APPROVAL TO DRILL A WELL

National Energy Board | Office national de l'énergie

Exploratory ☆ | Development ☐ | Delineation ☐ | Service ☐

APPROVAL TO DRILL A WELL

This application is submitted under Section 53 of the Canada Oil and Gas Drilling Regulations. When approved under Section 53 of the Regulations, it is the requisite approval for the commencement of drilling operations.

Well Name: Para et al Fort Liard N-01

Operator: Paramount Resources Ltd. Drilling Program No.: N/A

Contractor: Precision Drilling Interest Identifier: EL 381

Drilling Rig or Unit: 379 Estimated Well Cost: $2,177,000.00

Location-Unit: N Section: 01 Grid Area: 60° 10'. 123° 15'

Coordinates: Lat.: 60° 00' 52.339" Long.: 123° 15' 58.517"

Area: NWT Field/Pool: N/A

Elevation (KB)/RT: 491.20m (ASL) (GL)Seafloor: 486.20m

Approx. Spud Date: November 2000 Est. Days on Location: 35

Anticipated Total Depth: 2000m Target Horizons: Mattaqq

EVALUATION PROGRAM

Ten-metre sample intervals N/A

Five-metre sample intervals Surface to Total Depth

Canned sample intervals Surface to Total Depth for Paramount, not required for NEB

Conventional cores at Side wall cores with Logging Tools

Logs and Tests SP-GR-XX Cal-DLL-SFL, Sonic, SDL-CNL, EMT, MRI

CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m KB)	Cementing Program (m³)
244.5	53557	J-55	500	0:1:0"G" Cement
177.8	38.69	J-55	2000	Fill Cement 1:1:2
				Tail Cement 0:1:0

B.O.P. Equipment: 21mPa. BOP Stack and Manifold with one (1) Flow Diverter (for Surface Hole), one (1) Annular Preventer, three (3) rams (1 double gate and 1 single gate) and a double choke manifold.

Other Information: The NEB approved the well Para et al Liard C-02 last winter. However, through further study of the area, the well location was moved to this N-01 location as a more oprimumdrilling locarion. Paramount has decided to drill N-01 and not C-02.

Signed: Wayne R. Tomm (Responsible Officer) Title: Sr. Drilling and Completions Engineer

Name: Wayne R. Tomm Company: Paramount Resources Ltd.

Date: November 9, 2000 Phone: (403). 290-3600

APPROVAL

An approved copy of this notice is to be posted at each wellsite.

Date: Dec 12/00 Signed: D M Baker

Chief Conservation Officer

File: 9211-P33-12-8

WID: 1902

UWI: 300N016010123150

APPROVAL TO ALTER CONDITION OF A WELL

National Energy Board | Office national de l'énergie

APPROVAL TO ALTER CONDITION OF A WELL

This application is to be submitted to the Chief Conservation Officer at least 45 days before commencement of operations.

Well Name: Para.et.al.Fort.Liard.N-01 Area: .Fort.Liard,.NWT

Operator: Paramount.Resources.Ltd. Contractor: Drive.Well.Servicing

Drilling Rig or Unit: .642 Depth: .1940m

Coordinates: Lat: 60°.00'.52.339" Long: 125°.15'.58.517"

Date ADW Issued: .December.12,.2000 Date of last Operation: .January.16,.2001

Elevation (KB)/RT: ..492.1 (ASL) (GL) Seafloor: .487.00

TYPE OF OPERATION

To complete the well in the Mattson and Fantasque Formations with a final tubing assembly to selectively evaluate the various individual sands. A separate application will be made to Flow Test the individual sands into the pipeline.

SUMMARY OF PROPOSED OPERATIONS

Move in and rig up services and snubbing unit with associated equipment.
Make a clean-out trip and run a Cement Bond Log and a Correlation Log.
TCP the Mattson M5 sands and evaluate hydrocarbon potential.
Perforate underbalanced the Mattson M3, M2b, M2a, and Fantasque sands.
Snub in final tubing string with packers, blast joints and sliding sleeves to isolate individual sands for individual evaluations.
Install wellhead and perform clean-up flows on each sand.
Release service rig, snubbing unit and associated equipment.

Signed: Wayne R. Town — Responsible Officer Title: Sr. Drilling and Completions Engineer

Name: Wayne.R..Town Company: .Paramount.Resources.Ltd.

Date: .January.23,.2001 Phone: .(403).290-3600

APPROVAL

An approved copy of this notice is to be posted at each wellsite.

Date: Feb 9/01 Signed: D M Baker

Chief Conservation Officer

File: .9211-P33-12-8

WID: .1802
UWI 300N016010123151

Well Status

Suspended ☒

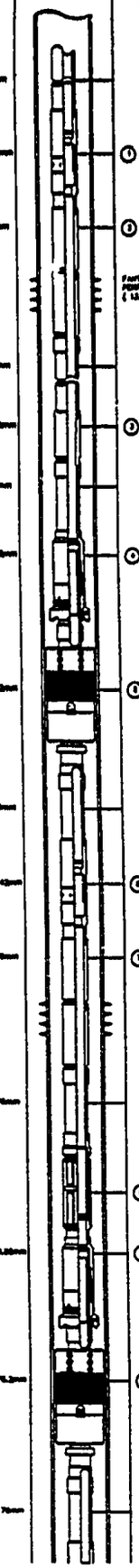
Completed ☐

Abandoned ☐

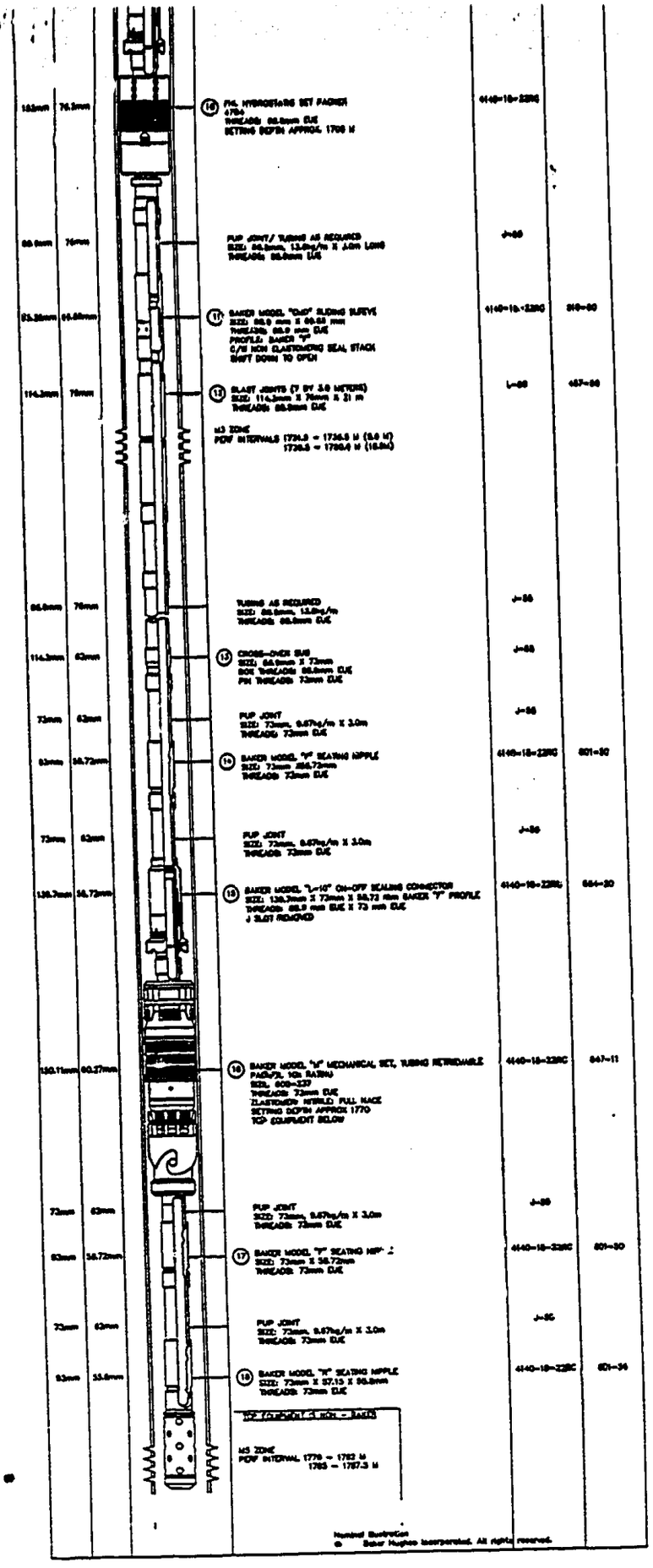
PROPOSED WELL COMPLETION
CUSTOMER: PARAMOUNT RESOURCES

Baker Oil Tools

CASING: 177.8 MM , 38.69 KG/M
TUBING: 88.9 MM, J-55



	TUBING TO SURFACE	J-55	
	① BAKER MODEL "CMD" SLIDING SLEEVE	4140-10-3280	880-80
	② BLAST JOINT	L-80	457-30
	FRACTURING ZONE		
	TUBING AS REQUIRED	J-55	
	③ BAKER MODEL "F" SEATING NIPPLE	4140-10-3280	881-80
	TUBING JOINT	J-55	
	④ BAKER MODEL "L-10" ON-OFF SEALING CONNECTOR	4140-10-3280	884-30
	⑤ PKL HYDROSTATIC SET PACKER	4140-10-3280	
	PUP JOINT/ TUBING AS REQUIRED	J-55	
	⑥ BAKER MODEL "CMD" SLIDING SLEEVE	4140-10-3280	880-80
	⑦ BLAST JOINT	L-80	457-30
	PUP JOINT/TUBING AS REQUIRED	J-55	
	⑧ SPLINED EXPANSION JOINT	4140-10-3280	
	⑨ BAKER MODEL "L-10" ON-OFF SEALING CONNECTOR	4140-10-3280	884-30
	⑩ PKL HYDROSTATIC SET PACKER	4140-10-3280	
	PUP JOINT/ TUBING AS REQUIRED	J-55	


(16) FHL HYDROSTATIC SET PACKER
4784
THREADS: 88.9mm EUE
SETTING DEPTH APPROX 1700 M
4140-18-22RC
PUP JOINT / TUBING AS REQUIRED
SIZE: 88.9mm, 13.84kg/m X 3.0m LONG
THREADS: 88.9mm EUE
J-55
(17) BAKER MODEL "CMD" SLIDING SLEEVE
SIZE: 88.9 mm X 69.85 mm
THREADS: 88.9 mm EUE
PROFILE: BAKER "F"
C/W NON ELASTOMERIC SEAL STACK
SHIFT DOWN TO OPEN
4140-18-22RC
310-60
(12) BLAST JOINTS (7 BY 3.0 METERS)
SIZE: 114.3mm X 76mm X 21 m
THREADS: 88.9mm EUE
L-80
457-66
M3 ZONE
PERF INTERVALS 1738.0 - 1738.8 M (8.0 M)
1738.8 - 1788.4 M (16.0M)
TUBING AS REQUIRED
SIZE: 88.9mm, 13.84kg/m
THREADS: 88.9mm EUE
J-55
(15) CROSS-OVER SUB
SIZE: 88.9mm X 73mm
BOX THREADS: 88.9mm EUE
PIN THREADS: 73mm EUE
J-55
PUP JOINT
SIZE: 73mm, 9.67kg/m X 3.0m
THREADS: 73mm EUE
J-55
(14) BAKER MODEL "F" SEATING NIPPLE
SIZE: 73mm X55.72mm
THREADS: 73mm EUE
4140-18-22RC
601-30
PUP JOINT
SIZE: 73mm, 9.67kg/m X 3.0m
THREADS: 73mm EUE
J-55
(13) BAKER MODEL "L-10" ON-OFF SEALING CONNECTOR
SIZE: 139.7mm X 73mm X 55.72 mm BAKER "F" PROFILE
THREADS: 88.9 mm EUE X 73 mm EUE
J SLOT REMOVED
4140-18-22RC
664-30
(10) BAKER MODEL "A" MECHANICAL SET, TUBING RETRIEVABLE
PACKER, 10k RATING
SIZE, 600-337
THREADS: 73mm EUE
ELASTOMER NITRILE, FULL NACE
SETTING DEPTH APPROX 1770
TOP EQUIPMENT BELOW
4140-18-22RC
647-11
PUP JOINT
SIZE: 73mm, 9.67kg/m X 3.0m
THREADS: 73mm EUE
J-55
(17) BAKER MODEL "F" SEATING NIPPLE
SIZE: 73mm X 55.72mm
THREADS: 73mm EUE
4140-18-22RC
601-30
PUP JOINT
SIZE: 73mm, 9.67kg/m X 3.0m
THREADS: 73mm EUE
J-55
(18) BAKER MODEL "R" SEATING NIPPLE
SIZE: 73mm X 57.15 X 90.8mm
THREADS: 73mm EUE
4140-18-22RC
601-34
TOP EQUIPMENT 4 JOINTS - BAKER
M5 ZONE
PERF INTERVAL 1778 - 1782 M
1785 - 1787.3 M
Nominal Illustration
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WELL TERMINATION RECORD (with attachment)

CANADA

WELL TERMINATION RECORD

This record is submitted in triplicate in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

WELL DATA

Well Name: Para et al Fort Liard N-01 Area: Fort Liard, NWT.

Grid Area: 60° 10' 123° 15' Field/Pool: N/A

Permit or Lease No.: EL 381 Final Coordinates: Lat.: 60° 00' 52.339" Long: 123° 15' 58.517"

Drilling Unit: Precision Rig #379 Elevations-RT(KB) 492.10 SF(GL) 487.00

Spud Date: December 12, 2000. Rig Released: January 16, 2001. Total Depth: 1940

CASING AND CEMENTING

O.D.:	Weight:	Grade:	Depth Set:	Cement and Additives:
244.5	53.57	J-55	501	27 Tonnes 0:1:0 G
177.0	38.69	J-55	1940	26 Tonnes 1:1:2 G + .5%CD
				30 Tonnes 0:1:0 G + NFL-2

PLUGGING PROGRAM

Approval of the following program was obtained by (person) N/A from

(person) by means of

on 19 .

Type of Plug:	Interval:	Felt:	Cement and Additives:

Lost Circulation/Overpressure Zones: N/A

Equipment left on Seafloor (Describe): N/A

Provision for Re-entry (Describe and attach sketch): N/A

Cores: Type: N/A Intervals:

Other Downhole Completion/Suspension Equipment: N/A

CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: Wayne R. Tomm P. Eng. Title: Sr. Drilling and Completions Engineer

Name: Wayne R. Tomm Date: January 23, 2001

Acknowledged by: Engineering Branch

Date: Feb 9/01

Well Status
Suspended ☒
Completed ☐
Abandoned ☐

File: 9211-R33-12-8

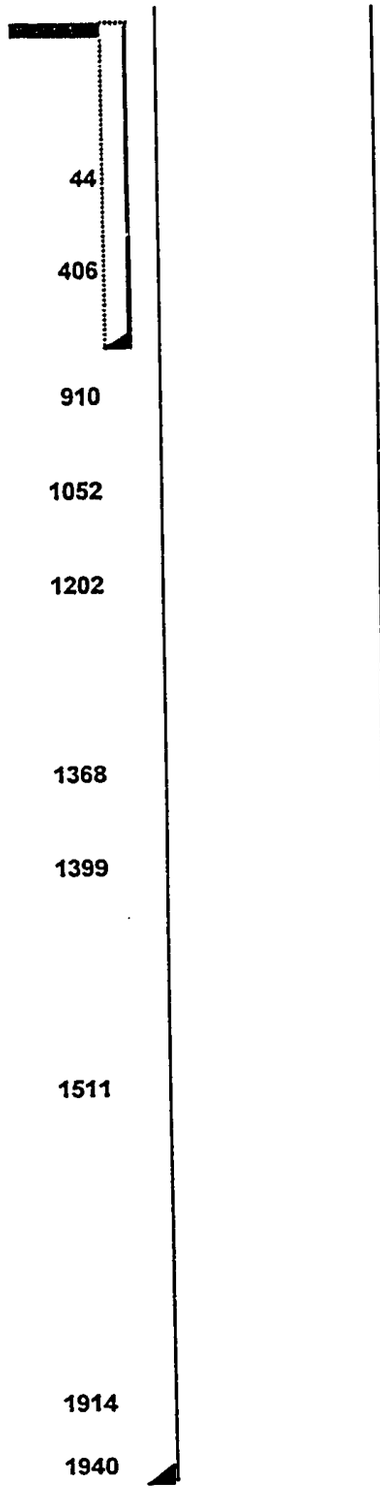
UWI: 300N016010123150

Canada

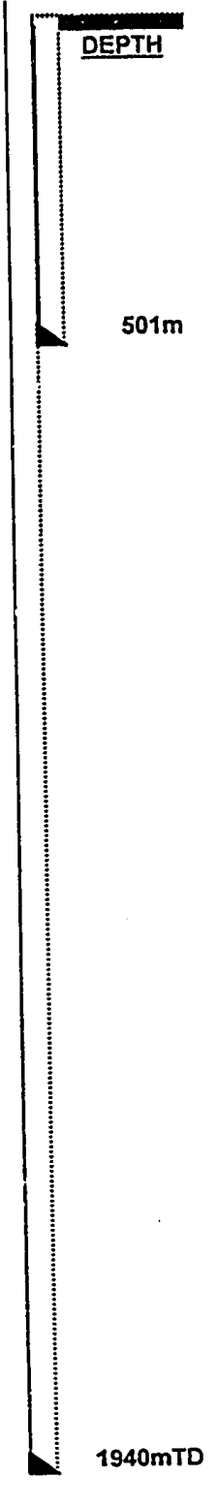
PARA ET AL FORT LIARD N-01

60deg 10' N, 123deg 15' W

(as drilled January 16, 2001)



Drilled TOPS PRIMARY * SECONDARY **	
Dunvegan	44
Lepine	406
SCATTER	910
GARBUTT	1052
CHINKEH SAND **	1202
BELLOY	1368
FANTASQUE **	1399
MATTSON *	1511
Mattson Fault	1914
Total depth	1940



DEPTH	HOLE SIZES	Casing as run
		244.5 mm, 53.57 kg/m J-55 LT&C
	Cement:	27 tonnes 0:1:0 Class "G" plus additives (75% Excess) - 10m3 returns
501m	311mm	
	222	177.8 mm, 38.69 kg/m J-55 LT&C
	Cement:	Preflushes: for Gel-Chem plus 3m3 sxavenger @ 1300kg/m3 Fill Cement: 26 tonnes 1:1:2 "G" + additives Tail Cement: 30 tonnes 0:1:0 "G" + additives - 7m3 returns
1940mTD		

FINAL WELL REPORT

N.E.B. COPY

FINAL WELL REPORT

Paramount Resources Ltd.

Para et al Southeast Fort Liard N-01

Grid: 60^0 10', 123^0 15'

DATE: September 26, 2001

COMPANY REPRESENTATIVES:
Wayne Tomm
Dave Block

NATIONAL ENERGY BOARD
LIBRARY BRANCH
OCT 0 5 2001

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A. INTRODUCTION

Paramount Resources Ltd. drilled a 1940 meter exploratory well, spudded on December 12, 2000 and finishing setting production casing to 1940 meters on January 15, 2001. The main target of the well was the Mattson at 1512 meters with the secondary target being the Chinkeh Sand at 1202 meters. The well potential was evaluated with the drilling rig over six intervals in the Mattson and one interval in the Fantasque.

The drilling contractor was Precision Drilling Rig #379 based out of Calgary, Alberta. The rig was rated for 2400 m and had an 82 m^3 mud system.

The well was drilled on Exploration License No.381 in which Paramount Resources Ltd. has a 33.34% working interest. Operating License: **Para et al Southeast Fort Liard N-01**
WID: 1902
File: 9211-P33-12-8
UWI: 300N016010123150
was issued to Paramount Resources Ltd. on December 12, 2000.

The well which is located approximately 30 km south east of Fort Liard, lies on the south east end of SE plunging anticline observed at the F-36 Mattson gas discovery. The well was planned to test the same structural closure as the Fort Liard C-02 well. The exact co-ordinates of the well are as follows: Latitude: 60^0 00' 52.339" N
Longitude: 123^0 15' 58.517" W

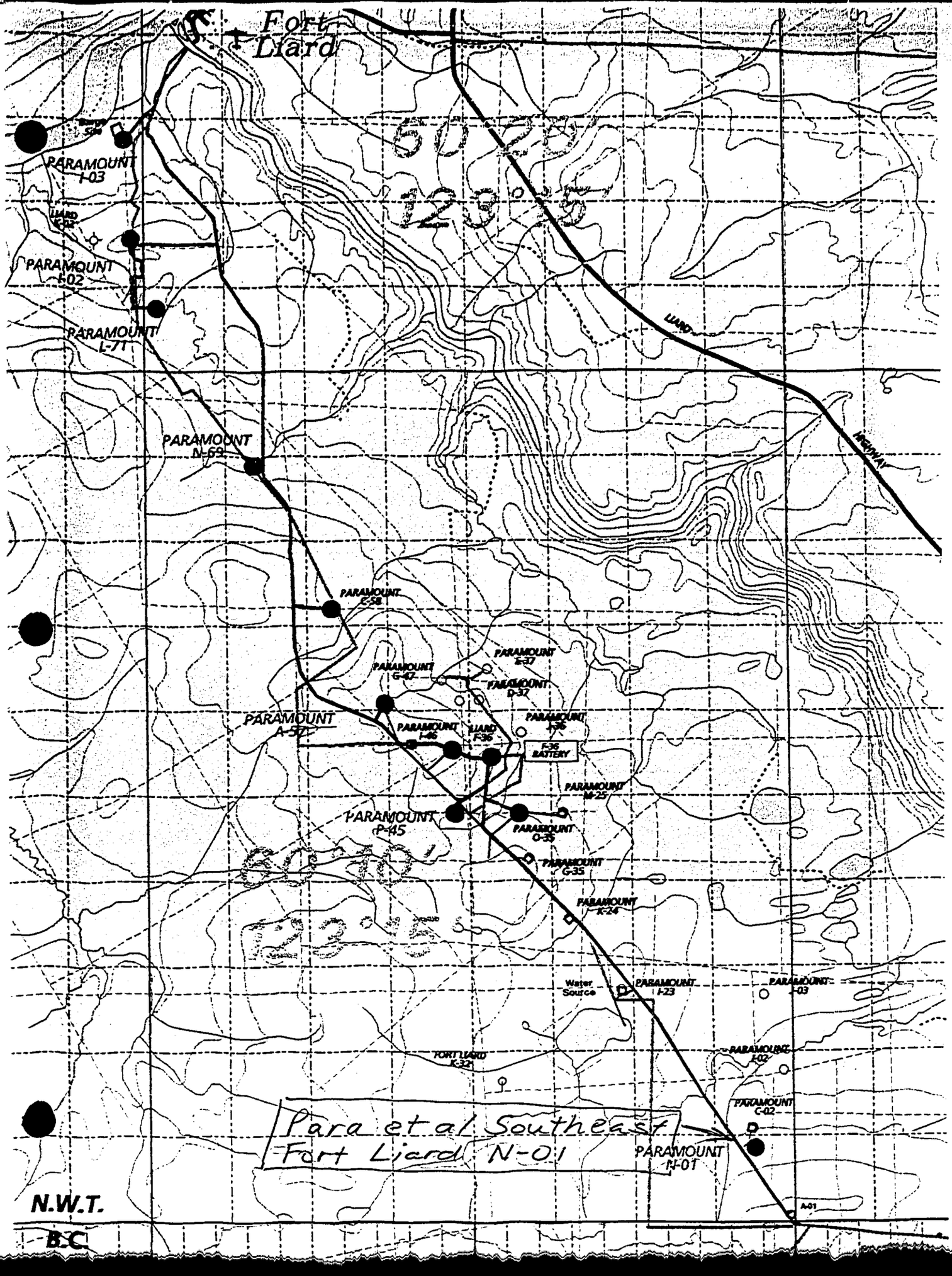
A Cancor Rathole Inc. rathole rig was moved onto the location on December 6, 2000. The 508 mm conductor hole was drilled to a depth of 12.5 m. While drilling the conductor hole boulders were encountered to a depth of 12 m. The 406.4 mm heavy walled conductor pipe was set at 12.5 m and cemented in place.

Precision Drilling Rig #379 was moved onto the location starting on December 6, 2000. The diverter was nippled up and function tested with the HCR. The well spudded on December 12, 2000 at 18:00 hours. The 311 mm surface hole was drilled to 501 mKB. Mud ring problems were encountered at approximately 69 mKB. There were no losses to the formation during the drilling of the surface hole. Surface casing of 244.5 mm, 53.57 kg/m, J-55 LT&C casing was run and set at 501 mKB. The surface casing was cemented with 27 tonnes 0:1:0 'G' cement plus 1% $CaCl_2$ with good cement returns throughout the job

The BOP's were installed, function tested, and pressure tested to 1500 kPa and 14000 kPa for 10 minutes each. The float collar and shoe were drilled out on December 19, 2000. A formation leak off test was done and the gradient was taken to 22 kPa/m with no formation breakdown. The 222 mm main hole was drilled with a flocculated water system to 950 meters and a gel-chemical mud system from there to total depth. Directional tools were utilized to control deviation problems. After reaching total depth the open hole density, induction, and

micro logs were run from TD to the surface casing shoe. Six DST's were run on the Mattson and one DST was run on the Fantasque. Sonic and neutron logs were then run from TD to 150 meters. A 177.8 mm, 38.69 kg/m, J-55, LT&C production casing was run and set at 1940 mKB. The casing was cemented with 26 tonnes 1:1:2 'G' cement plus 0.5% CD-31 and 30 tonnes 0:1:0 'G' cement plus 0.8% NFL-2. The plug was bumped with 29,500 kPa and the pressure held. The plug was down at 11:48 hours on January 15, 2001. There were 7 – 8 m^3 cement returned to surface.

The drilling rig was released January 16, 2001 at 12:00 hours.


Fort Liard
PARAMOUNT I-03
PARAMOUNT I-02
PARAMOUNT L-71
PARAMOUNT N-69
LIARD
HIGHWAY
PARAMOUNT C-58
PARAMOUNT E-37
PARAMOUNT G-47
PARAMOUNT D-32
PARAMOUNT A-57
PARAMOUNT I-46
LIARD F-36
PARAMOUNT I-36
F-36 BATTERY
PARAMOUNT M-25
PARAMOUNT P-45
PARAMOUNT O-35
PARAMOUNT G-35
PARAMOUNT K-24
Water Source
PARAMOUNT I-23
PARAMOUNT I-03
FORT LIARD K-32
PARAMOUNT I-02
PARAMOUNT C-02
PARAMOUNT N-01
Para et al Southeast
Fort Liard N-01
N.W.T.
B.C.

B. GENERAL DATA

1. Well Name: Paramount et al Southeast Fort Liard N-01

   Authority to Drill a Well No: 1902 Issued December 12, 2000

   Exploration Agreement Number: EL 381

   Location Unit: N

   Section: 01

   Grid Area: 60^0 10', 123^0 15'

   Classification: Exploration Well

2. Well Location: N-01 60^0 10' N, 123^0 15' W
   Coordinates: Latitude: 60^0 00' 52.339" N
   Longitude: 123^0 15' 58.517" W

3. Unique Well Identifier: 300N016010123150

4. Operator: Paramount Resources Ltd.

5. Contractor: Precision Drilling Services

6. Drilling Unit: Rig #379

7. Support Craft (Helicopter): N/A

8 Drilling Unit Performance: N/A

9. Difficulties and Delays: No major delays or difficulties

10. Total Well Cost: $2.1 mm

11. Horizontal Deviated Wells Require Bottom Hole Co-ordinates:
    Latitude: N/A
    Longitude: N/A

C. SUMMARY OF DRILLING OPERATIONS

1. Elevations:
   - Ground: 486.2 m
   - KB: 491.2 m
   - KB to Casing Flange: 5.1 m

2. Total Depth:
   - FTD: 1940 mKB
   - PBTD: 1934.2 mKB
   - TVD: 1940 mKB

3. Date and Hour Spudded: December 12, 2000 at 18:00 hours

4. Date Drilling Completed: January 5, 2001

5. Date of Rig Release: January 16, 2001

6. Well status: Suspended

7. Hole Sizes and Depths:

Conductor Hole:	508 mm to 12.5 mKB
Surface Hole:	311 mm to 501 mKB
Main Hole:	222 mm to 1940 mKB

8. Casing and Cementing Record:

Conductor Hole:

Casing Size:	406 mm
Casing Weight:	Heavy Weight
Depth Set:	12.5 mKB
Cut Height:	At Surface
Date Set:	December 6, 2000
Cement Volume:	40 sacs
Cement Type:	None reported
Additives:	None reported

Surface Hole:

Casing Size:	244.5 mm
Casing Weight:	53.57 kg/m
Casing Grade:	J-55
Casing Make:	Ipsco
Number of Joints:	40
Thread:	LT&C

Depth Set:	501 mKB
Cut Height:	At Surface
Date Set:	December 17, 2000
Cement Volume:	27 Tonnes
Float Shoe Depth:	501 m
Float Collar Depth:	496.2 m
Cut Off Depth:	Surface
Cement Type:	0:1:0 'G' cement
Additives:	1.0% $CaCl_2$
Cement Top:	Surface
Casing Bowl Size:	279 mm X 244.5 mm X 21 MPa
Casing Bowl Make:	Streamflo

Main Hole:

Casing Size:	177.8 mm		
Casing Weight:	38.68 kg/m		
Casing Grade:	J-55		
Casing Make:	Ipsco		
Number of Joints:	150		
Thread:	LT&C		
Depth Set:	1940 mKB		
Cut Height:	Surface		
Date Set:	January 15, 2001		
Float Shoe Depth:	1940 m		
Float Collar Depth:	1934.2 m		
Cut Off Depth:	Surface		
Cement Volume:	26 Tonnes	+	30 Tonnes
Cement Type:	1:1:2 'G'		0:1:0 'G'
Additives:	0.5% CD-31		0.8% NFL-2
Cement Top:	Surface		
Casing Bowl Size:	279 mm X 244.5 mm X 21 Mpa		
Casing Bowl Make:	Streamflo		

9. Sidetracked Hole: N/A

10. Drilling Fluid:

Conductor Hole: Water

Surface Hole: Gel - Chemical

Properties:	Viscosity:	53 - 80 sec/L
	Weight:	1050 - 1200 kg/m^3
	pH:	8 - 10
	Water loss:	Not controlled or reported
	Solids:	Not reported

	Gels:	2 – 8 / 5 - 19
	Filter Cake:	Not reported
	PV / YP:	Not reported

Main: Gel - Chemical

Properties:		
	Viscosity:	53 - 66 sec/L
	Weight:	1070 – 1145 kg/m^3
	pH:	9.5 – 10.5
	Water loss:	6 – 10 cc
	Solids:	1 - 8
	Gels:	4 – 10 / 5 - 16
	Filter Cake:	8 - 15
	PV / YP:	17 – 6 / 21- 9

11. Fishing Operations: None.

12. Well Kicks and Well Control Operations: N/A

13. Formation Leak Off Tests:

At surface casing shoe:

Depth:	511 m
Fluid Density:	1005 kg/m^3
Applied Pressure:	6100 kPa
Hydrostatic Press:	4940 kPa
Mud Weight Equiv:	2242 kg/m^3
Casing Setting Depth:	501 mKB

The leak-off test was taken to a gradient of 22 kPa /m without breaking down the formation.

14. Time Distribution.

Date	Hours	Activity
00/12/06	12.0	Move in, rig up
00/12/07	24.0	Move in, rig up
00/12/08	24.0	Move in, rig up
00/12/09	24.0	Move in, rig up
00/12/10	24.0	Move in, rig up
00/12/11	24.0	Move in, rig up
00/12/12	16.5	Move in, rig up
	0.25	Rig service

	0.25	Survey
	7.25	Drill
00/12/13	0.5	Rig service
	16.75	Drill
	1.5	Survey
	5.0	Circulate & condition mud
	0.25	BOP drill
00/12/14	0.5	Rig service
	2.0	Survey
	14.0	Drill
	0.25	Circulate & condition mud
	7.25	Trip
00/12/15	0.75	Rig Service
	1.75	Survey
	20.75	Drill
	0.75	Rig repair
00/12/16	0.5	Rig service
	1.25	Survey
	11.0	Drill
	2.5	Circulate & condition mud
	8.75	Trip
00/12/17	0.25	Rig service
	2.75	Circulate & condition mud
	0.5	Nipple up BOP's
	4.0	Weld bowl
	0.25	Safety meeting
	2.25	Cement casing
	8.0	Wait on cement
	5.25	Run casing
	0.75	Trip
00/12/18	9.0	Pressure test BOP's
	13.0	Nipple up BOP's

	2.0	Thaw out equipment
00/12/19	0.75	Rig service
	0.75	Survey
	8.75	Drill
	2.5	Drill out casing shoe
	0.5	Leak off test
	3.5	Pressure test BOP's
	3.25	Trip
	0.5	Thaw out equipment
	3.0	Handle tools
	0.5	BOP drill
00/12/20	0.5	Rig service
	2.0	Survey
	0.5	Circulate and condition mud
	21.0	Drill
00/12/21	0.75	Rig service
	0.75	Survey
	13.5	Drill
	0.25	Circulate
	4.75	Trip
	0.75	Slip & cut drill line
	3.25	Ream
00/12/22	0.75	Rig service
	2.75	Survey
	20.5	Drill
00/12/23	0.5	Rig service
	1.0	Rig repair
	1.75	Survey
	18.0	Drill
	0.75	Circulate and condition mud
	2.0	Trip
00/12/24	0.5	Rig service

	0.5	Survey
	9.25	Trip
	8.25	Drill
	2.0	Circulate and condition mud
	2.5	Handle tools
	1.0	Ream
00/12/25	0.25	Rig service
	13.5	Drill
	6.0	Trip
	0.5	Survey
	1.0	Circulate and condition mud
	2.5	Handle tools
	0.25	BOP drill
00/12/26	0.5	Rig service
	16.0	Drill
	4.5	Trip
	1.5	Ream
	0.25	Survey
	0.5	Circulate and condition mud
	0.25	BOP drill
	0.5	Flow check
00/12/27	0.5	Rig service
	1.0	Survey
	22.5	Drill
00/12/28	0.25	Rig service
	9.75	Drill
	0.75	Circulate and condition mud
	9.0	Trip
	1.0	Survey
	2.5	Handle tools
	0.5	Slip & cut drill line
00/12/29	0.5	Rig service

	0.5	Survey
	18.0	Drill
	2.0	Trip
	3.0	Ream
00/12/30	0.75	Rig service
	0.5	Survey
	9.25	Drill
	0.5	Circulate and condition mud
	2.75	Handle tools
	8.75	Trip
	1.5	Ream
00/12/31	0.5	Rig service
	1.75	Handle tools
	1.0	Circulate & condition mud
	5.0	Trip
	15.75	Drill
01/01/01	0.5	Rig service
	0.25	Survey
	17.25	Drill
	0.75	Handle tools
	3.25	Trip
	2.0	Ream
01/01/02	0.5	Rig service
	0.75	Survey
	16.5	Drill
	1.0	Circulate and condition mud
	5.25	Trip
01/01/03	0.75	Rig service
	0.25	Survey
	14.25	Drill
	3.25	Handle tools
	4.25	Trip

	0.75	Slip & cut drill line
	0.5	Ream
01/01/04	0.25	Rig service
	0.25	Survey
	7.5	Drill
	1.0	Circulate and condition mud
	10.25	Trip
	3.75	Handle tools
	1.0	Ream
01/01/05	0.5	Rig service
	11.0	Drill
	4.5	Circulate & condition mud
	7.75	Trip
	0.25	BOP drill
01/01/06	17.0	Logging
	5.75	Trip
	1.25	Handle tools
01/01/07	0.75	Rig service
	12.75	Trip
	9.75	Run DST's
01/01/08	0.25	Rig service
	9.5	Run DST's
	3.5	Circulate & condition mud
	10.75	Trip
01/01/09	0.5	Rig service
	4.0	Circulate & condition mud
	10.0	Run DST's
	9.5	Trip
01/01/10	0.5	Rig service
	2.0	Circulate & condition mud
	10.5	Run DST's
	11.0	Trip

01/01/11	0.5	Rig service
	1.0	Circulate & condition mud
	11.5	Run DST's
	11.0	Trip
01/01/12	0.75	Rig service
	2.0	Circulate & condition mud
	8.25	Run DST's
	12.25	Trip
	0.75	Slip & cut drill line
01/01/13	0.5	Rig service
	5.75	Circulate & condition mud
	6.25	Run logs
	3.25	Run DST's
	8.25	Trip
01/01/14	0.5	Rig service
	3.5	Circulate & condition mud
	1.0	Run logs
	7.25	Run casing
	11.75	Trip
01/01/15	0.25	Rig service
	6.5	Circulate & condition mud
	3.0	Nipple up BOP's
	5.0	Cement
	9.0	Tear out and move out
	0.25	Slip & cut drill line
01/01/16	24.0	Tear out and move out
01/01/17	24.0	Tear out and move out
01/01/18	24.0	Tear out and move out

Time Break Down

Activity	Hours
Move in, rig up	148.5
Tear out, move out	81.0
Drilling:	331.0
Surveying:	20.5
Circulating, condition mud	52.25
Running & cementing casing:	19.75
Wait on cement:	8.0
Rig Service:	16.75
Rig Repair:	1.75
Tripping:	195.0
Reaming:	13.75
Nipple up & PT BOP's	29.0
DST's	62.75
Logging	24.25
Flow checks	0.5
Handle tools	24.0
Slip & cut drill line	3.0
Safety meetings	0.25
Weld on casing bowl:	4.0
Drill out shoe:	2.5
Leak off test:	0.5
BOP drills:	1.5
Thaw out equipment:	2.5

15. Deviation Survey: See Attachment section for Survey Calculation Report.

16. Abandonment Plugs: N/A

17. Composite Well Record: See Geological Report in the Attachment section.

18. Completion Record:

Start Date:	December 12, 2000
Finish Date:	January 16, 2001
Contractor:	Precision 379

Completion Summary:

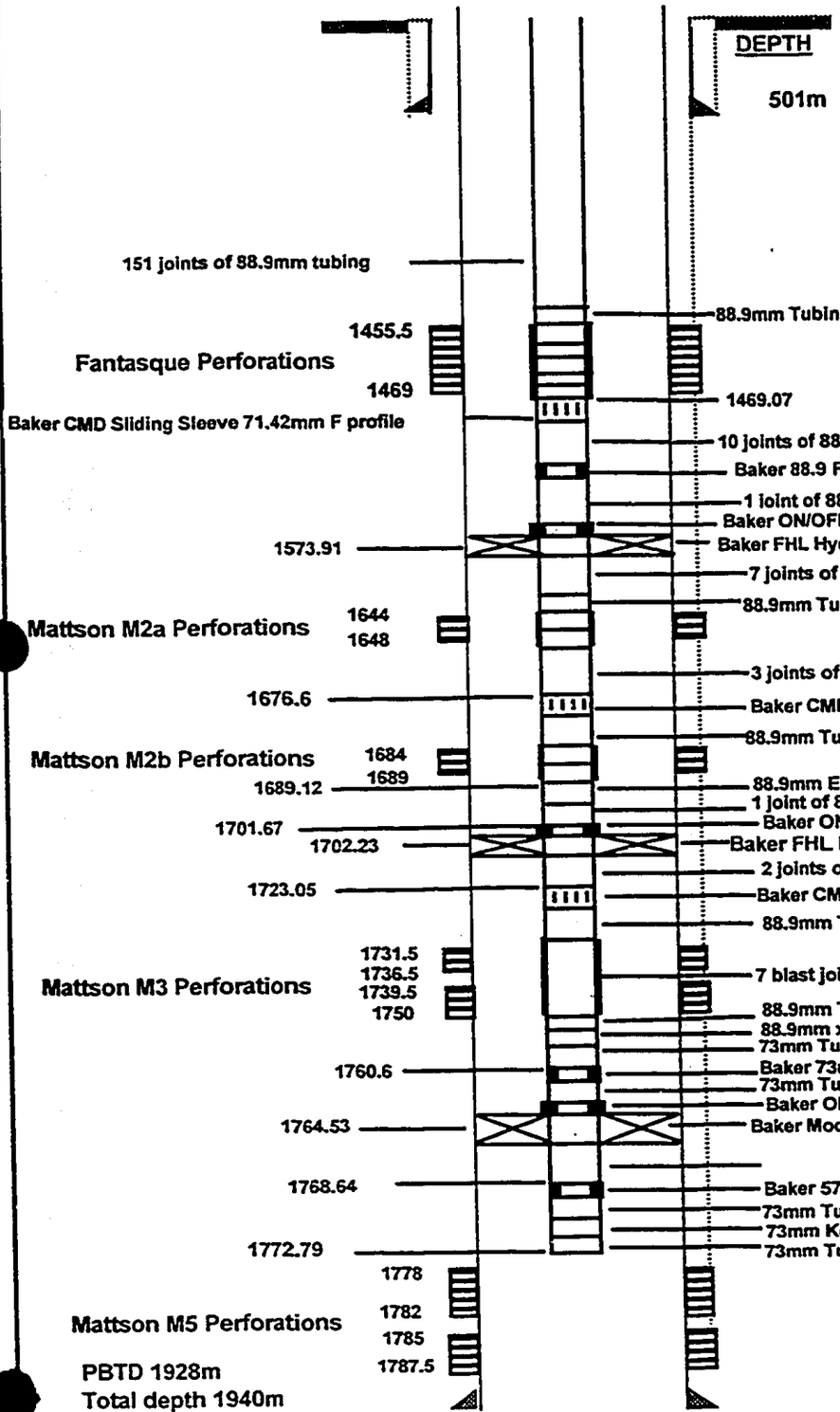
Date:	February / March, 2001	
Perf Intervals:	Fantasque:	1455.5 – 1469.0 mKB
	Mattson M2a:	1644.0 – 1648.0 mKB
	Mattson M2b:	1684.0 – 1989.0 mKB
	Mattson M3:	1731.5 – 1736.5 & 1739.5 – 1750.0 mKB
	Mattson M5:	1778.0 – 1782.0 & 1785.0 – 1787.5 mKB
Swab / Flow	Testing results reported in separate report.	
Stimulation:	No stimulation done.	

Final Well Configuration: See Bottom Hole Diagram on next page.

PARA ET AL FORT LIARD N-01

60deg 10' N, 123deg 15' W

(as completed)



HOLE SIZES

Cement:

311mm

222

Cement:

Casing as run

244.5 mm, 53.57 kg/m

J-55 LT&C

27 tonnes 0:1:0 Class "G" plus additives (75% Excess)

- 10m3 returns

177.8 mm, 38.69 kg/m

J-55 LT&C

Preflushes: for Gel-Chem plus 3m3 sxavenger @ 1300kg/m3

Fill Cement: 26 tonnes 1:1:2 "G" + additives

Tail Cement: 30 tonnes 0:1:0 "G" + additives

- 7m3 returns

D: GEOLOGY

Geological Summary

Tops: See page 2 of the Geological Report in the Attachment Section.

Sample Descriptions: See pages 23 to 45 of the Geological Report in the Attachment Section.

Total Depth: 1940 mKB

Coring Record: No coring done.

GAS DETECTION REPORT

A gas detector was utilized from the drill out of the conductor pipe to total depth. The gas detector readings are included on the composite geological log at the end of the Geological Report in the Appendix Section.

DRILL STEM TESTS: See test reports in the Geological Report in the Attachment Section for details.

DST#1:	Mattson	1682.0 – 1691.0 mKB
DST#2:	Mattson	1643.0 – 1648.0 mKB
DST#3:	Mattson	1730.0 – 1751.0 mKB
DST#4:	Mattson	1717.0 – 1738.0 mKB
DST#5:	Mattson	1738.0 – 1759.0 mKB
DST#6:	Mattson	1625.0 – 1632.0 mKB
DST#7:	Fantasque	1458.0 – 1465.0 mKB

WELL EVALUATION

The following logs were run:

High Definition Induction Log:	501 – 11933 mKB
Compensated Z-Densilog / Compensated Neutron Log:	501 – 1917 mKB
Multipole Array Accoustilog:	150 – 11935mKB
Minilog	501 – 1941 mKB
Cement Volume Log:	501 – 1917 mKB

GAS, OIL, & WATER ANALYSES: Gas and fluid analysis form the testing of the perforated intervals will be reported separately.

FORMATION STIMULATION: N/A

FORMATION AND TEST RESULTS: N/A

DETAILED TEST PRESSURE DATA READINGS: N/A

E. ENVIRONMENTAL CONSIDERATIONS

There were no outstanding environmental considerations on this well. The gel-chem mud system used on the hole was treated on site and the solids were disposed of using the mix/bury/cover disposal method. In February, 2001 the site was recontoured and there are no plans for any more work until this well is to be abandoned and reclaimed.

ATTACHMENT 8

GEOLOGICAL REPORT
ON

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

FOR
Paramount Resources Ltd.

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Dec./Jan. 2000/01

Gary Johannson, M.Sc. &
Byron Neu, B.Sc.
Wellsite Geologists
Décollement Consulting Ltd.
Calgary, Alberta, Canada

Décollement Consulting Ltd.

WELL DATA SUMMARY

WELL NAME	Paramount et al Fort Liard NWT N-01
LEGAL LOCATION	N-01/60-10, 123-15
UNIQUE WELL I.D.	300/N-01-60-10-123-15/00
SURFACE LOCATION	N-01/60-10, 123-15
FIELD/REGION	Fort Liard area, N.W.T.
OPERATOR	Paramount Resources Ltd.

SITE DATA

BOTTOMHOLE COORDINATES	Vertical Hole
SURFACE COORDINATES	Lat: 60 deg. 00' 52.339" N Long: 123 deg. 15' 58.517" W
SEISMIC LOCATION	Seismic Line: A00P-L1A-05 @ SP 319 (NAD27)
WELL CLASSIFICATION	Exploratory WELL LICENSE # WID 1902
AFE NUMBER	00N010054
DRILLING CONTRACTOR	Precision Drilling Rig #379

ELEVATIONS

GROUND LEVEL	486.2 (m)
KELLY BUSHING	491.2 (m)

DRILLING DATES

SPUD DATE	Dec. 12, 2000	TIME	16:30hrs
T.D. DATE	Jan. 5, 2001	TIME	1215hrs
RIG RELEASE DATE	n/a		

HOLE SIZE & MUD TYPE

SURFACE	311mm: Gel chem
MAIN	222mm: Floc water/Gel chem

CASING DATA

SURFACE	40 jts. of 244.5mm, J-55, 53.6kg/m set @ 501.0m
PRODUCTION	n/a

GEOLOGICAL DATA

SAMPLE INTERVAL	Surface to T.D.
GAS DETECTION INTERVAL	Surface to T.D.
LOGGING SUITE	HDIL-ZDL-CN-MAC-ML-GR-X-CAL
DRILL STEM TESTS	DST #1:1682-1691m;DST #2:1643-1648m; DST #3: Misrun;
DRILL STEM TESTS	DST #4:1717-1738m;DST #5:1738-1759m; DST #6:1625-1632m
	DST #7:1458-1465m;DST #8:1368-1379m;

WELL STATUS

CASED GAS WELL

Decollement Consulting Ltd.

FORMATION TOPS

Paramount et al Ft. Liard NWT N-01

.L.(m) 486.20 **K.B.(m)** 491.21

FORMATION	SAMPLE		High	PROGNOSIS			LOGS		Isopach
	MD(m)	SS(m)	Low (-)	MD(m)	SS(m)	Isopach	MD(m)	SS(m)	(m)
Quaternary					486.2	31.3	not picked		
Kotanelee Group	36.4	449.8	-5.1	31.3	454.9	15.0	not picked		
Dunvegan	44.4	441.8	1.9	46.3	439.9	135.0	not picked		
Sully	177.8	308.4	3.5	181.3	304.9	60.0	not picked		
Sikanni	241.6	244.6	-0.3	241.3	244.9	165.0	not picked		
Lepine	406.4	79.8	-0.1	406.3	79.9	505.0	not picked		
Scatter	910.6	-424.4	0.7	911.3	-425.1	139.7	973.0	-486.8	157.0
Garbutt	1052.0	-565.8	-1.0	1051.0	-564.8	118.3	1130.0	-643.8	88.0
Garbutt Radioactive Zone	1168.0	-681.8	1.3	1169.3	-683.1	30.0	1218.0	-731.8	31.2
Bullhead	not picked	-	-	not given	-	-	1232.0	-745.8	17.2
Chinkeh Siltstone	1252.0	-765.8	-52.7	1199.3	-713.1	3.0	1249.2	-763.0	3.6
Chinkeh Sand**	**1254.4**	-768.2	**-52.1**	**1202.3**	-716.1	**12.0**	**1252.8**	-766.6	2.7
Triassic	1264.0	-777.8	-49.7	1214.3	-728.1	148.5	1255.5	-769.3	112.5
Belloy	1368.0	-881.8	n/a	1309.3	-823.1	53.5	1368.0	-881.8	37.0
Fantasque**	**1399.0**	-912.8	**-36.2**	**1362.8**	-876.6	**127.4**	**1405.0**	-918.8	68.8
Kindle	1486.0	-999.8	4.2	1490.2	-1004.0	27.0	1473.8	-987.6	22.2
Mattson*	**1511.0**	-1024.8	**6.2**	**1517.2**	-1031.0	**109.0**	**1496.0**	**-1009.8**	**128.0**
M1 Zone	**1625.0**	-1138.8	**1.2**	**1626.2**	-1140.0	**14.0**	**1624.0**	**-1137.8**	**17.5**
M2a Zone	**1641.0**	-1154.8	**-0.8**	**1640.2**	-1154.0	**90.0**	**1641.5**	**-1155.3**	**88.0**
M2b Zone	not picked	-	-	not given	-	-	**1682.5**	**-1196.3**	**47.0**
M3 Zone	**1731.0**	**-1244.8**	**-0.8**	**1730.2**	-1244.0	**24.0**	**1729.5**	**-1243.3**	**23.5**
M4 Zone	**1755.0**	**-1268.8**	**-0.8**	**1754.2**	-1268.0	**26.0**	**1753.0**	**-1266.8**	**56.0**
M5a Zone	**1779.0**	**-1292.8**	**1.2**	**1780.2**	-1294.0	**60.0**	**1778.5**	**-1287.3**	**30.5**
M5b Zone	not picked	-	-	not given	-	-	**1809.0**	**-1322.8**	**45.5**
M6 Zone	**1861.0**	**-1374.8**	**-20.8**	**1840.2**	-1354.0	**55.0**	**1854.5**	**-1363.3**	**37.5**
M7 Zone	**1888.0**	**-1401.8**	**7.2**	**1895.2**	-1409.0	**n/a**	**1892.0**	**-1892.0**	**n/a**
T.D.	1940.0	**-1453.8**	**185.0**	2125.0	-1638.8	-2125.0	1942.5	-1456.3	**n/a**

Primary Target Zone *
Secondary Target Zone **

DEVIATION SURVEYS

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

Depth	Inclination
32.0	0.500°
59.0	0.250°
85.0	0.750°
102.0	zero
140.0	0.500°
168.0	0.750°
189.0	0.500°
224.0	0.750°
248.0	0.500°
278.0	1.000°
308.0	1.000°
334.0	1.250°
352.0	0.750°
380.0	2.000°
399.0	1.750°
428.0	1.500°
454.0	1.500°
482.0	1.000°
493.0	1.000°
See	attached
surveys	from Dene
Directional	for main hole

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PA[redacted] et al FORT LIARD
N-[redacted]-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
0	501.00	0.00	0.00	501.00	0.00	0.00	0.00	0.00
1	512.30	1.10	274.70	512.30	0.01	-0.11	0.01	2.92
2	521.80	1.20	276.80	521.80	0.03	-0.30	0.03	0.35
3	531.30	1.10	270.50	531.30	0.04	-0.49	0.04	0.51
4	540.80	1.10	261.30	540.79	0.03	-0.67	0.03	0.56
5	569.40	0.70	278.20	569.39	0.01	-1.11	0.01	0.50
6	597.90	0.50	306.70	597.89	0.11	-1.39	0.11	0.37
7	627.50	0.50	304.90	627.49	0.26	-1.59	0.26	0.02
8	655.10	0.90	295.80	655.09	0.42	-1.89	0.42	0.45
9	664.60	0.70	300.00	664.58	0.49	-2.01	0.49	0.66
10	702.70	0.50	353.10	702.68	0.77	-2.23	0.77	0.45
11	731.30	1.90	90.80	731.28	0.88	-1.77	0.88	2.13
12	750.30	2.10	92.60	750.27	0.86	-1.11	0.86	0.33
13	759.80	2.10	91.10	759.76	0.85	-0.76	0.85	0.18
14	769.40	1.80	91.20	769.35	0.85	-0.43	0.85	0.94
15	797.90	1.60	86.90	797.84	0.86	0.41	0.86	0.25
16	807.40	1.60	85.50	807.34	0.88	0.68	0.88	0.12
17	836.00	1.40	90.50	835.93	0.90	1.43	0.90	0.25
18	864.60	1.40	100.70	864.52	0.84	2.12	0.84	0.26
19	893.10	1.40	119.60	893.01	0.60	2.76	0.60	0.48
20	902.60	1.20	129.60	902.51	0.48	2.94	0.48	0.95
21	921.70	1.60	142.10	921.60	0.14	3.26	0.14	0.79
22	931.20	1.80	147.40	931.10	-0.09	3.42	-0.09	0.80
23	950.20	1.60	160.40	950.09	-0.59	3.67	-0.59	0.68
24	959.70	1.60	162.50	959.59	-0.84	3.75	-0.84	0.18
25	969.10	1.20	179.10	968.98	-1.07	3.80	-1.07	1.81
26	980.10	1.20	206.50	979.98	-1.28	3.75	-1.28	1.55
27	989.60	1.10	210.70	989.48	-1.45	3.65	-1.45	0.41
28	999.10	1.10	227.60	998.98	-1.59	3.54	-1.59	1.02
29	1027.70	0.70	217.40	1027.57	-1.91	3.23	-1.91	0.45
30	1046.70	0.70	250.40	1046.57	-2.05	3.05	-2.05	0.63
31	1074.70	0.50	247.30	1074.57	-2.15	2.78	-2.15	0.22
32	1103.20	0.50	260.60	1103.07	-2.22	2.54	-2.22	0.12
33	1135.40	0.90	283.50	1135.27	-2.18	2.16	-2.18	0.45
34	1159.60	0.30	213.50	1159.47	-2.19	1.94	-2.19	1.05
35	1188.10	0.30	173.10	1187.97	-2.33	1.90	-2.33	0.22
36	1235.90	0.50	182.20	1235.76	-2.66	1.91	-2.66	0.13
37	1274.10	0.70	168.90	1273.96	-3.06	1.95	-3.06	0.19
38	1307.30	0.70	165.30	1307.16	-3.45	2.04	-3.45	0.04
39	1349.80	0.90	198.00	1349.66	-4.02	2.00	-4.02	0.35

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-01-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
40	1385.00	0.70	215.30	1384.85	-4.46	1.79	-4.46	0.27
41	1425.90	0.50	14.50	1425.75	-4.49	1.69	-4.49	0.87
42	1454.70	1.90	57.80	1454.55	-4.11	2.13	-4.11	1.64
43	1464.30	1.80	55.70	1464.14	-3.94	2.39	-3.94	0.38
44	1473.90	1.40	54.60	1473.74	-3.79	2.61	-3.79	1.25
45	1483.40	1.40	52.80	1483.23	-3.65	2.80	-3.65	0.14
46	1511.70	1.10	41.60	1511.53	-3.24	3.25	-3.24	0.41
47	1539.00	1.20	11.40	1538.82	-2.76	3.48	-2.76	0.67
48	1552.00	1.40	356.60	1551.82	-2.47	3.50	-2.47	0.90
49	1577.80	1.40	350.60	1577.61	-1.85	3.43	-1.85	0.17
50	1596.40	1.40	1.20	1596.21	-1.40	3.40	-1.40	0.42
51	1615.00	1.80	352.40	1614.80	-0.88	3.36	-0.88	0.76
52	1626.00	1.80	352.00	1625.79	-0.54	3.32	-0.54	0.05
53	1653.00	1.80	341.10	1652.78	0.28	3.12	0.28	0.38
54	1681.60	1.40	345.00	1681.37	1.05	2.88	1.05	0.43
55	1700.40	1.20	1.20	1700.16	1.47	2.83	1.47	0.66
56	1709.70	1.10	355.20	1709.46	1.65	2.82	1.65	0.51
57	1728.90	1.40	0.10	1728.66	2.07	2.81	2.07	0.50
58	1755.00	1.60	348.50	1754.75	2.75	2.74	2.75	0.42
59	1767.30	1.60	345.70	1767.04	3.08	2.68	3.08	0.19
*	UNABLE TO SLIDE DUE TO HIGH PUMP PRESSURE							
60	1796.10	2.10	346.80	1795.83	3.98	2.44	3.98	0.52
61	1805.70	2.50	353.10	1805.42	4.36	2.37	4.36	1.48
62	1834.70	3.30	359.80	1834.38	5.83	2.30	5.83	0.90
63	1845.80	3.30	1.90	1845.46	6.46	2.31	6.46	0.33
64	1853.80	3.50	3.60	1853.45	6.94	2.33	6.94	0.84
*	RESUME SLIDING							
65	1863.50	3.50	6.10	1863.13	7.53	2.38	7.53	0.47
66	1873.10	3.30	4.30	1872.72	8.10	2.43	8.10	0.71
67	1882.70	3.20	359.80	1882.30	8.64	2.45	8.64	0.86
68	1892.30	2.80	357.60	1891.89	9.14	2.44	9.14	1.30
69	1902.20	2.60	352.40	1901.78	9.61	2.40	9.61	0.96
70	1922.00	2.80	5.00	1921.55	10.53	2.38	10.53	0.95
Bit	1940.00	2.98	10.00	1939.53	11.43	2.50	11.43	0.52

Final Closure is 11.70 metres on an Azimuth of 12.34

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-[redacted]-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
0	501.00	0.00	0.00	501.00	0.00	0.00	0.00	0.00
1	512.30	1.10	274.70	512.30	0.01	-0.11	0.01	2.92
2	521.80	1.20	276.80	521.80	0.03	-0.30	0.03	0.35
3	531.30	1.10	270.50	531.30	0.04	-0.49	0.04	0.31
4	540.80	1.10	261.30	540.79	0.03	-0.67	0.03	0.56
5	569.40	0.70	278.20	569.39	0.01	-1.11	0.01	0.50
6	597.90	0.50	306.70	597.89	0.11	-1.39	0.11	0.37
7	627.50	0.50	304.90	627.49	0.26	-1.59	0.26	0.02
8	655.10	0.90	295.80	655.09	0.42	-1.89	0.42	0.45
9	664.60	0.70	300.00	664.58	0.49	-2.01	0.49	0.66
10	702.70	0.50	353.10	702.68	0.77	-2.23	0.77	0.45
11	731.30	1.90	90.80	731.28	0.88	-1.77	0.88	2.13
12	750.30	2.10	92.60	750.27	0.86	-1.11	0.86	0.33
13	759.80	2.10	91.10	759.76	0.85	-0.76	0.85	0.18
14	769.40	1.80	91.20	769.35	0.85	-0.43	0.85	0.94
15	797.90	1.60	86.90	797.84	0.86	0.41	0.86	0.25
16	807.40	1.60	85.50	807.34	0.88	0.68	0.88	0.12
17	836.00	1.40	90.50	835.93	0.90	1.43	0.90	0.25
18	864.60	1.40	100.70	864.52	0.84	2.12	0.84	0.26
19	893.10	1.40	119.60	893.01	0.60	2.76	0.60	0.48
20	902.60	1.20	129.60	902.51	0.48	2.94	0.48	0.95
21	921.70	1.60	142.10	921.60	0.14	3.26	0.14	0.79
22	931.20	1.80	147.40	931.10	-0.09	3.42	-0.09	0.80
23	950.20	1.60	160.40	950.09	-0.59	3.67	-0.59	0.68
24	959.70	1.60	162.50	959.59	-0.84	3.75	-0.84	0.18
25	969.10	1.20	179.10	968.98	-1.07	3.80	-1.07	1.81
26	980.10	1.20	206.50	979.98	-1.28	3.75	-1.28	1.55
27	989.60	1.10	210.70	989.48	-1.45	3.65	-1.45	0.41
28	999.10	1.10	227.60	998.98	-1.59	3.54	-1.59	1.02
29	1027.70	0.70	217.40	1027.57	-1.91	3.23	-1.91	0.45
30	1046.70	0.70	250.40	1046.57	-2.05	3.05	-2.05	0.63
31	1074.70	0.50	247.30	1074.57	-2.15	2.78	-2.15	0.22
32	1103.20	0.50	260.60	1103.07	-2.22	2.54	-2.22	0.12
33	1135.40	0.90	283.50	1135.27	-2.18	2.16	-2.18	0.45
34	1159.60	0.30	213.50	1159.47	-2.19	1.94	-2.19	1.05
35	1188.10	0.30	173.10	1187.97	-2.33	1.90	-2.33	0.22
36	1235.90	0.50	182.20	1235.76	-2.66	1.91	-2.66	0.13
37	1274.10	0.70	168.90	1273.96	-3.06	1.95	-3.06	0.19
38	1307.30	0.70	165.30	1307.16	-3.45	2.04	-3.45	0.04
39	1349.80	0.90	198.00	1349.66	-4.02	2.00	-4.02	0.35

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-01-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
40	1385.00	0.70	215.30	1384.85	-4.46	1.79	-4.46	0.27
41	1425.90	0.50	14.50	1425.75	-4.49	1.69	-4.49	0.87
42	1454.70	1.90	57.80	1454.55	-4.11	2.13	-4.11	1.64
43	1464.30	1.80	55.70	1464.14	-3.94	2.39	-3.94	0.38
44	1473.90	1.40	54.60	1473.74	-3.79	2.61	-3.79	1.25
45	1483.40	1.40	52.80	1483.23	-3.65	2.80	-3.65	0.14
46	1511.70	1.10	41.60	1511.53	-3.24	3.25	-3.24	0.41
47	1539.00	1.20	11.40	1538.82	-2.76	3.48	-2.76	0.67
48	1552.00	1.40	356.60	1551.82	-2.47	3.50	-2.47	0.90
49	1577.80	1.40	350.60	1577.61	-1.85	3.43	-1.85	0.17
50	1596.40	1.40	1.20	1596.21	-1.40	3.40	-1.40	0.42
51	1615.00	1.80	352.40	1614.80	-0.88	3.36	-0.88	0.76
52	1626.00	1.80	352.00	1625.79	-0.54	3.32	-0.54	0.05
53	1653.00	1.80	341.10	1652.78	0.28	3.12	0.28	0.38
54	1681.60	1.40	345.00	1681.37	1.05	2.88	1.05	0.43
55	1700.40	1.20	1.20	1700.16	1.47	2.83	1.47	0.66
56	1709.70	1.10	355.20	1709.46	1.65	2.82	1.65	0.51
57	1728.90	1.40	0.10	1728.66	2.07	2.81	2.07	0.50
58	1755.00	1.60	348.50	1754.75	2.75	2.74	2.75	0.42
59	1767.30	1.60	345.70	1767.04	3.08	2.66	3.08	0.19
*	UNABLE TO SLIDE DUE TO HIGH PUMP PRESSURE							
60	1796.10	2.10	346.80	1795.83	3.98	2.44	3.98	0.52
61	1805.70	2.50	353.10	1805.42	4.36	2.37	4.36	1.48
62	1834.70	3.30	359.80	1834.38	5.83	2.30	5.83	0.90
63	1845.80	3.30	1.90	1845.46	6.46	2.31	6.46	0.33
64	1853.80	3.50	3.60	1853.45	6.94	2.33	6.94	0.84
*	RESUME SLIDING							
65	1863.50	3.50	6.10	1863.13	7.53	2.38	7.53	0.47
66	1873.10	3.30	4.30	1872.72	8.10	2.43	8.10	0.71
67	1882.70	3.20	359.80	1882.30	8.64	2.45	8.64	0.86
68	1892.30	2.80	357.60	1891.89	9.14	2.44	9.14	1.30
69	1902.20	2.60	352.40	1901.78	9.61	2.40	9.61	0.96
70	1922.00	2.80	5.00	1921.55	10.53	2.38	10.53	0.95
Bit	1940.00	2.98	10.00	1939.53	11.43	2.50	11.43	0.52

Final Closure is 11.70 metres on an Azimuth of 12.34

WELLSITE BIT RECORD

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

SPUD DATE: Dec. 12, 2000
T.D. DATE:

SURFACE CASING: 40 jts. of 244.5mm, J-55, 53.6kg/m set @ 501.0m

BIT #	1RTA	2A	3RR	4	5RR	6
SIZE (mm)	311	311	222	222	222	222
MAKE	Hughes		Hughes	Varel	Varel	Hughes
TYPE	GT-C0	SDGH	EP4727	ETD34XG	ETD55D-ER	ATJ-P66DC
SERIAL #	L71DM	700878	P25DJ	162685	149558	E68ZY
JETS	3x15.9	3x15.9	3x12.7	3x15.9	3x17.5	3x17.5
DEPTH IN	0.00	291.00	501.00	986.00	1404.00	1493.00
DEPTH OUT	291.00	501.00	986.00	1404.00	1493.00	1643.00
METRES	291.00	210.00	485.00	418.00	89.00	150.00
HOURS	35.25	41.75	26.50	52.00	21.75	41.00
ACC. HRS.	35.25	77.00	103.50	155.50	177.25	218.25
ROP (m/hr)	8.26	5.03	18.30	8.04	4.09	3.66
FOB	10-12daN	4-10daN	8-16daN	14-16daN	14-16daN	25daN
RPM	160-180	170-180	90+motor	90+motor	85+motor	55+motor
PP	9800	10500	10200	10200	7560	8300
DEN	1170	1200	1090	1130	1120	1135
VISCOSITY	54	81	38	57	64	64
MAX DEV.°	1.000°	1.000°	1.200°	0.500°	1.200°	1.800°
Condition:	T/B/G	T/B/G	T/B/G	T/B/G	T/B/G	T/B/G
Condition:	T/O/R/A/E	T/O/R/A/E	T/O/R/A/E	T/O/R/D/E	T/O/R/D/E	T/O/R/D/E
	4-4-FC-A	4-4-SS-A	2-2-NO-A	5-8-LT-H	5-8-LT-H	
	B/G/O/R/S	B/G/O/R/S	B/G/O/R	B/G/O/R	B/G/O/R	B/G/O/R/S
	6-IN-PR	1-IN-TD	2-IN-TO	8-14-TO	8-14-PR	
REMARKS	Surface hole	Surface hole	Main hole mud motor	Main hole mud motor	Main hole mud motor	Main hole mud motor

WELLSITE BIT RECORD

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

SPUD DATE: Dec. 12, 2000
T.D. DATE: Jan. 5, 2001

SURFACE CASING: 40 jts. of 244.5mm, J-55, 53.6kg/m set @ 501.0m

BIT #	5	6	7	8	9	
SIZE (mm)	222	222	222	222	222	
MAKE	Smith	RB1	Hughes	RB1	Smith	
TYPE	F67OD	C7LRGSP	ATJ588DX	C8LRGDSP	F80D-PS	
SERIAL #	MG1562	BZ996	H96ZB	BZ998	MG1754	
JETS	3x17.5	3x17.5	3x17.5	3x19.1	3x19.1	
DEPTH IN	1643.00	1718.00	1773.00	1873.00	1912.00	
DEPTH OUT	1718.00	1773.00	1873.00	1912.00	1940.00	
METRES	75.00	55.00	100.00	39.00	28.00	
HOURS	23.25	19.25	33.75	21.75	11.00	
ACC. HRS.	241.50	260.75	294.50	316.25	327.25	
ROP (m/hr)	3.23	2.86	2.96	1.79	2.55	
FOB	20daN	25daN	25daN	25daN	25daN	
RPM	55+motor	55+motor	55+motor	55+motor	55+motor	
PP	8000	8000	10500	8000	8000	
DEN	1150	1145	1135	1140	1140	
VISCOSITY	64	70	60	62	76	
MAX DEV.°	1.100°	1.600°	3.500°	2.600°	2.980°	
Condition:	T/BG	T/BG	T/BG	T/BG	T/BG	
Condition:	IR/ORD/I	IR/OR/WT	IR/OR/WT	IR/ORD/I	IR/OR/I	
	6-8-RG-A	6-8-BT-A	6-6-WT-A	4-8-WT-A	5-8-RG-A	
	RG/OR/PR	NG/OR/PR	SD/OR/PR	RG/OR/PR	NG/OR/PR	
	6-18-PR	7-20-PR	6-22-PR	7-30-PR	4-IN-TD	
REMARKS	Main hole mud motor	Main hole mud motor	Main hole mud motor	Main hole mud motor	Main hole mud motor	



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/07/2001**

Job Ticket #: **T4-5157** DST#: **1**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
Job Ticket #: T4-5157 DST#: 1
Test Date: 01/07/2001 400hrs

Contact: WILBERT CALLIHOO
Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

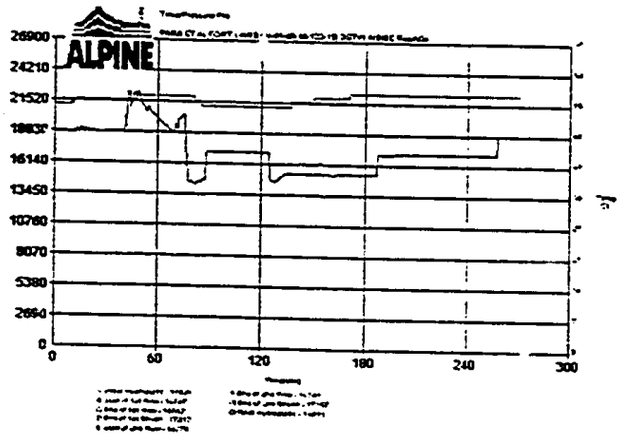
General Information:

Test Type:	INFLATE STRADDLE	Tester:	BILL HOLLINGSHEAD
Interval:	1682m -1691m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1670.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18820.4
B Start of 1st Flow	0.00	14766.7
C End of 1st Flow	10.02	14742.2
D End of 1st Shutin	36.90	17212.2
E Start of 2nd Flow	0.00	14777.7
F End of 2nd Flow	61.08	15340.6
G End of 2nd Shutin	70.14	17187.2
Q Final Hydrostatic	0.00	18810.5



Test Run Information:

Start Time:	400hrs
Reached Test Depth:	947hrs
Pull Out Time:	1245hrs
Tool Out Of Hole:	
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	74.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1140.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 10 - 39 - 60 - 70
TOOL OPEN FOR PREFLOW AT 09:47 JAN. 07 , 2001

PREFLOW: Strong air blow immediatelly gas to surface in 1.5 minutes strong 7 metre flare.

FINAL FLOW: Strong gas blow immediately and throughout. Mud spray to surface at 10 to 18 minutes into flow. See gas recovery page of this report for gas flow rates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 20 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.

Job Ticket #: T4-5157 DST#: 1

Test Date: 01/07/2001 400hrs

Contact: WILBERT CALLIHOO

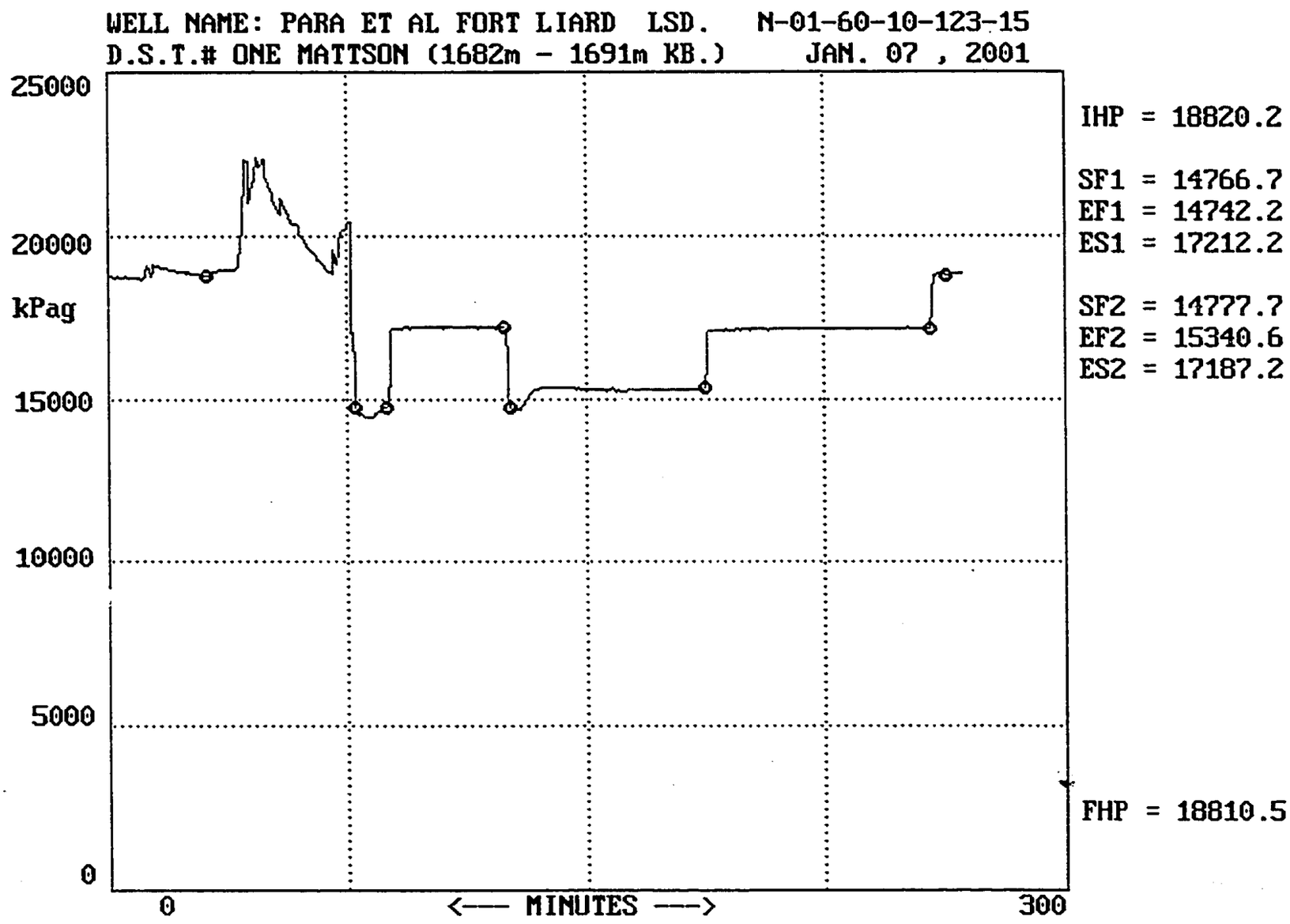
Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

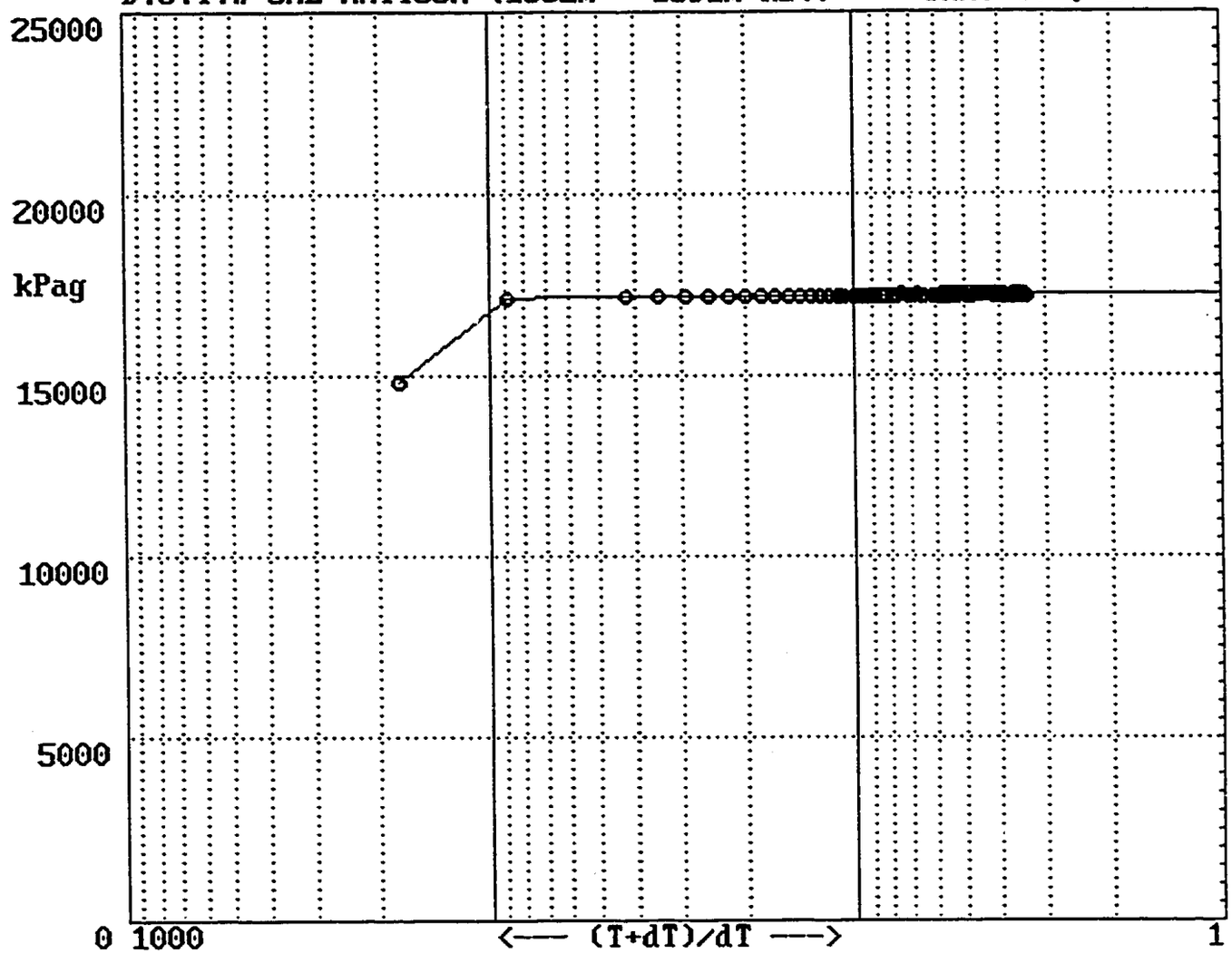
Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	6000	548260.00
20	22.23	6500	592831.00
30	22.23	6500	592831.00
40	22.23	6500	592831.00
50	22.23	6500	592831.00
60	22.23	6500	592831.00


WELL NAME: PARA ET AL FORT LIARD LSD. N-01-60-10-123-15
D.S.T.# ONE MATTSON (1682m - 1691m KB.) JAN. 07 , 2001
25000
20000
kPag
15000
10000
5000
0
0
<—— MINUTES ——>
300
IHP = 18820.2
SF1 = 14766.7
EF1 = 14742.2
ES1 = 17212.2
SF2 = 14777.7
EF2 = 15340.6
ES2 = 17187.2
FHP = 18810.5

WELL NAME: PARA ET AL FORT LIARD LSD. N-01-60-10-123-15
D.S.T.# ONE MATTSON (1682m - 1691m KB.) JAN. 07 , 2001



HORNER PLOT
SHUT-IN # 1

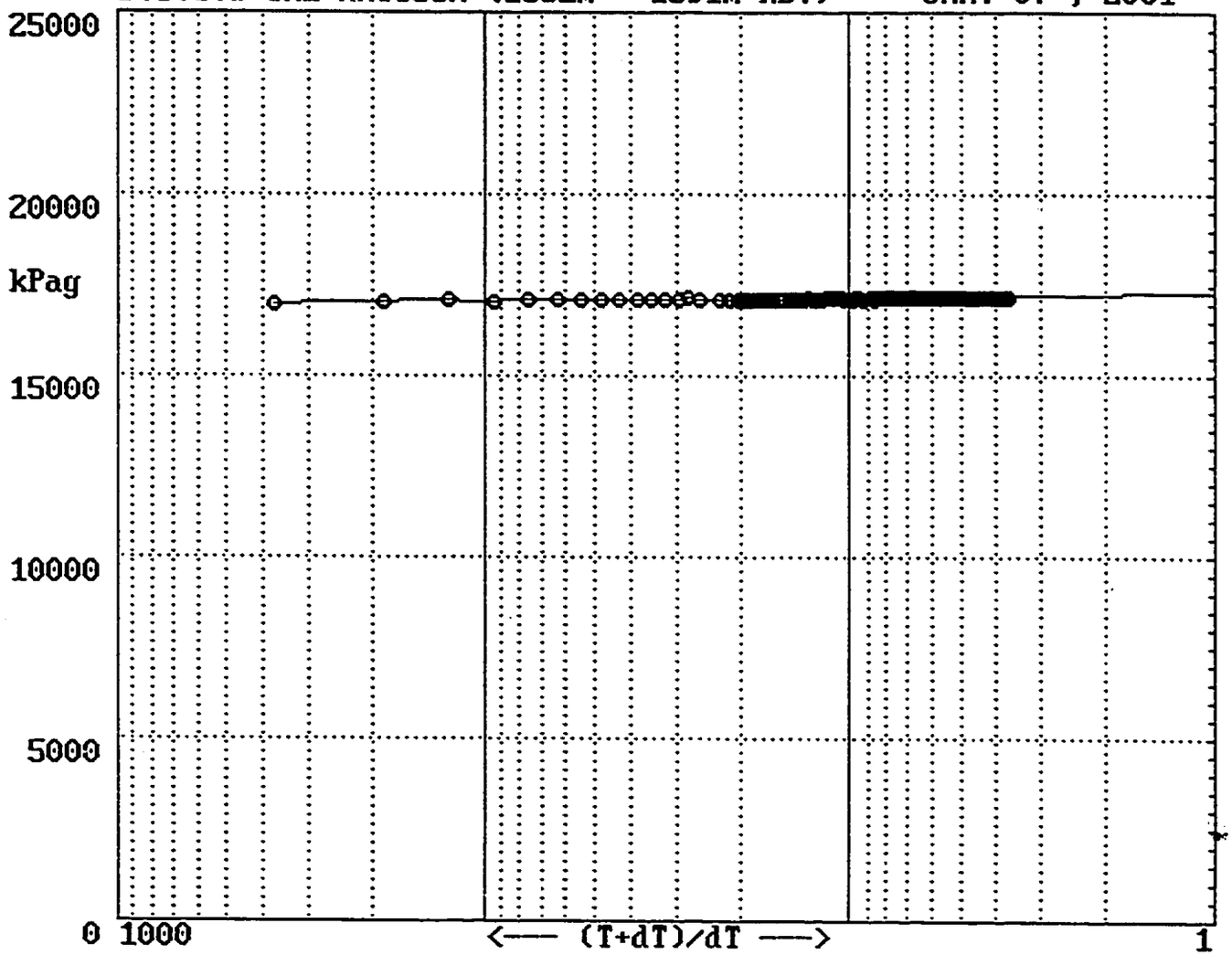
SLOPE =
31.9
kPa/cycle

Extrapolated
Pressure =
17234.5
kPag

- 5d -

*p275Y

WELL NAME: PARA ET AL FORT LIARD LSD. N-01-60-10-123-15
D.S.T.# ONE MATTSON (1682m - 1691m KB.) JAN. 07 , 2001



HORNER PLOT
SHUT-IN # 2

SLOPE =
208.3
kPa/cycle

Extrapolated
Pressure =
17303.2
kPag

ALPINE

Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/07/2001**

Job Ticket #: **D2-9622** DST#: **1**

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Contact: WILBERT CALLIHOO Well Name: PARAMOUNT ET AL FT [redacted]RL
Location: N-01-60-10-123-15

Inflate Straddle

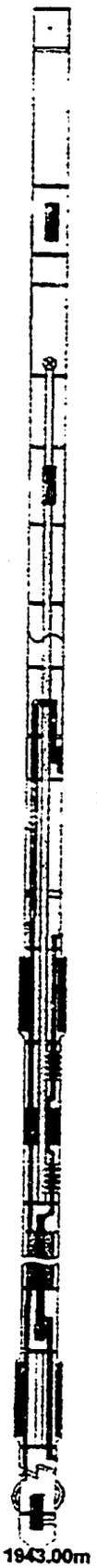
Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	65
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1686.22m
Total Drill Pipe Above K.B.:	4.22m
Total Depth:	1943m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1235.83	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.35	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC#1902
INSIDE RECORDER FAILED WAS FLOODED



Item	Length
P.O. Sub	0.31
C.O. Sub	0.30
P.O. Sub	0.31
FLUID REC#63	1.50
HMV Stroke	2.18
Sampler	1.10
INSIDE REC#70	1.50
Telemetry Tool	5.80
Jars	1.82
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	4.26
Bypass Receiver	0.78
Stubb	0.72
Packer	1.78
Extension Sub	[redacted]71
Drag Spring	2.08

Total Depth: 1943.00m

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs
Well Name: PARAMOUNT ET AL FT. LIARD
Contact: WILBERT CALLIHOO
Location: N-O1-60-10-123-15

General Information:

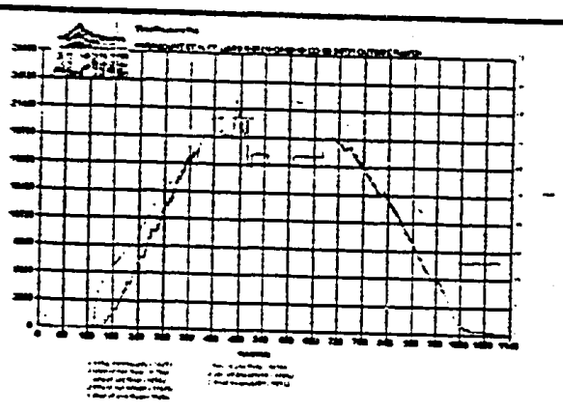
Test Type: INFLATE STRADDLE
Interval: 1682.00m - 1691.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1943.00m
Test Mode: Gas

Tester: DANNY ROSS
Truck No.: UNIT 677
Contractor: PRECISION
Rig No.: 379
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 61.00 C

Electronic Recorder Information:

OUTSIDE	
Recorder #: 124	Recorder #:
Range: 70000 kPag	Range: kPag
Depth: 1684.00 m	Depth: m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18971.3
B Start of 1st Flow	0.00	15798.8
C End of 1st Flow	10.00	15841.6
D End of 1st Shutin	37.00	17075.4
E Start of 2nd Flow	0.00	15569.8
F End of 2nd Flow	60.00	16184.2
G End of 2nd Shutin	70.00	17041.9
Q Final Hydrostatic	0.00	18832.4



Test Run Information:

Start Time: 400hrs
Reached Test Depth: 900hrs
Pull Out Time: 1300hrs
Tool Out Of Hole: 1900hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 41000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1110.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion: N/A

Water Loss: 8.50cm³
Mud Drop: NO
VIS: 74.00S/L
Filter Cake: 1.60mm
Pump Time: 25min
Reversed Out: NO

General Remarks:

PREFLOW: SRTONG AIR BLOW IMMEDIATELY. GAS TO SURFACE IN 1min. 30secs. WITH A STRONG 7m FLARE AT PIT.
FINAL FLOW:GAS TO SURFACE IMMEDIATELY. REFER TO CHARTS FOR GAS PRESSURES.

Recovery Description:

ONE SAMPLER RUN G.P.=96 2 GAS BOMBS CAUGHT PF=0000198 & MF=0000618. Total fluid recovery was 27 meters, consisting of 22 metres of clear condensate with 48api gravity. 5 metres of drilling mud. 5fluid recovery samples and 1 mud tank sample.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 6 Sent to: AGAT LAB

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9622 DST#: 1

Test Date: 01/07/2001 400hrs

Contact: WILBERT CALLIHOO Well Name: PARAMOUNT ET AL FT. [illegible]RC

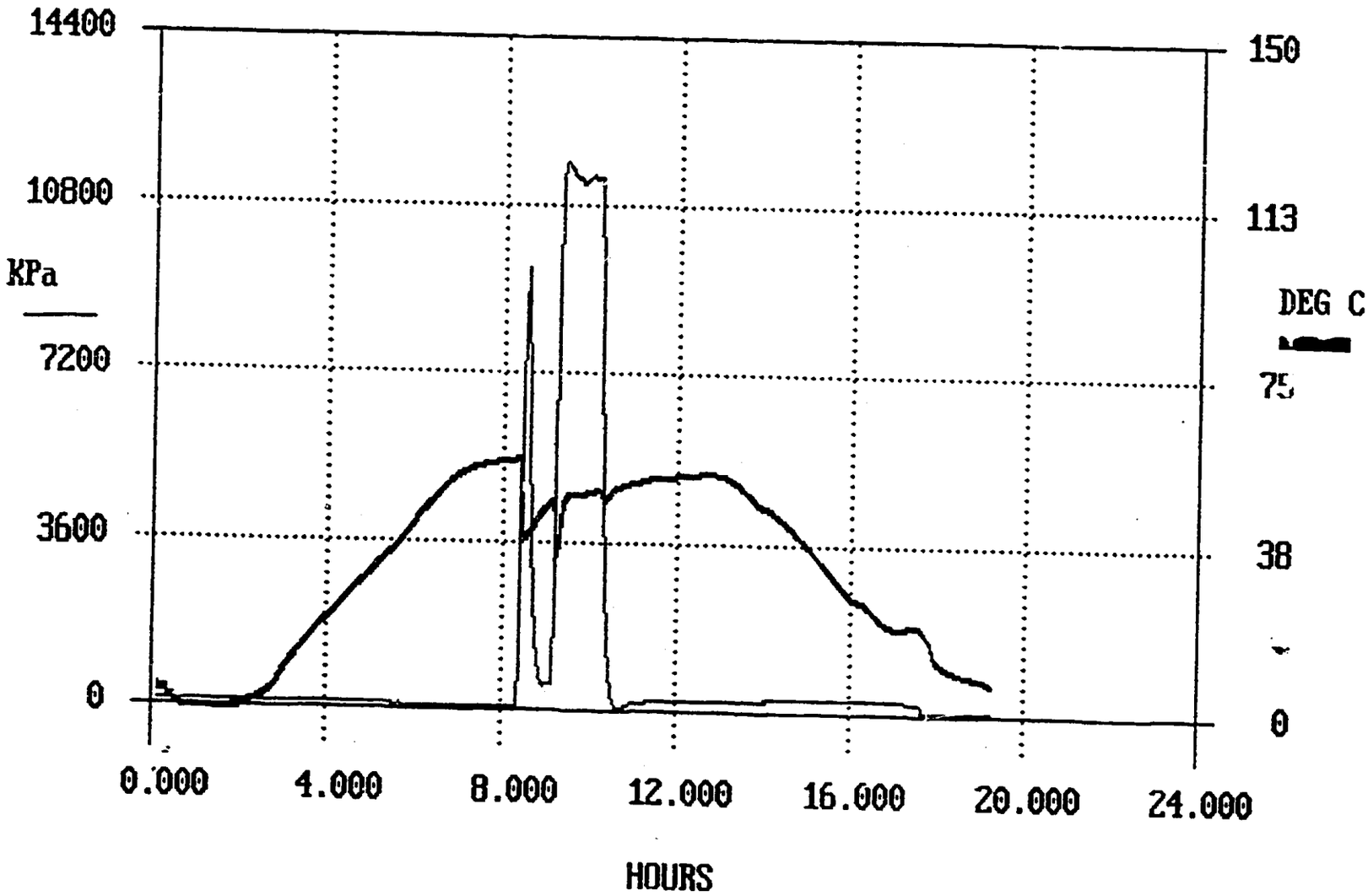
Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

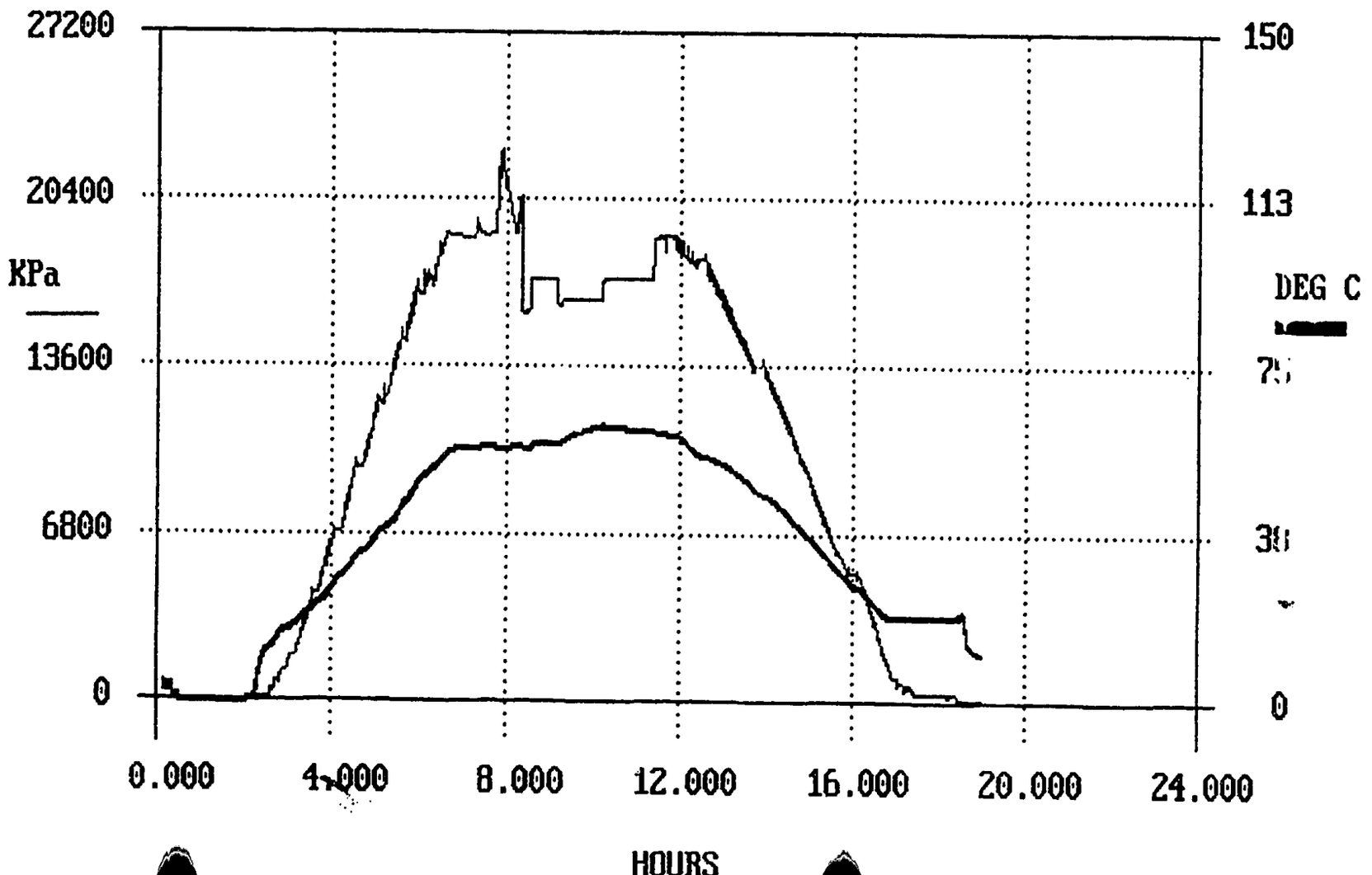
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	6000	548260.00
20	22.23	6500	592831.00
30	22.23	6500	592831.00
40	22.23	6500	592831.00
50	22.23	6500	592831.00
60	22.23	6500	592831.00

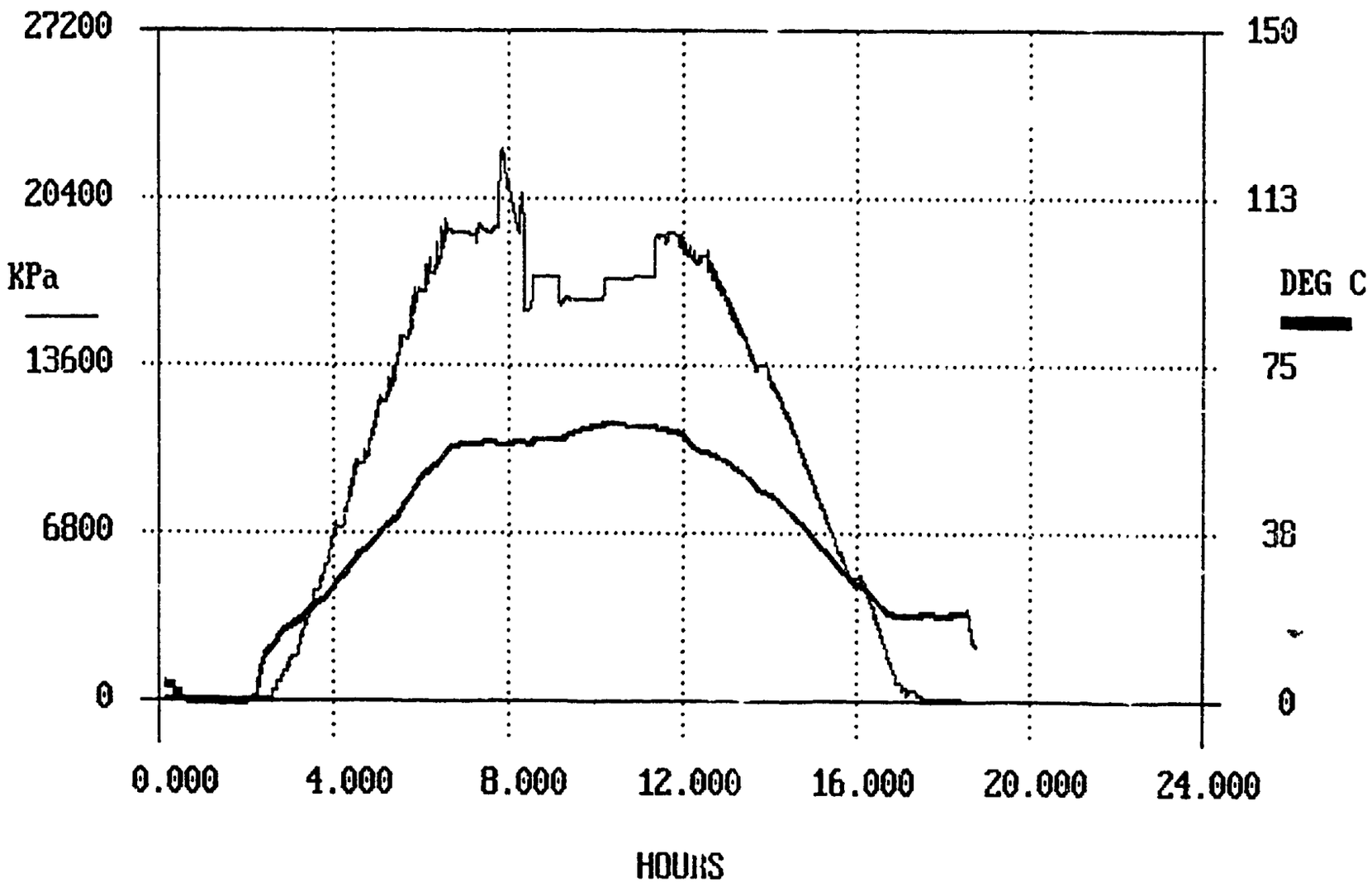
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s/n 124 PARAMOUNT ET AL FT.LIARD N-01 DST#1 TIC#2-9622 REC#124 OUTSIDE



FILE: <C:\ALP_IN\C2400712.126>
s/n 126 PARAMOUNT ET AL FT.LIARD N-01 DST#1 TIC#2-9622 REC#126 OUTSIDE





Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/08/2001**

Job Ticket #: **T4-5158** DST#: **2**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.

Job Ticket #: T4-5158 DST#: 2

Test Date: 01/08/2001 2100hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO

Location: N-01-60-10-123-15

General Information:

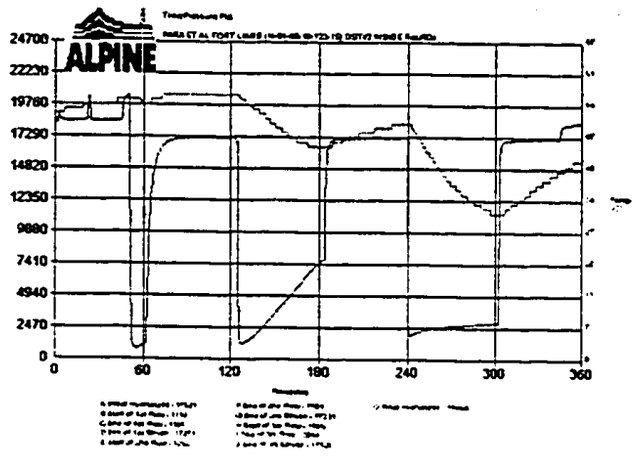
Test Type:	INFLATE STRADDLE	Tester:	BILL HOLLINGSHEAD
Interval:	1643m -1648m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	56.00 C

Telemetry Recorder Information:

INSIDE

Recorder #: 934 Depth: 1631.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18521.2
B Start of 1st Flow	0.00	1110.0
C End of 1st Flow	9.12	1194.8
D End of 1st Shutin	62.04	17251.1
E Start of 2nd Flow	0.00	1251.5
F End of 2nd Flow	57.00	7800.9
G End of 2nd Shutin	51.42	17230.8
H Start of 3rd Flow	0.00	1864.6
I End of 3rd Flow	60.54	2943.9
J End of 3rd Shutin	41.82	17126.4
Q Final Hydrostatic	0.00	18464.3



Test Run Information:

Start Time:	2100hrs
Reached Test Depth:	230hrs
Pull Out Time:	720hrs
Tool Out Of Hole:	
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	74.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1140.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 10 - 60 - 60 - 55 - 60 - 42
TOOL OPEN FOR PREFLOW AT 02:30 JAN. 08 , 2001

PREFLOW: Strong air blow immediately gas to surface in 4 minutes lazy 3 metre flare.

SECOND FLOW: Gas to surface immediately lazy 3 metre flare steady throughout . See gas recovery page of this report for gas flow rates.

FINAL FLOW: Gas to surface immediately 4metre flare throughout. See gas recovery page of this report for gas flow rates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 120 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5158 DST#: 2
Test Date: 01/08/2001 2100hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: 0

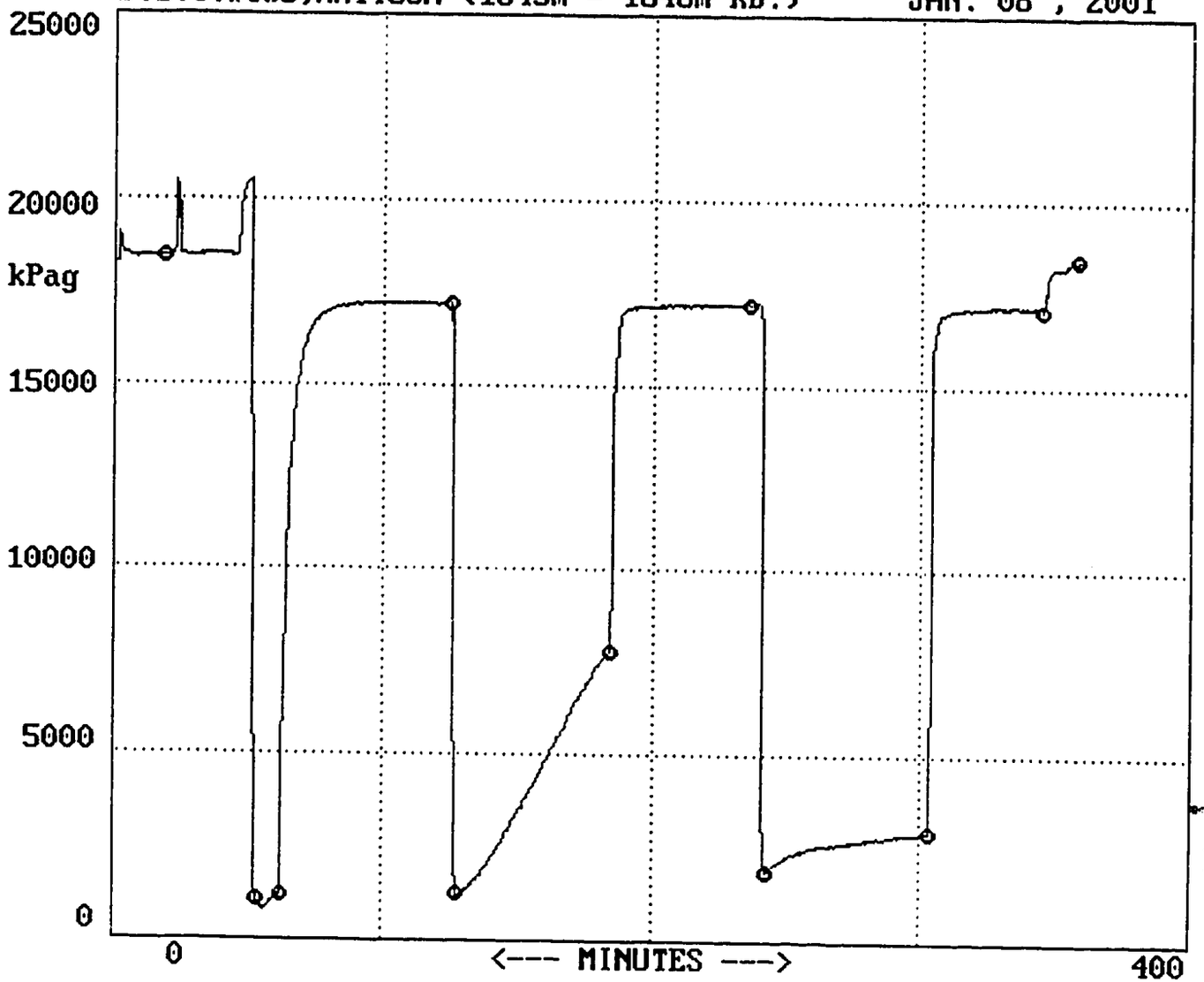
Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	6.35	650	4572.00
20	6.35	1300	8570.00
30	6.35	2800	17702.00
40	6.35	3700	23215.00
50	6.35	5100	31758.00
60	6.35	6200	38449.00

Gas Measurements for Flow # 3

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	12.70	1000	28567.00
20	12.70	1100	31072.00
30	12.70	1200	33756.00
40	12.70	1200	33756.00
50	12.70	1200	33756.00
60	12.70	1200	33756.00

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.) JAN. 08 , 2001



IHP = 18520.9

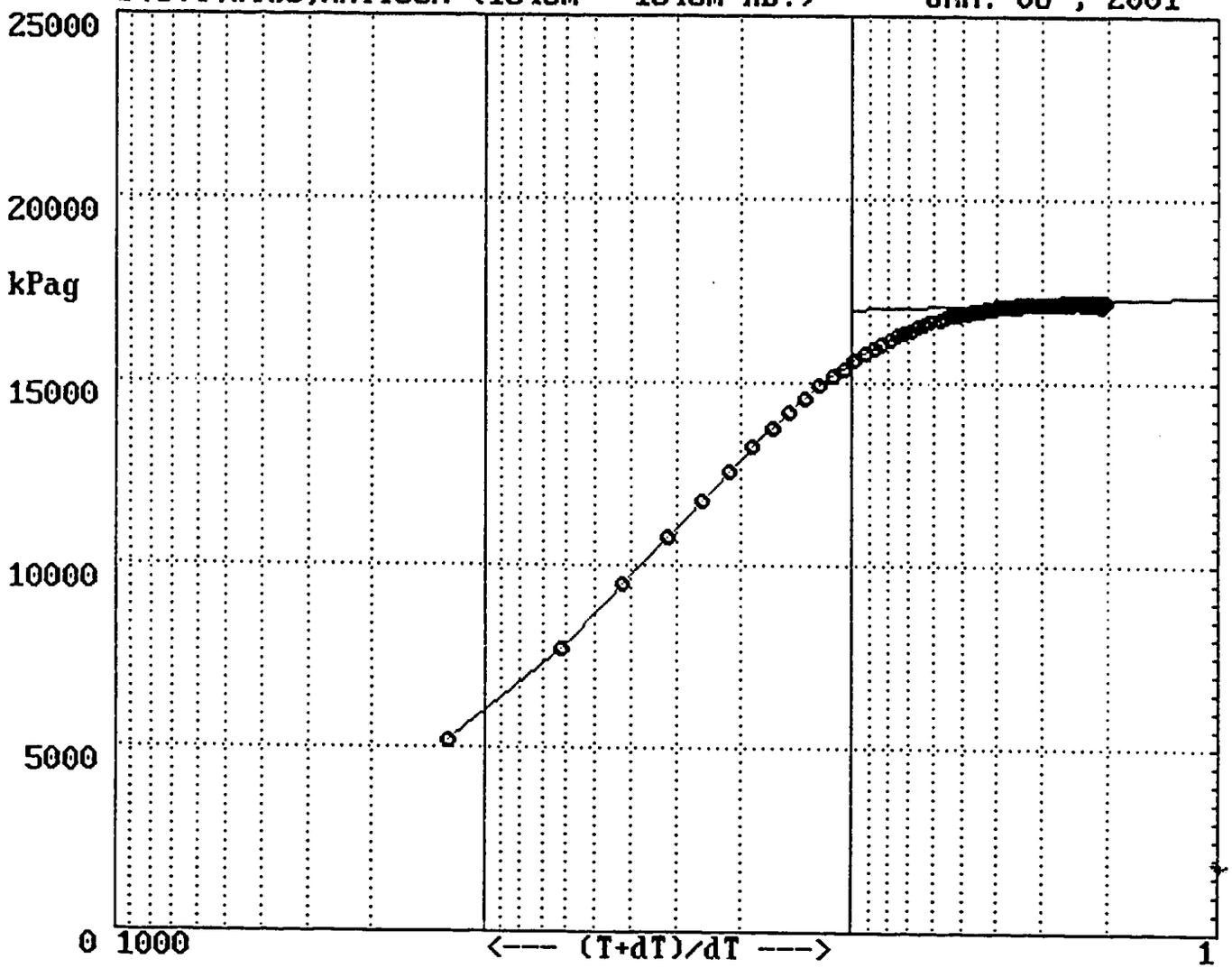
SF1 = 1110.0
EF1 = 1194.8
ES1 = 17251.1

SF2 = 1251.5
EF2 = 7800.9
ES2 = 17230.8

SF3 = 1864.6
EF3 = 2943.9
ES3 = 17126.4

FHP = 18464.3

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.) JAN. 08 , 2001

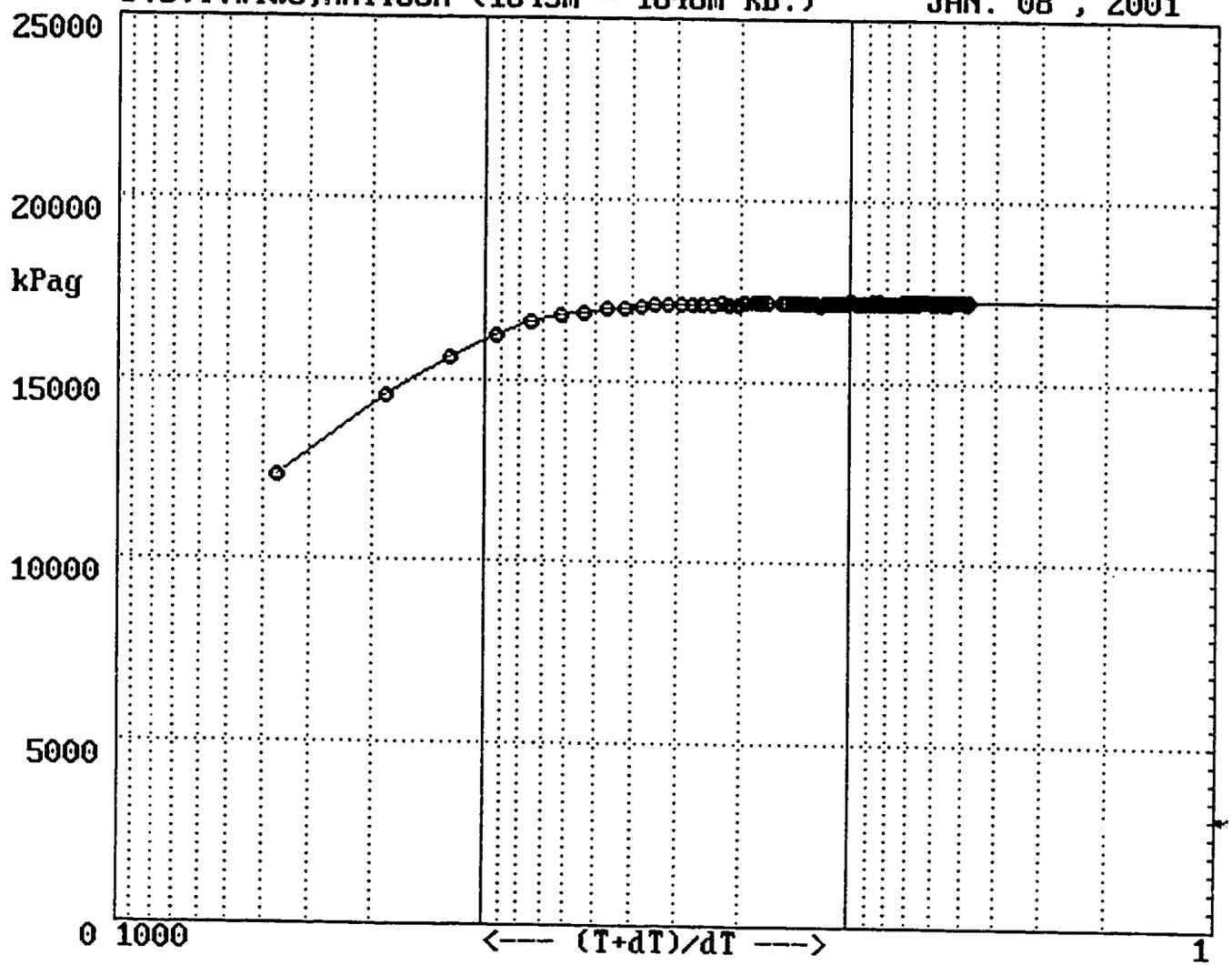


HORNER PLOT
SHUT-IN # 1

SLOPE =
386.5
kPa/cycle

Extrapolated
Pressure =
17357.6
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.) JAN. 08 , 2001

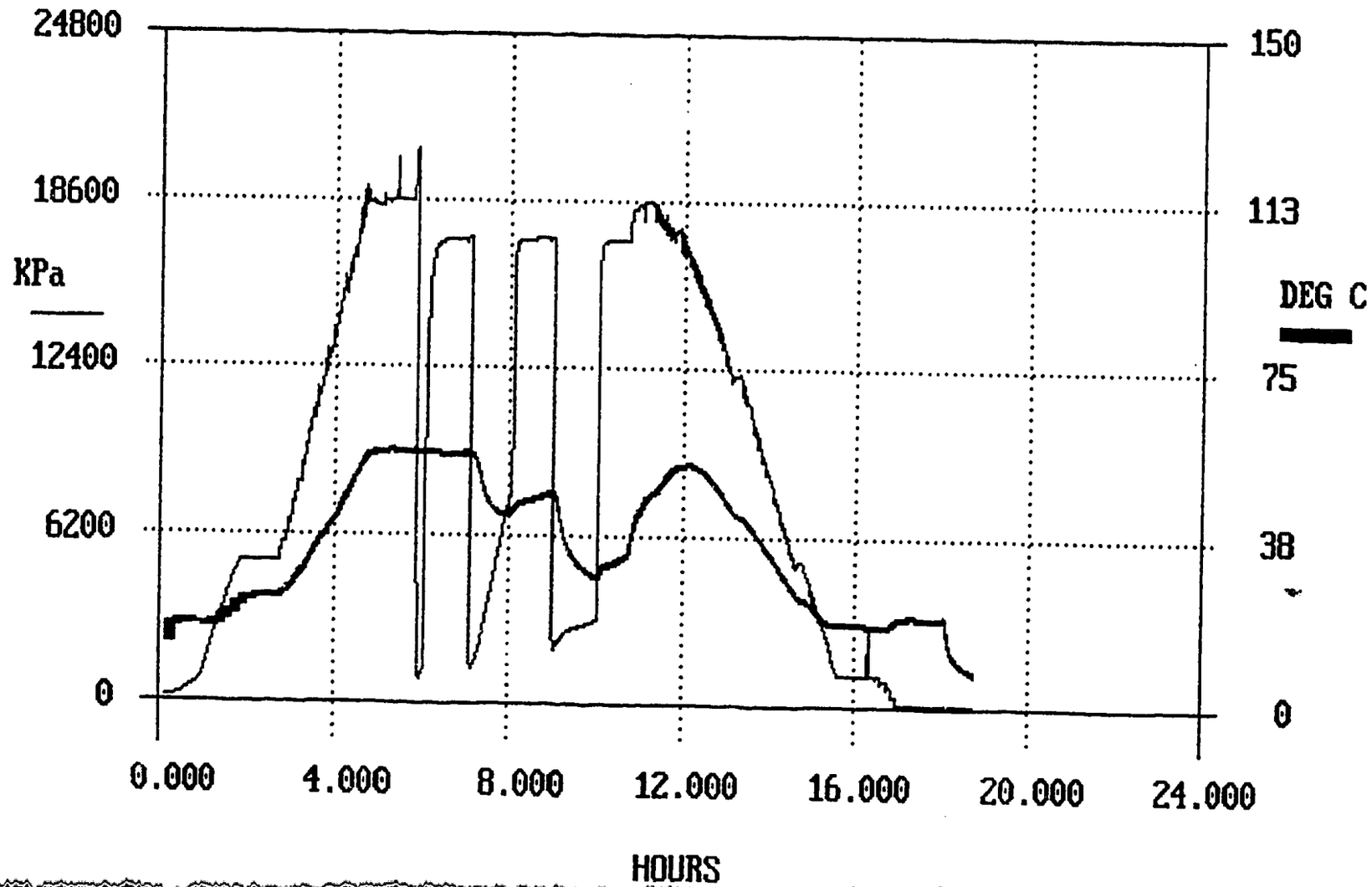


HORNER PLOT
SHUT-IN # 2

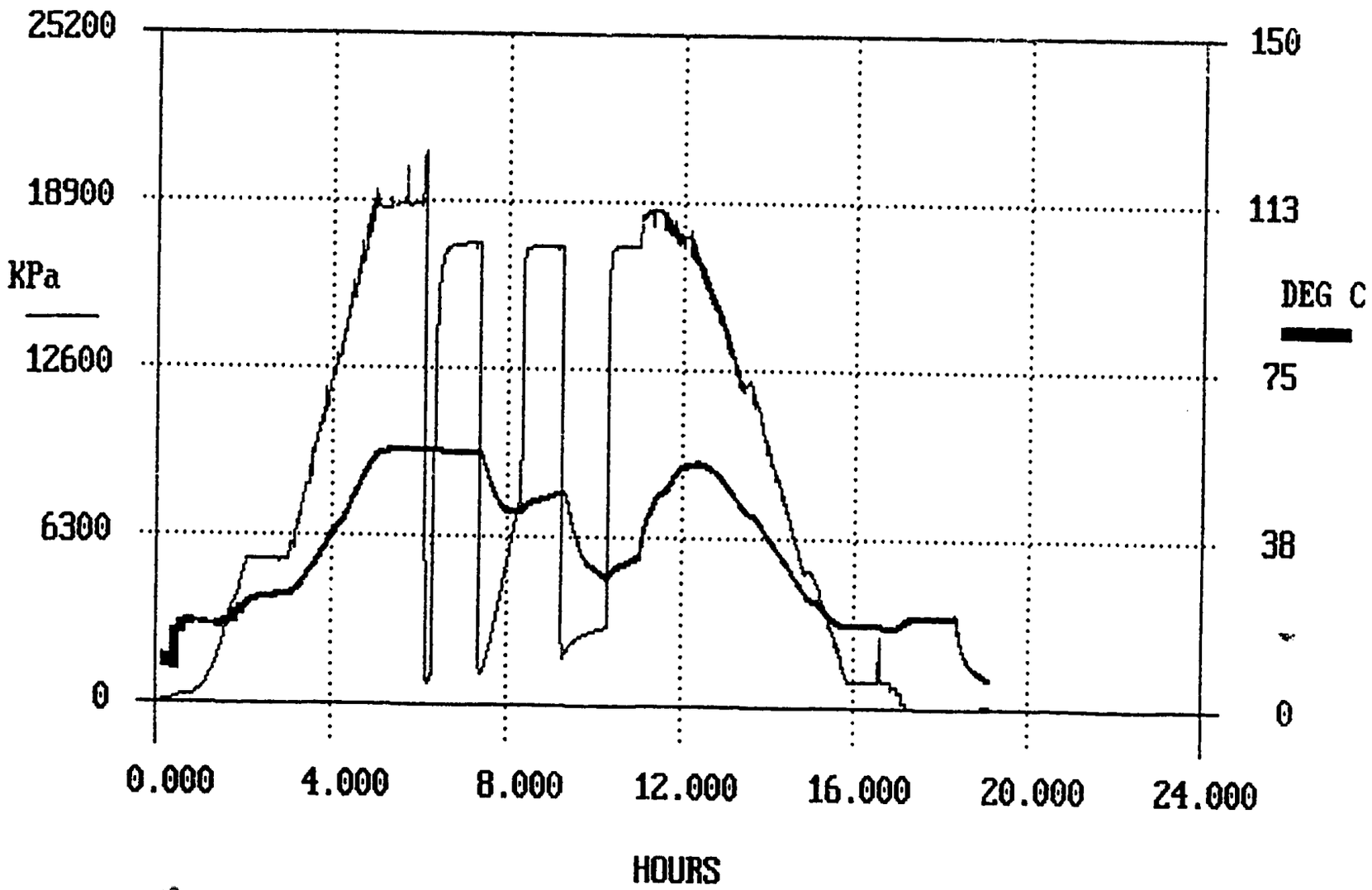
SLOPE =
6.8
kPa/cycle

Extrapolated
Pressure =
17236.0
kPag

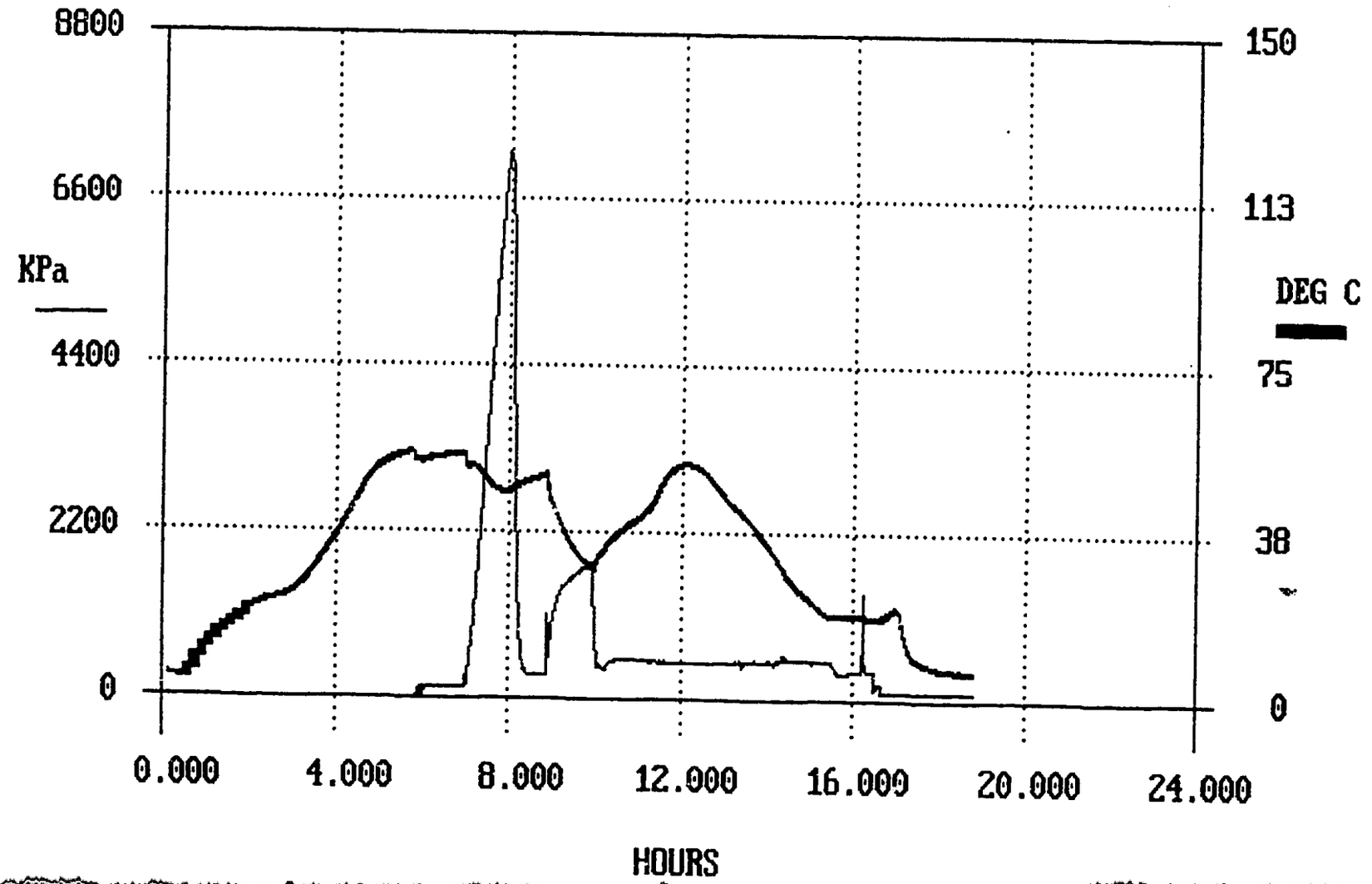
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s/n 124 PARAMOUNT ET AL FT. LIARD N-01 DST#2 TIC#2-9623 REC#124 OUTSIDE



FILE: <C:\ALP_IN\10810200.126>
s/n 126 PARAMOUNT ET AL FT LIARD N-01 DST#2 TIC#2-9623 REC#126 OUTSIDE



FILE: <C:\ALP_IN\10810200.063>
s/n 63 PARAMOUNT ET AL FT. LIARD N-01 DST#2 TIC#2-9623 REC#63 FLUID E



ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9623 DST#: 2

Test Date: 01/07/2001 2130hrs

Contact: WILBERT CALLIHOO Well Name: PARAMOUNT ET AL FT. LIARD

Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	6.35	650	4572.00
20	6.35	1300	8570.00
30	6.35	2800	17702.00
40	6.35	3700	23215.00
50	6.35	5100	31758.00
60	6.35	6200	38449.00

Gas Measurements for Flow # 3

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	12.70	1000	28567.00
20	12.70	1100	31072.00
30	12.70	1200	33756.00
40	12.70	1200	33756.00
50	12.70	1200	33756.00
60	12.70	1200	33756.00

Drill Stem Testing - Tool Diagram / Description

ALPINE

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9623 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARAMOUNT ET AL FT. LIAR

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	63
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1649.83m
Total Drill Pipe Above K.B.:	6.83m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1199.67	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC# 1902



Item	Length
P.O. Sub	0.3
C.O. Sub	0.3
P.O. Sub	0.3
FLUID REC#63	1.5
HMV Stroke	2.1
Sampler	1.1
INSIDE REC#70	1.5
Telemetry Tool	5.8
Jars	1.8
Safety Joint	0.6
Pump	2.0
Screen	1.1
Valve	2.2
Deflate	0.8
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	0.30
Bypass Receiver	0.78
Stubb	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

Total Depth: 1940.00m

- 011 -

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9623 DST#: 2

Test Date: 01/07/2001 2130hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

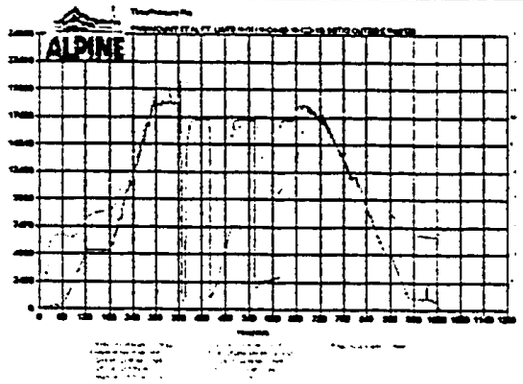
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DANNY ROSS
Interval:	1643.00m - 1648.00m	Truck No.:	UNIT 677
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	56.00 C

Electronic Recorder Information:

OUTSIDE Recorder #: 126		OUTSIDE Recorder #: 124	
Range:	70000 kPag	Range:	70000 kPag
Depth:	1645.00 m	Depth:	1645.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18681.9
B Start of 1st Flow	0.00	849.5
C End of 1st Flow	7.00	1063.7
D End of 1st Shutin	63.00	17250.2
E Start of 2nd Flow	0.00	1141.2
F End of 2nd Flow	55.00	7674.9
G End of 2nd Shutin	56.00	17136.8
H Start of 3rd Flow	0.00	1787.1
I End of 3rd Flow	60.00	2967.6
J End of 3rd Shutin	42.00	17194.6
Q Final Hydrostatic	0.00	18485.2



Test Run Information:

Start Time:	2130hrs
Reached Test Depth:	200hrs
Pull Out Time:	800hrs
Tool Out Of Hole:	1530hrs
Weight set on Packers:	8000.00daN
Weight to free Packers:	8000.00daN
Initial String Weight:	40000.00daN
Unseated String Weight:	42000.00daN

Tool Chased Dist:	0.00m	Water Loss:	8.50cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1110.00kg/m³	VIS:	74.00S/L
Amount of fill:	0.00m	Filter Cake:	1.60mm
Amt of cushion:	0.00	Pump Time:	25min
Type of cushion:	N/A	Reversed Out:	NO

General Remarks:

PREFLOW:STRONG AIR BLOW IMMEDIATELY. GAS TO SURFACE IN 4mins. STEADY 3m FLARE.
FINAL FLOW:STRONG GAS BLOW IMMEDIATLEY REFER TO CHARTS FOR PRESSURES.
THIRD FLOW: STRONG GAS BLOW IMMEDIATELY. REFER TO CHARTS FOR PRESSURES.

Recovery Description:

ONE SAMPLER RUN G.P.=40. TWO GAS BOMBS WERE CAUGHT PF=0002009 & MF=0007001. TOTAL FLUID RECOVERY WAS 75m CONSISTING OF MAINLY DRILLING FLUID WITH APPROX. 5m OF CONDINSATE MIXED MUD.

Gas Bomb: 2 Sample: 1

Fluid Sample: 5 Sent to: AGAT LAB



Drill Stem Test Report

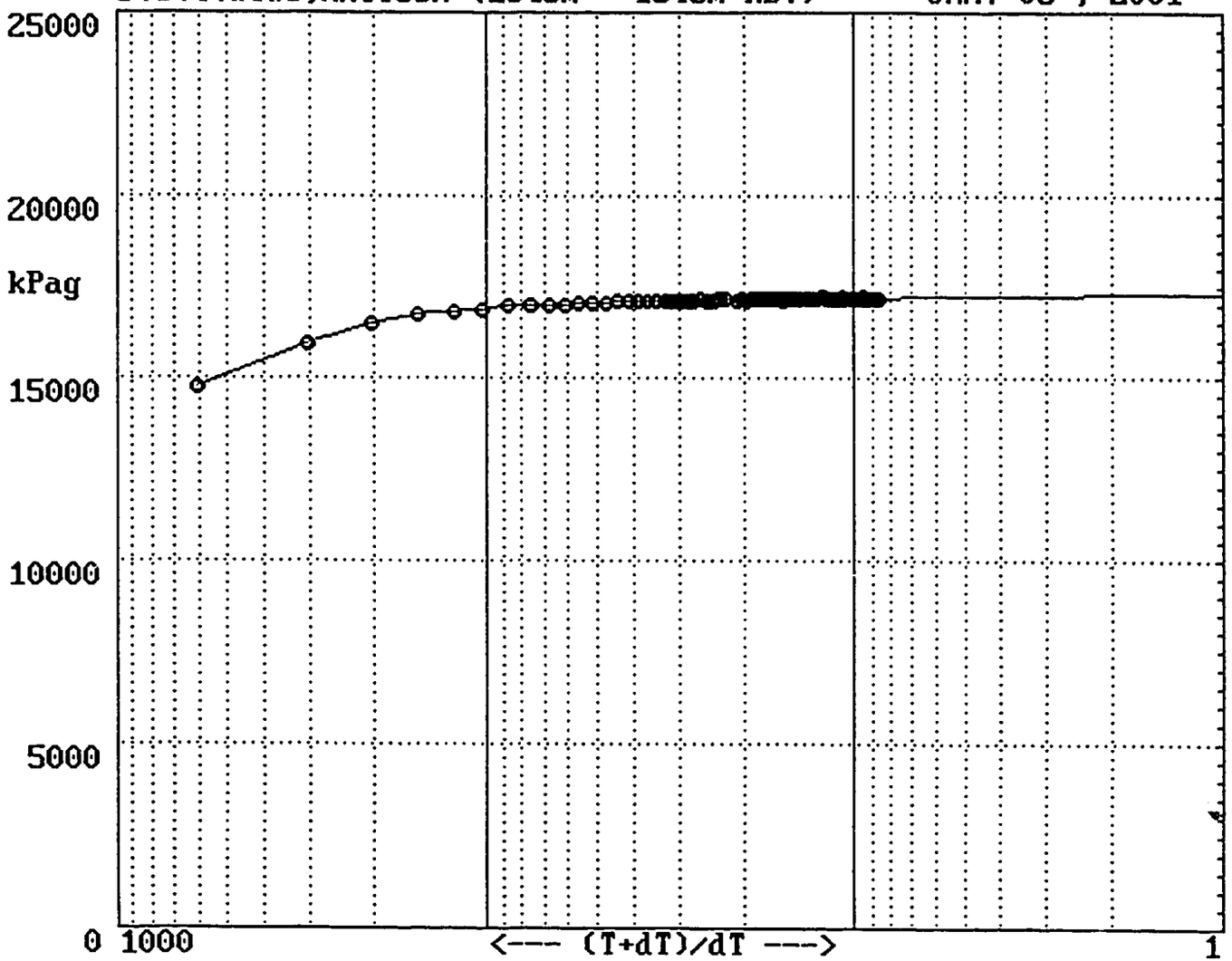
Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/07/2001**

Job Ticket #: **D2-9623** DST#: **2**

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.) JAN. 08 , 2001



HORNER PLOT
SHUT-IN # 3

SLOPE =
123.0
kPa/cycle

Extrapolated
Pressure =
17319.2
kPag

p275X



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **T4-5159** DST#: **3**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5159 DST#: 3
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

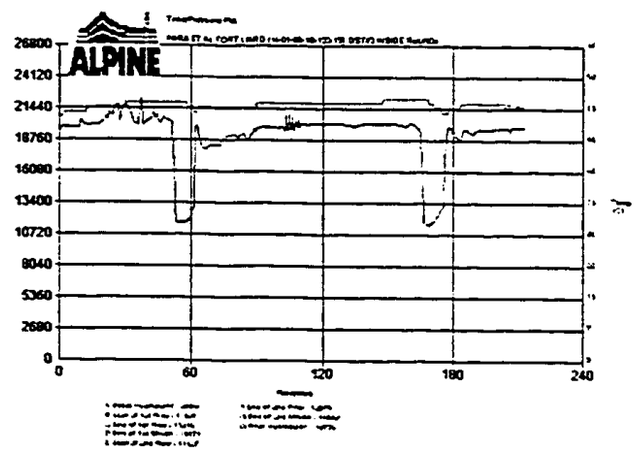
General Information:

Test Type:	INFLATE STRADDLE	Tester:	BILL HOLLINGSHEAD
Interval:	1730m -1751m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	55.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1718.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20055.6
B Start of 1st Flow	0.00	11807.8
C End of 1st Flow	8.64	13216.3
D End of 1st Shutin	6.00	18070.7
E Start of 2nd Flow	0.00	11827.2
F End of 2nd Flow	8.52	12974.7
G End of 2nd Shutin	8.64	18849.4
Q Final Hydrostatic	0.00	19799.2



Test Run Information:

Start Time:	1200hrs
Reached Test Depth:	1735hrs
Pull Out Time:	2000hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	2.00m
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

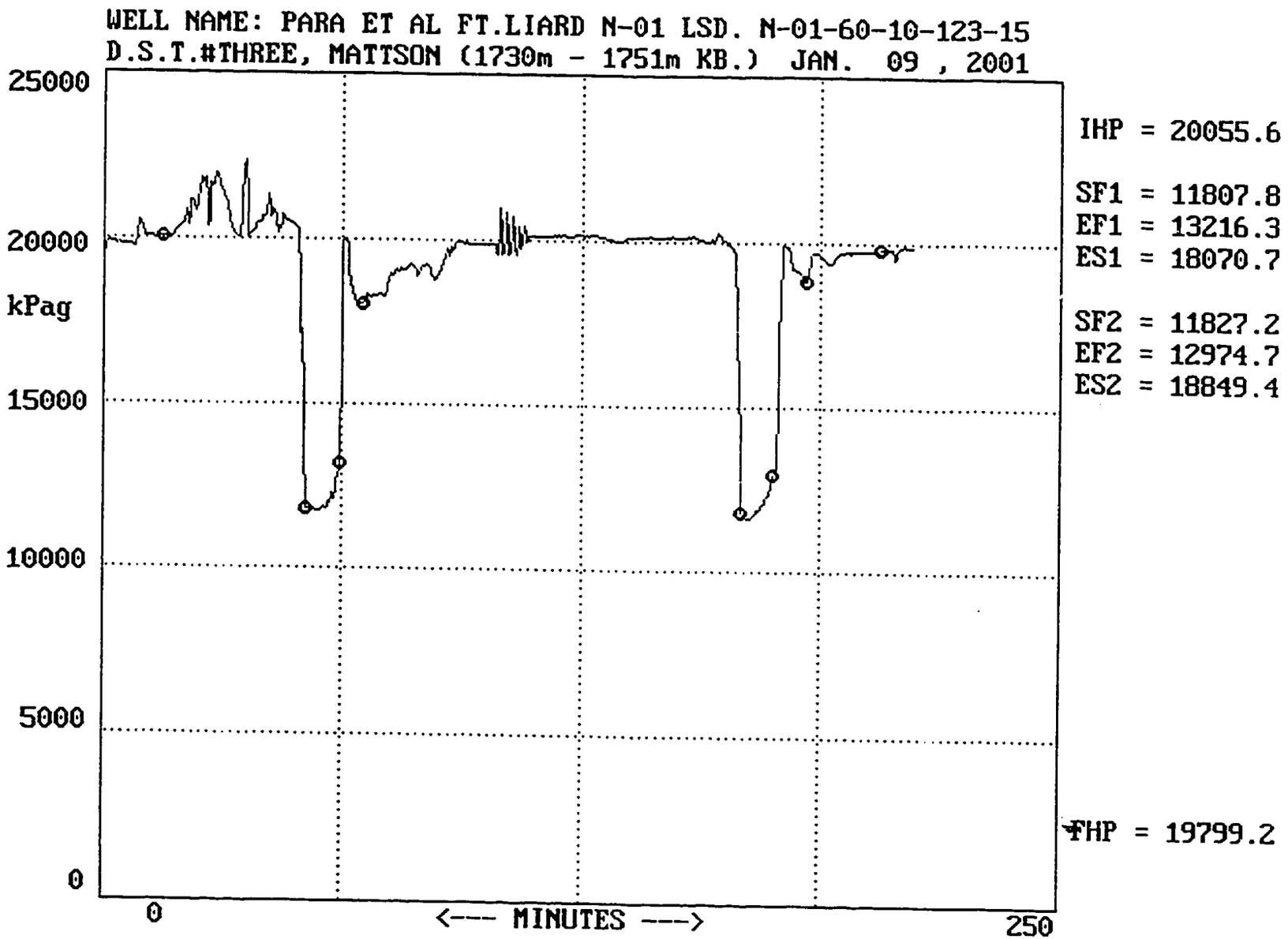
General Remarks:

WELL LIC. # 1902
TEST TIMES
TOOL OPEN FOR PREFLOW AT 17:35 JAN. 09 , 2001

PREFLOW: Strong air blow immediately gas to surface in 2 minutes strong 7metre flare increasing. Mud started to slowly drop in annulas at 8 minutes and tool was shut-in how ever shut-in is not valid due to a packer seal leak.
Packers were deflated and moved down 1 metre 1731-1752metres reset packers open tool and with the same results as first time.
MAXIMUM GAS FLOWRATE WAS 457,679m^3/day 5000kPa througha 22.23mm surface choke pressure was still building and there was mud slugging to surface.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 100 METRES


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#THREE, MATTSON (1730m - 1751m KB.) JAN. 09 , 2001
25000
20000
kPag
15000
10000
5000
0
0
<--- MINUTES --->
250
IHP = 20055.6
SF1 = 11807.8
EF1 = 13216.3
ES1 = 18070.7
SF2 = 11827.2
EF2 = 12974.7
ES2 = 18849.4
FHP = 19799.2



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **T4-5160** DST#: **4**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5160 DST#: 4
Test Date: 01/09/2001 2000hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

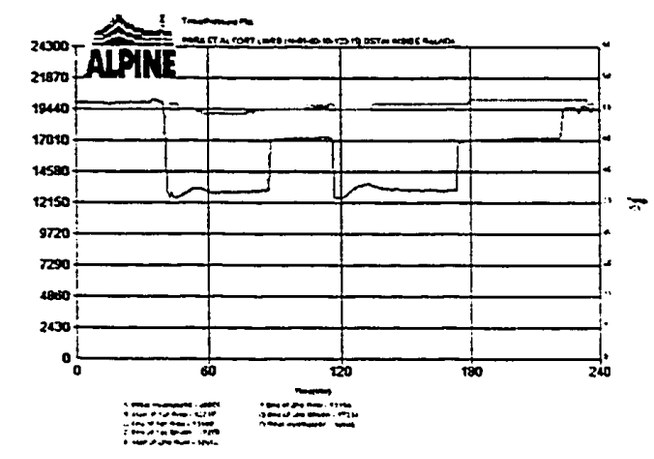
General Information:

Test Type:	INFLATE RESET	Tester:	BILL HOLLINGSHEAD
Interval:	1717m -1738m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	55.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1705.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20005.4
B Start of 1st Flow	0.00	12737.0
C End of 1st Flow	45.36	13148.5
D End of 1st Shutin	27.18	17278.0
E Start of 2nd Flow	0.00	12512.3
F End of 2nd Flow	55.44	13153.9
G End of 2nd Shutin	47.40	17230.3
Q Final Hydrostatic	0.00	19648.5



Test Run Information:

Start Time:	2000hrs
Reached Test Depth:	2140hrs
Pull Out Time:	40hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 45 - 25 - 60 - 50
TOOL OPEN FOR PREFLOW AT 21:40 JAN. 09 , 2001

PREFLOW: Strong gas blow immediately and steady throughout. See gas recovery page of this report for gas flowrates.

FINAL FLOW: Strong gas blow immediately and throughout drilling mud mist to surface throughout. See gas recovery page of this report for gas flowrates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 30 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5160 DST#: 4

Test Date: 01/09/2001 2000hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: Willis Choke

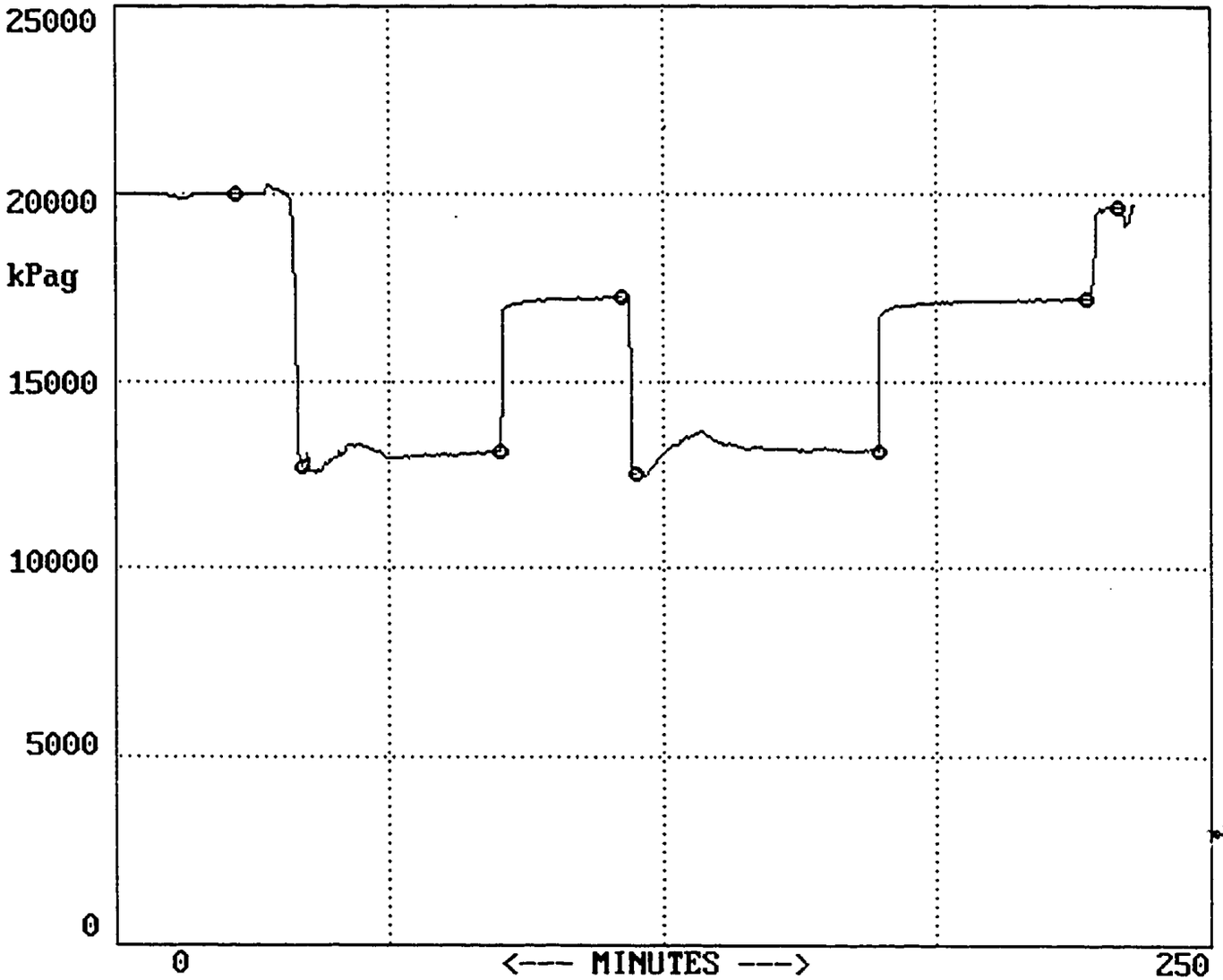
Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
20	22.23	4700	431260.00
25	22.23	4800	439926.00
35	22.23	4800	439926.00
40	22.23	4900	449212.00
45	22.23	4900	449212.00

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	4800	439926.00
20	22.23	4800	439926.00
30	22.23	4900	449212.00
40	22.23	4900	449212.00
50	22.23	5000	457679.00
60	22.23	5000	457679.00

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#FOUR-RESET,MATTSON(1717m - 1738m K.B.) JAN. 09,2001



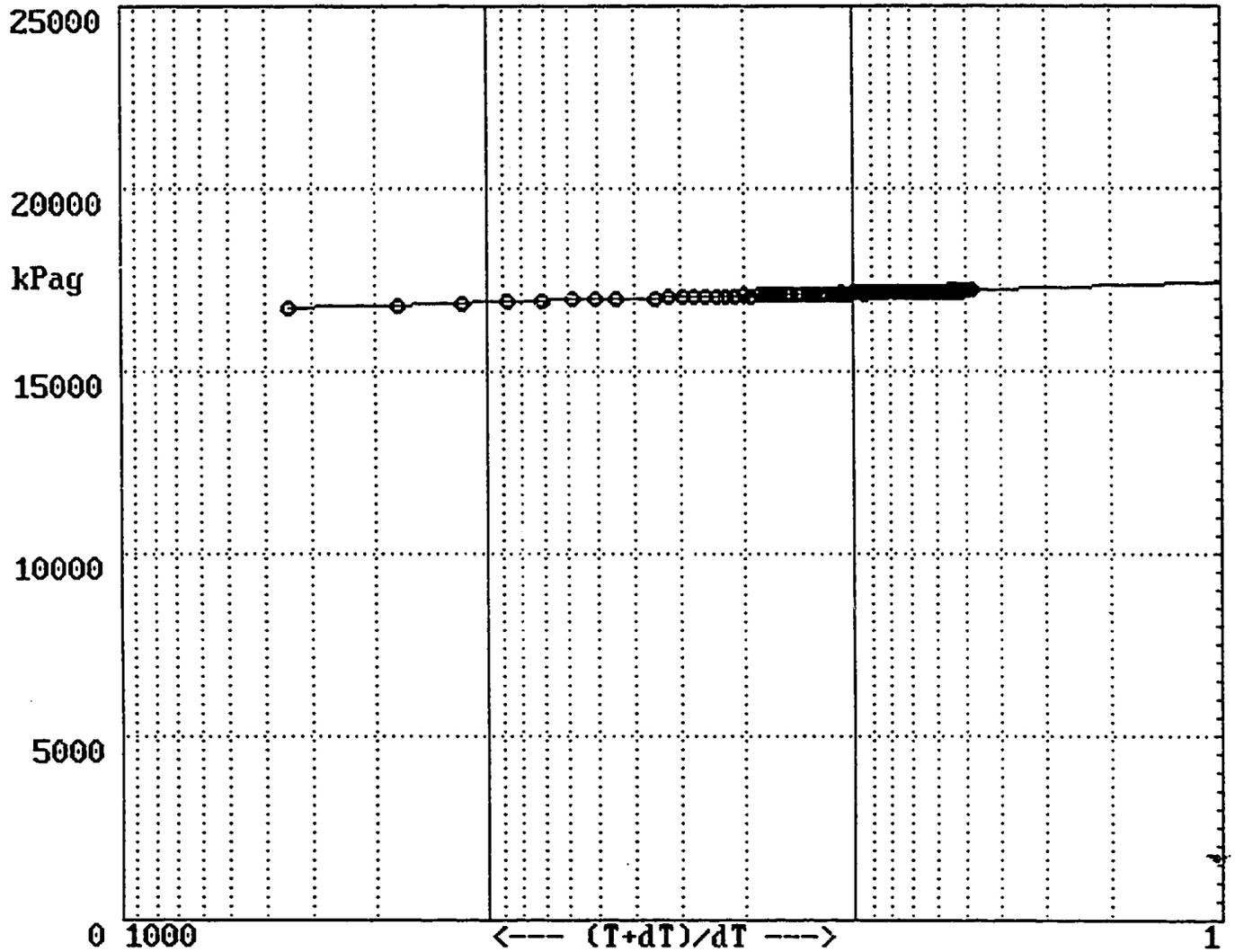
IHP = 20005.3

SF1 = 12737.0
EF1 = 13148.5
ES1 = 17278.0

SF2 = 12512.3
EF2 = 13153.9
ES2 = 17230.3

FHP = 19648.5

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#FOUR-RESET,MATTSON(1717m - 1738m K.B.) JAN. 09,2001

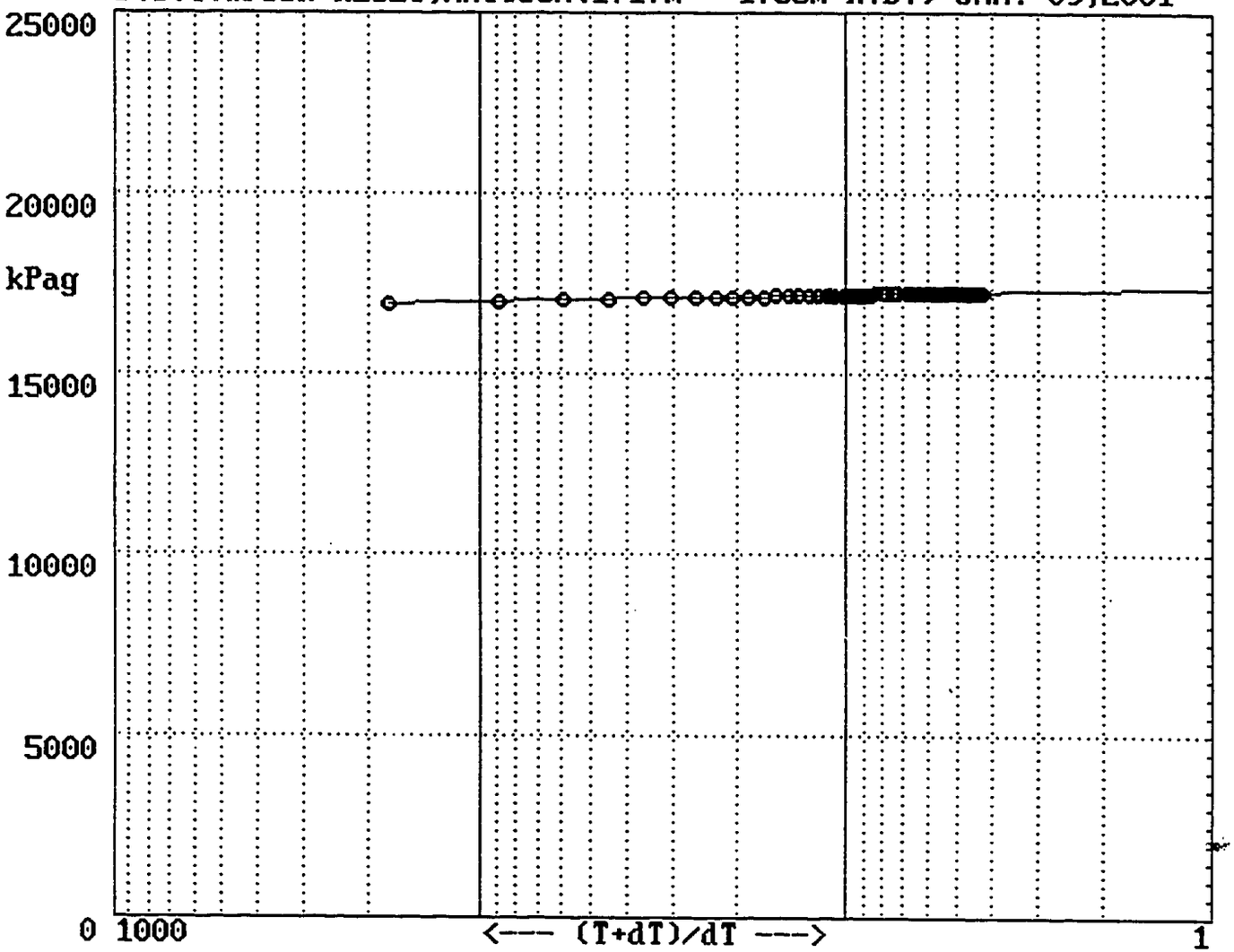


HORNER PLOT
SHUT-IN # 2

SLOPE =
302.6
kPa/cycle

Extrapolated
Pressure =
17438.3
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#FOUR-RESET,MATTSON(1717m - 1738m K.B.) JAN. 09,2001



HORNER PLOT
SHUT-IN # 1

SLOPE =
156.5
kPa/cycle

Extrapolated
Pressure =
17370.3
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **D2-9625** DST#: **4**

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 2100hrs

Well Name: PARAMOUNT ET AL FT. LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

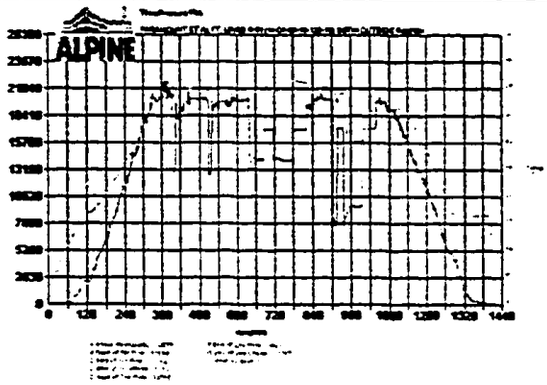
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DANNY ROSS
Interval:	1717.00m - 1738.00m	Truck No.:	UNIT 677
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.00 C

Electronic Recorder Information:

OUTSIDE Recorder #: 124		OUTSIDE Recorder #: 126	
Range:	70000 kPag	Range:	70000 kPag
Depth:	1719.00 m	Depth:	1719.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	19974.8
B Start of 1st Flow	0.00	13884.4
C End of 1st Flow	42.00	14362.4
D End of 1st Shutin	28.00	17135.6
E Start of 2nd Flow	0.00	13750.2
F End of 2nd Flow	54.00	14053.4
G End of 2nd Shutin	48.00	17197.0
Q Final Hydrostatic	0.00	19583.6



Test Run Information:

Start Time:	2100hrs
Reached Test Depth:	2140hrs
Pull Out Time:	30hrs
Tool Out Of Hole:	
Weight set on Packers:	8000.00daN
Weight to free Packers:	8000.00daN
Initial String Weight:	45000.00daN
Unseated String Weight:	45000.00daN

Tool Chased Dist:	0.00m	Water Loss:	8.20cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1160.00kg/m³	VIS:	76.00S/L
Amount of fill:	0.00m	Filter Cake:	1.60mm
Amt of cushion:	0.00	Pump Time:	30min
Type of cushion:	N/A	Reversed Out:	NO

General Remarks:

PREFLOW:STRONG GAS BLOW IMMEDIATELY STEADY THROUGHOUT.REFER TO CHARTS FOR RATES.
FINAL FLOW:STRONG GAS BLOW THROUHOUT. MISTING MUD STEADY THROUGHOUT.REFER TO CHARTS FOR RATES.

Recovery Description:

TWO GAS BOMBS CAUGHTPF=0000272 & MF=0002
SAMPLER SAME AS DST#3
RESET TO DST#5

Gas Bomb: 2 Sampler: 1
Fluid Sample: 0 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 2100hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	66
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1720.57m
Total Drill Pipe Above K.B.:	3.57m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1269.36	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC#1902



Item	Length	
P.O. Sub	0.31	
BIT SUB	1.04	
DOUBLE PIN	0.31	
P.O. Sub	0.31	
FLUID REC#63	1.50	
HMV Stroke	2.18	
Sampler	1.10	
INSIDE REC#70	1.50	
Telemetry Tool	5.80	
Jars	1.82	
Safety Joint	0.65	
Pump	2.04	
Screen	1.18	49.93m
Valve	2.23	
Deflate	0.85	
Packer	1.78	
T.C.	0.72	
K-3 Carrier	2.20	
Bypass Hanger	0.42	
C.O. Sub	0.30	
DRILL COLLAR	9.24	
C.O. Sub	0.30	
Blank Spacing	6.08	
Bypass Receiver	0.78	
T.C.	0.72	
Packer	1.78	
Extension Sub	0.71	
Drag Spring	2.08	

24.60m

Depth: 1717m

20.76m

Depth: 1738m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 2100hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure(kPa)	Rate (m³/d)
20	22.23	4700	431260.00
25	22.23	4800	439926.00
35	22.23	4800	439926.00
40	22.23	4900	449212.00
45	22.23	4900	449212.00

Gas Measurements for Flow # 2

Gas Recovery Measured With: 1

Time (min.)	Orifice (mm)	Pressure(kPa)	Rate (m³/d)
10	22.23	4800	439926.00
20	22.23	4800	439926.00
30	22.23	4900	449212.00
40	22.23	4900	449212.00
50	22.23	5000	457679.00
60	22.23	5000	457679.00



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/10/2001**

Job Ticket #: **T4-5161** DST#: **5**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5161 DST#: 5
Test Date: 01/10/2001 100hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Contact: WILBERT CALLIHOO

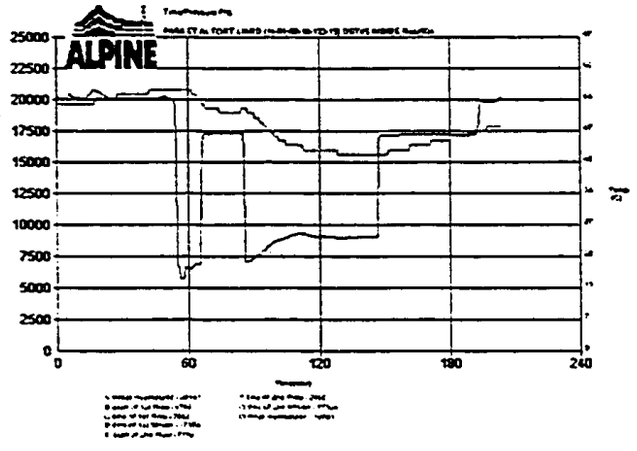
General Information:

Test Type:	INFLATE RESET	Tester:	BILL HOLLINGSHEAD
Interval:	1738m -1759m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	56.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1726.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20143.1
B Start of 1st Flow	0.00	6740.3
C End of 1st Flow	10.14	7042.3
D End of 1st Shutin	18.12	17374.3
E Start of 2nd Flow	0.00	7118.9
F End of 2nd Flow	60.06	9050.4
G End of 2nd Shutin	45.42	17306.3
Q Final Hydrostatic	0.00	19881.0



Test Run Information:

Start Time:	100hrs
Reached Test Depth:	205hrs
Pull Out Time:	420hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 10 - 20 - 60 - 45
TOOL OPEN FOR PREFLOW AT 02:05 JAN. 10 , 2001

PREFLOW: Strong gas blow immediately and steady throughout.

FINAL FLOW: Strong gas blow immediately and steady throughout. Mist of drilling mud at surface throughout. See gas recovery page of this report for gas flowrates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 55 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5161 DST#: 5

Test Date: 01/10/2001 100hrs

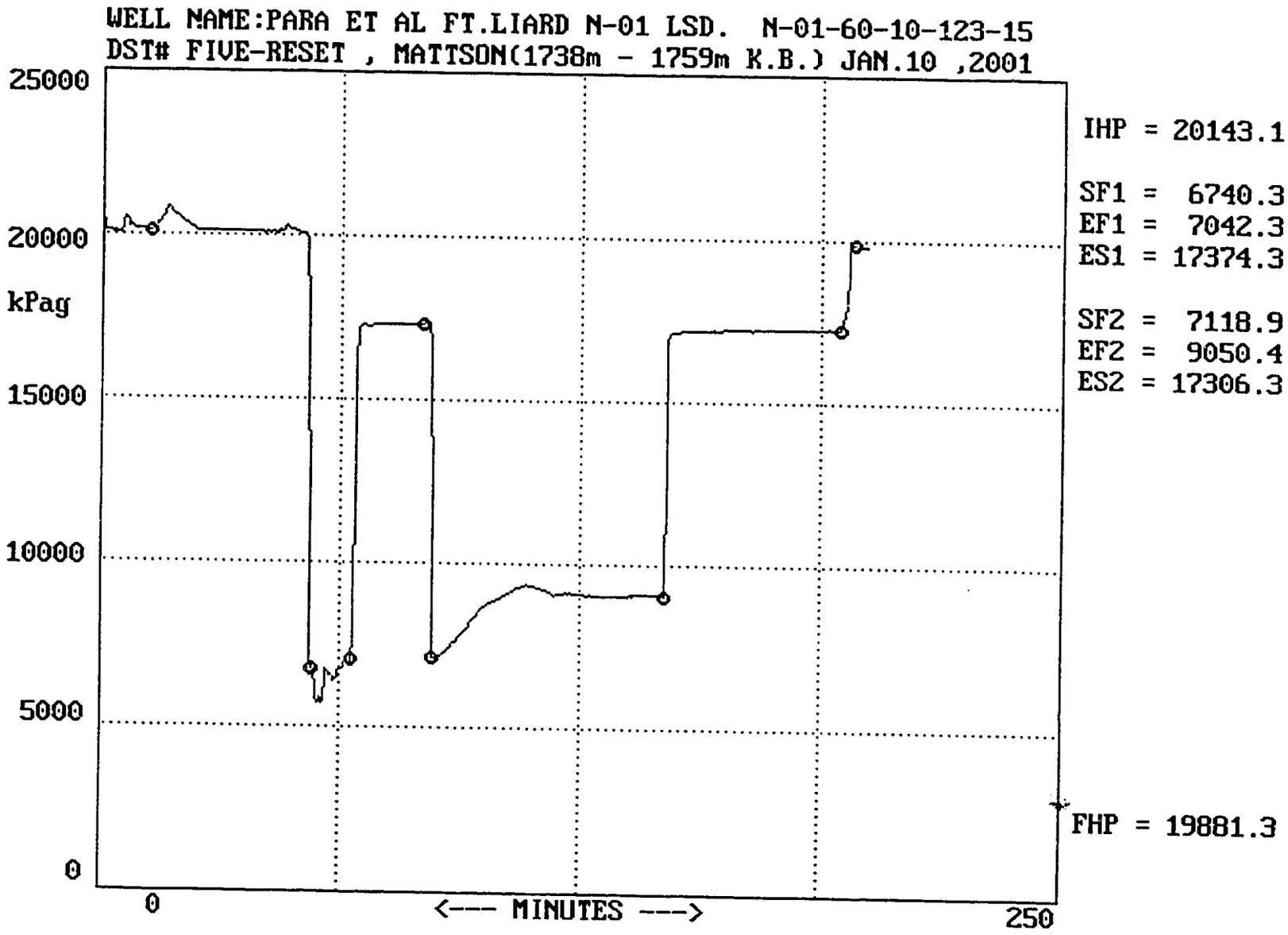
Well Name: PARA ET AL FORT LIARD

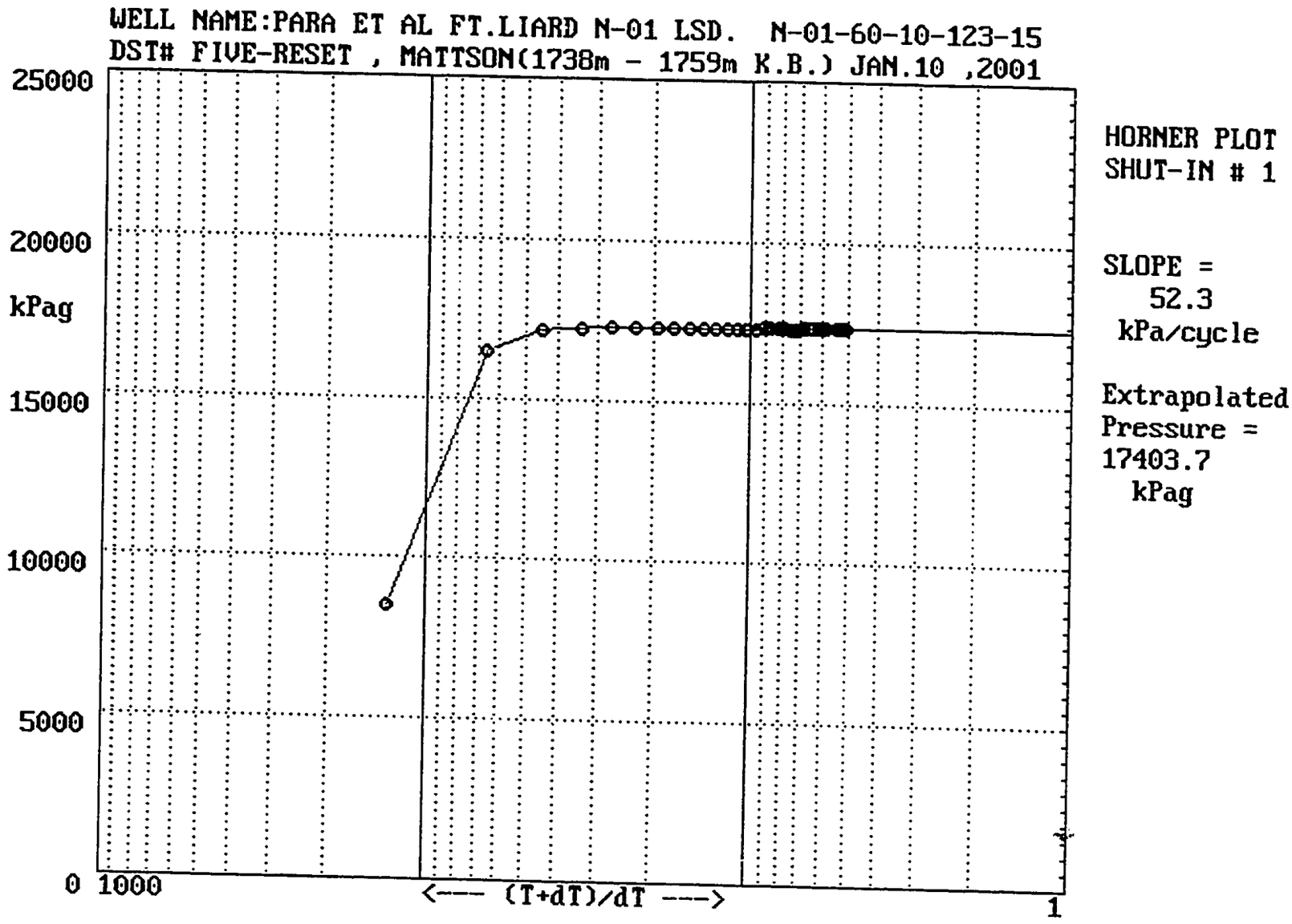
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

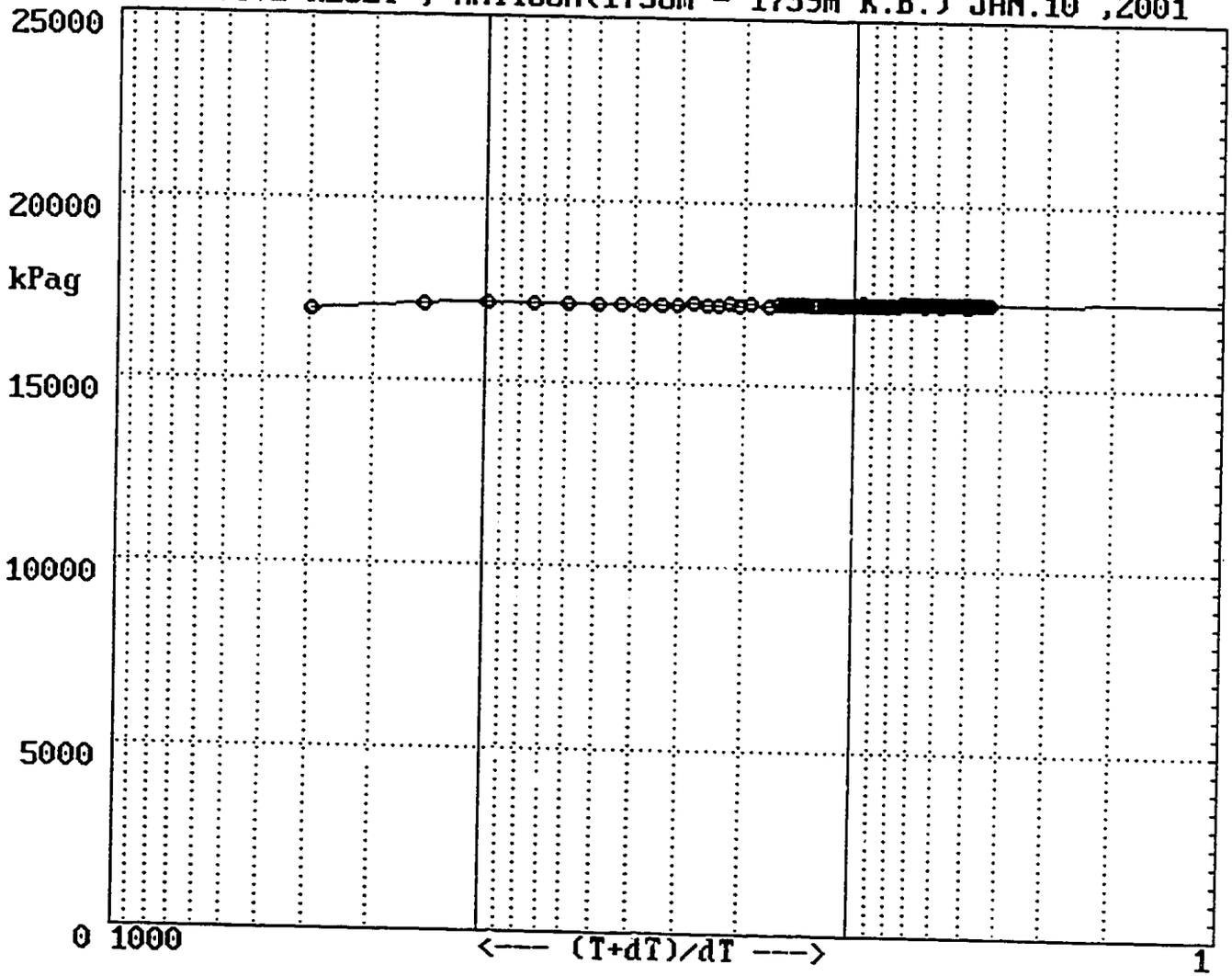
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	19.50	2200	138232.00
20	19.50	3400	210320.00
30	22.23	3500	323545.00
40	22.23	3500	323545.00
50	22.23	3500	323545.00
60	22.23	3500	323545.00


WELL NAME:PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST# FIVE-RESET , MATTSON(1738m - 1759m K.B.) JAN.10 ,2001
25000
20000
kPag
15000
10000
5000
0
0
<--- MINUTES --->
250
IHP = 20143.1
SF1 = 6740.3
EF1 = 7042.3
ES1 = 17374.3
SF2 = 7118.9
EF2 = 9050.4
ES2 = 17306.3
FHP = 19881.3


WELL NAME:PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST# FIVE-RESET , MATTSON(1738m - 1759m K.B.) JAN.10 ,2001
25000
20000
kPag
15000
10000
5000
0
1000
<--- (T+dT)/dT --->
1
HORNER PLOT
SHUT-IN # 1
SLOPE =
52.3
kPa/cycle
Extrapolated
Pressure =
17403.7
kPag

WELL NAME:PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST# FIVE-RESET , MATTSON(1738m - 1759m K.B.) JAN.10 ,2001



HORNER PLOT
SHUT-IN # 2

SLOPE =
85.9
kPa/cycle

Extrapolated
Pressure =
17355.9
kPag

p275Y



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/10/2001**

Job Ticket #: **D2-8751** DST#: **5**

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8751 DST#: 5

Test Date: 01/10/2001 30hrs

Well Name: PARAMOUNT ET AL FT. L[illegible]

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

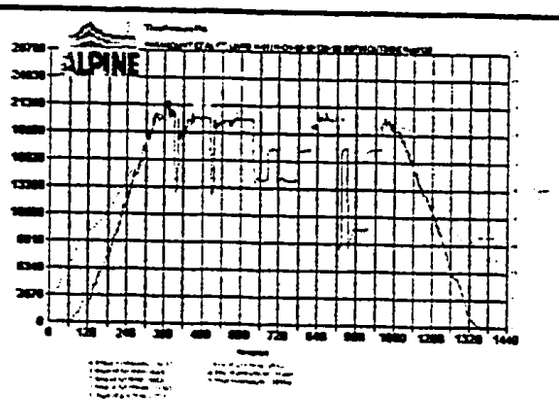
General Information:

Test Type: INFLATE STRADDLE
Interval: 1738.00m - 1759.00m
Formation: 1ST MID. BELLY RIVER
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

Tester: DANNY ROSS
Truck No.: UNIT 677
Contractor: PRECISION
Rig No.: 379
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 57.00 C

Electronic Recorder Information:

OUTSIDE			
Recorder #: 126		Recorder #:	
Range: 70000 kPag		Range:	kPag
Depth: 1740.00 m		Depth:	m
Flag Points:	Time:	Pressure:	
A Initial Hydrostatic	0.00	20172.7	
B Start of 1st Flow	0.00	8205.0	
C End of 1st Flow	10.00	8060.3	
D End of 1st Shutin	19.00	17303.4	
E Start of 2nd Flow	0.00	7708.4	
F End of 2nd Flow	57.00	9512.8	
G End of 2nd Shutin	46.00	17206.2	
Q Final Hydrostatic	0.00	19863.7	



Test Run Information:

Start Time: 30hrs
Reached Test Depth: 200hrs
Pull Out Time: 430hrs
Tool Out Of Hole: 1000hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 44000.00daN
Unseated String Weight: 45000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1160.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion: N/A

Water Loss: 6.20cm³
Mud Drop: NO
VIS: 76.00S/L
Filter Cake: 1.00mm
Pump Time: 30min
Reversed Out: NO

General Remarks:

PREFLOW:STRONG GAS BLOW IMMEDIATELY. STEADY 6m FLARE AT PIT.
FINAL FLOW:STRONG GAS BLOW IMMEDIATELY.MISTING DRILLING FLUID THROUGHOUT.
REFER TO CHARTS FOR RATES.

Recovery Description:

SAMPLER RUN IS SAME AS DST#3
TWO GAS BOMBS CAUGHT PF=0005 & MF=0006
TOTAL FLUID RECOVERY WAS 55m CONSISTING OF 25m CONDINSATE AND 30m FRESH WATER.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 4 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 30hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	67
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1739.92m
Total Drill Pipe Above K.B.:	1.92m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1288.71	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC#1902
FLUID RECORDER SEEMS TO HAVE BAD DATA. WHEN RECOVERED RECORDER HAD COME FREE FROM HANGER AND DROPED. BATTERY PACK WAS SMASHED AND IMPACT MAY HAVE CAUSED MALFUNCTION. VERY HIGH FLOW RATES IS MOST LIKELY THE CAUSE FOR THE RECORDER TO HAVE COME FREE FROM HANGER.



	Item	Length
	P.O. Sub	0.31
	BIT SUB	1.04
	DOUBLE PIN	0.31
	P.O. Sub	0.31
	FLUID REC#63	1.50
	HMV Stroke	2.18
	Sampler	1.10
	INSIDE REC#70	1.50
	Telemetry Tool	5.30
	Jars	1.82
	Safety Joint	0.65
	Pump	2.04
49.93m	Screen	1.18
	Valve	2.23
	Deflate	0.85
	Packer	1.78
	T.C.	0.72
	K-3 Carrier	2.20
	Bypass Hanger	0.42
	C.O. Sub	0.30
	DRILL COLLAR	9.24
	C.O. Sub	0.30
	Blank Spacing	6.08
	Bypass Receiver	0.78
	T.C.	0.72
	Packer	1.78
	Extension Sub	0.71
	Drag Spring	2.08

24.60m

Depth: 1738m

20.76m

Depth: 1759m

4.57m

Total Depth: 1940.00m

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8751 DST#: 5

Test Date: 01/10/2001 30hrs

Contact: WILBERT CALLIHOO Well Name: PARAMOUNT ET AL FT. LI[illegible]

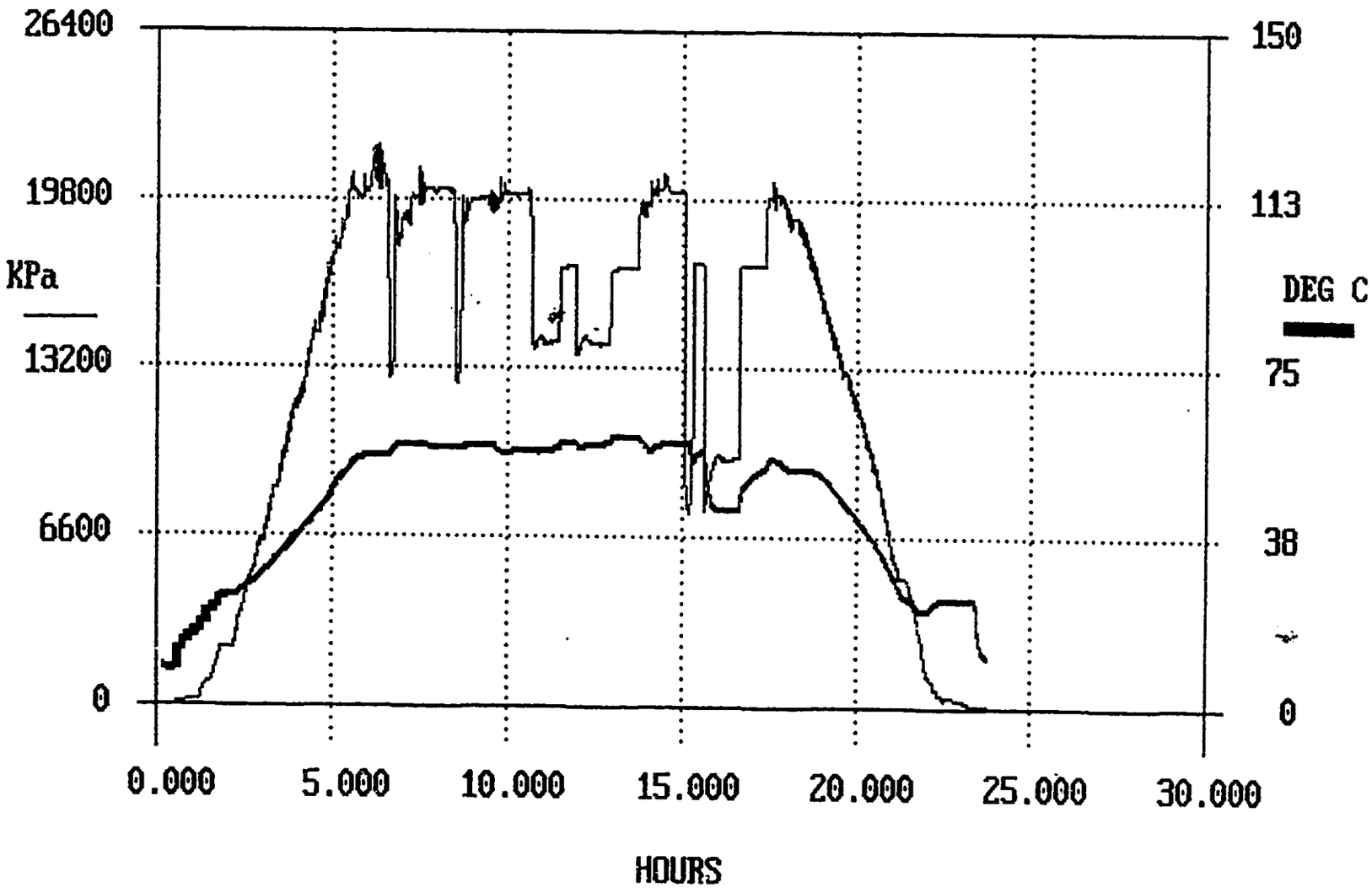
Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

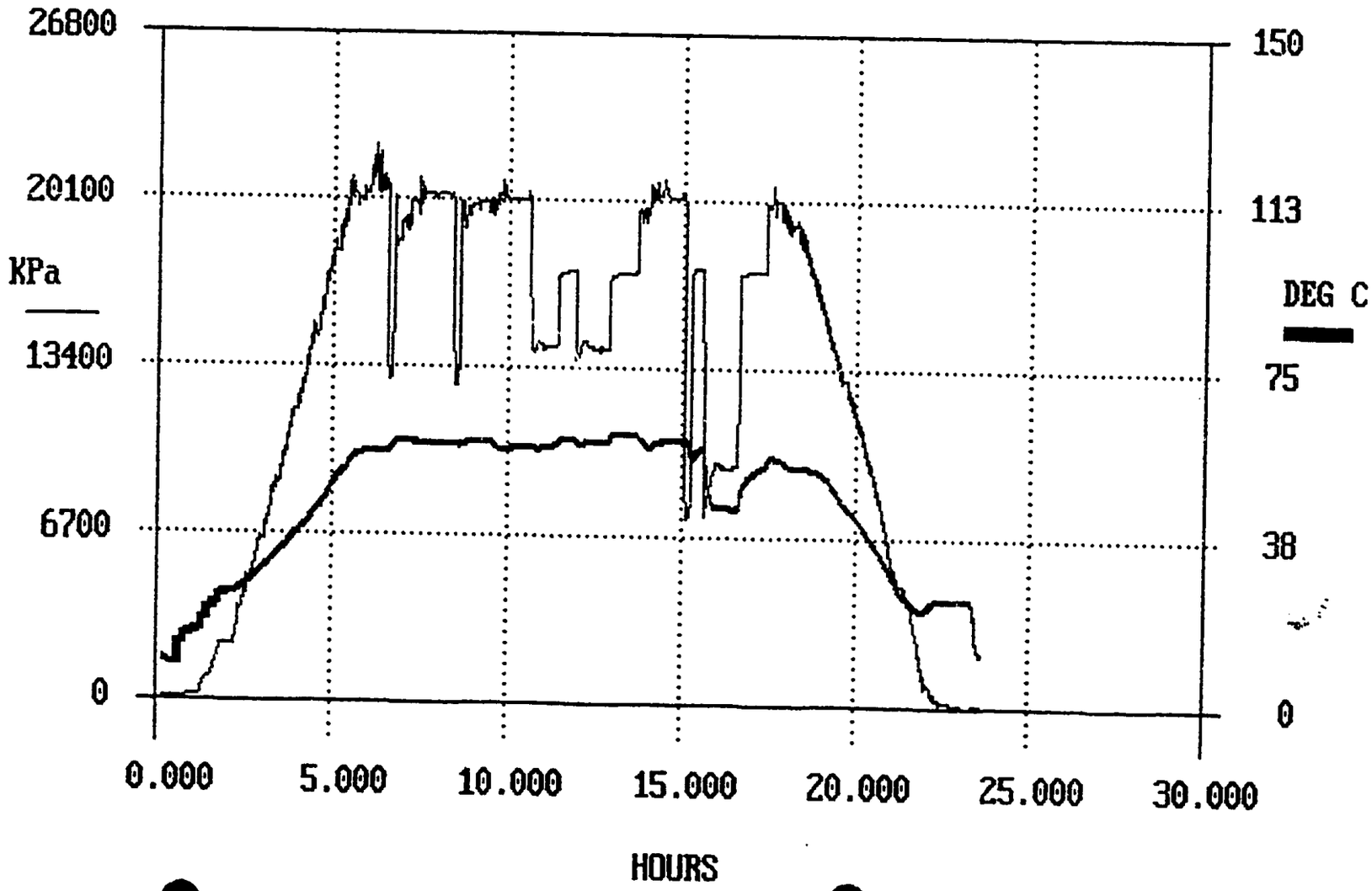
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
10	19.50	2200	138232.00
20	19.50	3400	210320.00
30	22.23	3500	323545.00
40	22.23	3500	323545.00
50	22.23	3500	323545.00
60	22.23	3500	323545.00

FILE: <C:\ALP_IN\11010808.124>
s/n 124 PARAMOUNT ET AL FT.LIARD N-01 DST#3 TIC#2-9624 REC#124 OUTSIDE

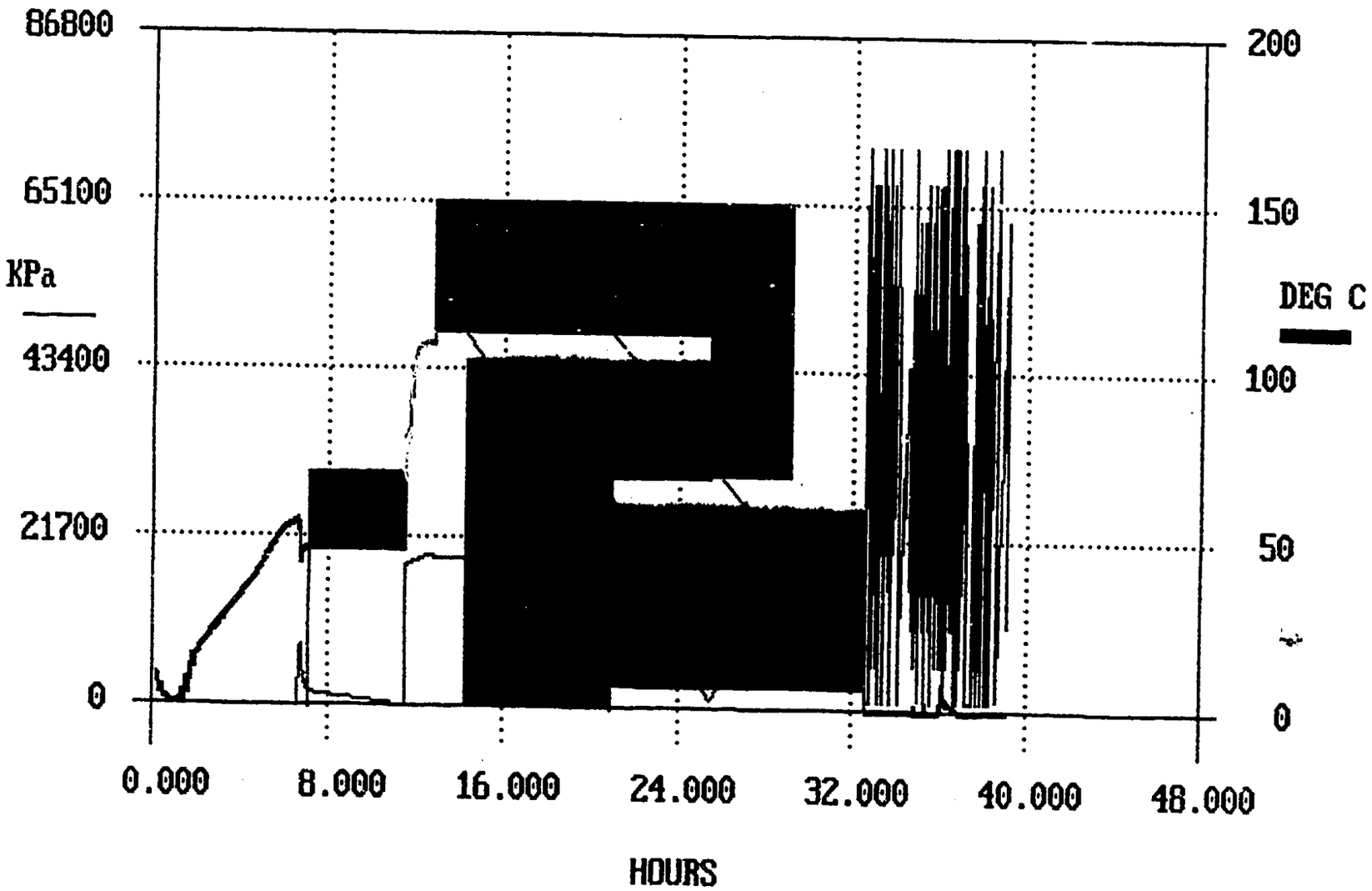


FILE: <C:\ALP_IN\11010211.126>
s/n 126 PARAMOUNT ET AL FT. LIARD N-01 DST#3 TIC#2-9624 REC#126 OUTSIDE



RECORDER CAME LOOSE FROM HANGER AND DROPED.

FILE: <C:\ALP_IN\11010805.063>
s/n 63 PARAMOUNT ET AL FT. LIARD N-01 DST#3 TIC#2-9624 REC#63 FLUID





Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **T4-5262** DST#: **6**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5262 DST#: 6
Test Date: 01/11/2001 700hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

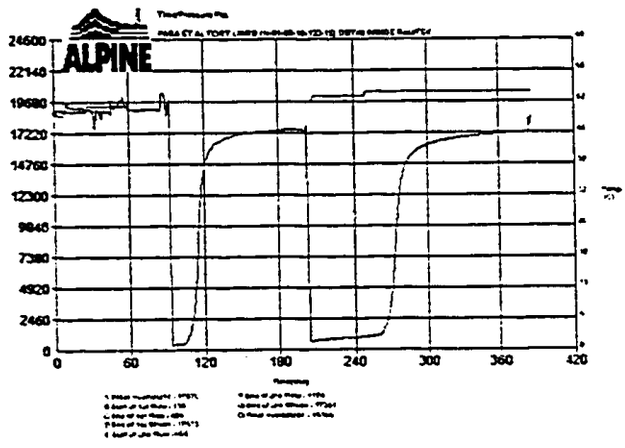
General Information:

Test Type:	INFLATE STRADDLE	Tester:	G.BABYAK
Interval:	1625m -1632m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	52.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1613.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18876.2
B Start of 1st Flow	0.00	338.0
C End of 1st Flow	9.00	493.7
D End of 1st Shutin	97.44	17533.0
E Start of 2nd Flow	0.00	667.6
F End of 2nd Flow	55.56	1174.1
G End of 2nd Shutin	121.08	17260.9
Q Final Hydrostatic	0.00	18366.0



Test Run Information:

Start Time:	700hrs
Reached Test Depth:	1100hrs
Pull Out Time:	1730hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	0min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

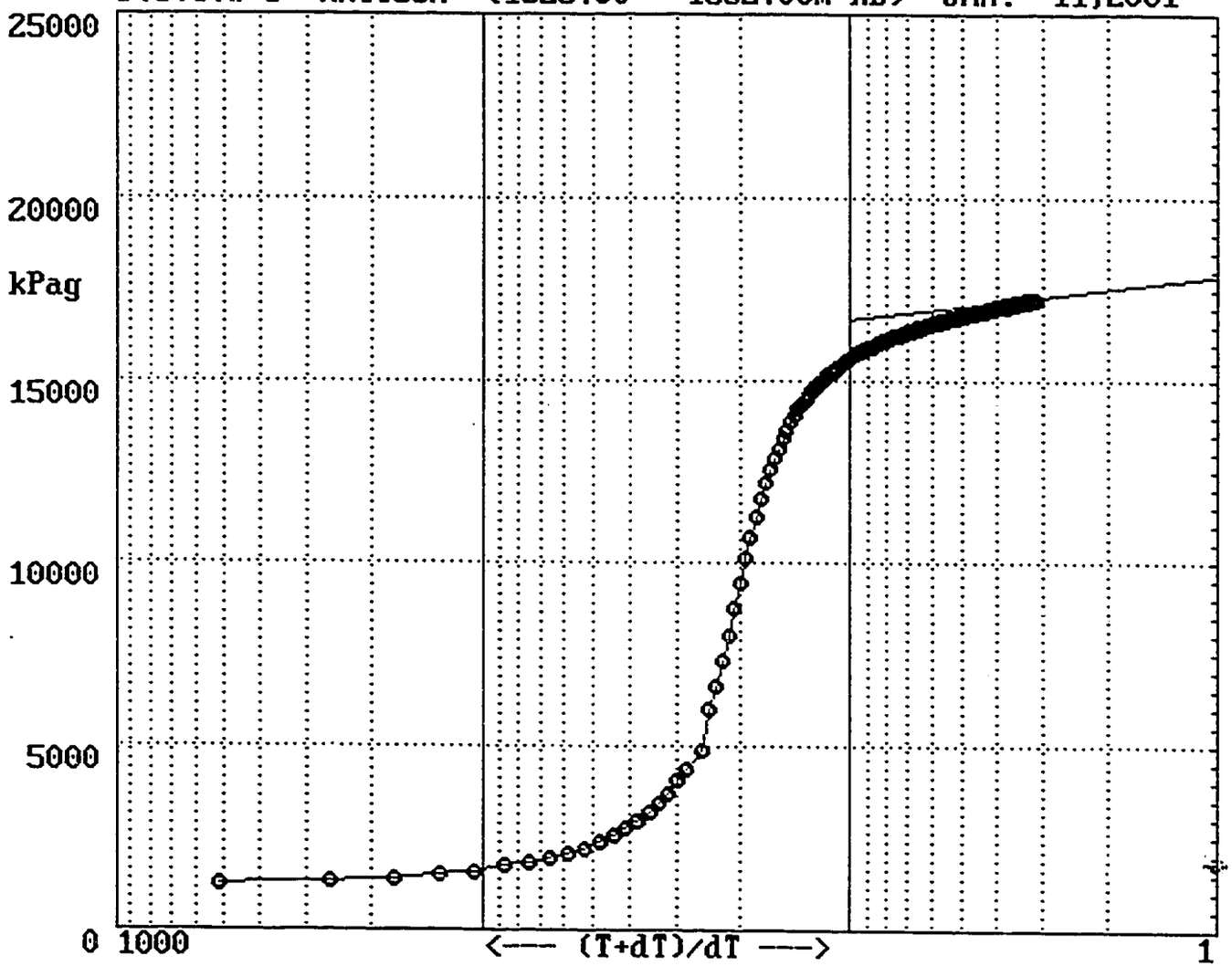
WELL LIC# 1902 TOOL OPEN AT 12:43

PREFLOW:Weak to strong in 30 seconds.No gas to surface.

FINAL FLOW:Weak to strong in 1 minutes.No gas to surface.

Recovery Description:

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.# 6 MATTSON (1625.00 - 1632.00m KB) JAN. 11,2001

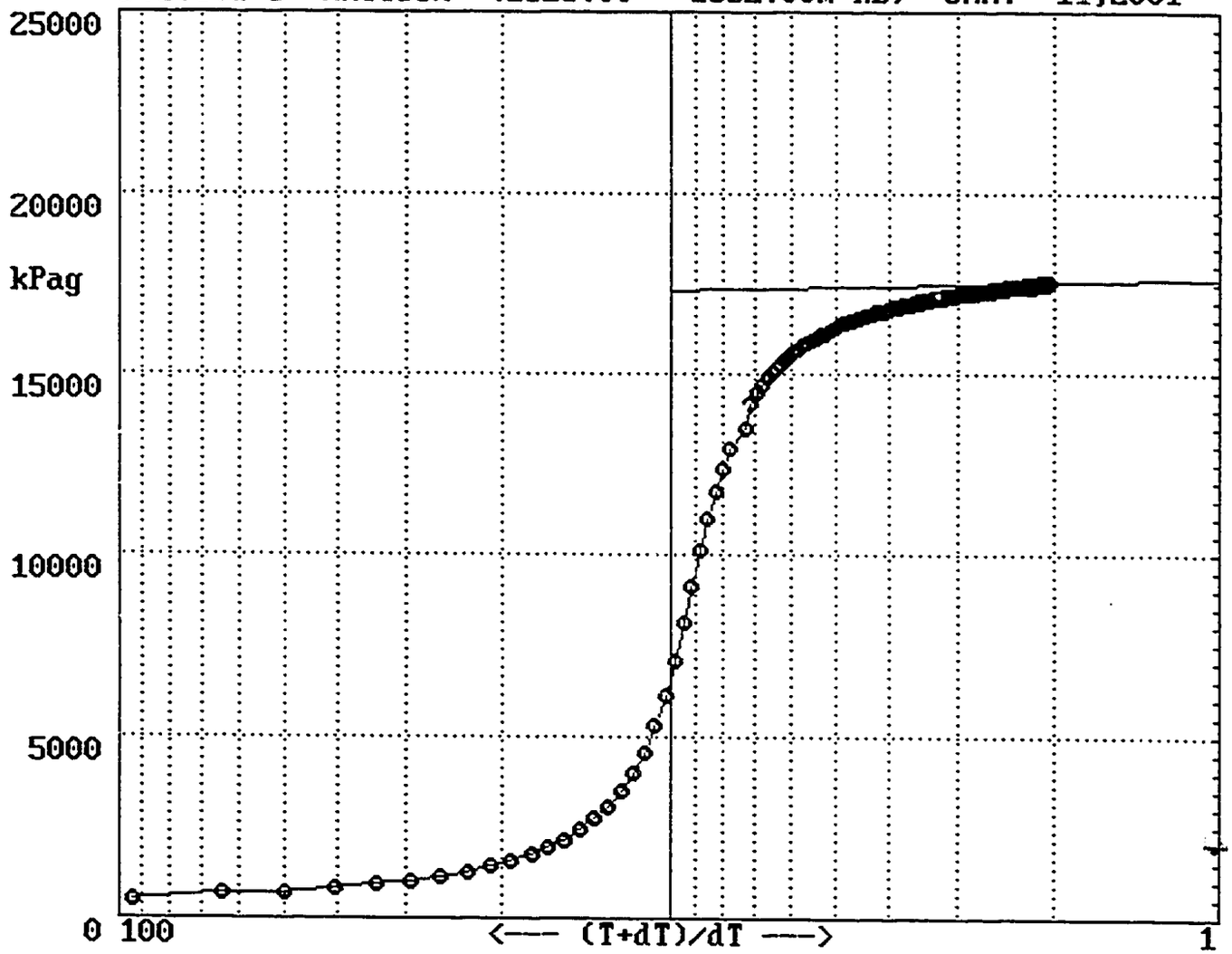


HORNER PLOT
SHUT-IN # 2

SLOPE =
1176.6
kPa/cycle

Extrapolated
Pressure =
17849.7
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.# 6 MATTSON (1625.00 - 1632.00m KB) JAN. 11,2001

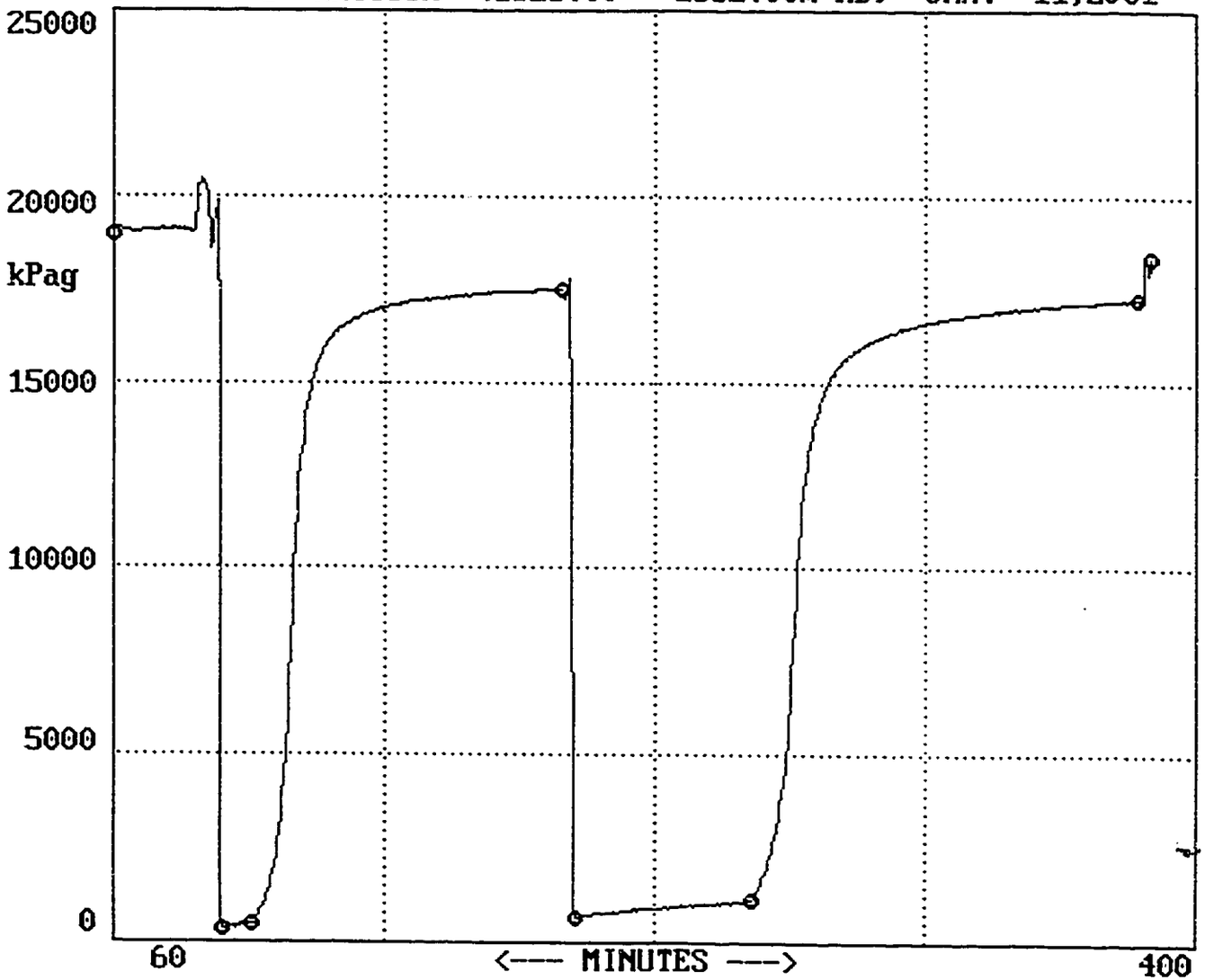


HORNER PLOT
SHUT-IN # 1

SLOPE =
358.4
kPa/cycle

Extrapolated
Pressure =
17640.1
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.# 6 MATTSON (1625.00 - 1632.00m KB) JAN. 11,2001



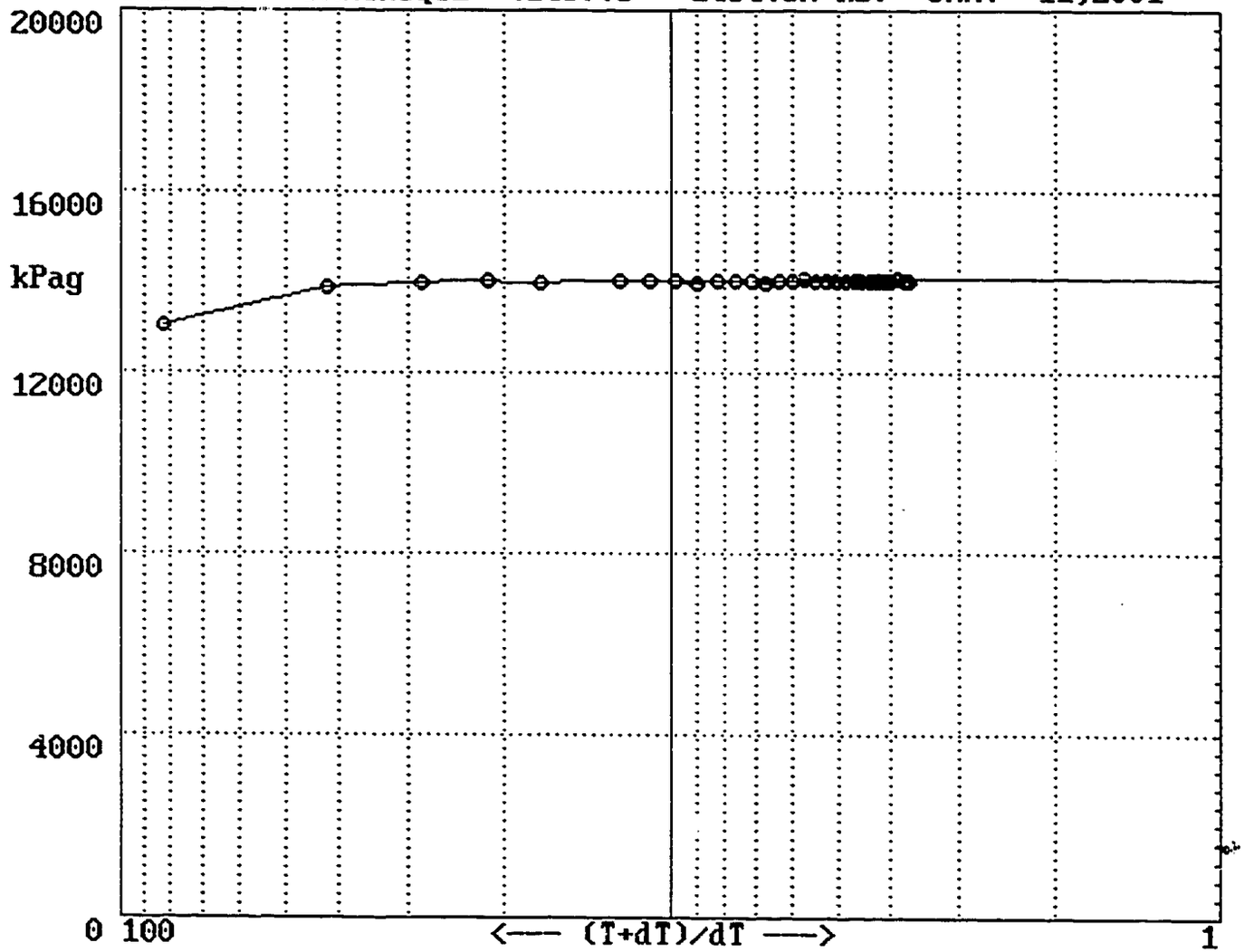
IHP = 18979.7

SF1 = 338.0
EF1 = 493.7
ES1 = 17533.0

SF2 = 667.6
EF2 = 1174.1
ES2 = 17260.9

FHP = 18366.3

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#? FANTASQUE (1457.5 - 1464.5m KB) JAN. 11,2001



HORNER PLOT
SHUT-IN # 1

SLOPE =
42.1
kPa/cycle

Extrapolated
Pressure =
14077.7
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **D2-8619** DST#: **6**

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Contact: WILBERT CALLIHOO Well Name: PARAMOUNT ET AL FT. L[redacted]D
Location: N-O1-60-10-123-15

Inflate Straddle

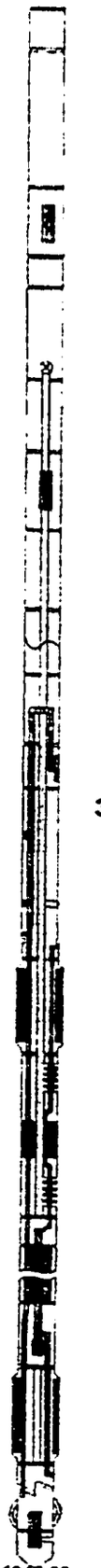
Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	62
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1626.66m
Total Drill Pipe Above K.B.:	1.66m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1178.21	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

License #1905



Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	[redacted]
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	[redacted]
Drag Spring	2.08

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8619 DST#: 6

Test Date: 01/11/2001 900hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

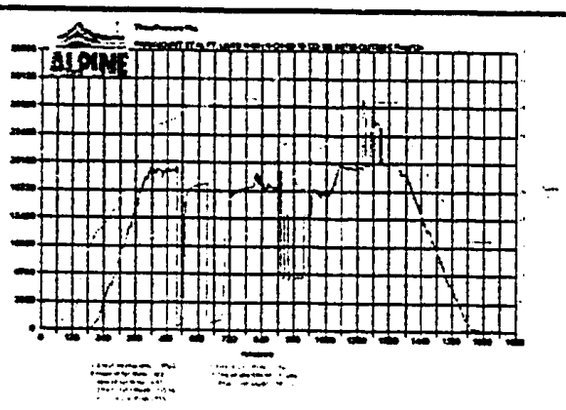
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DUANE WHITE
Interval:	1625.00m - 1632.00m	Truck No.:	UNIT 677
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.00 C

Electronic Recorder Information:

OUTSIDE		Recorder #:	
Recorder #:	124		
Range:	10000 kPag	Range:	kPag
Depth:	1459.00 m	Depth:	m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	19092.8
B Start of 1st Flow	0.00	392.4
C End of 1st Flow	10.00	619.2
D End of 1st Shutin	98.00	17514.1
E Start of 2nd Flow	0.00	732.6
F End of 2nd Flow	57.00	1559.0
G End of 2nd Shutin	120.00	17245.6
Q Final Hydrostatic	0.00	18560.4



Test Run Information:

Start Time:	900hrs
Reached Test Depth:	1200hrs
Pull Out Time:	1800hrs
Tool Out Of Hole:	2300hrs
Weight set on Packers:	6000.00daN
Weight to free Packers:	10000.00daN
Initial String Weight:	42000.00daN
Unseated String Weight:	42000.00daN

Tool Chased Dist:	0.00m	Water Loss:	6.50cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1190.00kg/m³	VIS:	95.00S/L
Amount of fill:	0.00m	Filter Cake:	2.00mm
Amt of cushion:	0.00	Pump Time:	30min
Type of cushion:	N/A	Reversed Out:	NO

General Remarks:

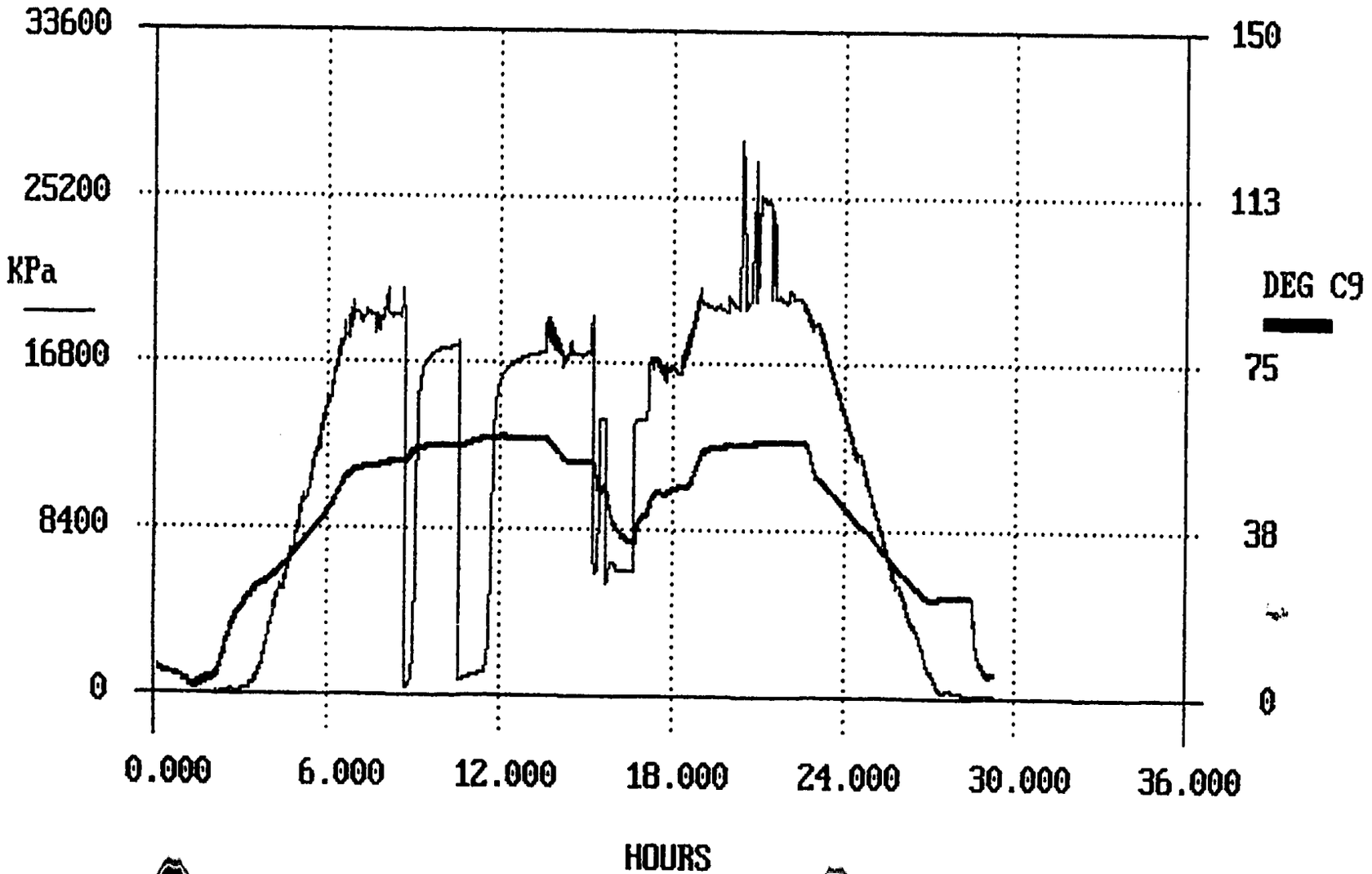
PREFLOW:Tool open @1247 weak air blow increasing to strong in 30 seconds steady through out
FINAL FLOW:weak increasing to strong in 1 min then steady through out

Recovery Description:

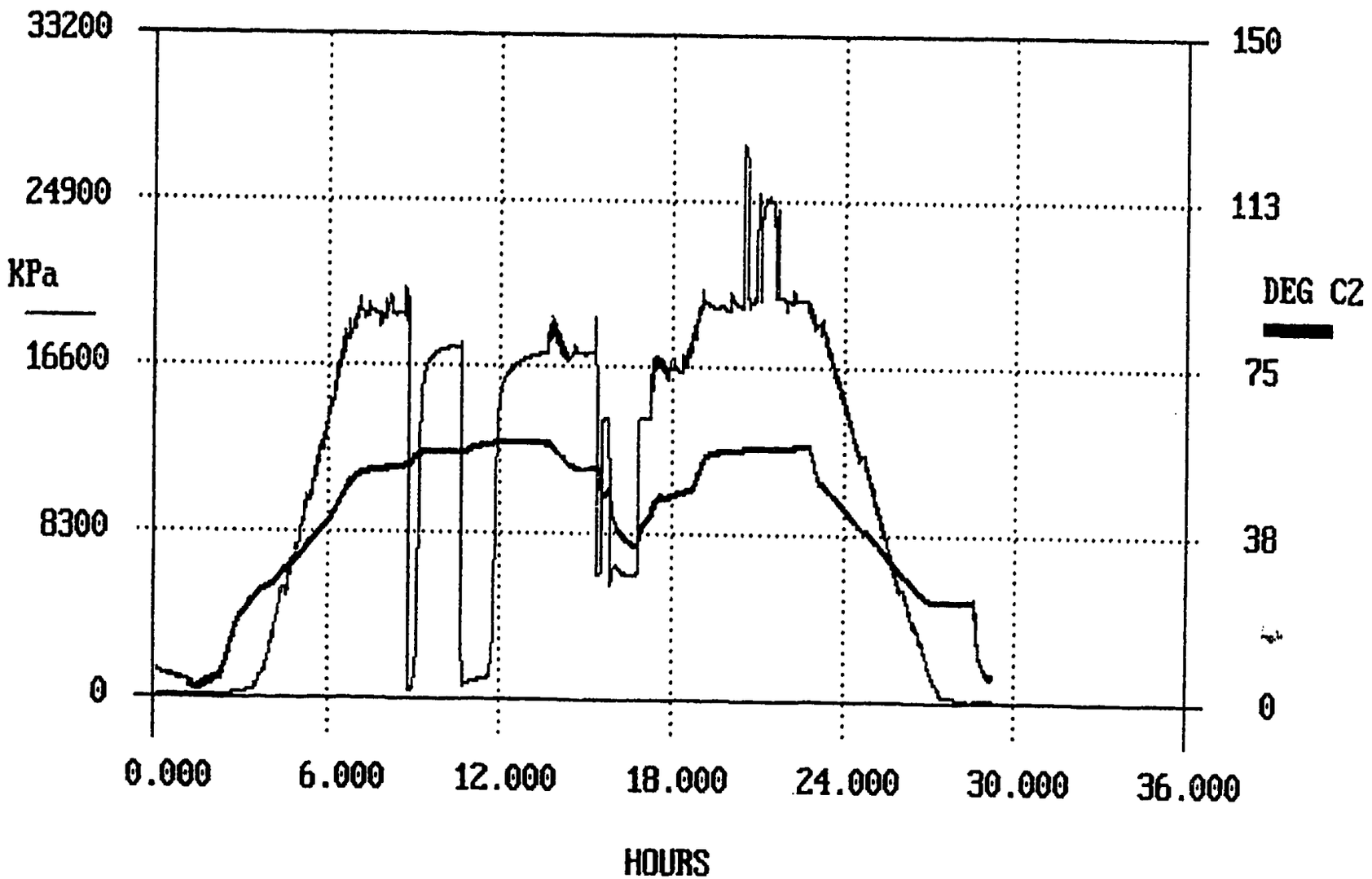
Gas Bomb: 0 Sampler: 0

Fluid Sample: 0 Sent to: AGAT GRANDE PRAIRIE

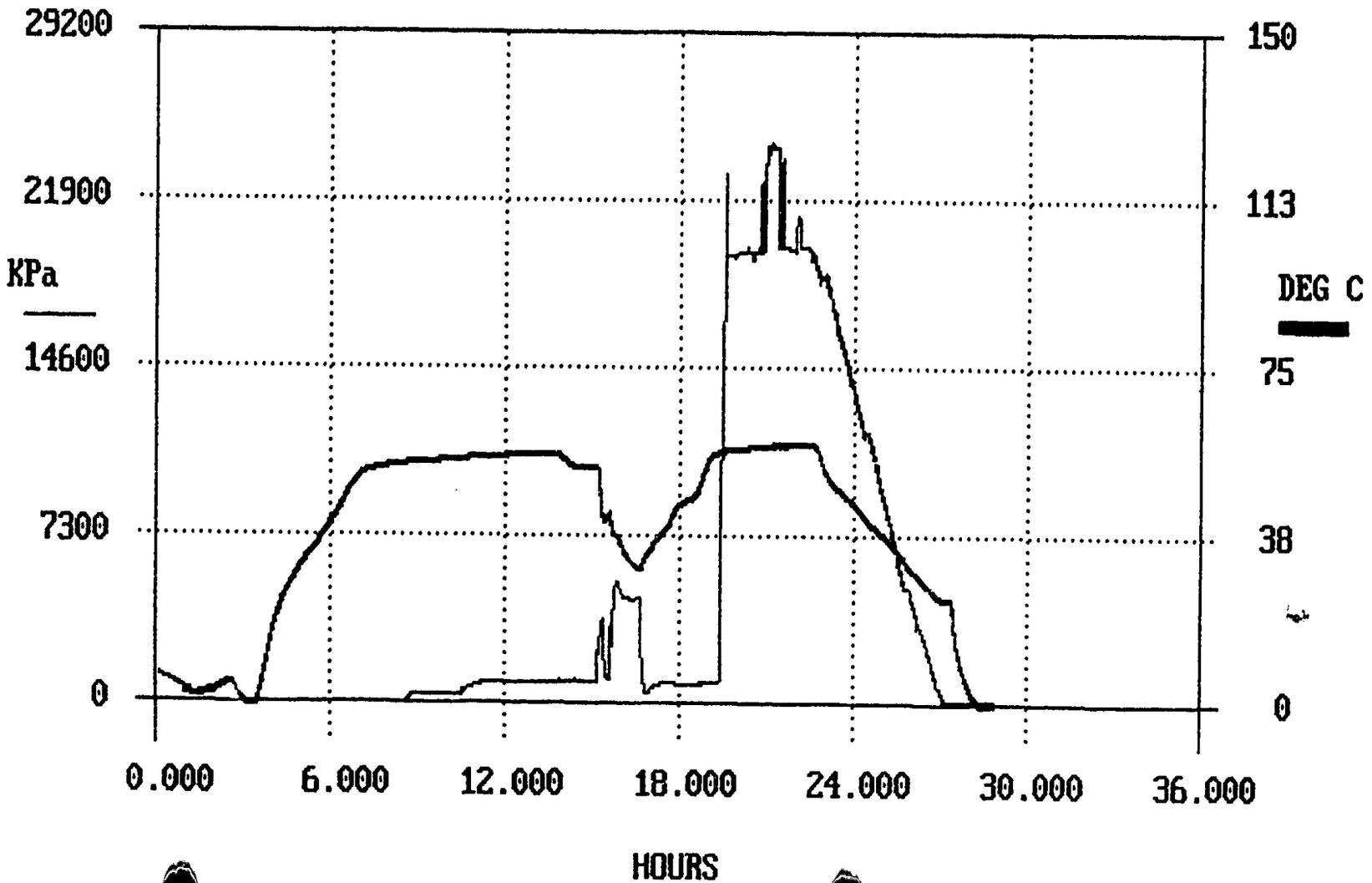
FILE: <C:\ALP_IN\11110857.124>
s/n 124 PARAMOUNT ET AL FT LIARD DST#6 REC#124 T#2-8619 OUTSIDE



FILE: <C:\ALP_IN\11110850.037>
s/n 37 PARAMOUNT ET AL FT LIARD DST#~~1~~ 7 REC#37 T#2-8619 ~~INSIDE~~ OUTSIDE



FILE: <C:\ALP_IN\11110811.126>
s/n 126 PARAMOUNT ET AL FT LIARD DST#6 REC#126 T#2-8619 FLUID



- 10k -



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **T4-5263** DST#: **7**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5263 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Contact: WILBERT CALLIHOO

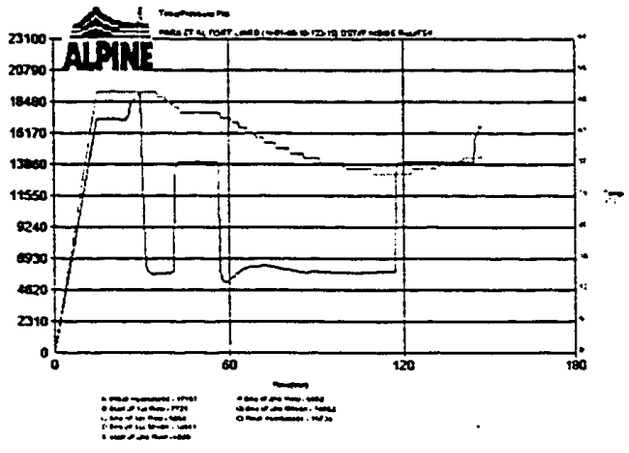
General Information:

Test Type:	INFLATE STRADDLE	Tester:	G.BABYAK
Interval:	1458m -1465m	Truck No.:	UNIT #114
Formation:	FANTASQUE	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	37.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1445.50 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	17183.2
B Start of 1st Flow	0.00	7721.3
C End of 1st Flow	10.02	5983.7
D End of 1st Shutin	15.12	14041.2
E Start of 2nd Flow	0.00	6097.8
F End of 2nd Flow	60.00	6001.8
G End of 2nd Shutin	26.82	14062.4
Q Final Hydrostatic	0.00	16724.2



Test Run Information:

Start Time:	1730hrs
Reached Test Depth:	1830hrs
Pull Out Time:	2100hrs
Tool Out Of Hole:	
Water Loss:	6.00cm³
Mud Drop:	NO
VIS:	95.00S/L
Filter Cake:	0.00mm
Pump Time:	0min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1180.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	

General Remarks:

WELL LIC#13525

PREFLOW:WEAK TO STRONG IN 15 SECONDS. GAS TO IN 1.5 MINUTES.

FINAL FLOW:SEE GAS RATES.

Recovery Description:

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5263 DST#: 7

Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 1

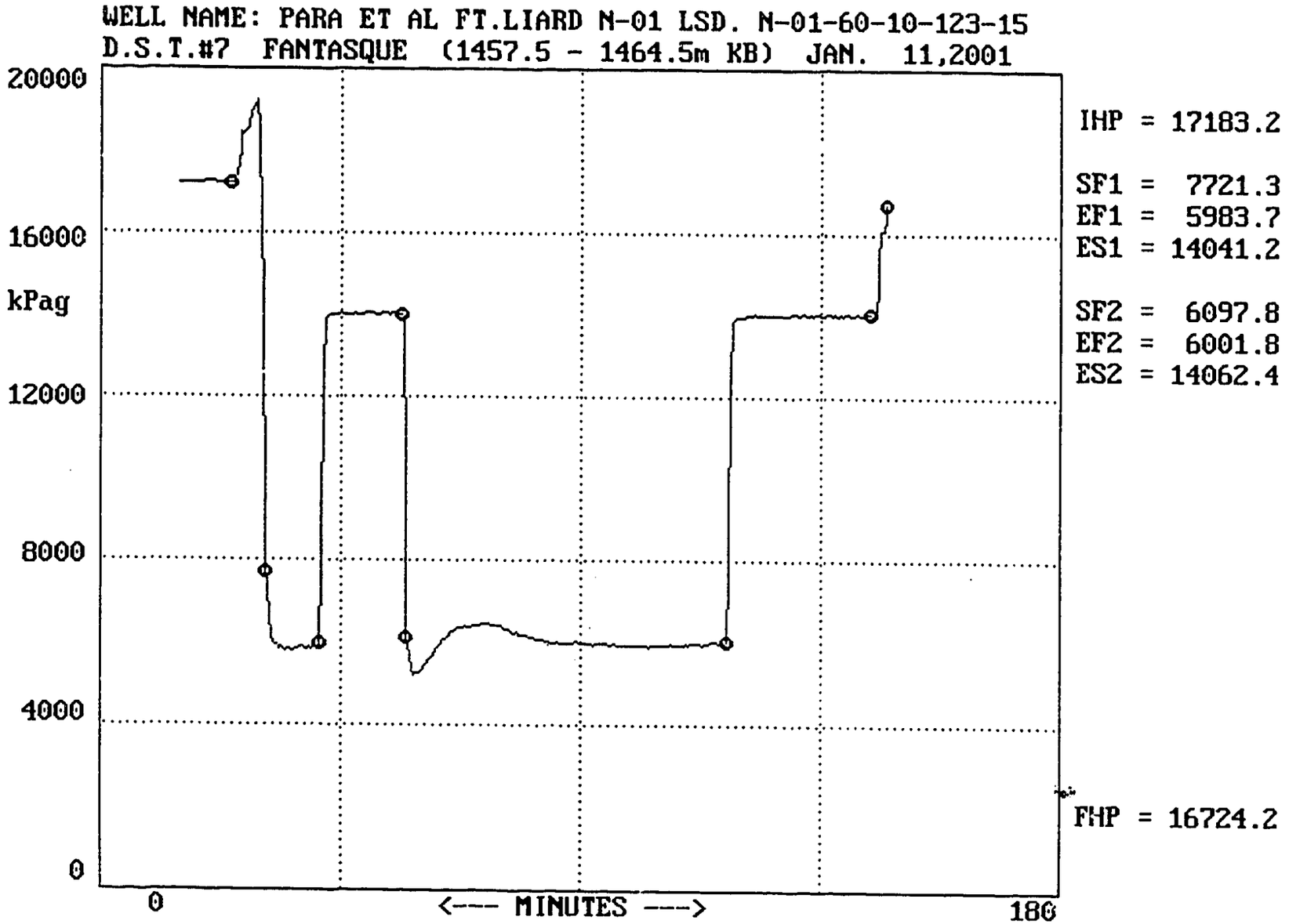
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	1724	163831.00

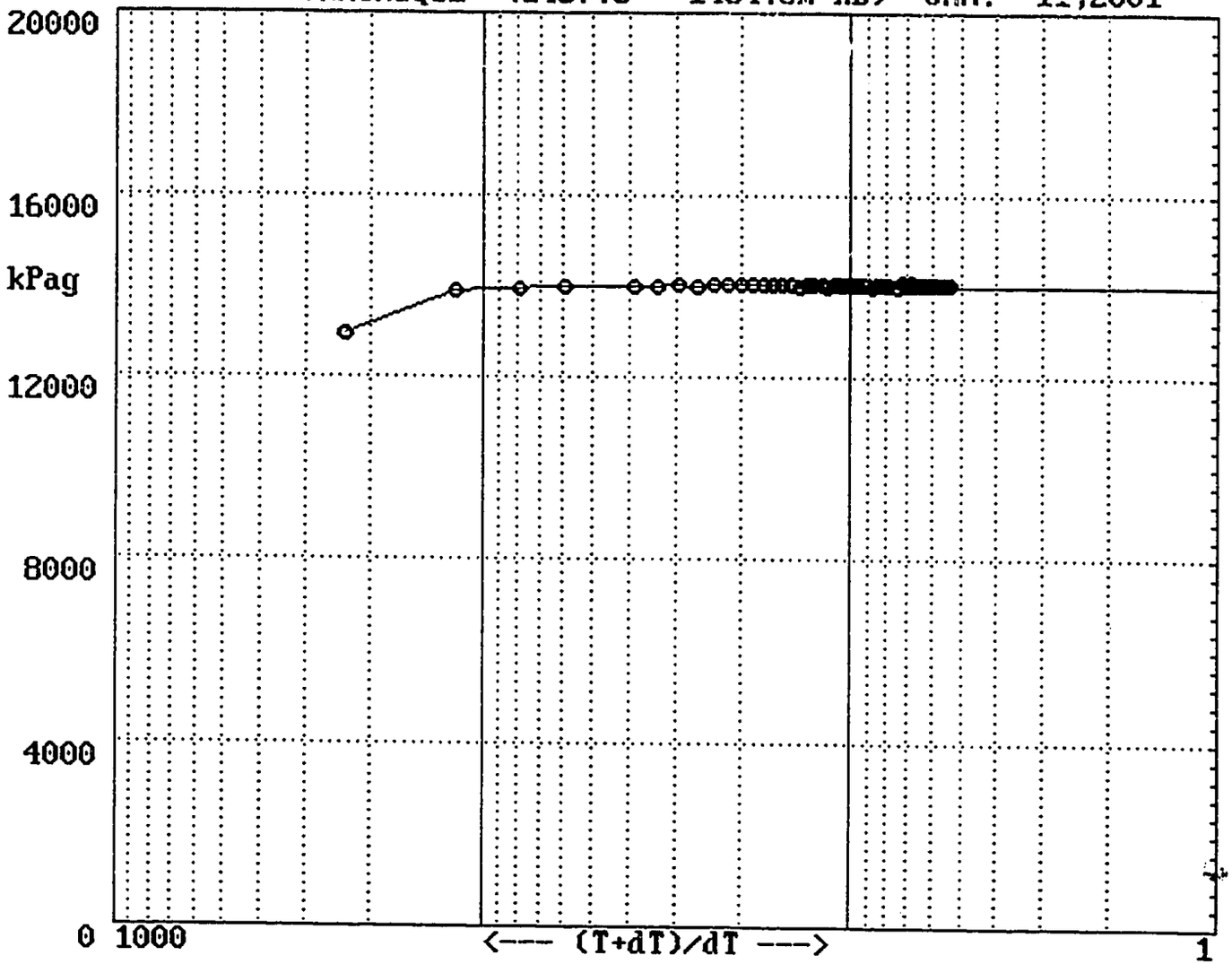
Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
5	22.23	1793	170022.00
10	22.23	1999	188593.00
15	22.23	2137	200974.00
20	22.23	2172	204069.00
25	22.23	2172	204069.00
30	22.23	2034	191688.00
35	22.23	1965	185498.00
40	22.23	1965	185498.00
45	22.23	1931	182402.00
50	22.23	1931	182402.00
55	22.23	1931	182402.00
60	22.23	1931	182402.00


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#7 FANTASQUE (1457.5 - 1464.5m KB) JAN. 11,2001
20000
16000
kPag
12000
8000
4000
0
0
<--- MINUTES --->
180
IHP = 17183.2
SF1 = 7721.3
EF1 = 5983.7
ES1 = 14041.2
SF2 = 6097.8
EF2 = 6001.8
ES2 = 14062.4
FHP = 16724.2

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#7 FANTASQUE (1457.5 - 1464.5m KB) JAN. 11,2001



HORNER PLOT
SHUT-IN # 2

SLOPE =
-92.4
kPa/cycle

Extrapolated
Pressure =
13980.7
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **D2-8620** DST#: **7**

Drill Stem Testing - Tool Diagram / Description

ALPINE

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	53
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1460.72m
Total Drill Pipe Above K.B.:	2.78m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1011.97	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

Drill Stem Testing - Tool Diagram / Description

ALPINE

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

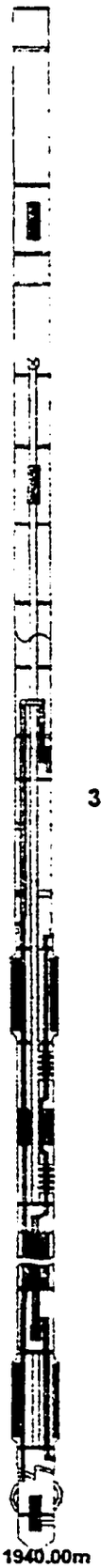
Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	53
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1460.72m
Total Drill Pipe Above K.B.:	2.78m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1011.97	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

21.84m

33.45m

Depth: 1458m

7.04m

Depth: 1465m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8620 DST#: 7

Test Date: 01/11/2001 1730hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: 1

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	1724	163831.00

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
5	22.23	1793	170022.00
10	22.23	1999	188593.00
15	22.23	2137	200974.00
20	22.23	2172	204069.00
25	22.23	2172	204069.00
30	22.23	2034	191688.00
35	22.23	1965	185498.00
40	22.23	1965	185498.00
45	22.23	1931	182402.00
50	22.23	1931	182402.00
55	22.23	1931	182402.00
60	22.23	1931	182402.00



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/12/2001**

Job Ticket #: **T4-5264** DST#: **8**

ALPINE

Real Time Test Report

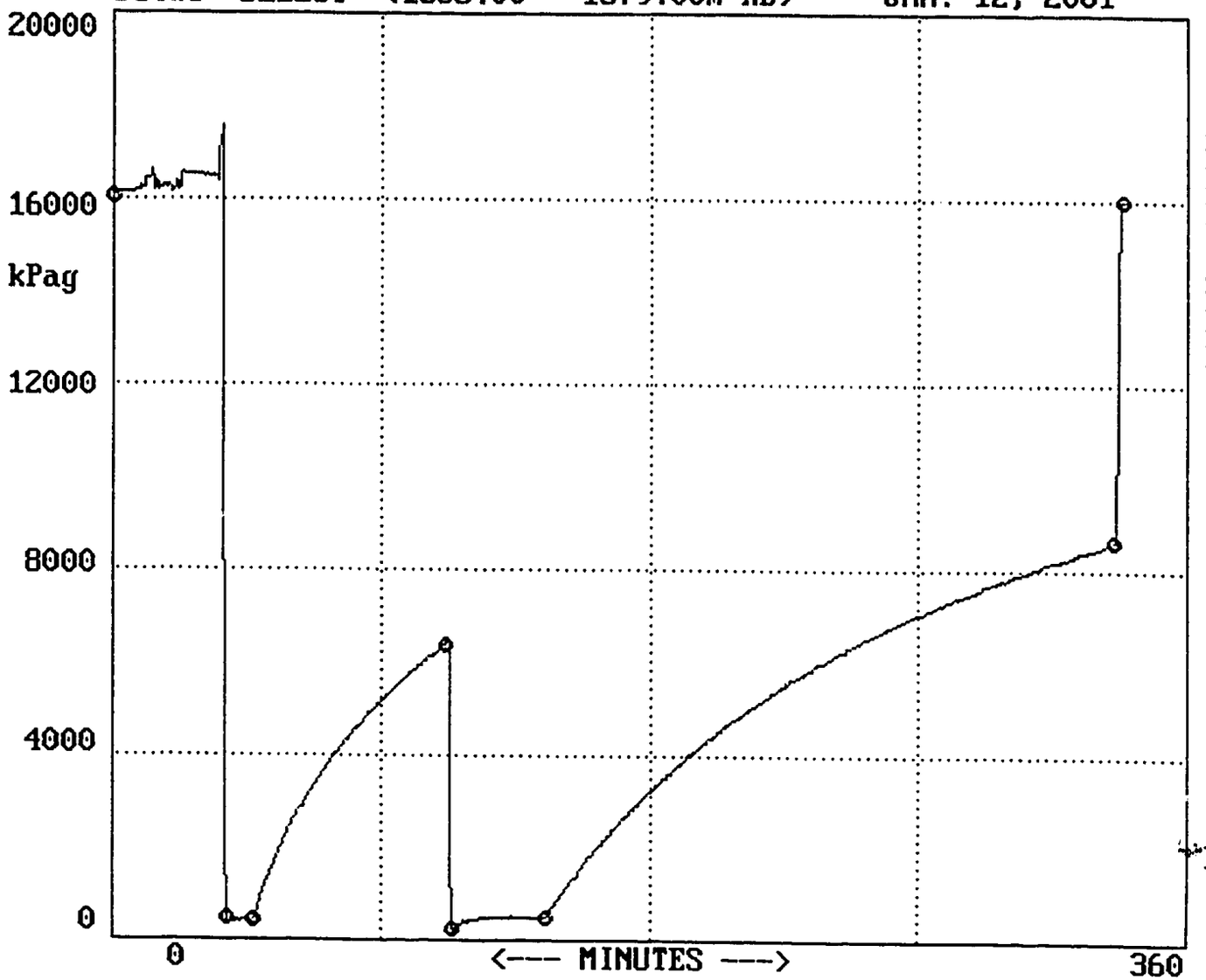
Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/12/2001**

Job Ticket #: **T4-5264** DST#: **8**

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST#8 BELLOY (1368.00 - 1379.00m KB) JAN. 12, 2001



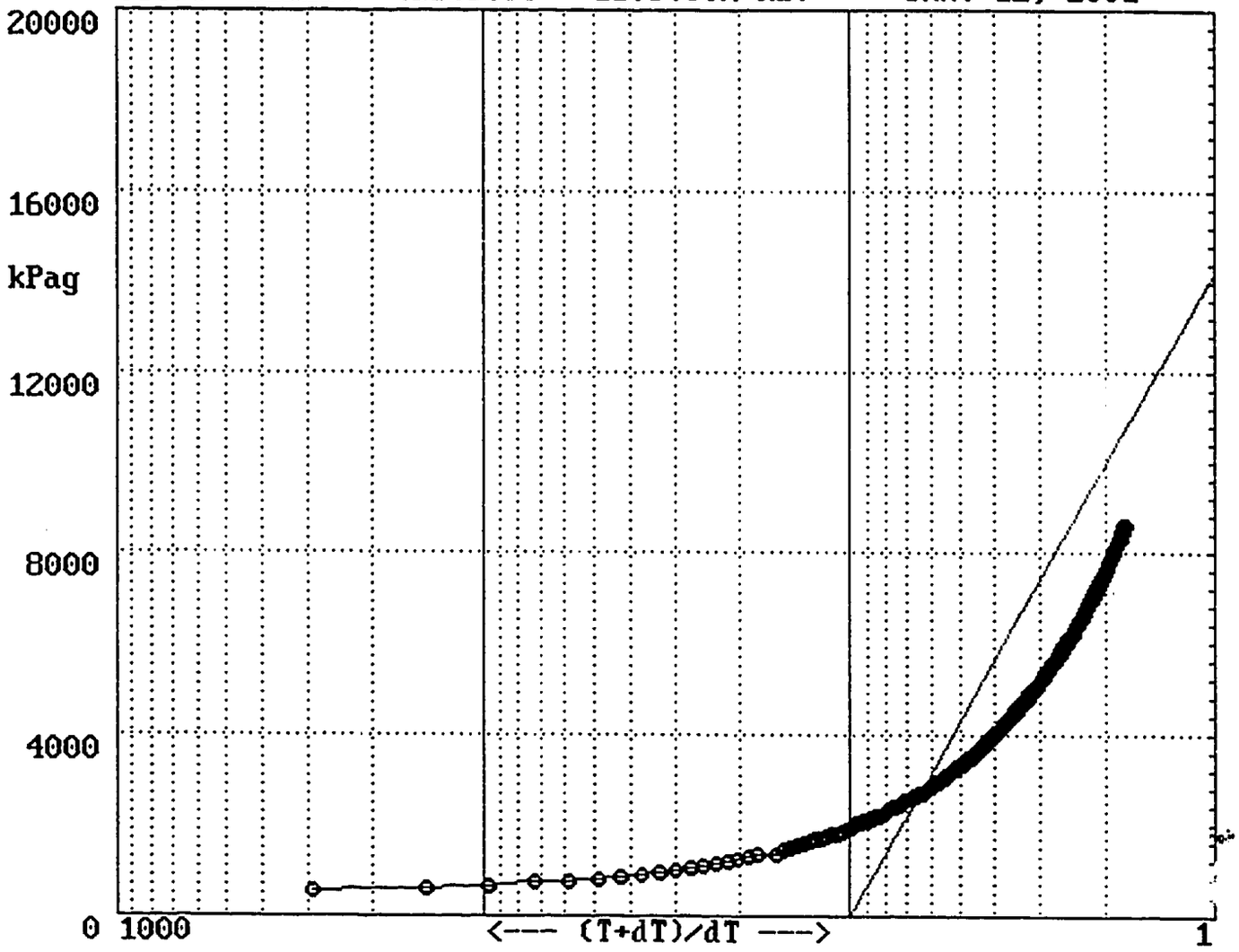
IHP = 16054.3

SF1 = 502.6
EF1 = 418.0
ES1 = 6377.4

SF2 = 248.3
EF2 = 505.4
ES2 = 8607.1

FHP = 15998.7

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST#8 BELLOY (1368.00 - 1379.00m KB) JAN. 12, 2001

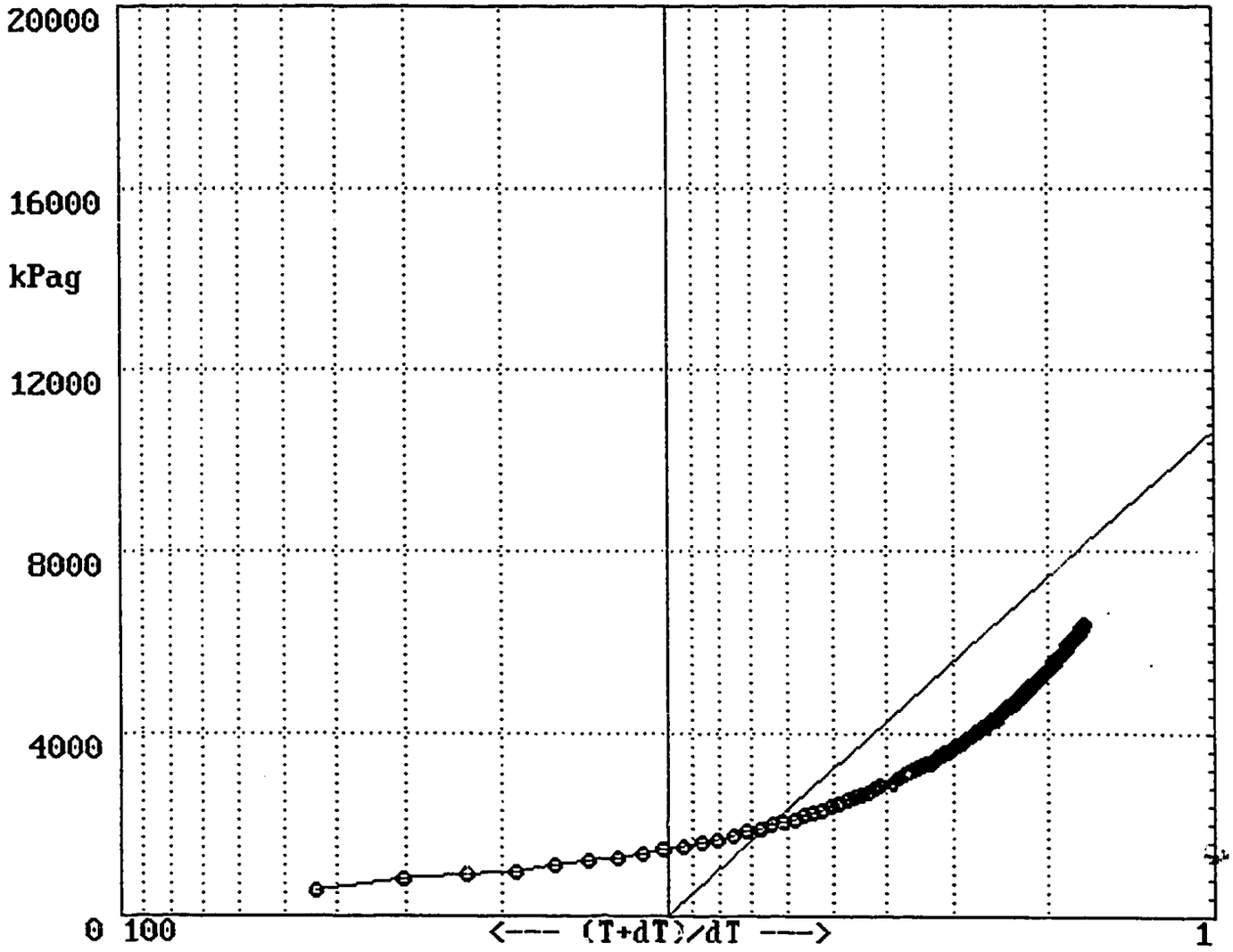


HORNER PLOT
SHUT-IN # 2

SLOPE =
14247.4
kPa/cycle

Extrapolated
Pressure =
14247.4
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST#8 BELLOY (1368.00 - 1379.00m KB) JAN. 12, 2001



HORNER PLOT
SHUT-IN # 1

SLOPE =
10627.1
kPa/cycle

Extrapolated
Pressure =
10627.1
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/12/2001**

Job Ticket #: **D2-8621** DST#: **8**

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8621 DST#: 8

Test Date: 01/12/2001 939hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

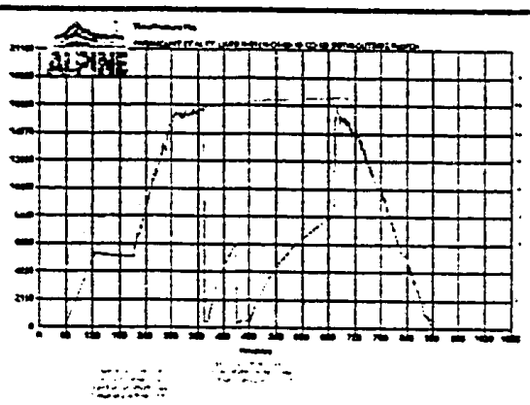
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DUANE WHITE
Interval:	1368.00m - 1379.00m	Truck No.:	UNIT 677
Formation:	BELLOY	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	50.00 C

Electronic Recorder Information:

OUTSIDE		Recorder #:	
Recorder #:	124		
Range:	10000 kPag	Range:	kPag
Depth:	1370.00 m	Depth:	m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	16207.4
B Start of 1st Flow	0.00	406.3
C End of 1st Flow	9.00	518.5
D End of 1st Shutin	64.00	6292.9
E Start of 2nd Flow	0.00	387.7
F End of 2nd Flow	31.00	490.7
G End of 2nd Shutin	191.00	8509.4
Q Final Hydrostatic	0.00	16197.0



Test Run Information:

Start Time:	939hrs
Reached Test Depth:	1500hrs
Pull Out Time:	2030hrs
Tool Out Of Hole:	100hrs
Weight set on Packers:	6000.00daN
Weight to free Packers:	10000.00daN
Initial String Weight:	39000.00daN
Unseated String Weight:	39000.00daN

Tool Chased Dist: 0.00m	Water Loss: 8.50cm³
Mud Type: GEL CHEMICAL	Mud Drop: NO
Mud Weight: 1180.00kg/m³	VIS: 95.00S/L
Amount of fill: 0.00m	Filter Cake: 2.00mm
Amt of cushion: 0.00	Pump Time:30min
Type of cushion:	Reversed Out: NO

General Remarks:

PREFLOW: Strong air blow immediately. No gas to surface. FINAL FLOW: Strong air blow immediately. Gas to surface in 2 minutes. Lazy 2 meter flare. Decreasing to 1/2 meter flare after 30 min
Gas was too small to measure.

Recovery Description:

gas bomb #367 Total fluid recovery was 35 meters of drilling mud

Gas Bomb: 1 Sampler: 1

Fluid Sample: 2 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

Contact: WILBERT CALLIHOO Well Name: PARAMOUNT ET AL FT. [redacted]D
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	68
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1370.60m
Total Drill Pipe Above K.B.:	2.67m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	921.85	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	[redacted]
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	6.10
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	[redacted]
Drag Spring	2.08

21.84m

37.35m

Depth: 1368m

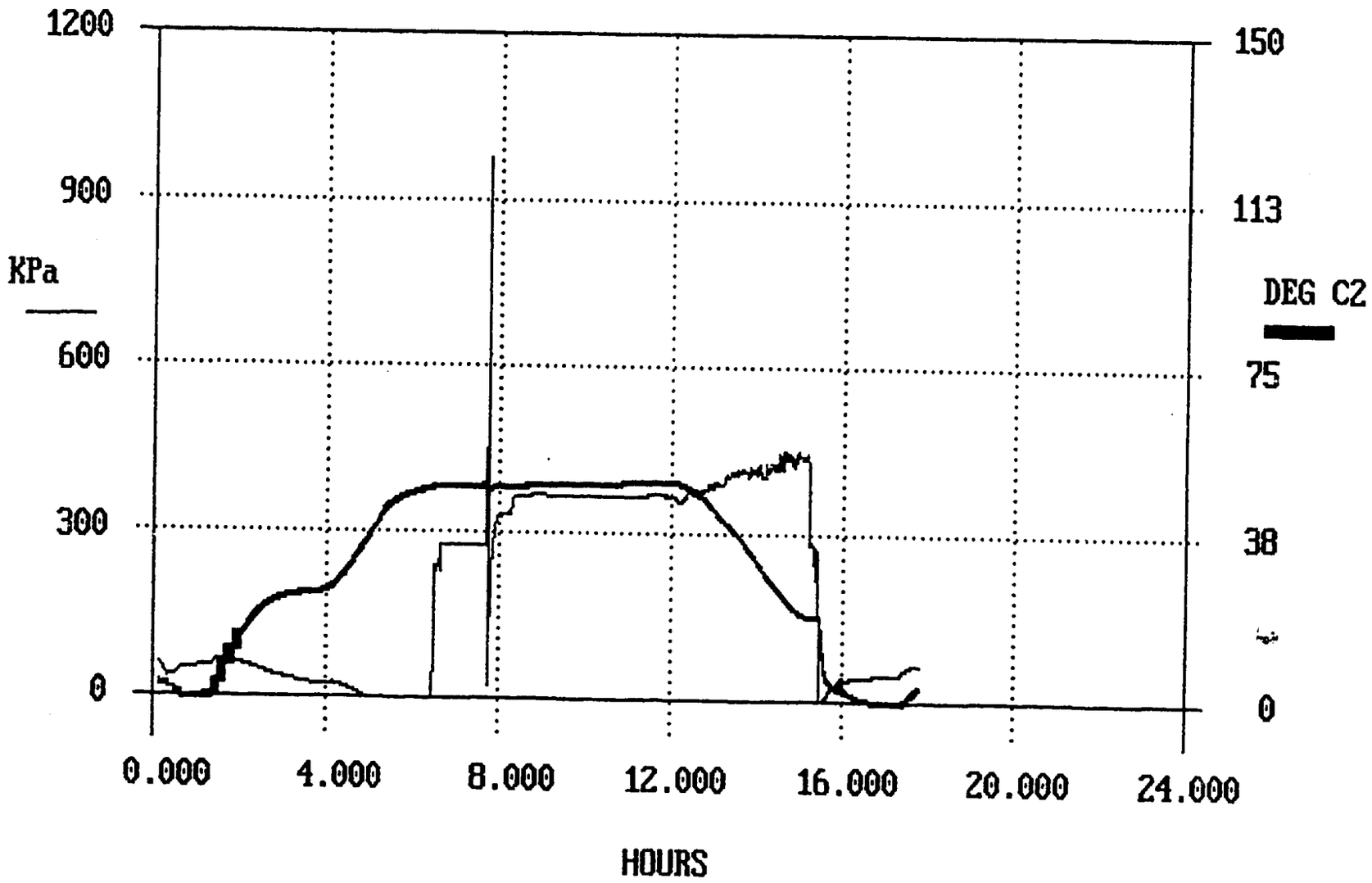
10.94m

Depth: 1379m

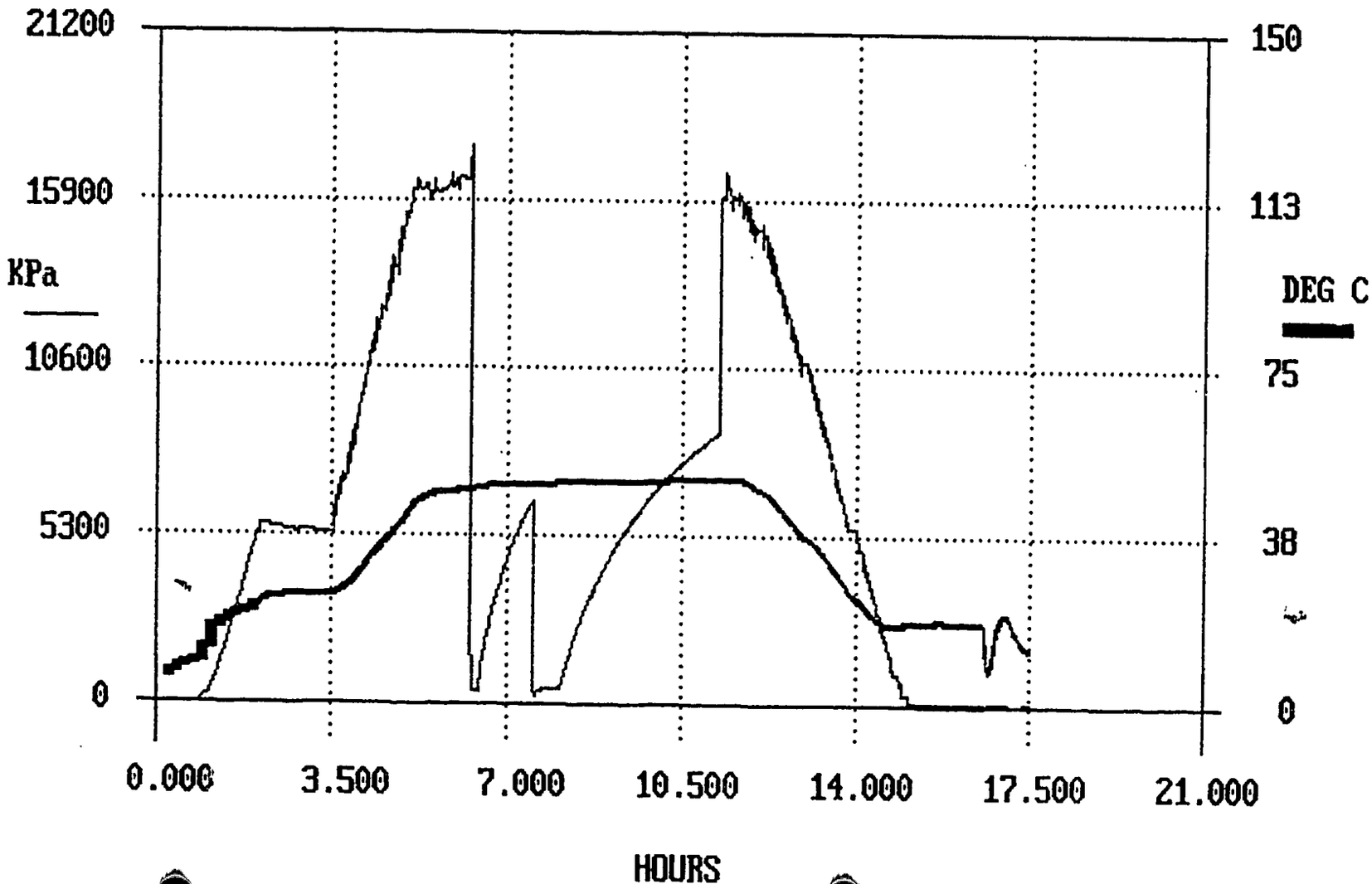
4.57m

Total Depth: 1940.00m

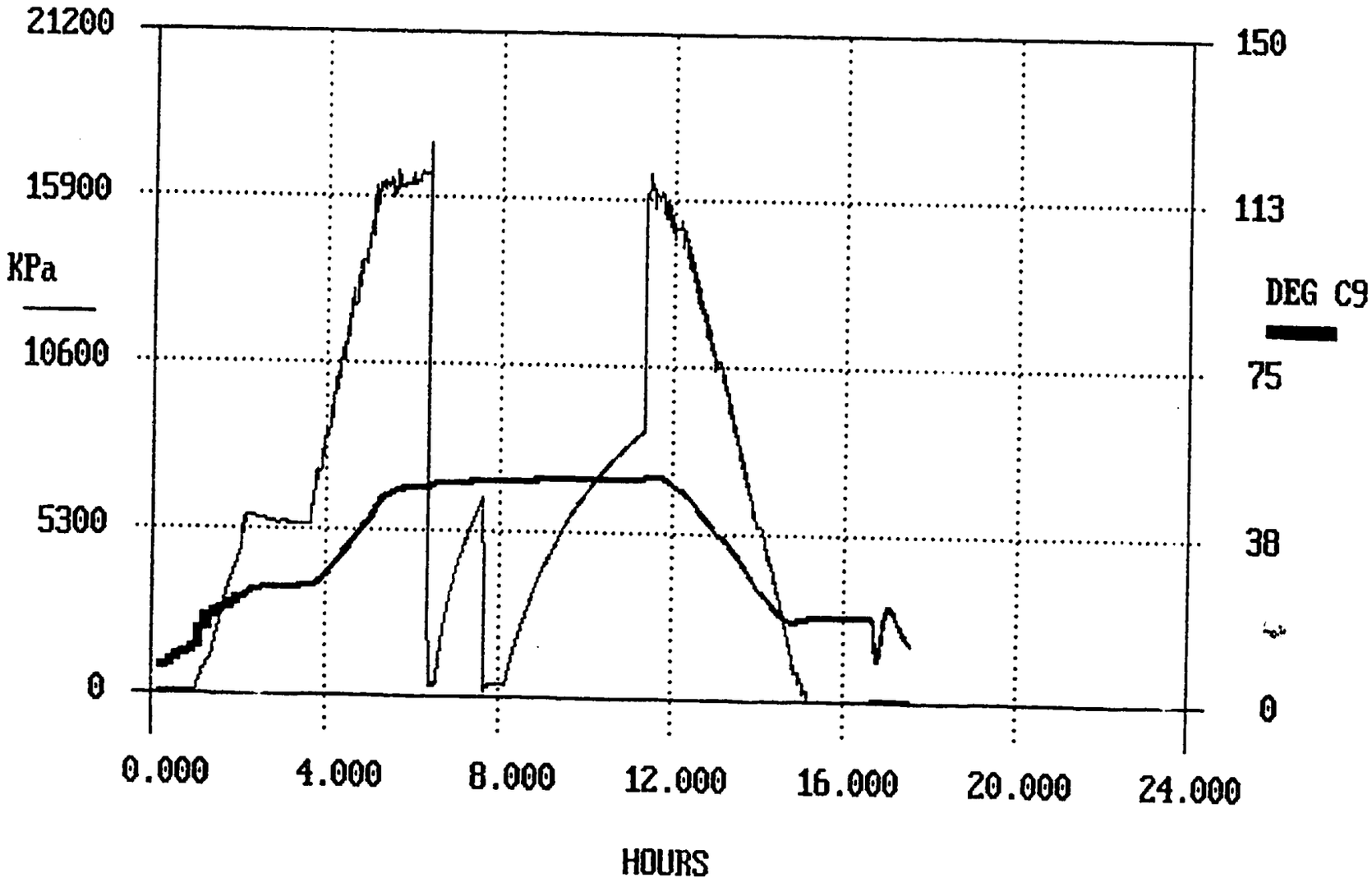
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s/n 126 PARAMOUNT ET AL FT. LIARD DST#8 REC#126 T#2-8621 FLUID



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s/n 124 PARAMOUNT ET AL FT LIARD DST#8 REC#124 t#2-8621 OUTSIDE



FILE: <C:\ALP_IN\11210857.037>
s/n 37 PARAMOUNT ET AL FT LIARD DST#8 REC#37 T#2-8621 OUTSIDE



DAILY DRILLING SUMMARY

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

Date	Depth	Drilling Hours	ROP (m/hr)	Mud Properties Density	Vis	YP	pH	Operations Summary
00-Dec-12	41	30	7.25	4.14	1040	60	-	10.0	Rig to spud, spud well @ 16:30hrs, drill 0-41m.
00-Dec-13	189	148	16.75	8.84	110-120	52-60	-	8.0-10.0	Work mud-ring, drill, work mud ring, drill, work mudring, drill to 189m
00-Dec-14	310	121	14.00	8.64	070-119	47-60	-	8.0-9.0	Drill from 189-291m, POOH for bit, RIH with Bit #2A, drill from 291-310m, circulate & run survey.
00-Dec-15	421	111	20.75	5.35	145-119	51-60	-	8.0-9.0	Drill from 310-421m, survey as required.
00-Dec-16	501	80	18.50	4.32	145-115	51-81	-	9.0-9.5	Drill from 421m to surface casing point @ 501m, circulate & condition hole, wiper trip.
00-Dec-17	501	0	0.00	0.00	1150	80	-	9.0	Wiper trip, work tight hole, circulate, POOH, rig to & run casing, rig to & cement casing, WOC.
00-Dec-18	501	0	0.00	0.00	-	-	-	-	WOC, tear out diverter, cut casing & conductor, cement casing, cut casing, weld on bowl, nipple up BOP, pressure test .
00-Dec-19	528	27	3.50	7.71	1010	29	-	-	Pressure test, pick up dir. tools, RIH, drill out cement, drill 501-511m, run leak-off test, drill 511-528m.
00-Dec-20	947	419	20.50	20.44	1005	29	-	-	Drill from 528-947m.
00-Dec-21	1036	89	10.25	8.68	075-109	38-55	17.0	9.0-10.5	Drill from 947-986m, circulate & pump pill, POOH for bit, RIH, ream & clean to bottom, drill 986-1036m.
00-Dec-22	1244	208	21.00	9.90	075-110	46-63	14.0	0.0-10.	Drill from 1036-1244m.
00-Dec-23	1378	134	20.00	6.70	110-113	51-58	.0-11.	9.0-10.5	Drill 1244-1301m, work on mudpump, drill 1301-
00-Dec-24	1409	31	5.50	5.64	120-113	52-57	9.5	10-10.5	Drill from 1378-1404m, POOH for bit, change out mud-motor, RIH, ream 1340-1404m, circulate hole clean, drill from 1404-1409m.
00-Dec-25	1493	84	22.00	3.82	120-112	54-67	.0-10.	9.0-10.5	Drill from 1409-1493m, circulate, commence POOH.
00-Dec-26	1524	31	8.50	3.65	110-113	61-73	8.0	9.5-10.5	POOH, make up bit, RIH, ream from 1473-1493m, drill from 1493-1524m.
00-Dec-27	1604	80	22.75	3.52	130-115	60-68	7.0-8.0	9.0-10.5	Drill from 1524-1604m.
00-Dec-28	1643	39	9.75	4.00	1140	62-71	7.0-8.0	0.0-10.	Drill from 1604-1643m, circulate, POOH for bit, work on directional tools & BHA, RIH, slip & cut, RIH.
00-Dec-29	1706	63	18.00	3.50	135-116	60-67	6.5-8.0	9.5-10.0	RIH, ream from 1614-1643m, drill from 1643-1706m.
00-Dec-30	1729	23	9.25	2.49	145-115	63-69	6.5-7.5	0.0-10.	Drill from 1706-1718m, circulate, POOH for bit, RIH, ream from 1702-1718m, drill from 1718-1729m.
00-Dec-31	1773	44	15.75	2.79	145-115	61-71	6.0-7.5	0.0-10.	Drill from 1729-1773m, circulate, POOH for bit, make up bit & RIH.
01-Jan-01	1829	56	17.25	3.25	150-115	60-63	5.5-7.0	0.0-10.	RIH, ream from 1762-1773m, drill from 1773-1829m.
02-Jan-01	1873	44	16.50	2.67	1135	60	7.0	9.5	Drill 1829-1873m, circulate, POOH.
03-Jan-01	1901	28	14.25	1.96	1140	66	7.0	9.5	POOH, work on directional tools, make up BHA, RIH, slip & cut, RIH, ream 1864-1873m, drill 1873-1901m.
04-Jan-01	1912	11	7.50	1.47	1140	61	7.0	9.0-9.5	Drill from 1901-1912m, cond. mud & circ., POOH, repair reamer, make up bit & tools, RIH, ream to bottom.

05-Jan-01	1940	28	11.00	2.55	1145	78	7.0	10.5	Drill from 1912m to FTD @ 1940m, circulate, wiper trip, circulate, POOH.
06-Jan-01	1940	0	0.00	0.00	1140	74	6.5	9.5	POOH, lay down directional tools, rig to & log Run with Baker Hughes, troubleshoot tool malfunction, loggers released, RIH & lay down 6 drill collars.
07-Jan-01	1940	0	0.00	0.00	1140	74	6.5	9.5	Make up DST #1, RIH & run DST #1, POOH, recover recorders, make up DST #2, RIH, slip & cut, RIH.
08-Jan-01	1940	0	0.00	0.00	1150	58	6.0	9.0	RIH, run DST #2, POOH, recover recorders, lay down test tool, make up bit, RIH for wiper trip, shut in well & circulate gas out through choke, condition mud.
09-Jan-01	1940	0	0.00	0.00	1160	76	6.0	10.0	Condition mud & circulate, POOH, make up DST #3, RIH & run DST #3, packer seat failed, reset packers, run DST #3, packer seat failed, change interval & reset packers, run DST #4.
10-Jan-01	1940	0	0.00	0.00	1180	80	6.0	10.0	Run DST #4, pull loose, reset packers, run DST #5, POOH, recover recorders, wiper trip, circulate gas out through choke, condition mud & circulate.
11-Jan-01	1940	0	0.00	0.00	1180	80	6.0	10.0	Condition mud & circulate, POOH, make up DST #6, RIH & run DST #6, reset packers & run DST #7, pull loose, RIH to 1688m, head up to reverse circulate.
12-Jan-01	1940	0	0.00	0.00	1180	80	6.0	10.0	Reverse circulate, POOH, make up DST #8, RIH & run DST #8, POOH.
13-Jan-01	1940	0	0.00	0.00	1190	72	6.0	10.0	POOH, lay down test tool, make up bit, RIH for wiper trip, circulate, POOH, rig to & log with Baker Atlas.
14-Jan-01	1940	0	0.00	0.00	-	-	-	-	Complete logging, rig out loggers, RIH for clean-out trip, geologist released.

WELLSITE LOGGING REPORT

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

HOLE DATA	MUD DATA	LOGGING COMPANY
Hole Size: 222mm		**Logging Co:** Baker Hughes
TD Driller: 1940.0m	**Type:** Gel-chem	**Engineer:** Mark Lowther
Strap: 1940.7	**Density:** 1140	**Truck No.:** 6591
TD Logger: 1942.5m	**Viscosity:** 74	**Start Date:** 06-Jan-01
Casing Driller: 501.0m	**W.L.:** 6.5	**Start Time:** 0730hrs
Casing Logger: 500.5m	**pH:** 9.5	**End Date:** 06-Jan-01
Hole Condition: Good		**End Time:** 2230hrs

LOGGING SEQUENCE

Run Number	Logged Interval From	To	Hours	Logs	Remarks
1	1942	500.5	10.50	ML-HDIL-ZDL-CN-DAL-GR-XY	
	Total Hours:		10.50		

LOGGING OPERATIONS SUMMARY

Date	From	To	Description of Operation
06 Jan 01	0730	1730	Complete Run #1 to surface casing.
	1730	2230	Pull to troubleshoot tool malfunction on surface. Root cause found t
			be wireline failure. Second run aborted - loggers released.

REMARKS & COMMENTS

There were a number of problems with the logging; 1) the wrong sonic tool was brought to the location whic necessitated a second run - the MAC tool was hotshotted to location while conducting Run #1; 2) the DAL sonic tool did not function properly on Run #1; 3) the HDIL tool failed 2m from surface casing and Run #1 w terminated before completing the GR-Neutron pass to 150m; 4) the second run was aborted because the MAC tool could not be powered up. Extensive troubleshooting determined a wireline failure was responsible. Loggers were released and DST testing commenced. Loggers were to return at a later date to complete Run 2.

WELLSITE LOGGING REPORT

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

HOLE DATA	MUD DATA	LOGGING COMPANY
Hole Size: 222mm		**Logging Co.:** Baker Hughes
TD Driller: 1940.0m	**Type:** Gel-chem	**Engineer:** A. Semenov
Strap: 1940.7	**Density:** 1190	**Truck No.:** HL6577
TD Logger: 1942.5m	**Viscosity:** 72	**Start Date:** 13-Jan-01
Casing Driller: 501.0m	**W.L.:** 6.0	**Start Time:** 1815hrs
Casing Logger: 500.5m	**pH:** 10.0	**End Date:** 14-Jan-01
Hole Condition: Good		**End Time:** 0045hrs

LOGGING SEQUENCE

Run Number	Logged Interval From	To	Hours	Logs	Remarks
1	1942m	150m	5.00	MAC-CN-GR-CAL	
	Total Hours:		5.00		

LOGGING OPERATIONS SUMMARY

Date	From	To	Description of Operation
13 Jan 01	1815	1900	Rig up & run in with logging tool.
	1900	0000	Log
14 Jan 01	0000	0045	Rig out.

REMARKS & COMMENTS

Logging went well with no problems.

WELL SUMMARY

PARAMOUNT ET AL FORT LIARD
NWT N-01-60-10123-15

The Paramount et al Fort Liard N-01 well is located approximately 20 kilometres south of the village of Fort Liard. This vertical exploration well was spudded on December 12, 2000 by Precision Drilling Rig #379 @ 16:30 hours. A Continental total gas detector and chromatograph was rigged up and running from surface to T.D. Samples were collected in 5 metre intervals from surface to F.T.D. The well reached F.T.D. at 1940 metres in sandstone of the lower Mattson on January 5, 2001 at 12:15 hours. Sample quality was variable, ranging from adequate to often poor to highly suspect, due to a combination of factors which includes inconsistent and improper sample-catching by inexperienced rig personnel, as well as periodic problems with the sample bucket being improperly set out such that it often fell off the catwalk at the shaker. As a result, sections of the samples are undoubtedly spot samples at best and therefore, not representative of the respective intervals. This is borne out by the misfit of some sample descriptions with the e-log characteristics in sections of the Mattson, especially with regard to porosity. There was also a considerable amount of cavings, often from the variably bentonitic claystones and shales of the Triassic, observed in samples through significant portions of the drilling.

The primary zone of interest was the Mississippian Mattson Formation, a predominantly clastic succession representing five different depositional environments of near shore marine to coastal plain systems. There were multiple zones within the succession occurring primarily in the coastal dune complex. Secondary targets in the well were the basal Cretaceous Chinkeh Formation and the Permian Fantasque Formation. All zones of interest were gas targets. The well was planned to test a structural closure on the Liard Anticline. The N-01 structure is located at the southeastward end of the NW-trending anticline which plunges to the southeast. The well-path was expected to cut the structure-forming fault at ~1960m in the Mattson section. The fault is interpreted to be a high-angle reverse fault that has been reactivated on a former oblique-slip normal fault.

There were no significant operational difficulties encountered during the drilling of this well. Surface hole (311mm) was drilled to a depth of 501m with a gel slurry. Surface casing (244.5mm) was set to a depth of 501m. The main hole (222mm) was drilled with floc water to a depth of 980m where it was displaced to a gel-chem mud system for the remainder of the hole. The main hole section from 501m to 1940m was drilled with a mud-motor to ensure control of potential deviation problems. This well drilled significantly faster than has been typical for this region and used far fewer bits.

Two logging runs were conducted upon reaching FTD, the first was conducted on January 6th and the second was conducted on January 13th upon completion of the testing program. Due to operational difficulties with Baker Atlas, the loggers were released on January 6th prior to completion of logging (see logging report for details). Both logging runs were conventional; #1: ML-HDIL-ZDL-CN-DAL-GR-XYCAL; #2: MAC-ZDL-CN-GR-XYCAL. After completion of the first logging run a total of 8 DST's were run, commencing on January 7th and completed on January 12th. Six DSTs were run in the Mattson (i.e., DSTs #1-6), one in the Fantasque (i.e., DST #7), and one in the Belloy (i.e., DST #8).

There were no significant problems encountered on the DST runs, excepting the two mis-runs on DST #3 when the packer seat failed during the pre-flows (see attached DST reports for details). Production casing was run upon completion of the testing program.

FORMATION EVALUATIONS

CHINKEH SAND

The Chinkeh Sand was drilled at approx. 9min/m. Background gas for the formation was ~75 units, with a peak of ~250 units. The Chinkeh Sand consists of a relatively consolidated, quartzose sandstone with minor black chert grains throughout, giving it a salt and pepper appearance. The sands were very fine to fine grained and well sorted with sub angular to angular grains. Calcareous cements were very common, with minor siliceous cements. There was also an argillaceous component to the matrix. The combination of these elements limited porosity to 3-6%.

CONCLUSION: This zone is of no economic interest.

BELLOY FORMATION

The Belloy Formation comprises ~ 37 metres of predominantly chert with interbedded sandstone and minor thin shale. The only potential zone of interest is the upper sandstone unit which produced a good gas show upon penetration.

The upper sandstone unit is quite variable, comprising predominantly quartzolithic wacke to subwacke with a lesser to minor component of sublitharenite. It ranges in colour from light brown to dark grey to medium to dark red. The sandstone is predominantly lower fine to lower medium grained, generally moderately sorted with sub-angular to sub-rounded grains. Composition consists of common frosted to clear quartz with lesser to locally minor varicoloured lithic grains. The sandstone is generally moderately glauconitic and there is a variably abundant to trace component of silty argillaceous to locally phosphatic/bituminous matrix. Locally, common to abundant ferruginous staining indicative of subaerial exposure is evident. The rocks are moderately to moderately poorly indurated with siliceous and dolomitic cements. Trace to locally minor quartz overgrowths were observed in some of the cuttings. In the basal part of the unit the sandstone is variably silicified and grades to sandy chert in part. Porosity is typically tight to poor with minor fair streaks in samples. Hydrocarbon shows consisted of traces of spotty oil stain and common weak, very thin diffuse cut with no dry fluorescence.

There was a significant increase in gas readings upon penetration of the Belloy which produced a good gas show that peaked at 580 units (BGG ~10 units) across ~4 metres near the top of the formation @ 1372-1376m. A DST (i.e., DST #8: 1368-1379m) was run across this interval with poor results; GTS was TSTM. The build on the ISI & FSI curves indicate a relatively tight interval with very low permeability.

CONCLUSION: There are no reservoir-quality intervals in the Belloy at this location. Despite a good gas show in the uppermost Belloy, the results of DST #8 indicate the Belloy has no economic potential at this location.

FANTASQUE FORMATION

The Fantasque formation is a massive chert interval that defines the upper Permian boundary. Sample lithology was relatively consolidated, light brown to dark gray chert. The lighter cherts were very dense and broken into glassy shards with common fracture surfaces. The darker cherts were somewhat granular with a slightly silty component and only minor fracture surfaces. Near the base of the section the cherts exhibited some residual bitumen and spotted oil staining. There was no cut and only a very faint white fluorescence.

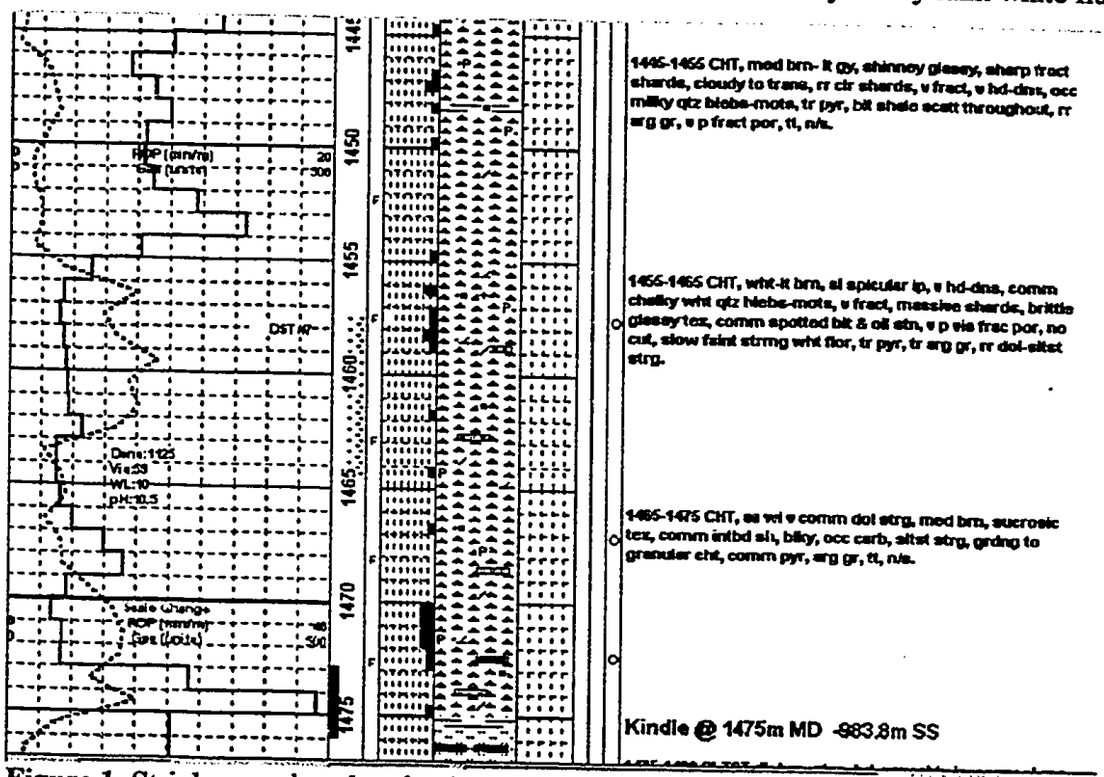


Figure 1. Striplog section showing lower Fantasque pay zone.

There was a significant, though generally minor, increase in gas in the lower Fantasque commencing at 1455m. The 1456-1463m interval had a fair gas show of ~240 units over a BGG of ~50 units. E-log porosity ranged from 9-12% through this interval and consists entirely of fracture porosity. A DST was run over the this interval (i.e., DST #7: 1458-1465m) and produced a stable flow rate of ~6.5 million ft^3/day.

CONCLUSION: The Fantasque has some fair to marginally good fractured reservoir intervals in the lower Fantasque. The results of DST #7 showed good to excellent gas flow rates in the lower section of this formation. The Fantasque is a zone capable of good commercial production at this location.

KINDLE FORMATION

The Kindle Formation comprises ~23 metres of siltstone with minor thinly interbedded dolomite and shale at this locality. The siltstone is typically medium to dark brown, quartzose, and slightly to locally moderately argillaceous with trace argillaceous partings. The siltstone is generally very dolomitic locally grading to very silty dolostone. The rocks are generally moderately to well indurated and tight with abundant dolomitic cement upsection grading downsection to abundant calcareous cement.

Hydrocarbon shows generally consisted of traces of very dull questionable fluorescence with variably minor to common weak slow yellow white streaming and diffuse cut which decreases downsection. There was generally no significant increase in gas readings through this formation with the exception of a minor thin gas show of ~260 units (BGG ~50 units) at 1481m.

CONCLUSION: The Kindle Formation has no reservoir-quality intervals and hence, no economic potential at this locality.

MATTSON FORMATION

Approximately 444 metres of the Mattson were penetrated at this locality; FTD was called in the lower Mattson. The Mattson Formation comprises sandstone with minor interbedded shale and carbonate. The section is strongly sand-dominated with generally minor carbonate & shale. There are two basic types of sandstone in the Mattson succession that are generally representative of their respective environments; 1) very fine to fine grained quartzarenite to minor sublitharenite of shoreface affinity, 2) upper very fine to lower medium grained quartzarenite to sublitharenite of eolian origin. A third variable type of sandstone consists of variably very fine to medium grained quartzarenite to quartzose subwackes of transitional facies but are generally of no economic interest. It seems reasonable to assume various degrees of reworking of both eolian and shoreface deposits during subsequent transgressions and regressions, making distinction between the two types sometimes unclear.

Five separate lithofacies have been identified in the Mattson succession in this region; 1) storm-reworked shoreface, 2) muddy shoreface or lagoon & tidal flat, 3) wave-reworked shoreface, foreshore and backshore, 4) coastal dune complex, and 5) interdune swamp & paleosoil. Although the lower Mattson was not penetrated at this locality, most of these lithofacies appear to be represented at this location. The Mattson Formation at this locality correlates reasonably well with the Paramount et al Liard A-01 well to the depth of the M3 zone, below which no log data is available for the A-01 well. However, there are numerous local differences with regard to facies stacking patterns apparent between the two locations, as well as greater porosity development at the N-01 location.

SHOREFACE SANDSTONE

The shoreface sandstone is a typically very light grey to light brown, well-sorted quartzarenite with trace amounts of dark lithic grains which can occasionally be identified as chert. The quartz is predominantly clear and angular to sub-rounded. Variable degrees of reworking and input from eolian sources is apparent where there is a minor frosted quartz component.

These sandstones are predominantly very fine to fine grained with either fraction locally dominant. The sandstones are often variably silty, ranging from trace to common, and locally grade to sandy siltstone in minor part. Argillaceous content is typically nil in these clean quartzarenites. Locally, the sandstone becomes slightly to moderately argillaceous and usually has argillaceous partings and laminae associated with it. Upsection, some sandstone has a variably trace to minor component of outsized (i.e., medium to fine) unusual grey blue, partly tripolitic chert grains and occasionally grades to sublitharenite. This appears to be a regional provenance marker, as noted on previous wells (i.e., I-46/60-20-123-15, b-43-K/94-O-14, I-02/60-20-123-30). Locally, the sandstone becomes a sublitharenite with an added minor component of carbonate grains and skeletal debris.

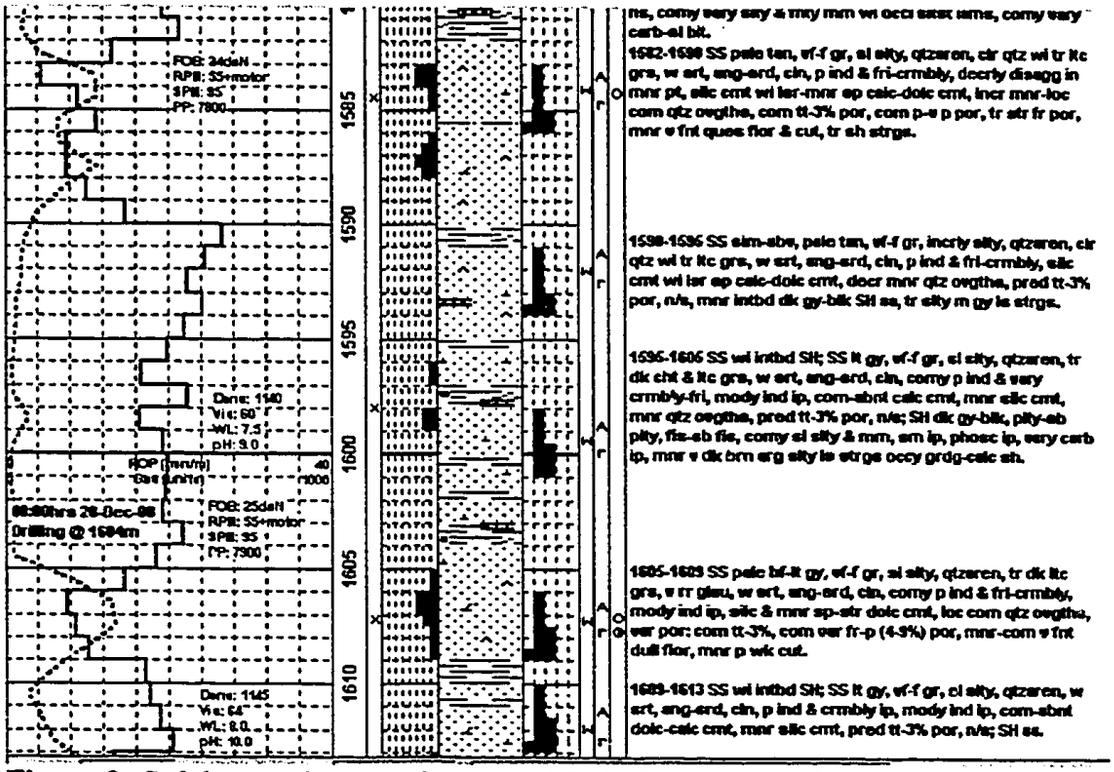


Figure 2. Striplog section showing typical Lithofacies #1 section (shoreface) in the upper Mattson Formation. Note fair gas shows.

The shoreface sandstone is variably indurated throughout the succession, ranging from moderately well to poorly indurated & friable to crumbly. Visible porosity is variable, though often poor (i.e., tight to 3%), even in some poorly indurated sandstone where matrix porosity is likely to be at least a few percent. Sections with fair and occasionally good porosity were observed; however, this better porosity was a generally minor component in consolidated cuttings. Samples often contained a variable disaggregated fraction, including sandstone that is generally tight in the writer's opinion, making porosity estimates somewhat problematic. To some degree at least, porosity distribution appears to be of a streaky to patchy nature, given the variability of visible porosity in cutting of the same sandstone.

ements are generally of mixed carbonate-siliceous type and locally wholly carbonate; upsection the carbonate cement is entirely calcareous becoming mixed calcareous-dolomitic downsection before being fully replaced by dolomitic cement at ~1605m. Permeability is estimated to be generally poor in much of this lithofacies, given the very fine-grained, silty nature of the sandstone and the typically common to abundant cements.

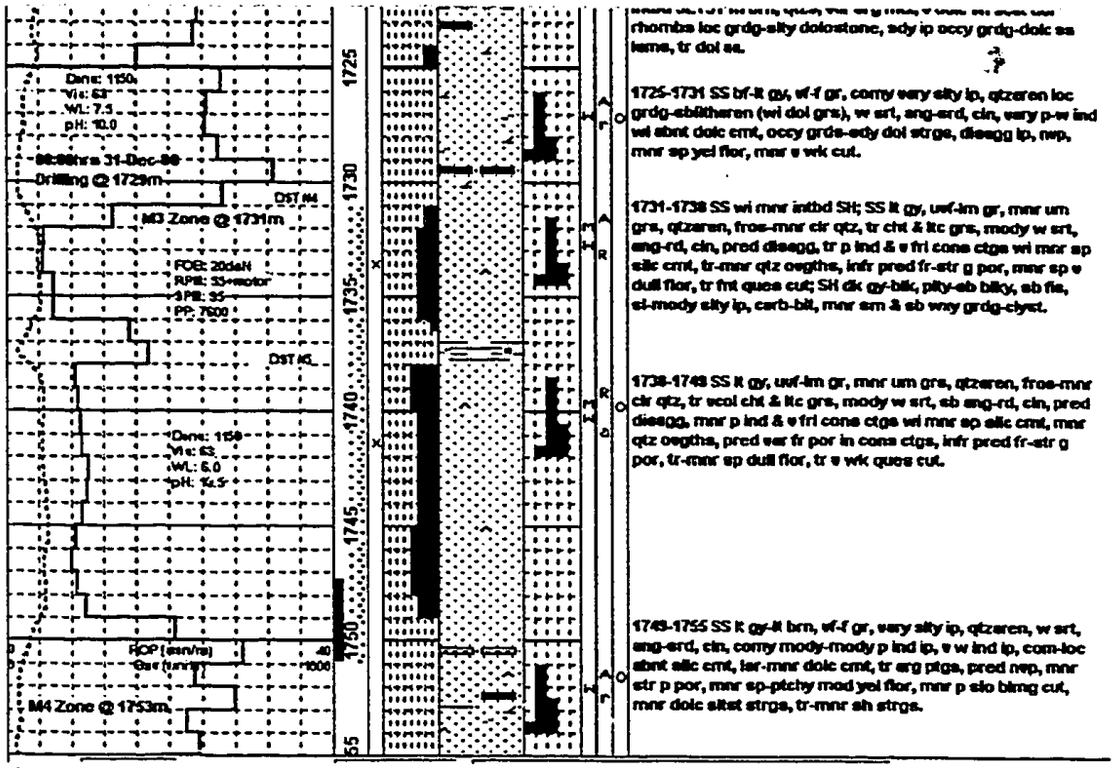


Figure 3. Striplog section showing typical Lithofacies #4 in the Mattson Formation. The eolian facies is overlain by shoreface sandstone & minor carbonate of Lithofacies #1.

EOLIAN SANDSTONE

Eolian sandstone can be usually distinguished from the shoreface quartzarenite by virtue of its coarser grain size and the dominant presence of frosted quartz grains. The sandstone is typically very light grey to light brown, moderately to moderately well sorted with angular to rounded grains. A much greater degree of rounding than is seen in shoreface sandstone is apparent where grain surfaces have not been modified by quartz overgrowths. These sandstones tend to have less compositional maturity than shoreface sandstone due to a generally higher minor chert fraction. Compositionally, the sandstone consists of abundant quartz with a variably minor to common frosted component and trace to minor predominantly dark varicoloured chert and lithic grains, comprising quartzarenite to minor sublitharenite.

These sandstones are typically very fine to lower medium grained with a fine median grain size. Trace to minor coarse grains are often present. The eolian sandstone tends to be poorly to very poorly indurated and very friable. They are commonly variably to wholly disaggregated in samples. Cements range from generally minor to locally common and are typically siliceous with a spotty to patchy distribution. Locally, spotty to patchy calcareous/dolomitic cement is a minor occurrence. Quartz overgrowths range from minor to common to locally abundant. Rare to trace interstitial pyrite was also commonly observed.

The best porosity in the Mattson appears to be largely lithofacies-dependant and typically confined to eolian deposits. Porosity was variable in the generally minor consolidated fraction and ranged from typically fair to locally poor to good. Porosity was inferred to be predominantly fair to good in much of the eolian sandstone.

Diagenesis

Some general diagenetic associations are apparent with regard to the different lithofacies and are as follows; 1) Siliceous cementation is wholly or strongly dominant in eolian and related depositional environments (i.e., transitional sandstone in interdune swamp & paleosol environments), 2) Dolomitic-calcareous cementation appears to be largely confined to shoreface environments. Mixed siliceous-carbonate cements appears to be more common in shoreface environments downsection than purely carbonate cements which dominate the upper Mattson, indicating at least two stages of authigenic cementation.

The same diagenetic trends noted on previous Mattson wells in the region also hold true at this location. A general diagenetic trend downsection in cement types follows; 1) 1496-1575m: calcareous cements with the first appearance of minor siliceous cement @ ~1560m; 2) 1575m: first appearance of dolomitic cement; 3) 1575-1605m: transition zone of mixed calcareous-dolomitic-siliceous cement; 4) 1605m: dolomitic cement completely replaces calcareous cement as the carbonate phase; 5) 1605-1890m: predominantly dolomitic cement with lesser to minor siliceous cement – distribution of these two types appears to be largely lithofacies-dependant in a mixed marginal marine-eolian section; and 6) 1890-1940m: predominantly siliceous cement with minor dolomitic cement.

Common to locally abundant subhedral to euhedral quartz overgrowths are typically associated with the best porosity, primarily in eolian deposits. Traces of spotty kaolin/illite were observed in predominantly terrestrial deposits and appear to be a useful criteria for aiding identification of eolian lithofacies. Pyrite cements and nodules are commonly associated with Lithofacies #5 (terrestrial) where it occurs in massive, crystalline and disseminated forms. The presence of unusual very bituminous claystone and coaly to bituminous shale is a typical co-association.

Stylolitic networks observed in quartzarenite in the lower Mattson on the b-43-K/94-O-14 well (i.e., ~2250-2255m) and the I-02 well (i.e., 1460m onward) were also found to occur at this locality. Traces of possible stylolites were first observed at ~1800m and unequivocal stylolites were noted by ~1900m in the M7 Zone. The stylolites appear to occur sporadically throughout the remainder of the section. This stylolite development appears to be a regional diagenetic artifact in the lower Mattson.

Hydrocarbon Shows & DST Results

Hydrocarbon shows were generally very poor, typically consisting of generally minor, spotty to patchy, dull to moderate yellow to yellow green fluorescence and trace to minor thin, faint yellow white diffuse to streaming cut to questionable or no cut. Exceptions to the above occur in a few intervals in the Mattson, where shows were slightly better; 1) 1505-1511m: minor to common spotty to patchy very dull fluorescence with common poor slow thin diffuse cut; 2) 1605-1609m: minor to common very faint dull fluorescence, minor poor weak cut; 3) 1174-1779m: common poor, slow, thin diffuse cut with no fluorescence (in a tight dolomite); and 4) 1850-1861m: minor to common dull to moderate yellow fluorescence, minor to common poor, slow thin streaming & diffuse cut.

A number of fair gas shows were recorded during the drilling of the Mattson; however, most of these were thin (i.e., 1-3 metres). One good Mattson gas show occurred in the upper Mattson @ 1511-1515m where ~1700 units of gas were recorded. A number of DSTs run in the Mattson produced excellent results and flow rates are listed below (see attached DST reports for details); 1) DST #1 (1682-1691m – M2b Zone): ~21 million ft^3/day; 2) DST #4 (1717-1738m – M3 Zone): ~16 million ft^3/day; and 3) DST #5 (1738-1759m – M3 Zone): ~11 million ft^3/day. The latter two DSTs were initially planned as a single 21m test (i.e., DST #3: 1730-1751m); however the packer seat failed during the preflow on two attempts. A decision was made to attempt the test in two stages without coming out of the hole by alternately setting top & bottom packers on a tight 2m interval at 1738m near the middle of the interval. The tight interval appears to separate two sections with good porosity and gas crossover at this point; however, it is possible that the two porous intervals are in communication regionally and may actually only represent a single reservoir. There were some negative indicators associated with the above test intervals that warrant further mention. There were no significant gas shows on the gas detectors when the intervals were drilled through, although the section was drilled only marginally overbalanced. Furthermore, induction curves showed invasion profiles and low resistivities more consistent with wet zones. The lack of drilled gas shows and unusual log characteristics for these excellent pay zones is problematic.

Two other DSTs were run in the Mattson with variable results; 1) DST #2 (1643-1648m – M2a Zone): ~1.3 million ft^3/day and 2) DST #6 (1625-1632m – M1 Zone); no gas to surface. It should be noted that there are some other short intervals in the Mattson that indicate economic potential on logs that were not tested due to time constraints and operational considerations.

CONCLUSION: The Mattson has numerous fair to good reservoir-quality intervals at this locality and a number of fair to occasionally good gas responses on gas detectors. Drill stem testing confirms excellent gas rates for the formation from multiple zones. This formation is capable of excellent economic production at this location and has good to excellent potential in the region.

LITHOLOGICAL DESCRIPTIONS

PARAMOUNT ET AL FORT LIARD NWT N-01
300/N-01-60-10-123-15/00

495-1475m logged by Byron Neu

495-500 **SHALE:**, dark gray, fissile, occasional blocky to sub blocky, partly micromicaceous, silty, firm to soft, trace siltstone stringers, white to light gray, quartz, salt and pepper, consolidated, silica cement, minor calcareous cement, tight.

500-510 **SHALE:**, light to medium gray, blocky, hard, occasional sub fissile, white/yellow floating chert pebbles, common cement from surface casing, trace siltstone.

510-520 **SHALE:**, medium to dark gray, blocky to sub fissile, moderately firm, micromicaceous, waxy texture, trace white chert fragments.

520-530 **SHALE:**, medium gray, blocky to minor fissile, rare argillaceous grained, firm, micromicaceous, rare floating white chert fragments.

530-535 **SHALE:**, medium gray, blocky to minor fissile, rare argillaceous grained, firm, micromicaceous, rare floating white chert fragments, thin siltstone lams, light brown, poor cemented, soft to friable, trace coal, black, shiny, anthracite.

535-540 **SHALE:**, medium gray, blocky to minor fissile, rare argillaceous grained, firm, micromicaceous, rare floating white chert fragments, thin siltstone lams, light brown, poor cemented, soft to friable.

540-545 **SHALE:**, medium gray, sub fissile to blocky, soft to friable, micromicaceous.

545-550 **SHALE:**, medium gray, sub fissile to blocky, soft to friable, micromicaceous, minor medium brown argillaceous grained.

550-555 **SHALE:**, medium gray, blocky, occasional sub fissile, faintly micromicaceous, moderately hard, earthy texture, occasional floating argillaceous grained, rare floating black chert grained.

555-560 **SHALE:**, medium gray, blocky, occasional sub fissile, faintly micromicaceous, moderately hard, earthy texture, occasional floating argillaceous grained, rare floating black chert grained, trace siltstone stringers, medium gray, occasional green/yellow chert fragments.

560-575 **SHALE:**, medium to dark gray, blocky to occasional sub fissile, moderately hard to firm, micromicaceous, slightly earthy texture,

575-585 **SILTSTONE:**, medium gray, quartzose, consolidated, common dark specks, salt and pepper, silica cement, minor calcareous cement, trace glauconitic, firm to well cemented, interbed shale as above.

5-725 **SHALE:**, dark gray to black, sub platy to sub blocky, firm, common mica flakes, rarely slightly silty.

725-735 **SHALE:**, dark gray, very firm to local hard, sub blocky to sub platy, moderately micromicaceous, slightly silty with minor argillaceous siltstone lams and stringers, slightly sandy in minor part, light gray, very fine grained, and very silty, grading to silt in part, quartzose with common black brown specks, scattered glauconitic, well sorted, sub angular to angular, silica cement, minor calcareous cement, slightly argillaceous comp to matrix, tight no shows.

735-755 **SILTSTONE:**, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, Shale, medium to dark gray, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty, **SANDSTONE:** stringers, light gray, very fine grained, and very silty, grading to silt in part, quartzose with common black brown specks, scattered glauconitic, well sorted, sub angular to angular, common dolomite fragments, silica cement, minor calcareous cement, slightly argillaceous comp to matrix, tight no shows.

755-765 **SHALE:**, dark gray to black, blocky to sub fissile, common mica, very firm to hard, predominant very silty grading to silt, slightly silty in part, with common argillaceous, trace scattered glauconitic.

765-775 **SILTSTONE:**, as above, **SHALE:** as above, **SANDSTONE:**, light gray, very fine grained, and very silty, grading to silt in part, quartzose with common black brown specks, scattered glauconitic, well sorted, sub angular to angular, silica cement, minor calcareous cement, slightly argillaceous comp to matrix, tight no shows.

775-785 **SHALE:**, dark gray to very dark gray, blocky to occasional sub platy, moderately hard to hard, moderately micromicaceous, common silty, very silty in part, with increase minor to very argillaceous glauconitic siltstone lams and stringers, occasional floating clear/yellow calcite fragments.

785-800 **SHALE:**, as above, with siltstone as previously described becoming increasingly clean in part with decrease trace to minor scattered glauconitic, no visual porosity, no shows, occasional floating clear to frosted quartz pebbles.

800-810 **SHALE:**, with a very silty component, shale dark gray, very firm to hard, blocky to sub blocky, occasional platy to fissile, very common mica flakes, commonly very silty, very rare scattered glauconitic.

810-820 **SHALE:**, light to medium gray, blocky, rare sub fissile, very hard, crumbly, occasional micromicaceous flakes, rare white chert fragments, trace coal.

820-825 **SHALE:**, as previously described siltstone, white to light gray, common black specks, moderately glauconitic grained, very common mica flakes, rarely very argillaceous, clean in minor part, common argillaceous grained and lams, poor visual porosity, tight, no shows.

825-835 **SHALE:**, as above, siltstone as above, grading to sandstone, white to light gray, quartzose, trace scattered black pecks, moderately glauconitic, trace mica, very fine grained, well sorted, sub r to sub angular, silica cement, minor calcareous cement, argillaceous, trace floating quartz grained, poor visual porosity, tight, no shows.

835-850 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, trace floating calcareous fragments, occasional dolomite chips, scattered argillaceous grained.

850-860 **SHALE:**, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

860-865 **SILTSTONE:**, light gray to brown, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, light spotted oil stain, no cut, very faint white fluorescence, poor visual porosity, tight, scattered rare calcareous/dolomite fragments.

865-880 **SHALE:**, medium to dark gray, very firm, blocky, very rarely sub platy, slightly waxy to earthy texture, very common to very slightly argillaceous component, predominant slightly to moderately silty.

880-885 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes.

885-895 **SHALE:**, as above, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

895-905 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

905-910 **SHALE:**, dark gray to occasional black, blocky, commonly to very micromicaceous, very rarely to very carbonaceous, moderately hard, occasional soft.

910-915 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

915-925 **SHALE:**, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

925-945 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes.

945-960 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, scattered argillaceous grained.

960-972 **SHALE:**, with a very silty component, shale dark gray, very firm to hard, blocky to sub blocky, occasional platy to fissile, very common mica flakes, commonly very silty, very rare scattered glauconitic.

Scatter @ 972m MD -485.8m SS

972-982 **SILTSTONE:** grading to **SANDSTONE:**, white to light gray, clear to frosted quartz grained, with common black and dark brown specks, moderately glauconitic, silt to very fine grained, predominant very fine grained, well sorted, sub r to sub angular, very argillaceous in minor part, common silica cement, rare calcareous cement, moderately to well cemented, argillaceous comp to matrix, poor visual porosity, tight, no shows.

982-995 **SANDSTONE:**, as above, grading to siltstone and shale, dark gray to very dark gray, blocky to occasional sub platy, moderately hard to hard, moderately micromicaceous, common silty, very silty in part, with increase minor to very argillaceous glauconitic siltstone lams and stringers, light spotted oil stain, no cut, minor faint white fluorescence.

995-1000 No sample caught.

1000-1005 **SANDSTONE:**, medium to dark gray, consolidated, salt and pepper, common scattered dark specks, quartzose, very fine grained, occasional silt, well sorted, sub angular to angular, common glauconitic, shale stringers, medium gray, fissile to soft, silica cement, minor calcareous cement, moderately to poor cemented, silty, argillaceous comp to matrix, very poor visual porosity, tight, no shows

1005-1010 **SANDSTONE:**, as above, light spotted oil stain, slow brown cut, faint blue/yellow fluorescence, shale, trace carbonaceous.

1010-1020 **SANDSTONE:** as above, part unconsolidated, very silty, trace light chert grained, shale, very dark, common carbonaceous.

1020-1025 **SANDSTONE:**, light to medium gray, consolidated, scattered dark chert grained, clear to frosted quartz grained, common glauconitic grained, very fine grained, slightly silty, moderately sorted, sub r to sub angular, silica cement to minor calcareous cement, slightly argillaceous, tight, no shows, shale, stringers as above.

1025-1030 **SILTSTONE:**, medium to dark gray, quartz, minor dark specks, slightly glauconitic, common mica flakes, grading to very silty shale lams and stringers.

1030-1045 **SANDSTONE:**, medium to dark gray, consolidated, salt and pepper, common scattered dark specks, quartzose, very fine grained, occasional silt, well sorted, sub angular to angular, common glauconitic, shale stringers, medium gray, fissile to soft, silica cement, minor calcareous cement, moderately to poor cemented, silty, argillaceous comp to matrix, very poor visual porosity, tight, no shows

1045-1052 **SANDSTONE:**, light to medium gray, consolidated, scattered dark chert grained, clear to frosted quartz grained, common glauconitic grained, very fine grained, slightly silty, moderately sorted, sub r to sub angular, silica cement to minor calcareous cement, slightly argillaceous, tight, no shows, shale, stringers as above.

1052-1060 SANDSTONE: grading to siltstone, SANDSTONE: as above, SILTSTONE:, dark gray to brown, quartzose, with dark chert grained, common glauconitic grained, very argillaceous matrix, silica cement, minor calcareous cement, well cemented, poor visual porosity, tight, light spotted oil stain, no shows.

1060-1070 SILTSTONE:, with interbed shale, medium gray to brown, quartzose, common dark specks, mica flakes in silt and shale, common glauconitic grained, trace carbonaceous, very slightly to very argillaceous, occasional grading to silty lams and stringers.

1070-1080 SILTSTONE:, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, Shale, medium to dark gray, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty.

1080-1090 NO SAMPLE.

1090-1095 SILTSTONE:, m to dark gray, common dark specks, quartzose, trace mica flakes, silica cement, shale dark gray, soft, blocky to fissile, common carbonaceous, common pyrite.

1095-1105 SILTSTONE:, medium gray to brown, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments, SHALE: black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown, common pyrite.

1105-1115 SILTSTONE:, with interbed shale, medium gray to brown, quartzose, common dark specks, mica flakes in silt and shale, common glauconitic grained, trace carbonaceous, very slightly to very argillaceous, occasional grading to silty lams and stringers.

1115-1125 SILTSTONE:, medium gray to brown, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, minor spotted oil stain, no cut, light blue fluorescence, poor visual porosity, tight, scattered rare calcareous/dolomite fragments, SHALE: black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown, common pyrite.

1125-1130 SILTSTONE: as above.

1130-1135 SILTSTONE:, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, Shale, very black, soft carbonaceous, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty, calcareous fragments, common pyrite.

arbutt @ 1135m MD –648.8m SS

1135-1145 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, trace floating calcareous fragments, occasional dolomite chips, scattered argillaceous grained.

1145-1160 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

1160-1168 **SHALE:**, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

1168-1185 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderate mica flakes.

1185-1190 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

1190-1195 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, scattered argillaceous grained.

1195-1200 **SHALE:**, as above, grading to siltstone, **SILTSTONE:**, medium gray to brown, quartzose, common glauconitic grained, occasional colored floating chert pebbs, trace pyrite, silica cement, well cemented, minor argillaceous component to matrix, poor visual porosity, tight, no shows.

1200-1216 **SHALE:**, dark gray to black, fissile to platy, occasional blocky, moderately hard, brittle in part, occasional silty in part, siltstone stringers as above.

Garbutt Radioactive Marker @ 1216m MD –729.8m SS

1216-1220 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous.

1220-1230 **SHALE:**, dark gray to black, firm, occasional brittle, platy to sub platy, occasional blocky, trace mica flakes, very slightly silty in part, rare carbonaceous, argillaceous grained, floating disseminated pyrite, minor coal fragments minor silt.

1230-1235 **SHALE:**, medium gray, moderately hard to crumb, sub fissile to sub blocky, occasional fissile, slightly silty, occasional argillaceous grained.

1235-1250 **SHALE:**, dark gray to black, firm, occasional brittle, platy to sub platy, occasional blocky, trace mica flakes, very slightly silty in part, rare carbonaceous, argillaceous grained, pyrite nodules, minor coal fragments minor silt.

1250-1252 **SHALE:**, dark gray, moderately hard, common brittle, fissile to sub fissile, rarely blocky, trace glauconitic, slightly silty, occasional argillaceous grained, trace pyrite nods, very rare siderite.

Garbutt @ 1135m MD –648.8m SS

1135-1145 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, trace floating calcareous fragments, occasional dolomite chips, scattered argillaceous grained.

1145-1160 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

1160-1168 **SHALE:**, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

1168-1185 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderate mica flakes.

1185-1190 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

1190-1195 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, scattered argillaceous grained.

1195-1200 **SHALE:**, as above, grading to siltstone, **SILTSTONE:**, medium gray to brown, quartzose, common glauconitic grained, occasional colored floating chert pebbs, trace pyrite, silica cement, well cemented, minor argillaceous component to matrix, poor visual porosity, tight, no shows.

1200-1216 **SHALE:**, dark gray to black, fissile to platy, occasional blocky, moderately hard, brittle in part, occasional silty in part, siltstone stringers as above.

Garbutt Radioactive Marker @ 1216m MD –729.8m SS

1216-1220 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous.

1220-1230 **SHALE:**, dark gray to black, firm, occasional brittle, platy to sub platy, occasional blocky, trace mica flakes, very slightly silty in part, rare carbonaceous, argillaceous grained, floating disseminated pyrite, minor coal fragments minor silt.

1230-1235 **SHALE:**, medium gray, moderately hard to crumb, sub fissile to sub blocky, occasional fissile, slightly silty, occasional argillaceous grained.

1235-1250 **SHALE:**, dark gray to black, firm, occasional brittle, platy to sub platy, occasional blocky, trace mica flakes, very slightly silty in part, rare carbonaceous, argillaceous grained, pyrite nodules, minor coal fragments minor silt.

1250-1252 **SHALE:**, dark gray, moderately hard, common brittle, fissile to sub fissile, rarely blocky, trace glauconitic, slightly silty, occasional argillaceous grained, trace pyrite nods, very rare siderite.

1315-1335 **SHALE:**, medium to dark gray 60%, red to brown 40%, sub fissile to sub blocky, occasional fissile, occasional blocky, moderately hard to hard, occasional brittle, trace mica flakes, silty with argillaceous lams and siltstone stringers, rare scattered carbonaceous, floating argillaceous grained, **SILTSTONE:** stringers, white to light gray, consolidated, clear to frosted quartz grained, minor scattered black specks, trace intergranular pyrite, well cemented, silica cement, minor dolomite cement, poor visual porosity, tight no shows.

1335-1350 SH, medium to dark gray 50%, red to brown 50%, sub fissile to sub blocky, occasional fissile, occasional blocky, moderately hard to hard, occasional brittle, trace mica flakes, silty with argillaceous lams and siltstone stringers, rare scattered carbonaceous, floating argillaceous grained, **SILTSTONE:** stringers, white to light gray, consolidated, clear to frosted quartz grained, minor scattered black specks, trace intergranular pyrite, well cemented, silica cement, minor dolomite cement, poor visual porosity, tight no shows.

1350-1368 **SHALE:**, medium to dark gray, becomming more red to brown, upper to 70%, sub fissile to sub blocky, occasional fissile, occasional blocky, moderately hard to hard, occasional brittle, trace mica flakes, silty with argillaceous lams and siltstone stringers, rare scattered carbonaceous, floating argillaceous grained, **SILTSTONE:** stringers, white to light gray, consolidated, clear to frosted quartz grained, minor scattered black specks, trace intergranular pyrite, well cemented, silica cement, minor dolomite cement, poor visual porosity, tight no shows.

Belloy @ 1368m MD -876.8m SS

1368-1376 **SANDSTONE:** light to medium brown in part, medium to dark brown grey in part, medium to dark red in part, lower fine to lower medium grained, trace to minor upper very fine grains, common frosted to clear quartz, lesser varicolored lithic grains, moderately glauconitic, variably clean to very argillaceous (predominantly lithic wacke to sub wacke; sublitharenite grading to litharenite in part), predominantly moderately to moderately well sorted, sub angular to subrounded, moderately to moderately poorly indurated, siliceous and dolomitic cement, trace to locally abundant silty argillaceous to locally phosphatic to bituminous matrix, locally common ferruginous stain, trace to minor quartz overgrowths, variably disaggregated in minor part, predominantly tight to poor effective porosity with minor fair streaks, trace spotty oil stain, no fluorescence, common weak very thin diffuse cut, trace cherty mudstone grading chert.

1376-1399 **CHERT:** with minor interbedded **SANDSTONE:**; **CHERT:** dark grey to black, commonly glauconitic, granular to occasional massive, very dense becoming crystalline in part, minor calcareous/dolomite cement, poor visible porosity, very tight, no shows, minor shale and siltstone stringers; **SANDSTONE:** medium to dark brown, similar to above becoming predominantly cherty grading to sandy chert in part, predominantly tight, no shows.

1399-1405 **CHERT:**, light brown to tan, sub transparent to transparent, hard to dense, occasional crumb, common very massive, occasional very fractured. calcareous cement in fractures, minor fracture porosity, very poor porosity. no shows, siltstone, shale stringers as above.

Fantasque @ 1405m MD -918.8m SS

1405-1415 **CHERT:**, light to medium gray, occasional light brown to tan, predominant very hard dense, sub transparent to rare transparent, minor scattered glauconitic grained, very rare granular texture, common fracture surfaces, calcareous and dolomite infill, minor fracture porosity and intergran porosity, tight, no shows, minor scattered siltstone and shale, predominant cave ins.

1415-1430 **CHERT:**, similar to above, becoming increasingly dark gray to black, common dull to very hard, slightly silty with occasional granular texture, rare fracture surfaces, very rare calcareous dolomite infill, trace argillaceous grained, common mica flakes, floating pyrite nods.

1430-1435 **CHERT:**, light brown to tan, sub transparent to translucent, hard to dense, occasional crumb, common very massive, occasional very fractured, calcareous cement in fractures, minor fracture porosity, very poor porosity, no shows, siltstone, shale stringers as above, argillaceous grained.

1435-1440 **CHERT:**, light to medium gray, occasional light brown to tan, predominant very hard dense, increasing granular texture, sub transparent to rare translucent, minor scattered glauconitic grained, very rare granular texture, common fracture surfaces, calcareous and dolomite infill, minor fracture porosity and intergranular porosity, tight, no shows, minor scattered siltstone and shale, rare intergranular pyrite.

1440-1445 **CHERT:**, sim to above, becoming increasingly dark gray to black, common dull to very hard, slightly silty with occasional granular texture, rare fracture surfaces, very rare calcareous dolomite infill, trace argillaceous grained, common mica flakes, floating pyrite nods.

1445-1455 **CHERT:**, medium brown to light gray, shinny glassy, sharp fractured shards, cloudy to translucent, rare clear shards, very fractured, very hard to dense, occasional milky quartz blebs to mots, trace pyrite, bitumen shale scattered throughout, rare argillaceous grained, very poor fractured porosity, tight, no shows.

1455-1465 **CHERT:**, white to light brown, slightly spicular in part, very hard to dense, common chalky white quartz blebs to mots, very fractured, massive shards, brittle glassy texture, common spotted bitumen and oil stain, very poor visual fracture porosity, no cut, slow faint streaming white fluorescence, trace pyrite, trace argillaceous grained, rare dolomite to siltstone stringers.

1465-1475 **CHERT:**, as above with very common dolomite stringers, medium brown, sucrosic texture, common interbed shale, blocky, occasional carbonaceous, siltstone stringers, grading to granular chert, common pyrite, argillaceous grained, tight, no shows.

1475m to TD logged by Gary Johannson

Kindle at 1475m MD -983.8m SS

1475-1486 **SILTSTONE:** dark brown, quartzose, hard, variably cherty in part, commonly slightly argillaceous, moderately to well indurated, very dolomitic to slightly calcareous occasionally grading to silty dolostone, sandy in part, trace argillaceous partings, no visible porosity, trace very dull fluorescence, common very slow weak blooming cut, minor thin interbedded **SHALE:**.

1486-1496 **SILTSTONE:** medium to dark brown, quartzose, trace to minor fossil fragments, very rare glauconite, slightly argillaceous in part, trace argillaceous partings, poorly to moderately indurated, abundant calcareous to dolomitic cement, commonly variably sandy grading to very fine sandstone in part, predominantly no visible porosity, trace very dull questionable fluorescence, minor to common very weak slow cut.

Mattson at 1496.0m MD -1004.8m SS

1496-1500 **SANDSTONE:** buff to light brown, very fine grained and silty, very quartzose, trace to minor dark lithic grains, moderately well sorted, angular to sub angular, predominantly clean, slightly argillaceous in part, commonly variably silty grading to siltstone in part, poor to moderately indurated, abundant calcareous cement, predominantly no visible porosity, common very dull yellow green fluorescence, trace to minor very weak slow thin cut.

1500-1505 **SILTSTONE:** with minor interbedded **SANDSTONE:**; **SILTSTONE:** predominantly medium to dark brown, quartzose as above with decreasing trace dark lithic grains, very rare glauconite, rare to trace bioclasts, commonly slightly to locally moderately argillaceous, clean in part, trace argillaceous partings and laminations, variably sandy in part locally grading to sandstone, poor to moderately indurated, abundant calcareous to dolomitic cement, no visible porosity, no shows.

1505-1511 **SANDSTONE:** and **SILTSTONE:**; **SANDSTONE:** light brown to buff, very fine grained and silty, quartzose as above, increasing trace to locally minor bioclast, trace dark chert and lithic grains, predominantly variably silty grading to siltstone in part, poorly to moderately indurated, very abundant calcareous cement, commonly no visible porosity, minor poor porosity, minor to common very dull fluorescence, common poor slow thin cut; minor **SHALE:** medium green, firm, sub platy, fissile faintly micromicaceous, slightly sub waxy.

1511-1520 **SANDSTONE:** with interbedded **SILTSTONE:**; **SANDSTONE:** variable: very light grey, fine to very fine grained and well sorted in part, very fine to upper medium grained in part with trace lower coarse grains and moderately disaggregated, moderately sorted, angular to rounded, clean, quartz arenite with trace chert grains, trace limestone/bioclastic grains, rare glauconite, predominantly poorly indurated and variably friable to crumbly, abundant calcareous to slightly dolomitic cement, minor patchy mixed siliceous and calcareous cement, minor to common quartz overgrowths, common variable poor to fair porosity in consolidated cuttings, tight to 2% in part, infer common fair porosity, abundant moderate pale yellow fluorescence, trace very weak thin cut; **SILTSTONE:** light to medium brown, quartzose, trace to minor fossil fragments, sandy in part grading to sandstone, clean to slightly argillaceous, poorly to moderately indurated, abundant calcareous cement, no visible porosity.

1520-1524 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, variably silty grading to siltstone in part, quartz arenite, trace lithic and rare glauconite grains, moderately to poorly indurated, abundant calcareous cement, common tight to poor porosity, minor fluorescence and trace questionable cut; **SHALE:** light green grey, medium grey, commonly variably silty and micromicaceous grading to argillaceous dolomitic siltstone in part, commonly slightly dolomitic.

1524-1530 SANDSTONE: with interbedded SHALE:; SANDSTONE: light grey, very fine to fine grained, slightly silty, quartz arenite, trace lithic grains, rare glauconite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, common to abundant calcareous cement, minor to common quartz overgrowths, variable porosity: common tight to poor porosity, lesser 7 to streaky 10% porosity, minor spotty dull fluorescence, minor weak streaming and faint diffuse cut; SHALE: medium grey as above.

1530-1534 SANDSTONE: with interbedded SHALE:; SANDSTONE: as above with slightly decreasing porosity, no shows; SHALE: as above.

1534-1540 SHALE: with interbedded SANDSTONE:; SHALE: dark grey to black, firm to hard, sub platy to sub blocky, sub fissile, predominantly variably silty and micromicaceous, carbonaceous to slightly bituminous; SANDSTONE: light to medium grey, predominantly very fine grained and silty locally grading to siltstone, very fine to fine grained in minor part, quartz arenite, clean to variably argillaceous in part, well sorted, angular to subrounded, moderately to poorly indurated, common to abundant calcareous cement, predominantly tight to 3% porosity, no shows, minor white to buff silty MARL stringers.

1540-1545 SANDSTONE: light grey, very fine to fine grained, variably silty, quartz arenite, trace lithic grains, rare glauconite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, abundant calcareous cement, minor quartz overgrowths, predominantly tight to 3% porosity, no shows, minor interbedded SHALE: as above.

1545-1549 SANDSTONE: very similar to above, light grey, very fine to fine grained, variably silty, quartz arenite, trace lithic grains, rare glauconite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, abundant calcareous cement, minor quartz overgrowths, common tight to 3% porosity, minor to locally common poor to streaky fair porosity, no shows, minor interbedded SHALE: as above.

1549-1558 SHALE: with interbedded SANDSTONE:; SHALE: dark grey to black, firm to slightly hard, sub platy to sub blocky, commonly sub fissile, commonly variably silty and faintly micromicaceous with occasional siltstone laminations, smooth in part, commonly variably carbonaceous to slightly bituminous; SANDSTONE: light grey, very fine grained, minor fine grains, variably silty grading to minor siltstone laminations to stringers, quartz arenite with trace dark lithic grains, well sorted, angular to subrounded, predominantly clean, slightly argillaceous in part, predominantly moderately indurated, poorly indurated in part, common to abundant calcareous cement, minor spotty to patchy siliceous cement, minor quartz overgrowths, predominantly no visible porosity, no shows.

1558-1572 SANDSTONE: similar to above, light grey, very fine grained, increasing minor fine grains, variably silty, quartz arenite, slightly increasing trace to minor predominantly dark lithic grains, well sorted, angular to subrounded, clean, commonly poorly indurated and crumbly to friable, moderately indurated in part, common calcareous and siliceous cement, trace quartz overgrowths, predominantly tight to 2% porosity, trace to minor streaky poor porosity, no shows, minor thin shale interbeds and stringers as above.

1572-1580 **SANDSTONE:** pale tan to light grey, very fine to fine grained, slightly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, variably disaggregated in part, siliceous cement with lesser to minor spotty calcareous to dolomitic cement, minor to locally common quartz overgrowths, common tight to 3% porosity, minor to locally common poor to streaky fair porosity, no shows.

1580-1582 **SHALE:** dark grey to black, firm to slightly hard, sub platy to sub blocky, commonly sub fissile, commonly variably silty and faintly micromicaceous with occasional siltstone laminations, commonly variably carbonaceous to slightly bituminous.

1582-1590 **SANDSTONE:** pale tan, very fine to fine grained, slightly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, decreasingly disaggregated in minor part, siliceous cement with lesser to minor spotty calcareous to dolomitic cement, increasing minor to locally common quartz overgrowths, common tight to 3% porosity, common poor to very poor porosity, trace streaky fair porosity, minor very faint questionable fluorescence and cut, trace shale stringers.

1590-1595 **SANDSTONE:** similar to above, pale tan, very fine to fine grained, increasingly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, siliceous cement with lesser spotty calcareous to dolomitic cement, decreasing minor quartz overgrowths, predominantly tight to 3% porosity, no shows, minor interbedded dark grey to black **SHALE:** as above, trace silty medium grey limestone stringers.

1595-1605 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, trace dark chert and lithic grains, well sorted, angular to subrounded, clean, commonly poorly indurated and variably crumbly to friable, moderately indurated in part, common to abundant calcareous cement, minor siliceous cement, minor quartz overgrowths, predominantly tight to 3% porosity, no shows; **SHALE:** dark grey to black, platy to sub platy, fissile to sub fissile, commonly slightly silty and micromicaceous, smooth in part, phosphatic in part, variably carbonaceous in part, minor very dark brown argillaceous silty limestone stringers occasionally grading to calcareous shale.

1605-1609 **SANDSTONE:** pale buff to light grey, very fine to fine grained, slightly silty, quartz arenite, trace dark lithic grains, very rare glauconite, well sorted, angular to subrounded, clean, commonly poorly indurated and friable to crumbly, moderately indurated in part, siliceous and minor spotty to streaky dolomitic cement, locally common quartz overgrowths, variable porosity: common tight to 3%, common variable fair to poor (4 to 9%) porosity, minor to common very faint dull fluorescence, minor poor weak cut.

1609-1613 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, poorly indurated and crumbly in part, moderately indurated in part, common to abundant dolomitic to calcareous cement, minor siliceous cement, predominantly tight to 3% porosity, no shows; **SHALE:** as above.

1572-1580 **SANDSTONE:** pale tan to light grey, very fine to fine grained, slightly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, variably disaggregated in part, siliceous cement with lesser to minor spotty calcareous to dolomitic cement, minor to locally common quartz overgrowths, common tight to 3% porosity, minor to locally common poor to streaky fair porosity, no shows.

1580-1582 **SHALE:** dark grey to black, firm to slightly hard, sub platy to sub blocky, commonly sub fissile, commonly variably silty and faintly micromicaceous with occasional siltstone laminations, commonly variably carbonaceous to slightly bituminous.

1582-1590 **SANDSTONE:** pale tan, very fine to fine grained, slightly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, decreasingly disaggregated in minor part, siliceous cement with lesser to minor spotty calcareous to dolomitic cement, increasing minor to locally common quartz overgrowths, common tight to 3% porosity, common poor to very poor porosity, trace streaky fair porosity, minor very faint questionable fluorescence and cut, trace shale stringers.

1590-1595 **SANDSTONE:** similar to above, pale tan, very fine to fine grained, increasingly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, siliceous cement with lesser spotty calcareous to dolomitic cement, decreasing minor quartz overgrowths, predominantly tight to 3% porosity, no shows, minor interbedded dark grey to black **SHALE:** as above, trace silty medium grey limestone stringers.

1595-1605 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, trace dark chert and lithic grains, well sorted, angular to subrounded, clean, commonly poorly indurated and variably crumbly to friable, moderately indurated in part, common to abundant calcareous cement, minor siliceous cement, minor quartz overgrowths, predominantly tight to 3% porosity, no shows; **SHALE:** dark grey to black, platy to sub platy, fissile to sub fissile, commonly slightly silty and micromicaceous, smooth in part, phosphatic in part, variably carbonaceous in part, minor very dark brown argillaceous silty limestone stringers occasionally grading to calcareous shale.

1605-1609 **SANDSTONE:** pale buff to light grey, very fine to fine grained, slightly silty, quartz arenite, trace dark lithic grains, very rare glauconite, well sorted, angular to subrounded, clean, commonly poorly indurated and friable to crumbly, moderately indurated in part, siliceous and minor spotty to streaky dolomitic cement, locally common quartz overgrowths, variable porosity: common tight to 3%, common variable fair to poor (4 to 9%) porosity, minor to common very faint dull fluorescence, minor poor weak cut.

1609-1613 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, poorly indurated and crumbly in part, moderately indurated in part, common to abundant dolomitic to calcareous cement, minor siliceous cement, predominantly tight to 3% porosity, no shows; **SHALE:** as above.

1650-1655 **SANDSTONE:** light grey, very fine to fine grained, trace lower medium grains, slightly silty, quartz arenite, clear to minor frosted quartz, trace chert and lithic grains, moderately well sorted, angular to subrounded, minor rounded grains, clean, predominantly poorly indurated and crumbly to friable, variably disaggregated in part, predominantly siliceous cement, minor spotty to streaky dolomitic cement, minor to locally common quartz overgrowths, predominantly tight to 3% porosity with minor poor to streaky fair porosity in consolidated cuttings, infer common poor to fair porosity, no shows.

1655-1661 **SANDSTONE:** pale tan to light grey, very fine to fine grained, slightly silty, quartz arenite, clear to minor frosted quartz, trace chert and lithic grains, moderately well to well sorted, angular to subrounded, minor rounded grains, clean, predominantly poorly indurated and crumbly to friable, disaggregated in minor part, predominantly siliceous cement, minor spotty to streaky dolomitic cement, decreasing minor quartz overgrowths, predominantly tight to 3% porosity with minor poor to streaky fair porosity, no shows, minor thin interbedded shale as above.

1661-1669 **SANDSTONE:** buff to very light grey, fine to very fine grained, minor lower medium grains, quartz arenite, clear to frosted quartz with trace varicolored chert and lithic grains, moderately well to well sorted, angular to rounded, clean, predominantly variably disaggregated, minor to common poorly indurated and friable consolidated cuttings with dolomitic and siliceous cement, common quartz overgrowths, predominantly variable poor porosity in consolidated cuttings, infer common fair to poor porosity, no shows, trace to minor thin shale stringers.

1669-1675 **SANDSTONE:** buff to very light grey, fine to very fine grained with minor lower medium grains in part, locally common scattered coarse and upper medium varicolored chert and quartz grains, quartz arenite locally grading to sublitharenite, clear to frosted quartz with trace varicolored chert and lithic grains, moderately well to locally moderately sorted, angular to rounded, clean, predominantly poorly indurated and crumbly to friable with common dolomitic and lesser to minor patchy siliceous cement, decreasingly disaggregated in part, minor quartz overgrowths, common tight to very poor porosity, minor streaky fair to poor porosity, no shows, trace thin shale interbedded to stringers.

1675-1683 **DOLOMITE:** with interbedded **CHERT:**; **DOLOMITE:** buff, cryptocrystalline to microcrystalline, clean, predominantly hard dense and variably cherty, firm and crumbly in minor part, trace stylolite, no visible porosity, trace spotty dull fluorescence, trace questionable cut; **CHERT:** pale grey, sub translucent, very hard, dense, brittle, clean, slightly to moderately dolomitic in part occasionally grading to very cherty dolomite, tight, no shows.

1683-1689 **SANDSTONE:** pale buff, lower fine to upper medium grained, minor coarse and trace upper very fine grains, sublitharenite, abundant frosted quartz and minor varicolored chert and lithic grains, moderately sorted, sub angular to rounded, clean, predominantly disaggregated, trace consolidated cuttings with dolomitic cement and variable poor to fair porosity, infer predominantly fair to good porosity, trace spotty yellow fluorescence, no cut.

1689-1695 **SANDSTONE:** buff, very fine to fine grained, slightly silty, trace scattered medium grains, quartz arenite, trace chert and lithic grains, moderately well sorted, angular to subrounded, minor rounded grains, poorly to moderately indurated, abundant dolomitic to slightly calcareous cement, predominantly tight to 2% porosity, no shows, minor interbedded dolomite as above becoming locally silty to sandy in part, decreasingly cherty, minor chert.

1695-1703 **SANDSTONE:** with interbedded **DOLOMITE:**; **SANDSTONE:** mixed: as above in part, as below in part; **DOLOMITE:** light to medium brown, cryptocrystalline to microcrystalline, firm to hard, commonly dense, variably cherty in part, trace to minor chert nodules to stringers, variably sandy in part locally grading to very dolomitic sandstone, minor locally relict clastic texture, very rare bitumen stained vugs, minor very faint fluorescence, no cut.

1703-1707 **SANDSTONE:** light grey, lower fine to lower medium grained, minor upper medium and trace coarse grains, sublitharenite grading to subquartzarenite, abundant frosted to minor clear quartz with minor varicolored chert and lithic grains, moderately sorted, subangular to rounded, clean, predominantly disaggregated, rare consolidated cuttings with siliceous and dolomitic cement, trace to minor quartz overgrowths, infer predominantly fair porosity, no shows.

1707-1715 **SANDSTONE:** predominantly as above, minor buff to light grey, very fine to fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, poorly to moderately indurated, abundant dolomitic cement, predominantly tight to 2%, no shows; minor thin interbedded dolomite as above.

1715-1718 No sample.

1718-1725 **SANDSTONE:** light grey, lower fine to lower medium grained, minor upper very fine grains, quartz arenite, frosted to clear quartz with trace varicolored chert and lithic grains, well sorted, angular to subrounded, minor rounded grains, clean, predominantly disaggregated, minor to common poorly to moderately indurated cuttings with common to abundant dolomitic and lesser to minor siliceous cement, minor quartz overgrowths, predominantly tight to 2% porosity in consolidated cuttings, infer common fair to poor porosity, trace to minor very dull fluorescence, trace questionable cut; minor interbedded **SILTSTONE:** medium brown, quartzose, variable argillaceous matrix, very dolomitic with scattered dolomite rhombs locally grading to silty dolostone, sandy in part occasionally grading to dolomitic sandstone laminations, trace dolomite as above.

1725-1731 **SANDSTONE:** buff to light grey, very fine to fine grained, commonly variably silty in part, quartz arenite locally grading to sublitharenite (with dolomite grains), well sorted, angular to subrounded, clean, variably poorly to well indurated with abundant dolomitic cement, occasionally grades to sandy dolomite stringers, disaggregated in part, no visible porosity, minor spotty yellow fluorescence, minor very weak cut.

1731-1738 **SANDSTONE:** with minor interbedded **SHALE:**; **SANDSTONE:** light grey, upper very fine to lower medium grained, minor upper medium grains, quartz arenite, frosted to minor clear quartz, trace chert and lithic grains, moderately well sorted, angular to rounded, clean, predominantly disaggregated, trace poorly indurated and very friable cuttings with minor spotty siliceous cement, trace to minor quartz overgrowths, infer predominantly fair to streaky good porosity, minor spotty very dull fluorescence, trace faint questionable cut; **SHALE:** dark grey to black, platy to sub blocky, sub fissile, slightly to moderately silty in part, carbonaceous to bituminous, minor smooth and sub waxy grading to claystone.

1738-1749 **SANDSTONE:** light grey, upper very fine to lower medium grained, minor upper medium grains, quartz arenite, frosted to minor clear quartz, trace varicolored chert and lithic grains, moderately well sorted, sub angular to rounded, clean, predominantly disaggregated, minor poorly indurated and very friable cuttings with minor spotty siliceous cement, minor quartz overgrowths, predominantly variable fair porosity in consolidated cuttings, infer predominantly fair to streaky good porosity, trace to minor spotty dull fluorescence, trace very weak questionable cut.

1749-1755 **SANDSTONE:** light grey to light brown, very fine to fine grained, variably silty in part, quartz arenite, well sorted, angular to subrounded, clean, commonly moderately to moderately poorly indurated in part, very well indurated in part, common to locally abundant siliceous cement, lesser to minor dolomitic cement, trace argillaceous partings, predominantly no visible porosity, minor streaky poor porosity, minor spotty to patchy moderate yellow fluorescence, minor poor slow blooming cut, minor dolomitic siltstone stringers, trace to minor shale stringers.

1755-1760 **SANDSTONE:** buff to pale brown, very fine to fine grained, trace scattered coarse chert grains, commonly slightly silty, quartz arenite, clear to frosted quartz, well sorted, angular to subrounded, minor rounded grains, clean, poorly indurated and crumbly in part, moderately to well indurated in part, disaggregated in part, dolomitic and siliceous cement, minor quartz overgrowths, common poor to trace streaky fair porosity, tight in part, no shows.

1760-1766 **SANDSTONE:** with minor interbedded **SHALE:**; **SANDSTONE:** as above becoming decreasingly disaggregated in part with trace pyrobituminous partings (possible stylolites), no shows; **SHALE:** black, firm to hard, brittle in part, platy to sub blocky, predominantly smooth and very faintly micromicaceous, slightly silty in part, carbonaceous to bituminous with common poor cut, trace slickensides.

1766-1770 **SANDSTONE:** similar to above becoming commonly variably disaggregated, common consolidated cuttings with increasing siliceous cement, decreasing minor streaky to spotty dolomitic cement, trace argillaceous and pyrobituminous partings, tight in part, infer common poor to fair porosity, minor to common very faint fluorescence, minor slow weak thin cut, minor interbedded **SHALE:** as above.

1770-1774 **SANDSTONE:** light grey to light brown, very fine to fine grained, variably silty in part, quartz arenite, well sorted, angular to subrounded, clean, commonly moderately to moderately poorly indurated in part, very well indurated in part, common to locally abundant siliceous cement, lesser to minor dolomitic cement, trace argillaceous partings, predominantly no visible porosity, minor streaky poor porosity, no shows.

1774-1778.5 **DOLOMITE:** with interbedded **SHALE:**; **DOLOMITE:** medium to dark brown, commonly firm to soft and crumbly, predominantly common to abundant extremely fine to very fine rhombs in variable minor to abundant argillaceous matrix, trace to minor argillaceous partings, commonly variably silty to sandy grading to dolomitic siltstone/sandstone in part, hard dense and cryptocrystalline to microcrystalline in minor part, no visible porosity, no fluorescence, common poor slow thin diffuse cut; **SHALE:** as above, minor interbedded **SANDSTONE:** as above.

1778.5-1787 **SANDSTONE:** light grey, very fine to lower medium grained, minor upper medium and trace scattered coarse grains, subquartzarenite grading to sublitharenite, frosted to minor clear quartz with minor to locally common varicolored chert and lithic grains, minor medium to coarse grained litharenite lags, moderately to locally moderately poorly sorted, rounded to sub angular, clean, predominantly disaggregated, minor to common poorly consolidated and friable cuttings with minor to locally common spotty to patchy siliceous cement, trace spotty dolomitic cement, minor quartz overgrowths, rare milky quartz pore fill, rare spotty kaolin to illite, variable fair to poor porosity in consolidated cuttings, infer predominantly fair to good porosity, minor to common spotty very dull to moderate yellow to yellow green fluorescence, minor very faint cut.

1787-1789 **SHALE:** as above with interbedded **DOLOMITE:** as above.

1789-1795 **SANDSTONE:** light grey, upper very fine to upper coarse grained, sublitharenite, frosted to minor clear quartz, increasing minor to locally common chert and lithic grains, moderately poorly sorted, rounded to sub angular, clean, predominantly variably disaggregated, common poorly indurated and friable cuttings with spotty to patchy siliceous cement, minor quartz overgrowths, variable fair to streaky poor porosity in consolidated cuttings, infer predominantly fair to good porosity, minor spotty dull fluorescence, trace weak cut; **SANDSTONE:** #2 fine to very fine grained, minor medium grains, quartz arenite, medium well sorted, angular to subrounded, variably poorly to moderately indurated with siliceous and dolomitic cement, clean, predominantly tight to poor porosity, no shows.

1795-1799 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light to minor medium grey, very fine to fine grained, predominantly subquartzarenite, well sorted, angular to subrounded, predominantly clean, locally variably argillaceous in part, predominantly well to moderately indurated, common to abundant dolomitic cement in part, lesser to minor locally abundant siliceous cement, tight to 2% porosity, minor streaky poor porosity, no shows; **SHALE:** dark grey to black, platy to sub platy, fissile, predominantly smooth and faintly micromicaceous, carbonaceous to slightly bituminoous with minor very poor cut, minor green slightly sub waxy slightly dolomitic shale stringers.

1799-1807 **SANDSTONE:** buff, fine to very fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, disaggregated in part, common to abundant dolomitic cement, minor to locally common quartz overgrowths, trace pyrobituminous partings (stylolites?), variable porosity in consolidated cuttings: common tight to 3%, common variable 5 to 10%, predominantly no fluorescence, minor very faint cut, minor interbedded **DOLOMITE:** light to medium grey brown, mottled, cryptocrystalline to microcrystalline, firm to hard, common relict clastic texture, variably sandy in part grading to very dolomitic sandstone, trace stylolites, tight, common spotty yellow fluorescence, trace questionable cut.

1807-1815 **SANDSTONE:** buff, very fine to fine grained, commonly variably silty, quartz arenite, rare fossil fragments, well sorted, angular to subrounded, clean, predominantly moderately to well indurated, poorly indurated and crumbly in minor part, disaggregated in minor part, abundant dolomitic cement, trace to minor quartz overgrowths, rare to trace pyrobituminous partings (stylolites?), predominantly tight to 2% porosity, minor streaky poor porosity, no shows, minor dark brown silty rhombic dolomite: thin interbeds to stringers as previously described (i.e., 1774m), trace to minor siltstone stringers, trace shale stringers?

1815-1822 **SANDSTONE:** buff, fine to very fine grained, trace to minor lower medium grains, quartz arenite, clear to lesser frosted quartz with trace to locally minor dolomitic/bioclastic grains, moderately well to well sorted, rounded to angular, clean, disaggregated in part, variably poorly to moderately indurated with abundant dolomitic cement, friable in part, minor to locally common quartz overgrowths, variable porosity in consolidated cuttings: common tight to 2%, lesser to minor variable fair porosity, very faint questionable cut, very faint very thin cut.

1822-1825 **SANDSTONE:** very similar to above becoming slightly coarser and commonly disaggregated, subquartzarenite with minor dolomite/bioclastic grains, predominantly common to abundant dolomitic cement, minor siliceous cement, poorly to moderately indurated, common tight to poor porosity with minor fair streaks in consolidated cuttings, infer predominantly fair porosity, no fluorescence, trace questionable cut.

1825-1830 **SANDSTONE:** light grey to buff, very fine to fine grained, trace scattered lower medium grains, quartz arenite, slightly silty, trace siltstone stringers, well sorted, angular to subrounded, clean, trace slightly argillaceous, trace pyrobituminous partings, variably moderately poorly to well indurated, abundant dolomitic cement with lesser locally abundant siliceous cement, predominantly tight to 2% porosity, minor poor porosity, trace very dull fluorescence, trace questionable cut, trace shale stringers.

1830-1832 **SANDSTONE:** buff, predominantly fine grained, minor lower medium and lesser upper very fine grains, quartz arenite, moderately well sorted, rounded to sub angular, clean, commonly disaggregated, minor poorly consolidated and friable cuttings with spotty dolomitic and siliceous cement and predominantly fair porosity, infer predominantly fair to streaky good porosity, no fluorescence, trace faint questionable cut.

1832-1841 **SANDSTONE:** light grey to buff, predominantly very fine to fine grained, variably silty in part, quartz arenite, trace dolomitic grains, well sorted, angular to subrounded, minor rounded grains, clean, predominantly moderately to well indurated, poorly indurated and crumbly in minor part, disaggregated in minor part, predominantly common to abundant dolomitic cement, minor locally common siliceous cement, predominantly tight to 2% porosity, trace to minor poor porosity, minor dull fluorescence, no cut, trace dolomite stringers.

1841-1846 **SANDSTONE:** with interbedded **DOLOMITE:** and **SHALE:**; **SANDSTONE:** light grey to buff, predominantly very fine to lower medium grained, very fine to fine grained in part, quartz arenite grading to sublitharenite with locally minor dolomitic grains, moderately well sorted, rounded to angular, commonly variably disaggregated, common poorly indurated and friable cuttings with common dolomitic and siliceous cement, minor quartz overgrowths, predominantly tight to poor porosity in consolidated cuttings, infer common poor to streaky fair porosity, no shows; **DOLOMITE:** light to dark brown, mottled in part, cryptocrystalline to microcrystalline, predominantly hard dense and variably cherty grading to dolomitic chert, occasional dolarenite stringers, variably sandy in part, tight, no shows, **SHALE:** as above.

1846-1850 **SANDSTONE:** light grey, lower fine to lower medium grained, trace to minor upper very fine and upper medium grains, quartz arenite, frosted to minor clear quartz, rare chert and dolomite grains, moderately to moderately well sorted, rounded to sub angular, disaggregated in part, common poorly to moderately indurated cuttings with common siliceous and lesser dolomitic cement, minor to locally common quartz overgrowths, trace spotty kaolin to illite, predominantly poor to streaky fair porosity in consolidated cuttings, infer common fair to streaky good porosity, rare to trace spotty bitumen, no fluorescence, trace very faint questionable cut.

1850-1861 **SANDSTONE:** variable: #1 buff to light grey, variably very fine to fine grained, slightly silty, quartz arenite, moderately well sorted, angular to subrounded, minor rounded grains, clean, trace to locally minor dolomitic grains, poorly to moderately indurated, commonly crumbly to friable, common to abundant dolomitic cement, predominantly tight to 3% porosity, **SANDSTONE:** #2 light grey, variably fine to medium grained, minor upper very fine grains, quartz arenite, clear to frosted quartz, moderately well sorted, angular to rounded, clean, commonly disaggregated, common very poorly indurated and very friable cuttings with spotty siliceous cement and common quartz overgrowths, predominantly fair porosity in consolidated cuttings, minor spotty bitumen, minor to common dull to moderate yellow fluorescence, minor to common very poor slow thin streaming and diffuse cut, trace to minor shale and dolomite stringers (including occasional dolarenite).

1861-1865 **SANDSTONE:** light grey to pale buff, predominantly fine grained, minor lower medium and trace to minor upper very fine grains, quartz arenite, predominantly frosted quartz, moderately well sorted, rounded to sub angular, clean, predominantly disaggregated, minor very poorly and very friable cuttings with minor spotty siliceous cement, trace spotty kaolin to illite, trace quartz overgrowths, variable fair to streaky good porosity in consolidated cuttings, infer predominantly good to fair porosity, no fluorescence, trace to minor very faint cut.

1865-1868 **SANDSTONE:** light grey, fine to very fine grained, trace lower medium grains, slightly silty, quartz arenite, clear to frosted quartz, moderately well sorted, angular to rounded, clean, poorly to moderately indurated, abundant dolomitic cement, predominantly no visible porosity, common very faint fluorescence, trace questionable cut.

1868-1873 SANDSTONE: light grey, predominantly fine grained, minor lower medium and trace to minor upper very fine grains, quartz arenite, predominantly frosted quartz, moderately well sorted, rounded to sub angular, clean, decreasingly commonly disaggregated, common poorly indurated and friable cuttings with minor to locally common spotty siliceous cement, trace spotty kaolin to illite, trace quartz overgrowths, predominantly variable fair to streaky poor porosity in consolidated cuttings, infer predominantly fair to streaky good porosity, no fluorescence, trace to minor very faint cut.

1873-1876 SHALE: with SANDSTONE:; SHALE: black to very dark grey, very firm to hard, sub platy to sub blocky, predominantly moderately to very silty with common argillaceous siltstone stringers, phosphatic to slightly bituminous: SANDSTONE: predominantly as below with tight to 3% porosity, no shows.

1876-1880 SANDSTONE: light grey, fine to very fine grained, variably silty in part, quartz arenite with rare to trace dolomitic grains, moderately well sorted, angular to rounded, clean, occasional sandy siltstone laminations, variably poorly to moderately indurated, crumbly to friable in part, disaggregated in part, predominantly common to abundant dolomitic cement, minor locally common streaky siliceous cement, locally minor quartz overgrowths, predominantly tight to 3% porosity, minor to locally common fair porosity, no shows.

1880-1888 SANDSTONE: very similar to above, light grey, fine to very fine grained, variably silty in part, quartz arenite with rare to trace dolomitic grains, moderately well sorted, angular to rounded, clean, with occasional sandy siltstone laminations, variably poorly to moderately indurated, crumbly to friable in part, disaggregated in part, decreasing common to locally abundant dolomitic cement, increasing minor to common streaky siliceous cement, trace to minor quartz overgrowths, predominantly tight to 3% porosity, minor streaky poor to fair porosity, no shows, trace dolarenite stringers and rare fine to coarse grained litharenite lags, minor interbedded SHALE: as above.

1888-1891 SANDSTONE: light grey, lower fine to lower medium grained, quartz arenite with frosted to lesser clear quartz, trace chert grains, moderately to moderately well sorted, rounded to angular, clean, predominantly disaggregated, trace consolidated cuttings with common dolomitic cement and variable fair to poor porosity, infer predominantly fair to streaky good porosity, trace questionable cut and fluorescence.

1891-1896 SANDSTONE: similar to above, light grey, lower fine to lower medium grained, minor upper very fine and trace upper medium grains, quartz arenite with frosted to lesser clear quartz, moderately to moderately well sorted, rounded to sub angular, clean, predominantly disaggregated, minor to common predominantly very poorly indurated and friable cuttings with variable spotty to streaky siliceous cement, common to locally abundant quartz overgrowths, trace spotty kaolin to illite, variable porosity in consolidated cuttings: common variable fair to streaky good porosity, tight to poor porosity in part, infer common fair to poor porosity, no shows.

1896-1906 **SANDSTONE:** light grey, variably very fine to fine grained, trace to minor scattered lower medium grains, slightly silty, quartz arenite with trace to locally minor dolomite grains, medium well sorted, angular to rounded, predominantly clean, trace slightly argillaceous, poorly indurated and crumbly in part, moderately to occasionally well indurated in part, predominantly common siliceous cement, lesser to minor locally common dolomitic cement, trace to locally minor spotty to patchy pyrite, predominantly no visible porosity, no shows; minor **SHALE:** black to very dark brown, platy to sub blocky, fissile, slightly silty in part, smooth and sub waxy to waxy in part, commonly variably phosphatic to slightly bituminous, trace slickensides, trace fine to medium grained dolarenite stringers.

1906-1913 **SANDSTONE:** mixed; predominantly **SANDSTONE:** #1 light grey to tan, very fine grained and silty, predominantly quartz arenite, well sorted, angular to subrounded, commonly clean, slightly argillaceous in part, trace to minor siltstone stringers, variably moderately to very well indurated with predominantly siliceous cement, minor spotty to streaky dolomitic cement, trace to minor stylolites, tight to 2% porosity, no shows: **SANDSTONE:** #2 very fine to lower medium grained, quartz arenite, frosted to minor clear quartz, moderately sorted, rounded to angular, commonly disaggregated in part, common poorly to moderately indurated cuttings with variable minor to common siliceous cement, locally common quartz overgrowths, variable tight to streaky fair porosity, trace questionable fluorescence and cut; minor interbedded **SHALE:** black to brown black, minor green, platy to sub platy, fissile, slightly silty and variably carbonaceous to bituminous in part, smooth and sub waxy in part grading to claystone.

1913-1921 **SANDSTONE:** mixed: predominantly **SANDSTONE:** #1 light grey, lower fine to lower medium grained, trace to minor upper very fine and trace upper medium grains, quartz arenite, frosted to clear quartz, moderately sorted, rounded to angular, predominantly disaggregated, minor to common poorly to moderately indurated cuttings with variable minor to abundant siliceous cement, common to abundant quartz overgrowths, trace locally abundant pyrite, variable tight to fair porosity in consolidated cuttings, infer poor to fair porosity, no shows; **SANDSTONE:** #2 light grey to buff, very fine to fine grained, slightly silty, quartz arenite, moderately well sorted, angular to rounded, poorly to moderately indurated, common to abundant dolomitic cement, minor siliceous cement, predominantly no visible porosity, trace spotty dead oil stain; minor **SHALE:** black, medium brown to green, platy, variably silty in part, micaceous in part, predominantly smooth and waxy to sub waxy with common slickensides.

1921-1925 **SANDSTONE:** light grey to buff, predominantly fine to very fine grained and slightly silty, fine grained with minor lower medium grains in part, quartz arenite, clean, moderately well to well sorted, angular to rounded, poorly to moderately indurated with predominantly siliceous cement, minor locally common dolomitic cement, minor quartz overgrowths, disaggregated in part, trace stylolites, predominantly tight to 3% porosity with minor poor to fair streaks in consolidated cuttings, infer minor to common poor to fair porosity, trace spotty bitumen, trace questionable fluorescence and cut.

1925-1931 **SANDSTONE:** predominantly as above becoming very fine grained and silty in part, increasing minor to common stylolites with pyrobituminous partings, predominantly clean, increasing induration and decreasingly disaggregated in part, decreasing porosity as above, variably argillaceous in part locally grading to subwacke, minor locally abundant dolomitic cement, trace pyrite, trace to minor spotty bitumen and dead oil stain, no fluorescence, trace faint cut; minor **SHALE:** predominantly medium to dark green, black to dark brown in part, sub platy, sub fissile, variably silty to sandy in part, commonly smooth and sub waxy to waxy grading to claystone, trace sandy siderite stringers.

1931-1936 **SANDSTONE:** buff to light grey, fine to very fine grained, minor lower medium grains, commonly slightly silty, quartz arenite, frosted to clear quartz, moderately well sorted, angular to rounded, predominantly poorly indurated and crumbly, moderately to well indurated in minor part, predominantly siliceous cement, minor spotty to streaky dolomitic cement, commonly variably disaggregated, trace to minor quartz overgrowths, trace stylolites, predominantly tight to 2% porosity with minor poor to fair streaks in consolidated cuttings, infer predominantly poor porosity, trace spotty bitumen, trace spotty dull fluorescence, trace faint cut.

1936-1940 **SANDSTONE:** predominantly as above becoming slightly finer and increasingly indurated, predominantly common to abundant siliceous cement, disaggregated in minor part, trace dolomitic cement, increasing minor stylolite as above, trace siltstone stringers, trace to minor spotty bitumen and dead oil stain, minor dull fluorescence, minor very faint slow cut.

F.T.D. of 1940m @ 1215hrs on 05-Jan-01

OVERSIZED

DOCUMENT

FILMED

ON

35mm

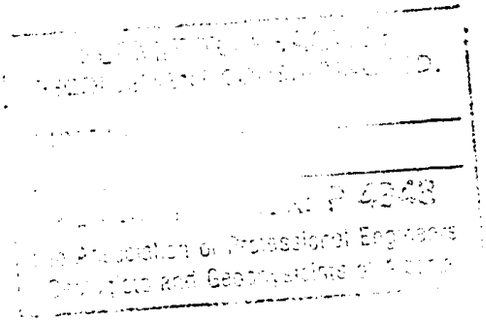
GEOLOGICAL REPORT

N.E.B. COPY

PARAMOUNT RESOURCES LTD.

PARAMOUNT ET AL FORT LIARD NWT N-01

300/N-01-60-10-123-15/00
NORTH WEST TERRITORIES



GEOLOGICAL REPORT
ON

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

FOR
Paramount Resources Ltd.

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Dec./Jan. 2000/01

Gary Johannson, M.Sc. &
Byron Neu, B.Sc.
Wellsite Geologists
Décollement Consulting Ltd.
Calgary, Alberta, Canada

Décollement Consulting Ltd.

WELL DATA SUMMARY

WELL NAME	Paramount et al Fort Liard NWT N-01
LEGAL LOCATION	N-01/60-10, 123-15
UNIQUE WELL I.D.	300/N-01-60-10-123-15/00
SURFACE LOCATION	N-01/60-10, 123-15
FIELD/REGION	Fort Liard area, N.W.T.
OPERATOR	Paramount Resources Ltd.

SITE DATA

BOTTOMHOLE COORDINATES	Vertical Hole
SURFACE COORDINATES	Lat: 60 deg. 00' 52.339" N Long: 123 deg. 15' 58.517" W
SEISMIC LOCATION	Seismic Line: A00P-L1A-05 @ SP 319 (NAD27)
WELL CLASSIFICATION	Exploratory WELL LICENSE # WID 1902
AFE NUMBER	00N010054
DRILLING CONTRACTOR	Precision Drilling Rig #379

ELEVATIONS

GROUND LEVEL	486.2 (m)
KELLY BUSHING	491.2 (m)

DRILLING DATES

SPUD DATE	Dec. 12, 2000	**TIME**	16:30hrs
T.D. DATE	Jan. 5, 2001	**TIME**	1215hrs
RIG RELEASE DATE	n/a		

HOLE SIZE & MUD TYPE

SURFACE	311mm: Gel chem
MAIN	222mm: Floc water/Gel chem

CASING DATA

SURFACE	40 jts. of 244.5mm, J-55, 53.6kg/m set @ 501.0m
PRODUCTION	n/a

GEOLOGICAL DATA

SAMPLE INTERVAL	Surface to T.D.
GAS DETECTION INTERVAL	Surface to T.D.
LOGGING SUITE	HDIL-ZDL-CN-MAC-ML-GR-XYCAL
DRILL STEM TESTS	DST #1:1682-1691m;DST #2:1643-1648m; DST #3: Misrun;
DRILL STEM TESTS	DST #4:1717-1738m;DST #5:1738-1759m; DST #6:1625-1632m
	DST #7:1458-1465m;DST #8:1368-1379m;

WELL STATUS

CASED GAS WELL

Decollement Consulting Ltd.

FORMATION TOPS

Paramount et al Ft. Liard NWT N-01

.L.(m) 486.20 **K.B.(m)** 491.21

FORMATION	SAMPLE		High	PROGNOSIS			LOGS		Isopach
	MD(m)	SS(m)	Low (-)	MD(m)	SS(m)	Isopach	MD(m)	SS(m)	(m)
Quaternary					486.2	31.3	not picked		
Kotanelee Group	36.4	449.8	-5.1	31.3	454.9	15.0	not picked		
Dunvegan	44.4	441.8	1.9	46.3	439.9	135.0	not picked		
Sully	177.8	308.4	3.5	181.3	304.9	60.0	not picked		
Sikanni	241.6	244.6	-0.3	241.3	244.9	165.0	not picked		
Lepine	406.4	79.8	-0.1	406.3	79.9	505.0	not picked		
Scatter	910.6	-424.4	0.7	911.3	-425.1	139.7	973.0	-486.8	157.0
Garbutt	1052.0	-565.8	-1.0	1051.0	-564.8	118.3	1130.0	-643.8	88.0
Garbutt Radioactive Zone	1168.0	-681.8	1.3	1169.3	-683.1	30.0	1218.0	-731.8	31.2
Bullhead	not picked	-	-	not given	-	-	1232.0	-745.8	17.2
Chinkeh Siltstone	1252.0	-765.8	-52.7	1199.3	-713.1	3.0	1249.2	-763.0	3.6
Chinkeh Sand**	**1254.4**	-768.2	**-52.1**	**1202.3**	-716.1	**12.0**	**1252.8**	-766.6	2.7
Triassic	1264.0	-777.8	-49.7	1214.3	-728.1	148.5	1255.5	-769.3	112.5
Belloy	1368.0	-881.8	n/a	1309.3	-823.1	53.5	1368.0	-881.8	37.0
Fantasque**	**1399.0**	-912.8	**-36.2**	**1362.8**	-876.6	**127.4**	**1405.0**	-918.8	68.8
Kindle	1486.0	-999.8	4.2	1490.2	-1004.0	27.0	1473.8	-987.6	22.2
Mattson*	**1511.0**	-1024.8	**6.2**	**1517.2**	-1031.0	**109.0**	**1496.0**	**-1009.8**	**128.0**
M1 Zone	**1625.0**	-1138.8	**1.2**	**1626.2**	-1140.0	**14.0**	**1624.0**	**-1137.8**	**17.5**
M2a Zone	**1641.0**	-1154.8	**-0.8**	**1640.2**	-1154.0	**90.0**	**1641.5**	**-1155.3**	**88.0**
M2b Zone	not picked	-	-	not given	-	-	**1682.5**	**-1196.3**	**47.0**
M3 Zone	**1731.0**	**-1244.8**	**-0.8**	**1730.2**	-1244.0	**24.0**	**1729.5**	**-1243.3**	**23.5**
M4 Zone	**1755.0**	**-1268.8**	**-0.8**	**1754.2**	-1268.0	**26.0**	**1753.0**	**-1266.8**	**56.0**
M5a Zone	**1779.0**	**-1292.8**	**1.2**	**1780.2**	-1294.0	**60.0**	**1778.5**	**-1287.3**	**30.5**
M5b Zone	not picked	-	-	not given	-	-	**1809.0**	**-1322.8**	**45.5**
M6 Zone	**1861.0**	**-1374.8**	**-20.8**	**1840.2**	-1354.0	**55.0**	**1854.5**	**-1363.3**	**37.5**
M7 Zone	**1888.0**	**-1401.8**	**7.2**	**1895.2**	-1409.0	**n/a**	**1892.0**	**-1892.0**	**n/a**
T.D.	1940.0	-1453.8	**185.0**	2125.0	-1638.8	-2125.0	1942.5	-1456.3	**n/a**

Primary Target Zone *
Secondary Target Zone **

DEVIATION SURVEYS

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

Depth	Inclination
32.0	0.500°
59.0	0.250°
85.0	0.750°
102.0	zero
140.0	0.500°
168.0	0.750°
189.0	0.500°
224.0	0.750°
248.0	0.500°
278.0	1.000°
308.0	1.000°
334.0	1.250°
352.0	0.750°
380.0	2.000°
399.0	1.750°
428.0	1.500°
454.0	1.500°
482.0	1.000°
493.0	1.000°
See	attached
surveys	from Dene
Directional	for main hole

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-01-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
0	501.00	0.00	0.00	501.00	0.00	0.00	0.00	0.00
1	512.30	1.10	274.70	512.30	0.01	-0.11	0.01	2.92
2	521.80	1.20	276.80	521.80	0.03	-0.30	0.03	0.35
3	531.30	1.10	270.50	531.30	0.04	-0.49	0.04	0.51
4	540.80	1.10	261.30	540.79	0.03	-0.67	0.03	0.56
5	569.40	0.70	278.20	569.39	0.01	-1.11	0.01	0.50
6	597.90	0.50	306.70	597.89	0.11	-1.39	0.11	0.37
7	627.50	0.50	304.90	627.49	0.26	-1.59	0.26	0.02
8	655.10	0.90	295.80	655.09	0.42	-1.89	0.42	0.45
9	664.60	0.70	300.00	664.58	0.49	-2.01	0.49	0.66
10	702.70	0.50	353.10	702.68	0.77	-2.23	0.77	0.45
11	731.30	1.90	90.80	731.28	0.88	-1.77	0.88	2.13
12	750.30	2.10	92.60	750.27	0.86	-1.11	0.86	0.33
13	759.80	2.10	91.10	759.76	0.85	-0.76	0.85	0.18
14	769.40	1.80	91.20	769.35	0.85	-0.43	0.85	0.94
15	797.90	1.60	86.90	797.84	0.86	0.41	0.86	0.25
16	807.40	1.60	85.50	807.34	0.88	0.68	0.88	0.12
17	836.00	1.40	90.50	835.93	0.90	1.43	0.90	0.25
18	864.60	1.40	100.70	864.52	0.84	2.12	0.84	0.26
19	893.10	1.40	119.60	893.01	0.60	2.76	0.60	0.48
20	902.60	1.20	129.60	902.51	0.48	2.94	0.48	0.95
21	921.70	1.60	142.10	921.60	0.14	3.26	0.14	0.79
22	931.20	1.80	147.40	931.10	-0.09	3.42	-0.09	0.80
23	950.20	1.60	160.40	950.09	-0.59	3.67	-0.59	0.68
24	959.70	1.60	162.50	959.59	-0.84	3.75	-0.84	0.18
25	969.10	1.20	179.10	968.98	-1.07	3.80	-1.07	1.81
26	980.10	1.20	206.50	979.98	-1.28	3.75	-1.28	1.55
27	989.60	1.10	210.70	989.48	-1.45	3.65	-1.45	0.41
28	999.10	1.10	227.60	998.98	-1.59	3.54	-1.59	1.02
29	1027.70	0.70	217.40	1027.57	-1.91	3.23	-1.91	0.45
30	1046.70	0.70	250.40	1046.57	-2.05	3.05	-2.05	0.63
31	1074.70	0.50	247.30	1074.57	-2.15	2.78	-2.15	0.22
32	1103.20	0.50	260.60	1103.07	-2.22	2.54	-2.22	0.12
33	1135.40	0.90	283.50	1135.27	-2.18	2.16	-2.18	0.45
34	1159.60	0.30	213.50	1159.47	-2.19	1.94	-2.19	1.05
35	1188.10	0.30	173.10	1187.97	-2.33	1.90	-2.33	0.22
36	1235.90	0.50	182.20	1235.76	-2.66	1.91	-2.66	0.13
37	1274.10	0.70	168.90	1273.96	-3.06	1.95	-3.06	0.19
38	1307.30	0.70	165.30	1307.16	-3.45	2.04	-3.45	0.04
39	1349.80	0.90	198.00	1349.66	-4.02	2.00	-4.02	0.35

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-01-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
40	1385.00	0.70	215.30	1384.85	-4.46	1.79	-4.46	0.27
41	1425.90	0.50	14.50	1425.75	-4.49	1.69	-4.49	0.87
42	1454.70	1.90	57.80	1454.55	-4.11	2.13	-4.11	1.64
43	1464.30	1.80	55.70	1464.14	-3.94	2.39	-3.94	0.38
44	1473.90	1.40	54.60	1473.74	-3.79	2.61	-3.79	1.25
45	1483.40	1.40	52.80	1483.23	-3.65	2.80	-3.65	0.14
46	1511.70	1.10	41.60	1511.53	-3.24	3.25	-3.24	0.41
47	1539.00	1.20	11.40	1538.82	-2.76	3.48	-2.76	0.67
48	1552.00	1.40	356.60	1551.82	-2.47	3.50	-2.47	0.90
49	1577.80	1.40	350.60	1577.61	-1.85	3.43	-1.85	0.17
50	1596.40	1.40	1.20	1596.21	-1.40	3.40	-1.40	0.42
51	1615.00	1.80	352.40	1614.80	-0.88	3.36	-0.88	0.76
52	1626.00	1.80	352.00	1625.79	-0.54	3.32	-0.54	0.05
53	1653.00	1.80	341.10	1652.78	0.28	3.12	0.28	0.38
54	1681.60	1.40	345.00	1681.37	1.05	2.88	1.05	0.43
55	1700.40	1.20	1.20	1700.16	1.47	2.83	1.47	0.66
56	1709.70	1.10	355.20	1709.46	1.65	2.82	1.65	0.51
57	1728.90	1.40	0.10	1728.66	2.07	2.81	2.07	0.50
58	1755.00	1.60	348.50	1754.75	2.75	2.74	2.75	0.42
59	1767.30	1.60	345.70	1767.04	3.08	2.66	3.08	0.19
*	UNABLE TO SLIDE DUE TO HIGH PUMP PRESSURE							
60	1796.10	2.10	346.80	1795.83	3.98	2.44	3.98	0.52
61	1805.70	2.50	353.10	1805.42	4.36	2.37	4.36	1.48
62	1834.70	3.30	359.80	1834.38	5.83	2.30	5.83	0.90
63	1845.80	3.30	1.90	1845.46	6.46	2.31	6.46	0.33
64	1853.80	3.50	3.60	1853.45	6.94	2.33	6.94	0.84
*	RESUME SLIDING							
65	1863.50	3.50	6.10	1863.13	7.53	2.38	7.53	0.47
66	1873.10	3.30	4.30	1872.72	8.10	2.43	8.10	0.71
67	1882.70	3.20	359.80	1882.30	8.64	2.45	8.64	0.86
68	1892.30	2.80	357.60	1891.89	9.14	2.44	9.14	1.30
69	1902.20	2.60	352.40	1901.78	9.61	2.40	9.61	0.96
70	1922.00	2.80	5.00	1921.55	10.53	2.38	10.53	0.95
Bit	1940.00	2.98	10.00	1939.53	11.43	2.50	11.43	0.52

Final Closure is 11.70 metres on an Azimuth of 12.34

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-01-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
0	501.00	0.00	0.00	501.00	0.00	0.00	0.00	0.00
1	512.30	1.10	274.70	512.30	0.01	-0.11	0.01	2.92
2	521.80	1.20	276.80	521.80	0.03	-0.30	0.03	0.35
3	531.30	1.10	270.50	531.30	0.04	-0.49	0.04	0.51
4	540.80	1.10	261.30	540.79	0.03	-0.67	0.03	0.56
5	569.40	0.70	278.20	569.39	0.01	-1.11	0.01	0.50
6	597.90	0.50	306.70	597.89	0.11	-1.39	0.11	0.37
7	627.50	0.50	304.90	627.49	0.26	-1.59	0.26	0.02
8	655.10	0.90	295.80	655.09	0.42	-1.89	0.42	0.45
9	664.60	0.70	300.00	664.58	0.49	-2.01	0.49	0.66
10	702.70	0.50	353.10	702.68	0.77	-2.23	0.77	0.45
11	731.30	1.90	90.80	731.28	0.88	-1.77	0.88	2.13
12	750.30	2.10	92.60	750.27	0.86	-1.11	0.86	0.33
13	759.80	2.10	91.10	759.76	0.85	-0.76	0.85	0.18
14	769.40	1.80	91.20	769.35	0.85	-0.43	0.85	0.94
15	797.90	1.60	86.90	797.84	0.86	0.41	0.86	0.25
16	807.40	1.60	85.50	807.34	0.88	0.68	0.88	0.12
17	836.00	1.40	90.50	835.93	0.90	1.43	0.90	0.25
18	864.60	1.40	100.70	864.52	0.84	2.12	0.84	0.26
19	893.10	1.40	119.60	893.01	0.60	2.76	0.60	0.48
20	902.60	1.20	129.60	902.51	0.48	2.94	0.48	0.95
21	921.70	1.60	142.10	921.60	0.14	3.26	0.14	0.79
22	931.20	1.80	147.40	931.10	-0.09	3.42	-0.09	0.80
23	950.20	1.60	160.40	950.09	-0.59	3.67	-0.59	0.68
24	959.70	1.60	162.50	959.59	-0.84	3.75	-0.84	0.18
25	969.10	1.20	179.10	968.98	-1.07	3.80	-1.07	1.81
26	980.10	1.20	206.50	979.98	-1.28	3.75	-1.28	1.55
27	989.60	1.10	210.70	989.48	-1.45	3.65	-1.45	0.41
28	999.10	1.10	227.60	998.98	-1.59	3.54	-1.59	1.02
29	1027.70	0.70	217.40	1027.57	-1.91	3.23	-1.91	0.45
30	1046.70	0.70	250.40	1046.57	-2.05	3.05	-2.05	0.63
31	1074.70	0.50	247.30	1074.57	-2.15	2.78	-2.15	0.22
32	1103.20	0.50	260.60	1103.07	-2.22	2.54	-2.22	0.12
33	1135.40	0.90	283.50	1135.27	-2.18	2.16	-2.18	0.45
34	1159.60	0.30	213.50	1159.47	-2.19	1.94	-2.19	1.05
35	1188.10	0.30	173.10	1187.97	-2.33	1.90	-2.33	0.22
36	1235.90	0.50	182.20	1235.76	-2.66	1.91	-2.66	0.13
37	1274.10	0.70	168.90	1273.96	-3.06	1.95	-3.06	0.19
38	1307.30	0.70	165.30	1307.16	-3.45	2.04	-3.45	0.04
39	1349.80	0.90	198.00	1349.66	-4.02	2.00	-4.02	0.35

01-05-2001

*** O-N-S-C-R-E-E-N ***
SURVEY CALCULATION REPORT

PARAMOUNT RESOURCES LIMITED
PARA et al FORT LIARD
N-01-60-10-123-15

Section Calculated on 0.00 Calculation Method: Minimum Curvature

#	Depth (m)	Angle	Azimuth	TVD (m)	N/S (m)	E/W (m)	Section (m)	DogLeg (/30)
40	1385.00	0.70	215.30	1384.85	-4.46	1.79	-4.46	0.27
41	1425.90	0.50	14.50	1425.75	-4.49	1.69	-4.49	0.87
42	1454.70	1.90	57.80	1454.55	-4.11	2.13	-4.11	1.64
43	1464.30	1.80	55.70	1464.14	-3.94	2.39	-3.94	0.38
44	1473.90	1.40	54.60	1473.74	-3.79	2.61	-3.79	1.25
45	1483.40	1.40	52.80	1483.23	-3.65	2.80	-3.65	0.14
46	1511.70	1.10	41.60	1511.53	-3.24	3.25	-3.24	0.41
47	1539.00	1.20	11.40	1538.82	-2.76	3.48	-2.76	0.67
48	1552.00	1.40	356.60	1551.82	-2.47	3.50	-2.47	0.90
49	1577.80	1.40	350.60	1577.61	-1.85	3.43	-1.85	0.17
50	1596.40	1.40	1.20	1596.21	-1.40	3.40	-1.40	0.42
51	1615.00	1.80	352.40	1614.80	-0.88	3.36	-0.88	0.76
52	1626.00	1.80	352.00	1625.79	-0.54	3.32	-0.54	0.05
53	1653.00	1.80	341.10	1652.78	0.28	3.12	0.28	0.38
54	1681.60	1.40	345.00	1681.37	1.05	2.88	1.05	0.43
55	1700.40	1.20	1.20	1700.16	1.47	2.83	1.47	0.66
56	1709.70	1.10	355.20	1709.46	1.65	2.82	1.65	0.51
57	1728.90	1.40	0.10	1728.66	2.07	2.81	2.07	0.50
58	1755.00	1.60	348.50	1754.75	2.75	2.74	2.75	0.42
59	1767.30	1.60	345.70	1767.04	3.08	2.66	3.08	0.19
*	UNABLE TO SLIDE DUE TO HIGH PUMP PRESSURE							
60	1796.10	2.10	346.80	1795.83	3.98	2.44	3.98	0.52
61	1805.70	2.50	353.10	1805.42	4.36	2.37	4.36	1.48
62	1834.70	3.30	359.80	1834.38	5.83	2.30	5.83	0.90
63	1845.80	3.30	1.90	1845.46	6.46	2.31	6.46	0.33
64	1853.80	3.50	3.60	1853.45	6.94	2.33	6.94	0.84
*	RESUME SLIDING							
65	1863.50	3.50	6.10	1863.13	7.53	2.38	7.53	0.47
66	1873.10	3.30	4.30	1872.72	8.10	2.43	8.10	0.71
67	1882.70	3.20	359.80	1882.30	8.64	2.45	8.64	0.86
68	1892.30	2.80	357.60	1891.89	9.14	2.44	9.14	1.30
69	1902.20	2.60	352.40	1901.78	9.61	2.40	9.61	0.96
70	1922.00	2.80	5.00	1921.55	10.53	2.38	10.53	0.95
Bit	1940.00	2.98	10.00	1939.53	11.43	2.50	11.43	0.52

Final Closure is 11.70 metres on an Azimuth of 12.34

WELLSITE BIT RECORD

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

SPUD DATE: Dec. 12, 2000
T.D. DATE:

SURFACE CASING: 40 jts. of 244.5mm, J-55, 53.6kg/m set @ 501.0m

BIT #	1A	2A	RR #2	2	3	4
SIZE (mm)	311	311	222	222	222	222
MAKE	Hughes		Hughes	Varel	Varel	Hughes
TYPE	GT-C0	SDGH	EP4727	ETD34XG	ETD55D-ER	ATJ-P66DC
SERIAL #	L71DM	700878	P25DJ	162685	149558	E68ZY
JETS	3x15.9	3x15.9	3x12.7	3x15.9	3x17.5	3x17.5
DEPTH IN	0.00	291.00	501.00	986.00	1404.00	1493.00
DEPTH OUT	291.00	501.00	986.00	1404.00	1493.00	1643.00
METRES	291.00	210.00	485.00	418.00	89.00	150.00
HOURS	35.25	41.75	26.50	52.00	21.75	41.00
ACC. HRS.	35.25	77.00	103.50	155.50	177.25	218.25
ROP (m/hr)	8.26	5.03	18.30	8.04	4.09	3.66
FOB	10-12daN	4-10daN	8-16daN	14-16daN	14-16daN	25daN
RPM	160-180	170-180	90+motor	90+motor	85+motor	55+motor
PP	9800	10500	10200	10200	7560	8300
DEN	1170	1200	1090	1130	1120	1135
VISCOSITY	54	81	38	57	64	64
MAX DEV.°	1.000°	1.000°	1.200°	0.500°	1.200°	1.800°
Condition:	T/B/G	T/B/G	T/B/G	T/B/G	T/B/G	T/B/G
Condition:	I/O/R/D/L	I/O/R/D/L	I/O/R/D/L	I/O/R/D/L	I/O/R/D/L	I/O/R/D/L
	4-4-FC-A	4-4-SS-A	2-2-NO-A	5-8-LT-H	5-8-LT-H	
	B/G/O/R/P	B/G/O/R/P	B/G/O/R/P	B/G/O/R/P	B/G/O/R/P	B/G/O/R/P
	6-IN-PR	1-IN-TD	2-IN-TO	8-14-TO	8-14-PR	
REMARKS	Surface hole	Surface hole	Main hole mud motor	Main hole mud motor	Main hole mud motor	Main hole mud motor

WELLSITE BIT RECORD

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

SPUD DATE: Dec. 12, 2000
T.D. DATE:

SURFACE CASING: 40 jts. of 244.5mm, J-55, 53.6kg/m set @ 501.0m

BIT #	1A	2A	2	2RR	3	4
SIZE (mm)	311	311	222	222	222	222
MAKE	Hughes		Hughes	Varel	Varel	Hughes
TYPE	GT-C0	SDGH	EP4727	ETD34XG	ETD55D-ER	ATJ-P66DC
SERIAL #	L71DM	700878	P25DJ	162685	149558	E68ZY
JETS	3x15.9	3x15.9	3x12.7	3x15.9	3x17.5	3x17.5
DEPTH IN	0.00	291.00	501.00	986.00	1404.00	1493.00
DEPTH OUT	291.00	501.00	986.00	1404.00	1493.00	1643.00
METRES	291.00	210.00	485.00	418.00	89.00	150.00
HOURS	35.25	41.75	26.50	52.00	21.75	41.00
ACC. HRS.	35.25	77.00	103.50	155.50	177.25	218.25
ROP (m/hr)	8.26	5.03	18.30	8.04	4.09	3.66
FOB	10-12daN	4-10daN	8-16daN	14-16daN	14-16daN	25daN
RPM	160-180	170-180	90+motor	90+motor	85+motor	55+motor
PP	9800	10500	10200	10200	7560	8300
DEN	1170	1200	1090	1130	1120	1135
VISCOSITY	54	81	38	57	64	64
MAX DEV.°	1.000°	1.000°	1.200°	0.500°	1.200°	1.800°
Condition:	T/B/G	T/B/G	T/B/G	T/B/G	T/B/G	T/B/G
Condition:	IR/OR/D/L	IR/OR/D/L	IR/OR/D/L	IR/OR/D/L	IR/OR/D/L	IR/OR/D/L
	4-4-FC-A	4-4-SS-A	2-2-NO-A	5-8-LT-H	5-8-LT-H	
	R/G/O/RP	R/G/O/RP	R/G/O/RP	R/G/O/RP	R/G/O/RP	R/G/O/RP
	6-IN-PR	1-IN-TD	2-IN-TO	8-14-TO	8-14-PR	
REMARKS	Surface hole	Surface hole	Main hole mud motor	Main hole mud motor	Main hole mud motor	Main hole mud motor



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/07/2001**

Job Ticket #: **T4-5157** DST#: **1**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
Job Ticket #: T4-5157 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO
Location: N-01-60-10-123-15

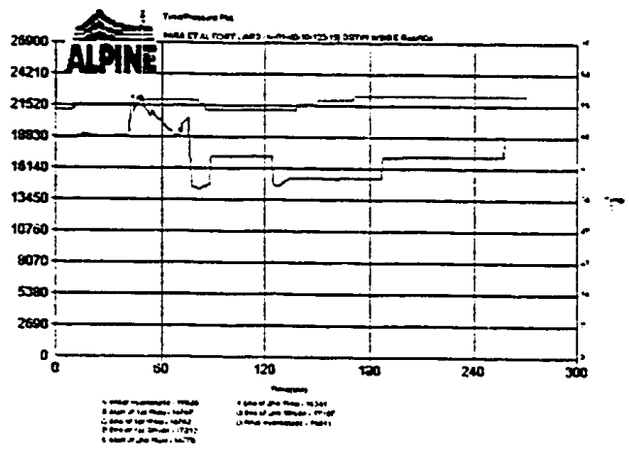
General Information:

Test Type:	INFLATE STRADDLE	Tester:	BILL HOLLINGSHEAD
Interval:	1682m -1691m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1670.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18820.4
B Start of 1st Flow	0.00	14766.7
C End of 1st Flow	10.02	14742.2
D End of 1st Shutin	36.90	17212.2
E Start of 2nd Flow	0.00	14777.7
F End of 2nd Flow	61.08	15340.6
G End of 2nd Shutin	70.14	17187.2
Q Final Hydrostatic	0.00	18810.5



Test Run Information:

Start Time:	400hrs
Reached Test Depth:	947hrs
Pull Out Time:	1245hrs
Tool Out Of Hole:	
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	74.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1140.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 10 - 39 - 60 - 70
TOOL OPEN FOR PREFLOW AT 09:47 JAN. 07 , 2001

PREFLOW: Strong air blow immediatelly gas to surface in 1.5 minutes strong 7 metre flare.

FINAL FLOW: Strong gas blow immediately and throughout. Mud spray to surface at 10 to 18 minutes into flow. See gas recovery page of this report for gas flow rates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 20 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5157 DST#: 1

Test Date: 01/07/2001 400hrs

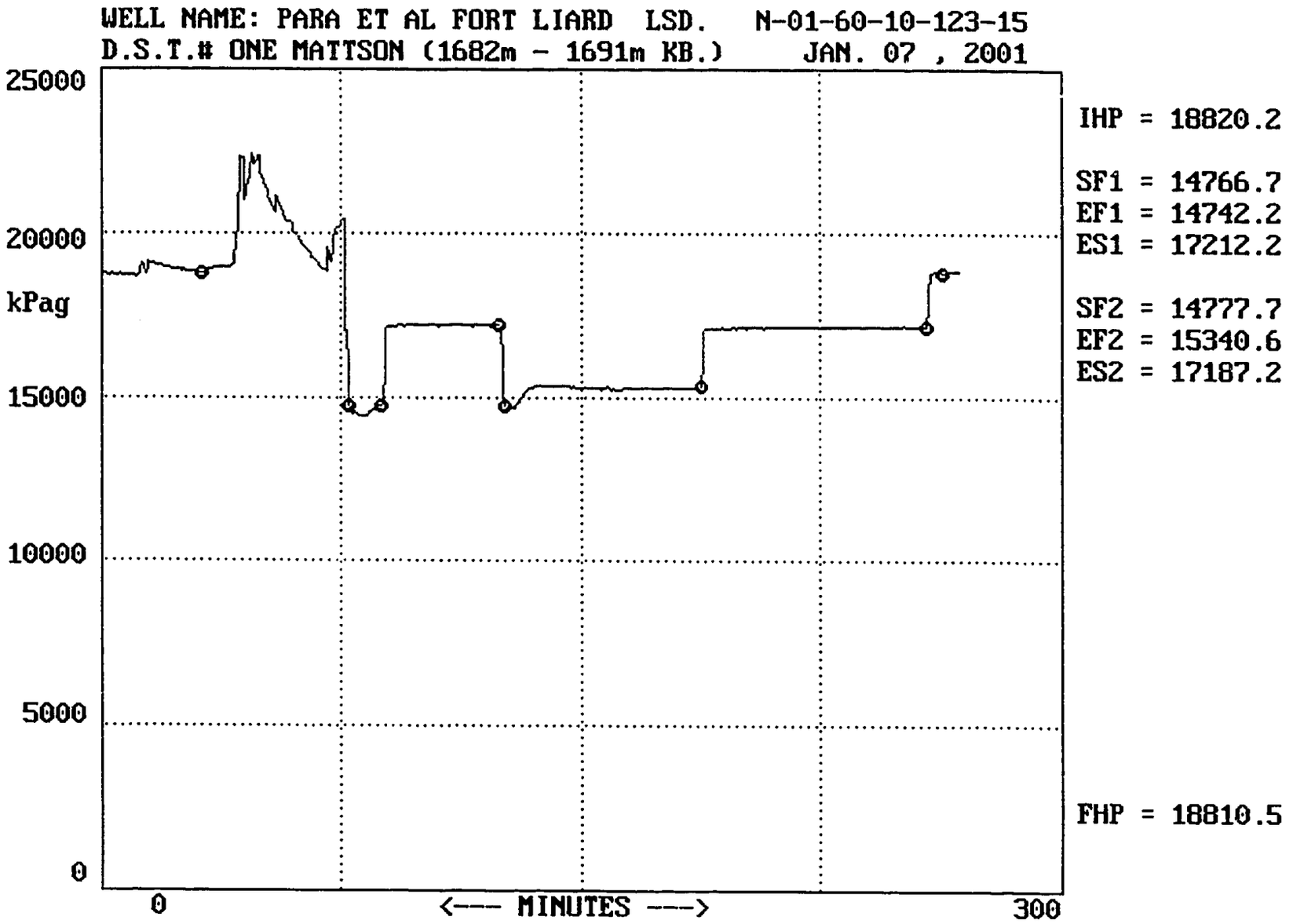
Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

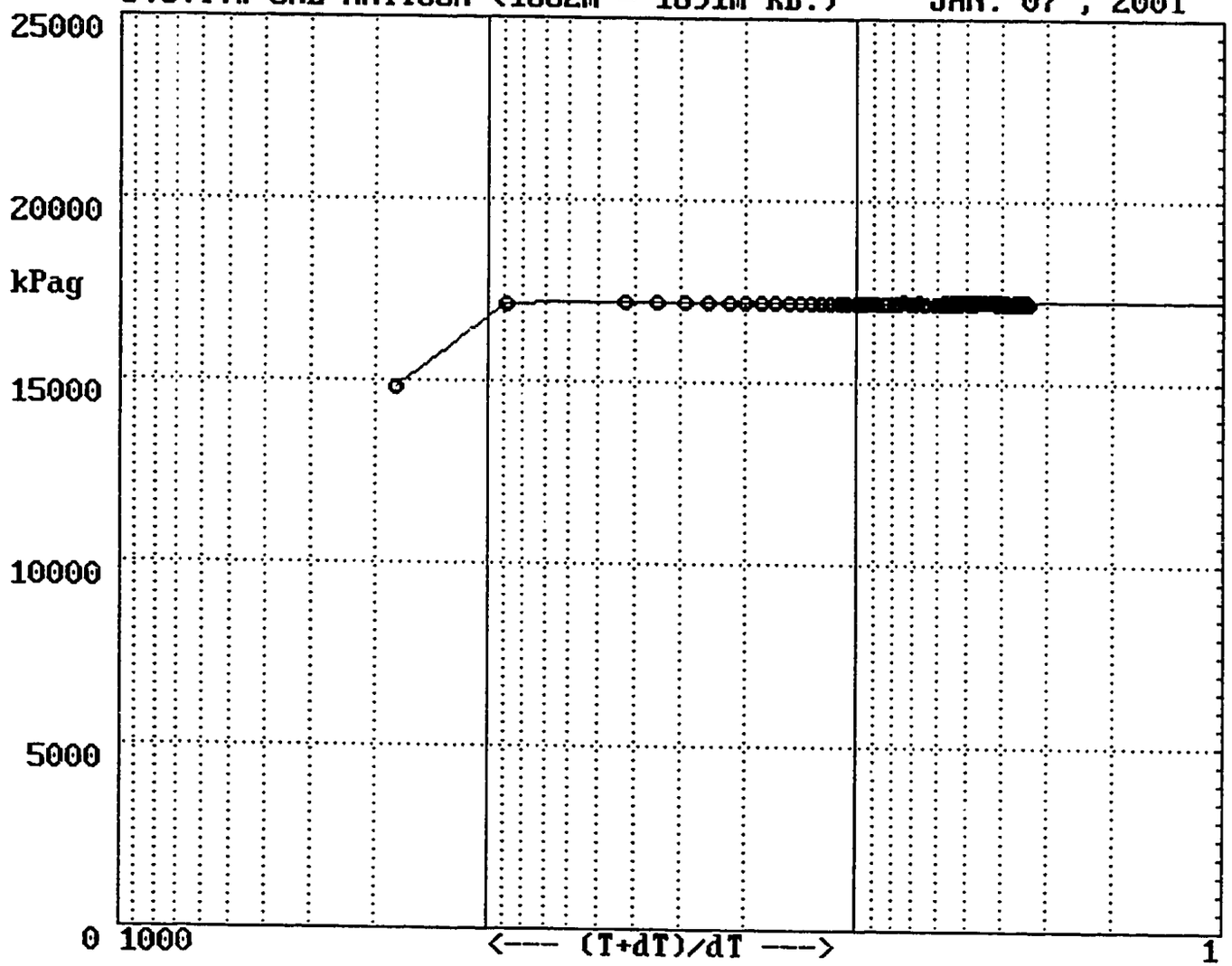
Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	6000	548260.00
20	22.23	6500	592831.00
30	22.23	6500	592831.00
40	22.23	6500	592831.00
50	22.23	6500	592831.00
60	22.23	6500	592831.00


WELL NAME: PARA ET AL FORT LIARD LSD. N-01-60-10-123-15
D.S.T.# ONE MATTSON (1682m - 1691m KB.) JAN. 07 , 2001
25000
20000
kPag
15000
10000
5000
0
0
<--- MINUTES --->
300
IHP = 18820.2
SF1 = 14766.7
EF1 = 14742.2
ES1 = 17212.2
SF2 = 14777.7
EF2 = 15340.6
ES2 = 17187.2
FHP = 18810.5

WELL NAME: PARA ET AL FORT LIARD LSD. N-01-60-10-123-15
D.S.T.# ONE MATTSON (1682m - 1691m KB.) JAN. 07 , 2001

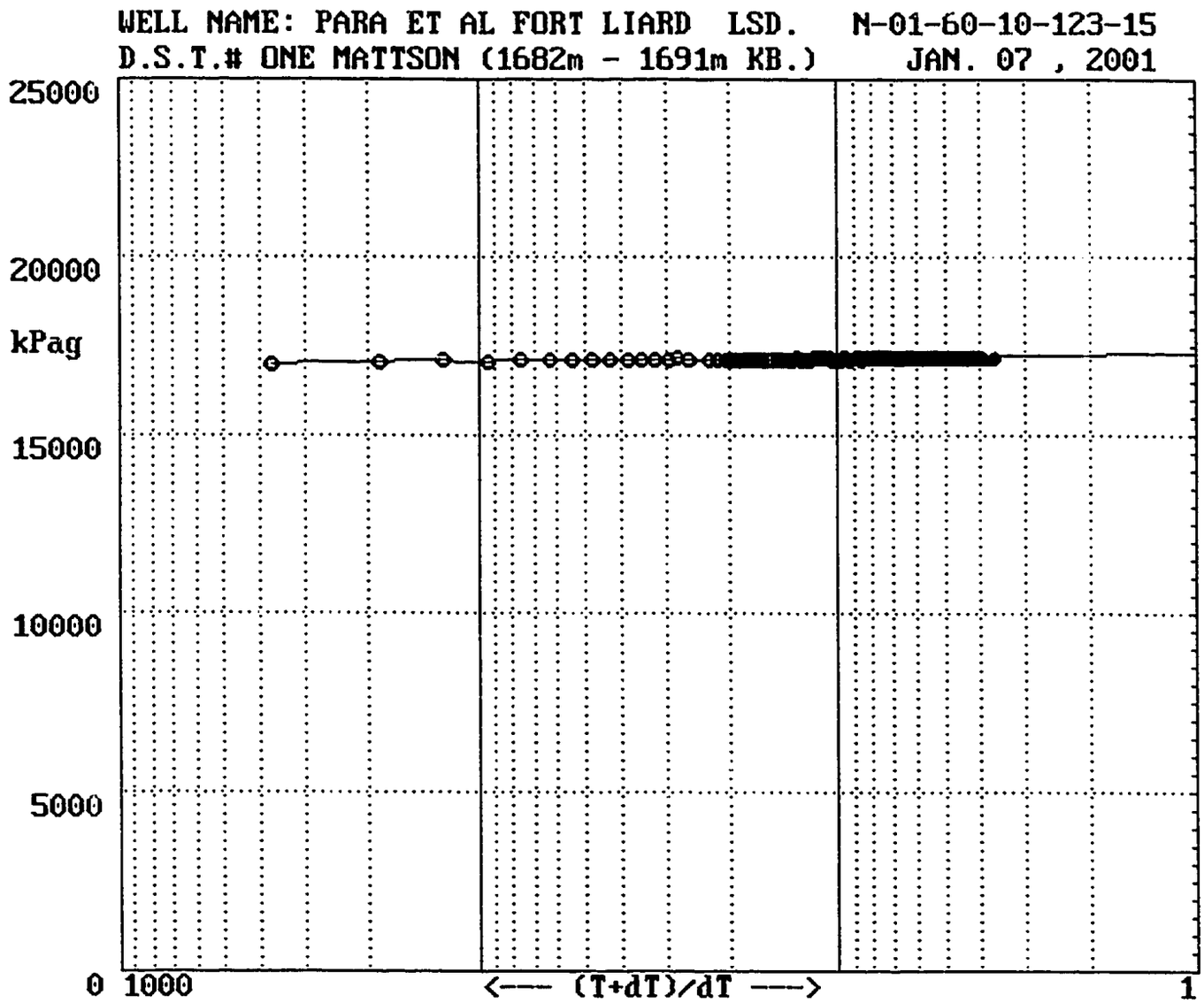


HORNER PLOT
SHUT-IN # 1

SLOPE =
31.9
kPa/cycle

Extrapolated
Pressure =
17234.5
kPag

p275Y


WELL NAME: PARA ET AL FORT LIARD LSD. N-01-60-10-123-15
D.S.T.# ONE MATTSON (1682m - 1691m KB.) JAN. 07 , 2001
25000
20000
kPag
15000
10000
5000
0
1000
<— (T+dT)/dT —>
1
HORNER PLOT
SHUT-IN # 2
SLOPE =
208.3
kPa/cycle
Extrapolated
Pressure =
17303.2
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/07/2001**

Job Ticket #: **D2-9622** DST#: **1**

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARAMOUNT ET AL FT. LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	65
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1686.22m
Total Drill Pipe Above K.B.:	4.22m
Total Depth:	1943m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1235.83	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.35	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC#1902
INSIDE RECORDER FAILED WAS FLOODED



Item	Length
P.O. Sub	0.31
C.O. Sub	0.30
P.O. Sub	0.31
FLUID REC#63	1.50
HMV Stroke	2.18
Sampler	1.10
INSIDE REC#70	1.50
Telemetry Tool	5.80
Jars	1.82
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	4.26
Bypass Receiver	0.78
Stubb	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

23.55m

37.22m

Depth: 1682m

9.10m

Depth: 1691m

4.57m

Total Depth: 1943.00m

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Contact: WILBERT CALLIHOO
Well Name: PARAMOUNT ET AL FT. LIARD
Location: N-01-60-10-123-15

General Information:

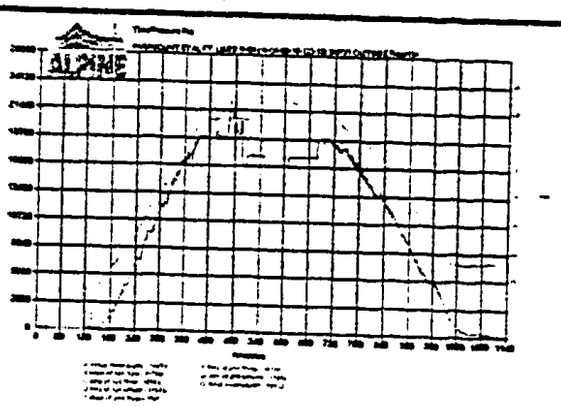
Test Type: INFLATE STRADDLE
Interval: 1682.00m - 1691.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1943.00m
Test Mode: Gas

Tester: DANNY ROSS
Truck No.: UNIT 677
Contractor: PRECISION
Rig No.: 379
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 61.00 C

Electronic Recorder Information:

OUTSIDE	
Recorder #: 124	Recorder #:
Range: 70000 kPag	Range: kPag
Depth: 1684.00 m	Depth: m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	16971.3
B Start of 1st Flow	0.00	15798.8
C End of 1st Flow	10.00	15841.6
D End of 1st Shutin	37.00	17075.4
E Start of 2nd Flow	0.00	15989.8
F End of 2nd Flow	60.00	16184.2
G End of 2nd Shutin	70.00	17041.9
Q Final Hydrostatic	0.00	16832.4



Test Run Information:

Start Time: 400hrs
Reached Test Depth: 900hrs
Pull Out Time: 1300hrs
Tool Out Of Hole: 1900hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 41000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1113.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion: N/A

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 74.00S/L
Filter Cake: 1.60mm
Pump Time: 25min
Reversed Out: NO

General Remarks:

PREFLOW: SRTONG AIR BLOW IMMEDIATELY. GAS TO SURFACE IN 1min. 30secs. WITH A STRONG 7m FLARE AT PIT.
FINAL FLOW:GAS TO SURFACE IMMEDIATELY. REFER TO CHARTS FOR GAS PRESSURES.

Recovery Description:

ONE SAMPLER RUN G.P.=96 2 GAS BOMBS CAUGHT PF=0000198 & MF=0000618. Total fluid recovery was 27 meters, consisting of 22 metres of clear condensate with 48api gravity. 5 metres of drilling mud. 5fluid recovery samples and 1 mud tank sample.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 6 Sent to: AGAT LAB

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9622 DST#: 1

Test Date: 01/07/2001 400hrs

Well Name: PARAMOUNT ET AL FT. LIARD

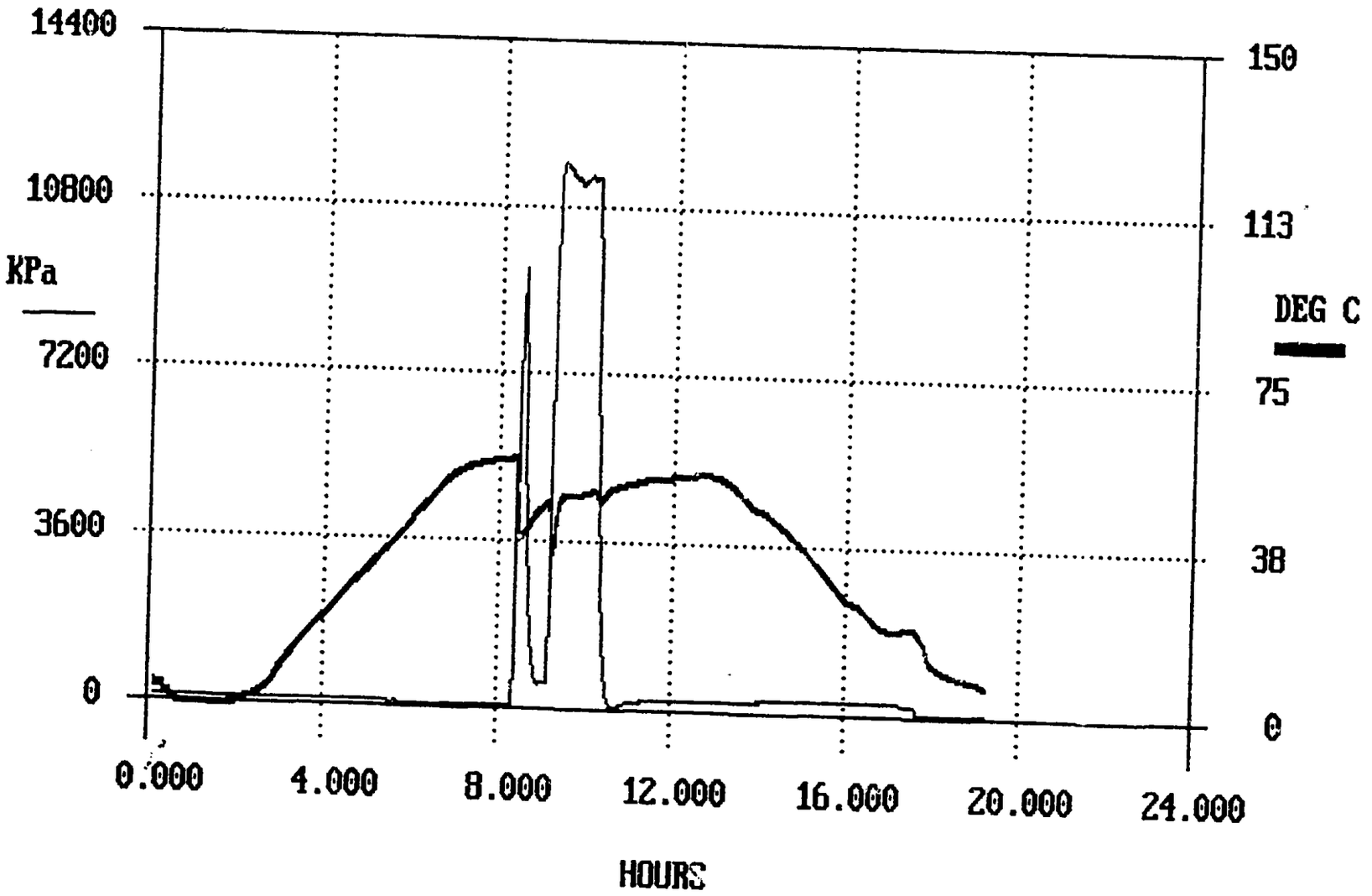
Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Gas Measurements for Flow # 2

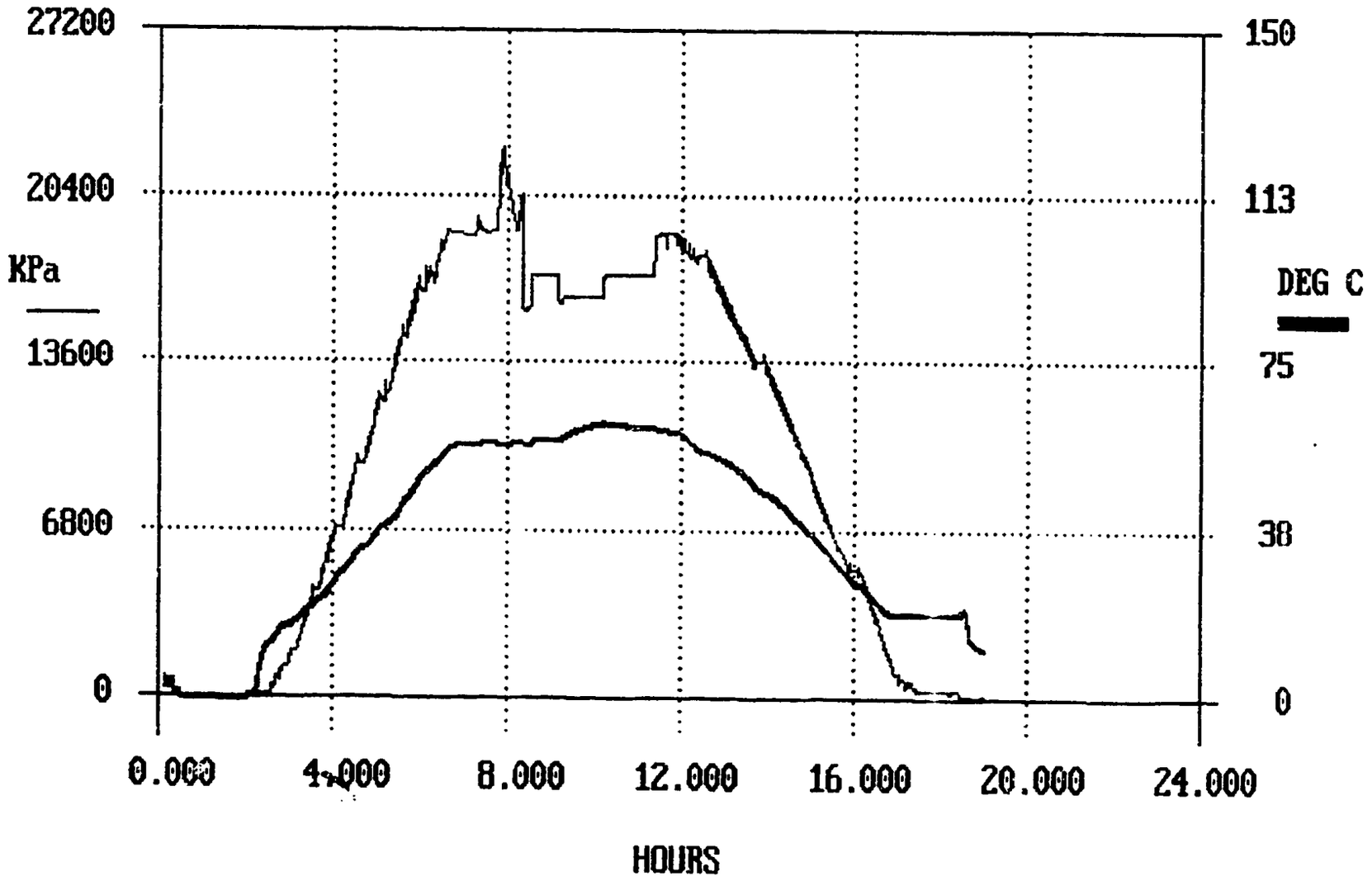
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
10	22.23	6000	548260.00
20	22.23	6500	592831.00
30	22.23	6500	592831.00
40	22.23	6500	592831.00
50	22.23	6500	592831.00
60	22.23	6500	592831.00

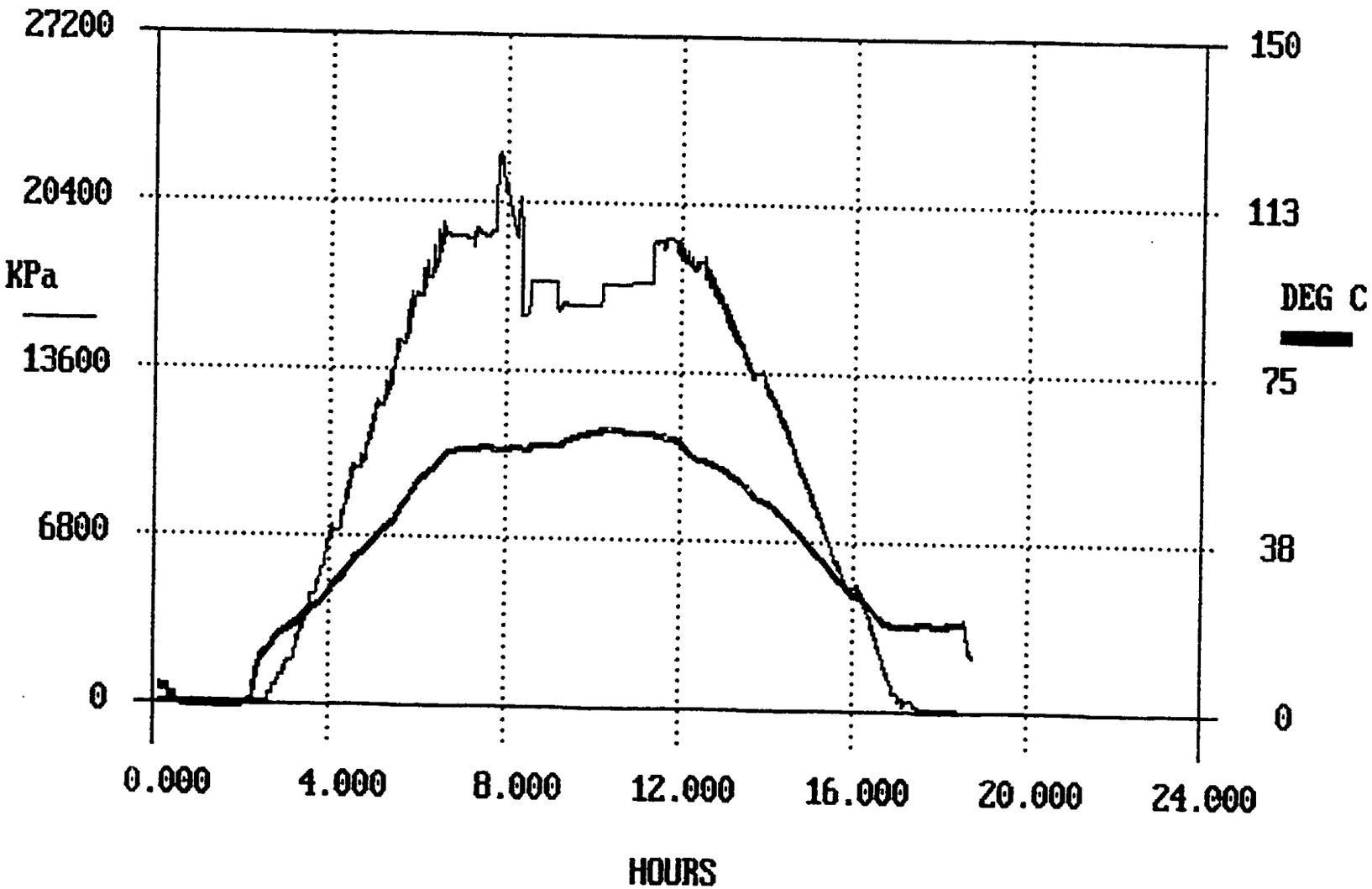
FILE: <C:\ALP_IN\C2400702.063>
S/N: 63 PARAMOUNT ET AL FT.LIARD N-01 DST#1 TIC#2-9622 REC#63 FLUID



FILE: <C:\ALP_IN\C2400710.124>
s/n 124 PARAMOUNT ET AL FT.LIARD N-01 DST#1 TIC#2-9622 REC#124 OUTSIDE



FILE: <C:\ALP_IN\C2400712.126>
s/n 126 PARAMOUNT ET AL FT.LIARD N-01 DST#1 TIC#2-9622 REC#126 OUTSIDE





Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/08/2001**

Job Ticket #: **T4-5158** DST#: **2**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5158 DST#: 2
Test Date: 01/08/2001 2100hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

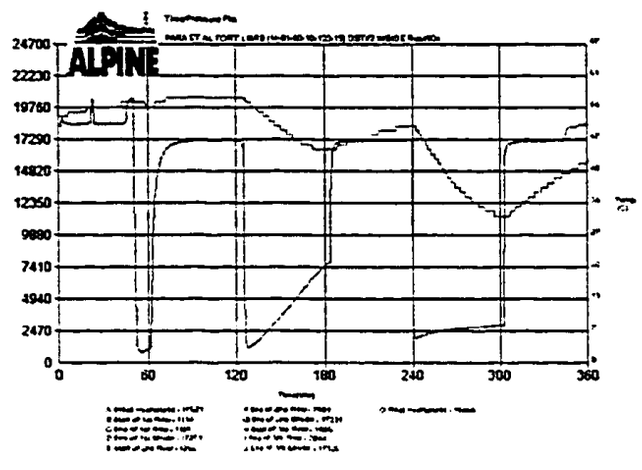
General Information:

Test Type:	INFLATE STRADDLE	Tester:	BILL HOLLINGSHEAD
Interval:	1643m -1648m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	56.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1631.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18521.2
B Start of 1st Flow	0.00	1110.0
C End of 1st Flow	9.12	1194.8
D End of 1st Shutin	62.04	17251.1
E Start of 2nd Flow	0.00	1251.5
F End of 2nd Flow	57.00	7800.9
G End of 2nd Shutin	51.42	17230.8
H Start of 3rd Flow	0.00	1864.6
I End of 3rd Flow	60.54	2943.9
J End of 3rd Shutin	41.82	17126.4
Q Final Hydrostatic	0.00	18464.3



Test Run Information:

Start Time:	2100hrs
Reached Test Depth:	230hrs
Pull Out Time:	720hrs
Tool Out Of Hole:	
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	74.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1140.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 10 - 60 - 60 - 55 - 60 - 42
TOOL OPEN FOR PREFLOW AT 02:30 JAN. 08 , 2001

PREFLOW: Strong air blow immediately gas to surface in 4 minutes lazy 3 metre flare.

SECOND FLOW: Gas to surface immediately lazy 3 metre flare steady throughout . See gas recovery page of this report for gas flow rates.

FINAL FLOW: Gas to surface immediately 4metre flare throughout. See gas recovery page of this report for gas flow rates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 120 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5158 DST#: 2

Test Date: 01/08/2001 2100hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: 0

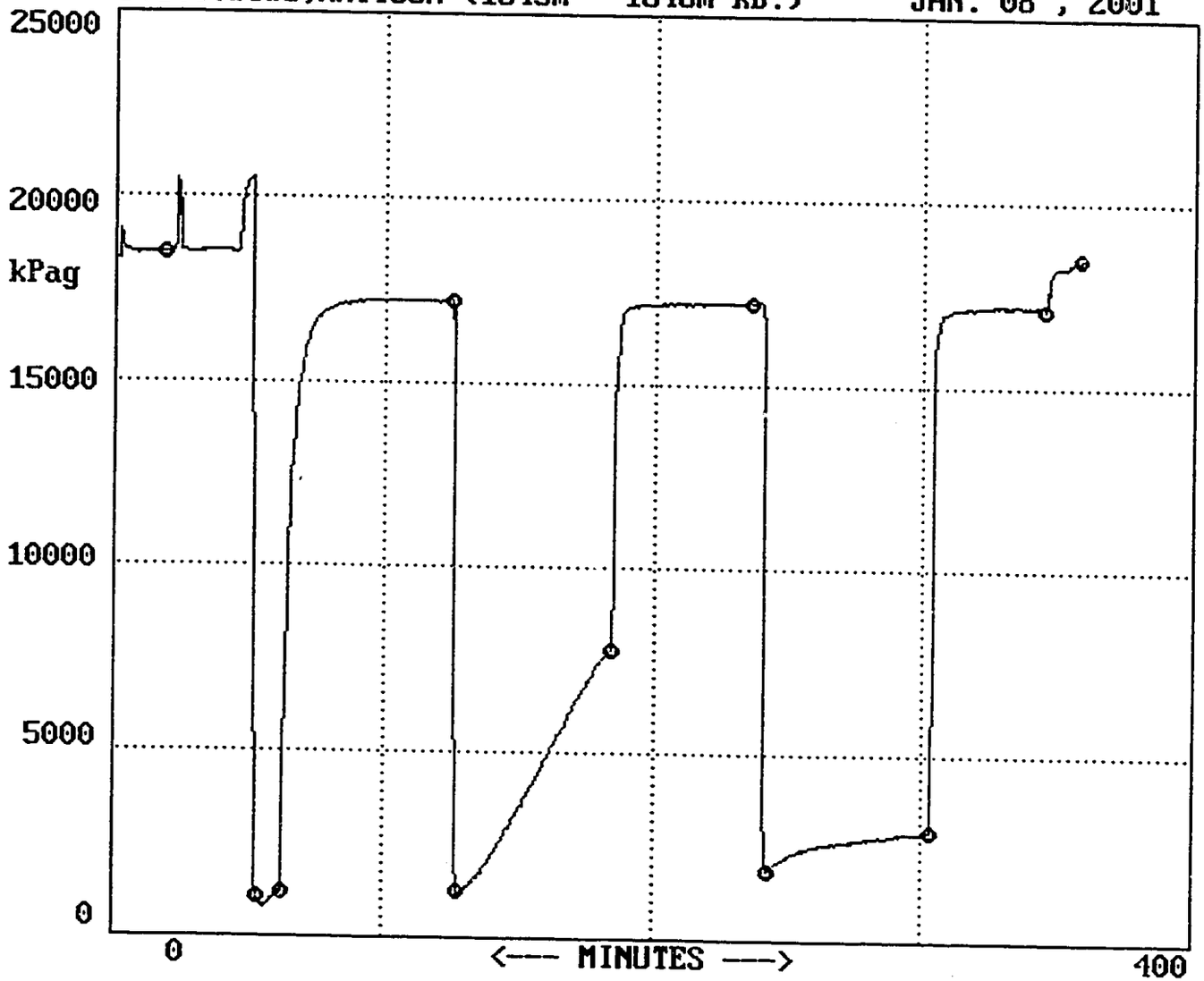
Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	6.35	650	4572.00
20	6.35	1300	8570.00
30	6.35	2800	17702.00
40	6.35	3700	23215.00
50	6.35	5100	31758.00
60	6.35	6200	38449.00

Gas Measurements for Flow # 3

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	12.70	1000	28567.00
20	12.70	1100	31072.00
30	12.70	1200	33756.00
40	12.70	1200	33756.00
50	12.70	1200	33756.00
60	12.70	1200	33756.00

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.) JAN. 08 , 2001



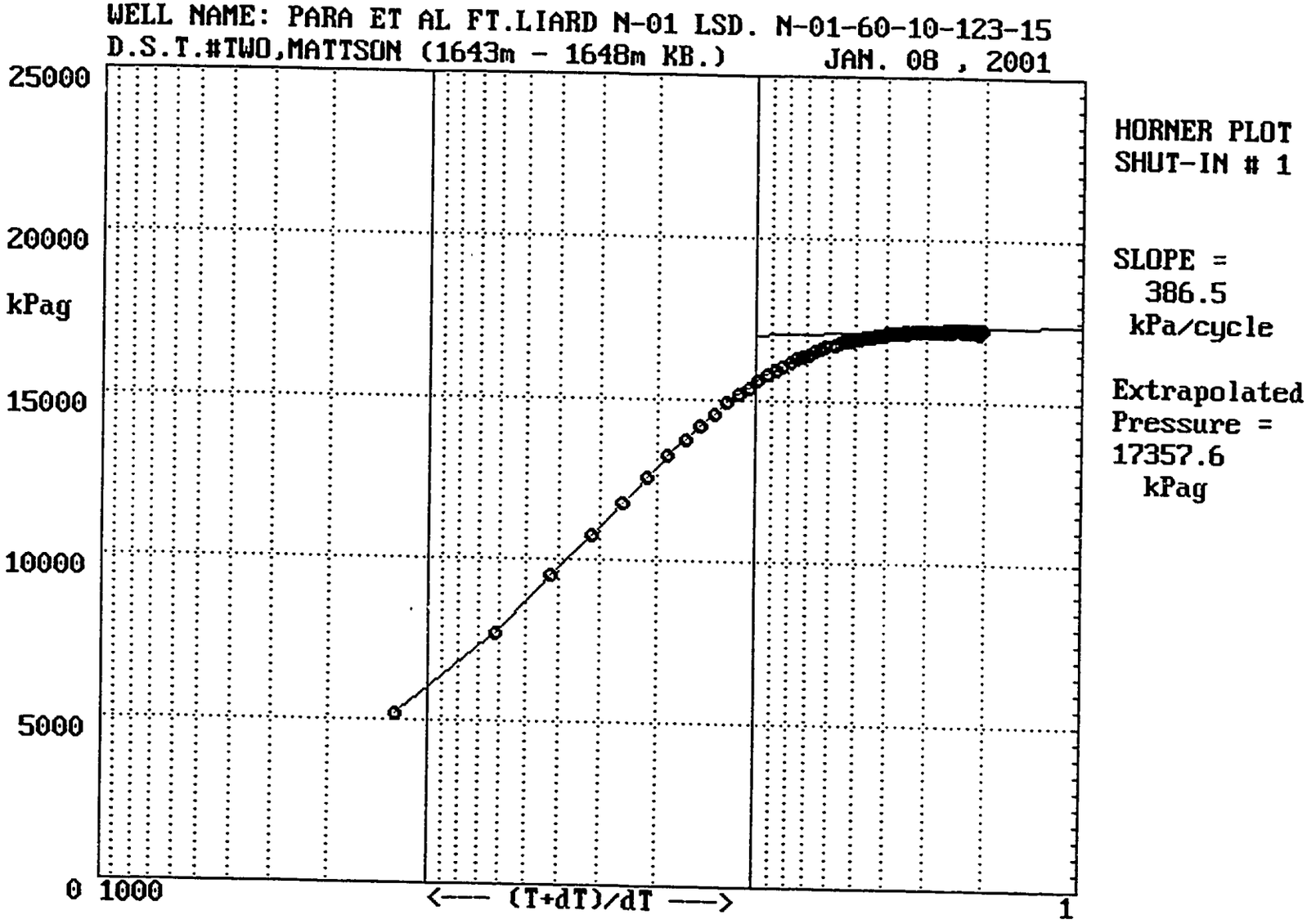
IHP = 18520.9

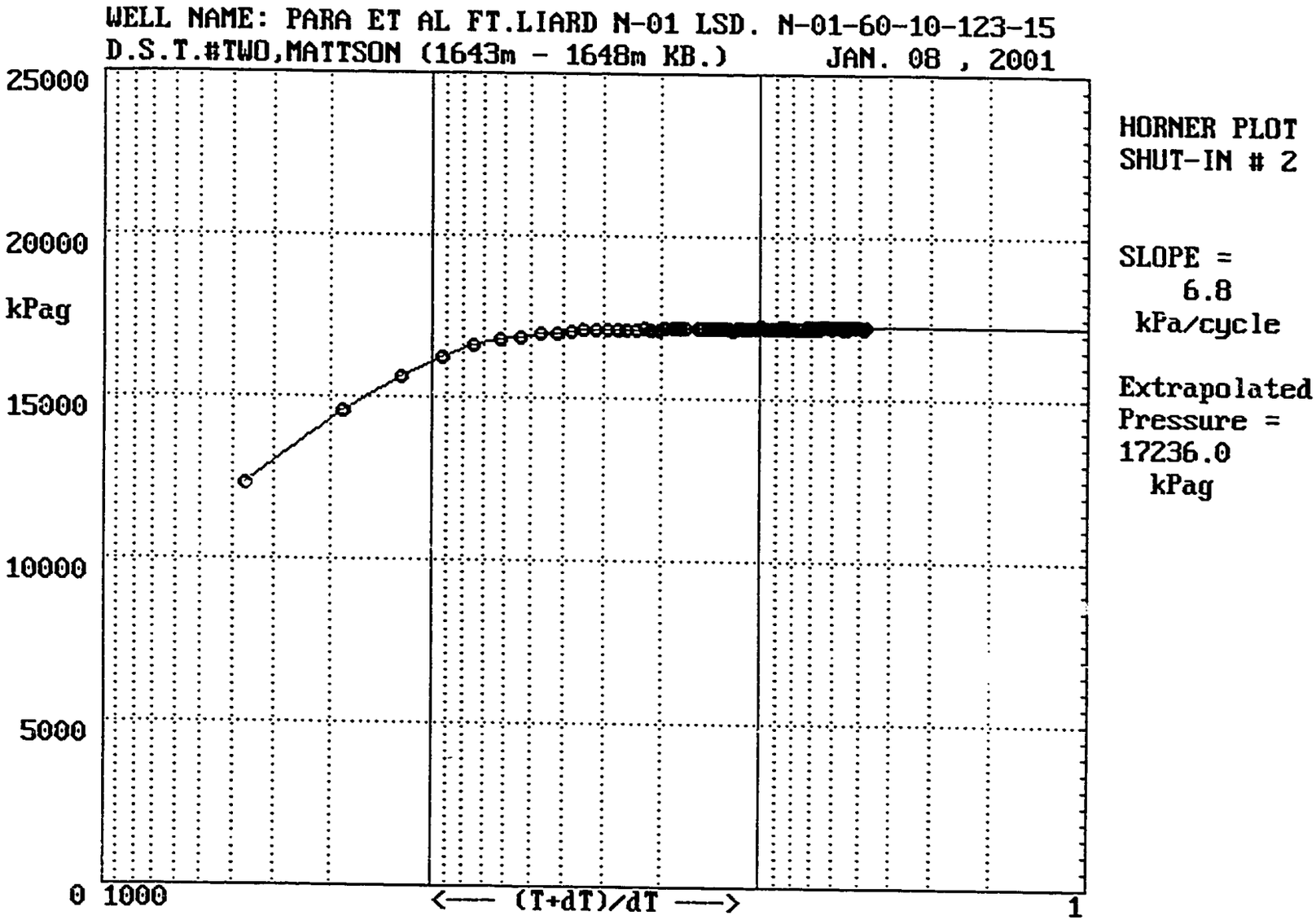
SF1 = 1110.0
EF1 = 1194.8
ES1 = 17251.1

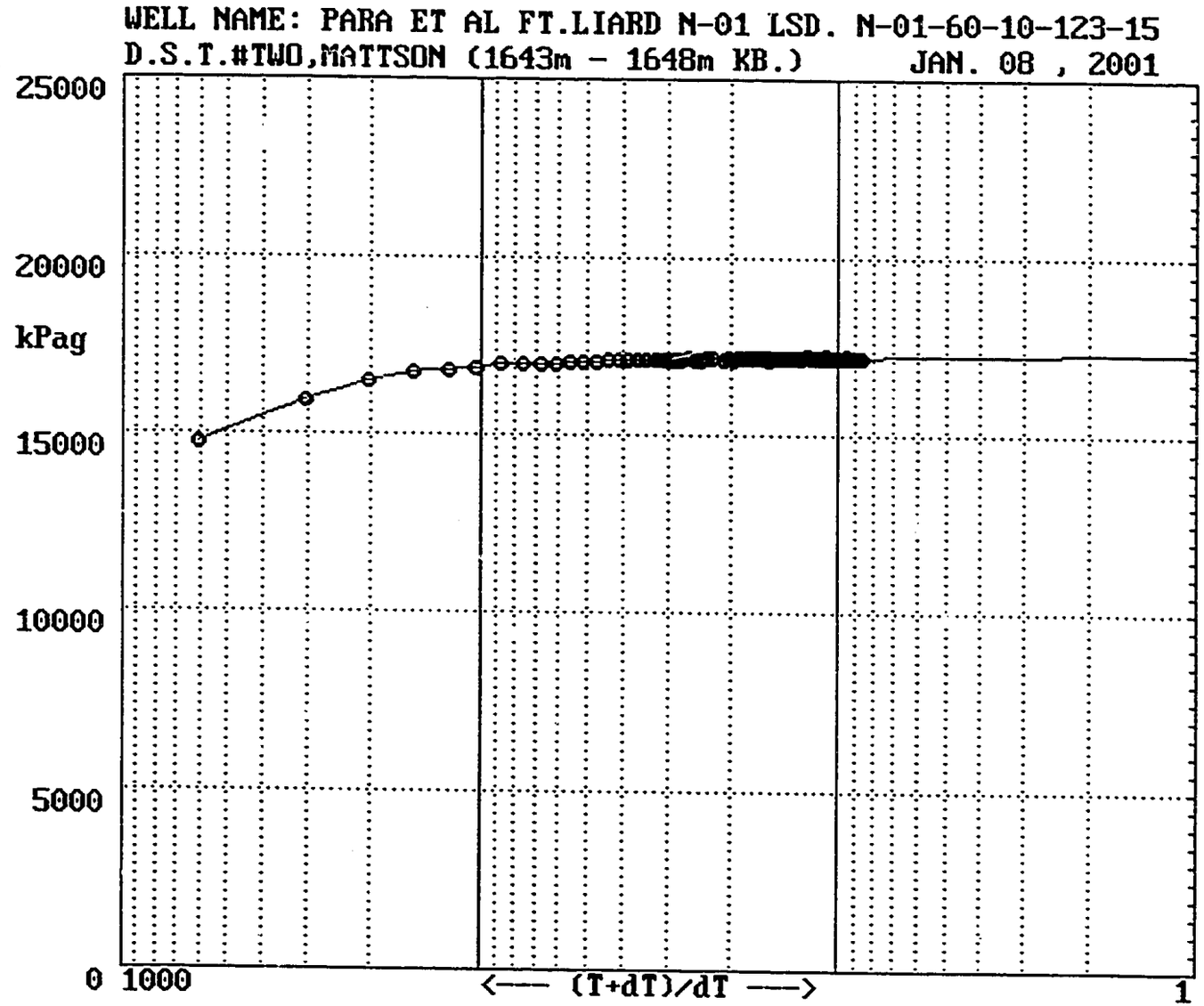
SF2 = 1251.5
EF2 = 7800.9
ES2 = 17230.8

SF3 = 1864.6
EF3 = 2943.9
ES3 = 17126.4

FHP = 18464.3

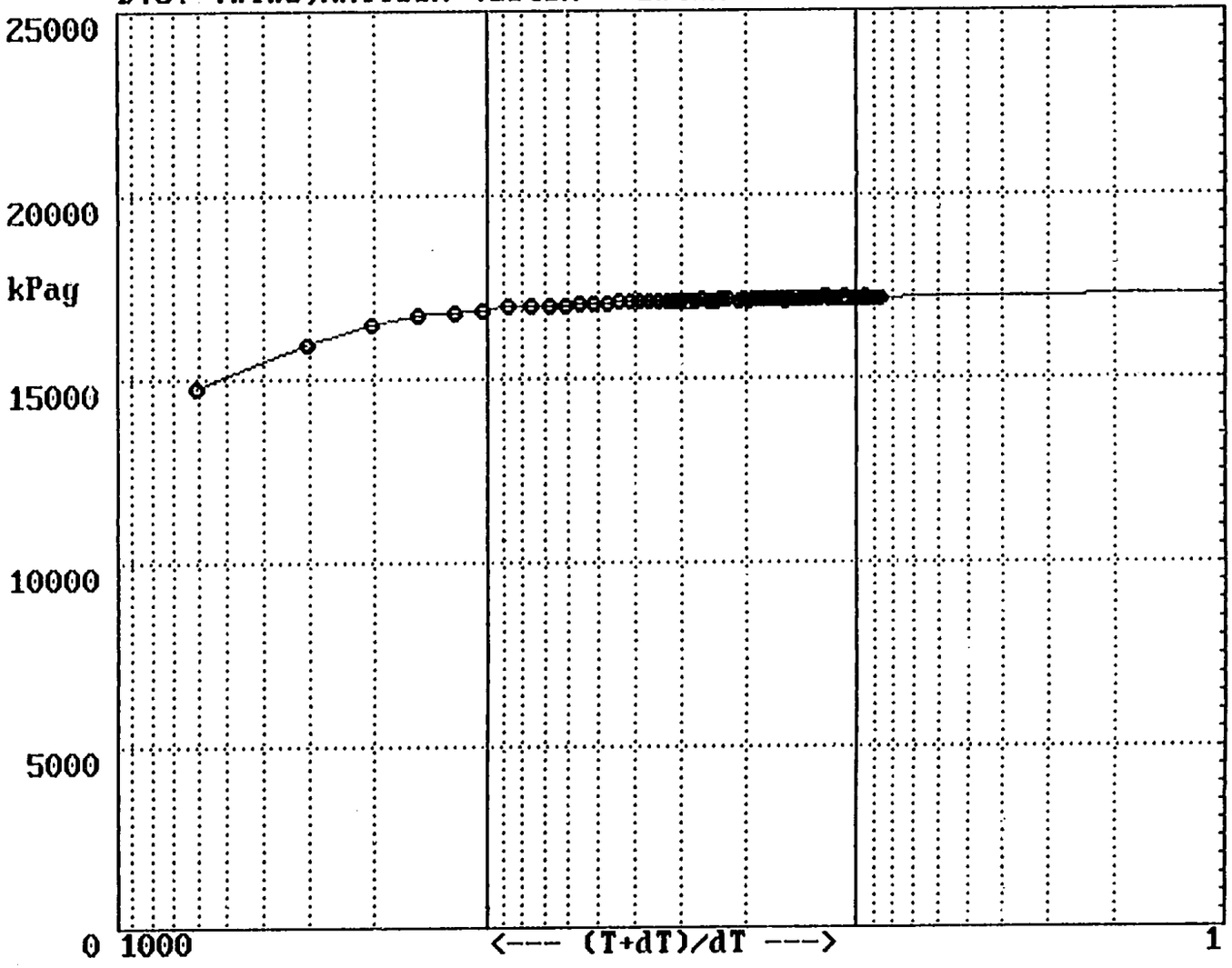

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.)
JAN. 08 , 2001
25000
20000
kPag
15000
10000
5000
0
1000
<—— (T+dT)/dT ——>
1
HORNER PLOT
SHUT-IN # 1
SLOPE =
386.5
kPa/cycle
Extrapolated
Pressure =
17357.6
kPag


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.)
JAN. 08 , 2001
25000
20000
kPag
15000
10000
5000
0
1000
<—— (T+dT)/dT ——>
1
HORNER PLOT
SHUT-IN # 2
SLOPE =
6.8
kPa/cycle
Extrapolated
Pressure =
17236.0
kPag


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.)
JAN. 08 , 2001
25000
20000
kPag
15000
10000
5000
0
1000
<— (T+dT)/dT —>
1
HORNER PLOT
SHUT-IN # 3
SLOPE =
123.0
kPa/cycle
Extrapolated
Pressure =
17319.2
kPag

p275X

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#TWO,MATTSON (1643m - 1648m KB.) JAN. 08 , 2001



HORNER PLOT
SHUT-IN # 3

SLOPE =
123.0
kPa/cycle

Extrapolated
Pressure =
17319.2
kPag

- 69 -

*p275X

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9623 DST#: 2

Test Date: 01/07/2001 2130hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

General Information:

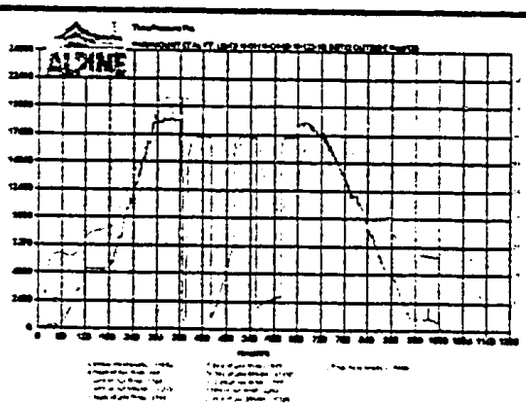
Test Type: INFLATE STRADDLE
Interval: 1643.00m - 1648.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

Tester: DANNY ROSS
Truck No.: UNIT 677
Contractor: PRECISION
Rig No.: 379
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 56.00 C

Electronic Recorder Information:

OUTSIDE	OUTSIDE
Recorder #: 126	Recorder #: 124
Range: 70000 kPag	Range: 70000 kPag
Depth: 1645.00 m	Depth: 1645.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18681.9
B Start of 1st Flow	0.00	849.5
C End of 1st Flow	7.00	1063.7
D End of 1st Shutin	63.00	17250.2
E Start of 2nd Flow	0.00	1141.2
F End of 2nd Flow	55.00	7674.9
G End of 2nd Shutin	56.00	17136.8
H Start of 3rd Flow	0.00	1787.1
I End of 3rd Flow	60.00	2967.6
J End of 3rd Shutin	42.00	17194.6
Q Final Hydrostatic	0.00	18485.2



Test Run Information:

Start Time: 2130hrs
Reached Test Depth: 200hrs
Pull Out Time: 800hrs
Tool Out Of Hole: 1530hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 40000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1110.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion: N/A

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 74.00S/L
Filter Cake: 1.60mm
Pump Time: 25min
Reversed Out: NO

General Remarks:

PREFLOW:STRONG AIR BLOW IMMEDIATELY. GAS TO SURFACE IN 4mins. STEADY 3m FLARE.
FINAL FLOW:STRONG GAS BLOW IMMEDIATLEY REFER TO CHARTS FOR PRESSURES.
THIRD FLOW: STRONG GAS BLOW IMMEDIATELY. REFER TO CHARTS FOR PRESSURES.

Recovery Description:

ONE SAMPLER RUN G.P.=40. TWO GAS BOMBS WERE CAUGHT PF=0002009 & MF=0007001. TOTAL FLUID RECOVERY WAS 75m CONSISTING OF MAINLY DRILLING FLUID WITH APPROX. 5m OF CONDINSATE MIXED MUD.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 5 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9823 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	63
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1649.83m
Total Drill Pipe Above K.B.:	6.83m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1199.67	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC# 1902



Item	Length
P.O. Sub	0.31
C.O. Sub	0.30
P.O. Sub	0.31
FLUID REC#63	1.50
HMV Stroke	2.18
Sampler	1.10
INSIDE REC#70	1.50
Telemetry Tool	5.80
Jars	1.82
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	0.30
Bypass Receiver	0.78
Stubb	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

23.55m

33.26m

Depth: 1643m

5.14m

Depth: 1648m

4.57m

Total Depth: 1940.00m

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9623 DST#: 2

Test Date: 01/07/2001 2130hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

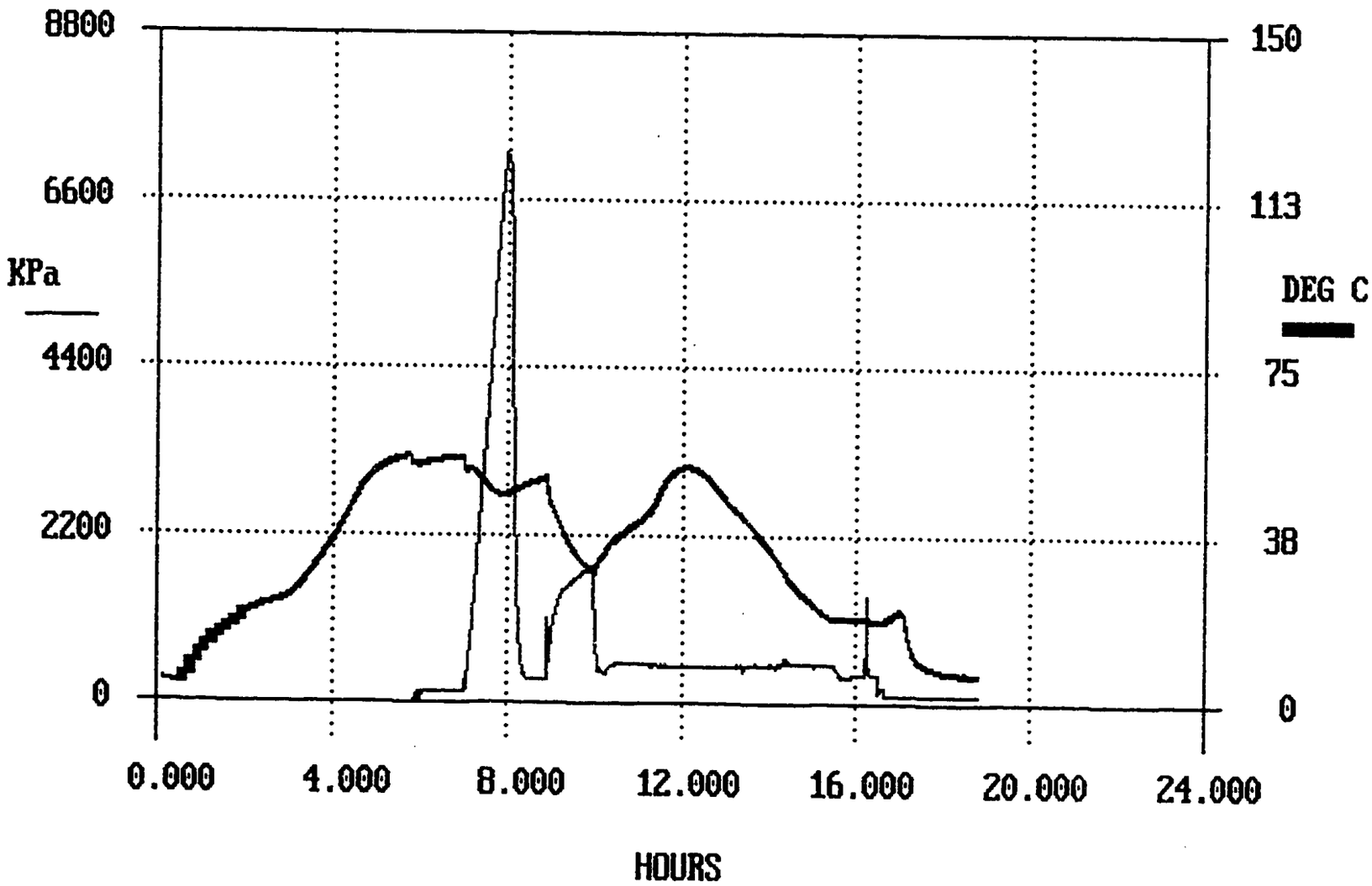
Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	6.35	650	4572.00
20	6.35	1300	8570.00
30	6.35	2800	17702.00
40	6.35	3700	23215.00
50	6.35	5100	31758.00
60	6.35	6200	38449.00

Gas Measurements for Flow # 3

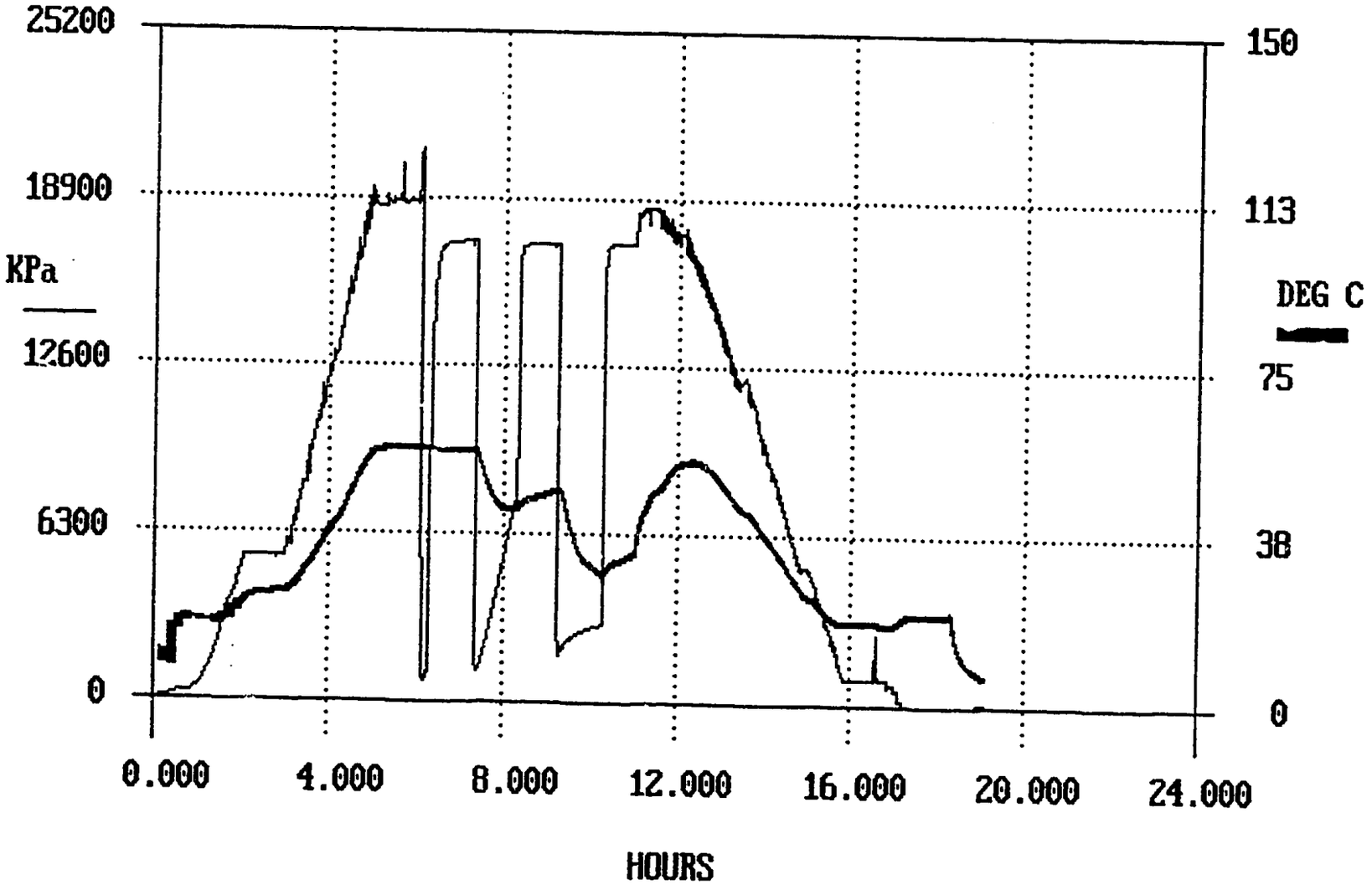
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	12.70	1000	28567.00
20	12.70	1100	31072.00
30	12.70	1200	33756.00
40	12.70	1200	33756.00
50	12.70	1200	33756.00
60	12.70	1200	33756.00

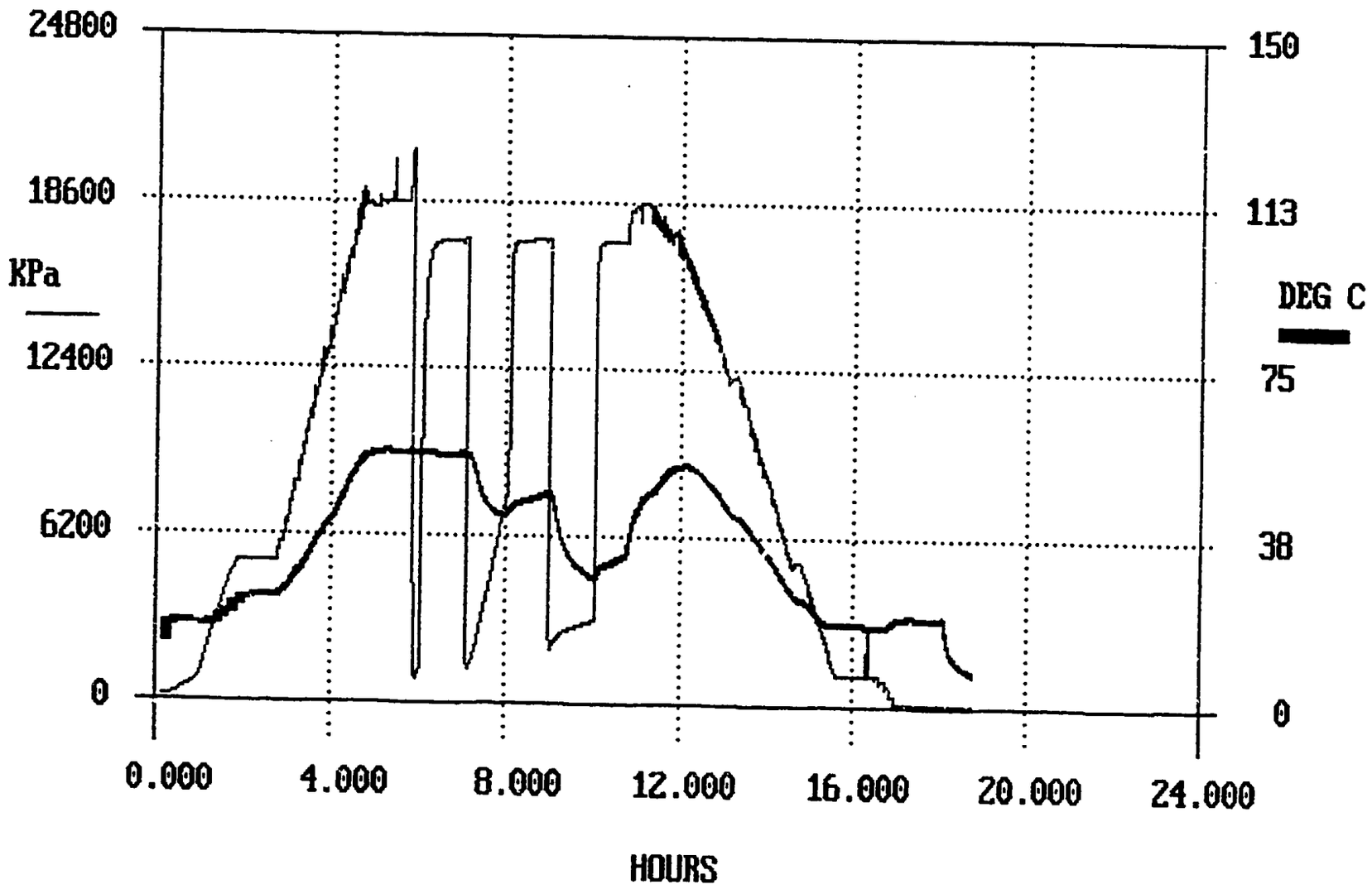
FILE: <C:\ALP_IN\10810200.063>
s/n 63 PARAMOUNT ET AL FT. LIARD N-01 DST#2 TIC#2-9623 REC#63 FLUID E



FILE: <C:\ALP_IN\10810200.126>
s/n 126 PARAMOUNT ET AL FT LIARD N-01 DST#2 TIC#2-9623 REC#126 OUTSIDE



FILE: <C:\ALP_IN\10810200.124>
s/n 124 PARAMOUNT ET AL FT. LIARD N-01 DST#2 TIC#2-9623 REC#124 OUTSIDE



ALPINE

Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **T4-5159** DST#: **3**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5159 DST#: 3
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

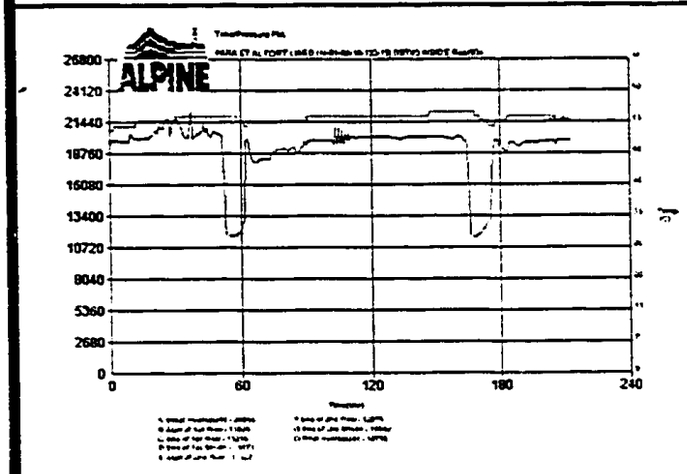
General Information:

Test Type:	INFLATE STRADDLE	Tester:	BILL HOLLINGSHEAD
Interval:	1730m -1751m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	55.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1718.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20055.6
B Start of 1st Flow	0.00	11807.8
C End of 1st Flow	8.64	13216.3
D End of 1st Shutin	6.00	18070.7
E Start of 2nd Flow	0.00	11827.2
F End of 2nd Flow	8.52	12974.7
G End of 2nd Shutin	8.64	18849.4
Q Final Hydrostatic	0.00	19799.2



Test Run information:

Start Time:	1200hrs
Reached Test Depth:	1735hrs
Pull Out Time:	2009hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	2.00m
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

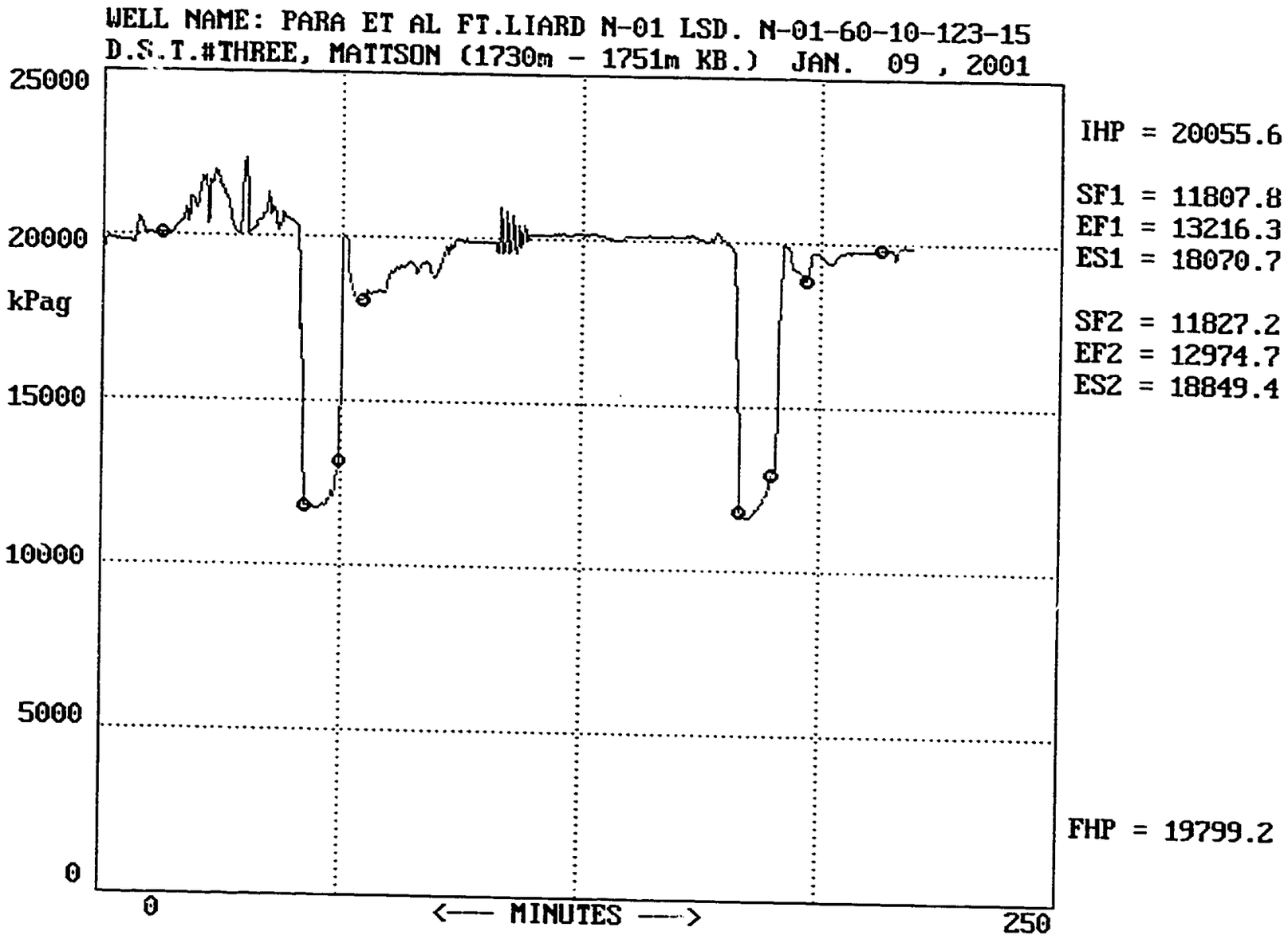
General Remarks:

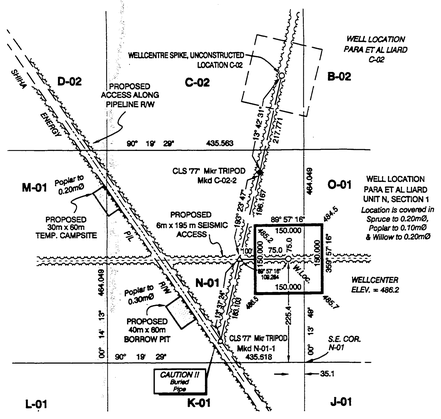
WELL LIC. # 1902
TEST TIMES
TOOL OPEN FOR PREFLOW AT 17:35 JAN. 09 , 2001

PREFLOW: Strong air blow immediately gas to surface in 2 minutes strong 7metre flare increasing. Mud started to slowly drop in annulas at 8 minutes and tool was shut-in how ever shut-in is not valid due to a packer seal leak.
Packers were deflated and moved down 1 metre 1731-1752metres reset packers open tool and with the same results as first time.
MAXIMUM GAS FLOWRATE WAS 457,679m^3/day 5000kPa througha 22.23mm surface choke pressure was still building and there was mud slugging to surface.

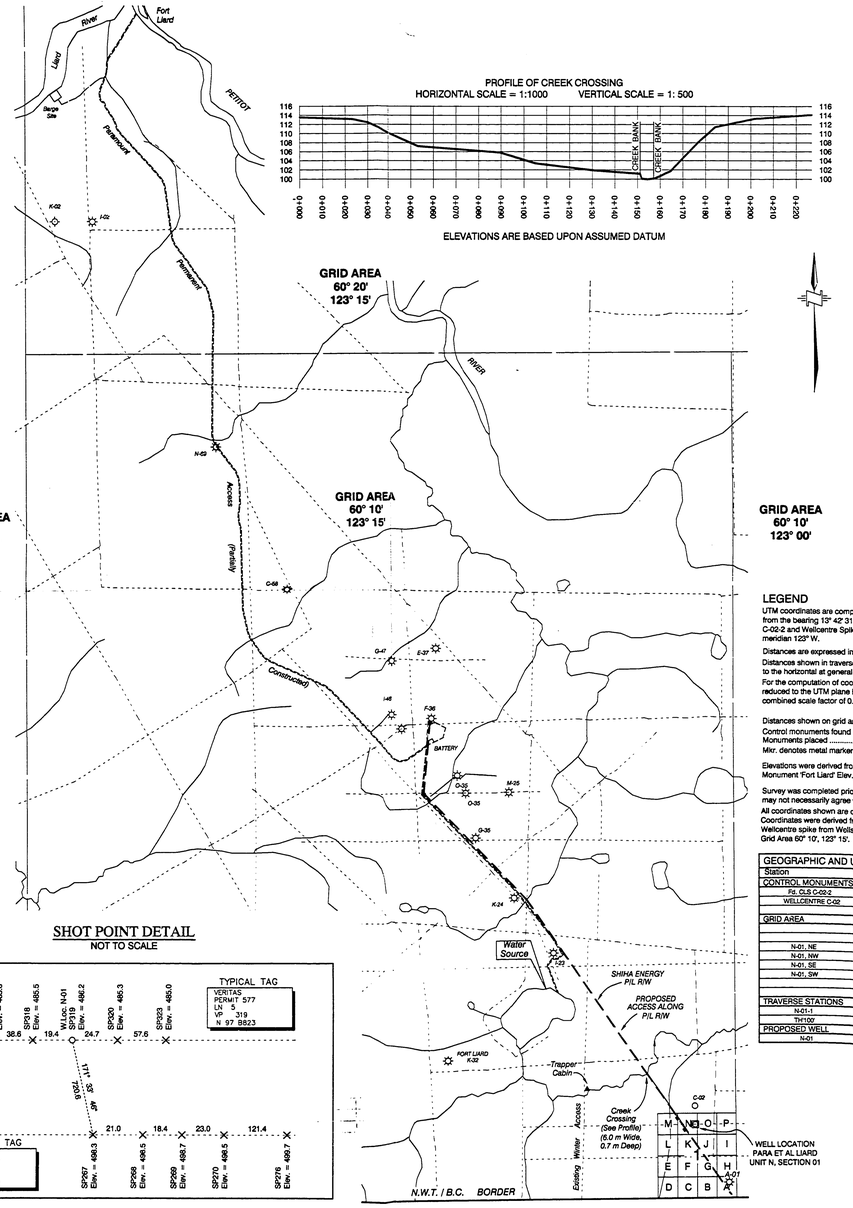
Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 100 METRES


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#THREE, MATTSON (1730m - 1751m KB.) JAN. 09 , 2001
25000
20000
kPag
15000
10000
5000
0
0
<— MINUTES —>
250
IHP = 20055.6
SF1 = 11807.8
EF1 = 13216.3
ES1 = 18070.7
SF2 = 11827.2
EF2 = 12974.7
ES2 = 18849.4
FHP = 19799.2

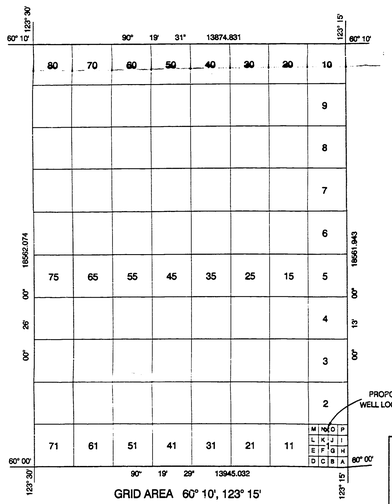


DETAIL
UNIT N, SECTION 01
SCALE 1:5,000



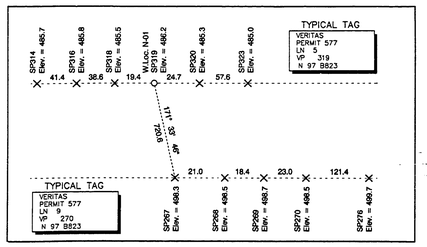
GRID AREA
60° 10'
123° 30'

GRID AREA
60° 10'
123° 00'



GRID AREA 60° 10', 123° 15'
SCALE 1:100,000

SHOT POINT DETAIL
NOT TO SCALE



PROFILE OF CREEK CROSSING
HORIZONTAL SCALE = 1:1000 VERTICAL SCALE = 1: 500

ELEVATIONS ARE BASED UPON ASSUMED DATUM

PLAN AND FIELD NOTES
OF SURVEY OF
PROPOSED EXPLORATORY WELL
PARA ET AL LIARD
IN UNIT N, SECTION 01
GRID AREA 60° 10', 123° 15'
NORTHWEST TERRITORIES
CANADA OIL AND GAS LAND REGULATIONS

SCALE 1:50,000
0m 500m 1000m 2000m 3000m 4000m 5000m

SURVEYED FOR
PARAMOUNT RESOURCES LTD.

BY: W.V. JOHNSON, CLS
JUNE, 2000

LEGEND

UTM coordinates are computed for Zone 10 Bearings were derived from the bearing 13° 42' 31" computed between Fd. CLS 77, Post C-02-2 and Wellcentre Spike for Wellsite C-02, and are referred to meridian 123° W.

Distances are expressed in metres and decimals thereof.
Distances shown in traverse are measured distances reduced to the horizontal at general ground level..
For the computation of coordinates measured distances have been reduced to the UTM plane by multiplying them by an average combined scale factor of 0.9995227.

Distances shown on grid area subdivisions are UTM plane.
Control monuments found ..... ●
Monuments placed ..... ○
Mkr. denotes metal marker post 2.0m long placed 0.30m away from Post.

Elevations were derived from Geodetic Survey of Canada Monument 'Fort Liard' Elev. = 216.299 m.

Survey was completed prior to drilling; therefore well as drilled may not necessarily agree with proposed location.
All coordinates shown are on 1927 North American Datum.
Coordinates were derived from Fd. CLS Post C-02-2 and Fd. Wellcentre spike from Wellsite Plan Para et al Liard Unit C, Sec. 02, Grid Area 60° 10', 123° 15'.

Certified Correct and completed on the 14th day of June, 2000.
W.V. Johnson Canada Lands Surveyor
Date: June 14, 2000

W.V. Johnson
Comm. No. 1393

GEOGRAPHIC AND UTM COORDINATES, (1927 NAD)				
Station	Latitude	Longitude(W)	Northings	Eastings
CONTROL MONUMENTS				
Fd. CLS C-02-2	60° 00' 58.489"	123° 16' 02.686"	6653044.322	485091.105
WELLCENTRE C-02	60° 01' 06.338"	123° 15' 59.417"	6653255.782	485142.689
GRID AREA				
N-01, NE	60° 01' 00.051"	123° 15' 56.250"	6653062.092	485190.968
N-01, NW	60° 01' 00.072"	123° 16' 24.374"	6653064.561	484755.412
N-01, SE	60° 00' 45.060"	123° 15' 56.252"	6652628.047	485189.103
N-01, SW	60° 00' 45.073"	123° 16' 24.375"	6652630.517	484753.493
TRAVERSE STATIONS				
N-01-1	60° 00' 46.587"	123° 16' 08.355"	6652675.717	485002.570
TH100	60° 00' 52.322"	123° 16' 05.569"	6652853.584	485045.677
PROPOSED WELL				
N-01	60° 00' 52.338"	123° 15' 58.517"	6652853.670	485154.589

PARAMOUNT RESOURCES LTD

WITNESS
July 15, 2000
DATE

AREAS REQUIRED:

WELLSITE:	150m x 150m =	2.25 ha.
TEMP. CAMPSITE:	30m x 60m =	0.18 ha.
BORROW PIT:	40m x 60m =	0.24 ha.
ACCESS:	6m x 195m =	0.12 ha.
TOTAL:		2.79 ha.

REV No.	DESCRIPTION	DATE

McElhanney
McELHANNEY ASSOCIATES
PROFESSIONAL LAND SURVEYORS
10012 - 97th Ave.
Fort St. John, British Columbia
Phone (250) 787-0394, Fax (250) 787-0310

DATE 00/07/13 JOB No. 3111-08117WS AW DWG

24X



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **T4-5160** DST#: **4**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5160 DST#: 4
Test Date: 01/09/2001 2000hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Contact: WILBERT CALLIHOO

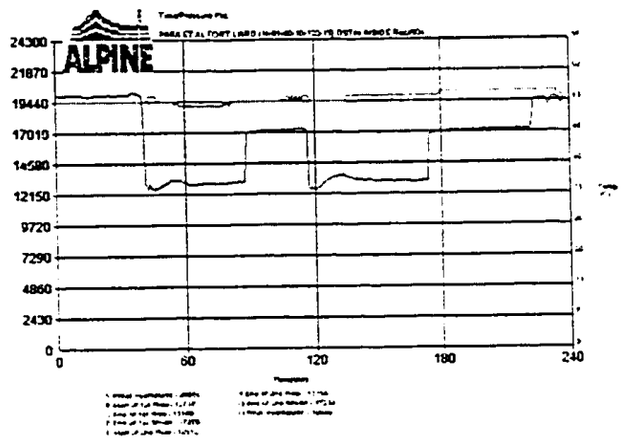
General Information:

Test Type:	INFLATE RESET	Tester:	BILL HOLLINGSHEAD
Interval:	1717m -1738m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	55.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1705.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20005.4
B Start of 1st Flow	0.00	12737.0
C End of 1st Flow	45.36	13148.5
D End of 1st Shutin	27.18	17278.0
E Start of 2nd Flow	0.00	12512.3
F End of 2nd Flow	55.44	13153.9
G End of 2nd Shutin	47.40	17230.3
Q Final Hydrostatic	0.00	19648.5



Test Run Information:

Start Time:	2000hrs
Reached Test Depth:	2140hrs
Pull Out Time:	40hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 45 - 25 - 60 - 50
TOOL OPEN FOR PREFLOW AT 21:40 JAN. 09 , 2001

PREFLOW: Strong gas blow immediately and steady throughout. See gas recovery page of this report for gas flowrates.

FINAL FLOW: Strong gas blow immediately and throughout drilling mud mist to surface throughout. See gas recovery page of this report for gas flowrates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 30 METRES

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5160 DST#: 4
Test Date: 01/09/2001 2000hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 1

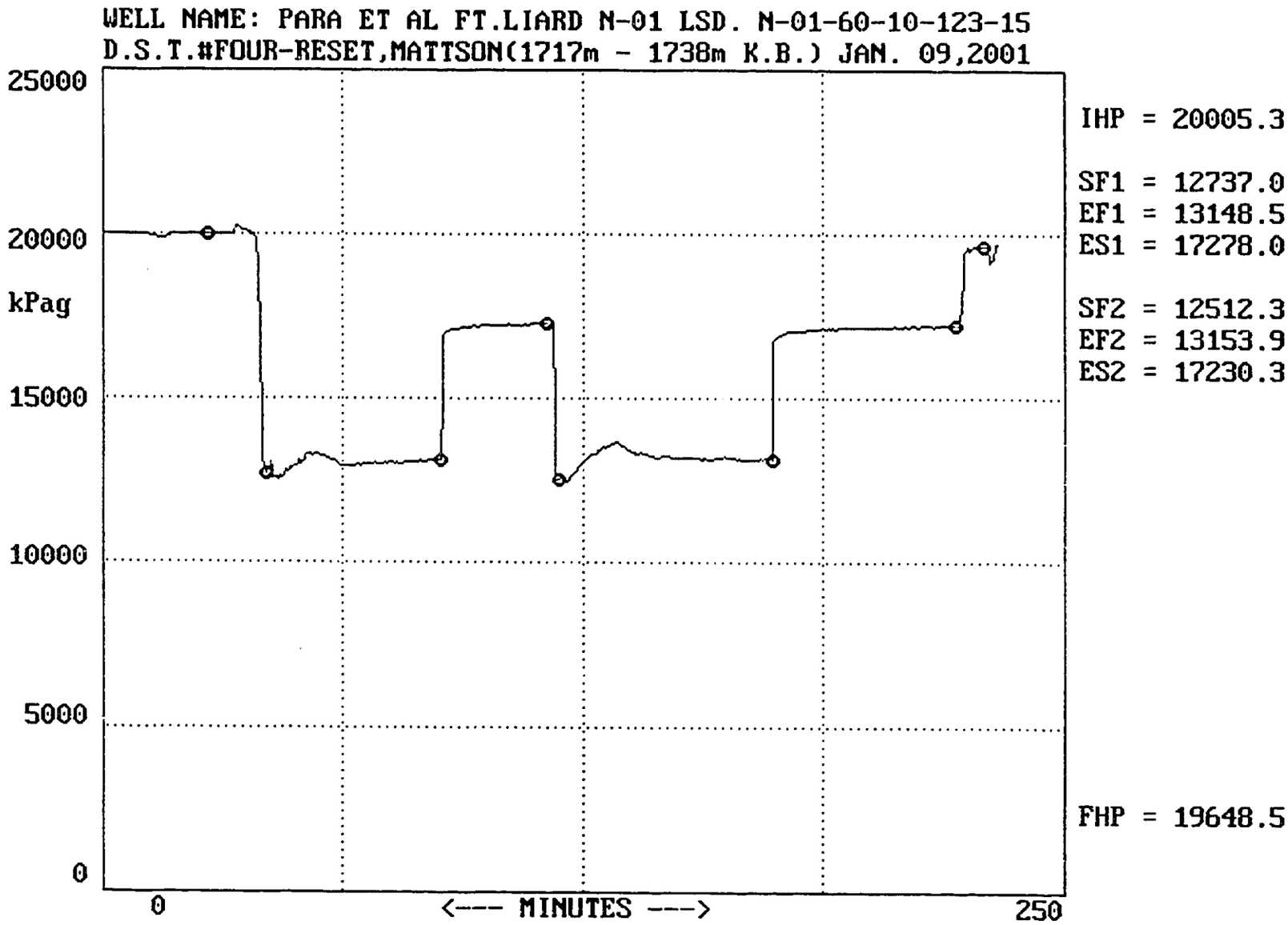
Gas Recovery Measured With: Willis Choke

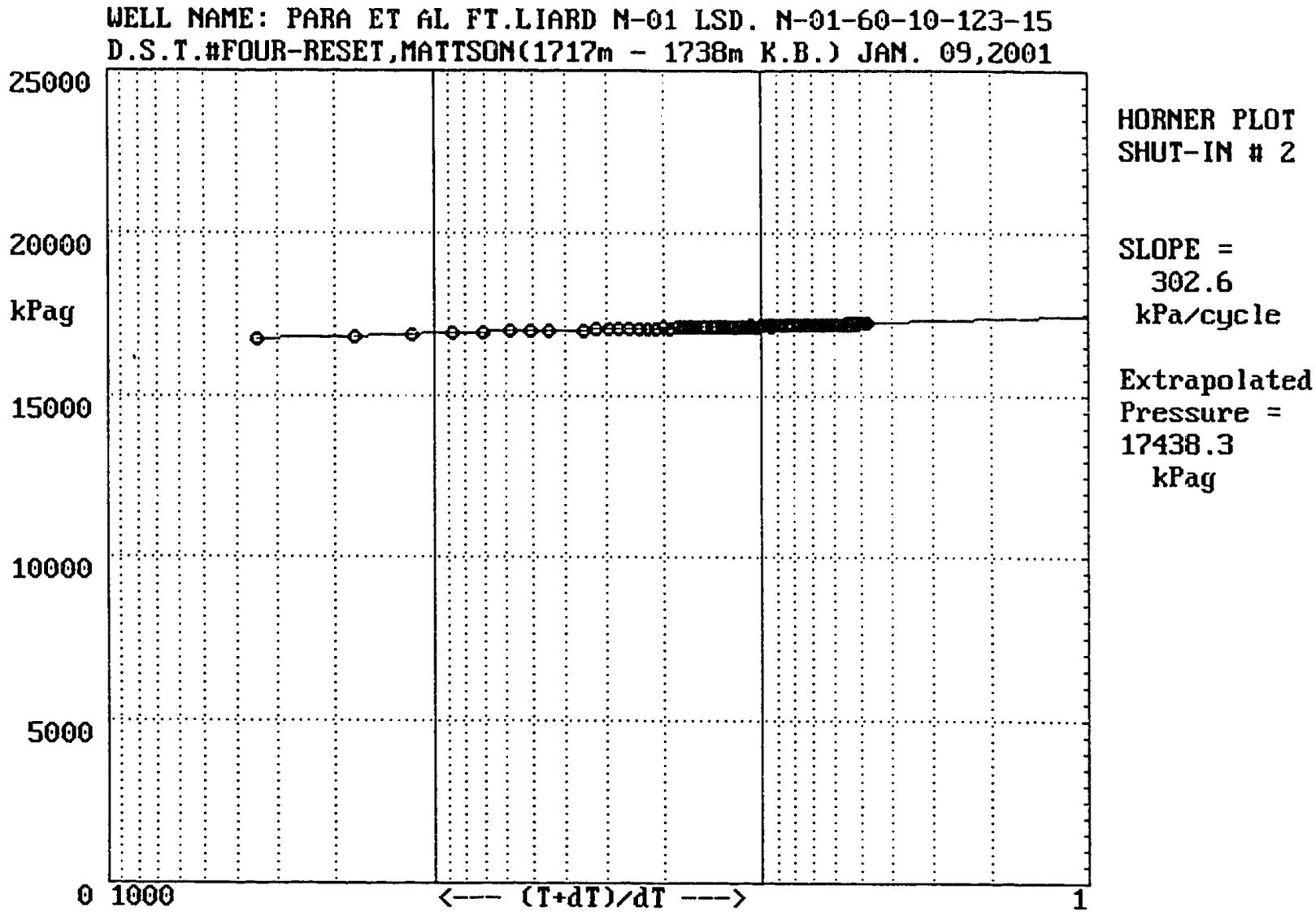
Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
20	22.23	4700	431260.00
25	22.23	4800	439926.00
35	22.23	4800	439926.00
40	22.23	4900	449212.00
45	22.23	4900	449212.00

Gas Measurements for Flow # 2

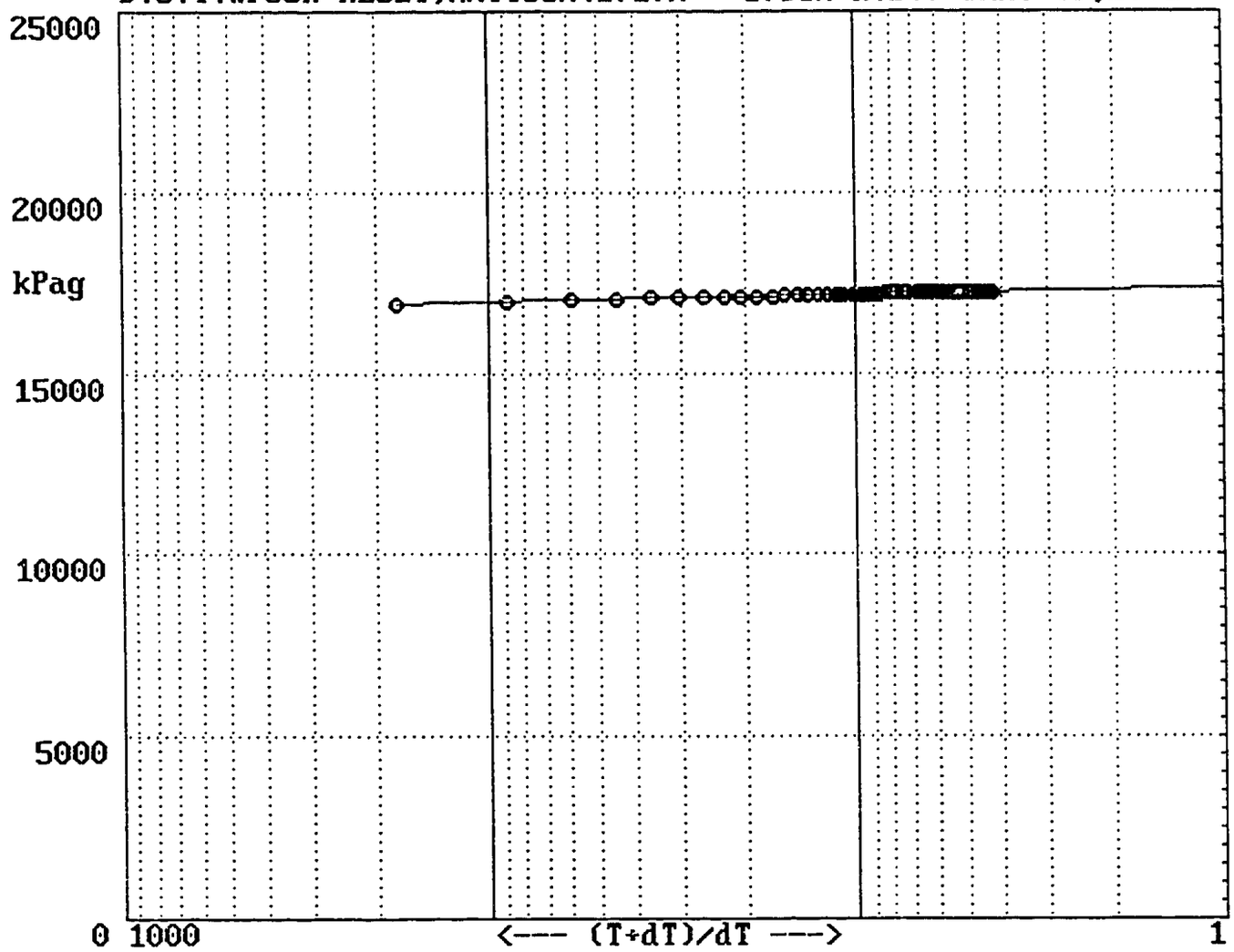
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	4800	439926.00
20	22.23	4800	439926.00
30	22.23	4900	449212.00
40	22.23	4900	449212.00
50	22.23	5000	457679.00
60	22.23	5000	457679.00


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#FOUR-RESET,MATTSON(1717m - 1738m K.B.) JAN. 09,2001
25000
20000
kPag
15000
10000
5000
0
0
<--- MINUTES --->
250
IHP = 20005.3
SF1 = 12737.0
EF1 = 13148.5
ES1 = 17278.0
SF2 = 12512.3
EF2 = 13153.9
ES2 = 17230.3
FHP = 19648.5


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#FOUR-RESET,MATTSON(1717m - 1738m K.B.) JAN. 09,2001
25000
20000
kPag
15000
10000
5000
0
1000
<--- (T+dT)/dT --->
1
HORNER PLOT
SHUT-IN # 2
SLOPE =
302.6
kPa/cycle
Extrapolated
Pressure =
17438.3
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#FOUR-RESET,MATTSON(1717m - 1738m K.B.) JAN. 09,2001



HORNER PLOT
SHUT-IN # 1

SLOPE =
156.5
kPa/cycle

Extrapolated
Pressure =
17370.3
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **D2-9625** DST#: **4**

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9625 DST#: 4

Test Date: 01/09/2001 2100hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

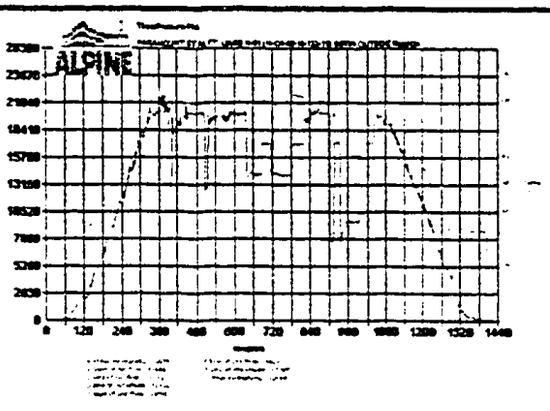
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DANNY ROSS
Interval:	1717.00m - 1738.00m	Truck No.:	UNIT 677
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.00 C

Electronic Recorder Information:

OUTSIDE	OUTSIDE
Recorder #: 124	Recorder #: 126
Range: 70000 kPag	Range: 70000 kPag
Depth: 1719.00 m	Depth: 1719.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	19974.8
B Start of 1st Flow	0.00	13884.4
C End of 1st Flow	42.00	14382.4
D End of 1st Shutin	28.00	17135.6
E Start of 2nd Flow	0.00	13750.2
F End of 2nd Flow	54.00	14053.4
G End of 2nd Shutin	48.00	17197.0
Q Final Hydrostatic	0.00	19583.6



Test Run Information:

Start Time:	2100hrs
Reached Test Depth:	2140hrs
Pull Out Time:	30hrs
Tool Out Of Hole:	
Weight set on Packers:	8000.00daN
Weight to free Packers:	8000.00daN
Initial String Weight:	45000.00daN
Unseated String Weight:	45000.00daN

Tool Chased Dist:	0.00m	Water Loss:	6.20cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1160.00kg/m³	VIS:	78.00S/L
Amount of fill:	0.00m	Filter Cake:	1.60mm
Amt of cushion:	0.00	Pump Time:	30min
Type of cushion:	N/A	Reversed Out:	NO

General Remarks:

PREFLOW:STRONG GAS BLOW IMMEDIATELY STEADY THROUGHOUT.REFER TO CHARTS FOR RATES.
FINAL FLOW:STRONG GAS BLOW THROUHOUT. MISTING MUD STEADY THROUGHOUT.REFER TO CHARTS FOR RATES.

Recovery Description:

TWO GAS BOMBS CAUGHTPF=0000272 & MF=0002
SAMPLER SAME AS DST#3
RESET TO DST#5

Gas Bomb: 2 Sampler: 1
Fluid Sample: 0 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 2100hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

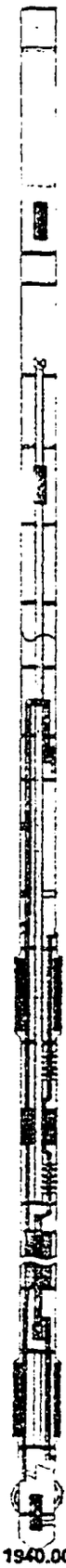
Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	66
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1720.57m
Total Drill Pipe Above K.B.:	3.57m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1269.36	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC#1902



	Item	Length
	P.O. Sub	0.31
	BIT SUB	1.04
	DOUBLE PIN	0.31
	P.O. Sub	0.31
	FLUID REC#62	1.50
	HMV Stroke	2.18
	Sampler	1.10
	INSIDE REC#70	1.50
	Telemetry Tool	5.80
	Jars	1.82
	Safety Joint	0.65
	Pump	2.04
49.93m	Screen	1.18
	Valve	2.23
	Deflate	0.85
	Packer	1.78
	T.C.	0.72
	K-3 Carrier	2.20
	Bypass Hanger	0.42
	C.O. Sub	0.30
	DRILL COLLAR	9.24
	C.O. Sub	0.30
	Blank Spacing	6.08
	Bypass Receiver	0.78
	T.C.	0.72
	Packer	1.78
	Extension Sub	0.71
	Drag Spring	2.08

24.60m

Depth: 1717m

20.76m

Depth: 1738m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 2100hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
20	22.23	4700	431260.00
25	22.23	4800	439926.00
35	22.23	4800	439926.00
40	22.23	4900	449212.00
45	22.23	4900	449212.00

Gas Measurements for Flow # 2

Gas Recovery Measured With: 1

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
10	22.23	4800	439926.00
20	22.23	4800	439926.00
30	22.23	4900	449212.00
40	22.23	4900	449212.00
50	22.23	5000	457679.00
60	22.23	5000	457679.00



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/10/2001**

Job Ticket #: **T4-5161** DST#: **5**

Real Time Testing Report

Company. PARAMOUNT RESOURCES LTD. Job Ticket #: 74-5161 DST#: 5
Test Date: 01/10/2001 100hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

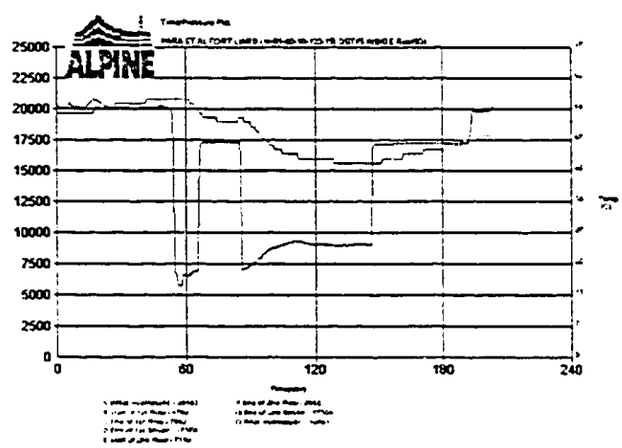
General Information:

Test Type:	INFLATE RESET	Tester:	BILL HOLLINGSHEAD
Interval:	1738m -1759m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	56.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: 934 Depth: 1726.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20143.1
B Start of 1st Flow	0.00	6740.3
C End of 1st Flow	10.14	7042.3
D End of 1st Shutin	18.12	17374.3
E Start of 2nd Flow	0.00	7118.9
F End of 2nd Flow	60.06	9050.4
G End of 2nd Shutin	45.42	17306.3
Q Final Hydrostatic	0.00	19881.0



Test Run Information:

Start Time:	100hrs
Reached Test Depth:	205hrs
Pull Out Time:	420hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

WELL LIC. # 1902
TEST TIMES 10 - 20 - 60 - 45
TOOL OPEN FOR PREFLOW AT 02:05 JAN. 10 , 2001

PREFLOW: Strong gas blow immediately and steady throughout.

FINAL FLOW: Strong gas blow immediately and steady throughout. Mist of drilling mud at surface throughout. See gas recovery page of this report for gas flowrates.

Recovery Description:

TOTAL ESTIMATED FLUID RECOVERY OF 55 METRES

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5161 DST#: 5
Test Date: 01/10/2001 100hrs

Well Name: PARA ET AL FORT LIARD

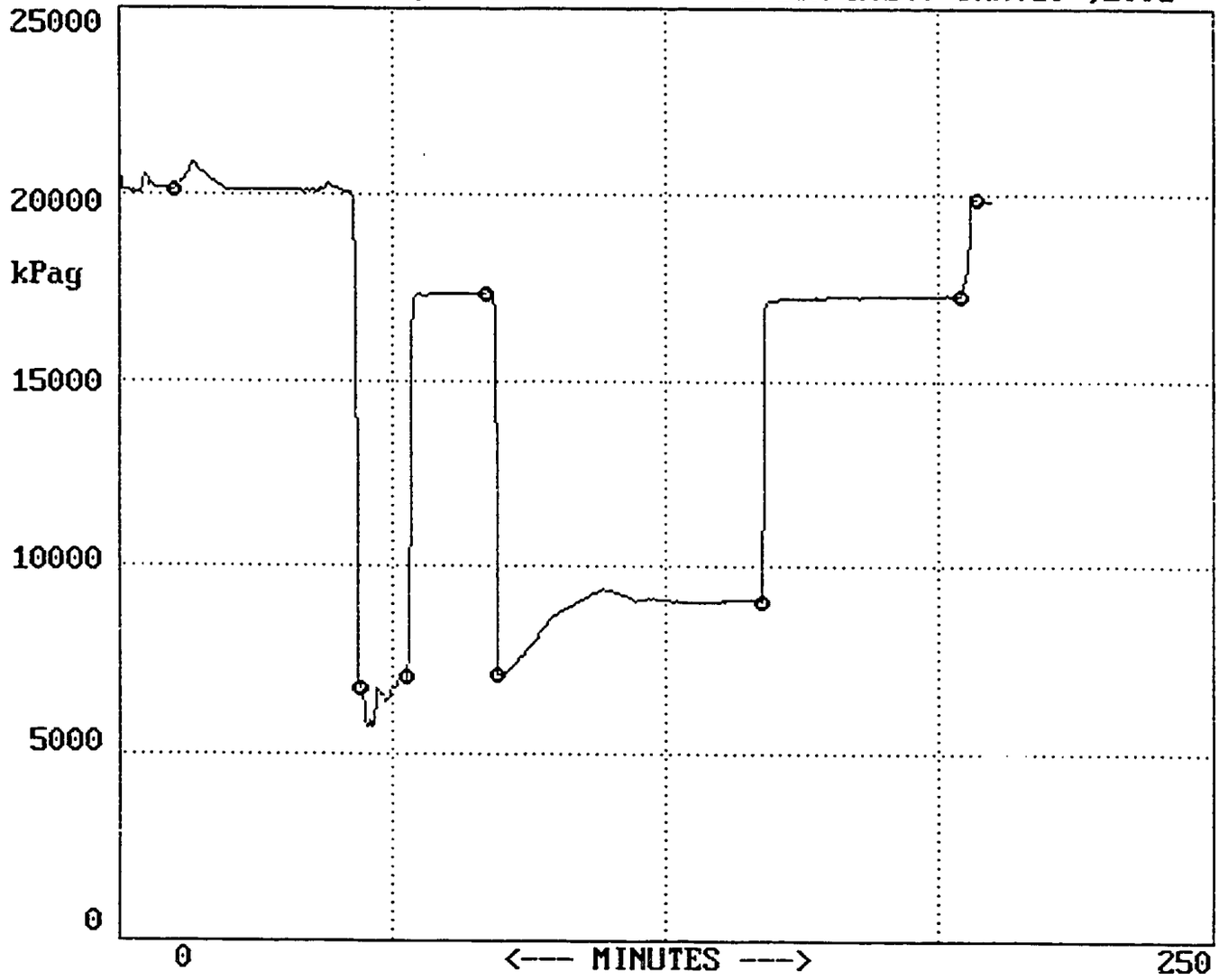
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	19.50	2200	138232.00
20	19.50	3400	210320.00
30	22.23	3500	323545.00
40	22.23	3500	323545.00
50	22.23	3500	323545.00
60	22.23	3500	323545.00

WELL NAME:PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST# FIVE-RESET , MATTSON(1738m - 1759m K.B.) JAN.10 ,2001



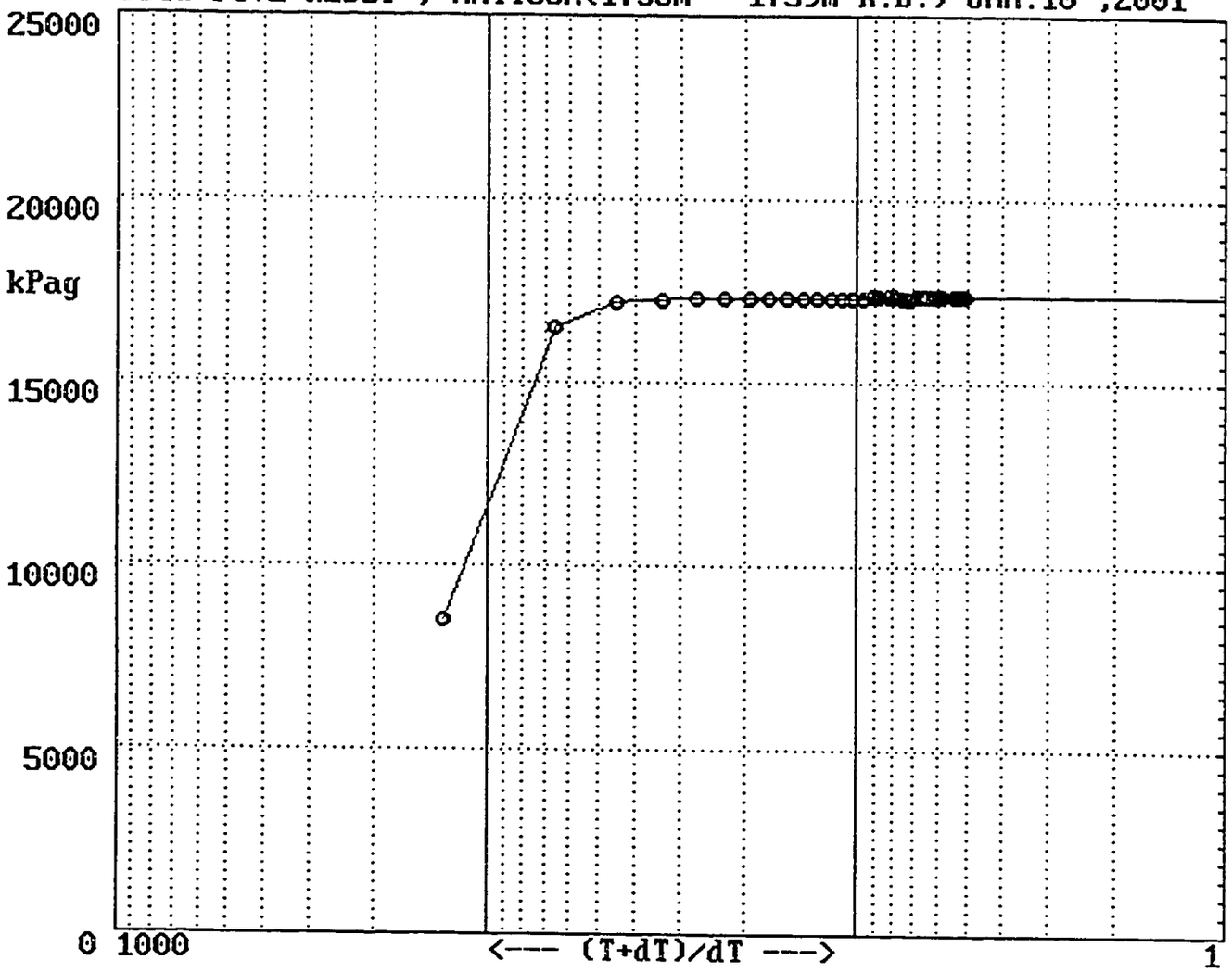
IHP = 20143.1

SF1 = 6740.3
EF1 = 7042.3
ES1 = 17374.3

SF2 = 7118.9
EF2 = 9050.4
ES2 = 17306.3

FHP = 19881.3

WELL NAME:PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST# FIVE-RESET , MATTSON(1738m - 1759m K.B.) JAN.10 ,2001

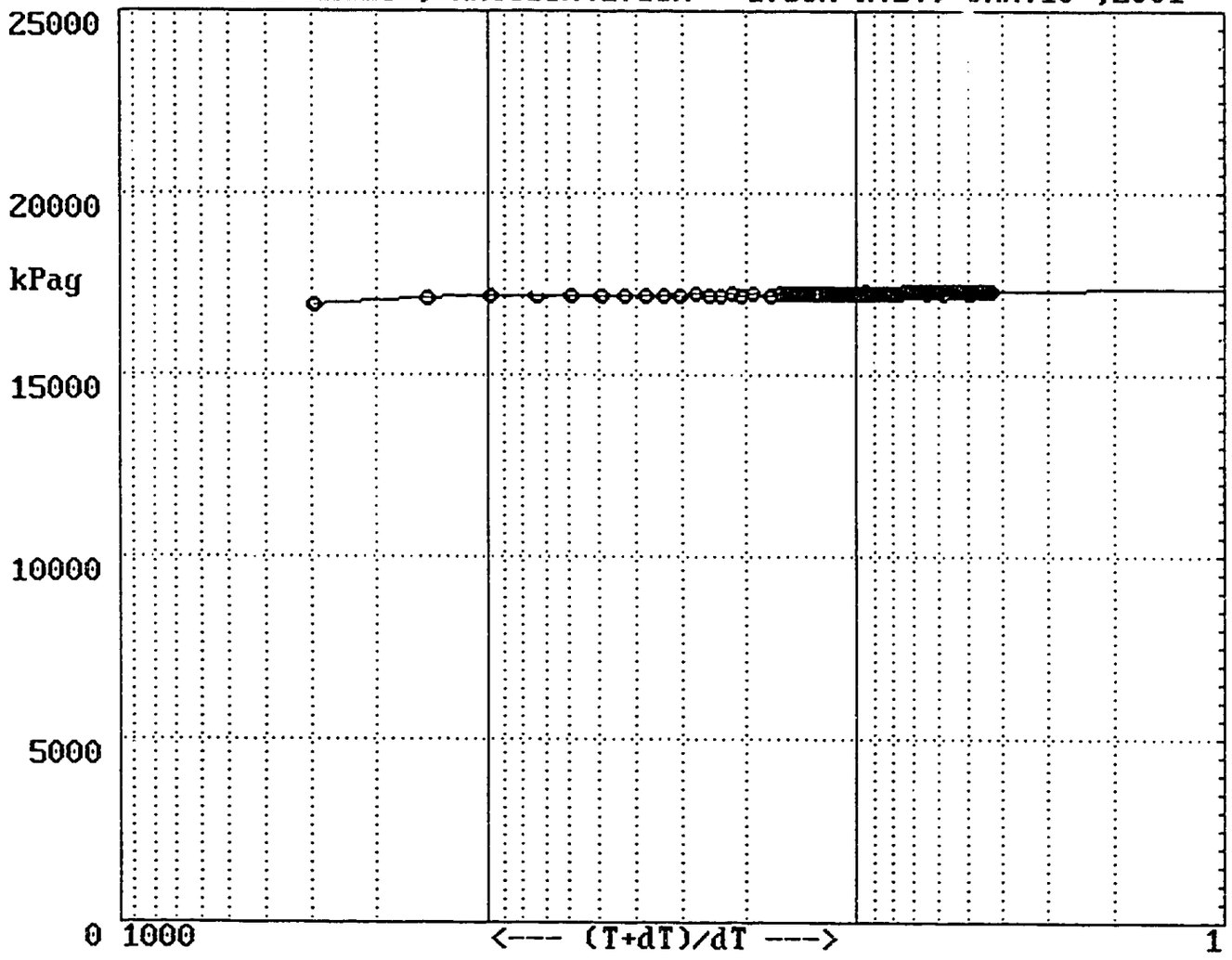


HORNER PLOT
SHUT-IN # 1

SLOPE =
52.3
kPa/cycle

Extrapolated
Pressure =
17403.7
kPag

WELL NAME:PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST# FIVE-RESET , MATTSON(1738m - 1759m K.B.) JAN.10 ,2001



HORNER PLOT
SHUT-IN # 2

SLOPE =
85.9
kPa/cycle

Extrapolated
Pressure =
17355.9
kPag

*p275Y



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/10/2001**

Job Ticket #: **D2-8751** DST#: **5**

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8751 DST#: 5

Test Date: 01/10/2001 30hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

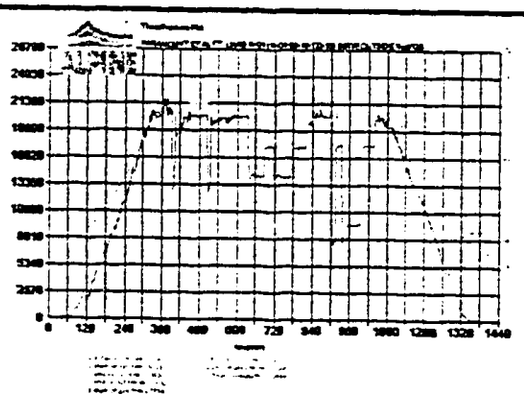
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DANNY ROSS
Interval:	1738.00m - 1759.00m	Truck No.:	UNIT 677
Formation:	1ST MID. BELLY RIVER	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.00 C

Electronic Recorder Information:

OUTSIDE		Recorder #:	
Recorder #:	126		
Range:	70000 kPag	Range:	kPag
Depth:	1740.00 m	Depth:	m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20172.7
B Start of 1st Flow	0.00	8205.0
C End of 1st Flow	10.00	8060.3
D End of 1st Shutin	19.00	17303.4
E Start of 2nd Flow	0.00	7708.4
F End of 2nd Flow	57.00	9512.8
G End of 2nd Shutin	46.00	17206.2
Q Final Hydrostatic	0.00	19863.7



Test Run Information:

Start Time:	30hrs
Reached Test Depth:	200hrs
Pull Out Time:	430hrs
Tool Out Of Hole:	1000hrs
Weight set on Packers:	8000.00daN
Weight to free Packers:	8000.00daN
Initial String Weight:	44000.00daN
Unseated String Weight:	45000.00daN

Tool Chased Dist:	0.00m	Water Loss:	6.20cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1160.00kg/m³	VIS:	76.00S/L
Amount of fill:	0.00m	Filter Cake:	1.60mm
Amt of cushion:	0.00	Pump Time:	30min
Type of cushion:	N/A	Reversed Out:	NO

General Remarks:

PREFLOW:STRONG GAS BLOW IMMEDIATELY. STEADY 6m FLARE AT PIT.
FINAL FLOW:STRONG GAS BLOW IMMEDIATELY.MISTING DRILLING FLUID THROUGHOUT.
REFER TO CHARTS FOR RATES.

Recovery Description:

SAMPLER RUN IS SAME AS DST#3
TWO GAS BOMBS CAUGHT PF=0005 & MF=0006
TOTAL FLUID RECOVERY WAS 55m CONSISTING OF 25m CONDINSATE AND 30m FRESH WATER.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 4 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 30hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	67
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1739.92m
Total Drill Pipe Above K.B.:	1.92m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1288.71	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Chcke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

WELL LIC#1902
FLUID RECORDER SEEMS TO HAVE BAD DATA. WHEN RECOVERED RECORDER HAD COME FREE FROM HANGER AND DROPED. BATTERY PACK WAS SMASHED AND IMPACT MAY HAVE CAUSED MALFUNCTION. VERY HIGH FLOW RATES IS MOST LIKELY THE CAUSE FOR THE RECORDER TO HAVE COME FREE FROM HANGER.



Item	Length	
P.O. Sub	0.31	
BIT SUB	1.04	
DOUBLE PIN	0.31	
P.O. Sub	0.31	
FLUID REC#83	1.50	
HMV Stroke	2.18	
Sampler	1.10	
INSIDE REC#70	1.50	
Telemetry Tool	5.80	
Jars	1.82	
Safety Joint	0.65	
Pump	2.04	
Screen	1.18	49.93m
Valve	2.23	
Deflate	0.85	
Packer	1.78	Depth: 1738m
T.C.	0.72	
K-3 Carrier	2.20	
Bypass Hanger	0.42	
C.O. Sub	0.30	
DRILL COLLAR	9.24	20.76m
C.O. Sub	0.30	
Blank Spacing	6.08	
Bypass Receiver	0.78	
T.C.	0.72	
Packer	1.78	Depth: 1759m
Extension Sub	0.71	
Drag Spring	2.08	4.57m

Total Depth: 1940.00m

ALPINE

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8751 DST#: 5

Test Date: 01/10/2001 30hrs

Well Name: PARAMOUNT ET AL FT. LIARD

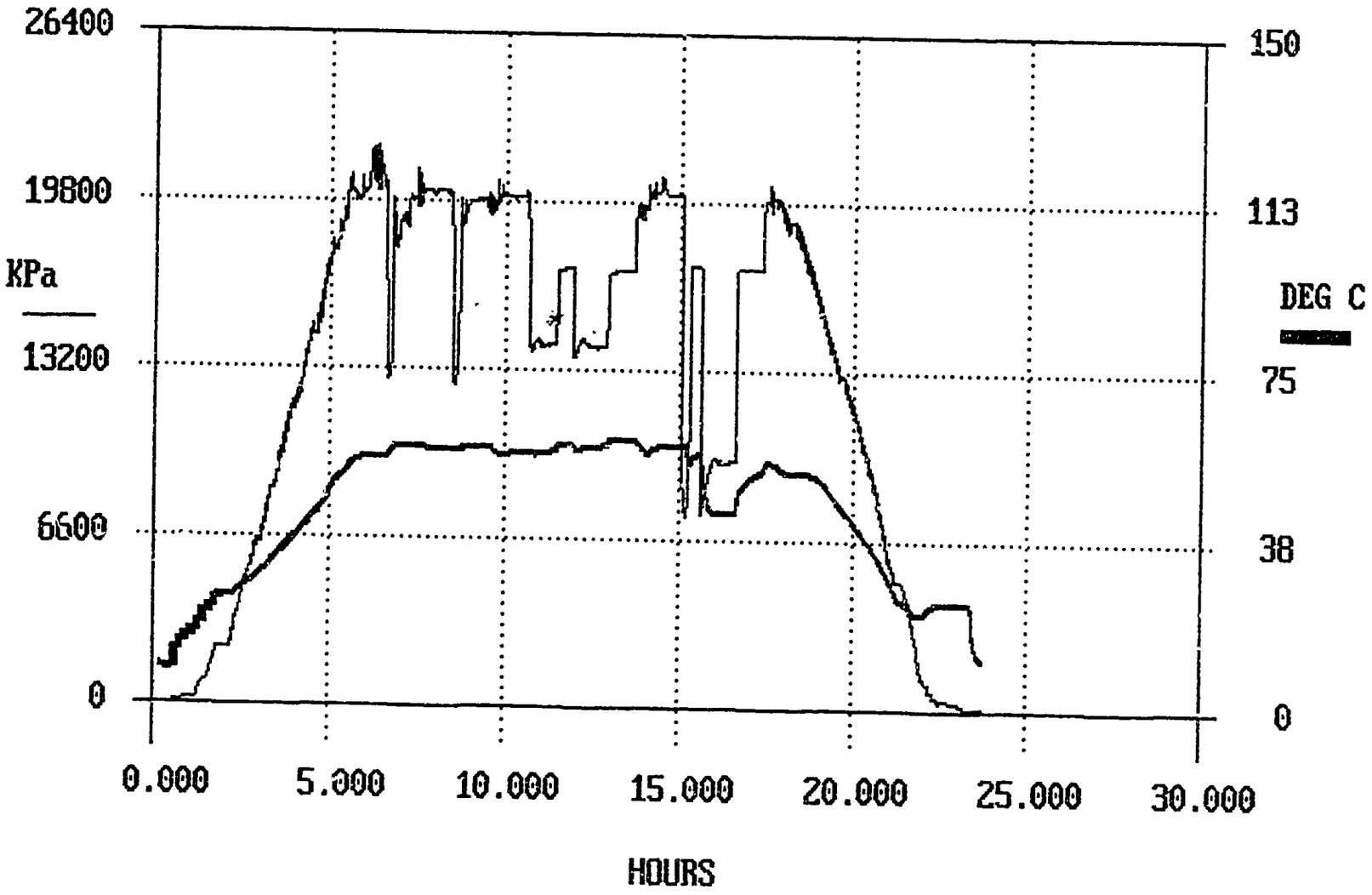
Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Gas Measurements for Flow # 2

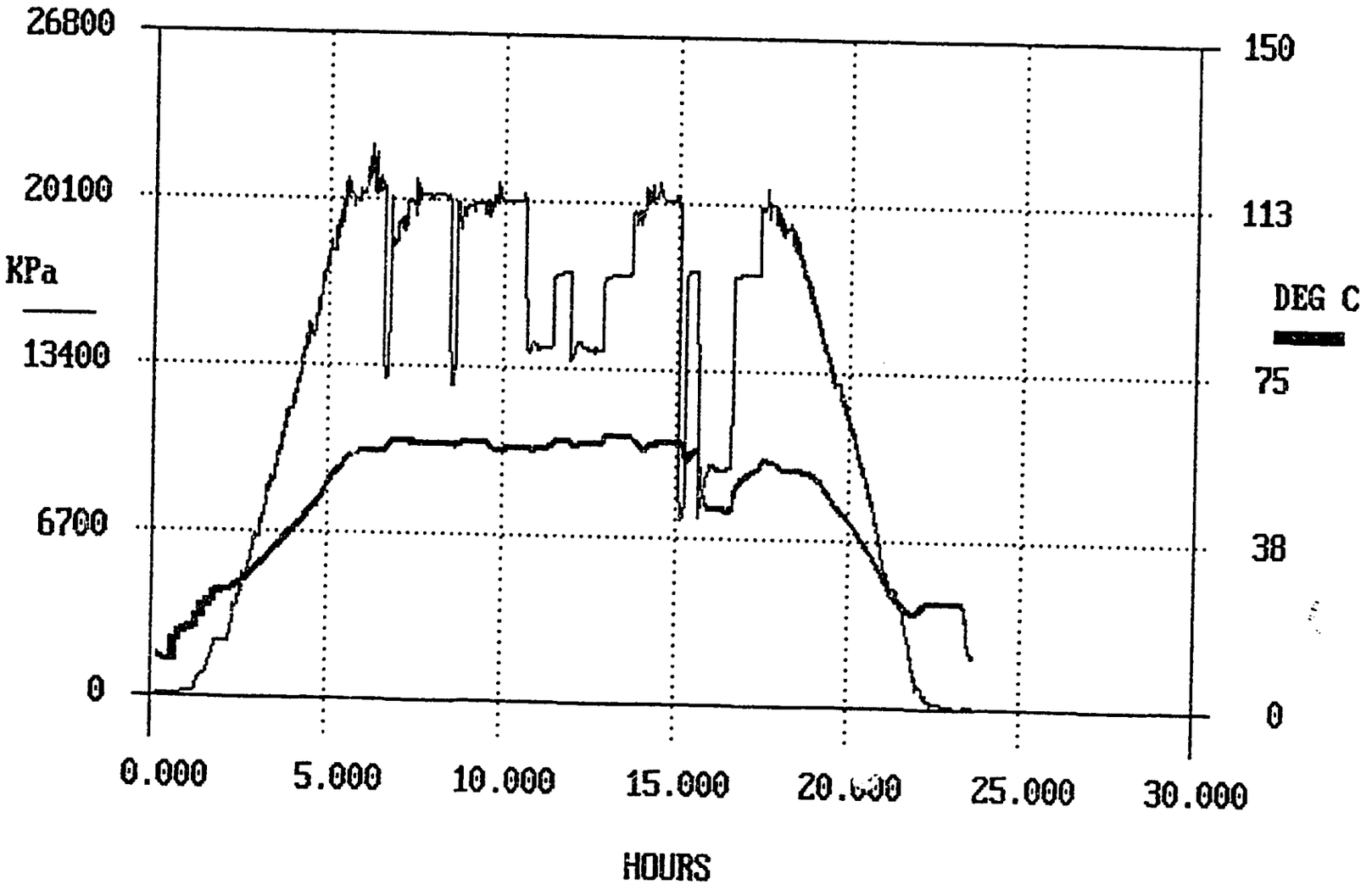
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	19.50	2200	138232.00
20	19.50	3400	210320.00
30	22.23	3500	323545.00
40	22.23	3500	323545.00
50	22.23	3500	323545.00
60	22.23	3500	323545.00

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s/n 124 PARAMOUNT ET AL FT.LIARD N-01 DST#3 TIC#2-9624 REC#124 OUTSIDE

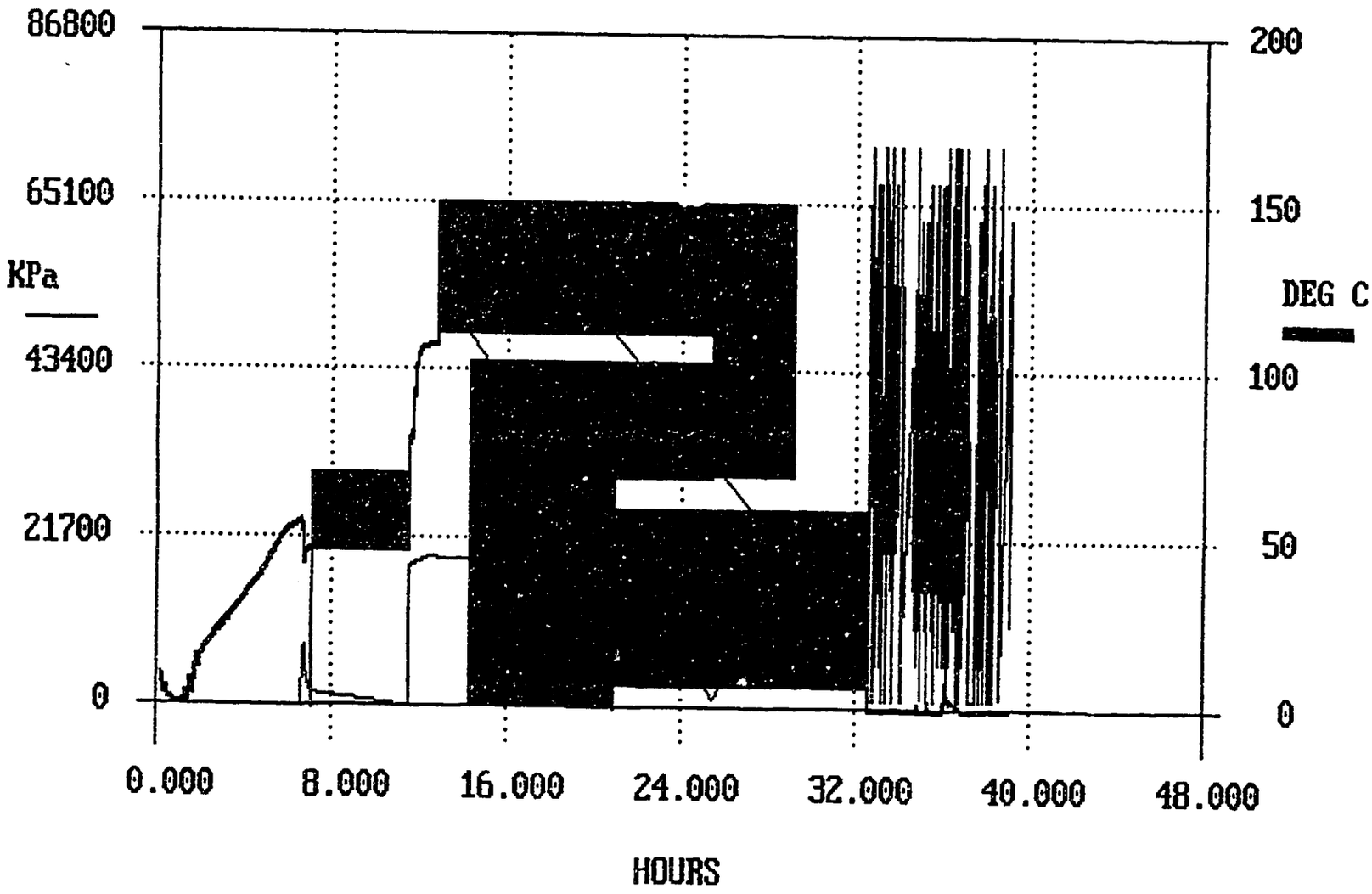


FILE: <C:\ALP_IN\11010211.126>
s/n 126 PARAMOUNT ET AL FT. LIARD N-01 DST#3 TIC#2-9624 REC#126 OUTSIDE



RECORDER CAME LOOSE FROM HANGER AND DROPED.

FILE: <C:\ALP_IN\11010805.063>
s/n 63 PARAMOUNT ET AL FT. LIARD N-01 DST#3 TIC#2-9624 REC#63 FLUID





Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: **01/11/2001**

Job Ticket #: **T4-5262** DST#: **6**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5262 DST#: 6
Test Date: 01/11/2001 700hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

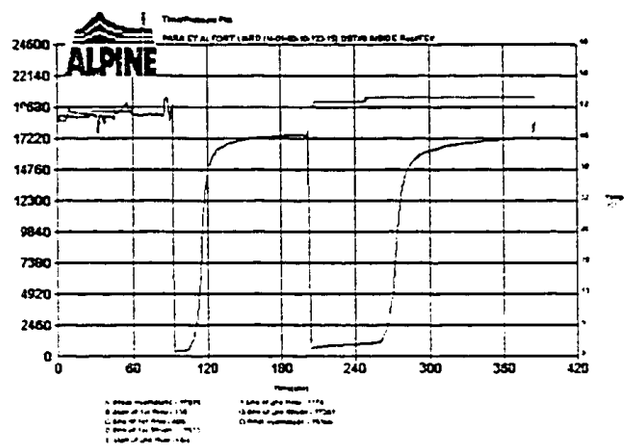
General Information:

Test Type:	INFLATE STRADDLE	Tester:	G.BABYAK
Interval:	1625m -1632m	Truck No.:	UNIT #114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	52.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1613.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18876.2
B Start of 1st Flow	0.00	338.0
C End of 1st Flow	9.00	493.7
D End of 1st Shutin	97.44	17533.0
E Start of 2nd Flow	0.00	667.6
F End of 2nd Flow	55.56	1174.1
G End of 2nd Shutin	121.08	17260.9
Q Final Hydrostatic	0.00	18366.0



Test Run Information:

Start Time:	700hrs
Reached Test Depth:	1100hrs
Pull Out Time:	1730hrs
Tool Out Of Hole:	
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	0.00mm
Pump Time:	0min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

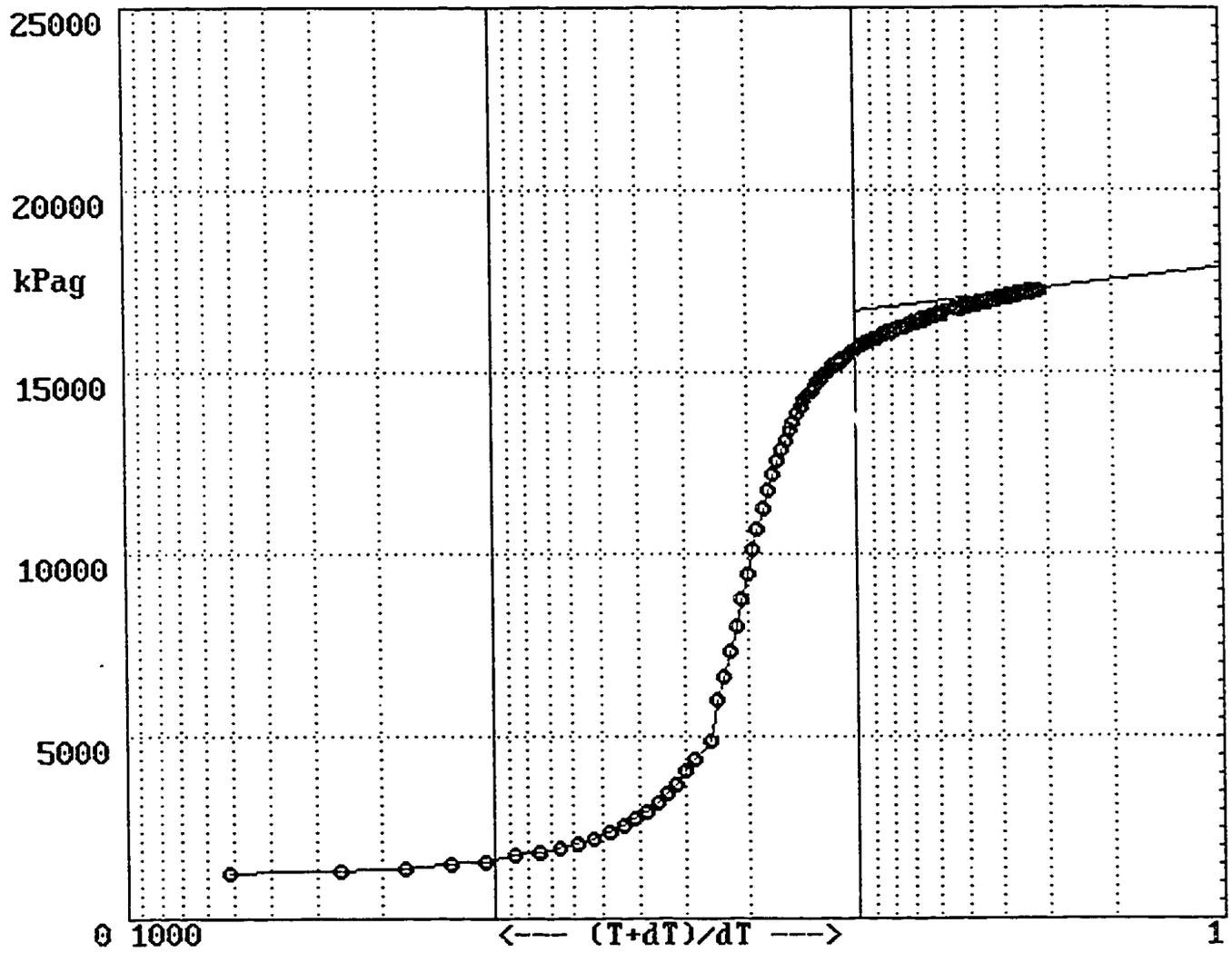
WELL LIC# 1902 TOOL OPEN AT 12:43

PREFLOW:Weak to strong in 30 seconds.No gas to surface.

FINAL FLOW:Weak to strong in 1 minutes.No gas to surface.

Recovery Description:

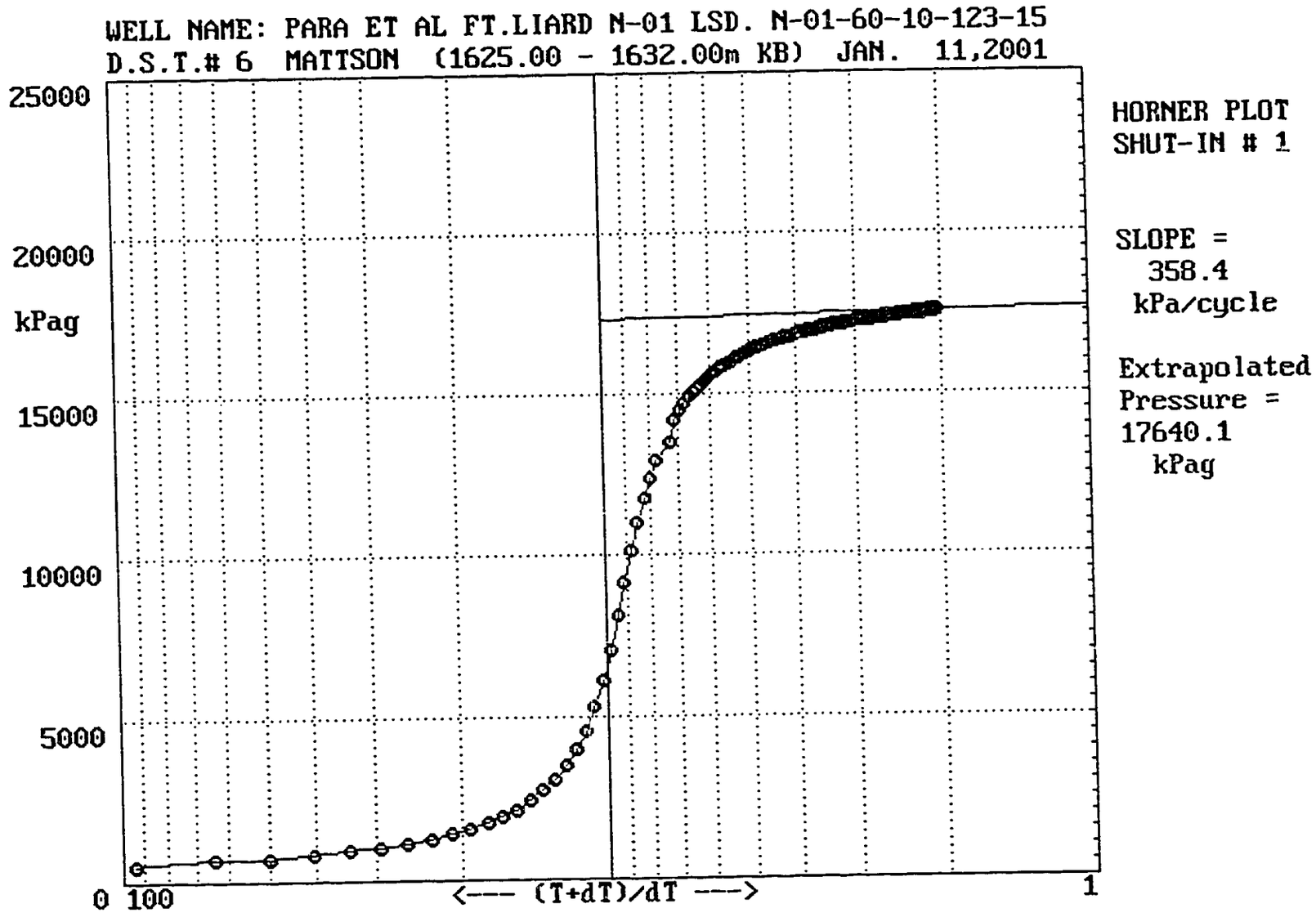
WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.# 6 MATTSON (1625.00 - 1632.00m KB) JAN. 11,2001



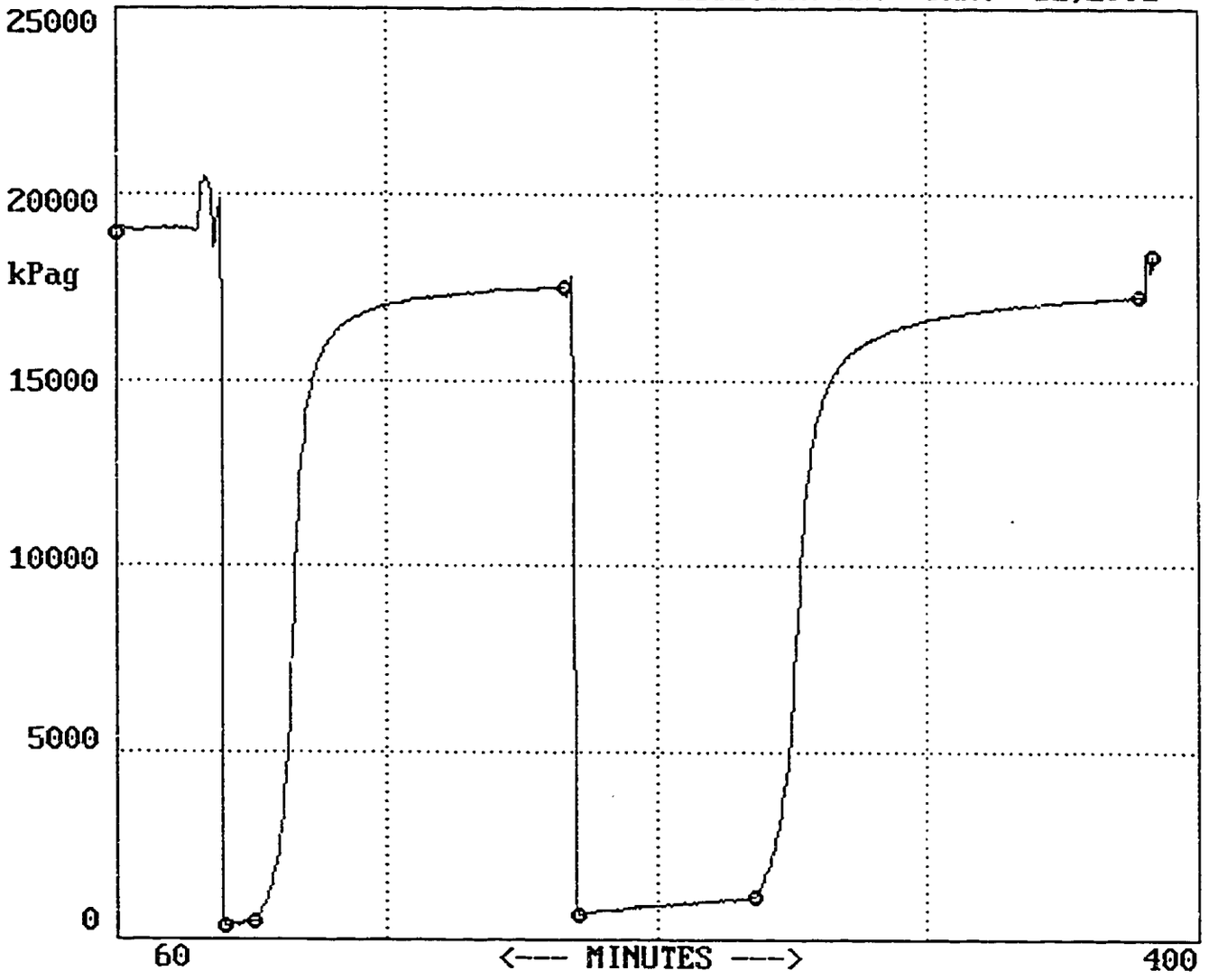
HORNER PLOT
SHUT-IN # 2

SLOPE =
1176.6
kPa/cycle

Extrapolated
Pressure =
17849.7
kPag


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.# 6 MATTSON (1625.00 - 1632.00m KB) JAN. 11,2001
25000
20000
kPag
15000
10000
5000
0
100
<--- (T+dT)/dT --->
1
HORNER PLOT
SHUT-IN # 1
SLOPE =
358.4
kPa/cycle
Extrapolated
Pressure =
17640.1
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.# 6 MATTSON (1625.00 - 1632.00m KB) JAN. 11,2001



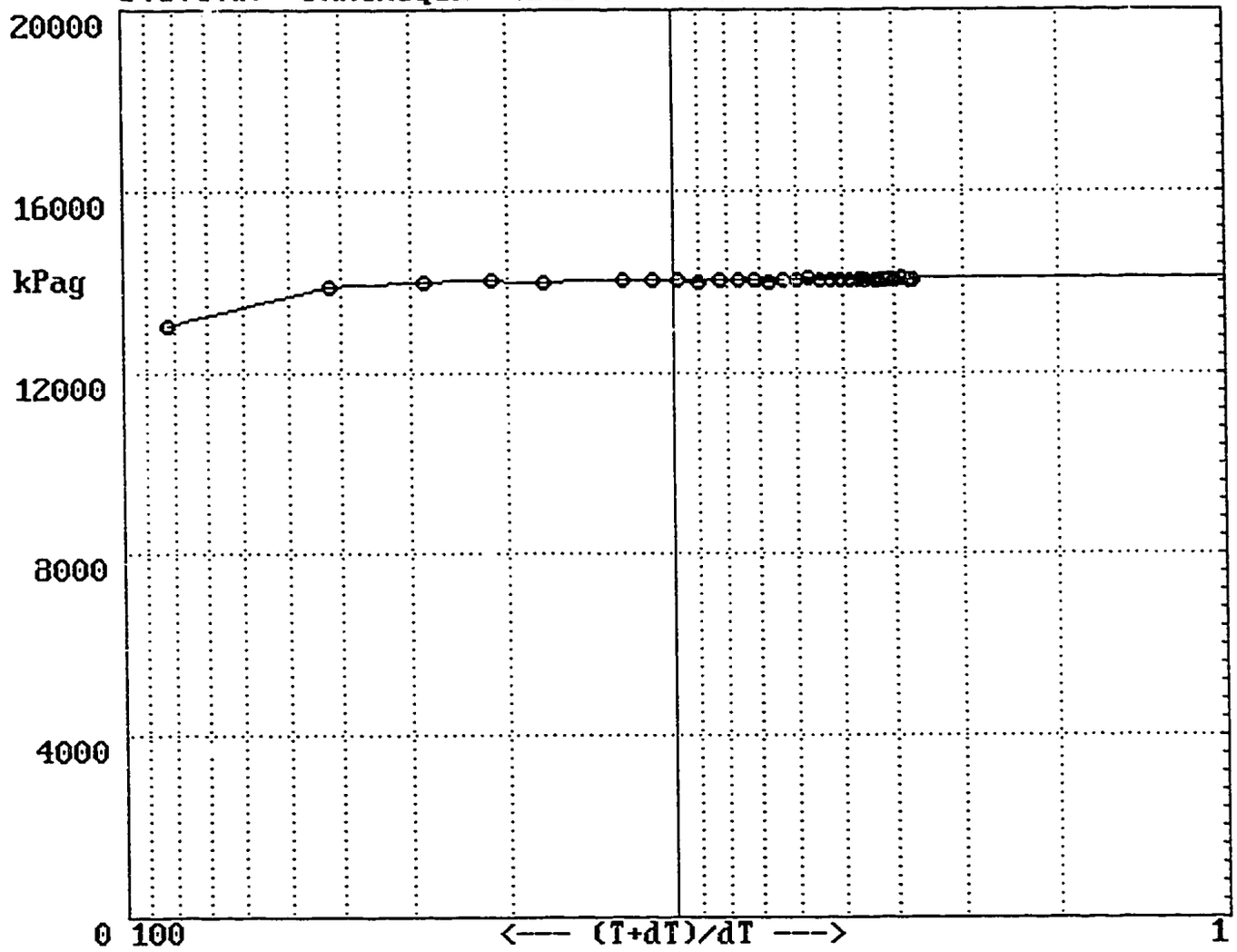
IHP = 18979.7

SF1 = 338.0
EF1 = 493.7
ES1 = 17533.0

SF2 = 667.6
EF2 = 1174.1
ES2 = 17260.9

FHP = 18366.3

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#7 FANTASQUE (1457.5 - 1464.5m KB) JAN. 11,2001



HORNER PLOT
SHUT-IN # 1

SLOPE =
42.1
kPa/cycle

Extrapolated
Pressure =
14077.7
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **D2-8619** DST#: **6**

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

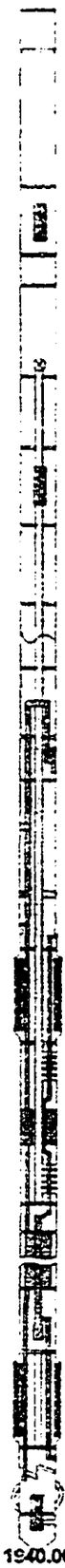
Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	62
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1626.66m
Total Drill Pipe Above K.B.:	1.66m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1178.21	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

License #190[illegible]



21.84m

33.45m

Depth: 1625m

7.04m

Depth: 1632m

4.57m

Total Depth: 1940.00m

Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARAMOUNT ET AL FT. LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

General Information:

Test Type: INFLATE STRADDLE
Interval: 1625.00m - 1632.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

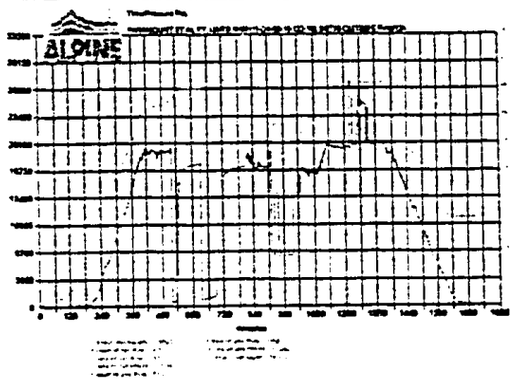
Tester: DUANE WHITE
Truck No.: UNIT 677
Contractor: PRECISION
Rig No.: 379
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 57.00 C

Electronic Recorder Information:

OUTSIDE
Recorder #: 124
Range: 10000 kPag
Depth: 1459.00 m

Recorder #:
Range: kPag
Depth: m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	19092.8
B Start of 1st Flow	0.00	392.4
C End of 1st Flow	10.00	619.2
D End of 1st Shutin	98.00	17514.1
E Start of 2nd Flow	0.00	732.6
F End of 2nd Flow	57.00	1559.0
G End of 2nd Shutin	120.00	17245.6
Q Final Hydrostatic	0.00	18560.4



Test Run Information:

Start Time: 900hrs
Reached Test Depth: 1200hrs
Pull Out Time: 1800hrs
Tool Out Of Hole: 2300hrs

Weight set on Packers: 6000.00daN
Weight to free Packers: 10000.00daN
Initial String Weight: 42000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Water Loss: 6.50cm³
Mud Type: GEL CHEMICAL
Mud Drop: NO
Mud Weight: 1190.00kg/m³
VIS: 95.00S/L
Amount of fill: 0.00m
Filter Cake: 2.00mm
Amt of cushion: 0.00
Pump Time: 30min
Type of cushion: N/A
Reversed Out: NO

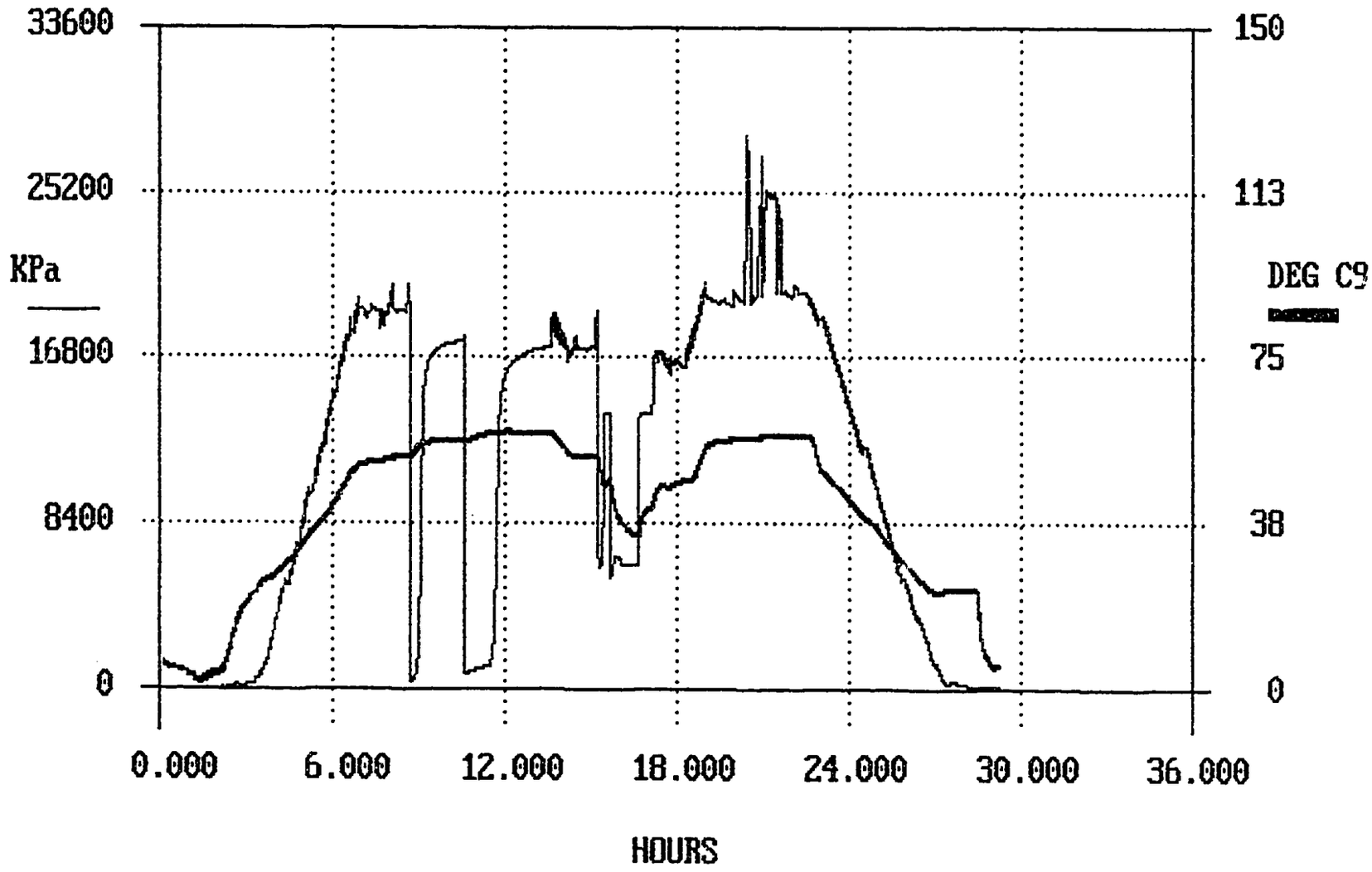
General Remarks:

PREFLOW:Tool open @1247 weak air blow increasing to strong in 30 seconds steady through out
FINAL FLOW:weak increasing to strong in 1 min then steady through out

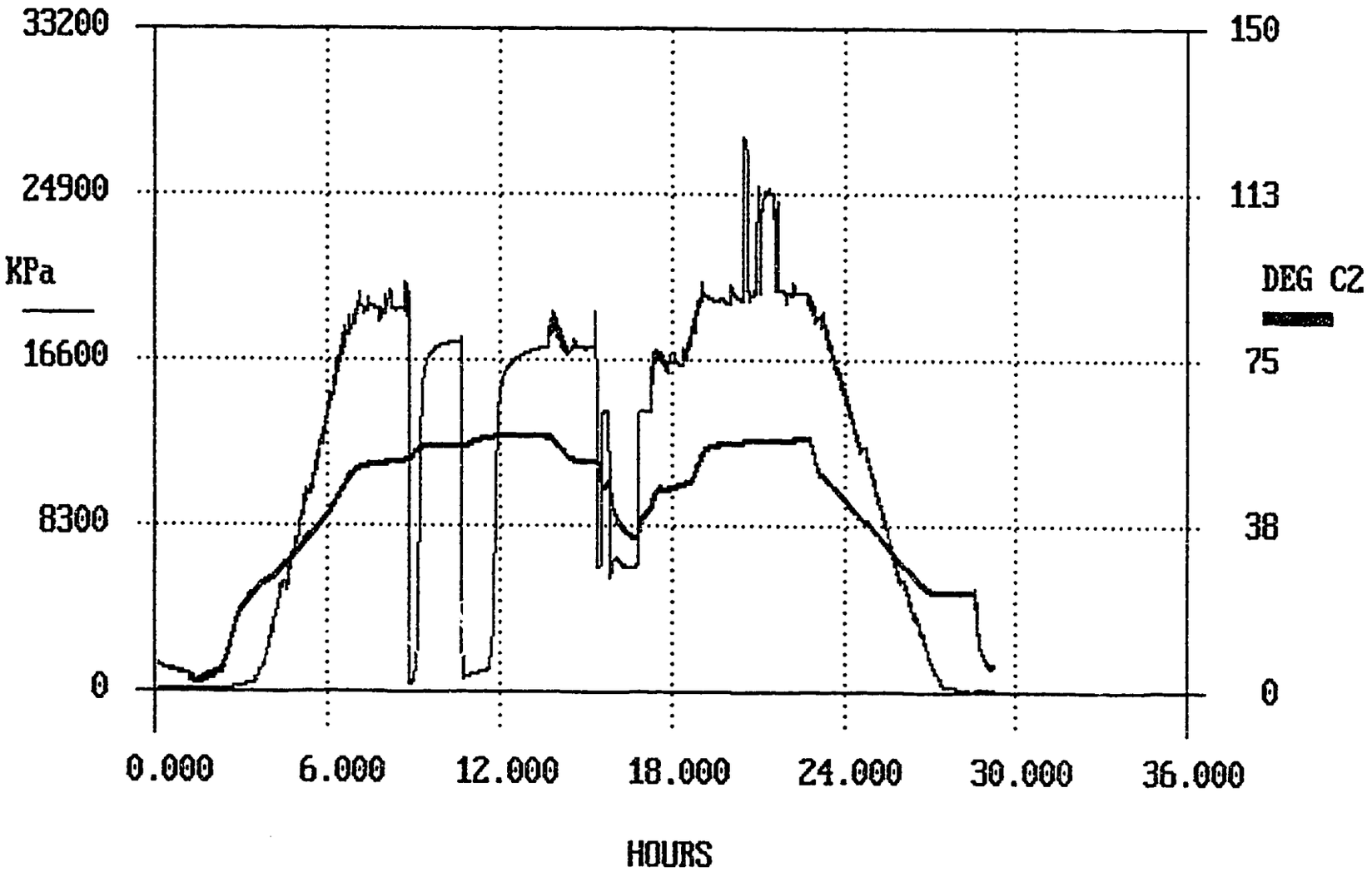
Recovery Description:

Gas Bomb: 0 Sampler: 0
Fluid Sample: 0 Sent to: AGAT GRANDE PRAIRIE

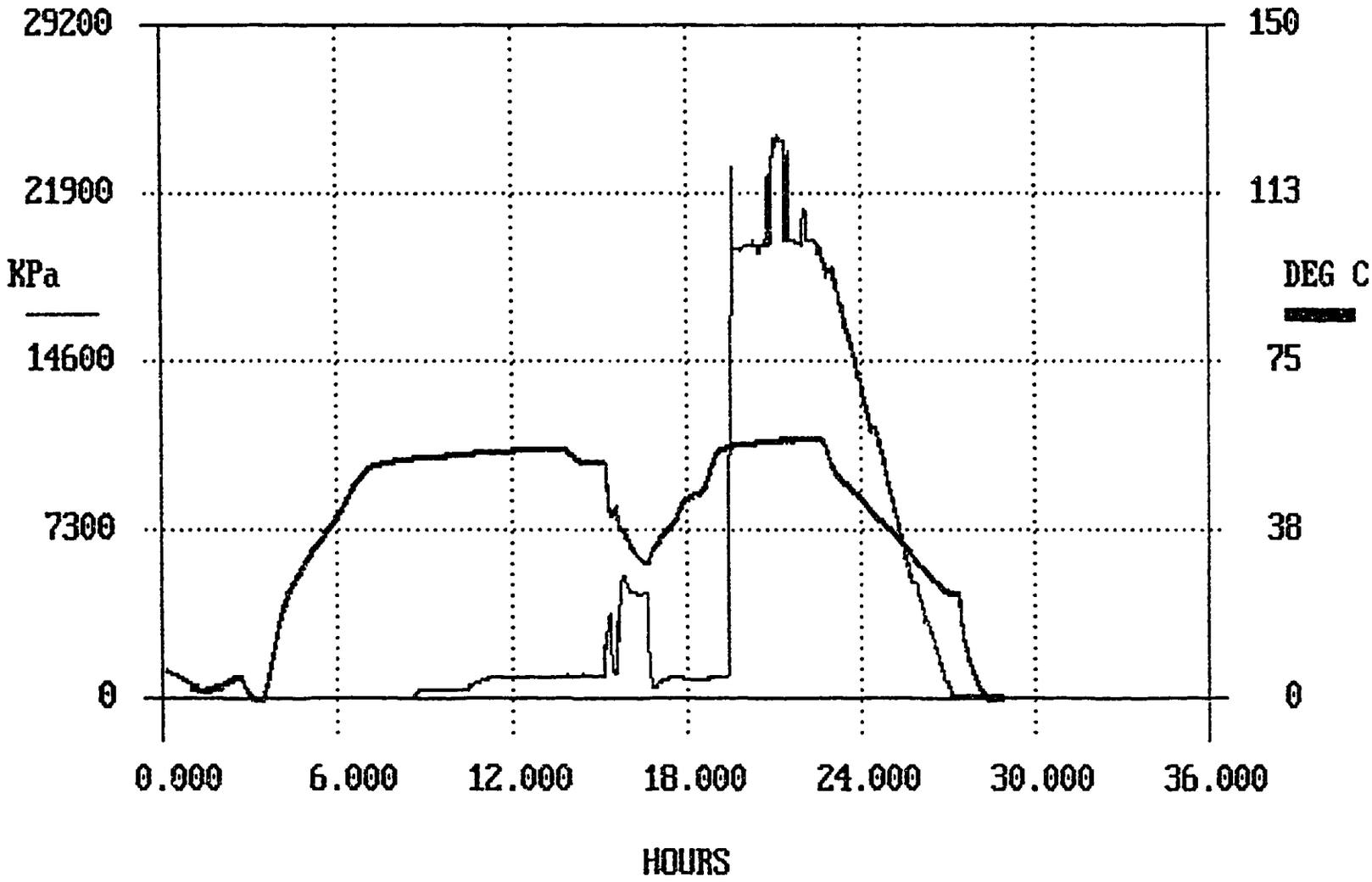
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s/n 124 PARAMOUNT ET AL FT LIARD DST#6 REC#124 T#2-8619 OUTSIDE



FILE: <C:\ALP_IN\11110850.037>
s/n 37 PARAMOUNT ET AL FT LIARD DST#~~1~~ 7 REC#37 T#2-8619 ~~INSIDE~~ OUTSIDE



FILE: <C:\ALP_IN\11110811.126>
s/n 126 PARAMOUNT ET AL FT LIARD DST#6 REC#126 T#2-8619 FLUID





Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **T4-5263** DST#: **7**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5263 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

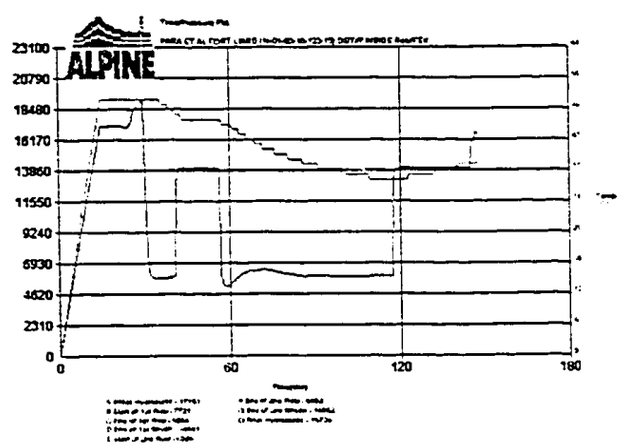
General Information:

Test Type:	INFLATE STRADDLE	Tester:	G.BABYAK
Interval:	1458m -1465m	Truck No.:	UNIT #114
Formation:	FANTASQUE	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	37.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1445.50 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	17183.2
B Start of 1st Flow	0.00	7721.3
C End of 1st Flow	10.02	5983.7
D End of 1st Shutin	15.12	14041.2
E Start of 2nd Flow	0.00	6097.8
F End of 2nd Flow	60.00	6001.8
G End of 2nd Shutin	26.32	14062.4
Q Final Hydrostatic	0.00	16724.2



Test Run Information:

Start Time:	1730hrs
Reached Test Depth:	1830hrs
Pull Out Time:	2100hrs
Tool Out Of Hole:	
Water Loss:	6.00cm³
Mud Drop:	NO
VIS:	95.00S/L
Filter Cake:	0.00mm
Pump Time:	0min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1180.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	

General Remarks:

WELL LIC#13525

PREFLOW:WEAK TO STRONG IN 15 SECONDS. GAS TO IN 1.5 MINUTES.

FINAL FLOW:SEE GAS RATES.

Recovery Description:

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5263 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Contact: WILBERT CALLIHOO

Gas Measurements for Flow # 1

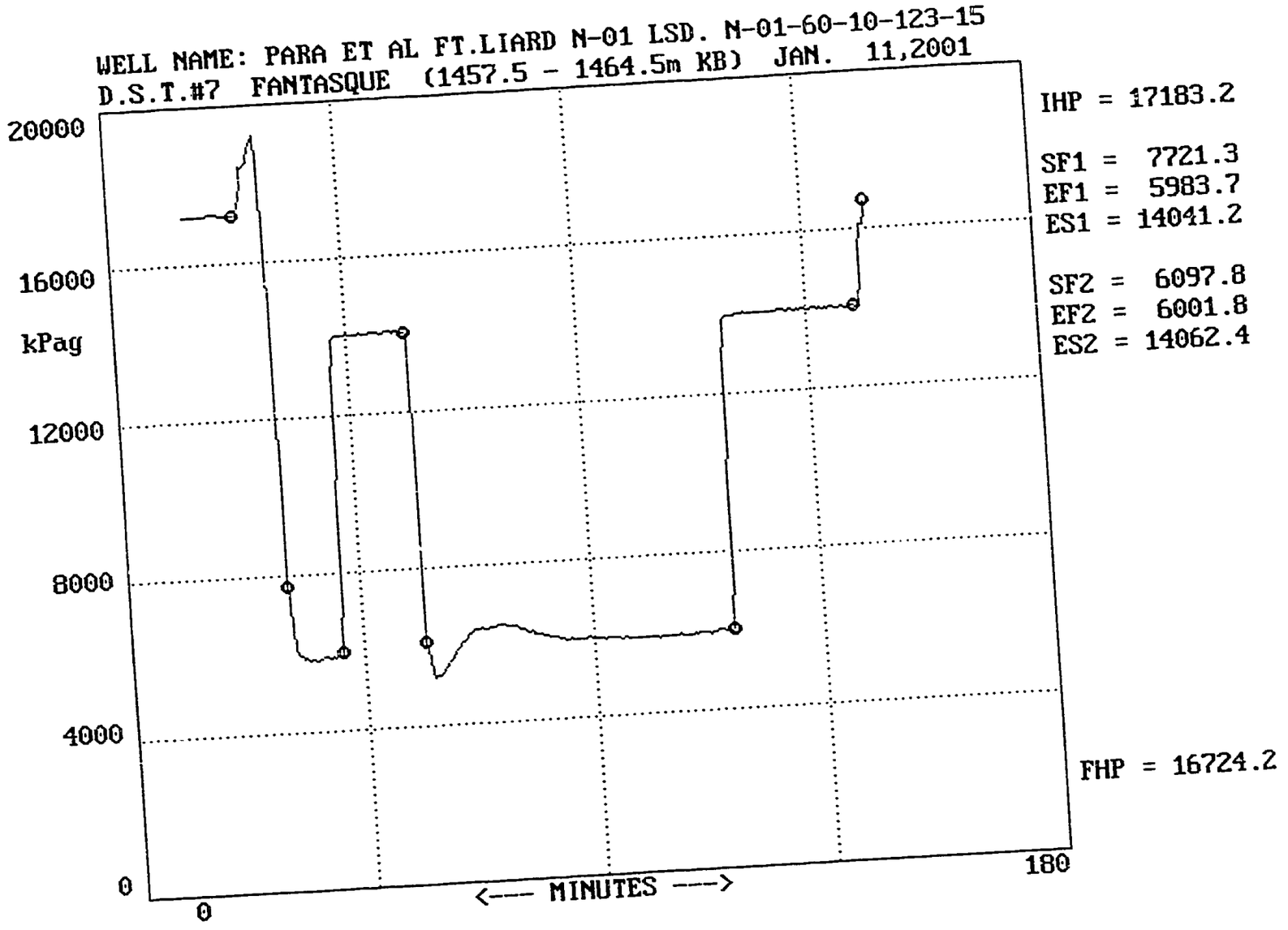
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	1724	163831.00

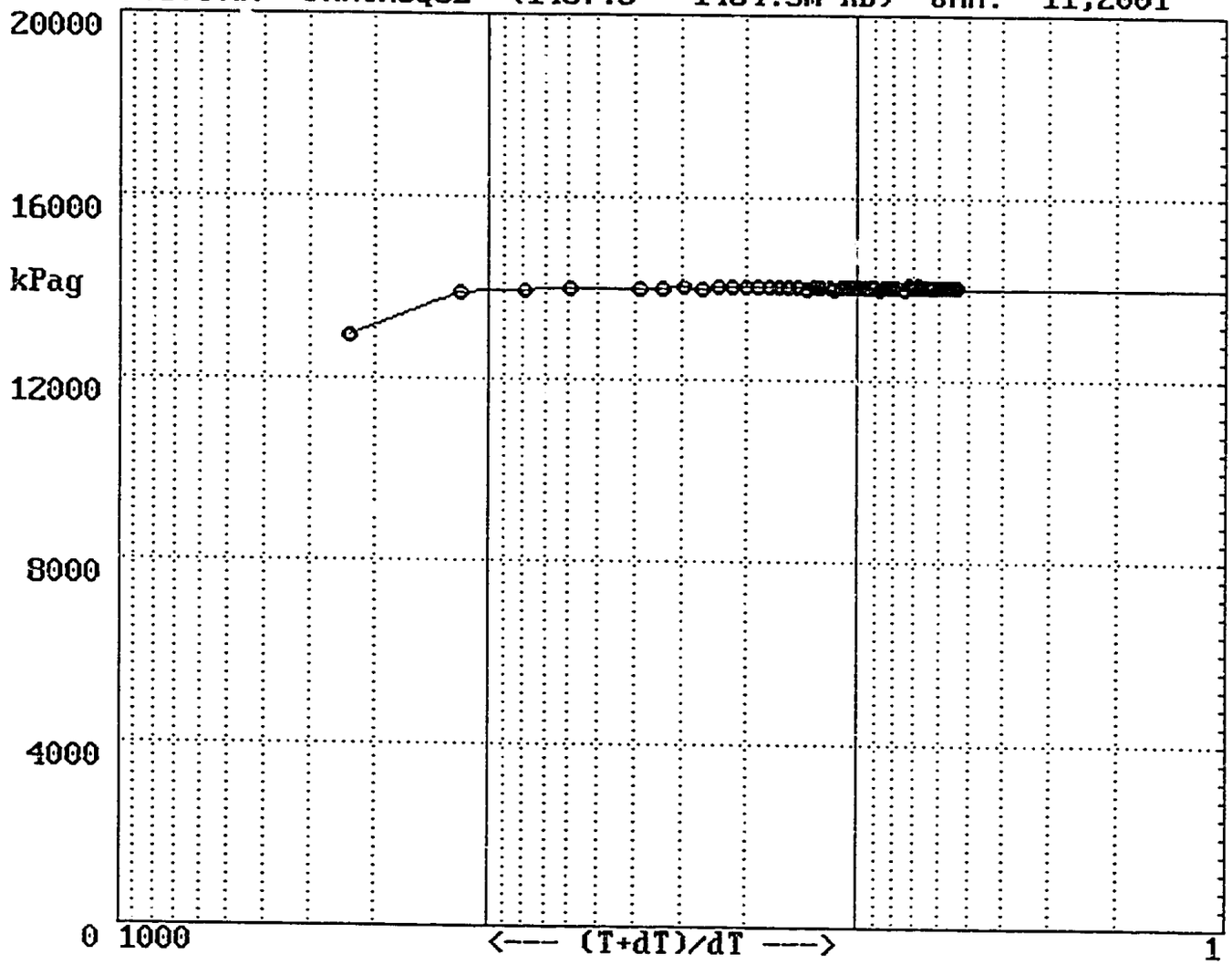
Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
5	22.23	1793	170022.00
10	22.23	1999	188593.00
15	22.23	2137	200974.00
20	22.23	2172	204069.00
25	22.23	2172	204069.00
30	22.23	2034	191688.00
35	22.23	1965	185498.00
40	22.23	1965	185498.00
45	22.23	1931	182402.00
50	22.23	1931	182402.00
55	22.23	1931	182402.00
60	22.23	1931	182402.00


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#7 FANTASQUE (1457.5 - 1464.5m KB) JAN. 11,2001
20000
16000
kPag
12000
8000
4000
0
0
<--- MINUTES --->
180
IHP = 17183.2
SF1 = 7721.3
EF1 = 5983.7
ES1 = 14041.2
SF2 = 6097.8
EF2 = 6001.8
ES2 = 14062.4
FHP = 16724.2

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
D.S.T.#7 FANTASQUE (1457.5 - 1464.5m KB) JAN. 11,2001



HORNER PLOT
SHUT-IN # 2

SLOPE =
-92.4
kPa/cycle

Extrapolated
Pressure =
13380.7
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **D2-8620** DST#: **7**

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARAMOUNT ET AL FT. LIARD
Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	53
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1460.72m
Total Drill Pipe Above K.B.:	2.78m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1011.97	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



21.84m

33.45m

7.04m

4.57m

Depth: 1458m

Depth: 1465m

Total Depth: 1940.00m

Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARAMOUNT ET AL FT. LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

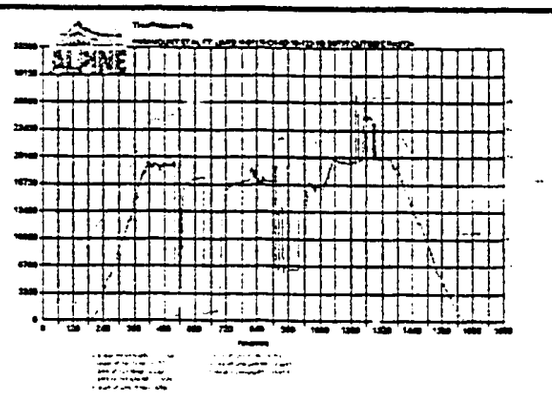
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DUANE WHITE
Interval:	1457.50m - 1464.50m	Truck No.:	UNIT 677
Formation:	FANTASQUE	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	42.00 C

Electronic Recorder Information:

OUTSIDE			
Recorder #:	124	Recorder #:	
Range:	1000 kPag	Range:	kPag
Depth:	1559.00 m	Depth:	m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	17188.9
B Start of 1st Flow	0.00	6375.1
C End of 1st Flow	8.00	6328.8
D End of 1st Shutin	15.00	13905.3
E Start of 2nd Flow	0.00	5968.8
F End of 2nd Flow	59.00	6281.3
G End of 2nd Shutin	28.00	13913.4
Q Final Hydrostatic	0.00	16971.3



Test Run Information:

Start Time:	1730hrs
Reached Test Depth:	1830hrs
Pull Out Time:	2100hrs
Tool Out Of Hole:	800hrs
Weight set on Packers:	6000.00daN
Weight to free Packers:	10000.00daN
Initial String Weight:	39000.00daN
Unseated String Weight:	42000.00daN

Tool Chased Dist:	0.00m	Water Loss:	6.50cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1190.00kg/m³	VIS:	95.00S/L
Amount of fill:	0.00m	Filter Cake:	2.00mm
Amt of cushion:	0.00	Pump Time:	30min
Type of cushion:	N/A	Reversed Out:	NO

General Remarks:

PREFLOW:weakair blow increasing to strong in 15 seconds Gas to surface. in 1.5 min see gas rates FINAL FLOW: Gas to surface immediately. see gas rates mud spray after 15 min cleaning up after 50 min

Recovery Description:

no recovery because we filled the pipe with drilling mud and then reversed out Sampler #53 2 gas bombs caught

Gas Bomb: 2 Sampler: 1
Fluid Sample: 0 Sent to: AGAT LAB

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: 1

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
10	22.23	1724	163831.00

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
5	22.23	1793	170022.00
10	22.23	1999	188593.00
15	22.23	2137	200974.00
20	22.23	2172	204069.00
25	22.23	2172	204069.00
30	22.23	2034	191688.00
35	22.23	1965	185498.00
40	22.23	1965	185498.00
45	22.23	1931	182402.00
50	22.23	1931	182402.00
55	22.23	1931	182402.00
60	22.23	1931	182402.00



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/12/2001**

Job Ticket #: **T4-5264** DST#: **8**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: T4-5264 DST# 8
Test Date: 01/12/2001 1000hrs

Well Name: PARA ET AL FORT LIARD
Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

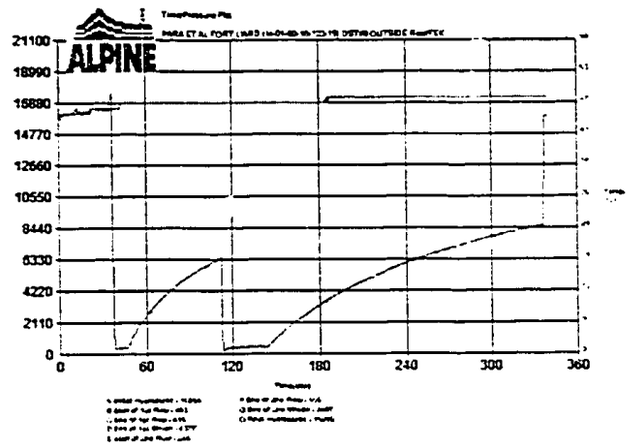
General Information:

Test Type:	INFLATE STRADDLE	Tester:	G.BABYAK
Interval:	1368m -1379m	Truck No.:	UNIT #114
Formation:	BELLOY	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	48.00 C

Telemetry Recorder Information:

OUTSIDE
Recorder #: FEK Depth: 1356.00 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	16054.3
B Start of 1st Flow	0.00	502.6
C End of 1st Flow	9.06	418.0
D End of 1st Shutin	64.62	6377.4
E Start of 2nd Flow	0.00	248.3
F End of 2nd Flow	30.72	505.4
G End of 2nd Shutin	191.28	8607.4
Q Final Hydrostatic	0.00	15998.7



Test Run Information:

Start Time:	1000hrs
Reached Test Depth:	1430hrs
Pull Out Time:	2030hrs
Tool Out Of Hole:	
Water Loss:	6.00cm³
Mud Drop:	NO
VIS:	95.00S/L
Filter Cake:	0.00mm
Pump Time:	0min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1190.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

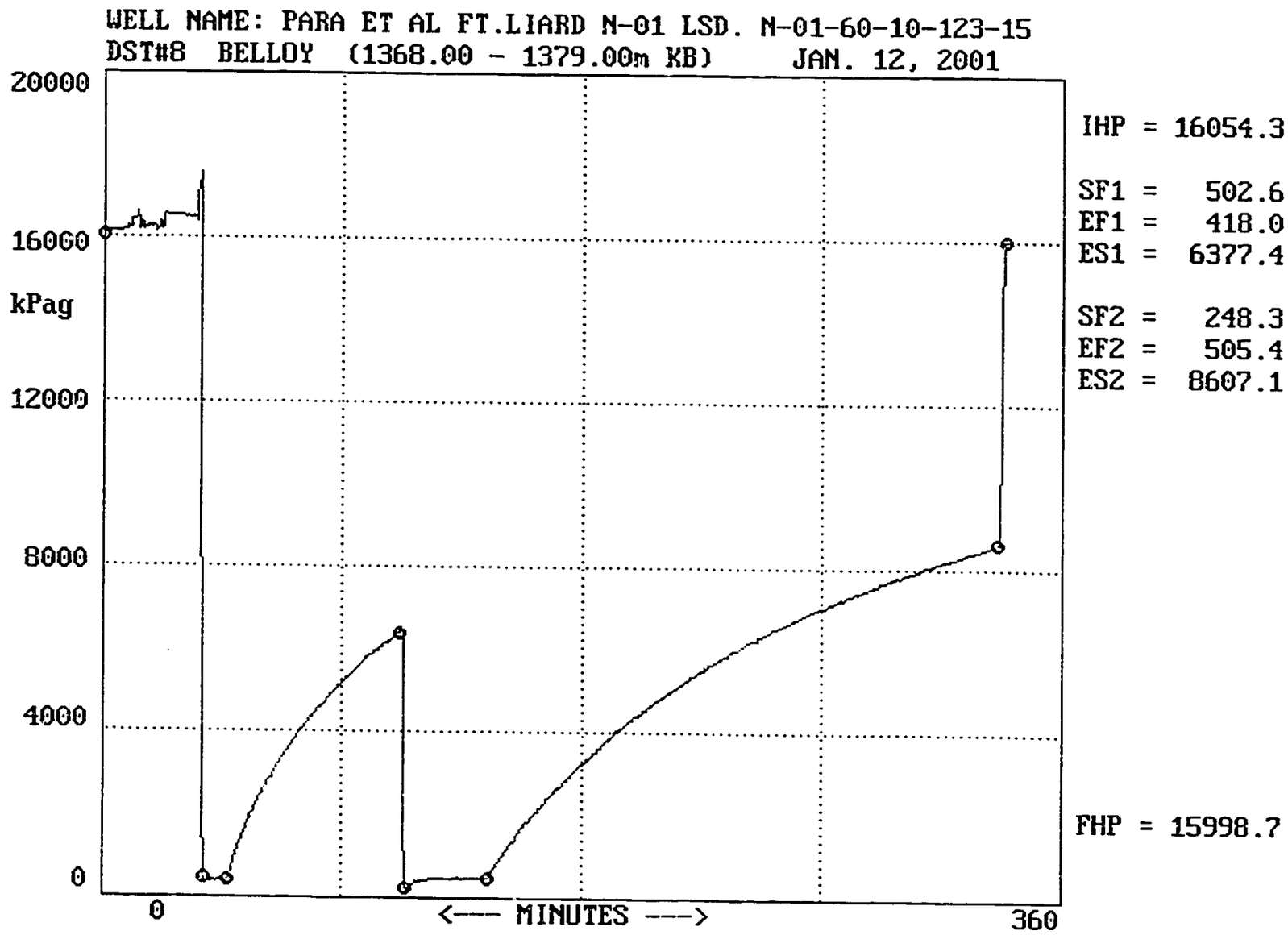
General Remarks:

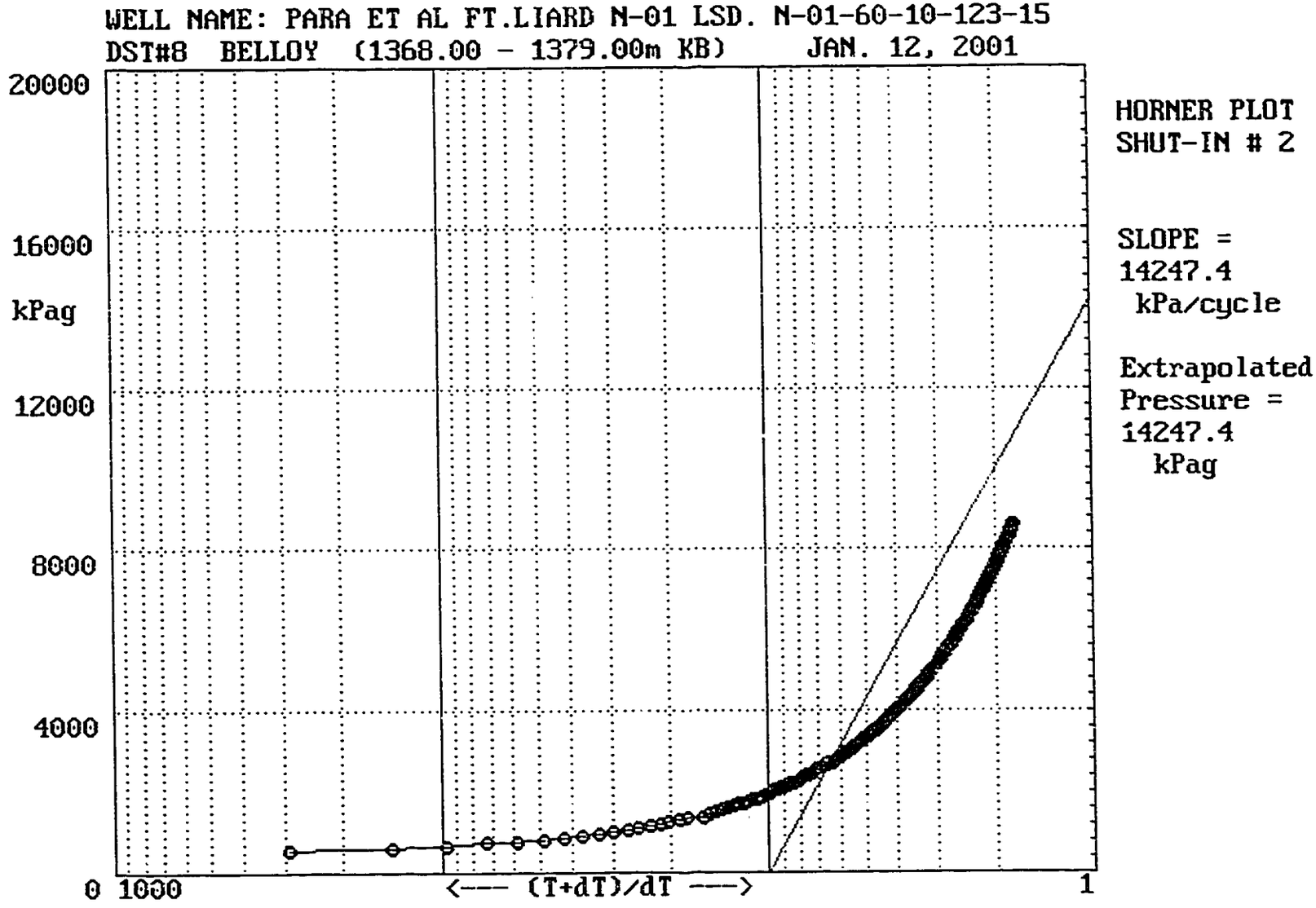
well lic# 13525

PREFLOW:Strong air blow thoughout.No gas to surface.

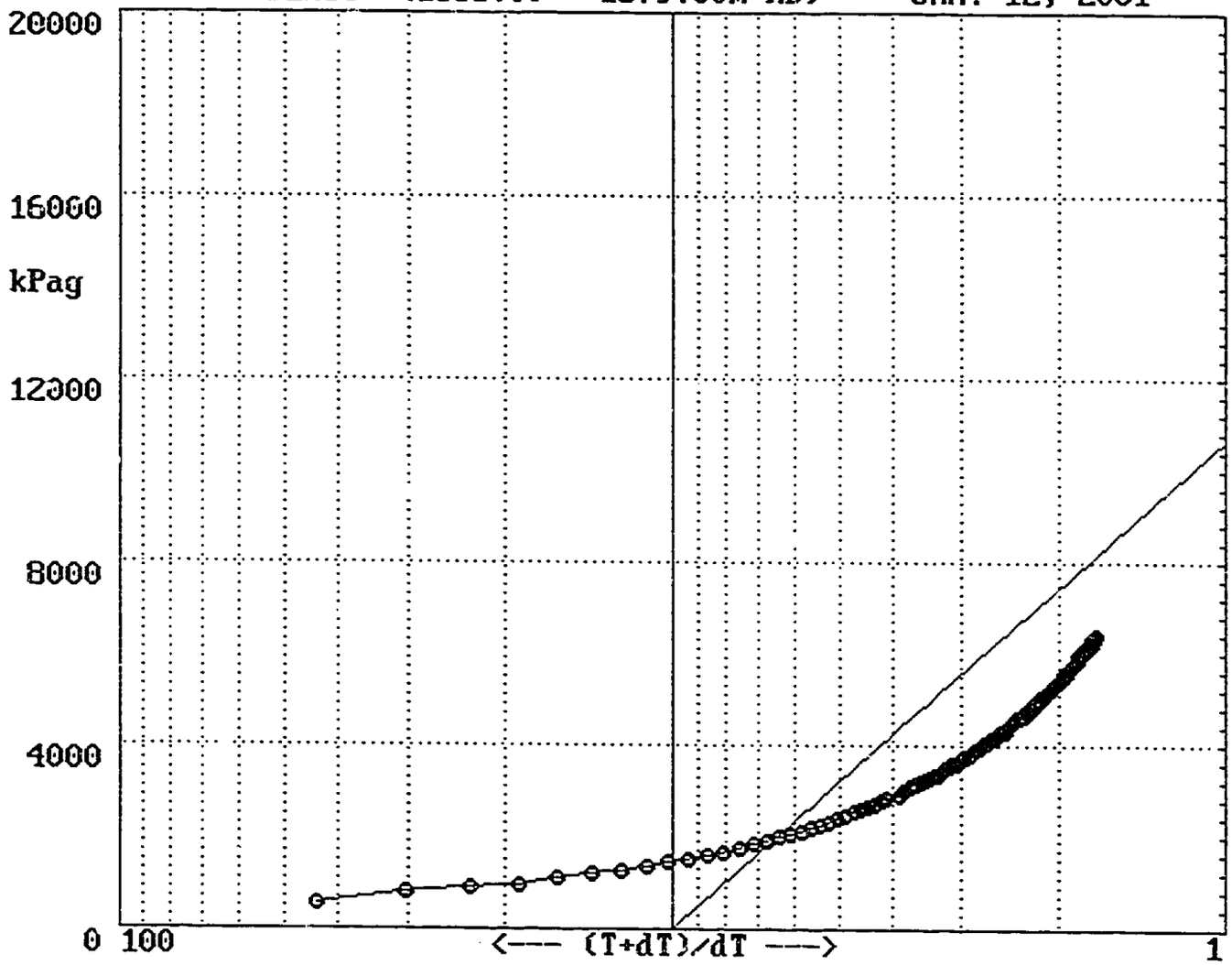
FINAL FLOW:Strong air blow, gas to surface in 2 minutes. lazy 2 meter flare decreasing thoughout.

Recovery Description:


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST#8 BELLOY (1368.00 - 1379.00m KB) JAN. 12, 2001
20000
16000
kPag
12000
8000
4000
0
0
<— MINUTES —>
360
IHP = 16054.3
SF1 = 502.6
EF1 = 418.0
ES1 = 6377.4
SF2 = 248.3
EF2 = 505.4
ES2 = 8607.1
FHP = 15998.7


WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST#8 BELLOY (1368.00 - 1379.00m KB) JAN. 12, 2001
20000
16000
kPag
12000
8000
4000
0
1000
<--- (T+dT)/dT --->
1
HORNER PLOT
SHUT-IN # 2
SLOPE =
14247.4
kPa/cycle
Extrapolated
Pressure =
14247.4
kPag

WELL NAME: PARA ET AL FT.LIARD N-01 LSD. N-01-60-10-123-15
DST#8 BELLOY (1368.00 - 1379.00m KB) JAN. 12, 2001



HORNER PLOT
SHUT-IN # 1

SLOPE =
10627.1
kPa/cycle

Extrapolated
Pressure =
10627.1
kPag



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**

Well Name: **PARAMOUNT ET AL FT. LIARD**
Location: **N-O1-60-10-123-15**

Test Date: **01/12/2001**

Job Ticket #: **D2-8621** DST#: **8**

Drill Stem Testing Report

12f

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8621 DST#: 8

Test Date: 01/12/2001 939hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-O1-60-10-123-15

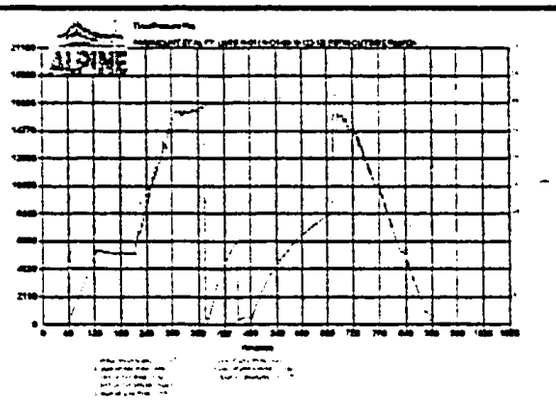
General Information:

Test Type:	INFLATE STRADDLE	Tester:	DUANE WHITE
Interval:	1368.00m - 1379.00m	Truck No.:	UNIT 677
Formation:	BELLOY	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	379
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	50.00 C

Electronic Recorder Information:

OUTSIDE		Recorder #:	
Recorder #:	124		
Range:	10000 kPag	Range:	kPag
Depth:	1370.00 m	Depth:	m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	16207.4
B Start of 1st Flow	0.00	406.3
C End of 1st Flow	9.00	518.5
D End of 1st Shutin	64.00	6292.9
E Start of 2nd Flow	0.00	387.7
F End of 2nd Flow	31.00	490.7
G End of 2nd Shutin	191.00	8509.4
Q Final Hydrostatic	0.00	16197.0



Test Run Information:

Start Time:	939hrs
Reached Test Depth:	1500hrs
Pull Out Time:	2030hrs
Tool Out Of Hole:	100hrs
Weight set on Packers:	6000.00daN
Weight to free Packers:	10000.00daN
Initial String Weight:	39000.00daN
Unseated String Weight:	39000.00daN

Tool Chased Dist:	0.00m	Water Loss:	6.50cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	NO
Mud Weight:	1190.00kg/m³	VIS:	95.00S/L
Amount of fill:	0.00m	Filter Cake:	2.00mm
Amt of cushion:	0.00	Pump Time:	30min
Type of cushion:		Reversed Out:	NO

General Remarks:

PREFLOW: Strong air blow immediately. No gas to surface. FINAL FLOW: Strong air blow immediately. Gas to surface in 2 minutes. Lazy 2 meter flare. Decreasing to 1/2 meter flare after 30 min
Gas was too small to measure.

Recovery Description:

gas bomb #367 Total fluid recovery was 35 meters of drilling mud

Gas Bomb: 1 Sampler: 1

Fluid Sample: 2 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD. Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

Well Name: PARAMOUNT ET AL FT. LIARD

Contact: WILBERT CALLIHOO Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	68
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1370.60m
Total Drill Pipe Above K.B.:	2.67m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	921.85	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



21.84m

37.35m

10.94m

4.57m

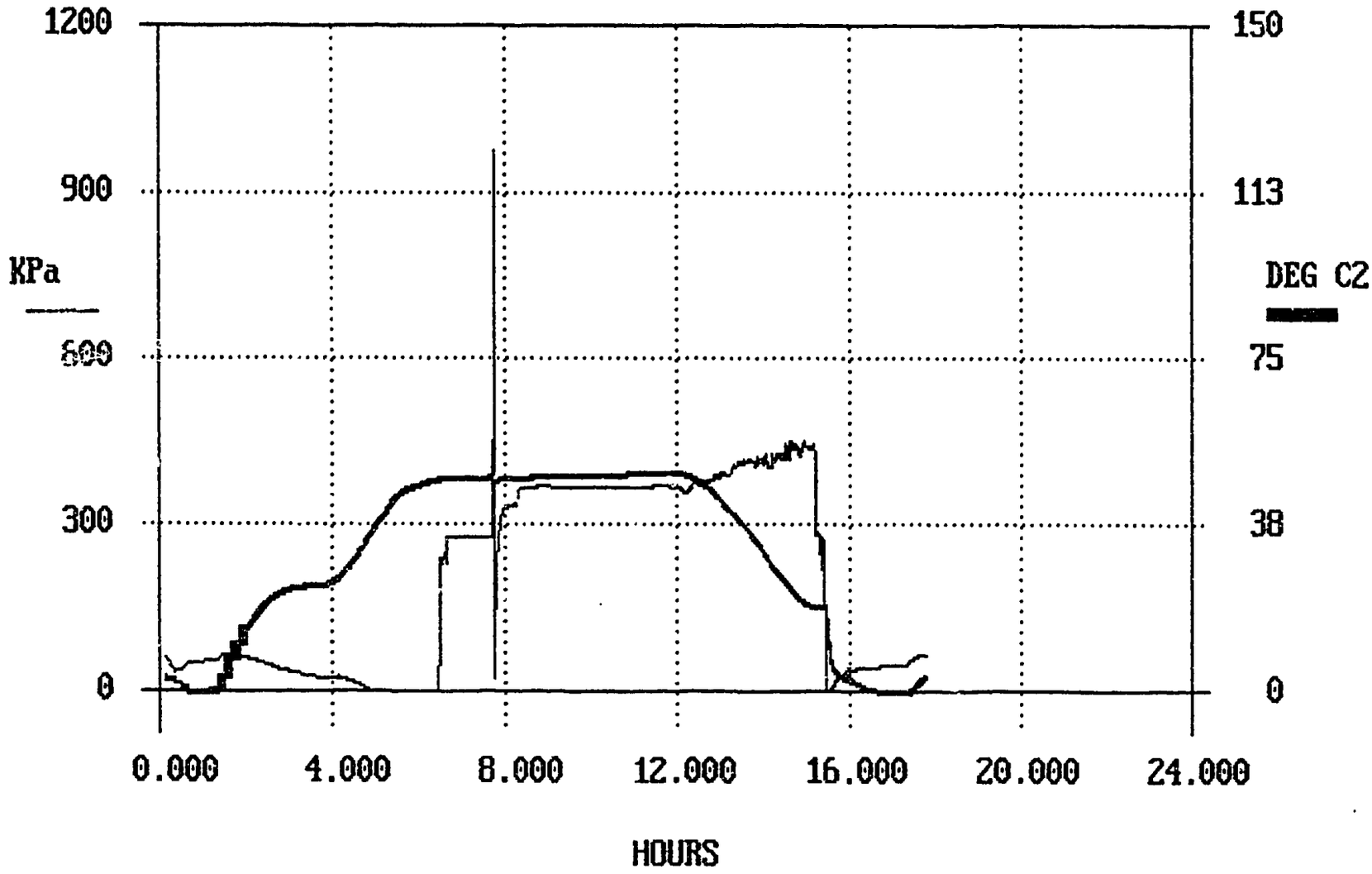
Depth: 1368m

Depth: 1379m

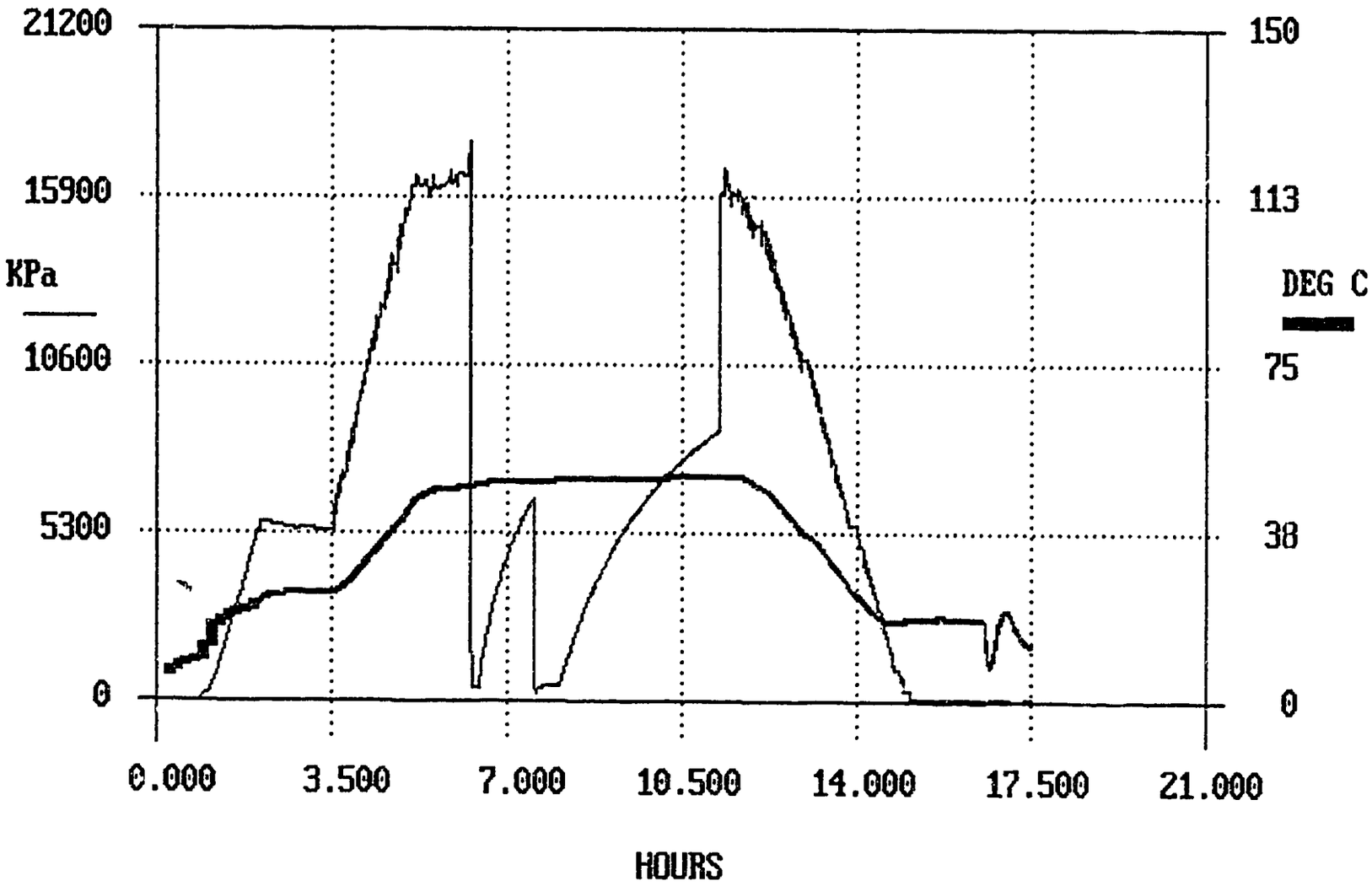
Item	Length
P.O. Sub	0.31
DOUBLE PIN	0.31
P.O. Sub	0.31
HMV Stroke	2.18
Samplar	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
T.C.	0.72
K-3 Carrier	2.20
Bypass Hanger	0.42
Blank Spacing	6.10
Bypass Receiver	0.78
T.C.	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

Total Depth: 1940.00m

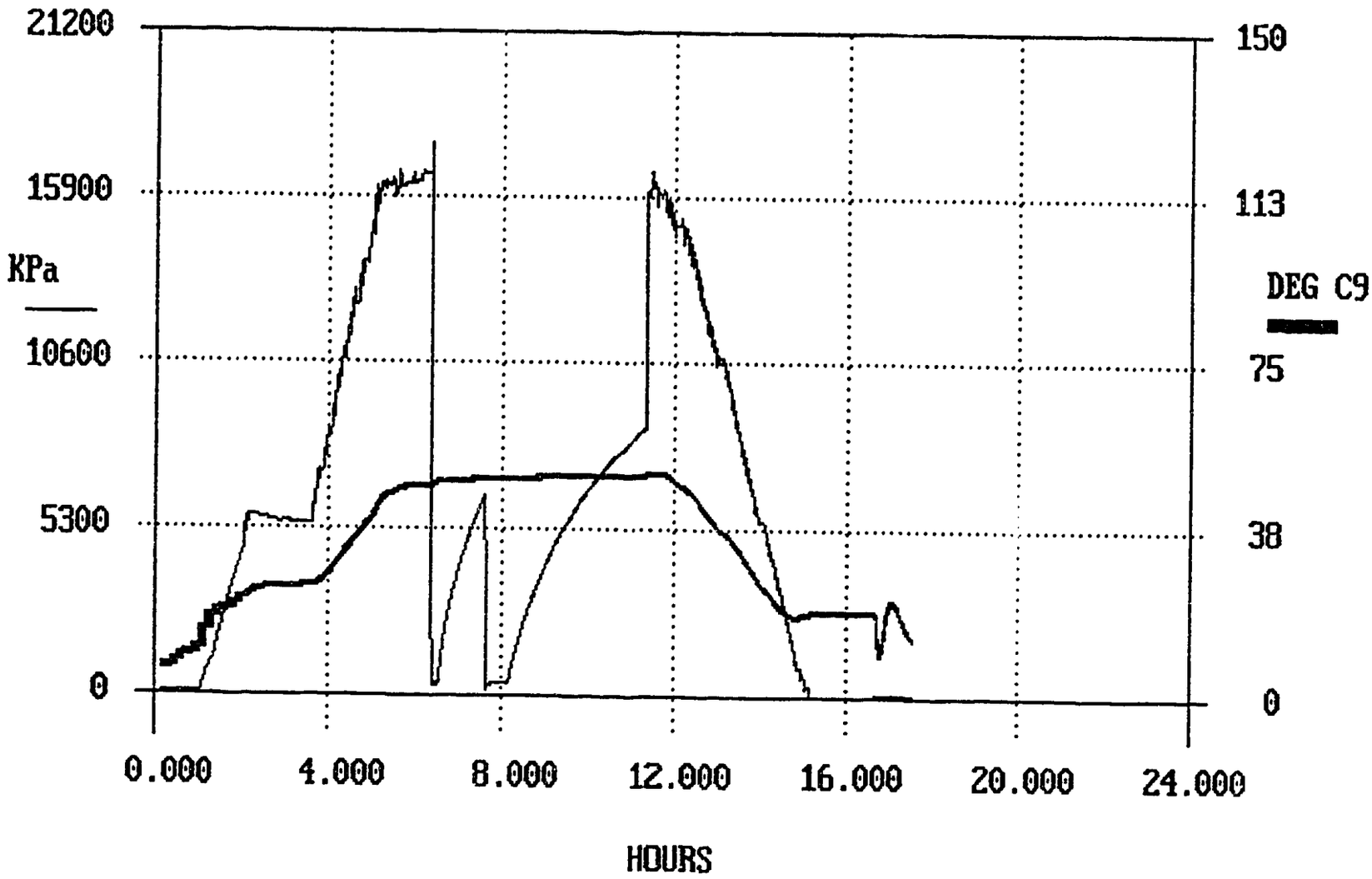
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s/n 126 PARAMOUNT ET AL FT. LIARD DST#8 REC#126 T#2-8621 FLUID



FILE: <C:\ALP_IN\11210903.124>
s/n 124 PARAMOUNT ET AL FT LIARD DST#8 REC#124 t#2-8621 OUTSIDE



FILE: <C:\ALP_IN\11210857.037>
s/n 37 PARAMOUNT ET AL FT LIARD DST#8 REC#37 T#2-8621 OUTSIDE



DAILY DRILLING SUMMARY

Paramount et al Fort Liard NWT N-01

N-01/60-10, 123-15

Date	Depth	Progress	Drilling Hours	ROP (m/hr)	Mud Properties Density	Vis	WL	pH	Operations Summary
00-Dec-12	41	30	7.25	4.14	1040	60	-	10.0	Rig to spud, spud well @ 16:30hrs, drill 0-41m.
00-Dec-13	189	148	16.75	8.84	110-120	52-60	-	8.0-10.0	Work mud-ring, drill, work mud ring, drill, work mudring, drill to 189m
00-Dec-14	310	121	14.00	8.64	070-119	47-60	-	8.0-9.0	Drill from 189-291m, POOH for bit, RIH with Bit #2A, drill from 291-310m, circulate & run survey.
00-Dec-15	421	111	20.75	5.35	145-119	51-60	-	8.0-9.0	Drill from 310-421m, survey as required.
00-Dec-16	501	80	18.50	4.32	145-115	51-81	-	9.0-9.5	Drill from 421m to surface casing point @ 501m, circulate & condition hole, wiper trip.
00-Dec-17	501	0	0.00	0.00	1150	80	-	9.0	Wiper trip, work tight hole, circulate, POOH, rig to & run casing, rig to & cement casing, WOC.
00-Dec-18	501	0	0.00	0.00	-	-	-	-	WOC, tear out diverter, cut casing & conductor, cement casing, cut casing, weld on bowl, nipple up BOP, pressure test .
00-Dec-19	528	27	3.50	7.71	1010	29	-	-	Pressure test, pick up dir. tools, RIH, drill out cement, drill 501-511m, run leak-off test, drill 511-528m.
00-Dec-20	947	419	20.50	20.44	1005	29	-	-	Drill from 528-947m.
00-Dec-21	1036	89	10.25	8.68	075-109	38-55	17.0	9.0-10.5	Drill from 947-986m, circulate & pump pill, POOH for bit, RIH, ream & clean to bottom, drill 986-1036m.
00-Dec-22	1244	208	21.00	9.90	075-110	46-63	14.0	0.0-10.	Drill from 1036-1244m.
00-Dec-23	1378	134	20.00	6.70	110-113	51-58	.0-11.	9.0-10.5	Drill 1244-1301m, work on mudpump, drill 1301-
00-Dec-24	1409	31	5.50	5.64	120-113	52-57	9.5	10-10.5	Drill from 1378-1404m, POOH for bit, change out mud-motor, RIH, ream 1340-1404m, circulate hole clean, drill from 1404-1409m.
00-Dec-25	1493	84	22.00	3.82	120-112	54-67	.0-10.	9.0-10.5	Drill from 1409-1493m, circulate, commence POOH.
00-Dec-26	1524	31	8.50	3.65	110-113	61-73	8.0	9.5-10.5	POOH, make up bit, RIH, ream from 1473-1493m, drill from 1493-1524m.
00-Dec-27	1604	80	22.75	3.52	130-115	60-68	7.0-8.0	9.0-10.5	Drill from 1524-1604m.
00-Dec-28	1643	39	9.75	4.00	1140	62-71	7.0-8.0	0.0-10.	Drill from 1604-1643m, circulate, POOH for bit, work on directional tools & BHA, RIH, slip & cut, RIH.
00-Dec-29	1706	63	18.00	3.50	135-116	60-67	6.5-8.0	9.5-10.0	RIH, ream from 1614-1643m, drill from 1643-1706m.
00-Dec-30	1729	23	9.25	2.49	145-115	63-69	6.5-7.5	0.0-10.	Drill from 1706-1718m, circulate, POOH for bit, RIH, ream from 1702-1718m, drill from 1718-1729m.
00-Dec-31	1773	44	15.75	2.79	145-115	61-71	6.0-7.5	0.0-10.	Drill from 1729-1773m, circulate, POOH for bit, make up bit & RIH.
01-Jan-01	1829	56	17.25	3.25	150-115	60-63	5.5-7.0	0.0-10.	RIH, ream from 1762-1773m, drill from 1773-1829m.
02-Jan-01	1873	44	16.50	2.67	1135	60	7.0	9.5	Drill 1829-1873m, circulate, POOH.
03-Jan-01	1901	28	14.25	1.96	1140	66	7.0	9.5	POOH, work on directional tools, make up BHA, RIH, slip & cut, RIH, ream 1864-1873m, drill 1873-1901m.
04-Jan-01	1912	11	7.50	1.47	1140	61	7.0	9.0-9.5	Drill from 1901-1912m, cond. mud & circ., POOH, repair reamer, make up bit & tools, RIH, ream to bottom.

05-Jan-01	1940	28	11.00	2.55	1145	78	7.0	10.5	Drill from 1912m to FTD @ 1940m, circulate, wiper trip, circulate, POOH.
06-Jan-01	1940	0	0.00	0.00	1140	74	6.5	9.5	POOH, lay down directional tools, rig to & log Run #1 with Baker Hughes, troubleshoot tool malfunction, loggers released, RIH & lay down 6 drill collars.
07-Jan-01	1940	0	0.00	0.00	1140	74	6.5	9.5	Make up DST #1, RIH & run DST #1, POOH, recover recorders, make up DST #2, RIH, slip & cut, RIH.
08-Jan-01	1940	0	0.00	0.00	1150	58	6.0	9.0	RIH, run DST #2, POOH, recover recorders, lay down test tool, make up bit, RIH for wiper trip, shut in well & circulate gas out through choke, condition mud.
09-Jan-01	1940	0	0.00	0.00	1160	76	6.0	10.0	Condition mud & circulate, POOH, make up DST #3, RIH & run DST #3, packer seat failed, reset packers, run DST #3, packer seat failed, change interval & reset packers, run DST #4.
10-Jan-01	1940	0	0.00	0.00	1180	80	6.0	10.0	Run DST #4, pull loose, reset packers, run DST #5, POOH, recover recorders, wiper trip, circulate gas out through choke, condition mud & circulate.
11-Jan-01	1940	0	0.00	0.00	1180	80	6.0	10.0	Condition mud & circulate, POOH, make up DST #6, RIH & run DST #6, reset packers & run DST #7, pull loose, RIH to 1688m, head up to reverse circulate.
12-Jan-01	1940	0	0.00	0.00	1180	80	6.0	10.0	Reverse circulate, POOH, make up DST #8, RIH & run DST #8, POOH.
13-Jan-01	1940	0	0.00	0.00	1190	72	6.0	10.0	POOH, lay down test tool, make up bit, RIH for wiper trip, circulate, POOH, rig to & log with Baker Atlas.
14-Jan-01	1940	0	0.00	0.00	-	-	-	-	Complete logging, rig out loggers, RIH for clean-out trip, geologist released.

WELLSITE LOGGING REPORT

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

HOLE DATA	MUD DATA	LOGGING COMPANY
Hole Size: 222mm		**Logging Co.:** Baker Hughes
TD Driller: 1940.0m	**Type:** Gel-chem	**Engineer:** Mark Lowther
Strap: 1940.7	**Density:** 1140	**Truck No.:** 6591
TD Logger: 1942.5m	**Viscosity:** 74	**Start Date:** 06-Jan-01
Casing Driller: 501.0m	**W.L.:** 6.5	**Start Time:** 0730hrs
Casing Logger: 500.5m	**pH:** 9.5	**End Date:** 06-Jan-01
Hole Condition: Good		**End Time:** 2230hrs

LOGGING SEQUENCE

Run Number	Logged Interval From	To	Hours	Logs	Remarks
1	1942	500.5	10.50	ML-HDIL-ZDL-CN-DAL-GR-XY	
	Total Hours:		10.50		

LOGGING OPERATIONS SUMMARY

Date	From	To	Description of Operation
06 Jan 01	0730	1730	Complete Run #1 to surface casing.
	1730	2230	Pull to troubleshoot tool malfunction on surface. Root cause found t
			be wireline failure. Second run aborted - loggers released.

REMARKS & COMMENTS

There were a number of problems with the logging; 1) the wrong sonic tool was brought to the location whic necessitated a second run - the MAC tool was hotshotted to location while conducting Run #1; 2) the DAL sonic tool did not function properly on Run #1; 3) the HDIL tool failed 2m from surface casing and Run #1 w terminated before completing the GR-Neutron pass to 150m; 4) the second run was aborted because the MAC tool could not be powered up. Extensive troubleshooting determined a wireline failure was responsible. Loggers were released and DST testing commenced. Loggers were to return at a later date to complete Run 2.

WELLSITE LOGGING REPORT

Paramount et al Fort Liard NWT N-01
N-01/60-10, 123-15

HOLE DATA	MUD DATA	LOGGING COMPANY
Hole Size: 222mm		**Logging Co.:** Baker Hughes
TD Driller: 1940.0m	**Type:** Gel-chem	**Engineer:** A. Semenov
Strap: 1940.7	**Density:** 1190	**Truck No.:** HL6577
TD Logger: 1942.5m	**Viscosity:** 72	**Start Date:** 13-Jan-01
Casing Driller: 501.0m	**W.L.:** 6.0	**Start Time:** 1815hrs
Casing Logger: 500.5m	**pH:** 10.0	**End Date:** 14-Jan-01
Hole Condition: Good		**End Time:** 0045hrs

LOGGING SEQUENCE

Run Number	Logged Interval From	To	Hours	Logs	Remarks
1	1942m	150m	5.00	MAC-CN-GR-CAL	
	Total Hours:		5.00		

LOGGING OPERATIONS SUMMARY

Date	From	To	Description of Operation
13 Jan 01	1815	1900	Rig up & run in with logging tool.
	1900	0000	Log
14 Jan 01	0000	0045	Rig out.

REMARKS & COMMENTS

Logging went well with no problems.

WELL SUMMARY

PARAMOUNT ET AL FORT LIARD
NWT N-01-60-10123-15

The Paramount et al Fort Liard N-01 well is located approximately 20 kilometres south of the village of Fort Liard. This vertical exploration well was spudded on December 12, 2000 by Precision Drilling Rig #379 @ 16:30 hours. A Continental total gas detector and chromatograph was rigged up and running from surface to T.D. Samples were collected in 5 metre intervals from surface to F.T.D. The well reached F.T.D. at 1940 metres in sandstone of the lower Mattson on January 5, 2001 at 12:15 hours. Sample quality was variable, ranging from adequate to often poor to highly suspect, due to a combination of factors which includes inconsistent and improper sample-catching by inexperienced rig personnel, as well as periodic problems with the sample bucket being improperly set out such that it often fell off the catwalk at the shaker. As a result, sections of the samples are undoubtedly spot samples at best and therefore, not representative of the respective intervals. This is borne out by the misfit of some sample descriptions with the e-log characteristics in sections of the Mattson, especially with regard to porosity. There was also a considerable amount of cavings, often from the variably bentonitic claystones and shales of the Triassic, observed in samples through significant portions of the drilling.

The primary zone of interest was the Mississippian Mattson Formation, a predominantly clastic succession representing five different depositional environments of near shore marine to coastal plain systems. There were multiple zones within the succession occurring primarily in the coastal dune complex. Secondary targets in the well were the basal Cretaceous Chinkeh Formation and the Permian Fantasque Formation. All zones of interest were gas targets. The well was planned to test a structural closure on the Liard Anticline. The N-01 structure is located at the southeastward end of the NW-trending anticline which plunges to the southeast. The well-path was expected to cut the structure-forming fault at ~1960m in the Mattson section. The fault is interpreted to be a high-angle reverse fault that has been reactivated on a former oblique-slip normal fault.

There were no significant operational difficulties encountered during the drilling of this well. Surface hole (311mm) was drilled to a depth of 501m with a gel slurry. Surface casing (244.5mm) was set to a depth of 501m. The main hole (222mm) was drilled with floc water to a depth of 980m where it was displaced to a gel-chem mud system for the remainder of the hole. The main hole section from 501m to 1940m was drilled with a mud-motor to ensure control of potential deviation problems. This well drilled significantly faster than has been typical for this region and used far fewer bits.

Two logging runs were conducted upon reaching FTD, the first was conducted on January 6th and the second was conducted on January 13th upon completion of the testing program. Due to operational difficulties with Baker Atlas, the loggers were released on January 6th prior to completion of logging (see logging report for details). Both logging runs were conventional; #1: ML-HDIL-ZDL-CN-DAL-GR-XYCAL; #2: MAC-ZDL-CN-GR-XYCAL. After completion of the first logging run a total of 8 DST's were run, commencing on January 7th and completed on January 12th. Six DSTs were run in the Mattson (i.e., DSTs #1-6), one in the Fantasque (i.e., DST #7), and one in the Belloy (i.e., DST #8).
There were no significant problems encountered on the DST runs, excepting the two mis-runs on DST #3 when the packer seat failed during the pre-flows (see attached DST reports for details). Production casing was run upon completion of the testing program.

FORMATION EVALUATIONS

CHINKEH SAND

The Chinkeh Sand was drilled at approx. 9min/m. Background gas for the formation was ~75 units, with a peak of ~250 units. The Chinkeh Sand consists of a relatively consolidated, quartzose sandstone with minor black chert grains throughout, giving it a salt and pepper appearance. The sands were very fine to fine grained and well sorted with sub angular to angular grains. Calcareous cements were very common, with minor siliceous cements. There was also an argillaceous component to the matrix. The combination of these elements limited porosity to 3-6%.

CONCLUSION: This zone is of no economic interest.

BELLOY FORMATION

The Belloy Formation comprises ~ 37 metres of predominantly chert with interbedded sandstone and minor thin shale. The only potential zone of interest is the upper sandstone unit which produced a good gas show upon penetration.

The upper sandstone unit is quite variable, comprising predominantly quartzolithic wacke to subwacke with a lesser to minor component of sublitharenite. It ranges in colour from light brown to dark grey to medium to dark red. The sandstone is predominantly lower fine to lower medium grained, generally moderately sorted with sub-angular to sub-rounded grains. Composition consists of common frosted to clear quartz with lesser to locally minor varicoloured lithic grains. The sandstone is generally moderately glauconitic and there is a variably abundant to trace component of silty argillaceous to locally phosphatic/bituminous matrix. Locally, common to abundant ferruginous staining indicative of subaerial exposure is evident. The rocks are moderately to moderately poorly indurated with siliceous and dolomitic cements. Trace to locally minor quartz overgrowths were observed in some of the cuttings. In the basal part of the unit the sandstone is variably silicified and grades to sandy chert in part. Porosity is typically tight to poor with minor fair streaks in samples. Hydrocarbon shows consisted of traces of spotty oil stain and common weak, very thin diffuse cut with no dry fluorescence.

There was a significant increase in gas readings upon penetration of the Belloy which produced a good gas show that peaked at 580 units (BGG ~10 units) across ~4 metres near the top of the formation @ 1372-1376m. A DST (i.e., DST #8: 1368-1379m) was run across this interval with poor results; GTS was TSTM. The build on the ISI & FSI curves indicate a relatively tight interval with very low permeability.

CONCLUSION: There are no reservoir-quality intervals in the Belloy at this location. Despite a good gas show in the uppermost Belloy, the results of DST #8 indicate the Belloy has no economic potential at this location.

FANTASQUE FORMATION

The Fantasque formation is a massive chert interval that defines the upper Permian boundary. Sample lithology was relatively consolidated, light brown to dark gray chert. The lighter cherts were very dense and broken into glassy shards with common fracture surfaces. The darker cherts were somewhat granular with a slightly silty component and only minor fracture surfaces. Near the base of the section the cherts exhibited some residual bitumen and spotted oil staining. There was no cut and only a very faint white fluorescence.

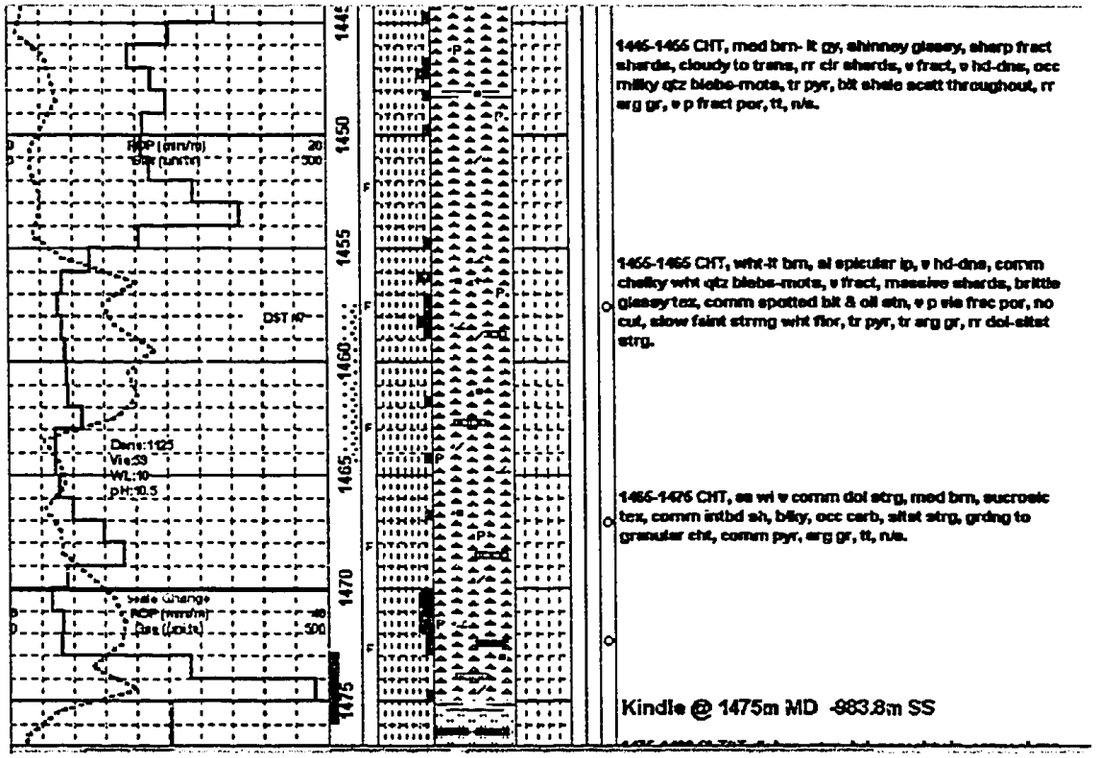


Figure 1. Striplog section showing lower Fantasque pay zone.

There was a significant, though generally minor, increase in gas in the lower Fantasque commencing at 1455m. The 1456-1463m interval had a fair gas show of ~240 units over a BGG of ~50 units. E-log porosity ranged from 9-12% through this interval and consists entirely of fracture porosity. A DST was run over the this interval (i.e., DST #7: 1458-1465m) and produced a stable flow rate of ~6.5 million ft^3/day.

CONCLUSION: The Fantasque has some fair to marginally good fractured reservoir intervals in the lower Fantasque. The results of DST #7 showed good to excellent gas flow rates in the lower section of this formation. The Fantasque is a zone capable of good commercial production at this location.

KINDLE FORMATION

The Kindle Formation comprises ~23 metres of siltstone with minor thinly interbedded dolomite and shale at this locality. The siltstone is typically medium to dark brown, quartzose, and slightly to locally moderately argillaceous with trace argillaceous partings. The siltstone is generally very dolomitic locally grading to very silty dolostone. The rocks are generally moderately to well indurated and tight with abundant dolomitic cement upsection grading downsection to abundant calcareous cement.

Hydrocarbon shows generally consisted of traces of very dull questionable fluorescence with variably minor to common weak slow yellow white streaming and diffuse cut which decreases downsection. There was generally no significant increase in gas readings through this formation with the exception of a minor thin gas show of ~260 units (BGG ~50 units) at 1481m.

CONCLUSION: The Kindle Formation has no reservoir-quality intervals and hence, no economic potential at this locality.

MATTSON FORMATION

Approximately 444 metres of the Mattson were penetrated at this locality; FTD was called in the lower Mattson. The Mattson Formation comprises sandstone with minor interbedded shale and carbonate. The section is strongly sand-dominated with generally minor carbonate & shale. There are two basic types of sandstone in the Mattson succession that are generally representative of their respective environments; 1) very fine to fine grained quartzarenite to minor sublitharenite of shoreface affinity, 2) upper very fine to lower medium grained quartzarenite to sublitharenite of eolian origin. A third variable type of sandstone consists of variably very fine to medium grained quartzarenite to quartzose subwackes of transitional facies but are generally of no economic interest. It seems reasonable to assume various degrees of reworking of both eolian and shoreface deposits during subsequent transgressions and regressions, making distinction between the two types sometimes unclear.

Five separate lithofacies have been identified in the Mattson succession in this region; 1) storm-reworked shoreface, 2) muddy shoreface or lagoon & tidal flat, 3) wave-reworked shoreface, foreshore and backshore, 4) coastal dune complex, and 5) interdune swamp & paleosoil. Although the lower Mattson was not penetrated at this locality, most of these lithofacies appear to be represented at this location. The Mattson Formation at this locality correlates reasonably well with the Paramount et al Liard A-01 well to the depth of the M3 zone, below which no log data is available for the A-01 well. However, there are numerous local differences with regard to facies stacking patterns apparent between the two locations, as well as greater porosity development at the N-01 location.

SHOREFACE SANDSTONE

The shoreface sandstone is a typically very light grey to light brown, well-sorted quartzarenite with trace amounts of dark lithic grains which can occasionally be identified as chert. The quartz is predominantly clear and angular to sub-rounded. Variable degrees of reworking and input from eolian sources is apparent where there is a minor frosted quartz component.

These sandstones are predominantly very fine to fine grained with either fraction locally dominant. The sandstones are often variably silty, ranging from trace to common, and locally grade to sandy siltstone in minor part. Argillaceous content is typically nil in these clean quartzarenites. Locally, the sandstone becomes slightly to moderately argillaceous and usually has argillaceous partings and laminae associated with it. Upsection, some sandstone has a variably trace to minor component of outsized (i.e., medium to fine) unusual grey blue, partly tripolitic chert grains and occasionally grades to sublitharenite. This appears to be a regional provenance marker, as noted on previous wells (i.e., I-46/60-20-123-15, b-43-K/94-O-14, I-02/60-20-123-30). Locally, the sandstone becomes a sublitharenite with an added minor component of carbonate grains and skeletal debris.

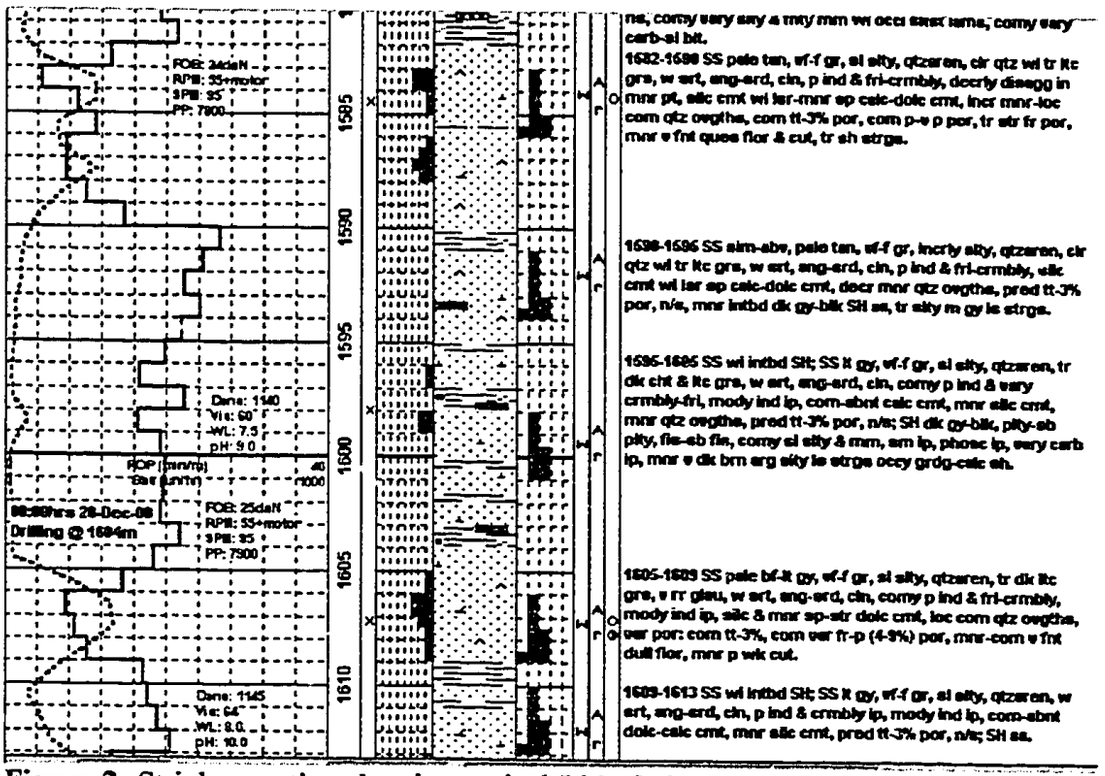


Figure 2. Striplog section showing typical Lithofacies #1 section (shoreface) in the upper Mattson Formation. Note fair gas shows.

The shoreface sandstone is variably indurated throughout the succession, ranging from moderately well to poorly indurated & friable to crumbly. Visible porosity is variable, though often poor (i.e., tight to 3%), even in some poorly indurated sandstone where matrix porosity is likely to be at least a few percent. Sections with fair and occasionally good porosity were observed; however, this better porosity was a generally minor component in consolidated cuttings. Samples often contained a variable disaggregated fraction, including sandstone that is generally tight in the writer's opinion, making porosity estimates somewhat problematic. To some degree at least, porosity distribution appears to be of a streaky to patchy nature, given the variability of visible porosity in cutting of the same sandstone.

Cements are generally of mixed carbonate-siliceous type and locally wholly carbonate; upsection the carbonate cement is entirely calcareous becoming mixed calcareous-dolomitic downsection before being fully replaced by dolomitic cement at ~1605m. Permeability is estimated to be generally poor in much of this lithofacies, given the very fine-grained, silty nature of the sandstone and the typically common to abundant cements.

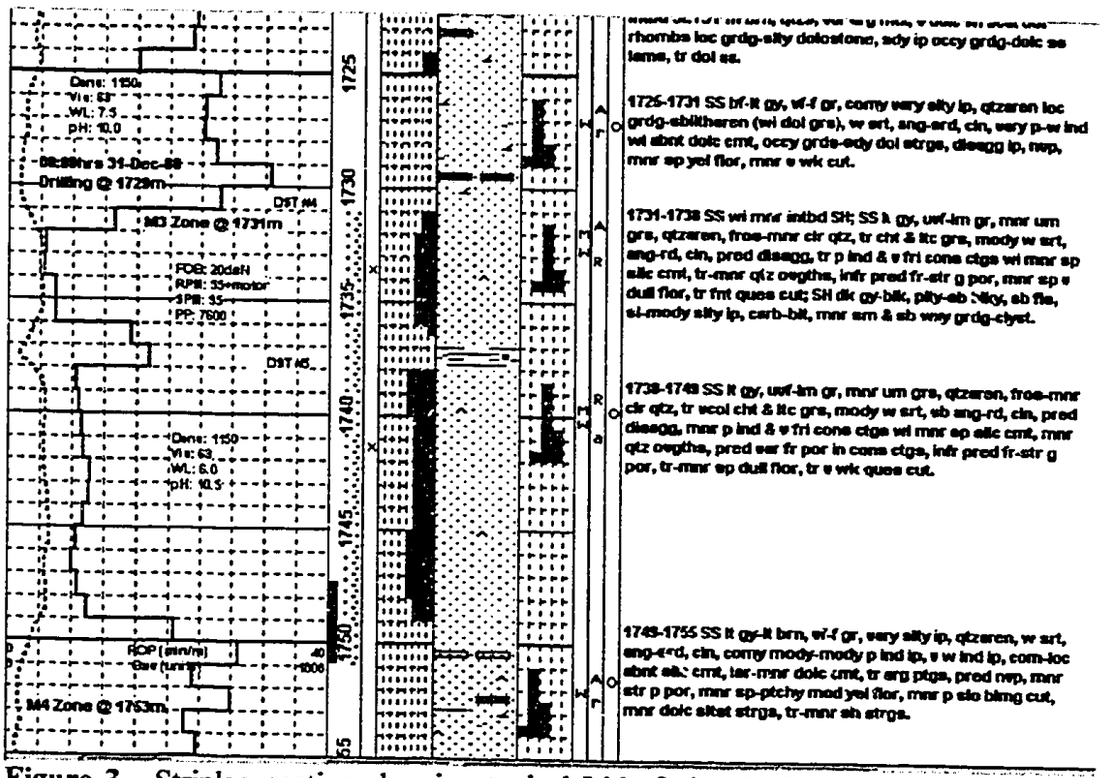


Figure 3. Striplog section showing typical Lithofacies #4 in the Mattson Formation. The eolian facies is overlain by shoreface sandstone & minor carbonate of Lithofacies #1.

EOLIAN SANDSTONE

Eolian sandstone can be usually distinguished from the shoreface quartzarenite by virtue of its coarser grain size and the dominant presence of frosted quartz grains. The sandstone is typically very light grey to light brown, moderately to moderately well sorted with angular to rounded grains. A much greater degree of rounding than is seen in shoreface sandstone is apparent where grain surfaces have not been modified by quartz overgrowths. These sandstones tend to have less compositional maturity than shoreface sandstone due to a generally higher minor chert fraction. Compositionally, the sandstone consists of abundant quartz with a variably minor to common frosted component and trace to minor predominantly dark varicoloured chert and lithic grains, comprising quartzarenite to minor sublitharenite.

These sandstones are typically very fine to lower medium grained with a fine median grain size. Trace to minor coarse grains are often present. The eolian sandstone tends to be poorly to very poorly indurated and very friable. They are commonly variably to wholly disaggregated in samples. Cements range from generally minor to locally common and are typically siliceous with a spotty to patchy distribution. Locally, spotty to patchy calcareous/dolomitic cement is a minor occurrence. Quartz overgrowths range from minor to common to locally abundant. Rare to trace interstitial pyrite was also commonly observed.

The best porosity in the Mattson appears to be largely lithofacies-dependant and typically confined to eolian deposits. Porosity was variable in the generally minor consolidated fraction and ranged from typically fair to locally poor to good. Porosity was inferred to be predominantly fair to good in much of the eolian sandstone.

Diagenesis

Some general diagenetic associations are apparent with regard to the different lithofacies and are as follows; 1) Siliceous cementation is wholly or strongly dominant in eolian and related depositional environments (i.e., transitional sandstone in interdune swamp & paleosol environments), 2) Dolomitic-calcareous cementation appears to be largely confined to shoreface environments. Mixed siliceous-carbonate cements appears to be more common in shoreface environments downsection than purely carbonate cements which dominate the upper Mattson, indicating at least two stages of authigenic cementation.

The same diagenetic trends noted on previous Mattson wells in the region also hold true at this location. A general diagenetic trend downsection in cement types follows; 1) 1496-1575m: calcareous cements with the first appearance of minor siliceous cement @ ~1560m; 2) 1575m: first appearance of dolomitic cement; 3) 1575-1605m: transition zone of mixed calcareous-dolomitic-siliceous cement; 4) 1605m: dolomitic cement completely replaces calcareous cement as the carbonate phase; 5) 1605-1890m: predominantly dolomitic cement with lesser to minor siliceous cement – distribution of these two types appears to be largely lithofacies-dependant in a mixed marginal marine-eolian section; and 6) 1890-1940m: predominantly siliceous cement with minor dolomitic cement.

Common to locally abundant subhedral to euhedral quartz overgrowths are typically associated with the best porosity, primarily in eolian deposits. Traces of spotty kaolin/illite were observed in predominantly terrestrial deposits and appear to be a useful criteria for aiding identification of eolian lithofacies. Pyrite cements and nodules are commonly associated with Lithofacies #5 (terrestrial) where it occurs in massive, crystalline and disseminated forms. The presence of unusual very bituminous claystone and coaly to bituminous shale is a typical co-association.

Stylolitic networks observed in quartzarenite in the lower Mattson on the b-43-K/94-O-14 well (i.e., ~2250-2255m) and the I-02 well (i.e., 1460m onward) were also found to occur at this locality. Traces of possible stylolites were first observed at ~1800m and unequivocal stylolites were noted by ~1900m in the M7 Zone. The stylolites appear to occur sporadically throughout the remainder of the section. This stylolite development appears to be a regional diagenetic artifact in the lower Mattson.

Hydrocarbon Shows & DST Results

Hydrocarbon shows were generally very poor, typically consisting of generally minor, spotty to patchy, dull to moderate yellow to yellow green fluorescence and trace to minor thin, faint yellow white diffuse to streaming cut to questionable or no cut. Exceptions to the above occur in a few intervals in the Mattson, where shows were slightly better; 1) 1505-1511m: minor to common spotty to patchy very dull fluorescence with common poor slow thin diffuse cut; 2) 1605-1609m: minor to common very faint dull fluorescence, minor poor weak cut; 3) 1174-1779m: common poor, slow, thin diffuse cut with no fluorescence (in a tight dolomite); and 4) 1850-1861m: minor to common dull to moderate yellow fluorescence, minor to common poor, slow thin streaming & diffuse cut.

A number of fair gas shows were recorded during the drilling of the Mattson; however, most of these were thin (i.e., 1-3 metres). One good Mattson gas show occurred in the upper Mattson @ 1511-1515m where ~1700 units of gas were recorded. A number of DSTs run in the Mattson produced excellent results and flow rates are listed below (see attached DST reports for details); 1) DST #1 (1682-1691m – M2b Zone): ~21 million ft^3/day; 2) DST #4 (1717-1738m – M3 Zone): ~16 million ft^3/day; and 3) DST #5 (1738-1759m – M3 Zone): ~11 million ft^3/day. The latter two DSTs were initially planned as a single 21m test (i.e., DST #3: 1730-1751m); however the packer seat failed during the preflow on two attempts. A decision was made to attempt the test in two stages without coming out of the hole by alternately setting top & bottom packers on a tight 2m interval at 1738m near the middle of the interval. The tight interval appears to separate two sections with good porosity and gas crossover at this point; however, it is possible that the two porous intervals are in communication regionally and may actually only represent a single reservoir. There were some negative indicators associated with the above test intervals that warrant further mention. There were no significant gas shows on the gas detectors when the intervals were drilled through, although the section was drilled only marginally overbalanced. Furthermore, induction curves showed invasion profiles and low resistivities more consistent with wet zones. The lack of drilled gas shows and unusual log characteristics for these excellent pay zones is problematic.

Two other DSTs were run in the Mattson with variable results; 1) DST #2 (1643-1648m – M2a Zone): ~1.3 million ft^3/day and 2) DST #6 (1625-1632m – M1 Zone); no gas to surface. It should be noted that there are some other short intervals in the Mattson that indicate economic potential on logs that were not tested due to time constraints and operational considerations.

CONCLUSION: The Mattson has numerous fair to good reservoir-quality intervals at this locality and a number of fair to occasionally good gas responses on gas detectors. Drill stem testing confirms excellent gas rates for the formation from multiple zones. This formation is capable of excellent economic production at this location and has good to excellent potential in the region.

LITHOLOGICAL DESCRIPTIONS

PARAMOUNT ET AL FORT LIARD NWT N-01
300/N-01-60-10-123-15/00

495-1475m logged by Byron Neu

495-500 **SHALE:**, dark gray, fissile, occasional blocky to sub blocky, partly micromicaceous, silty, firm to soft, trace siltstone stringers, white to light gray, quartz, salt and pepper, consolidated, silica cement, minor calcareous cement, tight.

500-510 **SHALE:**, light to medium gray, blocky, hard, occasional sub fissile, white/yellow floating chert pebbles, common cement from surface casing, trace siltstone.

510-520 **SHALE:**, medium to dark gray, blocky to sub fissile, moderately firm, micromicaceous, waxy texture, trace white chert fragments.

520-530 **SHALE:**, medium gray, blocky to minor fissile, rare argillaceous grained, firm, micromicaceous, rare floating white chert fragments.

530-535 **SHALE:**, medium gray, blocky to minor fissile, rare argillaceous grained, firm, micromicaceous, rare floating white chert fragments, thin siltstone lams, light brown, poor cemented, soft to friable, trace coal, black, shiny, anthracite.

535-540 **SHALE:**, medium gray, blocky to minor fissile, rare argillaceous grained, firm, micromicaceous, rare floating white chert fragments, thin siltstone lams, light brown, poor cemented, soft to friable.

540-545 **SHALE:**, medium gray, sub fissile to blocky, soft to friable, micromicaceous.

545-550 **SHALE:**, medium gray, sub fissile to blocky, soft to friable, micromicaceous, minor medium brown argillaceous grained.

550-555 **SHALE:**, medium gray, blocky, occasional sub fissile, faintly micromicaceous, moderately hard, earthy texture, occasional floating argillaceous grained, rare floating black chert grained.

555-560 **SHALE:**, medium gray, blocky, occasional sub fissile, faintly micromicaceous, moderately hard, earthy texture, occasional floating argillaceous grained, rare floating black chert grained, trace siltstone stringers, medium gray, occasional green/yellow chert fragments.

560-575 **SHALE:**, medium to dark gray, blocky to occasional sub fissile, moderately hard to firm, micromicaceous, slightly earthy texture,

575-585 **SILTSTONE:**, medium gray, quartzose, consolidated, common dark specks, salt and pepper, silica cement, minor calcareous cement, trace glauconitic, firm to well cemented, interbed shale as above.

585-590 **SILTSTONE:**, dark gray, quartzose, consolidated, common dark specks, salt and pepper, silica cement, minor calcareous cement, trace glauconitic, firm to well cemented, grading to shale as above.

590-600 **SILTSTONE:**, medium to dark gray, quartzose. common micromicaceous, well cemented, silica cement, trace calcareous cement, local glauconitic grained, shale, medium gray, silty, blocky, firm, micromicaceous, trace argillaceous grained.

600-605 **SILTSTONE:** as above, grading to shale, medium gray, sub fissile to blocky, moderately hard, micromicaceous, trace floating argillaceous grained.

605-625 **SILTSTONE:**, light to medium gray, grading to shale, consolidated, poor cemented, quartzose, rare dark specks, common glauconitic grained, calcareous to silica cement, argillaceous comp to matrix, shale stringers, medium gray, blocky, firm, very common micromicaceous, floating white argillaceous grained.

625-635 **SILTSTONE:**, as above, **SANDSTONE:** stringers, white to light gray, consolidated, poor cemented, clear to frosted quartz grained, occasional dark chert grained, very fine grained, well sorted, sub r to sub angular, calcareous to silica cement, argillaceous comp to matrix, very poor visual porosity, tight no shows, shale stringers as above.

635-645 **SANDSTONE:**, white to light gray, part consolidated, poor cemented, clear to frosted quartz grained, occasional dark chert grained, very fine grained grading to fine grained, well sorted, sub r to sub angular, calcareous to silica cement, argillaceous comp to matrix, very poor visual porosity, tight no shows, shale stringers, medium gray, rare carbonaceous.

645-650 **SANDSTONE:**, white, consolidated, poor cemented, trace scattered dark specks, clear to frosted quartz grained, very fine to fine grained, common fine grained, well sorted, sub r to sub angular, calcareous to silica cement, argillaceous matrix, common glauconitic, poor visual porosity, tight no shows, silty in part, shale in part.

650-660 **SANDSTONE:**, as above, poor cemented, part unconsolidated.

660-680 **SILTSTONE:**, medium to dark gray, quartzose, common micromicaceous, well cemented, silica cement, trace calcareous cement, local glauconitic grained, shale, medium gray, silty, blocky, firm, micromicaceous, trace argillaceous grained, **SANDSTONE:** stringers as above.

680-695 **SHALE:**, medium to dark gray, blocky to occasional sub fissile, moderately hard to firm, micromicaceous, slightly earthy texture, **SILTSTONE:**, medium gray, quartzose, consolidated, common dark specks, salt and pepper, silica cement, minor calcareous cement, trace glauconitic, firm to well cemented, interbed shale as above.

695-700 **SHALE:**, well interbed siltstone, shale medium gray blocky, occasional sub fissile, micromicaceous soft.

700-715 **SILTSTONE:**, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous. poor visual porosity, tight, no shows, Shale, medium to dark gray, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty.

715-725 **SHALE:**, dark gray to black, sub platy to sub blocky, firm, common mica flakes, rarely slightly silty.

725-735 **SHALE:**, dark gray, very firm to local hard, sub blocky to sub platy, moderately micromicaceous, slightly silty with minor argillaceous siltstone lams and stringers, slightly sandy in minor part, light gray, very fine grained, and very silty, grading to silt in part, quartzose with common black brown specks, scattered glauconitic, well sorted, sub angular to angular, silica cement, minor calcareous cement, slightly argillaceous comp to matrix, tight no shows.

735-755 **SILTSTONE:**, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, Shale, medium to dark gray, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty, **SANDSTONE:** stringers, light gray, very fine grained, and very silty, grading to silt in part, quartzose with common black brown specks, scattered glauconitic, well sorted, sub angular to angular, common dolomite fragments, silica cement, minor calcareous cement, slightly argillaceous comp to matrix, tight no shows.

755-765 **SHALE:**, dark gray to black, blocky to sub fissile, common mica, very firm to hard, predominant very silty grading to silt, slightly silty in part, with common argillaceous, trace scattered glauconitic.

765-775 **SILTSTONE:**, as above, **SHALE:** as above, **SANDSTONE:**, light gray, very fine grained, and very silty, grading to silt in part, quartzose with common black brown specks, scattered glauconitic, well sorted, sub angular to angular, silica cement, minor calcareous cement, slightly argillaceous comp to matrix, tight no shows.

775-785 **SHALE:**, dark gray to very dark gray, blocky to occasional sub platy, moderately hard to hard, moderately micromicaceous, common silty, very silty in part, with increase minor to very argillaceous glauconitic siltstone lams and stringers, occasional floating clear/yellow calcite fragments.

785-800 **SHALE:**, as above, with siltstone as previously described becoming increasingly clean in part with decrease trace to minor scattered glauconitic, no visual porosity, no shows, occasional floating clear to frosted quartz pebbles.

800-810 **SHALE:**, with a very silty component, shale dark gray, very firm to hard, blocky to sub blocky, occasional platy to fissile, very common mica flakes, commonly very silty, very rare scattered glauconitic.

810-820 **SHALE:**, light to medium gray, blocky, rare sub fissile, very hard, crumbly, occasional micromicaceous flakes, rare white chert fragments, trace coal.

820-825 **SHALE:**, as previously described siltstone, white to light gray, common black specks, moderately glauconitic grained, very common mica flakes, rarely very argillaceous, clean in minor part, common argillaceous grained and lams, poor visual porosity, tight, no shows.

825-835 **SHALE:**, as above, siltstone as above. grading to sandstone, white to light gray, quartzose, trace scattered black pecks, moderately glauconitic, trace mica, very fine grained, well sorted, sub r to sub angular, silica cement, minor calcareous cement, argillaceous, trace floating quartz grained, poor visual porosity, tight, no shows.

835-850 SHALE:, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, trace floating calcareous fragments, occasional dolomite chips, scattered argillaceous grained.

850-860 SHALE:, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

860-865 SILTSTONE:, light gray to brown, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, light spotted oil stain, no cut, very faint white fluorescence, poor visual porosity, tight, scattered rare calcareous/dolomite fragments.

865-880 SHALE:, medium to dark gray, very firm, blocky, very rarely sub platy, slightly waxy to earthy texture, very common to very slightly argillaceous component, predominant slightly to moderately silty.

880-885 SHALE:, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes.

885-895 SHALE:, as above, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

895-905 SHALE:, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

905-910 SHALE:, dark gray to occasional black, blocky, commonly to very micromicaceous, very rarely to very carbonaceous, moderately hard, occasional soft.

910-915 SHALE:, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

915-925 SHALE:, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

925-945 SHALE:, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes.

945-960 SHALE:, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, scattered argillaceous grained.

960-972 SHALE:, with a very silty component, shale dark gray, very firm to hard, blocky to sub blocky, occasional platy to fissile, very common mica flakes, commonly very silty, very rare scattered glauconitic.

Scatter @ 972m MD -485.8m SS

972-982 **SILTSTONE:** grading to **SANDSTONE:**, white to light gray, clear to frosted quartz grained, with common black and dark brown specks, moderately glauconitic, silt to very fine grained, predominant very fine grained, well sorted, sub r to sub angular, very argillaceous in minor part, common silica cement, rare calcareous cement, moderately to well cemented, argillaceous comp to matrix, poor visual porosity, tight, no shows.

982-995 **SANDSTONE:**, as above, grading to siltstone and shale, dark gray to very dark gray, blocky to occasional sub platy, moderately hard to hard, moderately micromicaceous, common silty, very silty in part, with increase minor to very argillaceous glauconitic siltstone lams and stringers, light spotted oil stain, no cut, minor faint white fluorescence.

995-1000 No sample caught.

1000-1005 **SANDSTONE:**, medium to dark gray, consolidated, salt and pepper, common scattered dark specks, quartzose, very fine grained, occasional silt, well sorted, sub angular to angular, common glauconitic, shale stringers, medium gray, fissile to soft, silica cement, minor calcareous cement, moderately to poor cemented, silty, argillaceous comp to matrix, very poor visual porosity, tight, no shows

1005-1010 **SANDSTONE:**, as above, light spotted oil stain, slow brown cut, faint blue/yellow fluorescence, shale, trace carbonaceous.

1010-1020 **SANDSTONE:** as above, part unconsolidated, very silty, trace light chert grained, shale, very dark, common carbonaceous.

1020-1025 **SANDSTONE:**, light to medium gray, consolidated, scattered dark chert grained, clear to frosted quartz grained, common glauconitic grained, very fine grained, slightly silty, moderately sorted, sub r to sub angular, silica cement to minor calcareous cement, slightly argillaceous, tight, no shows, shale, stringers as above.

1025-1030 **SILTSTONE:**, medium to dark gray, quartz, minor dark specks, slightly glauconitic, common mica flakes, grading to very silty shale lams and stringers.

1030-1045 **SANDSTONE:**, medium to dark gray, consolidated, salt and pepper, common scattered dark specks, quartzose, very fine grained, occasional silt, well sorted, sub angular to angular, common glauconitic, shale stringers, medium gray, fissile to soft, silica cement, minor calcareous cement, moderately to poor cemented, silty, argillaceous comp to matrix, very poor visual porosity, tight, no shows

1045-1052 **SANDSTONE:**, light to medium gray, consolidated, scattered dark chert grained, clear to frosted quartz grained, common glauconitic grained, very fine grained, slightly silty, moderately sorted, sub r to sub angular, silica cement to minor calcareous cement, slightly argillaceous, tight, no shows, shale, stringers as above.

1052-1060 **SANDSTONE:** grading to siltstone, **SANDSTONE:** as above, **SILTSTONE:**, dark gray to brown, quartzose, with dark chert grained, common glauconitic grained, very argillaceous matrix, silica cement, minor calcareous cement, well cemented, poor visual porosity, tight, light spotted oil stain, no shows.

1060-1070 **SILTSTONE:**, with interbed shale, medium gray to brown, quartzose, common dark specks, mica flakes in silt and shale, common glauconitic grained, trace carbonaceous, very slightly to very argillaceous, occasional grading to silty lams and stringers.

1070-1080 **SILTSTONE:**, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, Shale, medium to dark gray, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty.

1080-1090 NO SAMPLE.

1090-1095 **SILTSTONE:**, m to dark gray, common dark specks, quartzose, trace mica flakes, silica cement, shale dark gray, soft, blocky to fissile, common carbonaceous, common pyrite.

1095-1105 **SILTSTONE:**, medium gray to brown, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments, **SHALE:** black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown, common pyrite.

1105-1115 **SILTSTONE:**, with interbed shale, medium gray to brown, quartzose, common dark specks, mica flakes in silt and shale, common glauconitic grained, trace carbonaceous, very slightly to very argillaceous, occasional grading to silty lams and stringers.

1115-1125 **SILTSTONE:**, medium gray to brown, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, minor spotted oil stain, no cut, light blue fluorescence, poor visual porosity, tight, scattered rare calcareous/dolomite fragments, **SHALE:** black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown, common pyrite.

1125-1130 **SILTSTONE:** as above.

1130-1135 **SILTSTONE:**, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, Shale, very black, soft carbonaceous, moderately firm, sub blocky to sub platy, micromicaceous, predominantly very silty, calcareous fragments, common pyrite.

Garbutt @ 1135m MD –648.8m SS

1135-1145 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, trace floating calcareous fragments, occasional dolomite chips, scattered argillaceous grained.

1145-1160 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

1160-1168 **SHALE:**, as above, grading to siltstone, dark gray, occasional light gray, very common glauconitic, trace minor scattered dark specks, silica cement to minor calcareous cement, well cemented, very slightly very argillaceous, poor visual porosity, tight, no shows, scattered rare calcareous/dolomite fragments.

1168-1185 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderate mica flakes.

1185-1190 **SHALE:**, black, blocky, very rarely sub fissile to fissile, hard, occasional brittle, moderately mica flakes, with common to very slightly calcareous argillaceous grained, rare limestone chips, brown.

1190-1195 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous, scattered argillaceous grained.

1195-1200 **SHALE:**, as above, grading to siltstone, **SILTSTONE:**, medium gray to brown, quartzose, common glauconitic grained, occasional colored floating chert pebbs, trace pyrite, silica cement, well cemented, minor argillaceous component to matrix, poor visual porosity, tight, no shows.

1200-1216 **SHALE:**, dark gray to black, fissile to platy, occasional blocky, moderately hard, brittle in part, occasional silty in part, siltstone stringers as above.

Garbutt Radioactive Marker @ 1216m MD –729.8m SS

1216-1220 **SHALE:**, medium to dark gray, blocky to occasional sub platy, slightly silty, moderately hard, micromicaceous.

1220-1230 **SHALE:**, dark gray to black, firm, occasional brittle, platy to sub platy, occasional blocky, trace mica flakes, very slightly silty in part, rare carbonaceous, argillaceous grained, floating disseminated pyrite, minor coal fragments minor silt.

1230-1235 **SHALE:**, medium gray, moderately hard to crumb, sub fissile to sub blocky, occasional fissile, slightly silt occasional argillaceous grained.

1235-1250 **SHALE:**, dark gray to black, firm, occasional brittle, platy to sub platy, occasional blocky, trace mica flakes, very slightly silty in part, rare carbonaceous, argillaceous grained, pyrite nodules, minor coal fragments minor silt.

1250-1252 **SHALE:**, dark gray, moderately hard, common brittle, fissile to sub fissile, rarely blocky, trace glauconitic, slightly silty, occasional argillaceous grained, trace pyrite nods, very rare siderite.

Chinkeh Siltstone @ 1252m MD -760.8m SS

1252-1254.4 **SHALE:** grading to siltstone, **SILTSTONE:**, medium gray to light brown, clear to frosted quartz grained, common scattered black specks, moderately firm, moderately cemented, silica cement to very minor calcareous cement, very poor visual porosity, tight, no shows, **SHALE:**, dark gray to brown, moderately hard, blocky, minor sub fissile, trace mica flakes, common argillaceous grained (bentonite), trace pyrite nods, increase very silty in minor part, Inc rare siderite nods.

Chinkeh Sandstone @ 1254.4m MD -763.2m SS

1254.4-1264 **SANDSTONE:**, white to light gray, consolidated, clear to frosted quartz grained, very minor glauconitic grained, common very minor black specks, very fine grained to occasional lower fine grained, well sorted, sub angular to angular, poor cemented, crumb, minor silica cement, common calcareous cement, argillaceous comp to matrix, poor visual porosity 3 to 6%, tight, no shows, shale stringers as above, siltstone stringers as above.

Triassic @ 1264m MD -772.8m SS

1264-1285 **SHALE:** with interbed siltstone, **SHALE:**, light to medium gray, occasional dark gray, rarely light brown to red, hard to brittle, fissile to sub fissile, minor blocky red brown shale, very rarely very micromicaceous, scattered pyrite nods, minor carbonaceous, rarely slightly silty, bentonite grained, **SILTSTONE:**, white to medium brown to predominant brown, clear to frosted quartz grained, occasional dark specks, moderately cemented, silica cement, minor argillaceous, poor visual porosity, tight no shows.

1285-1295 **SILTSTONE:**, medium gray to light brown, clear to frosted quartz grained, common scattered black specks, moderately firm, moderately cemented, silica cement to very minor calcareous cement, very poor visual porosity, tight, no shows, **SHALE:**, rusty brown, moderately hard, blocky, minor sub fissile, trace mica flakes, common argillaceous grained (bentonite), trace pyrite nods, increase very silty in minor part, increasingly rare siderite nods.

1295-1305 **SHALE:**, with interbed siltstone, **SHALE:**, light to medium gray, occasional dark gray, rarely light brown to red, hard to brittle, fissile to sub fissile, minor blocky red brown shale, very rarely very micromicaceous, scattered pyrite nods, minor carbonaceous, rarely slightly silty, bentonite grained, **SILTSTONE:**, white to medium brown to predominant brown, clear to frosted quartz grained, occasional dark specks, moderately cemented, silica cement, minor argillaceous, poor visual porosity, tight no shows.

1305-1315 **SILTSTONE:** grading to **SHALE:**. **SILTSTONE:**, medium gray to light brown, clear to frosted quartz grained, common scattered black specks, moderately firm, moderately cemented, silica cement to very minor calcareous cement, very poor visual porosity, tight, no shows, **SHALE:**, rusty brown, moderately hard, blocky, minor sub fissile, trace mica flakes, common argillaceous grained (bentonite), trace pyrite nods, increase very silty in minor part, increasingly rare siderite nods.

1315-1335 **SHALE:**, medium to dark gray 60%, red to brown 40%, sub fissile to sub blocky, occasional fissile, occasional blocky, moderately hard to hard, occasional brittle, trace mica flakes, silty with argillaceous lams and siltstone stringers, rare scattered carbonaceous, floating argillaceous grained, **SILTSTONE:** stringers, white to light gray, consolidated, clear to frosted quartz grained, minor scattered black specks, trace intergranular pyrite, well cemented, silica cement, minor dolomite cement, poor visual porosity, tight no shows.

1335-1350 SH, medium to dark gray 50%, red to brown 50%, sub fissile to sub blocky, occasional fissile, occasional blocky, moderately hard to hard, occasional brittle, trace mica flakes, silty with argillaceous lams and siltstone stringers, rare scattered carbonaceous, floating argillaceous grained, **SILTSTONE:** stringers, white to light gray, consolidated, clear to frosted quartz grained, minor scattered black specks, trace intergranular pyrite, well cemented, silica cement, minor dolomite cement, poor visual porosity, tight no shows.

1350-1368 **SHALE:**, medium to dark gray, becomming more red to brown, upper to 70%, sub fissile to sub blocky, occasional fissile, occasional blocky, moderately hard to hard, occasional brittle, trace mica flakes, silty with argillaceous lams and siltstone stringers, rare scattered carbonaceous, floating argillaceous grained, **SILTSTONE:** stringers, white to light gray, consolidated, clear to frosted quartz grained, minor scattered black specks, trace intergranular pyrite, well cemented, silica cement, minor dolomite cement, poor visual porosity, tight no shows.

Belloy @ 1368m MD -876.8m SS

1368-1376 **SANDSTONE:** light to medium brown in part, medium to dark brown grey in part, medium to dark red in part, lower fine to lower medium grained, trace to minor upper very fine grains, common frosted to clear quartz, lesser varicolored lithic grains, moderately glauconitic, variably clean to very argillaceous (predominantly lithic wacke to sub wacke; sublitharenite grading to litharenite in part), predominantly moderately to moderately well sorted, sub angular to subrounded, moderately to moderately poorly indurated, siliceous and dolomitic cement, trace to locally abundant silty argillaceous to locally phosphatic to bituminous matrix, locally common ferruginous stain, trace to minor quartz overgrowths, variably disaggregated in minor part, predominantly tight to poor effective porosity with minor fair streaks, trace spotty oil stain, no fluorescence, common weak very thin diffuse cut, trace cherty mudstone grading chert.

1376-1399 **CHERT:** with minor interbedded **SANDSTONE:**; **CHERT:** dark grey to black, commonly glauconitic, granular to occasional massive, very dense becoming crystalline in part, minor calcareous/dolomite cement, poor visible porosity, very tight, no shows, minor shale and siltstone stringers; **SANDSTONE:** medium to dark brown, similar to above becoming predominantly cherty grading to sandy chert in part, predominantly tight, no shows.

1399-1405 **CHERT:**, light brown to tan, sub transparent to transparent, hard to dense, occasional crumb, common very massive, occasional very fractured, calcareous cement in fractures, minor fracture porosity, very poor porosity, no shows, siltstone, shale stringers as above.

Fantasque @ 1405m MD -918.8m SS

1405-1415 **CHERT:**, light to medium gray, occasional light brown to tan, predominant very hard dense, sub transparent to rare transparent, minor scattered glauconitic grained, very rare granular texture, common fracture surfaces, calcareous and dolomite infill, minor fracture porosity and intergran porosity, tight, no shows, minor scattered siltstone and shale, predominant cave ins.

1415-1430 **CHERT:**, similar to above, becoming increasingly dark gray to black, common dull to very hard, slightly silty with occasional granular texture, rare fracture surfaces, very rare calcareous dolomite infill, trace argillaceous grained, common mica flakes, floating pyrite nods.

1430-1435 **CHERT:**, light brown to tan, sub transparent to translucent, hard to dense, occasional crumb, common very massive, occasional very fractured, calcareous cement in fractures, minor fracture porosity, very poor porosity, no shows, siltstone, shale stringers as above, argillaceous grained.

1435-1440 **CHERT:**, light to medium gray, occasional light brown to tan, predominant very hard dense, increasing granular texture, sub transparent to rare translucent, minor scattered glauconitic grained, very rare granular texture, common fracture surfaces, calcareous and dolomite infill, minor fracture porosity and intergranular porosity, tight, no shows, minor scattered siltstone and shale, rare intergranular pyrite.

1440-1445 **CHERT:**, sim to above, becoming increasingly dark gray to black, common dull to very hard, slightly silty with occasional granular texture, rare fracture surfaces, very rare calcareous dolomite infill, trace argillaceous grained, common mica flakes, floating pyrite nods.

1445-1455 **CHERT:**, medium brown to light gray, shinny glassy, sharp fractured shards, cloudy to translucent, rare clear shards, very fractured, very hard to dense, occasional milky quartz blebs to mots, trace pyrite, bitumen shale scattered throughout, rare argillaceous grained, very poor fractured porosity, tight, no shows.

1455-1465 **CHERT:**, white to light brown, slightly spicular in part, very hard to dense, common chalky white quartz blebs to mots, very fractured, massive shards, brittle glassy texture, common spotted bitumen and oil stain, very poor visual fracture porosity, no cut, slow faint streaming white fluorescence, trace pyrite, trace argillaceous grained, rare dolomite to siltstone stringers.

1465-1475 **CHERT:**, as above with very common dolomite stringers, medium brown, sucrosic texture, common interbed shale, blocky, occasional carbonaceous, siltstone stringers, grading to granular chert, common pyrite, argillaceous grained, tight, no shows.

1475m to TD logged by Gary Johannson

Kindle at 1475m MD -983.8m SS

1475-1486 **SILTSTONE:** dark brown, quartzose, hard, variably cherty in part, commonly slightly argillaceous, moderately to well indurated, very dolomitic to slightly calcareous occasionally grading to silty dolostone, sandy in part, trace argillaceous partings, no visible porosity, trace very dull fluorescence, common very slow weak blooming cut, minor thin interbedded **SHALE:**.

1486-1496 **SILTSTONE:** medium to dark brown, quartzose, trace to minor fossil fragments, very rare glauconite, slightly argillaceous in part, trace argillaceous partings, poorly to moderately indurated, abundant calcareous to dolomitic cement, commonly variably sandy grading to very fine sandstone in part, predominantly no visible porosity, trace very dull questionable fluorescence, minor to common very weak slow cut.

Mattson at 1496.0m MD -1004.8m SS

1496-1500 **SANDSTONE:** buff to light brown, very fine grained and silty, very quartzose, trace to minor dark lithic grains, moderately well sorted, angular to sub angular, predominantly clean, slightly argillaceous in part, commonly variably silty grading to siltstone in part, poor to moderately indurated, abundant calcareous cement, predominantly no visible porosity, common very dull yellow green fluorescence, trace to minor very weak slow thin cut.

1500-1505 **SILTSTONE:** with minor interbedded **SANDSTONE:**; **SILTSTONE:** predominantly medium to dark brown, quartzose as above with decreasing trace dark lithic grains, very rare glauconite, rare to trace bioclasts, commonly slightly to locally moderately argillaceous, clean in part, trace argillaceous partings and laminations, variably sandy in part locally grading to sandstone, poor to moderately indurated, abundant calcareous to dolomitic cement, no visible porosity, no shows.

1505-1511 **SANDSTONE:** and **SILTSTONE:**; **SANDSTONE:** light brown to buff, very fine grained and silty, quartzose as above, increasing trace to locally minor bioclast, trace dark chert and lithic grains, predominantly variably silty grading to siltstone in part, poorly to moderately indurated, very abundant calcareous cement, commonly no visible porosity, minor poor porosity, minor to common very dull fluorescence, common poor slow thin cut; minor **SHALE:** medium green, firm, sub platy, fissile faintly micromicaceous, slightly sub waxy.

1511-1520 **SANDSTONE:** with interbedded **SILTSTONE:**; **SANDSTONE:** variable: very light grey, fine to very fine grained and well sorted in part, very fine to upper medium grained in part with trace lower coarse grains and moderately disaggregated, moderately sorted, angular to rounded, clean, quartz arenite with trace chert grains, trace limestone/bioclastic grains, rare glauconite, predominantly poorly indurated and variably friable to crumbly, abundant calcareous to slightly dolomitic cement, minor patchy mixed siliceous and calcareous cement, minor to common quartz overgrowths, common variable poor to fair porosity in consolidated cuttings, tight to 2% in part, infer common fair porosity, abundant moderate pale yellow fluorescence, trace very weak thin cut; **SILTSTONE:** light to medium brown, quartzose, trace to minor fossil fragments, sandy in part grading to sandstone, clean to slightly argillaceous, poorly to moderately indurated, abundant calcareous cement, no visible porosity.

1520-1524 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, variably silty grading to siltstone in part, quartz arenite, trace lithic and rare glauconite grains, moderately to poorly indurated, abundant calcareous cement, common tight to poor porosity, minor fluorescence and trace questionable cut; **SHALE:** light green grey, medium grey, commonly variably silty and micromicaceous grading to argillaceous dolomitic siltstone in part, commonly slightly dolomitic.

1524-1530 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, trace lithic grains, rare glauconite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, common to abundant calcareous cement, minor to common quartz overgrowths, variable porosity: common tight to poor porosity, lesser 7 to streaky 10% porosity, minor spotty dull fluorescence, minor weak streaming and faint diffuse cut; **SHALE:** medium grey as above.

1530-1534 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** as above with slightly decreasing porosity, no shows; **SHALE:** as above.

1534-1540 **SHALE:** with interbedded **SANDSTONE:**; **SHALE:** dark grey to black, firm to hard, sub platy to sub blocky, sub fissile, predominantly variably silty and micromicaceous, carbonaceous to slightly bituminous; **SANDSTONE:** light to medium grey, predominantly very fine grained and silty locally grading to siltstone, very fine to fine grained in minor part, quartz arenite, clean to variably argillaceous in part, well sorted, angular to subrounded, moderately to poorly indurated, common to abundant calcareous cement, predominantly tight to 3% porosity, no shows, minor white to buff silty MARL stringers.

1540-1545 **SANDSTONE:** light grey, very fine to fine grained, variably silty, quartz arenite, trace lithic grains, rare glauconite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, abundant calcareous cement, minor quartz overgrowths, predominantly tight to 3% porosity, no shows, minor interbedded **SHALE:** as above.

1545-1549 **SANDSTONE:** very similar to above, light grey, very fine to fine grained, variably silty, quartz arenite, trace lithic grains, rare glauconite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, abundant calcareous cement, minor quartz overgrowths, common tight to 3% porosity, minor to locally common poor to streaky fair porosity, no shows, minor interbedded **SHALE:** as above.

1549-1558 **SHALE:** with interbedded **SANDSTONE:**; **SHALE:** dark grey to black, firm to slightly hard, sub platy to sub blocky, commonly sub fissile, commonly variably silty and faintly micromicaceous with occasional siltstone laminations, smooth in part, commonly variably carbonaceous to slightly bituminous; **SANDSTONE:** light grey, very fine grained, minor fine grains, variably silty grading to minor siltstone laminations to stringers, quartz arenite with trace dark lithic grains, well sorted, angular to subrounded, predominantly clean, slightly argillaceous in part, predominantly moderately indurated, poorly indurated in part, common to abundant calcareous cement, minor spotty to patchy siliceous cement, minor quartz overgrowths, predominantly no visible porosity, no shows.

1558-1572 **SANDSTONE:** similar to above, light grey, very fine grained, increasing minor fine grains, variably silty, quartz arenite, slightly increasing trace to minor predominantly dark lithic grains, well sorted, angular to subrounded, clean, commonly poorly indurated and crumbly to friable, moderately indurated in part, common calcareous and siliceous cement, trace quartz overgrowths, predominantly tight to 2% porosity, trace to minor streaky poor porosity, no shows, minor thin shale interbeds and stringers as above.

1572-1580 **SANDSTONE:** pale tan to light grey, very fine to fine grained, slightly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, variably disaggregated in part, siliceous cement with lesser to minor spotty calcareous to dolomitic cement, minor to locally common quartz overgrowths, common tight to 3% porosity, minor to locally common poor to streaky fair porosity, no shows.

1580-1582 **SHALE:** dark grey to black, firm to slightly hard, sub platy to sub blocky, commonly sub fissile, commonly variably silty and faintly micromicaceous with occasional siltstone laminations, commonly variably carbonaceous to slightly bituminous.

1582-1590 **SANDSTONE:** pale tan, very fine to fine grained, slightly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, decreasingly disaggregated in minor part, siliceous cement with lesser to minor spotty calcareous to dolomitic cement, increasing minor to locally common quartz overgrowths, common tight to 3% porosity, common poor to very poor porosity, trace streaky fair porosity, minor very faint questionable fluorescence and cut, trace shale stringers.

1590-1595 **SANDSTONE:** similar to above, pale tan, very fine to fine grained, increasingly silty, quartz arenite, clear quartz with trace lithic grains, well sorted, angular to subrounded, clean, poorly indurated and friable to crumbly, siliceous cement with lesser spotty calcareous to dolomitic cement, decreasing minor quartz overgrowths, predominantly tight to 3% porosity, no shows, minor interbedded dark grey to black **SHALE:** as above, trace silty medium grey limestone stringers.

1595-1605 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, trace dark chert and lithic grains, well sorted, angular to subrounded, clean, commonly poorly indurated and variably crumbly to friable, moderately indurated in part, common to abundant calcareous cement, minor siliceous cement, minor quartz overgrowths, predominantly tight to 3% porosity, no shows; **SHALE:** dark grey to black, platy to sub platy, fissile to sub fissile, commonly slightly silty and micromicaceous, smooth in part, phosphatic in part, variably carbonaceous in part, minor very dark brown argillaceous silty limestone stringers occasionally grading to calcareous shale.

1605-1609 **SANDSTONE:** pale buff to light grey, very fine to fine grained, slightly silty, quartz arenite, trace dark lithic grains, very rare glauconite, well sorted, angular to subrounded, clean, commonly poorly indurated and friable to crumbly, moderately indurated in part, siliceous and minor spotty to streaky dolomitic cement, locally common quartz overgrowths, variable porosity: common tight to 3%, common variable fair to poor (4 to 9%) porosity, minor to common very faint dull fluorescence, minor poor weak cut.

1609-1613 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, poorly indurated and crumbly in part, moderately indurated in part, common to abundant dolomitic to calcareous cement, minor siliceous cement, predominantly tight to 3% porosity, no shows; **SHALE:** as above.

1613-1622 **SANDSTONE:** light grey, lower fine to upper medium grained, trace upper very fine and coarse grains, quartz arenite, abundant frosted quartz with trace to minor varicolored chert and lithic grains, moderately to moderately well sorted, rounded to sub angular, clean, predominantly poorly to very poorly indurated and very friable, commonly disaggregated, minor to locally common spotty dolomitic to slightly calcareous cement, trace to minor quartz overgrowths, predominantly variable fair to poor porosity in consolidated cuttings infer predominantly fair porosity, minor very faint questionable fluorescence, trace to minor very weak very thin cut.

1622-1625 **SANDSTONE:** with **SHALE:**; **SANDSTONE:** light grey, very fine to fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, poorly to moderately indurated, siliceous cement, trace to minor quartz overgrowths, tight to poor porosity, no shows; **SHALE:** dark grey to black, sub platy to sub platy, variably silty in part, variably carbonaceous.

1625-1631 **SANDSTONE:** very light brown, very fine to fine grained, variably silty, quartz arenite, increasing trace to minor dark chert and lithic grains, well sorted, angular to subrounded, clean, predominantly poorly indurated and crumbly to friable, common to locally abundant dolomitic cement, minor siliceous cement, trace to minor quartz overgrowths, predominantly poor to tight porosity, minor streaky fair porosity, no shows.

1631-1641 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light grey to light brown, predominantly very fine grained and variably silty occasionally grading to siltstone, very fine to fine grained in minor part, quartz arenite, well sorted, angular to subrounded, predominantly clean, slightly argillaceous in part, poorly indurated and crumbly in part, moderately to well indurated in part, common to abundant dolomitic cement, minor to locally common streaky siliceous cement, trace to locally minor interstitial pyrite, predominantly no visible porosity, no shows; **SHALE:** dark grey to black, firm to slightly hard, platy to sub platy, sub fissile, commonly slightly to locally moderately silty, carbonaceous to slightly bituminous, minor argillaceous siltstone stringers to laminations.

1641-1646 **SANDSTONE:** very light grey, predominantly fine grained, minor lower medium and trace upper very fine grains, quartz arenite, clear to minor frosted quartz, trace chert and lithic grains, well sorted, angular to subrounded, minor rounded grains, clean, predominantly variably disaggregated, minor to common poorly indurated and friable consolidated cuttings, minor spotty to patchy siliceous and calcareous to dolomitic cement, abundant quartz overgrowths, common variable 7 to 11% porosity with minor poor streaks in consolidated cuttings, infer common fair porosity, no shows.

1646-1650 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** as described below with predominantly tight to 3% porosity, disaggregated in minor part, no shows; **SHALE:** black, firm, platy to sub platy, fissile, slightly to moderately silty in part, smooth and sub waxy in part grading to claystone, commonly variably carbonaceous to slightly bituminous with very poor faint cut, trace pyrite nodules.

1650-1655 **SANDSTONE:** light grey, very fine to fine grained, trace lower medium grains, slightly silty, quartz arenite, clear to minor frosted quartz, trace chert and lithic grains, moderately well sorted, angular to subrounded, minor rounded grains, clean, predominantly poorly indurated and crumbly to friable, variably disaggregated in part, predominantly siliceous cement, minor spotty to streaky dolomitic cement, minor to locally common quartz overgrowths, predominantly tight to 3% porosity with minor poor to streaky fair porosity in consolidated cuttings, infer common poor to fair porosity, no shows.

1655-1661 **SANDSTONE:** pale tan to light grey, very fine to fine grained, slightly silty, quartz arenite, clear to minor frosted quartz, trace chert and lithic grains, moderately well to well sorted, angular to subrounded, minor rounded grains, clean, predominantly poorly indurated and crumbly to friable, disaggregated in minor part, predominantly siliceous cement, minor spotty to streaky dolomitic cement, decreasing minor quartz overgrowths, predominantly tight to 3% porosity with minor poor to streaky fair porosity, no shows, minor thin interbedded shale as above.

1661-1669 **SANDSTONE:** buff to very light grey, fine to very fine grained, minor lower medium grains, quartz arenite, clear to frosted quartz with trace varicolored chert and lithic grains, moderately well to well sorted, angular to rounded, clean, predominantly variably disaggregated, minor to common poorly indurated and friable consolidated cuttings with dolomitic and siliceous cement, common quartz overgrowths, predominantly variable poor porosity in consolidated cuttings, infer common fair to poor porosity, no shows, trace to minor thin shale stringers.

1669-1675 **SANDSTONE:** buff to very light grey, fine to very fine grained with minor lower medium grains in part, locally common scattered coarse and upper medium varicolored chert and quartz grains, quartz arenite locally grading to sublitharenite, clear to frosted quartz with trace varicolored chert and lithic grains, moderately well to locally moderately sorted, angular to rounded, clean, predominantly poorly indurated and crumbly to friable with common dolomitic and lesser to minor patchy siliceous cement, decreasingly disaggregated in part, minor quartz overgrowths, common tight to very poor porosity, minor streaky fair to poor porosity, no shows, trace thin shale interbedded to stringers.

1675-1683 **DOLOMITE:** with interbedded **CHERT:**; **DOLOMITE:** buff, cryptocrystalline to microcrystalline, clean, predominantly hard dense and variably cherty, firm and crumbly in minor part, trace stylolite, no visible porosity, trace spotty dull fluorescence, trace questionable cut; **CHERT:** pale grey, sub translucent, very hard, dense, brittle, clean, slightly to moderately dolomitic in part occasionally grading to very cherty dolomite, tight, no shows.

1683-1689 **SANDSTONE:** pale buff, lower fine to upper medium grained, minor coarse and trace upper very fine grains, sublitharenite, abundant frosted quartz and minor varicolored chert and lithic grains, moderately sorted, sub angular to rounded, clean, predominantly disaggregated, trace consolidated cuttings with dolomitic cement and variable poor to fair porosity, infer predominantly fair to good porosity, trace spotty yellow fluorescence, no cut.

1689-1695 **SANDSTONE:** buff, very fine to fine grained, slightly silty, trace scattered medium grains, quartz arenite, trace chert and lithic grains, moderately well sorted, angular to subrounded, minor rounded grains, poorly to moderately indurated, abundant dolomitic to slightly calcareous cement, predominantly tight to 2% porosity, no shows, minor interbedded dolomite as above becoming locally silty to sandy in part, decreasingly cherty, minor chert.

1695-1703 SANDSTONE: with interbedded DOLOMITE:; SANDSTONE: mixed: as above in part, as below in part; DOLOMITE: light to medium brown, cryptocrystalline to microcrystalline, firm to hard, commonly dense, variably cherty in part, trace to minor chert nodules to stringers, variably sandy in part locally grading to very dolomitic sandstone, minor locally relict clastic texture, very rare bitumen stained vugs, minor very faint fluorescence, no cut.

1703-1707 SANDSTONE: light grey, lower fine to lower medium grained, minor upper medium and trace coarse grains, sublitharenite grading to subquartzarenite, abundant frosted to minor clear quartz with minor varicolored chert and lithic grains, moderately sorted, subangular to rounded, clean, predominantly disaggregated, rare consolidated cuttings with siliceous and dolomitic cement, trace to minor quartz overgrowths, infer predominantly fair porosity, no shows.

1707-1715 SANDSTONE: predominantly as above, minor buff to light grey, very fine to fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, poorly to moderately indurated, abundant dolomitic cement, predominantly tight to 2%, no shows; minor thin interbedded dolomite as above.

1715-1718 No sample.

1718-1725 SANDSTONE: light grey, lower fine to lower medium grained, minor upper very fine grains, quartz arenite, frosted to clear quartz with trace varicolored chert and lithic grains, well sorted, angular to subrounded, minor rounded grains, clean, predominantly disaggregated, minor to common poorly to moderately indurated cuttings with common to abundant dolomitic and lesser to minor siliceous cement, minor quartz overgrowths, predominantly tight to 2% porosity in consolidated cuttings, infer common fair to poor porosity, trace to minor very dull fluorescence, trace questionable cut; minor interbedded SILTSTONE: medium brown, quartzose, variable argillaceous matrix, very dolomitic with scattered dolomite rhombs locally grading to silty dolostone, sandy in part occasionally grading to dolomitic sandstone laminations, trace dolomite as above.

1725-1731 SANDSTONE: buff to light grey, very fine to fine grained, commonly variably silty in part, quartz arenite locally grading to sublitharenite (with dolomite grains), well sorted, angular to subrounded, clean, variably poorly to well indurated with abundant dolomitic cement, occasionally grades to sandy dolomite stringers, disaggregated in part, no visible porosity, minor spotty yellow fluorescence, minor very weak cut.

1731-1738 SANDSTONE: with minor interbedded SHALE:; SANDSTONE: light grey, upper very fine to lower medium grained, minor upper medium grains, quartz arenite, frosted to minor clear quartz, trace chert and lithic grains, moderately well sorted, angular to rounded, clean, predominantly disaggregated, trace poorly indurated and very friable cuttings with minor spotty siliceous cement, trace to minor quartz overgrowths, infer predominantly fair to streaky good porosity, minor spotty very dull fluorescence, trace faint questionable cut; SHALE: dark grey to black, platy to sub blocky, sub fissile, slightly to moderately silty in part, carbonaceous to bituminous, minor smooth and sub waxy grading to claystone.

1738-1749 **SANDSTONE:** light grey, upper very fine to lower medium grained, minor upper medium grains, quartz arenite, frosted to minor clear quartz, trace varicolored chert and lithic grains, moderately well sorted, sub angular to rounded, clean, predominantly disaggregated, minor poorly indurated and very friable cuttings with minor spotty siliceous cement, minor quartz overgrowths, predominantly variable fair porosity in consolidated cuttings, infer predominantly fair to streaky good porosity, trace to minor spotty dull fluorescence, trace very weak questionable cut.

1749-1755 **SANDSTONE:** light grey to light brown, very fine to fine grained, variably silty in part, quartz arenite, well sorted, angular to subrounded, clean, commonly moderately to moderately poorly indurated in part, very well indurated in part, common to locally abundant siliceous cement, lesser to minor dolomitic cement, trace argillaceous partings, predominantly no visible porosity, minor streaky poor porosity, minor spotty to patchy moderate yellow fluorescence, minor poor slow blooming cut, minor dolomitic siltstone stringers, trace to minor shale stringers.

1755-1760 **SANDSTONE:** buff to pale brown, very fine to fine grained, trace scattered coarse chert grains, commonly slightly silty, quartz arenite, clear to frosted quartz, well sorted, angular to subrounded, minor rounded grains, clean, poorly indurated and crumbly in part, moderately to well indurated in part, disaggregated in part, dolomitic and siliceous cement, minor quartz overgrowths, common poor to trace streaky fair porosity, tight in part, no shows.

1760-1766 **SANDSTONE:** with minor interbedded **SHALE:**; **SANDSTONE:** as above becoming decreasingly disaggregated in part with trace pyrobituminous partings (possible stylolites), no shows; **SHALE:** black, firm to hard, brittle in part, platy to sub blocky, predominantly smooth and very faintly micromicaceous, slightly silty in part, carbonaceous to bituminous with common poor cut, trace slickensides.

1766-1770 **SANDSTONE:** similar to above becoming commonly variably disaggregated, common consolidated cuttings with increasing siliceous cement, decreasing minor streaky to spotty dolomitic cement, trace argillaceous and pyrobituminous partings, tight in part, infer common poor to fair porosity, minor to common very faint fluorescence, minor slow weak thin cut, minor interbedded **SHALE:** as above.

1770-1774 **SANDSTONE:** light grey to light brown, very fine to fine grained, variably silty in part, quartz arenite, well sorted, angular to subrounded, clean, commonly moderately to moderately poorly indurated in part, very well indurated in part, common to locally abundant siliceous cement, lesser to minor dolomitic cement, trace argillaceous partings, predominantly no visible porosity, minor streaky poor porosity, no shows.

1774-1778.5 **DOLOMITE:** with interbedded **SHALE:**; **DOLOMITE:** medium to dark brown, commonly firm to soft and crumbly, predominantly common to abundant extremely fine to very fine rhombs in variable minor to abundant argillaceous matrix, trace to minor argillaceous partings, commonly variably silty to sandy grading to dolomitic siltstone/sandstone in part, hard dense and cryptocrystalline to microcrystalline in minor part, no visible porosity, no fluorescence, common poor slow thin diffuse cut; **SHALE:** as above, minor interbedded **SANDSTONE:** as above.

1778.5-1787 **SANDSTONE:** light grey, very fine to lower medium grained, minor upper medium and trace scattered coarse grains, subquartzarenite grading to sublitharenite, frosted to minor clear quartz with minor to locally common varicolored chert and lithic grains, minor medium to coarse grained litharenite lags, moderately to locally moderately poorly sorted, rounded to sub angular, clean, predominantly disaggregated, minor to common poorly consolidated and friable cuttings with minor to locally common spotty to patchy siliceous cement, trace spotty dolomitic cement, minor quartz overgrowths, rare milky quartz pore fill, rare spotty kaolin to illite, variable fair to poor porosity in consolidated cuttings, infer predominantly fair to good porosity, minor to common spotty very dull to moderate yellow to yellow green fluorescence, minor very faint cut.

1787-1789 **SHALE:** as above with interbedded **DOLOMITE:** as above.

1789-1795 **SANDSTONE:** light grey, upper very fine to upper coarse grained, sublitharenite, frosted to minor clear quartz, increasing minor to locally common chert and lithic grains, moderately poorly sorted, rounded to sub angular, clean, predominantly variably disaggregated, common poorly indurated and friable cuttings with spotty to patchy siliceous cement, minor quartz overgrowths, variable fair to streaky poor porosity in consolidated cuttings, infer predominantly fair to good porosity, minor spotty dull fluorescence, trace weak cut; **SANDSTONE:** #2 fine to very fine grained, minor medium grains, quartz arenite, medium well sorted, angular to subrounded, variably poorly to moderately indurated with siliceous and dolomitic cement, clean, predominantly tight to poor porosity, no shows.

1795-1799 **SANDSTONE:** with interbedded **SHALE:**; **SANDSTONE:** light to minor medium grey, very fine to fine grained, predominantly subquartzarenite, well sorted, angular to subrounded, predominantly clean, locally variably argillaceous in part, predominantly well to moderately indurated, common to abundant dolomitic cement in part, lesser to minor locally abundant siliceous cement, tight to 2% porosity, minor streaky poor porosity, no shows; **SHALE:** dark grey to black, platy to sub platy, fissile, predominantly smooth and faintly micromicaceous, carbonaceous to slightly bituminoous with minor very poor cut, minor green slightly sub waxy slightly dolomitic shale stringers.

1799-1807 **SANDSTONE:** buff, fine to very fine grained, slightly silty, quartz arenite, well sorted, angular to subrounded, clean, moderately indurated in part, poorly indurated and crumbly to friable in part, disaggregated in part, common to abundant dolomitic cement, minor to locally common quartz overgrowths, trace pyrobituminous partings (stylolites?), variable porosity in consolidated cuttings: common tight to 3%, common variable 5 to 10%, predominantly no fluorescence, minor very faint cut, minor interbedded **DOLOMITE:** light to medium grey brown, mottled, cryptocrystalline to microcrystalline, firm to hard, common relict clastic texture, variably sandy in part grading to very dolomitic sandstone, trace stylolites, tight, common spotty yellow fluorescence, trace questionable cut.

1807-1815 **SANDSTONE:** buff, very fine to fine grained, commonly variably silty, quartz arenite, rare fossil fragments, well sorted, angular to subrounded, clean, predominantly moderately to well indurated, poorly indurated and crumbly in minor part, disaggregated in minor part, abundant dolomitic cement, trace to minor quartz overgrowths, rare to trace pyrobituminous partings (stylolites?), predominantly tight to 2% porosity, minor streaky poor porosity, no shows, minor dark brown silty rhombic dolomite: thin interbeds to stringers as previously described (i.e., 1774m), trace to minor siltstone stringers, trace shale stringers.

1815-1822 **SANDSTONE:** buff, fine to very fine grained, trace to minor lower medium grains, quartz arenite, clear to lesser frosted quartz with trace to locally minor dolomitic/bioclastic grains, moderately well to well sorted, rounded to angular, clean, disaggregated in part, variably poorly to moderately indurated with abundant dolomitic cement, friable in part, minor to locally common quartz overgrowths, variable porosity in consolidated cuttings: common tight to 2%, lesser to minor variable fair porosity, very faint questionable cut, very faint very thin cut.

1822-1825 **SANDSTONE:** very similar to above becoming slightly coarser and commonly disaggregated, subquartzarenite with minor dolomite/bioclastic grains, predominantly common to abundant dolomitic cement, minor siliceous cement, poorly to moderately indurated, common tight to poor porosity with minor fair streaks in consolidated cuttings, infer predominantly fair porosity, no fluorescence, trace questionable cut.

1825-1830 **SANDSTONE:** light grey to buff, very fine to fine grained, trace scattered lower medium grains, quartz arenite, slightly silty, trace siltstone stringers, well sorted, angular to subrounded, clean, trace slightly argillaceous, trace pyrobituminous partings, variably moderately poorly to well indurated, abundant dolomitic cement with lesser locally abundant siliceous cement, predominantly tight to 2% porosity, minor poor porosity, trace very dull fluorescence, trace questionable cut, trace shale stringers.

1830-1832 **SANDSTONE:** buff, predominantly fine grained, minor lower medium and lesser upper very fine grains, quartz arenite, moderately well sorted, rounded to sub angular, clean, commonly disaggregated, minor poorly consolidated and friable cuttings with spotty dolomitic and siliceous cement and predominantly fair porosity, infer predominantly fair to streaky good porosity, no fluorescence, trace faint questionable cut.

1832-1841 **SANDSTONE:** light grey to buff, predominantly very fine to fine grained, variably silty in part, quartz arenite, trace dolomitic grains, well sorted, angular to subrounded, minor rounded grains, clean, predominantly moderately to well indurated, poorly indurated and crumbly in minor part, disaggregated in minor part, predominantly common to abundant dolomitic cement, minor locally common siliceous cement, predominantly tight to 2% porosity, trace to minor poor porosity, minor dull fluorescence, no cut, trace dolomite stringers.

1841-1846 **SANDSTONE:** with interbedded **DOLOMITE:** and **SHALE:**; **SANDSTONE:** light grey to buff, predominantly very fine to lower medium grained, very fine to fine grained in part, quartz arenite grading to sublitharenite with locally minor dolomitic grains, moderately well sorted, rounded to angular, commonly variably disaggregated, common poorly indurated and friable cuttings with common dolomitic and siliceous cement, minor quartz overgrowths, predominantly tight to poor porosity in consolidated cuttings, infer common poor to streaky fair porosity, no shows; **DOLOMITE:** light to dark brown, mottled in part, cryptocrystalline to microcrystalline, predominantly hard dense and variably cherty grading to dolomitic chert, occasional dolarenite stringers, variably sandy in part, tight, no shows, **SHALE:** as above.

1846-1850 **SANDSTONE:** light grey, lower fine to lower medium grained, trace to minor upper very fine and upper medium grains, quartz arenite, frosted to minor clear quartz, rare chert and dolomite grains. moderately to moderately well sorted, rounded to sub angular, disaggregated in part, common poorly to moderately indurated cuttings with common siliceous and lesser dolomitic cement, minor to locally common quartz overgrowths, trace spotty kaolin to illite, predominantly poor to streaky fair porosity in consolidated cuttings, infer common fair to streaky good porosity, rare to trace spotty bitumen, no fluorescence, trace very faint questionable cut.

1850-1861 **SANDSTONE:** variable: #1 buff to light grey, variably very fine to fine grained, slightly silty, quartz arenite, moderately well sorted, angular to subrounded, minor rounded grains, clean, trace to locally minor dolomitic grains, poorly to moderately indurated, commonly crumbly to friable, common to abundant dolomitic cement, predominantly tight to 3% porosity, **SANDSTONE:** #2 light grey, variably fine to medium grained, minor upper very fine grains, quartz arenite, clear to frosted quartz, moderately well sorted, angular to rounded, clean, commonly disaggregated, common very poorly indurated and very friable cuttings with spotty siliceous cement and common quartz overgrowths, predominantly fair porosity in consolidated cuttings, minor spotty bitumen, minor to common dull to moderate yellow fluorescence, minor to common very poor slow thin streaming and diffuse cut, trace to minor shale and dolomite stringers (including occasional dolarenite).

1861-1865 **SANDSTONE:** light grey to pale buff, predominantly fine grained, minor lower medium and trace to minor upper very fine grains, quartz arenite, predominantly frosted quartz, moderately well sorted, rounded to sub angular, clean, predominantly disaggregated, minor very poorly and very friable cuttings with minor spotty siliceous cement, trace spotty kaolin to illite, trace quartz overgrowths, variable fair to streaky good porosity in consolidated cuttings, infer predominantly good to fair porosity, no fluorescence, trace to minor very faint cut.

1865-1868 **SANDSTONE:** light grey, fine to very fine grained, trace lower medium grains, slightly silty, quartz arenite, clear to frosted quartz, moderately well sorted, angular to rounded, clean, poorly to moderately indurated, abundant dolomitic cement, predominantly no visible porosity, common very faint fluorescence, trace questionable cut.

1868-1873 **SANDSTONE:** light grey, predominantly fine grained, minor lower medium and trace to minor upper very fine grains, quartz arenite, predominantly frosted quartz, moderately well sorted, rounded to sub angular, clean, decreasingly commonly disaggregated, common poorly indurated and friable cuttings with minor to locally common spotty siliceous cement, trace spotty kaolin to illite, trace quartz overgrowths, predominantly variable fair to streaky poor porosity in consolidated cuttings, infer predominantly fair to streaky good porosity, no fluorescence, trace to minor very faint cut.

1873-1876 **SHALE:** with **SANDSTONE:**; **SHALE:** black to very dark grey, very firm to hard, sub platy to sub blocky, predominantly moderately to very silty with common argillaceous siltstone stringers, phosphatic to slightly bituminous; **SANDSTONE:** predominantly as below with tight to 3% porosity, no shows.

1876-1880 **SANDSTONE:** light grey, fine to very fine grained, variably silty in part, quartz arenite with rare to trace dolomitic grains, moderately well sorted, angular to rounded, clean, occasional sandy siltstone laminations, variably poorly to moderately indurated, crumbly to friable in part, disaggregated in part, predominantly common to abundant dolomitic cement, minor locally common streaky siliceous cement, locally minor quartz overgrowths, predominantly tight to 3% porosity, minor to locally common fair porosity, no shows.

1880-1888 **SANDSTONE:** very similar to above, light grey, fine to very fine grained, variably silty in part, quartz arenite with rare to trace dolomitic grains, moderately well sorted, angular to rounded, clean, with occasional sandy siltstone laminations, variably poorly to moderately indurated, crumbly to friable in part, disaggregated in part, decreasing common to locally abundant dolomitic cement, increasing minor to common streaky siliceous cement, trace to minor quartz overgrowths, predominantly tight to 3% porosity, minor streaky poor to fair porosity, no shows, trace dolarenite stringers and rare fine to coarse grained litharenite lags, minor interbedded **SHALE:** as above.

1888-1891 **SANDSTONE:** light grey, lower fine to lower medium grained, quartz arenite with frosted to lesser clear quartz, trace chert grains, moderately to moderately well sorted, rounded to angular, clean, predominantly disaggregated, trace consolidated cuttings with common dolomitic cement and variable fair to poor porosity, infer predominantly fair to streaky good porosity, trace questionable cut and fluorescence.

1891-1896 **SANDSTONE:** similar to above, light grey, lower fine to lower medium grained, minor upper very fine and trace upper medium grains, quartz arenite with frosted to lesser clear quartz, moderately to moderately well sorted, rounded to sub angular, clean, predominantly disaggregated, minor to common predominantly very poorly indurated and friable cuttings with variable spotty to streaky siliceous cement, common to locally abundant quartz overgrowths, trace spotty kaolin to illite, variable porosity in consolidated cuttings: common variable fair to streaky good porosity, tight to poor porosity in part, infer common fair to poor porosity, no shows.

1896-1906 **SANDSTONE:** light grey, variably very fine to fine grained, trace to minor scattered lower medium grains, slightly silty, quartz arenite with trace to locally minor dolomite grains, medium well sorted, angular to rounded, predominantly clean, trace slightly argillaceous, poorly indurated and crumbly in part, moderately to occasionally well indurated in part, predominantly common siliceous cement, lesser to minor locally common dolomitic cement, trace to locally minor spotty to patchy pyrite, predominantly no visible porosity, no shows; minor **SHALE:** black to very dark brown, platy to sub blocky, fissile, slightly silty in part, smooth and sub waxy to waxy in part, commonly variably phosphatic to slightly bituminous, trace slickensides, trace fine to medium grained dolarenite stringers.

1906-1913 **SANDSTONE:** mixed; predominantly **SANDSTONE:** #1 light grey to tan, very fine grained and silty, predominantly quartz arenite, well sorted, angular to subrounded, commonly clean, slightly argillaceous in part, trace to minor siltstone stringers, variably moderately to very well indurated with predominantly siliceous cement, minor spotty to streaky dolomitic cement, trace to minor stylolites, tight to 2% porosity, no shows: **SANDSTONE:** #2 very fine to lower medium grained, quartz arenite, frosted to minor clear quartz, moderately sorted, rounded to angular, commonly disaggregated in part, common poorly to moderately indurated cuttings with variable minor to common siliceous cement, locally common quartz overgrowths, variable tight to streaky fair porosity, trace questionable fluorescence and cut; minor interbedded **SHALE:** black to brown black, minor green, platy to sub platy, fissile, slightly silty and variably carbonaceous to bituminous in part, smooth and sub waxy in part grading to claystone.

1913-1921 **SANDSTONE:** mixed: predominantly **SANDSTONE:** #1 light grey, lower fine to lower medium grained, trace to minor upper very fine and trace upper medium grains, quartz arenite, frosted to clear quartz, moderately sorted, rounded to angular, predominantly disaggregated, minor to common poorly to moderately indurated cuttings with variable minor to abundant siliceous cement, common to abundant quartz overgrowths, trace locally abundant pyrite, variable tight to fair porosity in consolidated cuttings, infer poor to fair porosity, no shows; **SANDSTONE:** #2 light grey to buff, very fine to fine grained, slightly silty, quartz arenite, moderately well sorted, angular to rounded, poorly to moderately indurated, common to abundant dolomitic cement, minor siliceous cement, predominantly no visible porosity, trace spotty dead oil stain; minor **SHALE:** black, medium brown to green, platy, variably silty in part, micaceous in part, predominantly smooth and waxy to sub waxy with common slickensides.

1921-1925 **SANDSTONE:** light grey to buff, predominantly fine to very fine grained and slightly silty, fine grained with minor lower medium grains in part, quartz arenite, clean, moderately well to well sorted, angular to rounded, poorly to moderately indurated with predominantly siliceous cement, minor locally common dolomitic cement, minor quartz overgrowths, disaggregated in part, trace stylolites, predominantly tight to 3% porosity with minor poor to fair streaks in consolidated cuttings, infer minor to common poor to fair porosity, trace spotty bitumen, trace questionable fluorescence and cut.

1925-1931 **SANDSTONE:** predominantly as above becoming very fine grained and silty in part, increasing minor to common stylolites with pyrobituminous partings, predominantly clean, increasing induration and decreasingly disaggregated in part, decreasing porosity as above, variably argillaceous in part locally grading to subwacke, minor locally abundant dolomitic cement, trace pyrite, trace to minor spotty bitumen and dead oil stain, no fluorescence, trace faint cut; minor **SHALE:** predominantly medium to dark green, black to dark brown in part, sub platy, sub fissile, variably silty to sandy in part, commonly smooth and sub waxy to waxy grading to claystone, trace sandy siderite stringers.

1931-1936 **SANDSTONE:** buff to light grey, fine to very fine grained, minor lower medium grains, commonly slightly silty, quartz arenite, frosted to clear quartz, moderately well sorted, angular to rounded, predominantly poorly indurated and crumbly, moderately to well indurated in minor part, predominantly siliceous cement, minor spotty to streaky dolomitic cement, commonly variably disaggregated, trace to minor quartz overgrowths, trace stylolites, predominantly tight to 2% porosity with minor poor to fair streaks in consolidated cuttings, infer predominantly poor porosity, trace spotty bitumen, trace spotty dull fluorescence, trace faint cut.

1936-1940 **SANDSTONE:** predominantly as above becoming slightly finer and increasingly indurated, predominantly common to abundant siliceous cement, disaggregated in minor part, trace dolomitic cement, increasing minor stylolite as above, trace siltstone stringers, trace to minor spotty bitumen and dead oil stain, minor dull fluorescence, minor very faint slow cut.

F.T.D. of 1940m @ 1215hrs on 05-Jan-01

ALPINE DRILL STEM TEST REPORTS (#1-8)

N.E.B. COPY

PARA ET AL FORT LIARD

N-01-60-10-123-15

DST #1



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/07/2001**

Job Ticket #: **D2-9622** DST#: **1**

NATIONAL ENERGY BOARD
RESEARCH BRANCH
JAN 21 2001

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

General Information:

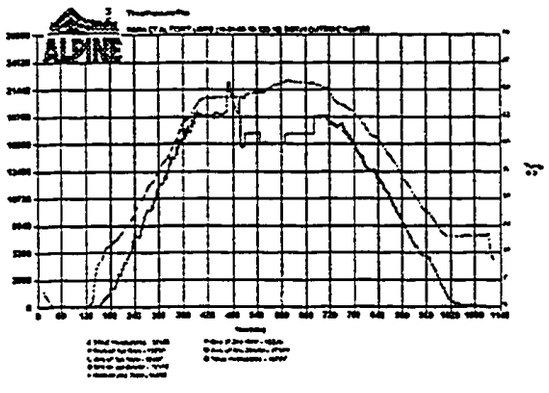
Test Type: INFLATE STRADDLE
Interval: 1682.00m - 1691.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1943.00m
Test Mode: Gas

Tester: D. ROSS
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 61.40 C

Electronic Recorder Information:

OUTSIDE Recorder #: 126		FLUID Recorder #: 063	
Range:	35000 kPa	Range:	70000 kPa
Depth:	1684.92 m	Depth:	1660.87 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	19127.5
B Start of 1st Flow	0.00	15750.2
C End of 1st Flow	9.00	15897.2
D End of 1st Shutin	37.00	17142.6
E Start of 2nd Flow	0.00	16059.2
F End of 2nd Flow	60.00	16236.3
G End of 2nd Shutin	70.00	17100.9
Q Final Hydrostatic	0.00	18796.5



Test Run Information:

Start Time: 400hrs
Reached Test Depth: 900hrs
Pull Out Time: 1300hrs
Tool Out Of Hole: 1900hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 41000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1110.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion:

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 74.00S/L
Filter Cake: 1.60mm
Pump Time: 25min
Reversed Out: NO

General Remarks:

Mechanically successful. *Test results suggest excellent permeability within the zone tested.

PREFLOW: Strong air blow throughout. Gas to surface in 1 1/2 minutes, 7 meter flare throughout. No gas rates taken for preflow.

FINAL FLOW: Gas to surface immediately.

***See gas volume charts for gas rates.

NOTE - See Alpine Telemetry report for real time data acquisition.

Recovery Description:

Total fluid recovery was 27 meters, consisting of 22 meters clear condensate and 5 meters drilling mud.
API Gravity = 48.0

Gas to surface.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 6 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY. AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	65
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1686.22m
- Total Drill Pipe Above K.B.:	4.22m
Total Depth:	1943m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1235.83	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.35	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

NOTE -

Electronic Rec. #070 malfunctioned, no pressure data is available.



Item	Length
P.O. Sub	0.31
C.O. Sub	0.30
P.O. Sub	0.31
REC#063	1.50
HMV Stroke	2.18
Sampler	1.10
REC#070	1.50
Telemetry Tool	5.80
Jars	1.82
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
Stub	0.72
ASE Carrier	2.20
REC#124	
REC#126	
Bypass Hanger	0.42
Blank Spacing	4.26
Bypass Receiver	0.78
Stub	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

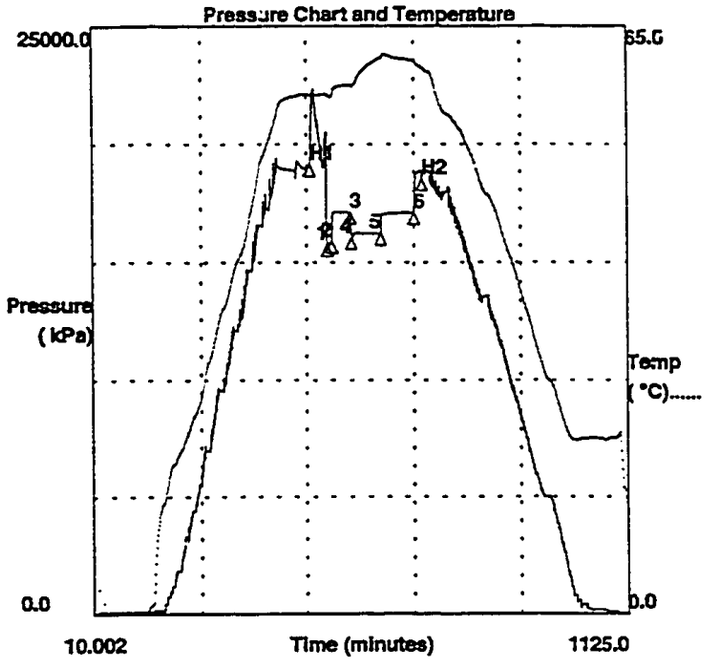
Gas Measurements for Flow # 2

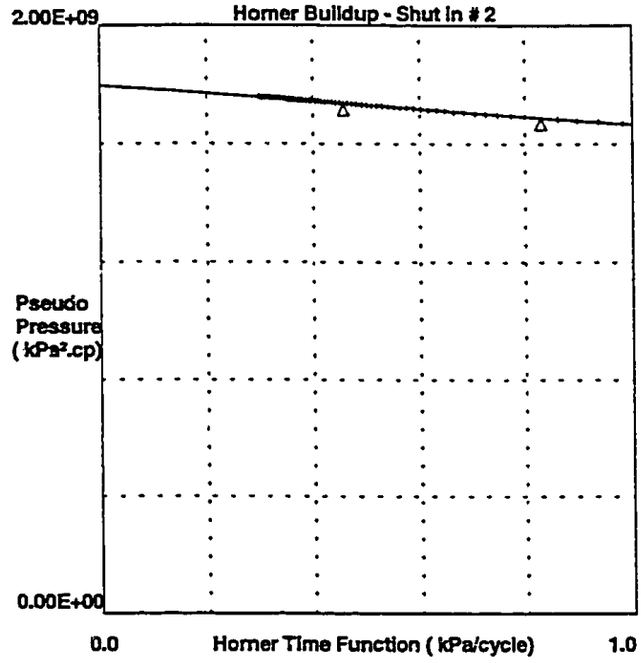
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	6000	548260.00
20	22.23	6500	592831.00
30	22.23	6500	592831.00
40	22.23	6500	592831.00
50	22.23	6500	592831.00
60	22.23	6500	592831.00

Well: PARA ET AL FORT LIARD DST #ONE Formation: MATTSON (1682-1691 m)

General Summary





Event Summary:	Time (min)	Durations (min)	Pressure (kPa)
1. Start Initial Flow	501.00		15750.18
2. Start Initial Shut In	510.00	9.00	15897.18
3. End Initial Shut In	547.00	37.00	17142.56
4. Start Main Flow	548.00		16059.22
5. Start Main Shut In	609.00	60.00	16236.30
6. End Main Shut In	679.00	70.00	17100.90
H1 Hydrostatic Initial	462.00		19136.80
H2 Hydrostatic Final	696.00		18551.14

RESULTS: Shut-in # 2

Perm-Thickness	2276.162 md.m
Permeability	569.04 md
Form. Pressure	17118.3 kPa
Skin	7.5
AOF	5915.0 10^3m^3/day
Damage Ratio	1.76
Distance	73.5 m
Flowrate (GAS)	593.8 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.00E-05 1/kPa
Porosity	0.15
Water Saturation	0.26
Thickness	4.0 m

Depletion Summary: Shut-in 1 vs 2

Pressure Drop= 28.68 kPa
Percent Drop (Extrap.)= 0.2 %
Percent Drop (Raw)= 0.2 %

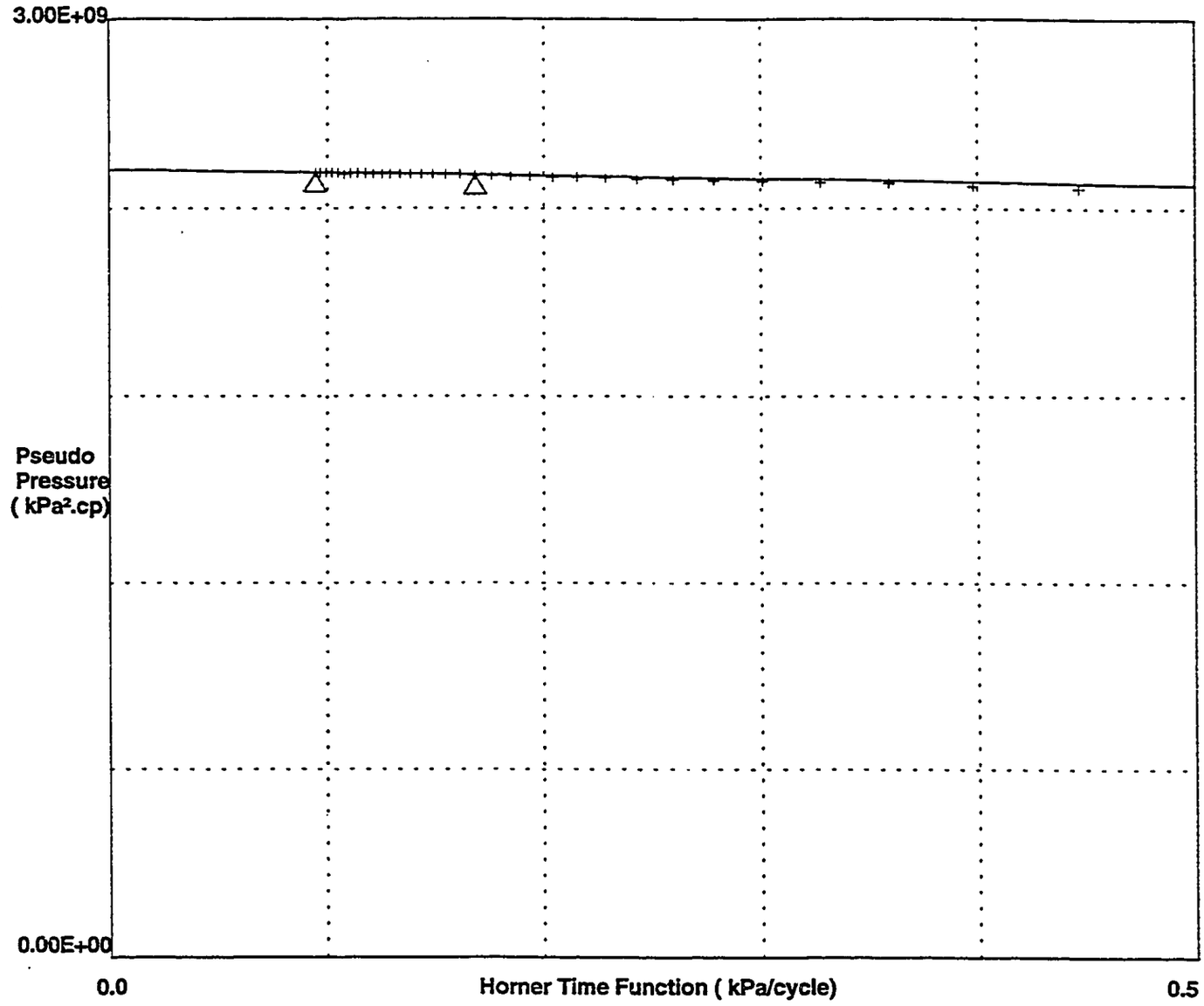
RESULTS: Shut-in # 1

Perm-Thickness	2865.719 md.m
Permeability	716.43 md
Form. Pressure	17147.0 kPa
Skin	21.9
AOF	3903.2 10^3m^3/day
Damage Ratio	3.2
Distance	29.8 m
Flowrate (GAS)	548.3 10^3m^3/day

General Remarks

Well: PARA ET AL FORT LIARD DST #ONE Formation: MATTSON (1682-1691 m)

Horner Plot Shut-in # 1



RESULTS: Shut-in # 1

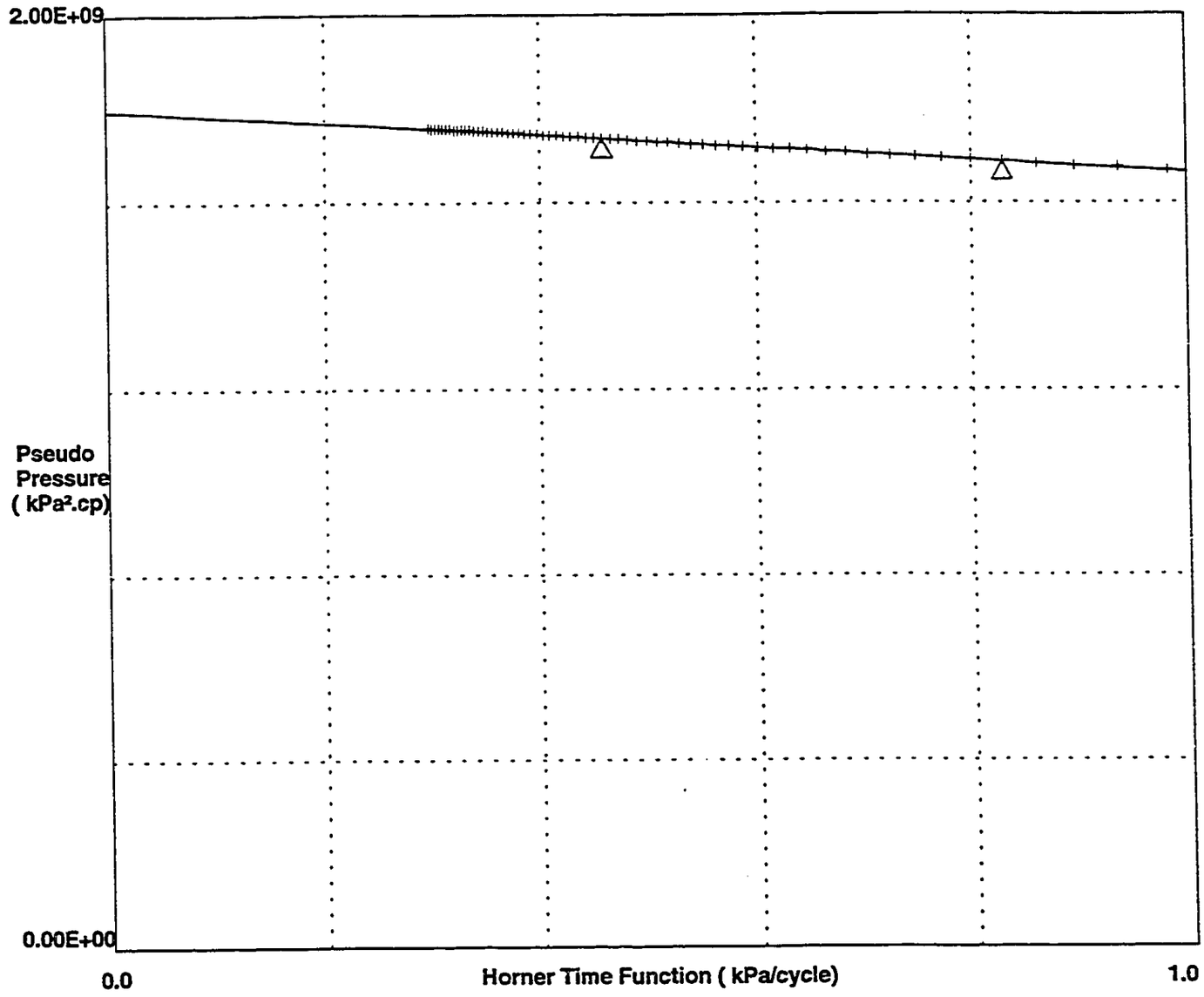
Perm-Thickness	2865.719 md.m
Permeability	716.43 md
Form. Pressure	17147.0 kPa
Skin	21.9
AOF	3903.2 10^3m^3/day
Damage Ratio	3.2
Distance	29.8 m
Flowrate (GAS)	548.3 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.00E-05 1/kPa
Porosity	0.15
Water Saturation	0.26
Thickness	4.0 m

Well: PARA ET AL FORT LIARD DST #ONE Formation: MATTSON (1682-1691 m)

Horner Plot Shut-in # 2



RESULTS: Shut-in # 2

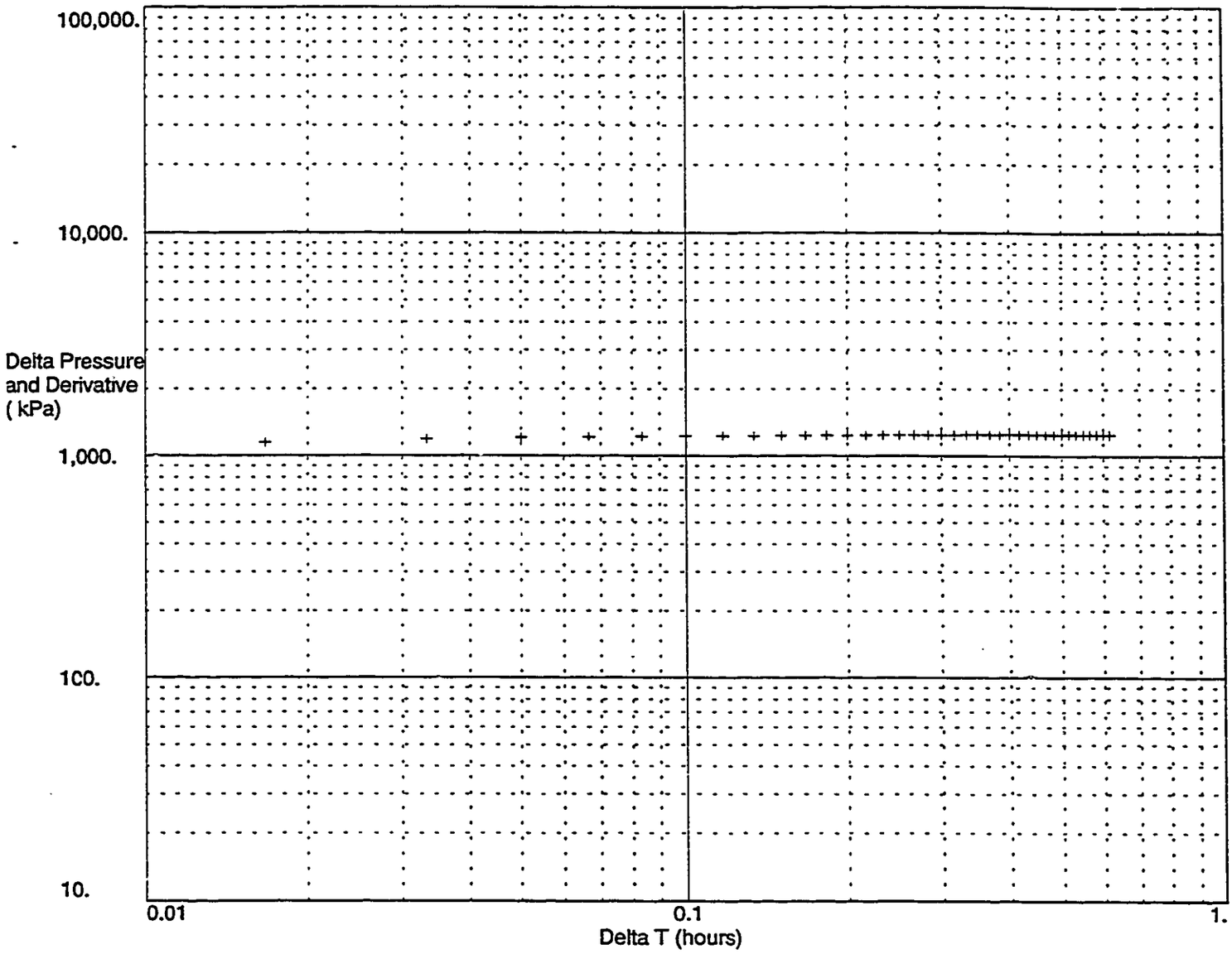
Perm-Thickness	2276.162 md.m
Permeability	569.04 md
Form. Pressure	17118.3 kPa
Skin	7.5
AOF	5915.0 10^3m^3/day
Damage Ratio	1.76
Distance	73.5 m
Flowrate (GAS)	593.8 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.00E-05 1/kPa
Porosity	0.15
Water Saturation	0.26
Thickness	4.0 m

Well: PARA ET AL FORT LIARD DST #ONE Formation: MATTSON (1682-1691 m)

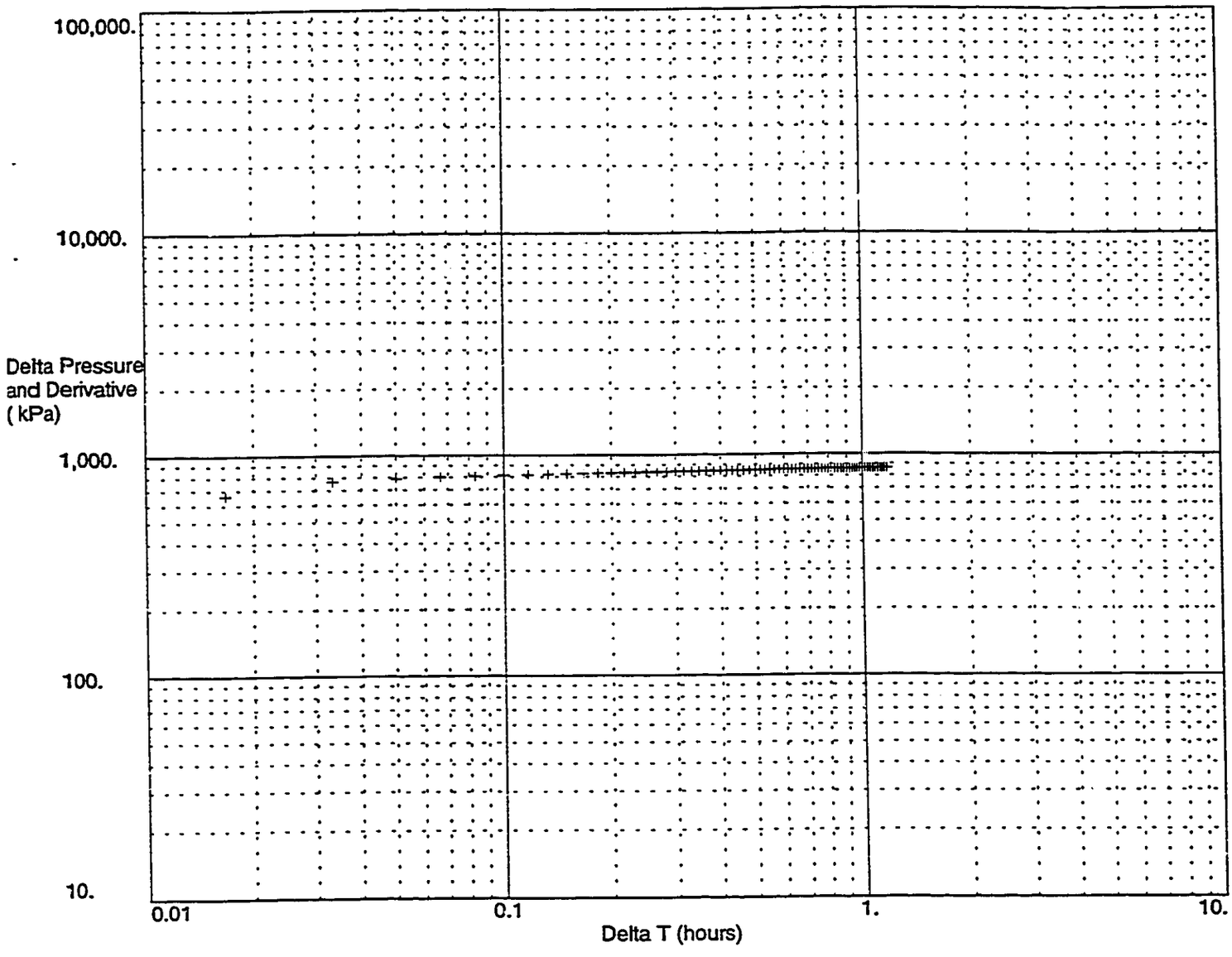
Delta P vs Delta T and Derivative Shut-in # 1



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope

Well: PARA ET AL FORT LIARD DST #ONE Formation: MATTSON (1682-1691 m)

Delta P vs Delta T and Derivative Shut-in # 2



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	19127.50		57.5
B	Start of 1st Flow	0.00	0.00	15750.20		57.5
		1.00	-22.00	15728.20		57.4
		2.00	-22.00	15728.20		57.3
		3.00	-25.50	15724.70		57.3
		4.00	-7.00	15743.20		57.2
		5.00	46.30	15796.50		57.2
		6.00	66.00	15816.20		57.2
		7.00	100.70	15850.90		57.3
		8.00	122.70	15872.90		57.3
C	End of 1st Flow	9.00	147.00	15897.20		57.4
		1.00	1143.50	17040.70	10.0000	57.6
		2.00	1191.00	17088.20	5.5000	57.8
		3.00	1208.30	17105.50	4.0000	58.0
		4.00	1216.40	17113.60	3.2500	58.1
		5.00	1222.20	17119.40	2.8000	58.2
		6.00	1225.70	17122.90	2.5000	58.2
		7.00	1229.20	17126.40	2.2857	58.3
		8.00	1230.30	17127.50	2.1250	58.3
		9.00	1232.60	17129.80	2.0000	58.3
		10.00	1233.80	17131.00	1.9000	58.4
		11.00	1234.90	17132.10	1.8182	58.4
		12.00	1236.10	17133.30	1.7500	58.4
		13.00	1237.30	17134.50	1.6923	58.4
		14.00	1238.40	17135.60	1.6429	58.4
		15.00	1238.40	17135.60	1.6000	58.4
		16.00	1239.60	17136.80	1.5625	58.5
		17.00	1239.60	17136.80	1.5294	58.5
		18.00	1240.70	17137.90	1.5000	58.5
		19.00	1240.70	17137.90	1.4737	58.5
		20.00	1243.00	17140.20	1.4500	58.5
		21.00	1243.00	17140.20	1.4286	58.5
		22.00	1243.00	17140.20	1.4091	58.5
		23.00	1243.00	17140.20	1.3913	58.5
		24.00	1243.00	17140.20	1.3750	58.5
		25.00	1243.00	17140.20	1.3600	58.5
		26.00	1243.00	17140.20	1.3462	58.5
		27.00	1243.00	17140.20	1.3333	58.6
		28.00	1243.00	17140.20	1.3214	58.6
		29.00	1244.20	17141.40	1.3103	58.6
		30.00	1244.20	17141.40	1.3000	58.6
		31.00	1244.20	17141.40	1.2903	58.6
		32.00	1243.00	17140.20	1.2813	58.6
		33.00	1245.40	17142.60	1.2727	58.6
		34.00	1245.40	17142.60	1.2647	58.6
		35.00	1245.40	17142.60	1.2571	58.6
		36.00	1245.40	17142.60	1.2500	58.6
D	End of 1st Shutin	37.00	1245.40	17142.60	1.2432	58.6
E	Start of 2nd Flow	0.00	0.00	16059.20		58.6
		1.00	-27.80	16031.40		58.5
		2.00	-38.20	16021.00		58.4
		3.00	-9.20	16050.00		58.4
		4.00	40.50	16099.70		58.5
		5.00	90.30	16149.50		58.5
		6.00	133.10	16192.30		58.6
		7.00	163.20	16222.40		58.7
		8.00	185.20	16244.40		58.8
		9.00	203.70	16262.90		58.9
		10.00	197.90	16257.10		59.0
		11.00	196.80	16256.00		59.1
		12.00	195.60	16254.80		59.3
		13.00	195.60	16254.80		59.4
		14.00	186.40	16245.60		59.5
		15.00	179.40	16238.60		59.5
		16.00	180.60	16239.30		59.6
		17.00	177.10	16236.30		59.7
		18.00	178.30	16237.50		59.8
		19.00	178.30	16237.50		59.8
		20.00	171.30	16230.50		59.9
		21.00	166.70	16225.90		60.0
		22.00	164.40	16223.60		60.0
		23.00	159.70	16218.90		60.1
		24.00	159.70	16218.90		60.1
		25.00	163.20	16222.40		60.2

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		26.00	162.10	16221.30		60.2
		27.00	158.50	16217.80		60.3
		28.00	156.30	16215.50		60.3
		29.00	155.10	16214.30		60.4
		30.00	160.90	16220.10		60.5
		31.00	167.80	16227.00		60.5
		32.00	167.80	16227.00		60.5
		33.00	159.70	16218.90		60.6
		34.00	154.00	16213.20		60.7
		35.00	154.00	16213.20		60.7
		36.00	155.10	16214.30		60.7
		37.00	156.30	16215.50		60.8
		38.00	157.40	16216.60		60.8
		39.00	158.60	16217.80		60.8
		40.00	159.70	16218.90		60.9
		41.00	162.10	16221.30		60.9
		42.00	163.20	16222.40		60.9
		43.00	165.50	16224.70		61.0
		44.00	165.50	16224.70		61.0
		45.00	166.70	16225.90		61.0
		46.00	169.00	16228.20		61.1
		47.00	169.00	16228.20		61.1
		48.00	167.80	16227.00		61.2
		49.00	173.60	16232.80		61.2
		50.00	167.80	16227.00		61.2
		51.00	167.80	16227.00		61.2
		52.00	165.50	16224.70		61.3
		53.00	165.50	16224.70		61.3
		54.00	166.70	16225.90		61.4
		55.00	172.50	16231.70		61.4
		56.00	174.80	16234.00		61.4
		57.00	172.50	16231.70		61.4
		58.00	173.60	16232.80		61.5
		59.00	175.90	16235.10		61.5
F	End of 2nd Flow	0.00	177.10	16236.30		61.5
		1.00	660.90	16897.20	70.0000	61.6
		2.00	765.10	17001.40	35.5000	61.6

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		3.00	787.00	17023.30	24.0000	61.7
		4.00	798.60	17034.90	18.2500	61.8
		5.00	806.70	17043.00	14.8000	61.9
		6.00	812.50	17048.80	12.5000	61.9
		7.00	817.10	17053.40	10.8571	61.9
		8.00	820.60	17056.90	9.6250	61.9
		9.00	824.10	17060.40	8.6667	61.9
		10.00	825.20	17061.50	7.9000	61.9
		11.00	827.60	17063.90	7.2727	61.9
		12.00	829.90	17066.20	6.7500	61.9
		13.00	832.20	17068.50	6.3077	61.8
		14.00	833.30	17069.60	5.9286	61.8
		15.00	834.50	17070.80	5.6000	61.8
		16.00	835.70	17072.00	5.3125	61.8
		17.00	836.80	17073.10	5.0588	61.8
		18.00	839.10	17075.40	4.8333	61.8
		19.00	839.10	17075.40	4.6316	61.8
		20.00	841.40	17077.70	4.4500	61.7
		21.00	842.60	17078.90	4.2857	61.7
		22.00	842.60	17078.90	4.1364	61.7
		23.00	843.80	17080.10	4.0000	61.7
		24.00	844.90	17081.20	3.8750	61.6
		25.00	846.10	17082.40	3.7600	61.6
		26.00	846.10	17082.40	3.6538	61.6
		27.00	847.20	17083.50	3.5556	61.6
		28.00	847.20	17083.50	3.4643	61.6
		29.00	848.40	17084.70	3.3793	61.6
		30.00	849.50	17085.80	3.3000	61.6
		31.00	849.50	17085.80	3.2258	61.6
		32.00	850.70	17087.00	3.1563	61.5
		33.00	850.70	17087.00	3.0909	61.5
		34.00	851.90	17088.20	3.0294	61.5
		35.00	853.00	17089.30	2.9714	61.5
		36.00	853.00	17089.30	2.9167	61.5
		37.00	853.00	17089.30	2.8649	61.5
		38.00	854.20	17090.50	2.8158	61.5
		39.00	854.20	17090.50	2.7692	61.4

Drill Stem Testing - Time / Pressure Listing

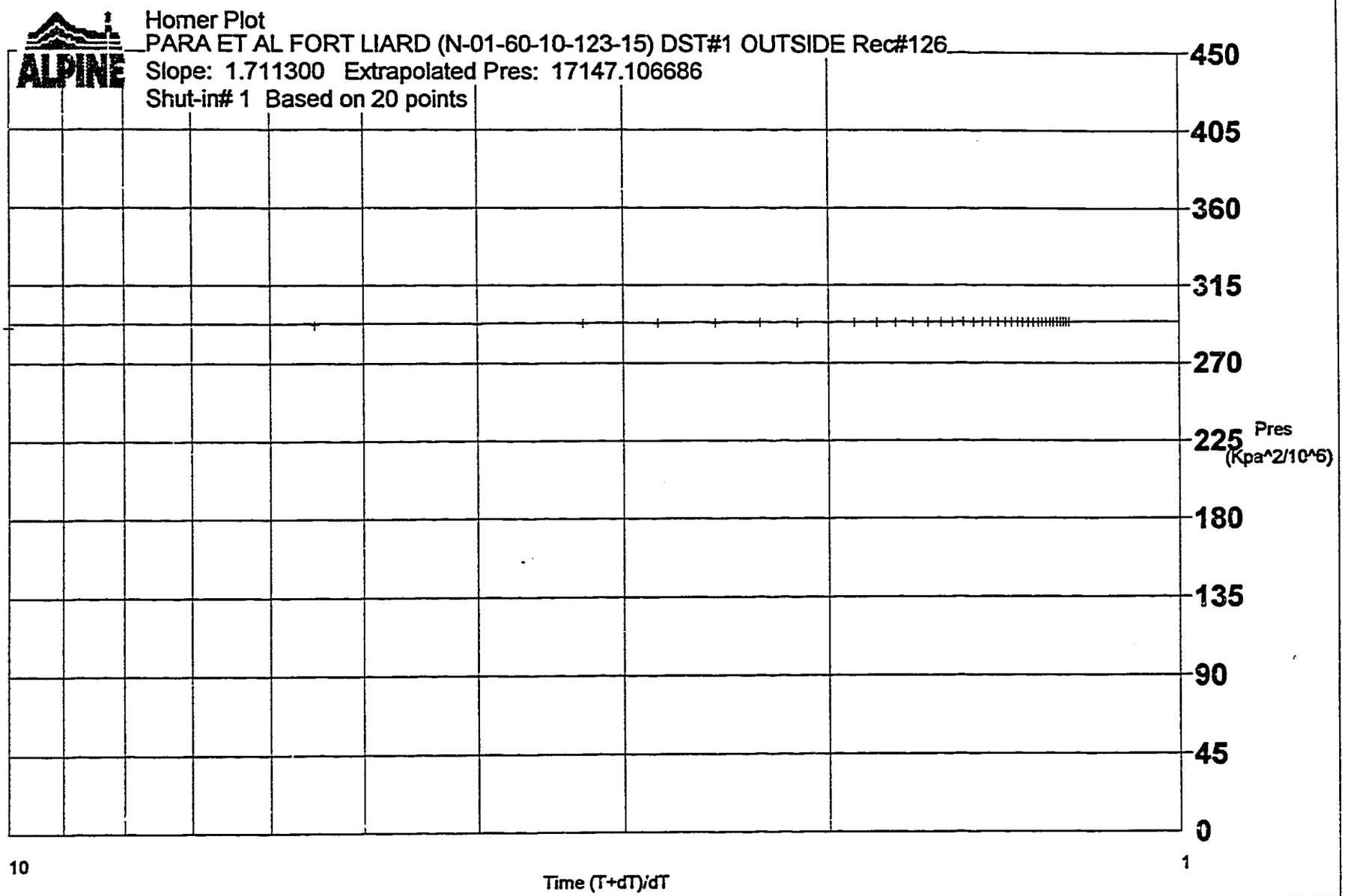
Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

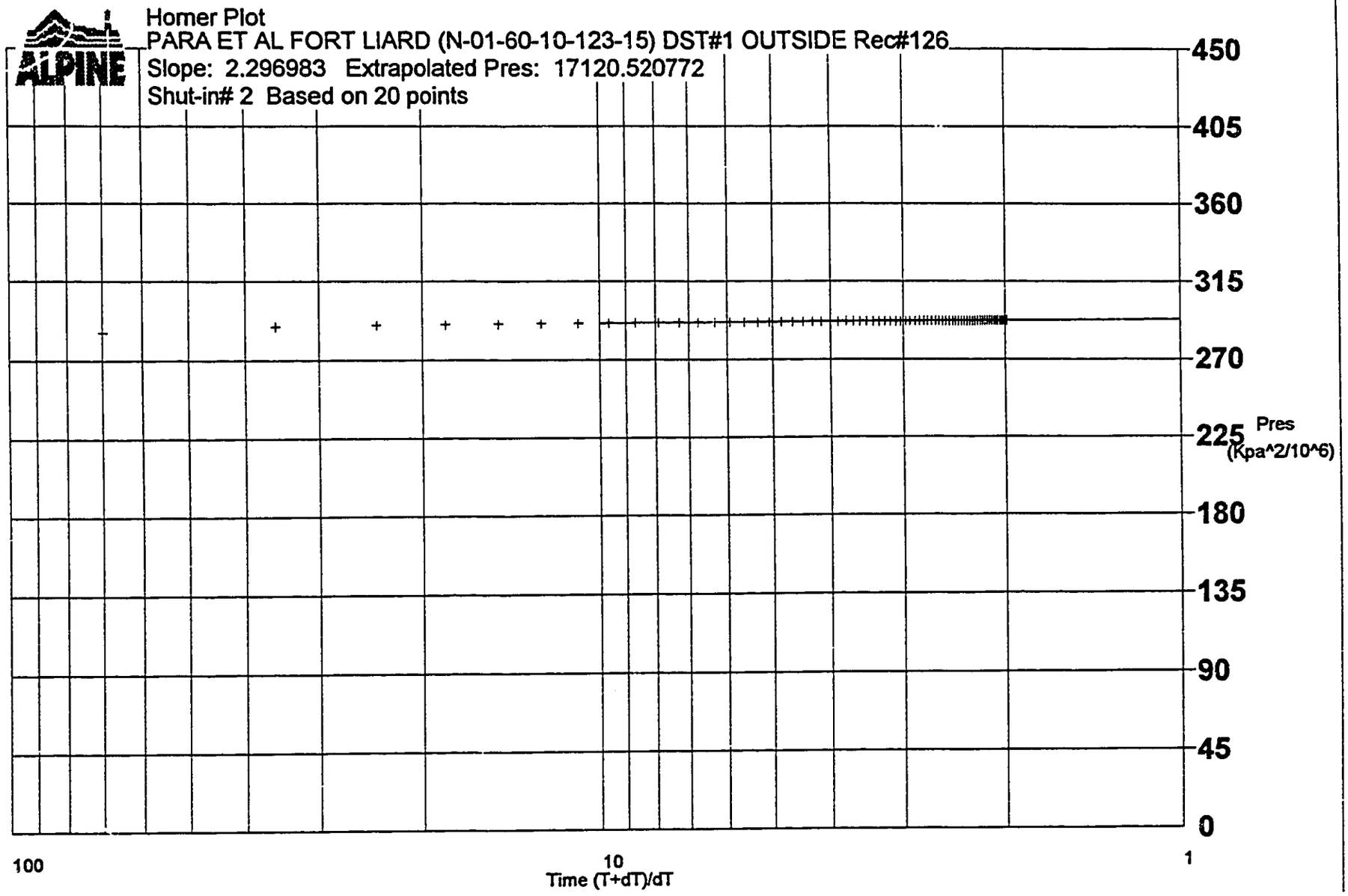
Contact: WILBERT CALLIHOO

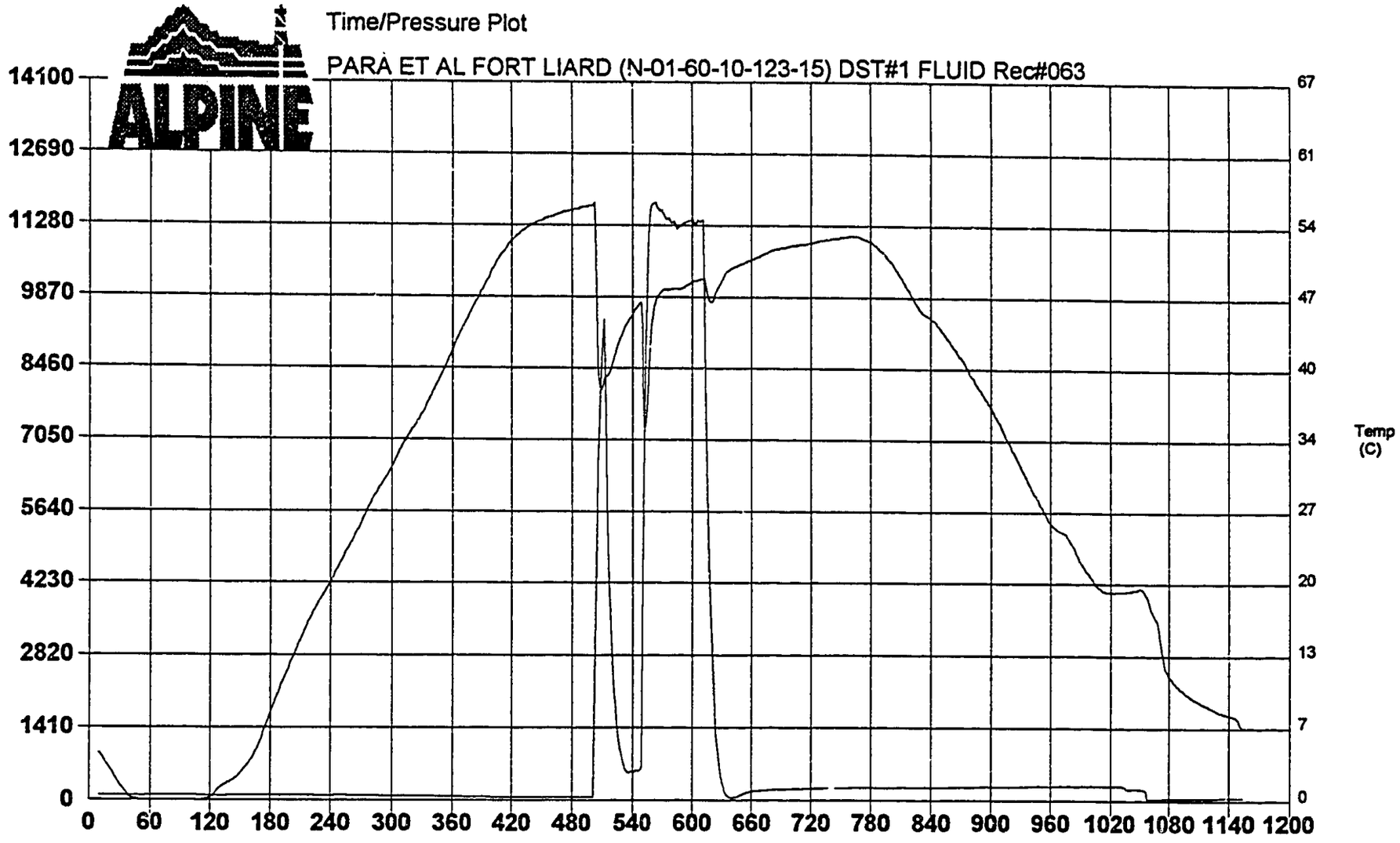
Job Ticket #: D2-9622 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

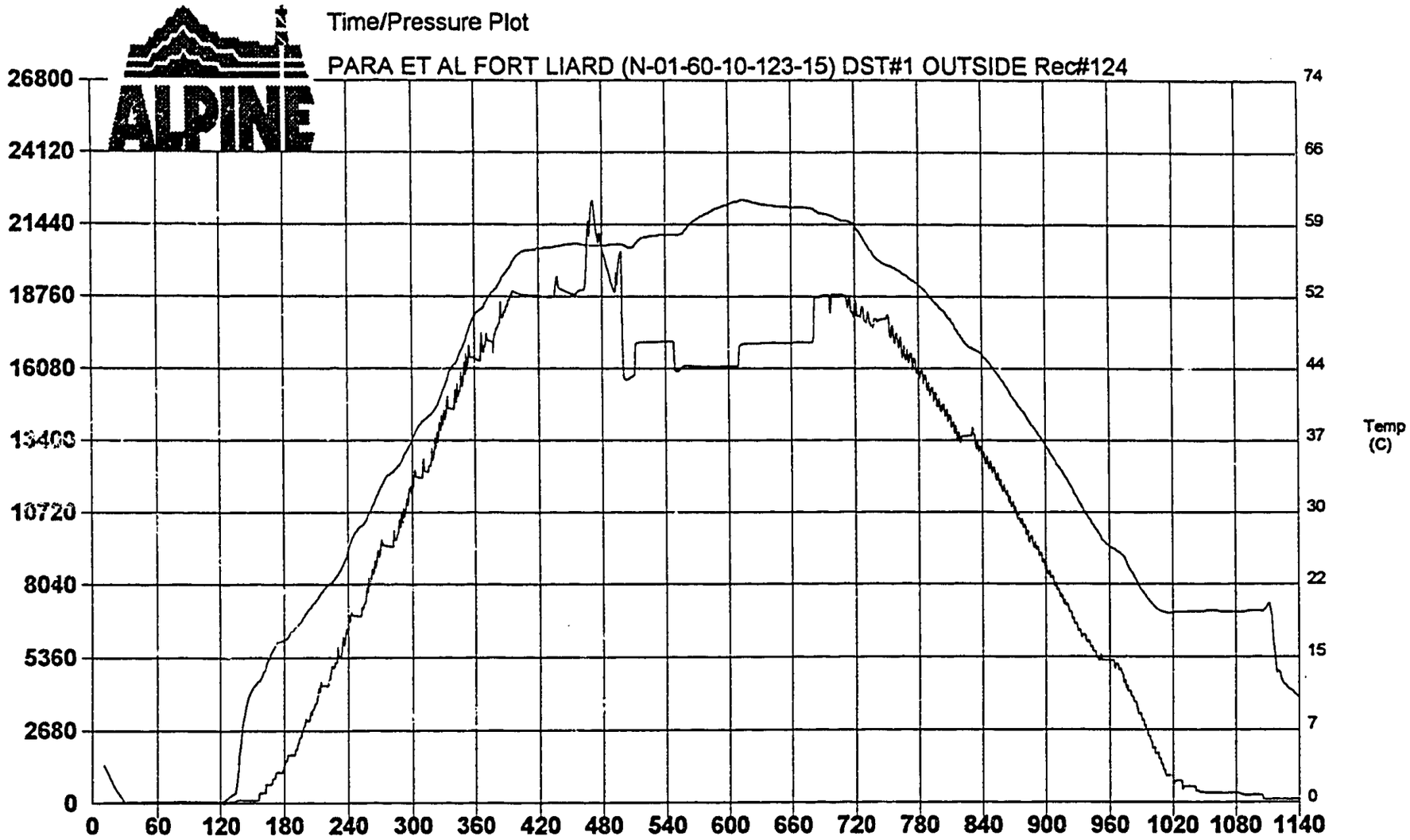
Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		40.00	855.30	17091.60	2.7250	61.4
		41.00	855.30	17091.60	2.6829	61.4
		42.00	855.30	17091.60	2.6429	61.4
		43.00	856.50	17092.80	2.6047	61.4
		44.00	856.50	17092.80	2.5682	61.4
		45.00	856.50	17092.80	2.5333	61.4
		46.00	857.70	17094.00	2.5000	61.4
		47.00	857.70	17094.00	2.4681	61.4
		48.00	857.70	17094.00	2.4375	61.4
		49.00	858.80	17095.10	2.4082	61.4
		50.00	858.80	17095.10	2.3800	61.4
		51.00	858.80	17095.10	2.3529	61.4
		52.00	860.00	17096.30	2.3269	61.4
		53.00	860.00	17096.30	2.3019	61.4
		54.00	860.00	17096.30	2.2778	61.4
		55.00	860.00	17096.30	2.2545	61.4
		56.00	861.10	17097.40	2.2321	61.4
		57.00	861.10	17097.40	2.2105	61.4
		58.00	861.10	17097.40	2.1897	61.3
		59.00	862.30	17098.60	2.1695	61.3
		60.00	862.30	17098.60	2.1500	61.3
		61.00	862.30	17098.60	2.1311	61.3
		62.00	862.30	17098.60	2.1129	61.3
		63.00	862.30	17098.60	2.0952	61.3
		64.00	863.40	17099.70	2.0781	61.3
		65.00	863.40	17099.70	2.0615	61.3
		66.00	863.40	17099.70	2.0455	61.3
		67.00	863.40	17099.70	2.0299	61.3
		68.00	863.40	17099.70	2.0147	61.3
		69.00	863.40	17099.70	2.0000	61.3
G	End of 2nd Shutin	70.00	864.60	17100.90	1.9857	61.3
Q	Final Hydrostatic	0.00	0.00	18796.50		60.9

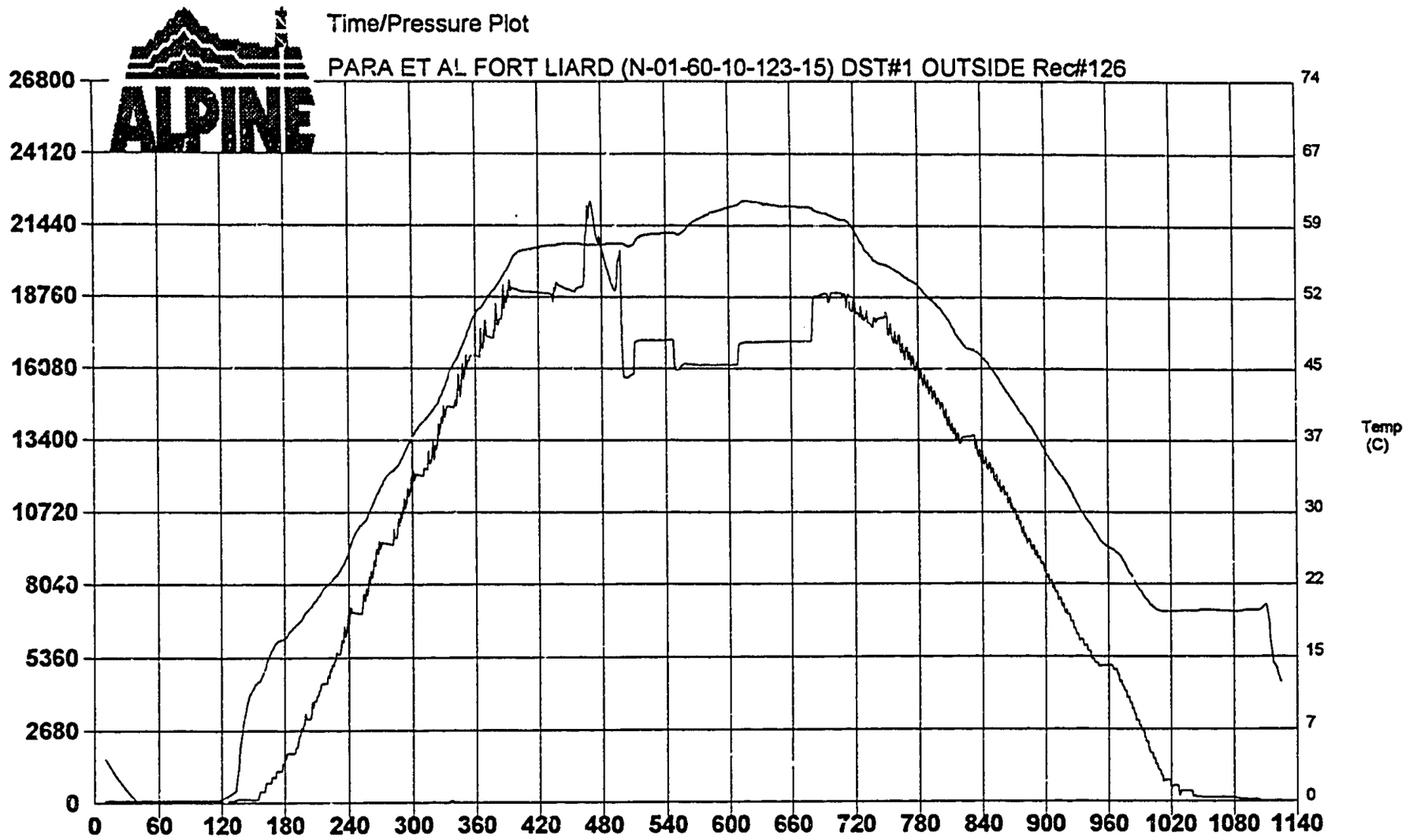

Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#1 OUTSIDE Rec#126
Slope: 1.711300 Extrapolated Pres: 17147.106686
Shut-in# 1 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
10
1
Time (T+dT)/dT


Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#1 OUTSIDE Rec#126
Slope: 2.296983 Extrapolated Pres: 17120.520772
Shut-in# 2 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT



A Initial Hydrostatic - 56
B Start of 1st Flow - 54
C End of 1st Flow - 9420
D End of 1st Shutin - 582
E Start of 2nd Flow - 624
F End of 2nd Flow - 11383
G End of 2nd Shutin - 216
Q Final Hydrostatic - 225


ALPINE
Time/Pressure Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#1 OUTSIDE Rec#124
26800
24120
21440
18760
16080
13400
10720
8040
5360
2680
0
74
66
59
52
44
37
30
22
15
7
0
Temp (C)
0 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140
Time(Min)
A Initial Hydrostatic - 18971
B Start of 1st Flow - 15799
C End of 1st Flow - 15842
D End of 1st Shutin - 17075
E Start of 2nd Flow - 15990
F End of 2nd Flow - 16184
G End of 2nd Shutin - 17042
Q Final Hydrostatic - 18832



A Initial Hydrostatic - 19128
B Start of 1st Flow - 15750
C End of 1st Flow - 15897
D End of 1st Shutin - 17143
E Start of 2nd Flow - 16059
F End of 2nd Flow - 16236
G End of 2nd Shutin - 17101
Q Final Hydrostatic - 18797



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: **01/07/2001**

Job Ticket #: **T5157-1** DST#: **1**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: T5157-1 DST#: 1
Test Date: 01/07/2001 400hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

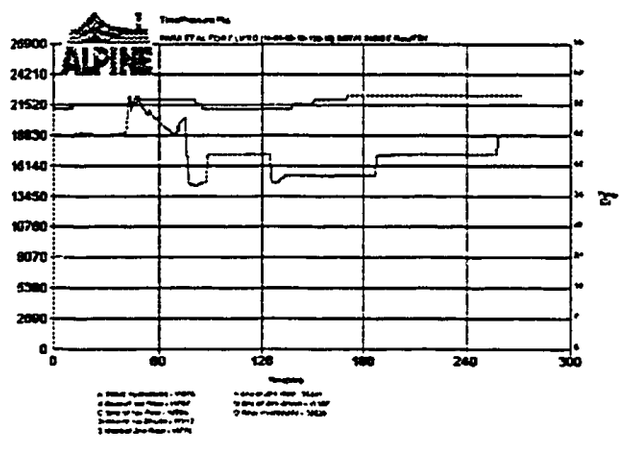
General Information:

Test Type:	INFLATE STRADDLE	Tester:	B. HOLLINGSHEAD
Interval:	1682m -1691m	Truck No.:	Unit 114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1943.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	61.40 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1671.45 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18976.1
B Start of 1st Flow	0.00	14766.7
C End of 1st Flow	10.56	14793.8
D End of 1st Shutin	36.36	17212.2
E Start of 2nd Flow	0.00	14777.7
F End of 2nd Flow	61.08	15340.6
G End of 2nd Shutin	70.14	17187.2
Q Final Hydrostatic	0.00	18827.6



Test Run Information:

Start Time:	400hrs
Reached Test Depth:	900hrs
Pull Out Time:	1300hrs
Tool Out Of Hole:	1900hrs
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	74.00S/L
Filter Cake:	1.60mm
Pump Time:	25min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1110.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	

General Remarks:

Mechanically successful. *Test results suggest excellent permeability within the zone tested.

PREFLOW: Strong air blow throughout. Gas to surface in 1 1/2 minutes, 7 meter flare throughout. No gas rates taken for preflow.

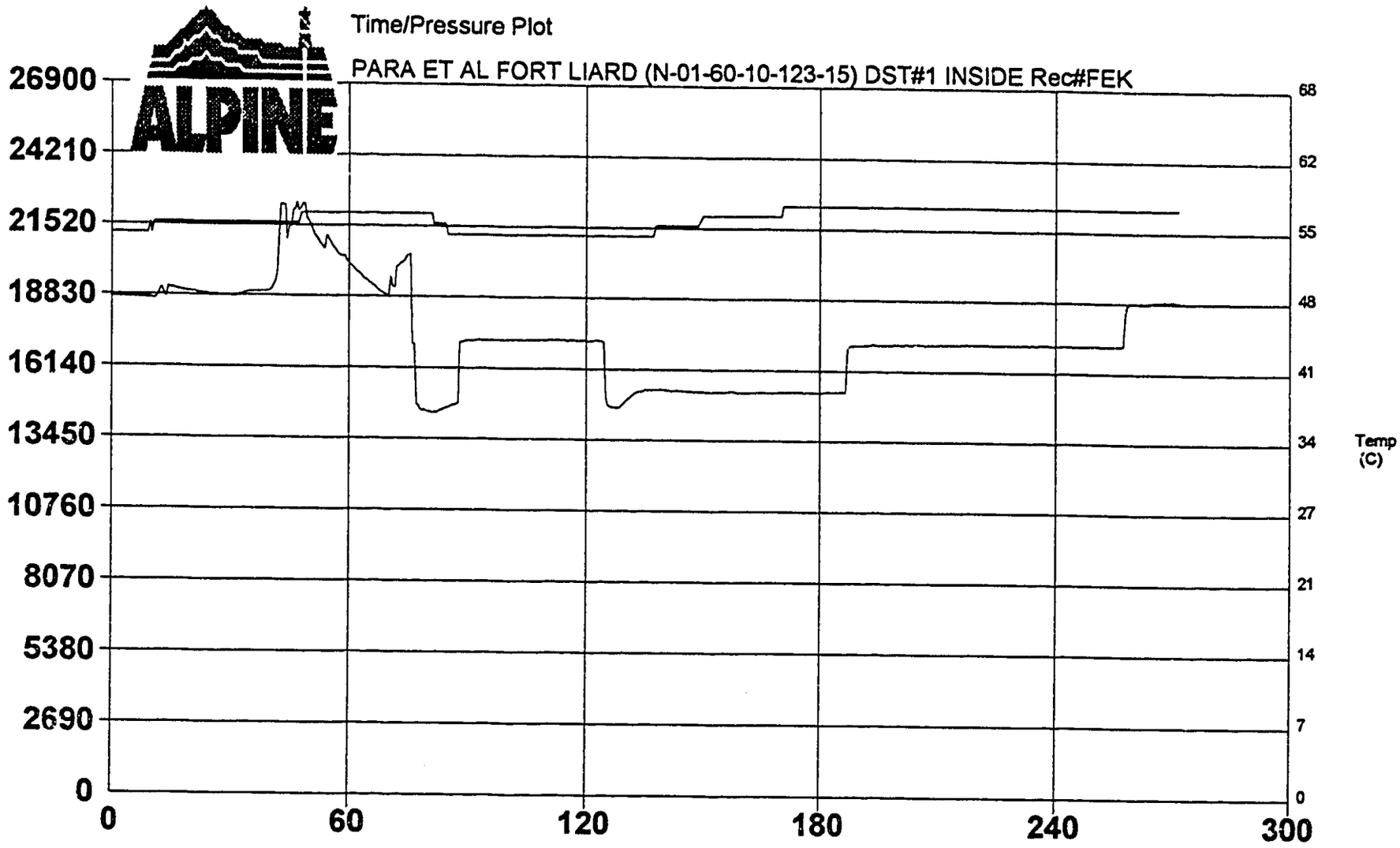
FINAL FLOW: Gas to surface immediately.

***See gas volume charts for gas rates.

Recovery Description:

Total fluid recovery was 27 meters, consisting of 22 meters clear condensate and 5 meters drilling mud.
API Gravity = 48.0

Gas to surface.



A Initial Hydrostatic - 18976
B Start of 1st Flow - 14767
C End of 1st Flow - 14794
D End of 1st Shutin - 17212
E Start of 2nd Flow - 14778
F End of 2nd Flow - 15341
G End of 2nd Shutin - 17187
Q Final Hydrostatic - 18828

N.E.B. COPY

PARA ET AL FORT LIARD

N-01-60-10-123-15

DST #2

ALPINE

Drill Stem Test Report

Prepared for: PARAMOUNT RESOURCES
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: 01/07/2001

Job Ticket #: D2-9623 DST#: 2

BOARD
JUN 21 2001

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-0623 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

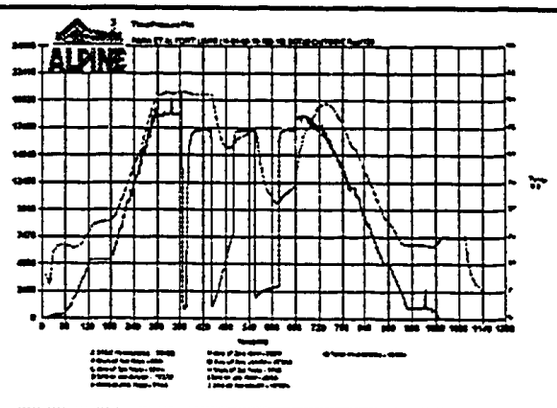
General Information:

Test Type: INFLATE STRADDLE
Interval: 1643.00m - 1648.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

Tester: D. ROSS
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 32.50 C

Electronic Recorder Information:

OUTSIDE		FLUID	
Recorder #: 126		Recorder #: 063	
Range: 35000 kPa		Range: 70000 kPa	
Depth: 1645.92 m		Depth: 1621.87 m	
Flag Points:	Time:		Pressure:
A Initial Hydrostatic	0.00		18681.9
B Start of 1st Flow	0.00		849.5
C End of 1st Flow	7.00		1063.7
D End of 1st Shutin	57.00		17220.1
E Start of 2nd Flow	0.00		1141.2
F End of 2nd Flow	55.00		7674.9
G End of 2nd Shutin	48.00		17168.0
H Start of 3rd Flow	0.00		1787.1
I End of 3rd Flow	60.00		2967.6
J End of 3rd Shutin	42.00		17194.6
Q Final Hydrostatic	0.00		18485.2



Test Run Information:

Start Time: 2130hrs
Reached Test Depth: 200hrs
Pull Out Time: 800hrs
Tool Out Of Hole: 1530hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 40000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1110.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion:

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 74.00S/L
Filter Cake: 1.60mm
Pump Time: 25min
Reversed Out: YES

General Remarks:

Mechanically successful. *Test results suggest high permeability within the zone tested.

PREFLOW: Strong air blow throughout. Gas to surface in 4 minutes, 3 meter flare. No rates taken for preflow.

SECOND FLOW: Gas to surface immediately.

FINAL FLOW: Gas to surface immediately.

***See gas volume charts for gas rates.

NOTE - See Alpine Telemetry report for real time data acquisition.

Recovery Description:

Total fluid recovery reversed out was 75 meters, consisting of 70 meters drilling mud and 5 meters condensate cut mud.

Gas to surface.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 5 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9823 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	63
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1649.83m
Total Drill Pipe Above K.B.:	6.83m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1199.67	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

NOTE -

Electronic Rec. #070 malfunctioned, no pressure data is available.



Item	Length
P.O. Sub	0.31
C.O. Sub	0.30
P.O. Sub	0.31
REC#063	1.50
HMV Stroke	2.18
Sampler	1.10
REC#070	1.50
Telemetry Tool	5.80
Jars	1.82
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.86
Packer	1.78
Stub	0.72
ASE Carrier	2.20
REC#124	
REC#126	
Bypass Hanger	0.42
Blank Spacing	0.30
Bypass Receiver	0.78
Stub	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

23.55m

33.26m

Depth: 1643m

5.14m

Depth: 1648m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9623 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
10	6.35	650	4572.00
20	6.35	1300	8570.00
30	6.35	2800	17702.00
40	6.35	3700	23215.00
50	6.35	5100	31758.00
55	6.35	6200	38449.00

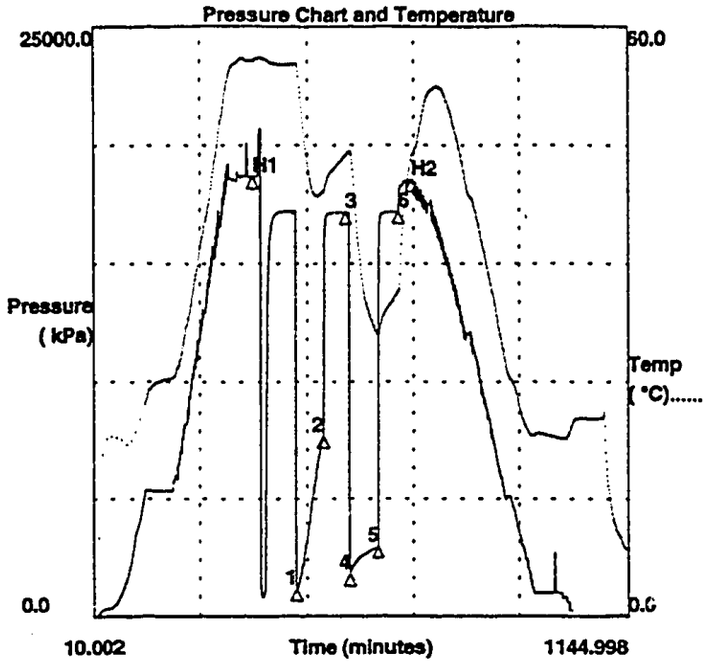
Gas Measurements for Flow # 3

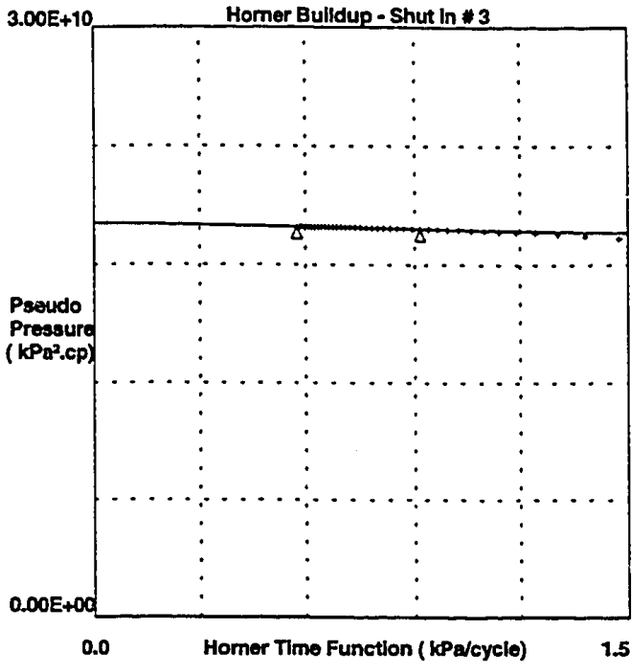
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
10	12.70	1000	28567.00
20	12.70	1100	31072.00
30	12.70	1200	33756.00
40	12.70	1200	33756.00
50	12.70	1200	33756.00
60	12.70	1200	33756.00

Well: PARA ET AL FORT LIARD DST #2 Formation: MATTSON (1643-1648 m)

General Summary





Event Summary:	Time (min)	Durations (min)	Pressure (kPa)
1. Start Initial Flow	442.00		1143.53
2. Start Initial Shut In	498.00	56.00	7674.86
3. End Initial Shut In	546.00	48.00	17168.03
4. Start Main Flow	556.00		1787.06
5. Start Main Shut In	616.00	60.00	2967.63
6. End Main Shut In	658.00	42.00	17194.65
H1 Hydrostatic Initial	350.00		18690.04
H2 Hydrostatic Final	685.00		18549.99

RESULTS: Shut-in # 3

Perm-Thickness	47.204 md.m
Permeability	15.735 md
Form. Pressure	17283.3 kPa
Skin	63.1
AOF	34.8 $10^3 m^3$/day
Damage Ratio	8.4
Distance	23.4 m
Flowrate (GAS)	33.8 $10^3 m^3$/day

GAS and Formation Properties

Viscosity	0.016 cp
Volume Factor 1/Bg	0.006
Compressibility	3.94E-05 1/kPa
Porosity	0.1
Water Saturation	0.26
Thickness	3.0 m

Depletion Summary: Shut-in 2 vs 3

Pressure Drop= -89.32 kPa
Percent Drop (Extrap.)= -0.5 %
Percent Drop (Raw)= -0.2 %

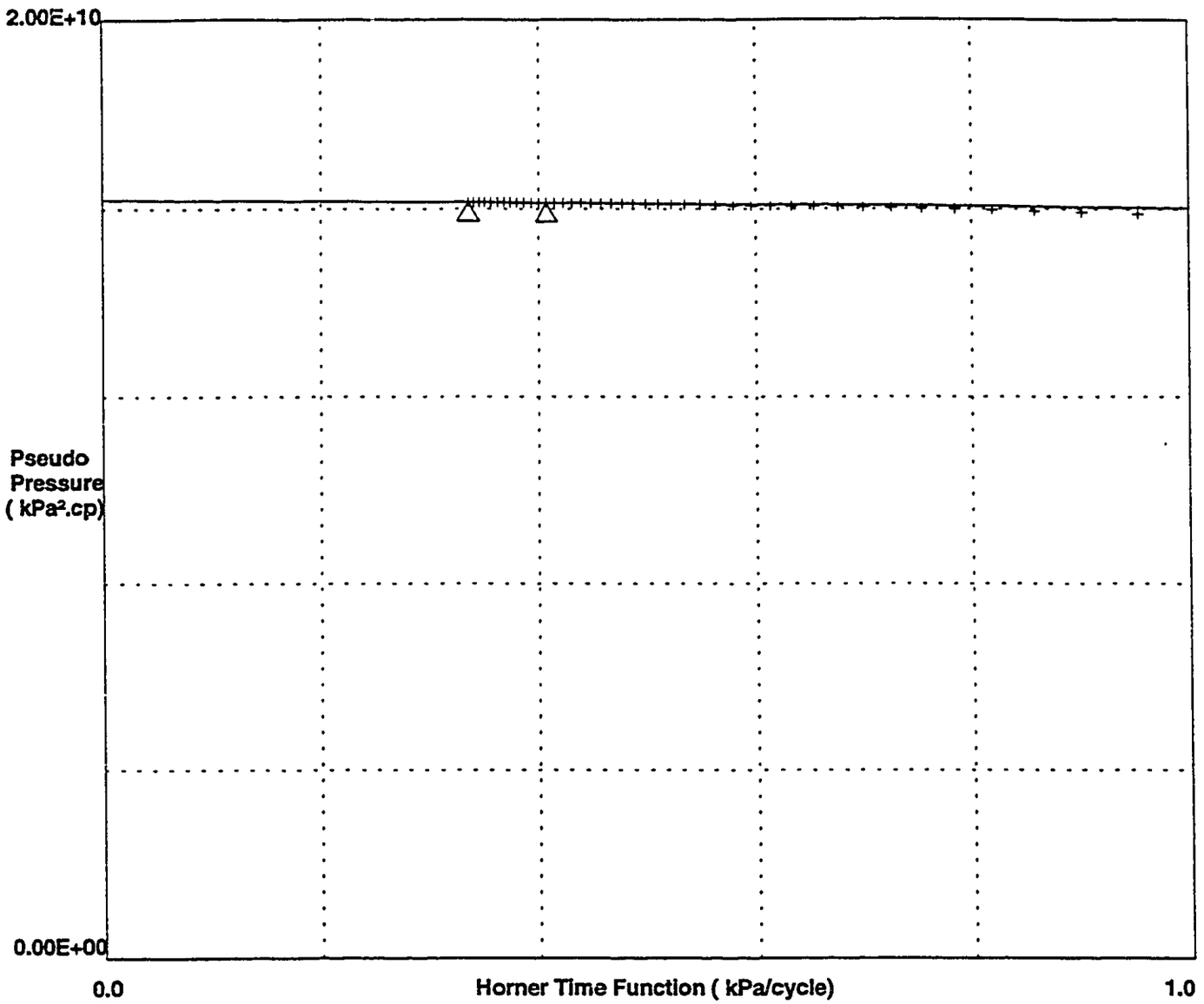
RESULTS: Shut-in # 2

Perm-Thickness	107.611 md.m
Permeability	35.87 md
Form. Pressure	17194.0 kPa
Skin	105.5
AOF	48.0 $10^3 m^3$/day
Damage Ratio	12.88
Distance	26.2 m
Flowrate (GAS)	38.4 $10^3 m^3$/day

General Remarks

Well: PARA ET AL FORT LIARD DST #2 Formation: MATTSON (1643-1648 m)

Horner Plot Shut-in # 2



RESULTS: Shut-in # 2

Perm-Thickness	107.611 md.m
Permeability	35.87 md
Form. Pressure	17194.0 kPa
Skin	105.5
AOF	48.0 10^3m^3/day
Damage Ratio	12.88
Distance	26.2 m
Flowrate (GAS)	38.4 10^3m^3/day

GAS and Formation Properties

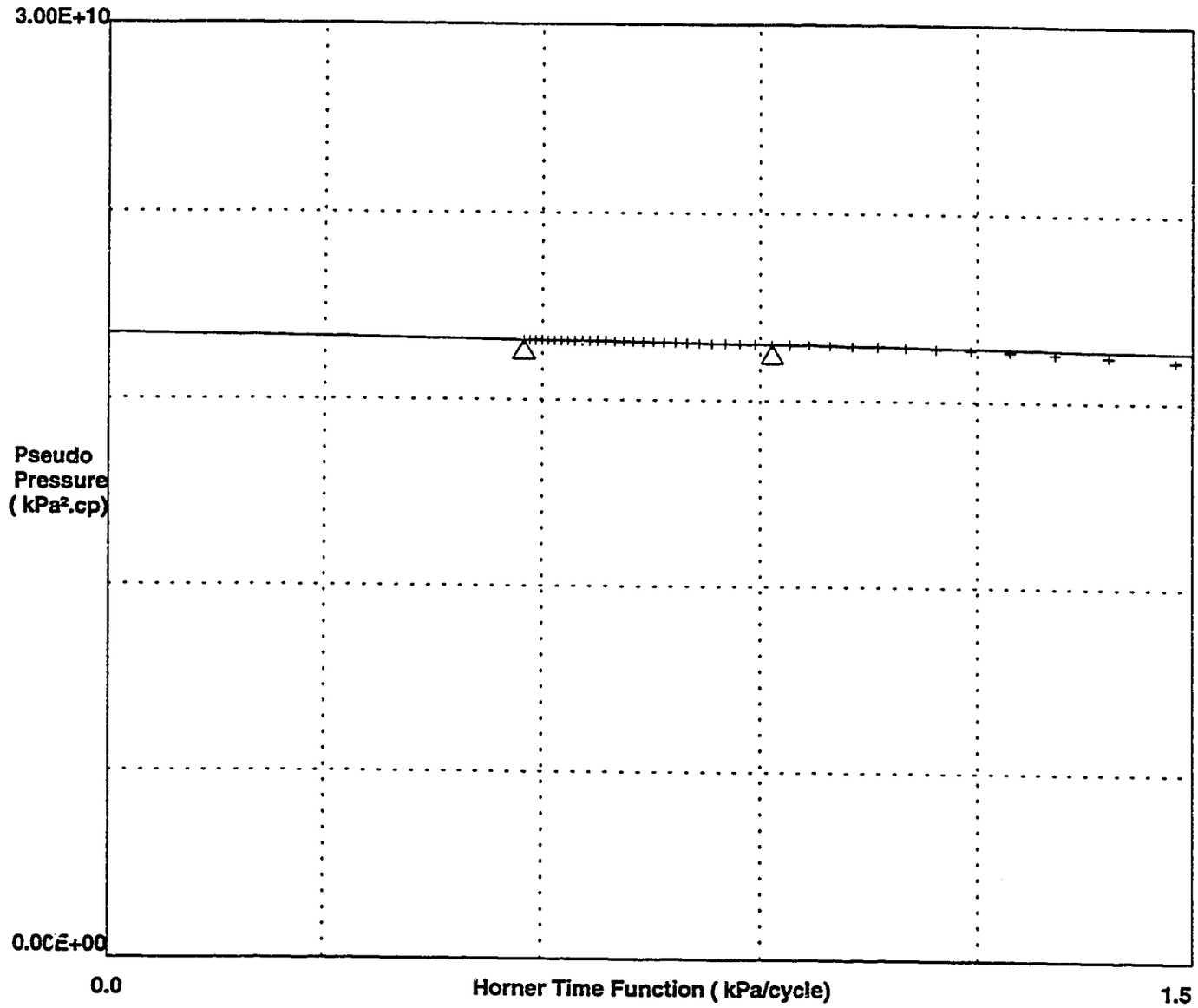
Viscosity	0.016 cp
Volume Factor 1/Bg	0.006
Compressibility	3.94E-05 1/kPa
Porosity	0.1
Water Saturation	0.26
Thickness	3.0 m

DST Manager

Location: N-01-60-10-123-15
Date : 2001/01/07

Well: PARA ET AL FORT LIARD DST #2 Formation: MATTSON (1643-1648 m)

Horner Plot Shut-in # 3



RESULTS: Shut-in # 3

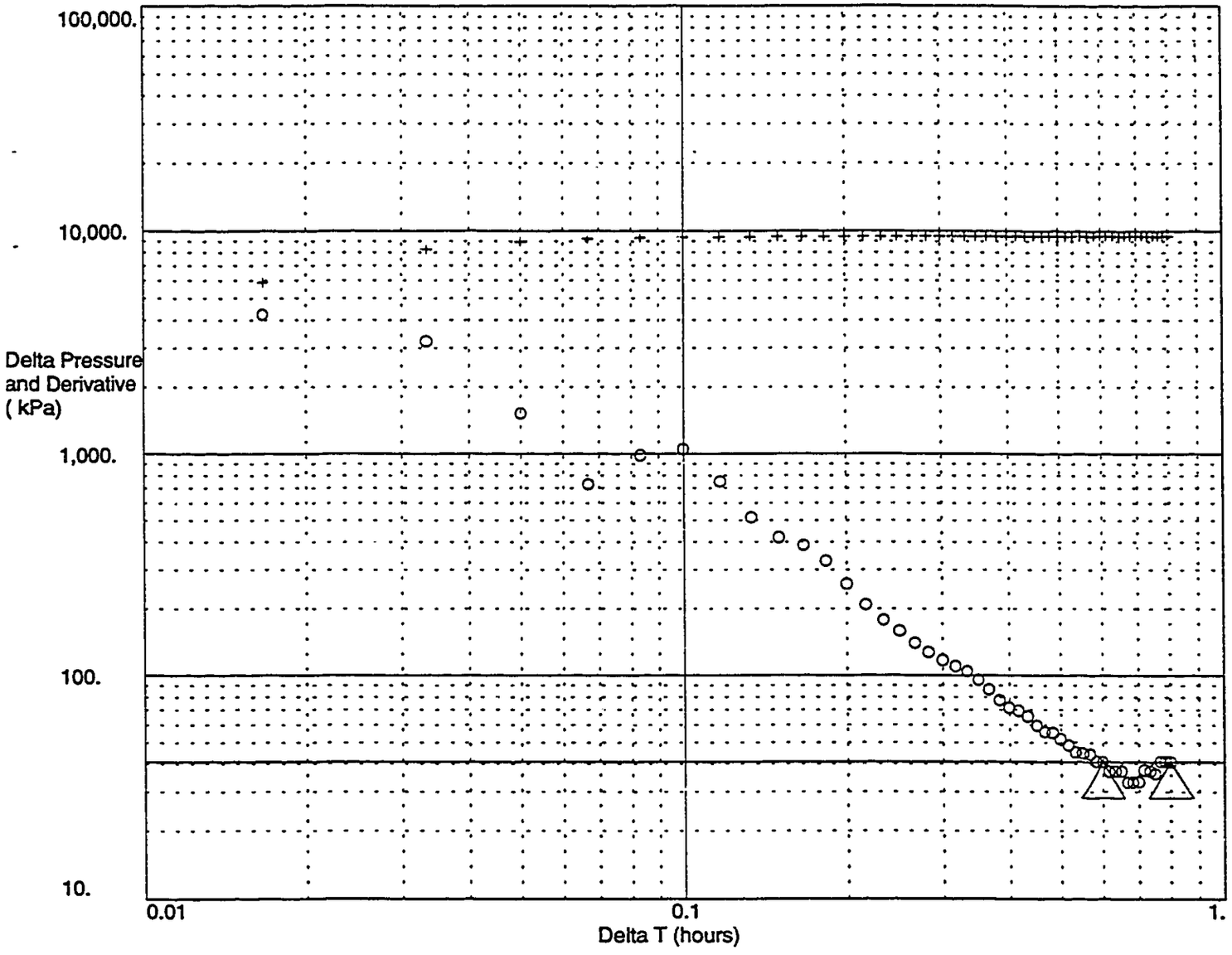
Perm-Thickness	47.204 md.m
Permeability	15.735 md
Form. Pressure	17283.3 kPa
Skin	63.1
AOF	34.8 $10^3 m^3$/day
Damage Ratio	8.4
Distance	23.4 m
Flowrate (GAS)	33.8 $10^3 m^3$/day

GAS and Formation Properties

Viscosity	0.016 cp
Volume Factor 1/Bg	0.006
Compressibility	3.94E-05 1/kPa
Porosity	0.1
Water Saturation	0.26
Thickness	3.0 m

Well: PARA ET AL FORT LIARD DST #2 Formation: MATTSON (1643-1648 m)

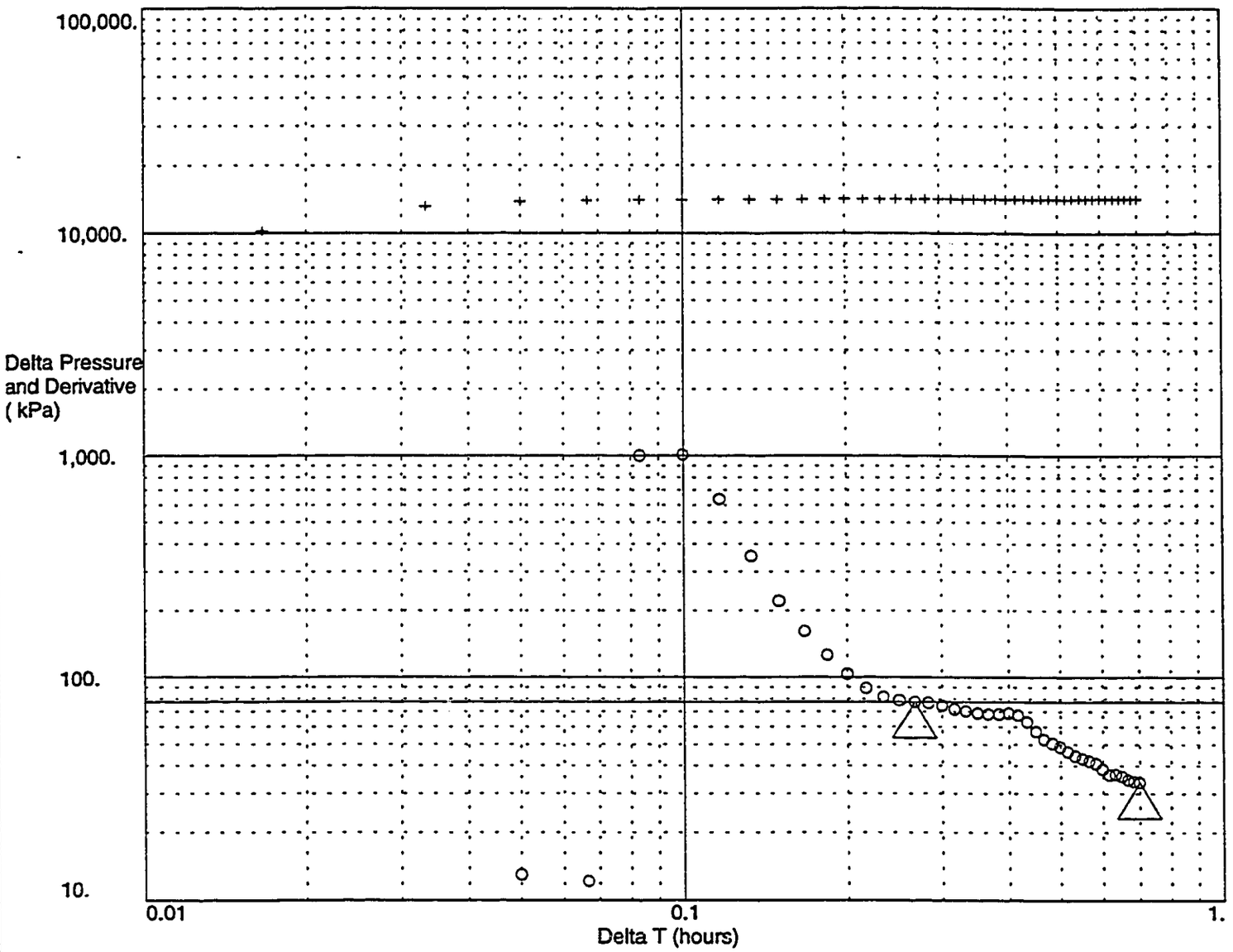
Delta P vs Delta T and Derivative Shut-in # 2



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope
Infinite Acting————	.60	.80	0.240	0.00

Well: PARA ET AL FORT LIARD DST #2 Formation: MATTSON (1643-1648 m)

Delta P vs Delta T and Derivative Shut-in # 3



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope
Infinite Acting————	.27	.70	-0.990	0.00

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9623 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	18681.90		56.8
B	Start of 1st Flow	0.00	0.00	849.50		56.8
		1.00	-87.90	761.60		56.8
		2.00	-37.00	812.50		56.8
		3.00	0.00	849.50		56.8
		4.00	60.20	909.70		56.8
		5.00	106.50	956.00		56.8
		6.00	196.80	1046.30		56.8
C	End of 1st Flow	7.00	214.20	1063.70		56.7
		1.00	2685.20	3748.90	8.0000	56.7
		2.00	7752.40	8816.10	4.5000	56.6
		3.00	10283.70	11347.40	3.3333	56.6
		4.00	11858.90	12922.60	2.7500	56.6
		5.00	12933.00	13996.70	2.4000	56.5
		6.00	13681.80	14745.50	2.1667	56.5
		7.00	14229.30	15293.00	2.0000	56.4
		8.00	14635.60	15699.30	1.8750	56.4
		9.00	14940.00	16003.70	1.7778	56.4
		10.00	15171.40	16235.10	1.7000	56.4
		11.00	15353.20	16416.90	1.6364	56.4
		12.00	15496.70	16560.40	1.5833	56.4
		13.00	15610.10	16673.80	1.5385	56.3
		14.00	15700.40	16764.10	1.5000	56.3
		15.00	15773.30	16837.00	1.4667	56.3
		16.00	15833.50	16897.20	1.4375	56.3
		17.00	15882.10	16945.80	1.4118	56.3
		18.00	15921.50	16985.20	1.3889	56.3
		19.00	15953.90	17017.60	1.3684	56.3
		20.00	15981.60	17045.30	1.3500	56.3
		21.00	16004.80	17068.50	1.3333	56.3
		22.00	16024.50	17088.20	1.3182	56.3
		23.00	16039.50	17103.20	1.3043	56.3
		24.00	16054.60	17118.30	1.2917	56.2
		25.00	16066.10	17129.80	1.2800	56.3
		26.00	16076.50	17140.20	1.2692	56.2
		27.00	16084.60	17148.30	1.2593	56.2
		28.00	16092.80	17156.50	1.2500	56.2
		29.00	16099.70	17163.40	1.2414	56.2
		30.00	16105.50	17169.20	1.2333	56.2
		31.00	16111.30	17175.00	1.2258	56.2
		32.00	16115.90	17179.60	1.2188	56.2
		33.00	16119.40	17183.10	1.2121	56.2
		34.00	16122.80	17186.50	1.2059	56.2
		35.00	16126.30	17190.00	1.2000	56.2
		36.00	16129.80	17193.50	1.1944	56.2
		37.00	16132.10	17195.80	1.1892	56.2
		38.00	16134.40	17198.10	1.1842	56.2
		39.00	16136.70	17200.40	1.1795	56.2
		40.00	16139.00	17202.70	1.1750	56.2
		41.00	16140.20	17203.90	1.1707	56.2
		42.00	16142.50	17206.20	1.1667	56.2
		43.00	16143.70	17207.40	1.1628	56.2
		44.00	16144.80	17208.50	1.1591	56.2
		45.00	16146.00	17209.70	1.1556	56.2
		46.00	16147.20	17210.90	1.1522	56.2
		47.00	16148.30	17212.00	1.1489	56.2
		48.00	16149.50	17213.20	1.1458	56.2
		49.00	16150.60	17214.30	1.1429	56.2
		50.00	16151.80	17215.50	1.1400	56.2
		51.00	16151.80	17215.50	1.1373	56.2
		52.00	16152.90	17216.60	1.1346	56.2
		53.00	16152.90	17216.60	1.1321	56.2
		54.00	16154.10	17217.80	1.1296	56.2
		55.00	16155.30	17219.00	1.1273	56.2
		56.00	16155.30	17219.00	1.1250	56.3
D	End of 1st Shutin	57.00	16156.40	17220.10	1.1228	56.3
E	Start of 2nd Flow	0.00	0.00	1141.20		55.9
		1.00	47.50	1188.70		55.5
		2.00	128.50	1269.70		55.0
		3.00	202.60	1343.80		54.5
		4.00	275.50	1416.70		53.9
		5.00	363.40	1504.60		53.4
		6.00	461.80	1603.00		52.9
		7.00	537.10	1678.30		52.4

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9623 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL. FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		8.00	626.20	1767.40		51.9
		9.00	735.00	1876.20		51.3
		10.00	854.20	1995.40		50.8
		11.00	968.80	2110.00		50.3
		12.00	1001.20	2142.40		49.8
		13.00	1125.00	2266.20		49.3
		14.00	1251.20	2392.40		48.8
		15.00	1372.70	2513.90		48.4
		16.00	1505.80	2647.00		48.0
		17.00	1632.00	2773.20		47.6
		18.00	1763.90	2905.10		47.2
		19.00	1897.00	3038.20		46.9
		20.00	2030.10	3171.30		46.5
		21.00	2162.10	3303.30		46.2
		22.00	2295.20	3436.40		45.9
		23.00	2428.30	3569.50		45.6
		24.00	2561.40	3702.60		45.3
		25.00	2698.00	3839.20		45.0
		26.00	2831.10	3972.30		44.7
		27.00	2960.70	4101.90		44.5
		28.00	3099.60	4240.80		44.3
		29.00	3242.00	4383.20		44.1
		30.00	3387.80	4529.00		43.9
		31.00	3539.40	4680.60		43.7
		32.00	3682.90	4824.10		43.6
		33.00	3829.90	4971.10		43.4
		34.00	3967.70	5108.90		43.3
		35.00	4104.20	5245.40		43.2
		36.00	4244.30	5385.50		43.1
		37.00	4379.70	5520.90		43.1
		38.00	4523.20	5664.40		43.0
		39.00	4670.20	5811.40		43.0
		40.00	4813.70	5954.90		42.9
		41.00	4973.50	6114.70		42.9
		42.00	5122.80	6264.00		42.9
		43.00	5262.80	6404.00		42.9
		44.00	5373.90	6515.10		42.9
		45.00	5490.80	6632.00		42.9
		46.00	5608.90	6750.10		42.9
		47.00	5736.20	6877.40		43.0
		48.00	5862.40	7003.60		43.0
		49.00	5995.50	7136.70		43.1
		50.00	6126.20	7267.40		43.1
		51.00	6211.90	7353.10		43.2
		52.00	6299.90	7441.10		43.2
		53.00	6377.40	7518.60		43.3
		54.00	6457.30	7598.50		43.4
F	End of 2nd Flow	55.00	6533.70	7674.90		43.4
		1.00	5877.30	13552.20	63.0000	43.5
		2.00	8248.90	15923.80	32.0000	43.7
		3.00	8966.50	16641.40	21.6667	43.9
		4.00	9211.90	16886.80	16.5000	44.1
		5.00	9305.60	16980.50	13.4000	44.3
		6.00	9351.90	17026.80	11.3333	44.5
		7.00	9379.70	17054.60	9.8571	44.6
		8.00	9397.10	17072.00	8.7500	44.8
		9.00	9409.80	17084.70	7.8889	44.9
		10.00	9420.20	17095.10	7.2000	45.0
		11.00	9428.30	17103.20	6.6364	45.0
		12.00	9435.30	17110.20	6.1667	45.2
		13.00	9441.00	17115.90	5.7692	45.2
		14.00	9445.70	17120.60	5.4286	45.3
		15.00	9450.30	17125.20	5.1333	45.3
		16.00	9453.80	17128.70	4.8750	45.4
		17.00	9456.10	17131.00	4.6471	45.4
		18.00	9458.40	17133.30	4.4444	45.5
		19.00	9458.40	17133.30	4.2632	45.5
		20.00	9463.00	17137.90	4.1000	45.6
		21.00	9466.50	17141.40	3.9524	45.6
		22.00	9470.00	17144.90	3.8182	45.7
		23.00	9473.40	17148.30	3.6957	45.7
		24.00	9474.60	17149.50	3.5833	45.8
		25.00	9475.80	17150.70	3.4800	45.8
		26.00	9478.10	17153.00	3.3846	45.8

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 880 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9623 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		27.00	9479.20	17154.10	3.2963	45.9
		28.00	9480.40	17155.30	3.2143	45.9
		29.00	9481.60	17156.50	3.1379	46.0
		30.00	9482.70	17157.60	3.0667	46.1
		31.00	9483.90	17158.80	3.0000	46.1
		32.00	9485.00	17159.90	2.9375	46.2
		33.00	9485.00	17159.90	2.8788	46.2
		34.00	9486.20	17161.10	2.8235	46.3
		35.00	9487.30	17162.20	2.7714	46.3
		36.00	9487.30	17162.20	2.7222	46.4
		37.00	9488.50	17163.40	2.6757	46.4
		38.00	9488.50	17163.40	2.6316	46.5
		39.00	9489.70	17164.60	2.5897	46.5
		40.00	9489.70	17164.60	2.5500	46.6
		41.00	9490.80	17165.70	2.5122	46.6
		42.00	9490.80	17165.70	2.4762	46.7
		43.00	9490.80	17165.70	2.4419	46.7
		44.00	9492.00	17166.90	2.4091	46.8
		45.00	9492.00	17166.90	2.3778	46.8
		46.00	9492.00	17166.90	2.3478	46.9
		47.00	9493.10	17168.00	2.3191	46.9
G	End of 2nd Shutin	48.00	9493.10	17168.00	2.2917	47.0
H	Start of 3rd Flow	0.00	0.00	1787.10		47.4
		1.00	62.50	1849.60		47.2
		2.00	128.40	1915.50		47.0
		3.00	177.00	1964.10		46.6
		4.00	228.00	2015.10		46.2
		5.00	278.90	2066.00		45.6
		6.00	320.60	2107.70		44.8
		7.00	370.30	2157.40		44.0
		8.00	403.90	2191.00		43.2
		9.00	435.10	2222.20		42.5
		10.00	460.60	2247.70		41.7
		11.00	498.80	2285.90		41.0
		12.00	523.10	2310.20		40.3
		13.00	562.50	2349.60		39.7
		14.00	586.80	2373.90		39.1
		15.00	613.40	2400.50		38.6
		16.00	643.50	2430.60		38.1
		17.00	662.00	2449.10		37.8
		18.00	679.40	2466.50		37.4
		19.00	695.60	2482.70		37.0
		20.00	711.80	2498.90		36.4
		21.00	728.00	2515.10		35.9
		22.00	750.00	2537.10		35.4
		23.00	758.10	2545.20		34.9
		24.00	772.00	2559.10		34.5
		25.00	785.80	2572.90		34.1
		26.00	797.40	2584.50		33.8
		27.00	818.30	2605.40		33.5
		28.00	818.30	2605.40		33.2
		29.00	837.90	2625.00		33.0
		30.00	841.40	2628.50		32.7
		31.00	854.10	2641.20		32.5
		32.00	876.10	2663.20		32.3
		33.00	881.90	2669.00		32.1
		34.00	890.00	2677.10		31.9
		35.00	901.60	2688.70		31.8
		36.00	913.20	2700.30		31.6
		37.00	925.90	2713.00		31.4
		38.00	938.60	2725.70		31.3
		39.00	946.70	2733.80		31.1
		40.00	964.10	2751.20		31.0
		41.00	974.50	2761.60		30.8
		42.00	969.90	2757.00		30.7
		43.00	988.40	2775.50		30.6
		44.00	994.20	2781.30		30.4
		45.00	1009.20	2796.30		30.3
		46.00	1012.70	2799.80		30.2
		47.00	1035.80	2822.90		30.1
		48.00	1040.50	2827.60		29.9
		49.00	1044.00	2831.10		29.8
		50.00	1053.20	2840.30		29.7
		51.00	1064.80	2851.90		29.6

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

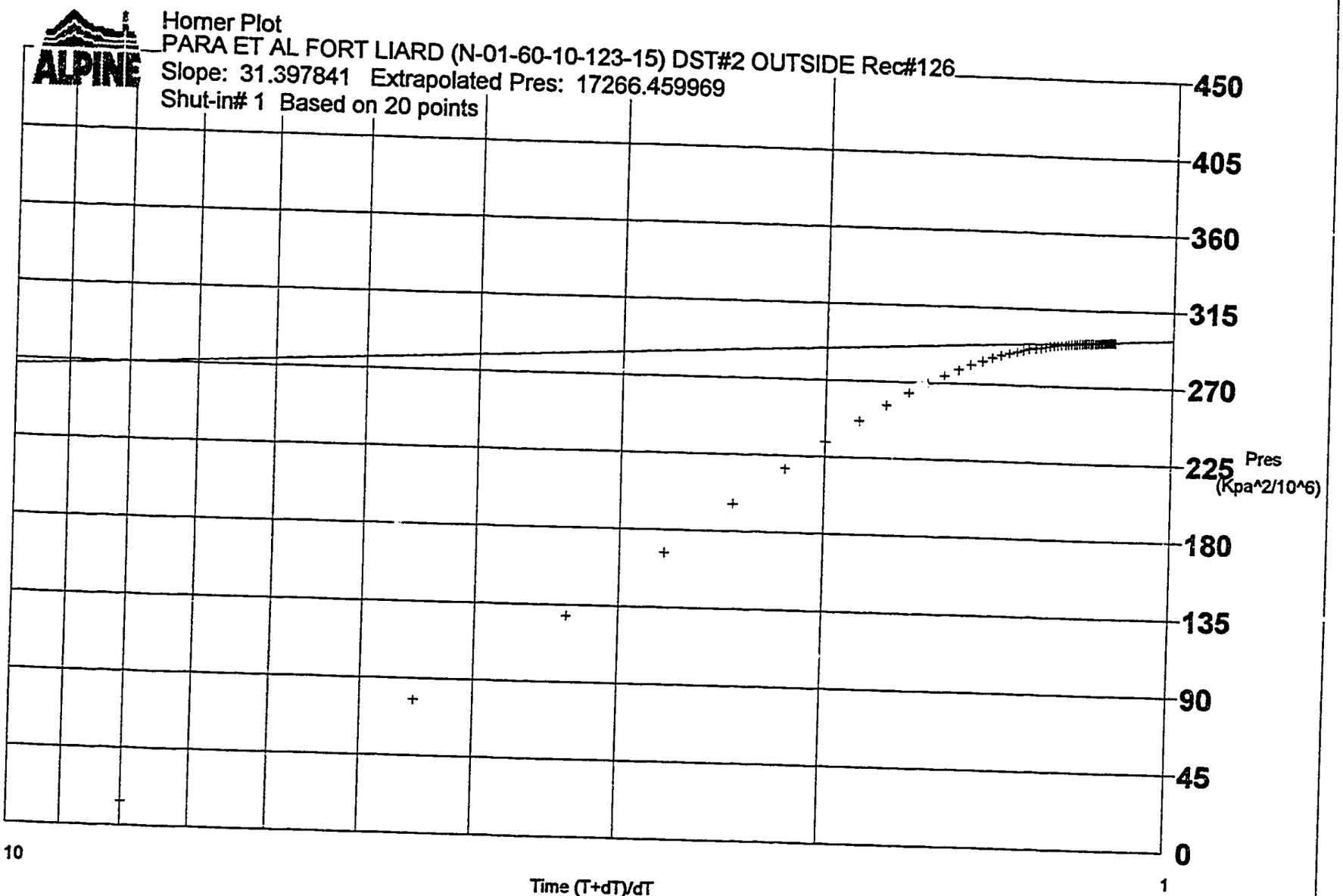
Contact: WILBERT CALLIHOO

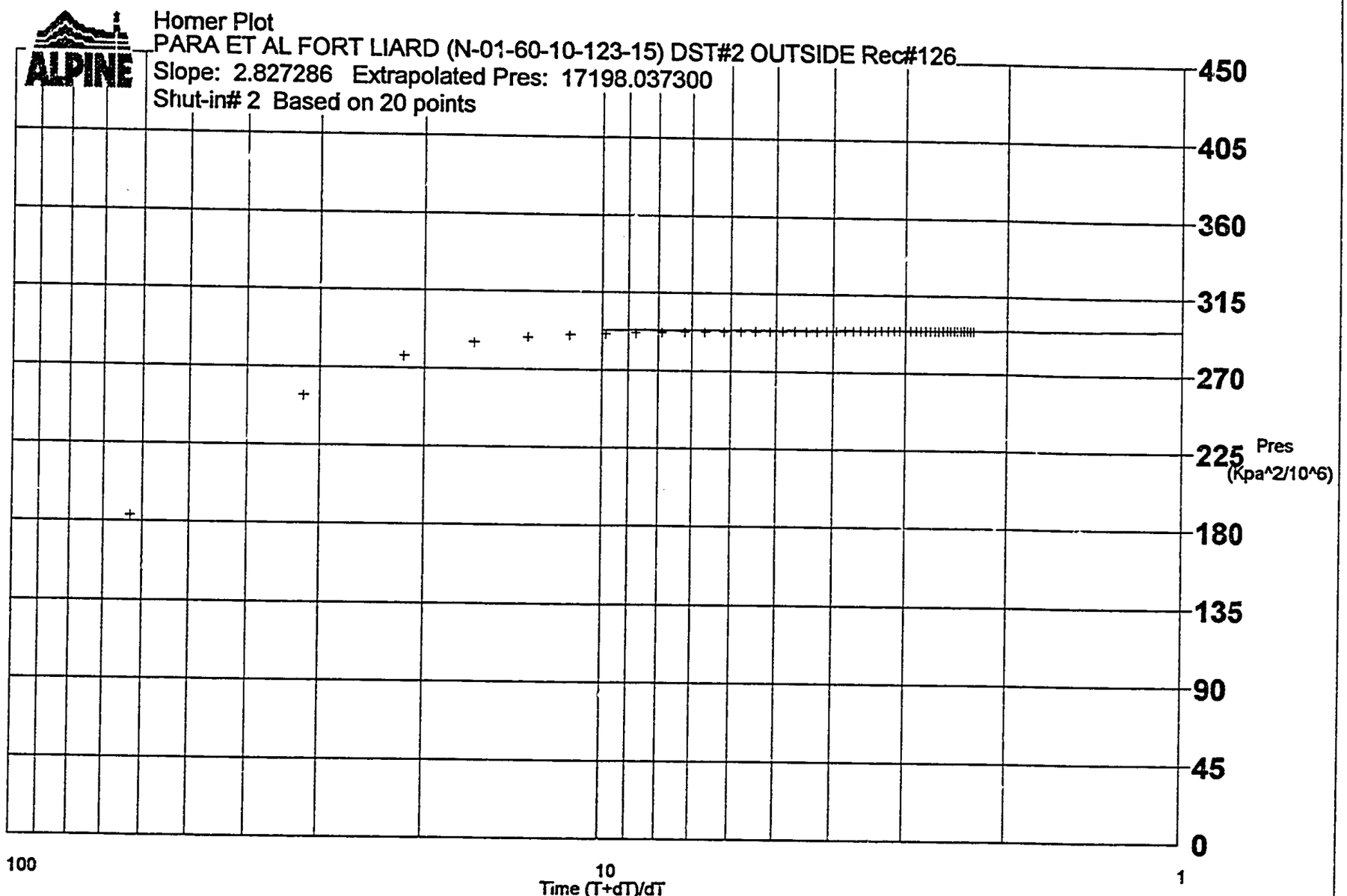
Job Ticket #: D2-9623 DST#: 2
Test Date: 01/07/2001 2130hrs

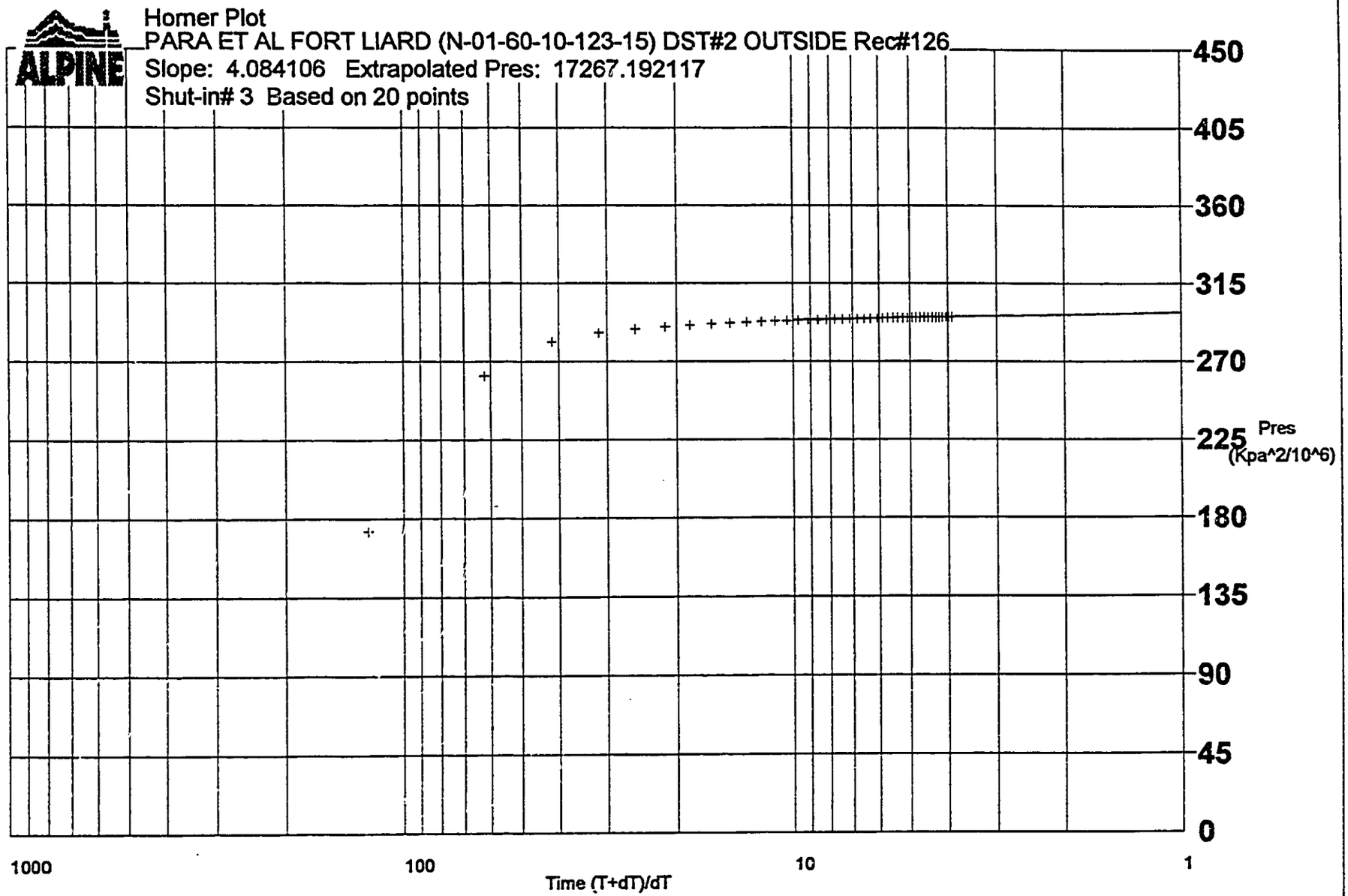
Well Name: PARA ET AL FORT LIARD

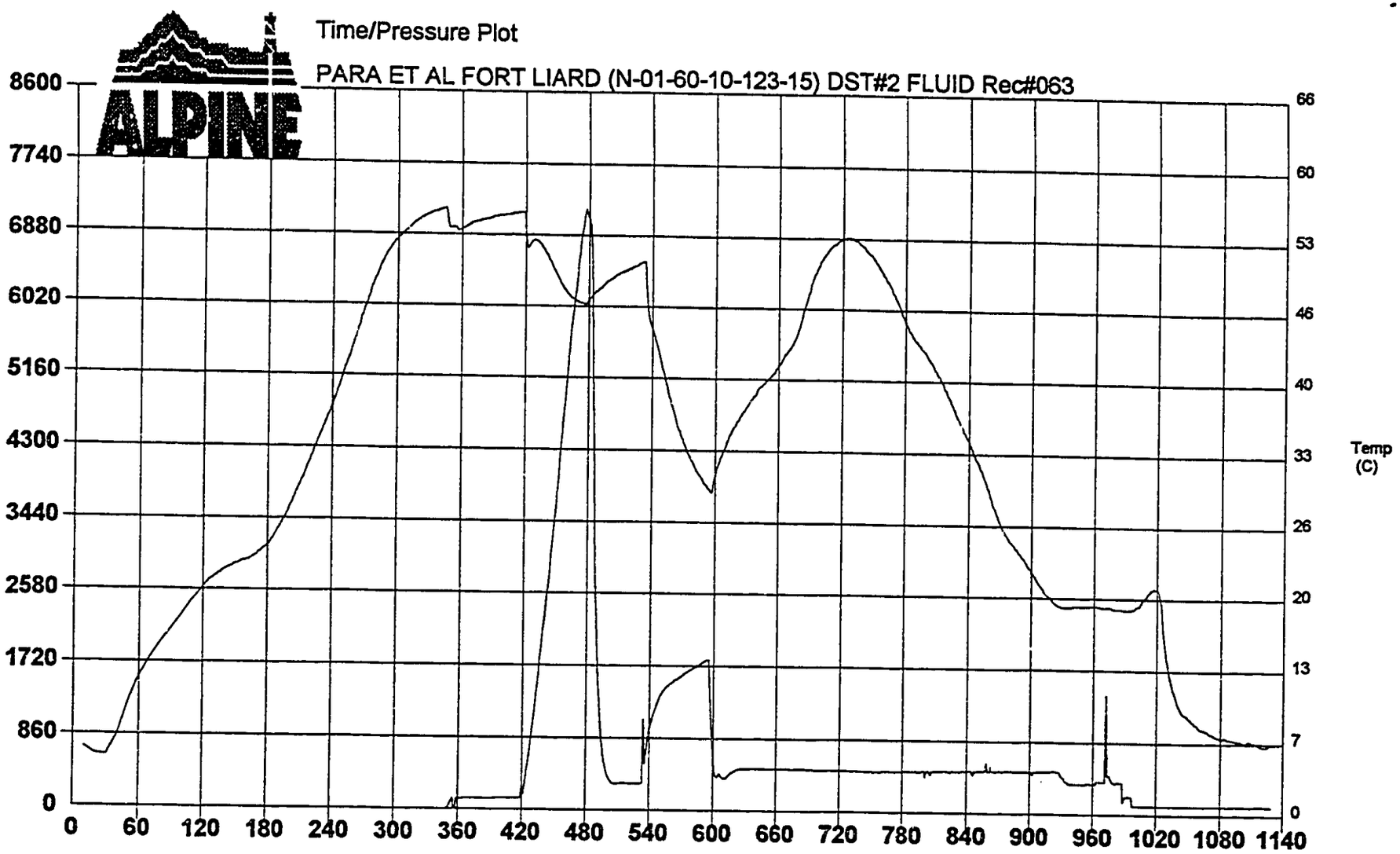
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		52.00	1074.00	2861.10		29.5
		53.00	1072.90	2860.00		29.3
		54.00	1084.50	2871.60		29.2
		55.00	1098.40	2885.50		29.2
		56.00	1092.60	2879.70		29.1
		57.00	1108.80	2895.90		28.9
		58.00	1116.90	2904.00		28.8
		59.00	1174.70	2961.80		28.8
I	End of 3rd Flow	60.00	1180.50	2967.60		28.7
		1.00	10185.30	13152.90	123.0000	28.7
		2.00	13207.40	16175.00	62.0000	28.9
		3.00	13809.20	16776.80	41.6667	29.2
		4.00	13962.00	16929.60	31.5000	29.5
		5.00	14024.50	16992.10	25.4000	29.7
		6.00	14062.70	17030.30	21.3333	29.9
		7.00	14088.20	17055.80	18.4286	30.1
		8.00	14109.00	17076.60	16.2500	30.3
		9.00	14125.20	17092.80	14.5556	30.4
		10.00	14137.90	17105.50	13.2000	30.6
		11.00	14148.30	17115.90	12.0909	30.7
		12.00	14156.40	17124.00	11.1667	30.8
		13.00	14162.20	17129.80	10.3846	30.9
		14.00	14168.00	17135.60	9.7143	31.0
		15.00	14173.80	17141.40	9.1333	31.1
		16.00	14177.30	17144.90	8.6250	31.2
		17.00	14180.70	17148.30	8.1765	31.3
		18.00	14184.20	17151.80	7.7778	31.3
		19.00	14186.50	17154.10	7.4211	31.4
		20.00	14190.00	17157.60	7.1000	31.5
		21.00	14193.50	17161.10	6.8095	31.6
		22.00	14197.00	17164.60	6.5455	31.6
		23.00	14200.40	17168.00	6.3043	31.7
		24.00	14203.90	17171.50	6.0833	31.8
		25.00	14207.40	17175.00	5.8800	31.9
		26.00	14210.80	17178.40	5.6923	31.9
		27.00	14213.20	17180.80	5.5185	32.0
		28.00	14215.50	17183.10	5.3571	32.1
		29.00	14216.60	17184.20	5.2069	32.2
		30.00	14217.80	17185.40	5.0667	32.2
		31.00	14218.90	17186.50	4.9355	32.3
		32.00	14220.10	17187.70	4.8125	32.4
		33.00	14221.30	17188.90	4.6970	32.5
		34.00	14222.40	17190.00	4.5882	32.6
		35.00	14223.60	17191.20	4.4857	32.6
		36.00	14223.60	17191.20	4.3889	32.7
		37.00	14224.70	17192.30	4.2973	32.8
		38.00	14224.70	17192.30	4.2105	32.9
		39.00	14225.90	17193.50	4.1282	33.0
		40.00	14225.90	17193.50	4.0500	33.1
		41.00	14227.00	17194.60	3.9756	33.2
J	End of 3rd Shutin	42.00	14227.00	17194.60	3.9048	33.2
Q	Final Hydrostatic	0.00	0.00	18485.20		42.4

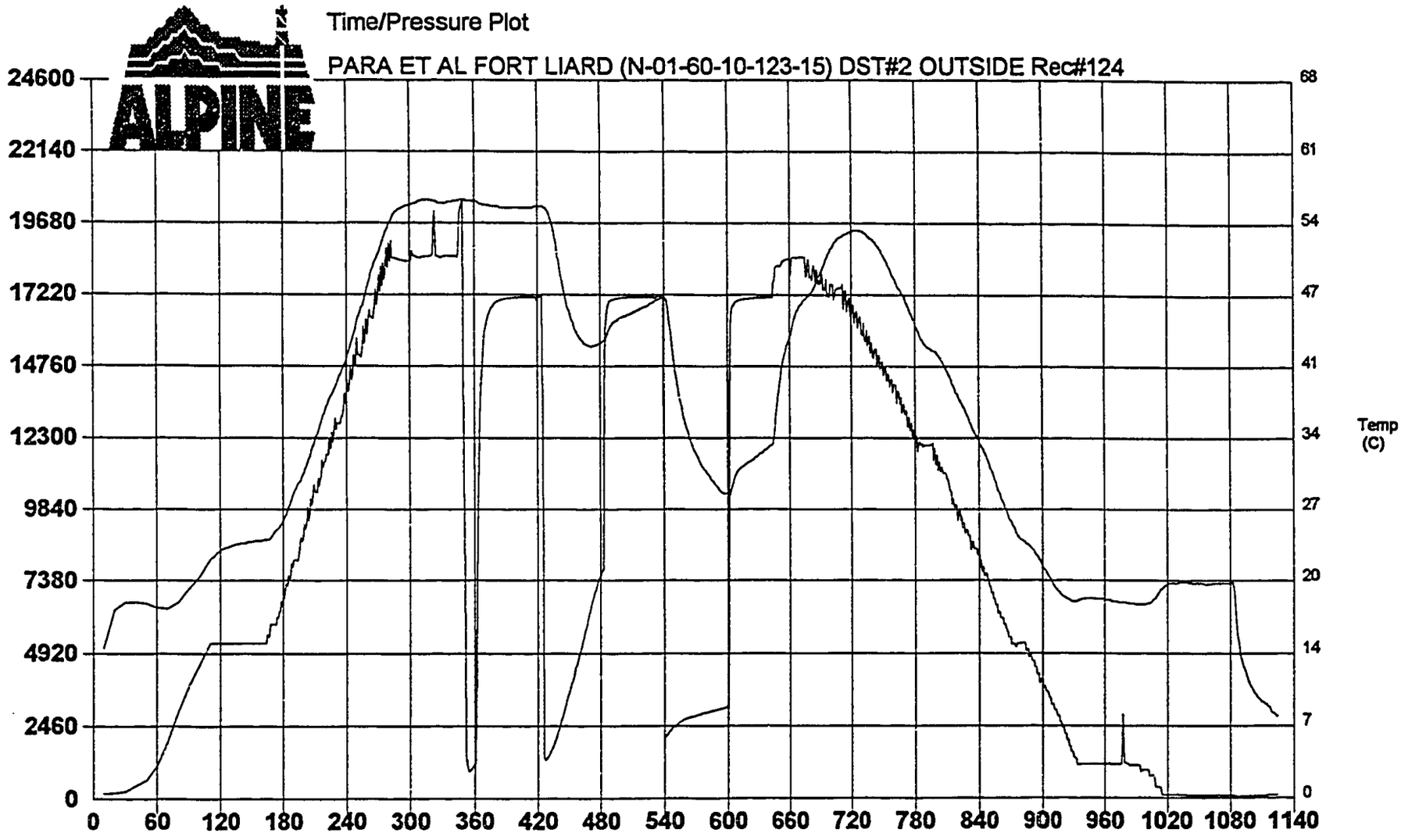

ALPINE
Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#2 OUTSIDE Rec#126
Slope: 31.397841 Extrapolated Pres: 17266.459969
Shut-in# 1 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
10
Time (T+dT)/dT
1


ALPINE
Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#2 OUTSIDE Rec#126
Slope: 2.827286 Extrapolated Pres: 17198.037300
Shut-in# 2 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT


Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#2 OUTSIDE Rec#126
Slope: 4.084106 Extrapolated Pres: 17267.192117
Shut-in# 3 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
1000
100
10
1
Time (T+dT)/dT



A Initial Hydrostatic - 0
B Start of 1st Flow - 0
C End of 1st Flow - 127
D End of 1st Shutin - 131
E Start of 2nd Flow - 181
F End of 2nd Flow - 7203
G End of 2nd Shutin - 317
H Start of 3rd Flow - 323
I End of 3rd Flow - 1798
J End of 3rd Shutin - 499
Q Final Hydrostatic - 497



A Initial Hydrostatic - 18545
B Start of 1st Flow - 1184
C End of 1st Flow - 1226
D End of 1st Shutin - 17125
E Start of 2nd Flow - 1294
F End of 2nd Flow - 7778
G End of 2nd Shutin - 17140
H Start of 3rd Flow - 2035
I End of 3rd Flow - 3125
J End of 3rd Shutin - 17118
Q Final Hydrostatic - 18341

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#2 OUTSIDE Rec#126



A Initial Hydrostatic - 18682
B Start of 1st Flow - 850
C End of 1st Flow - 1064
D End of 1st Shutin - 17220
E Start of 2nd Flow - 1141
F End of 2nd Flow - 7675
G End of 2nd Shutin - 17168
H Start of 3rd Flow - 1787
I End of 3rd Flow - 2968
J End of 3rd Shutin - 17195
Q Final Hydrostatic - 18485



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: **01/07/2001**

Job Ticket #: **T5158-2** DST#: **2**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: T5158-2 DST#: 2
Test Date: 01/07/2001 2130hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

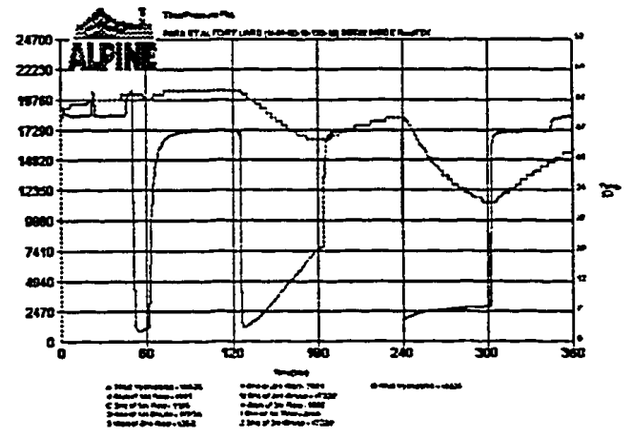
General Information:

Test Type:	INFLATE STRADDLE	Tester:	B. HOLLINGSHEAD
Interval:	1643m -1648m	Truck No.:	Unit 114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature.	32.50 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1632.45 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	18524.7
B Start of 1st Flow	0.00	1041.0
C End of 1st Flow	8.64	1184.8
D End of 1st Shutin	56.94	17233.7
E Start of 2nd Flow	0.00	1251.5
F End of 2nd Flow	57.00	7800.9
G End of 2nd Shutin	45.90	17229.4
H Start of 3rd Flow	0.00	1864.6
I End of 3rd Flow	60.54	2943.9
J End of 3rd Shutin	40.32	17229.2
Q Final Hydrostatic	0.00	18323.9



Test Run Information:

Start Time:	2130hrs
Reached Test Depth:	200hrs
Pull Out Time:	800hrs
Tool Out Of Hole:	1530hrs
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	74.00S/L
Filter Cake:	1.60mm
Pump Time:	25min
Reversed Out:	YES
Mud Type:	GEL CHEMICAL
Mud Weight:	1110.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	

General Remarks:

Mechanically successful. *Test results suggest high permeability within the zone tested.

PREFLOW: Strong air blow throughout. Gas to surface in 4 minutes, 3 meter flare. No rates taken for preflow.

SECOND FLOW: Gas to surface immediately.

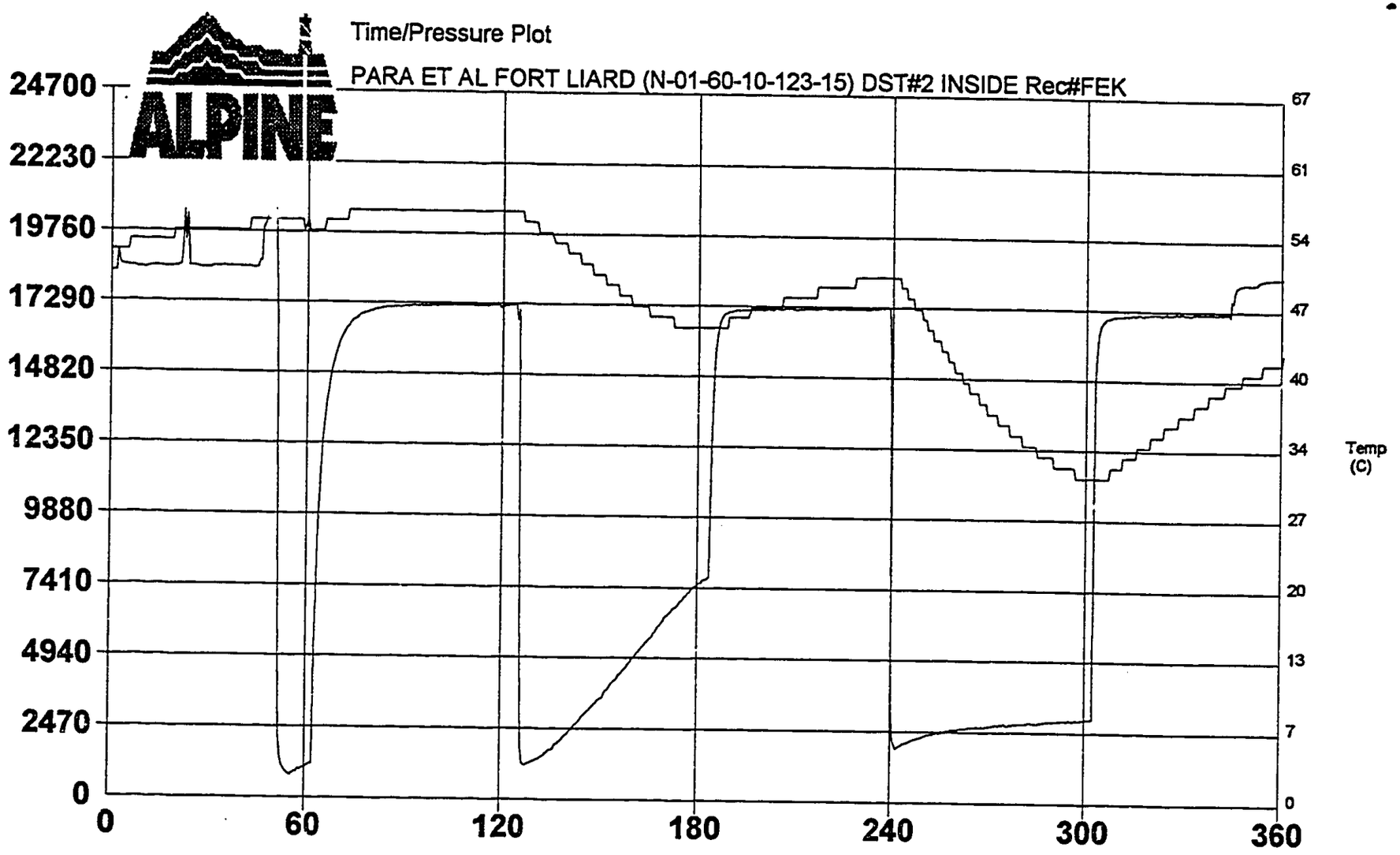
FINAL FLOW: Gas to surface immediately.

***See gas volume charts for gas rates.

Recovery Description:

Total fluid recovery reversed out was 75 meters, consisting of 70 meters drilling mud and 5 meters condensate cut mud.

Gas to surface.



A Initial Hydrostatic - 18525
B Start of 1st Flow - 1041
C End of 1st Flow - 1195
D End of 1st Shutin - 17234
E Start of 2nd Flow - 1252
F End of 2nd Flow - 7801
G End of 2nd Shutin - 17229
H Start of 3rd Flow - 1865
I End of 3rd Flow - 2944
J End of 3rd Shutin - 17229
Q Final Hydrostatic - 18324

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PARA ET AL FORT LIARD

N-01-60-10-123415

DST #3

ALPINE

Drill Stem Test Report

Prepared for: PARAMOUNT RESOURCES
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: 01/08/2001

Job Ticket #: D2-9624 DST#: 3

NATIONAL ENERGY BOARD
JAN 21 2001

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9624 DST#: 3
Test Date: 01/08/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

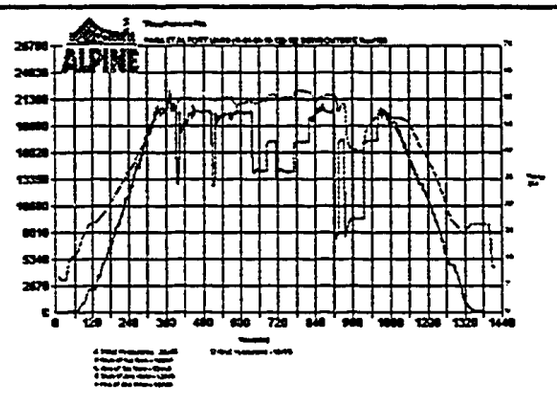
General Information:

Test Type:	INFLATE STRADDLE	Tester:	D. ROSS
Interval:	1730.00m - 1751.00m	Truck No.:	Unit 677
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	57.90 C

Electronic Recorder Information:

OUTSIDE Recorder #: 126		OUTSIDE Recorder #: 124	
Range:	35000 kPa	Range:	70000 kPa
Depth:	1732.92 m	Depth:	1732.92 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20217.8
B Start of 1st Flow	0.00	12948.1
C End of 1st Flow	6.00	13443.4
E Start of 2nd Flow	0.00	12656.4
F End of 2nd Flow	8.00	13747.8
Q Final Hydrostatic	0.00	19775.7



Test Run Information:

Start Time:	1200hrs
Reached Test Depth:	1730hrs
Pull Out Time:	2000hrs
Tool Out Of Hole:	2045hrs
Weight set on Packers:	8000.00daN
Weight to free Packers:	6000.00daN
Initial String Weight:	42000.00daN
Unseated String Weight:	45000.00daN

Tool Chased Dist:	0.00m	Water Loss:	6.20cm³
Mud Type:	GEL CHEMICAL	Mud Drop:	2.00m
Mud Weight:	1160.00kg/m³	VIS:	78.00S/L
Amount of fill:	0.00m	Filter Cake:	1.60mm
Amt of cushion:	0.00	Pump Time:	25min
Type of cushion:		Reversed Out:	NO

General Remarks:

This is the first of three tests run on the same trip in the hole.

PREFLOW: Strong air blow throughout. Gas to surface in 2 minutes, 7 meter flare.

FINAL FLOW: Strong air blow throughout.

*** See gas volume charts for gas rates.

Recovery Description:

Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condensate and 30 meters fresh water.

Gas to surface.

Gas Bomb: 0 Sampler: 0
Fluid Sample: 0 Sent to: SEE DST #5

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9624 DST#: 3
Test Date: 01/08/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	67
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1735.36m
Total Drill Pipe Above K.B.:	5.36m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1284.15	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:

Ran to test depth. Opened tool for preflow and mud began to drop after 6 minutes. Moved down 1 meter and opened tool for a second preflow, and again mud began to drop.

NOTE -
Electronic Rec. #070 and #063 malfunctioned, no pressure data is available.



Item	Length	Depth
P.O. Sub	0.31	
Bit Sub	1.04	
Double Pin	0.31	
P.O. Sub	0.31	
REC#063	1.50	
HMV Stroke	2.18	
Sampler	1.10	
REC#070	1.50	
Telemetry Tool	5.80	24.60m
Jars	1.82	
Safety Joint	0.65	
Pump	2.04	
Screen	1.18	49.93m
Valve	2.23	
Deflate	0.85	
Packer	1.78	Depth: 1730m
Stub	0.72	
ASE Carrier	2.20	
REC#124		
REC#126		
Bypass Hanger	0.42	
C.O. Sub	0.30	20.76m
DRILL COLLAR	9.24	
C.O. Sub	0.30	
Blank Spacing	6.08	
Bypass Receiver	0.78	
Stub	0.72	Depth: 1751m
Packer	1.78	
Extension Sub	0.71	
Drag Spring	2.08	4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9624 DST#: 3
Test Date: 01/08/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure(kPa)	Rate (m^3/d)
5	22.23	5000	457679.00

Drill Stem Testing - Time / Pressure Listing

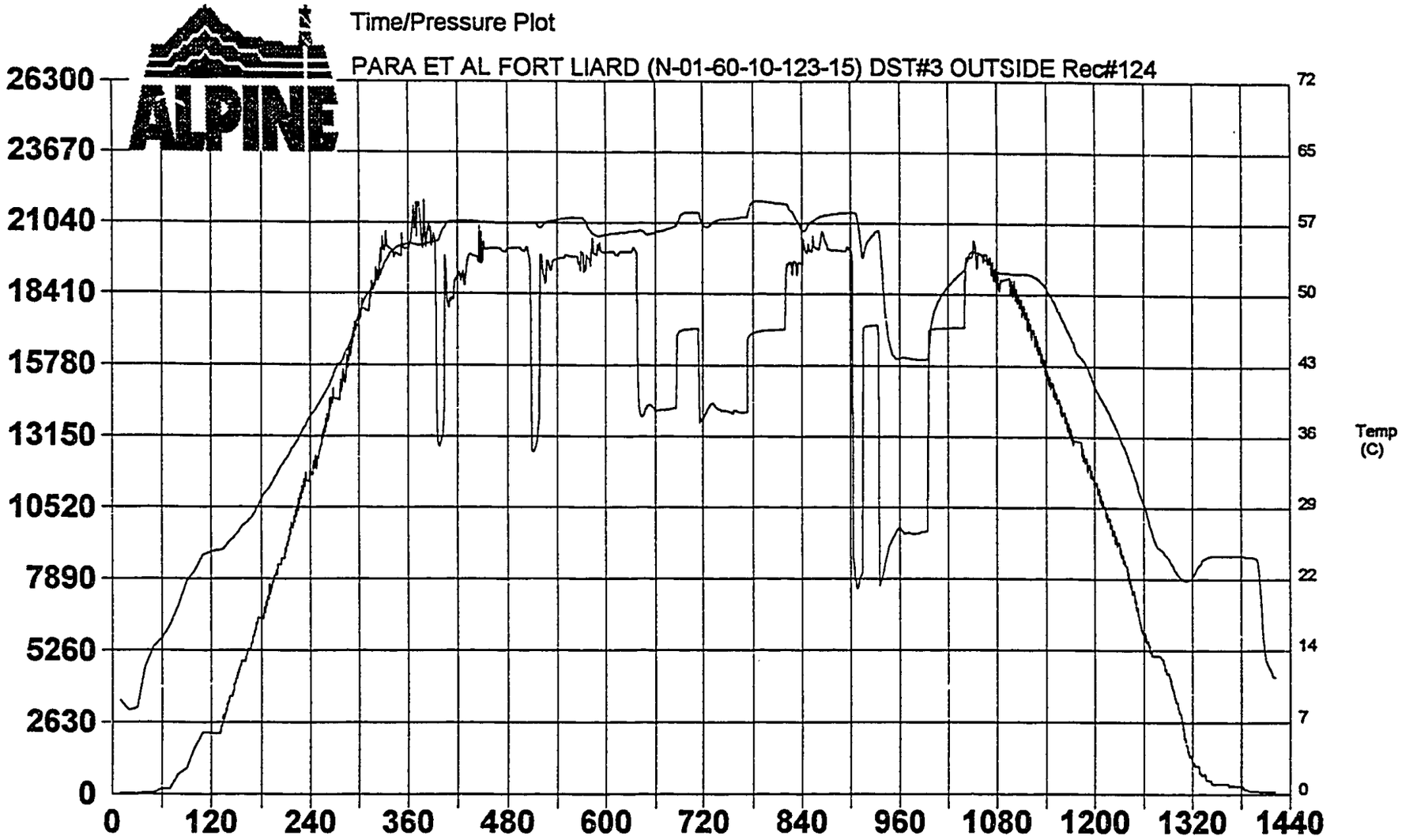
Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9624 DST#: 3
Test Date: 01/08/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	20217.80		55.9
B	Start of 1st Flow	0.00	0.00	12948.10		56.0
		1.00	55.50	13003.60		56.2
		2.00	-54.40	12893.70		56.4
		3.00	-70.60	12877.50		56.7
		4.00	48.60	12996.70		56.9
		5.00	181.70	13129.80		57.1
C	End of 1st Flow	6.00	495.30	13443.40		57.2
E	Start of 2nd Flow	0.00	0.00	12656.40		57.9
		1.00	-49.80	12606.60		57.9
		2.00	-48.60	12607.80		57.9
		3.00	0.00	12656.40		57.9
		4.00	130.80	12787.20		57.9
		5.00	292.80	12949.20		57.8
		6.00	435.20	13091.60		57.7
		7.00	703.70	13360.10		57.6
F	End of 2nd Flow	8.00	1091.40	13747.80		57.5
Q	Final Hydrostatic	0.00	0.00	19775.70		58.3



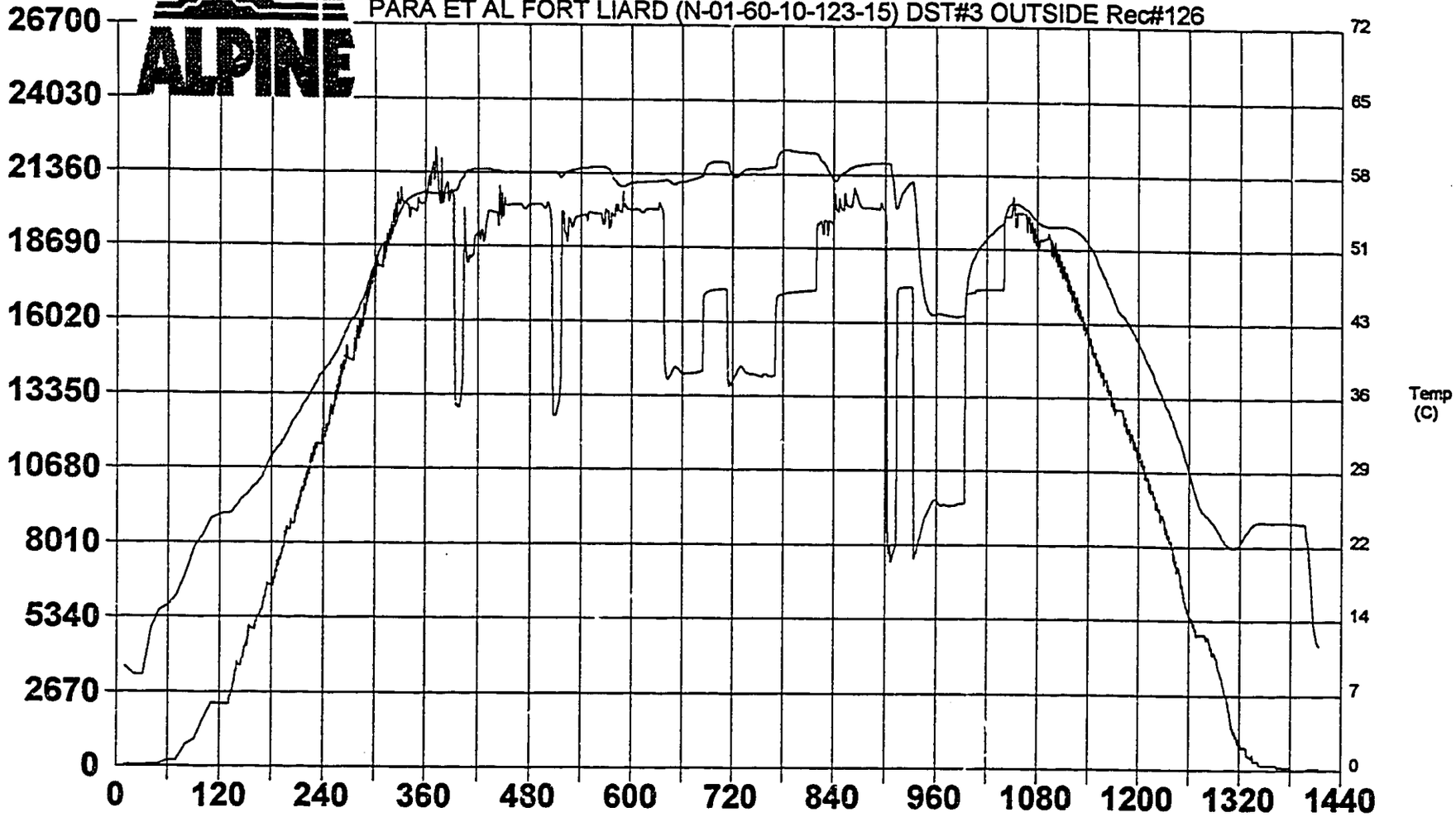
A Initial Hydrostatic - 21785
B Start of 1st Flow - 13001
C End of 1st Flow - 13197
E Start of 2nd Flow - 12640
F End of 2nd Flow - 13857

Q Final Hydrostatic - 19738

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#3 OUTSIDE Rec#126



A Initial Hydrostatic - 20218
B Start of 1st Flow - 12948
C End of 1st Flow - 13443
E Start of 2nd Flow - 12656
F End of 2nd Flow - 13748

Q Final Hydrostatic - 19776

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PARA ET AL FORT LIARD

N-01-60-10-123-15

DST#4

ALPINE

Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **D2-9625** DST#: **4**

NATIONAL ENERGY BOARD
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Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

General Information:

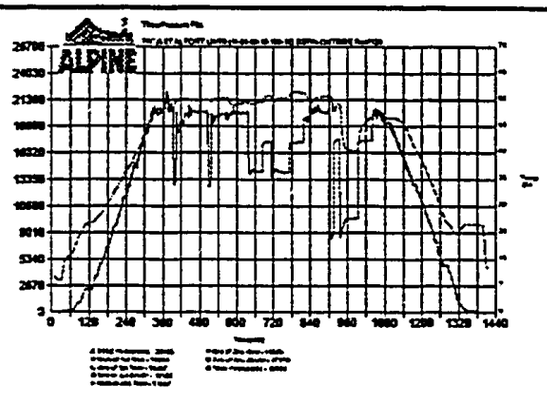
Test Type: INFLATE RESET
Interval: 1717.00m - 1738.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

Tester: D. ROSS
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 60.10 C

Electronic Recorder Information:

OUTSIDE Recorder #: 126		OUTSIDE Recorder #: 124	
Range:	35000 kPa	Range:	70000 kPa
Depth:	1719.92 m	Depth:	1719.92 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20062.7
B Start of 1st Flow	0.00	13984.0
C End of 1st Flow	42.00	14237.4
D End of 1st Shutin	28.00	17194.6
E Start of 2nd Flow	0.00	13686.5
F End of 2nd Flow	55.00	14092.8
G End of 2nd Shutin	48.00	17157.6
Q Final Hydrostatic	0.00	19687.7



Test Run Information:

Start Time: 1200hrs
Reached Test Depth: 2140hrs
Pull Out Time: 30hrs
Tool Out Of Hole: 1000hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 45000.00daN
Unseated String Weight: 45000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1160.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion:

Water Loss: 6.20cm³
Mud Drop: NO
VIS: 76.00S/L
Filter Cake: 1.60mm
Pump Time: 30min
Reversed Out: NO

General Remarks:

This is the second of three tests run on the same trip in the hole. Mechanically successful. *Test results suggest excellent permeability within the zone tested.

PREFLOW: Gas to surface immediately.

FINAL FLOW: Gas to surface immediately, misting mud throughout.

***See gas volume charts for gas rates.

NOTE - See Alpine Telemetry report for real time data acquisition.

Recovery Description:

Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condinsate and 30 meters fresh water.

Gas to surface.

Gas Bomb: 0 Sampler: 0
Fluid Sample: 0 Sent to: SEE DST #5

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	66
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1720.57m
Total Drill Pipe Above K.B.:	3.57m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1269.36	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



	Item	Length
	P.O. Sub	0.31
	Bit Sub	1.04
	Double Pin	0.31
	P.O. Sub	0.31
	REC#063	1.50
	HMV Stroke	2.18
	Sampler	1.10
	REC#070	1.50
	Telemetry Tool	5.80
	Jars	1.82
	Safety Joint	0.65
	Pump	2.04
49.93m	Screen	1.18
	Valve	2.23
	Deflate	0.85
	Packer	1.78
	Stub	0.72
	ASE Carrier	2.20
	REC#124	
	REC#126	
	Bypass Hanger	0.42
	C.O. Sub	0.30
	DRILL COLLAR	9.24
	C.O. Sub	0.30
	Blank Spacing	6.08
	Bypass Receiver	0.78
	Stub	0.72
	Packer	1.78
	Extension Sub	0.71
	Drag Spring	2.08

24.60m

Depth: 1717m

20.76m

Depth: 1738m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
20	22.23	4700	431280.00
25	22.23	4800	439926.00
35	22.23	4800	439926.00
40	22.23	4900	449212.00

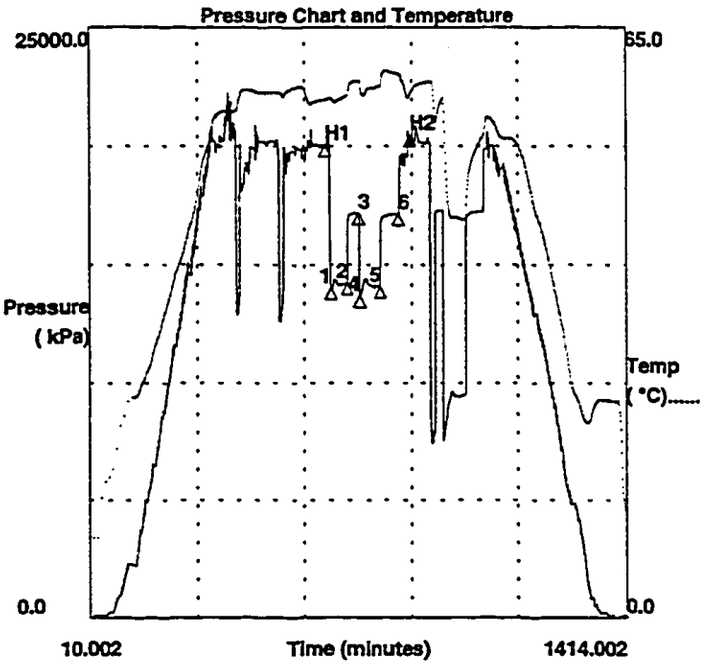
Gas Measurements for Flow # 2

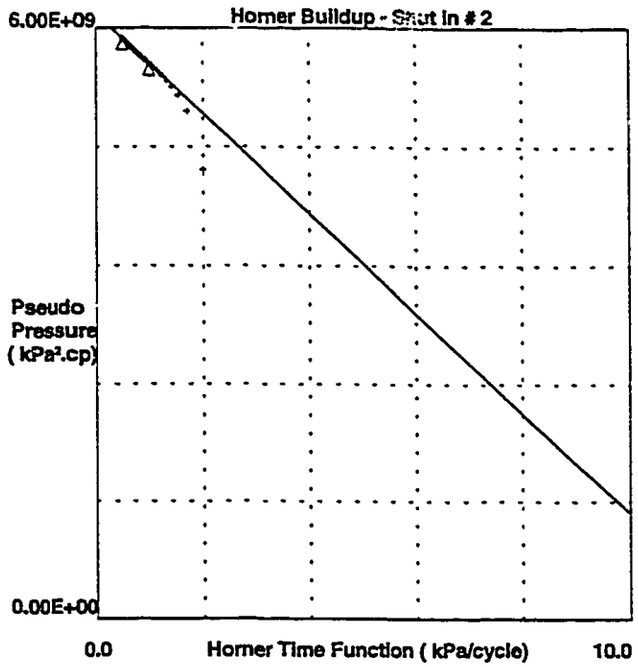
Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	22.23	4800	439926.00
20	22.23	4800	439926.00
30	22.23	4900	449212.00
40	22.23	4900	449212.00
50	22.23	5000	457679.00

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

General Summary





Event Summary:	Time (min)	Durations (min)	Pressure (kPa)
1. Start Initial Flow	641.00		14031.41
2. Start Initial Shut In	684.00	43.00	14237.44
3. End Initial Shut In	712.00	28.00	17194.65
4. Start Main Flow	715.00		13686.50
5. Start Main Shut In	770.00	55.00	14092.76
6. End Main Shut In	817.00	47.00	17156.45
H1 Hydrostatic Initial	625.00		20066.21
H2 Hydrostatic Final	847.00		20507.19

RESULTS: Shut-in # 2

Perm-Thickness	456.398 md.m
Permeability	82.982 md
Form. Pressure	17275.7 kPa
Skin	6.9
AOF	1368.1 10^3m^3/day
Damage Ratio	1.77
Distance	22.0 m
Flowrate (GAS)	457.7 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.06E-05 1/kPa
Porosity	0.18
Water Saturation	0.24
Thickness	5.5 m

Depletion Summary: Shut-in 1 vs 2

Pressure Drop= 0.45 kPa
Percent Drop (Extrap.)= 0.0 %
Percent Drop (Raw)= 0.2 %

RESULTS: Shut-in # 1

Perm-Thickness	541.274 md.m
Permeability	98.413 md
Form. Pressure	17276.1 kPa
Skin	9.2
AOF	1400.1 10^3m^3/day
Damage Ratio	2.02
Distance	23.9 m
Flowrate (GAS)	449.2 10^3m^3/day

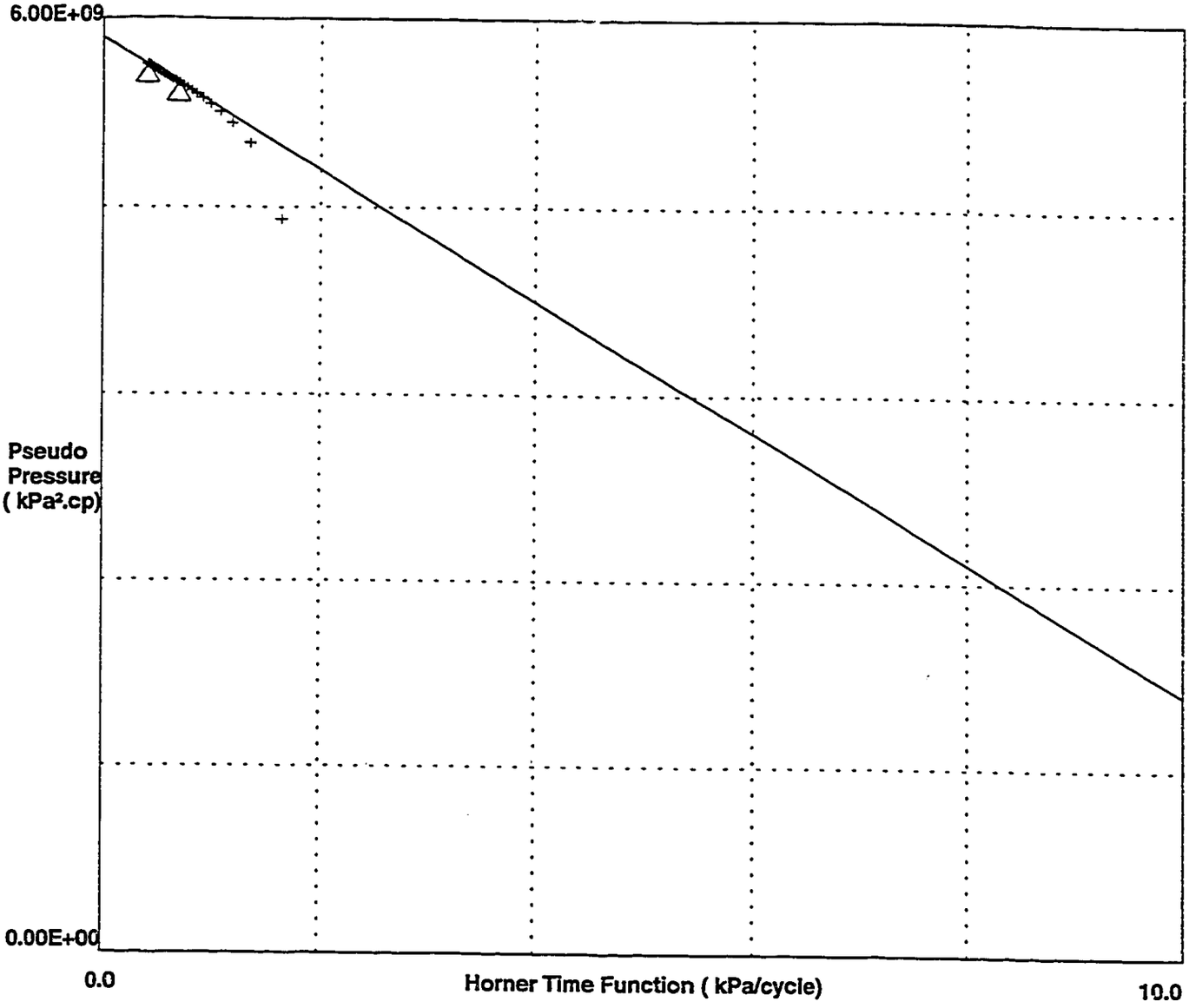
General Remarks

DST Manager

Location: N-01-60-10-123-15
Date : 01/09/2001

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

Horner Plot Shut-in # 1



RESULTS: Shut-in # 1

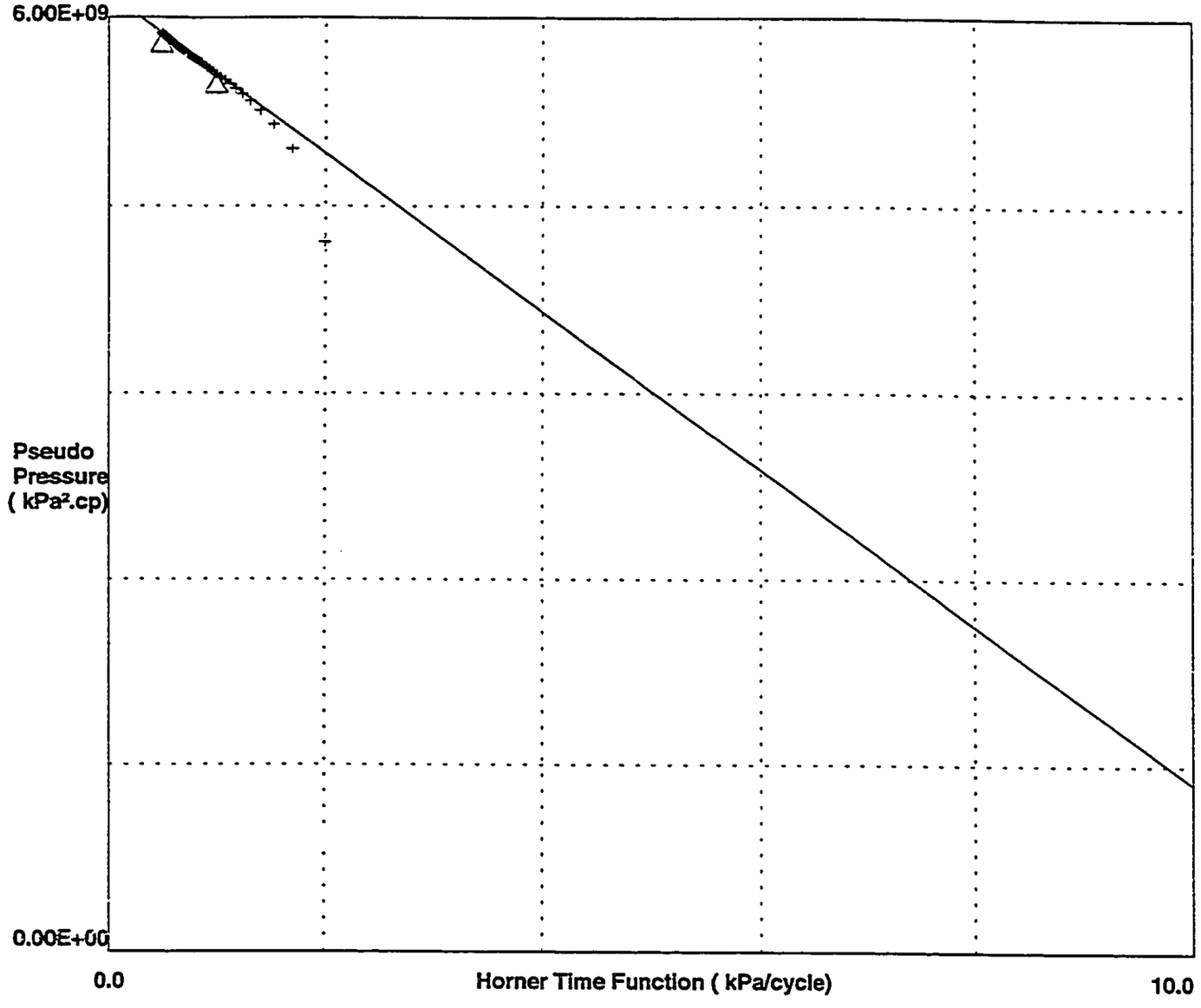
Perm-Thickness	541.274 md.m
Permeability	98.413 md
Form. Pressure	17276.1 kPa
Skin	9.2
AOF	1400.1 10^3m^3/day
Damage Ratio	2.02
Distance	23.9 m
Flowrate (GAS)	449.2 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.06E-05 1/kPa
Porosity	0.18
Water Saturation	0.24
Thickness	5.5 m

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

Horner Plot Shut-in # 2



RESULTS: Shut-in # 2

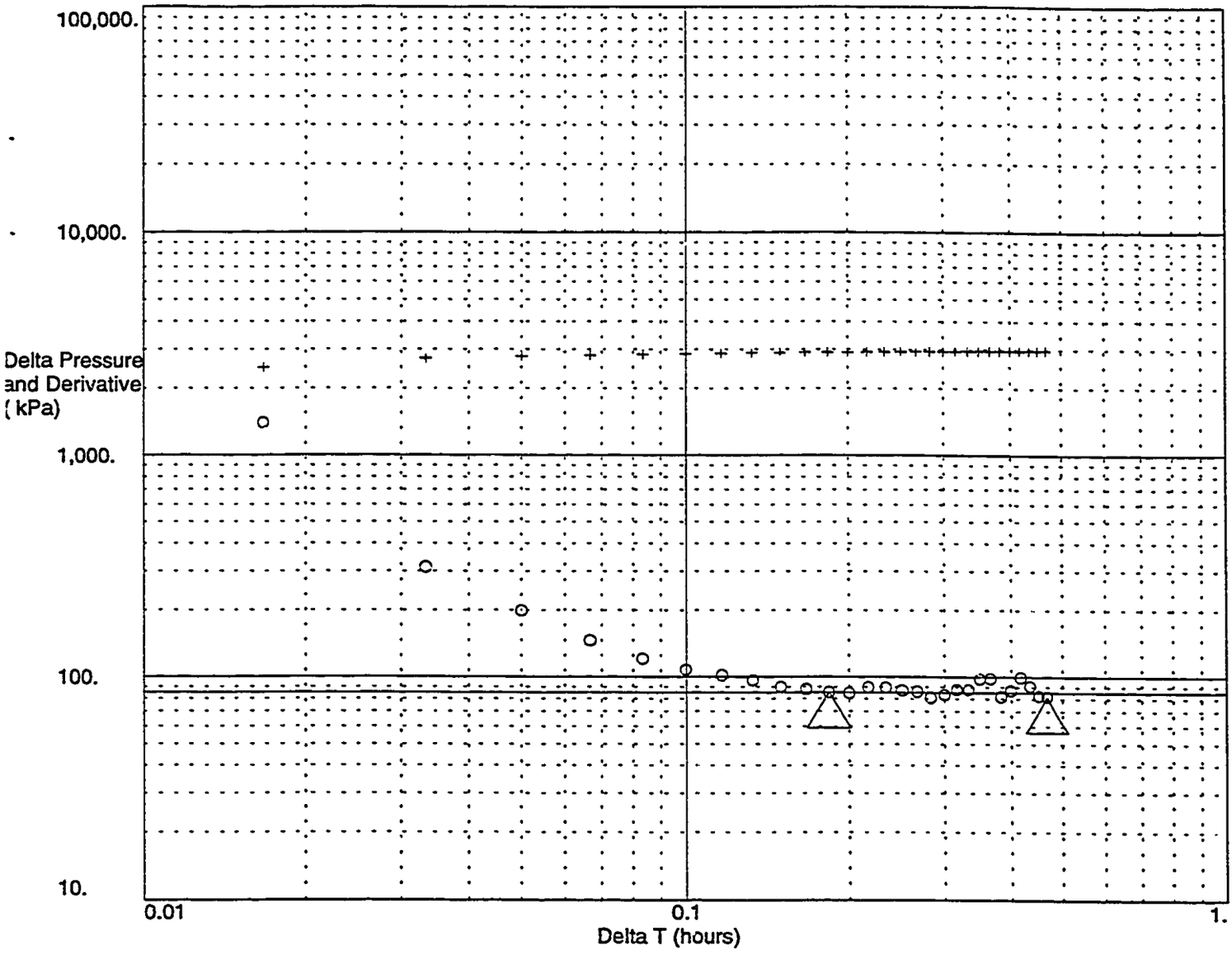
Perm-Thickness	456.398 md.m
Permeability	82.982 md
Form. Pressure	17275.7 kPa
Skin	6.9
AOF	1368.1 10^3m^3/day
Damage Ratio	1.77
Distance	22.0 m
Flowrate (GAS)	457.7 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.06E-05 1/kPa
Porosity	0.18
Water Saturation	0.24
Thickness	5.5 m

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

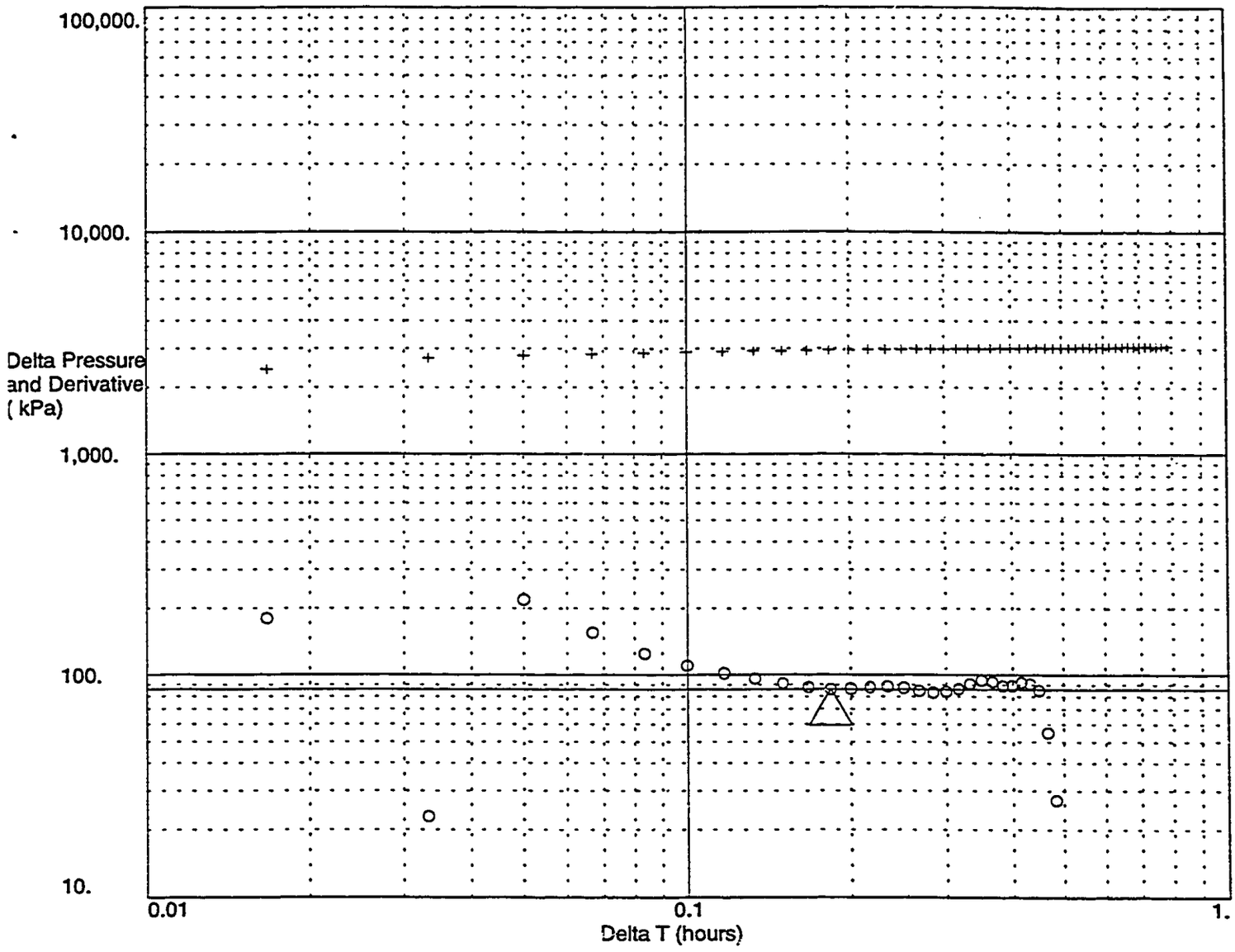
Delta P vs Delta T and Derivative Shut-in # 1



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope
Infinite Acting————	.18	.47	0.030	0.00

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

Delta P vs Delta T and Derivative Shut-in # 2



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope
Infinite Acting————	.18	.78	-4.528	0.00

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	20062.70		57.1
B	Start of 1st Flow	0.00	0.00	13984.00		57.3
		1.00	-59.10	13924.90		57.2
		2.00	-5.80	13978.20		57.2
		3.00	99.50	14083.50		57.1
		4.00	94.90	14078.90		57.0
		5.00	167.50	14171.50		56.9
		6.00	232.60	14216.60		56.9
		7.00	325.20	14309.20		56.8
		8.00	361.10	14345.10		56.8
		9.00	370.30	14354.30		56.8
		10.00	390.00	14374.00		56.8
		11.00	375.00	14359.00		56.9
		12.00	315.90	14299.90		56.9
		13.00	328.70	14312.70		56.9
		14.00	310.10	14294.10		57.0
		15.00	270.80	14254.80		57.0
		16.00	185.10	14169.10		57.0
		17.00	175.90	14159.90		57.0
		18.00	140.00	14124.00		57.1
		19.00	142.30	14126.30		57.1
		20.00	173.60	14157.60		57.1
		21.00	151.60	14135.60		57.1
		22.00	157.40	14141.40		57.1
		23.00	172.40	14156.40		57.1
		24.00	181.70	14165.70		57.2
		25.00	185.10	14169.10		57.2
		26.00	170.10	14154.10		57.2
		27.00	160.80	14144.80		57.2
		28.00	166.60	14150.60		57.3
		29.00	178.20	14162.20		57.3
		30.00	182.80	14166.80		57.3
		31.00	177.00	14161.00		57.3
		32.00	185.10	14169.10		57.4
		33.00	186.30	14170.30		57.4
		34.00	164.30	14148.30		57.4
		35.00	189.80	14173.80		57.4
		36.00	209.50	14193.50		57.5
		37.00	208.30	14192.30		57.5
		38.00	197.90	14181.90		57.5
		39.00	234.90	14218.90		57.6
		40.00	229.10	14213.10		57.6
		41.00	253.40	14237.40		57.6
C	End of 1st Flow	42.00	253.40	14237.40		57.7
		1.00	2478.10	16715.50	43.0000	57.7
		2.00	2714.20	16951.60	22.0000	58.1
		3.00	2776.70	17014.10	15.0000	58.3
		4.00	2811.40	17048.80	11.5000	58.5
		5.00	2834.60	17072.00	9.4000	58.7
		6.00	2851.90	17089.30	8.0000	58.8
		7.00	2864.70	17102.10	7.0000	58.8
		8.00	2876.20	17113.60	6.2500	58.9
		9.00	2885.50	17122.90	5.6667	58.9
		10.00	2892.40	17129.80	5.2000	59.0
		11.00	2899.40	17136.80	4.8182	59.0
		12.00	2905.20	17142.60	4.5000	59.0
		13.00	2909.80	17147.20	4.2308	59.0
		14.00	2915.60	17153.00	4.0000	59.1
		15.00	2920.20	17157.60	3.8000	59.0
		16.00	2923.70	17161.10	3.6250	59.1
		17.00	2928.30	17165.70	3.4706	59.1
		18.00	2930.60	17168.00	3.3333	59.1
		19.00	2934.10	17171.50	3.2105	59.1
		20.00	2937.60	17175.00	3.1000	59.1
		21.00	2939.90	17177.30	3.0000	59.1
		22.00	2943.40	17180.80	2.9091	59.1
		23.00	2946.80	17184.20	2.8261	59.1
		24.00	2948.00	17185.40	2.7500	59.1
		25.00	2950.30	17187.70	2.6800	59.1
		26.00	2953.80	17191.20	2.6154	59.1
		27.00	2954.90	17192.30	2.5556	59.1
D	End of 1st Shutin	28.00	2957.20	17194.60	2.5000	59.1
E	Start of 2nd Flow	0.00	0.00	13686.50		58.7
		1.00	194.50	13881.00		58.4

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		2.00	69.40	13755.90		58.2
		3.00	50.90	13737.40		58.0
		4.00	122.70	13809.20		57.9
		5.00	217.60	13904.10		57.8
		6.00	311.40	13997.90		57.7
		7.00	384.30	14070.80		57.6
		8.00	464.10	14150.60		57.6
		9.00	508.10	14194.60		57.6
		10.00	564.80	14251.30		57.7
		11.00	610.00	14296.50		57.7
		12.00	665.50	14352.00		57.8
		13.00	682.90	14369.40		57.8
		14.00	709.50	14396.00		57.9
		15.00	738.40	14424.90		58.0
		16.00	709.50	14396.00		58.1
		17.00	674.80	14361.30		58.2
		18.00	626.20	14312.70		58.2
		19.00	583.30	14269.80		58.3
		20.00	552.10	14238.60		58.3
		21.00	501.20	14187.70		58.4
		22.00	496.50	14183.00		58.4
		23.00	497.70	14184.20		58.4
		24.00	485.00	14171.50		58.4
		25.00	469.90	14156.40		58.4
		26.00	445.60	14132.10		58.4
		27.00	449.10	14135.60		58.4
		28.00	451.40	14137.90		58.4
		29.00	457.20	14143.70		58.4
		30.00	435.20	14121.70		58.4
		31.00	436.40	14122.90		58.4
		32.00	424.80	14111.30		58.4
		33.00	430.60	14117.10		58.4
		34.00	415.50	14102.00		58.4
		35.00	413.20	14099.70		58.4
		36.00	387.70	14074.20		58.4
		37.00	388.90	14075.40		58.4
		38.00	384.30	14070.80		58.4
		39.00	349.50	14036.00		58.4
		40.00	329.50	14016.40		58.5
		41.00	450.20	14136.70		58.5
		42.00	463.00	14149.50		58.4
		43.00	464.10	14150.60		58.5
		44.00	451.40	14137.90		58.5
		45.00	453.70	14140.20		58.5
		46.00	419.00	14105.50		58.5
		47.00	394.70	14081.20		58.5
		48.00	382.00	14068.50		58.6
		49.00	385.40	14071.90		58.6
		50.00	387.70	14074.20		58.6
		51.00	372.70	14059.20		58.6
		52.00	387.70	14074.20		58.6
		53.00	384.30	14070.80		58.6
		54.00	403.90	14090.40		58.6
F	End of 2nd Flow	55.00	406.30	14092.80		58.6
		1.00	2415.50	16508.30	98.0000	58.7
		2.00	2706.00	16798.80	49.5000	59.0
		3.00	2782.40	16875.20	33.3333	59.3
		4.00	2826.40	16919.20	25.2500	59.6
		5.00	2855.30	16948.10	20.4000	59.8
		6.00	2877.30	16970.10	17.1667	59.9
		7.00	2893.50	16986.30	14.8571	60.0
		8.00	2908.60	17001.40	13.1250	60.1
		9.00	2920.10	17012.90	11.7778	60.2
		10.00	2930.50	17023.30	10.7000	60.2
		11.00	2938.60	17031.40	9.8182	60.3
		12.00	2946.80	17039.60	9.0833	60.3
		13.00	2954.90	17047.70	8.4615	60.3
		14.00	2960.60	17053.40	7.9286	60.3
		15.00	2966.40	17059.20	7.4667	60.3
		16.00	2973.40	17066.20	7.0625	60.3
		17.00	2978.00	17070.80	6.7059	60.3
		18.00	2982.60	17075.40	6.3889	60.3
		19.00	2987.30	17080.10	6.1053	60.3
		20.00	2991.90	17084.70	5.8500	60.2

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

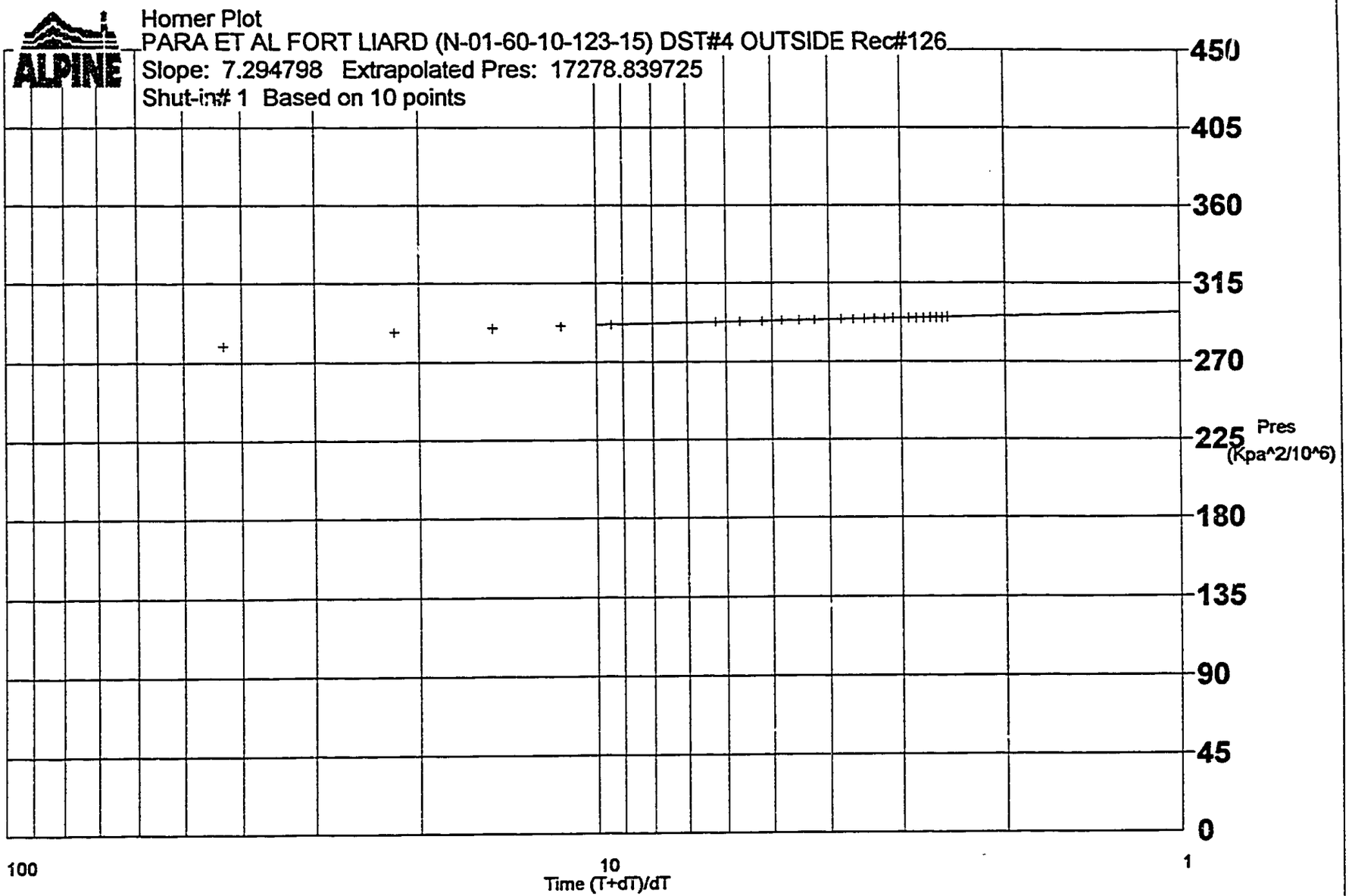
Contact: WILBERT CALLIHOO

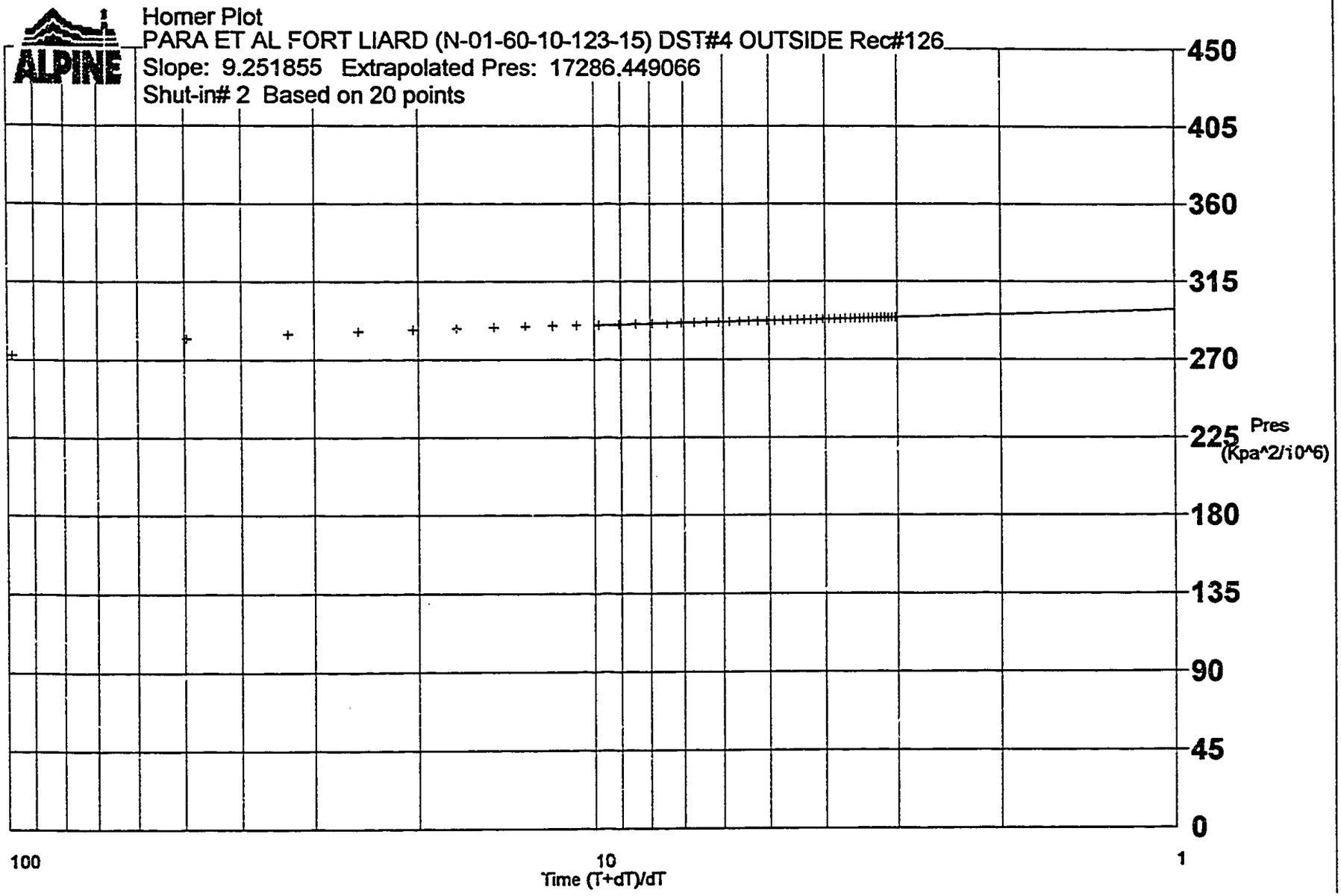
Job Ticket #: D2-9625 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		21.00	2996.50	17089.30	5.6190	60.2
		22.00	3000.00	17092.80	5.4091	60.2
		23.00	3003.50	17096.30	5.2174	60.2
		24.00	3006.90	17099.70	5.0417	60.2
		25.00	3010.40	17103.20	4.8800	60.2
		26.00	3013.90	17106.70	4.7308	60.2
		27.00	3016.20	17109.00	4.5926	60.2
		28.00	3019.70	17112.50	4.4643	60.1
		29.00	3022.00	17114.80	4.3448	60.1
		30.00	3025.50	17118.30	4.2333	60.1
		31.00	3027.80	17120.60	4.1290	60.1
		32.00	3031.20	17124.00	4.0313	60.1
		33.00	3033.60	17126.40	3.9394	60.1
		34.00	3035.90	17128.70	3.8529	60.1
		35.00	3038.20	17131.00	3.7714	60.1
		36.00	3041.70	17134.50	3.6944	60.0
		37.00	3044.00	17136.80	3.6216	60.1
		38.00	3045.10	17137.90	3.5526	60.0
		39.00	3047.40	17140.20	3.4872	60.0
		40.00	3049.80	17142.60	3.4250	60.0
		41.00	3052.10	17144.90	3.3659	60.0
		42.00	3054.40	17147.20	3.3095	60.0
		43.00	3055.50	17148.30	3.2558	60.0
		44.00	3057.90	17150.70	3.2045	60.0
		45.00	3059.00	17151.80	3.1556	60.0
		46.00	3061.30	17154.10	3.1087	60.0
		47.00	3063.70	17156.50	3.0638	60.0
G	End of 2nd Shutin	48.00	3064.80	17157.60	3.0208	60.0
Q	Final Hydrostatic	0.00	0.00	19687.70		58.2

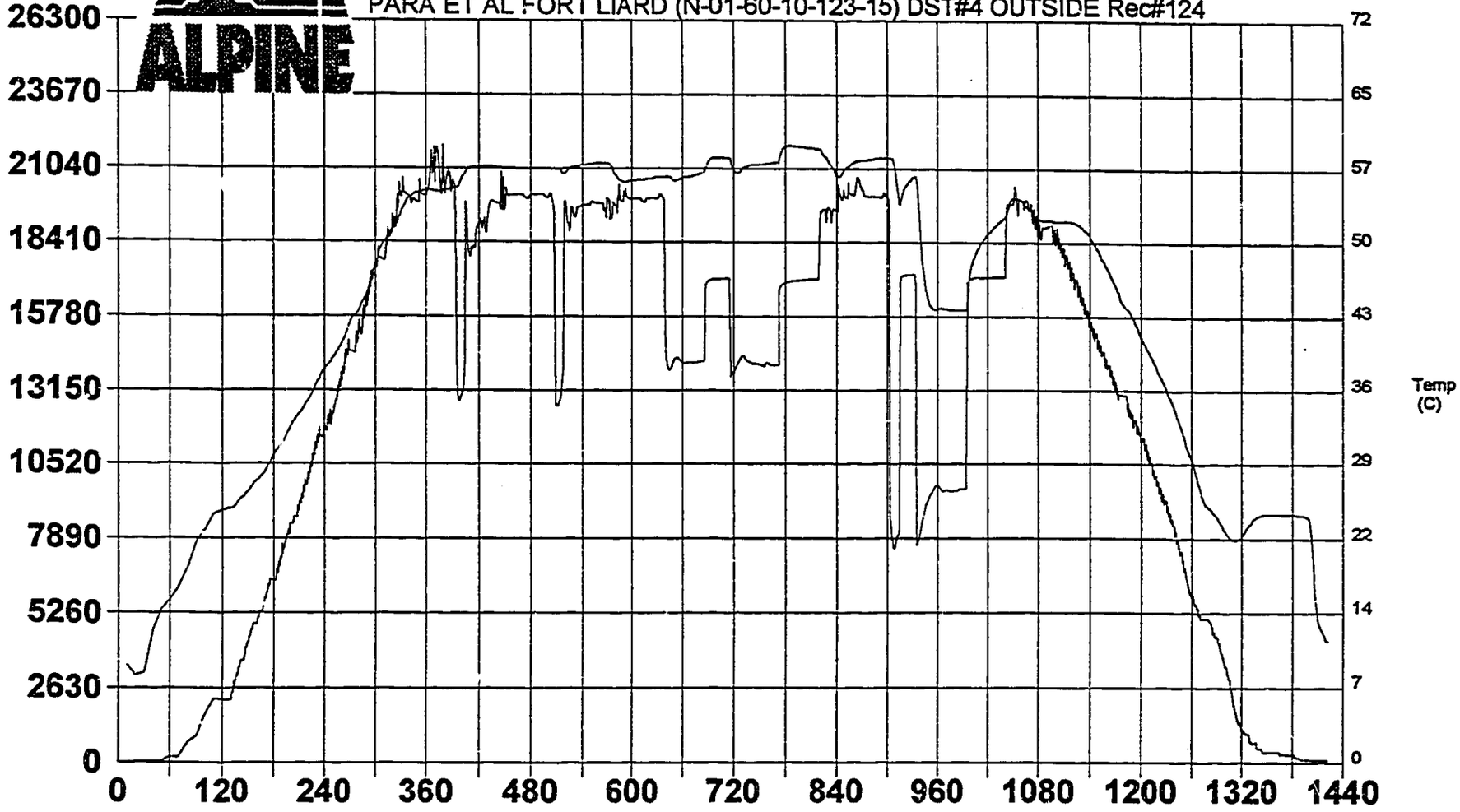

Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#126
Slope: 7.294798 Extrapolated Pres: 17278.839725
Shut-in# 1 Based on 10 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT


ALPINE
Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#126
Slope: 9.251855 Extrapolated Pres: 17286.449066
Shut-in# 2 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT

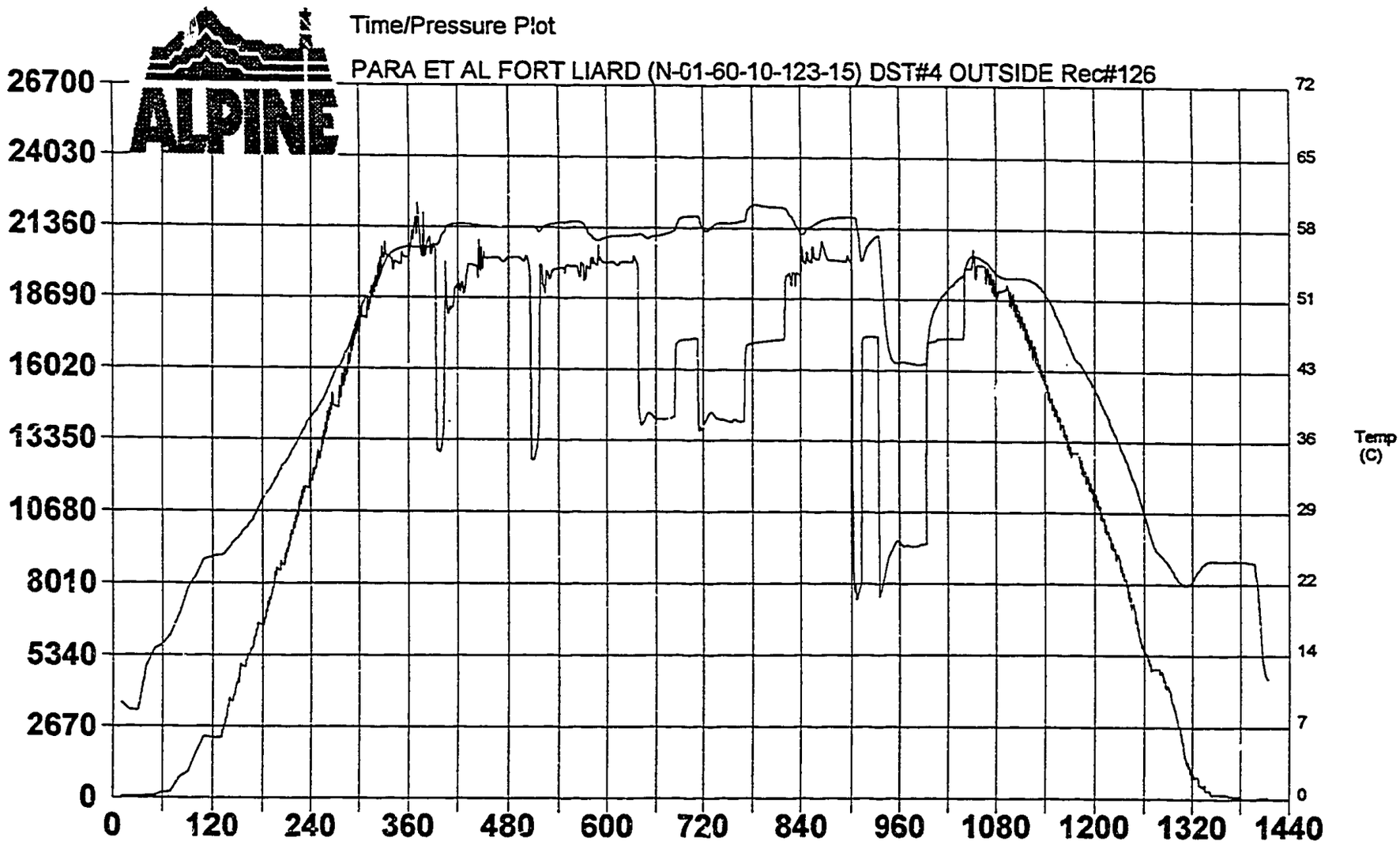
ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#124



A Initial Hydrostatic - 19975
B Start of 1st Flow - 13917
C End of 1st Flow - 14178
D End of 1st Shutin - 17138
E Start of 2nd Flow - 13638
F End of 2nd Flow - 14053
G End of 2nd Shutin - 17106
Q Final Hydrostatic - 19584



A Initial Hydrostatic - 20063
B Start of 1st Flow - 13984
C End of 1st Flow - 14237
D End of 1st Shutin - 17195
E Start of 2nd Flow - 13687
F End of 2nd Flow - 14093
G End of 2nd Shutin - 17158
Q Final Hydrostatic - 19688



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/09/2001**

Job Ticket #: **T5160-4** DST#: **4**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: T5160-4 DST#: 4
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

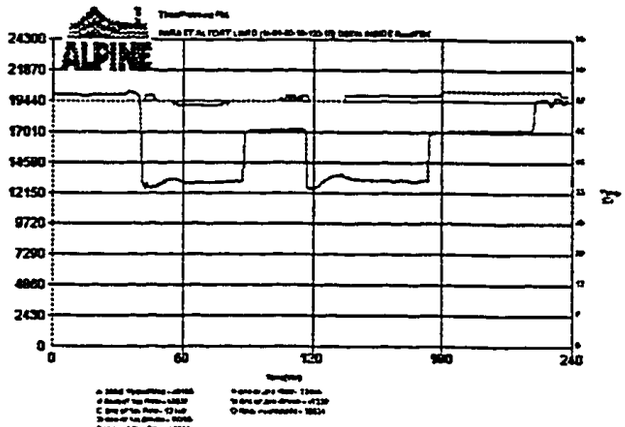
General Information:

Test Type:	INFLATE RESET	Tester:	B. HOLLINGSHEAD
Interval:	1717m -1738m	Truck No.:	Unit 114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	60.10 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1706.45 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20144.1
B Start of 1st Flow	0.00	12530.2
C End of 1st Flow	44.88	13148.5
D End of 1st Shutin	27.18	17278.0
E Start of 2nd Flow	0.00	12512.3
F End of 2nd Flow	55.44	13153.9
G End of 2nd Shutin	47.40	17230.3
Q Final Hydrostatic	0.00	19630.8



Test Run Information:

Start Time:	1200hrs
Reached Test Depth:	2140hrs
Pull Out Time:	30hrs
Tool Out Of Hole:	1000hrs
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	1.60mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	

General Remarks:

This is the second of three tests run on the same trip in the hole. Mechanically successful. *Test results suggest excellent permeability within the zone tested.

PREFLOW: Gas to surface immediately.

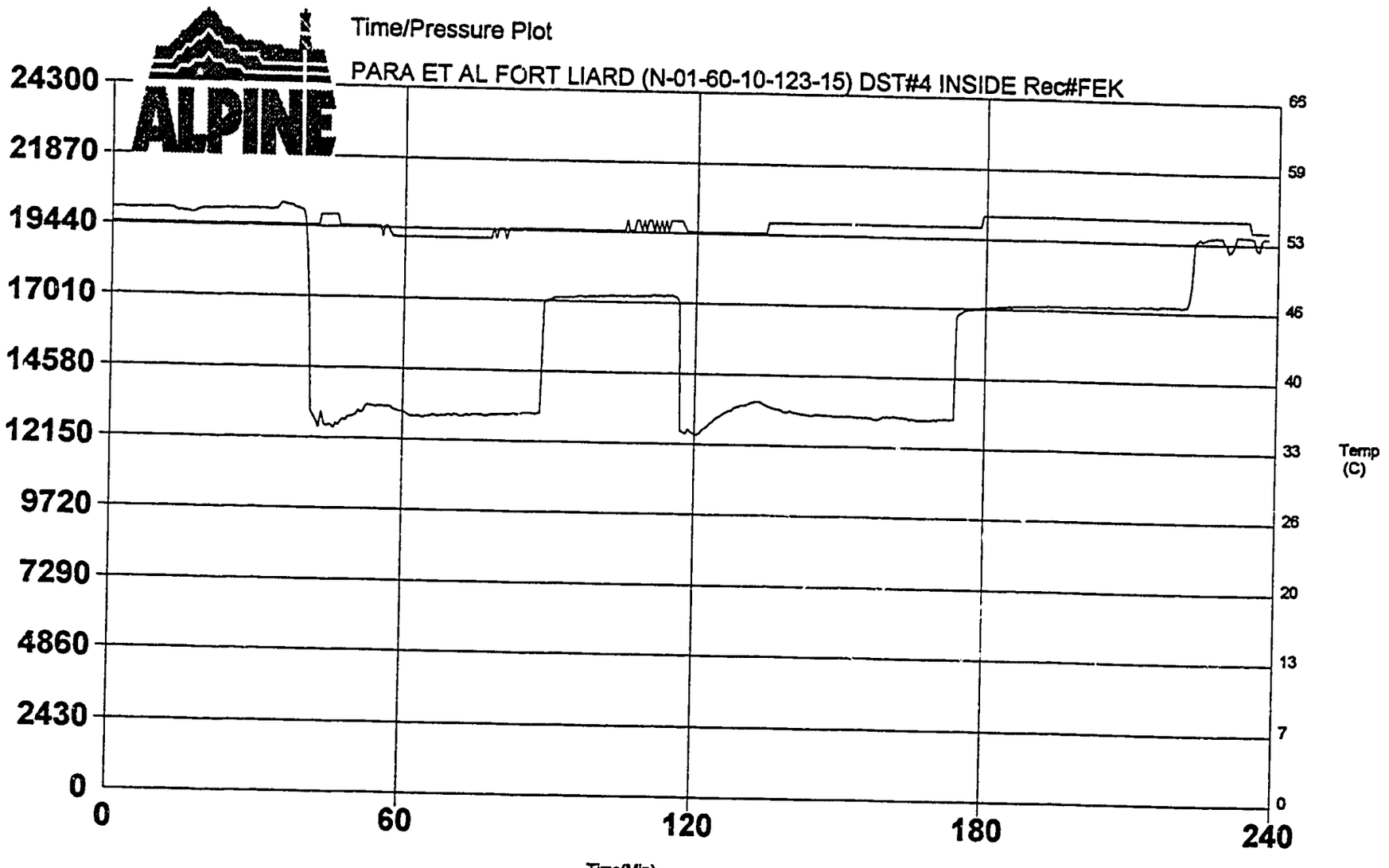
FINAL FLOW: Gas to surface immediately, misting mud throughout.

***See gas volume charts for gas rates.

Recovery Description:

Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condinsate and 30 meters fresh water.

Gas to surface.


ALPINE
Time/Pressure Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 INSIDE Rec#FEK
24300
21870
19440
17010
14580
12150
9720
7290
4860
2430
0
0
60
120
180
240
Time(Min)
65
59
53
46
40
33
26
20
13
7
0
Temp (C)
A Initial Hydrostatic - 20144
B Start of 1st Flow - 12530
C End of 1st Flow - 13149
D End of 1st Shutin - 17278
E Start of 2nd Flow - 12512
F End of 2nd Flow - 13154
G End of 2nd Shutin - 17230
Q Final Hydrostatic - 19631

N.E.B. COPY

PARA ET AL FORT LIARD

N-01-60-10-123-15

DST#5



Drill Stem Test Report

Prepared for: PARAMOUNT RESOURCES
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: 01/10/2001

Job Ticket #: D2-8751 DST#: 5

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

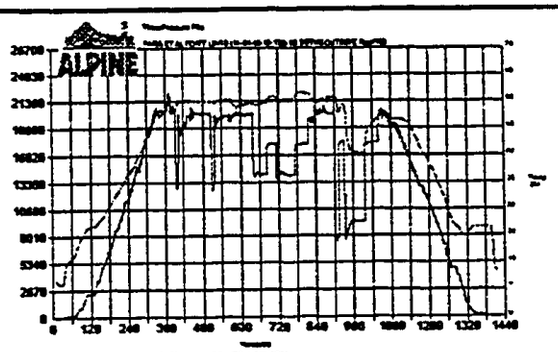
General Information:

Test Type: INFLATE RESET
Interval: 1738.00m - 1759.00m
Formation: 1ST MID. BELLY RIVER
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

Tester: D. ROSS
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 44.00 C

Electronic Recorder Information:

OUTSIDE Recorder #: 126		OUTSIDE Recorder #: 124	
Range: 35000 kPa		Range: 70000 kPa	
Depth: 1740.92 m		Depth: 1740.92 m	
Flag Points:	Time:		Pressure:
A Initial Hydrostatic	0.00		20172.7
B Start of 1st Flow	0.00		7710.7
C End of 1st Flow	9.00		8060.3
D End of 1st Shutin	19.00		17303.4
E Start of 2nd Flow	0.00		7527.9
F End of 2nd Flow	59.00		9512.8
G End of 2nd Shutin	45.00		17232.8
Q Final Hydrostatic	0.00		19863.7



Test Run Information:

Start Time: 1200hrs
Reached Test Depth: 200hrs
Pull Out Time: 430hrs
Tool Out Of Hole: 1000hrs

Weight set on Packers: 8000.00daN
Weight to free Packers: 8000.00daN
Initial String Weight: 44000.00daN
Unseated String Weight: 45000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1160.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion:

Water Loss: 6.20cm³
Mud Drop: NO
VIS: 76.00S/L
Filter Cake: 1.50mm
Pump Time: 30min
Reversed Out: NO

General Remarks:

This is the third of three tests run on the same trip in the hole. Mechanically successful. *Test results suggest excellent permeability within the zone tested.

PREFLOW: Gas to surface immediately with a 6 meter flare. No rates taken for preflow.

FINAL FLOW: Gas to surface immediately, misting mud throughout.

***See gas volume charts for gas rates.

NOTE - See Alpine Telemetry report for real time data acquisition.

Recovery Description:

Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condensate and 30 meters fresh water.

Gas to surface.

Gas Bomb: 5 Sampler: 3
Fluid Sample: 4 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	67
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1739.92m
Total Drill Pipe Above K.B.:	1.92m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1288.71	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



Item	Length
P.O. Sub	0.31
Bit Sub	1.04
Double Pin	0.31
P.O. Sub	0.31
REC#063	1.50
HMV Stroke	2.18
Sampler	1.10
REC#070	1.50
Telemetry Tool	5.80
Jars	1.82
Safety Joint	0.85
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
Stub	0.72
ASE Carrier	2.20
REC#124	
REC#126	
Bypass Hanger	0.42
C.O. Sub	0.30
DRILL COLLAR	9.24
C.O. Sub	0.30
Blank Spacing	6.08
Bypass Receiver	0.78
Stub	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

24.60m

49.93m

Depth: 1738m

20.76m

Depth: 1759m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 1200hrs

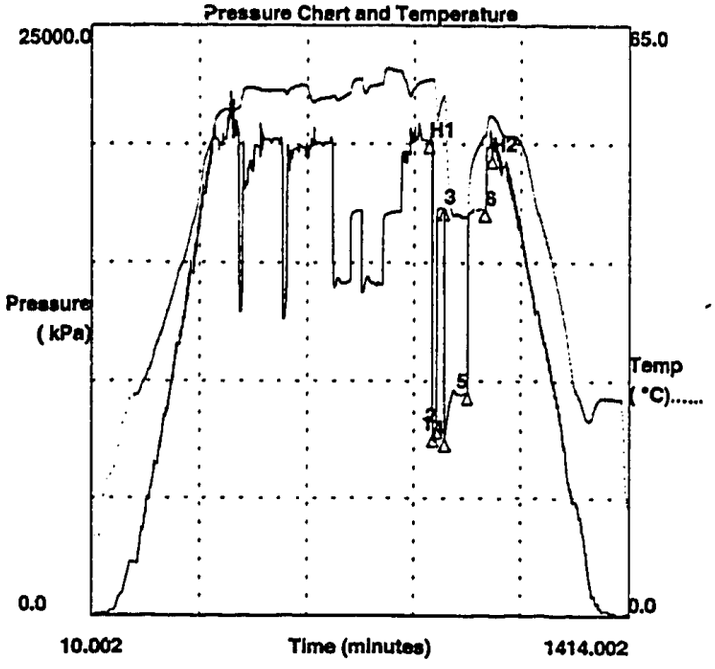
Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

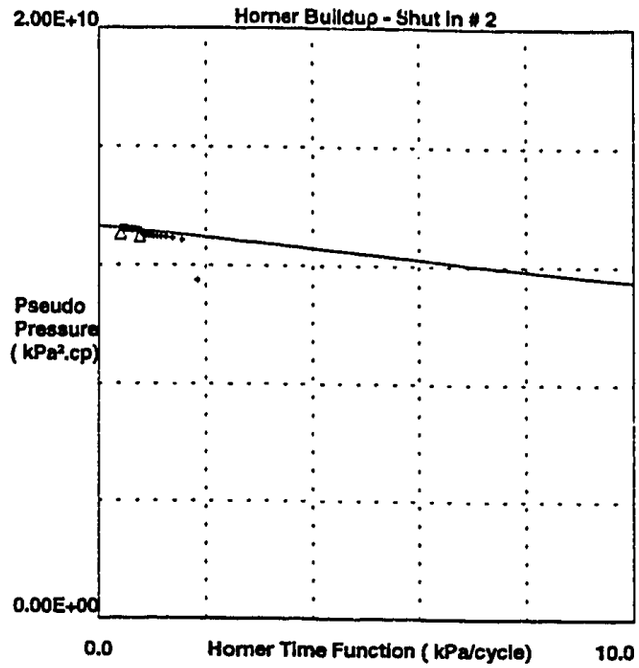
Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m^3/d)
10	19.50	2200	138232.00
20	19.50	3400	210320.00
30	22.23	3500	323545.00
40	22.23	3500	323545.00
50	22.23	3500	323545.00
59	22.23	3500	323545.00

General Summary





Event Summary:	Time (min)	Durations (min)	Pressure (kPa)
1. Start Initial Flow	904.00		7710.74
2. Start Initial Shut In	913.00	9.00	8060.28
3. End Initial Shut In	932.00	19.00	17303.44
4. Start Main Flow	934.00		7527.87
5. Start Main Shut In	993.00	59.00	9512.84
6. End Main Shut In	1037.00	44.00	17232.84
H1 Hydrostatic Initial	892.00		20124.08
H2 Hydrostatic Final	1055.00		19500.23

RESULTS: Shut-In # 2

Perm-Thickness	868.976 md.m
Permeability	78.998 md
Form. Pressure	17268.5 kPa
Skin	76.2
AOF	464.5 10^3m^3/day
Damage Ratio	9.45
Distance	19.4 m
Flowrate (GAS)	323.5 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.03E-05 1/kPa
Porosity	0.15
Water Saturation	0.24
Thickness	11.0 m

Depletion Summary: Shut-In 1 vs 2

Pressure Drop= 68.5 kPa
Percent Drop (Extrap.)= 0.4 %
Percent Drop (Raw)= 0.4 %

RESULTS: Shut-In # 1

Perm-Thickness	163.77 md.m
Permeability	14.888 md
Form. Pressure	17337.0 kPa
Skin	35.7
AOF	176.3 10^3m^3/day
Damage Ratio	5.3
Distance	8.4 m
Flowrate (GAS)	138.2 10^3m^3/day

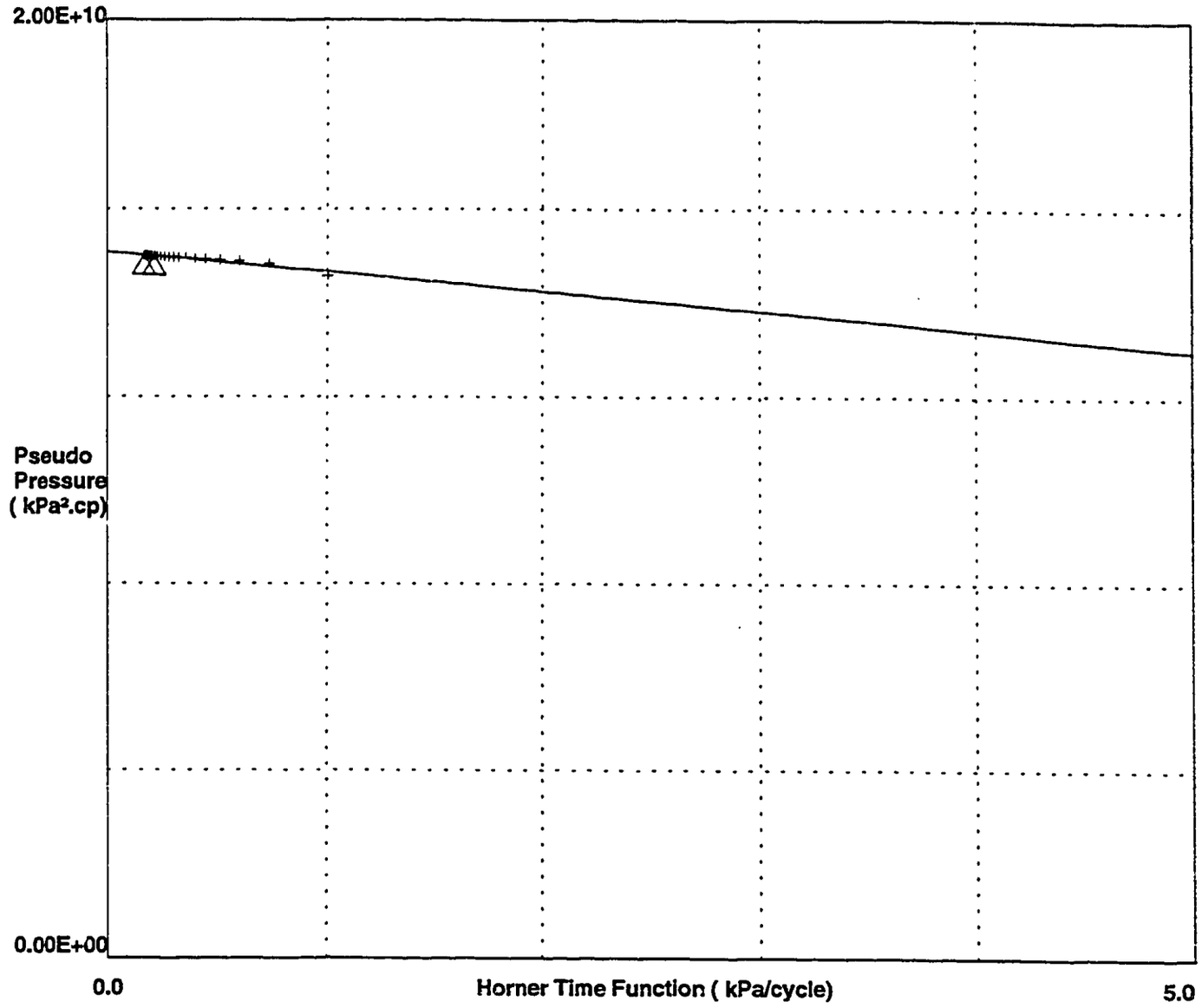
General Remarks

DST Manager

Location: N-01-60-10-123-15
Date : 10/01/2001

Well: PARA ET AL FORT LIARD DST #5 Formation: 1ST MID BLRV (1738-1759 m)

Horner Plot Shut-in # 1



RESULTS: Shut-in # 1

Perm-Thickness	163.77 md.m
Permeability	14.888 md
Form. Pressure	17337.0 kPa
Skin	35.7
AOF	176.3 10^3m^3/day
Damage Ratio	5.3
Distance	8.4 m
Flowrate (GAS)	138.2 10^3m^3/day

GAS and Formation Properties

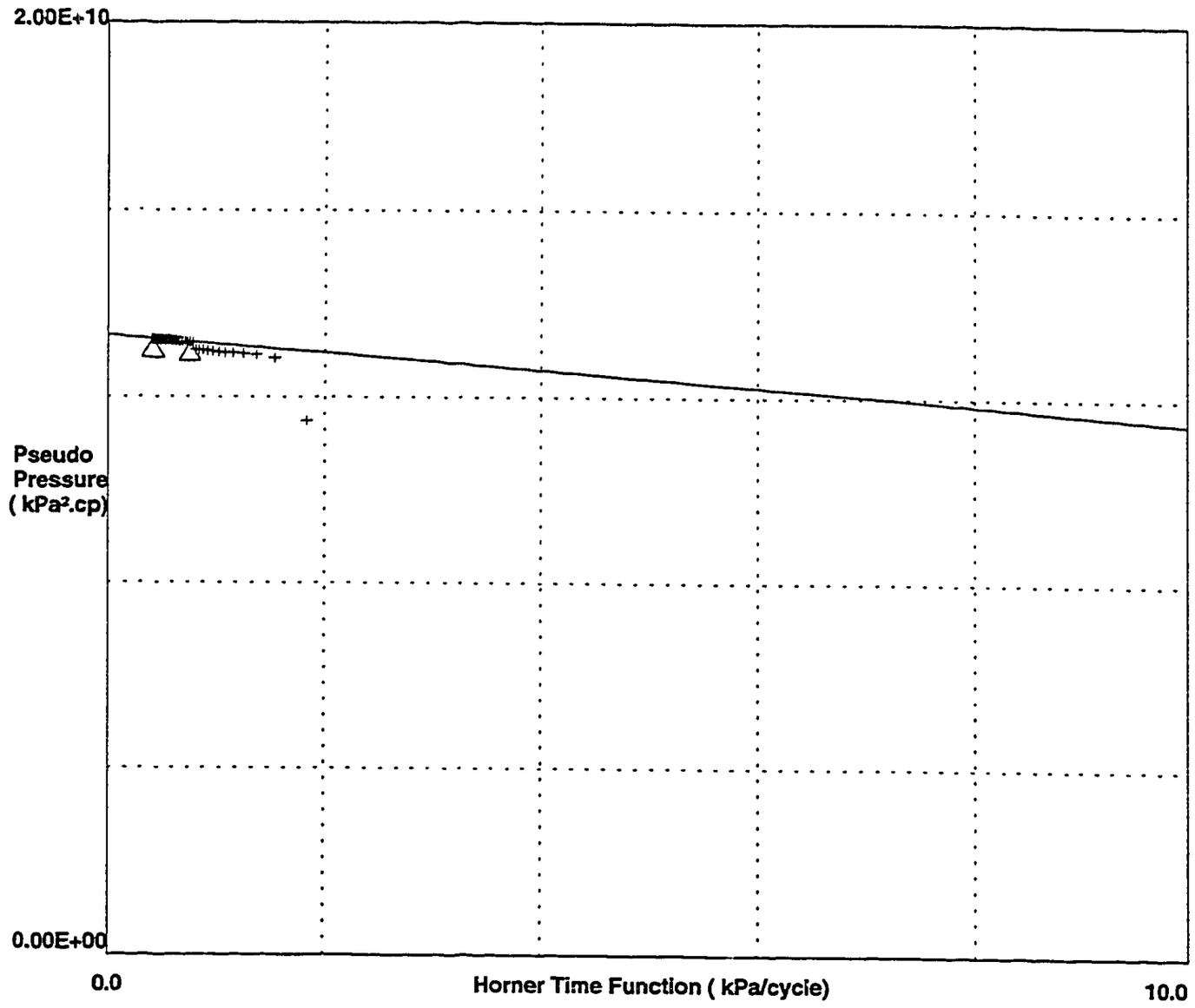
Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.03E-05 1/kPa
Porosity	0.15
Water Saturation	0.24
Thickness	11.0 m

DST Manager

Location: N-01-60-10-123-15
Date : 10/01/2001

Well: PARA ET AL FORT LIARD DST #5 Formation: 1ST MID BLRV (1738-1759 m)

Horner Plot Shut-in # 2



RESULTS: Shut-in # 2

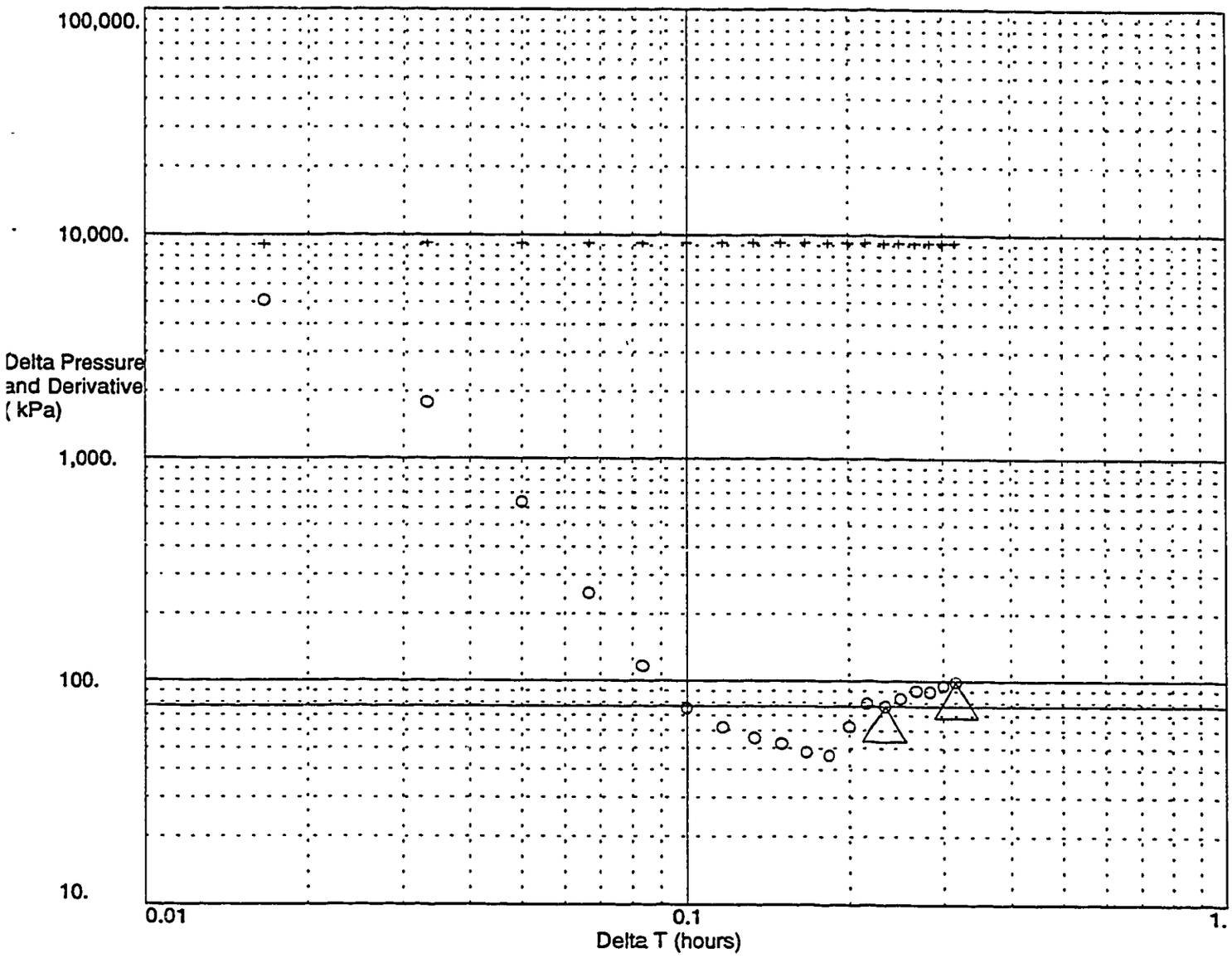
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Form. Pressure	17268.5 kPa
Skin	76.2
AOF	464.5 10^3m^3/day
Damage Ratio	9.45
Distance	19.4 m
Flowrate (GAS)	323.5 10^3m^3/day

GAS and Formation Properties

Viscosity	0.017 cp
Volume Factor 1/Bg	0.007
Compressibility	4.03E-05 1/kPa
Porosity	0.15
Water Saturation	0.24
Thickness	11.0 m

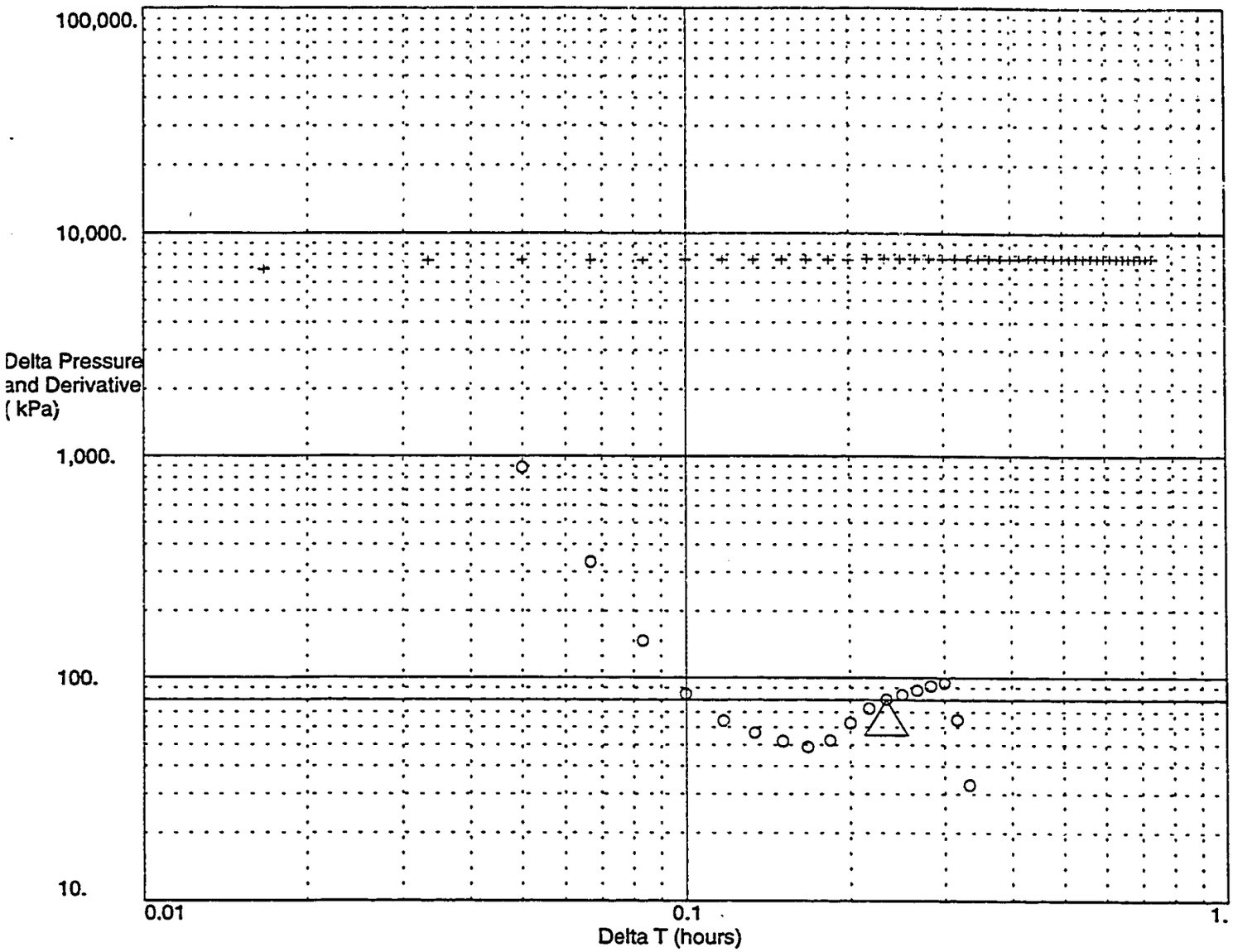
Well: PARA ET AL FORT LIARD DST #5 Formation: 1ST MID BLRV (1738-1759 m)

Delta P vs Delta T and Derivative Shut-in # 1



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope
Infinite Acting———	.23	.32	0.777	0.00

Delta P vs Delta T and Derivative Shut-in # 2



Identified Regime	From Delta T (hr)	To Delta T (hr);	Actual Slope	Ideal Slope
Infinite Acting————	.23	.70	-4.672	0.00

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	20172.70		59.1
B	Start of 1st Flow	0.00	0.00	7710.70		59.0
		1.00	253.50	7964.20		59.0
		2.00	-173.60	7537.10		58.9
		3.00	-292.80	7417.90		58.6
		4.00	-245.30	7465.40		58.2
		5.00	-39.30	7671.40		57.6
		6.00	33.60	7744.30		57.0
		7.00	155.10	7865.80		56.2
		8.00	182.90	7893.60		55.4
C	End of 1st Flow	9.00	349.60	8060.30		54.6
		1.00	9032.50	17092.80	10.0000	54.6
		2.00	9161.00	17221.30	5.5000	54.8
		3.00	9185.30	17245.60	4.0000	55.1
		4.00	9196.80	17257.10	3.2500	55.3
		5.00	9204.90	17265.20	2.8000	55.6
		6.00	9209.60	17269.90	2.5000	55.8
		7.00	9215.40	17275.70	2.2857	56.0
		8.00	9218.80	17279.10	2.1250	56.2
		9.00	9222.30	17282.60	2.0000	56.3
		10.00	9224.60	17284.90	1.9000	56.5
		11.00	9226.90	17287.20	1.8182	56.6
		12.00	9228.10	17288.40	1.7500	56.7
		13.00	9230.40	17290.70	1.6923	56.8
		14.00	9233.90	17294.20	1.6429	56.9
		15.00	9235.00	17295.30	1.6000	57.0
		16.00	9237.40	17297.70	1.5625	57.1
		17.00	9239.70	17300.00	1.5294	57.1
		18.00	9240.80	17301.10	1.5000	57.2
D	End of 1st Shutin	19.00	9243.10	17303.40	1.4737	57.3
E	Start of 2nd Flow	0.00	0.00	7527.90		56.7
		1.00	165.50	7693.40		55.8
		2.00	180.50	7708.40		54.7
		3.00	303.20	7831.10		53.6
		4.00	425.90	7953.80		52.4
		5.00	571.70	8099.60		51.3
		6.00	697.90	8225.80		50.2
		7.00	739.60	8267.50		49.3
		8.00	883.10	8411.00		48.4
		9.00	1041.60	8569.50		47.7
		10.00	1179.40	8707.30		47.0
		11.00	1297.40	8825.30		46.5
		12.00	1395.80	8923.70		46.0
		13.00	1497.70	9025.60		45.6
		14.00	1561.30	9089.20		45.3
		15.00	1607.60	9135.50		45.0
		16.00	1668.70	9194.60		44.8
		17.00	1728.00	9255.90		44.6
		18.00	1778.90	9306.80		44.5
		19.00	1863.40	9391.30		44.4
		20.00	1914.30	9442.20		44.3
		21.00	1972.20	9500.10		44.2
		22.00	2032.40	9560.30		44.2
		23.00	2067.10	9595.00		44.2
		24.00	2081.00	9608.90		44.2
		25.00	2085.60	9613.50		44.2
		26.00	2050.90	9578.80		44.2
		27.00	2026.60	9554.50		44.3
		28.00	1993.00	9520.90		44.3
		29.00	1954.90	9482.80		44.3
		30.00	1930.50	9458.40		44.3
		31.00	1870.40	9398.30		44.3
		32.00	1884.20	9412.10		44.3
		33.00	1907.40	9435.30		44.3
		34.00	1917.80	9445.70		44.3
		35.00	1921.30	9449.20		44.2
		36.00	1921.30	9449.20		44.2
		37.00	1907.40	9435.30		44.2
		38.00	1899.30	9427.20		44.2
		39.00	1897.00	9424.90		44.2
		40.00	1884.20	9412.10		44.2
		41.00	1871.50	9399.40		44.1
		42.00	1878.50	9406.40		44.1
		43.00	1869.20	9397.10		44.1

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

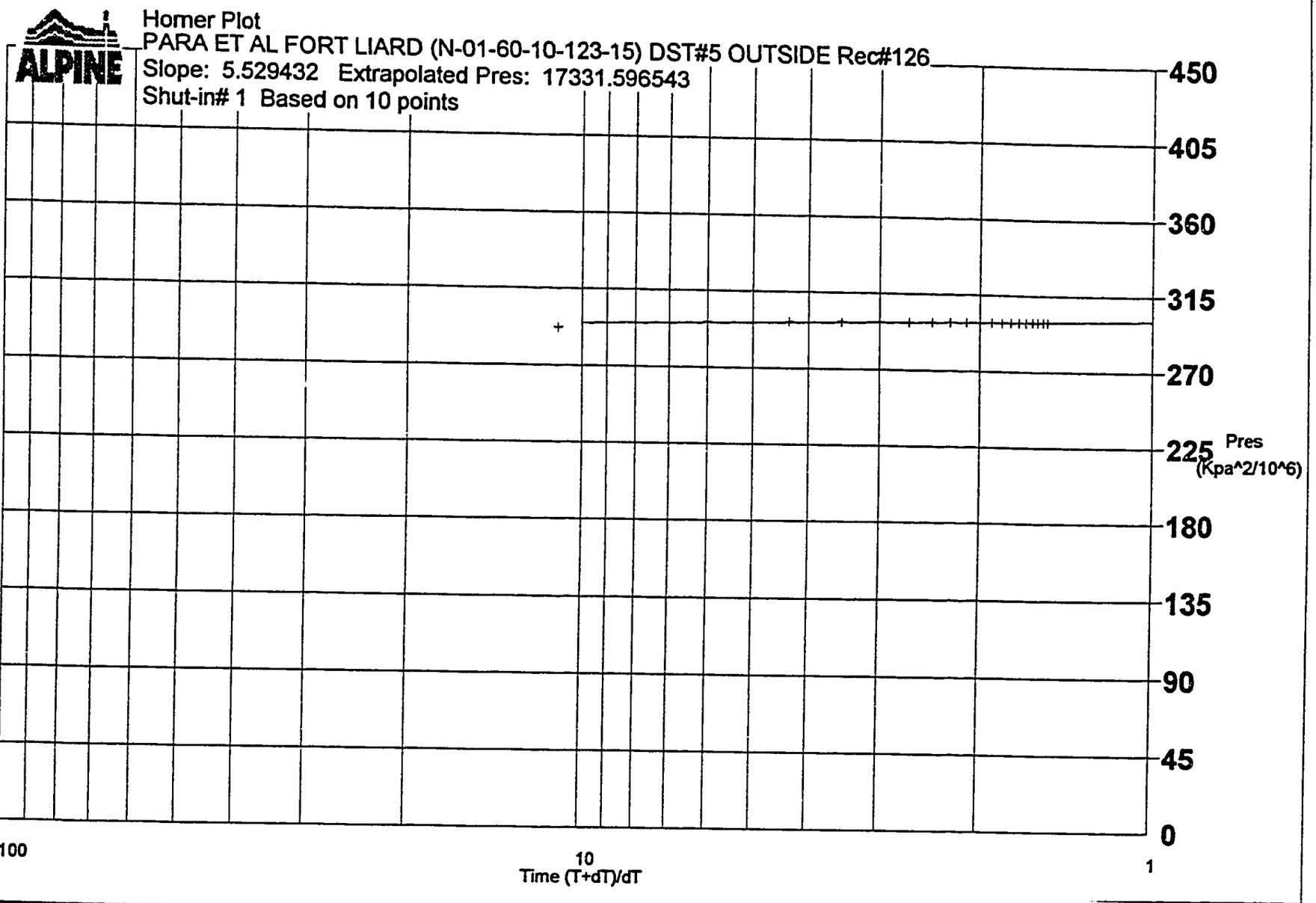
Contact: WILBERT CALLIHOO

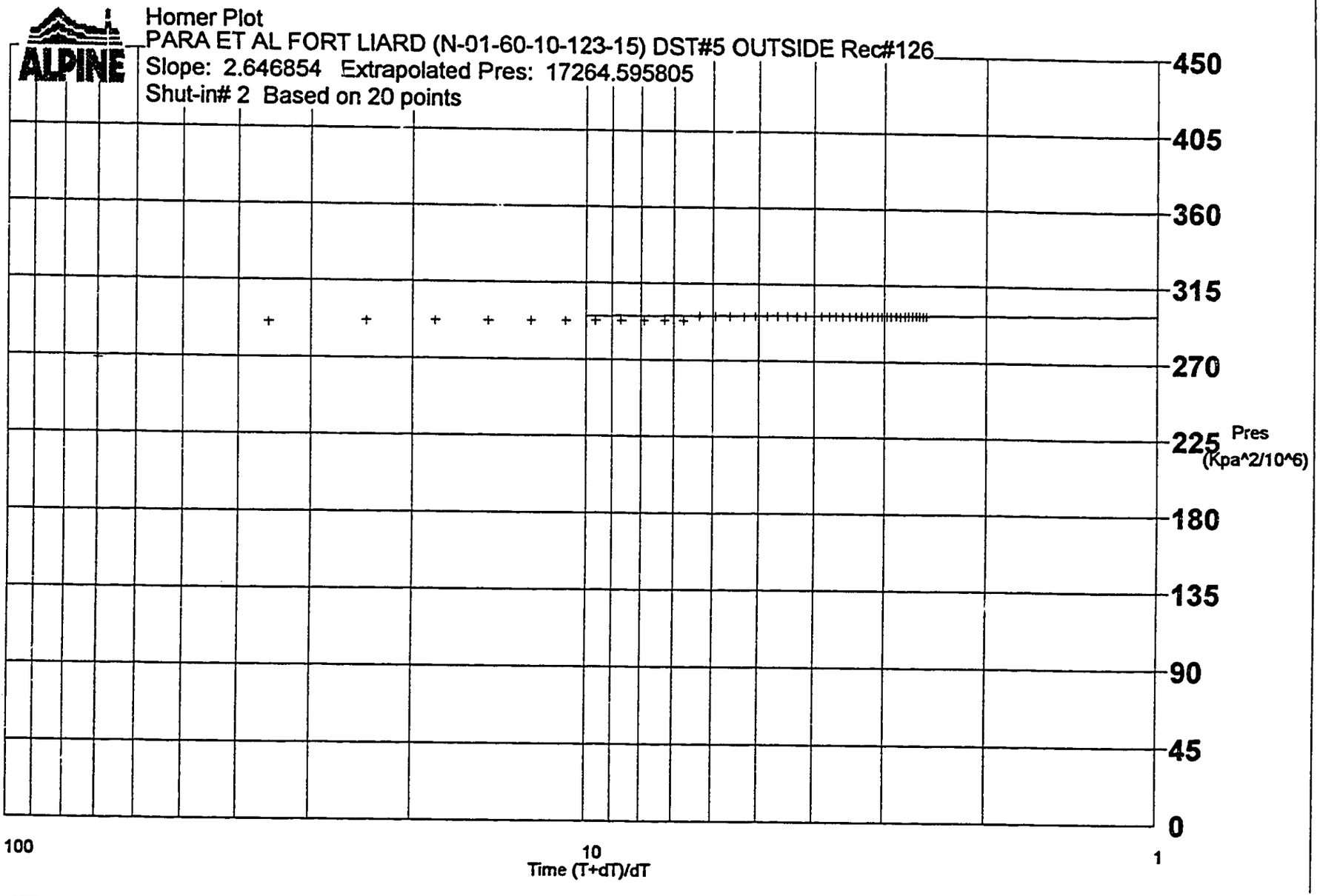
Job Ticket #: D2-8751 DST#: 5
Test Date: 01/10/2001 1200hrs

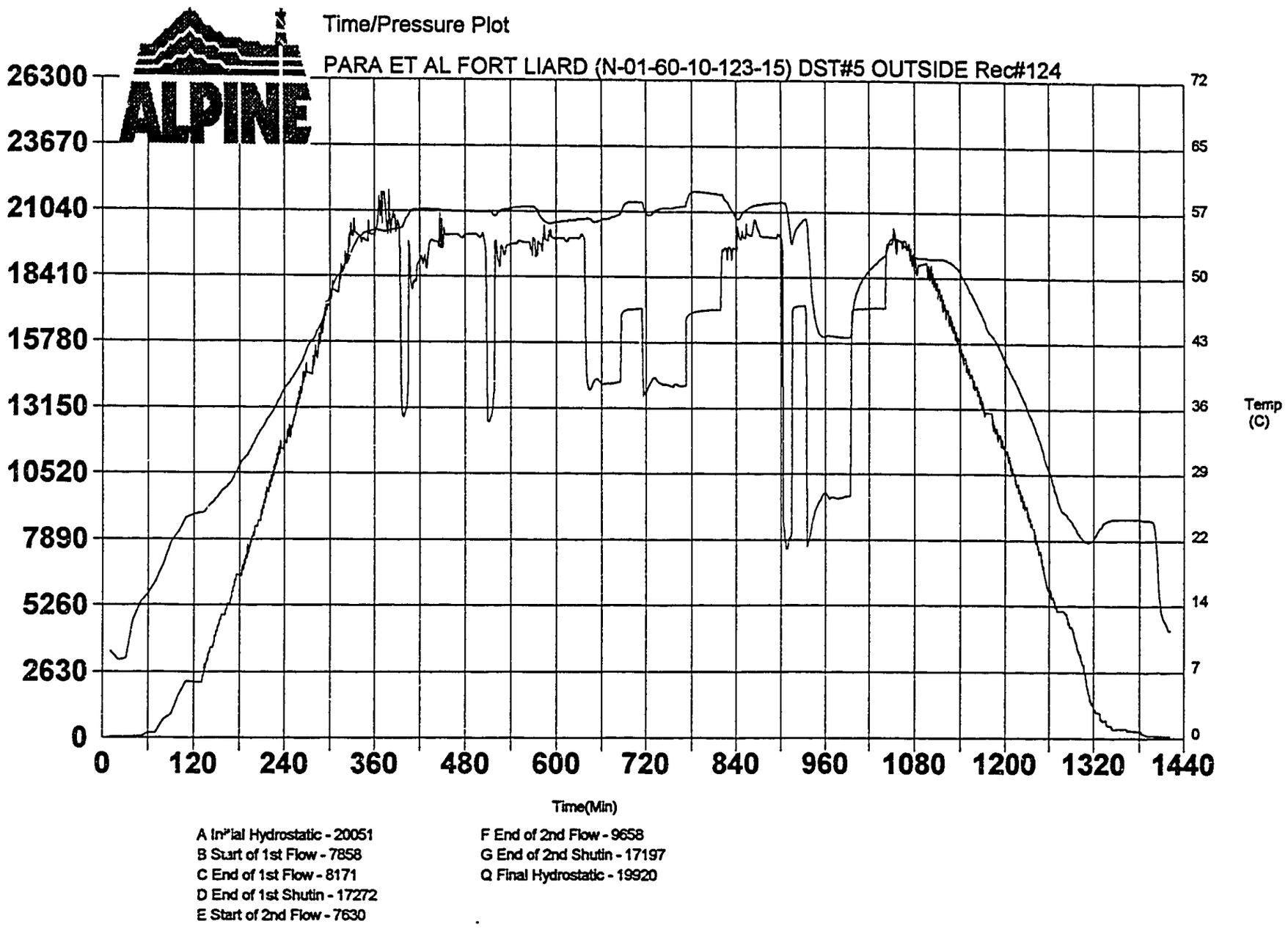
Well Name: PARA ET AL FORT LIARD

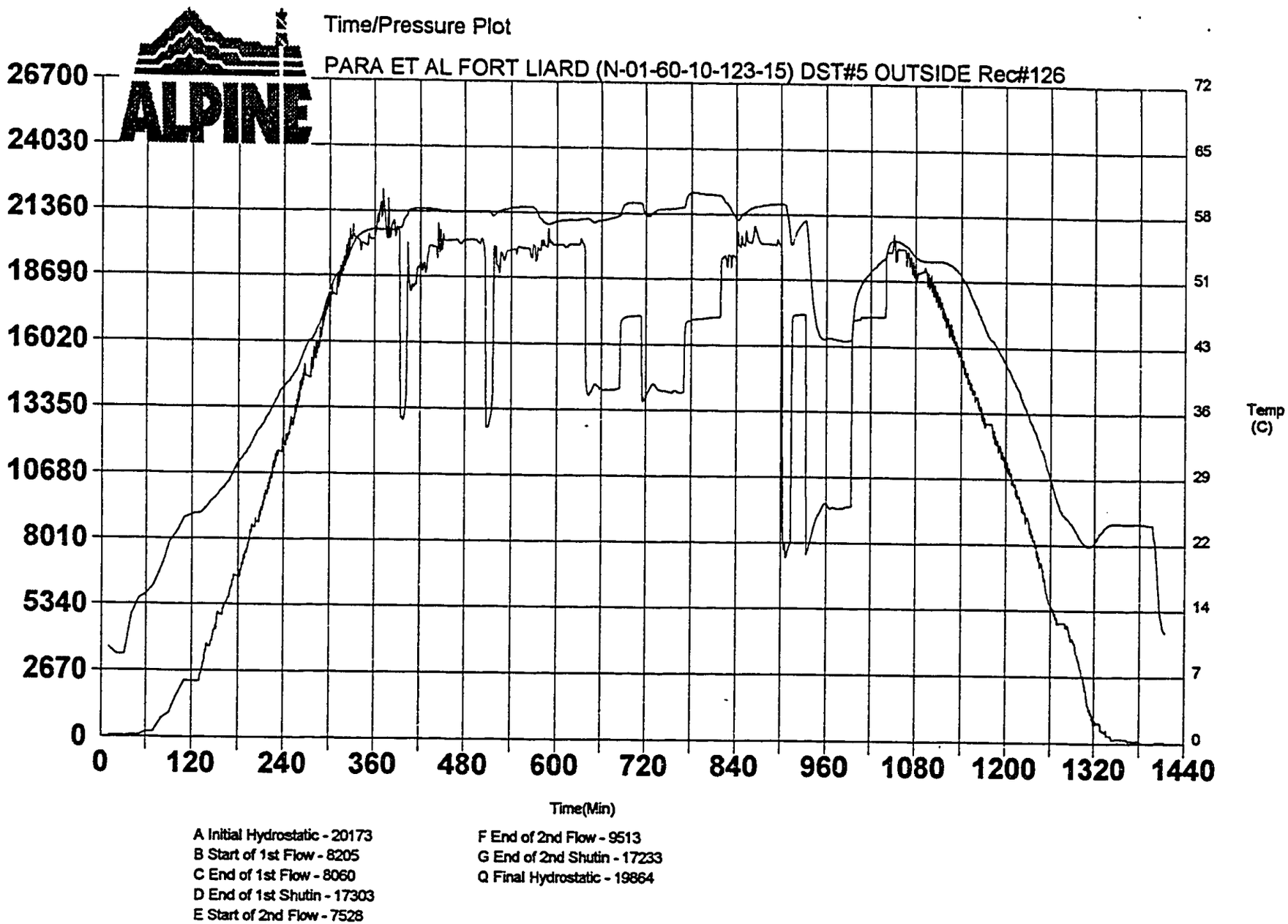
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		14.00	1870.40	9398.30		44.1
		45.00	1875.00	9402.90		44.1
		46.00	1894.70	9422.60		44.1
		47.00	1884.20	9412.10		44.0
		48.00	1894.70	9422.60		44.0
		49.00	1891.20	9419.10		44.0
		50.00	1917.80	9445.70		44.0
		51.00	1931.70	9459.60		44.0
		52.00	1949.10	9477.00		44.0
		53.00	1950.20	9478.10		44.0
		54.00	1950.20	9478.10		44.0
		55.00	1966.40	9494.30		44.0
		56.00	1951.40	9479.30		44.1
		57.00	1961.80	9489.70		44.1
		58.00	1960.60	9488.50		44.1
F	End of 2nd Flow	59.00	1984.90	9512.80		44.1
		1.00	6871.70	16384.50	69.0000	44.3
		2.00	7530.20	17043.00	35.0000	45.6
		3.00	7559.20	17072.00	23.6667	46.5
		4.00	7575.40	17088.20	18.0000	47.3
		5.00	7578.80	17091.60	14.6000	47.8
		6.00	7584.60	17097.40	12.3333	48.3
		7.00	7590.40	17103.20	10.7143	48.7
		8.00	7596.20	17109.00	9.5000	49.0
		9.00	7600.80	17113.60	8.5556	49.3
		10.00	7604.30	17117.10	7.8000	49.5
		11.00	7607.80	17120.60	7.1818	49.7
		12.00	7610.10	17122.90	6.6667	49.9
		13.00	7684.20	17197.00	6.2308	50.1
		14.00	7687.60	17200.40	5.8571	50.2
		15.00	7689.90	17202.70	5.5333	50.4
		16.00	7694.60	17207.40	5.2500	50.5
		17.00	7695.70	17208.50	5.0000	50.6
		18.00	7699.20	17212.00	4.7778	50.8
		19.00	7699.20	17212.00	4.5789	50.9
		20.00	7700.40	17213.20	4.4000	51.0
		21.00	7701.50	17214.30	4.2381	51.1
		22.00	7703.80	17216.60	4.0909	51.2
		23.00	7705.00	17217.80	3.9565	51.3
		24.00	7706.20	17219.00	3.8333	51.4
		25.00	7707.30	17220.10	3.7200	51.5
		26.00	7708.50	17221.30	3.6154	51.6
		27.00	7708.50	17221.30	3.5185	51.7
		28.00	7709.60	17222.40	3.4286	51.8
		29.00	7710.80	17223.60	3.3448	51.9
		30.00	7711.90	17224.70	3.2667	52.0
		31.00	7713.10	17225.90	3.1935	52.1
		32.00	7714.30	17227.10	3.1250	52.2
		33.00	7715.40	17228.20	3.0606	52.2
		34.00	7715.40	17228.20	3.0000	52.3
		35.00	7715.40	17228.20	2.9429	52.4
		36.00	7716.60	17229.40	2.8889	52.5
		37.00	7717.70	17230.50	2.8378	52.6
		38.00	7716.60	17229.40	2.7895	52.6
		39.00	7718.90	17231.70	2.7436	52.7
		40.00	7718.90	17231.70	2.7000	52.8
		41.00	7718.90	17231.70	2.6585	52.9
		42.00	7718.90	17231.70	2.6190	52.9
		43.00	7718.90	17231.70	2.5814	53.0
		44.00	7720.00	17232.80	2.5455	53.0
G	End of 2nd Shutin	45.00	7720.00	17232.80	2.5111	53.1
Q	Final Hydrostatic	0.00	0.00	19863.70		54.9


ALPINE
Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#5 OUTSIDE Rec#126
Slope: 5.529432 Extrapolated Pres: 17331.596543
Shut-in# 1 Based on 10 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT


ALPINE
Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#5 OUTSIDE Rec#126
Slope: 2.646854 Extrapolated Pres: 17264.595805
Shut-in# 2 Based on 20 points
450
405
360
315
270
225
180
135
90
45
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT


ALPINE
Time/Pressure Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#5 OUTSIDE Rec#124
26300
23670
21040
18410
15780
13150
10520
7890
5260
2630
0
72
65
57
50
43
36
29
22
14
7
0
Temp (C)
0
120
240
360
480
600
720
840
960
1080
1200
1320
1440
Time(Min)
A Initial Hydrostatic - 20051
B Start of 1st Flow - 7858
C End of 1st Flow - 8171
D End of 1st Shutin - 17272
E Start of 2nd Flow - 7630
F End of 2nd Flow - 9658
G End of 2nd Shutin - 17197
Q Final Hydrostatic - 19920



A Initial Hydrostatic - 20173
B Start of 1st Flow - 8205
C End of 1st Flow - 8060
D End of 1st Shutin - 17303
E Start of 2nd Flow - 7528
F End of 2nd Flow - 9513
G End of 2nd Shutin - 17233
Q Final Hydrostatic - 19864



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/10/2001**

Job Ticket #: **T5161-5** DST#: **5**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: T5161-5 DST#: 5
Test Date: 01/10/2001 1200hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

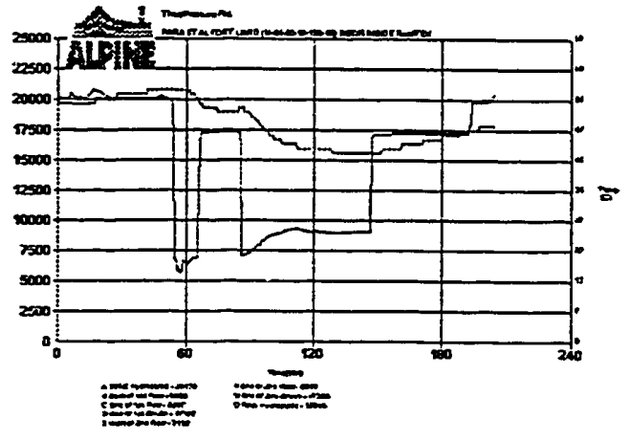
General Information:

Test Type:	INFLATE RESET	Tester:	B. HOLLINGSHEAD
Interval:	1738m -1759m	Truck No.:	Unit 114
Formation:	1ST MID. BELLY RIVER	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	44.00 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1727.45 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	20169.6
B Start of 1st Flow	0.00	5825.9
C End of 1st Flow	8.58	6906.7
D End of 1st Shutin	19.68	17391.6
E Start of 2nd Flow	0.00	7118.9
F End of 2nd Flow	60.06	9050.4
G End of 2nd Shutin	43.92	17288.4
Q Final Hydrostatic	0.00	19848.1



Test Run Information:

Start Time:	1200hrs
Reached Test Depth:	200hrs
Pull Out Time:	430hrs
Tool Out Of Hole:	1000hrs
Water Loss:	6.20cm³
Mud Drop:	NO
VIS:	76.00S/L
Filter Cake:	1.60mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1160.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	

General Remarks:

This is the third of three tests run on the same trip in the hole. Mechanically successful. *Test results suggest excellent permeability within the zone tested.

PREFLOW: Gas to surface immediately with a 6 meter flare. No rates taken for preflow.

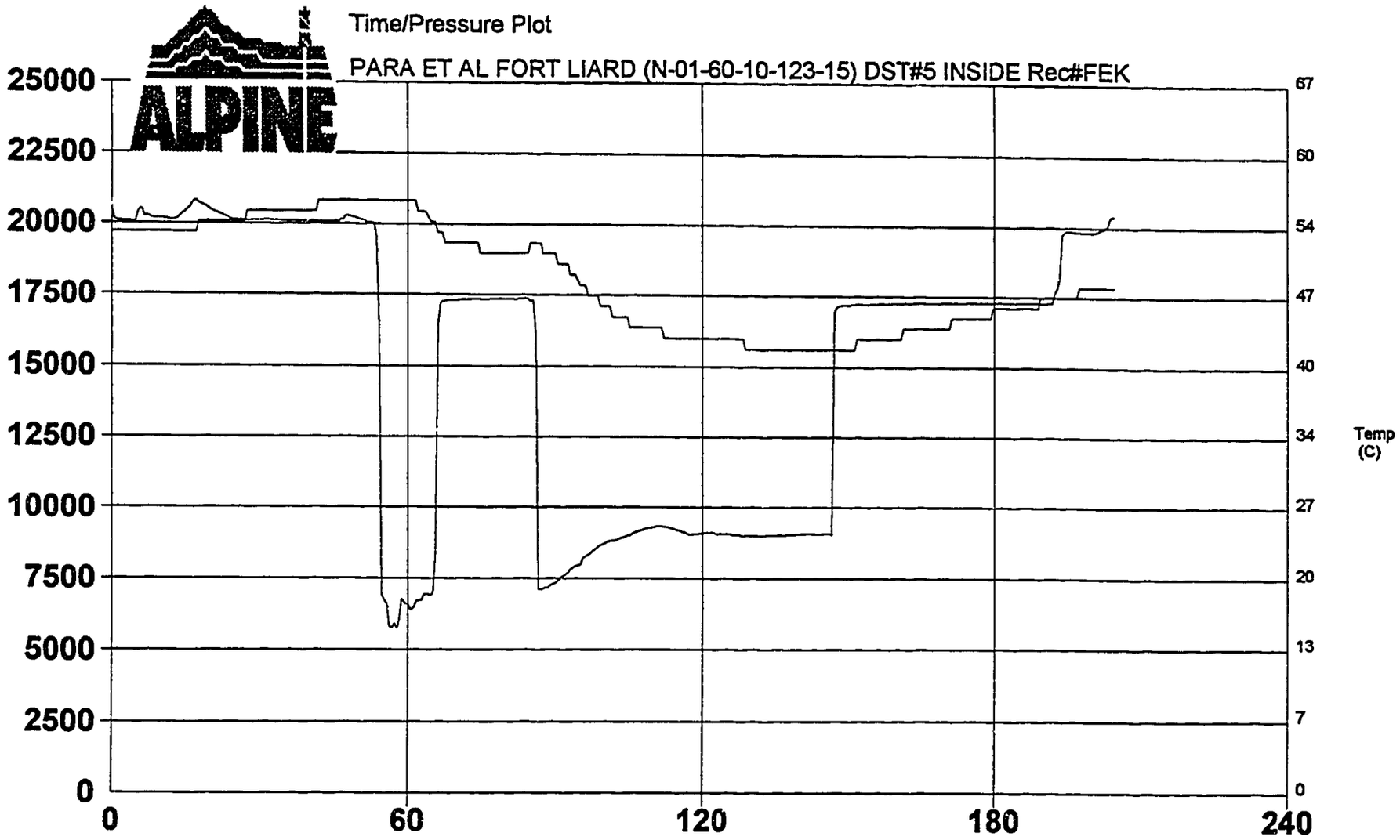
FINAL FLOW: Gas to surface immediately, misting mud throughout.

***See gas volume charts for gas rates.

Recovery Description:

Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condensate and 30 meters fresh water.

Gas to surface.


ALPINE
Time/Pressure Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#5 INSIDE Rec#FEK
25000
22500
20000
17500
15000
12500
10000
7500
5000
2500
0
67
60
54
47
40
34
27
20
13
7
0
Temp (C)
0
60
120
180
240
Time(Min)
A Initial Hydrostatic - 20170
B Start of 1st Flow - 5826
C End of 1st Flow - 6907
D End of 1st Shutin - 17392
E Start of 2nd Flow - 7119
F End of 2nd Flow - 9050
G End of 2nd Shutin - 17288
Q Final Hydrostatic - 19848

N.E.B. COPY

PARA ET AL FORT LIARD

N-01-60-10-123-15

DST #6

ALPINE

Drill Stem Test Report

Prepared for: PARAMOUNT RESOURCES
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: 01/11/2001

Job Ticket #: D2-8619 DST#: 6

NATIONAL ENERGY BOARD
JAN 21 2001

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

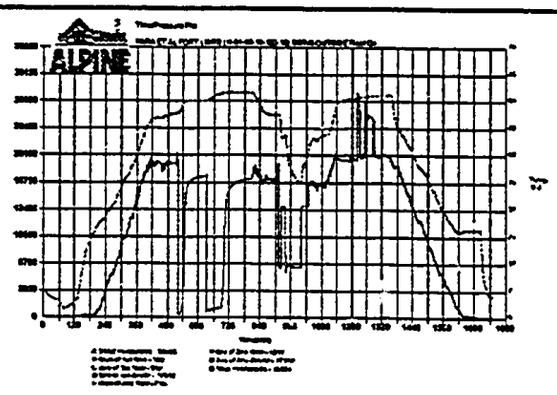
General Information:

Test Type: INFLATE STRADDLE
Interval: 1625.00m - 1632.00m
Formation: MATTSON
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Fluid

Tester: D. WHITE
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 58.10 C

Electronic Recorder Information:

OUTSIDE		FLUID	
Recorder #: 124		Recorder #: 126	
Range: 70000 kPa		Range: 70000 kPa	
Depth: 1627.92 m		Depth: 1610.89 m	
Flag Points:	Time:	Pressure:	
A Initial Hydrostatic	0.00	19088.2	
B Start of 1st Flow	0.00	392.4	
C End of 1st Flow	10.00	619.2	
D End of 1st Shutin	97.00	17516.4	
E Start of 2nd Flow	0.00	732.8	
F End of 2nd Flow	55.00	1215.3	
G End of 2nd Shutin	123.00	17250.2	
Q Final Hydrostatic	0.00	18831.2	



Test Run Information:

Start Time: 900hrs
Reached Test Depth: 1200hrs
Pull Out Time: 1800hrs
Tool Out Of Hole: 2300hrs

Weight set on Packers: 6000.00daN
Weight to free Packers: 10000.00daN
Initial String Weight: 42000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1190.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion: N/A

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 96.00S/L
Filter Cake: 2.00mm
Pump Time: 30min
Reversed Out: NO

General Remarks:

This is the first of two tests run on the same trip in the hole. Mechanically successful. *Test results suggest moderate permeability within the zone tested.

PREFLOW: Weak air blow increasing to strong in 30 seconds. Remaining strong throughout remainder of flow.

FINAL FLOW: Weak air blow increasing to strong in 1 minute. Remaining strong throughout remainder of flow.

NOTE - See Alpine Telemetry report for real time data acquisition.

Recovery Description:

Total fluid recovery for DST #6 and #7 was reversed out before being recorded.

No gas to surface.

Gas Bomb: 0 Sampler: 0
Fluid Sample: 0 Sent to: SEE DST #7

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	62
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1626.66m
Total Drill Pipe Above K.B.:	1.66m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1176.71	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.12	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



Item	Length
P.O. Sub	0.31
Double Pin	0.31
P.O. Sub	0.31
HMV Stroke	2.18
REC#126	1.50
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
Stub	0.72
ASE Carrier	2.20
REC#037	
REC#124	
Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
Stub	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

23.34m

34.95m

Depth: 1625m

7.04m

Depth: 1632m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	19088.20		52.5
B	Start of 1st Flow	0.00	0.00	392.40		52.6
		1.00	72.90	465.30		52.6
		2.00	159.70	552.10		52.7
		3.00	84.50	476.90		52.8
		4.00	23.10	415.50		52.9
		5.00	99.50	491.90		53.1
		6.00	116.90	509.30		53.3
		7.00	145.80	538.20		53.4
		8.00	156.20	548.60		53.6
		9.00	168.90	561.30		53.7
C	End of 1st Flow	10.00	226.80	619.20		53.9
		1.00	166.70	785.90	11.0000	54.0
		2.00	348.40	967.60	6.0000	54.2
		3.00	555.60	1174.80	4.3333	54.4
		4.00	807.90	1427.10	3.5000	54.5
		5.00	1119.20	1738.40	3.0000	54.6
		6.00	1511.60	2130.80	2.6667	54.7
		7.00	2025.50	2644.70	2.4286	54.8
		8.00	2732.70	3351.90	2.2500	54.9
		9.00	3733.90	4353.10	2.1111	55.0
		10.00	5143.60	5762.80	2.0000	55.1
		11.00	6985.10	7604.30	1.9091	55.1
		12.00	9027.90	9647.10	1.8333	55.2
		13.00	10779.10	11398.30	1.7692	55.2
		14.00	12070.80	12690.00	1.7143	55.3
		15.00	12985.10	13604.30	1.6667	55.4
		16.00	13635.60	14254.80	1.6250	55.4
		17.00	14117.10	14736.30	1.5882	55.5
		18.00	14488.60	15107.80	1.5556	55.5
		19.00	14775.70	15394.90	1.5263	55.5
		20.00	15007.10	15626.30	1.5000	55.6
		21.00	15195.80	15815.00	1.4762	55.6
		22.00	15350.90	15970.10	1.4545	55.7
		23.00	15482.80	16102.00	1.4348	55.7
		24.00	15596.30	16215.50	1.4167	55.7
		25.00	15694.60	16313.80	1.4000	55.7
		26.00	15780.30	16399.50	1.3846	55.7
		27.00	15854.40	16473.60	1.3704	55.7
		28.00	15920.30	16539.50	1.3571	55.7
		29.00	15980.50	16599.70	1.3448	55.8
		30.00	16034.90	16654.10	1.3333	55.8
		31.00	16084.70	16703.90	1.3226	55.8
		32.00	16128.70	16747.90	1.3125	55.8
		33.00	16169.20	16788.40	1.3030	55.8
		34.00	16208.50	16827.70	1.2941	55.8
		35.00	16243.30	16862.50	1.2857	55.8
		36.00	16276.80	16896.00	1.2778	55.8
		37.00	16308.10	16927.30	1.2703	55.8
		38.00	16337.00	16956.20	1.2632	55.8
		39.00	16363.60	16982.80	1.2564	55.8
		40.00	16389.10	17008.30	1.2500	55.8
		41.00	16413.40	17032.60	1.2439	55.8
		42.00	16435.40	17054.60	1.2381	55.8
		43.00	16456.20	17075.40	1.2326	55.8
		44.00	16477.10	17096.30	1.2273	55.8
		45.00	16495.60	17114.80	1.2222	55.8
		46.00	16514.10	17133.30	1.2174	55.8
		47.00	16530.30	17149.50	1.2128	55.8
		48.00	16545.40	17164.60	1.2083	55.8
		49.00	16560.40	17179.60	1.2041	55.8
		50.00	16574.30	17193.50	1.2000	55.9
		51.00	16588.20	17207.40	1.1961	55.8
		52.00	16600.90	17220.10	1.1923	55.9
		53.00	16613.60	17232.80	1.1887	55.8
		54.00	16625.20	17244.40	1.1852	55.8
		55.00	16636.80	17256.00	1.1818	55.8
		56.00	16647.20	17266.40	1.1786	55.9
		57.00	16657.60	17276.80	1.1754	55.9
		58.00	16668.00	17287.20	1.1724	55.9
		59.00	16678.50	17297.70	1.1695	55.9
		60.00	16687.70	17306.90	1.1667	55.9
		61.00	16695.80	17315.00	1.1639	55.9
		62.00	16703.90	17323.10	1.1613	55.9

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		63.00	16712.00	17331.20	1.1587	55.9
		64.00	16721.30	17340.50	1.1563	55.9
		65.00	16729.40	17348.60	1.1538	55.9
		66.00	16737.50	17356.70	1.1515	55.9
		67.00	16744.40	17363.60	1.1493	55.9
		68.00	16751.40	17370.60	1.1471	55.9
		69.00	16758.30	17377.50	1.1449	55.9
		70.00	16766.40	17385.60	1.1429	55.9
		71.00	16772.20	17391.40	1.1408	55.9
		72.00	16778.00	17397.20	1.1389	55.9
		73.00	16784.90	17404.10	1.1370	55.9
		74.00	16790.70	17409.90	1.1351	55.9
		75.00	16796.50	17415.70	1.1333	55.9
		76.00	16802.30	17421.50	1.1316	55.9
		77.00	16808.10	17427.30	1.1299	55.9
		78.00	16813.90	17433.10	1.1282	55.9
		79.00	16819.70	17438.90	1.1266	55.9
		80.00	16824.30	17443.50	1.1250	55.9
		81.00	16830.10	17449.30	1.1235	55.9
		82.00	16834.70	17453.90	1.1220	55.9
		83.00	16839.30	17458.50	1.1205	55.9
		84.00	16844.00	17463.20	1.1190	55.9
		85.00	16848.60	17467.80	1.1176	55.9
		86.00	16853.20	17472.40	1.1163	55.9
		87.00	16857.90	17477.10	1.1149	55.9
		88.00	16862.50	17481.70	1.1136	55.9
		89.00	16867.10	17486.30	1.1124	55.9
		90.00	16870.60	17489.80	1.1111	55.9
		91.00	16875.20	17494.40	1.1099	55.9
		92.00	16878.70	17497.90	1.1087	55.9
		93.00	16883.30	17502.50	1.1075	55.9
		94.00	16886.80	17506.00	1.1064	55.9
		95.00	16890.30	17509.50	1.1053	55.9
		96.00	16893.70	17512.90	1.1042	55.9
D	End of 1st Shutin	97.00	16897.20	17516.40	1.1031	55.9
E	Start of 2nd Flow	0.00	0.00	732.60		55.8
		1.00	-6.90	725.70		55.8
		2.00	41.70	774.30		55.8
		3.00	68.30	800.90		55.8
		4.00	76.40	809.00		55.8
		5.00	86.90	819.50		55.8
		6.00	97.30	829.90		55.9
		7.00	107.70	840.30		55.9
		8.00	119.30	851.90		56.0
		9.00	128.50	861.10		56.1
		10.00	138.90	871.50		56.1
		11.00	147.00	879.60		56.2
		12.00	156.30	888.90		56.3
		13.00	166.70	899.30		56.3
		14.00	174.80	907.40		56.4
		15.00	182.90	915.50		56.4
		16.00	191.00	923.60		56.5
		17.00	199.10	931.70		56.5
		18.00	209.50	942.10		56.6
		19.00	214.20	946.80		56.6
		20.00	222.30	954.90		56.7
		21.00	229.20	961.80		56.7
		22.00	239.60	972.20		56.7
		23.00	247.70	980.30		56.8
		24.00	254.70	987.30		56.9
		25.00	261.60	994.20		56.9
		26.00	270.90	1003.50		56.9
		27.00	277.80	1010.40		57.0
		28.00	284.80	1017.40		57.0
		29.00	292.90	1025.50		57.0
		30.00	299.80	1032.40		57.1
		31.00	306.80	1039.40		57.1
		32.00	313.70	1046.30		57.1
		33.00	319.50	1052.10		57.2
		34.00	326.40	1059.00		57.2
		35.00	333.40	1066.00		57.2
		36.00	341.50	1074.10		57.2
		37.00	349.60	1082.20		57.3
		38.00	355.40	1088.00		57.3

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		39.00	363.50	1096.10		57.3
		40.00	370.40	1103.00		57.4
		41.00	376.20	1108.80		57.4
		42.00	385.50	1118.10		57.4
		43.00	391.30	1123.90		57.4
		44.00	398.20	1130.80		57.4
		45.00	406.30	1138.90		57.5
		46.00	410.90	1143.50		57.5
		47.00	415.60	1148.20		57.5
		48.00	423.70	1156.30		57.5
		49.00	426.00	1158.60		57.5
		50.00	431.80	1164.40		57.5
		51.00	437.60	1170.20		57.6
		52.00	444.50	1177.10		57.6
		53.00	450.30	1182.90		57.6
		54.00	456.10	1188.70		57.6
F	End of 2nd Flow	55.00	482.70	1215.30		57.6
		1.00	166.70	1382.00	66.0000	57.6
		2.00	343.70	1559.00	33.5000	57.7
		3.00	540.50	1755.80	22.6667	57.7
		4.00	766.20	1981.50	17.2500	57.7
		5.00	1030.10	2245.40	14.0000	57.7
		6.00	1346.10	2561.40	11.8333	57.7
		7.00	1731.50	2946.80	10.2857	57.7
		8.00	2207.20	3422.50	9.1250	57.8
		9.00	2807.90	4023.20	8.2222	57.8
		10.00	3579.90	4795.20	7.5000	57.8
		11.00	4570.60	5785.90	6.9091	57.8
		12.00	5809.10	7024.40	6.4167	57.8
		13.00	7221.10	8436.40	6.0000	57.8
		14.00	8617.00	9832.30	5.6429	57.8
		15.00	9813.80	11029.10	5.3333	57.9
		16.00	10767.50	11982.80	5.0625	57.9
		17.00	11509.40	12724.70	4.8235	57.9
		18.00	12086.90	13302.20	4.6111	57.9
		19.00	12544.10	13759.40	4.4211	57.9
		20.00	12911.00	14126.30	4.2500	58.0
		21.00	13209.60	14424.90	4.0952	58.0
		22.00	13456.20	14671.50	3.9545	58.0
		23.00	13662.20	14877.50	3.8261	58.0
		24.00	13837.00	15052.30	3.7083	58.0
		25.00	13986.30	15201.60	3.6000	58.0
		26.00	14115.90	15331.20	3.5000	58.0
		27.00	14230.50	15445.80	3.4074	58.0
		28.00	14331.20	15546.50	3.3214	58.0
		29.00	14421.50	15636.80	3.2414	58.0
		30.00	14501.30	15716.60	3.1667	58.1
		31.00	14575.40	15790.70	3.0968	58.1
		32.00	14641.40	15856.70	3.0313	58.1
		33.00	14702.70	15918.00	2.9697	58.1
		34.00	14759.40	15974.70	2.9118	58.1
		35.00	14811.50	16026.80	2.8571	58.1
		36.00	14860.10	16075.40	2.8056	58.1
		37.00	14905.30	16120.60	2.7568	58.1
		38.00	14946.90	16162.20	2.7105	58.1
		39.00	14987.40	16202.70	2.6667	58.0
		40.00	15024.50	16239.80	2.6250	58.1
		41.00	15060.40	16275.70	2.5854	58.1
		42.00	15093.90	16309.20	2.5476	58.1
		43.00	15126.30	16341.60	2.5116	58.1
		44.00	15156.40	16371.70	2.4773	58.0
		45.00	15186.50	16401.80	2.4444	58.0
		46.00	15214.30	16429.60	2.4130	58.0
		47.00	15240.90	16456.20	2.3830	58.0
		48.00	15267.50	16482.80	2.3542	58.0
		49.00	15291.80	16507.10	2.3265	58.0
		50.00	15315.00	16530.30	2.3000	58.0
		51.00	15338.10	16553.40	2.2745	58.0
		52.00	15360.10	16575.40	2.2500	58.0
		53.00	15381.00	16596.30	2.2264	58.0
		54.00	15400.60	16615.90	2.2037	58.0
		55.00	15420.30	16635.60	2.1818	58.0
		56.00	15438.80	16654.10	2.1607	58.0
		57.00	15457.40	16672.70	2.1404	58.0

Drill Stem Testing - Time / Pressure Listing

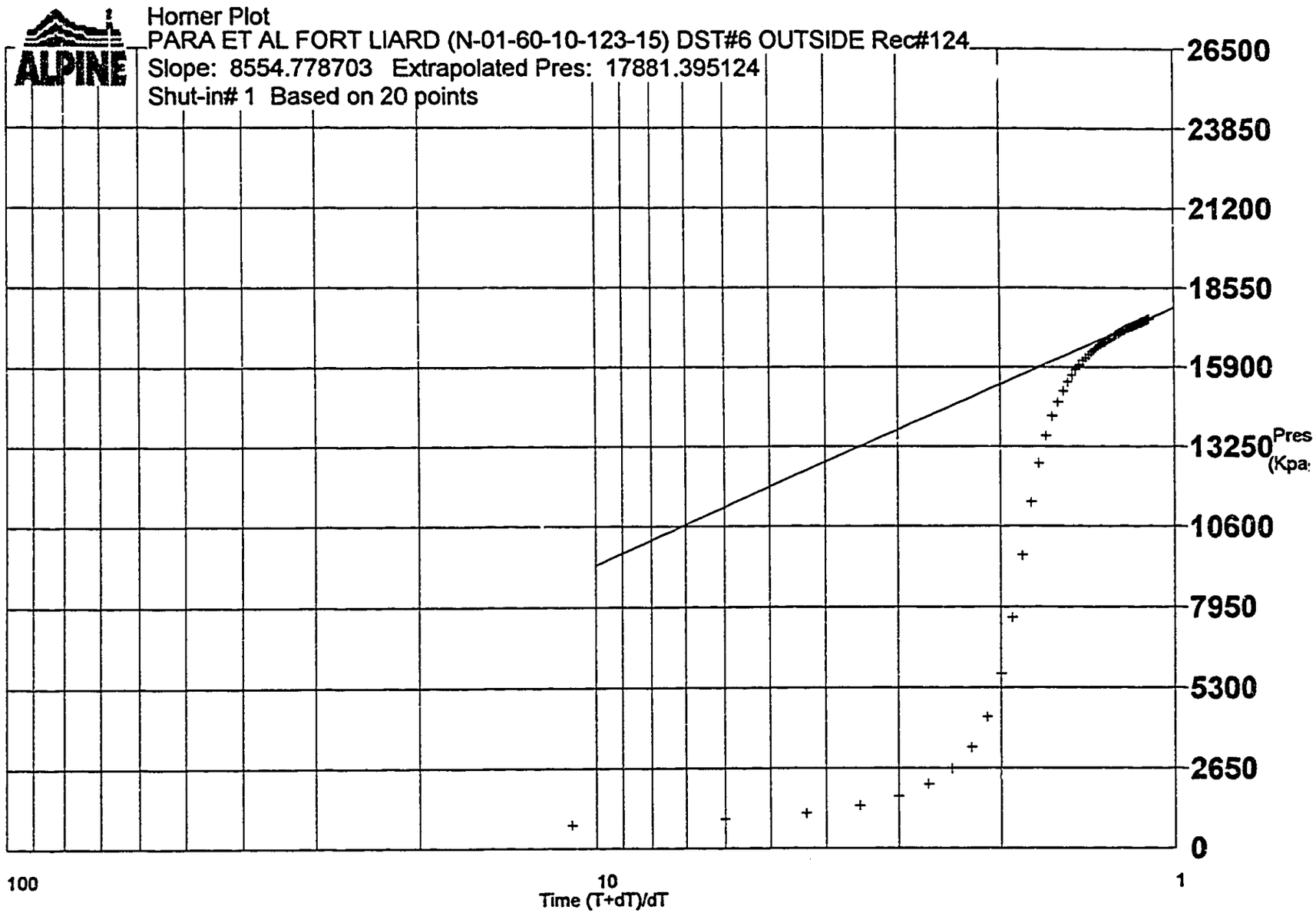
Company: PARAMOUNT RESOURCES L
4700, 888 - 3rd Street S.W.
CALGARY, AB

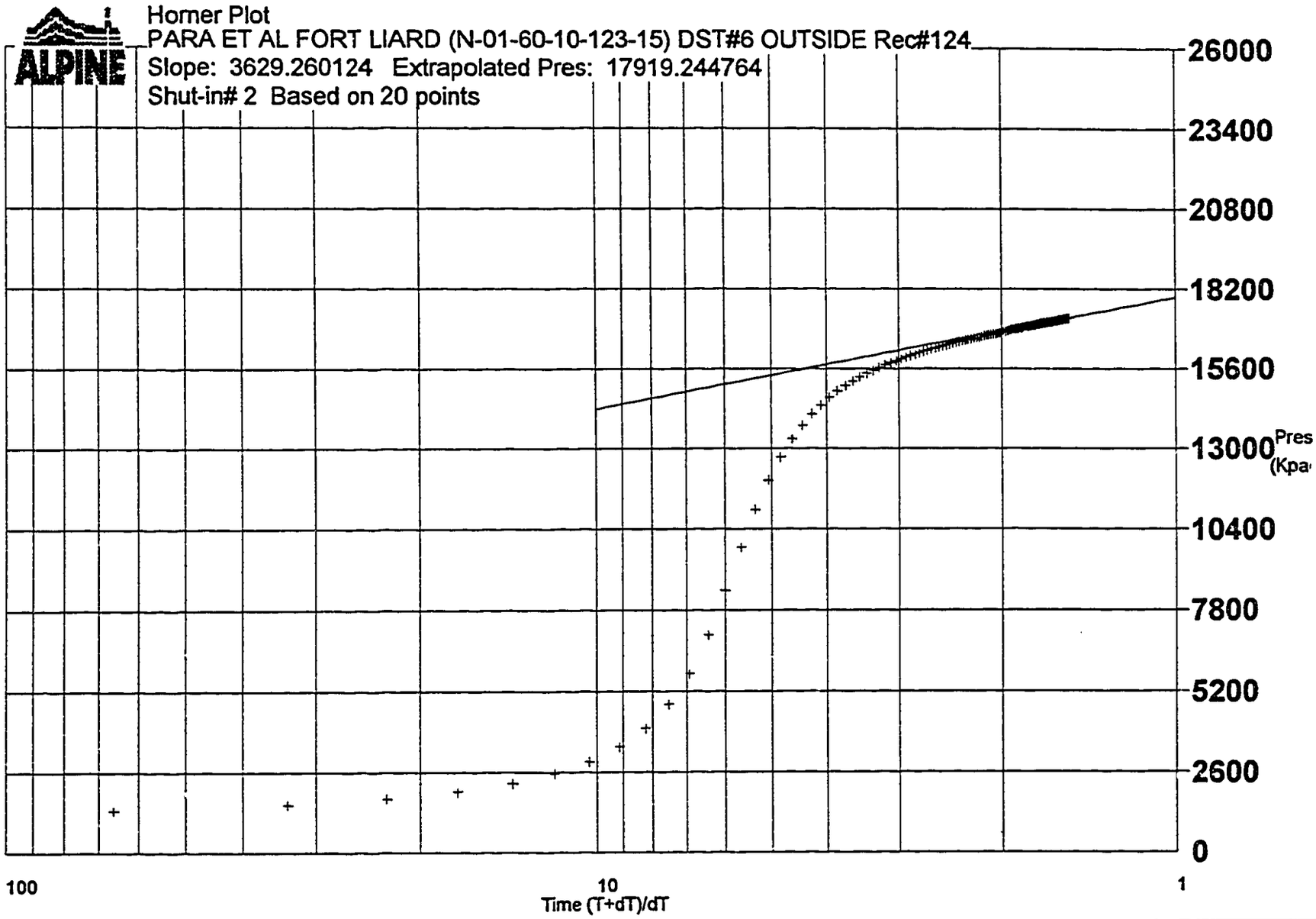
Contact: WILBERT CALLIHOO

Job Ticket #: D2-8619 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		58.00	15475.90	16691.20	2.1207	58.0
		59.00	15492.10	16707.40	2.1017	58.0
		60.00	15508.30	16723.60	2.0833	58.0
		61.00	15524.50	16739.80	2.0656	57.9
		62.00	15539.50	16754.80	2.0484	58.0
		63.00	15554.60	16769.90	2.0317	57.9
		64.00	15569.60	16784.90	2.0156	57.9
		65.00	15583.50	16798.80	2.0000	57.9
		66.00	15597.40	16812.70	1.9848	57.9
		67.00	15611.30	16826.60	1.9701	57.9
		68.00	15624.00	16839.30	1.9559	57.9
		69.00	15636.70	16852.00	1.9420	57.9
		70.00	15649.50	16864.80	1.9286	57.9
		71.00	15662.20	16877.50	1.9155	57.9
		72.00	15673.80	16889.10	1.9028	57.9
		73.00	15685.40	16900.70	1.8904	57.9
		74.00	15695.80	16911.10	1.8784	57.9
		75.00	15707.40	16922.70	1.8667	57.9
		76.00	15717.80	16933.10	1.8553	57.9
		77.00	15728.20	16943.50	1.8442	57.9
		78.00	15738.60	16953.90	1.8333	57.9
		79.00	15747.90	16963.20	1.8228	57.9
		80.00	15753.30	16973.60	1.8125	57.8
		81.00	15767.50	16982.80	1.8025	57.9
		82.00	15776.80	16992.10	1.7927	57.8
		83.00	15786.10	17001.40	1.7831	57.8
		84.00	15794.20	17009.50	1.7738	57.8
		85.00	15803.40	17018.70	1.7647	57.8
		86.00	15811.50	17026.80	1.7558	57.9
		87.00	15819.60	17034.90	1.7471	57.8
		88.00	15827.70	17043.00	1.7386	57.8
		89.00	15835.80	17051.10	1.7303	57.8
		90.00	15843.90	17059.20	1.7222	57.8
		91.00	15850.90	17066.20	1.7143	57.8
		92.00	15859.00	17074.30	1.7065	57.8
		93.00	15867.10	17082.40	1.6989	57.8
		94.00	15874.00	17089.30	1.6915	57.8
		95.00	15881.00	17096.30	1.6842	57.8
		96.00	15886.80	17102.10	1.6771	57.8
		97.00	15894.90	17110.20	1.6701	57.8
		98.00	15900.60	17115.90	1.6633	57.8
		99.00	15907.60	17122.90	1.6566	57.8
		100.00	15913.40	17128.70	1.6500	57.8
		101.00	15920.30	17135.60	1.6436	57.8
		102.00	15926.10	17141.40	1.6373	57.8
		103.00	15931.90	17147.20	1.6311	57.8
		104.00	15937.70	17153.00	1.6250	57.8
		105.00	15944.60	17159.90	1.6190	57.8
		106.00	15950.40	17165.70	1.6132	57.8
		107.00	15956.20	17171.50	1.6075	57.8
		108.00	15960.80	17176.10	1.6019	57.8
		109.00	15966.60	17181.90	1.5963	57.8
		110.00	15972.40	17187.70	1.5909	57.8
		111.00	15977.00	17192.30	1.5856	57.8
		112.00	15982.80	17198.10	1.5804	57.8
		113.00	15988.60	17203.90	1.5752	57.8
		114.00	15993.20	17208.50	1.5702	57.8
		115.00	15997.90	17213.20	1.5652	57.8
		116.00	16002.50	17217.80	1.5603	57.8
		117.00	16008.30	17223.60	1.5556	57.8
		118.00	16012.90	17228.20	1.5508	57.8
		119.00	16017.50	17232.80	1.5462	57.8
		120.00	16021.00	17236.30	1.5417	57.8
		121.00	16025.60	17240.90	1.5372	57.8
		122.00	16030.30	17245.60	1.5328	57.8
G	End of 2nd Shutin	123.00	16034.90	17250.20	1.5285	57.8
Q	Final Hydrostatic	0.00	0.00	18831.20		56.8

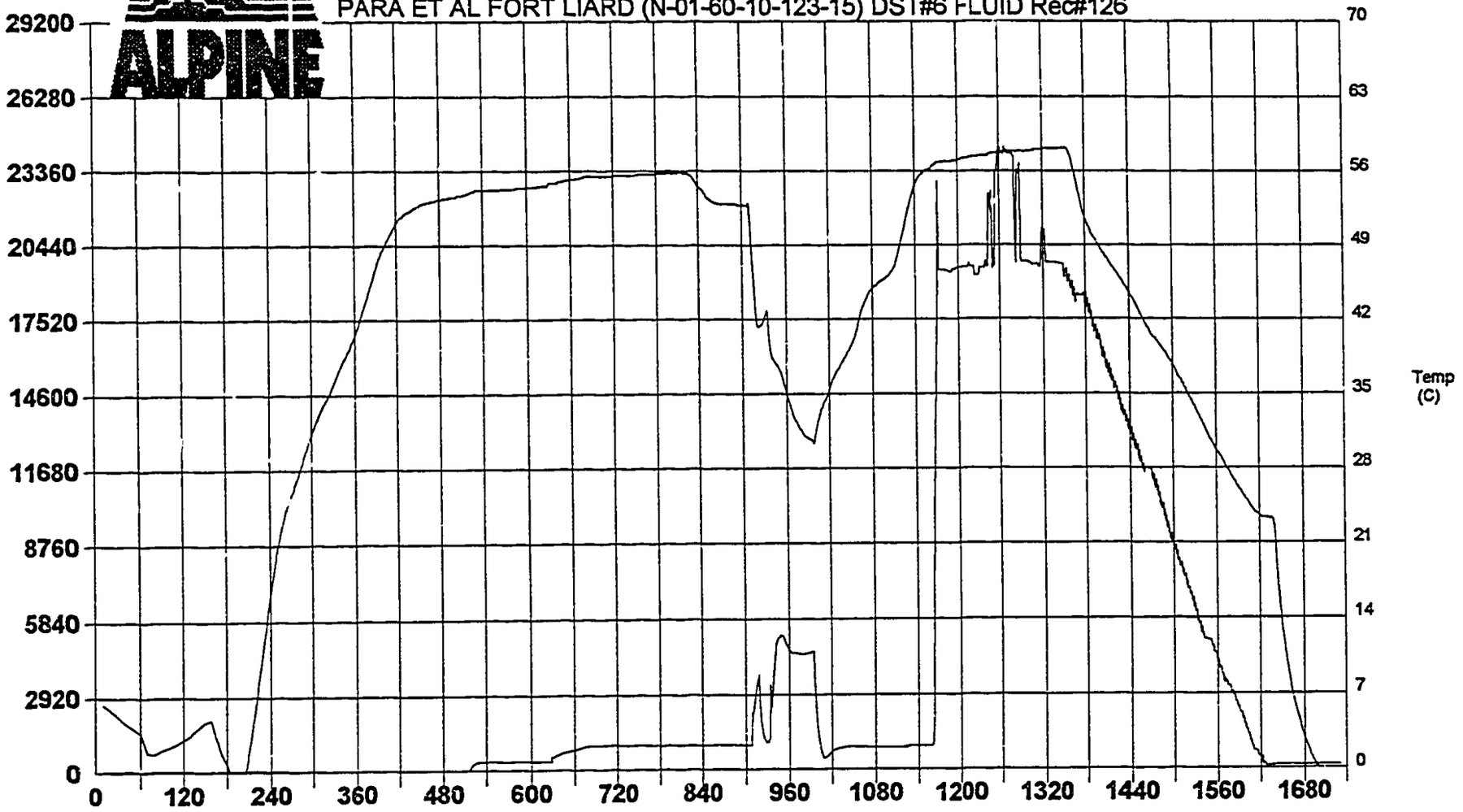

ALPINE
Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#6 OUTSIDE Rec#124
Slope: 8554.778703 Extrapolated Pres: 17881.395124
Shut-in# 1 Based on 20 points
26500
23850
21200
18550
15900
13250
Pres
(Kpa
10600
7950
5300
2650
0
100
10
1
Time (T+dT)/dT


ALPINE
Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#6 OUTSIDE Rec#124
Slope: 3629.260124 Extrapolated Pres: 17919.244764
Shut-in# 2 Based on 20 points
26000
23400
20800
18200
15600
13000
Pres
(Kpa
10400
7800
5200
2600
0
100
10
1
Time (T+dT)/dT

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#6 FLUID Rec#126

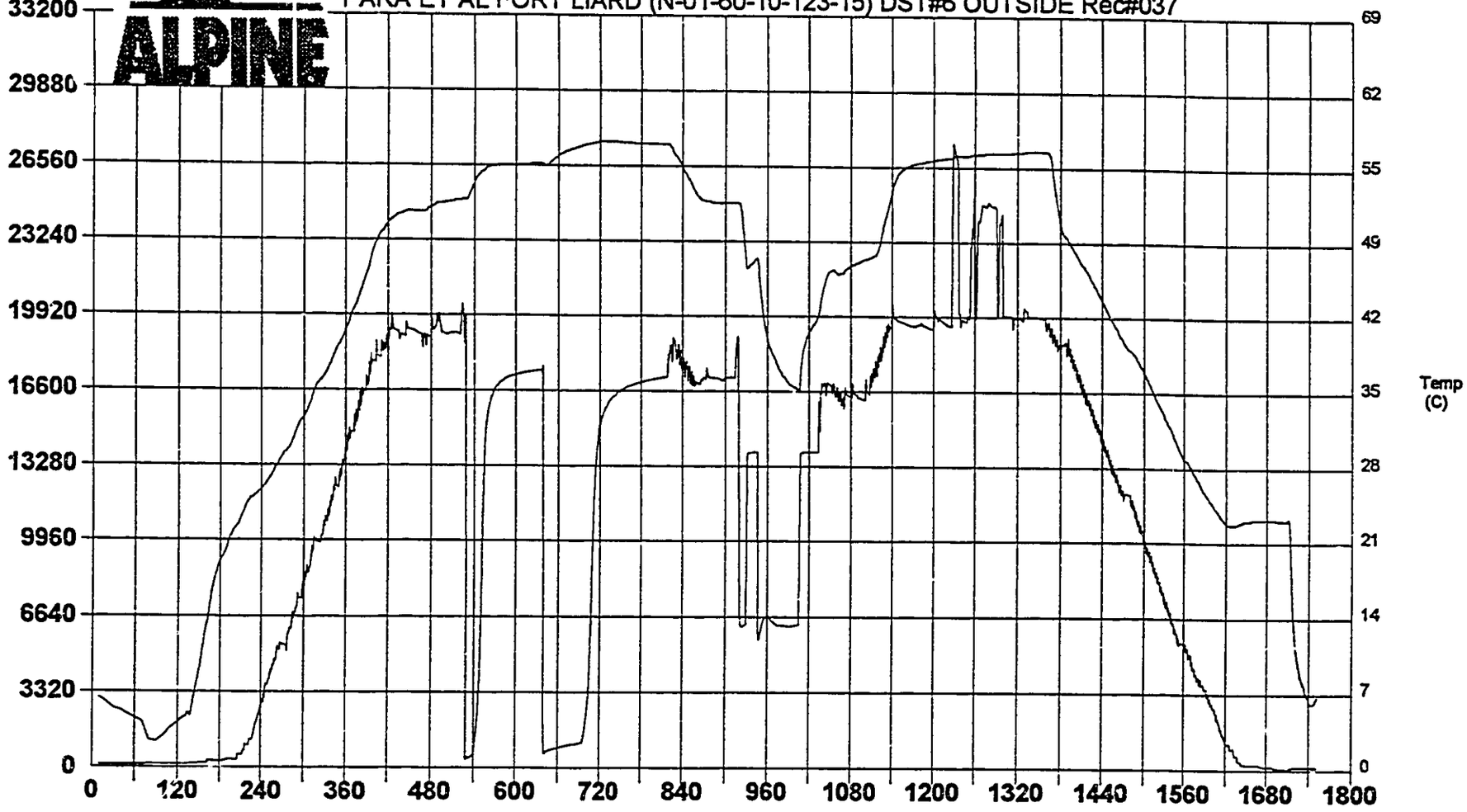


A Initial Hydrostatic - 0
B Start of 1st Flow - 0
C End of 1st Flow - 332
D End of 1st Shutin - 326
E Start of 2nd Flow - 493
F End of 2nd Flow - 940
G End of 2nd Shutin - 947
Q Final Hydrostatic - 947

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#6 OUTSIDE Rec#037

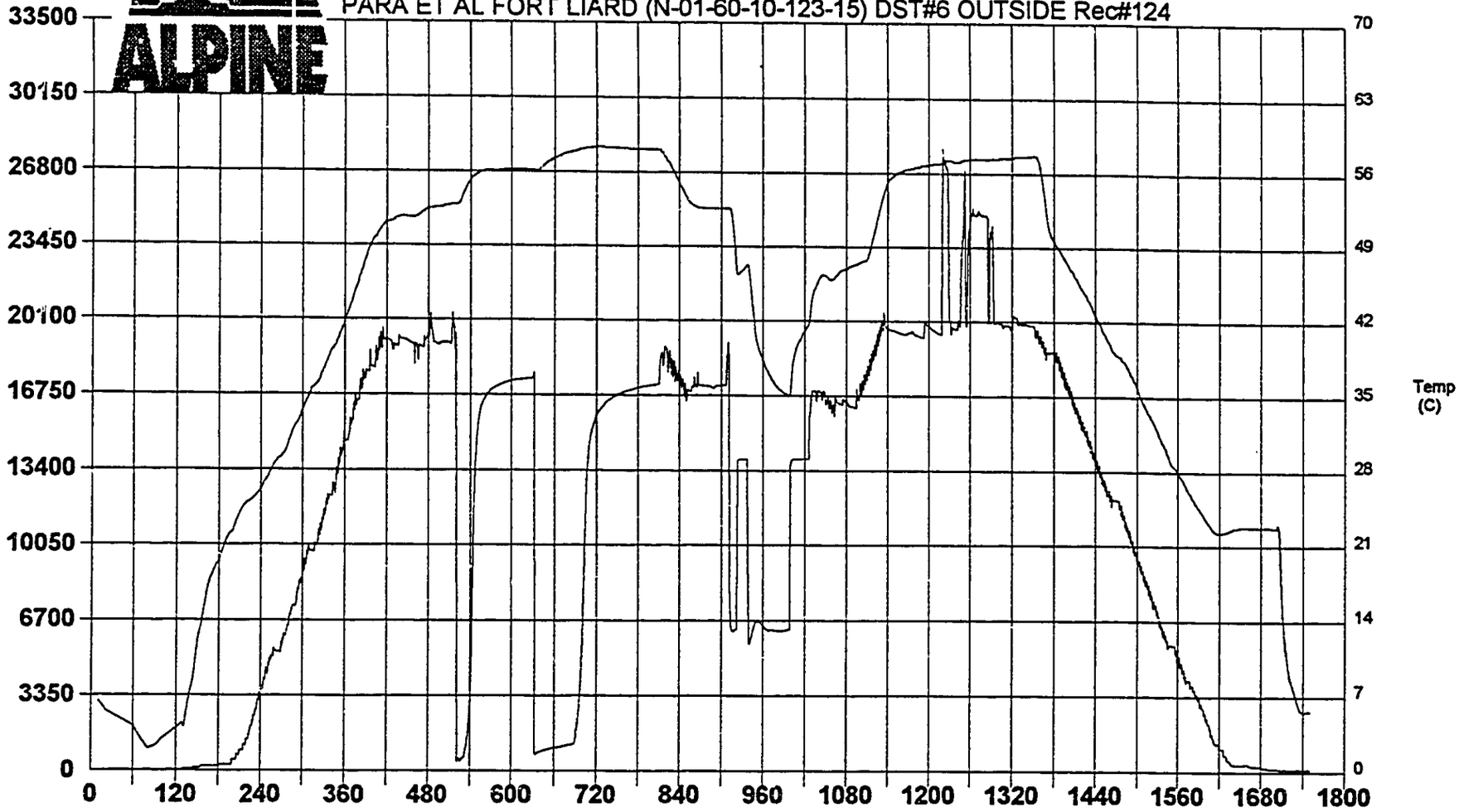


A Initial Hydrostatic - 19140
B Start of 1st Flow - 336
C End of 1st Flow - 502
D End of 1st Shutin - 17504
E Start of 2nd Flow - 623
F End of 2nd Flow - 1111
G End of 2nd Shutin - 17216
Q Final Hydrostatic - 18815

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#6 OUTSIDE Rec#124



A Initial Hydrostatic - 19088
B Start of 1st Flow - 392
C End of 1st Flow - 619
D End of 1st Shutin - 17516
E Start of 2nd Flow - 733
F End of 2nd Flow - 1215
G End of 2nd Shutin - 17250
Q Final Hydrostatic - 18831



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: **01/11/2001**

Job Ticket #: **T5262-6** DST#: **6**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: T5262-6 DST#: 6
Test Date: 01/11/2001 900hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

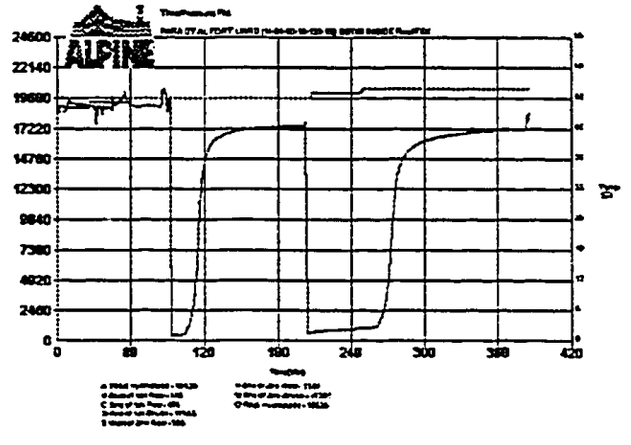
General Information:

Test Type:	INFLATE STRADDLE	Tester:	G. BABYAK
Interval:	1625m -1632m	Truck No.:	Unit 114
Formation:	MATTSON	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Fluid	Bottom Hole Temperature:	58.10 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1614.17 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	19119.9
B Start of 1st Flow	0.00	338.0
C End of 1st Flow	8.52	476.2
D End of 1st Shutin	97.92	17533.0
E Start of 2nd Flow	0.00	667.6
F End of 2nd Flow	55.08	1122.5
G End of 2nd Shutin	121.56	17260.9
Q Final Hydrostatic	0.00	18625.0



Test Run Information:

Start Time:	900hrs
Reached Test Depth:	1200hrs
Pull Out Time:	1800hrs
Tool Out Of Hole:	2300hrs
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	95.00S/L
Filter Cake:	2.00mm
Pump Time:	30min
Reversed Out:	NO
Mud Type:	GEL CHEMICAL
Mud Weight:	1190.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

This is the first of two tests run on the same trip in the hole. Mechanically successful. *Test results suggest moderate permeability within the zone tested.

PREFLOW: Weak air blow increasing to strong in 30 seconds. Remaining strong throughout remainder of flow.

FINAL FLOW: Weak air blow increasing to strong in 1 minute. Remaining strong throughout remainder of flow.

Recovery Description:

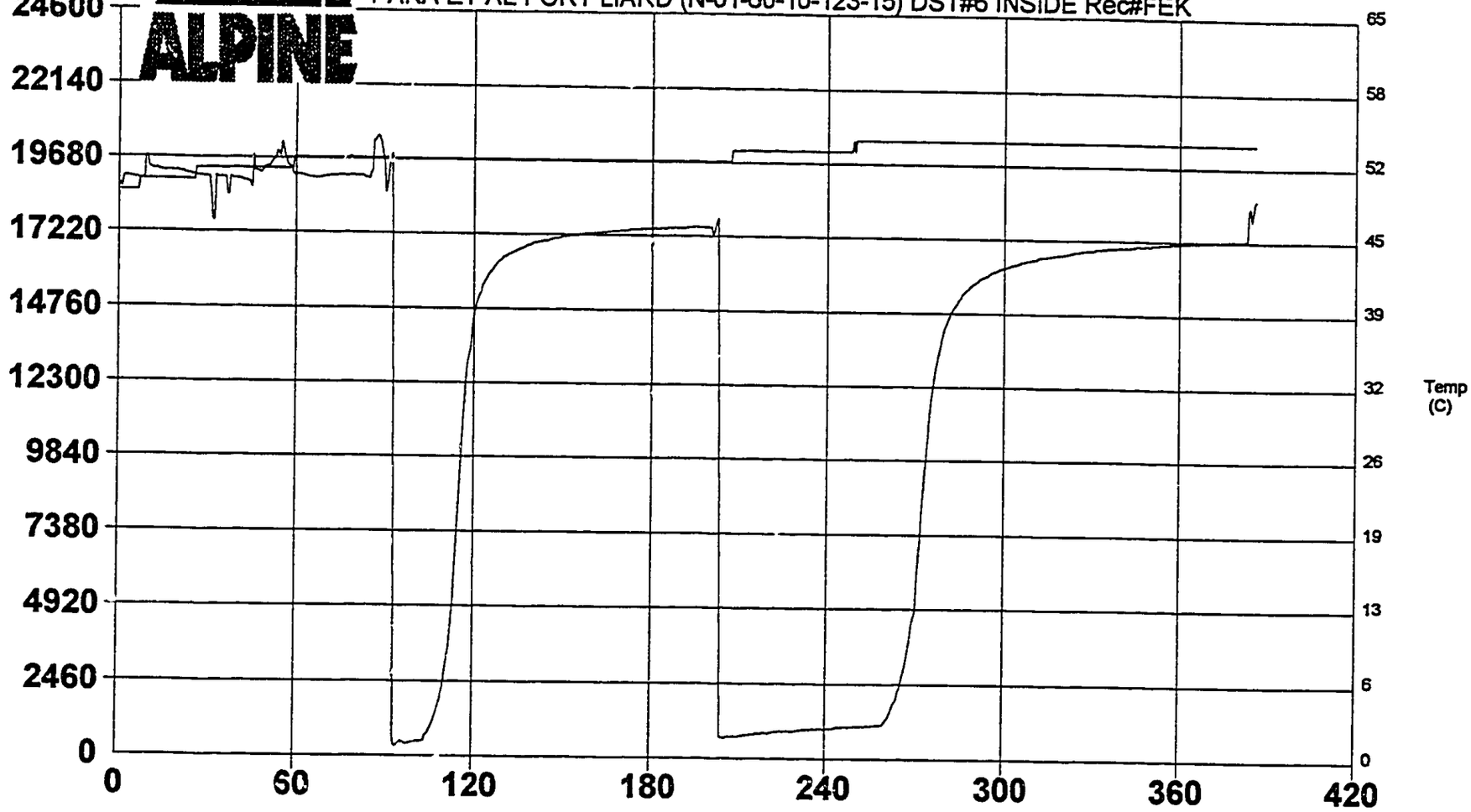
Total fluid recovery for DST #6 and #7 was reversed out before being recorded.

No gas to surface.

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#6 INSIDE Rec#FEK



A Initial Hydrostatic - 19120
B Start of 1st Flow - 338
C End of 1st Flow - 476
D End of 1st Shutin - 17533
E Start of 2nd Flow - 668
F End of 2nd Flow - 1123
G End of 2nd Shutin - 17261
Q Final Hydrostatic - 18625

NEB COPY

ALPINE

Drill Stem Test Report

Prepared for: PARAMOUNT RESOURCES
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Test Date: 01/11/2001

Job Ticket #: D2-8620 DST#: 7

GEOLOGICAL SURVEY

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

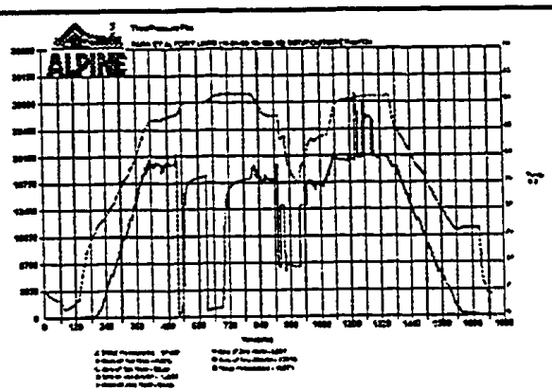
General Information:

Test Type: INFLATE RESET
Interval: 1457.50m - 1464.50m
Formation: FANTASQUE
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Gas

Tester: D. WHITE
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 34.90 C

Electronic Recorder Information:

OUTSIDE		FLUID	
Recorder #: 124		Recorder #: 126	
Range: 70000 kPa		Range: 70000 kPa	
Depth: 1460.92 m		Depth: 1437.09 m	
Flag Points:	Time:		Pressure:
A Initial Hydrostatic	0.00		17188.9
B Start of 1st Flow	0.00		6375.1
C End of 1st Flow	8.00		6328.8
D End of 1st Shutin	15.00		13905.3
E Start of 2nd Flow	0.00		5644.7
F End of 2nd Flow	58.00		6281.3
G End of 2nd Shutin	27.00		13915.7
Q Final Hydrostatic	0.00		16971.3



Test Run Information:

Start Time: 1730hrs
Reached Test Depth: 1830hrs
Pull Out Time: 2100hrs
Tool Out Of Hole: 800hrs

Weight set on Packers: 6000.00daN
Weight to free Packers: 10000.00daN
Initial String Weight: 39000.00daN
Unseated String Weight: 42000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1190.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion: N/A

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 95.00S/L
Filter Cake: 2.00mm
Pump Time: 30min
Reversed Out: YES

General Remarks:

This is the second of two tests run on the same trip in the hole. Mechanically successful. *Test results suggest high permeability within the zone tested.

PREFLOW: Weak air blow increasing to strong in 15 seconds. Remaining strong throughout remainder of flow. Gas to surface in 1 1/2 minutes.

FINAL FLOW: Gas to surface immediately. Mud spray after 15 minutes cleaning up in 50 minutes.

*** See gas volume charts for gas rates.

NOTE - See Alpine Telemetry report for real time data acquisition.

Recovery Description:

Total fluid recovery for DST #6 and #7 was reversed out before being recorded.

Gas to surface.

Gas Bomb: 2 Sampler: 1
Fluid Sample: 0 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	53
Drill Pipe Singles:	0
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1460.78m
Total Drill Pipe Above K.B.:	2.78m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	1010.53	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



Item	Length
P.O. Sub	0.31
Double Pin	0.31
P.O. Sub	0.31
REC#128	1.50
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
Stub	0.72
ASE Carrier REC#037	2.20
REC#124 Bypass Hanger	0.42
Blank Spacing	2.20
Bypass Receiver	0.78
Stub	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

23.34m

34.95m

Depth: 1458m

7.04m

Depth: 1465m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Gas Recovery Measurements

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8620 DST#: 7
Test Date: C1/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-S0-10-123-15

Gas Measurements for Flow # 1

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
8	22.23	1724	163831.00

Gas Measurements for Flow # 2

Gas Recovery Measured With: Willis Choke

Time (min.)	Orifice (mm)	Pressure (kPa)	Rate (m³/d)
5	22.23	1793	170022.00
10	22.23	1999	188593.00
15	22.23	2137	200974.00
20	22.23	2172	204069.00
25	22.23	2172	204069.00
30	22.23	2034	191688.00
35	22.23	1965	185498.00
40	22.23	1965	185498.00
45	22.23	1931	182402.00
50	22.23	1931	182402.00
55	22.23	1931	182402.00
58	22.23	1931	182402.00

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	17188.90		52.3
B	Start of 1st Flow	0.00	0.00	6375.10		52.1
		1.00	-105.30	6269.80		51.7
		2.00	-138.90	6236.20		51.2
		3.00	-181.70	6193.40		50.6
		4.00	-127.30	6247.80		49.8
		5.00	-111.10	6264.00		49.0
		6.00	-100.70	6274.40		48.2
		7.00	-68.30	6306.80		47.4
C	End of 1st Flow	8.00	-46.30	6328.80		46.6
		1.00	7406.30	13735.10	9.0000	46.1
		2.00	7526.70	13855.50	5.0000	46.1
		3.00	7548.70	13877.50	3.6667	46.1
		4.00	7559.10	13887.90	3.0000	46.2
		5.00	7563.70	13892.50	2.6000	46.3
		6.00	7567.20	13896.00	2.3333	46.3
		7.00	7569.50	13898.30	2.1429	46.4
		8.00	7570.70	13899.50	2.0000	46.5
		9.00	7571.80	13900.60	1.8889	46.5
		10.00	7571.80	13900.60	1.8000	46.6
		11.00	7573.00	13901.80	1.7273	46.7
		12.00	7574.10	13902.90	1.6667	46.8
		13.00	7560.30	13889.10	1.6154	46.8
		14.00	7575.30	13904.10	1.5714	46.9
D	End of 1st Shutin	15.00	7576.50	13905.30	1.5333	47.0
E	Start of 2nd Flow	0.00	0.00	5644.70		46.3
		1.00	96.10	5740.80		45.7
		2.00	214.20	5858.90		45.0
		3.00	362.30	6007.00		44.3
		4.00	507.00	6151.70		43.6
		5.00	665.60	6310.30		42.9
		6.00	780.10	6424.80		42.2
		7.00	891.30	6536.00		41.6
		8.00	942.20	6586.90		41.1
		9.00	973.40	6618.10		40.7
		10.00	975.70	6620.40		40.3
		11.00	983.90	6628.60		39.9
		12.00	1013.90	6658.60		39.7
		13.00	1024.40	6669.10		39.4
		14.00	1019.70	6664.40		39.2
		15.00	992.00	6636.70		39.0
		16.00	949.10	6593.80		38.8
		17.00	909.80	6554.50		38.6
		18.00	869.30	6514.00		38.5
		19.00	834.50	6479.20		38.3
		20.00	795.20	6439.90		38.2
		21.00	767.40	6412.10		38.0
		22.00	735.00	6379.70		37.9
		23.00	695.70	6340.40		37.7
		24.00	674.80	6319.50		37.5
		25.00	652.80	6297.50		37.4
		26.00	628.50	6273.20		37.2
		27.00	611.20	6255.90		37.1
		28.00	595.00	6239.70		37.0
		29.00	618.10	6262.80		36.8
		30.00	615.80	6260.50		36.7
		31.00	623.90	6268.60		36.6
		32.00	616.90	6261.60		36.4
		33.00	610.00	6254.70		36.3
		34.00	605.40	6250.10		36.2
		35.00	610.00	6254.70		36.1
		36.00	605.40	6250.10		36.0
		37.00	585.70	6230.40		35.9
		38.00	583.40	6228.10		35.8
		39.00	582.20	6226.90		35.7
		40.00	578.80	6223.50		35.7
		41.00	571.80	6216.50		35.6
		42.00	578.80	6223.50		35.5
		43.00	581.10	6225.80		35.4
		44.00	570.70	6215.40		35.4
		45.00	574.10	6218.80		35.3
		46.00	578.80	6223.50		35.3
		47.00	585.70	6230.40		35.2
		48.00	599.60	6244.30		35.2

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Job Ticket #: D2-8620 DST#: 7
Test Date: 01/11/2001 1730hrs

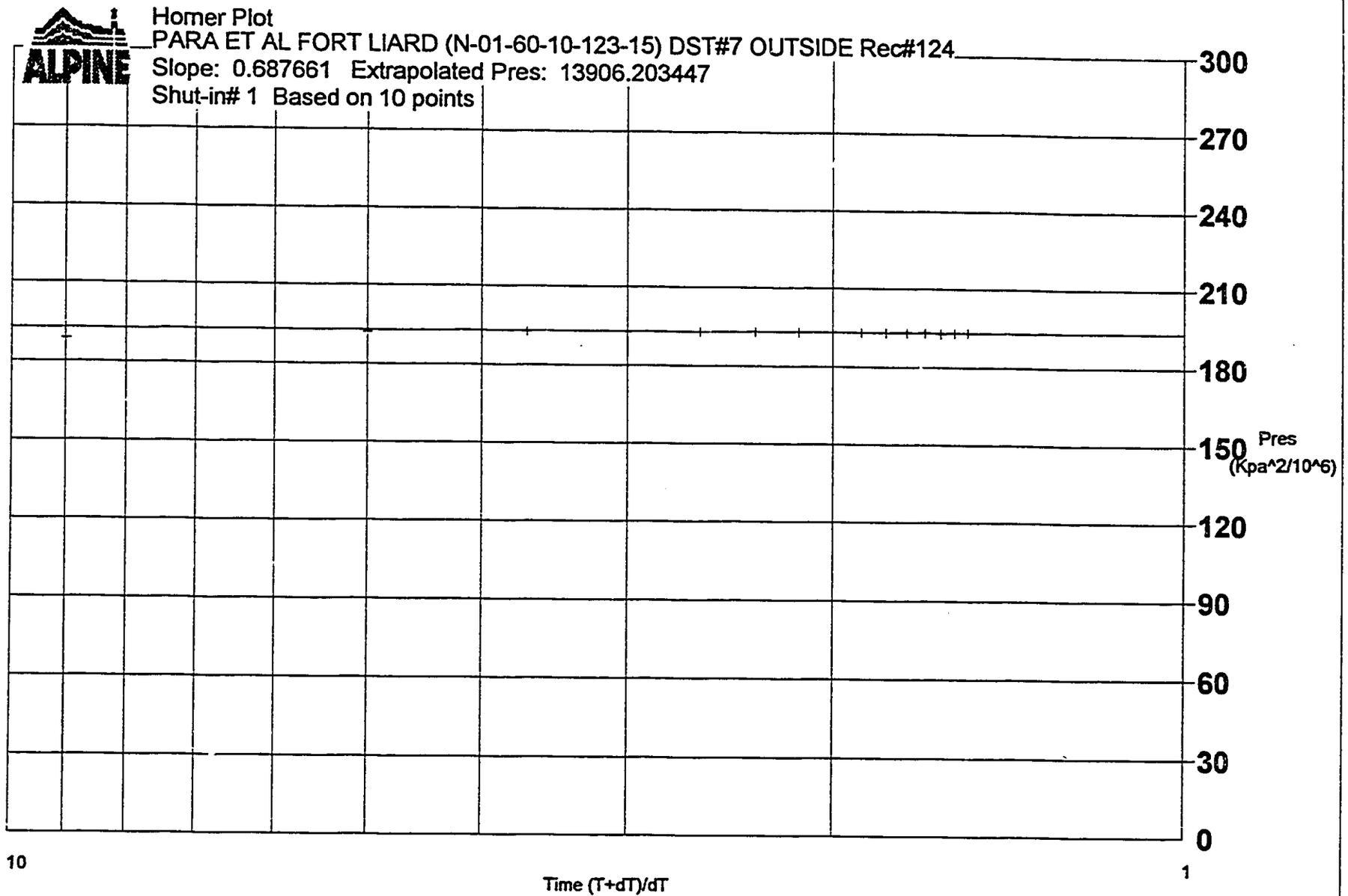
Well Name: PARA ET AL FORT LIARD

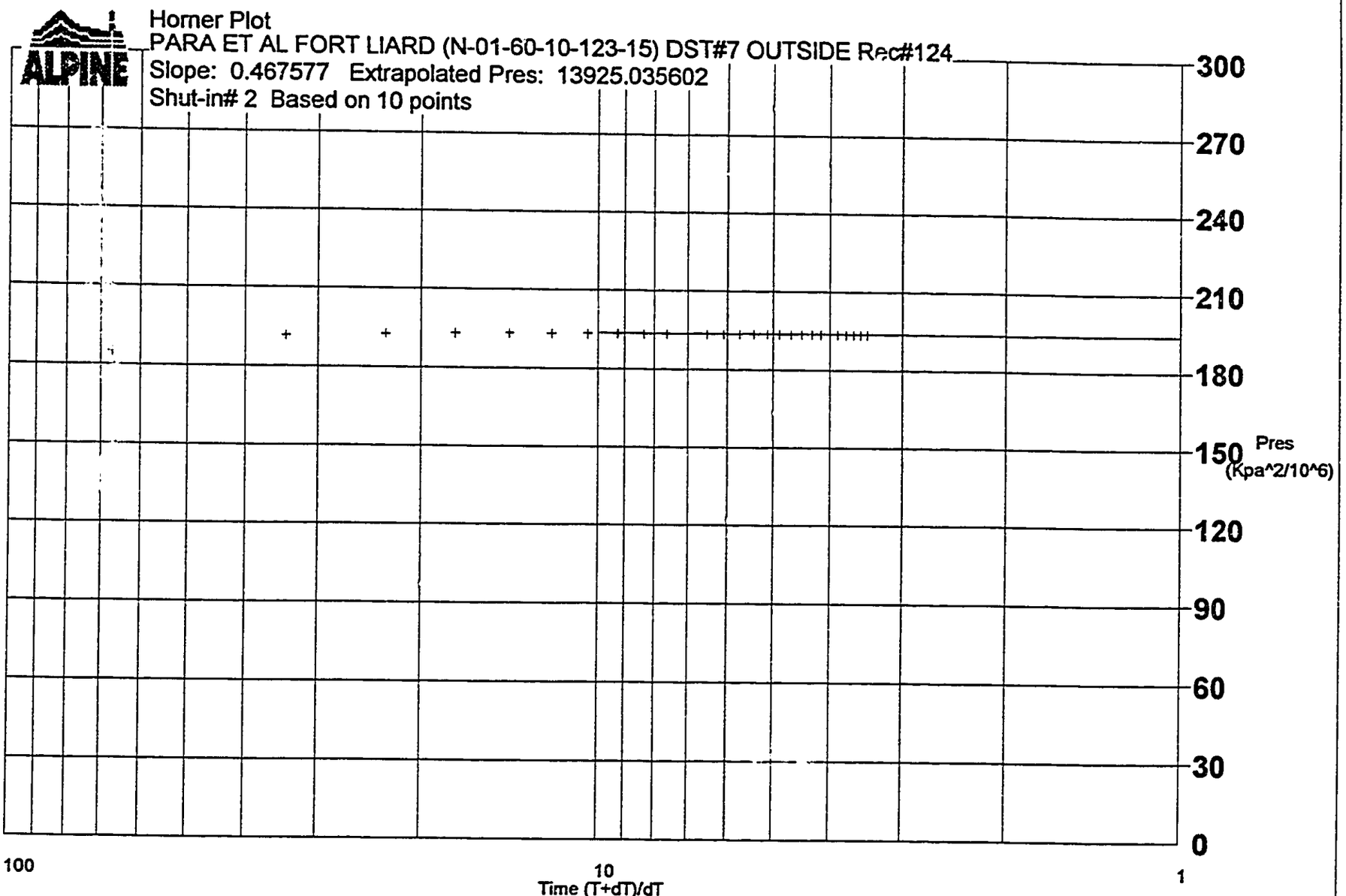
Contact: WILBERT CALLIHOO

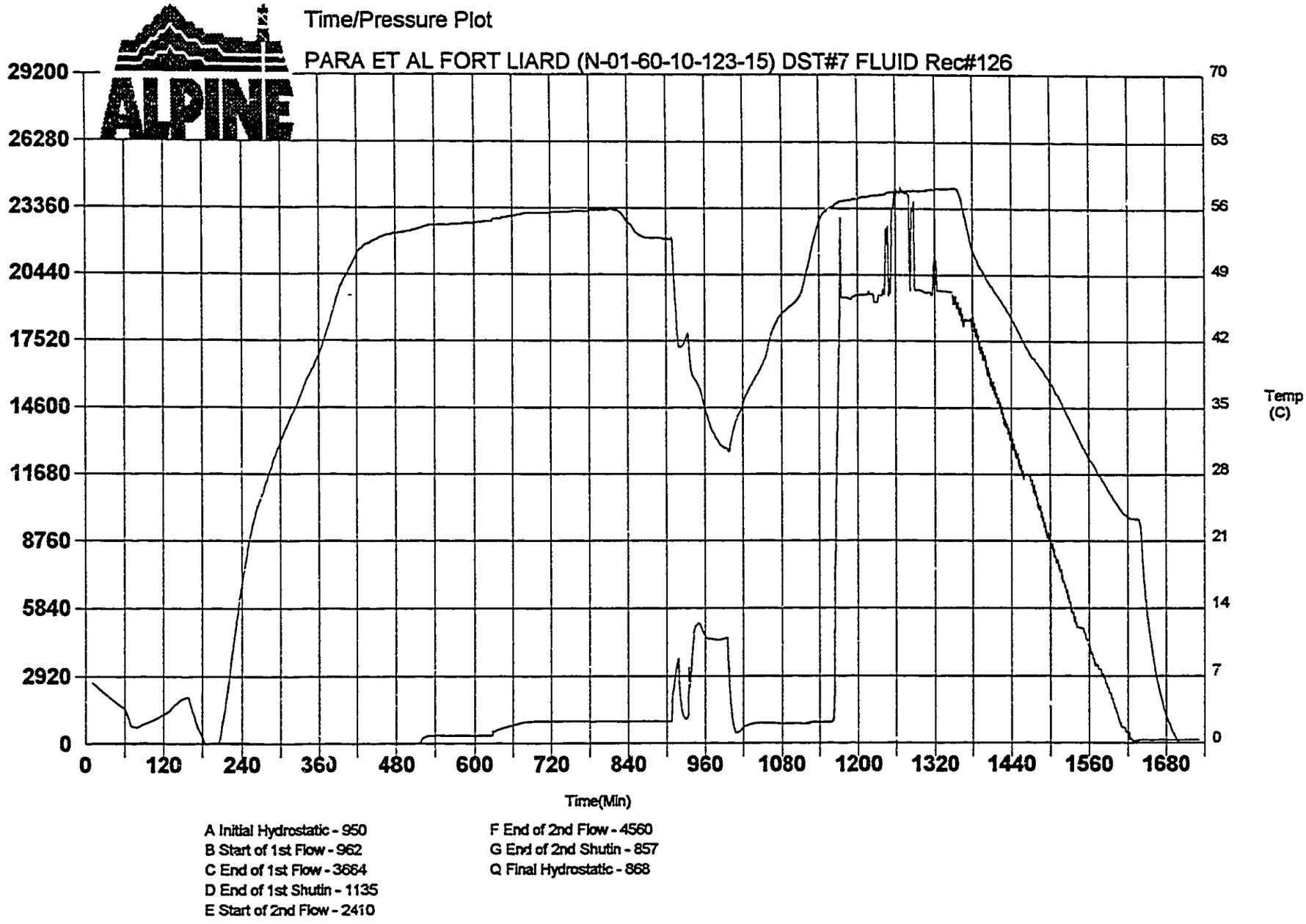
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		49.00	592.60	6237.30		35.1
		50.00	595.00	6239.70		35.1
		51.00	596.10	6240.80		35.0
		52.00	612.30	6257.00		35.0
		53.00	612.30	6257.00		35.0
		54.00	613.50	6258.20		34.9
		55.00	626.20	6270.90		34.9
		56.00	635.50	6280.20		34.8
		57.00	635.50	6280.20		34.8
F	End of 2nd Flow	58.00	636.60	6281.30		34.8
		1.00	7312.60	13593.90	67.0000	35.0
		2.00	7560.30	13841.60	34.0000	35.9
		3.00	7595.00	13876.30	23.0000	36.8
		4.00	7608.90	13890.20	17.5000	37.4
		5.00	7614.70	13896.00	14.2000	38.0
		6.00	7619.30	13900.60	12.0000	38.3
		7.00	7621.60	13902.90	10.4286	38.7
		8.00	7624.00	13905.30	9.2500	38.9
		9.00	7625.10	13906.40	8.3333	39.2
		10.00	7626.30	13907.60	7.6000	39.4
		11.00	7627.40	13908.70	7.0000	39.5
		12.00	7628.60	13909.90	6.5000	39.7
		13.00	7628.60	13909.90	6.0769	39.8
		14.00	7629.70	13911.00	5.7143	40.0
		15.00	7630.90	13912.20	5.4000	40.1
		16.00	7630.90	13912.20	5.1250	40.2
		17.00	7632.10	13913.40	4.8824	40.3
		18.00	7632.10	13913.40	4.6667	40.5
		19.00	7633.20	13914.50	4.4737	40.6
		20.00	7633.20	13914.50	4.3000	40.7
		21.00	7633.20	13914.50	4.1429	40.8
		22.00	7633.20	13914.50	4.0000	40.9
		23.00	7634.40	13915.70	3.8696	41.0
		24.00	7634.40	13915.70	3.7500	41.1
		25.00	7634.40	13915.70	3.6400	41.2
		26.00	7634.40	13915.70	3.5385	41.3
G	End of 2nd Shutin	27.00	7634.40	13915.70	3.4444	41.4

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
Q	Final Hydrostatic	0.00	0.00	16971.30		43.8


Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#7 OUTSIDE Rec#124
Slope: 0.687661 Extrapolated Pres: 13906.203447
Shut-in# 1 Based on 10 points
300
270
240
210
180
150
120
90
60
30
0
Pres
(Kpa^2/10^6)
10
1
Time (T+dT)/dT

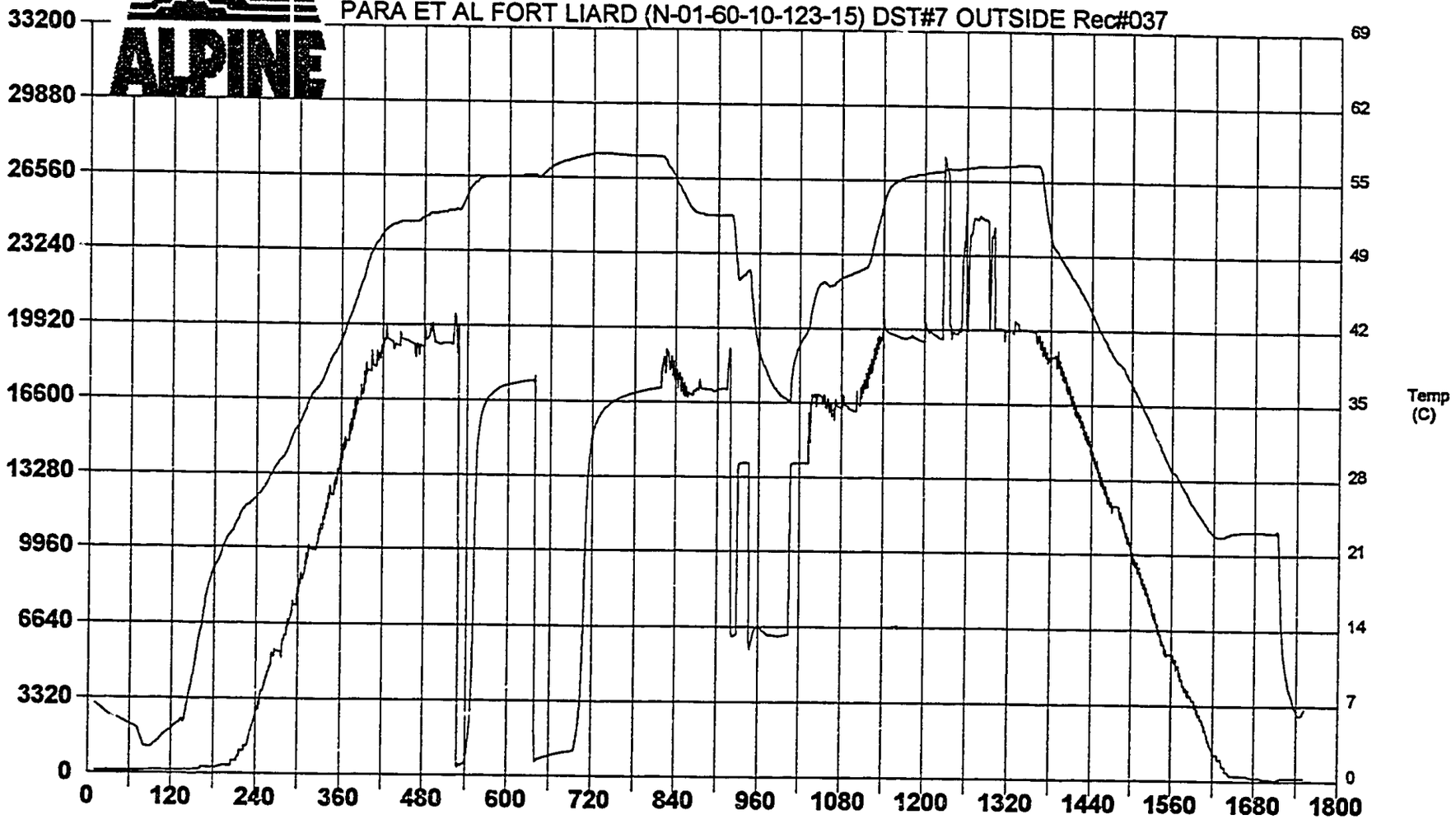

ALPINE
Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#7 OUTSIDE Rec#124
Slope: 0.467577 Extrapolated Pres: 13925.035602
Shut-in# 2 Based on 10 points
300
270
240
210
180
150
120
90
60
30
0
Pres
(Kpa^2/10^6)
100
10
1
Time (T+dT)/dT


ALPINE
Time/Pressure Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#7 FLUID Rec#126
29200
26280
23360
20440
17520
14600
11680
8760
5840
2920
0
70
63
56
49
42
35
28
21
14
7
0
Temp (C)
0
120
240
360
480
600
720
840
960
1080
1200
1320
1440
1560
1680
Time(Min)
A Initial Hydrostatic - 950
B Start of 1st Flow - 962
C End of 1st Flow - 3664
D End of 1st Shutin - 1135
E Start of 2nd Flow - 2410
F End of 2nd Flow - 4560
G End of 2nd Shutin - 857
Q Final Hydrostatic - 868

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#7 OUTSIDE Rec#037

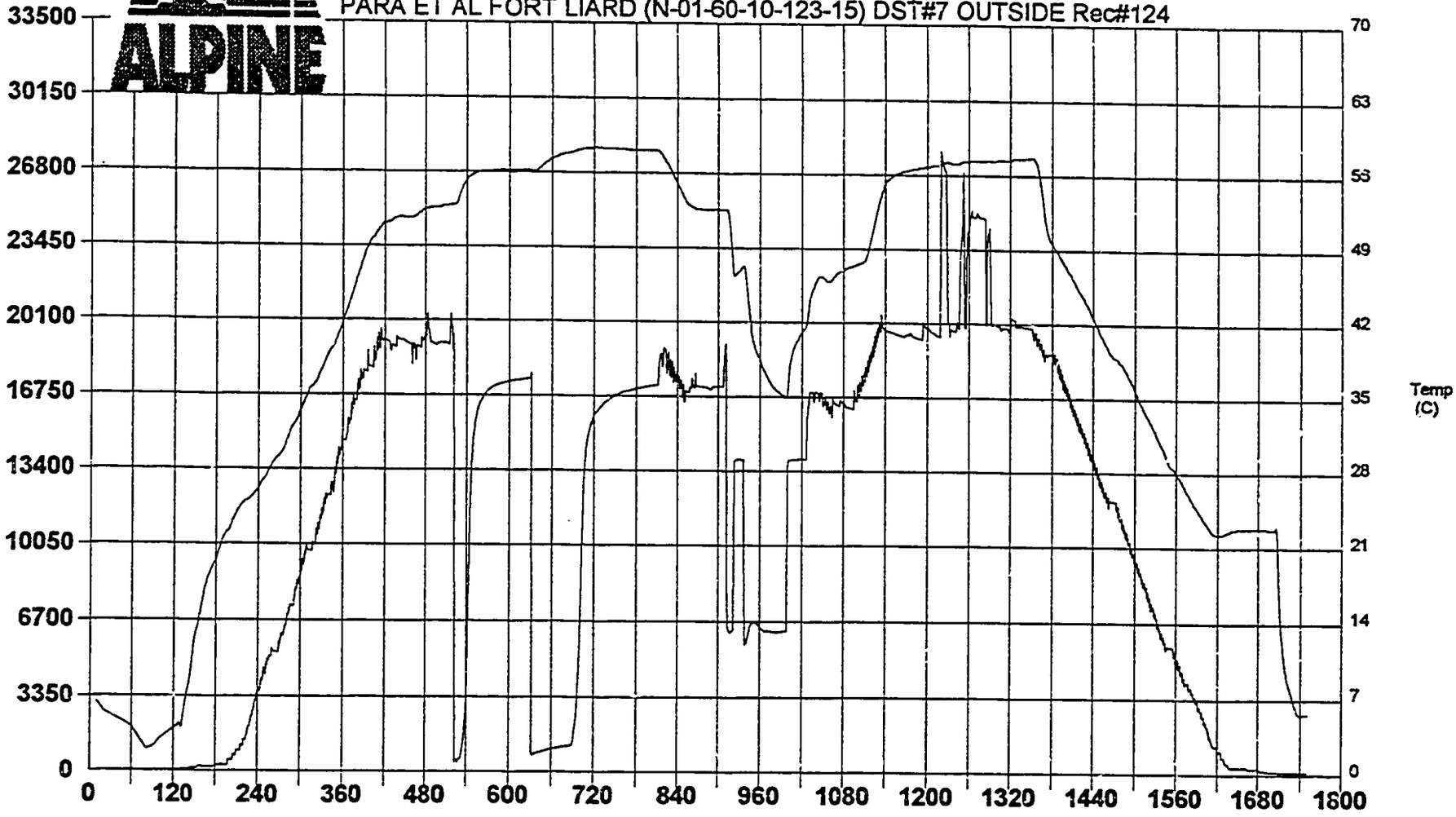


A Initial Hydrostatic - 17183
B Start of 1st Flow - 6233
C End of 1st Flow - 6335
D End of 1st Shutin - 13902
E Start of 2nd Flow - 5631
F End of 2nd Flow - 6277
G End of 2nd Shutin - 13916
Q Final Hydrostatic - 16967

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#7 OUTSIDE Rec#124



A Initial Hydrostatic - 17189
B Start of 1st Flow - 6375
C End of 1st Flow - 6329
D End of 1st Shutin - 13905
E Start of 2nd Flow - 5645
F End of 2nd Flow - 6281
G End of 2nd Shutin - 13916
Q Final Hydrostatic - 16971



Real Time Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/11/2001**

Job Ticket #: **T5263-7** DST#: **7**

Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: T5263-7 DST#: 7
Test Date: 01/11/2001 1730hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

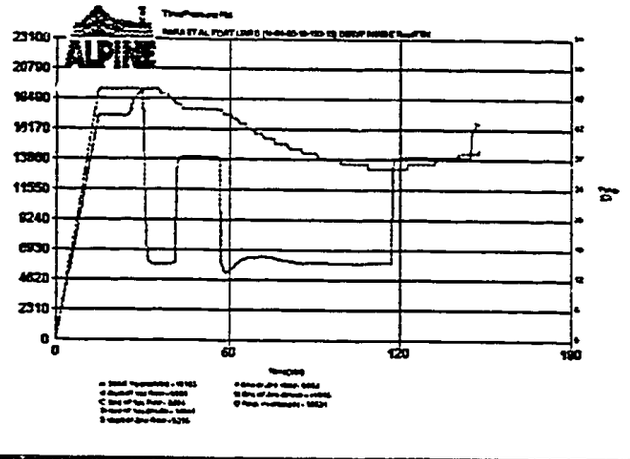
General Information:

Test Type:	INFLATE RESET	Tester:	G. BABYAK
Interval:	1458m -1465m	Truck No.:	Unit 114
Formation:	FANTASQUE	Contractor:	PRECISION
KB Elevation:	492.10m	Rig No.:	387
Ground Elevation:	487.00m	Hole Diameter:	222mm
Total Depth:	1940.00m	Hole Condition:	GOOD
Test Mode:	Gas	Bottom Hole Temperature:	34.90 C

Telemetry Recorder Information:

INSIDE
Recorder #: FEK Depth: 1447.17 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	17183.2
B Start of 1st Flow	0.00	6063.8
C End of 1st Flow	9.00	5983.7
D End of 1st Shutin	15.12	14041.2
E Start of 2nd Flow	0.00	5216.3
F End of 2nd Flow	58.50	6001.8
G End of 2nd Shutin	27.78	14045.6
Q Final Hydrostatic	0.00	16621.3



Test Run Information:

Start Time:	1730hrs
Reached Test Depth:	1830hrs
Pull Out Time:	2100hrs
Tool Out Of Hole:	800hrs
Water Loss:	6.50cm³
Mud Drop:	NO
VIS:	95.00S/L
Filter Cake:	2.00mm
Pump Time:	30min
Reversed Out:	YES
Mud Type:	GEL CHEMICAL
Mud Weight:	1190.00kg/m³
Amount of fill:	0.00m
Amount of cushion:	0.00
Type of cushion:	N/A

General Remarks:

This is the second of two tests run on the same trip in the hole. Mechanically successful. *Test results suggest high permeability within the zone tested.

PREFLOW: Weak air blow increasing to strong in 15 seconds. Remaining strong throughout remainder of flow. Gas to surface in 1 1/2 minutes.

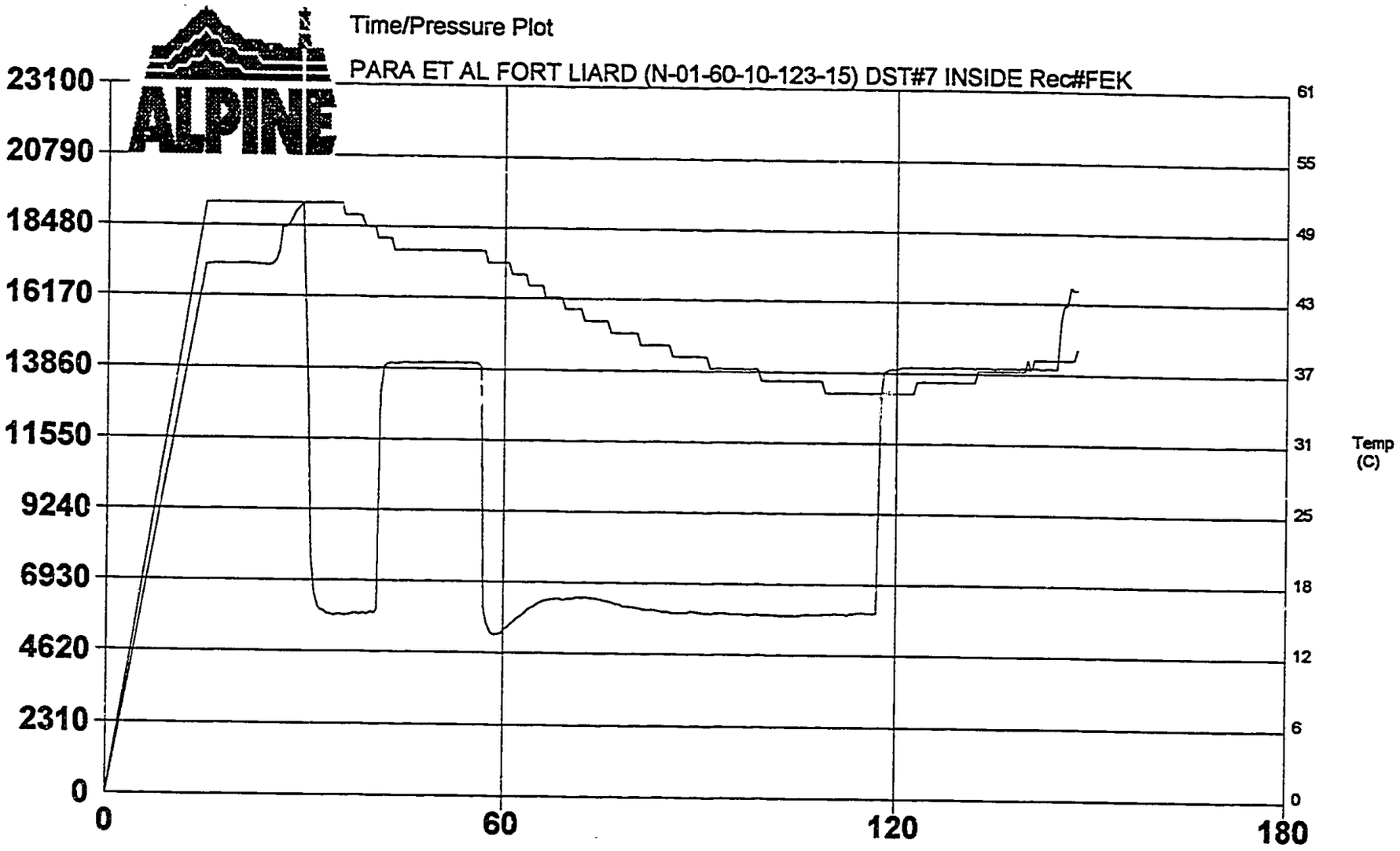
FINAL FLOW: Gas to surface immediately. Mud spray after 15 minutes cleaning up in 50 minutes.

*** See gas volume charts for gas rates.

Recovery Description:

Total fluid recovery for DST #6 and #7 was reversed out before being recorded.

Gas to surface.


ALPINE
Time/Pressure Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#7 INSIDE Rec#FEK
23100
20790
18480
16170
13860
11550
9240
6930
4620
2310
0
0
60
120
180
Time(Min)
61
55
49
43
37
31
25
18
12
6
0
Temp (C)
A Initial Hydrostatic - 17183
B Start of 1st Flow - 6064
C End of 1st Flow - 5984
D End of 1st Shutin - 14041
E Start of 2nd Flow - 5216
F End of 2nd Flow - 6002
G End of 2nd Shutin - 14046
Q Final Hydrostatic - 16621

N.E.B. COPY



Drill Stem Test Report

Prepared for: **PARAMOUNT RESOURCES**
4700, 888 - 3rd Street S.W.
CALGARY, AB

Well Name: **PARA ET AL FORT LIARD**
Location: **N-01-60-10-123-15**

Test Date: **01/12/2001**

Job Ticket #: **D2-8621** DST#: **8**

NATIONAL ENERGY BOARD
JAN 21 2001

Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

General Information:

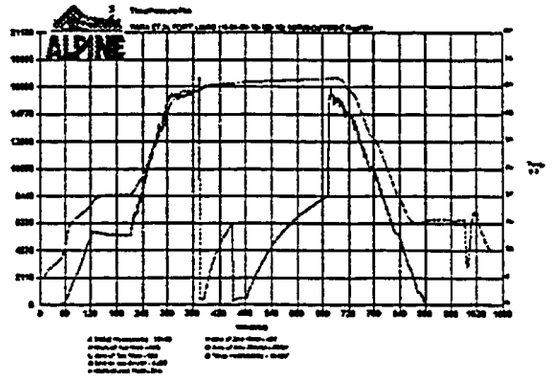
Test Type: INFLATE STRADDLE
Interval: 1368.00m - 1379.00m
Formation: BELLOY
KB Elevation: 492.10m
Ground Elevation: 487.00m
Total Depth: 1940.00m
Test Mode: Fluid

Tester: D. WHITE
Truck No.: Unit 677
Contractor: PRECISION
Rig No.: 387
Hole Diameter: 222mm
Hole Condition: GOOD
Bottom Hole Temperature: 49.80 C

Electronic Recorder Information:

OUTSIDE		FLUID	
Recorder #:	124	Recorder #:	126
Range:	70000 kPa	Range:	70000 kPa
Depth:	1370.92 m	Depth:	1347.09 m

Flag Points:	Time:	Pressure:
A Initial Hydrostatic	0.00	16539.5
B Start of 1st Flow	0.00	406.3
C End of 1st Flow	8.00	428.2
D End of 1st Shutin	65.00	6292.9
E Start of 2nd Flow	0.00	253.5
F End of 2nd Flow	30.00	490.7
G End of 2nd Shutin	191.00	8509.4
Q Final Hydrostatic	0.00	16197.0



Test Run Information:

Start Time: 939hrs
Reached Test Depth: 1500hrs
Pull Out Time: 2030hrs
Tool Out Of Hole: 100hrs

Weight set on Packers: 6000.00daN
Weight to free Packers: 10000.00daN
Initial String Weight: 39000.00daN
Unseated String Weight: 39000.00daN

Tool Chased Dist: 0.00m
Mud Type: GEL CHEMICAL
Mud Weight: 1190.00kg/m³
Amount of fill: 0.00m
Amt of cushion: 0.00
Type of cushion:

Water Loss: 6.50cm³
Mud Drop: NO
VIS: 95.00S/L
Filter Cake: 2.00mm
Pump Time: 30min
Reversed Out: NO

General Remarks:

Mechanically successful. *Test results suggest low permeability within the zone tested.

PREFLOW: Strong air blow throughout.

FINAL FLOW: Strong air blow throughout. Gas to surface in 2 minutes, lazy 2 meter flare decreasing to 1/2 meter after 30 minutes. Rates too small to measure.

Recovery Description:

Total fluid recovery was 35 meters of drilling fluid.

Gas to surface.

Gas Bomb: 1 Sampler: 1
Fluid Sample: 3 Sent to: AGAT LAB

Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Inflate Straddle

Drill Collar Stands:	3
Drill Collar Singles:	0
Drill Pipe Stands:	68
Drill Pipe Singles:	1
Heavy Wt. Pipe Stands:	20
Heavy Wt. Pipe Singles:	0
Total Drill Collars/Pipe and Tools:	1370.67m
Total Drill Pipe Above K.B.:	2.67m
Total Depth:	1940m

Tool / Drill Stem Information:

Tool Weight:	2000.00	daN
Drill Collar Inside Diameter:	54.00	mm
Drill Collar Length:	54.49	m
Drill Pipe Inside Diameter:	97.00	mm
Drill Pipe Length:	920.42	m
Heavy Weight Pipe Diameter:	69.00	mm
Heavy Weight Pipe Length:	372.42	m
Bottom Choke Diameter:	12.70	mm
Number of Packers: 2 Dia.:	196.90	mm

Tool Remarks:



Item	Length
P.O. Sub	0.31
Double Pin	0.31
P.O. Sub	0.31
REC#126	1.50
HMV Stroke	2.18
Sampler	1.10
Telemetry Tool	6.80
Jars	2.10
Safety Joint	0.65
Pump	2.04
Screen	1.18
Valve	2.23
Deflate	0.85
Packer	1.78
Stub	0.72
ASE Carrier	2.20
REC#037	
REC#124	
Bypass Hanger	0.42
Blank Spacing	6.10
Bypass Receiver	0.78
Stub	0.72
Packer	1.78
Extension Sub	0.71
Drag Spring	2.08

23.34m

38.85m

Depth: 1368m

10.94m

Depth: 1379m

4.57m

Total Depth: 1940.00m

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8821 DST#: 8
Test Date: 01/12/2001 939hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
A	Initial Hydrostatic	0.00	0.00	16539.50		47.6
B	Start of 1st Flow	0.00	0.00	406.30		47.8
		1.00	45.10	451.40		47.9
		2.00	31.20	437.50		48.0
		3.00	21.90	428.20		48.1
		4.00	8.10	414.40		48.2
		5.00	10.40	416.70		48.2
		6.00	20.80	427.10		48.3
		7.00	19.60	425.90		48.4
C	End of 1st Flow	8.00	21.90	428.20		48.5
		1.00	90.30	518.50	9.0000	48.5
		2.00	307.90	736.10	5.0000	48.6
		3.00	509.30	937.50	3.6667	48.6
		4.00	696.80	1125.00	3.0000	48.6
		5.00	875.10	1303.30	2.6000	48.6
		6.00	1044.00	1472.20	2.3333	48.7
		7.00	1204.90	1633.10	2.1429	48.7
		8.00	1358.90	1787.10	2.0000	48.7
		9.00	1507.00	1935.20	1.8889	48.7
		10.00	1648.20	2076.40	1.8000	48.7
		11.00	1784.80	2213.00	1.7273	48.7
		12.00	1916.70	2344.90	1.6667	48.8
		13.00	2042.90	2471.10	1.6154	48.8
		14.00	2166.70	2594.90	1.5714	48.8
		15.00	2284.80	2713.00	1.5333	48.8
		16.00	2401.70	2829.90	1.5000	48.8
		17.00	2512.60	2941.00	1.4706	48.8
		18.00	2622.80	3051.00	1.4444	48.8
		19.00	2728.10	3156.30	1.4211	48.8
		20.00	2832.30	3260.50	1.4000	48.8
		21.00	2933.00	3361.20	1.3810	48.8
		22.00	3031.30	3459.50	1.3636	48.8
		23.00	3127.40	3555.60	1.3478	48.8
		24.00	3220.00	3648.20	1.3333	48.8
		25.00	3311.40	3739.60	1.3200	48.8
		26.00	3401.70	3829.90	1.3077	48.8
		27.00	3488.50	3916.70	1.2963	48.8
		28.00	3574.20	4002.40	1.2857	48.9
		29.00	3658.70	4086.90	1.2759	48.9
		30.00	3740.80	4169.00	1.2667	48.9
		31.00	3821.80	4250.00	1.2581	48.9
		32.00	3900.60	4328.80	1.2500	48.9
		33.00	3978.10	4406.30	1.2424	48.9
		34.00	4054.50	4482.70	1.2353	48.9
		35.00	4128.60	4556.80	1.2286	48.9
		36.00	4202.60	4630.80	1.2222	48.9
		37.00	4274.40	4702.60	1.2162	48.9
		38.00	4345.00	4773.20	1.2105	48.9
		39.00	4414.40	4842.60	1.2051	48.9
		40.00	4483.90	4912.10	1.2000	48.9
		41.00	4551.00	4979.20	1.1951	48.9
		42.00	4617.00	5045.20	1.1905	48.9
		43.00	4681.80	5110.00	1.1860	48.9
		44.00	4746.60	5174.80	1.1818	49.0
		45.00	4810.30	5238.50	1.1778	48.9
		46.00	4872.80	5301.00	1.1739	49.0
		47.00	4934.10	5362.30	1.1702	49.0
		48.00	4994.30	5422.50	1.1667	49.0
		49.00	5053.30	5481.50	1.1633	49.0
		50.00	5112.40	5540.60	1.1600	49.0
		51.00	5171.40	5599.60	1.1569	49.0
		52.00	5228.10	5656.30	1.1538	49.0
		53.00	5284.80	5713.00	1.1509	49.0
		54.00	5340.40	5768.60	1.1481	49.0
		55.00	5394.80	5823.00	1.1455	49.0
		56.00	5449.20	5877.40	1.1429	49.0
		57.00	5501.30	5929.50	1.1404	49.0
		58.00	5554.50	5982.70	1.1379	49.0
		59.00	5606.60	6034.80	1.1356	49.0
		60.00	5657.50	6085.70	1.1333	49.0
		61.00	5708.40	6136.60	1.1311	49.0
		62.00	5759.40	6187.60	1.1290	49.0
		63.00	5808.00	6236.20	1.1270	49.0
		64.00	5857.80	6286.00	1.1250	49.1

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
D	End of 1st Shutin	65.00	5864.70	6292.90	1.1231	49.1
E	Start of 2nd Flow	0.00	0.00	253.50		49.1
		1.00	71.70	325.20		49.1
		2.00	101.80	355.30		49.1
		3.00	135.40	388.90		49.1
		4.00	156.20	409.70		49.1
		5.00	170.10	423.60		49.1
		6.00	175.90	429.40		49.2
		7.00	185.20	438.70		49.2
		8.00	189.80	443.30		49.2
		9.00	202.50	456.00		49.2
		10.00	214.10	467.60		49.2
		11.00	212.90	466.40		49.2
		12.00	218.70	472.20		49.2
		13.00	217.60	471.10		49.2
		14.00	222.20	475.70		49.3
		15.00	223.40	476.90		49.3
		16.00	228.00	481.50		49.3
		17.00	224.50	478.00		49.3
		18.00	224.50	478.00		49.3
		19.00	219.90	473.40		49.3
		20.00	226.80	480.30		49.3
		21.00	219.90	473.40		49.3
		22.00	223.40	476.90		49.3
		23.00	231.50	485.00		49.3
		24.00	229.10	482.60		49.3
		25.00	228.00	481.50		49.3
		26.00	224.50	478.00		49.4
		27.00	229.10	482.60		49.4
		28.00	233.80	487.30		49.4
		29.00	223.40	476.90		49.4
F	End of 2nd Flow	30.00	237.20	490.70		49.4
		1.00	110.00	600.70	39.0000	49.4
		2.00	209.50	700.20	20.0000	49.4
		3.00	306.80	797.50	13.6667	49.4
		4.00	400.50	891.20	10.5000	49.4
		5.00	494.30	985.00	8.5000	49.4
		6.00	585.70	1076.40	7.3333	49.4
		7.00	676.00	1166.70	6.4286	49.4
		8.00	763.90	1254.60	5.7500	49.4
		9.00	853.10	1343.80	5.2222	49.5
		10.00	938.70	1429.40	4.8000	49.4
		11.00	1023.20	1513.90	4.4545	49.4
		12.00	1106.50	1597.20	4.1667	49.5
		13.00	1188.70	1679.40	3.9231	49.5
		14.00	1269.70	1760.40	3.7143	49.5
		15.00	1349.60	1840.30	3.5333	49.5
		16.00	1428.30	1919.00	3.3750	49.5
		17.00	1504.70	1995.40	3.2353	49.5
		18.00	1581.10	2071.80	3.1111	49.5
		19.00	1656.30	2147.00	3.0000	49.5
		20.00	1730.40	2221.10	2.9000	49.5
		21.00	1802.20	2292.90	2.8095	49.5
		22.00	1873.90	2364.60	2.7273	49.5
		23.00	1945.70	2436.40	2.6522	49.5
		24.00	2015.10	2505.80	2.5833	49.5
		25.00	2084.60	2575.30	2.5200	49.5
		26.00	2152.80	2643.50	2.4615	49.5
		27.00	2220.00	2710.70	2.4074	49.5
		28.00	2287.10	2777.80	2.3571	49.5
		29.00	2354.20	2844.90	2.3103	49.5
		30.00	2420.20	2910.90	2.2667	49.5
		31.00	2485.00	2975.70	2.2258	49.5
		32.00	2548.70	3039.40	2.1875	49.5
		33.00	2612.30	3103.00	2.1515	49.6
		34.00	2674.80	3165.50	2.1176	49.5
		35.00	2736.20	3226.90	2.0857	49.5
		36.00	2798.70	3289.40	2.0556	49.6
		37.00	2860.00	3350.70	2.0270	49.6
		38.00	2920.20	3410.90	2.0000	49.6
		39.00	2979.20	3469.90	1.9744	49.6
		40.00	3038.30	3529.00	1.9500	49.6
		41.00	3096.10	3586.80	1.9268	49.6
		42.00	3154.00	3644.70	1.9048	49.6

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		43.00	3210.70	3701.40	1.8037	49.6
		44.00	3268.60	3759.30	1.8636	49.6
		45.00	3323.00	3813.70	1.8444	49.6
		46.00	3378.60	3869.30	1.8261	49.6
		47.00	3433.00	3923.70	1.8085	49.6
		48.00	3487.40	3978.10	1.7917	49.6
		49.00	3540.60	4031.30	1.7755	49.6
		50.00	3595.00	4085.70	1.7600	49.6
		51.00	3647.10	4137.80	1.7451	49.6
		52.00	3699.20	4189.90	1.7308	49.6
		53.00	3750.10	4240.80	1.7170	49.6
		54.00	3801.00	4291.70	1.7037	49.6
		55.00	3851.90	4342.60	1.6909	49.6
		56.00	3901.70	4392.40	1.6786	49.6
		57.00	3951.50	4442.20	1.6667	49.6
		58.00	4000.10	4490.80	1.6552	49.6
		59.00	4048.70	4539.40	1.6441	49.7
		60.00	4096.20	4586.90	1.6333	49.6
		61.00	4144.80	4635.50	1.6230	49.6
		62.00	4191.10	4681.80	1.6129	49.7
		63.00	4237.40	4728.10	1.6032	49.6
		64.00	4283.70	4774.40	1.5938	49.7
		65.00	4330.00	4820.70	1.5846	49.7
		66.00	4375.10	4865.80	1.5758	49.7
		67.00	4421.40	4912.10	1.5672	49.7
		68.00	4465.40	4956.10	1.5588	49.7
		69.00	4509.40	5000.10	1.5507	49.7
		70.00	4553.30	5044.00	1.5429	49.7
		71.00	4597.30	5088.00	1.5352	49.7
		72.00	4640.10	5130.80	1.5278	49.7
		73.00	4683.00	5173.70	1.5205	49.7
		74.00	4724.60	5215.30	1.5135	49.7
		75.00	4766.30	5257.00	1.5067	49.7
		76.00	4808.00	5298.70	1.5000	49.7
		77.00	4849.60	5340.30	1.4935	49.7
		78.00	4890.20	5380.90	1.4872	49.7
		79.00	4930.70	5421.40	1.4810	49.7
		80.00	4972.30	5463.00	1.4750	49.7
		81.00	5011.70	5502.40	1.4691	49.7
		82.00	5051.00	5541.70	1.4634	49.7
		83.00	5090.40	5581.10	1.4578	49.7
		84.00	5128.60	5619.30	1.4524	49.8
		85.00	5166.80	5657.50	1.4471	49.7
		86.00	5205.00	5695.70	1.4419	49.7
		87.00	5243.20	5733.90	1.4368	49.8
		88.00	5281.40	5772.10	1.4318	49.8
		89.00	5318.40	5809.10	1.4270	49.8
		90.00	5355.40	5846.10	1.4222	49.8
		91.00	5392.50	5883.20	1.4176	49.8
		92.00	5429.50	5920.20	1.4130	49.8
		93.00	5465.40	5956.10	1.4086	49.8
		94.00	5501.30	5992.00	1.4043	49.8
		95.00	5536.00	6026.70	1.4000	49.8
		96.00	5571.90	6062.60	1.3958	49.8
		97.00	5606.60	6097.30	1.3918	49.8
		98.00	5642.50	6133.20	1.3878	49.8
		99.00	5677.20	6167.90	1.3838	49.8
		100.00	5710.80	6201.50	1.3800	49.8
		101.00	5745.50	6236.20	1.3762	49.8
		102.00	5779.10	6269.80	1.3725	49.8
		103.00	5812.60	6303.30	1.3689	49.8
		104.00	5846.20	6336.90	1.3654	49.8
		105.00	5878.60	6369.30	1.3619	49.8
		106.00	5911.00	6401.70	1.3585	49.8
		107.00	5944.60	6435.30	1.3551	49.8
		108.00	5977.00	6467.70	1.3519	49.8
		109.00	6008.20	6498.90	1.3486	49.8
		110.00	6040.60	6531.30	1.3455	49.9
		111.00	6071.90	6562.60	1.3423	49.9
		112.00	6103.10	6593.80	1.3393	49.9
		113.00	6134.40	6625.10	1.3363	49.9
		114.00	6165.60	6656.30	1.3333	49.9
		115.00	6196.90	6687.60	1.3304	49.9
		116.00	6227.00	6717.70	1.3276	49.9

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

Contact: WILBERT CALLIHOO

Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 935hrs

Well Name: PARA ET AL FORT LIARD
Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
		117.00	6258.20	6748.90	1.3248	49.9
		118.00	6287.20	6777.90	1.3220	49.9
		119.00	6317.30	6808.00	1.3193	49.9
		120.00	6347.30	6838.00	1.3167	49.9
		121.00	6376.30	6867.00	1.3140	49.9
		122.00	6408.70	6899.40	1.3115	49.9
		123.00	6437.60	6928.30	1.3089	49.9
		124.00	6466.60	6957.30	1.3065	49.0
		125.00	6495.50	6986.20	1.3040	49.9
		126.00	6495.50	6986.20	1.3016	50.0
		127.00	6552.20	7042.90	1.2992	49.9
		128.00	6553.40	7044.10	1.2969	50.0
		129.00	6608.90	7099.60	1.2946	49.9
		130.00	6610.10	7100.80	1.2923	50.0
		131.00	6636.70	7127.40	1.2901	50.0
		132.00	6663.30	7154.00	1.2879	50.0
		133.00	6691.10	7181.80	1.2857	50.0
		134.00	6718.90	7209.60	1.2836	50.0
		135.00	6745.50	7236.20	1.2815	50.0
		136.00	6772.10	7262.80	1.2794	50.0
		137.00	6798.70	7289.40	1.2774	50.0
		138.00	6825.40	7316.10	1.2754	50.0
		139.00	6852.00	7342.70	1.2734	50.0
		140.00	6877.40	7368.10	1.2714	50.0
		141.00	6902.90	7393.60	1.2695	50.0
		142.00	6929.50	7420.20	1.2676	50.0
		143.00	6955.00	7445.70	1.2657	50.0
		144.00	6979.30	7470.00	1.2639	50.0
		145.00	7005.90	7496.60	1.2621	50.0
		146.00	7030.20	7520.90	1.2603	50.0
		147.00	7054.50	7545.20	1.2585	50.0
		148.00	7080.00	7570.70	1.2568	50.0
		149.00	7104.30	7595.00	1.2550	50.0
		150.00	7128.60	7619.30	1.2533	50.0
		151.00	7152.90	7643.60	1.2517	50.0
		152.00	7177.20	7667.90	1.2500	50.0
		153.00	7201.50	7692.20	1.2484	50.0
		154.00	7225.80	7716.50	1.2468	50.0
		155.00	7249.00	7739.70	1.2452	50.1
		156.00	7272.10	7762.80	1.2436	50.0
		157.00	7296.40	7787.10	1.2420	50.0
		158.00	7319.60	7810.30	1.2405	50.1
		159.00	7342.70	7833.40	1.2390	50.1
		160.00	7365.90	7856.60	1.2375	50.1
		161.00	7389.00	7879.70	1.2360	50.1
		162.00	7412.20	7902.90	1.2346	50.1
		163.00	7434.20	7924.90	1.2331	50.1
		164.00	7456.20	7946.90	1.2317	50.1
		165.00	7479.30	7970.00	1.2303	50.1
		166.00	7501.30	7992.00	1.2289	50.1
		167.00	7523.30	8014.00	1.2275	50.1
		168.00	7545.30	8036.00	1.2262	50.1
		169.00	7567.30	8058.00	1.2249	50.1
		170.00	7589.30	8080.00	1.2235	50.1
		171.00	7610.10	8100.80	1.2222	50.1
		172.00	7632.10	8122.80	1.2209	50.1
		173.00	7652.90	8143.60	1.2197	50.1
		174.00	7674.90	8165.60	1.2184	50.1
		175.00	7695.70	8186.40	1.2171	50.1
		176.00	7716.60	8207.30	1.2159	50.1
		177.00	7737.40	8228.10	1.2147	50.1
		178.00	7758.20	8248.90	1.2135	50.1
		179.00	7779.10	8269.80	1.2123	50.1
		180.00	7799.90	8290.60	1.2111	50.1
		181.00	7819.60	8310.30	1.2099	50.1
		182.00	7840.40	8331.10	1.2088	50.2
		183.00	7860.10	8350.80	1.2077	50.1
		184.00	7880.90	8371.60	1.2065	50.2
		185.00	7900.60	8391.30	1.2054	50.2
		186.00	7920.30	8411.00	1.2043	50.2
		187.00	7940.00	8430.70	1.2032	50.2
		188.00	7959.60	8450.30	1.2021	50.2
		189.00	7979.30	8470.00	1.2011	50.2
		190.00	7999.00	8489.70	1.2000	50.2

Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.
4700, 888 - 3rd Street S.W.
CALGARY, AB

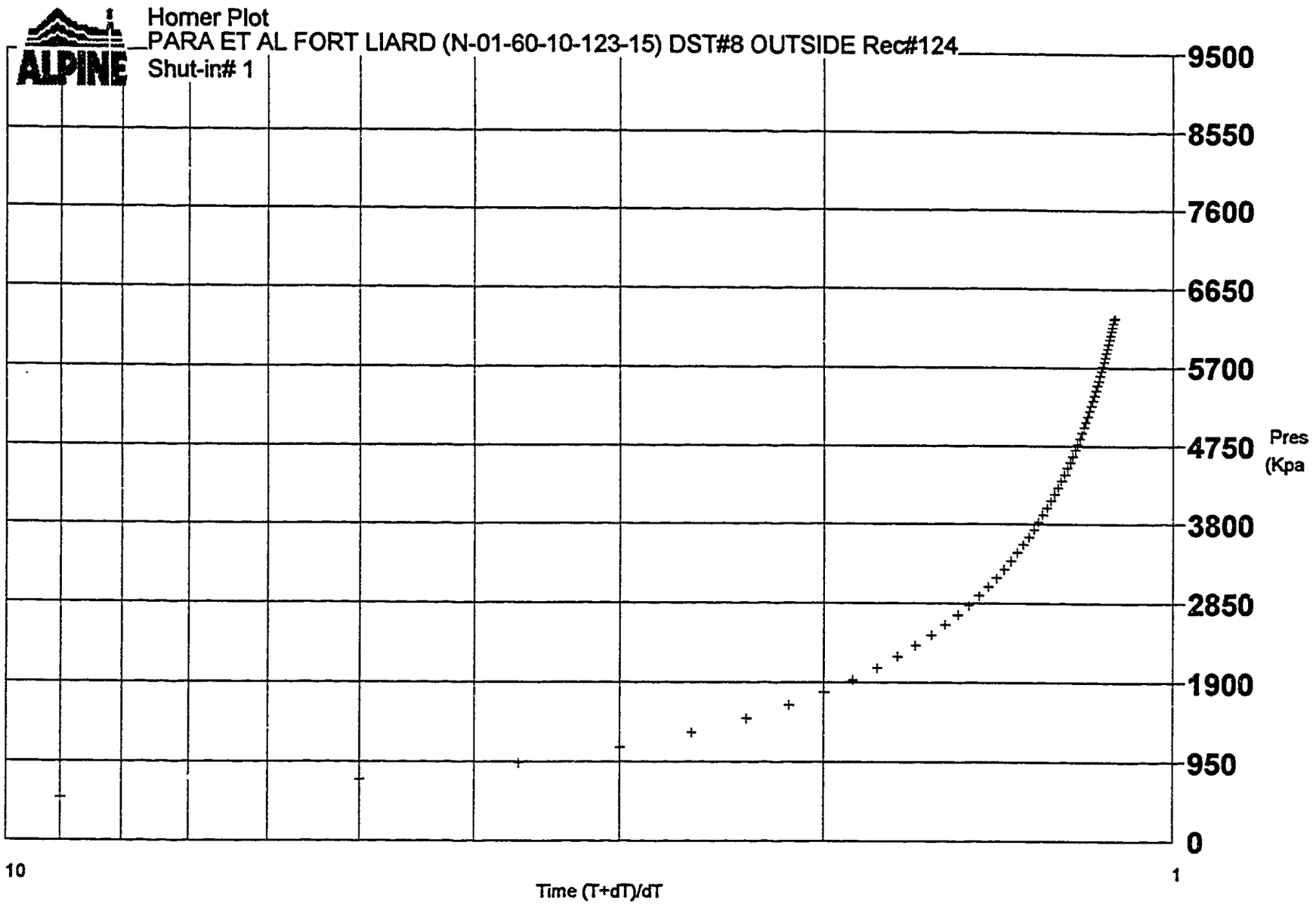
Contact: WILBERT CALLIHOO

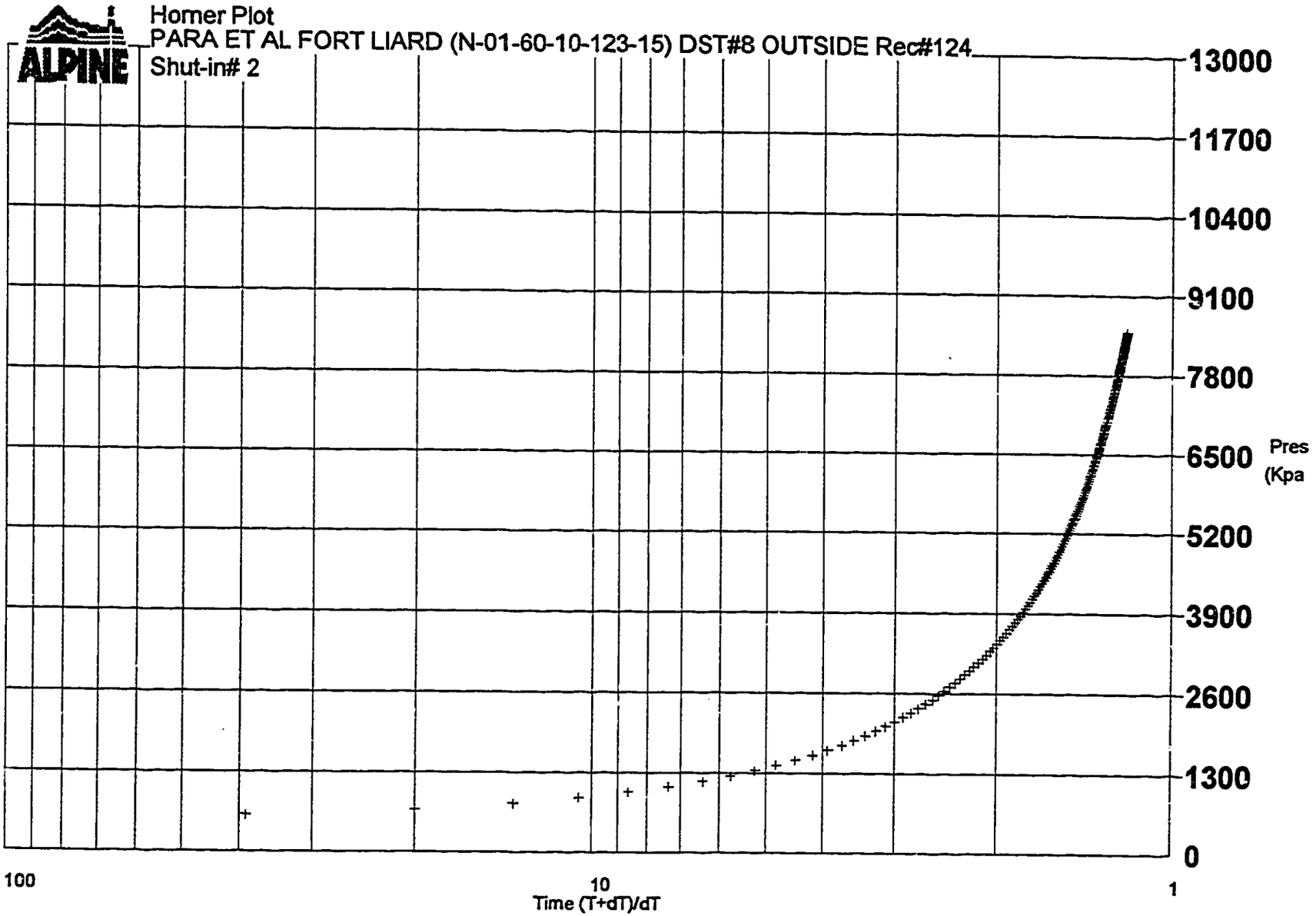
Job Ticket #: D2-8621 DST#: 8
Test Date: 01/12/2001 939hrs

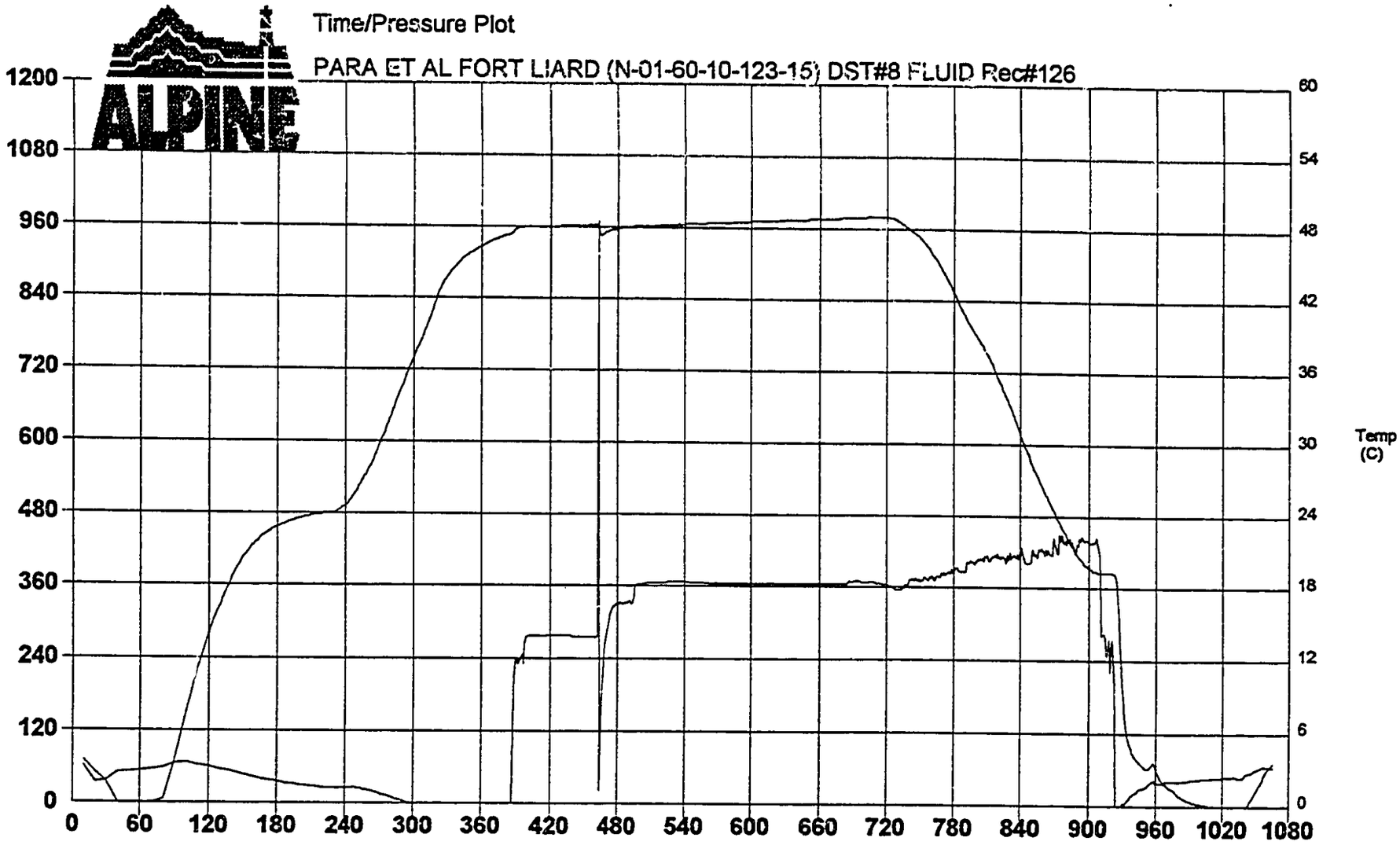
Well Name: PARA ET AL FORT LIARD

Location: N-01-60-10-123-15

Chart Label	Comments	Time (Min.)	Delta P (KPag)	Pressure (KPag)	Abscissa (T+dt)/dt	Temp. (°C)
G	End of 2nd Shutin	191.00	8018.70	8509.40	1.1990	50.2
Q	Final Hydrostatic	0.00	0.00	16197.00		50.4


ALPINE
Homer Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#8 OUTSIDE Rec#124
Shut-in# 1
9500
8550
7600
6650
5700
4750
3800
2850
1900
950
0
Pres (Kpa
10
1
Time (T+dT)/dT


ALPINE
Horner Plot
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#8 OUTSIDE Rec#124
Shut-in# 2
13000
11700
10400
9100
7800
6500
5200
3900
2600
1300
0
Pres (Kpa
100
10
1
Time (T+dT)/dT

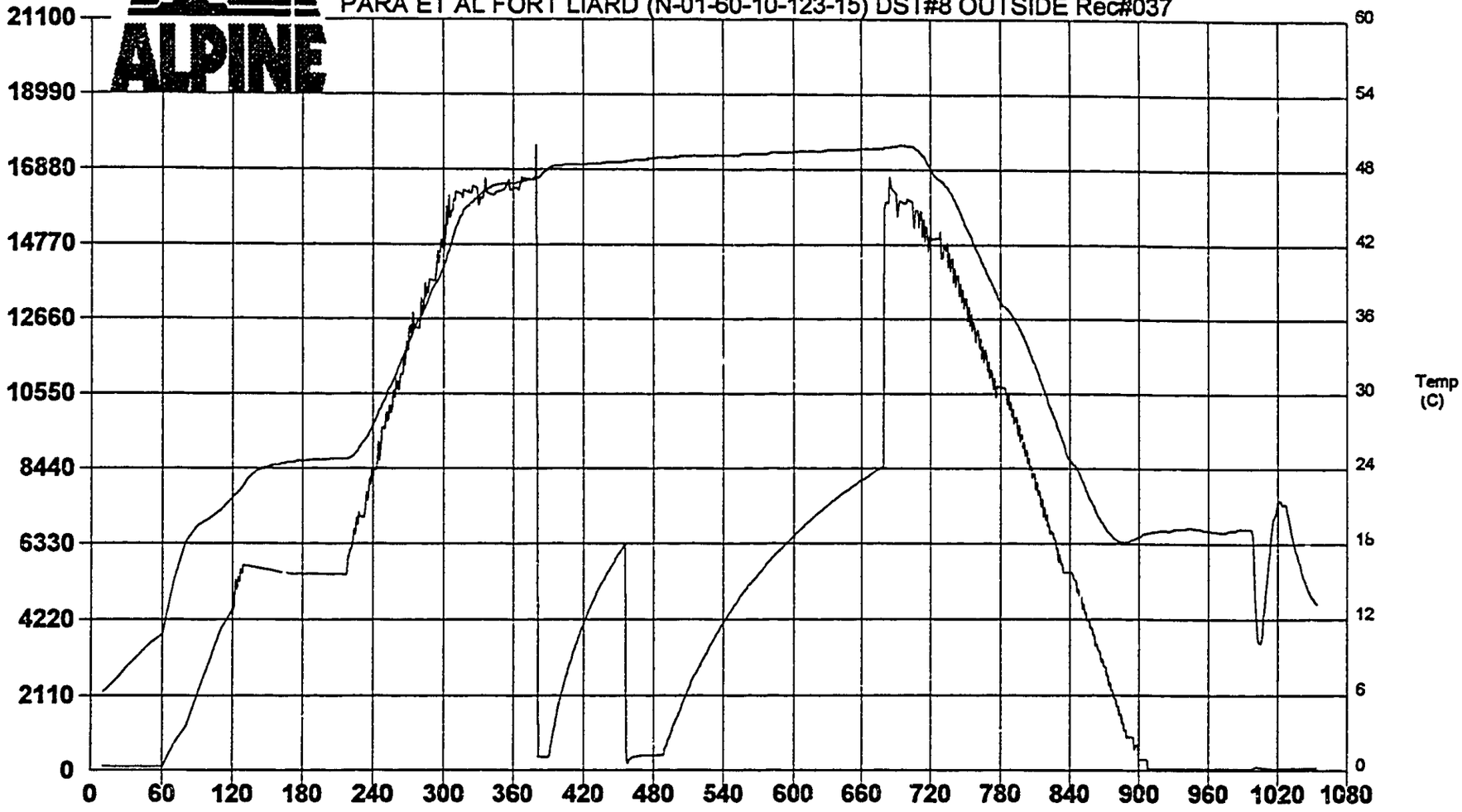


A Initial Hydrostatic - 0
B Start of 1st Flow - 0
C End of 1st Flow - 230
D End of 1st Shutin - 276
E Start of 2nd Flow - 22
F End of 2nd Flow - 333
G End of 2nd Shutin - 365
Q Final Hydrostatic - 365

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#8 OUTSIDE Rec#037

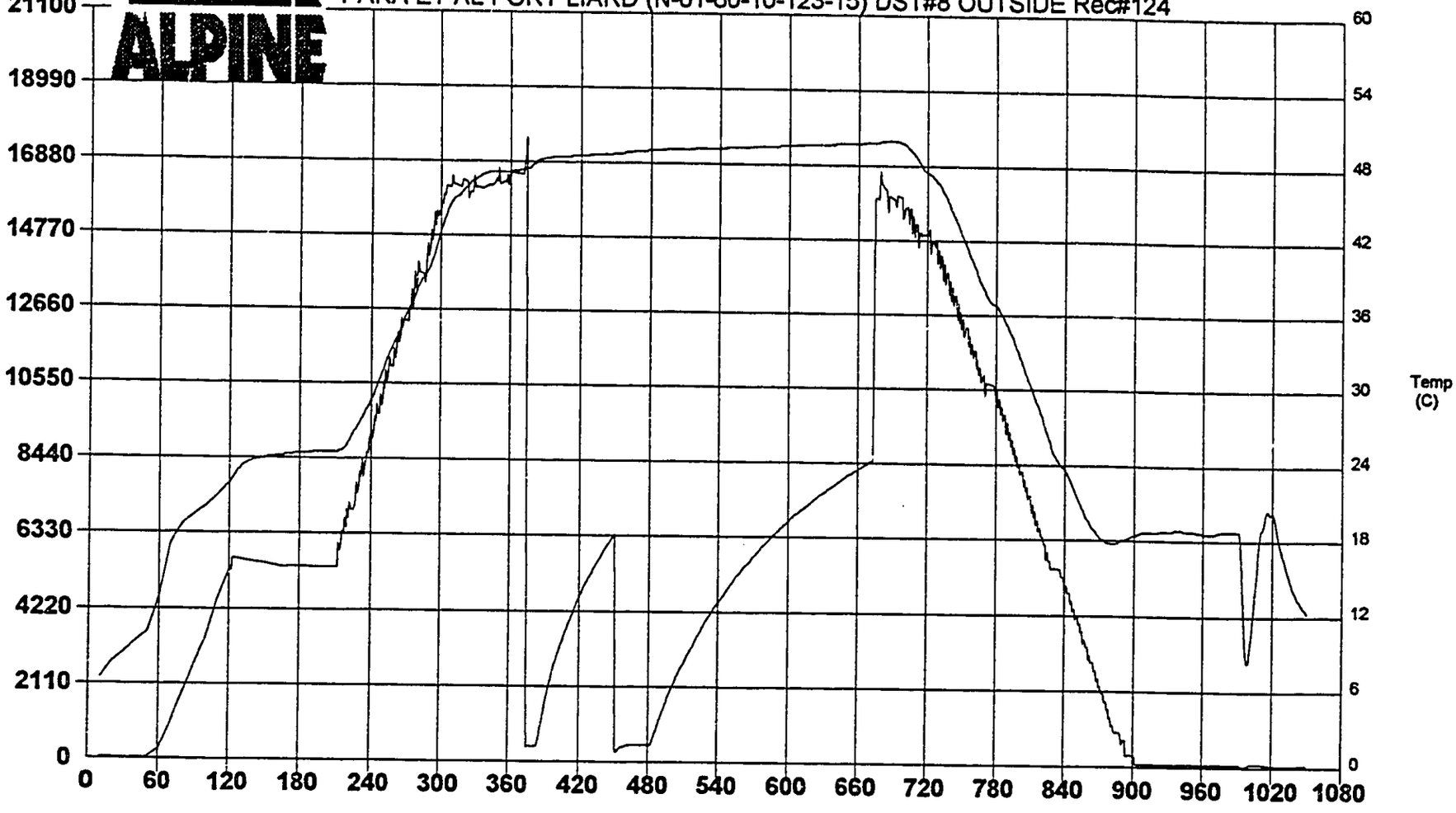


A Initial Hydrostatic - 16593
B Start of 1st Flow - 368
C End of 1st Flow - 372
D End of 1st Shutin - 6289
E Start of 2nd Flow - 183
F End of 2nd Flow - 419
G End of 2nd Shutin - 8493
Q Final Hydrostatic - 15949

ALPINE

Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#8 OUTSIDE Rec#124



A Initial Hydrostatic - 16540
B Start of 1st Flow - 406
C End of 1st Flow - 428
D End of 1st Shutin - 6293
E Start of 2nd Flow - 254
F End of 2nd Flow - 491
G End of 2nd Shutin - 8509
Q Final Hydrostatic - 16197

AGAT LABORATORIES DST TOOL INFORMATION

AGAT® Laboratories

DST TOOL INFORMATION

AGAT W/O #: 01G63754

COMPANY NAME: PARAMOUNT RESOURCES LTD.

LOCATION: N-01-60-10-123-15

RESULTS

D.S.T. #:	1
B.H.S. #:	GP#96
OPENING PRESSURE:	0.0KPA
RECOVERY:	0.0

RESULTS

D.S.T. #:	2
B.H.S. #:	GP#40
OPENING PRESSURE:	0.00KPA
RECOVERY:	PB: ~100 ml WATER

AGAT® Laboratories

DST TOOL INFORMATION

AGAT W/O #: 01G63754

COMPANY NAME: PARAMOUNT RESOURCES LTD.

LOCATION: N-01-60-10-123-15

RESULTS

D.S.T. #:	5
B.H.S. #:	#49
OPENING PRESSURE:	0.0KPA
RECOVERY:	0.0

AGAT® Laboratories

DST TOOL INFORMATION

AGAT W/O #: 01C63845

COMPANY NAME: Paramount Resources Ltd.

LOCATION: 01-60-10-123-15

RESULTS

D.S.T. #:	7
B.H.S. #:	53
OPENING PRESSURE:	0 kPa
RECOVERY:	Air Only

HYDROCARBON LIQUID ANALYSIS

AGAT® Laboratories

HYDROCARBON LIQUID ANALYSIS

N.E.B. COPY

Container Identification	Laboratory Number
PB#14	CG63754N

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
Not Available	PARA et al FORT LIARD N-01	KB m 492.10 CRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	#5	60 deg 10' LATITUDE 123 deg 15' LONGITUDE	

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
1738.00-1759.00	2	Pressure (kPa)					
mKB		Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 10, 2001	Jan 12, 2001	Jan 16, 2001	KK

Other Information

COMP.	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
N2	0.0000	0.0000	0.0000
CO2	0.0000	0.0000	0.0000
H2S	0.0000	0.0000	0.0000
C1	0.0001	TRACE	TRACE
C2	0.0014	0.0003	0.0007
C3	0.0010	0.0003	0.0005
IC4	0.0007	0.0003	0.0005
NC4	0.0017	0.0008	0.0010
IC5	0.0033	0.0019	0.0023
NC5	0.0047	0.0026	0.0032
C6	0.0202	0.0134	0.0157
C7+	0.9669	0.9804	0.9761
TOTAL	1.0000	1.0000	1.0000

Observed Properties of C7+ Residue (15/15° C)

Density	*Relative Density*	*API @ 15°*
782.9 kg/m³	0.7836	49.1

Relative Molecular Mass: 130.4

Calculated Properties of Total Sample (15/15° C)

Density	*Relative Density*	*API @ 15°*
779.4 kg/m³	0.7801	49.9

Relative Molecular Mass: 128.6

Calculations for C6 and C7 are based on Boiling Point Grouping. If Carbon Number Grouping had been done, the mole fractions would be (C6: 0.0475) (C7+:0.9396)

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	Well No.
CG63754N	PARAMOUNT RESOURCES LTD.	No. Available

BOILING POINT RANGE (C)	COMPONENT		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
36.1 - 68.9	HEXANES	C6	0.0193	0.0129	0.0152
68.9 - 98.3	HEPTANES	C7	0.0496	0.0400	0.0438
98.3 - 125.6	OCTANES	C8	0.1372	0.1261	0.1345
125.6 - 150.6	NONANES	C9	0.1370	0.1413	0.1476
150.6 - 173.9	DECANES	C10	0.1372	0.1570	0.1613
173.9 - 196.1	UNDECANES	C11	0.0805	0.1011	0.1028
196.1 - 215.0	DODECANES	C12	0.0373	0.0511	0.0513
215.0 - 235.0	TRIDECANES	C13	0.0295	0.0437	0.0435
235.0 - 252.2	TETRADECANES	C14	0.0175	0.0279	0.0275
252.2 - 270.6	PENTADECANES	C15	0.0109	0.0187	0.0182
270.6 - 287.8	HEXADECANES	C16	0.0045	0.0082	0.0080
287.8 - 302.8	HEPTADECANES	C17	0.0015	0.0029	0.0028
302.8 - 317.2	OCTADECANES	C18	0.0003	0.0007	0.0007
317.2 - 330.0	NONADECANES	C19	0.0001	0.0002	0.0002
330.0 - 344.4	EICOSANES	C20	0.0000	0.0001	0.0001
344.4 - 357.2	HENEICOSANES	C21	0.0000	0.0000	0.0000
357.2 - 369.4	DOCOSANES	C22	0.0000	0.0000	0.0000
369.4 - 380.0	TRICOSANES	C23	0.0000	0.0000	0.0000
380.0 - 391.1	TETRACOSANES	C24	0.0000	0.0000	0.0000
391.1 - 401.7	PENTACOSANES	C25	0.0000	0.0000	0.0000
401.7 - 412.2	HEXACOSANES	C26	0.0000	0.0000	0.0000
412.2 - 422.2	HEPTACOSANES	C27	0.0000	0.0000	0.0000
422.2 - 431.7	OCTACOSANES	C28	0.0000	0.0000	0.0000
431.7 - 441.1	NONACOSANES	C29	0.0000	0.0000	0.0000
441.1 - PLUS	TRIACONTANES PLUS	C30+	0.0000	0.0000	0.0000

BOILING POINT RANGE (C)	AROMATICS		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
80.0	BENZENE	C6	0.0043	0.0027	0.0023
110.6	TOLUENE	C7	0.0748	0.0554	0.0482
136.2	ETHYLBENZENE	C8	0.0137	0.0117	0.0102
138.4 - 144.4	XYLENES	C8	0.1196	0.1021	0.0883
168.9	1,2,4 TRIMETHYLBENZENE	C9	0.0231	0.0223	0.0193

BOILING POINT RANGE (C)	NAPHTHENES		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
48.9	CYCLOPENTANE	CC5	0.0009	0.0005	0.0005
72.2	METHYLCYCLOPENTANE	MCC5	0.0051	0.0035	0.0034
81.1	CYCLOHEXANE	CC6	0.0179	0.0121	0.0117
101.1	METHYLCYCLOHEXANE	MCC6	0.0651	0.0514	0.0504

The above hexanes plus values are based upon a measured mass fraction and a calculated mole fraction, and assume a total hydrocarbon recovery from the chromatographic system.

AGAT® Laboratories

HYDROCARBON LIQUID ANALYSIS

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Container Identification	Laboratory Number
PB#12	CG63754L

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
Not Available	PARA et al LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	#2	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
1643.00-1648.00	BOTTOM HOLE SAMPLER	Pressure (kPa)					
mKB		Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	KK

Other Information
BHS#GP40/150mls muddy water(TRACE CONDENSATE)

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	Well No.
CG63754L	PARAMOUNT RESOURCES LTD.	Not Available

Rcvd Apr. 2/01

AGAT® Laboratories

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HYDROCARBON LIQUID ANALYSIS

Container Identification	Laboratory Number
PB#1	C69078A

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01	PARA et al FORT LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
NWT	MATTSON SAND	SOLID PRODUCTION SERVICES

Test Type	Test No.	Test Recovery	Name of Sampler
		N-01 - 60 deg 10' Latitude 123 deg 15' Longitude	

Test Interval or Perfs		Sampling Point
1739.50-1750.00	1684.00-1689.00	PRESSURE TANK
1731.50-1736.50	1644.0-1648.0 mKB	

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Mar 05, 2001	Mar 15, 2001	Mar 29, 2001	KK

Other Information
INTERVAL 1455.00-1469.00 mKB

COMP.	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
N2	0.0000	0.0000	0.0000
CO2	0.0000	0.0000	0.0000
H2S	0.0000	0.0000	0.0000
C1	0.0002	TRACE	0.0001
C2	0.0013	0.0004	0.0007
C3	0.0077	0.0030	0.0044
IC4	0.0067	0.0034	0.0045
NC4	0.0198	0.0102	0.0130
IC5	0.0314	0.0200	0.0240
NC5	0.0375	0.0239	0.0283
C6	0.0901	0.0682	0.0766
C7+	0.8053	0.8709	0.8484
TOTAL	1.0000	1.0000	1.0000

Observed Properties of C7+ Residue (15/15° C)

Density	*Relative Density*	*API @ 15°*
766.8 kg/m³	0.7675	52.9

Relative Molecular Mass: 122.5

Calculated Properties of Total Sample (15/15° C)

Density	*Relative Density*	*API @ 15°*
747.0 kg/m³	0.7476	57.8

Relative Molecular Mass: 113.3

Calculations for C6 and C7 are based on Boiling Point Grouping. If Carbon Number Grouping had been done, the mole fractions would be (C6: 0.2456) (C7+:0.6498)

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WinFLUID, a comparison, history and trending analysis system.

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AGAT® Laboratories

HYDROCARBON LIQUID ANALYSIS

Container Identification	Laboratory Number
PB#3	CG63754C

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
Not Available	PARA et al LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	#1	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs		Sampling Point		Separator	Reservoir	Source	Sampled	Received
1682.00-1691.00		3	Pressure (kPa)					
mKB			Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	KK

Other Information

COMP.	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
N2	0.0000	0.0000	0.0000
CO2	0.0000	0.0000	0.0000
H2S	0.0000	0.0000	0.0000
C1	0.0006	0.0001	0.0002
C2	0.0012	0.0003	0.0006
C3	0.0016	0.0005	0.0008
IC4	0.0008	0.0003	0.0005
NC4	0.0019	0.0008	0.0011
IC5	0.0024	0.0013	0.0016
NC5	0.0033	0.0018	0.0022
C6	0.0240	0.0150	0.0177
C7+	0.9642	0.9799	0.9753
TOTAL	1.0000	1.0000	1.0000

Observed Properties of C7+ Residue (15/15° C)

Density	*Relative Density*	*API @ 15°*
787.4 kg/m³	0.7881	48.0

Relative Molecular Mass: 139.3

Calculated Properties of Total Sample (15/15° C)

Density	*Relative Density*	*API @ 15°*
783.8 kg/m³	0.7845	48.9

Relative Molecular Mass: 137.1

Calculations for C6 and C7 are based on Boiling Point Grouping. If Carbon Number Grouping had been done, the mole fractions would be (C6: 0.0642) (C7+:0.9240)

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	Well No.
CG63754C	PARAMOUNT RESOURCES LTD.	Not Available

BOILING POINT RANGE (C)	COMPONENT		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
36.1 - 68.9	HEXANES	C6	0.0234	0.0147	0.0174
68.9 - 98.3	HEPTANES	C7	0.0566	0.0434	0.0475
98.3 - 125.6	OCTANES	C8	0.0948	0.0828	0.0883
125.6 - 150.6	NONANES	C9	0.1088	0.1067	0.1114
150.6 - 173.9	DECANES	C10	0.1239	0.1348	0.1384
173.9 - 196.1	UNDECANES	C11	0.1003	0.1199	0.1218
196.1 - 215.0	DODECANES	C12	0.0686	0.0893	0.0896
215.0 - 235.0	TRIDECANES	C13	0.0538	0.0758	0.0754
235.0 - 252.2	TETRADECANES	C14	0.0324	0.0492	0.0485
252.2 - 270.6	PENTADECANES	C15	0.0192	0.0313	0.0306
270.6 - 287.8	HEXADECANES	C16	0.0092	0.0159	0.0154
287.8 - 302.8	HEPTADECANES	C17	0.0047	0.0086	0.0083
302.8 - 317.2	OCTADECANES	C18	0.0011	0.0021	0.0020
317.2 - 330.0	NONADECANES	C19	0.0003	0.0006	0.0006
330.0 - 344.4	EICOSANES	C20	0.0001	0.0002	0.0002
344.4 - 357.2	HENEICOSANES	C21	0.0000	0.0001	0.0001
357.2 - 369.4	DOCOSANES	C22	0.0000	0.0000	0.0000
369.4 - 380.0	TRICOSANES	C23	0.0000	0.0000	0.0000
380.0 - 391.1	TETRACOSANES	C24	0.0000	0.0000	0.0000
391.1 - 401.7	PENTACOSANES	C25	0.0000	0.0000	0.0000
401.7 - 412.2	HEXACOSANES	C26	0.0000	0.0000	0.0000
412.2 - 422.2	HEPTACOSANES	C27	0.0000	0.0000	0.0000
422.2 - 431.7	OCTACOSANES	C28	0.0000	0.0000	0.0000
431.7 - 441.1	NONACOSANES	C29	0.0000	0.0000	0.0000
441.1 - PLUS	TRIACONTANES PLUS	C30+	0.0000	0.0000	0.0000

BOILING POINT RANGE (C)	AROMATICS		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
80.0	BENZENE	C6	0.0085	0.0051	0.0043
110.6	TOLUENE	C7	0.0725	0.0511	0.0444
136.2	ETHYLBENZENE	C8	0.0100	0.0081	0.0071
138.4 - 144.4	XYLENES	C8	0.0822	0.0667	0.0576
168.9	1.2.4 TRIMETHYLBENZENE	C9	0.0205	0.0189	0.0163

BOILING POINT RANGE (C)	NAPHTHENES		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
48.9	CYCLOPENTANE	CC5	0.0006	0.0003	0.0003
72.2	METHYLCYCLOPENTANE	MCC5	0.0073	0.0047	0.0046
81.1	CYCLOHEXANE	CC6	0.0244	0.0157	0.0152
101.1	METHYLCYCLOHEXANE	MCC6	0.0650	0.0488	0.0478

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	Well No.
C69078A	PARAMOUNT RESOURCES LTD.	N-01

BOILING POINT RANGE (C)	COMPONENT		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
36.1 - 68.9	HEXANES	C6	0.0884	0.0672	0.0756
68.9 - 98.3	HEPTANES	C7	0.1056	0.1045	0.1128
98.3 - 125.6	OCTANES	C8	0.0976	0.1102	0.1157
125.6 - 150.6	NONANES	C9	0.0513	0.0650	0.0669
150.6 - 173.9	DECANES	C10	0.0479	0.0674	0.0682
173.9 - 196.1	UNDECANES	C11	0.0290	0.0448	0.0448
196.1 - 215.0	DODECANES	C12	0.0163	0.0274	0.0270
215.0 - 235.0	TRIDECANES	C13	0.0129	0.0235	0.0230
235.0 - 252.2	TETRADECANES	C14	0.0081	0.0158	0.0153
252.2 - 270.6	PENTADECANES	C15	0.0055	0.0115	0.0110
270.6 - 287.8	HEXADECANES	C16	0.0016	0.0037	0.0035
287.8 - 302.8	HEPTADECANES	C17	0.0010	0.0024	0.0023
302.8 - 317.2	OCTADECANES	C18	0.0003	0.0009	0.0008
317.2 - 330.0	NONADECANES	C19	0.0002	0.0004	0.0004
330.0 - 344.4	EICOSANES	C20	0.0000	0.0001	0.0001
344.4 - 357.2	HENEICOSANES	C21	0.0000	0.0001	0.0001
357.2 - 369.4	DOCOSANES	C22	0.0000	0.0000	0.0000
369.4 - 380.0	TRICOSANES	C23	0.0000	0.0000	0.0000
380.0 - 391.1	TETRACOSANES	C24	0.0000	0.0000	0.0000
391.1 - 401.7	PENTACOSANES	C25	0.0000	0.0000	0.0000
401.7 - 412.2	HEXACOSANES	C26	0.0000	0.0000	0.0000
412.2 - 422.2	HEPTACOSANES	C27	0.0000	0.0000	0.0000
422.2 - 431.7	OCTACOSANES	C28	0.0000	0.0000	0.0000
431.7 - 441.1	NONACOSANES	C29	0.0000	0.0000	0.0000
441.1 - PLUS	TRIACONTANES PLUS	C30+	0.0000	0.0000	0.0000

BOILING POINT RANGE (C)	AROMATICS		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
80.0	BENZENE	C6	0.0370	0.0286	0.0241
110.6	TOLUENE	C7	0.0940	0.0856	0.0733
136.2	ETHYLBENZENE	C8	0.0072	0.0076	0.0065
138.4 - 144.4	XYLENES	C8	0.0653	0.0685	0.0583
168.9	1,2,4 TRIMETHYLBENZENE	C9	0.0072	0.0085	0.0073

BOILING POINT RANGE (C)	NAPHTHENES		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
48.9	CYCLOPENTANE	CC5	0.0017	0.0010	0.0010
72.2	METHYLCYCLOPENTANE	MCC5	0.0359	0.0299	0.0291
81.1	CYCLOHEXANE	CC6	0.0826	0.0687	0.0654
101.1	METHYLCYCLOHEXANE	MCC6	0.0986	0.0957	0.0922

GAS ANALYSIS

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
NW #6	GG63754I

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Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	5	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs	Sampling Point
1738.00-1759.00 mKB	MAIN FLOW

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 16, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0001	0.0001	
He	0.0001	0.0001	
N2	0.0100	0.0100	
CO2	0.0020	0.0000	
H2S	0.0000	0.0000	
C1	0.9387	0.9406	
C2	0.0309	0.0310	
C3	0.0096	0.0096	35.3
IC4	0.0017	0.0017	7.4
NC4	0.0025	0.0025	10.5
IC5	0.0010	0.0010	4.9
NC5	0.0009	0.0009	4.4
C6	0.0007	0.0007	3.8
C7+	0.0018	0.0018	11.5
Total	1.0000	1.0000	77.8

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.74	39.82

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.601	0.599

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4591	197.7	4586	197.5

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.4	104.9

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
63.00 kPa	0.00

AGAT® Laboratories

GAS ANALYSIS

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Container Identification	Laboratory Number
NW #5	GG63754H

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	5	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs	Sampling Point
1738.00-1759.00	PRE-FLOW
mKB	

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 16, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	TRACE	TRACE	
He	0.0001	0.0001	
N2	0.0005	0.0005	
CO2	0.0094	0.0000	
H2S	0.0000	0.0000	
C1	0.9372	0.9462	
C2	0.0321	0.0324	
C3	0.0097	0.0098	35.6
iC4	0.0018	0.0018	7.9
NC4	0.0024	0.0024	10.1
iC5	0.0009	0.0009	4.4
NC5	0.0007	0.0007	3.4
C6	0.0006	0.0006	3.3
C7+	0.0046	0.0046	29.3
Total	1.0000	1.0000	94.0

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
40.31	40.68

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.613	0.604

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4619	200.2	4593	199.2

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.7	104.8

VAPOUR PRESSURE (Pentanes +)

38.64 kPa

H_2S g/m³

0.00

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
V 5316	G63845A

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Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	FANTASQUE	WEATHERFORD MCA

Test Type	Test No.	Test Recovery	Name of Sampler
DST	7	LATITUDE: 60 deg 10' LONGITUDE: 123 deg 15'	DW

Test Interval or Perfs		Sampling Point
1457.00-1464.00		MAIN FLOW
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1700
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 11, 2001	Jan 15, 2001	Jan 16, 2001	PL

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0000	0.0000	
He	0.0001	0.0001	
N2	0.0061	0.0063	
CO2	0.0369	0.0000	
H2S	0.0000	0.0000	
C1	0.9175	0.9528	
C2	0.0286	0.0297	
C3	0.0063	0.0065	23.1
IC4	0.0020	0.0021	8.7
NC4	0.0007	0.0007	2.9
IC5	0.0004	0.0004	2.0
NC5	0.0002	0.0002	1.0
C6	0.0005	0.0005	2.7
C7+	0.0007	0.0007	4.4
Total	1.0000	1.0000	44.8

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
37.82	39.24

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.620	0.586

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4699	199.9	4596	195.9

RELATIVE MOLECULAR MASS

Total Gas	C_7+
18.0	102.2

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
56.68 kPa	0.00

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WinFLUID, a comparison, history and trending analysis system.

Other Comments: 300N016010123150

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GAS ANALYSIS

Container Identification	Laboratory Number
V 618	GG63754B

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs	Sampling Point
1682.00-1691.00 mKB	MAIN FLOW

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					700
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	TRACE	TRACE	
He	0.0001	0.0001	
N2	0.0030	0.0031	
CO2	0.0185	0.0000	
H2S	0.0000	0.0000	
C1	0.9352	0.9530	
C2	0.0268	0.0273	
C3	0.0074	0.0075	27.2
IC4	0.0015	0.0015	6.5
NC4	0.0020	0.0020	8.4
IC5	0.0009	0.0009	4.4
NC5	0.0008	0.0008	3.9
C6	0.0013	0.0013	7.1
C7+	0.0025	0.0025	15.9
Total	1.0000	1.0000	73.4

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.27	39.98

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.612	0.595

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4644	199.4	4593	197.4

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.7	104.7

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
50.76 kPa	0.00

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AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
V 198	GG63754A

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs		Sampling Point
1682.00-1691.00		PRE-FLOW
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					380
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	TRACE	TRACE	
He	0.0001	0.0001	
N2	0.0050	0.0051	
CO2	0.0176	0.0000	
H2S	0.0000	0.0000	
C1	0.9356	0.9525	
C2	0.0271	0.0276	
C3	0.0075	0.0076	27.5
IC4	0.0015	0.0015	6.5
NC4	0.0020	0.0020	8.4
IC5	0.0009	0.0009	4.4
NC5	0.0007	0.0007	3.4
C6	0.0007	0.0007	3.8
C7+	0.0013	0.0013	8.3
Total	1.0000	1.0000	62.3

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
38.93	39.61

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.607	0.591

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4643	198.6	4594	196.7

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
17.6	104.5

VAPOUR PRESSURE	H_2S g/m³
65.97 kPa	0.00

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GAS ANALYSIS

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Container Identification	Laboratory Number
V 7001	GG63754D

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs		Sampling Point
1643.00-1648.00		MAIN FLOW
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					20
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	TRACE	TRACE	
He	0.0001	0.0001	
N2	0.0065	0.0066	
CO2	0.0114	0.0000	
H2S	0.0000	0.0000	
C1	0.9404	0.9513	
C2	0.0270	0.0273	
C3	0.0076	0.0077	27.9
IC4	0.0015	0.0015	6.5
NC4	0.0020	0.0020	8.4
IC5	0.0008	0.0008	3.9
NC5	0.0007	0.0007	3.4
C6	0.0008	0.0008	4.4
C7+	0.0012	0.0012	7.6
Total	1.0000	1.0000	62.1

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.10	39.53

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.602	0.591

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4624	197.8	4592	196.5

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.4	103.7

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
64.70 kPa	0.00

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AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
V 2009	GG63754C

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs		Sampling Point
1643.00-1648.00		PRE-FLOW
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					20
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0000	0.0000	
He	0.0001	0.0001	
N2	0.0120	0.0121	
CO2	0.0053	0.0000	
H2S	0.0000	0.0000	
C1	0.9392	0.9443	
C2	0.0272	0.0273	
C3	0.0078	0.0078	28.6
IC4	0.0015	0.0015	6.5
NC4	0.0020	0.0020	8.4
IC5	0.0009	0.0009	4.4
NC5	0.0008	0.0008	3.9
C6	0.0010	0.0010	5.5
C7+	0.0022	0.0022	14.0
Total	1.0000	1.0000	71.3

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.37	39.56

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.602	0.597

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4598	197.3	4583	196.7

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
17.4	104.7

VAPOUR PRESSURE	H_2S g/m³
54.35 kPa	0.00

AGAT® Laboratories

GAS ANALYSIS

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Container Identification	Laboratory Number
NW 2	GG63754G

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	4	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs	Sampling Point
1717.00-1738.00 mKB	MAIN FLOW

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					10
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	TRACE	TRACE	
He	0.0001	0.0001	
N2	0.0085	0.0086	
CO2	0.0099	0.0000	
H2S	0.0000	0.0000	
C1	0.9321	0.9415	
C2	0.0312	0.0315	
C3	0.0092	0.0093	33.8
IC4	0.0016	0.0016	7.0
NC4	0.0023	0.0023	9.7
IC5	0.0008	0.0008	3.9
NC5	0.0007	0.0007	3.4
C6	0.0008	0.0008	4.4
C7+	0.0028	0.0028	18.1
Total	1.0000	1.0000	80.3

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.62	40.00

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.610	0.601

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4614	198.9	4587	197.8

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.7	106.2

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
46.59 kPa	0.00

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GAS ANALYSIS

Container Identification	Laboratory Number
Z 272	GG63754F

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	4	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs		Sampling Point
1717.00-1738.00		PRE-FLOW
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1000
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	TRACE	TRACE	
He	0.0001	0.0001	
N2	0.0048	0.0048	
CO2	0.0103	0.0000	
H2S	0.0000	0.0000	
C1	0.9351	0.9450	
C2	0.0314	0.0317	
C3	0.0096	0.0097	35.3
IC4	0.0018	0.0018	7.9
NC4	0.0025	0.0025	10.5
iC5	0.0010	0.0010	4.9
NC5	0.0009	0.0009	4.4
C6	0.0010	0.0010	5.5
C7+	0.0015	0.0015	9.5
Total	1.0000	1.0000	78.0

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.64	40.04

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.607	0.597

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4621	199.1	4593	198.0

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.6	103.9

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
64.90 kPa	0.00

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AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
V 367	G63845C

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	BELLOY	WEATHERFORD MCA

Test Type	Test No.	Test Recovery	Name of Sampler
DST	8	LATITUDE: 60 deg 10' LONGITUDE: 123 deg 15'	DW

Test Interval or Perfs	Sampling Point
1368.00-1379.00	FLARE LINE
mKB	

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 11, 2001	Jan 15, 2001	Jan 16, 2001	PL

Other Information
SAMPLE RECEIVED WITH 99.3% AIR CONTAMINATION

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0043	0.0105	
He	0.0139	0.0340	
N2	0.1814	0.4436	
CO2	0.5911	0.0000	
H2S	0.0000	0.0000	
C1	0.0112	0.0274	
C2	0.0070	0.0171	
C3	0.0242	0.0592	88.9
IC4	0.0003	0.0007	1.3
NC4	0.0139	0.0340	58.5
IC5	0.0107	0.0262	52.3
NC5	0.0132	0.0323	63.8
C6	0.0529	0.1294	290.5
C7+	0.0759	0.1856	492.0
Total	1.0000	1.0000	1047.3

NOTE: The following have exceeded normal limits: He, N2, CO2, IC5, NC5, C6, C7, C8

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
34.76	85.17

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
1.652	1.843

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
5670	302.2	3195	299.2

RELATIVE MOLECULAR MASS

Total Gas	C_7+
47.8	106.9

VAPOUR PRESSURE	H_2S g/m³
34.79 kPa	0.00

ALERT!... Received Pressure differs significantly with operating pressure. This may be indicative of a non-representative sample.

Other Comments: 300N016010123150

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AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
V 5316	G63845A

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	FANTASQUE	WEATHERFORD MCA

Test Type	Test No.	Test Recovery	Name of Sampler
DST	7	LATITUDE: 60 deg 10' LONGITUDE: 123 deg 15'	DW

Test Interval or Perfs	Sampling Point
1457.00-1464.00 mKB	MAIN FLOW

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1700
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 11, 2001	Jan 15, 2001	Jan 16, 2001	PL

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0000	0.0000	
He	0.0001	0.0001	
N2	0.0061	0.0063	
CO2	0.0369	0.0000	
H2S	0.0000	0.0000	
C1	0.9175	0.9528	
C2	0.0286	0.0297	
C3	0.0063	0.0065	23.1
IC4	0.0020	0.0021	8.7
NC4	0.0007	0.0007	2.9
IC5	0.0004	0.0004	2.0
NC5	0.0002	0.0002	1.0
C6	0.0005	0.0005	2.7
C7+	0.0007	0.0007	4.4
Total	1.0000	1.0000	44.8

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
37.82	39.24

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.620	0.586

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4699	199.9	4596	195.9

RELATIVE MOLECULAR MASS

Total Gas	C7+
18.0	102.2

VAPOUR PRESSURE	H_2S g/m³
56.68 kPa	0.00

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WinFLUID, a comparison, history and trending analysis system.

Other Comments: 300N016010123150

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GAS ANALYSIS

Container Identification	Laboratory Number
NW #1	G63845B

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	FANTASQUE	WEATHERFORD MCA

Test Type	Test No.	Test Recovery	Name of Sampler
DST	7	LATITUDE: 60 deg 10' LONGITUDE: 123 deg 15'	DW

Test Interval or Perfs		Sampling Point
1457.00-1464.00		PREFLOW
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					1
Temperature (°C)					21

Date Sampled	Date Received	Date Reported	Analyst
Jan 11, 2001	Jan 15, 2001	Jan 16, 2001	PL

Other Information

SAMPLE RECEIVED WITH 64.3% AIR CONTAMINATION

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0001	0.0001	
He	TRACE	TRACE	
N2	0.0213	0.0215	
CO2	0.0092	0.0000	
H2S	0.0000	0.0000	
C1	0.9168	0.9254	
C2	0.0343	0.0346	
C3	0.0087	0.0088	32.0
IC4	0.0029	0.0029	12.7
NC4	0.0012	0.0012	5.1
IC5	0.0009	0.0009	4.4
NC5	0.0006	0.0006	2.9
C6	0.0013	0.0013	7.1
C7+	0.0027	0.0027	17.4
Total	1.0000	1.0000	81.6

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.29	39.64

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.617	0.608

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4597	198.4	4571	197.4

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
17.9	105.9

VAPOUR PRESSURE	H_2S g/m³
46.86 kPa	0.00

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WinFLUID, a comparison, history and trending analysis system.

Other Comments: 300N016010123150

WATER ANALYSIS

AGAT® Laboratories

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WATER ANALYSIS

Container Identification	Laboratory Number
PB 3C	W63845C

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m 492.10 GRD m

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	BELLOY	

Test Type	Test No.	Test Recovery	Name of Sampler
DST	8	SAMPLE COMPANY: WEATHERFORD	

Test Interval or Perfs	Sampling Point
1368.00-1379.00 mKB	MUD TANK

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 12, 2001	Jan 15, 2001	Jan 16, 2001	LN

Other Information
300N016010123150

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1608.0	0.292	69.9
K	13.0	0.002	0.3
Ca	11.7	0.002	0.3
Mg	3.0	0.001	0.1
Fe	2.8	0.001	0.1

Anions

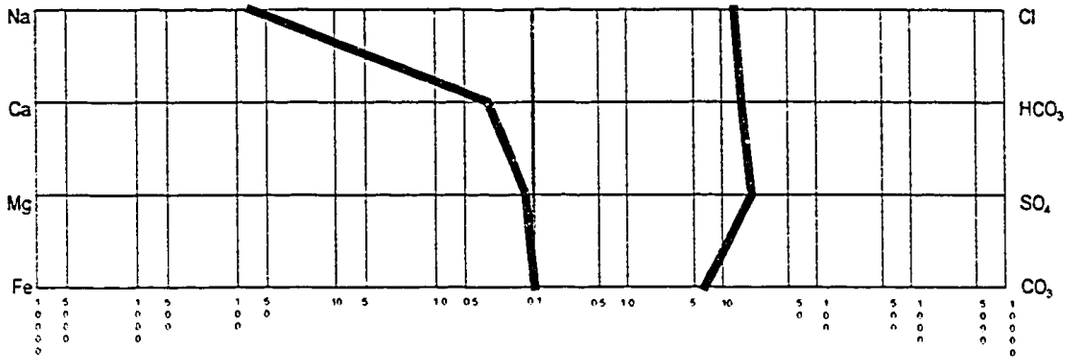
ION	mg/L	Mass Fraction	mmol/L
Cl	488.0	0.088	13.8
HCO_3	986.4	0.179	16.2
SO_4	2006.0	0.364	20.9
CO_3	396.9	0.072	6.6
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Mud Filtrate Loss mL	6.50
Total Dissolved Solids (Calculated) mg/L	5515
Observed pH	9.43
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM-m (25°C)	1.620
Salinity %	0.09

Total Cations	71.2	Total Anions	78.3

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

Container Identification	Laboratory Number
PB 2B	W63845B

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Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m 492.10 GRD m

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	BELLOY	

Test Type	Test No.	Test Recovery	Name of Sampler
DST	8	SP: 35m ABOVE TOOL; SAMPLE COMPANY: WEATHERFORD	

Test Interval or Perfs	Sampling Point
1368.00-1379.00 mKB	ABOVE TOOL

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 12, 2001	Jan 15, 2001	Jan 16, 2001	LN

Other Information
300N016010123150

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1707.0	0.293	74.3
K	13.2	0.002	0.3
Ca	13.4	0.002	0.3
Mg	3.8	0.001	0.2
Fe	3.9	0.001	0.1

Anions

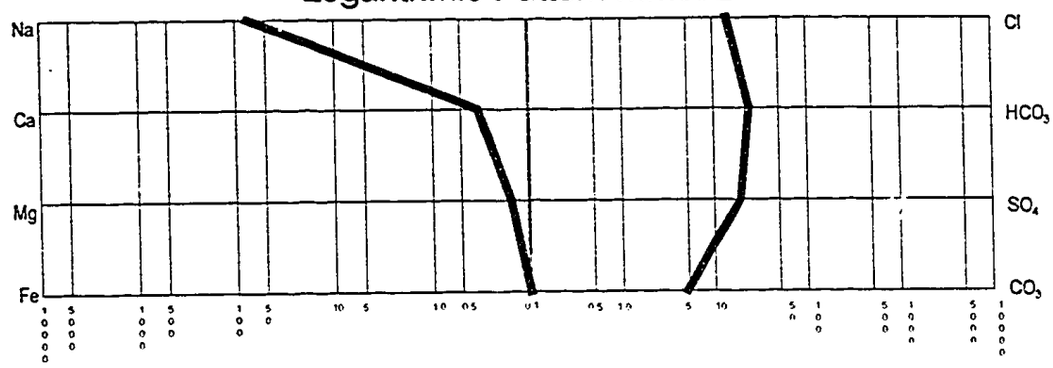
ION	mg/L	Mass Fraction	mmol/L
Cl	493.0	0.085	13.9
HCO_3	1479.6	0.254	24.2
SO_4	1820.0	0.312	18.9
CO_3	294.0	0.050	4.9
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Mud Filtrate Loss mL	6.25
Total Dissolved Solids (Calculated) mg/L	5827
Observed pH	9.78
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM-m (25°C)	1.510
Salinity %	0.09

Total Cations	75.7	Total Anions	80.9

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

Container Identification	Previous Number	Laboratory Number
PB 4D	WG63754J	WG63754D

FIELD COPY

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m 492.10 GRD m 487.0(

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1		

Test Interval or Perfs		Sampling Point
1682.00-1691.00		4
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 16, 2001	LN

Other Information

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1670.0	0.287	72.6
K	34.7	0.006	0.9
Ca	27.5	0.005	0.7
Mg	8.5	0.001	0.3
Fe	35.5	0.006	0.6

Anions

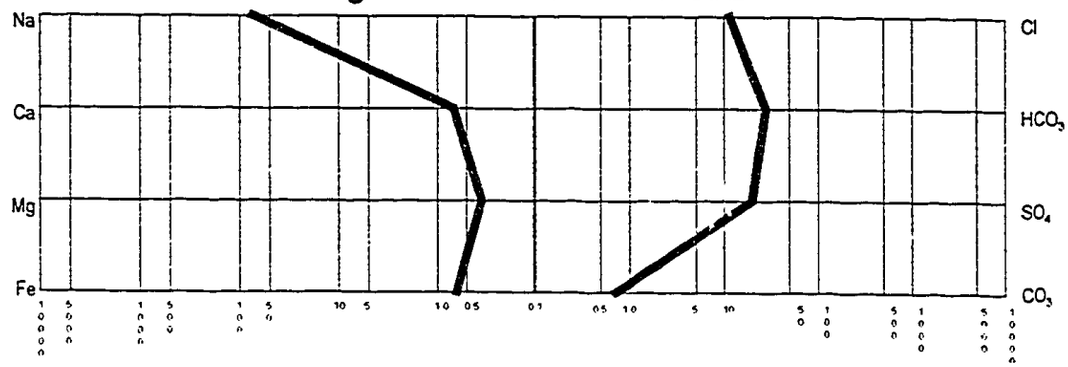
ION	mg/L	Mass Fraction	mmol/L
Cl	411.0	0.071	11.6
HCO_3	1688.8	0.290	27.7
SO_4	1895.0	0.326	19.7
CO_3	44.1	0.008	0.7
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	5815
Observed pH	8.43
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM-m (25°C)	1.490
Salinity %	0.07

Total Cations	76.9	Total Anions	79.5

Logarithmic Pattern mmol/L



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AGAT® Laboratories

WATER ANALYSIS

Container Identification
PB 150

Previous Number	Laboratory Number
WG63754C	WG63754O

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	5		

Test Interval or Perfs		Sampling Point
1738.00-1759.00		3
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 10, 2001	Jan 12, 2001	Jan 16, 2001	LN

Other Information
MUDDY WATER

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1720.0	0.271	74.8
K	145.0	0.023	3.7
Ca	18.2	0.003	0.5
Mg	13.4	0.002	0.6
Fe	210.0	0.033	3.8

Anions

ION	mg/L	Mass Fraction	mmol/L
Cl	411.0	0.065	11.6
HCO_3	2077.4	0.327	34.0
SO_4	1326.0	0.209	13.8
CO_3	Nil	Nil	Nil
OH	Nil	Nil	Nil
NO2	105.8	0.017	2.3
NO3	320.0	0.050	5.2

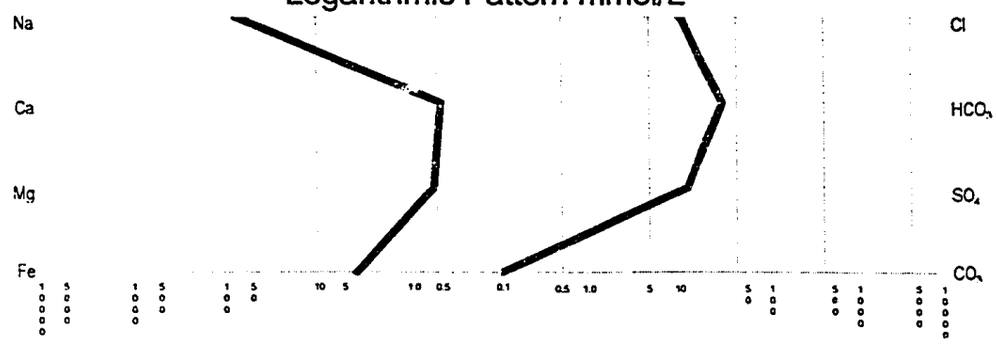
Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	6346
Observed pH	8.21
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.006
Resistivity / OHM-m (25°C)	1.560
Salinity %	0.07

Total Cations	88.1

Total Anions	80.7

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

Container Identification
PB 5E

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Previous Number	Laboratory Number
WG63754K	WG63754E

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1		

Test Interval or Perfs		Sampling Point
1682.00-1691.00		5
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1633.0	0.310	71.0
K	36.2	0.007	0.9
Ca	24.0	0.005	0.6
Mg	8.5	0.002	0.3
Fe	46.5	0.009	0.8

Anions

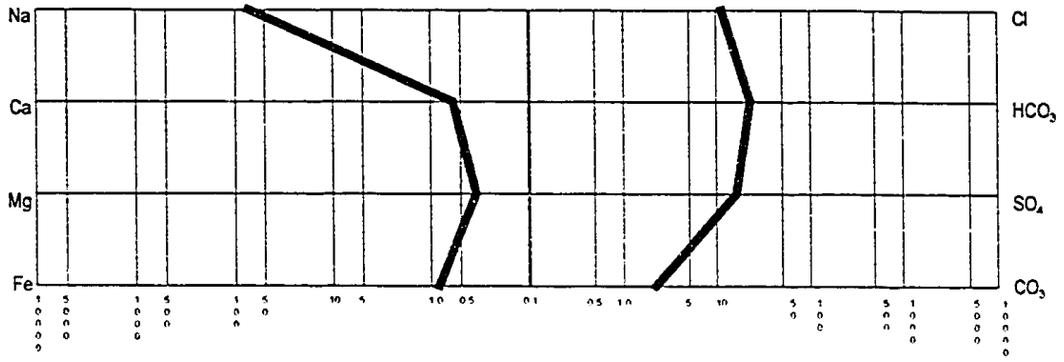
ION	mg/L	Mass Fraction	mmol/L
Cl	411.0	0.078	11.6
HCO_3	1404.8	0.267	23.0
SO_4	1566.0	0.298	16.3
CO_3	132.3	0.025	2.2
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	5262
Observed pH	8.72
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM-m (25°C)	1.720
Salinity %	0.07

Total Cations	75.5	Total Anions	69.4

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

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Container Identification	Previous Number	Laboratory Number
PB 3C	WG63754i	WG63754C

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1		

Test Interval or Perfs		Sampling Point
1682.00-1691.00		3
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

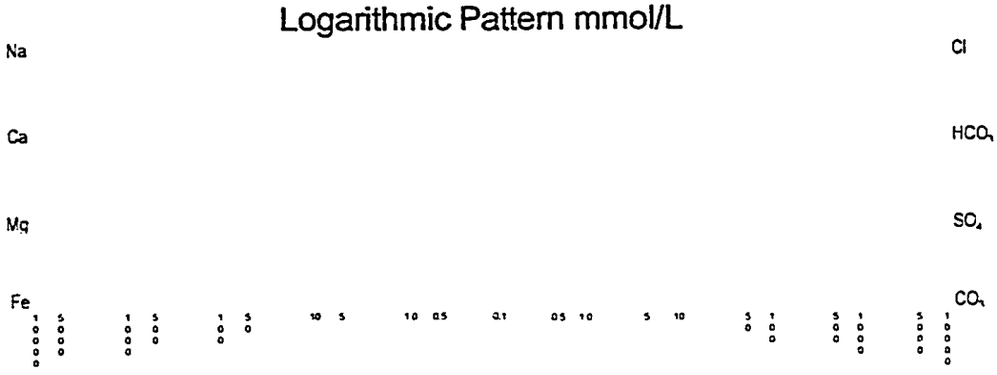
Other Information

Cations | Anions | Other Measurements

Total Cations | Total Anions

There is not a sufficient quantity of water for analysis.

Logarithmic Pattern mmol/L



AGAT® Laboratories

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WATER ANALYSIS

Container Identification	Laboratory Number
PB 6F	WG63754F

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1		

Test Interval or Perfs		Sampling Point		Separator	Reservoir	Source	Sampled	Received
1682.00-1691.00		MUD TANK	Pressure (kPa)					
mKB			Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12 2001	Jan 15, 2001	LN

Other Information

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1643.0	0.329	71.5
K	15.3	0.003	0.4
Ca	13.7	0.003	0.3
Mg	2.2	Trace	0.1
Fe	1.9	Trace	Trace

Anions

ION	mg/L	Mass Fraction	mmol/L
Cl	328.0	0.066	9.3
HCO_3	881.8	0.177	14.5
SO_4	1649.0	0.330	17.2
CO_3	455.7	0.091	7.6
OH	Nil	Nil	Nil

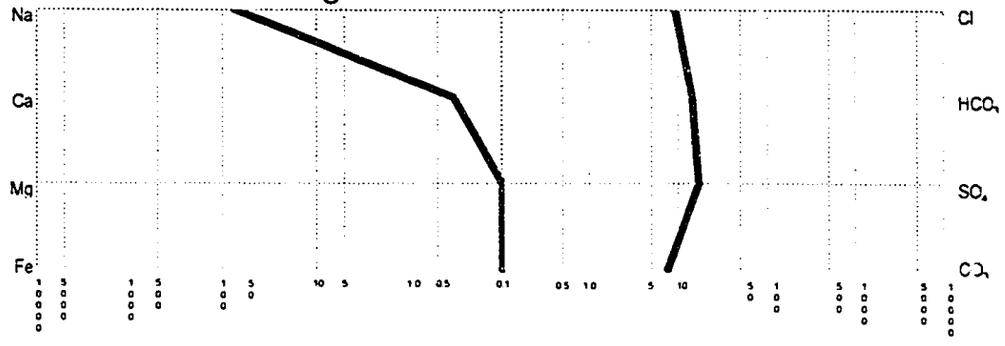
Other Measurements

Measurement	Value
Mud Filtrate Loss mL	7.00
Total Dissolved Solids (Calculated) mg/L	4990
Observed pH	9.62
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM•m (25°C)	1.800
Salinity %	0.06

Total Cations	72.7	Total Anions	65.6

The ionic balance for this water exceeds 10%. The imbalance is caused by anions not analyzed for in the routine analysis.

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

NEB COPY

Container Identification	Laboratory Number
PB 12L	WG63754L

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2		

Test Interval or Perfs		Sampling Point		Separator	Reservoir	Source	Sampled	Received
1643.00-1648.00		BOTTOM HOLE SAMPLER	Pressure (kPa)					
mKB			Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information
BHS #GP40/150 MLS MUDDY H2O

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	2369.0	0.314	103.0
K	34.2	0.005	0.9
Ca	9.9	0.001	0.2
Mg	15.2	0.002	0.6
Fe	1.5	Trace	Trace

Anions

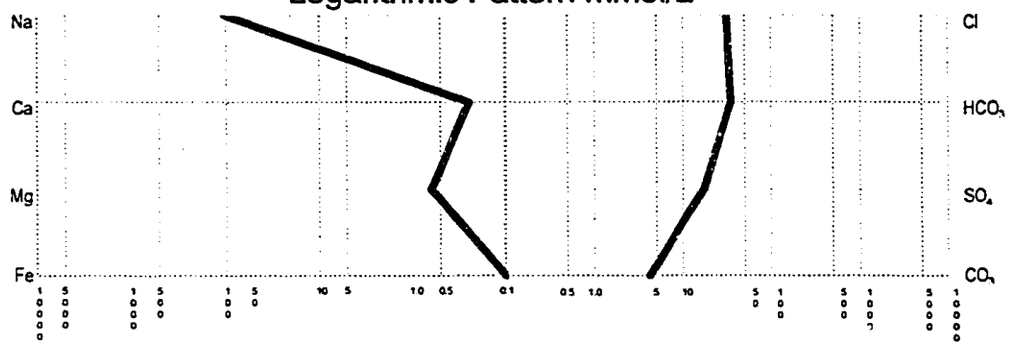
ION	mg/L	Mass Fraction	mmol/L
Cl	1109.0	0.147	31.3
HCO_3	2137.1	0.283	35.0
SO_4	1628.0	0.216	16.9
CO_3	249.9	0.033	4.2
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	7553
Observed pH	8.80
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.007
Resistivity / OHM-m (25°C)	1.180
Salinity %	0.20

Total Cations	105.7	Total Anions	104.4

Logarithmic Pattern mmol/L



AGAT® Laboratories N.E. COPY

WATER ANALYSIS

Container Identification	Previous Number	Laboratory Number
PB 11K	WG63754E	WG63754K

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2		

Test Interval or Perfs		Sampling Point
1643.00-1648.00		5
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information
REVERSED OUT

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1580.0	0.305	68.7
K	17.1	0.003	0.4
Ca	17.3	0.003	0.4
Mg	2.9	0.001	0.1
Fe	2.1	Trace	Trace

Anions

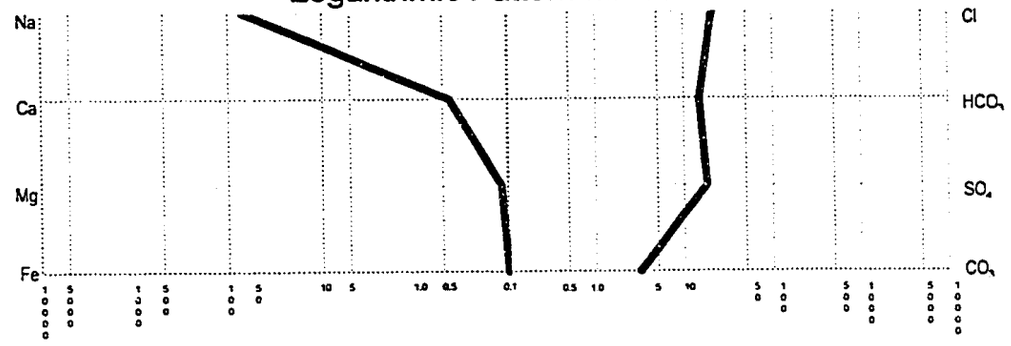
ION	mg/L	Mass Fraction	mmol/L
Cl	739.0	0.143	20.8
HCO_3	896.7	0.173	14.7
SO_4	1732.0	0.334	18.0
CO_3	191.1	0.037	3.2
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Mud Filtrate Loss mL	7.00
Total Dissolved Solids (Calculated) mg/L	5178
Observed pH	9.38
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM-m (25°C)	1.810
Salinity %	0.13

Total Cations	70.3	Total Anions	74.8

Logarithmic Pattern mmol/L



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WATER ANALYSIS

Container Identification	Laboratory Number
PB 10J	WG63754J

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2		

Test Interval or Perfs		Sampling Point
1643.00-1648.00		4
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information
REVERSED OUT

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1455.0	0.312	63.3
K	16.6	0.004	0.4
Ca	14.6	0.003	0.4
Mg	2.5	0.001	0.1
Fe	1.8	Trace	Trace

Anions

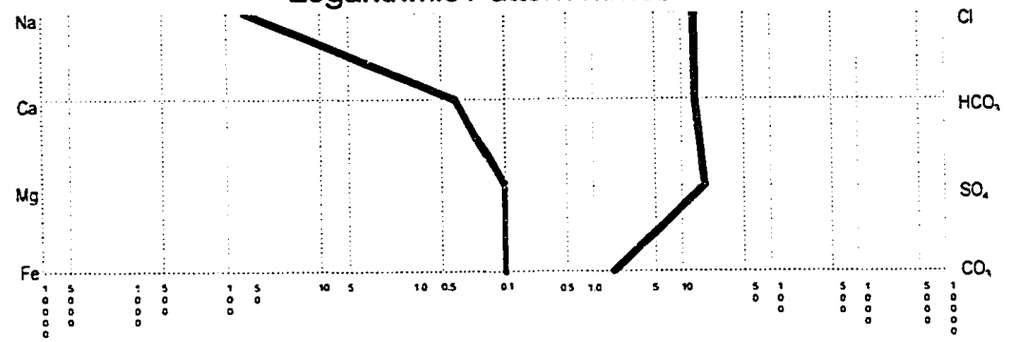
ION	mg/L	Mass Fraction	mmol/L
Cl	493.0	0.106	13.9
HCO_3	866.8	0.186	14.2
SO_4	1714.0	0.367	17.8
CO_3	102.9	0.022	1.7
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Mud Filtrate Loss mL	7.25
Total Dissolved Solids (Calculated) mg/L	4667
Observed pH	8.98
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM-m (25°C)	1.950
Salinity %	0.09

Total Cations	64.6	Total Anions	65.5

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

N.E.B. COPY

Container Identification	Previous Number	Laboratory Number
PB 91	WG63754C	WG63754I

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2		

Test Interval or Perfs		Sampling Point
1643.00-1648.00		3
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information
REVERSED OUT

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1517.0	0.328	66.0
K	16.6	0.004	0.4
Ca	14.4	0.003	0.4
Mg	2.6	0.001	0.1
Fe	1.9	Trace	Trace

Anions

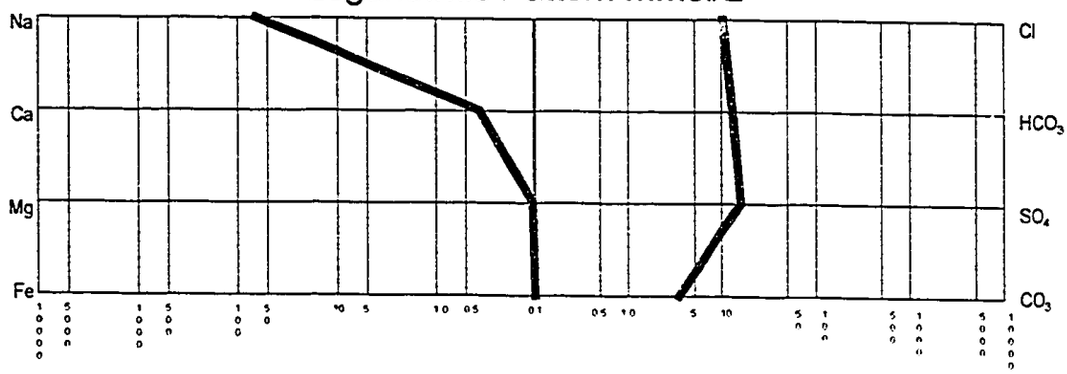
ION	mg/L	Mass Fraction	mmol/L
Cl	370.0	0.080	10.4
HCO_3	792.1	0.172	13.0
SO_4	1512.0	0.327	15.7
CO_3	205.8	0.045	3.4
OH	Nil	Nil	Nil
NO3	186.0	0.040	3.0

Other Measurements

Measurement	Value
Mud Filtrate Loss mL	7.50
Total Dissolved Solids (Calculated) mg/L	4618
Observed pH	9.38
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM•m (25°C)	1.930
Salinity %	0.07

Total Cations	67.3	Total Anions	61.3

Logarithmic Pattern mmol/L



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WATER ANALYSIS

Container Identification	Laboratory Number
PB 8H	WG63754H

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2		

Test Interval or Perfs		Sampling Point
1643.00-1648.00		2
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information
REVERSED OUT

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1487.0	0.300	64.7
K	16.5	0.003	0.4
Ca	16.1	0.003	0.4
Mg	2.4	Trace	0.1
Fe	1.9	Trace	Trace

Anions

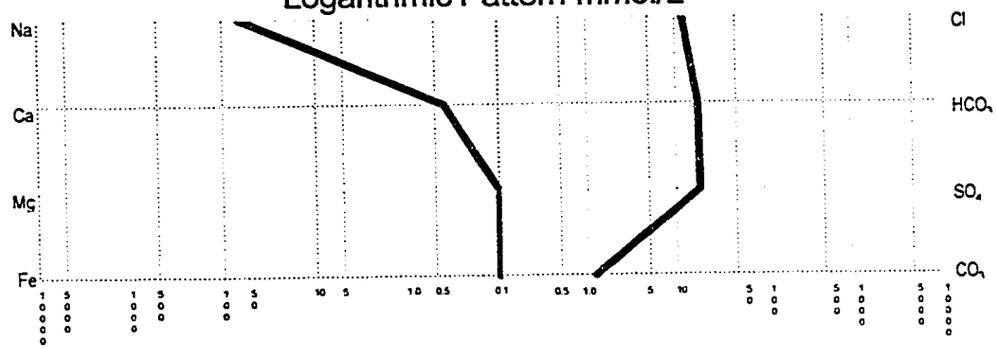
ION	mg/L	Mass Fraction	mmol/L
Cl	431.0	0.087	12.2
HCO_3	1120.9	0.226	18.4
SO_4	1805.0	0.364	18.8
CO_3	73.5	0.015	1.2
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Mud Filtrate Loss mL	7.50
Total Dissolved Solids (Calculated) mg/L	4954
Observed pH	8.79
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.005
Resistivity / OHM•m (25°C)	1.970
Salinity %	0.08

Total Cations	66.1	Total Anions	69.3

Logarithmic Pattern mmol/L



AGAT® Laboratories

WATER ANALYSIS

N.E.B. COPY

Container Identification	Laboratory Number
PB 7G	WG63754G

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01-60-10-123-15	PARA ET AL FORT LIARD N-01-60-10-123-15	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	2		

Test Interval or Perfs		Sampling Point
1643.00-1648.00		1
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 15, 2001	LN

Other Information
REVERSED OUT

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	1913.0	0.287	83.2
K	76.0	0.011	1.9
Ca	97.0	0.015	2.4
Mg	17.6	0.003	0.7
Fe	54.0	0.008	1.0

Anions

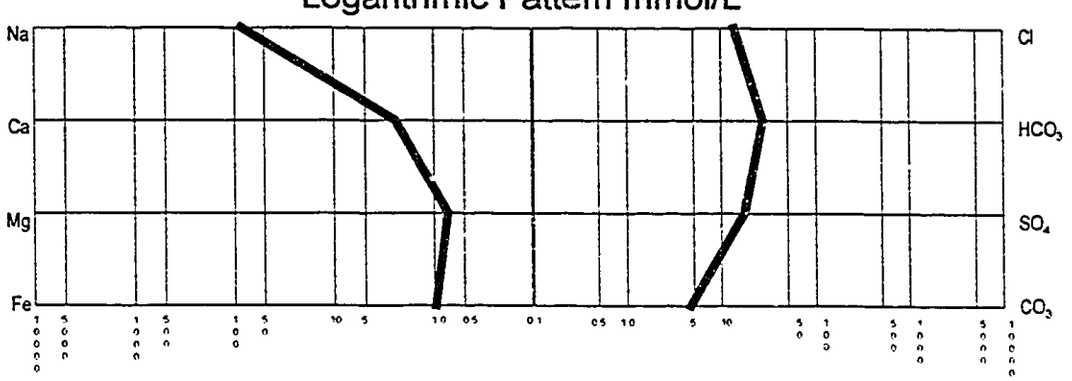
ION	mg/L	Mass Fraction	mmol/L
Cl	493.0	0.074	13.9
HCO_3	1688.8	0.254	27.7
SO_4	1694.0	0.254	17.6
CO_3	279.3	0.042	4.7
OH	Nil	Nil	Nil
NO3	344.0	0.052	5.5

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	6656
Observed pH	9.16
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.006
Resistivity / OHMm (25°C)	1.520
Salinity %	0.09

Total Cations	93.4	Total Anions	87.1

Logarithmic Pattern mmol/L



OIL ANALYSIS

AGAT® Laboratories

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OIL ANALYSIS

Container Identification	Laboratory Number
PB-4	OG63754D

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	1	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs		Sampling Point
1682.00-1691.00		4
mKB		

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Jan 07, 2001	Jan 12, 2001	Jan 16, 2001	H,J

Other Information

Sample Properties

Colour of Clean Oil	Colour Number ASTM D-1500
Colorless	L-1 A.S.T.M.

B.S.& W. (Volume Fraction)

Water	Sediment	Total
Trace	Trace	Trace

Free Water
36 vol %

API Gravity @ 15°C
47.93

Density - After Cleaning

Relative	Absolute kg/m³
0.7886	787.9

Total Sulphur Mass Fraction	Pour Point / °C (A.S.T.M. D-97)
0.00027	<-50

Viscosity

Temp °C	Absolute mPa*s	Kinematic mm²*s-1
25	0.93	1.19
38	0.78	1.01
50	0.66	0.87

Distillation

Volume Fraction	Temp / °C
0.05	120.1
0.10	128.2
0.15	134.2
0.20	140.3
0.25	146.3
0.30	152.4
0.35	158.5
0.40	164.5
0.45	169.6
0.50	175.6
0.55	182.7
0.60	189.8
0.65	196.9
0.70	204.9
0.75	215.1
0.80	228.2
0.85	240.3
0.90	250.4
0.95	261.5
F.B.P.	263.6

Method
A.S.T.M. -D86*

Initial Boiling Point
103.9

Absolute Barometric Pressure (kPa)
89.7

Room Temp (°C)
21.0

Characterization Factor
11.8

200 °C Naphtha	275 °C Kerosene	350 °C Light Gas Oil
0.67	0.97	0.00

Recovered	Residue	Distillation Loss
0.97	0.03	0.00

Remarks:

BS&W performed on oil portion only. The distillation temperatures have been corrected to 101.3 kPa (abs).

FLOW AND BUILD UP

MARCH 1 – JULY 8 2001

N.E.B. COPY

PARAMOUNT RESOURCES LTD.
PARA ET AL FORT LIARD N 01
FORMATION: M3
Flow and Buildup-March 1 – July 8/2001
Static Gradient Mar 15/2001
Static Gradient July 8/2001

Test Completed By
Solid Production Services
505 – 19th Ave
Nisku, Alberta
T9E-7V9
(780) 955-7525

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact:

Phone: Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard Nc 1

Operator:

Location-Downhole: No 1

Location-Surface: No 1

Test Information:

Company: Solid Production Services Ltd.

Representative:

Supervisor:

Test Type: Flow and Build up Job Number: 0107016

Test Unit:

Start Date: 2001/03/15 Start Time: 20:11:00

End Date: 2001/07/08 End Time: 09:20:00

Report Date: 2001/07/10 Prepared By: Ella Berscheid

Remarks: Qualified By:

WELL INFORMATION

Well Name : Para et al Ft. Liard No 1

Well Operator :

Well Location : No 1

Location-Surface : No 1

Field : Ft. Liard **Well Type : Vertical**

Pool :

Formation : M3

Perforation Type :			Producing Through : Tubing	Size	73.00 mm
Pool Datum	m	CF	Elevation Referenced From	492.10 m	KB
Datum Depth	m	CF	Elevation Referenced To	487.00 m	GL
			Offset	5.10 m	

Production Intervals

Production Interval & MPP Reference To : KB MPP Pressure Reference : None

	From - m	To - m	Depth - m	Pressure - kPa
1.	1731.50	1736.50	1734.00	
2.	1739.50	1750.00	1744.75	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Remarks :

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107016

	80193 Date	80193 Clk Time	80193 Time	80193 Pres.	80193 Temp.	80181 Date	80181 Clk Time	80181 Time	80181 Pres.	80181 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
1	2001/03/15	21:23:57	1.2161	17484.60	64.31	2001/03/15	21:23:57	1.2161	17496.67	64.09
2			On Bottom							
3			Run depth: 80193 - 1760.6 mkb, 80181 - 1761.1 mkb							
4	2001/03/15	21:26:57	1.2661	17484.71	64.37	2001/03/15	21:26:57	1.2661	17496.22	64.14
5	2001/03/16	06:17:57	10.1161	17491.57	64.46	2001/03/16	06:17:57	10.1161	17504.15	64.21
6	2001/03/16	15:17:57	19.1161	17491.13	64.46	2001/03/16	15:17:57	19.1161	17504.00	64.21
7	2001/03/17	00:17:57	28.1161	17490.90	64.47	2001/03/17	00:17:57	28.1161	17503.56	64.21
8	2001/03/17	09:17:57	37.1161	17490.47	64.48	2001/03/17	09:17:57	37.1161	17503.14	64.22
9	2001/03/17	18:17:57	46.1161	17490.30	64.48	2001/03/17	18:17:57	46.1161	17502.88	64.22
10	2001/03/18	03:17:57	55.1161	17490.02	64.49	2001/03/18	03:17:57	55.1161	17502.95	64.23
11	2001/03/18	12:17:57	64.1161	17489.72	64.49	2001/03/18	12:17:57	64.1161	17502.70	64.23
12	2001/03/18	21:17:57	73.1161	17489.49	64.50	2001/03/18	21:17:57	73.1161	17502.61	64.24
13	2001/03/19	06:17:57	82.1161	17489.55	64.50	2001/03/19	06:17:57	82.1161	17502.34	64.24
14	2001/03/19	15:17:57	91.1161	17489.29	64.51	2001/03/19	15:17:57	91.1161	17502.36	64.25
15	2001/03/20	00:17:57	100.1161	17489.23	64.51	2001/03/20	00:17:57	100.1161	17502.19	64.25
16	2001/03/20	09:17:57	109.1161	17489.12	64.52	2001/03/20	09:17:57	109.1161	17502.37	64.25
17	2001/03/20	18:17:57	118.1161	17489.06	64.52	2001/03/20	18:17:57	118.1161	17502.04	64.26
18	2001/03/21	03:17:57	127.1161	17489.10	64.53	2001/03/21	03:17:57	127.1161	17502.19	64.26
19	2001/03/21	12:17:57	136.1161	17489.13	64.53	2001/03/21	12:17:57	136.1161	17502.09	64.26
20	2001/03/21	21:17:57	145.1161	17489.05	64.53	2001/03/21	21:17:57	145.1161	17502.33	64.27
21	2001/03/22	06:17:57	154.1161	17489.12	64.54	2001/03/22	06:17:57	154.1161	17502.34	64.27
22	2001/03/22	15:17:57	163.1161	17489.14	64.54	2001/03/22	15:17:57	163.1161	17502.48	64.28
23	2001/03/23	00:17:57	172.1161	17489.12	64.54	2001/03/23	00:17:57	172.1161	17502.52	64.28
24	2001/03/23	09:17:57	181.1161	17489.21	64.55	2001/03/23	09:17:57	181.1161	17502.56	64.28
25	2001/03/23	18:17:57	190.1161	17489.45	64.55	2001/03/23	18:17:57	190.1161	17502.59	64.29
26	2001/03/24	03:17:57	199.1161	17489.29	64.55	2001/03/24	03:17:57	199.1161	17502.67	64.29
27	2001/03/24	12:17:57	208.1161	17489.54	64.56	2001/03/24	12:17:57	208.1161	17502.77	64.29
28	2001/03/24	21:17:57	217.1161	17489.45	64.56	2001/03/24	21:17:57	217.1161	17502.78	64.29
29	2001/03/25	06:17:57	226.1161	17489.38	64.56	2001/03/25	06:17:57	226.1161	17502.93	64.30
30	2001/03/25	15:17:57	235.1161	17489.27	64.57	2001/03/25	15:17:57	235.1161	17487.84	64.30
31	2001/03/25	22:53:57	242.7161	17491.42	64.57	2001/03/25	22:53:57	242.7161	17504.60	64.30
32			Open well							
33	2001/03/25	22:56:57	242.7661	17407.31	64.57	2001/03/25	22:56:57	242.7661	17446.23	64.31
34	2001/03/26	00:14:57	244.0661	15581.29	64.49	2001/03/26	00:14:57	244.0661	15611.35	64.22
35	2001/03/26	09:14:57	253.0661	15244.06	63.99	2001/03/26	09:14:57	253.0661	15238.44	63.74
36	2001/03/26	18:14:57	262.0661	15280.72	63.97	2001/03/26	18:14:57	262.0661	15277.47	63.71
37	2001/03/27	03:14:57	271.0661	15203.24	64.01	2001/03/27	03:14:57	271.0661	15232.64	63.75
38	2001/03/27	12:14:57	280.0661	15154.61	63.89	2001/03/27	12:14:57	280.0661	15179.83	63.64
39	2001/03/27	21:14:57	289.0661	15109.91	63.82	2001/03/27	21:14:57	289.0661	15123.45	63.56
40	2001/03/28	06:14:57	298.0661	15041.70	63.74	2001/03/28	06:14:57	298.0661	15070.89	63.48
41	2001/03/28	15:14:57	307.0661	15161.19	63.79	2001/03/28	15:14:57	307.0661	15161.06	63.52
42	2001/03/29	00:14:57	316.0661	15429.54	64.05	2001/03/29	00:14:57	316.0661	15438.87	63.78
43	2001/03/29	09:14:57	325.0661	14994.80	63.81	2001/03/29	09:14:57	325.0661	15005.72	63.54
44	2001/03/29	18:14:57	334.0661	14930.17	63.54	2001/03/29	18:14:57	334.0661	14940.94	63.27
45	2001/03/30	03:14:57	343.0661	14815.78	63.31	2001/03/30	03:14:57	343.0661	14826.20	63.04
46	2001/03/30	12:14:57	352.0661	14733.17	63.11	2001/03/30	12:14:57	352.0661	14743.83	62.83
47	2001/03/30	21:14:57	361.0661	14647.10	62.88	2001/03/30	21:14:57	361.0661	14657.71	62.61

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107016

	80193 Date	80193 Clk Time	80193 Time	80193 Pres.	80193 Temp.	80181 Date	80181 Clk Time	80181 Time	80181 Pres.	80181 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
48	2001/03/31	06:14:57	370.0661	14562.38	62.66	2001/03/31	06:14:57	370.0661	14573.36	62.38
49	2001/03/31	15:14:57	379.0661	15222.69	62.70	2001/03/31	15:14:57	379.0661	15186.28	62.43
50	2001/04/01	00:14:57	388.0661	14492.85	62.48	2001/04/01	00:14:57	388.0661	14503.32	62.21
51	2001/04/01	09:14:57	397.0661	14482.12	62.56	2001/04/01	09:14:57	397.0661	14492.74	62.29
52	2001/04/01	18:14:57	406.0661	14351.81	62.15	2001/04/01	18:14:57	406.0661	14361.97	61.88
53	2001/04/02	03:14:57	415.0661	14275.24	61.93	2001/04/02	03:14:57	415.0661	14286.87	61.66
54	2001/04/02	12:14:57	424.0661	14192.03	61.72	2001/04/02	12:14:57	424.0661	14203.12	61.45
55	2001/04/02	21:14:57	433.0661	14110.28	61.55	2001/04/02	21:14:57	433.0661	14120.96	61.28
56	2001/04/03	06:14:57	442.0661	14033.09	61.39	2001/04/03	06:14:57	442.0661	14043.67	61.12
57	2001/04/03	15:14:57	451.0661	13958.10	61.24	2001/04/03	15:14:57	451.0661	13968.96	60.97
58	2001/04/04	00:14:57	460.0661	15182.22	61.73	2001/04/04	00:14:57	460.0661	15193.27	61.46
59	2001/04/04	09:14:57	469.0661	13884.36	61.18	2001/04/04	09:14:57	469.0661	13894.64	60.92
60	2001/04/04	18:14:57	478.0661	13799.13	60.99	2001/04/04	18:14:57	478.0661	13809.42	60.72
61	2001/04/05	03:14:57	487.0661	13744.14	60.84	2001/04/05	03:14:57	487.0661	13754.76	60.57
62	2001/04/05	12:14:57	496.0661	13665.85	60.74	2001/04/05	12:14:57	496.0661	13676.16	60.47
63	2001/04/05	21:14:57	505.0661	13588.92	60.63	2001/04/05	21:14:57	505.0661	13599.52	60.37
64	2001/04/06	06:14:57	514.0661	14353.89	61.05	2001/04/06	06:14:57	514.0661	14364.37	60.77
65	2001/04/06	15:14:57	523.0661	13953.05	61.18	2001/04/06	15:14:57	523.0661	13956.39	60.91
66	2001/04/07	00:14:57	532.0661	13843.98	61.10	2001/04/07	00:14:57	532.0661	13854.25	60.83
67	2001/04/07	09:14:57	541.0661	13445.68	60.73	2001/04/07	09:14:57	541.0661	13456.44	60.47
68	2001/04/07	18:14:57	550.0661	14028.60	60.91	2001/04/07	18:14:57	550.0661	14039.32	60.63
69	2001/04/08	03:14:57	559.0661	14063.42	61.31	2001/04/08	03:14:57	559.0661	14073.84	61.04
70	2001/04/08	12:14:57	568.0661	14056.95	61.43	2001/04/08	12:14:57	568.0661	14067.73	61.16
71	2001/04/08	21:14:57	577.0661	14235.83	61.78	2001/04/08	21:14:57	577.0661	14244.83	61.51
72	2001/04/09	06:14:57	586.0661	14062.31	61.63	2001/04/09	06:14:57	586.0661	14072.65	61.36
73	2001/04/09	15:14:57	595.0661	14034.79	61.61	2001/04/09	15:14:57	595.0661	14045.56	61.34
74	2001/04/10	00:14:57	604.0661	14006.75	61.60	2001/04/10	00:14:57	604.0661	14016.98	61.33
75	2001/04/10	09:14:57	613.0661	13980.13	61.60	2001/04/10	09:14:57	613.0661	13990.57	61.33
76	2001/04/10	18:14:57	622.0661	14045.88	61.91	2001/04/10	18:14:57	622.0661	14056.22	61.64
77	2001/04/11	03:14:57	631.0661	13952.84	61.67	2001/04/11	03:14:57	631.0661	13963.33	61.40
78	2001/04/11	12:14:57	640.0661	13928.47	61.65	2001/04/11	12:14:57	640.0661	13939.15	61.38
79	2001/04/11	21:14:57	649.0661	13926.76	61.76	2001/04/11	21:14:57	649.0661	13888.35	61.47
80	2001/04/12	06:14:57	658.0661	13882.24	61.66	2001/04/12	06:14:57	658.0661	13892.44	61.39
81	2001/04/12	15:14:57	667.0661	13850.25	61.64	2001/04/12	15:14:57	667.0661	13860.88	61.37
82	2001/04/13	00:14:57	676.0661	13823.14	61.63	2001/04/13	00:14:57	676.0661	13833.51	61.37
83	2001/04/13	09:14:57	685.0661	13789.90	61.62	2001/04/13	09:14:57	685.0661	13800.93	61.35
84	2001/04/13	18:14:57	694.0661	14444.67	62.10	2001/04/13	18:14:57	694.0661	14455.90	61.83
85	2001/04/14	03:14:57	703.0661	13784.99	61.76	2001/04/14	03:14:57	703.0661	13796.50	61.49
86	2001/04/14	12:14:57	712.0661	13736.80	61.67	2001/04/14	12:14:57	712.0661	13747.72	61.40
87	2001/04/14	21:14:57	721.0661	13744.61	61.86	2001/04/14	21:14:57	721.0661	13755.55	61.59
88	2001/04/15	06:14:57	730.0661	13586.36	61.92	2001/04/15	06:14:57	730.0661	13596.82	61.65
89	2001/04/15	15:14:57	739.0661	13673.16	61.66	2001/04/15	15:14:57	739.0661	13684.30	61.39
90	2001/04/16	00:14:57	748.0661	13824.47	61.79	2001/04/16	00:14:57	748.0661	13835.63	61.52
91	2001/04/16	09:14:57	757.0661	13603.80	61.66	2001/04/16	09:14:57	757.0661	13614.39	61.39
92	2001/04/16	18:14:57	766.0661	13572.28	61.59	2001/04/16	18:14:57	766.0661	13583.48	61.32
93	2001/04/17	03:14:57	775.0661	13761.89	61.82	2001/04/17	03:14:57	775.0661	13773.37	61.55
94	2001/04/17	12:14:57	784.0661	13496.94	61.62	2001/04/17	12:14:57	784.0661	13507.37	61.35

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107016

	80193 Date	80193 Clk Time	80193 Time	80193 Pres.	80193 Temp.	80181 Date	80181 Clk Time	80181 Time	80181 Pres.	80181 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
95	2001/04/17	21:14:57	793.0661	13498.49	61.71	2001/04/17	21:14:57	793.0661	13509.36	61.44
96	2001/04/18	06:14:57	802.0661	13462.87	61.61	2001/04/18	06:14:57	802.0661	13473.20	61.34
97	2001/04/18	15:14:57	811.0661	13469.82	61.69	2001/04/18	15:14:57	811.0661	13479.82	61.42
98	2001/04/19	00:14:57	820.0661	13353.16	61.53	2001/04/19	00:14:57	820.0661	13389.11	61.27
99	2001/04/19	09:14:57	829.0661	13145.47	61.34	2001/04/19	09:14:57	829.0661	13156.06	61.07
100	2001/04/19	18:14:57	838.0661	13984.46	61.78	2001/04/19	18:14:57	838.0661	13995.78	61.51
101	2001/04/20	03:14:57	847.0661	12739.53	61.25	2001/04/20	03:14:57	847.0661	12749.66	60.98
102	2001/04/20	12:14:57	856.0661	13241.23	61.19	2001/04/20	12:14:57	856.0661	13252.47	60.93
103	2001/04/20	21:14:57	865.0661	13200.13	61.39	2001/04/20	21:14:57	865.0661	13210.79	61.12
104	2001/04/21	06:14:57	874.0661	13161.14	61.39	2001/04/21	06:14:57	874.0661	13172.10	61.12
105	2001/04/21	15:14:57	883.0661	13138.66	61.39	2001/04/21	15:14:57	883.0661	13150.34	61.13
106	2001/04/22	00:14:57	892.0661	13111.35	61.40	2001/04/22	00:14:57	892.0661	13122.46	61.13
107	2001/04/22	09:14:57	901.0661	12746.13	61.29	2001/04/22	09:14:57	901.0661	12746.90	61.02
108	2001/04/22	18:14:57	910.0661	12271.55	60.25	2001/04/22	18:14:57	910.0661	12281.53	59.97
109	2001/04/23	03:14:57	919.0661	12164.67	60.03	2001/04/23	03:14:57	919.0661	12174.78	59.75
110	2001/04/23	12:14:57	928.0661	12366.34	60.16	2001/04/23	12:14:57	928.0661	12376.87	59.89
111	2001/04/23	21:14:57	937.0661	12244.56	60.22	2001/04/23	21:14:57	937.0661	12254.24	59.95
112	2001/04/24	06:14:57	946.0661	12523.82	60.72	2001/04/24	06:14:57	946.0661	12533.21	60.45
113	2001/04/24	15:14:57	955.0661	12184.86	60.20	2001/04/24	15:14:57	955.0661	12195.48	59.93
114	2001/04/25	00:14:57	964.0661	12349.66	60.58	2001/04/25	00:14:57	964.0661	12360.59	60.31
115	2001/04/25	09:14:57	973.0661	12128.39	60.35	2001/04/25	09:14:57	973.0661	12138.83	60.08
116	2001/04/25	18:14:57	982.0661	12046.53	60.18	2001/04/25	18:14:57	982.0661	12057.04	59.91
117	2001/04/26	03:17:57	991.1161	11979.96	60.10	2001/04/26	03:14:57	991.0661	11990.91	59.83
118	2001/04/26	12:17:57	1000.1161	12200.95	60.36	2001/04/26	12:14:57	1000.0661	12254.54	60.10
119	2001/04/26	21:17:57	1009.1161	11868.33	60.12	2001/04/26	21:14:57	1009.0661	11878.88	59.85
120	2001/04/27	06:17:57	1018.1161	11802.50	60.05	2001/04/27	06:14:57	1018.0661	11813.10	59.78
121	2001/04/27	15:17:57	1027.1161	12243.67	60.63	2001/04/27	15:14:57	1027.0661	12254.73	60.36
122	2001/04/28	00:17:57	1036.1161	11730.09	60.05	2001/04/28	00:14:57	1036.0661	11740.79	59.79
123	2001/04/28	09:17:57	1045.1161	11392.19	59.63	2001/04/28	09:14:57	1045.0661	11402.91	59.36
124	2001/04/28	18:17:57	1054.1161	11288.89	59.39	2001/04/28	18:14:57	1054.0661	11299.74	59.13
125	2001/04/29	03:17:57	1063.1161	11787.63	59.94	2001/04/29	03:14:57	1063.0661	11798.26	59.68
126	2001/04/29	12:17:57	1072.1161	12012.24	60.43	2001/04/29	12:14:57	1072.0661	12032.06	60.17
127	2001/04/29	21:17:57	1081.1161	11329.69	60.07	2001/04/29	21:14:57	1081.0661	11341.27	59.81
128	2001/04/30	06:17:57	1090.1161	12109.44	60.59	2001/04/30	06:14:57	1090.0661	12275.25	60.40
129	2001/04/30	15:17:57	1099.1161	12130.16	60.65	2001/04/30	15:14:57	1099.0661	12140.66	60.38
130	2001/05/01	00:17:57	1108.1161	12145.05	60.88	2001/05/01	00:14:57	1108.0661	12155.88	60.61
131	2001/05/01	09:17:57	1117.1161	11707.30	60.54	2001/05/01	09:14:57	1117.0661	11718.23	60.26
132	2001/05/01	18:17:57	1126.1161	11141.63	59.87	2001/05/01	18:14:57	1126.0661	11152.63	59.60
133	2001/05/02	03:17:57	1135.1161	11773.46	60.46	2001/05/02	03:14:57	1135.0661	11783.92	60.20
134	2001/05/02	12:17:57	1144.1161	11749.97	60.61	2001/05/02	12:14:57	1144.0661	11761.59	60.33
135	2001/05/02	21:17:57	1153.1161	11663.08	60.34	2001/05/02	21:14:57	1153.0661	11674.07	60.07
136	2001/05/03	06:17:57	1162.1161	11549.89	60.45	2001/05/03	06:14:57	1162.0661	11561.16	60.18
137	2001/05/03	14:08:57	1169.9661	10935.94	59.82	2001/05/03	14:05:57	1169.9161	10947.00	59.55
138			Shut in well							
139	2001/05/03	14:11:57	1170.0161	11799.76	60.31	2001/05/03	14:08:57	1169.9661	11634.22	59.92
140	2001/05/03	15:14:57	1171.0661	12212.37	60.28	2001/05/03	15:11:57	1171.0161	12220.63	60.00
141	2001/05/04	00:14:57	1180.0661	12452.46	61.31	2001/05/04	00:11:57	1180.0161	12463.31	61.05

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107016

	80193 Date	80193 Clk Time	80193 Time	80193 Pres.	80193 Temp.	80181 Date	80181 Clk Time	80181 Time	80181 Pres.	80181 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
142	2001/05/04	09:14:57	1189.0661	12516.25	61.62	2001/05/04	09:11:57	1189.0161	12526.57	61.34
143	2001/05/04	18:14:57	1198.0661	12568.95	61.76	2001/05/04	18:11:57	1198.0161	12579.75	61.48
144	2001/05/05	03:14:57	1207.0661	12613.32	61.88	2001/05/05	03:11:57	1207.0161	12624.05	61.61
145	2001/05/05	12:14:57	1216.0661	12652.19	61.99	2001/05/05	12:11:57	1216.0161	12663.07	61.71
146	2001/05/05	21:14:57	1225.0661	12687.25	62.09	2001/05/05	21:11:57	1225.0161	12698.07	61.81
147	2001/05/06	06:14:57	1234.0661	12719.18	62.17	2001/05/06	06:11:57	1234.0161	12730.36	61.89
148	2001/05/06	15:14:57	1243.0661	12748.80	62.25	2001/05/06	15:11:57	1243.0161	12759.70	61.97
149	2001/05/07	00:14:57	1252.0661	12776.06	62.31	2001/05/07	00:11:57	1252.0161	12787.09	62.04
150	2001/05/07	09:14:57	1261.0661	12801.56	62.38	2001/05/07	09:11:57	1261.0161	12812.60	62.10
151	2001/05/07	18:14:57	1270.0661	12825.59	62.44	2001/05/07	18:11:57	1270.0161	12836.59	62.16
152	2001/05/08	03:14:57	1279.0661	12848.16	62.49	2001/05/08	03:11:57	1279.0161	12859.32	62.22
153	2001/05/08	12:14:57	1288.0661	12869.56	62.54	2001/05/08	12:11:57	1288.0161	12880.55	62.27
154	2001/05/08	21:14:57	1297.0661	12889.78	62.59	2001/05/08	21:11:57	1297.0161	12900.83	62.31
155	2001/05/09	06:14:57	1306.0661	12909.16	62.64	2001/05/09	06:11:57	1306.0161	12920.22	62.36
156	2001/05/09	15:14:57	1315.0661	12927.23	62.68	2001/05/09	15:11:57	1315.0161	12938.53	62.40
157	2001/05/10	00:14:57	1324.0661	12944.76	62.72	2001/05/10	00:11:57	1324.0161	12956.07	62.44
158	2001/05/10	09:14:57	1333.0661	12961.68	62.75	2001/05/10	09:11:57	1333.0161	12972.77	62.48
159	2001/05/10	18:14:57	1342.0661	12977.94	62.80	2001/05/10	18:11:57	1342.0161	12988.93	62.52
160	2001/05/11	03:14:57	1351.0661	12993.02	62.83	2001/05/11	03:11:57	1351.0161	13004.28	62.55
161	2001/05/11	12:14:57	1360.0661	13007.72	62.86	2001/05/11	12:11:57	1360.0161	13019.13	62.59
162	2001/05/11	21:14:57	1369.0661	13022.14	62.89	2001/05/11	21:11:57	1369.0161	13033.45	62.62
163	2001/05/12	06:14:57	1378.0661	13035.95	62.93	2001/05/12	06:11:57	1378.0161	13047.13	62.65
164	2001/05/12	15:14:57	1387.0661	13049.10	62.95	2001/05/12	15:11:57	1387.0161	13060.15	62.68
165	2001/05/13	00:14:57	1396.0661	13061.92	62.98	2001/05/13	00:11:57	1396.0161	13073.24	62.71
166	2001/05/13	09:14:57	1405.0661	13074.20	63.01	2001/05/13	09:11:57	1405.0161	13085.57	62.73
167	2001/05/13	18:14:57	1414.0661	13086.13	63.03	2001/05/13	18:11:57	1414.0161	13097.52	62.76
168	2001/05/14	03:14:57	1423.0661	13097.57	63.06	2001/05/14	03:11:57	1423.0161	13109.06	62.79
169	2001/05/14	12:14:57	1432.0661	13108.93	63.08	2001/05/14	12:11:57	1432.0161	13120.26	62.81
170	2001/05/14	21:14:57	1441.0661	13119.75	63.11	2001/05/14	21:11:57	1441.0161	13131.04	62.83
171	2001/05/15	06:14:57	1450.0661	13130.27	63.13	2001/05/15	06:11:57	1450.0161	13141.59	62.86
172	2001/05/15	15:14:57	1459.0661	13140.54	63.16	2001/05/15	15:11:57	1459.0161	13151.77	62.88
173	2001/05/16	00:14:57	1468.0661	13150.45	63.18	2001/05/16	00:11:57	1468.0161	13161.81	62.90
174	2001/05/16	09:14:57	1477.0661	13159.81	63.19	2001/05/16	09:11:57	1477.0161	13171.42	62.92
175	2001/05/16	18:14:57	1486.0661	13168.89	63.22	2001/05/16	18:11:57	1486.0161	13180.41	62.94
176	2001/05/17	03:14:57	1495.0661	13177.93	63.24	2001/05/17	03:11:57	1495.0161	13189.20	62.96
177	2001/05/17	12:14:57	1504.0661	13186.59	63.26	2001/05/17	12:11:57	1504.0161	13197.88	62.98
178	2001/05/17	21:14:57	1513.0661	13195.13	63.27	2001/05/17	21:11:57	1513.0161	13206.58	63.00
179	2001/05/18	06:14:57	1522.0661	13203.39	63.29	2001/05/18	06:11:57	1522.0161	13214.77	63.02
180	2001/05/18	15:14:57	1531.0661	13211.36	63.31	2001/05/18	15:11:57	1531.0161	13222.76	63.03
181	2001/05/19	00:14:57	1540.0661	13219.11	63.33	2001/05/19	00:11:57	1540.0161	13230.67	63.05
182	2001/05/19	09:14:57	1549.0661	13226.72	63.35	2001/05/19	09:11:57	1549.0161	13238.32	63.07
183	2001/05/19	18:14:57	1558.0661	13234.14	63.36	2001/05/19	18:11:57	1558.0161	13245.59	63.08
184	2001/05/20	03:14:57	1567.0661	13241.43	63.38	2001/05/20	03:11:57	1567.0161	13252.89	63.10
185	2001/05/20	12:14:57	1576.0661	13248.49	63.39	2001/05/20	12:11:57	1576.0161	13259.92	63.12
186	2001/05/20	21:14:57	1585.0661	13255.41	63.41	2001/05/20	21:11:57	1585.0161	13266.92	63.13
187	2001/05/21	06:14:57	1594.0661	13262.01	63.42	2001/05/21	06:11:57	1594.0161	13273.39	63.14
188	2001/05/21	15:14:57	1603.0661	13268.33	63.44	2001/05/21	15:11:57	1603.0161	13279.98	63.16

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

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Job Number: 0107016

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189	2001/05/22	00:14:57	1612.0661	13274.86	63.46	2001/05/22	00:11:57	1612.0161	13286.45	63.18
190	2001/05/22	09:14:57	1621.0661	13281.11	63.48	2001/05/22	09:11:57	1621.0161	13292.57	63.20
191	2001/05/22	18:14:57	1630.0661	13287.27	63.49	2001/05/22	18:11:57	1630.0161	13298.59	63.21
192	2001/05/23	03:14:57	1639.0661	13292.86	63.50	2001/05/23	03:11:57	1639.0161	13304.33	63.22
193	2001/05/23	12:14:57	1648.0661	13298.67	63.52	2001/05/23	12:11:57	1648.0161	13310.23	63.24
194	2001/05/23	21:14:57	1657.0661	13304.31	63.53	2001/05/23	21:11:57	1657.0161	13315.74	63.25
195	2001/05/24	06:14:57	1666.0661	13309.66	63.55	2001/05/24	06:11:57	1666.0161	13321.07	63.26
196	2001/05/24	15:14:57	1675.0661	13315.15	63.56	2001/05/24	15:11:57	1675.0161	13326.51	63.27
197	2001/05/25	00:14:57	1684.0661	13320.19	63.57	2001/05/25	00:11:57	1684.0161	13331.88	63.29
198	2001/05/25	09:14:57	1693.0661	13325.42	63.58	2001/05/25	09:11:57	1693.0161	13337.14	63.30
199	2001/05/25	18:14:57	1702.0661	13330.34	63.59	2001/05/25	18:11:57	1702.0161	13342.16	63.31
200	2001/05/26	03:14:57	1711.0661	13335.32	63.60	2001/05/26	03:11:57	1711.0161	13346.85	63.32
201	2001/05/26	12:14:57	1720.0661	13340.00	63.62	2001/05/26	12:11:57	1720.0161	13351.59	63.33
202	2001/05/26	21:14:57	1729.0661	13344.58	63.63	2001/05/26	21:11:57	1729.0161	13356.13	63.34
203	2001/05/27	06:14:57	1738.0661	13348.99	63.64	2001/05/27	06:11:57	1738.0161	13360.82	63.36
204	2001/05/27	15:14:57	1747.0661	13353.38	63.65	2001/05/27	15:11:57	1747.0161	13365.11	63.37
205	2001/05/28	00:14:57	1756.0661	13357.66	63.66	2001/05/28	00:11:57	1756.0161	13369.43	63.38
206	2001/05/28	09:14:57	1765.0661	13361.89	63.67	2001/05/28	09:11:57	1765.0161	13373.68	63.39
207	2001/05/28	18:14:57	1774.0661	13366.03	63.68	2001/05/28	18:11:57	1774.0161	13377.53	63.40
208	2001/05/29	03:14:57	1783.0661	13370.11	63.69	2001/05/29	03:11:57	1783.0161	13381.86	63.41
209	2001/05/29	12:14:57	1792.0661	13374.01	63.70	2001/05/29	12:11:57	1792.0161	13385.78	63.42
210	2001/05/29	21:14:57	1801.0661	13378.16	63.72	2001/05/29	21:11:57	1801.0161	13389.68	63.43
211	2001/05/30	06:14:57	1810.0661	13381.72	63.72	2001/05/30	06:11:57	1810.0161	13393.54	63.44
212	2001/05/30	15:14:57	1819.0661	13385.44	63.73	2001/05/30	15:11:57	1819.0161	13397.02	63.45
213	2001/05/31	00:14:57	1828.0661	13389.12	63.75	2001/05/31	00:11:57	1828.0161	13400.68	63.46
214	2001/05/31	09:14:57	1837.0661	13392.62	63.76	2001/05/31	09:11:57	1837.0161	13404.19	63.47
215	2001/05/31	18:14:57	1846.0661	13396.07	63.77	2001/05/31	18:11:57	1846.0161	13407.88	63.48
216	2001/06/01	03:14:57	1855.0661	13399.70	63.78	2001/06/01	03:11:57	1855.0161	13411.24	63.49
217	2001/06/01	12:14:57	1864.0661	13403.04	63.78	2001/06/01	12:11:57	1864.0161	13414.83	63.50
218	2001/06/01	21:14:57	1873.0661	13406.39	63.80	2001/06/01	21:11:57	1873.0161	13417.97	63.51
219	2001/06/02	06:14:57	1882.0661	13409.66	63.81	2001/06/02	06:11:57	1882.0161	13421.20	63.52
220	2001/06/02	15:14:57	1891.0661	13412.71	63.82	2001/06/02	15:11:57	1891.0161	13424.56	63.53
221	2001/06/03	00:14:57	1900.0661	13415.76	63.82	2001/06/03	00:11:57	1900.0161	13427.53	63.54
222	2001/06/03	09:14:57	1909.0661	13418.83	63.83	2001/06/03	09:11:57	1909.0161	13430.64	63.55
223	2001/06/03	18:14:57	1918.0661	13422.06	63.84	2001/06/03	18:11:57	1918.0161	13433.73	63.56
224	2001/06/04	03:14:57	1927.0661	13425.13	63.85	2001/06/04	03:11:57	1927.0161	13436.92	63.57
225	2001/06/04	12:14:57	1936.0661	13428.11	63.86	2001/06/04	12:11:57	1936.0161	13439.86	63.57
226	2001/06/04	21:14:57	1945.0661	13431.05	63.87	2001/06/04	21:11:57	1945.0161	13442.77	63.59
227	2001/06/05	06:14:57	1954.0661	13433.82	63.88	2001/06/05	06:11:57	1954.0161	13445.60	63.59
228	2001/06/05	15:14:57	1963.0661	13436.61	63.88	2001/06/05	15:11:57	1963.0161	13448.40	63.60
229	2001/06/06	00:14:57	1972.0661	13439.40	63.89	2001/06/06	00:11:57	1972.0161	13451.28	63.61
230	2001/06/06	09:14:57	1981.0661	13441.92	63.90	2001/06/06	09:11:57	1981.0161	13453.93	63.62
231	2001/06/06	18:14:57	1990.0661	13444.85	63.91	2001/06/06	18:11:57	1990.0161	13456.74	63.63
232	2001/06/07	03:14:57	1999.0661	13447.55	63.92	2001/06/07	03:11:57	1999.0161	13459.22	63.63
233	2001/06/07	12:14:57	2008.0661	13449.86	63.93	2001/06/07	12:11:57	2008.0161	13461.84	63.64
234	2001/06/07	21:14:57	2017.0661	13452.45	63.94	2001/06/07	21:11:57	2017.0161	13464.11	63.65
235	2001/06/08	06:14:57	2026.0661	13454.89	63.95	2001/06/08	06:11:57	2026.0161	13466.67	63.66

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
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Para et al Ft. Liard No 1
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	80193 Date	80193 Clk Time	80193 Time	80193 Pres.	80193 Temp.	80181 Date	80181 Clk Time	80181 Time	80181 Pres.	80181 Temp.
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236	2001/06/08	15:14:57	2035.0661	13457.41	63.95	2001/06/08	15:11:57	2035.0161	13469.28	63.67
237	2001/06/09	00:14:57	2044.0661	13459.86	63.96	2001/06/09	00:11:57	2044.0161	13471.50	63.67
238	2001/06/09	09:14:57	2053.0661	13462.35	63.97	2001/06/09	09:11:57	2053.0161	13474.11	63.68
239	2001/06/09	18:14:57	2062.0661	13464.82	63.98	2001/06/09	18:11:57	2062.0161	13476.56	63.69
240	2001/06/10	03:14:57	2071.0661	13466.83	63.98	2001/06/10	03:11:57	2071.0161	13478.87	63.70
241	2001/06/10	12:14:57	2080.0661	13469.31	63.99	2001/06/10	12:11:57	2080.0161	13481.03	63.71
242	2001/06/10	21:14:57	2089.0661	13471.57	64.00	2001/06/10	21:11:57	2089.0161	13483.44	63.71
243	2001/06/11	06:14:57	2098.0661	13474.09	64.00	2001/06/11	06:11:57	2098.0161	13485.72	63.72
244	2001/06/11	15:14:57	2107.0661	13476.13	64.01	2001/06/11	15:11:57	2107.0161	13487.64	63.73
245	2001/06/12	00:14:57	2116.0661	13478.24	64.02	2001/06/12	00:11:57	2116.0161	13490.18	63.74
246	2001/06/12	09:14:57	2125.0661	13480.39	64.03	2001/06/12	09:11:57	2125.0161	13492.33	63.74
247	2001/06/12	18:14:57	2134.0661	13482.53	64.03	2001/06/12	18:11:57	2134.0161	13494.61	63.75
248	2001/06/13	03:14:57	2143.0661	13484.77	64.05	2001/06/13	03:11:57	2143.0161	13496.57	63.76
249	2001/06/13	12:14:57	2152.0661	13486.77	64.05	2001/06/13	12:11:57	2152.0161	13498.62	63.76
250	2001/06/13	21:14:57	2161.0661	13489.01	64.05	2001/06/13	21:11:57	2161.0161	13500.67	63.77
251	2001/06/14	06:14:57	2170.0661	13491.11	64.06	2001/06/14	06:11:57	2170.0161	13502.74	63.78
252	2001/06/14	15:14:57	2179.0661	13492.99	64.07	2001/06/14	15:11:57	2179.0161	13504.97	63.78
253	2001/06/15	00:14:57	2188.0661	13495.08	64.07	2001/06/15	00:11:57	2188.0161	13506.92	63.79
254	2001/06/15	09:14:57	2197.0661	13497.22	64.08	2001/06/15	09:11:57	2197.0161	13509.10	63.80
255	2001/06/15	18:14:57	2206.0661	13499.03	64.09	2001/06/15	18:11:57	2206.0161	13511.00	63.80
256	2001/06/16	03:14:57	2215.0661	13501.10	64.09	2001/06/16	03:11:57	2215.0161	13513.03	63.81
257	2001/06/16	12:14:57	2224.0661	13503.11	64.10	2001/06/16	12:11:57	2224.0161	13514.93	63.82
258	2001/06/16	21:14:57	2233.0661	13504.78	64.11	2001/06/16	21:11:57	2233.0161	13516.77	63.82
259	2001/06/17	06:14:57	2242.0661	13506.72	64.11	2001/06/17	06:11:57	2242.0161	13518.69	63.83
260	2001/06/17	15:14:57	2251.0661	13508.90	64.12	2001/06/17	15:11:57	2251.0161	13520.71	63.84
261	2001/06/18	00:14:57	2260.0661	13510.51	64.13	2001/06/18	00:11:57	2260.0161	13522.58	63.84
262	2001/06/18	09:14:57	2269.0661	13512.62	64.13	2001/06/18	09:11:57	2269.0161	13524.46	63.85
263	2001/06/18	18:14:57	2278.0661	13514.49	64.14	2001/06/18	18:11:57	2278.0161	13526.25	63.85
264	2001/06/19	03:14:57	2287.0661	13516.22	64.14	2001/06/19	03:11:57	2287.0161	13528.09	63.86
265	2001/06/19	12:14:57	2296.0661	13518.01	64.15	2001/06/19	12:11:57	2296.0161	13529.96	63.87
266	2001/06/19	21:14:57	2305.0661	13519.92	64.16	2001/06/19	21:11:57	2305.0161	13531.84	63.87
267	2001/06/20	06:14:57	2314.0661	13521.68	64.16	2001/06/20	06:11:57	2314.0161	13533.44	63.88
268	2001/06/20	15:14:57	2323.0661	13523.55	64.17	2001/06/20	15:11:57	2323.0161	13535.32	63.88
269	2001/06/21	00:14:57	2332.0661	13525.22	64.18	2001/06/21	00:11:57	2332.0161	13537.12	63.89
270	2001/06/21	09:14:57	2341.0661	13526.92	64.18	2001/06/21	09:11:57	2341.0161	13538.78	63.90
271	2001/06/21	18:14:57	2350.0661	13528.55	64.19	2001/06/21	18:11:57	2350.0161	13540.56	63.91
272	2001/06/22	03:14:57	2359.0661	13530.41	64.20	2001/06/22	03:11:57	2359.0161	13542.21	63.91
273	2001/06/22	12:14:57	2368.0661	13532.01	64.20	2001/06/22	12:11:57	2368.0161	13544.02	63.92
274	2001/06/22	21:14:57	2377.0661	13533.76	64.21	2001/06/22	21:11:57	2377.0161	13545.79	63.93
275	2001/06/23	06:14:57	2386.0661	13535.59	64.22	2001/06/23	06:11:57	2386.0161	13547.41	63.93
276	2001/06/23	15:14:57	2395.0661	13537.23	64.22	2001/06/23	15:11:57	2395.0161	13549.42	63.94
277	2001/06/24	00:14:57	2404.0661	13539.12	64.23	2001/06/24	00:11:57	2404.0161	13551.06	63.94
278	2001/06/24	09:14:57	2413.0661	13540.67	64.23	2001/06/24	09:11:57	2413.0161	13552.87	63.95
279	2001/06/24	18:14:57	2422.0661	13542.47	64.24	2001/06/24	18:11:57	2422.0161	13554.51	63.95
280	2001/06/25	03:14:57	2431.0661	13544.03	64.24	2001/06/25	03:11:57	2431.0161	13556.11	63.96
281	2001/06/25	12:14:57	2440.0661	13545.70	64.25	2001/06/25	12:11:57	2440.0161	13557.78	63.96
282	2001/06/25	21:14:57	2449.0661	13547.41	64.25	2001/06/25	21:11:57	2449.0161	13559.40	63.97

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
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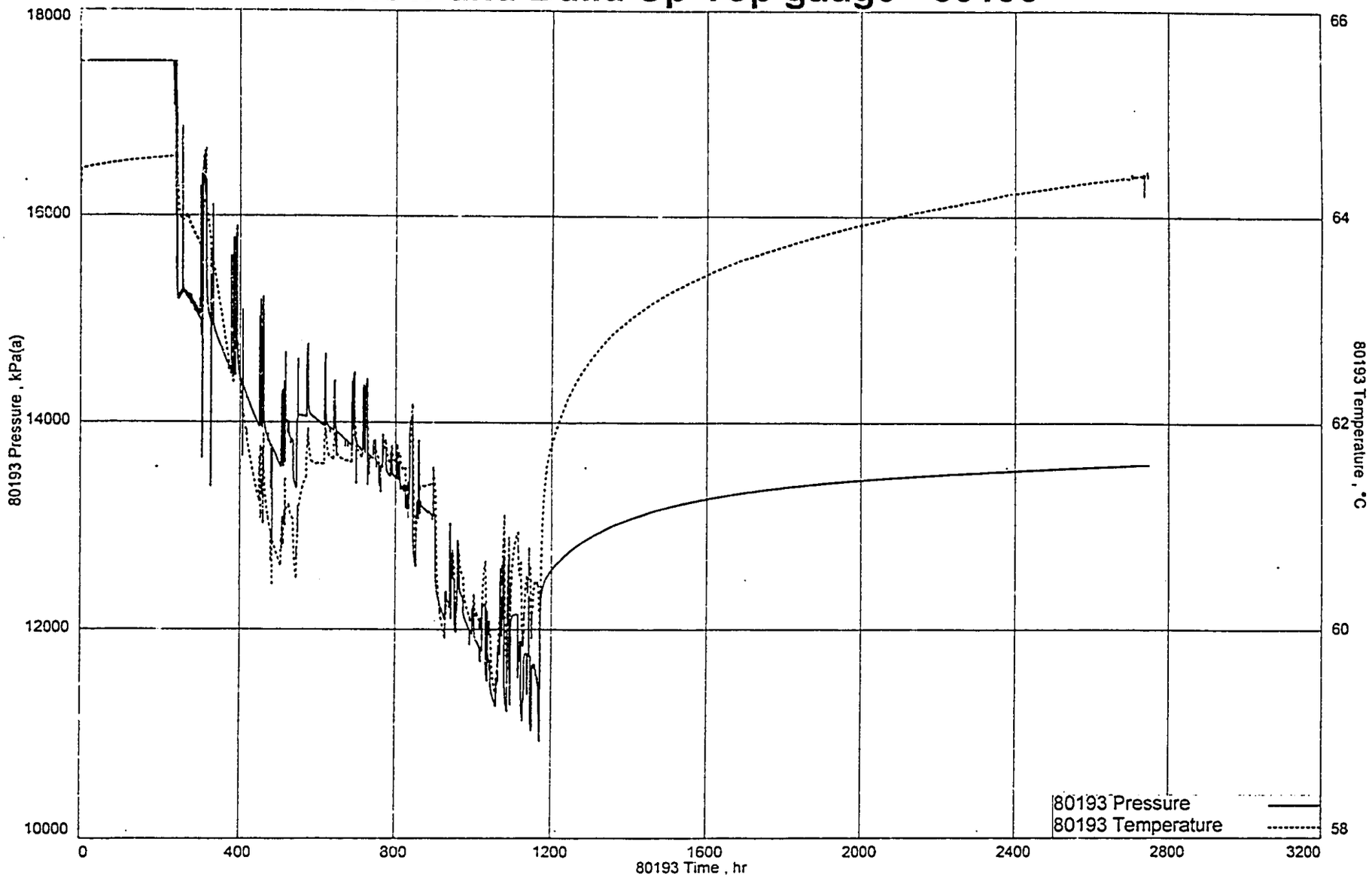
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284	2001/06/26	15:14:57	2467.0661	13550.65	64.26	2001/06/26	15:11:57	2467.0161	13562.61	63.98
285	2001/06/27	00:14:57	2476.0661	13552.36	64.27	2001/06/27	00:11:57	2476.0161	13564.43	63.98
286	2001/06/27	09:14:57	2485.0661	13554.01	64.27	2001/06/27	09:11:57	2485.0161	13565.93	63.99
287	2001/06/27	18:14:57	2494.0661	13555.45	64.28	2001/06/27	18:11:57	2494.0161	13567.49	64.00
288	2001/06/28	03:14:57	2503.0661	13557.16	64.28	2001/06/28	03:11:57	2503.0161	13569.23	64.00
289	2001/06/28	12:14:57	2512.0661	13558.78	64.29	2001/06/28	12:11:57	2512.0161	13570.86	64.01
290	2001/06/28	21:14:57	2521.0661	13560.31	64.29	2001/06/28	21:11:57	2521.0161	13572.39	64.01
291	2001/06/29	06:14:57	2530.0661	13561.88	64.30	2001/06/29	06:11:57	2530.0161	13573.88	64.01
292	2001/06/29	15:14:57	2539.0661	13563.47	64.30	2001/06/29	15:11:57	2539.0161	13575.44	64.02
293	2001/06/30	00:14:57	2548.0661	13564.91	64.31	2001/06/30	00:11:57	2548.0161	13576.82	64.02
294	2001/06/30	09:14:57	2557.0661	13566.38	64.31	2001/06/30	09:11:57	2557.0161	13578.67	64.03
295	2001/06/30	18:14:57	2566.0661	13567.87	64.31	2001/06/30	18:11:57	2566.0161	13580.03	64.04
296	2001/07/01	03:14:57	2575.0661	13569.58	64.32	2001/07/01	03:11:57	2575.0161	13581.48	64.04
297	2001/07/01	12:14:57	2584.0661	13570.93	64.32	2001/07/01	12:11:57	2584.0161	13583.04	64.04
298	2001/07/01	21:14:57	2593.0661	13572.44	64.33	2001/07/01	21:11:57	2593.0161	13584.54	64.05
299	2001/07/02	06:14:57	2602.0661	13573.91	64.33	2001/07/02	06:11:57	2602.0161	13586.08	64.05
300	2001/07/02	15:14:57	2611.0661	13575.50	64.34	2001/07/02	15:11:57	2611.0161	13587.50	64.06
301	2001/07/03	00:14:57	2620.0661	13577.09	64.34	2001/07/03	00:11:57	2620.0161	13589.08	64.06
302	2001/07/03	09:14:57	2629.0661	13578.51	64.34	2001/07/03	09:11:57	2629.0161	13590.57	64.06
303	2001/07/03	18:14:57	2638.0661	13579.93	64.35	2001/07/03	18:11:57	2638.0161	13592.13	64.07
304	2001/07/04	03:14:57	2647.0661	13581.50	64.35	2001/07/04	03:11:57	2647.0161	13593.60	64.07
305	2001/07/04	12:14:57	2656.0661	13582.99	64.36	2001/07/04	12:11:57	2656.0161	13595.00	64.08
306	2001/07/04	21:14:57	2665.0661	13584.44	64.36	2001/07/04	21:11:57	2665.0161	13596.68	64.08
307	2001/07/05	06:14:57	2674.0661	13585.88	64.37	2001/07/05	06:11:57	2674.0161	13597.98	64.09
308	2001/07/05	15:14:57	2683.0661	13587.47	64.37	2001/07/05	15:11:57	2683.0161	13599.46	64.09
309	2001/07/06	00:14:57	2692.0661	13589.42	64.37	2001/07/06	00:11:57	2692.0161	13601.41	64.09
310	2001/07/06	09:14:57	2701.0661	13592.05	64.38	2001/07/06	09:11:57	2701.0161	13604.03	64.09
311	2001/07/06	18:14:57	2710.0661	13593.88	64.38	2001/07/06	18:11:57	2710.0161	13605.78	64.10
312	2001/07/07	03:14:57	2719.0661	13595.40	64.39	2001/07/07	03:11:57	2719.0161	13607.65	64.12
313	2001/07/07	12:14:57	2728.0661	13596.96	64.39	2001/07/07	12:11:57	2728.0161	13609.05	64.12
314	2001/07/07	21:14:57	2737.0661	13596.52	64.40	2001/07/07	21:11:57	2737.0161	13608.50	64.13
315	2001/07/08	06:14:57	2746.0661	13597.73	64.38	2001/07/08	06:11:57	2746.0161	13610.19	64.10
316	2001/07/08	08:02:57	2747.8661	13598.09	64.39	2001/07/08	07:59:57	2747.8161	13609.94	64.12
317			Off Bottom							

Print Filter Used: Nth Line = 180.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3
Job Number: 0107016

Flow and Build Up-Top gauge - 80193

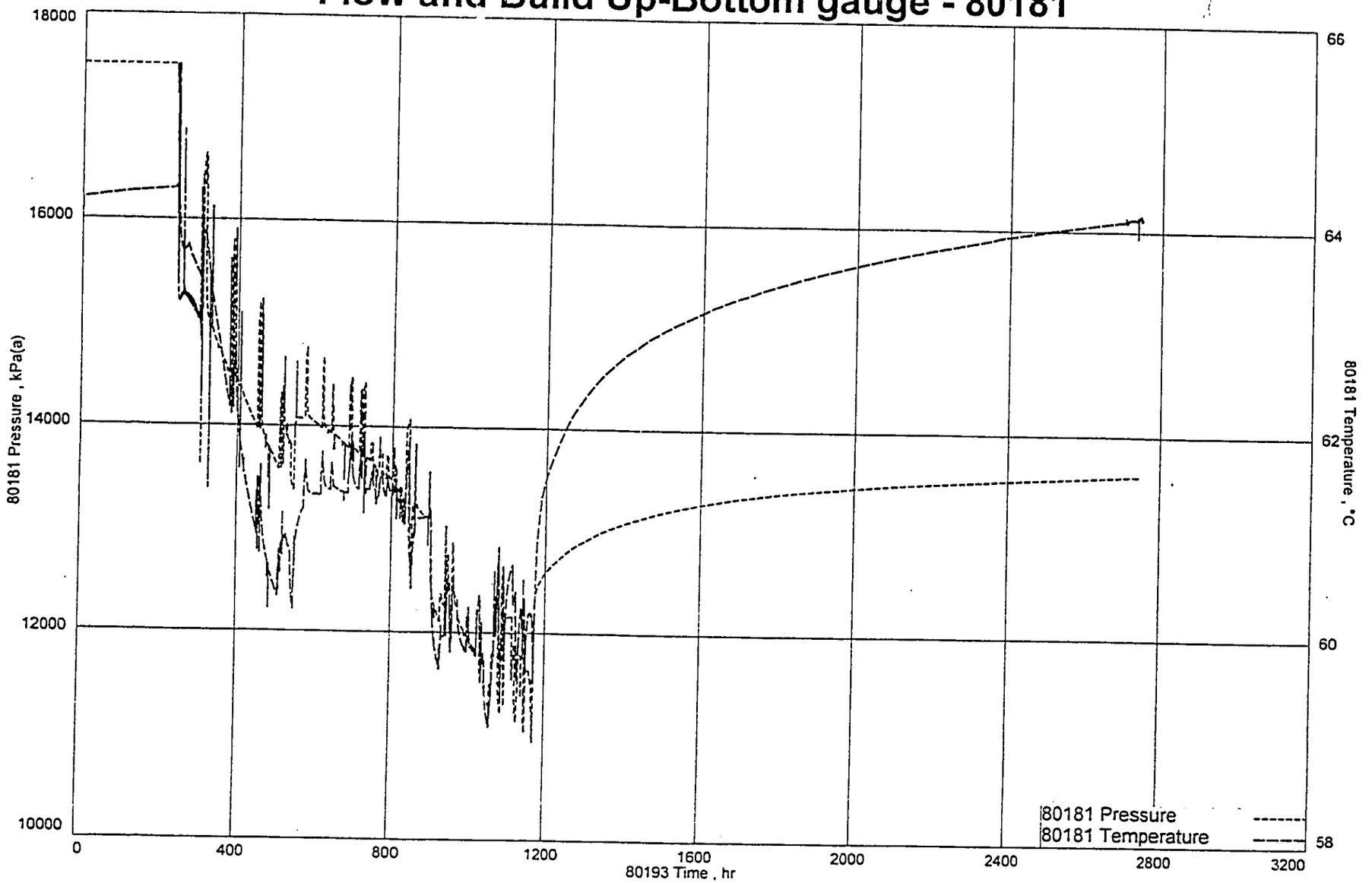


Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3
Job Number: 0107016

Flow and Build Up-Bottom gauge - 80181



Fast

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact:

Phone: Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard No 1

Operator:

Location-Downhole: No 1

Location-Surface: No 1

Test Information:

Company: Solid Production Services Ltd.

Representative:

Supervisor:

Test Type: Static Gradient

Test Unit:

Start Date: 2001/03/15

End Date: 2001/03/15

Report Date: 2001/07/10

Remarks:

Job Number: 0107017

Start Time: 20:11:00

End Time: 22:02:00

Prepared By: Ella Berscheid

Qualified By:

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/03/15

Static Gradient
Top gauge

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107017

Top

Gauge Serial Number	80193		Gauge Type	ss2500	
Gauge Manufacturer	Spartek		Maximum Recorder Range	41370.00	kPa
Run Depth	1760.60000	m	Date of Last Calibration	2001/01/31	
Gauge Start Date	2001/03/15 20:11:00		Gauge Stop Date	2001/03/15 22:02:00	
Date Gauge On Bottom	2001/03/15 21:26:00		Date Gauge Off Bottom	2001/03/15 21:36:00	

Test Data

Test/Prod Interval Top KB (TVD)	1731.50000	m	Base KB (TVD)	1750.00000	m
Pool Datum		m	Datum Depth		m
Tubing Pressure Initial	14910.00	kPa(a)	Final		kPa(a)
Casing Pressure Initial	12331.00	kPa(a)	Final		kPa(a)
Start Test Date	2001/03/15 20:11:00		Time Well Shut-In	2001/03/15 20:00:00	

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
4.60	20:32:28	21.47	14919.40		-6.60	
304.60	20:39:58	7.50	15387.13	1.559	12.79	0.065
604.60	20:48:27	8.50	15836.26	1.497	24.74	0.040
904.60	20:57:27	9.00	16263.43	1.424	34.92	0.034
1204.60	21:04:27	7.00	16672.83	1.365	45.92	0.037
1504.60	21:14:57	10.50	17058.00	1.284	58.19	0.041
1704.60	21:20:57	6.00	17311.27	1.266	62.93	0.024
1760.60	21:32:57	12.00	17493.23	3.249	64.43	0.027
		18.00				

Results

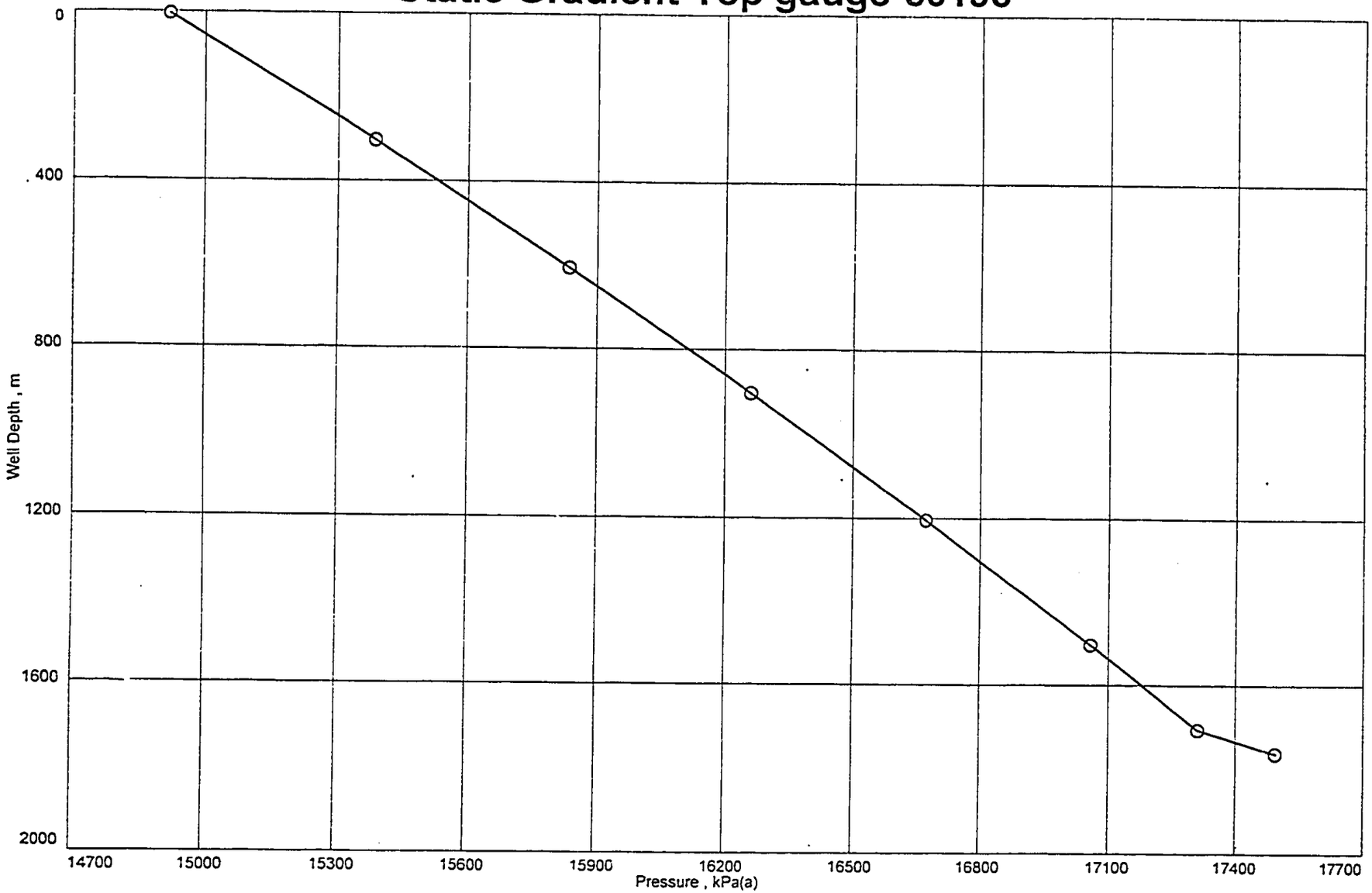
Gas Gradient	3.249	kPa/m	Gas/Liquid Interface	m	kPa(a)
Liquid Gradient		kPa/m			
			Well Datum (MPP)	**1740.75 m**	**17428.72 kPa(a)**

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/03/15

Para et al Ft. Liard No 1
Formation: M3
Job Number: 0107017

Static Gradient-Top gauge-80193



Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/03/15

Static Gradient
Bottom gauge 80181

Para et al Ft. Liard No 1
Formation: M3.

Job Number: 0107017

Bottom

Gauge Serial Number	80181		Gauge Type	ss2500	
Gauge Manufacturer	Spartek		Maximum Recorder Range	41370.00	kPa
Run Depth	1761.10000	m	Date of Last Calibration	2001/01/31	
Gauge Start Date	2001/03/15 20:11:00		Gauge Stop Date	2001/03/15 22:02:00	
Date Gauge On Bottom	2001/03/15 21:26:00		Date Gauge Off Bottom	2001/03/15 21:36:00	

Test Data

Test/Prod Interval Top KB (TVD)	1731.50000	m	Base KB (TVD)	1750.00000	m
Pool Datum		m	Datum Depth		m
Tubing Pressure Initial	14910.00	kPa(a)	Final		kPa(a)
Casing Pressure Initial	12331.00	kPa(a)	Final		kPa(a)
Start Test Date	2001/03/15 20:11:00		Time Well Shut-In	2001/03/15 20:00:00	

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
5.10	20:32:28	21.47	14909.10		-7.47	
305.10	20:39:58	7.50	15392.56	1.612	12.65	0.067
605.10	20:48:58	9.00	15845.20	1.509	24.61	0.040
905.10	20:57:27	8.50	16273.70	1.428	34.76	0.034
1205.10	21:04:57	7.50	16682.64	1.363	45.81	0.037
1505.10	21:14:57	10.00	17065.86	1.277	58.10	0.041
1705.10	21:20:57	6.00	17318.87	1.265	62.75	0.023
1761.10	21:32:57	12.00	17504.90	3.322	64.19	0.026
		6.00				

Results

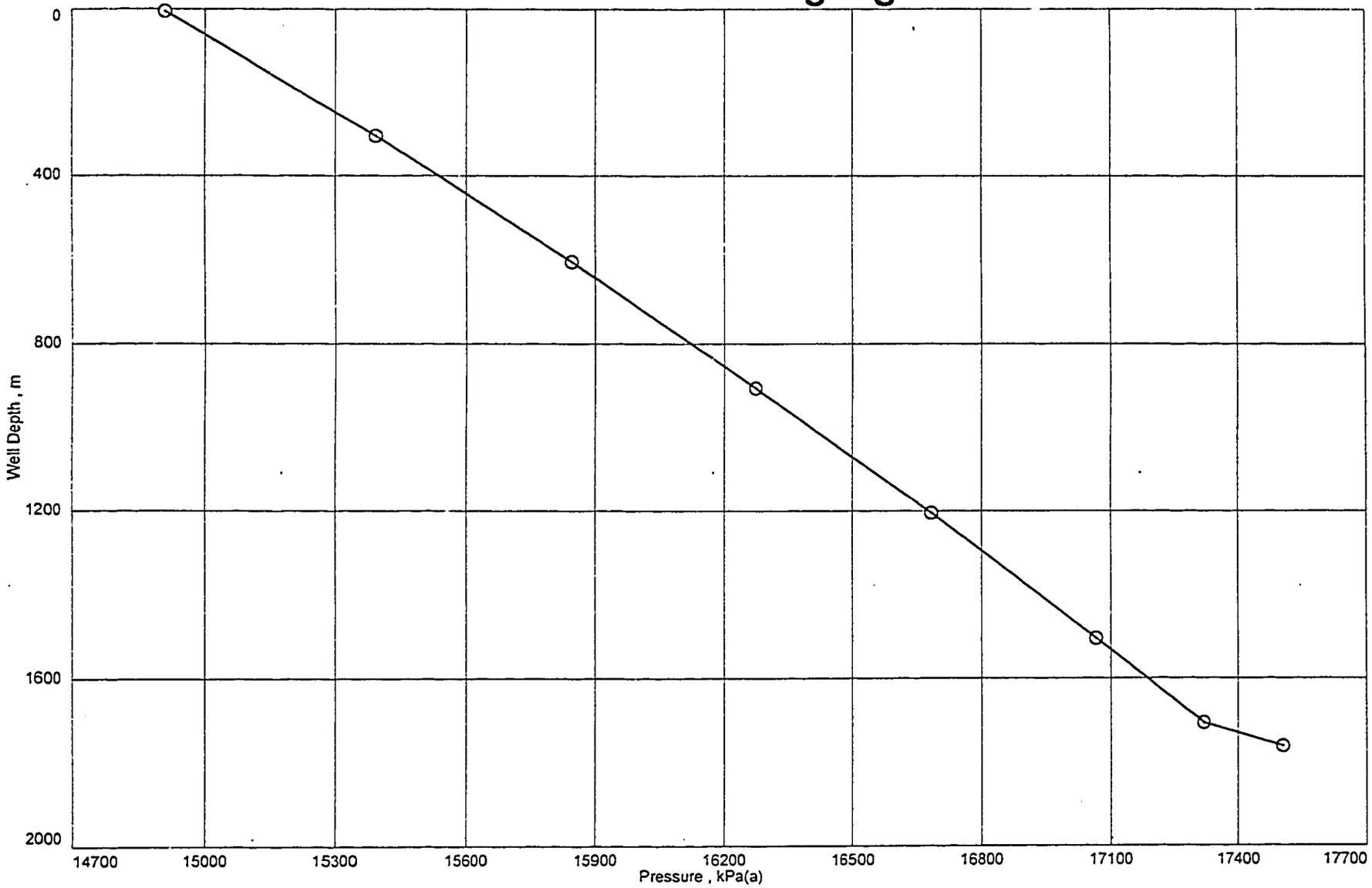
Gas Gradient	3.322	kPa/m	Gas/Liquid Interface	m	kPa(a)
Liquid Gradient		kPa/m			
			Well Datum (MPP)	**1740.75 m**	**17437.30 kPa(a)**

Fast

Paramount Resources Ltd. .
No 1
Start Test Date: 2001/03/15
Final Test Date: 2001/03/15

Para et al Ft. Liard No 1
Formation: M3
Job Number: 0107017

Static Gradient-Bottom gauge-80181



Fast

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact:

Phone: Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard No 1

Operator:

Location-Downhole: No 1

Location-Surface: No 1

Test Information:

Company: Solid Production Services Ltd.

Representative:

Supervisor:

Test Type: Static Gradient

Test Unit:

Start Date: 2001/07/08

End Date: 2001/07/08

Report Date: 2001/07/10

Remarks:

Job Number: 0107018

Start Time: 09:32:00

End Time: 11:27:00

Prepared By: Ella Berscheid

Qualified By:

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/08
Final Test Date: 2001/07/08

Static Gradient
Top gauge

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107018

Top

Gauge Serial Number			Gauge Type	ss2500	
Gauge Manufacturer	Spartek		Maximum Recorder Range	41370.00	kPa
Run Depth	1760.60000	m	Date of Last Calibration	2001/01/25	
Gauge Start Date	2001/07/08 09:32:18		Gauge Stop Date	2001/07/08 11:27:00	
Date Gauge On Bottom	2001/07/08 10:48:00		Date Gauge Off Bottom	2001/07/08 10:58:00	

Test Data

Test/Prod Interval Top KB (TVD)	1731.50000	m	Base KB (TVD)	1750.00000	m
Pool Datum		m	Datum Depth		m
Tubing Pressure Initial	11700.00	kPa(a)	Final		kPa(a)
Casing Pressure Initial	11700.00	kPa(a)	Final		kPa(a)
Start Test Date	2001/07/08 09:32:00		Time Well Shut-In	2001/05/03 15:10:00	

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
4.60	09:48:57	16.95	11721.87		18.14	
504.60	09:58:57	10.00	12292.69	1.142	22.22	0.008
1004.60	10:08:58	10.00	12829.93	1.074	39.15	0.034
1504.60	10:18:57	10.00	13341.24	1.023	57.51	0.037
1604.60	10:25:38	6.67	13438.91	0.977	60.17	0.027
1704.60	10:32:37	7.00	13537.20	0.983	62.29	0.021
1729.60	10:38:58	6.33	13561.30	0.964	63.15	0.034
1739.60	10:43:38	4.67	13570.98	0.968	63.38	0.023
1749.60	10:48:17	4.67	13580.80	0.982	63.62	0.023
1760.60	10:59:18	11.00	13592.57	1.070	63.78	0.015

Results

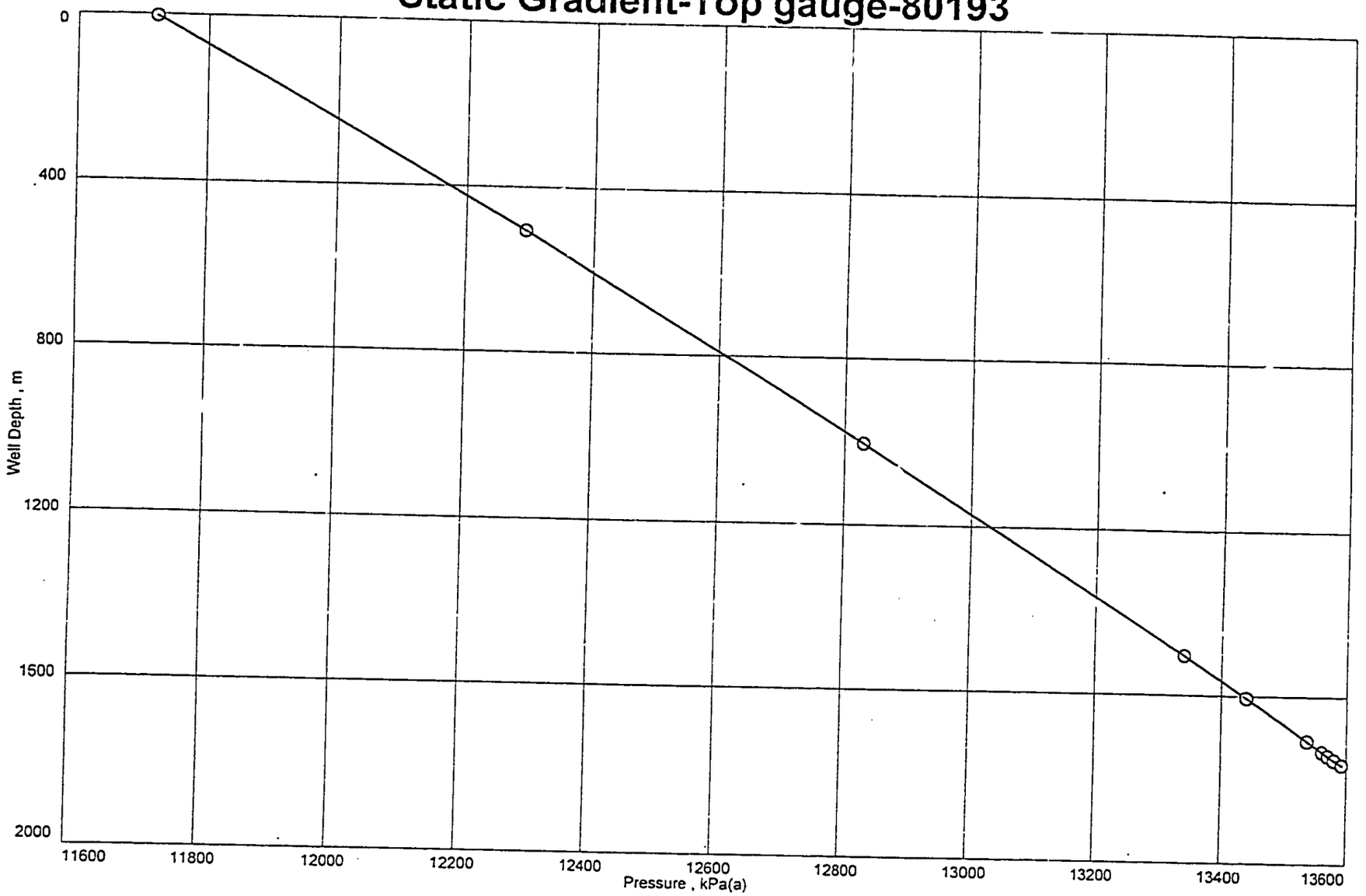
Gas Gradient	1.070	kPa/m	Gas/Liquid Interface	m	kPa(a)
Liquid Gradient		kPa/m			
			Well Datum (MPP)	**1740.75 m**	**13571.33 kPa(a)**

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/08
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3
Job Number: 0107018

Static Gradient-Top gauge-80193



Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/08
Final Test Date: 2001/07/08

Static Gradient
Bottom gauge 80359

Para et al Ft. Liard No 1
Formation: M3

Job Number: 0107018

Bottom

Gauge Serial Number	80359	Gauge Type	ss2500
Gauge Manufacturer	Spartek	Maximum Recorder Range	41370.00 kPa
Run Depth	1761.10000 m	Date of Last Calibration	2001/02/12
Gauge Start Date	2001/07/08 09:32:18	Gauge Stop Date	2001/07/08 11:27:00
Date Gauge On Bottom	2001/07/08 10:48:00	Date Gauge Off Bottom	2001/07/08 10:58:00

Test Data

Test/Prod Interval Top KB (TVD)	1731.50000 m	Base KB (TVD)	1750.00000 m
Pool Datum	m	Datum Depth	m
Tubing Pressure Initial	11700.00 kPa(a)	Final	kPa(a)
Casing Pressure Initial	11700.00 kPa(a)	Final	kPa(a)
Start Test Date	2001/07/08 09:32:00	Time Well Shut-In	2001/05/03 15:10:00

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
5.10	09:48:38	16.63	11711.94		15.99	
505.10	09:58:38	10.00	12283.50	1.143	22.41	0.013
1005.10	10:08:18	9.67	12822.92	1.079	39.24	0.034
1505.10	10:18:38	10.33	13337.90	1.030	57.66	0.037
1605.10	10:25:18	6.67	13435.67	0.978	60.18	0.025
1705.10	10:32:37	7.33	13533.86	0.982	62.29	0.021
1730.10	10:38:37	6.00	13558.07	0.968	63.07	0.031
1740.10	10:43:18	4.67	13567.83	0.976	63.28	0.021
1750.10	10:48:17	5.00	13577.70	0.986	63.52	0.024
1761.10	10:58:57	10.67	13589.46	1.069	63.63	0.010

Results

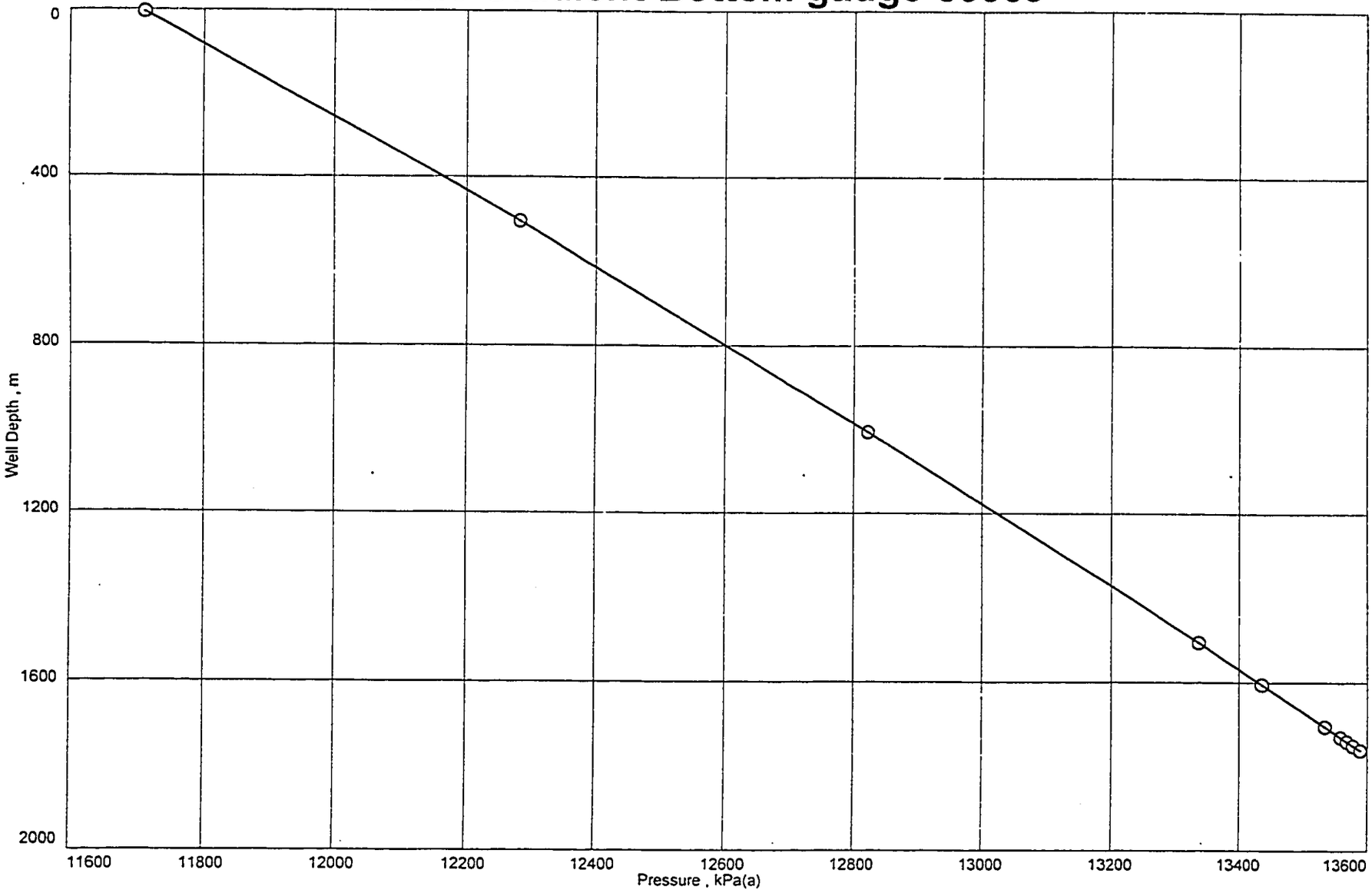
Gas Gradient	1.069 kPa/m	Gas/Liquid Interface	m	kPa(a)
Liquid Gradient	kPa/m			
		Well Datum (MPP)	**1740.75 m**	**13567.70 kPa(a)**

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/08
Final Test Date: 2001/07/08

Para et al Ft. Liard No 1
Formation: M3
Job Number: 0107018

Static Gradient-Bottom gauge-80359



Fast

FLOW AND BUILD UP

MAY 5 – JULY 5 2001

N.E.B. COPY

PARAMOUNT RESOURCES LTD.
PARA ET AL FORT LIARD N O1
Formation: M2
Flow and Build Up – May 5 – July 5/2001
Static Gradient July 5/2001

Test Completed By
Solid Production Services
505 – 19th Ave
Nisku, Alberta
T9E-7V9
(780) 955-7525

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact:

Phone: Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard No1

Operator:

Location-Downhole: No 1

Location-Surface: No 1

Test Information:

Company: Solid Production Services Ltd.

Representative:

Supervisor:

Test Type: Flow and Build Up

Test Unit:

Start Date: 2001/05/05

End Date: 2001/07/05

Report Date: 2001/07/10

Remarks:

Job Number: 0107014

Start Time: 09:46:00

End Time: 16:00:00

Prepared By: Ella Berscheid

Qualified By:

WELL INFORMATION

Well Name : Para et al Ft. Liard No1

Well Operator :

Well Location : No 1

Location-Surface : No 1

Field : Ft. Liard **Well Type : Vertical**

Pool :

Formation : M2

Perforation Type :			Producing Through : Tubing	Size	88.90 mm
Pool Datum	m	CF	Elevation Referenced From	492.10 m	KB
Datum Depth	m	CF	Elevation Referenced To	487.00 m	GL
			Offset	5.10 m	

Production Intervals

Production Interval & MPP Reference To : KB MPP Pressure Reference : None

	From - m	To - m		Depth - m	Pressure - kPa
1.	1644.00	1648.00	1.	1646.00	
2.	1684.00	1689.00	2.	1686.50	
3.			3.		
4.			4.		
5.			5.		
6.			6.		
7.			7.		
8.			8.		
9.			9.		
10.			10.		
11.			11.		
12.			12.		

Remarks :

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Recorder

Para et al Ft. Liard No1
Formation: M2

Job Number: 0107014

Top

Gauge Serial Number	80247		Gauge Type	ss2500
Gauge Manufacturer	Spartek		Maximum Recorder Range	41370.00 kPa
Run Depth	1691.60000 m		Date of Last Calibration	2000/08/14
Gauge Start Date	2001/05/05 10:17:27		Gauge Stop Date	2001/07/05 16:00:00
Date Gauge On Bottom	2001/05/05 10:17:00		Date Gauge Off Bottom	2001/07/05 15:52:00

Bottom

Gauge Serial Number	80461		Gauge Type	ss2500
Gauge Manufacturer	Spartek		Maximum Recorder Range	41370.00 kPa
Run Depth	1692.10000 m		Date of Last Calibration	2000/08/10
Gauge Start Date	2001/05/05 10:17:27		Gauge Stop Date	2001/07/05 16:00:00
Date Gauge On Bottom	2001/05/05 10:17:00		Date Gauge Off Bottom	2001/07/05 15:52:00

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2

Job Number: 0107014

	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
1	2001/05/05	10:17:27	0.8411	16962.92	62.49	2001/05/05	10:17:27	0.8411	16959.10	62.79
2			On Bottom							
3			Run depth: 80247 - 1691.6 mkb, 80461 - 1692.1 mkb							
4	2001/05/05	10:17:57	0.8494	16962.70	62.53	2001/05/05	10:17:57	0.8494	16958.87	62.82
5	2001/05/05	11:03:57	1.6161	16956.13	62.84	2001/05/05	11:03:57	1.6161	16952.70	63.06
6	2001/05/05	12:27:57	3.0161	16968.99	62.79	2001/05/05	12:27:57	3.0161	16966.08	63.01
7			Open well							
8	2001/05/05	12:30:57	3.0661	16892.94	62.78	2001/05/05	12:30:57	3.0661	16890.69	63.00
9	2001/05/05	13:45:57	4.3161	16497.43	62.66	2001/05/05	13:45:57	4.3161	16493.98	62.94
10	2001/05/05	18:30:57	9.0661	16466.21	62.70	2001/05/05	18:30:57	9.0661	16462.76	62.98
11	2001/05/05	23:15:57	13.8161	16386.23	62.71	2001/05/05	23:15:57	13.8161	16382.25	62.98
12	2001/05/06	04:00:57	18.5661	16329.92	62.72	2001/05/06	04:00:57	18.5661	16326.02	62.97
13	2001/05/06	08:45:57	23.3161	16246.45	62.73	2001/05/06	08:45:57	23.3161	16242.52	62.99
14	2001/05/06	13:30:57	28.0661	16171.84	62.73	2001/05/06	13:30:57	28.0661	16167.75	62.99
15	2001/05/06	18:15:57	32.8161	16098.77	62.74	2001/05/06	18:15:57	32.8161	16094.68	63.00
16	2001/05/06	23:00:57	37.5661	16027.01	62.74	2001/05/06	23:00:57	37.5661	16022.64	63.00
17	2001/05/07	03:45:57	42.3161	15955.85	62.74	2001/05/07	03:45:57	42.3161	15951.79	63.00
18	2001/05/07	08:30:57	47.0661	15888.89	62.74	2001/05/07	08:30:57	47.0661	15884.61	63.01
19	2001/05/07	13:15:57	51.8161	15817.63	62.74	2001/05/07	13:15:57	51.8161	15813.36	63.02
20	2001/05/07	18:00:57	56.5661	15747.96	62.74	2001/05/07	18:00:57	56.5661	15743.43	63.02
21	2001/05/07	22:45:57	61.3161	15678.33	62.74	2001/05/07	22:45:57	61.3161	15673.89	63.02
22	2001/05/08	03:30:57	66.0661	15609.07	62.73	2001/05/08	03:30:57	66.0661	15604.59	63.01
23	2001/05/08	08:15:57	70.8161	15541.82	62.73	2001/05/08	08:15:57	70.8161	15537.47	63.02
24	2001/05/08	13:00:57	75.5661	15474.33	62.73	2001/05/08	13:00:57	75.5661	15469.69	63.01
25	2001/05/08	17:45:57	80.3161	15406.76	62.73	2001/05/08	17:45:57	80.3161	15402.41	63.01
26	2001/05/08	22:30:57	85.0661	15344.80	62.71	2001/05/08	22:30:57	85.0661	15340.31	63.01
27	2001/05/09	03:15:57	89.8161	15277.79	62.70	2001/05/09	03:15:57	89.8161	15273.50	63.02
28	2001/05/09	08:00:57	94.5661	15212.71	62.70	2001/05/09	08:00:57	94.5661	15207.81	63.03
29	2001/05/09	12:45:57	99.3161	15146.51	62.70	2001/05/09	12:45:57	99.3161	15141.80	63.04
30	2001/05/09	17:30:57	104.0661	15079.89	62.69	2001/05/09	17:30:57	104.0661	15074.83	63.00
31	2001/05/09	22:15:57	108.8161	15014.52	62.69	2001/05/09	22:15:57	108.8161	15009.80	63.01
32	2001/05/10	03:00:57	113.5661	14952.54	62.68	2001/05/10	03:00:57	113.5661	14947.87	63.00
33	2001/05/10	07:45:57	118.3161	14887.00	62.67	2001/05/10	07:45:57	118.3161	14882.26	62.99
34	2001/05/10	12:30:57	123.0661	15068.39	62.75	2001/05/10	12:30:57	123.0661	15038.52	63.00
35	2001/05/10	17:15:57	127.8161	14757.86	62.66	2001/05/10	17:15:57	127.8161	14752.71	62.97
36	2001/05/10	22:00:57	132.5661	14694.82	62.65	2001/05/10	22:00:57	132.5661	14689.95	62.96
37	2001/05/11	02:45:57	137.3161	14631.92	62.65	2001/05/11	02:45:57	137.3161	14628.10	62.96
38	2001/05/11	07:30:57	142.0661	14571.02	62.65	2001/05/11	07:30:57	142.0661	14567.15	62.95
39	2001/05/11	12:15:57	146.8161	14507.20	62.63	2001/05/11	12:15:57	146.8161	14502.54	62.95
40	2001/05/11	17:00:57	151.5661	14444.98	62.63	2001/05/11	17:00:57	151.5661	14440.57	62.95
41	2001/05/11	21:45:57	156.3161	14384.36	62.62	2001/05/11	21:45:57	156.3161	14379.78	62.93
42	2001/05/12	02:30:57	161.0661	14325.04	62.61	2001/05/12	02:30:57	161.0661	14320.88	62.93
43	2001/05/12	07:15:57	165.8161	14263.00	62.61	2001/05/12	07:15:57	165.8161	14258.25	62.92
44	2001/05/12	12:00:57	170.5661	14201.78	62.60	2001/05/12	12:00:57	170.5661	14197.99	62.91
45	2001/05/12	16:45:57	175.3161	14143.32	62.60	2001/05/12	16:45:57	175.3161	14139.11	62.92
46	2001/05/12	21:30:57	180.0661	14081.91	62.60	2001/05/12	21:30:57	180.0661	14078.36	62.91
47	2001/05/13	02:15:57	184.8161	14021.75	62.59	2001/05/13	02:15:57	184.8161	14017.95	62.90
48	2001/05/13	07:00:57	189.5661	13963.11	62.59	2001/05/13	07:00:57	189.5661	13959.48	62.91

Print Filter Used: Nth Line = 95.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2

Job Number: 0107014

	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
49	2001/05/13	11:45:57	194.3161	13906.51	62.59	2001/05/13	11:45:57	194.3161	13902.79	62.91
50	2001/05/13	16:30:57	199.0661	13836.45	62.58	2001/05/13	16:30:57	199.0661	13832.41	62.89
51	2001/05/13	21:15:57	203.8161	13780.27	62.58	2001/05/13	21:15:57	203.8161	13776.61	62.89
52	2001/05/14	02:00:57	208.5661	13721.46	62.57	2001/05/14	02:00:57	208.5661	13717.46	62.87
53	2001/05/14	06:45:57	213.3161	13664.11	62.57	2001/05/14	06:45:57	213.3161	13660.61	62.90
54	2001/05/14	11:30:57	218.0661	13606.92	62.55	2001/05/14	11:30:57	218.0661	13603.17	62.87
55	2001/05/14	16:15:57	222.8161	13550.47	62.55	2001/05/14	16:15:57	222.8161	13546.99	62.87
56	2001/05/14	21:00:57	227.5661	13491.83	62.54	2001/05/14	21:00:57	227.5661	13488.36	62.86
57	2001/05/15	01:45:57	232.3161	13434.94	62.54	2001/05/15	01:45:57	232.3161	13430.88	62.86
58	2001/05/15	06:30:57	237.0661	13378.90	62.53	2001/05/15	06:30:57	237.0661	13374.93	62.83
59	2001/05/15	11:15:57	241.8161	13321.47	62.52	2001/05/15	11:15:57	241.8161	13317.86	62.84
60	2001/05/15	16:00:57	246.5661	13263.26	62.51	2001/05/15	16:00:57	246.5661	13259.72	62.83
61	2001/05/15	20:45:57	251.3161	13209.42	62.51	2001/05/15	20:45:57	251.3161	13206.27	62.83
62	2001/05/16	01:30:57	256.0661	13154.12	62.50	2001/05/16	01:30:57	256.0661	13150.66	62.82
63	2001/05/16	06:15:57	260.8161	13097.61	62.50	2001/05/16	06:15:57	260.8161	13093.58	62.81
64	2001/05/16	11:00:57	265.5661	13040.94	62.50	2001/05/16	11:00:57	265.5661	13037.49	62.81
65	2001/05/16	15:45:57	270.3161	12985.57	62.53	2001/05/16	15:45:57	270.3161	12982.06	62.84
66	2001/05/16	20:30:57	275.0661	12930.60	62.55	2001/05/16	20:30:57	275.0661	12927.09	62.87
67	2001/05/17	01:15:57	279.8161	12876.22	62.55	2001/05/17	01:15:57	279.8161	12872.62	62.86
68	2001/05/17	06:00:57	284.5661	12823.37	62.57	2001/05/17	06:00:57	284.5661	12819.86	62.87
69	2001/05/17	10:45:57	289.3161	12767.86	62.56	2001/05/17	10:45:57	289.3161	12764.15	62.86
70	2001/05/17	15:30:57	294.0661	12715.31	62.57	2001/05/17	15:30:57	294.0661	12711.75	62.88
71	2001/05/17	20:15:57	298.8161	12661.13	62.58	2001/05/17	20:15:57	298.8161	12657.33	62.87
72	2001/05/18	01:00:57	303.5661	12605.33	62.56	2001/05/18	01:00:57	303.5661	12601.78	62.87
73	2001/05/18	05:45:57	308.3161	12551.06	62.56	2001/05/18	05:45:57	308.3161	12547.49	62.86
74	2001/05/18	10:30:57	313.0661	12496.74	62.57	2001/05/18	10:30:57	313.0661	12492.95	62.87
75	2001/05/18	15:15:57	317.8161	12442.84	62.56	2001/05/18	15:15:57	317.8161	12439.52	62.86
76	2001/05/18	20:00:57	322.5661	12389.35	62.56	2001/05/18	20:00:57	322.5661	12385.95	62.86
77	2001/05/19	00:45:57	327.3161	12336.12	62.56	2001/05/19	00:45:57	327.3161	12332.41	62.87
78	2001/05/19	05:30:57	332.0661	12282.77	62.56	2001/05/19	05:30:57	332.0661	12278.79	62.85
79	2001/05/19	10:15:57	336.8161	12230.81	62.55	2001/05/19	10:15:57	336.8161	12227.43	62.85
80	2001/05/19	15:00:57	341.5661	12178.23	62.55	2001/05/19	15:00:57	341.5661	12175.07	62.86
81	2001/05/19	19:45:57	346.3161	12122.92	62.54	2001/05/19	19:45:57	346.3161	12119.39	62.84
82	2001/05/20	00:30:57	351.0661	12068.67	62.54	2001/05/20	00:30:57	351.0661	12065.03	62.86
83	2001/05/20	05:15:57	355.8161	12019.09	62.54	2001/05/20	05:15:57	355.8161	12015.51	62.83
84	2001/05/20	10:00:57	360.5661	11966.78	62.55	2001/05/20	10:00:57	360.5661	11963.39	62.86
85	2001/05/20	14:45:57	365.3161	11913.22	62.54	2001/05/20	14:45:57	365.3161	11909.44	62.83
86	2001/05/20	19:30:57	370.0661	11861.60	62.54	2001/05/20	19:30:57	370.0661	11857.80	62.85
87	2001/05/21	00:15:57	374.8161	11809.10	62.53	2001/05/21	00:15:57	374.8161	11805.53	62.84
88	2001/05/21	05:00:57	379.5661	11757.45	62.52	2001/05/21	05:00:57	379.5661	11753.66	62.83
89	2001/05/21	09:45:57	384.3161	11704.89	62.52	2001/05/21	09:45:57	384.3161	11701.12	62.83
90	2001/05/21	14:30:57	389.0661	11653.95	62.50	2001/05/21	14:30:57	389.0661	11650.02	62.82
91	2001/05/21	19:15:57	393.8161	11600.23	62.50	2001/05/21	19:15:57	393.8161	11596.77	62.82
92	2001/05/22	00:00:57	398.5661	11548.45	62.49	2001/05/22	00:00:57	398.5661	11544.88	62.81
93	2001/05/22	04:45:57	403.3161	11496.54	62.49	2001/05/22	04:45:57	403.3161	11493.22	62.79
94	2001/05/22	09:30:57	408.0661	11446.24	62.50	2001/05/22	09:30:57	408.0661	11442.62	62.81
95	2001/05/22	14:15:57	412.8161	11394.46	62.49	2001/05/22	14:15:57	412.8161	11390.71	62.80
96	2001/05/22	19:00:57	417.5661	11343.25	62.48	2001/05/22	19:00:57	417.5661	11339.56	62.78

Print Filter Used: Nth Line = 95.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
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Para et al Ft. Liard No1
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Job Number: 0107014

	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
97	2001/05/22	23:45:57	422.3161	11292.02	62.48	2001/05/22	23:45:57	422.3161	11288.57	62.79
98	2001/05/23	04:30:57	427.0661	11240.63	62.48	2001/05/23	04:30:57	427.0661	11237.31	62.80
99	2001/05/23	09:15:57	431.8161	11189.87	62.46	2001/05/23	09:15:57	431.8161	11185.94	62.77
100	2001/05/23	14:00:57	436.5661	11139.59	62.47	2001/05/23	14:00:57	436.5661	11135.55	62.79
101	2001/05/23	18:45:57	441.3161	11088.73	62.47	2001/05/23	18:45:57	441.3161	11085.11	62.79
102	2001/05/23	23:30:57	446.0661	11037.88	62.47	2001/05/23	23:30:57	446.0661	11034.41	62.78
103	2001/05/24	04:15:57	450.8161	10982.50	62.44	2001/05/24	04:15:57	450.8161	10978.84	62.75
104	2001/05/24	09:00:57	455.5661	10932.55	62.45	2001/05/24	09:00:57	455.5661	10928.88	62.77
105	2001/05/24	13:45:57	460.3161	10881.53	62.42	2001/05/24	13:45:57	460.3161	10877.53	62.73
106	2001/05/24	18:30:57	465.0661	10830.61	62.43	2001/05/24	18:30:57	465.0661	10826.76	62.76
107	2001/05/24	23:15:57	469.8161	10779.04	62.42	2001/05/24	23:15:57	469.8161	10775.37	62.73
108	2001/05/25	04:00:57	474.5661	10727.86	62.41	2001/05/25	04:00:57	474.5661	10724.76	62.72
109	2001/05/25	08:45:57	479.3161	10677.62	62.42	2001/05/25	08:45:57	479.3161	10673.80	62.74
110	2001/05/25	13:30:57	484.0661	10628.63	62.43	2001/05/25	13:30:57	484.0661	10624.91	62.75
111	2001/05/25	18:15:57	488.8161	10577.60	62.38	2001/05/25	18:15:57	488.8161	10573.99	62.70
112	2001/05/25	23:00:57	493.5661	10526.61	62.39	2001/05/25	23:00:57	493.5661	10522.83	62.71
113	2001/05/26	03:45:57	498.3161	10477.36	62.40	2001/05/26	03:45:57	498.3161	10473.72	62.72
114	2001/05/26	08:30:57	503.0661	10433.77	62.40	2001/05/26	08:30:57	503.0661	10429.93	62.73
115	2001/05/26	13:15:57	507.8161	10415.79	62.40	2001/05/26	13:15:57	507.8161	10412.34	62.70
116	2001/05/26	18:00:57	512.5661	10421.30	62.38	2001/05/26	18:00:57	512.5661	10417.60	62.68
117	2001/05/26	22:45:57	517.3161	10300.34	62.43	2001/05/26	22:45:57	517.3161	10297.02	62.76
118	2001/05/27	03:30:57	522.0661	10248.46	62.43	2001/05/27	03:30:57	522.0661	10245.13	62.74
119	2001/05/27	08:15:57	526.8161	10197.38	62.39	2001/05/27	08:15:57	526.8161	10194.06	62.69
120	2001/05/27	13:00:57	531.5661	10146.10	62.38	2001/05/27	13:00:57	531.5661	10143.06	62.70
121	2001/05/27	17:45:57	536.3161	10094.42	62.36	2001/05/27	17:45:57	536.3161	10090.91	62.66
122	2001/05/27	22:30:57	541.0661	10398.02	62.44	2001/05/27	22:30:57	541.0661	10395.27	62.75
123	2001/05/28	03:15:57	545.8161	10016.58	62.34	2001/05/28	03:15:57	545.8161	10013.24	62.65
124	2001/05/28	08:00:57	550.5661	9963.61	62.32	2001/05/28	08:00:57	550.5661	9960.59	62.61
125	2001/05/28	12:45:57	555.3161	9913.09	62.32	2001/05/28	12:45:57	555.3161	9909.80	62.62
126	2001/05/28	17:30:57	560.0661	9862.94	62.32	2001/05/28	17:30:57	560.0661	9859.49	62.62
127	2001/05/28	22:15:57	564.8161	9812.91	62.32	2001/05/28	22:15:57	564.8161	9809.54	62.62
128	2001/05/29	03:00:57	569.5661	9763.18	62.32	2001/05/29	03:00:57	569.5661	9759.50	62.62
129	2001/05/29	07:45:57	574.3161	9713.35	62.29	2001/05/29	07:45:57	574.3161	9710.15	62.57
130	2001/05/29	12:30:57	579.0661	9663.19	62.29	2001/05/29	12:30:57	579.0661	9659.84	62.57
131	2001/05/29	17:15:57	583.8161	10126.46	62.58	2001/05/29	17:15:57	583.8161	10124.16	62.93
132	2001/05/29	22:00:57	588.5661	10181.38	62.40	2001/05/29	22:00:57	588.5661	10178.43	62.65
133	2001/05/30	02:45:57	593.3161	10279.99	61.56	2001/05/30	02:45:57	593.3161	10278.81	62.16
134	2001/05/30	07:30:57	598.0661	9706.75	62.01	2001/05/30	07:30:57	598.0661	9706.36	62.30
135	2001/05/30	12:15:57	602.8161	9647.48	62.08	2001/05/30	12:15:57	602.8161	9646.56	62.34
136	2001/05/30	17:00:57	607.5661	9593.24	62.07	2001/05/30	17:00:57	607.5661	9592.38	62.33
137	2001/05/30	21:45:57	612.3161	9538.59	62.06	2001/05/30	21:45:57	612.3161	9537.85	62.31
138	2001/05/31	02:30:57	617.0661	9487.10	62.05	2001/05/31	02:30:57	617.0661	9486.55	62.30
139	2001/05/31	07:15:57	621.8161	9435.73	62.04	2001/05/31	07:15:57	621.8161	9435.02	62.29
140	2001/05/31	12:00:57	626.5661	9384.25	62.03	2001/05/31	12:00:57	626.5661	9383.61	62.27
141	2001/05/31	16:45:57	631.3161	9338.22	62.02	2001/05/31	16:45:57	631.3161	9337.57	62.26
142	2001/05/31	21:30:57	636.0661	9919.02	61.07	2001/05/31	21:30:57	636.0661	9918.63	61.89
143	2001/06/01	02:15:57	640.8161	9267.01	61.96	2001/06/01	02:15:57	640.8161	9266.39	62.21
144	2001/06/01	07:00:57	645.5661	9214.97	62.00	2001/06/01	07:00:57	645.5661	9214.38	62.24

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Paramount Resources Ltd.
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Formation: M2

Job Number: 0107014

	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
145	2001/06/01	11:45:57	650.3161	9192.71	62.01	2001/06/01	11:45:57	650.3161	9192.05	62.26
146	2001/06/01	16:30:57	655.0661	9172.19	62.01	2001/06/01	16:30:57	655.0661	9171.76	62.25
147	2001/06/01	21:15:57	659.8161	9055.86	61.99	2001/06/01	21:15:57	659.8161	9055.33	62.23
148	2001/06/02	02:00:57	664.5661	9005.18	61.97	2001/06/02	02:00:57	664.5661	9004.48	62.21
149	2001/06/02	06:45:57	669.3161	8954.10	61.96	2001/06/02	06:45:57	669.3161	8953.17	62.20
150	2001/06/02	11:30:57	674.0661	8903.83	61.95	2001/06/02	11:30:57	674.0661	8903.37	62.19
151	2001/06/02	16:15:57	678.8161	8853.60	61.94	2001/06/02	16:15:57	678.8161	8852.77	62.17
152	2001/06/02	21:00:57	683.5661	8917.95	61.96	2001/06/02	21:00:57	683.5661	8916.49	62.17
153	2001/06/03	01:45:57	688.3161	8772.43	61.92	2001/06/03	01:45:57	688.3161	8771.90	62.14
154	2001/06/03	06:30:57	693.0661	8724.32	61.91	2001/06/03	06:30:57	693.0661	8723.88	62.12
155	2001/06/03	11:15:57	697.8161	8673.87	61.89	2001/06/03	11:15:57	697.8161	8673.42	62.09
156	2001/06/03	16:00:57	702.5661	8623.91	61.88	2001/06/03	16:00:57	702.5661	8623.38	62.09
157	2001/06/03	20:45:57	707.3161	8574.14	61.87	2001/06/03	20:45:57	707.3161	8573.21	62.08
158	2001/06/04	01:30:57	712.0661	8518.56	61.87	2001/06/04	01:30:57	712.0661	8518.36	62.08
159	2001/06/04	06:15:57	716.8161	8876.03	61.96	2001/06/04	06:15:57	716.8161	8875.50	62.14
160	2001/06/04	11:00:57	721.5661	8496.51	61.93	2001/06/04	11:00:57	721.5661	8495.86	62.14
161	2001/06/04	15:45:57	726.3161	8443.89	61.89	2001/06/04	15:45:57	726.3161	8444.63	62.11
162	2001/06/04	20:30:57	731.0661	8397.07	61.88	2001/06/04	20:30:57	731.0661	8394.83	62.10
163	2001/06/04	20:57:57	731.5161	8393.05	61.88	2001/06/04	20:57:57	731.5161	8391.58	62.09
164			Shut in well							
165	2001/06/04	21:00:57	731.5661	8843.00	61.97	2001/06/04	21:00:57	731.5661	8858.07	62.18
166	2001/06/05	01:12:57	735.7661	8659.23	61.96	2001/06/05	01:12:57	735.7661	8657.90	62.15
167	2001/06/05	05:57:57	740.5161	8931.40	62.01	2001/06/05	05:57:57	740.5161	8931.06	62.20
168	2001/06/05	10:42:57	745.2661	9088.60	62.01	2001/06/05	10:42:57	745.2661	9089.87	62.20
169	2001/06/05	15:27:57	750.0161	9196.48	59.32	2001/06/05	15:27:57	750.0161	9197.49	60.19
170	2001/06/05	20:12:57	754.7661	9219.93	59.13	2001/06/05	20:12:57	754.7661	9221.24	60.00
171	2001/06/06	00:57:57	759.5161	9248.57	59.06	2001/06/06	00:57:57	759.5161	9249.79	59.93
172	2001/06/06	05:42:57	764.2661	9275.15	59.07	2001/06/06	05:42:57	764.2661	9276.32	59.91
173	2001/06/06	10:27:57	769.0161	9300.14	59.07	2001/06/06	10:27:57	769.0161	9301.30	59.90
174	2001/06/06	15:12:57	773.7661	9324.70	59.04	2001/06/06	15:12:57	773.7661	9325.77	59.89
175	2001/06/06	19:57:57	778.5161	9348.87	59.07	2001/06/06	19:57:57	778.5161	9349.91	59.90
176	2001/06/07	00:42:57	783.2661	9372.26	59.10	2001/06/07	00:42:57	783.2661	9373.07	59.90
177	2001/06/07	05:27:57	788.0161	9395.36	59.11	2001/06/07	05:27:57	788.0161	9396.22	59.93
178	2001/06/07	10:12:57	792.7661	9417.47	59.14	2001/06/07	10:12:57	792.7661	9418.73	59.96
179	2001/06/07	14:57:57	797.5161	9440.04	59.18	2001/06/07	14:57:57	797.5161	9441.05	60.00
180	2001/06/07	19:42:57	802.2661	9462.12	59.22	2001/06/07	19:42:57	802.2661	9462.75	60.01
181	2001/06/08	00:27:57	807.0161	9483.21	59.24	2001/06/08	00:27:57	807.0161	9484.22	60.02
182	2001/06/08	05:12:57	811.7661	9505.07	59.30	2001/06/08	05:12:57	811.7661	9505.90	60.05
183	2001/06/08	09:57:57	816.5161	9525.96	59.29	2001/06/08	09:57:57	816.5161	9526.92	60.06
184	2001/06/08	14:42:57	821.2661	9546.97	59.33	2001/06/08	14:42:57	821.2661	9547.55	60.08
185	2001/06/08	19:27:57	826.0161	9567.33	59.34	2001/06/08	19:27:57	826.0161	9568.25	60.08
186	2001/06/09	00:12:57	830.7661	9587.85	59.40	2001/06/09	00:12:57	830.7661	9588.38	60.12
187	2001/06/09	04:57:57	835.5161	9607.74	59.44	2001/06/09	04:57:57	835.5161	9608.46	60.13
188	2001/06/09	09:42:57	840.2661	9627.30	59.46	2001/06/09	09:42:57	840.2661	9628.17	60.16
189	2001/06/09	14:27:57	845.0161	9647.11	59.50	2001/06/09	14:27:57	845.0161	9647.98	60.19
190	2001/06/09	19:12:57	849.7661	9666.68	59.54	2001/06/09	19:12:57	849.7661	9667.62	60.21
191	2001/06/09	23:57:57	854.5161	9685.84	59.55	2001/06/09	23:57:57	854.5161	9686.66	60.23
192	2001/06/10	04:42:57	859.2661	9704.98	59.57	2001/06/10	04:42:57	859.2661	9705.72	60.26

Print Filter Used: Nth Line = 95.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2

Job Number: 0107014

	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
193	2001/06/10	09:27:57	864.0161	9723.79	59.62	2001/06/10	09:27:57	864.0161	9724.46	60.29
194	2001/06/10	14:12:57	868.7661	9742.40	59.67	2001/06/10	14:12:57	868.7661	9742.99	60.30
195	2001/06/10	18:57:57	873.5161	9760.95	59.68	2001/06/10	18:57:57	873.5161	9761.37	60.32
196	2001/06/10	23:42:57	878.2661	9779.08	59.71	2001/06/10	23:42:57	878.2661	9779.92	60.35
197	2001/06/11	04:27:57	883.0161	9797.11	59.74	2001/06/11	04:27:57	883.0161	9797.83	60.39
198	2001/06/11	09:12:57	887.7661	9815.03	59.77	2001/06/11	09:12:57	887.7661	9815.99	60.41
199	2001/06/11	13:57:57	892.5161	9832.85	59.81	2001/06/11	13:57:57	892.5161	9833.61	60.42
200	2001/06/11	18:42:57	897.2661	9850.57	59.85	2001/06/11	18:42:57	897.2661	9851.37	60.45
201	2001/06/11	23:27:57	902.0161	9868.18	59.85	2001/06/11	23:27:57	902.0161	9868.83	60.47
202	2001/06/12	04:12:57	906.7661	9885.21	59.88	2001/06/12	04:12:57	906.7661	9886.13	60.50
203	2001/06/12	08:57:57	911.5161	9902.66	59.94	2001/06/12	08:57:57	911.5161	9903.39	60.50
204	2001/06/12	13:42:57	916.2661	9919.58	59.93	2001/06/12	13:42:57	916.2661	9920.43	60.54
205	2001/06/12	18:27:57	921.0161	9936.88	59.98	2001/06/12	18:27:57	921.0161	9937.57	60.56
206	2001/06/12	23:12:57	925.7661	9953.48	60.00	2001/06/12	23:12:57	925.7661	9954.22	60.58
207	2001/06/13	03:57:57	930.5161	9970.16	60.04	2001/06/13	03:57:57	930.5161	9970.91	60.60
208	2001/06/13	08:42:57	935.2661	9986.72	60.07	2001/06/13	08:42:57	935.2661	9987.36	60.61
209	2001/06/13	13:27:57	940.0161	10003.03	60.10	2001/06/13	13:27:57	940.0161	10003.72	60.65
210	2001/06/13	18:12:57	944.7661	10019.58	60.12	2001/06/13	18:12:57	944.7661	10020.13	60.66
211	2001/06/13	22:57:57	949.5161	10035.62	60.13	2001/06/13	22:57:57	949.5161	10036.22	60.69
212	2001/06/14	03:42:57	954.2661	10051.61	60.17	2001/06/14	03:42:57	954.2661	10052.13	60.71
213	2001/06/14	08:27:57	959.0161	10067.39	60.19	2001/06/14	08:27:57	959.0161	10068.07	60.72
214	2001/06/14	13:12:57	963.7661	10083.49	60.24	2001/06/14	13:12:57	963.7661	10084.08	60.75
215	2001/06/14	17:57:57	968.5161	10099.07	60.26	2001/06/14	17:57:57	968.5161	10099.67	60.77
216	2001/06/14	22:42:57	973.2661	10114.53	60.25	2001/06/14	22:42:57	973.2661	10115.25	60.79
217	2001/06/15	03:27:57	978.0161	10130.32	60.31	2001/06/15	03:27:57	978.0161	10130.71	60.81
218	2001/06/15	08:12:57	982.7661	10145.73	60.33	2001/06/15	08:12:57	982.7661	10146.27	60.83
219	2001/06/15	12:57:57	987.5161	10160.94	60.36	2001/06/15	12:57:57	987.5161	10161.49	60.84
220	2001/06/15	17:42:57	992.2661	10175.99	60.37	2001/06/15	17:42:57	992.2661	10176.54	60.86
221	2001/06/15	22:27:57	997.0161	10191.29	60.39	2001/06/15	22:27:57	997.0161	10191.62	60.88
222	2001/06/16	03:12:57	1001.7661	10206.20	60.43	2001/06/16	03:12:57	1001.7661	10206.47	60.90
223	2001/06/16	07:57:57	1006.5161	10221.09	60.44	2001/06/16	07:57:57	1006.5161	10221.36	60.92
224	2001/06/16	12:42:57	1011.2661	10235.62	60.49	2001/06/16	12:42:57	1011.2661	10236.04	60.94
225	2001/06/16	17:27:57	1016.0161	10250.18	60.49	2001/06/16	17:27:57	1016.0161	10250.77	60.95
226	2001/06/16	22:12:57	1020.7661	10264.86	60.52	2001/06/16	22:12:57	1020.7661	10265.18	60.97
227	2001/06/17	03:00:57	1025.5661	10279.33	60.53	2001/06/17	02:57:57	1025.5161	10279.61	60.99
228	2001/06/17	07:45:57	1030.3161	10294.12	60.55	2001/06/17	07:42:57	1030.2661	10294.24	61.01
229	2001/06/17	12:30:57	1035.0661	10308.36	60.58	2001/06/17	12:27:57	1035.0161	10308.46	61.03
230	2001/06/17	17:15:57	1039.8161	10322.54	60.61	2001/06/17	17:12:57	1039.7661	10322.93	61.05
231	2001/06/17	22:00:57	1044.5661	10336.78	60.62	2001/06/17	21:57:57	1044.5161	10336.86	61.06
232	2001/06/18	02:45:57	1049.3161	10350.66	60.64	2001/06/18	02:42:57	1049.2661	10350.76	61.08
233	2001/06/18	07:30:57	1054.0661	10364.75	60.66	2001/06/18	07:27:57	1054.0161	10364.88	61.09
234	2001/06/18	12:15:57	1058.8161	10378.51	60.68	2001/06/18	12:12:57	1058.7661	10378.62	61.11
235	2001/06/18	17:00:57	1063.5661	10392.33	60.71	2001/06/18	16:57:57	1063.5161	10392.48	61.13
236	2001/06/18	21:45:57	1068.3161	10405.92	60.74	2001/06/18	21:42:57	1068.2661	10406.10	61.14
237	2001/06/19	02:30:57	1073.0661	10419.79	60.76	2001/06/19	02:27:57	1073.0161	10419.60	61.16
238	2001/06/19	07:15:57	1077.8161	10433.30	60.77	2001/06/19	07:12:57	1077.7661	10433.14	61.17
239	2001/06/19	12:00:57	1082.5661	10446.57	60.79	2001/06/19	11:57:57	1082.5161	10446.62	61.19
240	2001/06/19	16:45:57	1087.3161	10459.88	60.80	2001/06/19	16:42:57	1087.2661	10459.68	61.21

Print Filter Used: Nth Line = 95.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2

Job Number: 0107014

	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
241	2001/06/19	21:30:57	1092.0661	10472.99	60.83	2001/06/19	21:27:57	1092.0161	10473.03	61.22
242	2001/06/20	02:15:57	1096.8161	10486.19	60.84	2001/06/20	02:12:57	1096.7661	10486.16	61.23
243	2001/06/20	07:00:57	1101.5661	10499.37	60.85	2001/06/20	06:57:57	1101.5161	10499.22	61.25
244	2001/06/20	11:45:57	1106.3161	10512.40	60.87	2001/06/20	11:42:57	1106.2661	10512.50	61.26
245	2001/06/20	16:30:57	1111.0661	10525.35	60.89	2001/06/20	16:27:57	1111.0161	10525.26	61.27
246	2001/06/20	21:15:57	1115.8161	10538.24	60.91	2001/06/20	21:12:57	1115.7661	10538.11	61.29
247	2001/06/21	02:00:57	1120.5661	10550.83	60.93	2001/06/21	01:57:57	1120.5161	10550.95	61.31
248	2001/06/21	06:45:57	1125.3161	10563.73	60.94	2001/06/21	06:42:57	1125.2661	10563.57	61.32
249	2001/06/21	11:30:57	1130.0661	10576.37	60.95	2001/06/21	11:27:57	1130.0161	10576.16	61.33
250	2001/06/21	16:15:57	1134.8161	10589.02	60.98	2001/06/21	16:12:57	1134.7661	10588.77	61.34
251	2001/06/21	21:00:57	1139.5661	10601.31	60.99	2001/06/21	20:57:57	1139.5161	10601.20	61.35
252	2001/06/22	01:45:57	1144.3161	10613.69	61.01	2001/06/22	01:42:57	1144.2661	10613.51	61.37
253	2001/06/22	06:30:57	1149.0661	10626.19	61.02	2001/06/22	06:27:57	1149.0161	10625.98	61.38
254	2001/06/22	11:15:57	1153.8161	10638.66	61.04	2001/06/22	11:12:57	1153.7661	10638.03	61.39
255	2001/06/22	16:00:57	1158.5661	10650.89	61.05	2001/06/22	15:57:57	1158.5161	10650.58	61.41
256	2001/06/22	20:45:57	1163.3161	10663.18	61.07	2001/06/22	20:42:57	1163.2661	10662.62	61.43
257	2001/06/23	01:30:57	1168.0661	10674.73	61.09	2001/06/23	01:27:57	1168.0161	10674.49	61.44
258	2001/06/23	06:15:57	1172.8161	10687.02	61.11	2001/06/23	06:12:57	1172.7661	10686.45	61.45
259	2001/06/23	11:00:57	1177.5661	10699.52	61.12	2001/06/23	10:57:57	1177.5161	10698.84	61.47
260	2001/06/23	15:45:57	1182.3161	10711.42	61.14	2001/06/23	15:42:57	1182.2661	10710.95	61.48
261	2001/06/23	20:30:57	1187.0661	10723.16	61.16	2001/06/23	20:27:57	1187.0161	10722.74	61.50
262	2001/06/24	01:15:57	1191.8161	10735.02	61.18	2001/06/24	01:12:57	1191.7661	10734.55	61.51
263	2001/06/24	06:00:57	1196.5661	10746.87	61.19	2001/06/24	05:57:57	1196.5161	10746.41	61.52
264	2001/06/24	10:45:57	1201.3161	10758.04	61.20	2001/06/24	10:42:57	1201.2661	10757.56	61.53
265	2001/06/24	15:30:57	1206.0661	10769.78	61.22	2001/06/24	15:27:57	1206.0161	10769.18	61.55
266	2001/06/24	20:15:57	1210.8161	10781.11	61.24	2001/06/24	20:12:57	1210.7661	10780.66	61.56
267	2001/06/25	01:00:57	1215.5661	10792.45	61.25	2001/06/25	00:57:57	1215.5161	10791.87	61.57
268	2001/06/25	05:45:57	1220.3161	10803.54	61.26	2001/06/25	05:42:57	1220.2661	10803.10	61.59
269	2001/06/25	10:30:57	1225.0661	10814.84	61.27	2001/06/25	10:27:57	1225.0161	10814.44	61.60
270	2001/06/25	15:15:57	1229.8161	10825.97	61.29	2001/06/25	15:12:57	1229.7661	10825.63	61.61
271	2001/06/25	20:00:57	1234.5661	10837.33	61.31	2001/06/25	19:57:57	1234.5161	10836.48	61.62
272	2001/06/26	00:45:57	1239.3161	10848.24	61.32	2001/06/26	00:42:57	1239.2661	10847.57	61.64
273	2001/06/26	05:30:57	1244.0661	10859.27	61.34	2001/06/26	05:27:57	1244.0161	10858.75	61.65
274	2001/06/26	10:15:57	1248.8161	10870.16	61.35	2001/06/26	10:12:57	1248.7661	10869.54	61.66
275	2001/06/26	15:00:57	1253.5661	10881.35	61.36	2001/06/26	14:57:57	1253.5161	10880.49	61.67
276	2001/06/26	19:45:57	1258.3161	10891.83	61.37	2001/06/26	19:42:57	1258.2661	10891.31	61.68
277	2001/06/27	00:30:57	1263.0661	10902.64	61.38	2001/06/27	00:27:57	1263.0161	10902.16	61.69
278	2001/06/27	05:15:57	1267.8161	10913.39	61.40	2001/06/27	05:12:57	1267.7661	10912.57	61.70
279	2001/06/27	10:00:57	1272.5661	10923.97	61.42	2001/06/27	09:57:57	1272.5161	10923.33	61.71
280	2001/06/27	14:45:57	1277.3161	10934.45	61.42	2001/06/27	14:42:57	1277.2661	10933.62	61.72
281	2001/06/27	19:30:57	1282.0661	10944.98	61.43	2001/06/27	19:27:57	1282.0161	10944.28	61.73
282	2001/06/28	00:15:57	1286.8161	10955.40	61.45	2001/06/28	00:12:57	1286.7661	10954.77	61.74
283	2001/06/28	05:00:57	1291.5661	10965.80	61.46	2001/06/28	04:57:57	1291.5161	10965.00	61.76
284	2001/06/28	09:45:57	1296.3161	10976.16	61.47	2001/06/28	09:42:57	1296.2661	10975.32	61.76
285	2001/06/28	14:30:57	1301.0661	10986.13	61.48	2001/06/28	14:27:57	1301.0161	10985.55	61.78
286	2001/06/28	19:15:57	1305.8161	10996.37	61.49	2001/06/28	19:12:57	1305.7661	10995.68	61.78
287	2001/06/29	00:00:57	1310.5661	11006.36	61.50	2001/06/28	23:57:57	1310.5161	11005.76	61.79
288	2001/06/29	04:45:57	1315.3161	11016.54	61.51	2001/06/29	04:42:57	1315.2661	11015.71	61.80

Print Filter Used: Nth Line = 95.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2

Job Number: 0107014

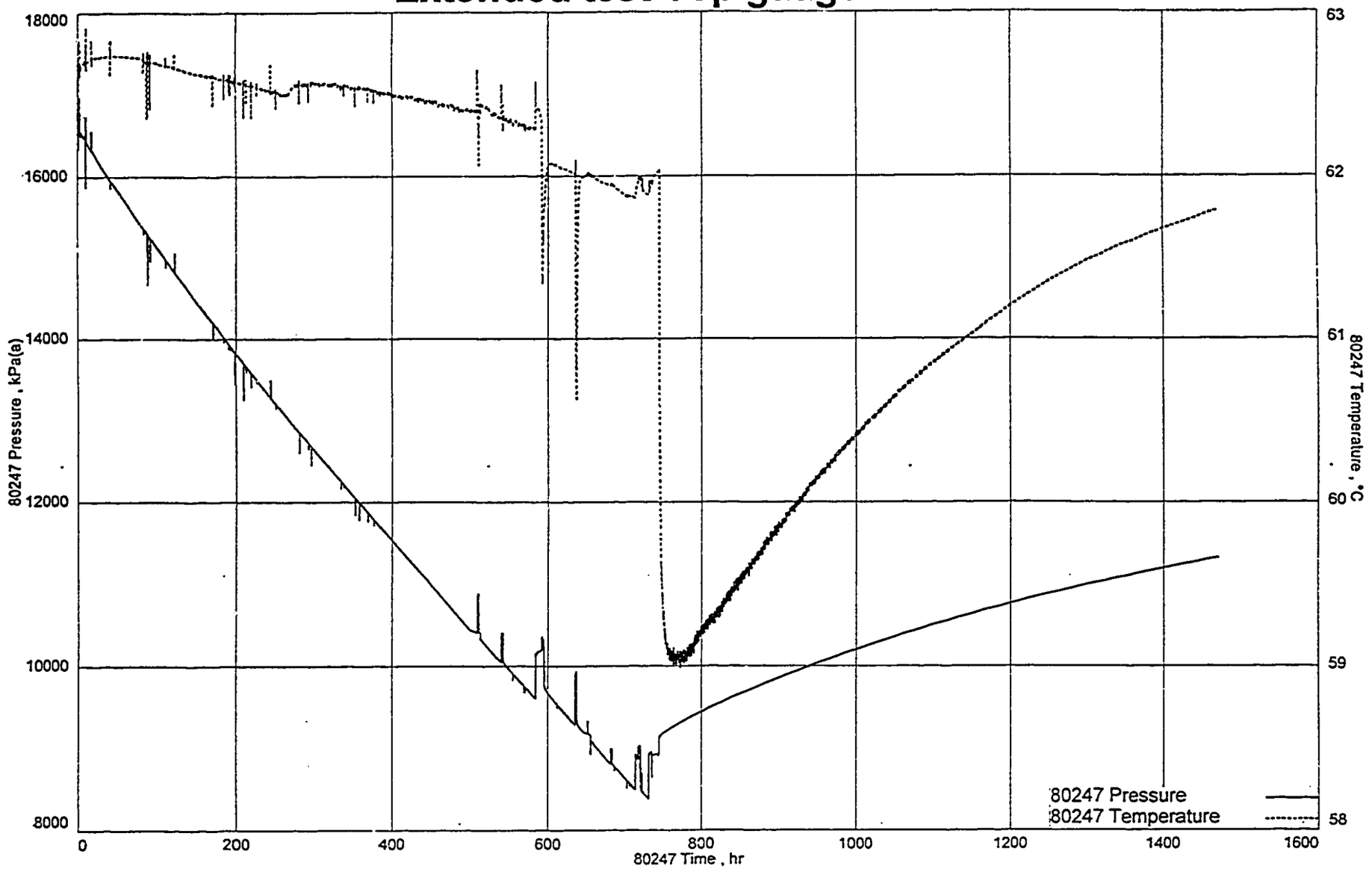
	80247 Date	80247 Clk Time	80247 Time	80247 Pres.	80247 Temp.	80461 Date	80461 Clk Time	80461 Time	80461 Pres.	80461 Temp.
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	°C
289	2001/06/29	09:30:57	1320.0661	11026.26	61.52	2001/06/29	09:27:57	1320.0161	11025.82	61.81
290	2001/06/29	14:15:57	1324.8161	11036.48	61.53	2001/06/29	14:12:57	1324.7661	11035.70	61.82
291	2001/06/29	19:00:57	1329.5661	11046.19	61.54	2001/06/29	18:57:57	1329.5161	11045.65	61.83
292	2001/06/29	23:45:57	1334.3161	11056.19	61.56	2001/06/29	23:42:57	1334.2661	11055.44	61.84
293	2001/06/30	04:30:57	1339.0661	11065.87	61.56	2001/06/30	04:27:57	1339.0161	11065.16	61.84
294	2001/06/30	09:15:57	1343.8161	11075.70	61.58	2001/06/30	09:12:57	1343.7661	11075.11	61.85
295	2001/06/30	14:00:57	1348.5661	11085.49	61.58	2001/06/30	13:57:57	1348.5161	11084.60	61.86
296	2001/06/30	18:45:57	1353.3161	11094.83	61.59	2001/06/30	18:42:57	1353.2661	11094.03	61.87
297	2001/06/30	23:30:57	1358.0661	11104.38	61.60	2001/06/30	23:27:57	1358.0161	11103.42	61.87
298	2001/07/01	04:15:57	1362.8161	11113.80	61.60	2001/07/01	04:12:57	1362.7661	11113.04	61.88
299	2001/07/01	09:00:57	1367.5661	11123.30	61.62	2001/07/01	08:57:57	1367.5161	11122.57	61.89
300	2001/07/01	13:45:57	1372.3161	11132.68	61.62	2001/07/01	13:42:57	1372.2661	11131.94	61.89
301	2001/07/01	18:30:57	1377.0661	11142.00	61.63	2001/07/01	18:27:57	1377.0161	11141.05	61.90
302	2001/07/01	23:15:57	1381.8161	11151.57	61.64	2001/07/01	23:12:57	1381.7661	11150.50	61.91
303	2001/07/02	04:00:57	1386.5661	11160.58	61.65	2001/07/02	03:57:57	1386.5161	11159.80	61.92
304	2001/07/02	08:45:57	1391.3161	11169.82	61.66	2001/07/02	08:42:57	1391.2661	11168.95	61.92
305	2001/07/02	13:30:57	1396.0661	11178.86	61.67	2001/07/02	13:27:57	1396.0161	11177.92	61.93
306	2001/07/02	18:15:57	1400.8161	11187.97	61.68	2001/07/02	18:12:57	1400.7661	11187.03	61.94
307	2001/07/02	23:00:57	1405.5661	11197.08	61.68	2001/07/02	22:57:57	1405.5161	11196.10	61.94
308	2001/07/03	03:45:57	1410.3161	11205.87	61.69	2001/07/03	03:42:57	1410.2661	11204.97	61.95
309	2001/07/03	08:30:57	1415.0661	11214.99	61.70	2001/07/03	08:27:57	1415.0161	11214.00	61.96
310	2001/07/03	13:15:57	1419.8161	11223.55	61.70	2001/07/03	13:12:57	1419.7661	11222.79	61.96
311	2001/07/03	18:00:57	1424.5661	11232.57	61.71	2001/07/03	17:57:57	1424.5161	11231.60	61.97
312	2001/07/03	22:45:57	1429.3161	11241.37	61.72	2001/07/03	22:42:57	1429.2661	11240.11	61.98
313	2001/07/04	03:30:57	1434.0661	11249.81	61.73	2001/07/04	03:27:57	1434.0161	11248.92	61.98
314	2001/07/04	08:15:57	1438.8161	11258.83	61.74	2001/07/04	08:12:57	1438.7661	11257.53	61.99
315	2001/07/04	13:00:57	1443.5661	11267.42	61.75	2001/07/04	12:57:57	1443.5161	11266.32	62.00
316	2001/07/04	17:45:57	1448.3161	11275.96	61.75	2001/07/04	17:42:57	1448.2661	11274.66	62.01
317	2001/07/04	22:30:57	1453.0661	11284.44	61.76	2001/07/04	22:27:57	1453.0161	11283.42	62.01
318	2001/07/05	03:15:57	1457.8161	11292.72	61.77	2001/07/05	03:12:57	1457.7661	11291.76	62.02
319	2001/07/05	08:00:57	1462.5661	11301.39	61.78	2001/07/05	07:57:57	1462.5161	11300.33	62.03
320	2001/07/05	12:45:57	1467.3161	11309.69	61.78	2001/07/05	12:42:57	1467.2661	11308.72	62.03
321						2001/07/05	15:42:57	1470.2661	11318.63	62.02
322			Off Bottom							

Print Filter Used: Nth Line = 95.000

Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2
Job Number: 0107014

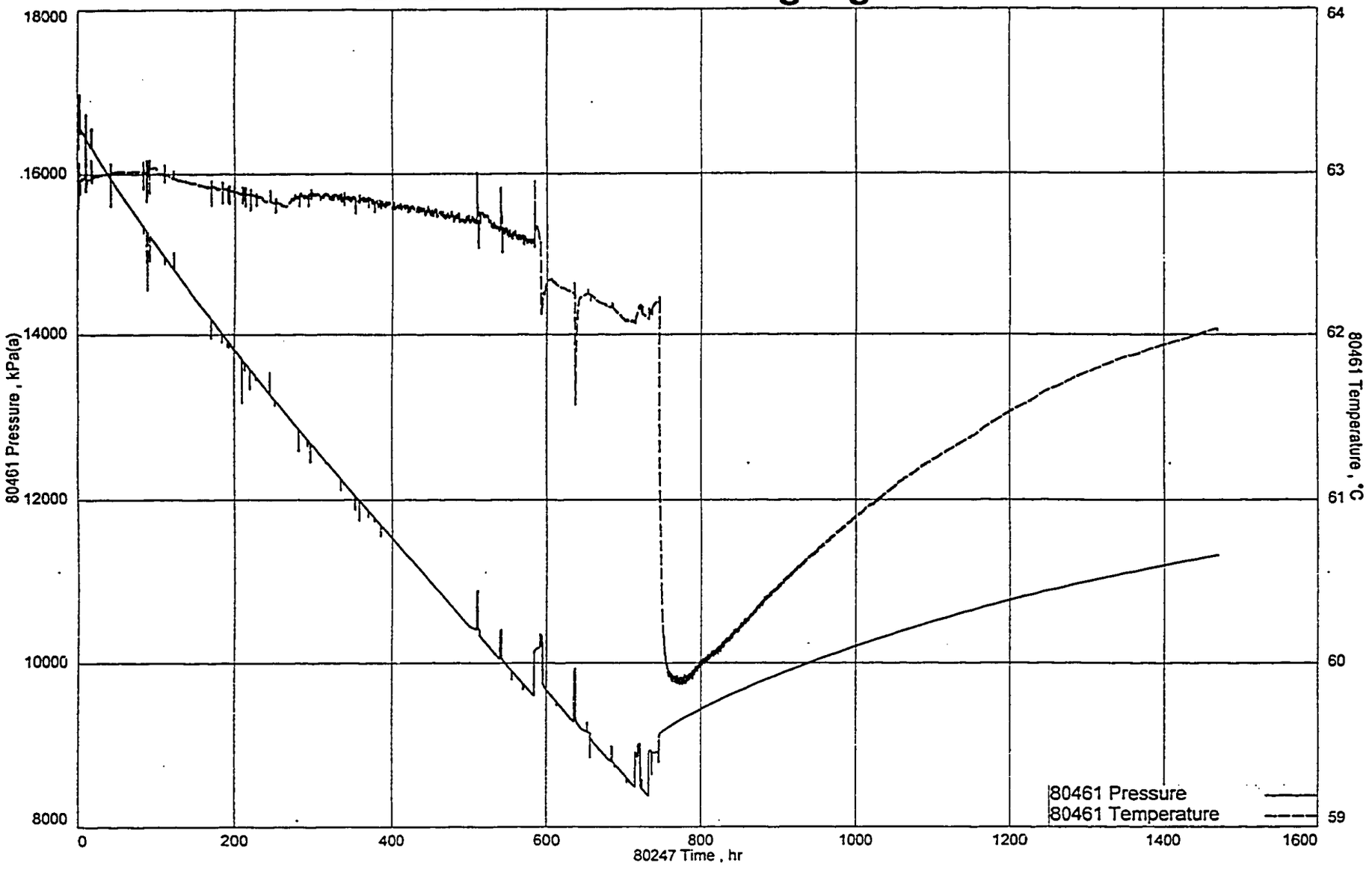
Extended test-Top gauge-80247



Paramount Resources Ltd.
No 1
Start Test Date: 2001/05/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No1
Formation: M2
Job Number: 0107014

Extended test-Bottom gauge-80461



C:\My Documents\PARA May 5-Jul5 2001 trg\N01-M2-MAY5-JUL5-01-TRG FKT 11-Jul-01 Ver 2.313

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact:

Phone: Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Ft. Liard No 1

Operator:

Location-Downhole: No 1

Location-Surface: No 1

Test Information:

Company: Solid Production Services Ltd.

Representative:

Supervisor:

Test Type: Static Gradient

Test Unit:

Start Date: 2001/07/05

End Date: 2001/07/05

Report Date: 2001/07/10

Remarks:

Job Number: 0107015

Start Time: 16:10:00

End Time: 18:03:00

Prepared By: Ella Berscheid

Qualified By:

Fast

Paramount Resources Ltd.
No 1.
Start Test Date: 2001/07/05
Final Test Date: 2001/07/05

Static Gradient
Top gauge

Para et al Ft. Liard No 1
Formation: M2

Job Number: 0107015

Top

Gauge Serial Number	-		Gauge Type	ss2500	
Gauge Manufacturer	Spartek		Maximum Recorder Range	41370.00	kPa
Run Depth	1691.60000	m	Date of Last Calibration	2001/01/25	
Gauge Start Date	2001/07/05 16:10:00		Gauge Stop Date	2001/07/05 18:03:00	
Date Gauge On Bottom	2001/07/05 17:26:00		Date Gauge Off Bottom	2001/07/05 17:36:00	

Test Data

Test/Prod Interval Top KB (TVD)	1644.00000	m	Base KB (TVD)	1689.00000	m
Pool Datum		m	Datum Depth		m
Tubing Pressure Initial	9743.00	kPa(a)	Final		kPa(a)
Casing Pressure Initial	12228.00	kPa(a)	Final		kPa(a)
Start Test Date	2001/07/05 16:10:00		Time Well Shut-In	2001/06/04 21:00:00	

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
4.60	16:19:38		9749.26		24.01	
				0.913		-0.003
504.60	16:30:17	10.67	10205.97		22.54	
				0.868		0.034
1004.60	16:42:57	12.67	10639.79		39.29	
				0.831		0.036
1504.60	16:55:38	12.67	11055.16		57.39	
				0.811		0.033
1554.60	17:01:38	6.00	11095.73		59.02	
				0.816		0.023
1604.60	17:07:18	5.67	11136.51		60.18	
				0.809		0.014
1654.60	17:13:38	6.33	11176.96		60.90	
				0.848		0.009
1664.60	17:18:57	5.33	11185.44		60.99	
				0.824		0.014
1674.60	17:23:58	5.00	11193.68		61.13	
				5.255		0.026
1684.60	17:29:18	5.33	11246.24		61.39	
				10.481		0.014
1691.60	17:40:57	11.67	11319.60		61.49	

Results

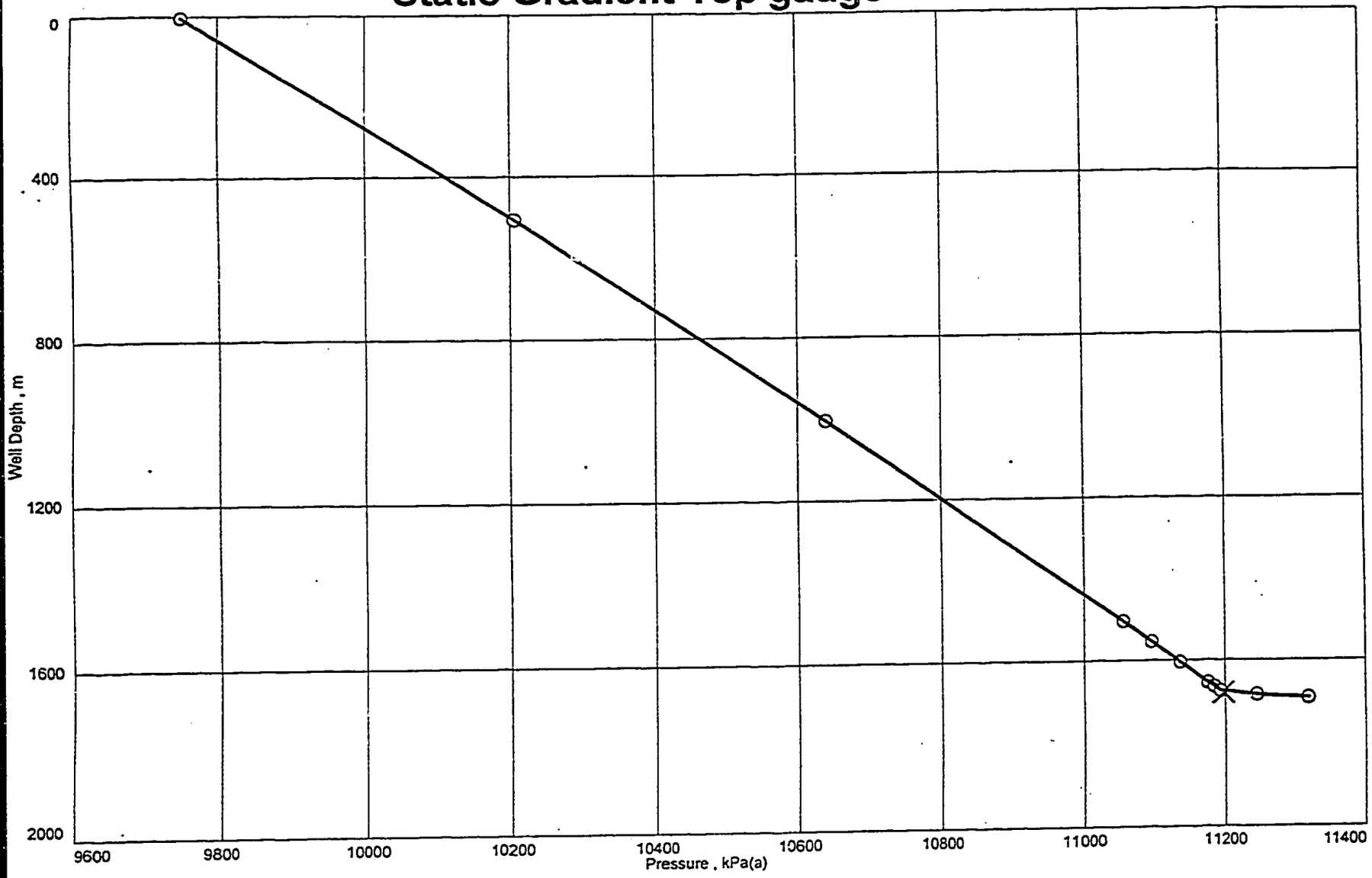
Gas Gradient	0.824	kPa/m	Gas/Liquid Interface	1680.01 m	11198.14 kPa(a)
Liquid Gradient	10.481	kPa/m			
			Well Datum (MPP)	**1666.50 m**	**11187.01 kPa(a)**

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No 1
Formation: M2
Job Number: 0107015

Static Gradient-Top gauge-



Fast

ocuments\PARA Jul 5-2001 sg\N01-M2-JUL5-01-SG FKT 11-Jul-01 Ver 2.313

Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/05
Final Test Date: 2001/07/05

Static Gradient
Bottom gauge 80359

Para et al Ft. Liard No 1
Formation: M2

Job Number: 0107015

Bottom

Gauge Serial Number	80359	Gauge Type	ss2500
Gauge Manufacturer	Spartek	Maximum Recorder Range	41370.00 kPa
Run Depth	1692.10000 m	Date of Last Calibration	2001/02/12
Gauge Start Date	2001/07/05 16:10:00	Gauge Stop Date	2001/07/05 18:03:00
Date Gauge On Bottom	2001/07/05 17:26:00	Date Gauge Off Bottom	2001/07/05 17:36:00

Test Data

Test/Prod Interval Top KB (TVD)	1644.00000 m	Base KB (TVD)	1689.00000 m
Pool Datum	m	Datum Depth	m
Tubing Pressure Initial	9743.00 kPa(a)	Final	kPa(a)
Casing Pressure initial	12228.00 kPa(a)	Final	kPa(a)
Start Test Date	2001/07/05 16:10:00	Time Well Shut-In	2001/06/04 21:00:00

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
5.10	16:19:57		9739.83		22.73	
				0.914		-0.000
505.10	16:30:17	10.33	10196.70		22.68	
				0.872		0.033
1005.10	16:43:18	13.00	10632.87		39.39	
				0.838		0.036
1505.10	16:55:38	12.33	11052.06		57.42	
				0.821		0.032
1555.10	17:01:38	6.00	11093.12		59.01	
				0.815		0.023
1605.10	17:07:38	6.00	11133.88		60.14	
				0.811		0.013
1655.10	17:13:38	6.00	11174.42		60.81	
				0.829		0.006
1665.10	17:19:18	5.67	11182.71		60.87	
				0.836		0.015
1675.10	17:24:38	5.33	11191.07		61.02	
				5.604		0.024
1685.10	17:29:37	5.00	11247.11		61.26	
				10.485		0.015
1692.10	17:40:57	11.33	11320.51		61.36	

Results

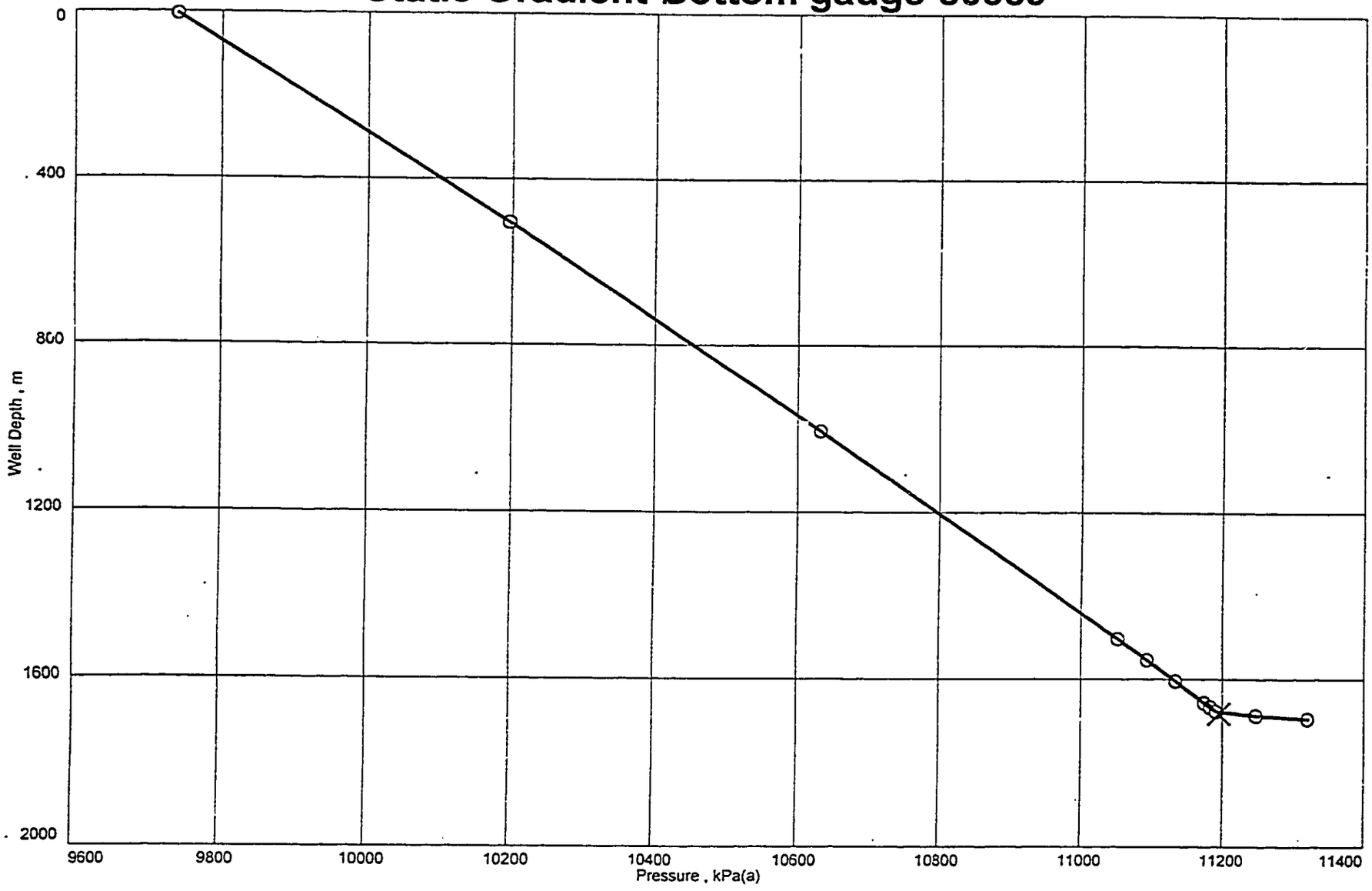
Gas Gradient	0.836 kPa/m	Gas/Liquid Interface	1680.16 m	11195.29 kPa(a)
Liquid Gradient	10.485 kPa/m			
		Well Datum (MPP)	**1666.50 m**	**11183.87 kPa(a)**

Fast

Paramount Resources Ltd.
No 1
Start Test Date: 2001/07/05
Final Test Date: 2001/07/05

Para et al Ft. Liard No 1
Formation: M2
Job Number: 0107015

Static Gradient-Bottom gauge-80359



Fast

SUBSURFACE FLOW AND BUILD UP

JUNE 4 – AUG. 2 2001

T. S.

N.E.B. COPY
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Paramount Fort Liard N-01
N-01
Fantasque Formation

Surface
Flow & Build up Test
June 4 – August 2, 2001

GENERAL INFORMATION

Client Information:

Company: Paramount Resources Ltd.

Contact: Terry Stasiuk

Phone: 290-3600 Fax: 262-7994 e-mail:

Site Information:

Contact: Ryan Tober

Phone: (250)233-6430 Fax: e-mail:

Well Information:

Name: Paramount Fort Liard N-01

Operator: Paramount Resources Ltd.

Location-Downhole: N-01

Location-Surface: N-01

Test Information:

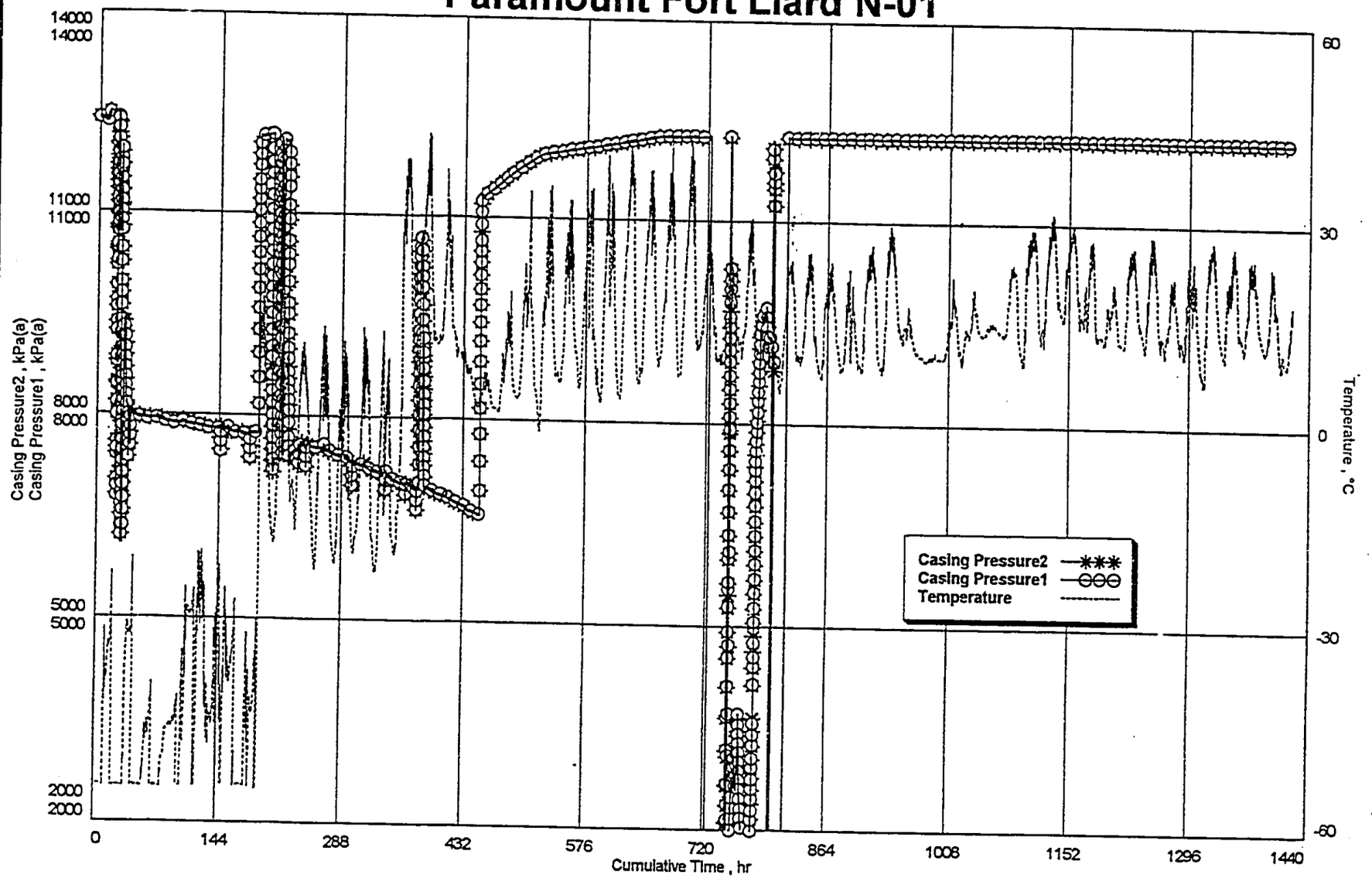
Company:	OPSCO Energy Ind. Ltd.		
Representative:	Lawrence Bews		
Supervisor:	Terry Biem		
Test Type:	Flow & Build up	Job Number:	
Test Unit:	SDS #10031416		
Start Date:	2001/06/04	Start Time:	12:49:00
End Date:	2001/08/02	End Time:	16:07:00
Report Date:	2001/07/12	Prepared By:	Dawn Strazza
Remarks:		Qualified By:	

Pressures are reported as absolute (kPaa).
Fantasque perforated interval @ 145.5 - 1469 mKB.
NOTE: Temperature sensor#13027162 malfunctioned intermittently during test.

Paramount Resources Ltd.
N-01
Start Test Date: 2001/06/04
Final Test Date: 2001/08/02

Paramount Fort Liard N-01
Formation: Fantasque

Paramount Fort Liard N-01



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Paramount Resources Ltd.
N-01
Start Test Date: 2001/06/04
Final Test Date: 2001/08/02

FieldNotes
Field Measurements

Paramount Fort Liard N-01
Formation: Fantasque

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
1	2001/06/04	12:49:44	0.0000	Activate SDS unit #10031416.		
2				Sensor #12031450 - Casing pressure #1		
3				Sensor #12031438 - Casing pressure #2.		
4				Sensor #13027162 - Temperature, not on the well.		
5	2001/06/04	12:49:44	0.0000	12403.46	12413.12	23.3
6		15:14:26	2.4117	12394.51	12402.77	-54.6
7		17:38:26	4.8117	12373.27	12384.66	-54.5
8		20:02:27	7.2117	12364.48	12375.61	-54.6
9		22:27:26	9.6283	12384.12	12391.00	-54.7
10	2001/06/05	00:51:26	12.0283	12497.02	12491.68	-37.8
11		03:16:26	14.4450	12499.51	12493.79	-35.1
12		05:41:27	16.8617	12496.04	12490.44	-34.0
13		08:06:26	19.2783	12491.85	12490.36	-28.6
14		10:31:27	21.6950	12489.12	12491.11	-54.7
15		12:56:27	24.1117	11156.37	11162.19	-54.8
16		15:21:26	26.5283	11306.39	11312.68	-54.7
17		17:46:26	28.9450	6105.84	6116.02	-54.7
18		20:10:27	31.3450	9387.99	9393.53	-54.7
19		22:35:26	33.7617	8180.36	8186.97	-54.8
20	2001/06/06	01:00:27	36.1783	7711.80	7716.07	-33.6
21		03:25:26	38.5950	7676.28	7680.12	-32.5
22		05:50:26	41.0117	7992.36	7995.85	-32.0
23		08:15:27	43.4283	7974.95	7981.81	-54.7
24		10:40:26	45.8450	7967.27	7978.44	-54.6
25		13:05:27	48.2617	7950.86	7961.79	-54.6
26		15:30:27	50.6783	7946.90	7958.85	-54.7
27		17:55:27	53.0950	7941.70	7954.47	-54.6
28		20:20:26	55.5117	7941.24	7947.04	-54.8
29		22:45:27	57.9283	7932.82	7937.63	-51.0
30	2001/06/07	01:10:27	60.3450	7935.73	7939.82	-47.2
31		03:35:26	62.7617	7935.66	7939.93	-45.1
32		06:00:27	65.1783	7933.36	7937.80	-45.0
33		08:25:26	67.5950	7934.99	7941.21	-45.2
34		10:50:27	70.0117	7935.43	7944.32	-54.7
35		13:15:27	72.4283	7925.53	7938.84	-54.8
36		15:40:26	74.8450	7923.20	7936.12	-54.8
37		18:05:26	77.2617	7913.38	7919.78	-54.8
38		20:30:27	79.6783	7900.42	7905.44	-50.8
39		22:55:27	82.0950	7891.69	7896.39	-49.3
40	2001/06/08	01:20:26	84.5117	7888.62	7893.39	-46.3
41		03:45:26	86.9283	7878.28	7882.57	-46.1

Paramount Resources Ltd.
N-01
Start Test Date: 2001/06/04
Final Test Date: 2001/08/02

FieldNotes
Field Measurements

Paramount Fort Liard N-01
Formation: Fantasque

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
42	2001/06/08	06:10:27	89.3450	7870.27	7874.86	-45.5
43		08:35:27	91.7617	7874.85	7879.80	-45.4
44		11:00:27	94.1783	7876.81	7881.51	-45.1
45		13:25:26	96.5950	7864.48	7869.75	-42.7
46		15:50:27	99.0117	7868.66	7874.83	-54.7
47		18:15:27	101.4283	7893.60	7898.81	-53.9
48		20:40:27	103.8450	7880.14	7885.73	-47.7
49		23:05:26	106.2617	7860.54	7865.01	-30.7
50	2001/06/09	01:30:27	108.6783	7861.82	7865.75	-28.4
51		03:55:26	111.0950	7859.21	7863.61	-29.0
52		06:20:26	113.5117	7854.61	7858.87	-29.6
53		08:45:27	115.9283	7843.36	7848.66	-29.6
54		11:10:26	118.3450	7844.03	7852.08	-54.5
55		13:35:27	120.7617	7835.96	7846.31	-27.5
56		16:00:27	123.1783	7826.05	7834.70	-28.9
57		18:25:27	125.5950	7822.83	7833.21	-25.6
58		20:50:26	128.0117	7816.96	7828.15	-26.4
59		23:14:27	130.4117	7806.13	7809.51	-43.2
60	2001/06/10	01:38:27	132.8117	7806.79	7810.21	-44.5
61		04:02:27	135.2117	7808.11	7812.02	-44.0
62		06:26:27	137.6117	7805.56	7809.28	-45.6
63		08:50:27	140.0117	7800.23	7805.06	-33.9
64		11:14:26	142.4117	7800.41	7808.09	-33.3
65		13:38:26	144.8117	7795.14	7806.09	-24.1
66		16:02:27	147.2117	7810.79	7824.15	-44.3
67		18:26:27	149.6117	7804.32	7818.43	-54.4
68		20:51:27	152.0283	7785.95	7796.97	-25.5
69		23:15:27	154.4283	7775.40	7781.68	-38.1
70	2001/06/11	01:39:26	156.8283	7770.58	7773.84	-38.4
71		04:03:27	159.2283	7754.48	7758.45	-35.9
72		06:27:27	161.6283	7747.21	7750.31	-33.7
73		08:51:26	164.0283	7754.02	7759.53	-54.6
74		11:15:27	166.4283	7791.75	7802.46	-54.6
75		13:39:27	168.8283	7739.49	7753.31	-54.5
76		16:03:27	171.2283	7724.12	7739.85	-54.4
77		18:28:26	173.6450	7722.01	7736.42	-54.4
78		20:52:27	176.0450	7710.71	7724.10	-54.6
79		23:17:27	178.4617	7695.95	7701.10	-45.3
80	2001/06/12	01:41:27	180.8617	7750.43	7754.09	-54.7
81		04:05:26	183.2617	7725.23	7728.45	-43.4
82		06:29:27	185.6617	7743.38	7746.94	-41.8

Paramount Resources Ltd.
N-01
Start Test Date: 2001/06/04
Final Test Date: 2001/08/02

FieldNotes
Field Measurements

Paramount Fort Liard N-01
Formation: Fantasque

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
83	2001/06/12	08:53:26	188.0617	7733.52	7738.68	-35.5
84		11:00:27	190.1783	12158.77	12170.63	24.8
85		11:00:27	190.1783	Pause SDS unit and process data.		
86		11:27:30	190.6294	Reactivate unit.		
87		11:27:31	190.6297	12160.49	12145.04	25.7
88		13:51:31	193.0297	12160.29	12142.24	15.1
89		16:15:32	195.4297	12167.75	12150.65	8.3
90		18:40:32	197.8464	12175.72	12158.22	4.3
91		21:04:32	200.2464	12179.78	12166.41	-2.6
92		23:29:32	202.6631	12183.35	12174.76	-8.1
93	2001/06/13	01:53:32	205.0631	11767.96	11764.06	-16.1
94		04:17:31	207.4631	7302.94	7294.64	-18.4
95		06:41:31	209.8631	7322.37	7313.38	-15.2
96		09:05:32	212.2631	7389.65	7377.83	-6.0
97		11:29:31	214.6631	12131.65	12114.77	8.4
98		13:53:31	217.0631	7464.39	7446.94	13.8
99		16:17:32	219.4631	12092.56	12077.00	6.5
100		18:41:32	221.8631	12091.93	12075.56	6.1
101		21:06:32	224.2797	11120.82	11108.01	0.6
102		23:30:32	226.6797	7397.05	7386.18	-11.1
103	2001/06/14	01:54:31	229.0797	7445.20	7433.89	-10.3
104		04:18:31	231.4797	7479.05	7469.21	-12.2
105		06:42:31	233.8797	7492.84	7482.96	-14.0
106		09:06:31	236.2797	7521.35	7511.46	-3.8
107		11:30:31	238.6797	7571.46	7558.13	4.2
108		13:54:31	241.0797	7570.75	7556.11	7.1
109		16:18:32	243.4797	7607.07	7591.97	9.1
110		18:43:31	245.8964	7478.51	7463.40	3.6
111		21:07:32	248.2964	7583.49	7567.92	-0.7
112		23:32:32	250.7131	7569.83	7558.42	-10.7
113	2001/06/15	01:56:32	253.1131	7544.15	7534.74	-15.4
114		04:20:31	255.5131	7541.83	7534.16	-21.3
115		06:45:31	257.9297	7536.96	7527.74	-18.5
116		09:10:31	260.3464	7532.56	7523.47	-5.3
117		11:35:32	262.7631	7536.88	7523.59	1.5
118		14:00:31	265.1797	7535.01	7519.62	11.8
119		16:25:32	267.5964	7528.67	7513.68	6.1
120		18:50:32	270.0131	7503.08	7488.14	2.3
121		21:15:32	272.4297	7493.66	7479.87	-4.8
122		23:40:32	274.8464	7479.46	7469.50	-14.6
123	2001/06/16	02:05:32	277.2631	7456.12	7448.07	-19.2

Paramount Resources Ltd.
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FieldNotes
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	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
124	2001/06/16	04:30:31	279.6797	7446.58	7438.61	-21.6
125		06:55:31	282.0964	7429.06	7422.03	-19.1
126		09:20:32	284.5131	7435.04	7423.17	-3.2
127		11:45:31	286.9297	7419.13	7405.41	1.5
128		14:10:31	289.3464	7464.11	7451.38	-5.4
129		16:35:32	291.7631	7393.64	7378.07	7.7
130		19:00:32	294.1797	7374.67	7358.78	1.0
131		21:25:32	296.5964	7370.89	7356.53	-7.8
132		23:50:32	299.0131	7332.91	7322.35	-16.6
133	2001/06/17	02:15:32	301.4297	7321.18	7312.52	-19.9
134		04:40:31	303.8464	7324.49	7315.28	-17.7
135		07:05:31	306.2631	7308.84	7298.43	-15.8
136		09:30:31	308.6797	7304.44	7294.07	-9.7
137		11:55:31	311.0964	7291.27	7277.54	1.8
138		14:20:32	313.5131	7326.68	7310.54	10.3
139		16:45:32	315.9297	7276.87	7260.41	9.1
140		19:10:32	318.3464	7253.86	7237.58	5.4
141		21:35:32	320.7631	7241.24	7225.39	-3.8
142	2001/06/18	00:00:31	323.1797	7219.10	7209.17	-18.2
143		02:25:31	325.5964	7202.19	7193.09	-21.0
144		04:50:31	328.0131	7207.93	7199.51	-22.8
145		07:15:31	330.4297	7193.01	7184.51	-19.2
146		09:40:31	332.8464	7185.93	7175.13	-6.2
147		12:05:32	335.2631	7217.95	7203.21	3.3
148		14:30:31	337.6797	7165.07	7150.65	2.1
149		16:55:32	340.0964	7082.71	7068.11	-2.6
150		19:20:32	342.5131	7138.30	7121.43	7.9
151		21:45:32	344.9297	7117.50	7101.39	-3.6
152	2001/06/19	00:10:31	347.3464	7092.58	7082.14	-17.8
153		02:35:32	349.7631	7068.15	7059.29	-19.9
154		05:00:31	352.1797	7056.81	7046.71	-18.9
155		07:25:31	354.5964	7045.48	7033.61	-13.2
156		09:50:32	357.0131	7042.76	7028.21	-5.9
157		11:37:32	358.7964	7033.76	7017.55	27.5
158		11:37:32	358.7964	Pause SDS unit and process data.		
159		11:47:20	358.9597	Reactivate unit. still on test.		
160		11:47:20	358.9597	7036.40	7019.81	25.9
161		12:15:00	359.4211	7033.19	7016.91	25.4
162		14:40:00	361.8378	7020.23	7001.76	35.6
163		17:05:00	364.2544	7046.20	7028.86	37.1
164		19:30:01	366.6711	7035.79	7018.13	36.4

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	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
165	2001/06/19	21:55:01	369.0878	7009.84	6992.64	23.7
166	2001/06/20	00:20:00	371.5044	6975.19	6963.86	9.9
167		02:45:01	373.9211	6952.09	6942.16	8.8
168		05:10:01	376.3378	6700.81	6691.80	6.4
169		07:35:00	378.7544	6961.87	6948.77	11.3
170		10:00:00	381.1711	10685.98	10675.72	22.8
171		12:25:00	383.5878	8185.53	8169.07	27.2
172		14:50:00	386.0044	6943.44	6925.67	33.2
173		17:15:01	388.4211	6977.88	6960.22	42.4
174		19:40:01	390.8378	6964.20	6946.59	37.5
175		22:05:00	393.2544	6947.38	6931.54	20.0
176	2001/06/21	00:30:01	395.6711	6935.22	6923.31	12.4
177		02:55:00	398.0878	6896.84	6886.89	11.8
178		05:20:00	400.5044	6892.41	6882.00	11.0
179		07:45:01	402.9211	6881.75	6870.92	12.1
180		10:10:00	405.3378	6867.84	6857.43	11.7
181		12:35:00	407.7544	6859.45	6846.86	16.6
182		15:00:00	410.1711	6856.31	6841.86	27.5
183		17:25:01	412.5878	6851.57	6835.82	30.4
184		19:50:00	415.0044	6817.94	6803.96	19.3
185		22:15:01	417.4211	6835.40	6822.50	17.1
186	2001/06/22	00:40:01	419.8378	6788.48	6776.76	13.2
187		03:05:01	422.2544	6771.99	6760.70	12.1
188		05:30:01	424.6711	6758.80	6748.34	10.4
189		07:55:01	427.0878	6739.09	6729.61	9.8
190		10:20:00	429.5044	6724.99	6715.59	9.4
191		12:45:00	431.9211	6722.78	6713.84	9.7
192		15:10:00	434.3378	6698.26	6689.42	8.1
193		17:35:00	436.7544	6651.91	6643.57	6.5
194		20:00:01	439.1711	6637.11	6628.75	7.0
195		22:25:01	441.5878	6632.68	6624.51	5.3
196	2001/06/23	00:50:01	444.0044	6620.51	6612.43	3.5
197		03:15:01	446.4211	6609.73	6602.11	2.3
198		05:40:01	448.8378	6593.04	6585.83	2.0
199		08:05:00	451.2544	6583.30	6576.60	2.8
200		08:07:00	451.2878	6579.58	6572.99	2.9
201		08:08:00	451.3042	Estimated time well shut in for build up.		
202		08:08:00	451.3044	6941.91	6935.91	2.8
203		10:30:00	453.6711	11299.10	11300.43	3.5
204		12:55:00	456.0878	11325.53	11326.30	5.9
205		15:20:00	458.5044	11350.97	11351.43	5.7

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	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
206	2001/06/23	17:45:01	460.9211	11375.93	11376.21	5.0
207		20:10:01	463.3378	11396.16	11396.99	3.7
208		22:35:00	465.7544	11426.27	11427.26	2.0
209	2001/06/24	01:00:01	468.1711	11451.32	11452.58	1.7
210		03:25:00	470.5878	11476.26	11477.89	1.6
211		05:50:00	473.0044	11500.73	11501.97	1.2
212		08:15:00	475.4211	11527.26	11528.99	3.8
213		10:40:00	477.8378	11554.47	11554.60	8.5
214		13:05:00	480.2544	11580.58	11579.28	8.4
215		15:30:00	482.6711	11605.86	11604.63	10.6
216		17:55:01	485.0878	11630.53	11628.29	13.5
217		20:20:00	487.5044	11655.58	11652.70	16.3
218		22:45:01	489.9211	11676.92	11676.08	6.0
219	2001/06/25	01:10:01	492.3378	11699.03	11699.35	4.0
220		03:35:01	494.7544	11720.79	11721.51	3.5
221		06:00:01	497.1711	11742.14	11743.27	3.2
222		08:25:00	499.5878	11764.33	11764.30	7.5
223		10:50:00	502.0044	11788.63	11785.25	15.9
224		13:15:00	504.4211	11811.58	11805.38	21.8
225		15:40:00	506.8378	11830.99	11825.57	16.7
226		18:05:00	509.2544	11854.41	11846.61	31.7
227		20:30:01	511.6711	11870.67	11866.02	15.2
228		22:55:01	514.0878	11890.41	11887.88	8.5
229	2001/06/26	01:20:00	516.5044	11911.91	11911.20	4.6
230		03:45:01	518.9211	11931.40	11932.21	1.8
231		06:10:01	521.3378	11942.90	11944.38	-1.3
232		08:35:00	523.7544	11954.24	11953.00	8.8
233		11:00:00	526.1711	11965.32	11959.79	14.7
234		13:25:00	528.5878	11974.63	11965.16	24.0
235		15:50:00	531.0044	11978.25	11970.23	21.1
236		18:15:01	533.4211	11987.76	11976.83	34.1
237		20:40:01	535.8378	11989.96	11981.07	19.6
238		23:05:00	538.2544	11990.71	11987.96	9.0
239	2001/06/27	01:30:01	540.6711	11995.55	11993.99	6.8
240		03:55:00	543.0878	12000.28	11998.83	6.0
241		06:20:00	545.5044	12004.81	12004.11	6.0
242		08:45:00	547.9211	12011.24	12008.92	9.5
243		11:10:00	550.3378	12019.82	12012.98	17.3
244		13:35:00	552.7544	12027.30	12015.79	25.1
245		16:00:01	555.1711	12032.95	12021.57	25.6
246		18:25:01	557.5878	12037.88	12026.01	30.6

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
247	2001/06/27	20:50:00	560.0044	12041.96	12031.57	22.0
248		23:15:01	562.4211	12043.15	12036.29	12.2
249	2001/06/28	01:40:00	564.8378	12046.20	12042.00	9.7
250		04:05:00	567.2544	12049.27	12048.91	5.1
251		06:30:01	569.6711	12054.63	12053.79	7.6
252		08:55:00	572.0878	12062.04	12057.50	14.0
253		11:20:00	574.5044	12070.97	12061.41	20.6
254		13:45:00	576.9211	12078.93	12065.40	27.0
255		16:10:01	579.3378	12080.34	12069.54	20.7
256		18:35:00	581.7544	12088.72	12076.40	28.9
257		21:00:01	584.1711	12086.91	12080.49	13.5
258		23:25:01	586.5878	12091.28	12087.63	9.5
259	2001/06/29	01:50:01	589.0044	12095.30	12093.08	7.8
260		04:15:01	591.4211	12099.68	12099.04	4.2
261		06:40:01	593.8378	12105.16	12103.75	3.4
262		09:05:00	596.2544	12114.59	12108.15	14.5
263		11:30:00	598.6711	12124.64	12110.34	25.1
264		13:55:00	601.0878	12132.69	12114.95	35.4
265		16:20:00	603.5044	12131.99	12120.45	19.1
266		18:45:01	605.9211	12138.90	12127.73	28.5
267		21:10:01	608.3378	12145.17	12131.34	25.9
268		23:35:00	610.7544	12143.03	12136.71	11.7
269	2001/06/30	02:00:01	613.1711	12145.85	12144.19	5.4
270		04:25:01	615.5878	12150.07	12150.09	3.7
271		06:50:00	618.0044	12158.21	12153.37	6.3
272		09:15:00	620.4211	12164.91	12158.51	16.7
273		11:40:00	622.8378	12175.70	12162.10	25.0
274		14:05:00	625.2544	12182.15	12166.62	31.1
275		16:30:01	627.6711	12188.02	12172.43	37.7
276		18:55:01	630.0878	12193.78	12177.15	38.1
277		21:20:00	632.5044	12198.84	12181.49	29.0
278		23:45:01	634.9211	12194.00	12187.75	11.0
279	2001/07/01	02:10:00	637.3378	12197.59	12194.79	6.4
280		04:35:00	639.7544	12203.78	12199.88	7.0
281		07:00:01	642.1711	12210.46	12204.64	7.7
282		09:25:00	644.5878	12217.66	12209.95	16.7
283		11:50:00	647.0044	12227.97	12214.02	25.4
284		14:15:00	649.4211	12233.98	12217.63	29.2
285		16:40:01	651.8378	12240.47	12224.53	36.3
286		19:05:00	654.2544	12247.85	12231.48	33.4
287		21:30:01	656.6711	12253.90	12238.99	24.4

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	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
288	2001/07/01	23:55:01	659.0878	12253.91	12246.20	12.1
289	2001/07/02	02:20:01	661.5044	12259.19	12255.83	8.4
290		04:45:01	663.9211	12262.53	12259.09	9.8
291		07:10:01	666.3378	12266.98	12257.39	14.7
292		09:35:00	668.7544	12266.50	12257.80	17.7
293		12:00:00	671.1711	12270.43	12257.32	24.1
294		14:25:00	673.5878	12272.73	12256.40	32.4
295		16:50:00	676.0044	12272.09	12256.48	29.5
296		19:15:01	678.4211	12272.16	12256.45	32.5
297		21:40:01	680.8378	12270.12	12255.87	21.9
298	2001/07/03	00:05:00	683.2544	12264.66	12256.77	14.4
299		02:30:01	685.6711	12262.66	12259.45	7.1
300		04:55:01	688.0878	12261.63	12259.86	6.7
301		07:20:00	690.5044	12264.97	12258.14	12.9
302		09:45:00	692.9211	12267.29	12258.20	19.4
303		12:10:00	695.3378	12272.26	12256.26	26.3
304		14:35:00	697.7544	12273.25	12256.19	32.9
305		17:00:01	700.1711	12272.86	12255.92	34.8
306		19:25:01	702.5878	12274.32	12256.00	37.6
307		21:50:00	705.0044	12272.38	12255.28	23.7
308	2001/07/04	00:15:00	707.4211	12263.42	12256.68	12.1
309		02:40:00	709.8378	12263.34	12257.79	11.8
310		05:05:00	712.2544	12263.70	12257.85	12.1
311		07:30:01	714.6711	12264.88	12257.47	13.2
312		09:55:00	717.0878	12268.31	12257.62	18.5
313		12:10:00	719.3378	12269.39	12256.33	21.6
314		12:10:00	719.3378	Pause unit & process data.		
315		12:37:13	719.7911	Reprogram & reactivate unit.		
316		12:37:13	719.7911	12270.57	12255.77	24.0
317		15:03:13	722.2244	12270.19	12256.54	22.5
318		17:29:13	724.6578	93.01	93.01	22.2
319		19:55:13	727.0911	100.93	93.01	16.4
320		22:21:13	729.5244	102.18	93.01	14.2
321	2001/07/05	00:47:13	731.9578	101.73	93.01	9.3
322		03:13:13	734.3911	102.01	93.01	9.6
323		05:39:13	736.8244	101.96	93.01	9.6
324		08:05:13	739.2578	101.96	93.01	10.6
325		10:31:13	741.6911	102.09	93.01	9.9
326		12:57:12	744.1244	101.10	93.01	14.2
327		15:23:12	746.5578	12269.17	12255.57	22.1
328		17:49:13	748.9911	2676.98	2659.86	24.0

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	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
329	2001/07/05	20:15:13	751.4244	1531.48	1517.26	21.7
330		22:41:13	753.8578	2309.42	2294.79	14.2
331	2001/07/06	01:07:12	756.2911	2692.95	2677.67	12.8
332		03:33:12	758.7244	2710.17	2695.13	12.2
333		05:59:12	761.1578	2905.31	2890.50	11.4
334		08:25:12	763.5911	2614.25	2599.46	13.3
335		10:51:12	766.0244	2113.25	2099.47	14.8
336		13:17:12	768.4578	1407.47	1394.15	21.0
337		15:43:12	770.8911	981.89	967.68	27.8
338		18:09:13	773.3244	981.49	967.05	29.5
339		20:35:13	775.7578	1265.99	1251.51	22.1
340		23:01:13	778.1911	2653.59	2638.00	13.7
341	2001/07/07	01:27:12	780.6244	7867.08	7856.66	10.5
342		03:53:13	783.0578	8508.27	8499.03	10.8
343		06:19:12	785.4911	9416.74	9411.05	10.9
344		08:45:12	787.9244	9524.38	9519.24	10.5
345		11:11:12	790.3578	9663.83	9658.70	11.7
346		13:37:13	792.7911	9431.01	9425.44	11.9
347		16:03:13	795.2244	8919.04	8910.76	11.8
348		18:29:13	797.6578	9246.57	9239.65	11.3
349		20:55:13	800.0911	12084.23	12077.69	12.3
350		23:21:13	802.5244	102.60	93.01	8.9
351	2001/07/08	01:47:12	804.9578	102.57	93.01	7.7
352		04:13:12	807.3911	101.71	93.01	5.2
353		06:39:13	809.8244	102.80	93.01	7.7
354		09:05:13	812.2578	103.99	93.01	13.1
355		11:31:13	814.6911	101.79	93.01	17.4
356		13:57:12	817.1244	12269.91	12255.05	22.5
357		16:23:13	819.5578	12269.64	12255.94	21.3
358		18:49:13	821.9911	12271.27	12255.88	21.2
359		21:15:13	824.4244	12269.80	12255.44	18.3
360		23:41:13	826.8578	12260.85	12256.89	9.9
361	2001/07/09	02:07:13	829.2911	12260.44	12257.84	10.1
362		04:33:12	831.7244	12260.07	12257.75	9.2
363		06:59:12	834.1578	12260.45	12257.73	10.0
364		09:25:12	836.5911	12263.76	12256.76	13.2
365		11:51:12	839.0244	12270.20	12254.69	21.1
366		14:17:12	841.4578	12271.87	12254.35	24.3
367		16:43:12	843.8911	12270.81	12254.43	22.9
368		19:09:13	846.3244	12267.58	12254.45	18.9
369		21:35:13	848.7578	12261.69	12255.59	12.5

Fast FieldNotes32™ Ver 1.653
C:\ZIPDUMP\SDSDATA\paraN-01fantasque\paraN-01fantasque.FLD 15-Aug-01

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
370	2001/07/10	00:01:12	851.1911	12260.33	12257.31	9.5
371		02:27:13	853.6244	12259.73	12257.97	8.0
372		04:53:12	856.0578	12259.08	12258.48	7.1
373		07:19:12	858.4911	12260.43	12257.96	9.1
374		09:45:12	860.9244	12263.52	12257.64	16.9
375		12:11:12	863.3578	12267.59	12254.77	19.1
376		14:37:13	865.7911	12267.46	12255.40	19.1
377		17:03:13	868.2244	12268.86	12255.10	20.4
378		19:29:13	870.6578	12268.53	12254.98	19.0
379		21:55:13	873.0911	12267.14	12254.74	15.6
380	2001/07/11	00:21:12	875.5244	12261.84	12255.67	12.3
381		02:47:13	877.9578	12260.14	12257.47	9.5
382		05:13:12	880.3911	12259.03	12258.67	7.8
383		07:39:13	882.8244	12260.03	12257.88	9.0
384		10:05:13	885.2578	12263.10	12256.88	13.2
385		12:31:13	887.6911	12268.38	12255.38	19.0
386		14:57:12	890.1244	12263.30	12256.12	14.0
387		17:23:13	892.5578	12269.83	12256.03	20.0
388		19:49:13	894.9911	12264.48	12255.84	14.8
389		22:15:13	897.4244	12261.28	12256.62	11.3
390	2001/07/12	00:41:13	899.8578	12259.42	12257.69	8.5
391		03:07:13	902.2911	12259.72	12257.67	8.8
392		05:33:12	904.7244	12259.42	12257.83	8.1
393		07:59:12	907.1578	12263.86	12256.89	14.5
394		10:25:12	909.5911	12267.90	12255.16	20.4
395		12:51:12	912.0244	12270.04	12253.91	22.5
396		15:17:12	914.4578	12271.72	12253.95	24.2
397		17:43:12	916.8911	12272.11	12254.72	26.7
398		20:09:13	919.3244	12272.14	12255.23	21.7
399		22:35:13	921.7578	12266.09	12254.25	14.8
400	2001/07/13	01:01:12	924.1911	12260.18	12257.22	9.4
401		03:27:13	926.6244	12259.80	12258.22	8.7
402		05:53:12	929.0578	12259.60	12258.42	8.8
403		08:19:12	931.4911	12263.12	12257.12	12.5
404		10:45:12	933.9244	12271.22	12255.44	22.4
405		13:11:12	936.3578	12272.90	12254.05	26.6
406		15:37:13	938.7911	12272.88	12254.74	28.6
407		18:03:13	941.2244	12272.84	12253.64	28.1
408		20:29:13	943.6578	12271.80	12253.76	23.8
409		22:55:13	946.0911	12265.98	12254.07	17.9
410	2001/07/14	01:21:12	948.5244	12262.32	12255.45	14.5

Paramount Resources Ltd.
N-01
Start Test Date: 2001/06/04
Final Test Date: 2001/08/02

FieldNotes
Field Measurements

Paramount Fort Liard N-01
Formation: Fantasque

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
411	2001/07/14	03:47:13	950.9578	12262.18	12256.13	13.4
412		06:13:12	953.3911	12261.57	12256.86	12.5
413		08:39:13	955.8244	12264.10	12256.08	14.4
414		11:05:13	958.2578	12263.66	12256.09	13.9
415		13:31:13	960.6911	12265.01	12255.55	16.5
416		15:57:12	963.1244	12264.26	12256.10	14.0
417		18:23:13	965.5578	12262.15	12256.13	12.1
418		20:49:13	967.9911	12261.16	12256.99	11.1
419		23:15:13	970.4244	12260.77	12257.23	10.7
420	2001/07/15	01:41:12	972.8578	12260.39	12257.40	10.2
421		04:07:12	975.2911	12260.58	12257.75	10.2
422		06:33:12	977.7244	12260.26	12257.94	9.7
423		08:59:12	980.1578	12260.15	12257.76	9.7
424		11:25:12	982.5911	12260.07	12258.05	9.2
425		13:51:12	985.0244	12260.72	12258.07	9.9
426		16:17:13	987.4578	12260.68	12257.93	10.0
427		18:43:12	989.8911	12261.29	12257.58	10.2
428		21:09:13	992.3244	12260.70	12257.53	10.2
429		23:35:13	994.7578	12260.20	12257.55	10.0
430	2001/07/16	02:01:13	997.1911	12260.30	12257.94	9.8
431		04:27:12	999.6244	12259.43	12256.84	10.0
432		06:53:12	1002.0578	12260.26	12257.94	10.0
433		09:19:12	1004.4911	12261.18	12257.51	11.0
434		11:45:12	1006.9244	12264.73	12256.51	14.2
435		14:11:12	1009.3578	12265.61	12256.00	15.0
436		16:37:13	1011.7911	12269.30	12255.97	17.3
437		19:03:13	1014.2244	12269.28	12255.50	18.1
438		21:29:13	1016.6578	12269.95	12255.56	17.2
439		23:55:13	1019.0911	12261.36	12255.78	11.9
440	2001/07/17	02:21:13	1021.5244	12260.93	12257.23	11.2
441		04:47:12	1023.9578	12260.14	12257.51	9.5
442		07:13:12	1026.3911	12261.88	12256.47	12.0
443		09:39:13	1028.8244	12264.06	12256.12	14.4
444		12:05:13	1031.2578	12263.03	12256.14	13.5
445		14:31:13	1033.6911	12263.11	12256.03	13.7
446		16:57:13	1036.1244	12266.16	12256.28	15.8
447		19:23:13	1038.5578	12269.48	12255.75	18.7
448		21:49:13	1040.9911	12264.68	12254.62	16.8
449	2001/07/18	00:15:13	1043.4244	12263.08	12255.55	14.4
450		02:41:13	1045.8578	12262.69	12255.66	13.8
451		05:07:12	1048.2911	12261.98	12255.90	13.4

Upscan+

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
452	2001/07/18	07:33:12	1050.7244	12262.20	12256.06	13.2
453		09:59:12	1053.1578	12262.46	12256.04	14.0
454		12:25:12	1055.5911	12263.00	12255.77	14.4
455		14:51:12	1058.0244	12263.73	12255.61	15.1
456		17:17:13	1060.4578	12263.09	12255.34	14.9
457		19:43:12	1062.8911	12263.68	12255.43	15.0
458		22:09:13	1065.3244	12262.88	12255.56	14.5
459	2001/07/19	00:35:13	1067.7578	12262.68	12255.65	14.1
460		03:01:13	1070.1911	12262.34	12255.93	13.6
461		05:27:12	1072.6244	12262.17	12255.94	13.6
462		07:53:12	1075.0578	12262.51	12256.28	13.6
463		10:19:12	1077.4911	12264.53	12255.88	15.8
464		12:45:12	1079.9244	12266.44	12254.68	18.8
465		15:11:12	1082.3578	12270.53	12254.18	22.4
466		17:37:13	1084.7911	12271.46	12254.66	23.1
467		20:03:13	1087.2244	12271.78	12254.85	22.7
468		22:29:13	1089.6578	12269.20	12254.05	19.1
469	2001/07/20	00:55:12	1092.0911	12261.72	12255.55	12.2
470		03:21:13	1094.5244	12260.49	12257.77	10.5
471		05:47:12	1096.9578	12259.39	12257.28	9.3
472		08:13:12	1099.3911	12264.96	12256.27	17.6
473		10:39:13	1101.8244	12271.41	12253.63	23.8
474		13:05:13	1104.2578	12271.85	12253.31	28.0
475		15:31:13	1106.6911	12271.92	12253.44	28.4
476		17:57:13	1109.1244	12271.88	12254.30	27.9
477		20:23:13	1111.5578	12273.16	12253.90	26.6
478		22:49:13	1113.9911	12267.55	12253.45	18.2
479	2001/07/21	01:15:12	1116.4244	12261.98	12255.22	14.0
480		03:41:13	1118.8578	12262.87	12255.89	14.5
481		06:07:12	1121.2911	12262.05	12256.49	12.3
482		08:33:13	1123.7244	12265.85	12256.57	19.4
483		10:59:12	1126.1578	12271.23	12254.19	24.4
484		13:25:12	1128.5911	12272.37	12253.29	27.1
485		15:51:12	1131.0244	12273.32	12254.47	30.0
486		18:17:13	1133.4578	12272.31	12254.17	28.6
487		20:43:12	1135.8911	12273.57	12252.99	24.8
488		23:09:13	1138.3244	12267.41	12253.83	18.2
489	2001/07/22	01:35:13	1140.7578	12265.91	12254.60	17.9
490		04:01:12	1143.1911	12264.32	12255.05	16.4
491		06:27:12	1145.6244	12264.10	12255.26	15.9
492		08:53:12	1148.0578	12266.86	12255.91	21.7

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
493	2001/07/22	11:19:12	1150.4911	12271.66	12254.02	24.0
494		13:45:12	1152.9244	12272.22	12253.61	28.0
495		16:11:13	1155.3578	12273.17	12254.22	28.4
496		18:37:13	1157.7911	12273.63	12253.92	27.7
497		21:03:13	1160.2244	12273.30	12253.43	25.2
498		23:29:13	1162.6578	12267.90	12253.82	19.3
499	2001/07/23	01:55:12	1165.0911	12263.37	12254.74	16.2
500		04:21:12	1167.5244	12263.56	12255.14	15.9
501		06:47:12	1169.9578	12263.88	12255.29	17.7
502		09:13:12	1172.3911	12264.56	12255.40	17.1
503		11:39:13	1174.8244	12268.88	12255.21	21.1
504		14:05:13	1177.2578	12272.30	12253.94	27.1
505		16:31:13	1179.6911	12272.25	12254.23	26.9
506		18:57:13	1182.1244	12268.61	12253.97	21.7
507		21:23:13	1184.5578	12261.78	12255.20	13.4
508		23:49:13	1186.9911	12262.21	12255.50	13.5
509	2001/07/24	02:15:13	1189.4244	12262.16	12255.94	13.3
510		04:41:12	1191.8578	12262.09	12256.03	13.2
511		07:07:12	1194.2911	12261.30	12256.16	12.3
512		09:33:13	1196.7244	12263.01	12256.48	13.9
513		11:59:12	1199.1578	12265.64	12255.78	17.1
514		14:25:12	1201.5911	12265.45	12255.37	16.0
515		16:51:13	1204.0244	12266.76	12255.20	18.4
516		19:17:13	1206.4578	12267.75	12255.36	19.1
517		21:43:12	1208.8911	12264.69	12255.10	15.8
518	2001/07/25	00:09:13	1211.3244	12262.03	12256.01	12.7
519		02:35:13	1213.7578	12261.72	12256.47	12.3
520		05:01:12	1216.1911	12261.80	12256.54	12.3
521		07:27:12	1218.6244	12262.10	12256.73	13.1
522		09:53:12	1221.0578	12264.79	12256.28	16.3
523		12:19:12	1223.4911	12269.90	12254.40	23.6
524		14:45:12	1225.9244	12271.06	12254.24	25.3
525		17:11:13	1228.3578	12271.56	12254.60	25.8
526		19:37:13	1230.7911	12271.34	12255.04	22.7
527		22:03:13	1233.2244	12267.54	12254.23	18.0
528	2001/07/26	00:29:13	1235.6578	12262.40	12255.21	14.6
529		02:55:12	1238.0911	12261.87	12255.69	14.0
530		05:21:12	1240.5244	12261.07	12256.18	12.3
531		07:47:12	1242.9578	12262.28	12256.29	13.0
532		10:13:12	1245.3911	12266.88	12255.77	18.2
533		12:39:13	1247.8244	12271.37	12254.09	25.6

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
534	2001/07/26	15:05:13	1250.2578	12271.96	12253.75	26.7
535		17:31:13	1252.6911	12271.47	12254.26	24.4
536		19:57:13	1255.1244	12270.80	12254.89	22.2
537		22:23:13	1257.5578	12267.21	12254.51	16.6
538	2001/07/27	00:49:12	1259.9911	12260.60	12256.26	12.6
539		03:15:13	1262.4244	12261.59	12256.22	13.1
540		05:41:12	1264.8578	12261.21	12257.29	12.0
541		08:07:13	1267.2911	12262.11	12256.84	13.1
542		10:33:13	1269.7244	12263.35	12257.10	14.1
543		12:59:12	1272.1578	12268.01	12255.78	18.2
544		15:25:12	1274.5911	12269.81	12255.50	19.8
545		17:51:13	1277.0244	12270.85	12256.11	20.8
546		20:17:13	1279.4578	12267.07	12254.92	17.4
547		22:43:12	1281.8911	12262.22	12255.85	13.5
548	2001/07/28	01:09:12	1284.3244	12260.88	12256.97	11.8
549		03:35:13	1286.7578	12261.14	12257.20	12.2
550		06:01:12	1289.1911	12260.68	12257.65	11.2
551		08:27:12	1291.6244	12261.99	12256.53	13.5
552		10:53:12	1294.0578	12269.63	12255.44	21.3
553		13:19:12	1296.4911	12270.61	12254.16	25.3
554		15:45:12	1298.9244	12270.48	12254.91	20.3
555		18:11:13	1301.3578	12269.95	12255.76	20.3
556		20:37:13	1303.7911	12268.87	12255.82	19.8
557		23:03:13	1306.2244	12261.85	12256.04	13.3
558	2001/07/29	01:29:12	1308.6578	12260.23	12258.33	8.6
559		03:55:12	1311.0911	12259.35	12258.83	7.8
560		06:21:12	1313.5244	12259.19	12259.37	6.4
561		08:47:12	1315.9578	12263.96	12257.52	18.5
562		11:13:12	1318.3911	12269.49	12254.49	24.5
563		13:39:13	1320.8244	12270.32	12253.89	24.4
564		16:05:13	1323.2578	12271.50	12254.66	26.0
565		18:31:13	1325.6911	12271.61	12254.82	24.5
566		20:57:13	1328.1244	12266.03	12253.93	18.2
567		23:23:13	1330.5578	12262.50	12255.04	14.6
568	2001/07/30	01:49:12	1332.9911	12262.27	12256.57	12.5
569		04:15:12	1335.4244	12261.35	12257.36	11.2
570		06:41:12	1337.8578	12260.72	12257.94	10.1
571		09:07:13	1340.2911	12264.36	12257.23	18.8
572		11:33:13	1342.7244	12269.50	12255.54	20.3
573		13:59:12	1345.1578	12268.10	12255.25	18.7
574		16:25:13	1347.5911	12272.74	12254.59	25.5

	Date	Clock Time	Cum Time	Casing Pres1	Casing Pres2	Temp
	yyyy/mm/dd	hh:mm:ss	hr	kPa(a)	kPa(a)	°C
575	2001/07/30	18:51:13	1350.0244	12272.14	12255.12	24.2
576		21:17:13	1352.4578	12271.47	12255.07	19.3
577		23:43:12	1354.8911	12261.82	12255.33	13.9
578	2001/07/31	02:09:13	1357.3244	12262.66	12256.24	13.4
579		04:35:12	1359.7578	12262.29	12256.47	12.3
580		07:01:12	1362.1911	12262.31	12256.65	13.0
581		09:27:12	1364.6244	12264.73	12256.42	15.7
582		11:53:12	1367.0578	12270.18	12254.92	23.8
583		14:19:12	1369.4911	12272.67	12254.57	21.9
584		16:45:13	1371.9244	12273.00	12254.68	22.6
585		19:11:13	1374.3578	12269.01	12254.34	20.7
586		21:37:13	1376.7911	12265.01	12254.93	17.1
587	2001/08/01	00:03:13	1379.2244	12262.32	12255.82	14.2
588		02:29:13	1381.6578	12262.16	12256.57	12.7
589		04:55:12	1384.0911	12261.62	12257.64	11.6
590		07:21:12	1386.5244	12261.41	12257.76	11.1
591		09:47:12	1388.9578	12263.72	12256.49	13.8
592		12:13:12	1391.3911	12267.05	12255.84	17.4
593		14:39:13	1393.8244	12272.98	12255.00	21.6
594		17:05:13	1396.2578	12272.86	12255.12	22.5
595		19:31:13	1398.6911	12265.94	12255.26	17.2
596		21:57:13	1401.1244	12263.51	12255.85	14.4
597	2001/08/02	00:23:13	1403.5578	12260.92	12258.16	10.9
598		02:49:12	1405.9911	12260.07	12258.88	9.0
599		05:15:12	1408.4244	12261.41	12258.76	10.0
600		07:41:12	1410.8578	12261.15	12258.71	9.5
601		10:07:13	1413.2911	12261.38	12258.80	9.9
602		12:33:13	1415.7244	12263.91	12257.62	12.7
603		14:59:12	1418.1578	12268.60	12256.35	16.8
604		16:07:13	1419.2911	12279.89	12279.78	18.5
605		16:07:13	1419.2911	SDS unit rigged out and sent to Red Deer to be downloaded.		

OPSCO ENERGY INDUSTRIES LTD.
SDS FIELD OPERATIONS

CUSTOMER:	Paramount Resources Ltd.
LOCATION:	N-01
WELL NAME:	Paramount Fort Liard N-01
FORMATION/ZONE:	Fantasque
PERFORATIONS:	1455.5 – 1469 mKB
ELEVATIONS.	KB = 492.1 GL = 487.0
TUBING SIZE:	89mm
DEPTH:	1740 mKB
CASING SIZE:	177mm
DEPTH:	1940 mKB
START DATE:	June 04/01
FINISH DATE:	August 02/01
CUSTOMER REP. (OFFICE):	Terry Stasiuk 1-403-809-3910
CUSTOMER REP. (FIELD):	Ryan Tober 1-250-233-6430
OPSCO REP:	Terry Biem 1-403-391-9124
OPERATION:	Flow and Build up
SDS SAMPLE PROGRAM:	60sec / 1075hrs
DIRECTIONS:	From Fort Nelson follow west hwy # 2 to hwy # 77 Go north 122 km, turn and go west 8km to Plant site.
SDS BOX #:	10031416 (Casing) 10031419 (Tubing)
PT SENSOR # 1:	12031450 tagged as csps1 12031464 tagged as tups1
PT SENSOR # 2:	12031438 tagged as csps2 12031567 tagged as tups2
TEMPRATURE SENSOR #:	13027162 tagged as mtm1 13027135 tagged as mtm1

DATE	TIME	OPERATIONS DATA
June 4/01	1200	Arrived on location.
	1210	Rigged in two sds units.
	1249	Activated sds #1416
		PT1= 12310 kPag
		PT2= 12320 kPag
		MTM= 23 deg C
	1253	Activated sds #1419
		PT1= 7186 kPag
		PT2= 7172 kPag
		MTM= 21 deg C
	1300	Off location.
June 12/01	1045	Arrived on location.
	1055	SDS #1416 Pressures
		PT1= 12069 kPag
		PT2= 12080 kPag
		MTM= 22 deg C
	1100	SDS #1419 Pressures
		PT1= 8506 kPag
		PT2= 8514 kPag

Opsco

		MTM= 23 deg C
	1100	Dumped data and reactivated sds unit #1416
	1108	Dumped data and reactivated sds unit #1419
	1120	Off location.
June 19/01	1125	Arrived on location.
	1130	SDS #1416 Pressures
		PT1= 6943 kPag
		PT2= 6928 kPag
		MTM= 25 deg C
	1137	Dumped sds and activated unit #1416
	1142	SDS #1419 Pressures
		PT1= 8953 kPag
		PT2= 8964 kPag
		MTM= 25 deg C
	1146	Dumped sds and activated unit #1419
	1230	Off location.
July 4/01	1115	A.O.L.
	1125	SDS#19{tbg} pressures
		PT1=9609 kPag.
		PT2=9617 kPag.
		MTM=22 deg C
	145	Dloaded and rigged out unit #1419
	1210	SDS#1416{csg} pressures
		PT1=12175 kPag.
		PT2=12164 kPag.
		MTM=22 deg C
		Dload SDS unit.
		Reprogram unit for 120 sec. Readings.
		Activate box.
	1250	Off location.
August 2/01	1607	SDS #1416 rigged out by Paramount personnel
		Unit sent to Red Deer to be downloaded.
		End Of Test

WELL TEST DATA
MATTSON SAND

FEB. 28 – MAR 10
2001

N.E.B. COPY

PARAMOUNTRESOURCES LTD.

PARA et al FORT LIARD

N-01

200/N-01/00

MATTSON SAND

FEB 28-MAR 10, 2001

Well Test Data

Contact

GRANT HARTER
Well Testing Manager

Nisku: (780) 955-7525

APR 17 2001

GENERAL INFORMATION

Client Information:

Company: PARAMOUNT RESOURCES LTD.

Contact: PARAMOUNT RESOURCES LTD.

Phone: 403-290-3626 Fax: 403-266-6032 e-mail:

Site Information:

Contact: WAYNE/ AL IRONSIDE

Phone: Fax: e-mail:

Well Information:

Name: PARA et al FORD LIARD N-01

Operator: PARAMOUNT RESOURCES LTD.

Location-Downhole: N-01

Location-Surface: N-01

Test Information:

Company: SOLID PRCDUCTION SERVICES LTD.

Representative: GRANT HARTER

Supervisor: RYAN WHITE

Test Type: SINGLE POINT TEST

Test Unit: PT-501

Start Date: 2001/02/28

End Date: 2001/03/10

Report Date: 2001/04/09

Remarks:

Job Number: 064

Start Time: 19:05:00

End Time: 10:55:00

Prepared By: LAURA D. DOMINICK

Qualified By:

WELL INFORMATION

Well Name : PARA et al FORD LIARD N-01

Well Operator : PARAMOUNT RESOURCES LTD.

Well Location : N-01

Location-Surface : N-01

Field : FORT LIARD

Well Type : Vertical

Pool : UNDEFINED

Formation : MATTSON SAND

Perforation Type : GINS			Producing Through : Tubing	Size	88.90 mm
Pool Datum	m	KB	Elevation Referenced From	492.10 m	GL
Datum Depth	m	KB	Elevation Referenced To	487.00 m	GL
			Offset	5.10 m	

Production Intervals

Production Interval & MPP Reference To : KB

MPP Pressure Reference : None

	From - m	To - m	Depth - m	Pressure - kPa
1.	1778.00	1782.00	1780.00	
2.	1785.00	1787.50	1786.25	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Remarks :

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

FieldNotes
METER REPORT

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

Gas Meter 1

Meter Type:	Orifice Meter
Meter Size:	146.30 mm
Previous Gas Production:	0.000 10^3m^3
Tap Type:	Flange
Tap Location:	Downstream
Gas Gravity (G):	0.603
CO_2:	1.62 %
H_2S:	0.00 %
N_2:	0.23 %
Critical Temperature (T_c):	198.51 K
Critical Pressure (P_c):	4680.98 kPa

Oil Meter 1

Meter Type:	Measured Rate
Measurement Type:	Cumulative
Columns for Measured Rate:	
Previous Oil Production:	0.000 m^3
Previous Water Production:	0.000 m^3

Oil Meter 2

Meter Type:	Produced Volume
Measurement Type:	Cumulative
Columns for Produced Volume:	
Previous Oil Production:	0.000 m^3
Previous Water Production:	0.000 m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
1	2001/02/28	17:00:00	0.00	0.00	0.00	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00
2		17:45:00	0.75	Rig off B.O.P's.																	
3		18:45:00	1.75	Rig up flow line to well head.																	
4		19:02:00	2.03	Bar dropped.																	
5		19:02:27	2.04	Perf guns went off.																	
6		19:05:00	2.08			310		0													
7		19:10:00	2.17			670		0													
8		19:15:00	2.25			1550		0													
9		19:30:00	2.50			4600		0													
10		19:45:00	2.75			7000		0													
11		20:00:00	3.00			8750		0													
12		20:05:00	3.08	Rig up wireline to drop perf guns.																	
13		20:40:00	3.67	Perf guns dropped.																	
14		21:50:00	4.83	Start running in to perform gradient and set recorders.																	
15		23:15:00	6.25	Rig out wireline.																	
16		23:20:00	6.33			13410		0													
17		23:30:00	6.50	Open to flow on 7.14mm choke.																	
18		23:30:00	6.50			13430		200													
19		23:35:00	6.58			10100	6	400													
20		23:37:00	6.62	Cut choke to 6.35mm.																	
21		23:40:00	6.67			7710	8	400													
22		23:45:00	6.75			6500	8	400													
23		23:46:00	6.77	Cut choke to 5.15mm, Meter in service on 50.8mm orifice plate.																	
24		23:59:59	7.00		50.80					0	0.00	0	0.00	0.00							
25		23:59:59	7.00			5040	8	520	710	1.74	11	20.80	0.00								
26	2001/03/01	00:05:00	7.08	Change orifice to 25.4mm, Increased back pressure.																	
27		00:05:00	7.08		25.40																
28		00:15:00	7.25			4840	8	600	758	31.35	12	22.47	0.23								
29		00:30:00	7.50			4870	8	600	772	31.85	12	22.83	0.46								
30		01:00:00	8.00			4900	11	610	772	31.85	13	22.79	0.94								
31		01:30:00	8.50			6230	10	690	545	22.64	13	16.45	1.35								

2001/02/28 17:00:00 To 2001/03/01 05:30:00

Gas	5.692	Cum.	5.692	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	0.922	Cum.	0.922	m^3

Fast

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
32	2001/03/01	01:30:00	8.50	Obstruction at Choke rock to clear.																	
33		02:00:00	9.00			6840	10	700	758	30.36	8	22.27	1.75								
34		02:05:00	9.08	Well hydrating at choke, started to produce fluid, Increased choke to 5.55mm.																	
35		02:10:00	9.17	Increased backpressure.																	
36														1.28							
37		02:30:00	9.50			5760	10	700	1655	17.92	6	24.79	2.24								
38		03:00:00	10.00			5850	10	700	1813	18.91	6	26.65	2.77	1.93	100	0.65	0.65	0.00	0.00	0.65	0.65
39				Grindout = 100%H²o, Trace cond, Sal = 39,111ppm , ph=7, Trace of sediment.																	
40		03:30:00	10.50			5860	10	690	1848	19.41	6	27.26	3.34								
41		04:00:00	11.00			6130	10	690	1862	19.41	6	27.36	3.91	2.07	100	0.14	0.78	0.00	0.00	0.14	0.78
42		04:30:00	11.50			6130	10	690	1827	19.66	4	27.39	4.48								
43		05:00:00	12.00			6130	10	700	2034	21.15	4	29.99	5.07	2.21	100	0.14	0.92	0.00	0.00	0.14	0.92
44		05:02:00	12.03	Kimray in service, Adjust back pressure.																	
45				Grindout = 100% H²o, Trace cond, Sal = 39,111ppm, ph=7, Trace sediment.																	
46		05:30:00	12.50			6210	10	700	1848	22.15	2	29.37	5.69								
47		06:00:00	13.00			6250	10	700	1820	22.89	0	29.77	6.31	2.35	100	0.14	1.06	0.00	0.00	0.14	1.06
48				Total hour flowed 6.5hrs.																	
49				Cumm gas flared = 6.31*10³m³.																	
50				Cumm Fluid produced = 1.063m³.																	
51		06:30:00	13.50			6350	10	700	1820	22.89	0	29.77	6.93								
52		07:00:00	14.00			6400	10	700	1820	22.89	0	29.77	7.55	2.35		0.00	1.06	0.00	0.00	0.00	1.06
53				Two H.P gas samples taken.Cylinder #'s 96800000 & 00019832 and one stock tank fluid sample of water to be sent to AGAT.																	
54		07:30:00	14.50			6410	10	715	1862	24.14	0	30.91	8.18								
55		08:00:00	15.00			6470	10	715	1862	23.89	-2	30.89	8.82	2.35		0.00	1.06	0.00	0.00	0.00	1.06
56		08:30:00	15.50			6460	10	725	1841	24.39	-2	31.04	9.47								
57		09:00:00	16.00			6490	10	725	1855	24.14	-2	30.99	10.12	2.42	100	0.07	1.14	0.00	0.00	0.07	1.14
58				Grindout unobtainable.																	
59		09:30:00	16.50			6520	10	725	1855	23.89	-2	30.83	10.76								
60		10:00:00	17.00			6550	10	725	1862	24.39	-2	31.21	11.41	2.42		0.00	1.14	0.00	0.00	0.00	1.14
61		10:30:00	17.50			6570	10	725	1875	24.64	-2	31.49	12.06								
62		11:00:00	18.00			6590	10	725	1875	25.38	2	31.68	12.72	2.49	100	0.07	1.21	0.00	0.00	0.07	1.21

2001/02/28 17:00:00 To 2001/03/01 05:30:00

Gas	5.692	Cum.	5.692	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	0.922	Cum.	0.922	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	$10^3m^3/$	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
63	2001/03/01	11:30:00	18.50			6610	10	725	1862	25.63	2	31.72	13.38								
64		11:30:00	18.50	Shut in well.End of test.Record build ups.																	
65		11:30:00	18.50		0.00				0	0.00	0	0.00	13.38								
66				SUMMARY.																	
67				Cumm hours flowed = 12 hrs.																	
68				Cumm gas flared = 13.38*10³m³.																	
69				Cumm fluid produced = 1.21m³.																	
70		11:35:00	18.58			7620		725													
71		11:40:00	18.67			8750		800													
72		11:45:00	18.75			9490		825													
73		12:00:00	19.00			11680		950													
74		12:15:00	19.25			12690		975													
75		12:30:00	19.50			13340		975													
76		13:00:00	20.00			13980		975													
77		13:30:00	20.50			14230		890													
78		14:00:00	21.00			14330		875													
79		14:30:00	21.50			14430		875													
80		15:00:00	22.00			14510		800													
81		15:30:00	22.50			14530		800													
82		16:00:00	23.00			14560		800													
83		16:30:00	23.50			14560		800													
84		17:00:00	24.00			14570		800													
85		17:30:00	24.50			14580		800													
86		18:00:00	25.00			14590		800													
87		18:30:00	25.50			14590		800													
88		18:45:00	25.75	Blead off casing.																	
89		19:00:00	26.00			14650		0													
90		19:30:00	26.50			14650		0													
91		20:00:00	27.00			14650		0													
92		20:30:00	27.50			14650		0													
93		21:00:00	28.00			14650		0													

2001/03/01 05:30:00 To 2001/03/02 05:30:00

Gas	7.685	Cum.	13.377	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	0.285	Cum.	1.207	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
94	2001/03/01	21:30:00	28.50			14650		0													
95		22:00:00	29.00			14650		0													
96		22:30:00	29.50			14650		0													
97		23:00:00	30.00			14650		0													
98		23:30:00	30.50			14650		0													
99		23:59:59	31.00			14650		0													
100	2001/03/02	00:30:00	31.50			14650		0													
101		01:00:00	32.00			14650		0													
102		01:30:00	32.50			14650		0													
103		02:00:00	33.00			14650		0													
104		02:30:00	33.50			14650		0													
105		03:00:00	34.00			14650		0													
106		03:30:00	34.50			14650		0													
107		04:00:00	35.00			14650		0													
108		04:30:00	35.50			14650		0													
109		05:00:00	36.00			14650		0													
110		05:30:00	36.50			14650		0													
111		06:00:00	37.00			14650		0													
112		06:30:00	37.50			14660		0													
113		07:00:00	38.00			14660		0													
114		13:00:00	44.00	Rig up wireline to run plug.																	
115		13:45:00	44.75	Plug set.																	
116		14:00:00	45.00	Rig off wellhead.Wait on rig work.No more flowing on N-01.																	
117	2001/03/03	12:00:00	67.00	First shot of first perforation. 1739.5m -1745.0m.																	
118		12:10:00	67.17					50													
119		12:15:00	67.25					650													
120		12:20:00	67.33					2250													
121		12:30:00	67.50					4250													
122		12:45:00	67.75					4300													
123		13:00:00	68.00					4350													
124		13:15:00	68.25					4400													

2001/03/01 05:30:00 To 2001/03/02 05:30:00

Gas	7.685	Cum.	13.377	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	0.285	Cum.	1.207	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol	
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3	
125	2001/03/03	14:30:00	69.50					8400														
126		14:30:00	69.50	Begin running in with second shot.																		
127		15:25:00	70.42					9250														
128		15:30:00	70.50	Second shot fired. 1745.0m - 1750m.																		
129		15:35:00	70.58					9300														
130		15:40:00	70.67					9400														
131		15:45:00	70.75					9500														
132		16:00:00	71.00					9700														
133		16:15:00	71.25					9800														
134		16:30:00	71.50					9825														
135		17:15:00	72.25	Begin running in with third shot.																		
136		17:30:00	72.50					10150														
137		18:00:00	73.00					10400														
138		18:18:00	73.30	Third shot fired. 1731.5m - 1736.5m.																		
139		18:25:00	73.42					10450														
140		18:30:00	73.50					10450														
141		18:45:00	73.75					10450														
142		19:00:00	74.00					10450														
143		19:15:00	74.25					10450														
144		19:30:00	74.50					10450														
145		19:30:00	74.50	Begin running in with fourth shot.																		
146		20:00:00	75.00					10500														
147		20:28:00	75.47	Fourth shot fired. 1684m - 1689m.																		
148		20:30:00	75.50					10400														
149		20:35:00	75.58					10380														
150		20:40:00	75.67					10300														
151		20:45:00	75.75					10250														
152		21:00:00	76.00					10200														
153		21:15:00	76.25					10100														
154		21:30:00	76.50					10050														
155		21:30:00	76.50	Computalog shut down for the night, record build ups.																		

2001/03/03 12:00:00 To 2001/03/04 05:30:00

Gas	0.000	Cum.	13.377 10^3m^3
Oil	0.000	Cum.	0.000 m^3
Water	0.000	Cum.	1.207 m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
156	2001/03/03	22:00:00	77.00					10000													
157		22:30:00	77.50					9900													
158		23:00:00	78.00					9900													
159		23:59:59	79.00					9900													
160	2001/03/04	00:30:00	79.50					9900													
161		01:00:00	80.00					9900													
162		01:30:00	80.50					9925													
163		02:00:00	81.00					9950													
164		02:30:00	81.50					9975													
165		03:00:00	82.00					10000													
166		03:30:00	82.50					10025													
167		04:00:00	83.00					10050													
168		04:30:00	83.50					10050													
169		05:00:00	84.00					10050													
170		05:30:00	84.50					10050													
171		06:00:00	85.00					10050													
172		06:30:00	85.50					10050													
173		07:00:00	86.00					10050													
174		07:30:00	86.50					10050													
175		08:00:00	87.00					10100													
176		08:15:00	87.25					10200													
177		08:15:00	87.25	Open well to lift fluid. 36/64 or a 14.29mm choke.																	
178		08:20:00	87.33	14.29				9000													
179		08:22:00	87.37	Meter in service.57.15 mm orifice.																	
180		08:25:00	87.42		0.00				0	0.00	0	0.00	13.38								
181		08:25:00	87.42	14.29	57.15			8650	1834	76.64	-10	290.56	13.38	2.49		0.00	1.21	0.00	0.00	0.00	1.21
182		08:29:00	87.48	Increase orifice to 76.2mm.																	
183		08:30:00	87.50	14.29	76.20			8650	1379	15.93	-12	210.70	14.25	2.49		0.00	1.21	0.00	0.00	0.00	1.21
184		08:32:00	87.53	Fluid to surface.																	
185		08:35:00	87.58					9800	627	0.50	-11	25.69	14.66								
186		08:40:00	87.67					11400	1413	0.75	1	44.88	14.78								

2001/03/03 12:00:00 To 2001/03/04 05:30:00

Gas	0.000	Cum.	13.377	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	0.000	Cum.	1.207	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
187	2001/03/04	08:42:00	87.70	Decrease choke to a 28/64 or a 11.11mm.																	
188		08:45:00	87.75	11.11				13600	2620	2.99	12	119.51	15.07								
189		08:50:00	87.83					13800	2096	25.63	9	314.82	15.82								
190		08:55:00	87.92					13800	1820	18.17	6	248.35	16.80								
191		08:55:00	87.92	Increase choke to a 32/64 or a 12.70mm.																	
192		09:00:00	88.00	12.70				13700	1758	18.66	6	247.43	17.66								
193		09:05:00	88.08					13900	1793	22.15	0	275.73	18.57								
194		09:10:00	88.17		76.20			13950	1800	30.36	-4	326.52	19.61								
195		09:15:00	88.25					13950	1793	31.11	-6	331.37	20.75	14.71	100	12.22	13.43	0.00	0.00	12.22	13.43
196		09:21:00	88.35	Shut in well.Well dry.																	
197		09:21:00	88.35	0.00					0	0.00	0	0.00	20.75								
198				SUMMARY.																	
199				CUMM HOURS FLOWED = 1.1 HRS.																	
200				CUMM GAS FLARED = $7.37*10^3M^3$																	
201				CUMM FLUID LIFTED = 12.220 M^3. 100% H^2O SALINITY = 33,778 PPM.																	
202		09:25:00	88.42	Begin running in with fifth shot.																	
203		09:30:00	88.50					14450													
204		10:00:00	89.00					14450													
205		10:30:00	89.50					14500													
206		11:00:00	90.00					14700													
207		11:30:00	90.50					14700													
208		11:45:00	90.75	Fifth shot fired. 1684m - 1689m.																	
209		12:00:00	91.00					14700													
210		12:15:00	91.25					14700													
211		12:30:00	91.50					14700													
212		12:45:00	91.75	Begin running in with sixth shot.																	
213		14:00:00	93.00					14700													
214		14:30:00	93.50					14700													
215		14:50:00	93.83					14700													
216		14:54:00	93.90	Sixth shot fired. 1463m - 1469m.																	
217		14:55:00	93.92					14700													

2001/03/04 05:30:00 To 2001/03/05 06:00:00

Gas	7.377	Cum.	20.754	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	12.220	Cum.	13.427	m^3

Fast

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
218	2001/03/04	15:00:00	94.00					14700													
219		15:05:00	94.08					14700													
220		15:15:00	94.25					14700													
221		15:30:00	94.50					14700													
222		16:00:00	95.00					14700													
223		17:00:00	96.00					14700													
224		18:00:00	97.00					14700													
225		19:00:00	98.00					14700													
226		20:00:00	99.00					14700													
227		21:00:00	100.00					14700													
228		22:00:00	101.00					14700													
229		23:00:00	102.00					14700													
230		23:59:59	103.00					14700													
231	2001/03/05	01:00:00	104.00					14700													
232		02:00:00	105.00					14700													
233		03:00:00	106.00					14700													
234		04:00:00	107.00					14700													
235		05:00:00	108.00					14700													
236		06:00:00	109.00					14700													
237		07:00:00	110.00					14700													
238		08:00:00	111.00					14700													
239		09:00:00	112.00					14700													
240		10:00:00	113.00					14700													
241		10:45:00	113.75	Begin running in with seventh shot.																	
242		11:00:00	114.00					14700													
243		11:30:00	114.50					14700													
244		11:35:00	114.58	Seventh shot fired.																	
245		12:00:00	115.00					14550													
246		12:30:00	115.50					14600													
247		12:45:00	115.75	Begin running in with eighth shot.																	
248		13:00:00	116.00					14600													

2001/03/04 05:30:00 To 2001/03/05 06:00:00

Gas	7.377	Cum.	20.754	10^3m^3
Oil	0.000	Cum.	0.000	m^3
Water	12.220	Cum.	13.427	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
249	2001/03/05	13:30:00	116.50					14600													
250		13:40:00	116.67	Eighth shot fired.																	
251		13:45:00	116.75					14600													
252		13:50:00	116.83					14600													
253		13:55:00	116.92					14600													
254		14:00:00	117.00					14600													
255		14:30:00	117.50					14600													
256		15:00:00	118.00					14600													
257		15:15:00	118.25	Begin rigging in snubbers.																	
258		17:25:00	120.42	Pressure test flow line with well gas.Pressure test good. 14575 Kpa on Casing.																	
259		17:30:00	120.50	Open well to clean up well on a 32/64 or a 12.70mm Choke.																	
260		17:33:00	120.55	Increase choke to a 14.29mm.																	
261		17:35:00	120.58					13300													
262		17:38:00	120.63	Meter in service.101.60mm orifice.																	
263		17:39:00	120.65	Increase choke to a 40/64 or a 15.86mm.																	
264		17:40:00	120.67		0.00				0	0.00	0	0.00	20.75	14.71		0.00	13.43	0.00	0.00	0.00	13.43
265		17:40:00	120.67		101.60			12700	1551	26.38	-23	575.04	20.75								
266		17:42:00	120.70	Increase choke to a 43/64 or a 17.07mm.																	
267		17:44:00	120.73	Increase choke to 48/64 or a 19.05mm.																	
268		17:45:00	120.75		19.05		14	11900	1931	31.85	-23	706.38	22.98								
269		17:50:00	120.83				16	12100	1896	31.85	-22	698.09	25.42								
270		17:55:00	120.92				20	12100	1862	30.86	-20	677.24	27.80								
271		18:00:00	121.00				21	12100	1855	32.35	-20	692.18	30.18								
272		18:05:00	121.08				24	12000	1986	30.61	-10	680.50	32.57								
273		18:10:00	121.17				24	12100	1999	29.61	-8	668.55	34.91								
274		18:15:00	121.25				26	12100	2041	30.36	-8	684.06	37.26								
275		18:30:00	121.50				32	12100	1806	36.33	-6	700.53	44.47	15.99	0	1.28	14.71	1.28	1.28	0.00	13.43
276		18:34:00	121.57	Shut in well.End of clean up.																	
277				SUMMARY.																	
278				CUMM HOURS FLOWED = 1 HR.																	
279				CUMM GAS FLARED = 23.72*10^3M^3.																	

2001/03/05 06:00:00 To 2001/03/06 06:00:00

Gas	23.713	Cum.	44.467 10^3m^3
Oil	1.279	Cum.	1.279 m^3
Water	0.000	Cum.	13.427 m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
280	2001/03/05			CUMM FLUID PRODUCED = 1.28*M³. 100% CONDENSATE. A.P.I =58.2 @ 15.6°C.																	
281		19:00:00	122.00					14550													
282		20:00:00	123.00					14550													
283		21:00:00	124.00					14550													
284		22:00:00	125.00					14550													
285		23:00:00	126.00					14550													
286		23:59:59	127.00					14550													
287	2001/03/06	01:00:00	128.00					14550													
288		02:00:00	129.00					14550													
289		03:00:00	130.00					14550													
290		04:00:00	131.00					14550													
291		05:00:00	132.00					14550													
292		06:00:00	133.00					14550													
293		07:00:00	134.00					14550													
294	2001/03/07	07:01:00	158.02	Check pressure on well.																	
295	2001/03/07	07:30:00	158.50	14500 Kpa on casing.																	
296		14:00:00	165.00	Attempt to bleed down tubing.Tubing bleed down unsuccessful.																	
297		15:30:00	166.50											17.65	100	1.66	16.37	0.00	1.28	1.66	15.09
298				Salinity of water = 28,444 ppm.																	
299		15:30:00	166.50	Wireline to run plug.																	
300		16:00:00	167.00	Plug set.																	
301		16:20:00	167.33	Bleed off 14600 Kpa on tubing.																	
302		16:35:00	167.58	Tubing bleed off.																	
303		17:00:00	168.00	shut down for night.																	
304	2001/03/08	07:00:00	182.00	Check pressure on well.																	
305		07:30:00	182.50	13700 Kpa on casing.																	
306		08:00:00	183.00	Wireline to pull plug.																	
307		10:45:00	185.75	Open well to clean up gun junk.																	
308		11:30:00	186.50	Shut in well.Minimal gun junk lifted.																	
309		12:00:00	187.00	Wireline to run plug.																	
310		12:20:00	187.33	Plug set.																	

2001/03/05 06:00:00 To 2001/03/06 06:00:00

Gas	23.713	Cum.	44.467 10^3m^3
Oil	1.279	Cum.	1.279 m^3
Water	0.000	Cum.	13.427 m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol	
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3	
311	2001/03/08	12:30:00	187.50	Bleed off pressure above plug.																		
312		12:45:00	187.75	Pressure bleed off.																		
313		19:00:00	194.00	Rig off subber's and B.O.P.S.																		
314		19:15:00	194.25	Equalize tubing with casing gas.																		
315		19:30:00	194.50	Rig up wireline to pull plug.																		
316		20:00:00	195.00	Wireline pulled prong.																		
317		20:30:00	195.50	Wireline pulled plug.																		
318		21:15:00	196.25	Open well to clean up fluid.																		
319		21:30:00	196.50	Well dead wirline shut down for the night.																		
320		21:45:00	196.75	Open well to clean up .																		
321		22:00:00	197.00	Well dead no fluid, Shut in to stop cock.																		
322		22:05:00	197.08			2000		14500														
323		22:10:00	197.17			5500		14500														
324		22:15:00	197.25			7200		14500														
325		22:30:00	197.50			7200		14500														
326		22:45:00	197.75			7200		14500														
327		23:00:00	198.00			7200		14500														
328		23:00:00	198.00	Open to flow clean up.																		
329		23:05:00	198.08			2550		14500														
330		23:10:00	198.17			0		14500														
331		23:10:00	198.17	Fluid to surface.																		
332		23:15:00	198.25			5300	12	14500														
333		23:30:00	198.50			7800	16	14500														
334		23:45:00	198.75			11950	18	14500														
335		23:45:00	198.75	Shut in well cleaned up.																		
336		23:59:59	199.00			14200		14500														
337				Summary										25.14	100	7.49	23.86	0.00	1.28	7.49	22.58	
338				Flowed well for 45mins.																		
339				Fluid recovered = 7.49m³.																		
340	2001/03/09	07:15:00	206.25	Rig up flow line to Casing.																		
341		07:20:00	206.33	Pressure test flow line with well gas.Pressure test good.																		

2001/03/08 07:00:00 To 2001/03/09 07:15:00

Gas	0.000	Cum.	44.467 10^3m^3
Oil	0.000	Cum.	1.279 m^3
Water	7.488	Cum.	22.578 m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
342	2001/03/09	07:30:00	206.50			14200		14500													
343		07:30:00	206.50	Open casing to clean up on a 32/64 or a 12.70mm choke.																	
344		07:35:00	206.58	12.70		14200		14000													
345		07:40:00	206.67			14225		13600													
346		07:41:00	206.68	Meter in service.101.60 mm Orifice.																	
347		07:41:00	206.68		0.00				0	0.00	0	0.00	44.47								
348		07:45:00	206.75		101.60	14250	10	13350	1510	23.39	-32	546.24	45.98	25.14		0.00	23.86	0.00	1.28	0.00	22.58
349		07:50:00	206.83			14400	12	13400	1496	23.39	-30	540.96	47.87								
350		07:55:00	206.92			14525	14	13400	1482	23.64	-32	544.08	49.76								
351		08:00:00	207.00			14750	16	13450	1482	23.64	-32	544.08	51.64	25.14		0.00	23.86	0.00	1.28	0.00	22.58
352		08:15:00	207.25			14800	20	13500	1462	23.39	-28	532.01	57.25								
353		08:30:00	207.50			14900	24	13500	1462	23.14	-24	524.00	62.75	25.14		0.00	23.86	0.00	1.28	0.00	22.58
354		08:30:00	207.50		0.00				0	0.00	0	0.00	62.75								
355		08:30:00	207.50	Shut in well.End of clean up.																	
356				SUMMARY.																	
357				CUMM HOURS FLOWED = 1 HR.																	
358				CUMM GAS FLARED = 18.28*10³M³.																	
359				CUMM FLUID PRODUCED = 0.00 M³.																	
360		11:20:00	210.33			14900		14400													
361		11:25:00	210.42	Pressure up to manifold.Pressure test good.																	
362		11:30:00	210.50	Open well to clean up on a 32/64 or a 12.70mm choke.																	
363		11:35:00	210.58			10050		14400													
364		11:37:00	210.62	Meter in service.101.60mm orifice.																	
365		11:40:00	210.67		0.00				0	0.00	0	0.00	62.75								
366		11:40:00	210.67	12.70	101.60	9750	15	14500	1407	13.94	-16	391.27	62.75								
367		11:45:00	210.75			1000	17	14450	1020	15.68	-12	352.30	64.04								
368		12:00:00	211.00			9950	22	14500	1117	16.42	-10	374.85	67.83								
369		12:15:00	211.25			9950	23	14500	1172	16.67	-7	384.05	71.78								
370		12:30:00	211.50			9950	24	14500	1103	18.41	-8	392.97	75.83	25.14		0.00	23.86	0.00	1.28	0.00	22.58
371		12:30:00	211.50		0.00				0	0.00	0	0.00	75.83								
372		12:30:00	211.50	Shut in well.End of clean up.Rig out production equipment.																	

2001/03/09 07:15:00 To 2001/03/10 05:30:00

Gas	42.284	Cum.	86.751	10^3m^3
Oil	1.981	Cum.	3.260	m^3
Water	11.228	Cum.	33.806	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
373	2001/03/09				SUMMARY.																
374					CUMM HOURS FLOWED = 1 HR.																
375					CUMM GAS FLARED = 13.08*10³M³.																
376					CUMM FLUID PRODUCED = 0.00 M³.																
377		15:00:00	214.00	Rig production equipment back in.																	
378		18:00:00	217.00	Wireline on location to set plug.																	
379		22:45:00	221.75	Rig in pressure tester to set packer.																	
380		22:50:00	221.83	Pressure up tubing to 3500 psi or 24132 kpa for 15 mins.																	
381		23:05:00	222.08	Rig off pressure tester.																	
382		23:15:00	222.25	Rig in wireline to pull prong.																	
383		23:59:59	223.00	Run in with wireline to pull plug																	
384	2001/03/10	00:45:00	223.75	Rig off wireline.																	
385		01:00:00	224.00			500		12500													
386		01:00:00	224.00	Open to flow tubing to clean up, fluid at surface 32/64 or 12.70mm.																	
387		01:05:00	224.08			1000	10	12500													
388		01:10:00	224.17			5000	16	12500													
389		01:15:00	224.25			7000	18	12500													
390		01:30:00	224.50			11200	22	12500													
391		01:35:00	224.58	Increased choke to 36/64 or 14.28mm. Obstructions at choke.																	
392		01:40:00	224.67	Meter in service.																	
393		01:45:00	224.75		101.60	12000	20	12500	965	9.96	-4	268.83	76.76								
394		01:45:00	224.75	Obstruction at choke rock choke to clear.																	
395		02:00:00	225.00			10200	20	12500	1034	16.93	-4	362.31	80.05	38.35	85	13.21	37.07	1.98	3.26	11.23	33.81
396		02:15:00	225.25	Shut well mist extracter freezing in P-tank.																	
397		02:15:00	225.25		0.00				0	0.00	0	0.00	80.05								
398		02:20:00	225.33			11500		12500													
399		02:25:00	225.42			14450		12500													
400		02:30:00	225.50			14450		12500													
401				SUMMARY.																	
402				CUMM HOURS FLOWED = 1HRS: 15MINS																	
403				CUMM GAS FLARED = 4.078 10^3m^3.																	

2001/03/09 07:15:00 To 2001/03/10 05:30:00

Gas	42.284	Cum.	86.751	10^3m^3
Oil	1.981	Cum.	3.260	m^3
Water	11.228	Cum.	33.806	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
404	2001/03/10																				
405		04:30:00	227.50	CUMM FLUID PRODUCED = 13.21m³.																	
406		04:45:00	227.75	Pressure test flow line with well gas.Pressure test good.																	
407		04:45:00	227.75	Open well on a 32/64 or a 12.70mm choke.																	
408		04:50:00	227.83			14600		12000													
409		04:55:00	227.92			14600	8	10000													
410		04:55:00	227.92			14600	8	8000													
411					101.60				0	0.00	0	0.00	80.05								
412		05:00:00	228.00	Meter in service.																	
413		05:15:00	228.25			14600	8	7200	1585	10.70	-14	362.06	81.31								
414		05:30:00	228.50			14600	12	6000	792	9.21	-14	240.82	84.45								
415		05:45:00	228.75			14600	12	5900	551	8.96	-14	201.94	86.75								
416		06:00:00	229.00			14600	12	5800	551	8.96	-14	201.89	88.85								
417		06:30:00	229.50			14600	12	5800	551	7.47	-14	184.31	90.87								
418		07:00:00	230.00			14600	14	5800	552	7.47	-10	182.83	94.69								
419		07:30:00	230.50			14600	14	5800	538	7.47	-10	180.84	98.48	2.14	100	0.07	37.14	0.00	3.26	0.07	33.87
420		08:00:00	231.00			14600	15	5800	538	7.22	-10	177.79	102.21								
421		08:30:00	231.50			14600	17	5750	517	7.22	-10	174.81	105.89								
422		08:30:00	231.50			14600	18	5700	510	7.22	-10	173.80	109.52	2.14		0.00	37.14	0.00	3.26	0.00	33.87
423				Shut in casing.End of clean up.Rig up flow line to tubing.																	
424				SUMMARY.																	
425				CUMM HOURS FLOWED = 3.75 HRS.																	
426				CUMM GAS FLARED = 29.47*10³M³.																	
427		08:50:00	231.83	CUMM FLUID PRODUCED = 0.069 M³. 100% WATER & METHANOL.																	
428		08:50:00	231.83			14600		11500													
429		08:55:00	231.92	Pressure test flow line with tubing pressure.Pressure test good.																	
430		08:59:00	231.98	Open tubing to clean up on a 32/64 or a 12.70mm choke.																	
431		09:00:00	232.00	Meter in service.101.60mm orifice.																	
432		09:00:00	232.00		0.00					0	0.00	0	0.00	109.52							
433		09:05:00	232.08	12.70	101.60	11800	22	12200	979	15.93	-12	348.22	109.52	2.14		0.00	37.14	0.00	3.26	0.00	33.87
434		09:10:00	232.17			11400	22	12400	896	14.68	-13	321.43	110.68								
						11300	24	12400	883	13.69	-11	306.78	111.77								

2001/03/09 07:15:00 To 2001/03/10 05:30:00

Gas	42.284	Cum.	86.751	10^3m^3
Oil	1.991	Cum.	3.260	m^3
Water	11.223	Cum.	33.806	m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064

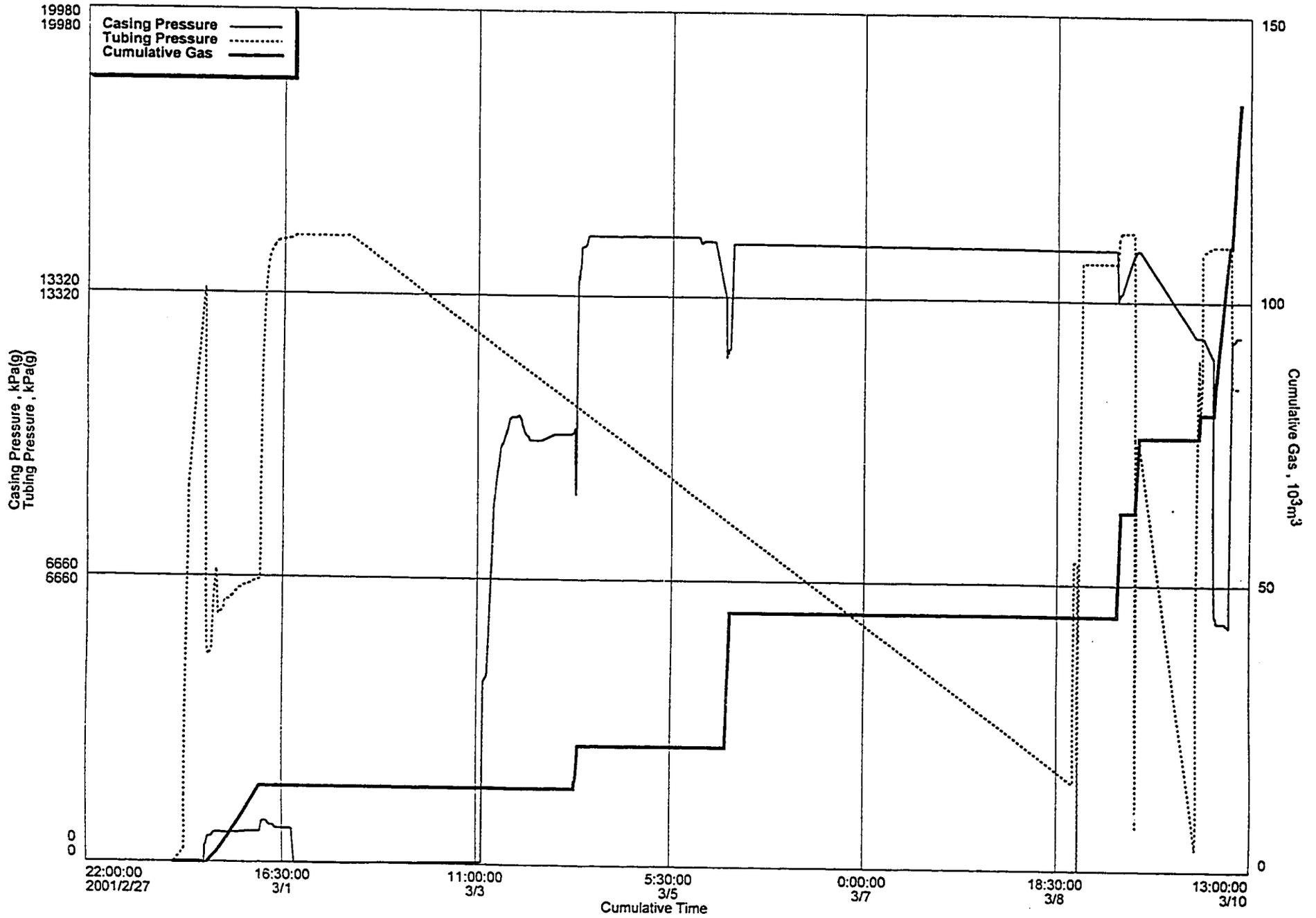
	Date	Clock Time	Cum Time	Choke Size	Orifice Size	Tbg Pres	Tbg Tem	Csg Pres	Static Pres	Diff Pres	Me Tem	Gas Rate	Cum Gas	Fld Vol	BSW	Inc Fld	Cum Fld	Inc Oil	Cum Oil	Inc BSW	BSW Vol
	yyyy/mm/d	hh:mm:s	hr	mm	mm	kPa(g)	°C	kPa(g)	kPa(g	kPa	°C	10^3m^3/	10^3m^3	m^3	%	m^3	m^3	m^3	m^3	m^3	m^3
435	2001/03/10	09:15:00	232.25			11300	24	12400	862	13.44	-12	301.27	112.83	2.14		0.00	37.14	0.00	3.26	0.00	33.87
436		09:30:00	232.50			11300	24	12400	896	13.69	-14	310.97	116.02								
437		09:45:00	232.75			11300	24	12450	896	13.94	-14	313.79	119.27	2.14		0.00	37.14	0.00	3.26	0.00	33.87
438		10:00:00	233.00			11300	25	12500	896	13.94	-12	312.46	122.53								
439		10:30:00	233.50			11300	28	12500	896	13.94	-12	312.46	129.04	2.14		0.00	37.14	0.00	3.26	0.00	33.87
440		10:55:00	233.92			11300	30	12500	896	13.94	-12	312.46	134.47	2.14		0.00	37.14	0.00	3.26	0.00	33.87
441		10:55:00	233.92						0	0.00	0	0.00	134.47								
442				Shut in well.End of clean up.Rig out production equipment.																	
443				SUMMARY.																	
444				CUMM HOURS FLOWED = 2 HRS.																	
445				CUMM GAS FLARED = 24.95*10³M³.																	
446				TOTAL GAS FLARED 134.47*3m3.																	
447				CUMM FLUID PRODUCED = 0.00 M³.																	

2001/03/10 05:30:00 To 2001/03/10 10:55:00

Gas	47.715	Cum.	134.466 10^3m^3
Oil	0.000	Cum.	3.260 m^3
Water	0.069	Cum.	33.875 m^3

PARAMOUNT RESOURCES LTD.
N-01
Start Test Date: 2001/02/28
Final Test Date: 2001/03/10

PARA et al FORD LIARD N-01
Formation: MATTSON SAND
Pool: UNDEFINED
Job Number: 064



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Fast

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
AGAT 12861	G68442B

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON SAND	SOLID PRODUCTION SERVICES

Test Type	Test No.	Test Recovery	Name of Sampler

Test Interval or Perfs		Sampling Point
1739.50-1750.00	1684.00-1689.00	METER RUN
1731.50-1736.50	mKB	

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)			1827	1827	1900
Temperature (°C)			6	6	21

Date Sampled	Date Received	Date Reported	Analyst
Mar 04, 2001	Mar 08, 2001	Mar 19, 2001	

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0001	0.0001	
He	0.0001	0.0001	
N2	0.0023	0.0023	
CO2	0.0162	0.0000	
H2S	0.0000	0.0000	
C1	0.9401	0.9558	
C2	0.0271	0.0275	
C3	0.0074	0.0075	27.2
IC4	0.0015	0.0015	6.5
NC4	0.0022	0.0022	9.3
IC5	0.0008	0.0008	3.9
NC5	0.0007	0.0007	3.4
C6	0.0007	0.0007	3.8
C7+	0.0008	0.0008	5.0
Total	1.0000	1.0000	59.1

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
38.99	39.62

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.603	0.588

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4643	198.4	4598	196.6

RELATIVE MOLECULAR MASS

Total Gas	C_7+
17.5	102.0

VAPOUR PRESSURE	H_2S g/m³
73.35 kPa	0.00

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
AGAT 12997	G68442A

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON SAND	SOLID PRODUCTION SERVICES

Test Type	Test No.	Test Recovery	Name of Sampler

Test Interval or Perfs		Sampling Point
1739.50-1750.00	1684.00-1689.00	METER RUN
1731.50-1736.50	mKB	

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)			3448	3448	2000
Temperature (°C)			9	9	21

Date Sampled	Date Received	Date Reported	Analyst
Mar 04, 2001	Mar 08, 2001	Mar 19, 2001	PL

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL • m³
H2	0.0001	0.0001	
He	0.0001	0.0001	
N2	0.0011	0.0011	
CO2	0.0171	0.0000	
H2S	0.0000	0.0000	
C1	0.9388	0.9553	
C2	0.0271	0.0276	
C3	0.0077	0.0078	28.3
IC4	0.0016	0.0016	7.0
NC4	0.0023	0.0023	9.7
IC5	0.0009	0.0009	4.4
NC5	0.0008	0.0008	3.9
C6	0.0010	0.0010	5.5
C7+	0.0014	0.0014	8.9
Total	1.0000	1.0000	67.7

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.21	39.87

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.607	0.591

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4644	199.1	4597	197.2

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
17.6	104.2

VAPOUR PRESSURE	H_2S g/m³
63.32 kPa	0.00

AGAT® Laboratories

WATER ANALYSIS

Container Identification	Laboratory Number
PB 1A	W88442A

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation			
N-01	PARA ET AL FORT LIARD N-01	KB m	492.10	GRD m	487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON SAND	SOLID PRODUCTION SERVICES

Test Type	Test No.	Test Recovery	Name of Sampler

Test Interval or Perfs		Sampling Point		Separator	Reservoir	Source	Sampled	Received
1739.50-1750.00	1684.00-1689.00	PRESSURE TANK	Pressure (kPa)					
1731.50-1736.50	mKB		Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Mar 04, 2001	Mar 08, 2001	Mar 16, 2001	LN

Other Information

Cations

ION	mg/L	Mass Fraction	mmol/L
Na	601.0	0.015	26.1
K	19200.0	0.473	491.1
Ca	174.0	0.004	4.3
Mg	16.5	Trace	0.7
Fe	31.2	0.001	0.6

Anions

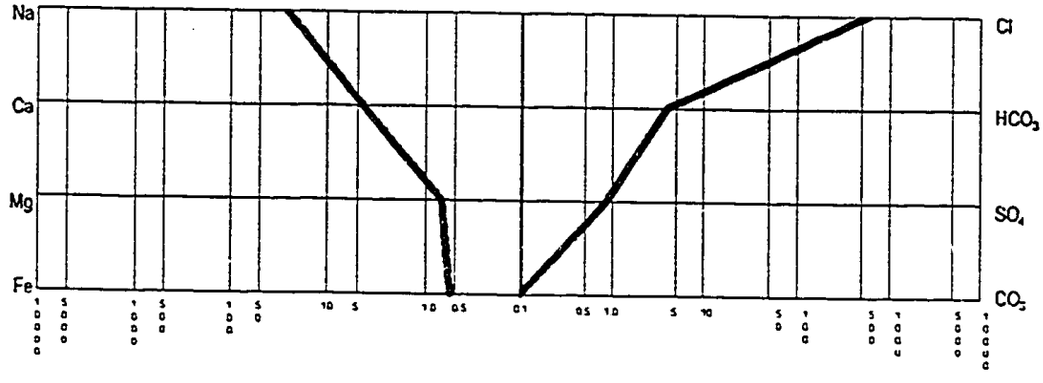
ION	mg/L	Mass Fraction	mmol/L
Cl	20244.0	0.499	571.0
HCO_3	244.0	0.006	4.0
SO_4	82.7	0.002	0.9
CO_3	Nil	Nil	Nil
OH	Nil	Nil	Nil

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	40593
Observed pH	6.94
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.027
Resistivity / OHM•m (25°C)	0.163
Salinity %	3.56

Total Cations	528.4	Total Anions	576.7

Logarithmic Pattern mmol/L



AGAT® Laboratories

HYDROCARBON LIQUID ANALYSIS

Container Identification	Laboratory Number
PB#1	C69078A

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
N-01	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
NWT	MATTSON SAND	SOLID PRODUCTION SERVICES

Test Type	Test No.	Test Recovery	Name of Sampler
		N-01 - 60 deg 10' Latitude 123 deg 15' Longitude	

Test Interval or Perfs		Sampling Point
1739.50-1750.00	1684.00-1689.00	PRESSURE TANK
1731.50-1736.50	1644.0-1648.0 mKB	

	Separator	Reservoir	Source	Sampled	Received
Pressure (kPa)					
Temperature (°C)					

Date Sampled	Date Received	Date Reported	Analyst
Mar 05, 2001	Mar 15, 2001	Mar 29, 2001	KK

Other Information
INTERVAL 1455.00-1469.00 mKB

COMP.	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
N2	0.0000	0.0000	0.0000
CO2	0.0000	0.0000	0.0000
H2S	0.0000	0.0000	0.0000
C1	0.0002	TRACE	0.0001
C2	0.0013	0.0004	0.0007
C3	0.0077	0.0030	0.0044
IC4	0.0067	0.0034	0.0045
NC4	0.0198	0.0102	0.0130
IC5	0.0314	0.0200	0.0240
NC5	0.0375	0.0239	0.0283
C6	0.0901	0.0682	0.0766
C7+	0.8053	0.8709	0.8484
TOTAL	1.0000	1.0000	1.0000

Observed Properties of C7+ Residue (15/15° C)

Density	Relative Density	API @ 15°
766.8 kg/m³	0.7675	52.9

Relative Molecular Mass
122.5

Calculated Properties of Total Sample (15/15° C)

Density	Relative Density	API @ 15°
747.0 kg/m³	0.7476	57.8

Relative Molecular Mass
113.3

Calculations for C6 and C7 are based on Boiling Point Grouping. If Carbon Number Grouping had been done, the mole fractions would be (C6: 0.2456) (C7+:0.6498)

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WinFLUID, a comparison, history and trending analysis system.

AGAT® Laboratories

PROPERTIES OF C6+ FRACTION

File No.	Company	Well No.
C69078A	PARAMOUNT RESOURCES LTD.	N-01

BOILING POINT RANGE (C)			COMPONENT		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
36.1	-	68.9	HEXANES	C6	0.0884	0.0672	0.0756
68.9	-	98.3	HEPTANES	C7	0.1056	0.1045	0.1128
98.3	-	125.6	OCTANES	C8	0.0976	0.1102	0.1157
125.6	-	150.6	NONANES	C9	0.0513	0.0650	0.0669
150.6	-	173.9	DECANES	C10	0.0479	0.0674	0.0682
173.9	-	196.1	UNDECANES	C11	0.0290	0.0448	0.0448
196.1	-	215.0	DODECANES	C12	0.0163	0.0274	0.0270
215.0	-	235.0	TRIDECANES	C13	0.0129	0.0235	0.0230
235.0	-	252.2	TETRADECANES	C14	0.0081	0.0158	0.0153
252.2	-	270.6	PENTADECANES	C15	0.0055	0.0115	0.0110
270.6	-	287.8	HEXADECANES	C16	0.0016	0.0037	0.0035
287.8	-	302.8	HEPTADECANES	C17	0.0010	0.0024	0.0023
302.8	-	317.2	OCTADECANES	C18	0.0003	0.0009	0.0008
317.2	-	330.0	NONADECANES	C19	0.0002	0.0004	0.0004
330.0	-	344.4	EICOSANES	C20	0.0000	0.0001	0.0001
344.4	-	357.2	HENEICOSANES	C21	0.0000	0.0001	0.0001
357.2	-	369.4	DOCOSANES	C22	0.0000	0.0000	0.0000
369.4	-	380.0	TRICOSANES	C23	0.0000	0.0000	0.0000
380.0	-	391.1	TETRACOSANES	C24	0.0000	0.0000	0.0000
391.1	-	401.7	PENTACOSANES	C25	0.0000	0.0000	0.0000
401.7	-	412.2	HEXACOSANES	C26	0.0000	0.0000	0.0000
412.2	-	422.2	HEPTACOSANES	C27	0.0000	0.0000	0.0000
422.2	-	431.7	OCTACOSANES	C28	0.0000	0.0000	0.0000
431.7	-	441.1	NONACOSANES	C29	0.0000	0.0000	0.0000
441.1	-	PLUS	TRIACONTANES PLUS	C30+	0.0000	0.0000	0.0000

BOILING POINT RANGE (C)			AROMATICS		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
80.0			BENZENE	C6	0.0370	0.0286	0.0241
110.6			TOLUENE	C7	0.0940	0.0856	0.0733
136.2			ETHYLBENZENE	C8	0.0072	0.0076	0.0065
138.4	-	144.4	XYLENES	C8	0.0653	0.0685	0.0583
168.9			1,2,4 TRIMETHYLBENZENE	C9	0.0072	0.0085	0.0073

BOILING POINT RANGE (C)	NAPHTHENES		MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
48.9	CYCLOPENTANE	CC5	0.0017	0.0010	0.0010
72.2	METHYLCYCLOPENTANE	MCC5	0.0359	0.0299	0.0297
81.1	CYCLOHEXANE	CC6	0.0826	0.0687	0.0654
101.1	METHYLCYCLOHEXANE	MCC6	0.0986	0.0957	0.0922

The above hexanes plus values are based upon a measured mass fraction and a calculated mole fraction, and assume a total hydrocarbon recovery from the chromatographic system.

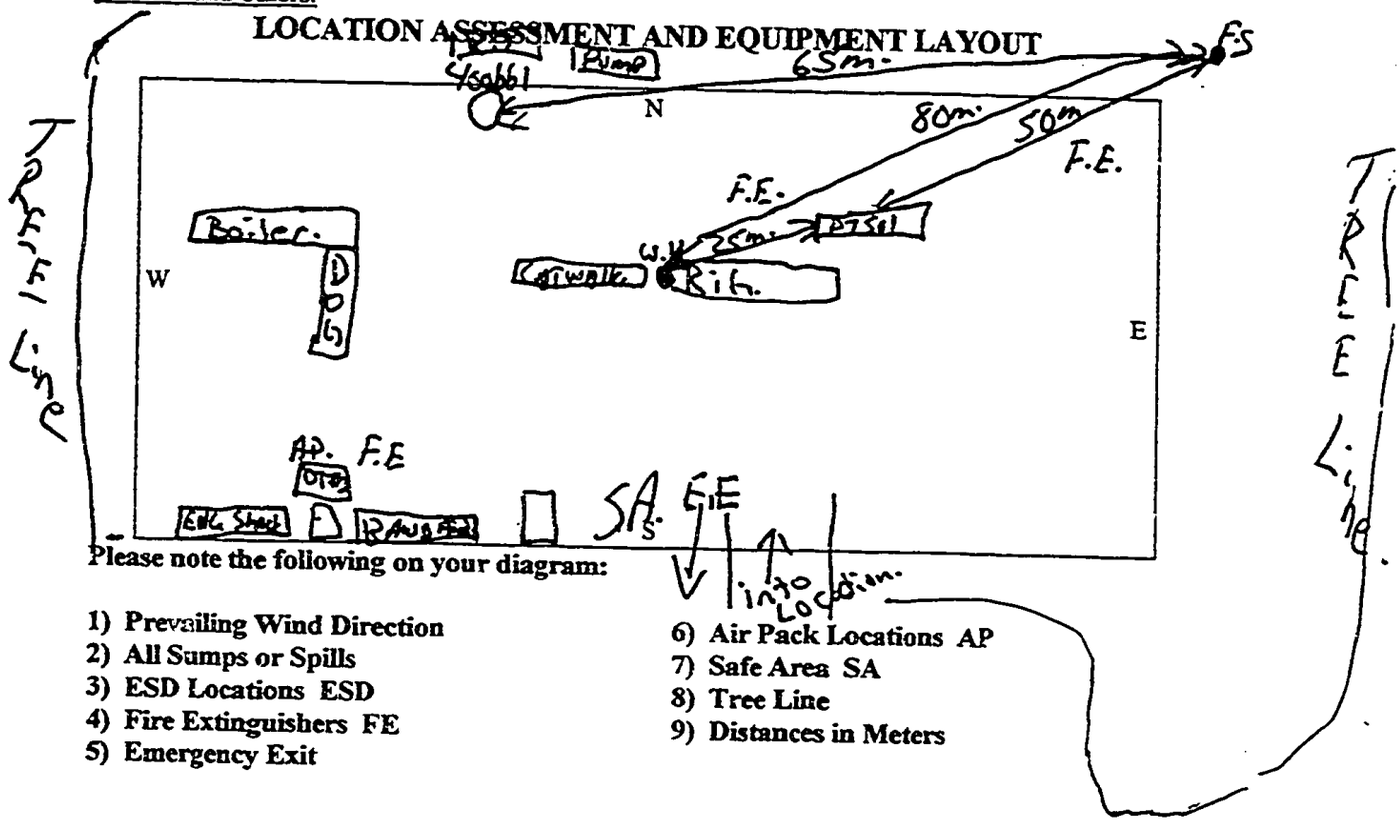
SOLID PRODUCTION SERVICES
PRE-JOB/SAFETY SUMMARY

Company: Paramount Resources Ltd.
Location: Para et al Liardn-o1
Start Date: 01/02/26 **Company Rep:** Al Ironside
Directions to Lease: From Paramount Maxhamish sign on Liard highway. Approx 115 Km. Go left. Follow main road to a T. Go right at T for approx 10km. Where road bends to left go right into.

Phone Numbers	Office	Mobile	Motel
Company Rep		403-861-3845	
Day Supervisor	780-955-7525	780-914-0045	
Night Supervisor	780-955-7525	780-499-2423	
Safety Supervisor			
RCMP	867-770-4221		
Hospital	867-770-4301		
Air Ambulance	867-770-3116		
OHS			

Pre-Job Discussion
Be extra careful during work hours. Injuries tend to happen when people are tired. Look out for yourself and others.

LOCATION ASSESSMENT AND EQUIPMENT LAYOUT



Please note the following on your diagram:

1) Prevailing Wind Direction
2) All Sumps or Spills
3) ESD Locations ESD
4) Fire Extinguishers FE
5) Emergency Exit
6) Air Pack Locations AP
7) Safe Area SA
8) Tree Line
9) Distances in Meters

SOLID PRODUCTION SERVICES
PRE-JOB/SAFETY SUMMARY con't

	H2S	First Aid	CPR	WHMIS	TDGR
R.White Senior Supervisor	☒	☒	☐	☒	☒
S.Truscott Night Supervisor	☒	☒	☐	☒	☒
T.Peterson Day Operator	☒	☒	☐	☒	☒
T.Wells Night Operator	☒	☒	☐	☒	☒
_____ Day Assistant	☐	☐	☐	☐	☐
_____ Night Assistant	☐	☐	☐	☐	☐

Company Rep - Personnel and Equipment Checklist

Personnel

	Poor	Fair	Good	Excellent
Knowledge	☐	☐	☐	☐
Conduct	☐	☐	☐	☐

Equipment

	Poor	Fair	Good	Excellent
Condition	☐	☐	☐	☐
Performance	☐	☐	☐	☐
Cleanliness	☐	☐	☐	☐

Company Rep Comments

_____
_____
_____
_____
_____

_____ _____
COMPANY REPRESENTATIVE SOLID SENIOR SUPERVISOR

SOLID PRODUCTION SERVICES
SAMPLE INFORMATION & RECEIPT

COMPANY: Paramount Resources Ltd
LOCATION: N-01
OPERATED BY: Paramount
SAMPLE DATE: 01/03/04
FLOW RATE #: 28.889 $10^3m^3/d$
FORMATION NAME AND ZONE: Mattson Sand

JOB #: 064
FIELD: Fort Liard

TIME: 0530 hrs

SEND RESULTS TO COMPANY ABOVE AND SOLID PRODUCTION SERVICES LTD.
ATTN: LYNETTE CHILEEN FAX # 955-3412

	CONTAINER #	PRESSURE	TEMP DEG C
WELLHEAD SAMPLES	1.____	____	
	2.____	____	
HIGH PRESS. GAS	1.96800000	1862 Kpa	2
	2.00019832	1862 Kpa	2
LOW PRESS. GAS	1.____	____	
	2.____	____	
HIGH PRESS. LIQUID	1.____	____	
	2.____	____	
LOW PRESS. LIQUID	1.____	____	
	2.____	____	

STOCK TANK SAMPLES (WATER) : 1
NO. OF SAMPLES (OIL OR CONDENSATE) : 0

PRODUCTION RATES: GAS28.889 E3M^3/D OIL/COND0M3D H2O1-2M3D

PRESSURES:
TUBING 6200
CASING 700
SEPARATOR 1862

SAMPLES DELIVERED TO: Agat **BY:** Solid

SAMPLES RECEIVED BY: ____ **DATE:**

SOLID PRODUCTION SERVICES
SAMPLE INFORMATION & RECEIPT

COMPANY: Paramount Resources Ltd
LOCATION: N-01
OPERATED BY: Paramount
SAMPLE DATE: 01/03/04
FLOW RATE #: 260 10^3m^3
FORMATION NAME AND ZONE: Mattson Sand

JOB #: 064
FIELD: Fort Liard

TIME: 0900

SEND RESULTS TO COMPANY ABOVE AND SOLID PRODUCTION SERVICES LTD.
ATTN: LYNETTE CHILEEN FAX # 955-3412

	CONTAINER #	PRESSURE	TEMP DEG C
WELLHEAD SAMPLES	1.____	____	
	2.____	____	
HIGH PRESS. GAS	1.00012861	1827 Kpa	6
	2.00012997	3448 Kpa	9
LOW PRESS. GAS	1.____	____	
	2.____	____	
HIGH PRESS. LIQUID	1.____	____	
	2.____	____	
LOW PRESS. LIQUID	1.____	____	
	2.____	____	

STOCK TANK SAMPLES (WATER) : 2
NO. OF SAMPLES (OIL OR CONDENSATE) : 0

PRODUCTION RATES: GAS260 E3M^3/D OIL/COND0M3D H2O0M3D

PRESSURES:
TUBING
CASING 13900 Kpa
SEPARATOR 1827 Kpa

SAMPLES DELIVERED TO: AGAT **BY:** Solid

SAMPLES RECEIVED BY: ____ **DATE:**

STATIC GRADIENT TEST DATA

AUG. 8, 2002

N.E.B. COPY

Para et al Fort Liard N-01
N-01
Mattson, M2A, M2B, M3 Formation
Static Gradient Test Data
Aug 08, 2002

GENERAL INFORMATION

Client Information:

Company: Paramount Resoureces Ltd.

Contact: Wayne Tomm

Phone: 290-3600 Fax: e-mail:

Site Information:

Contact:

Phone: Fax: e-mail:

Well Information:

Name: Para et al Fort Liard N-01

Operator: Paramount Resoureces Ltd.

Location-Downhole: N-01

Location-Surface: N-01

Test Information:

Company:	OPSCO Energy Industries Ltd.		
Representative:	Lawrence Bews		
Supervisor:			
Test Type:	Static Gradient	Job Number:	
Test Unit:			
Start Date:	2002/08/08	Start Time:	10:40:00
End Date:	2002/08/08	End Time:	12:53:05
Report Date:	2002/08/16	Prepared By:	JIM O'KEEFE
Remarks:		Qualified By:	

Mattson M2A, M2B, M3 perforated interval @ 1644.0 - 1750.0 mKB.
All pressures are reported in Absolute (kPaa)
All depths are measured in mKB.

Paramount Resoureces Ltd.
N-01
Start Test Date: 2002/08/08
Final Test Date: 2002/08/08

Static Gradient
Para et al Fort Liard N-01

Para et al Fort Liard N-01
Formation: Mattson

Gauge Serial Number	1026	Gauge Type	Strain
Gauge Manufacturer	Panther	Maximum Recorder Range	41370.00 kPa
Run Depth	1765.10 m	Date of Last Calibration	2002/05/21
Gauge Start Date	2002/08/08 10:40:00	Gauge Stop Date	2002/08/08 12:53:05
Date Gauge On Bottom	2002/08/08 12:26:00	Date Gauge Off Bottom	2002/08/08 12:36:00

Test Data

Test/Prod Interval Top KB (TVD)	1644.00 m	Base KB (TVD)	1750.00 m
Pool Datum Depth (SS)	m	Well Datum Depth	m
Tubing Pressure Initial	2655.00 kPa(a)	Final	kPa(a)
Casing Pressure Initial	10728.00 kPa(a)	Final	kPa(a)
Start Test Date	2002/08/08 10:40:00	Date Well Shut-In	

Depth m	Time hh:mm:ss	Duration min	Pressure kPa(a)	Gradient kPa/m	Temp. °C	Gradient °C/m
5.10	11:04:39		2654.97		19.38	
305.10	11:12:09	7.50	2717.00	0.207	19.90	0.002
605.10	11:22:00	9.83	2779.36	0.208	28.15	0.028
905.10	11:31:50	9.83	2839.85	0.202	35.52	0.025
1205.10	11:42:20	10.50	2901.05	0.204	42.12	0.022
1505.10	11:52:29	10.16	2963.53	0.208	54.70	0.042
1650.10	12:02:40	10.17	2993.65	0.208	60.32	0.039
1690.10	12:09:49	7.16	3001.28	0.191	61.54	0.031
1720.10	12:17:19	7.50	3137.12	4.528	62.78	0.041
1750.10	12:24:20	7.00	3273.51	4.546	62.97	0.006
1765.10	12:38:19	14.00	3342.16	4.577	63.10	0.008

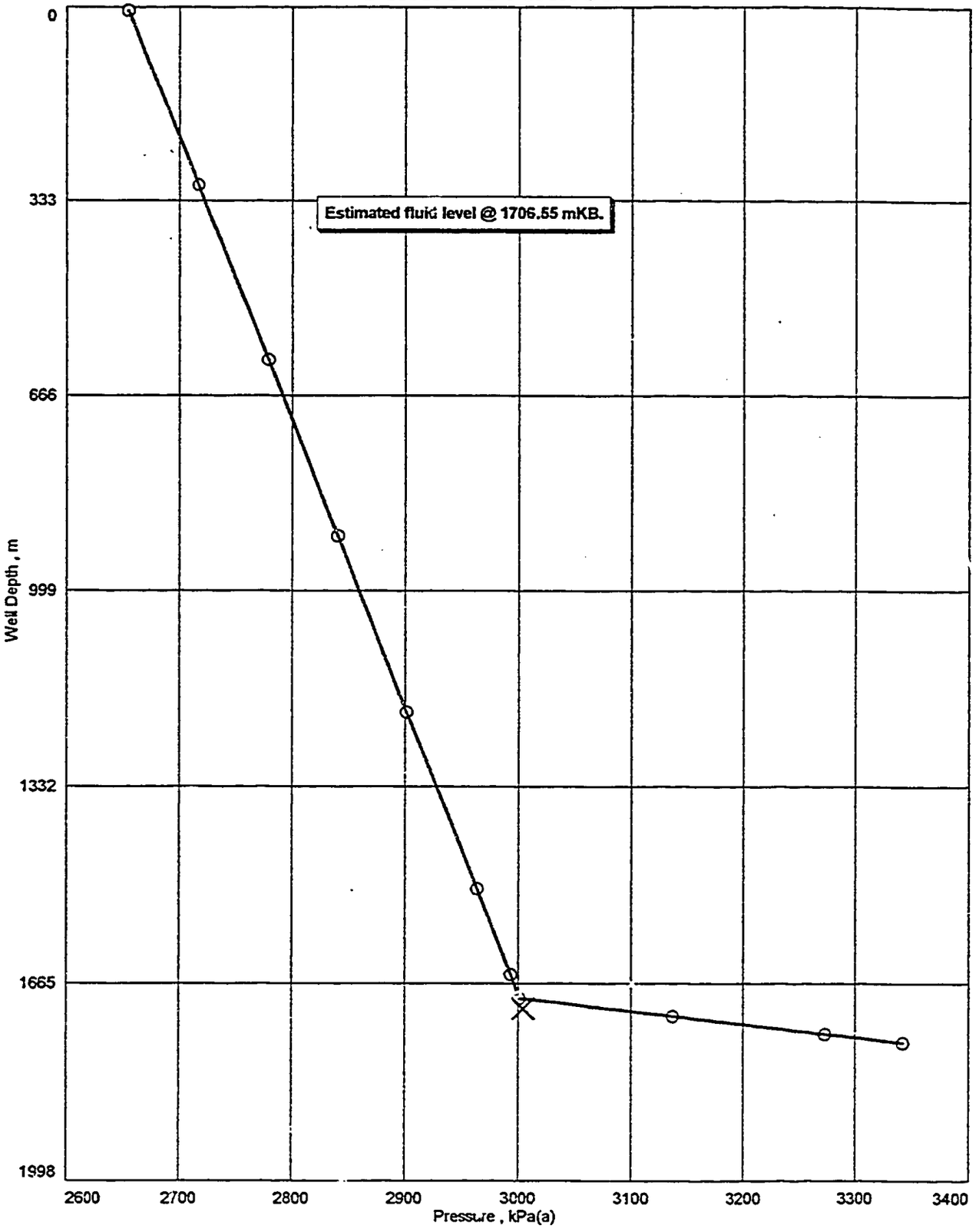
Results

Gradient 1	0.191 kPa/m	Liquid Interface 1	1706.55 m
Gradient 2	9.796 kPa/m		
		MPP	

Paramount Resoureces Ltd.
N-01
Start Test Date: 2002/08/08
Final Test Date: 2002/08/08

Para et al Fort Liard N-01
Formation: Mattson

Static Gradient



C:\WIREDATA\home\PARn-01SG\PARN-01SG.FKT 16-Aug-02 Ver 2.406

Paramount Resoureces Ltd. N-01 Start Test Date: 2002/08/08 Final Test Date: 2002/08/08	**Recorder**	Para et al Fort Liard N-01 Formation: Mattson

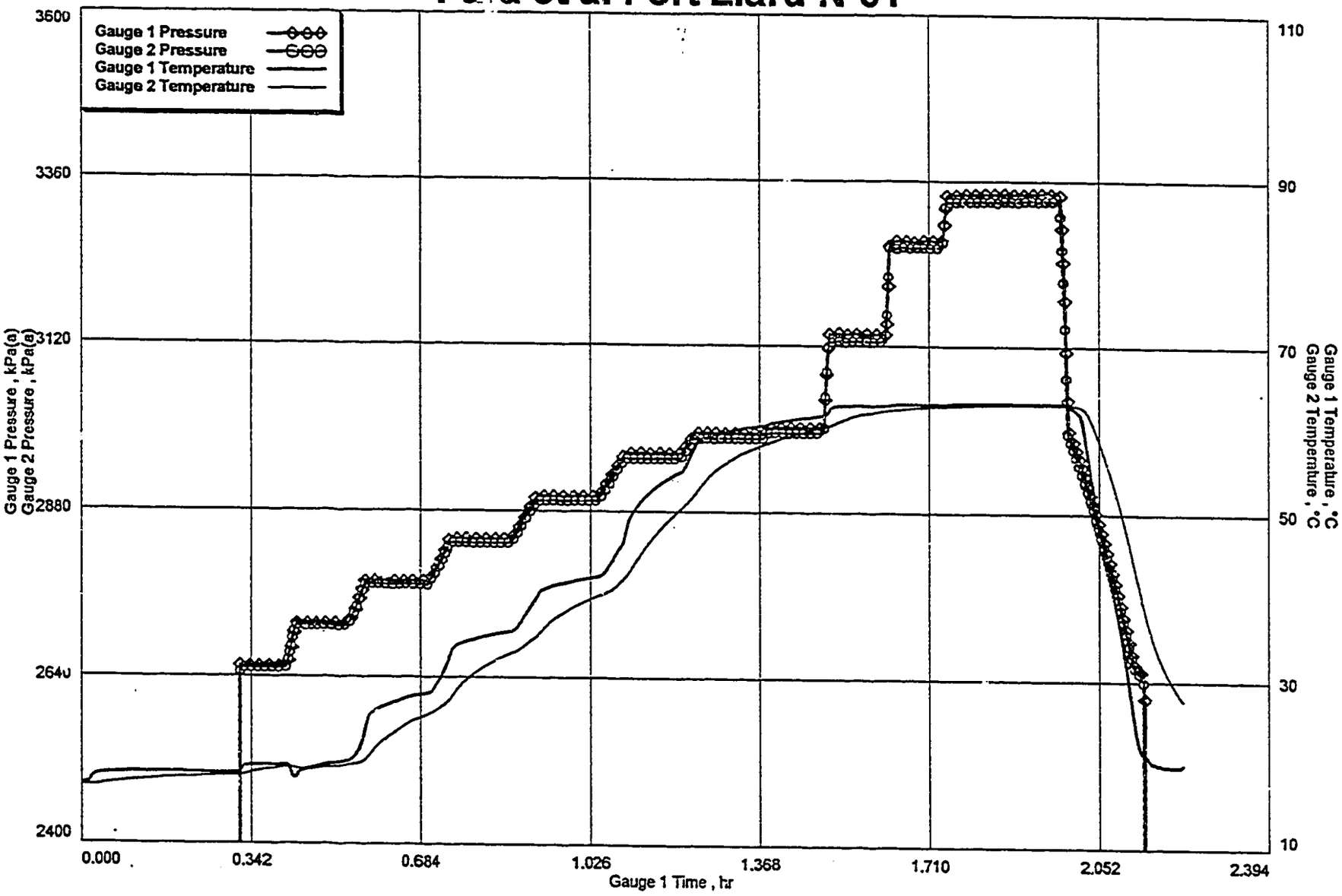
Gauge Serial Number	1026	Gauge Type	Strain
Gauge Manufacturer	Panther	Maximum Recorder Range	41370.00 kPa
Run Depth	1765.10 m	Date of Last Calibration	2002/05/21
Gauge Start Date	2002/08/08 10:40:00	Gauge Stop Date	2002/08/08 12:53:05
Date Gauge On Bottom	2002/08/08 12:26:00	Date Gauge Off Bottom	2002/08/08 12:36:00

Gauge Serial Number	1076	Gauge Type	Strain
Gauge Manufacturer	Panther	Maximum Recorder Range	41370.00 kPa
Run Depth	1764.10 m	Date of Last Calibration	2002/05/21
Gauge Start Date	2002/08/08 10:40:00	Gauge Stop Date	2002/08/08 12:53:05
Date Gauge On Bottom	2002/08/08 12:26:00	Date Gauge Off Bottom	2002/08/01 12:36:00

Paramount Resoureces Ltd.
N-01
Start Test Date: 2002/08/08
Final Test Date: 2002/08/08

Para et al Fort Liard N-01
Formation: Mattson

Para et al Fort Liard N-01



STANDARD SURVEY REPORT

DENE DIRECTIONAL & RENTALS LTD.

Standard Survey Report

N.E.B. COPY

Company:	PARAMOUNT RESOURCES LTD.	**Date:** 9/1/2001 **Time:** 11:55:49	**Page:** 1
Ref:	#epf\N-01	**Co-ordinate(NE) Reference:**	Site: PARA et al FORT LIARD, Grid North
Site:	PARA et al FORT LIARD	**Vertical (TVD) Reference:**	Est. KB Elev. 491.2 above Mean Sea Level
Well:	N-01	**Section (VS) Reference:**	Slot (0.0E,0.0N,0.0Azi)
Wellpath:	Original hole	**Survey Calculation Method:**	Minimum Curvature

N-01 60-10-123-15

Map Projection & Zone: Universal Transverse Mercator
UTM Zone 10, South 126W to 120W

Direction of Local North: Grid

Ellipsoid: WGS 1984

Field Datum: Mean Sea Level

Geomagnetic Model: WMM2000

Site: PARA et al FORT LIARD
Ground Elev.= 486.2m

Site Centre: 485149.57 m E — 60 1 5.000 N **Latitude**
16653451.90 m N — 123 15 59.000 W **Longitude**

Site Water Depth: 0.00 m

Position Uncertainty: 0.00 m

Magnetic Declination: 25.42 deg
Grid Convergence: 0.00 deg

Measured Depths Referenced To: Est. KB Elev. 491.20 m above Mean Sea Level

Well: N-01

Originating From: 0.00 m +N/-S, 0.00 m +E/-W

Map Easting: 485149.57 m
Map Northing: 16653451.90 m

Wellpath: Original hole

Origin of Vertical Section: Slot — 0.00 m +N/-S, 0.00 m +E/-W

Direction of Vertical Section: 0.00 deg

Survey: Survey #1

Start Date: 9/1/2001

Company: Dene Directional & Rentals Ltd

Engineer:

Tool:

Drilled Wellpath: Survey #1

MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	VS m	DLS deg/30m	Build deg/30m	Turn deg/30m	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	
501.00	0.00	0.00	501.00	0.00	0.00	0.00	0.000	0.000	0.000	
512.30	1.10	274.70	512.30	0.01	-0.11	0.01	2.920	2.920	0.000	
521.80	1.20	276.80	521.80	0.03	-0.30	0.03	0.343	0.316	6.632	
531.30	1.10	270.50	531.30	0.04	-0.49	0.04	0.509	-0.316	-19.895	
540.80	1.10	261.30	540.79	0.03	-0.67	0.03	0.557	0.000	-29.053	
569.40	0.70	278.20	569.39	0.01	-1.11	0.01	0.499	-0.420	17.727	
597.90	0.50	306.70	597.89	0.11	-1.39	0.11	0.372	-0.211	30.000	
627.50	0.50	304.90	627.49	0.26	-1.59	0.26	0.016	0.000	-1.824	
655.10	0.90	295.80	655.09	0.42	-1.89	0.42	0.450	0.435	-9.891	
664.60	0.70	300.00	664.58	0.49	-2.01	0.49	0.658	-0.632	13.263	
702.70	0.50	353.10	702.68	0.77	-2.23	0.77	0.445	-0.157	41.811	
731.30	1.90	90.80	731.28	0.88	-1.77	0.88	2.128	1.469	102.483	
750.30	2.10	92.60	750.27	0.86	-1.11	0.86	0.331	0.316	2.842	
759.80	2.10	91.10	759.76	0.85	-0.76	0.85	0.174	0.000	-4.737	
769.40	1.80	91.20	769.35	0.85	-0.43	0.85	0.938	-0.937	0.312	
797.90	1.60	86.90	797.84	0.86	0.41	0.86	0.250	-0.211	-4.526	
807.40	1.60	85.50	807.34	0.88	0.68	0.88	0.123	0.000	-4.421	

DENE DIRECTIONAL & RENTALS LTD.

Standard Survey Report

Company:	PARAMOUNT RESOURCES LTD.	**Date:** 9/1/2001 **Time:** 11:55:49	**Page:** 2
Ref:	#epfN-01	**Co-ordinate(NE) Reference:**	Site: PARA et al FORT LIARD, Grid North
Site:	PARA et al FORT LIARD	**Vertical (TVD) Reference:**	Est. KB Elev. 491.2 above Mean Sea Level
Well:	N-01	**Section (VS) Reference:**	Slot (0.0E,0.0N,0.0Azi)
Wellpath:	Original hole	**Survey Calculation Method:**	Minimum Curvature

Drilled Wellpath: Survey #1

MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	VS m	DLS deg/30m	Build deg/30m	Turn deg/30m	Tool/Comment
836.00	1.40	90.50	835.93	0.90	1.43	0.90	0.251	-0.210	5.245	
864.60	1.40	100.70	864.52	0.84	2.12	0.84	0.261	0.000	10.699	
893.10	1.40	119.60	893.01	0.60	2.76	0.60	0.484	0.000	19.895	
902.60	1.20	129.60	902.51	0.48	2.94	0.48	0.953	-0.632	31.579	
911.09	1.37	136.06	911.00	0.35	3.08	0.35	0.787	0.599	22.801	Scatter
921.70	1.60	142.10	921.60	0.14	3.26	0.14	0.787	0.651	17.097	
931.20	1.80	147.40	931.10	-0.09	3.42	-0.09	0.803	0.632	16.737	
950.20	1.60	160.40	950.09	-0.59	3.67	-0.59	0.684	-0.316	20.526	
959.70	1.60	162.50	959.59	-0.84	3.75	-0.84	0.185	0.000	6.632	
969.10	1.20	179.10	968.98	-1.07	3.80	-1.07	1.805	-1.277	52.979	
980.10	1.20	206.50	979.98	-1.28	3.75	-1.28	1.550	0.000	74.727	
989.60	1.10	210.70	989.48	-1.45	3.65	-1.45	0.413	-0.316	13.263	
999.10	1.10	227.60	998.98	-1.59	3.54	-1.59	1.021	0.000	53.368	
1027.70	0.70	217.40	1027.57	-1.91	3.23	-1.91	0.450	-0.420	-10.699	
1046.70	0.70	250.40	1046.57	-2.05	3.05	-2.05	0.628	0.000	52.105	
1051.13	0.67	250.03	1051.00	-2.06	3.00	-2.06	0.217	-0.215	-2.484	Garbutt
1074.70	0.50	247.30	1074.57	-2.15	2.78	-2.15	0.217	-0.214	-3.479	
1103.20	0.50	260.60	1103.07	-2.22	2.54	-2.22	0.122	0.000	14.000	
1135.40	0.90	283.50	1135.27	-2.18	2.16	-2.18	0.448	0.373	21.335	
1159.60	0.30	213.50	1159.47	-2.19	1.94	-2.19	1.048	-0.744	-86.777	
1188.10	0.30	173.10	1187.97	-2.33	1.90	-2.33	0.218	0.000	-42.526	
1202.13	0.36	176.82	1202.00	-2.41	1.91	-2.41	0.131	0.123	7.957	CHINKEH SAND**
1214.13	0.41	179.16	1214.00	-2.49	1.91	-2.49	0.131	0.125	5.851	Triassic
1235.90	0.50	182.20	1235.76	-2.66	1.91	-2.66	0.131	0.127	4.186	
1274.10	0.70	168.90	1273.96	-3.06	1.95	-3.06	0.190	0.157	-10.445	
1307.30	0.70	165.30	1307.16	-3.45	2.04	-3.45	0.040	0.000	-3.253	
1309.14	0.70	167.02	1309.00	-3.47	2.05	-3.47	0.346	0.046	27.984	Belloy
1349.80	0.90	198.00	1349.66	-4.02	2.00	-4.02	0.346	0.145	22.861	
1362.15	0.82	203.10	1362.00	-4.19	1.94	-4.19	0.265	-0.190	12.383	FANTASQUE**
1385.00	0.70	215.30	1384.85	-4.46	1.79	-4.46	0.265	-0.160	16.020	
1425.90	0.50	14.50	1425.75	-4.49	1.69	-4.49	0.866	-0.147	116.773	
1454.70	1.90	57.80	1454.55	-4.11	2.13	-4.11	1.639	1.458	45.104	
1464.30	1.80	55.70	1464.14	-3.94	2.39	-3.94	0.377	-0.312	-6.562	
1473.90	1.40	54.60	1473.74	-3.79	2.61	-3.79	1.254	-1.250	-3.437	
1483.40	1.40	52.80	1483.23	-3.65	2.80	-3.65	0.139	0.000	-5.684	
1490.17	1.32	50.59	1490.00	-3.55	2.92	-3.55	0.409	-0.336	-9.802	Kindle
1511.70	1.10	41.60	1511.53	-3.24	3.25	-3.24	0.409	-0.312	-12.524	
1517.17	1.09	35.25	1517.00	-3.16	3.32	-3.16	0.667	-0.032	-34.808	"MATTSON"
1539.00	1.20	11.40	1538.82	-2.76	3.48	-2.76	0.667	0.146	-32.780	
1552.00	1.40	356.60	1551.82	-2.47	3.50	-2.47	0.898	0.462	-34.154	
1577.80	1.40	350.60	1577.61	-1.85	3.43	-1.85	0.170	0.000	-6.977	
1596.40	1.40	1.20	1596.21	-1.40	3.40	-1.40	0.417	0.000	17.097	
1615.00	1.80	352.40	1614.80	-0.88	3.36	-0.88	0.755	0.645	-14.194	
1626.00	1.80	352.00	1625.79	-0.54	3.32	-0.54	0.034	0.000	-1.091	
1653.00	1.80	341.10	1652.78	0.28	3.12	0.28	0.380	0.000	-12.111	
1681.60	1.40	345.00	1681.37	1.05	2.88	1.05	0.435	-0.420	4.091	
1700.40	1.20	1.20	1700.16	1.47	2.83	1.47	0.664	-0.319	25.851	
1709.70	1.10	355.20	1709.46	1.65	2.82	1.65	0.505	-0.323	-19.355	
1728.90	1.40	0.10	1728.66	2.07	2.81	2.07	0.497	0.469	7.656	
1755.00	1.60	348.50	1754.75	2.75	2.74	2.75	0.417	0.230	-13.333	
1767.30	1.60	345.70	1767.04	3.08	2.66	3.08	0.191	0.000	-6.829	
1796.10	2.10	346.80	1795.83	3.98	2.44	3.98	0.522	0.521	1.146	
1805.70	2.50	353.10	1805.42	4.36	2.37	4.36	1.477	1.250	19.687	

DENE DIRECTIONAL & RENTALS LTD.

Standard Survey Report

Company:	PARAMOUNT RESOURCES LTD.	**Date:** 9/1/2001 **Time:** 11:55:49	**Page:** 3
Ref:	#epfN-01	**Co-ordinate(NE) Reference:**	Site: PARA et al FORT LIARD, Grid North
Site:	PARA et al FORT LIARD	**Vertical (TVD) Reference:**	Est. KB Elev. 491.2 above Mean Sea Level
Well:	N-01	**Section (VS) Reference:**	Slot (0.0E,0.0N,0.0Azi)
Wellpath:	Original hole	**Survey Calculation Method:**	Minimum Curvature

Drilled Wellpath: Survey #1

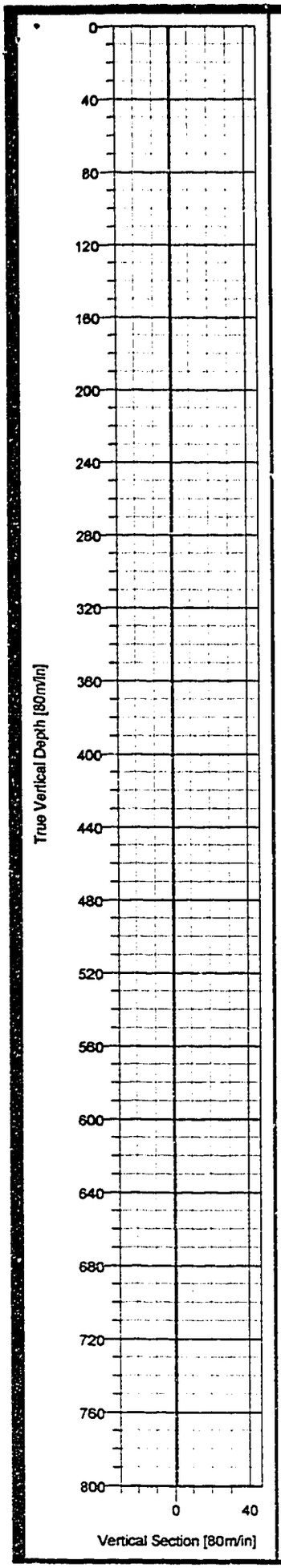
MD m	Incl deg	Azim deg	TVD m	+N/-S m	+E/-W m	VS m	DLS deg/30m	Build deg/30m	Turn deg/30m	Tool/Comment
1853.80	3.50	3.60	1853.45	6.87	2.34	6.87	0.709	0.624	6.549	
1863.50	3.50	6.10	1863.14	7.46	2.39	7.46	0.472	0.000	7.732	
1873.10	3.30	4.30	1872.72	8.03	2.44	8.03	0.708	-0.625	-5.625	
1882.70	3.20	359.80	1882.30	8.57	2.46	8.57	0.856	-0.312	-14.063	
1892.30	2.80	357.60	1891.89	9.07	2.45	9.07	1.301	-1.250	-6.875	
1902.20	2.50	352.40	1901.78	9.53	2.41	9.53	1.164	-0.909	-15.758	
1922.00	2.80	5.00	1921.56	10.44	2.40	10.44	0.990	0.455	19.091	
1940.00	2.98	10.00	1939.54	11.34	2.52	11.34	0.516	0.300	8.333	Ext..Bit..TD

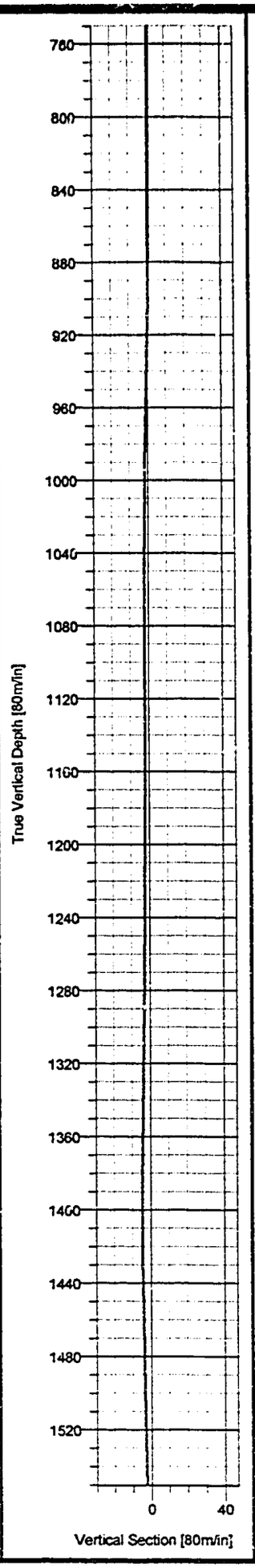
Formations (per Prognosis, NOT "As Drilled")

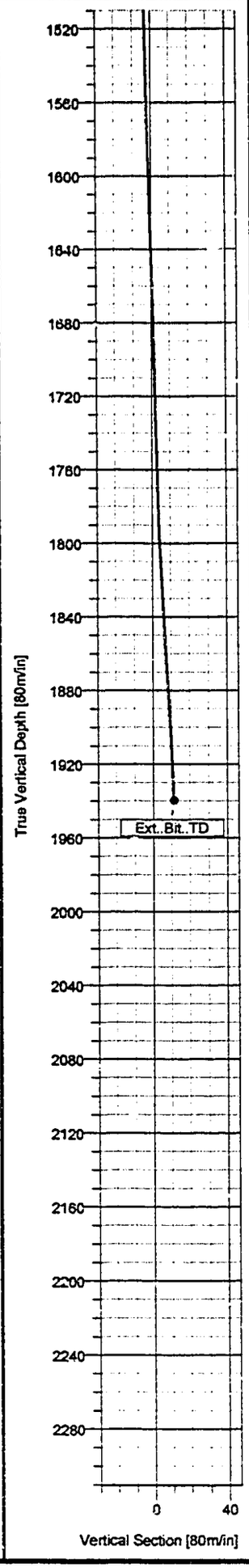
MD m	TVD m	Formations	Lithology	Dip Angle deg	Dip Direction deg
0.00	46.00	Dunvegan		0.00	0.00
0.00	406.00	Lepine		0.00	0.00
911.09	911.00	Scatter		0.00	0.00
1051.13	1051.00	Garbutt		0.00	0.00
1202.13	1202.00	CHINKEH SAND**		0.00	0.00
1214.13	1214.00	Triassic		0.00	0.00
1309.14	1309.00	Belloy		0.00	0.00
1362.15	1362.00	FANTASQUE**		0.00	0.00
1490.17	1490.00	Kindle		0.00	0.00
1517.17	1517.00	*MATTSON*		0.00	0.00
1960.49	1960.00	Mattson Fault		0.00	0.00

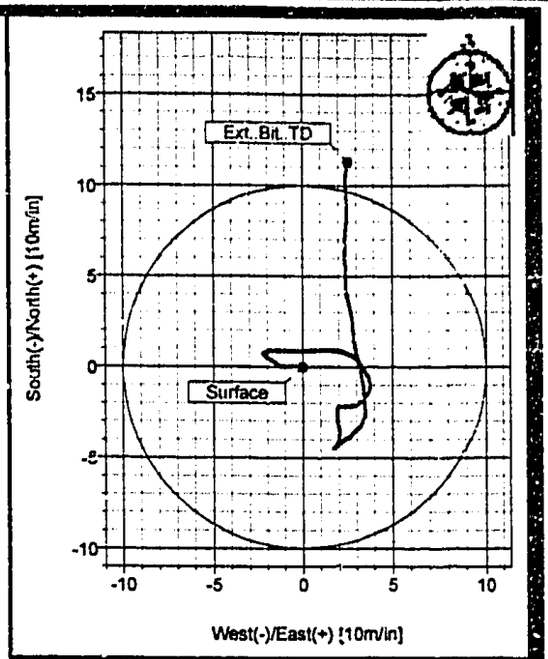
Annotation

MD m	TVD m		
1940.00	1939.54	Ext..Bit..TD	(Extrapolation to Bit)









PARAMOUNT RESOURCES LTD.
Ref: #epfIN-01
Site: PARA et al FORT LIARD
Well: N-01
Wellpath: Drilled Path
Survey: Survey #1

SITE DETAILS

PARA et al FORT LIARD

Site Centre Latitude: 60 1 5.000 N
Longitude: 123 15 59.000 W

Magnetic Declination: 25.42°

WELLPATH DETAILS

Original hole

Vertical Section Origin: Slot - (0.00,0.00)
Vertical Section Angle: 0.00°

Depth Reference, Ground Elev.: 486.20m
Depth Reference, Est. KB Elev.: 491.20m

LEGEND

Survey #1 - DRILLED WELLPATH

FORMATION TOP DETAILS
(per Prognosis, NOT "As Drilled")

No.	TVD	MD	Formation
1	911.00	911.09	Scatter
2	1051.00	1051.13	Garbutt
3	1202.00	1202.13	CHINKEH SAND**
4	1214.00	1214.13	Triassic
5	1309.00	1309.14	Belloy
6	1362.00	1362.15	FANTASQUE**
7	1490.00	1490.17	Kindle
8	1517.00	1517.17	*MATTSON*
9	1960.00	1960.49	Mattson Fault

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Phone: (403) 438-1221
Fax: (403) 968-5365
Email: denedirectional.com

Survey: Survey #1 (N-01/Original hole)

Created By: Isobel G. Irvine Date: 9/1/2001
Checked: _____ Date: _____
Approved: _____ Date: _____