

**AUTHORITY TO
DRILL A WELL**



CANADA

Exploratory ☒
Development ☐Delineation ☐
Service ☐

AUTHORITY TO DRILL A WELL

APPLICATION

This application is submitted with Section 82 of the Canada Oil and Gas Drilling Regulations. When approved under Section 83 of the Regulations, it is the requisite authority for the commencement of drilling operations.

Well Name in Full: OEI et al Liard N-60
Operator: Ocelot Energy Inc. Drilling Program No.: N/A
Contractor: Precision Permit or Lease No.: EL 382
Drilling Rig or Unit: #403 Estimated Well Cost: \$1,100,000
Location-Unit: N Section: 60 Grid Area: 60°20' 123°00'
Coordinates: Lat: 60°19'55.263" Long: 123°10'36.008"
Area: Fort Liard Field/Pool: N/A
Elevation-RT/KB: 339.8 m. (ASL) Seafloor: N/A (BAT)
Approx. Spud Date: November 15, 1997 Estimated Days on Location: 14
Anticipated Total Depth: 675 m. Target Horizon(s): Chinkeh, Mattson

EVALUATION PROGRAM

Ten-metre sample intervals: None
Five-metre sample intervals: 1 vial + 1 bag to NEB, 1 vial to OEI + partners from surface to T.D.
Canned sample intervals: None
Conventional cores at: One (1) in Chinkeh and two (2) in Mattson
Logs and Tests: Logs as per program, Test (DST) dependent on logs.

CASING AND CEMENTING PROGRAM

O.D.	Weight:	Grade:	Setting Depth Below Seafloor:	Cementing Program (Volumes)
406	Conductor			
244.5 mm.	48.1 kg/m.	H-40	150 m.	Cement to surface
177.8 mm.	29.76 kg/m.	J-55	650 m.	Cement to surface
114.3 mm.	14.14 kg/m.	J-55	675 m.	Cement to surface
139.7 mm.	20.83 kg/m.	J-55	675 m.	Cement to surface
B.O.P. Equipment: 228.6 mm. (9") x 21 MPa (3000 lb.)				
annular, 2 - pipe rams, 1 - blind ram				

Other Information: Surface Casing Program the same, a contingent casing + cement program will be in effect after drilling out. See attached Drilling Program.

Signed: [Signature] Title: Drilling Engineer
Date: October 6, 1997 Company: Ocelot Energy Inc.

APPROVAL

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

Signed: [Signature] Chief Conservation Officer
Date: Nov 18/97

File 9211-022-1-1, WID 1830
UWI 300N606020123000

Canada

**WELL
TERMINATION
RECORD**



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: OEI-LIARD-N-69 Paramount West Bovie N-60 Area: Fort Liard
Grid Area: 60° 20' 123° 00' Field/Pool: -
Permit or Lease No.: EL 382 Final Coordinates: Lat: 60° 19' 55.26" Long: 123° 10' 36.01"
Drilling Unit: Precision 403 Elevations-RT(KB) 340 SF(KB) 335.7
Spud Date: Dec. 12, 1997 Rig Released: Dec. 25, 1997 Total Depth: 835m

CASING AND CEMENTING

O.D.:	Weight:	Grade:	Depth Set:	Cement and Additives:
<u>244.5</u>	<u>48.07</u>	<u>H40</u>	<u>250</u>	<u>19T. 0; 1.0 + 3% CaCl₂</u> <i>Class G</i>

PLUGGING PROGRAM

Approval of the following program was obtained by (person) Info not available in well file from
(person) - by means of

- on - 19 -

Type of Plug:	Interval:	Fell:	Cement and Additives:
<u>Cement</u>	<u>530 - 835</u>	<u>512</u>	<u>14.4m³ THIXMIX II +</u> <u>25% CFL - 3 +</u> <u>2% CaCl₂</u>
<u>Cement</u>	<u>215 - 512</u>		<u>16.6m³</u> <u>(same as above)</u>

Lost Circulation/Overpressure Zones: N/A

Equipment left on Seafloor (Describe): N/A

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

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: S. Maaskant CET
P-Eng.

Name: Shirley Maaskant

Paramount Resources Ltd.

Title: Regulatory & Community Affairs Manager

Date: March 2, 2000

Acknowledged by: J. M. Baker

Engineering Branch

Date: May 05/00

File: 9211-022-1-1, WID 1830

UWI 300N606020123000

Well Status
Suspended ☐
Completed ☐
Abandoned ☒

Canada

FINAL WELL REPORT

Final Well Report
Paramount Resources Ltd.
Paramount West Bovie N-60
(Original Name: OEI et al Liard N-60)

Grid: 60° 20', 123° 00'

WID 1830

FINAL WELL REPORT

Paramount Resources Ltd.

Paramount West Bovie N-60
(Original Name: OEI et al Liard N-60)

Grid: 60° 20', 123° 00'
W10. 1830

DATE: Sept. 19, 2000

COMPANY REPRESENTATIVE: Wayne Tomm

SEP 25 2000

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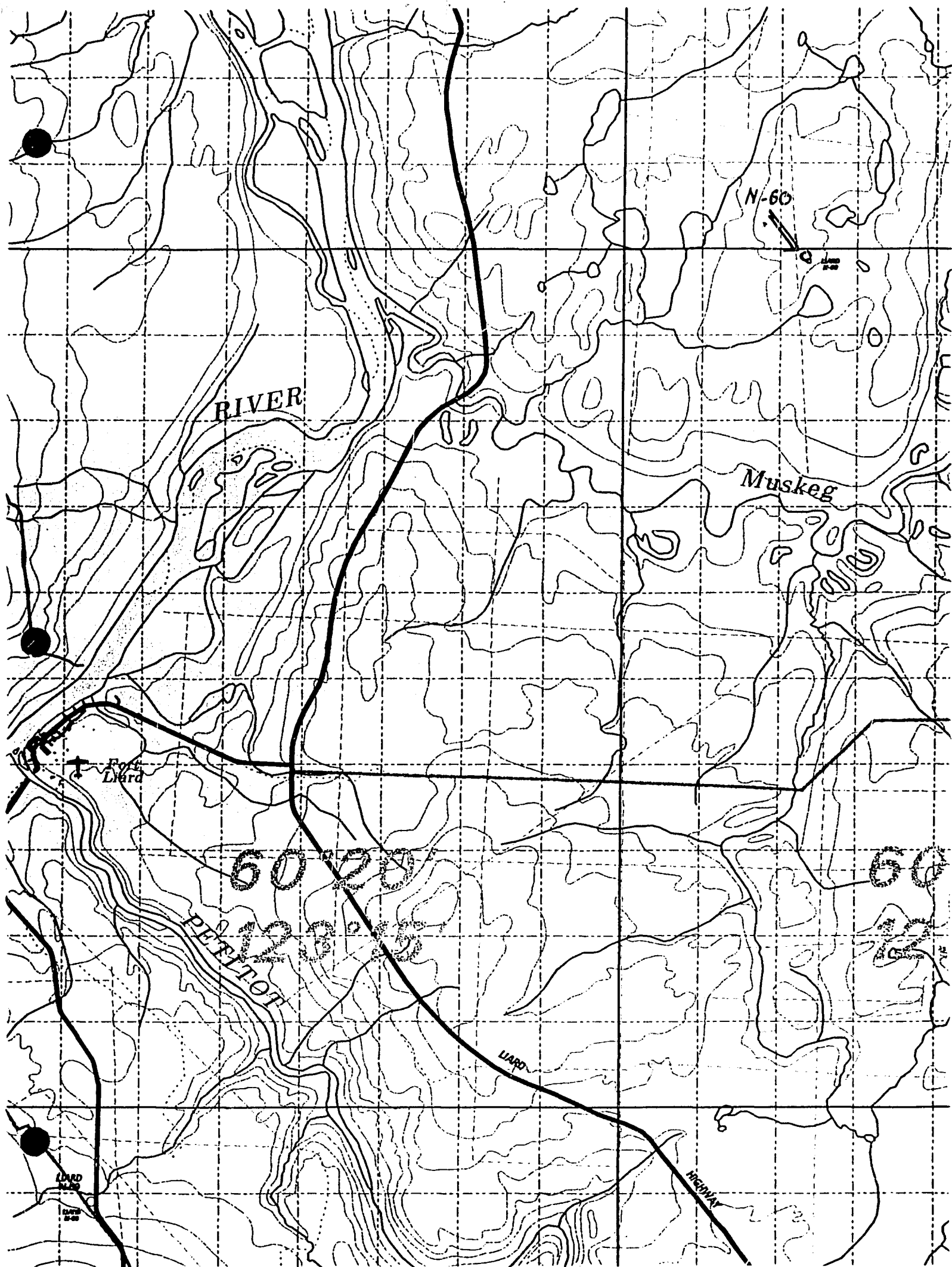
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6. Final survey plan.



A. INTRODUCTION

Ocelot Energy Inc. drilled a 835 meter exploratory well spudded on December 12, 1997 and rig released on December 25, 1997 to evaluate gas potential in the Mattson formation at a depth of 548 mKB.

The well potential was evaluated over two intervals in the Mattson formation with the drilling rig.

The drilling contractor was Precision Drilling Rig#403 based out of Calgary, Alberta.

The well was drilled on Exploration License No.382 in which Ocelot Energy Inc had a 50 % working interest. Operating License No. **OEI et al Liard N-60**

WID: 1830

File: 9211-O22-1-1

UWI: 300N606020123000

was issued to Ocelot Energy Inc. on October 06, 1997

The exact co-ordinates of the well are as follows:

Latitude: 60° 19' 55.263"

Longitude: 123° 10' 36.008"

The rig was moved onto the location (December 09, 1997) and the well spudded on December 12, 1997 at 10:30 hours to drill the 311 mm surface hole to a depth of 250 m. The diverter was nipped up and functioned tested with the HCR prior to spud.

The conductor shoe was then drilled out and the 311 mm surface hole was drilled ahead to 250 m with no problems encountered

When running the 2445 mm x 48.07 kg/m x H-40 ST&C casing all joints were circulated down to 250m. Casing was cemented with 19 tonnes of 0:1:0 "G" + 3 % CaCl₂. There was good mud returns reported throughout the cement job with 5.0 m³ cement returns. The plug was displaced with 9.8m³ water and the plugs held. The plug was down at 23:37 hours on (December 13, 1997). The surface casing was set at 250 m.

The BOP's were installed and pressure tested. The annular preventor was pressure tested to 1,400 kPa low and 10,000 kPa high. The pipe rams, kelly cock, stabbing valve and downhole BOP valve were tested to 1,400 kPa low and 12,500 kPa high. The accumulator precharge bottles were checked and the accumulator function tested prior to drilling out.

The float collar and shoe were drilled out on December 15, 1997. The 222 mm main hole was drilled ahead to 650 m with some hole sloughing occurring. A bottom hole drill stem test was then conducted (DST#1) over the Mattson interval 635.8m – 650.0m. The hole was then

drilled to a total depth of 835 m in the Flett formation.

After total depth had been reached the open hole was logged by Computalog. Log run # 1 was a STI/DAR/UGR/CAL; Log run # 2 was a SPED/INT/UGR/CAL from total depth to surface.

After the logs were evaluated it was decided to abandon the well and cement plugs were run. Plug # 1 was run from 835 m to 530 m using 16.6 tonnes of Thixmix II cement + .25 % CFL-3 + 2% CaCl_2 . After the plug was run and 30 singles were pulled. Drill pipe was run in and tagged the first plug at 512 m with 9,000daN. Plug # 2 was run from 512 m to 215 m using 18.5 tonnes Thixmix II cement + .25 % CFL-3 + 2% CaCl_2 . The second plug was circulated at 200 m after waiting on cement for 1.25 hours and recovered 1.5m³ cement returns. A 10m surface plug along with rat hole and mouse hole were cemented with 2.0 tonnes 0:1:0 "G" cement + 3% CaCl_2 . The rig was then rigged out and released at 06:00 hours on December 25, 1997.

Casing was cut off 1m below surface and steel plate welded over both conductor and surface casing. A surface marker was installed and site cleaned up.

B. GENERAL DATA

1. Well Name: OEI et al Liard N-60
Authority to Drill a Well No : WID 1830
Exploration Agreement Number: EL382
Location Unit: N
Section: 60
Grid Area: 60° 20' 123° 00'
Classification: Exploration
2. Well Location: N-60
Coordinates: Latitude: 60° 19' 55.263"
Longitude: 123° 10' 36.008"
3. Unique Well Identifier: 300N606020123000
4. Operator: Ocelot Energy Inc.

5. Contractor: Precision Drilling
6. Drilling Unit: Rig# 403
8. Support Craft (Helicopter): none required
9. Drilling Unit Performance: average
10. Difficulties and Delays: none encountered
11. Total Well Cost: \$1,060,000.00

C. SUMMARY OF DRILLING OPERATIONS

1. Elevations:
Ground: 335.7m
KB: 340.0m
KB To Casing Flange: N/A
2. Total Depth:
FTD: 835 mKB

TVD: 835mKB
3. Date and Hour Spudded: December 12, 1997 at 10:30 hours
4. Date Drilling Completed: December 22, 1997
5. Date of Rig Release: 06:00 hours on December 25, 1997
6. Well status: Dry and Abandoned
7. Hole Sizes and Depths:
Conductor Hole: 508 mm to (unknown) mKB
Surface Hole: 311 mm to 250 mKB
Main Hole: 222. mm to 835 mKB
8. Casing and Cementing Record:
Conductor Hole:
Casing Size: 406 mm
Casing Weight: (unknown) kg/m

Surface Hole:

Casing Size: 244.5 mm
Casing Weight: 48.07 kg/m
Casing Grade: H-40
Casing Make: Prudential
Number of Joints: ?
Thread: ST&C
Depth Set: 250 m (KB)
Cut Height: At Surface (KB)
Date Set: December 13, 1997
Cement Volume: 19 Tonnes
Float Shoe Depth: 250 m
Float Collar Depth: 1 joint above shoe
Cut Off Depth: 1.0m below surface
Cement Type: 0:1:0 "G"
Additives: 3% CaCl₂
Cement Top: Surface (mKB)
Casing Bowl Size: 279 mm X 244.5 mm X 21 mpa
Casing Bowl Make: Crown

9. Sidetracked Hole: N/A.

10. Drilling Fluid:

Conductor Hole: Gel - Chemical

Surface Hole: Gel - Chemical

Properties: Viscosity: 90 sec/L
Weight: 1185 kg/m³
PH: 9.0

Main: Gel - Chemical

Properties: Viscosity: 55 sec/L
Weight: 1100 kg/m³
PH: 9.5
Water loss: 8.0 cc

11. Fishing Operations: n/a

12. Well Kicks and Well Control Operations: n/a

13. Formation Leak Off Tests: none performed

Depth: 250m
Casing Setting Depth: 250 mKB

14. Deviation Survey: maximum 3.5° at 835m(TD)

15. Abandonment Plugs

	Plug 1	Plug 2	
Date	97-12-24	97-12-24	
Interval (KB)	835 - 512	512 - 215	
Formation Name	Mattson	Chinkeh	
Formation Depth (KB)	548	507	
Tonnes of Cement	16	18.5	
Additives	2% CaCl ₂	3% CaCl ₂	
Volume of H ₂ O Ahead	3m ³	3m ³	
Displacement	3.5m ³	0.5m ³	
Slurry Density	1900kg/m ³	1900kg/m ³	
Calculated Plug Depth	m KB	215m KB	
Felt Plug Depth (KB)	512m	215m	
Fluid Between Plugs	Gel-Chem mud	Gel-Chem mud	

16. Daily Well Reports: See appendix 4.

17. Completion Record: (N/A)

18. SAMPLE DESCRIPTIONS: (See also - Hydrocarbon Well Log attached)

19. DRILL STEM TESTS

TYPE: Bottom Hole DST #1

TOP:	635.8 m/KB
BOTTOM:	650.0 m/KB
OIL RATE:	0 m ³ /d
GAS RATE:	32m ³ /d
CONDENSATE:	0 m ³ /d
WATER RATE:	147.5 m ³ /d
OIL GRAVITY:	N/A
Water Salinity:	2725 mg/l Cl ⁻
Recovery ISIP:	5847 kPa
Recovery FSIP:	5831 kPa

20. WELL EVALUATION: as per appendix 2.

The following logs were run:

Simultaneous Triple Induction SFL:	831.9 – 249.6m
Spectral PE Density Compensated Neutron GR:	833.2 – 249.6m
Digital Array Tool Comstar:	831.9 – 249.6m
Hydrocarbon well log attached:	

21 ANALYSES as per appendix 1.

Appendix 1:

Environmental well analysis

NOTIFICATION OF DRILLING WASTE DISPOSAL

The licensee certifies that the information on this form is correct and is submitted to the appropriate regulatory agency 48 hours prior to drilling waste disposal.

DAY MONTH YEAR
04 02 1998
YOUR FILE NUMBER
12820-T (TOTAL WASTE)

1. REGULATORY OFFICE

Appropriate regulatory office: DEPARTMENT OF NORTHERN DEVELOPEMENT & Fax: () -
Second regulatory office (if applicable): INDIAN AFFAIRS FT. SIMPSON HWT Fax: () -

2. WELL INFORMATION

Well licensee: OCELOT FT. LEARD N60
Surface location: _____ Well licence number: _____
Unique well identifier: _____ MSL number (if applicable) _____
Sump location or storage location 1. Same as surface location for: _____
2. Same as surface location for: _____
Mud type Gel chem
Date of Sampling: DAY MONTH YEAR 03 02 1998 Proposed Date of disposal: (48 hours notice is required) DAY MONTH YEAR 06 02 1998
Operator/company Name: JIGGS WALD Phone: (403) 554-1314
contact Company Name: _____ Mobile: () - Fax: () -
Sampling company Name: JACK BELL Phone: () ⁵²⁴ 2213
contact Company Name: STAD ENTERPRISES Mobile: () - Fax: () ⁵²⁴ 2217

If drilling sump wastes are to be disposed by land treatment or alternate disposal methods, attach the required documentation and provide a summary in the comments section on page 2 of this form.

3. ON-SITE DISPOSAL

Fluids: _____ m³ Solids: _____ m³ Total Waste: 496 m³
Soil texture: Clay loam

LANDSPREADING ☐

Application thickness: _____ cm Incorporation depth: _____ cm

Receiving Soil EC: _____ dS/m Receiving Soil SAR: _____

	Minimum area ha	Max. application rate m ³ /ha	Max. amount added kg/ha
Chloride	_____	_____	_____
Sodium	_____	_____	_____
Nitrogen	_____	_____	_____
TDS	_____	_____	_____

Toxicity pass: _____ Predicted oil content after mix: _____ %
Proposed application rate: _____ m³/ha
Proposed area used for disposal: _____ ha

MIX-BURY-COVER ☒

Est. water table depth: 10 m Intended mix ratio: 3:1
Volume to be disposed: 496 m³
Has site been used before? No Toxicity pass: Yes

Post disposal values:

Chloride 31.90 mg/kg Oil 0.01 %
Total mass chloride: 82.21 kg Total mass nitrogen: _____ kg

4. OFF-SITE DISPOSAL

Fluids: _____ m³ Solids: _____ m³ Total Waste: _____ m³
Soil texture: _____ Horizon thickness: _____ cm

LANDSPRAYING ☐

PUMPOFF ☐

LWD ☐

Application thickness: _____ cm Incorporation depth: _____ cm
(if applicable)

Receiving soil EC: _____ dS/m Receiving soil SAR: _____

	Minimum area ha	Max. application rate m ³ /ha	Max. amount added kg/ha
Chloride	_____	_____	_____
Sodium	_____	_____	_____
Nitrogen	_____	_____	_____
TDS	_____	_____	_____

Solids Loading Rate: _____ t/ha
Toxicity pass: _____

Predicted oil content after mix: _____ %

Proposed application rate: _____ m³/ha

Proposed area used for disposal: _____ ha

Land owner: _____

Phone: _____

Date of consent: _____

Landowner consent is required if the disposal is off site.

Horizontal Oil Well? No Hydrocarbons Added? No Salt Zone Encountered? No Nitrogen > 400 kg added? No
If you answered YES to any one of the above questions, please give details in the comments section on page 2.

MSL Number

● SAMPLE, MEASURE and PUMP OFF REPORT

OCELOT ENERGY

Submitted by:
JACK BELL

JAN 27,98

S.T.A.D. ENTERPRISES LTD.

P.O. BOX 1320, Valleyview, Alberta T0H 3N0

Telephone: (403) 524-2213 Fax: (403) 524-2217

S.T.A.D. ENTERPRISES LTD.

SUMP TREATING & DISPOSAL

DRILLING WASTE SAMPLE REPORT

REPORT NO: 3356

DATE: JAN 27/98

COMPANY NAME: OCELOT ENERGY
LEGAL DESCRIPTION: OCELOT FT. LEARD N60
LOCATION OF SUMP: ON LEASE
ROAD CONDITION: GOOD
SAMPLED BY: JACK BELL
KILOMETERS: 1400

(From Base to Lease and Return)

SIZE of SUMP:	PIT #1	PIT #2	PIT #3	PIT #4	PIT #5	PIT #6
(FLUIDS)						
(SOLIDS)	496					
CUTTINGS VOLUME						
FREEBOARD	0.6					
TOTAL VOLUME OF SUMP:	496					
TOTAL TREATABLE:		TOTAL SOLIDS: 496 TOTAL M3				496

MEASUREMENTS:

PIT#1	Length	18	x Width	12	x Depth	2.3	=	496	M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3
	Length		x Width		x Depth		=		M3

COMMENTS

Oil Cover? Y/N)

NIL ICE.45M

DESCRIPTION OF AREA

POPLUR

DIRECTIONS

PHOTOGRAPHS

ONE

*All slopes have been taken into consideration for volume.

S.T.A.D. ENTERPRISES LTD.

P.O. BOX 1320, VALLEYVIEW, ALBERTA T0H 3N0

Tel: (403) 524-2213 Fax: (403) 524-2217

S.T.A.D. ENTERPRISES LTD.

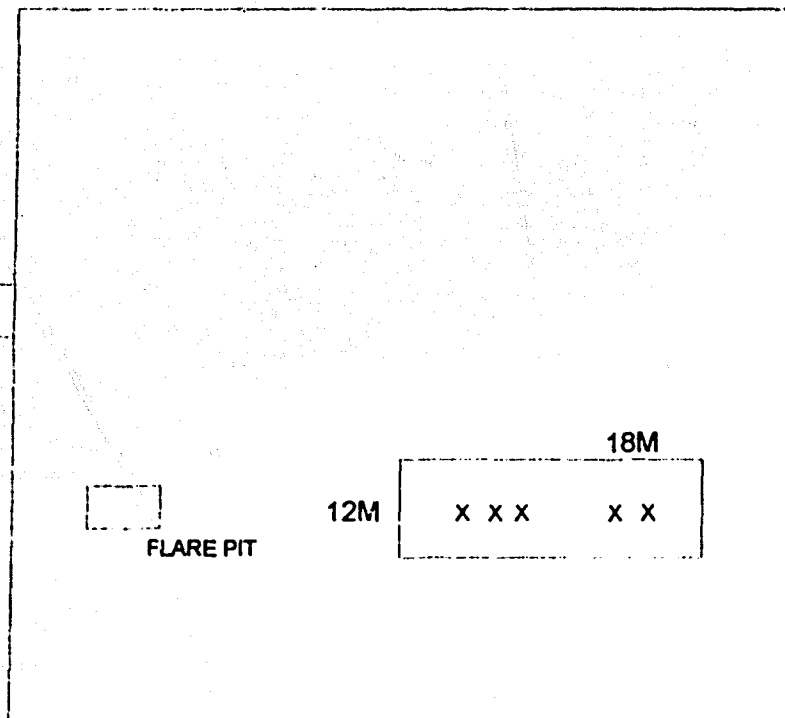
SUMP TREATING & DISPOSAL

SUMP DIAGRAMS LAYOUT and DIMENSIONS

DATE: JAN 27/98
REPORT: 3356

COMPANY: OCELOT
LEGAL DESCRIPTION: (N-60)

N



Denotes Drainage

XXXXXXX PROPOSED PUMPOFF AREA

* All slopes have been taken into consideration for volume

S T A D ENTERPRISES LTD.
P O BOX 1320, VALLEYVIEW, ALBERTA T0H 3N0 Tel: (403) 524-2213 Fax: (403) 524-2217

Appendix 2: Fluid Analysis



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9
Phone (403) 438-5522

F97-05638
Laboratory Report Number:

Page 1 of 3

Energy Resource Group

Ocelot Energy Inc.

Operator

Container Identity

Lat 60.19'55.263"

Location

Ocelot et al Liard 60.19'55.263"

Well Name

340.0

KB Elev, m

335.7

GR Elev, m

Liard

Field/Area

Mattson

Pool / Zone

Murray

Sampler

DyDrill

Company

DST

1

Test Type

No

Multiple Recovery

N

Test Recovery:

429 m Mud Cut Water

Test Interval, m

635.8-650.0

mKB

Perforations, m

See Below

Sample Point

Amount & Type of Cushion

Mud Resistivity

@ 25°C

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m³/d

Oil

m³/d

Gas

10³ m³/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

97-12-19

Date Sampled (Y-M-D)

97-12-20

Date Received (Y-M-D)

97-12-20

Date Reported (Y-M-D)

C. Jorven

Analyst

Other Information

F97-5638-1, 423 m Above Tool

Filtrate recovered from watery mud

Resistivity: 2.56 ohm m @ 25C.

pH: 9.8 @ 20C

F97-5638-2, 328.2 m Above Tool

Colorless filtrate recovered from water with trace sediment

Resistivity: 1.25 ohm m @ 25C.

pH: 7.3 @ 20C

F97-5638-3, 271.5 m Above Tool

Colorless filtrate recovered from water with trace sediment

Resistivity: 1.15 ohm m @ 25C.

pH: 7.3 @ 20C

F97-5638-4, 163.6 m Above Tool

Colorless filtrate recovered from water with trace sediment

Resistivity: 1.13 ohm m @ 25C.

pH: 7.1 @ 20C.

F97-5638-5, 91.5 m Above Tool

Water analysis F97-5638-5

F97-5638-6, Top of Tool

Water analysis F97-5638-6

Supervisor

E. Fedorow

Approved

S. Montgomery



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9
Phone (403) 438-5522

F97-05638-05
Laboratory Report Number

Page 2 of 3

WATER ANALYSIS

Energy Resource Group

Ocelot Energy Inc.

Operator

Container Identity

Lat 60.19'55.263"

Ocelot et al Liard 60.19'55.263"

340.0 335.7

Location

Well Name

KB Elev, m GR Elev, m

Liard

Mattson

Murray

DyDrill

Field/Area

Pool / Zone

Sampler

Company

DST

Test Type

No

Multiple Recovery

N

Test Recovery:

429 m Mud Cut Water

Test Interval, m

635.8-650.0

mKB

Perforations, m

91.5 m Above Tool

Sample Point

Amount & Type of Cushion

Mud Resistivity

@ 25°C

Type of Production:

Pumping

Flowing

Gas Lift

Swab

Production Rates:

Water

m³/d

Oil

m³/d

Gas

10³ m³/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

97-12-19

Date Sampled (Y-M-D)

97-12-20

Date Received (Y-M-D)

97-12-20

Date Reported (Y-M-D)

C. Jorven

Analyst

Other Information

Ion	mg/L	Mass Fraction	meq/L
Na	1 732	0.2786	75.34
K	43	0.0069	1.10
Ca	172	0.0277	8.59
Mg	112	0.0180	9.18
Ba			
Sr			
Fe	Much		

Ion	mg/L	Mass Fraction	meq/L
Cl	2 725	0.4382	76.85
Br			
I			
HCO3	1 269	0.2041	20.81
SO4	165	0.0265	3.42
CO3	0	0.0000	0.00
OH	0	0.0000	0.00
H2S	Nil		

Total Dissolved Solids, mg/L

Evaporated @ 110°C Evaporated @ 180°C

5 950

At Ignition

Calculated

4 790

6 217

Organic Matter: Nil

Relative Density

Refractive Index

1.003 @ 25°C

1.3336 @ 25°C

Observed pH

Resistivity ohm·m

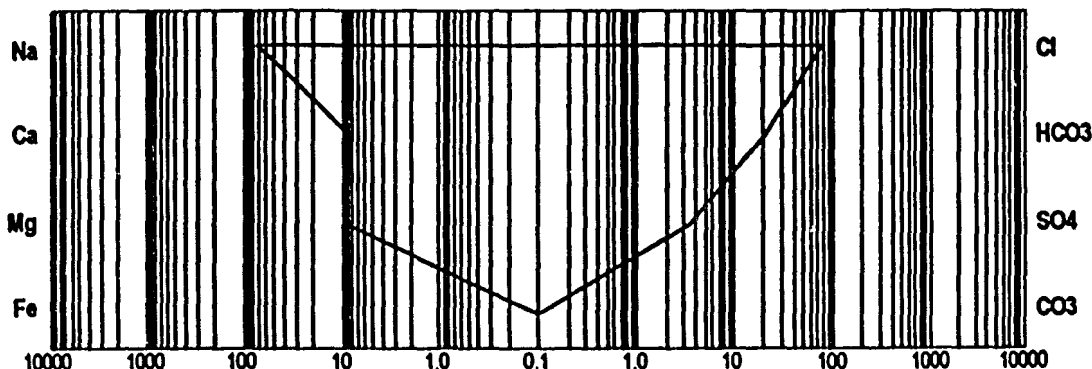
7.3 @ 25 °C

1.12 @ 25°C

Remarks

Analysis performed on a pale yellow filtrate recovered from water.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor

E. Fedoruk

Approved

S. Montgomery



14203 - 129 Avenue, Edmonton, Alberta T5L 4N9
Phone (403) 438-5522

F97-05638-06
Laboratory Report Number

Page 3 of 3

WATER ANALYSIS

Energy Resource Group

Ocelot Energy Inc.

Operator

Container Identity

Lat 60.19'55.263"
Location

Ocelot et al Liard 60.19'55.263"
Well Name

340.0 335.7
KB Elev, m GR Elev, m

Liard
Field/Area

Mattson
Pool / Zone

Murray
Sampler

DyDrill
Company

DST 1
Test Type No
Multiple Recovery N

Test Recovery:
429 m Mud Cut Water

Test Interval, m
635.8-650.0
mKB

Perforations, m

Top of Tool

Sample Point

Amount & Type of Cushion

@ 25°C
Mud Resistivity

Type of Production: Pumping _____ Flowing _____ Gas Lift _____ Swab _____

Production Rates: Water _____ m³/d Oil _____ m³/d Gas _____ 10³ m³/d

Gauge Pressure, kPa

Temperature, °C

Separator

Treater

Reservoir

Source

Sampled

Received

97-12-19
Date Sampled (Y-M-D)

97-12-20
Date Received (Y-M-D)

97-12-20
Date Reported (Y-M-D)

C. Jorven
Analyst

Other Information

Ion	mg/L	Mass Fraction	meq/L
Na	1 746	0.2879	75.95
K	43	0.0071	1.10
Ca	175	0.0288	8.71
Mg	108	0.0178	8.86
Ba			
Sr			
Fe	Much		

Ion	mg/L	Mass Fraction	meq/L
Cl	2 795	0.4608	78.82
Br			
I			
HCO ₃	1 196	0.1971	19.61
SO ₄	3	0.0005	0.07
CO ₃	0	0.0000	0.00
OH	0	0.0000	0.00
H ₂ S	Nil		

Total Dissolved Solids, mg/L

Evaporated @ 110°C Evaporated @ 180°C

5 650

At Ignition

Calculated

4 850

6 065

Organic Matter: Nil

Relative Density

Refractive Index

1.003 @ 25°C

1.3336 @ 25°C

Observed pH

Resistivity ohm·m

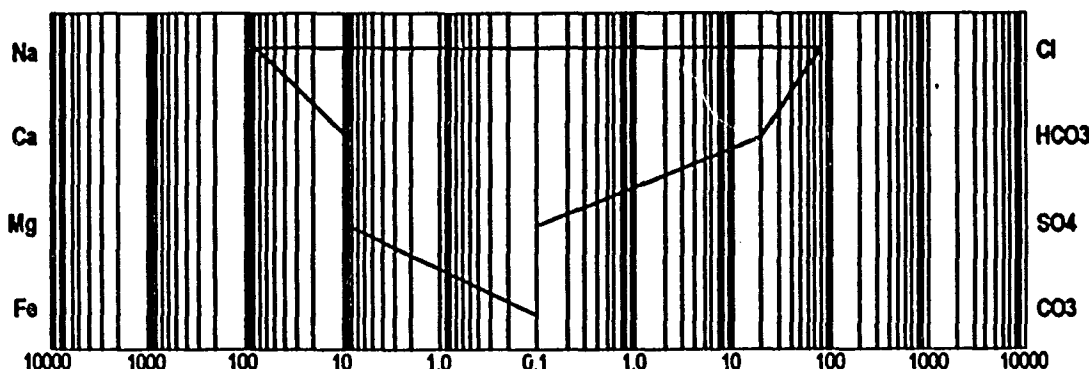
7.2 @ 25 °C

1.11 @ 25°C

Remarks

Analysis performed on a pale yellow filtrate recovered from water.

Logarithmic Pattern of Dissolved Ions, meq/L



Supervisor

E. Fedorkiw

Approved

S. Montgomery

Appendix 3:

Well Logs

LOGS FILMED AT
END.

Appendix 4:

Gas Detector Log and Mud Log

ELECTRO^{TEST} REPORT

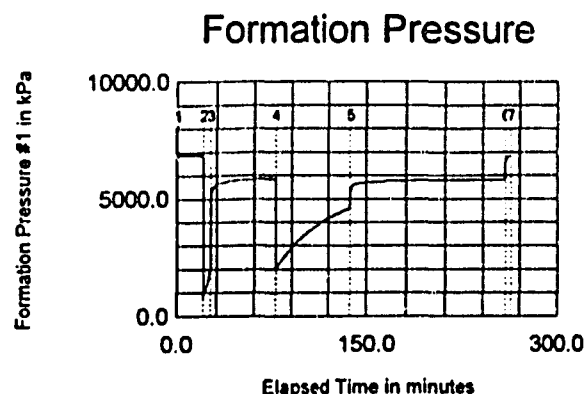
OCELOT ENERGY INC.
WELL: OEI ET AL LIARD
Lat. 60 19' 55.263" Long. 123 10' 36.008"
DST #1: MATTISON (635.8 - 650.0 mKB)
DATE: DECEMBER 19, 1997

Downhole
Systems
Technology Canada Inc.

#7, 4539-6th St. N.E.
Calgary, Alberta
T2E 3Z6
(403) 299-1960

DRILL STEM TEST - FINAL REPORT

Well Operator OCELOT ENERGY INC.
 Well Name OEI et al LIARD
 Location Lat. 60 19' 55.263" Lon. 123 10' 36.008"
 DST # ONE
 Interval Tested 635.8 - 650.0 mKB
 Formation MATTISON
 Date DECEMBER 19, 1997
 Wellsite Rep. WOODY PERIARD
 Test Engineer MURRAY/DMITROVIC
 Wireline Operator
 Drilling Contractor PRECISION #403
 Well Total Depth 650.00 meters
 Well Elevations KB 340.00 meters
 GL 335.70 meters
 Main Hole Size 200.00 mm



SUMMARY

		Time	Duration	Graph #	Pressure (kPa)	Extrapolated Press.(kPa)	Liq. Rate(m3/d) Average/Final	Gas Rate(m3/d) Average/Final
Initial Hydrostatic				1	6890			
Preflow	Start	14:52:29		2	760		147.5	32
	End	14:57:29	5	3	1951		127.4	0
Initial Shut In	End	15:49:44	52	4	5847	5882		
Flow #2	Start	15:49:59		4	2075		42.3	18
	End	16:49:59	60	5	4609		23.2	0
Shut In #2	End	18:50:09	120	6	5831	5882		
Final Hydrostatic				7	6754			
Bottom Hole Temperature		29 deg C						

Electronics #3, Formation Pressure 1, Ser. # 154775, Depth 637.7 mKB (all gauges at same depth)

LIQUID RECOVERY

Mud cut water. Height 429 m Volume 2.455 m3

RESERVOIR PARAMETERS

Net Pay: 9.7 m Permeability: 15.3 mD
 Porosity: 13.8 % Skin: 3.3
 Sw: 83%

Samples sent to Core Laboratories in Fort St. John.

COMMENTS

Successful bottom hole test with real time pressure data and closed chamber flow rates.

A GR/CCL correlation log was run prior to inflating the packers. A depth adjustment was not made.

The preflow was run under closed chamber conditions throughout, with primarily liquid flow indicated.

Radial flow conditions were established during the initial shut in and the extrapolated pressure is valid.

The second flow period was also run under closed chamber conditions throughout, with liquid inflow recorded.

Radial flow conditions were reached during the final shut in, with a high confidence level in the extrapolated pressure and calculated reservoir parameters.

If you require additional information contact David Sask at (403) 299-1960.

TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mKB
LOC:	Lat. 60 19' 55.263" Lon. 123 10' 36.008"	FORMATION NAME:	MATTISON

Mud Type	GEL CHEM
Density	1090.00 kg/cu m
Viscosity	51.00 mPa S
Resistivity	0.00 ohms/m

Fluid Cushion: Nil
 Density of recovered fluids (used in liquid rate calculations): 1090.00 kg/m³
 Calculated Fluid Recovery: 438 meters of water.
 Observed Fluid Recovery: 429 meters of water.

Reverse Circulated: No

TOOL STRING CONFIGURATION

	Length <u>meters</u>	Inner Diameter <u>mm</u>	Outer Diameter <u>mm</u>
Drill Pipe Above K.B.	1.56	97.00	114.00
Upper Drill Pipe	466.87	97.00	114.00
Drill Collars	145.25	62.00	158.00
Stabbing Valve	0.49	57.00	155.00
RCV/DBS/XO'S	0.64	60.00	162.00
Drill Collar	18.31	62.00	155.00
Hydraulic Jars	2.00	50.80	127.00
Safety Joint	1.35	25.40	127.00
Top Packer	<u>2.45</u>	22.25	171.00
Top of Interval	635.80		
Packer Stub	0.80	0.00	127.00
Downhole Flow Valve	0.92	0.00	127.00
Electronics Section	1.51	0.00	127.00
Inflation Pump	2.44	0.00	127.00
Spacer Pipe	8.00	0.00	127.00
Bullnose	<u>0.53</u>	0.00	127.00
Bottom of Interval	650.00		
Total Interval	14.20		

Test Tool Choke Diameter	22.50 mm	
Surface Choke	0.00 mm	Bean Choke
Total String Volume	3.94 cu m	
Initial Closed Chamber Gas Volume	3.94 cu m	
Annular Volume	0.27 cu m	

TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mKB
LOC:	Lat. 60 19' 55.263" Lon. 123 10' 36.008"	FORMATION NAME:	MATTISON

PACKER INFLATION

Time	Elapsed Time	Formation Pressure #1 kPa	Recovery Pressure kPa	Surface Pressure kPa	Inflation Pressure kPa	Hydrostatic Pressure kPa	Net Inflation Pressure kPa
14:33:19	00:00:00	6897.72	151.95	85.75	6501.66	6890.07	-388.41
14:33:34	00:00:15	6897.72	153.38	86.25	6502.40	6890.07	-387.67
14:33:49	00:00:30	6898.44	151.94	86.76	6502.39	6890.78	-388.39
14:34:04	00:00:45	6897.71	151.93	86.75	6502.38	6890.77	-388.39
14:34:19	00:01:00	6899.16	151.93	85.74	6502.37	6890.76	-388.39
14:34:34	00:01:15	6898.45	152.66	86.24	6502.39	6891.50	-389.11
14:34:49	00:01:30	6897.70	151.20	85.73	6502.36	6890.03	-387.67
14:35:04	00:01:45	6897.70	151.92	85.22	6502.35	6889.31	-386.95
14:35:19	00:02:00	6896.96	152.63	85.72	6502.34	6889.30	-386.96
14:35:34	00:02:15	6895.51	151.19	86.22	6820.17	6884.98	-64.82
14:35:49	00:02:30	6896.96	151.19	85.71	6980.54	6885.70	94.84
14:36:04	00:02:45	6896.95	150.46	86.22	7087.69	6884.97	202.72
14:36:19	00:03:00	6896.95	151.18	86.21	7165.28	6884.97	280.31
14:36:34	00:03:15	6896.95	151.17	86.21	7202.22	6884.24	317.98
14:36:49	00:03:30	6896.94	151.89	85.19	7228.82	6884.23	344.59
14:37:04	00:03:45	6896.94	151.17	86.71	7252.46	6883.51	368.95
14:37:19	00:04:00	6896.21	151.16	86.70	7268.71	6882.79	385.93
14:37:34	00:04:15	6896.94	150.44	85.69	7287.19	6882.78	404.40
14:37:49	00:04:30	6896.20	151.16	85.18	7297.52	6882.78	414.75
14:38:04	00:04:45	6896.20	151.15	85.68	7307.13	6881.33	425.79
14:38:19	00:05:00	6896.20	150.43	85.17	7318.21	6874.86	443.35
14:38:49	00:05:30	6896.19	152.59	84.65	7335.19	6875.57	459.62
14:39:19	00:06:00	6894.73	151.14	85.65	7356.62	6874.13	482.49
14:39:49	00:06:30	6872.88	150.42	86.15	7461.54	6863.33	598.21
14:40:19	00:07:00	6876.52	151.13	85.13	7898.95	6866.92	1032.03
14:40:49	00:07:30	6890.35	151.13	86.13	9808.96	6878.42	2930.54
14:41:19	00:08:00	6892.54	150.42	86.12	9676.07	6883.47	2792.60
14:41:49	00:08:30	6891.08	150.41	85.60	9540.93	6882.02	2658.91
14:42:19	00:09:00	6889.63	149.69	84.07	9456.00	6881.30	2574.70
14:42:49	00:09:30	6889.63	149.69	84.57	9396.93	6881.30	2515.63
14:43:19	00:10:00	6889.62	150.41	85.06	9352.62	6881.30	2471.32
14:43:49	00:10:30	6888.89	149.69	85.56	9315.69	6880.58	2435.11
14:44:19	00:11:00	6888.17	149.69	85.04	9285.41	6880.58	2404.83
14:44:49	00:11:30	6888.89	149.69	85.03	9258.82	6880.57	2378.25
14:45:19	00:12:00	6888.16	150.40	85.52	9236.66	6879.85	2356.81
14:45:49	00:12:30	6887.43	149.68	83.99	9215.25	6879.13	2336.11
14:46:19	00:13:00	6888.16	150.40	84.99	9198.26	6880.57	2317.69
14:46:49	00:13:30	6888.16	150.40	84.98	9182.01	6880.57	2301.44
14:47:19	00:14:00	6886.70	149.68	84.97	9165.75	6878.40	2287.35
14:47:49	00:14:30	6887.43	149.68	84.97	9151.72	6878.40	2273.32
14:48:19	00:15:00	6886.70	149.68	84.96	9139.17	6879.12	2260.04
14:48:49	00:15:30	6887.43	149.68	85.96	9128.09	6878.40	2249.69
14:49:19	00:16:00	6885.97	148.24	85.45	9119.96	6878.40	2241.56
14:49:49	00:16:30	6885.97	148.95	85.44	9112.57	6878.39	2234.17
14:50:19	00:17:00	6885.97	148.95	84.93	9105.18	6876.96	2228.23
14:50:49	00:17:30	6861.21	148.23	84.92	9154.67	6846.75	2307.91
14:51:19	00:18:00	6893.25	150.39	85.42	9123.64	6884.14	2239.50
14:51:49	00:18:30	6881.59	151.82	84.91	9088.93	6889.89	2199.03

TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mKB
LOC:	Lat. 60 19' 55.263" Lon. 123 10' 36.008"	FORMATION NAME:	MATTISON

PREFLOW									
Time	Elapsed Time	Formation Pressure #1 kPa	Recovery Pressure kPa	Surface Pressure kPa	Liquid Flowrate m3/d	Surface Gas Flowrate m3/d	Total Gas Flowrate m3/d	Gas Liquid Ratio m3/m3	Formation Temp. deg C
14:52:29	00:00:00	760.01	496.59	84.90	1678.03	0.00	-1747.16	-1.04	28.90
14:52:44	00:00:15	829.29	621.81	85.91	1409.24	0.00	-1414.12	-1.00	28.90
14:52:59	00:00:30	889.09	707.45	86.92	1042.90	0.00	-968.89	-0.93	28.90
14:53:14	00:00:45	984.62	803.87	87.93	734.37	0.00	-615.51	-0.84	28.90
14:53:29	00:01:00	1018.89	899.57	88.94	516.01	0.00	-355.43	-0.69	28.90
14:53:44	00:01:15	1069.94	967.21	89.45	361.46	0.00	-179.73	-0.50	28.90
14:53:59	00:01:30	1120.25	1025.49	90.46	258.60	0.00	-82.18	-0.32	28.90
14:54:14	00:01:45	1188.80	1099.59	90.96	198.19	0.00	-27.54	-0.14	28.90
14:54:29	00:02:00	1229.63	1147.80	92.48	154.52	0.00	25.31	0.16	28.91
14:54:44	00:02:15	1294.53	1221.90	91.97	132.22	0.00	18.58	0.14	28.91
14:54:59	00:02:30	1363.80	1298.15	92.98	124.20	0.00	10.28	0.08	28.92
14:55:14	00:02:45	1431.61	1368.66	94.49	120.08	0.00	35.38	0.29	28.91
14:55:29	00:03:00	1488.49	1426.20	94.49	114.82	0.00	56.21	0.49	28.92
14:55:44	00:03:15	1530.05	1470.80	96.01	103.41	0.00	84.01	0.81	28.92
14:55:59	00:03:30	1583.28	1529.07	96.01	95.94	0.00	68.60	0.72	28.92
14:56:14	00:03:45	1645.98	1594.53	97.02	96.59	0.00	54.47	0.56	28.92
14:56:29	00:04:00	1710.87	1662.86	97.01	99.86	0.00	17.86	0.18	28.92
14:56:44	00:04:15	1772.85	1727.60	98.02	101.89	0.00	29.88	0.29	28.92
14:56:59	00:04:30	1832.63	1790.17	99.54	101.90	0.00	43.72	0.43	28.92
14:57:14	00:04:45	1890.23	1849.15	99.54	101.40	0.00	42.65	0.42	28.92
14:57:29	00:05:00	1950.74	1911.72	100.04	127.84	0.00	-14.31	-0.11	28.93

TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mK3
LOC: Lat. 60 19' 55.263" Lon. 123 10' 36.008"		FORMATION NAME:	MATTISON

INITIAL SHUT IN

Time	Elapsed Time	Formation Pressure #1 kPa	Formation Pressure #2 kPa	Transducer Difference kPa	Recovery Pressure kPa	Surface Pressure kPa	Formation Temp. deg C	Hydrostatic Pressure kPa
14:57:39	00:00:00	2038.96	2081.03	-42.07	1820.37	100.04	28.93	6872.63
14:57:54	00:00:15	4756.78	4737.05	19.72	1897.32	99.53	28.94	6894.91
14:58:09	00:00:30	5090.46	5064.29	26.17	1898.76	99.53	28.94	6891.31
14:58:24	00:00:45	5220.14	5195.16	24.97	1898.04	100.03	28.95	6889.86
14:58:39	00:01:00	5298.09	5274.26	23.82	1898.76	99.52	28.95	6889.86
14:59:09	00:01:30	5396.44	5373.49	22.94	1898.76	100.02	28.95	6887.71
14:59:39	00:02:00	5457.63	5436.05	21.58	1899.47	99.50	28.95	6887.70
15:00:09	00:02:30	5504.25	5482.06	22.19	1898.75	98.99	28.95	6889.14
15:00:39	00:03:00	5539.94	5518.01	21.94	1900.19	99.49	28.95	6886.98
15:01:09	00:03:30	5568.35	5546.76	21.59	1899.47	98.97	28.96	6886.25
15:01:39	00:04:00	5592.38	5570.48	21.90	1900.18	99.98	28.96	6886.97
15:02:09	00:04:30	5612.05	5592.76	19.29	1900.18	98.45	28.97	6886.96
15:02:39	00:05:00	5630.26	5611.45	18.81	1899.45	99.46	28.97	6886.24
15:03:39	00:06:00	5659.39	5639.48	19.91	1899.45	99.44	28.98	6885.51
15:04:39	00:07:00	5681.96	5663.91	18.05	1900.16	99.93	29.00	6884.78
15:05:39	00:08:00	5701.62	5683.31	18.31	1900.15	99.41	29.01	6883.33
15:06:39	00:09:00	5718.37	5700.56	17.81	1903.02	100.92	29.01	6884.04
15:07:39	00:10:00	5731.48	5713.49	17.99	1902.30	99.39	29.02	6884.03
15:08:39	00:11:00	5742.40	5724.99	17.42	1902.29	99.38	29.03	6883.31
15:09:39	00:12:00	5753.32	5735.04	18.28	1902.29	99.37	29.03	6882.58
15:10:39	00:13:00	5762.79	5744.38	18.41	1901.56	99.35	29.04	6881.85
15:11:39	00:14:00	5769.34	5751.57	17.77	1901.56	99.34	29.04	6881.85
15:12:39	00:15:00	5775.90	5758.75	17.14	1902.28	99.32	29.05	6881.85
15:13:39	00:16:00	5782.45	5765.22	17.23	1901.56	99.81	29.05	6881.12
15:14:39	00:17:00	5788.27	5769.53	18.75	1901.55	98.78	29.05	6881.84
15:15:39	00:18:00	5792.64	5774.55	18.09	1901.55	98.26	29.06	6880.39
15:16:39	00:19:00	5796.28	5778.86	17.42	1902.27	99.26	29.06	6881.83
15:17:39	00:20:00	5800.65	5783.18	17.47	1902.27	98.74	29.06	6883.27
15:18:39	00:21:00	5804.29	5787.49	16.80	1902.26	98.22	29.07	6882.54
15:19:39	00:22:00	5807.20	5789.64	17.56	1901.54	99.22	29.07	6882.54
15:20:39	00:23:00	5810.84	5793.23	17.61	1900.82	99.71	29.07	6881.82
15:21:39	00:24:00	5813.03	5795.39	17.64	1901.54	98.68	29.07	6881.10
15:22:39	00:25:00	5815.94	5798.98	16.96	1901.54	97.65	29.08	6881.10
15:23:39	00:26:00	5818.12	5801.85	16.27	1900.82	98.14	29.08	6881.09
15:24:39	00:27:00	5820.31	5804.01	16.30	1900.10	98.63	29.08	6880.37
15:25:39	00:28:00	5822.49	5806.16	16.33	1900.10	98.11	29.08	6881.09
15:26:39	00:29:00	5824.68	5807.60	17.08	1900.81	97.58	29.08	6880.37
15:27:39	00:30:00	5826.13	5809.04	17.10	1900.09	98.06	29.08	6880.37
15:29:39	00:32:00	5829.04	5812.63	16.42	1900.09	97.51	29.09	6878.93
15:31:39	00:34:00	5831.95	5815.50	16.46	1898.65	97.47	29.09	6878.92
15:33:39	00:36:00	5834.87	5818.37	16.50	1899.37	97.44	29.09	6877.48
15:35:39	00:38:00	5836.32	5820.52	15.80	1899.37	98.92	29.10	6877.48
15:37:39	00:40:00	5838.51	5821.96	16.54	1897.21	98.40	29.10	6878.20
15:39:39	00:42:00	5839.96	5824.11	15.85	1897.20	98.88	29.10	6877.47
15:41:39	00:44:00	5842.14	5826.27	15.88	1897.92	98.34	29.10	6876.03
15:43:39	00:46:00	5843.60	5828.42	15.18	1897.92	97.81	29.11	6876.03
15:45:39	00:48:00	5844.33	5827.70	16.63	1897.92	98.79	29.11	6875.31
15:47:39	00:50:00	5846.51	5829.13	17.37	1897.92	97.75	29.11	6875.30
15:49:39	00:52:00	5847.23	5830.57	16.67	1898.63	97.21	29.12	6877.46
15:49:44	00:52:04	5847.23	5830.56	16.67	1898.63	97.71	29.12	6875.29

TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mKB
LOC:	Lat. 60 19' 55.263" Lon. 123 10' 36.008"	FORMATION NAME:	MATTISON

SECOND FLOW PERIOD

Time	Elapsed Time	Formation Pressure #1 kPa	Recovery Pressure kPa	Surface Pressure kPa	Liquid Flowrate m3/d	Surface Gas Flowrate m3/d	Total Gas Flowrate m3/d	Gas Liquid Ratio m3/m3	Formation Temp. deg C
15:49:59	00:00:00	2075.29	2017.31	98.72	-115.12	0.00	687.24	-5.97	29.11
15:50:14	00:00:15	2073.84	2027.38	99.22	-88.53	0.00	575.64	-6.50	29.10
15:50:29	00:00:30	2088.42	2046.08	100.23	-44.47	0.00	427.98	-9.62	29.10
15:50:44	00:00:45	2108.10	2068.37	100.23	-1.48	0.00	282.93	-190.89	29.11
15:50:59	00:01:00	2126.33	2089.22	101.74	28.43	0.00	206.98	7.28	29.11
15:51:29	00:01:30	2167.16	2133.09	102.24	62.85	0.00	86.56	1.38	29.11
15:51:59	00:02:00	2205.06	2172.64	103.75	74.86	0.00	58.79	0.79	29.11
15:52:29	00:02:30	2253.91	2216.51	104.75	79.19	0.00	40.25	0.51	29.11
15:52:59	00:03:00	2290.36	2254.62	106.26	78.17	0.00	42.04	0.54	29.11
15:53:29	00:03:30	2330.46	2296.33	107.27	77.95	0.00	26.64	0.34	29.11
15:53:59	00:04:00	2367.64	2333.72	108.27	76.89	0.00	39.66	0.52	29.10
15:54:29	00:04:30	2404.09	2371.83	109.28	74.98	0.00	16.88	0.23	29.10
15:54:59	00:05:00	2442.73	2411.38	110.79	75.72	0.00	12.78	0.17	29.10
15:55:59	00:06:00	2514.91	2484.73	113.81	71.35	0.00	59.15	0.83	29.09
15:56:59	00:07:00	2587.08	2559.51	108.74	77.52	0.00	-240.84	-3.11	29.08
15:57:59	00:08:00	2654.88	2628.54	117.84	66.59	0.00	81.64	1.23	29.08
15:58:59	00:09:00	2722.68	2698.29	119.86	66.66	0.00	16.53	0.25	29.06
15:59:59	00:10:00	2789.75	2765.88	124.40	64.44	0.00	61.32	0.95	29.06
16:00:59	00:11:00	2850.98	2829.15	127.43	60.29	0.00	49.26	0.82	29.05
16:01:59	00:12:00	2912.95	2893.13	129.45	60.33	0.00	13.50	0.22	29.04
16:02:59	00:13:00	2974.18	2953.52	132.99	58.82	0.00	25.73	0.44	29.04
16:03:59	00:14:00	3028.85	3009.60	135.00	55.12	0.00	17.90	0.32	29.03
16:04:59	00:15:00	3087.17	3067.83	137.53	54.85	0.00	33.82	0.62	29.02
16:05:59	00:16:00	3138.92	3119.59	140.05	50.37	0.00	25.09	0.50	29.01
16:06:59	00:17:00	3192.86	3173.51	142.07	50.79	0.00	21.35	0.42	29.01
16:07:59	00:18:00	3243.16	3224.55	146.11	47.38	0.00	43.55	0.92	29.00
16:08:59	00:19:00	3293.46	3275.59	147.11	48.27	0.00	3.05	0.06	28.99
16:09:59	00:20:00	3340.83	3323.03	149.64	45.26	0.00	16.10	0.36	28.99
16:10:59	00:21:00	3388.94	3372.63	151.65	45.96	0.00	12.24	0.27	28.98
16:11:59	00:22:00	3433.41	3417.19	154.68	42.64	0.00	17.66	0.41	28.97
16:12:59	00:23:00	3479.32	3465.35	157.20	44.95	0.00	7.44	0.17	28.97
16:13:59	00:24:00	3522.33	3507.04	160.23	40.52	0.00	17.88	0.44	28.96
16:14:59	00:25:00	3566.79	3552.32	162.75	42.06	0.00	16.88	0.40	28.96
16:15:59	00:26:00	3606.88	3592.57	165.78	38.70	0.00	29.33	0.76	28.95
16:16:59	00:27:00	3649.88	3636.41	166.78	40.48	0.00	-9.16	-0.23	28.94
16:17:59	00:28:00	3688.51	3674.50	169.81	37.86	0.00	13.08	0.35	28.94
16:18:59	00:29:00	3726.41	3712.59	171.82	36.16	0.00	5.73	0.16	28.93
16:19:59	00:30:00	3766.50	3752.84	174.34	37.31	0.00	22.81	0.61	28.93
16:21:59	00:32:00	3837.19	3823.27	178.87	32.87	0.00	6.30	0.19	28.92
16:23:59	00:34:00	3907.89	3895.14	183.91	31.32	0.00	11.73	0.37	28.91
16:25:59	00:36:00	3976.40	3964.84	189.46	31.33	0.00	30.68	0.98	28.90
16:27:59	00:38:00	4039.08	4028.08	193.48	29.38	0.00	7.96	0.27	28.89
16:29:59	00:40:00	4100.29	4090.60	198.01	28.00	0.00	14.72	0.53	28.88
16:31:59	00:42:00	4161.51	4150.24	202.53	28.60	0.00	8.78	0.31	28.87
16:33:59	00:44:00	4217.62	4207.00	207.56	25.71	0.00	18.43	0.72	28.87
16:35:59	00:46:00	4273.74	4263.77	212.59	25.31	0.00	15.10	0.60	28.86
16:37:59	00:48:00	4325.48	4314.06	217.12	22.36	0.00	18.31	0.82	28.85
16:39:59	00:50:00	4377.95	4367.95	221.65	23.90	0.00	18.55	0.78	28.85
16:41:59	00:52:00	4425.32	4415.37	226.19	21.60	0.00	5.62	0.26	28.84
16:43:59	00:54:00	4474.14	4465.66	230.73	23.25	0.00	0.89	0.04	28.83

TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mKB
LOC:	Lat. 60 19' 55.263" Lon. 123 10' 36.008"	FORMATION NAME:	MATTISON

SECOND SHUTIN

Time	Elapsed Time	Formation Pressure #1 kPa	Formation Pressure #2 kPa	Transducer Difference kPa	Recovery Pressure kPa	Surface Pressure kPa	Formation Temp. deg C	Hydrostatic Pressure kPa
16:50:04	00:00:00	4622.79	4606.27	16.53	4566.25	245.38	28.81	6775.66
16:51:04	00:01:00	5513.08	5489.39	23.69	4599.29	245.88	28.81	6877.06
16:52:04	00:02:00	5572.09	5549.07	23.02	4598.57	245.88	28.81	6877.79
16:53:04	00:03:00	5604.14	5582.15	22.00	4598.58	245.88	28.81	6877.07
16:54:04	00:04:00	5627.46	5605.16	22.30	4598.58	245.37	28.80	6877.79
16:55:04	00:05:00	5645.67	5623.85	21.82	4599.30	245.88	28.80	6877.07
16:56:04	00:06:00	5659.51	5638.95	20.56	4598.58	245.38	28.80	6876.35
16:57:04	00:07:00	5672.62	5651.17	21.45	4597.86	245.39	28.80	6877.79
16:58:04	00:08:00	5682.82	5661.96	20.86	4599.30	246.42	28.80	6877.07
16:59:04	00:09:00	5691.56	5672.02	19.54	4598.58	246.45	28.80	6874.20
17:00:04	00:10:00	5700.30	5679.93	20.37	4597.15	246.48	28.80	6874.92
17:02:04	00:12:00	5712.69	5692.87	19.82	4597.15	246.54	28.80	6874.92
17:04:04	00:14:00	5725.07	5705.09	19.98	4597.86	247.10	28.80	6874.20
17:06:04	00:16:00	5734.54	5715.15	19.38	4597.14	245.11	28.80	6874.20
17:08:04	00:18:00	5741.82	5723.06	18.76	4597.14	245.14	28.80	6873.48
17:10:04	00:20:00	5749.10	5730.25	18.86	4597.14	244.63	28.81	6872.75
17:12:04	00:22:00	5755.66	5735.99	19.66	4594.98	244.14	28.81	6874.91
17:14:04	00:24:00	5761.48	5741.74	19.74	4596.42	244.67	28.81	6874.91
17:16:04	00:26:00	5765.85	5747.49	18.36	4596.42	244.20	28.81	6873.46
17:18:04	00:28:00	5770.95	5752.52	18.43	4595.69	243.23	28.82	6874.18
17:20:04	00:30:00	5774.59	5756.11	18.48	4594.97	243.26	28.82	6873.46
17:25:04	00:35:00	5783.33	5764.73	18.59	4593.53	239.73	28.83	6870.57
17:30:04	00:40:00	5789.88	5771.20	18.68	4591.38	238.14	28.83	6871.29
17:35:04	00:45:00	5795.70	5777.66	18.04	4589.21	234.99	28.84	6869.84
17:40:04	00:50:00	5800.07	5782.69	17.38	4588.49	232.83	28.85	6869.84
17:45:04	00:55:00	5805.16	5786.99	18.17	4585.61	231.22	28.85	6871.99
17:50:04	01:00:00	5808.80	5791.30	17.50	4583.46	229.16	28.86	6872.70
17:55:04	01:05:00	5811.71	5793.45	18.26	4581.29	226.59	28.86	6871.25
18:00:04	01:10:00	5813.16	5796.32	16.85	4579.13	226.13	28.87	6870.53
18:05:04	01:15:00	5816.80	5799.19	17.61	4576.98	222.11	28.87	6869.09
18:10:04	01:20:00	5818.98	5802.78	16.21	4573.38	218.55	28.88	6868.36
18:15:04	01:25:00	5820.44	5804.22	16.23	4570.51	215.48	28.88	6869.80
18:20:04	01:30:00	5823.35	5804.93	18.42	4569.07	211.86	28.88	6869.80
18:25:04	01:35:00	5824.81	5807.09	17.72	4564.76	208.73	28.88	6869.80
18:30:04	01:40:00	5825.54	5808.53	17.01	4561.89	205.14	28.88	6869.80
18:35:04	01:45:00	5827.72	5810.68	17.04	4557.58	202.57	28.88	6871.24
18:40:04	01:50:00	5829.18	5811.40	17.78	4553.98	197.45	28.89	6871.23
18:45:04	01:55:00	5829.91	5812.84	17.07	4549.67	193.35	28.88	6868.36
18:50:04	02:00:00	5831.36	5813.56	17.81	4433.30	79.39	28.88	6869.79
18:50:09	02:00:03	5830.63	5813.55	17.08	4432.58	79.90	28.89	6868.35

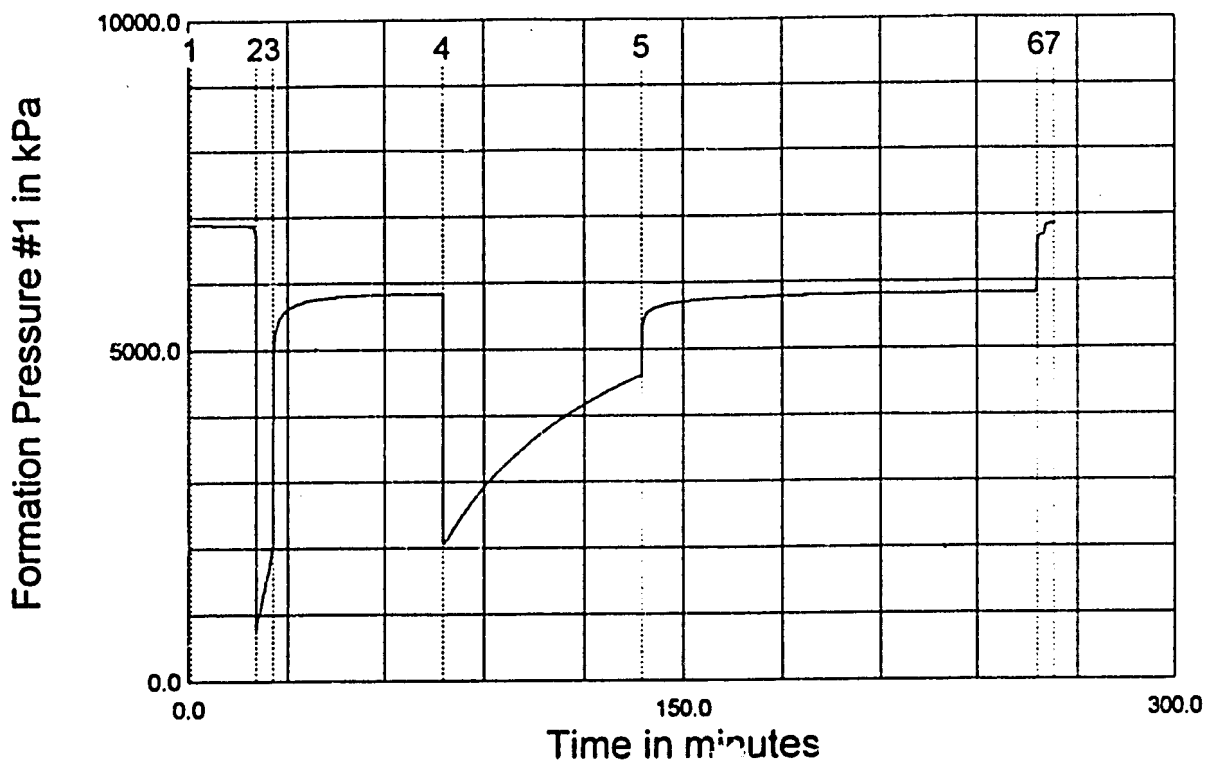
TEST DATE:	DECEMBER 19, 1997	DST NUMBER:	ONE
WELL NAME:	OEI et al LIARD	INTERVAL:	635.8 - 650.0 mKB
LOC:	Lat. 60 19' 55.263" Lon. 123 10' 36.008"	FORMATION NAME:	MATTISON

PACKER DEFLATION

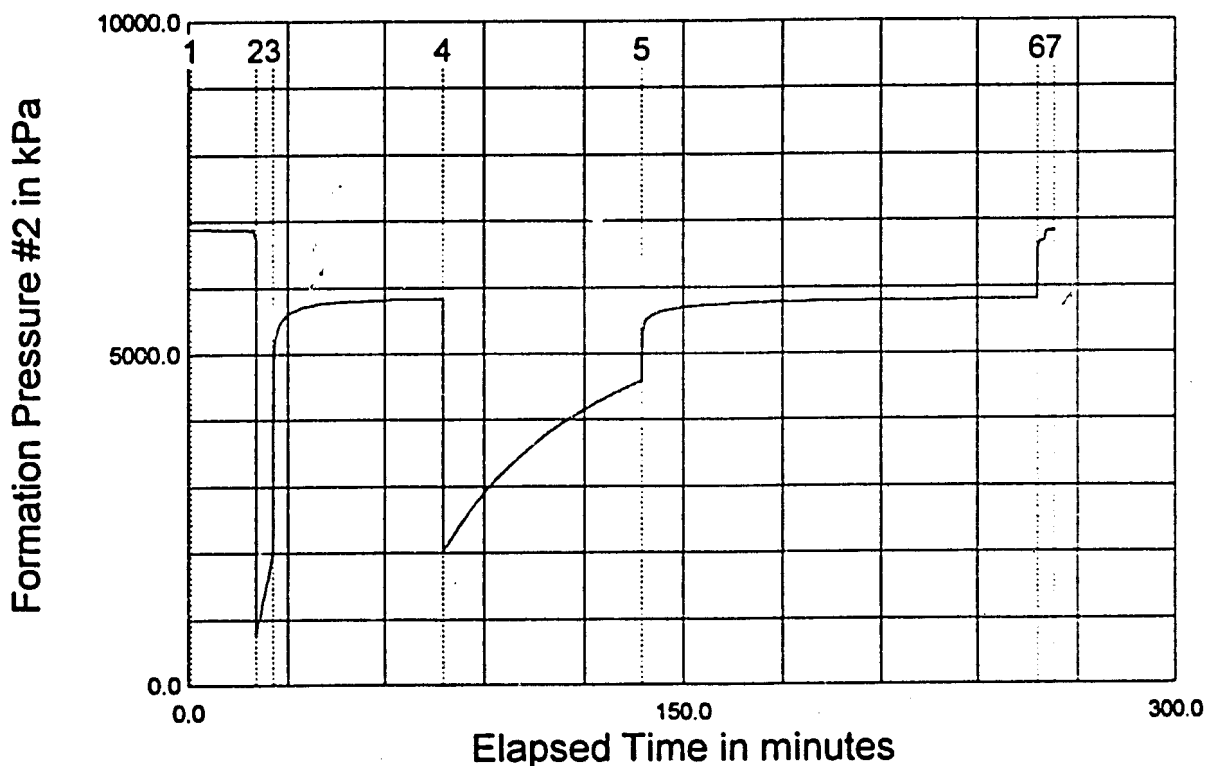
Time	Elapsed Time	Formation Pressure #1 kPa	Recovery Pressure kPa	Surface Pressure kPa	Inflation Pressure kPa	Hydrostatic Pressure kPa	Net Inflation Pressure kPa
18:51:49	00:00:00	6694.45	4433.29	79.39	8846.71	6754.01	2092.70
18:52:04	00:00:15	6698.82	4433.29	79.38	8849.67	6756.88	2092.78
18:52:19	00:00:30	6703.19	4433.29	79.38	8852.62	6759.04	2093.58
18:52:34	00:00:45	6735.96	4435.44	80.90	6972.30	6803.62	168.68
18:52:49	00:01:00	6826.99	4434.01	80.40	6885.10	6820.17	64.93
18:53:04	00:01:15	6837.92	4434.01	78.88	6862.19	6826.64	35.55
18:53:19	00:01:30	6841.56	4433.29	79.39	6850.37	6829.52	20.85
18:53:34	00:01:45	6844.47	4433.29	81.41	6847.41	6833.84	13.58
18:53:49	00:02:00	6848.84	4434.01	79.89	6847.41	6836.71	10.70
18:54:04	00:02:15	6852.49	4434.01	80.40	6848.89	6840.31	8.58
18:54:19	00:02:30	6853.94	4433.30	80.41	6849.63	6842.47	7.16
18:54:34	00:02:45	6857.58	4434.01	80.92	6851.85	6845.34	6.50
18:54:49	00:03:00	6859.04	4433.30	81.43	6854.07	6848.22	5.85
18:55:04	00:03:15	6860.50	4433.30	80.93	6852.59	6849.66	2.93
18:55:14	00:03:24	6861.95	4433.30	80.93	6854.07	6850.38	3.69

OEI et al LIARD Lat. 60 19' 55.263" Lon. 123 10' 36.008"
DST #ONE, MATTISON, 635.8 - 650.0 mKB

Formation Pressure #1

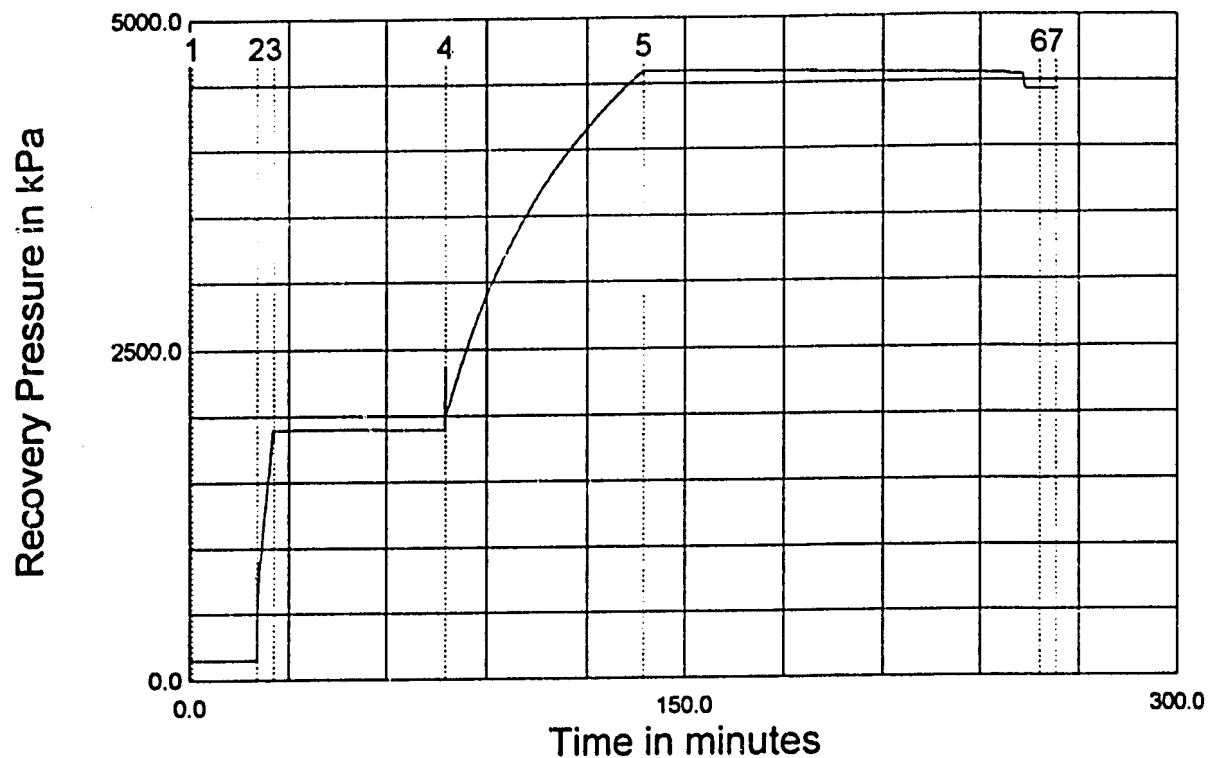


Formation Pressure #2

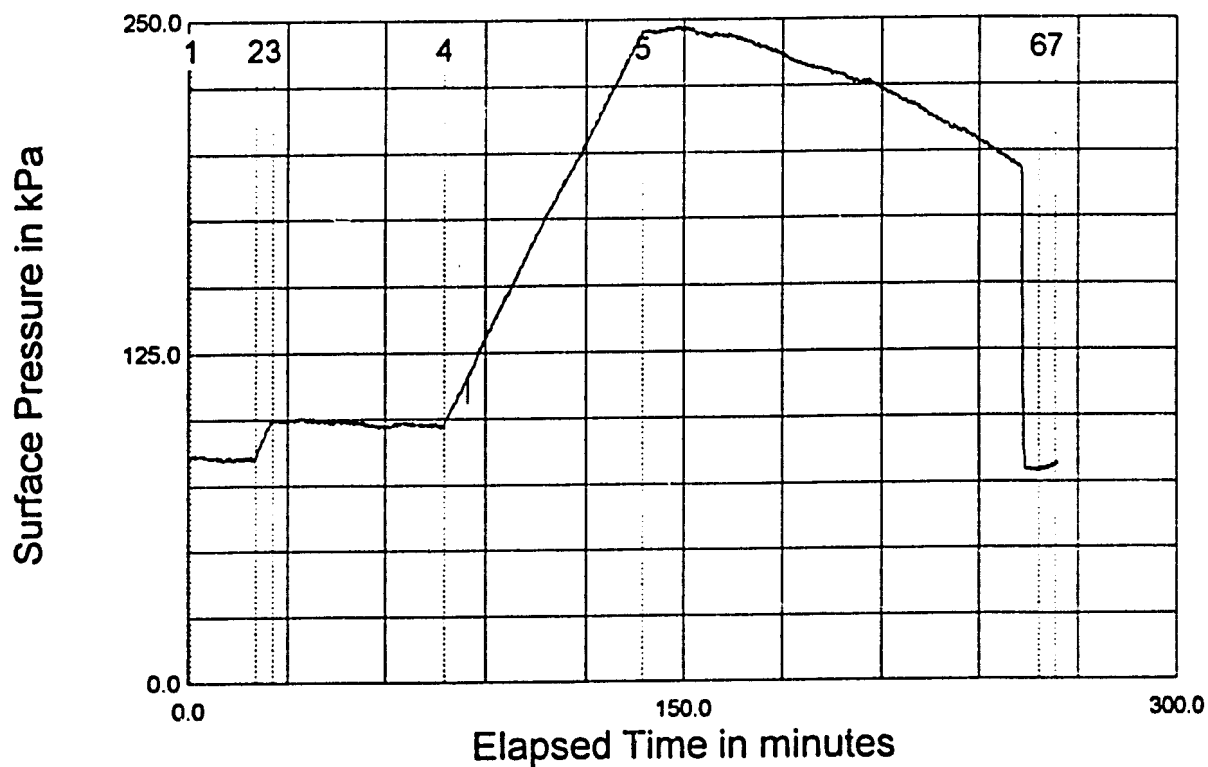


OEI et al LIARD Lat. 60 19' 55.263" Lon. 123 10' 36.008"
DST #ONE, MATTISON, 635.8 - 650.0 mKB

Recovery Pressure

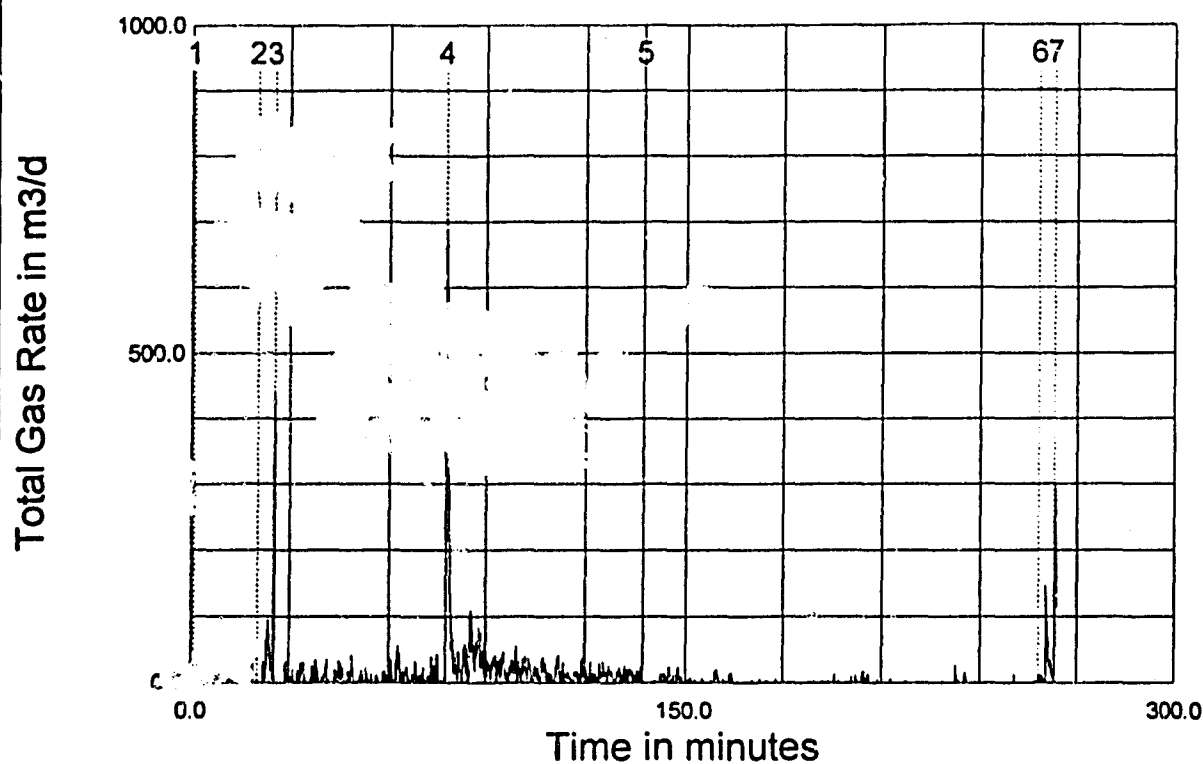


Surface Pressure

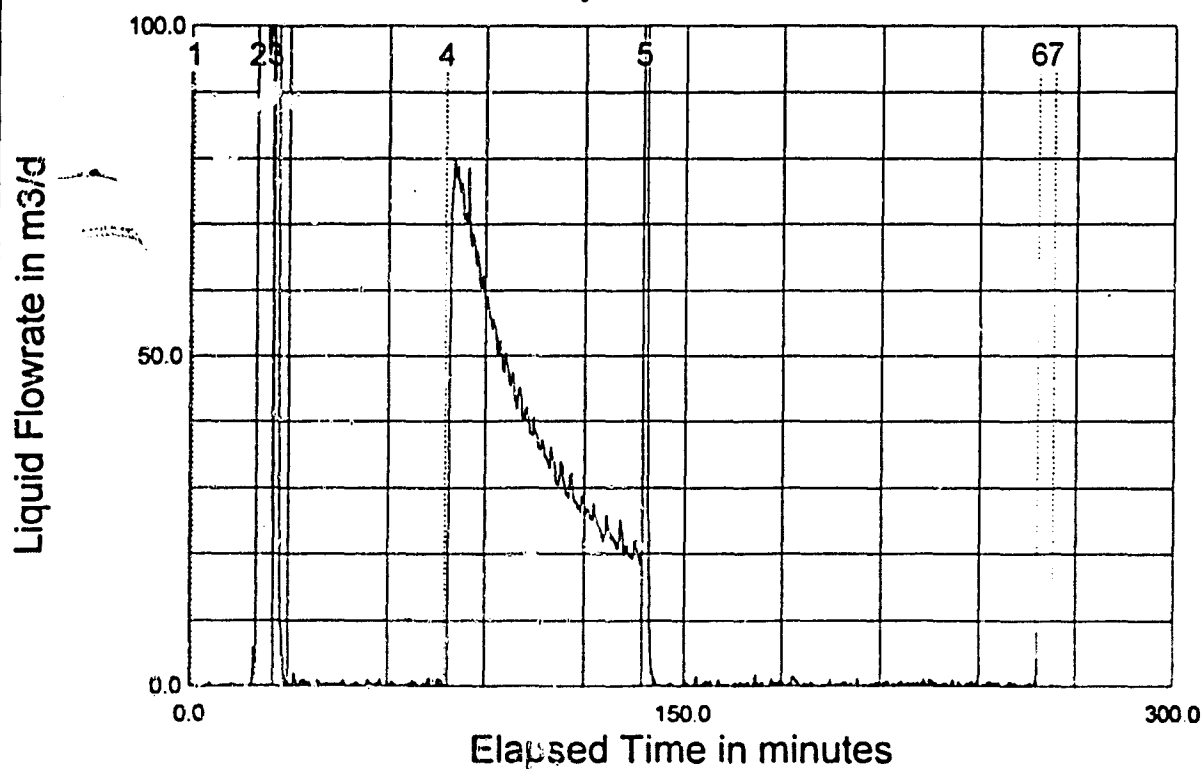


OEI et al. LiARD Lat. 60 19' 55.263" Lon. 123 10' 36.008"
DST #ONE, MATTISON, 635.8 - 650.0 mKB

Total Gas Rate

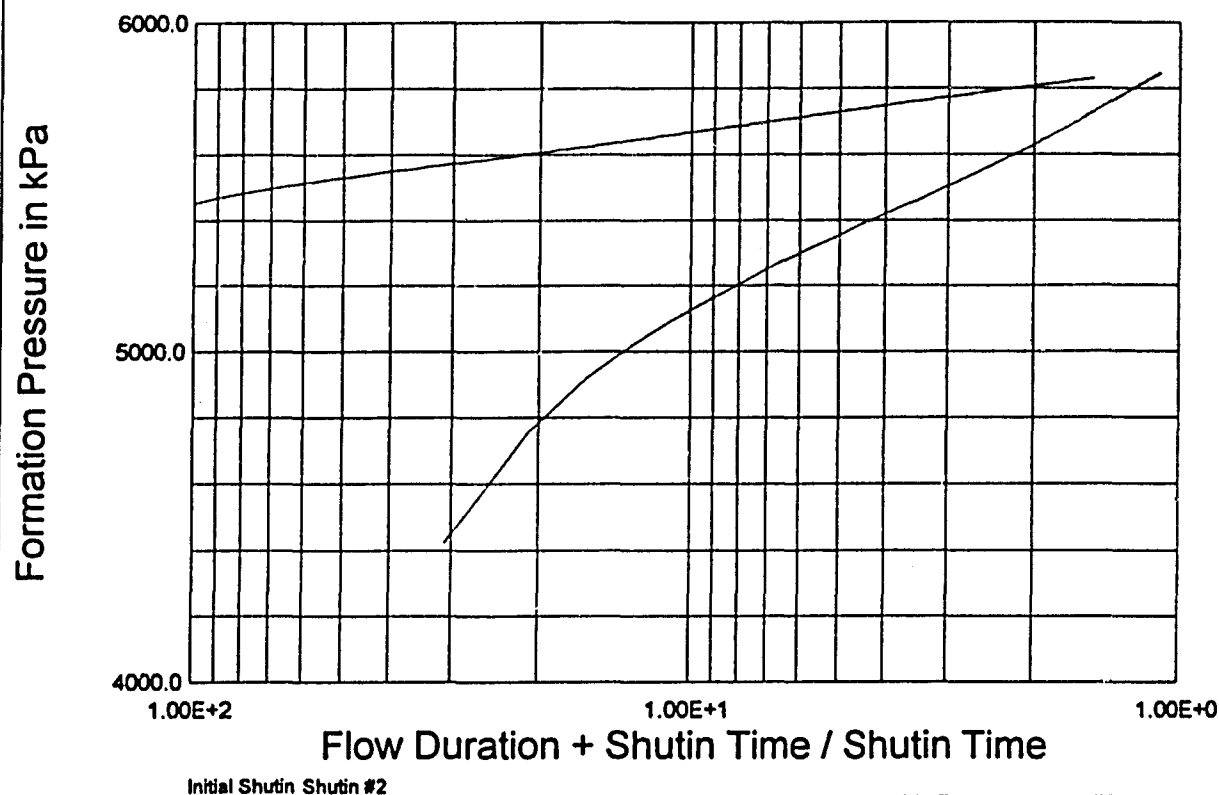


Liquid Rate

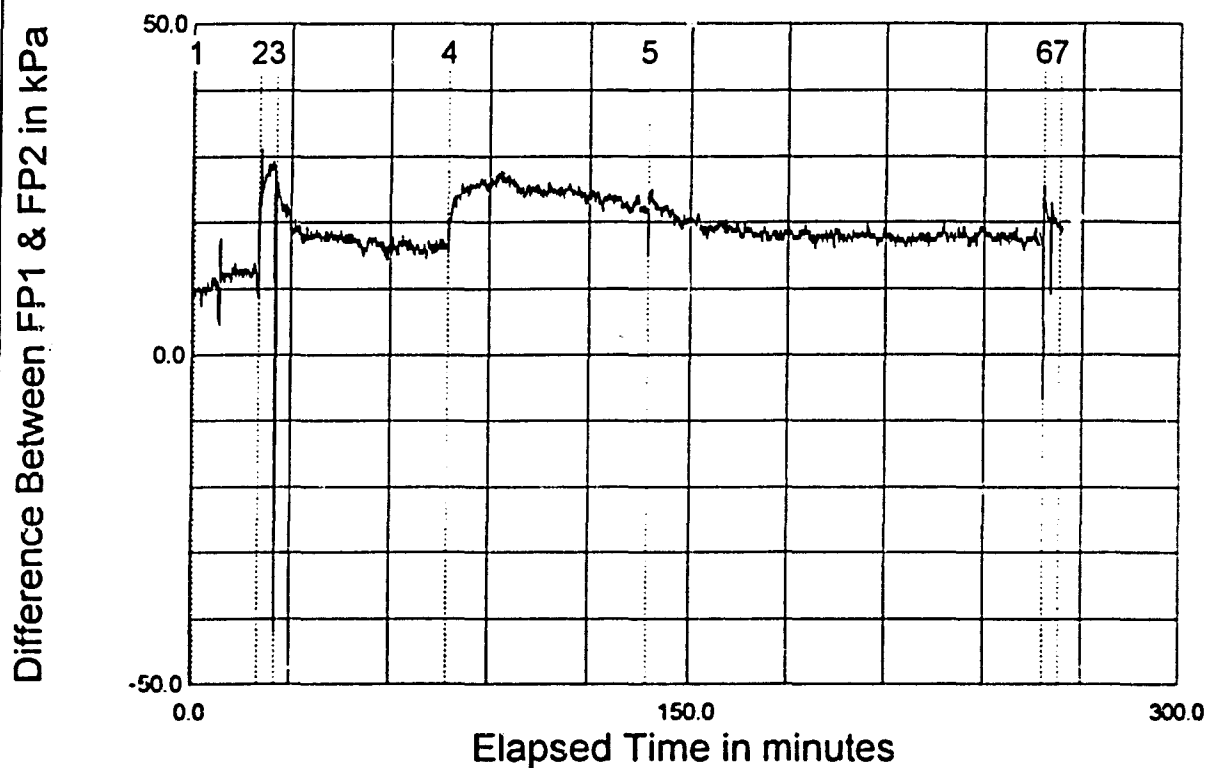


OEI et al LIARD Lat. 60 19' 55.263" Lon. 123 10' 36.008"
DST #ONE, MATTISON, 635.8 - 650.0 mKB

Horner Plot

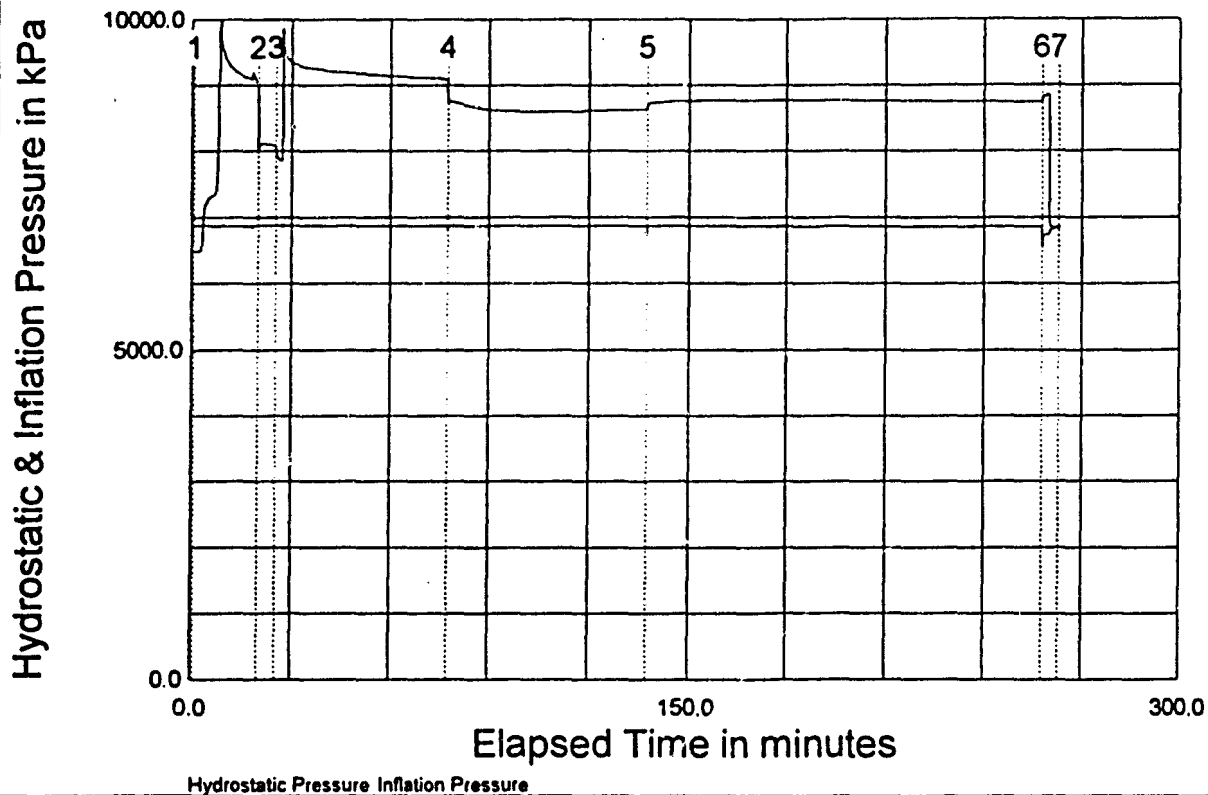


Transducer Difference (FP#1 - FP#2)

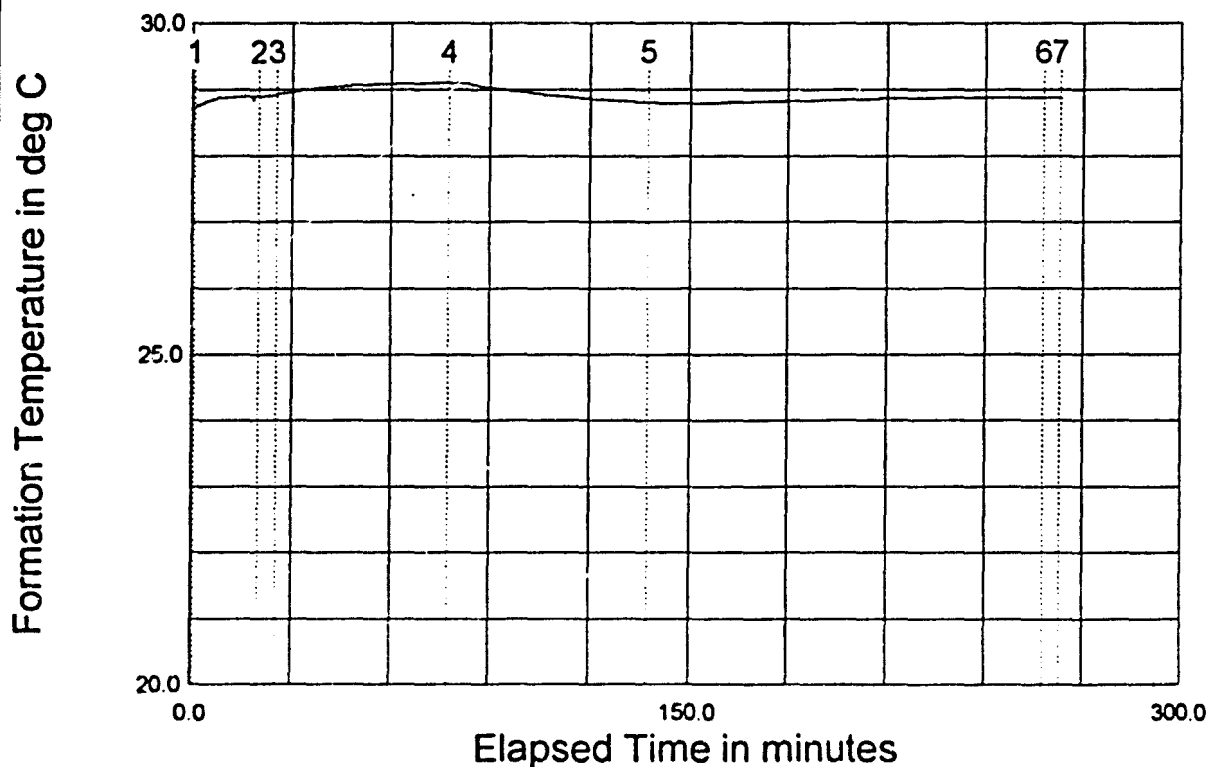


OEI et al LIARD Lat. 60 19' 55.263" Lon. 123 10' 36.008"
DST #ONE, MATTISON, 635.8 - 650.0 mKB

Hydrostatic & Inflation Pressure



Formation Temperature



HORNER PRESSURE BUILDUP PLOT

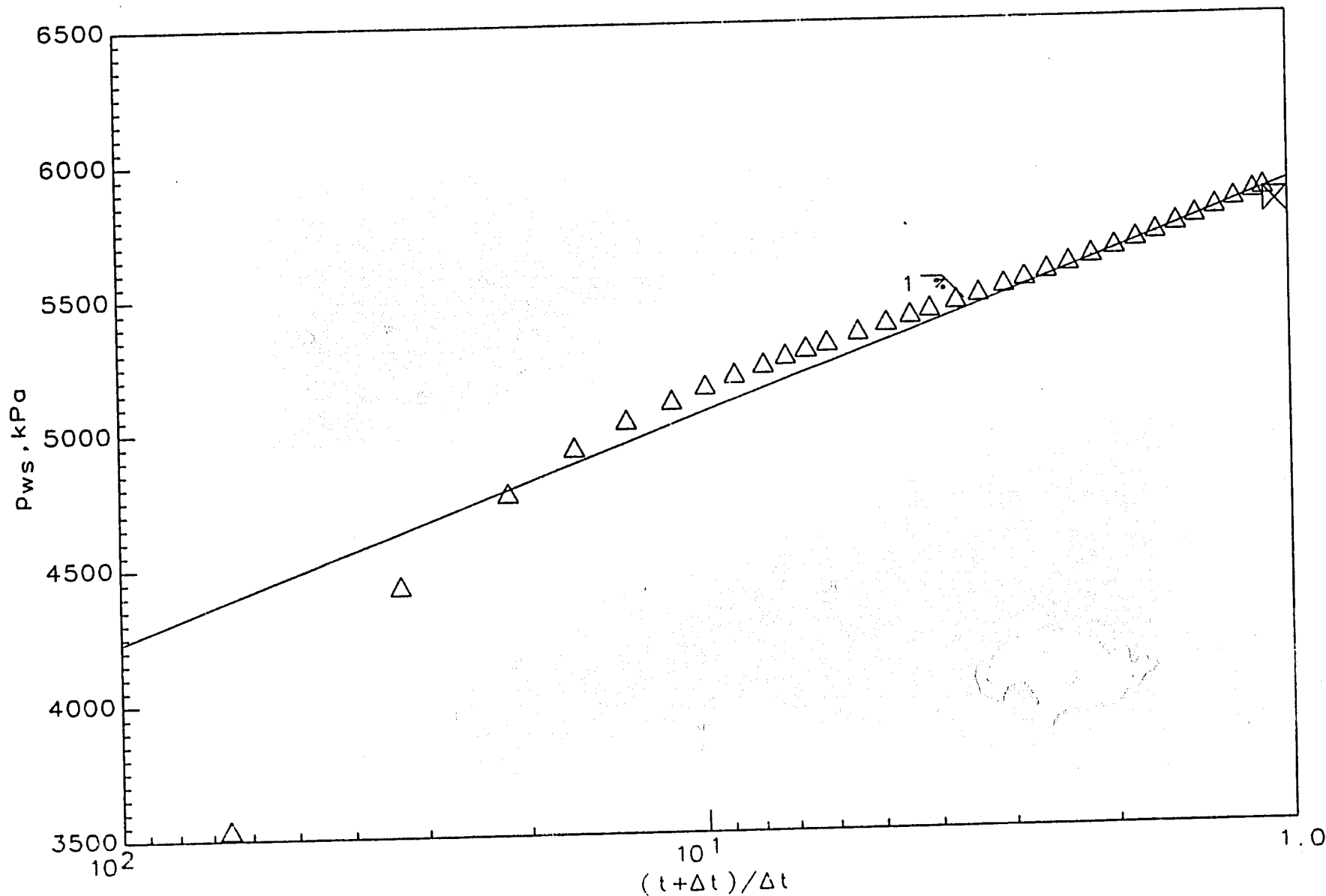
OEI et al Liard

Lat 60 19'55.263" Lon 123 10'36.008"

DST #1, Mattison, 635.8-650.0mKB
Initial Shut In

$[k_1/u]_t = 34.08$ $k_1 = 18.84$ mD $s = 2.1$ $p^* = 5882.3$

$t = 0.87$ hr $r = 3$ m



STORAGE AND SKIN TYPECURVE (Bourdet et al) PRESSURE BUILDUP PLOT

OEI et al Liard

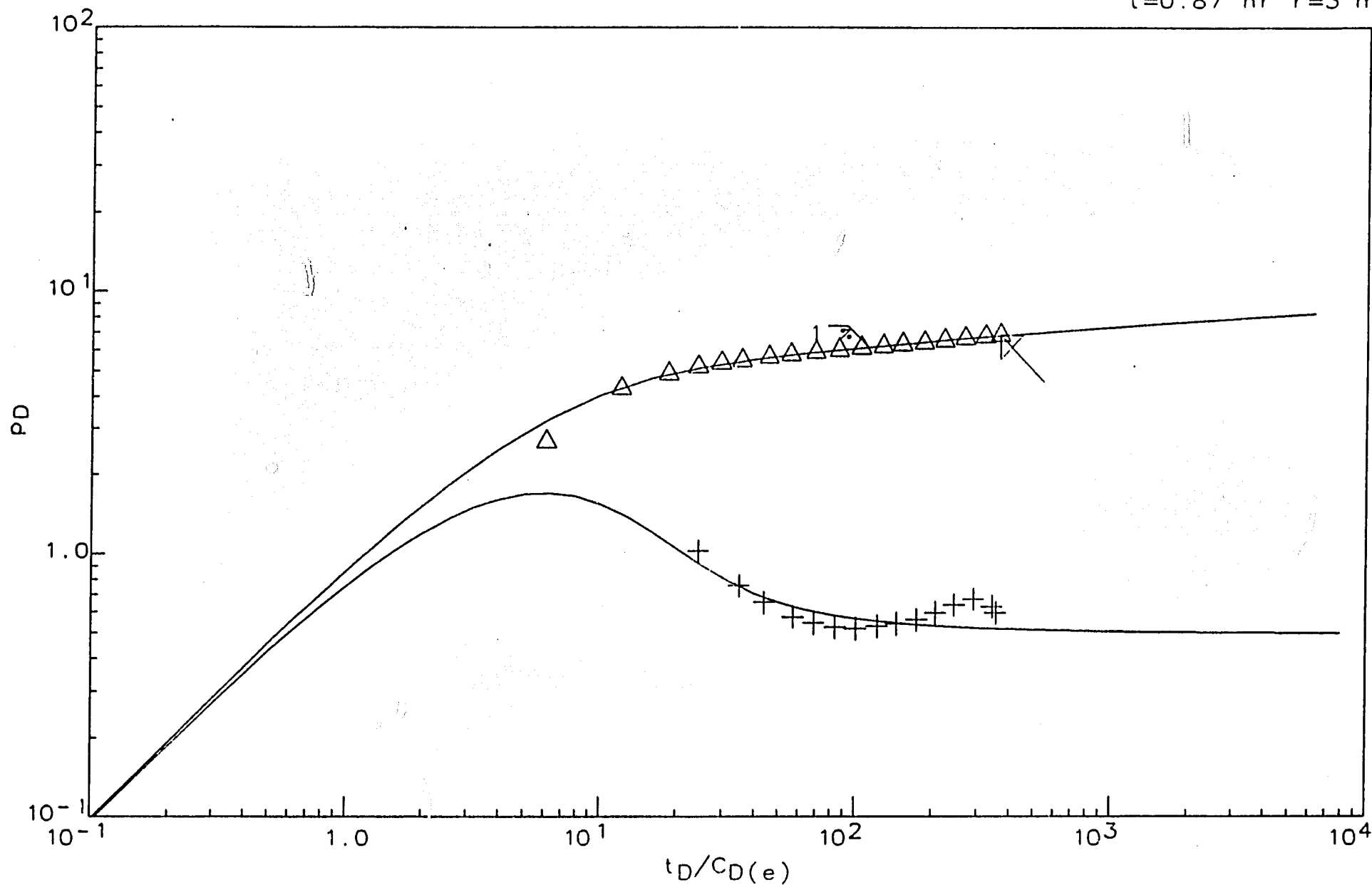
Lat 60 19'55.263" Lon 123 10'36.008"

DST #1, Mattison, 635.8-650.0mKB

Initial Shut In

$[k_1/u]_i = 43.87$ $k_1 = 24.26$ $C_D = 8.924e-01$ $s = 3.5$

$t = 0.87$ hr $r = 3$ m



HORNER
PRESSURE BUILDUP PLOT

OEI et al Liard

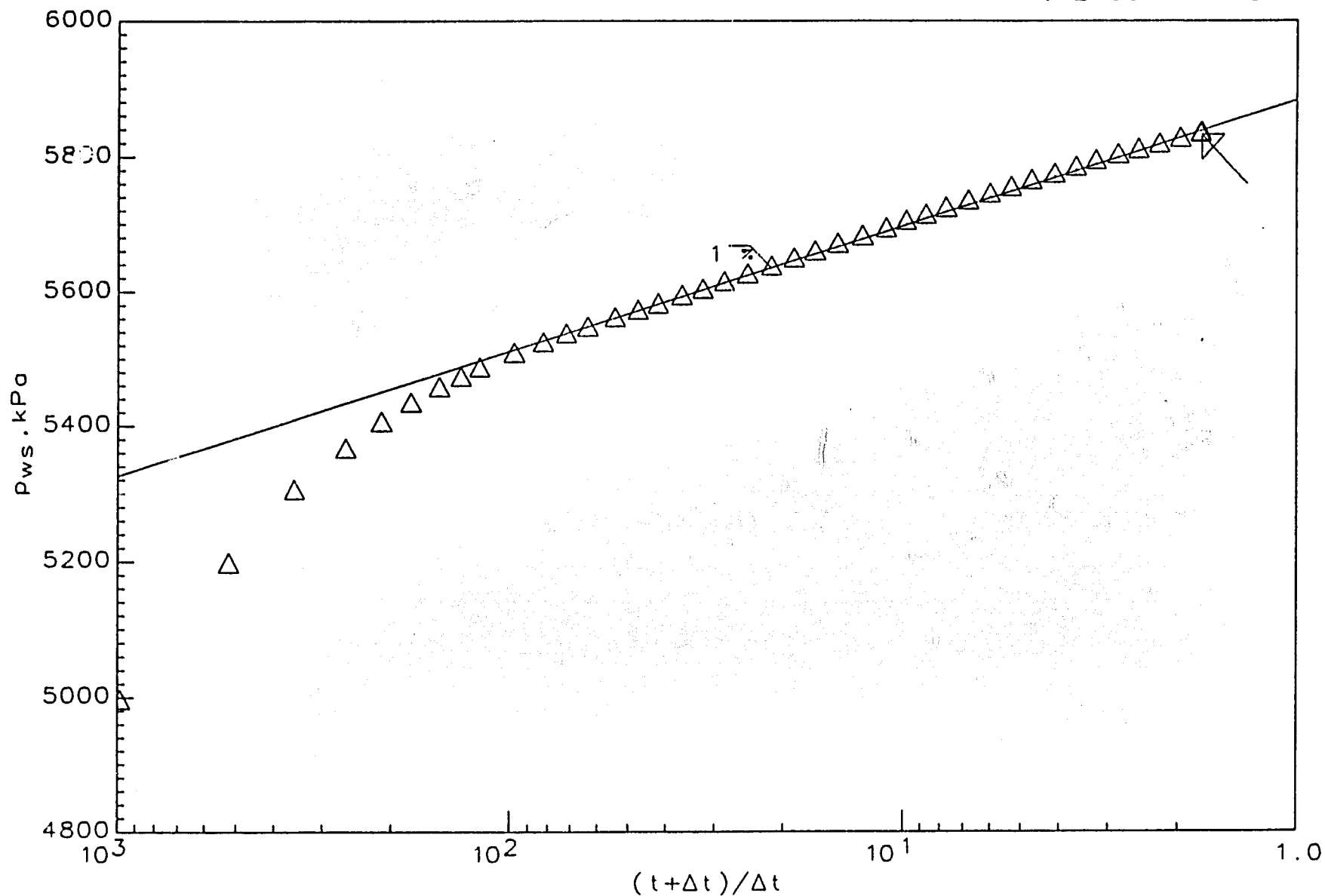
Lat 60 19'55.263" Lon 123 10'36.008"

DST #1, Mattison, 635.8-650.0mKB

Final Shut In

$[k_1/u]_t = 27.65$ $k_1 = 15.29$ mD $s = 3.3$ $p^* = 5882.2$

$t = 2.00$ hr $r = 9$ m

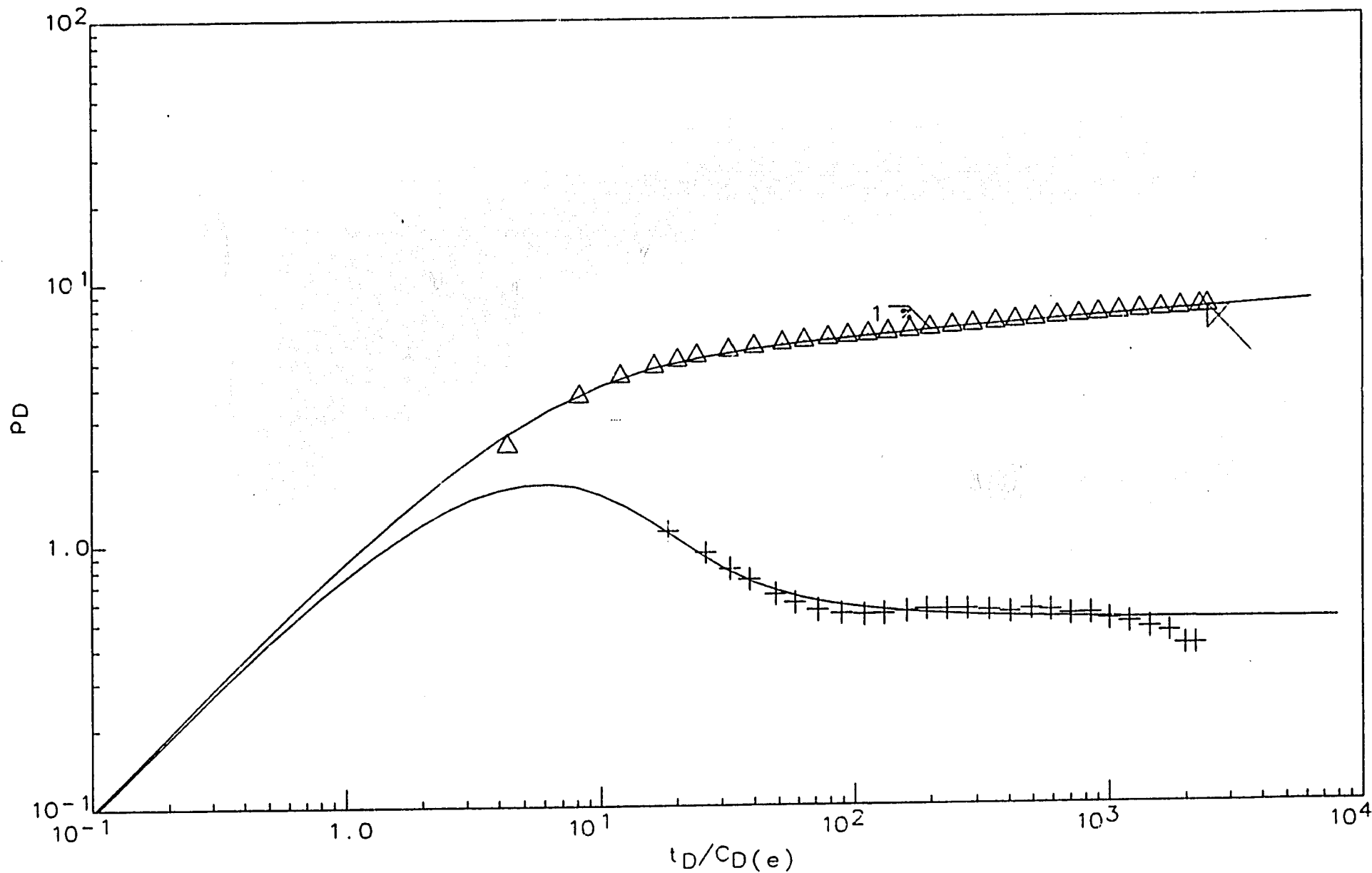


STORAGE AND SKIN TYPECURVE (Bourdet et al)
PRESSURE BUILDUP PLOT

OEI et al Liard
Lat 60 19'55.263" Lon 123 10'36.008"
[k_1/u] $_t=28.72$ $k_1=15.88$ $C_D=9.310e-01$ $s=3.5$

DST #1, Mattison, 635.8-650.0mKB
Final Shut In

$t=2.00$ hr $r=9$ m



Water Well Test - BUILDUP (Horner Time)

OEI et al Liard
Lat 60 19'55.263" Lon 123 10'36.008

DST #1, Mattison, 635.8-650.0mKB
Final Shut In

*****	Input Data	*****	*****	Results	*****
				Radial Analysis - Zone 1	
Final Water Rate	=	23.20 m3/d		Transmissivity	= 268.19 mDm/mPa.s
Total Porosity	=	13.80 %		Mobility (Total)	= 27.648 mD/mPa.s
Oil Saturation	=	0.00 %		Permeability (Water)	= 15.29 mD
Water Saturation	=	83.00 %		Permeability (Oil)	= - mD
Gas Saturation	=	17.00 %		Permeability (Gas)	= - mD
Net Pay	=	9.70 m		Extrapolated Pressure	= 5882.2 kPa
Perforated Interval	=	- m		Average Reservoir Pressure	= - kPa
Horiz To Vert Perm Ratio	=	1.000		Extrapolated Pressure At 72	= 5880.5 kPa
Net Wellbore Inclination	=	0.		Skin Effect	= 3.30
Wellbore Radius	=	0.09 m		Partial Penetration Skin	= -
Drainage Area - Zone	=	64.7 ha		Inclination Skin	= 0.000
Shape Code - Zone 1	=	R1A		Damage Skin	= 3.30
Drainage Area -	=	64.7 ha		Pressure Drop (Total Skin)	= 530.7 kPa
Shape Code - Zone2	=	R1A		Damage Ratio	= 1.73
Water Formation Vol Factor	=	1.01		Flow Efficiency	= 0.58
Water Viscosity	=	0.553 mPa.s		Radius Of Investigation	= 9 m
Water Compressibility	=	4.470e-07 1/kPa		a Time Of Investigation	= 2.003 hr
Initial Pressure	=	- kPa		Specified Reservoir Pressure	= 5882.2 kPa
Final Flowing Pressure	=	4622.8 kPa		Specified Flowing Pressure	= 4622.8 kPa
Formation Temperature	=	48.89 deg C		PI / II (Total Actual)	= 1.842e-02 m3/d/kPa
Cumulative Production (water)	=	- m3		PI / II (Total Ideal)	= 3.184e-02 m3/d/kPa
Corrected Flow Time	=	1.477 hr		Stab PI / II (Total Actual)	= 1.234e-02 m3/d/kPa
				Stab PI / II (Total Ideal)	= 2.133e-02 m3/d/kPa
*****	Calculations	*****		Stabilization / Specified Time	= 2981.346 hr
Total Compressibility	=	3.321e-05 1/kPa		Stabilized Rate @ Current Skin	= 15.54 m3/d
Wellbore Storage Constant	=	8.95e-06 m3/kPa		Stabilized Rate @ Skin Of 0	= 21.65 m3/d
*****	Results	*****		Stabilized Rate @ Skin Of -4	= 41.38 m3/d
				Radial Analysis - Zone 2	
Bourdet Et Al Type Curve Analysis				Permeability (Water)	= - mD
Dimensionless Storage Constant	=	0.93		Permeability (Oil)	= - mD
Wellbore Storage Constant	=	2.16e-06 m3/kPa		Permeability (Gas)	= - mD
Permeability	=	15.88 mD		Extrapolated Pressure	= - kPa
Skin Effect (Total)	=	3.490		Average Reservoir Pressure	= - kPa
Inter Porosity Coeff	=	-		Extrapolated Pressure At 72	= - kPa
Storativity Ratio	=	-		Apparent Skin	= -
				Specified Reservoir Pressure	= - kPa
				Specified Flowing Pressure	= - kPa
				Stabilization / Specified Time	= - hr
				Stabilized Rate @ Current Skin	= - m3/d
				Stabilized Rate @ Skin Of 0	= - m3/d
				Stabilized Rate @ Skin Of -4	= - m3/d

Dec 17, 1997

Morning Report Formation Summary

Storage Units:

Metric

Date: Dec 17, 1997
Well Name: OEI et al Liard N-60
Location: 60-19 N, 123-10 W
Report From: Ron Rainville
Report To: Wayne Keedwell

Time: 2,359
Depth: 555.00
Progress: 47

Kelly Bushing Elevation: 340.00
Ground Elevation: 335.70

Casing Flange Elevation: 335.70
Storage Units: Metric

**** All Depths measured from Kelly Bushing Elevation ****

Group Formation Member	Prognosed Top	Sample Top (MD)	Sample Top (TVD)	Subsea Elevation	Thickness	Difference From Prognosis
SCATTER	307.00	304.00	304.00	36.00	203.00	3.00
CHINKEH	467.00	507.00	507.00	-167.00	8.00	-40.00
FANTASQUE	477.00	515.00	515.00	-175.00	33.00	-38.00
MATTSON	542.00	548.00	548.00	-208.00		-6.00

Sample Descriptions

Storage Units:

Metric

25.00 to 198.00 (173.00)	100% GLACIAL TILL predominately SANDSTONE: medium to predominately very coarse grained to conglomerate, angular to subrounded, poorly sorted, predominately unconsolidated, very friable, predominately quartzose with very abundant clear to red brown to occasionally pink quartz grains, pebbles, and fragments, EXCELLENT POROSITY (24%), NO SHOWS. Approximate 30% miscellaneous rock fragments: tight SANDSTONE, dense LIMESTONE, SHALE, and miscellaneous igneous and metamorphic fragments. Some boulders, inferred from intervals of slow and extremely rough drilling.
198.00 to 240.00 (42.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, very silty and sandy, slightly glauconitic in part. Abundant interlaminated and interbedded SILTSTONE: gray to gray brown, argillaceous, sandy (grading to very fine grained SANDSTONE), TIGHT, NO SHOWS. (Samples 90% siltstone with shale).
240.00 to 250.00 (10.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, very silty, sandy and slightly glauconitic in part. (Samples 95% + shale).
250.00 to 270.00 (20.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, silty.
270.00 to 275.00 (5.00)	100% SHALE As above. Trace interlaminated SILTSTONE: gray, argillaceous, sandy and glauconitic in part, TIGHT, NO SHOWS.
275.00 to 298.00 (23.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, very silty in part. Minor interlaminated SILTSTONE: gray to gray brown, argillaceous, sandy, TIGHT, NO SHOWS. Trace interlaminated SANDSTONE: light gray, very fine grained, subrounded, moderately sorted, well cemented, quartzose, siliceous, silty, argillaceous, TIGHT, NO SHOWS.
298.00 to 304.00 (6.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. Abundant interlaminated SANDSTONE: dark gray, very fine grained, subrounded, moderately sorted, well cemented, quartzose, very argillaceous, TIGHT, NO SHOWS.
304.00 to 306.00 (2.00)	100% SANDSTONE gray to gray brown, very fine grained (grading to SILTSTONE), subrounded, well sorted, well cemented, quartzose, very silty and argillaceous, slightly micaceous in part, TIGHT, NO SHOWS.
306.00 to 310.00 (4.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty.
310.00 to 315.00 (5.00)	100% SANDSTONE gray to brown, predominately fine to occasionally medium grained, subrounded, well sorted, well cemented, quartzose, very argillaceous, glauconitic, slightly micaceous and kaolinitic in part, Poor POROSITY to TIGHT, NO SHOWS.

Sample Descriptions

Storage Units:

Metric

315.00 to 320.00 (5.00)	100% SANDSTONE brown, fine to very fine grained, subrounded, well sorted, well cemented, quartzose, very argillaceous, Poor POROSITY to TIGHT, NO SHOWS.
320.00 to 329.00 (9.00)	100% SANDSTONE light gray, very fine to occasionally medium grained, subrounded, moderately sorted, well cemented, quartzose, very argillaceous, glauconitic, slightly micaceous in part, TIGHT, NO SHOWS.
329.00 to 332.00 (3.00)	100% SANDSTONE gray to light gray, very fine to occasionally medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, glauconitic, argillaceous and slightly micaceous in part, FAIR POROSITY (12%), NO SHOWS.
332.00 to 338.00 (6.00)	100% SANDSTONE gray to light gray, very fine to occasionally medium grained, subrounded, moderately sorted, well cemented, quartzose, very argillaceous, glauconitic and slightly micaceous in part, Poor POROSITY to TIGHT, NO SHOWS.
338.00 to 352.00 (14.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. (Very Poor SAMPLES: heavy contamination with surface gravel).
352.00 to 353.00 (1.00)	100% SANDSTONE gray to salt and pepper, very fine to fine grained, subangular, moderately sorted, well cemented, quartzose, very argillaceous, carbonaceous, micaceous, glauconitic, TIGHT, NO SHOWS.
353.00 to 358.00 (5.00)	100% SANDSTONE gray to brown, very fine to occasionally medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, silty, argillaceous, glauconitic, TRACE to Poor POROSITY (5% to 8%), TRACE BROWN Oil STAINING and DULL ORANGE FLUORESCENCE, Very SLOW MILKY YELLOW CUT.
358.00 to 367.00 (9.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. (Very Poor SAMPLES: heavy contamination with surface gravel).
367.00 to 375.00 (8.00)	100% SANDSTONE brown, fine to very fine grained, subrounded, well sorted, poorly cemented, quartzose, argillaceous, FAIR POROSITY (12%), SOME BROWN Oil STAINING and DULL ORANGE FLUORESCENCE, Very SLOW MILKY YELLOW CUT.
375.00 to 380.00 (5.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. (Very Poor SAMPLES: heavy contamination with surface gravel).
380.00 to 400.00 (20.00)	100% SILTSTONE dark gray to gray brown, very argillaceous and sandy (grading to very fine grained very argillaceous tight sandstone), slightly micaceous and pyritic in part, TIGHT, NO SHOWS. Abundant interlaminated and interbedded SHALE: black, micromicaceous in part, fissile to platy, very silty and sandy, slightly pyritic in part.

Sample Descriptions

Storage Units:

Metric

400.00 to 410.00 (10.00)	100% SHALE black, micromicaceous in part, fissile to platy, very silty and sandy. Abundant interlaminated and interbedded SILTSTONE grading to very fine grained tight sandstone as above.
410.00 to 430.00 (20.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty and sandy in part. Some interlaminated SILTSTONE grading to sandstone as above.
430.00 to 445.00 (15.00)	100% SHALE black, micromicaceous in part, fissile to platy, slightly silty and pyritic in part. Trace interlaminated SILTSTONE: gray to gray brown, argillaceous, sandy, TIGHT, NO SHOWS. Trace IRONSTONE.
445.00 to 463.00 (18.00)	100% SHALE with minor IRONSTONE as above. Scattered trace fossil fragments.
463.00 to 464.00 (1.00)	100% SANDSTONE brown, very fine grained, subrounded, well sorted, well cemented, quartzose, argillaceous, siliceous, sideritic, hard, TIGHT, NO SHOWS.
464.00 to 482.00 (18.00)	100% SHALE with trace IRONSTONE as above.
482.00 to 507.00 (25.00)	100% SHALE black, micromicaceous in part, fissile to platy, slightly pyritic in part. Trace interlaminated SHALE: light gray to white, Scattered trace interlaminated COAL.
507.00 to 510.00 (3.00)	100% SANDSTONE brown, fine to medium to occasionally coarse grained, subrounded, well sorted, well cemented, quartzose, argillaceous, very slightly pyritic and glauconitic in part, very slightly kaolinitic and micaceous in part, TIGHT, NO SHOWS.

Sample Descriptions

Storage Units:

Metric

522.00 to 540.00 (18.00)	100% CHERT predominately light brown to occasionally white, slightly glauconitic and pyritic in part, fossiliferous in part with scattered trace sponge spicules, scattered trace fractures and free quartz crystals, SCATTERED TRACE LEACHED POROSITY and DEAD Oil STAINING.
540.00 to 548.00 (8.00)	100% CHERT as above. Trace interlaminated SHALE: dark gray to black, fissile to platy.
548.00 to 553.00 (5.00)	100% DOLOMITE brown, microcrystalline, argillaceous, very silty and siliceous, slightly pyritic in part, TRACE POROSITY to DENSE, NO SHOWS. Trace interlaminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty, slightly pyritic in part.
553.00 to 554.00 (1.00)	100% SHALE as above.
554.00 to 556.00 (2.00)	100% SANDSTONE gray to brown, very fine grained (combined to SILTSTONE), subrounded, well sorted, well cemented, quartzose, siliceous, dolomitic, very silty and argillaceous, TIGHT, NO SHOWS.
556.00 to 560.00 (4.00)	100% SANDSTONE as above, with abundant interlaminated and interbedded SHALE: gray to dark gray, micromicaceous in part, fissile to platy, silty, slightly pyritic in part.
560.00 to 561.00 (1.00)	100% SHALE as above.
561.00 to 570.00 (9.00)	100% SANDSTONE light brown, predominately very fine to occasionally fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly silty and dolomitic in part, TRACE to OCCASIONALLY Poor POROSITY to TIGHT, NO SHOWS. Minor interlaminated SHALE as above. Trace CHERT: light blue gray.
570.00 to 575.00 (5.00)	100% SANDSTONE light gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly dolomitic in part, slightly kaolinitic and glauconitic in part, TRACE to OCCASIONALLY Poor POROSITY to TIGHT, SCATTERED TRACE DEAD Oil STAINING. Trace interlaminated and interbedded SHALE as above.
575.00 to 577.00 (2.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, slightly silty and pyritic in part.
577.00 to 579.00 (2.00)	100% SANDSTONE light gray to white to clear, medium to coarse grained, subrounded, well sorted, fair to poorly cemented, quartzose, siliceous, slightly dolomitic and pyritic in part, Good POROSITY (15%), NO SHOWS.
579.00 to 586.00 (7.00)	100% SANDSTONE as above: Poor to FAIR POROSITY (9% to 12%), NO SHOWS.

Sample Descriptions

Storage Units:

Metric

586.00 to 587.00 (1.00)	100% SHALE as above.
587.00 to 593.00 (6.00)	100% SANDSTONE light gray brown to white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, friable, quartzose with some frosted grains, slightly pyritic and dolomitic in part to predominately very clean, Good POROSITY (18%), SCATTERED TRACE LIGHT BROWN OIL STAINING, TRACE HYDROCARBON ODOR, TRACE FREE OIL IN SAMPLE, NO FLUORESCENCE OR CUT.
593.00 to 594.00 (1.00)	100% SANDSTONE light gray to light brown, fine to medium grained, subrounded, well sorted, well cemented, quartzose with some frosted grains, siliceous, dolomitic, slightly pyritic in part, TIGHT, NO SHOWS.
594.00 to 595.00 (1.00)	100% SANDSTONE light gray brown to white to clear, medium to coarse grained, as above: Good POROSITY (15%), NO SHOWS.
595.00 to 597.00 (2.00)	100% DOLOMITE light gray brown, microcrystalline, silty, sandy, argillaceous, DENSE, NO SHOWS. Some interlaminated SANDSTONE : light gray, very fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, dolomitic, slightly pyritic in part, TIGHT, NO SHOWS.
597.00 to 601.00 (4.00)	100% SANDSTONE white, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, Good to EXCELLENT POROSITY (18% to 24%), NO SHOWS.
601.00 to 604.00 (3.00)	100% SANDSTONE light gray brown, fine to medium grained, subrounded, well sorted, fair to well cemented, quartzose, siliceous, slightly dolomitic and pyritic in part, Poor POROSITY (10%), NO SHOWS. Trace interlaminated SHALE : dark gray to black, micromicaceous in part, fissile to platy, slightly pyritic in part.
604.00 to 610.00 (6.00)	100% SANDSTONE light gray brown to white to clear, fine to medium to occasionally coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic and kaolinitic in part to predominately very clean, EXCELLENT POROSITY (24%), NO SHOWS.
610.00 to 611.00 (1.00)	100% SHALE black, micromicaceous in part, fissile to platy, pyritic in part.
611.00 to 612.00 (1.00)	100% SANDSTONE as above: Good POROSITY (18%), NO SHOWS.
612.00 to 613.00 (1.00)	100% SHALE as above.

Sample Descriptions

Storage Units:

Metric

- 613.00 to 615.00 (2.00) 100% **SANDSTONE**
as above: Good POROSITY (18%), NO SHOWS.
- 615.00 to 617.00 (2.00) 100% **SANDSTONE**
light gray brown to clear, fine to medium grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic and kaolinitic in part to predominately very clean, EXCELLENT POROSITY (24%), NO SHOWS.
- 617.00 to 624.00 (7.00) 100% **SHALE**
dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy, pyritic in part, carbonaceous with some interlaminated COAL.
- 624.00 to 627.00 (3.00) 100% **SANDSTONE**
white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, EXCELLENT POROSITY (24%), NO SHOWS.
- 627.00 to 631.00 (4.00) 100% **SHALE**
black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part, carbonaceous in part with trace interlaminated COAL.
- 631.00 to 633.00 (2.00) 100% **SANDSTONE**
light gray brown, fine to medium grained, subrounded, well sorted, fair to poorly cemented, quartzose, siliceous, argillaceous and pyritic in part, FAIR POROSITY (12%), NO SHOWS. Trace interlaminated SHALE: gray to dark gray, micromicaceous in part, fissile to platy, silty, sandy.
- 633.00 to 636.00 (3.00) 100% **SHALE**
black, micromicaceous in part, fissile to platy, silty, sandy, carbonaceous, pyritic in part.
- 636.00 to 642.00 (6.00) 100% **SANDSTONE**
light gray brown to clear, fine to medium grained, subrounded, well sorted, poorly cemented to unconsolidated, friable, quartzose, slightly argillaceous and pyritic in part, Good POROSITY (18%), SCATTERED TRACE PYROBITUMEN and DEAD Oil STAINING, NO FLUORESCENCE OR CUT.
- 642.00 to 650.00 (8.00) 100% **SANDSTONE**
white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, Good to EXCELLENT POROSITY (18% to 24%), NO SHOWS.

Sample Descriptions

Storage Units:

Metric

650.00 to 652.00 (2.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty, sandy, pyritic, carbonaceous with trace interlaminated COAL.
652.00 to 654.00 (2.00)	100% SANDSTONE gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE as above.
654.00 to 657.00 (3.00)	100% SHALE with trace interlaminated COAL as above.
657.00 to 662.00 (5.00)	100% SANDSTONE with trace interlaminated SHALE as above.
662.00 to 666.00 (4.00)	100% SHALE with trace interlaminated COAL as above.
666.00 to 667.00 (1.00)	100% SANDSTONE as above: TIGHT, NO SHOWS.
667.00 to 669.00 (2.00)	100% SHALE with trace interlaminated COAL as above.
669.00 to 672.00 (3.00)	100% SANDSTONE gray brown, very fine grained (grading to SILTSTONE), subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly pyritic in part, TIGHT, NO SHOWS. Trace interlaminated SHALE: black, micromicaceous in part, fissile to platy, silty, sandy, carbonaceous, pyritic.
672.00 to 673.00 (1.00)	100% SHALE as above.
673.00 to 678.00 (5.00)	100% SANDSTONE light gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE as above.
678.00 to 681.00 (3.00)	100% SHALE black, micromicaceous in part, fissile to platy, carbonaceous, pyritic, slightly silty in part. Trace IRONSTONE.
681.00 to 685.00 (4.00)	100% SANDSTONE white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented, friable, quartzose with some frosted grains, pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, FAIR to Good POROSITY (15% to 20%), NO SHOWS.
685.00 to 686.00 (1.00)	100% SHALE as above.
686.00 to 690.00 (4.00)	100% SANDSTONE as above: predominately coarse grained, poorly cemented to unconsolidated, EXCELLENT POROSITY (24%), NO SHOWS.

Sample Descriptions

Storage Units: Metric

690.00 to 691.00 (1.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy, pyritic in part.
691.00 to 693.00 (2.00)	100% SANDSTONE light gray to light gray brown, fine to medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TIGHT, NO SHOWS. Trace interlaminated SHALE as above.
693.00 to 695.00 (2.00)	100% SHALE as above.
695.00 to 697.00 (2.00)	100% SANDSTONE with trace interlaminated SHALE as above.
697.00 to 699.00 (2.00)	100% SHALE as above.
699.00 to 702.00 (3.00)	100% SANDSTONE white to clear, fine to medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, slightly pyritic in part, predominately very clean, Poor POROSITY to TIGHT, NO SHOWS.
702.00 to 704.00 (2.00)	100% SHALE black, micromicaceous in part, fissile to platy, pyritic, silty and sandy in part.
704.00 to 707.00 (3.00)	100% SANDSTONE as above: Poor POROSITY to TIGHT, NO SHOWS.
707.00 to 708.00 (1.00)	100% SHALE as above.
708.00 to 709.00 (1.00)	100% SHALE black, micromicaceous in part, fissile to platy, very carbonaceous. Abundant interbedded and interlaminated COAL.
709.00 to 711.00 (2.00)	100% SHALE as above.
711.00 to 717.00 (6.00)	100% SANDSTONE light gray to light gray brown, fine to medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part. TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty, sandy, pyritic.
717.00 to 718.00 (1.00)	100% SHALE as above.
718.00 to 725.00 (7.00)	100% SANDSTONE light gray to gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly pyritic in part, TIGHT, NO SHOWS. Some interlaminated SHALE as above.

Sample Descriptions

Storage Units: Metric

725.00 to 730.00 (5.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
730.00 to 732.00 (2.00)	100% SANDSTONE light gray brown to white, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS.
732.00 to 733.00 (1.00)	100% SHALE as above.
733.00 to 736.00 (3.00)	100% SANDSTONE as above: TRACE POROSITY to TIGHT, NO SHOWS.
736.00 to 738.00 (2.00)	100% SHALE as above.
738.00 to 741.00 (3.00)	100% SANDSTONE as above: TRACE POROSITY to TIGHT, NO SHOWS.
741.00 to 746.00 (5.00)	100% SHALE dark gray brown to black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part. Trace inter laminated SILTSTONE: gray to gray brown, argillaceous, sandy (grading to very fine grained SANDSTONE), quartzose, siliceous, argillaceous, TIGHT, NO SHOWS.
746.00 to 755.00 (9.00)	100% SANDSTONE light gray brown to white, very fine to occasionally medium grained, subrounded, well sorted, moderately to well cemented, quartzose, siliceous, slightly pyritic and kaolinitic in part, Poor POROSITY to TIGHT, NO SHOWS. Trace inter laminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
755.00 to 763.00 (8.00)	100% SHALE black to occasionally red brown, fissile to platy, carbonaceous in part. Some IRONSTONE.
763.00 to 787.00 (24.00)	100% SANDSTONE white to clear, fine to medium grained, subrounded, well sorted, moderately to poorly cemented, quartzose, friable, slightly siliceous and pyritic in part, very slightly kaolinitic and dolomitic in part to predominately very clean, FAIR to Good POROSITY (15% to 18%), NO SHOWS. Trace inter laminated SHALE as above.
787.00 to 788.00 (1.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
788.00 to 796.00 (8.00)	100% SANDSTONE as above: moderately cemented, FAIR POROSITY (15%), NO SHOWS.
796.00 to 802.00 (6.00)	100% SANDSTONE light gray to gray brown, very fine grained (occasionally grained to SILTSTONE), subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS. Abundant inter laminated and interbedded SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty,

Sample Descriptions

Storage Units:

Metric

sandy, pyritic in part.

802.00 to 805.00
(3.00)

100% SHALE

black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
Trace interlaminated SILTSTONE: gray, argillaceous, sandy (occasionally grading to very fine grained tight sandstone), siliceous, pyritic in part, TIGHT, NO SHOWS.

**LEGIBILITY
OF LOG
COULD VARY
DUE TO
COLOR
CONTENT**

Appendix 5: Daily Well Reports

**Sorus
Consulting
(1985) Ltd.**

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI el al LIANO N-80"				UNIQUE ID			DAY NO.	Post release
OPERATION @ 2000 HOURS	Trucks moving rig							DATE	1/3/95
DEPTH	PROGRESS	0	HOURS (24)	0	ROP	#DIV/0!	ATC NO.	4192	

DRILLING FLUID / SOLIDS CONTROL

DRILLING FLUIDS / SOLIDS CONTROL							
TYPE	Gel / Chem	TIME CHECK		ENGINEER	CM/Chk / Crystal	MOBILE	
TOUR BOOK		MUD REPORT		mg/l	ADDITIVE		CIRCULATION DATA
DENSITY			SALINITY		Gel		MUD GRADIENT KPa/m (10)
VISCOSITY			CHLORIDE		Crustic		TANK VOLUME m³
W.L			CALCIUM		Disco		HOLE VOLUME m³
PH				Vol. Frac.	Detergent		WATER TO LOC m³ (cum)
F.C.			SAND		Orispec		BOTTOMS UP TIME
FANN 600			SOLIDS		Soda Ash		HOLE CIRC TIME
FANN 300				UF/OF	Light		TOTAL CIRC TIME
P.V.			DEBITEN		Sawdust		LWD OFF LOC m³ (cum)
Y.P.			DEBANDER				DAILY MUD COST
QELS			CENTRIFUGE				CUM. MUD COST \$11.10

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT DATA				TIME BREAKDOWN			
BIT NO.		BIT NO.		DRILLING		MURATO	
SIZE		WCM		TRIPPING		DRLG MHRN	
TYPE		RPM		RIG SERVICE		MPI END	
SERIAL NO.		STRING WT		SURVEYING		PRESS TEST	
JETS/FA		OP ANN VEL	0.00	CORECOND		DRLG OUT	
IN		OC ANN VEL	0.00	LOGGING		SAC LANE	
OUT		NOZ VEL	82.5	OST		RIG REPAIR	
BIT METERS		PUMP		CORING		LD DPDC'S	
BIT HOURS		TYPE	TRIPLEX	REAMING		W/O Cementoff	
BIT ROP		LINEH (Max)	152 X 229	OTD		SAFETY MTG	
CUM HOURS		SPM		CASNO		MDLG TOOLH	
CONDITION		M/MIN	0.00	CEMENTING		Chg. Sengins	
PULLED FOR		PRESSURE		WOC		TOTAL	0.00

SURVEYS

BOTTOM HOLE ASSEMBLY

[illegible]

REMARKS & GENERAL REPORT DETAILS

08:00- Rig out wellhead unit (Ducharme). Drain & winterize						
10:00- Welder to weld cushion on roof of standby pump to haul to Nisku. Cut off casing bowl						
11:00- Picker truck to haul Generator set & propane tank to Beaver Enterprises camp, Fort Liard						
12:00- Trucks on location rig out equipment to remove derrick & drawworks Trucks had problems with frozen brakes.						
Shock tool & jars sent with BOP to Precision Yard #4 to be picked up by Cougar tool.						
Casing bowl sent with 4 joints of surface casing to P&G Bon Fort St. John. To be picked up by Streamflo.						
					GR. ELEV. (Surveyed)	395.7
					CUT (-) / FILL (+)	0.0
					GR. FI. RV. (Corrected)	335.7
					KB to GR. FI. RV.	4.3
WEATHER / TEMPERATURE	Cloudy, -38 Hi, -42 Lo	ROAD/LEASE	Rough/Good		ACTUAL KB	340.0
REPORT TO	Halvey Farrell	PHONE/FAX	289-5718 / 289-5680		LAST BOP DRILL	12/21/97
SUPERVISOR	Woody Pettard	MOBILE	(250)774 - 9540		LAST BOP INSPECTION	12/22/97
NHU MANAGER	Brian Evanyehyn	MOBILE			LAST SAFETY MEETING	12/24/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST			CUM. COST	\$1,059,393

**OCELOT ENERGY
INC.**

WELL NAME	OEI et al LIARD N-60°					UNIQUE ID			DAY NO.	14
OPERATION @ 0800 HOURS	Rig released @ 06:00 hr 12/25/97							DATE	12/26/97	
DEPTH		PROGRESS	0	HOURS (24)	0	ROP	#DIV/0!	AFE NO.	4192	

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	Corbin Coyes	MOBILE	
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES	CIRCULATION DATA	
DENSITY			SALINITY	Gel	MUD GRADIENT KPa/m	0.0
VISCOSITY			CHLORIDES	Caustic	TANK VOLUME m ³	
W.L.			CALCIUM	Desco	HOLE VOLUME m ³	
pH			Vol. Frac.	Detergent	WATER TO LOC m ³ (cum)	790
F.C.			SAND	Drispac	BOTTOMS UP TIME	
FANN 600			SOLIDS	Soda Ash	HOLE CIRC TIME	
FANN 300			UF/OF	Lignite	TOTAL CIRC TIME	
P.V.			DESILTER	Sawdust	LWD OFF LOC m ³ (cum)	
Y.P.			DESANDER		DAILY MUD COST	
GELS			CENTRIFUGE		CUM. MUD COST	\$11,197

BIT DATA				TIME BREAKDOWN			
BIT NO.		BIT NO.			DRILLING	MI/RT/O	12.00
SIZE		WOB			TRIPPING	DRLG MH/RH	
TYPE		RPM			RIG SERVICE	NIPPLE U/D	6.00
SERIAL NO.		STRING WT			SURVEYING	PRESS TEST	
JETS/TFA		DP ANN VEL	0.00		CIRC&COND	DRLG OUT	
IN @		DC ANN VEL	0.00		LOGGING	S&C LINE	
OUT @		NOZ VEL	82.5		OST	RIG REPAIR	
BIT METERS		PUMP			CORING	LD DP/DC's	
BIT HOURS		TYPE	TRIPLEX		REAMING	WO Cementers	
BIT ROP		LINER (BxS)	152 X 229		CTB	SAFETY MTG	
CUM HOURS		SPM			CASING	HDLG TOOLS	
CONDITION		M ³ /MIN	0.00		CEMENTING	Circ. Samples	
PULLED FOR		PRESSURE			WOC	TOTAL	18.00

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION		
835	3 1/2					Down	
						LENGTH	m

00:00- Nipple out BOP, clean tanks, rig out rig.					
06:00- Rig Release.					
06:00- Rig out rig & equipment to move.					
18:00- Shut down to move on January 1 st					
				GR. ELEV. (Surveyed)	335.7
				CUT (-) / FILL (+)	0.0
				GR. ELEV. (Corrected)	335.7
				KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, +2 Hi, -5 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	340.0
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	12/21/97
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	12/22/97
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	12/24/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$16,650	CUM. COST	\$815,313

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60°	UNIQUE ID		DAY NO.	13
OPERATION @ 0800 HOURS	Tear out rig.	DATE	12/25/97		
DEPTH	plugged	PROGRESS	0	HOURS (24)	0
		ROP	#DIV/0!	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	Corbin Coyes	MOBILE	
TOUR BOOK	MUD REPORT		mg/L	ADDITIVES		CIRCULATION DATA
DENSITY			SALINITY	Gel		MUD GRADIENT KPa/m
VISCOSITY			CHLORIDES	Caustic		TANK VOLUME m³
W.L.			CALCIUM	Desco		HOLE VOLUME m³
pH			Vol. Frac.	Detergent		WATER TO LOG m³ (cum)
F.C.			SAND	Driscap		BOTTOMS UP TIME
FANN 600			SOLIDS	Soda Ash		HOLE CIRC TIME
FANN 300			UF/OF	Lignite		TOTAL CIRC TIME
P.V.			DESILTER	Sawdust		LWD OFF LOG m³ (cum)
Y.P.			DESANDER			DAILY MUD COST
GELS			CENTRIFUGE			CUM. MUD COST
						\$11,197

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.		BIT NO.		DRILLING		MURU/TO	
SIZE		WOB		TRIPPING	4.75	DRLG MH/RH	
TYPE		RPM		RIG SERVICE		NIPPLE U/D	
SERIAL NO.		STRING WT		SURVEYING		PRESS TEST	
JETS/TFA		DP ANN VEL	50.46	CIRC&COND	1.75	DRLG OUT	
IN @		DC ANN VEL	70.01	LOGGING		S&C LINE	
OUT @		NOZ VEL	82.5	DST		RIG REPAIR	
BIT METERS		PUMP		CORING		LD DP/DC'S	2.00
BIT HOURS		TYPE	TRIPLEX	REAMING		WO Cementer	10.00
BIT ROP		LINER (BxS)	152 X 229	CTB		SAFETY MTG	
CUM HOURS		SPM	115	CASING		HDLG TOOLS	
CONDITION		M³/MIN	1.44	CEMENTING	2.00	Circ. Samples	
PULLED FOR		PRESSURE		WOC	3.50	TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION	
835	3 1/2					Down
						LENGTH
						m

REMARKS & GENERAL REPORT DETAILS

00:00- Run in hole open ended to run plugs.	Plug #1: 835m to 530m (305m) Caliper log +20% excess		
02:00- Wait on Sanjel to run plugs.	3 m³ water, followed by 14.4 m³, 16.0 tonne Thixmix II +.25% CFL-3, + 2% CaCl₂		
12:00- Run Plug #1	Displaced with 3.6 m³ water. Tagged 512m with 9,000 daN after 6 hrs		
12:45- Pull & stand 17 stands	Plug #2: 512m to 215m (297m) Caliper log +20% excess		
13:30- Circulate @ 500m.	3 m³ water, followed by 16.6 m³, 18.5 tonne Thixmix II +.25% CFL-3, + 3% CaCl₂		
14:00- Pull & lay down 30 joints	Displaced with 0.6 m³ water. Circulated @ 200m after 1.25 hrs		
15:00- Wait on cement.	1.5 m³ returns.		
18:30- Run in tag Plug #1 @ 512m KB with 9,000 daN.			
19:15- Run Plug # 2 from 512m to 215m.			
19:45- Pull & stand 10 stands, lay down 33 joints, run in to 200m KB			
21:00- Circulate @ 200m 1.5 m³ cement returns. Mix & pump 7 m³ water inhibited w/ 40 litres	GR. ELEV. (Surveyed)	335.7	
22:15- Lay down pipe, Mouse hole, kelly & sock.	corinox.	CUT (-) / FILL (+)	0.0
23:15- Pump 10 linear metre surface plug. Cement rathole & mousehole. 2 tonne 0-1-0 "G" +3%	GR. ELEV. (Corrected)	335.7	
24:00- Nipple out BOP	CaCl₂	KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, +5 Hi, -15 Lo	ROAD/LEASE	Rough/Good
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540
RIG MANAGER	Brian Evanyshyn	MOBILE	
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$42,673
		CUM. COST	

**OCELOT ENERGY
INC.**

WELL NAME	OEI et al LIARD N-60°				UNIQUE ID			DAY NO.	12
OPERATION @ 0800 HOURS								DATE	12/24/97
DEPTH	835	PROGRESS	0	HOURS (24)	0	ROP	#DIV/0!	AFE NO.	4192

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	Corbin Coyes	MOBILE		
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES	CIRCULATION DATA		
DENSITY	1100		SALINITY	Gel	MUD GRADIENT KPa/m	10.8	
VISCOSITY	55		CHLORIDES	Caustic	TANK VOLUME m ³	36	
W.L	8		CALCIUM	Desco	HOLE VOLUME m ³	28	
pH	9.5		Vol. Frac.	Detergent	WATER TO LOC m ³ (cum)	670	
P.C.			SAND	Driscap	BOTTOMS UP TIME	16	
FANN 600			SOLIDS	Soda Ash	HOLE CIRC TIME	20	
FANN 300			UF/OF	Lignite	TOTAL CIRC TIME	47	
P.V.			DESILTER	Sawdust	LWD OFF LOC m ³ (cum)	0	
Y.P.			DESANDER		DAILY MUD COST		
GELS			CENTRIFUGE		CUM. MUD COST	\$11,197	

BIT DATA						TIME BREAKDOWN			Midnight to Midnight	
BIT NO.	RR #2		BIT NO.	RR # 2		DRILLING	M/R/U/T/O			
SIZE	222		WOB			TRIPPING	7.50	DRLG MH/RH		
TYPE	F37DPD		RPM			RIG SERVICE		NIPPLE U/D		
SERIAL NO.	LJ8363		STRING WT	41,000		SURVEYING		PRESS TEST		
JETS/TFA	3 X 11.1		DP ANN VEL	50.46		CIRC&COND	3.25	DRLG OUT		
IN @	250		DC ANN VEL	70.01		LOGGING	9.00	S&C LINE	0.75	
OUT @	835		NOZ VEL	82.5		OBT		RIG REPAIR		
BIT METERS	585		PUMP			CORING		LD DP/DC'S	1.00	
BIT HOURS	93.50		TYPE	TRIPLX		REAMING		WO ORDERS	2.50	
BIT ROP	6.26		LINER (BxS)	152 X 229		CTB		SAFETY MTG		
CUM HOURS	133.00		SPM	115		CASING		HDLG TOOLS		
CONDITION	T-5, B-E, In		M ³ /MIN	1.44		CEMENTING		Circ. Samples		
PULLED FOR	TD		PRESSURE	7,600		WOC		TOTAL	24.00	

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24:00- Drop survey pull out of hole to log.					
02:00- Rig up Computalog & log: Run #1- STI / DAR / UGR / CAL. Run #2- SPED / INT / UGR / CAL					
11:00- Run in 8- DC's & lay down same.					
12:15- Run in hole with bit					
13:30- Slip & cut drill line					
14:15- Finish run in hole to bottom					
15:45- Circulate on bottom, wait on orders. (Logs being flown to Calgary)					
19:00- Trip out to DC's					
20:30- Wait on orders.					
23:00- Lay down remaining 10- DC's					
24:00- Run in hole open ended to run abandonment plugs.				GR. ELEV. (Surveyed)	335.7
				CUT (-) / FILL (+)	0.0
				GR. ELEV. (Corrected)	335.7
				KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, -20 Hi, -23 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	340.0
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	12/21/97
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	12/22/97
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	12/21/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$47,665	CUM. COST	\$755,990

DAILY DRILLING REPORT

WELL NAME:	OEI et al LIARD N-60°					UNIQUE ID			DAY NO.	11
OPERATION @ 0800 HOURS									DATE	12/23/97
DEPTH	835	PROGRESS	53	HOURS (24)	19.75	ROP	2.68	AFE NO.	4192	

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	Cortin Coyes	MOBILE			
TOUR BOOK		MUD REPORT		ADDITIVES		CIRCULATION DATA		
DENSITY	1100		SALINITY		Gel	20	MUD GRADIENT KPa/m	10.8
VISCOSITY	56		CHLORIDES		Caustic	1	TANK VOLUME m³	36
W.L.	8		CALCIUM		Desco		HOLE VOLUME m³	28
pH	9.5			Vol. Frac.	Detergent		WATER TO LOC m³ (cum)	625
F.C.			SAND		Driscap	1	BOTTOMS UP TIME	16
FANN 600			SOLIDS		Soda Ash		HOLE CIRC TIME	20
FANN 300				UF/OF	Lignite		TOTAL CIRC TIME	47
P.V.			DESILTER		Sawdust		LWD OFF LOC m³ (cum)	0
Y.P.			DESANDER				DAILY MUD COST	\$914
GELS			CENTRIFUGE				CUM. MUD COST	\$11,197

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	RR #2		BIT NO.	RR #2		DRILLING	19.75	M/RWTO	
SIZE	222		WOB	0,000 / 16,000		TRIPPING	2.00	DRLO MVRH	
TYPE	F37DPD		RPM	60		RIG SERVICE	0.75	NIPPLE W/D	
SERIAL NO.	LJ9353		STRING WT	41,000		SURVEYING		PRESS TEST	
JETS/TFA	3 X 11.1		DP ANN VEL	50.48		CIRC&COND	1.50	DRLO OUT	
IN @	250		DC ANN VEL	70.01		LOGGING		S&C LINE	
OUT @	835		NOZ VEL	82.5		POST		RIG REPAIR	
BIT METERS	585			PUMP		CORING		LD DP&C's	
BIT HOURS	93.50		TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP	6.26		LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS	133.00		SPM	115		CASING		HDLG TOOLS	
CONDITION			M³/MIN	1.44		CEMENTING		Circ. Samples	
PULLED FOR	TD		PRESSURE	7,600		WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION			
						Bit, Shock Tool, 2- DC's, Jara, 16- DC's, X/1		
						LENGTH	173.80 m	

REMARKS & GENERAL REPORT DETAILS

24:00- Drilled from 782m to 835m. (Includes 3-rig services .75hr)						GR. ELEV. (Surveyed)	335.7
20:30- Circulate & condition mud to log.						CUT (-) / FILL (+)	0.0
21:00- Wiper trip to DC's. Measure DP						GR. ELEV. (Corrected)	335.7
23:00- Circulate & condition hole & mud to log.						KB to GR. ELEV.	4.3
24:00- Trip out to log						ACTUAL KB	340.0
						LAST BOP DRILL	12/21/97
						LAST BOP INSPECTION	12/22/97
						LAST SAFETY MEETING	12/21/97
H2S - safety man on location.						CUM. COST	\$708,325
WEATHER / TEMPERATURE	Cloudy, -15Hl, -23 Lo		ROAD/LEASE	Rough/Good			
REPORT TO	Harvey Farrell		PHONE/FAX	299-5718 / 299-5680			
SUPERVISOR	Woody Periard		MOBILE	(250)774 - 8540			
RIG MANAGER	Brian Evanyshyn		MOBILE				
CONTRACTOR / RIG NO.	Precision # 403		DAILY COST	\$29,119			

**OCELOT ENERGY
INC.**

WELL NAME	OEI et al LIARD N-60°					UNIQUE ID		DAY NO.	10
OPERATION @ 0800 HOURS	DRILLING AHEAD FROM 805m.							DATE	12/22/97
DEPTH	782	PROGRESS	63	HOURS (24)	22.25	ROP	2.83	AFE NO.	4192

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	Corbin Coyes	MOBILE		
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES	CIRCULATION DATA		
DENSITY	1090		SALINITY	Gel	20	MUD GRADIENT KPa/m	10.7
VISCOSITY	48		CHLORIDES	Caustic	2	TANK VOLUME m ³	38
W.L.	7.5		CALCIUM	Desco		HOLE VOLUME m ³	27
pH	10		Vol. Frac.	Detergent		WATER TO LOC m ³ (cum)	565
F.C.			SAND	Drispac	1	BOTTOMS UP TIME	15
FANN 600			SOLIDS	Soda Ash		HOLE CIRC TIME	19
FANN 300			UF/OF	Lignite		TOTAL CIRC TIME	45
P.V.			DESILTER	Sawdust		LWD OFF LOC m ³ (cum)	0
Y.P.			DESANDER			DAILY MUD COST	\$1,001
GELS			CENTRIFUGE			CUM. MUD COST	\$10,283

BIT DATA				TIME BREAKDOWN					
BIT NO.	RR #2		BIT NO.	RR # 2		DRILLING	22.25	MUR/TO	
SIZE	222		WOB	10,000		TRIPPING		DRLG MH/RH	
TYPE	F37DPD		RPM	60		RIG SERVICE	0.75	NIPPLE LVD	
SERIAL NO.	LJ9353		STRING WT	30,000		SURVEYING	1.00	PRESS TEST	
JETS/TFA	3 X 11.1		DP ANN VEL	50.46		CIRC&COND		DRLG OUT	
IN @	250		DC ANN VEL	70.01		LOGGING		S&C LINE	
OUT @			NOZ VEL	82.5		DST		RIG REPAIR	
BIT METERS	532		PUMP			CORING		LD DP/DC'S	
BIT HOURS	74.75		TYPE	TRIFLEX		REAMING		WO ORDERS	
BIT ROP	7.12		LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS	113.25		SPM	115		CASING		HDLG TOOLS	
CONDITION			M ³ /MIN	1.44		CEMENTING		Circ. Samples	
PULLED FOR			PRESSURE	7,400		WOC		TOTAL	24.00

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION	BOTTOM HOLE ASSEMBLY	
720	Miss Run					Bit, Shock Tool, 2- DC's, Jars, 16- DC's, X/I	
729	3						
						LENGTH	173.80 m

24:00- Drilled from 719m to 782m. (Includes 3-rig services .75hr, 2-surveys 1.0hr)					
24:00- Drilling ahead from 782m.					
				GR. ELEV. (Surveyed)	335.7
				CUT (-) / FILL (+)	0.0
H2S - safety man on location.				GR. ELEV. (Corrected)	335.7
				KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, -20 Hi, -28 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	340.0
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	12/20/97
SUPERVISOR	Woody Perlard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	12/20/97
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	12/19/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$28,066	CUM. COST	\$679,206

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OCELOT ENERGY INC.

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60°				UNIQUE ID			DAY NO.	9
OPERATION @ 0800 HOURS	Drilling from 736m							DATE	12/21/97
DEPTH	719	PROGRESS	69	HOURS (24)	17.75	ROP	3.89	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	Corbin Coyes	MOBILE	CIRCULATION DATA		
	TOUR BOOK	MUD REPORT	mg/L	ADDITIVES				
DENSITY	1100		SALINITY	Gel	25	MUD GRADIENT KPa/m		10.8
VISCOSITY	65		CHLORIDES	Caustic		TANK VOLUME m³		30
W.L.	7.5		CALCIUM	Desco		HOLE VOLUME m³		26
pH	9		Vol. Frac.	Detergent		WATER TO LOC m³ (cum)		565
F.C.			SAND	Driscap	1	BOTTOMS UP TIME		14
FANN 600			SOLIDS	Soda Ash		HOLE CIRC TIME		18
FANN 300			UF/OF	Lignite		TOTAL CIRC TIME		39
P.V.			DESILTER	Sawdust		LWD OFF LOC m³ (cum)		0
Y.P.			DESANDER			DAILY MUD COST		\$927
GELS			CENTRIFUGE			CUM. MUD COST		\$9,282

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	RR #2	BIT NO.	RR #2	DRILLING	17.75	M/RWTO	
SIZE	222	WOB	10,000	TRIPPING	6.75	DRLG MHRH	
TYPE	F37DPD	RPM	60	R/S SERVICE	0.50	NIPPLE U/D	
SERIAL NO.	LJ9353	STRING WT	38,000	SURVEYING		PRESS TEST	
JETS/TFA	3 X 11.1	DP ANN VEL	50.46	CIRC&COND		DRLG OUT	
IN @	250	DC ANN VEL	70.01	LOGGING		S&C LINE	
OUT @		NOZ VEL	82.5	D&T		RIG REPAIR	
BIT METERS	469	PUMP		CORING		LD DP/DC'S	
BIT HOURS	52.00	TYPE	TRIPLEX	REAMING		WO ORDERS	
BIT ROP	9.02	LINER (BxS)	152 X 229	CTB		SAFETY MTG	
IN HOURS	91.00	SPM	115	CASING		HDLG TOOLS	
CONDITION		M/MIN	1.44	CEMENTING		Circ. Samples	
PULLED FOR		PRESSURE	7,400	WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION	
						Bit, Shock Tool, 2- DC's, Jars, 16- DC's, X/1
						LENGTH 173.80 m

REMARKS & GENERAL REPORT DETAILS

24:00- Run in hole with bit. Couldn't circulate, Trip out install float correct way run in hole.				GR. ELEV. (Surveyed)	335.7
05:45- Drill from 650m to 719m. (Includes 2-rig services .5hr)				CUT (-) / FILL (+)	0.0
24:00- Drilling ahead from 719m				GR. ELEV. (Corrected)	335.7
				KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, -16 Hi, -24 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	340.0
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	12/20/97
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	12/20/97
JOB MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	12/19/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$26,437	CUM. COST	\$651,140

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60°				UNIQUE ID			DAY NO.	8
OPERATION @ 0800 HOURS								DATE	12/20/97
DEPTH	650	PROGRESS	6	HOURS (24)	0.5	ROP	10.00	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Ge! / Chem	TIME CHCKD	11:00	ENGINEER	Corbin Coyes		MOBILE	
	TOUR BOOK	MUD REPORT		mg/L	ADDITIVES		CIRCULATION DATA	
DENSITY	1090		SALINITY		Gel	15	MUD GRADIENT KPa/m	10.7
VISCOSITY	51		CHLORIDES		Caustic	1	TANK VOLUME m³	30
W.L.	7.5		CALCIUM		Desco		HOLE VOLUME m³	23
pH	10			Vol. Frac.	Detergent		WATER TO LOC m³ (cum)	505
F.C.			SAND		Driscap		BOTTOMS UP TIME	13
FANN 600			SOLIDS		Soda Ash		HOLE CIRC TIME	16
FANN 300				UF/OF	Lignite		TOTAL CIRC TIME	37
P.V.			DESILTER		Sawdust		LWD OFF LOC m³ (cum)	0
Y.P.			DESANDER				DAILY MUD COST	\$384
GELS			CENTRIFUGE				CUM. MUD COST	\$8,355

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	2	RR 2	BIT NO.		DRILLING	0.50	M/RU/TO	
SIZE	222	223	WOB		TRIPPING	9.25	DRLG MH/RH	
TYPE	F37DPD	F37DPD	RPM		RIG SERVICE	0.50	NIPPLE U/D	
SERIAL NO.	LJ9353	LJ9354	STRING WT	37,000	SURVEYING		PRESS TEST	
JETS/TFA	3 X 11.1	3 X 11.1	DP ANN VEL	50.46	CIRC&COND	1.75	DRLG OUT	
IN @	510	650	DC ANN VEL	70.01	LOGGING		S&C LINE	
OUT @	650		NOZ VEL	82.5	DST	6.00	RIG REPAIR	
BIT METERS	140		PUMP		CORING		LD DP/DC'S	
BIT HOURS	34.25		TYPE	TRIPLEX	REAMING		WO ORDERS	
BIT ROP	4.09		LINER (Bxs)	152 X 229	CTB		SAFETY MTG	
CUM HOURS	73.25		SPM	115	CASING		HDLG TOOLS	6.25
CONDITION	3, E, In		M³/MIN	1.44	CEMENTING		Circ. Samples	0.75
PULLED FOR	DST		PRESSURE		WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION			
650	2 1/8					Bit, Shock Tool, 2- DC's, Jars, 16- DC's, X/1		
						LENGTH	173.80 m	

REMARKS & GENERAL REPORT DETAILS

24:00- Rig service/ function test BOP's. Circulate up sample & wait on orders.					
01:00- Drill from 645m to 650m					
01:30- Wiper trip to collars, mezsure drill pipe. (includes circulate sample .25hr)					
04:15- Circulate & condition mud					
05:45- Pull out of hole to run DST.					
08:00- Pick up & make up Downhole Systems Technology test tool. (Includes Rig service .25hr)					
10:30- Run in hole DST #1					
12:00- Head up test tool & run wireline. Inflate packers.					
14:45- Drill stem test Mattison interval from 635.8 - 650m					
18:45- Deflate packers, Pull out wireline, Rig out test head.					
20:00- Pull out of hole with test #1. Recover Fluid samples.				GR. ELEV. (Surveyed)	335.7
22:30- Break down & lay down test tools				CUT (-) / FILL (+)	0.0
23:30- Run in hole with bit RR # 2				GR. ELEV. (Corrected)	335.7
				KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, -19 Hi, -26 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	340.0
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	12/16/97
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	12/18/97
IG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	12/18/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$31,766	CUM. COST	\$624,703

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60°				UNIQUE ID		DAY NO.		7
OPERATION @ 0800 HOURS								DATE	12/19/97
DEPTH	645	PROGRESS	90	HOURS (24)	21.25	ROP	4.24	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	11:00	ENGINEER	Corbin Coyes	MOBILE		
TOUR BOOK		MUD REPORT		mg/L		ADDITIVES		CIRCULATION DATA
DENSITY	1090	1100	SALINITY	2 / 7	Gel	35	MUD GRADIENT KPa/m	10.7
VISCOSITY	43	41	CHLORIDES	100	Caustic	1	TANK VOLUME m³	30
W.L.	7.6	8	CALCIUM	40	Desco		HOLE VOLUME m³	23
pH	10	9.5		Vol. Frac.	Detergent		WATER TO LOC m³ (cum)	505
F.C.		0.5	SAND	0.25	Driscap	1	BOTTOMS UP TIME	13
FANN 600			SOLIDS	150	Soda Ash		HOLE CIRC TIME	16
FANN 300				UF/OF	Lignite		TOTAL CIRC TIME	37
P.V.		11	DESILTER		Sawdust	50	LWD OFF LOC m³ (cum)	0
Y.P.		4	DESANDER				DAILY MUD COST	\$3,081
GELS		0.5 / 10	CENTRIFUGE				CUM. MUD COST	\$7,971

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	2	BIT NO.	2	DRILLING	21.25	M/R/U/T/O	
SIZE	222	WOB	7,000 / 10,000	TRIPPING		DRLG MH/RH	
TYPE	F37DPD	RPM	60	RIG SERVICE	0.75	NIPPLE U/D	
SERIAL NO.	LJ9353	STRING WT	37,000	SURVEYING	0.50	PRESS TEST	
JETS/TFA	3 X 11.1	DP ANN VEL	50.46	CIRC&COND		DRLG OUT	
IN @	510	DC ANN VEL	70.01	LOGGING		S&C LINE	
OUT @		NOZ VEL	82.5	OST		RIG REPAIR	
BIT METERS	135	PUMP		CORING		LD DP/DC'S	
BIT HOURS	33.75	TYPE	TRIPLEX	REAMING		WO ORDERS	
BIT ROP	4.00	LINER (BxS)	152 X 229	CTB		SAFETY MTG	
CUM HOURS	72.75	SPM	115	CASING		HDLG TOOLS	
CONDITION		M³/MIN	1.44	CEMENTING		Circ. Samples	1.50
ILLED FOR		PRESSURE	7,200	WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION		
596	2 1/2					Bit, Shock Tool, 2- DC's, Jars, 16- DC's, X/1	
						LENGTH	173.80 m

REMARKS & GENERAL REPORT DETAILS

24:00- Drill from 555m to 589m. (Includes 2 rig services .5hr)						GR. ELEV. (Surveyed)	335.7
11:15- Circulate up sample & await geologist						CUT (-) / FILL (+)	0.0
12:00- Drill from 589m to 602m. (Includes survey .5hr)						GR. ELEV. (Corrected)	335.7
15:15- Circulate up sample & await geologist						KB to GR. ELEV.	4.3
16:00- Drill from 602m to 645m. (Includes rig service .25hr)						ACTUAL KB	340.0
24:00- Drilling ahead from 645m.						LAST BOP DRILL	12/16/97
						LAST BOP INSPECTION	12/18/97
						LAST SAFETY MEETING	12/18/97
						CUM. COST	\$592,947
Note: Mud Costs & costs reflect mud costs missed on report #5							
Checked BOP flange studs.							
WEATHER / TEMPERATURE	Sunny, -19 Hi, -31 Lo		ROAD/LEASE	Rough/Good			
REPORT TO	Harvey Farrell		PHONE/FAX	299-5718 / 299-5680			
SUPERVISOR	Woody Periard		MOBILE	(250) 174 - 9540			
RIG MANAGER	Brian Evanyshyn		MOBILE				
CONTRACTOR / RIG NO.	Precision # 403		DAILY COST	\$31,665			

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60°				UNIQUE ID		DAY NO.		6
OPERATION @ 0800 HOURS								DATE	12/18/97
DEPTH	555	PROGRESS	47	HOURS (24)	12.75	ROP	3.69	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD		ENGINEER		MOBILE		
TOUR BOOK		MUD REPORT	mg/L		ADDITIVES		CIRCULATION DATA	
DENSITY	1100		SALINITY		Gel	20	MUD GRADIENT KPa/m	10.8
VISCOSITY	48		CHLORIDES		Caustic	2	TANK VOLUME m³	30
W.L.	8		CALCIUM		Desco		HOLE VOLUME m³	18
pH	10			Vol. Frac.	Detergent		WATER TO LOC m³ (cum)	300
F.C.			SAND		Drispac	2	BOTTOMS UP TIME	10
FANN 600			SOLIDS		Soda Ash		HOLE CIRC TIME	14
FANN 300				UF/OF	Lignite	2	TOTAL CIRC TIME	35
P.V.			DESILTER				LWD OFF LOC m³ (cum)	0
Y.P.			DESANDER				DAILY MUD COST	\$1,474
GEL3			CENTRIFUGE				CUM. MUD COST	\$4,890

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	1	2	BIT NO.	2		DRILLING	12.75	M/RU/TO	
SIZE	222	222	WOB	7,000 / 10,000		TRIPPING	7.25	DRLG MHRH	
TYPE	GT 1	F37DPD	RPM	70 / 50		RIG SERVICE	0.50	NIPPLE U/D	
SERIAL NO.	M85YV	LJ9353	STRING WT	34,000		SURVEYING	0.25	PRESS TEST	
JETS/TFA	2X10.3, 12.7	3 X 11.1	DP ANN VEL	50.46		CIRC&COND		DRLG OUT	
IN @	250	510	DC ANN VEL	70.01		LOGGING		S&C LINE	1.00
OUT @	510		NOZ VEL	82.5		DST		RIG REPAIR	
BIT METERS	260	45	PUMP			CORING		LD DP/DC'S	
BIT HOURS	22.50	12.50	TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP	11.56	3.60	LINER (BxS)	152 X 229		CTB		SAFETY MTG	0.25
CUM HOURS	39.00	51.50	SPM	116		CASING		HDLG TOOLS	
CONDITION	3, E, IN		M ³ /MIN	1.44		CEMENTING		Circ. Samples	2.00
PULLED FOR	Penetration		PRESSURE	7,000		WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

SURVEYS				BOTTOM HOLE ASSEMBLY	
DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION
539	2				
		</			

REMARKS & GENERAL REPORT DETAILS

24:00- Drilled from 508m to 510m (Includes 1-rig service .25hr, circulate sample .25hr)				GR. ELEV. (Surveyed)	335.7
00:45- Pull out of hole with bit. Circulate out 5 singles tight hole conditions.				CUT (-) / FILL (+)	0.0
04:00- Make up bit, run in hole with DC's & 1 stand. Changed out upper Kelly cock & install lower Kelly cock.				GR. ELEV. (Corrected)	335.7
06:30- Slip & cut drill line.				KB to GR. ELEV.	4.3
07:30- Run in hole, pick up 5 singles layed down & wash 8m to bottom.				ACTUAL KB	340.0
09:15- Drill from 510m to 555m. (Includes rig service .25hr, circulate samples 1.75hr, BOP drill .25hr, Survey .25hr)				LAST BOP DRILL	12/16/97
24:00- Drilling ahead from 555m				LAST BOP INSPECTION	12/16/97
				LAST SAFETY MEETING	12/15/97
				CUM. COST	\$561,282
WEATHER / TEMPERATURE	Cloudy, -18 Hi, -29 Lo	ROAD/LEASE	Rough/Good		
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680		
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540		
RIG MANAGER	Brian Evanyshyn	MOBILE			
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$40,359		

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60°					UNIQUE ID		DAY NO.	5
OPERATION @ 0800 HOURS	Drilled to 510m. Trip for bit. Running in with bit #2							DATE	12/17/97
DEPTH	508	PROGRESS	246	HOURS (24)	21.75	ROP	11.31	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	MOBILE			
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES	CIRCULATION DATA		
DENSITY	1110		SALINITY	Gel	84	MUD GRADIENT KPa/m	10.9
VISCOSITY	44		CHLORIDES	Caustic	1	TANK VOLUME m³	30
W.L.	9.5		CALCIUM	Desco		HOLE VOLUME m³	18
pH	10		Vol. Frac.	Detergent		WATER TO LOC m³ (cum)	300
F.C.			SAND	Drispac	3	BOTTOMS UP TIME	10
FANN 600			SOLIDS	Soda Ash	3	HOLE CIRC TIME	14
FANN 300			UF/OF	Lignite	3	TOTAL CIRC TIME	35
P.V.			DESILTER			LWD OFF LOC m³ (cum)	0
Y.P.			DESANDER			DAILY MUD COST	\$1,810
GELS			CENTRIFUGE			CUM. MUD COST	\$3,416

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT DATA					TIME BREAKDOWN			Mileage in to Mileage out	
BIT NO.	1		BIT NO.	1		DRILLING	21.75	M/RU/TO	
SIZE	222		WOB	12,000 / 8,000		TRIPPING		DRLG MH/RH	
TYPE	GT 1		RPM	100		RIG SERVICE	0.75	NIPPLE U/D	
SERIAL NO.	M8FYV		STRING WT	33,000		SURVEYING	1.25	PRESS TEST	
JETS/TFA	2X10.3, 12.7		DP ANN VEL	50.46		CIRC&COND	0.25	DRLG OUT	
IN @	250		DC ANN VEL	70.01		LOGGING		S&C LINE	
OUT @			NOZ VEL			DST		RIG REPAIR	
BIT METERS	258		PUMP			CORING		LD DP/DC'S	
BIT HOURS	22.25		TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP	11.60		LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS	38.75		SPM	115		CASING		HDLG TOOLS	
CONDITION			M'/MIN	1.44		CEMENTING			
WELL FOR			PRESSURE	7,200		WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

SURVEYS				BOTTOM HOLE ASSEMBLY	
DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION
355	1 1/4				
422	3 1/8				
482	Miss Run				
491	1 1/2				
				LENGTH	173.80 m

REMARKS & GENERAL REPORT DETAILS

24:00- Drilling from 262m. (Includes 3-rig services .5hr, circulate .25hr, 4- surveys 1.25hr)

					GR. ELEV. (Surveyed)	335.7
					CUT (-) / FILL (+)	0.0
					GR. ELEV. (Corrected)	335.7
					KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, -16 Hi, -19 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB		340.0
REPORT TO	Harvey Farrell	PHONE/FAX	239-5718 / 299-5680	LAST BOP DRILL		12/16/97
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 7540	LAST BOP INSPECTION		12/16/97
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING		12/15/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$31,657	CUM. COST	\$520,923	

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60	UNIQUE ID		DAY NO.	4
OPERATION @ 0600 HOURS	Drill from 357m			DATE	12/16/97
DEPTH	262	PROGRESS	12	HOURS (24)	0.5
		ROP	24.00	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	MOBILE		
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES	CIRCULATION DATA	
DENSITY			SALINITY	Gel	MUD GRADIENT KPa/m	0.0
VISCOSITY			CHLORIDES	Caustic	TANK VOLUME m ³	30
W.L.			CALCIUM	Desco	HOLE VOLUME m ³	9
pH			Vol. Frac.	Detergent	WATER TO LOC m ³ (cum)	300
F.C.			SAND		BOTTOMS UP TIME	5
FANN 600			SOLIDS		HOLE CIRC TIME	5.6
FANN 300			UF/OF		TOTAL CIRC TIME	27
P.V.			DESILTER		LWD OFF LOC m ³ (cum)	0
Y.P.			DESANDER		DAILY MUD COST	\$0
GELS			CENTRIFUGE		CUM. MUD COST	\$1,606

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	1	BIT NO.	1	DRILLING	0.50	M/R/UTO	
SIZE	222	WOB	8,000	TRIPPING	0.75	DRLG MHR/H	
TYPE	GT 1	RPM	85	RIG SERVICE		NIPPLE U/D	15.00
SERIAL NO.	M85YV	STRUNG WT	31,000	SURVEYING		PRESS TEST	6.75
JETS/TFA	2X10.3, 12.7	DP ANN VEL	43.88	CIRC&COND		DRLG OUT	1.50
IN @	260	DC ANN VEL	60.88	LOGGING		S&C LINE	
OUT @		NOZ VEL		DST		RIG REPAIR	
BIT METERS	12	PUMP		CORING		LD DP/DC'S	
BIT HOURS	0.50	TYPE	TRIPLEX	REAMING		WO ORDERS	
BIT ROP	24.00	LINER (BxS)	152 X 229	CTB		SAFETY MTG	
CUM HOURS	17.00	SPM	100	CASING		HDLG TOOLS	
CONDITION		M'/MIN	1.25	CEMENTING		Pre DO meetin	0.50
PULLED FOR		PRESSURE	4,000	WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION
				LENGTH	m

REMARKS & GENERAL REPORT DETAILS

24:00- Nipple up BOP's. Function test BOP's, install Swaco Hydraulic Choke control.					
15:00- Pressure test with Falcon Pressure Testers: Manifold, Blind Rams, Inside BOP, Stabbing Valve. 12,500 Kpa Hi, 1,400 Kpa Lo Held each for 10 minutes.					
16:00- Run in hole with bit, pick up shock sub & jars.					
16:45- Pressure Test: Annular Preventer to 10,000 Kpa Hi, 1,400 Kpa Lo, held 10 minutes. Pressure test: Upper Pipe Rams, Lower Pipe Rams, HCR Valve, Kill Line Valves, Check valves to 12,500 KPa Hi, 1,400 KPa Lo. Held 10 minutes.					
Performed accumulator test OK. Checked Motor Shut off's OK					
21:30- Pre Drill out meeting.					
22:00- Drill out cement, float, cement & shoe					
23:30- Drill from 250m to 262m					
				GR. ELEV. (Surveyed)	335.7
				CUT (-) / FILL (+)	0.0
				GR. ELEV. (Corrected)	335.7
				KB to GR. ELEV.	4.3
WEATHER / TEMPERATURE	Cloudy, -17 Hi, -23 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	340.2
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	12/16/97
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	12/16/97
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	12/15/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$37,320	CUM. COST	\$489,264

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60					UNIQUE ID		DAY NO.	3
OPERATION @ 0800 HOURS	Nipple up BOP system.							DATE	12/15/97
DEPTH	250	PROGRESS	0	HOURS (24)	0	ROP	#DIV/0!	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER			MOBILE		
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES		CIRCULATION DATA		
DENSITY			SALINITY		Gel		MUD GRADIENT KPa/m	0.0
VISCOSITY			CHLORIDES		Caustic		TANK VOLUME m ³	
W.L.			CALCIUM		Desco		HOLE VOLUME m ³	
pH				Vol. Frac.	Detergent		WATER TO LOC m ³ (cum)	210
F.C.			SAND				BOTTOMS UP TIME	
F/NN 600			SOLIDS				HOLE CIRC TIME	
FANN 300				UF/OF			TOTAL CIRC TIME	
P.V.			DESILTER				LWD OFF LOC m ³ (cum)	
Y.P.			DESANDER				DAILY MUD COST	
GELS			CENTRIFUGE				CUM. MUD COST	

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT DATA						TIME BREAKDOWN			(Weight In To Weight Out)
BIT NO.			BIT NO.			DILLING		M/R/U/T/O	
SIZE			WOB			TRIPPING		DRLG MH/RH	
TYPE			RPM			RIG SERVICE		HIPPLE U/D	16.75
SERIAL NO.			STRING WT			SURVEYING		PRESS TEST	
JETS/I/F/A			DP ANN VEL	0		CIRC&COND		DRLG OUT	
I/H @			DC ANN VEL	0.00		LOGGING		S&C LINE	
OUT @			NOZ VEL			O/S T		RIG REPAIR	
BIT METERS			PUMP			CORING		L/D DP/DC'S	
BIT HOURS			TYPE	TRIPLX		REAMING		WO ORDERS	
BIT ROP			LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS			SPM			CASING		HDLG TOOLS	
CONDITION			M'/MIN	0.00		CEMENTING			
VALLED FOR			PRESSURE			WOC	7.25	TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION		
						LENGTH	m

REMARKS & GENERAL REPORT DETAILS

24:00- Wait on cement. Nipple down diverter.						
07:15- Cut off conductor & casing. Weld on casing bowl & pressure test weld, held 8000 KPa. Nipple up BOP as per drilling program configuration.						
Note: Expect to begin pressure testing 10:00						
Drill out 20:00hrs?						
					GR. ELEV. (Surveyed)	335.7
					CUT (-) / FILL (+)	
					GR. ELEV. (Corrected)	
					KB to GR. ELEV.	
WEATHER / TEMPERATURE	Cloudy, -5Hi, -22 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB		
REPORT TO	Harvey Farrell	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL		
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION		
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING		12/13/97
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$27,345	CUM. COST	\$451,944	

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60					UNIQUE ID		DAY NO.	2
OPERATION @ 0800 HOURS		Cut off casing						DATE	12/14/97
DEPTH	250	PROGRESS	62	HOURS (24)	4.25	ROP	14.59	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	Gel / Chem	TIME CHCKD	ENGINEER	MOBILE				
TOUR BOOK		MUD REPORT	mg/L	ADDITIVES	CIRCULATION DATA			
DENSITY	1185		SALINITY	Gel	35	MUD GRADIENT KPa/m	11.6	
VISCOSITY	94		CHLORIDES	Caustic	1	TANK VOLUME m ³		
W.L.			CALCIUM	Desco	1	HOLE VOLUME m ³		
pH	9		Vol. Frac.	Detergent	1	WATER TO LOC m ³ (cum)	210	
F.C.			SAND			BOTTOMS UP TIME		
FANN 600			SOLIDS			HOLE CIRC TIME		
FANN 300			UF/OF			TOTAL CIRC TIME		
P.V.			DESILTER			LWD OFF LOC m ³ (cum)		
Y.P.			DESANDER			DAILY MUD COST	\$1,606	
GELS			CENTRIFUGE			CUM. MUD COST	\$1,606	

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	1A	2A	BIT NO.	2A		DRILLING	4.50	M/RU/TO	
SIZE	311	311	WOB	8 - 10		TRIPPING	6.50	DRLG MH/RH	
TYPE	HP 11	SDGH	RPM	150		RIG SERVICE	0.50	NIPPLE U/D	
SERIAL NO.	DB1292	DB1211	STRING WT	33,000		SURVEYING	0.50	PRESS TEST	
JETS/TFA	3 X 15.9	3 X 14.3	DP ANN VEL	21.85		CIRC&COND	3.25	DRLG OUT	
IN @	0	196	DC ANN VEL	25.59		LOGGING		S&C LINE	
OUT @	196	250	NOZ VEL			OST		RIG REPAIR	
BIT METERS	196	52	PUMP			CORING		LD DPMO's	
BIT HOURS	13.75	2.75	TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP	16.67	18.90	LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS	13.75	16.50	SPM	115		CASING	7.25	HDLG TOOLS	
CONDITION	T-7, B-E, G-In	2, 2, In	M ³ /MIN	1.44		CEMENTING	1.00		
PULLED FOR	Drill Rate	TD SURFACE	PRESSURE	4,200		WOC	0.50	TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION			
226	1/2							
250	1							
						LENGTH	m	

REMARKS & GENERAL REPORT DETAILS

24:00- Drill from 188m - 198m. (Includes rig service .25hr, Surveys .5hr.)				CASING DETAILS:		Ran 195 joints of 244.5mm	
02:15- Trip for bit @ 198m.				48.07 kg/m, H-40, Prudential, new, ST&C. Guide			
05:30- Drill from 188m to 250m TD surface.(includes rig service .25hr, survey .25hr)				shoe & float collar 1- joint up. Landed @ 250.0m KB			
08:45- Circulate & condition for wiper trip.				Total length 251.93m			
09:00- Wiper Trip to bit. Some tight spots.							
10:45- Circulate & condition mud to run casing.				CEMENT: Sanjel Cementers W/ 2m3 water, followed by 19.0 tonne			
12:30- Pull out of hole to run casing. Lay down 2 - 9" Drill Collars.				0:1:0 "G" + 3% CaCl2 Yield .76 m3/tonne @ 1901kg/m3. Total			
14:00- Rig up & run casing. Circulate nearly all joints in.				slurry 14.4 m3. Displaced w/ 9.8 m3 water. Plug Down @ 23:37 hr.			
21:15- Circulate & condition mud to cement.				Float held. 5.0 m3 good cement Returns. No slump.			
22:30- Rig up Sanjel & Cement surface casing				PLUG Down @ 23:37, 12/13/97			
23:30- WOC.				GR. ELEV. (Surveyed)		335.7	
				CUT (-) / FILL (+)			
				GR. ELEV. (Corrected)			
				KB to GR. ELEV.			
WEATHER / TEMPERATURE		Cloudy, -3Hi, -9 Lo	ROAD/LEASE	Rough/Good		ACTUAL KB	
REPORT TO		Harvey Farrel	PHONE/FAX	299-5718 / 299-5680		LAST BOP DRILL	
SUPERVISOR		Woody Perlard	MOBILE	(250)774 - 9540		LAST BOP INSPECTION	
RIG MANAGER		Brian Evanyshyn	MOBILE			LAST SAFETY MEETING	
CONTRACTOR / RIG NO.		Precision # 403	DAILY COST	\$59,844		CUM. COST	\$424,599

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60					UNIQUE ID		DAY NO.	1
OPERATION @ 0800 HOURS	Drilling from 240m							DATE	12/13/97
DEPTH	188	PROGRESS	188	HOURS (24)	12	ROP	15.67	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE		TIME CHCKD		ENGINEER			MOBILE		
TOUR BOOK		MUD REPORT		mg/L		ADDITIVES		CIRCULATION DATA	
DENSITY	1110		SALINITY		Gel	25	MUD GRADIENT KPa/m	10.9	
VISCOSITY	32		CHLORIDES		Caustic	1	TANK VOLUME m ³		
W.L.			CALCIUM				HOLE VOLUME m ³		
pH	8.5			Vol. Frac.			WATER TO LOC m ³ (cum)	135	
F.C.			SAND				BOTTOMS UP TIME		
FANN 600			SOLIDS				HOLE CIRC TIME		
FANN 300				UF/OF			TOTAL CIRC TIME		
P.V.			DESILTER				LWD OFF LOC m ³ (cum)		
Y.P.			DESANDER				DAILY MUD COST		
GELS			CENTRIFUGE				CUM. MUD COST		

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT DATA					TIME BREAKDOWN			Midnight to Midnight	
BIT NO.	1A		BIT NO.	1A		DRILLING	12.00	M/RU/TO	
SIZE	311		WOB	4 - 10		TRIPPING		DRLG MH/RH	
TYPE	HP 11		RPM	150		RIG SERVICE		NIPPLE U/D	
SERIAL NO.	DB1292		STRING WT	30,000		SURVEYING	1.50	PRESS TEST	
JETS/TFA	3 X 15.9		DP ANN VEL	21.85		CIRC&COND		DRLG OUT	
IN @	0		DC ANN VEL	25.59		LOGGING		S&C LINE	
OUT @			NOZ VEL			DST		RIG REPAIR	10.50
BIT METERS	188		PUMP			CORING		LD DP/DC's	
BIT HOURS	12.00		TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP	15.67		LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS	12.00		SPM	115		CASING		HDLG TOOLS	
CONDITION			M ³ /MIN	1.44		CEMENTING			
WELL FOR			PRESSURE	3,000		WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

CURVES				BOTTOM HOLE ASSEMBLY			
DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION		
34	3/4	143	1/2				
61	1	170	3/4				
89	3/4						
116	1/4					LENGTH	m

REMARKS & GENERAL REPORT DETAILS

24:00 - Wait on mechanic						
09:00 - Repair floor motor. (Changed fuel injectors, leaking)						
10:30 - Spud in & drill ahead 311mm hole 0m to 188m. (includes 1.5hrs surveys)						
24:00 - Drilling ahead.						
					GR. ELEV. (Surveyed)	335.7
					CUT (-) / FILL (+)	
					GR. ELEV. (Corrected)	
					KB to GR. ELEV.	
WEATHER / TEMPERATURE	Cloudy, +3Hi, -3 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB		
REPORT TO	Harvey Farrel	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL		
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION		
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING		
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST	\$20,355	CUM. COST	\$364,755	

**OCELOT ENERGY
INC.**

WELL NAME	OEI et al LIARD N-60				UNIQUE ID		DAY NO.	PS-4
OPERATION @ 0800 HOURS	WARNING ON MECHANIC TO REPAIR DRAWWORKS ENGINE						DATE	12/12/97
DEPTH		PROGRESS	0	HOURS (24)		ROP	AFE NO.	4192

BIT DATA					TIME BREAKDOWN				Midnight to Midnight
BIT NO.	1A		BIT NO.			DRILLING		MI/RU/TO	16.00
SIZE	311		WOB			TRIPPING		DRLG MH/RH	
TYPE			RPM			RIG SERVICE		NIPPLE U/D	
SERIAL NO.			STRUNG WT			SURVEYING		PRESS TEST	
JETS/TFA			DP ANN VEL			CIRC&COND		DRLG OUT	
IN @			DC ANN VEL			LOGGING		S&C LINE	
OUT @			NOZ VEL			DST		RIG REPAIR	8.00
BIT METERS			PUMP			CORING		LD DP/DC'S	
BIT HOURS			TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP			LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS			SPM			CASING		HDLG TOOLS	
CONDITION			M ³ /MIN			CEMENTING			
PULLED FOR			PRESSURE			WOC		TOTAL	24.00

SURVEYS						BOTTOM HOLE ASSEMBLY	
DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION		
						LENGTH	m

24:00 - Rig up					
06:00- Weld on diverter flange					
08:00- Rig up diverter & HCR, function test & lay line to flare pit. Rig up floor & prepare to spud.					
16:00- Wait on mechanic to repair floor engine.					
24:00- Continue waiting on mechanic.					
					GR. ELEV. (Surveyed)
					CUT (-) / FILL (+)
					GR. ELEV. (Corrected)
					KB to GR. ELEV.
WEATHER / TEMPERATURE	Cloudy, +3Hi, -9 Lo	ROAD/LEASE	Rough/Good	ACTUAL KB	
REPORT TO	Harvey Farrel	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	
RIG MANAGER	Brian Evanyshyn	MOBILE		LAST SAFETY MEETING	
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST		CUM. COST	

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60				UNIQUE ID		DAY NO.	PS-3
OPERATION @ 0800 HOURS	Weld on Flange for diverter						DATE	12/11/97
DEPTH		PROGRESS	0	HOURS (24)		ROP	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE		TIME CHCKD		ENGINEER		MOBILE	
TOUR BOOK		MUD REPORT	mg/L		ADDITIVES		CIRCULATION DATA
DENSITY			SALINITY			MUD GRADIENT KPa/m	0.0
VISCOSITY			CHLORIDES			TANK VOLUME m ³	
W.L.			CALCIUM			HOLE VOLUME m ³	
pH				Vol. Frac.		WATER TO LOC m ³ (cum)	
F.C.			SAND			BOTTOMS UP TIME	
FANN 600			SOLIDS			HOLE CIRC TIME	
FANN 300				UF/OF		TOTAL CIRC TIME	
P.V.			DESILTER			LWD OFF LOC m ³ (cum)	
Y.P.			DESANDER			DAILY MUD COST	
GELS			CENTRIFUGE			CUM. MUD COST	

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT NO.	1A		BIT NO.			DRILLING		M/RU/TO	24.00
SIZE	311		WOB			TRIPPING		DRLG MH/RH	
TYPE			RPM			RIG SERVICE		NIPPLE U/D	
SERIAL NO.			STRING WT			SURVEYING		PRESS TEST	
JETS/TFA			DP ANN VEL			CIRC&COND		DRLG OUT	
IN @			DC ANN VEL			LOGGING		S&C LINE	
OUT @			NOZ VEL			OST		RIG REPAIR	
BIT METERS			PUMP			CORING		LD DP/DC'S	
BIT HOURS			TYPE	TRIPLEX		REAMING		WO ORDERS	
BIT ROP			LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS			SPM			CASING		HDLG TOOLS	
CONDITION			M'/MIN			CEMENTING			
VALLED FOR			PRESSURE			WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION		
						LENGTH	m

REMARKS & GENERAL REPORT DETAILS

[illegible]

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60				UNIQUE ID		DAY NO.	PS-2
OPERATION @ 0800 HOURS	Spot rig mats rig up						DATE	12/10/97
DEPTH		PROGRESS	0	HOURS (24)		ROP	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE		TIME CHCKD		ENGINEER		MOBILE	
TOUR BOOK		MUD REPORT	mg/L		ADDITIVES		CIRCULATION DATA
DENSITY			SALINITY			MUD GRADIENT KPa/m	0.0
VISCOSITY			CHLORIDES			TANK VOLUME m ³	
W.L.			CALCIUM			HOLE VOLUME m ³	
pH				Vol. Frac.		WATER TO LOC m ³ (cum)	
F.C.			SAND			BOTTOMS UP TIME	
FANN 600			SOLIDS			HOLE CIRC TIME	
FANN 300				UF/OF		TOTAL CIRC TIME	
P.V.			DESILTER			LWD OFF LOC m ³ (cum)	
Y.P.			DESANDER			DAILY MUD COST	
GELS			CENTRIFUGE			CUM. MUD COST	

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT DATA					TIME BREAKDOWN			Daylight to Midnight	
BIT NO.			BIT NO.			DRILLING		M/RU/TO	20.00
SIZE			WOB			TRIPPING		DRLG MH/RH	
TYPE			RPM			RIG SERVICE		NIPPLE U/D	
SERIAL NO.			STRING WT			SURVEYING		PRESS TEST	
JETS/TFA			DP ANN VEL			CIRC&COND		DRLG OUT	
IN @			DC ANN VEL			LOGGING		S&C LINE	
OUT @			NOZ VEL			DST		RIG REPAIR	
BIT METERS			PUMP			CORING		LD DP/DC's	
BIT HOURS			TYPE	TRIPLEX		REAMING		WO Daylight	4.00
BIT ROP			LINER (BxS)	152 X 229		CTB		SAFETY MTG	
CUM HOURS			SPM			CASING		HDLG TOOLS	
CONDITION			M ³ /MIN			CEMENTING			
PULLED FOR			PRESSURE			WOC		TOTAL	24.00

SURVEYS

BOTTOM HOLE ASSEMBLY

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION	
						LENGTH m

REMARKS & GENERAL REPORT DETAILS

REMARKS & GENERAL EVENT DATA						
24:00 - Rig in transit from Sturgeon Lake to Fort Liard.						
14:00 - Rig arriving on location. Unload same.						
16:00 - Pin derrick sections together.						
20:00 - Shut down for night.						
24:00 - Wait on daylight.						

**OCELOT ENERGY
INC.**

DAILY DRILLING REPORT

WELL NAME	OEI et al LIARD N-60				UNIQUE ID		DAY NO.	PS-1
OPERATION @ 0800 HOURS	Tear out rig & load out same						DATE	12/9/97
DEPTH		PROGRESS	0	HOURS (24)		ROP	AFE NO.	4192

DRILLING FLUID / SOLIDS CONTROL

TYPE	TIME CHCKD	ENGINEER	MOBILE
TOUR BOOK	MUD REPORT	mg/L	ADDITIVES
DENSITY		SALINITY	MUD GRADIENT KPa/m
VISCOSITY		CHLORIDES	TANK VOLUME m ³
W.L.		CALCIUM	HOLE VOLUME m ³
pH		Vol. Frac.	WATER TO LOC m ³ (cum)
F.C.		SAND	BOTTOMS UP TIME
FANN 600		SOLIDS	HOLE CIRC TIME
FANN 300		UF/OF	TOTAL CIRC TIME
P.V.		DESILTER	LWD OFF LOC m ³ (cum)
Y.P.		DESANDER	DAILY MUD COST
GELS		CENTRIFUGE	CUM. MUD COST

BIT DATA

TIME BREAKDOWN

Midnight to Midnight

BIT DATA				TIME BREAKDOWN			
BIT NO.		BIT NO.		DRILLING		MI/R/TO	16.00
SIZE		WOB		TRIPPING		DRLG MH/RH	
TYPE		RPM		RIG SERVICE		NIPPLE U/D	
SERIAL NO.		STRING WT		SURVEYING		PRESS TEST	
JETS/TFA		DP ANN VEL		CIRC&COND		DRLG OUT	
IN @		DC ANN VEL		LOGGING		S&C LINE	
OUT @		NOZ VEL		OBT		RIG REPAIR	
BIT METERS		PUMP		CORING		LD DP/DC'S	
BIT HOURS		TYPE	TRIPLEX	REAMING		WO Daylight	
BIT ROP		LINER (BxS)	152 X 220	CTB		SAFETY MTG	
CUM HOURS		SPM		CASING		HDLG TOOLS	
CONDITION		M ³ /MIN		CEMENTING			
VALLED FOR		PRESSURE		WOC		TOTAL	16.00

SURVEYS

BOTTOM HOLE ASSEMBLY

[illegible]

REMARKS & GENERAL REPORT DETAILS

08:00 - Tear out Camp & rig. Load rig to move to Fort Liard N-60

24:00 - Rig & crews in transit.

				GR. ELEV. (Surveyed)	
				CUT (-) / FILL (+)	
				GR. ELEV. (Corrected)	
				KB to GR. ELEV.	
WEATHER / TEMPERATURE		ROAD/LEASE		ACTUAL KB	
REPORT TO	Harvey Farrel	PHONE/FAX	299-5718 / 299-5680	LAST BOP DRILL	
SUPERVISOR	Woody Periard	MOBILE	(250)774 - 9540	LAST BOP INSPECTION	
RIG MANAGER	Brian Evanyshyn	MOBILE	621-7499	LAST SAFETY MEETING	
CONTRACTOR / RIG NO.	Precision # 403	DAILY COST		CUM. COST	



Appendix 6:

Survey Plan

OVERSIZED

DOCUMENT

FILMED

ON

35mm

GEOLOGICAL REPORT

Geological Report

on

Paramount West Bowie N-60

~~OEL et al Liard N-60~~

60-19 N, 123-10 W

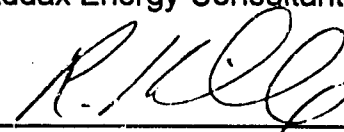
**Well Reached Total Depth on
Dec 22, 1997 @ 20:15**

for

Ocelot Energy Inc.

Prepared For: Wayne Keedwell
Ocelot Energy Inc.

Prepared By: Ron Rainville
Addax Energy Consultants Ltd.



Ron Rainville

NATIONAL ENERGY BOARD
ENGINEERING BRANCH

JAN 12 1998

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OEI et al LIARD N-60

GEOLOGICAL SUMMARY

The main objective of this exploratory well was the Pennsylvanian Mattson Formation, with a secondary zone of interest existing in the Lower Cretaceous Chinkoh. Samples were caught and examined from 25 meters (base of surface conductor pipe) to total depth, a Continental Laboratories total gas detector and chromatograph were run from below surface casing at 250 meters to TD (see CL log for plot of gas readings), and one drill stem test was run on penetration in the Mattson. After drilling had been completed, three well logs (STI-SP-GR, DAR-GR-CAL, SLD-CNS-GR-PE-XY CAL) were run by Computalog. No cores were cut.

Logs indicated the Chinkoh Formation at 504.5 meters (-164.5 subsea). The zone consisted of a predominately fine to medium and occasionally coarse grained argillaceous sandstone with traces of interlaminated shale, and samples showed only traces to occasionally poor porosity with no visual oil shows. Log and gas detector data also indicated no evidence of hydrocarbons, and no further evaluations were done on the zone.

The Mattson was penetrated at 546.5 meters (-206.5 subsea), and consisted of 264.5 meters of interbedded sandstones and shales (see strip log and printed sample descriptions for details). Several zones of good porosity were present, but no evidence of hydrocarbons was indicated by either sample or gas detector data. One drill stem test was run on penetration over a sand from 636 to 650 meters; the test produced no gas to surface, and pipe recovery consisted of 429 meters of fresh water (See DST Report for details). Logs confirmed that all porous sands in the Mattson were water saturated, and no further tests were run in the formation.

No further testing was done and, after logging had been completed, the well was immediately plugged and abandoned.

Well Summary

Storage Units: Metric

Well Information

Operator: Ocelot Energy Inc.
Well Name: OEI et al Liard N-60
Location: 60-19 N, 123-10 W
UWI: 200N060000100100
Pool: Chinkeh/Mattson
Field: Wildcat
Province / State: NWT
Country: Canada

Surface Node	Hole Type: Vertical	Fault Indicator:
Co-ordinates	Latitude:	Longitude:
N / S: 6688195.4 m NUTM		
E / W: 490244.3 m EUTM		

Bottom Hole Node	Latitude:	Longitude:
Co-ordinates		
N / S:		
E / W:		

Elevations	Reference: DLS
Ground Elevation: 335.70	Kelly Bushing to Ground: 4.30
Kelly Bushing Elevation: 340.00	Cut (-):
Casing Flange Elevation: 335.70	Fill (+):

Total Depth	Measured Depth	True Vertical Depth
Total Depth Driller (Tally):	835.00	835.00
Total Depth Driller (Strap or SLM):	835.00	835.00
Total Depth Logger:	834.00	834.00

Miscellaneous Depths

Plugback Depth:	Water Depth Reference:
Whipstock or Sidetrack Depth:	Water Depth:

Well Summary

Drilling Contractor: Precision Drilling Rig 403	Spud Date: Dec 12, 1997 @ 10:30
Rig Release Date: Dec 24, 1997 @ 18:00	Total Depth Date: Dec 22, 1997 @ 20:15

Cores	#	Formation	Interval	Cut	Recovered	%
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Daily Drilling Summary

Storage Units: Metric

Date	A.M. Depth	Progress	Rotating Hours	Avg. P.R.	Daily Costs	Formation	Operational Status @ Report Time
Dec 12, 1997	188		12.30		\$364,755	Glacial till	Drill 311 mm surface hole
Dec 13, 1997	250	62.00	4.30	14.4	\$59,844	Lepine	W.O.C.
Dec 14, 1997	250	0.00	0.00	0.0	\$27,345	Lepine	Nipple up BOP's
Dec 15, 1997	262	12.00	0.50	24.0	\$37,320	Lepine	Drill 222 mm hole
Dec 16, 1997	508	246.00	21.80	11.3	\$31,657	Chinkeh	Drill 222 mm hole
Dec 17, 1997	555	47.00	12.80	3.7	\$40,359	Mattson	Drill 222 mm hole
Dec 18, 1997	644	89.00	21.30	4.2	\$31,665	Mattson	Circulate sample
Dec 19, 1997	650	6.00	0.50	12.0	\$31,756	Mattson	Trip in to drill after DST #1
Dec 20, 1997	718	68.00	17.80	3.8	\$26,437	Mattson	Drill 222 mm hole
Dec 21, 1997	782	64.00	22.50	2.8	\$28,066	Mattson	Drill 222 mm hole
Dec 22, 1997	835	53.00	19.00	2.8	\$29,119	Flett	Trip out to log at TD
Dec 23, 1997	835	0.00	0.00	0.0	\$47,665	Flett	Trip in to run plugs

Accumulated Daily Costs: \$755,988

Casing Data Summary

Storage Units:

Metric

Casing Type: Surface

Casing Size: 244.5

Hole Size: 311.0

Casing Landed @: 250.00

Total Joints: 195

Casing Date: Dec 13, 1997 @ 21:15

Plug Down Date: Dec 13, 1997 @ 23:37

of Joints / Length / O.D. / Weight: Ran 195 joints of 244.5 mm, 48.07 kg/m, H-40, new Prudential ST & C casing. Guide shoe and float collar 1 joint up. Landed at 250.0 meters K.B. Total length 251.93 meters.

Cementing Details:

Cemented by Sanjel with 2 m³ water, followed by 19.0 tonnes of 0:1:0 Class "G" + 3% CaCl₂. Yield .76 m³/tonne @ 1901 kg/m. Total slurry 14.4 m³. Displaced with 9.8 m³ water. Plug down at 23:37 hours, Dec. 13/97. Float held. 5.0 m³ good returns. No slump.

Remarks:

Bit Record Table

Storage Units: Metric

**** For more detailed Bit Information refer to Bit Record ****

Bit #	Make	Type	IADC		Depth In	Depth Out	Made	Hours	Avg. P.R.	I.A.D.C. Bit Condition									
			S	T						I	O	MDC	Loc	B	G	ODC	RP1	RP2	
1A	REED	HP11			0.0	198.0	198.0	13.75	14.4										
2A	SMITH	SDGH			198.0	250.0	52.0	2.75	18.9										
1	HTC	GT1			250.0	510.0	260.0	22.50	11.6										
2	STC	F37DPD			510.0	650.0	140.0	34.25	4.1										
2RR	STC	F37DPD			650.0	835.0	185.0	59.25	3.1										

Total Rotating Hours: 132.50

Wireline Logging Summary

Storage Units: Metric

Logging Suite Number: 1
Wireline Logging Company: Computalog
District: Grande Prairie
Witness: Ron Rainville

Engineer: Calvin Bast & Robert Parson
Unit Number: 334

Was Pressure Control Equipment Utilized:
Was the Logging Job Mechanically Assisted:

Maximum Deviation: 3.500 °
Hole Size: 222.0

Total Lost Time: 0.00
Loggers' Total Down Time: 0.00
Total Job Time (From Rig up to Rig down): 8.00

	Measured Depth	True Vertical Depth
Casing Depth Driller	250.00	250.00
Casing Depth Logger	249.60	249.60
Total Depth Driller (Tally)	835.00	835.00
Total Depth Driller (Strap or SLM)	835.00	

Logging Run #: 1
Date: Dec 23, 1997

Drilling Fluid Data

Drilling Fluid Type: Gel Chem
Fluid Density: 1100

Viscosity: 55

pH: 9.5

Fluid Loss: 8.0

Mud Resistivity (Rm): 3.50 @ 14.0 °
Mud Resistivity (Rm) @ BHT: 2.15 @ 37.0 °
Mud Filtrate Resistivity (Rmf): 4.00 @ 17.0 °
Mud Cake Resistivity (Rmc): 2.10 @ 22.0 °

Maximum Temperature: 37.0 °
Source (Rmf): Sample
Source (Rmc): Sample

Logging Run Information

Date on Bottom: Dec 23, 1997
Total Depth Logger: 834.00 (MD) 834.00 (TVD)

Logging Tools: STI-SP-UGR/DAR-UGR-CAL

Remarks: Properties of water sample recovered from DST #1: Rw = 1.2 at 21 C. Salinity = 5400 ppm NaCl.

Hole Conditions: Good

Wireline Logging Summary

Storage Units:

Metric

Logging Run #: 2
Date: Dec 23, 1997

Drilling Fluid Data

Drilling Fluid Type: Gel Chem
Fluid Density: 1100

Viscosity: 55

pH: 9.5

Fluid Loss: 8.0

Mud Resistivity (Rm): 3.50 @ 14.0 °
Mud Resistivity (Rm) @ BHT: 2.15 @ 37.0 °
Mud Filtrate Resistivity (Rmf): 4.00 @ 17.0 °
Mud Cake Resistivity (Rmc): 2.10 @ 22.0 °

Maximum Temperature: 37.0 °
Source (Rmf): Sample
Source (Rmc): Sample

Logging Run Information

Date on Bottom: Dec 23, 1997

Total Depth Logger: 834.00 (MD) 834.00 (TVD)

Logging Tools: SPED-CNT-UGR-CAL

Remarks: Properties of water sample recovered from DST #1: Rw = 1.2 at 21 C. Salinity = 5400 ppm NaCl.

Hole Conditions: Good

Drill Stem Test Report

Storage Units: Metric

Run #: 1 Date: Dec 19, 1997
Test #: 1 Misrun:
Test Company: Downhole Systems Technol Closed Chamber Company:
Representative: Jim Murray Representative:
Unit #: K.B. Elevation: 340.00
Test Type: Inflate Bottom Hole

Formations Tested From the: Mattson
To the: Mattson

Test Interval: From: 635.80 (MD) To: 650.00 (MD) (14.20)
From: 635.80 (TVD) To: 650.00 (TVD) (14.20)

Total Depth: 650.00 (MD) 650.00 (TVD) (At the time of the Test)

String Configuration:

Drilling Fluid Type and Properties: Gel Chem: MD 1090 V 51

Cushion Type / Amount:

Hole Condition: Good

Bottom Hole Temperature: 29 ° Tool Chased Distance: Mud Drop:

Period	Intitial Pressure	Final Pressure	Times	Flow Description	Choke Type	Orifice Diameter	Units
Time / Pressure / Flow Rate Measurements							
Initial Hydrostatic	0.0	6,890.0					
Flow 1	760.0	1,951.0	5	Closed chamber			m ³ /day
						147.4 liquid, 26 gas	
Shut-in 1	1,951.0	5,847.0	52				
Flow 2	2,075.0	4,609.0	60	Closed chamber			m ³ /day
						42.3 liquid, 18 gas	
Shut-in 2	4,609.0	5,832.0	120				
Final Hydrostatic	6,754.0	0.0					

Recovery: 429 meters of fresh water: 4540 ppm NaCl, RW = 1.11 @ 25 C

Analyses: C & G Labs: Ft. St. John, BC

Remarks:

Directional / Drift Survey Points

Storage Units: Metric

Survey Type: /

Measured Depth	T.V.D.	Drift Angle (°)	Azimuth (°)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
34.00	34.00	0.750					
61.00	61.00	1.000					
89.00	89.00	0.750					
116.00	116.00	0.250					
143.00	143.00	0.500					
170.00	170.00	0.750					
226.00	226.00	0.500					
250.00	250.00	1.000					
355.00	355.00	1.250					
422.00	422.00	3.130					
491.00	491.00	1.500					
539.00	539.00	2.000					
590.00	590.00	2.500					
650.00	650.00	2.130					
729.00	729.00	3.000					
835.00	835.00	3.500					

Formation Top Summary

Storage Units:

Metric

Kelly Bushing Elevation: 340.00
Ground Elevation: 335.70

Casing Flange Elevation: 335.70

**** All Depths measured from Kelly Bushing Elevation ****

Group Formation Member	Prognosis (TVD)	Sample Top (MD)	Sample Top (TVD)	Log Top (MD)	Log Top (TVD)	Subsea	Thickness
TILL		25.00	25.00			315.00	173.00
LEPINE		198.00	198.00			142.00	52.00
SURFACE CASING		250.00	250.00	249.60	249.60	90.40	52.90
SCATTER	307.00	304.00	304.00	302.50	302.50	37.50	202.00
CHINKEH	467.00	507.00	507.00	504.50	504.50	-164.50	20.50
FANTASQUE	477.00	515.00	515.00	525.00	525.00	-185.00	21.50
MATTSON	542.00	548.00	548.00	546.50	546.50	-206.50	264.50
FLETT	783.00	812.00	812.00	811.00	811.00	-471.00	23.00
TOTAL DEPTH	803.00	835.00	835.00	834.00	834.00	-494.00	

Sample Descriptions

Storage Units:

Metric

25.00 to 198.00 (173.00)	100% GLACIAL TILL predominately SANDSTONE: medium to predominately very coarse grained to conglomerate, angular to subrounded, poorly sorted, predominately unconsolidated, very friable, predominately quartzose with very abundant clear to red brown to occasionally pink quartz grains, pebbles, and fragments, EXCELLENT POROSITY (24%), NO SHOWS. Approximate 30% miscellaneous rock fragments: tight SANDSTONE, dense LIMESTONE, SHALE, and miscellaneous igneous and metamorphic fragments. Some boulders, inferred from intervals of slow and extremely rough drilling.
198.00 to 240.00 (42.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, very silty and sandy, slightly glauconitic in part. Abundant interlaminated and interbedded SILTSTONE: gray to gray brown, argillaceous, sandy (grading to very fine grained SANDSTONE), TIGHT, NO SHOWS. (Samples 90% siltstone with shale).
240.00 to 250.00 (10.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, very silty, sandy and slightly glauconitic in part. (Samples 95% + shale).
250.00 to 270.00 (20.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, silty.
270.00 to 275.00 (5.00)	100% SHALE As above. Trace interlaminated SILTSTONE: gray, argillaceous, sandy and glauconitic in part, TIGHT, NO SHOWS.
275.00 to 298.00 (23.00)	100% SHALE gray to dark gray, micromicaceous in part, fissile to platy, very silty in part. Minor interlaminated SILTSTONE: gray to gray brown, argillaceous, sandy, TIGHT, NO SHOWS. Trace interlaminated SANDSTONE: light gray, very fine grained, subrounded, moderately sorted, well cemented, quartzose, siliceous, silty, argillaceous, TIGHT, NO SHOWS.
298.00 to 304.00 (6.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. Abundant interlaminated SANDSTONE: dark gray, very fine grained, subrounded, moderately sorted, well cemented, quartzose, very argillaceous, TIGHT, NO SHOWS.
304.00 to 306.00 (2.00)	100% SANDSTONE gray to gray brown, very fine grained (grading to SILTSTONE), subrounded, well sorted, well cemented, quartzose, very silty and argillaceous, slightly micaceous in part, TIGHT, NO SHOWS.
306.00 to 310.00 (4.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty.
310.00 to 315.00 (5.00)	100% SANDSTONE gray to brown, predominately fine to occasionally medium grained, subrounded, well sorted, well cemented, quartzose, very argillaceous, glauconitic, slightly micaceous and kaolinitic in part, Poor POROSITY to TIGHT, NO SHOWS.

Sample Descriptions

Storage Units:

Metric

315.00 to 320.00 (5.00)	100% SANDSTONE brown, fine to very fine grained, subrounded, well sorted, well cemented, quartzose, very argillaceous, Poor POROSITY to TIGHT, NO SHOWS.
320.00 to 329.00 (9.00)	100% SANDSTONE light gray, very fine to occasionally medium grained, subrounded, moderately sorted, well cemented, quartzose, very argillaceous, glauconitic, slightly micaceous in part, TIGHT, NO SHOWS.
329.00 to 332.00 (3.00)	100% SANDSTONE gray to light gray, very fine to occasionally medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, glauconitic, argillaceous and slightly micaceous in part, FAIR POROSITY (12%), NO SHOWS.
332.00 to 338.00 (6.00)	100% SANDSTONE gray to light gray, very fine to occasionally medium grained, subrounded, moderately sorted, well cemented, quartzose, very argillaceous, glauconitic and slightly micaceous in part, Poor POROSITY to TIGHT, NO SHOWS.
338.00 to 352.00 (14.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. (Very Poor SAMPLES: heavy contamination with surface gravel).
352.00 to 353.00 (1.00)	100% SANDSTONE gray to salt and pepper, very fine to fine grained, subangular, moderately sorted, well cemented, quartzose, very argillaceous, carbonaceous, micaceous, glauconitic, TIGHT, NO SHOWS.
353.00 to 358.00 (5.00)	100% SANDSTONE gray to brown, very fine to occasionally medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, silty, argillaceous, glauconitic, TRACE to Poor POROSITY (5% to 8%), TRACE BROWN Oil STAINING and DULL ORANGE FLUORESCENCE, Very SLOW MILKY YELLOW CUT.
358.00 to 367.00 (9.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. (Very Poor SAMPLES: heavy contamination with surface gravel).
367.00 to 375.00 (8.00)	100% SANDSTONE brown, fine to very fine grained, subrounded, well sorted, poorly cemented, quartzose, argillaceous, FAIR POROSITY (12%), SOME BROWN Oil STAINING and DULL ORANGE FLUORESCENCE, Very SLOW MILKY YELLOW CUT.
375.00 to 380.00 (5.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy. (Very Poor SAMPLES: heavy contamination with surface gravel).
380.00 to 400.00 (20.00)	100% SILTSTONE dark gray to gray brown, very argillaceous and sandy (grading to very fine grained very argillaceous tight sandstone), slightly micaceous and pyritic in part, TIGHT, NO SHOWS. Abundant interlaminated and interbedded SHALE: black, micromicaceous in part, fissile to platy, very silty and sandy, slightly pyritic in part.

Sample Descriptions

Storage Units:

Metric

400.00 to 410.00 (10.00)	100% SHALE black, micromicaceous in part, fissile to platy, very silty and sandy. Abundant interlaminated and interbedded SILTSTONE grading to very fine grained tight sandstone as above.
410.00 to 430.00 (20.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty and sandy in part. Some interlaminated SILTSTONE grading to sandstone as above.
430.00 to 445.00 (15.00)	100% SHALE black, micromicaceous in part, fissile to platy, slightly silty and pyritic in part. Trace interlaminated SILTSTONE: gray to gray brown, argillaceous, sandy, TIGHT, NO SHOWS. Trace IRONSTONE.
445.00 to 463.00 (18.00)	100% SHALE with minor IRONSTONE as above. Scattered trace fossil fragments.
463.00 to 464.00 (1.00)	100% SANDSTONE brown, very fine grained, subrounded, well sorted, well cemented, quartzose, argillaceous, siliceous, sideritic, hard, TIGHT, NO SHOWS.
464.00 to 482.00 (18.00)	100% SHALE with trace IRONSTONE as above.
482.00 to 507.00 (25.00)	100% SHALE black, micromicaceous in part, fissile to platy, slightly pyritic in part. Trace interlaminated SHALE: light gray to white, Scattered trace interlaminated COAL.
507.00 to 509.00 (2.00)	100% SANDSTONE brown, fine to medium to occasionally coarse grained, subrounded, well sorted, well cemented, quartzose, argillaceous, very slightly pyritic and glauconitic in part, very slightly kaolinic and micaceous in part, TIGHT, NO SHOWS. Trace interlaminated SHALE: green, fissile to platy.
509.00 to 513.00 (4.00)	100% SANDSTONE as above: TRACE to OCCASIONALLY Poor POROSITY (5% to 8%), NO SHOWS. Trace interlaminated SHALE as above.
513.00 to 515.00 (2.00)	100% SANDSTONE as above: very argillaceous, TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE as above.
515.00 to 517.00 (2.00)	100% SHALE black, very silty and sandy, very glauconitic and siliceous.
515.00 to 522.00 (7.00)	100% SILTSTONE dark gray to gray brown, very argillaceous and siliceous (grading to chert), glauconitic to occasionally very glauconitic, hard, TIGHT, NO SHOWS. Abundant interlaminated SHALE: black, very silty and sandy, very glauconitic and siliceous. Abundant CHERT: dark gray to gray brown, very silty and sandy in part, SCATTERED TRACE LEACHED POROSITY and DEAD Oil STAINING. Very abundant red brown iron staining on siltstone, shale, and chert.

Sample Descriptions

Storage Units:

Metric

522.00 to 540.00 (18.00)	100% CHERT predominately light brown to occasionally white, slightly glauconitic and pyritic in part, fossiliferous in part with scattered trace sponge spicules, scattered trace fractures and free quartz crystals, SCATTERED TRACE LEACHED POROSITY and DEAD Oil STAINING.
540.00 to 548.00 (8.00)	100% CHERT as above. Trace interlaminated SHALE: dark gray to black, fissile to platy.
548.00 to 553.00 (5.00)	100% DOLOMITE brown, microcrystalline, argillaceous, very silty and siliceous, slightly pyritic in part, TRACE POROSITY to DENSE, NO SHOWS. Trace interlaminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty, slightly pyritic in part.
553.00 to 554.00 (1.00)	100% SHALE as above.
554.00 to 556.00 (2.00)	100% SANDSTONE gray to brown, very fine grained (grained to SILTSTONE), subrounded, well sorted, well cemented, quartzose, siliceous, dolomitic, very silty and argillaceous, TIGHT, NO SHOWS.
556.00 to 560.00 (4.00)	100% SANDSTONE as above, with abundant interlaminated and interbedded SHALE: gray to dark gray, micromicaceous in part, fissile to platy, silty, slightly pyritic in part.
560.00 to 561.00 (1.00)	100% SHALE as above.
561.00 to 570.00 (9.00)	100% SANDSTONE light brown, predominately very fine to occasionally fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly silty and dolomitic in part, TRACE to OCCASIONALLY Poor POROSITY to TIGHT, NO SHOWS. Minor interlaminated SHALE as above. Trace CHERT: light blue gray.
570.00 to 575.00 (5.00)	100% SANDSTONE light gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly dolomitic in part, slightly kaolinitic and glauconitic in part, TRACE to OCCASIONALLY Poor POROSITY to TIGHT, SCATTERED TRACE DEAD Oil STAINING. Trace interlaminated and interbedded SHALE as above.
575.00 to 577.00 (2.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, slightly silty and pyritic in part.
577.00 to 579.00 (2.00)	100% SANDSTONE light gray to white to clear, medium to coarse grained, subrounded, well sorted, fair to poorly cemented, quartzose, siliceous, slightly dolomitic and pyritic in part, Good POROSITY (15%), NO SHOWS.
579.00 to 586.00 (7.00)	100% SANDSTONE as above: Poor to FAIR POROSITY (9% to 12%), NO SHOWS.

Sample Descriptions

Storage Units:

Metric

586.00 to 587.00 (1.00)	100% SHALE as above.
587.00 to 593.00 (6.00)	100% SANDSTONE light gray brown to white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, friable, quartzose with some frosted grains, slightly pyritic and dolomitic in part to predominately very clean, Good POROSITY (18%), SCATTERED TRACE LIGHT BROWN OIL STAINING, TRACE HYDROCARBON ODOR, TRACE FREE OIL IN SAMPLE, NO FLUORESCENCE OR CUT.
593.00 to 594.00 (1.00)	100% SANDSTONE light gray to light brown, fine to medium grained, subrounded, well sorted, well cemented, quartzose with some frosted grains, siliceous, dolomitic, slightly pyritic in part, TIGHT, NO SHOWS.
594.00 to 595.00 (1.00)	100% SANDSTONE light gray brown to white to clear, medium to coarse grained, as above: Good POROSITY (15%), NO SHOWS.
595.00 to 597.00 (2.00)	100% DOLOMITE light gray brown, microcrystalline, silty, sandy, argillaceous, DENSE, NO SHOWS. Some interlaminated SANDSTONE: light gray, very fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, dolomitic, slightly pyritic in part, TIGHT, NO SHOWS.
597.00 to 601.00 (4.00)	100% SANDSTONE white, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, Good to EXCELLENT POROSITY (18% to 24%), NO SHOWS.
601.00 to 604.00 (3.00)	100% SANDSTONE light gray brown, fine to medium grained, subrounded, well sorted, fair to well cemented, quartzose, siliceous, slightly dolomitic and pyritic in part, Poor POROSITY (10%), NO SHOWS. Trace interlaminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, slightly pyritic in part.
604.00 to 610.00 (6.00)	100% SANDSTONE light gray brown to white to clear, fine to medium to occasionally coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic and kaolinitic in part to predominately very clean, EXCELLENT POROSITY (24%), NO SHOWS.
610.00 to 611.00 (1.00)	100% SHALE black, micromicaceous in part, fissile to platy, pyritic in part.
611.00 to 612.00 (1.00)	100% SANDSTONE as above: Good POROSITY (18%), NO SHOWS.
612.00 to 613.00 (1.00)	100% SHALE as above.

Sample Descriptions

Storage Units:

Metric

613.00 to 615.00 (2.00)	100% SANDSTONE as above: Good POROSITY (18%), NO SHOWS.
615.00 to 617.00 (2.00)	100% SANDSTONE light gray brown to clear, fine to medium grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic and kaolinitic in part to predominately very clean, EXCELLENT POROSITY (24%), NO SHOWS.
617.00 to 624.00 (7.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy, pyritic in part, carbonaceous with some interlaminated COAL.
624.00 to 627.00 (3.00)	100% SANDSTONE white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, EXCELLENT POROSITY (24%), NO SHOWS.
627.00 to 631.00 (4.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part, carbonaceous in part with trace interlaminated COAL.
631.00 to 633.00 (2.00)	100% SANDSTONE light gray brown, fine to medium grained, subrounded, well sorted, fair to poorly cemented, quartzose, siliceous, argillaceous and pyritic in part, FAIR POROSITY (12%), NO SHOWS. Trace interlaminated SHALE: gray to dark gray, micromicaceous in part, fissile to platy, silty, sandy.
633.00 to 636.00 (3.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty, sandy, carbonaceous, pyritic in part.
636.00 to 642.00 (6.00)	100% SANDSTONE light gray brown to clear, fine to medium grained, subrounded, well sorted, poorly cemented to unconsolidated, friable, quartzose, slightly argillaceous and pyritic in part, Good POROSITY (18%), SCATTERED TRACE PYROBITUMEN and DEAD Oil STAINING, NO FLUORESCENCE OR CUT.
642.00 to 650.00 (8.00)	100% SANDSTONE white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented to unconsolidated, very friable, quartzose, slightly pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, Good to EXCELLENT POROSITY (18% to 24%), NO SHOWS.
650.00 to 652.00 (2.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty, sandy, pyritic, carbonaceous with trace interlaminated COAL.
652.00 to 654.00 (2.00)	100% SANDSTONE gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE as above.

Sample Descriptions

Storage Units: Metric

654.00 to 657.00 (3.00)	100% SHALE with trace interlaminated COAL as above.
657.00 to 662.00 (5.00)	100% SANDSTONE with trace interlaminated SHALE as above.
662.00 to 666.00 (4.00)	100% SHALE with trace interlaminated COAL as above.
666.00 to 667.00 (1.00)	100% SANDSTONE as above: TIGHT, NO SHOWS.
667.00 to 669.00 (2.00)	100% SHALE with trace interlaminated COAL as above.
669.00 to 672.00 (3.00)	100% SANDSTONE gray brown, very fine grained (grading to SILTSTONE), subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly pyritic in part, TIGHT, NO SHOWS. Trace interlaminated SHALE: black, micromicaceous in part, fissile to platy, silty, sandy, carbonaceous, pyritic.
672.00 to 673.00 (1.00)	100% SHALE as above.
673.00 to 678.00 (5.00)	100% SANDSTONE light gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE as above.
678.00 to 681.00 (3.00)	100% SHALE black, micromicaceous in part, fissile to platy, carbonaceous, pyritic, slightly silty in part. Trace IRONSTONE.
681.00 to 685.00 (4.00)	100% SANDSTONE white to clear, medium to coarse grained, subrounded, well sorted, poorly cemented, friable, quartzose with some frosted grains, pyritic in part with trace pyrite cement, slightly kaolinitic in part to predominately very clean, FAIR to Good POROSITY (15% to 20%), NO SHOWS.
685.00 to 686.00 (1.00)	100% SHALE as above.
686.00 to 690.00 (4.00)	100% SANDSTONE as above: predominately coarse grained, poorly cemented to unconsolidated, EXCELLENT POROSITY (24%), NO SHOWS.
690.00 to 691.00 (1.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, very silty and sandy, pyritic in part.
691.00 to 693.00 (2.00)	100% SANDSTONE light gray to light gray brown, fine to medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TIGHT, NO SHOWS. Trace interlaminated SHALE as above.

Sample Descriptions

Storage Units: Metric

693.00 to 695.00 (2.00)	100% SHALE as above.
695.00 to 697.00 (2.00)	100% SANDSTONE with trace interlaminated SHALE as above.
697.00 to 699.00 (2.00)	100% SHALE as above.
699.00 to 702.00 (3.00)	100% SANDSTONE white to clear, fine to medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, slightly pyritic in part, predominately very clean, Poor POROSITY to TIGHT, NO SHOWS.
702.00 to 704.00 (2.00)	100% SHALE black, micromicaceous in part, fissile to platy, pyritic, silty and sandy in part.
704.00 to 707.00 (3.00)	100% SANDSTONE as above: Poor POROSITY to TIGHT, NO SHOWS.
707.00 to 708.00 (1.00)	100% SHALE as above.
708.00 to 709.00 (1.00)	100% SHALE black, micromicaceous in part, fissile to platy, very carbonaceous. Abundant interbedded and interlaminated COAL.
709.00 to 711.00 (2.00)	100% SHALE as above.
711.00 to 717.00 (6.00)	100% SANDSTONE light gray to light gray brown, fine to medium grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part. TRACE POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty, sandy, pyritic.
717.00 to 718.00 (1.00)	100% SHALE as above.
718.00 to 725.00 (7.00)	100% SANDSTONE light gray to gray brown, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, slightly pyritic in part, TIGHT, NO SHOWS. Some interlaminated SHALE as above.
725.00 to 730.00 (5.00)	100% SHALE dark gray to black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
730.00 to 732.00 (2.00)	100% SANDSTONE light gray brown to white, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS.

Sample Descriptions

Storage Units:

Metric

732.00 to 733.00 (1.00)	100% SHALE as above.
733.00 to 736.00 (3.00)	100% SANDSTONE as above: TRACE POROSITY to TIGHT, NO SHOWS.
736.00 to 738.00 (2.00)	100% SHALE as above.
738.00 to 741.00 (3.00)	100% SANDSTONE as above: TRACE POROSITY to TIGHT, NO SHOWS.
741.00 to 746.00 (5.00)	100% SHALE dark gray brown to black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part. Trace interlaminated SILTSTONE: gray to gray brown, argillaceous, sandy (grading to very fine grained SANDSTONE), quartzose, siliceous, argillaceous, TIGHT, NO SHOWS.
746.00 to 755.00 (9.00)	100% SANDSTONE light gray brown to white, very fine to occasionally medium grained, subrounded, well sorted, moderately to well cemented, quartzose, siliceous, slightly pyritic and kaolinitic in part, Poor POROSITY to TIGHT, NO SHOWS. Trace interlaminated SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
755.00 to 763.00 (8.00)	100% SHALE black to occasionally red brown, fissile to platy, carbonaceous in part. Some IRONSTONE.
763.00 to 787.00 (24.00)	100% SANDSTONE white to clear, fine to medium grained, subrounded, well sorted, moderately to poorly cemented, quartzose, friable, slightly siliceous and pyritic in part, very slightly kaolinitic and dolomitic in part to predominately very clean, FAIR to Good POROSITY (15% to 18%), NO SHOWS. Trace interlaminated SHALE as above.
787.00 to 788.00 (1.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part.
788.00 to 796.00 (8.00)	100% SANDSTONE as above: moderately cemented, FAIR POROSITY (15%), NO SHOWS.
796.00 to 802.00 (6.00)	100% SANDSTONE light gray to gray brown, very fine grained (occasionally grained to SILTSTONE), subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous, pyritic in part, TRACE POROSITY to TIGHT, NO SHOWS. Abundant interlaminated and interbedded SHALE: dark gray to black, micromicaceous in part, fissile to platy, silty, sandy, pyritic in part.
802.00 to 804.00 (2.00)	100% SHALE black, micromicaceous in part, fissile to platy, silty and sandy in part, pyritic in part. Trace interlaminated SILTSTONE: gray, argillaceous, sandy (occasionally grading to very fine grained tight sandstone), siliceous, pyritic in part, TIGHT, NO SHOWS.

Sample Descriptions

Storage Units:

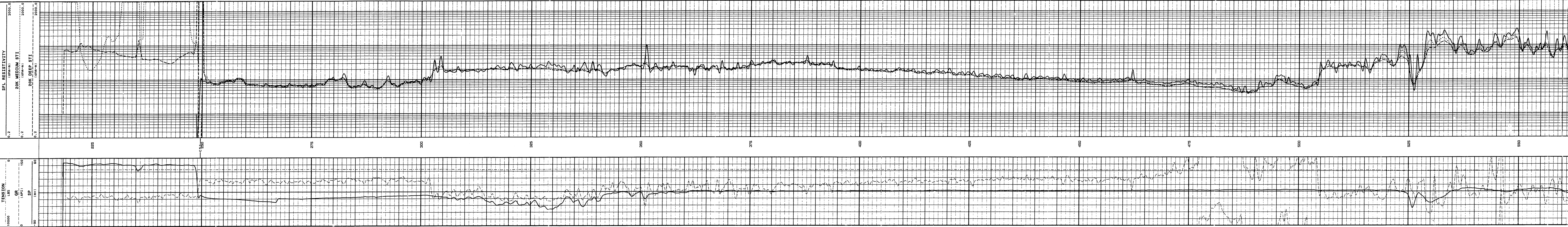
Metric

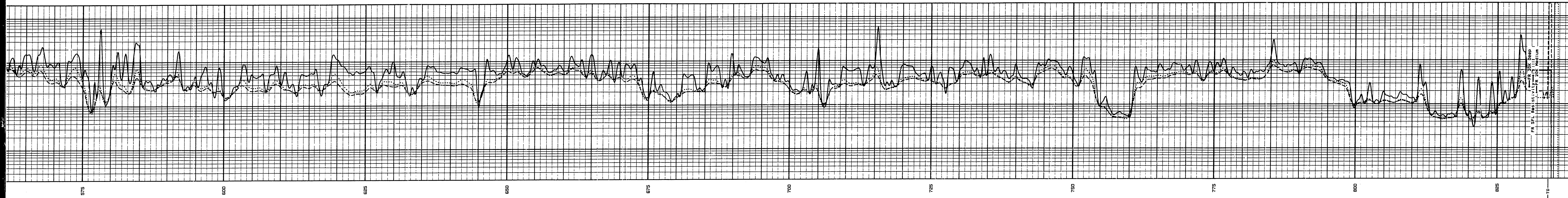
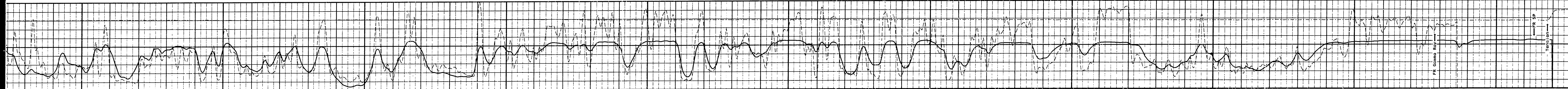
- | | |
|----------------------------|---|
| 804.00 to 812.00
(8.00) | 100% SANDSTONE
light gray to white, very fine to fine grained, subrounded, well sorted, well cemented, quartzose, siliceous, argillaceous and slightly pyritic in part, TIGHT, NO SHOWS. Minor interlaminated SHALE as above. |
| 812.00 to 814.00
(2.00) | 100% DOLOMITE
gray to brown, fine to microcrystalline, argillaceous, slightly glauconitic and pyritic in part, PREDOMINATELY DENSE with SOME FRACTURING, NO SHOWS. |
| 814.00 to 820.00
(6.00) | 100% DOLOMITE
light gray brown, micro to medium crystalline, sandy, pyritic, slightly glauconitic, fossiliferous in part with trace crinoid remains, Poor INTERCRYSTALLINE and MICRO VUGGY POROSITY, NO SHOWS. |
| 820.00 to 827.00
(7.00) | 100% DOLOMITE
brown to dark brown, fine to microcrystalline, argillaceous, sandy, pyritic, TRACE POROSITY to DENSE, NO SHOWS. Some interlaminated SHALE: gray to dark gray, fissile to platy, dolomitic. |
| 827.00 to 833.00
(6.00) | 100% LIMESTONE
gray to light gray, cryptocrystalline, chalky and argillaceous in part, pyritic in part, DENSE, NO SHOWS. |
| 833.00 to 835.00
(2.00) | 100% LIMESTONE
gray to light gray, micro to cryptocrystalline, chalky and argillaceous in part, fossiliferous in part with some shell and crinoid remains. TRACE CHALKY POROSITY to DENSE, NO SHOWS. |

**RESISTIVITY/
CONDUCTIVITY**

177115IMP

FINISH DEPTH: 219.0 METERS DIRECTION: UP DATE: 12/23/97 TIME: 07:48 MODE: TRACE PLAYBACK





SP (mV) 50
GR (API) 150
TENSION LBS 10000

20K DEEP STI (Ohm-m) 2000.0
20K MEDIUM STI (Ohm-m) 2000.0
SFL RESISTIVITY (Ohm-m) 2000.0

START DEPTH: 838.3 METERS
DIRECTION: UP
DATE: 12/23/97
TIME: 07:48
MODE: TRACE PLAYBACK
17711STIRP

START DEPTH: 838.3 METERS
DIRECTION: UP
DATE: 12/23/97
TIME: 07:48
MODE: TRACE PLAYBACK
17711STIRP

MAIN PASS
VERSION: 1.64

MAIN PASS
VERSION: 1.64

SYSTEM CONSTANTS
NAME DESCRIPTION VALUE UNITS
CCT 507.8 CPS
GR DELTA 507.8 CPS

SYSTEM CONSTANTS
NAME DESCRIPTION VALUE UNITS
CCT 507.8 CPS
GR DELTA 507.8 CPS

REPEAT PASS
VERSION: 1.64

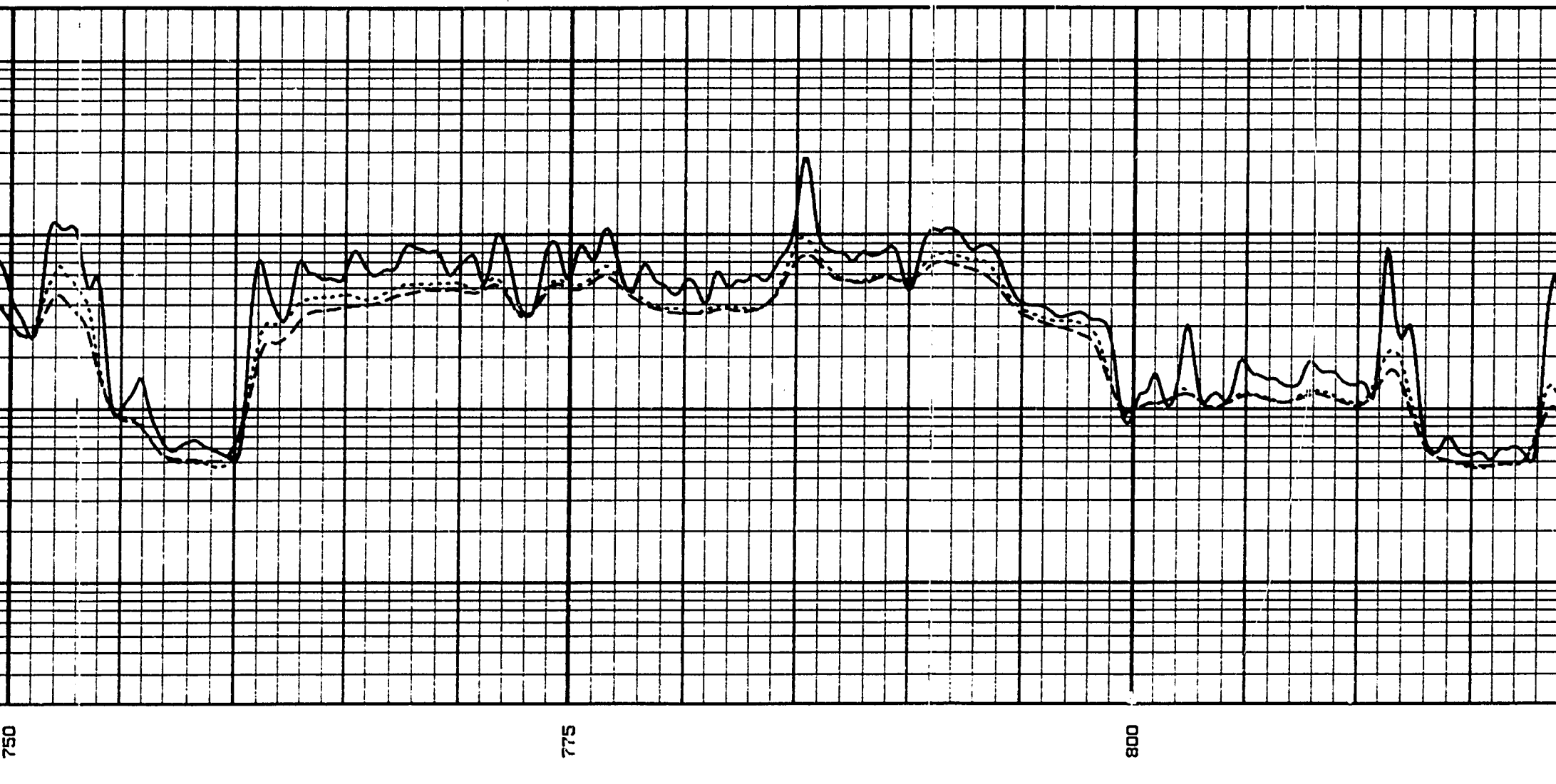
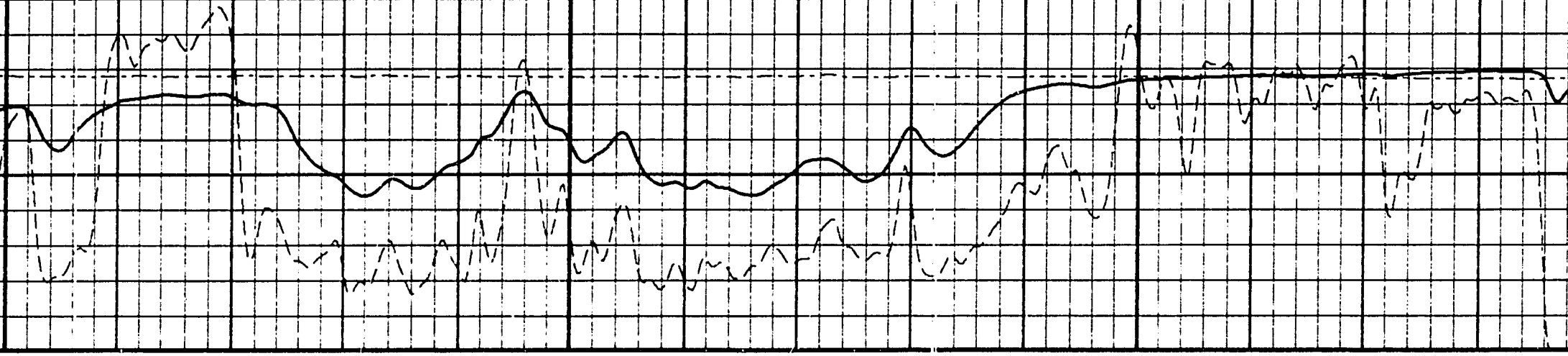
REPEAT PASS
VERSION: 1.64

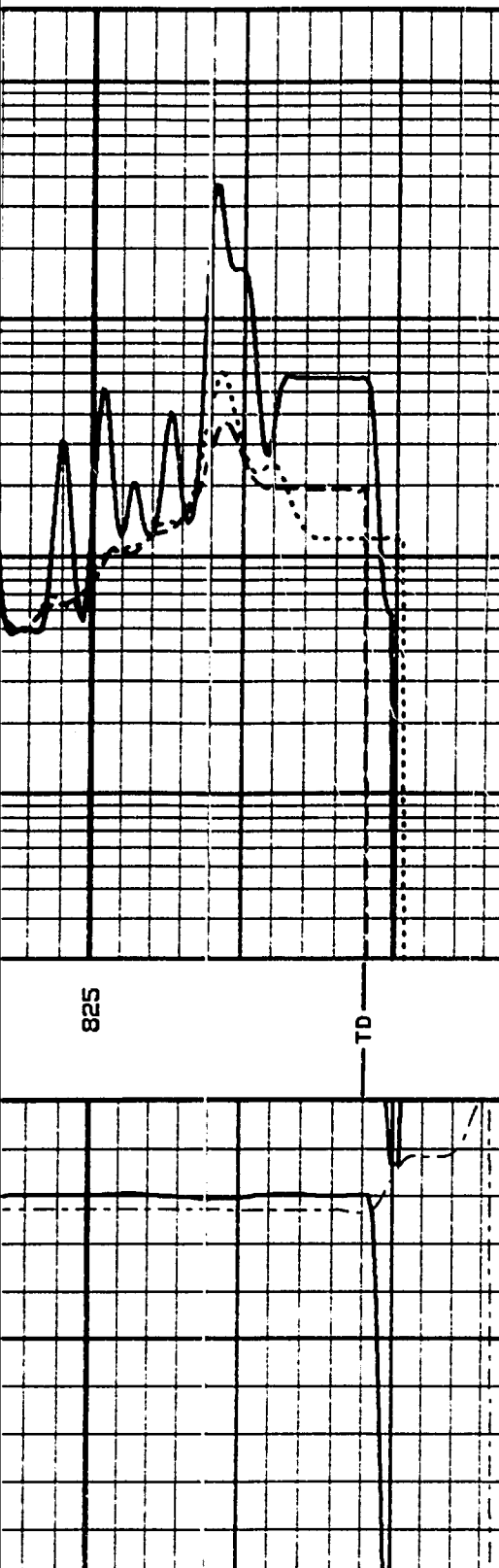
FINISH DEPTH: 719.4 METERS
DIRECTION: UP
DATE: 12/23/97
TIME: 07:38
MODE: TRACE PLAYBACK
17711STIRP

FINISH DEPTH: 719.4 METERS
DIRECTION: UP
DATE: 12/23/97
TIME: 07:38
MODE: TRACE PLAYBACK
17711STIRP

TENSION LBS 10000
GR (API) 150
SP (mV) 50

SFL RESISTIVITY (Ohm-m) 2000.0
20K MEDIUM STI (Ohm-m) 2000.0
20K DEEP STI (Ohm-m) 2000.0





SP	(mv)	60
GR	(API)	150
TENSION	LBS	0

20K DEEP STI	(Ohm-m)	2000.0
20K MEDIUM STI	(Ohm-m)	2000.0
SFL RESISTIVITY	(Ohm-m)	2000.0

START DEPTH: 838.8 METERS DIRECTION: UP DATE: 12/23/97 TIME: 07:35 MODE: TRACE PLAYBACK 177111STIRP

REPEAT PASS VERSION: 1.64

NAME	DESCRIPTION	VALUE	UNITS
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GAPI	GR STANDARD	507.8	CPS
GDLT	GR DELTA	507.8	CPS

11/28/97 09:14 0.0 m Ver 1.64 Job 17711

Simultaneous Triple Induction Shop Calibration

TOOL TYPE: STI-AA SONDE SERIAL NO: 122 FIRMWARE VERSION: 6.0 ELECTRONICS SERIAL NO: 122

LOOP CALIBRATION: Gain and Phase Error of Internal Reference

	10KHz	20KHz	40KHz
Gain:	1.06	0.79	0.70
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00
Phase Error(degrees):	1.06	0.79	0.70
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

SHOP ELECTRONICS CALIBRATION:

	10KHz	20KHz	40KHz
Zero Error(mho/m):	4.2	17.4	10.7
Upper Limit:	100.0	100.0	100.0
Lower Limit:	-100.0	-100.0	-100.0
Gain:	0.997	0.995	0.988
Upper Limit:	1.000	1.000	1.000
Lower Limit:	0.900	0.900	0.900
Phase Error(degrees):	-1.09	0.09	-0.57
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

	10KHz	20KHz	40KHz
Zero Error(mho/m):	7.7	23.0	10.5
Upper Limit:	100.0	100.0	100.0
Lower Limit:	-100.0	-100.0	-100.0
Gain:	0.996	0.991	0.989
Upper Limit:	1.000	1.000	1.000
Lower Limit:	0.900	0.900	0.900
Phase Error(degrees):	-0.95	-0.08	-0.57
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

SFL CALIBRATIONS:

	MIN	MAX	UNITS	GAIN	MIN	MAX
Voltage:	-100.0	100.0	UV	1.043	0.800	1.200
Current:	-0.3	25.0	UA	1.024	0.800	1.200

12/23/97 03:04 290.1 m Ver 1.64 Job 17711

Simultaneous Triple Induction Before Survey Calibration

TOOL TYPE: STI-AA SONDE SERIAL NO: 122 FIRMWARE VERSION: 6.0 ELECTRONICS SERIAL NO: 122

	10KHz	20KHz	40KHz
Zero Error(mho/m):	6.9	15.9	9.5
Upper Limit:	100.0	100.0	100.0
Lower Limit:	-100.0	-100.0	-100.0
Gain:	0.998	0.996	0.988
Upper Limit:	1.000	1.000	1.000
Lower Limit:	0.900	0.900	0.900
Phase Error(degrees):	-1.14	-0.17	-0.54
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

	10KHz	20KHz	40KHz
Zero Error(mho/m):	6.5	15.7	9.5
Upper Limit:	100.0	100.0	100.0
Lower Limit:	-100.0	-100.0	-100.0
Gain:	0.996	0.996	0.990
Upper Limit:	1.000	1.000	1.000
Lower Limit:	0.900	0.900	0.900
Phase Error(degrees):	-1.13	-0.15	-0.57
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

SFL CALIBRATIONS:

	MIN	MAX	UNITS	GAIN	MIN	MAX
Voltage:	-100.0	100.0	UV	1.047	0.800	1.200
Current:	-0.3	25.0	UA	1.021	0.800	1.200

12/23/97 06:30 212.2 m Ver 1.64 Job 17711

Simultaneous Triple Induction After Survey Check

TOOL TYPE: STI-AA SONDE SERIAL NO: 122 FIRMWARE VERSION: 6.0 ELECTRONICS SERIAL NO: 122

	10KHz	20KHz	40KHz
Zero Error(mho/m):	9.0	19.0	11.2
Upper Limit:	100.0	100.0	100.0
Lower Limit:	-100.0	-100.0	-100.0
Gain:	0.994	0.994	0.988
Upper Limit:	1.000	1.000	1.000
Lower Limit:	0.900	0.900	0.900
Phase Error(degrees):	-1.09	-0.09	-0.58
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

	10KHz	20KHz	40KHz
Zero Error(mho/m):	9.1	19.2	11.4
Upper Limit:	100.0	100.0	100.0
Lower Limit:	-100.0	-100.0	-100.0
Gain:	0.994	0.994	0.988
Upper Limit:	1.000	1.000	1.000
Lower Limit:	0.900	0.900	0.900
Phase Error(degrees):	-1.05	-0.09	-0.57
Upper Limit:	10.00	10.00	10.00
Lower Limit:	-10.00	-10.00	-10.00

SFL CALIBRATIONS:

	MIN	MAX	UNITS	GAIN	MIN	MAX
Voltage:	-100.0	100.0	UV	1.047	0.800	1.200
Current:	-0.3	25.0	UA	1.027	0.800	1.200

12/22/97 21:58 0.0 m Ver 1.64-1.64 Job 17711

Gamma Ray Before Survey Calibration

Tool Type: GRT-HA Serial No: 30699 Calibrator No: 210

Background	Calibrator	Standard	Units
197.4	705.2	140.0	GAPI

Delta Counts Per Sec: 507.8 CPS/API = 3.627

O.I. Adaptor Head

Weight	18.0 kg
Length	17 m
Max. Diameter	9.3 cm
Total Stack Height	492.1 kg in air
Total Stack Length	23.08 m

Caliper 20.97 m

2-Arm Caliper

Weight	35.4 kg
Length	2.7 m
Max. Diameter	10.2 cm

Universal G.R

Weight	167.8 kg
Length	8.9 m
Max. Diameter	9.3 cm

Digital Acoustic Tool

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
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Centralizer

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Simultaneous Triple Induction

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Centralizer

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Simultaneous Triple Induction

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Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

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Max. Diameter	11.2 cm

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Centralizer

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Simultaneous Triple Induction

Weight	175.8 kg
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Centralizer

Weight	13.6 kg
Length	1.45 m
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Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.45 m
Max. Diameter	9.3 cm

Simultaneous Triple Induction

Weight	175.8 kg
Length	8.9 m
Max. Diameter	11.2 cm

Centralizer

Weight	13.6 kg
Length	1.4

**SONIC
NEUTRON
DENSITY**

COMPUTALOG

SPECTRAL PE DENSITY
COMPENSATED NEUTRON
GAMMA RAY LOG

PROVINCE NORTH WEST TERRITORIES
FIELD UNDEFINED
WELL OEL ST GL LIARD N-60
COMPANY OCELOT ENERGY INC.

COMPANY OCELOT ENERGY INC.

WELL OEL ET AL LIARD N-60
FIELD UNDEFINED
PROVINCE NORTH WEST TERRITORIES

LOCATION
LAT 60°19'55.263"N, LONG 123°10'36.008"W
Per. Datum Ground Level Elev. 340.00
Log measured from K.B. 4.30 m above Permanent Datum.

Other Services:
DAR/UGR/CAL ST/SP/UGR
ELEV. K.B. 340.00
C.L. 335.70
CBF

Date DECEMBER 22, 1997

Run No. ONE

First Reading 833.2 FROM SAMPLE

Last Reading 249.6 Rm=1.2 @ 21°C

Meters Meas. 583.6 5400 ppm NaCl

Depth Reached 834.0

Bot. Driller 835.0

Csg. Logger 249.6

Csg. Driller 250.0

Fluid Type GEL CHEMICAL

Dens. & Visc. 1100 55

Mud pH 9.5

Mud Water Loss 8.0

Mud Res. 3.50 @ 14 °C

Mud Res. @ BHT 2.15 @ 37 °C

Rmc 2.10 @ 22 °C

Rmf 4.00 @ 17 °C

Rmf @ BHT 2.63 @ 37 °C

Bit Size 222.0mm

Spacing

Operating Time 3.5 hrs.

Unit # 334

Location GRANDE PRAIRIE

Recorded By C. BAST

Witnessed By R. RAINVILLE

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT AND DO NOT WARRANT THE CORRECTNESS OF ANY INTERPRETATION, AND WE SHALL NOT BE RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUFFERED OR INCURRED OR SUFFERED FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS' AGENTS OR EMPLOYEES THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS SET OUT IN OUR CURRENT PRICE SCHEDULE.

REMARKS R19: PRECISION #403
Drilling Stopped 2400 /22 Circulation Stopped 2030 /22 Tool on Bottom 0830 /23 BHT 37 °C
- STI/SP/UGR/DAT/CAL LOGGED IN COMBINATION.

Prints: 2

Scale

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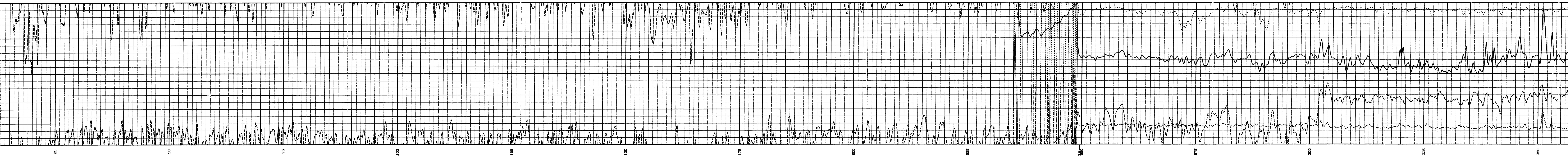
17711SPEMP

FINISH DEPTH: 18.9 METERS
DIRECTION: UP
DATE: 12/29/97
TIME: 11:11
MODE: TRACE PLAYBACK

NEUT. POROSITY (SS)
% POROSITY
45
45
0

DEN. POROSITY (SS)
% POROSITY
10
450
0

PE
-15
-50

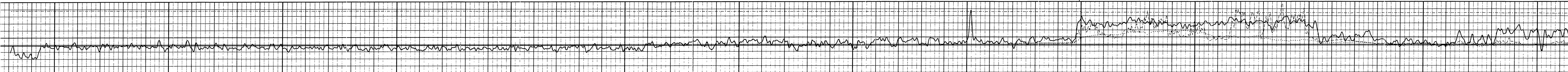


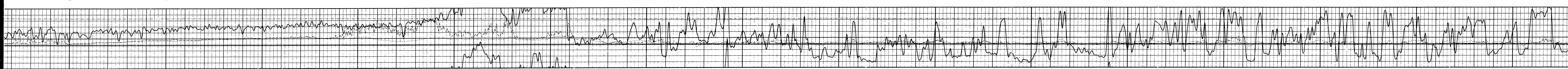
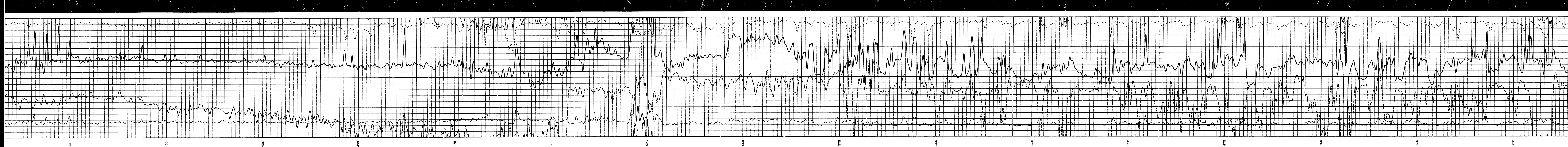
GR
(API)
150
0

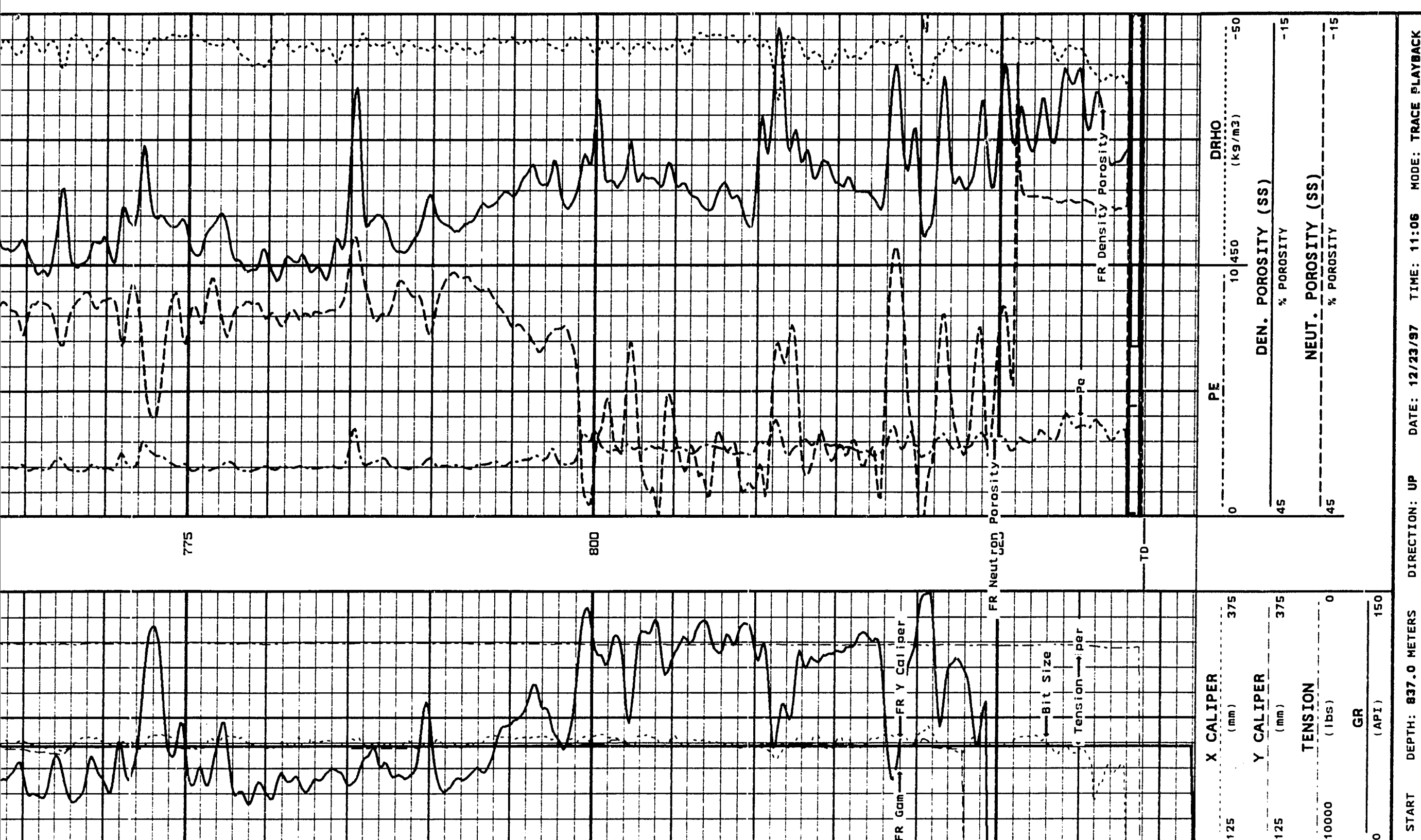
TENSION
(lbs)
10000
0

Y CALIPER
(mm)
125
375

X CALIPER
(mm)
125
375



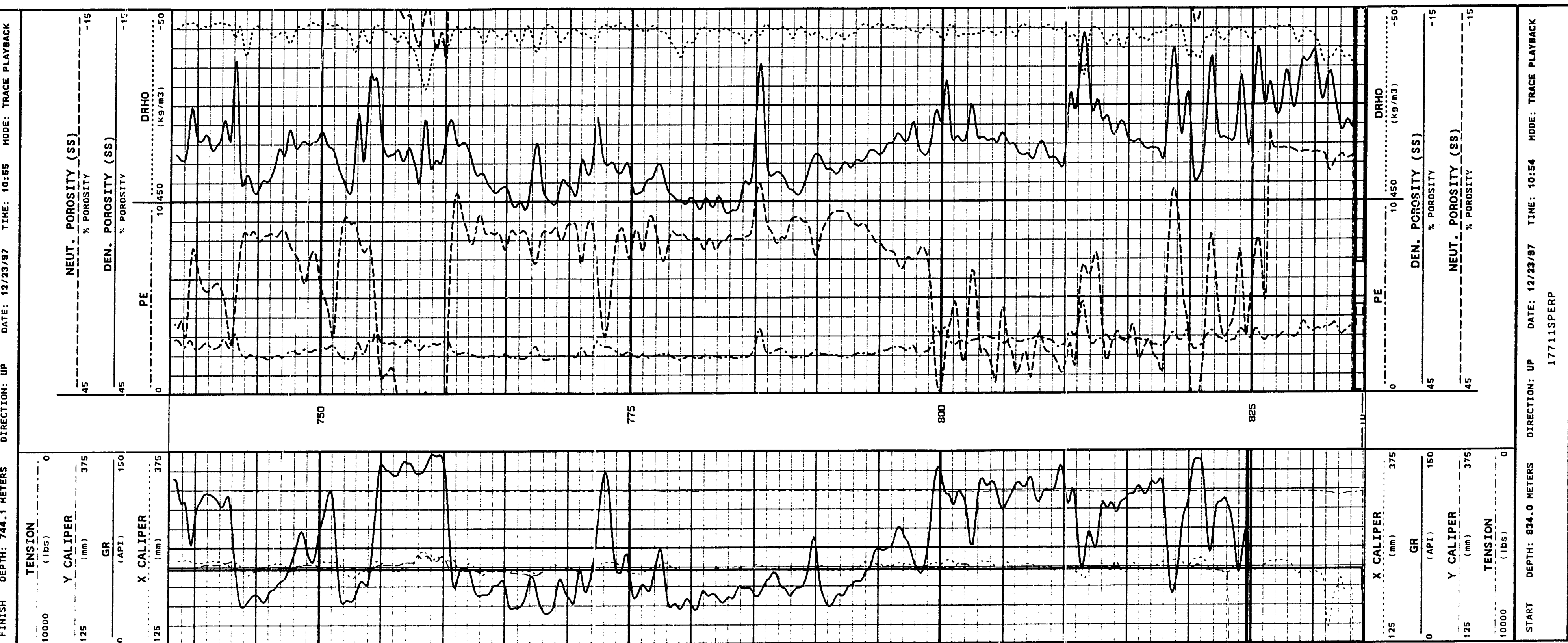




NAME	DESCRIPTION	VALUE	UNITS
TDL	LOGGER	832.0	METERS
BS	BIT SIZE	244.5	MM
GPI	GR STANDARD	140.0	DEG
GDLT	GR DELTA	507.8	CPS
SACC	ACCUMULATION TIME	100	SECONDS
SWI	BARITE ON/OFF SWITCH	1100.00	KG/M3
MM	MUD WEIGHT	1100.00	KG/M3

START	DEPTH: 832.0 METERS	DIRECTION: UP	DATE: 12/23/97	TIME: 11:06	MODE: TRACE PLAYBACK
17711SPERP					

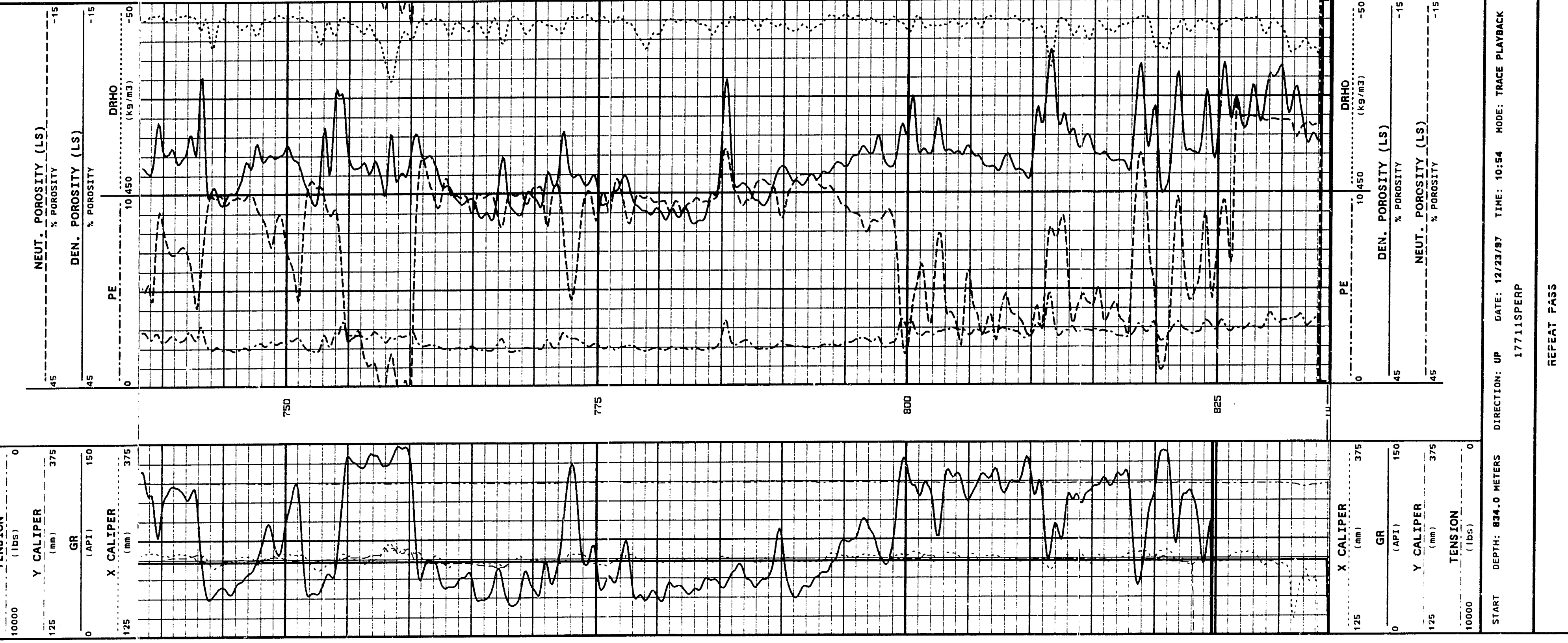
MAIN PASS					
VERSION: 1.64					



NAME	DESCRIPTION	VALUE	UNITS
TDL	LOGGER	834.0	METERS
BS	BIT SIZE	244.5	MM
GPI	GR STANDARD	140.0	DEG
GDLT	GR DELTA	507.8	CPS
SACC	ACCUMULATION TIME	100	SECONDS
SWI	BARITE ON/OFF SWITCH	1100.00	KG/M3
MM	MUD WEIGHT	1100.00	KG/M3

START	DEPTH: 834.0 METERS	DIRECTION: UP	DATE: 12/23/97	TIME: 10:54	MODE: TRACE PLAYBACK
17711SPERP					

REPEAT PASS					
VERSION: 1.64					

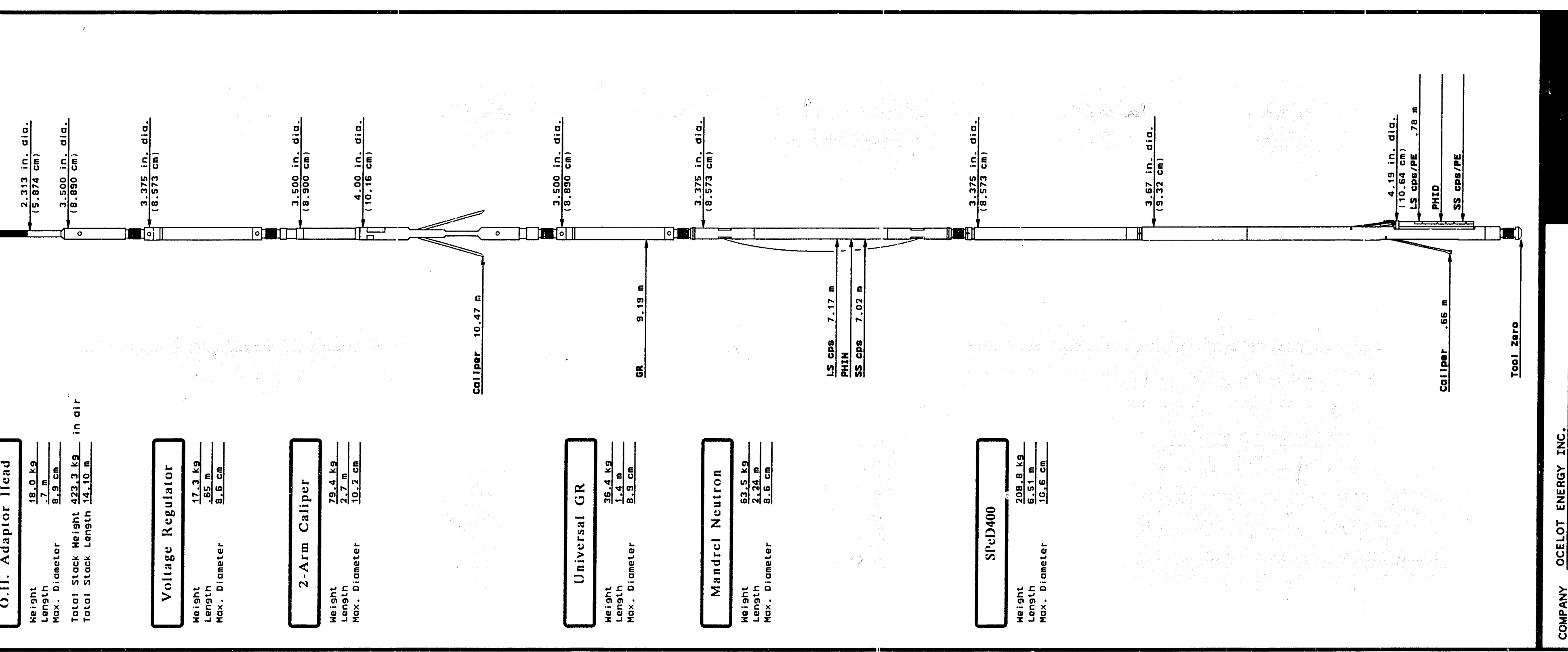


NAME	DESCRIPTION	VALUE	UNITS
TDL	LOGGER	834.0	METERS
BS	BIT SIZE	244.5	MM
GPI	GR STANDARD	140.0	DEG
GDLT	GR DELTA	507.8	CPS
SACC	ACCUMULATION TIME	100	SECONDS
SWI	BARITE ON/OFF SWITCH	1100.00	KG/M3
MM	MUD WEIGHT	1100.00	KG/M3

START	DEPTH: 834.0 METERS	DIRECTION: UP	DATE: 12/23/97	TIME: 10:54	MODE: TRACE PLAYBACK
17711SPERP					

REPEAT PASS					
VERSION: 1.64					

Tool Type: YCA-CC Serial No: 9055			
Measured	Small	Large	Units
CALY	3385.0	5830.0	MV
			178 356 MM
12/22/97	21:58	0.0 m	Ver 1.64-1.64 Job 17711
Gamma Ray Before Survey Calibration			
Tool Type: GRT-HA Serial No: 30899			
Calibrator No: 210			
Background	Calibrator	Standard	Units
197.4	705.2	140.0	GAPI
Delta Counts Per Sec: 507.8 CPS/API = 3.627			
11/30/97	11:02	0.0 m	Ver 1.64-1.64 Job SHOP
Compensated Neutron Shop Calibration			
Tool Type: CNT- Verifier No: 089			
Serial No: 50125 Source No: 71-2A-304N			
Tank Ratio:	Low Porosity	Med Porosity	High Porosity
11.23	11.23	11.23	11.23
LS Detector:	876.4	204.3	90.5
SS Detector:	553.8	282.9	203.1
Tool Ratio:	0.68	1.385	2.244
Tool Porosity:	-0.08	11.23	27.38
Tool Constant: 1.003			
Surface Temperature: 21 Deg C			
SS Detector LS Detector Ratio Porosity			
340.2 CPS	259.1 CPS	1.318	10.00
12/22/97	21:01	0.0 m	Ver 1.64-1.64 Job 17711
Compensated Neutron Before Survey Calibration			
Tool Type: CNT- Verifier No: 089			
Serial No: 50125 Source No: 71-2A-304N			
LS Detector:	254.3	255.3	CPS
SS Detector:	335.6	335.5	CPS
Tool Ratio:	1.320	1.318	SS/LS
Tool Porosity:	10.02	9.99	LM-PU
Tool Constant: 1.003			
12/05/97	13:53:23	0.0 m	Ver 1.64-1.64 Job SHOP
Spectral Pe Density Shop Calibration			
Tool Type: Sped. Firmware Version: 4.0			
Serial No: 110110 Source No: 1951-04			
BKG	AL	AL+FE	MG
CS PK	109.36	105.60	105.98
GAIN	0.165	0.161	0.164
DNPK	11.63	9.75	9.40
RES	9.38	1650	1089
LITH	217	1891	942
LSUC	688	4248	3775
LSUC	1389	109.52	110.20
CS PK	107.50	0.165	0.165
GAIN	0.162	9.58	9.35
DNPK	11.60	3137	2156
RES	9.47	4238	1777
LSUC	689	12110	10848
LSUC	1389	100.00	100.00
ACC	100.00		
Density Calibration			
Spine Angle = Fresh Barile			
Spine Length = 138.77			
LS Slope = -0.2377			
LS Intercept = 3.0119			
SS Slope = -0.4166			
SS Intercept = -0.4166			
12/22/97	22:04:26	0.0 m	Ver 1.64-1.64 Job 17711
Spectral Pe Density Before Survey Tool Check			
Tool Type: Sped. Firmware Version: 4.0			
Serial No: 110110 Source No: 1951-04			
SHOP	BEFORE	AFTER	UNITS
CS PK	109.36	110.88	CH
GAIN	0.165	0.167	CH/Kev
DNPK	11.63	12.01	CH
RES	9.38	10.23	CH
LITH	217	216	CPS
LSUC	688	680	CPS
LSUC	1389	1380	CPS
CS PK	107.50	111.49	CH
GAIN	0.162	0.168	CH/Kev
DNPK	11.60	11.77	CH
RES	9.47	10.84	CH
LSUC	689	650	CPS
LSUC	1386	1370	CPS
ACC	100.00	100.00	SECS
12/22/97	21:56	0.0 m	Ver 1.64-1.64 Job 17711
Spectral Pe Density After Survey Tool Check			
Tool Type: Sped. Firmware Version: 4.0			
Serial No: 110110 Source No: 1951-04			
SHOP	BEFORE	AFTER	UNITS
CS PK	109.36	110.88	CH
GAIN	0.165	0.167	CH/Kev
DNPK	11.63	12.01	CH
RES	9.38	10.23	CH
LITH	217	216	CPS
LSUC	688	680	CPS
LSUC	1389	1380	CPS
CS PK	107.50	111.49	CH
GAIN	0.162	0.168	CH/Kev
DNPK	11.60	11.77	CH
RES	9.47	10.84	CH
LSUC	689	650	CPS
LSUC	1386	1370	CPS
ACC	100.00	100.00	SECS
12/22/97	21:56	0.0 m	Ver 1.64-1.64 Job 17711
Caliper Before Survey Calibration			
Tool Type: XCA-SPEED-AB Serial No: 110			
Measured	Small	Large	Units
CALX	1772.4	3177.2	CPS
			178 356 MM



COMPANY: OCELOT ENERGY INC.

WELL: OET ET AL L'YARD N-60

FIELD: UNDEFINED PROVINCE: N.M.T.

COMPUTALOG

CS400
DIGITAL ARRAY
TOOL
COMSTAR

PROVINCE NORTH WEST TERRITORIES
FIELD UNDEFINED
WELL OEL ET AL LIARD N-60
COMPANY OCELOT ENERGY INC.

COMPANY OCELOT ENERGY INC.
WELL OEL ET AL LIARD N-60
FIELD UNDEFINED
PROVINCE NORTH WEST TERRITORIES

LSO Sec. Top. Rge. Other Services:
Perm. Datum Ground Level Elev. 340.0 STI/SP/UGR/CAL
Log measured from K.B. 4.3 m above SPD/CNT/UGR/CAL
Permanent Datum. ELEV. K.B. 340.00
UHI N/A G.L. 335.70
Licence EL 382 CBF

Date 12/22/97
Run No. 12
Bot. Driller 835.0
Bot. Logger 834.0
First Reading 831.9
Last Reading 249.6
Meters Meas. 582.3
Csg. Driller 250.0
Csg. Logger 249.6
Bit Size 222.000
Fluid Type GEL CHEMICAL
Dens. Visc. 1100.00 55.00
pH Fluid Loss 9.50 8.00
Sample Source Flowline
Rm 3.50 @ 14 °C
Rmf 4.00 @ 17 °C
Rmc 2.10 @ 22 °C
Rm @ BHT 2.63 @ 37 °C
Max Rec. Temp 37
Spacing
Operating Time 505 hrs.
Unit 334
Location GRANDE PRAIRIE
Recorded By C. BAST
Witnessed By R. RAINVILLE

FROM SAMPLE
Re=1.2 @ 21°C
5400 ppm NaCl

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES, OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS SET OUT IN OUR CURRENT PRICE SCHEDULE.

REMARKS: RIG: PRECISION #403
Drilling Stopped 2400 /22 Circulation Stopped 2030 /22 Tool on Bottom 0400 /23 BHT 37 °C

Prints: 2

CHANGES IN MUD TYPE OR NEW SAMPLE

Depth - Driller
Type Fluid In
Hole
Dens.
Visc.
Water Loss
Source of Sample
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Source Rmf Rmc
Rm @ BHT
Rmf @ BHT
Rmc @ BHT

SCALE CHANGES
Interval
Type Log
Scale

EQUIPMENT DATA
Run No. Tool No. Tool Type
ONE 122122 30689 STI UGR
Other 38mm STANDOFFS RA-205-680

REMARKS

MAIN PASS
1:240 SCALE

BIT SIZE
CONSTANT 2 100.00
GR 125

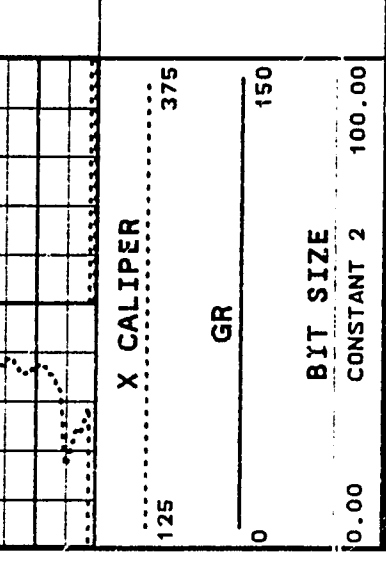
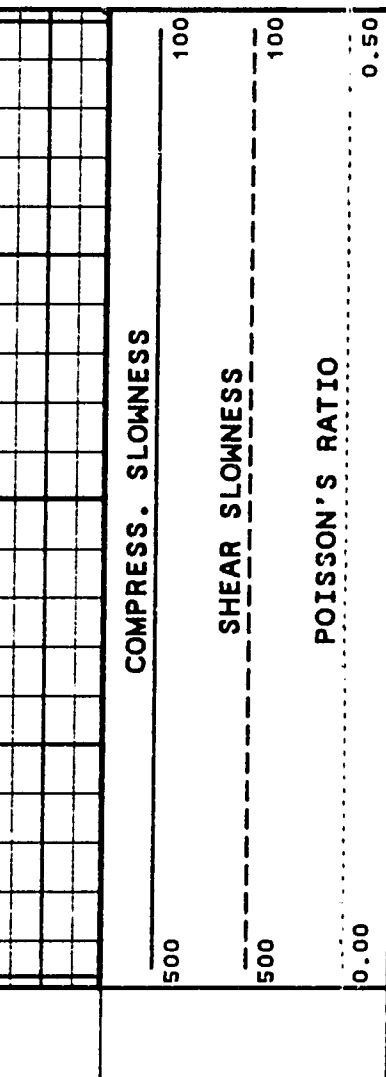
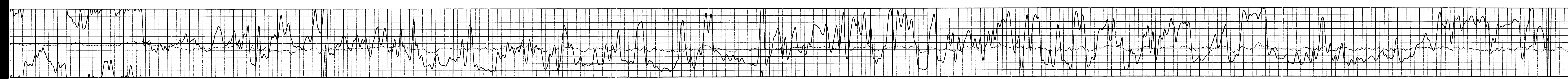
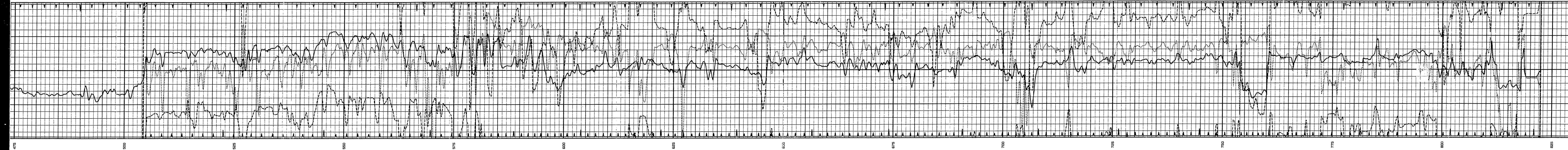
X CALIPER
125 150 175 200 225 250 275 300 325 350 375 400 425 450

POISSON'S RATIO
0.00 0.50

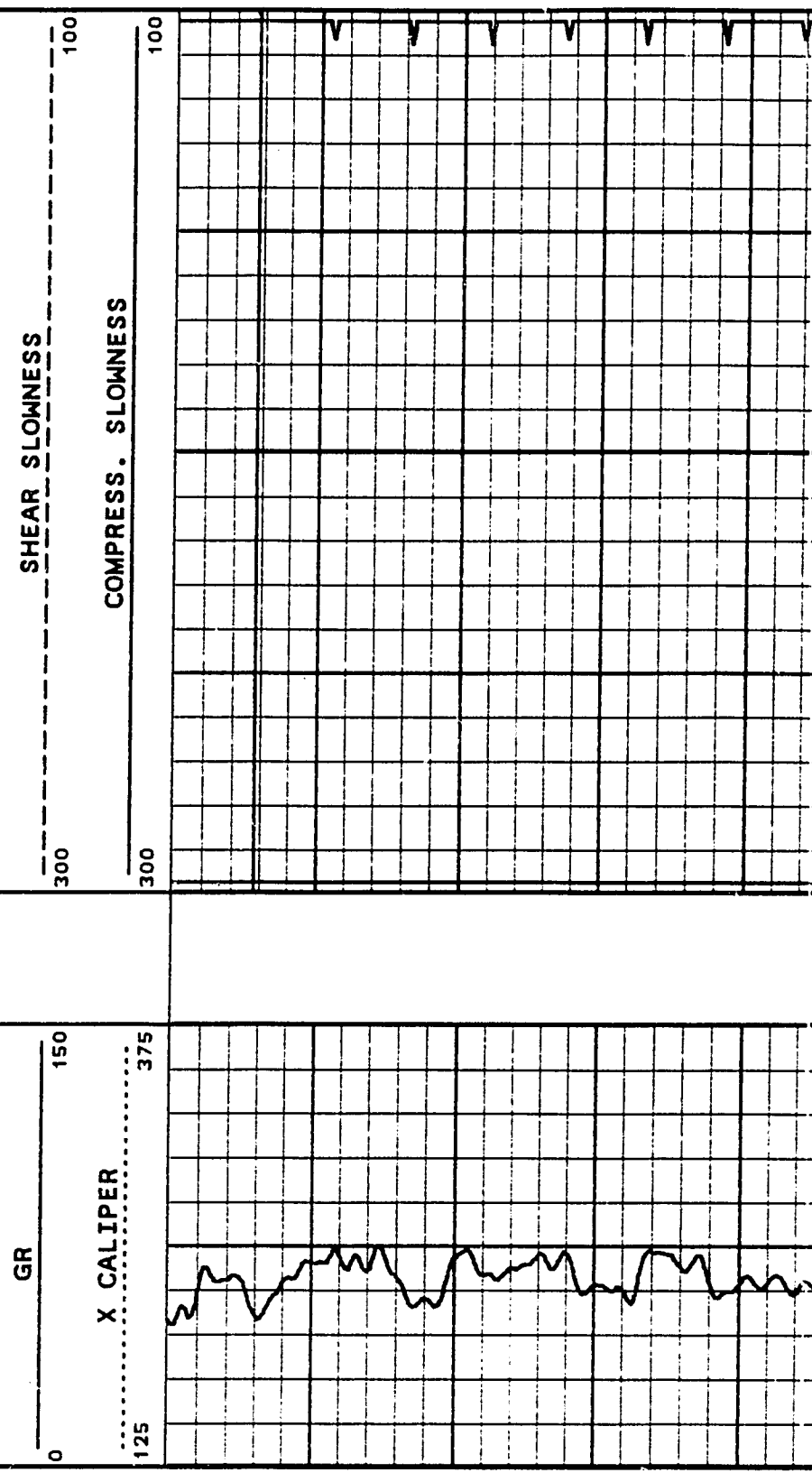
SHEAR SLOWNESS
500 100

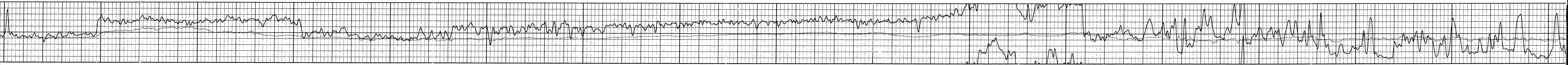
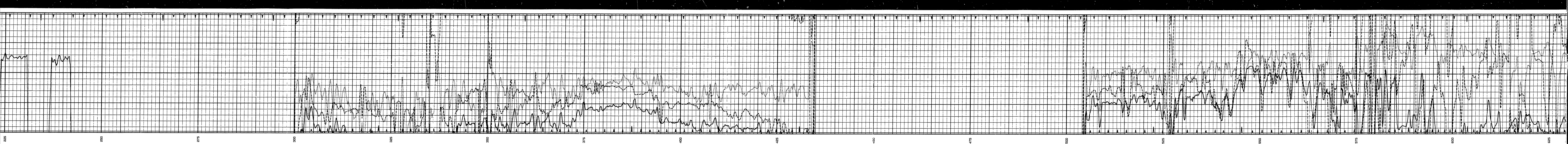
COMPRESS. SLOWNESS
500 100

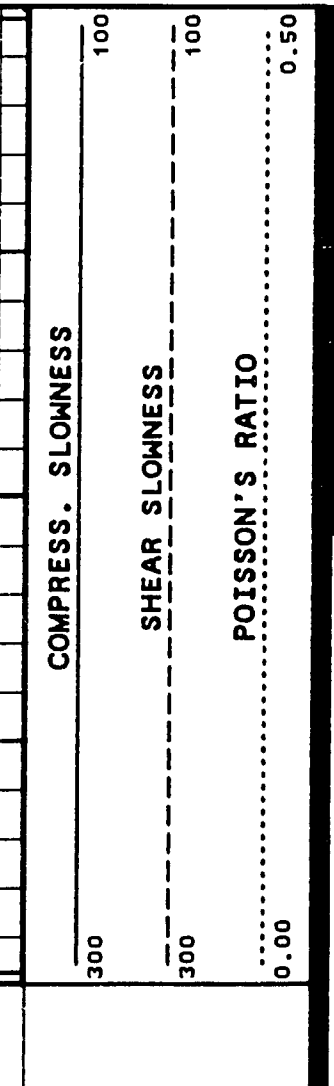
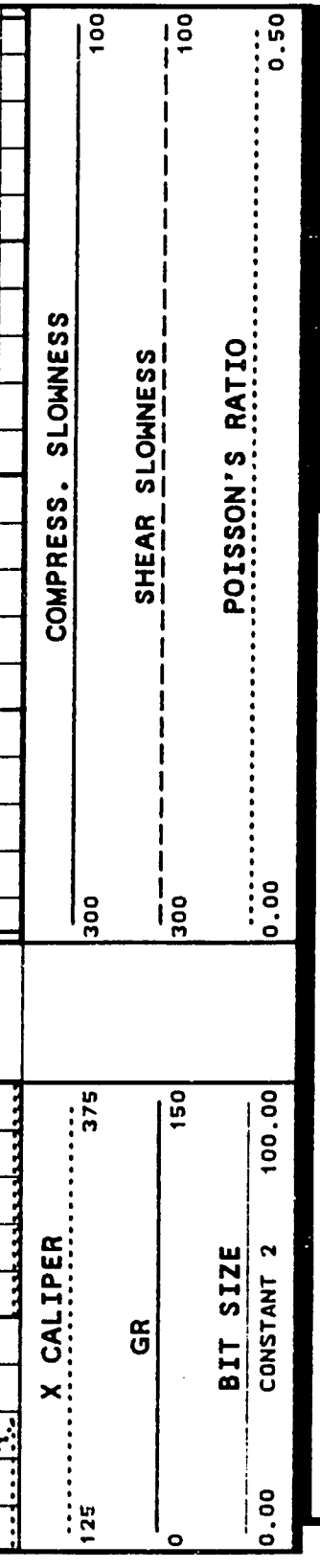
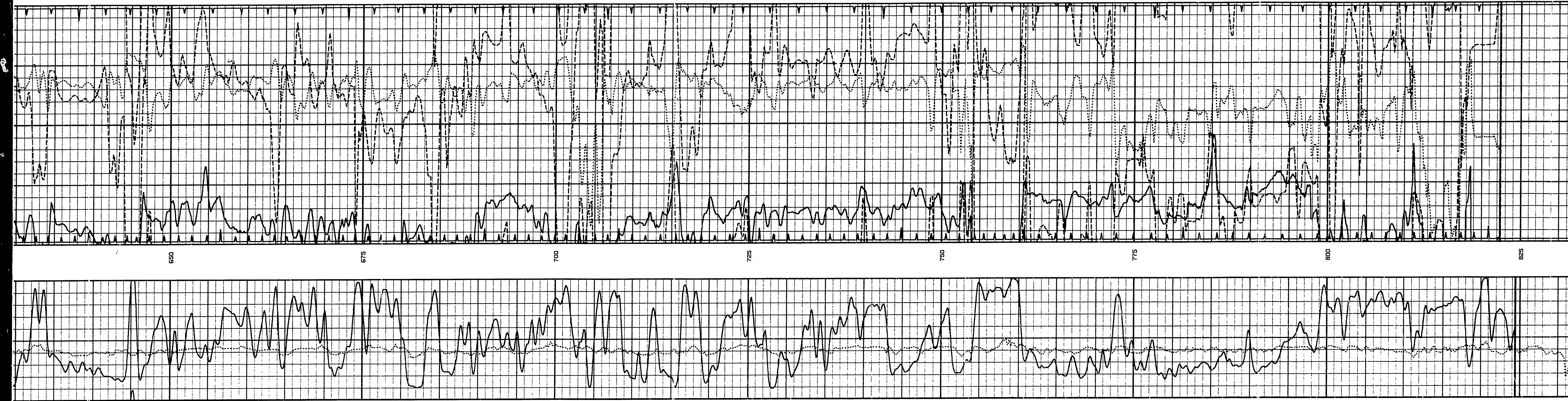
225 250 275 300 325 350 375 400 425 450



REMARKS



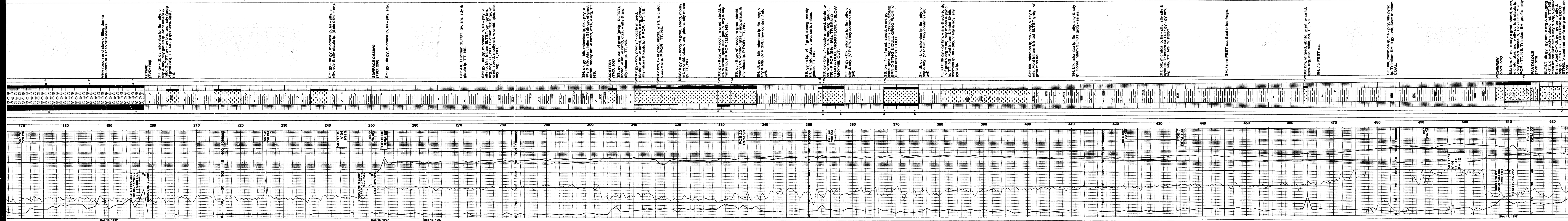


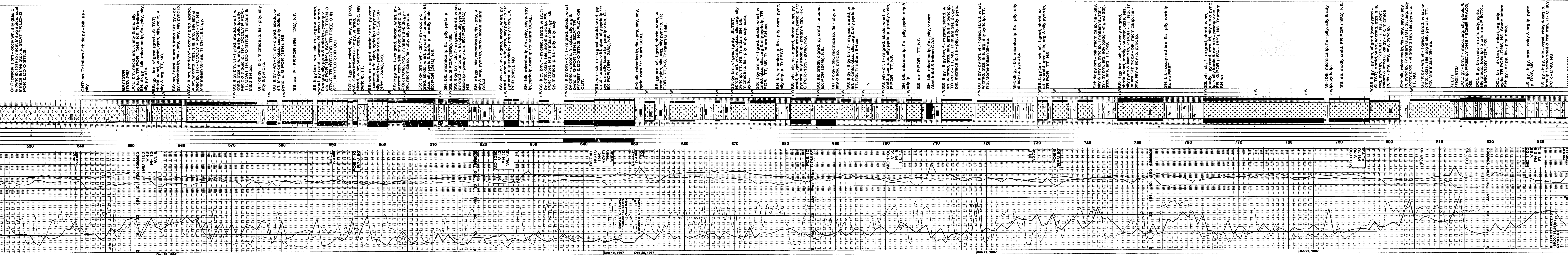


COMPANY		OCELOT ENERGY INC.	
WELL	OEI ET AL LIARD N-60		
FIELD	UNDEFINED	PROVINCE	N.M.T.

COMPUTALOG

MISCELLANEOUS



TOTAL DEFIN
(TVD: 835)