

N.E.B. COPY

Wellsite Geological Report

PARAMOUNT et al CAMERON
C-75 60 10'N 117 15'W

WELLSITE GEOLOGICAL REPORT

PARAMOUNT et al CAMERON
C-75 60° 10' 117° 15'

Completed (94-03-23) By:

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NATIONAL ENERGY BOARD
ENGINEERING BRANCH
MAR 30 1994

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1A. WELL DATA SUMMARY

WELL NAME: PARAMOUNT et al CAMERON C-75 60° 10' 117° 15'

LOCATION: Unit: C Section: 75 Grid Area: 60° 10' 117° 15'

UWI: 300C756010117150

PROVINCE: Northwest Territories

OPERATOR: Paramount Resources Ltd.

AFE NO.: 18103

PERMIT or LEASE: Federal - Crown SDL - 009

DRILLING AUTHORITY: File #9211-P33-7-3 CLASSIFICATION: Development

DRILLING CONTRACTOR: PHELPS DRILLING RIG NO: 4E NWT LICENSE #: 2687

K.B. ELEVATION: 788.47 Metres GROUND ELEVATION: 783.62 Metres

C.F. ELEVATION: 784.12 Metres

TOTAL DEPTH: 1590 Metres (Driller's) , 1587.0 Metres (Logger's)

SPUD DATE: 94-02-17 @ 0900 hrs.

DATE TOTAL DEPTH REACHED: 94-03-16 @ 1615 hrs.

DRILLING RIG RELEASE DATE: 94-03-20 @ 1600 hrs.

WELL STATUS: Cased Potential Sulphur Point Oil

WELLSITE DRILLING SUPERVISOR: Gery Fuchs, Frank Pfefferle

WELLSITE GEOLOGICAL REPRESENTATIVE: W.M.(Mike)WHITE

1B.

ENGINEERING SUMMARYi) Casing Record Summary

Hole Size (mm)	Csg. Size (mm)	Wt (kg/m)	Grade	Make	Setting Depth K.B.	Cementing Details
-----	-----	-----	-----	-----	-----	-----
311.2	244.5	53.6	J-55	LT&C	402 m.	30 tonnes 0-1-0 'G' + 2% CaCl ₂ Cemented 94-02-19
222.2	177.8	34.2	LS-65	LT&C	1130 m.	11.75 tonnes 0-1-0 'G' + 33.3% Microsil + .5% T10 + 9% CaCl ₂ + 4.5 tonne Thix Mix 'G' + .4% D23 + 1% CaCl ₂ + .1% SPC 12000. Cemented 94-03-02
158.8	114.4	14.1	J-55	ST&C	1590 m. top @ 1048m	13 tonnes Thix Mix 'G' + .4% D-23 + .1% SPC-12000, Cemented 94/03/19

1B.

ENGINEERING SUMMARYii) Bit Record

Bit #	Make	Type	Size (mm)	Hours	Depth In	Depth Out	Meters Drilled	Condition T/B/G
1A	SECURITY	S33SF	311.2	15.50	0m	172m	172m	8/8/1
2A	REED	HP12		1.75	172	198	26	4/4/1
3A	SECURITY	S33SF		12.75	198	402	204	5/4/1
4	HTC	ATJ05	222.2	12.75	402	639	237	1/2/I
5RR	HTC	ATJ05		30.00	639	1067	428	1/8/I
6	STC	F3H		Clean out trip for bridged logging tool				
7	REED	EXP43A		5.00	1067	1128	61	1/1/I
8RR	HTC	ATJ05		Clean out trip prior to 177.8mm casing				
9	REED	EHP51H	158.8	0.00	1130	1130	Plugged jet	
10RR	REED	EHP51H		13.00	1130	1222	92	1/1/I
*** Plugback to 1169m with plug #3 to correct deviation ***								
11	SECURITY	S33F	158.8	17.50	1169	1184	15	3/4/I
12	SECURITY	S33F		14.75	1184	1261	77	4/4/I
13RR	REED	EHP51H		25.00	1261	1363	102	2/4/I
14	REED	EHP51H		13.75	1363	1419	56	2/1/I
15	D.BOART	SC-278	158.0	9.75	1319	1425	6	Core #1
16RR	D.BOART	SC-278		13.50	1425	1433	8	Core #2
17RR	D.BOART	SC-278		7.00	1433	1439	6	Core #3
18RR	REED	EHP51H	158.8	0.00	1439	1439	Clean out trip	
19RR	REED	EHP51H		34.25	1439	1590	151	4/3/I

1B.

ENGINEERING SUMMARYiii) Deviation Surveys

Depth -----	Measurement -----	Depth -----	Measurement -----	Depth -----	Measurement -----
35m	1.75°	903m	0.75°	1192.1m	0.8° S66.4W
44	1.00	998	0.50	1201.3	0.6 N63.6W
72	1.00	1097	1.25	1210.9	0.4 S71.4W
100	0.75	1161	1.50	1220.6	0.4 N43.6W
127	0.75	1175	2.50	1230.3	0.4 N58.6W
156	1.00	1186	3.75	1239.6	0.7 N68.6W
182	1.00	1196	5.00	1249.3	0.1 N63.6W
209	0.75	1205	7.75	1261	0.25°
237	0.75	*****		1281	0.75
266	0.75	*PLUGBACK to 1169m *		1305	2.00
295	1.00	*****		1320	1.75
322	0.50	1152.4m	1.9° S86.4W	1340	1.50
351	0.50	1159.6	2.1 N88.6W	1359	2.00
378	0.75	1162.1	2.3 S81.4W	1378	1.50
481	1.00	1168.9	2.2 S86.4W	1397	1.50
576	0.75	1171.7	1.9 S86.4W	1458	1.50
700	0.50	1179.9	1.2 S74.4W	1518	0.75
799	1.00	1182.5	0.6 N78.6W	1584	1.00

1) 9.6

ALV.

PARAMOUNT et al CAMERON
C75-6010' 117°15'

2) 26.4 3)

B.H.A. No. _____

D.H.A. No. _____

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Sheet _____ of _____

1B.

ENGINEERING SUMMARYiv) Drilling Fluids

Type	Depth (m)	Den. kg/m ³	Vis s/L	W.L. cc/ 30min	pH	PV/YP	Pf/Mf	Cl- mg /L	K+ mg /L	Ca++ mg /L	% Slds	% Oil
----	-----	-----	---	-----	----	-----	-----	-----	---	-----	-----	---
Gel H ₂ O	132m	1090	30	N/C	7.0	3/1	0/.2	50	-	20	5.5	-
	200	1190	32	25.0	7.5	5/2.5	0/.2	50	-	20	12.0	-
	360	1180	34	16.0	8.0	5/1	0/.3	50	-	20	11.0	-
	387	1190	50	18.0	8.5	10/7.5	.1/.3	50	-	30	12.0	-
	402	1200	44	16.0	8.0	11/4.5	0/.3	50	-	20	12.5	-
SappH ₂ O	414	1015	29		10.5	2/0	.3/.4	50	-	--	tr	-
	638	1030	50	13.2	9.0	16/3.5	.2/.4	50	-	20	2.5	-
Gel Polymer	709	1065	41	16.0	11.5	9/2	2/3	200	-	20	4.0	-
	921	1070	38	12.0	10.0	8/1	.5/1.1	300	-	0	4.4	-
	1050	1060	40	11.0	10.0	8/2	.5/1.2	300	-	0	3.8	-
	1067	1040	45	14.0	10.0	10/1.5	.4/.8	300	-	0	2.5	-
	1067	1030	38	36.0	12.5	5/14	3/3	300	-	40	1.9	-
Gel Chem	1128	1070	56	10.0	11.5	23/7	2/3	300	-	0	4.4	-
	1130	1070	49	11.0	11.0	12/6	1/2.2	300	-	0	4.4	-
	1130	1045	34	15.0	10.5	6/3	.7/1.6	300	-	0	2.8	-
	1212	1070	52	9.0	10.0	17/5.5	.7/2.2	300	-	20	4.4	-
	1222	1070	38	10.0	9.5	12/3.5	.3/1.9	300	-	20	4.4	-

***** Deviation problems 1161-1205m. Plugback 1222-1169m *****

1070	1060	51	10.0	11.0	14/4.5	.5/1.5	300	-	30	3.8	-
1084	1060	44	10.0	12.0	14/4	.6/1.4	300	-	20	3.8	-
1222	1080	44	10.0	11.0	14/3.5	.4/1.2	300	-	20	5.0	-
1250	1100	50	8.5	11.0	20/8	.3/1.1	300	-	20	6.3	-
1310	1100	42	9.0	10.0	14/4	.2/.8	300	-	20	6.3	-
1343	1100	45	8.5	10.0	17/6.5	.1/.8	300	-	20	6.3	-
1365	1100	46	9.0	10.0	18/5	.2/.9	300	-	20	6.3	-
1400	1090	52	9.0	9.0	22/12	.1/.6	300	-	20	5.6	-
1420	1100	55	9.0	10.0	22/8	.1/.7	250	-	40	6.3	-
1425	1100	45	8.0	10.0	17/6.5	.2/1.0	250	-	80	6.3	-
1433	1100	45	8.0	10.0	18/5	.2/1.1	250	-	60	6.3	-
1461	1100	93	9.0	9.0	30/12	.1/.6	500	-	100	6.2	-
1510	1080	40	15.0	10.0	13/5.5	.1/.5	800	-	520	4.9	-
1565	1070	55	10.5	11.0	15/10	.3/.7	800	-	400	4.3	-
1590	1070	65	9.0	10.5	20/13	.2/.6	800	-	320	4.3	-
1590	1080	60	8.0	10.0	18/11	.1/.5	900	-	400	4.9	-

1B.

ENGINEERING SUMMARY

- v) Hole Problems (severe deviation, sloughing, dog legs, etc.)

High degree of sloughing & spalling of formations while drilling caused sample quality to be very poor from uphole contamination. High deviation from 1161-1205m (1.50° - 7.75°) resulted in plugback to 1169m & motor drilling (1169-1261m) to correct.

- vi) Lost Circulation

In Wabamun @ 612m, 634m & 639m experienced total losses amounting to 199m³. Set cement plug #1. Tagged plug @ 540m, washed to 572m. Drill cement 572-639m. Drill ahead to 659m, lost 7m³. Regain volume. Drill ahead 659-679m, lost 10m³. At 679m lost additional 12m³. Regain volume. Drill ahead 679-710m, lost 13m³. Circulate & condition mud system. Drill ahead to 903m, lost 26m³. Rebuild volumes. Drill ahead to 942m, lost 32m³. Regain circulation. Drill ahead to 985m, losing 2m³/hr then total loss of 54m³. Regain circulation & rebuild volumes. Drill ahead to 1067m, lost 60m³. Attempt to run Temperature Log to locate lost circulation zone. Hit bridge @ 461m, fluid level @ 100m. On clean out trip needed to regain circulation, lost another 30m³. Ran Temperature Log to locate zone @ 590m. Set open hole cement plug #2 @ 590m. Tag cement @ 513m. Drill cement from 520-590m. RIH, drill ahead 1067-1106m. Start to experience losses. Drill to 1128m, lost circulation, 60m³. Run 177.8mm casing.

- vii) Well Control Problems (well flow, blowouts - conditions before and after blow out)

No well control problems were encountered during the drilling operations.

- viii) Cementation (plugbacks, stabilization, abandonment)

PLUG #1: 639-540m, 6 tonnes Class 'G' + 2% CaCl₂, 2125 hrs, plug down @ 2125 hours, 94-02-22.
PLUG #2: 590-513m, 6 tonnes Class 'G' + 2%CaCl₂ + 2 sacks celloflake, plug down @ 0435 hours, 94-02-27
PLUG #3: 1222-1169m, 2.4 tonnes 0-1-0 'G' + 1% T10, plug down @ 1914 hours 94-03-05

2.i)

GEOLOGICAL FORMATION TOPS

K.B. 782.62m

Formation Age	Formation Name	<u>Sample</u>		<u>Wireline Logs</u>		
		Depth	TVDSS	Depth	TVD	TVDSS
CRETACEOUS						
(Kbs)	Bluesky	543m	+ 245.5m	545.5m	+ 243.0m	+ 243.0m
DEVONIAN						
(Dwa)	Wabamun	561	+ 227.5	560.8	+ 227.7	+ 227.7
(Djm)	Jean Marie	700	+ 88.5	723.2	+ 65.3	+ 65.3
(Dsi)	Fort Simpson	706	+ 82.5	729.0	+ 59.5	+ 59.5
(Dtf)	Twin Falls	824	- 35.5	840.6	- 52.1	- 52.1
(Dhr)	Hay River	991	- 202.5	1002.5	- 214.0	- 214.0
(Dbl)	Beaverhil Lk	1290	- 501.5			
(Dmu)	Muskwa	1332	- 543.5			
(Dsp)	Slave Point	1359	- 570.5	1358.3	- 569.8	- 569.8
(Dfv)	FtVermillion	1388	- 599.5	1388.9	- 600.4	- 600.4
(Dew)	WattMountain	1404	- 615.5	1407.3	- 618.8	- 618.8
(Dst)	SulphurPoint					
	Limestone	1409	- 620.5	1418.1	- 629.6	- 629.6
	Dolomite	1424	- 635.5	1423.6	- 635.1	- 635.1
(Deg)	Muskeg	1443	- 654.5	1440.0	- 651.5	- 651.5
(Dek)	Keg River	1539	- 750.5	1534.8	- 746.3	- 746.3
TOTAL DEPTH		1590	- 801.5	1587.0	- 798.5	- 798.5

2.ii) Sample Requirements

Paramount Resources Ltd.: 1 - 7 ml vial sample every 5 m from surface casing to final total depth.
1 - sample file every 5 m from S.C. to T.D.

Government (N.E.B.) : 1 - unwashed plastic lined bag sample every 5 m from surface casing to final total depth.
1 - 7 ml vial sample every 5 m from S.C. to T.D.

I.S.P.G : 1 - unwashed plastic lined bag sample every 5 m from surface casing to final total depth
1 - processed Geochem jar sample every 10 m from S.C. to T.D.
1 - 7 ml vial sample every 5 m from S.C. to T.D.

Sample Quality : Poor sample quality from surface casing to intermediate casing point @ 1130m with numerous samples missing due to lost circulation. Many samples of lost circulation material. Slight improvement of sample quality after setting casing. Abundant sloughing & spalling of shales.

2.iii) Sample Descriptions

<u>Interval</u>	<u>Description</u>
402-407m	No Sample: Formation leak-off test @ 407m
410-420	SHALE:medium to dark grey, fine texture, slightly micaceous, brittle to firm, sub blocky, occasionally sub fissile minor traces SANDSTONE:buff grey white, silt grained, sub angular, well sorted, siliceous, consolidated, tight
420-445	SHALE:as above very minor traces SANDSTONE:as above
445-470	SHALE:medium to occasional dark grey, fine texture, occasionally micaceous, firm to hard, blocky to sub blocky, occasionally sub fissile, occasionally carbonaceous in part
470-495	SHALE:as above
495-525	SHALE:medium to dark grey, fine to occasional medium texture, in part sub waxy, micro micaceous in part, occasional black to dark grey, slightly carbonaceous, blocky to sub blocky, occasionally sub fissile, appears slightly bentonitic in part very minor trace SANDSTONE:clear to frosted, medium grained, sub rounded, poor sorting, unconsolidated No Sample 515m
525-535	SHALE:medium to dark grey as above; increasing black to dark grey, carbonaceous, platy, occasionally sub fissile, slightly micro micaceous
535-540	SHALE:predominantly black to dark grey, carbonaceous, slightly micro micaceous, occasional ironstone staining, brittle to firm, platy to sub blocky
540-545	No Sample

Interval

Description

BLUESKY 543m (+245.5m TVDSS)

545-550 SANDSTONE:clear to frosted, light grey, very fine grained, sub angular to sub rounded, well sorted, siliceous, friable, good to excellent intergranular porosity, no fluorescence, very slight weak yellow streaming cut fluorescence, poor show
abundant SHALE:medium to dark grey, occasional black, occasionally carbonaceous, micro micaceous in part, medium occasional GLAUCONITE:green, granular

***NOTE: The 550m & 555m samples appear to be switched. Therefore the 555m sample is described as the 550m sample & visa versa.

550-561 predominantly SHALE:as above, probably cavings
abundant SANDSTONE:as above with increased abundance of green GLAUCONITE grains
abundant LIMESTONE:cream white to light buff white, crypto to micro crystalline, appears dense, clean, slightly fragmental/bioclastic appearing in part, possibly brecciated

WABAMUN 561m (+227.5m TVDSS)

561-570 LIMESTONE:cream white, occasionally slightly chalky appearing, light buff tan to light brown, crypto to very fine crystalline, fragmental/bioclastic appearing in part, slightly brecciated in part, clean, dense with poor to fair intergranular porosity, no fluorescence, no show

570-585 LIMESTONE:as above
minor traces disseminated PYRITE
occasionally abundant SANDSTONE:cavings as above

585-605 No Samples - Lost circulation @ 612m

605-639 Lost Circulation Material (LCM) - primaseal (sawdust, celloflake, plastic), lost circulation @ 634m & 639m

*** Set cement plug #1, 639-572m to control lost circulation ***

639-640 LIMESTONE:cream white to light buff tan, micro to in part very fine crystalline, sucrosic/silty appearing, bioclastic appearing in part, slightly chalky in part, clean, dense with poor to fair intercrystalline porosity, no fluorescence no show
abundant SHALE:medium to dark grey, medium texture, brittle to hard, splintery to sub blocky, possibly cavings

IntervalDescription

640-660 Limestone:as above, becoming buff light grey white in part, increasingly very fine crystalline, fragmental/bioclastic appearing in part, slightly brecciated in part, sucrosic/silty, **occasional poor to fair intercrystalline porosity, no fluorescence, no show** abundant SHALE:cavings throughout as above abundant Cement:cavings from plug #1

*** Lost Circulation @ 659m ***

660-670 Limestone:as above, becoming slightly light to medium brown in part, sucrosic/silty to sandy appearing in part, slightly brecciated, fragmental/bioclastic in part, **poor to fair intercrystalline porosity, no fluorescence, no show** abundant SHALE:cavings as above abundant Cement:as above abundant Lost Circulation Material:primaseal as above

670-675 ??Questionable Interpretation
Limestone:as above
abundant SHALE:cavings, medium to dark grey, fine to medium texture, occasionally slightly micro micaceous, brittle to hard, sub platy, splintery, sub blocky

*** Lost Circulation @ 679m ***

675-685 ??Questionable Interpretation
Limestone:cream white to light buff grey white, slightly mottled in part, micro to very fine crystalline, sucrosic/silty to in part sandy, brecciated in part, **predominantly appears dense with occasional poor to fair intercrystalline porosity, no fluorescence, no show** abundant Lost Circulation Material:primaseal as above

685-690 Limestone:light grey, mottled in part, cream white, very fine crystalline, sucrosic/silty to sandy appearing, in part brecciated, **poor to fair intercrystalline porosity, no fluorescence, no show** abundant SHALE:dark grey, occasional black carbonaceous, slightly micro micaceous in part, brittle to firm, splintery to blocky, possibly cavings abundant Lost Circulation Material:primaseal as above

IntervalDescription

690-700

LIMESTONE:light grey white, cream white, occasional buff tan white, mottled in part, micro to very fine crystalline, sucrosic/silty to sandy appearing, slightly brecciated in part, **poor to fair intercrystalline porosity, no fluorescence, no show**
minor SHALE:as above
abundant Lost Circulation Material:sawdust, etc., as above

JEAN MARIE 700m (+ 88.5m TVDSS)

700-706

LIMESTONE:as above
slight increase **SHALE:**medium to dark grey, fine to sub waxy texture, slightly micro micaceous in part, brittle to firm, splintery to sub blocky, possibly cavings; minor traces light grey green, sub waxy, fissile, splintery to platy
abundant **Cement** cavings
abundant Lost Circulation Material:as above

*** Losses in Circulation between 679-710m ***

FORT SIMPSON 706m (+ 82.5m TVDSS)

706-720

SHALE:dark grey to black, appears carbonaceous in part, very minor traces green grey, fine to occasionally medium texture, occasionally sub waxy, slightly micro micaceous, brittle to firm, splintery to sub blocky
LIMESTONE:buff light grey to grey white, micro to very fine crystalline, occasionally sucrosic/silty to sandy, grading to dolomitic in part, slightly brecciated in part, argillaceous in part, **poor to fair intercrystalline porosity no fluorescence, no show**

720-735

LIMESTONE:cream white to light buff white grey, micro to very fine crystalline, appears sucrosic/silty to sandy, dolomitic appearing in part, slightly brecciated in part, slightly argillaceous in part, **poor to fair intercrystalline porosity, no fluorescence, no show**
slight to abundant **SHALE:**as above
occasionally abundant Lost Circulation Material:primaseal

735-745

LIMESTONE:buff light grey to light grey white, micro to very fine crystalline, sucrosic/sandy to silty, very dolomitic in part, moderately argillaceous in part, **poor to fair intercrystalline porosity, no fluorescence, no show**
minor trace **SHALE:**medium to dark grey, fine to in part sub waxy texture, slightly micro micaceous, brittle to firm, splintery to sub blocky; occasional light green grey

IntervalDescription

745-750	No Sample
750-760	LIMESTONE:as above minor trace SHALE:as above
760-775	SHALE:dark grey, fine to medium texture, abundant grey green, sub waxy texture, slightly calcareous in part, brittle to firm, fissile in part, splintery to sub blocky interbedded LIMESTONE:as above
775-800	SHALE:as above with occasional olive brown, fine texture, brittle to firm, splintery interbedded LIMESTONE:as above
800-805	SHALE:dark grey to black, slightly carbonaceous in part, fine texture, brittle to moderately soft, occasionally fissile, splintery to sub blocky; abundant light green, sub waxy, slightly calcareous in part, brittle, splintery; occasional olive brown as above interbedded LIMESTONE:cream white, light buff tan white, buff light grey, micro to very fine crystalline, appears sucrosic/silty to occasionally sandy, dolomitic in part, argillaceous in part, dense with occasional poor intercrystalline porosity, no fluorescence, no show
805-810	No Sample
810-815	SHALE:as above with increase olive to medium brown interbedded LIMESTONE:as above
815-824	SHALE:light green to light grey green, sub waxy, slightly calcareous in part, occasionally slightly pyritic, splintery medium to dark grey, fine texture, fissile, splintery interbedded LIMESTONE:cream white to light buff grey, micro to very fine crystalline, sucrosic/silty to occasionally sandy, appears dolomitic in part, argillaceous in part, dense with occasional poor intercrystalline porosity, no fluorescence, no show
<u>TWIN FALLS 824m (- 35.5m TVDSS)</u>	
824-845	LIMESTONE:as above becoming grey brown in part & very sucrosic/sandy appearing in part, increasingly argillaceous in part (830m & 840m samples) interbedded SHALE:light green, medium to dark grey, occasional black, olive brown, as above

IntervalDescription

845-870 LIMESTONE:cream white to light buff grey, buff tan in part, mottled in part, micro to fine crystalline, occasionally silty appearing, fragmental/bioclastic in part, dolomitic in part, fossiliferous in part, argillaceous in part, dense interbedded SHALE:medium to dark grey,occasional black carbonaceous, light green to grey green, occasional olive to medium brown, fine to sub waxy texture, occasionally calcareous, brittle to fissile, splintery to occasionally sub blocky

870-895 interbedded LIMESTONE & SHALE:as above

*** Lost Circulation @ 903m ***

895-905 ??Questionable Interpretation
Assumed interbedded LIMESTONE & SHALE:as above

905-915 LIMESTONE:buff light grey, occasional cream white, mottled in part, micro to fine crystalline, occasionally appears silty, fragmental/bioclastic in part, fossiliferous in part, slightly dolomitic in part, argillaceous in part, dense interbedded SHALE:dark grey, occasional carbonaceous black, occasional grey green, fine texture, slightly micro micaceous in part, brittle to firm, splintery to sub blocky abundant Lost Circulation Material:primaseal

915-920 LIMESTONE:as above
interbedded SHALE:as above

920-925 interbedded LIMESTONE & SHALE:as above
abundant Lost Circulation Material:as above

925-935 SHALE:dark grey to black, carbonaceous, slightly micro micaceous in part, fine texture, brittle to firm, splintery to sub blocky
interbedded LIMESTONE:grey brown, light to medium grey, as above
abundant Lost Circulation Material:as above

*** Lost Circulation @ 942m. ***

935-945 ??Questionable Interpretation
interbedded LIMESTONE & SHALE:as above becoming lighter
abundant Lost Circulation Material:as above

IntervalDescription

945-950 SHALE:dark grey to black, carbonaceous, slightly micro micaceous in part; predominantly grey green, fine to sub waxy texture, calcareous in part, brittle to firm, fissile, blocky to splintery
interbedded LIMESTONE:cream white, light buff grey white, occasional buff tan to medium brown, micro to fine crystalline, silty to sandy in part, fossiliferous in part, fragmental/bioclastic appearing in part, slightly argillaceous in part, dense
decrease abundance Lost Circulation Material:as above

950-955 SHALE:light grey green as above, with abundant medium grey, fine texture, sub fissile, splintery to sub blocky
interbedded LIMESTONE:as above

955-960 ??Questionable Interpretation
interbedded LIMESTONE & SHALE:as above
abundant Lost Circulation Material:primaseal (sawdust, celloflake, plastic)

960-975 LIMESTONE:cream white to light buff grey, mottled in part, micro to very fine crystalline, sucrosic/silty to occasionally sandy appearing in part, slightly dolomitic in part, fragmental/bioclastic appearing in part, occasionally fossiliferous, dense
occasional interbedded SHALE:light grey green, fine to sub waxy texture, calcareous, brittle to firm, sub fissile to fissile, splintery to sub blocky

975-985 No Samples

*** Lost Circulation @ 985m ***

985-991 LIMESTONE:as above
increased interbedded SHALE:as above

HAY RIVER SHALE 991m (-202.5m TVDSS)

991-995 SHALE:predominantly light to medium green, grey green, abundant medium grey, sub waxy to fine texture, slightly micro micaceous in part, calcareous in part, brittle to sub fissile, splintery
occasional interbedded LIMESTONE:as above

IntervalDescription

995-1020 **SHALE**:dark grey to predominantly black, slightly carbonaceous, slightly micro micaceous in part, fine texture brittle to firm, splintery to sub blocky
 ??abundant interbedded **LIMESTONE**:light buff grey brown, occasional cream white, light to medium brown, micro to very fine crystalline, sucrosic/silty to occasionally sandy, fragmental in part, slightly dolomitic in part, fossiliferous in part, slightly argillaceous, dense

1020-1025 Lost Circulation Material:primaseal as above, emerald seal
 ??Questionable Interpretation
 SHALE:as above
 occasional interbedded **LIMESTONE**:as above

1025-1030 **SHALE**:medium to dark grey, abundant black slightly carbonaceous, abundant light grey green becoming increasingly micro micaceous in part
 abundant **LIMESTONE**:as above
 abundant Lost Circulation Material:as above

1030-1035 interbedded **Limestone & Shale**
 LIMESTONE:cream white to light grey, micro to fine crystalline, sucrosic/silty to occasionally sandy appearing, fragmental, fossiliferous, slightly argillaceous in part, dense
 SHALE:predominantly light grey green, abundant medium grey, fine to sub waxy texture, calcareous in part, fissile in part, brittle to firm, splintery to sub blocky

1035-1050 ??Questionable Interpretation
 interbedded **LIMESTONE & SHALE**: as above
 abundant Lost Circulation Material:primaseal, emerald seal

1050-1067 No Samples

*** Lost Circulation @ 1067m, Set cement plug #2 ***

1067-1075 **SHALE**:predominantly light green to grey green, abundant medium grey, occasional dark grey to carbonaceous black, fine to sub waxy texture, slightly micro micaceous in part, calcareous, predominantly fissile, platy to sub blocky
 minor traces **LIMESTONE**:cream white to light grey white, crypto to very fine crystalline, occasionally silty to sandy appearing, dense
 abundant **Cement**:cavings from plug #2

IntervalDescription

1075-1080	SHALE:as above with increase medium to dark grey, abundant orange and olive brown, fine to medium texture, silty, calcareous, sub blocky minor LIMESTONE:as above abundant Cement:as above
1080-1095	SHALE:predominantly light green to light grey green, abundant dark grey to carbonaceous black, medium grey, as above minor LIMESTONE:as above abundant Cement:as above
1095-1123	SHALE:predominantly light green to light grey green, fissile calcareous, platy to sub blocky; medium to dark grey, abundant black carbonaceous, slightly micro micaceous in part, fine texture, splintery occasional minor LIMESTONE:cream white to light grey, crypto to very fine crystalline, dense abundant Cement:cavings from plug #2
1123-1130	No Samples
*** Lost Circulation @ 1128m, Run 177.8mm casing ***	
1130-1135	??Questionable Interpretation - cement from casing Assumed interbedded LIMESTONE & SHALE
1135-1140	predominantly LIMESTONE:light grey occasionally mottled with white & buff brown, abundant cream white, micro to very fine crystalline, sucrosic/silty, slightly dolomitic in part, fossiliferous in part, moderately argillaceous, dense SHALE:light to medium grey, occasional dark grey to carbonaceous black, fine texture, micro micaceous in part, slightly calcareous in part, sub fissile, soft, splintery to sub blocky
NOTE	Hard bit grinding formation rather than cutting. Shales probably ground fine enough to be dispersed into mud system.
1140-1145	LIMESTONE:as above increase SHALE:as above
1145-1150	predominantly LIMESTONE:light grey, minor cream white, as above SHALE:light to increasingly dark grey, as above; occasional light green grey, sub waxy, sub fissile, soft, splintery

IntervalDescription

1150-1155	predominantly SHALE :light to medium grey, light green grey in part, minor dark grey, fine texture, appears sub waxy occasionally, micro micaceous in part, sub fissile, soft, splintery to sub platy, occasionally sub blocky interbedded LIMESTONE :light to medium grey occasionally mottled with buff brown, occasional cream white, micro to very fine crystalline, sucrosic/silty in part, appears slightly dolomitic in part, moderately to very argillaceous, dense
1155-1160	predominantly LIMESTONE :as above interbedded SHALE :as above
1160-1175	predominantly SHALE :light to medium grey, slight green grey in part, as above interbedded LIMESTONE :as above minor disseminated PYRITE throughout
1175-1200	interbedded SHALE & LIMESTONE :slight increase limestone, as above occasional minor disseminated PYRITE
1200-1222	SHALE :predominantly light green grey to light grey, occasional medium & dark grey, fine to sub waxy texture, occasionally slightly micro micaceous, slightly calcareous in part, sub fissile, splintery to sub blocky, occasionally sub platy interbedded LIMESTONE :buff light grey to buff tan light grey, micro to very fine crystalline, slightly silty appearing in part, slightly dolomitic, moderately to very argillaceous, dense
*** Severe deviation 1161-1205m, plugback to 1169m to motor drill ***	
1222-1225	SHALE :predominantly light grey to light green grey, abundant medium grey, fine to sub waxy texture, slightly micro micaceous in part, occasional carbonaceous specks, occasionally very slightly calcareous, sub fissile, splintery to sub blocky, occasionally sub platy
1225-1240	SHALE :as above with medium to dark grey, occasional dark grey to slightly carbonaceous black, slightly micaceous in part, brittle, splintery

IntervalDescription

1240-1255	SHALE: light grey to light green grey, abundant medium grey in part, fine to sub waxy texture, slightly micaceous in part, occasional carbonaceous specks, occasionally slightly calcareous, sub fissile, splintery to sub blocky very minor streak LIMESTONE: 1250m sample, medium brown, micro to very fine crystalline, dense, argillaceous
1255-1275	SHALE: predominantly as above with slight increase medium to dark grey, slightly pyritized in part & black slightly carbonaceous, very occasional brown, fine texture, brittle, sub platy
1275-1285	SHALE: light grey to light green grey, as above; becoming predominantly medium to dark grey, occasional slightly carbonaceous black, fine to sub waxy texture, slightly micaceous in part, brittle to sub fissile, splintery to sub blocky very minor streak LIMESTONE: 1280m sample, light grey, very fine crystalline, dense, argillaceous
1285-1290	SHALE: light to medium grey, green grey in part, fine to sub waxy texture, occasional carbonaceous specks, occasionally slightly calcareous, slightly micaceous in part, brittle to sub fissile, splintery to sub blocky
<u>BEAVERHILL LAKE 1290m (-501.5m TVDSS)</u>	
1290-1305	SHALE: light to medium grey, light green grey, becoming predominantly dark grey to occasionally carbonaceous black, fine to sub waxy texture, increasingly calcareous, occasionally slightly micaceous, occasional carbonaceous specks, sub fissile to moderately soft, splintery to blocky; abundant brown to grey brown, very calcareous LIMESTONE: brown to grey brown, occasional light grey, chalky, very argillaceous to shaley, crypto crystalline, dense, very argillaceous, grading to limy shale
1305-1315	SHALE: light to medium grey, light green grey, abundant medium to dark grey, as above, becoming increasingly calcareous in part; minor brown to grey brown very minor streak LIMESTONE: as above
1315-1320	No Sample
1320-1332	SHALE: as above with occasional pyritized minor LIMESTONE: as above with occasional light grey, micro crystalline, dense, slight to moderately argillaceous

Interval

Description

MUSKWA 1332m (-543.5m TVDSS)

- 1332-1337 **SHALE**:black, carbonaceous, slightly micaceous in part, occasionally slightly pyritized, fine texture, brittle, blocky, occasional brown black slightly calcareous in part **LIMESTONE**:grey brown, crypto to very fine crystalline, dense, argillaceous
- 1337-1359 **LIMESTONE**:chalky cream white, light grey, occasional light brown, crypto to occasionally very fine crystalline, fossiliferous, in part fragmental/bioclastic, dense, slightly argillaceous
abundant **SHALE**:possibly interbedded though probably caving, grey green to medium grey, occasional dark carbonaceous grey sub waxy to fine texture, slightly micaceous, calcareous in part, brittle to sub fissile, splintery to sub blocky
minor disseminated **PYRITE**

SLAVE POINT 1359m (-570.5m TVDSS)

- 1359-1365 **LIMESTONE**:buff tan to medium brown, yellow brown in part, crypto crystalline, occasionally slightly chalky appearing, slightly fossiliferous in part, dense, clean to slightly argillaceous, occasional disseminated pyrite association interbedded **SHALE**:light green, grey green, occasional light to medium grey, sub waxy to fine texture, calcareous in part, occasional disseminated pyrite associated, brittle to sub fissile, sub blocky to blocky
- 1365-1380 **LIMESTONE**:mottled buff tan light to medium brown, occasional cream white spotting, very fine to fine crystalline, sandy appearing, bioclastic appearing, fossiliferous, **poor to fair intercrystalline porosity, bright white yellow fluorescence, weak pale white cut**, occasionally slightly argillaceous
occasional interbedded **SHALE**:light to medium green, medium grey, sub waxy to fine & medium texture, occasional carbonaceous specks, micro micaceous, brittle to sub fissile, splintery to sub blocky
- 1380-1388 **LIMESTONE**:mottled buff tan to dark brown with cream white spotting, very fine to fine crystalline, bioclastic, fossiliferous, sandy appearing, **porosity, fluorescence & cut as above**
interbedded **SHALE**:black, carbonaceous, fine texture, splintery to sub platy

IntervalDescriptionFORT VERMILLION 1388m (-599.5m TVDSS)

1388-1404 **LIMESTONE:**abundant mottled buff tan to medium brown with cream white, becoming medium brown & light to medium grey, very fine to fine, becoming crypto to micro crystalline, chalky & anhydritic appearing in part, fragmental in part, fossiliferous in part, sandy in part, **occasional poor intercrystalline porosity becoming predominantly dense, no fluorescence, no cut**
interbedded **ANHYDRITE:**buff tan to cream white, massive, occasionally appears as chalky white calcium carbonate precipitate from mud

WATT MOUNTAIN 1404m (-615.5m TVDSS)

1404-1409 **SHALE:**waxy light to medium green; micaceous pale green white kaolinitic appearing, firm to sub fissile, sub platy to blocky
abundant **LIMESTONE:**orange brown, crypto to fine crystalline, fossiliferous, brecciated in part, dense

SULPHUR POINT 1409m (-620.5m TVDSS)

1409-1419 ??Questionable Interpretation - abundant shale cavings
LIMESTONE:buff to medium brown, light grey, cream chalky white, micro to very fine crystalline, in part appears slightly sucrosic/silty, dense, clean to slightly argillaceous
minor interbedded **SHALE:**light to medium grey, medium texture, slightly micro micaceous, blocky

1419.0-1425.6 **CORE #1:** Cut 6.6 metres, Recovered 5.94 metres, 9.75 hours

1425.6-1433.4 **CORE #2:** Cut 7.8 metres, Recovered 7.6 metres, 13.50 hours

1433.4-1439.0 **CORE #3:** Cut 5.6 metres, Recovered 5.0 metres, 7.00 hours

1439-1443 **DOLOMITE:**buff to medium brown, micro to very fine crystalline, sucrosic/silty appearing, **poor intercrystalline porosity, occasional minor black pyrobitumen staining, poor yellow white fluorescence, weak streaming yellow white cut**

IntervalDescriptionMUSKEG 1443m (-654.5m TVDSS)

1443-1465	ANHYDRITE:buff to light brown, occasional orange brown, cream white in part, occasional chalky cream white calcium carbonate precipitate from mud, massive abundant DOLOMITE:buff to medium brown, very fine crystalline, sucrosic/sandy to silty, occasionally anhydritic, predominantly dense appearing with occasional poor intercrystalline porosity, no show
1465-1475	ANHYDRITE:buff tan to light brown, chalky cream white, calcium carbonate in part, massive minor to abundant SHALE:medium to dark grey black, carbonaceous in part, fine to sub waxy texture, brittle to firm, splintery to blocky
1475-1480	DOLOMITE:light to medium brown, very fine crystalline, sucrosic/sandy appearing, occasionally slightly anhydritic, poor to fair intercrystalline porosity, no show interbedded ANHYDRITE:as above
1480-1490	ANHYDRITE:buff tan to light brown, chalky cream white, occasional calcium carbonate, massive minor interbedded DOLOMITE:as above
1490-1495	DOLOMITE:light to medium brown, very fine to fine crystalline, sucrosic/sandy appearing, fair intercrystalline & abundant vuggy porosity, no show interbedded ANHYDRITE:as above
1495-1505	interbedded ANHYDRITE & DOLOMITE:as above, predominantly anhydrite
1505-1510	interbedded ANHYDRITE & DOLOMITE:as above, increase dolomite abundant SHALE:probably cavings, medium to dark grey, light grey green, minor trace black carbonaceous, fine to sub waxy texture, brittle to sub fissile, occasionally slightly micro micaceous, splintery to sub blocky
1510-1530	??Questionable Interpretation predominantly SHALE:medium to dark grey, abundant grey green, occasional black, as above, ??cavings interbedded ANHYDRITE & DOLOMITE:as above

IntervalDescription

1530-1539 interbedded ANHYDRITE & DOLOMITE
ANHYDRITE:buff to light brown, cream white, mottled in part, massive
DOLOMITE:buff tan to medium brown, occasionally mottled, very fine crystalline, sucrosic/silty to sandy appearing, anhydritic, **appears dense with occasional poor to fair intercrystalline porosity, no show**

KEG RIVER 1539m (-750.5m TVDSS)

1539-1545 DOLOMITE:light to medium brown, fine crystalline, sucrosic/sandy appearing, **poor intercrystalline porosity, no show**, slight to moderately argillaceous

1545-1560 DOLOMITE:light to medium brown, becoming (1555-1560m) dark brown with black pyrobitumen association, fine to occasional medium crystalline, sucrosic/sandy to in part silty, **poor to fair intercrystalline with occasional vuggy & remnant vuggy porosity, scattered weak pale yellow fluorescence, weak slow streaming yellow white cut**

1560-1565 DOLOMITE:light to medium brown, occasional dark brown, abundant light grey, as above, **poor intercrystalline porosity, no fluorescence, no show**

1565-1585 DOLOMITE:buff tan to medium brown, abundant light grey, occasional abundant dark brown with black pyrobitumen association, fine crystalline, sucrosic/sandy to occasional silty appearance, slightly fragmental/bioclastic appearing, **poor intercrystalline porosity, no fluorescence, no show**, slight to moderately argillaceous
minor SHALE laminations:light green, grey green to light grey, sub waxy, sub fissile, splintery to sub blocky, slightly micro micaceous

1585-1590 DOLOMITE:buff tan to medium brown, occasional dark brown with occasional pyrobitumen staining, fine crystalline, sucrosic/sandy to occasionally silty, appears fragmental/bioclastic in part, **poor intercrystalline porosity, no fluorescence, no show**, slight to moderately argillaceous
minor SHALE lamination:green grey, sub waxy, sub fissile, sub blocky

4.i)

CORE SUMMARY

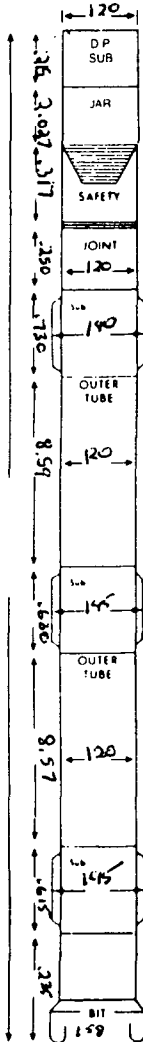
<u>Core No.</u>	<u>Interval</u>	<u>Formation</u>	<u>Recovery</u>	<u>Comments</u>
1	1419.0-1425.6	Sulphur Point	5.9m	-Jammed off, Ls & mnrl Dol
2	1425.6-1433.4	Sulphur Point	7.6m	-Dolomite w/ oil stain
3	1433.4-1439.0	Sulphur Point	5.0m	-Dolomite w/ oil stain

CORE REPORT

WELL NAME: PARAMOUNT et al CAMERON C-75 LOCATION: C-75 60 10'N 117 15'W FIELD/AREA: Cameron
 DATE: 94-03-11 TIME: 2100h EXAMINER: W.M.(Mike)WHITE
 CORE NO.: 1 INTERVAL: 1419.00 m TO 1425.60 m RECOVERY: 5.94 m CORE SIZE: 67 mm FORMATION: Sulphur Pt
 TYPE SDWLL SAMPLER: SDWLL REC. - NO. OF SHOTS: NO. RECDV: NO. OF BOXES: 5

DEPTH	Min/5th m	TOTAL GAS (%)	PORO		GRNSZ		GEOLOGICAL DESCRIPTION
			FLREG	FLITHOLOGY	SUFMC		
1419.00							*1419-1419.35m Ls:bf brn lt gy,sl chky app,occ-abnt dk gy & gn Sh lam & ptg thru,crypto-mi xl,dns
1420.00							*1419.35-1419.95m Ls:aa,bcm m gy (19.44-19.60m) vf xl w crypto xl blebs,Sh lam thru,mod stress frac w occ sl styl grwth
1421.00							*1419.95-1420.75m Ls:bf brn lt gy,crypto xl,sl chky app dns,Sh lam thru,mnr stress frac
1422.00							*1420.75-1421.37m Ls:aa w scat weeping oil stn f/ mi frac gn yel-gld yel flor,gd stmg yel wh cut
1423.00							*1421.37-1422.96m Ls:bf brn lt gy-m gy,pred crypto xl, occ f xl (22.81-22.90m),dns w pos pr intxl por,n flor,n shw,abnt calc assoc; abnt Sh:dk gy,gn,gn gy,sh wxy tex, brit,lam,ptg & assoc,num stress frac thru
1424.00							*1422.96-1423.50m Ls:bf brn lt gy,crypto xl,chky app, dns,mnr Sh assoc,lam & ptg aa
1425.00							*1423.50-1424.04m Ls:aa,incr Sh ptg & lam,brec app ip, mnr,stress frac,occ calc blec w lrg calc grwth @ 23.80m
1426.00							*1424.04-1424.37m Ls:bf brn lt gy aa w dkr brn,occ Sh assoc,pr intxl por,abnt mi frac w/ weeping oil & scat stn thru,brit wh yel & gld yel flor,strong stmg yel wh cut
							*1424.37-1424.94m Dol:bf brn-dk brn,abnt dk gy Sh assoc vf xl,suc/sity-occ sdy app,pr-fr intxl w abnt vug por thru,scat oil stn,wk yel wh flor,slw stmg yel wh cut, shatrd & rubly
							*1424.94-1425.60m Unrecovered Core - jammed off

START (m)	DEPTH (m)	TIME	MIN/METRE		Mud Report & Remarks	WEIGHT daN	r/min	PUMP SIZE	
			Actual	Lost				Pressure kPa	Stroke mm
0.2	0.2	0835	25			3-4	50	8500	65
0.4	0.4	0835	25						
0.75	0.8	0837	13			4-5	90	8500	65
1.00	0.8	0837	20						
1.25	1.0	1420	16						
1.50	1.2	02	22						
1.75	1.4	04	20			4-5	100	8500	65
2.00	1.6	06	20						
2.25	1.8	08	19			4-5	120	8500	65
2.50	2.0	1421	17						
2.75	2.2	02	17						
3.00	2.4	04	17						
3.25	2.6	06	15						
3.50	2.8	08	16						
3.75	3.0	1422	18			4-5	120	8500	65
4.00	3.2	02	17						
4.25	3.4	04	15						
4.50	3.6	06	14						
4.75	3.8	08	14						
5.00	4.0	1423	11						
5.25	4.2	02	23						
5.50	4.4	04	22						
5.75	4.6	06	19						
6.00	4.8	08	17						
6.25	5.0	1424	26						
6.50	5.2	02	19						
6.75	5.4	04	12						
7.00	5.6	06	12						
7.25	5.8	08	8						
7.50	6.0	1425	8						
7.75	6.2	02	8						
8.00	6.4	04	8						
8.25	6.6	06	26	Sample					
8.50	6.8	08							
8.75	7.0	1426			1415				
9.00	7.2								
9.25	7.4								
9.50	7.6								
9.75	7.8								
10.00	8.0								
10.25	8.2								
10.50	8.4								
10.75	8.6								
11.00	8.8								
11.25	9.0								
11.50	9.2								
11.75	9.4								
12.00	9.6								
12.25	9.8								
12.50	10.0								
12.75	10.2								
13.00	10.4								
13.25	10.6								
13.50	10.8								
13.75	11.0								
14.00	11.2								
14.25	11.4								
14.50	11.6								
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15.25	12.2								
15.50	12.4								
15.75	12.6								
16.00	12.8								
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16.50	13.2								
16.75	13.4								
17.00	13.6								
17.25	13.8								
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17.75	14.2								
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18.25	14.6								
18.50	14.8								
18.75	15.0								
19.00	15.2								
19.25	15.4								
19.50	15.6								
19.75	15.8								
20.00	16.0								
20.25	16.2								
20.50	16.4								
20.75	16.6								
21.00	16.8								
21.25	17.0								
21.50	17.2								
21.75	17.4								
22.00	17.6								
22.25	17.8								
22.50	18.0								
22.75	18.2								



CORING LOG FROM

BAKER HUGHES INTEQ
A DIVISION OF BAKER HUGHES CANADA INC.

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Phone: (403) 296-9700 / Fax (403) 296-9785

Date MARCH 11/94 Service Representative M. Dixon
Company PARAMOUNT Contractor Phelaps 4 E
Well Name/No. PARAMOUNT FINAL CAMERON L-75 60° 10' 117° 15'
Field NWT Hole Size (mm) 159
Diamond Bit Size (mm) 159X 67 Bit No. 061617
Diamond Bit Type SC-278 Core Barrel Size (mm) 120X67X189
Length (m) 22.17 No. 39 Jar No. 365
Core No. 1 Depth: From 1419 m To 1415 m
Total Metres Cored 6.6 Recovered 6
Hours 9 Formation Cored Sulphur Point
Description TIGHT SANDSTONE
Time Reaming To Bottom 1/2 hr
Mud Wt. (kg/m³) 1035 r/min.
Mud Flowrate (m³/min.) 0.78
Bit Condition: Before Good % After Good %

CORE REPORT

WELL NAME: PARAMOUNT et al CAMERON C-75

LOCATION: C-75 60 10'N 117 15'W

FIELD/AREA: Cameron

DATE: 94-03-12

TIME: 1700h

EXAMINER: W.M.(Mike)WHITE

CORE NO.: 2 INTERVAL: 1425.60 m TO 1433.40 m

RECOVERY: 7.6 m

CORE SIZE: 67 mm

FORMATION: Sulphur Pt

TYPE SDWLL SAMPLER:

SDWLL REC. - NO. OF SHOTS:

NO. RECOV:

NO. OF BOXES: 6

DEPTH	Min/5th m	TOTAL GAS (%)	PORO		GRMSZ	GEOLOGICAL DESCRIPTION
			FL	REG		
1426.00						*1425.60-1425.78m Dol:lt-m brn,bf brn wet,crypto-mi xl, app sl chky,app dns w pr intxl & vug por,v mnr wh gel flor,wk gel cut
1427.00						*1425.78-1427.00m Dol:brec m-dk brn w bf brn intel,abnt m gy-gn gy Sh lam & ptg,crypto-vf xl,pr-fr intxl & vug por, scat oil stn thru,wk gel flor,sl bl gel cut
1428.00						*1427.00-1428.54m Dol:brec aa w decr Sh lam,incrly brec & Sh lam 28.41-28.54m,incr pr-fr vug por,even oil stn thru,com-scat wk pale gel-occ gld gel flor thru,wk bl gel cut
1429.00						*1428.54-1430.26m Dol:m-dk oil stn brn,occ bf-m brn,mnr Sh lam thru,occ brec,pr-fr intxl & vug por,weeping oil, abnt even bri wh gel-gld gel flor,strong stmg gn gel cut
1430.00						*1430.26-1430.83m Dol:gy brn,occ Sh lam,crypto-mi xl, app pred dns;dk oil stn brn 30.40-30.50m,pr intxl & vug por,weeping oil,brt gel flor,stmg gn gel cut
1431.00						*1430.83-1432.93m Dol:bf brn-gy brn,pred dk brn oil stn thru,mi-vf xl,occ suc/sity app,occ calc xl grwth w lrg calc grwth @ 32.87m,pr-fr intxl & vug por,occ oozing oil scat-com dull wh gel-bri gld gel flor,fr-gd stmg gn gel cut
1432.00						
1433.00						*1432.93-1433.20m Dol:bf brn-gy brn occ m oil stn brn, abnt Sh lam,app sl brec ip,crypto-vf xl,app dns,scat pale gel flor,slw stmg wh gel cut
1434.00						*1433.20-1433.40m Unrecovered Core - jammed off

CORE REPORT

FIELD/AREA: Cameroon

EXAMINER: W.M. (Mike) WHITE

FORMATION: Sulphur Pt

NO. OF BOXES: 4

DEPTH	Min/5th m	TOTAL GAS (%)	PORO		GRNSZ		FLREGFL	LITHOLOGY	SUFMC	GEOLOGICAL DESCRIPTION
1434.00										*1433.40-1434.07 Dol:brn gy,mi-vf xl,abnt Sh lam & ptg thru,dns w occ vug por,weeping oil stn 33.49-33.59m,even bri gel flor,stmg gn gel cut,scat bri gel flor 33.59-.79 bri gid gel flor 33.79-33.96m,stmg gel cut
1435.00										*1434.07-1436.29m Dol:brn-gy brn,pred oil stn,mi-vf xl,suc/slty app - 35.48m,shy & dns app 35.48-35.65m w Sh lam @ 35.65m & 36.09-36.14m,calc grwth thru,app brec 35.65-36.09m,Sh brk @ 36.29m:dk gy,sh wxy,brit;fr vug & intxl por bcm tt 35.48-36.29m,scat-occ even pale-bri gel flor,stmg wh gel-occ gn gel cut
1436.00										
1437.00										*1436.29-1436.88m Dol:lt-m brn,gy brn,sl-mod oil stn thru,mi-vf xl,suc/slty app,occ Sh lam,pr bcm pr-fr vug & intxl por,scat pale lt gel flor,stmg wh gel cut
1438.00										*1436.88-1438.40m Dol:dk brn oil stn thru,gy brn surf,mi xl,suc/slty,occ Sh lam thru,pr intxl w pr-fr vug por,scat-occ even pale-bri gel flor,stmg gel cut,rubbly & highly brkn 37.48-38.40m
1439.00										*1438.40-1439.00m Unrecovered Core - milled, jammed off

5.i)

WIRELINE LOGGING SUMMARY

<u>Run No.</u>	<u>Date</u>	<u>Log Type</u>	<u>Interval</u>	<u>Remarks</u>
	94-02-26	Temperature	1065-402m	-Find lost circulation zone
1A	94-02-28	Phasor-SFL-SP BHCS-GR-Cal	1124-401m 1113-401m	-In combination w/ Sonic
1B	94-02-28	CNL-LDT-Pe-EDAC CVL	1126-401m 1126-401m	-DOL (740-540),SS (575-402) -Calculated from EDAC
2A	94-03-16	Phasor-SFL-SP CNL-LDT-Pe-DAC CVL	1584-1130m 1576-1130m 1576-1130m	-Run in combo w/ CNL-LDT -GR run to 1130m -Calculated for 114mm pipe
2B	94-03-17	BHCS-GR-Cal Microlog	1577-1130m 1584-1130m	-Run in combo w/ Microlog

6.i)

WELLSITE DRILL STEM TEST REPORT

DST #: 1

DATE: 94-03-13

WELLNAME:PARAMOUNT et al CAMERON C-75

LOCATION: I-74 60°10'N 117°15'W INTERVAL: 1423.0 - 1439.0 m KB

FIELD/AREA: Cameron Hills FORMATION: Sulphur Point

TYPE OF TEST: Inflate Bottom Hole COMPANY: Downhole Systems Technology

KB: 788.47m GL: 783.62m TD: 1439 m

HOLE SIZE - DRILLED: 158.8 mm

CASING - SIZE: 177.8 mm WT: 34.2 kg/m SHOE DEPTH: 1130 m

MUD - TYPE: Gel Chem DEN: 1100 kg/m VIS: 43 WL: 8.0

FC: 1.0 mm pH: 10.0

HOLE CONDITION TIME: 0.50 hrs.

TEST TIMES -

STARTED IN HOLE: 11:30 94/03/13 ON BOTTOM: 14:00

PACKER SET: 15:45 PRE-FLOW STARTED: 19:59 (#2)

INIT. SHUT-IN STARTED: 20:18 FINAL FLOW STARTED: :

FIN. SHUT-IN STARTED: : PACKER PULLED LOOSE: 21:30

OUT OF HOLE: 02:30 03/14 TEST POSITIVE: No = plugged tool

BLOW DESCRIPTIONS

TIME	BLOW DESCRIPTION OR FLAIR DESCRIPTIONS (WEAK/FAIR/GOOD/STRONG)	COMMENTS
PRE FLOW	Closed Chamber - see attached report 1 st preflow electronics failed. Bring wireline to surface & repair.	2 nd preflow tool plugging. GTS in 30 sec, 2% H2S
FIRST SHUT IN	After 10 min preflow shut-in for 60 min. H2S gas migrating from fluid was reverse circulated. Pulled tool.	Unable to unplug tool so abort remainder of test

CUSHION USED: - 120 Litres, KONTOL & H₂O
 CHOKE - SURFACE: n/a BOTTOM: 12.2 mm
 MUD LEVEL IN ANNULUS: Full throughout test
 WT. OF D.P. - BEFORE: 34000 dN AFTER: dN
 WT. ON PACKER: N/A dN WT. PACKER PULLED LOOSE: N/A dN

PRESSURE DATA -		RECORDER No: FP1					DEPTH: 1427.00 m		
CHART POINTS	IHP	IPFP	FPFP	ISIP	IFP	FFP	FSIP	FHP	
PRESSURE	15577	9233	9267	9383					15541
TIME (MIN)		18		34					

BHT: 50.0 deg. C. DEPTH: 1439.0 m TIME ON BOTTOM: 487 min

RECOVERY FLUID

60 metres : gasified oil cut drilling fluid

SAMPLES

No Samples were taken.

ELECTRO^{TEST} REPORT

WELL OPERATOR NAME	:	PARAMOUNT RESOURCES LTD.
WELL	:	PARAMOUNT ET AL CAMERON
LOCATION	:	C-75 60 10'N 117 15'W
DST#	:	ONE
INTERVAL TESTED	:	1423.3-1439.0 mKB
FORMATION	:	SULPHUR POINT
DATE	:	03/13/94
Wellsite Rep	:	FRANK PFEFFERLE
Test Engineer	:	ZEIDLER/POWELL
Wireline Operator	:	POWELL
Drilling Contractor	:	PHELPS 4e

WELL DATA

Well Total Depth	:	1439.0 meters
Well Elevations KB	:	788.47 meters
GL	:	783.62 meters
Main Hole Size	:	159.0 mm

WELL PRESSURE SUMMARY

	Pressure	Duration	Graph Ref. #	Time
Initial Hydrostatic:	15577 kPa		1	
Preflow - Start:	7894 kPa		2	20:05
End:	9321 kPa	12 min	3	
Initial Shutin - Start:	9325 kPa		3	20:18
End:	9382 kPa	34 min	4	
Main Flow - Start:	NA kPa		4	
End:	NA kPa	min	5	
Final Shut In - Start:	NA kPa		5	
End:	NA kPa	min	6	
Final Hydrostatic:	15541 kPa		7	
Bottomhole Temperature:	50 deg C			

COMMENTS

This was a partially successful bottom hole test of the Sulphur Point Formation run under closed chamber conditions. When the Flow Valve was first opened after inflating the packers communications with the downhole tools was lost and the Auxiliary Shut In Valve was closed after 6 minutes. During this time the Surface Pressure increased to 1136 kPa. The wireline was retrieved to surface, repaired and run in the well and communications with the electronics re-established. The surface pressure was bled off with gas to surface in 30 seconds. The gas contained 2% H₂S.

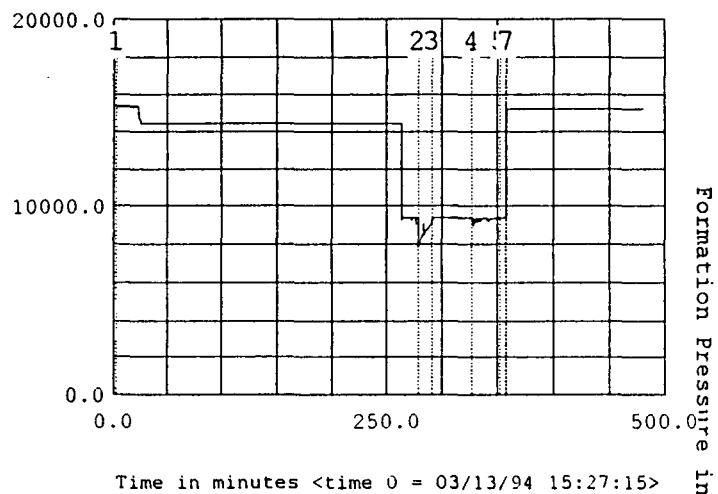
The Main Flow valve was opened for the Preflow. Both the Formation Pressure and Recovery Pressure guages were showing quite high values and there was little response at surface. This is indicative of plugging of the tools inside the string and with some leakage through the plug. During the Initial Shut In the formation pressure did achieve a build up very quickly and was confirmed by the Horner Plot. The Horner Plot data though is too scattered to determine an accurate P*. After the reservoir pressure was determined attempts were made unsuccessfully to unplug the tool by opening and closing the Flow Valve. The remainder of the test was then aborted.

The plugging of the tools above the flow valve with shale was confirmed during servicing.

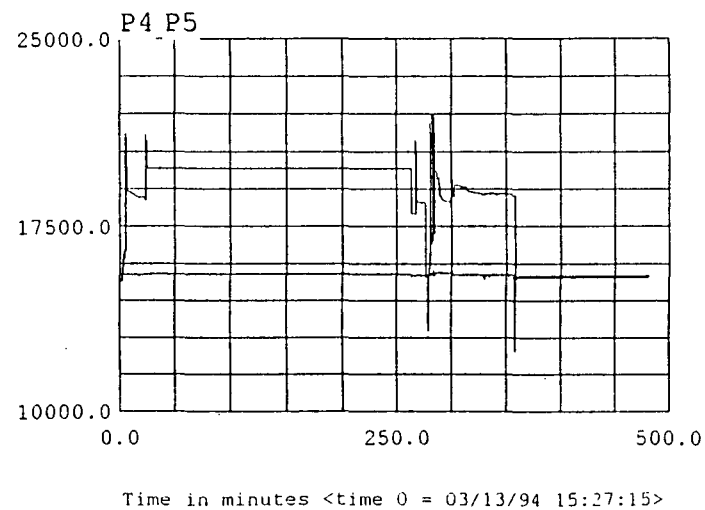
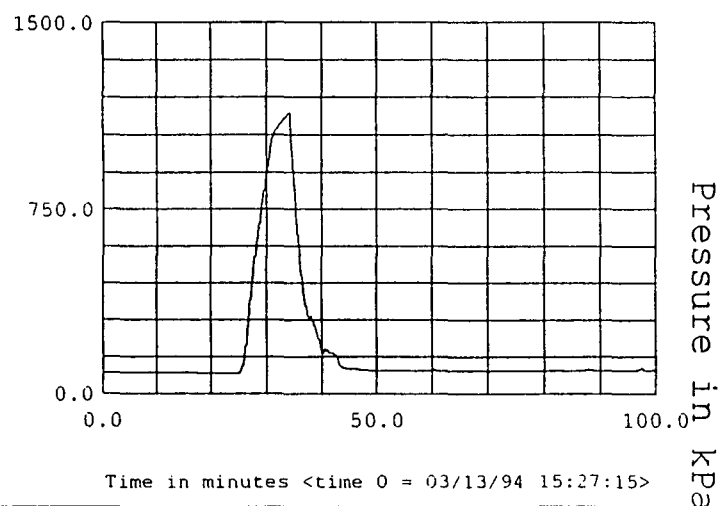
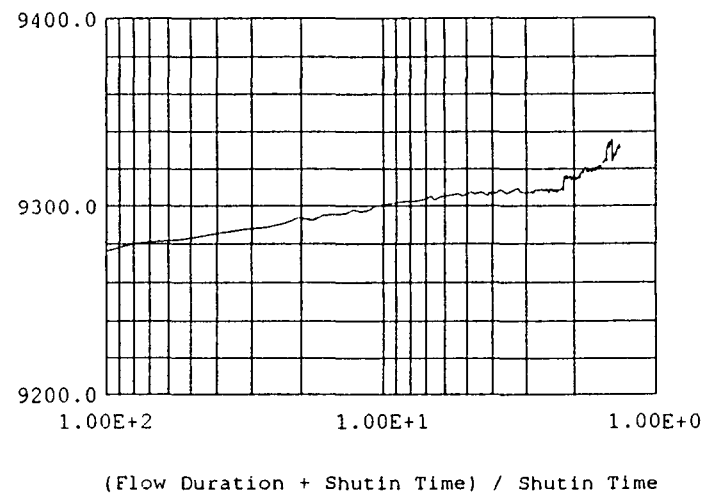
The drill pipe was reverse circulated and because the amount of fluid column could not be calculated due to the plugging fluid volumes were not determined.

Should you have any questions regarding this report please contact Joe Zeidler at 299 1960.

PARAMOUNT ET AL CAMERON C-75 60 10'N 117 15'W
DST #ONE, SULPHUR POINT, 1423.0-1439.0 mKB



Horner Plot - Shutin 1



DST #: 2

DATE: 94-03-14

WELLNAME: PARAMOUNT et al CAMERON C-75

LOCATION: C-75 60°10'N 117°15'W INTERVAL: 1423.3 - 1439.0 m KB

FIELD/AREA: Cameron Hills FORMATION: Sulphur Point

TYPE OF TEST: Inflate Bottom Hole COMPANY: Downhole Systems Technology

KB: 788.47m GL: 783.62m TD: 1439 m

HOLE SIZE - DRILLED: 158.8 mm

CASING - SIZE: 177.8 mm WT: 34.2 kg/m SHOE DEPTH: 1130 m

MUD - TYPE: Gel Chem DEN: 1100 kg/m VIS: 45 WL: 8.0

FC: 1.0 mm pH: 10.0

HOLE CONDITION TIME: 2.00 hrs.

TEST TIMES -

STARTED IN HOLE: 10:15 94/03/14 ON BOTTOM: 12:00

PACKER SET: 12:45 PRE-FLOW STARTED: 14:00

INIT. SHUT-IN STARTED: 14:10 FINAL FLOW STARTED: 14:42

FIN. SHUT-IN STARTED: 15:46 PACKER PULLED LOOSE: 16:47

OUT OF HOLE: 24:00 TEST POSITIVE: - YES

BLOW DESCRIPTIONS

TIME	BLOW DESCRIPTION OR FLAIR DESCRIPTIONS (WEAK/FAIR/GOOD/STRONG)	COMMENTS
PRE FLOW	Monitored under Closed Chamber. Inflow of fluids & surface pressure response was moderate. Took on 220m fluid.	Surface pressure increased-715kPa
FINAL FLOW	Run under Closed Chamber till 6021kPa reached. GTS immediately when open to surface. 2%H ₂ S. Fluid 15min later.	Surface pressure decrease - 187kPa increase w/ fluid
FINAL SHUT IN	Build up of pressure was very fast. Stabilized in 61 min.	

CUSHION USED: - none

CHOKE - SURFACE:

BOTTOM: 12.2 mm

MUD LEVEL IN ANNULUS: Full throughout test

WT. OF D.P. - BEFORE: 34000 dN

AFTER: dN

WT. ON PACKER: N/A dN

WT. PACKER PULLED LOOSE: N/A dN

PRESSURE DATA -		RECORDER No: FP1					DEPTH: 1427.3 m		
CHART POINTS	IHP	IPFP	FPFP	ISIP	IFP	FFP	FSIP	FHP	
PRESSURE	15554	2288	4074	9378	3894	7393	9333	15236	
TIME (MIN)		10		32	63		61		

BHT: 50 deg. C. DEPTH: 1439.0 m TIME ON BOTTOM: 300 min

RECOVERY FLUID

DST was pulled to fluid recovery with test plugs & then reverse circulated.

588 metres (1.88m³) : 60 metres (200 litres) oil
(guage = 570 metres) 528 metres gassified salt water (110K ppm) & mud

SAMPLES

Samples were taken during final flow when fluid came to surface initially and at the end of final flow period. Sample at end of flow showed oil film.

4 Samples were taken on recovery of test fluid. One sample at both top and bottom of recovery, and two samples in the middle of the recovery.

ELECTRO^{TEST} REPORT

WELL OPERATOR NAME	:	PARAMOUNT RESOURCES LTD.
WELL	:	PARAMOUNT ET AL CAMERON
LOCATION	:	C-75 60 10'N 117 15'W
DST#	:	TWO
INTERVAL TESTED	:	1423.3-1439.0 mKB
FORMATION	:	SULPHUR POINT
DATE	:	03/14/94
Wellsite Rep	:	FRANK PFEFFERLE
Test Engineer	:	ZEIDLER/POWELL
Wireline Operator	:	POWELL
Drilling Contractor	:	PHELPS 4e

WELL DATA

Well Total Depth	:	1439.0 meters
Well Elevations KB	:	788.47 meters
GL	:	783.62 meters
Main Hole Size	:	159.0 mm

WELL PRESSURE SUMMARY

	Pressure	Duration	Graph Ref. #	Time
Initial Hydrostatic:	15554 kPa		1	
Preflow - Start:	2012 kPa		2	14:00
End:	4123 kPa	10 min	3	
Initial Shutin - Start:	4521 kPa		3	14:10
End:	9376 kPa	32 min	4	
Main Flow - Start:	3961 kPa		4	14:42
End:	7191 kPa	63 min	5	
Final Shut In - Start:	8321 kPa		5	15:46
End:	9333 kPa	61 min	6	16:47
Final Hydrostatic:	15236 kPa		7	
Bottomhole Temperature:	44.8 deg C			

COMMENTS

This was a successful bottom hole test of the Sulphur Point Formation run under closed chamber conditions for the Preflow during which there was a moderate inflow of fluids and surface pressure response. 220 meters of fluid entered the drill string and the surface pressure increased from atmospheric to 715 kPa. During the Initial Shut In the formation pressure build up was very fast and indicative of formation damage. This allowed the shut in time to be decreased by 30 min. The original formation pressure was reached and confirmed by the Horner Plot.

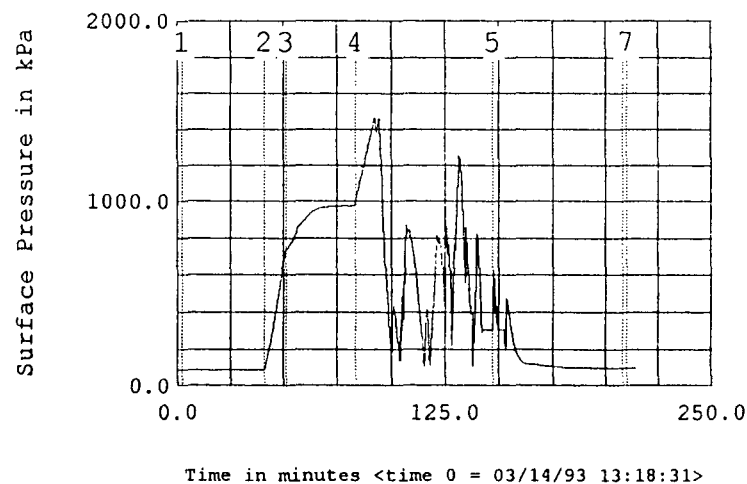
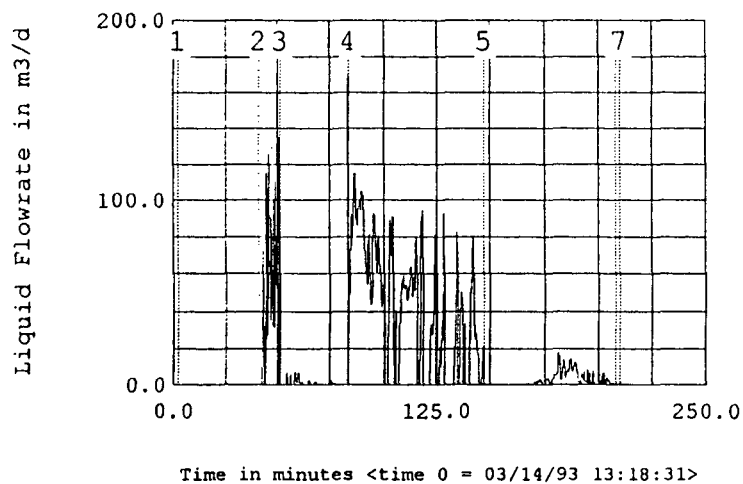
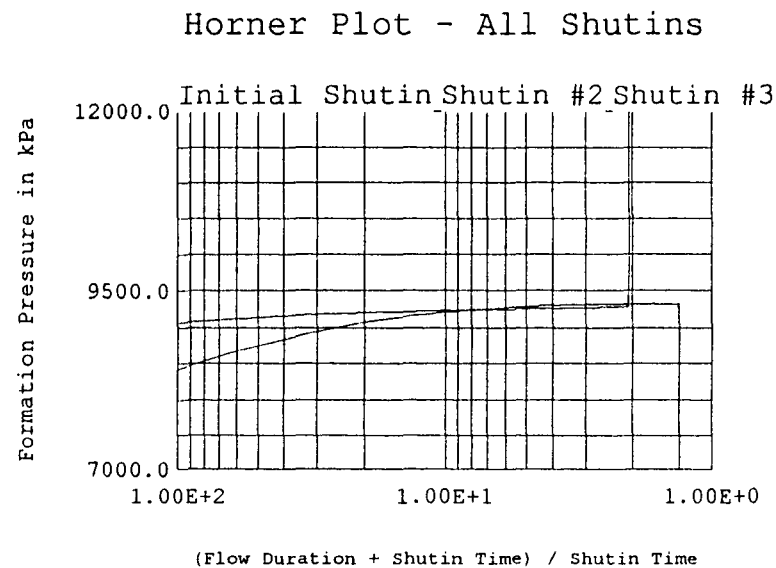
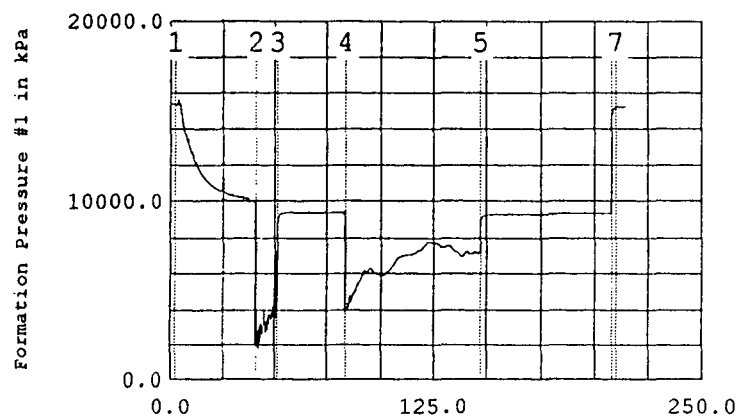
During the Main Flow the fluid inflow and surface pressure response was again moderate. The main flow was run under closed chamber conditions until the formation pressure reached 6021 kPa and then opened to surface. Gas came almost immediately and fluid fifteen minutes later. At the end of the flow period a sample taken at the manifold did show an oil film. The gas produced had an H₂S content of 2%. The surface pressure did decrease to 187 kPa and would increase again as it unloaded fluid. A total of 570m fluid was monitored by the recovery guage. The build up of Final Shut In pressure was again very fast and reached stabilized conditions within the reduced time of 61minutes. This was confirmed by the Horner Plot.

When the drill pipe was pulled the recovery was determined to be 588m(1.88m³) fluid. This was reversed out and from the pump strokes determined to contain about 200 liters of oil, about 1.58 m³ of salt water and the about 100 liters of mud. The mud was probably from the annulus and not from the produced fluid as most of the mud from the interval was flowed to the flare pit during the main flow. The salt water was determined to have a salinity of 11% or 110,000ppm by using a refractometer.

The Fekete analysis indicated that P* = 9419.8 kPa and the extrapolated Final Shut In was 9366.2 kPa. Based upon a Net Pay of 15m and 20% Porosity the Fekete analysis determined a Permeability of K = 15.6 md and a Skin of S = +20.

This report includes the real time data and graphs of all pressures recorded downhole and at surface as well as graphs for flow rates and Horner Plots of the shut ins. A disc containing the ASCII formation pressure file and this report is also included. Should you have any questions regarding this report please contact Joe Zeidler at 299 1960.

PARAMOUNT ET AL CAMERON C-75 60 10'N 117 15'W
DST #TWO, SULPHUR POINT, 1423.2-1439.0 mKB



DST #: 3

DATE: 94-03-17

WELLNAME: PARAMOUNT et al CAMERON C-75

LOCATION: C-75 60°10'N 117°15'W INTERVAL: 1534.0 - 1542.0 m KB

FIELD/AREA: Cameron Hills FORMATION: Keg River

TYPE OF TEST: Inflate Straddle COMPANY: McAllister

KB: 788.47m GL: 783.62m TD: 1590 m

HOLE SIZE - DRILLED: 158.8 mm

CASING - SIZE: 177.8 mm WT: 34.2 kg/m SHOE DEPTH: 1130 m

MUD - TYPE: Gel Chem DEN: 1070 kg/m VIS: 65 WL: 9.0

FC: 1.0 mm pH: 10.5

HOLE CONDITION TIME: 0.00 hrs.

TEST TIMES -

STARTED IN HOLE: 11:00 94/03/17 ON BOTTOM: 14:00
PACKER SET: 14:30 PRE-FLOW STARTED: 14:50
INIT. SHUT-IN STARTED: 14:55 FINAL FLOW STARTED: 15:55
FIN. SHUT-IN STARTED: 16:25 PACKER PULLED LOOSE: 17:25
OUT OF HOLE: 03:00 03/18 TEST POSITIVE: YES

BLOW DESCRIPTIONS

TIME	BLOW DESCRIPTION OR FLAIR DESCRIPTIONS (WEAK/FAIR/GOOD/STRONG)	COMMENTS
PRE FLOW	Very weak air blow, dead in 4 minutes.	
FINAL FLOW	Weak air blow, diminishing throughout. Dead in 25 minutes. No gas to surface.	

CUSHION USED: none

CHOKE - SURFACE: N/A

BOTTOM: 19.05mm

MUD LEVEL IN ANNULUS: Full throughout

WT. OF D.P. - BEFORE: 35000 dN AFTER: 35000 dN

WT. ON PACKER: 8000 dN

WT. PACKER PULLED LOOSE: 5000 dN

PRESSURE DATA -										RECORDER No: 0195 Elec										DEPTH: 1536.0 m									
CHART POINTS										IHP IPFP FPFP										ISIP IFP FFP FSIP FHP									
PRESSURE										16822 264 304										1839 288 299 1114 16800									
TIME (MIN)										5										60 30 60									

BHT: 57 deg. C. DEPTH: 1536.0 m TIME ON BOTTOM: 205 min

RECORDER & MISC. DATA

RECORDER No.	0284	13192	10277	0195	

CAPACITY	Electric	23787	27235	Electric	

CLOCK	1 min	24 hr	24 hr	1 min	

IN/OUT	IN	IN	OUT	OUT	

RECOVERY FLUID

No fluid recovered as indicated by no increase in string weight. Dropped down to run DST #4.

SAMPLES

No Samples - dropped down to 1546m to run DST #4.

McALLISTER PETROLEUM SERVICES LTD.

COMPANY NAME: PARAMOUNT RES
 WELL NAME : PARAMOUNT ET AL CAMERON KB ELV 788.5 m
 LOCATION : C 75 60 10 117 15 GR ELV 783.6 m
 INTERVAL : 1534 TO 1542 TOTAL DEPTH 1590 m
 TIME: PF 5 ; ISI 60; 2FL 30 ; 2SI 30
 DATE: 94/ 03/ 17
 IT# 0084 DST # THREE
 FORM: KEG RIVER
 TEST TYPE: Inf Stdle
 INFLATE (Length)
 P.O. Sub .31
 P.O. Sub .31
 Recorder DATA ALL MEASUREMENTS ARE 'SI'
 REC. # : 0284 : 13192 : 10277 : 0195 :
 RANGE : ELEC : 23787 : 27235 : ELEC :
 CLOCK : 1 Min. : 24 Hr. : 24 Hr. : 1 Min. :
 DEPTH : 1519 : 1524 : 1536 : 1536 :
 O/I : (In) : (In) : (Out) : (Out) :
 Inside Rec. 1.73
 Hyd. Tool & Sampler 2.39
 REC #: 0195 : HOLE and PIPE DESCRIPTION
 IH : 16822 : Hole Size: 200 mm : Hole Cond: Good
 PF : 264 : Btm Choke: 19.05 mm : Packer O.D. 170 mm : Squeeze Valve .36
 PF : 304 : D.Coll ID: 57 mm : B.H. Temp: 57 C : Inside Rec. 1.53
 ISI : 1839 : D.Pipe ID: 70 mm : Mud Drop : Nil m
 IF : 288 : D.C. Leng: 194.72 m : Amt.Fill : N/A m : Jars 1.53
 PF : 299 : D.P. Leng: 1334.76 m : Tool Wt. : 5000 daN : Safety Jt. .69
 FSI : 1114 : Wt. Sec : 8000 daN : Wt Pulled: 5000 daN : Pump 2.64
 FH : 16800 : Init. Wt.: 35000 daN : Final Wt : 35000 daN : Screen 1.07
 Packer 1.90
 TIMES and MUD DESCRIPTION
 T.Started: 11:00 Hr : T Opened : 14:50 Hr : T Out: 3:00 Hr
 T.On Btm.: 13:45 Hr : T Pulled : 17:25 Hr
 MUD type : Gel chemical Weight: 1065
 Viscosity: 79 Water loss: 10.5
 TOTAL TOOL ABOVE INTV. 14.46m
 DEPTH: 1534 m
 RECOVERY FLUID: Cusion: None
 Total m of m in D.C. & m in D.P.
 Stub .50
 Prod.Sub .31
 Out.Rec. 1.95
 Spacing 4.50
 API Gravity: Salinity: ppm
 GAS RATES Measured with:
 TIME (Min) ORFICE (cm) PRESSURE (kPa) RATE (Cu m/day)
 1. - - - -
 2. - - - -
 3. - - - -
 4. - - - -
 5. N G T S
 6. - - - -
 7. - - - -
 8. - - - -
 9. - - - -
 Rec. Sub .20
 Stub .60
 TOT. INTERVAL: 8.06m
 DEPTH: 1542 m
 Packer 1.80
 Comp. Blank .32
 Dragspring 1.96
 TOTAL TOOL: 26.60m
 Cust R: F PFEFFERLE
 Tester: R Cassidy
 (551-1870)
 Successful: Yes
 REMARKS: Samples to: Samplers #
 Gas samples # # Fluid samples #
 PREFLOW: VERY WAB, DEAD IN 4 MIN. NGTS.
 SECOND FLOW: WAB, DEAD IN 25 MIN. NGTS.

DST #: 4

DATE: 94-03-17

WELLNAME: PARAMOUNT et al CAMERON C-75
LOCATION: C-75 60°10'N 117°15'W INTERVAL: 1546.0 - 1554.0 m KB
FIELD/AREA: Cameron Hills FORMATION: Keg River

TYPE OF TEST: Inflate Straddle COMPANY: McAllister

KB: 788.47m GL: 783.62m TD: 1590 m
HOLE SIZE - DRILLED: 158.8 mm

CASING - SIZE: 177.8 mm WT: 34.2 kg/m SHOE DEPTH: 1130 m

MUD - TYPE: Gel Chem DEN: 1070 kg/m VIS: 65 WL: 9.0
FC: 1.0 mm pH: 10.5

HOLE CONDITION TIME: 0.00 hrs.

TEST TIMES -

STARTED IN HOLE: 17:25 94/03/17 ON BOTTOM: 18:00
PACKER SET: 18:10 PRE-FLOW STARTED: 18:22
INIT. SHUT-IN STARTED: 18:32 FINAL FLOW STARTED: 19:32
FIN. SHUT-IN STARTED: 20:32 PACKER PULLED LOOSE: 22:32
OUT OF HOLE: 03:00 03/18 TEST POSITIVE: YES

BLOW DESCRIPTIONS

TIME	BLOW DESCRIPTION OR FLAIR DESCRIPTIONS (WEAK/FAIR/GOOD/STRONG)	COMMENTS
PRE FLOW	Strong air blow immediately, remaining strong throughout. No gas to surface.	
FINAL FLOW	Strong air blow immediately. Gas to surface in 4 minutes. Too small to measure. 1 metre lazy flame.	

CUSHION USED: none
CHOKE - SURFACE: N/A BOTTOM: 19.05mm
MUD LEVEL IN ANNULUS: Full throughout
WT. OF D.P. - BEFORE: 35000 dN AFTER: 40000 dN
WT. ON PACKER: 8000 dN WT. PACKER PULLED LOOSE: 5000 dN

PRESSURE DATA - RECORDER No: 0195 Elec DEPTH: 1548.0 m								
CHART POINTS	IHP	IPFP	FPPF	ISIP	IFP	FFP	FSIP	FHP
PRESSURE	16659	1672	4367	10462	5371	10437	10465	16583
TIME (MIN)		10		60		60		120

BHT: 57 deg. C. DEPTH: 1548.0 m TIME ON BOTTOM: 272 min

RECORDER & MISC. DATA

RECORDER No.	0284	13192	10277	0195	
CAPACITY	Electric	23787	27235	Electric	
CLOCK	1 min.	24 hr	24 hr	1 min.	
IN/OUT	IN	IN	OUT	OUT	

RECOVERY FLUID

1000 metres : 100 metres of oil cut mud
900 metres of water

SAMPLES

1 Sample chamber #104 - 1.0 litres
1 Gas Sampler #6427 - taken during valve opening
8 Fluid Samples : 5 oil samples - top, middle & bottom of oil recovery
3 water samples - top, middle & bottom of recovery
- salinity 100,000 PPM (refractometer)

COMPANY NAME: PARAMOUNT RES		DATE: 94/ 03/ 17	
WELL NAME : PARAMOUNT ET AL CAMERON	KB ELV 788.5	m IT# 0085 DST # FOUR	
LOCATION : C 75 60 10 117 15	GR ELV 783.6	m FORM: KEG RIVER	
INTERVAL : 1546 TO 1554	TOTAL DEPTH 1590	m	
TIME: PF 10; ISI 60; 2FL 60 ; 2SI 120		TEST TYPE: Inf Stdle	
RECORDER DATA ALL MEASUREMENTS ARE 'SI'		INFLATE (Length)	
		P.O. Sub .31	
		P.O. Sub .31	
REC. # : 0284 : 13192 : 10277 : 0195 :		Inside Rec. 1.73	
RANGE : ELEC : 23787 : 27235 : ELEC :			
CLOCK : 1 Min. : 24 Hr. : 24 Hr. : 1 Min. :		Hyd. Tool &	
DEPTH : 1531 : 1536 : 1548 : 1548 :		Sampler 2.39	
OVI : (In) : (In) : (Out) : (Out) :			
REC #: 0195 : HOLE and PIPE DESCRIPTION			
IH : 16657 : Hole Size: 200 mmHole Cond: Good			
PF : 1672 : Btm Choke: 19.05 mmPacker O.D. 170 mm			
PF : 4367 : D.Coll ID: 57 mmB.H. Temp: 57 C			
ISI : 10462 : D.Pipe ID: 70 mmMud Drop : Nil m			
IF : 5371 : D.C. Leng: 194.72 mAmt.Fill : N/A m			
FF : 10437 : D.P. Leng: 1343.67 mTool Wt. : 5000 daN			
FSI : 10465 : Wt. Set : 8000 daNWt Pulled: 5000 daN			
FH : 16503 : Init. Wt.: 35000 daNFinal Wt : 40000 daN			
TIMES and MUD DESCRIPTION			
T.Started: 11:00 HrT Opened : 18:22 HrT Out: 3:00 Hr			
T.En Btm.: 18:00 HrT Pulled : 22:32 Hr			
Mud type : Gel chemical Weight: 1065			
Viscosity: 79 Water loss: 10.5			
RECOVERY FLUID: Cusion: None			
Total 1000 m of 194.72 m in D.C. & 805.28 m in D.P.			
100 m of OIL CUT MUD			
900 m of WATER			
m of			
m of			
API Gravity: Salinity: 100K ppm			
GAS RATES Measured with:			
TIME (Min)	ORFICE (mm)	PRESSURE (kPa)	RATE (Cu m/day)
1. -	-	-	-
2. -	-	-	-
3. -	-	-	-
4. -	-	-	-
5. -	T	S	T M
6. -	-	-	-
7. -	-	-	-
8. -	-	-	-
9. -	-	-	-
REMARKS: Samples to: AGAT Samplers # 104			
Gas samples # 6427 # Fluid samples # 8			
PREFLOW: SAB IMMEDIATELY SAME THROUGHOUT, NGTS.			
SECOND FLOW: SAB IMMEDIATELY, GTS IN 4 MIN. LAZY ONE			
METER FLAME, TSTM.			

00/01/01
00:15:30

Company PARAMOUNT RES

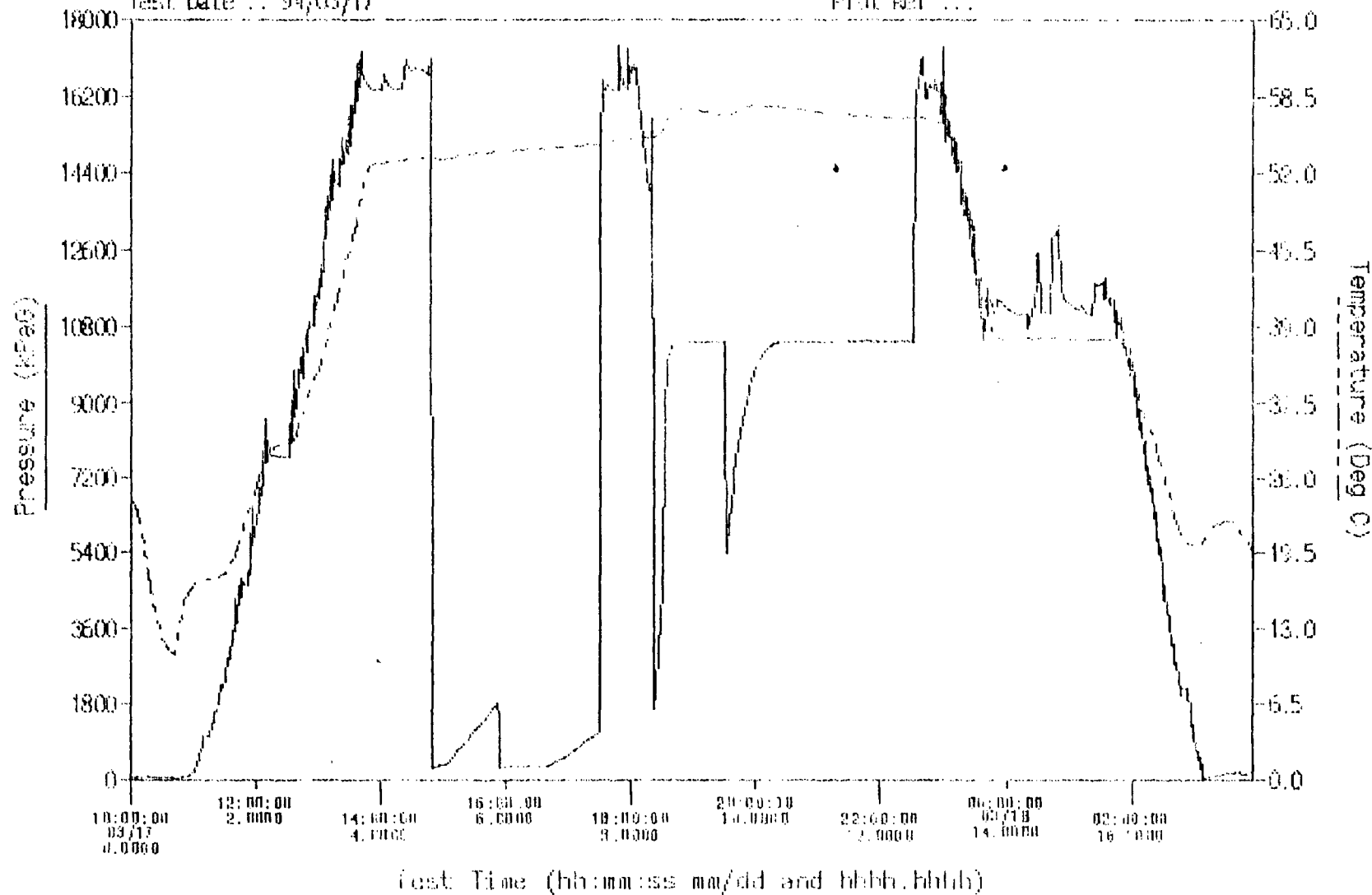
Well PARAMOUNT ET AL CANTON C 75 60 10 117 15

Test Date .. 94/03/17

File S/N 030-195

File Ref ... 00850

Plot Ref ...

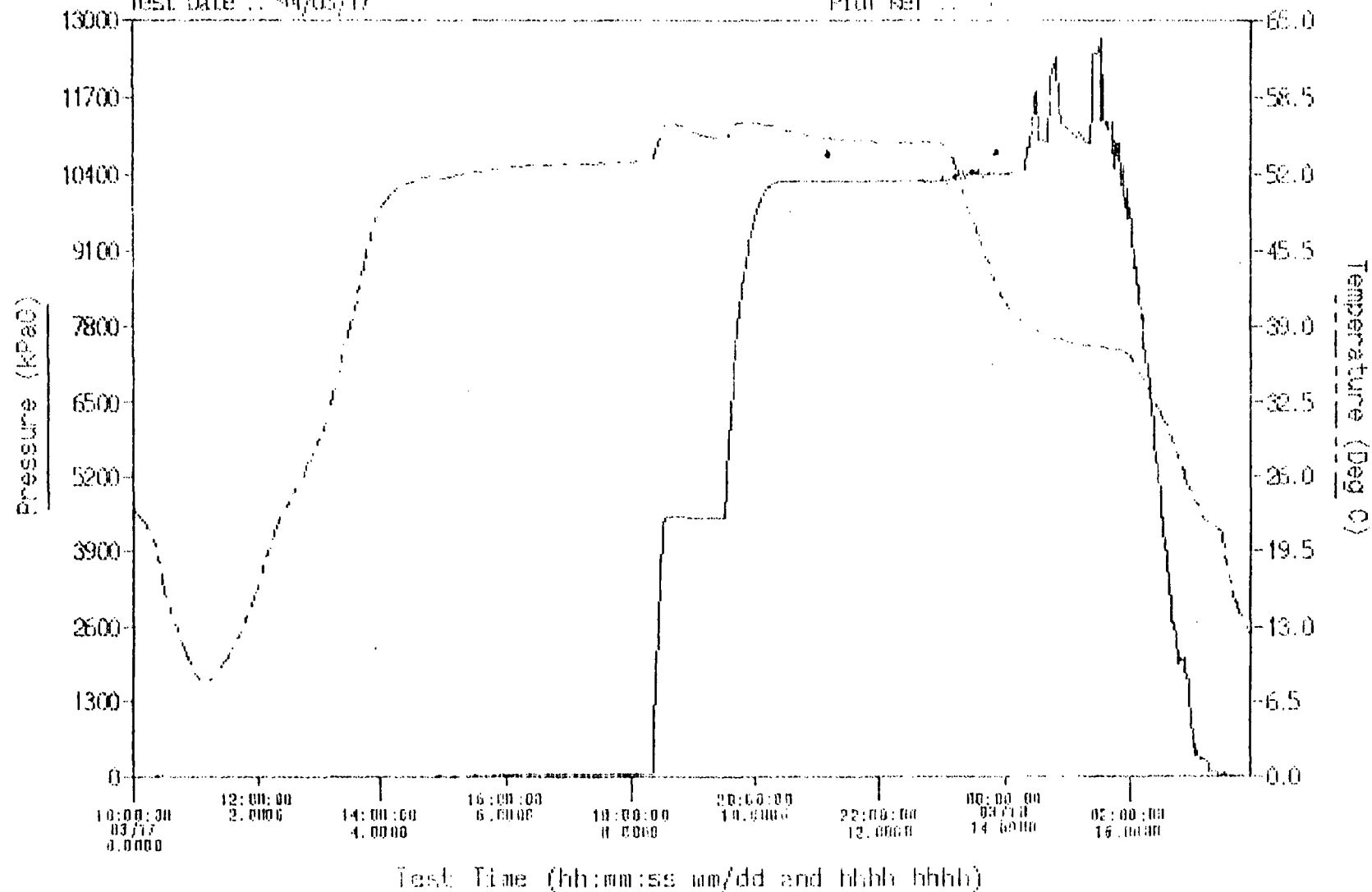


00/01/01
00:00:00

Company PARAMOUNT RES
Well PARAMOUNT ET AL CAMERON C 75 60 10 117 15
Test Date .. 94/03/17

EMP S/N 030124
File Ref ... 0033A
Plot Ref ...

60



DST #: 5

DATE: 94-03-18

WELLNAME: PARAMOUNT et al CAMERON C-75

LOCATION: C-75 60°10'N 117°15'W INTERVAL: 1423.5 - 1431.5 m KB

FIELD/AREA: Cameron Hills FORMATION: Sulphur Point

TYPE OF TEST: Inflate Straddle

COMPANY: McAllister

KB: 788.47m GL: 783.62m TD: 1590 m

HOLE SIZE - DRILLED: 158.8 mm

CASING - SIZE: 177.8 mm WT: 34.2 kg/m SHOE DEPTH: 1130 m

MUD - TYPE: Gel Chem DEN: 1080 kg/m VIS: 60 WL: 8.0

FC: 1.0 mm pH: 10.0

HOLE CONDITION TIME: 0.00 hrs.

TEST TIMES -

STARTED IN HOLE: 06:45	94/03/18	ON BOTTOM: 09:00
PACKER SET: 10:10		PRE-FLOW STARTED: 10:21
INIT. SHUT-IN STARTED: 10:31		FINAL FLOW STARTED: 11:31
FIN. SHUT-IN STARTED: 13:01		PACKER PULLED LOOSE: 16:01
OUT OF HOLE: 20:00		TEST POSITIVE: YES

BLOW DESCRIPTIONS

TIME	BLOW DESCRIPTION OR FLAIR DESCRIPTIONS (WEAK/FAIR/GOOD/STRONG)	COMMENTS
PRE FLOW	Fair air blow to Strong air blow in 1 minute. Gas to surface in 7 minutes. 3 metre lazy flame.	Gas migration w/ flame dying out 20min into shutin
FINAL FLOW	Gas to surface immediately. 3 metre lazy flame throughout.	Flame died out 8 min after shut-in

CUSHION USED: 100 Litres KONTOL inhibitor & water

CHOKE - SURFACE: N/A BOTTOM: 19.05mm

MUD LEVEL IN ANNULUS: Full throughout

WT. OF D.P. - BEFORE: 35000 dN AFTER: 36000 dN

WT. ON PACKER: 8000 dN WT. PACKER PULLED LOOSE: 5000 dN

PRESSURE DATA -									RECORDER No: 0195 Elec		DEPTH: 1425.5 m					
CHART POINTS									IHP	IPFP	FPFP	ISIP	IFP	FFP	FSIP	FHP
PRESSURE									15091	1012	902	9546	725	1046	9410	15000
TIME (MIN)										10		60		90		180

BHT: 57 deg. C. DEPTH: 1425.5 m TIME ON BOTTOM: 421 min

RECORDER & MISC. DATA

RECORDER No.	0284	13192	10277	0195	

CAPACITY	Electric	23787	27235	Electric	

CLOCK	1 min	24 hr	24 hr	1 min	

IN/OUT	IN	IN	OUT	OUT	

RECOVERY FLUID

180 metres of KONTOL inhibitor & water & ammonia

SAMPLES

- 1 Sample Chamber #110 - 1.0 litres
- 1 Gas Sampler #6711 - taken during valve opening
- 3 Samples of recovery fluid - top, middle & bottom (salinity 19,300 PPM)

COMPANY NAME: PARAMOUNT RES				DATE: 94/ 03/ 18
WELL NAME	: PARAMOUNT ET AL CAMERON	KB ELV 788.5	m	IT# 0086 DST # FIVE
LOCATION	: C 75 50 10 117 15	GR ELV 783.6	m	FORM: SUIPHUR POINT
INTERVAL	: 1423.5 TO 1431.5	TOTAL DEPTH 1590	m	
TIME: PF 10; ISI 60; 2FL 90 ; 2SI 180				TEST TYPE: Inf Std1-
RECORDED DATA ALL MEASUREMENTS ARE 'SI'				INFLATE (Length)
				P.O. Sub .31
				P.O. Sub .31
REC. # : 0284 : 13172 : 10277 : 0195 :				
RANGE : ELEC : 23787 : 27235 : ELEC :				Inside Rec. 1.73
CLOCK : 1 Min. : 24 Hr. : 24 Hr. : 11 Min. :				
DEPTH : 1408.5 : 1413.5 : 1425.5 : 1425.5 :				Hyd. Tool &
O/I : (In) : (In) : (Out) : (Out) :				Sampler 2.39

REC #: 0195 : HOLE and PIPE DESCRIPTION				
IH	: 150911	Hole Size: 159 mm	Hole Cond: Good	
PF	: 10121	Btm Choke: 19.05 mm	Packer O.D. 140 mm	Squeeze Valve .34
RF	: 9021	D.Coll ID: 57 mm	B.H. Temp: 57 C	Inside Rec. 1.53
ISI	: 95461	D.Pipe ID: 70 mm	Mud Drop : Nil m	
IF	: 7251	D.C. Leng: 194.72 m	Amt.Fill : N/A m	Jars 1.53
FF	: 10461	D.P. Leng: 1219.14 m	Tool Wt. : 5000 daN	Safety St. .69
FSI	: 94101	Wt. Set : 8000 daN	Wt Pulled: 5000 daN	Pump 2.64
FH	: 150001	Init. Wt.: 35000 daN	Final Wt : 36000 daN	Screen 1.07

TIMES and MUD DESCRIPTION				
T.Started: 7:50 Hr				Opened : 10:21 Hr
T.On Btm: 9:00 Hr				T Out: 20:00 Hr
T.On Btm: 9:00 Hr				T Pulled : 16:01 Hr
Mud type : Gel chemical				Weight: 1065
Viscosity: 79				Water loss: 10.5

RECOVERY FLUID: Cusion: 50 LITRES INHIBITOR				
Total 180 m of 180 m in D.C. & _ m in D.P.				Stub .50
180 m of CORBAN AMMONIA				Prod.Sub .31
_ m of _				Out.Rec. 1.95
_ m of _				Spacing 4.50
_ m of _				
API Gravity: _				Salinity: 17,300 PPM

GAS RATES Measured with:				
TIME (Min)	ORFICE (mm)	PRESSURE (kPa)	RATE (Cu m/day)	
1. -	-	-	-	Rec. Sub .20
2. -	-	-	-	Stub .50
3. -	-	-	-	
4. -	-	-	-	TOT. INTERVAL: 8.06m
5. - T	- S	- T	- M	DEPTH: 1431.5m
6. -	-	-	-	
7. -	-	-	-	Packer 1.80
8. -	-	-	-	
9. -	-	-	-	Comp. Blank .32

REMARKS: Samples to: AGAT Samplers # 110				
Gas samples # 6711 # Fluid samples # 3				
PREFLOW: FAB TO SAB IN 1 MIN. GTS IN 7 MIN, 3 METER LAZY FLAME.				
SECOND FLOW: GTS IMMEDIATELY ,TSTM. LAZY 3 METER FLAME.				
Cust R: F PFEFFERLE				
Tester: R Cassidy				
(551-1870)				
Successful: Yes				

01/01/01
04:57:40

Company: ... PARMAINT RES

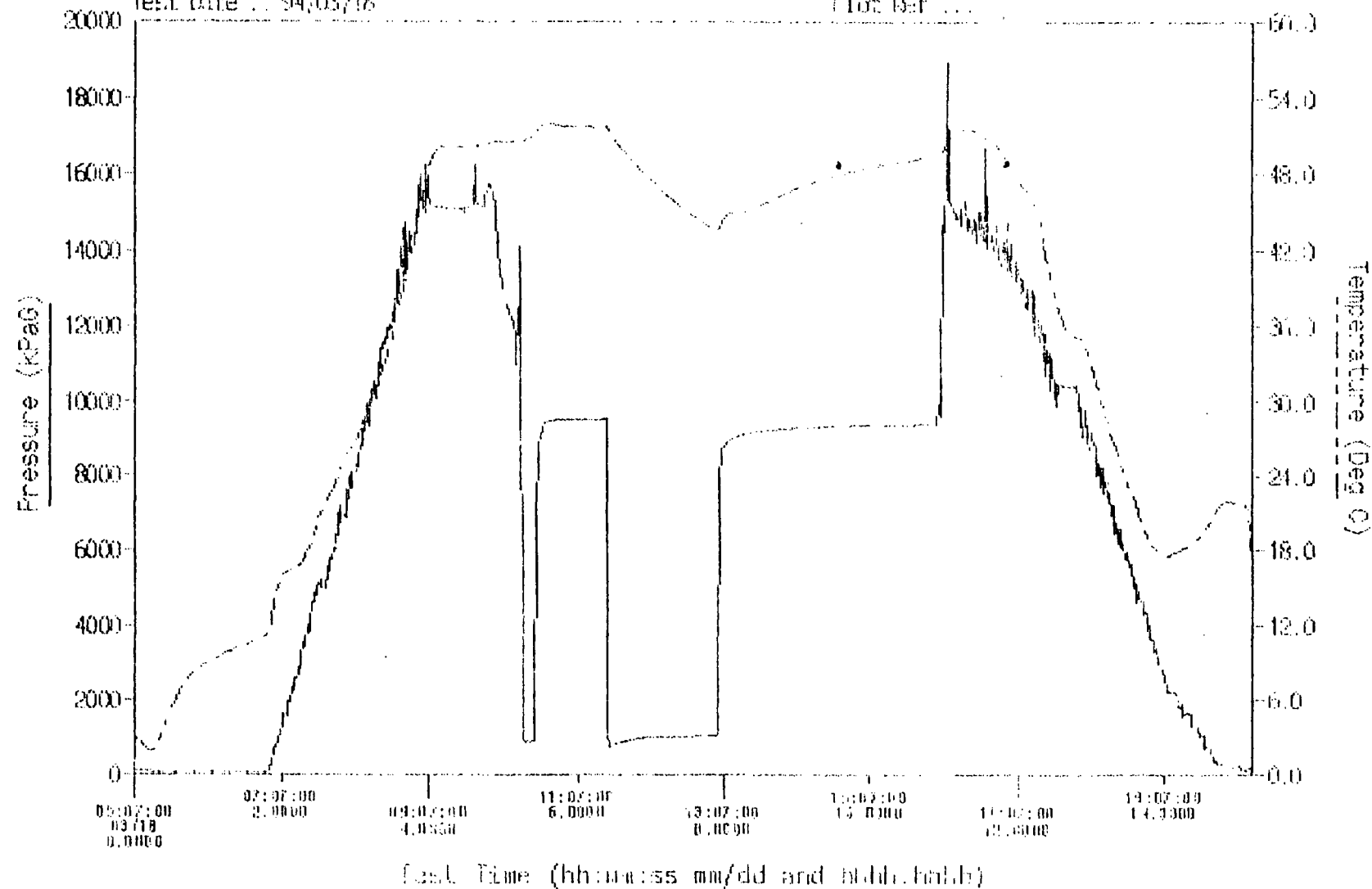
Well: ... PARMAINT ET AL GARDEN C 75 60 10 117 15

Test Date: ... 94/03/18

UMP S/N: ... 000135

File Ref: ... 00017

Plot Ref: ...



01/01/01
05.05:16

Company : PAYMOUNT RES

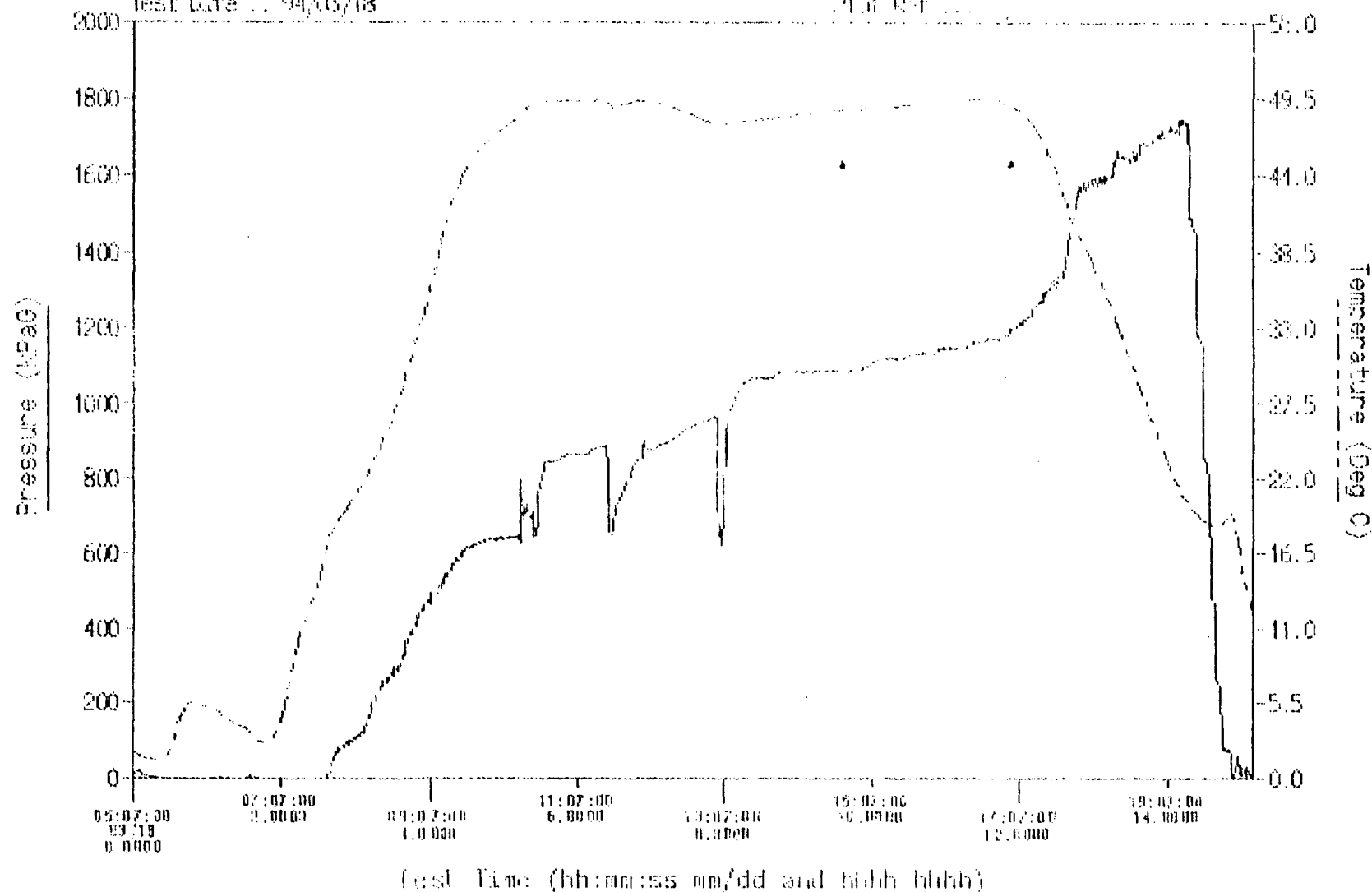
Well : PAYMOUNT E FAL CONFINED 75 EG TO 117.15

Test Date : 94/03/18

EMP S/N : 030-284

File Name : 0395

PLG R-F :



CHRONOLOGICAL DAILY DRILLING SUMMARY

DATE	DAY FROM SPUD	DEPTH @ 0001h	PROG	STATUS @ 0001h
94-02-17	0	0m	Om	Spud 311.2mm surface hole @ 0900hrs.
94-02-18	1	163	163	Drilling surface hole w/ Bit #1A
94-02-19	2	387	224	Wiper tripping prior to casing depth
94-01-20	3	402	15	Waiting on cement, Nippling up BOP's
94-01-21	4	402	0	Pressure testing
94-02-22	5	639	237	Attempting to regain lost circulation
94-02-23	6	639	0	WOC, plug #1 to heal lost circulation
94-02-24	7	710	71	Circulating to condition contaminated mud
94-02-25	8	942	232	Rebuilding volume after lost circulation
94-02-26	9	1067	125	Build volume prior to POOH to Temperature Log
94-02-27	10	1067	0	Mixing LCM pill prior to cement plug #2
94-02-28	11	1099	32	Drilling 222.2mm main hole w/ NB #7 (EHP43A)
94-03-01	12	1128	29	RIH to clean out to run 177.8mm casing
94-03-02	13	1130	2	Running 177.8mm casing
94-03-03	14	1130	0	Waiting on 3.5" drilling equipment & DP
94-03-04	15	1130	0	POOH w/ NB #9 (158.8mm) to unplug jets
94-03-05	16	1222	92	Surveying to find extent of dogleg
94-03-06	17	1222	0	Waiting on open hole cement plug #3 to harden
*** Plugback to 1169m, with PLUG #3 to correct deviation ***				
94-03-07	18	1170	-52	Motor drilling to correct deviation, NB #11
94-03-08	19	1187	17	Motor drilling w/ NB #12
94-03-09	20	1261	74	RIH w/ rotary assembly & Bit #13RR
94-03-10	21	1350	89	Rotary drilling 158.8mm hole
94-03-11	22	1417	67	Drilling w/ NB #14
94-03-12	23	1426	9	Cutting Sulphur Point Core #2
94-03-13	24	1437	11	Cutting Sulphur Point Core #3
94-03-14	25	1439	2	Reverse circulate DST #1 (misrun) fluid
94-03-15	26	1439	0	POOH & recover DST tool #2 (1423.3-1439.0)
94-03-16	27	1512	73	Drilling 158.8mm hole w/ Bit #19RR
94-03-17	28	1590	78	TD @ 1615 hrs, 03/16. Log w/ Schlumberger
94-03-18	29	1590	0	Reverse circulate DST #4 (1546-1554m)
94-03-19	30	1590	0	RIH to condition hole for 114.4mm liner
94-03-20	31	1590	0	RIH w/ drill string to POOH sideways
Rig Release 94-03-20 @ 1600 hrs.				