PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-29-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-02

Day 22 Depth 694 m Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Tear out Rig to Move to Rock site

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt ____ Vis ____ WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips		
3. Rig Service		
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing Pull Csg w/ Spear	3	
11. Logging		
12. Cut + Dress Casing	1½	
13. Formation Testing		
14. Waiting on: Daylight	2	
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Install Wellhead	2	
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out	15½	
21.		
TOTAL	24	

COSTS

DAILY 21500

CUMMULATIVE 1,051,000

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-29-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-09-60-20-123-00

OPERATIONS DETAIL:

Rig out Floor - Pick up and Make up Weather Ford Internal Casing Spear - Run in and Latch into Casing - Pull up and Work Casing - Pull on Slips and Work Casing Slips out of Casing Bowl - Clean out Casing Bowl - Install New Set of Casing Slips - Slips went down into Casing Bowl to Proper Depth - Land Casing with 30 000 daN Tension on Casing String - Release - Pull out - Break Down Load out and Return Weather Ford Internal Casing Spear - Also Return Original Casing Slips to ABB Vetco Gray to Ft St. John Cut off and Dress Casing - Install Well head Spool with 244.5mm Casing Seal - Install Tubing Hanger Spool and Well head

Rig out Rig - Inspect and Lower Derrick - Unstring Drilling Line thru Blocks and Crown - Shut Down - Drain and Wash Boiler - Clean up Lease - Burn all Broken Pallets & Wood Pieces Rig out Ready to Move

Talked to Les Shaw - Transportation Superintendent For NWT Highways in Fort Simpson and he agreed to let Rig Move go ahead providing Legal Loads would be Hauled - Also Wanted a Fax From Paramount agreeing to Cover Road Repairs needed if Hiway #7 was damaged by Rig Move - Passed this on to Phil Christie

Rig Released @ 1999-03-29-12:00 Hrs

WANT LIST:

WEATHER: Cloudy - Cool - Wind - N 20 Knots - 12°C ROAD: Good on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-28-24:00 (Yr - Mon - Day - Time)

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-20

Day 26 Depth 694 Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Install Wellhead

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1000 Vis 62 WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m

____ ° at ____ m ____ ° at ____ m

____ ° at ____ m ____ ° at ____ m

____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

47m³ Invert Mud

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips		
3. Rig Service		
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement	2	
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on: Nowsco Cementer	6 1/4	
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Attempt to Set Slips & Cut Csg	4 1/4	
18. Laying Down DP & BOP's	9 1/4	
19. Plug & Abandon		
20. Rig up - Tear out Rig out	2	
21. Safety Meeting	1/4	
TOTAL	24	

COSTS

DAILY	68000
CUMMULATIVE	1028500

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-28-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-10-40-123-00

OPERATIONS DETAIL:

Circ & Work Casing - Waiting Replacement Nowsco Cement Pump Truck - Truck Arrived and Hooked up @ 06:15 Hrs. - Cement Casing - Bump Plug - Rig out Nowsco - Tear out BOPs - Side Valves & Lines - Lift BOP Stack - Install Slips Not able to get Slips to go down into Casing Bowl to Proper Depth - Set Csg in Slips - Tear out BOPs & Lay Down - Cut off Casing - Rig out Rig - Ordered out Internal Casing Spear and Replacement Slips - Tear out Rig - Laying Down Kelly @ Midnite

Casing Cemented by Nowsco Services - Pump 8.8m³ Diesel From Mud Makeup Tank plus 3m³ Nowflush Inhibited Water Followed with 15 Tonnes Oil G Cement + .8% NFL2 - Slurry Weight 1900 Kg/m³ - Slurry Yield 11.35m³ - Dropped Rubber Plug - Displaced with 16.4m³ Invert - Bump plug w/ 7000 Kpa - 3500 Kpa over Circ Press - Wait 2 mins - Bled Back - Floats Held Ok Plug Down @ 99-03-28-08:10 Hrs.

Calculated Capacity of Annulus between Casing & Hole was 22.5m³ / Pumped 11.8m³ PreFlush plus 11.35m³ Cement Slurry - Recovered all Invert Mud out of Hole plus .5m³ Diesel PreFlush

Will be Leaving 3000 Gal Skidded Fuel Storage Tank on location For the Summer as per Agreement w/ Nisku Bulk - Husky Bulk Station Fort Nelson

WANT LIST: Returned Submersible Pump + 1" Hose to Ketek - Ft St John
Returned 2 Gen Sets w/ Yard Lights to The Rental Shop - Fort Nelson
Returned 20" Diverter Skid to Weather Ford Rentals - Nisku

WEATHER: Clear - Calm - Cold - 10°C ROAD: Good on Hiway - Rough to location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Returned Geologist Wellsite Unit to Lykal Rentals - Grande Prairie
Returned Gen Set - Matting - Washpan - Light Stand - Coyote Rentals - Nisku
Returned Shale Shaker - Invert Pump and Hoses - Lights & Stand - DC Energy - Grande Prairie
Returned Cougar Drilling Jars - Hess Oil Field Services - Ft St John

PARAMOUNT RESOURCES LTD.

CASING SUMMARY

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00 DATE Mar-27-1999
SURFACE ( ) INTERMEDIATE ( ) PRODUCTION ( ) LINER ( )

Size: 244.5 mm

KB: 454.10 m

KB - CF: 7.20 m

NO.	DESCRIPTION	MEASURED LENGTH	KB Depth
1	Weather Ford Float Shoe	.46	693.20
1	Joint 244.5mm Casing	13.28	680.02
1	Weather Ford Float Collar	.40	679.62
49	Joints 244.5mm Casing	679.62	Surface
	Scratchers		
8	Centralizers Weather Ford middle joint Top 2-3-10-18-30-40-49		

	Total String	693.76	
minus	KB to Csg Top (STICK UP)		Cut-off
	Landed Depth KB	693.70	Jt. Length
	Hole Depth KB	694.00	
	Distance Csg Landed Off Bottom	.40	

Cementing Company: Nowsco Cementers Ltd.
Wash-Type: Diesel + Now Flush — Volume: 11.8 m³
Cement Type Lead Slurry: — Volume:
Additives:
Cement Type Tail Slurry: 15 Tonnes - 0:1:0 G + .8% NFL + .1% R-6 — Volume: 11.35 m³
Additives: .8% NFL - .1% R6
Cement Type Above Stage Collar: — Volume:
Additives:
Displacement Rate: Max 1.2 m3/min Average .84 m3/min
Calculated Cement Top(s): (fill) mKB (tail) 420 mKB
Returns: Mud Cement Diesel Pre Flush .5 m3
String Wt. in Mud Wt of: Invert 980 kg/m3 = 38000 daN
Wt. set on slips: 30000 daN
Remarks: Could not get Original Slips to set down to Proper Height in Bowl - Used Internal Casing Spear - Pull up on Casing Retrieve Slips - Put in Replacement Slips - Working Okay

Supervisor: Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-29-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 20 Depth 1004 Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Circ & Work Casing - Prepare to Cement Casing

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1.000 Vis 61 WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
				203	90	152	.199	Csg-48				1200

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips	1	
3. Rig Service		
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation Casing	1 1/2	
8. Rig Repair		
9. Run Casing & Cement	6 3/4	
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on: Newborn Cement Truck	14 1/2	
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21. Safety Meeting	1/4	
TOTAL	24	

COSTS

DAILY 101,000

CUMMULATIVE 960,500

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-27-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Finish Laying Down Drill Collars - Rig in Power Tongs - Rig to Run Casing - Held Safety Meeting w/ Power Tong Operator - Pickup & Run Casing - Rig in Circ Line - Break Circ - Circ Casing - Rig out Lay Down Machine and Power Tongs - Circ and Work Casing Rig in Newsco Cementers - Hook up Lines From Trucks to Cement Truck - Clutch on Cement Pump Truck Broke Down - Not able to get Power thru Clutch to Transmission Circ and Wait on Replacement Cement Truck - Will have to Haul in Cement Truck on Wheeler due to 70% Road Ban Circ - Work Casing - Wait on Newsco Cement Truck For 14 1/2 Hrs.

This A.M. - Mar-28-99 - Cement Truck Arrived and Hooked up Ready to Cement @ 06:15 Hrs.

Ran 50 Jts 244.5mm - 64.7 Kg/m - L80 - 8Rd - LT&C - New - Smls Lone Star Casing w/ Weatherford Float Shoe & Weatherford Float Collar - Centralizers on Bottom Joint and Top of #2 - #10 18 - 26 - 34 - 42 & 49 - Total Tally 693.70 - Landed @ 693.2M - KB.

WANT LIST:

WEATHER: Cloud - Calm - Cold - 11°c ROAD: Good on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PARAMOUNT RESOURCES LTD.

PIPE TALLY SHEET

DATE Mar-27-1999

PAGE 1 of 1

WELL NAME Paramount et al Arrowhead LOCATION C-08-60-40-123-00

Size 244.5mm Wt. 64.74kg/m Grade L-80 Cplg LT&C Thread 8Rd

Joint	Length	Joint	Length	Joint	Length	Joint	Length	Joint	Length
1	13.28	11	13.86	21	13.88	31	14.28	41	13.58
2	14.08	12	13.22	22	13.98	32	13.94	42	14.06
3	13.80	13	14.02	23	13.92	33	13.90	43	13.68
4	13.94	14	13.44	24	14.12	34	13.78	44	14.04
5	13.84	15	13.94	25	13.98	35	13.90	45	13.68
6	13.94	16	13.98	26	13.66	36	14.10	46	13.60
7	14.00	17	13.94	27	14.08	37	13.62	47	14.00
8	14.22	18	14.00	28	14.04	38	13.52	48	13.90
9	13.62	19	14.08	29	14.00	39	13.40	49	13.88
10	13.80	20	13.98	30	14.14	40	13.58	50	13.68
A	138.52	B	138.46	C	139.80	D	138.02	E	138.10

Joint	Length	Joint	Length	Joint	Length	Joint	Length	Joint	Length
51		61		71		81		91	
52		62		72		82		92	
53		63		73		83		93	
54		64		74		84		94	
55		65		75		85		95	
56		66		76		86		96	
57		67		77		87		97	
58		68		78		88		98	
59		69		79		89		99	
60		70		80		90		100	
F		G		H		I		J	

		Column Subtotal
A	138.52	
B	138.46	
C	139.80	
D	138.02	
E	138.10	
F		
G		
H		
I		
J		
Total	692.90	

Shoe	.46
Collar	.40
Other	
	.86

	JOINTS	LENGTH
Page Total	50	692.90
Brought FWD		
Grand Total		692.90
Joints on Location	53	

Remarks: Returned 3 Joints to Paramount Base Camp at Fitzhard 12.88 - 13.24 - 13.68

Supervisor Wilbert Callihoo

NOTE: Use a new page for each casing type. Number joints in order of running.
Indicate joints not run by * and do not include in total length.

PARA-PIPE_TAL.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-26-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 19 Depth 604 Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Circ and Work Casing on Bottom

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 985 Vis 57 WL 17 Gels 2/3 Solids 6.2 % PV 11.0 YP 1.92 pH
Oil 86.4 % Sand .005 % Cake 2 PPMCL 166666 PPMCa 60000

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____	° at ____	m	____	° at ____	m
____	° at ____	m	____	° at ____	m
____	° at ____	m	____	° at ____	m
____	° at ____	m	____	° at ____	m

MUD & CHEMICALS ADDED

Mil Clean - 1 Bbl
Flow-Dry - 7 Sax
Diesel - 11 m³

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips	7	
3. Rig Service	1/4	
4. Deviation Surveys		
5. Ream & Cond. Hole Clean to Bott	1/2	
6. Mix & Cond. Mud		
7. Circulation	3	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Drillstem Test	12 1/4	
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Slip & Cut Drilling line	1/2	
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21. Safety Meeting	1/2	
TOTAL	24	

COSTS

DAILY	48500
CUMMULATIVE	859500

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-26-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-W0

OPERATIONS DETAIL:

Finish Running Test Tools in Hole For DST #2 - Position Packers - Pump up and set Packers - Open Tool - Weak Air Blow on Tool Open - Increased to Strong Air Blow in 15 Secs - Hose to Bottom of Pit - Open to Flare Line - No Gas to Surface Shut in For 1 Hr - Open Tool - Strong Air Blow when Tool Opened Gas to Surface in 1 Min - Blow Increasing during 2 Hr. Valve Open - Strong 2 M Flare Flame throughout Valve Open - Shut in For 4 Hrs - Deflate Packers - Pull Loose and Pull Out Recovered 55 M Very Gassified Invert Mud - Reverse Recorder and Get Pressures - Send to Calgary - Break Down - Lay Down and Load out Test Tools - Release Tester - Slip & Cut Line after Making up & Running in Bit and BHA - Run in Hole - Break Circ and Wash out 40 M to Bottom - Circ to Clean Hole - Make 8 Stand Wiper Trip up into Casing - Run Back in - Circ to Clean Hole - Pump Pill - Held Safety Meeting with Lay Down Operator - Lay Down Drill Pipe - Pick up and Break Kelly - Lay Down Heavy Wate Pipe and Drill Collars -

Since Midnite - Finished Laying Down Drill Collars - Rig in Power Tongs - Pickup and Run 244.5mm Casing - Went in Hole w/ No Problems - Rig in Circ Head & Line - Circ Casing

WANT LIST:

WEATHER: Overcast - Calm - Cool - Snow - 6°C ROAD: Good on Hiway - Rough to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PARAMOUNT RESOURCES LTD.

FIELD DRILL STEM TEST REPORT

A. WELL DATA

DATE Mar-26-1999

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-122-00

DST No. 2 Interval 602-612 Formation Chinkeh Sand

Last Casing: Size 339mm Depth 504 Open Hole: Size 311mm Depth 694

Hole Troubles Nil Caliper at Packer(s) 316 mm

Mud: Wt 985 Vis 50 W.L. 17 % Oil 85.5 ppm Cl 161538

B. TEST STRING DATA

Testing Company Baker Oil Tools Type of Test InFlate Straddle

Type & No. of packers 2 InFlatable Size 263mm

DP size 114mm Weight 24.6 Kg/m Length 430m

DC size 174mm Weight 64 Kg/m ID 58 Length 120m

Tailpipe size ✓ Weight ✓ Length ✓ Perfs ✓

T.D.String Recorder Depth Water Cushion BH Choke

Packer depths 602 & 612 Wt on Packers 16 000 daN

Other Equip Floor Manifold - Pumpout Sub - Jars - Bottom Hole Sampler - Safety Jt Fail Safe Head - By Pass Assembly

C. TEST RESULTS Temp 33 °C

Times: PF 10 ISI 60 Flow 120 FSI 240

Pressures: PF 228 IF 395 IH 5945 ISI 5371

FF 867 FH 5926 FSI 5400

FLOW DESCRIPTION

Preflow Weak Air Blow building to Strong Air Blow in 3½ mins - Building during PreFlow Valve open - No Gas to Surface

Valve Open Strong Air Blow when Tool opened - Gas to Surface in 1 min - Blow Increasing during Valve Open - Strong 2m Flame

Recoveries 85m Gassified Invert Mud - No Indication of Water in Samples

D. SAMPLE DETAILS

Caught 3 Samples of Fluid Recovery

Sent to: AGAT Laboratories Via: Tester Date Sent: Mar-26-1999

E. REMARKS

Good Test - No Problems

Supervisor Wilbert Callihoo

NOTE: Data reported on this form are field readings taken

PARA-DST_RPT.xls

PARAMOUNT RESOURCES LTD.

FIELD DRILL STEM TEST REPORT

A. WELL DATA DATE Mar-25-1999

WELL NAME Paramount et al Arrowhead LOCATION C-02-40-40-123-00

DST No. 1 Interval 617-627m Formation Chinkeh Sand

Last Casing: Size 339.7 Depth 504 Open Hole: Size 311.2 Depth 694

Hole Troubles None Caliper at Packer(s) 315mm

Mud: Wt 985 Vis 50 W.L. 17 % Oil 85.5 ppm Cl 161538

B. TEST STRING DATA

Testing Company Baker Oil Tools Type of Test InFlate Straddle

Type & No. of packers InFlatable - 2 Size 263mm

DP size 114mm Weight 24.6 Kg/m Length 453.56

DC size 174mm Weight 64Kg/m ID 58mm Length 120.00

Tailpipe size ✓ Weight ✓ Length ✓ Perfs ✓

T.D.String 637m Recorder Depth 620 Water Cushion ✓ BH Choke 25.4mm

Packer depths 617 & 627m Wt on Packers 16 000 daN

Other Equip Fail Safe Head - Floor Manifold - Safety Joint - Pump out Sub - Jars Bottom Hole Samples - By Pass Assembly

C. TEST RESULTS Temp 34 °C

Times: PF 10 ISI 60 Flow 120 FSI 240 mins

Pressures: PF 466 IF 2214 IH 6077 ISI 5400

FF 5115 FH 6072 FSI 5397

FLOW DESCRIPTION

Preflow Weak Air Blow when Tool Opened - Increased to Strong Air Blow after 75 Secs - Hose to Bottom of Pit

Valve Open Weak Air Blow building to Strong Air Blow after 75 Secs Held Steady throughout 120 Mins Tool opened - No Gas to Surf

Recoveries 490m Salt Water - Clean Water - 36 000 PPM Salinity

D. SAMPLE DETAILS

Caught 6 Samples Fluid when Reverse Circ out - Had Invert mud in First and Last Sample

Sent to: AGAT Laboratories Via: Tester Date Sent: Mar-26-1999

E. REMARKS

Good Test - No Problems

Supervisor Wilbert Callihoo

NOTE: Data reported on this form are field readings taken

PARA-DST_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-25-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 18 Depth 604 Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Shut in Test Tools - DST #2 - Final Shut In

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt ____ Vis ____ WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1 - Test Tools		120	15.14	
12 - Drill Collars		174	114.58	
1 - Xo Sub		164	.58	
6 - Heavi Wate DP		114	55.58	
46 - Drill Pipe		114	442.96	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips	5	
3. Rig Service	1/2	
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging	23/4	
12. Coring		
13. Formation Testing	14 1/2	
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Waiton Orders	1	
20. Rig up - Tear out		
21. Pre Test Safety Meeting	1/4	
TOTAL	24	

COSTS

DAILY 57000

CUMMULATIVE 811000

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-25-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-100-40-123-00

OPERATIONS DETAIL:

Finished Running Logs in Well with Baker Atlas - Rig out Loggers - Send logs in to Calgary via Satellite - Wait for Orders Pickup - Make up and Run in Baker Inflate Test Tools with 10m Interval - Tools went in Hole w/no Problem - Pump up and Set Packers - Open Tool - Run Successful Test - Pull Tools Loose and Pull out of Hole w/no Problems - Recovered 490m Saltwater in Pipe - Salinity of 36000 PPM - Forward Test Results on to Calgary - Circ Fluid out thru Pump out Sub - Make up Test Tools For DST #2 - Running Test Tools in Hole @ Midnite

DST #1 - 627 - 617 m

DST #2 - 612 - 602 m

Since Midnite have Conducted DST #2 - Strong Air Blow on Initial Open - NGTS - Shut in For 60 Mins - Opened Tool - Had Very Strong Air Blow - GTS in 1½ Mins - Flare Building thru 120 mtrs Valve Open - Tool Shut in at Report Time Will pull Packers loose @ 08:30 Hrs

WANT LIST:

WEATHER: Overcast - Cool - N Wind @ 15 Kph -4°C ROAD: Good Hill

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Returned Wellsite Unit to Mount View Trailers - Grande Prairie
Returned Centrifuges - Stand a Feed Pumps to Coyote Rentals - Wetaskiwin

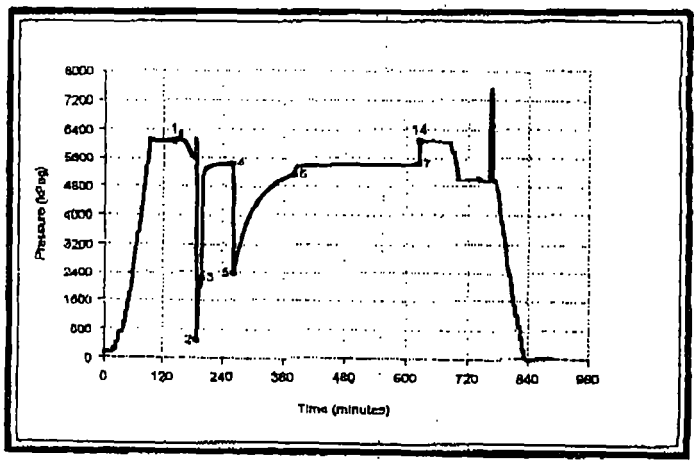
BAKER HUGHES

Baker Oil Tools

Paramount Berkley Arrowhead C-02
60-40-123-00
DST# 1

Formation: Tight hole
Interval - from: 617 **to:** 627 m

Recorder# W35 at 620 m



Maximum Btm Hole Temperature @ FSI: 33.6 C

		Pressure (kPag)	Time (min)	Extrapolated Pressure (kPag)
1	Initial Hydrostatic	6077		
2	Start of 1st Flow	466		
3	End of 1st Flow	2214	9.5	
4	End of 1st Shut-in	5400	61.0	
5	Start of 2nd Flow	2343		
6	End of 2nd Flow	5115	120.0	
7	End of 2nd Shut-in	5397	240.5	
14	Final Hydrostatic	6072		

Liquid Recovery of 500.00 m

Test was reversed out.

Recovery	Description	Salinity
10.00 m	invert	
490.00 m	salt water	36000

Test Date: 1999-03-25
Test Type: Inflate Straddle
Tester Name: Ken Willis
Drill Pipe O.D.: 114.00 mm
Drill Collar I.D.: 61.00 mm
Drill Collar Length: 169.61 m
Hole Size: 311.00 mm

Blow Description:

PREFLOW - WAB to SAB in 75 sec. Steady throughout. NGTS. FINAL FLOW - WAB to SAB in 75 sec. Steady throughout. NGTS.

Remarks:

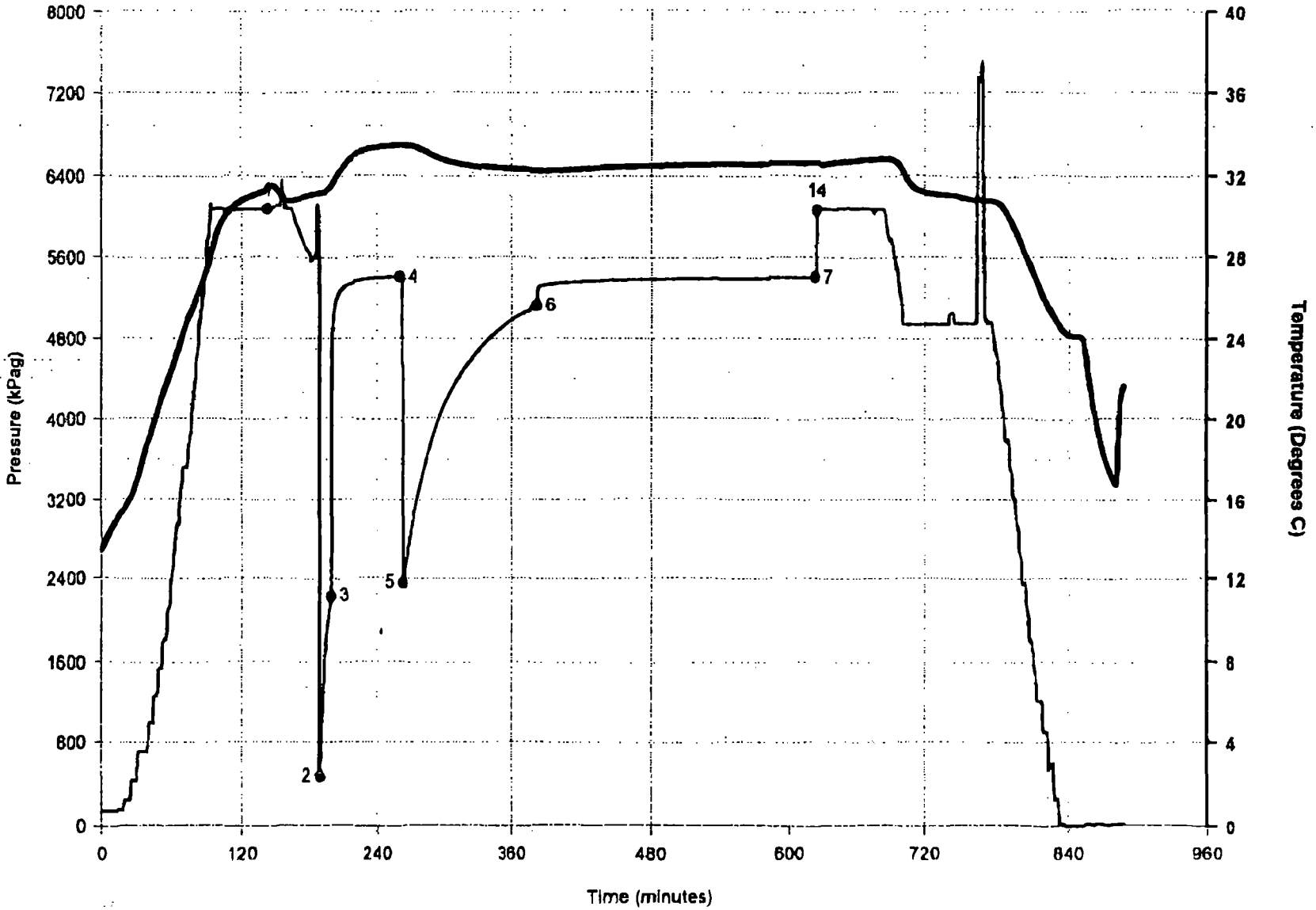
All measurements are field estimates. 6 HWDP, 114x69.8x62.5kg/m, listed as DC.

Baker Oil Tools Drill Stem Testing

Paramount Berkley Arrowhead C-02
60-40-123-00
DST #: 1
Recorder: W35

Pressure (kPag) at Critical Points:

1: 6077	4: 5400	7: 5397
2: 466	5: 2343	14: 6072
3: 2214	6: 5115	

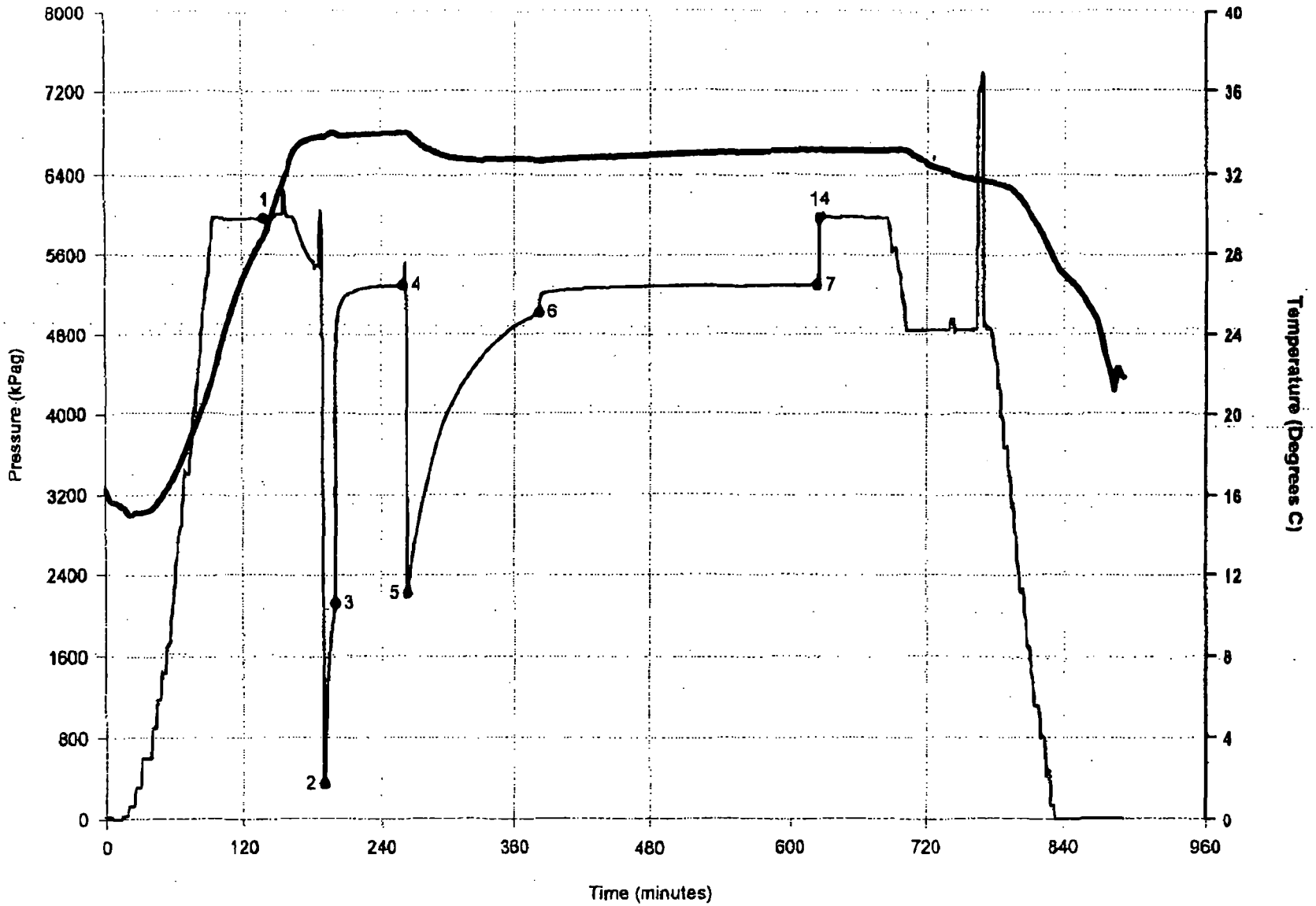


Baker Oil Tools Drill Stem Testing

Paramount Berkley Arrowhead C-02
60-40-123-00
DST #: 1
Recorder: K79

Pressure (kPag) at Critical Points:

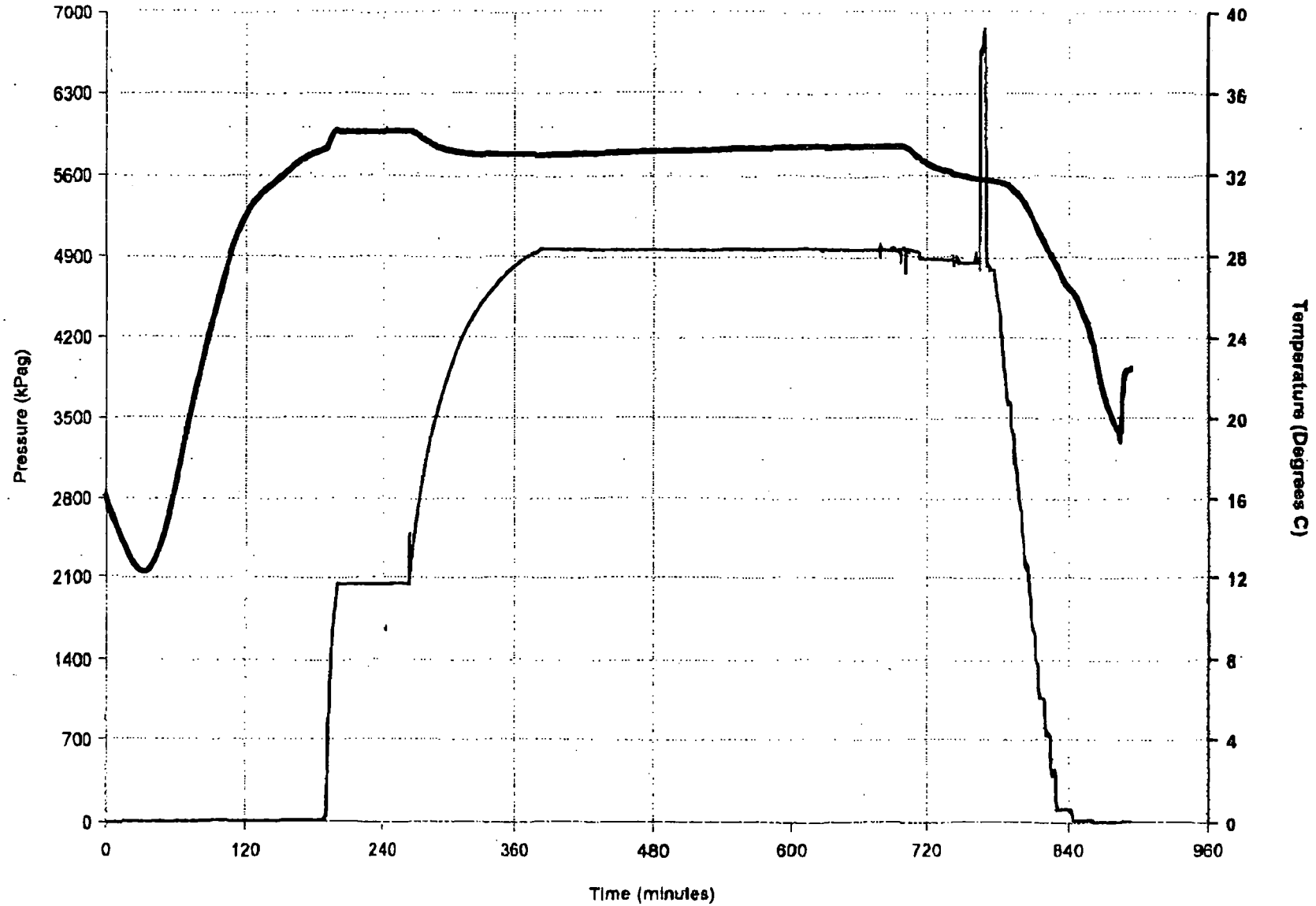
1: 5968	4: 5294	7: 5292
2: 344	5: 2210	14: 5970
3: 2104	6: 5011	



PAGE 09 GERRY SANDERS 14905944 01/10 05/12/1995

Baker Oil Tools Drill Stem Testing

Paramount Berkley Arrowhead C-02
60-40-123-00
DST #: 1
Recorder: K78



Baker Oil Tools — FIELD REPORT

TEST DATA

TEST No 1 LUS. TEST No 1

FORMATION TESTED Tight hole T.D. 694 m

INTERVAL TESTED: From 617 m to 627 m

TOTAL INTERVAL TESTED 10 m

TEST TYPE Inflate Straddle RESET: YES ☐ NO ☒

CUSHION: YES ☐ NO ☒ TYPE AMOUNT m

STARTED IN HOLE @ 07:00 HRS. OPENED TOOL 10:04 HRS.

DATE & TIME OUT OF HOLE 1999-03-25 @ 20:30 HRS.

TEST TIMES:

PRE-FLOW 10 MIN. INITIAL SHUT-IN 60 MIN.

SECOND FLOW MIN. SECOND SHUT-IN MIN.

FINAL FLOW 120 MIN. FINAL SHUT-IN 240 MIN.

PRE-FLOW BLOW DESCRIPTION: WAB to SAB in 75 sec. Steady throughout. NGTS.

FINAL FLOW BLOW DESCRIPTION: WAB to SAB in 75 sec. Steady throughout. NGTS.

MECHANICAL RECORDERS

No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE
20610	OUTSIDE ☒		INSIDE ☐ OUTSIDE ☐		INSIDE ☐ OUTSIDE ☐
DEPTH	620 m	DEPTH	m	DEPTH	m
CLOCK	25152	CLOCK		CLOCK	
REC. SEC. #	15027	REC. SEC. #		REC. SEC. #	
No.	INSIDE ☐ OUTSIDE ☐	No.	INSIDE ☐ OUTSIDE ☐	No.	INSIDE ☐ OUTSIDE ☐
DEPTH	m	DEPTH	m	DEPTH	m
CLOCK		CLOCK		CLOCK	
REC. SEC. #		REC. SEC. #		REC. SEC. #	

ELECTRONIC RECORDERS

No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE
W35	INSIDE ☐ OUTSIDE ☒	K79	INSIDE ☒ OUTSIDE ☐	K78	INSIDE ☒ OUTSIDE ☐
DEPTH	620 m	DEPTH	609 m	DEPTH	605 m
TEMP.	33.6	TEMP.	33.9	TEMP.	34.2
FILE	pc02a.dec	FILE	pc02aa.dec	FILE	pc02ar.dec

FIELD READINGS

REC. No. W35 DEFLECTION	PRESSURE kPa	REC. No. K79 DEFLECTION	PRESSURE kPa
1	6076.94	1	5968.49
2	466.22	2	344.31
3	2213.90	3	2104.10
4	5400.01	4	5293.50
5	2343.13	5	2210.28
6	5115.42	6	5011.06
7	5396.90	7	5292.11
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14	6072.16	14	5970.47

REMARKS

SEQUENCE OF TEST EVENTS:

All measurements are field estimates. 6 HWDP, 114x69.8x62.5kg/m, listed as DC.

GENERAL INFORMATION

COMPANY Paramount Resources Ltd

CONTACT IN CALGARY

CONTACT'S PHONE FAX

WELL NAME Paramount Berkley Arrowhead C-02

LOCATION 60-40-123-00

K.B. m GROUND ELEV m

COMPANY REP Wilbert Callihoo

TESTER Ken Willis

JAR No 1020 HYDRAULIC TOOL No 139

UNIT # 960201 PUMP No 59

CONTRACTOR Precision RIG No 307

TICKET No 809381 DATE 1999-03-25

MUD & HOLE DATA

HOLE CONDITION @ TEST TIME:

EXCELLENT ☐ GOOD ☐ FAIR ☒ POOR ☐

WAS HOLE CONDITIONED PRIOR TO TEST: YES ☐ NO ☒

HOLE DEVIATION: YES ☐ NO ☒ AMOUNT DEGREES

CALIPER LOG RUN PRIOR TO TEST: YES ☒ NO ☐

CALIPERED HOLE SIZE @ TEST DEPTH MAX. mm

MUD TYPE Invert

WEIGHT 985 kg/m³ VISCOSITY 50 WATER LOSS

FILTER CAKE mm

DRILL PIPE SIZE:O.D. 114 mm I.D. 97 mm WEIGHT 247.7 kg/m

DRILL COLLARS:O.D. 174 mm I.D. 61 mm RUN 169.61 m

MAIN HOLE OR CASING SIZE 311 mm

BOTTOM HOLE OR CHOKE SIZE 25.4 mm

PACKER RUBBER SIZE: DIAM. IN mm 263 LENGTH IN m 1.63

RUBBER LEFT IN HOLE: YES ☐ NO ☒

TOP PACKER: SERIAL No CONDITION 1

BTM PACKER: SERIAL No CONDITION 1

GAS MEASUREMENTS

MEASURED WITH:

SIDE STATIC ☐ CRITICAL FLOW PROVER ☐

FLOOR MANIFOLD ☒ ORIFICE WELL TESTER ☐

CLOSED CHAMBER ☐ OTHER

RISER SIZE

FLOW #	TIME	CHOKE mm	READING kPa	RATE m3/D

RECOVERY

RECOVERY VERIFICATION SIGNATURE:

TOTAL FLUID RECOVERED 500 m CONSISTING OF:

10 m OF invert SALINITY

490 m OF salt water SALINITY 36000

m OF SALINITY

m OF SALINITY

TEST WAS REVERSED OUT: YES ☒ NO ☐

BTM. H. SAMPLER # NSN/NSN SENT TO AGAT

GAS BOMB # SENT TO

No. OF FLUID SAMPLES TAKEN 5 SENT TO AGAT

Baker Oil Tools — FIELD REPORT

TEST A — TEST No 2 — LUS. TEST No 2

FORMATION TESTED — T.D. 694 m

INTERVAL TESTED: From 602 m to 612 m

TOTAL INTERVAL TESTED 10 m

TEST TYPE Inflate Straddle — RESET: YES ☐ NO ☒

CUSHION: YES ☐ NO ☒ TYPE — AMOUNT m

STARTED IN HOLE @ 23:30 HRS. OPENED TOOL 01:15 HRS.

DATE & TIME OUT OF HOLE 1999-03-26 @ HRS.

TEST TIMES:

PRE-FLOW 10 MIN. — INITIAL SHUT-IN 60 MIN.

SECOND FLOW MIN. — SECOND SHUT-IN MIN.

FINAL FLOW 120 MIN. — FINAL SHUT-IN 240 MIN.

PRE-FLOW BLOW DESCRIPTION: WAB to SAB in 210 sec. Increasing throughout. NGTS.

FINAL FLOW BLOW DESCRIPTION: SAB immediatly. GTS 1 min. Increasing throughout. Strong 2m flame.

MECHANICAL RECORDERS

No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE
20610	OUTSIDE ☒		OUTSIDE ☐		OUTSIDE ☐
DEPTH 605 m		DEPTH m		DEPTH m	
CLOCK 25152		CLOCK		CLOCK	
REC. SEC. # 15027		REC. SEC. #		REC. SEC. #	
No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE
DEPTH m		DEPTH m		DEPTH m	
CLOCK		CLOCK		CLOCK	
REC. SEC. #		REC. SEC. #		REC. SEC. #	

ELECTRONIC RECORDERS

No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE	No.	INSIDE / OUTSIDE
W35	OUTSIDE ☒	K79	OUTSIDE ☐	K78	OUTSIDE ☐
DEPTH 605 m		DEPTH 594 m		DEPTH 590 m	
TEMP.		TEMP.		TEMP.	
FILE		FILE		FILE	

FIELD READINGS

REC. No. DEFLECTION	PRESSURE kPa	REC. No. DEFLECTION	PRESSURE kPa
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	

REMARKS

SEQUENCE OF TEST EVENTS:

All measurements are field estimates. 6 HWDP, 114x69.8x62.5kg/m, listed as DC. Impact Pump Out Sub included in collar tally. One gas bomb caught at end of main flow. Preliminary report.

GENERAL INFORMATION

COMPANY Paramount Resources Ltd

CONTACT IN CALGARY

CONTACT'S PHONE — FAX

WELL NAME Paramount Berkley Arrowhead C-02

LOCATION 60-40-123-00

K.B. m GROUND ELEV m

COMPANY REP Wilbert Callihoo

TESTER Ken Willis

JAR No 1020 — HYDRAULIC TOOL No 135

UNIT # 360201 — PUMP No 89

CONTRACTOR Precision — RIG No 307

TICKET No 809382 — DATE 1999-03-25

MUD & HOLE DATA

HOLE CONDITION @ TEST TIME:

EXCELLENT ☐ GOOD ☐ FAIR ☒ POOR ☐

WAS HOLE CONDITIONED PRIOR TO TEST: YES ☐ NO ☒

HOLE DEVIATION: YES ☐ NO ☒ AMOUNT DEGREES

CALIPER LOG RUN PRIOR TO TEST: YES ☒ NO ☐

CALIPERED HOLE SIZE @ TEST DEPTH MAX. mm

MUD TYPE Invert

WEIGHT 965 kg/m³ VISCOSITY 50 WATER LOSS

FILTER CAKE mm

DRILL PIPE SIZE:O.D. 114 mm I.D. 97 mm WEIGHT 247.7 kg/m

DRILL COLLARS:O.D. 174 mm I.D. 61 mm RUN 170.09 m

MAIN HOLE OR CASING SIZE 311 mm

BOTTOM HOLE OR CHOKE SIZE 25.4 mm

PACKER RUBBER SIZE: DIAM. IN mm 263 LENGTH IN m 1.66

RUBBER LEFT IN HOLE: YES ☐ NO ☒

TOP PACKER: SERIAL No — CONDITION

BTM PACKER: SERIAL No — CONDITION

GAS MEASUREMENTS

MEASURED WITH:

SIDE STATIC ☐ — CRITICAL FLOW PROVER ☐

FLOOR MANIFOLD ☒ — ORIFICE WELL TESTER ☐

CLOSED CHAMBER ☐ — OTHER

RISER SIZE

FLOW #	TIME	CHOKE mm	READING kPa	RATE m3/C
2	10	6.35	50	846
2	20	6.35	80	1028
2	30	6.35	110	1210
2	40	6.35	130	1331
2	50	6.35	150	1432
2	60	6.35	170	1574
2	70	6.35	200	1756
2	80	6.35	210	1817
2	90	6.35	220	1877
2	100	6.35	240	1999
2	110	6.35	250	2060
2	120	6.35	260	2121

RECOVERY

RECOVERY VERIFICATION SIGNATURE

TOTAL FLUID RECOVERED m CONSISTING OF:

m OF — SALINITY

m OF — SALINITY

m OF — SALINITY

m OF — SALINITY

TEST WAS REVERSED OUT: YES ☐ NO ☒

BTM. H. SAMPLER # — SENT TO

GAS BOMB # NSN — SENT TO

No. OF FLUID SAMPLES TAKEN — SENT TO

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-24-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-03-60-4-123-00

Day 17 Depth 694 Metres last 24 hr 32 Rotating hrs 11 1/4

Activity at report time Run in with DST #1 - 622-617M

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 985 Vis 50 WL 17 Gels 2/3 Solids 5.2 % PV 10 YP 1.92 pH
Oil 85.5 % Sand .005 % Cake 2 PPMCL 161538 PPMCa 55384

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
3	311.2	RBT-C2	MX-101	10-14	80-100	694	32	32	11 1/4	11 1/4	2.84	2	2	TD

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
3	19	19	25.4	203	2X100	152	2.2	32	38/56			8000

DEVIATION SURVEYS

°	at m		°	at m	
°	at m		°	at m	
°	at m		°	at m	
°	at m		°	at m	

MUD & CHEMICALS ADDED

Cal Carb - 41 Sax
Barite - 5 Sax

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	11 1/4	
2. Trips	5 1/4	
3. Rig Service	1/2	
4. Deviation Surveys	1/2	
5. Ream & Cond. Hole Clean to Bottom	1/4	
6. Mix & Cond. Mud		
7. Circulation	2 1/2	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging	3 1/2	
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21. Safety Meeting	1/4	
TOTAL	24	

COSTS

DAILY

CUMMULATIVE

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-24-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Finish Pulling out of Hole - Change Bits - Pulled Bit had Buttons broke off and 1 Cone was locked - Make up 2 Type Chisel Button Bit and Run in Hole - Break Circ - Clean out 4m to Bottom - Drill Ahead - Penetration Rate quite slow - 3m/Hr. Ran Survey @ 674m - Deviation at 1 1/4° - Drill to 694m - Calling this Depth T.D. - Circ to Clean Hole - Made a Stand Wiper Trip up into Casing - Circ to Clean Hole - Drop Survey - Pump Pill - Pull out of Hole - Held Safety Meeting w/ Loggers & Rig Crew - Rig in Baker Atlas Loggers and Run Logs in Hole

WANT LIST:

WEATHER: Cloudy - Calm - Cool +15°C ROAD: Fair on Hiway - Rough to location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Sent out 1 load of Shale to Ft St John
Returned Core Barrels - Pup Joints - Jars & Tools to Baker Hughes
Returned 2 Baskets Fishing Tools to Baker Hughes
Returned Incinerator to Raven Rentals in Ft St John

Geological Morning Report

Mar 25, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40' 123° 00' **Days from Spud:** 13
Target Location: C-02

Date: Mar 25, 1999 **Depth:** 694m
Time: 06:00 hrs **Progress:** 23m
Hours Drilling: 8 **Average ROP:** 2.8m / hr

Formation: Flett

Operational Status: Run in with test tool

Operational Summary: Drill 311mm hole, Wiper trip, Log, Run DST

Remarks: TD at 694m 14:40 hrs. Ran DIL / ZDL-CNL combination from TD to Surface. Second run was Dipole Sonic. Tool failed. Third run, had to go with normal Sonic. Option was to hotshot an XMAC out of Grande Prairie. Running in DST # 1 from 617 to 627m.

Paramount Resources Ltd.
Paramount Berkley Arrowhead C-02
60° 40` 123° 00`

Colin or Wilbert
1-600-700-5443

Logging Alert

Status: **Tight Hole**
UWI: 300C026040123000
Coordinates: Lat. 60° 31` 12.091" Long. 123° 01` 10.431"
Contractor: Precision Drilling Rig #507 Licence: EL383
Elevation: Ground 447.2m KB 454.1m
Deviated hole: None
Hole Size: 311 mm Mud: Invert
Surface Casing: 339.7 mm 81.1kg/m landed at 504m KB
Production Casing: 244.5mm TD: about 750m MD Field Prints: 4
1 wellsite floppie: ASCII of GR from casing to TD at .2 or.25m increments, 2 columns **from the top down please**

eg. DEPT	GR
510.00	115
510.25	118

From Ft Nelson take Alaska Hwy West to Hwy 7. (~29km) Turn North and follow Hwy 7 toward Fort Liard. From NWT Border go 72km then turn RIGHT TO Precision # 507.

Logs:

1. HDIL-GR
   - 1:600 TD to Casing GR 0-150
   - 1:240 TD to Casing

2. ZDL-CNL-GR-PE-DAC
   - 1:600 TD to surface PE 0-10
   - 1:240 TD to surface
   - Sandstone matrix -15 to 45 from TD to casing
   - Limestone repeat from TD to 600m
   - *Annular volume / hole volume for 244.5mm casing and open hole

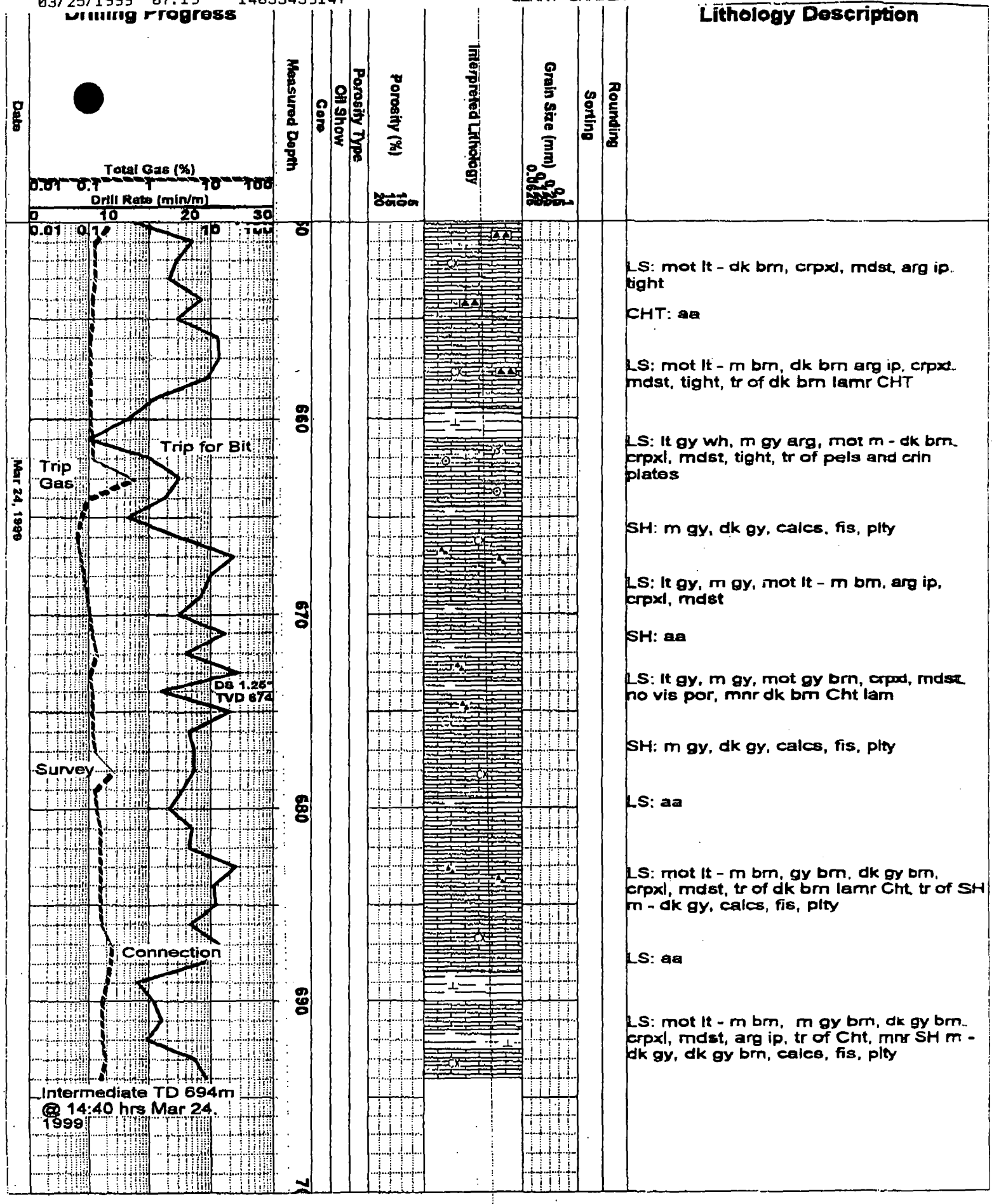
3. MAC-GR-CAL (possible run in dipole mode)
   - 1:600 TD to surface 100-500
   - 1:240 TD to surface 100-300

4. **LOG GAMMA, SONIC AND NEUTRON THROUGH CASING TO SURFACE**

Logstar: All logs, entire well — 6 prints, 4 LAS
Copies to Paul Collens — off: 290-3600, home: 220-9766

****** Mark first readings on all curves ******
No shop Copies. All scratch, scraps and garbage to be left on lease.

Thanks:
COLIN BREDIN


Drilling Progress
Total Gas (%)
0.01 0.1 1 10 100
Drill Rate (min/m)
0 10 20 30
Date
Mar 24, 1999
Measured Depth
Core
Oil Show
Porosity Type
Porosity (%)
Interpreted Lithology
Grain Size (mm)
Sorting
Rounding
Lithology Description
Trip for Bit
Trip Gas
DB 1.25
TVD 674
Survey
Connection
Intermediate TD 694m @ 14:40 hrs Mar 24, 1999
660
670
680
690
LS: mot lt - dk brn, crpxl, mdst, arg ip, tight
CHT: aa
LS: mot lt - m brn, dk brn arg ip, crpxl, mdst, tight, tr of dk brn lamr CHT
LS: lt gy wh, m gy arg, mot m - dk brn, crpxl, mdst, tight, tr of pels and crin plates
SH: m gy, dk gy, calcs, fis, plty
LS: lt gy, m gy, mot lt - m brn, arg ip, crpxl, mdst
SH: aa
LS: lt gy, m gy, mot gy brn, crpxl, mdst, no vis por, mnr dk brn Cht lam
SH: m gy, dk gy, calcs, fis, plty
LS: aa
LS: mot lt - m brn, gy brn, dk gy brn, crpxl, mdst, tr of dk brn lamr Cht, tr of SH m - dk gy, calcs, fis, plty
LS: aa
LS: mot lt - m brn, m gy brn, dk gy brn, crpxl, mdst, arg ip, tr of Cht, mnr SH m - dk gy, dk gy brn, calcs, fis, plty

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-23-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-10-123-00

Day 16 Depth 662 m Metres last 24 hr 114 Rotating hrs 16 1/2

Activity at report time Drill Ahead @ 622m @ 07:00 HRS.

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 990 Vis 50 WL 17 Gels 2/3 Solids 5.2 % PV 9 YP 2.4 pH

Oil 86.5 % Sand .005 % Cake 2 PPMCL 166666 PPMCa 56666

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1	311.2	STC-FDGH	JR181.3	7-8000	90/110	604	56	100	4 1/2	12 1/4	8.16	3	2	TD
2	311.2	RTC-HPSTH Rerun	NP6611	7-12000	100/110	662	58	58	12	12	4.83	4	8	TD

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1	19	19	25.4	203	100	152	2.2	32	28/56			7900
2	19	12.5	25.4	203	100	152	2.2	32	28/56			7700

DEVIATION SURVEYS

3/4 ° at 550 m ____ ° at ____ m
1 1/4 ° at 600 m ____ ° at ____ m
1 ° at 635 m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

Cal Carb - 25 9ax

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1-Bit		311	.30	
3-Drill Collars		228	28.48	
1-XO Sub		222	.40	
1-Drilling Jars		168	3.96	
12-Drill Collars		174	114.04	
1-XO Sub		164	.58	
6-Heli Wate DP		114	54.96	
47-Drill Pipe		114	451.98	
1-Kelly		114	7.30	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	16 1/2	
2. Trips	4 1/2	
3. Rig Service	1/2	
4. Deviation Surveys	1 1/4	
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation	1	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21. BOP Drill - Man Crew	1/4	
TOTAL	24	

COSTS

DAILY 47000
CUMMULATIVE 701000

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-23-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Drill Ahead 311.2mm Hole - Run Deviation Survey and Hole Angle Holding at @ 550M - Drill ahead to 598M and Hole Angle building Drill to 609M - Bit not Drilling and Torquing up - Circ to Clean Hole - Pull out soft Teeth Bit - Had over 50% Chert in last Sample before Pulling out - Running with 2 Type Reman Button Bit - Drill ahead @ 3-5m/Hr - Drilled thru Chert Section from 637-647m - Drill to 662M - Bit Torquing up and not Drilling Circ to clean Hole - Pump wt Material Pill - Pulling out of Hol at Midnite

Since Midnite got out of Hole - Bit has Broken and Worn Teeth and 1 Core (#3) Locked up - Rarin with RBT - Type C2 Chisel Tooth Bit - Drilling Ahead with 12000-15000 lbs on Bit and Drilling @ 3-4m/Hr - Drilling in Limestone with Chert Stringers - Loggers and Tester Arrived at Location

WANT LIST:

WEATHER: Clear - Calm - Cool -1°C ROAD: Fair on Highway - Soft Snow to Loc

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 24, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40' 123° 00' **Days from Spud:** 12
Target Location: C-02

Date: Mar 24, 1999
Time: 06:00 hrs
Hours Drilling: 15

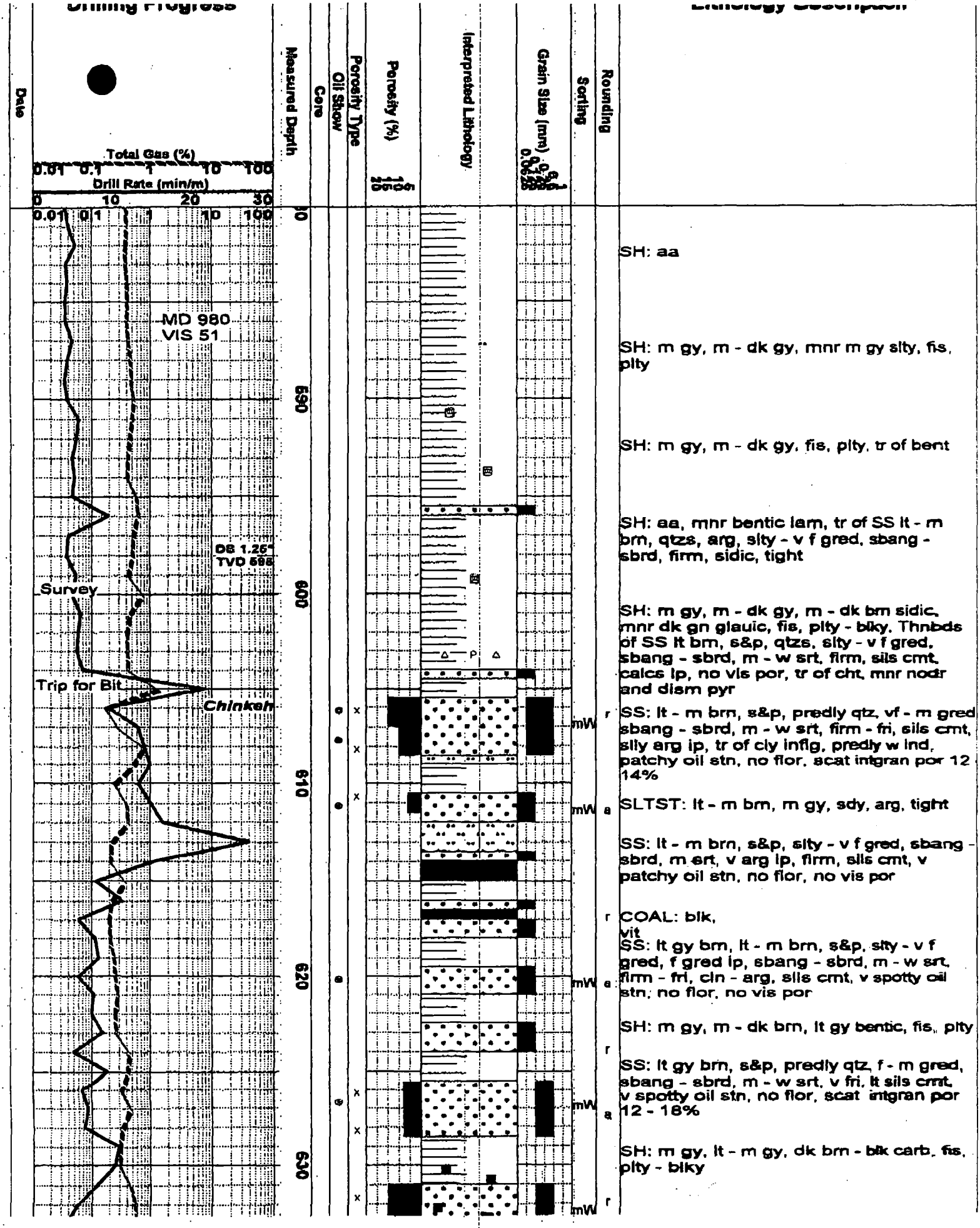
Depth: 671m
Progress: 67m
Average ROP: 4.5m / hr

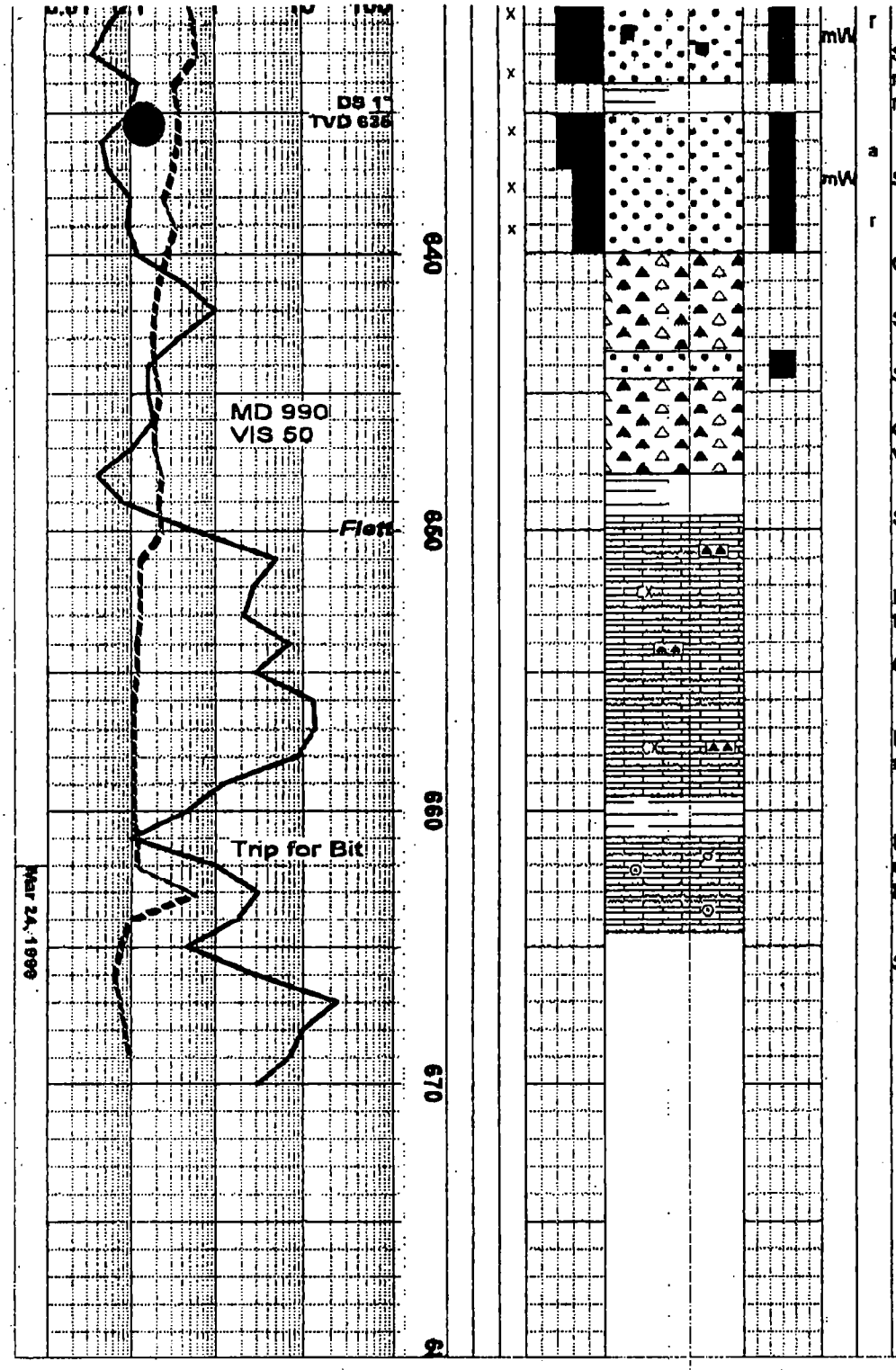
Formation: Flett

Operational Status: Drilling

Operational Summary: Trip for bit, Drill, Trip for bit, Drill 311mm hole

Remarks: Chinkeh 605.5m. Uppermost sand is oil stained and has porosity but not much for gas effect. Has possibilities but pretty subtle. Mud density 990. Tight sand, shales, silts and coal in the middle. Lower sand is porous but looks wet. A lot of Chert from 640 - 649m (Fantasque?). Flett 649.5m, tight Limestone. Tripped for bit last night. Drilling about 3m/hr in Flett. Loggers on location.


Drilling Progress
Date
Total Gas (%)
0.01 0.1 1 10 100
Drill Rate (min/m)
0 10 20 30
0.01 0.1 1 10 100
MD 980
VIS 51
DB 1.26
TVD 598
Survey
Trip for Bit
Chinkeh
Measured Depth
590
600
610
620
630
Core
Oil Show
Porosity Type
Porosity (%)
Interpreted Lithology
Grain Size (mm)
Sorting
Rounding
Lithology Description
SH: aa
SH: m gy, m - dk gy, mnr m gy slty, fis, plty
SH: m gy, m - dk gy, fis, plty, tr of bent
SH: aa, mnr bentic lam, tr of SS lt - m brn, qtzs, arg, slty - v f gred, sbang - sbrd, firm, sidic, tight
SH: m gy, m - dk gy, m - dk brn sidic, mnr dk gn glauic, fis, plty - blky. Thnbds of SS lt brn, s&p, qtzs, slty - v f gred, sbang - sbrd, m - w srt, firm, sils cmt, calcs ip, no vis por, tr of cht, mnr nodr and dism pyr
SS: lt - m brn, s&p, predly qtz, vf - m gred sbang - sbrd, m - w srt, firm - fri, sils cmt, slly arg ip, tr of cly inflg, predly w ind, patchy oil stn, no flor, scat intgran por 12 - 14%
SLTST: lt - m brn, m gy, sdy, arg, tight
SS: lt - m brn, s&p, slty - v f gred, sbang - sbrd, m srt, v arg ip, firm, sils cmt, v patchy oil stn, no flor, no vis por
COAL: blk, vit
SS: lt gy brn, lt - m brn, s&p, slty - v f gred, f gred ip, sbang - sbrd, m - w srt, firm - fri, cln - arg, sils cmt, v spotty oil stn, no flor, no vis por
SH: m gy, m - dk brn, lt gy bentic, fis, plty
SS: lt gy brn, s&p, predly qtz, f - m gred, sbang - sbrd, m - w srt, v fri, lt sils cmt, v spotty oil stn, no flor, scat intgran por 12 - 18%
SH: m gy, lt - m gy, dk brn - blk carb, fis, plty - blky



SS: lt gy, s&p, f - m grad, sbang - sbrd, m - w srt, v fri - py cons, clyey ip, no stn, no flor, intgran por 15 - 18%, mnr SH aa

SS: aa

CHT: vcol, mas

SS: aa

SH: m gy, m gy sdy, fis, blky - plty

CHT: clr, wh, lt brn, dk brn, dk bl gy vari, mas

SH: m - dk gy, dk gy, fis, plty

LS: mot lt - dk brn, crpxl, mdst, arg ip, tight

CHT: aa

LS: mot lt - m brn, dk brn arg ip, crpxl, mdst, tight, tr of dk brn lamr CHT

LS: lt gy wh, m gy arg, mot m - dk brn, crpxl, mdst, tight, tr of pels and crin plates

SH: m gy, dk gy, calcs, fis, plty

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-22-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-00-60-40-123-00

Day 15 Depth 548 Metres last 24 hr 42 Rotating hrs 6

Activity at report time Pull out of Hole @ 604m @ 07:00 Hrs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 980 Vis 51 WL 18 Gels 2/3 Solids % PV 10 YP 1.92 pH

Oil 96.4 % Sand .005 % Cake 2 PPMCL 158333 PPMCa 53333

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1	311.2	STC-F3GH	121513	3-8000	65-80		42	44	6	6 1/4	7.04	R		
					110									

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1	19	19	25.4	203	2X100	152	2.2	32	38/56			7500

DEVIATION SURVEYS

° at m		° at m	
° at m		° at m	
° at m		° at m	
° at m		° at m	

MUD & CHEMICALS ADDED

Caustic - 1 Sack - Inventory Adj.

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1-Bit		311	.30	
3-Drill Collars		228	28.48	
1-XO Sub		222	.40	
1-Drilling Jars		168	3.96	
12-Drill Collars		174	114.04	
1-XO Sub		164	.58	
6-Heavi Wate DP		114	54.96	
35-Drill Pipe		114	336.74	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	6	
2. Trips	12 1/2	
3. Rig Service	1/2	
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21. Fishing Cones	5	
TOTAL	24	

COSTS

DAILY	39500
CUMMULATIVE	654000

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-22-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-4-123-00

OPERATIONS DETAIL:

Run in Hole with Drill Bit - Not able to Drill Ahead - Bit Torquing up - Could not make any Progress - Pull out of Hole - Made 2 Runs in Hole w/ Magnet - Recovered Rollers and Balls From Bit Bearings - Laydown Magnet - Run in with Bit - Not able to Drill Ahead - Bit Torquing up - Pull out of Hole - Pick up and make up 12" Flat Bottom Mill and Junk Sub - Run in and Mill ahead For 2 Meters - Had Torque in Drill String when starting to Mill ahead - Smoothed out after Milling 1 Meter - Pull out Laydown Mill and Junk Sub - Recovered 2 Rollers in Junk Basket - Run in with Bit - Took off Drilling smooth - Drill ahead at Midnite

Surveys - 3/4 @ 550 m & 1 1/4 @ 660 m

WANT LIST:

WEATHER: Clear - Cool - S Wind @ 20 km/H - 2°C ROAD: Good on Highway - Rough to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 23, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Grid Area: 60° 40' 123° 00'
Target Location: C-02

Spud Date: Mar 11, 1999
Days from Spud: 11

Date: Mar 23, 1999
Time: 06:00 hrs
Hours Drilling: 9

Depth: 604m
Progress: 98m
Average ROP: 10.8m / hr

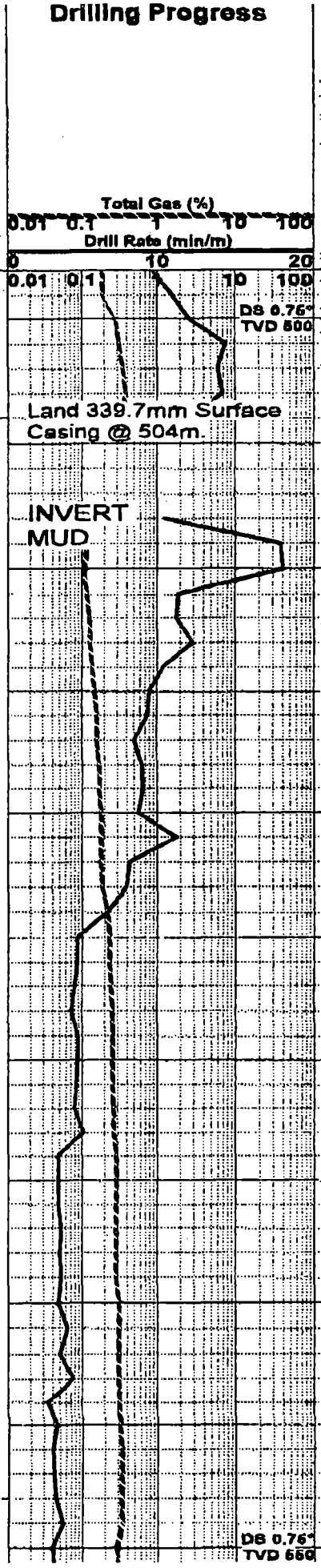
Formation: Garbutt

Operational Status: Tripping

Operational Summary: Fish, Run in with bit, Drill 311mm hole, Trip for bit.

Remarks: Shale, no shows. Loggers and tester alerted.

Drilling Progress



Lithology Description

SS: aa

SH: m gy, m gy brn, slty ip, fis, plty - blky

SS: aa

SH: m gy, slty - sdy, fis, blky

SS: lt - m gy brn, s&p, slty - v f gred, sbang - sbrd, m - w srt, arg, slly calcs, ptch oil stn, no vis por

SH: m gy, m gy slty, sdy ip, fis, blky - plty

SS: aa

SH: m gy, m gy slty, fis, plty - blky

SH: aa

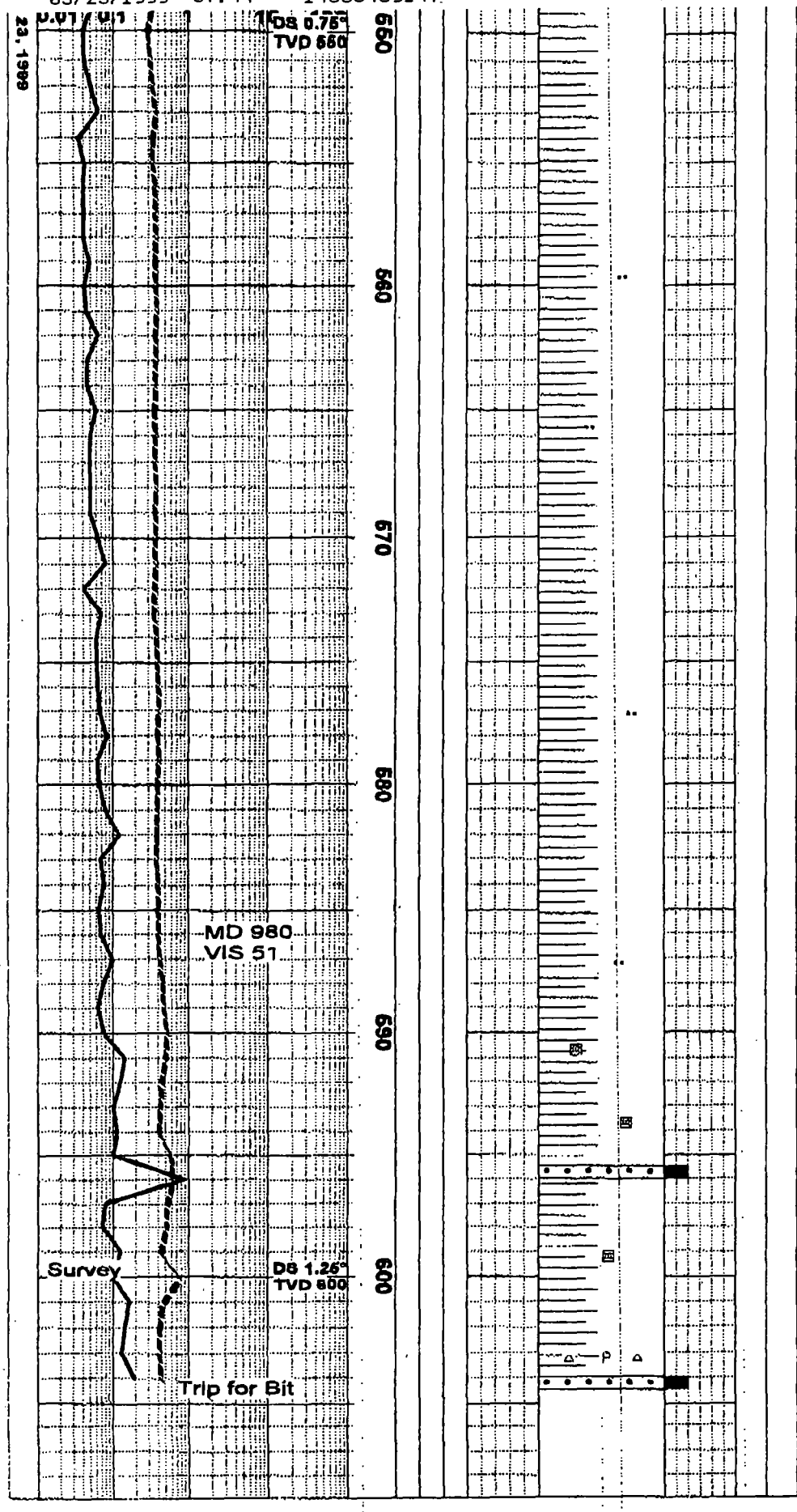
SH: m gy, m gy slty, fis, predly plty

SH: m gy, m - dk gy, fis, plty

SH: aa

SH: m gy, m - dk gy, fis, plty

SH: aa



SH: m gy, m - dk gy, fis, plty

SH: aa

SH: m gy, m - dk gy, fis, plty, mnr m gy slty

SH: m gy, m - dk gy, fis, plty

SH: aa

SH: m gy, m - dk gy, mnr m gy slty, fis, plty

SH: aa

SH: m gy, m - dk gy, mnr m gy slty, fis, plty

SH: m gy, m - dk gy, fis, plty, tr of bent

SH: aa, mnr bentic lam, tr of SS lt - m brn, qtzs, arg, slty - v f gred, sbang - sbrd, firm, sidic, tight

SH: m gy, m - dk gy, m - dk brn sidic, mnr dk gn glauic, fis, plty - blky, Thnbds of SS lt brn, s&p, qtzs, slty - v f gred, sbang - sbrd, m - w srt, firm, sils cmt, calcs ip, no vis por, tr of cht, mnr nodr and dism pyr

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-21-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-100-40-123-00

Day 14 Depth 506 Metres last 24 hr 2 Rotating hrs 13/4

Activity at report time Pull out w/ Magnet @ 07:00 HRS.

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1040 Vis 58 WL 18 Gels 2/3 Solids 8.3 % PV 11 YP 28 pH
Oil 88.3 % Sand .005 % Cake 2 PPMCL 190000 PPMCa 72000

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1	311.2	STC-FDGH	LR1813	2-3	80	506	2	2	13/4	13/4	1.14	3	2	Th

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1	19	19	17.5	203	74/100	152	2.22	32	38/56			9000

DEVIATION SURVEYS

° at m		° at m	
° at m		° at m	
° at m		° at m	
° at m		° at m	

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1 - Bit		311.2	.30	
3 - Drill Collars		228	28.48	
1 - XO Sub		222	.40	
1 - Drilling Jars		168	3.96	
12 - Drill Collars		174	114.84	
1 - XO Sub		164	.58	
6 - Heavi Wate DP		114	54.96	
31 - Drill Pipe		114	297.80	
1 - Kelly		114	6.00	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	13/4	
2. Trips	7 1/2	
3. Rig Service	1/2	
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation Displace to Invert	13/4	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing Run Magnet	1 1/4	
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS	8	
16. Drilling Out		
17. Last Circ.		
18. Laying Down DP & BOP's		
19. Drill out thru Csg	2 1/2	
20. Slip & Cut Drlg line	1/2	
21. BOP Drill	1/4	
TOTAL	24	

COSTS

DAILY 27500
CUMMULATIVE 614500

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-21-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Finish Pressure Testing BOP Stack - Pipe Rams and Hydril All Held O.K. - Pressure Test All Surface Values - Stabbing Valve - Kelly Cocks - Back Pressure Valve - Kill Lines Kill Line Valves - Perform Accumulator Check - Accumulator All O.K. - Had Made up Bit and BHA and Ran in Hole - Tag Cement Top @ 486m - Float Collar @ 490m - Pump Water to Flush Surface Hole Mud out of Suction Lines - Mud Pumps and Mud Lines - Pump 1.5m³ Diesel Fuel and then Displace Water in Casing to Invert - Drill out Cement - Float Collar Cementing Shoe Joint and Float Shoe - After Drilling out thru Shoe Bit Torqued up and could not Drill w/ Bit running smoothly - Were able to Rotate w/ 2-3 wanden Weight on Bit - Would Torque up when Weight on Bit was Increased - Pulled out of Hole and Found 6 Roller Bearings From 17½" Surface Hole Bit Jammed in Teeth Locking up Bit - Ran in w/ 11¼" Magnet and Junk Sub Work Magnet and Junk Sub - Pull out of Hole - Had 6 Full Rollers and 6 Worn Down Rollers on Magnet - Nothing in Junk Sub - Lay Down Magnet and Junk Sub - Make up Bit & BHA - Run in Hole

Since Midnite Finished Running In w/ Bit - Not able to Drill Ahead Bit Torquing up when Weight Set on Bit - Circ on Bottom and try to Work Bit past Tight Spot in Hole - Not able to get Bit to get past Tight Spot in Hole - Pull out of Hole - No Rollers in Bit Teeth - Made up Magnet and Ran in Hole - Circ & Work Magnet on Bottom - Pull out of Hole - Had Roller and 2 Small Pieces plus Filings on Magnet - Clean off and Run Back in Hole - Circ & Work Magnet on Bottom - Pull Out -

WANT LIST:

WEATHER: Clear - Calm - Cool -2°C ROAD: Good on Hiway - Rough to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 22, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40` 123° 00` **Days from Spud:** 10
Target Location: C-02

Date: Mar 22, 1999
Time: 06:00 hrs
Hours Drilling: 2

Depth: 506m
Progress: 1.5m
Average ROP: .75m / hr

Formation: Scatter

Operational Status: Fish

Operational Summary: Pressure test, Drill out, Trip magnet (on third trip)

Remarks: Lost some roller bearings while drilling pilot hole for surface. Found them.

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-20-24:00 (Yr - Mon - Day - Time)

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 13 Depth 504 Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Pressure Test with Pipe in Hole.

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt ____ Vis ____ WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1	311.2	STC-FDGH												

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1	12.5	12.5	25.4	203		152						

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m

____ ° at ____ m ____ ° at ____ m

____ ° at ____ m ____ ° at ____ m

____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips		
3. Rig Service	1/4	
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS	21	
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21. Weld Casing Bowl	23/4	
TOTAL	24	

COSTS

DAILY 26000

CUMMULATIVE 587000

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-20-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Finish Welding on 13 5/8" Casing Bowl - Press Test Weld w/Air and Had Leak in Weld - Reweld Bowl and Pressure Tested o.k. Put on Spool above Bowl - DSA Flange - 13 5/8" - 5000 x 13 5/8" - 3000 - Single Gate Ram - Flanged Outlet Spool - Double Gate BOP - Flanged Outlet Spool - Hydril & Riser with Flowline Outlet Put on 2 Sets Bleed off Line Valves and 2 Sets Kill Line Valves Had to Weld up Double Flange Directional Spool For Bleed off Line and Make up Line to Hook Valves together and Hookup to Manifold Shack - Weld and Fabricate Line to Hook Kill Line Valves together and Make up Line From Mud Line to Kill Line Valves - Move the Manifold Shack with Loader to get Lines to Make up - Had to Change Angles & Reweld outlet From Riser to Flowline -

Hook in Pressure Tester and Pressure Test Manifold Valves and Manifold Lines - All Valves on Bleed off side of BOPs & HCR Valve - Press Test Blind Rams and Casing - Check Motor Shut offs - Test BOP Flanges - All Worked and Held o.k.

WANT LIST:

WEATHER: Clear - Calm - Cool - 6° C ROAD: Good on Hiway - Fair to location Muddy on location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 21, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Grid Area: 60° 40` 123° 00`
Target Location: C-02

Spud Date: Mar 11, 1999
Days from Spud: 9

Date: Mar 21, 1999
Time: 06:00 hrs
Hours Drilling: 0

Depth: 504m
Progress: 0m
Average ROP: 0m / hr

Formation: Scatter

Operational Status: Pressure test.

Operational Summary: Nipple up, Pressure test.

Remarks: Should drill to core point today.

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-19-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 12 Depth 504 Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1150 Vis 65 WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH 9.0

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
				203	100	152	1.11	Pipe Casing				5300

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

Gel - 5 Sax

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	1/4	
2. Trips	2	
3. Rig Service	1/4	
4. Deviation Surveys	1/4	
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation	2 3/4	
8. Rig Repair		
9. Run Casing & Cement	7 3/4	
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on: Cement	5 1/2	
15. Nipple Up & Test BOPS Nipple down	3 1/2	
16. Drilling Out		
17. Weld Bowl	1 1/2	
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20.		
21. Safety Meeting	1/4	
TOTAL	24	

COSTS

DAILY	141 000
CUMMULATIVE	561 000

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-19-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-100-40-123-00

OPERATIONS DETAIL:

Finished Drilling 1m of 444.5mm Hole - Circ - Cond Mud & Hole - Drop Survey - Pull out of Hole - Rig in Power Tongs and Rig to Run Casing - Run 339mm Casing - Went in Hole and Went to Bottom w/No Problems - Rig in Circ Line - Circ and Wash Csg - Held Safety Meeting w/ Nowsco Cementers - Cement Casing Rig out Cementers - W.O.C. - Cut Conductor Pipe and Casing Nipple Down 20" Diverter Stack - Cut Casing at Cut off Weld on Casing Bowl

Ran 32 Jts - 339.7mm - 81.1 Kg/m Casing w/ Weatherford Float Shoe and Float Collar - Centralizers on Bottom Joint and Top of Joints #2-6-10-14-18-22-27-32 & 36
Cemented Casing with Nowsco Cementers - Pumped 3m³ Water ahead Followed with 52 Tonnes Class G Cement + 1% CaCl2 Slurry Weight 1900 Kg/m³ - Slurry Yield 39.46m³ - Dropped Rubber Plug - Displaced with 39.5m³ Water - Circ Pressure 6500 Kpa - Bumped Plug with 10,000 Kpa - Wait 2 Mins - Bled Back - Floats Held OK - Recovered 7m³ Cement Returns to Surface - Plug Down - 99-03-19-15:16 Hrs.

WANT LIST:

WEATHER: Clear - Calm - Mild - 4°C ROAD: Wet on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PARAMOUNT RESOURCES LTD.

SURFACE CASING REPORT

O.D.: 339.7 MM

WELL NAME: Paramount et al Arrowhead LOC: C-02-60-4W-123-60 DATE: 99-03-19

JTS ON LOC	M ON LOC	CASING WT.	GRADE	RANGE	THREAD	T & C	MAKE	JTS. RUN	DEPTH LANDED	M RUN IN WELL
38	577.46	81.1 Kg/m	K-55	3	8Rd	ST&C	Lone Star	37	504	505.10

SHOE: MAKE: Weatherford	TYPE: Float-8Rd		LENGTH, M	.46
COLLAR: MAKE: Weatherford	TYPE: Float-8Rd		LENGTH, M	.34
LANDING JOINT (WHEN USED) LENGTH, M			LENGTH, M	
OVERALL LENGTH OF CASING STRING, M		504.30	TOTAL, M	505.10
METERS UP FROM K.B. (SUBTRACT)	1.1 M			1.10
SETTING DEPTH: LOG:		DRILLER: 504.00		504.00
SHOE JOINT: OVERALL:	14.96 M (SUBTRACT)		SHOE JOINT	14.96
FLOAT COLLAR: LOG:	M	DRILLER: 490.14 M		490.14
K.B. TO CASING FLG:	7.20 M	CUT OFF: 6 M		

CENTRALIZERS & TURBOLIZERS:

MAKE: Weatherford NUMBER 10

POSITIONS:

Lower Part of Shoe Joint
Top of Joints - #2-6-10-14-18-22
27-32+36

SCRATCHERS:

MAKE: Nil NUMBER

POSITIONS:

JOINTS WELDED: Nil - Threadlock - Float Shoe & Float Collar

REMARKS:

LANDED ON BOTTOM. - Yes
FLOAT & SHOE THREAD LOCKED. - Yes

OPERATORS REP: Wilbert Callihoo

SURF CSG RPT

PARAMOUNT RESOURCES LTD.

RUNNING AND CEMENTING

SURFACE CASING O.D.: 339.7 MM

WELL NAME: Paramount et al Arrowhead LOC: C-02 DATE: 99-03-19

K.B. ELEVATION 453.10 CSG. FLG 7.20 TOTAL DEPTH (DRILLER) 504

HOLE SIZE	444.5mm		
DEPTH M	504		

CSG IN HOLE	505.10		
DEPTH SET	504.00		

MUD TYPE: Gel-Chem WT: 1150 KG/M3 VISC: 44 WL: 12.8

BOP'S 20" Diverter Stack + 6" Bloey Line

RUNNING

POWER TONGS Premier Ventures TORQUE: MAX: 8700 NM NOM 7000 NM MIN 5300
TIME PIPE START: 04:30 TIME ON BOTTOM 09:30 TIME CIRCULATED 09:44
FILL UP POINTS: Every Joint BOTTOM BY CSG 504.00m UP FROM KB: 1.0m

REMARKS:

CEMENTING

CEMENT CO: Nowsco OPERATOR: Terry Tabach AR. TIME: 08:00HRS
TYPES & QUANTITY OF CEMENT: 52 Tonnes Class G + 1% CaCl2
HEIGHT TO BE CEMENTED Surface
FLUSH: 3m³ Water MIX TIME: START: 11:54 FIN: 12:38 WT: 1900 kg/m³
CALCULATED DISP 39.5m³ MEASURED DISP. 39.6m³ START: 12:42 FIN: 13:16
DISPLACING FLUID Water MAX. PRESS 6500 kPa BUMP W/ 10,000 kPa
CEMENT RETURNS 7m³ Returns to Surface FLOATS Yes WORKED CSG WHILE CMT Yes

REMARKS: Casing Went in Hole w/No Problems
Good Cement Job

LANDING

TIME LANDED: 12:38 DATE: 99-03-19 WT. STRING (LESS BLOCKS) daN 28000
WT. LANDED IN SLIPS: Nil daN BOWL: ABB Vetco Gray SIZE: 339mm X 346mm
SERIES 1500-5000PSI SLIP & SEAL ASS: Automatic

REMARK:

AGENT OF OPERATOR: Wilbert Callihoo

RUN & CMT SFC

PARAMOUNT RESOURCES LTD.

PIPE TALLY

DATE: 99-03-19
WELL NAME: Paramount et al Arrowhead — LOCATION: C-02
CONTRACTOR: Precision Drilling - Rig #207
PIPE DESCRIPTION: 339.7 mm. 88.1 KG/M — GRADE: K55 — RANGE: 3
CPLG: STC — THREAD: 8Rd — MFG.: Lone Star — NEW OR USED: New
TYPE OF STRING: Surface — TALLIED: W.A. Callihoo — THREADS OFF: Yes

	LENGTH		LENGTH		LENGTH		LENGTH		LENGTH		LENGTH
1	14.16	21	14.22	41		61		81		101	
2	14.30	22	13.14	42		62		82		102	
3	14.26	23	14.00	43		63		83		103	
4	14.16	24	14.36	44		64		84		104	
5	14.20	25	14.16	45		65		85		105	
6	13.10	26	13.16	46		66		86		106	
7	13.24	27	13.26	47		67		87		107	
8	14.12	28	13.24	48		68		88		108	
9	13.22	29	13.14	49		69		89		109	
10	13.16	30	13.06	50		70		90		110	
TTL 1-10	137.92	TTL 21-30	135.74	TTL 41-50		TTL 61-70		TTL 81-90		TTL 101-110	
11	13.18	31	13.18	51		71		91		111	
12	14.28	32	13.20	52		72		92		112	
13	12.12	33	13.18	53		73		93		113	
14	14.08	34	13.06	54		74		94		114	
15	12.44	35	14.16	55		75		95		116	
16	13.50	36	14.14	56		76		96		116	
17	12.96	37	13.36	57		77		97		117	
18	14.42	38	13.16	58		78		98		118	
19	14.32	39		59		79		99		119	
20	13.06	40		60		80		100		120	
TTL 11-20	136.36	TTL 31-40	107.44	TTL 51-60		TTL 71-80		TTL 91-100		TTL 111-120	
TTL 01-20	274.28	TTL 21-40	243.18	TTL 41-60		TTL 61-80		TTL 81-100		TTL 101-120	

TOTAL 1-20	274.28	PAGE 1 TOTAL	517.46	Shoe= Float - .46
TOTAL 21-40	243.18	PAGE 2 TOTAL		Float= Collar - .34
				Shoe jt.=
TOTAL 41-60		FLOAT & SHOE	.80	TOTAL JOINTS ON LOCATION 38
TOTAL 61-80		GRAND TOTAL:	518.26	REMARKS:
TOTAL 81-100				Ran 37 Joints - Tally Total 505.10 m
TOTAL 100-120				Jt #38 Left out
TOTAL 1 - 120	517.46			AGENT OF OPERATOR: W.A. Callihoo

PROD TALLY 1

PARAMOUNT RESOURCES LIMITED

MAXIMUM ALLOWABLE CASING PRESSURE

WELL NAME: Paramount et al Arrowhead
NO: C-02

CASING: 339.7mm X 81.1 Kg/m LANDED AT: 504

FORMATION RUPTURE:
18.00 KPA/M X 504 M= 9072 KPA

MAXIMUM HOLD BACK WITH CASING FULL OF GAS: KPA

MAXIMUM HOLD BACK WITH FLUID IN WELL BORE:

DENSITY KG/M3	Hydrostatic Press	MACP	DENSITY KG/M3	MACP KPA	DENSITY KG/M3	MACP KPA
1000	4944	4128	1250		1500	
1010	4994	4078	1260		1510	
1020	5044	4028	1270		1520	
1030	5092	3980	1280		1530	
1040	5142	3930	1290		1540	
1050	5186	3886	1300		1550	
1060	5240	3832	1310		1560	
1070	5290	3782	1320		1570	
1080	5340	3732	1330		1580	
1090	5390	3682	1340		1590	
1100	5438	3634	1350		1600	
1110	5488	3584	1360		1610	
1120	5538	3534	1370		1620	
1130	5586	3486	1380		1630	
1140	5636	3436	1390		1640	
1150	5686	3386	1400		1650	
1160	5736	3336	1410		1660	
1170	5784	3288	1420		1670	
1180	5834	3238	1430		1680	
1190	5884	3188	1440		1690	
1200	5934	3138	1450		1700	
1210			1460		1710	
1220			1470		1720	
1230			1480		1730	
1240			1490		1740	
1250			1500		1750	

'IF LOST CIRCULATION OCCURS DO NOT USE THESE PRESSURES!

Geological Morning Report

Mar 20, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Grid Area: 60° 40` 123° 00`
Target Location: C-02

Spud Date: Mar 11, 1999
Days from Spud: 8

Date: Mar 20, 1999
Time: 06:00 hrs
Hours Drilling: 0

Depth: 504m
Progress: 0m
Average ROP: 0m / hr

Formation: Scatter

Operational Status: Nipple up

Operational Summary: Run and cement surface casing, Nipple up

Remarks:

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-18-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-4W-123-00

Day 11 Depth 504 Metres last 24 hr 77 Rotating hrs 18 1/4

Activity at report time Running 339.7mm Casing

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1150 Vis 64 WL 12 Gels 3.5/14 Solids .11 % PV 15 YP 12.9 pH 9.5

Oil ____ % Sand .01 % Cake 2 PPMCL 200 PPMCa 20

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
RR4A	444.5	HTC-ATMX3	D7784	6-8000	120	504	77	183	18 1/4	36 1/4	5	3	3	TD

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
RR4A	12.5	12.5	25.4	203	2X110	152	2.38	32	38/60			7400

DEVIATION SURVEYS

3/4	° at 444 m		° at		m
1	° at 472 m		° at		m
3/4	° at 500 m		° at		m
	° at	m	° at		m

MUD & CHEMICALS ADDED

Gel - 30 Sax
Soda Ash - 2 Sax

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1-Bit		444.5	.44	
1-Bit Sub		228	.96	
3-Drill Collars		228	28.12	
1-XO Sub		222	.40	
1-Drilling Jars		168	3.96	
12-Drill Collars		174	114.04	
1-XO Sub		164	.58	
6-Heavi Wate DP		114	54.96	
30 Drill Pipe		114	288.12	
1-Kelly		114	12.50	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	18 1/4	
2. Trips	3 1/4	
3. Rig Service	1/2	
4. Deviation Surveys	1	
5. Ream & Cond. Hole Clean to Bottom	1/4	
6. Mix & Cond. Mud	3/4	
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY 25500

CUMMULATIVE 420 000

SUPERVISOR Wilbert Callihoo

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PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-18-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Drill and Ream 311.2mm Hole to 444.5mm - Penetration Rate down to 3-4m/Hr From 475m and down to T.D. - Deviation stayed Good Hole Angle 3/4° at Bottom - Increased Bit Weight to 6-8000 daN to try to Increase Penetration Rate - Drilling quite Rough - Drilled to 500m - Made Wiper Trip - Measure out - Put on Kelly and Circ. 1 Single out of Hole @ 410m - Came out Rest of Way w/ No Problems - Clean up Bit and is Good - Check Measurements Run in Hole - Drill to 503m @ 24:00 Hrs.

Since Midnite - Drilled to 504.4m - Circ to Clean Hole - Had Raised Mud to 60 For Running Casing - Circ to Clean Hole - Pull out of Hole after stopping Survey - Work thru Tight Spots @ 410 & 270m - Break off Bit & Bit Sub - Clean up Floor - Rig in Powder Tongs - Pick up & Run 339mm Casing

WANT LIST:

WEATHER: Cloud - Cool - S. Wind @ 20Km/H - 6°C ROAD: Wet on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 19, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Grid Area: 60° 40` 123° 00`
Target Location: C-02

Spud Date: Mar 11, 1999
Days from Spud: 7

Date: Mar 19, 1999
Time: 06:00 hrs
Hours Drilling: 12

Depth: 504m
Progress: 48m
Average ROP: 4.0m / hr

Formation: Scatter

Operational Status: Run surface casing

Operational Summary: Ream pilot hole to 500m, Wiper trip, Ream to 504m and condition hole, Hoist drill string, Run 339.7mm surface casing

Remarks: No gas shows.

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-17-24:00 (Yr - Mon - Day - Time)

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 10 Depth 427 Metres last 24 hr 106 Rotating hrs 18

Activity at report time Ream Hole to 444.5mm From 311.2mm @ 460m @ 022 Hrs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1140 Vis 45 WL 13 Gels 2/8 Solids .110 % PV 14 YP 2.87 pH 8.5

Oil ___ % Sand .005 % Cake 2 PPMCL 200 PPMCa 80

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
RR4A	444.5	HTC-ATM43	D778V	4-8000	125		106	106	18	18	5.88	Rmo	2	

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
RR4A	15.9	15.9	25.4	203	2x/111	152	2.4	32	38/60			7500

DEVIATION SURVEYS

1	at 348 m			at	m
Missing	at 376 m			at	m
1	at 385 m			at	m
1	at 415 m			at	m

MUD & CHEMICALS ADDED

Gel - 59ex

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1-Bit		444.5	.44	
1-Bit Sub		228	.96	
3-Drill Collars		228	28.12	
1-XO Sub		228	.40	
1-Drilling Jars		168	3.96	
12-Drill Collars		174	114.04	
1-XO Sub		164	.58	
16-Heavi Wate DP		114	54.96	
22-Drill Pipe		114	211.16	
1-Kelly		114	12.84	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	18	
2. Trips	3	
3. Rig Service	1/2	
4. Deviation Surveys	2	
5. Ream &	1/2	
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY	42500
CUMMULATIVE	394500

SUPERVISOR Wilbert Calliboo

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PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-17-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Finish Pulling out with Bit #RR3A - Bit was totally wrecked #3 Cone had all Rollers missing and Rollers on other 2 Cones were Showing and close to Falling out also - Outer 2 Rows of teeth on all 3 Cones were Worn and Broken down to 1/2 of Original Had to use double Line to Break Pipe Tool Joints on way out of Hole

Made up Bit #4 and Ran in Hole - Went in Hole O.K. - Break Circ and Clean out 4M to Bottom - Broke and Re-Dope rest of Pipe Joints on way in Hole - Drill and Ream out Hole to 444.5m From 311.2mm - Drilling ahead @ 4-8m/Hr - Tryed to carry 8-10000 lbs Bit Weight and Deviation goes out to 1° - Carrying 46000 lbs to try and Keep Deviation From going out Further Drill ahead w/no problems other than slow Penetration.

WANT LIST:

WEATHER: Clear-Cool-Calm -8°C ROAD: Wet on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 18, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40' 123° 00' **Days from Spud:** 6
Target Location: C-02

Date: Mar 18, 1999
Time: 06:00 hrs
Hours Drilling: 20

Depth: 456m
Progress: 124m
Average ROP: 6.25m / hr

Formation: Scatter

Operational Status: Reaming rat hole

Operational Summary: Ream 311mm pilot hole to 444mm.

Remarks: No shows. Should be at casing point by this evening.

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-16-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-4W-123-00

Day 9 Depth 321 Metres last 24 hr 131 Rotating hrs 21

Activity at report time Ream 311mm Hole to 444mm @ 336 m @ 07:00

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1130 Vis 43 WL 13 Gels 3/10.0 Solids .1 % PV 13 YP 7.66 pH 9.5
Oil ____ % Sand .005 % Cake 2 PPMCL 200 PPMCa 80

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
RR9A	444.5	Vakel-L111	614475	4-5000	115440	321	131	321	21	42 3/4	7.55	5	8	In

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
RR3A	15.9	15.9	25.4	203	2x111	152	2.4	32	38/60			7200

DEVIATION SURVEYS

1	° at 312 m		° at	m	
7/8	° at 260 m		° at	m	
1/2	° at 310 m		° at	m	
	° at	m		° at	m

MUD & CHEMICALS ADDED

Gel - 10 Sacks
Caustic - 1 Sack
Soda Ash - 1 Sack
Desco - 1 Sack

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1 - Bit		444.5	.44	
1 - Bit Sub		228	.96	
3 - Drill Collars		228	28.12	
1 - XO Sub		222	.40	
1 - Drilling Jars		168	3.96	
12 - Drill Collars		178	114.04	
1 - XO Sub		164	.58	
6 - Heavi Wate DP		114	54.96	
12 - Drill Pipe		114	118.32	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	21	
2. Trips	1	
3. Rig Service	1/2	
4. Deviation Surveys	1 1/2	
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Last Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY 31500
CUMMULATIVE 352500

SUPERVISOR Wilbert Callihoo

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PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-16-1999
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-100-40-123-00

OPERATIONS DETAIL:

Ream out 311mm Hole to 444mm - Carrying 4-5000 dan Bit Wt
Try to Carry more Bit Weight and Deviation starts to go
out - Last Survey was at 1/2°

Bit started to Torque up - Worked Bit to get Rid of Balled
up Bit - Started to Drill again and Drilled down 1 more
single - Made Connection and Drilled 2m - Torqued up
and stopped Table - Circ to Clean Hole - Pull out to check
on Bit - Pipe torqued up - Broke and Replaced Breakout
Line - Put Scotch Block on Breakout Line to Break Pipe

Since Midnite got Bit to Surface and is totally Cratered
All 3 Cones are loose with 2 Outer Rows of Teeth either
Broken or Worn Half way down - #1 Cone has all Roller
Bearings Missing and other 2 Cones have Roller Bearings
Ready to Fall out - Ran in with Rerun Bit - Hughes X16 Type

WANT LIST:

WEATHER: Clear - Cool - Wind - S@20KmH -6°C ROAD: Wet on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 17, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Spud Date: Mar 11, 1999
Grid Area: 60° 40` 123° 00`
Days from Spud: 5
Target Location: C-02

Date: Mar 17, 1999
Time: 06:00 hrs
Hours Drilling: 16

Depth: 332m
Progress: 116m
Average ROP: 7.25m / hr

Formation: Scatter

Operational Status: Reaming rat hole

Operational Summary: Ream 311mm pilot hole to 444mm, Trip for bit, Ream pilot hole.

Remarks: No shows.

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-15-24:00 (Yr - Mon - Day - Time)

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 8 Depth 190 Metres last 24 hr 190 Rotating hrs 21 3/4

Activity at report time

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1125 Vis 45 WL 15 Gels 2.5/10 Solids % PV 3/60 YP 3.83 pH 10

Oil % Sand .005 % Cake 2 PPMCL 200 PPMCa 80

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
RR3A	444.5	Varel-L111	614475	3-5000	140		190	190	21 3/4	21 3/4	8.7	8	nog	

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
RR3A	15.9	15.9	25.4	203	118	152	2.6	34	40/62			5700

DEVIATION SURVEYS

1/8	at 52 m			at	m
1	at 100 m			at	m
1/2	at 130 m			at	m
3/4	at 175 m			at	m

MUD & CHEMICALS ADDED

Gel - 4 Sax

Caustic - 2 Sax

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1-Bit		444.5	.44	
1-Bit Sub		228	.96	
8-Drill Collars		228	28.12	
1-Xo Sub		222	.40	
1-Drilling Jars		168	3.96	
12-Drill Collars		168	114.04	
3-HeviWateDP		114	27.40	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	21 3/4	
2. Trips		
3. Rig Service	1/2	
4. Deviation Surveys	1 3/4	
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY	345190
CUMMULATIVE	320,500

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-15-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-80

OPERATIONS DETAIL:

Reaming and Drilling Hole From 311.2mm to 444.5mm - Run Surveys and Deviation holding at 1° or Less - Can only Carry 3-4000 daN Bit Weight to keep Deviation at 1° - Have tried to carry More Weight (6-8000 daN) on Bit - Deviation went out From 1/2° to 1° with Higher Bit Weight - Ream Ahead w/no Problems

WANT LIST:

WEATHER: Clear Cool - S. Wind @ 24 km/h - 8°C ROAD: Good on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 16, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Spud Date: Mar 11, 1999
Grid Area: 60° 40` 123° 00`
Days from Spud: 4
Target Location: C-02

Date: Mar 16, 1999
Time: 06:00 hrs
Hours Drilling: 19

Depth: 216m
Progress: 160m
Average ROP: 8.4m / hr

Formation: Scatter

Operational Status: Reaming rat hole

Operational Summary: Ream 311mm pilot hole to 444mm.

Remarks:

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-14-24:00 (Yr - Mon - Day - Time)

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 7 Depth 504 Metres last 24 hr 87 Rotating hrs 14 1/2

Activity at report time Ream 311.2mm Hole to 444.5mm @ 64m @ 07:00

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1110 Vis 45 WL 15.0 Gels 2.5/11 Solids ____ % PV 13 YP 3.8 pH 10.0

Oil ____ % Sand .005 % Cake 2 PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
RR2A	311.2	HTC-ATXG1	D70113	5-8 DOC	120	504	87	87	14 1/2	14 1/2	6	2	3	In

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
RR2A	15.9	15.9	25.4	203 DX	104	152	2.28	33	38/60			8000

DEVIATION SURVEYS

3/4 °	at 433 m	____ °	at ____ m	Gel - 60 Sax	
3/4 °	at 472 m	____ °	at ____ m	Caustic - 2 Sax	
1 °	at 500 m	____ °	at ____ m	Sawdust - 5 Sax	
____ °	at ____ m	____ °	at ____ m		

MUD & CHEMICALS ADDED

Gel - 60 Sax
Caustic - 2 Sax
Sawdust - 5 Sax

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1-Bit		444.5	.44	
1-Bit Sub		229	.96	
1-Drill Collar		228	9.36	
1-XO Sub		222	.40	
1-XO Sub		164	.58	
1-Kelly		114	9.00	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	14 3/4	
2. Trips	3 3/4	
3. Rig Service	1/2	
4. Deviation Surveys	1 1/4	
5. Ream & Cond. Hole	2 3/4	
6. Mix & Cond. Mud		
7. Circulation	1	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY 26500

CUMMULATIVE 296000

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-14-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Ream and Clean Back in Hole From 236m to Bottom @ 412m After Bit Trip - Clean out 4m Fill on Bottom - Reamed Sections of Hole on Way in - Was able to Run in 1 Full Stand out of 8 on Way Back in Hole - Run Deviation Surveys and Hole Angle Holding Ok at 1° or Less - Drill to 504m - Circ to Condition Hole - Run Survey on Bottom - Circ - Pull out of Hole - Lay Down 311mm Bit and 9" Bottom Hole Drill Collar - Pipe Came out of Hole with No Problems - Much Better than First Trip - Pick up - Make up and Run in 444.5mm Bit - Breakdown Stand of 9" Drill Collars Start to open Hole to 444.5mm - Reamed to 20m

Reaming Hole @ 64m @ Morning Report Time

WANT LIST:

WEATHER: Clear - Cool - S. Wind @ 20 KmH - 8°C ROAD: Good on Hi-Way - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 15, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40' 123° 00' **Days from Spud:** 3
Target Location: C-02

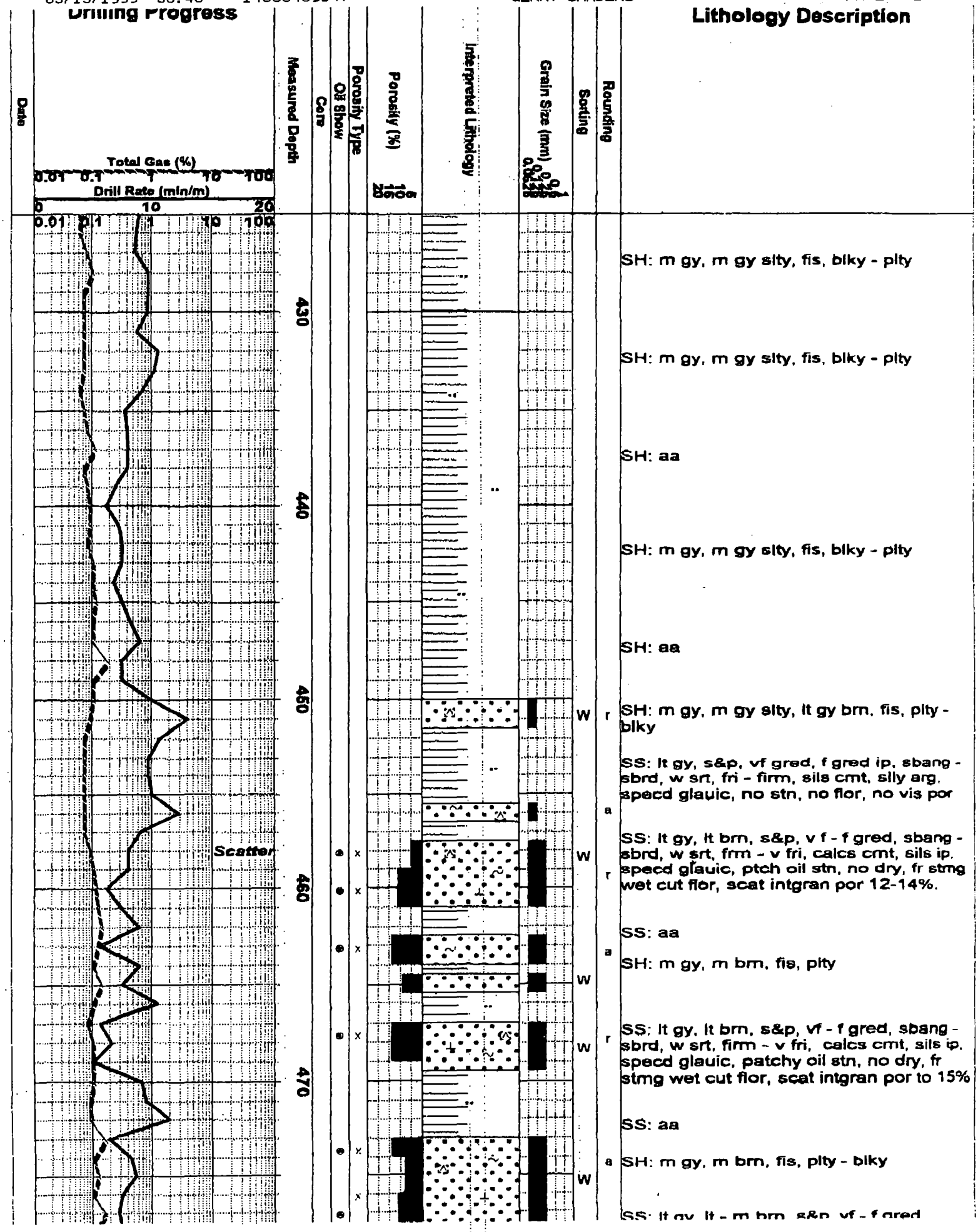
Date: Mar 15, 1999 **Depth:** 504m
Time: 06:00 hrs **Progress:** 69m
Hours Drilling: 9.5 **Average ROP:** 7.2m / hr

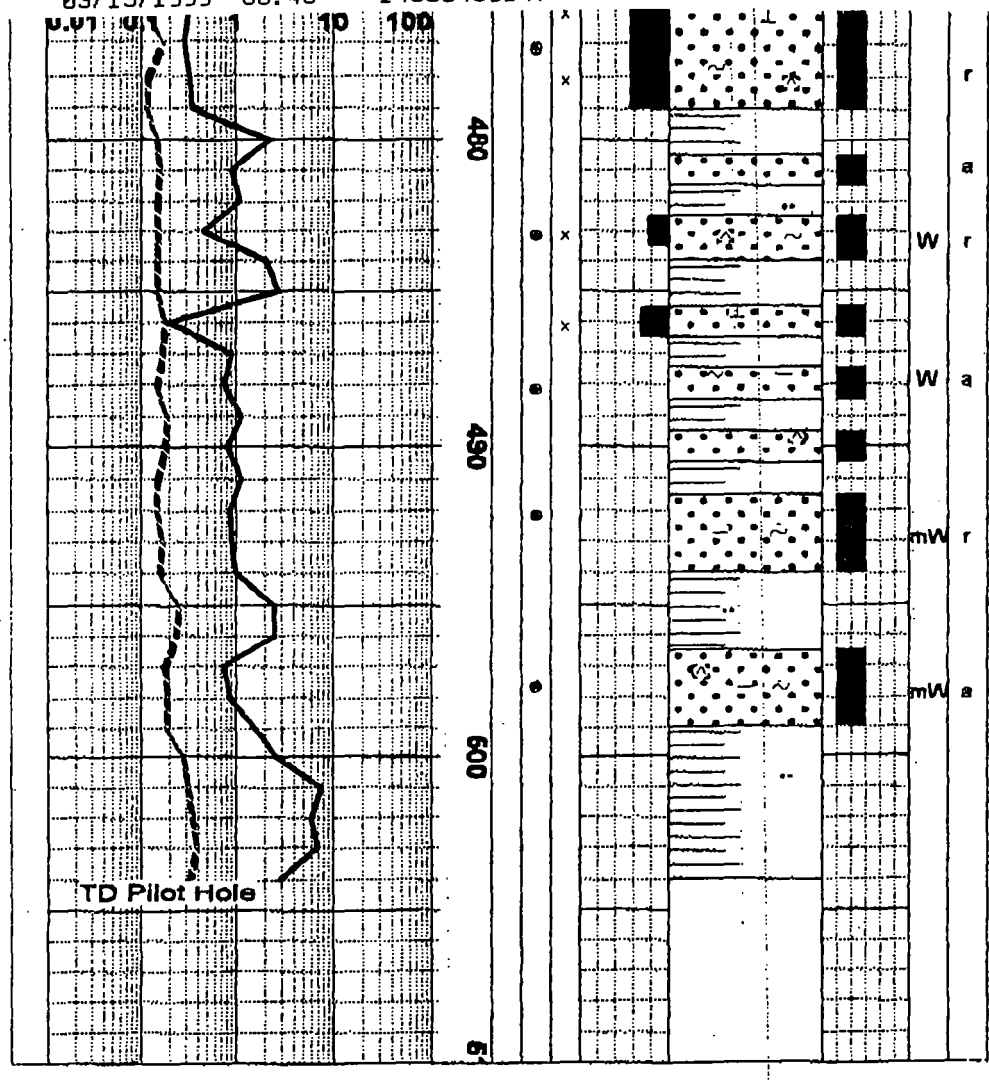
Formation: Scatter

Operational Status: Reaming (at 56m, about 10m / hr)

Operational Summary: Drill and survey 311mm pilot hole to 504m, Trip for 444mm bit, Ream pilot hole.

Remarks: Scatter (457.5m) is a Sandstone, light grey, light - medium brown, salt and pepper, very fine to fine grained, speckled glauconitic, siliceous to calcareous cement, patchy oil stain, fair streaming wet cut florescence, scattered intergranular porosity to 15%. Minimal gas effect, probably wet. First sand is at 450m but top will probably be 457m on logs.


Drilling Progress
Date
Total Gas (%)
0.01 0.1 1 10 100
Drill Rate (min/m)
0 10 20
Measured Depth
Core
Oil Show
Porosity Type
Porosity (%)
Interpreted Lithology
Grain Size (mm)
Sorting
Rounding
Lithology Description
430
440
450
460
470
Scatter
SH: m gy, m gy slty, fis, blky - plty
SH: m gy, m gy slty, fis, blky - plty
SH: aa
SH: m gy, m gy slty, fis, blky - plty
SH: aa
SH: m gy, m gy slty, lt gy brn, fis, plty - blky
SS: lt gy, s&p, vf gred, f gred ip, sbang - sbrd, w srt, fri - firm, sils cmt, slly arg, specd glauic, no stn, no flor, no vis por
SS: lt gy, lt brn, s&p, v f - f gred, sbang - sbrd, w srt, frm - v fri, calcs cmt, sils ip, specd glauic, ptch oil stn, no dry, fr stmg wet cut flor, scat intgran por 12-14%.
SS: aa
SH: m gy, m brn, fis, plty
SS: lt gy, lt brn, s&p, vf - f gred, sbang - sbrd, w srt, firm - v fri, calcs cmt, sils ip, specd glauic, patchy oil stn, no dry, fr stmg wet cut flor, scat intgran por to 15%
SS: aa
SH: m gy, m brn, fis, plty - blky
SS: lt gy, lt - m brn, s&p, vf - f gred



SS: lt gy, lt - m brn, s&p, vf - f gred, sbang - sbrd, w srt, fri - v frl, slly calcs, sils cmt, specd glauic, patchy oil stn, fr stmg wet cut flor, scat intgran por 6-8%

SH: m gy, m brn, fis, plty

SS:
aa

SH: m gy, m gy slty, fis, blky - plty

SS: aa

SH: lt gy, m gy, m gy slty, fis, blky - plty

SS: lt gy, lt - m brn, s&p, vf - f gred, sbang - sbrd, m - w srt, fri, sils cmt, arg - v arg ip, specd glauic, patchy oil stn, strmg wet cut flor, no vis por

SH: aa

SS: aa

SH: m gy, m gy brn, slty ip, fis, plty - blky

SS: aa

PARAMOUNT

RENTAL EQUIPMENT COST SHEET

WELL NAME: Paramount et al Arrowhead
WELL LOCATION: C-02-60-40-123-00
SPUD DATE: March-11-99
AFE: 16908

	PRODUCT OR	COMPANY	COST	DAY 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Days	TOTAL COST
	MUD VAN	Baker	50								✓	✓	✓	✓	✓	✓	✓			
X	GARBAGE BIN	Raven	75								✓	✓	✓	✓	✓	✓	✓			
	400 BL TANK 5	DC Energy	300								✓	✓	✓	✓	✓	✓	✓			
	SLOP TANK 1	DC Energy	75								✓	✓	✓	✓	✓	✓	✓			
	525 BBL. FUEL TK.	Husky	20								✓	✓	✓	✓	✓	✓	✓			
X	WELLSITE SHACK 2	Lykal	300								✓	✓	✓	✓	✓	✓	✓			
X	WELLSITE SHACK 1	Mountain View	150								✓	✓	✓	✓	✓	✓	✓			
	CENTERFUGE + Stand	Coyote	535								X	X	X	✓	✓	✓	✓			
	CENTERFUGE + Mats	Coyote	480								X	X	X	✓	✓	✓	✓			
	Light Plant	Coyote	175								X	X	X	✓	✓	✓	✓			
	SHOCK-SUBS + Jars		350											✓	✓	✓	✓			
	H.W. PIPE																			
	LOADER	Beaver	400								✓	✓	✓	✓	✓	✓	✓			
	X/O SPOOL																			
	STRING STAB'S + Jars																			
X	G-brake	Swace	100								X	X	X	X	X	X	X			
X	Rig Phones	Blizzard	105								✓	✓	✓	✓	✓	✓	✓			
X	Light Tower 92	Rental Shop	125								✓	✓	✓	✓	✓	✓	✓			
	GAS DETECTOR																			
	8 man Sleeper	Beaver	100								✓	✓	✓	✓	✓	✓	✓			
X	Water Shacks	Badger	150								✓	✓	✓	✓	✓	✓	✓			
X	Incinerator	Raven	50								✓	✓	✓	✓	✓	✓	✓			
X	Submers Diesel Pump	Ketch	50								✓	✓	✓	✓	✓	✓	✓			
			3200																	

REMARKS:

TOTAL WELL COST 3600

RENTALS

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-13-04:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 6 Depth 417 Metres last 24 hr 133 Rotating hrs 16 1/2

Activity at report time Drill 311.2 mm Hole @ 440m @ 07:00 Hrs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1105 Vis 40 WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH 10.0
Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCs ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1RR	311.2	STC-SDS	70014	5-9000	115	417	133	417	16 1/2	45 3/4	9.11	3	4	TN

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1RR	15.9	15.9	12.5	203	89	152	.98	28	33/56			6800

DEVIATION SURVEYS

1/4 °	at 290 m	1 °	at 405 m
1/4 °	at 320 m	____ °	at ____ m
1 °	at 350 m	____ °	at ____ m
1/8 °	at 378 m	____ °	at ____ m

MUD & CHEMICALS ADDED

Gel - 15 sax
Caustic - 2 sax
Drilling Detergent - 1 Pail

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	16 1/2	
2. Trips	4 1/2	
3. Rig Service	1/2	
4. Deviation Surveys	1 1/2	
5. Ream & Cond. Hole	3/4	
6. Mix & Cond. Mud		
7. Circulation	1/4	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY 39500
CUMMULATIVE 259500

SUPERVISOR Wilbert Callibee

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-13-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Drill 311.2mm Hole - Run Deviation Surveys and Hole Angle D.H. Staying Inside 1° when carrying 5-6000 daN Bit Weight - Surveys go out to 1° when carrying 7-8000 daN Bit Weight - Drill to 412M at 6:00PM - Penetration had Slowed Down and Survey was out to 1° Circ & Work Pipe to Clean Hole - Trip out For Bit Change - Hole Very Tight - Had to Work Pipe to get out of Hole - Did not have to Circ out any Singles - Change Bits and Run in Hole - Hit Bridge in Hole @ 110M - Pick up Kelly - Break Circ - Clean out From 110 - 132M - Run in Hole - Ream From 203 - 236M

Since Midnite - Ream and Clean in Hole From 236m to Bottom at 412M - Had 4M Fill on Bottom - Survey at 432M was 3 1/4° Drilling Ahead to T.D. - Had lots of Shale and Clay come over Shaker when Cleaning to Bottom - Hole Fill took 40% more Mud than what was Calculated Capacity - Lost 13m³ Mud out of Tanks when Making Trip - Went Down Hole

WANT LIST:

WEATHER: Clear - Calm - Cool - 12°C ROAD: Good Highway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 14, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40' 123° 00' **Days from Spud:** 2
Target Location: C-02

Date: Mar 14, 1999
Time: 06:00 hrs
Hours Drilling: 12.5

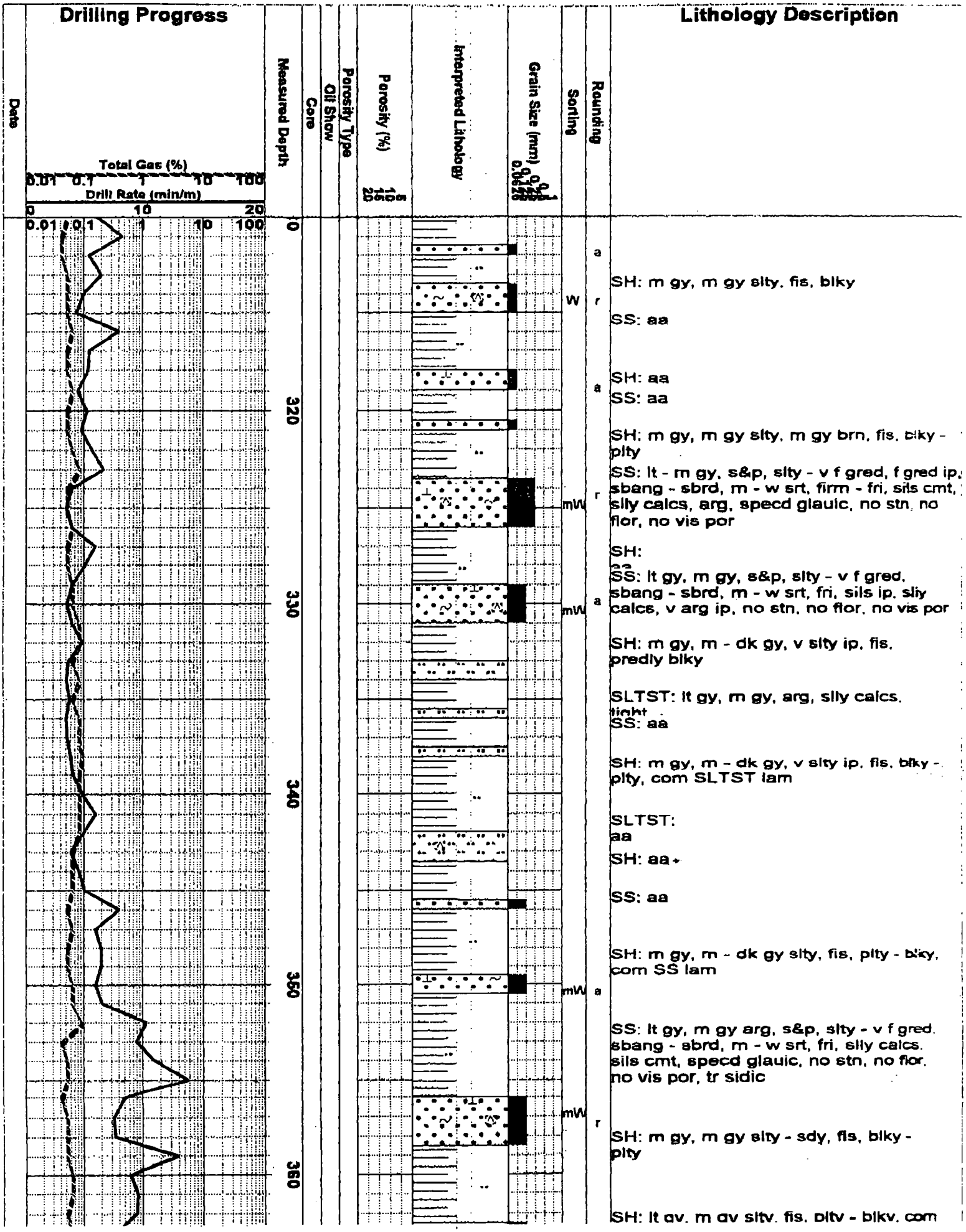
Depth: 435m
Progress: 104m
Average ROP: 8.3m / hr

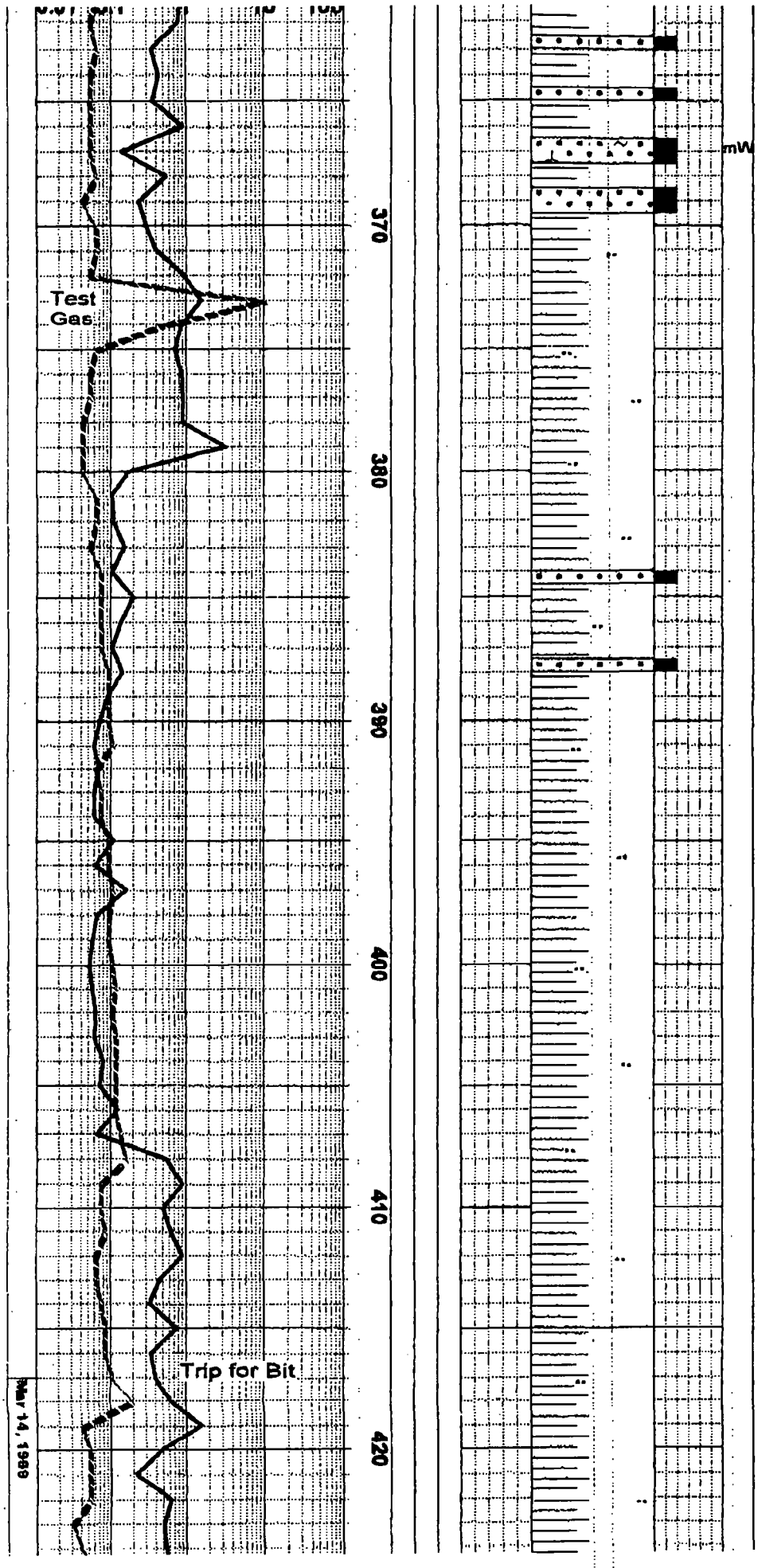
Formation: Fort St. John

Operational Status: Drilling

Operational Summary: Drill and survey 311mm pilot hole, Trip for bit, Clean to bottom, Drill 311mm hole.

Remarks: Interbedded sandstones and shales, no shows. Sand sloughed in from upper hole, had to clean from 110m to bottom. Last survey at 3/4.


Drilling Progress
Date
Total Gas (%)
0.01 0.1 1 10 100
Drill Rate (min/m)
0 10 20
Measured Depth
Core
Oil Show
Porosity Type
Porosity (%)
Interpreted Lithology
Grain Size (mm)
Sorting
Rounding
Lithology Description
0
320
330
340
350
360
W
mW
mW
mW
mW
a
r
a
r
a
r
SH: m gy, m gy slty, fis, blky
SS: aa
SH: aa
SS: aa
SH: m gy, m gy slty, m gy brn, fis, blky - plty
SS: lt - m gy, s&p, slty - v f gred, f gred ip, sbang - sbrd, m - w srt, firm - fri, sils cmt, slly calcs, arg, specd glauic, no stn, no flor, no vis por
SH:
aa
SS: lt gy, m gy, s&p, slty - v f gred, sbang - sbrd, m - w srt, fri, sils ip, slly calcs, v arg ip, no stn, no flor, no vis por
SH: m gy, m - dk gy, v slty ip, fis, predly blky
SLTST: lt gy, m gy, arg, slly calcs, tight
SS: aa
SH: m gy, m - dk gy, v slty ip, fis, blky - plty, com SLTST lam
SLTST:
aa
SH: aa
SS: aa
SH: m gy, m - dk gy slty, fis, plty - blky, com SS lam
SS: lt gy, m gy arg, s&p, slty - v f gred, sbang - sbrd, m - w srt, fri, slly calcs, sils cmt, specd glauic, no stn, no flor, no vis por, tr sidic
SH: m gy, m gy slty - sdy, fis, blky - plty
SH: lt gy, m gy slty, fis, plty - blky, com



SH: lt gy, m gy slty, fis, plty - blky, com SS thnbds

SH: aa

SS: lt gy, m gy arg, s&p, slty - v f gred, sbang - sbrd, m - w srt, fri, sils cmt. calcs ip, slly arg, specd glauic, no stn, no flor, no vis por

SH: m gy, m - dk gy, v slty ip, fis, blky - pl

SH: m gy, m gy slty, fis, plty - blky

SS: aa

SH: aa

SS: thnbds, lt - m gy, s&p, slty - v f gred, sbang - sbrd, m - w srt, fri, arg, slly calcs, specd glauic, no stn, no flor, no por

SH: aa

SS: aa

SH: m gy, m gy slty, fis, blky - plty

SH: aa

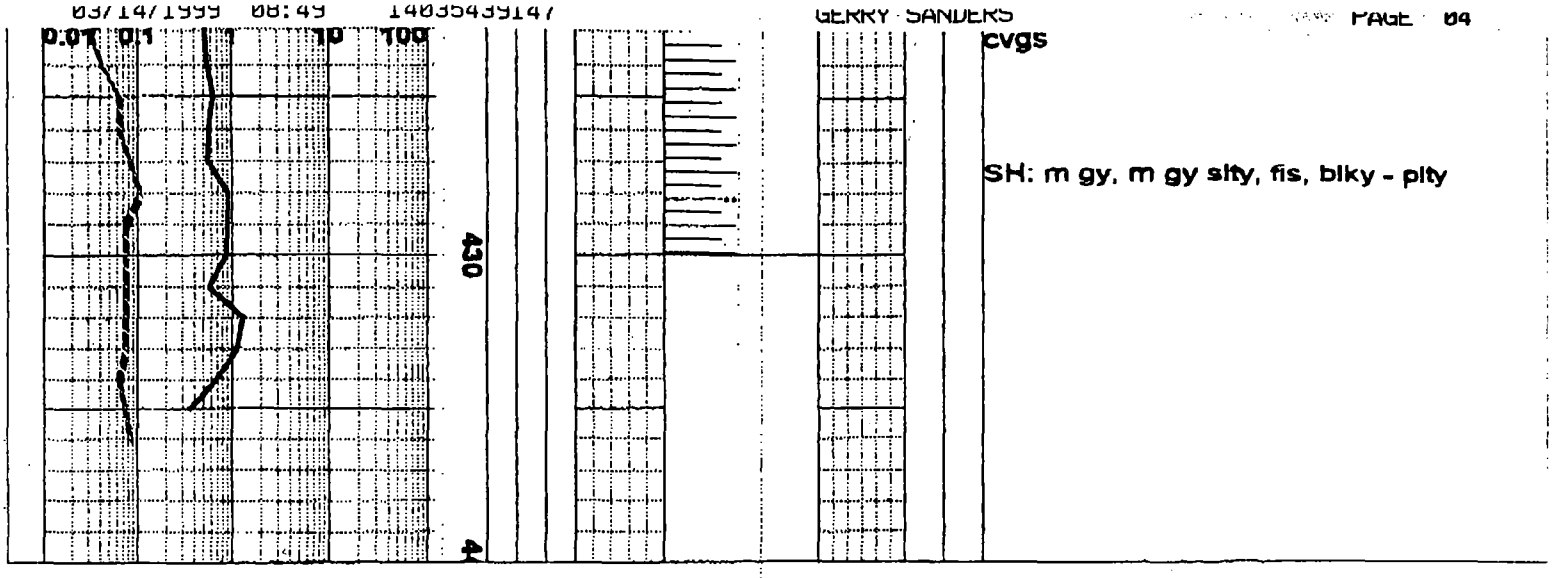
SH: m gy, m gy slty, fis, blky - plty

SH: aa

SH: m gy, m gy slty, fis, blky - plty

SH: m - dk gy, m gy slty, fis, plty - blky, com cvgs

SH: m gy, m gy slty, fis, blky - plty, mnr cvgs


0.01
0.1
1
10
100
430
cvgs
SH: m gy, m gy slty, fis, blky - plty

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-12-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al/Arrowhead LOCATION -60-40-122-00

Day 5 Depth 284 Metres last 24 hr 210 Rotating hrs 21 1/2

Activity at report time Drill 311.2mm Hole @ 344m @ 07:00 Hrs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1100 Vis 43 WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH 10.0
Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1RR	311.2	STC-SDS	70014	6-7 000	115		210	284	21 1/2	29 1/4	9.7	Rang		

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1RR	15.9	15.9	17.5	203	90	152	1.98	30	36/58			6600

DEVIATION SURVEYS

1/8	° at 90 m	1/8	° at 204 m	Gel - 15 Sax	
3/4	° at 120 m	1/8	° at 230 m	Caustic - 1 Sack	
1/8	° at 150 m	1/2	° at 260 m		
1/4	° at 177 m		° at m		

MUD & CHEMICALS ADDED

Gel - 15 Sax
Caustic - 1 Sack

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1 - Bit		311.2	.36	
3 - Drill Collars		228	28.48	
1 - XO Sub		220	.40	
1 - Drilling Jars		168	3.96	
12 - Drill Collars		174	114.04	
1 - XO Sub		164	.58	
6 - Heavi Wate DP		114	54.96	
8 - Drill Pipe		114	57.82	
1 - Kelly		114	3.40	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	21 1/2	
2. Trips		
3. Rig Service	1/2	
4. Deviation Surveys	1 3/4	
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair - Change Pump Head	1/4	
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out		
21.		
TOTAL	24	

COSTS

DAILY 36,500
CUMMULATIVE 226,000

SUPERVISOR Wilbert Callihoo

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-12-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Drill Ahead - 311.2mm Hole - Run Deviation Surveys every 30m - Hole Angle holding Good - Inside 1° - Only able to carry 6-7 ton Bit Weight - Tried with 10-12 ton Bit Weight and Deviation Started to wander out - Drilling at 9-10m/Hr with 6-7 ton Bit Weight - Started w/ 110 Pump Strokes and 130 RPM on the Rotary - Now Down to 94 SPM on the Pumps and 115 on the table - 2 Rig Engines are Wide Open and Overloaded - Conductor Pipe Holding Well - Measured Casing and will Drill to 504m - Surface Casing Depth

WANT LIST:

WEATHER: Cloudy-Cool-S Wind @ 18 Km/H - -8°C ROAD: Good on Highway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 13, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02
Grid Area: 60° 40` 123° 00`
Target Location: C-02

Spud Date: Mar 11, 1999
Days from Spud: 1

Date: Mar 13, 1999
Time: 06:00 hrs
Hours Drilling: 19

Depth: 331m
Progress: 203m
Average ROP: 10.6m / hr

Formation: Upper Cretaceous

Operational Status: Drilling

Operational Summary: Drill and survey 311mm pilot hole.

Remarks: Interbedded sandstones and shales, no shows. Last survey was 1/4. Should be finished pilot hole late tonight.

Drilling Progress

Total Gas (%): 0.01 0.1 1 10 100

Drill Rate (min/m): 0 10 20

Date | Measured Depth | Core | Oil Show | Porosity Type | Porosity (%) | Interpreted Lithology | Grain Size (mm) | Sorting | Rounding

Lithology Description

0.0 Spud Mar 11, 1999 @ 15:25 hrs.

Drill out 311mm pilot hole under conductor pipe

Mar 11, 1999

10 — CMT: Oilfield cement

TILL: glac dft, sand and clay with occ cblsts

TILL: aa

20 — TILL: glac dft, sd and cly with occ cblsts

TILL: aa

30 — TILL: glac dft, sd and cly with occ cblsts

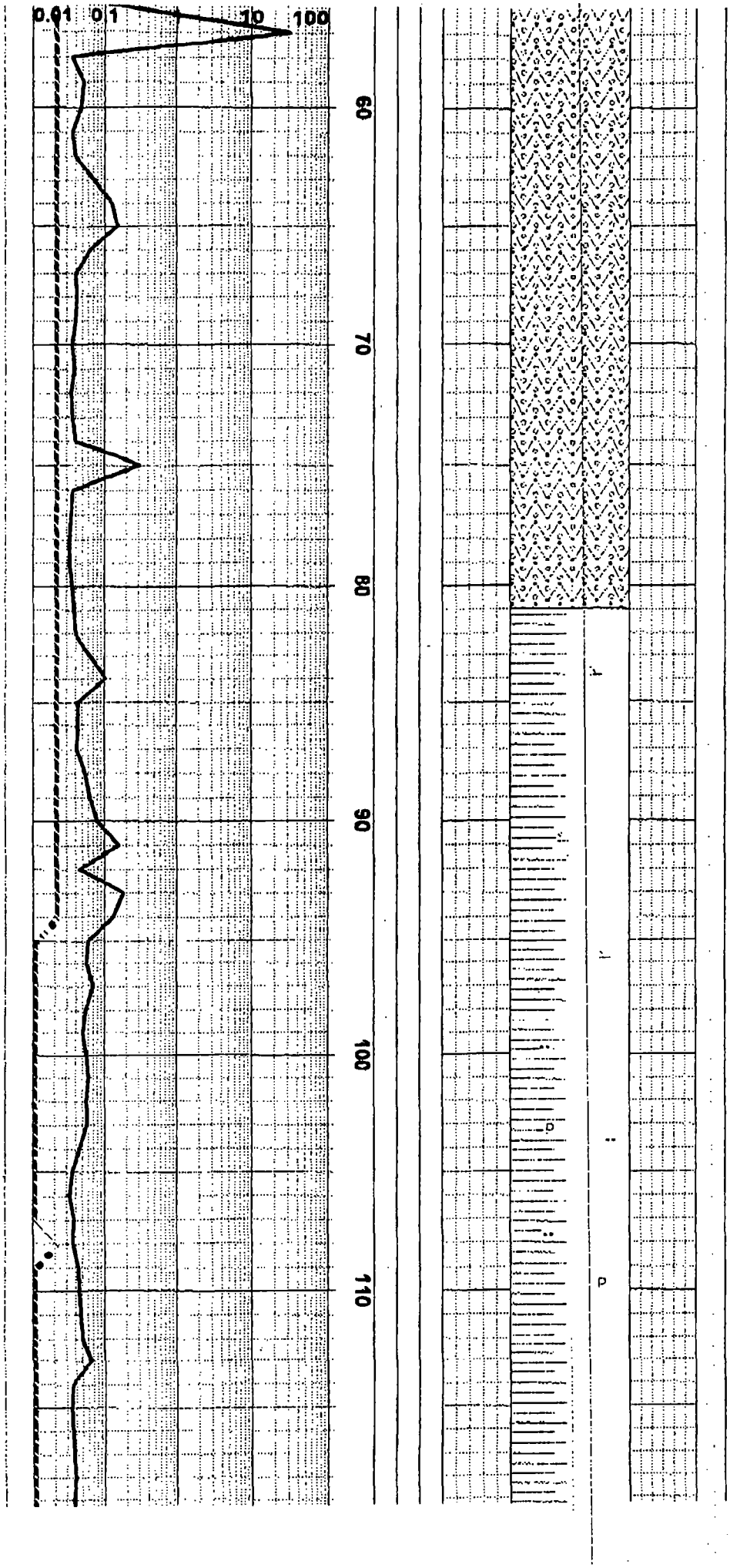
TILL: aa

40 — TILL: glac dft, sd and cly with occ cblst

TILL: aa

50 — TILL: glac dft, sd and cly with occ cblsts

TILL: aa



TILL: aa

TILL: glac dft, sd and cly with occ cblsts

TILL: aa

TILL: glac dft, sd and cly with occ cblsts

SH: m gy, dk gy, mnr lt brn, sbfis - fis, plty

SH: m gy, dk gy, mnr m brn sidic, fis, plty

SH: aa, abnt sd cvgs

SH: aa, com cvgs

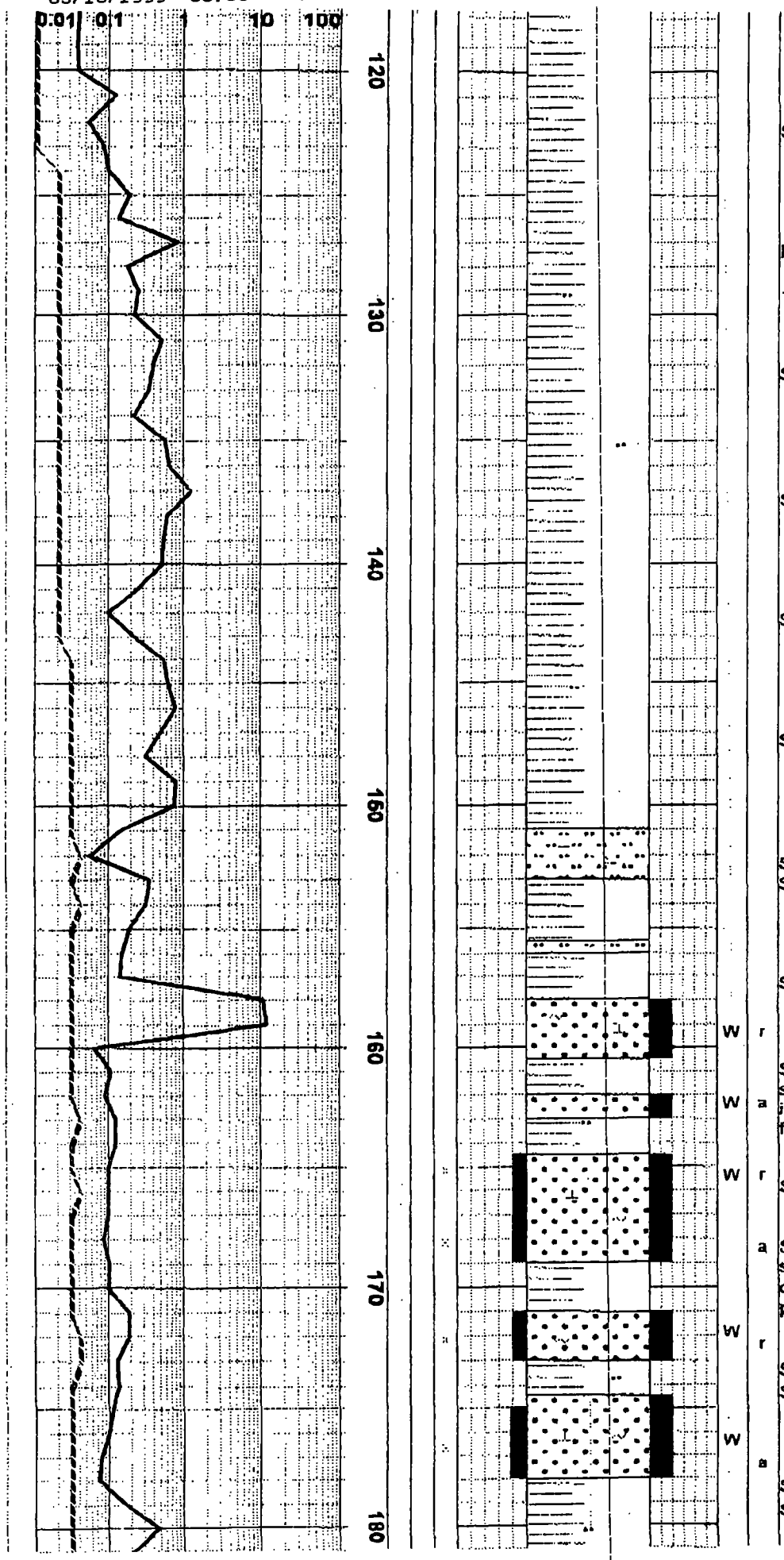
SH: m - dk gy, m gy, m gy slty, fis, plty - blky

SH: m gy, m gy v slty, sdy ip, fis, blky, com dism pyr

SH: m gy, m gy slty, tr of dism pyr, fis, plty - blky

SH: aa

SH: m gy, m - dk gy brn, fis, plty - blky



SH: aa

NO SPL:

SH: m gy, m - dk gy, slty ip, fis, plty - blky

SH: aa

SH: m gy, m - dk gy, slty ip, fis, plty - blky

SH: aa

SH: m gy, m gy slty, fis, plty - blky, mnr SLTST dk brn, arg, sidic

SH: aa

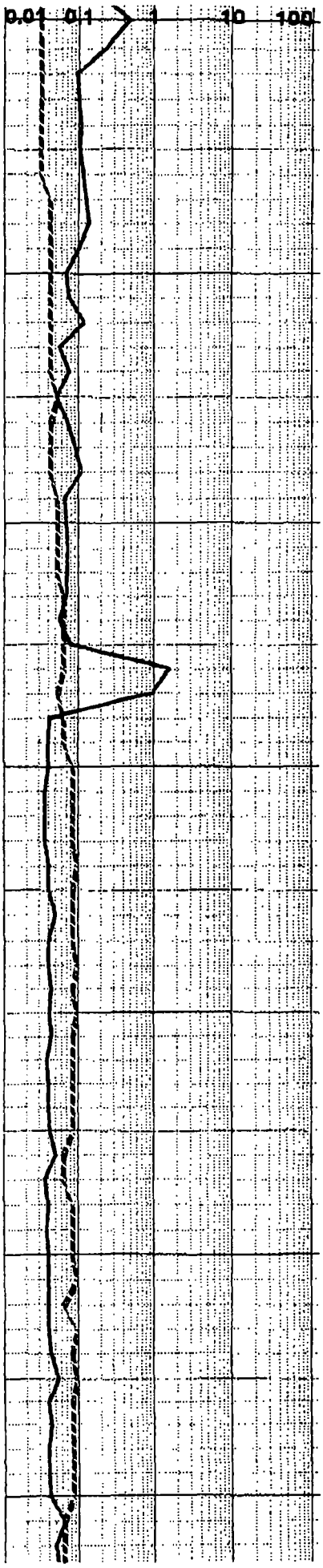
SS: lt gy, m gy, s&p, slty - f gred, sbang - sbrd, m srt, fri, calc cmt, cly inflg, specd glauic, slly arg, no stn, no flor, no vis por

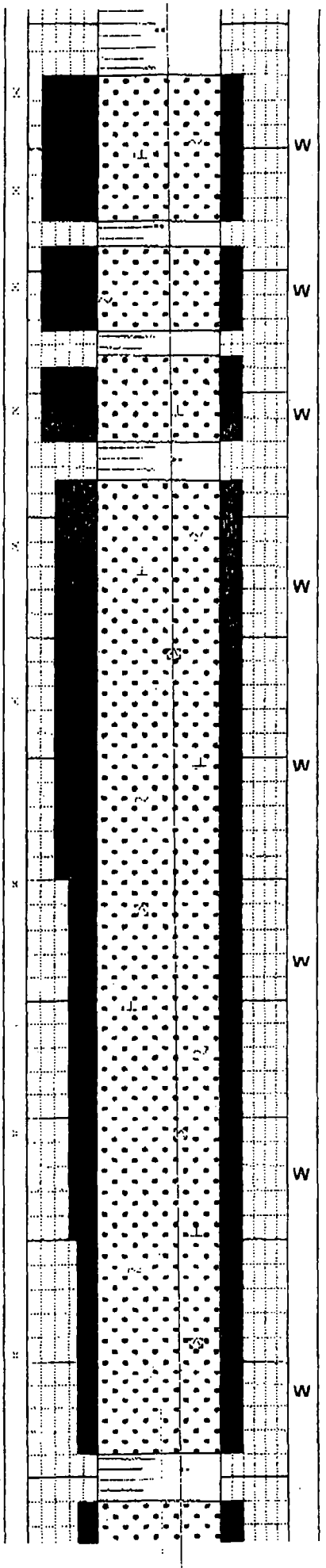
SH: aa

SS: lt gy, s&p, slty - v f gred, sbang - sbrd, w srt, firm - fri, arg ip, specd glauic, calc cmt, cly inflg ip, no stn, no flor, patchy intgran por 6-8%

SH: m gy, m gy slty, sdy ip, fis, blky - plty
SS: aa

SH: aa
SS: aa, v arg ip





SS: aa, v arg ip

SS: lt gy, s&p, slty - v f gred, sbang - sbrd, w srt, v fri - py cons, lt calc cmt, arg ip, specd glauic, no stn, no flor, intgran por to 20%, mnr SH aa

SS: aa

SH: m gy, m gy slty, fis, blky - plty

SS: aa, abnt cvgs

SS: lt gy, s&p, predly qtz, slty - v f gred, sbang - sbrd, w srt, v fri, lt sils cmt, slly calcs ip, mnr specd glauic, no stn, no flor, scat intgran por to 15%

SS: aa

SS: lt gy, s&p, predly qtz, slty - v f gred, sbang - sbrd, w srt, v fri, lt sils cmt, slly calcs, specd glauic, no stn, no flor, scat intgran por to 15%

SS: aa

SH: aa

SS: lt gy, s&p, predly qtz, slty - v f gred, sbang - sbrd, w srt, slly arg, v fri - py cons, slly calcs, lt sils cmt, specd glauic ip, no stn, no flor, scat intgran por 8-10%

SS: aa

SH: m gy, m gy slty, sdy ip, fis, plty - blky, tr m brn sidic

SS: aa

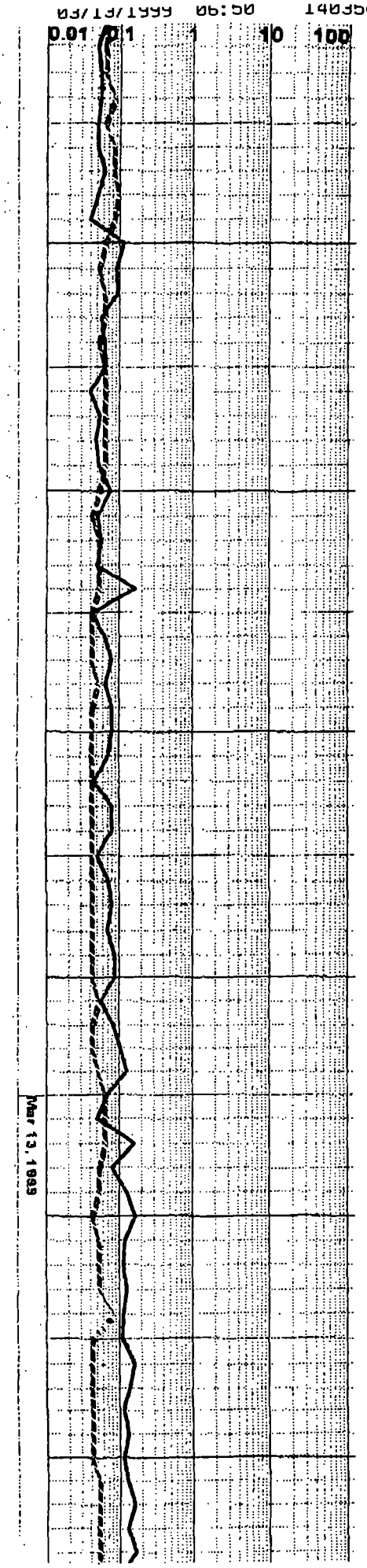
SH: m gy, m gy slty, fis, blky - plty

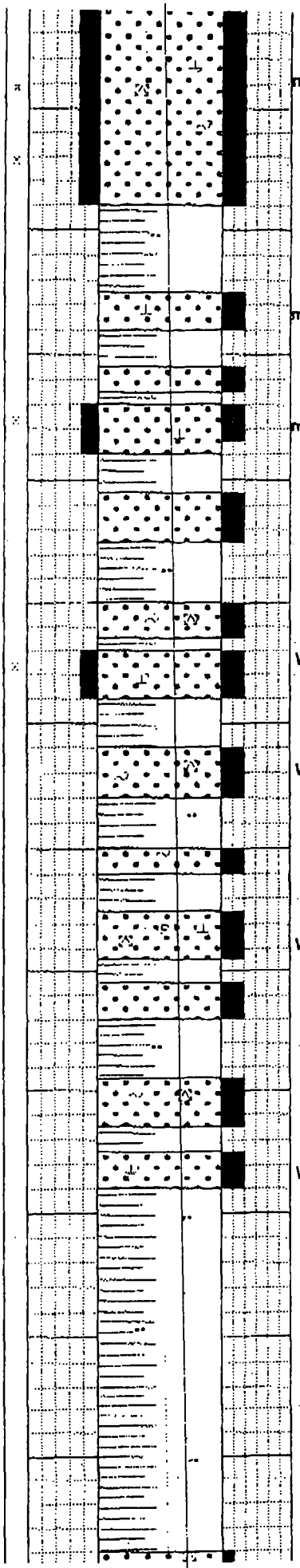
SS: lt gy, s&p, slty - v f gred, sbang - sbrd, w srt, v fri, slly arg, calcs ip, lt sils cmt, specd glauic, no stn, no flor, scat intgran por 6-8%

SS: aa

SH: m gy, m gy slty, fis, blky

SS: lt gy, lt - m gy arg, s&p, slty - v f gred, sbang - sbrd, m - w srt, v fri, slly





SS: lt gy, lt - m gy arg, s&p, slty - v f gred, sbang - sbrd, m - w srt, v fri, slly calcs, lt sils cmt, specd glauic, no stn, no flor, scat intgran por 6-8%

SH: m gy, m gy slty, m brn, fis, blky

SS: lt gy, lt - m gy arg, s&p, slty - v f gred, sbang - sbrd, m - w srt, v fri, slly calcs, lt sils cmt, specd glauic, no stn, no flor, scat intgran por 6-8%

SH: m gy, m gy slty, m brn, fis, blky

SS: aa

SH: aa

SS: aa

SH: aa

SS: lt gy, m gy, s&p, slty - v f gred, sbang - sbrd, w srt, arg ip, v fri - py cons, slly calcs, specd glauic, lt sils cmt ip, no stn, no flor, scat intgran por 6-8%

SS: aa, m gy arg

SH: m gy, m - dk gy, m - dk brn, sbfis - fis, blky - plty

SS: m gy, lt gy, s&p, slty - v f gred, sbang - sbrd, m srt, v arg ip, v py cons, slly calcs, no stn, no flor, no vis por

SH: m gy, m gy brn, slty ip, sbfis - fis, blky, tr of dism pyr

SS: lt - m gy, m gy, s&p, slty - v f gred, sbang - sbrd, m - w srt, arg, fri, slly calcs, specd glauic, no stn, no flor, no vis por

SH: m gy, m gy slty, m gy brn, sbfis - fis, predly blky

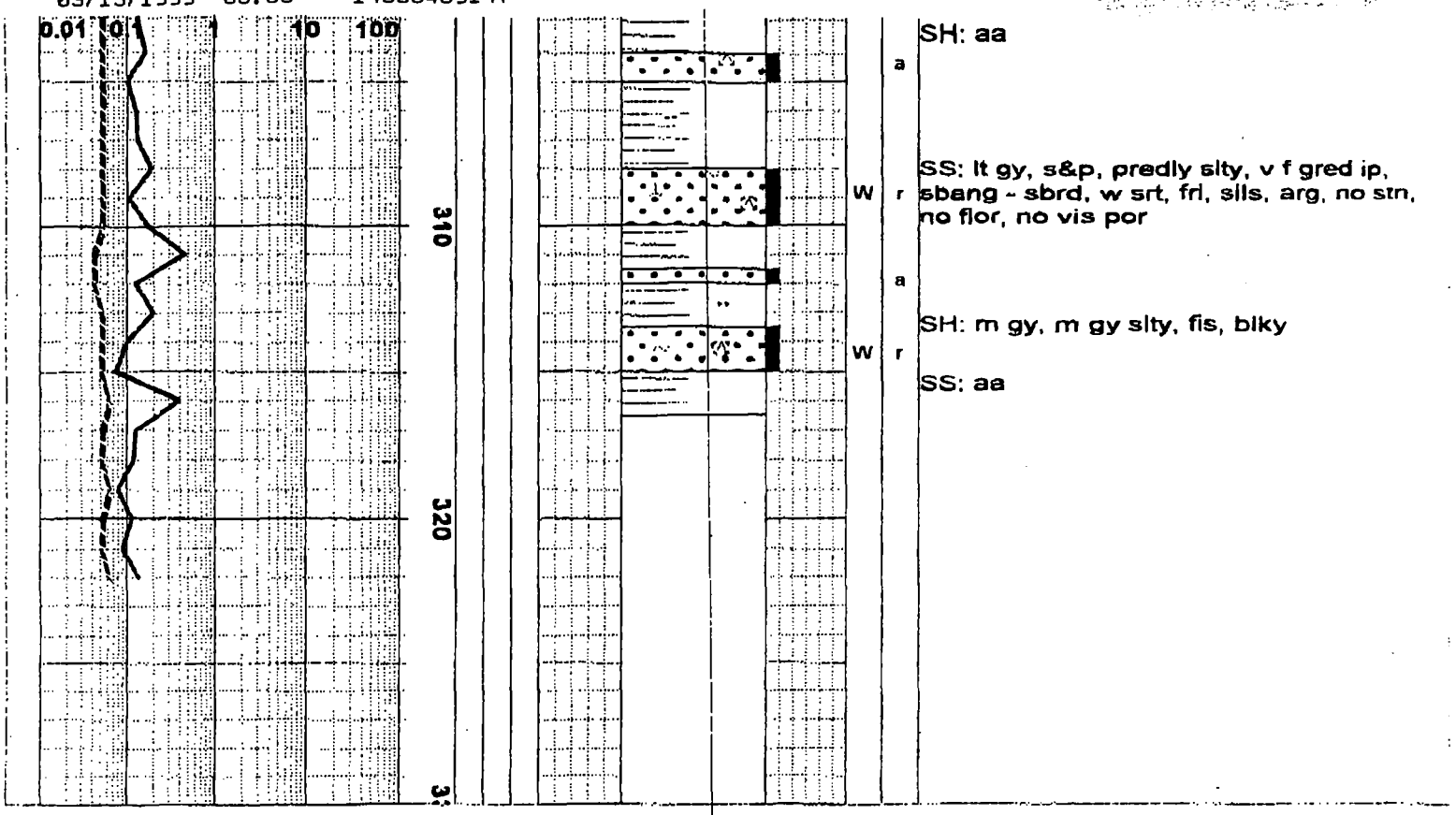
SS: aa

SH: m - dk gy, dk gy, slty ip, sbfis - fis, blky - plty, corn sd cvgs

SH: aa

SH: m gy, m - dk gy, slty ip, sbfis - fis, plty - blky

SH: aa


0.01
0.1
1
10
100
310
320
W
W
a
r
a
r
SH: aa
SS: lt gy, s&p, predly slty, v f gred ip, sbang - sbrd, w srt, frl, slls, arg, no stn, no flor, no vis por
SH: m gy, m gy slty, fis, blky
SS: aa

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-11-24:00 (Yr - Mon - Day - Time)

WELL NAME Paramount et al Arrowhead LOCATION C-02-100-10-123-00

Day 4 Depth 74 Metres last 24 hr 74 Rotating hrs 7 3/4

Activity at report time Drill 311.2mm Hole @ 135m @ 07:00 Hrs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt 1070 Vis 42 WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH 10.5

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G
1RR	311.2	STC-SDS	70014	1-5	65/130		74	74	7 3/4	7 3/4	9.54	Rrog		

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa
1RR	15.9	15.9	17.5	203	27/100	152	2.2	32	38/60			3800

DEVIATION SURVEYS

1/4	at 30 m			at	m
1/4	at 60 m			at	m
	at m			at	m
	at m			at	m

MUD & CHEMICALS ADDED

Gel - 85 Sax
Caustic - 2 Sax
Sodaash - 2 Sax
Drilling Detergent - 1 Pail - 20 litres

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN
1 - Bit		311.2	.36	
3 - Drill Collars		228	28.48	
1 - XO Sub		220	.40	
1 - Drilling Jar		168	3.96	
3 - Drill Collars		174	28.56	
1 - XO Sub		164	.58	
1 - Kelly		114	12.00	

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling	7 3/4	
2. Trips		
3. Rig Service	1/2	
4. Deviation Surveys	1/2	
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation	1 1/2	
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS	9 3/4	
16. Work Mud Ring	1/4	
17. Make up BHA	2	
18. Laying Down DP & BOP's		
19. Weldon 20" Flange	1 1/4	
20. Rig up - Tear out		
21. Safety Meetings	1/2	
TOTAL	24	

COSTS

DAILY

CUMMULATIVE

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-11-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-23-00

OPERATIONS DETAIL:

Finish Welding Conductor Pipe Riser onto 20" Flange - Put Riser on Top of 20" Hydril and Hook up Flow Line - Lay Bleey Line - Hook up Kill Line - Fill Mud Tanks with Water - Function Test Annular Diverter - Pickup - Make up and Run in BHA - Held Pre-Spud Operational and Safety Meeting with Crew - Did Rig Check - Pressure Test 20" Diverter and Conductor Pipe - Broke Down and Started to Leak up into Cellar at Less than 1000 Kpa - Mix up Hi Vis Mud (90 Vis) in Suction Tank - Circ thru Cond Pipe and Cond Pipe Cement Job Sealed off and Holding - Drill Ahead - Clean Mud Ring out of Flowline Run Surveys and Deviation Holding ok -

Since Midnite - Drill Ahead - Run Surveys

WANT LIST:

WEATHER: Clear - Calm - Cool - 8° C ROAD: Good on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Geological Morning Report

Mar 12, 1999

Report To: Paul Collens
Report from: Colin Bredin
1-250-774-0521
Satellite Phone: 1-600-700-5443
Satellite Fax: 1-403-543-9147

Well Name: Paramount Berkley Arrowhead C-02 **Spud Date:** Mar 11, 1999
Grid Area: 60° 40' 123° 00' **Days from Spud:** 0
Target Location: C-02

Date: Mar 12, 1999
Time: 06:00 hrs
Hours Drilling: 11

Depth: 128m
Progress: 0m
Average ROP: 11.6m / hr

Formation: Surface hole

Operational Status: Drilling

Operational Summary: Spud in with 311mm bit, Drill and survey pilot hole.

Remarks: Clay and sand with a few cobblestones from conductor to 81m. Subfissile Shale at 81m. Drilling good, last survey was 3/4°. Gas sniffer on line. No shows. Checked to the north but didn't find anyone. Suncor has a service rig on their location with Schlumberger backed up to it.

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-10-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 3 Depth ✓ Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Nipplingup 20" Diverter Stack

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt ____ Vis ____ WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCs ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips		
3. Rig Service		
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out – Rigup	24	
21.		
TOTAL	24	

COSTS

DAILY	31500
CUMMULATIVE	164500

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-10-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-80

OPERATIONS DETAIL:

Finished Putting up PreFabs around Rig Floor & Substructure Rig up Rig Floor - Hook up Mud Pumps and Mud Tanks - Put Water in Boiler and Build up Steam - Fill Water Tank - Get Water & Steam Line thru Rig - Put 9 "4 3/4" Drill Collars on Racks along with Heavi-Wate Pipe & 13 3/8" Surface Casing Spot Cement Bin and 400 Bbl Tank For Cementing Water Put Water in Mud Tanks & Prepare to Mix Pre-Spud Mud Pick up Kelly - Hook up to Swivel - Set Rat Hole Sack in Rat Hole Spot 20" Diverter Equipment under Sub - Take 20" Conductor Flange off Drilling Spool - Will have to do quite a Bit of Welding and Modification to Nipple up 20" Stack due to Height of Sub - Have to Add on 16" to Conductor Pipe and Change Riser and Flow Nipple above 20" Hydril - Get all Yard Lights Setup and Working - Brought Overhead of Fuel Dug Sewer Trench For Wellsite Shacks - Hook up Geologist & Mudman Shacks -

Since Midnite - Finish Welding on 20" Flange on Conductor Pipe - Press Test Weld - Held OK - Put on Drilling Spool and Side Valves - Install Hydril - Putting on Riser & Flow Nipple

N.B. - Crew - 6:00 AM

WANT LIST:

WEATHER: Clear - Cool - Wind - 20 Km H S.E. -8°C ROAD: Good on Hiway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-09 24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-10-123-00

Day 2 Depth ✓ Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Rig up Rig - Hook up lines - Finish Putting up PreFabs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt ____ Vis ____ WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCs ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips		
3. Rig Service		
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out & Move Rig	24	
21.		
TOTAL	24	

COSTS

DAILY 113,000

CUMMULATIVE 133,000

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 90-03-09-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

Finish Laying Rest of Matting on Location - Unload Bottom End of Derrick off Bed Truck with Cranes - Pin Derrick on Sub & Put Crown on Derrick Stand - Put up Doghouse - Raise A-legs - String Drilling Line Thru Blocks & Crown - Put Monkey Board on Derrick - Spot all Buildings and Tanks - lay Matting & Spot Centrifuges and Slop Tank - Move Surplus Mud Products and Vac Tower From Old Location - Unload Truck w/ Loader and Stack Mud Products at Edge of Lease - Warm up and Start Light Plant - Build up Air - Start Flare Motor - Raise Derrick @ 18:30 Hrs. - Start to Put up Pre Fabs - Hookup Water - Steam & Fuel Lines - Get Lights Working - Spot all Wellsite Shacks - Move over Drill Collars - Drill Pipe and Pipe Racks - Spot Racks - Unload Collars & Pipe - Put in Catwalk - Ramp & Stairs - Cranes Finished and Released @ 14:00 Hrs - Trucks Released @ 18:00 Hrs. - Rigging Up.

Slower Moving and Rigging up - Had only 1 Crew most of Day Due to Crew Change - Incoming Crew did not start to Work until 14:00 Hrs - Had 2 Crews till 20:00 Hrs.

Pipe Racks back to Swarberg Trucking - Ft St. John
Wellsite Unit back to C&V Rentals - Grande Prairie

WANT LIST:

WEATHER: Clear - Wind - S.E. @ 20 Km/H - Cool - 10°C ROAD: Good on Highway - Fair to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Sent Back with Rig Move Trucks - 284 Jts - 3½" Drill Pipe Grade E & X95 - 21 Jts 8¾" Spiral Drill Collars - 4" Hex Kelly & Rollers - All Handling Equipment - Subs - Tongs & Pickup Subs
Went back to Weather Ford in Fort St. John

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT

FOR 24 HR PERIOD ENDING 99-03-08-24:00
Yr - Mon - Day - Time

WELL NAME Paramount et al Arrowhead LOCATION C-02-60-40-123-00

Day 1 Depth ✓ Metres last 24 hr ✓ Rotating hrs ✓

Activity at report time Rig up on New Location @ 08:00 Hrs.

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

Wt ____ Vis ____ WL ____ Gels ____ Solids ____ % PV ____ YP ____ pH ____

Oil ____ % Sand ____ % Cake ____ PPMCL ____ PPMCa ____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM m. DRLD	Rot hrs TODAY	CUM. Rot hr	m/hr	Dull Cond. T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm 1	2	3	PUMP STROKE	SPM	LINER	m³/MIN	ANN. VEL. DP	DC	JET VEL.	HHP	SURF. PRESS. kPa

DEVIATION SURVEYS

____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m
____ ° at ____ m ____ ° at ____ m

MUD & CHEMICALS ADDED

BOTTOM HOLE ASSEMBLY

TOOL	ID mm	OD mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. Drilling		
2. Trips		
3. Rig Service		
4. Deviation Surveys		
5. Ream & Cond. Hole		
6. Mix & Cond. Mud		
7. Circulation		
8. Rig Repair		
9. Run Casing & Cement		
10. Fishing		
11. Logging		
12. Coring		
13. Formation Testing		
14. Waiting on:		
15. Nipple Up & Test BOPS		
16. Drilling Out		
17. Lost Circ.		
18. Laying Down DP & BOP's		
19. Plug & Abandon		
20. Rig up - Tear out & Move	24	
21.		
TOTAL	24	

COSTS

DAILY	20,000
CUMMULATIVE	20,000

SUPERVISOR Wilbert Callihoo

PARA-DRL_RPT.xls

PARAMOUNT RESOURCES LTD.

DAILY DRILLING REPORT (page 2)

FOR 24 HR PERIOD ENDING 99-03-08-24:00
Yr - Mob - Day - Time

WELL NAME Paramount et al [illegible] LOCATION C-02-60-40-123-00

OPERATIONS DETAIL:

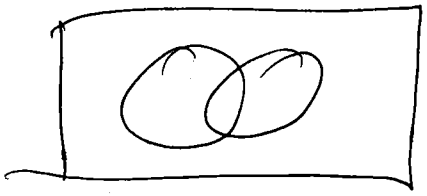
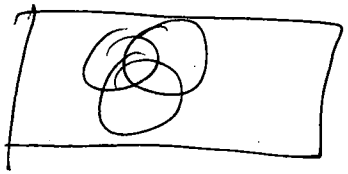
Brought in Swanberg Bros Trucking - Take Apart - Move and Setup Camp at New Location - Camp Move West O.K. Camp Operational at New Location @ 16:00 Hrs - All Building O.K & Camp Working - No Damage on Move.

Brought in 2 Cranes For Rig Move - Let Down Dog house - Stairs - Draw Works & A Legs - Unpin and Take Derrick off Sub - Move all Buildings and Tanks - Take Sub apart & Move Load Matting - Move to New Location - Lay Matting in place at New Location - Spot Sub and Put Sub Together - Set BOPs Under Sub - Load Derrick on 2 Bed Trucks with Cranes - Move Derrick in 1 Piece - Very Slow Moving due to Narrow Road - Start to Spot Buildings and Tanks. Rig Move Going O.K so Far.

Released Cardusty Vacuum Truck - Will be using Vacuum Truck that was on Rig #379 - Newer and Better Truck.

WANT LIST:

WEATHER: Clear - Wind - 15 Km/H - N - Cold - 26°C ROAD: Snow on Highway to Location

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Sent 20 Joints 4½" - XH - Grade E Pipe to Rig #373 - From Drill String of Rig #507
Also sent over 48 Joints 3½" Heavi Wate Drill Pipe to Rig #373
Rental Pipe From Weather Ford Ft. St. John