



DRILLING FLUID RECAP  
APPENDIX 3 FROM WCR  
BOGGY CREEK - 1  
W1053

# **APPENDIX-3**

## **Drilling Fluid Recap**

GAS & FUEL EXPLORATION

BOGGY CREEK NO. 1

PEP104, OTWAY BASIN

Prepared by : J. McLaughlin

Dated : January 1992

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GAS & FUEL EXPLORATION  
 BOGGY CREEK NO. 1.  
PEP 104, OTWAY TROUGH

WELL SUMMARY

Operator : Gas & Fuel Exploration  
 Well Name : Boggy Creek No. 1  
 Location : PEP104, Otway Basin, Vic.  
 Contractor/Rig : Gearhart/ Rig 2  
 Rig on Location : 15th Dec 1991  
 Spud Date : 21st Dec 1991  
 Datum/RKB Elevation : 6m  
 Total Depth : 1900m  
 Date Reached TD : 4th January 1992  
 Total Days Drilling : 15  
 Rig Off Location : 12th January 1992  
 Total Days on Well : 22

<u>Drilling Fluid Type</u>	<u>Interval</u>	<u>Hole Size</u>	<u>Cost (A\$)</u>
Flocculated Spud Mud	Surf - 323m	12 1/4"	\$ 1,669.82
KCl/EZ MUD	323m - 1900m	8 1/2"	\$ 27,265.80
Mud Materials Charged to Drilling			\$ 28,935.62
Engineer on Location from Dec 20 to Jan 10			
Drilling Fluid Engineering: 22 days @ \$495.00			\$ 10890.00
Total Cost Drilling Materials & Engineering			\$ 39,825.62
Sodium Chloride completion brine			\$ 3,705.79
Cementing, etc			\$ 449.29
Total mud materials not charged to drilling			\$ 4,155.08
Casing Programme	:	9 5/8" @ 316m 7" @ TD	
Drilling Supervisor	:	Gerard Nicot	
Baroid Drilling Fluid Engineer:		Joe McLaughlin	

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

12 1/4" Hole (Surface to 323m) - 2 Days

9 5/8" Casing Set at 316m

Boggy Creek No. 1 was spudded at 1100 hours on December 21st, 1991, using Gearhart Rig No. 2.

The drill water was tested at 250 mg/l Chlorides, 100 mg/l Total Hardness and 80 mg/l Calcium.

A fresh-water flocculated AQUAGEL spud mud was used to drill the 12 1/4" hole section. 120 bbls of AQUAGEL was prehydrated prior to spud. Initially the active surface mud volume was restricted to one surface mud tank, with mud properties of:

Mud weight	:	8.6 ppg
Viscosity	:	48 secs/quart
PV	:	8 cP
YP	:	24 lb/100ft <sup>2</sup>
Gel Strength	:	7/12 lb/100ft <sup>2</sup>
Cl	:	500 mg/l
pH	:	9
Snd	:	5%
Sol	:	4%
TH(Ca)	:	160 mg/l
MBC	:	11 ppb
Pf/Mf	:	0.05/0.1

As drilling proceeded through the Port Campbell Limestone the initial pump rate was kept to 250 gpm to avoid washing out the conductor as it had not been cemented. However washout did occur at 145m with returns to the cellar.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

12 1/4" Hole (Surface to 323m) - 2 Days

Cont'd

9 5/8" Casing Set at 316m

It was decided to continue drilling to casing point, with returns being jetted back into the mud tanks without attempting a cement job. Drilling continued through the Gellibrand Marl with a reduced pump rate, but as the flow from the washout slowed the pump rate was increased to 340 gpm.

As the Gellibrand Formation dispersed rapidly into the mud system the viscosity rose to > 60, the MBT to 15 lb/bbl and the mud weight increased from 8.6 to 8.9 ppg by 282m. This was reduced by incorporating the other mud tanks which were half full of water into the mud system. The sandtrap was partially dumped on connections to make space for dilution at a rate of ~30 bbl/hr.

The solids control equipment initially consisted of B60/B100 shaker screens although the desander and desilter were tried, however the discharge volume tended to be on the excessive side and the weight of the discharge was only 8.7ppg-8.9ppg, as this was unacceptable they were shut down for maintenance.

At 323m the hole was circulated clean for 2 hours and a wiper trip run prior to pulling out to run 9 5/8" casing. When the casing was run 5m of fill was encountered and was circulated out of the hole. Two batches of 2% gel had to be mixed for the lead cement slurry due to problems caused by leaking valves within the mud tanks and the inherent difficulty in using two rig pumps for

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

12 1/4" Hole (Surface to 323m) - 2 Days

Cont'd

9 5/8" Casing Set at 316m

the cement job, one to jet the returns from the cellar the other to pump the gel premix to the cementer, when there is only one suction line. The only solution to the problem with the pumps was to forget about jetting the cellar until after the cement had been pumped with the result that about 70 bbls of mud was displaced into the cellar and from there to the sump as no other pump was available on the lease to drain the cellar back into the active mud system. The cement was then displaced with mud and cement observed at the surface in the cellar.



GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

8 1/2" hole 323m - 1900m - 13 days

7" casing to TD

While the BOP's were being nipped up, the mud system was pretreated with 0.4 ppb Sodium bicarbonate. The 9 5/8" shoe was drilled out with the flocculated mud from the 12 1/4" hole with very little increase in viscosity. A formation integrity test was run at 323m giving a equivalent mud weight of 15.3ppg.

Drilling then continued rapidly through the Gellibrand Marl, with the flocculated gel mud. Near the base of the Marl and through the Clifton Formation a significant thinning of the mud occurred which could not be explained, as no appreciable quantities of organic matter was observed in either formation. Aquagel premixes (10 ppb) were added to increase the yield point and increase the quantity of cuttings returning to the shakers, the hole was also swept with high viscosity sweeps with no increase in cuttings at the shakers.

The viscosity and yield point began to increase rapidly in the Narratwurk Marl, reaching 70+ sec/qt, as the marl dispersed into the mud. Premixeds were made up as follows and added to the system:

Water	:	100 bbls
KCl	:	18 ppb
PAC-R	:	2 ppb
EZ MUD	:	.6 ppb

Within a few circulations the mud was back in shape with a yield point < 25 lb/100ft<sup>2</sup> and viscosity 45-50 sec/qrt. PAC-R/KCl premixes continued to be added whilst drilling the Mepunga Formation reducing the water loss to 12 ml/30 min by 595m.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL

Cont'd

On entering the Dilwyn Sandstone it was anticipated that a decline in the clay content and thus the yield point and filter cake of the mud would occur; which is what did happen. However the cause of this decline was not due entirely to the coarse clean sandstones but also to the very dispersive organic-rich interbedded mudstone. Rather than continue to add AQUAGEL to the system to overcome the problem it was decided to continue the conversion of the gel mud system to the KCl/EZ MUD system which had been started in the Narratwurk and Mepunga Formations in order to try to prevent the problem. The aim was to use the KCl to stop the mudstone dispersing and the EZ MUD to encapsulate the mudstone and the organic matter so it could be easily removed at the shakers.

At 852m the rate of penetration rapidly declined as the Pember Formation was drilled. At 880m and 904m samples were circulated on drill breaks looking for the top of the Pebble Point Formation. The standard method throughout the hole was to circulate 5 minutes on bottom and then pull back one stand to circulate the sample to surface so as not to wash the hole out at a possible DST packer zone. Whether this method worked on this well is inconclusive; however, there is a washed out area within the base of the Pember Formation, which was subjected to several "bottoms up" circulations; this is possible support for this approach.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL

Cont'd

Through the Pember and Pebble Point formations concentrated premixes of PAC-R/KCl/EZ MUD consisting of: 2 ppb PAC-R, 18 ppb KCl and 2 ppb EZ MUD, were added to reduce the water loss and maintain the yield point.

By 952m premix additions were maintaining the mud weight at 8.8 ppg, other mud properties were:

Viscosity	:	44 secs/quart
PV	:	14 cP
YP	:	16 lb/100ft <sup>2</sup>
Gel Strength	:	3/5 lb/100ft <sup>2</sup>
pH	:	8.5
MBC	:	8 lb/bbl
F	:	9.0 cm <sup>3</sup> /30min
Th	:	160 mg/l
Cl	:	14000 mg/l.

From the top of the Paaratte Sandstone the addition of AQUAGEL premixes (10 ppb) were required to maintain the yield point and filter cake integrity. Mud losses up to 40 bbl/hr (averaging 10 bbl/hr) were encountered whilst drilling the Paaratte Formation; however, at the time lost circulation material was not present on the lease and these losses continued until the bit was pulled at 1076m. With the addition of a stabiliser to the BHA the new bit had to be reamed from 538m to 1076m over a period of 16 hours. The returns at the shakers whilst reaming consisted of up to 25% filter cake however as mud losses had reduced to <5 bbl/hr, it was decided not to add the newly arrived lost circulation material at this point as the seepage losses were apparently self-arresting.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL

Cont'd

The shaker screens were upgraded to a B60/B80 & a B80/B100 and all pieces of solids control equipment, having been stripped apart and cleaned, were operated. The desander continued to discharge at an excessive rate sometimes up to 7 bbls/hr, however spare parts were scarce and little could be done to fix the problem throughout the well, so the desander was generally run until its discharge weight dropped to <10 ppg and then it was turned off.

Another factor which contributed to a very inefficient solids control system was the fact that equalisers within the mud tanks had rusted and some were immovable. This meant that a constant mud flow from the shakers to the suction tank could not be maintained without opening pump suction valves in each tank which caused the mud to bypass the solids control equipment and go directly to the pumps.

As the fresh water supply was dwindling it was decided to use sumpwater from 1076m, this was tested initially at: Chlorides 1800 mg/l, Total Hardness 100, Calcium 100 and pH 10. The test done when drilling was completed showed Chlorides 3500 mg/l, Total hardness 140 mg/l, Calcium 140 mg/l and pH 7.

Drilling continued with the Paaratte Sandstone becoming steadily harder and the drilling rate steadily decreasing. From 1245m the Paaratte formation became predominantly claystone, and the clay content began to rise so the addition of the AQUAGEL premixes was stopped and PAC-R/KCl/EZ MUD premixes were increased in preparation for drilling into the Belfast Formation. Losses had decreased to less than 2 bbl/hr

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DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL

Cont'd

Upon drilling into the Belfast formation connection gas began to occur and this continued throughout the Belfast formation stopping when the Waare Formation was entered. The mud weight at this time was a constant 9.2 ppg suggesting that the Belfast is slightly overpressured relative to the Waare and Paaratte Formations.

At 1611m the bit was pulled as the hole deviation had increased to 4 degrees and the bit was torquing up. The new bit was reamed for 11 hours beginning at 1002m to 1058m, from 1229m to 1257m and from 1315m to 1611m.

After the trip premix was continually added to the active to maintain mud volume due to increased seepage losses as a result of the removal of large quantities of filter cake while reaming to bottom. The fact that surface losses were running at up to 10 bbl/hour due to poor condition of the solids control equipment also did not help to reduce the mud consumption rate. At the same time the MBT of the mud increased to 9 - 9.5 ppb equivalent reactive clay at the bottom of the Belfast; the clay seen in the cuttings was very sticky so the concentrations of EZ MUD and PAC-R were increased. Also some splintery pieces of shale had been observed at the shakers after getting back to bottom. Although these cavings soon stopped, they caused some concern that letting the mud weight drop too much while maintaining surface volume could lead to shale problems. Coincidentally, the desilter was shut off for maintenance at this point and the premixes were weighted up to 8.7ppg with KCl.

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BOBBY CREEK NO. 1  
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DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL                      Cont'd

At 1673m a drill break was circulated, and determined to be the top of the Waare Formation. A wiper trip to 1300m was run with tight hole from 1645m to 1400m, overpull of 20/45klbs, the region in which the hole deviation increased markedly. 11m of fill was encountered on running back to bottom and was circulated out before pulling the bit. A drill stem test was run with a flow of 90+% carbon dioxide. At no time up to this point had the mud shown any signs of carbon dioxide contamination and the mud was to show negligible signs of contamination throughout the drilling of the well, an observation consistent with Pine Lodge No. 1. In actual fact the only mud to show major carbon dioxide contamination in this well was the rathole mud recovered after reverse circulating the DST drillstring and that was only a few barrels. The before and after tests were as follows:

	<u>BEFORE</u>	<u>AFTER</u>
pH	9.5	7.5
Pm	0	0
Pf/Mf	.25/.8	0/2.3
Chlorides	19000	17000
KCl	3.6	3.2
Calcium	100	320

A wiper trip was run after the DST and prior to running a 60ft core barrel. The bit was run in the hole to 1662 and reamed to bottom where the jets became solidly blocked, upon pulling out 5 to 6m of pipe scale was found above the bit, probably caused by the flow of carbon dioxide during the DST.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

8 1/2" HOLE INTERVAL

Cont'd

A 60ft core barrel was then run in to 1358m and reamed to 1418m over 6 hours, it was then pulled and a 30ft barrel run. It was reamed from 1200m to 1328m over 3 hours and RIH to 1427m from where it was RIH and reamed to 1673m. 8m of hard fill was found on bottom. This was then pulled and a second 30ft core barrel was run in to 1650m from where it was washed and reamed to bottom. The hole was then cored to 1682m.

The trip gas after coring was 400 units of hydrocarbons which would suggest a trip gas of ~ 4000 units including the carbon dioxide (assuming that the trip gas came from the DST zone which included 90% carbon dioxide). With this amount of gas the mud should have been aerated and weighed a lot less than its true weight, and shown signs of carbon dioxide contamination; none of which were observed, suggesting that the trip gas was mainly hydrocarbons and that for some reason the carbon dioxide was not flowing into the well. Maximum trip gas prior to this was the 40 units observed on the wiper trip with the core barrel.

The hole was drilled to 1900m at an average penetration rate of 8.5 m/hr with no further problems being encountered. BPB logs were run with the static losses being 2-8 bbls/hr, the same as in the dynamic situation. A minor amount of tight hole was encountered whilst logging however a wiper trip made during the logging programme had no problem running to bottom. A further wiper trip was completed after logging prior to running casing, also without any problems.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

DISCUSSION BY INTERVAL

Completion of 8 1/2" HOLE INTERVAL

7" casing was run to TD and the mud treated with a biocide, a corrosion inhibitor and caustic potash, raising the pH to 10. The casing was then cemented and displaced with water.

The mud tanks were then dumped and cleaned and 315 bbls of 9.2 ppg Sodium Chloride Brine containing BARACOR 100 inhibitor/microbiostat were mixed to a pH of 10. A casing scrapper was then run on tubing. The hole was initially reverse circulated with water to clean the rusted tubing, then circulated conventionally prior to reverse circulating a high viscosity pill and the Sodium Chloride Brine. The tubing was then pulled and the well completed and suspended.



GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

Conclusions and Recommendations

- 1) No major problems were encountered whilst drilling the 12 1/4" hole with the exception of the washed-out conductor. The conductor was washed out due to the fact that it had not been cemented in, rather than a high hydraulic regime.
- 2) In the 8 1/2" hole the combination of the 3-4% KCl/EZ MUD system, and low bit hydraulics was successful in achieving a near gauge stable hole with only some minor tight hole problems developing. The use of a slick assembly down to 1076m and the lack of wiper trips resulted in hours of reaming when stabilisers and later core barrels were run in the hole. The fact that the hole deviated markedly over 200m from ~1400m to ~1600m was also a contributing factor.
- 3) The inefficiency of the solids control equipment was a major factor contributing to the increased cost of the effective maintenance of the mud, as greater quantities of mud had to be used to maintain a workable surface volume. When the desilter and desander were stripped after top hole they were found to contain large pieces of rubber and wads of grass wedged in the portholes, its still a mystery how they got there and from where. Even with these foreign items removed they did not work very efficiently and as the well went on more and more cones were sealed as their discharge became excessive. It is recommended that the desander be removed and be replaced with a two cone 20 inch desander.

GAS & FUEL EXPLORATION  
BOBBY CREEK NO. 1  
PEP 104, OTWAY BASIN, VIC.

Conclusions and Recommendations

- 4) Whilst drilling through the Waare Formation negligible Carbon Dioxide contamination of the mud was observed even though hydrocarbons from the same reservoir were being observed. This, in combination with the trip gas mentioned previously, suggests that possibly the hydrocarbons are sourced from a reservoir or sub-reservoir which is close to balance with the mud system whereas the Carbon Dioxide is well underpressured and does not flow into the hole. With possible Carbon Dioxide contamination of the mud expected in this area, the inclusion of a detector in the mudlogging unit would be recommended.

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## MATERIAL RECAP

Page 1

COMPANY Gas & Fuel Exploration N.L. HOLE SIZE 12.25"  
 WELL Boggy Creek No.1 CONTRACTOR/RIG Gearhart Rig 2  
 LOCATION PEP 104, Otway Basin, Victoria MUD TYPE Flocculated Spud Mud

INTERVAL TO (m) 323 DRILLING DAYS 2 COST/DAY \$834.91  
 FROM (m) 17 ROTATING HRS. 19 COST/M \$5.46  
 DRILLED (m) 306 COST/BBL \$1.67  
 DATE December 1991 MUD CONSUMPTION FACTOR (bbl/m) 3.26

MATERIAL	UNIT	UNIT COST	QUANTITY		CONC (ppb)		TOTAL COST (A\$)	
			EST	ACT	EST	ACT	ESTIMATE	ACTUAL
AQUAGEL	25 kg	12.18	213	124	9.9	6.8	2,594.34	1,510.32
Caustic Soda	25 kg	26.42	5	5	0.2	0.3	132.10	132.10
Lime	25 kg	6.85	11	4	0.5	0.2	75.35	27.40

DIESEL	Bbls							
CHEMICAL VOLUME	Bbls		14	8				
FRESH WATER	Bbls		1170	990				
SEA WATER	Bbls		0	0				
TOTAL MUD MADE	Bbls		1184	998				
COST LESS BARYTES							\$2,801.79	\$1,669.82
COST WITH BARYTES							\$2,801.79	\$1,669.82

### COMMENTS

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## MATERIAL RECAP

Page 2

COMPANY Gas & Fuel Exploration N.L. HOLE SIZE 8.5"  
 WELL Boggy Creek No.1 CONTRACTOR/RIG Gearhart Rig 2  
 LOCATION PEP 104, Otway Basin, Victoria MUD TYPE 3-4% KCl/EZ MUD

INTERVAL TO (m) 1900 DRILLING DAYS 15 COST/DAY \$1,817.72  
 FROM (m) 323 ROTATING HRS. 124.5 COST/M \$17.29  
 DRILLED (m) 1577 COST/BBL \$7.29  
 DATE Jan 1992 MUD CONSUMPTION FACTOR (bbl/m) 2.37

MATERIAL	UNIT	UNIT COST	QUANTITY		CONC (ppb)		TOTAL COST (A\$)	
			EST	ACT	EST	ACT	ESTIMATE	ACTUAL
Barite,	50 kg	13.22		30		0.9		396.60
BARACIDE	30 kg	450.07		2		0.0		900.14
AQUAGEL	25 kg	12.18		148		2.2		1,802.64
Caustic Potash	25 kg	36.93	20	13	0.5	0.2	738.60	480.09
EZ MUD	5 gal	57.43	75	71	1.4	0.8	4,307.25	4,077.53
PAC-R	50 lb	149.75	66	71	1.5	0.9	9,883.50	10,632.25
Pot. Chloride, Ag	50 kg	20.25	240	409	11.8	12.1	4,860.00	8,282.25
Soda Ash	25 kg	14.89	10	4	0.2	0.1	148.90	59.56
Sodium Bicarbonate	25 kg	18.78		3		0.0		56.34
BARASCAV D	25 kg	28.92		20		0.3		578.40

DIESEL	Bbls							
CHEMICAL VOLUME	Bbls		45	78				
FRESH WATER	Bbls		2200	3300				
SALVAGED MUD	Bbls		0	360				
TOTAL MUD MADE	Bbls		2245	3738				
COST LESS BARYTES							\$19,938.25	\$26,869.20
COST WITH BARYTES							\$19,938.25	\$27,265.80

### COMMENTS

Watered back mud from previous section was pretreated with 0.4 ppb sodium bicarbonate and used to drill out cement. This mud was then converted to a KCl/EZ MUD System.

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MATERIAL RECAP

Page 3

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1  
 LOCATION PEP 104, Otway Basin, Victoria

CONTRACTOR/RIG Gearhart Rig 2

MATERIAL	UNIT	UNIT COST	QUANTITY		CONC (ppb)		TOTAL COST (A\$)	
			EST	ACT	EST	ACT	ESTIMATE	ACTUAL

Materials not used for Drilling, Testing or Completion

1) 9 5/8" Casing

AQUAGEL	25 kg	12.18		28				341.04
Calcium Chloride	25 kg	16.14		1				16.14

2) 7" Casing

AQUAGEL	25 kg	12.18		7				85.26
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3) Hygiene

Lime	25 kg	6.85		1				6.85
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\$449.29

COMMENTS

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MATERIAL RECAP

Page 4

COMPANY Gas & Fuel Exploration N.L. HOLE SIZE Completion  
 WELL Boggy Creek No.1 CONTRACTOR/RIG Gearhart Rig 2  
 LOCATION PEP 104, Otway Basin, Victoria MUD TYPE NaCl Brine

DATE Jan 1992 COST/BBL \$10.84

MATERIAL	UNIT	UNIT COST	QUANTITY		CONC (ppb)		TOTAL COST (A\$)	
			EST	ACT	EST	ACT	ESTIMATE	ACTUAL
Salt(Flossy Fine)	25 kg	6.89		384		61.89		2,645.76
BARACOR 100	55 gal	340.28		2		2.680		680.56
EZ MUD	5 gal	57.43		4		0.487		229.72
PAC-R	50 lb	149.75		1		0.146		149.75

DIESEL	Bbls							0.00	0.00
CHEMICAL VOLUME	Bbls		0	27				0.00	0.00
FRESH WATER	Bbls		0	315				0.00	0.00
SEA WATER	Bbls		0	0				0.00	0.00
TOTAL MUD MADE	Bbls		0	342				0.00	0.00
COST LESS BARYTES								\$0.00	\$3,705.79
COST WITH BARYTES								\$0.00	\$3,705.79

COMMENTS

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# Baroid Australia Pty. Ltd.

## MATERIAL SUMMARY

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1 CONTRACTOR/RIG Gearhart Rig 2  
 LOCATION PEP 104, Otway Basin, Victoria

INTERVAL	DRILLED	DAYS	HOURS	MUD TYPES
12.25"	306	2	19.0	Flocculated Spud Mud
8.5"	1577	15	124.5	3-4% KCl/EZ MUD

TOTALS	1883	17	143.50	COST/DAY	\$1,946.51
RECAP BY	J. McLaughlin			COST/M	\$17.57
DATE	Jan 1992			COST/BBL	\$7.51
				MUD CONSUMPTION FACTOR (bbl/m)	2.34

MATERIAL	UNIT	UNIT COST	QUANTITY		TOTAL COST (A\$)	
			ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
Barite	25 kg	13.22		30		396.60
BARACIDE	30 kg	450.07		2		900.14
AQUAGEL	25 kg	12.18	213	307	2,594.34	3,739.26
Calcium Chloride	25 kg	16.14		1		16.14
Caustic Potash	25 kg	36.93	20	13	738.60	480.09
Caustic Soda	25 kg	26.42	5	5	132.10	132.10
EZ MUD	5 gal	57.43	75	75	4,307.25	4,307.25
Lime	25 kg	6.85	11	5	75.35	34.25
PAC-R	50 lb	149.75	66	72	9,883.50	10,782.00
Pot. Chloride, Ag	50 kg	20.25	240	409	4,860.00	8,282.25
Soda Ash	25 kg	14.89	10	4	148.90	59.56
Sodium Bicarbonate	25 kg	18.78		3		56.34
Sodium Sulphite	25 kg	28.92		20		578.40
Sodium Chloride	25 kg	6.89		384		2,645.76
BARACOR 100	55 gal	340.28		2		680.56
DIESEL	Bbls					
CHEMICAL VOLUME	Bbls		59	115		
FRESH WATER	Bbls			4290		
SEA WATER	Bbls					
TOTAL MUD MADE	Bbls		59	4405		
COST LESS BARYTES					\$22,740.04	\$32,694.10
COST WITH BARYTES					\$22,740.04	\$33,090.70

### COMMENTS

# Baroid Australia Pty. Ltd.

## PROPERTY RECAP

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1  
 LOCATION PEP 104, Otway Basin, Victoria

CONTRACTOR/RIG: Gearhart Rig 2

DATE: Jan 1992

DATE	DEPTH m	HOLE SIZE in	RET TMP C	MUD WT ppg	VIS sec	IV	YP	GELS		FILTRATE		RETORT		SD	MBC	PH	PM	Pf	Mf	Cl	KCl % / l	TH mg / l	SO3 mg / l	REMARKS/TREATMENT	
								10 sec min	10 sec min	API ml	CK 32nd	SOL %	H2O %												
21/12	13																								
21/12	64	12.25	15	8.6	48	8	24	7	12	N/C	N/C	4	96	2	11	9	0.5	0.08	0.1	500	-	160	-	Spudded 1100 hrs 21st Dec with Spud Mud. Conductor washed out, drilled ahead.	
22/12	282	12.25	18	8.9	40	4	16	3	6	N/C	N/C	5	95	1	15	8.5	0.2	0.05	0.1	500	-	100	-		
23/12	323	12.25	15	8.8	36	6	18	2	5	N/C	N/C	6	94	Tr	8	8.5	0.15	0.02	0.05	500	-	80	-	9 5/8" Cng point	
23/12	323	8.5	-	8.7	35	4	9	1	3	24	2	2	98	0.5	7	8.5	-	0.1	0.8	500	-	120	-	Waiting on cement	
24/12	410	8.5	22	8.7	35	5	14	2	3	21	2	3	97	1.5	9	10.5	1.5	0.32	0.45	500	-	160	-	Drilled shoe w/- spud Mud	
25/12	595	8.5	31	8.8	45	15	22	3	5	12	2	5	95	Tr	10	8.5	0.25	0.08	0.15	7500	1.5	120	-	Added PAC-R/KCl/EZ MUD at low concentrations to maintain YP & volume.	
26/12	873	8.5	29	8.8	44	10	20	3	8	12	1	4	96	1	7.5	9	0.2	0.08	0.15	11000	2.5	100	-	losing 10bbl/hr. POOH for Bit & BHA change. Ream to bottom. Add gel for low YP	
26/12	952	8.5	34	8.8	44	14	16	3	5	9.0	1	4	96	0.25	8	8.5	0.05	0.05	0.15	14000	3	160	-	use sump water in premixes	
27/12	1076	8.5	35	8.8	38	8	14	1	3	9.6	1	2	98	0.4	8	9.5	0.25	0.15	0.35	14000	3	80	40	Mud system now converted to KCl/PAC-R/EZ MUD	
27/12	1076	8.5	34	8.9	43	7	17	1	3	8.4	1	4	96	0.5	7.5	8.5	0.05	0.05	0.2	14000	3	120	100	High torque, low ROP, high dev. POOH to change bit.	
28/12	1240	8.5	38	9.0	45	14	19	2	4	6.8	1	4	96	1	8	9	Tr	0.14	0.5	17000	3.4	120	150	Ream to bottom. Increase KCl/EZ MUD for swelling	
28/12	1339	8.5	40	9.2	40	13	16	1	2	7.4	1	4	96	0.25	9	9	-	0.15	0.5	14000	3.1	120	80	clays in Belfast. W/trip DSTF1-flow. Wiper trip.	
28/12	1484	8.5	37	9.2	41	10	14	1	2	7.2	1	4	96	0.2	8	9	Tr	0.35	0.75	16000	2.9	140	40	Ream w/- 60ft corebarrel.	
29/12	1550	8.5	38	9.1	44	10	16	1	3	7.8	1	4	96	0.25	8	9.5	0.05	0.42	1.05	19000	3.1	50	180	ragged flow line sample	
30/12	1611	8.5	35	9.2	45	12	17	1	2	6.8	1	5	95	0.25	8	9.5	-	0.27	0.75	18500	3.8	100	60	POOH. Wiper trip, ream.	
30/12	1611	8.5	33	9.2	46	14	18	1	2	7.2	1	5	95	0.2	7.5	9	-	0.25	0.75	19000	3.2	80	100	Core with 30 ft barrel.	
31/12	1640	8.5	36	9.2	40	10	14	1	2	6.6	1	5	95	0.2	9	9.5	-	0.5	1.1	19000	3.5	80	80	Slight CO2 contamination.	
31/12	1673	8.5	35	9.3	42	10	17	1	2	6.2	1	6	94	0.2	9.5	9	-	0.25	0.8	19000	3.6	100	80	Drill ahead thru Waare & Eumeralla.	
01/01	1673	8.5	35	9.2	41	9	15	1	2	6.7	1	4	96	0.1	8.5	9	-	0.2	0.75	19000	80	80	3.2		
01/01	1673	8.5	33	9.2	42	9	16	1	2	6.5	1	4	96	0.2	8	9	-	0.1	0.5	18500	3.2	80	40		
01/01	1673	8.5	33	9.2	41	9	17	1	2	6.2	1	4	96	0.25	8	10	0.25	0.5	1.6	23000	4	80	180		
02/01	1673	8.5	33	9.2	39	14	14	2	2	8.2	1	4.0	96	0.5	8.5	9.5	-	0.55	1.3	19000	3.8	80	180		
02/01	1673	8.5	31	9.2	44	12	18	2	4	7.5	1	4	96	0.2	8	9	Tr	0.3	1	19000	3.6	80	100		
03/01	1674	8.5	33	9.2	39	9	16	1	2	7.6	1	4.0	96	0.2	8.8	9	-	0.15	0.8	18000	3.5	100	60		
03/01	1682	8.5	34	9.2	41	9	15	1	2	7.0	1	4	96	0.25	9	9	-	0.15	0.8	24000	4.4	120	60		
04/01	1720	8.5	36	9.2	45	12	18	2	3	6.8	1	5.0	95	0.3	7.5	9	-	0.25	0.8	25000	4.5	100	60		
04/01	1824	8.5	38	9.2	43	10	15	1	3	6.8	1	4	96	0.25	8.5	8.5	-	0.08	0.65	24000	4.2	100	60		



# Baroid Australia Pty. Ltd.

## PROPERTY RECAP

COMPANY Gas & Fuel Exploration N.L.

WELL Boggy Creek No.1

LOCATION PEP 104, Otway Basin, Victoria

CONTRACTOR/RIG: Gearhart Rig 2

DATE: Jan 1992

DATE	DEPTH m	HOLE SIZE in	RET TMP C	MUD WT PPG	VIS PV SEC	YP	GELS		FILTRATE		REFORT		SD	MBC	PH	Pm	Pf	MF	Cl mg/l	KCl %	TH mg /l	SO3 mg /l	REMARKS/TREATMENT	
							10 sec	10 min	API ml	CK 32nd	SOL %	H2O %												
1991																								
05/01	1900	8.5	38	9.3	41	10	16	1	2	6.4	1	5	0.4	9	9.5	0.4	0.6	1.6	21000	3.9	80	100	TD. Wiper trip. POOH	
06/01	1900	8.5	34	9.3	43	14	17	1	2	6.4	1	5	0.2	8	9	-	0.6	1.9	24000	4.1	80	60	Run BPB electric logs	
07/01	1900	8.5	36	9.3	42	8	12	1	1	6.8	1	4	0.2	7	10	-	1.25	1.5	30000	5	60	60	Run BPB electric logs	
08/01	1900	6.276	-	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Run 7" casing. Displace	
09/01	1900	6.276	-	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	cement with water. Make	
10/01	1900	6.276	-	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	up 9.2 ppg NaCl brine.	
11/01	1900	6.276	-	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Displace water with brine	

# Baroid Australia Pty. Ltd.

## BIT RECORD

**COMPANY** Gas & Fuel Exploration N.L.  
**WELL** Boggy Creek No.1  
**LOCATION** PEP 104, Otway Basin, Victoria  
**CONTRACTOR/RIG:** Gearhart Rig 2  
**DATE:** Jan 1992

BIT NO.	BIT SIZE in	MAKE	TYPE	JETS	DEPTH OUT m	MTRS DRILD	HRS ON BIT	RATE m/hr	ACC DRLG HRS	BIT WT tonnes	RPM	VERT DEV. deg.	PUMP PRESS psi	PUMP RATE gpm	MUD WT PPg	MUD VIS sec	CONDITION (in 1/8")			REMARKS	
																	T	B	G		
1	12.25	SEC	S33F	16,16,16	323	310	19	16.3	19	5/15	110/120	0.75	650	340	8.9	40	2	2	2	In	
2	8.5	SEC	S44GF	11,11,13	-	490	-	-	-	20	120	0.75	1100	310	8.8	44	-	-	-	-	
3	8.5	SEC	S82F	11,11,13	1076	753	34.5	21.8	53.5	20	100/130	3.75	900	250	8.8	43	7	2	2	1	Bit change
4	8.5	SEC	S44GF	11,11,11	1611	535	52	10.3	105.5	10/20	120/130	2.25	1000	250	9.2	44	4	4	3	2	Hi Dev & Torq
5	8.5	CHRIS	C-9	OPEN	1673	62	7.5	8.3	113	15/20	120/130	2.25	550	200	9.3	42	60% worn				POOH for DST#1
		SEC	S82F	11,11,11	1682	9	4.5	2.0	117.5	12/18	80	-	950	260	9.2	41	3	3	3	In	Core #1
		SEC	S82F	11,11,11	1900	218	26	8.4	143.5	20	90	1.25	950	260	9.3	42	3	3	3	In	TD

# Baroid Australia Pty Ltd

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## SOLIDS CONTROL EQUIPMENT and MUD VOLUME ANALYSIS

COMPANY Gas & Fuel Exploration N.L. CONTRACTOR/RIG: Gearhart Rig 2  
 WELL Boggy Creek No.1 DATE: Dec 1991  
 LOCATION PEP 104, Otway Basin, Victoria

Date: 1991 | 22-Dec 23-Dec 24-Dec 25-Dec 26-Dec 27-Dec 28-Dec 29-Dec 30-Dec

SOLIDS CONTROL		60/100	60/100	60/100	60/100	60/80	60/100	60/80	60/100	80/100
Shaker 1	Screen	60/100	60/100	60/100	60/100	60/80	60/100	60/80	60/100	80/100
Brandt	Hrs	21	20		16	24	21	24	24	18
Shaker 2	Screen	60/100	60/100		80/100	80/100	80/100	60/100	80/100	60/100
Brandt	Hrs	21	20		12.5	24	21	24	24	18
Desilter 1	U/F PPG	12.3	8.7		9.6	10.3	11	12	11.5	11.3
	BBL/Hr	2	20		2	1.5	0.5	1	0.3	0.5
	Hrs	16	2		12	13	21	24	22	10
	Vol	32	40		24	19.5	10.5	24	6.6	5
Desilter 2	U/F SG									
	M3/Hr									
	Hrs									
	Vol									
Desander	U/F PPG	14	8.9		10.3	11.1	9.7	11.3	10	10.2
	BBL/Hr	3	2		5	3.5	4	4	4	4
	Hrs	16	2		14	20	21	24	24	16
	Vol	48	4		70	70	84	96	96	64
Centrifuge Swaco	Hrs									
	Feed SG									
	O/F SG									
Depth(metres)	292	323	323	652	983	1076	1353	1556	1611	
Daily drilled	275	31		329	331	93	277	1556	55	
Hole Size(In)	12.25	12.25	8.971	8.5	8.5	8.5	8.5	8.5	8.5	
<b>MUD VOLUMES (BBL)</b>										
Initial Active:		450	280	340	356	371	326	336	313	
Added: Drillwater	890	100	60	250	200	300	200	300	120	
Seawater										
From Reserve		25								
Losses: DFE	80	44		94	90	95	120	103	69	
Dumped/Lost	220	235		60	50	230	40	170	30	
New Hole	140	16		80	45	20	70	50		
Total Losses	440	295		234	185	345	230	323	99	
To Reserve										
Final Active	450	280	340	356	371	326	296	313	334	
Reserve - Initial		25								
Added: Drillwater							60			
Seawater										
From Active	25									
To Active		25					20			
Final Reserve	25						40			
Total Final Volume	475	280	340	356	371	326	336		334	
Daily Dilution Rate, (bbl/m)	1.60	9.52		0.71	0.56	3.71	0.83	0.21		
Daily Consumption Rate, (bbl/m)	3.24	3.23		0.76	0.60	3.23	0.94	0.19		

# Baroid Australia Pty Ltd

## SOLIDS CONTROL EQUIPMENT and MUD VOLUME ANALYSIS

COMPANY Gas & Fuel Exploration N.L. CONTRACTOR/RIG: Gearhart Rig 2  
 WELL Boggy Creek No.1 DATE: Dec 1991  
 LOCATION PEP 104, Otway Basin, Victoria

Date: 1991 | 31-Dec 01-Jan 02-Jan 03-Jan 04-Jan 05-Jan 06-Jan 07-Jan TOTALS

SOLIDS CONTROL		31-Dec	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	TOTALS
Shaker 1	Screen	80/100	80/100			80/100	80/100			
Brandt	Hrs	24	4			20	22			238
Shaker 2	Screen	60/100	60/100			60/100	60/100			
Brandt	Hrs	24	4			20	22			234.5
Desilter 1	U/F PPG	11.3								
	BBL/Hr	0.2								
	Hrs	24								144
	Vol	4.8								166.4
Desilter 2	U/F SG									
	M3/Hr									
	Hrs									
	Vol									
Desander	U/F PPG	9.7				11	10.8			
	BBL/Hr	5				5	7			
	Hrs	13				18	3			171
	Vol	65				90	21			708
Centrifuge Swaco	Hrs									
	Feed SG O/F SG									
Depth(metres)		1673	1673	1673	1682	1835	1900	1900	1900	
Daily drilled		62			9		1900			4918
Hole Size(In)		8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	
<b>MUD VOLUMES (BBL)</b>										
Initial Active:		334	379	279	319	284	364	338		
Added: Drillwater		250		100		150	100	60	60	3140
	Seawater									25
Losses: DFE	From Reserve					90	21			876
	Dumped/Lost	70				20	90	40		1495
	New Hole	120	100	60	30	40	15			496
	Total Losses	15			5	40	15			2867
To Reserve	205	100	60	35	150	126	40			
Final Active		379	279	319	284	284	338	358		
Reserve - Initial	Added: Drillwater				100		80			160
	Seawater									25
	From Active				20					65
To Active										
Final Reserve				80	80					
Total Final Volume		379	279	319	364	364		358		
Daily Dilution Rate, (bbl/m)			100.00	60.00	3.89	150.00	0.07			0.64
	Daily Consumption Rate, (bbl/m)			100.00	11.11	150.00	0.05			0.67

**WEEKLY INVENTORY**

Gas & Fuel Exploration N.I.  
Boggy Creek No.1

COMPANY  
WELL

MATERIAL	Date:	20/12		21/12		22/12		23/12		24/12		25/12		26/12		Totals						
		Unit	Beg	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Bal				
Barite,	50kg			400										40	15	440	15	425				
BARACIDE	30kg			2												2		2				
AQUAGEL	25kg		240	96	124	28									44	336	224	112				
BARADEFAM W300	25lt			2												2		2				
Calcium Chloride	25kg		20													20	1	19				
Caustic Potash	25kg		40													40	3	37				
Caustic Soda	25kg		20		4											20	5	15				
CONDET	208lt			2												2		2				
ENVIRO-SPOT	208lt			2												2		2				
EZ MUD	25lt		64	32										20	10	96	28	68				
KWIKSEAL	40lb															20		20				
Lime	25kg		20		4									36		20	4	16				
Mica	25kg															36		36				
PAC-R	50lb		40	80												120	25	95				
Pot. Chloride, Ag	50kg		100	100										100	50	300	122	178				
Soda Ash	25kg		20													20		20				
Sodium Bicarbonate	25kg		20													20	3	17				
BARASCAV D	25kg		20													40	2	38				
XCD Polymer	25kg															20		20				
Salt (Flossy Fine)	25kg																					
BARACOR 100	55gal																					
<b>DAILY COST</b>																1643	367	356	2193	2826	3764	11150

WEEKLY INVENTORY

Gas & Fuel Exploration N.I.  
Boggy Creek No.1

COMPANY  
WELL

MATERIAL	Date:		27/12		28/12		29/12		30/12		31/12		01/01		02/01		Totals	
	Unit Size	Beg	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Bal
Barite,	50kg	425				15										440	30	410
BARACIDE	30kg	2														2		2
AQUAGEL	25kg	112		51		12										336	299	37
BARADEFOAM W300	251t	2														2		2
Calcium Chloride	25kg	19														20	1	19
Caustic Potash	25kg	37		2	1										40	9	31	
Caustic Soda	25kg	15													20	5	15	
CONDET	2081t	2													2		2	
ENVIRO-SPOT	2081t	2													2		2	
EZ MUD	251t	68		5	9					11					96	63	33	
KWIKSEAL	401b	20													20		20	
Lime	25kg	16													20	5	15	
Mica	25kg	36													36		36	
PAC-R	501b	95		6											3	120	63	57
Pot. Chloride, Ag	50kg	178		24	46					8					33	500	341	159
Soda Ash	25kg	20			4										20	4	16	
Sodium Bicarbonate	25kg	17													20	3	17	
BARASCAV D	25kg	38		2											1	40	13	27
XCD Polymer	25kg	20													20		20	
Salt (Flossy Fine)	25kg																	
BARACOR 100	55gal																	
DAILY COST						2425	3396	2484	3342	902	1305	25003						

WEEKLY INVENTORY

COMPANY Gas & Fuel Exploration N.L.  
WELL Boggy Creek No.1

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MATERIAL	Date: Unit Size	03/01		04/01		05/01		06/01		07/01		08/01		09/01		Totals			
		Beg	Recd	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Bal	
Barite,	50kg	410														440	30	410	
BARACIDE	30kg	2									2					2	2		
AQUAGEL	25kg	37					7									336	307	29	
BARADEF0AM W300	25lt	2														2	2		
Calcium Chloride	25kg	19														20	1	19	
Caustic Potash	25kg	31	1				1									40	13	27	
Caustic Soda	25kg	15														20	5	15	
CONDET	208lt	2														2		2	
ENVIRO-SPOT	208lt	2														2		2	
EZ MUD	25lt	33	5				1									4	96	75	
KWIKSEAL	40lb	20														20		20	
Lime	25kg	15														20		15	
Mica	25kg	36														36		36	
PAC-R	50lb	57	4													1	120	72	
Pot. Chloride, Ag	50kg	159	10				30									500	409	91	
Soda Ash	25kg	16														20	4	16	
Sodium Bicarbonate	25kg	17														20	3	17	
BARASCAV D	25kg	27	2				1									40	20	20	
XCD Polymer	25kg	20														20		20	
Salt (Flossy Fine)	25kg															384		64	
BARACOR 100	55gal										2					250	320		
																2	2		
<b>DAILY COST</b>																			

BAROID AUSTRALIA PTY LTD

WEEKLY INVENTORY

COMPANY Gas & Fuel Exploration N.L.  
WELL Bogy Creek No.1

MATERIAL	Date:	10/01		11/01		12/01		13/01		14/01		15/01		16/01		Totals		
		Unit Size	Beg	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Recd	Used	Bal
Barite,		50kg	410													440	30	410
BARACIDE		30kg														2	2	
AQUAGEL		25kg	29													336	307	29
BARADEF0AM W300		25lt	2													2	2	
Calcium Chloride		25kg	19													20	1	19
Caustic Potash		25kg	27													40	13	27
Caustic Soda		25kg	15													20	5	15
CONDET		208lt	2													2	2	
ENVIRO-SPOT		208lt	2													2	2	
EZ MUD		25lt	21													96	75	21
KWIKSEAL		40lb	20													20	20	
Lime		25kg	15													20	5	15
Mica		25kg	36													36	36	
PAC-R		50lb	48													120	72	48
Pot. Chloride, Ag		50kg	91													500	409	91
Soda Ash		25kg	16													20	4	16
Sodium Bicarbonate		25kg	17													20	3	17
BARASCAV D		25kg	20													40	20	20
XCD Polymer		25kg	20													20	20	
Salt (Flossy Fine)		25kg	64		64											384	384	
BARACOR 100		55gal														2	2	
DAILY COST					441													33091



**MATERIAL RECONCILIATION**

**COMPANY** Gas & Fuel Exploration N.L.  
**WELL** Bogy Creek No.1

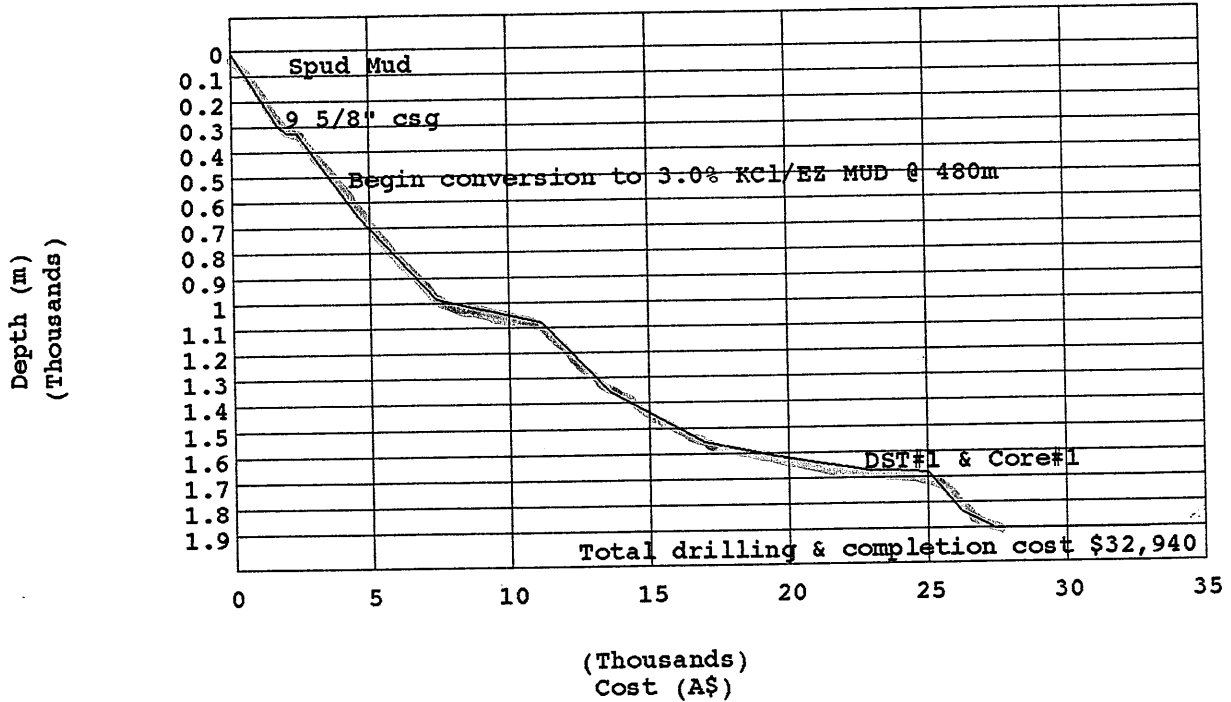
MATERIAL	Date DT Juv	DELIVERIES							TOTAL DEL	USAGE			TOTAL USAGE	ENDING INVENT	VAR- IANCE
		20/Dec	21/Dec	26/Dec	28/Dec	8/Jan	Interval			OTHER (cmtg & losses)					
							12 1/4"	8 1/2"			Compl.				
Barite, 50kg			400	40				440		30		30	410		
BARACIDE 30kg			2					2		2		2			
AQUAGEL 25kg		240	96					336	124	147	36	307	29		
BARADEFOAM W300 25lt			2					2			1	1	19		
Calcium Chloride 25kg		20						20				13	27		
Causitic Potash 25kg		40						40				5	15		
Causitic Soda 25kg		20						20	5				2		
CONDET 208lt			2					2					2		
ENVIRO-SPOT 208lt			2					2					2		
EZ MUD 25lt		64	32					96		71	4	75	21		
KWIKSEAL 40lb				20				20				5	20		
Lime 25kg		20						20	4		1	5	15		
Mica 25kg				36				36					36		
PAC-R 50lb		40	80					120		71	1	72	48		
Pot. Chloride, Ag 50kg		100	100	100	200			500		409		409	91		
Soda Ash 25kg		20						20		4		4	16		
Sodium Bicarbonate 25kg		20						20		3		3	17		
BARASCAVD 25kg				40				40		20		20	20		
XCD Polymer 25kg		20						20					20		
Salt (Flossy Fine) 25kg							384	384			384	384			
BARACOR 100 55gal							2	2			2	2			

# Baroid Australia Pty. Ltd.

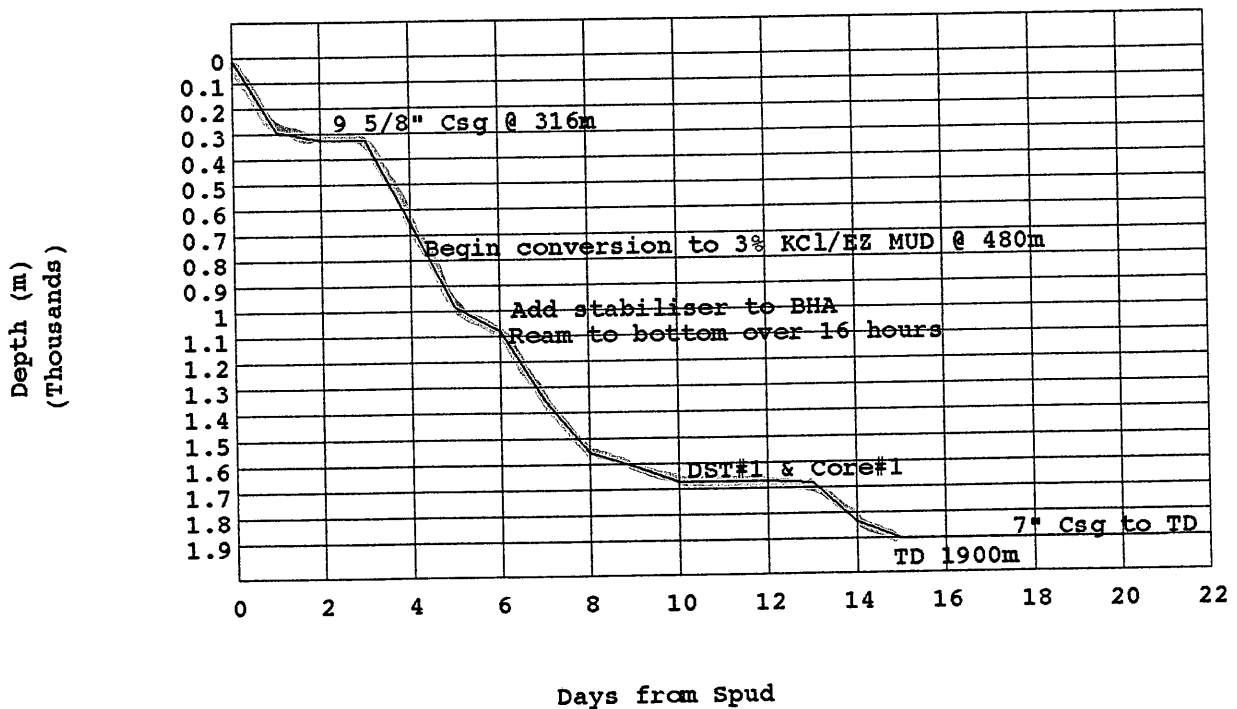
## COST & DAYS GRAPHS

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1  
 LOCATION PEP 104, Otway Basin, Victoria

DEPTH vs COST



DEPTH vs DAYS



PE905703

This is an enclosure indicator page.  
The enclosure PE905703 is enclosed within the  
container PE905691 at this location in this  
document.

The enclosure PE905703 has the following characteristics:

ITEM\_BARCODE = PE905703  
CONTAINER\_BARCODE = PE905691  
NAME = Rheology and Filtration Graphs  
BASIN = OTWAY  
PERMIT = PEP 104  
TYPE = WELL  
SUBTYPE = DIAGRAM  
DESCRIPTION = Rheology and Filtration Graphs (from  
appendix 3 of WCR) for Boggy Creek-1  
REMARKS =  
DATE\_CREATED =  
DATE\_RECEIVED =  
W\_NO = W1053  
WELL\_NAME = BOGGY CREEK-1  
CONTRACTOR = BAROID AUSTRALIA PTY LTD  
CLIENT\_OP\_CO = GAS AND FUEL EXPLORATION N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

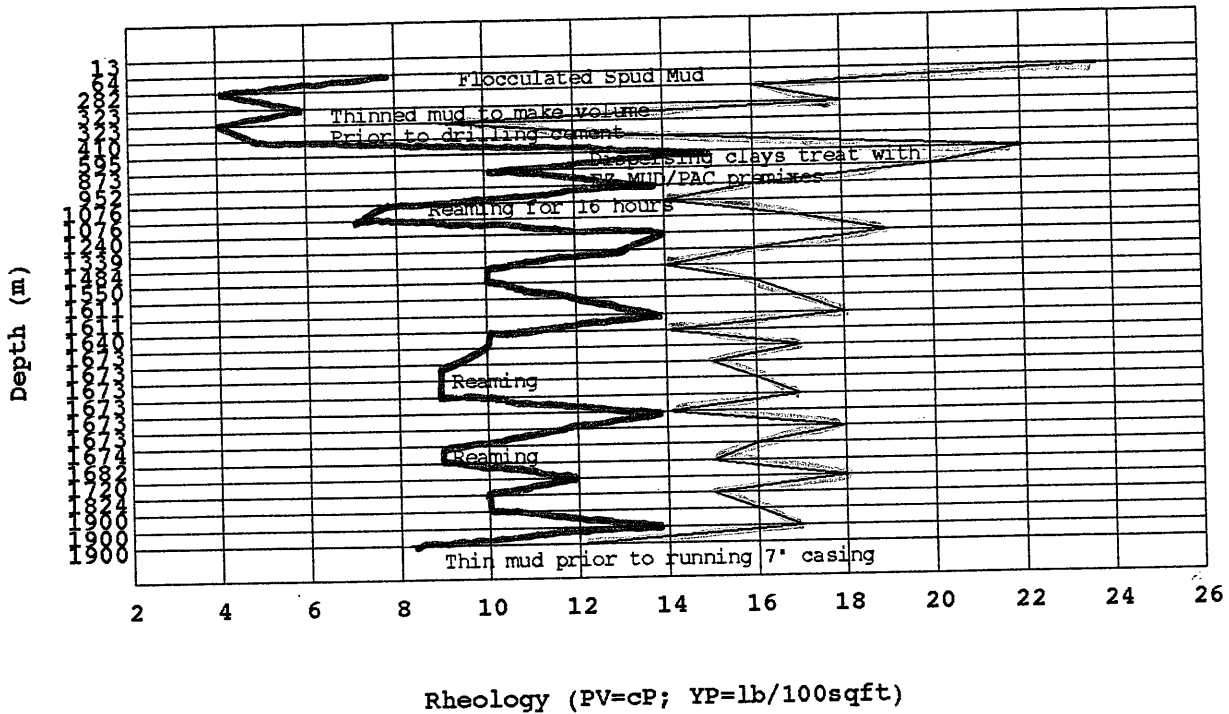


# Baroid Australia Pty. Ltd.

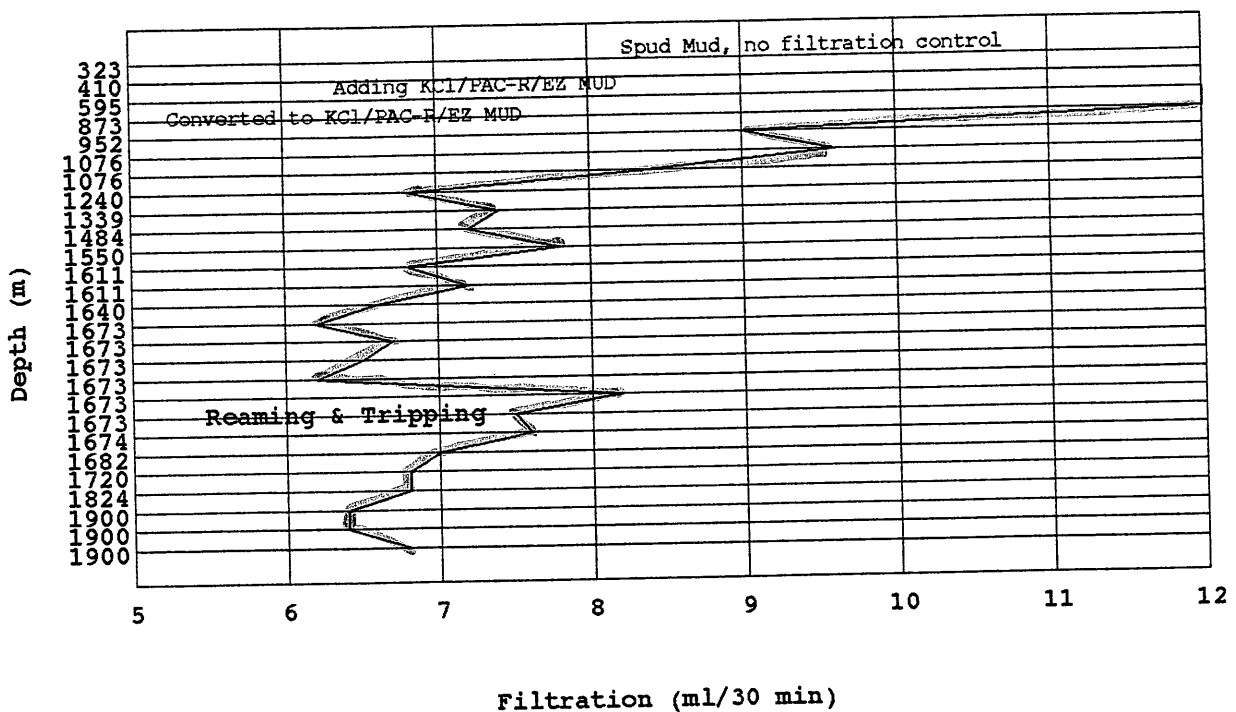
## RHEOLOGY & FILTRATION GRAPHS

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1  
 LOCATION PEP 104, Otway Basin, Victoria

DEPTH vs RHEOLOGY



DEPTH vs FILTRATION

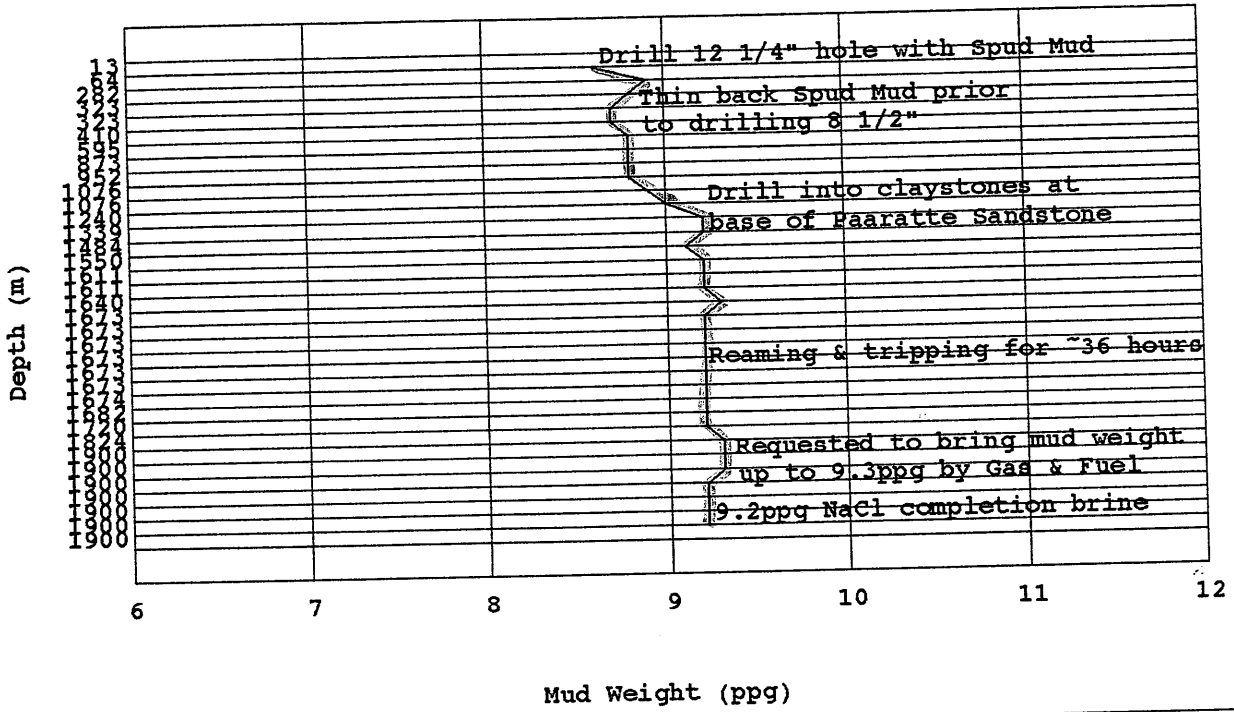


# Baroid Australia Pty. Ltd.

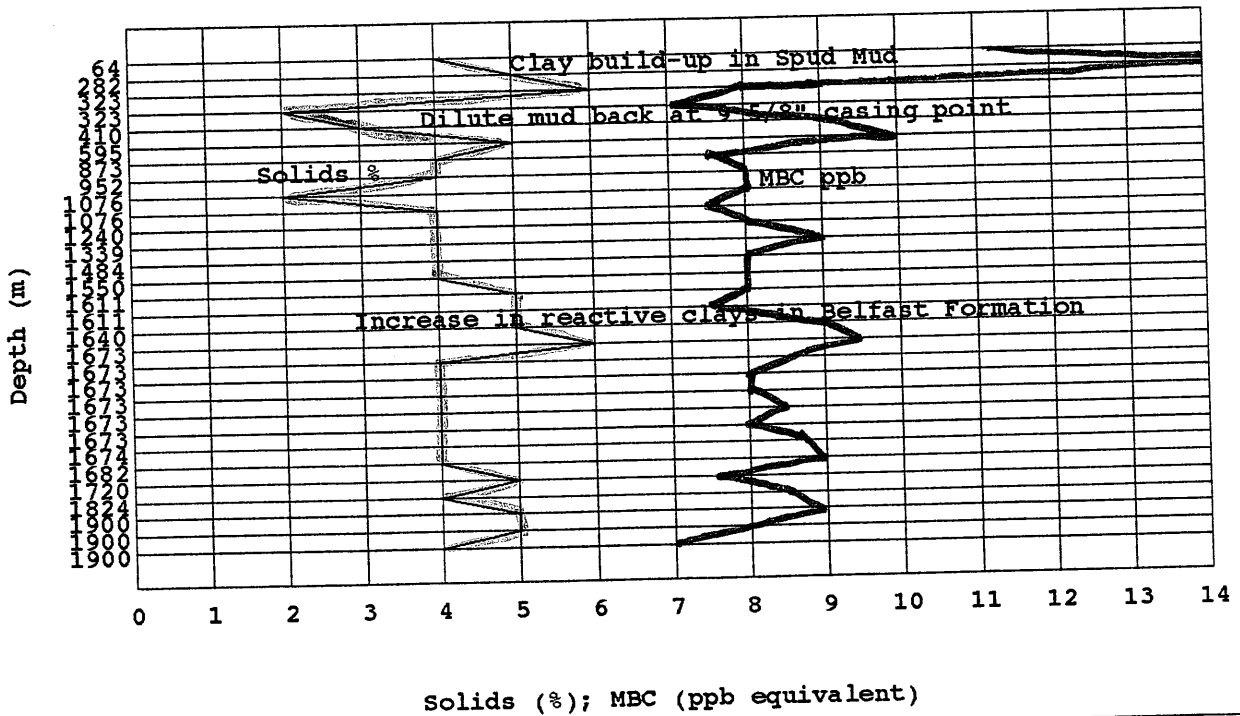
## MUD WEIGHT, SOLIDS & MBC GRAPHS

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1  
 LOCATION PEP 104, Otway Basin, Victoria

DEPTH vs MUD WEIGHT



DEPTH vs SOLIDS & MBC



PE905704

This is an enclosure indicator page.  
The enclosure PE905704 is enclosed within the  
container PE905691 at this location in this  
document.

The enclosure PE905704 has the following characteristics:

ITEM\_BARCODE = PE905704  
CONTAINER\_BARCODE = PE905691  
    NAME = Calliper and Formation Tops  
          Stratigraphic Log  
    BASIN = OTWAY  
    PERMIT = PEP 104  
    TYPE = WELL  
    SUBTYPE = STRAT\_COLUMN  
DESCRIPTION = Calliper and Formation Tops  
              Stratigraphic Column (from Appendix 3  
              from WCR) for Boggy Creek-1  
REMARKS =  
DATE\_CREATED =  
DATE\_RECEIVED =  
    W\_NO = W1053  
    WELL\_NAME = BOGGY CREEK-1  
    CONTRACTOR = BAROID AUSTRALIA PTY LTD  
    CLIENT\_OP\_CO = GAS AND FUEL EXPLORATION N.L.

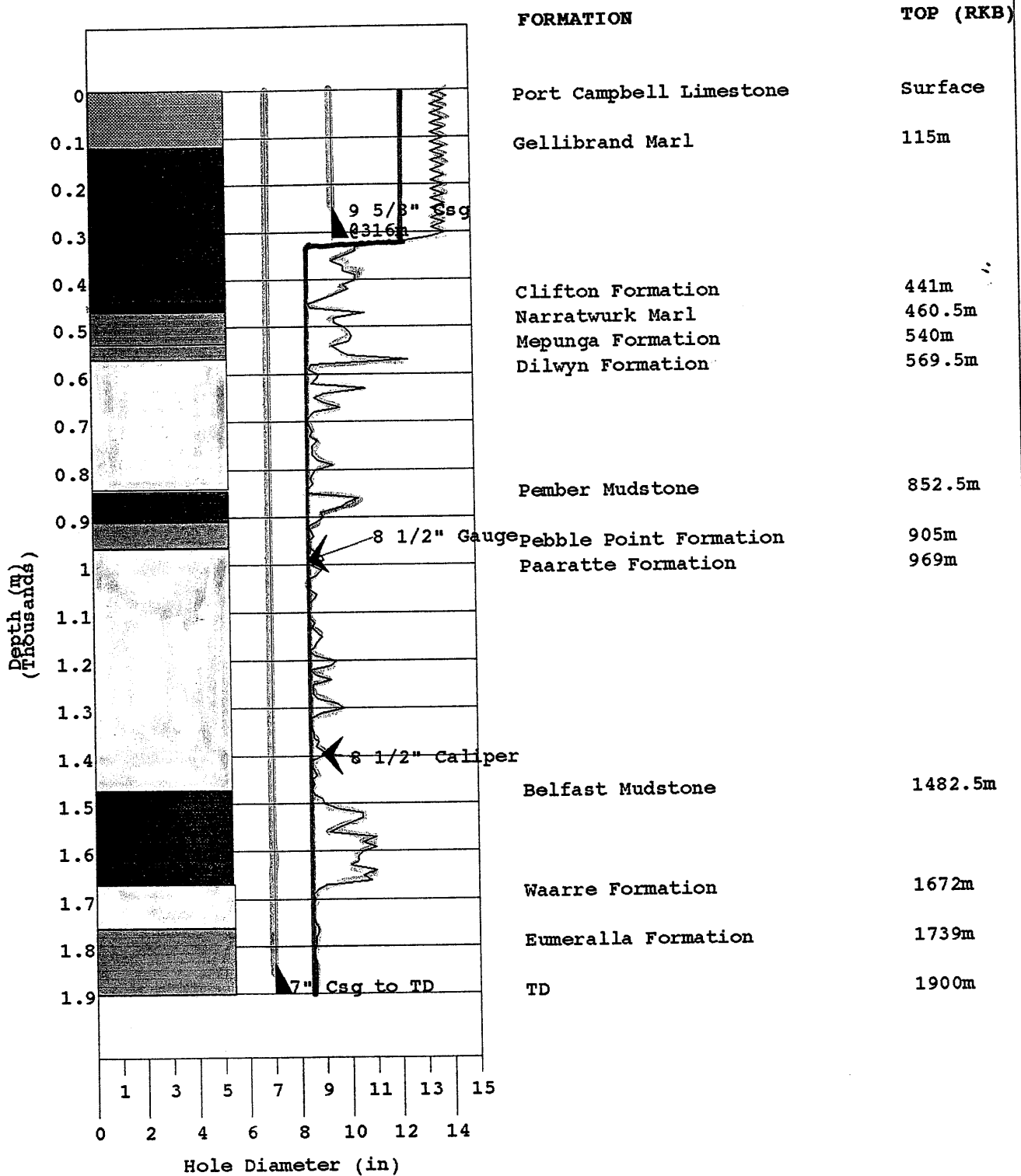
(Inserted by DNRE - Vic Govt Mines Dept)



# Baroid Australia Pty. Ltd.

## CALIPER & FORMATION TOPS

COMPANY Gas & Fuel Exploration N.L.  
 WELL Boggy Creek No.1  
 LOCATION PEP 104, Otway Basin, Victoria



# Baroid Australia Pty. Ltd.

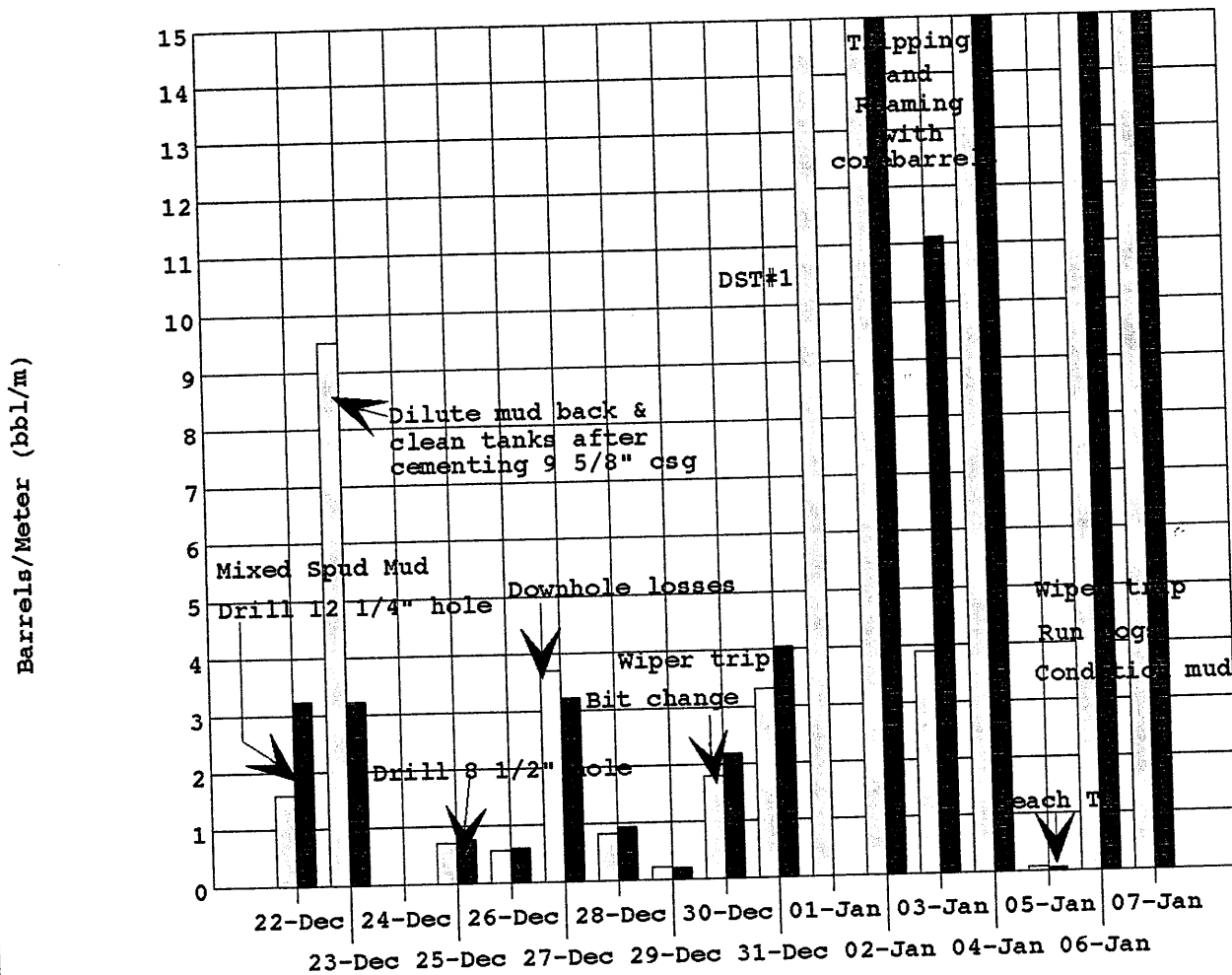
## MUD DILUTION & CONSUMPTION RATES

COMPANY  
WELL  
LOCATION

Gas & Fuel Exploration N.L.  
Boggy Creek No.1  
PEP 104, Otway Basin, Victoria

CONTRACTOR/RIG: Gearhart Rig 2  
DATE: Jan 1992

### DAILY DILUTION AND CONSUMPTION RATES



Date: 1991

Dilution  Consumption

**FORMULAE USED:**

$$\text{Daily Dilution Rate} = \frac{\text{Initial Active} - \text{Final Active} + \text{Additions} - \text{Transfers}}{\text{Metres Drilled}}$$

$$\text{Daily Consumption Rate} = \frac{\text{Mud Made}}{\text{Metres Drilled}}$$





# Baroid Drilling Fluids, Inc.

Report from 0800 (21st) to 0800 (22nd)

DRILLING MUD REPORT NO. 1



DATE <u>22ND DEC</u> 19 <u>91</u>	DEPTH <u>292</u> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <u>21ST DEC 91</u>	PRESENT ACTIVITY <u>DRILLING</u>

REPORT FOR <u>GAS + FUEL EXPLORATION</u>	CONTRACTOR <u>GEARHART</u>	RIG NO. <u>2</u>
REPORT FOR <u>GERARD N. COST</u>	REPORT FOR <u>T. DOHERTY</u>	SECTION, TOWNSHIP, RANGE

NAME AND NO. <u>BOGGY CREEK #1</u>	FIELD OR BLOCK NO. <u>DEP 104</u>	COUNTY, PARISH OR OFFSHORE AREA <u>OWENBY BASIN</u>	STATE/PROVINCE <u>VICTORIA</u>
DRILLING ASSEMBLY		MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>	CIRCULATION DATA
PIPE SIZE <u>2 1/4</u>	TYPE <u>SEC 533E 3X16</u>	JET SIZE	ANNULAR VEL. <u>64</u> <input type="checkbox"/> ft/min <input type="checkbox"/> m/min
PIPE TYPE <u>4 1/2</u>	LENGTH	SET @	DC <u>3/16</u> <u>76/76</u>
PIPE TYPE <u>4 1/2</u>	LENGTH <u>52</u>	SET @	PUMP MAKE, MODEL <u>GDPZ 8</u>
PIPE TYPE <u>8 1/2</u>	LENGTH <u>36/174</u>	SET @	ASSUMED EFF <u>95%</u>
			CIRCULATION PRESSURE <u>600</u> <input type="checkbox"/> psi <input type="checkbox"/> kPa
			BOTTOMS UP (min) <u>14 mins</u>
			TOTAL CIRC. TIME (min) <u>64</u>

From	MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	1630	0600				
Line Temperature <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	15					
Depth <input type="checkbox"/> ft <input checked="" type="checkbox"/> m	64	282				
<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	8.6	8.9				
Viscosity <input type="checkbox"/> sec/qt API @ <u>   </u> °F <input type="checkbox"/> sec/L @ <u>   </u> °C	48	40	1			
Static Viscosity cP @ <u>   </u> °F <input type="checkbox"/> °C	8	4				
Yield Point <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	24	16				
Length (10 sec/10 min) <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	71	12	31	6	1	
Rate API cm <sup>3</sup> /30 min	N/C	N/C				
HP Filtrate cm <sup>3</sup> /30 min @ <u>   </u> °F @ <u>   </u> °C	—	—				
Thickness API/HTHP <input type="checkbox"/> 32nd in. <input type="checkbox"/> mm	—	—	1			
Solids Content (% by Vol.) <input type="checkbox"/> calculated <input checked="" type="checkbox"/> wet	4	5				
Solids Content (% by Vol.) Oil/Water	96	95	1			
Solids Content (% by Vol.)	2	1				
Line Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	11	15				
<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ <u>   </u> °F <u>   </u> °C	9	8.5				
Yield Mud (P <sub>m</sub> ) ml	0.5	0.2				
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	0.05	0.12	0.05	0.1	1	
Relative Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml	—	—	1			
Sulfide, mg/L	500	500				
Hardness as Calcium, mg/L	160	100				

RECOMMENDED TREATMENT

SPUDDED AT 1100 HRS  
MADE UP 120 BBLs HAVIS SPUD MUD TO DRILL AROUND CONDUCTOR. CONDUCTOR WASHED OUT SO CONTINUED TO USE HAVIS MUD TO 180M. BEGAN DILUTING MUD BACK IN GELLIBRAND MARL AS CLAY CONTENT INCREASED. DILUTING MUD BACK AS APPROACH CASING POINT

REMARKS

Formation Gellibrand Marl.  
Rop  
Drillwater CE 250 to 100. Ca<sup>2+</sup> 80  
Carbide  
Survey @ 30m 1/2° 150m  
water used = 890

UNIT COST	BAROID (BULK)	BAROID (DRUM)	ADDS	GAS	LIME	SOLIDS CONTROL EQUIPMENT					
						uf	of	MAKE/BRAND	SIZE/SCREENS	HRS	
		420	336	20	20			SHKR 1	88/8.9	60/100	24
								SHKR 2	8.8/8.9	60/100	24
								SHKR 3	—	—	
			124	4	4			SHKR 4	—	—	
			150 <sup>3</sup>	185 <sup>6</sup>	77 <sup>4</sup>			DESAND	14.99	8x12"	16
								DESILT	12.30	12x6"	16
			124	4	4			M CLNR	—	—	
			212	16	16			CENT 1	—	—	
			8	0.25	0.25			CENT 2	—	—	

BAROID REPRESENTATIVE <u>JOE MCLAUGHLIN</u>	OFFICE/HOME <u>PERTH</u>	TELEPHONE	DAILY COST <u>\$1643<sup>40</sup></u>	CUMULATIVE COST <u>\$1643<sup>40</sup></u>
	WAREHOUSE <u>ADRIAN</u>	TELEPHONE		

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

THIS COPY TO BAROID TECHNICAL DEPARTMENT



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. **2**

DATE <b>23<sup>RD</sup> Dec 19 91</b>	DEPTH <b>323</b> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <b>21<sup>ST</sup> DEC 91</b>	PRESENT ACTIVITY <b>WAITING ON CEMENT</b>

REPORT FOR **GAS + FUEL EXPLORATION**  
**GERARD NICOT**

CONTRACTOR **GEARHART**  
 RIG NO. **NO 2**  
 REPORT FOR **TED DOWERTY**  
 SECTION, TOWNSHIP, RANGE

NAME AND NO. <b>BOGGY CREEK #1</b>	FIELD OR BLOCK NO. <b>SEP 104</b>	COUNTY, PARISH OR OFFSHORE AREA <b>OTWAY BASIN</b>	STATE/PROVINCE <b>VICTORIA</b>
DRILLING ASSEMBLY	CASING	MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>	CIRCULATION DATA
SIZE TYPE JET SIZE	SURFACE SET @ <b>9 5/8</b> <b>318M</b>	HOLE <b>80</b> PITS <b>280</b>	PUMP SIZE <b>6x8"</b> ANNULAR VEL. <input type="checkbox"/> ft/min <input type="checkbox"/> m/min
TYPE TYPE LENGTH	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME <b>360</b>	PUMP MAKE, MODEL <b>GDP 28</b> ASSUMED EFF <b>98%</b> CIRCULATION PRESSURE <input type="checkbox"/> psi <input type="checkbox"/> kPa
DRILL PIPE TYPE LENGTH	INTERMEDIATE SET @	IN STORAGE WEIGHT	vol/stk <b>2.8 gal/stk</b> BOTTOMS UP (min)
COLLAR SIZE LENGTH	PRODUCTION OR LINER SET @	MUD TYPE <b>FOR SPUD MUD</b>	vol/min TOTAL CIRC. TIME (min)

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS			
From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken						
Line Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<b>15</b>				
Depth	<input type="checkbox"/> ft <input checked="" type="checkbox"/> m	<b>323</b>				
	<input checked="" type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	<b>8.8</b>				
Plastic Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	<b>36</b>				
Dynamic Viscosity	cP @ ___ °F <input checked="" type="checkbox"/> cP @ ___ °C	<b>6</b>				
API Viscosity	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<b>18</b>				
Filterability (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<b>2/5</b>				
API Filtrate cm <sup>3</sup> /30 min		<b>N/C</b>				
API Filtrate cm <sup>3</sup> /30 min @ ___ °F @ ___ °C		<b>-</b>				
Thickness API/HTHP	<input type="checkbox"/> 32nd in. <input type="checkbox"/> mm	<b>L</b>				
Solids Content (% by Vol.)	<input type="checkbox"/> calculated <input checked="" type="checkbox"/> wet	<b>6</b>				
Water Content (% by Vol.) Oil/Water		<b>94</b>				
Water Content (% by Vol.)		<b>T<sub>2</sub></b>				
Barium Blue Capacity	<input type="checkbox"/> bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<b>8</b>				
	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C	<b>8.5</b>				
API Mud (P <sub>m</sub> ) ml		<b>0.15</b>				
API Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml		<b>0.02 0.05</b>				
API Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml		<b>L</b>				
API Solids, mg/L		<b>500</b>				
API Hardness as Calcium, mg/L		<b>80</b>				

RECOMMENDED TREATMENT

Added 100 bbls of water to reduce viscosity as Gellibrand Marl dispersing into mud system. Visc > 60 occurring. Dump mud through sandtrap. (2120 bbls)

After cementing dumped + cleaned settling tanks.

REMARKS

Drilled ahead through Gellibrand Marl to 323m. Circulated hole clean. Ran wiper trip. Circulate for 2 hours. Push. Run 9 5/8 (SS). Sm fill on bottom. Circulate through cellar due to washout around conductor. Very coarse particle size returns at shakers. Pump cement. Displace with mud. Return on cement. Water used = 100

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	Chem. 25kg	SOLIDS CONTROL EQUIPMENT				
					MAKE/ BRAND	SIZE/ SCREENS	HRS		
			<b>2.2</b>	<b>16</b>	SHKR 1	<b>8.8</b>	<b>60/100</b>	<b>20</b>	
					SHKR 2	<b>8.8</b>	<b>60/100</b>	<b>20</b>	
					SHKR 3				
			<b>28</b>	<b>1</b>	SHKR 4				
			<b>34</b>	<b>26</b>	DESAND	<b>8.9</b>	<b>8x12</b>	<b>2</b>	
					DESILT	<b>8.7</b>	<b>12x6</b>	<b>2</b>	
					M CLNR				
			<b>152</b>	<b>5</b>	CENT 1				
			<b>184</b>	<b>15</b>	CENT 2				

BAROID REPRESENTATIVE <b>JOE McLAUGHLIN</b>	OFFICE/HOME <b>DELHI</b>	TELEPHONE	DAILY COST <b>\$ 371.42</b>	CUMULATIVE COST <b>\$ 2014.82</b>
WAREHOUSE <b>ADLAIKX</b>	TELEPHONE			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

THIS COPY TO BAROID TECHNICAL DEPARTMENT



# Baroid Drilling Fluids, Inc.

DRILLING MUD REPORT NO. **3**

DATE <u>24<sup>th</sup> Dec</u> 19 <u>91</u>	DEPTH <u>323</u> <input type="checkbox"/> ft <input type="checkbox"/> m
SPUD DATE <u>21<sup>st</sup> Dec 91</u>	PRESENT ACTIVITY <u>Testing Stack</u>

REPORT FOR <u>CAS + Fuel Exploration</u>	CONTRACTOR <u>GEARHART</u>	RIG NO. <u>2</u>
REPORT FOR <u>GEARHART Nicot</u>	REPORT FOR <u>A. DOWEN</u>	SECTION, TOWNSHIP, RANGE

NAME AND NO. <u>BOGUM CREEK #1</u>		FIELD OR BLOCK NO. <u>REP 104</u>		COUNTY, PARISH OR OFFSHORE AREA <u>WINNIE BASIN</u>		STATE/PROVINCE <u>VICTORIA</u>	
DRILLING ASSEMBLY		CASING		MUD VOLUME <input type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>		CIRCULATION DATA	
PIPE SIZE <u>4 1/2</u>	TYPE	JET SIZE	SURFACE SET @ <u>9 5/8 @ 318</u>	HOLE <u>80</u>	PITS <u>340</u>	PUMP SIZE <u>6x8"</u>	ANNULAR VEL. <input type="checkbox"/> ft/min <input type="checkbox"/> m/min
PIPE TYPE <u>4 1/2</u>	TYPE	LENGTH	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME <u>420</u>		PUMP MAKE, MODEL <u>CDPZ 8</u>	ASSUMED EFF <u>95%</u>
PIPE TYPE <u>4 1/2</u>	TYPE	LENGTH	INTERMEDIATE SET @	IN STORAGE	WEIGHT	vol/stk <u>2.8 gal/stk</u>	STK/MIN
COLLAR SIZE <u>6"</u>	LENGTH	PRODUCTION OR LINER SET @	MUD TYPE <u>GEL/POLYMER</u>		vol/min		

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
Temperature	<input type="checkbox"/> °F <input type="checkbox"/> °C	<input type="checkbox"/> °F <input type="checkbox"/> °C	<input type="checkbox"/> °F <input type="checkbox"/> °C	RECOMMENDED TREATMENT	
Depth	<input type="checkbox"/> ft <input type="checkbox"/> m	<input type="checkbox"/> ft <input type="checkbox"/> m	<input type="checkbox"/> ft <input type="checkbox"/> m	<p>Made up Pcc R premix (1.5ppb) (60bbls) added to surface active system + petrachemical mud with 0.40ppb sodium bicarbonate for drilling out cement.</p> <p>Wait on cement. Nipple up stack. Testing stack.</p> <p>Water used = 60 bbls</p>	
Viscosity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C		
Plastic Viscosity	cP @ ___ °F <input type="checkbox"/> cP @ ___ °C	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Point	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Rate API cm <sup>3</sup> /30 min	<input type="checkbox"/> cm <sup>3</sup> /30 min	<input type="checkbox"/> cm <sup>3</sup> /30 min	<input type="checkbox"/> cm <sup>3</sup> /30 min		
HTHP Filtrate cm <sup>3</sup> /30 min	@ ___ °F @ ___ °C	@ ___ °F @ ___ °C	@ ___ °F @ ___ °C		
Thickness API/HTHP	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm		
Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> retort	<input type="checkbox"/> calculated <input type="checkbox"/> retort	<input type="checkbox"/> calculated <input type="checkbox"/> retort		
Oil Content (% by Vol.)	<input type="checkbox"/> Oil/Water	<input type="checkbox"/> Oil/Water	<input type="checkbox"/> Oil/Water		
Water Content (% by Vol.)	<input type="checkbox"/> Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<input type="checkbox"/> Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<input type="checkbox"/> Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud		
Line Blue Capacity	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F <input type="checkbox"/> °C	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F <input type="checkbox"/> °C	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F <input type="checkbox"/> °C		
Filter Mud (P <sub>m</sub> ) ml	<input type="checkbox"/> ml	<input type="checkbox"/> ml	<input type="checkbox"/> ml		
Filterate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml		
Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml		
Hardness, mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L		
Hardness as Calcium, mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L		

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
Temperature	<input type="checkbox"/> °F <input type="checkbox"/> °C	<input type="checkbox"/> °F <input type="checkbox"/> °C	<input type="checkbox"/> °F <input type="checkbox"/> °C	RECOMMENDED TREATMENT	
Depth	<input type="checkbox"/> ft <input type="checkbox"/> m	<input type="checkbox"/> ft <input type="checkbox"/> m	<input type="checkbox"/> ft <input type="checkbox"/> m	<p>Made up Pcc R premix (1.5ppb) (60bbls) added to surface active system + petrachemical mud with 0.40ppb sodium bicarbonate for drilling out cement.</p> <p>Wait on cement. Nipple up stack. Testing stack.</p> <p>Water used = 60 bbls</p>	
Viscosity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C		
Plastic Viscosity	cP @ ___ °F <input type="checkbox"/> cP @ ___ °C	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Point	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Rate API cm <sup>3</sup> /30 min	<input type="checkbox"/> cm <sup>3</sup> /30 min	<input type="checkbox"/> cm <sup>3</sup> /30 min	<input type="checkbox"/> cm <sup>3</sup> /30 min		
HTHP Filtrate cm <sup>3</sup> /30 min	@ ___ °F @ ___ °C	@ ___ °F @ ___ °C	@ ___ °F @ ___ °C		
Thickness API/HTHP	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm		
Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> retort	<input type="checkbox"/> calculated <input type="checkbox"/> retort	<input type="checkbox"/> calculated <input type="checkbox"/> retort		
Oil Content (% by Vol.)	<input type="checkbox"/> Oil/Water	<input type="checkbox"/> Oil/Water	<input type="checkbox"/> Oil/Water		
Water Content (% by Vol.)	<input type="checkbox"/> Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<input type="checkbox"/> Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<input type="checkbox"/> Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud		
Line Blue Capacity	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F <input type="checkbox"/> °C	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F <input type="checkbox"/> °C	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F <input type="checkbox"/> °C		
Filter Mud (P <sub>m</sub> ) ml	<input type="checkbox"/> ml	<input type="checkbox"/> ml	<input type="checkbox"/> ml		
Filterate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml		
Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml	<input type="checkbox"/> ml/ml		
Hardness, mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L		
Hardness as Calcium, mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L	<input type="checkbox"/> mg/L		

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	PCC R	SOLUBLE	SODIUM	BICARBONATE	SOLIDS CONTROL EQUIPMENT		
								MAKE/BRAND	SIZE/SCREENS	HRS
			184	120	20			SHKR 1	60/100	-
			-	-	-			SHKR 2	60/100	-
			2	3				SHKR 3		
			299	8.3				SHKR 4		
			-	-				DESAND	8x12"	-
			2	3				DESILT	12x6"	-
								M CLNR		
			118	17				CENT 1		
			24	0.4				CENT 2		

BAROID REPRESENTATIVE <u>McLaughlin</u>	OFFICE/HOME <u>Central</u>	TELEPHONE	DAILY COST <u>\$ 351.88</u>	CUMULATIVE COST <u>\$ 2366.70</u>
WAREHOUSE <u>DELAVIE</u>	TELEPHONE			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

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# Baroid Drilling Fluids, Inc.

DRILLING MUD REPORT NO. **4**

DATE <b>25<sup>th</sup> Dec</b> 19 <b>91</b>	DEPTH <b>652</b> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <b>21<sup>st</sup> Dec 91</b>	PRESENT ACTIVITY <b>Drilling ahead</b>

REPORT FOR <b>Gas &amp; Fuel Exploration</b>	CONTRACTOR <b>GEARITANT</b>	RIG NO. <b>2</b>
REPORT FOR <b>GERARD NICOT</b>	REPORT FOR <b>IVAN SERPIC</b>	SECTION, TOWNSHIP, RANGE

NAME AND NO. <b>BOOTH CREEK #1</b>	FIELD OR BLOCK NO. <b>REP 104</b>	COUNTY, PARISH OR OFFSHORE AREA <b>OTWAY BASIN</b>	STATE/PROVINCE <b>VICTORIA</b>
DRILLING ASSEMBLY		MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>	CIRCULATION DATA
BIT SIZE <b>12</b>	TYPE <b>S44</b>	JET SIZE <b>2x11.13</b>	SURFACE SET @ <b>95/80/318</b>
PIPE TYPE <b>4 1/2</b>	TYPE <b>E</b>	LENGTH	INTERMEDIATE SET @
PIPE TYPE <b>4 1/2</b>	TYPE <b>U12</b>	LENGTH <b>55.69</b>	INTERMEDIATE SET @
COLLAR SIZE <b>6"</b>	LENGTH <b>139.30</b>	PRODUCTION OR LINER SET @	MUD TYPE <b>Gel/POLYMER</b>
HOLE <b>165</b>	PITS <b>350</b>	TOTAL CIRCULATING VOLUME <b>425</b>	PUMP SIZE <b>6x8"</b>
IN STORAGE	WEIGHT	PUMP MAKE, MODEL <b>CDP2 8</b>	ASSUMED EFF <b>98</b>
		vol/stk <b>2.8 gal/stk</b>	STK/min
		vol/min	ANNULAR VEL <b>122</b> <input type="checkbox"/> ft/min <input checked="" type="checkbox"/> m/min
			DP <b>1400</b> <b>139</b> <b>1217</b>
			CIRCULATION PRESSURE <b>1100</b> <input type="checkbox"/> psi <input type="checkbox"/> kPa
			BOTTOMS UP (min) <b>15</b>
			TOTAL CIRC. TIME (min) <b>60</b>

Mud From	MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
	<input type="checkbox"/> F.L. <input checked="" type="checkbox"/> PT	<input type="checkbox"/> F.L. <input type="checkbox"/> PT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	1920	0500				
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	22	31			
Depth	<input type="checkbox"/> ft <input checked="" type="checkbox"/> m	4.10	5.95			
	<input checked="" type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	8.7	8.8			
Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	35	45	1		
Static Viscosity	cP @ ___ °F <input type="checkbox"/> °C	5	15			
Yield Point	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	14	22			
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	21	3	31	5	1
Rate API cm <sup>3</sup> /30 min		21	12			
HTHP Filtrate cm <sup>3</sup> /30 min @ ___ °F @ ___ °C		—	—			
Thickness API/HTHP	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	2	2	1		
Clay Content (% by Vol.)	<input type="checkbox"/> calculated <input checked="" type="checkbox"/> wet	3	5			
Solids Content (% by Vol.) Oil/Water		197	95	1		
Water Content (% by Vol.)		1.5	Tr			
Line Blue Capacity	<input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	9	10			
	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C	10.5	8.5			
Specific Gravity Mud (P <sub>m</sub> ) ml		1.5	0.25			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml		0.37	0.45	0.08	0.15	1
Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml		+	+	1		
Chloride, mg/L		500	7500			
Hardness as Calcium, mg/L		160	120			
Wt %		—	1.5			

**RECOMMENDED TREATMENT**

Dilled out of shoe with 8 1/2" bit through Gellibrand Marl. Mud thinned rapidly whilst drilling the bottom of Gellibrand + top of Clifton formation. Added gel premixes (~10ppb) to achieve to raise YP. Swept hole with hi vis sweeps (Pac R) - no increase in returns at shakers. Viscosity began to increase rapidly in the Narratook [ \* High pH etc caused by drilling cement ]

**REMARKS**

Formation (~425m). Pac R premix + water was added but viscosity continued to rise reaching 70+. So KCC/Pac R premix were added + some pHPA was drilled in the flow line to reduce the solids content of the mud. Within a few circulations the viscosity decreased to 45-50 sec/qt.

Water added 250bbls.

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	SOLIDS CONTROL EQUIPMENT								
				MAK/BRAND	SIZE/SCREENS	HRS	MAK/BRAND	SIZE/SCREENS	HRS	MAK/BRAND	SIZE/SCREENS	HRS
			18L	SHKR 1	6x100	16						
				SHKR 2	8x100	12/12						
				SHKR 3								
			28	SHKR 4								
			34	DESAND	10.3	24x24	14					
			1198	DESILT	4b	12x6"	12					
				M CLNR								
			180	CENT 1								
			156	CENT 2								
			110									
			176									
			94									
			34									
			19									

BAROID REPRESENTATIVE <b>McHargh</b>	OFFICE/HOME <b>Perth</b>	TELEPHONE	DAILY COST <b>\$2192.97</b>	CUMULATIVE COST <b>\$4559.67</b>
WAREHOUSE <b>Ardenland</b>	TELEPHONE			

COMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

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# Baroid Drilling Fluids, Inc.

DRILLING MUD REPORT NO. **5**

DATE <b>26<sup>th</sup> Dec</b> 19 <b>91</b>	DEPTH <b>983</b> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <b>2<sup>nd</sup> Dec 91</b>	PRESENT ACTIVITY <b>Drilling Ahead</b>

REPORT FOR <b>CAS + FUEL EXPLORATION</b>	CONTRACTOR <b>GEAR HART</b>	RIG NO. <b>2</b>
REPORT FOR <b>CERARD NICOT</b>	REPORT FOR <b>IVAN SEPERIC</b>	SECTION, TOWNSHIP, RANGE

WELL NAME AND NO. <b>BOGON CREEK #1</b>	FIELD OR BLOCK NO. <b>PPP 104</b>	COUNTY, PARISH OR OFFSHORE AREA <b>ORUM BASIN</b>	STATE/PROVINCE <b>VICTORIA</b>
DRILLING ASSEMBLY		MUD VOLUME <input type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>	CIRCULATION DATA
BIT SIZE <b>2</b>	TYPE <b>S44</b>	JET SIZE <b>2x1/13</b>	SURFACE SET @ <b>95/8 @ 318</b>
PIPE TYPE <b>4 1/2 F</b>	LENGTH <b>788</b>	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME <b>580</b>
WELL PIPE TYPE <b>4 1/2 HW</b>	LENGTH <b>55.60</b>	INTERMEDIATE SET @	IN STORAGE <b>200</b>
COLLAR SIZE <b>6 1/2 DC</b>	LENGTH <b>131.3</b>	PRODUCTION OR LINER SET @	MUD TYPE <b>KCE/PHPA</b>
		PUMP SIZE <b>6x8"</b>	ANNULAR VEL <b>DP 112 100/110 DC 186/</b>
		PUMP MAKE, MODEL <b>GDPZ 8</b>	ASSUMED EFF <b>95%</b>
		vol/stk <b>0.067 bbl/stk</b>	stk/min
		vol/min <b>5.9</b>	vol/min
			CIRCULATION PRESSURE <b>700</b> <input type="checkbox"/> psi <input type="checkbox"/> kPa
			BOTTOMS UP (min) <b>28</b>
			TOTAL CIRC. TIME (min) <b>98</b>

Mud From	MUD PROPERTIES		
	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT
Sample Taken	1900	0500	
Line Temperature <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	29	34	
Depth <input type="checkbox"/> ft <input checked="" type="checkbox"/> m	873	952	
<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	8.8	8.8	
Viscosity <input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	44	44	1
Plastic Viscosity cP @ ___ °F <input type="checkbox"/> °C	10	14	
Yield Point <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	20	16	
Length (10 sec/10 min) <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	38	35	1
API cm <sup>3</sup> /30 min	12	9	
HTHP Filtrate cm <sup>3</sup> /30 min @ ___ °F @ ___ °C	—	—	
Thickness API/HTHP <input type="checkbox"/> 82nd in. <input type="checkbox"/> mm	11	11	1
Content (% by Vol.) <input type="checkbox"/> calculated <input checked="" type="checkbox"/> retort	4	4	
Oil Content (% by Vol.) Oil/Water	96	96	1
Water Content (% by Vol.)	1	0.25	
Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	7.5	8	
<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C	9	8.5	
Filtrate (P <sub>m</sub> ) ml	0.2	0.05	
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	0.08	0.05	1
Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml	+	+	1
Chloride, mg/L	11000	14000	
Hardness as Calcium, mg/L	100	160	
(wt %)	2.5%	3%	

WEIGHT	VISCOSITY	FILTRATE
BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER		

**RECOMMENDED TREATMENT**

Drill ahead through Dilwyn SST, Pember Hdst + into Pebble point formation.

Add Pac R/KCE promoters to maintain volume + maintain 1P.

**REMARKS**

Changed shaker 1 screen mud flowing over.

Water added 200 bbls

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	KCE	SOLYS	FZ-ATD	PAC R	SOL	SOLYS	PROMOTER	SOLIDS CONTROL EQUIPMENT		
											MAKE/BRAND	SIZE/SCREENS	HRS
				176	94	110	34				SHKR 1	60/80	24
											SHKR 2	80/100	24
				48	16	6	1				SHKR 3		
				97	918	898	36	93			SHKR 4		
											DESAND	10.1	8x12" 20
											DESILT	10.3	12x6" 13
				72	18	16	2				M CLNR		
				128	78	104	33				CENT 1		
				13	1.9	1.3					CENT 2		

BAROID REPRESENTATIVE <b>McLAUGHLIN</b>	OFFICE/HOME <b>REATH</b>	TELEPHONE	DAILY COST <b>\$ 2826.31</b>	CUMULATIVE COST <b>\$ 7385.98</b>
WAREHOUSE <b>DOERAGE</b>	TELEPHONE			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

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DRILLING MUD REPORT NO. **6**  
 DATE 27th Dec 19 91 DEPTH 1076  ft  m  
 SPUD DATE 21st Dec 91 PRESENT ACTIVITY Reaming to bottom

FOR Gas + Fuel Exploration CONTRACTOR GEARHART RIG NO. 2  
 OFF FOR GEARHART NCOI REPORT FOR IVAN SEPERIC SECTION, TOWNSHIP, RANGE

NAME AND NO. Boggy Creek #1 FIELD OR BLOCK NO. REP 104 COUNTY, PARISH OR OFFSHORE AREA Orin Basin STATE/PROVINCE Virginia  
 DRILLING ASSEMBLY CASING MUD VOLUME  bbl  m<sup>3</sup> CIRCULATION DATA  
 TYPE 382F JET SIZE 2x11.12 SURFACE SET @ 95/80/318 HOLE 230 PITS 320 PUMP SIZE 6x8" ANNULAR VEL  ft/min  m/min  
 DP 116 H<sub>2</sub>O 132/208  
 PIPE TYPE E LENGTH INTERMEDIATE TOTAL CIRCULATING VOLUME PUMP MAKE, MODEL ASSUMED EFF 95% CIRCULATION PRESSURE 900  psi  kPa  
 DIAMETER 4.12 SET @ INTERMEDIATE IN STORAGE WEIGHT vol/stk 0.067 bbl/stk BOTTOMS UP (min) 28  
 PIPE TYPE 4 LENGTH 55.69 SET @ INTERMEDIATE IN STORAGE WEIGHT vol/stk 6.7 bbl/stk TOTAL CIRC. TIME (min) 82  
 HOLESIZE 6" LENGTH 168.5 PRODUCTION OR LINER SET @ MUD TYPE 3% KCC / EZ MUD

MUD PROPERTIES	MUD PROPERTY SPECIFICATIONS		
	F.L. <input type="checkbox"/> PIT	F.L. <input type="checkbox"/> PIT	F.L. <input type="checkbox"/> PIT
Temperature <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>38</u>	<u>34</u>	
Viscosity <input type="checkbox"/> sec/qt API @ <u>29</u> °C	<u>8.8</u>	<u>8.9</u>	<u>1</u>
Viscosity <input type="checkbox"/> cP @ <u>29</u> °C	<u>8</u>	<u>7</u>	
Length (10 sec/10 min) <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<u>11.3</u>	<u>11.3</u>	<u>1</u>
Filtrate cm <sup>3</sup> /30 min @ <u>29</u> °C	<u>9.6</u>	<u>8.4</u>	
Thickness API/HTHP <input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<u>1</u>	<u>1</u>	<u>1</u>
Content (% by Vol.) <input type="checkbox"/> calculated <input type="checkbox"/> report	<u>2</u>	<u>4</u>	
Content (% by Vol.) Oil/Water	<u>98</u>	<u>96</u>	<u>1</u>
Content (% by Vol.)	<u>0.4</u>	<u>0.5</u>	
Blue Capacity <input type="checkbox"/> bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<u>8</u>	<u>7.5</u>	
<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ <u>29</u> °C	<u>9.5</u>	<u>8.5</u>	
Mud (P <sub>m</sub> ) ml	<u>0.25</u>	<u>0.05</u>	
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	<u>.19 .35</u>	<u>.05 .20</u>	<u>1</u>
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml	<u>—</u>	<u>—</u>	<u>1</u>
mg/L	<u>14000</u>	<u>14000</u>	
as Calcium, mg/L	<u>80</u>	<u>120</u>	
	<u>40</u>	<u>100</u>	

RECOMMENDED TREATMENT  
 Drill ahead through Paratte formation  
 Mud thinning as drilling through sand intervals adding gel precursor (2.11ppb) to active to maintain 1P. hosing mud to sand intervals up to 20 bbls/Pool to change bit. Run w/ NS + STAB Run from 538m.

REMARKS  
 Lost down hole whilst drilling + reaming  
 total 150 bbls.  
 Critical velocities 6 1/2" DC 300 ft/min  
 H<sub>2</sub>O 285 ft/min DP 286 ft/min.  
 Water used in last 24 hours = 300

SOLIDS CONTROL EQUIPMENT	MATERIALS																		
	BAROID (BULK)	BAROID (REG)	AQUAGEL	KCC	STAC	ER-H2O	SSAC	PAC-R	SP-11	CHAMP	PATROL	SODIUM Sulfate	LOWRY	MICRO	2526	MAKE/BRAND	SIZE/SCREENS	HRS	
SHKR 1	<u>420</u>	<u>420</u>	<u>156</u>	<u>128</u>	<u>78</u>	<u>104</u>	<u>33</u>	<u>20</u>	<u>36</u>								<u>60/80</u>	<u>21</u>	
SHKR 2		<u>42</u>	<u>100</u>				<u>30</u>	<u>20</u>	<u>36</u>								<u>80/100</u>	<u>21</u>	
SHKR 3		<u>15</u>	<u>44</u>	<u>50</u>	<u>10</u>	<u>9</u>	<u>1</u>	<u>2</u>											
SHKR 4		<u>198</u>	<u>555</u>	<u>1012</u>	<u>917</u>	<u>1347</u>	<u>369</u>	<u>98</u>											
DESAND		<u>15</u>	<u>224</u>	<u>127</u>	<u>28</u>	<u>25</u>	<u>3</u>	<u>2</u>									<u>9.7</u>	<u>8x12"</u>	<u>21</u>
DESILT																	<u>11.0</u>	<u>2x6"</u>	<u>21</u>
M CLNR																			
CENT 1		<u>147</u>	<u>112</u>	<u>178</u>	<u>68</u>	<u>95</u>	<u>32</u>	<u>28</u>	<u>20</u>	<u>36</u>									
CENT 2																			

AGENT REPRESENTATIVE McLaughlin OFFICE/HOME DEPT TELEPHONE 3763 52 DAILY COST \$ 3763 52 CUMULATIVE COST \$ 11,149.50  
 WAREHOUSE DEPT TELEPHONE



# Baroid Drilling Fluids, Inc.

DRILLING MUD REPORT NO. **7**

DATE <u>28<sup>th</sup> Dec</u> 19 <u>91</u>	DEPTH <u>1353</u> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <u>21<sup>st</sup> Dec 91</u>	PRESENT ACTIVITY <u>Drilling Ahead</u>

CLIENT <u>Gas &amp; Fuel Exploration</u>	CONTRACTOR <u>CEAR HART</u>	RIG NO. <u>2</u>
REPORT FOR <u>GERARD NICOS</u>	REPORT FOR <u>VAN SEDERIC</u>	SECTION, TOWNSHIP, RANGE

WELL NAME AND NO. <u>Boggy Creek</u>	FIELD OR BLOCK NO. <u>PEP 104</u>	COUNTY, PARISH OR OFFSHORE AREA <u>OKLAHOMA BASIN</u>	STATE/PROVINCE <u>VIC</u>
DRILLING ASSEMBLY		MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>	CIRCULATION DATA
PIPE SIZE <u>3 1/2</u>	TYPE <u>SEZF</u>	JET SIZE <u>2 x 1 1/8</u>	SURFACE SET @ <u>9580</u> <u>3181</u>
PIPE TYPE <u>4 1/2</u>	TYPE <u>E</u>	LENGTH	INTERMEDIATE SET @
PIPE TYPE <u>4 1/2</u>	TYPE <u>4 1/2</u>	LENGTH <u>55.64</u>	INTERMEDIATE SET @
PIPE TYPE <u>6 1/4</u>	TYPE <u>6 1/4</u>	LENGTH <u>168.5</u>	PRODUCTION OR LINER SET @
HOLE		PITS	PUMP SIZE
<u>300</u>		<u>300</u>	<u>6 x 8"</u>
TOTAL CIRCULATING VOLUME <u>600</u>		PUMP MAKE, MODEL <u>GDPZ 8</u>	ASSUMED EFF <u>9%</u>
IN STORAGE <u>40</u>		WEIGHT <u>8.6</u>	CIRCULATION PRESSURE <u>1100</u> <input type="checkbox"/> psi <input type="checkbox"/> kPa
MUD TYPE <u>KCL / PUA</u>		vol/stk <u>0.067</u> <u>44</u> / <u>SK</u>	BOTTOMS UP (min) <u>33</u>
		vol/min <u>7.37</u>	TOTAL CIRC. TIME (min) <u>82</u>

From	MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>1900</u>	<u>0500</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>38</u>	<u>38</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>1240</u>	<u>1339</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>9.0</u>	<u>9.2</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>45</u>	<u>40</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>12</u>	<u>13</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>19</u>	<u>16</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>2.4</u>	<u>1.2</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>6.8</u>	<u>7.4</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>12</u>	<u>11</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>4</u>	<u>4</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>96</u>	<u>96</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>1</u>	<u>0.25</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>8.1</u>	<u>9</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>9.0</u>	<u>9.0</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>Tr</u>	<u>—</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>114</u>	<u>105</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>17000</u>	<u>14000</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>120</u>	<u>120</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>150</u>	<u>80</u>			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>3.4</u>	<u>3.1</u>			

BY AUTHORITY  OPERATOR'S WRITTEN  DRILLING CONTRACTOR  
 OPERATOR'S REPRESENTATIVE  OTHER

RECOMMENDED TOUR TREATMENT

Continued to Run to bottom w/ new stabilisers. Drill ahead through Paratite SST. Yield point dropping as delays lost to down hole wall cake. Adding gel premixes to maintain MBT at 8ppb.

REMARKS

Carbides run at 1134 + 1296 m indicate average hole size of 9.3"

Using 1/3 borewater 2/3 sump water

Sump water pH 10 @ 1800 pphf 0.11.25

Water used in last 24 hours = 240

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	KCC	SOLK	PACER	SOLBS	E2M+P	SOL	SOL	SOL	SOL	SOL	SOL	SOL	SOL	SOL	SOLIDS CONTROL EQUIPMENT			
																		MAKE/ BRAND	SIZE/ SCREENS	HRS	
			112	178	05	68	32	28										SHKR 1	60/80	24	
																		SHKR 2	60/100	24	
																		SHKR 3			
			51	24	6	5	2	2										SHKR 4			
			621	448	898	287	73	528										DESAND	11.3	8x12	24
																		DESILT	12	12x6	22
																		M CLNR			
			275	146	31	33	5	4										CENT 1			
			61	154	89	63	30	26										CENT 2			

BAROID REPRESENTATIVE <u>JOE McLAUGHLIN</u>	OFFICE/HOME <u>PEATH</u>	TELEPHONE	DAILY COST <u>\$2424</u> <sup>53</sup>	CUMULATIVE COST <u>\$13574</u> <sup>03</sup>
WAREHOUSE <u>INTRAIDE</u>	TELEPHONE			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

THIS COPY TO BAROID TECHNICAL DEPARTMENT



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. **8**

DATE **29<sup>th</sup> DEC** 19 **91** DEPTH **1556**  ft  m

SPUD DATE **21<sup>st</sup> DEC 91** PRESENT ACTIVITY **DRILLING** **ahead**

FOR **GAS + FUEL EXPLORATION** CONTRACTOR **PEARHART** RIG NO. **2**

REPORT FOR **GEAROD NICOT** SECTION, TOWNSHIP, RANGE

NAME AND NO. **BOGGY CREEK** FIELD OR BLOCK NO. **PEP 104** COUNTY, PARISH OR OFFSHORE AREA **ORAMA** STATE/PROVINCE **VICTORIA**

DRILLING ASSEMBLY			CASING		MUD VOLUME		CIRCULATION DATA					
TYPE	JET SIZE	SET @	SURFACE	HOLE	PITS	PUMP SIZE	ANNULAR VEL	DP	ASSUMED EFF	CIRCULATION PRESSURE	BOTTOMS UP (min)	TOTAL CIRC. TIME (min)
<b>2 5/8 F</b>	<b>2X1.13</b>	<b>5380</b>	<b>318</b>	<b>350</b>	<b>300</b>	<b>6x8"</b>	<input checked="" type="checkbox"/> ft/min <input type="checkbox"/> m/min	<b>102</b>	<b>117</b>	<b>900</b>	<b>48</b>	<b>120</b>
TYPE	LENGTH	SET @	INTERMEDIATE	TOTAL CIRCULATING VOLUME	IN STORAGE	WEIGHT	PUMP MAKE, MODEL	vol/stk	EFF %	psi	kPa	
<b>E</b>	<b>55.69</b>			<b>850</b>	<b>40</b>	<b>8.5</b>	<b>GDP 2.8</b>	<b>0.067</b>	<b>90</b>			
TYPE	LENGTH	SET @	INTERMEDIATE	MUD TYPE								
<b>4 1/2 DP</b>	<b>168.5</b>			<b>KCE / PAPA</b>								
TYPE	LENGTH	SET @	PRODUCTION OR LINER									
<b>6 1/4</b>	<b>168.5</b>											

MUD PROPERTIES	MUD PROPERTY SPECIFICATIONS		
	WEIGHT	VISCOSITY	FILTRATE
Specific Gravity	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<input type="checkbox"/> ft <input type="checkbox"/> m	
Viscosity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m³		
Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ 25°C		
Viscosity	cP @ ___ °F <input checked="" type="checkbox"/> 25°C		
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa		
API cm³/30 min	<input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa		
Filtrate cm³/30 min	@ ___ °F @ ___ °C		
Thickness API/HTHP	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm		
Content (% by Vol.)	<input type="checkbox"/> calculated <input checked="" type="checkbox"/> report		
Content (% by Vol.) Oil/Water			
Content (% by Vol.)			
Free Blue Capacity	<input type="checkbox"/> bbl equiv. <input type="checkbox"/> cm³/cm³ mud		
	<input checked="" type="checkbox"/> strip <input type="checkbox"/> Meter @ ___ °F ___ °C		
Mud (P <sub>m</sub> ) ml			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml			
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml			
mg/L			
ness as Calcium, mg/L			
plate (mg/L)			
(wt %)			

BY AUTHORITY  OPERATOR'S WRITTEN  DRILLING CONTRACTOR  OPERATOR'S REPRESENTATIVE  OTHER

RECOMMENDED TREATMENT

Drilling ahead through Parate formation. More clay present so reducing gel additions. Using sump water for premixes. Treating with soda ash to raise pH + reduce Ca content.

REMARKS

lost about 100 bbls seepage downhole  
Water (added in last 24 hours) = 300 bbls

SOLIDS CONTROL EQUIPMENT	MAKE/ BRAND	SIZE/ SCREENS	HRS
SHKR 2		60/100	24
SHKR 3			
SHKR 4			
DESAND	10	8x12"	24
DESILT	11.5	12x6"	22
M CLNR			
CENT 1			
CENT 2			

BAROID REPRESENTATIVE	OFFICE/HOME	TELEPHONE	DAILY COST	CUMULATIVE COST
<b>Joe McLaughlin</b>	<b>Perth</b>		<b>\$ 3396 "</b>	<b>\$ 16970 "</b>
	WAREHOUSE	TELEPHONE		
	<b>Delade</b>			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

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# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. **9**

DATE **30th Dec 1991** DEPTH **1611**  ft  m  
 SPUD DATE **21st Dec** PRESENT ACTIVITY **RETURNING TO BOTTOM**

FOR **GAS + FUEL EXPLORATION** CONTRACTOR **GEARHART** RIG NO. **2**  
 REPORT FOR **GERARD NICOL** SECTION, TOWNSHIP, RANGE

WELL NAME AND NO. **3000m COREK 1** FIELD OR BLOCK NO. **REP 104** COUNTY, PARISH OR OFFSHORE AREA **OTWAY** STATE/PROVINCE **BASIN VIC**  
 DRILLING ASSEMBLY CASING MUD VOLUME  bbl  m<sup>3</sup> CIRCULATION DATA  
 SURFACE HOLE PITS PUMP SIZE ANNULAR VEL.  ft/min  m/min  
 SET @ **95/8 @ 318** **370** **330** **6 x 8"** DP **17** **17**  
 INTERMEDIATE TOTAL CIRCULATING VOLUME PUMP MAKE, MODEL ASSUMED EFF. % CIRCULATION PRESSURE  psi  kPa  
 SET @ **35+** **700** **GDP28** **95%** **1100**  
 INTERMEDIATE IN STORAGE WEIGHT vol/stk stk/min BOTTOMS UP (min)  
 SET @ **55.6** **120** **8.6** **0.067** **51**  
 PRODUCTION OR LINER MUD TYPE **KCC/PHPA** **5.9** vol/min TOTAL CIRC. TIME (min)  
 SET @ **168.3** **KCC/PHPA** **5.9** vol/min **117**

MUD PROPERTIES	MUD PROPERTY SPECIFICATIONS		
	WEIGHT	VISCOSITY	FILTRATE
Temperature <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.
1610 0500			
35 33			
1611 1611			
9.17 7.2			
45 46 1			
12 14			
17 18			
11.2 11.0 1			
6.8 7.2			
— —			
17 17 1			
5 5			
95 95 1			
0.25 0.2			
8 7.5			
9.5 9.0			
700 —			
27.75 251.75 1			
— — 1			
18500 15000			
100 80			
60 100			
3.8 3.2			

RECOMMENDED TREATMENT

*Drill ahead through Belfast formation with 11 1/2" hole. Dev increasing pool for next bit. Ret. w/1- Bit No 4. Recm from 1002 to 1058 m from 1229 to 1257. Run 1315 - F.W.*

REMARKS

*Desilts mop*

*Run 200 100 m mud pump. circulation vol was lowered to 2400.*

*Water used in case 24 hours = 240*

SOLIDS CONTROL EQUIPMENT	MAKE/ BRAND	SIZE/ SCREENS	HRS
SHKR 2	BRAND	60/100	15
SHKR 3			
SHKR 4			
DESAND	10.2	8x12	16
DESILT	11.3	12x6"	16
M CLNR			
CENT 1			
CENT 2			

REPRESENTATIVE **M. Handley** OFFICE/HOME **247** TELEPHONE **247** DAILY COST **\$ 2483<sup>63</sup>** CUMULATIVE COST **15 0453<sup>63</sup>**  
 WAREHOUSE **Deland** TELEPHONE

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

10/1/89

THIS COPY TO BAROID TECHNICAL DEPARTMENT



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 10

DATE <b>31<sup>ST</sup> DEC</b> 19 <b>91</b>	DEPTH <b>1673</b> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <b>21<sup>ST</sup> DEC</b>	PRESENT ACTIVITY <b>Circ prior to Poort.</b>

FOR <b>Gas + Fuel Exploration</b>	CONTRACTOR <b>GEARHART</b>	RIG NO. <b>2</b>
FOR <b>GERARD NICOT</b>	REPORT FOR <b>J. SEPELIC</b>	SECTION, TOWNSHIP, RANGE

NAME AND NO. <b>BOCCACREEK 1</b>	FIELD OR BLOCK NO. <b>DEP 104</b>	COUNTY, PARISH OR OFFSHORE AREA <b>ORAN BASIN VIC</b>	STATE/PROVINCE
<b>DRILLING ASSEMBLY</b> TYPE <b>SE4</b> JET SIZE <b>3x12</b> SET @ <b>95/80/318</b> TYPE <b>E</b> LENGTH <b>55.6</b> SET @ INTERMEDIATE TYPE <b>H21</b> LENGTH <b>168.3</b> SET @ INTERMEDIATE COLLAR SIZE <b>6.14</b> LENGTH <b>168.3</b> SET @ PRODUCTION OR LINER		<b>MUD VOLUME</b> <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup> HOLE <b>385</b> PITS <b>330</b> TOTAL CIRCULATING VOLUME <b>715</b> IN STORAGE <b>50</b> WEIGHT <b>8.5+</b> MUD TYPE <b>Kcc/PHPA</b>	
<b>CIRCUULATION DATA</b> PUMP SIZE <b>6x8U</b> ANNULAR VEL <b>127</b> <input type="checkbox"/> ft/min <input checked="" type="checkbox"/> m/min PUMP MAKE, MODEL <b>CD 228</b> ASSUMED EFF <b>9%</b> CIRCULATION PRESSURE <b>1000</b> <input type="checkbox"/> psi <input checked="" type="checkbox"/> kPa vol/stk <b>0.067</b> stk/min BOTTOMS UP (min) <b>52</b> TOTAL CIRC. TIME (min) <b>120</b>			

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
From	□ F.L. □ PIT	□ F.L. □ PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	1700	0500	BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	RECOMMENDED TREATMENT	
Temperature	36	35	<p>Drill ahead to 1673m. Circ. Wiper trip to 1400m tight hole from 1645 to 1400m. Ret. circ. Poort.</p>		
Depth	1640	1673			
Viscosity	9.2	9.3			
Plastic Viscosity	110	42			
Yield Point	10	10			
Flow Time (10 sec/10 min)	14	17			
API Filtrate	11.2	11.2			
API Filtrate	6.6	6.2			
Thickness API/HTHP	11	11			
Content (% by Vol.)	5	6			
Content (% by Vol.) Oil/Water	95	94			
Content (% by Vol.)	0.2	0.2			
Blue Capacity	9	9.5			
Mud (P <sub>m</sub> ) ml	700	200			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	51	28			
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml	1	1			
mg/L	19000	14000			
Hardness as Calcium, mg/L	80	100			
SPH (mg/L)	80	80			
W/O (mg/L)	3.5	3.6			

REMARKS

Increased addition of EZMUD + KCC to inhibit swelling clays at bottom of Belfast mudstone. whilst leaning to bottom wired all the filter cake off the wall, so seepage increased to about 5 bbl/hr. Added 250 bbls of water last 24 hours

PRG	UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	SOLIDS CONTROL EQUIPMENT												
					SHKR 1	SHKR 2	SHKR 3	SHKR 4	DESAND	DESILT	M CLNR	CENT 1	CENT 2				
					74	48	71	22	29								
					200												
					70	11	8	2	1								
					1417	1317	1198	5784	3693								
					276	59	57	10	7								
					20439	63	23	28									

BAROID REPRESENTATIVE <b>Joe McHugh</b>	OFFICE/HOME <b>Perth</b>	TELEPHONE	DAILY COST <b>\$ 3342.00</b>	CUMULATIVE COST <b>\$ 22795.63</b>
WAREHOUSE <b>Adelaide</b>	TELEPHONE			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.



# Baroid Drilling Fluids, Inc.

DRILLING MUD REPORT NO. **11**

DATE 1st Jan 19 92 DEPTH 1673  ft  m  
 SPUD DATE 21st Dec 91 PRESENT ACTIVITY POOH

REPORT FOR GAS + FUEL CONTRACTOR GEARHART RIG NO. 2  
 POINT FOR GERARD NICOT REPORT FOR TRASSERIE SECTION, TOWNSHIP, RANGE  
 NAME AND NO. BOGGY CREEK #1 FIELD OR BLOCK NO. RED LOW COUNTY, PARISH OR OFFSHORE AREA ORAN BASIN STATE/PROVINCE VIC

DRILLING ASSEMBLY			CASING		MUD VOLUME		CIRCULATION DATA					
SIZE	TYPE	JET SIZE	SET @	SURFACE	HOLE	PITS	PUMP SIZE	ANNULAR VEL.	DP	DC	ft/min	m/min
<u>12 5/8</u>	<u>API</u>		<u>9 7/8 @ 318m</u>		<u>385</u>	<u>280</u>	<u>6 x 8 1/2</u>					
PIPE	TYPE	LENGTH	SET @	INTERMEDIATE	TOTAL CIRCULATING VOLUME		PUMP MAKE, MODEL	ASSUMED EFF	CIRCULATION PRESSURE			
<u>1 1/2</u>					<u>665</u>		<u>CDPZ 8</u>	<u>75%</u>				
LINE	TYPE	LENGTH	SET @	INTERMEDIATE	IN STORAGE	WEIGHT	vol/stk	stk/min	BOTTOMS UP (min)			
<u>1 1/2</u>		<u>5.69</u>										
COLLAR SIZE		LENGTH	PRODUCTION OR LINER	MUD TYPE					TOTAL CIRC. TIME (min)			
<u>6 1/4</u>		<u>164.8</u>		<u>KCE / HTHP</u>								

From	MUD PROPERTIES		
	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.	<input type="checkbox"/> F.L. <input type="checkbox"/> P.T.
Sample Taken	<u>1600</u>	<u>0500</u>	
mine Temperature <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>35</u>	<u>33</u>	
ft <input type="checkbox"/> m	<u>1673</u>	<u>1673</u>	
<input type="checkbox"/> gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m³	<u>9.2</u>	<u>9.2</u>	
el Viscosity <input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	<u>41</u>	<u>42</u>	<u>1</u>
st Viscosity cP @ ___ °F <input type="checkbox"/> °C	<u>9</u>	<u>9</u>	
int <input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa	<u>15</u>	<u>16</u>	
length (10 sec/10 min) <input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa	<u>11/2</u>	<u>11/2</u>	<u>1</u>
ate API cm³/30 min	<u>6.7</u>	<u>6.5</u>	
HP Filtrate cm³/30 min @ ___ °F @ ___ °C	<u>1</u>	<u>1</u>	<u>1</u>
thickness API/HTHP <input type="checkbox"/> 32nd in. <input type="checkbox"/> mm	<u>1</u>	<u>1</u>	<u>1</u>
os Content (% by Vol.) <input type="checkbox"/> calculated <input type="checkbox"/> port	<u>4</u>	<u>4</u>	
ontent (% by Vol.) Oil/Water	<u>96</u>	<u>96</u>	<u>1</u>
ontent (% by Vol.)	<u>0.1</u>	<u>0.2</u>	
lene Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm³/cm³ mud	<u>8.5</u>	<u>8.0</u>	
<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C	<u>9</u>	<u>9</u>	
y Mud (P <sub>m</sub> ) ml	<u>200</u>	<u>200</u>	
nity Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	<u>.2175</u>	<u>.1105</u>	<u>1</u>
rnate Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml	<u>1</u>	<u>1</u>	<u>1</u>
g/L	<u>19000</u>	<u>18500</u>	
ardness as Calcium, mg/L	<u>80</u>	<u>80</u>	
<u>SO<sub>4</sub> SULPHATE mg/L</u>	<u>80</u>	<u>40</u>	
<u>KCL 90W</u>	<u>3.2</u>	<u>3.2</u>	

MUD PROPERTY SPECIFICATIONS

WEIGHT VISCOSITY FILTRATE

BY AUTHORITY  OPERATOR'S WRITTEN  DRILLING CONTRACTOR  
 OPERATOR'S REPRESENTATIVE  OTHER

RECOMMENDED TREATMENT

*Rit w/ DST tool # 1  
 Test # 1. POOH w/ DST # 1  
 Rit w/ - BIT JUNK SUB  
 Broken jets POOH.*

REMARKS

*Sample of mud from DST # 1  
 pH = 9 Fil = 10 pH = 20  
 pf/mf = .2175 KCE - 3.2 Cl = 17000  
 Ca = 40 SO<sub>4</sub> = 10  
 Error correction pH = 7.5 Fil = 10 pm = 200  
 pf/mf 0/2.3 Cl 17000 KCE = 3.2  
 Ca = 320 TH = 480*

PROC UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	SOLIDS CONTROL EQUIPMENT			
				MAKE/ BRAND	SIZE/ SCREENS	HRS	
				SHKR 1	<u>Baroid</u>	<u>80/100</u>	<u>4</u>
				SHKR 2	<u>Baroid</u>	<u>60/150</u>	<u>4</u>
				SHKR 3			
				SHKR 4			
				DESAND			
				DESILT			
				M CLNR			
				CENT 1			
				CENT 2			

BAROID REPRESENTATIVE Joe McLaughlin OFFICE/HOME PEATH TELEPHONE  
 WAREHOUSE DOERADE TELEPHONE

DAILY COST ZERO CUMULATIVE COST \$ 22795 63

COMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT IMPLICATION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 12

DATE 2<sup>ND</sup> JAN 19 92 DEPTH 1673  ft  m

SPUD DATE 21<sup>ST</sup> DEC 91 PRESENT ACTIVITY DRILLING TO BOTTOM

OPERATOR GAS + FUEL MISC EXPL. CONTRACTOR GEARHART RIG NO. 2

REPORT FOR GERALD NICOL SECTION, TOWNSHIP, RANGE

NAME AND NO. BOCKY CREW #1 FIELD OR BLOCK NO. REP 104 COUNTY, PARISH OR OFFSHORE AREA OTWAY BASIN STATE/PROVINCE VICTORIA

DRILLING ASSEMBLY			CASING		MUD VOLUME		CIRCULATION DATA		
SIZE <u>12</u>	TYPE <u>C-9</u>	JET SIZE	SURFACE SET @ <u>95/8 @ 318</u>	HOLE <u>385</u>	PITS <u>320</u>	PUMP SIZE <u>6x8"</u>	ANNULAR VEL. DP	<input type="checkbox"/> ft/min	<input type="checkbox"/> m/min
PIPE <u>4 1/2</u>	TYPE <u>E</u>	LENGTH	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME <u>705</u>	PUMP MAKE, MODEL <u>GDP2 8</u>	ASSUMED EFF <u>95%</u>	CIRCULATION PRESSURE	<input type="checkbox"/> psi	<input type="checkbox"/> kPa
PIPE <u>4 1/2</u>	TYPE <u>E</u>	LENGTH <u>5569</u>	INTERMEDIATE SET @	IN STORAGE	WEIGHT	vol/stk <u>0.067</u>	BOTTOMS UP (min)	<input type="checkbox"/> psi	<input type="checkbox"/> kPa
COLLAR SIZE <u>6 1/4</u>	LENGTH <u>16830</u>	PRODUCTION OR LINER SET @	MUD TYPE <u>KCL/PHPA</u>			vol/min	TOTAL CIRC. TIME (min)		

From	MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	1900	2000	0530			
Surface Temperature <input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<del>1673</del> 33	33	31			
Temperature <input type="checkbox"/> ft <input type="checkbox"/> m	1673	1673	1673			
Weight <input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m³	9.2	9.2	9.1			
Plastic Viscosity <input type="checkbox"/> sec/qt API @ <u>°F</u> <input type="checkbox"/> sec/L @ <u>°C</u>	4/1	39	4/1			
Thermal Viscosity cP @ <u>°F</u> <input type="checkbox"/> °C	9	14	12			
Yield Point <input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa	17	14	18			
Flow Length (10 sec/10 min) <input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa	1/2	2/2	2/4			
Rate API cm³/30 min	6.2	8.2	7.5			
API Filtrate cm³/30 min @ <u>°F</u> @ <u>°C</u>	—	—	—			
Thickness API/HTHP <input type="checkbox"/> 32nd in. <input type="checkbox"/> mm	11	1	11			
Content (% by Vol.) <input type="checkbox"/> calculated <input type="checkbox"/> reported	4	4	4			
Water Content (% by Vol.) Oil/Water	96	96	96			
Water Content (% by Vol.)	0.25	0.5	0.2			
Free Water Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm³/cm³ mud	8.0	8.5	8.0			
<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ <u>°F</u> <u>°C</u>	10	9.5	9.0			
Water Mud (P <sub>m</sub> ) ml	0.25	200	Tr			
Water Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	0.57	0.59	1.3			
Water Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml	—	—	—			
Water, mg/L	23000	19000	19000			
Hardness as Calcium, mg/L	80	80	80			
Chloride (Mg/L)	180	100	100			
Water (wt %)	4	3.8	3.6			

BY AUTHORITY  OPERATOR'S WRITTEN  DRILLING CONTRACTOR  OPERATOR'S REPRESENTATIVE  OTHER

RECOMMENDED TREATMENT

Pool w/ blocked jets. Pipe scale.

2.4 wt 60ft corebarrel. Ream tight hole from 1358 to 1418m. Pool

2.4 wt stabiliser BHA tight hole from 1200m. Ream.

REMARKS

Returns at the shakers consist dominantly of wall cake while reaming with core barrel

Used 100 bbls water last 24 hrs.

PROG UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	Ker	Pine	Fibrous	Siga	Pine	SOLG	GROTE	BIDZEL	Sulfur	Sulfur	SOLIDS CONTROL EQUIPMENT		
														MAKE/ BRAND	SIZE/ SCREENS	HRS
		137	37	204	37	63	28	20						SHKR 1	80/100	
														SHKR 2	60/100	
														SHKR 3		
				12	2	3	1	2						SHKR 4		
				243	14	49	36	59						DESAND	8x2	
														DESILT	12x6	
														M CLNR		
		30	294	308	61	60	8	12						CENT 1		
		437	37	197	35	60	27	18						CENT 2		

BAROID REPRESENTATIVE McLaughlin OFFICE/HOME DEATH TELEPHONE

WAREHOUSE DELAIDE TELEPHONE

DAILY COST \$ 901.88 CUMULATIVE COST \$ 23697.51

COMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 13

DATE 3<sup>RD</sup> JAN 19 92 DEPTH 1682  ft  m  
 SPUD DATE 21<sup>ST</sup> DEC 91 PRESENT ACTIVITY Breaking open core barrel

OPERATOR GAS + FUEL EXPLORATION CONTRACTOR GEARHART RIG NO. 2  
 REPORT FOR HUAN SEPERIC SECTION, TOWNSHIP, RANGE

NAME AND NO. BOGLEY CREEK #1 FIELD OR BLOCK NO. SEP 104 COUNTY, PARISH OR OFFSHORE AREA OTWA STATE/PROVINCE BASIN VICTORIA

DRILLING ASSEMBLY		CASING		MUD VOLUME <input type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>		CIRCULATION DATA	
TYPE <u>C-9</u>	JET SIZE <u>OPEN</u>	SURFACE SET @ <u>9518(6)318</u>	HOLE <u>390</u>	PITS <u>290</u>	PUMP SIZE <u>6x8"</u>	ANNULAR VEL DP <u>82</u>	<input type="checkbox"/> ft/min <input type="checkbox"/> m/min <u>93/146</u>
PIPE TYPE <u>E</u>	LENGTH	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME <u>680</u>	PUMP MAKE, MODEL <u>G.D. 28</u>	ASSUMED EFF <u>90%</u>	CIRCULATION PRESSURE <u>550</u>	<input type="checkbox"/> psi <input type="checkbox"/> kPa
PIPE TYPE <u>14.250</u>	LENGTH <u>55.6</u>	INTERMEDIATE SET @	IN STORAGE <u>80</u>	WEIGHT <u>8.6</u>	vol/stk <u>0.067</u>	BOTTOMS UP (min) <u>67</u>	
COLLAR SIZE <u>6 1/4</u>	LENGTH <u>157.82</u>	PRODUCTION OR LINER SET @	MUD TYPE <u>KCE KADA</u>		vol/min <u>4.7</u>	TOTAL CIRC. TIME (min) <u>145</u>	

MUD PROPERTIES	MUD PROPERTY SPECIFICATIONS		
	WEIGHT	VISCOSITY	FILTRATE
Temperature <input type="checkbox"/> °F <input type="checkbox"/> °C	<u>33</u>	<u>29</u>	
Specific Gravity <input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	<u>9.2</u>	<u>9.2+</u>	
Viscosity <input type="checkbox"/> sec/qt API @ <u>79 F</u> <input type="checkbox"/> sec/l @ <u>—</u> °C	<u>39</u>	<u>41</u>	<u>1</u>
Plastic Viscosity <input type="checkbox"/> cp @ <u>79</u> °F <input type="checkbox"/> °C	<u>9</u>	<u>9</u>	
Yield Point <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<u>16</u>	<u>15</u>	
Flow Length (10 sec/10 min) <input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<u>112</u>	<u>112</u>	<u>1</u>
Filtrate cm <sup>3</sup> /30 min @ <u>—</u> °F @ <u>—</u> °C	<u>76</u>	<u>70</u>	<u>1</u>
Filtrate cm <sup>3</sup> /30 min @ <u>—</u> °F @ <u>—</u> °C	<u>—</u>	<u>—</u>	
Thickness API/HTHP <input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<u>1</u>	<u>1</u>	<u>1</u>
Content (% by Vol.) <input type="checkbox"/> calculated <input checked="" type="checkbox"/> retort	<u>4</u>	<u>4</u>	
Oil Content (% by Vol.) Oil/Water	<u>0.2</u>	<u>0.25</u>	<u>1</u>
Water Content (% by Vol.)	<u>0.2</u>	<u>0.25</u>	
Free Water Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<u>8.75</u>	<u>9</u>	
<input checked="" type="checkbox"/> Strip <input type="checkbox"/> Meter @ <u>—</u> °F <u>—</u> °C	<u>9.0</u>	<u>9.0</u>	
Initial Mud (P <sub>m</sub> ) ml	<u>zero</u>	<u>zero</u>	
Final Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	<u>.15/ .8</u>	<u>.15/ .8</u>	<u>1</u>
Final Alkalinity Filtrate (P <sub>f</sub> /P <sub>f</sub> ) ml/ml	<u>—</u>	<u>—</u>	<u>1</u>
Iron mg/L	<u>18000</u>	<u>24000</u>	
Ironness as Calcium, mg/L	<u>100</u>	<u>120</u>	
White Sodium <u>mg/L</u>	<u>60</u>	<u>60</u>	
Chloride <u>(wt %)</u>	<u>3.5</u>	<u>4.4</u>	

RECOMMENDED TREATMENT

Ream from 1200m to bottom with stabilisers. Circ. T.G. = 37 units 8m fill.

Pool. Rin w/ - 30ft core barrel

Ream 18m to bottom. T.G. = 800 units fill < 1m.

Core from 1673 - 1682m. Pool.

REMARKS

⊙ Alkalinity indicates CO<sub>2</sub> contamination of mud by 800 unit trap gas.

used 100 bbls water lost 24 hrs

PHASE	BAROID (BULK)	BAROID (REG)	AQUAGEL	SOLIDS CONTROL EQUIPMENT												
				KCE	SHKR	DESAND	DESILT	M CLNR	CENT 1	CENT 2	MAKE/ BRAND	SIZE/ SCREENS	HRS			
INITIAL																
START																
ACTIVE																
END																
FINAL																
DRY																

BAROID REPRESENTATIVE DE MCHAUGHIN OFFICE/HOME PERIT TELEPHONE  
 WAREHOUSE DELAWE TELEPHONE

DAILY COST \$1305.06 CUMULATIVE COST 25002.57

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 14

DATE <u>4<sup>th</sup> Jan</u> 19 <u>92</u>	DEPTH <u>1835</u> <input type="checkbox"/> ft <input checked="" type="checkbox"/> m
SPUD DATE <u>2<sup>nd</sup> Dec 91</u>	PRESENT ACTIVITY <u>DRILLING AHEAD</u>

OPERATOR <u>CAS + FUEL EXPLORATION</u>	CONTRACTOR <u>GEARHART</u>	RIG NO. <u>2</u>
REPORT FOR <u>GERARD NICOT</u>	REPORT FOR <u>IVAN SEPERIC</u>	SECTION, TOWNSHIP, RANGE

NAME AND NO. <u>BOGGS CREEK #1</u>	FIELD OR BLOCK NO. <u>DEP 104</u>	COUNTY, PARISH OR OFFSHORE AREA <u>OTWAY</u>	STATE/PROVINCE <u>BRUNSWICK</u>																																																						
<table border="1"> <tr> <th colspan="2">DRILLING ASSEMBLY</th> <th colspan="2">CASING</th> <th colspan="2">MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m<sup>3</sup></th> </tr> <tr> <td>SIZE <u>4 1/2</u></td> <td>TYPE <u>E</u></td> <td>SET @ <u>95/8 @ 318</u></td> <td>HOLE <u>430</u></td> <td>PITS <u>280</u></td> <td>PUMP SIZE <u>6x8"</u></td> </tr> <tr> <td>SIZE <u>4 1/2</u></td> <td>TYPE <u>H2</u></td> <td>SET @</td> <td>TOTAL CIRCULATING VOLUME <u>710</u></td> <td></td> <td>PUMP MAKE, MODEL <u>QDPZ 8</u></td> </tr> <tr> <td>COLLAR SIZE <u>6 1/4</u></td> <td>LENGTH</td> <td>INTERMEDIATE SET @</td> <td>IN STORAGE <u>zero</u></td> <td>WEIGHT</td> <td>ASSUMED EFF <u>90</u></td> </tr> <tr> <td></td> <td></td> <td>PRODUCTION OR LINER SET @</td> <td>MUD TYPE <u>KCE/PAE</u></td> <td></td> <td>CIRCULATION PRESSURE <u>925</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ANNULAR VEL. DP <u>104</u> <input type="checkbox"/> ft/min <input checked="" type="checkbox"/> m/min</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>CIRCULATION PRESSURE <u>925</u> <input type="checkbox"/> psi <input checked="" type="checkbox"/> kPa</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BOTTOMS UP (min) <u>58</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>TOTAL CIRC. TIME (min) <u>118</u></td> </tr> </table>		DRILLING ASSEMBLY		CASING		MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>		SIZE <u>4 1/2</u>	TYPE <u>E</u>	SET @ <u>95/8 @ 318</u>	HOLE <u>430</u>	PITS <u>280</u>	PUMP SIZE <u>6x8"</u>	SIZE <u>4 1/2</u>	TYPE <u>H2</u>	SET @	TOTAL CIRCULATING VOLUME <u>710</u>		PUMP MAKE, MODEL <u>QDPZ 8</u>	COLLAR SIZE <u>6 1/4</u>	LENGTH	INTERMEDIATE SET @	IN STORAGE <u>zero</u>	WEIGHT	ASSUMED EFF <u>90</u>			PRODUCTION OR LINER SET @	MUD TYPE <u>KCE/PAE</u>		CIRCULATION PRESSURE <u>925</u>						ANNULAR VEL. DP <u>104</u> <input type="checkbox"/> ft/min <input checked="" type="checkbox"/> m/min						CIRCULATION PRESSURE <u>925</u> <input type="checkbox"/> psi <input checked="" type="checkbox"/> kPa						BOTTOMS UP (min) <u>58</u>						TOTAL CIRC. TIME (min) <u>118</u>		
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MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS		
From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	<u>1800</u>	<u>0530</u>		BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	RECOMMENDED TREATMENT	
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C	<u>36</u>	<u>38</u>	<p>LAMED OUT CORE. RTH W/ - NGHS SEC 82F. OPENED UP 9M OF HOLE. DRILLED AHEAD THROUGH WAARE FORMATIONS + Eumeralla Formation.</p> <p>Maintaining pit vol with KCE/PAE/ERMG Premixes. Running desander with loss rate of ~ 5 bbls/hr.</p>		
Specific Gravity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>	<u>9.2</u>	<u>9.2</u>			
Dynamic Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C	<u>45</u>	<u>43</u>			
Kinematic Viscosity	cP @ ___ °F <input type="checkbox"/> cP @ ___ °C	<u>12</u>	<u>10</u>			
Yield Point	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<u>18</u>	<u>15</u>			
Plastic Viscosity (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa	<u>2/3</u>	<u>1/3</u>			
API Filtrate cm <sup>3</sup> /30 min		<u>6.8</u>	<u>6.8</u>			
API Filtrate cm <sup>3</sup> /30 min @ ___ °F @ ___ °C		<u>+</u>	<u>+</u>			
Filtrate Thickness API/HTHP	<input type="checkbox"/> 2nd in. <input type="checkbox"/> mm	<u>11</u>	<u>11</u>			
Solids Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> wetort	<u>5</u>	<u>4</u>			
Water Content (% by Vol.) Oil/Water		<u>95</u>	<u>96</u>			
Water Content (% by Vol.)		<u>0.25</u>	<u>0.25</u>			
Line Blue Capacity	<input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud	<u>7.5</u>	<u>8.5</u>			
Line Blue Capacity	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C	<u>9.0</u>	<u>8.5</u>			
Mud (P <sub>m</sub> ) ml		<u>zero</u>	<u>zero</u>			
API Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml		<u>0.25</u>	<u>0.65</u>			
API Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml		<u>+</u>	<u>+</u>			
API Filtrate (mg/L)		<u>25000</u>	<u>24000</u>			
Hardness as Calcium, mg/L		<u>100</u>	<u>120</u>			
Sulfide (mg/L)		<u>60</u>	<u>60</u>			
Sulfide (wt %)		<u>4.5</u>	<u>4.2</u>			

Used 150 bbls in last 24 hours

PROC. UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	KCE	SOLV	SODIUM SULPHATE	CALP	SOLV	SODIUM SULPHATE	CALP	SOLV	SOLIDS CONTROL EQUIPMENT				
												MAKE/ BRAND	SIZE/ SCREENS	HRS		
		<u>422</u>	<u>37</u>	<u>159</u>	<u>33</u>	<u>57</u>	<u>17</u>	<u>26</u>					SHKR 1		<u>880/100</u>	<u>20</u>
													SHKR 2		<u>860/100</u>	<u>20</u>
													SHKR 3			
				<u>10</u>	<u>5</u>	<u>4</u>	<u>2</u>	<u>1</u>					SHKR 4			
				<u>222</u>	<u>280</u>	<u>599</u>	<u>57</u>	<u>36</u>					DESAND	<u>11 pgs</u>	<u>8x12</u>	<u>18</u>
													DESILT		<u>12x6</u>	<u>0</u>
													M CLNR			
		<u>30</u>	<u>299</u>	<u>351</u>	<u>68</u>	<u>67</u>	<u>15</u>	<u>20</u>					CENT 1			
		<u>432</u>	<u>37</u>	<u>149</u>	<u>28</u>	<u>53</u>	<u>15</u>	<u>25</u>					CENT 2			

BAROID REPRESENTATIVE <u>JOE McHAUGHAN</u>	OFFICE/HOME <u>1415 GLENVIEW DR. AUSTIN TX 78704</u>	TELEPHONE	DAILY COST <u>\$ 1182<sup>32</sup></u>	CUMULATIVE COST <u>\$ 26184<sup>89</sup></u>
	WAREHOUSE <u>PERTH</u>	TELEPHONE		

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

THIS COPY TO BAROID TECHNICAL DEPARTMENT



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 15  
 DATE 5<sup>th</sup> Jan 1992 DEPTH 1900 ft  
 SPUD DATE 21<sup>st</sup> Dec 91 PRESENT ACTIVITY DRILLING BPB LOGS

OPERATOR **Gas + Fuel Exploration** CONTRACTOR **GEARHART** RIG NO. **2**  
 REPORT FOR **IVAN SEPERIC** SECTION, TOWNSHIP, RANGE

WELL NAME AND NO. **CELAND Nicol Bogum CK #1** FIELD OR BLOCK NO. COUNTY, PARISH OR OFFSHORE AREA **OWAY BASIN VICTORIA** STATE/PROVINCE  
 DRILLING ASSEMBLY: PIPE 4 1/2" TYPE E LENGTH 55.6' JET SIZE 3x11 SET @ 915180 318. SURFACE HOLE 445 PITS 350 MUD VOLUME 795  
 CIRCULATION DATA: PUMP SIZE 6x8 1/2" ANNULAR VEL DP 102 1/2" W/min 117/183  
 PUMP MAKE, MODEL G0028 ASSUMED EFF 95% CIRCULATION PRESSURE 950  
 IN STORAGE 40 WEIGHT 8.7 vol/stk 0.067 65/15K BOTTOMS UP (min) 61  
 TOTAL CIRC. TIME (min) 135  
 MUD TYPE **KCE/PHPA**

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
From	F.L. OPT	F.L. PIT	WEIGHT	VISCOSITY	FILTRATE
Sample Taken	2100				
Temperature	33				
Depth	1900				
Weight	9.3				
Plastic Viscosity	4/1	1			
Dynamic Viscosity	10				
Yield Point	16				
Strength (10 sec/10 min)	112	1			
Rate API cm <sup>3</sup> /30 min	6.4				
API Filtrate cm <sup>3</sup> /30 min	—				
Thickness API/HTHP	1				
Solids Content (% by Vol.)	5				
Water Content (% by Vol.) Oil/Water	95				
Water Content (% by Vol.)	0.4				
Methylene Blue Capacity	9				
Filterability	9.5				
Mud (P <sub>m</sub> ) ml	0.4				
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	0.6 1.6				
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml	—				
Chloride, mg/L	21000				
Hardness as Calcium, mg/L	80				
Sulfide	100				
Iron (wt%)	3.9				

RECOMMENDED TREATMENT  
 Drill ahead to Room. Circ. to set wiper trip. Post. 2.11 W/- BPB LOGS. LOG.

REMARKS  
 Static losses downhole 1 bbl/hr. Lined Desander off as pulling out too much mud + to keep mud weight at 9.3 ppg Used 100 bbls water last 24 hrs

PR UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	KCE	SOLUBLE PAC P	SOLUBLE SCL	EZ-AND	SCL	SODIUM SULPHATE	CALCIUM CHLORIDE	POTASSIUM	SOLIDS CONTROL EQUIPMENT			
												MAKE/BRAND	SIZE/SCREENS	HRS	
		432	37	49	53	28	15	25				SHKR 1	BRAND	880/100	22
												SHKR 2		860/100	22
												SHKR 3			
		0	0	28	3	2	1	2				SHKR 4			
		0	0	567	449	114	36	28	93	92		DESAND	10.8	8x12"	3
												DESILT		12x6"	
												M CLNR			
		30	24	329	70	70	16	11				CENT 1			
		437	37	121	50	26	14	24				CENT 2			

BAROID REPRESENTATIVE **JOE McLAUGHLIN** OFFICE/HOME **PENTH** TELEPHONE  
 WAREHOUSE **DEWAIDE** TELEPHONE  
 DAILY COST **\$1196.96** CUMULATIVE COST **\$27381.79**



# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. **16**  
 DATE **6<sup>th</sup> Jan** 19 **92** DEPTH **1900**  ft  m  
 SPUD DATE **2<sup>nd</sup> Dec 91** PRESENT ACTIVITY **POOH AFTER WIPER TRIP**

PORT FOR **CAS + FUEL EXPLORATION** CONTRACTOR **GEARHART** RIG NO. **2**  
 NAME AND NO. **CELAND NISLOT** REPORT FOR **STAN SEPERIC** SECTION, TOWNSHIP, RANGE

DRILLING ASSEMBLY		CASING		MUD VOLUME <input checked="" type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>		CIRCULATION DATA	
TYPE	JET SIZE	SURFACE SET @	HOLE	PITS	PUMP SIZE	ANNULAR VEL. DP	<input type="checkbox"/> ft/min <input type="checkbox"/> m/min <input type="checkbox"/> DC
<b>1/2</b>		<b>9 3/8 @ 36</b>	<b>4.5</b>	<b>350</b>	<b>6x8"</b>		
TYPE	LENGTH	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME		PUMP MAKE, MODEL	ASSUMED EFF	CIRCULATION PRESSURE <input type="checkbox"/> psi <input type="checkbox"/> kPa
<b>1/2</b>			<b>795</b>		<b>CDP 28</b>	<b>95</b>	
TYPE	LENGTH	INTERMEDIATE SET @	IN STORAGE	WEIGHT	vol/stk	BOTTOMS UP (min)	
<b>1/2</b>			<b>zero</b>		<b>0.067</b>		
CLARIFIER SIZE	LENGTH	PRODUCTION OR LINER SET @	MUD TYPE			TOTAL CIRC. TIME (min)	
<b>6 1/4</b>			<b>LCR/DHPA</b>				

MUD PROPERTIES		MUD PROPERTY SPECIFICATIONS	
From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY
Sample Taken			
Temperature	<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C		
	<input type="checkbox"/> ft <input type="checkbox"/> m		
	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>		
Dynamic Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C		
Static Viscosity	cP @ ___ °F ___ °C		
Yield Point	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Rate API cm <sup>3</sup> /30 min			
Filtrate cm <sup>3</sup> /30 min @ ___ °F @ ___ °C			
Thickness API/HTHP	<input type="checkbox"/> 32nd in. <input type="checkbox"/> mm		
Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> retort		
Water Content (% by Vol.) Oil/Water			
Water Content (% by Vol.)			
Free Water Capacity	<input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud		
	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C		
Mud (P <sub>m</sub> ) ml			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml			
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml			
Chloride mg/L			
Density as Calcium, mg/L			
White (wt %)			

RECOMMENDED TREATMENT

Run BPB LOGS

- MRS-DLC-DLP-ARS-WDS
- DLS-MRS-CSS
- PDS-CNS
- Velocity

Run to Bottom. Circ 2 hours.  
 POOH. Rig up BPB to run RFT.

REMARKS

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	SOLIDS CONTROL EQUIPMENT												
				MAKE/BRAND	SIZE/SCREENS	HRS										
				SHKR 1		1380/100	2									
				SHKR 2		60/100	2									
				SHKR 3												
				SHKR 4												
				DESAND												
				DESILT												
				M CLNR												
				CENT 1												
				CENT 2												

BAROID REPRESENTATIVE **TECH** OFFICE/HOME **TECH** TELEPHONE  
**DE McLaughlin** WAREHOUSE **DELAIDE** TELEPHONE  
 DAILY COST **\$607.50** CUMULATIVE COST **\$27989.27**

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

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# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 17

DATE 7<sup>th</sup> JAN 19 92 DEPTH 1900  ft  m  
 SPUD DATE 21<sup>st</sup> DEC 91 PRESENT ACTIVITY POOH SIDWAYS

CONTRACTOR GEARHART RIG NO. 2  
 REPORT FOR IVAN SEPERIC SECTION, TOWNSHIP, RANGE

NAME AND NO. BOOTH CREEK #1 FIELD OR BLOCK NO. REP 104 COUNTY, PARISH OR OFFSHORE AREA ORCAH BASIN STATE/PROVINCE VICTORIA  
 DRILLING ASSEMBLY: TYPE DC, LENGTH 1900, SURFACE SET @ 36, INTERMEDIATE SET @ 36, MUD VOLUME 1000 bbl, TOTAL CIRCULATING VOLUME 745, PUMP SIZE 6x8", ANNULAR VEL DC, PUMP MAKE MODEL GDP28, ASSUMED EFF 95%, CIRCULATION PRESSURE ---, BOTTOMS UP (min) ---, TOTAL CIRC. TIME (min) ---

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS		
FROM	TO	TEST	WEIGHT	VISCOSITY	FILTRATE
Sample Taken		<input checked="" type="checkbox"/> F.L. <input type="checkbox"/> PIT			
Temperature		<input type="checkbox"/> °F <input checked="" type="checkbox"/> °C			
Specific Gravity		<input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>			
Dynamic Viscosity		<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C			
Static Viscosity		cP @ ___ °F <input type="checkbox"/> ___ °C			
Shear Rate		<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa			
Flow Length (10 sec/10 min)		<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa			
Rate API cm <sup>3</sup> /30 min					
HTG P Filtrate cm <sup>3</sup> /30 min		@ ___ °F @ ___ °C			
Thickness API/HTHP		<input type="checkbox"/> 32nd in. <input type="checkbox"/> mm			
Content (% by Vol.)		<input type="checkbox"/> calculated <input checked="" type="checkbox"/> report			
Oil Content (% by Vol.)					
Water Content (% by Vol.)					
Free Water Capacity		<input type="checkbox"/> bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud			
		<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C			
Mud (P <sub>m</sub> ) ml					
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml					
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml					
Chloride (mg/L)					
Hardness as Calcium (mg/L)					

RECOMMENDED TREATMENT  
 Run 1 RFT.  
 2) SIDEWALL CORE  
 R.H. W/- BIT. CIRC 3 hours  
 POOH SIDWAYS

REMARKS  
 Raised pH mud prior to running casing.  
 Used 60 bbls water last 24 hours.

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	KOR	SDS	PALR	SDH	EZ-MIX	SSA	SOUND	SUNDRIN	CAMP	CURE	SOLIDS CONTROL EQUIPMENT			
														MAKE/BRAND	SIZE/SCREENS	HRS	
			37	91	50	26	14	24						SHKR 1	80/100		
														SHKR 2	60/100		
														SHKR 3			
			7		1	1								SHKR 4			
			8336		149	57	45		36	93				DESAND			
														DESILT			
														M CLNR			
														CENT 1			
														CENT 2			
			30	91	49	25	14	23									

BAROID REPRESENTATIVE DEATH OFFICE/HOME TELEPHONE  
 WAREHOUSE DEATH TELEPHONE  
 DAILY COST \$ 329.37 CUMULATIVE COST \$ 28318.64

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

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# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. 18

DATE	8th JAN 19 92	DEPTH	1900 m <input type="checkbox"/> ft <input type="checkbox"/> m
SPUD DATE	21st Dec 91	PRESENT ACTIVITY	DISPLACING CEMENT

DR	CAS + FUEL	CONTRACTOR	GEARHANT	RIG NO.	2
PORT FOR	CERAND Nicol	REPORT FOR	IAN SEPERIC	SECTION, TOWNSHIP, RANGE	

WELL NAME AND NO.	BOGGY CREEK # 1	FIELD OR BLOCK NO.	REP # 104	COUNTY, PARISH OR OFFSHORE AREA	OSWALD	STATE/PROVINCE	BASIN VICTORIA
DRILLING ASSEMBLY		CASING		MUD VOLUME <input type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>		CIRCULATION DATA	
TYPE	JET SIZE	SURFACE SET @	9 5/8 316m	HOLE	PITS	PUMP SIZE	ANNULAR VEL. <input type="checkbox"/> ft/min <input type="checkbox"/> m/min
TYPE	LENGTH	INTERMEDIATE SET @	7" @ 1900m	TOTAL CIRCULATING VOLUME		PUMP MAKE, MODEL	ASSUMED EFF %
PIPE	TYPE	LENGTH	INTERMEDIATE SET @	IN STORAGE	WEIGHT	vol/stk	stk/min
PIPER SIZE	LENGTH	PRODUCTION OR LINER SET @		MUD TYPE	1 kcc/DPPA	vol/min	TOTAL CIRC. TIME (min)

MUD PROPERTIES			
From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT
Sample Taken			
Temperature	<input type="checkbox"/> °F <input type="checkbox"/> °C		
Viscosity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>		
Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C		
Weight	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Filtrate cm <sup>3</sup> /30 min	@ ___ °F @ ___ °C		
Thickness API/HTHP	<input type="checkbox"/> 32nd in. <input type="checkbox"/> mm		
Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> retort		
Content (% by Vol.) Oil/Water			
Content (% by Vol.)			
Blue Capacity	<input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud		
	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C		
Mud (P <sub>m</sub> ) ml			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml			
Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml			
mg/L			
Hardness as Calcium, mg/L			

WEIGHT	VISCOSITY	FILTRATE
BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER		

**RECOMMENDED TREATMENT**

POOH SIDELAYS. LAY DOWN BHA. RIG W/ 7" CASING TO 1900m. CEMENT. DISPLACE W/ WATER.

PREPARED MUD BEHIND CASING TO PH 10 added Biocide (1ppb) + Sodium Sulphide (1.5ppb)

**REMARKS**

DUMP + CLEAN MUD TANKS FOR COMPLETION BRINE.

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	Cement	Lump	Sulphide	AC	AZ	SOLIDS CONTROL EQUIPMENT				
									MAKE/BRAND	SIZE/SCREENS	HRS		
				23	14	2				SHKR 1	880/100		
										SHKR 2	60/100		
										SHKR 3			
				1	4	2				SHKR 4			
				369	1156	900				DESAND			
										DESILT			
										M CLNR			
				22		2				CENT 1			
				22	10	0				CENT 2			

BAROID REPRESENTATIVE	OFFICE/HOME	TELEPHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin	WAREHOUSE		\$1052.75	\$29371.39

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# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. **319**

DATE **9th Jan 1992** DEPTH **1900**  ft  m

SPUD DATE **21st Dec 91** PRESENT ACTIVITY

FOR **Gas + Fuel** CONTRACTOR **GEARHART** RIG NO. **2**

PORT FOR **GERARD NICOT** REPORT FOR **IAN SEPERIC** SECTION, TOWNSHIP, RANGE

NAME AND NO. **Boggy Creek #1** FIELD OR BLOCK NO. **DP 104** COUNTY, PARISH OR OFFSHORE AREA **OTHAM** STATE/PROVINCE **BASIN Victoria**

DRILLING ASSEMBLY			CASING		MUD VOLUME <input type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>		CIRCULATION DATA				
TYPE	TYPE	JET SIZE	SURFACE SET @	HOLE	PITS	PUMP SIZE	ANNULAR VEL	DP	DC	<input type="checkbox"/> ft/min <input type="checkbox"/> m/min	
PIPE	TYPE	LENGTH	INTERMEDIATE SET @	TOTAL CIRCULATING VOLUME		PUMP MAKE, MODEL	ASSUMED EFF	CIRCULATION PRESSURE		<input type="checkbox"/> psi <input type="checkbox"/> kPa	
PIPE	TYPE	LENGTH	INTERMEDIATE SET @	IN STORAGE	WEIGHT	vol/stk	stk/min	BOTTOMS UP (min)			
PIPE	TYPE	LENGTH	PRODUCTION OR LINER SET @	MUD TYPE			vol/min	TOTAL CIRC. TIME (min)			

MUD PROPERTIES			
	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT
Temperature	<input type="checkbox"/> °F <input type="checkbox"/> °C		
Viscosity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>		
API Viscosity	<input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C		
Weight	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
Length (10 sec/10 min)	<input type="checkbox"/> lb/100 ft <sup>2</sup> <input type="checkbox"/> Pa		
API cm <sup>3</sup> /30 min			
Filtrate cm <sup>3</sup> /30 min	@ ___ °F @ ___ °C		
Thickness API/HTHP	<input type="checkbox"/> 32nd in. <input type="checkbox"/> mm		
Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> retort		
Content (% by Vol.) Oil/Water			
Content (% by Vol.)			
Blue Capacity	<input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud		
Strip	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C		
Mud (P <sub>m</sub> ) ml			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml			
Alkalinity Filtrate (P <sub>f</sub> /P <sub>2</sub> ) ml/ml			
mg/L			
Hardness as Calcium, mg/L			

MUD PROPERTY SPECIFICATIONS		
WEIGHT	VISCOSITY	FILTRATE
BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER		
RECOMMENDED TREATMENT		
<p>Making up 9.2 ppg (SS 1b/bbl)</p> <p>Sodium Chloride completion fluid</p> <p>Preparing cans for tubing.</p>		

REMARKS

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	Nace	Bosny	Bosny-A	20512	SOLIDS CONTROL EQUIPMENT			
								MAKE/BRAND	SIZE/SCREENS	HRS	
			30	0	0			SHKR 1			
			384	2				SHKR 2			
			17	70				SHKR 3			
			1218	4820				SHKR 4			
			336	384				DESAND			
			307	70				DESILT			
			29	314				M CLNR			
								CENT 1			
								CENT 2			

BAROID REPRESENTATIVE **Joe McLaughlin** OFFICE/HOME **PERIOD** TELEPHONE

WAREHOUSE **DEGAIDE** TELEPHONE

DAILY COST **\$494.48** CUMULATIVE COST **\$29865.87**

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# Baroid Drilling Fluids, Inc.



DRILLING MUD REPORT NO. **20**

DATE 10th JAN 19 92 DEPTH 1900  ft  m  
 SPUD DATE 21st DEC 91 PRESENT ACTIVITY Rit W/ Taping

DRIFT FOR Gas + Fuel Exploration CONTRACTOR GEARHART RIG NO. 2  
 NAME AND NO. GERALD NICOT REPORT FOR IAN SEPERIC SECTION, TOWNSHIP, RANGE

FIELD OR BLOCK NO. DEP 124 COUNTY, PARISH OR OFFSHORE AREA ONTARIO STATE/PROVINCE BRASIL  
 DRILLING ASSEMBLY: TYPE, JET SIZE, SURFACE SET @ 95/8 @ 34m, HOLE LINER PITS 280, PUMP SIZE, ANNULAR VEL. DP, DC, CIRCULATION DATA  
 CASING: TYPE, LENGTH, INTERMEDIATE SET @ 7 @ 192m, TOTAL CIRCULATING VOLUME, PUMP MAKE, MODEL, ASSUMED EFF %  
 PIPE: TYPE, LENGTH, INTERMEDIATE SET @, IN STORAGE 40, WEIGHT, vol/stk, CIRCULATION PRESSURE, BOTTOMS UP (min)  
 TAPER SIZE, LENGTH, PRODUCTION OR LINER SET @, MUD TYPE 9.2 ppg Necc completion fluid, vol/min, TOTAL CIRC. TIME (min)

MUD PROPERTIES				MUD PROPERTY SPECIFICATIONS		
<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE	
BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER				RECOMMENDED TREATMENT		
Make up hi vis pill. (400bl) Made up 280 bbls of 9.2 ppg Sodium chloride completion base				REMARKS		
Temperature <input type="checkbox"/> °F <input type="checkbox"/> °C	<input type="checkbox"/> ft <input type="checkbox"/> m	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m³	<u>9.2</u>			
Viscosity <input type="checkbox"/> sec/qt API @ ___ °F <input type="checkbox"/> sec/L @ ___ °C			/			
Viscosity cP @ ___ °F ___ °C			/			
Length (10 sec/10 min) <input type="checkbox"/> lb/100 ft² <input type="checkbox"/> Pa			/			
Filtrate cm³/30 min @ ___ °F @ ___ °C			/			
Thickness API/HTHP <input type="checkbox"/> 32nd in. <input type="checkbox"/> mm			/			
Content (% by Vol.) <input type="checkbox"/> calculated <input type="checkbox"/> retort			/			
Content (% by Vol.) Oil/Water			/			
Content (% by Vol.)			/			
Blue Capacity <input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm³/cm³ mud			/			
<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ ___ °F ___ °C			<u>10</u>			
Mud (P <sub>m</sub> ) ml			/			
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml			/			
Alkalinity Filtrate (P <sub>f</sub> /P <sub>f</sub> ) ml/ml			/			
mg/L			/			
Hardness as Calcium, mg/L			/			

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	Balacer A	SS gel	EZ Mud	Elastic Sol. 250	SOLIDS CONTROL EQUIPMENT			
								MAKE/ BRAND	SIZE/ SCREENS	HRS	
								SHKR 1			
								SHKR 2			
								SHKR 3			
								SHKR 4			
								DESAND			
								DESILT			
								M CLNR			
								CENT 1			
								CENT 2			

BAROID REPRESENTATIVE McLaughlin OFFICE/HOME PEATH TELEPHONE  
 WAREHOUSE ADGAMPE TELEPHONE  
 DAILY COST \$ 2632.78 CUMULATIVE COST \$ 32498.65

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.  
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# Baroid Drilling Fluids, Inc.

DRILLING MUD REPORT NO. **21**

DATE <b>11th Jan 1991</b>	DEPTH <b>1900</b>	<input type="checkbox"/> ft <input type="checkbox"/> m
SPUD DATE <b>21st Dec 90</b>		PRESENT ACTIVITY

FOR <b>Gas + Fuel</b>	CONTRACTOR <b>CEARHART</b>	RIG NO. <b>2</b>
REPORT FOR <b>GERARD NICOT</b>	REPORT FOR <b>MAN SEPERIC</b>	SECTION, TOWNSHIP, RANGE

WELL NAME AND NO. <b>BOGGY CREEK #1</b>	FIELD OR BLOCK NO. <b>REP 104</b>	COUNTY, PARISH OR OFFSHORE AREA <b>OTWAY BASIN</b>	STATE/PROVINCE <b>VICTORIA</b>
DRILLING ASSEMBLY		MUD VOLUME <input type="checkbox"/> bbl <input type="checkbox"/> m <sup>3</sup>	CIRCULATION DATA
BIT SIZE	TYPE	JET SIZE	ANNULAR VEL. <input type="checkbox"/> ft/min <input type="checkbox"/> m/min DP _____ DC _____
PIPE	TYPE	LENGTH	CIRCULATION PRESSURE <input type="checkbox"/> psi <input type="checkbox"/> kPa
PIPE	TYPE	LENGTH	BOTTOMS UP (min)
PIPE	TYPE	LENGTH	TOTAL CIRC. TIME (min)
PIPE	TYPE	LENGTH	IN STORAGE
PIPE	TYPE	LENGTH	WEIGHT
PIPE	TYPE	LENGTH	MUD TYPE <b>Nace Bence</b>

MUD PROPERTIES			MUD PROPERTY SPECIFICATIONS			
Sample From	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	<input type="checkbox"/> F.L. <input type="checkbox"/> PIT	WEIGHT	VISCOSITY	FILTRATE
Temperature	<input type="checkbox"/> °F <input type="checkbox"/> °C			BY AUTHORITY <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR <input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	RECOMMENDED TREATMENT	
Viscosity	<input type="checkbox"/> lb/gal <input type="checkbox"/> lb/cu. ft. <input type="checkbox"/> Sp.G. <input type="checkbox"/> kg/m <sup>3</sup>			<p><i>2.4 w/ tubing. Reverse circ w/ water. Circ long way round. Reverse circ hi vis pill + brine. Released.</i></p>		
HTHP	<input type="checkbox"/> sec/qt API @ _____ °F <input type="checkbox"/> sec/L @ _____ °C					
Content (% by Vol.)	<input type="checkbox"/> calculated <input type="checkbox"/> retort					
Oil/Water	<input type="checkbox"/> calculated <input type="checkbox"/> retort					
Blue Capacity	<input type="checkbox"/> lb/bbl equiv. <input type="checkbox"/> cm <sup>3</sup> /cm <sup>3</sup> mud					
Filtrate (P <sub>1</sub> /M) m/ml	<input type="checkbox"/> Strip <input type="checkbox"/> Meter @ _____ °F _____ °C					
Filtrate (P <sub>2</sub> /P <sub>1</sub> ) m/ml						
Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) m/ml						
Hardness as Calcium, mg/L						

UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	NACE	SOLIDS CONTROL EQUIPMENT														
					SHKR 1	SHKR 2	SHKR 3	SHKR 4	DESAND	DESILT	M CLNR	CENT 1	CENT 2	MAKE/ BRAND	SIZE/ SCREENS	HRS			
				64															
				64															
				440 <sup>g</sup>															
				384															
				0															

BAROID REPRESENTATIVE <b>McLAUGHLIN</b>	OFFICE/HOME	TELEPHONE	DAILY COST <b>440.96</b>	CUMULATIVE COST <b>\$32 939.61</b>
WAREHOUSE	TELEPHONE			

RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

10/1/89

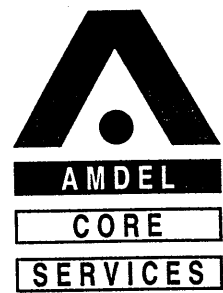
THIS COPY TO BAROID TECHNICAL DEPARTMENT

55836



5th Cut A4 Dividers  
Re-order code 897052

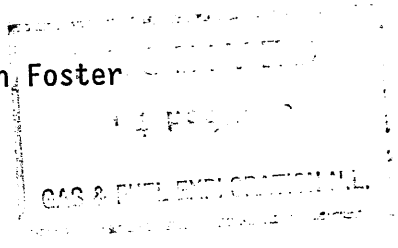
W1148-



11 February 1992

Gas & Fuel Exploration NL  
GPO Box 1841Q  
MELBOURNE VIC 3001

Attention: John Foster



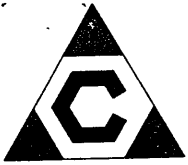
REPORT: 009/1538

CLIENT REFERENCE:	R H
MATERIAL:	Water Sample (from mud pit) <i>JDF</i>
LOCALITY:	Boggy Creek No. 1
WORK REQUIRED:	Water Analysis

Please direct technical enquiries regarding this work to the signatory below under whose supervision the work was carried out.

**BRIAN L WATSON**  
Laboratory Supervisor  
on behalf of Amdel Core Services Pty Ltd

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Water Analysis Report

Job No. 2AD0191

Method WAT 2 Page W2

Sample ID. BOGGY CREEK 1

Chemical Composition				Derived Data			
		mg/L	me/L				mg/L
<b>Cations</b>				<b>Total Dissolved Solids</b>			
Calcium	(Ca)	136.0	6.79	A. Based on E.C.			17969
Magnesium	(Mg)	46.6	3.84	B. Calculated (HCO3=CO3)			18746
Sodium	(Na)	3110.0	135.28				
Potassium	(K)	5475.0	140.03				
<b>Anions</b>				<b>Total Hardness</b>			
Hydroxide	(OH)			Carbonate Hardness			531
Carbonate	(CO3)			Non-Carbonate Hardness			531
Bi-Carbonate	(HCO3)	704.0	11.54	Total Alkalinity			580
Sulphate	(SO4)	272.0	5.66	(Each as CaCO3)			
Chloride	(Cl)	9354	263.48	<b>Totals and Balance</b>			
Nitrate	(NO3)	0.5	0.01	Cations (me/L)	285.9	Diff=	5.23
				Anions (me/L)	280.7	Sum =	566.62
<b>Other Analyses</b>				ION BALANCE (Diff*100/Sum) = 0.92%			
				Sodium / Total Cation Ratio 47.3%			
				Remarks			
Reaction - pH				7.8			
Conductivity (E.C)				26000			
(micro -S/cm at 25°C)							
Resistivity Ohm.M at 25°C				0.385			
				Note: mg/L = Milligrams per litre me/L = MilliEqvs. per litre			

Name: Ms R. TAMKE  
Address: AMDEL CORE SERVICES  
FLEMINGTON STREET  
FREWVILLE

Date Collected 16-1-92  
Date Received 23-1-92  
Collected by CLIENT (from mud pit) *[Signature]*