HOME

KAKISA

RIVER J-42

9211-H5-1-2

Canada Oil and Gas Lands Administration

Administration du pétrole et du gaz des terres du Canada

D.A. 1122
E.A. # 173

Nova Scotia	☐	West Coast	☐	Exploratory	☒
Newfoundland	☐	Northern	☒	Development	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Delineation	☐
				Service	☐

AUTHORITY TO DRILL A WELL

APPLICATION

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

Well Name in Full: Home Kakisa River J-42

Operator: Home Oil Company Limited

Drilling Program No.: N/A

Contractor: Hi-Tower Drilling Limited

Permit or Lease No.: N/A

Drilling Rig or Unit: Rig # 17

Estimated Well Cost: 1,084,000

Location-Unit: J Section: 42 Grid Area: 60-10-118-30

Coordinates: Lat.: 60°01'43.147" N Long.: 118°38'05.604" W

Area: West Cameron Hills

Field/Pool: N/A

Elevation-~~RT~~KB: 626 m (ASL) ~~Ground~~ Ground 620 m (ASL)

Approx. Spud Date: January 20, 1984

Estimated Days on Location: 30 days

Anticipated Total Depth: 1736 m

Target Horizon(s): Upper Keg River 1557 m
Sulphur Point 1505 m
Slave Point 1444 m

UWI 300J426010118300

EVALUATION PROGRAM

Ten-metre sample intervals: Surface to surface casing T.D.

Five-metre sample intervals: Surface casing (435 m) to T.D.

Canned sample intervals: Surface casing (435 m) to T.D.

Conventional cores at: Sulphur and/or Slave Point, and Upper Keg River

Logs and Tests: DILL - SP Sonic - GR FDC-CNL-GR-CAL, Microlog
4 Possible DST's - Keg River, Slave Point, Sulphur Point

CASING AND CEMENTING PROGRAM

O.D.	Weight:	Grade:	Setting Depth ~~Setting Depth~~	Cementing Program (Volumes):
339.7mm	81.3 kg/m	JERW	110	110 m - surface Class "G" (10.7 m^3)
244.5	53.6	K55	435	435 m - 90 m Class "G" (15.1 m^3)
177.8	34.2	K55	1550	1550 m - 435 m Class "G" (20.7 m^3)
114	17.3	K55	1736	1736 m - 1520 m Class "G" (3.1 m^3)

NOTE: 177.8 mm to 1736 m if severe lost circulation is not encountered.

B.O.P. Equipment: Manifold 21 MPa c/w Hydraulic choke and HCR Surface Hole: 14 MPa Divertor/Spool/Casing head

Intermediate and Main hole: 21 MPa Annular/Blind/Pipe/Spool/Pipe

Other Information:

Signed: G.W. Nicholl Title: G.W. Nicholl, Drilling Engineer

Date: 83-12-19 Company: Home Oil Company Limited

APPROVAL

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

Signed: M.S. Thomas
Engineering Branch

Date: 18 January 84

File: 9211-H5-1-2

Department of Energy Mines and Resources
Ministère de l'Énergie des Mines et des Ressources

Department of Indian Affairs and Northern Development
Ministère des Affaires indiennes et du Nord Canadien

Canada

FINAL WELL REPORT

HOME KAKISA RIVER J-42

84-04-23

M.G. Wilcox P. Eng.
Chief Drilling Engineer

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APPENDICES

FINAL WELL REPORT
HOME KAKISA RIVER J-42

SUMMARY:

Home Kakisa River J-42 was drilled to a total depth of 1750 m to test the Slave Point, Sulphur Point and Upper Keg River Formations of the Devonian Age. Home Oil Company Limited contracted Hi-tower Drilling Rig # 17 to drill the well.

The well was spudded 84-02-09 at 00:45 hours and reached a total depth of 1750 m on 84-03-03. There were no problems drilling. This operation included the setting of 339.7 mm conductor casing to 130 m, and 244.5 mm surface casing to 438 m.

CORES:

Core # 1	1458.0 m - 1467.0 m	Slave Point	Full Recovery
Core # 2	1467.8 m - 1479.6 m	Slave Point	Full Recovery

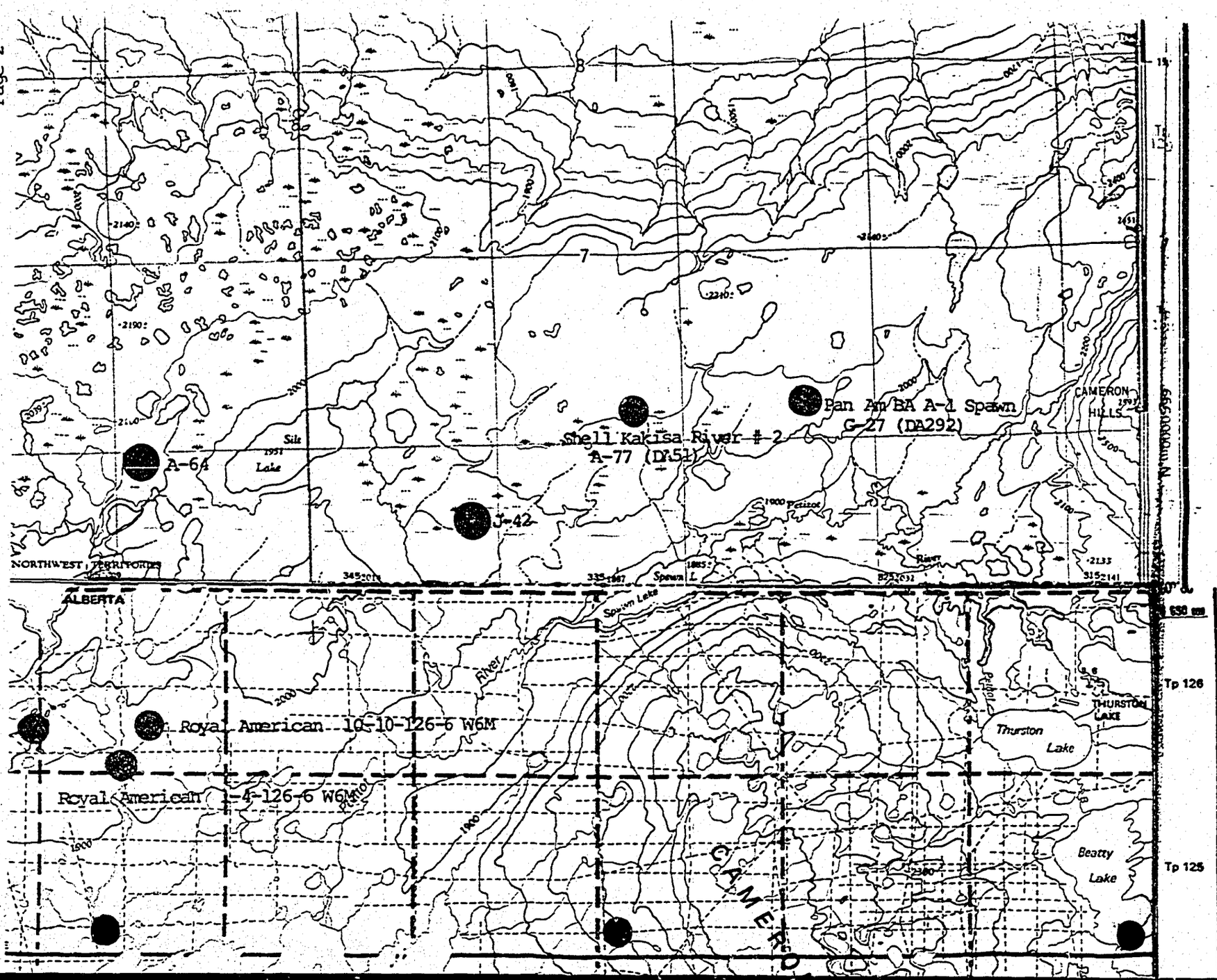
DRILLSTEM TESTS:

DST # 1	1450 m - 1479.6 m	Slave Point	N.G.T.S., 90 m mud
DST # 2	1527 m - 1555 m	Sulphur Point	N.G.T.S., 70 m mud, 60 m oil stained mud
DST # 3	1719 m - 1726 m	Basal Red Beds	Misrun
DST # 4	1719 m - 1726 m	Basal Red Beds	N.G.T.S., 2 m mud
DST # 5	1623 m - 1634 m	Lower Keg River	N.G.T.S., 1197 m Salt Water
DST # 6	1589 m - 1593 m	Upper Keg River	N.G.T.S., 200 m salt water
DST # 7	1526 m - 1531 m	Sulphur Point	N.G.T.S., 65 m slight oil stained mud, 91 m salt water
DST # 8	1516 m - 1521 m	Sulphur Point	N.G.T.S., 1.5 m mud
DST # 9	1447 m - 1453 m	Slave Point	N.G.T.S., 90 m mud

LOGS:

130 m - 438 m	Dual, Sonic
438 m - 1750 m	Dual Sonic, Dip, CNL Microlog, Velocity survey. Wave form.

Home Oil Company Limited decided to abandon the well on the basis of log, core and DST evaluation. The well was plugged and the rig was released 84-03-12 at 24:00 hours.



GRID ZONE DESIGNATION	100,000 M. SQUARE IDENTIFICATION
11V	LT MT / LS MS — 670 — 40

TO GIVE A REFERENCE TO NEAREST 1000 METRES

EXAMPLE: STREAM JUNCTION

SQUARE: Read letters of 100,000 m. square	LT
EASTING: Read number on grid line immediately to left of point. Estimate tenths of a square from this line eastward to point.	8 1 / 81
NORTHING: Read number on grid line immediately below point. Estimate tenths of a square from this line northward to point.	2 2 / 22
MILITARY GRID REFERENCE (to nearest 1,000 metres)	LT8122

If reporting beyond 18° in any direction, prefix Grid Zone Designation as: 11VLT8122

TEN THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 11

Miami Amoco Kakisa River I-52
(DA741)

GENERAL DATA

NAME : Home Kakisa River J-42

LOCATION : Latitude 60° 01' 43.147" UTM 665521.76 m N
Longitude 118° 38' 05.604" UTM 408891.13 m E

Taken from Midwest survey dated 84-01-05.

UNIQUE WELL IDENTIFIER: ~~Drilling Authority # 1135~~.

OPERATOR : Home Oil Company Limited
2300 Home Oil Tower
324 - 8th Avenue S.W.
Calgary, Alberta
T2P 2Z5

CONTRACTOR : Hi Tower Drilling Services Limited
Division of Bow Valley Resources
Box 6650, Postal Station "D"
1600 - 321 Sixth Avenue S.W.
Calgary, Alberta
T2P 2V8

DRILLING UNIT : Hi Tower Rig # 17
Conventional Land Rig with 2200 m depth rating.

SUMMARY OF DRILLING OPERATIONS

(1) K.B. Elevation 619.76 m
Ground Elevation 615.01 m, 0.30 m Fill
Actual Ground Elevation 615.31 m

(2) T.D. 1750 m
Logged 130 - 438 m Dual Sonic
438 - 1750 m DILL, Sonic, DIP, CNL, Microlog, Velocity Survey, Wave form.

(3) Spudded: 1984-02-10-00:45 hours

(4) Drilling Completed: 1984-03-03

(5) Rig Released: 1984-03-12

(6) Well Status: Abandoned

(7) Hole Sizes and Depths

Table 1	Size	Interval
Conductor	445 mm	0 - 130 m
Surface	311 mm	130 - 438 m
Main	222 mm	438 - 1750 m T.D.

(8) Casing and Cementing Record: See casing and cementing details

(9) Sidetracked Hole: None.

(10) Drilling Fluid: Gel Chemical System.

TABLE 1 Drilling Fluid Properties

Hole Size	Density (kg/m^3)		Viscosity (s/L)		pH	
	Average	Range	Average	Range	Average	Range
Conductor 444.5 mm 0 - 130 m	1100	1080-1120	64.5	59-70	9.5	9.5
Surface 311 mm 130-482 m	1117	1100-1130	58.3	52-68	9.5	9.5
Main 222 mm 482-1833 m	1108	1060-1160	52	38-65	9.7	9.3 - 10.5

(11) Fishing Operations: None.

(12) Well Kicks: None.

(13) Formation Leak Off Tests

Depth : 446 m
Fluid Density : 1000 kg/m^3
Applied Pressure: 5500 kPa
EMD : 2273 kg/m^3
Casing Depth : 438 m

(14) Time Distribution: See Table 2

(15) Deviation Survey: See Table 3

(16) Abandonment Plugs:

#1	1750 - 1570 m, 11.3t	0:1:0 "G" + 0.2% HR4	Not Felt
#2	1550 - 1420 m, 8.5t	0:1:0 "G" + 0.2% HR4	Felt @ 1402 m
#3	860 - 800 m, 4.6t	0:1:0 "G" 0.2% HR4	Felt @ 792 m
#4	465 - 400 m, 5.5t	0:1:0 "G"	Felt @ 375 m

NOTE: Drilling fluid between plugs as described in (10) this section.

TABLE 2

TIME DISTRIBUTION

Days from Spud	Drilling	Tripping	Rig Service & BOP's	Reaming	Slip & Cut Line	Survey	Handle Tools	Circulating	Clean to Bottom	Condition Mud	Repairs	Coring	DST's	Fishing	Run Casing	W.O.C.	Logging	Other
0			0.5															
0	16.25		0.75	5.25		0.75		0.5										16.5 Rig up, 7.0 drill mouse hole, 0.5 rig up
1	5.0	2.25	0.75	1.0		0.5		1.25							6.0	4.25		1.5 cementing,
2	5.25	1.0	0.75			0.75										6.0		1.5 circulate casing 9.0 nipple up
3	22.0		0.75			1.25												1.25 drill cement
4	8.25	4.5	0.75			0.75		2.0							3.5		4.25	
5		0.75	0.25					1.0							1.75	8.0		.75 cement casing 9.75 Nipple up
6	17.75	1.0	0.75			0.25												1.75 Pressure test 2.0 pressure test 1.5 drill cement
7	19.5	2.5	0.75		1.0	0.25												0.75 leak off test
8	23.0		0.75			0.25												
9	23.0		0.75			0.25												
10	22.5		0.75			0.75												
11	22.75		0.75			0.5												
12	22.75		0.75			0.5												
13	22.75		0.75			0.5												
14	9.75	5.75	0.75			0.75	1.75	2.5										
15		0.75	0.25		0.5			0.5	0.5			21.5						2.75 circulate sample
16		9.25	0.75				3.5	0.25	1.5	0.5		8.25						
17		4.25	0.75				3.0	0.5				8.0	6.5					
18	12.25	7.0	0.75		1.0	0.5	2.0	0.5										1.0 recover core
19	5.25	5.0	0.75			0.5	1.5						8.0					2.0 circ. sample,
20	15.75	4.0	0.75				1.75		0.5									1.0 wait on orders
21	18.0	3.75	0.5		1.0	0.25			0.5									1.25 circulate sample
22	23.0		0.75			0.25												
23	11.0	3.25	0.75			0.25	2.5										6.25	
24																	24.0	
25		6.25	0.5				2.5	3.5								4.0	3.0	4.25 pressure test
26		8.5	0.75				7.5						7.25					
27			0.75										23.25					
28			0.75		1.0								22.25					
29			0.75				4.5						18.75					
30		6.75	0.75				2.5											
31		0.5	0.5													10.75		6.0 WOO, 8.0 WOC 10.25 Wait on cement
32																13.75		2.0 lay down pipe 3.25 lay down pipe, 7.0 tear out rig
TOTAL	325.75	77.0	22.0	6.25	4.50	9.75	33.0	12.50	3.0	0.5	0.00	37.75	86.00	0.00	11.25	46.75	37.50	102.50

TOTAL 816

WELL NAME AND LOCATION Home Kakisa River J-42

DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION
43	3/4°				
71	3/4°				
90	1/4°				
119	3/4°				
130	1/4°				
167	1 1/4°				
186	1/2°				
214	1 1/4°				
233	1/2°				
261	1 1/2°				
290	7/8°				
328	1°				
365	7/8°				
394	1 7/8°				
438	1 1/2°				
470	1°				
564	1/8°				
680	1°				
775	1/2°				
889	1°				
955	1/4°				
1031	1/2°				
1107	1/2°				
1183	1°				
1268	2°				
1287	2°				
1315	1/8°				
1353	1/8°				
1401	1°				
1449	1 1/4°				
1496	1 1/8°				
1544	7/8°				
1620	7/8°				
1705	1/4°				
1750	1° T.D.				

CASING DETAIL

Date: 84-02-10

Well	Total Depth (Driller)
Home Kakisa River J-42	130.00

Hole Size	Casing Size	String
444.5 mm	339.7 mm	Conductor casing

Casing String Description (Include Float Equip., Stage Collars, Etc.)

No. Of Joints	Weight kg/m	Grade	Threads	Length/m	From	To
1	Shoe	A.P.I.	End	.43	129.00	128.57
1	71.42	H .40	End	13.00	128.57	115.57
1	Collar	A.P.I.	End	.50	115.57	115.07
10	71.42	H .40	End	123.90	115.07	surface

11 Total Joints

137.83 Total String Length

Total Depth With Casing	Thread Make Up + -	KB - Top CSG
129.00	.15 m	+8.83

Centralizers	Qty.	Type	Spacing
Scratchers	Qty.	Type	Spacing

Remarks

Severe gravel and boulders encountered did not run any centralizers.

Drilling Supervisor: Dan Kamieniecki

Date: 84-02-10

home oil CEMENTING DETAIL

WELL NAME: Home Kakisa River

WELL LOCATION: J-42

CEMENT INTERVAL	1ST STAGE: 130 M TO 0 M	TOP FORMATION COVERED	Surface • Ground M
	2ND STAGE: M TO M		0 M
SLURRY VOLUME (TOTAL/GAUGE)	1ST STAGE: 11.62 / 7.75 M^3	EXCESS: 50 %	STAGE TOOL: 0 M
	2ND STAGE: / M^3		

1ST STAGE FILLER	TYPE	YIELD	M^3/TONNE
	SLURRY VOLUME M^3	DRY VOLUME	TONNE
1ST STAGE TAIL-IN	TYPE: 0:1:0 & 2% $CaCl_2$	YIELD: .76	M /TONNE
	SLURRY VOLUME: 11.62 M^3	DRY VOLUME: 15.25	TONNE
2ND STAGE	TYPE	YIELD	M^3/TONNE
	SLURRY VOLUME M^3	DRY VOLUME	TONNE

PREFLUSH: $3m^3$ fresh water

1ST STAGE MIXING FILLER	START	END	TOTAL	RATE M^3/MIN
	SLURRY WEIGHT PROGRAM KG/M^3		ACTUAL (AVG)	KG/M^3
1ST STAGE MIXING TAIL-IN	START: 18:45	END: 19:05	TOTAL: 20	RATE: .59 M^3/MIN
	SLURRY WEIGHT PROGRAM: 1895 KG/M^3		ACTUAL (AVG): 1895	KG/M^3
2ND STAGE	START	END	TOTAL	RATE M^3/MIN
	SLURRY WEIGHT PROGRAM KG/M^3		ACTUAL (AVG)	KG/M^3

DISPLACE START: 19:25	PLUG DOWN: 19:34	TIME: 9 (MIN)	RATE: 1.13 M^3/MIN
PRESSURES INITIAL: 0 KPA	FINAL: 2000 KPA	BUMP: 2500 KPA	FLOAT HELD: Yes
BOTTOM PLUG: /	TOP PLUG: Wood	CEMENT HEAD: Suadge	CASING RECIP.: 5m while mix

CENTRALIZERS: 0 N/A

REMARKS:

808 12/82

Dan Kamieniecke
DRILLING SUPERVISOR
84-02-10
DATE

CASING DETAIL

Date: 84-02-14

Well	Total Depth (Driller)
Home Kakisa River J-42	438.50

Hole Size	Casing Size	String
311 mm	244.5 mm	Surface

Casing String Description (Include Float Equip., Stage Collars, Etc.)

No. Of Joints	Weight-kg/m	Grade	Thread	Length/m	From	To
1	Shoe	A.P.I	End	.55	437.86	437.31
1	53.57	K .55	End	13.65	437.31	423.66
1	Collar	A.P.I.	End	.46	423.66	423.20
37	53.57	K .55	End	424.66	423.20	Surface

Total Joints

439.32 Total String Length

Total Depth With Casing	Thread Make Up + −	KB - Top CSG
437.86	±.35 m	

	Qty.	Type	Spacing
Centralizers			
Scratchers			

Remarks

Drilling Supervisor: Dan Kamieniecki

Date: 84-02-14

home oil CEMENTING DETAIL

WELL NAME: Home Kakisa River

WELL LOCATION: J-42

CEMENT INTERVAL	1ST STAGE 428 M TO surface M 2ND STAGE M TO M	TOP FORMATION COVERED	Surface • Ground M • M
SLURRY VOLUME (TOTAL/GAUGE)	1ST STAGE 20.32 / 1355 M^3 2ND STAGE / M^3	EXCESS 50 %	STAGE TOOL • M

1ST STAGE	FILLER	TYPE	YIELD	M^3/TONNE
		SLURRY VOLUME M^3	DRY VOLUME TONNE	
	TAIL-IN	TYPE 0:1:D"G" & 1% $CaCl_2$	YIELD 76 M /TONNE	
		SLURRY VOLUME 20.32 M^3	DRY VOLUME 26.75 TONNE	
2ND STAGE		TYPE	YIELD M^3/TONNE	
		SLURRY VOLUME M^3	DRY VOLUME TONNE	

PREFLUSH 3m3 fresh water.

1ST STAGE	MIXING FILLER	START	END	TOTAL	RATE M^3/MIN
		SLURRY WEIGHT PROGRAM KG/M^3		ACTUAL (AVG) KG/M^3	
	MIXING TAIL-IN	START	END	TOTAL	RATE M^3/MIN
		SLURRY WEIGHT PROGRAM KG/M^3		ACTUAL (AVG) KG/M^3	
2ND STAGE		START	END	TOTAL	RATE M^3/MIN
		SLURRY WEIGHT PROGRAM KG/M^3		ACTUAL (AVG) KG/M^3	

DISPLACE START	PLUG DOWN	TIME (MIN)	RATE M^3/MIN
PRESSURES INITIAL KPA	FINAL KPA	BUMP KPA	FLOAT HELD
BOTTOM PLUG rubber	TOP PLUG rubber	CEMENT HEAD continuous	CASING RECIP. 7m while mixing

CENTRALIZERS • 430, 411m

REMARKS: $7m^3$ good cement returns

808 12/82

Dan Kameniecki
DRILLING SUPERVISOR

84-02-14
DATE

GEOLOGY

1. DRILL CUTTINGS

Samples taken every 5 m from 435 m to T.D. No samples were caught from 1458.8 - 1479.6 m (cored interval). Samples stored at the Institute of Sedimentary and Petroleum Geology, Calgary.

2. CORES

Core Number	Interval	Recovery
1	1458.8 - 1467.8 m	8.3 m
2	1467.8 - 1479.6 m	11.5 m

Cores stored at the Institute of Sedimentary and Petroleum Geology, Calgary.

3. LITHOLOGY

See Attached.

4. STRATIGRAPHIC COLUMN

See Attached.

Home Kakisa River J-42

LITHOLOGY SUMMARY

Depth (m)	%	Sample Description
435-440		Shale dark to medium grey, trace fish scales and white specks, trace pyrite.
440-445	80	Shale same as above.
	20	Limestone white to cream white, microcrystalline to very finely crystalline, slight chalky.
445-450	60	Shale same as above.
	40	Limestone white to cream white, very finely crystalline, slight chalky, trace cherty.
448		Wabamun
450-460		Limestone same as above; slightly sandy.
460-485		Limestone white, micro- to crypto-crystalline, minor very finely crystalline, slight chalky to micritic; trace thin fractures.
485-510		Limestone white, micro- to very finely crystalline, minor chalky to micritic, slightly sandy.
510-550		Limestone white, micro- to crypto-crystalline, micritic, trace thin fractures, slight sparry calcite veinlets.
550-575		Limestone white, microcrystalline, minor cryptocrystalline, micritic, trace oolite and pelletoidal, trace sparry calcite.
575-595		Limestone white to cream tan, micro- to very finely crystalline, minor chalky; buff grey and argillaceous in part; trace pyrite.
595-650		Limestone light tan, in part white, crypto- to micro-crystalline, minor very finely crystalline, micritic in part; slight bioclastic fragments; trace pyrite.
650-665		Limestone tan to white, cryptocrystalline, minor microcrystalline, micritic, trace bioclastic fragments.
665-680		Limestone buff tan to buff white, micro- to very finely crystalline, trace pellets, trace pyrite.
680-690		Limestone buff white, minor buff tan and buff grey, very fine to finely crystalline, micritic, slightly argillaceous and silty; trace bioclastic fragments and pyrite.

Depth (m)	%	Sample Description
690-704	60	Limestone buff white to tan, slight brown grey, crypto- to micro-crystalline, micritic, trace bioclastic fragments.
	40	Siltstone buff grey to buff white, calcareous, minor sandy.
704		Kakisa
704-730		Limestone tan to light brown, minor buff white, crypto- to micro-crystalline, slight very finely crystalline, minor micritic; trace biocalastics; with minor stringers of siltstone, buff grey, calcareous, grading to very fine grained calcareous sandstone.
730-770		Limestone buff tan, minor buff white, micro- to very finely crystalline, minor cryptocrystalline, micritic to chalky in part, trace bioclastics; slightly argillaceous and silty near bottom.
770-795	70	Siltstone buff grey, calcareous, slightly argillaceous, grading to very fine grained calcareous sandstone in minor part.
	30	Limestone same as above.
795-820	80	Siltstone same as above.
	20	Limestone same as above.
820-825	75	Sandstone light to buff grey, very fine grained, calcareous, minor argillaceous; with minor calcareous siltstone; trace pyrite.
	15	Limestone same as above.
	10	Shale medium grey, subfissile, slightly calcareous.
825-830	60	Siltstone buff grey, calcareous, slightly argillaceous, minor very fine grained sandstone, calcareous, slight argillaceous.
	40	Limestone buff white, minor light tan, microcrystalline, minor cryptocrystalline; trace coarse bioclastic fragments.
826		Jean Marie
830-835	60	Siltstone same as above; slight shale, medium grey, subfissile.
	40	Limestone buff white to tan, microcrystalline, minor very finely crystalline, trace bioclastic fragments.

Depth (m)	%	Sample Description
835-845	40	Siltstone same as above.
	40	Limestone same as above.
	20	Shale same as above.
836		Fort Simpson
845-850		No sample
850-870	50	Siltstone same as above.
	25	Shale medium to green grey, subfissile, calcareous.
	25	Limestone same as above.
870-900	60	Siltstone buff grey, calcareous, slight sandy; with minor buff white silty limestone in places.
	40	Shale dark grey, minor brown grey to green grey, subfissile, slight marly.
900-920	75	Siltstone light green grey to buff grey, slight calcareous, slight argillaceous and sandy.
	25	Shale medium to dark grey, minor brown grey, subfissile, slightly calcareous and marly.
920-925	50	Shale brown grey, minor medium and green grey, slight micromicaceous and calcareous.
	50	Siltstone buff grey to buff white, sandy, in part calcareous, grading to very fine grained sandstone in part.
925-930	70	Shale same as above.
	30	Siltstone same as above.
930-940		Shale brown grey to red brown, subfissile, slightly calcareous and micromicaceous; minor stringers buff grey calcareous-argillaceous siltstone and buff grey argillaceous limestone.
940-950	50	Shale same as above.
	50	Siltstone same as above.
950-955	75	Shale red brown to dark brown, minor green grey and medium grey, subfissile, slightly calcareous.
	25	Siltstone same as above.
955-960	50	Shale same as above.
	50	Siltstone same as above.
960-990	75	Shale same as above.
	25	Siltstone same as above; minor buff grey argillaceous limestone in lower part.
990-1025	70	Shale same as above.
	30	Siltstone buff grey, calcareous, slight sandy; with minor buff white to grey argillaceous to silty limestone.

Depth (m)	%	Sample Description
1025-1035	50	Shale same as above.
	50	Siltstone same as above.
1035-1045	30	Shale green grey, minor red brown, subfissile, slightly calcareous.
	70	Siltstone buff grey to buff white, calcareous, slight sandy; trace crinoid.
1045-1075	50	Shale as above.
	50	Siltstone as above.
1075-1095	75	Shale same as above.
	25	Siltstone same as above.
1095-1100	60	Siltstone buff white to buff grey, calcareous, slight argillaceous; with minor silty limestone.
	40	Shale same as above.
1100-1130	60	Shale same as above.
	40	Siltstone same as above.
1130-1145		Shale green grey, slight red brown, subfissile, calcareous, with minor buff white calcareous siltstone stringers.
1145-1160	75	Shale same as above.
	25	Siltstone same as above.
1160-1215		Shale green grey to medium grey, slight red brown, subfissile, minor calcareous; with minor stringers of siltstone, buff white to buff grey, calcareous; slight silty limestone.
1215-1290		Shale green grey, subfissile, slight calcareous, with minor stringers of siltstone, buff white to buff grey, calcareous; slight argillaceous limestone.
1290-1300	50	Shale same as above.
	30	Limestone buff tan to light brown grey, microcrystalline, minor buff white, slightly argillaceous and silty.
	20	Siltstone same as above.
1300-1345		Shale green grey, slightly calcareous; with minor stringers of siltstone, buff grey to buff white, calcareous.
1345-1360	75	Shale same as above.
	25	Siltstone buff white, calcareous, in part grading to silty limestone, white to tan, microcrystalline.
1360-1365	80	Shale green grey, in part red brown grey, subfissile, slightly calcareous; slight siltstone.
	20	Limestone white, crypto- to micro-crystalline.

Depth (m)	%	Sample Description
1365-1390	80	Shale same as above.
	20	Siltstone same as above.
1390-1405		Shale medium red brown, in part green grey, subfissile, slightly marly and micromicaceous; with slight stringers of siltstone.
1404		Muskwa
1405-1440		Shale red brown to dark grey, minor green grey, subfissile, carbonaceous, slightly marly; with minor limestone, buff tan to buff white, earthy, slightly argillaceous.
1440-1450	80	Shale same as above.
	20	Limestone white to buff white, minor cream grey and tan, microcrystalline, chalky in part, slightly argillaceous.
1450-1455	60	Limestone light brown, in part buff white to tan, very fine to finely crystalline, minor microcrystalline, slight micritic, very light cut, no show; trace bioclastics and pyrite.
	40	Shale same as above.
1452		Slave Point
1455-1458.8		Limestone light brown, minor tan to buff white, very fine to finely crystalline, minor micritic, slight very poor pinpoint porosity, light cut, light bitumin concentration, no show.
1458.8-1467.8		Core No. 1 (see Core Report)
1467.8-1479.6		Core No. 2 (see Core Report)
1479.6-1505		Limestone medium brown to tan, minor buff white, micro- to crypto-crystalline, trace pyrite; slight thin fractures; very light cut.
1505-1510	50	Limestone same as above.
	25	Shale light green, minor green grey, subfissile, slightly waxy.
	25	Limestone light brown to cream tan, crypto-crystalline.
1507		Watt Mountain
1509		Sulphur Point
1510-1525		Limestone light brown to cream tan, minor buff white, micro- to crypto-crystalline; slight thin fracrures; trace pyrite.
1525-1560		Limestone light brown to tan, minor buff white, micro- to very finely crystalline, minor cryptocrystalline, slight bioclastics; very poor to poor pinpoint porosity, slight light oil

Depth (m)	%	Sample Description
		stain showing light slow cut, slightly bituminous.
1555-1560	80	Limestone as above.
	20	Dolomite honey brown, minor grem grey, very finely to finely crystalline, with minor very poor to poor intercrystalline porosity, trace light oil stain, very light cut.
1559		Muskeg
1560-1565		Dolomite medium to light brown, minor cream grey, fine to medium crystalline, minor micro- to very finely crystalline, very poor intercrystalline porosity, trace light oil stain, light slow cut, trace bitumin concentration; trace clear to white dolomite rhombs; minor limestone, medium brown, micro- to cryptocrystalline, slight micritic to chalky.
1565-1580		Dolomite light to medium brown, minor cream white to tan, very fine to finely crystalline, medium crystalline in part, trace white to clear dolomite rhombs, with very poor intercrystalline to pinpoint porosity, trace light oil stain, light slow cut; minor stringers or patches of limestone, buff white to buff brown, microcrystalline, earthy in part; slight stringers of anhydrite, white, microsucrosic.
1580-1595		Dolomite light brown to cream white, fine to medium crystalline, minor very finely crystalline, very poor to poor intercrystalline to pinpoint porosity, trace light oil stain with light slow cut, trace bitumin concentration; slight anhydrite stringers.
1595-1610	80	Dolomite light to medium brown, minor buff white to buff grey, fine to medium crystalline, minor very finely crystalline, very poor pinpoint to intercrystalline porosity, trace light oil stain in places, light slow cut.
	20	Anhydrite white, microsucrosic, slightly dolomitic.
1610-1625		Dolomite light to medium brown, minor buff white, very fine to finely crystalline, trace pyrite; slight anhydrite stringers.
1625-1630	60	Dolomite same as above; with minor anhydrite.
	40	Dolomite light to medium brown, minor tan, fine to medium crystalline, poor to fair intercrystalline porosity, light cut.

Depth (m)	%	Sample Description
1628		Upper Keg River
1630-1635		Dolomite light to medium brown, slight dark brown, micro- to very finely crystalline, trace pyrite.
1635-1640		Dolomite light honey brown, in part medium to dark brown, fine to medium crystalline, minor coarsely crystalline, minor very poor to poor intercrystalline porosity, slight fair porosity, very light cut; trace clear to white dolomite rhombs.
1640-1645		Dolomite medium brown, in part light tan and dark brown, very fine to medium crystalline, trace white dolomite rhombs, poor intercrystalline porosity, very light cut.
1645-1650	80	Limestone dirty buff brown, minor buff grey, earthy to lithographic, slight marly; in part dolomitic limestone, dark brown grey to dark grey, cryptocrystalline, minor microcrystalline, slight argillaceous and sub-bituminous in places.
	20	Dolomite medium to light brown, very fine to medium crystalline, minor poor porosity, light cut; trace white dolomite rhombs.
1646		Lower Keg River
1650-1660	60	Limestone same as above.
	40	Dolomitic limestone dark brown to brown grey, micro- to very finely crystalline, slightly argillaceous and sub-bitumous.
1660-1680	70	Dolomitic Limestone same as above.
	30	Limestone dirty buff brown, earthy to lithographic, slightly marly and dolomitic.
1680-1685	70	Limestone same as above.
	30	Dolomitic Limestone same as above.
1685-1690	40	Limestone same as above; with minor dolomitic limestone same as above.
	60	Dolomite light brown to medium grey brown, cryptocrystalline, minor microcrystalline, with minor limestone, buff brown grey, microcrystalline, earthy, slightly marly.
1687		Chinchaga
1690-1695	50	Dolomite buff brown to tan, in part medium to dark brown, microcrystalline, minor cryptocrystalline, slight very finely crystalline.
	40	Limestone buff white to buff brown, earthy, slightly marly.
	10	Anhydrite white, microsucrosic.
1695-1710	60	Dolomite same as above.
	20	Limestone buff brown to buff white, earthy,

Depth (m)	%	Sample Description
		minor dolomitic, slight marly.
	20	Anhydrite white to cream brown, microsucrosic.
1710-1715	60	Anhydrite cream tan, minor cream white, crypto- to micro-crystalline, slightly dolomitic.
	40	Dolomite light to buff brown, minor brown grey, microcrystalline, slightly argillaceous.
1715-1720	50	Sandstone clear and frosty quartz, very coarse grained, rounded to subrounded, poor to medium sorted; minor shale, green grey to medium grey, slight sandy.
	30	Anhydrite same as above.
	20	Dolomite same as above.
1720		Red Beds (adjusted according to drilling rate)
1720-1730		Sandstone frosty to clear quartz, very coarse grained, rounded to subrounded; minor pink feldspar; trace deep green to black biotite; trace pyrite.
1730-1735	80	Granite polycrystalline quartz, clear and frosty white; minor feldspar, pink, cream white; slight biotite, golden black; slight amphibole, dark green to black; slight leucoxene, dull white; trace chlorite, earthy green.
	20	Sandstone same as above.
1731		Precambrian
1735-1750		Granite feldspar, pink to cream brown; quartz, clear and frosty white, polycrystalline; minor biotite, black to golden black; minor amphibole, dark green to blakc; slight leucoxene and chlorite.
1750		Total Depth

Home Kakisa River J-42

CORE REPORT

Core No. 1 : 1458.8--1467.8 m K.B., cut 9.0 meters, recovered 8.3 meters

Core No. 2 : 1467.8-1479.6 m K.B., cut 11.8 meters, recovered 11.5 meters

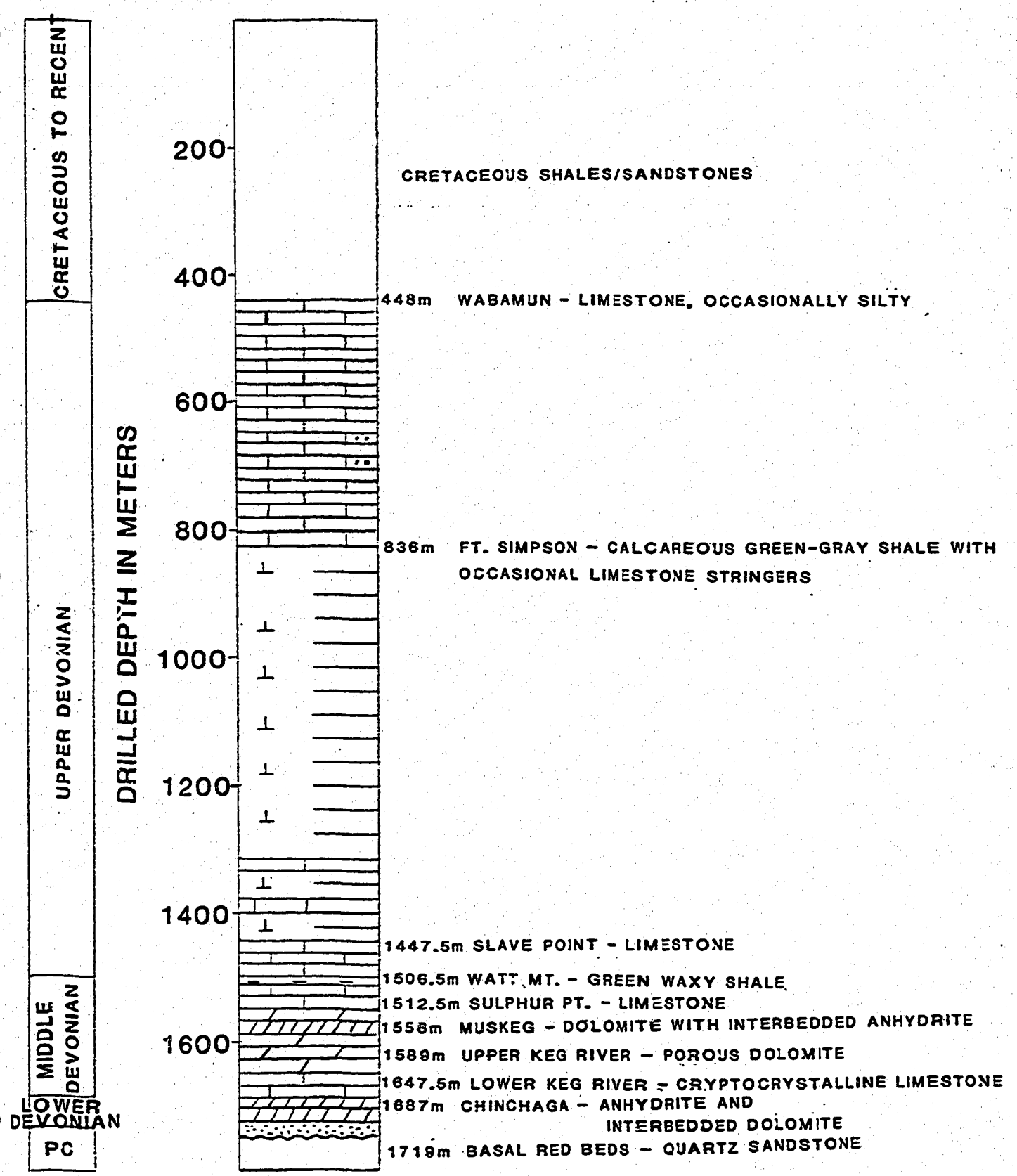
Interval (m)	Thickness (m)	Lithology Description
1458.8-1461.3	2.5	Limestone medium to dark brown, cryptocrystalline, minor microcrystalline, massive, slightly argillaceous in places, bulbous stromatoporoids in places.
1461.3-1461.6	0.3	Limestone medium to dark brown grey, microcrystalline, slight very finely crystalline, stromatoporoids, slight stylolites, minor thin hair-line fractures with light to medium oil stain.
1461.6-1461.8	0.2	Limestone medium to light brown, microcrystalline to very finely crystalline, minor irregular thin fractures with very light oil stain in places.
1461.8-1462.0	0.2	Limestone dark brown grey, cryptocrystalline, slight microcrystalline, argillaceous, hard.
1462.0-1462.3	0.3	Limestone medium brown, very fine to finely crystalline, slight thin fractures, trace spotty oil stain.
1462.3-1464.3	2.0	Limestone medium brown, in part dark brown, cryptocrystalline to microcrystalline, in part argillaceous, as nodular lime mud, some as bands, minor thin irregular fractures.
1464.3-1465.2	0.9	Limestone light to medium brown, micro- to crypto-crystalline, bulbous stromatoporoids in places; slight thin hair-line fractures in places.
1465.2-1465.85	0.65	Limestone medium to dark brown grey, cryptocrystalline, moderately fractured, with argillaceous lime mud nodules and bands, light bitumin concentration along thin fractures.

Interval (m)	Thickness (m)	Lithology Description
1465.85-1466.3	0.45	Limestone medium to dark brown, crypto- to micro-crystalline, slight very finely crystalline, minor thin fractures with light to medium oil stain (esp. between 1466.0-1466.16 m K.B.)
1466.3-1467.1	0.8	Limestone medium brown, minor dark brown, crypto- to micro-crystalline, minor thin fractures, bulbous stromatoporoids in places.
1467.1		End of Core No. 1
1467.1-1467.8	0.7	Lost core.
Coring times:	60, 84, 110, 154, 162, 157, 200, 190, 148 (minutes per meter)	
1467.8-1469.1	1.3	Limestone medium brown, micro- to very finely crystalline, minor finely crystalline, bulbous stromatoporoids in part, thin vertical and branching fractures with light oil stain; slight stylolite; very light oil stain in lower part.
1469.1-1470.1	1.0	Limestone medium brown, crypto- to micro-crystalline, massive stromatoporoids, minor argillaceous, few thin fractures; slight stylolite.
1470.1-1470.5	0.4	Limestone medium brown, crypto- to micro-crystalline, massive stromatoporoids, in part argillaceous, minor thin fractures with light oil stain.
1470.5-1471.2	0.7	Limestone medium to dark brown, micro- to very finely crystalline, minor fine to medium crystalline, massive to bulbous stromatoporoids, minor thin irregular and vertical fractures with light to medium oil stain, slow bleeding in part, esp. between 1470.8-1471.0 m, and 1471.1 to 1471.2 m K.B.
1471.2-1471.8	0.6	Limestone medium to dark brown, crypto- to micro-crystalline, massive stromatoporoids in part, minor argillaceous lime mud, minor stylolite; limestone showed light cut in solvent.
1471.8-1472.5	0.7	Limestone light to medium chocolate brown, cryptocrystalline, minor

Interval (m)	Thickness (m)	Lithology Description
		microcrystalline, massive to bulbous stromatoporoids, minor thin fractures with light to medium oil stain, in part light bleeding oil.
1472.5-1472.9	0.4	Limestone medium brown, crypto- to micro-crystalline, massive to bulbous stromatoporoids, in part replaced by coarsely crystalline sparry calcite; slight bioclastic fragments; light cut in solvent.
1472.9-1473.5	0.6	Limestone medium brown, crypto- to micro-crystalline, slight very fine crystalline, massive stromatoporoids, thin vertical and branching fractures, slight very poor pinpoint and organic porosity, showing medium to heavy oil stain, in part bleeding oil.
1473.5-1474.6	1.1	Limestone medium brown, crypto- to micro-crystalline, massive to bulbous stromatoporoids in part, minor stylolite, a few thin fractures with trace scattered light oil stain.
1474.6-1477.1	0.5	Limestone dark to medium brown, cryptocrystalline, minor microcrystalline, massive, in part argillaceous, bulbous stromatoporoids in places, slight stylolite; light cut in solvent.
1477.1-1477.8	0.7	Limestone medium brown, crypto- to micro-crystalline, massive stromatoporoids, minor thin fractures, slight very poor organic to pinpoint porosity, medium to heavy oil stain, in part bleeding oil.
1477.8-1479.3	0.5	Limestone dark brown, minor medium brown, crypto- to micro-crystalline, massive stromatoporoids, trace calcite-quartz veinlets and patches; slight stylolite; becoming with slight very poor fracture-lined pinpoint and vuggy porosity showing light oil stain in places in lower part.
1479.3		End of Core No. 2
1479.3-1479.6	0.3	Lost core

Coring times: 135, 110, 102, 71, 66, 57, 58, 64, 76, 62, 59 (minutes per meter); 75 (minutes per 0.6 meter)

J-42 WELL KB 619.7m



WELL EVALUATION

1. DOWNHOLE LOGS

Run No.	Date	Interval	Service Company
1	84-02-13	128 - 437.8 m	Computalog-Gearhart
2	84-03-03	437 - 1750 m	Computalog-Gearhart

For logs types and scale see attached well logging program.

2. OTHER LOGS

Mud logging done from surface casing to F.T.D.

3. VELOCITY SURVEY

Survey done after final logging run. As yet, Home Oil has not received the records from Century Geophysical.

4. FORMATION STIMULATION

No formation stimulation was conducted in this well.

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WELL LOGGING PROGRAM

COST AREA 2 CHARGE

WELL NAME HOME KAKISA RIVER
LOCATION KAKISA R. J-42
SERVICE COMPANY COMPUTALOG

CLASS EXPLORATORY.
LOGGING RUN ONE
INTERVAL SURFACE TO SURFACE CASING @ 435 M

LOG	CURVE	YES	CURVE & DEPTH SCALES	LIN	LOG	1:600	1:240	1:48	COMMENTS
INDUCTION OR ~~LATEROLOG~~	DIL-SFL	X	0-50	x		x			
	DIL-SFL	X	0.2-2000		X		X		
	DLL-SFL								
	DLL-SFL								
	SP	X	-80/20	X		X	X		
	GAMMA RAY	X	0-150	X		X	X		Dashed Curve
	TENSION	X	DELTA TENS.	X			X		TRACK 2
ACOUSTIC	SONIC	X	100-500	X		X	X		
	GAMMA RAY	X	0-150	X		X	X		
	CALIPER	X	125-375	X		X	X		
	TENSION	X	DELTA TENS.	X			X		TRACK 2
	WAVEFORM								
	TTI								
DENSITY-NEUTRON	FDC								
	FDC								
	DRHO								
	CNL								
	SS MATRIX								
	LS MATRIX								
	CALIPER								
	90 CALIPER								90 OFFSET
	GAMMA RAY								
	PE								
	TENSION		DELTA TENS.						
MICROLOG	MNORMAL								
	MINVERSE								
	GAMMA RAY								
	CALIPER								
	TENSION		DELTA TENS.						

ADDITIONAL INSTRUCTIONS

1) Comstar service required for both curves.

Note: Sonic required as part of our farmont commitment to Coho.

HOME OIL CO. LTD.
GEOL. OPS.
1984-02-08

APPROVAL

home oil

WELL LOGGING PROGRAM

AREA 2 CHARGE

COST

WELL NAME HOME KAKISA RIVER
LOCATION KAKISA R. J-42
SERVICE COMPANY COMPUTALOG

CLASS EXPLORATORY
LOGGING RUN TWO*
INTERVAL SURFACE CASING TO INTERMEDIATE CASING @ 1550 M

LOG	CURVE	YES	CURVE & DEPTH SCALES	LIN	LOG	1:600	1:240	1:48	COMMENTS
INDUCTION OR LATEROLOG	DIL-SFL	X	0-50	X		X			
	DIL-SFL	X	0.2-2000		X		X		
	DLL-SFL								
	DLL-SFL								
	SP	X	-80/20	X		X	X		
	GAMMA RAY	X	0-150	X		X	X		Dashed Curve
	TENSION	X	DELTA TENS.	X			X		TRACK 2
ACOUSTIC	SONIC	X	100-500	X		X	X		
	GAMMA RAY	X	0-150	X		X	X		
	CALIPER	X	125-375	X		X	X		
	TENSION	X	DELTA TENS.	X		X	X		TRACK 2
	WAVEFORM	X							MAY BE REQUIRED
	TTI	X					X		
DENSITY-NEUTRON	FDC	X	2000-3000	X		X			
	FDC	X	+45/-15	X			X		
	DRHO	X	+250/-250	X		X	X		
	CNL	X	+45/-15	X			X		
	SS MATRIX								
	LS MATRIX	X	+45/-15	X			X		
	CALIPER	X	125-375	X		X	X		MARK DENSITY CALIPER
	90 CALIPER	X	125-375	X			X		90 OFFSET
	GAMMA RAY	X	0-150	X		X	X		
	PE								
	TENSION	X	DELTA TENS.	X			X		TRACK 1
MICROLOG	MNORMAL								
	MINVERSE								
	GAMMA RAY								
	CALIPER								
	TENSION		DELTA TENS.						

ADDITIONAL INSTRUCTIONS

* Logging run 2 contingent on setting intermediate casing.

1) Sonic Waveform or Open Hole VDL may be required over zones of interest.
2) Have Microlog, RFT, and Dipmeter available on site.
3) Borehole Integrated Volume required TD to surface casing.
4) Comstar service required for all curves.

HOME OIL CO. LTD.
GEOL. OPS.
1584-02-08

APPROVAL

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WELL LOGGING PROGRAM

AREA 2 CHARGE
COST

WELL NAME HOME KAKISA RIVER
LOCATION KAKISA R. J-42
SERVICE COMPANY COMPUTALOG

CLASS EXPLORATORY
LOGGING RUN THREE
INTERVAL INT. CASING TO FTD @ 1736 M

LOG	CURVE	YES	CURVE & DEPTH SCALES	LIN	LOG	1:600	1:240	1:48	COMMENTS
INDUCTION OR ~~ELECTROLOG~~	DIL-SFL	X	0-50	X		X			
	DIL-SFL	X	0.2-2000		X		X		
	DLL-SFL								
	DLL-SFL								
	SP	X	-80/20	X		X	X		
	GAMMA RAY	X	0-150	X		X	X		Dashed Curve
	TENSION	X	DELTA TENS.	X			X		TRACK 2
ACOUSTIC	SONIC	X	100-500	X		X	X		
	GAMMA RAY	X	0-150	X		X	X		
	CALIPER	X	125-375	X		X	X		
	TENSION	X	DELTA TENS.	X		X	X		TRACK 2
	WAVEFORM	X							MAY BE REQUIRED
	TTI	X					X		
DENSITY-NEUTRON	FDC	X	2000-3000	X		X			1.2 INCH SAMPLING
	FDC	X	+45/-15	X			X	X	REPEAT REQUIRED
	DRHO	X	+250/-250	X		X	X	X	OVER KEG. R.
	CNL	X	+45/-15	X			X	X	
	SS MATRIX								
	LS MATRIX	X	+45/-15	X			X	X	
	CALIPER	X	125-375	X		X	X		
	90 CALIPER	X	125-375	X			X		90 OFFSET
	GAMMA RAY	X	0-150	X		X	X	X	
	PE								
	TENSION	X	DELTA TENS.	X			X	X	TRACK 1
MICROLOG	MNORMAL								
	MINVERSE								
	GAMMA RAY								
	CALIPER								
	TENSION		DELTA TENS.						

ADDITIONAL INSTRUCTIONS

1) Sonic Waveform or Open Hole VDL may be required over zones of interest.
2) Have Microlog, RFT and Dipmeter available on site.
3) Borehole Integrated Volume required TD to casing point.
4) Comstar service required for all curves.

HOME OIL CO. LTD.
GEOL. OPS.
1984-02-08

FORMATION AND PRODUCTION TESTING

Test No.	Date	Interval	Recovery
1	84-02-27	1450 - 1479.6	42 m mud
2	84-02-28	1527 - 1555	70 m mud, 60 m oil stained mud.
3	84-03-06	1719 - 1726	Misrun
4	84-03-06	1719 - 1726	2 m brine cut mud
5	84-03-07	1623 - 1634	1197 m salt water
6	84-03-07	1589 - 1593	200 m salt water
7	84-03-08	1526 - 1531	65 m oil stained mud 91 m salt water
8	84-03-09	1515 - 1521	1.5 m mud
9	84-03-09	1447 - 1453	90 m mud and salt water

Detailed pressure information submitted in appendices.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER C84-4420-1

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME
HOME OIL COMPANY LIMITED

WELL NAME
Home Kakisa River J-42

LOCATION
60°01'43.147"N
118°38'05.604"W

ELEVATIONS K.B. / GRD
619.76

FIELD OR AREA
Kakisa River

POOL OR ZONE
Slave Point

NAME OF SAMPLER

COMPANY
Halliburton

TEST TYPE
DST

NO
1

MULTIPLE RECOVERY
X

TEST RECOVERY
42 m drilling mud

SAMPLING POINT
Top of Fluid

AMT & TYPE OF CUSHION

MUD RESISTIVITY

Test interval (metres)
1450 - 1479.6

Perforations (metres)

TYPE OF PRODUCTION
PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES
WATER m^3/d OIL m^3/d GAS $10^3 m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa
SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y M D)
1984-02-26

DATE RECEIVED (Y M D)
1984-02-29

DATE REPORTED (Y M D)
1984-03-08

ANALYST
S. Sargious

OTHER INFORMATION

ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$	ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Na	715	0.3287	31.10	Cl	310	0.1425	8.74
K	27	0.0124	0.69	Br			
Ca	5	0.0023	0.13	I			
Mg	0	0.0000	0.00	HCO_3	214	0.0984	3.51
Ba				SO_4	724	0.3329	7.53
Sr				CO_3	180	0.0828	3.00
Fe	MUCH			OH	0	0.0000	0.00

H_2S NIL

TOTAL SOLIDS $\frac{m \cdot V^{-1}}{g \cdot m^3}$

EVAPORATED @ 110 °C: 2 900

AT IGNITION: 1 992

CALCULATED: 2 175

ORGANICS: MUCH

RELATIVE DENSITY: 0.999 @ 25°C

REFRACTIVE INDEX: 1.3331 (25°C)

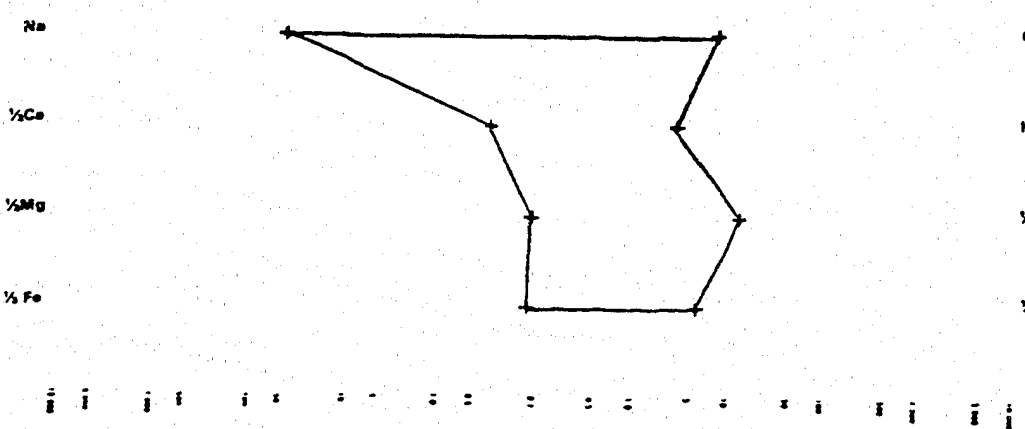
OBSERVED pH: 10.0* 22 °C

RESISTIVITY (Ohm-m): 3.13 @ 25°C

REMARKS

Amber colored filtrate recovered from a sample containing approximately 30% sediment.

LOGARITHMIC PATTERN $c / mol \cdot m^{-3}$



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: C84-4420-2

OPERATOR NAME: HOME OIL COMPANY LIMITED

WELL NAME: Home Kakisa River J-42

60°01'43.147"N
113°38'05.604"W

FIELD OR AREA: Kakisa River

POOL OR ZONE: Slave Point

NAME OF SAMPLER:

COMPANY: Halliburton

TEST TYPE: DST NO: 1

TEST RECOVERY: 42 m drilling mud

MULTIPLE RECOVERY: Y X N

SAMPLING POINT: Middle of Fluid

AMT & TYPE OF CUSHION:

MUD RESISTIVITY:

Test Interval (metres): 1450 - 1479.6

Perforations (metres):

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3 m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE C

DATE SAMPLED (Y M D): 1984-02-26

DATE RECEIVED (Y M D): 1984-02-29

DATE REPORTED (Y M D): 1984-03-08

ANALYST: S. Sargious

OTHER INFORMATION:

ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$	ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Na	760	0.3248	33.06	Cl	305	0.1303	8.60
K	31	0.0132	0.79	Br			
Ca	5	0.0021	0.13	I			
Mg	0	0.0000	0.00	HCO_3	244	0.1043	4.00
Ba				SO_4	815	0.3484	8.48
Sr				CO_3	180	0.0769	3.00
Fe	MUCH			OH	0	0.0000	0.00

H_2S NIL

TOTAL SOLIDS $\frac{m \cdot V^{-1}}{g \cdot m^3}$

EVAPORATED 110°C: 2 952

AT IGNITION: 2 004

CALCULATED: 2 340

ORGANICS: MUCH

RELATIVE DENSITY: 0.999 @ 25°C

REFRACTIVE INDEX: 1.3331 @ 25°C

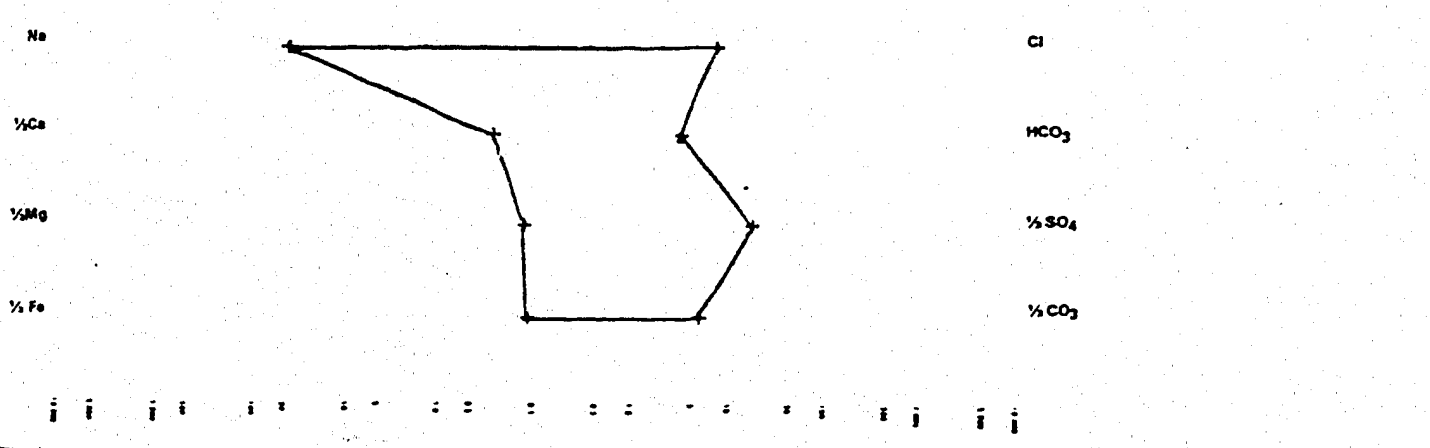
OBSERVED pH: 9.9* 22°C

RESISTIVITY (ohmm): 3.14 @ 25°C

REMARKS

Amber colored filtrate recovered from a sample containing approximately 40% sediment.

LOGARITHMIC PATTERN $c/mol \cdot m^{-3}$



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: C84-4420-3

OPERATOR NAME: HOME OIL COMPANY LIMITED

WELL NAME: Home Kakisa River J-42

LOCATION: 60°01'43.147"N 118°38'05.604"W

FIELD OR AREA: Kakisa River

POOL OR ZONE: Slave Point

NAME OF SAMPLER:

COMPANY: Halliburton

TEST TYPE: DST NO: 1

TEST RECOVERY: 42 m drilling mud

MULTIPLE RECOVERY: Y X N

SAMPLING POINT: Top of Tool

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY:

Test Interval (metres): 1450 - 1479.6

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3 m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D): 1984-02-26

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-08

ANALYST: S. Sargious

OTHER INFORMATION:

ION	$m \cdot V^{-1} / g \cdot m^{-3}$	Mass Fraction	$c / mol \cdot m^{-3}$	ION	$m \cdot V^{-1} / g \cdot m^{-3}$	Mass Fraction	$c / mol \cdot m^{-3}$
Na	805	0.3179	35.02	Cl	338	0.1335	9.53
K	27	0.0107	0.69	Br			
Ca	10	0.0039	0.25	I			
Mg	5	0.0020	0.21	HCO_3	476	0.1880	7.81
Ba				SO_4	811	0.3203	8.44
Sr				CO_3	60	0.0237	1.00
Fe	MUCH			OH	0	0.0000	0.00

H_2S NIL

TOTAL SOLIDS $m \cdot V^{-1} / g \cdot m^{-3}$

EVAPORATED @ 110°C	EVAPORATED @ 180°C
2 764	
AT IGNITION	CALCULATED
2 192	2 532

ORGANICS: MUCH

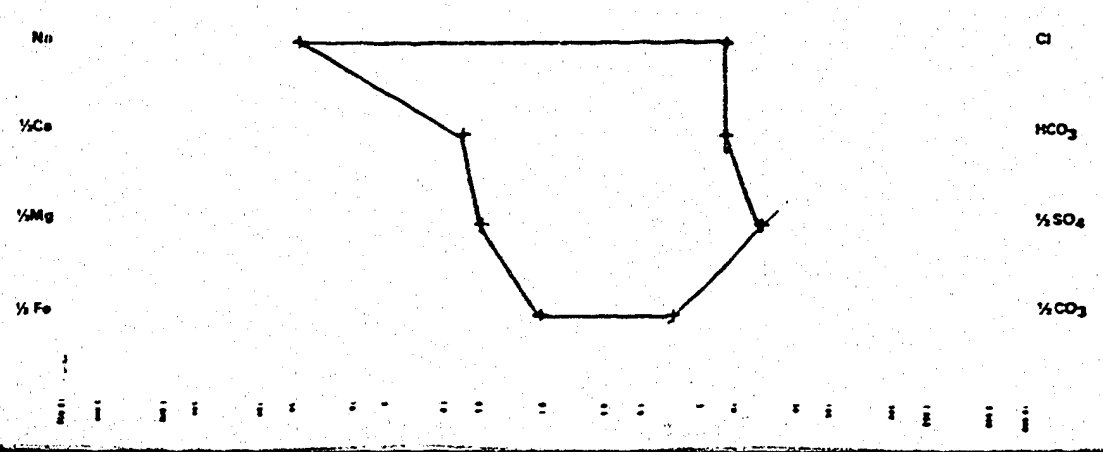
RELATIVE DENSITY	REFRACTIVE INDEX
0.998 @ 25°C	1.3331 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm-m)
9.3* 22°C	2.94 @ 25°C

REMARKS

Amber colored filtrate recovered from a sample containing approximately 70% sediment.

LOGARITHMIC PATTERN $c / mol \cdot m^{-3}$



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: C84-4383-60

CONTAINER NUMBER

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

WELL NAME: Home Kakisa River J-42

LOCATION: 60°01'43.147"N 118°38'05.604"W

ELEVATIONS K.B. GRD: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST

NO: 2

MULTIPLE RECOVERY: X

TEST RECOVERY: 60 m oil stained mud
70 m brackish water

SAMPLING POINT: Down Hole Sampler #1005

AMT & TYPE OF CUSHION

MUD RESISTIVITY

Total Interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES: WATER m^3/d OIL m^3/d GAS $10^4 m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa: SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE C

DATE SAMPLED (Y M D)	DATE RECEIVED (Y M D)	DATE REPORTED (Y M D)	ANALYST	OTHER INFORMATION
1984-02-28	1984-02-29	1984-03-02	S. Sargious	

ION	$m \cdot V^{-1} \cdot g \cdot m^{-3}$	Mass Fraction	c $mol \cdot m^{-3}$	ION	$m \cdot V^{-1} \cdot g \cdot m^{-3}$	Mass Fraction	c $mol \cdot m^{-3}$
Na	29 370	0.2928	1277.60	Cl	59 800	0.5961	1686.36
K	915	0.0091	23.42	Br			
Ca	6 743	0.0672	168.24	I			
Mg	1 905	0.0190	78.30	HCO_3	763	0.0076	12.51
Ba				SO_4	827	0.0082	8.60
Sr				CO_3	0	0.0000	0.00
Fe	PRESENT			OH	0	0.0000	0.00
				H_2S	PRESENT		

TOTAL SOLIDS $m \cdot V^{-1} \cdot g \cdot m^{-3}$

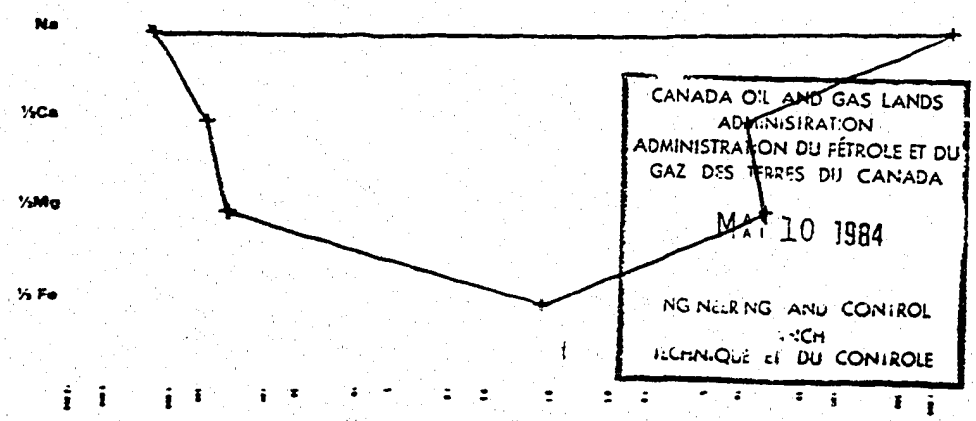
EVAPORATED @ 110°C	EVAPORATED @ 180°C
113 200	
AT IGNITION	CALCULATED
94 920	100 323

ORGANICS: TRACE

RELATIVE DENSITY	REFRACTIVE INDEX
1.073 @ 29°C	1.3508 @ 29°C

OBSERVED pH	RESISTIVITY (Ohm-m)
6.8* 23°	0.078 @ 29°C

LOGARITHMIC PATTERN c / $mol.m^{-3}$



REMARKS

Pale yellow colored filtrate recovered from a sample containing a trace sediment and hydrogen sulfide.

The down hole sampler was received with an opening pressure of 500 kPa @ 16°C It contained 2 600 mL water only. Insufficient recoverable gas for analysis.

HOME OIL COMPANY LIMITED — LAB REPORT NO: C84-4383

C84-4383-1 455 M

Resistivity: 5.08 ohm m @ 25°C.

Chloride: 35 g/m^3

C84-4383-2 490 M

Chloride: 300 g/m^3

C84-4383-3 505 M

Resistivity: 3.37 ohm m @ 25°C.

Chloride: 65 g/m^3

C84-4383-4 510 M

Resistivity: 3.75 ohm m @ 25°C.

Chloride: 215 g/m^3

C84-4383-5 515 M

Resistivity: 4.01 ohm m @ 25°C.

Chloride: 165 g/m^3

C84-4383-6 520 M

Resistivity: 4.12 ohm m @ 25°C.

Chloride: 170 g/m^3

C84-4383-7 545 M

Resistivity: 11.3 ohm m @ 25°C.

Chloride: 63 g/m^3

C84-4383-8 555 M

Resistivity: 9.02 ohm m @ 25°C.

Chloride: 100 g/m^3

HOME OIL COMPANY LIMITED — LAB REPORT NO: C84-4383

C84-4383-9 560 M

Resistivity: 9.50 ohm m @ 25°C.

Chloride: 60 g/m^3

C84-4383-10 565 M

No recovery for analysis.

C84-4383-11 570 M

Chloride: 100 g/m^3

C84-4383-12 580 M

Resistivity: 11.3 ohm m @ 25°C.

Chloride: 65 g/m^3

C84-4383-13 585 M

Resistivity: 13.4 ohm m @ 25°C.

Chloride: 60 g/m^3

C84-4383-14 590 M

Resistivity: 2.57 ohm m @ 25°C.

Chloride: 219 g/m^3

C84-4383-15 600 M

No recovery for analysis.

C84-4383-16 605 M

Resistivity: 7.40 ohm m @ 25°C.

Chloride: 83 g/m^3

C84-4383-17 610 M

No recovery for analysis.

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-18 615 M

Chloride: 625 g/m^3

C84-4383-19 620 M

Resistivity: 0.840 ohm m @ 25°C.

Chloride: 125 g/m^3

C84-4383-20 735 M

Chloride: 100 g/m^3

C84-4383-21 745 M

Resistivity: 16.9 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-22 750 M

Resistivity: 14.8 ohm m @ 25°C.

Chloride: 35 g/m^3

C84-4383-23 755 M

No recovery for analysis.

C84-4383-24 770 M

Resistivity: 8.40 ohm m @ 25°C.

Chloride: 67 g/m^3

C84-4383-25 790 M

Resistivity: 9.06 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-26 795 M

No recovery for analysis.

C84-4383-27 820 M

Resistivity: 5.61 ohm m @ 25°C.

Chloride: 30 g/m^3

C84-4383-28 825 M

No recovery for analysis.

C84-4383-29 845 M

Resistivity: 8.58 ohm m @ 25°C.

Chloride: 30 g/m^3

C84-4383-30 860 M

Resistivity: 7.62 ohm m @ 25°C.

Chloride: 88 g/m^3

C84-4383-31 865 M

Resistivity: 9.06 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-32 915 M

Resistivity: 7.69 ohm m @ 25°C.

Chloride: 85 g/m^3

C84-4383-33 920 M

No recovery for analysis.

C84-4383-34 925 M

Chloride: 1 000 g/m^3

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-35 930 M

Resistivity: 8.36 ohm m @ 25°C.

Chloride: 60 g/m^3

C84-4383-36 955 M

Resistivity: 8.67 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-37 960 M

Resistivity: 4.91 ohm m @ 25°C.

Chloride: 158 g/m^3

C84-4383-38 970 M

Resistivity: 8.49 ohm m @ 25°C.

Chloride: 65 g/m^3

C84-4383-39 975 M

Resistivity: 5.43 ohm m @ 25°C.

Chloride: 162 g/m^3

C84-4383-40 1 000 M

Chloride: 300 g/m^3

C84-4383-41 1 105 M

Resistivity: 7.99 ohm m @ 25°C.

Chloride: 88 g/m^3

C84-4383-42 1 110 M

Resistivity: 6.52 ohm m @ 25°C.

Chloride: 140 g/m^3

HOME OIL COMPANY LIMITED — LAB REPORT NO: C84-4383

C84-4383-43 1 170 M

Resistivity: 8.53 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-44 1 220 M

No recovery for analysis.

C84-4383-45 1 225 M

No recovery for analysis.

C84-4383-46 1 230 M

No recovery for analysis.

C84-4383-47 1 245 M

Resistivity: 4.28 ohm m @ 25°C.

Chloride: 245 g/m^3

C84-4383-48 1 260 M

Resistivity: 4.06 ohm m @ 25°C.

Chloride: 175 g/m^3

C84-4383-49 1 290 M

Resistivity: 2.78 ohm m @ 25°C.

Chloride: 392 g/m^3

C84-4383-50 1 300 M

Resistivity: 4.99 ohm m @ 25°C.

Chloride: 165 g/m^3

C84-4383-51 1 320 M

Resistivity: 6.49 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-52 1 330 M

Chloride: 125 g/m^3

C84-4383-53 1 370 M

Chloride: 250 g/m^3

C84-4383-54 1 380 M

Chloride: 150 g/m^3

C84-4383-55 1 390 M

Resistivity: 6.83 ohm m @ 25°C.

Chloride: 25 g/m^3

C84-4383-56 1 395 M

Resistivity: 6.49 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-57 1 400 M

Resistivity: 5.40 ohm m @ 25°C.

Chloride: 30 g/m^3

C84-4383-58 1 410 M

No recovery for analysis.

C84-4383-59 1 420 M

Resistivity: 5.54 ohm m @ 25°C.

Chloride: 60 g/m^3

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

CONTAINER IDENTITY

LABORATORY NUMBER: C84-4421-1

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION: WELL NAME: Home Kakisa River J-42 — 60°01'43.147"W 118°38'05.604"W

ELEVATIONS: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST NO: 2

TEST RECOVERY: 60 m oil stained mud
70 m brackish water

MULTIPLE RECOVERY: Y X N

SAMPLING POINT: Top of Fluid

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ 25°C

Test Interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES: WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D): 1984-02-28

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-08

ANALYST: S. Sargious

OTHER INFORMATION

ION	$m \cdot v^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$	ION	$m \cdot v^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Na	875	0.3369	38.06	Cl	200	0.0770	5.64
K	31	0.0119	0.79	Br			
Ca	8	0.0031	0.20	I			
Mg	0	0.0000	0.00	HCO_3	1 025	0.3947	16.81
Ba				SO_4	362	0.1394	3.77
Sr				CO_3	96	0.0370	1.60
Fe	PRESENT			OH	0	0.0000	0.00

H_2S NIL

TOTAL SOLIDS $m \cdot v^{-1}$ / $g \cdot m^{-3}$

EVAPORATED @ 110°C: 2 670

EVAPORATED @ 180°C

AT IGNITION: 1 710

CALCULATED: 2 597

ORGANICS: PRESENT

RELATIVE DENSITY: 0.999 @ 25°C

REFRACTIVE INDEX: 1.3331 @ 25°C

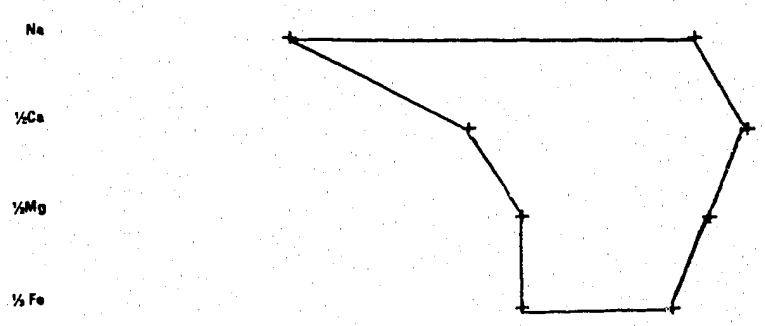
OBSERVED pH: 9.1* 22°C

RESISTIVITY (Ohm-m): 2.93 @ 25°C

REMARKS

Pale yellow colored filtrate recovered from watery mud.

LOGARITHMIC PATTERN c/mol·m^{-3}



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

CONTAINER IDENTITY

LABORATORY NUMBER: C84-4421-2

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

WELL NAME: Home Kakisa River J-42

60°01'43.147"N 118°38'05.604"W

ELEVATIONS K.B. (metres) GRD: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST NO: 2

MULTIPLE RECOVERY Y N: X

TEST RECOVERY: 60 m oil stained mud
70 m brackish water

SAMPLING POINT: Middle of Fluid

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ °C

Test Interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D): 1984-02-28

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-08

ANALYST: S. Sarqious

OTHER INFORMATION

ION	$m \cdot V^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$	ION	$m \cdot V^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Na	3 170	0.3306	137.90	Cl	4 425	0.4614	124.79
K	78	0.0081	2.00	Br			
Ca	200	0.0209	4.99	I			
Mg	97	0.0101	3.99	HCO_3	1 049	0.1094	17.20
Ba				SO_4	571	0.0595	5.94
Sr				CO_3	0	0.0000	0.00
Fe	PRESENT			OH	0	0.0000	0.00

H_2S NIL

TOTAL SOLIDS $m \cdot V^{-1}$ / $g \cdot m^{-3}$

EVAPORATED @ 110°C: 9 480

EVAPORATED @ 180°C

AT IGNITION: 8 716

CALCULATED: 9 590

ORGANICS: PRESENT

RELATIVE DENSITY: 1.005 @ 25°C

REFRACTIVE INDEX: 1.3340 @ 25°C

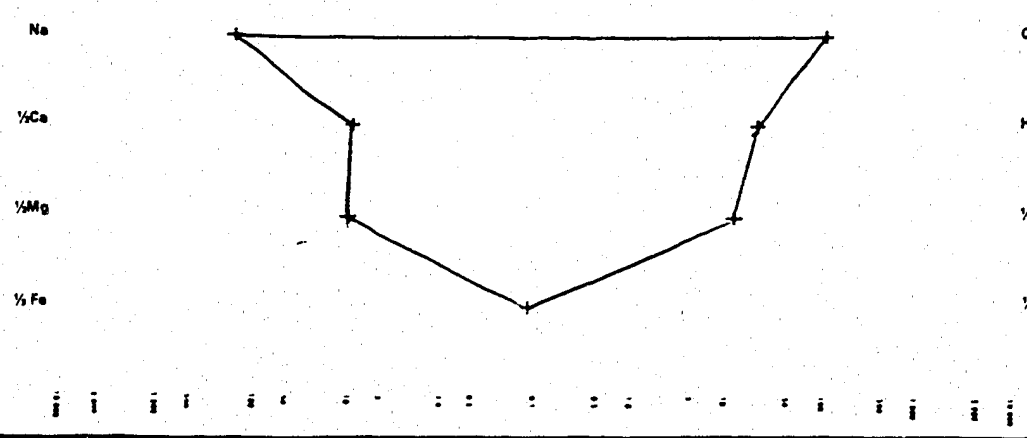
OBSERVED pH: 7.8 @ 22°C

RESISTIVITY (Ohm-m): 0.587 @ 25°C

REMARKS

Pale yellow colored filtrate recovered from muddy water containing a thin layer of hydrocarbons.

LOGARITHMIC PATTERN c / $mol \cdot m^{-3}$



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

CONTAINER IDENTITY

LABORATORY NUMBER C84-4421-3

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION

WELL NAME: Home Kakisa River J-42

60°01'43.147"N 118°38'05.604"W

ELEVATIONS K.B. metres GRD: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST

NO: 2

MULTIPLE RECOVERY (Y N): X

TEST RECOVERY: 60 m oil stained mud
70 m brackish water

SAMPLING POINT: Top of Tool

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ °C

Test Interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d bbl/d m^3/d GAS $10^3m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D): 1984-02-28

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-08

ANALYST: S. Sargious

OTHER INFORMATION

ION	$\frac{m \cdot v^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$	ION	$\frac{m \cdot v^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Na	27 720	0.2873	1205.82	Cl	58 250	0.6037	1642.65
K	821	0.0085	21.02	Br			
Ca	6 366	0.0660	158.83	I			
Mg	1 750	0.0181	71.93	HCO_3	720	0.0075	11.81
Ba				SO_4	861	0.0089	8.96
Sr				CO_3	0	0.0000	0.00
Fe	PRESENT			OH	0	0.0000	0.00

H_2S PRESENT

TOTAL SOLIDS $\frac{m \cdot v^{-1}}{g \cdot m^{-3}}$

EVAPORATED @ 110°C: 108 500

EVAPORATED @ 180°C

AT IGNITION: 91 310

CALCULATED: 96 488

ORGANICS: TRACE

RELATIVE DENSITY: 1.069 @ 29°C

REFRACTIVE INDEX: 1.3498 @ 29°C

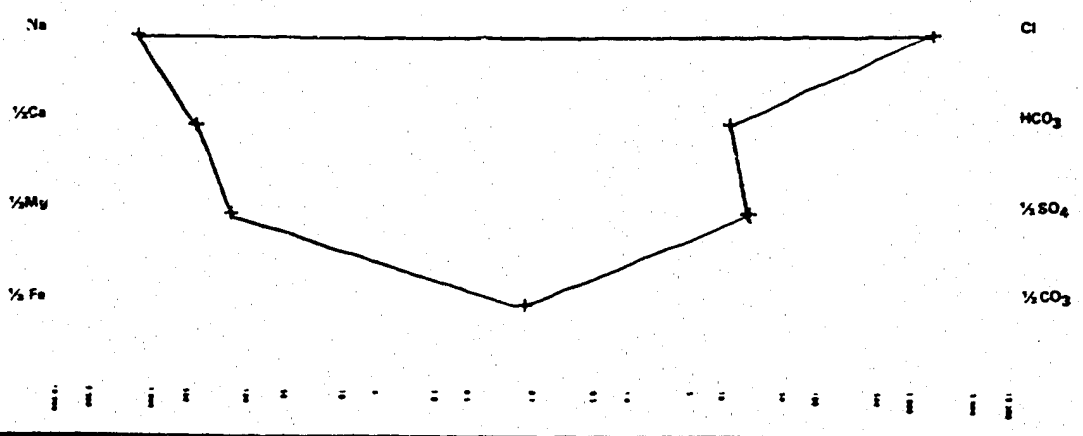
OBSERVED pH: 7.0* 22 °C

RESISTIVITY (Ohm-m): 0.080 @ 29°C

REMARKS

Pale yellow colored filtrate recovered from a sample containing approximately 20% sediment and hydrogen sulfide.

LOGARITHMIC PATTERN $c/mol \cdot m^{-3}$



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: C84-4421-4

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION

WELL NAME: Home Kakisa River J-42

60°01'43.147"N
118°38'05.604"W

ELEVATIONS K.B. (metres) GND: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST

NO: 2

MULTIPLE RECOVERY: Y X N

TEST RECOVERY: 60 m oil stained mud
70 m brackish water

SAMPLING POINT: Down Hole Sampler #1005

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ 25°C

Test interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3 m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D): 1984-02-28

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-02

ANALYST: S. Sargious

OTHER INFORMATION

ION	$m \cdot V^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$	ION	$m \cdot V^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Na	29 370	0.2928	1277.60	Cl	59 800	0.5961	1686.36
K	915	0.0091	23.42	Br			
Ca	6 743	0.0672	168.24	I			
Mg	1 905	0.0190	78.30	HCO_3	763	0.0076	12.51
Ba				SO_4	827	0.0082	8.60
Sr				CO_3	0	0.0000	0.00
Fe	PRESENT			OH	0	0.0000	0.00

H_2S PRESENT

TOTAL SOLIDS ($m \cdot V^{-1}$ / $g \cdot m^{-3}$)

EVAPORATED @ 110°C: 113 200

EVAPORATED @ 180°C

AT IGNITION: 94 920

CALCULATED: 100 323

ORGANICS: TRACE

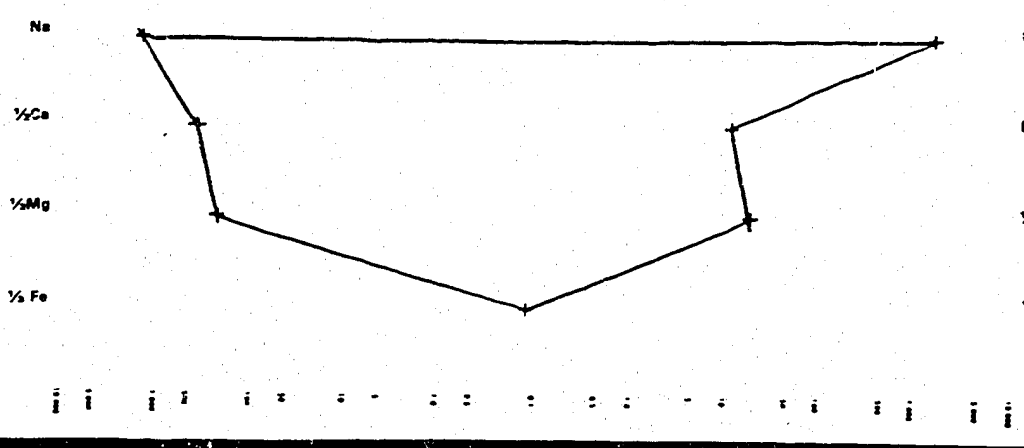
RELATIVE DENSITY: 1.073 @ 29°C

REFRACTIVE INDEX: 1.3508 @ 25°C

OBSERVED pH: 6.8 @ 23°C

RESISTIVITY (Ohm·m): 0.078 @ 25°C

LOGARITHMIC PATTERN c / $mol \cdot m^{-3}$



REMARKS

Pale yellow colored filtrate recovered from a sample containing a trace sediment and hydrogen sulfide.

The down hole sampler was received with an opening pressure of 500 kPa @ 16°C It contained 2 600 mL water only.
Insufficient recoverable gas for analysis.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

OIL ANALYSIS

CONTAINER IDENTITY

LABORATORY NUMBER: C84-4421-2

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION

WELL NAME: Home Kakisa River J-42

60°01'43.147"N
118°38'05.604"W

ELEVATIONS K.B. (metres) GRD: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST

NO.: 2

MULTIPLE RECOVERY Y: X N:

TEST RECOVERY:
60 m oil stained mud
70 m brackish water

SAMPLING POINT: Middle of Fluid

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ 29°c

Test Interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D): 1984-02-28

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-08

ANALYST: S. Sargious

OTHER INFORMATION

SAMPLE PROPERTIES

COLOR OF CLEAN OIL: Brown

B.S. & W. (VOLUME FRACTION) WATER SEDIMENT TOTAL

DENSITY

RELATIVE: AS RECEIVED AFTER CLEANING: 0.857

ABSOLUTE kg/m³: AS RECEIVED AFTER CLEANING: 856

TOTAL SULFUR (MASS FRACTION): 0.0059

TOTAL SALT g/m³

POUR POINT °C: USBM ASTM

CARBON RESIDUE (MASS FRACTION): CONRADSON RAMSBOTTOM

RVP kPa

VISCOSITY

TEMP °C ABSOLUTE mPa·s KINEMATIC mm²/s

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP °C
I.B.P.	
0.05	
0.10	
0.15	
0.20	
0.25	
0.30	
0.35	
0.40	
0.45	
0.50	
0.55	
0.60	
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
F.B.P.	
CRACKED	

METHOD

BAROM. PRESS. kPa(abs) ROOM TEMP. °C

DISTILLATION SUMMARY

(VOLUME FRACTION)

200°C NAPHTHA 275°C KEROSENE 350°C LIGHT GAS OIL

RECOVERED RESIDUE DISTILLATION LOSS

RELATIVE DENSITY

DISTILLATE RESIDUE

BASE TYPE:

CHARACTERIZATION FACTOR:

Total Sulfur: 5.90 g/kg

Analysis determined on sample after cleaning by centrifuging.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: C84-4383-60

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME: HOME OIL COMPANY LIMITED

WELL NAME: Home Kakisa River J-42

LOCATION: 60°01'43.147"N 118°38'05.604"W

ELEVATIONS: 619.76

FIELD OR AREA: Kakisa River

POOL OR ZONE: Sulfur Point

NAME OF SAMPLER

COMPANY: Halliburton

TEST TYPE: DST NO: 2

MULTIPLE RECOVERY: Y X N

TEST RECOVERY: 60 m oil stained mud
70 m brackish water

SAMPLING POINT: Down Hole Sampler #1005

AMT & TYPE OF CUSHION

MUD RESISTIVITY

Test Interval (metres): 1527 - 1555

Perforations (metres)

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE C

DATE SAMPLED (Y-M-D): 1984-02-28

DATE RECEIVED (Y-M-D): 1984-02-29

DATE REPORTED (Y-M-D): 1984-03-02

ANALYST: S. Sargious

OTHER INFORMATION

ION	$m \cdot V^{-1} / g \cdot m^{-3}$	Mass Fraction	$c / mol \cdot m^{-3}$	ION	$m \cdot V^{-1} / g \cdot m^{-3}$	Mass Fraction	$c / mol \cdot m^{-3}$
Na	29 370	0.2928	1277.60	Cl	59 800	0.5961	1686.36
K	915	0.0091	23.42	Br			
Ca	6 743	0.0672	168.24	I			
Mg	1 905	0.0190	78.30	HCO_3	763	0.0076	12.51
Ba				SO_4	827	0.0082	8.60
Sr				CO_3	0	0.0000	0.00
Fe	PRESENT			OH	0	0.0000	0.00

H_2S PRESENT

TOTAL SOLIDS $m \cdot V^{-1} / g \cdot m^{-3}$

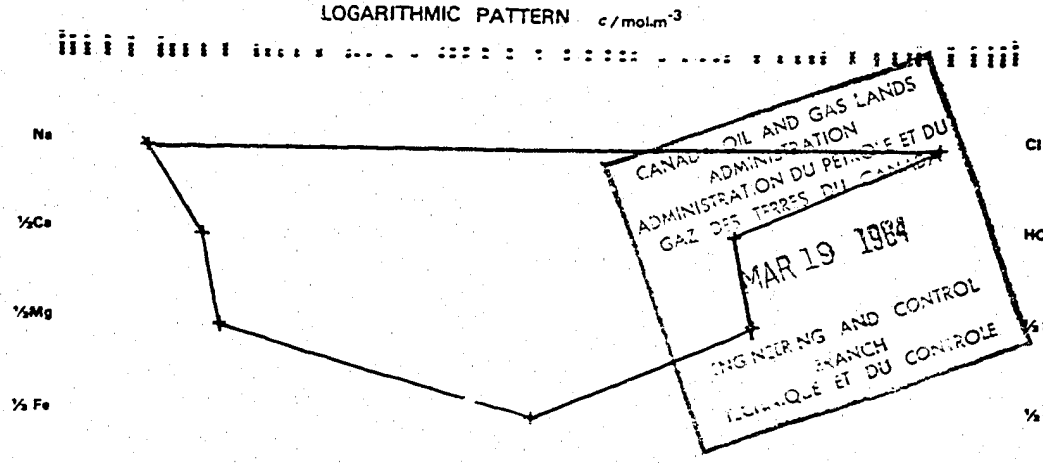
EVAPORATED @ 110°C	EVAPORATED @ 180°C	AT IGNITION	CALCULATED
113 200		94 920	100 323

ORGANICS: TRACE

RELATIVE DENSITY	REFRACTIVE INDEX
1.073 @ 25°C	1.3508 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm-m)
6.8* 23°C	0.078 @ 25°C

LOGARITHMIC PATTERN $c / mol \cdot m^{-3}$



REMARKS

Pale yellow colored filtrate recovered from a sample containing a trace sediment and hydrogen sulfide.

The down hole sampler was received with an opening pressure of 500 kPa @ 16°C It contained 2 600 mL water only. Insufficient recoverable gas for analysis.

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-1 455 M

Resistivity: 5.08 ohm m @ 25°C.

Chloride: 35 g/m^3

C84-4383-2 490 M

Chloride: 300 g/m^3

C84-4383-3 505 M

Resistivity: 3.37 ohm m @ 25°C.

Chloride: 65 g/m^3

C84-4383-4 510 M

Resistivity: 3.75 ohm m @ 25°C.

Chloride: 215 g/m^3

C84-4383-5 515 M

Resistivity: 4.01 ohm m @ 25°C.

Chloride: 135 g/m^3

C84-4383-6 520 M

Resistivity: 4.12 ohm m @ 25°C.

Chloride: 170 g/m^3

C84-4383-7 545 M

Resistivity: 11.3 ohm m @ 25°C.

Chloride: 63 g/m^3

C84-4383-8 555 M

Resistivity: 9.02 ohm m @ 25°C.

Chloride: 100 g/m^3

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-9 560 M

Resistivity: 9.50 ohm m @ 25°C.

Chloride: 60 g/m^3

C84-4383-10 565 M

No recovery for analysis.

C84-4383-11 570 M

Chloride: 100 g/m^3

C84-4383-12 580 M

Resistivity: 11.3 ohm m @ 25°C.

Chloride: 65 g/m^3

C84-4383-13 585 M

Resistivity: 13.4 ohm m @ 25°C.

Chloride: 60 g/m^3

C84-4383-14 590 M

Resistivity: 2.57 ohm m @ 25°C.

Chloride: 219 g/m^3

C84-4383-15 600 M

No recovery for analysis.

C84-4383-16 605 M

Resistivity: 7.40 ohm m @ 25°C.

Chloride: 83 g/m^3

C84-4383-17 610 M

No recovery for analysis.

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-18 615 M

Chloride: 625 g/m^3

C84-4383-19 620 M

Resistivity: 0.840 ohm m @ 25°C.

Chloride: 125 g/m^3

C84-4383-20 735 M

Chloride: 100 g/m^3

C84-4383-21 745 M

Resistivity: 16.9 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-22 750 M

Resistivity: 14.8 ohm m @ 25°C.

Chloride: 35 g/m^3

C84-4383-23 755 M

No recovery for analysis.

C84-4383-24 770 M

Resistivity: 8.40 ohm m @ 25°C.

Chloride: 67 g/m^3

C84-4383-25 790 M

Resistivity: 9.06 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-26 795 M

No recovery for analysis.

HOME OIL COMPANY LIMITED

LAB REPORT NO: C84-4383

C84-4383-27 820 M

Resistivity: 5.61 ohm m @ 25°C.

Chloride: 30 g/m^3

C84-4383-28 825 M

No recovery for analysis.

C84-4383-29 845 M

Resistivity: 8.58 ohm m @ 25°C.

Chloride: 30 g/m^3

C84-4383-30 860 M

Resistivity: 7.62 ohm m @ 25°C.

Chloride: 88 g/m^3

C84-4383-31 865 M

Resistivity: 9.06 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-32 915 M

Resistivity: 7.69 ohm m @ 25°C.

Chloride: 85 g/m^3

C84-4383-33 920 M

No recovery for analysis.

C84-4383-34 925 M

Chloride: 1 000 g/m^3

HOME OIL COMPANY LIMITED

LAB REPORT NO: C84-4383

C84-4383-35 930 M

Resistivity: 8.36 ohm m @ 25°C.

Chloride: 60 g/m^3

C84-4383-36 955 M

Resistivity: 8.67 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-37 960 M

Resistivity: 4.91 ohm m @ 25°C.

Chloride: 158 g/m^3

C84-4383-38 970 M

Resistivity: 8.49 ohm m @ 25°C.

Chloride: 65 g/m^3

C84-4383-39 975 M

Resistivity: 5.43 ohm m @ 25°C.

Chloride: 162 g/m^3

C84-4383-40 1 000 M

Chloride: 300 g/m^3

C84-4383-41 1 105 M

Resistivity: 7.99 ohm m @ 25°C.

Chloride: 88 g/m^3

C84-4383-42 1 110 M

Resistivity: 6.52 ohm m @ 25°C.

Chloride: 140 g/m^3

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-43 1 170 M

Resistivity: 8.53 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-44 1 220 M

No recovery for analysis.

C84-4383-45 1 225 M

No recovery for analysis.

C84-4383-46 1 230 M

No recovery for analysis.

C84-4383-47 1 245 M

Resistivity: 4.28 ohm m @ 25°C.

Chloride: 245 g/m^3

C84-4383-48 1 260 M

Resistivity: 4.06 ohm m @ 25°C.

Chloride: 175 g/m^3

C84-4383-49 1 290 M

Resistivity: 2.78 ohm m @ 25°C.

Chloride: 392 g/m^3

C84-4383-50 1 300 M

Resistivity: 4.99 ohm m @ 25°C.

Chloride: 165 g/m^3

HOME OIL COMPANY LIMITED LAB REPORT NO: C84-4383

C84-4383-51 1 320 M

Resistivity: 6.49 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-52 1 330 M

Chloride: 125 g/m^3

C84-4383-53 1 370 M

Chloride: 250 g/m^3

C84-4383-54 1 380 M

Chloride: 150 g/m^3

C84-4383-55 1 390 M

Resistivity: 6.83 ohm m @ 25°C.

Chloride: 25 g/m^3

C84-4383-56 1 395 M

Resistivity: 6.49 ohm m @ 25°C.

Chloride: 50 g/m^3

C84-4383-57 1 400 M

Resistivity: 5.40 ohm m @ 25°C.

Chloride: 30 g/m^3

C84-4383-58 1 410 M

No recovery for analysis.

C84-4383-59 1 420 M

Resistivity: 5.54 ohm m @ 25°C.

Chloride: 60 g/m^3

FORMATION TESTING

Technical Report

HALLIBURTON

CALGARY, ALBERTA

A Halliburton Company

TESTERS	G. Taylor
WITNESS	D. Kamieniecki
DRILLING CONTRACTOR	Hi-Tower #17

HALLIBURTON

FORMATION TESTING

DATA SHEET

REFER TO INVOICE NO.	25 971
DATE OF TEST	84-02-26
TEST No.	1
JOB TYPE	Dual Bottom Hole

PRESSURE SUMMARY kPa

GAUGE NUMBER		2804	1452	7993	3650		
GAUGE DEPTH		1435.38	1440.65	1441.90	1478.35		
BLANKED OFF		~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL		24	24	24	48		
INITIAL HYDROSTATIC			15 797	15 775	16 201		
FIRST FLOW	INITIAL	70	202	196	614		
	FINAL	136	207	196	614		
FIRST CLOSED IN		193	538	500	928		
SECOND FLOW	INITIAL	193	315	297	700		
	FINAL	390	439	427	836		
SECOND CLOSED IN		487	889	836	1 059		
THIRD FLOW	INITIAL						
	FINAL						
THIRD CLOSED IN							
FINAL HYDROSTATIC			15 523	15 460	16 031		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	10	120		TESTER VALVE OPENED	18:40
CLOSED IN	75	240		PACKER UNSEATED	02:05

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE	METRES	DESCRIPTION OF LIQUID
	42	Drilling mud.
	42	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Slave Point	TEMP. REC. No.: TE70
NET PRODUCTIVE THICKNESS: m	DEPTH MAX. TEMP.: 1443.15 m °C
K B ELEVATION: 619.76 m	MUD TYPE: Gel Chemical
ALL DEPTHS MEASURED FROM: ☒ KB ☐ GROUND	MUD DENSITY: 1100 kg/m³ MUD VISC: 57 s/L
PACKER DEPTHS: TOP 1450 BOTTOM m	CASING OR HOLE SIZE: 222 mm
DEPTH OF TESTER VALVE: 1438.11 m	RATHOLE SIZE: mm
CASING PERFORATED INTERVAL: N/A m	DRILL PIPE: OD mm 114.3 kg/m 24.7
TOTAL DEPTH: 1479.6 m	DRILL COLLARS ABOVE TESTER VALVE: ID mm 71 LENGTH m 152.49
AMOUNT AND TYPE CUSHION: Nil	SURFACE CHOKE: 25.4 mm
	BOTTOM CHOKE: 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS/OIL RATIO _____

REFRACTOMETER/RELATIVE DENSITY

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT _____ mg/L

SAMPLE SHIPPED TO LABORATORY	YES	NO
SAMPLER No.	☐	☒
GAS SAMPLE BOTTLE No.	☐	☒

LABORATORY: Recovery Sample to C and G (Grande Prairie)

REMARKS

CANADA OIL AND GAS LANDS ADMINISTRATION
ADMINISTRATION DU PÉTROLE ET DU GAZ DES TERRES DU CANADA
MAR 19 1984
ENGINEERING AND CONTROL BRANCH
TECHNIQUE ET DU CONTRÔLE

COMPANY	HOME OIL COMPANY LIMITED
LEGAL DESCRIPTION	60-01-43.14 118-38-05.60
PROVINCE OR TERRITORY	N.W.T.
FIELD OR AREA	KAKISA RIVER
TEST NUMBER	1
WELL NAME AND NUMBER	HOME KAKISA R J-42
TESTED INTERVAL	1450 - 1479.6

FORM 344C

HALLIBURTON

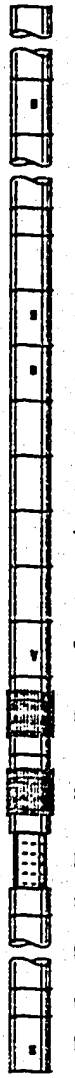
TICKET NO.: 25 971
HOME OIL COMPANY LIMITED
HOME KAKISA R J-42

DATES AND TIMES (00:00-24:00 HRS.)	REMARKS
1984 02 24	
16:30	Arrived on location.
1984 02 26	
12:30	Job started.
15:30	Run in hole.
17:35	Head up.
18:40	Preflow: Weak air blow, no gas to surface, steady throughout.
18:50	Shut in.
20:05	Initial Flow: (air hose broke and repaired) very weak air blow, no gas to surface, dead in 30 minutes.
22:05	Shut in.
02:05	Pull loose (mud dropped 2 m in annulus).
05:00	Recover recorders.
07:00	Job complete.

HALLIBURTON

HALLIBURTON SERVICES LIMITED

TICKET NO. 25 971



		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	171.0	71.0	114.36	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	38.13	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1435.38
12	DUAL CIP VALVE.....	127.0	22.1	1.48	
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1438.11
80	AP RUNNING CASE.....	127.0	57.2	1.25	1440.65
80	AP RUNNING CASE.....	127.0	57.2	1.25	1441.90
82	TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
70	OPEN HOLE PACKER.....	196.9	38.9	1.82	
70	OPEN HOLE PACKER.....	196.9	38.9	1.82	1450.00
21	PERFORATED TAIL PIPE.....	127.0	60.2	8.27	
5	CROSSOVER.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	18.86	
5	CROSSOVER.....	171.5	76.2	0.31	
81	BLANKED-OFF RUNNING CASE.....	127.0	57.2	1.25	1478.35

EQUIPMENT DATA

HALLIBURTON

NOMENCLATURE

b	=	Formation Volume Factor	1
CD	=	Wellbore Storage Coefficient	1
CT	=	System Compressibility	1/kPa
CUSH	=	Metres or Density of Cushion	m OR kg/m³
DCFAC	=	Drill Collar Factor	m³/m
DCID	=	Drill Collar I.D.	mm
DCLEN	=	Drill Collar Length	m
DPFAC	=	Drill Pipe Factor	m³/m
DPID	=	Drill Pipe I.D.	mm
DR	=	Damage Ratio	1
GOR	=	Gas Oil Ratio	1
GRAD	=	Gradient	kPa/m
h	=	Estimated Net Pay Thickness	m
K	=	Permeability	mD
Kh	=	Permeability * Net Pay	mD.m
Kh/u	=	Transmissibility	mD·m/mPa·s
M(P*)	=	Real Gas Potential of P*	P Pa·Pa/Pa·s
M(Pf)	=	Real Gas Potential of Pf	P Pa·Pa/Pa·s
OF1	=	Indicated Flow Rate (Max)	m³/d
OF2	=	Indicated Flow Rate (Min)	m³/d
OF3	=	Theoretical Flow Rate (Max)	m³/d
OF4	=	Theoretical Flow Rate (Min)	m³/d
P*	=	Extrapolated Static Pressure	kPa
PD	=	Pressure Dimensionless	1
Pd	=	Pressure Drop across Damaged Zone	kPa
		(except Gas Horner)	P Pa·Pa/Pa·s
Pf	=	Final Flow Pressure	kPa
PI	=	Productivity Index	kPa
POROS	=	Porosity	%
Pot.	=	Potential Surface	m
Q	=	Liquid Production Rate During Test	m³/d
Q1	=	Theoretical Liquid Production Rate	
		with Damage Removed	m³/d
S	=	Skin Factor	1
SPGR	=	Gas Gravity	1
SPO	=	Oil Gravity	1
TD	=	Time Dimensionless	1
TEMP	=	Temperature	Celsius
TVDEP	=	Tester Valve Depth	m
VISG	=	Viscosity of Gas	uPa·s
VISO	=	Viscosity of Oil	mPa·s
VISW	=	Viscosity of Water	mPa·s
Z	=	Gas Deviation Factor	1

NOTICE

These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warranty express or implied as to the accuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

FORMATION TESTING

Technical Report

CALGARY, ALBERTA

A Halliburton Company

TESTERS	
	G. Taylor
WITNESS	D. Kamieniecki
DRILLING CONTRACTOR	Hi-Tower #17

HALLIBURTON

FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO.	25 972
DATE OF TEST	84-02-28
TEST No.	2
JOB TYPE	Dual Bottom Hole

PRESSURE SUMMARY kPa

GAUGE NUMBER	3650	2804	7993	1452		
GAUGE DEPTH	1512.38	1517.65	1518.90	1553.75		
BLANKED OFF	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC		16 444	16 448	16 829		
FIRST FLOW INITIAL	91	433	500	797		
FIRST FLOW FINAL	446	481	515	797		
FIRST CLOSED IN	504	10 797	10 752	11 159		
SECOND FLOW INITIAL	631	772	853	1 161		
SECOND FLOW FINAL	1 283	1 349	1 335	1 725		
SECOND CLOSED IN	1 303	10 564	9 796	10 932		
THIRD FLOW INITIAL						
THIRD FLOW FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC		16 243	*	16 627		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	10	90		TESTER VALVE OPENED	16:54
CLOSED IN	60	240		PACKER UNSEATED	23:34

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE

METRES	DESCRIPTION OF LIQUID
60	Oil stained mud.
70	Brackish water.
130	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Sulfur Point	TEMP. REC. No.: TE70; DEPTH: 1520.15 m; MAX. TEMP.: 42.9 °C
NET PRODUCTIVE THICKNESS: m	MUD TYPE: Gel Chemical
K B ELEVATION: 619.76 m	MUD DENSITY: 1102 kg/m³; MUD VISC: 55 s
ALL DEPTHS MEASURED FROM: X KB, GROUND	CASING OR HOLE SIZE: 222 mm
PACKER DEPTHS: TOP 1527, BOTTOM m	RATHOLE SIZE: mm
DEPTH OF TESTER VALVE: 1515.11 m	DRILL PIPE: OD mm 114.3, kg m 24.7
CASING PERFORATED INTERVAL: N/A m	DRILL COLLARS ABOVE TESTER VALVE: ID mm 71, LENGTH m 152.49
TOTAL DEPTH: 1555 m	SURFACE CHOKE: 25.4 mm
AMOUNT AND TYPE CUSHION: Nil	BOTTOM CHOKE: 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C
GAS/OIL RATIO _____
REFRACTOMETER / ~~RELATIVE DENSITY~~
RECOVERY WATER _____ @ _____ °C
CHLORIDE CONTENT 120 000 mg/L

SAMPLE SHIPPED TO LABORATORY	YES	NO
SAMPLER No. 1005	X	☐
GAS SAMPLE BOTTLE No. _____	☐	X

LABORATORY C and G (Grande Prairie)

REMARKS

* Not readable, clock stopped.

COMPANY: HOME OIL COMPANY LIMITED
LEGAL DESCRIPTION: 60-01-43.14 118-38-05.60
PROVINCE OR TERRITORY: N.W.T.
FIELD OR AREA: KAKISA RIVER
TEST NUMBER: 2
WELL NAME AND NUMBER: HOME KAKISA R J-42
TESTED INTERVAL: 1527 - 1555

FORM 344C

HALLIBURTON

TICKET NO.: 25 972
HOME OIL COMPANY LIMITED
HOME KAKISA R J-42

DATES AND TIMES (00:00-24:00 HRS)	REMARKS
1984 02 28	
12:00	Pick up tool.
13:30	Run in hole.
16:15	Head up.
16:54	Preflow: Weak blow building to strong, bottom of pail in 1 1/2 minutes. Remaining steady throughout, annulus level did not drop. No gas to surface.
17:04	Shut in.
18:04	Weak blow, building slightly bottom of pail in 13 minutes, no gas to surface.
19:34	Shut in.
23:34	Pull loose.
1984 02 29	
03:00	Recover recorders.
04:15	Job complete.

HALLIBURTON

H A L L I B U R T O N S E R V I C E S L I M I T E D

SPECIAL PRESSURE DATA

DATE: 84-02-28 TICKET # 25972

* Gauge Number	:	1452.	*
* Gauge Depth	:	1554. m	*
* Time of Flow	:	10.0 min.	*
* Final Pressure	:	797.1 kPa.	*

Initial Hydrostatic Pressure = 16829.3 kPa
Final Hydrostatic Pressure = 16627.0 kPa

GAUGE 1, FLOW 1

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	797.1
2.	0.0084	5.0	791.6
3.	0.0167	10.0	797.1

HALLIBURTON SERVICES LIMITED

GAUGE 1, CIP 1

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0034	2.0	0.7796	1065.2
2.	0.0069	4.0	0.5408	1534.6
3.	0.0103	6.0	0.4244	2242.9
4.	0.0137	8.0	0.3514	3420.7
5.	0.0171	10.0	0.3006	4903.2
6.	0.0205	12.0	0.2630	6191.0
7.	0.0256	15.0	0.2218	7309.8
8.	0.0342	20.0	0.1758	8390.4
9.	0.0427	25.0	0.1460	9081.1
10.	0.0512	30.0	0.1249	9576.4
11.	0.0598	35.0	0.1090	10006.6
12.	0.0683	40.0	0.0969	10337.8
13.	0.0768	45.0	0.0872	10586.4
14.	0.0854	50.0	0.0791	10817.5
15.	0.0938	55.0	0.0726	11005.6
16.	0.1024	60.0	0.0669	11158.8

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 84-02-28 TICKET # 25972

* Gauge Number	:	1452.	*
* Gauge Depth	:	1554. m	*
* Time of Flow	:	90.0 min.	*
* Final Pressure	:	1725.0 kPa.	*

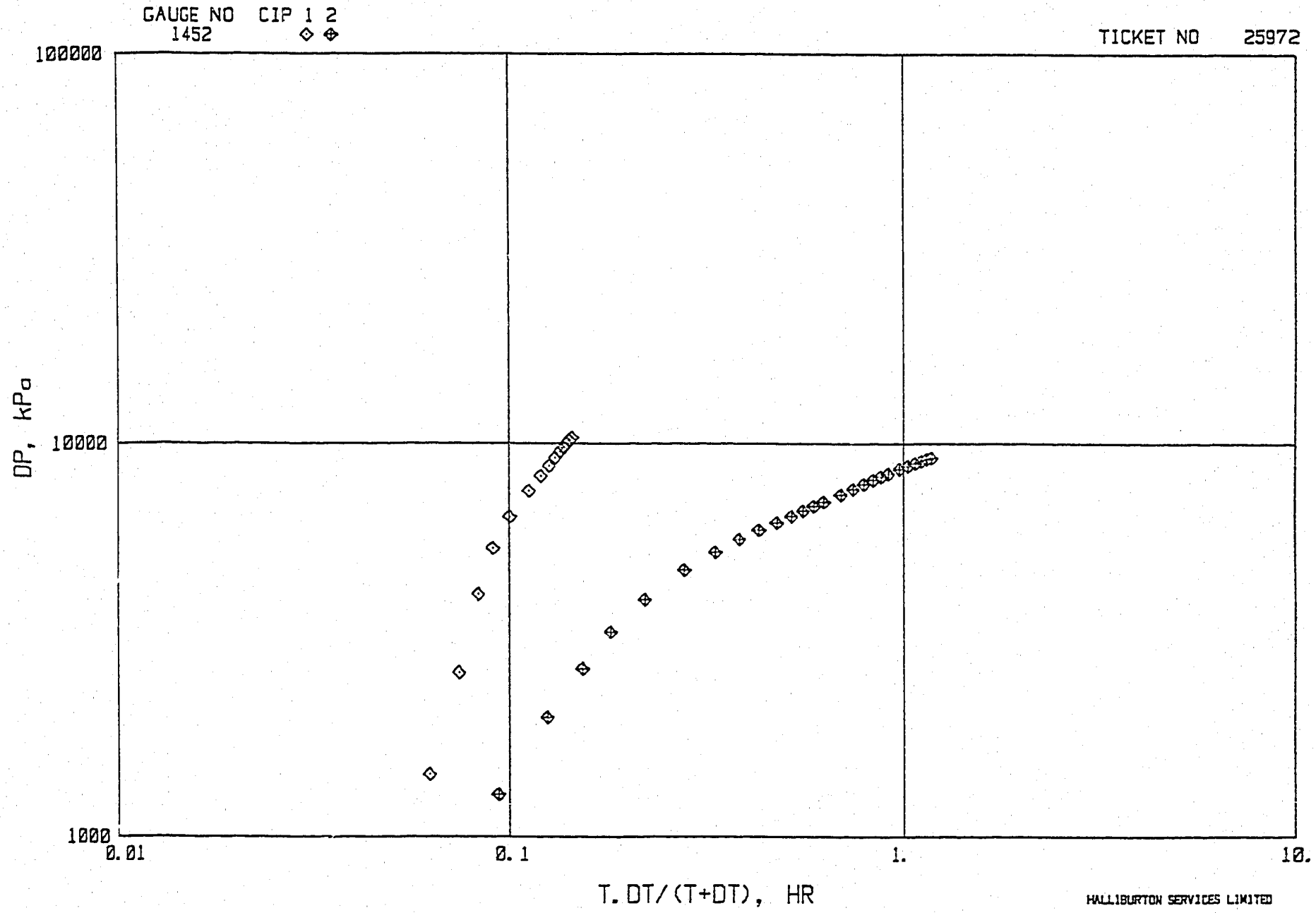
GAUGE 1, FLOW 2

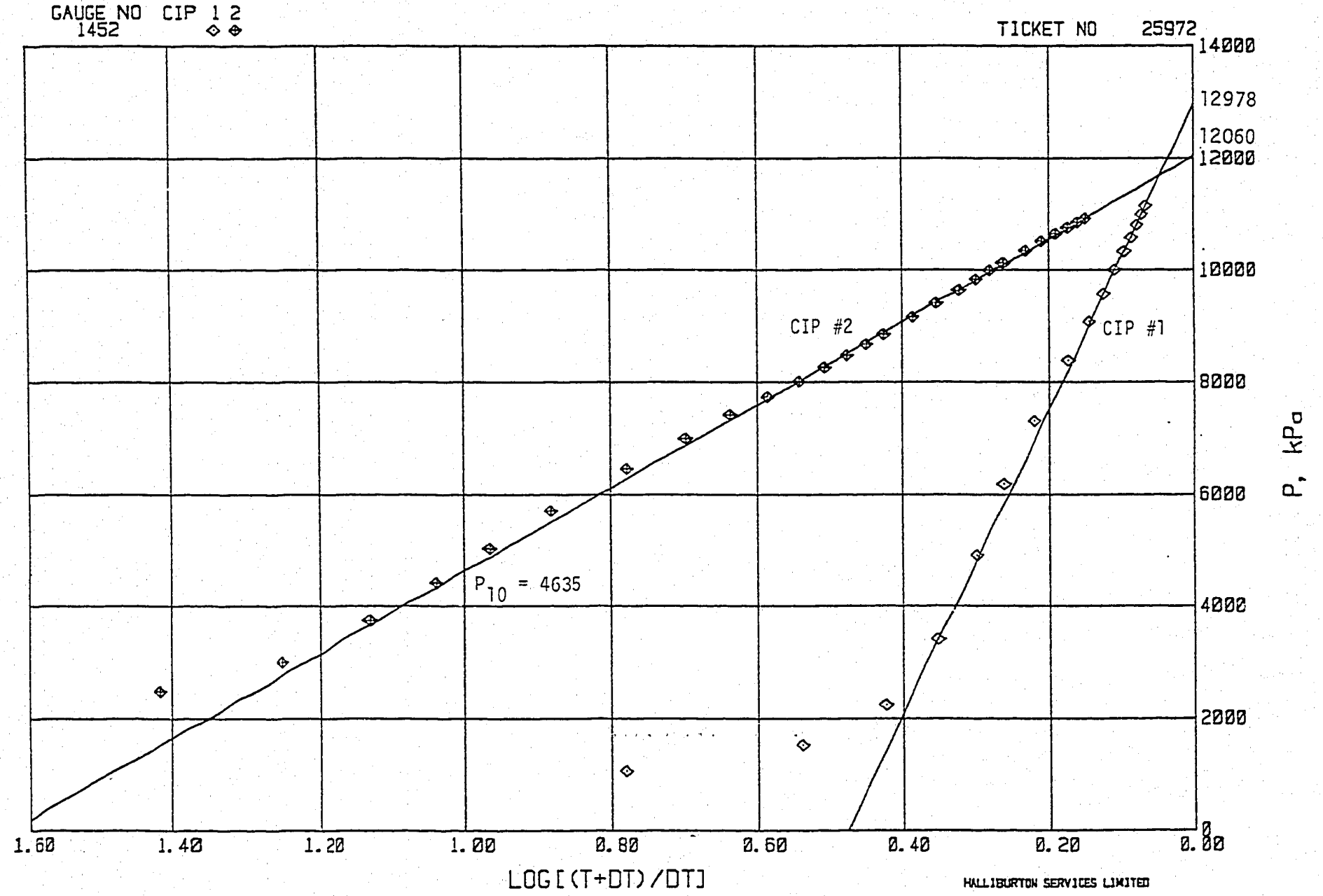
	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	1161.3
2.	0.0168	10.0	1194.2
3.	0.0337	20.0	1273.8
4.	0.0505	30.0	1352.5
5.	0.0673	40.0	1425.7
6.	0.0840	50.0	1491.6
7.	0.1009	60.0	1552.0
8.	0.1177	70.0	1609.7
9.	0.1345	80.0	1667.3
10.	0.1513	90.0	1725.0

HALLIBURTON SERVICES LIMITED

GAUGE 1, CIP 2

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0034	2.0	1.6980	2022.4
2.	0.0066	4.0	1.4180	2484.5
3.	0.0099	6.0	1.2501	3011.6
4.	0.0133	8.0	1.1302	3748.1
5.	0.0166	10.0	1.0419	4409.4
6.	0.0200	12.0	0.9690	5025.8
7.	0.0250	15.0	0.8836	5706.3
8.	0.0333	20.0	0.7775	6462.6
9.	0.0416	25.0	0.6986	6995.2
10.	0.0498	30.0	0.6372	7418.1
11.	0.0582	35.0	0.5861	7741.0
12.	0.0665	40.0	0.5440	8017.1
13.	0.0748	45.0	0.5081	8264.7
14.	0.0831	50.0	0.4771	8480.3
15.	0.0914	55.0	0.4500	8676.6
16.	0.0997	60.0	0.4260	8851.8
17.	0.1164	70.0	0.3852	9163.7
18.	0.1329	80.0	0.3523	9411.3
19.	0.1496	90.0	0.3245	9640.6
20.	0.1662	100.0	0.3010	9833.3
21.	0.1828	110.0	0.2809	9996.6
22.	0.1994	120.0	0.2633	10132.3
23.	0.2327	140.0	0.2341	10363.4
24.	0.2659	160.0	0.2109	10522.2
25.	0.2991	180.0	0.1919	10656.1
26.	0.3324	200.0	0.1761	10766.2
27.	0.3656	220.0	0.1627	10863.4
28.	0.3989	240.0	0.1513	10932.2


GAUGE NO
1452
CIP 1 2
TICKET NO 25972
100000
10000
1000
DP, kPa
0.01
0.1
1.
10.
T. DT/(T+DT), HR
HALLIBURTON SERVICES LIMITED


GAUGE NO CIP 1 2
1452
TICKET NO 25972
14000
12978
12060
12000
10000
8000
6000
4000
2000
0
P, kPa
CIP #2
CIP #1
P_{10} = 4635
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG[(T+DT)/DT]
HALLIBURTON SERVICES LIMITED

HALLIBURTON SERVICES LIMITED TICKET NO. 25972

		O.D.(mm)	I.D.(mm)	LENGTH(m)	DEPTH(m)
3	DRILL COLLARS.....	171.0	71.0	114.36	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	38.13	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1512.38
12	DUAL CIP VALVE.....	127.0	22.1	1.48	
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1515.11
80	AP RUNNING CASE.....	127.0	57.2	1.25	1517.65
80	AP RUNNING CASE.....	127.0	57.2	1.25	1518.90
82	TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
70	OPEN HOLE PACKER.....	196.9	38.9	1.82	
70	OPEN HOLE PACKER.....	196.9	38.9	1.82	1527.00
21	PERFORATED TAIL PIPE.....	127.0	60.2	6.67	
5	CROSSOVER.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	18.86	
5	CROSSOVER.....	171.5	76.2	0.31	
81	BLANKED-OFF RUNNING CASE.....	127.0	57.2	1.25	1553.75

EQUIPMENT DATA

HALLIBURTON

NOMENCLATURE

b	=	Formation Volume Factor	1
CD	=	Wellbore Storage Coefficient	1
CT	=	System Compressibility	1/kPa
CUSH	=	Metres or Density of Cushion	m OR kg/m³
DCFAC	=	Drill Collar Factor	m³/m
DCID	=	Drill Collar I.D.	mm
DCLEN	=	Drill Collar Length	m
DPFAC	=	Drill Pipe Factor	m³/m
DPID	=	Drill Pipe I.D.	mm
DR	=	Damage Ratio	1
GOR	=	Gas Oil Ratio	1
GRAD	=	Gradient	kPa/m
h	=	Estimated Net Pay Thickness	m
K	=	Permeability	mD
Kh	=	Permeability * Net Pay	mD.m
Kh/u	=	Transmissibility	mD·m/mPa·s
M(P*)	=	Real Gas Potential of P*	P Pa·Pa/Pa·s
M(Pf)	=	Real Gas Potential of Pf	P Pa·Pa/Pa·s
OF1	=	Indicated Flow Rate (Max)	m³/d
OF2	=	Indicated Flow Rate (Min)	m³/d
OF3	=	Theoretical Flow Rate (Max)	m³/d
OF4	=	Theoretical Flow Rate (Min)	m³/d
P*	=	Extrapolated Static Pressure	kPa
PD	=	Pressure Dimensionless	1
Pd	=	Pressure Drop across Damaged Zone	kPa
		(except Gas Horner)	P Pa·Pa/Pa·s
Pf	=	Final Flow Pressure	kPa
PI	=	Productivity Index	kPa
POROS	=	Porosity	%
Pot.	=	Potential Surface	m
Q	=	Liquid Production Rate During Test	m³/d
Q1	=	Theoretical Liquid Production Rate with Damage Removed	m³/d
S	=	Skin Factor	1
SPGR	=	Gas Gravity	1
SPO	=	Oil Gravity	1
TD	=	Time Dimensionless	1
TEMP	=	Temperature	Celsius
TVDEP	=	Tester Valve Depth	m
VISG	=	Viscosity of Gas	uPa·s
VISO	=	Viscosity of Oil	mPa·s
VISW	=	Viscosity of Water	mPa·s
Z	=	Gas Deviation Factor	1

N O T I C E

TESTERS: G. Taylor

WITNESS: D. Kamieniecki

DRILLING CONTRACTOR: Hi-Tower #17

HALLIBURTON

FORMATION TESTING
DATA SHEET

INVOICE NO. 25 974

DATE OF TEST 84-03-05

TEST No. 3

JOB TYPE Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER	7993	1462	2804	3650		
GAUGE DEPTH	1698.44	1704.39	1705.64	1727.76		
BLANKED OFF	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC						
FIRST FLOW — INITIAL						
FIRST FLOW — FINAL						
FIRST CLOSED IN						
SECOND FLOW — INITIAL						
SECOND FLOW — FINAL						
SECOND CLOSED IN						
THIRD FLOW — INITIAL						
THIRD FLOW — FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC						

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW				TESTER VALVE OPENED	
CLOSED IN				PACKER UNSEATED	

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE — METRES	DESCRIPTION OF LIQUID
Nil	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Basal Red Beds	TEMP. REC. No.: TE70; DEPTH: 1706.89 m; MAX. TEMP.: 45.5 °C
NET PRODUCTIVE THICKNESS: m	MUD TYPE: Gel Chemical
K B ELEVATION: 619.76 m	MUD DENSITY: 1060 kg/m³; MUD VISC: 70 s/L
ALL DEPTHS MEASURED FROM: ☒ KB ☐ GROUND	CASING OR HOLE SIZE: 222 mm
PACKER DEPTHS: TOP 1719 BOTTOM 1726 m	RATHOLE SIZE: mm
DEPTH OF TESTER VALVE: 1699.69 m	DRILL PIPE: OD mm 114.3; kg/m 24.7
CASING PERFORATED INTERVAL: N/A m	DRILL COLLARS ABOVE TESTER VALVE: ID mm 71; LENGTH m 171.35
TOTAL DEPTH: 1750 m	SURFACE CHOKE: 25.4 mm
AMOUNT AND TYPE CUSHION: Nil	BOTTOM CHOKE: 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS / OIL RATIO _____

REFRACTOMETER/RELATIVE DENSITY

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT _____ mg/L

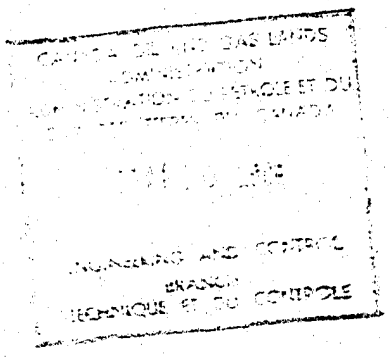
SAMPLE SHIPPED TO LABORATORY — YES ☐ NO ☒

SAMPLER No. _____ — ☐ ☒

GAS SAMPLE BOTTLE No. _____ — ☐ ☒

LABORATORY N/A

REMARKS



FORM 344C

COMPANY: HOME OIL COMPANY LIMITED

LEGAL DESCRIPTION: 60-01-43.14 118-38-05.60

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: KAKISA RIVER

TEST NUMBER: 3

WELL NAME AND NUMBER: HOME KAKISA RIVER J-42

TESTED INTERVAL: 1719 - 1726

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 03 05					
17:00					Pick up tool.
19:00					Run in hole.
21:45					Head up.
22:20					Pumped up but packers didn't seat.
22:50					Repump. Packers didn't seat.
23:20					Repump. Packers didn't seat.
24:00					Pull loose.
84 03 06					
03:15					Recover recorders and service tool.
					Top packer had a hole in it, everything
					else looked fine.
07:30					Job complete.

		O.D.(mm)	I.D.(mm)	LENGTH(m)	DEPTH(m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1698.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1699.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1704.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1705.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1719.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	4.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1726.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1727.76

EQUIPMENT DATA

WITNESS	G. Taylor
	D. Kamieniecki
DRILLING CONTRACTOR	Hi-Tower #17

HALLIBURTON

FORMATION TESTING
DATA SHEET

INVOICE NO.	25 975
DATE OF TEST	84-03-06
TEST No.	4
JOB TYPE	Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER	7993	1452	2804	3650		
GAUGE DEPTH	1698.44	1704.39	1705.64	1727.76		
BLANKED OFF	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC		18 817	18 828	18 957		
FIRST FLOW INITIAL		177	192	398		
FIRST FLOW FINAL	NO	150	177	405		
FIRST CLOSED IN	DATA	3 999	4 045	4 216		
SECOND FLOW INITIAL		170	190	378		
SECOND FLOW FINAL		139	177	372		
SECOND CLOSED IN		2 457	2 490	2 670		
THIRD FLOW INITIAL						
THIRD FLOW FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC		18 402	18 416	18 617		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	5	90		TESTER VALVE OPENED	11:45
CLOSED IN	70	180		PACKER UNSEATED	17:30

LIQUID RECOVERY DATA

METRES	DESCRIPTION OF LIQUID
2	Brine cut drilling mud.
2	TOTAL LIQUID RECOVERY

MEASURED FROM TESTER VALVE

EQUIPMENT AND WELL DATA

FORMATION TESTED	Basal Red Beds	TEMP. REC. No.	TE70
		DEPTH	1706.89 m
		MAX. TEMP.	48.1 °C
NET PRODUCTIVE THICKNESS	m	MUD TYPE	Gel Chemical
K B ELEVATION	619.76 m	MUD DENSITY kg/m³	1060
		MUD VISC s/L	70
ALL DEPTHS MEASURED FROM:	[X] KB [ ] GROUND	CASING OR HOLE SIZE	222 mm
PACKER DEPTHS TOP	1719	BOTTOM 1726 m	RATHOLE SIZE mm
DEPTH OF TESTER VALVE	1699.69 m	DRILL PIPE OD mm	114.3
		kg/m	24.7
CASING PERFORATED INTERVAL	N/A m	DRILL COLLARS ABOVE TESTER VALVE ID mm	71
		LENGTH m	171.35
TOTAL DEPTH	1750 m	SURFACE CHOKE	25.4 mm
AMOUNT AND TYPE CUSHION	Nil	BOTTOM CHOKE	19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS/OIL RATIO _____

REFRACTOMETER / ~~RELATIVE DENSITY~~

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT 25 000 mg/L

	YES	NO
SAMPLE SHIPPED TO LABORATORY	☐	☒
SAMPLER No. _____	☐	☒
GAS SAMPLE BOTTLE No. _____	☐	☒

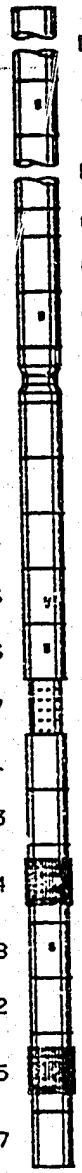
LABORATORY Recovery samples to C and G

REMARKS

COMPANY	HOME OIL COMPANY LIMITED
LEGAL DESCRIPTION	60-01-43.14 118-38-05.60
PROVINCE OR TERRITORY	N.W.T.
FIELD OR AREA	KAKISA RIVER
TEST NUMBER	4
WELL NAME AND NUMBER	HOME KAKISA RIVER J-42
TESTED INTERVAL	1719 - 1726

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 03 06					
07:30					Run hole.
10:45					Head up.
11:00					Pump up packers.
11:45					Preflow: Weight indicator showed that tool opened but no bubbles in pail.
11:50					Closed tool in.
13:00					Final Flow: Weight indicator showed tool opened, one bubble in pail only.
14:30					Closed tool in.
17:30					Pull loose.
22:30					Recover recorders.
00:15					Job complete.

PRODUCTION TEST DATA



		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1698.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1699.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1704.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1705.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1719.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	4.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1726.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1727.76

EQUIPMENT DATA

TESTER: G. Taylor
WITNESS: D. Kamieniecki
DRILLING CONTRACTOR: Hi-Tower #17

HALLIBURTON

FORMATION TESTING
DATA SHEET

INVOICE NO. 49 176
DATE OF TEST 84-03-07
TEST No. 5
JOB TYPE Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER	7993	1452	2804	3650		
GAUGE DEPTH	1602.44	1608.39	1609.64	1635.76		
BLANKED OFF	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC			17 774	18 013		
FIRST FLOW INITIAL			1 166	2 919		
FIRST FLOW FINAL			4 312	5 720		
FIRST CLOSED IN	NO	NO	12 991	13 221		
SECOND FLOW INITIAL	DATA	DATA	4 731	5 528		
SECOND FLOW FINAL			12 984	13 245		
SECOND CLOSED IN			12 991	13 250		
THIRD FLOW INITIAL						
THIRD FLOW FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC			17 441	17 668		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	5	90		TESTER VALVE OPENED	03:15
CLOSED IN	60	180		PACKER UNSEATED	08:50

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE: METRES	DESCRIPTION OF LIQUID
1197	Sour smelling salt water.
1197	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Lower Keg River	TEMP. REC. No. TE70; DEPTH 1610.89 m; MAX. TEMP. NO DATA °C
NET PRODUCTIVE THICKNESS m	MUD TYPE Gel Chemical
K B ELEVATION 619.76 m	MUD DENSITY 1060 kg/m³; MUD VISC 70 s/L
ALL DEPTHS MEASURED FROM: ☒ KB ☐ GROUND	CASING OR HOLE SIZE 222 mm
PACKER DEPTHS TOP 1623 BOTTOM 1634 m	RATHOLE SIZE mm
DEPTH OF TESTER VALVE 1603.69 m	DRILL PIPE OD mm 114.3; kg/m 24.7
CASING PERFORATED INTERVAL N/A m	DRILL COLLARS ABOVE TESTER VALVE ID mm 71; LENGTH m 171.35
TOTAL DEPTH 1750 m	SURFACE CHOKE 25.4 mm
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C
GAS - OIL RATIO _____
REFRACTOMETER/~~RELATIVE DENSITY~~
RECOVERY WATER _____ @ _____ °C
CHLORIDE CONTENT 135 000 mg/L

SAMPLE SHIPPED TO LABORATORY — YES ☐ NO ☒
SAMPLER No. _____ ☐ ☒
GAS SAMPLE BOTTLE No. _____ ☐ ☒
LABORATORY Recovery samples to C and G

REMARKS

CANADA OIL AND GAS LANDS ADMINISTRATION
ADMINISTRATION DU PÉTROLE ET DU GAZ DES TERRES DU CANADA
MAY 10 1984
ENGINEERING AND CONTROL BRANCH
TECHNIQUE ET DU CONTRÔLE

COMPANY: HOME OIL COMPANY LIMITED
LEGAL DESCRIPTION: 60-01-34.14 118-38-05.60
PROVINCE OR TERRITORY: N.W.T.
FIELD OR AREA: KAKISA RIVER
TEST NUMBER: 5
WELL NAME AND NUMBER: HOME KAKISA RIVER J-42
TESTED INTERVAL: 1623 - 1634

FORM 344C

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 03 06					
24:00					Run in hole.
84 03 07					
02:15					Head up.
02:35					Pump up packers.
03:15					Preflow: Weight indicator showed tool opened in 12 minutes, no bubbles in pail.
03:20					Closed tool in.
04:20					Final Flow: Weight indicator showed tool opened but no bubbles in pail.
05:50					Closed tool in. (Started to bubble 20 minutes into shut in).
08:50					Pull loose.
13:15					Recover recorders.
15:00					Job complete.

PRODUCTION TEST DATA

		O.D.(mm)	I.D.(mm)	LENGTH(m)	DEPTH(m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1602.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1603.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1608.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1609.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1623.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	8.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1634.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1635.76

EQUIPMENT DATA

TESTERS: G. Taylor

WITNESS: D. Kamieniecki

DRILLING CONTRACTOR: Hi-Tower #17

HALLIBURTON

FORMATION TESTING
DATA SHEET

INVOICE NO. 49 177

DATE OF TEST 84-03-07

TEST No. 6

JOB TYPE Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER		7993	1452	2804	3650		
GAUGE DEPTH		1568.44	1574.39	1575.64	1594.76		
BLANKED OFF		~~YES~~ NO	~~YES~~ NO	~~YES~~ NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL		24	24	24	48		
INITIAL HYDROSTATIC			17 407	17 413	17 588		
FIRST FLOW	INITIAL	0	181	192	568		
	FINAL	249	352	398	606		
FIRST CLOSED IN		350	12 530	12 546	12 688		
SECOND FLOW	INITIAL	364	490	516	674		
	FINAL	2 054	2 127	2 151	2 317		
SECOND CLOSED IN		2 070	12 474	12 518	12 668		
THIRD FLOW	INITIAL						
	FINAL						
THIRD CLOSED IN							
FINAL HYDROSTATIC			16 951	17 007	17 156		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	5	90		TESTER VALVE OPENED	18:53
CLOSED IN	60	180		PACKER UNSEATED	00:32

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE

METRES	DESCRIPTION OF LIQUID
200	Sour smelling salt water.
200	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Upper Keg River	TEMP. REC. No. TE70; DEPTH 1576.89 m; MAX. TEMP. 47.5 °C
NET PRODUCTIVE THICKNESS m	MUD TYPE: Gel Chemical
K B ELEVATION 619.76 m	MUD DENSITY 1060 kg/m³; MUD VISC 70 s/L
ALL DEPTHS MEASURED FROM: ☒ KB ☐ GROUND	CASING OR HOLE SIZE 222 mm
PACKER DEPTHS TOP 1589 BOTTOM 1593 m	RATHOLE SIZE mm
DEPTH OF TESTER VALVE 1569.69 m	DRILL PIPE OD mm 114.3; kg/m 24.7
CASING PERFORATED INTERVAL N/A m	DRILL COLLARS ABOVE TESTER VALVE ID mm 71; LENGTH m 171.35
TOTAL DEPTH 1750 m	SURFACE CHOKE 25.4 mm
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS OIL RATIO _____

REFRACTOMETER / ~~RELATIVE DENSITY~~

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT 105 000 mg/L

	YES	NO
SAMPLE SHIPPED TO LABORATORY		
SAMPLER No.	☐	☒
GAS SAMPLE BOTTLE No.	☐	☒

LABORATORY Recovery samples to C and G

REMARKS

CANADA OIL AND GAS LANDS ADMINISTRATION
ADMINISTRATION DU PÉTROLE ET DU GAZ DES TERRES DU CANADA
MAY 10 1984
ENGINEERING AND CONTROL BRANCH
TECHNIQUE ET DU CONTRÔLE

COMPANY: HOME OIL COMPANY LIMITED

LEGAL DESCRIPTION: 60-01-43.14 118-38-05.60

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: KAKISA RIVER

TEST NUMBER: 6

WELL NAME AND NUMBER: HOME KAKISA RIVER J-42

TESTED INTERVAL: 1589 - 1593

FORM 344C

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 07 03					
15:00					Job started.
16:15					Run in hole.
18:00					Head up.
18:20					Pump up packers.
18:57					Preflow: Very weak blow building to weak, no gas to surface.
19:02					Closed tool in.
20:02					Final Flow: Very weak blow building to strong in 35 minutes, no gas to surface.
84 03 08					
00:32					Pull loose.
03:15					Recover recorders.
04:00					Job complete.

PRODUCTION TEST DATA

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 84-03-07 TICKET # 49177

* Gauge Number	:	3650.	*
* Gauge Depth	:	1595. m	*
* Time of Flow	:	5.0 min.	*
* Final Pressure	:	606.2 kPa.	*

Initial Hydrostatic Pressure = 17588.4 kPa
Final Hydrostatic Pressure = 17156.1 kPa

GAUGE 1, FLOW 1

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	568.4
2.	0.0048	2.5	574.0
3.	0.0096	5.0	606.2

GAUGE 1, CIP 1

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0033	2.0	0.5387	10669.8
2.	0.0065	4.0	0.3517	11342.6
3.	0.0097	6.0	0.2639	11688.6
4.	0.0129	8.0	0.2118	11890.2
5.	0.0162	10.0	0.1762	12027.9
6.	0.0194	12.0	0.1517	12155.9
7.	0.0244	15.0	0.1246	12274.4
8.	0.0324	20.0	0.0970	12409.2
9.	0.0406	25.0	0.0791	12503.8
10.	0.0487	30.0	0.0669	12564.0
11.	0.0568	35.0	0.0580	12603.2
12.	0.0649	40.0	0.0511	12630.9
13.	0.0729	45.0	0.0458	12652.9
14.	0.0811	50.0	0.0414	12667.2
15.	0.0892	55.0	0.0378	12680.6
16.	0.0973	60.0	0.0348	12688.2

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 84-03-07 TICKET # 49177

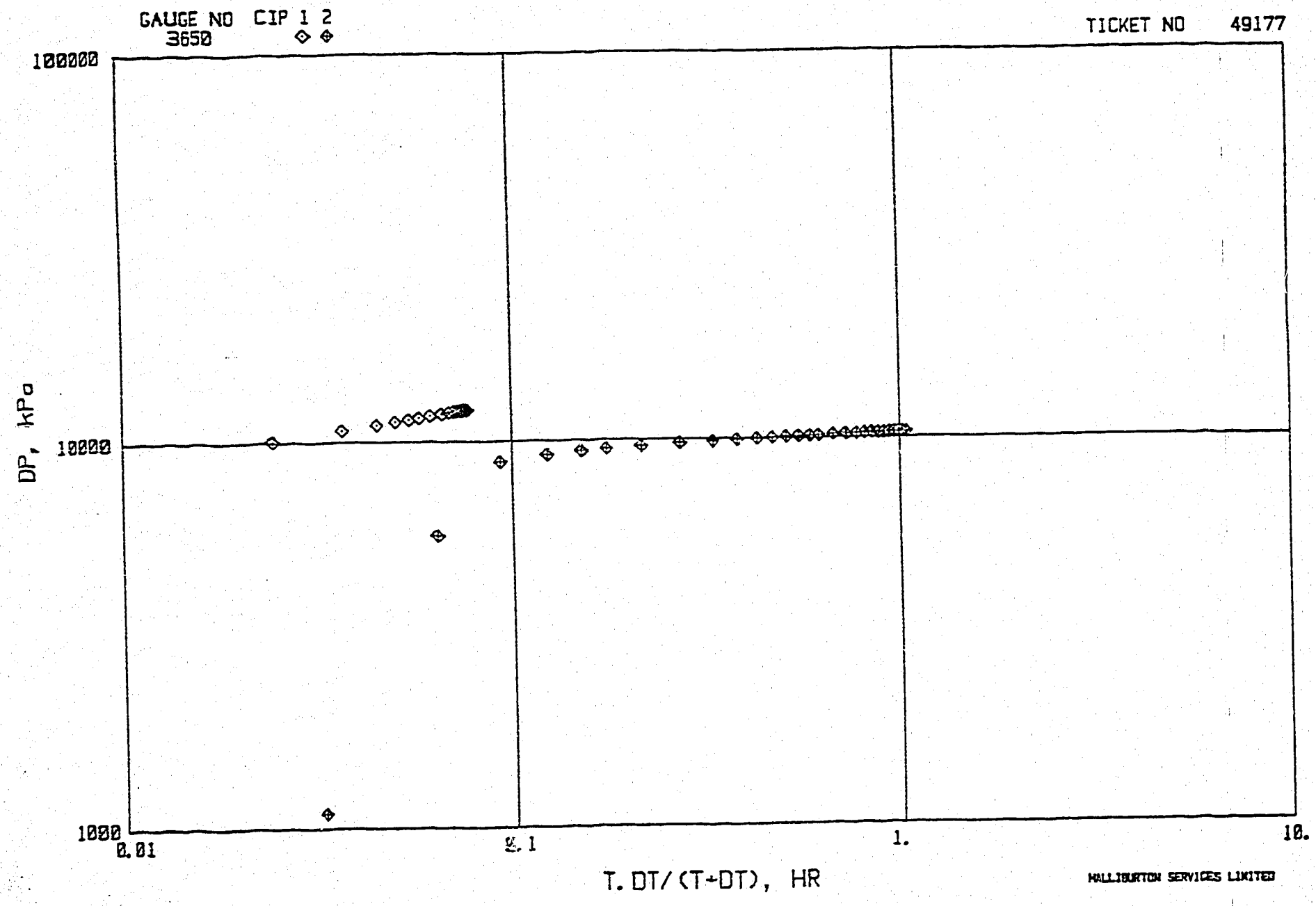
* Gauge Number	:	3650.	*
* Gauge Depth	:	1595. m	*
* Time of Flow	:	90.0 min.	*
* Final Pressure	:	2317.0 kPa.	*

GAUGE 1, FLOW 2

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	674.4
2.	0.0164	10.0	989.9
3.	0.0327	20.0	1282.6
4.	0.0490	30.0	1505.2
5.	0.0653	40.0	1691.8
6.	0.0816	50.0	1878.4
7.	0.0980	60.0	2033.8
8.	0.1143	70.0	2129.4
9.	0.1306	80.0	2221.3
10.	0.1470	90.0	2317.0

GAUGE 1, CIP 2

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0033	2.0	1.6892	3409.2
2.	0.0067	4.0	1.3907	8015.8
3.	0.0099	6.0	1.2295	11165.8
4.	0.0133	8.0	1.1099	11508.9
5.	0.0167	10.0	1.0196	11694.3
6.	0.0199	12.0	0.9514	11804.2
7.	0.0250	15.0	0.8646	11940.9
8.	0.0332	20.0	0.7604	12088.1
9.	0.0416	25.0	0.6811	12178.9
10.	0.0499	30.0	0.6198	12252.5
11.	0.0582	35.0	0.5700	12304.1
12.	0.0665	40.0	0.5284	12348.0
13.	0.0749	45.0	0.4927	12385.3
14.	0.0832	50.0	0.4623	12414.9
15.	0.0915	55.0	0.4357	12438.8
16.	0.0998	60.0	0.4122	12460.8
17.	0.1164	70.0	0.3725	12496.2
18.	0.1331	80.0	0.3399	12526.7
19.	0.1497	90.0	0.3129	12549.7
20.	0.1664	100.0	0.2899	12573.6
21.	0.1830	110.0	0.2703	12594.6
22.	0.1996	120.0	0.2533	12610.8
23.	0.2162	130.0	0.2383	12624.2
24.	0.2328	140.0	0.2250	12634.7
25.	0.2495	150.0	0.2131	12641.4
26.	0.2661	160.0	0.2024	12650.0
27.	0.2827	170.0	0.1928	12659.6
28.	0.2994	180.0	0.1841	12668.2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3650
TICKET NO 49177
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10000
1000
DP, kPa
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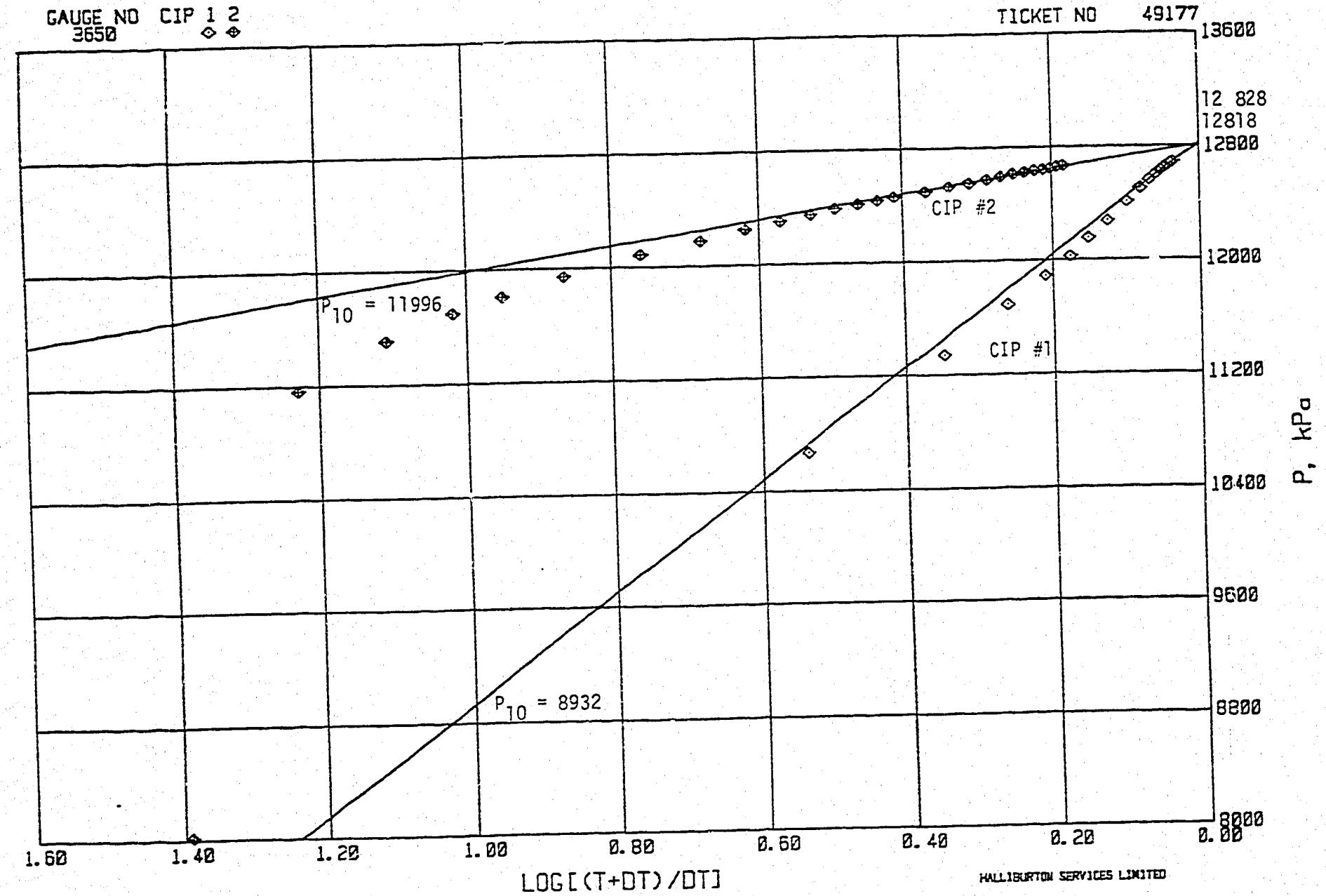
0.1
1.
10.
T. DT/(T+DT), HR
HALLIBURTON SERVICES LIMITED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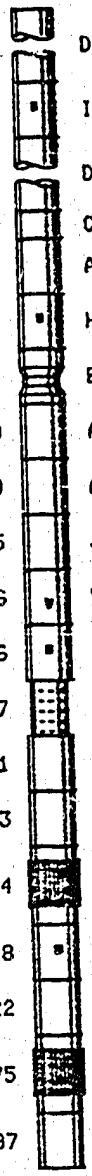
3650
TICKET NO 49177
13600
12 828
12818
12800
12000
11200
10400
9600
8800
8000
P, kPa
CIP #2
CIP #1
P_{10} = 11996
P_{10} = 8932
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG[(T+DT)/DT]
HALLIBURTON SERVICES LIMITED



		O.D.(mm)	I.D.(mm)	LENGTH(m)	DEPTH(m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1568.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1569.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1574.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1575.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1589.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	1.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1593.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1594.76

EQUIPMENT DATA

TESTERS: G. Taylor
WITNESS: D. Kamieniecki
DRILLING CONTRACTOR: Hi-Tower #17

HALLIBURTON
FORMATION TESTING
DATA SHEET

INVOICE NO. 49 178
DATE OF TEST 84-03-08
TEST No. 7
JOB TYPE Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER	7993	1452	2804	3650		
GAUGE DEPTH	1505.44	1511.39	1512.64	1532.76		
BLANKED OFF	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC		16 741	16 766	16 921		
FIRST FLOW INITIAL	0	189	213	476		
FIRST FLOW FINAL	185	271	296	503		
FIRST CLOSED IN	248	10 846	10 881	10 993		
SECOND FLOW INITIAL	353	483	481	643		
SECOND FLOW FINAL	987	1 041	1 066	1 201		
SECOND CLOSED IN	1 006	10 034	10 065	10 167		
THIRD FLOW INITIAL						
THIRD FLOW FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC		16 365	13 400	16 609		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	5	90		TESTER VALVE OPENED	08:45
CLOSED IN	60	180		PACKER UNSEATED	14:20

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE

METRES	DESCRIPTION OF LIQUID
65	Oil stained drilling mud.
91	Salt water.
156	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Lower Sulphur Point
TEMP. REC. No.: TE70
DEPTH: 1513.89 m
MAX. TEMP.: 43.8 °C
NET PRODUCTIVE THICKNESS: m
MUD TYPE: Gel Chemical
K.B ELEVATION: 619.76 m
MUD DENSITY: 1060 kg/m³
MUD VISC: 70 s/L
ALL DEPTHS MEASURED FROM: [X] KB [ ] GROUND
CASING OR HOLE SIZE: 222 mm
PACKER DEPTHS: TOP 1526 BOTTOM 1531 m
RATHOLE SIZE: mm
DEPTH OF TESTER VALVE: 1506.69 m
DRILL PIPE: OD mm 114.3, kg/m 24.7
CASING PERFORATED INTERVAL: N/A m
DRILL COLLARS ABOVE TESTER VALVE: ID mm 71, LENGTH m 171.35
TOTAL DEPTH: 1750 m
SURFACE CHOKE: 25.4 mm
AMOUNT AND TYPE CUSHION: Nil
BOTTOM CHOKE: 19.05 mm

SAMPLE DATA

OIL GRAVITY @ °C
GAS/OIL RATIO
REFRACTOMETER/ ~~RELATIVE DENSITY~~
RECOVERY WATER @ °C
CHLORIDE CONTENT 65 000 mg/L

SAMPLE SHIPPED TO LABORATORY: YES [ ] NO [X]
SAMPLER No. 35: YES [X] NO [ ]
GAS SAMPLE BOTTLE No.: YES [ ] NO [X]
LABORATORY: C and G (Grande Prairie)

REMARKS

COMPANY: HOME OIL COMPANY LIMITED
LEGAL DESCRIPTION: 60-01-43.14 118-38-05.60
PROVINCE OR TERRITORY: N.W.T.
FIELD OR AREA: KAKISA RIVER
TEST NUMBER: 7
WELL NAME AND NUMBER: HOME KAKISA RIVER J-42
TESTED INTERVAL: 1526 - 1531

FORM 344C

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 03 08					
04:00					Job started (service tool).
05:00					Run in hole.
07:45					Head up.
08:10					Pump up packers.
08:45					Preflow: Very weak blow building to weak, no gas to surface.
08:50					Closed tool in.
09:50					Final Flow: Very weak blow building to strong, bottom of pail in 45 minutes, no gas to surface.
11:20					Closed tool in.
14:20					Pull loose.
17:15					Recover recorders.
18:30					Job complete.

PRODUCTION TEST DATA

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 84-03-08 TICKET # 49178

* Gauge Number	:	2804.	*
* Gauge Depth	:	1513. m	*
* Time of Flow	:	5.0 min.	*
* Final Pressure	:	296.0 kPa.	*

Initial Hydrostatic Pressure = 16766.4 kPa
Final Hydrostatic Pressure = 16399.6 kPa

GAUGE 1, FLOW 1

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	213.1
2.	0.0148	2.5	223.8
3.	0.0299	5.0	296.0

GAUGE 1, CIP 1

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0063	2.0	0.5459	779.2
2.	0.0128	4.0	0.3498	2793.2
3.	0.0189	6.0	0.2644	4984.9
4.	0.0254	8.0	0.2105	6151.1
5.	0.0317	10.0	0.1760	6823.2
6.	0.0380	12.0	0.1513	7320.2
7.	0.0476	15.0	0.1248	7940.3
8.	0.0635	20.0	0.0967	8679.6
9.	0.0791	25.0	0.0793	9218.4
10.	0.0950	30.0	0.0670	9647.2
11.	0.1110	35.0	0.0579	9993.8
12.	0.1266	40.0	0.0512	10256.4
13.	0.1426	45.0	0.0457	10471.4
14.	0.1584	50.0	0.0414	10636.6
15.	0.1744	55.0	0.0378	10774.8
16.	0.1901	60.0	0.0348	10881.4

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 84-03-08 TICKET # 49178

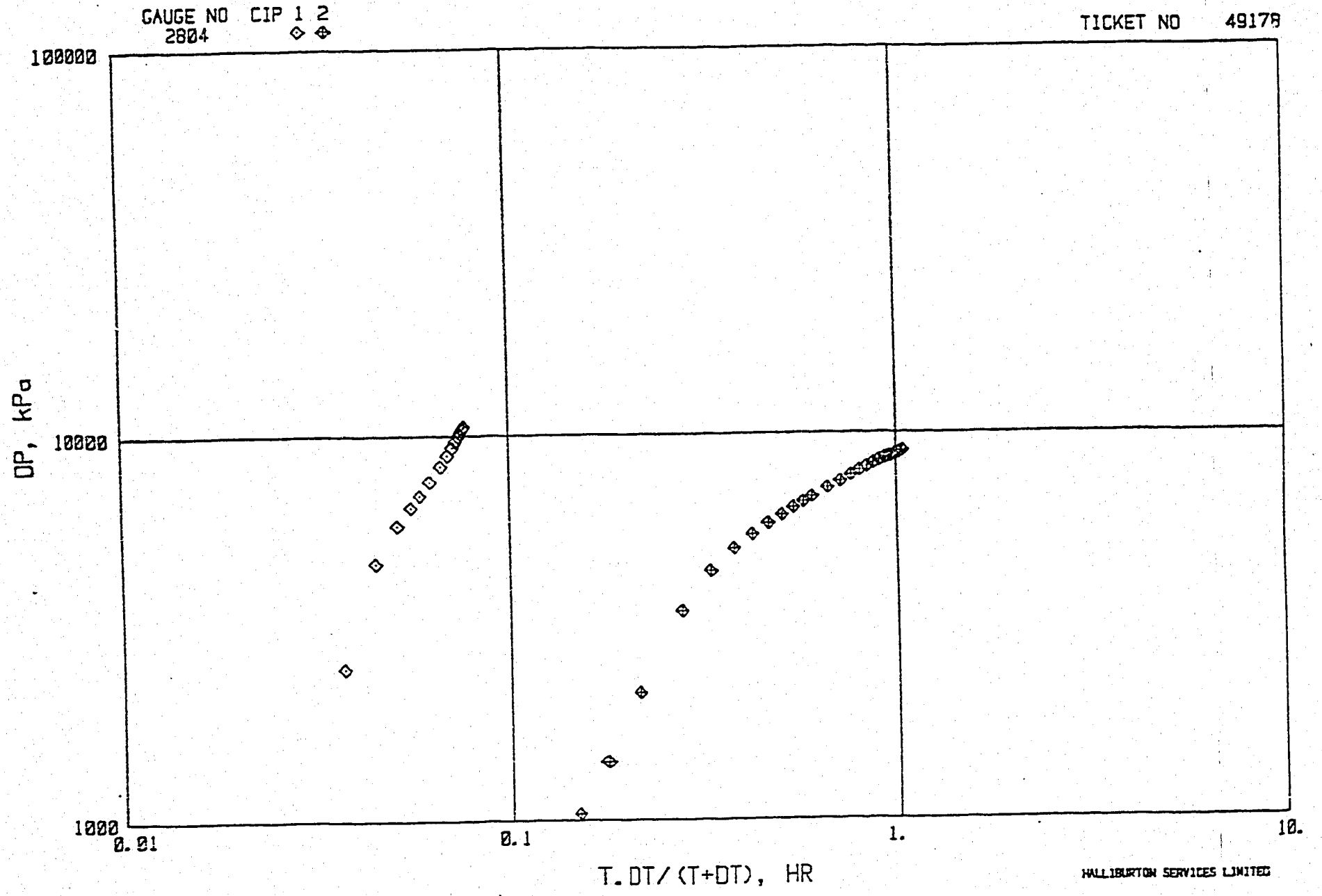
* Gauge Number	:	2804.	*
* Gauge Depth	:	1513. m	*
* Time of Flow	:	90.0 min.	*
* Final Pressure	:	1066.3 kPa.	*

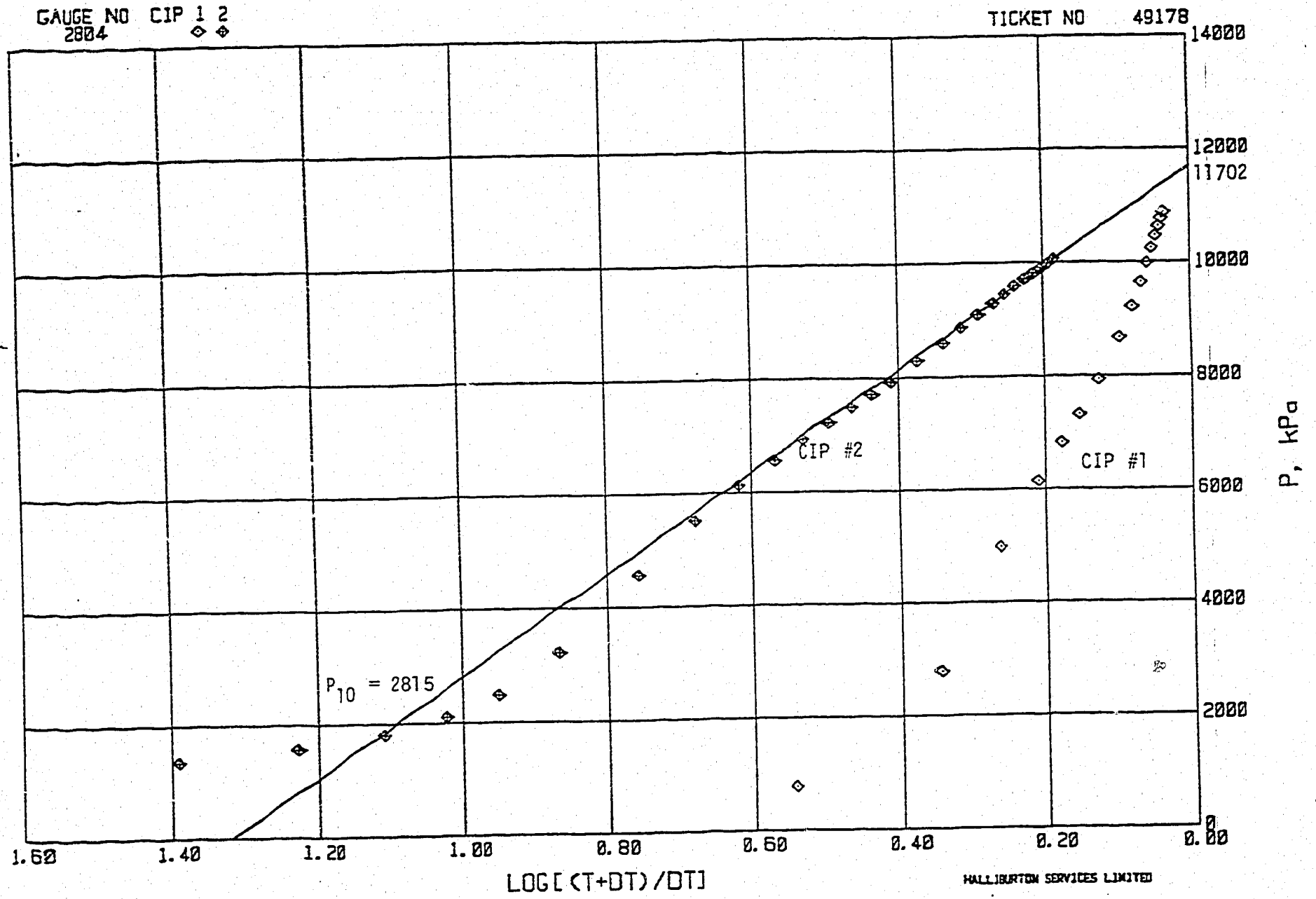
GAUGE 1, FLOW 2

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	480.5
2.	0.0325	10.0	553.6
3.	0.0649	20.0	679.3
4.	0.0974	30.0	747.1
5.	0.1300	40.0	812.2
6.	0.1623	50.0	866.6
7.	0.1950	60.0	921.0
8.	0.2272	70.0	967.3
9.	0.2598	80.0	1018.1
10.	0.2923	90.0	1066.3

GAUGE 1, CIP 2

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0065	2.0	1.6952	1175.0
2.	0.0134	4.0	1.3902	1354.2
3.	0.0200	6.0	1.2249	1562.0
4.	0.0265	8.0	1.1110	1803.6
5.	0.0331	10.0	1.0227	2104.9
6.	0.0399	12.0	0.9499	2485.6
7.	0.0499	15.0	0.8649	3216.7
8.	0.0666	20.0	0.7589	4570.7
9.	0.0832	25.0	0.6807	5505.1
10.	0.0996	30.0	0.6201	6134.1
11.	0.1163	35.0	0.5699	6565.4
12.	0.1329	40.0	0.5283	6923.1
13.	0.1494	45.0	0.4932	7218.2
14.	0.1661	50.0	0.4625	7492.6
15.	0.1827	55.0	0.4358	7714.7
16.	0.1993	60.0	0.4123	7931.3
17.	0.2325	70.0	0.3725	8294.2
18.	0.2657	80.0	0.3401	8603.8
19.	0.2990	90.0	0.3130	8867.3
20.	0.3323	100.0	0.2900	9094.8
21.	0.3656	110.0	0.2703	9289.7
22.	0.3986	120.0	0.2533	9448.6
23.	0.4319	130.0	0.2383	9586.7
24.	0.4652	140.0	0.2249	9703.1
25.	0.4984	150.0	0.2131	9808.7
26.	0.5316	160.0	0.2024	9908.9
27.	0.5649	170.0	0.1928	9985.7
28.	0.5981	180.0	0.1841	10065.1


GAUGE NO CIP 1 2
2804
TICKET NO 49178
100000
10000
1000
DP, kPa
0.01
0.1
1.
10.
T.DT/(T+DT), HR
HALLIBURTON SERVICES LIMITED


GAUGE NO CIP 1 2
2804
TICKET NO 49178
14000
12000
11702
10000
8000
6000
4000
2000
0
CIP #2
CIP #1
P_{10} = 2815
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG[(T+DT)/DT]
P, kPa
HALLIBURTON SERVICES LIMITED

		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1505.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1506.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1511.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1512.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1526.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	2.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1531.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1532.76

EQUIPMENT DATA

HALLIBURTON

FORMATION TESTING
DATA SHEET

WITNESS	G. Taylor
	D. Kamieniecki
DRILLING CONTRACTOR	Hi-Tower #17

INVOICE NO.	49 179
DATE OF TEST	84-03-09
TEST No.	8
JOB TYPE	Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER	7993	1452	2804	3650		
GAUGE DEPTH	1495.44	1501.39	1502.64	1522.76		
BLANKED OFF	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	YES/~~NO~~	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC		16 588	16 611	16 735		
FIRST FLOW INITIAL	0	158	233	370		
FIRST FLOW FINAL	30	129	156	639		
FIRST CLOSED IN	34	7 939	7 969	8 172		
SECOND FLOW INITIAL	34	153	159	765		
SECOND FLOW FINAL	35	91	154	970		
SECOND CLOSED IN	34	3 462	3 526	3 670		
THIRD FLOW INITIAL						
THIRD FLOW FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC		16 180	16 233	16 360		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	5	90		TESTER VALVE OPENED	22:15
CLOSED IN	60	180		PACKER UNSEATED	03:50

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE	METRES	DESCRIPTION OF LIQUID
	1.5	Drilling mud.
	1.5	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED	Upper Sulphur Point	TEMP. REC. No. / DEPTH	TE70 / 1503.89 m
		MAX. TEMP.	43.3 °C
NET PRODUCTIVE THICKNESS	m	MUD TYPE	Gel Chemical
K.B. ELEVATION	619.76 m	MUD DENSITY kg/m³	1060
		MUD VISC s/L	70
ALL DEPTHS MEASURED FROM:	☒ KB ☐ GROUND	CASING OR HOLE SIZE	222 mm
PACKER DEPTHS TOP	1516	BOTTOM 1521 m	RATHOLE SIZE mm
DEPTH OF TESTER VALVE	1496.69 m	DRILL PIPE OD mm / kg/m	114.3 / 24.7
CASING PERFORATED INTERVAL	N/A m	DRILL COLLARS ABOVE TESTER VALVE ID mm / LENGTH m	71 / 171.35
TOTAL DEPTH	1750 m	SURFACE CHOKE	25.4 mm
AMOUNT AND TYPE CUSHION	Nil	BOTTOM CHOKE	19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS/OIL RATIO _____

REFRACTOMETER/~~RELATIVE DENSITY~~

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT 30 000 mg/L

SAMPLE SHIPPED TO LABORATORY	YES	NO
SAMPLER No.	☐	☒
GAS SAMPLE BOTTLE No.	☐	☒

LABORATORY Recovery samples to C and G

REMARKS

Charts indicate plugging perforations.

FORM 344C

COMPANY: HOME OIL COMPANY LIMITED
LEGAL DESCRIPTION: 60-01-34.14 118-38-05.60
PROVINCE OR TERRITORY: N.W.T.
FIELD OR AREA: KAKISA RIVER
TEST NUMBER: 8
WELL NAME AND NUMBER: HOME KAKISA RIVER J-42
TESTED INTERVAL: 1516 - 1521

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84-03-08					
18:30					Job started (service tool).
19:00					Run in hole.
21:15					Head up.
21:30					Pump up packers.
21:15					Preflow: Very weak blow remaining very
					weak throughout.
22:20					Closed tool in.
23:20					Final Flow: 10 bubbles in pail then dead
84 03 09					
00:50					throughout.
00:50					Closed in.
03:50					Pull loose.
06:00					Recover recorders.
06:30					Job complete.

		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1495.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1496.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1501.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1502.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1516.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	2.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1521.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1522.76

EQUIPMENT DATA

HALLIBURTON

FORMATION TESTING
DATA SHEET

INVOICE NO.	49 180
DATE OF TEST	84-03-09
TEST No.	9
JOB TYPE	Hydroflate Straddle

WITNESS	G. Taylor
	D. Kamieniecki
DRILLING CONTRACTOR	Hi-Tower #17

PRESSURE SUMMARY kPa

GAUGE NUMBER	7993	1452	2804	3650		
GAUGE DEPTH	1426.44	1432.39	1433.64	1454.76		
BLANKED OFF	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	24	24	24	48		
INITIAL HYDROSTATIC		15 844	15 821	16 040		
FIRST FLOW - INITIAL	1 307	1 519	1 506	8 918		
FIRST FLOW - FINAL	1 255	1 426	1 415	11 312		
FIRST CLOSED IN		11 101	11 080	11 312		
SECOND FLOW - INITIAL						
SECOND FLOW - FINAL						
SECOND CLOSED IN						
THIRD FLOW - INITIAL						
THIRD FLOW - FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC		15 550	15 572	15 717		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	90			TESTER VALVE OPENED	14:50
CLOSED IN	180			PACKER UNSEATED	19:20

LIQUID RECOVERY DATA

METRES	DESCRIPTION OF LIQUID
90	Drilling mud and salt water.
90	TOTAL LIQUID RECOVERY

RECOVERED FROM TESTER VALVE

EQUIPMENT AND WELL DATA

FORMATION TESTED: Slave Point	TEMP. REC. No.: TE70; DEPTH: 1434.89 m; MAX. TEMP.: 40.3 °C
NET PRODUCTIVE THICKNESS: m	MUD TYPE: Gel Chemical
K B ELEVATION: 619.76 m	MUD DENSITY: 1060 kg/m³; MUD VISC: 70 s/L
ALL DEPTHS MEASURED FROM: ☒ KB ☐ GROUND	CASING OR HOLE SIZE: 222 mm
PACKER DEPTHS: TOP 1447 BOTTOM 1453 m	RATHOLE SIZE: mm
DEPTH OF TESTER VALVE: 1427.69 m	DRILL PIPE: OD mm 114.3; kg/m 24.7
CASING PERFORATED INTERVAL: N/A m	DRILL COLLARS ABOVE TESTER VALVE: ID mm 71; LENGTH m 171.35
TOTAL DEPTH: 1750 m	SURFACE CHOKE: 25.4 mm
AMOUNT AND TYPE CUSHION: Nil	BOTTOM CHOKE: 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS / OIL RATIO _____

REFRACTOMETER / ~~RELATIVE DENSITY~~

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT 75 000 mg/L

SAMPLE SHIPPED TO LABORATORY	YES	NO
SAMPLER No. 207	☒	☐
GAS SAMPLE BOTTLE No.	☐	☒

LABORATORY C and G (Grande Prairie)

REMARKS

Charts indicate perforations plugged off.

COMPANY: HOME OIL COMPANY LIMITED

LEGAL DESCRIPTION: 60-01-34-14 118-38-05.60

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: KAKISA RIVER

TEST NUMBER: 9

WELL NAME AND NUMBER: HOME KAKISA RIVER J-42

TESTED INTERVAL: 1447 - 1453

FORM 344C

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 03 09					
06:30					Job started. Service tool.
08:30					Run in hole.
10:15					Head up.
10:30					Pump.
11:15					Preflow: Packers skidded and held, annulus dropped 1 m (did not get preflow. Later discovered on charts.)
11:20					Shut in. (Did not get shut in, later discovered on charts).
12:20					Tool opened and packers skidded, annulus dropped 1 metre.
12:35					Tool opened and packers skidded, annulus dropped 1 metre.
13:00					Tool opened and packers skidded, lost packer seat, annulus dropped 1 m.
13:05					Reset packer 1.5 m higher than original packer seat and pump.
14:10					Tool opened, packers skidded 0.5 m, annulus dropped 1 m.
14:35					Tool opened, packers skidded 0.5 m annulus dropped 1 m.
14:50					Tool opened. Weak blow building to fair then dying after 80 minutes.
16:20					Shut in tool.
19:20					Pull loose.
21:45					Recover recorders.
24:00					Job complete.

PRODUCTION TEST DATA

		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1426.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1427.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1432.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1433.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1447.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	3.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1453.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1454.76

EQUIPMENT DATA

Home Kakisa River J-42

GEOLOGICAL REPORT

HOME OIL COMPANY LIMITED

Home Kakisa River J-42

GEOLOGICAL REPORT

Say-Lee Kua
Calgary, Alberta

Home Kakisa River J-42

TABLE OF CONTENTS

Home Kakisa River J-42

WELL DATA SUMMARY

Well Name:	Home Kakisa River
Location:	J-42-60-10-118-30 (Unit J, Section 42, Grid area 60-10-118-30), N.W.T.
Operator:	Home Oil Co. Ltd.
Co-ordinates:	Latitude: 60° 01' 43.147" N; Longitude: 118° 38' 05.604" W
Elevations:	Ground: +615.31 m S.L.; K.B.: +619.76 m S.L.
Land Use Permit No.:	N83A038
Spud Date:	1984-02-09
End Drilling:	1984-03-03
Rig Release:	
Total Depth:	1750 m K.B.
Status of Well:	Plugged & Abandoned
Hole Size:	311 mm: 0-438 m K.B.; 222 mm: 438-1750 m K.B.
Casing:	Surface: ran 38 joints (439.32m) of 244.5 mm, 53.57 kg/m, K-55, LT&C new Algoma seamless casing equipped with Baker float shoe and float collar; cemented by Homco with 26.75 tonnes of 0:1:0 plus 2% $CaCl_2$; landed at 437.86 m K.B.
Logs:	Surface: Computalog Gerhart Ltd. DILL/SFL: 1:600 & 1:240, 128-437.8 m K.B. Sonic/ G.R.: 1:600 & 1:240, 128-434.2 m K.B. Final: Computalog Gerhart Ltd. DILL/SFL: 1:600 & 1:240, 437-1750 m K.B. Sonic/G.R.: 1:600 & 1:240, 437-1740 m K.B. CNL/FDC/G.R.: 1:600 & 1:240, 1430-1750 m K.B. Dipmeter: 437-1750 m K.B.
Coring:	Christensen Diamond Products (Canada) Ltd. Diamond Bit Type C-201; Core Barrel Size: 171 mm (O.D.), 102 mm (I.D.), 18 m (Length) Core No. 1: 1458.5-1467.8 m K.B.(Slave Point), recovered 8.3 meters Core No. 2: 1467.8-1479.6 m K.B. (Slave Point), recovered 11.5 meters
Drill Stem Tests:	Halliburton Services Ltd. D.S.T. No. 1: 1450.0-1479.6 m K.B. (Slave Point) Preflow: weak air blow with no gas to surface; Valve-open: weak air blow with no GTS, dead in 30 minutes; recovered 42 m drilling mud

D.S.T. No. 2: 1527.0-1555.0 m K.B.(Sulphur Point) Preflow: weak building to strong air blow with no GTS; Valve-open: weak building to strong air blow with no GTS; recovered 70 m brackish water, 60 m oil stained drilling fluid

D.S.T. No.3: 1719.0-1726.0 m K.B. (Red Beds) Misrun

D.S.T. No.4: 1719.0-1726.0 m K.B. (Red Beds) Preflow: very weak air blow, no GTS; Valve-open: very weak air blow, no GTS; recovered 2 m brine cut drilling mud (salinity: 25000 ppm)

D.S.T. No.5: 1623.0-1634.0 m K.B. (Upper Keg River) Preflow: weight indicator showed tool opened, no bubbles in pail; Valve-open: weight indicator showed tool opened, bubbles 30 minutes after shut-in; recovered 1197 m sour smelly brine (salinity: 135000 ppm)

D.S.T. No.6: 1589.0-1593.0 m K.B. (Muskeg) Preflow: very weak increasing to weak air blow, no GTS; Valve-open: weak increasing to strong air blow in 35 minutes, steady, no GTS; recovered 200 m water (sour smelling brine, salinity: 105000 ppm)

D.S.T. No.7: 1526.0-1531.0 m K.B. (Sulphur Point) Preflow: very weak air blow building to weak in 5 minutes, no GTS; Valve-open: very weak air blow building to strong in 45 minutes, no GTS; recovered 65 m slightly oil stained drilling mud (salinity: 30000 ppm), 91 m water (slightly sour smelling, salinity: 65000 ppm)

D.S.T. No.8: 1516.0-1521.0 m K.B. (Sulphur Point) Preflow: very weak air blow, no GTS; Valve-open: 10 bubbles in pail then dead throughout; recovered 1.5 m drilling mud (salinity: 30000 ppm)

D.S.T. No.9: 1447.0-1453 m K.B.(Slave Point) Preflow: weak air blow, no GTS, tool skidded closed; Valve-open: weak air blow building to fair, dead in 80 minutes; recovered 90 m drilling mud

Drilling Contractor: Hi Tower Drilling Rig No. 17

Wellsite Geologist: Say-Lee Kua

Home Kakisa Kakisa J-42

GEOLOGICAL MARKERS

Formation	Prognosis	Sample	Log	(Subsea)
Wabamun	460	448	448	+ 171.76
Kakisa	697	704	708	- 88.24
Jean Marie	807	826	825	- 205.24
Fort Simpson	817	836	836	- 216.24
Muskwa	-	1404	1406.5	- 786.74
Slave Point	1444	1452	1447.5	- 827.74
Watt Mountain	1502	1507	1506.5	- 886.24
Sulphur Point	1507	1509	1512.5	- 892.74
Muskeg	1551	1559	1558	- 938.24
Upper Keg River	1557	1628	1628	-1008.24
Lower Keg River	1639	1646	1647.5	-1027.74
Chinchaga	1680	1687	1687	-1067.24
Red Beds	1706	1720	1719	-1099.24
Precambrian	1721	1731	1729	-1109.24
Total Depth	1736	1750	1750	-1130.24

Home Kakisa River J-42

LITHOLOGY SUMMARY

Depth (m)	%	Sample Description
435-440		Shale dark to medium grey, trace fish scales and white specks, trace pyrite.
440-445	80	Shale same as above.
	20	Limestone white to cream white, microcrystalline to very finely crystalline, slight chalky.
445-450	60	Shale same as above.
	40	Limestone white to cream white, very finely crystalline, slight chalky, trace cherty.
448		Wabamun
450-460		Limestone same as above; slightly sandy.
460-485		Limestone white, micro- to crypto-crystalline, minor very finely crystalline, slight chalky to micritic; trace thin fractures.
485-510		Limestone white, micro- to very finely crystalline, minor chalky to micritic, slightly sandy.
510-550		Limestone white, micro- to crypto-crystalline, micritic, trace thin fractures, slight sparry calcite veinlets.
550-575		Limestone white, microcrystalline, minor cryptocrystalline, micritic, trace oolite and pelletoidal, trace sparry calcite.
575-595		Limestone white to cream tan, micro- to very finely crystalline, minor chalky; buff grey and argillaceous in part; trace pyrite.
595-650		Limestone light tan, in part white, crypto- to micro-crystalline, minor very finely crystalline, micritic in part; slight bioclastic fragments; trace pyrite.
650-665		Limestone tan to white, cryptocrystalline, minor microcrystalline, micritic, trace bioclastic fragments.
665-680		Limestone buff tan to buff white, micro- to very finely crystalline, trace pellets, trace pyrite.
680-690		Limestone buff white, minor buff tan and buff grey, very fine to finely crystalline, micritic, slightly argillaceous and silty; trace bioclastic fragments and pyrite.

Depth (m)	%	Sample Description
690-704	60	Limestone buff white to tan, slight brown grey, crypto- to micro-crystalline, micritic, trace bioclastic fragments.
	40	Siltstone buff grey to buff white, calcareous, minor sandy.
704		Kakisa
704-730		Limestone tan to light brown, minor buff white, crypto- to micro-crystalline, slight very finely crystalline, minor micritic; trace biocalstics; with minor stringers of siltstone, buff grey, calcareous, grading to very fine grained calcareous sandstone.
730-770		Limestone buff tan, minor buff white, micro- to very finely crystalline, minor cryptocrystalline, micritic to chalky in part, trace bioclastics; slightly argillaceous and silty near bottom.
770-795	70	Siltstone buff grey, calcareous, slightly argillaceous, grading to very fine grained calcareous sandstone in minor part.
	30	Limestone same as above.
795-820	80	Siltstone same as above.
	20	Limestone same as above.
820-825	75	Sandstone light to buff grey, very fine grained, calcareous, minor argillaceous; with minor calcareous siltstone; trace pyrite.
	15	Limestone same as above.
	10	Shale medium grey, subfissile, slightly calcareous.
825-830	60	Siltstone buff grey, calcareous, slightly argillaceous, minor very fine grained sandstone, calcareous, slight argillaceous.
	40	Limestone buff white, minor light tan, microcrystalline, minor cryptocrystalline; trace coarse bioclastic fragments.
826		Jean Marie
830-835	60	Siltstone same as above; slight shale, medium grey, subfissile.
	40	Limestone buff white to tan, microcrystalline, minor very finely crystalline, trace bioclastic fragments.

Depth (m)	%	Sample Description
835-845	40	Siltstone same as above.
	40	Limestone same as above.
	20	Shale same as above.
836		Fort Simpson
845-850		No sample
850-870	50	Siltstone same as above.
	25	Shale medium to green grey, subfissile, calcareous.
	25	Limestone same as above.
870-900	60	Siltstone buff grey, calcareous, slight sandy; with minor buff white silty limestone in places.
	40	Shale dark grey, minor brown grey to green grey, subfissile, slight marly.
900-920	75	Siltstone light green grey to buff grey, slight calcareous, slight argillaceous and sandy.
	25	Shale medium to dark grey, minor brown grey, subfissile, slightly calcareous and marly.
920-925	50	Shale brown grey, minor medium and green grey, slight micromicaceous and calcareous.
	50	Siltstone buff grey to buff white, sandy, in part calcareous, grading to very fine grained sandstone in part.
925-930	70	Shale same as above.
	30	Siltstone same as above.
930-940		Shale brown grey to red brown, subfissile, slightly calcareous and micromicaceous; minor stringers buff grey calcareous-argillaceous siltstone and buff grey argillaceous limestone.
940-950	50	Shale same as above.
	50	Siltstone same as above.
950-955	75	Shale red brown to dakr brown, minor green grey and medium grey, subfissile, slightly calcareous.
	25	Siltstone same as above.
955-960	50	Shale same as above.
	50	Siltstone same as above.
960-990	75	Shale same as above.
	25	Siltstone same as above; minor buff grey argillaceous limestone in lower part.
990-1025	70	Shale same as above.
	30	Siltstone buff grey, calcareous, slight sandy; with minor buff white to grey argillaceous to silty limestone.

Depth (m)	%	Sample Description
1025-1035	50	Shale same as above.
	50	Siltstone same as above.
1035-1045	30	Shale green grey, minor red brown, subfissile, slightly calcareous.
	70	Siltstone buff grey to buff white, calcareous, slight sandy; trace crinoid.
1045-1075	50	Shale as above.
	50	Siltstone as above.
1075-1095	75	Shale same as above.
	25	Siltstone same as above.
1095-1100	60	Siltstone buff white to buff grey, calcareous, slight argillaceous; with minor silty limestone.
	40	Shale same as above.
1100-1130	60	Shale same as above.
	40	Siltstone same as above.
1130-1145		Shale green grey, slight red brown, subfissile, calcareous, with minor buff white calcareous siltstone stringers.
1145-1160	75	Shale same as above.
	25	Siltstone same as above.
1160-1215		Shale green grey to medium grey, slight red brown, subfissile, minor calcareous; with minor stringers of siltstone, buff white to buff grey, calcareous; slight silty limestone.
1215-1290		Shale green grey, subfissile, slight calcareous, with minor stringers of siltstone, buff white to buff grey, calcareous; slight argillaceous limestone.
1290-1300	50	Shale same as above.
	30	Limestone buff tan to light brown grey, microcrystalline, minor buff white, slightly argillaceous and silty.
	20	Siltstone same as above.
1300-1345		Shale green grey, slightly calcareous; with minor stringers of siltstone, buff grey to buff white, calcareous.
1345-1360	75	Shale same as above.
	25	Siltstone buff white, calcareous, in part grading to silty limestone, white to tan, microcrystalline.
1360-1365	80	Shale green grey, in part red brown grey, subfissile, slightly calcareous; slight siltstone.
	20	Limestone white, crypto- to micro-crystalline.

Depth (m)	%	Sample Description
1365-1390	80	Shale same as above.
	20	Siltstone same as above.
1390-1405		Shale medium red brown, in part green grey, subfissile, slightly marly and micromicaceous; with slight stringers of siltstone.
1404		Muskwa
1405-1440		Shale red brown to dark grey, minor green grey, subfissile, carbonaceous, slightly marly; with minor limestone, buff tan to buff white, earthy, slightly argillaceous.
1440-1450	80	Shale same as above.
	20	Limestone white to buff white, minor cream grey and tan, microcrystalline, chalky in part, slightly argillaceous.
1450-1455	60	Limestone light brown, in part buff white to tan, very fine to finely crystalline, minor microcrystalline, slight micritic, very light cut, no show; trace bioclastics and pyrite.
	40	Shale same as above.
1452		Slave Point
1455-1458.8		Limestone light brown, minor tan to buff white, very fine to finely crystalline, minor micritic, slight very poor pinpoint porosity, light cut, light bitumin concentration, no show.
1458.8-1467.8		Core No. 1 (see Core Report)
1467.8-1479.6		Core No. 2 (see Core Report)
1479.6-1505		Limestone medium brown to tan, minor buff white, micro- to crypto-crystalline, trace pyrite; slight thin fractures; very light cut.
1505-1510	50	Limestone same as above.
	25	Shale light green, minor green grey, subfissile, slightly waxy.
	25	Limestone light brown to cream tan, crypto-crystalline.
1507		Watt Mountain
1509		Sulphur Point
1510-1525		Limestone light brown to cream tan, minor buff white, micro- to crypto-crystalline; slight thin fracrures; trace pyrite.
1525-1560		Limestone light brown to tan, minor buff white, micro- to very finely crystalline, minor cryptocrystalline, slight bioclastics; very poor to poor pinpoint porosity, slight light oil

Depth (m)	%	Sample Description
		stain showing light slow cut, slightly bituminous.
1555-1560	80	Limestone as above.
	20	Dolomite honey brown, minor grem grey, very finely to finely crystalline, with minor very poor to poor intercrystalline porosity, trace light oil stain, very light cut.
1559		Muskeg
1560-1565		Dolomite medium to light brown, minor cream grey, fine to medium crystalline, minor micro- to very finely crystalline, very poor intercrystalline porosity, trace light oil stain, light slow cut, trace bitumin concentration; trace clear to white dolomite rhombs; minor limestone, medium brown, micro- to cryptocrystalline, slight micritic to chalky.
1565-1580		Dolomite light to medium brown, minor cream white to tan, very fine to finely crystalline, medium crystalline in part, trace white to clear dolomite rhombs, with very poor intercrystalline to pinpoint porosity, trace light oil stain, light slow cut; minor stringers or patches of limestone, buff white to buff brown, microcrystalline, earthy in part; slight stringers of anhydrite, white, microsucrosic.
1580-1595		Dolomite light brown to cream white, fine to medium crystalline, minor very finely crystalline, very poor to poor intercrystalline to pinpoint porosity, trace light oil stain with light slow cut, trace bitumin concentration; slight anhydrite stringers.
1595-1610	80	Dolomite light to medium brown, minor buff white to buff grey, fine to medium crystalline, minor very finely crystalline, very poor pinpoint to intercrystalline porosity, trace light oil stain in places, light slow cut.
	20	Anhydrite white, microsucrosic, slightly dolomitic.
1610-1625		Dolomite light to medium brown, minor buff white, very fine to finely crystalline, trace pyrite; slight anhydrite stringers.
1625-1630	60	Dolomite same as above; with minor anhydrite.
	40	Dolomite light to medium brown, minor tan, fine to medium crystalline, poor to fair intercrystalline porosity, light cut.

Depth (m)	%	Sample Description
1628		Upper Keg River
1630-1635		Dolomite light to medium brown, slight dark brown, micro- to very finely crystalline, trace pyrite.
1635-1640		Dolomite light honey brown, in part medium to dark brown, fine to medium crystalline, minor coarsely crystalline, minor very poor to poor intercrystalline porosity, slight fair porosity, very light cut; trace clear to white dolomite rhombs.
1640-1645		Dolomite medium brown, in part light tan and dark brown, very fine to medium crystalline, trace white dolomite rhombs, poor intercrystalline porosity, very light cut.
1645-1650	80	Limestone dirty buff brown, minor buff grey, earthy to lithographic, slight marly; in part dolomitic limestone, dark brown grey to dark grey, cryptocrystalline, minor microcrystalline, slight argillaceous and sub-bituminous in places.
	20	Dolomite medium to light brown, very fine to medium crystalline, minor poor porosity, light cut; trace white dolomite rhombs.
1646		Lower Keg River
1650-1660	60	Limestone same as above.
	40	Dolomitic limestone dark brown to brown grey, micro- to very finely crystalline, slightly argillaceous and sub-bitumous.
1660-1680	70	Dolomitic Limestone same as above.
	30	Limestone dirty buff brown, earthy to lithographic, slightly marly and dolomitic.
1680-1685	70	Limestone same as above.
	30	Dolomitic Limestone same as above.
1685-1690	40	Limestone same as above; with minor dolomitic limestone same as above.
	60	Dolomite light brown to medium grey brown, cryptocrystalline, minor microcrystalline, with minor limestone, buff brown grey, microcrystalline, earthy, slightly marly.
1687		Chinchaga
1690-1695	50	Dolomite buff brown to tan, in part medium to dark brown, microcrystalline, minor cryptocrystalline, slight very finely crystalline.
	40	Limestone buff white to buff brown, earthy, slightly marly.
	10	Anhydrite white, microsucrosic.
1695-1710	60	Dolomite same as above.
	20	Limestone buff brown to buff white, earthy,

Depth (m)	%	Sample Description
		minor dolomitic, slight marly.
	20	Anhydrite white to cream brown, microsucrosic.
1710-1715	60	Anhydrite cream tan, minor cream white, crypto- to micro-crystalline, slightly dolomitic.
	40	Dolomite light to buff brown, minor brown grey, microcrystalline, slightly argillaceous.
1715-1720	50	Sandstone clear and frosty quartz, very coarse grained, rounded to subrounded, poor to medium sorted; minor shale, green grey to medium grey, slight sandy.
	30	Anhydrite same as above.
	20	Dolomite same as above.
1720		Red Beds (adjusted according to drilling rate)
1720-1730		Sandstone frosty to clear quartz, very coarse grained, rounded to subrounded; minor pink feldspar; trace deep green to black biotite; trace pyrite.
1730-1735	80	Granite polycrystalline quartz, clear and frosty white; minor feldspar, pink, cream white; slight biotite, golden black; slight amphibole, dark green to black; slight leucoxene, dull white; trace chlorite, earthy green.
	20	Sandstone same as above.
1731		Precambrian
1735-1750		Granite feldspar, pink to cream brown; quartz, clear and frosty white, polycrystalline; minor biotite, black to golden black; minor amphibole, dark green to blakc; slight leucoxene and chlorite.
1750		Total Depth

Home Kakisa River J-42

CORE REPORT

Core No. 1 : 1458.8--1467.8 m K.B., cut 9.0 meters, recovered 8.3 meters

Core No. 2 : 1467.8-1479.6 m K.B., cut 11.8 meters, recovered 11.5 meters

Interval (m)	Thickness (m)	Lithology Description
1458.8-1461.3	2.5	Limestone medium to dark brown, cryptocrystalline, minor microcrystalline, massive, slightly argillaceous in places, bulbous stromatoporoids in places.
1461.3-1461.6	0.3	Limestone medium to dark brown grey, microcrystalline, slight very finely crystalline, stromatoporoids, slight stylolites, minor thin hair-line fractures with light to medium oil stain.
1461.6-1461.8	0.2	Limestone medium to light brown, microcrystalline to very finely crystalline, minor irregular thin fractures with very light oil stain in places.
1461.8-1462.0	0.2	Limestone dark brown grey, cryptocrystalline, slight microcrystalline, argillaceous, hard.
1462.0-1462.3	0.3	Limestone medium brown, very fine to finely crystalline, slight thin fractures, trace spotty oil stain.
1462.3-1464.3	2.0	Limestone medium brown, in part dark brown, cryptocrystalline to microcrystalline, in part argillaceous, as nodular lime mud, some as bands, minor thin irregular fractures.
1464.3-1465.2	0.9	Limestone light to medium brown, micro- to crypto-crystalline, bulbous stromatoporoids in places; slight thin hair-line fractures in places.
1465.2-1465.85	0.65	Limestone medium to dark brown grey, cryptocrystalline, moderately fractured, with argillaceous lime mud nodules and bands, light bitumin concentration along thin fractures.

Interval (m)	Thickness (m)	Lithology Description
1465.85-1466.3	0.45	Limestone medium to dark brown, crypto- to micro-crystalline, slight very finely crystalline, minor thin fractures with light to medium oil stain (esp. between 1466.0-1466.16 m K.B.)
1466.3-1467.1	0.8	Limestone medium brown, minor dark brown, crypto- to micro-crystalline, minor thin fractures, bulbous stromatoporoids in places.
1467.1		End of Core No. 1
1467.1-1467.8	0.7	Lost core.
Coring times:	60, 84, 110, 154, 162, 157, 200, 190, 148 (minutes per meter)	
1467.8-1469.1	1.3	Limestone medium brown, micro- to very finely crystalline, minor finely crystalline, bulbous stromatoporoids in part, thin vertical and branching fractures with light oil stain; slight stylolite; very light oil stain in lower part.
1469.1-1470.1	1.0	Limestone meidum brown, crypto- to micro-crystalline, massive stromatoporoids, minor argillaceous, few thin fractures; slight stylolite.
1470.1-1470.5	0.4	Limestone medium brown, crypto- to micro-crystalline, massive stromatoporoids, in part argillaceous, minor thin fractures with light oil stain.
1470.5-1471.2	0.7	Limestone medium to dark brown, micro- to very finely crystalline, minor fine to medium crystalline, massive to bulbous stromatoporoids, minor thin irregular and vertical fractures with light to medium oil stain, slow bleeding in part, esp. between 1470.8-1471.0 m, and 1471.1 to 1471.2 m K.B.
1471.2-1471.8	0.6	Limestone medium to dark brown, crypto- to micro-crystalline, massive stromatoporoids in part, minor argillaceous lime mud, minor stylolite; limestone showed light cut in solvent.
1471.8-1472.5	0.7	Limestone light to medium chocolate brown, cryptocrystalline, minor

Interval (m)	Thickness (m)	Lithology Description
		microcrystalline, massive to bulbous stromatoporoids, minor thin fractures with light to medium oil stain, in part light bleeding oil.
1472.5-1472.9	0.4	Limestone medium brown, crypto- to micro-crystalline, massive to bulbous stromatoporoids, in part replaced by coarsely crystalline sparry calcite; slight bioclastic fragments; light cut in solvent.
1472.9-1473.5	0.6	Limestone medium brown, crypto- to micro-crystalline, slight very fine crystalline, massive stromatoporoids, thin vertical and branching fractures, slight very poor pinpoint and organic porosity, showing medium to heavy oil stain, in part bleeding oil.
1473.5-1474.6	1.1	Limestone medium brown, crypto- to micro-crystalline, massive to bulbous stromatoporoids in part, minor stylolite, a few thin fractures with trace scattered light oil stain.
1474.6-1477.1	0.5	Limestone dark to medium brown, cryptocrystalline, minor microcrystalline, massive, in part argillaceous, bulbous stromatoporoids in places, slight stylolite; light cut in solvent.
1477.1-1477.8	0.7	Limestone medium brown, crypto- to micro-crystalline, massive stromatoporoids, minor thin fractures, slight very poor organic to pinpoint porosity, medium to heavy oil stain, in part bleeding oil.
1477.8-1479.3	0.5	Limestone dark brown, minor medium brown, crypto- to micro-crystalline, massive stromatoporoids, trace calcite-quartz veinlets and patches; slight stylolite; becoming with slight very poor fracture-lined pinpoint and vuggy porosity showing light oil stain in places in lower part.
1479.3		End of Core No. 2
1479.3-1479.6	0.3	Lost core

Coring times: 135, 110, 102, 71, 66, 57, 58, 64, 76, 62, 59 (minutes per meter); 75 (minutes per 0.6 meter)

Home oil FIELD DRILL STEM TEST REPORT

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DST NO.	WELL NAME		DATE
1	Home Kakisa River J-42		84-02-27
TESTING CO.	FORMATION	INTERVAL	TO
Halliburton	Slave Point	1450	1479.6

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL-
619.76	1479.6	22	Gel/Chem	1	5.6	8.4	280

TIME PACKER SET	PF	IS	VO	FSI	TIME PACKER LOOSE
18:40	10 mins	75 mins	120 mins	240 mins	02:45

BLOW DESC. ON PF: Weak air blow NGTS

BLOW DESC. ON VO: Very weak air blow NGTS Dead in 30 mins

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STAT ?.ETC)

FINAL RECOVERY DATA

	# of CUSHION	SALINITY		REMARKS
42	# of MUD	SALINITY		Drlg. Mud
	# of WATER	SALINITY		
	# of CONDENSATE	GRAVITY		
	# of OIL	GRAVITY		

42 m TOTAL PIPE RECOVERY

COMMENTS: No sign of Gas or Oil cut mud in any recovery

IHP	IFP		FFP		ISIP	
15785 kPa	183	kPa	367	kPa	550	kPa
FHP					FSIP	
15509 kPa	183	kPa	367	kPa	825	kPa

CHART NO.	DEPTH	BH	CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
1452	1440.63		19.05	Inside	

TYPE OF TEST AND TOOLS: dual packer Bottom hole conventional

SAMPLES FOR ANALYSIS -

FORWARDED TO: C & G Labs Edmonton

SHIPPED BY: Tester

NO. OF SAMPLES: 3

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)

Temp recorder malfunctioned. Recorder above shut in tool verified recovery.

GEOL. OR ENG. Dan Kamieniecki

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home oil FIELD DRILL STEM TEST REPORT

DST NO.	WELL NAME	DATE
02	Home Kakisa iver J-42	84-02-28

TESTING CO.	FORMATION	INTERVAL		
Halliburton	Sul hur Point	1527	TO	1555

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL-
619.76	±555	222	Gel/Chem	1100	60	90	260

TIME PACKER SET	IF	ISI	VO	FSI	TIME PACKER LOOSE
	10 mins	60 mins	90 mins	240 mins	

BLOW DESC. ON IF
Weak initial building to trong air blow in 1.5m NGTS

BLOW DESC. ON VO
Weak air blow building to strong in 15 mins. Steady NGTS

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STA C.ETC)

FINAL RECOVERY DATA

	# of CUSHION	SALINITY		REMARKS
70	# of MUD	SALINITY	120 000	Brackish water (refractometer)
	# of WATER	SALINITY		
	# of CONDENSATE	GRAVITY		
60	# of OIL	GRAVITY	N/A	Oil stained drlg fluid

130 m TOTAL PIPE RECOVERY

COMMENTS: Fluid recovery showed no sign of gas cut.

IHP		IFP		ISIP	
16303	kPa	448	kPa	806 kPa	10784.7 kPa
FHP				FFP	FSIP
16212	kPa		kPa	1343 kPa	10514 kPa

CHART NO.	DEPTH	BH CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
2805	1517 65	19.04	Inside	42.9

TYPE OF TEST AND TOOLS
Dual packer bottom hole conventional

SAMPLES FOR ANALYSIS -

FORWARDED TO: C & G Labs, Edmonton

SHIPPED BY: Tester Sampler #1005

NO. OF SAMPLES: 4

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)
Recorder above shut in tool verifies recovery

GEOL. OR ENG. Dan Kamieniecki

FIELD DRILL STEM TEST REPORT

DST NO.	WELL NAME	DATE
04	Home Kakisa River J-42	84-03-06

TESTING CO.	FORMATION	INTERVAL		
Halliburton	asal Red Beds	1719	TO	1726

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL
619.76	1750	222	Gel/Chem	1095	60	9.0	220

TIME PACKER SET	PF		VO	FSI	TIME PACKER LOOSE
11:00	5 mins	60 mins	90 mins	180 mins	17:30

BLOW DESC. ON PF: Weight inducator showed to l opened - no bubble

BLOW DESC. ON VO: Tool opened - on bubble, t' en dead

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STA C.ETC)

FINAL RECOVERY DATA

				REMARKS
	# of CUSHION	SALINITY		
2	# of MUD	SALINITY	2500 mg/l	Brine cut drlg
	# of WATER	SALINITY		Refractometer mud
	# of CONDENSATE	GRAVITY		
	# of OIL	GRAVITY		

2.0 m TOTAL PIPE RECOVERY

COMMENTS: No sign on gas or oil

IHP		IFP		FFP		ISIP	
18930	kPa	480	kPa	380	kPa	4190	kPa
FHP				FFP		FSIP	
18830	kPa		kPa	380	kPa	2670	kPa

CHART NO.	DEPTH	BH CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
3650	1727.5	19.04	Outside	48°C

TYPE OF TEST AND TOOLS: Inflate Straddle

SAMPLES FOR ANALYSIS -

FORWARDED TO: C & G Labs, Edmonton

SHIPPED BY: Tester

NO. OF SAMPLES: 3

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)

Bottom hole scmpler drained. Test mechanically sound. FFSR #2681

GEOL. OR ENG. Dan Kamieniecki

FIELD DRILL STEM TEST REPORT

DST NO.	WELL NAME	DATE
5	Home Kakisa River J-42	84-03-07

TESTING CO.	FORMATION	INTERVAL		
Halliburton	~~Lower~~ Upper Keg River	1623	TO	1634

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL
619.76	1750	222	Gel Chem	1095	60	9.0	220

TIME PACKER SET	IF	ISI	VO	FSI	TIME PACKER LOOSE
02:35	5 mins	60 mins	90 mins	180 mins	08:50

BLOW DESC. ON IF
Weight indicator showed tool open, no bubbles in pail

BLOW DESC. ON VO
Weight indicator showed tool opened, bubbles 30 min after shut in

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STATIC.ETC)

FINAL RECOVERY DATA

	m of CUSHION	SALINITY		REMARKS
	m of MUD	SALINITY		
1197	m of WATER	SALINITY	135000	Sour smelly brine
	m of CONDENSATE	GRAVITY		
	m of OIL	GRAVITY		

1197 m
TOTAL PIPE RECOVERY

COMMENTS: Salinity from refractometer

IHP		IFP		ISIP	
17970	kPa	5330	kPa	5320	kPa
FHP		FFP		FSIP	
17590	kPa		kPa	13210	kPa
		13210	kPa	13210	kPa

CHART NO.	DEPTH	BH CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
3650	1635.55	19.04	Outside	N/A

TYPE OF TEST AND TOOLS
Inflate straddle

SAMPLES FOR ANALYSIS -

FORWARDED TO: C & G Labs Edmonton FF SR 2682

SHIPPED BY: Tester

NO. OF SAMPLES: 4

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)
Plugging occured in upper pipe string. Possible partial tool plugging, test invalid

GEOL. OR ENG. Dan Kamieniecki

home oil FIELD DRILL STEM TEST REPORT

DST NO.	WELL NAME	DATE
6	Home Kakisa River J-42	83-03-07

TESTING CO.	FORMATION	INTERVAL
Halliburton	~~Upper Keg River~~ (Muskeg)	1589 TO 1593

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL -
619.76	1750 TD	222	Gel Chem	1095	60	9.0	225

TIME PACKER SET	IF	ISI	VO	FST	TIME PACKER LOOSE
18.19	5 mins	60 mins	90 mins	180 mins	00:32

BLOW DESC. ON PF
Very weak air blow increasing to weak

BLOW DESC. ON VO
Weak air blow increasing to strong in 35 mins steady

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STATIC.ETC)

FINAL RECOVERY DATA

	m of CUSHION	SALINITY	REMARKS
	m of MUD	SALINITY	
200	m of WATER	SALINITY 105000mg/l	some some smelling brine (Refractometer)
	m of CONDENSATE	GRAVITY	
	m of OIL	GRAVITY	

200 m
TOTAL PIPE RECOVERY

COMMENTS: No sign of oil or gas cut in fluid recovery

IHP	PFP	IFP	ISIP
17590 kPa	580 kPa	670 kPa	12640 kPa
FHP 17210 kPa	kPa	FFP 2100 kPa	FSIP 12640 kPa

CHART NO.	DEPTH	BH CHOKE	INSIDE OR OUTSIDE RECORDER	SHT
3650	1593.55	19.04	Outside	48

TYPE OF TEST AND TOOLS
Inflate Straddle

SAMPLES FOR ANALYSIS -
FORWARDED TO: C & G Labs Edmonton FFSR #2683
SHIPPED BY: Tester

NO. OF SAMPLES: 4

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)
Recorder above shut in tool verifies recovery

GEOL. OR ENG. Dan Kamieniecki

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Home Oil

FIELD DRILL STEM TEST REPORT

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DST NO.	WELL NAME		DATE
7	Home Kakisa River J-42		84-03-08
TESTING CO.	FORMATION	INTERVAL	
Halliburton	Sulphur Point	1526 TO 1531	

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL-
619.76	1750	22	Gel/Chem	1095	60	10.0	225

TIME PACKER SET	PF	FI	VO	FSI	TIME PACKER LOOSE
08:10	5 mins	30 mins	90 mins	180 mins	14:20

BLOW DESC. ON PF
Very weak air blow building to weak in 5 mins. NGTS

BLOW DESC. ON VO
Very weak air blow building to strong in 45 mins. NGTS

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STATIC ETC)

FINAL RECOVERY DATA

	m of CUSHION	SALINITY	REMARKS
65	m of MUD	SALINITY 3000	Slightly oil stained drlg mud
91	m of WATER	SALINITY 6500	Slightly sour brine
	m of CONDENSATE	GRAVITY	refratometer
	m of OIL	GRAVITY	

156 m TOTAL PIPE RECOVERY

COMMENTS:

IHP	IFP	FFP	ISIP
16830 kPa	480 kPa	670 kPa	11130 kPa
FHP		FFP	FSIP
16550 kPa	kPa	1050 kPa	10080 kPa

CHART NO.	DEPTH	CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
3650	1532.55	19.04	Outside	42

TYPE OF TEST AND TOOLS
Inflate Straddle

SAMPLES FOR ANALYSIS -

FORWARDED TO: C & G Labs, Edmonton FFSR #2684

SHIPPED BY: Tester (3fluid sampler #0035)

NO. OF SAMPLES: 4

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)
Recorder above shut in tool verified fluid recovery

GEOL. OR ENG. Dan Kamieniecki

666

FIELD DRILL STEM TEST REPORT

DST NO.	WELL NAME		DATE
8	Home Kakisa River J-42		84-03-09
TESTING CO.	FORMATION	INTERVAL	
Halliburton	Sulphur Point	1516 TO 1521	

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL -
619.76	1750	222	Gel Chem	1098	60	9.6	225

TIME PACKER SET	PF	SI	VO	FSI	TIME PACKER LOOSE
21:35	5 mins	60 mins	90 mins	180 mins	03:50

BLOW DESC. ON PF
Very weak air blow GTS

BLOW DESC. ON VO
10 bubbles in pail then dea throughout

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUPEMENT (CRITICAL FLOW PROVER.SIDE STATIC.ETC)

FINAL RECOVERY DATA

			REMARKS
	m of CUSHION	SALINITY	
1.5	m of MUD	SALINITY 3000 mg/l	Drlg. mud refractometer
	m of WATER	SALINITY	
	m of CONDENSATE	GRAVITY	
	m of OIL	GRAVITY	

1.5 m
TOTAL PIPE RECOVERY

COMMENTS: No sign of gas or oil
cut fluid in recovery

IHP	FFP	FP	SIP
16,640 kPa	70 kPa	770 kPa	8080 kPa
FHP		FFP	FSIP
16070 kPa	kPa	1340 kPa	3620 kPa

CHART NO.	DEPTH	CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
3650	1522.55	19.04	Outside	42

TYPE OF TEST AND TOOLS
inflate Straddle

SAMPLES FOR ANALYSIS -

FORWARDED TO: C & G Labs Edmonton FFSP #2685

SHIPPED BY: Tester

NO. OF SAMPLES: 1

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)
Possible slight plugging of tool from charts, found no evidence on surface

GEOL. OR ENG. Dan Kamieniecki

666

Home Oil — FIELD DRILL STEM TEST REPORT — 22

DST NO.	WELL NAME	DATE
2	Hom Bakisa River J-42	24-03-03

TESTING CO.	FORMATION	INTERVAL		
Halliburton	Slave Point	1447	TO	1453

KB ELEV.	WELL DEPTH	HOLE SIZE	MUD TYPE	DEN.	VISC	WL	CL-
[illegible]	1740	7 7/8	Gel Chem	1085	60	9.2	230

TIME PACKER SET	PF	ISI	VO	FSI	TIME PACKER LOOSE
1:30	mins	mins	90 mins	180 mins	13:20

BLOW DESC. ON PF
Weak air blow, 1/2". Tool shloded closed

BLOW DESC. ON VO
Weak air blow building to fair, dead in 60 mins.

GAS FLOW READINGS

TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE	TIME	CH.SIZE	TEMP	B.PRESS.	FLOW RATE

TYPE OF MEASUREMENT (CRITICAL FLOW PROVER.SIDE STATIC.ETC)

FINAL RECOVERY DATA

				REMARKS
	m of CUSHION	SALINITY		
90	m of MUD	SALINITY		Drlg mud
	m of WATER	SALINITY		
	m of CONDENSATE	GRAVITY		
	m of OIL	GRAVITY		

m TOTAL PIPE RECOVERY

COMMENTS: No sign of oil or gas cut in fluid recovery

IHP		IFP		ISIP	
15785	kPa		kPa	1467 kPa	kPa
FHP		FFP		FSIP	
15509	kPa		kPa	458 kPa	11096 kPa

CHART NO.	DEPTH	BH CHOKE	INSIDE OR OUTSIDE RECORDER	BHT
1452	1432.51	19:05	Inside	[illegible]

TYPE OF TEST AND TOOLS
Inflate Straddle

SAMPLES FOR ANALYSIS -

FORWARDED TO: C S G Labs Edmonton EESR #2686

SHIPPED BY: Tester

NO. OF SAMPLES: 3

REMARKS (MISRUN REASONS.HOLE CONDITIONS.ETC)
Tools shifted several times, fluid lost in annulus approx 385m of recovery

GEOL. OR ENG. Don Kenfield

666

WELL HISTORY LOG

WELL NAME Home Kakisa River **LOCATION** J-42 N. W. T. **FTD** 1750 m K.B.

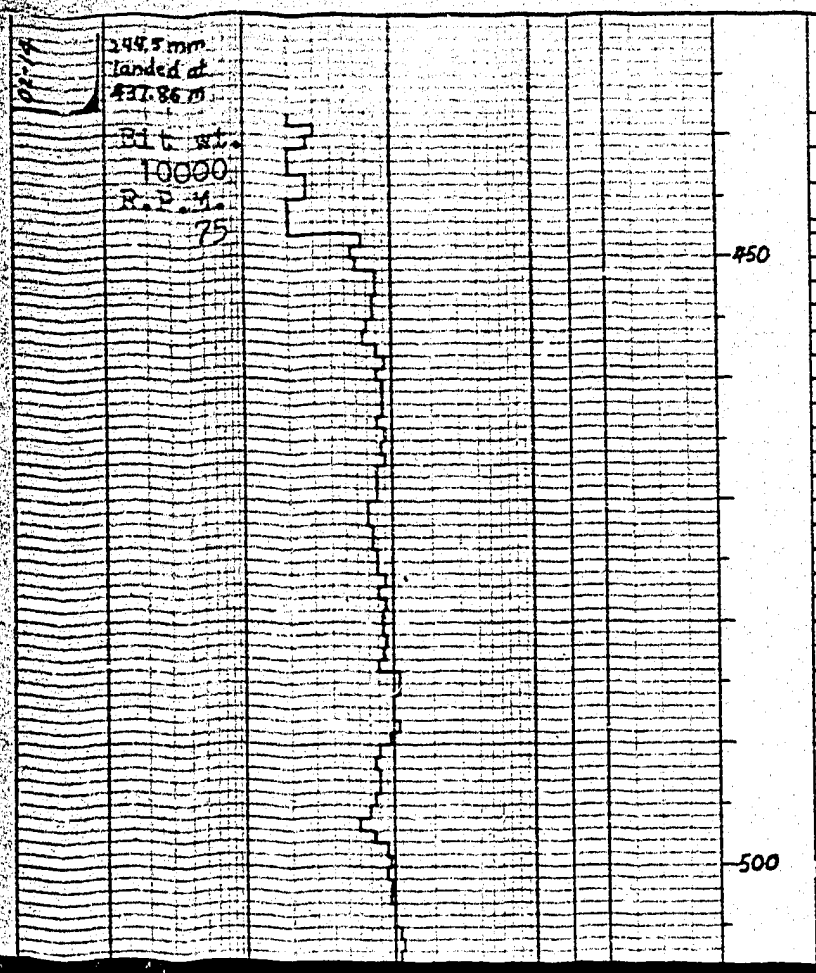
DATE SPUDDED 1984-02-09 **ELEV: K.B.** +619.76m S.L. **FORMATION** Precambrian

RIG RELEASE _____ **ELEV: G.L.** +615.31m S.L. **STATUS** _____

GEOLOGIST Say-Lee Kua

Breccia	Dolomite	Volcanic	Calcareous	Nodules	Chalky
Conglomerate	Anhydrite	Metamorphic	Dolomitic	Bioclastic or Frag.	Lithographic
Granite Wash	Gypsum	Marl, limy	Anhydritic	Oolites	Cryptocrystalline
Sandstone	Salt	Marl, dolomitic	Gypsiferous	Pellets	No Sample
Siltstone	Potash	Limestone, streak	Chert, light and dark	Pyrite	Stromatoporoid
Shale	Coal	Dolomite, streak	Argillaceous	Fossils	Coral
Shale, black	Glacial Till	Sandy	Glauconitic	Carbonaceous	Dolomite rhombs
Limestone	Igneous	Silty	Salt Cast	Earthy	Arkosic

ENGINEERING DATA | PENETRATION RATE MIN / meter (0.1, 1.0, 10, 100) | SHOW | POROSITY TYPE | VISUAL POR (POOR <5%, FAIR 5-10, GOOD 10-15, EXCELLENT >15%) | DEPTH | LITHOLOGY | GRAIN OR CRYSTAL SIZE (SILT (MIC XLN), VF (VF XLN), F (F XLN), M (MED XLN), C (C XLN)) | DEAD OIL STAINING | LIVE OIL STAINING | FLUOR-ESCENCE (EXCELLENT, GOOD, FAIR, POOR) | CORES & TESTS | DESCRIPTIONS & REMARKS



SH dk-m gy, tr fish sc & wh spec; tr pyr; w/ sl lst,

Wabamun 448m (+171.76m S.L.)

LST wh-crm wh, sl chky, tr chty; sl sdy in places

LST wh, sl chky to micritic, tr thin frac

LST wh, pt chky to micritic sl sdy

Limestone | Igneous | Silty | Salt Cast | E Earthy | + Arkosic

ENGINEERING DATA	PENETRATION RATE MIN / meter (0.1 1.0 10 100)	SHOW	POROSITY TYPE	VISUAL POR (POOR <5% · FAIR 5-10 · GOOD 10-15 · EXCELLENT >15%)	DEPTH	LITHOLOGY	GRAIN OR CRYSTAL SIZE (SILT (MIC XLN) · VF (VF XLN) · F (F XLN) · M (MED XLN) · C (C XLN))	DEAD OIL STAINING	LIVE OIL STAINING	FLUOR-ESCENCE (EXCELLENT · GOOD · FAIR · POOR)	CORES & TESTS	DESCRIPTIONS & REMARKS

02-15 (111 m)
244.5 mm landed at 437.86 m
Bit wt. 10000
R.P.M. 75

450

500

550

600

Bit wt. 12000
R.P.M. 80
Pump pr. 6000
Mud wt. 1060
vis. 38
pH 10.5

STG 438-621m
3-4-25 bra
3-4-L

SH dk-m gy, tr fish sc & wh spec; tr pyr; w/ sl lst,

Wabamun 448m (+171.76m S.L.)

LST wh-crm wh, sl chky, tr chty; sl sdy in places

LST wh, sl chky to micritic, tr thin frac

LST wh, pt chky to micritic sl sdy

LST wh, micritic, tr thin frac; sl clr sparry calc

LST wh to crm tan, micritic tr ool; tr sparry calc

LST bf wh to crm tan, sl bf gy, mnr chky, pt arg; tr pyr

LST wh to crm tan, pt micritic to chky

LST lt tan to wh, mnr micritic, tr pyr

02-75 (111 m)

Bit wt. 12000
R.P.M. 80
Pump p. 6000
Mud wt. 1069
vis. 38
pH 10.5

STG 438-621m
34.25 hrs
3-4-1

02-76 (84 m)

Bit wt. 12000
R.P.M. 68
Pump p. 7200
Mud wt. 1102
vis. 42
w.l. 11
pH 10

TD

02-77 (96 m)

550

600

650

700

LST wh, micritic, tr thin frac; sl clr sparry calc

LST wh to crm tan, micritic tr ool; tr sparry calc

LST bf wh to crm tan, sl bf gy, mnr chky, pt arg; tr pyr

LST wh to crm tan, pt micritic to chky

LST lt tan to wh, mnr micritic, tr pyr

LST as above; sl biocl

LST tan to bf wh, pt micritic tr ost., pel; tr pyr

LST bf wh, mnr tan & bf gy, pt slty, sl arg; tr biocl tr pyr

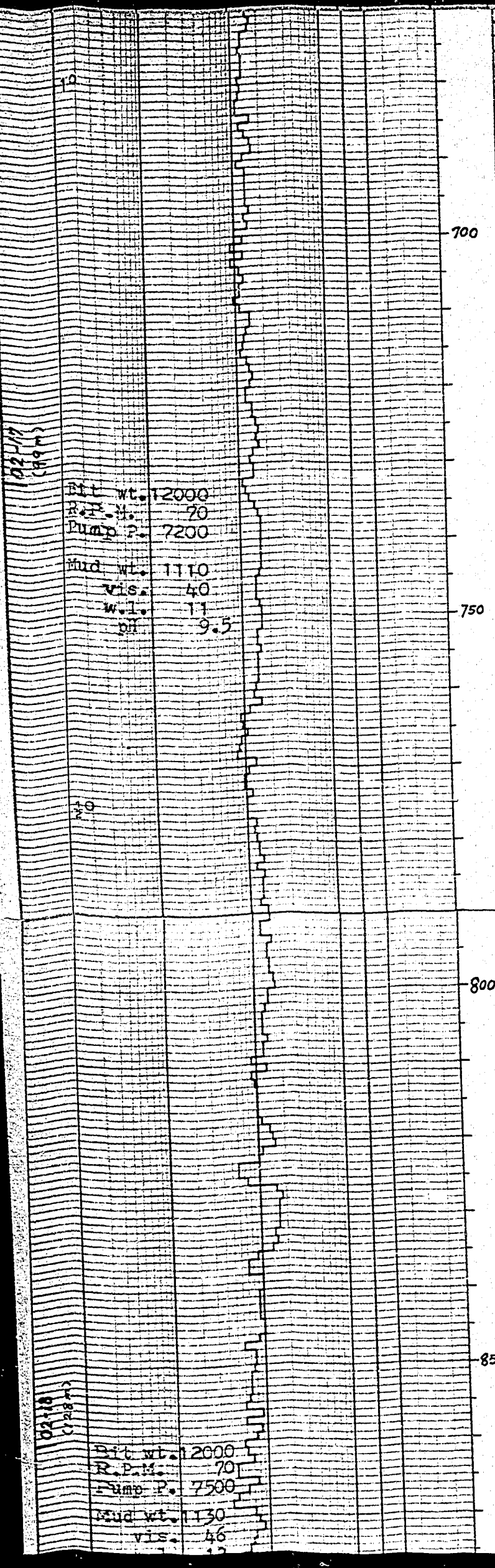
LST bf wh to tan, sl brn gy, micritic, tr biocl; w/ strgs of sltst, bf gy, calc, mnr sdy

Kakisa 704m (-84.24m S.L.)

LST tan to lt brn, mnr bf wh, mnr micritic; w/ mnr sltst

LST as above; tr biocl

LST bf tan to bf wh, mnr



LST bf wh, mnr tan & bf gy, pt slty, sl arg; tr biocl tr pyr

LST bf wh to tan, sl brn gy, micritic, tr biocl; w/ strgs of sltst, bf gy, calc, mnr sdy

Kakisa 704m (-84.24m S.L.)

LST tan to lt brn, mnr bf wh, mnr micritic; w/ mnr sltst

LST as above; tr biocl

LST bf tan to bf wh, mnr micritic-chky, tr biocl

LST as above; sl arg

LST as above; sl arg & slty

SLTST bf gy, calc, sl arg, gd to vf gr calc ss in mnr pt; mnr intbd lst

SS bf gy, calc, mnr arg, sl slty, tr pyr

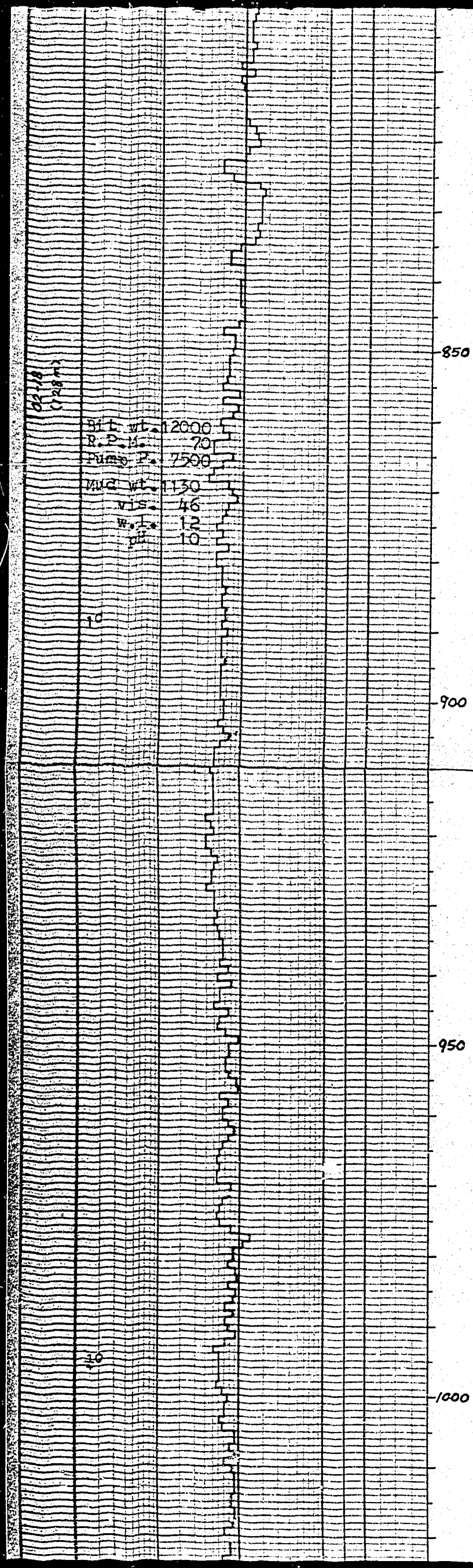
Jean Marie 826m (-206.24m S.L.)

LST bf wh to bf tan, tr biocl mnr sltst

Ft. Simpson 836m (-216.24m S.L.)

SLTST bf gy, sdy, calc, sl arg, mnr sh ptg; w/ intbd lst, bf wh to tan, tr biocl

SLTST bf gy, calc, sl sdy; w/



SS bf gy, calc, mnr arg, sl slty, tr pyr

Jean Marie 826m (-206.24m S.L.)

LST bf wh to bf tan, tr biocl mnr sltst

Ft. Simpson 836m (-216.24m S.L.)

SLTST bf gy, sdy, calc, sl arg, mnr sh ptg; w/ intbd lst, bf wh to tan, tr biocl

SLTST bf gy, calc, sl sdy; w/ intbd sh, dk gy, mnr brn to grn gy, sl carb & mrly

SLTST lt grn to bf gy, calc, mnr mica, sl arg & sdy; mnr sh, m-dk gy, red brn, sl calc & mrly

SH brn gy, mnr m-grn gy, sl micmica & calc; w/ intbd sltst, bf gy to bf wh, sdy, pt calc, gd to vf gr ss in pt; sh bcm red brn

SH red brn to dk brn, mnr grn to m gy, sl calc; w/ intbd sltst, calc, arg, bcm slty to arg lst in pt

SH grn gy, mnr red brn, sl calc; intbd w/ sltst, bf wh to bf gy, calc, sl sdy; mnr slty lst

mnr sh, m-dk gy, red brn, sl calc & mrly

SH brn gy, mnr m-grn gy, sl micmica & calc; w/ intbd sltst, bf gy to bf wh, sdy, pt calc, gd to vf gr ss in pt; sh bcm red brn

SH red brn to dk brn, mnr grn to m gy, sl calc; w/ intbd sltst, calc, arg, bcm slty to arg lst in pt

SH grn gy, mnr red brn, sl calc; intbd w/ sltst, bf wh to bf gy, calc, sl sdy; mnr slty lst

950

1000

1050

1100

10

$\frac{1}{2}$ 10

$\frac{1}{2}$ 10

02-19 (185.5m)

Bit wt. 2000
R.P.M. 70
Pump P. 7500

Mud wt. 1140
vis. 44
w.l. 12.5
pH 9.5

1027-9 (1196.5m)

Bit wt. 12000
R.P.M. 70
Pump P. 7500

Mud wt. 1140
vis. 44
w.l. 12.5
pH 9.5

1050

1100

10

1150

Bit wt. 12000
R.P.M. 80

10
Bit wt. 13000
R.P.M. 75

Bit wt. 13000
R.P.M. 80

Mud wt. 1145
vis. 43
w.l. 13
pH 9.3

1200

Bit wt. 12000
R.P.M. 80

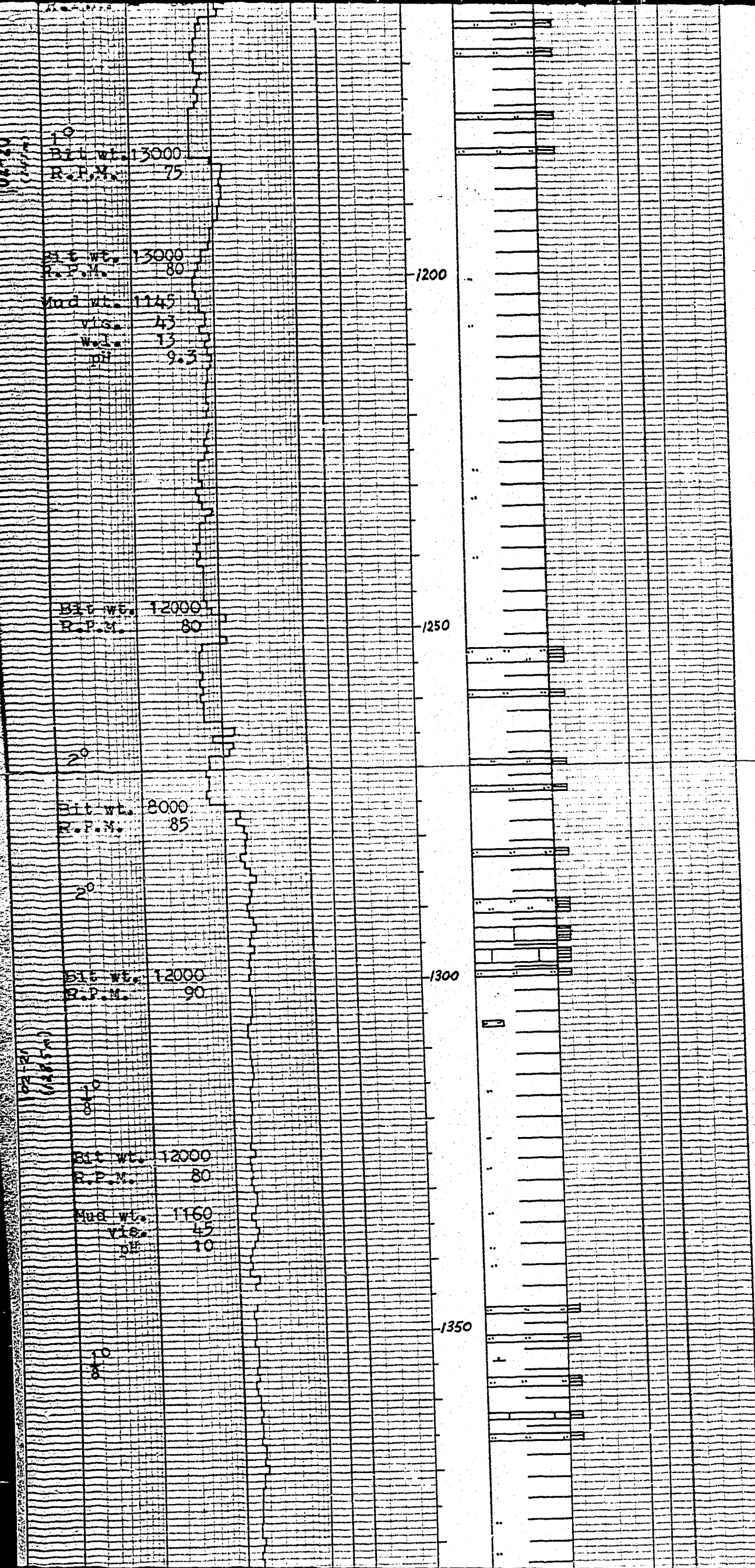
1250

Top

SH grn gy, sl red brn, sbfis calc; sl sltst strgs

SH grn gy to m gy, sbfis, mnr calc; sl sltst strgs

SH grn gy, sbfis, sl calc; w/ mnr strgs of sltst, bf wh to bf gy, calc; sl arg lst



mnr calc; sl sltst strgs

SH grn gy, sbfis, sl calc; w/ mnr strgs of sltst, bf wh to bf gy, calc; sl arg lst

SH as above; intbd w/ sltst & lst, bf tan to bf wh, sl arg & slty

SH grn gy, sl calc; w/ sl strgs of sltst, bf gy to bf wh, calc; tr lst

SH grn gy, bcm red brn in pt, sbfis, sl calc; mnr sltst, bf wh to bf gy, calc; sl lst, wh to tan, slty

Sh as abcve; intbd w/ lst, wh, sl chky

Bit wt. 12000
R.P.M. 90

Bit wt. 12000
R.P.M. 80

Mud wt. 1160
vis. 45
pH 10

Bit wt. 12000
R.P.M. 90

Mud wt. 1150
vis. 48
w.l. 10
pH 9.5

DST #1 1458m
148.5 hrs
5-5-1/8

Mud wt. 1102
vis. 58
w.l. 8.6
pH 9.7

Bit wt. 12000
R.P.M. 85
Pump P. 6500

Bit wt. 16000
R.P.M. 90

1300

1350

1400

1450

1500

1450.0

458.8

1479.6

D.S.T. #1
Rec. 42 m drilling mud

SH grn gy, sl calc; w/ sl strgs of sltst, bf gy to bf wh, calc; tr lst

SH grn gy, bcm red brn lx pt, sbfis, sl calc; mnr sltst, bf wh to bf gy, calc; sl lst, wh to tan, slty

Sh as abcve; intbd w/ lst, wh, sl chky

SH m red brn, pt grn gy, sl mrly, calc & micmica; sl strgs of sltst,

Muskwa 1404m (-784.24m S.L.)

SH m red brn, pt dk gy, carb, sl mrly, mnr grn gy, sbfis; mnr lst, brn to bf tan, sl arg & earthy

SH dk gy, pt brn gy, mnr grn gy, micmica, pt carb, sl mrly; w/ mnr lst, bf wh to tan, earthy, sl arg

Slave Point 1452m (-832.24m S.L.)

LST lt brn, pt m brn, sl vp por, lt cut; lst bcm m-dk brn, pt strom, sl styl mnr thin frac w/ lt o stn in places; sl arg; bulb-massive strom, scat lt o stn, thin frac, slow o bleeding in places, sl vp por, m to hvy o stn in places

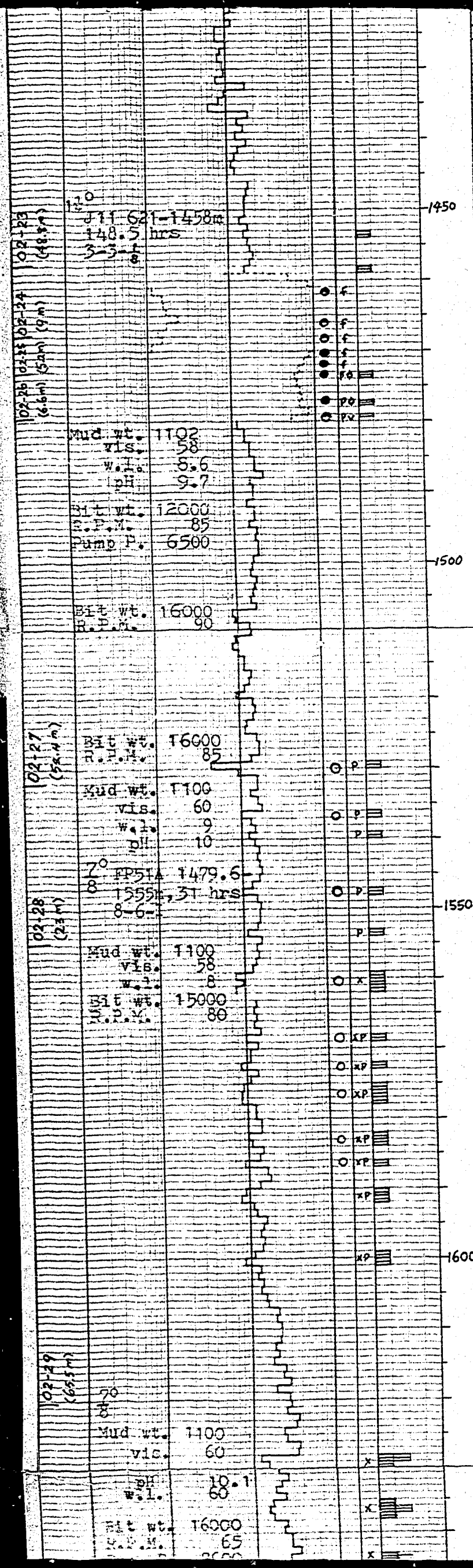
LST m brn, pt tan to bf wh, prob strom in pt, sl thin frac; tr pyr

Watt Mtn 1507m (-887.24m S.L.)

SH grn-gy, wxy; w/ lst, brn

Sulphur Pt. 1509m (-889.24m S.L.)

LST lt brn to crm tan, mnr bf wh, sl biocl, tr pyr



SH dk gy, pt brn gy, mnr grn gy, micmi.ca, pt carb, sl mrly; w/ mnr lst, bf wh to tan, earthy, sl arg

Slave Point 1452m (-832.24m S.L.)

LST lt brn, pt m brn, sl vp por, lt cut; lst bcm m-dk brn, pt strom, sl styl mnr thin frac w/ lt o stn in places; sl arg; bulb-massive strom, scat lt o stn, thin frac, slow o bleeding in places, sl vp por, m to hvy o stn in places

LST m brn, pt tan to bf wh, prob strom in pt, sl thin frac; tr pyr

Watt Mtn 1507m (-887.24m S.L.)

SH grn-gy, wxy; w/ lst, brn

Sulphur Pt. 1509m (-889.24m S.L.)

LST lt brn to crm tan, mnr bf wh, sl biocl, tr pyr

LST lt brn to tan, pt bf wh, sl biocl, mnr vp-p por, tr o stn, lt yel cut, sl bit cctn

Muskeg 1559m (-939.24m S.L.)

DOL lt-m brn, mnr crm gy to crm wh, tr wh dol rhombs vp por, tr lt o stn, lt slow cut; mnr lst, bf wh to bf gy, sl arg; sl anhy strg

DOL lt brn to crm wh, mnr vp por, lt slow cut; sl lst, bf wh to bf gy, sl arg; sl anhy, wh, micsuc

DOL lt-m brn, mnr bf wh to bf gy, vp por, sl cut, mnr anhy, prl wh, micsuc, sl dol; sl lst strg

Upper Keg R. 1628m (-1008.24m S.L.)

DOL lt-m brn, mnr tan, mnr p por, lt cut; tr pyr; bcm lt honey brn to crm wh, vp-p por, sl fair por, lt slow cut; tr wh dol rhomb

02-28 (2a F)

8 1555m, 31 hrs
8-6-

Mud wt. 1100
vis. 58
w.l. 8
Bit wt. 15000
R.P.M. 80

02-29 (1555 F)

70
8

Mud wt. 1100
vis. 60
pH 10.1
w.l. 60

Bit wt. 16000
R.P.M. 65
Pump P. 7600
FP51A 1555-1651m
49.75 hrs, 8-7-0

03-01 (1545 F)

Bit wt. 17000
R.P.M. 65
Pump P. 7600
Mud wt. 1090
vis. 60
w.l. 9.6
pH 10

Bit wt. 17000
R.P.M. 68

10

03-02 (14 m)

Mud wt. 1095
vis. 76
w.l. 11
pH 9

Bit wt. 17000
R.P.M. 55

FP53A 1651-1750m, 35.5 hrs, 3-2-I

10

03-03 (34 m)

1550
1600
1650
1700

1535.0

Rec. 60 70

Muskeg 1559m (-939.24m Svb.)

DOL lt-m brn, mnr crm gy to crm wh, tr wh dol rhombs vp por, tr lt o stn, lt slow cut; mnr lst, bf wh to bf gy, sl arg; sl anhy strg

DOL lt orn to crm wh, mnr vp por, lt slow cut, sl lst, bf wh to bf gy, sl arg; sl anhy, wh, micsuc

DOL lt-m brn, mnr bf wh to bf gy, vp por, sl cut; mnr anhy, prl wh, micsuc, sl dol; sl lst strg

Upper Keg R. 1628m (-1008.24m S.L.)

DOL lt-m brn, mnr tan, mnr p por, lt cut; tr pyr; bcm lt honey brn to crm wh, vp-p por, sl fair por, lt slow cut; tr wh dol rhomb

Lower Keg R. 1646m (-1026.24m S.L.)

LST dirty bf brn, mnr bf gy, earthy-lith, sl mrly; pt dol lst, dk gy to dk brn gy, sl arg & sbbit in places

Chinchga 1687m (-1067.24m S.L.)

DOL bf brn to m gy brn, sl arg; intbd w/ lst, bf brn to bf gy, earthy, sl dol; mnr anhy, wh to crm tan, micsuc

Anhy crm tan to crm wh, micxln sl dol

Red Beds 1720m (-1100.24m S.L.)

SS clr to fros qtz, vc gr, mnr m gr, rd-sbrd, m-p srtd; mnr feld, arkosic, sl mica

Precambrian 1731m (-1111.24m S.L.)

Gran pink-crm tan feld, wh-clr qtz, golden bk biot, dk grn to bk amph, sl earthy grn chlor, sl leucoxene

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY:	HOME OIL COMPANY LIMITED	**FORMATION:**	Slave Point	**PAGE:**	1
WELL:	Home Kakisa River	**CORING EQUIPMENT:**	Diamond	**LAB NO:**	~~684-2662~~
LOCATION:	J-42 (N.W.T.)	**CORING DIAMETER:**	.106 M	**DATE:**	1984-03-13
FIELD:	Kakisa River	**CORING FLUID:**	Chemical Gel	**ANALYSTS:**	Rob Paul
PROVINCE:	Northwest Territories	**ELEVATION:**	KB: 619.76 M GRD: 615.31 M		

Core transported in
( ) Rubber sleeve
( ) Plastic sleeve
(X) Boxes
( ) Core artificially kept frozen in transit
( ) Core placed in deep freeze (at -28C) at the laboratory
( ) Core slabbed prior to analysis
( ) Permeability measured on 0.020 M cubes
(X) Permeability measured on 0.025 M drilled plugs
( ) Permeability measured on a sample jacketed in an aluminum sleeve
(X) Permeability measured on 0.106 M full diameter

Type of solvent used for extraction: Toluene

Extraction time: 240 Hours

Drying temperature and time: 120°C for 12 Hours

METHOD OF ANALYSIS:

POROSITY: Boyle's Law Helium Porosimeter

PERMEABILITY: Hassler Holder

FLUID SATURATION: Ruska Fluid Content Still

The 'OB' samples were confined in aluminum sleeves and subjected to kPa overburden pressure during porosity and permeability determinations.

REMARKS: Full diameter samples sandblasted before KH measurements.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY:	HOME OIL COMPANY LIMITED	FORMATION:	Slave Point	PAGE:	1 A
WELL:	Home Kakisa River	CORING FLUID:	Chemical Gel	LAB NO:	C84-2562
LOCATION:	J-42 (N.W.T.)	CORING EQUIPMENT:	Diamond	DATE:	1984-03-13
FIELD:	Kakisa River	ELEVATION:	KB: 519.76 M GRD: 515.31 M	ANALYST:	Rob Paul
PROVINCE:	Northwest Territories	REMARKS:	Full Diameter & Small Plug Analysis		

SUMMARY

SUMMARY INTERVAL: 1458.80 - 1479.60 M

TOTAL THICKNESS: 20.80 M

THICKNESS ANALYZED: 3.25 M

THICKNESS NOT ANALYZED: RUBBLE 0.00 DENSE 16.30 LOST 1.25 DRILLED 0.00 NOT ANALYZED 0.00 17.55 M

PERMEABILITY RANGE	THICKNESS M	WEIGHTED AVERAGE PERMEABILITY MD	PERMEABILITY THICKNESS MD.M	WEIGHTED AVERAGE POROSITY	POROSITY THICKNESS M	WEIGHTED AVERAGE RESIDUAL OIL	WEIGHTED AVERAGE PORE SAT. WATER
TOTAL ANALYZED	3.25	2.537	8.246	0.014	0.047	0.087	0.034
10.00 MD AND GREATER	0.50	14.700	7.350	0.014	0.007	0.480	0.024
1.00 MD TO 9.99 MD	0.45	1.700	0.765	0.020	0.009	0.000	0.000
0.50 MD TO 0.99 MD	0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.01 MD TO 0.49 MD	2.10	0.062	0.131	0.013	0.028	0.021	0.018
LESS THAN 0.01 MD	0.20	0.000	0.000	0.015	0.003	0.000	0.315

PORO. % MD

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY: HOME OIL COMPANY LIMITED — PAGE: 2

WELL: HOME KAKISA RIVER J-42 (NWT) — LAB NO: C84-2562

SMPL NO	INTERVAL REPRESENTED TOP M	BASE M	THICK M	PERMEABILITY TO AIR KMAX MD	K90' MD	KV MD	PERM THICK MD.M	PORO.	PORO. THICK M	DENSITY BULK KG/M3	DENSITY GRAIN KG/M3	RESIDUAL PORE SAT. OIL	RESIDUAL PORE SAT. WATER	VISUAL EXAMINATION
					CORED INTERVAL 1458.80 - 1479.60 M									
					CORE #1 1458.80 - 1467.80 M				RECEIVED IN LAB 8.20 M					
DE	1455.80	1467.00	8.20											LS,SH
LO	1467.00	1467.80	0.80											LOST
					CORE #2 1467.80 - 1479.60 M				RECEIVED IN LAB 11.35 M					
1	1467.80	1468.15	0.35	15.00	0.01	8.30	5.250	0.009	0.003	2660	2680	0.642	TRCE	LS,SH,VF
DE	1468.15	1468.60	0.45											LS,SH
2	1468.60	1468.70	0.10	0.03			0.003	0.017	0.002			TRCE	TRCE	SP,LS,SH
DE	1468.70	1470.80	2.10											LS,SH
3	1470.80	1470.95	0.15	0.04	0.04	0.01	0.006	0.006	0.001	2680	2700	TRCE	TRCE	LS,SH
DE	1470.95	1471.30	0.35											LS,SH
4	1471.30	1471.50	0.20	0.22	0.03	0.01	0.044	0.013	0.003	2660	2700	0.222	TRCE	LS,SH,RF
DE	1471.50	1471.80	0.30											LS,SH
5	1471.80	1472.30	0.50	0.02	<0.01	<0.01	0.010	0.004	0.002	2710	2720	TRCE	TRCE	LS,SH
6	1472.30	1472.60	0.30	0.15	0.03	0.01	0.045	0.018	0.005	2660	2710	TRCE	0.123	LS,SH,VF
DE	1472.60	1472.90	0.30											LS,SH
7	1472.90	1473.35	0.45	1.70	0.01	0.01	0.765	0.019	0.009	2670	2720	0.000	0.000	LS,SH,VF
8	1473.35	1473.50	0.15	14.00	0.01	5.70	2.100	0.028	0.004	2620	2700	0.103	0.079	LS,SH,VF

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY: HOME OIL COMPANY LIMITED

WELL: HOME KAKISA RIVER J-42 (NWT)

LAB NO: C84-2562

SMPL NO	INTERVAL REPRESENTED TOP M	BASE M	THICK M	PERMEABILITY TO AIR KMAX MD	K90' MD	KV MD	PERM THICK MD.M	PORO.	PORO. THICK M	DENSITY BULK KG/M3	DENSITY GRAIN KG/M3	RESIDUAL PORE SAT. OIL	RESIDUAL PORE SAT. WATER	VISUAL EXAMINATION
9	1473.50	1473.65	0.15	0.03	0.03	0.66	0.004	0.020	0.003	2620	2680	TRCE	TRCE	LS,SH
DE	1473.65	1473.80	0.15											LS,SH
10	1473.80	1474.00	0.20	0.03	0.03	<0.01	0.006	0.005	0.001	2670	2680	TRCE	TRCE	LS,SH
DE	1474.00	1477.15	3.15											LS,SH
11	1477.15	1477.35	0.20	<0.01	<0.01	<0.01	0.000	0.014	0.003	2650	2690	TRCE	0.317	LS,SH
12	1477.35	1477.50	0.15	0.02	0.02	0.01	0.003	0.029	0.004	2620	2690	0.000	0.000	LS,SH
13	1477.50	1477.85	0.35	0.03	0.03	0.01	0.010	0.019	0.007	2640	2700	0.000	0.000	LS,SH
DE	1477.85	1479.15	1.30											LS,SH
LO	1479.15	1479.60	0.45											LOST

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

4605-12 STREET N.E. CALGARY ALBERTA T2E 4R3

TELEPHONE (403) 277-0725

LAB. REPORT NO: C84-2562

Home Kakisa River J-42 (N.W.T.)

Core #1 1458.80 - 1467.80 M Slave Point (9.00 M) Rec.: 8.20 M

1458.80 - 1461.20 M (2.40 M): Limestone, macroscopic, light brown, speckled, partly grey, subhorizontal, massive, partly grading to calcareous shale; rare grey stringers of grey calcareous shale; microscopic, dark brown, micro-crypto crystalline, no shows, tight; white speckles are very fine crystalline lenses or fossils.

1461.20 - 1464.20 M (3.00 M): Limestone, macroscopic, grey, grey-brown, massive, horizontal lamination; rare lenses grey-brown microscopic, dark grey-brown, micro-crypto crystalline, no shows, tight; lenses are crypto crystalline.

1464.20 - 1466.50 M (2.30 M): Limestone, brown, grey-brown, partly speckled, rare dark grey, shale stringers; microscopic, dark brown, micro-crypto crystalline, tight.

1466.50 - 1466.80 M (0.30 M): Limestone, grey, grey-brown lenticular worm like limestone in dark grey calcareous shale matrix; limestone is light brown, very fine crystalline, no shows, tight.

1466.80 - 1467.00 M (0.20 M): Limestone, grey, micro-crypto crystalline, tight.

Core #2 1467.80 - 1479.60 M Slave Point (11.80 M) Rec.: 11.35 M

1467.80 - 1468.70 M (0.90 M): Limestone, grey-brown, micro-crypto crystalline, no shows, tight.

1468.70 - 1470.45 M (1.70 M): Limestone as above, rare vugs but no permeability and brown lively oil stain, fair green-white cut, poor green-white fluorescence.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

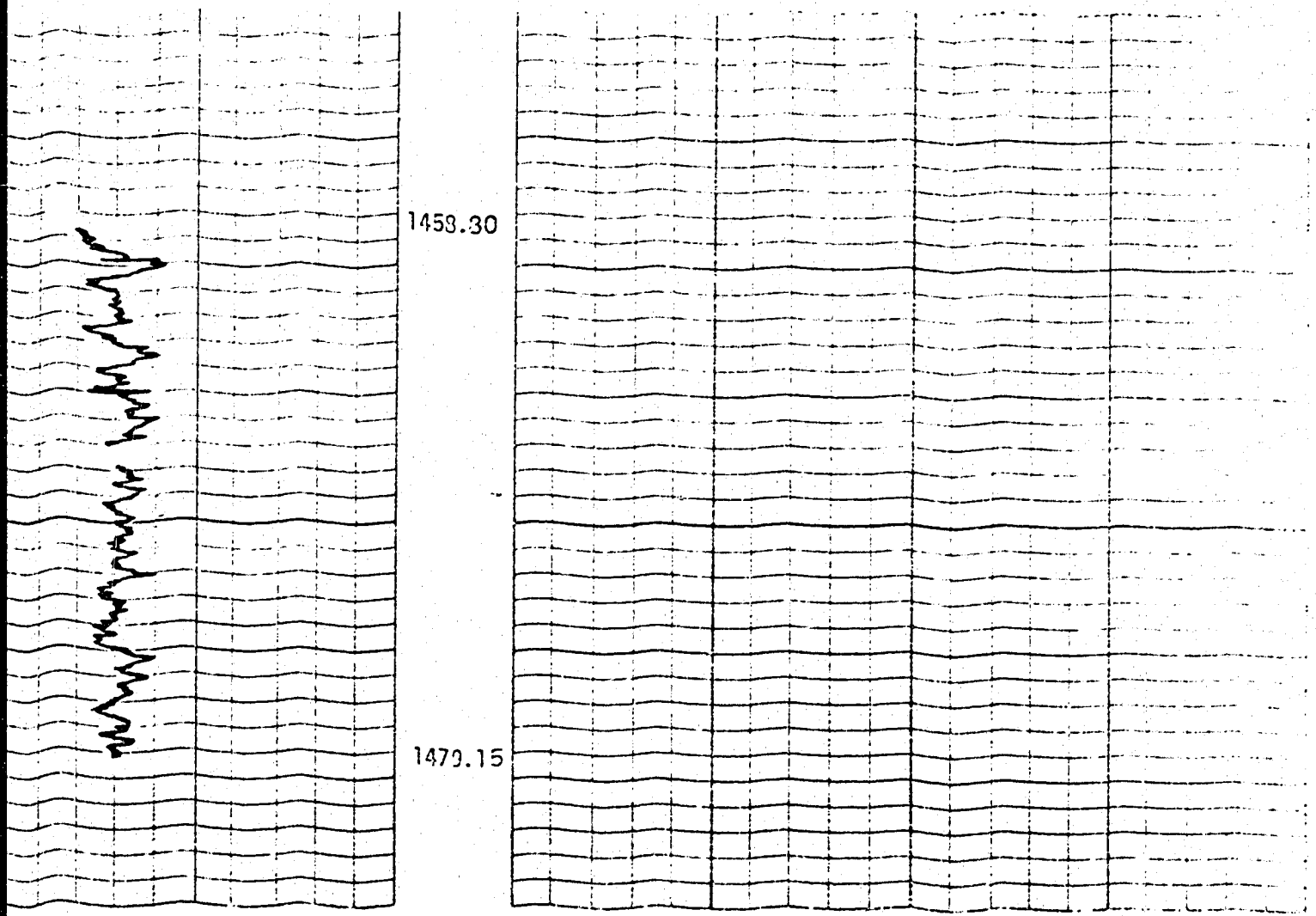
COMPANY: HOME OIL COMPANY LIMITED

WELL: Home Kakisa River J-42

LAB NO: C84-2562

RADIOACTIVITY LOG

VERTICAL SCALE 1 : 240 T.C. 15 SEC. SENS. 6000 CPM

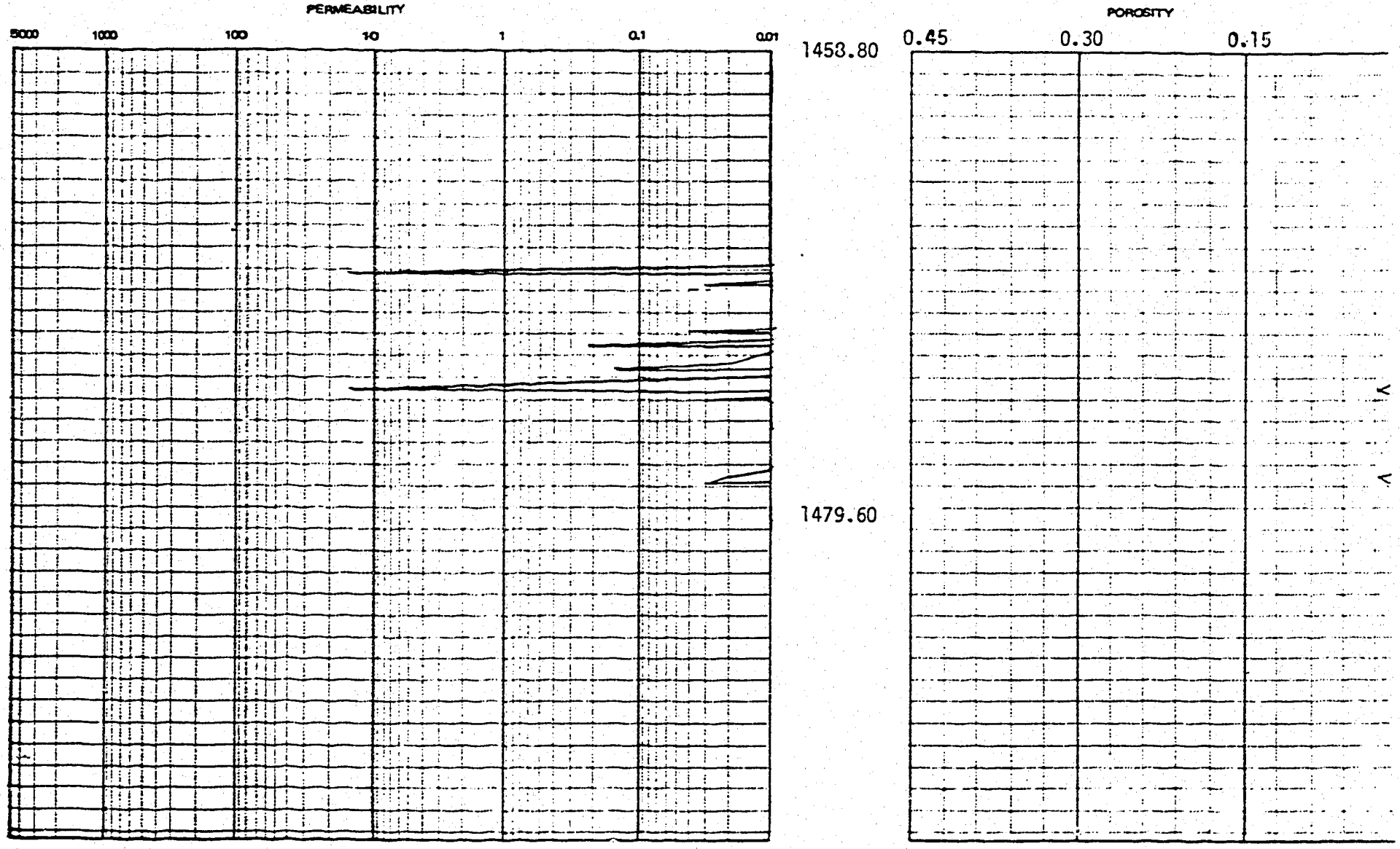


CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WELL NAME Home Kakisa River J-42 (N.W.T.) LAB. NUMBER C84-2562

FORMATION Slave Point CORED INTERVAL 1458.80 to 1479.60



CHEMICAL & GEOLOGICAL LABORATORIES LIMITED

CORE DESCRIPTION SYMBOLS

A	Anhydrite
AMPH	Amphipora
ANG	Angular
ARGIL	Argillaceous
AREN	Arenaceous
BD	Bands
BLSH	Black Shale
BN	Bentonite
BR	Brecciated
BT	Buttoned
C	Coarse
CA	Calcite
CARB	Carbonaceous
CG	Conglomerate
CH	Chert
CM	Cement
CO	Coralline Fragments
CSS	Coarse Sandstone
CALC	Calcareous
DE	Dense
DOL	Dolomite
DF	Diagonal Fracture
F	Fine
FE	Ironstone
FG	Fragmental
FOSS	Fossiliferous
FSL	Fine Sand Lenses
FSS	Fine Sandstone
FD	Full Diameter
GL	Glauconitic
HC	Horizontal Crack
HF	Horizontal Fracture
I	Intergranular
INB	Interbedded
KA	Kaolinite
LAM	Laminations
LS	Limestone
LV	Large Vugs
M	Medium
MSS	Medium Sandstone
MUDST	Mudstone
NR	Not reactive to cold 15% HCl
NA	Not analyzed by customers request
O	Open
OB	Overburden
OCC	Occasional
OOL	Oolitic
PPV	Pin Point Vugs
PTSL	Paper-thin Shale Laminations
PY	Pyrites
PYB	Pyrobitumen
R1	Slightly reactive to cold 15% HCl
R2	Reactive to cold 15% HCl
RC	Random Cracks
RF	Random Fractures
RND	Rounded
RU	Rubble
S	Stained
SD	Sand
SDY	Sandy
SH	Shale
SHL	Shale Lenses
SHY	Shaly
SIL	Siltstone
SL/	Slightly
SL	Sand Lenses
SP	Small Plug
ST	Stylolite
STK	Streaks
SUBRND	Subrounded
SUBANG	Subangular
SV	Slightly Vuggy
STROM	Stromatoporiod
TR	Trace
U	Unconsolidated
V	Vuggy
VC	Vertical Crack
VF	Vertical Fracture
V.F.	Very Fine
VFSS	Very Fine Sandstone
XL	Crystals
XLN	Crystalline
*	Broken Core (K90° used summary purpose)
**	Permeability > 30,000 m
-.01	Permeability <.01

KH and K90° are transverse permeability measurements on full diameter samples.

HOME

KAKISA

RIVER J-42

9211-H5-1-2

NOTE: THIS IS ADDITIONAL INFORMATION RECEIVED AT A LATER DATE.

Canada Oil and Gas Lands Administration | Administration du pétrole et du gaz des terres du Canada

				Well Status	
Nova Scotia	☐	West Coast	☐	Suspended	☐
Newfoundland	☐	Northern	☒	Completed	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Abandoned	☒

WELL TERMINATION RECORD

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

WELL DATA

Well Name: Home Kakisa River J-42 Area: Cameron Hills, N.W.T.

Grid Area: 60° 10' 00" 118° 45' 00" Field/Pool: Wildcat

Permit or Lease No.: 1135 Final Coordinates: Lat.: 60° 01' 43.147" Long: 118° 38' 05.604"

Drilling Unit: Hi Tower Rig 17 Elevations-RT/KB: 619.76 SF/GL: 615.31

Spud Date: 1984-02-09-00:45 Rig Released: 1984-03-12 Total Depth: 1750 m

CASING AND CEMENTING

O.D.:	Weight:	Grade:	Depth Set:	Cement and Additives:
339.7	71.42	H40	129.0	0:1:0 Class "G" + 2% $CaCl_2$
244.5	53.57	K55	437.86	0:1:0 Class "G" + 1% $CaCl_2$

PLUGGING PROGRAM

Approval of the following program was obtained by (person) Gordon Nicholl from (person) John Hamilton of the Canada Oil and Gas Lands Administration by means of Telephone on March 11 19 84

Type of Plug:	Interval:	Felt:	Cement and Additives:
D&A cement	1750 - 1570	No feel Req'd	0:1:0 Class "G"
D&A Cement	1550 - 1420	1402	0:1:0 Class "G"
D&A Cement	860 - 800	852	0:1:0 Class "G"
D&A Cement	465 - 400	427	0:1:0 Class "G"

Lost Circulation/Overpressure Zones: Nil

Equipment left on Seafloor (Describe): N/A

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

Cores: Type: Full Hole Intervals: 1458 - 1467

1467 - 1479.6

Other Downhole Completion/Suspension Equipment: Nil

CANADA OIL AND GAS LANDS ADMINISTRATION
ADMINISTRATION DU PÉTROLE ET DU GAZ DES TERRES DU CANADA
NOV 19 1984
ENGINEERING AND CONTROL BRANCH
TECHNIQUE ET DU CONTRÔLE

CERTIFICATION

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

Signed: [signature] P. Eng. Title: Chief Drilling Engineer

Name: M.G. Wilcox, P. Eng. Date: 1984-09-07

Acknowledged by: Engineering Branch

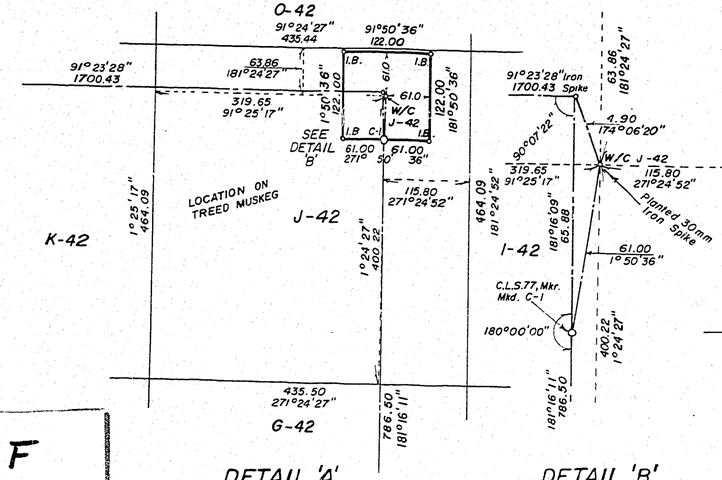
Date:

File:

Department of Energy, Mines and Resources | Ministère de l'Énergie, des Mines et des Ressources

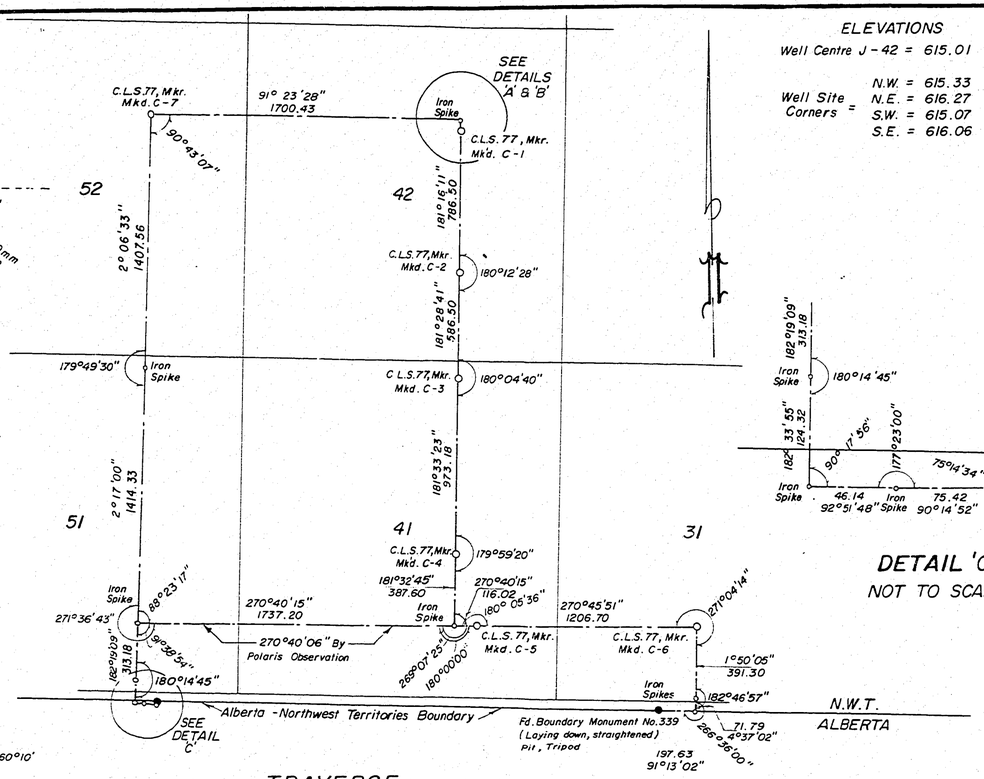
Department of Indian Affairs and Northern Development | Ministère des Affaires indiennes et du Nord canadien

Canada



DETAIL 'A'
UNIT J, SECTION 42
SCALE 1:5000

DETAIL 'B'
NOT TO SCALE

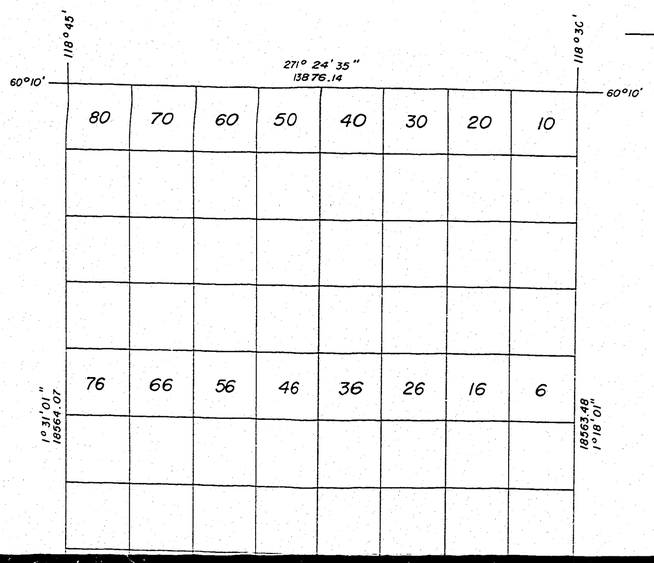


TRAVERSE
SCALE 1:20,000

ELEVATIONS
Well Centre J-42 = 615.01

Well Site Corners = N.W. = 615.33, N.E. = 616.27, S.W. = 615.07, S.E. = 616.06

DETAIL 'C'
NOT TO SCALE



GEOGRAPHIC AND UTM CO-ORDINATES (1927 NAD)				
Station	Latitude	Longitude	Northings	Eastings
CONTROL MONUMENTS				
339	59° 59' 58.357"	118° 36' 53.630"	6 652 253.22	409 925.99
341	59° 59' 58.293"	118° 39' 50.619"	6 652 319.20	407 184.13
GRID AREA				
NE	60° 10'	118° 30'	6 670 711.86	416 756.22
NW	60° 10'	118° 45'	6 671 053.25	402 884.28
SE	60° 00'	118° 30'	6 652 153.16	416 335.00
SW	60° 00'	118° 45'	6 652 495.69	402 392.85
J-42 NE	60° 01' 45.212"	118° 37' 58.125"	6 655 582.77	409 008.47
J-42 NW	60° 01' 45.210"	118° 38' 26.250"	6 655 593.46	408 573.16

LEGEND
UTM coordinates are computed for Zone 11, Central Meridian 117° W.
Bearings were derived from the bearing 91° 22'42.6" computed between Boundary Monuments No's. 339 and 341 and are referred to Meridian 117° 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 0.9996072. Coordinates were then adjusted to fit the control. (Sea Level Factor = 0.99990534; Scale Factor = 0.99970182)
Distances shown on grid area subdivisions are UTM plane.
Boundary Monuments found shown thus: ●
Monuments planted shown thus: ○
Traverse lines and stations shown thus: ○———○
Mkr. denotes metal marker post 2.0m. long planted 0.3 m. W.
Elevations were derived from Boundary Monument No. 341, Elev. = 596.158
Survey was completed prior to drilling, therefore well as drilled may not necessarily agree with proposed location.
Area required = 1.49 hectares.
Transit is "WILD T-200".
Electronic Distance Measuring machine is "WILD DI4L SERIAL No. 44353".
Line between Monument No's. 339 & 341 is overgrown, plus Monument No. 341 is not on either lines that were existing. See Detail 'C'.

THIS SURVEY WAS EXECUTED DURING THE DECEMBER 14 TO DECEMBER 23, 1983, BY

HOME OIL COMPANY LIMITED

CANADA LANDS SURVEYS RECORDS
6 9 5 1 7
13 NOV. 1984

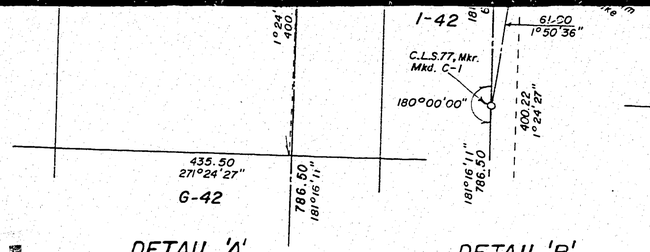
PLAN AND FIELD NOTES OF SURVEY OF PROPOSED EXPLORATORY WELL HOME KAKISA RIVER IN UNIT J, SECTION GRID AREA 60°10', I
NORTHWEST TERRITORIES
CANADA OIL AND GAS LAND REGULATIO

Scale 1:20,000
1000 0

SURVEYED FOR:
HOME OIL COMPANY LIMITED
BY: L.W. BRETON, C.L.S.
1983

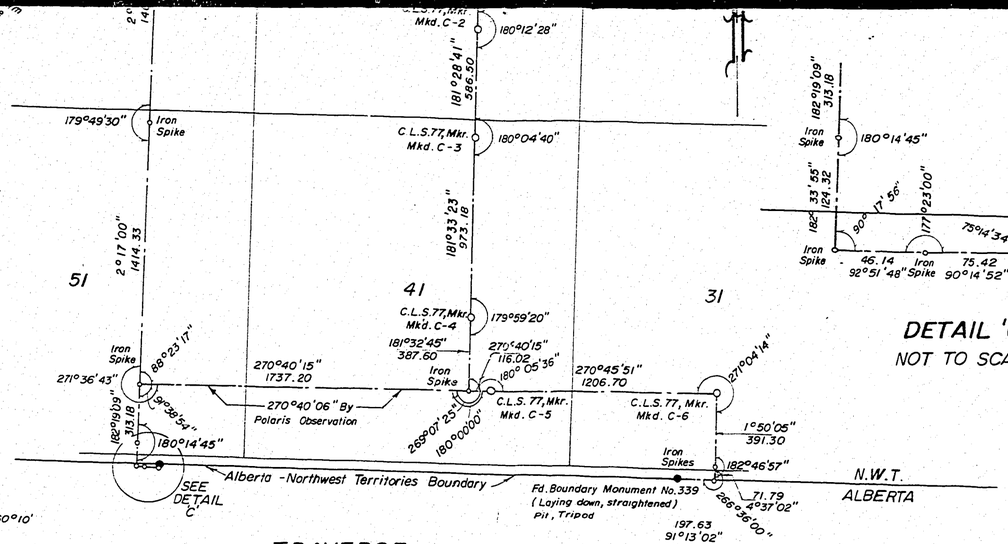
1 OF

2 of



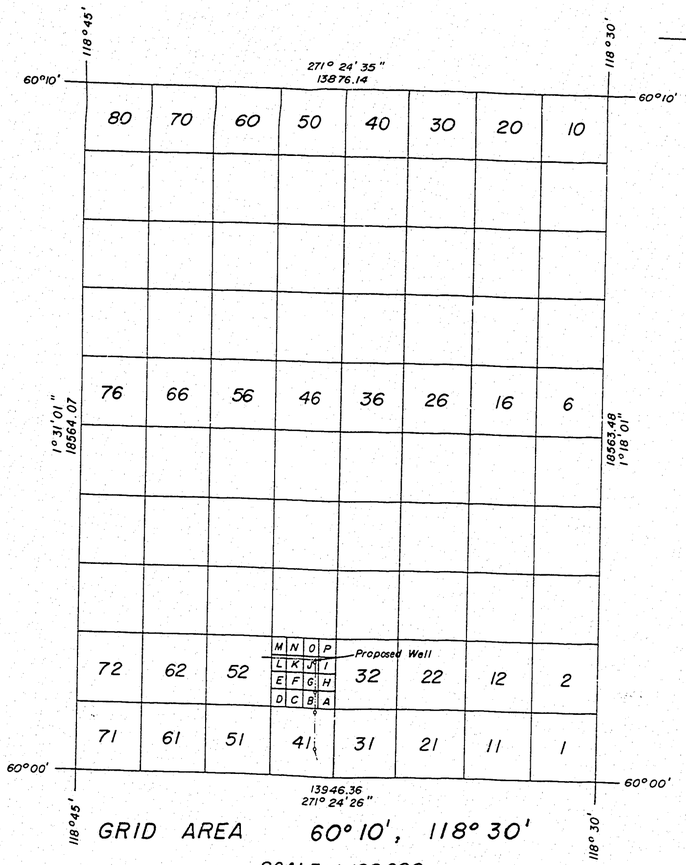
DETAIL 'A'
UNIT J, SECTION 42
SCALE 1:5000

DETAIL 'B'
NOT TO SCALE



TRAVERSE
SCALE 1:20,000

DETAIL 'C'
NOT TO SCALE



GRID AREA 60° 10', 118° 30'
SCALE 1:100,000

GEOGRAPHIC AND UTM COORDINATES (1927 NAD)				
Station	Latitude	Longitude	Northings	Eastings
CONTROL MONUMENTS				
339	59° 59' 58.357"	118° 36' 53.630"	6 652 253.22	409 925.99
341	59° 59' 58.293"	118° 39' 50.619"	6 652 319.20	407 184.13
GRID AREA				
NE	60° 10'	118° 30'	6 670 711.86	416 756.22
NW	60° 10'	118° 45'	6 671 053.25	402 884.28
SE	60° 00'	118° 30'	6 652 153.16	416 335.00
SW	60° 00'	118° 45'	6 652 495.69	402 392.85
J-42 NE	60° 01' 45.212"	118° 37' 58.125"	6 655 582.77	409 008.47
J-42 NW	60° 01' 45.210"	118° 38' 26.250"	6 655 593.46	408 573.16
J-42 SE	60° 01' 30.212"	118° 37' 58.125"	6 655 118.82	408 997.02
J-42 SW	60° 01' 30.210"	118° 38' 26.250"	6 655 129.52	408 561.65
TRAVERSE STATIONS				
C-1	60° 01' 41.176"	118° 38' 05.634"	6 655 460.80	408 889.17
C-2	60° 01' 15.765"	118° 36' 05.504"	6 654 674.80	408 871.74
C-3	60° 00' 56.816"	118° 38' 05.546"	6 654 088.71	408 856.61
C-4	60° 00' 25.374"	118° 38' 05.700"	6 653 116.26	408 830.18
C-5	60° 00' 12.899"	118° 37' 58.273"	6 652 727.58	408 935.69
C-6	60° 00' 13.335"	118° 36' 40.428"	6 652 711.50	410 141.81
C-7	60° 01' 43.269"	118° 39' 55.428"	6 655 567.93	407 191.39
PROPOSED WELL				
	60° 01' 43.147"	118° 38' 05.604"	6 655 521.76	408 891.13

Co-ordinates are based on provisional values for Monuments #339 and #341, obtained from Geodetic Survey of Canada.

OF SURVEY OF PROPOSE
EXPLORATORY WELL
HOME KAKISA RIVE
IN UNIT J, SECTIO
GRID AREA 60° 10'
NORTHWEST TERRITORIE

CANADA OIL AND GAS LAND REGUL

Scale 1:20,000

1000 0

SURVEYED FOR:

HOME OIL COMPANY LIMIT

BY: L.W. BRETON, C.L.S.

1983

LEGEND

UTM coordinates are computed for Zone 11, Central Meridian 117° W.
Bearings were derived from the bearing 91° 22' 42.6" computed between Boundary Monuments No's. 339 and 341 and are referred to Meridian 117° W.
Distances are expressed in metres and decimals thereof.
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Distances shown on grid area subdivisions are UTM plane.
Boundary Monuments found shown thus: ●
Monuments planted shown thus: ○
Traverse lines and stations shown thus: ○———○
Mkr. denotes metal marker post 2.0m. long planted 0.3 m. W.
Elevations were derived from Boundary Monument No. 341, Elev. = 596.158
Survey was completed prior to drilling, therefore well as drilled may not necessarily agree with proposed location.
Area required = 1.49 hectares.
Transit is "WILD T-200".
Electronic Distance Measuring machine is "WILD DI 4L SERIAL No. 44353".
Line between Monument No's. 339 & 341 is overgrown, plus Monument No. 341 is not on either lines that were existing. See 'Detail C'.

THIS SURVEY WAS EXECUTED DURING T
DECEMBER 14 TO DECEMBER 23, 1983.

HOME OIL COMPANY LIMITED

Vice-President

Vice-President

January 5, 1984
Date

CANADA LANDS SURVEYS RECORDS

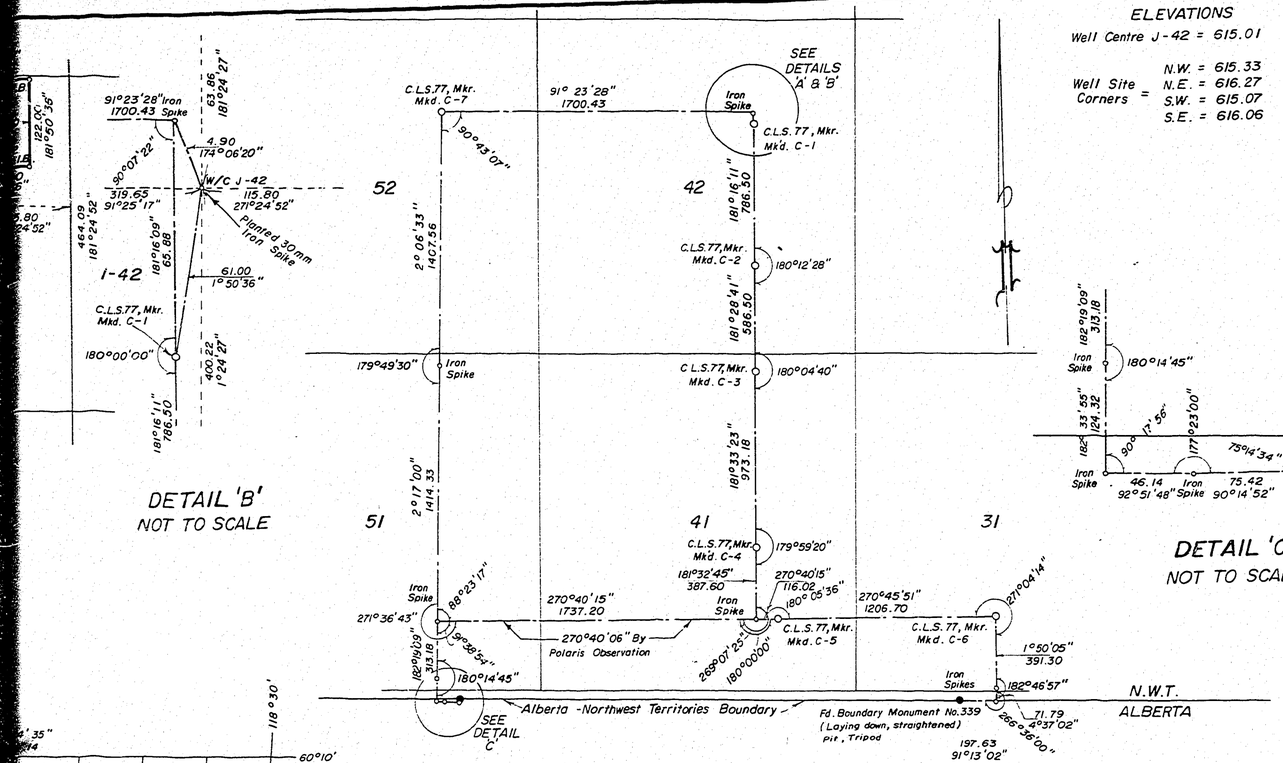
PLAN AND FIELD NOTES OF SURVEY OF PROPOSED EXPLORATORY WELL HOME KAKISA RIVER IN UNIT J, SECTION 42 GRID AREA 60°10', 118°30'

NORTHWEST TERRITORIES

CANADA OIL AND GAS LAND REGULATIONS

Scale 1:20,000

1000 0 1000 2000 METRIC



TRAVERSE
SCALE 1:20,000

DETAIL 'B'
NOT TO SCALE

DETAIL 'C'
NOT TO SCALE

ELEVATIONS

Well Centre J-42 = 615.01

Well Site Corners = N.W. = 615.33, N.E. = 616.27, S.W. = 615.07, S.E. = 616.06

40	30	20	10	60°10'
36	26	16	6	

118°30'

1956.49 1°18'01"

GEOGRAPHIC AND UTM COORDINATES (1927 NAD)

Station	Latitude	Longitude	Northings	Eastings
CONTROL MONUMENTS				
339	59° 59' 58.357"	118° 36' 53.630"	6 652 253.22	409 925.99
341	59° 59' 58.293"	118° 39' 50.619"	6 652 319.20	407 184.13
GRID AREA				
NE	60°10'	118°30'	6 670 711.86	416 756.22
NW	60°10'	118°45'	6 671 053.25	402 884.28
SE	60°00'	118°30'	6 652 153.16	416 335.00
SW	60°00'	118°45'	6 652 495.69	402 392.85
J-42 NE	60°01' 45.212"	118°37' 58.125"	6 655 582.77	409 008.47
			6 655 593.46	408 573.16

LEGEND

UTM coordinates are computed for Zone 11, Central Meridian 117° W.
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Monuments planted shown thus: ○
Traverse lines and stations shown thus: ○——○
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Area required = 1.49 hectares -
Transit is "WILD T-200".
Electronic Distance Measuring machine is "WILD DI4L SERIAL No. 44353".
Line between Monument No's. 339 & 341 is overgrown, plus Monument No. 341 is not on either lines that were existing. See Detail 'C'.

I, L.W. Breton, 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 Edmonton this 30th day of December, 1983.

Linda Brune
Commissioner of Oaths in and for the Province of Alberta.
(Linda Brune - commission expires 26/11/86)

Louis W. Breton
Canada Lands Surveyor

THIS SURVEY WAS EXECUTED DURING THE PERIOD DECEMBER 14 TO DECEMBER 23, 1983, BY L.W. BRETON, C.L.S.

HOME OIL COMPANY LIMITED

SURVEYED FOR:
HOME OIL COMPANY LIMITED
BY: L.W. BRETON, C.L.S.
1983

ALBERTA LAND SURVEYORS' ASSOCIATION
PERMIT HOLDER
P 0314
MORRETT SURVEYS & SERVICES LTD.

EXPLORATORY WELL
HOME KAKISA RIVER
IN UNIT J, SECTION 42
GRID AREA 60°10', 118°30'
NORTHWEST TERRITORIES
CANADA OIL AND GAS LAND REGULATIONS

Scale 1:20,000

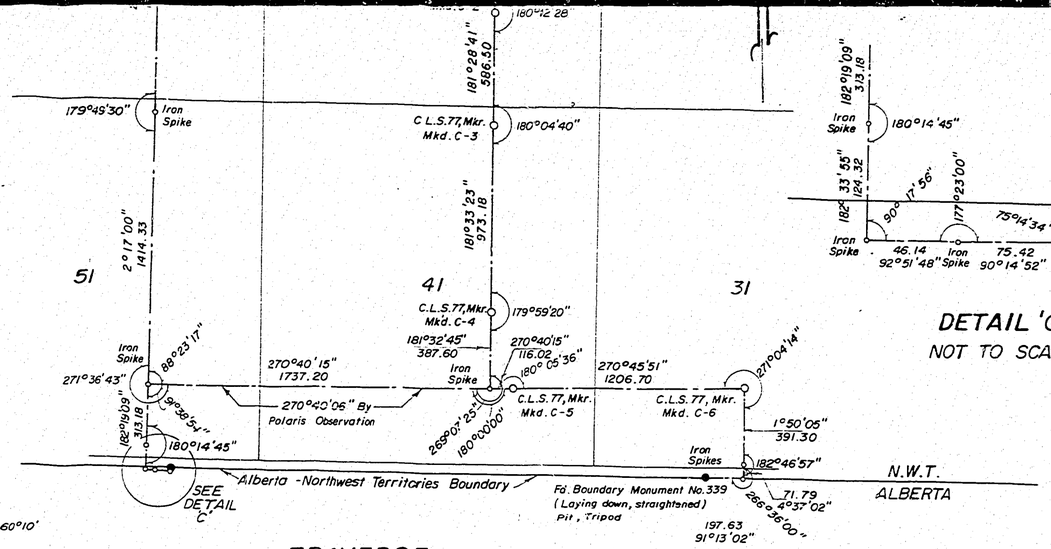
1000 0 1000 2000 METRIC

SURVEYED FOR:

HOME OIL COMPANY LIMITED

BY: L.W. BRETON, C.L.S.

1983

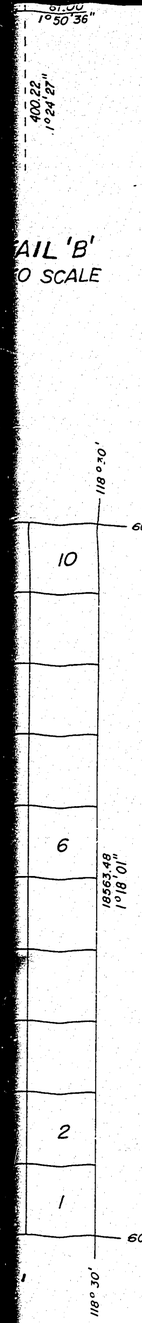


TRAVERSE

SCALE 1:20,000

DETAIL 'C'

NOT TO SCALE



GEOGRAPHIC AND UTM CO-ORDINATES (1927 NAD)

Station	Latitude	Longitude	Northings	Eastings
CONTROL MONUMENTS				
339	59° 59' 58.357"	118° 36' 53.630"	6 652 253.22	409 925.99
341	59° 59' 58.293"	118° 39' 50.619"	6 652 319.20	407 184.13
GRID AREA				
NE	60°10'	118°30'	6 670 711.86	416 756.22
NW	60°10'	118°45'	6 671 053.25	402 884.28
SE	60°00'	118°30'	6 652 153.16	416 335.00
SW	60°00'	118°45'	6 652 495.69	402 392.85
J-42 NE	60°01' 45.212"	118° 37' 58.125"	6 655 582.77	409 008.47
J-42 NW	60° 01' 45.210"	118° 38' 26.250"	6 655 593.46	408 573.16
J-42 SE	60° 01' 30.212"	118° 37' 58.125"	6 655 118.82	408 997.02
J-42 SW	60° 01' 30.210"	118° 38' 26.250"	6 655 129.52	408 561.65
TRAVERSE STATIONS				
C-1	60° 01' 41.176"	118° 38' 05.634"	6 655 460.80	408 889.17
C-2	60° 01' 15.765"	118° 38' 05.504"	6 654 674.80	408 871.74
C-3	60° 00' 56.816"	118° 38' 05.546"	6 654 088.71	408 856.61
C-4	60° 00' 25.374"	118° 38' 05.700"	6 653 116.26	408 830.18
C-5	60° 00' 12.899"	118° 37' 58.273"	6 652 727.58	408 935.69
C-6	60° 00' 13.335"	118° 36' 40.428"	6 652 711.50	410 141.81
C-7	60° 01' 43.269"	118° 39' 55.428"	6 655 567.93	407 191.39
PROPOSED WELL				
	60° 01' 43.147"	118° 38' 05.604"	6 655 521.76	408 891.13

Co-ordinates are based on provisional values for Monuments #339 and #341, obtained from Geodetic Survey of Canada.

LEGEND

UTM coordinates are computed for Zone 11, Central Meridian 117° W.
Bearings were derived from the bearing 91° 22'42.6" computed between Boundary Monuments No's. 339 and 341 and are referred to Meridian 117° 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 0.9996072. Coordinates were then adjusted to fit the control. (Sea Level Factor = 0.99990534; Scale Factor = 0.99970182)
Distances shown on grid area subdivisions are UTM plane.
Boundary Monuments found shown thus: ●
Monuments planted shown thus: ○
Traverse lines and stations shown thus: ○——————○
Mkr. denotes metal marker post 20 m. long planted 0.3 m. W.
Elevations were derived from Boundary Monument No. 341, Elev. = 596.158
Survey was completed prior to drilling, therefore well as drilled may not necessarily agree with proposed location.
Area required = 1.49 hectares.
Transit is "WILD T-200"
Electronic Distance Measuring machine is "WILD DI4L SERIAL No. 44353".
Line between Monument No's. 339 & 341 is overgrown, plus Monument No. 341 is not on either lines that were existing. See 'Detail C'.

I, L.W. Breton, 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 Edmonton
this 30th day of December, 1983.

Linda Brune
Commissioner of Oaths in and for the Province of Alberta.
(Linda Brune - commission expires 26/11/86)

Louis W. Breton
Canada Lands Surveyor

ALBERTA LAND SURVEYORS' ASSOCIATION PERMIT HOLDER P 034 MIDWEST SURVEYS & SERVICES LTD.

THIS SURVEY WAS EXECUTED DURING THE PERIOD DECEMBER 14 TO DECEMBER 23, 1983, BY L.W. BRETON, C.L.S.

HOME OIL COMPANY LIMITED

Vice-President

Vice-President

January 5, 1984
Date

CANADA LANDS SURVEYS RECORDS 1984 02 27

4 OF 4

MIDWEST SURVEYS

MIDWEST SURVEYS & SERVICES LTD. E-717-83-1

Exam'd VJV 4000 7-11-84

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: E84-2806-4

CONTAINER IDENTITY:

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION: J-42/60° 01"/118° 38"/

WELL NAME: HOME KAKISA RIVER J-42

ELEVATIONS K.B. Unspecified GRD.: 619.76

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: SLAVE POINT

NAME OF SAMPLER:

COMPANY: HOWCO

TEST TYPE: DST

NO.: 9

TEST RECOVERY: 90 M OF BRINE CONTAMINATED MUD.

MULTIPLE RECOVERY: Y X

SAMPLING POINT: DOWNHOLE SAMPLER

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY @ °F/°C

Test Interval (metres): 1447 - 1453

Perforations (metres):

TYPE OF PRODUCTION: PUMPING / FLOWING / GAS LIFT / SWAB

PRODUCTION RATES: WATER m^3/d / OIL m^3/d / GAS $10^3m^3/d$

GAUGE PRESSURE kPa: SEPARATOR / TREATER / RESERVOIR / SOURCE

TEMPERATURE °C: SEPARATOR / TREATER / RESERVOIR / SOURCE

DATE SAMPLED (Y-M-D): 84/03/09

DATE RECEIVED (Y-M-D): 84/03/20

DATE REPORTED (Y-M-D): 84/04/05

ANALYST: S.T.

OTHER INFORMATION: PO: F 57314

ION	$m \cdot V^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Na	4 170	0.3044	181.40
K	35	0.0026	0.90
Ca	328	0.0239	8.19
Mg	35	0.0026	1.44
Ba			
Sr			
Fe	NIL		

ION	$m \cdot V^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Cl	840	0.0613	23.69
Br			
I			
HCO_3	217	0.0158	3.56
SO_4	8 074	0.5894	83.97
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	NIL		

TOTAL SOLIDS $m \cdot V^{-1}$ / $g \cdot m^{-3}$

EVAPORATED @ 110°C	EVAPORATED @ 180°C
14 160	
AT IGNITION	CALCULATED
13 020	13 699

ORGANICS: MUCH

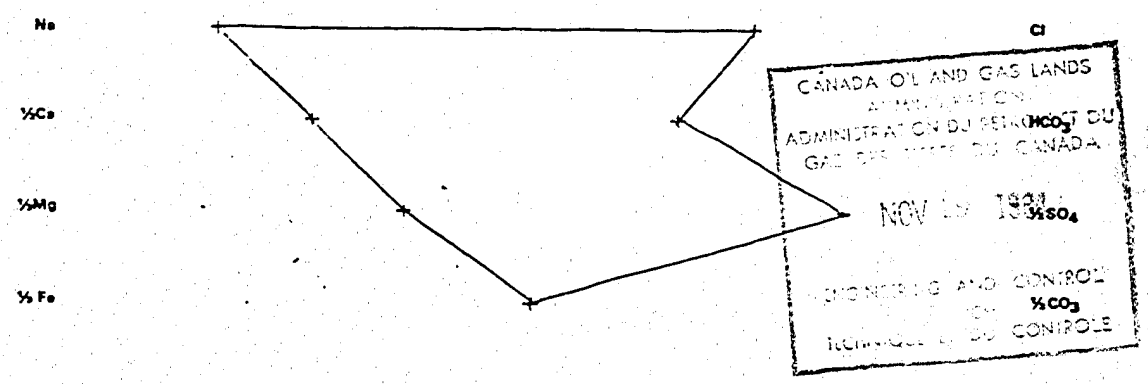
RELATIVE DENSITY	REFRACTIVE INDEX
1.010 @ 25°C	1.3350 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm-m)
8.0 @ 23.°C	0.650 @ 25°C

REMARKS

The sample consisted of muddy water. The analysis is characteristic of mud filtrate water.

LOGARITHMIC PATTERN c / $mol \cdot m^{-3}$



HOME OIL COMPANY LIMITED

LABORATORY REPORT NO: E84-2806

E84-2806-1: Sampled from top of fluid
RESISTIVITY: 0.656 Ohm/meters @ 25°C.
Muddy water.

E84-2806-2: Sampled from middle of fluid
RESISTIVITY: 0.680 Ohm/meters @ 25 °C.
Muddy water.

E84-2806-3: Sampled from top of tool
RESISTIVITY: 0.685 Ohm/meters @ 25 °C.
Muddy water.

TESTERS: G. Taylor

WITNESS: D. Kamieniecki

DRILLING CONTRACTOR: Hi-Tower #17

HALLIBURTON

FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO. 49 180

DATE OF TEST 84-03-09

TEST No. 9

JOB TYPE Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER		7993	1452	2804	3650		
GAUGE DEPTH		1426.44	1432.39	1433.64	1454.76		
BLANKED OFF		YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL		24	24	24	48		
INITIAL HYDROSTATIC			15 844	15 821	16 040		
FIRST FLOW	INITIAL	1 307	1 519	1 506	8 918		
	FINAL	1 255	1 426	1 415	11 312		
FIRST CLOSED IN			11 101	11 080	11 312		
SECOND FLOW	INITIAL						
	FINAL						
SECOND CLOSED IN							
THIRD FLOW	INITIAL						
	FINAL						
THIRD CLOSED IN							
FINAL HYDROSTATIC			15 550	15 572	15 717		

TIME PERIODS

	FIRST	SECOND	THIRD		TIME
FLOW	90			TESTER VALVE OPENED	14:50
CLOSED IN	180			PACKER UNSEATED	19:20

LIQUID RECOVERY DATA

MEASURED FROM TESTER VALVE

METRES	DESCRIPTION OF LIQUID
90	Drilling mud and salt water.
90	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED: Slave Point	TEMP. REC. No. TE70; DEPTH 1434.89 m; MAX. TEMP. 40.3 °C
NET PRODUCTIVE THICKNESS m	MUD TYPE Gel Chemical
K B ELEVATION 619.76 m	MUD DENSITY kg/m³ 1060; MUD VISC s/L 70
ALL DEPTHS MEASURED FROM: ☒ KB ☐ GROUND	CASING OR HOLE SIZE 222 mm
PACKER DEPTHS TOP 1447 BOTTOM 1453 m	RATHOLE SIZE mm
DEPTH OF TESTER VALVE 1427.69 m	DRILL PIPE OD mm 114.3; kg/m 24.7
CASING PERFORATED INTERVAL N/A m	DRILL COLLARS ABOVE TESTER VALVE ID mm 71; LENGTH m 171.35
TOTAL DEPTH 1750 m	SURFACE CHOKE 25.4 mm
AMOUNT AND TYPE CUSHION Nil	BOTTOM CHOKE 19.05 mm

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS / OIL RATIO _____

REFRACTOMETER / ~~RELATIVE DENSITY~~

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT 75 000 mg/L

SAMPLE SHIPPED TO LABORATORY — YES ☒ NO ☐

SAMPLER No. 207

GAS SAMPLE BOTTLE No. _____ YES ☐ NO ☒

LABORATORY C and G (Grande Prairie)

REMARKS

Charts indicate perforations plugged off.

COMPANY: HOME OIL COMPANY LIMITED

LEGAL DESCRIPTION: 60-01-34.14 118-38-05.60

PROVINCE OR TERRITORY: N.W.T.

FIELD OR AREA: KAKISA RIVER

TEST NUMBER: 9

WELL NAME AND NUMBER: HOME KAKISA RIVER J-42

TESTED INTERVAL: 1447 - 1453

TICKET NO. 49 180

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m^3/day)	LIQUID RATE (m^3/day)	REMARKS
84 03 09					
06:30					Job started. Service tool.
08:30					Run in hole.
10:15					Head up.
10:30					Pump.
11:15					Preflow: Packers skidded and held, annulus dropped 1 m (did not get preflow. Later discovered on charts.)
11:20					Shut in. (Did not get shut in, later discovered on charts).
12:20					Tool opened and packers skidded, annulus dropped 1 metre.
12:35					Tool opened and packers skidded, annulus dropped 1 metre.
13:00					Tool opened and packers skidded, lost packer seat, annulus dropped 1 m.
13:05					Reset packer 1.5 m higher than original packer seat and pump.
14:10					Tool opened, packers skidded 0.5 m, annulus dropped 1 m.
14:35					Tool opened, packers skidded 0.5 m annulus dropped 1 m.
14:50					Tool opened. Weak blow building to fair then dying after 80 minutes.
16:20					Shut in tool.
19:20					Pull loose.
21:45					Recover recorders.
24:00					Job complete.

PRODUCTION TEST DATA

HALLIBURTON SERVICES LIMITED

TICKET NO. 49 180

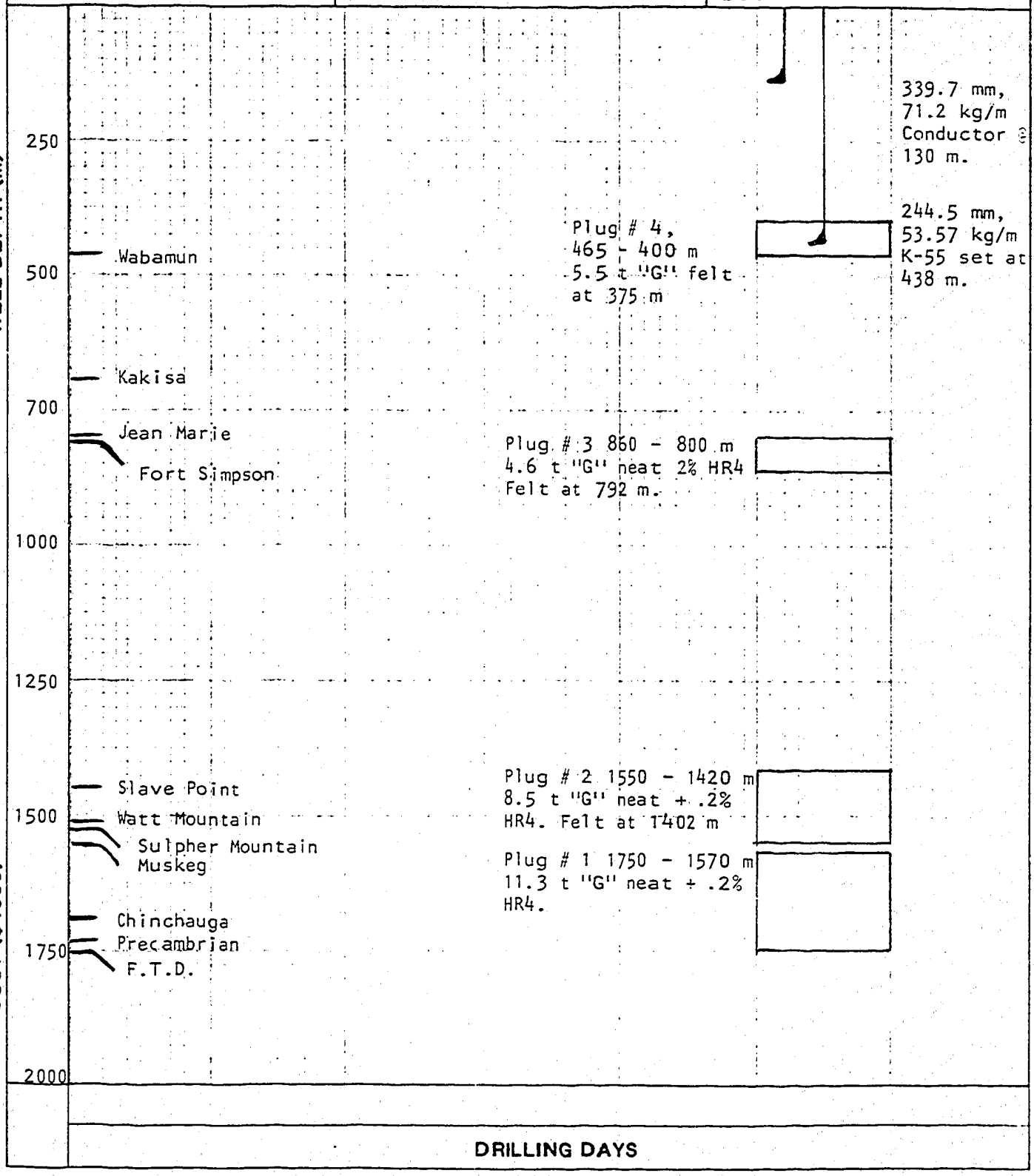
		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	171.0	71.0	142.71	
50	IMPACT REVERSING SUB.....	171.5	76.2	0.31	
3	DRILL COLLARS.....	171.0	71.0	28.64	
5	CROSSOVER.....	171.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1426.44
60	HYDROSPRING TESTER.....	127.0	19.1	2.54	1427.69
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1432.39
80	AP RUNNING CASE.....	127.0	57.2	1.25	1433.64
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.14	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.42	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1447.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	3.58	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1453.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1454.76

EQUIPMENT DATA

WELL NAME: Home Kakisa River J-42

CONTRACTOR: Hi-Tower Rig # 17

AFE COST:	AFE #:	LOC:



CONCORD DRILLING FLUIDS LTD.

MUD PRODUCTS USED

Weight & Clays		
Avongel	844 sacks	10,972.00
Lost Circulation		
Sawdust	191 sacks	1,470.70
Chemicals		
Caustic	45 sacks	$ 2,362.50
Soda Ash	28 sacks	1,016.40
Peltex	11 sacks	539.00
Lignite	14 sacks	339.50
Polysec	111 sacks	2,325.45
Bicarb of Soda	11 sacks	764.50
CMC	5 sacks	1,250.00
SAPP	1 sack	145.00
Pallets		152.00
	TOTAL MUD:	$21,337.05

home oil

BIT RECORD

Well: Home Kakisa River J-42 D. Kamieniucki

Rig: Hi - Tower #17 | Pumps: D-300, D300

Bit No	Size	Make	Type	Serial No.	Depth In	Meterage	Hours	Pen Rate	RPM	Wt DaN	Jet Size	Pump 1 SPM	Liner	Pump 2 SPM	Liner	Condition	Remarks
1C	445	RT Reed	411J	738069	0	94	16.25	5.78	50/150	2/20	12.7x2 14.3	55	140	55	127	7 4 1	Severe boulders & gravel
2C	445	RT HW	DSC	46988	94	36	5.00	7.20	50/120	6/8	open	55	140	55	127	4 3 1	T.D. conductor hole
1A	311	HW	XDV	7716D	130	235	27.25	8.62	900/120	6/8	3x12.7	50	140	50	127	5 3 1	Slowed down
2A	311	HW	XDV	77622	365	73	8.25	8.84	120	6/8	3x12.7	50	140	50	127	1 1 1	T.D. Surface hole
1	222	Reed	S13C	D05112	438	183	34.25	5.34	70/90	10/12	8.7 2x7.9	55	140	--	127	3 4 1	Pulled
2	222	HW	J-11	92873	621	877	148.50	5.63	85	8/13	8.7 2x7.9	55	140	--	127	3 3 1/8	Core point
3C	221	Chris	C-201	060237	1458	9	21.50	.41	85	10/11	convent	60	140	--	127	good	Jammed core #1
4C	221	Chris	C-4D	060233	1467.8	11.8	16.25	.72	85	8/10	convent	60	140	--	127	85%	Jammed core #2
5	222	Reed	FPS1A	D05275	1479.6	171.4	48.50	3.53	55/80	14/17	2x7.9 8.7	58	140	--	127	8 6 1	Grit drilling
6	222	Reed	FPS3A	E8019D	1651	99	35.50	2.78	55/66	14/17	2x7.9 8.7	58	140	--	127	3 2 1	T.D.

T.D. 84-03-03-11:15 hrs.

Total rotating hrs. from spud 361.25

D. Kamieniucki

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY: HOME OIL COMPANY LIMITED

WELL: Home Kakisa River

LOCATION: J-42 (N.W.T.)

FIELD: Kakisa River

PROVINCE: Northwest Territories

FORMATION: Slave Point

CORING EQUIPMENT: Diamond

CORING DIAMETER: .106 M

CORING FLUID: Chemical Gel

ELEVATION: KB: 619.76 M
GRD: 615.31 M

PAGE: 1

LAB NO: C84-2562

DATE: 1984-03-13

ANALYSTS: Rob Paul

Core transported in
( ) Rubber sleeve
( ) Plastic sleeve
(X) Boxes
( ) Core artificially kept frozen in transit
( ) Core placed in deep freeze (at -28C) at the laboratory
( ) Core slabbed prior to analysis
( ) Permeability measured on 0.020 M cubes
(X) Permeability measured on 0.025 M drilled plugs
( ) Permeability measured on a sample jacketed in an aluminum sleeve
(X) Permeability measured on 0.106 M full diameter

Type of solvent used for extraction: Toluene

Extraction time: 240 Hours

Drying temperature and time: 120°C for 12 Hours

METHOD OF ANALYSIS:

POROSITY: Boyle's Law Helium Porosimeter

PERMEABILITY: Hassler Holder

FLUID SATURATION: Ruska Fluid Content Still

The 'OB' samples were confined in aluminum sleeves and subjected to kPa overburden pressure during porosity and permeability determinations.

REMARKS: Full diameter samples sandblasted before KH measurements.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY:	HOME OIL COMPANY LIMITED	FORMATION:	Slave Point	PAGE:	1 A
WELL:	Home Kakisa River	CORING FLUID:	Chemical Gel	LAB NO:	C84-2562
LOCATION:	J-42 (N.W.T.)	CORING EQUIPMENT:	Diamond	DATE:	1984-03-13
FIELD:	Kakisa River	ELEVATION:	KB: 619.76 M GRD: 615.31 M	ANALYST:	Rob Paul
PROVINCE:	Northwest Territories	REMARKS:	Full Diameter & Small Plug Analysis		

SUMMARY

SUMMARY INTERVAL: 1458.80 - 1479.60 M

TOTAL THICKNESS: 20.80 M

THICKNESS ANALYZED: 3.25 M

THICKNESS NOT ANALYZED: RUBBLE 0.00 DENSE 16.30 LOST 1.25 DRILLED 0.00 NOT ANALYZED 0.00 17.55 M

PERMEABILITY RANGE	THICKNESS M	WEIGHTED AVERAGE PERMEABILITY MD	PERMEABILITY THICKNESS MD.M	WEIGHTED AVERAGE POROSITY	POROSITY THICKNESS M	WEIGHTED AVERAGE RESIDUAL OIL	WEIGHTED AVERAGE PORE SAT. WATER
TOTAL ANALYZED	3.25	2.537	8.246	0.014	0.047	0.087	0.034
10.00 MD AND GREATER	0.50	14.700	7.350	0.014	0.007	0.480	0.024
1.00 MD TO 9.99 MD	0.45	1.700	0.765	0.020	0.009	0.000	0.000
0.50 MD TO 0.99 MD	0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.01 MD TO 0.49 MD	2.10	0.062	0.131	0.013	0.028	0.021	0.018
LESS THAN 0.01 MD	0.20	0.000	0.000	0.015	0.003	0.000	0.315

PORO. % MD

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

COMPANY: HOME OIL COMPANY LIMITED — PAGE: 2

WELL: HOME KAKISA RIVER J-42 (NWT) — LAB NO: C34-2562

SMPL NO	INTERVAL REPRESENTED TOP M	BASE M	THICK M	PERMEABILITY TO AIR KMAX MD	K90' MD	KV MD	PERM THICK MD.M	PORO.	PORO. THICK M	DENSITY BULK KG/M3	DENSITY GRAIN KG/M3	RESIDUAL PORE SAT. OIL	RESIDUAL PORE SAT. WATER	VISUAL EXAMINATION
					CORED INTERVAL 1458.80 - 1479.60 M									
					CORE #1 1458.80 - 1467.80 M									
											RECEIVED IN LAB 8.20 M			
DE	1458.80	1467.00	8.20											LS,SH
LO	1467.00	1467.80	0.80											LOST
					CORE #2 1467.80 - 1479.60 M									
											RECEIVED IN LAB 11.35 M			
1	1467.80	1468.15	0.35	15.00	0.01	8.30	5.250	0.009	0.003	2660	2680	0.642	TRCE	LS,SH,VF
DE	1468.15	1468.60	0.45											LS,SH
2	1468.60	1468.70	0.10	0.03			0.003	0.017	0.002			TRCE	TRCE	SP,LS,SH
DE	1468.70	1470.80	2.10											LS,SH
3	1470.80	1470.95	0.15	0.04	0.04	0.01	0.006	0.006	0.001	2680	2700	TRCE	TRCE	LS,SH
DE	1470.95	1471.30	0.35											LS,SH
4	1471.30	1471.50	0.20	0.22	0.03	0.01	0.044	0.013	0.003	2660	2700	0.222	TRCE	LS,SH,RF
DE	1471.50	1471.80	0.30											LS,SH
5	1471.80	1472.30	0.50	0.02	<0.01	<0.01	0.010	0.004	0.002	2710	2720	TRCE	TRCE	LS,SH
6	1472.30	1472.60	0.30	0.15	0.03	0.01	0.045	0.018	0.005	2660	2710	TRCE	0.123	LS,SH,VF
DE	1472.60	1472.90	0.30											LS,SH
7	1472.90	1473.35	0.45	1.70	0.01	0.01	0.765	0.019	0.009	2670	2720	0.000	0.000	LS,SH,VF
8	1473.35	1473.50	0.15	14.00	0.01	5.70	2.100	0.028	0.004	2620	2700	0.103	0.079	LS,SH,VF

C H E M I C A L & G E O L O G I C A L L A B O R A T O R I E S L T D .

COMPANY: HOME OIL COMPANY LIMITED

WELL: HOME KAKISA RIVER J-42 (NWT)

LAB NO: C84-2562

SMPL NO	INTERVAL REPRESENTED TOP M	BASE M	THICK M	PERMEABILITY TO AIR KMAX MD	K90' MD	KV MD	PERM THICK MD.M	PORO.	PORO. THICK M	DENSITY BULK KG/M3	DENSITY GRAIN KG/M3	RESIDUAL PORE SAT. OIL	RESIDUAL PORE SAT. WATER	VISUAL EXAMINATION
9	1473.50	1473.65	0.15	0.03	0.03	0.66	0.004	0.020	0.003	2620	2680	TRCE	TRCE	LS,SH
DE	1473.65	1473.80	0.15											LS,SH
10	1473.80	1474.00	0.20	0.03	0.03	<0.01	0.006	0.005	0.001	2670	2680	TRCE	TRCE	LS,SH
DE	1474.00	1477.15	3.15											LS,SH
11	1477.15	1477.35	0.20	<0.01	<0.01	<0.01	0.000	0.014	0.003	2650	2690	TRCE	0.317	LS,SH
12	1477.35	1477.50	0.15	0.02	0.02	0.01	0.003	0.029	0.004	2620	2690	0.000	0.000	LS,SH
13	1477.50	1477.85	0.35	0.03	0.03	0.01	0.010	0.019	0.007	2640	2700	0.000	0.000	LS,SH
DE	1477.85	1479.15	1.30											LS,SH
LO	1479.15	1479.60	0.45											LOST

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

4605-12 STREET N.E. CALGARY ALBERTA T2E 4R3

TELEPHONE (403) 277-0725

LAB. REPORT NO: C84-2562

Home Kakisa River J-42 (N.W.T.)

Core #1 1458.80 - 1467.80 M Slave Point (9.00 M) Rec.: 8.20 M

1458.80 - 1461.20 M (2.40 M): Limestone, macroscopic, light brown, speckled, partly grey, subhorizontal, massive, partly grading to calcareous shale; rare grey stringers of grey calcareous shale; microscopic, dark brown, micro-crypto crystalline, no shows, tight; white speckles are very fine crystalline lenses or fossils.

1461.20 - 1464.20 M (3.00 M): Limestone, macroscopic, grey, grey-brown, massive, horizontal lamination; rare lenses grey-brown microscopic, dark grey-brown, micro-crypto crystalline, no shows, tight; lenses are crypto crystalline.

1464.20 - 1466.50 M (2.30 M): Limestone, brown, grey-brown, partly speckled, rare dark grey, shale stringers; microscopic, dark brown, micro-crypto crystalline, tight.

1466.50 - 1466.80 M (0.30 M): Limestone, grey, grey-brown lenticular worm like limestone in dark grey calcareous shale matrix; limestone is light brown, very fine crystalline, no shows, tight.

1466.80 - 1467.00 M (0.20 M): Limestone, grey, micro-crypto crystalline, tight.

Core #2 1467.80 - 1479.60 M Slave Point (11.80 M) Rec.: 11.35 M

1467.80 - 1468.70 M (0.90 M): Limestone, grey-brown, micro-crypto crystalline, no shows, tight.

1468.70 - 1470.45 M (1.70 M): Limestone as above, rare vugs but no permeability and brown lively oil stain, fair green-white cut, poor green-white fluorescence.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

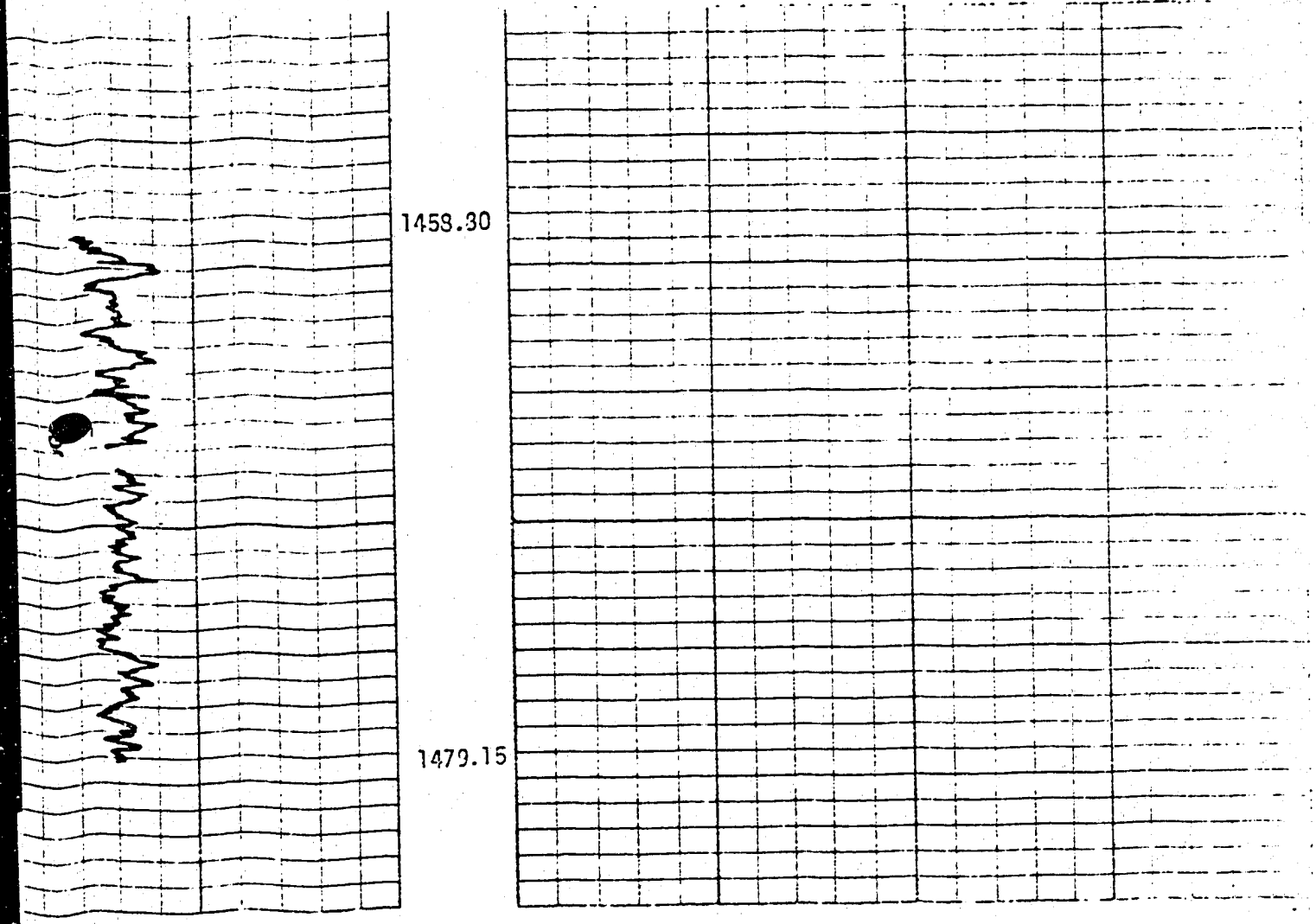
COMPANY: HOME OIL COMPANY LIMITED

WELL: Home Kakisa River J-42

LAB NO: C84-2562

RADIOACTIVITY LOG

VERTICAL SCALE 1 : 240 T.C. 15 SEC. SENS. 6000 CPM

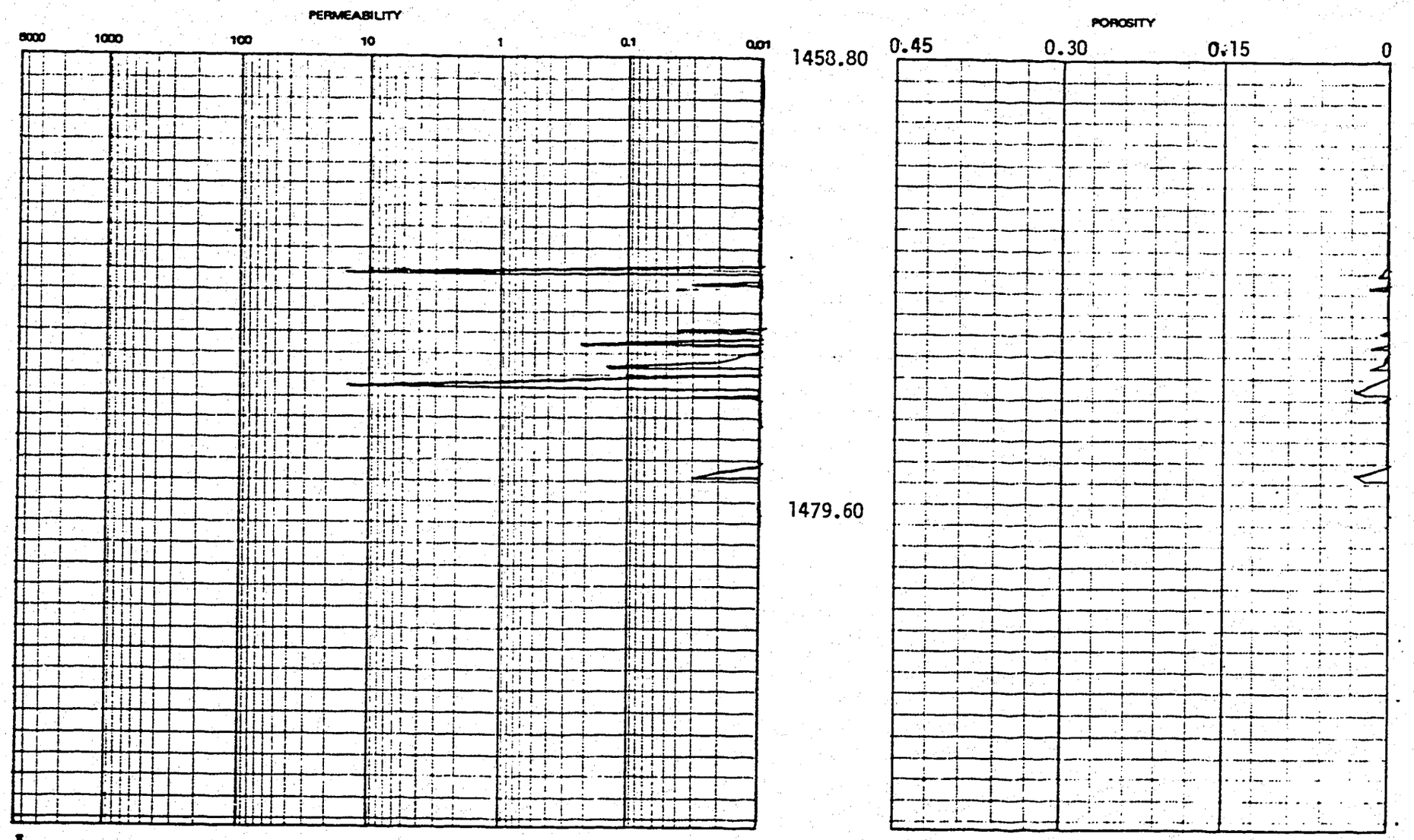


CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WELL NAME Home Kakisa River J-42 (N.W.T.) LAB. NUMBER C84-2562

FORMATION Slave Point CORED INTERVAL 1458.80 to 1479.60



CHEMICAL & GEOLOGICAL LABORATORIES LIMITED

CORE DESCRIPTION SYMBOLS

A	Anhydrite
AMPH	Amphipora
ANG	Angular
ARGIL	Argillaceous
AREN	Arenaceous
BD	Bands
BLSH	Black Shale
BN	Bentonite
BR	Brecciated
BT	Buttoned
C	Coarse
CA	Calcite
CARB	Carbonaceous
CG	Conglomerate
CH	Chert
CM	Cement
CO	Coralline Fragments
CSS	Coarse Sandstone
CALC	Calcareous
DE	Dense
DOL	Dolomite
DF	Diagonal Fracture
F	Fine
FE	Ironstone
FG	Fragmental
FOSS	Fossiliferous
FSL	Fine Sand Lenses
FSS	Fine Sandstone
FD	Full Diameter
GL	Glauconitic
HC	Horizontal Crack
HF	Horizontal Fracture
I	Intergranular
INB	Interbedded
KA	Kaolinite
LAM	Laminations
LS	Limestone
LV	Large Vugs
M	Medium
MSS	Medium Sandstone
MUDST	Mudstone
NR	Not reactive to cold 15% HCl
NA	Not analyzed by customers request
O	Open
OB	Overburden
OCC	Occasional
OOL	Oolitic
PPV	Pin Point Vugs
PTSL	Paper-thin Shale Laminations
PY	Pyrites
PYB	Pyrobitumen
R1	Slightly reactive to cold 15% HCl
R2	Reactive to cold 15% HCl
RC	Random Cracks
RF	Random Fractures
RND	Rounded
RU	Rubble
S	Stained
SD	Sand
SDY	Sandy
SH	Shale
SHL	Shale Lenses
SHY	Shaly
SIL	Siltstone
SL/	Slightly
SL	Sand Lenses
SP	Small Plug
ST	Stylolite
STK	Streaks
SUBRND	Subrounded
SUBANG	Subangular
SV	Slightly Vuggy
STROM	Stromatoporiod
TR	Trace
U	Unconsolidated
V	Vuggy
VC	Vertical Crack
VF	Vertical Fracture
V.F.	Very Fine
VFSS	Very Fine Sandstone
XL	Crystals
XLN	Crystalline
*	Broken Core (K90° used summary purpose)
**	Permeability > 30,000 m
-.01	Permeability <.01

KH and K90° are transverse permeability measurements on full diameter samples.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

9211-H5-1-2

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

Canada Oil and Gas Lands Administration
Administration du pétrole et du gaz des terres du Canada
MAY 8 1984
To:

CONTAINER IDENTITY:

LABORATORY NUMBER: E84-2801-3

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION: J-42/60°,01" /118°,38"

WELL NAME: HOME KAKISA RIVER J-42

ELEVATIONS K.B. (metres) GRD.: 619.76

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: BASIL RED BEDS

From: M. OF SAMPLER

COMPANY: HOWCO

TEST TYPE: DST

NO: 3

TEST RECOVERY: 2 M OF BRINE CUT DRILLING MUD

MULTIPLE RECOVERY: Y X N

SAMPLING POINT: TOP OF FLUID

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY @ °C

Test Interval (metres): 1719 - 1726

Perforations (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m^3/d | OIL m^3/d | GAS $10^3m^3/d$

	SEPARATOR	TREATER	RESERVOIR	SOURCE
GAUGE PRESSURE kPa				
TEMPERATURE °C				

DATE SAMPLED (Y-M-D): 84/03/06

DATE RECEIVED (Y-M-D): 84/03/20

DATE REPORTED (Y-M-D): 84/04/05

ANALYST: S.T.

OTHER INFORMATION: PO: F 57314

ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Na	4 090	0.3222	177.92
K	37	0.0029	0.95
Ca	129	0.0102	3.22
Mg	19	0.0015	0.78
Ba			
Sr			
Fe	TRACE		

ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Cl	750	0.0591	21.15
Br			
I			
HCO_3	327	0.0258	5.36
SO_4	7 341	0.5783	76.35
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	NIL		

TOTAL SOLIDS $\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$

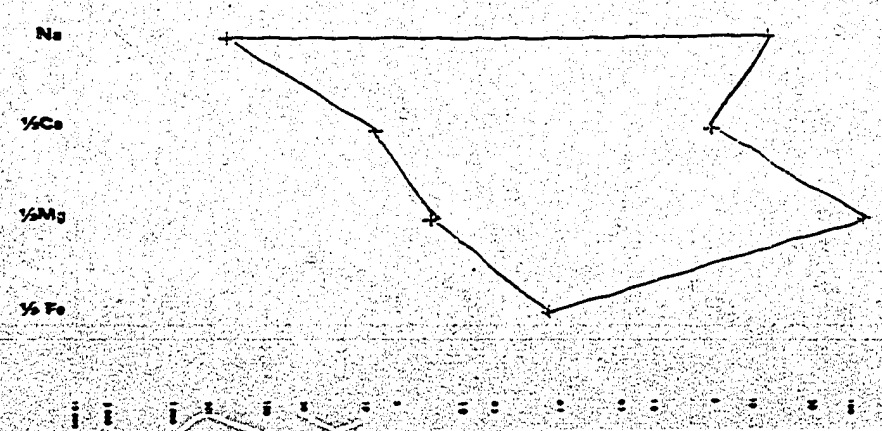
EVAPORATED @ 110°C	EVAPORATED @ 180°C
12 540	
AT IGNITION	**CALCULATED**
11 930	12 693

ORGANICS: MUCH

RELATIVE DENSITY	REFRACTIVE INDEX
1.009 @ 25°C	1.3349 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm·m)
8.2 @ 24.°C	0.715 @ 25°C

LOGARITHMIC PATTERN $c/mol \cdot m^{-3}$



REMARKS

The sample consisted of muddy water, The analysis is characteristic of a mud filtrate water.

HOME OIL COMPANY LIMITED LABORATORY REPORT NO: E84-2801

E84-2801-1: Sampled from top of fluid
RESISTIVITY: 0.810 Ohm/meters @ 25 °C.
Muddy water.

E84-2801-2: Sampled from middle of fluid
RESISTIVITY: 0.743 Ohm/meters @ 25 °C.
Muddy water.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: E84-2802-3

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION: J-42/60°, 01'/118°, 38'. WELL NAME: HOME KAKISA RIVER J-42

ELEVATIONS K.B. GRD.: 619.76

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: LOWER KEG RIVER

NAME OF SAMPLER:

COMPANY: HOWCO

TEST TYPE: DST NO.: 5

TEST RECOVERY: SOUR SMELLING BRINE

MULTIPLE RECOVERY Y/N: X

SAMPLING POINT: TOP OF TOOL

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY @ 29°c

Tests (metres): 1623 - 1634

Perforations (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m^3/d | OIL m^3/d | GAS $10^3m^3/d$

	SEPARATOR	TREATER	RESERVOIR	SOURCE
GAUGE PRESSURE kPa				
TEMPERATURE °C				

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
84/03/07	84/03/20	84/04/05	S.I.	PO: F57314

ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$	ION	$\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Na	30 960	0.2690	1346.76	Cl	70 500	0.6123	1988.10
K	1 090	0.0095	27.90	Br			
Ca	8 509	0.0739	212.30	I			
Mg	2 357	0.0205	96.88	HCO_3	478	0.0042	7.84
Ba				SO_4	1 218	0.0106	12.66
Sr				CO_3	0	0.0000	0.00
Fe	MUCH			OH	0	0.0000	0.00
				H_2S	PRESENT		

TOTAL SOLIDS $\frac{m \cdot V^{-1}}{g \cdot m^{-3}}$

EVAPORATED @ 110°C	EVAPORATED @ 180°C
121 200	
AT IGNITION	**CALCULATED**
105 700	115 112

ORGANICS: TRACE

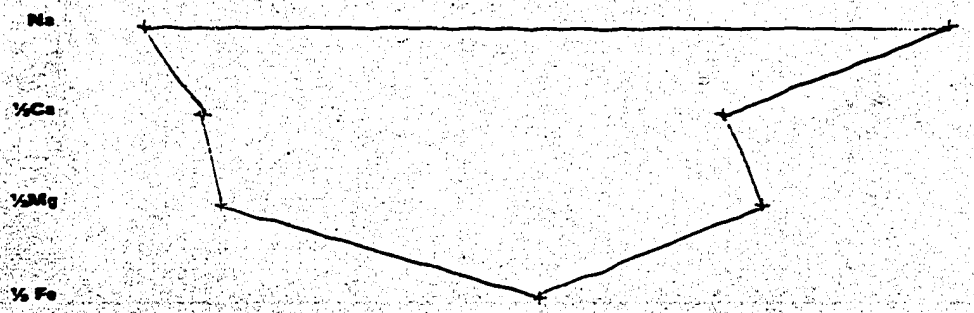
RELATIVE DENSITY	REFRACTIVE INDEX
1.079 @ 25°C	1.3529 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm·m)
6.9 • 24.°C	0.073 @ 25°C

REMARKS

The sample consisted of slightly muddy salt water.

LOGARITHMIC PATTERN $c/mol \cdot m^{-3}$



HOME OIL COMPANY LIMITED

LABORATORY REPORT NO: E84-2802

E84-2802-1: Sampled from top of fluid
RESISTIVITY: 0.209 Ohm/meters @ 25 °C.
Muddy water.

E84-2802-2: Sampled from middle of fluid
RESISTIVITY: 0.085 Ohm/meters @ 25 °C.
Slightly muddy water. H_2S present.

E84-2802-4: Sampled from Downhole Sampler
RESISTIVITY: 0.074 Ohm/meters @ 25 °C.
Slightly muddy water. H_2S present.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: E84-2803-4

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION: J-42/60° 01"/118° 38"

WELL NAME: HOME KAKISA RIVER J-42

ELEVATIONS K.B. (metres) 619.76 GRD.

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: UPPER KEG RIVER

NAME OF SAMPLER:

COMPANY: HOWCO

TEST TYPE: DST NO.: 6

TEST RECOVERY: 200 M OF SOUR SMELLING BRINE

MULTIPLE RECOVERY: Y [X] N [ ]

SAMPLING POINT: DOWNHOLE SAMPLER

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY @ 25°c

Test Interval (metres): 1589 - 1593

Perforations (metres):

TYPE OF PRODUCTION: PUMPING [ ] FLOWING [ ] GAS LIFT [ ] SWAB [ ]

PRODUCTION RATES: WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

	SEPARATOR	TREATER	RESERVOIR	SOURCE
GAUGE PRESSURE kPa				
TEMPERATURE °C				

DATE SAMPLED (Y-M-D): 84/03/07

DATE RECEIVED (Y-M-D): 84/03/20

DATE REPORTED (Y-M-D): 84/04/05

ANALYST: S.T.

OTHER INFORMATION: PO: F57314

ION	$m \cdot V^{-1}$ g·m^{-3}	Mass Fraction	c mol·m^{-3}
Na	25 510	0.2718	1109.69
K	748	0.0080	19.15
Ca	6 494	0.0692	162.03
Mg	1 735	0.0185	71.31
Ba			
Sr			
Fe	PRESENT		

ION	$m \cdot V^{-1}$ g·m^{-3}	Mass Fraction	c mol·m^{-3}
Cl	56 800	0.6053	1601.76
Br			
I			
HCO_3	505	0.0054	8.28
SO_4	2 049	0.0218	21.31
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	PRESENT		

TOTAL SOLIDS $m \cdot V^{-1}$ g·m^{-3}

EVAPORATED @ 110°C	EVAPORATED @ 180°C
104 600	
AT IGNITION	CALCULATED
92 000	93 841

ORGANICS: NIL

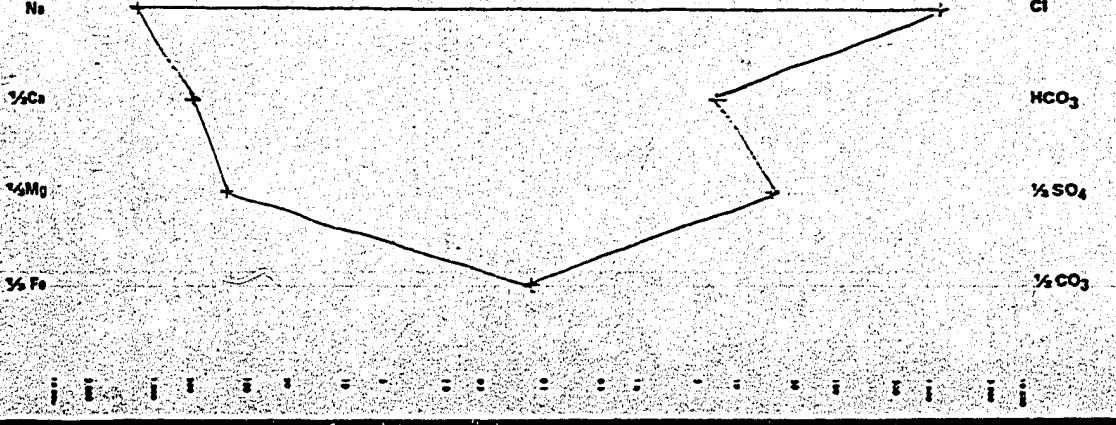
RELATIVE DENSITY	REFRACTIVE INDEX
1.064 @ 25°C	1.3498 @ 20°C

OBSERVED pH	RESISTIVITY (Ohm m)
7.1 • 23.-c	0.084 @ 23°C

REMARKS

The sample consisted of murky salt water.

LOGARITHMIC PATTERN c mol·m^{-3}



HOME OIL COMPANY LIMITED

LABORATORY REPORT NO: E84-2803

E84-2803-1: Sampled from top of fluid
RESISTIVITY: 0.296 Ohm/meters @ 25 °C.
Murky water.

E84-2803-2: Sampled from middle of fluid
RESISTIVITY: 0.100 Ohm/meters @ 25 °C.
Murky water, H_2S present.

E84-2803-3: Sampled from top of tool
RESISTIVITY: 0.098 Ohm/meters @ 25 °C.
Murky water, H_2S present.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

GAS ANALYSIS

CONTAINER IDENTITY: 6473

LABORATORY NUMBER: E84-2804-5

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION:

WELL NAME: HOME KAKISA RIVER J42-6B-01-118-38

ELEVATIONS K.B. (metres): 619.76 GRD.:

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: LOWER SULPHUR POINT

NAME OF SAMPLER:

COMPANY: HALLIBURTON SERVICES LTD.

TEST TYPE: DST NO.: 7

TEST RECOVERY: 65 m. of oil stained (trace) drilling mud.

MULTIPLE RECOVERY: Y / N: X

SAMPLING POINT: TOOL

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

Test Interval (metres): 1526 - 1531

Perforations (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m^3/d | OIL m^3/d | GAS $10^3m^3/d$

	SEPARATOR	TREATER	RESERVOIR	SOURCE	CONTAINER SAMPLED	CONTAINER RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 84/03/08

DATE RECEIVED (Y-M-D): 84/03/20

DATE REPORTED (Y-M-D): 84/04/12

ANALYST: R. M.

OTHER INFORMATION:

COMP.	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	PETROLEUM LIQUID CONTENT $\frac{c}{mm^3}$
H_2	0.0000	0.0000	
He	0.0000	0.0000	
N_2	0.1275	0.1275	
CO_2	0.0000	0.0000	
H_2S	0.0000	0.0000	
C_1	0.7908	0.7908	
C_2	0.0339	0.0339	
C_3	0.0194	0.0194	71.5
IC_4	0.0057	0.0057	24.8
NC_4	0.0097	0.0097	40.9
IC_5	0.0039	0.0039	19.2
NC_5	0.0035	0.0035	16.9
C_6	0.0028	0.0028	15.2
C_7	0.0018	0.0018	10.1
C_8	0.0007	0.0007	4.5
C_9	0.0003	0.0003	1.9
C_{10+}	0.0000	0.0000	0.0
TOTAL	1.0000	1.0000	205.0

GROSS HEATING VALUE MJ/m^3 @ 15°C AND 101.325 kPa

MOISTURE AND ACID GAS FREE MEASURED	MOISTURE AND ACID GAS FREE CALCULATED	DETERMINED DEW POINT	VAPOUR PRESSURE PENTANES PLUS
	38.04	°C	83. kPa

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED MEASURED	MOISTURE FREE AS SAMPLED CALCULATED	MOISTURE AND ACID GAS FREE MEASURED	MOISTURE AND ACID GAS FREE CALCULATED
Insufficient	0.694		0.694

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED pPc (abs)	AS SAMPLED pTc	ACID GAS FREE pPc (abs)	ACID GAS FREE pTc
4450. kPa	197.5 K	4450. kPa	197.5 K

$H_2S \cdot gm^3$: 0.00

RELATIVE MOLECULAR MASS: Total Gas 20.10 C_{7+} 106.72

C5+ ML/MOL 1.603

GROSS HEATING VALUE AS PER AGA REPORT #5

38.04 MAJ/M3 @ 15C AND 101.325 KPA

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: E84-2804-4

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION:

WELL NAME: HOME KAKISA RIVER J42-6B-01-118-38

ELEVATIONS K.B. (metres) GRD.: 619.76

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: LOWER SULFUR POINT

NAME OF SAMPLER:

COMPANY: HALLIBURTON SERVICES LTD.

TEST TYPE: DST NO.: 7

TEST RECOVERY: 65 m. of oil-stained (trace) drilling mud.

MULTIPLE RECOVERY: Y [X] N [ ]

SAMPLING POINT: DOWNHOLE SAMPLER

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY @ 29°c

Test Interval (metres): 1526 - 1531

Perforations (metres):

TYPE OF PRODUCTION: PUMPING [ ] FLOWING [ ] GAS LIFT [ ] SWAB [ ]

PRODUCTION RATES: WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

	SEPARATOR	TREATER	RESERVOIR	SOURCE
GAUGE PRESSURE kPa				
TEMPERATURE °C				

DATE SAMPLED (Y-M-D): 84/03/08

DATE RECEIVED (Y-M-D): 84/03/20

DATE REPORTED (Y-M-D): 84/04/12

ANALYST: S.T.

OTHER INFORMATION:

ION	$m \cdot v^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Na	20 710	0.2790	900.89
K	609	0.0082	15.59
Ca	5 037	0.0679	125.68
Mg	1 278	0.0172	52.53
Ba			
Sr			
Fe	PRESENT		

ION	$m \cdot v^{-1}$ / $g \cdot m^{-3}$	Mass Fraction	c / $mol \cdot m^{-3}$
Cl	43 700	0.5889	1232.34
Br			
I			
HCO_3	581	0.0078	9.53
SO_4	2 304	0.0310	23.96
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	PRESENT		

TOTAL SOLIDS $m \cdot v^{-1}$ / $g \cdot m^{-3}$

EVAPORATED @ 110°C	EVAPORATED @ 180°C
80 560	
AT IGNITION	**CALCULATED**
71 700	74 219

ORGANICS: TRACE

RELATIVE DENSITY	REFRACTIVE INDEX
1.048 @ 29°C	1.3463 @ 25°C

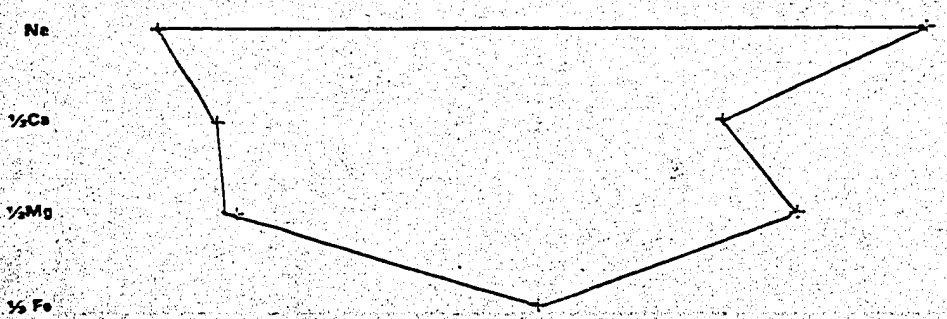
OBSERVED pH	RESISTIVITY (Ohm m)
7.1 @ 23.-°C	0.105 @ 29°C

REMARKS

A Halliburton Services Downhole Sampler was received at ATM pressure It contained 2.0 L. of water only.

Continued..

LOGARITHMIC PATTERN c / $mol \cdot m^{-3}$



HOME OIL COMPANY LIMITED LABORATORY REPORT NUMBER: E84-2804

E84-2804-1: TOP

RESISTIVITY: 0.412 Ohm/meters @ 25°C.

Slightly oil-stained muddy water.

E84-2804-2: MIDDLE

RESISTIVITY: 0.175 Ohm/meters @ 25°C.

Slightly muddy water.

E84-2804-3: TOP OF TOOL.

RESISTIVITY: 0.131 Ohm/meters @ 25°C.

Murky water, Hydrogen Sulfide present.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

WATER ANALYSIS

LABORATORY NUMBER: E84-2805

CONTAINER IDENTITY:

LICENCE NUMBER:

OPERATOR NAME: HOME OIL COMPANY LIMITED

LOCATION: J-42/60 '01"/118' 38"

WELL NAME: HOME KAKISA RIVER J-42

ELEVATIONS: K.B. 619.76 Ground GRD.

FIELD OR AREA: KAKISA RIVER

POOL OR ZONE: UPPER SULPHUR POINT

NAME OF SAMPLER:

COMPANY: HALLIBURTON SERVICES LTD.

TEST TYPE: DST NO. 8

TEST RECOVERY: 1.5 m OF DRILLING MUD

MULTIPLE RECOVERY: Y N X

SAMPLING POINT: TOP OF TOOL

AMT. & TYPE OF CUSHION: File #

MUD RESISTIVITY: @ 25°C

Canada Oil and Gas Lands Administration
Administration du pétrole et du gaz des terres du Canada
MAY 8 1984
I91

Test Interval (metres): 1516 - 1521

Perforations (metres):

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES: WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

	SEPARATOR	TREATER	RESERVOIR	SOURCE
GAUGE PRESSURE kPa				
TEMPERATURE °C				

DATE SAMPLED (Y-M-D): 84/03/09
DATE RECEIVED (Y-M-D): 84/03/20
DATE REPORTED (Y-M-D): 84/04/05
ANALYST: S.T.
OTHER INFORMATION:

ION	$\frac{m \cdot v^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Na	6 380	0.3327	277.53
K	134	0.0070	3.43
Ca	621	0.0324	15.49
Mg	152	0.0079	6.25
Ba			
Sr			
Fe	NIL		

ION	$\frac{m \cdot v^{-1}}{g \cdot m^{-3}}$	Mass Fraction	$\frac{c}{mol \cdot m^{-3}}$
Cl	7 970	0.4157	224.75
Br			
I			
HCO_3	115	0.0060	1.89
SO_4	3 802	0.1983	39.54
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	NIL		

TOTAL SOLIDS $\frac{m \cdot v^{-1}}{g \cdot m^{-3}}$

EVAPORATED @ 110°C	EVAPORATED @ 180°C
19 300	
AT IGNITION	CALCULATED
18 220	19 174

ORGANICS: MUCH

RELATIVE DENSITY	REFRACTIVE INDEX
1.014 @ 25°C	1.3368 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm m)
7.8 • 23.°C	0.383 @ 25°C

REMARKS

The sample consisted of muddy, slightly salty water.

LOGARITHMIC PATTERN c/mol·m^{-3}