

Chevron Canada Resources

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9211-C4-1-2

Final Well Report

Volume 1



Chevron Hume River I-66

65° 55' 33.91" N

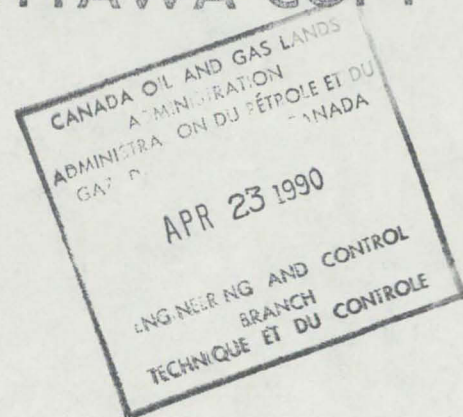
129° 41' 39.43" W

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FINAL WELL REPORT

CHEVRON HUME RIVER I-66

65° 55' 33.91" N

129° 41' 39.43" W

Grid Area 66° 00', 129° 30'

1990-04-16

**MICROFILMED
SUR MICROFILM:**

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FINAL WELL REPORT

INTRODUCTION

i) Summary

The Chevron Hume River I-66 well location is situated in the north-central part of the Landblock and has porous sands of the Lower Cretaceous Gilmore Lake Member as the primary objective.

The Gilmore Lake Member consists predominantly of well sorted, medium grained, clear, quartzose sandstone deposited in a fluvial environment. Porosity in this unit is intergranular, and is expected to average 25%. The trap is stratigraphic with the Imperial shale forming the lateral seal, and the shale and coal of the Upper Gilmore Lake Member creating the vertical seal. The source rock is believed to be the upper shale of the Gilmore Lake.

ii) Operator, Contractor, and Drilling Unit Used

See General Data

iii) Wellsite Operations

(Refer to Appendix 1)

iv) Formations Penetrated

(Refer to Appendices 2, 3 and 4)

v) Testing Results

(Refer to Appendix 5)

vi) Locality Map

(Refer to Appendix 6)

GENERAL DATA

i) Well Name: Chevron Hume River I-66
Exploration Agreement Number: EL322
Federal Designation: N 65° 55' 33.91"/W 129° 41' 39.43"
Unit I, Section 66
Grid Area 66° 00', 129° 30'

ii) Well Location:

Wellsite Location

The field location of the well was determined by locating shot point 5864x, on line 62X. The staked lease size is 200 metres square, oriented to take advantage of the existing terrain. Please refer to the wellsite plat for details.

Legal Survey Requirements

All surveys for exploratory wells must be done in accordance with the "Canada Oil and Gas Land Regulations". Basically the regulations require that a survey be performed to establish the location of the well relative to a grid area, defined by geographic coordinates. In this particular case the survey was completed in two stages: a control survey by GPS techniques to locate legal CLS77 posts near the wellsite, and a conventional survey between these two monuments to locate the well centre and lease boundary.

GPS Survey

The GPS control survey was done using four Trimble 4000ST GPS receivers over a period of two days (October 5 and 6, 1989). Please refer to the wellsite plan for Chevron Mountain River, Unit 0, Section 18, for the traverse details. Two existing control monuments were located (stations 74t087 and 6999029), and two new intervisible monuments were placed approximately 339 metres apart on seismic line 62X, on either side of the well centre.

All of the baseline processing was done using Trimvec-Plus suite of software provided by Trimble Navigation.

Conventional Survey

The layout of the wellsite boundary and well centre between the iron posts was accomplished by conventional means.

Computations

For the GPS data, only non-trivial baselines have been included in the network adjustment; each loop contains vectors from a minimum of at least two independent sessions. The 3-D least squares adjustment and coordinate transformations were done using Geolab; station 74T087 was held fixed in all three dimensions, while station 669029 on the horizontal coordinates were held fixed. No significant misclosures were noted between the control points.

All of the geoid-ellipsoid conversions shown on the wellsite plan were computed using the geoid prediction program from the University of New Brunswick, based on Rapp 78 data.

All of the geographic and UTM coordinates shown on the various tables of the wellsite plan are referred to the Clarke 1866 ellipsoid, and are based on the NAD27 adjustment.

iii) Unique Well Identifier

Drilling Program No.: 9211-C4-1
Land Use Permit No.: N89A100

iv) Operator and Drilling Contractor

(OPERATOR)

Chevron Canada Resources
500 5 Avenue S.W.
CALGARY, Alberta
T2P 0L7
Phone 234-5000

(CONTRACTOR)

Shehtah Drilling Limited
P.O. Box 1467
YELLOWKNIFE, N.W.T.
X1A 2P1

General Manager: Mr. R. F. (Dick) Gajek
Telephone: (403) 873-4225

v) Drilling Unit

Name:	Shehtah 1E
Type:	2 800 m capacity, Troy Series 600 (600 hp)
Registry:	N/A
Year Built:	1982
Shipyard:	N/A

vi) Position Keeping - N/A

vii) Aircraft Support

a) Company

The Chevron Aircraft which supported the drilling operations consisted of a Hawker Siddeley HS-748, a Cessna Citation C-2 and a Twin Otter.

The Hawker Siddeley and Citation were based in Calgary while the Twin Otter remained at Norman Wells.

b) Charter

Charter Aircraft consisted of North-Wright's Twin Otter and Okanagan's Bell 206B Helicopter. These services supplemented our Company aircraft and were contracted as required.

c) Commercial

Canadian Airlines had daily flights from Calgary to Norman Wells return, which were used periodically to transport supplies, groceries, and equipment.

viii) Drilling Unit Performance - N/A

ix) Difficulties and Delays

No difficulties or delays were encountered.

SUMMARY OF DRILLING OPERATIONS

i) Elevations

Ground:	89.69 m
Fill:	0.15 m
KB to Ground:	5.46 m
KB Elevation:	95.30 m

ii) Total Depth

Drilled:	745 m
Logged:	745 m
Plugged Back:	645 m

iii) Date Spudded

1990-01-17-20:00 hours.
Notified COGLA Yellowknife of spud.

iv) Date Drilling Completed

Drilling was completed 1990-01-30.

v) Date of Rig Release

Shehtah Rig 1E was released at 14:00 hrs 1990-02-09.

vi) Well Status

Suspended 1990-02-09. Abandoned 1990-03-03.

vii) Hole Size and Depth

	<u>Hole</u>	<u>Size</u>	<u>Depth</u>
a)	Conductor	660.4 mm (26")	45 m (148 ft)
b)	Surface	444.5 mm (17 1/2")	267 m (876 ft)
c)	Main	215.9 mm (8 1/2")	745 m (2444 ft)

viii) Casing and Cementing Record

HOLE	SIZE	WEIGHT	GRADE	MAKE	NO. OF JTS.	THREAD TYPE	DATE SET	DEPTH SET (m)	CEMENT TYPE & VOLUME
Conductor	508.0 mm	139.9 kg/m	X-56		5	Vetco RL-4S	90-01-18	44.6	3m3 SAPP Water pre-flush fol- lowed by 19.8m3 (24.4t) Alaskan Class "G" Permafrost cement c/w 0.15% permafrost retarder mixed to 1760 kg/m3 slurry density
Surface	339.7 mm	101.2 kg/m	K-55	US Steel	23	ST&C	90-01-22	267.0	3m3 SAPP water pre-flush fol- lowed by 35.2m3 (43.5t) Alaskan Class "G" Permafrost cement c/w 0.15% permafrost retarder mixed to 1760kg/m3 slurry density
Production	177.8 mm	34.3 kg/m	K-55	Algoma	43	LT&C	90-02-07	537.3	3m3 SAPP water pre-flush fol- lowed by 23m3 (30.2t) 0-1-0 Class "G" + 0.5% CFR-3 mixed to 1900kg/m3 slurry density

ix) Side Tracked Hole - N/A

x) Drilling Fluid
(Refer to Appendix 7)

HOLE	SIZE mm (in)	TYPE	PROPERTIES									
			Den- sity	Vis- cosity	W.L.	pH	PV	YP	Gel in/10min	Solids	Oil	Cl
Conduc- tor	660.4 (26)	Gel- Chemical	1090	60	11.6	9.5	25	4.5	1/8	11%	Nil	200
Surface	444.5 (17 1/2)	Gel- Chemical	1100	95	10.8	9.5	36	18.5	7/12	6%	Nil	250
Main	215.9 (8 1/2)	Gel- Chemical	1075	90	8.6	9.0	33	18.5	6/16	4%	Nil	250

xi) Fishing Operations - N/A

xii) Well Kicks - N/A

xiii) Formation Leak-Off Tests (FLOT)

CASING SIZE mm (in)	SHOE DEPTH	FLUID DENSITY (kg/m ³)	MAXIMUM SURFACE PRESSURE (kPa)	EQUIVALENT GRADIENT (kPa/m)	EQUIVALENT MUD DENSITY (kg/m ³)	DATE FLOT CONDUCTED
508.0 (20)	44.6 m				N/A	N/A
339.7 (13 3/8)	267.0 m	1070	1 850	17.4	1775	90-01-24

xiv) Time Distribution

	<u>HOURS</u>	<u>DAYS</u>
<u>DRILLING OPERATIONS</u>		
1. Drilling	66 3/4	2.8
2. Tripping	13 3/4	0.6
3. Coring	64 1/4	2.7
4. Deviation Surveys	5 1/2	0.2
5. Rig Service and Tests	11 3/4	0.5
<u>DEAD TIME</u>		
1. Drillstem Testing	62 3/4	2.6
2. Logging	75 3/4	3.1
3. Circulating Samples	1/2	-
4. Casing, Cementing and WOC	138 1/2	5.8
5. Hole Conditioning	67	2.8
6. Rig Move, Up, Down	145	6.0
7. Completing	22	0.9
<u>LOST TIME</u>		
1. Fishing	-	-
2. Lost Circulation	2 1/2	0.1
3. Repairs	-	-
4. Waiting	10 3/4	0.5
5. Miscellaneous	- 4 1/4	0.2
TOTAL:	691	28.8

xv) Deviation Surveys
(Refer to Appendix 8)xvi) Abandonment Plugs

PLUG NUMBER	PLUG TYPE	INTERVAL	LENGTH (m)	FLUID BETWEEN PLUGS	FORMATION ISOLATED
1	SUS- PEN- SION	745m - 645m	100 m		Bottom hole
EZSV	ABAN- DON- MENT	470m		Inhibited Diesel	
EZSV		467m			
2		467m - 452m	15 m		In 177.8mm prod. csg
3		17m - 7m	10 m	Inhibited Fresh Water	In 177.8mm prod. csg
WELD ON CAP ON 339.7 mm SURFACE CASING 1m BELOW GROUND					

xvii) Composite Well Record

(Refer to Appendix 2)

SUMMARY REPORT

<u>WELL NAME</u>	Chevron Hume River I-66
<u>LOCATION UNIT</u>	Unit I, Sec. 66 Grid Area 66-00-129-30
<u>COORDINATES</u>	65° 55' 33.91" N 129° 41' 39.43" W
<u>GROUND ELEVATION</u>	89.69 m Fill 0.15 m
<u>KB TO GROUND LEVEL</u>	5.46 m
<u>KB ELEVATION</u>	95.30 m
<u>TOTAL DEPTH</u>	745 m
<u>STATUS</u>	Abandoned
<u>SPUDDED</u>	1990-01-17-20:00
<u>RIG RELEASE</u>	1990-02-09-14:00
<u>GEOLOGIST</u>	Dave Hendry
<u>ENGINEERS</u>	Kevin Anderson, Rod Uchytel, Bill Meyer, Bill Marsh
<u>CONTRACTOR</u>	Sheetah 1
<u>MUD LOGGER</u>	Datalog
<u>HOLE SIZE</u>	660 mm Surface to 45 m 444 mm 45 m to 267 m 216 mm 267 m to 745 m
<u>CONDUCTOR CASING</u>	Ran 5 joints of 508 mm, 139.9 kg/m, X-56, Vetco RL-45. Landed at 44.6 m. Total string 44.85 m. Cemented with 24.4 tonnes of Alaskan Permafrost cement plus 0.15% P.F. retarder. C.I.P. 1990-01-18-22:20
<u>SURFACE CASING</u>	Ran 23 joints of 339.7 mm, 101.2 kg/m, K-55, 8rnd, ST & C casing. Landed at 267.00 m. Total string 270.07 m. Cemented with 43.5 tonnes of Alaskan Permafrost (46% excess used due to hole washout) plus 0.15% P.F. retarder. C.I.P. 1990-01-22-14:21

PRODUCTION CASING

Ran 43 joints of 177.8 mm, 34.2 kg/m, K-55, LT & C casing. Landed at 537.3 m. Total string 538.02 m. Cemented with 30.3 tonnes of 0-1-0 class "G" plus 0.5% CFR-3.

C.I.P. 1990-02-08-02:00

ABANDONMENT PLUGS

Plug #1 745 m - 645 m

DITCH SAMPLES

5 m intervals

One set of bagged, vialled and jar samples for Chevron Canada Resources and one set of bagged, vialled and jar samples for the COGLA. Samples stored at ISPG.

SAMPLE DESCRIPTION

0 m - 745 m (refer to Appendix 3)

WELL SITE ROCK LOG DESCRIPTION

0 m - 745 m (refer to Appendix 9)

CORED INTERVALS

<u>Core #1</u>	456 m - 483 m	Cut 27 m	Recovered 27 m
<u>Core #2</u>	483 m - 486.2 m	Cut 3.2 m	Recovered 3.2 m
<u>Core #3</u>	486.2 m - 497.6 m	Cut 11.4 m	Recovered 11.0 m
<u>Core #4</u>	497.6 m - 524.6 m	Cut 27 m	Recovered 20.1 m

LITHOLOGY

(Refer to Appendix 10)

LOST CIRCULATION

@ 693 m pulled wiper trip and regained returns.

FORMATION TESTS

DST #1 658 m to 689.08 m Canol Shales
Inflate Straddle - Baker Oil Tools

Times: 8, 29, 87, 181

Preflow: Weak air blow increasing to strong in 30 seconds. Steady throughout. No gas to surface.

Valve Open: Weak air blow increasing to strong in 45 seconds, steady throughout. No gas to surface.

Recovery: 370 m of fluid consisting of:
40 m of drilling fluid
330 m of muddy water 750 ppm Cl.

Pressures: IHP	7 250	1st IFP	2 621	1st FFP	3 060
(In Kpa) ISIP	5 319	2nd IFP	3 353	2nd FFP	4 353
FHP	5 035	FHP	7 190		

Recorder at 661 m BHT 34.4°C

DST #2 470 m to 486 m Arctic Red Sandstone
Inflate Straddle - Baker Oil Tools

Times: 10, 28, 91, 177

Preflow: Very weak air blow increasing to weak in 10 minutes.
No gas to surface.

Valve Open: Very weak air blow increasing slightly in 15 minutes, then decreasing to nil in 75 minutes. No gas to surface.

Recovery: 15 m gas cut drilling fluid (1000 ppm Cl)

Pressures: IHP	5 216	1st IFP	483	1st FFP	483
(In Kpa) ISIP	2 853	2nd IFP	474	2nd FFP	397
FHP	483	FHP	5 129		

Recorder at 473 m BHT 26.7°C

DST #3 470 m to 486 m Arctic Red Sandstone
Inflate Straddle - Baker Oil Tools

Times: 10, 25, 22, 37, 10, 45, 10, 168

Preflow: Very weak air blow, weak in 3 minutes, very weak in 10 minutes.

Second Flow: Very weak air blow decreasing to nil in 20 minutes.

Third Flow: 20-30 very weak bubbles decreasing to nil in 2 minutes.

Final Flow: No blow. No gas to surface.

Recovery: 30 m slightly gas cut drilling fluid (220 ppm Cl)

Pressures: IHP	5 181	1st IFP	422	1st FFP	442
(In Kpa) ISIP	1 750	2nd IFP	466	2nd FFP	319
2nd SIP	655	3rd IFP	491	3rd FFP	302
3rd SIP	543			4th SIP	500
4th FFP	285	4th SIP	353	4th FHP	5 078

Recorder at 473 m BHT 26.7°C
N/A

BIOSTRATIGRAPHIC DATA

GEOLOGICAL MARKERS
Chevron Hume River I-66
KB Elevation 95 m (Actual KB 95.3 m)

<u>Formation</u>	<u>Samples</u>	<u>Log</u>	
	<u>Depth - m</u>	<u>Depth - m</u>	<u>Elevation- m</u>
1. Arctic Red Sandstone	467	468	-373
2. Gilmore Lake Shale	484.5	484.5	-389.5
3. Gilmore Lake Coal	490	487	-392
4. Gilmore Lake Sand		Absent	
5. Imperial	495	495	-400
6. Canol	669	667	-572
7. Hare Indian Ramp	686.5	687	-592
8. Hare Indian Shale	706	707	-612
TOTAL DEPTH	745	745	-650

(i) LOGGING

By Computalog

DIL-SP-GR	745	m - 267	m
CNL-SDL-GR-XYCAL	745	m - 267	m
CNS-SGR	267	m - 0	m
BCS-GR-CAL	745	m - 267	m
SSS-GR-CAL	267	m - 0	m (1st run)
MGL-GR-CAL	715	m - 660	m
	625	m - 600	m
	505	m - 445	m
SFT	693	m - 678.5	m
	613.4	m - 611	m
	484.4	m - 472.1	m

(ii) FORMATION STIMULATION

See Formation and Production Test Results

iii) Formation and Production Test Results

Completion Summary

Completion, stimulation and abandonment of the Gilmore Lake sand was performed during the period 1990-02-21 to 1990-03-03. The complete daily tour reports are contained in Appendix 12. The following four (4) subsections contain the description of the work performed.

A. Cement Bond Log

A Computalog cement bond-gamma ray (CBL-GR) log was performed over the interval 511 mkb (PBTD) to 209 mkb. The log found the following: good cement bond from 511-485 mb, poor cement across Gilmore Lake sand from 485-478 mkb, very good cement bond from 478-430 mkb and cement top at 424 mkb.

The Computalog CBL-GR log dated 1990-02-25 is contained in Appendix 13.

B. Gilmore Lake Perforation - Bottomhole Pressure Measurement

The Gilmore Lake sand intervals 474.6-475.5 and 478.0-484.4 mkb were perforated with a 127 mm tubing-conveyed gun loaded with 34 gram charges spaced at 20 spm. The cushion present before perforating was an estimated 80 lineal metres of diesel. Surface pressure response following perforation was nil.

Tandem GRC electronic bottomhole pressure gauges were run following perforating. The bottomhole pressure was initially 1032 kPa (abs) (corrected to MPP) declining continuously through the 21-hour measured period to 831 kPa (abs). The pressure was still declining by 6.5 kPa/hour at the end of the period. No extrapolation to a static reservoir pressure was possible.

A measured pressure summary and the GRC pressure data in tabular and plotted form is contained in Appendix 14.

C. Stimulation

The Gilmore Lake sand was stimulated with a total of 9 m³ of 15% Halliburton MCA acid (15% HCl c/w 3% Mor-flo-2 surfactant and HAI-85 inhibitor at 1 litre/m³). The first 2m³ acid was washed past the interval with coil tubing and the final 7 m³ was nitrified at 150 scm/m³ and squeezed to formation.

Well flow back was attempted but resulted in pressure decline to zero with nil sustained flow and no gas to surface. Two dry swabs were pulled from 451 mkb to confirm nil liquid influx.

The Halliburton field stimulation treating log is contained in Appendix 15.

D. Abandonment

Gilmore Lake zonal abandonment was accomplished by setting a Halliburton EZ drill SV bridge plug at 467 mkb followed by pressure testing (7000 kPa) and the dump bailing of 15 lineal metres cement. The surface abandonment included cutting the wellhead off 1 metre below ground level, plugging the well with 10 lineal metres of cement and welding plate steel to the 339.7 mm and 177.8 mm casing stubs. A steel name sign and vertical post were welded to the top casing stub.

The well abandonment schematic detailing all well equipment specification and position is contained in Appendix 16.

APPENDIX 1

WELLSITE OPERATIONS SUMMARY

DATE: 18-01-90 **DAY:** 01 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Spud in at 20:00, drill 660mm hole to 18m in 2.5 hours,
MIDNIGHT DEPTH: 18m **OPERATION:** Work on cellar pumps **PROGRESS:** 18m

DATE: 19-01-90 **DAY:** 02 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Drill ahead to 45.8m, working tight connections, circ at TD, dummy trip, circ, dummy trip, POOH. Rig out rotary table, install false floor, rig up and run 508mm casing, pick up drill pipe and run inside casing, tag into adaptor, circ and work casing, cement casing, CIP: 22:20, WOC.
MIDNIGHT DEPTH: 45m **OPERATION:** WOC **PROGRESS:** 27m

DATE: 20-01-90 **DAY:** 03 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: WOC, drill mouse hole, tear out false floor and landing joint, install diverter, flow line, blowey line, nipple up, make up and run in bottom hole assembly, pressure test, continue making up bottom hole assembly.
MIDNIGHT DEPTH: 45m **OPERATION:** Making up bottom hole assembly **PROGRESS:** 0

DATE: 21-01-90 **DAY:** 04 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Drill out cement, drill ahead in 444mm hole with surveys.
MIDNIGHT DEPTH: 193m **OPERATION:** Drilling **PROGRESS:** 148m

DATE: 22-01-90 **DAY:** 05 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Drill ahead with surveys, drill to 250m, circ, POOH for wiper trip, lay down 9" collars, pick up 6 3/4 collars and monel, RIH surveying, ream bridge at 186m, RIH to bottom, drill to 267m, circ, dummy trip 3 stands, RIH, circ, survey, POOH to log, rig up loggers and log.
MIDNIGHT DEPTH: 267m **OPERATION:** Logging **PROGRESS:** 74m

DATE: 23-01-90 **DAY:** 06 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Continue logging, RIH for clean out trip, rig up and run csg, cement, WOC, unbolt diverter, rough cut csg, remove landing joint and diverter, cut csg and install csg bowl.
MIDNIGHT DEPTH: 267m **OPERATION:** Install Csg Bowl **PROGRESS:** 0

DATE: 24-01-90 **DAY:** 07 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Continue to install Csg bowl, spacer spool, nipple up BOP stack, pressure test.
MIDNIGHT DEPTH: 267m **OPERATION:** Pressure test **PROGRESS:** 0

DATE: 25-01-90 **DAY:** 08 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Pressure test, RIH, pressure test, wait on bolts for ram, repair ram, pressure test, drill out cement, drill ahead to 272m, circ, perform leak off test, POOH to change to 215.9mm bit.
MIDNIGHT DEPTH: 272m **OPERATION:** Tripping **PROGRESS:** 5m

DATE: 26-01-90 **DAY:** 09 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Change bottom hole assembly, RIH, drill 216mm hole, with surveys, weld repair on stand pipe, drill ahead, circ sample, wait on orders, dummy trip, circ, survey, POOH, pick up and make up core barrel, RIH with core barrel.
MIDNIGHT DEPTH: 456m **OPERATION:** RIH with core barrel **PROGRESS:** 184m

DATE: 27-01-90 **DAY:** 10 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: RIH with core barrel, circ, (2m fill), cut core #1, hoist, recover core #1, service barrel, RIH, circ, (7m fill), cut core #2.
MIDNIGHT DEPTH: 484m **OPERATION:** Coring **PROGRESS:** 28m

DATE: 28-01-90 **DAY:** 11 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Cut core #2, circ, hoist and recover core, RIH for core #3, ream 3m to bottom, cut core #3, circ, hoist and recover core, RIH for core #4, ream 8m to bottom, cut core #4.
MIDNIGHT DEPTH: 515m **OPERATION:** Coring **PROGRESS:** 31m

DATE: 29-01-90 **DAY:** 12 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Cut core #4, circ, hoist and recover core, lay down core barrel, RIH with bit, ream 8m fill, drill ahead.
MIDNIGHT DEPTH: 675m **OPERATION:** Drilling **PROGRESS:** 160m

DATE: 30-01-90 **DAY:** 13 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Drill, hoist dull bit, hole tight on trip out, thaw frozen kelly, RIH, ream 60m at 500m, ream and run to bottom, could not break circ at bottom, pull 15 singles and 3 stands to break circ, hole to tight to circ, losing fluid to formation while pumping, trip out of hole to unplug jet, RIH.
MIDNIGHT DEPTH: 690m **OPERATION:** Reaming **PROGRESS:** 15m

DATE: 31-01-90 **DAY:** 14 **RIG:** SHEHTAH 1E
K.B.: 95.30m **GRD:** 89.69m
OPERATIONS SUMMARY: Ream to bottom, drill, loss circulation at 692m, 6-8m loss, build volume and mix sawdust, drill ahead to TD, circ sample, condition mud, dummy trip, circ, survey, hoist to log, rig to log and log.
MIDNIGHT DEPTH: 745m **OPERATION:** Logging **PROGRESS:** 55m

DATE: 01-02-90 DAY: 15 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Finish logging. RIH for clean out trip.
POOH. Rig up loggers and begin logging.
MIDNIGHT DEPTH: 745 m OPERATION: Logging PROGRESS: 0.0 m

DATE: 02-02-90 DAY: 16 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Finish logging. Rig out loggers. Make up BHA and RIH for clean out trip. Circ. and cond. hole prior to running DST#1. POOH. Rig up test tools and RIH with same. Run DST#1 and POOH to fluid. Drop bar and reverse out recovery. Finish POOH.
MIDNIGHT DEPTH: 745 m OPERATION: Testing PROGRESS: 0.0 m

DATE: 03-02-90 DAY: 17 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Finish POOH with DST#1. Service test tools and RIH for DST#2. Run DST#2 and POOH. Service DST tools and replace damaged packer. Make up BHA and RIH. Ream bridge at 685m, ream to bottom. Circ. and cond. hole, WOO. POOH to run DST#3. Held BOP drill and safety meeting.
MIDNIGHT DEPTH: 745 m OPERATION: Testing PROGRESS: 0.0 m

DATE: 04-02-90 DAY: 18 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Finish POOH. Make up test tools and RIH. Run DST#3. Damage to packer when POOH. Rig out and service DST tools. M/U BHA and RIH. Circ. and cond. hole.
MIDNIGHT DEPTH: 745 m OPERATION: Testing PROGRESS: 0.0 m

DATE: 05-02-90 DAY: 19 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Continue reaming and RIH, hole tight in places. Finish RIH, circ. and cond. hole. POOH, work tight hole on trip out. Lay down HWDP and rack back collars. RIH open ended. Hit bridge at 450m. Circ. and work pipe through bridge. RIH, hit bridge at 600m, could not work through. POOH. M/U BHA RIH. Work tight hole from 400m to 645m. Erratic pump pressure. POOH for washout none found. RIH
MIDNIGHT DEPTH: 745 m OPERATION: Hole Cond. PROGRESS: 0.0 m

DATE: 06-02-90 DAY: 20 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Continue RIH. Ream from 400m to 745m. Circ. and cond. hole. POOH, working tight hole. Pull bit into surface casing. RIH and work sloughing hole to 685m.
MIDNIGHT DEPTH: 745 m OPERATION: Hole Cond. PROGRESS: 0.0 m

DATE: 07-02-90 DAY: 21 RIG: SHEHTAH 1E
K.B.: 95.30 m GRD: 89.69 m
OPERATIONS SUMMARY: Continue reaming and working tight hole to bottom. Circ. and cond. hole. POOH. RIH open ended and set abandonment plug #1 from 745m to 645m. POOH. Circ. hole clean, finish POOH. Rig to and run 177.8 mm casing, landed at 537.3 m. Rig out power tongs and rig up cementers.
MIDNIGHT DEPTH: 745 m OPERATION: Run Casing PROGRESS: 0.0 m

CHEVRON HUME RIVER 1-66

DATE: 08-02-90

DAY: 22

RIG: SHEHTAH 1E

K.B.: 95.30 m

GRD: 89.69 m

OPERATIONS SUMMARY: Held safety meeting prior to cement job. Cement 177.8 mm casing string with 30.2 t of class "G" cement with 0.5% CFR-3. Bumped plug, pressured up, held and released, float held. No cement returns. Top calculated at approximately 330m. Break apart stack, lift stack and set slips. Rough cut casing, installed supp. pack-off and wellhead. Pressure test seals on wellhead. Completed wellhead assembly. Remove stack from sub. Cleaned mud tanks and sub and floor areas. Tear out floor pre-fabs.

MIDNIGHT DEPTH: 745 m

OPERATION: Tearing Out PROGRESS: 0.0 m

DATE: 09-02-90

DAY: 23

RIG: SHEHTAH 1E

K.B.: 95.30 m

GRD: 89.69 m

OPERATIONS SUMMARY: Continue tearing out. Cleaned and drained boilers. Cemented mousehole. Rigged down satellite communications. Prepared to lower derrick. Rig Released at 1400 hours 90-02-09.

MIDNIGHT DEPTH: 745 m

OPERATION: Rig Release PROGRESS: 0.0 m

APPENDIX 2

COMPOSITE WELL RECORD

(with logs)

APPENDIX 3

SAMPLE DESCRIPTION

- 10-20 SHALE: medium grey, slightly micromicaceous, slightly silty with silt beds, grading to siltstone, slight disseminated pyrite and blebs, non-calcareous, very slightly bentonitic, subblocky, firm. With 5% brown, dolomitic concretions, microcrystalline, hard, slightly silty with silty beds.
- 20-30 SHALE: as above, trace bentonitic, non-calcareous, disseminated pyrite and blebs, dolomite concretions, slightly silty with silt beds, grading to siltstone, subblocky.
SILTSTONE: 10%, lighter grey, argillaceous, micromicaceous, trace calcareous, trace glauconite, trace pyrite, tight, trace sandy.
- 30-40 SHALE: generally as above, trace dolomite concretions, decreasing silty, trace siltstone.
- 40-45 SHALE: as above, dolomite concretions, minor siltstone.
- 45-50 POOR SAMPLE AFTER CASING
SHALE: medium grey, disseminated pyrite, trace pyrite blebs, micromicaceous, slightly silty to silty, grading to siltstone.
DOLOMITE: 30%, brown argillaceous, microcrystalline, trace silty, trace pyrite, concretions and possibly laminae.
SILTSTONE: 20%, light grey, slightly argillaceous, trace micaceous, blocky, tight.
- 50-60 SHALE: medium grey, micromicaceous, trace disseminated pyrite, predominantly only trace silty, subblocky to subplaty, firm, decrease dolomitic concretions to trace.
SILTSTONE: 15%, light grey, slightly argillaceous, trace glauconite, slightly micromicaceous, blocky, tight.
- 60-70 FAIRLY COARSE SAMPLE
SHALE: as above, silty beds, grading to siltstone.
SILTSTONE: decrease abundance, darker, increasing argillaceous, grading to silty shale.
- 70-80 SHALE: as above, minor silt beds, trace siltstone. With 5% brown, argillaceous, dolomitic concretions, possibly ironstone.
- 80-90 POOR SAMPLE mostly coarse material
SHALE: slightly micromicaceous, pyritic locally, slightly silty, minor siltstone, trace plant flakes.
DOLOMITE: 35%, medium brown, microcrystalline, argillaceous, ironstone concretions, part with dark brown pellets, part with disseminated pyrite and blebs, minor part silty, block, hard, tight, no stain or cut.
- 90-100 SHALE: becoming dark brownish grey, slightly silty, becoming slightly dolomitic/sideritic, disseminated pyrite, micromicaceous, trace concretions, subblocky.
- 100-110 SHALE: medium grey, silty, slightly micromicaceous, trace dolomitic, minor dolomitic/sideritic shale, trace carbonaceous plant flakes, subblocky, firm.
- 110-120 SHALE: medium grey, brownish grey, becoming slightly sideritic, decrease to slightly silty, trace disseminated pyrite, trace micromicaceous.
- 120-130 SHALE: only part trace sideritic/dolomitic, decreasing silt, trace glauconite, trace pyrite, subplaty to subblocky.

- 130-140 SHALE: medium grey, trace sideritic/dolomitic, slightly micromicaceous, minor slightly silty, subblocky to subplaty.
- 140-150 SHALE: slightly pyritic, trace micromicaceous, slightly sideritic, trace glauconitic shale. Few brown, microcrystalline, sideritic/dolomitic concretions.
- 150-160 SHALE: slight disseminated pyrite, part slightly sideritic.
- 160-170 SHALE: only trace silty, trace micromicaceous, slight disseminated pyrite, pyrite blebs, trace shale with glauconite grains.
- 170-180 SHALE: medium grey, minor dark grey, trace bentonitic, non-silty, becoming brittle, subplaty, few siderite/dolomite concretions.
- 180-190 SHALE: as above.
- 190-200 SHALE: medium grey, brittle, trace bentonitic, trace pyritic, with 5% brown, microcrystalline, siderite/dolomite concretions.
- 200-210 SHALE: becoming predominantly dark grey, trace bentonitic, non-calcareous, non-dolomitic, trace pyrite, with dolomite/siderite concretions, slightly argillaceous and silty.
- 210-220 SHALE: medium to dark grey, becoming slightly silty to silty again, slightly micromicaceous, trace bentonitic, trace pyrite, subblocky. Few siderite/dolomite concretions.
- 220-230 SHALE: decrease silt, slightly disseminated pyrite, trace micromicaceous, part darker, trace sideritic, trace glauconite grains, pyrite blebs.
- 230-240 SHALE: medium grey, part slightly silty, slightly pyritic, trace carbonaceous and micromicaceous specks, trace bentonitic. With 5% siderite/dolomite concretions.
- 240-250 SHALE: increasing silt, slightly micromicaceous, trace pyrite, trace sideritic, subblocky.
- 250-260 SHALE: medium grey, increasing silt, silty to very silty, slightly micromicaceous, part with glauconite grains, trace sideritic, blocky.
- 260-267 SHALE: silty to very silty, minor grading to argillaceous siltstone, micromicaceous, trace glauconite grains, trace pyrite, very slightly sideritic, blocky, firm.
- 267-272 SHALE: medium grey, very silty, grading to argillaceous siltstone, micromicaceous, slightly disseminated pyrite, trace carbonaceous specks, firm, blocky to subblocky.
- 272-275 SHALE: silty to very silty, part grading to siltstone, slight disseminated pyrite.
- 275-280 SHALE: medium grey, decrease silt, slightly silty to silty, slightly micromicaceous, very slightly pyritic, trace carbonaceous specks.
- 280-285 SHALE: medium grey, very slightly silty, slightly micromicaceous, trace pyrite, trace carbonaceous, becoming subplaty to platy.

- 285-290 SHALE: slightly silty, very slight disseminated pyrite and blebs, slightly micromicaceous, trace carbonaceous, subblocky to subplaty, trace brown, microcrystalline dolomite concretions.
- 290-295 SHALE: slightly lighter medium grey, trace silty, locally slight pyrite blebs, subplaty.
- 295-305 SHALE: trace silty, locally slightly pyritic, subplaty.
- 305-305 SHALE: as above.
- 335-310 SHALE: trace silty, trace micromicaceous, subplaty.
- 310-315 SHALE: medium grey, trace silty, trace pyrite and micromicaceous, subplaty, very slightly bentonitic.
- 315-320 SHALE: trace silty, trace pyrite, subblocky to subplaty. With 2% brown, microcrystalline, dolomite concretions.
- 320-325 SHALE: medium grey, trace silty, trace micromicaceous, very slightly bentonitic, trace carbonaceous specks, pyritic blebs and tubes, trace dolomite/siderite concretions.
- 325-330 SHALE: as above, only trace silt, slightly bentonitic, subblocky to subplaty.
- 330-335 SHALE: slight disseminated pyrite, and pyritic microfossils, trace carbonaceous specks, trace silty, platy.
- 335-340 SHALE: trace pyritic, platy, only trace silty.
- 340-345 SHALE: medium grey, becoming subblocky to subplaty.
- 345-350 SHALE: very slightly bentonitic, pyrite blebs after fossils, trace carbonaceous specks, subplaty.
- 350-355 SHALE: as above, trace brown dolomite concretions.
- 355-360 SHALE: subplaty, slight increase pyrite blebs and pyritic microfossils.
- 360-365 SHALE: pyritic tubes and blebs, trace carbonaceous specks.
- 365-370 SHALE: medium grey, slight pyrite blebs and tubes, part with disseminated pyrite, trace carbonaceous specks, subplaty to platy.
- 370-375 SHALE: as above, trace brown dolomite concretions.
- 375-380 SHALE: as above, pyrite blebs, tubes, trace disseminated pyrite, subplaty, trace dolomite concretions.
- 380-385 SHALE: as above, slight pyrite, trace carbonaceous specks, trace silty.
- 385-390 SHALE: slight increase in pyrite, carbonaceous specks, subplaty.
- 390-395 SHALE: trace silty, slight pyrite tubes and blebs, slight carbonaceous specks, subplaty.
- 395-400 SHALE: as above, only trace silty.

400-405 SHALE: as above, trace silty, slight carbonaceous specks.

405-410 SHALE: subplaty, trace silty, slight carbonaceous specks, pyrite blebs, as above. Begin 5% brown, dolomite concretions, slightly sideritic.

410-415 SHALE: disseminated pyrite and blebs, slight carbonaceous specks, trace silty, trace brown dolomite concretions.

415-420 SHALE: as above, pyrite, trace dolomite concretions.

420-425 SHALE: very slightly bentonitic, trace silty, rare glauconite.

425-430 SHALE: medium grey, part with slight increase in silt, disseminated pyrite and blebs, trace carbonaceous specks.

430-435 SHALE: medium grey, slight increase in silt, trace to slightly silty, increase micromicaceous, slight carbonaceous specks, pyritic as above.

435-440 SHALE: slightly silty throughout, trace glauconite, few laminae very silty and trace sandy, 1% floating free grains of quartz, very fine to fine grained, well rounded. Trace microcrystalline dolomite concretions.

440-445 SHALE: darker grey, slightly silty to very silty, disseminated pyrite and blebs, carbonaceous specks. Part very glauconitic shale, micromicaceous, silty, trace sandy streaks, occasional floating, well rounded quartz to fine grained. Trace grey, very argillaceous, very fine grained sandstone, tight, no stain or cut.

445-450 SHALE: increasing silty, silty to very silty, decreasing glauconite, disseminated pyrite and blebs, decreasing sandy streaks, trace gastropod.
SILTSTONE: thin bed, dark brownish grey, very argillaceous, slightly sandy, micaceous, trace glauconite, grading to sandy, silty shale. Trace grading to argillaceous, silty, sandstone, very fine to fine grained, poorly sorted, trace glauconite and pyrite, tight, no stain or cut.

450-455 SHALE: disseminated pyrite, pyritic blebs and tubes, silty, part sandy, scattered floating fine to medium quartz grains, trace glauconite, carbonaceous specks, trace very thin coal laminae. Minor grading to argillaceous siltstone.

SANDSTONE: trace amounts, very fine to fine grained, quartz, very argillaceous, very silty, trace glauconite, subangular, poorly sorted, tight, no stain or cut.

456-483m SEE CORE DESCRIPTION #1

ARCTIC RED SANDSTONE 467.1m (-371.8m)

483-486.2m SEE CORE DESCRIPTION #2

GILMORE LAKE SHALE 484.45m (-389.15m)

486.2-497.6m SEE CORE DESCRIPTION #3

GILMORE LAKE COAL 489.80m (-394.50m)

IMPERIAL SHALE 494.65m (-399.35m)

497.6-524.6m SEE CORE DESCRIPTION #4

- 525-530 SHALE: medium grey, platy, trace micromicaceous, trace carbonaceous specks, rare pyrite, minor slightly silty shale.
- 530-535 SHALE: medium grey, slightly brownish, slight carbonaceous specks and micromicaceous, very slightly silty, trace sideritic shale, trace pyrite.
- 535-540 SHALE: as above, slightly silty beds, trace sandy laminae.
- 540-545 SHALE: as above, occasional carbonaceous specked partings.
- 545-550 SHALE: increase silty beds, minor (2%) grading to argillaceous, sandy siltstone, carbonaceous specked, no stain or cut.
- 550-555 SHALE: micromicaceous, slight carbonaceous specked, decrease silty beds, only trace sandy, trace sideritic.
- 555-560 SHALE: as above.
- 560-565 SHALE: only trace silty shale, slightly micromicaceous and trace carbonaceous specks, platy.
- 565-570 SHALE: minor silty shale, slightly dolomitic and part slightly sideritic.
- 570-575 SHALE: medium grey, platy and subplaty, few silty laminae, slightly micromicaceous, very slightly dolomitic and part sideritic.
- 575-580 SHALE: decreasing silty, trace ironstone laminae.
- 580-585 SHALE: slight increase silty, few siltstone laminae, very slightly dolomitic/sideritic.
- 585-590 SHALE: slightly micromicaceous and carbonaceous specked, part slightly silty, subplaty, trace dolomitic/sideritic.
- 590-595 SHALE: as above, only trace silty.
- 595-600 SHALE: as above, trace sideritic nodules.
- 600-605 SHALE: slight increase silty shale beds, (5%).
- 605-610 SHALE: generally as above, silty beds, slightly carbonaceous specked, trace siltstone laminae.
- 610-615 SHALE: silty beds, trace pyrite, slightly micromicaceous and carbonaceous specked.
SILTSTONE: brown, sandy in part, grading to silty sandstone, quartz, argillaceous, micaceous, slightly pyritic, trace dolomitic, subangular, poor sorting, tight, no stain or cut.
- 615-620 SHALE: as above.
SILTSTONE: 40%, brown, argillaceous, micaceous, carbonaceous/bitumen specked, very sandy, grading to silty, very fine grained sandstone, dolomitic, trace calcareous, tight, weak cut, no streaming.
- 620-625 SHALE: as above, slightly silty with silty beds.
SILTSTONE: 10%, darker brown-black, decreasing sandy, dolomitic, increasing carbonaceous/bitumen specked, argillaceous, micaceous, tight, no stain or cut.

- 625-630 SHALE: slightly micromicaceous, carbonaceous specked, trace silty, with 20% silty beds, 4% siltstone laminae, carbonaceous, pyritic, argillaceous, tight, no stain or cut.
- 630-635 SHALE: as above, disseminated pyrite, silty beds, few siltstone laminae, carbonaceous plant remains.
- 635-640 SHALE: as above, silty beds, few siltstone laminae.
- 640-645 SHALE: as above, silty beds, trace siltstone, carbonaceous specks.
- 645-650 SHALE: as above, silty beds.
SILTSTONE: 10%, argillaceous, micaceous, carbonaceous specked, tight, no stain or cut.
- 650-655 SHALE: decreasing silty, no siltstone, trace pyritic, trace micromicaceous.
- 655-660 SHALE: minor silty beds, trace siltstone may be all cavings, part slightly pyritic, carbonaceous specked, trace brown sideritic nodules.
- 660-665 SHALE: as above, minor silty shale, slight disseminated pyrite, sideritic nodules.
- 665-670 SHALE: medium grey, disseminated pyrite, carbonaceous specks, begin dark carbonaceous partings, part dolomitic/sideritic shale and nodules.
Also 10% dark grey shale, slightly bituminous, disseminated pyrite, barely visible cut.

CANOL SHALE 669m (-573.7m)

- 670-675 SHALE: dark grey, black, bituminous, trace very thin coal laminae, disseminated pyrite, pyrite blebs, trace chert pyrite nodules, blocky, moderately hard, fair to good cut.
- 675-680 SHALE: black, very pyritic, bituminous/carbonaceous, blocky, part very hard, siliceous, barely visible cut.
- 680-685 SHALE: black, pyritic, bituminous, blocky, part very hard and siliceous, fair cut.

HARE INDIAN RAMP 686.5m (591.2m)

- 685-690 SANDSTONE: very fine grained, brown, clear quartz, silty, very clean, trace mica, bivalve and crinoid fragments, calcareous, slightly dolomitic, slightly siliceous, trace pyrite, dead brown stain coating grains, tight to very poor, ineffective porosity at best, no cut, subangular, well sorted.
Also darker sandstone, silty, argillaceous, grading to sandy siltstone, pyritic, tight.
Trace white, microcrystalline, silty, fossiliferous limestone.
SHALE: as above.
- 690-692 LIMESTONE: white, microcrystalline, clean, very pyritic, pyrite blebs, trace brachiopods, silty, trace sandy, tight.
SILTSTONE: very light brownish, clean, trace sandy, very calcareous, tight, no stain or cut.

692-695 POOR SAMPLE, lost circulation, poor returns, mostly sawdust.

LIMESTONE: light brown, microcrystalline, silt, locally pyritic, slightly argillaceous, tight. Trace limestone packed with dark brown and black, well rounded, argillaceous pellets, silty, tight.

SHALE: thin bed, light grey, disseminated pyrite and blebs, slightly silt, trace sandy, slightly calcareous.

695-700 LIMESTONE: light to medium brownish grey, microcrystalline, slight disseminated pyrite, part with fossil spines and pellets, tight, no stain or cut.

SILTSTONE: 10%, light grey, calcareous, disseminated pyrite, slightly argillaceous.

SHALE: light grey, pyritic, part silty.

700-705 LIMESTONE: light to medium brownish grey, microcrystalline, silty, increasing argillaceous, disseminated pyrite, tight.

SHALE: 15%, light grey, silty, calcareous, pyritic.

SILTSTONE: 10%, argillaceous, calcareous, pyritic.

HARE INDIAN SHALE 707m (-611.7m)

705-710 LIMESTONE: slightly darker, medium brownish grey, microcrystalline, silty to very silty, argillaceous, grading to siltstone, hard, blocky, tight. Also light to medium brown limestone as above, cleaner, slightly silty, pyritic.

SHALE: 30%, brownish grey, very pyritic, calcareous, silty, trace crinoids.

710-715 LIMESTONE: medium brown, increasing silty, argillaceous, grading to marlstone and shale, hard, blocky, tight.

SHALE: 30%, pyritic, calcareous, silty.

SILTSTONE: 10%, argillaceous, calcareous.

715-720 SHALE: medium brownish grey, silty to very silty, grading to siltstone, disseminated pyrite, calcareous.

LIMESTONE: argillaceous to very argillaceous, silty, probably grading to marlstone, blocky, tight.

SILTSTONE: 10%, argillaceous, calcareous.

720-725 SHALE: calcareous, silty, part grading to very argillaceous siltstone.

LIMESTONE: increasing argillaceous, silty to very silty, grading to marlstone and shale.

725-730 SHALE: slightly darker, very calcareous, silty, part grading to siltstone, blocky, hard.

LIMESTONE: increasing argillaceous, silty to very silty, grading to marlstone and shale.

730-735 SHALE: very calcareous, silty, part grading to siltstone.

LIMESTONE: as above, grading to silty marlstone.

735-740 SHALE: medium brownish grey, decreasing silt, slightly pyritic, calcareous, subplaty.

LIMESTONE: decreasing abundance, very argillaceous, silty, grading to marlstone and shale.

740-745 SHALE: silty, calcareous, part grading to marlstone.

TOTAL DEPTH 745m

APPENDIX 4

CORE ANALYSIS

AGAT Laboratories
Core Services Division

3

CORE ANALYSIS REPORT

CHEVRON HUME RIVER I-66
N65-55 W129-41

CORE 1: 456.00 - 483.00 m
CORE 2: 483.00 - 486.20 m
CORE 3: 486.20 - 497.60 m

Prepared for:

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RC2665/67
February 1990

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AGAT LABORATORIES CORE SERVICES

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**CORE ANALYSIS DATA
CHEVRON HUME RIVER**

N65-55 W129-41

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41
FORMATION: ARC RED SD/GILMORE LK
DRILLING FLUID:

AGAT LABORATORIES

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W/O No: RC2665
Date: 15-02-90

FINAL CORE ANALYSIS DATA

Sample	Interval (m)		Rep Thick (m)	Sample Length (m)	-----Gas Permeability-----			Porosity	Density (kg/m3)		Residual Saturation		Remarks
	Top	Base			Kmax (mD)	K90 (mD)	Vertical (mD)		Bulk	Grain	Oil	Water	

CORE NO. 1 456.00 - 483.00 (RECEIVED/CUT = 26.60/27.00m TOTAL BOXES = 24)													
NA	456.00	471.60	15.60	-	-	-	-	-	-	-	-	-	sh/ss
SP1	471.60	471.78	.18	-	.68	-	-	.032	2550	2640	.000	.249	ss;fgr;hfrac
NA	471.78	473.56	1.78	-	-	-	-	-	-	-	-	-	ss;shy
002	473.56	474.02	.46	.09	.47	.29	.14	.076	2440	2640	.000	.320	ss;fgr;slty;argptg
003	474.02	474.64	.62	.11	1.19	1.08	.44	.116	2340	2650	.000	.138	ss;vf-fgr;wsrt;arg
004	474.64	474.85	.21	.09	1.67	1.37	.34	.107	2370	2650	.000	.455	ss;vf-fgr;wsrt;arg;lam
SP1P	474.85	475.09	.24	-	.29	-	-	.097	2390	2650	.000	.487	ss;vf-fgr;wsrt;arg
NA	475.09	475.64	.55	-	-	-	-	-	-	-	-	-	ss;arg;bioturb
SP5	475.64	475.80	.16	-	.06	-	-	.082	2450	2670	.000	.228	ss;fgr;arg;slpyr
006	475.80	476.29	.49	.07	.12	.11	.03	.085	2460	2690	.000	.244	ss;fgr;arg;slpyr
007	476.29	476.96	.67	.09	.75	.62	.14	.121	2360	2690	.000	.314	ss;fgr;slty;bioturb;slpyr
NA	476.96	477.36	.40	-	-	-	-	-	-	-	-	-	ss;shylam
SP2P	477.36	477.71	.35	-	153.	-	-	.116	2340	2650	.000	.377	ss;f-mgr;wsrt;silcmt
008	477.71	478.04	.33	.09	150.	145.	118.	.122	2330	2650	.000	.076	ss;f-mgr;wsrt;silcmt
SP3P	478.04	478.60	.56	-	84.1	-	-	.112	2350	2650	.000	.166	ss;f-mgr;wsrt;silcmt
009	478.60	478.78	.18	.07	101.	101.	95.9	.129	2310	2650	.000	.080	ss;f-mgr;sil;hfrac;argptg
010	478.78	479.13	.35	.09	116.	79.9	108.	.129	2290	2640	.000	.184	ss;f-mgr;sil;vfrac
SP4P	479.13	479.81	.68	-	94.0	-	-	.103	2390	2660	.000	.154	ss;f-cgr;sil;pyr;granomold
011	479.81	480.11	.30	.09	137.	132.	84.6	.120	2350	2670	.000	.051	ss;f-cgr;sil;pyr;granomold
SP5P	480.11	480.24	.13	-	98.1	-	-	.111	2370	2670	.000	.232	ss;f-cgr;sil;pyr;granomold
SP6P	480.24	480.95	.71	-	126.	-	-	.102	2380	2650	.000	.132	ss;f-cgr;sil;pyr;granomold
012	480.95	481.23	.28	.09	87.3	81.3	72.4	.107	2370	2650	.000	.050	ss;f-cgr;sil;pyr;granomold

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41
FORMATION: ARC RED SD/GILMORE LK
DRILLING FLUID:

AGAT LABORATORIES

Page: 2
W/O No: RC2665
Date: 15-02-90

FINAL CORE ANALYSIS DATA

Sample	Interval (m)		Rep Thick (m)	Sample Length (m)	-----Gas Permeability-----			Porosity	Density (kg/m3)		Residual Saturation		Remarks
	Top	Base			Kmax (mD)	K90 (mD)	Vertical (mD)		Bulk	Grain	Oil	Water	
SP7P	481.23	481.36	.13	-	134.	-	-	.111	2350	2650	.000	.112	ss;f-cgr;sil;granomold
013	481.36	481.50	.14	.06	4660. *	69.1	253. *	.115	2350	2650	.000	.028	ss;f-cgr;vfrac;carbptg
SP8P	481.50	482.28	.78	-	90.9	-	-	.100	2380	2650	.000	.102	ss;f-cgr;sil;granomold
014	482.28	482.55	.27	.07	36.2	34.0	18.1	.092	2410	2650	.000	.048	ss;f-cgr;carbptg;granomold
SP9P	482.55	482.60	.05	-	57.9	-	-	.092	2400	2650	.000	.105	ss;f-cgr;carbptg;hfrac
LC	482.60	483.00	.40	-	-	-	-	-	-	-	-	-	lost core
CORE NO. 2					483.00 -	486.20	(RECEIVED/CUT = 3.20/ 3.20m TOTAL BOXES = 3)						
SP10P	483.00	483.43	.43	-	17.7	-	-	.087	2420	2650	.000	.067	ss;vf-fgr;silcmt
015	483.43	483.62	.19	.07	54.2	42.9	26.6	.084	2440	2670	.000	.088	ss;f-mgr;styl;vfrac;pyr
SP11P	483.62	483.75	.13	-	152.	-	-	.106	2370	2660	.000	.078	ss;f-mgr;slpyr;granomold
016	483.75	483.90	.15	.08	82.5	64.7	11.2	.104	2390	2660	.000	.004	ss;f-mgr;slpyr;carbptg
017	483.90	484.04	.14	.06	52.2	47.0	10.7	.100	2390	2660	.000	.027	ss;f-mgr;slpyr;carbptg
SP12P	484.04	484.47	.43	-	298.	-	-	.110	2370	2660	.000	.324	ss;f-mgr;slpyr;granomold
NA	484.47	486.20	1.73	-	-	-	-	-	-	-	-	-	mudstone/sltst
CORE NO. 3					486.20 -	497.60	(RECEIVED/CUT = 11.00/11.40m TOTAL BOXES = 10)						
NA	486.20	486.86	.66	-	-	-	-	-	-	-	-	-	mudstone/sltst
SP13P	486.86	486.98	.12	-	.25	-	-	.045	2440	2550	.000	.541	ss;vf-fgr;sil;hicarb
018	486.98	487.19	.21	.06	.99	.98	.47	.042	2430	2540	.000	.400	ss;vf-fgr;sil;hicarb
SP14P	487.19	487.38	.19	-	2.40	-	-	.044	2400	2520	.000	.147	ss;vf-fgr;sil;hicarb
SP19	487.38	487.48	.10	-	.03	-	-	.019	2370	2420	.000	.411	ss;vf-fgr;sil;carblam
SP20	487.48	487.58	.10	-	.07	-	-	.029	2460	2540	.000	.227	ss;vf-fgr;sil;carblam

* - Affected by open vertical fracture

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41
FORMATION: ARC RED SD/GILMORE LK
DRILLING FLUID:

AGAT LABORATORIES

Page: 3
W/O No: RC2665
Date: 15-02-90

FINAL CORE ANALYSIS DATA

Sample	Interval (m)		Rep Thick (m)	Sample Length (m)	-----Gas Permeability-----			Porosity	Density (kg/m3)		Residual Saturation		Remarks
	Top	Base			Kmax (mD)	K90 (mD)	Vertical (mD)		Bulk	Grain	Oil	Water	
SP21	487.58	487.69	.11	-	.04	-	-	.024	2480	2540	.000	.481	ss;vf-fgr;sil;carb;lam
022	487.69	487.81	.12	.07	1.32	.39	1.68	.041	2520	2630	.000	.434	ss;vf-fgr;carb;pyr;vfrac
SP15P	487.81	487.88	.07	-	.03	-	-	.073	2400	2590	.000	.693	ss;vf-fgr;silcmt;carb
023	487.88	488.17	.29	.07	53.2	45.5	.46	.062	2000	2130	.000	.330	ss;vf-fgr;hcarb;lam
SP16P	488.17	488.36	.19	-	.05	-	-	.036	2500	2590	.000	.801	ss;vf-fgr;carb;lam
NA	488.36	488.61	.25	-	-	-	-	-	-	-	-	-	sltst;coaly
024	488.61	488.98	.37	.09	.03	.03	.02	.025	2550	2620	.000	.257	sltst;carb;arg
SP17P	488.98	489.07	.09	-	.02	-	-	.029	2530	2600	.000	.865	sltst;carb;arg
025	489.07	489.38	.31	.08	.22	.14	.01	.033	2490	2570	.000	.353	ss/sltst;lam;carb
SP26	489.38	489.61	.23	-	.07	-	-	.030	2290	2360	.000	.371	ss/sltst;carb;lam
SP18P	489.61	489.72	.11	-	<.01	-	-	.034	2470	2560	.000	.738	ss/sltst;lam;carb
027	489.72	489.83	.11	.05	.41	.16	.06	.047	2470	2600	.000	.169	ss/sltst;lam;carb
SP28	489.83	489.94	.11	-	.46	-	-	.021	2470	2530	.000	.626	ss/sltst;carbptg
NA	489.94	490.16	.22	-	-	-	-	-	-	-	-	-	sltst;coaly
029	490.16	490.31	.15	.05	.90	.26	.02	.035	2530	2620	.000	.367	ss/sltst;arg;lam;carb
SP19P	490.31	490.43	.12	-	.01	-	-	.030	2520	2600	.000	.620	ss/sltst;arg;carb
030	490.43	490.69	.26	.11	.17	.09	.04	.041	2500	2610	.000	.495	ss/sltst;arg;carb
031	490.69	490.91	.22	.07	18.7	16.6	.42	.049	2310	2430	.000	.371	ss/sltst;hfrac;carb;lam
SP32	490.91	491.04	.13	-	1.68	-	-	.031	2430	2500	.000	.575	sltst/ss;carbptg;hfrac
SP20P	491.04	491.13	.09	-	.23	-	-	.036	2370	2460	.000	.472	ss/sltst;carb;lam
033	491.13	491.25	.12	.07	.72	.18	.04	.048	2460	2580	.000	.516	ss/sltst;carb
SP34	491.25	491.33	.08	-	.59	-	-	.036	2450	2540	.000	.521	ss/sltst;carb;lam
035	491.33	491.46	.13	.07	.18	.11	.03	.041	2500	2610	.000	.532	sltst/ss;lam;carb
SP21P	491.46	491.59	.13	-	.03	-	-	.027	2500	2570	.000	.551	sltst/ss;lam;carb
036	491.59	491.73	.14	.05	.07	.07	.02	.034	2500	2580	.000	.381	ss/sltst;carb;lam

AGAT LABORATORIES

FINAL CORE ANALYSIS DATA

[illegible]

CORE ANALYSIS - QUALITY CONTROL REPORT DATE: 2-20-1990

WORK ORDER: RC2665
 COMPANY: CHEVRON CANADA RESOURCES
 WELL: CHEVRON HUME RIVER I-66
 LOCATION: N65-55 W129-41

CORE NO.1 456.00 - 483.00 REC:26.60

NA	456.00	471.60			
SP1	471.60	471.78			
-KMAX (	.68)	IS OUTSIDE FOUR STANDARD DEVIATION (	.01 -	.01)	Non penetrative horizontal fracture; results verified
NA	471.78	473.56			
002	473.56	474.02			
003	474.02	474.64			
-KMAX (	1.19)	IS OUTSIDE FOUR STANDARD DEVIATION (	21.04 -	757.59)	
-K90 (	1.08)	IS OUTSIDE FOUR STANDARD DEVIATION (	8.63 -	310.85)	Very fine to fine grained; argillaceous; results verified
-KV (	.44)	IS OUTSIDE FOUR STANDARD DEVIATION (	4.76 -	171.25)	
004	474.64	474.85			
-KMAX (	1.67)	IS OUTSIDE FOUR STANDARD DEVIATION (	6.41 -	230.72)	
-K90 (	1.37)	IS OUTSIDE FOUR STANDARD DEVIATION (	2.24 -	80.57)	Very fine to fine grained; argillaceous; results verified
-KV (	.34)	IS OUTSIDE FOUR STANDARD DEVIATION (	1.02 -	36.80)	
SP1P	474.85	475.09			
-KMAX (	.29)	IS OUTSIDE FOUR STANDARD DEVIATION (	1.71 -	61.57)	Very fine to fine grained; argillaceous; results verified
NA	475.09	475.64			
SP5	475.64	475.80			
-KMAX (	.06)	IS OUTSIDE FOUR STANDARD DEVIATION (	.24 -	8.49)	Fine grained; argillaceous; results verified
006	475.80	476.29			
-KMAX (	.12)	IS OUTSIDE FOUR STANDARD DEVIATION (	.35 -	12.61)	Fine grained; silty; argillaceous; results verified
007	476.29	476.96			
-KMAX (	.75)	IS OUTSIDE FOUR STANDARD DEVIATION (	40.74 -	1466.56)	
-K90 (	.62)	IS OUTSIDE FOUR STANDARD DEVIATION (	18.28 -	658.13)	Fine grained; silty; argillaceous; results verified
-KV (	.14)	IS OUTSIDE FOUR STANDARD DEVIATION (	11.18 -	402.38)	
NA	476.96	477.36			
SP2P	477.36	477.71			
008	477.71	478.04			
SP3P	478.04	478.60			
009	478.60	478.78			
-KMAX (	100.70)	IS OUTSIDE FOUR STANDARD DEVIATION (	117.21 -	4219.74)	Silica cement; results verified
010	478.78	479.13			
-KMAX (	115.68)	IS OUTSIDE FOUR STANDARD DEVIATION (	117.21 -	4219.74)	Silica cement; results verified
-K90 (	79.93)	IS LESS THAN KV (	108.30)		Non penetrative, vertical fracture

SP4P	479.13	479.81			
011	479.81	480.11			
SP5P	480.11	480.24			
SP6P	480.24	480.95			
-KMAX (	125.90)	IS OUTSIDE FOUR STANDARD DEVIATION (	3.31 -	119.18)	Fine to coarse grained; granomoldic porosity; results verified
012	480.95	481.23			
-K90 (	81.29)	IS OUTSIDE FOUR STANDARD DEVIATION (	2.24 -	80.57)	Fine to coarse grained; granomoldic porosity; results verified
-KV (	72.42)	IS OUTSIDE FOUR STANDARD DEVIATION (	1.02 -	36.80)	Fine to coarse grained; granomoldic porosity; results verified
SP7P	481.23	481.36			
013	481.36	481.50			
-KMAX (	4659.33)	IS OUTSIDE FOUR STANDARD DEVIATION (	18.44 -	663.84)	Open vertical fracture; results verified
-KV (	253.47)	IS OUTSIDE FOUR STANDARD DEVIATION (	4.01 -	144.36)	Open vertical fracture; results verified
-K90 (	69.10)	IS LESS THAN KV (	253.47)		
SP8P	481.50	482.28			
014	482.28	482.55			
-KMAX (	36.23)	IS OUTSIDE FOUR STANDARD DEVIATION (	.88 -	31.80)	Fine to coarse grained; granomoldic porosity; results verified
-K90 (	34.05)	IS OUTSIDE FOUR STANDARD DEVIATION (	.24 -	8.49)	Fine to coarse grained; granomoldic porosity; results verified
-KV (	18.15)	IS OUTSIDE FOUR STANDARD DEVIATION (	.08 -	2.84)	Fine to coarse grained; granomoldic porosity; results verified
SP9P	482.55	482.60			
-KMAX (	57.86)	IS OUTSIDE FOUR STANDARD DEVIATION (	.88 -	31.80)	Non penetrative, horizontal fracture; results verified
LC	482.60	483.00			

CORE NO.2 483.00 - 486.20 REC: 3.20

SP10P	483.00	483.43			
-KMAX (	17.75)	IS OUTSIDE FOUR STANDARD DEVIATION (	.46 -	16.43)	Results verified
015	483.43	483.62			
-KMAX (	54.16)	IS OUTSIDE FOUR STANDARD DEVIATION (	.31 -	11.05)	Fine to medium grained; stylolitic; non penetrative, vertical fracture; results verified
-K90 (	42.89)	IS OUTSIDE FOUR STANDARD DEVIATION (	.07 -	2.56)	Fine to medium grained; stylolitic; non penetrative, vertical fracture; results verified
-KV (	26.61)	IS OUTSIDE FOUR STANDARD DEVIATION (	.02 -	.72)	Fine to medium grained; stylolitic; non penetrative, vertical fracture; results verified
SP11P	483.62	483.75			
016	483.75	483.90			
-K90 (	64.66)	IS OUTSIDE FOUR STANDARD DEVIATION (	1.43 -	51.37)	Fine to medium grained; carbonaceous partings; results verified
017	483.90	484.04			
-K90 (	47.00)	IS OUTSIDE FOUR STANDARD DEVIATION (	.78 -	28.19)	Fine to medium grained; carbonaceous partings; results verified
SP12P	484.04	484.47			
NA	484.47	486.20			

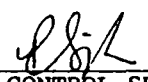
CORE NO.3 486.20 - 497.60 REC:11.00

NA	486.20	486.86			
SP13P	486.86	486.98			
-GRAIN DENSITY (2551) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss					[2580-2690]) Highly carbonaceous; results verified
-KMAX (	.25)	IS OUTSIDE FOUR STANDARD DEVIATION (	.29 -	10.36)	Very fine to fine grained; results verified
018	486.98	487.19			

-GRAIN DENSITY (2541) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous	Page: 7
-KV (.47) IS OUTSIDE FOUR STANDARD DEVIATION (.01 -	.42) Results verified	
SP14P 487.19 487.38		
-GRAIN DENSITY (2515) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
SP19 487.38 487.48		
-GRAIN DENSITY (2416) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
SP20 487.48 487.58		
-GRAIN DENSITY (2537) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
SP21 487.58 487.69		
-GRAIN DENSITY (2536) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results veirfied	
022 487.69 487.81		
-KV (1.68) IS OUTSIDE FOUR STANDARD DEVIATION (.01 -	.36) Non penetrative, vertical fracture; results verified	
-KMAX (1.32) IS LESS THAN KV (1.68)		
-K90 (.39) IS LESS THAN KV (1.68)		
SP15P 487.81 487.88		
-KMAX (.03) IS OUTSIDE FOUR STANDARD DEVIATION (145.95 -	5254.27) Very fine to fine grained; silica cement; result verified	
023 487.88 488.17		
-GRAIN DENSITY (2130) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
SP16P 488.17 488.36		
-GRAIN DENSITY (2571) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
NA 488.36 488.61		
024 488.61 488.98		
SP17P 488.98 489.07		
025 489.07 489.38		
-GRAIN DENSITY (2571) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
SP26 489.38 489.61		
-GRAIN DENSITY (2361) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
SP18P 489.61 489.72		
-GRAIN DENSITY (2551) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Highly carbonaceous; results verified	
027 489.72 489.83		
-KMAX (.41) IS OUTSIDE FOUR STANDARD DEVIATION (.45 -	16.16) Siltstone and sandstone; argillaceous; results verified	
-K90 (.16) IS OUTSIDE FOUR STANDARD DEVIATION (.21 -	7.70)	
SP28 489.83 489.94		
-GRAIN DENSITY (2527) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Carbonaceous; results verified	
-KMAX (.46) IS OUTSIDE FOUR STANDARD DEVIATION (.01 -	.05) Carbonaceous partings enhancing permeability; results verified	
NA 489.94 490.16		
029 490.16 490.31		
SP19P 490.31 490.43		
030 490.43 490.69		
031 490.69 490.91		
-GRAIN DENSITY (2434) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss	[2580-2690]) Carbonaceous;	
-K90 (16.59) IS OUTSIDE FOUR STANDARD DEVIATION (.34 -	12.16) non penetrative, horizontal fracture; result verified	
SP32 490.91 491.04		
-GRAIN DENSITY (2503) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (sltst	[2580-2690]) Carbonaceous; non penetrative, horizontal fracture;	
-KMAX (1.68) IS OUTSIDE FOUR STANDARD DEVIATION (.01 -	.46) results verified	

SP20P	491.04	491.13		
-GRAIN DENSITY (2460) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss			[2580-2690]]	Carbonaceous; results verified
033	491.13	491.25		
-K90 (	.18)		.27 -	9.68) Sandstone/siltstone; results verified
SP34	491.25	491.33		
-GRAIN DENSITY (2543) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss			[2580-2690]]	Carbonaceous; results verified
035	491.33	491.46		
SP21P	491.46	491.59		
-GRAIN DENSITY (2570) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (sltst			[2580-2690]]	Carbonaceous; results verified
036	491.59	491.73		
SP22P	491.73	491.81		
-KMAX (	.01)		.02 -	.72) Sandstone/siltstone; results verified
037	491.81	491.90		
-KV (	.16)		.22 -	7.97) Sandstone/siltstone; results verified
SP38	491.90	492.08		
-GRAIN DENSITY (2534) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss			[2580-2690]]	Carbonaceous; results verified
039	492.08	492.30		
NA	492.30	492.48		
SP23P	492.48	492.68		
040	492.68	493.10		
SP24P	493.10	493.22		
-GRAIN DENSITY (2710) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss			[2580-2690]]	Dolomitic; results verified
041	493.22	493.60		
042	493.60	493.85		
-KMAX (	2.12)		.02 -	.57) Carbonaceous partings enhancing permeability; results verified
SP25P	493.85	494.01		
-GRAIN DENSITY (2536) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss			[2580-2690]]	Carbonaceous; results verified
SP43	494.01	494.11		
-KMAX (	.06)		.09 -	3.41) Sandstone/siltstone; results verified
SP26P	494.11	494.33		
-KMAX (	.04)		.12 -	4.25) Sandstone/siltstone; results verified
SP27P	494.33	494.59		
-GRAIN DENSITY (2567) OUT OF LIMIT FOR LITHOLOGY SPECIFIED (ss			[2580-2690]]	Carbonaceous; results verified
SP28P	494.59	494.69		
-KMAX (	472.24)		.01 -	.06) Conglomerate; results verified
NA	494.69	497.20		
LC	497.20	497.60		

APPROVED:


 QUALITY CONTROL SUPERVISOR

 February 20, 1990
 DATE

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

AGAT LABORATORIES

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W/O No: RC2665
Date: 15-02-90

CALCULATED DATA REPORT

Sample	Interval (m)		Rep. Thick.		Porosity *		Wt. Avg. Porosity (Arith.)	Kmax *		Wt. Avg. Kmax (Arith.)
	Top	Base	m	Cuml.	Por-m	Cuml.		mD-m	Cuml.	

	CORE NO. 1		456.00 - 483.00		(RECEIVED/CUT = 26.60/27.00m			TOTAL BOXES = 24)		
NA	456.00	471.60	15.60	-	-	-	-	-	-	-
SP1	471.60	471.78	.18	.18	.006	.006	.032	.122	.122	.680
NA	471.78	473.56	1.78	-	-	-	-	-	-	-
002	473.56	474.02	.46	.64	.035	.041	.064	.216	.339	.529
003	474.02	474.64	.62	1.26	.072	.113	.089	.738	1.076	.854
004	474.64	474.85	.21	1.47	.022	.135	.092	.351	1.427	.971
SP1P	474.85	475.09	.24	1.71	.023	.158	.093	.070	1.497	.875
NA	475.09	475.64	.55	-	-	-	-	-	-	-
SP5	475.64	475.80	.16	1.87	.013	.172	.092	.010	1.506	.806
006	475.80	476.29	.49	2.36	.042	.213	.090	.059	1.565	.663
007	476.29	476.96	.67	3.03	.081	.294	.097	.502	2.068	.682
NA	476.96	477.36	.40	-	-	-	-	-	-	-
SP2P	477.36	477.71	.35	3.38	.041	.335	.099	53.556	55.623	16.457
008	477.71	478.04	.33	3.71	.040	.375	.101	49.415	105.039	28.312
SP3P	478.04	478.60	.56	4.27	.063	.438	.103	47.096	152.134	35.629
009	478.60	478.78	.18	4.45	.023	.461	.104	18.125	170.260	38.261
010	478.78	479.13	.35	4.80	.045	.506	.105	40.489	210.748	43.906
SP4P	479.13	479.81	.68	5.48	.070	.576	.105	63.933	274.681	50.125
011	479.81	480.11	.30	5.78	.036	.612	.106	41.235	315.916	54.657
SP5P	480.11	480.24	.13	5.91	.014	.627	.106	12.751	328.667	55.612
SP6P	480.24	480.95	.71	6.62	.072	.699	.106	89.384	418.051	63.150
012	480.95	481.23	.28	6.90	.030	.729	.106	24.433	442.483	64.128

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

AGAT LABORATORIES

Page: 10
W/O No: RC2665
Date: 15-02-90

CALCULATED DATA REPORT

Sample	Interval (m)		Rep. Thick.		Porosity * Rep. Thick.		Wt. Avg. Porosity (Arith.)	Kmax * Rep. Thick.		Wt. Avg. Kmax (Arith.)
	Top	Base	m	Cuml.	Por-m	Cuml.		mD-m	Cuml.	
SP7P	481.23	481.36	.13	7.03	.014	.743	.106	17.466	459.949	65.427
013	481.36	481.50	.14	7.17	.016	.760	.106	-	-	-
SP8P	481.50	482.28	.78	7.95	.078	.838	.105	70.863	530.812	66.769
014	482.28	482.55	.27	8.22	.025	.862	.105	9.782	540.594	65.766
SP9P	482.55	482.60	.05	8.27	.005	.867	.105	2.894	543.488	65.718
LC	482.60	483.00	.40	-	-	-	-	-	-	-
CORE NO. 2 483.00 - 486.20 (RECEIVED/CUT = 3.20/ 3.20m TOTAL BOXES = 3)										
SP10P	483.00	483.43	.43	8.70	.037	.904	.104	7.632	551.120	63.347
015	483.43	483.62	.19	8.89	.016	.920	.104	10.291	561.411	63.151
SP11P	483.62	483.75	.13	9.02	.014	.934	.104	19.761	581.172	64.432
016	483.75	483.90	.15	9.17	.016	.950	.104	12.371	593.543	64.727
017	483.90	484.04	.14	9.31	.014	.964	.104	7.309	600.852	64.538
SP12P	484.04	484.47	.43	9.74	.047	1.011	.104	128.138	728.990	74.845
NA	484.47	486.20	1.73	-	-	-	-	-	-	-
CORE NO. 3 486.20 - 497.60 (RECEIVED/CUT = 11.00/11.40m TOTAL BOXES = 10)										
NA	486.20	486.86	.66	-	-	-	-	-	-	-
SP13P	486.86	486.98	.12	9.86	.005	1.016	.103	.030	729.020	73.937
018	486.98	487.19	.21	10.07	.009	1.025	.102	.208	729.228	72.416
SP14P	487.19	487.38	.19	10.26	.008	1.034	.101	.456	729.684	71.119
SP19	487.38	487.48	.10	10.36	.002	1.036	.100	.003	729.687	70.433
SP20	487.48	487.58	.10	10.46	.003	1.038	.099	.007	729.694	69.760

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

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CALCULATED DATA REPORT

Sample	Interval (m)		Rep. Thick.		Porosity *		Wt. Avg. Porosity (Arith.)	Kmax *		Wt. Avg. Kmax (Arith.)
	Top	Base	m	Cuml.	Por-m	Cuml.		mD-m	Cuml.	
SP21	487.58	487.69	.11	10.57	.003	1.041	.098	.004	729.698	69.035
022	487.69	487.81	.12	10.69	.005	1.046	.098	.158	729.856	68.275
SP15P	487.81	487.88	.07	10.76	.005	1.051	.098	.002	729.859	67.831
023	487.88	488.17	.29	11.05	.018	1.069	.097	15.442	745.300	67.448
SP16P	488.17	488.36	.19	11.24	.007	1.076	.096	.009	745.310	66.309
NA	488.36	488.61	.25	-	-	-	-	-	-	-
024	488.61	488.98	.37	11.61	.009	1.085	.093	.011	745.321	64.197
SP17P	488.98	489.07	.09	11.70	.003	1.088	.093	.002	745.323	63.703
025	489.07	489.38	.31	12.01	.010	1.098	.091	.068	745.391	62.064
SP26	489.38	489.61	.23	12.24	.007	1.105	.090	.016	745.407	60.899
SP18P	489.61	489.72	.11	12.35	.004	1.109	.090	.001	745.407	60.357
027	489.72	489.83	.11	12.46	.005	1.114	.089	.045	745.453	59.828
SP28	489.83	489.94	.11	12.57	.002	1.116	.089	.051	745.503	59.308
NA	489.94	490.16	.22	-	-	-	-	-	-	-
029	490.16	490.31	.15	12.72	.005	1.121	.088	.135	745.638	58.619
SP19P	490.31	490.43	.12	12.84	.004	1.125	.088	.001	745.639	58.072
030	490.43	490.69	.26	13.10	.011	1.136	.087	.044	745.684	56.923
031	490.69	490.91	.22	13.32	.011	1.146	.086	4.105	749.789	56.291
SP32	490.91	491.04	.13	13.45	.004	1.150	.086	.218	750.007	55.763
SP20P	491.04	491.13	.09	13.54	.003	1.154	.085	.021	750.028	55.394
033	491.13	491.25	.12	13.66	.006	1.159	.085	.086	750.114	54.913
SP34	491.25	491.33	.08	13.74	.003	1.162	.085	.047	750.162	54.597
035	491.33	491.46	.13	13.87	.005	1.168	.084	.023	750.185	54.087
SP21P	491.46	491.59	.13	14.00	.004	1.171	.084	.004	750.189	53.585
036	491.59	491.73	.14	14.14	.005	1.176	.083	.010	750.199	53.055

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
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CALCULATED DATA REPORT

Sample	Interval (m)		Rep. Thick.		Porosity * Rep. Thick.		Wt. Avg. Porosity (Arith.)	Kmax * Rep. Thick.		Wt. Avg. Kmax (Arith.)
	Top	Base	m	Cuml.	Por-m	Cuml.		mD-m	Cuml.	
SP22P	491.73	491.81	.08	14.22	.003	1.179	.083	.001	750.199	52.757
037	491.81	491.90	.09	14.31	.006	1.184	.083	18.962	769.162	53.750
SP38	491.90	492.08	.18	14.49	.008	1.192	.082	.191	769.352	53.096
039	492.08	492.30	.22	14.71	.008	1.199	.082	.040	769.392	52.304
NA	492.30	492.48	.18	-	-	-	-	-	-	-
SP23P	492.48	492.68	.20	14.91	.005	1.204	.081	.004	769.396	51.603
040	492.68	493.10	.42	15.33	.013	1.217	.079	.008	769.404	50.190
SP24P	493.10	493.22	.12	15.45	.003	1.219	.079	.001	769.406	49.800
041	493.22	493.60	.38	15.83	.010	1.229	.078	.004	769.409	48.605
042	493.60	493.85	.25	16.08	.008	1.237	.077	.530	769.939	47.882
SP25P	493.85	494.01	.16	16.24	.004	1.241	.076	.014	769.954	47.411
SP43	494.01	494.11	.10	16.34	.004	1.245	.076	.006	769.960	47.121
SP26P	494.11	494.33	.22	16.56	.009	1.254	.076	.009	769.969	46.496
SP27P	494.33	494.59	.26	16.82	.011	1.265	.075	.070	770.039	45.781
SP28P	494.59	494.69	.10	16.92	.002	1.267	.075	47.227	817.266	48.302
NA	494.69	497.20	2.51	-	-	-	-	-	-	-
LC	497.20	497.60	.40	-	-	-	-	-	-	-

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

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STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

GROUPING BY POROSITY RANGES

Porosity Range	Samples		Metres		Wt. Avg.	Wt. Avg. Kmax		Frequency %	
	In Rng	Cuml.	In Rng	Cuml.	Porosity (Arith)	Arith	Geom	In Rng	Cuml.
0.000-0.0199	1	1	.10	.10	.019	.030	.030	.60	.60
0.020-0.0399	26	27	4.57	4.67	.030	10.625	.086	27.23	27.83
0.040-0.0599	13	40	2.24	6.91	.043	2.425	.520	13.35	41.18
0.060-0.0799	4	44	.91	7.82	.070	38.046	3.142	5.42	46.60
0.080-0.0999	7	51	1.83	9.65	.088	16.796	2.127	10.91	57.51
0.100-0.1199	14	65	5.30	14.95	.107	103.424	55.649	31.59	89.09
0.120-0.1399	5	70	1.83	16.78	.123	81.840	19.440	10.91	100.00

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

AGAT LABORATORIES

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STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

GROUPING BY PERMEABILITY RANGES

Permeability Range	Samples		Metres		Wt. Avg.	Wt. Avg. Kmax		Frequency %				
	In	Rng	Cuml.	In	Rng	Cuml.	Porosity (Arith)	Arith	Geom	In	Rng	Cuml.
0.000-0.009	1		1	.11		.11	.034	.001	.005	.66		.66
0.010-0.019	4		5	.70		.81	.026	.010	.010	4.17		4.83
0.020-0.039	7		12	1.38		2.19	.029	.025	.024	8.22		13.05
0.040-0.079	8		20	1.25		3.44	.040	.057	.056	7.45		20.50
0.080-0.159	2		22	.65		4.09	.071	.113	.112	3.87		24.37
0.160-0.319	8		30	1.63		5.72	.047	.224	.220	9.71		34.09
0.320-0.639	4		34	.76		6.48	.060	.472	.470	4.53		38.62
0.640-1.249	7		41	2.13		8.61	.087	.931	.910	12.69		51.31
1.250-2.499	5		46	.90		9.51	.053	1.904	1.869	5.36		56.67
2.500-4.999	0		46	.00		9.51	.000	.000	.000	.00		56.67
5.000-9.999	0		46	.00		9.51	.000	.000	.000	.00		56.67
10.000-19.999	2		48	.65		10.16	.074	18.058	18.053	3.87		60.55
20.000-39.999	1		49	.27		10.43	.092	36.230	36.230	1.61		62.16
40.000-79.999	4		53	.67		11.10	.078	53.628	53.611	3.99		66.15
80.000-159.999	14		67	5.06		16.16	.110	110.845	108.285	30.15		96.31
160.000-319.999	2		69	.52		16.68	.102	282.891	280.647	3.10		99.40
320.000-639.999	1		70	.10		16.78	.022	472.240	472.240	.60		100.00

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

AGAT LABORATORIES

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STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

POROSITY-METRES OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

Porosity Cut Off	Metres		Capacity Lost		Capacity Remaining		Wt. Avg. Arith	
	Lost	Remaining	Por-Metres	%	Por-Metres	%	Mean	Median
0.000	.00	16.92	.000	.00	1.267	100.00	.075	.087
0.020	.10	16.82	.002	.15	1.266	99.85	.075	.088
0.040	4.77	12.15	.141	11.11	1.127	88.89	.093	.104
0.060	6.91	10.01	.233	18.42	1.034	81.58	.103	.108
0.080	7.82	9.10	.297	23.44	.970	76.56	.107	.110
0.100	10.57	6.35	.550	43.39	.717	56.61	.113	
0.120	15.09	1.83	1.042	82.19	.226	17.81	.123	
0.140	16.92	.00	1.267	100.00	.000	.00	.000	

Total Storage Capacity in Porosity-Metres = 1.267

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
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STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

MILLIDARCY-METRES OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

Permeability Cut Off	Metres		Capacity Lost		Capacity Remaining		Wt. Avg. Geom.	
	Lost	Remaining	mD-Metres	%	mD-Metres	%	Mean	Median
0.000	.00	16.78	.000	.00	817.265	100.00	2.614	1.166
0.010	.81	15.97	.007	.00	817.258	100.00	2.724	1.186
0.020	1.52	15.26	.021	.00	817.244	100.00	3.483	1.441
0.040	2.52	14.26	.055	.01	817.211	99.99	5.569	2.451
0.080	3.44	13.34	.113	.01	817.153	99.99	8.576	18.962
0.160	4.09	12.69	.186	.02	817.079	99.98	10.711	40.211
0.320	5.72	11.06	.552	.07	816.714	99.93	18.988	81.661
0.640	6.48	10.30	.911	.11	816.354	99.89	24.944	86.024
1.250	8.61	8.17	2.894	.35	814.372	99.65	59.139	99.536
2.500	9.51	7.27	4.607	.56	812.658	99.44	90.696	105.864
5.000	9.51	7.27	4.607	.56	812.658	99.44	90.696	105.864
10.000	9.51	7.27	4.607	.56	812.658	99.44	90.696	105.864
20.000	10.16	6.62	16.345	2.00	800.921	98.00	106.273	110.684
40.000	10.43	6.35	26.126	3.20	791.139	96.80	111.248	112.749
80.000	11.10	5.68	62.061	7.59	755.204	92.41	121.254	
160.000	16.16	.62	622.938	76.22	194.327	23.78	305.233	
320.000	16.68	.10	770.038	94.22	47.227	5.78	472.362	
640.000	16.78	.00	817.265	100.00	.000	.00	.000	

Total Flow Capacity in Millidarcy-Metres (Arithmetic) = 817.265

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER I-66
LOCATION: N65-55 W129-41

AGAT LABORATORIES

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Date: 15-02-90

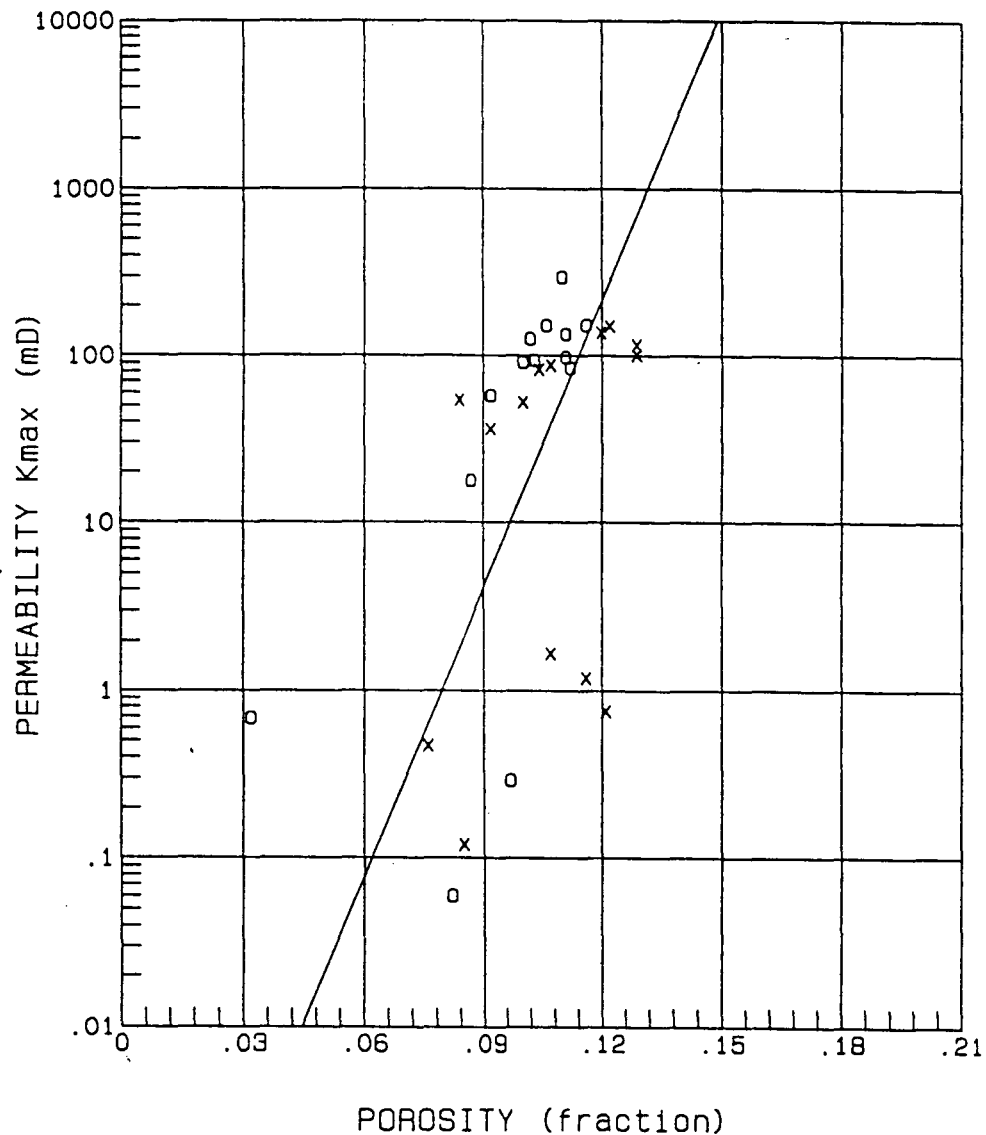
SUMMARY OF CORE DATA REPORT

PERMEABILITY RANGES, MILLIDARCY

	Total	100.00 +	10.00 - 99.99	1.00 - 9.99	0.50 - 0.99	0.10 - 0.49	0.01 - 0.09	< 0.01
Thickness (m)	16.67	3.10	4.17	1.70	1.41	2.80	3.49	.00
Fraction of analyzed core		.186	.250	.102	.085	.168	.209	.00
Porosity thickness (por-m)	1.248	.341	.396	.127	.110	.161	.113	.00
Permeability thickness (mD-m)	817.26	523.76	288.90	2.64	1.10	.74	.13	-
Wt. average Porosity	.075	.110	.095	.075	.078	.057	.032	.00
Wt. average Permeability	49.03	168.96	69.28	1.55	.78	.26	.04	-
Wt. average Residual Oil	.000	.000	.000	.000	.000	.000	.000	.00
Wt. average Residual Water	.291	.195	.136	.258	.353	.423	.446	.00
Wt. average (geom.) Kmax., mD for All Samples =			2.72					
Wt. average (harm.) Kmax., mD for All Samples =			.10					

COMPANY: CHEVRON CANADA RESOURCES FIGURE: 1
 LOCATION: N65-55 W129-41 W/O NO: RC2665
 INTERVAL: 456.00- 486.20 DATE: 15-02-90
 FORMATION: ARCTIC RED SAND

POROSITY - PERMEABILITY (Kmax) CORRELATION

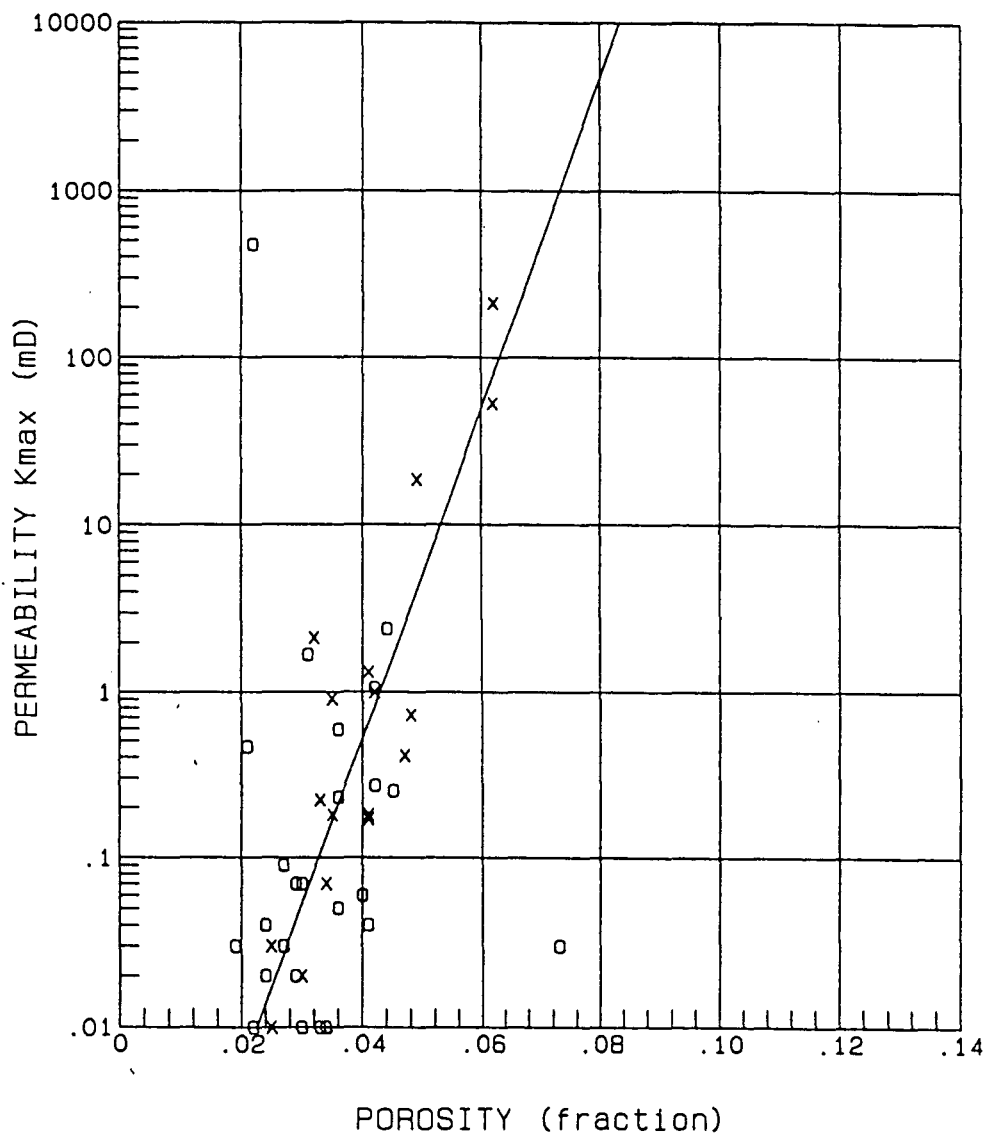


x - FULL DIAMETER o - SMALL PLUG
 NOTE: Samples are not weighted

Equation: $\text{Log (Kmax)} = -4.55 + 57.37 * \text{Porosity}$
 Correlation Coefficient: $r = .502$

COMPANY: CHEVRON CANADA RESOURCES FIGURE: 2
 LOCATION: N65-55 W129-41 W/O NO: RC2665
 INTERVAL: 486.20- 497.60 DATE: 15-02-90
 FORMATION: GILMORE LAKE

POROSITY - PERMEABILITY (Kmax) CORRELATION



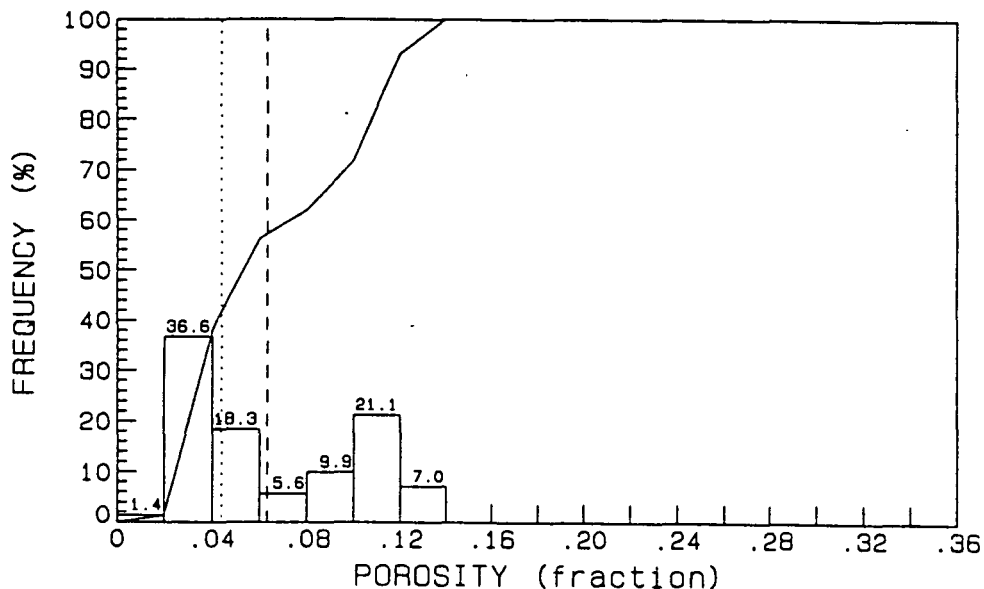
x - FULL DIAMETER o - SMALL PLUG

NOTE: Samples are not weighted

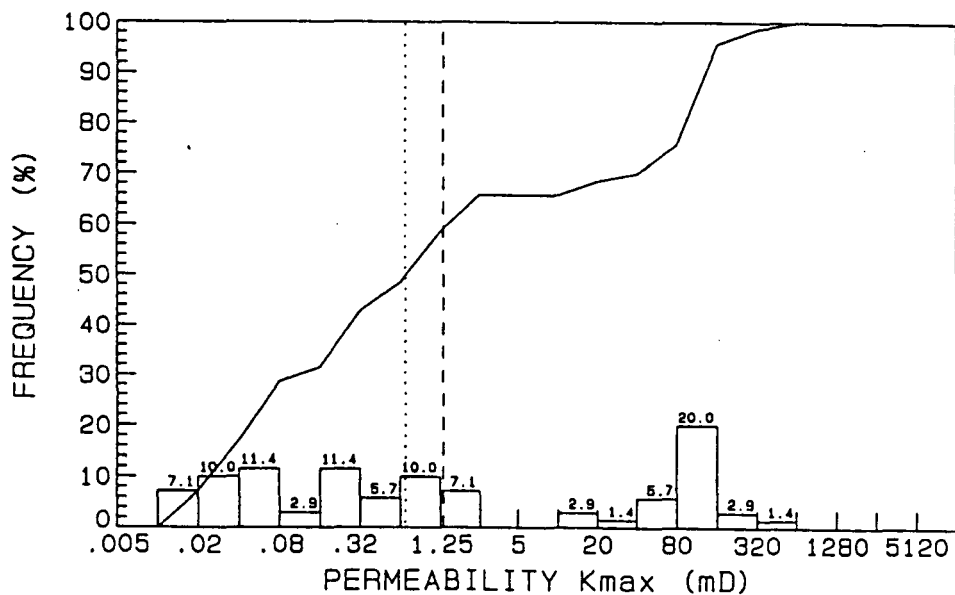
Equation: $\text{Log (Kmax)} = -4.24 + 98.86 * \text{Porosity}$
 Correlation Coefficient: $r = .416$

COMPANY: CHEVRON CANADA RESOURCES FIGURE: 3
 LOCATION: N65-55 W129-41 W/O NO: RC2665
 INTERVAL: 456.00 - 497.60 m DATE: 15-02-90
 FORMATION: ARC RED SD/GILMORE L

POROSITY FREQUENCY DISTRIBUTION



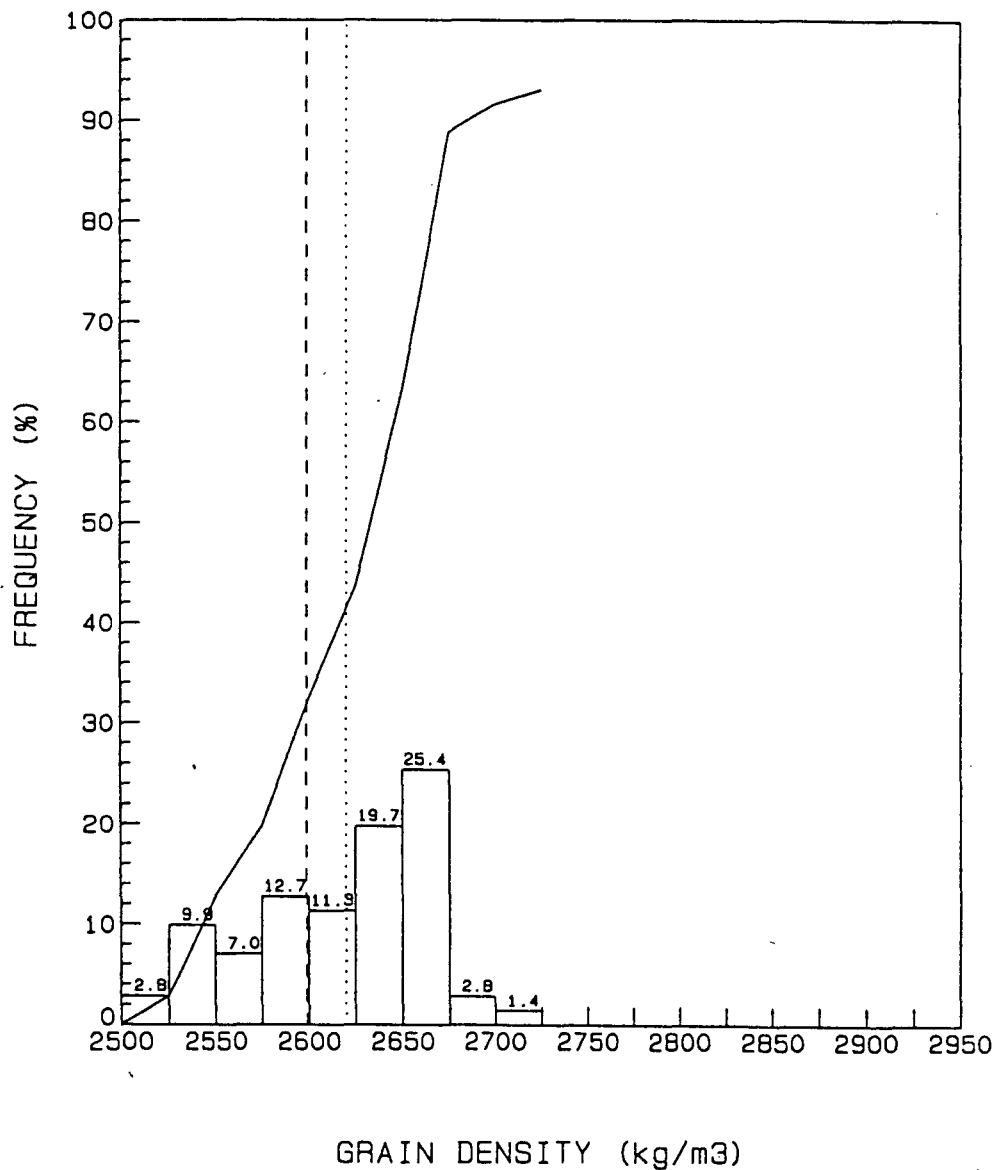
PERMEABILITY Kmax FREQUENCY DISTRIBUTION



Arith. Mean Porosity	----- POROSITY	- Arith. Mean: .063
Geom. Mean Permeability	-----	Median: .044
Cumulative Frequency %	----- PERMEABILITY	- Geom. Mean: 1.32
Median		Median: .70

COMPANY: CHEVRON CANADA RESOURCES	FIGURE: 4
LOCATION: N65-55 W129-41	W/O NO: RC2665
INTERVAL: 456.00 - 497.60 m	DATE: 15-02-90
FORMATION: ARC RED SD/GILMORE L	

GRAIN DENSITY FREQUENCY DISTRIBUTION



Arithmetic Mean	-----	Wt. Avg. Arith. Mean: 2598
Median		
Cumulative Frequency %	—————	Grain Density Median: 2620

GENERAL LITHOLOGICAL DESCRIPTIONS

GENERAL LITHOLOGICAL DESCRIPTIONS

Well: CHEVRON HUME RIVER I-66
Location: N65-55 W129-41
Job No: RC2665/67

Formation: ARCTIC RED SAND/GILMORE LAKE
Cored Interval: 1) 456.00-483.00 m
2) 483.00-486.20 m
3) 486.20-497.60 m

Recovery: 1) 26.60 m
2) 3.20 m
3) 11.00 m

CORE	DEPTH INTERVAL	CORE ANALYSIS	LITHOLOGY	REMARKS
1	456.00-466.96	N/A	Shale	Black, hard, subfissile shale; bioturbated; burrowed; sandy and silty laminae and lenses common; pyrite nodules common.
1	466.96-471.44	N/A	Mudstone/ Sandstone/ Siltstone/ Shale	Grey to dark grey, intermixed mudstone, sandstone, siltstone and shale; bioturbated; ripple laminated; burrowed; pyrite nodules common; bioclasts common. Low visible porosity; no fluorescence.
1	471.44-471.60	N/A	Sandstone	Grey, fine grained, silica cemented quartzarenite; framework grains are subrounded and composed of quartz; dolomite cement present; laminated; glauconite present. Low visible porosity; no fluorescence.
1	471.60-474.02	SP1,2,3	Sandstone/ Mudstone	Dark grey, bioturbated, silty, mudstone interspersed with fine grained, silica cemented quartzarenite. No visible porosity; no fluorescence.
1	474.02-475.09	SP1P,4	Sandstone	Light grey, very fine to fine grained, well sorted, argillaceous quartzarenite; framework grains are subangular to subrounded and composed mainly of quartz; silica cement abundant; clay minerals filling some of pores common; hydrocarbon lining pores abundant. Fair to good intergranular porosity; no fluorescence.
1	475.09-477.36	SP5,6,7	Sandstone/ Siltstone	Grey, fine grained, bioturbated, argillaceous sandstone to siltstone; bioturbated; argillaceous stylolaminae and partings common; silica cement abundant; conglomeratic at base; bioclasts present. No visible porosity; no fluorescence.

GENERAL LITHOLOGICAL DESCRIPTIONS

Well: CHEVRON HUME RIVER I-66
Location: N65-55 W129-41
Job No: RC2665/67

Formation: ARCTIC RED SAND/GILMORE LAKE

Cored Interval: 1) 456.00-483.00 m
2) 483.00-486.20 m
3) 486.20-497.60 m

Recovery: 1) 26.60 m
2) 3.20 m
3) 11.00 m

<u>CORE</u>	<u>DEPTH INTERVAL</u>	<u>CORE ANALYSIS</u>	<u>LITHOLOGY</u>	<u>REMARKS</u>
1	477.36-479.37	SP2P, SP3P 8-10	Sandstone/ Siltstone	Light grey, upper fine to lower medium grained, well sorted, silica cemented litharenite; argillaceous partings and thin laminae present; fractured at base; clay minerals blocking pore space present. Fair to good visible porosity; no fluorescence.
1	479.37-482.60	SP4P-SP9P 11-14	Sandstone	Light grey, fine to coarse grained sandstone grading down to fine grained silica cemented quartzarenite; argillaceous clasts common; pyrite present; coarsening upwards trend; low and high amplitude stylolites common; fractured at base. Good to very good intergranular and granomoldic porosity; no fluorescence.
1	482.60-483.00	N/A	LC	Lost core.
2	483.00-484.47	SP10P-SP12P 15-17	Sandstone	Light grey, very fine to fine grained quartzarenite, grading down to fine to medium grained, litharenite rich in clay clasts; stylolites common; coaly convoluted laminae common. Fair to good intergranular and granomoldic porosity; no fluorescence.
2	484.47-485.63	N/A	Siltstone/ Mudstone	Dark grey to black, tight siltstone to mudstone; coaly thin laminae and partings common; bioturbated; burrowed; sandy lenses common; pyrite common. No visible porosity; no fluorescence.
2	485.63-486.20	N/A	Sandstone/ Siltstone	Grey to light grey, mottled sandstone and siltstone; bioturbated; burrowed; ripple laminae common; silica cement common. Low visible porosity; no fluorescence.

GENERAL LITHOLOGICAL DESCRIPTIONS

Well: CHEVRON HUME RIVER I-66
Location: N65-55 W129-41
Job No: RC2665/67

Formation: ARCTIC RED SAND/GILMORE LAKE

Cored Interval: 1) 456.00-483.00 m

2) 483.00-486.20 m

3) 486.20-497.60 m

Recovery: 1) 26.60 m

2) 3.20 m

3) 11.00 m

CORE	DEPTH INTERVAL	CORE ANALYSIS	LITHOLOGY	REMARKS
3	486.20-486.86	N/A	Siltstone/ Mudstone	Grey, grading down to dark grey, siltstone to mudstone; bioturbated; coaly laminae and partings common. No visible porosity; no fluorescence.
3	486.86-488.36	SP13P-SP16P 18, SP19-SP21 22, 23	Sandstone	Light grey, very fine to fine grained, silica cemented quartzarenite; bioturbated; coaly and argillaceous clasts, laminae and partings abundant; ripple laminae abundant; soft sediment deformation; pyrite and anhydrite present. Low visible porosity; no fluorescence.
3	488.36-489.07	SP17P, 24	Siltstone	Dark grey to grey, hard siltstone; burrowed, coaly lenses and partings common; coaly bed at the top. No visible porosity; no fluorescence.
3	489.07-492.30	SP18P-SP22P 25-39	Sandstone/ Siltstone	Light grey to grey, interlaminated sandstone and siltstone; convoluted laminae abundant; pyrite nodules common; thin coaly laminae, lenses and partings common; silica cement common; locally bioturbated; crosslaminated. Low visible porosity; no fluorescence.
3	492.30-493.60	SP23P, SP24P 40, 41	Sandstone	Grey, very fine grained, silica cemented sandstone; bioturbated; coaly partings common. No visible porosity; no fluorescence.
3	493.60-494.69	SP25P-SP28P 42, SP43	Sandstone/ Siltstone	Dark grey to light grey, interlaminated sandstone to siltstone; bioturbated; ripple laminated; conglomerate at base; coaly laminae and partings present. Low visible porosity; no fluorescence.

GENERAL LITHOLOGICAL DESCRIPTIONS

Well: CHEVRON HUME RIVER I-66
Location: N65-55 W129-41
Job No: RC2665/67

Formation: ARTIC RED SAND/GILMORE LAKE

Cored Interval: 1) 456.00-483.00 m

2) 483.00-486.20 m

3) 486.20-497.60 m

Recovery: 1) 26.60 m

2) 3.20 m

3) 11.00 m

<u>CORE</u>	<u>DEPTH INTERVAL</u>	<u>CORE ANALYSIS</u>	<u>LITHOLOGY</u>	<u>REMARKS</u>
3	494.69-497.20	N/A	Shale	Dark grey blocky shale; locally subfissile; sandy and silty lenses present.
3	497.20-497.60	N/A	LC	Lost core.

SAMPLE HANDLING

AGAT LABORATORIES CORE SERVICES

SAMPLE HANDLING AND ANALYSIS INFORMATION

Company: CHEVRON CANADA RESOURCES LTD.
Well: CHEVRON HUME RIVER I-66
Location: N65-55 W129-41
Field:

Coring Equipment:
Coring Fluid:
Core Diameter: .10 m
Total Cored: 31.60 m
Total Recovered: 30.80 m

Job Number: RC2665/67
Date: February 20, 1990

HANDLING

Core Transported in:	Boxes
Cutting Solution:	Water
Cleaning Solvent:	Toluene
Extraction:	Vapor phase
Cleaning Time:	72 Hours
Drying Equipment:	Convectional Oven
Drying Time:	48 Hours at 108°C

ANALYSIS

Grain volume measured by Boyle's Law using helium
Bulk volume measured by calipering on right-cylindrical samples
Bulk volume measured by archimedes principle using H₂O/Hg on non-cylindrical samples
Fluid saturations by retort on end pieces
Permeability measured on .10 m full diameter samples
Permeability measured on 25/38 mm diameter drilled plugs
Full diameter core sandblasted before Kh measurements

REMARKS

Two sets of colour photographs on whole core
One floppy diskette
Slabbed the core
Boxed the core

ABBREVIATIONS

COMMON ABBREVIATIONS

abnt Abundant
abv Above
Alg Algae (al)
alt Altered (ing)
amor Amorphous
Amph Amphipora
ang Angular
anhy Anhydrite (ic)
app Appear
apr Apparent
aprox Approximate (ly)
arg Argillaceous
ark Arkose (ic)
asph Asphalt (ic)
apha Aphanitic

bcm Become (ing)
bd Bed
bdd Bedded
bdg Bedding
Belm Belmnites
bent Bentonite (ic)
bf Buff
biocl Bioclastic
bioturb Bioturbated
bit Bitumen (inous)
bl Blue (ish)
blk Black
blky Blocky
bnd Band (ed)
Brac Brachiopod
brec Breccia (ted)
bri Bright
brit Brittle
brn Brown
Bry Bryozoa
bulb Bulbous
bur Burrowed

c Coarse (ly)
calc Calcite (areous)
carb Carbonaceous
cbl Cobble (64-256 mm)
Ceph Cephalopod
cgl Conglomerate
chk Chalk (y)
chlor Chlorite
cht Chert
chty Cherty
cl Clastic
cln Clean
clr Clear
cly Clay (ey)
cmt Cement (ed)
col Color (ed)
com Common
coq Coquina
Cor Coral
crbnt Carbonate
Crin Crinoid (al)
crm Cream
crpxl Cryptocrystalline
ctc Contact

deb Debris
decr Decrease (ing)
desi Desiccation
dism Disseminated
dk Dark (er)
dns Dense (er)
dol Dolomite (ic)
drsy Druse (y)
dtrl Detrital (us)

elg Elongate

euhed Euhedral

f Fine (ly)
fau Fauna
Fe Iron-Ferruginous
Fe-mag Fero-magnesian
fenst Fenestral
fis Fissile
fl fill (ed)
fld Feldspar (thic)
flk Flake
flky Flaky
flor Fluorescence
flt Fault (ed)
fltg Floating
Foram Foraminifera
fos Fossil (iferous)
fr Fair
frac Fracture (ed)
frag Fragment (al)
fri Friable
frmwk Framework
fros Frosted

g Good
Gast Gastropod
gl Glass (y)
glau Glauconite (ic)
gn Green
gr Grain (ed)
gran Granular
grd Grade (ed)
grdg Grading
grnl Granule (2-4 mm)
gy Gray
gyp Gypsum (iferous)

COMMON ABBREVIATIONS (CONTINUED)

hd	Hard	m	Medium	phos	Phosphate (ic)
hfrac	Horizontal Fracture	mar	Maroon	pk	Pink
hi	High	mas	Massive	plag	Plagioclase
hrtl	Horizontal	mat	Material, matter	Plcy	Pelecypod
hvy	Heavy	mica	Mica (ceous)	pl	Plant
hydc	Hydrocarbon	mic	Micro	plty	Platy
		mky	Milky	por	Porous (sity)
		mnr	Minor	pos	Possible (ility)
ig	Igneous	mnrl	Mineral (ized)	p-p	Pin point
imbed	Imbedded	mnut	Minute	pred	Predominant (ly)
imp	Impression	Mol	Mollusca	prim	Primary
incl	Included (sion)	mot	Mottled	prob	Probable (ly)
incr	Increase (ing)	mrly	Marly	prom	Prominent (ly)
indst	Indistinct	mtx	Matrix	pt	Part (ly)
intbd	Interbedded			ptch	Patch (es)
intcl	Intraclast (s)			ptg	Parting
intfrag	Interfragmental	n	No, none, non	purp	Purple
intgran	Intergranular	nod	Nodule	pyr	Pyrite (ic)(ized)
intlam	Interlaminated	num	Numerous	pyrbit	Pyrobitumen
intr	Intrusion (ive)				
intv	Interval				
intxl	Intercrystalline	o	Oil	qtz	Quartz
ireg	Irregular	occ	Occasional	qtzc	Quartzitic
ird	Iridescent	od	Odor	qtzs	Quartzose
intrsk	Intraskeletal	ool	Oolite (ic)		
		op	Opaque		
kao	Kaolin	org	Organic	rd	Round (ed)
		orng	Orange	repl	Replaced (ing)(ment)
		orth	Orthoclase	rex1	Recrystallized
lam	Laminated	Ost	Ostracod	rmn	Remains (nant)
lchd	Leached	ovgth	Overgrowth	rr	Rare
len	Lentil (cular)	ox	Oxidized	rsns	Resinous
lith	Lithographic			rthy	Earthy
lmy	Limy				
lrg	Large (er)	P	Preliminary (as suffix)		
ls	Limestone	pbl	Pebble (4-64 mm)	s	Small
lse	Loose	pel	Pellet	sa	Salt (y)
lstr	Lustre	perm	Permeability	S	Sulphur
lt	Light (er)	pet	Petroleum (iferous)	s&p	Salt & pepper

COMMON ABBREVIATIONS (CONTINUED)

sat	Saturated	thk	Thick	yel	Yellow
sb	Sub	thn	Thin		
sc	Scales	thru	Throughout		
scat	Scattered	tr	Trace	zn	Zone
sd	Sand (1/16 - 2 mm)	trnsl	Translucent		
sdv	Sandy	trnsp	Transparent		
sec	Secondary	tt	Tight	*	Broken core
sed	Sediment (ary)	tub	Tubular	>10000	Permeability over 10000 mD
sft	Soft			<0.01	Permeability less than 0.01 mD
sh	Shale	uncons	Unconsolidated	CC	Cracked Core
shad	Shadow	unident	Unidentifiable	Dr	Drilled
shy	Shaly	up	Upper	LC	Lost Core
sid	Siderite (ic)			RU	Rubble
sil	Silica (eous)			mD	milliDarcy
sks	Slickensided	v	Very		
sl	Slight (ly)	v frac	Very fractured		
sln	Solution	var	Variable		
silt	Silt	vcol	Varicolored		
siltst	Siltstone	vfrac	Vertical Fracture		
silty	Silty	vgt	Varigated		
sm	Smooth	vn	Vein		
SP	Small Plug (as prefix)	vrtil	Vertical		
sp	Spot (ted)(ty)	vug	Vug (gy)(ular)		
spec	Speck (led)				
spl	Sample				
srt	Sort (ed)(ing)	/	With		
strg	Stringer	w	Well		
Strom	Stromatoporoid	wh	White		
stromlt	Stromatolite	wk	Weak		
struc	Structure	wthrd	Weathered		
styl	Stylolite (ic)	wtr	Water		
suc	Sucrosic	wvy	Wavy		
sug	Sugary	wxy	Waxy		
surf	Surface				
sz	Size				
sup	Supported				
		xbd	Cross-bedded		
tab	Tabular	xbdg	Cross-bedding		
tex	Texture	xl	Crystal (line)		
Tham	Thamnopora	xlam	Cross-laminated		

CORE LOG

CORE #1 ARCTIC RED SANDSTONE/GILMORE LAKE
INTERVAL: 456-483m
CUT: 27m
RECOVERED: 27m

CORING TIMES:

456m/7,6,5,6,6/4,3,4,4,3/3,5,6,3,5/5,4,4,3,4/5,4,5,5,5/5,5,2,2,2/462m
462m/2,2,2,2,2/1,1,1,2,1/1,2,2,1,2/1,2,3,3,5/4,3,2,4,4/3,2,4,2,3/468m
468m/2,3,1,2,2/1,1,2,2,2/1,1,2,1,2/1,1,1,4/4,3,2,4,19/6,1,1,1,2/474m
474m/1,4,4,6,5/6,6,5,3,3/7,4,2,2,4/3,2,3,2,6/5,5,9,10,16/17,23,20,20,10/480m
480m/8,8,10,7,10/11,15,14,14,16/15,15,15,10,11/483m

456.00-460.20 SHALE: dark grey, slightly silty, very slightly dolomitic, pyrite (4.20m) blebs and nodules to 1cm, slight disseminated pyrite, slightly micromicaceous, trace carbonaceous specks, platy, breaks easily into hockey pucks.

460.20-462.70 SHALE: and argillaceous siltstone, mottled, moderately bioturbated, (2.50m) burrowed, part poorly laminated, graded laminations, medium to dark grey, slight disseminated pyrite, decrease blebs and nodules, micromicaceous, trace carbonaceous.

462.70-467.10 SHALE: dark grey, platy, hockey pucks, only trace silty, trace (4.40m) carbonaceous specks, pyrite blebs, very slightly dolomitic, occasional large fragments and trace laminae of coaly and pyritic plant remains, minor silty and trace sandy bands. At 466.25m there is a several cm lense of medium to coarse quartz sandstone, trace pebbles, siliceous, tight, with pyritic and coaly plant fragments.

ARCTIC RED SANDSTONE 467.10m (-371.8m)

467.10-471.75 SILTSTONE: mottled grey, bioturbated, siltstone is trace argillaceous (4.65m) to argillaceous, sandy locally, quartz, mica, siliceous, very slightly dolomitic, hard, tight. Part grading to very fine, silty sandstone, tight, no stain or cut. Dark micromicaceous shale partings. Burrows to 5cm (both horizontal and vertical), pyritic burrows locally, poor scour and sole marks, small sand dikes or diapirs slightly warping laminae above, locally graded laminae to several cm. At 468.20 there is a 20cm bed, brown siltstone, dolomitic/sideritic, argillaceous, trace sandy, dense, hard, tight.

471.75-472.05 SANDSTONE: very fine grained, medium grey, clean quartz, glauconite (0.30m) grains, micaceous laminae and partings, trace argillaceous, slightly silty, slightly coarser at base with several shale clasts, very fine to fine grained with medium grains, siliceous, dolomitic, trace sideritic, subangular, poorly sorted, hard, **tight to very poor porosity at best, slight bitumen specks, very weak cut.** Uneven scour at base, sand dike cutting into bed below.

472.05-472.65 SANDSTONE: and sandy siltstone, mottled darker grey, bioturbated, (0.65m) burrows, very fine grained, with trace fine grains, quartz, mica, trace glauconite, silty, slightly argillaceous, siliceous, slightly dolomitic, pyrite locally, dark carbonaceous/bituminous and micromicaceous patches and partings decreasing with depth, cleaner laminae near base, **tight, barely visible cut.**

472.65-472.85 SANDSTONE: medium grey, grading from cleaner sandstone at base, very (0.25m) fine to fine grained, becoming fine to medium grained lower, silt, clean, quartz, slight mica, trace bitumen specks, siliceous, trace dolomitic, hard, tight, no stain or cut. Poorly laminated, trace carbonaceous shale partings.

472.85-474.25 SANDSTONE: mottled, bioturbated, burrows common, fine grained, part (1.40m) very fine to fine grained, scattered medium grains, quartz, glauconite locally, slightly siliceous and dolomitic, very poorly sorted, **tight to very poor porosity at best, no stain or cut**, patchy carbonaceous, argillaceous and micromicaceous material, carbonaceous and micromicaceous shale partings, sole markings common. Base is black, carbonaceous shale with sole markings and burrows, black shale is extruded vertically into sandstone above for 10cm locally.

474.25-475.35 SANDSTONE: massive, homogeneous bed, dark brownish grey, very fine to (1.10m) fine grained, quartz, glauconite, slight mica, very clean, trace shale grains, siliceous, only trace dolomitic, subangular to subrounded, well sorted, **intergranular bitumen specks throughout, very fine intergranular, very poor, porosity, 2-4%, very weak, slow, yellow cut, no streaming, weak oily odour, no H₂S reading.** Thin band of fine to coarse grained sandstone at base, with carbonaceous shale rip up clasts, siliceous, bitumen specks, tight.

475.35-477.66 SANDSTONE: medium brownish grey, very fine grained, some very fine to (2.31m) fine grained, quartz, variably micaceous, slightly glauconite, slightly silty, patchy argillaceous and carbonaceous material, moderately bioturbated, dolomitic and siliceous, poor sorting, **tight**. Carbonaceous shale partings. Becomes sandstone lenses with carbonaceous shale partings lower, with less bioturbation, few burrows. Base is 10cm pebble conglomerate, pebbles to 1cm, quartz, coarse to very coarse matrix, shale clasts, pyritic locally, siliceous, trace dolomitic, patch white, microcrystalline clay, bitumen or carbonaceous specks, tight, no stain or cut.

477.66-479.60 SANDSTONE: medium grey, very clean, massive bedded, medium grained, (1.94m) quartz, slight glauconite, minor grey shale grains, siliceous, locally white, microcrystalline clay? filling porosity, occasional carbonaceous patches and partings, subrounded to rounded, well sorted, **6-10% porosity, no stain or cut, no salt taste.**

479.60-483.00 SANDSTONE: medium grey, poorly banded, coarser, variably coarse grained (3.40m) and medium to coarse grained, locally very coarse grains, slightly coarser in upper part, quartz, very clean, 5% small intergranular patches of microcrystalline pyrite and dark argillaceous material, minor white microcrystalline clay filling porosity, trace carbonaceous specks, occasional pyritic, argillaceous and carbonaceous laminae, few small patches with porosity filled with bitumen and pyrite, **variable 6-10% porosity, no stain or cut.** At 482.7m there is a very thin band with very coarse grains, few pebbles, with a black pyritic and coaly parting at base. Lower 30cm of core is tighter, siliceous and slightly dolomitic.

CORE #2 ARCTIC RED SANDSTONE/GILMORE LAKE SHALE
INTERVAL: 483-486.2m
CUT: 3.2m
RECOVERED: 3.2m

CORING TIMES:

483m/9,17,10,9,8/10,6,8,4,2/3,4,3,3,8/17/486.2m

483.00-484.45 SANDSTONE: grey, coarse grained and medium to coarse grained, (1.45m) predominantly clear quartz, few grey shale grains, trace coal grains, minor very fine quartz grains in matrix, very clean, siliceous, small inter-granular patches of pyritic & argillaceous material, minor amounts of soft, white, microcrystalline kaolin? filling porosity, small patches with bitumen filling porosity, variable porosity, 6-10%, occasional 10-15% in coarser bands, trace bitumen specks, no stain, trace cut from carbonaceous plant remains. Several irregular partings of coal & pyritic.

GILMORE LAKE SHALE 484.45m (-389.15m)

484.45-485.55 SANDY SILTSTONE: part grading to silty sandstone, dark brown, (1.10m) argillaceous, mica, very carbonaceous, trace pyrite, tight, with coal laminae to several mm and rarely to several cm, coaly leaf remains throughout, locally weak cut from coal plant remains. One strong vertical fracture splits core.

485.55-486.20 SILTSTONE: lighter, medium brownish grey, quartz, argillaceous, mica, (0.65m) small carbonaceous plant remains throughout, decrease coal from interval above, tight. Thinly laminated, numerous short vertical "burrow like" cracks filled with carbonaceous material.

CORE #3 GILMORE LAKE SHALE/COAL
 INTERVAL: 486.2-497.6m
 CUT: 11.4m
 RECOVERED: 11.0m

CORING TIMES:

486.2m/12,6,5,9/10,8,3,7,6/2,3,2,3,7/7,7,3,3,3/7,5,7,9,11/4,5,7,5,6/492m
 492m/17,6,5,1,3/7,7,6,6,6/4,5,8,6,9/1,6,1,1,1/2,1,1,2,9/3,1,2/497.6m

486.20-486.30 SILTSTONE: brownish grey, argillaceous, trace sandy, carbonaceous plant (0.10m) flakes, thinly, laminated, no coal.

486.30-486.82 SHALE: very carbonaceous, silty, grading to siltstone in upper part, (0.52m) decreasing silt with depth, coal laminae to several mm, pyrite blebs locally.

486.82-488.52 SANDSTONE: light grey, laminated, fine to medium grained, clear (1.70m) quartz, clean, minor very fine grained quartz, trace mica, very siliceous, tight, coal laminae to several mm throughout, very coaly, broken coal laminae and ripped up coal clasts locally, pyrite blebs, **trace weak cut from coal**. Middle becomes very fine to fine grained sandstone, minor sandy siltstone.

488.52-488.95 SILTSTONE: brownish grey, argillaceous, poorly laminated in upper part, (0.43m) carbonaceous plant flakes throughout, no coal, tight. Small vertical cracks filled with carbonaceous material.

488.95-489.80 SANDSTONE: thinly laminated, very fine to fine grained and very fine (0.85m) grained, silty, slightly argillaceous, siliceous, tight, carbonaceous, coal partings, minor coal laminae, ripped up coal fragments, pyrite blebs.

489.80-490.13 SANDSTONE: and coal, increasing coal, very fine to fine grained, (0.33m) quartz, carbonaceous, siliceous, tight. Very common coal laminae to several mm, pyrite blebs, trace cut from coal.

490.13-492.30 SANDSTONE: grey, brownish grey, very fine grained, quartz, very silty, (2.27m) argillaceous, carbonaceous, siliceous, tight, part very fine to fine grained, poorly laminated, minor warped laminae, carbonaceous partings, trace coal laminae, pyrite blebs. Part in middle is fine grained, cleaner sandstone, siliceous, tight, carbonaceous, with coal laminae.

492.30-493.70 SILTSTONE: brownish grey, sandy, argillaceous, carbonaceous plant (1.40m) flakes, slight increase coal fragments at base.

493.70-494.65 SANDSTONE: and coal, laminated, very fine grained, silty, part sandy, (0.95m) siltstone, very fine to fine grained locally in middle and lower part, quartz, siliceous, carbonaceous, plant fragments, coal partings and laminae common, tight. Base is 10cm conglomerate, coarse to very coarse and pebbles of quartz, packed with medium to dark grey siliceous pebbles and chert pebbles to 2cm, siliceous, also soft, brown, microcrystalline clay filling porosity, **trace bitumen**, subangular, subrounded and rounded, very poorly sorted, tight to very poor porosity at best, very poor pin point cut.

IMPERIAL SHALE 494.65m (-399.35m)

494.65-497.20 SHALE: dark grey, dense, trace silty, trace micromicaceous, trace (2.55m) pyrite, slight carbonaceous specked partings, no coal, no siltstone, breaks easily into hockey pucks.

CORE #4 IMPERIAL SHALE
INTERVAL: 497.6-524.6m
CUT: 27m
RECOVERED: 20.1m (74%)

CORING TIMES:

497.6m/14,6/2,1,2,2,1/8,2,1,2,1/5,1,3,1,1/2,5,2,2,1/2,5,1,2,1/2,2,5,2,2/504m
504m/1,2,2,2,2/2,2,2,2,2/1,2,3,2,2/2,1,1,2,1/1,3,5,1,1/1,2,1,2,2/1,2,2,2,1/511m
511m/2,2,1,2,2/2,2,2,2,2/6,1,2,2,2/3,1,2,2,2/3,2,1,2,2/2,2,3,4,3/13,7,5,4,2/518m
518m/2,3,6,6,7/7,9,8,8,8/6,3,4,2,3/3,8,7,5,4/4,4,4,4,3/4,2,3,1,3/2,2,3/524.6m

497.60-517.7 SHALE: medium grey, dense, vaguely banded, trace silty and micro-
(20.1m) micaceous, with bands of slightly increased silt and micromicaceous, carbonaceous specked, some parting are very micromicaceous and specked with carbonaceous plant remains, trace weak cut from plant remains, no coal, rare pyrite. Trace (less than 1%) laminae to 1-2mm, siltstone, lighter grey, argillaceous, micaceous, carbonaceous specked, tight. Rare grading to sandy siltstone and silty, very fine grained sandstone, argillaceous, micaceous, siliceous, trace dolomitic, part pyritic, tight. One thin band, 10cm, lighter grey, very calcareous, silty, trace carbonaceous specked, dense, tight. Core breaks easily into hockey pucks.

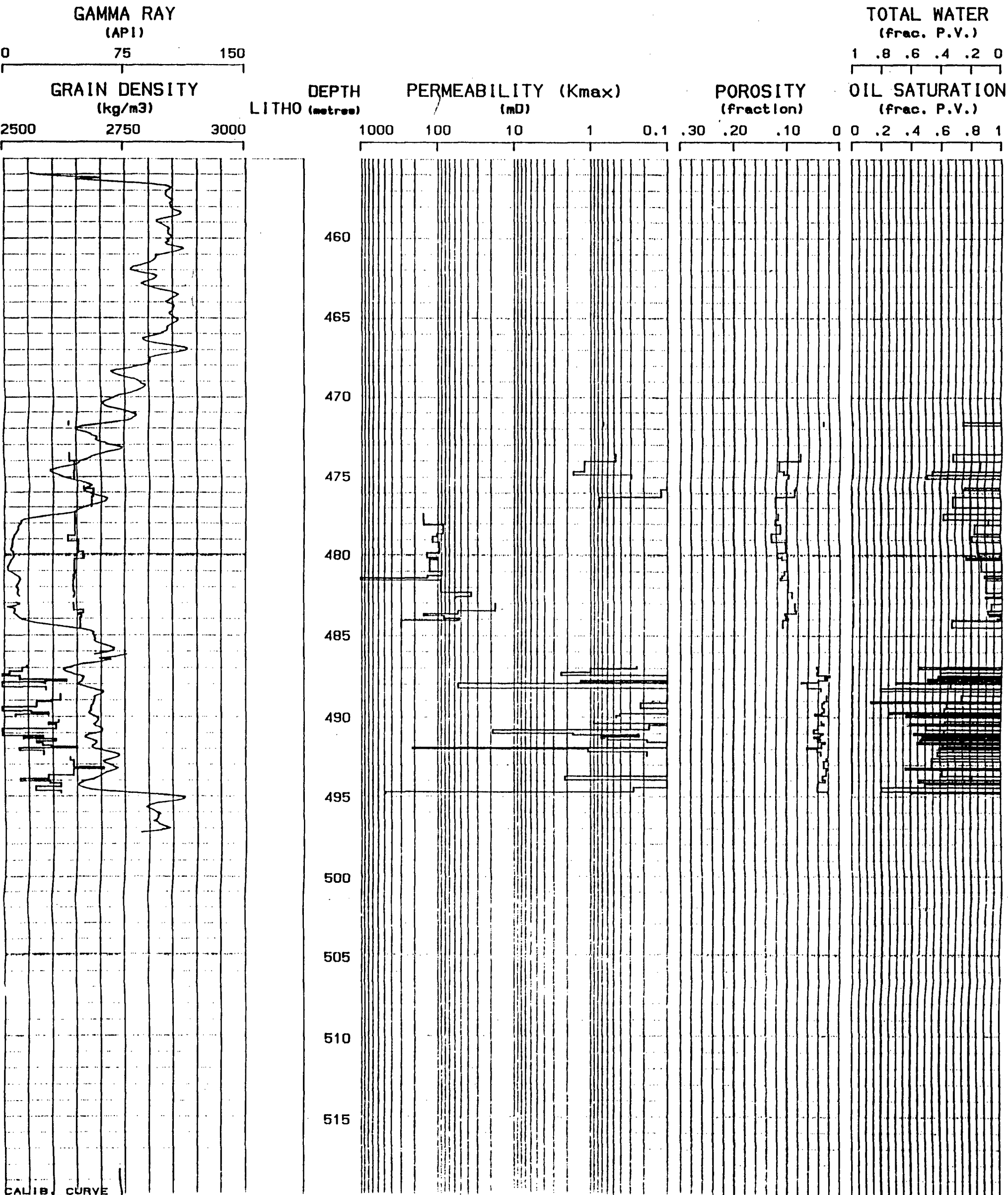
LOST 6.9m CORE OFF BOTTOM

COMPANY: CHEVRON CANADA RESOURCES
WELL: CHEVRON HUME RIVER 1-66
LOCATION: N65-55 W129-41
FIELD:
FORMATION(S): ARC RED SD/GILMORE L
W/O: RC2665



RECOVERY: 40.80 m
CORED INTERVAL: 456.00 - 497.60 m
DRLG. FLD.:
ELEVATION: KB:
GRD:

CORELOG



CALIB. CURVE

APPENDIX 5

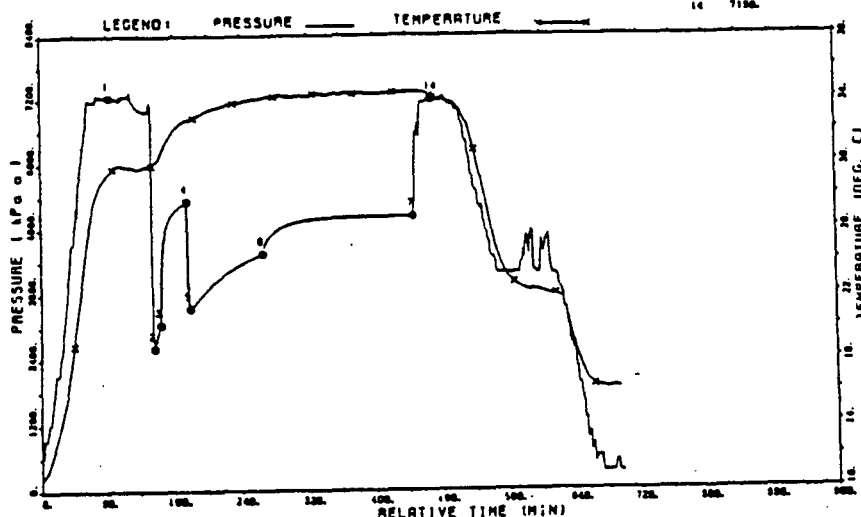
TESTING RESULTS

CHEVRON HUME RIVER I-66
 400/ 82.000 / 042.010 /00
 DST#01
 658.00m to 689.08m
 CANOL SHALES COAL STRING

DEPTH: 661.00m

PRESSURE
kPa(a)

RECORDER # 001767



- 1) Initial Hydro : 7250.
- 2) 1st Flow Start: 2621.
- 3) 1st Flow End : 3060.
- 4) END 1st Shutin: 5319.
- 5) 2nd Flow Start: 3353.
- 6) 2nd Flow End : 4353.
- 7) END 2nd Shutin: 5035.
- 14) Final Hydro. : 7190.

TEST TIMES (MIN)

- 1stFLOW : 8.0
 SHUTIN: 29.0
 2ndFLOW : 87.0
 SHUTIN: 181.0

RECOVERY DATA

TOTAL FLUID RECOVERY OF 370.00 M CONSISTED OF 40.00 M OF DRILLING FLUID AND 330.00 M OF MUDDY WATER. NO GAS TO SURFACE.

REMARKS AND TEST SUMMARY

Test results indicate a mechanically successful test. Bottom hole pressures and the shape of the shut-in curves suggest HIGH PERMEABILITY within the interval tested. The initial shut-in was not extrapolated due to insufficient curve development. The difference between the shut-ins indicates possible depletion.

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PAGE 1	PAGE 2	PAGE 3	PAGE 4
General Data	Tool Sequence	PRESSURE	Plot Summary
Blow Description	Recorder Summary	-TIME	Reservoir Calculations
Liquid Recovery	Mud and Hole Data	LISTING	-Parameters used
Gas Measurements			-Results

***** RECORDER PAGES & FIGURES *****

BAKER OIL TOOLS CANADA
DST#01 REPORT

p.1

Well name : CHEVRON HUME RIVER I-66
ation : 400/ 82.000 / 042.010 /00
Interval : 658.00m to 689.08m
Test Date : 90/02/02
Test Type : INFLATE STRADDLE
Formation : CANOL SHALES COAL STRING

K.B.Elevation : 95.30m
Grd.Elevation : 89.69m
TD @ test Date: 745.00m
Ticket Number : 80965
Unit Number :

Started in hole at : 1245 hrs
Tool opened at : 1527 hrs
Reverse circulated?: YES
Contractor & Rig No: SHEHTAH #1E
Baker#1 : 1 of 1 on the same trip.

Operator: CHEVRON CANADA RESOURCES LIMITED

14TH FLOOR
500 - 5TH AVE. S.W.
CALGARY, ALBERTA
T2P0L7

Company Rep : MARSH B
Testers : FORBES G

5 REPORTS(S) TO: DOUG LEWIS
Company:

BLOW DESCRIPTION

PREFLOW: Weak air blow increasing to strong in 30 seconds, steady throughout.
No gas to surface.

FINAL FLOW: Weak air blow increasing to strong in 45 seconds, steady throughout. No gas to surface.

TOTAL LIQUID RECOVERY : 370.00m

For DST# 1 through DST# 1
11 Fluid Samples
Sent to: CHEVRON

Field Est. Salinity :750.0g/m3

Btm. Hole Sampler #: 53
Sent to: DRAINED

40.00m DRILLING FLUID.
330.00m MUDDY WATER.

GAS MEASUREMENTS

No Gas Measurements

TOOL SEQUENCE

*****RECORDER SUMMARY*****

SUB	LENGTH (m)
PUMP OUT SUB	.40
CROSS OVER SUB	.30
INSIDE RECORDER	1.38
HYDRAULIC TOOL	1.50
BTM HOLE SAMPLER	1.03
INSIDE RECORDER	1.38
HYDRAULIC JARS	2.22
SAFETY JOINT	.65
INFLATE PUMP	2.28
SCREEN	1.16
TOP INFLATE PACKER	1.78
PACKER STICK DOWN	.78
PORTED COMB SUB	.30
OUTSIDE RECORDER	2.01
CROSS OVER SUB	.20
DRILL COLLARS	27.08
CROSS OVER SUB	.21
PACKER STICK UP	.50
BTM INFLATE PACKER	1.90
INSIDE RECORDER	2.74
BELLY SPRING	2.61

1) NUMBER : 001767	ELECTRONIC GAUGE.
TYPE : DMRB	
LOCATION: OUTSIDE	
RANGE: 34500.00kPa(a)	
DEPTH : 661.00m	
2) NUMBER : 001785	ELECTRONIC GAUGE.
TYPE : DMRB	
LOCATION: OUTSIDE	
RANGE: 68900.00kPa(a)	
DEPTH : 661.00m	
3) NUMBER : 014156	
TYPE : K-3	
LOCATION: OUTSIDE	
RANGE: 13700.00kPa	
DEPTH : 661.00m	
4) NUMBER : 021150	ABOVE HYDRAULIC
TYPE : K-3	TOOL.
LOCATION: INSIDE	
RANGE: 20500.00kPa	
DEPTH : 645.00m	

5) NUMBER : 021162	ABOVE INTERVAL.
TYPE : K-3	
LOCATION: INSIDE	
RANGE: 21900.00kPa	
DEPTH : 650.00m	

***** TOOL TOTAL 52.41

DRILL COLLARS ID= 72.0mm: 84.86

DRILL PIPE OD=114.3mm: 564.35

OD= :

6) NUMBER : 021347	BELOW INTERVAL.
TYPE : K-3	
LOCATION: INSIDE	
CAPACITY: 13700.00kPa	
DEPTH : 695.00m	

COLLAR-PIPE TOTAL 649.21

STICK UP ABOVE TABLE : 5.29

TOOL ABOVE INTERVAL : 14.08

TOTAL INTERVAL : 31.08

BOTTOM CHOKE SIZE: 25.40 mm

MUD AND HOLE DATA

Calipered Hole Size @ Test Depth: 222.00mm	Water Loss : 9.0cc/s
Hole Condition at Test Time : GOOD	Filter Cake: 1.5 mm
Hole Conditioned Prior to Test? : YES	
Mud Weight : 1070.0 kg/m3	Main Hole Size: 222.00mm
Type : GEL CHEMICAL	
viscosity : 68.0s/l	Temperature @661.00m = 34.4C

Location: 400/ 82.000 / 042.010 /00
st Type: INFLATE STRADDLE
rmation: CANOL SHALES COAL STRING

Recorder Number: 001767
Recorder Depth: 661.00 m
Subsea Depth: -565.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
1	INITIAL HYDROSTATIC			7250	
2	START OF 1st FLOW	0.0		2621	
		1.0		2733	
		2.0		2750	
		3.0		2776	
		4.0		2819	
		5.0		2888	
		7.0		3009	
3	END OF 1st FLOW	8.0		3060	
	1st SHUTIN PERIOD	0.0		3060	
		1.0	888	3948	9.0000
		2.0	1328	4388	5.0000
		3.0	1526	4586	3.6667
		4.0	1638	4698	3.0000
		5.0	1733	4793	2.6000
		7.0	1854	4914	2.1429
		8.0	1897	4957	2.0000
		9.0	1940	5000	1.8889
		10.0	1974	5035	1.8000
		11.0	2009	5069	1.7273
		12.0	2035	5095	1.6667
		13.0	2052	5112	1.6154
		15.0	2095	5155	1.5333
		16.0	2112	5172	1.5000
		17.0	2129	5190	1.4706
		18.0	2138	5198	1.4444
		19.0	2155	5216	1.4211
		20.0	2173	5233	1.4000
		21.0	2181	5241	1.3810
		23.0	2207	5267	1.3478
		24.0	2216	5276	1.3333
		25.0	2224	5285	1.3200

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 82.000 / 042.010 /00
 Test Type: INFLATE STRADDLE
 Formation: CANOL SHALES COAL STRING

Recorder Number: 001767
 Recorder Depth: 661.00 m
 Subsea Depth: -565.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
		26.0	2233	5293	1.3077
		27.0	2241	5302	1.2963
		28.0	2250	5310	1.2857
4	END OF 1st SHUTIN	29.0	2259	5319	1.2759
5	START OF 2nd FLOW	0.0		3353	
		2.0		3353	
		4.0		3397	
		7.0		3457	
		9.0		3500	
		11.0		3543	
		14.0		3595	
		16.0		3629	
		18.0		3664	
		20.0		3690	
		23.0		3741	
		25.0		3767	
		27.0		3802	
		30.0		3836	
		32.0		3862	
		34.0		3888	
		36.0		3905	
		39.0		3940	
		41.0		3974	
		43.0		3991	
		46.0		4026	
		48.0		4043	
		50.0		4060	
		52.0		4078	
		55.0		4112	
		57.0		4129	
		59.0		4147	
		62.0		4172	
		64.0		4190	
		66.0		4207	

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 82.000 / 042.010 /00
t Type: INFLATE STRADDLE
mation: CANOL SHALES COAL STRING

Recorder Number: 001767
Recorder Depth: 661.00 m
Subsea Depth: -565.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
		68.0		4224	
		71.0		4250	
		73.0		4259	
		75.0		4276	
		78.0		4293	
		80.0		4310	
		82.0		4328	
		84.0		4336	
6	END OF 2nd FLOW	87.0		4353	
	2nd SHUTIN PERIOD	0.0		4353	
		3.0	190	4543	32.6667
		7.0	302	4655	14.5714
		10.0	354	4707	10.5000
		13.0	397	4750	8.3077
		17.0	440	4793	6.5882
		20.0	466	4819	5.7500
		24.0	500	4853	4.9583
		27.0	517	4871	4.5185
		31.0	543	4897	4.0645
		34.0	552	4905	3.7941
		37.0	569	4922	3.5676
		41.0	586	4940	3.3171
		44.0	595	4948	3.1591
		48.0	604	4957	2.9792
		51.0	612	4966	2.8627
		55.0	621	4974	2.7273
		58.0	621	4974	2.6379*
		61.0	629	4983	2.5574*
		65.0	638	4991	2.4615*
		68.0	638	4991	2.3971*
		72.0	647	5000	2.3194*
		75.0	647	5000	2.2667*
		79.0	655	5009	2.2025*
		82.0	655	5009	2.1585*

* VALUES USED FOR EXTRAPOLATIONS

DST=01
CHEVRON HUME RIVER I-66
658.00 m to 689.08 m

p.3c

Location: 400/ 82.000 / 042.010 /00
Test Type: INFLATE STRADDLE
Formation: CANOL SHALES COAL STRING

Recorder Number: 001767
Recorder Depth: 661.00 m
Subsea Depth: -565.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
		85.0	655	5009	2.1176*
		89.0	655	5009	2.0674*
		92.0	664	5017	2.0326*
		96.0	664	5017	1.9896*
		99.0	664	5017	1.9596*
		103.0	664	5017	1.9223*
		106.0	664	5017	1.8962*
		109.0	673	5026	1.8716*
		113.0	664	5017	1.8407*
		116.0	673	5026	1.8190*
		120.0	673	5026	1.7917*
		123.0	673	5026	1.7724*
		127.0	673	5026	1.7480*
		130.0	681	5035	1.7308*
		133.0	673	5026	1.7143*
		137.0	673	5026	1.6934*
		140.0	673	5026	1.6786*
		144.0	673	5026	1.6597*
		147.0	673	5026	1.6463*
		151.0	673	5026	1.6291*
		154.0	673	5026	1.6169*
		157.0	681	5035	1.6051*
		161.0	681	5035	1.5901*
		164.0	681	5035	1.5793*
		168.0	681	5035	1.5655*
		171.0	681	5035	1.5556*
		175.0	681	5035	1.5429*
		178.0	681	5035	1.5337*
7	END OF 2nd SHUTIN	181.0	681	5035	1.5249*
14	FINAL HYDROSTATIC			7190	

* VALUES USED FOR EXTRAPOLATIONS

DST=01
CHEVRON HUME RIVER I-66
658.00 m to 689.08 m

p.3d

Location: 400/ 82.000 / 042.010 /00
Test Type: INFLATE STRADDLE
Formation: CANOL SHALES COAL STRING

Recorder Number: 001767
Recorder Depth: 661.00 m
Subsea Depth: -565.70 m

1st SHUT-IN

HORNER EXTRAPOLATION .00 kPa(a)
HORNER SLOPE .00000 kPa/cycle

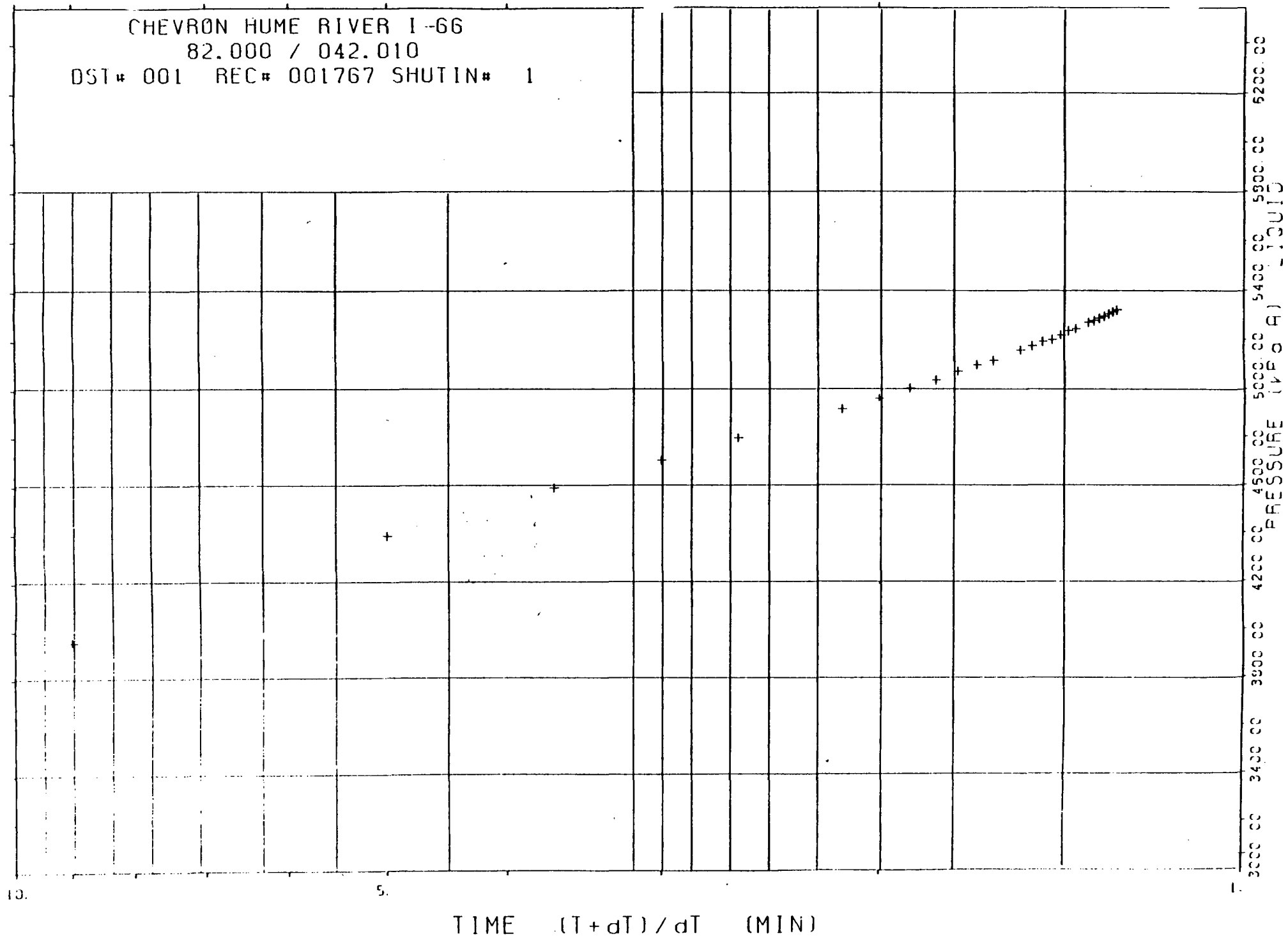
2nd SHUT-IN

HORNER EXTRAPOLATION 5077.84 kPa(a)
HORNER SLOPE 218.71588 kPa/cycle

CHEVRON HUME RIVER I-66

82.000 / 042.010

DST# 001 REC# 001767 SHUTIN# 1



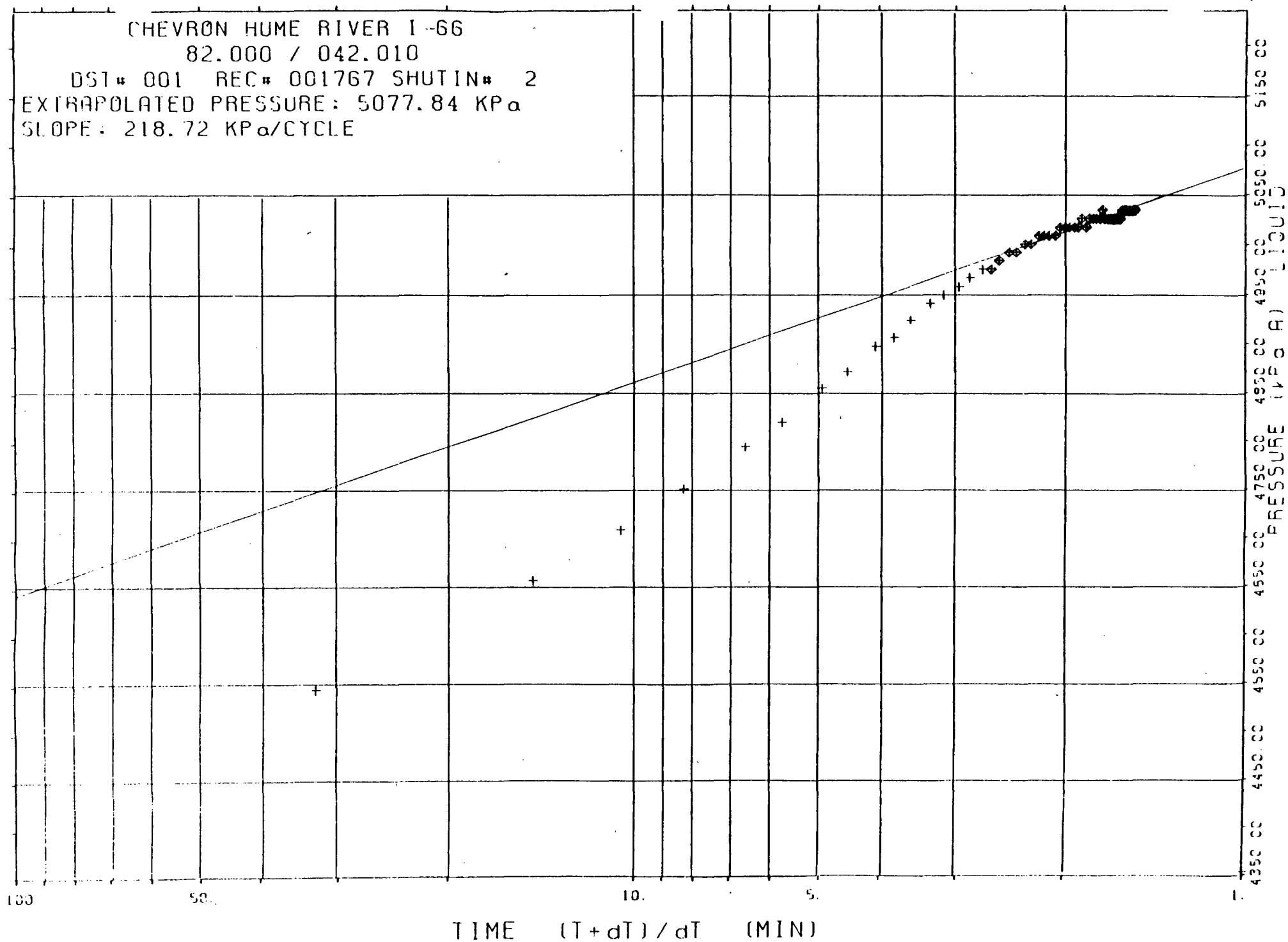
CHEVRON HUME RIVER 1-66

82.000 / 042.010

DST# 001 REC# 001767 SHUTIN# 2

EXTRAPOLATED PRESSURE: 5077.84 KPa

SLOPE: 218.72 KPa/CYCLE



CHEVRON HUME RIVER 1-66

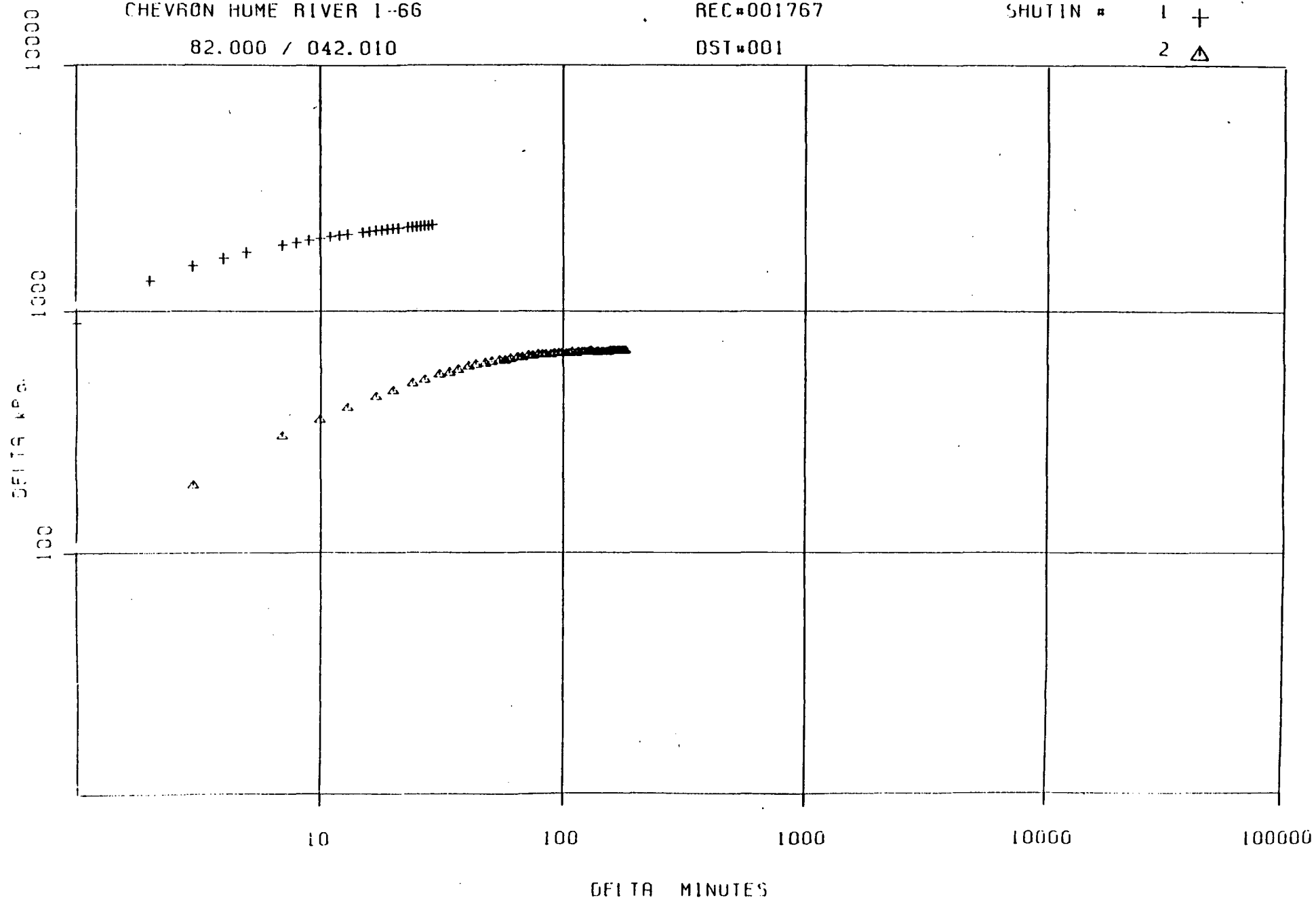
REC#001767

SHUT IN # 1 +

82.000 / 042.010

DST#001

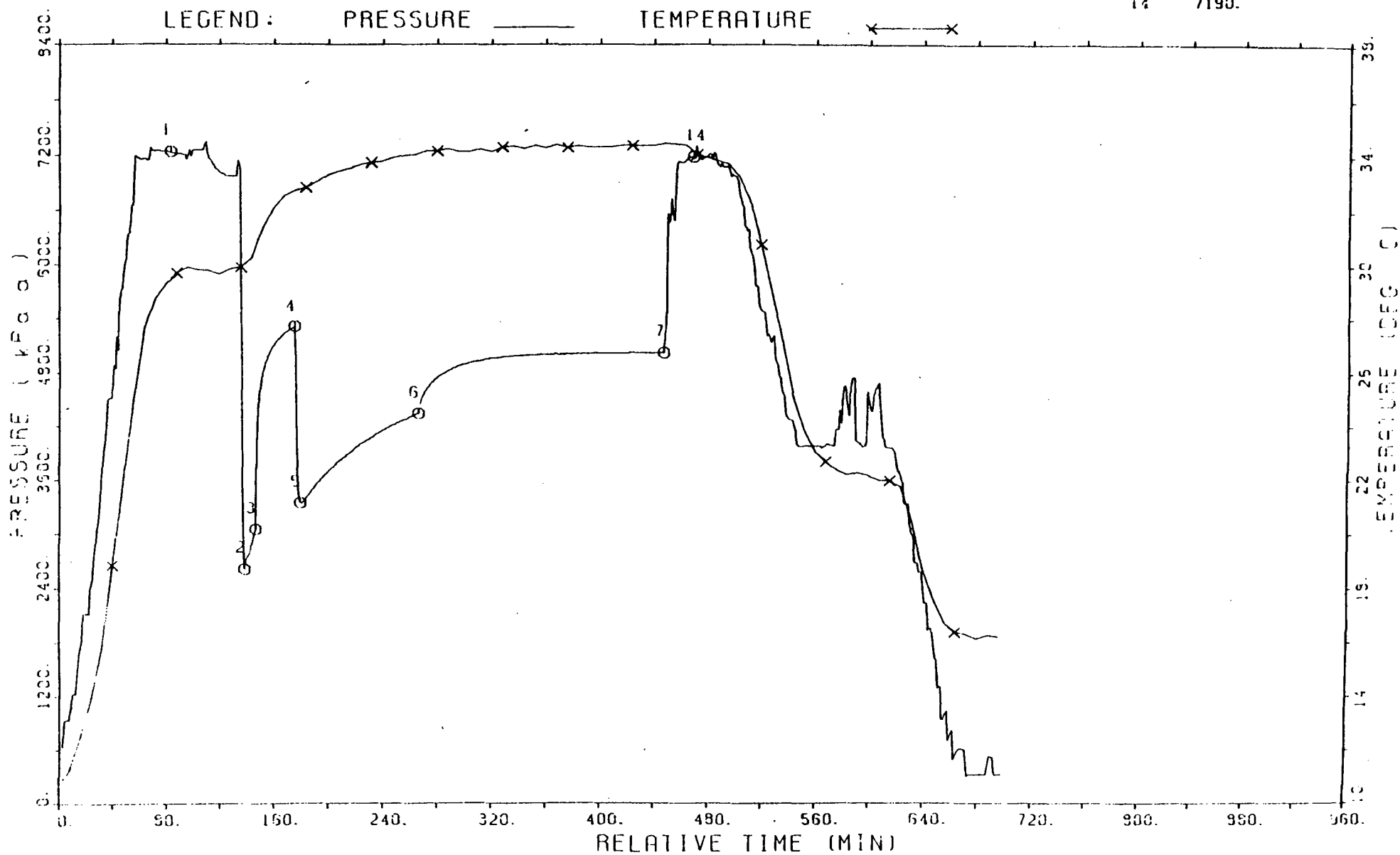
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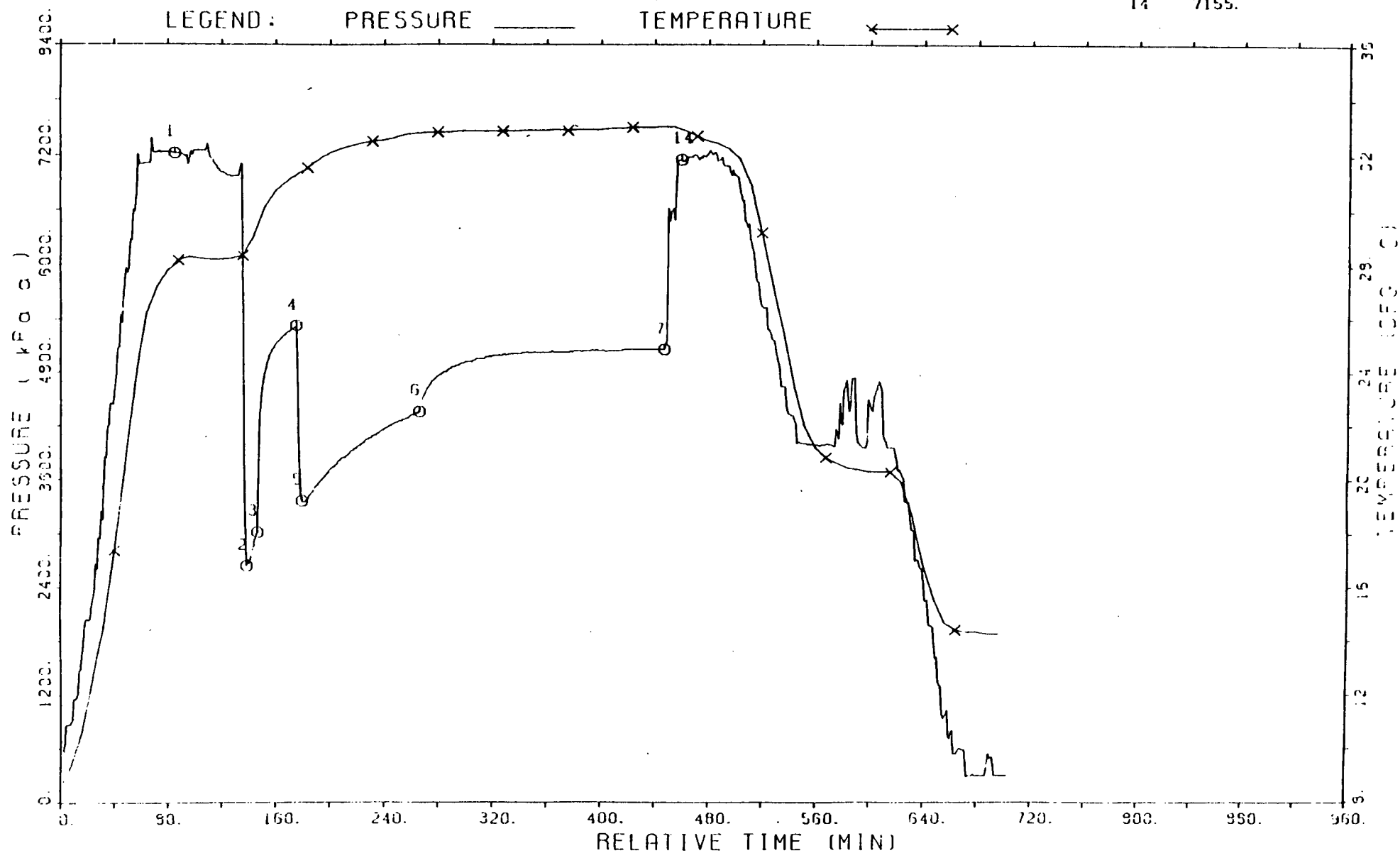
CHEVRON HUME RIVER I-66
DST #1
ELECTRONIC GAUGE #1767

LEGEND: $\odot$

1	=	7250.	1767
2		2621.	
3		3060.	
4		5319.	
5		3353.	
6		4353.	
7		5035.	
14		7190.	



LEGEND. ①	1 =	7224.	1(2)
	2	2639.	
	3	3917.	
	4	5328.	
	5	3362	
	6	4362	
	7	5052.	
	14	7155.	



DST#01
CHEVRON HUME RIVER I-66
658.00m to 689.08m

PRESSURE RECORDER NUMBER : 001767

DEPTH : 661.00m

LOCATION : OUTSIDE

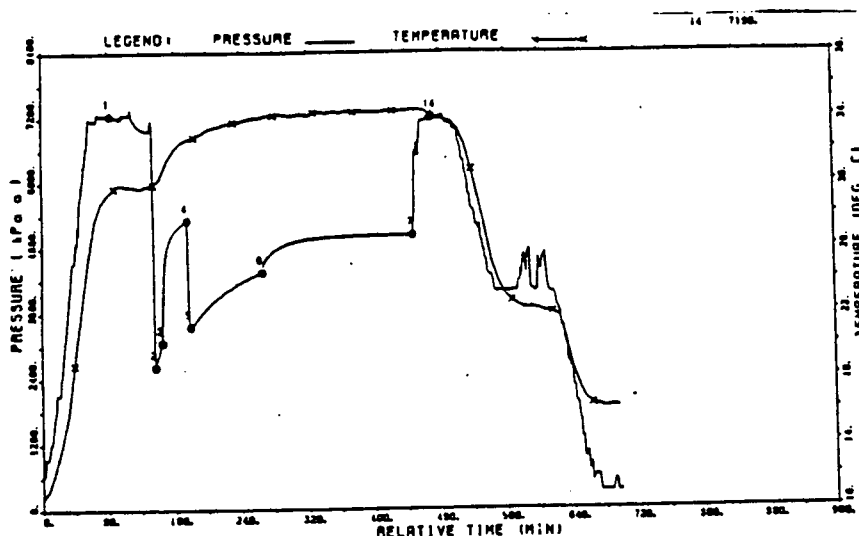
TYPE : DMRB

CAPACITY : 34500.00kPa(a)

PRESSURE
kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 34.4 C

- 1) Initial Hydro : 7250.
- 2) 1st Flow Start: 2621.
- 3) 1st Flow End : 3060.
- 4) END 1st Shutin: 5319.
- 5) 2nd Flow Start: 3353.
- 6) 2nd Flow End : 4353.
- 7) END 2nd Shutin: 5035.
- 14) Final Hydro. : 7190.



ELECTRONIC GAUGE.

TEST TIMES(MIN)

- 1st FLOW : 8.0
- SHUTIN: 29.0
- 2nd FLOW : 87.0
- SHUTIN: 181.0

PRESSURE RECORDER NUMBER : 001785

DEPTH : 661.00m

LOCATION : OUTSIDE

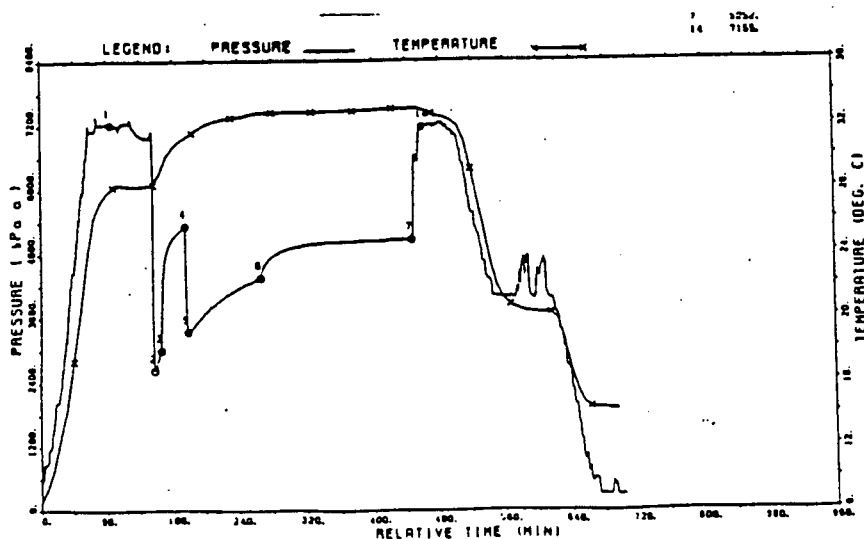
TYPE : DMRB

CAPACITY : 68900.00kPa(a)

PRESSURE
kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 32.9 C

- 1) Initial Hydro : 7224.
- 2) 1st Flow Start: 2638.
- 3) 1st Flow End : 3017.
- 4) END 1st Shutin: 5328.
- 5) 2nd Flow Start: 3362.
- 6) 2nd Flow End : 4362.
- 7) END 2nd Shutin: 5052.
- 14) Final Hydro. : 7155.



ELECTRONIC GAUGE.

DST#01
CHEVRON HUME RIVER I-66
658.00m to 689.08m

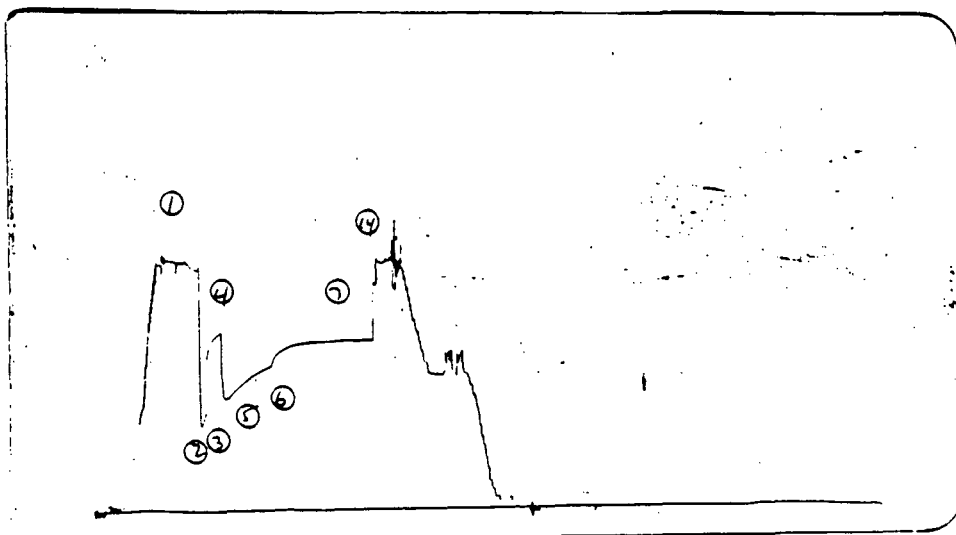
PRESSURE RECORDER NUMBER : 014156

EPTH : 661.00m
TYPE : K-3

LOCATION : OUTSIDE
CAPACITY : 13700.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 7150.
- 2) 1st Flow Start: 2461.
- 3) 1st Flow End : 2813.
- 4) END 1st Shutin: 5232.
- 5) 2nd Flow Start: 3262.
- 6) 2nd Flow End : 4165.
- 7) END 2nd Shutin: 4961.
- 14) Final Hydro. : 7128.



TEST TIMES (MIN)

- 1st FLOW : 8.0
SHUTIN: 29.0
2nd FLOW : 87.0
SHUTIN: 181.0

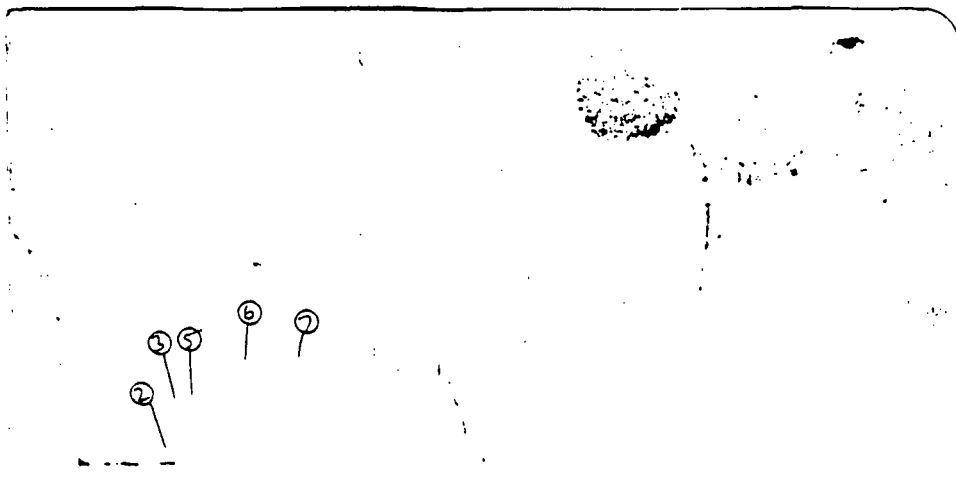
PRESSURE RECORDER NUMBER : 021150

DEPTH : 645.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 20500.00 kPa

PRESSURE
kPa

- 1) Initial Hydro :
- 2) 1st Flow Start: 0.
- 3) 1st Flow End : 2471.
- 4) END 1st Shutin:
- 5) 2nd Flow Start: 2453.
- 6) 2nd Flow End : 4033.
- 7) END 2nd Shutin: 4000.
- 14) Final Hydro. :



ABOVE HYDRAULIC
TOOL.

DST#01
CHEVRON HUME RIVER I-66
658.00m to 689.08m

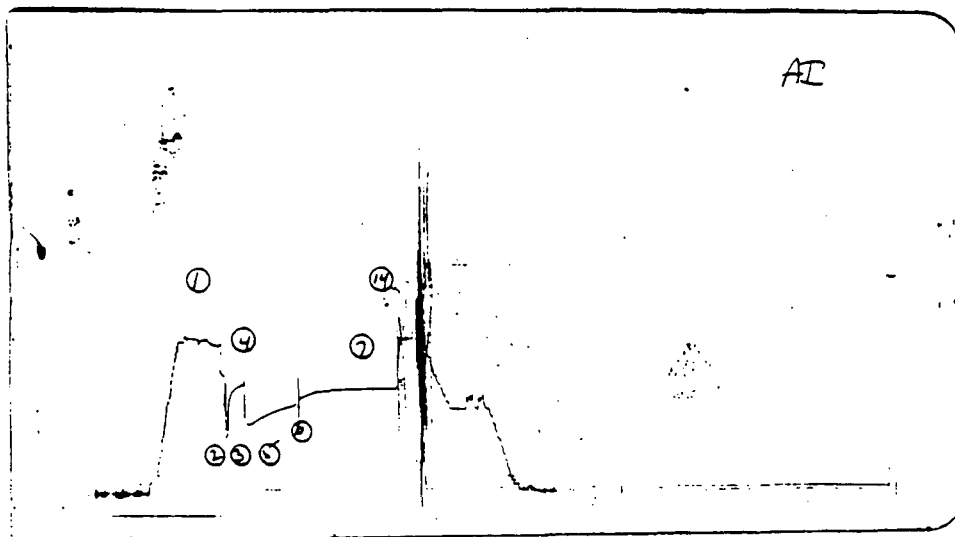
PRESSURE RECORDER NUMBER : 021162

DEPTH : 650.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 21900.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 7038.
- 2) 1st Flow Start: 2247.
- 3) 1st Flow End : 2627.
- 4) END 1st Shutin: 5046.
- 5) 2nd Flow Start: 3088.
- 6) 2nd Flow End : 3982.
- 7) END 2nd Shutin: 4773.
- 14) Final Hydro. : 6943.



ABOVE INTERVAL.

TEST TIMES (MIN)

- 1st FLOW : 8.0
SHUTIN: 29.0
2nd FLOW : 87.0
SHUTIN: 181.0

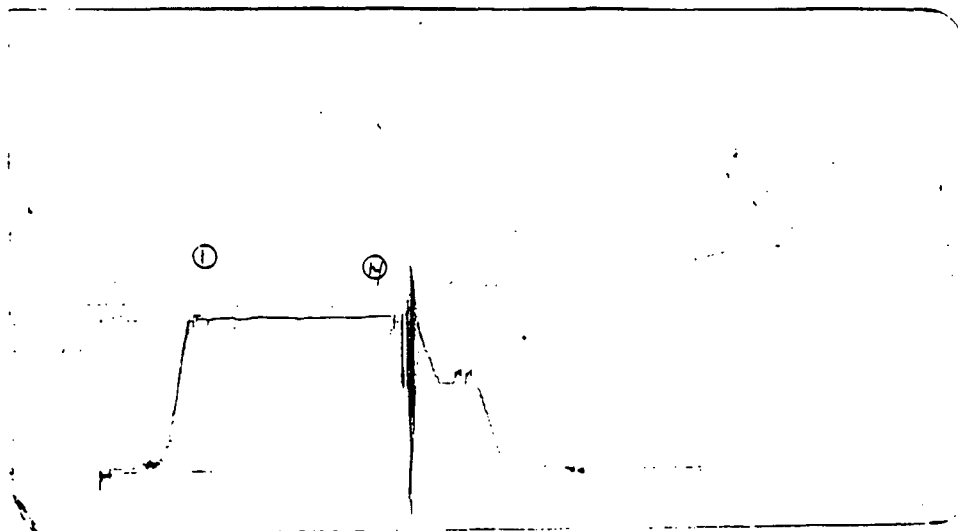
PRESSURE RECORDER NUMBER : 021347

DEPTH : 695.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 13700.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 7430.
- 14) Final Hydro. : 7398.



BELOW INTERVAL.

CHEVRON HUME RIVER I-66
400/ 82.000 / 042.010 /00
DST#02
470.00m to 486.01m
ARCTIC RED SANDSTONE

DEPTH: 473.00m

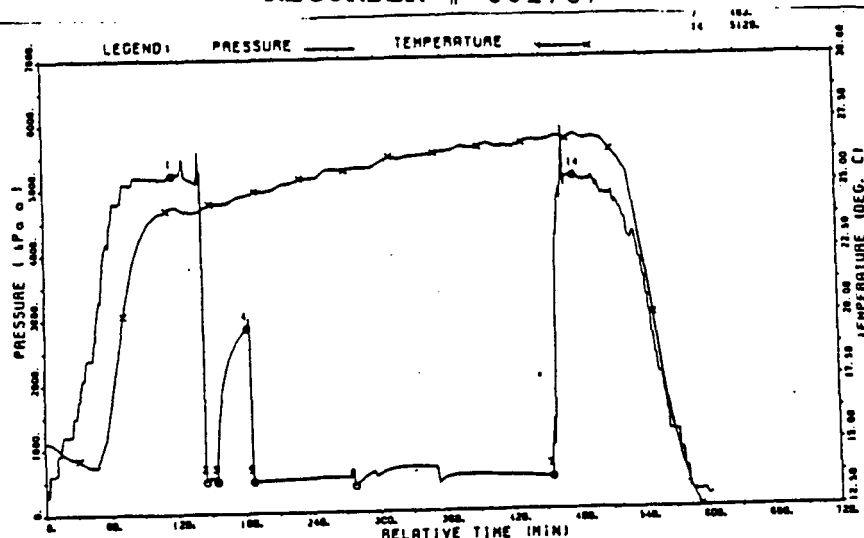
RECORDER # 001767

PRESSURE
kPa(a)

- 1) Initial Hydro : 5216.
- 2) 1st Flow Start: 483.
- 3) 1st Flow End : 483.
- 4) END 1st Shutin: 2853.
- 5) 2nd Flow Start: 474.
- 6) 2nd Flow End : 397.
- 7) END 2nd Shutin: 483.
- 14) Final Hydro. : 5129.

TEST TIMES (MIN)

- 1stFLOW : 10.0
SHUTIN: 28.0
2ndFLOW : 91.0
SHUTIN: 177.0



RECOVERY DATA

ALL FLUID RECOVERY CONSISTED OF 15.00 M OF GAS CUT DRILLING FLUID. NO GAS TO SURFACE.

REMARKS AND TEST SUMMARY

The available results suggest LOW PERMEABILITY within the interval tested. Minor plugging during the flows. This did not affect the test results. The final shut-in does not appear to be valid. The pressure drops may be a result of the jars firing.

TABLE OF CONTENTS

PAGE 1	PAGE 2	PAGE 3	PAGE 4
General Data	Tool Sequence	PRESSURE	Plot Summary
Blow Description	Recorder Summary	-TIME	Reservoir Calculations
Liquid Recovery	Mud and Hole Data	LISTING	-Parameters used
Gas Measurements			-Results

***** RECORDER PAGES & FIGURES *****

Well name : CHEVRON HUME RIVER I-66
Location : 400/ 82.000 / 042.010 /00
Interval : 470.00m to 486.01m
Test Date : 90/02/03
Test Type : INFLATE STRADDLE
Formation : ARCTIC RED SANDSTONE

K.B.Elevation : 95.30m
Grd.Elevation : 89.69m
TD @ test Date: 745.00m
Ticket Number : 80966
Unit Number :

Started in hole at : 0615 hrs
Tool opened at : 0825 hrs
Reverse circulated?: NO
Contractor & Rig No: SHEHTAH #1E
Baker#2 : 1 of 1 on the same trip.

Operator: CHEVRON CANADA RESOURCES LIMITED

14TH FLOOR
500 - 5TH AVE. S.W.
CALGARY, ALBERTA
T2P0L7

Company Rep : MARSH B
Testers : FORBES G

5 REPORTS(S) TO: DOUG LEWIS
Company:

BLOW DESCRIPTION

PREFLOW: Very weak air blow increasing to weak in 10 minutes. No gas to surface.

FINAL FLOW: Very weak air blow increasing slightly in 15 minutes, then decreasing to nil in 75 minutes. No gas to surface.

TOTAL LIQUID RECOVERY : 15.00m

For DST# 2 through DST# 2

6 Fluid Samples

Sent to: CHEVRON

Field Est. Salinity :1000.0g/m3

Btm. Hole Sampler #: 53

Sent to: DRAINED

15.00m GAS CUT DRILLING FLUID.

GAS MEASUREMENTS

No Gas Measurements

TOOL SEQUENCE

RECORDER SUMMARY

SUB	LENGTH (m)	
PUMP OUT SUB	.40	1) NUMBER : 001767 ELECTRONIC GAUGE.
CROSS OVER SUB	.30	TYPE : DMRB
INSIDE RECORDER	1.38	LOCATION: OUTSIDE
HYDRAULIC TOOL	1.50	RANGE: 34500.00kPa(a)
BTM HOLE SAMPLER	1.03	DEPTH : 473.00m
INSIDE RECORDER	1.38	2) NUMBER : 001785 ELECTRONIC GAUGE.
HYDRAULIC JARS	2.22	TYPE : DMRB
SAFETY JOINT	.65	LOCATION: OUTSIDE
INFLATE PUMP	2.28	RANGE: 68900.00kPa(a)
SCREEN	1.16	DEPTH : 473.00m
TOP INFLATE PACKER	1.78	
PACKER STICK DOWN	.78	3) NUMBER : 014156
PORTED COMB SUB	.30	TYPE : K-3
OUTSIDE RECORDER	2.01	LOCATION: OUTSIDE
DRILL COLLARS	2.83	RANGE: 13700.00kPa
CROSS OVER SUB	.20	DEPTH : 473.00m
SPACING	9.18	
CROSS OVER SUB	.21	4) NUMBER : 021150 ABOVE HYDRAULIC
PACKER STICK UP	.50	TYPE : K-3 TOOL.
BTM INFLATE PACKER	1.90	LOCATION: INSIDE
INSIDE RECORDER	2.74	RANGE: 20500.00kPa
BELLY SPRING	2.61	DEPTH : 457.00m
		5) NUMBER : 021162 ABOVE INTERVAL.
		TYPE : K-3
		LOCATION: INSIDE
		RANGE: 21900.00kPa
		DEPTH : 462.00m
***** TOOL TOTAL	37.34	6) NUMBER : 021347 BELOW INTERVAL.
DRILL COLLARS		TYPE : K-3
ID= 72.0mm:	83.99	LOCATION: INSIDE
ID= :		CAPACITY: 22000.00kPa
DRILL PIPE		DEPTH : 492.00m
OD=114.3mm:	374.51	
OD= :		
COLLAR-PIPE TOTAL	458.50	
STICK UP ABOVE TABLE :	2.58	
TOOL ABOVE INTERVAL :	14.08	
TOTAL INTERVAL :	16.01	
BOTTOM CHOKE SIZE:	25.40 mm	

MUD AND HOLE DATA

Calipered Hole Size @ Test Depth:	222.00mm	Water Loss :	9.0cc/s
Hole Condition at Test Time	: FAIR	Filter Cake:	1.5 mm
Hole Conditioned Prior to Test?	: NO		
Mud Weight :	1070.0 kg/m3	Main Hole Size:	222.00mm
Type :	GEL CHEMICAL		
Viscosity :	68.0s/l	Temperature @473.00m	= 26.7C

Location: 400/ 82.000 / 042.010 /00
Test Type: INFLATE STRADDLE
Formation: ARCTIC RED SANDSTONE

Recorder Number: 001767
Recorder Depth: 473.00 m
Subsea Depth: -377.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
1	INITIAL HYDROSTATIC			5216	
2	START OF 1st FLOW	0.0		483	
		1.0		509	
		2.0		526	
		3.0		535	
		4.0		552	
		5.0		526	
		6.0		543	
		8.0		560	
		9.0		543	
3	END OF 1st FLOW	10.0		483	
	1st SHUTIN PERIOD	0.0		483	
		1.0	440	922	11.0000
		2.0	802	1285	6.0000
		3.0	1043	1526	4.3333
		4.0	1224	1707	3.5000
		6.0	1474	1957	2.6667
		7.0	1577	2060	2.4286
		8.0	1672	2155	2.2500
		9.0	1750	2233	2.1111
		10.0	1819	2302	2.0000
		11.0	1888	2371	1.9091
		12.0	1931	2414	1.8333
		14.0	2026	2509	1.7143
		15.0	2052	2535	1.6667
		16.0	2095	2578	1.6250
		17.0	2138	2621	1.5882
		18.0	2172	2655	1.5556
		19.0	2198	2681	1.5263
		20.0	2224	2707	1.5000
		22.0	2267	2750	1.4545
		23.0	2293	2776	1.4348

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 82.000 / 042.010 /00
Test Type: INFLATE STRADDLE
Formation: ARCTIC RED SANDSTONE

Recorder Number: 001767
Recorder Depth: 473.00 m
Subsea Depth: -377.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
		24.0	2310	2793	1.4167
		25.0	2328	2810	1.4000
		26.0	2336	2819	1.3846
		27.0	2353	2836	1.3704
4	END OF 1st SHUTIN	28.0	2371	2853	1.3571
5	START OF 2nd FLOW	0.0		474	
		3.0		483	
		7.0		483	
		10.0		491	
		14.0		491	
		17.0		500	
		20.0		500	
		24.0		500	
		27.0		500	
		31.0		509	
		34.0		509	
		38.0		509	
		41.0		517	
		44.0		517	
		48.0		509	
		51.0		526	
		55.0		517	
		58.0		526	
		62.0		526	
		65.0		526	
		68.0		526	
		72.0		526	
		75.0		526	
		79.0		535	
		82.0		526	
		86.0		543	
		89.0		535	
6	END OF 2nd FLOW	91.0		397	

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 82.000 / 042.010 /00
Test Type: INFLATE STRADDLE
Formation: ARCTIC RED SANDSTONE

Recorder Number: 001767
Recorder Depth: 473.00 m
Subsea Depth: -377.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
2nd SHUTIN PERIOD		0.0		397	
		5.0	78	474	21.2000
		9.0	147	543	12.2222
		14.0	198	595	8.2143
		19.0	129	526	6.3158
		23.0	181	578	5.3913
		28.0	224	621	4.6071
		32.0	241	638	4.1563
		37.0	259	655	3.7297
		41.0	267	664	3.4634
		46.0	276	672	3.1957
		51.0	276	672	2.9804
		55.0	284	681	2.8364
		60.0	276	672	2.6833
		64.0	276	672	2.5781
		69.0	267	664	2.4638
		73.0	267	664	2.3836
		78.0	78	474	2.2949
		83.0	112	509	2.2169
		87.0	129	526	2.1609
		92.0	138	535	2.0978
		96.0	147	543	2.0521
		101.0	147	543	2.0000
		105.0	147	543	1.9619
		110.0	147	543	1.9182
		115.0	147	543	1.8783
		119.0	138	535	1.8487
		124.0	138	535	1.8145
		128.0	129	526	1.7891
		133.0	129	526	1.7594
		137.0	121	517	1.7372
		142.0	121	517	1.7113
		147.0	112	509	1.6871
		151.0	112	509	1.6689
		156.0	112	509	1.6474

* VALUES USED FOR EXTRAPOLATIONS

Location: 400/ 82.000 / 042.010 /00
Test Type: INFLATE STRADDLE
Formation: ARCTIC RED SANDSTONE

Recorder Number: 001767
Recorder Depth: 473.00 m
Subsea Depth: -377.70 m

TIME-PRESSURE LISTING

CHART LABEL	COMMENTS	TIME MIN.	DELTA P kPa	PRESSURE(T+dt)/dt kPa(a)	ABSCISSA
		160.0	103	500	1.6312
		165.0	95	491	1.6121
		169.0	95	491	1.5976
		174.0	95	491	1.5805
7	END OF 2nd SHUTIN	177.0	86	483	1.5706
14	FINAL HYDROSTATIC			5129	

* VALUES USED FOR EXTRAPOLATIONS

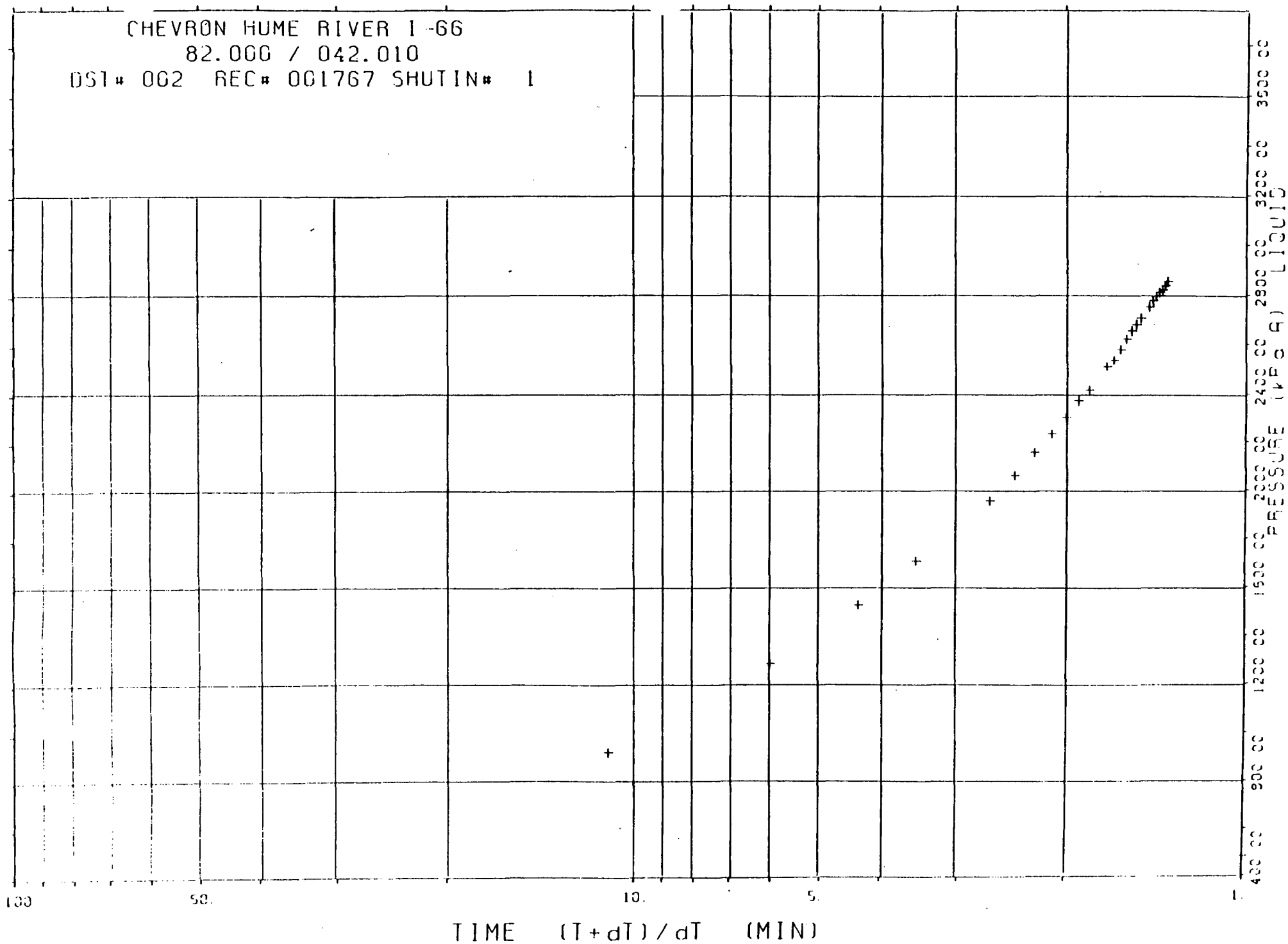
1st SHUT-IN
HORNER EXTRAPOLATION .00 kPa(a)
HORNER SLOPE .00000 kPa/cycle

2nd SHUT-IN
HORNER EXTRAPOLATION .00 kPa(a)
HORNER SLOPE .00000 kPa/cycle

CHEVRON HUME RIVER 1-66

82.000 / 042.010

DS1# 002 REC# 001767 SHUTIN# 1



CHEVRON HUME RIVER 1-66

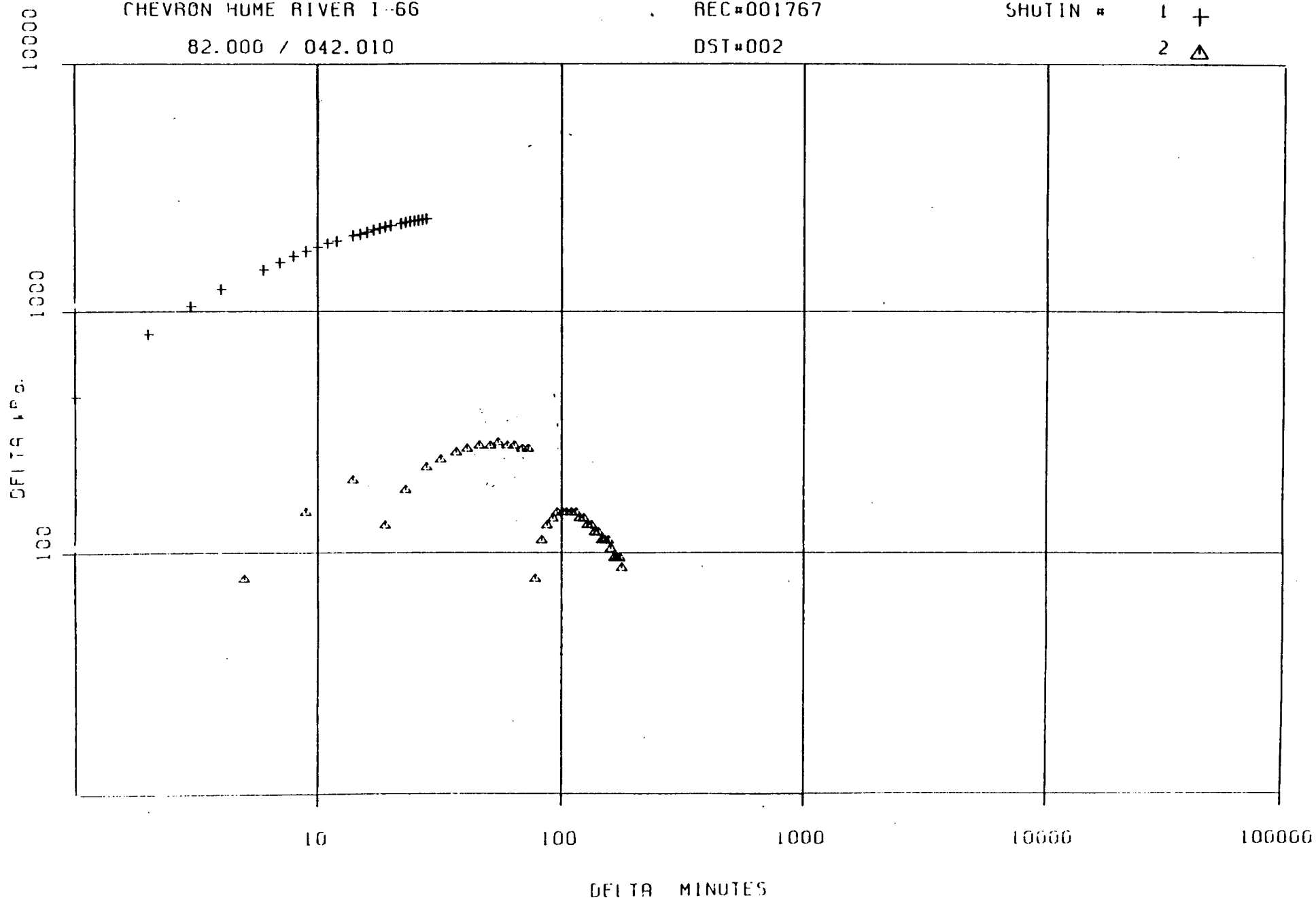
REC#001767

SHOTIN # 1 +

82.000 / 042.010

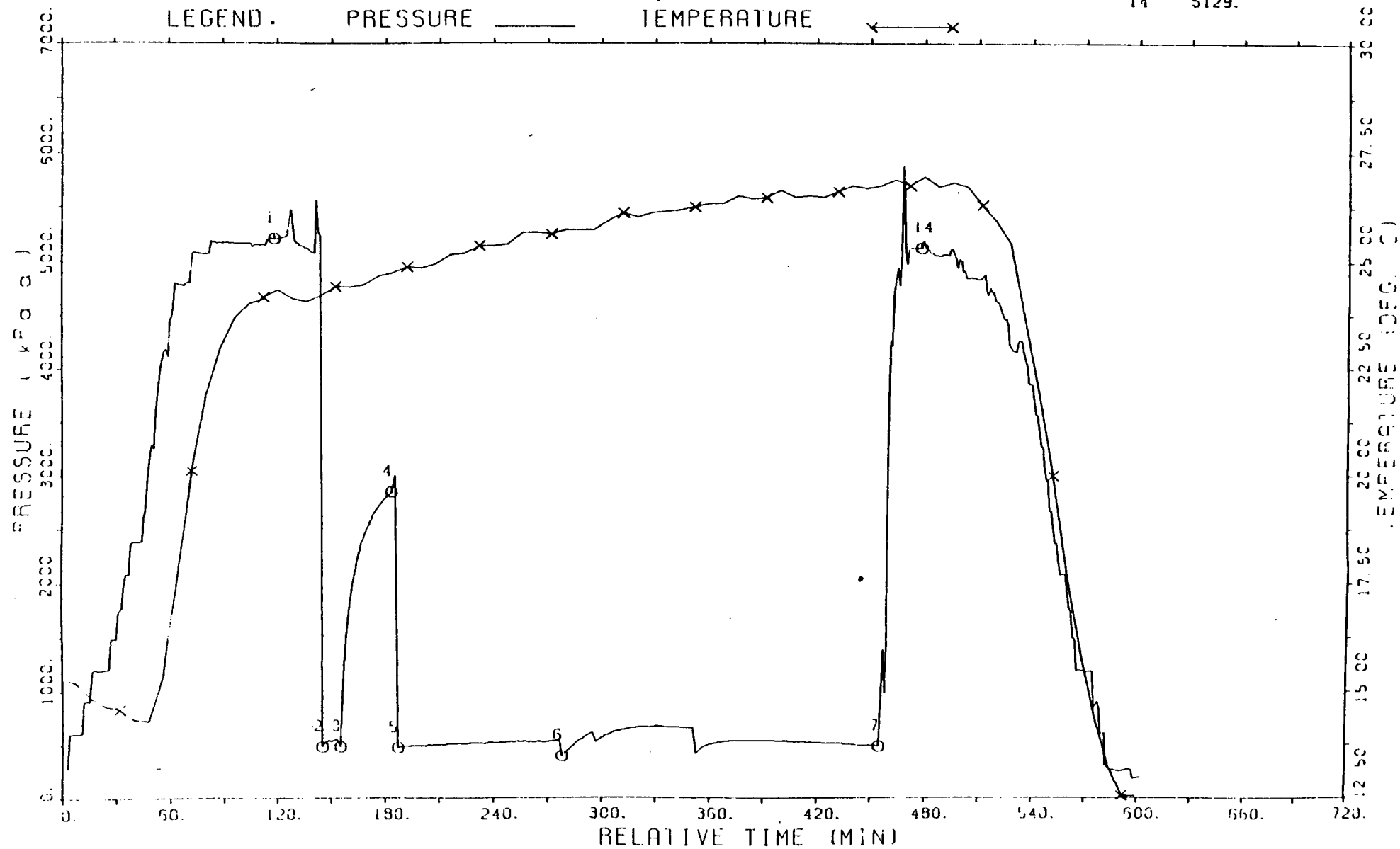
DST#002

2 Δ



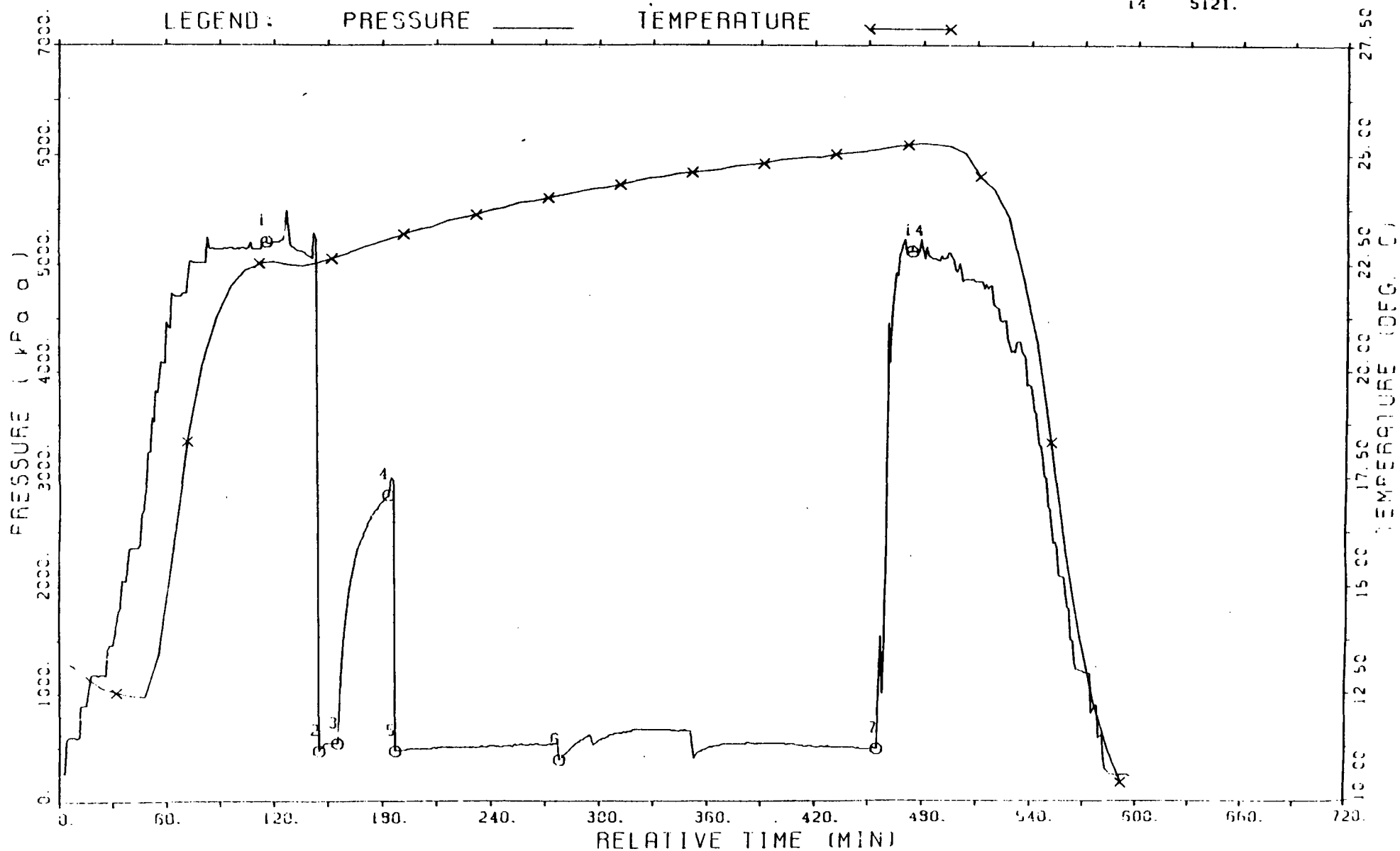
CHEVRON HUME RIVER I-66
DST #2
ELECTRONIC GAUGE #1767

LEGEND: ○ 1 = 5216. (m)
2 183.
3 483.
4 2853.
5 474.
6 337.
7 183.
14 5129.



CHEVRON HUME RIVER I-66
DST #2
ELECTRONIC GAUGE #1785

LEGEND. O	1	=	5207.	atd
	2		466.	
	3		535.	
	4		2845.	
	5		466.	
	6		373	
	7		483.	
	14		5121.	



DST#02
CHEVRON HUME RIVER I-66
470.00m to 486.01m

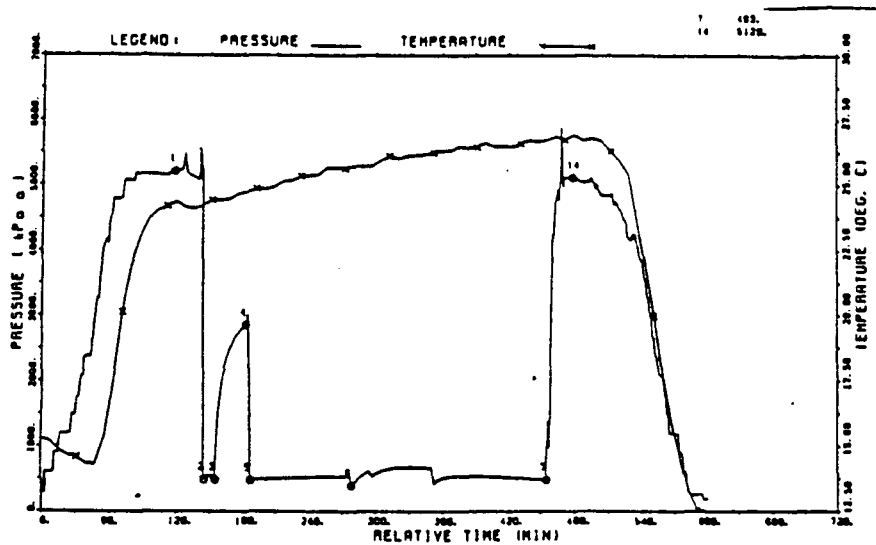
PRESSURE RECORDER NUMBER : 001767

PTH : 473.00m LOCATION : OUTSIDE
TYPE : DMRB CAPACITY : 34500.00kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 26.7 C

PRESSURE
kPa(a)

- 1) Initial Hydro : 5216.
- 2) 1st Flow Start: 483.
- 3) 1st Flow End : 483.
- 4) END 1st Shutin: 2853.
- 5) 2nd Flow Start: 474.
- 6) 2nd Flow End : 397.
- 7) END 2nd Shutin: 483.
- 14) Final Hydro. : 5129.



ELECTRONIC GAUGE.

TEST TIMES (MIN)

- 1st FLOW : 10.0
SHUTIN: 28.0
2nd FLOW : 91.0
SHUTIN: 177.0

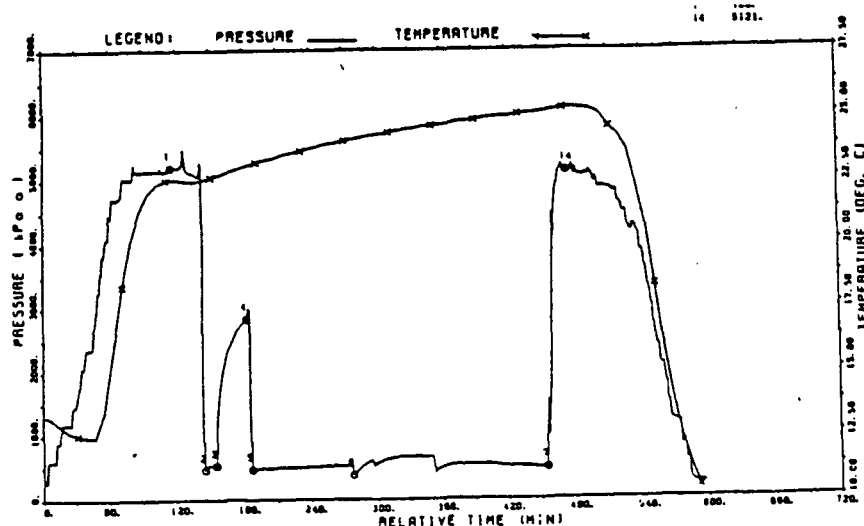
PRESSURE RECORDER NUMBER : 001785

DEPTH : 473.00m LOCATION : OUTSIDE
TYPE : DMRB CAPACITY : 68900.00kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 25.0 C

PRESSURE
kPa(a)

- 1) Initial Hydro : 5207.
- 2) 1st Flow Start: 466.
- 3) 1st Flow End : 535.
- 4) END 1st Shutin: 2845.
- 5) 2nd Flow Start: 466.
- 6) 2nd Flow End : 379.
- 7) END 2nd Shutin: 483.
- 14) Final Hydro. : 5121.



ELECTRONIC GAUGE.

DST#02
CHEVRON HUME RIVER I-66
470.00m to 486.01m

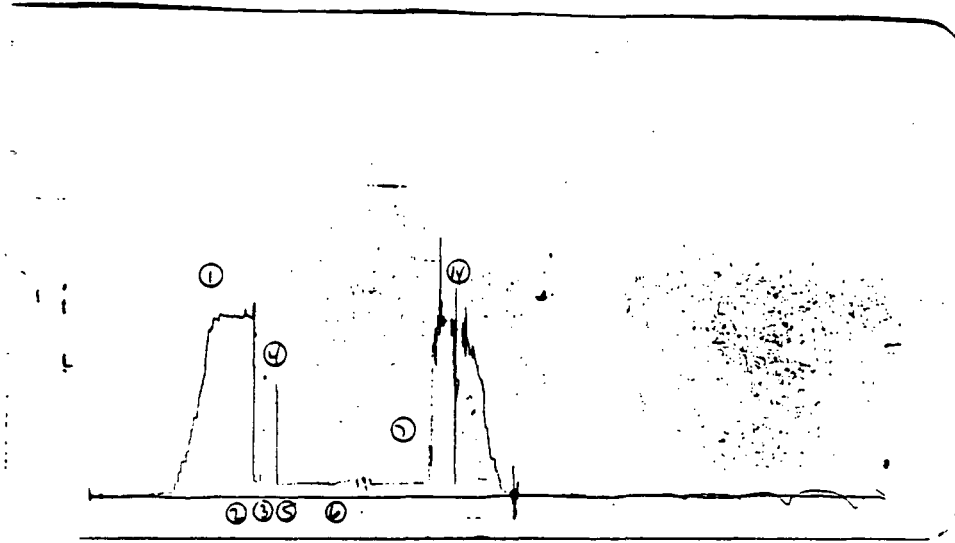
PRESSURE RECORDER NUMBER : 014156

DEPTH : 473.00m
TYPE : K-3

LOCATION : OUTSIDE
CAPACITY : 13700.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 5084.
- 2) 1st Flow Start: 406.
- 3) 1st Flow End : 403.
- 4) END 1st Shutin: 2732.
- 5) 2nd Flow Start: 326.
- 6) 2nd Flow End : 306.
- 7) END 2nd Shutin: 346.
- 14) Final Hydro. : 5035.



TEST TIMES (MIN)

- 1st FLOW : 10.0
SHUTIN: 28.0
2nd FLOW : 91.0
SHUTIN: 177.0

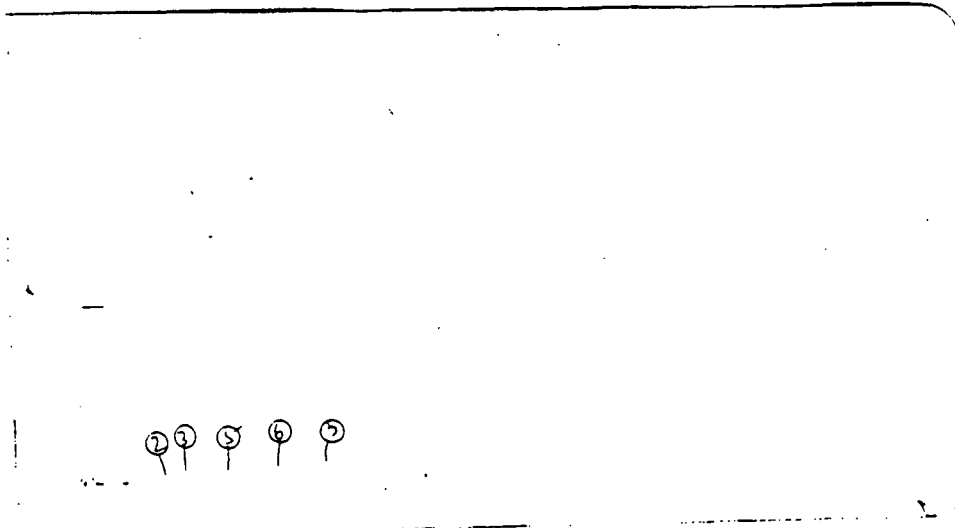
PRESSURE RECORDER NUMBER : 021150

DEPTH : 457.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 20500.00 kPa

PRESSURE
kPa

- 1) Initial Hydro :
- 2) 1st Flow Start: 37.
- 3) 1st Flow End : 113.
- 4) END 1st Shutin:
- 5) 2nd Flow Start: 113.
- 6) 2nd Flow End : 167.
- 7) END 2nd Shutin: 167.
- 14) Final Hydro. :



ABOVE HYDRAULIC
TOOL.

DST#02
CHEVRON HUME RIVER I-66
470.00m to 486.01m

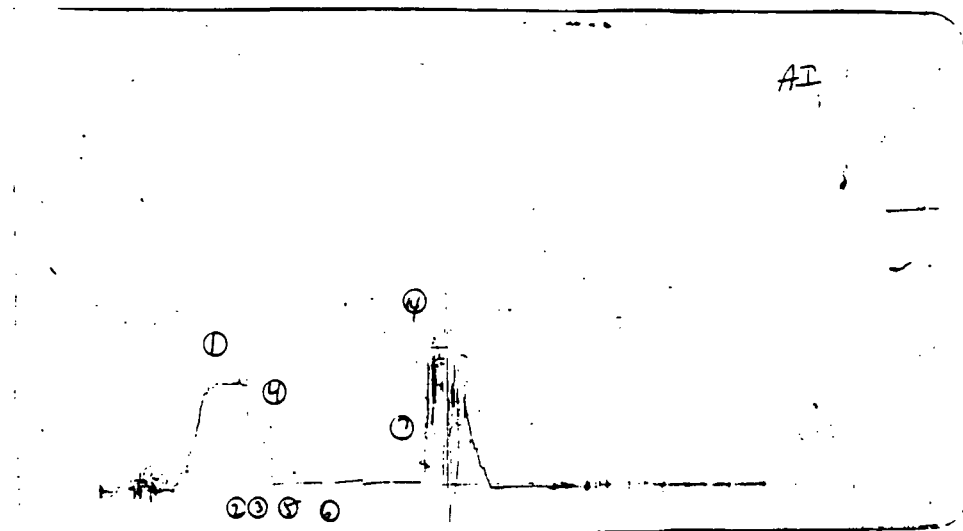
PRESSURE RECORDER NUMBER : 021162

DEPTH : 462.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 21900.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 4983.
- 2) 1st Flow Start: 265.
- 3) 1st Flow End : 258.
- 4) END 1st Shutin: 2586.
- 5) 2nd Flow Start: 273.
- 6) 2nd Flow End : 234.
- 7) END 2nd Shutin: 273.
- 14) Final Hydro. : 4831.



ABOVE INTERVAL.

TEST TIMES (MIN)

- 1st FLOW : 10.0
SHUTIN: 28.0
2nd FLOW : 91.0
SHUTIN: 177.0

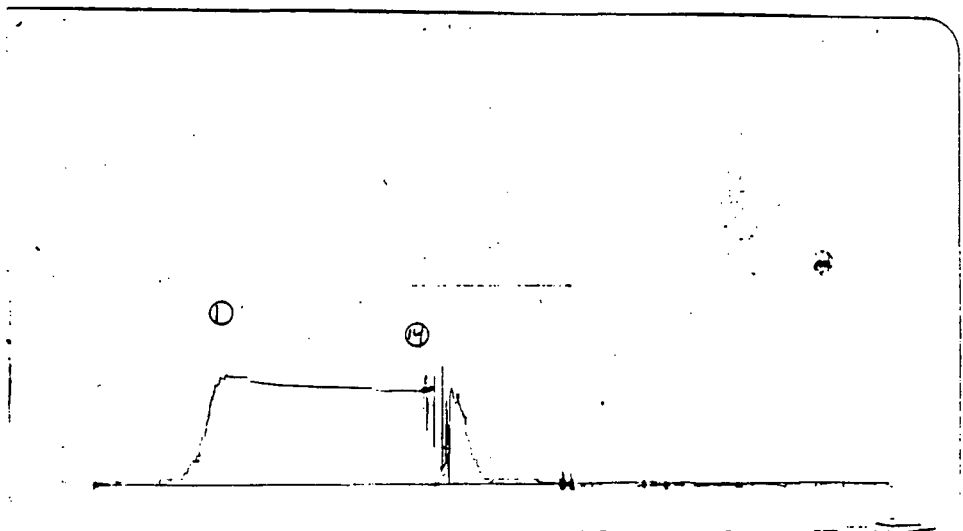
PRESSURE RECORDER NUMBER : 021347

DEPTH : 492.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 22000.00 kPa

PRESSURE
kPa

- 1) Initial Hydro : 5201.
- 14) Final Hydro. : 5170.



BELOW INTERVAL.

CHEVRON HUME RIVER I-66
400/ 82.000 / 042.010 /00

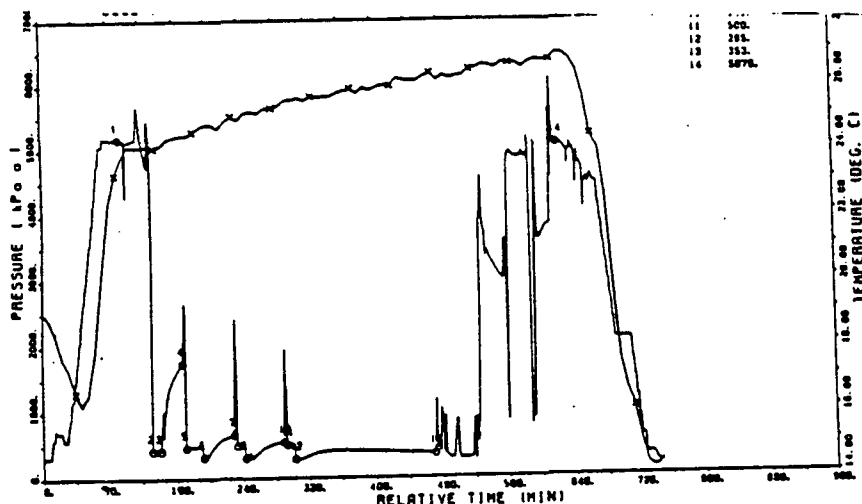
DST#03

470.00m to 486.01m

ARCTIC RED SANDSTONE

DEPTH: 473.00m

RECORDER # 001767



PRESSURE

kPa(a)

- 1) Initial Hydro : 5181.
- 2) 1st Flow Start: 422.
- 3) 1st Flow End : 422.
- 4) END 1st Shutin: 1750.
- 5) 2nd Flow Start: 466.
- 6) 2nd Flow End : 319.
- 7) END 2nd Shutin: 655.
- 8) 3rd Flow Start: 491.
- 9) 3rd Flow End : 302.
- 10) END 3rd Shutin: 543.
- 11) 4th Flow Start: 500.
- 12) 4th Flow End : 285.
- 13) END 4th Shutin: 353.
- 14) Final Hydro. : 5078.

TEST TIMES (MIN)

- 1stFLOW : 10.0
- SHUTIN: 25.0
- 2ndFLOW : 22.0
- SHUTIN: 37.0
- 3rdFLOW : 10.0
- SHUTIN: 45.0
- 4thFLOW : 10.0
- SHUTIN: 168.0

RECOVERY DATA

TOTAL FLUID RECOVERY CONSISTED OF 30.0 M OF GAS CUT DRILLING FLUID. NO GAS TO SURFACE.

REMARKS AND TEST SUMMARY

The test results suggest VIRTUALLY NO PERMEABILITY within the interval tested. Minor plugging during the flows. This did not affect the test results. This caused the small pressure decrease when the tool was closed for the shut-ins, as the space that the recovery was in was increased. The small pressure decrease during the final shut-in is a result of the jars bleeding off, again increasing the space that the recovery was in. Had trouble pulling the tools loose. The tool opened several times while trying to get loose. This accounted for approximately 15 meters of the fluid recovery.

Well name : CHEVRON HUME RIVER I-66
Location : 400/ 82.000 / 042.010 /00
Interval : 470.00m to 486.01m
Test Date : 90/02/04
Test Type : INFLATE STRADDLE
Formation : ARCTIC RED SANDSTONE

K.B.Elevation : 95.30m
Grd.Elevation : 89.69m
TD @ test Date: 745.00m
Ticket Number : 80967
Unit Number :

Started in hole at : 0615 hrs
Tool opened at : 0838 hrs
Reverse circulated?: NO
Contractor & Rig No: SHEHTAH #1E
Baker#3 : 1 of 1 on the same trip.

Operator: CHEVRON CANADA RESOURCES LIMITED
14TH FLOOR
500 - 5TH AVE. S.W.
CALGARY, ALBERTA
T2P0L7

Company Rep : MARSH B
Testers : FORBES G

5 REPORTS(S) TO: DOUG LEWIS
Company:

BLOW DESCRIPTION

PREFLOW: Very weak air blow, weak in 3 minutes, very weak in 10 minutes.
2ND FLOW: Very weak air blow decreasing to nil in 20 minutes.
3RD FLOW: 20-30 very weak bubbles decreasing to nil in 2 minutes.
ANAL FLOW: No blow. No gas to surface.

TOTAL LIQUID RECOVERY : 30.00m

For DST# 3 through DST# 3
7 Fluid Samples
Sent to: CHEVRON

Field Est. Salinity :220.0g/m3

Btm. Hole Sampler #: 53
Sent to: DRAINED

30.00m SLIGHTLY GAS CUT DRILLING MUD.

GAS MEASUREMENTS

No Gas Measurements

TOOL SEQUENCE

*****RECORDER SUMMARY*****

SUB	LENGTH (m)
PUMP OUT SUB	.40
CROSS OVER SUB	.30
INSIDE RECORDER	1.38
HYDRAULIC TOOL	1.50
BTM HOLE SAMPLER	1.03
INSIDE RECORDER	1.38
HYDRAULIC JARS	2.22
SAFETY JOINT	.65
INFLATE PUMP	2.28
SCREEN	1.16
TOP INFLATE PACKER	1.78
PACKER STICK DOWN	.78
PORTED COMB SUB	.30
OUTSIDE RECORDER	2.01
DRILL COLLARS	2.83
CROSS OVER SUB	.20
SPACING	9.18
CROSS OVER SUB	.21
PACKER STICK UP	.50
BTM INFLATE PACKER	1.90
INSIDE RECORDER	2.74
BELLY SPRING	2.61

***** TOOL TOTAL	37.34
DRILL COLLARS	
ID= 72.0mm:	83.70
ID= :	
DRILL PIPE	
OD=114.3mm:	374.16
OD= :	

COLLAR-PIPE TOTAL	457.86

1) NUMBER : 001767	ELECTRONIC GAUGE.
TYPE : DMRB	
LOCATION: OUTSIDE	
RANGE: 34500.00kPa(a)	
DEPTH : 473.00m	
2) NUMBER : 001785	ELECTRONIC GAUGE.
TYPE : DMRB	
LOCATION: OUTSIDE	
RANGE: 68900.00kPa(a)	
DEPTH : 473.00m	
3) NUMBER : 014156	
TYPE : K-3	
LOCATION: OUTSIDE	
RANGE: 13700.00kPa	
DEPTH : 473.00m	
4) NUMBER : 021150	ABOVE HYDRAULIC
TYPE : K-3	TOOL.
LOCATION: INSIDE	
RANGE: 20500.00kPa	
DEPTH : 457.00m	
5) NUMBER : 021162	ABOVE INTERVAL.
TYPE : K-3	
LOCATION: INSIDE	
RANGE: 21900.00kPa	
DEPTH : 462.00m	
6) NUMBER : 021347	BELOW INTERVAL.
TYPE : K-3	
LOCATION: INSIDE	
CAPACITY: 22000.00kPa	
DEPTH : 492.00m	

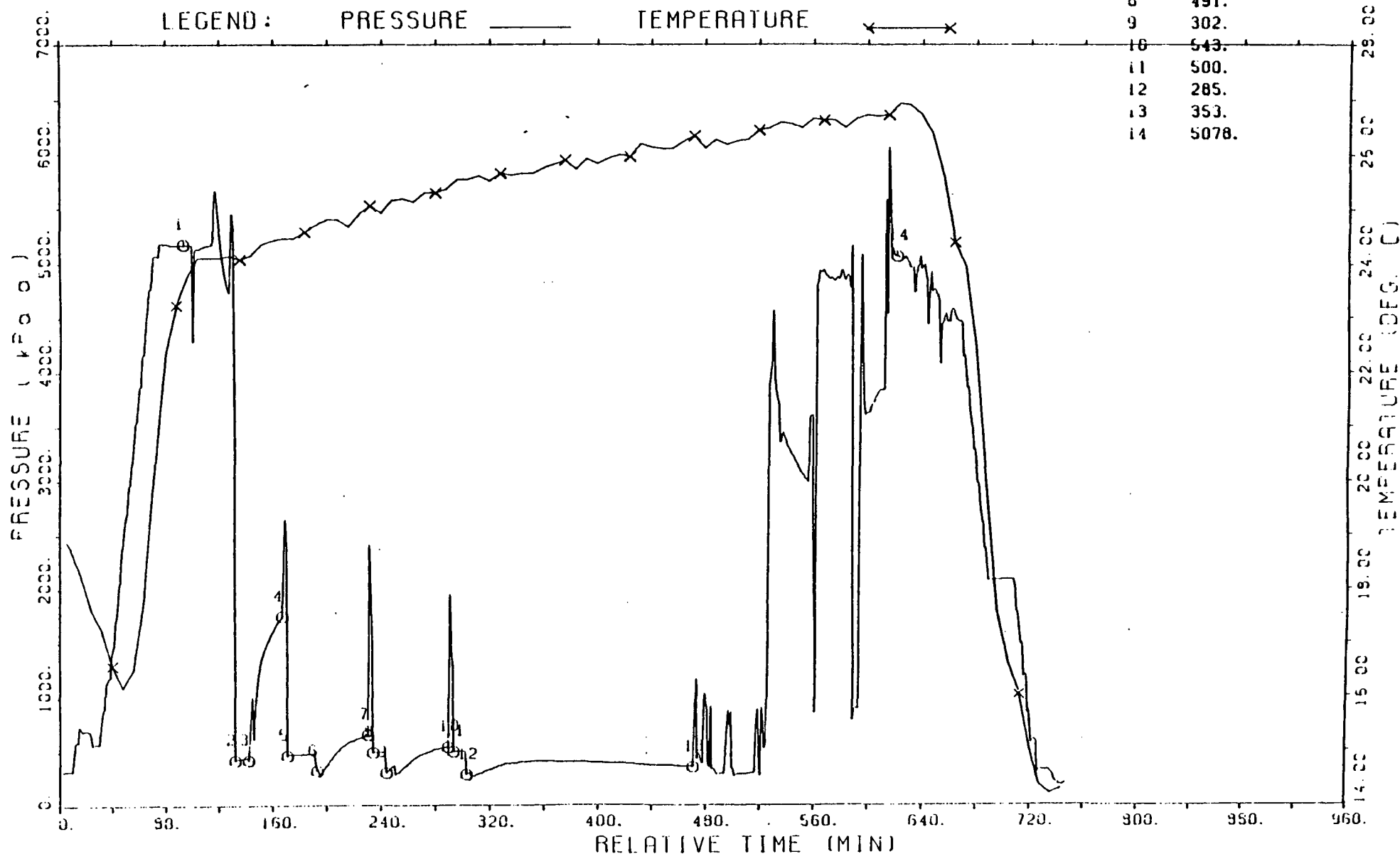
STICK UP ABOVE TABLE : 1.94
 TOOL ABOVE INTERVAL : 14.08
 TOTAL INTERVAL : 16.01
 BOTTOM CHOKE SIZE: 25.40 mm

MUD AND HOLE DATA

Calipered Hole Size @ Test Depth: 222.00mm	Water Loss : 9.6cc/s
Hole Condition at Test Time : FAIR	Filter Cake: 1.5 mm
Hole Conditioned Prior to Test? : YES	
Mud Weight : 1065.0 kg/m3	Main Hole Size: 222.00mm
Type : GEL CHEMICAL	
scosity : 50.0s/l	Temperature @473.00m = 26.7C

CHEVRON HUME RIVER I-66
DST #3
ELECTRONIC GAUGE #1767

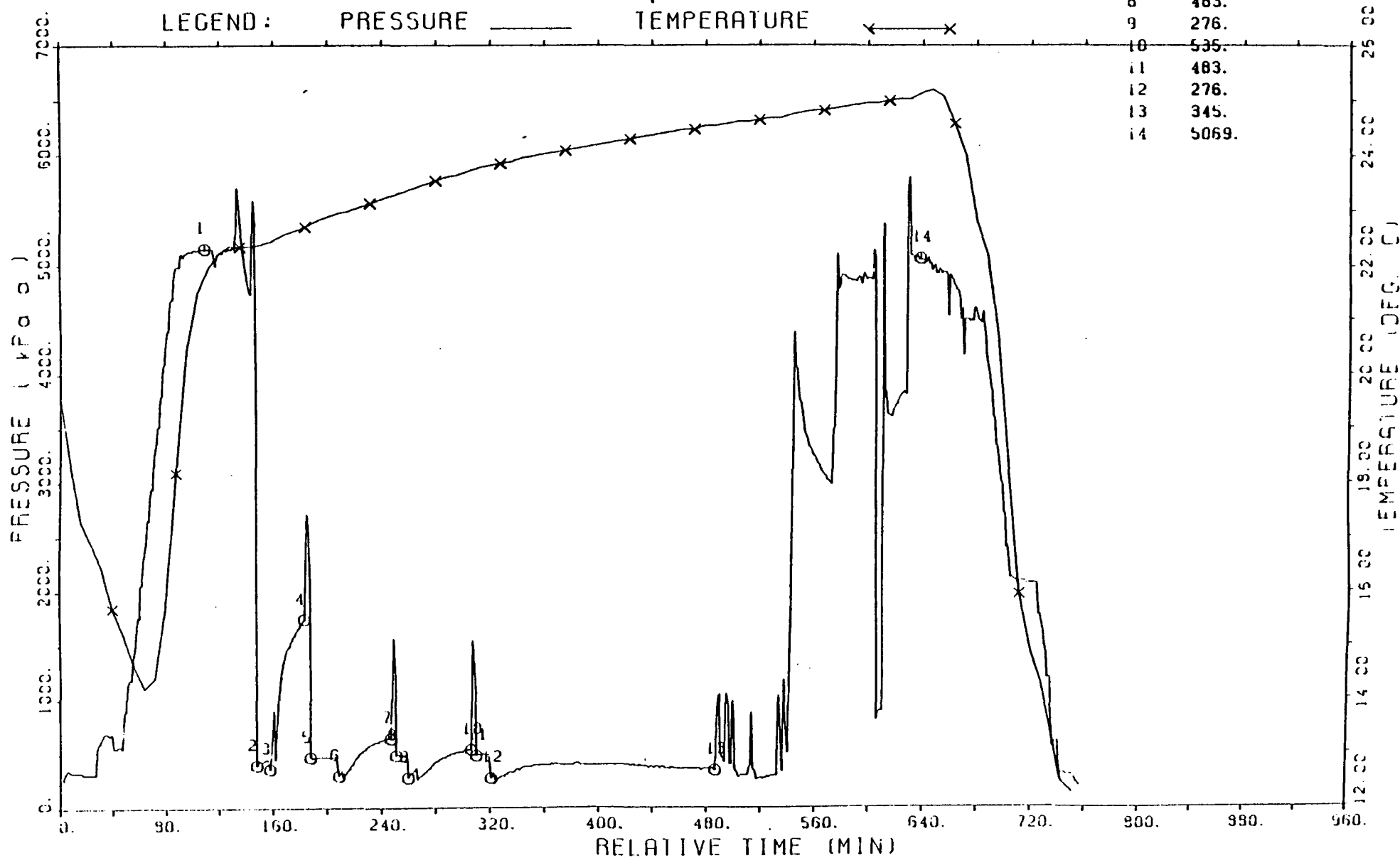
LEGEND: ○	1	=	5181.	kPa(a)
	2		422.	
	3		422.	
	4		1750.	
	5		466.	
	6		319.	
	7		655.	
	8		491.	
	9		302.	
	10		543.	
	11		500.	
	12		285.	
	13		353.	
	14		5078.	



CHEVRON HUME RIVER I-66
DST #3
ELECTRONIC GAUGE #1785

LEGEND: ○ 1 = 5155. kPa(a)

2	397.
3	362
4	1741.
5	466.
6	293.
7	638.
8	483.
9	276.
10	535.
11	483.
12	276.
13	345.
14	5069.

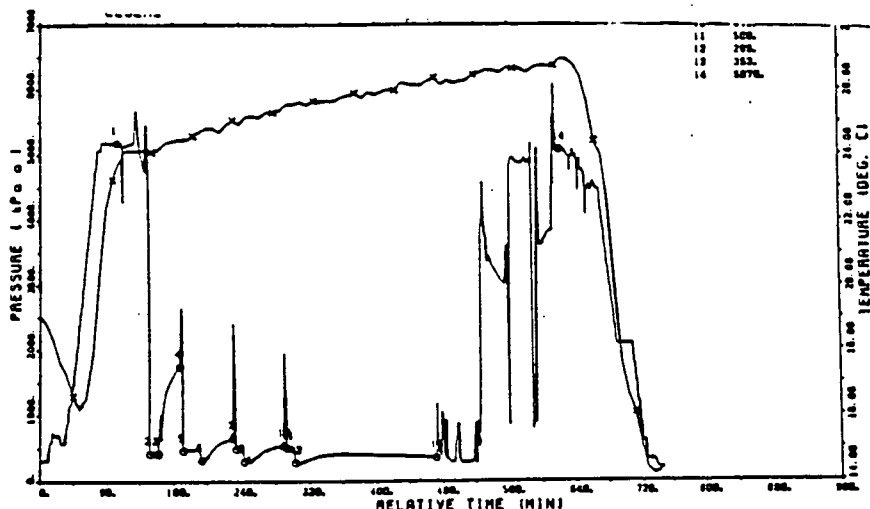


PRESSURE RECORDER NUMBER : 001767

DEPTH : 473.00m
TYPE : DMRB

LOCATION : OUTSIDE
CAPACITY : 34500.00kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 26.7 C



- 1) Initial Hydro : 5181.
- 2) 1st Flow Start : 422.
- 3) 1st Flow End : 422.
- 4) END 1st Shutin : 1750.
- 5) 2nd Flow Start : 466.
- 6) 2nd Flow End : 319.
- 7) END 2nd Shutin : 655.
- 8) 3rd Flow Start : 491.
- 9) 3rd Flow End : 302.
- 10) END 3rd Shutin : 543.
- 11) 4th Flow Start : 500.
- 12) 4th Flow End : 285.
- 13) END 4th Shutin : 353.
- 14) Final Hydro. : 5078.

ELECTRONIC GAUGE.

TEST TIMES (MIN)

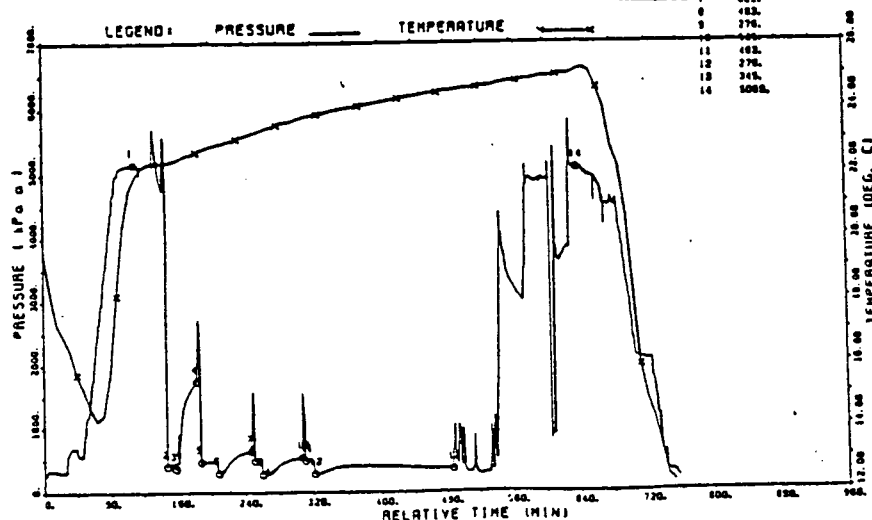
- | | |
|------------|-------|
| 1st FLOW : | 10.0 |
| SHUTIN: | 25.0 |
| 2nd FLOW : | 22.0 |
| SHUTIN: | 37.0 |
| 3rd FLOW : | 10.0 |
| SHUTIN: | 45.0 |
| 4th FLOW : | 10.0 |
| SHUTIN: | 168.0 |

PRESSURE RECORDER NUMBER : 001785

DEPTH : 473.00m
TYPE : DMRB

LOCATION : OUTSIDE
CAPACITY : 68900.00kPa(a)

***** TEMPERATURE AT RECORDER DEPTH = 24.9 C



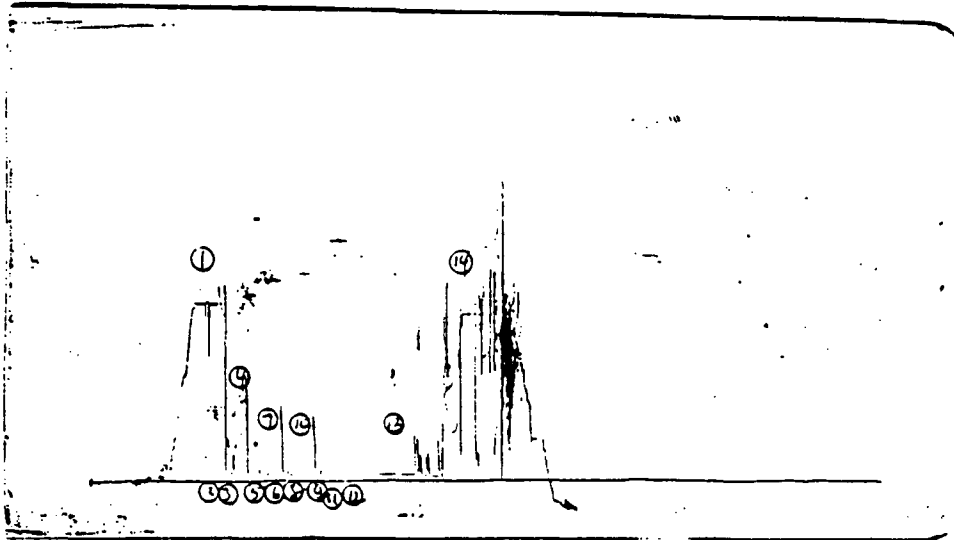
- 1) Initial Hydro : 5155.
- 2) 1st Flow Start : 397.
- 3) 1st Flow End : 362.
- 4) END 1st Shutin : 1741.
- 5) 2nd Flow Start : 466.
- 6) 2nd Flow End : 293.
- 7) END 2nd Shutin : 638.
- 8) 3rd Flow Start : 483.
- 9) 3rd Flow End : 276.
- 10) END 3rd Shutin : 535.
- 11) 4th Flow Start : 483.
- 12) 4th Flow End : 276.
- 13) END 4th Shutin : 345.
- 14) Final Hydro. : 5069.

ELECTRONIC GAUGE.

PRESSURE RECORDER NUMBER : 014156

DEPTH : 473.00m
TYPE : K-3

LOCATION : OUTSIDE
CAPACITY : 13700.00 kPa



PRESSURE
kPa

- 1) Initial Hydro : 5010.
- 2) 1st Flow Start: 297.
- 3) 1st Flow End : 242.
- 4) END 1st Shutin: 1646.
- 5) 2nd Flow Start: 316.
- 6) 2nd Flow End : 201.
- 7) END 2nd Shutin: 518.
- 8) 3rd Flow Start: 310.
- 9) 3rd Flow End : 200.
- 10) END 3rd Shutin: 403.
- 11) 4th Flow Start: 323.
- 12) 4th Flow End : 133.
- 13) END 4th Shutin: 288.
- 14) Final Hydro. : 4905.

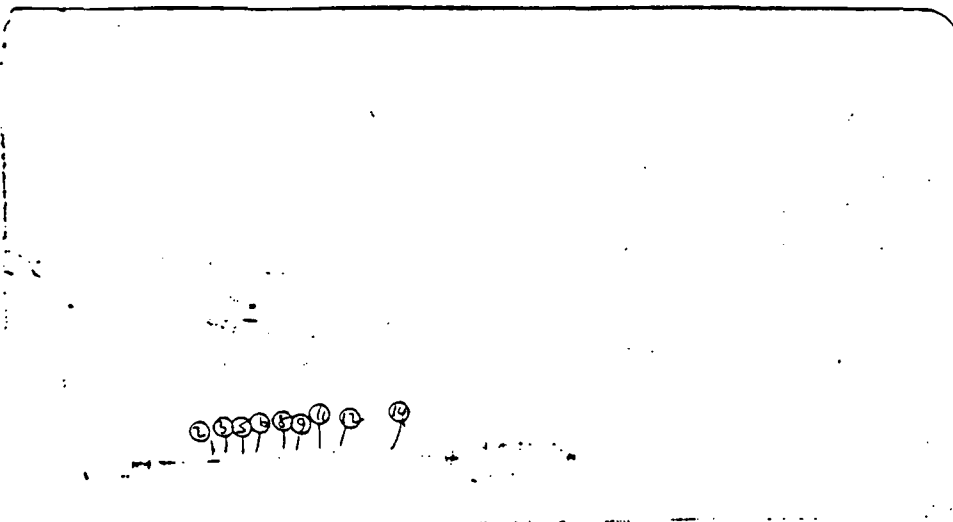
TEST TIMES (MIN)

1st FLOW : 10.0
SHUTIN: 25.0
2nd FLOW : 22.0
SHUTIN: 37.0
3rd FLOW : 10.0
SHUTIN: 45.0
4th FLOW : 10.0
SHUTIN: 168.0

PRESSURE RECORDER NUMBER : 021150

DEPTH : 457.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 20500.00 kPa



PRESSURE
kPa

- 1) Initial Hydro :
- 2) 1st Flow Start: 45.
- 3) 1st Flow End : 100.
- 4) END 1st Shutin:
- 5) 2nd Flow Start: 106.
- 6) 2nd Flow End : 143.
- 7) END 2nd Shutin:
- 8) 3rd Flow Start: 149.
- 9) 3rd Flow End : 159.
- 10) END 3rd Shutin:
- 11) 4th Flow Start: 159.
- 12) 4th Flow End : 162.
- 13) END 4th Shutin:
- 14) Final Hydro. : 336.

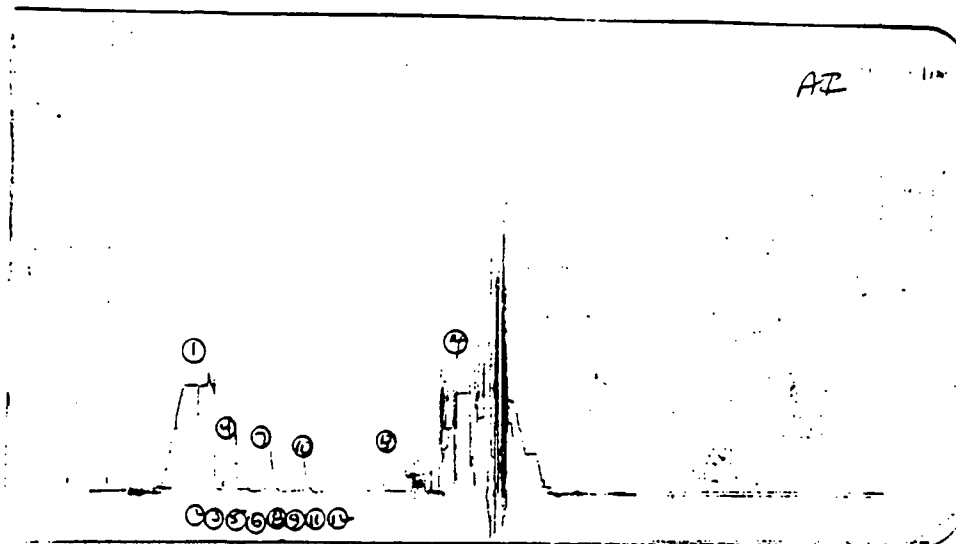
ABOVE HYDRAULIC
TOOL.

PRESSURE RECORDER NUMBER : 021162

DEPTH : 462.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 21900.00 kPa

PRESSURE
kPa
1) Initial Hydro : 4909.
2) 1st Flow Start: 190.
3) 1st Flow End : 140.
4) END 1st Shutin: 1524.
5) 2nd Flow Start: 197.
6) 2nd Flow End : 77.
7) END 2nd Shutin: 464.
8) 3rd Flow Start: 229.
9) 3rd Flow End : 95.
10) END 3rd Shutin: 251.
11) 4th Flow Start: 242.
12) 4th Flow End : 46.
13) END 4th Shutin: 208.
14) Final Hydro. : 4823.



ABOVE INTERVAL.

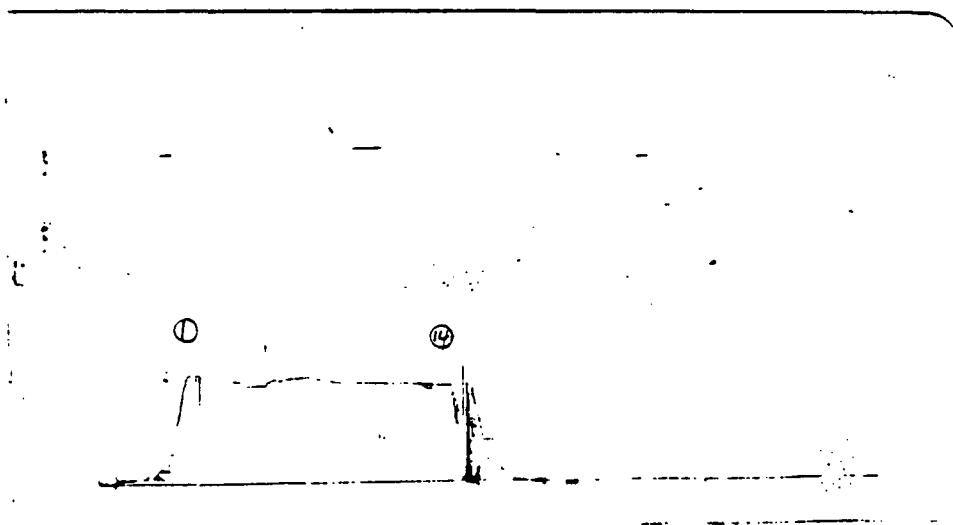
TEST TIMES (MIN)
1st FLOW : 10.0
SHUTIN: 25.0
2nd FLOW : 22.0
SHUTIN: 37.0
3rd FLOW : 10.0
SHUTIN: 45.0
4th FLOW : 10.0
SHUTIN: 168.0

PRESSURE RECORDER NUMBER : 021347

DEPTH : 492.00m
TYPE : K-3

LOCATION : INSIDE
CAPACITY : 22000.00 kPa

PRESSURE
kPa
1) Initial Hydro : 5215.
14) Final Hydro. : 5113.



BELOW INTERVAL.

APPENDIX 6

LOCALITY MAP

Survey was completed prior to drilling; therefore well as drilled may not necessarily agree with proposed location.

AFFIDAVIT

I, Akbar Karsan, of the City of Edmonton, Alberta, Canada Lands Surveyor, make oath and say that I have in my own proper person, according to the law and the instructions of the Surveyor General of Canada Lands, faithfully and correctly executed the survey shown by this plan and field notes, and that the said plan and field notes are correct and true to the best of my knowledge and belief.
SO HELP ME GOD.

Sworn before me at the City of Edmonton
in the Province of Alberta this 16th day
of November, 1989.

Akbar Karsan
Canada Lands Surveyor

R. Gibennus

A Commissioner for Oaths in and for
the Province of Alberta.

Robert A. Gibennus
25/03/1991

LOCALITY MAP

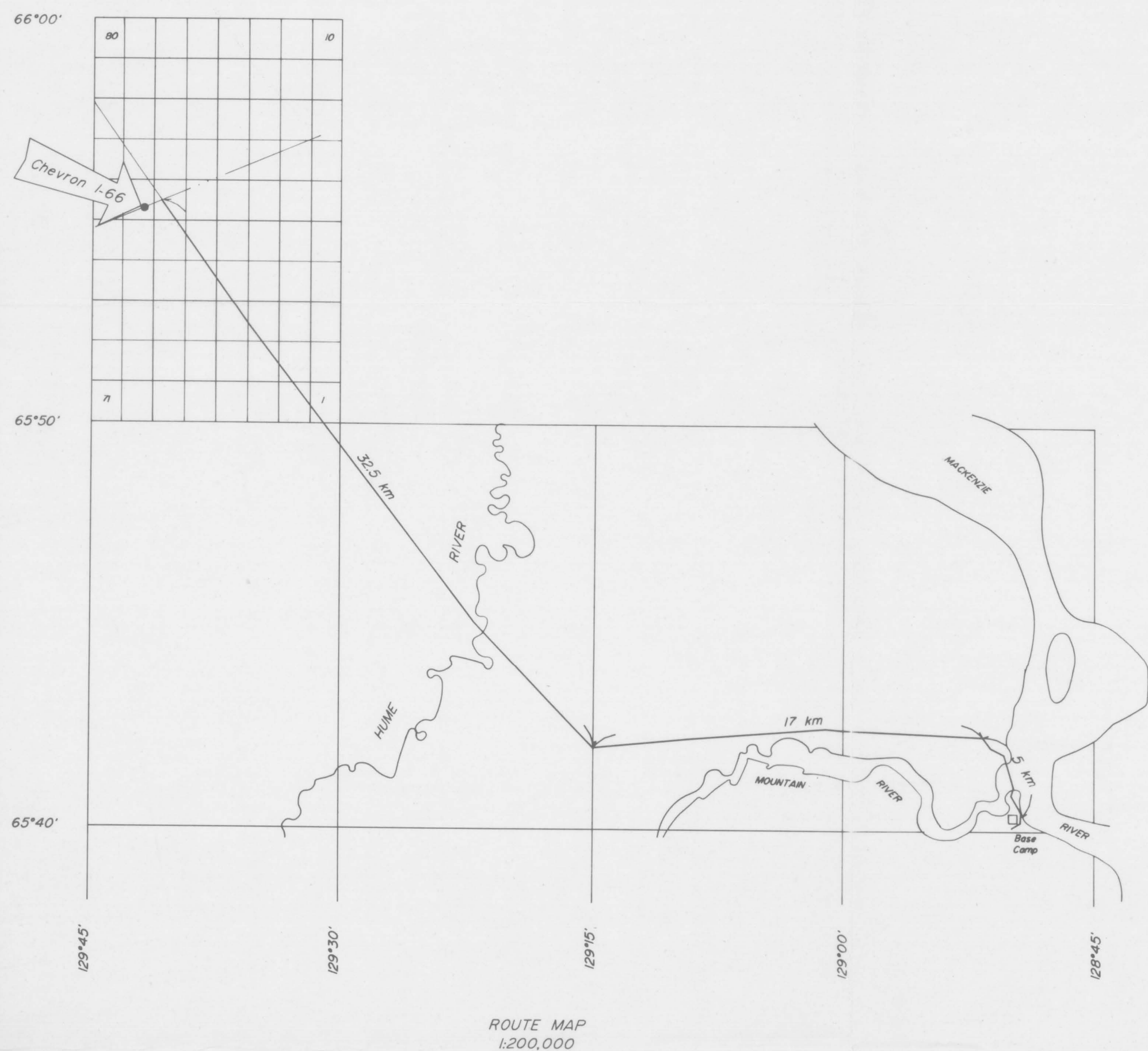
FORT GOOD HOPE

HUME RIVER I-66

THIS SURVEY WAS EXECUTED DUE
TO OCTOBER 10, 1989, BY AKBAR

CHEVRON CANADA RESOL.

STAR TECH LAND SURVEYS LTD.
212, 7618-103rd Street Edmonton
Phone: 432-9331 Job No. S890013A
Dwg No. S890013A

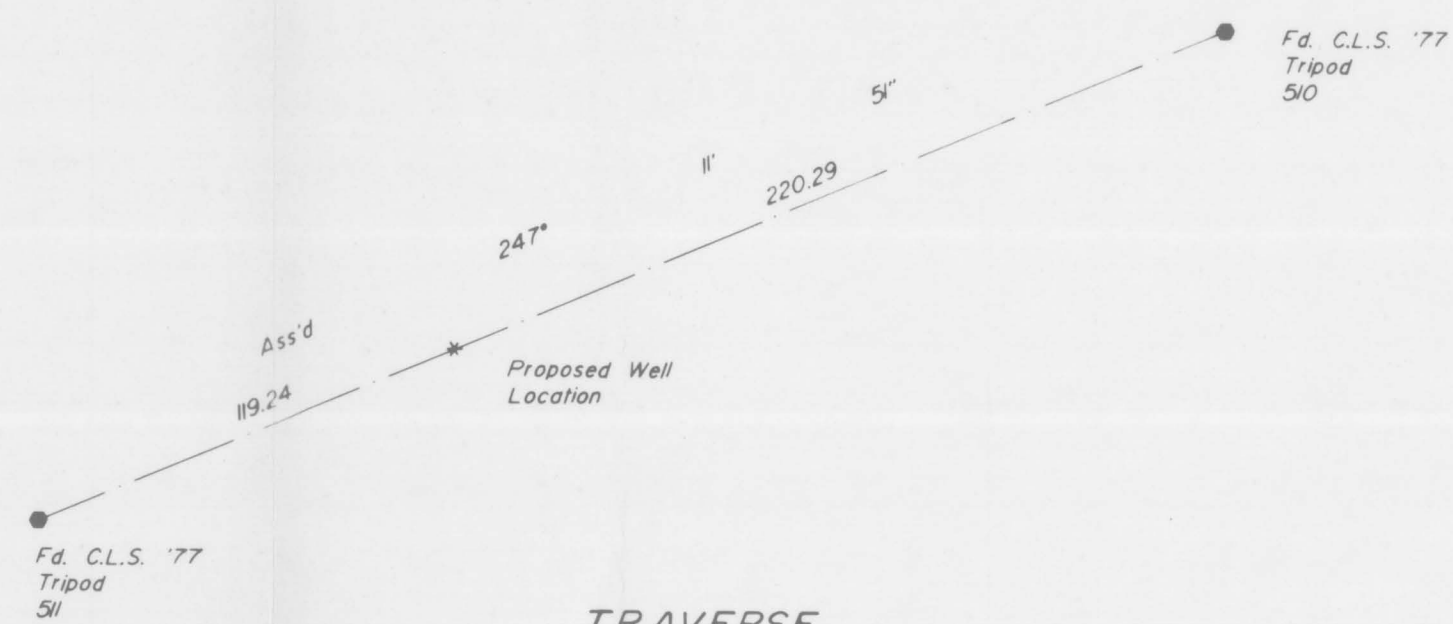


ELEVATIONS:
N.W. Cor. 90.1
N.E. Cor. 89.9
S.W. Cor. 90.1
S.E. Cor. 90.1
Proposed Well Location 89.69

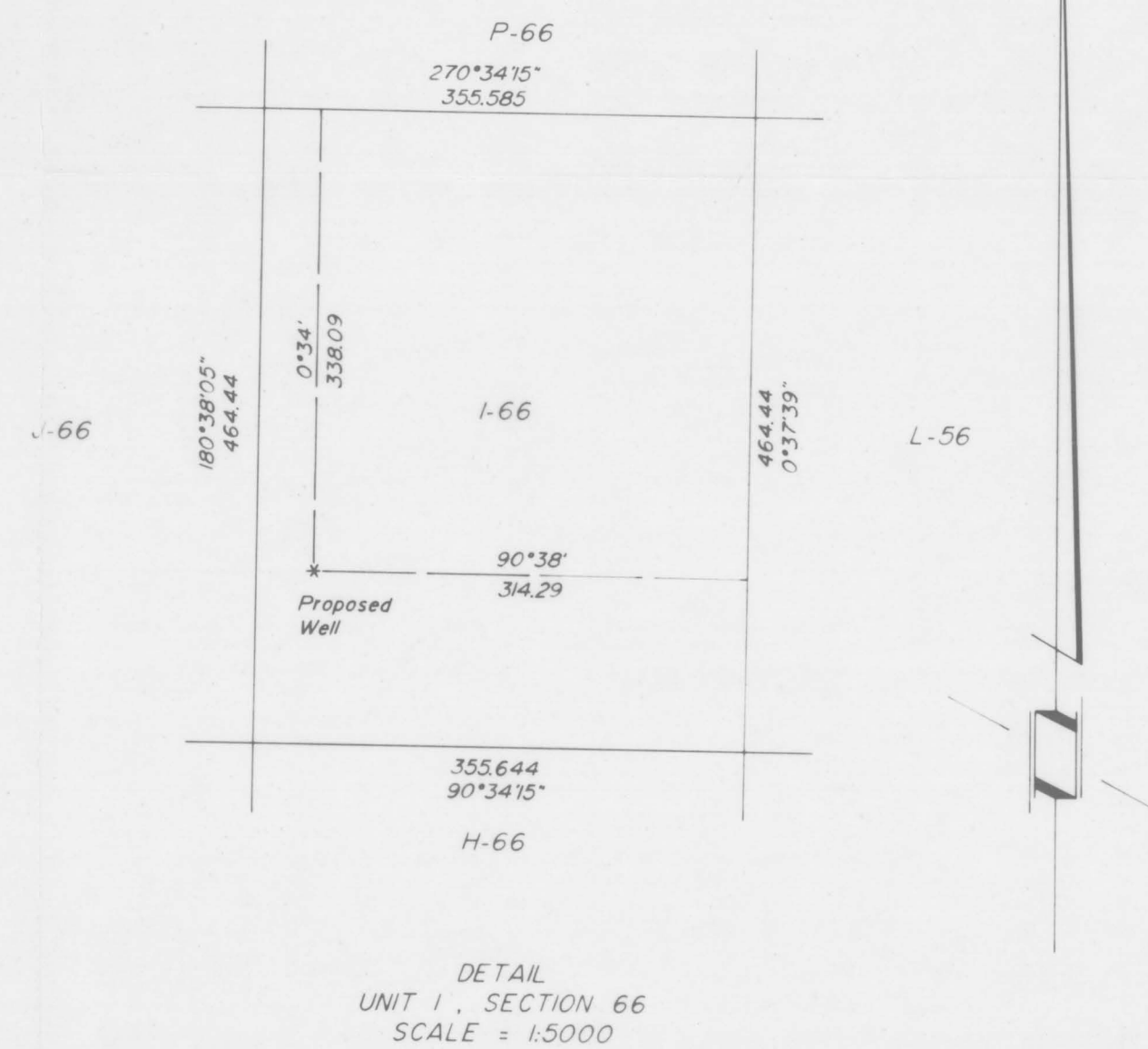
AREA IN WELL SITE = 4.00 ha. 9.88 Ac.



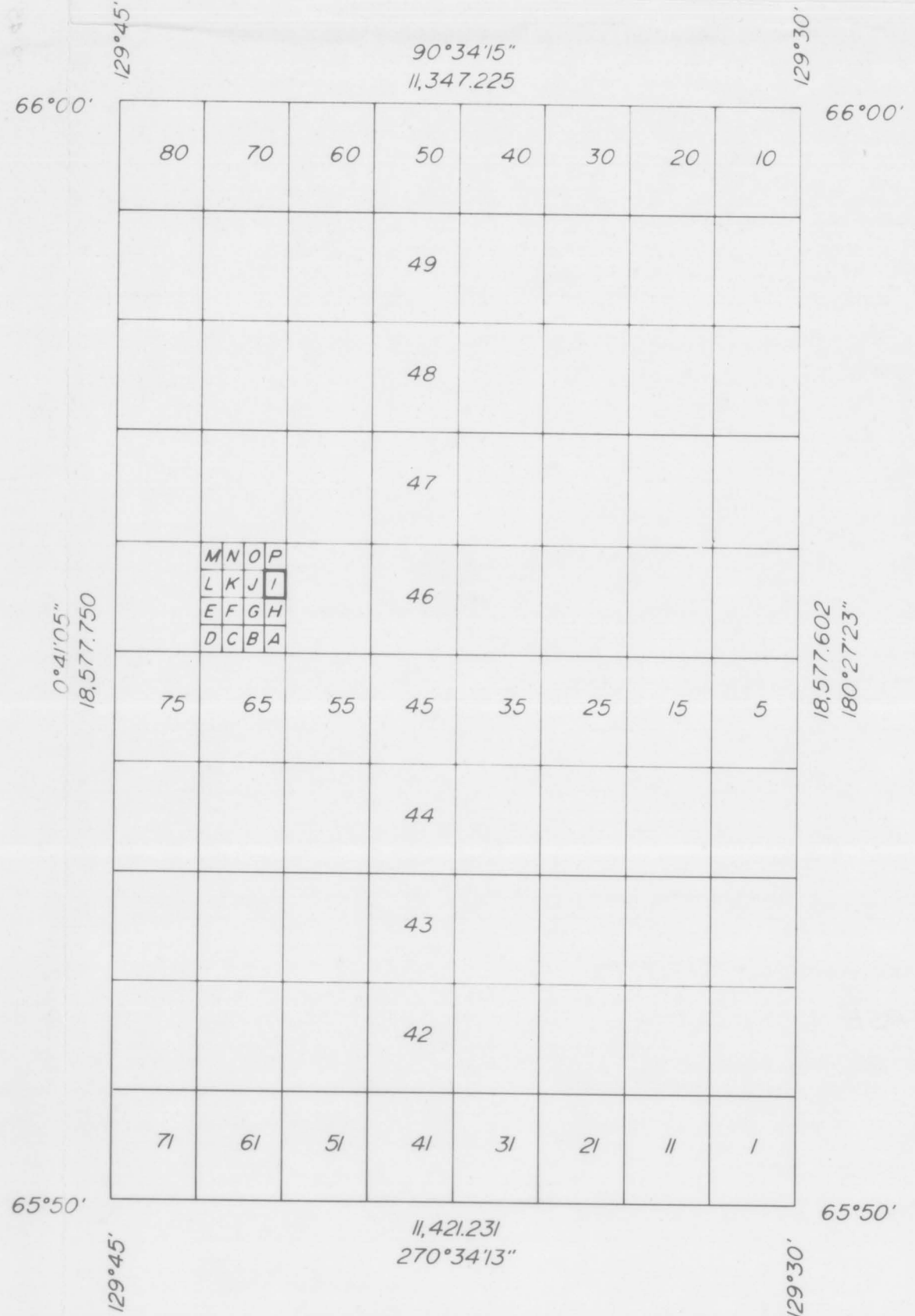
SEISMIC DETAIL
SCALE = 1:2000



TRAVERSE
SCALE = 1:2000



UNIT DETAIL
SCALE = 1:5000

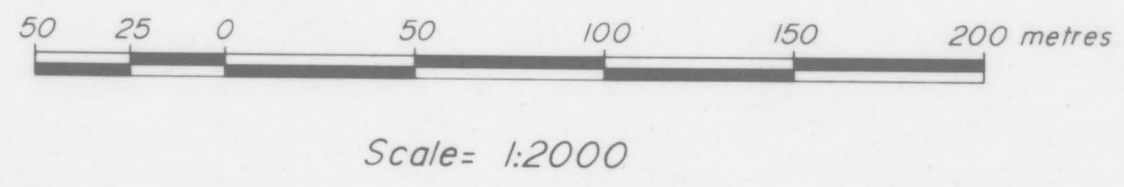


GRID AREA 66°00', 129°30'
SCALE = 1:100 000

PLAN AND FIELD NOTES
OF SURVEY OF

PROPOSED EXPLORATORY WELL
CHEVRON HUME RIVER
IN UNIT 1, SECTION 66
GRID AREA 66°00', 129°30'
NORTHWEST TERRITORIES

CANADA OIL AND GAS REGULATIONS



LEGEND

UTM coordinates are computed for Zone 09, central meridian 129° W.
Bearings were derived (adjusted) by solar observations as shown and are referred to meridian 129°W.
Distances are expressed in metres and decimals thereof.
Distances shown in traverse are measured distances reduced to the horizontal at general ground level.
For the computation of coordinates measured distances have been reduced to the UTM plane by multiplying them by an average combined scale factor of 0.9996.
Distances shown on grid area subdivisions are UTM plane.
Authorized control monuments found shown thus ●
Monuments placed shown thus ○
Traverse lines shown thus
Elevations were derived from GPS data. Average elevation is 90m.
Survey was completed prior to drilling; therefore well as drilled may not necessarily agree with proposed location.

AFFIDAVIT

I, Akbar Karsan, of the City of Edmonton, Alberta, Canada Lands Surveyor, make oath and say that I have in my own proper person, according to the law and the instructions of the Surveyor General of Canada Lands, faithfully and correctly executed the survey shown by this plan and field notes, and that the said plan and field notes are correct and true to the best of my knowledge and belief.
SO HELP ME GOD.

Sworn before me at the City of Edmonton
in the Province of Alberta this 16th day
of November, 1989.

Robert A. Gibennus
A Commissioner for Oaths in and for
the Province of Alberta.
Robert A. Gibennus
25/03/1991

THIS SURVEY WAS EXECUTED DURING THE PERIOD OCTOBER 1
TO OCTOBER 10, 1989, BY AKBAR KARSAN, C.L.S.

CHEVRON CANADA RESOURCES LIMITED

STAR TECH LAND SURVEYS LTD.
212, 7618-103rd Street Edmonton
Phone: 432-9331 Job No. S89003A
Dwg No. S89003A

APPENDIX 7

DRILLING FLUID REPORT

Chevron Hume River I-66

65 55' 33.91"N

129 41' 39.43"W

Well Recap

M-I Drilling Fluids Canada, Inc.

Chevron Hume River I-66

65 55' 33.91"N

129 41' 39.43"W

Spud Date:	Jan. 17, 1990
Rig Release Date:	Feb. 07, 1990
Total Days:	22
Total Depth:	745 m

Sales Representative: Mark Ralph

Field Representative: Tim Aldridge

TABLE OF CONTENTS

1. Recap by Interval
2. Graphics Section
 - a. Days vs. Depth
 - b. Mud Costs - Weekly/Total
 - c. PV/YP vs. Depth
3. Summary of Daily Mud Checks

CONDUCTOR HOLE SECTION:

Interval:	0 - 46 m
Mud Type:	Gel / Caustic
Hole Size:	660 mm
Casing Size:	508 mm
Total Days:	3

Comments: Spudded surface hole with Gel/Caustic/Slurry. Some boulders encountered and minor losses through the cellar pumping system and over shaker screen. Run, Land and cement casing with no problems. Cement returns to surface.

Material Usage:

<u>Product</u>	<u>Units</u>
M-I Gel	107
Caustic Soda	4
Bentonite (40 Kg)	40

SURFACE HOLE SECTION:

Interval: 46 - 267 m
Mud Type: Gel/Caustic
Hole Size: 444 mm
Casing Size: 340 mm
Total Days: 4

Comments: No significant problems encountered on this interval. Some cement cut mud while drilling out the 508 mm Conductor shoe. Hit one small bridge @ 186 m on trip from 267 m. Landed and cemented 340 mm casing with returns to surface.

Material Usage:

<u>Product</u>	<u>Units</u>
Bentonite (40 Kg)	90
Caustic Soda	4
Bicarbonate	6
Kelzan XCD	8
Peltex	7

MAIN HOLE SECTION:

Interval:	267 - 745 m
Mud Type:	Gel/Kelzan
Hole Size:	216 mm
Casing Size:	178 mm
Total Days:	.15

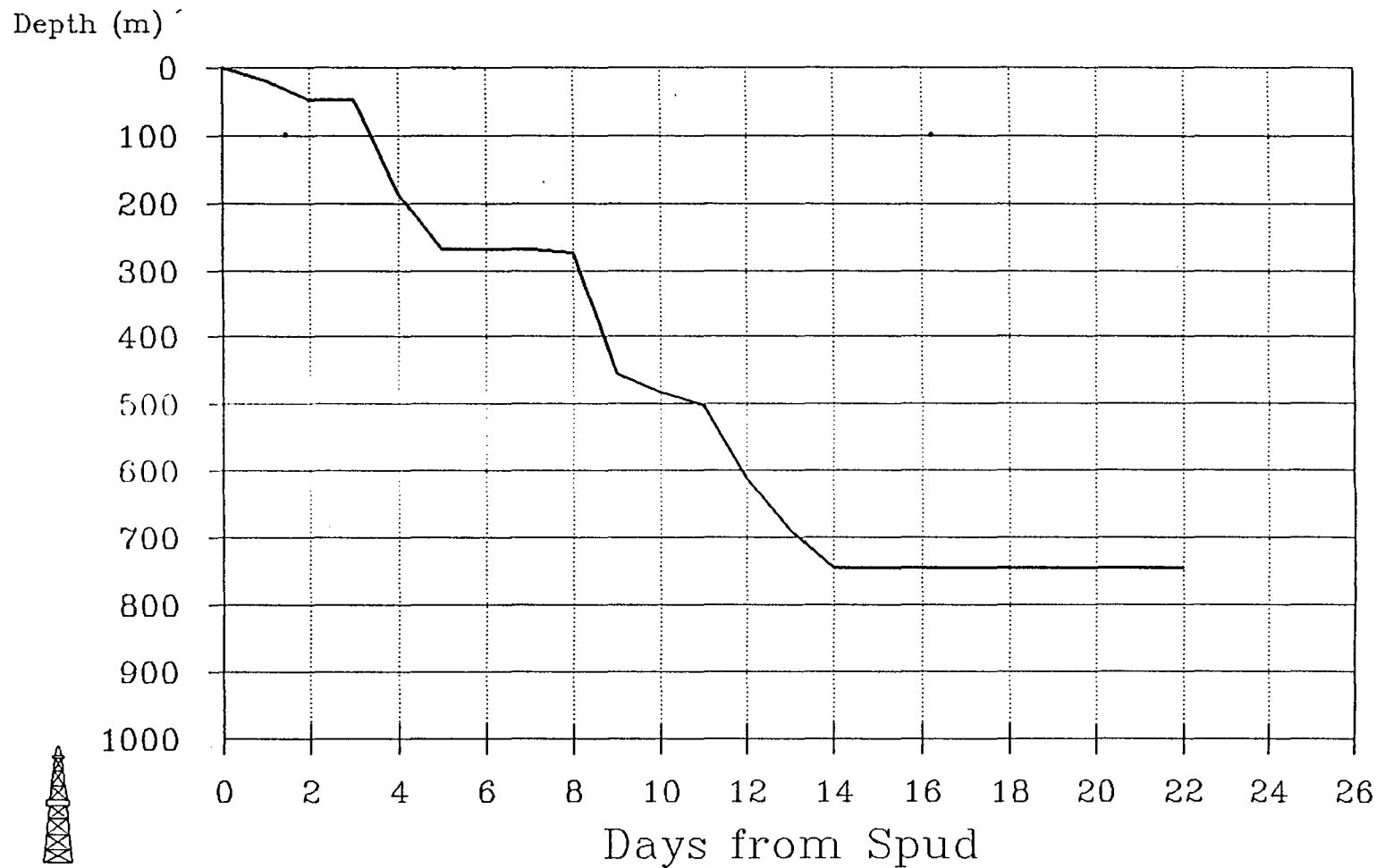
Comments: Drill out with water, pump suction leaking. Dumped 10 m³ of cement cut mud. Drilled ahead to core point, then cut 4 cores. Hole tight @ 500 m on trip from 690 m. Washed and reamed from 500 - 690 m, drill 3 m to 693 m and lost minor circulation. Treated with sawdust and built volume. Drill to T.D. Minor seepage noticed during DST's. Packer rubber seperated and left in hole after DST #3. Hole tight running in, unable to circulate. run in open ended, hit bridge @ 600 m. Run in with bit and wash 400 - 650 m. Trip for washout and stuck pipe. Run in hole, hole sloughing. Ream from 500 - 680 m and increased rheology. Tripped out, ran in open ended and set plug @ 745 - 645 m. Ran casing to 645 m and cemented.

Material Usage:

<u>Product</u>	<u>Units</u>
Caustic Soda	17
Bentonite (40 Kg)	166
Bentonite (100 lb)	201
Barite	75
Bicarbonate	2
Kelzan XC	23
Nitrate	6
Peltex	5
Sawdust	1

Days vs. Depth

Chevron Hume River I-66

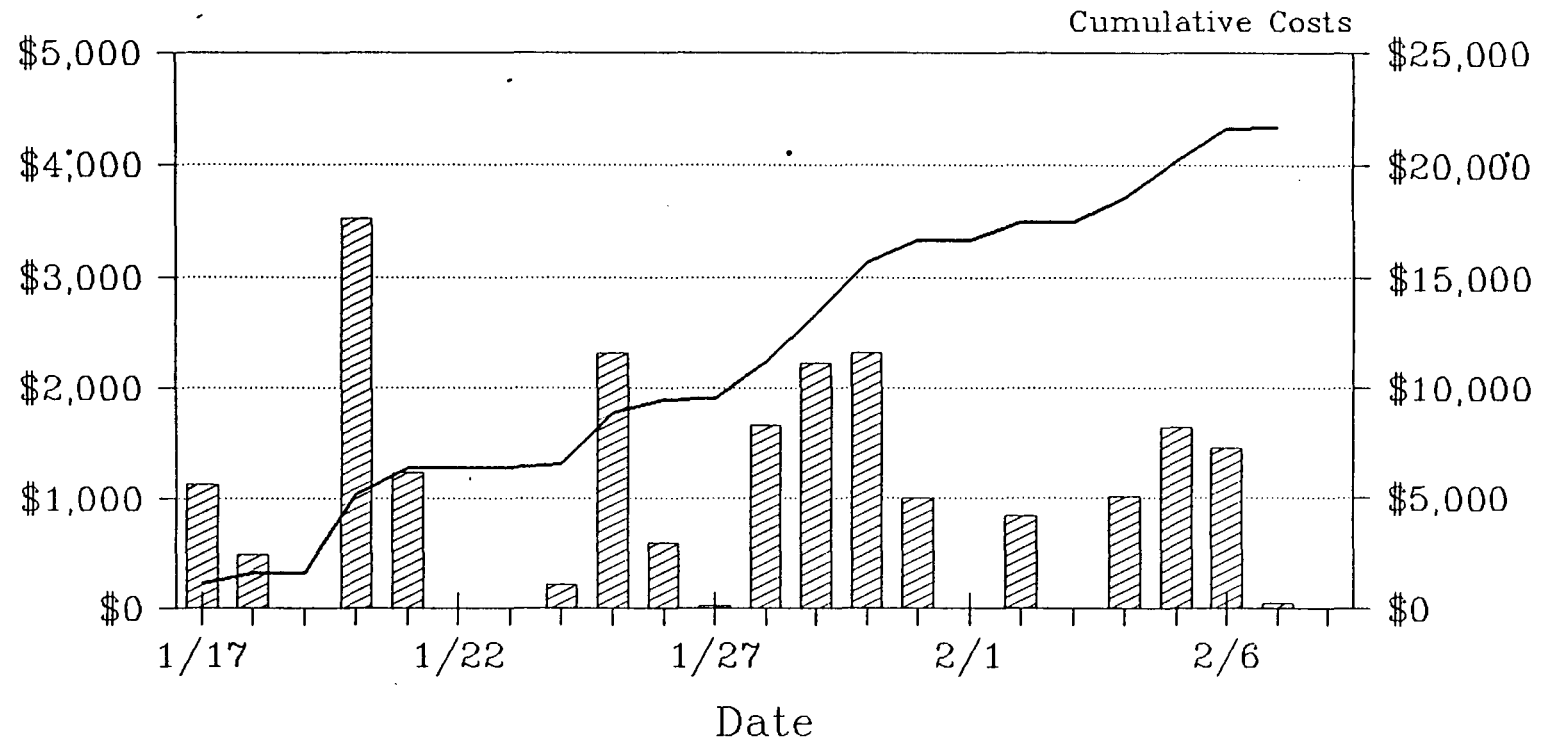


M - I Drilling Fluids Canada, Inc.

X Data	Days from Spud
	0
20	1
46	2
46	3
186	4
267	5
267	6
267	7
272	8
455	9
483	10
502	11
612	12
690	13
745	14
745	15
745	16
745	17
745	18
745	19
745	20
745	21
745	22
	23

Mud Costs – Daily/Total

Chevron Hume River I-66

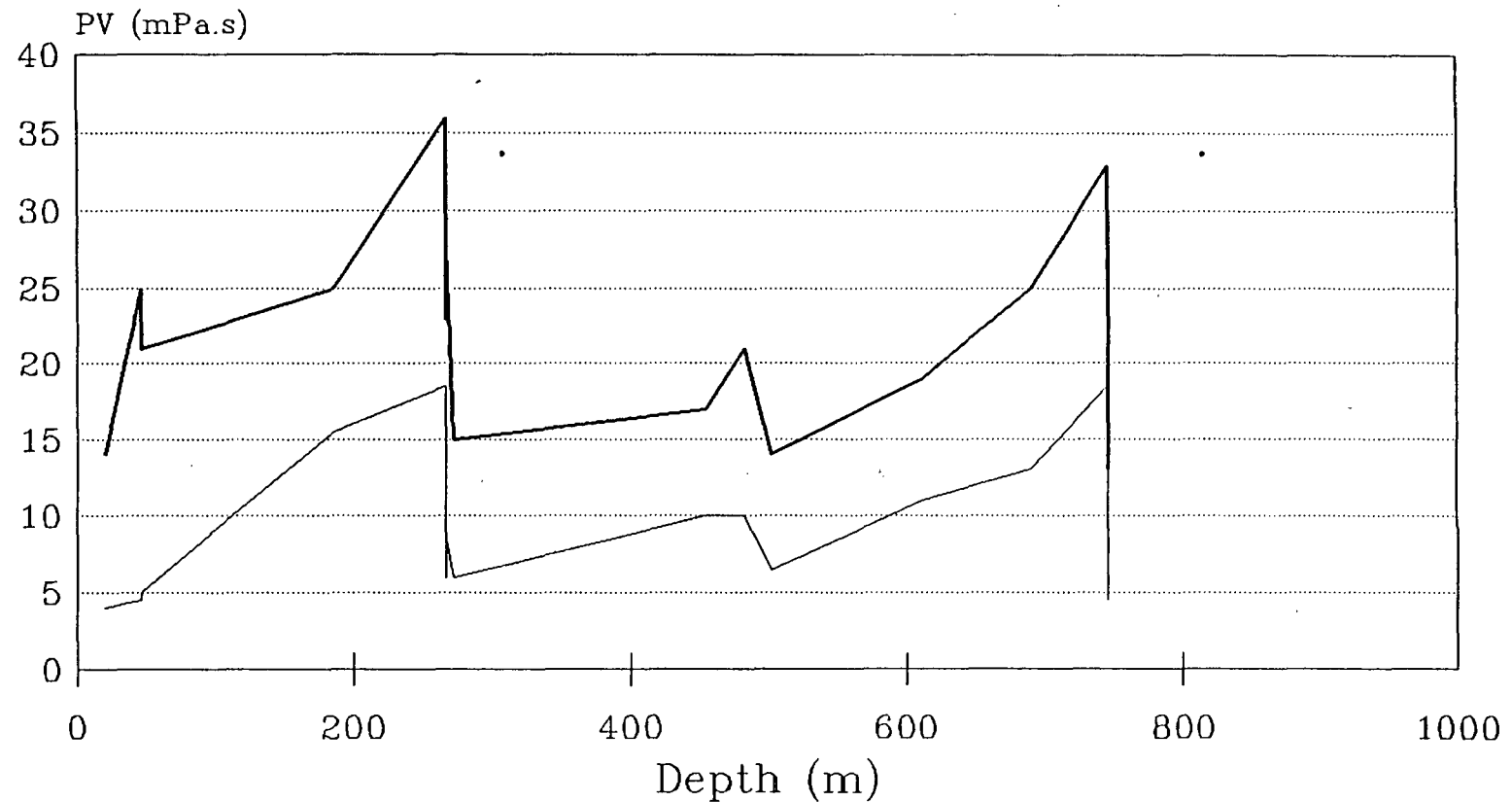


M- I Drilling Fluids Canada, Inc.

X Data	Daily Cost	Cumulative Cos
17	1127	1127
1/18	485	1612
1/19	0	1612
1/20	3520	5132
1/21	1233	6365
1/22	0	6365
1/23	0	6365
1/24	209	6574
1/25	2308	8882
1/26	585	9467
1/27	32	9499
1/28	1659	11158
1/29	2224	13382
1/30	2314	15696
1/31	1000	16696
2/1	0	16696
2/2	833	17529
2/3	0	17529
2/4	1013	18542
2/5	1638	20180
2/6	1455	21635
2/7	53	21688
2/8		

PV/YP vs. Depth

Chevron Hume River I-66



— Plastic Visc. — Yield Point

M - I Drilling Fluids Canada, Inc.

X Data	Plastic Visc.	Yield Point
20	14	4
46	25	4.5
46	21	5
186	25	15.5
267	36	18.5
267	23	6
267	28	8.5
272	15	6
455	17	10
483	21	10
502	14	6.5
612	19	11
690	25	13
745	33	18.5
745	13	4.5
745	18	7
745	19	6.5
745	15	6
745	22	6.5
745	24	10
745	26	26.5
745	15	6

WEEKLY SUMMARY

WELL NAME CHEVRON HUME RIVER

LEGAL I-66

MUD TYPE GEL-CAUSTIC
GEL-KELZAN XC MUD ENGINEER TIM ALORIDGE

CONTRACTOR SHEHTAH IE PAGE 1 OF 1

DATE	DEPTH m	MUD DENSITY Kg/m³	FUN VIS s/L	FANN READINGS		P.V. mPa.s	Y.P. Pa	GEL STRENGTH Pa		FLUID LOSS cm³/30 min		FILT CAKE mm	EXC. SULF. mg/L	pH	ALKALINITY		CHLORIDES mg/L	Ca mg/L	CO ₃ mg/L	HCO ₃ mg/L	K ⁺ ion mg/L	POLYMER kg/m³	MBT kg/m³	VOLUME FRACTION			D/B ratio	ESTIMATED DAILY COST \$	ESTIMATED ACCUM COST \$				
				0 600	0 300			10 sec	10 min	Std. API	HTHP				PI	MI								OIL	SOLIDS	SAND							
1990																																	
JAN 14																																	
DAYS FROM SPUD																																	
JAN 15																																	
JAN 16																																	
JAN 17	20	1090	47 36	22 14	4 1	10 136	-	2	-	9.5	2.5	200	0	-	-	-	-	50	0	.057	TR	-	-	-	-	-	-	1127.00					
		SAND WELL @ 20:00 WITH MUD. DRILLING 660MM CONDUCTOR HOLE - SOME BULGERS																															
		MINOR LOSSES THROUGH CELLAR PUMPING SYSTEM.																														1127.00	
JAN 18	46	1180	60 59	34 25	4.5 1	8 116	-	2	-	9.5	2.6	200	0	-	-	-	-	57	0	.11	1/8	-	-	-	-	-	-	985.10					
		DRILL 660MM CONDUCTOR HOLE TO 46M - WIPER TRIP - CIRC - WIPER TRIP - TRIP OUT AND																															
1		RUN 508MM CONDUCTOR PIG - LAND PIG OK - CIRCULATE CASING - CEMENT CSG. - RETURNS TO SURF.																														1611.81	
JAN 19	46	1100	55 52	31 21	5 1	10 100	-	2	-	9.0	2.5	200	0	-	-	-	-	50	0	.06	TR	-	-	-	-	-	-	-					
		NIPPLE UP DIVERTER SYSTEM. - PREPARE TO DRILL OUT 508MM CSG.																															
2																													1612.-				
JAN 20	196	1100	64 81	56 25	15.5 1	10 104	-	2	-	9.0	2.5	250	0	4	20	-	-	57	0	.06	TR	-	-	-	-	-	-	3520.					
		DRILL OUT CONDUCTOR WITH MUD. DUMP CEMENT CUT MUD (5M3) DRILL 444.5MM HOLE																															
3		SURVEY - DRILL - SURVEY - DRILL - DRILLING AHEAD.																															5732.-

WEEKLY SUMMARY

WELL NAME CHEVRON HUME RIVER

LEGAL I-66

MUD TYPE GEL-KELZAN XC

MUD ENGINEER TIM ALORINGE

CONTRACTOR SHEHTAH LE PAGE 2 OF 2

DATE 1990	DEPTH m	MUD DENSITY Kg/m ³	FUN VIS s/L	FANN READINGS		P.V. mPa.s	Y.P. Pa	GEL STRENGTH Pa		FLUID LOSS cm ³ /30 min		FILT CAKE mm	EXC. SULF. mg/L	pH	ALKALINITY		CHLORIDES mg/L	Ca mg/L	CO ₂ mg/L	HCO ₃ mg/L	K + lon mg/L	POLYMER kg/m ³	MBT kg/m ³	VOLUME FRACTION			D/B ratio	ESTIMATED DAILY COST \$	ESTIMATED ACCUM COST \$
				θ 600	θ 300			10 sec	10 min	Std. API	HTHP				PI	MI								OIL	SOLIDS	SAND			
JAN 21	267	1100	95	69	73	36	18.5	7	12	108	-	2	-	9.5	1.2	.5	250	0	4	20	-	-	64	0	.06	TR	-	-	1233.
4	DAILY 444 MM HOLE - SURVEY - DRILL TO 248M - TRIP OUT 644 DOWN 229MM DC - PICK UP MODEL - RTH - BRIDGE @ 186M - CIRC THRU - DRILL TO 267M - WIPE TRIP - CIRC TRIP TO LOG.																												6365.-
JAN 22	267	1100	53	58	35	23	6	2	9	112	-	2	-	9.5	1.2	.6	250	0	-	-	-	-	54	0	.06	TR	-	-	-
5	LOG WELL OK - CLEAN OUT TRIP - RIG UP & RUN 339MM SURF CASING - LAND CASING OK CIRC GSC. CEMENT CSG. - RETURNS TO SURF.																												6365.-
JAN 23	267	1090	60	73	45	28	8.5	2.5	50	110	-	2	-	9.0	.05	.4	250	0	-	-	-	-	50	0	.057	TR	-	-	-
6	NIPPLE DOWN DIVERTER - NIPPLE UP BOP STACK.																												6365.-
JAN 24	272	1090	49	42	27	15	6	1.5	4	108	-	2	-	9.0	.1	.45	250	0	2	10	-	-	46	0	.045	TR	-	-	209.
7	PRESS TEST STACK - REPAIR RAHS - RTH - DRILL OUT WITH WATER - PUMP SECTIONS LEMKING 244ED 10M ³ CEMENT CUT MUD. - DRILL TO 272M LEAK OFF TEST.																												6573.-
JAN 25	485	1080	55	54	37	17	10.5	8.0	104	-	2	-	-	9.5	.3	.8	250	0	2	10	-	-	50	0	.05	TR	-	-	2308.
8	LEAK OFF TEST - TRIP OUT - PICK UP 215MM BIT. - RTH OK - DRILL 215.9MM HOLE - CIRC SAME CIRC TRIP - TRIP OUT TO CORE.																												8881.-
JAN 26	483	1080	55	62	41	21	10	3	9	9.8	-	1	-	9.5	.25	.5	250	0	2	10	-	-	50	0	.05	TR	-	-	585.
9	CUT CORE # 1 - TRIP OUT FULL RECOVERY RTH CUT CORE # 2																												9466.-
JAN 27	502	1080	45	41	27	14	6.5	3	6	9.8	-	1	-	9.5	.35	1.5	250	0	7	11	-	-	53	0	.045	TR	-	-	32.
10	CUT CORE # 2 - 244 JAMMED - CUT CORE # 3 244 JAMMED - TRIP OUT AND RECOVER CORE - RTH FOR CORE # 4																												9498.-

WEEKLY SUMMARY

WELL NAME CHEVRON HOME RIVER

LEGAL I-66

MUD TYPE GEL-KELLAN XC MUD ENGINEER TIM ALDRIDGE

CONTRACTOR SALHTAH IE PAGE 3 OF 3

DATE	DEPTH m	MUD DENSITY Kg/m³	FUN VIS s/L	FANN READINGS		P.V. mPa.s	Y.P. Pa	GEL STRENGTH Pa		FLUID LOSS cm³/30 min		FILT CAKE mm	EXC. SULF. mg/L	pH	ALKALINITY		CHLORIDES mg/L	Ca mg/L	CO₂ mg/L	HCO₃ mg/L	K+ ion mg/L	POLYMER kg/m³	MBT kg/m³	VOLUME FRACTION			D/B ratio	ESTIMATED DAILY COST \$	ESTIMATED ACCUM COST \$		
				θ 600	θ 300			10 sec	10 min	Std. API	HTHP				PI	MI								OIL	SOLIDS	SAND					
1990																															
JAN 28	612	1080	55	60	41	17	11	3.5	12	9.9	-	1	-	10.4	15		250	0	8	4	-	-	57	0	.05	TR	-		1659.		
DAYS FROM SPUD				CUT CORE # 4 - TRIP OUT & RECOVER CORE - PCK UP BIT - RTH WASH LOGS FILL 3/4 HR																											
11				DRILL 215.9m HOLE																											11157.
JAN 29	690	1070	75	76	51	25	13	5	12	8.8	-	2	-	9.5	25	55	250	0	5	8	-	-	61	0	.04	TR			2225.		
				TRIP FOR BIT - TIGHT @ 500M - PULLED THROUGH - RTH WASH & REM 500-690M - HOLE PULLED OFF - WORK ARE																											
12				LOGS - CIRCULATE OUT CUTTINGS - TRIP OUT FOR PULSED TEST & CHANGE IT SIZE.																											13382.
JAN 30	745	1075	90	103	70	33	18.5	6	16	8.6	-	2	-	9.0	15	55	250	0	3	15	-	-	57	0	.04	TR			2314.		
				RTH - WASH & REM FROM 500M TO 690M - DRILL 3M TO 673 - LOSE CIRCULATION (MINDA) - TREAT WITH SPINOST																											
13				& BUILD VOLUME - DRILL TO 745 METERS - WASH TRIP OK - LMFILL - TRIP OUT TO LOGS.																										15696.	
JAN 31	745	1070	47	35	22	13	15	2	7	9.0	-	1	-	9.2	1	4	250	0	-	-	-	-	49	0	.04	TR			1000.		
				LOGGING - BOTTOM HOLE TEMP 34°C FROM LOGGERS																											
14				2.5 M FILL FROM LOGGERS BIT RUN																											16696.
FEB 01	745	1070	68	50	32	18	7	2	7	9.0	-	1	-	9.0	1	3	250	0	-	-	-	-	49	0	.04	TR			-		
				LOGGING - CLEAN OUT TRIP GOOD - LOGGING.																											
15																															16696.
FEB 02	745	1070	70	51	32	19	6.5	5	10	9.0	-	2	-	9.0	1	45	250	0	-	-	-	-	49	0	.04	TR			833.		
				FINISH LOGGING - CLEAN OUT TRIP OK - RUN IN HOLE DST #1																											
16				SPIN SEPARATE TO FUNDATION & LOGGING & REMAIN TRIP 5M³																											17529.
FEB 03	745	1065	50	42	27	15	6	15	7	9.0	-	1	-	9.0	4	200	0	-	-	-	-	49	0	.04	TR			-			
				DST #1 - TRIP OUT - RTH FOR DST #2 - TRIP OUT DST #2 - RTH & CIRCULATE																											
17				TRIP OUT & RTH DST # - ALONG SEPARATE DRAINING TESTING & TRIPS 5M³ LEFT TO FILL																											17529.

WEEKLY SUMMARY

AL

41

WELL NAME CHEVRON ALBERTA RIVER

LEGAL I-66

MUD TYPE GEL-KELZAN XC

MUD ENGINEER TIM ALDRIDGE

CONTRACTOR SHEN-TAH KE

PAGE 4 OF 4

DATE	DEPTH m	MUD DENSITY Kg/m ³	FUN VIS s/L	FANN READINGS		P.V. mPa.s	Y.P. Pa	GEL STRENGTH Pa		FLUID LOSS cm ³ /30 min		FILT CAKE mm	EXC. SULF. mg/L	pH	ALKALINITY		CHLORIDES mg/L	Ca mg/L	CO ₃ mg/L	HCO ₃ mg/L	K ⁺ ion mg/L	POLYMER kg/m ³	MBT kg/m ³	VOLUME FRACTION			D/B ratio	ESTIMATED DAILY COST \$	ESTIMATED ACCUM COST \$
				θ 600	θ 300			10 sec	10 min	Std. API	HTHP				PI	MI								OIL	SOLIDS	SAND			
1990																													
FEB 04	745	1090	62	57	35	22	65	2	8	96	-	1	-	90	1	45	250	0	-	-	-	-	57	0	.05	TR	-	-	1013.
DAYS FROM SPUD		DST	# 3	TRIP OUT LAY DOWN TEST TOOLS - PAPER RUNNER SEPARATED & LEFT IN HOLE -																									
18		CLEAN	OUT	TRIP THENT @ 500M RUNNING IN - WORK PRT CHANGE TO GPC - ALL IN P.M. - HOLE TIGHT.																									19542.
FEB 05	745	1085	70	68	44	24	10	35	10	90	-	2	-	95	2	7	220	0	4	6	-	-	67	0	.05	TR			1638.
		TRIP OUT	LAY DOWN	HUMP, RTH OPEN GUIDED - BRIDGE @ 600M - TRIP OUT & PICK UP BIT - RTH																									
17		RENN	400	400-650M - TRIP OUT FOR WASHOUT - APC STUCK - WASH FREE - CHANGE OUT.																									20181.
FEB 06	745	1090	115	103	77	26	25	10	21	95	-	2	-	95	15	45	250	0	-	-	-	-	64	0	.06	WLS			1455.
		FINISH OUT	WASPT	FOR WASH OUT - RTH WITH BIT HOLE SEVENING - RTH FROM APPROX 500-650M																									
20		INCREASED	REDUCY	- CIRC ON BOTTOM - WATER TRIP GOOD.																									21635.
FEB 07	PB645	1090	48	42	27	15	6	15	7	96	-	1	-	90	1	5	250	0	-	-	-	-	49	0	.06	WLS			53.44
		TRIP OUT	GOOD	- RTH OPEN GUIDED - PUMP & DISPLACE CEMENT PCK. 745-645M - TRIP OUT - RTH																									
21		WITH OUT	TO 550.4M	- TRIP OUT LAYING DOWN RP AND TO RUN 177.8M CSG - RUN HANDY CUT CSG																									21688.11
FEB 08				END OF WELL																									
22																													
FEB 09																													
23																													
FEB 10																													
24																													

APPENDIX 8

DEVIATION SURVEYS

CHEVRON CANADA RESOURCES LIMITED
FORT GOOD HOPE

Slot : Date Printed : 18-APR-90
Well : HUME RVR I-66 Our Ref : S02636.0CH
PBHL : 0.00

Page : 2

Measured Depth	Drift Angle	Drift Direction	Course Length	Vertical Depth	Vertical Section	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Severity
0.00	0.00	0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00
80.00	1.00	15.00	80.00	80.00	0.67	0.67 N	0.18 E	0.37
158.00	0.75	345.00	78.00	157.99	1.82	1.82 N	0.22 E	0.20
248.00	1.50	15.00	90.00	247.97	3.53	3.53 N	0.38 E	0.31
298.00	1.75	25.00	50.00	297.95	4.86	4.86 N	0.87 E	0.23
402.00	0.25	30.00	104.00	401.93	6.49	6.49 N	1.65 E	0.43
444.00	0.00	30.00	42.00	443.93	6.57	6.57 N	1.70 E	0.18
605.00	1.50	335.00	161.00	604.91	8.48	8.48 N	0.81 E	0.28
730.00	2.50	330.00	125.00	729.83	12.32	12.32 N	1.25 W	0.24

CALCULATION METHOD : Minimum curvature
SLOT COORDINATES : 0.00 N 0.00 E
BOTTOM HOLE LOCATION : Referenced to SLOT
DISTANCE : 12.39
DIRECTION : 354.23

Report Units : Meters
Accepted by :
Checked by :

SURVEY RUN INFORMATION

=====

UPDATE: 18-APR-90 (MD 730)

APPENDIX 9

WELLSITE ROCK LOG

(with Logs)

APPENDIX 10

WELLSITE HYDROCARBON REPORT

DATALOG

TECHNOLOGY INC.

WELLSITE HYDROCARBON REPORT

FOR

CHEVRON CANADA RESOURCES

CHEVRON HUME RIVER I-66

prepared by

SHELDON HARBINSON

and

DEAN BIRD

ARCTIC RED

46 m to 467.1 m

Chevron Hume River I-66 was spudded on January 17, 1990. The conductor barrel was set at 44.6 meters. The entire hole was drilled with a gel-chem system. Logging was commenced on January 20, 1990 at a depth of 46 meters in the Arctic Red formation.

The penetration rate in this formation was very inconsistent from 46 meters to 267 meters at which point surface casing was set. This varying penetration rate resulted in a sometimes inconsistent background gas as it ranged from 2 units to 10 units up to 125 meters. At this point the total gas background increased somewhat ranging from 15 units to 45 units until 174 meters. The total gas was then lower averaging between 2 units and 20 units up to casing point. The gas throughout this section was composed primarily of C1 with only trace levels of C2 present and no heavies noted.

After casing was set the penetration rate was very consistent for the remainder of the formation. The background gas was quite low from 267 meters to 335 meters as it averaged from 0 units to 10 units. The background gas level then increased slightly ranging from about 5 units to 30 units for the rest of the formation. The gas again was composed of entirely C1 with only trace levels of C2 present. Two shows were seen in this formation and they are as follows:

oil ind.

1. 341.2 m to 345.0 m 45 units over 6 units .010
2. 380.0 m to 380.6 m 44 units over 9 units .010

Both of the above shows can be considered as poor as they have fairly low peaks. The shows are composed primarily of C1 with only trace levels of C2 present. This suggests that these shows are the result of dry gas. Both shows are quite insignificant as they occurred while drilling in abundant shale.

The carbon dioxide level was very low up to 135 meters (ranging from .010 % to .030 %) at which point it increased to a higher background level of .030 % to .100 %. After drilling out the shoe it increased sharply to .300 % and then decreased to previously seen background levels again.

Coring was commenced at the base of the formation at a depth of 456 meters and was continued into the next formation.

ARCTIC RED SANDSTONE

467.1 m to 484.45 m

This formation was the secondary objective of this well and the entire formation was cored. Core #1 was started at 456.0 meters and continued to 483.0 meters at which point core #2 was started. The background gas was very low throughout this formation because it was completely cored. Less rock is being cut and is being cut slower, therefore there is less gas being liberated. The total gas ranged from 0 units to 5

units and consisted of primarily C1. No significant gas responses were seen in this formation while coring.

The level of carbon dioxide was very steady as it ranged from .025 % to .035 %.

GILMORE LAKE

484.45 m to 494.65 m

The Gilmore Lake formation was entirely cored as well resulting in a low background gas much the same as the previous formation. This gas ranged from 0 units to 5 units consisting of C1 only. Core #2 started at 483.0 meters and continued to 486.2 meters after having jammed off. Core #3 was then commenced at this depth and continued from the Gilmore Lake Shale formation to the Gilmore Lake Coal formation which came in at 487.8 meters. No gas shows were seen in this section.

The carbon dioxide level was consistent as in the previous formation ranging from .025 % to .035 %.

IMPERIAL

494.65 m to 669 m

Core #3 was continued into the Imperial formation until 497.6 meters at which point the core jammed off. Core #4 was started at this depth and continued until 524.6 meters and then drilling was resumed. The drilling continued into abundant shale and resulted in a steady penetration rate and a low but consistent total gas background level. The gas level varied from 5 units to 25 units for the majority of

the formation (650 to 687 meters) and consisted of mainly C1 with small amounts of C2 present. From 650 meters to the base of the formation the background gas was slightly higher as it averaged between 15 units and 50 units. In this section the gas was composed of C1 through C4 resulting in a much higher oil indicator ratio $((C3 + C4)/C1)$. This ratio ranged from .100 to .770 through this section and was likely the result of drilling into slightly carbonaceous shales with some traces of bituminous coal. No significant gas responses were seen in this formation.

The level of carbon dioxide varied somewhat through this formation as it averaged between .030 % to .100 %.

CANOL

669 m to 687 m

The gas background decreased slightly as the Canol formation was penetrated, ranging from 10 units to 40 units with the higher readings found at the top of the formation. The gas consisted of C1 through C4 and is probably the result of drilling in a carbonaceous shale as seen in the corresponding samples. The amount of heavies present resulted in a high oil indicator ratio. No significant gas shows were noted in this section.

The carbon dioxide level was fairly high as well ranging from .055 % to .015 %.

HARE INDIAN

687 m to 745 m (F.T.D.)

Background gas levels decreased considerably in this section as most of the formation contained a fairly dense limestone. The gas averaged from 2 units to 9 units and was composed mainly of C1 with only trace amounts of C2 present. Shortly after penetration into the Hare Indian formation the shaker was bypassed as lost circulation was encountered. The penetration rate was fairly consistent throughout this formation resulting in the fairly consistent gas readings. No shows were seen in this formation.

The level of carbon dioxide remained consistent at about .045 % to .090 %.

Final total depth was reached on January 30, 1990 at a depth of 745 meters.

APPENDIX 11

WATER ANALYSIS



CHEVRON HUME RIVER

I-66

WATER ANALYSIS

Prepared For:

CHEVRON CANADA RESOURCES

File No: 90AS5156

Date: February 9, 1990

GEOTECHnical resources ltd.

4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128
TELEX 03-821172 ENVOY 100: TELEX. GEO FAX: (403) 230-4370



WATER ANALYSIS

Company Name: CHEVRON CANADA RESOURCES
Well Name: CHEVRON HUME RIVER
LSD: I-66

DST: 1 KB : 95.3
Interval: 658 - 689 GRD: 89.96
Formation: Canol Shales

File Number: 90AS5156 Date: February 9, 1990

<u>Sample Location</u>	<u>Resistivity (ohm.m)</u>	<u>Salinity (ppm)</u>
Mud tank prior to test		326
Top	1.923	375
Middle	1.724	750
Top of Tool	1.667	979

WATER ANALYSIS



Company Name: CHEVRON CANADA RESOURCES
Well Name: CHEVRON HUME RIVER
LSD: I-66

DST: 2 KB : 95.3
Interval: 470 - 496 GRD: 89.96
Formation: Arctic Red Sandstone

File Number: 90AS5156 Date: February 9, 1990

<u>Sample Location</u>	<u>Resistivity (ohm.m)</u>	<u>Salinity (ppm)</u>
Top	1.852	512
Top of Tool	1.923	461

WATER ANALYSIS



Company Name: CHEVRON CANADA RESOURCES
Well Name: CHEVRON HUME RIVER
LSD: I-66

DST: 3 KB : 95.3
Interval: 470 - 486 GRD: 89.96
Formation: Arctic Red Sandstone

File Number: 90AS5156

Date: February 9, 1990

<u>Sample Location</u>	<u>Resistivity (ohm.m)</u>	<u>Salinity (ppm)</u>
Mud tank prior to test		220
Top	2.381	308
Top of Tool	2.500	220

**GEOTECHⁿical resources ltd.**4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3
(403) 230-4128**WATER ANALYSIS**

CONTAINER IDENTITY

5156F5

OPERATOR'S NAME

CHEVRON CANADA RESOURCES

SAMPLE LOCATION

WELL NAME

CHEVRON HUME RIVER

FIELD OR AREA

POOL OR ZONE

CANOL SHALES

TEST TYPE NO

TEST RECOVERY

370 M

DST 1

SAMPLING POINT

BOTTOM HOLE SAMPLER 53MULTIPLE RECOVERY
TEST INTERVAL
FROM

PUMPING

FLOWING

GAS LIFT

SWAB

TO 658

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

TO 689

SEPARATOR

TREATER

RESERVOIR

SAMPLED

RECEIVED

PERFORATIONS
FROM

GAUGE PRESSURE K/Pa

TEMPERATURE (°C)

TO

DATE SAMPLED

Y M D

H:M

DATE RECEIVED

Y M D

DATE ANALYZED

Y M D

ANALYST

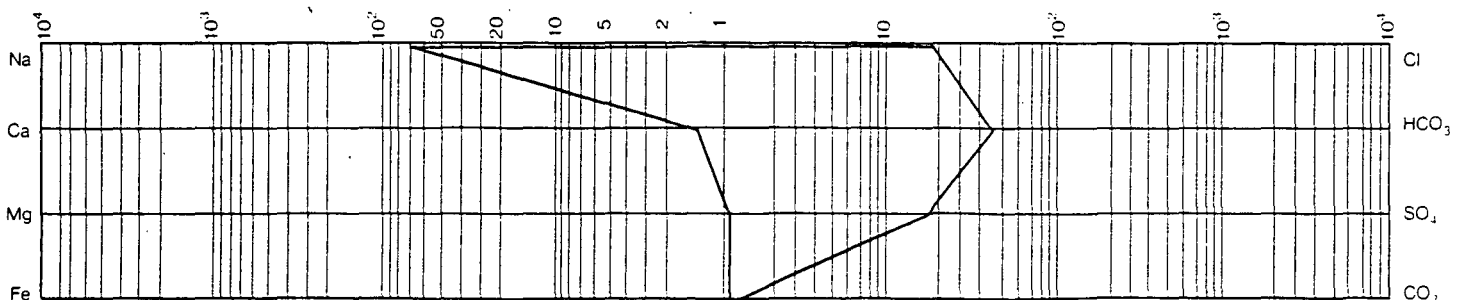
02-FEB-90**08-FEB-90****09-FEB-90****GB****SUMMARY DATA**

TOTAL HARDNESS AS CaCO ₃	125	g/m ³
TOTAL ALKALINITY	1847	g/m ³
SALINITY AS NaCl	946	ppm
SATURATION INDEX	1.91	
STABILITY INDEX	4.71	
CORROSION TENDENCY	0.85	

CaCO₃ SCALING TENDENCYCaCO₃ SCALING TENDENCY

Scaling calculations done at 30 C

LOGARITHMIC PATTERN MEQ PER LITRE



REMARKS

**GEOTECH**nical resources ltd.4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3
(403) 230-4128**WATER ANALYSIS
DETAILED REPORT**

OPERATOR'S NAME	CHEVRON CANADA RESOURCES
WELL NAME	CHEVRON HUME RIVER
LOCATION	I-66
SAMPLING POINT	BOTTOM HOLE SAMPLER 53

FILE NUMBER	90AS5156
LABORATORY NUMBER	5156-W5

CATIONS

ION	g/m ³	MASS FRACTION	MEQ/L
Na	1730	0.32	75.3
K	26.4	0.00	0.68
Ca	31.3	0.01	1.56
Mg	10.4	0.00	0.86
Ba	0.07	0.00	0.001
Sr	1.37	0.00	0.03
Fe	0.55	0.00	0.03
Mn			
Al			
Si			
B	0.979		
U			
Th			

ANIONS

ION	g/m ³	MASS FRACTION	MEQ/L
Cl	575	0.11	16.2
Br			
I			
F			
HCO ₃	2250	0.42	36.9
CO ₃	0.00	0.00	0.00
OH	0.00	0.00	0.00
SO ₄	728	0.14	15.2
H ₂ S			
PO ₄			

TOTAL SOLIDS (g/m³)

EVAPORATED AT 110°C EVAPORATED AT 180°C

AT IGNITION CALCULATED

5354

SPECIFIC GRAVITY at 15°C REFRACTIVE INDEX (R) at 25°C
1.343OBSERVED pH at 25°C RESISTIVITY (RW) Ω m at 25°C
8.54 1.668REDOX POTENTIAL (E_n) DISSOLVED O₂ g/m³

TOTAL METALS

METAL	g/m ³
-------	------------------

Fe

Mn

Cations/Anions: 1.15

DST 1

Interval: 658 to 689

KB: 95.30 GRD: 89.69

Perfs to

REMARKS

IODIDE NOT AVAILABLE - INSUFFICIENT SAMPLE

**GEOTECH** *technical resources ltd.*4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3
(403) 230-4128**WATER ANALYSIS**

CONTAINER IDENTITY

5156F8

OPERATOR'S NAME

CHEVRON CANADA RESOURCES

SAMPLE LOCATION

WELL NAME

CHEVRON HUME RIVER

FIELD OR AREA

POOL OR ZONE

ARTIC RED SANDSTONE

TEST TYPE NO

DST 2MULTIPLE RECOVERY
TEST INTERVAL
FROM**470**

TO

486PERFORATIONS
FROM

TO

DATE SAMPLED

Y M D

03-FEB-90

H:M

DATE RECEIVED

Y M D

08-FEB-90

DATE ANALYZED

Y M D

09-FEB-90

ANALYST

GBFILE
NUMBER**90AS5156**LABORATORY
NUMBER**5156-W8**ELEVATIONS
KB**95.30**

GRD

89.69**I-66**
NAME OF SAMPLER

COMPANY

BOTC

TEST RECOVERY

15 M

SAMPLING POINT

BOTTOM HOLE SAMPLER 53

AMT. AND TYPE OF CUSHION

MUD RESISTIVITY Ω/m

PUMPING

FLOWING

GAS LIFT

SWAB

WATER

 m^3/d

OIL

 m^3/d

GAS

 $10^3 m^3/d$

SEPARATOR

TREATER

RESERVOIR

SAMPLED

RECEIVED

GAUGE PRESSURE K/Pa

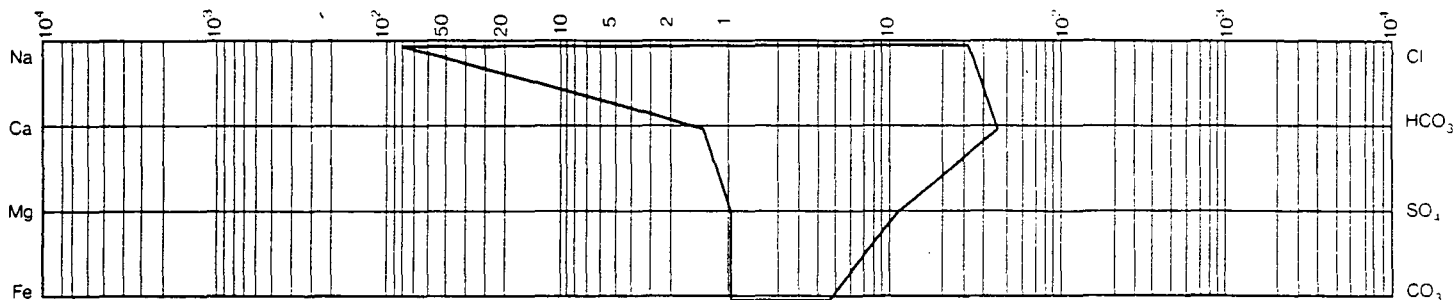
TEMPERATURE ($^{\circ}C$)**SUMMARY DATA**

TOTAL HARDNESS AS $CaCO_3$	116	g/m^3
TOTAL ALKALINITY	2143	g/m^3
SALINITY AS NaCl	1529	ppm
SATURATION INDEX	1.7	
STABILITY INDEX	4.89	
CORROSION TENDENCY	0.85	

 $CaCO_3$ SCALING TENDENCY **$CaCO_3$ SCALING TENDENCY**

Scaling calculations done at 30 C

LOGARITHMIC PATTERN MEQ PER LITRE



REMARKS

**GEOTECH**nical resources Ltd.4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3
(403) 230-4128**WATER ANALYSIS
DETAILED REPORT**

OPERATOR'S NAME	CHEVRON CANADA RESOURCES
WELL NAME	CHEVRON HUME RIVER
LOCATION	I-66
SAMPLING POINT	BOTTOM HOLE SAMPLER 53

FILE NUMBER	90AS5156
LABORATORY NUMBER	5156-W8

CATIONS				ANIONS				TOTAL SOLIDS (g/m ³)	
ION	g/m ³	MASS FRACTION	MEQ/L	ION	g/m ³	MASS FRACTION	MEQ/L	EVAPORATED AT 110°C	EVAPORATED AT 180°C
Na	2000	0.34	87	Cl	929	0.16	26.2	AT IGNITION	CALCULATED
K	23.3	0.00	0.6	Br					5965
Ca	28.9	0.00	1.44	I				SPECIFIC GRAVITY	REFRACTIVE INDEX (R)
Mg	9.06	0.00	0.75	F				at 15°C	at 25°C
Ba	0.085	0.00	0.001	HCO ₃	2370	0.4	38.9	OBSERVED pH	RESISTIVITY (RW) Ω m
Sr	1.16	0.00	0.03	CO ₃	119	0.02	3.9	at 25°C	at 25°C
Fe	2.36	0.00	0.13	OH	0.00	0.00	0.00	8.30	1.317
Mn				SO ₄	482	0.08	10	REDOX POTENTIAL (E _h)	DISSOLVED O ₂
Al				H ₂ S					g/m ³
Si				PO ₄					
B	0.99								
U									
Th									

Cations/Anions: 1.14

DST 2

Interval: 470 to 486

KB: 95.30 GRD: 89.69

Perfs to

TOTAL METALS

METAL	g/m ³
-------	------------------

Fe

Mn

REMARKS

IODIDE NOT AVAILABLE - INSUFFICIENT SAMPLE

**GEOTECH** *nical resources ltd.*4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3
(403) 230-4128**WATER ANALYSIS**

CONTAINER IDENTITY

5156F11

OPERATOR'S NAME

CHEVRON CANADA RESOURCES

SAMPLE LOCATION

WELL NAME

CHEVRON HUME RIVER**I-66**ELEVATIONS
KB**95.30**

GRD

89.69

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

ARTIC RED SANDSTONE**BOTC**

TEST TYPE NO

TEST RECOVERY

30 M**DST 3**

SAMPLING POINT

AMT. AND TYPE OF CUSHION

MUD RESISTIVITY Ω/m MULTIPLE RECOVERY
TEST INTERVAL
FROM**BOTTOM HOLE SAMPLER 53**

PUMPING

FLOWING

GAS LIFT

SWAB

470

TO

WATER

 m^3/d

OIL

 m^3/d

GAS

 $10^3 m^3/d$ **486**PERFORATIONS
FROM

GAUGE PRESSURE K/Pa

TEMPERATURE (°C)

SEPARATOR

TREATER

RESERVOIR

SAMPLED

RECEIVED

TO

DATE SAMPLED

Y M D

H:M

DATE RECEIVED

Y M D

DATE ANALYZED

Y M D

ANALYST

04-FEB-90**08-FEB-90****09-FEB-90****GB**

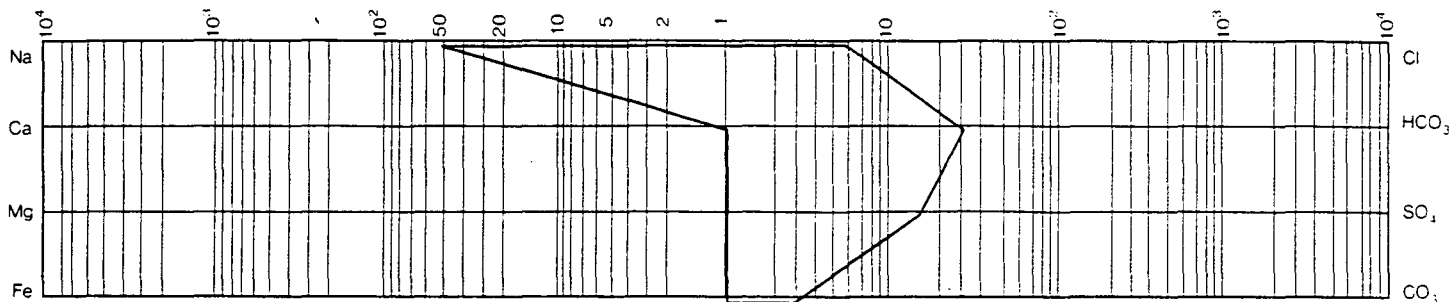
SUMMARY DATA

TOTAL HARDNESS AS $CaCO_3$	83	g/m^3
TOTAL ALKALINITY	1423	g/m^3
SALINITY AS NaCl	297	ppm
SATURATION INDEX	1.25	
STABILITY INDEX	5.71	
CORROSION TENDENCY	0.68	

CaCO₃ SCALING TENDENCYCaCO₃ SCALING TENDENCY

Scaling calculations done at 30 C

LOGARITHMIC PATTERN MEQ PER LITRE



REMARKS

**GEOTECH**nical resources ltd.4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3
(403) 230-4128**WATER ANALYSIS
DETAILED REPORT**

OPERATOR'S NAME	CHEVRON CANADA RESOURCES
WELL NAME	CHEVRON HUME RIVER
LOCATION	I-66
SAMPLING POINT	BOTTOM HOLE SAMPLER 53

FILE NUMBER	90AS5156
LABORATORY NUMBER	5156-W11

CATIONS				ANIONS			
ION	g/m ³	MASS FRACTION	MEQ/L	ION	g/m ³	MASS FRACTION	MEQ/L
Na	1140	0.31	49.6	Cl	181	0.05	5.1
K	31.9	0.01	0.82	Br			
Ca	18.6	0.01	0.93	I			
Mg	6.15	0.00	0.51	F			
Ba	0.325	0.00	0.005	HCO ₃	1580	0.43	25.9
Sr	0.519	0.00	0.012	CO ₃	76	0.02	2.53
Fe	5.15	0.00	0.28	OH	0.00	0.00	0.00
Mn				SO ₄	673	0.18	14
Al				H ₂ S			
Si				PO ₄			
B	0.446						
U							
Th							

TOTAL SOLIDS (g/m³)

EVAPORATED AT 110°C EVAPORATED AT 180°C

AT IGNITION CALCULATED
3713SPECIFIC GRAVITY at 15°C REFRACTIVE INDEX (R) at 25°C
1.344OBSERVED pH at 25°C RESISTIVITY (RW) Ω m at 25°C
8.22 2.382REDOX POTENTIAL (E_n) DISSOLVED O₂ g/m³

TOTAL METALS

METAL	g/m ³
-------	------------------

Fe

Mn

Cations/Anions: 1.10

DST 3

Interval: 470 to 486

KB: 95.30 GRD: 89.69

Perfs to

REMARKS

IODIDE NOT AVAILABLE - INSUFFICIENT SAMPLE

CREW		FROM	TO	CONTRACTOR REMARKS
Driller	Art Gortwright	0700	1800	Moved equipment to location.
Derrick	Dennis Danneroga	1800	2100	Spotted equipment
Helper	Patrick Danneroga		2100	SDON
Helper	Kris Yuken			
Extra				
Safety	Boiler B. Killeen			
BOP				
Accum Press.	kPa			
Air Shut Off				
Stab Valve				
Fire Ext				
H ₂ S				
Driller				
Derrick				
Helper				
Helper				
Extra				
Safety				
BOP				est Cost: 40000 (incl. rig move trans and mobilization.)
Accum Press.	kPa			AFE 601-0-20
Air Shut Off				Shetah 4
Stab Valve				Jules Fournier S.F.
Fire Ext				RIG OR CONTRACTOR
H ₂ S				CONTRACTOR REPRESENTATIVE

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Job Description: Complete and Test the Arctic Red Sand (474.5-484.5m)

Day 1 Summary: Moved on and spotted service rig.

Detail: Moved Shetah 4 single service rig, mud tank, day house, push shack, pump, boiler, accumulator and junk box to location from Norman Wells. Spotted equipment as per spacing/positioning requirements

SDON

CREW		FROM	TO	CONTRACTOR REMARKS	
T O U R 1	Driller	A. Lortweight	0800	1500	Began rigging in equipment
	Derrick	P. Bonnerouge	1200		Compressor failed. Ordered compressor
	Helper	D. Pierrot	1100		from Edmonton. Fired Boiler
	Helper	D. Bonnerouge	1100	1200	Continued rigging in.
	Extra	C. Yekon	1200	1500	Delivered thing. Cont'd rigging in.
	Safety	R. Lillian	1500		Rigged up temporary air. Moved on rig.
	BOP			2000	Raised derrick. Unthawed sandline
	Accum Press.		kPa	2400	SDCN
	Air Shut Off				
	Stab Valve				
Fire Ext					
H ₂ S					
T O U R 2	Driller				
	Derrick				
	Helper				
	Helper				
	Extra				
	Safety				Cost 6000 Est
	BOP				Accum 46000 Est.
	Accum Press.		kPa		
	Air Shut Off				Weather -40°C Sun. 601-0-020
	Stab Valve				Shetah 4
Fire Ext				Jules Fourpel S.F.	
H ₂ S				RIG OR CONTRACTOR	
				CONTRACTOR REPRESENTATIVE	

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 2 Summary: Rigged in service life and equipment

Detail: Held safety meeting. Discussed program and rig in safety concerns.

Began rigging up equipment. Rig air compressor failed (seized bearing) - unable to operate controls. Ordered out compressor. Fired Boiler. Positioned catwalk and ladders. Delivered 70jts 73mm EUE J-55 9.67 kg/m tubing to location.

Rigged up Halliburton's pumper[✓] air supply to rig. Positioned rig. Raised the derrick. Thawed out frozen sandline. Prepared to stump test ROP.

SDON.

CREW		FROM	TO	CONTRACTOR REMARKS	
TOUR 1	Driller	A. Curtwright	0900	1100	Prepared to stump test
	Derrick	P. Bunnereuge	1100	1115	Safety meeting
	Helper	D. Perrot	1115	1430	discontinuing lines
	Helper	D. Bunnereuge	1430	1645	Stump tested
	Extra	C. Yuker	1645	1730	Function test. Rig Inspection
	Safety	Boiler B. Killen	1730	2000	Tallied tubing. Installed compressor
	BOP			2000	SDCN
	Accum Press.	1400 kPa			
	Air Shut Off				
	Stab Valve				
Fire Ext	4-30#				
H ₂ S	drager				
TOUR 2	Driller				
	Derrick				
	Helper				
	Helper				
	Extra				
	Safety				4900 / 51500
	BOP				
	Accum Press.	kPa			
	Air Shut Off				weather - 4/10C wind clear 601-0-020
	Stab Valve				Sketch 4
Fire Ext				Jules Fournier	
H ₂ S				RIG OR CONTRACTOR	CONTRACTOR REPRESENTATIVE

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 3 Summary: Stump pressure tested BOP. Installed new rig air compressor

Detail: Prepared to stump test BOP. Held safety meeting. Discussed chemical handling safety and pressure testing concerns and procedures.

Pressure tested blind rams to 1.4 MPa. OK. Attempted 7 MPa tests - repaired leaks. Obtained 7 MPa test (10 min). Pressure tested pipe rams to 1.4 and 7 MPa (10 min) OK. Pressure tested annular preventer to 1.4 and 4 MPa (10 min), OK. All tests with diesel.

Performed BOP mechanical function test as per ERCB 15-37. Found inadequate system pressure of 7000 kPa after operating all components - require minimum 9400 kPa for Class III. Ordered out N₂ to increase precharge to meet spec. Completed service rig inspection checklist. Found several minor items to be corrected including wind indication + lease entrance sign - ordered correction.

Tallied tubing. MU bit and scraper
Installed new rig air compressor

TOUR	CREW		FROM	TO	CONTRACTOR REMARKS	
1	Driller	A. Cartwright	0800	0900	Installation BCP.	
	Derrick	P. Bonnerouge	0900	0930	P-tested + mech checked BCP.	
	Helper	D. Pierrat	0930	1200	Rigged up floor	
	Helper	D. Bonnerouge	1200	1215	Re-mechanical tested Accum / BCP.	
	Extra	C. Yukon	1215	1515	RIH w/ scraper and bit to 510.5m	
	Safety	B. Killen	1515	1600	Reverse circulate well to H ₂ C	
	BOP		1600	1615	Safety meeting	
	Accum Press.	13000 kPa	1615	1730	Performed 1m ³ 15% HCL thing pickle	
	Air Shut Off		1730	1800	Circulate well to inhibited diesel	
	Stab Valve		1800	2000	PCCH w/ scraper	
	Fire Ext	4-30# drager		2000	Secured well SDCN	
2	H ₂ S					
	Driller					
	Derrick					
	Helper					
	Helper					
	Extra					
	Safety					
	BOP					
	Accum Press.	kPa			33000 / 84500	
	Air Shut Off				weather - 22°C snow/wind 601-0-020	
	Stab Valve				shetah 4	
	Fire Ext				J. Fournel / J. Fournel	
	H ₂ S				B. Meiklejohn	
					RIG OR CONTRACTOR CONTRACTOR REPRESENTATIVE	

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 4 summary: Installed BCP. Ran scraper and bit. Circulated mud out of hole. Pickled tubing. Circulated well to inhibited diesel. PCCH w/ scraper

Details: Well dead. Removed wellhead. Installed 21 MPa Class III BCP. Pressure tested pipe rams and wellhead connection to 1400 kPa, OK. P-tested to 7000 kPa - dropped to 6000 kPa in 10 min - visual, OK sus-pect thing hanger. Rigged up floor and tongs. Tarped in BCP. Hydraulic hose for annular prevented failed - ordered replacement. With annular not operational, the BCPs are Class II, OK. Performed BCP operational check rams 3: closure, OK. Accumulator pressure 13500 kPa. Accum. pressure after closing + opening blind rams was 11000 kPa (> 8400 kPa) OK meets Class II requirements. Recharge time 2 min.

MURH w/ 177.8mm CSY scraper and 158.75mm bit on 73mm EUE 9.67 kg/m tubing (tallied and drifted). Tagged PBTD at 510.5 mKB with 53 joints (by tally). Pulled out top joint. Prepared to reverse circulate well over to water. Attempted to break circulation. Not successful, suspect bit plugged. PCCH another joint (landed ~ 496 mKB). Freezing problems - thawed. Broke normal circulation. Normally circulated well over to fresh H₂C with gel-chem mud returns to pit sump. Held safety meeting (Topic Acid pumping Procedures). Rigged up acid pumper. Pressure tested line to 7 MPa. Pumped 1m³ 15% HCL acid (w/ 18/m³ HA1-85 and 22/m³ PER-5) followed by 0.5 m³ water at 25 m³/min SD 10 min. Pumped an additional 1m³ water. SD Rigged out Acid pumper. Reverse circulated out pickle acid with rig pump using 4m³ water. Neutralized acid in rig tank with NaCO₃. Mixed up 0.7% inhibited (Petro-lite K142) diesel. Normally circulated well bore over to inhibited diesel. 1m³ clean H₂O returns to sump - last 2m³ to rig tank.

PCCH w/ 73mm tubing scraper and bit. Layed out 50' and bit.

CREW		FROM	TO	CONTRACTOR REMARKS				
Driller								
Derrick								
Helper								
Helper								
Extra								
Safety								
BOP								
Accum Press.		kPa						
Air Shut Off								
Stab Valve								
Fire Ext								
H ₂ S								
PRESS FIRMLY YOU ARE MAKING FOUR COPIES								
					Driller			
					Derrick			
					Helper			
					Helper			
					Extra			
					Safety			
					BOP			
					Accum Press.		kPa	
					Air Shut Off			
Stab Valve								
Fire Ext								
H ₂ S								
Sketch 4 Computalog RIG OR CONTRACTOR				CONTRACTOR REPRESENTATIVE				

Page 2 of 2

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 5 page 2 of 2

TCP/Tailpipe/packer/Tubing Details	length m	position of item top mKB
127mm bullnose	0.27	484.40
TCP 127mm HSC 20spm spiral 120s @ 34g/s dp	6.38	478.02
TCP 127mm HSC Blank	2.48	475.54
TCP 127mm HSC 20spm spiral 19s @ 34g/s dp	0.91	474.63
TCP 127mm HSC Blank (safety spacer)	2.65	
Firing head 73mm EUE (incl. collar)	0.31	
3m 73mm EUE J-55 pup	3.10	
73mm EUE separation sub (Approx 0.15m fall off to bottom when released)	0.28	468.29
1.2m 73mm EUE J-55 pup	1.28	467.01
57.15mm Baker R nipple (no-gc 55.80mm)	0.25	466.76
73mm EUE J-55 9.67kg/m joint	9.66	457.10
73mm EUE Fill disk and Flow sub	0.20	456.90
57.15mm Baker F nipple	0.30	456.60
3m 73mm EUE J-55 pup	3.13	453.47
57.67mm Baker F nipple	0.30	453.17
1.8m 73mm EUE J-55 pup	1.91	451.26
177.8mm x 73mm EUE Guiberson UNi6 retrievable	-	
Casing Packer (6k) (1.03m Top-mid rubber)	2.05	449.21
73mm EUE J-55 9.67kg/m joint	9.65	439.56
Radioactive sub 73mm EUE .05m bottom to RA screw	0.13	439.65
45-73mm EUE J-55 9.67kg/m joints (less top most collar)	434.00	
73mm x 177.8mm Barber tubing hanger	0.26	
Total	479.50	
Note: When guns released the KB-TSF	4.87	
Fish will be 16.25m in length less Compression	- 0.09	
w/ PBTD = 511mKB Fish landed by Tally	484.28mKB	
Top will be 494.75mKB Correction to electric line	+ 0.12	

CREW		FROM	TO	CONTRACTOR REMARKS	
TOUR 1	Driller	A. Cartwright	1200	1200	Added dog to road blockage (casing)
	Derrick	P. Bunnecough	1200	1200	Removed BOP. Installed wellhead
	Helper	D. Pierrot	1200	1200	Rigged up swab equipment
	Helper	D. Bunnecough	1200	1200	Safety meeting
	Extra	C. Yukon	1200	1200	Attempted to RIH. Removed WH. Drifted.
	Safety Reeler	B. Miller	1200	1200	Installed WH. Rigged up swab equip.
	BOP		1200	1200	Pulled 2 swabs from 440m. Rigged dn
	Accum Press.	kPa	1340	1404	Pressurized annulus
	Air Shut Off		1404	1445	Perforated. Monitored response
	Stab Valve		1445	1520	Rigged in wireline
Fire Ext	4-30, 1-1/2	1520	1620	RIH. released guns. PCH	
H ₂ S	drager	1620	1700	RIH and set RZB back PCH	
		1700	1800	RIH w/ electronic recorders. PCH	
TOUR 2	Driller		1800	1830	RIH w/ FSG plug set. PCH.
	Derrick		1830	1900	Rig dn wireline
	Helper		1900	1900	Secure well SDON
	Helper				
	Extra				
	Safety				
	BOP				13200/157600
	Accum Press.	kPa			25T
	Air Shut Off				-22°C windy etc
	Stab Valve				sheath 4
Fire Ext				Computers	
H ₂ S				RIG OR CONTRACTOR	
				CONTRACTOR REPRESENTATIVE	

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 6 Summary: Removed BOP. Installed wellhead. Swabbed down tubing to 395m. Dropped bar and perforated Arctic Red 474.6 - 475.5 & 478 - 484.4 mKB. Released guns. Ran pressure recorders (hanging in nipple above) to obtain initial pressure. Details: Waited for road out of camp to be plowed. Arrived location 0845hrs. Tubing and casing pressure zero. Removed BOP. Performed walkaround rig inspection, OK. Installed wellhead.

Rigged up swabbing equipment. Held safety meeting (topics: swabbing and TCP perforating). Attempted to RIH with swab cup. No success - hanging up in 79.4mm 21 MPa master valve. Pulled up. Found a hardened chunk of silicon(?) below gate. Removed wellhead and drifted valve to break and remove blockage. Installed wellhead. Rigged up swabbing equipment. RIH to 440mKB. Pulled swab #1 and recovered 1.2m³ diesel. RIH to 440 mKB. Pulled swab #2 and recovered zero. PCH. Rigged down swabbing equipment. The estimated fluid level is 395mKB which is an 80m diesel cushion (~hydrostatic 650 kPa). Pressure tested pump line to 10 MPa. Pressurized annulus to 9600kPa to provide additional force to the packer for perforating. Hooked up acoustic recording device to the wellhead.

Dropped bar at 1404hrs to fire TCP guns (20s until surface acoustic response) to perforate the Arctic Red Sandstone (474.6 - 475.5 and 478.0 - 484.4 mKB). No change in 9600kPa annulus pressure, OK. Bleed off annulus to tank. Tubing pressure response: 2min - nothing; 15min - 60kPa, very slight blow; 30min - 80kPa; 40min - 70kPa. Shut-in well. Rigged up wireline. MURIH w/ an Otis B shifting tool on electric line. P separation sub at 466.3mKB. Shift released guns into camp. RIH to 490 mKB - clear. Logged CCH across perforated interval, OK - perforation indicated in proper location. PCH. MURIH w/ Baker RZF back in annulus and set in 5T 15mm Baker R nipple at 466.8mKB PCH. MURIH with tandem 35 MPa BRC electronic recorders (SN 71244 top, 71847 bottom) set on RZB

29' 41' 39.43" W

TOUR		CREW		FROM	TO	CONTRACTOR REMARKS
1	Driller	A. Cartwright		0830	0830	Rigged up N ₂ and wireline R/H w/ pull tool
	Derrick	P. Bunnereuge		0830	0945	Repaired N ₂ burner fuel system
	Helper	D. Perrot		0945	1000	safety meeting
	Helper	D. Bunnereuge		1000	1040	Pressured string w/ N ₂ . Pulled prong PCC H.
	Extra	C. Yukko		1040	1115	R/H. Pulled FSC
	Safety Asst.	B. Killen		1115	1140	R/H. Pulled recorders
	BOP			1140	1215	Pulled RZB lock
	Accum Press.			1215	1230	Rigged down wireline
	Air Shut Off			1230	1300	Rigged up swab equipment R/H. Pulled swab
	Stab Valve			1300	1445	Rigged up CTU/N ₂ /pumper
	Fire Ext	4-30 1-130		1445	1500	Safety meeting
	H ₂ S	drager		1500	1615	P-tested CTU R/H w/ CTU
				1615	1710	Washed 1m ³ . Washed 1m ³ .
2	Driller			1710	1735	Blew down well PCC H
	Derrick			1735	1807	N ₂ /Acid squeeze
	Helper			1807	2015	R/H w/ CTU. Blew down well. PCC H
	Helper			2015	2030	Rigged out CTU/N ₂ /pumper
	Extra			2030		Secure well SDEN
	Safety					
	BOP					
	Accum Press.					62200/21900
	Air Shut Off					-10°C extreme wind high W.Ch.11. 801-0-020
	Stab Valve					Sketch 4
	Fire Ext					Computing / Italliburto
	H ₂ S					RIG OR CONTRACTOR
						CONTRACTOR REPRESENTATIVE

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COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 7 Summary: Pulled pressure recorder. Final measured BHP ~ 700 kpa(abs).

Perform 2m³ MCA acid wash and 7m³ MCA nitrified acid squeeze

Details: Rigged in N₂ pumper and wireline. MR/H with pulling tool to 456.6 mKB. Held safety meeting. Pressure tested N₂ line to 5 MPa, OK. Pressurized tubing to 3000 kpa with N₂. Rigged off N₂. Pulled prong from FSG plug at 456.6 mKB PCC H. R/H and pulled FSG plug. Note: surface pressure dropped 200 kpa in 30 minutes. Bled tubing to rig tank to 1100 kpa at 1100 hrs. R/H and retrieved tandem GRC electronic recorders - off bottom 112 hrs. R/H and pulled RZB lock from R profile at 466.8 mKB. PCC H. Rigged out wireline.

Rigged up swabbing equipment. Bled well to zero pressure. R/H to 440m. Pulled a swab. No recovery. Rigged down swab equipment. Reviewed pressure data from recorders. Found pressure at gauge depth 466.8 mKB to be 925 kpa(abs) on 90-02-26 1727 hrs (when run) decreasing continuously through cut period to 719 kpa(abs) on 90-02-27 1013 hrs (before plug pulled). (Note: the gauge reference is SN 71843 bottom; the 925 kpa pressure corresponds closely to the cushion hydrostatic prior to perforating) The declining BHP indicates the reservoir pressure is very low (~820 kpa(abs) at 479.5 mKB MPP)

Rigged in CTU, N₂, acid pumper and acid hauler. Held safety meeting (topics: HCL acid, first Aid proced., p-testing and program). Pressure tested CTU pipes, rams, blind rams and stuffing box to 1400 and 14000 kpa. Repaired one leak, OK. Pressure tested acid pumper line to 25000 kpa. R/H hole w/ CTU (25.4 mm OD) to 490 mKB. Pumped 1.0 m³ 15% Halliburton MCA acid (15% HCL @ w 3% MOR-Elec II surfactant and HAT-85 inhibitor at 1.8 l/m³) down CTU. Displaced acid down with N₂ and out CTU and post perf in a 10 min span (~0.1 m³/min at 14 MPa). Pumped another 1.0 m³ of same acid and displaced in same manner with N₂ except pumped post perf in 2 stages with 5 min shut in between. Blew back wash acid to rig tank with CTU and N₂. PCC H. Closed blind rams.

TOUR		CREW		FROM	TO	CONTRACTOR REMARKS	
1	Driller	A. Conwright		1300	1305	Waited on road while snow plow	
	Derrick	P. Bannercough		1300	1305	Arrived location.	
	Helper	D. Pierce		1325	1330	Bled tubing to pit (flame)	
	Helper	D. Bannercough		1330	1415	Rigged up and swabbed (2 from bottom)	
	Extra	C. Yukan		1415	1430	ST well. Rigged down swab equipment	
	Safety	B. Baileer		1430	1615	Monitored tubing pressure. Prepared BOP for stump test.	
	BOP			1615	1715	P. tested on stump.	
	Accum Press.	14500 kPa		1715	1730	Sampled tubing gas. Bled off tubing. Killed well.	
	Air Shut Off			1730	1820	Removed wellhead. Installed BOP.	
	Stab Valve			1820	1830	P. tested pipe rams	
2	Fire Ext	4-30# 1-150#		1830	1845	Rigged up floor and Tongs. Torped BOPs	
	H ₂ S	drager		1845		Secured Well SDCN	
	Daily rig inspection OK						
	Driller						
	Derrick						
	Helper						
	Helper						
	Extra						
	Safety						
	BOP						
	Accum Press.		kPa			8000 / 22840	
	Air Shut Off					-21°C wind high W. chills	601-0-020
	Stab Valve					sketch 4	Jules Fourny
	Fire Ext						
	H ₂ S					RIG OR CONTRACTOR	CONTRACTOR REPRESENTATIVE

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 1 Summary: Bled tubing to zero. Pulled two swabs from bottom - no returns. Monitored surface pressure. Bled off no hydrocarbon to surface. Killed well. Removed wellhead. Installed BOPs.

Details: Road drifted in with snow. Waited on road plowing. Arrived location 1300 hrs. Shut in tubing pressure 2055 kPa at 1700 hrs. Bled tubing to flare pit to zero pressure in 30s - only slight blowby remaining. No hydrocarbon gas to surface. Rigged up to swab. R/H to 440 m. Pulled swab. zero returns. Installed new swab cup. R/H to 451 m (depthometer measurement). Pulled swab. zero liquid recovery. Rigged down swab equipment. Wog ST at 1415 hrs. Pressure build-up 1430 hrs - 90 kPa, 1455 hrs - 200 kPa, 1535 hrs - 250 kPa. Bled tubing to zero at 1545 hrs. No hydrocarbon to surface. Nunching shut in well. 1610 hrs - 120 kPa, 1715 hrs - 300 kPa. Took sample of surface gas with evacuated AGAT cylinder.

Prepared BOPs for stump testing. Pressure tested BOP rams to 1.5 and 7.0 MPa (10 min.) OK. Performed accumulator / BOP mechanical check. Accumulator pressure 14500 kPa. Shutoff recharge. Closed pipe rams (2s). Opened pipe rams. Final accumulator pressure 11500 kPa, OK - Meets Class II requirements. Annular preventer is not operational due to a hose failure. Accum. recharge time < 1 min. 1

Bled tubing to N.I. pressure to flare pit. No hydrocarbon to surface. (1720 hrs) Pumped 1.2 m³ water down tubing to kill. Tubing on vacuum. Removed wellhead. Installed BOPs. Pressure tested pipe rams to 1.5 and 7.0 MPa (10 min.) OK. Rigged up floor and tongs. Torped in BOPs.

Well Secured. SDCN

CREW		FROM	TO	CONTRACTOR REMARKS	
TOUR 1	Driller	A. Cartwright	0800	1230	Unit packer
	Derrick	P. Benneridge	0730	1025	Mixed up inhibited H ₂ O. Circ. well over
	Helper	D. Pierrat	1025	1210	POCH. Layed down string
	Helper	D. Benneridge	1210	1230	Rigged up electric line. Attempted to convert EZdrill
	Extra	C. Yukon	1230	1600	waited on Halliburton Hand. Hauled out tubing
	Safety	B. Killeen	1600	1800	Converted EZdrill. MURIH. Set.
	BOP	F. H			

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 9 Summary: Poch sideways with tubing string. Circulated well over to inhibited H₂O. Set bridge plug at 410m - failed. Set second bridge plug at 467m - P test OK. Dump bailed cement. built plug 15m in length to 452m KB.

Details: Slight vacuum on tubing. Zero pressure. Set Halliburton thick packer. Tubing went on slight blow and casing on slight vacuum. Mixed up 1 percent inhibited fresh water (Petracite KW132). Normal circulated well over to inhibited H₂O. Diesel returns to rig tank. Rigged up Poch. Well dead. Poch with tubing, packer and tail pipe assembly. Layed down all joints. Sent all tubing and equipment back to base camp.

Rigged up electric line. Attempted to convert Halliburton EZ drill SV squeeze packer to a bridge plug w/ conversion kit - no success. Waited on Halliburton hand from nearby location. Converted to bridge plug OK. MURIH CCL Baker 20 and EZ drill bridge plug. CCL - Mid rubber 3.0m. Circulated on depth to Computalog CBL/GR/CCL dated 90-02-25. Positioned CCL at 467m KB. Set bridge plug (177.8mm Halliburton EZ drill SV squeeze packer converted to bridge plug) with mid rubber at 470m KB (packer/bridge plug top at 469.7). All surface indications during setting were normal. Tagged plug - position, OK. Poch. Pressure tested line to 7MPa. Filled casing with 1.8m³ inhibited water. Pressured casing to 6.5MPa - pressure declined rapidly to zero after several seconds. Established a feedrate of .08m³/min at 1000kpa. Increased to .4m³/min at 2500kpa. After hole fill pumped a total of 1.0m³. Discussed failure with Halliburton - no procedures appeared incorrect. MURIH with a second bridge plug of identical description. Tagged first bridge plug at correct set depth. Pulled up 3m and set bridge plug (mid-rubber at 467m KB). Tagged bridge plug OK. Poch. Filled casing with 0.1m³. Pressure tested casing to 7000kpa (15 min), OK. Bled off casing. Rigged up electric line bailers. Mixed up Glass Cement. Performed 5 cement boiler runs (110 x 102mm boiler) to build a 15m plug. Estimated cement top is 452m KB. Poch. Displaced casing with an empty full plugged boiler to drop fluid level to approx. 2m below surface. Rigged out electric line.

WELL NAME Chester Home River 166 LSD 120° 41' 27.42" N SEC 1 TWP 1 RGE 1 W 1 DATE 7C 0202

TOUR	CREW		FROM	TO	CONTRACTOR REMARKS	
1	Driller	A. Cartwright	0800	0900	Removed BCPs	Installed wellhead
	Derrick	P. Bonnerange	0900	1000	Rigged out service rig	
	Helper	D. Pierrat	1000	1200	Melted down around wellhead	Cleaned lease
	Helper	D. Bonnerange		1200	Moved off service rig	
	Extra	C. Yukon				
	Safety	B. K. Heen				
	BOP					
	Accum Press.					kPa
	Air Shut Off					
	Stab Valve					
2	Fire Ext	4-30, 1-1				
	H ₂ S					
	Driller					
	Derrick					
	Helper					
	Helper					
	Extra					
	Safety					
	BOP				30000 / 224000	
	Accum Press.					kPa
	Air Shut Off				-15°C o/c	601-0-020
	Stab Valve				Sheet 4	J. Fournel
	Fire Ext					
	H ₂ S					
					RIG OR CONTRACTOR	CONTRACTOR REPRESENTATIVE

COMPANY ENGINEERING SUMMARY: JOB DETAILS AND EQUIPMENT INSTALLED

Day 10 Summary: Rigged out service rig. Wellhead ready for cutoff/removal.

Detail: Well dead. Removed BCPs. Installed wellhead. Rigged out service rig and equipment. Melted cellar down to enable a wellhead cutoff.

Moved off service rig and equipment. Cleaned lease.

"CARBONLESS PAPER"

APPENDIX 13

BOND LOG

(with Logs)

APPENDIX 14

PRESSURE DATA

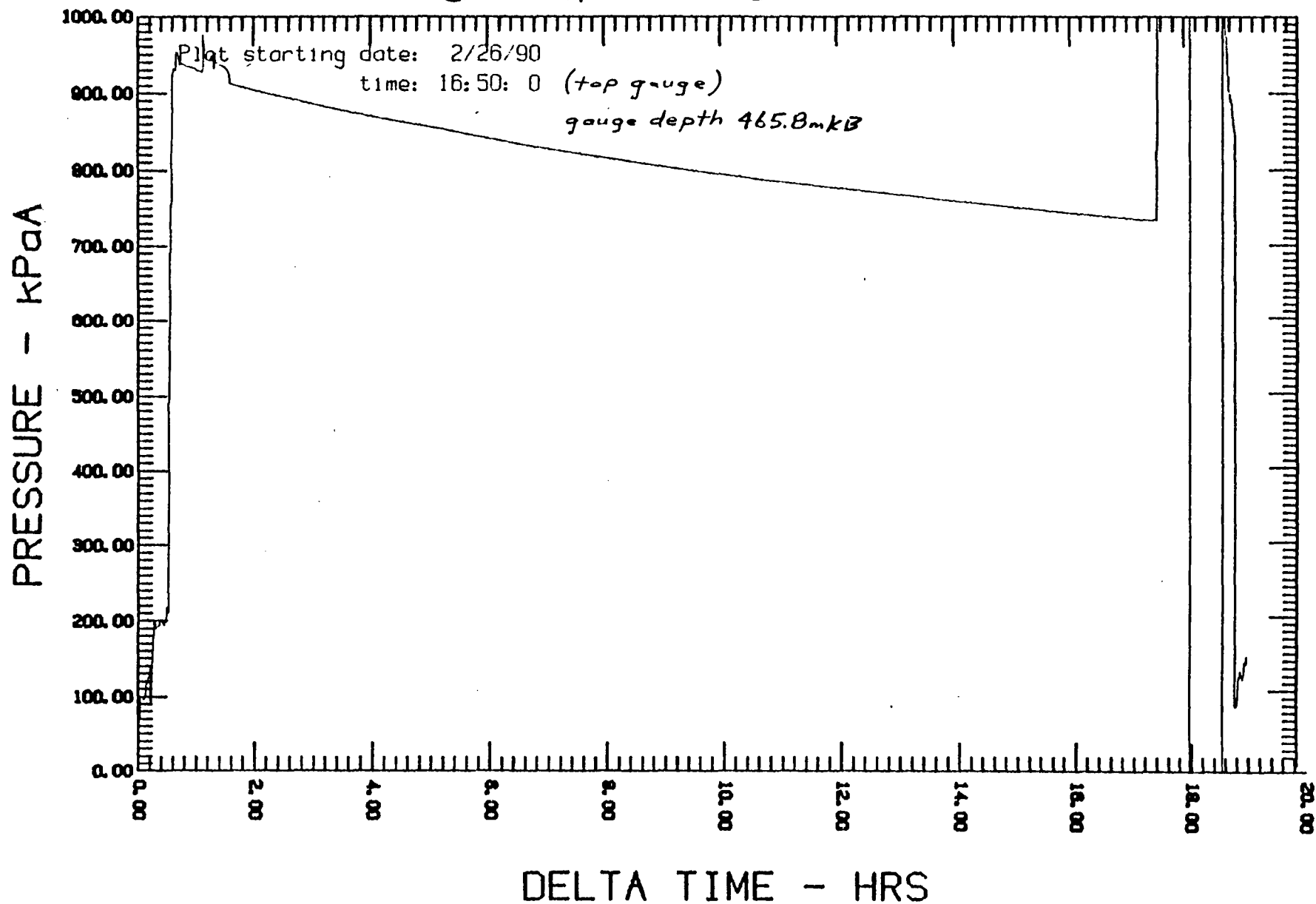
**Chevron Hume River I66
(Gilmore Lake Sand)
Summary of Measured Bottomhole Pressures**

	Top GRC ³ Gauge #71844 @ 465.8 mKB <u>kpa (abs)</u>	Bottom GRC ³ Gauge #71843 @ 466.8 mKB <u>kpa (abs)</u>	Averaged and Corrected ⁴ to MPP @ 479.5 mKB <u>kpa (abs)</u>
Initial Pressure after Perforating ¹ (Measurement 17:26 Hours 1990-02-26 Perforated 14:04 Hours 1990-02-26)	927	925	1 032
Final Pressure after Perforating ² (Measurement 21 Hours after Initial at 10:13 Hours 1990-02-27)	736	714	831

Notes:

1. An estimated 80 lineal metre diesel (or 740 kpa (abs)) cushion was in place prior to perforating.
2. Measurement was continuous between initial and final points. The final pressure was still declining at approximately 6.5 kpa per hour.
3. Published gauge accuracy is +/- 14 kpa.
4. The depth correction used a pressure gradient of 8 kpa/metre.

Chevron Hume River I66



DATE: 2 / 26 / 1990

COMPANY: COMPUTALOG LTD.

CLIENT: CHEVRON CANADA RESOURCES

WELL NAME: CHEVRON HUME RIVER

WELL NUMBER: I/66

TEST NUMBER: 1

LOCATION: HUME RIVER

TEST OPERATOR: ROD MUMBY

GAUGE SER. NO.: 71844 (*Top gauge*)

COMMENTS: 65*55' 33.91" N/

129*41' 39.43"W

DATE: 2 / 26 / 1990
WELL NAME: CHEVRON HUME RIVER

PAGE NUMBER 1
1/66

REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
16:50:28	0.008	63.02	26.16	
16:50:57	0.016	63.02	23.76	
16:51:26	0.024	62.12	23.78	
16:51:55	0.032	62.12	21.17	
16:52:24	0.040	69.32	21.17	
16:52:52	0.048	69.32	18.67	
16:53:21	0.056	98.81	18.67	
16:53:50	0.064	98.81	16.23	
16:54:19	0.072	97.60	16.23	
16:54:48	0.080	97.60	14.13	
16:55:16	0.088	99.71	14.13	
16:55:45	0.096	99.71	12.10	
16:56:14	0.104	95.25	12.10	
16:56:43	0.112	95.25	9.94	
16:57:12	0.120	99.89	9.94	
16:57:40	0.128	99.89	7.88	
16:58: 9	0.136	104.16	7.88	
16:58:38	0.144	104.16	5.60	
16:59: 7	0.152	115.93	5.60	
16:59:36	0.160	115.93	3.96	
17: 0: 4	0.168	119.56	3.96	
17: 0:33	0.176	119.56	2.31	
17: 1: 2	0.184	124.28	2.31	
17: 1:31	0.192	124.28	0.77	
17: 2: 0	0.200	128.54	0.77	
17: 2:28	0.208	128.54	-0.58	
17: 2:57	0.216	137.00	-0.58	
17: 3:26	0.224	137.00	-1.68	
17: 3:55	0.232	93.37	-1.68	
17: 4:24	0.240	93.37	-2.99	
17: 4:52	0.248	145.97	-2.99	
17: 5:21	0.256	145.97	-3.92	
17: 5:50	0.264	158.00	-3.92	
17: 6:19	0.272	158.00	-4.31	
17: 6:48	0.280	201.36	-4.31	
17: 7:16	0.288	201.36	-4.37	
17: 7:45	0.296	199.35	-4.37	
17: 8:14	0.304	199.35	-4.31	
17: 8:43	0.312	189.18	-4.31	
17: 9:12	0.320	189.18	-4.43	
17: 9:40	0.328	192.66	-4.43	
17:11: 7	0.352	193.20	-4.51	
17:11:36	0.360	193.72	-4.51	
17:12: 4	0.368	193.72	-4.44	
17:12:33	0.376	200.51	-4.44	
17:14:57	0.416	201.18	-3.30	
17:15:26	0.424	197.95	-3.30	
17:15:55	0.432	197.95	-2.88	
17:16:24	0.440	194.00	-2.88	
17:16:52	0.448	194.00	-2.45	

RIH w/ gauges

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WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE KF3A	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
17:17:21	0.456	200.03	-2.45	
17:17:50	0.464	200.03	-1.89	
17:18:19	0.471	197.82	-1.89	
17:18:48	0.480	197.82	-1.27	
17:19:16	0.488	206.36	-1.27	
17:19:45	0.496	206.36	-0.33	
17:20:14	0.504	218.44	-0.33	
17:20:43	0.512	218.44	1.24	
17:21:12	0.520	211.28	1.24	
17:21:40	0.528	211.28	2.80	
17:22: 9	0.536	491.99	2.80	
17:22:38	0.544	491.99	7.05	
17:23: 7	0.552	691.49	7.05	
17:23:36	0.560	691.49	12.90	
17:24: 4	0.568	757.29	12.90	
17:24:33	0.576	757.29	16.87	
17:25: 2	0.584	826.06	16.87	
17:25:31	0.592	826.06	19.31	
17:26: 0	0.600	926.87	19.31	
17:26:28	0.608	926.87	21.31	on bottom
17:26:57	0.616	933.41	21.31	
17:27:26	0.624	933.41	22.66	
17:27:55	0.632	929.91	22.66	
17:29:21	0.656	929.77	24.01	
17:29:50	0.664	954.04	24.01	
17:30:19	0.672	954.04	24.37	
17:30:48	0.680	950.21	24.37	
17:31:16	0.688	950.21	24.67	
17:31:45	0.696	947.28	24.67	
17:32:14	0.704	947.28	24.86	
17:32:43	0.712	937.37	24.86	
17:33:12	0.720	937.37	25.03	
17:33:40	0.728	939.00	25.03	
17:37: 2	0.784	938.05	25.68	
17:37:31	0.792	937.06	25.68	
17:38:57	0.816	936.17	25.68	
17:39:26	0.824	935.37	25.68	
17:42:48	0.880	934.67	26.21	
17:43:16	0.888	934.34	26.21	
17:46:38	0.944	933.67	26.53	
17:47: 7	0.952	932.52	26.53	
17:48:33	0.976	931.89	26.66	
17:49: 2	0.984	931.17	26.66	
17:50:57	1.016	930.20	26.74	
17:51:26	1.024	929.93	26.74	
17:52:52	1.048	928.95	26.74	
17:53:21	1.056	928.68	26.74	
17:55:45	1.096	927.69	26.94	
17:56:14	1.104	927.43	26.94	
17:56:43	1.112	931.88	26.94	

Note: the small
rise in pressure
is due to the
diesel displacement
when running the
'FSG' plug and w/L
equip. to bottom.

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
17:57:12	1.120	976.96	26.94	
17:57:40	1.128	968.32	26.94	
17:58: 9	1.136	964.31	26.94	
17:58:38	1.144	950.14	26.94	
17:59: 7	1.152	950.14	27.09	
17:59:36	1.160	945.96	27.09	
18: 0: 4	1.168	945.07	27.09	
18: 0:33	1.176	944.80	27.09	
18: 1:31	1.192	944.27	27.09	
18: 2: 0	1.200	943.38	27.09	
18: 3:26	1.224	942.75	27.21	
18: 3:55	1.232	944.42	27.21	
18: 4:24	1.240	944.78	27.21	
18: 4:52	1.248	945.58	27.21	
18: 5:21	1.256	948.52	27.21	
18: 5:50	1.264	948.22	27.21	
18: 6:19	1.272	944.87	27.21	
18: 6:48	1.280	950.03	27.21	
18: 7:16	1.288	944.24	27.21	
18: 8:14	1.304	945.23	27.28	
18: 8:43	1.312	932.22	27.28	
18: 9:12	1.320	946.03	27.28	
18: 9:40	1.328	944.25	27.28	
18:10: 9	1.336	939.26	27.28	
18:13: 2	1.384	938.39	27.37	
18:13:31	1.392	938.03	27.37	
18:14: 0	1.400	935.80	27.37	
18:14:28	1.408	937.58	27.37	
18:15:26	1.424	936.96	27.37	
18:15:55	1.432	936.52	27.37	
18:17:21	1.456	935.68	27.41	
18:17:50	1.464	935.33	27.41	
18:18:48	1.480	934.53	27.41	
18:19:16	1.488	934.08	27.41	
18:19:45	1.496	933.55	27.41	
18:20:14	1.504	932.83	27.41	
18:20:43	1.512	932.83	27.44	
18:21:12	1.520	930.82	27.44	
18:21:40	1.528	929.93	27.44	
18:22: 9	1.536	929.13	27.44	
18:22:38	1.544	928.42	27.44	
18:23: 7	1.552	927.71	27.44	
18:23:36	1.560	926.99	27.44	
18:24: 4	1.568	920.49	27.44	
18:24:33	1.576	915.42	27.44	
18:25: 2	1.584	915.42	27.47	
18:25:31	1.592	912.33	27.47	
18:27:26	1.624	911.44	27.47	
18:27:55	1.632	911.17	27.47	
18:30:19	1.672	910.22	27.49	

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REAL TIME =====	DELTA TIME HRS =====	PRESSURE kPaA =====	TEMPERATURE °C =====	COMMENTS =====
18:30:48	1.680	910.04	27.49	
18:33:40	1.728	909.15	27.53	
18:34: 9	1.736	908.93	27.53	
18:38: 0	1.800	907.95	27.59	
18:38:28	1.808	907.60	27.59	
18:41:21	1.856	906.62	27.59	
18:41:50	1.864	906.44	27.59	
18:44:43	1.912	905.47	27.60	
18:45:12	1.920	905.20	27.60	
18:47:36	1.960	904.36	27.64	
18:48: 4	1.968	904.18	27.64	
18:51:26	2.024	903.21	27.72	
18:51:55	2.032	903.03	27.72	
18:55:16	2.088	902.23	27.76	
18:55:45	2.096	902.02	27.76	
18:58:38	2.144	901.04	27.76	
18:59: 7	2.152	900.86	27.76	
19: 2:28	2.208	899.93	27.80	
19: 2:57	2.216	899.84	27.80	
19: 6:19	2.272	898.88	27.81	
19: 6:48	2.280	898.71	27.81	
19:10:38	2.344	897.73	27.81	
19:11: 7	2.352	897.46	27.81	
19:14:57	2.416	896.48	27.81	
19:15:26	2.424	896.39	27.81	
19:18:48	2.480	895.39	27.80	
19:19:16	2.488	895.30	27.80	
19:23: 7	2.552	894.41	27.80	
19:23:36	2.560	894.24	27.80	
19:26:57	2.616	893.34	27.79	
19:27:26	2.624	893.16	27.79	
19:30:48	2.680	892.18	27.79	
19:31:16	2.688	891.91	27.79	
19:34: 9	2.736	891.20	27.79	
19:34:38	2.744	890.84	27.79	
19:37:31	2.792	889.95	27.79	
19:38: 0	2.800	889.77	27.79	
19:41:21	2.856	888.78	27.78	
19:41:50	2.864	888.60	27.78	
19:45:12	2.920	887.61	27.77	
19:45:40	2.928	887.43	27.77	
19:49: 2	2.984	886.53	27.76	
19:49:31	2.992	886.35	27.76	
19:52:52	3.048	885.44	27.74	
19:53:21	3.056	885.35	27.74	
19:56:43	3.112	884.43	27.73	
19:57:12	3.120	884.27	27.73	
20: 1: 2	3.184	883.29	27.73	
20: 1:31	3.192	883.02	27.73	
20: 5:21	3.256	882.02	27.72	

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REAL TIME =====	DELTA TIME HRS =====	PRESSURE KPaA =====	TEMPERATURE °C =====	COMMENTS =====
20: 5:50	3.264	861.85	27.72	
20: 9:40	3.328	860.87	27.72	
20:10: 9	3.336	860.69	27.72	
20:13:31	3.392	879.79	27.71	
20:14: 0	3.400	879.61	27.71	
20:17:50	3.464	878.63	27.71	
20:18:19	3.472	878.64	27.71	
20:21:40	3.528	877.74	27.69	
20:22: 9	3.536	877.46	27.69	
20:26: 0	3.600	876.74	27.69	
20:26:28	3.608	876.39	27.69	
20:30:19	3.672	875.50	27.69	
20:30:48	3.680	875.31	27.69	
20:34:38	3.744	874.42	27.69	
20:35: 7	3.752	874.16	27.69	
20:38:57	3.816	873.27	27.69	
20:39:26	3.824	872.92	27.69	
20:43:16	3.888	872.03	27.69	
20:43:45	3.896	871.76	27.69	
20:47:36	3.960	871.05	27.70	
20:48: 4	3.968	870.70	27.70	
20:52:24	4.040	869.71	27.69	
20:52:52	4.048	869.63	27.69	
20:56:43	4.112	868.65	27.69	
20:57:12	4.120	868.56	27.69	
21: 1:31	4.192	867.66	27.69	
21: 2: 0	4.200	867.48	27.69	
21: 6:19	4.272	866.49	27.68	
21: 6:48	4.280	866.40	27.68	
21:10:38	4.344	865.60	27.68	
21:11: 7	4.352	865.33	27.68	
21:15:55	4.432	864.36	27.68	
21:16:24	4.440	864.18	27.68	
21:21:12	4.520	863.20	27.68	
21:21:40	4.528	863.11	27.68	
21:26:28	4.608	862.13	27.68	
21:26:57	4.616	861.86	27.68	
21:31:45	4.696	860.90	27.69	
21:32:14	4.704	860.72	27.69	
21:36:33	4.776	859.73	27.68	
21:37: 2	4.784	859.64	27.68	
21:40:52	4.848	858.65	27.67	
21:41:21	4.856	858.56	27.67	
21:45:12	4.920	857.69	27.69	
21:45:40	4.928	857.51	27.69	
21:50: 0	5.000	856.54	27.69	
21:50:28	5.008	856.45	27.69	
21:54:48	5.080	855.46	27.68	
21:55:16	5.088	855.37	27.68	
21:59: 7	5.152	854.46	27.66	

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REAL TIME =====	DELTA TIME HRS =====	PRESSURE kPaA =====	TEMPERATURE °C =====	COMMENTS =====
21:59:36	5.160	854.30	27.68	
22: 3:26	5.224	853.34	27.69	
22: 3:55	5.232	853.25	27.69	
22: 7:16	5.288	852.35	27.68	
22: 7:45	5.296	852.08	27.68	
22:11:36	5.360	851.20	27.69	
22:12: 4	5.368	851.02	27.69	
22:16:24	5.440	850.03	27.68	
22:16:52	5.448	849.85	27.68	
22:20:14	5.504	848.97	27.69	
22:20:43	5.512	848.80	27.69	
22:24:33	5.576	847.82	27.69	
22:25: 2	5.584	847.64	27.69	
22:28:52	5.648	846.75	27.69	
22:29:21	5.656	846.57	27.69	
22:33:12	5.720	846.59	27.69	
22:33:40	5.728	846.42	27.69	
22:37:31	5.792	844.44	27.69	
22:38: 0	5.800	844.35	27.69	
22:41:50	5.864	843.38	27.69	
22:42:19	5.872	843.20	27.69	
22:46: 9	5.936	842.29	27.68	
22:46:38	5.944	842.12	27.68	
22:50: 0	6.000	841.24	27.69	
22:50:28	6.008	841.06	27.69	
22:54:48	6.080	840.09	27.69	
22:55:16	6.088	840.00	27.69	
22:59: 7	6.152	839.10	27.69	
22:59:36	6.160	838.92	27.69	
23: 3:55	6.232	837.94	27.69	
23: 4:24	6.240	837.86	27.69	
23: 8:14	6.304	836.98	27.69	
23: 8:43	6.312	836.80	27.69	
23:13: 2	6.384	835.82	27.69	
23:13:31	6.392	835.64	27.69	
23:17:50	6.464	834.66	27.69	
23:18:19	6.472	834.49	27.69	
23:23: 7	6.552	833.60	27.69	
23:23:36	6.560	833.33	27.69	
23:27:55	6.632	832.44	27.69	
23:28:24	6.640	832.26	27.69	
23:32:43	6.712	831.36	27.69	
23:33:12	6.720	831.18	27.69	
23:37:31	6.792	830.30	27.69	
23:38: 0	6.800	830.12	27.69	
23:42:48	6.880	829.15	27.69	
23:43:16	6.888	828.97	27.69	
23:48: 4	6.968	828.08	27.69	
23:48:33	6.976	827.90	27.69	
23:53:21	7.056	827.01	27.69	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
23:53:50	7.064	826.84	27.69	
23:58:38	7.144	825.68	27.71	
23:59: 7	7.152	825.70	27.71	
0: 4:24	7.240	824.70	27.69	
0: 4:52	7.248	824.52	27.69	
0:10:38	7.344	823.64	27.70	
0:11: 7	7.351	823.47	27.70	
0:15:55	7.432	822.56	27.69	
0:16:24	7.440	822.38	27.69	
0:21:40	7.526	821.49	27.69	
0:22: 9	7.536	821.31	27.69	
0:27:55	7.632	820.34	27.69	
0:28:24	7.640	820.08	27.69	
0:34: 9	7.736	819.09	27.69	
0:34:38	7.744	819.00	27.69	
0:39:26	7.824	818.04	27.70	
0:39:55	7.832	817.95	27.70	
0:45:40	7.926	816.97	27.69	
0:46: 9	7.936	816.79	27.69	
0:51:55	8.032	815.80	27.69	
0:52:24	8.040	815.62	27.69	
0:58: 9	8.136	814.74	27.69	
0:58:38	8.144	814.48	27.69	
1: 3:55	8.232	813.50	27.69	
1: 4:24	8.240	813.41	27.69	
1: 9:40	8.326	812.43	27.69	
1:10: 9	8.336	812.34	27.69	
1:14:28	8.408	811.37	27.70	
1:14:57	8.416	811.29	27.70	
1:19:45	8.496	810.32	27.72	
1:20:14	8.504	810.24	27.72	
1:25: 2	8.584	809.36	27.72	
1:25:31	8.592	809.18	27.72	
1:30:19	8.672	808.21	27.73	
1:30:48	8.680	808.12	27.73	
1:35:36	8.760	807.22	27.72	
1:36: 4	8.768	807.04	27.72	
1:41:21	8.856	806.16	27.73	
1:41:50	8.864	805.99	27.73	
1:46:38	8.944	805.10	27.73	
1:47: 7	8.952	804.92	27.73	
1:52:24	9.040	804.04	27.74	
1:52:52	9.048	803.87	27.74	
1:58:38	9.144	802.90	27.75	
1:59: 7	9.152	802.72	27.75	
2: 4:24	9.240	801.81	27.73	
2: 4:52	9.248	801.54	27.73	
2:10:38	9.344	800.67	27.74	
2:11: 7	9.352	800.49	27.74	
2:17:21	9.456	799.58	27.72	

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REAL TIME =====	DELTA TIME HRS =====	PRESSURE kPaA =====	TEMPERATURE °C =====	COMMENTS =====
2:17:50	9.464	799.40	27.72	
2:24:33	9.576	798.43	27.72	
2:25: 2	9.584	798.24	27.72	
2:31:16	9.688	797.26	27.72	
2:31:45	9.696	797.17	27.72	
2:37:31	9.792	796.29	27.73	
2:38: 0	9.800	796.12	27.73	
2:43:45	9.896	795.14	27.73	
2:44:14	9.904	795.06	27.73	
2:50:28	10.008	794.08	27.73	
2:50:57	10.016	793.99	27.73	
2:55:45	10.096	793.10	27.73	
2:56:14	10.104	792.92	27.73	
3: 3:26	10.224	791.94	27.73	
3: 3:55	10.232	791.77	27.73	
3:10: 9	10.336	790.79	27.73	
3:10:38	10.344	790.70	27.73	
3:16:24	10.440	789.80	27.72	
3:16:52	10.448	789.62	27.72	
3:22:38	10.544	788.74	27.72	
3:23: 7	10.552	788.56	27.72	
3:30:19	10.672	787.58	27.72	
3:30:48	10.680	787.40	27.72	
3:37: 2	10.784	786.50	27.72	
3:37:31	10.792	786.33	27.72	
3:45:12	10.920	785.35	27.72	
3:45:40	10.928	785.26	27.72	
3:51:55	11.032	784.28	27.72	
3:52:24	11.040	784.19	27.72	
3:58:38	11.144	783.21	27.71	
3:59: 7	11.152	783.12	27.71	
4: 5:50	11.264	782.24	27.72	
4: 6:19	11.272	782.06	27.72	
4:14:28	11.408	781.08	27.72	
4:14:57	11.416	780.90	27.72	
4:22: 9	11.536	779.92	27.71	
4:22:38	11.544	779.83	27.71	
4:30:19	11.672	778.85	27.71	
4:30:48	11.680	778.67	27.71	
4:37:31	11.792	777.70	27.71	
4:38: 0	11.800	777.61	27.71	
4:45:40	11.928	776.62	27.70	
4:46: 9	11.936	776.53	27.70	
4:53:21	12.056	775.55	27.70	
4:53:50	12.064	775.46	27.70	
5: 2: 0	12.200	774.49	27.70	
5: 2:28	12.208	774.40	27.70	
5: 9:12	12.320	773.50	27.69	
5: 9:40	12.328	773.32	27.69	
5:17:50	12.464	772.34	27.69	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
5:18:19	12.472	772.26	27.69	
5:26: 0	12.600	771.37	27.69	
5:26:28	12.608	771.19	27.69	
5:34:38	12.744	770.20	27.69	
5:35: 7	12.752	770.02	27.69	
5:41:21	12.856	769.06	27.69	
5:41:50	12.864	768.97	27.69	
5:46:33	12.976	768.00	27.70	
5:49: 2	12.984	767.91	27.70	
5:56:14	13.104	767.00	27.72	
5:56:43	13.112	766.86	27.72	
6: 3:26	13.224	765.88	27.71	
6: 3:55	13.232	765.79	27.71	
6:10: 9	13.336	764.90	27.71	
6:10:38	13.344	764.72	27.71	
6:17:50	13.464	763.83	27.71	
6:18:19	13.472	763.66	27.71	
6:25: 2	13.584	762.78	27.72	
6:25:31	13.592	762.60	27.72	
6:32:14	13.704	761.71	27.72	
6:32:43	13.712	761.53	27.72	
6:40:24	13.840	760.55	27.71	
6:40:52	13.848	760.46	27.71	
6:48: 4	13.968	759.48	27.71	
6:48:33	13.976	759.39	27.71	
6:56:43	14.112	758.41	27.72	
6:57:12	14.120	758.25	27.72	
7: 4:24	14.240	757.26	27.71	
7: 4:52	14.248	757.17	27.71	
7:12: 4	14.368	756.28	27.71	
7:12:33	14.376	756.02	27.71	
7:20:43	14.512	755.14	27.72	
7:21:12	14.520	754.96	27.72	
7:29:50	14.664	753.98	27.72	
7:30:19	14.672	753.89	27.72	
7:37:31	14.792	752.93	27.72	
7:38: 0	14.800	752.84	27.72	
7:45:12	14.920	751.85	27.72	
7:45:40	14.928	751.76	27.72	
7:53:21	15.056	750.78	27.72	
7:53:50	15.064	750.69	27.72	
8: 1:31	15.192	749.75	27.73	
8: 2: 0	15.200	749.47	27.73	
8:11: 7	15.352	748.59	27.74	
8:11:36	15.360	748.41	27.74	
8:19:45	15.496	747.43	27.73	
8:20:14	15.504	747.34	27.73	
8:27:55	15.632	746.37	27.74	
8:28:24	15.640	746.28	27.74	
8:37:31	15.792	745.31	27.74	

DATE: 2 / 27 / 0
WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
8:38: 0	15.800	745.22	27.74	
8:47: 7	15.952	744.25	27.75	
8:47:36	15.960	744.16	27.75	
8:56:43	16.112	743.17	27.74	
8:57:12	16.120	743.08	27.74	
9: 4:52	16.248	742.11	27.74	
9: 5:21	16.256	742.02	27.74	
9:13: 2	16.384	741.12	27.73	
9:13:31	16.392	740.94	27.73	
9:24: 4	16.568	739.99	27.75	
9:24:33	16.576	739.90	27.75	
9:33:40	16.728	738.92	27.75	
9:34: 9	16.736	738.83	27.75	
9:43:45	16.896	737.93	27.74	
9:44:14	16.904	737.67	27.74	
9:55:16	17.088	736.70	27.75	
9:55:45	17.096	736.61	27.75	
10: 4:52	17.248	735.73	27.75	
10: 5:21	17.256	735.55	27.75	
10:13:31	17.392	736.19	27.76	
10:14: 0	17.400	827.55	27.76	
10:14:28	17.408	1341.31	27.76	
10:14:57	17.416	2971.12	27.76	
10:15:26	17.424	2971.12	27.71	
10:15:55	17.432	4079.76	27.71	
10:16:24	17.440	4062.73	27.71	
10:16:52	17.448	4049.05	27.71	
10:17:21	17.456	4035.85	27.71	
10:17:50	17.464	4023.57	27.71	
10:18:19	17.472	4011.86	27.71	
10:18:48	17.480	4002.00	27.71	
10:19:16	17.488	3993.27	27.71	
10:19:45	17.496	3993.27	27.88	
10:20:14	17.504	3971.82	27.88	
10:20:43	17.512	3960.39	27.88	
10:21:12	17.520	3954.54	27.88	
10:21:40	17.528	3947.20	27.88	
10:22: 9	17.536	3946.27	27.88	
10:22:38	17.544	3944.69	27.88	
10:23: 7	17.552	3943.02	27.88	
10:23:36	17.560	3941.35	27.88	
10:24: 4	17.568	3941.35	27.81	
10:24:33	17.576	3938.11	27.81	
10:25: 2	17.584	3936.62	27.81	
10:25:31	17.592	3935.04	27.81	
10:26: 0	17.600	3933.47	27.81	
10:26:28	17.608	3932.07	27.81	
10:26:57	17.616	3930.59	27.81	
10:27:26	17.624	3929.19	27.81	
10:27:55	17.632	3927.61	27.81	

Pressure declining
at approx. 6.9 kpa/

last measured pressure

pulled plug / well
pressurized with N₂

DATE: 2 / 27 / 0
WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
10:28:24	17.640	3927.61	27.75	
10:28:52	17.648	3924.85	27.75	
10:29:21	17.656	3923.36	27.75	
10:29:50	17.664	3921.32	27.75	
10:30:19	17.672	3846.05	27.75	
10:30:48	17.680	3848.64	27.75	
10:31:45	17.696	3846.47	27.75	
10:32:14	17.704	3847.45	27.75	
10:32:43	17.712	3847.45	27.72	
10:33:12	17.720	3770.91	27.72	
10:33:40	17.728	3764.24	27.72	
10:34: 9	17.736	3751.55	27.72	
10:34:38	17.744	3733.39	27.72	
10:35: 7	17.752	3717.00	27.72	
10:35:36	17.760	3700.06	27.72	
10:36: 4	17.768	3684.04	27.72	
10:36:33	17.776	3666.22	27.72	
10:37: 2	17.784	3666.22	27.64	
10:37:31	17.792	3637.88	27.64	
10:38: 0	17.800	3623.17	27.64	
10:38:28	17.808	3609.30	27.64	
10:38:57	17.816	3598.76	27.64	
10:39:26	17.824	3589.24	27.64	
10:39:55	17.832	3581.84	27.64	
10:40:24	17.840	3574.82	27.64	
10:40:52	17.848	3567.98	27.64	
10:41:21	17.856	3567.98	27.62	
10:41:50	17.864	3553.73	27.62	
10:42:19	17.872	3577.38	27.62	
10:42:48	17.880	3559.27	27.62	
10:43:16	17.888	3554.19	27.62	
10:43:45	17.896	3545.69	27.62	
10:44:14	17.904	3533.40	27.62	
10:44:43	17.912	3524.63	27.62	
10:45:12	17.920	3518.16	27.62	
10:45:40	17.928	3518.16	27.62	
10:46: 9	17.936	3502.20	27.62	
10:46:38	17.944	3494.72	27.62	
10:47: 7	17.952	3487.15	27.62	
10:47:36	17.960	3479.30	27.62	
10:48: 4	17.968	3471.92	27.62	
10:48:33	17.976	3464.82	27.62	
10:49: 2	17.984	0.00	27.62	
10:50: 0	18.000	0.00	27.59	
10:50:28	18.008	0.00	27.59	
10:54:19	18.072	0.00	27.56	
10:54:48	18.080	0.00	27.56	
10:58:38	18.144	0.00	27.47	
10:59: 7	18.152	0.00	27.47	
11: 2:57	18.216	0.00	27.40	

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WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
11: 3:26	18.124	0.00	27.40	
11: 7:16	18.266	0.00	27.37	
11: 7:45	18.296	0.00	27.37	
11:15:55	18.431	0.00	27.35	
11:16:24	18.440	0.00	27.35	
11:20:14	18.504	0.00	27.37	
11:20:43	18.512	0.00	27.37	
11:22: 9	18.556	0.00	27.37	
11:22:38	18.544	1400.77	27.37	
11:23: 7	18.552	1296.93	27.37	
11:23:36	18.560	1165.27	27.37	
11:24: 4	18.568	1013.78	27.37	
11:24:33	18.576	1013.78	25.76	
11:25: 2	18.584	984.29	25.76	
11:25:31	18.592	975.20	25.76	
11:26: 0	18.600	967.45	25.76	
11:26:28	18.608	958.69	25.76	
11:26:57	18.616	951.14	25.76	
11:27:26	18.624	935.37	25.76	
11:27:55	18.632	922.28	25.76	
11:28:52	18.646	922.46	22.22	
11:29:21	18.656	902.62	22.22	
11:29:50	18.664	901.57	22.22	
11:30:19	18.672	890.53	22.22	
11:30:48	18.680	896.28	22.22	
11:31:16	18.688	894.18	22.22	
11:31:45	18.696	888.93	22.22	
11:32:14	18.704	882.79	22.22	
11:32:43	18.712	877.53	22.22	
11:33:12	18.720	877.53	17.10	
11:33:40	18.728	859.00	17.10	
11:34: 9	18.736	852.41	17.10	
11:34:38	18.744	851.26	17.10	
11:35: 7	18.752	849.39	17.10	
11:35:36	18.760	99.82	17.10	
11:36: 4	18.768	87.58	17.10	
11:36:33	18.776	98.05	17.10	
11:37:31	18.792	98.41	11.34	
11:38: 0	18.800	89.58	11.34	
11:38:28	18.808	110.90	11.34	
11:38:57	18.816	117.59	11.34	
11:39:26	18.824	124.03	11.34	
11:39:55	18.832	128.08	11.34	
11:40:24	18.840	130.99	11.34	
11:40:52	18.848	134.34	11.34	
11:41:50	18.864	134.60	4.75	
11:42:19	18.872	125.63	4.75	
11:42:48	18.880	129.10	4.75	
11:43:16	18.888	126.48	4.75	
11:43:45	18.896	124.25	4.75	

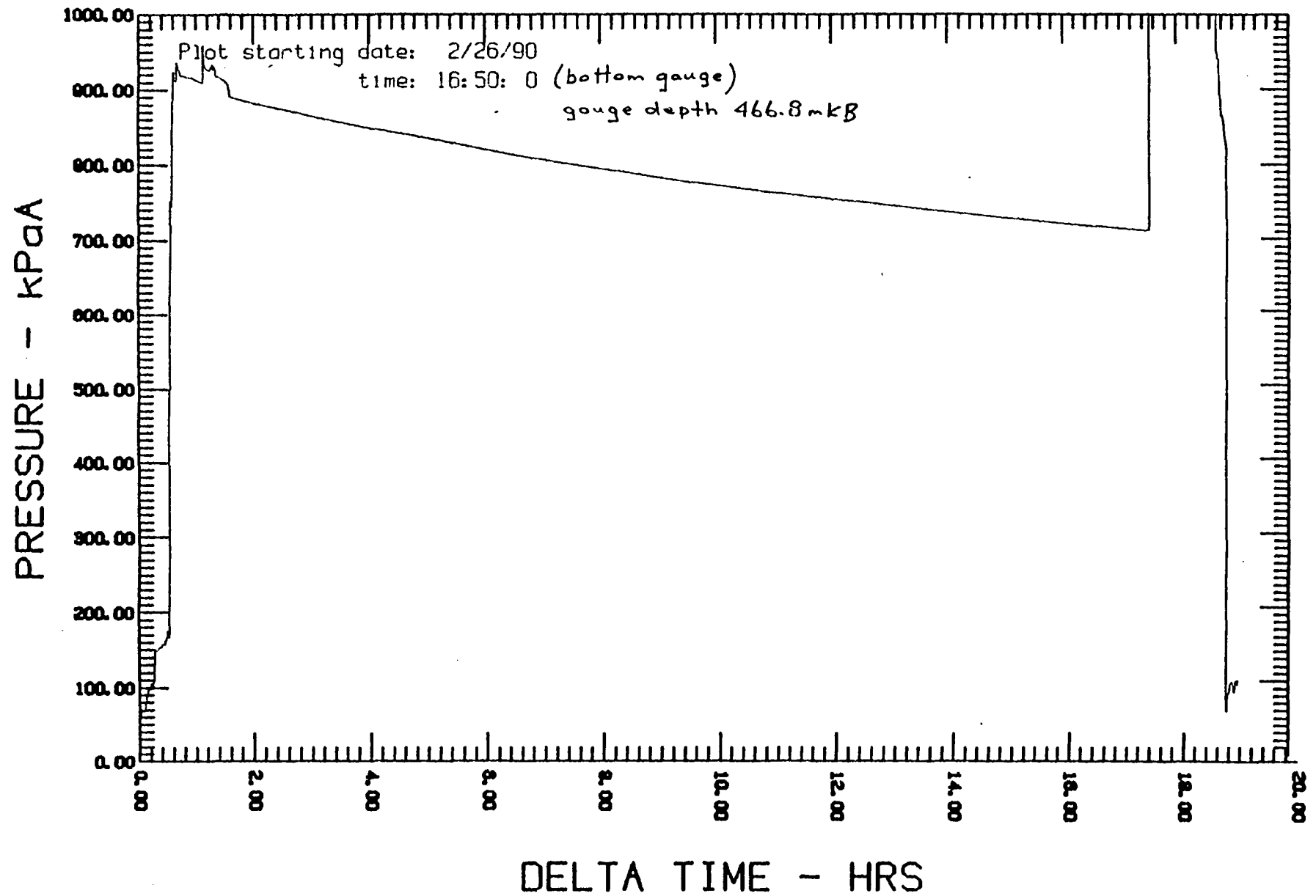
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DATE: 2 / 27 / 0
WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
11:44:14	18.904	128.74	4.75	
11:44:43	18.912	136.24	4.75	
11:45:12	18.920	143.38	4.75	
11:45:40	18.928	146.64	4.75	
11:46: 9	18.936	146.64	0.64	
11:46:38	18.944	143.99	0.64	
11:47: 7	18.952	152.02	0.64	
11:47:36	18.960	153.61	0.64	
16:50: 0	0.000	0.00	0.64	

Chevron Hume River I66



DATE: 2 / 26 / 1990

COMPANY: COMPUTALOG LTD.

CLIENT: CHEVRON CANADA RESOURCES

WELL NAME: CHEVRON HUME RIVER

WELL NUMBER: I/66

TEST NUMBER: 1

LOCATION: HUME RIVER

TEST OPERATOR: ROD MUMBY

GAUGE SER. NO.: 71843 (bottom gauge)

COMMENTS: 65*55' 33.91" N/

129*41' 39.43" W

DATE: 2 / 26 / 1990
WELL NAME: CHEVRON HUME RIVER

PAGE NUMBER 1
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REAL TIME	DELTA TIME HRS	PRESSURE KPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
16:50:28	0.008	37.60	25.59	
16:50:57	0.016	37.60	24.62	
16:51:26	0.024	62.14	24.62	
16:51:55	0.032	62.14	23.02	
16:52:24	0.040	66.95	23.02	
16:52:52	0.048	66.95	21.04	
16:53:21	0.056	71.77	21.04	
16:53:50	0.064	71.77	16.86	
16:54:19	0.072	67.30	18.88	
16:54:48	0.080	67.30	16.61	
16:55:16	0.088	69.03	16.61	
16:55:45	0.096	69.03	14.27	
16:56:14	0.104	73.68	14.27	
16:56:43	0.112	73.68	11.95	
16:57:12	0.120	80.22	11.95	
16:57:40	0.128	80.22	9.70	
16:58: 9	0.136	86.32	9.70	
16:58:38	0.144	86.32	7.64	
16:59: 7	0.152	92.81	7.64	
16:59:36	0.160	92.81	5.85	
17: 0: 4	0.168	98.61	5.85	
17: 0:33	0.176	95.61	4.26	
17: 1: 2	0.184	101.07	4.26	
17: 1:31	0.192	101.07	2.88	
17: 2: 0	0.200	97.88	2.88	
17: 2:28	0.208	97.88	1.62	
17: 2:57	0.216	106.19	1.62	
17: 3:26	0.224	106.19	0.50	
17: 3:55	0.232	98.68	0.50	
17: 4:24	0.240	98.68	-0.48	
17: 4:52	0.248	105.80	-0.48	
17: 5:21	0.256	105.80	-1.44	
17: 5:50	0.264	108.99	-1.44	
17: 6:19	0.272	108.99	-2.28	
17: 6:48	0.280	151.71	-2.28	
17: 7:16	0.288	151.71	-2.90	
17: 7:45	0.296	149.13	-2.90	
17: 9:13	0.320	146.77	-3.74	
17: 9:40	0.328	151.03	-3.74	
17:11: 7	0.352	151.77	-4.24	
17:11:36	0.360	154.15	-4.24	
17:14: 0	0.400	153.90	-3.99	
17:14:28	0.408	157.62	-3.99	
17:15:55	0.432	157.53	-3.23	
17:16:24	0.440	156.49	-3.23	
17:16:52	0.448	156.49	-2.73	
17:17:21	0.456	159.56	-2.73	
17:17:50	0.464	159.56	-2.09	
17:18:19	0.472	167.87	-2.09	
17:18:48	0.480	167.87	-1.20	

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gauges

DATE: 2 / 26 / 1990
WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE KPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
17:19:16	0.466	166.56	-1.20	
17:19:45	0.445	166.56	-0.08	
17:20:14	0.504	175.36	-0.08	
17:20:43	0.511	175.36	1.29	
17:21:12	0.510	166.79	1.29	
17:21:40	0.529	166.79	2.91	
17:22: 9	0.506	499.66	2.91	
17:22:38	0.544	499.66	6.00	
17:23: 7	0.551	752.15	6.00	
17:23:36	0.560	752.15	9.92	
17:24: 4	0.566	744.73	9.92	
17:24:33	0.576	744.73	13.37	
17:25: 2	0.584	847.28	13.37	
17:25:31	0.592	847.28	16.11	
17:26: 0	0.600	924.54	16.11	
17:26:28	0.606	924.54	18.40	on bottom
17:26:57	0.616	914.87	18.40	(Temp. not yet
17:27:26	0.624	914.87	20.24	stabilized)
17:27:55	0.632	912.10	20.24	
17:28:24	0.640	912.10	21.60	
17:28:52	0.648	913.69	21.60	
17:29:21	0.656	913.69	22.62	
17:29:50	0.664	936.32	22.62	
17:30:19	0.672	936.32	23.39	
17:30:48	0.680	928.46	23.39	
17:31:16	0.686	928.46	23.99	
17:31:45	0.696	926.62	23.99	
17:32:14	0.704	926.62	24.43	
17:32:43	0.712	919.58	24.43	
17:37: 2	0.784	918.66	25.43	
17:37:31	0.792	918.00	25.43	
17:38:57	0.816	917.52	25.64	
17:39:26	0.824	916.93	25.64	
17:45:40	0.928	915.96	26.21	
17:46: 9	0.936	915.63	26.21	
17:46:38	0.944	915.63	26.27	
17:47: 7	0.952	914.56	26.27	
17:48:33	0.976	913.76	26.39	
17:49: 2	0.984	913.15	26.39	
17:50:57	1.016	912.37	26.47	
17:51:26	1.024	912.10	26.47	
17:52:52	1.048	911.26	26.47	
17:53:21	1.056	910.89	26.47	
17:53:16	1.088	910.28	26.66	
17:53:45	1.096	909.82	26.66	
17:56:14	1.104	909.63	26.66	
17:56:43	1.112	958.76	26.66	
17:57:12	1.120	949.49	26.66	
17:57:40	1.128	948.00	26.66	
17:58: 9	1.136	935.67	26.66	

Note: the small
rise in pressure
is due to the diesel
displacement when
running the 'FSG'
plug and w/L equip
to bottom.

DATE: 2 / 26 / 1990
WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
17:58:38	1.144	933.45	26.66	
17:59: 7	1.152	933.45	26.82	
17:59:36	1.160	928.45	26.82	
18: 1: 2	1.184	927.71	26.82	
18: 1:31	1.192	927.06	26.82	
18: 2:28	1.208	926.23	26.82	
18: 2:57	1.216	925.86	26.82	
18: 3:26	1.224	925.86	26.95	
18: 3:55	1.232	927.89	26.95	
18: 4:24	1.240	928.26	26.95	
18: 4:52	1.248	931.41	26.95	
18: 5:21	1.256	928.72	26.95	
18: 5:50	1.264	928.26	26.95	
18: 6:19	1.272	934.01	26.95	
18: 6:48	1.280	927.80	26.95	
18: 8:14	1.304	927.76	27.03	
18: 8:43	1.312	931.74	27.03	
18: 9:12	1.320	928.32	27.03	
18: 9:40	1.328	918.40	27.03	
18:12: 4	1.368	917.56	27.11	
18:12:33	1.376	917.15	27.11	
18:13:31	1.392	916.60	27.11	
18:14: 0	1.400	915.67	27.11	
18:15:26	1.424	914.83	27.11	
18:15:55	1.432	914.46	27.11	
18:17:21	1.456	913.58	27.17	
18:17:50	1.464	913.21	27.17	
18:18:48	1.480	912.47	27.17	
18:19:16	1.488	911.91	27.17	
18:19:45	1.496	911.36	27.17	
18:20:14	1.504	910.34	27.17	
18:20:43	1.512	910.34	27.20	
18:21:12	1.520	908.41	27.20	
18:21:40	1.528	907.67	27.20	
18:22: 9	1.536	906.93	27.20	
18:22:38	1.544	906.10	27.20	
18:23: 7	1.552	905.45	27.20	
18:23:36	1.560	900.82	27.20	
18:24: 4	1.568	894.79	27.20	
18:24:33	1.576	891.83	27.20	
18:25: 2	1.584	891.83	27.24	
18:25:31	1.592	890.56	27.24	
18:27:26	1.624	889.72	27.24	
18:27:55	1.632	889.54	27.24	
18:29:50	1.664	888.72	27.26	
18:30:19	1.672	888.53	27.26	
18:33:40	1.728	887.70	27.31	
18:34: 9	1.736	887.45	27.31	
18:37: 2	1.784	886.53	27.31	
18:37:31	1.792	886.43	27.31	

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WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE KPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
18:39:55	1.832	865.55	27.38	
18:40:24	1.840	865.37	27.36	
18:42:46	1.860	864.50	27.47	
18:43:16	1.888	864.32	27.47	
18:46:38	1.944	863.39	27.53	
18:47: 7	1.952	863.16	27.53	
18:50: 0	2.000	862.23	27.53	
18:50:28	2.008	862.14	27.53	
18:54:19	2.072	861.15	27.59	
18:54:48	2.080	861.06	27.59	
18:57:40	2.128	860.07	27.62	
18:58: 9	2.136	879.98	27.62	
19: 1:31	2.192	879.06	27.65	
19: 2: 0	2.200	878.97	27.65	
19: 5:21	2.256	878.05	27.65	
19: 5:50	2.264	877.87	27.65	
19: 9:12	2.320	876.93	27.65	
19: 9:40	2.328	876.75	27.65	
19:13: 2	2.384	875.82	27.64	
19:13:31	2.392	875.73	27.64	
19:16:52	2.448	874.89	27.63	
19:17:21	2.456	874.61	27.63	
19:21:12	2.520	873.78	27.62	
19:21:40	2.528	873.58	27.62	
19:25:31	2.592	872.65	27.61	
19:26: 0	2.600	872.37	27.61	
19:28:52	2.648	871.45	27.61	
19:29:21	2.656	871.26	27.61	
19:32:14	2.704	870.33	27.60	
19:32:43	2.712	870.24	27.60	
19:35: 7	2.752	869.40	27.59	
19:35:36	2.760	869.21	27.59	
19:38:28	2.808	868.47	27.59	
19:38:57	2.816	868.19	27.59	
19:41:50	2.864	867.26	27.59	
19:42:19	2.872	867.08	27.59	
19:45:12	2.920	866.15	27.59	
19:45:40	2.928	866.06	27.59	
19:49: 2	2.984	865.23	27.59	
19:49:31	2.992	865.04	27.59	
19:52:52	3.048	864.11	27.57	
19:53:21	3.056	863.92	27.57	
19:56:43	3.112	862.99	27.56	
19:57:12	3.120	862.90	27.56	
20: 0: 4	3.168	862.06	27.57	
20: 0:33	3.176	861.79	27.57	
20: 4:24	3.240	860.86	27.56	
20: 4:52	3.248	860.58	27.56	
20: 7:45	3.296	859.84	27.56	
20: 8:14	3.304	859.56	27.56	

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REAL TIME	DELTA TIME HRS	PRESSURE KPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
20:12: 4	3.368	858.73	27.56	
20:12:33	3.376	858.54	27.56	
20:15:55	3.432	857.80	27.56	
20:16:24	3.440	857.53	27.56	
20:19:45	3.496	856.69	27.56	
20:20:14	3.504	856.50	27.56	
20:23:36	3.560	855.67	27.56	
20:24: 4	3.568	855.48	27.56	
20:27:55	3.632	854.55	27.55	
20:28:24	3.640	854.37	27.55	
20:31:45	3.696	853.43	27.53	
20:32:14	3.704	853.34	27.53	
20:35:36	3.760	852.42	27.54	
20:36: 4	3.768	852.33	27.54	
20:39:26	3.824	851.40	27.54	
20:39:55	3.832	851.31	27.54	
20:43:45	3.896	850.38	27.54	
20:44:14	3.904	850.20	27.54	
20:47:36	3.960	849.46	27.54	
20:48: 4	3.968	849.18	27.54	
20:51:55	4.032	848.35	27.54	
20:52:24	4.040	848.16	27.54	
20:56:14	4.104	847.42	27.54	
20:56:43	4.112	847.14	27.54	
21: 0:33	4.176	846.40	27.53	
21: 1: 2	4.184	846.12	27.53	
21: 5:21	4.256	845.19	27.53	
21: 5:50	4.264	845.10	27.53	
21: 9:40	4.328	844.26	27.53	
21:10: 9	4.336	844.08	27.53	
21:14:28	4.408	843.15	27.53	
21:14:57	4.416	842.97	27.53	
21:19:16	4.488	842.04	27.53	
21:19:45	4.496	841.95	27.53	
21:24: 4	4.568	841.02	27.53	
21:24:33	4.576	840.93	27.53	
21:28:52	4.648	840.00	27.52	
21:29:21	4.656	839.91	27.52	
21:33:12	4.720	838.98	27.51	
21:33:40	4.728	838.88	27.51	
21:37: 2	4.784	838.05	27.51	
21:37:31	4.792	837.86	27.51	
21:41:50	4.864	836.94	27.51	
21:42:19	4.872	836.85	27.51	
21:46: 9	4.936	835.92	27.51	
21:46:38	4.944	835.83	27.51	
21:50:28	5.008	834.90	27.51	
21:50:57	5.016	834.81	27.51	
21:54:48	5.080	833.88	27.51	
21:55:16	5.088	833.79	27.51	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
21:59: 7	5.152	832.96	27.51	
21:59:36	5.160	832.68	27.51	
22: 3:26	5.224	831.75	27.50	
22: 3:55	5.232	831.66	27.50	
22: 7:16	5.288	830.73	27.50	
22: 7:45	5.296	830.64	27.50	
22:11: 7	5.352	829.72	27.51	
22:11:36	5.360	829.63	27.51	
22:14:57	5.416	828.79	27.51	
22:15:26	5.424	828.61	27.51	
22:19:16	5.488	827.63	27.51	
22:19:45	5.496	827.50	27.51	
22:23: 7	5.552	826.66	27.51	
22:23:36	5.560	826.48	27.51	
22:26:57	5.616	825.74	27.51	
22:27:26	5.624	825.46	27.51	
22:31:16	5.688	824.63	27.51	
22:31:45	5.696	824.35	27.51	
22:35:36	5.760	823.52	27.52	
22:36: 4	5.768	823.25	27.52	
22:39:55	5.832	822.41	27.52	
22:40:24	5.840	822.04	27.52	
22:44:14	5.904	821.21	27.51	
22:44:43	5.912	821.02	27.51	
22:48:33	5.976	820.19	27.52	
22:49: 2	5.984	819.91	27.52	
22:52:52	6.048	819.08	27.52	
22:53:21	6.056	818.80	27.52	
22:57:40	6.128	817.86	27.52	
22:58: 9	6.136	817.69	27.52	
23: 2: 0	6.200	816.86	27.52	
23: 2:28	6.208	816.68	27.52	
23: 6:19	6.272	815.74	27.51	
23: 6:48	6.280	815.56	27.51	
23:11: 7	6.352	814.64	27.52	
23:11:36	6.360	814.55	27.52	
23:14:57	6.416	813.80	27.51	
23:15:26	6.424	813.52	27.51	
23:19:45	6.496	812.69	27.51	
23:20:14	6.504	812.51	27.51	
23:24: 4	6.568	811.67	27.51	
23:24:33	6.576	811.40	27.51	
23:29:21	6.656	810.48	27.52	
23:29:50	6.664	810.38	27.52	
23:33:40	6.728	809.46	27.52	
23:34: 9	6.736	809.36	27.52	
23:38:28	6.808	808.43	27.51	
23:38:57	6.816	808.25	27.51	
23:43:45	6.896	807.33	27.52	
23:44:14	6.904	807.14	27.52	

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REAL TIME	DELTA TIME HR'S	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
23:49: 2	6.984	806.31	27.52	
23:49:31	6.992	806.13	27.52	
23:53:50	7.064	805.20	27.52	
23:54:19	7.072	805.11	27.52	
23:58:38	7.144	804.18	27.52	
23:59: 7	7.152	804.09	27.52	
0: 3:55	7.232	803.26	27.52	
0: 4:24	7.240	803.07	27.52	
0: 9:12	7.320	802.15	27.52	
0: 9:40	7.328	802.06	27.52	
0:14:57	7.416	801.13	27.52	
0:15:26	7.424	800.94	27.52	
0:21:12	7.520	800.02	27.52	
0:21:40	7.528	799.74	27.52	
0:26:28	7.608	798.91	27.52	
0:26:57	7.616	798.72	27.52	
0:32:14	7.704	797.89	27.51	
0:32:43	7.712	797.70	27.51	
0:37: 2	7.784	796.96	27.51	
0:37:31	7.792	796.68	27.51	
0:43:16	7.888	795.76	27.51	
0:43:45	7.896	795.57	27.51	
0:49:31	7.992	794.65	27.51	
0:50: 0	8.000	794.46	27.51	
0:54:48	8.080	793.54	27.51	
0:55:16	8.088	793.45	27.51	
1: 0:33	8.176	792.52	27.51	
1: 1: 2	8.184	792.43	27.51	
1: 5:50	8.264	791.50	27.51	
1: 6:19	8.272	791.32	27.51	
1:11:36	8.360	790.39	27.51	
1:12: 4	8.368	790.30	27.51	
1:16:52	8.448	789.38	27.52	
1:17:21	8.456	789.20	27.52	
1:21:40	8.528	788.28	27.53	
1:22: 9	8.536	788.18	27.53	
1:27:26	8.624	787.26	27.53	
1:27:55	8.632	787.17	27.53	
1:31:45	8.696	786.34	27.53	
1:32:14	8.704	786.15	27.53	
1:37:31	8.792	785.24	27.55	
1:38: 0	8.800	785.05	27.55	
1:42:48	8.880	784.13	27.55	
1:43:16	8.888	784.04	27.55	
1:48:33	8.976	783.12	27.56	
1:49: 2	8.984	783.02	27.56	
1:53:21	9.056	782.19	27.56	
1:53:50	9.064	782.01	27.56	
1:59: 7	9.152	781.09	27.56	
1:59:36	9.160	780.99	27.56	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
2: 4:24	9.240	780.07	27.56	
2: 4:52	9.248	779.98	27.56	
2:10:38	9.344	779.05	27.56	
2:11: 7	9.352	778.95	27.56	
2:16:52	9.448	778.03	27.56	
2:17:21	9.456	777.84	27.56	
2:23: 7	9.552	777.01	27.55	
2:23:36	9.560	776.82	27.55	
2:29:50	9.664	775.90	27.55	
2:30:19	9.672	775.71	27.55	
2:36:33	9.776	774.79	27.55	
2:37: 2	9.784	774.60	27.55	
2:42:48	9.880	773.68	27.56	
2:43:16	9.888	773.59	27.56	
2:48:33	9.976	772.66	27.56	
2:49: 2	9.984	772.57	27.56	
2:55:16	10.088	771.65	27.56	
2:55:45	10.096	771.47	27.56	
3: 1: 2	10.184	770.63	27.56	
3: 1:31	10.192	770.45	27.56	
3: 7:45	10.296	769.62	27.56	
3: 8:14	10.304	769.43	27.56	
3:13:31	10.392	768.51	27.56	
3:14: 0	10.400	768.42	27.56	
3:20:43	10.512	767.49	27.56	
3:21:12	10.520	767.21	27.56	
3:27:55	10.632	766.38	27.56	
3:28:24	10.640	766.20	27.56	
3:34:38	10.744	765.27	27.56	
3:35: 7	10.752	765.18	27.56	
3:41:21	10.856	764.25	27.56	
3:41:50	10.864	764.16	27.56	
3:48: 4	10.968	763.23	27.55	
3:48:33	10.976	763.13	27.55	
3:55:16	11.088	762.21	27.55	
3:55:45	11.096	762.12	27.55	
4: 1:31	11.192	761.19	27.55	
4: 2: 0	11.200	761.10	27.55	
4: 8:14	11.304	760.27	27.54	
4: 8:43	11.312	760.08	27.54	
4:15:55	11.432	759.15	27.54	
4:16:24	11.440	759.06	27.54	
4:23:36	11.560	758.14	27.54	
4:24: 4	11.568	757.95	27.54	
4:31:16	11.688	757.02	27.53	
4:31:45	11.696	756.93	27.53	
4:38:28	11.808	756.10	27.53	
4:38:57	11.816	755.91	27.53	
4:46: 9	11.936	754.99	27.53	
4:46:38	11.944	754.89	27.53	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
4:53:50	12.064	753.97	27.54	
4:54:19	12.072	753.88	27.54	
5: 1: 2	12.184	752.95	27.53	
5: 1:31	12.192	752.86	27.53	
5: 8:43	12.312	751.93	27.53	
5: 9:12	12.320	751.75	27.53	
5:16:24	12.440	750.83	27.53	
5:16:52	12.448	750.64	27.53	
5:25: 2	12.584	749.80	27.53	
5:25:31	12.592	749.62	27.53	
5:32:43	12.712	748.69	27.53	
5:33:12	12.720	748.60	27.53	
5:39:26	12.824	747.77	27.53	
5:39:55	12.832	747.56	27.53	
5:46:38	12.944	746.66	27.53	
5:47: 7	12.952	746.57	27.53	
5:53:50	13.064	745.65	27.53	
5:54:19	13.072	745.56	27.53	
6: 1: 2	13.184	744.63	27.53	
6: 1:31	13.192	744.35	27.53	
6: 9:12	13.320	743.43	27.53	
6: 9:40	13.328	743.34	27.53	
6:15:26	13.424	742.42	27.55	
6:15:55	13.432	742.33	27.55	
6:22:38	13.544	741.41	27.55	
6:23: 7	13.552	741.31	27.55	
6:29:21	13.656	740.39	27.55	
6:29:50	13.664	740.30	27.55	
6:37: 2	13.784	739.37	27.55	
6:37:31	13.792	739.28	27.55	
6:44:14	13.904	738.35	27.55	
6:44:43	13.912	738.17	27.55	
6:52:24	14.040	737.25	27.55	
6:52:52	14.048	737.06	27.55	
7: 1: 2	14.184	736.13	27.54	
7: 1:31	14.192	735.95	27.54	
7: 8:43	14.312	735.03	27.55	
7: 9:12	14.320	734.93	27.55	
7:16:24	14.440	734.00	27.54	
7:16:52	14.448	733.91	27.54	
7:24:33	14.576	732.99	27.55	
7:25: 2	14.584	732.90	27.55	
7:32:43	14.712	731.98	27.56	
7:33:12	14.720	731.80	27.56	
7:39:55	14.832	731.06	27.56	
7:40:24	14.840	730.78	27.56	
7:48:33	14.976	729.86	27.57	
7:49: 2	14.984	729.77	27.57	
7:55:45	15.096	728.85	27.57	
7:56:14	15.104	728.76	27.57	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
8: 3:26	15.224	727.84	27.58	
8: 3:55	15.232	727.74	27.58	
8:11:36	15.360	726.82	27.58	
8:12: 4	15.368	726.73	27.58	
8:20:14	15.504	725.81	27.59	
8:20:43	15.512	725.72	27.59	
8:27:55	15.632	724.80	27.59	
8:28:24	15.640	724.71	27.59	
8:36:33	15.776	723.87	27.59	
8:37: 2	15.784	723.69	27.59	
8:45:40	15.928	722.85	27.59	
8:46: 9	15.936	722.67	27.59	
8:55:16	16.088	721.74	27.59	
8:55:45	16.096	721.65	27.59	
9: 2:28	16.208	720.82	27.59	
9: 2:57	16.216	720.63	27.59	
9:12: 4	16.368	719.71	27.59	
9:12:33	16.376	719.62	27.59	
9:21:12	16.520	718.69	27.58	
9:21:40	16.528	718.59	27.58	
9:30:19	16.672	717.68	27.59	Pressure declining at approx. 6.5 kpa/ hour.
9:30:48	16.680	717.58	27.59	
9:39:55	16.832	716.66	27.59	
9:40:24	16.840	716.57	27.59	
9:50: 0	17.000	715.65	27.59	
9:50:28	17.008	715.46	27.59	
9:59:36	17.160	714.63	27.59	
10: 0: 4	17.168	714.45	27.59	
10:13: 2	17.384	714.26	27.59	last measured pressure
10:13:31	17.392	731.18	27.59	↓ pulled plug / well pressurized with N ₂
10:14: 0	17.400	1159.88	27.59	
10:14:28	17.408	2402.84	27.59	
10:14:57	17.416	4065.26	27.59	
10:15:26	17.424	4065.26	27.59	
10:15:55	17.432	4044.44	27.59	
10:16:24	17.440	4030.65	27.59	
10:16:52	17.448	4017.54	27.59	
10:17:21	17.456	4004.25	27.59	
10:17:50	17.464	3992.01	27.59	
10:18:19	17.472	3981.03	27.59	
10:18:48	17.480	3972.07	27.59	
10:19:16	17.488	3962.82	27.59	
10:19:45	17.496	3962.82	27.72	
10:20:14	17.504	3938.97	27.72	
10:20:43	17.512	3933.00	27.72	
10:21:12	17.520	3924.34	27.72	
10:21:40	17.528	3923.67	27.72	
10:22: 9	17.536	3922.22	27.72	
10:22:38	17.544	3920.68	27.72	
10:23: 7	17.552	3918.95	27.72	

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
10:23:36	17.560	3917.31	27.72	
10:24: 4	17.568	3917.31	27.64	
10:24:33	17.576	3914.12	27.64	
10:25: 2	17.584	3912.58	27.64	
10:25:31	17.592	3910.85	27.64	
10:26: 0	17.600	3909.40	27.64	
10:26:28	17.608	3907.86	27.64	
10:26:57	17.616	3906.52	27.64	
10:27:26	17.624	3905.07	27.64	
10:27:55	17.632	3903.73	27.64	
10:28:24	17.640	3903.73	27.56	
10:28:52	17.648	3900.82	27.56	
10:29:21	17.656	3899.47	27.56	
10:29:50	17.664	3822.91	27.56	
10:30:19	17.672	3825.70	27.56	
10:31:45	17.696	3825.03	27.56	
10:32:14	17.704	3823.87	27.56	
10:32:43	17.712	3823.87	27.52	
10:33:12	17.720	3743.53	27.52	
10:33:40	17.728	3733.25	27.52	
10:34: 9	17.736	3714.63	27.52	
10:34:38	17.744	3698.59	27.52	
10:35: 7	17.752	3681.22	27.52	
10:35:36	17.760	3665.00	27.52	
10:36: 4	17.768	3649.17	27.52	
10:36:33	17.776	3634.31	27.52	
10:37: 2	17.784	3634.31	27.47	
10:37:31	17.792	3603.99	27.47	
10:38: 0	17.800	3590.19	27.47	
10:38:28	17.808	3578.59	27.47	
10:38:57	17.816	3568.72	27.47	
10:39:26	17.824	3560.86	27.47	
10:39:55	17.832	3553.96	27.47	
10:40:24	17.840	3547.06	27.47	
10:40:52	17.848	3540.07	27.47	
10:41:21	17.856	3540.07	27.44	
10:41:50	17.864	3534.24	27.44	
10:42:19	17.872	3544.46	27.44	
10:42:48	17.880	3530.76	27.44	
10:43:16	17.888	3524.44	27.44	
10:43:45	17.896	3518.50	27.44	
10:44:14	17.904	3505.58	27.44	
10:44:43	17.912	3499.35	27.44	
10:45:12	17.920	3491.21	27.44	
10:45:40	17.928	3491.21	27.43	
10:46: 9	17.936	3475.70	27.43	
10:46:38	17.944	3468.23	27.43	
10:47: 7	17.952	3460.58	27.43	
10:47:36	17.960	3452.92	27.43	
10:48: 4	17.968	3445.74	27.43	

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WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
10:48:33	17.976	3438.37	27.43	
10:49: 2	17.984	3430.15	27.43	
10:49:31	17.992	3422.78	27.43	
10:50: 0	18.000	3422.78	27.42	
10:50:28	18.006	3407.38	27.42	
10:50:57	18.016	3399.62	27.42	
10:51:26	18.024	3392.27	27.42	
10:51:55	18.032	3350.97	27.42	
10:52:24	18.040	3136.97	27.42	
10:52:52	18.048	2927.92	27.42	
10:53:21	18.056	2734.49	27.42	
10:53:50	18.064	2561.88	27.42	
10:54:19	18.072	2561.68	27.41	
10:54:48	18.080	2230.49	27.41	
10:55:16	18.088	2119.37	27.41	
10:55:45	18.096	1999.76	27.41	
10:56:14	18.104	1868.66	27.41	
10:56:43	18.112	1784.98	27.41	
10:57:12	18.120	1697.78	27.41	
10:57:40	18.128	1699.75	27.41	
10:58: 9	18.136	1696.10	27.41	
10:58:38	18.144	1696.10	27.32	
10:59: 7	18.152	1689.87	27.32	
10:59:36	18.160	1686.79	27.32	
11: 0: 4	18.168	1684.07	27.32	
11: 0:33	18.176	1681.64	27.32	
11: 1: 2	18.184	1679.11	27.32	
11: 3:55	18.232	1678.24	27.26	
11: 4:24	18.240	1678.05	27.26	
11: 7:16	18.288	1677.67	27.22	
11: 7:45	18.296	1649.02	27.22	
11: 8:14	18.304	1644.72	27.22	
11: 8:43	18.312	1638.74	27.22	
11: 9:12	18.320	1632.19	27.22	
11: 9:40	18.328	1626.11	27.22	
11:10: 9	18.336	1620.69	27.22	
11:10:38	18.344	1615.08	27.22	
11:11: 7	18.352	1609.75	27.22	
11:11:36	18.360	1609.75	27.20	
11:12: 4	18.368	1598.89	27.20	
11:12:33	18.376	1593.28	27.20	
11:13: 2	18.384	1587.68	27.20	
11:13:31	18.392	1582.72	27.20	
11:14: 0	18.400	1577.86	27.20	
11:14:28	18.408	1573.28	27.20	
11:14:57	18.416	1568.33	27.20	
11:15:26	18.424	1563.28	27.20	
11:15:55	18.432	1563.28	27.20	
11:16:24	18.440	1566.37	27.20	
11:16:52	18.448	1562.07	27.20	

Poort w/
P-recorders

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WELL NAME: CHEVRON HUME RIVER

PAGE NUMBER 13
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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
11:17:21	18.456	1555.71	27.20	
11:17:50	18.464	1550.58	27.20	
11:18:19	18.472	1545.91	27.20	
11:18:48	18.480	1541.51	27.20	
11:19:16	18.488	1536.84	27.20	
11:19:45	18.496	1519.66	27.20	
11:20:43	18.512	1519.20	27.21	
11:21:12	18.520	1509.95	27.21	
11:21:40	18.528	1449.37	27.21	
11:22: 9	18.536	1394.25	27.21	
11:22:38	18.544	1306.10	27.21	
11:23: 7	18.552	1180.37	27.21	
11:23:36	18.560	1033.32	27.21	
11:24: 4	18.568	949.75	27.21	
11:24:33	18.576	949.75	26.24	
11:25: 2	18.584	947.63	26.24	
11:25:31	18.592	940.59	26.24	
11:26: 0	18.600	931.04	26.24	
11:26:28	18.608	921.66	26.24	
11:26:57	18.616	910.55	26.24	
11:27:26	18.624	901.10	26.24	
11:27:55	18.632	891.74	26.24	
11:28:24	18.640	887.85	26.24	
11:28:52	18.648	887.85	22.37	
11:29:21	18.656	872.27	22.37	
11:29:50	18.664	864.30	22.37	
11:30:19	18.672	864.40	22.37	
11:30:48	18.680	866.43	22.37	
11:31:16	18.688	861.99	22.37	
11:31:45	18.696	858.28	22.37	
11:32:14	18.704	854.29	22.37	
11:32:43	18.712	846.14	22.37	
11:33:12	18.720	846.14	15.97	
11:33:40	18.728	830.19	15.97	
11:34: 9	18.736	826.67	15.97	
11:34:38	18.744	822.96	15.97	
11:35: 7	18.752	69.21	15.97	
11:35:36	18.760	83.17	15.97	
11:36: 4	18.768	86.29	15.97	
11:36:33	18.776	91.53	15.97	
11:37:31	18.792	91.62	8.62	
11:38: 0	18.800	92.82	8.62	
11:38:28	18.808	96.87	8.62	
11:38:57	18.816	100.82	8.62	
11:39:26	18.824	105.24	8.62	
11:39:55	18.832	106.25	8.62	
11:40:24	18.840	108.00	8.62	
11:40:52	18.848	107.44	8.62	
11:41:21	18.856	106.34	8.62	
11:41:50	18.864	106.34	2.50	

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WELL NAME: CHEVRON HUME RIVER

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REAL TIME	DELTA TIME HRS	PRESSURE kPaA	TEMPERATURE °C	COMMENTS
=====	=====	=====	=====	=====
11:42:19	18.872	101.96	2.50	
11:42:48	18.880	101.41	2.50	
11:43:16	18.888	93.77	2.50	
11:43:45	18.896	95.80	2.50	
11:44:14	18.904	97.82	2.50	
11:44:43	18.912	107.03	2.50	
11:45:12	18.920	108.69	2.50	
11:45:40	18.928	107.67	2.50	
11:46: 9	18.936	107.67	-1.23	
11:46:38	18.944	110.41	-1.23	
11:47: 7	18.952	103.32	-1.23	
11:47:36	18.960	108.29	-1.23	
16:50: 0	0.000	0.00	-1.23	

APPENDIX 15

STIMULATION TREATING REPORT

IT (IN)	TIME	RATE m ³ /min	VOLUME PUMPED IN m ³			PRESSURE MPa		REMARKS
			STAGE	TOTAL	IN FORMA	LIHNG	EASING	
①	1515		110 scm ³			15 mpa	1 mpa	Displace ctu of Methanol
				110 scm ³				with N ²
②	1526		500 scm ³			16 mpa	16 mpa	Pressure test Pipe Rams
③	1533					18 mpa	18 mpa	Pressure test Blind Rams
④	1542					18 mpa	18 mpa	Pressure test Stuffing Box
⑤	1544					0	0	Break off injector And
						0	0	Replace "O" Ring on Union
⑥	1551						18 mpa	Pressure test Stuffing Box
⑦	1553			610 scm ³		0	2 mpa	Block off pressure and
								Open well head.
⑧	1600						2 mpa	Start Ctu to 490m
⑨	1621						2 mpa	Ctu at 490 m
⑩	1627		1 m ³			2 mpa	1 mpa	Circulate 1 m ³ of Acid
⑪	1635			1 m ³		20 mpa	1 mpa	Acid pumped.
⑫	1637		110 scm ³			2 mpa	1 mpa	Pump N ² to displace and
								Wash Pass Perf's
⑬	1647			720 scm ³		12 mpa	1 mpa	Stop N ²
⑭	1650		1 m ³					Circulate 1 m ³ of Acid
⑮	1657			2 m ³				Stop Acid
⑯	1702		60 scm ³					Start N ²
⑰	1704	30 scm ³		780 scm ³		10 mpa	1 mpa	Stopped N ²
⑱	1707		60 scm ³			3 mpa	2 mpa	Start N ²
⑲	1709	30 scm ³		840 scm ³		2 mpa	2 mpa	Stopped N ² Acid washed
								By Perf's

RT ION	TIME	RATE m ³ /min	VOLUME PUMPED IN m ³			PRESSURE MPa		REMARKS
			STAGE	TOTAL	IN FORMATION	TUBING	CASING	
20	1714		180scm			2mpa	2mpa	Blowdown well Through ctu
21	1719	30scm		1020scm		14mpa	2mpa	Stopped N ² to Surface
22	1722							Roll ctu to Surface.
23	1735							ctu at Surface.
24	1738	116 m ³ 24scm	2500 m ³ 282scm				1mpa	Start Nitrofied Acid
25	1750	125 m ³ 38scm	1.25 m ³ 190scm	4000 m ³ 1308scm			5mpa	Increased Rate.
26	1755	135 m ³ 53scm	1.75 m ³ 245scm	5.25 1498scm			5mpa	Increased Rate.
27	1800	15 m ³ 75scm	2.0 m ³ 300scm	7.0 m ³ 1763scm			5mpa	Increased Rate.
28	1804			9.0 m ³ 2063scm			6mpa	Stopped Acid and displaced with N ²
29	1806	75scm	180scm	7.0 m ³ 2243scm	1134scm		6mpa	Stopped N ²
30	1806						5mpa	ISIP
31	1821						4mpa	After 15 minutes Flow well to Rig tank
32	1840						1mpa	Start ctu in hole.
33	1848						1mpa	ctu on bottom.
34	1850		5 510scm				1mpa 2mpa	Started Pumping N ²
35	1907	30scm	140scm	2753scm		20mpa	2mpa	decreased N ² to 20scm.
36	1915	20scm	75scm	2893scm		15mpa	1mpa	decreased N ² to 15scm
37	1920	10scm	40scm	2968scm		10mpa	1mpa	decreased N ² to 10scm
38	1924			3008scm		6mpa	1mpa	Stopped N ² to see if well made fluid.
39	1932		75scm			1mpa	1mpa	Started N ² at 15scm
40	1937	15scm	90scm	3083scm		8mpa	1mpa	Increased N ² to 30scm

TREATING LOG

INVOICE No. 091850

[illegible]

Chevron Hume River I66
Well Abandonment Schematic

Elevations

WB 95.3 m
bund 89.7 m

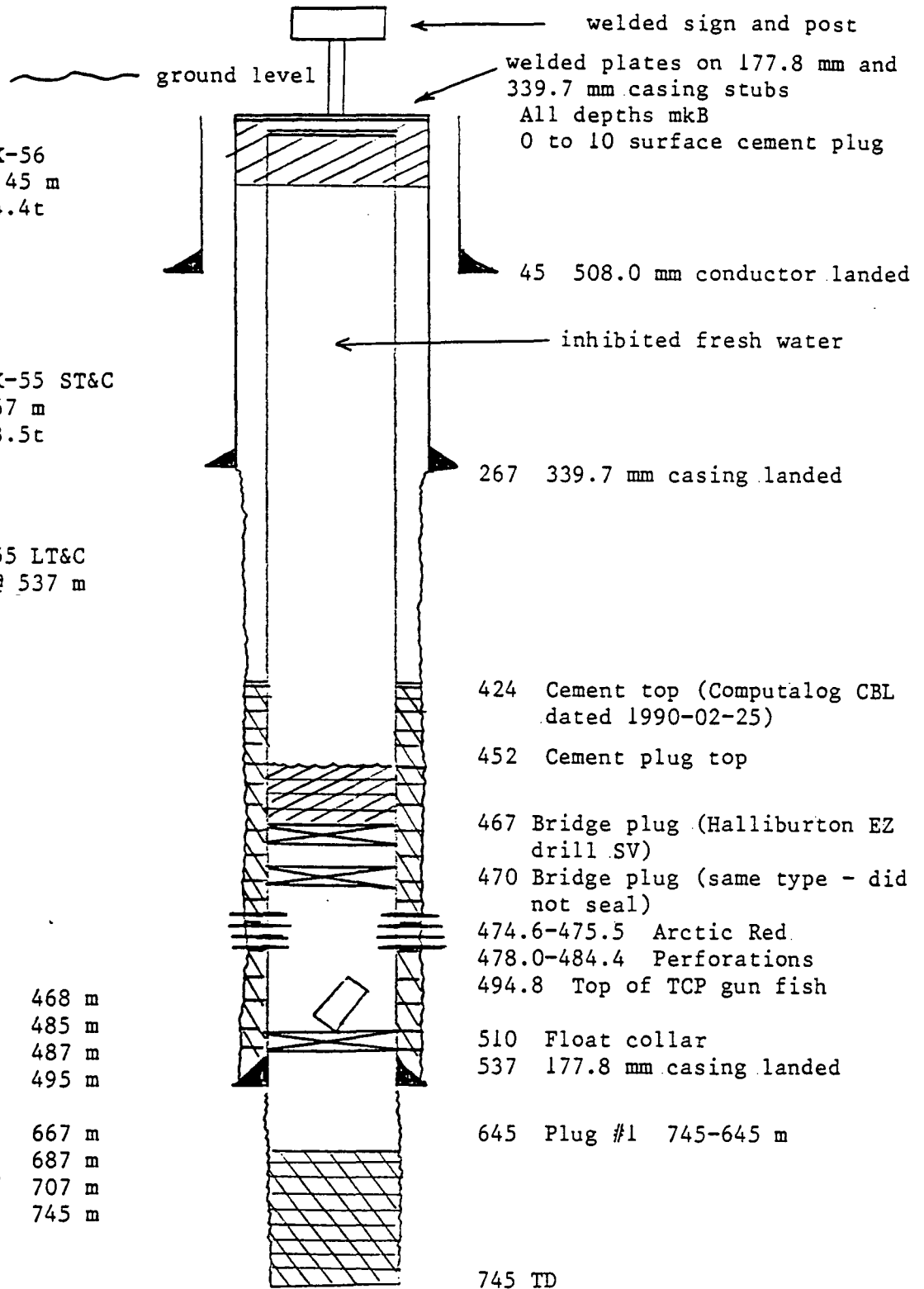
508.0 mm, 139.9 kg/m, X-56
Conductor Casing set @ 45 m
Cemented to Surface (24.4t
Permafrost)

339.7 mm, 101.2 kg/m, K-55 ST&C
Surface Casing Set @ 267 m
Cemented to Surface (43.5t
Permafrost)

177.8 mm 34.3 kg/m, K-55 LT&C
Production Casing Set @ 537 m
(30.2t Class "G")

Formation Tops

Gilmore Lake Sand	
Arctic Red Sandstone	468 m
Gilmore Lake Shale	485 m
Gilmore Lake Coal	487 m
Imperial	495 m
Canol	667 m
Hare Indian Ramp	687 m
Hare Indian Shale	707 m
TD	745 m



APPENDIX 16

WELL ABANDONMENT SCHEMATIC