

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

# 

# Driiling Fluid Recap

Prepared by : J. McLaughlin

Dated : January 1992

## TABLE OF CONTENTS

•	TOTAL T	CIDALIDA
1.	WELL	SUMMARY

- 2. WELL DISCUSSION
  - DISCUSSION BY INTERVAL
  - CONCLUSIONS AND RECOMMENDATIONS
- 3. RECAP TABLES
  - MATERIAL RECAP (BY INTERVAL)
  - MATERIAL SUMMARY
  - DRILLING FLUID PROPERTIES RECAP
  - BIT RECORD
  - SOLIDS CONTROL EQUIPMENT & MUD VOLUMES
  - MATERIAL INVENTORY AND RECONCILIATION
- 4. GRAPHS (vs DEPTH)
  - COST AND DAYS
  - RHEOLOGY AND FILTRATION
  - MUD WEIGHT, SOLIDS & MBC
  - CALIPER AND FORMATION TOPS
  - MUD DILUTION & CONSUMPTION RATES
- 5. DAILY MUD REPORTS

# 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

Drilling Fluid Type	<u>Interval</u>	<u> Hole Size</u>	Cost (	A\$)
Flocculated Spud Mud KCl/EZ MUD	Surf - 323m 323m - 1900m	•	\$ 1,6 \$ 27,2	69.82 265.80
Mud Materials Charged to	\$ 28,9	35.62		
Engineer on Location from Drilling Fluid Engineering	\$ 1089	90.00		
Total Cost Drilling Mater	\$ 39,8	325.62		
Sodium Chloride completic Cementing, etc		705.79 149.29		
Total mud materials not o	charged to dril	.ling	\$ 4,1	L55.08

Casing Programme : 9 5/8" @ 316m
7" @ TD
Drilling Supervisor : Gerard Nicot
Baroid Drilling Fluid Engineer: Joe McLaughlin

# 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.

### 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

# 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.

### DISCUSSION BY INTERVAL

8 1/2" hole 323m - 1900m - 13 days 7" casing to TD

While the BOP's were being nippled 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.

## **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.

# 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.

# 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

# 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. Coincidently, the desilter was shut off for maintenance at this point and the premixes were weighted up to 8.7ppg with KCl.

# 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:

	<b>BEFORE</b>	<u>AFTER</u>
рН	9.5	7.5
Pm	0	0
Pf/Mf	.25/.8	0/2.3
Chlorides	19000	17000
KC1	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.

## 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.

# 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.

# Conclusions and Recommendations

- 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.
- 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.

# Conclusions and Recommendations

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.

# MATERIAL RECAP

Page 1

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

HOLE SIZE

12.25"

CONTRACTOR/RIG

Gearhart Rig 2

LOCATION PEP 104, Otway Basin, Victoria MUD TYPE

Flocculated Spud Mud

INTERVAL TO (m) FROM (m)		DRILLING		COST/DAY COST/M	\$834.91 \$5.46
DRILLED (m)	306 December			COST/BBL FACTOR (bbl/m)	\$1.67 3.26

MATERIAL	UNIT	UNIT	QUANT EST	ACT	CONC EST	(ppb) ACT	TOTAL COST.	(A\$) -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 CHEMICAL VOLUME FRESH WATER SEA WATER TOTAL MUD MADE COST LESS BARYTES COST WITH BARYTES	Bbls Bbls Bbls Bbls Bbls	14 1170 0 1184	8 990 0 998	\$2,801.79 \$2,801.79	\$1,669.82 \$1,669.82
---	--------------------------------------	-------------------------	----------------------	--------------------------	--------------------------

COMMENTS

# **MATERIAL RECAP**

Page 2.

Gas & Fuel Exploration N.L. COMPANY

HOLE SIZE CONTRACTOR/RIG 8.5

Boggy Creek No.1 WELL

Gearhart Rig 2

LOCATION PEP 104, Otway Basin, Victoria MUD TYPE

3-4% KCl/EZ MUD

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

Barite,	50 kg	13.22		30		0.9		396.60
BARACIDE	30 kg	450.07		2		0.0		900.1
<del> </del>	25 kg	12.18		148		2.2		1,802.6
AQUAGEL Caustic Potash	25 kg	36.93	20	13	0.5	0.2	738.60	480.0
EZ MUD	5 qal	57.43	75	71	1.4	0.8	4,307.25	4,077.5
<del></del>	50 lb	149.75	66	71	1.5	0.9	9,883.50	10,632.2
PAC-R	50 kg	20.25	240	409	11.8	12.1	4,860.00	8,282.2
Pot. Chloride, Ag	25 kg	14.89	10	4	0.2	0.1	148.90	59.5
Soda Ash Sodium Bicarbonate	25 kg 25 kg	18.78		3		0.0		56.3
BARASCAV D	25 kg 25 kg	28.92		20		0.3		578.4

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

BAROID AUSTRALIA PTY LTD

**MATERIAL RECAP** 

Page 3

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

Gearhart Rig 2 CONTRACTOR/RIG

LOCATION PEP 104, Otway Basin, Victoria

MATERIAL	UNIT	UNIT O	CANTITY CONC (ppb ST ACT EST ACT	) TOTAL COST (AS)  ESTIMATE ACTUAL
	Materials	not used	for Drilling, Testin	g or Completion
1) 9 5/8	" Casing			÷
AQUAGEL Calcium Chloride	25 kg 25 kg	12.18 16.14	28 1	341.04 16.14
2) 7" Ca:	sing			
AQUAGEL	25 kg	12.18	7	85.26
3) Hygie	ne			Ø.
Lime	25 kg	6.85	1	6.85

\$449.29

COMMENTS

BAROID AUSTRALIA PTY LTD

# **MATERIAL RECAP**

Page 4

COMPANY

Gas & Fuel Exploration N.L.

Boggy Creek No.1

LOCATION PEP 104, Otway Basin, Victoria MUD TYPE

HOLE SIZE

CONTRACTOR/RIG

Completion Gearhart Rig 2

NaCl Brine

COST/BBL

\$10.84

DATE

COMMENTS

Jan 1992

MATERIAL	UNIT						
		COST	EST	ACT 1	est act	BSTIMATE -	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		i	0.146		149.75
	30 22	213170		_	***		4
							1
					i.t		
-							
						ę.·	
						€	
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
1							į

BAROID AUSTRALIA PTY LTD

# **MATERIAL SUMMARY**

COMPANY Gas & Fuel Exploration N.L.

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% KC1/EZ MUD

TOTALS 1883 17 143.50 COST/DAY \$1,946.51 COST/M \$17.57 RECAP BY J.McLaughlin COST/BBL \$7.51

DATE Jan 1992 MUD CONSUMPTION FACTOR (bbl/m)

2.34 MATERIAL UNIT QUANTITY TOTAL COST (A\$) COST ESTIMATE ACTUAL EXTENATE ACTUAL Barite 25 kg 30 13.22 396.60 2

BARACIDE 30 kg 450.07 900.14 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 9,883.50 72 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 25 kg Sodium Chloride 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

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

Gearhart Rig 2 CONTRACTOR/RIG:

PROPERTY RECAP

Jan 1992 DATE:

1						-	-								-					
MOD	>	VIS PV	TP		GELS	PILTRATE	ATE	RRTORT	7	as	MBC	ьщ	E E	P.F.	Mf	ដ	XC1	E	503	REMARKS/TREATMENT
E E	<b>2</b>	nec		10	10	API	Ŗ	SOL	Н20									Вщ	Вщ	
PPG				860	min	п	32nd	•	•	•	qdd					mg/1	<b>æ</b>	7	7	
																		.,		Spudded 1100 hrs 21st Dec
9.6		48	8 24	7	12	N/C	N/C	4	96	8	11	O	0.5	80.0	0.1	200	1	160	1	with Spud Mud. Conductor
8.9		- °	4 16	 	9	N/C	N/C	'n	95	-	15	8.5	0.2	0.05	0.1	200	ı	100	ı	washed out, drilled ahead.
8.8		36	6 18	-	'n	N/C	- O/N	9	94	Tr	80	8.5	0.15	0.02	0.05	200	1	80	1	9 5/8" Cng point
9.7		32			~	24	7	8	96	0.5	7	8.5		0.1	9.0	200	ı	120	1	Waiting on cement
8.7		35	3 14	~	~	21	7	m	16	1.5	σ.	10.5	1.5	0.32	0.45	200	•	160	'	Drilled shoe w/- Spud Mud
8.8		45 13	5 22		· ·	12	8	'n	95	Tr	10	8.5	0.25	80.0	0.15	7500	1.5	120	1	Added PAC-R/KC1/EZ MUD at
8.8		44 1.	0 20	<u>e</u>	80	12		4	96	-	7.5	o	0.2	80.0	0.15	11000	2.5	100	1	low concentrations to
8.8		44 1.	4 16	<u></u>	Ŋ	0.6	7	4	96	0.25		8.5	0.05	0.05	0.15	14000	9	160	ı	maintain YP & volume.
8.8		38	9 14		n	9.6	-1	7	86	0.4	8	9.5	0.25	0.15	0.35	14000	е	8	\$	Losing 10bbl/hr. PooH for
8.9		43	7 17			8.4	н	4	96	0.5	7.5	8.5	0.05	0.05	0.2	14000	е .	120	100	Bit & BHA change. Ream to
9.0		45 1,	4 19	2	4	8.9	-	4	96	-	80	6	Tr	0.14	0.5	17000	3.4	120	150	bottom. Add gel for low YP
9.5		40	3 16		~	7.4	-	4	96	0.25	a	o	1	0.15	0.5	14000	3.1	120	80	Use sump water in premixes
9.5		41 10	0 14		~	7.2	н	4	96	0.2	8	o,	H	0.35	0.75	16000	2.9	140	40	Mud system now converted
9.1		44 10	0 16	<u></u>	<u> </u>	7.8	-	4	96	0.25	8	n. 0	0.03	0.42	1.05	19000	3.1	50	180	to KCl/PAC-R/EZ MUD
9.2		45 12	2 17		~	6.8		'n	95 0	0.25	<b>®</b>	5.6		0.27	0.75	18500	3.8	100	9	High torque, low ROP, high
9.2		46 1.	18		~	7.2	-	'n	9.5	0.2	7.5	6	1	0.25	0.75	19000	3.2	80	100	dev. POOH to change bit.
9.2		40 10	0 14		~	6.6	<del>-</del>	ស	8	0.5	۵	e. e	t	0.5	1:1	19000	3.5	8	8	Ream to bottom. Increase
8	_	42 10	0 17		~	6.2	-	v	94	0.5	2.0	٥		0.25	8.0	19000	3.6	100	8	KC1/EZ MUD for swelling
9.2		41	9 15		~	6.7	п	4	96	0.1	8.5	6	ı	0.2	0.75	19000	80	80	3.2	clays in Belfast. W/trip
9.2	~	42	9 16		~	6.5	-	4	96	0.5	80	6		0.1	0.5	18500	3.2	8	40	DST#1-flow. Wiper trip.
9.2	~	41	9 17		~	6.2	-	4	96	0.25	8	9	0.25		1.6	23000	4	8	180	Ream w/- 60ft corebarrel.
9.5	~	39 1.	4 14	-	~	8.2	-	4.0	96	0.5	8.5	9.5		0.55	1:3	19000	3.8	8	180	Lagged flow line sample
9.2	~	44 12	2 18	- 2	4	7.5	-	4	96	0.2	60	6	Tr	0.3	-	19000	3.6	08	100	POOH. Wiper trip, ream.
9.2		39	9 16		~	7.6		0.4	96	0.2	8.8	6	1	0.15	0.8	18000	3.5	100	09	Core with 30 ft barrel.
9.2		41	9 15		8	7.0		4	0 96	0.25	6	O	1	0.15	8.0	24000	4.	120	9	Slight CO2 contamination.
9.5	~	45 12	2 18	- 5	<u></u>	6.8	Ħ	0.0	80	0.3	7.5	o,		0.25	8.0	25000	4.3	100	9	Drill ahead thru Waare
9.5		43	10 15	5	3	6.8	1	4	96	0.25	8.5	8.5	•	0.08	0.65	24000	4.2	100	8	& Eumeralla.

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

Gearhart Rig 2 CONTRACTOR/RIG:

PROPERTY RECAP

Jan 1992 DATE:

Notice of the state of the stat	-	mp. Wiber trib. PooH	200	וו מצם פופר מדרה דראם	Run BPB electric logs	Run 7" casing. Displace	cement with water. Make	Tan Sur	יייייי איז אלה אלה איז לח	Displace water with Drine	
200	pa .	+			. Si	ě.	ď		3 	<u>1</u>	
	E .	-			09				•	1	
TOW TO	-	-		- <del>-</del>	'n					1	
- 5		21000		24000	30000	1		l	ı	1	
76		•	•	1.9	1.5	ı			1	1	
PE		,	•	9.0	1.25	1			:	1	
E.		1	o •		1	,		1	1	ı	
Hd			o.	6	10	' '			1	1	
MBC		qdd	0	80	7	1			•	ı	
gs		-	•	0.2	0.2	}		1	1	1	
RETORT	П20	•	50	95	96		ı	'		1	
RB	SOL	•	n.	2	4		1	1	ı	!	
RATE	f	32nd		-				1	'	1	
FILTRATE	API	III	6.4	6.4			1		1		
GELS	10 10	sec min	1 2	1 2		- -	1	1	1	 	
TP		8	16	17		12	<u>.</u>	<u>.</u>			
PΨ			10	4		 SO	,	1		1	
VIS	nec	+	41	7		2,	1				
MUD		644	6.6	6	;	e. 6	9.5	9.5	- 6	9.5	
RET		υ	38	4	5	36	ı	,		1 1	
HOLE		in	8.5	0	:	8.5	6.276	6.276	376	6.276	
		E	1900		0061	1900	1900	1900		0061	
DATE DEPTE		1991	05/01			07/01	08/01			10/01	

BIT RECORD		REMARKS	Bit change	Hi Dev & Torq POOH for DST#1 Core #1		
<b>m</b> .		("E) (8") G	In - 1 Bi	~	or ar	
		1/1	2 1 2	3 WOLL	ო	
		CONDITION (in 1/8")	2 - 7	4 60%	m	
		MUD VIS Bec	40 44 43		42	
*	7	MUD WT	8.8 8.8	9.3	۳.	
	t Rig 2	PUME PRATE	340 310 250			
	earhart in 1992	PUMP DEESS DEES	650 1100 900	900 1000 550	50	
	/RIG:Gea	VERT IDEV. P			25 9	
	CONTRACTOR/RIG:Gearhart DATE:Jan 1992	RPM	10/120	100/130 3 120/130 2 80	90	ii .
	CON	BIT WT tonnes	5/15	10/20 15/20 12/18	20	
		ACC DRLG HRS	19			ë
_		RATE m/hr	16.3	10.3	8.4	
_td		HRS		52 7.5 4.5	26	
y. l	N.L. ictori	MTRS	310 490 753	535 62 9	218	
a Pt	oration 1    asin, V:	DEPTH OUT		1611 1673 1682	1900	
Baroid Australia Pty. L	Gas & Fuel Exploration N.L. Boggy Creek No.1 PEP 104, Otway Basin, Victoria	JETS 32nd"	ਜਿਜ	11,11,13 11,11,11 OPEN	11,11,11	
Aus	Gas & Boggy PEP 10	TYPE	S33F S44GF	S82F S44GF C-9	SBZF	
j	<b>→</b>	MAKE	SEC	SEC SEC CHRTS		
aro	COMPANY WELL LOCATION	BIT	വ			
m	COMPANY WELL LOCATIO	BIT NO.	2	E 4	ഹ	

Baro	oid	Aust	SOL	IDS CO	NTROL	EQUIP	MENT a	nd MUE	O VOLU	ME ANA	Page 1
COMPANY	2 -	Gas & Fue	el Explo	ration 1	N.L.	CO	NTRACTO	R/RIG:			
vell.	. •	Boggy Cre	ek No.1	•				DATE:	Dec 199	1	
LOCATION		PEP 104,	Otway B	asin, V	ictoria			05.5	00 5	20 0	30 . Dog
	Date:	1991	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	78-Dec	Z9-Dec	30-Dec
SOLIDS C	ONTRO	L						60 (100	60/00	60/100	00/100
Shaker 1		Screen	60/100	60/100	60/100		60/80	60/100		60/100	
Brandt		Hrs	21	20		16	24	21	24	24	18
Shaker 2		Screen	60/100	60/100				80/100		80/100	
Brandt		Hrs	21	20		12.5	24	21	24	24	18
									10	11 5	11.3
Desilter	1	U/F PPG	12.3	8.7		9.6	10.3	11	12	11.5	
		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					12		<u> </u>		4
		VO1	<del> </del>								
Desander		U/F PPG	14	8.9		10.3	11.1	9.7	11.3	10	10.2
Desamer		BBL/Hr	3	2		5	3.5	4	4	4	4
			16	2		14	20	21	24	24	16
		Hrs Vol	48	4		70	70	84	96	<sub>27</sub> 96	64
Centrifuç Swaco	ge 	Hrs Feed SG O/F SG									
Depth(me	tresl		292	323	323	652	983	1076	1353		
Daily dr			275	31		329	331	93	277		
Hole Size			12.25	12.25	8.971	8.5	8.5	8.5	8.5	8.5	8.5
MUD VOLU		BBL									
Initial			T	450	280	340	356	371			
Added:		water	890	100	60	250	200	300	200	300	120
	From	Reserve		25					100	101	3 6:
Losses:	DFE		80			94					
	Dumpe	ed/Lost	220			60					
	New F	Hole	140			80					
		L Losses eserve	440			234					
Final Ac			450			356	371	326	296	313	, 33
Reserve				25					60	1	
Added:		lwater							01	,	
	Seawa										
		Active	25						20	n	
	To A	ctive		25					4(		
Final Re			25			<u> </u>		326			33
Total Fi	nal V	olume	475	280	340	356	371	320	<u>, 33</u>	<u> </u>	
Daily Di (bbl/m)			1.60			0.71					
Daily Co Rate, (b		tion	3.24	3.23		0.76	5 0.60	3.2	o 0.9	4 O.T.	J

Page 2

SOLIDS CONTROL EQUIPMENT and MUD VOLUME ANALYSI
---

COMPANY	Gas &	Fuel	Explorat
WELL	Boggy	Creek	No.1

										1
COMPANY	Gas & Fu			N.L.	CO	NTRACT			t Rig 2	
WELL	Boggy Cr	eek No.1					DATE:	Dec 199	1	`
LOCATION	PEP 104,	Otway E	asin, V	ictoria						
Date		31-Dec	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	TOTALS
SOLIDS CONTR	OL									
Shaker 1	Screen	1	80/100				80/100			
Brandt	Hrs	24	4			20	22			238
Shaker 2	Screen	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
		1 .								
Desilter 2	U/F SG									
	M3/Hr									
	Hrs									
	Vol	1								
Desander	U/F PPG	9.7				11	10.8			
	BBL/Hr	5				5	7			
	Hrs	13				18				171
	Vol	65				90	21			708
Centrifuge	Hrs	į.								
Swaco	Feed SG	1							ë ·	1
	O/F SG								· · · · · · · · · · · · · · · · · · ·	ļ
·							1000	1000	1000	
Depth(metres)		1673	1673	1673	1682	1835			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	l
MUD VOLUMES		<del></del>					264			<del></del>
Initial Activ		334	379	279	319	284				2140
	.lwater	250		100		150	100	60	60	3140
	ater									25
i	n Reserve					00	01			1
Losses: DFE		70			2.2	90				876 1495
	ed/Lost	120	100	60	30	20			ļ	496
4	Hole	15			5	40			\	
1	l Losses	205	100	60	35	150	126	40	1	2867
	leserve		070	210	204	201	338	358		<del> </del>
Final Active		379	279	319	284	284 80		358	<u></u>	+
Reserve - Ini					100	80	•			160
1	lwater				100					100
3	vater									25
l .	a Active	1			20					65
ł	Active				20					65
Final Reserve				212	80	80		358	<u> </u>	+
Total Final V	/olume	379	279	319	364	364	<u> </u>	338	)	
			100 00	CO 00	2 00	150 00	0.07	,		0.64
Daily Dilutio	on Rate,		100.00	60.00	3.89	150.00	0.01			0.04
(bbl/m)	. •			100 00	11 11	150 00	0.05	:		0.67
Daily Consum				100.00	11.11	150.00	, 0.05	,		0.07
Rate, (bbl/m)	)									
		1								_1

BAROID AUSTRALIA PTY LTD

COMPANY WELL	Gas & Fuel Exploration N.L. Boggy Creek No.1	iel Ex :eek N	plorati o.1	on N.	ٺ												Page 1
	2.4.5		6 10 10	2.0	21.11.2	27.11	17	23/12		24/12		25/12	26	26/12		Totale	
MATERIAL	<b>—</b>	Beg I	Recd Used	ed Re	-	Used Re	Recd Used	<del></del>	d Used	100	Used	Recd Used		Recd Used	d Recd	Used	Bal
	Size		-	_  :	-			1					╬	40	15 440	15	425
Barite,	50kg			4	400	+	-	1				-	$\frac{1}{1}$				_
BARACIDE	30kg			<u>_</u> _	1	- 10		1			000	-	<u> </u>	<b>V</b>	4 33	224	112
AOUAGEL	25kg		240	4	96 1	24	7	28			27	-	+	+	<u> </u>  -	3	1
BARADEFOAM W300	251t				2			1			1	+	+	+	7 6		10
Calcium Chloride	25kg		20	_				+			7		-	+	1 40		_
Caustic Potash	25kg		40	_	-	-	+	1			1	1	╁			) (	$oldsymbol{igl }$
Caustic Soda	25kg		20	_	-	4					Ī	-	$\dagger$				_
CONDET	2081t			-	7	+	-	+			T	-	+	-		2	7
ENVIRO-SPOT	2081t			+	7	+	1	+	1		C	-	14		10	28	
EZ MUD	251t		64	+	32	+	-	+			7	-	1	20	<u> </u>		_
KWIKSEAL	401b			1	+	+	1	+				-	$\frac{1}{1}$	2	700		4 16
Lime	25kg		20	_	+	4	+	+			Ī		+	36	36		
Mica	25kg			1	<del> </del>	+	-	1	-		α		9		9 120	25	
PAC-R	501b		40	<u>- </u>	08	1	-	+	7		70		<del> </del>	100			I
Pot. Chloride, Ag	50kg		100	<u>-</u>	100	$\frac{1}{1}$	+	1	-		77		<del> </del>		<u> </u>	_	20
Soda Ash	25kg		20	1	+	+	$\frac{1}{1}$	+	·			-	+	-	2		3 17
Sodium Bicarbonate	25kg		20	_		$\frac{1}{1}$	-	+					<u> </u>	40	2 40		2 38
BARASCAV D	25kg				+	+	+	+					_			0	20
XCD Polymer	25kg		20	+	+	+	+	+						-			
Salt (Flossy Fine)	25kg		-	+	+	+	-	1	-				$\frac{1}{1}$				
BARACOR 100	55gal		-	+	+	1	+	+	-				<u> </u>				
				+	+	+	+	+	-				<del> </del>				
				+	-	+	+			_							
					+	1	+	1	-				-				
				<u> </u>	-	_	-	1		1			t				_
						1		1	+				t	-			_
					-		+	+	-				$\dagger$		<u> </u>		-
				-	-	+		1					$\dagger$	-	<u> </u>		
			+	+	+	+		$\frac{1}{1}$					$\Box$				
	-				∦	16/3	E	367	356		2193		2826	37	3764	11150	0
DAILY COST			-	1	- T	77.27		1									

WEEKLY INVENTORY

Gas & Fuel Exploration N.L.           Boggy Creek No.1         2/12         28/12         29/12           AL         Unit         Beg Recd Used Size         Recd Used Recd Used Size         12         29/12           50kg         425         2         12         15           30kg         2         2         12         15           25kg         112         51         12         12           8ab         25kg         15         2         1           a 25kg         15         2         1         6           2081t         2         1         6         6           401b         20         5         9         6           25kg         16         5         9         6           25kg         16         4         4         4           401b         20         2         1         4           25kg         16         4         4         4           25kg         20         2         2         2           25kg         20         2         2         2           25kg         20         2         2         2							Share and the state of the stat					*	EEKLY	WEEKLY INVENTORY	<b>TORY</b>
MATERIAL   Date:   27/12   28/12     29/12	Gas & Fue Boggy Cre	l Exploek No.1	ration	N.L.										14	Page 2
NATERIAL   Unit   Beg   Recd   Used   Recd   Used   Recd   Used   Size   Size	Date:	27/12		28/12	1/67	2	30/12	31/12	12	10/10	02	02/01		Totals	
Stree				Recd Use	-		Recd Us	Used Re	Recd Used	Recd Us	Used Re	Recd Used	Recd	Used	Bal
Substitute		25				15		}					440	30	410
EEL	<del>                                     </del>	2		-	<u> </u>			<u> </u>					2	:	2
tum Chloride 251t 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2	1	12	51	-	2	12							336	299	. 37
tum Chloride 25kg 19	251t	2											2		2
Lic Potash 25kg 37 2 1 1		19		-									20	-	19
Lic Soda 25kg 15		37	2		1			1			-1		40	6	31
## State	25kg	15											20	5	15
XO-SPOT     2081t     2       JD     251t     68     5     9     6       JD     20     5     9     6       SEAL     20     6     11     7       Ash     25kq     17     24     4       Ash     25kq     20     4       Ash     25kq     17     2       Ash     25kq     17     2       SCAV D     25kq     20     2       Polymer     25kq     20     2       CFlossy Fine)     25kq     20     2       COR 100     55gal     2     2	2081t	2											2		7
DD 251t 68 5 9 6 6 5 5 9 9 6 6 5 5 9 9 6 6 5 5 9 9 6 6 5 9 9 6 6 9 9 9 9	2081t	2											2		7
REAL 401b 20 25kg 16 25kg 16 25kg 36 25kg 36 25kg 36 20 20 24 46 34 25kg 178 24 46 34 25kg 178 20 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	_	89	5		6	9		11			2	2	96	63	33
25kg 16		20											20		20
Chloride, Aq 50kq 178 24 46 34  Chloride, Aq 50kq 178 24 46  Ash  m Bicarbonate 25kq 20 SCAV D 25kq 38 2 2 2 SCAV D 25kq 20 CFlossy Fine) 25kq 20 CFlossy Fine) 55qal  CFlossy Fine 55qal  CFlossy Fine 55qal		16										-	20	2	15
Chloride, Aq 501b 95 6 11 7  Chloride, Aq 50kq 178 24 46 34  Ash  m Bicarbonate 25kq 17 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		36											_		36
de, Ag 50kg 178 24 46 34  25kg 20 4  rbonate 25kg 17 2 2  25kg 20 2  25kg 20 2  25kg 20 2  Y Fine) 25kg 20 2		95	9	7	1	7		8			3	<u>س</u>	_	63	57
25kg 20 4  rbonate 25kg 17 2 25kg 38 2 2 25kg 20 20 7 Fine) 25kg 20	50kg	78	24	4	9	34	200	20			12	33	2	341	159
rbonate 25kg 17 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	25kg	20			4								20	4	16
25kg 38 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		17											20	3	17
y Fine) 25kg 20 · 55gal		38	2		2	2		7			7	-	40	13	27
y Fine) 25kg	25kg	20											20		20
. 55gal															
	55gal				+			1	_	1	+	-			-
	•				+			+		1					
					4			1			1				
					+			$\frac{\perp}{1}$	+						
		-			1		+	1	1	1	1	-			
		-			1			1	-	1	$\frac{\perp}{1}$				
		-			+			+			+				
														0000	
DATLY COST			2425	339	9	2484		3342			305	1305		50067	

:

													WE	EKLY	WEEKLY INVENTORY	TORY
COMPANY	Gas & F Boggy (	Gas & Fuel Exploration N.L. Boggy Creek No.1	ration	N.L.											щ	Page 3
	Date:	10/01		04/01	10/20	10	06/01	07,	07/01	10/80	11	10/60			Totals	
MATERIAL	Unit	Beg Reco	Recd Recd	Recd Used	ed Recd	Used	773	Used Re	Recd Used	d Recd	ed Used		Used	Recd	Used	Bal
Barite,	50kg	410												440	30	410
BARACIDE	30kg	2			<u>                                      </u>					2				2	2	
AQUAGEL	25kg	37			<u>                                      </u>			7	_	_	1			336	307	29
BARADEFOAM W300	251t	2								<u></u>				2		2
Calcium Chloride	25kg	19												20		19
Caustic Potash	25kg	31	1		1			1						40	13	27
Caustic Soda	25kg	15												20	5	15
CONDET	2081t	2												2		7
ENVIRO-SPOT	2081t	2												2		2
EZ MUD	251t	33	5		2								4	96	75	21
KWIKSEAL	401b	20												20		20
Lime	25kg	15												20	2	15
Mica	25kg	36												36		36
PAC-R	501b	57	4		3			1					1	120	72	48
Pot. Chloride, Ag	50kg	159	10		28	30								500	409	91
Soda Ash	25kg	16												20	4	16
Sodium Bicarbonate	25kg	17												20	3	17
BARASCAV D	25kg	27	2							4				40	20	20
XCD Polymer	25kg	20												20		20
Salt (Flossy Fine)	25kg				_			3	384	4	70		250	384	320	64
BARACOR 100	55gal			-	$\frac{1}{1}$		-	1	2	1			2	2	2	
					+				:	-						
					+			<u> </u> 	-	+	-					
					<u> </u>					1						
								T	-							
					+			+		+						
DATI,Y COST			1183	11	1197	608		329	1053	13	494		2783		32650	
		A franchischer und der der der der der der der der der de					-									

Case & Fuel Exploration N.L.															WEE	KLY IN	WEEKLY INVENTORY	ORY
MATERIAL   Date   Dat	COMPANY		uel Ex	plorat	tion 1	.r.											ŭ	Page 4
Date:   1901   1101   1201   1301	WELL	roggy c	N YEET	<b>1</b>					-						.			
Unit         Recd Used         Rec		Dates		10/01		11/01	1	2/01	13/01	14/0	1	15/01	=	16/01	_	- ⊢	tals	
50 kg	MATERIAL	Unit		Recd U	<del></del>	1-	<u> </u>	ecd Used	Recd Use		id Used	Recd		Recd Use			Jaed	Bal
50kg   410   2   2   2   2   2   2   2   2   2		Size					╬			-						440	30	410
30 kg   20 kg   25 k	Barite,	50kg	410	+		1	4			1					<u> </u> 		C	
25kg   29   20   20   20   20   20   20   20	BARACIDE	30kg					1			<u> </u>	$\prod$			-	1	326	202	20
2514   2   2   2   40   40   40   40   40	AOUAGEL	25kg	29				-								+	000	700	6.2
25kg 139 4 4 6 4 6 4 6 4 6 4 6 4 6 6 4 6 6 6 6	BARADEFOAM W300	251t	2			-	+			1				-	<u> </u>	7 0	-	101
25kg   27   24   25   25   25   25   25   25   25	Calcium Chloride	25kg	19							1				-	1	0 0	12,	27
25kg   15   2   2   2   2   2   2   2   2   2	Canatic Potash	25kg	27											-	1	2 0	7	12
Color   Colo	Canatte Soda	25kg	15							1					$\frac{1}{1}$	07	C	CT
Compared to the control of the con	CONDET	2081t	2							1					1	7 0		1
Date	TOG DO LO DO LA DOM	2081t	2	-						1	-				$\frac{1}{1}$	7		7
Section   Color   Co	TO THE PLANT	251+	2												+	36	()	77
Carlottide, Aq	Es MOD	4101	16	-			<u> </u>									20		20
2556g 4.5 Chloride, Ag 50kg 91 Ash mblicarbonate 25kg 17 SCAV D 25kg 20 SCAV D 25kg 20 Chloride, Ag 64 Chloride, Ag 50kg 91 SCAV D 25kg 20 Chloride, Ag 50kg 17 SCAV D 25kg 20 Chloride, Ag 50kg 18 SCAV D 25kg 20 Chloride, Ag 50kg 18 SCAV D 20 Chloride, Ag 50kg 18 Chloride, Ag 50k	KWIKSEAL	4010	2 4	+	Ī	-	-			<u></u>						20	2	15
Chloride, Ag   50h   48   120   48   120   48   120   48   120   48   120   48   120   48   120   48   120   48   120   48   120   120   48   120	Lime	2.3Kg		+		-	+									36		36
Solution   48   Solution   49   Solution   49   Solution   49   Solution   49   Solution   49   Solution   40   Solution   4	Mica	25 Kg	25	+	Ī		+-			L						120	72	48
25kg 16 25kg 17 25kg 20 25kg 20 25kg 64 64 84 384 3 25kg 64 64 884 384 3 25kg 64 884 3 25kg 64 8 25kg 64 8 25kg 64 8		arns.	87	1	Ī	+	$\dagger$			<u> </u>					_	200	409	91
25kg 16 25kg 17 25kg 20 25kg 64 64 384 3 25kg 64 64 20 55gal 64 64 86 86 86 86 86 86 86 86 86 86 86 86 86		50kg	91			-	$\dagger$			<u> </u>	-					20	4	16
25kg 17 25kg 20 25kg 20 25kg 64 64 55gal 64 64 64 64 64 64 64 64 64 64	Soda Ash	25kg	16	+		1	+		+	+					<u> </u>	20	3	17
25kg 20 25kg 20 25kg 64 64 64 384 3 y Fine) 25kg 64 64 64 2 2 55gal 64 64 64 84 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Sodium Bicarbonate	25kg	17	+		+	$\dagger$		-	1					<u> </u>	40	20	20
25kg 20 y Fine) 25kg 64 64 2 55gal 2 55gal 2 64 64 64 2 7 8 8 8 9 8 9 8 9 8 9 8 9 9 9 9 9 9 9 9	BARASCAV D	25kg	20	+		+	$\dagger$	-	+	1					<u> </u>	20		20
Fine) 25kg 64 64 64	XCD Polymer	25kg	70	-+			†			<u> </u>					<u>                                      </u>	384	384	
55gal		25kg	64	+	64		$\dagger$			1	-				+	2	2	
	BARACOR 100	55gal		+		+	$\dagger$			+								
				+		-	$\dagger$			<u> </u>					<u> </u>			
				+			†			<u> </u> 								
				+			1	-		<u> </u>								
				1			$\dagger$	-	+	$\frac{\perp}{1}$					$\frac{1}{1}$	<del> </del>		
							$\dagger$	-	1	+		1		1	1			
										<u> </u> 		_		<u> </u>	$\frac{1}{1}$	+		
										1					$\dagger$	+		
										+		1			$\dagger$	-		
											-  -				╬		22001	
	HOOD WITH				441					4					1		22021	

WELL	Boggy Creek No.1	Creek	No.1													
					DELIV	DELIVERIES		1				USAGE				
	Date	20/Dec	21/Dec	26/Dec	28/Dec		8/Jan		TOTAL		Interval	val	OTHER	TOTAL	ENDING	VAR-
MATERIAL	DT		_						DEL	12 1/4"	81/2"	Complt.	(cmtg &	USAGE	INVENT	IANCE
	Inv												losses)			
Barite,	50kg		400	40	0				440		30			30		
BARACIDE	30kg		2						2		2			2		
AOUAGEL	25kg	240	٥						336	124	147		36	307	29	
BARADEFOAM W300	25lt		2						2						7	
Calcium Chloride	25kg	20							20				1		19	
Caustic Potash	25kg	40							40		13			13	27	
Caustic Soda	25kg	20							20	2				8	15	
CONDET	208lt		2						2						2	
ENVIRO-SPOT	208lt		2						2						2	
EZMUD	25lt	64	32						96		71	4		75	21	
KWIKSEAL	40fb			20	0				20						20	
Line	25kg	20		ļ 					20	4				1 5	15	
Mica	25kg			36	9				36						36	
PAC-R	50lb	9	80						120		71	1		72	48	
Pot. Chloride, Ag	50kg	100	100	100		200			\$00		409			400		
Soda Ash	25kg	20							20		4			4		
Sodium Bicarbonate	25kg	20							20		3			3		
BARASCAV D	25kg			40	0				40		20			90		
XCD Polymer	25kg	20							20						8	
Salt (Flossy Fine)	25kg						384		384			384		384		
BARACOR 100	55gal						2		2			2		2		
													-			
										"						
				_	_											
				_	-	_	 							,		
				_												
					-	<u> </u>										
					-											
				<u></u>												
								s.i								

MATERIAL RECONCILIATION

Gas & Fuel Exploration N.L.

COMPANY

**COST & DAYS GRAPHS** 

COMPANY

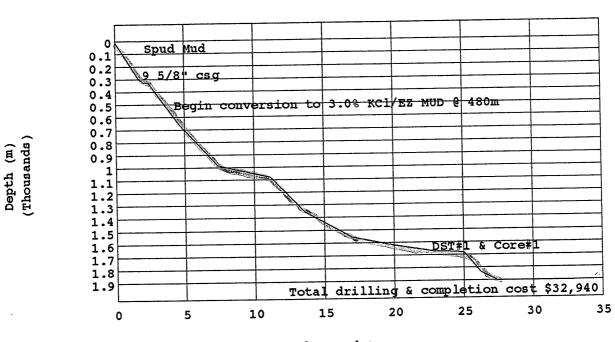
Gas & Fuel Exploration N.L.

WELL

Boggy Creek No.1

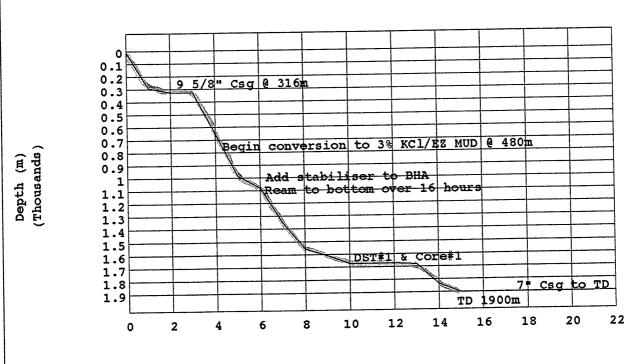
LOCATION PEP 104, Otway Basin, Victoria

DEPTH vs COST



(Thousands) Cost (A\$)

# DEPTH VS DAYS



Days from Spud

### 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

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)



# **RHEOLOGY & FILTRATION GRAPHS**

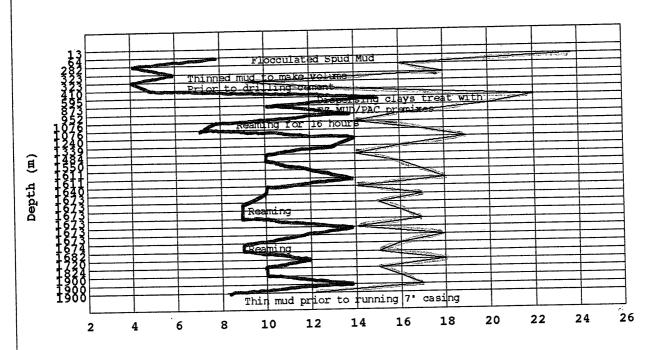
COMPANY Gas & Fue

Gas & Fuel Exploration N.L.

WELL Boggy Creek No.1

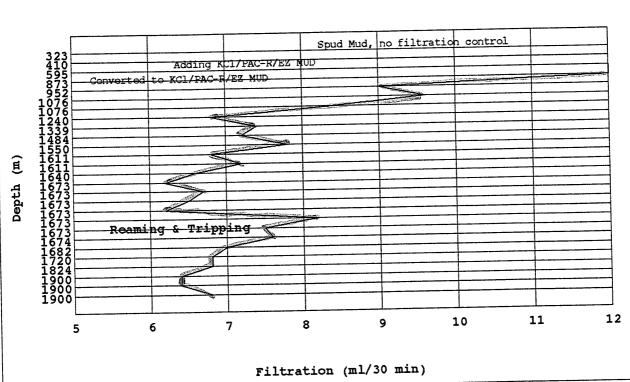
LOCATION PEP 104, Otway Basin, Victoria

# DEPTH vs RHEOLOGY



Rheology (PV=cP; YP=lb/100sqft)

# DEPTH VS FILTRATION





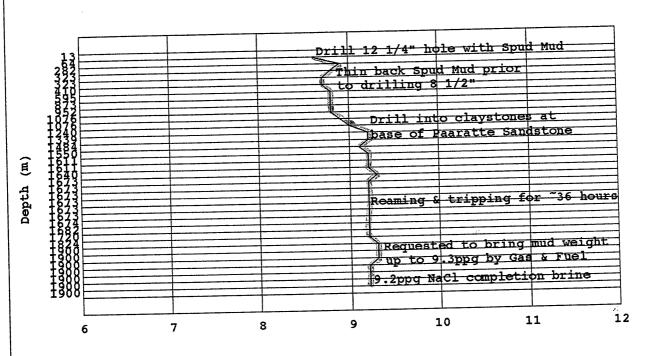
MUD WEIGHT, SOLIDS & MBC GRAPHS

Gas & Fuel Exploration N.L. COMPANY

Boggy Creek No.1 WELL

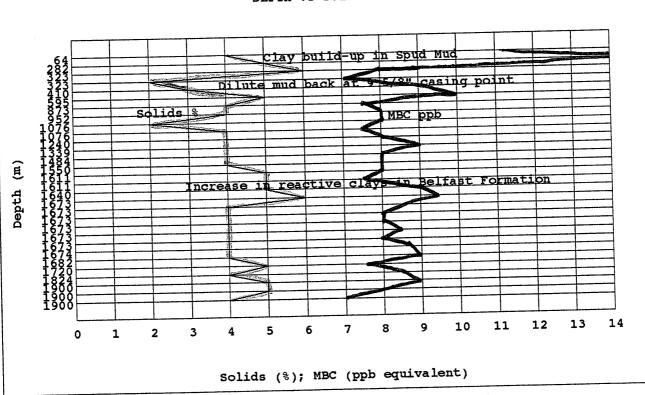
LOCATION PEP 104, Otway Basin, Victoria

DEPTH vs MUD WEIGHT



Mud Weight (ppg)

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)



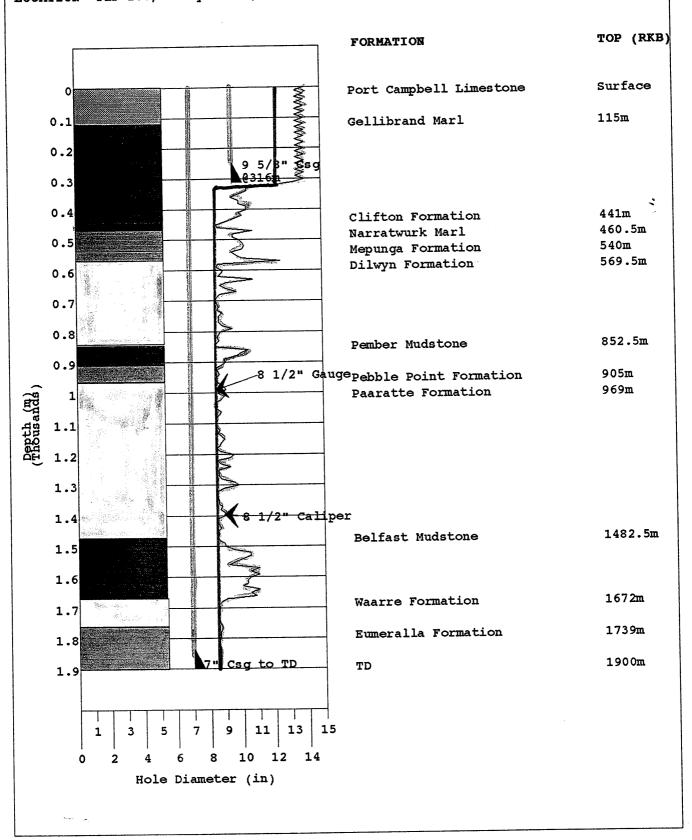
## Baroid Australia Pty. Ltd.

#### **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

Barrels/Meter (bbl/m)

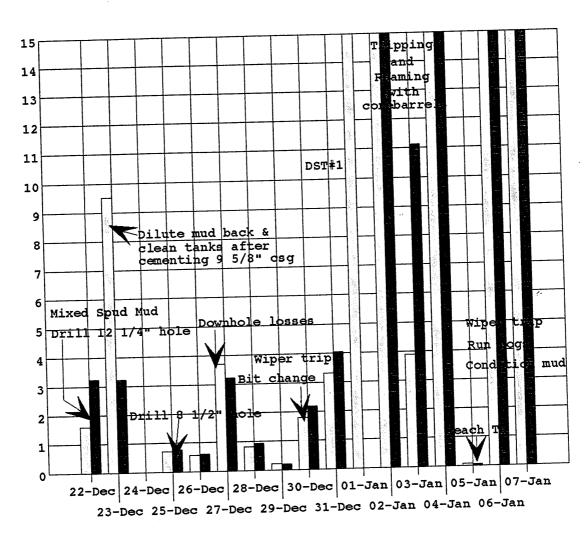
Gas & Fuel Exploration N.L.

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:

Initial Active - Final Active + Additions - Transfers

Daily Dilution Rate = Metres Drilled

Daily Consumption Rate

Mud Made Metres Drilled

	,							1			DRILLI	NG MUD	REPOF	T NO.	1		٠.			
	Baro	id D	rill	ina	Fli	ıide	Ir	ic	ì	币	DATE	22	ND D	€C.	_ 195	?1	DEPTH	292	<u>.</u>	Ott Om
		^		· ·	_		-	- 1		T			75.0	DEC	PR	ESENT	ACTIVITY			
TOR	Report	feer	05	<b>30</b> (2	.151	to C	<b>7</b> ≥≥	(22")	Icor	NTRACTO	R R	DATE_			Ш_	JAC (	RIG NO.			
<del>,</del>	CAS	+ F	<u>ر د د</u>	<u>ر ۲</u>	EXP	Lac	45	<u>د، د</u>			<u> </u>	EAR	HAR	T			SECTION, T	OWNSHIP.	RANGE	
PORT FOR	' 0	a er	re D	, ,	س، د	5			REF	PORT FOR	1		HERT				<u> </u>			<del></del>
NAME AND						(#:	FIEL	D OR BLOC		104		COUNT	Y, PARIS ORE ARE	HOR A	سهد		ATE/PROVI	NCE	VICTO	218
DRILLING	ASSEMB		4-7		SING			UD VOLU			□ m³	1					TION DATA	Ą		·
BESIZE 1	TYPE	JET SIZE		SU	RFACE	<del></del>	HOL			DITE	<del>7</del> 0	PUMP S	SIZE /	>×8′	.1		ANNULAR V	Flu by	DC <u>8/6</u>	] m/min _ <i>96_[74</i>
	CC S 33	E_3x1(	SET		MEDIA	TE	тот	AL CIRCUL	ATING	VOLUME	10		MAKE, MO	DDEL	ASSL	MED	CIRCULATION	ON	_	□ psi □ kPa
-741124	TYPE	LENGTH	SET		MEDIA	TE	IN S	TORAGE	51	WEIGHT		vol/stk	) <u>Z</u> 9	<u> </u>		ે જે ≱/min	воттомѕ		<u>00.</u> کامارسم	
	ten	52	SET	@				SO TYPE		8.	6	╀		890			UP (min)			
OLLAR SIZE	16/2" =	LENGTH	1	RODUCT	ION OH	LINER		Fu		spup n	24A		<u> 33</u>	6 ge	1 mi	el/min	TIME (min)		64	
								D PROP			517	E O E		MUD	VISCOS		SPECIFICA	FILTRATI		
From					- [ 	□ F.L. □		□ F.L. □		□ F.L. □	Pillw	EIGHT	ODITY !	OPERA	TOR'S V	VRITTEN	DRILLING	G CONTRA		
ample Take			r	J°F .Ĉ	<del>- Tal</del>		30 5		ဝ၁		-	MIUN								
ot <u>h</u>				· · ·		64	-	28	2					RECO!			OUR TREA			
VC	bigai □lb	/cu.ft.	∃Sp.G	. <sup>*</sup> ∐ k̈́ç	1/m³	8.	6	8.	9_				MAD	e E	UP	120	BBLS	HIVIS	SPUDI	HUD
	sec/qt API				_℃	42	<u> </u>	40				10	DAI						orbuct	
stic Viscosity	cl	<u>P@</u>	. □°F	Oft2	]°C	<u>8</u>		4			$\dashv$	MA	SHO	out		(U,	~ TINUE	9 10	use H	hvis
pint	ec/10 min)	<u>`</u>		Oft <sup>2</sup>		71	12	31	6	7		MU	0 7	D 1	1800	7 . 1	BEGAN	DILLT	ING M	(4 p
ate API cm <sup>3</sup> /30						~		~	10			BA							CLAY	
/I-THP Filtrate	cm³/30 min	@.	°F	@	_℃			-								u Tim	4 140	10 B	MCK AS	
nickness A				in. 🗆		<u> </u>		1-		• /		AP	PROP	ac H	(	PSIN	4 8011	VT		
3 Content (%			lculate	d □H	etort.	<u> 4</u>		5 9		,										
ontent (%		yvalei		•:	· <u>^</u>	<del>7</del>	<u>۔۔۔</u>	1	<b>&gt;</b>	<u> </u>						REM/	ARKS	er,		
ne Blue C		] le fobi equ	uiv. 🛘	cm³/cm³	mud	11		15	5						0	. 1		ا ٔ و		
	□ Strip	☐ Meter	<u>@</u>	<u>-°F —</u>	_ ℃	9		8.		ļ		to	mat	00	Ge	eliba	and '	1/01/	•	
y Mud (P <sub>m</sub>						<u> </u>		0.		<del>                                     </del>	$\dashv$	R	>₽							
y Filtrate (	P <sub>f</sub> /M <sub>f</sub> ) ml/m				$\dashv$	<u>0.08</u> +	<u>0.1</u>	20.05		<del>\                                    </del>	$\dashv$	7		l	~-	29	W 0	100	Ca+ 9	80
oride, mg/L	y i made (i )	11 2J 1114111	<u> </u>			50	حد		અ			_								
_	s Calcium, r	ng/L				160		10	00			Ca	chia	ر ٥	-					
										ļ		Sur.	عارب م	~ ~ ~	_	4,0	150	١		
			· ·	<del></del>						<del> </del>		رىمەھ	104 (d		ud >	90	(O	<i>/</i> /~		
		П				П	1	TI	П		П									
_ ts	BGCK	lgG)		ا بل													SOLIDS	CONTRI uf los	OL EQUIPI	MENT
CT UNIT COST	BAROID (BULK)	ваноїВ (Кве	AOOAĞEE	eneste Serste	krime	200												MAKEL	SIZE/	1 "
N S	BAR	BAB	δδ	43	1														SCREENS	
⊀fING :NTORY		425	330	> 20	20	1											SHKR 1	8889		160
= D							П		Π								SHKR 2 SHKR 3	8.8/8.5	1 -100	1202
ST	<b></b>		124	4	#	T			T	$\top$							SHKR 4		-	<del>                                     </del>
T LAST		<del>                                     </del>	15103		1	1	$\vdash$	1	T	$\top$		1	1				DESAND	14 ppg	8×16	16
TIVE		<del>                                     </del>	121,	1856	71	+	$\vdash$	-	+		<del>                                     </del>	1	1		<u> </u>	<del>                                     </del>	DESILT	12.30		16
JLATIVE	<del> </del>			<b> </b>	-	-	-		+-		-	+	<del> </del>				M CLNR			
)			124	1	4		<del> </del>		-		-	+				-	CENT 1		<del> </del>	
RY/			212	16	<del></del>		1		1		-		-			ļ	CENT 2	<u> </u>		1-
fiC. ☐ kg/m²	4			0.25		5	<u> </u>	Щ.,	<u></u>	<u>.</u>			1				1	<u> </u>	TN/E CCCT	1
PAROID RE	PRESENTA	TIVE	OFFI	CE/HOM	E ,	Penti	Н		TELEF	HONE	· ·		1	DAILY C	UST	340	,	LUMULA 4	TIVE COST	>
C= 1	MChA	د . برای	WAR	EHOUSE	A	EAR	Q.		TELEF	PHONE				19	64.	<b>&gt;</b>	l	<u> </u>	643	
			•			1. 10 M														

												s		÷	O					
					<b></b>	: .! .	I		1	١ ١		NG MUD F	<u> </u>	TNO.	<u></u>	31		323		] ft
	Baro	id D	rilli	ng I	-Iu	ıas,	Inc	•	4	<b>'</b> ∤	DATE				PRE	SENTA	CTIVITY			
									CONTR	ACTOR	SPUD	DATE	<u>√13.</u>	D€C	끸	×	<u>کمیکیمو</u> RIG NO.			<u></u>
FOR	CAS 1	+ Fu	Ē٤	EXP	اده	ZALIC	~~_				(	JEARL	HART			1	SECTION, TO	WNSHIP, R		
PORT FOR	(	) SERA	0 5	K	برده				REPOR	TFOR	/	60 J		ERT	1					
AME AND N	0. –		بدب	Co	E.S./	#1	FIELD OF	BLOCK	NO.	<b>.</b>		COUNTY		OT	JA4	13 PX	TE/PROVIN	11125	A -	
DRILLING	ASSEMB		155		ING			VOLUN			] m³				CIRC		ON DATA	. ,	ft/min □ r	n/min
		JET SIZE	SET		FACE	95/8	HOLE	80	PITS	28	ے	PUMP SI		SXC			ANNULAR VE	DC	<u> </u>	<u>_</u>
E TY	PE .	LEŃGTH	SET	INTERN				IRCULAT	ING VOI			PUMP M	DP3	DEL Z	ASSU!		CIRCULATION PRESSURE	N 		] psi ] kPa
RILL PIPE TY	/PE	LENGTH		INTERN	EDIAT	E	IN STOR			GHT		vol/stk	a		al St		BOTTOMS UP (min)			
ZE LLAR SIZE		LENGTH		ODUCTIO	ON OR I	LINER	MUD TY	P						<del></del>	vo	l/min	TOTAL CIRC. TIME (min)			
			SET	@	1	l	MUD F	ROPE		10 M	Ï			MUD	PROPE	RTYS	PECIFICAT	riońs		
mp From						) F.L. []\P	f 0	F.L. 🗆 F	nt 🗆	F.L. 🗆 F	PIT W	/EIGHT	<u></u>		viscos		DRILLING	CONTRACT	TOR	
mple Taken					_	190	> -				[5	BY AUTHO	c	OPERA	TOR'S R	EPRESE	MAINE LI	JIREK		
fline Temperatu	ire			]°F	-7	<u>15</u> 323			$\dashv$								UR TREAT			
	gal □lb.	/cu.ft.				8.8						PG	ded	100	, Př	ols o	حب إد	re(	15 (C)	عاد ال ر
iel Viscosity ☐ \$			□sec/		°C	_B6		4	-		$\dashv$	WSC.	os. h	٦, ۵	s Ç	elli	dol	Marl	disper	E'23
astic Viscosity	cl	<u> </u>		□کــ □ 0ft²		<u> </u>		3			ᅱ	ink	140	ک ک	15t	om.	Visc :	دم ح	) مردد المراجعة	, ij
ngth (10 se	c/10 min)			Oft²			5	K		1		Trv	.p ~	<i>د</i> ی	™.ro∙	<u>.</u> کل	Send	-~≈ρ. ˈ	(	-5.5 )
ate API cm3/30 i					_ _	NIC	-	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			$\dashv$	afte	10	men	4-5	Ġ,	umped	+ = (	إلامدىء	
I/H IP Filtrate c				<u>'@</u> in. □r	°C			7		1	$\dashv$	Set	line	کر ر	صامة	•				
s Content (% t				d 🗆 🕊				3						-			•			
uid Content (% b	oy Vol.) Oi	/Water				94		Ϋ			ᅪ		<del>-                                    </del>			REMA	RKS	e .		
ontent (% b		⊒ to/obi eq	·	3/cm3 r	71/4	<u>Te</u> 8	$\dashv$	<u> </u>	$\dashv$			<u> </u>	V - C	- 10	- لء		. ^	Hiba	I Me	اد
yrene Blue Ca		Meter		-°F	·°C	8.5		T				، بملار د یا	いピン マファ		C, (c		ν .	معل م		
ali y Mud (P <sub>m</sub> )						0.15		-2-				ونو	sec.	م يملأ	. (	الاس	lale	for :	2 ho-	Ś.
	f/Mf) ml/m				-	0.02 C	)·u\	3		<del>- /-</del>	$\dashv$			ດໍ	G	5/8	(ss.	5~	fil o.	^
hate Alkalinity	Fittrate (P	1/P <sub>2</sub> ) mi/m	11		-	<u></u>	>					<b>l</b> cai	lom.	. C.	(سه ٔ د	- د	+1, no-cl	n ce !	er clu	د کی
rdness as	Calcium, r	ng/L				ଞ						was	u out	c ( )	مرسر	و ک	through -classical Shell short	or. V	اوس د	xJSC common
							-					pelo	le sa	se rr	م) مماط د مف	ا ا	cofinste	مهاسعٍ د	-C~P	رو پسور ا
					-							1/3	NG CC	ريون	21 =	100	•• (~••		<u></u>	
	J.C.S	၅			T												i		L EQUIPM	
HELDER T	BAROID (BULK)	BAROID (REG)	AQUAGEL	Charter, 25kg	`													MAKE/	SIZE/ SCREENS	HRS
	ВАН	BA8	Ϋ́	a n		$\bot \bot \bot$					lacksquare	<del> - - </del>					SHKR 1	8.8	60/130	20
TING ENTORY			212	16								-				<b> </b> -	SHKR 2	8.8	64/00	23
CE D				_							<u> </u>	-		1/			SHKR 3			
FEAST ₹.			28	1			*	Isen	1~	Cen	20	1.75	75/8	CA	124	-	SHKR 4	<u> </u>	0	-
STLAST -IR			3410	26	2							4		<u> </u>			DESAND	8.7		2
TIVE			_												<u> </u>		M CLNR	0.1		
JLATIVE ED			152	5							_					<u> </u>	CENT 1			
YPORY			184	15					<u> -</u>		<u> </u>			<del> </del>		-	CENT 2	<u> </u>		
OCT □1b/bbl ONC. □kg/m³			10	0.2	<u> </u>			<u> </u>	<u> </u>	<u> </u>	<u></u>		<u>L_</u> ,	DA" Y C	L COST		<del></del>	CUMU! AT	IVE COST	<u></u>
ROID REF	PRESENTA	ATIVE	OFFI	CE/HOME		PERIH			TELEPH(					DAILY C	37 I	42	ľ			2
Joi N	MAN	GHEIN	WAR	EHOUSE	9	DELA	ı <b>)</b> €		TELEPHO	ONE		·	1	+	٠ <del>٠٠</del>		<u></u>			

ا ا	,									L		÷	-		<u>.</u>					
										<b>.</b>	DRIL	LING MU	D REPO	ORT NO.			3			
(PAROLI)	Bar	oid l	Dril	lling	FI	uids	, Ir	nc.		<b>D</b>			+41		19_	91	_DEPTH_	32	23	_
	, 									1	SPL	JD DATE	215	Dec	91P	RESEN	TACTIVITY	<u>S</u>	acl	
ATOR	GAS	+ 1	۸€ر	τ×	اد ح	LALO	<u>.</u> 		co	NTRACTO	OR	CEA	RHA	a T			RIG NO.	2	<u> </u>	
ORT FOR	-		201		•	ار دے ۱		_	RE	PORT FO	R	/	Don	ENIC			SECTION,	TOWNS	HIP, RANGE`	······································
NAME AND	NO.	Box				#1	_	DOR BLO					ITY, PARI HORE AF		INK		TATE/PROV		WALA.	
DRILLING		<b>ABLY</b>		C/	ASING	3	+	JD VOL		اكاهل	n				CI	RCUL	TION DAT			
1/2	TYPE	JET SIZE		ET@		<u> 318</u>		40			40			6×8			ANNULAR DP		ft/min DC	m/min
T4112	TYPE	LENGTH	s	ET@	RMEDI				ATING 4-2				MAKE, N	8 NODET		UMED 95%	CIRCULAT	E	/_	□ psi □ kPa
41/2	TYPE Hew	LENGTH	s	ET@	RMEDI			FORAGE		WEIGHT		vol/sti	<u>' 2</u>	·8 90	1/54	stk/min Ł	BOTTOMS UP (min)		/	
OLLAR SIZE	34	LENGTH		PRODUCT ET @	TION O	R LINER	<u> </u>			<b>bune</b>	e					vol/min	TOTAL CIF	/		
From	·							D PROP		ES DF.L.C	7 DIT	WEIGHT		MUE	PROF		SPECIFIC	ATION FILTR		
ample Tak	en					140		ے .ا.ان			31.11	BY AUTI	HORITY	OPER	ATOR'S	WRITTE	N DRILLIN	IG CONT	TRACTOR	
ne Tempera	ture			<b>□</b> °F (													OUR TRE			
	bo/gal □	lb/cu. ft.	□Sp.	ft_   .Gkg		32 						No	ی وی	·P ~	Pec	R	previx	(1.	Sppb)	€60bb1
Viscosity[						35		1		1		ad	ded	15	Sur	(ece	مدلم،	ع ج	Sppb) 1stem + occarbo	preton
stic Viscosity		cP @	1° []	F <u>12</u> [ 100 ft² [	_	<del>- 4</del>		19	<u> </u>			A.	ر د ال،نحر	41TL	C APE	ppb	Sodiu _+	~ k	صاعت ،،د	icle lo
ength (10	sec/10 mir	n)		100 ft <sup>2</sup>	$\overline{}$	11	3	7	•	1		an	$\mathcal{C}'''$	<i>6</i> u		, , , ,	•			
até API cm³/3						24	-		)											
HP Filtrate		nin @	<u></u> 22n	°F@ nolin. □	_ °C	<u> </u>	-	R		<del>  ,</del>						•				
Content (%			calcula	ted 🗀	etort	a							•							
id Content (%		Oil/Water				9	1	. 1								REM	ARKS	61		
ne Blue C		□nnq/ppi e	quiv. [	] cm³/cm³	mud	7 7	<b>-</b>	``	<u>~</u>			(-2	ء مل -		Ca			ole	up st	ack
-		Mete	r @	°F	2℃	8.5			<u> </u>				51. N					γ. •	- •	•
.li y Mud (P <sub>n</sub> y Filtrate (	,) ml P <sub>f</sub> /M <sub>f</sub> ) ml/	ml				<u> </u>		- 3		,		1	S1:~10	<b>'</b>	>/ A	eK.				
ate Alkalinit	y Filtrate (	P <sub>1</sub> /P <sub>2</sub> ) ml/i	ml			4		Z		/										
rdness as	s Calcium	mo/l	<del></del> -	<del></del>		<u>50</u>			<u> </u>	<u> </u>										
Turicos di	Journal	,										(	ساحل	كعة	we	d =	601	حاط	,	
										ļ		ľ								
	۶ ک							TT	1	1	П			П						
TZ OST	) (BUL	(REG	교	9	7	\$											SOLIDS	uc	ROL EQUIP	MENI
UNIT COST	BAROID (BULK)	BAROID (REG)	AQUAGEL	Cac A	3,0													BRAN	SIZE/	SHRS
NG		-	184	+	-	1		+	╁	<del>- -'-</del>	† †	1	<del>  '</del> -	╁			SHKR 1		62/10	<del></del>
ITORY		1	<u> </u>	-	- A	1			$\vdash$		$\vdash$	<del> </del>	1	<del> </del>	<del> </del>		SHKR 2		60/10	3
76T				2	3			+	$\vdash$		1-	+	1	1			SHKR 3 SHKR 4			
LAST				299 <sup>S</sup>	) S. 3	4		1	$\vdash$	$\top$	1	1	1			1	DESAND	<del>                                     </del>	8x 12	-
IVE					75			1		1	1						DESILT		12×6	-,1
ATIVE				2	3			1			1						M CLNR	-	-	+-
î RY				118	17												CENT 1	1		1
☐ lb/bbl IC. ☐ kg/m³				•24	0.															
BOID RE	PRESENT	ATIVE	OFF	ICE/HOME	<b>=</b>	- En Tri			TELEP	HONE				DAILY C	OST 35	<u>-</u> . 8	8	CUMUÏ	ATIVE COST	, 40
E N	Khan	GHIN	WAF	REHOUSE	+	DELA	NE.	1	TELEP	HONE				4	عد ه	<b>&gt;</b> (	i	4	256	<del></del>

		•	
			: :
		DRILL	LING MUD REPORT NO. 4
Baroid Drilling Fluids,	Inc	DAT	E 2514 DEC 19 91 DEPTH GC2 DET
Daiold Drining Fidids,	11.0.		DDATE 2151 DEC 9 PRESENT ACTIVITY
TOR C	/ co	NITRACTOR	GEARLART RIGNO. 2
EPORT FOR		PORT FOR	SECTION, TOWNSHIP, RANGE
GERARD NICOT			NAN SERPIC
NAME AND NO. BOCKET CLEEN X 1	FIELD OR BLOCK NO	). •	COUNTY, PARISH OR STATE/PROVINCE
DRILLING ASSEMBLY CASING	MUD VOLUME		
BESIZE TIPE JETSIZE SURFACE		PITS 3 <b>5</b> 0	PUMP SIZE 6 × 8 " ANNULAR VEL
PE TYPE LENGTH INTERMEDIATE	TOTAL CIRCULATING		PUMP MAKE MODEL ASSUMED CIRCULATION DES
-7 µ 12 € SET@	42	<u> </u>	CDP2 8 EFF 98 PRESSURE 1100 KPa
LE SS. 4 SET@	IN STORAGE	WEIGHT	2.8 gc/sth UP (min) 13
OLLAR SIZE LENGTH PRODUCTION OR LINER SET @	MUDTYPE CEL	POLUMER	vol/min TOTAL CIRC.
(5) (44) 540 021 9	MUD PROPERTI	7	MUD PROPERTY SPECIFICATIONS
main From DF.L. DV	T DF.L. DPIT	□F.L.□PIT V	WEIGHT VISCOSITY FILTRATE
ample Taken	0500	<u> </u>	BY AUTHORITY OPERATOR'S WRITTEN ORILLING CONTRACTOR OPERATOR'S REPRESENTATIVE OTHER
ne Temperature	3ι		RECOMMENDED TOUR TREATMENT
<u></u>		<b>.</b>	Driked out of shoe with 812" bit through
□ Ub/gal □ Ib/cu.ft. □ Sp.G. □ kg/m³ 9. ·		<del>                                     </del>	Gellibrard Harl. Had thinned rapidly
wiscosity sec/qt API @ _ °F  sec/L @ _ °C	15	<del>                                     </del>	whilst drilling the bottom of Gellibrand +
In Spirit Discharge De 14	22		two of Clifton formation. Added all premix
	3 3/5	,	1 1) In oct is to raise 4P. Swept hole
are API cm³/30 min	12		with hi vis sweeps (Pack) - no encrease in
/HTHP Filtrate cm³/30 min @°F@ °C			returns at Shahers. Viscosity began to
nickness API/HTHP 32nd in. mm 2	2		increase rapidly in the Norraturelle
FContent (% by Vol.) ☐ calculated ☐ Leftort 3	5		[* High pH etc consect by drilling coment]
uid Content (% by Vol.) Oil/Water		<del>  '  </del>	REMARKS
ne Blue Capacity □45/bbl equiv. □ cm³/cm³ mud 9	Tr		Formetion (2 425m). Pac R premis +
ne Blue Capacity □llafobl equiv. □ cm³/cm³ mud 9 □llafobl equiv. □ cm³/cm³ mud 9 □llafobl equiv. □ cm³/cm³ mud 9	10 5* 8·5	-	water was ackled but viscosity continue
alia y Mud (P <sub>m</sub> ) ml		<del> </del>	to not reaching 70t. so KCR/Pac R prem
y Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml		4 /	
ate Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml		1	in the flow like to reduce the Solichs conte.
or <u>ide,</u> mg/L 50	> 7500		of the rend . Within a few aren among
rdness as Calcium, mg/L	120		in the flow like to reduce the Solichs contra of the rend. Within a few arenical solich contra the viscosity decreased to \$5-50 scoolger.
~ (w+%) -	1.5	-	
			Uctes added 250 Hals.
8			TILL SOURCE CONTROL FOR WELLT
OST	1663		SOLIDS CONTROL EQUIPMENT
BAROID (REG) BAROID (REG) BAROID (REG) AQUAGEL AQUAGEL ACC COMP			MAKE/ SIZE/
	1 1 1 1 1 1		BRAND SCREENS HRS
NTORY   184   118 200 96	35 20		SHKR1 Layloo 16
			SHKR2 2/25/135/12/2
1 1 2 2 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2			SHKR 3
7 28 8 24 2	93 14		SHKR 4
3. 344 1148 489 1140	369 16		DESAND 10-3 - 14
D	- /		DESILT 416 12×6 12
ATIVE	1 . 1	1 I	M CLNR

\$219297 ROID REPRESENTATIVE \$4559 TELEPHONE WAREHOUSE Adelande COMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT TION OF ANY LIABILITY BY BAROID DRILLING FLUIDS, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

CENT 1

CENT 2

CUMULATIVE COST

THIS COPY TO BAROID TECHNICAL DEPARTMENT

TELEPHONE

19

		1		ORILLIN	IG MUD RI	EPOR	T NO.	E	3				
Baroid Drilling F	luids. I	nc.	(h)	DATE	2614	ھ	ec	19_	9.	DEPTH_	98:	3	□ft □
	·				DATE _2		YE C	91 PI	RESENT	ACTIVITY	sc Arr	r <del>CA</del> n	
ATOR C		C	ONTRACTOR	_	<b>)</b>	_		كلنند	>	RIG NO.	2		
PORT FOR	PLORATE		EPORT FOR	<u> </u>	EAR H				· · · · ·	SECTION,	TOWNSHIP	, RANGE -	<del></del>
NAME AND NO.		LD OR BLOCK N		<u> </u>	COUNTY, F		ER.	<u> </u>	Ist	ATE/PROV	INCE -		<del></del>
130CGM (REEL	X1	PEP 1	<u> </u>		OFFSHOR	E AREA	O		845	· ^>	Vici	A A	
DRILLING ASSEMBLY CASIN  BESIZE TYPE JET SIZE SURFAC		AUD VOLUME	lama.	⊒ m³	PUMP SIZE				RCULA	ANNULAR	VEL.	□lie/min □	] m/min
2 S44 Dx 11.13 SET@ 95/8	<u>(9) 3184                                    </u>	TAL CIRCULATIN	1 31	<u>-၁</u>	PUMP MAR	<u>_</u>	×8 DEI	ASS	UMED	CIRCULATI	136/116		<b>/</b> □ psi
74/L F 788 SET@			WEIGHT		CDP:		3	EFF	95% stk/min	PRESSURE		<u>ල</u>	□kPa
= 41/1 Hay 55.64 SET@		STORAGE 240			0	<u>.0</u> (	3 5	2/10		UP (min)	~	8	<del></del>
DLLAR SIZE LENGTH PRODUCTION O			PHPA		<u> </u>		5.9		/ol/min	TIME (min)		98	
	<del></del>	JD PROPERT		OIT WE	IGHT		MUD	VISCO		SPECIFICA	FILTRATI	=	
ample Taken	□F.L.□#IT	□F.L.□PfT の <b>5</b> 0ろ	UF.L. UF		AUTHOR	ITY 🗆	OPERA	ATOR'S	WRITTEN	☐ DRILLIN	G CONTRA		
ine Temperature	29	34			7,011,011	··· _	OPER/	ATOR'S	REPRESE	OUR TRE	OTHER		
oth 🗆 ft 🗀 📶	873	952	<u> </u>	_		<u> </u>	I	. 4-	1	l_	Dl	Sc.	
□ Ib/gal □ Ib/cu. ft. □ Sp.G. □ kg/m³  Viscosity□ sec/qt API@°F □ sec/L@°C	8·8 #u	8.8	<del>                                     </del>		Dil	٠ (	the	es co	יאינים	~9~	D111	e point	` <i>†</i> •
stic Viscosity cP@ PF PC	10	14	+ - ′ -		Pen	بعط	H	dst	+ 1	A) (O)	いとりかい	e boin	•
d bint □µb/100 ft² □ Pa	20	Ilə			0								
ngth (10 sec/10 min)	3/8	3/5	- /		Do	J	Pac	RI	KCe	Plom	ixes	te mo	+<
e API cm³/30 min	12	9 -	<del> </del>	ᅱ	Volu	me	<b>+</b>	*	inta	in I	P.	to mo	
ickness API/HTHP	1	/1	1										
Content (% by Vol.)   calculated   refort	4	4											
id Content (% by Vol.) Oil/Water	96	96	1	$\dashv$					REMA	RKS	6		<del></del>
ne Blue CapacityUb/obl equivcm³/cm³ mud	7.5	9											
□Strip □ Meter @ °F °C	9	8.5											
life / Mud (P <sub>m</sub> ) ml	0.2	20.05		_									
Fittrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml  ate Alkalinity Fittrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml	+-	·05/ ·19	5 /	$\dashv$									
ride, mg/L	11000				CI		A	اء	. ما	1	Ca	4.6	lawine
rdness as Calcium, mg/L	100	160			(ha	nag	J	3	ine i	7 20	ice n	,,,,,,,	
2 (w 3/a)	2.5%	3%	<del></del>		010	ووب		A 1-		٠ <u></u>			
	ļ			$\neg$	Wa	'er	Ac	your c	,	X00 PI	215	н.Ј (	
8 6	1 1	.											
BAROID (BULK) BAROID (REG) AQUAGEL  KCC SOUCE	SALED STOWN	Comy								301103	- u(	OL EQUIPN	n=141
BAROID (BU BAROID (RE BAROID (RE SOME SOME	1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	र्ध । ।									MAKE/	SIZE/	HRS
NG G	<del>- -'- -'</del>	<del>- </del>	<del>'   '  </del>			++		1		SHKR 1		60/80	
176 176 176 9		<del>4</del>				$\dashv$				SHKR 2		80/100	
	1-1-					-				SHKR 3			
LAST LAST	6 6	92				$\dashv$				SHKR 4	-		
972 9x	8 898 W	6'}							-	DESAND	4	8x12"	20
ATIVE	·   -   - ·	4			_	$\dashv$			<u> </u>	M CLNR	13.3	12×6	<u>13</u>
72 I	8 16	2				_				CENT 1			
	8 10H 3	3				_				CENT 2			
	· <del>s</del> 1·3 _	4											
	PERTY	TELE	PHONE			D/	SILY C	OST	2631	ı [ˈ	CUMULAT - 4	IVE COST	78
Mchanghan WAREHOUSE 7	DELANCE	TELE	PHONE	<del></del>			4	<u> </u>	<b></b>	l	\$ 7	782	

<b>- 3</b>			ž	:	. ,				
	I	D	RILLING MUD REPC	RT NO.	<u> </u>	<del></del>			
Baroid Drilling Fluid	s, Inc.	ID [	DATE 27/11	De c 19_		DEPTH	1076		
	-	1	SPUD DATE 2151	DEC91PI	RESENT	ACTIVITY SALVA	to be	Hom	-\$
ATOR CAS + FLE EXPLOSES		CONTRACTOR	GEARHAN			RIG NO.	2		
FEFOR O		REPORT FOR	JAM SE	•		SECTION, TO	WNSHIP, RA	NGE	
MEAND NO.	FIELD OR BLOCK	L	COUNTY, PARI		STA	ATE/PROVIN	ICE ,		
BOGGY ( REEK AT 1	- PEP 1	104	OFFSHORE AR			15 m2		SALIA	
PRILLING ASSEMBLY CASING	MUD VOLU	JME Wobl C				ANNULAR VE		ft/min []	pn/min
S82F 2x 11, 17 SET@ 95/803		32	0	6×8"		ANNULAR VE DPCIRCULATIO			208
PE TYPE LENGTH INTERMEDIATE  4412	TOTAL CIRCULA	SSO	PUMP MAKE, N	8 EFF	UMED 95%	PRESSURE	90		□kPa ु
TYPE LENGTH INTERMEDIATE SET @	IN STORAGE	WEIGHT	vol/stk	1-067 561	stk/min	BOTTOMS UP (min)	29	8	
AR SIZE . I LENGTH PRODUCTION OR LINES		1			Simm	TOTAL CIRC TIME (min)	. <i>&amp;</i>	32	
6   (68.2   SET@	MUD PROPE			MUD PROF	PERTYS	PECIFICA"	TIONS		
	_CHPIT   CF.L.CH	PIT DF.L. DPI	IT WEIGHT	visco		C 550 1 11 1	FILTRATE	OB.	{
	<b>1968</b> 050	0	BY AUTHORITY	☐ OPERATOR'S ☐ OPERATOR'S	REPRESE	TATIVE	OTHER	UN .	
	34	<del></del>	-	RECOMMEN	NDED TO				
	376 1071 x.8 8.9		Dall	ohecel	-thre	agh =	Parall	e to	(metion)
	38 43		] Mud	thinning	as	سااله	of the	ough !	sard 🖟
	8 7		استله الم	als add	ling	gel Y	pren.	×8) (	~川ppb)
	14 17	<del>_</del>		ruc to	رجر	11	1P.	hosin	حر ي
	7.6 8.4	<del>3</del>   /_		10 Sano					ا عاداد
The Filtrate cm <sup>3</sup> /30 min @°F@°C			Pool .	to chan	7	bit.	214 h	108 +	STAB 3
mckness API/HTHP	1 1		Rean f		38~			, -	3
Solitonia (10 b) 10 m/	2 4						12.		
	98 94	1		· · · · · · · · · · · · · · · · · · ·	REMA	RKS			7
	8 7.					,,			- September 1
	9.5 8.0								
- CHD		05	_						
ty Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	4 .34 .04	·29 /				i lat a	املاسم	T 180	ير بر
te Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml	1000 1400	00 /	المحيم	downhi 150 bloks velocities 286 ft/m	<i>يو س</i>	m'e' ~	ر ۱.م		:
	80 129		- total	velschie	م الله	Dc 3	25/th	4, 6	- -,
	40 13		Hude	286 Alm	:- P	4 286¥	داست.		i.
			- Lucker	יוון שבע יי	, las	1 241	10cg =	300	> ;
[Co (lest */el) ] ] ] ]	2 <del>3/4   7 2</del>	·			<del>                                      </del>				
BAROID (BULK)  BAROID (REG)  AQUAGEL  STUCC  STUCC	1 1 3 1 1					SOLIDS C		.EQUIPM	IENT :
BAROID (BULK BAROID (REG) AQUAGEL STIVE STIVE STIVE ACCE ACCE ACCE STIVE STIVE ACCE ACCE ACCE ACCE ACCE ACCE ACCE AC	14.20 Sec. 17.20 Sec.	1000 A				1	MAKEL!	SIZE/	·
BAROID (B BAROID (B BAROID (C S S S S S S S S S S S S S S S S S S S	न इ व के व	1 4 7 7 7			_		BRAND S	CREENS	
G	o4 33 <b>36</b>					SHKR 1		60/80	21
/E		1 2 2 1		+ + -	1	SHKR 2		82/100	<u>21</u>
# 42 / loc	30	20 36		+	1	SHKR 3	+		
15 44 50 10	9 1 2	144		+	1	SHKR 4	-+		21
1983 5357 1212 514773	x4 36 98	<del>                                     </del>				DESAND DESILT	9.7	3×12	21
D -		<del>                                     </del>			-	M CLNR	11.0	axU	<u></u>
15 22 12 28 2	25 3 2	1-4-				CENT 1			<u> </u>
	95 32 28	20 36				CENT 2			-
T □ lb/bbl :. □ kg/m³									
A DID REPRESENTATIVE OFFICE/HOME DEAT		TELEPHONE		DAILY COST		62 10	UMULATIN		
		TELEPHONE		\$3	763	J =	\$11,	149.	20
SE MCLANGHIN WAREHOUSE DOG	AR								•

. .

THIS COPY TO BAROID TECHNICAL DEPARTMENT

			ı		DRILLIN	<i>:</i> NG MUD REPO	PRT NO.	4				
Baroid C	)rilling F	ehiul	Inc.	币	DATE	2814-	ک∈د	19 91	_ DEPTH _	1353	3	ft
Daroid L		iaiao,		T	SPLID	DATE 215T	Dec 6	PRESENT Do	T ACTIVITY_	AHER	НО	
TOR CALL	Si. = F	~ 0 - 0 -		CONTRACTO					RIG NO.	2		
ORT FOR	. 1	XPLOKA	F11.30	REPORT FOR		, C.			SECTION,	TOWNSHIP	, RANGE `	
	·D Nic	F	IELD OR BLOCK	(NO.		COUNTY, PARI	SHOR	<u> </u>	TATE/PROV	INÇE		
504					□ m³	OFFSHORE AR	EA DE			VIC.		
	SURFAÇ	EH	OLE	PITS		PUMP SIZE	1 4				be 143	m/min
PE. TYPE LENGTH	INTERMED			TING VOLUME	25	PUMP MAKE, N	ODEL	ASSUMED	CIRCULAT	ION ,		□psi
PIPE TYPE LENGTH	SET @ INTERMED	IATE IN	N STORAGE	(SOO)	,	vol/stk		stk/min	воттомѕ	<u> </u>		∟кра
411 thush SS.E		OR LINER M	HO IUD TYPE			1		,	TOTAL CIF	<u></u>		
		1 .			<u> </u>	1			<u> </u>		52	
From		<del></del>			PIT WE			VISCOSITY		FILTRAT		
mple Taken		1900			B\	AUTHORITY	□ OPERA	TOR'S WRITTEI	N DRILLIN	G CONTRA	CTOR	
ne Temperature			_									
□Jb/gal □lb/cu.ft.		9.0	9.2			Contin	ق عب					-
TViscosity⊡sec/qt API @°	=□sec/L@°C	45	440	) /		ner 5	telals	es. Dil	il ahad	ا است	س-عه	
		14-	13		-	Rarate	: SSt	. 1.9J	60,4	arel	المناح	D.6.
<del></del>		<del>                                     </del>				Elays	lost	ال صا 	own hale	: <b>.</b>	incame.	8 ppl
API cm³/30 min		6.8	, <b>4</b> .4	-		get pre	~ ·× e	, to	<b>42,4</b>		<b>,</b>	٠,٠
· · · · · · · · · · · · · · · · · · ·		14	<u> </u>	<del> </del>	$\dashv$	•						
		#	4									
		96			-		<del></del>	DEM	ARKS			
intent (% by Vol.)	uiv.   cm3/cm3 mud	2.1	9	<u> </u>	$\dashv$		J-41	IJEIVI.	A11110			
		9.0	9.5	>								
Mud (P <sub>m</sub> ) ml		Tr			_	O 1: 1	_	ι	1121		<b>-</b> 1	•
	nl											
						a verege	112 1	~ a	2/	3 Su	سم سدا	5(
dness as Calcium, mg/L		120		2		Using	د ۱۵ معامد	of io	(e 190	ء محد	Inf 0.1	1-25
with (mg/c)		1				م م <i>سح</i> ا ، ا	401 TA	TH 100	)   	21.1	· · ·	24.5
					1	Water	در د	<u> </u>	last	<u> </u>	ر - درمر درمر	
- (c)		14-1-	<u>£</u> † k‡						1			
COST COST	E E	なまな	\$ <del>\$</del> <del>\$</del> <b>\$</b>	-						MAKE	917E/	
BARC BARO	\$ 1744	. [ ፞፞ቝ [ .	多大伙伙	<u> </u>							SCREENS	
NG		5 68	32 28						SHKR 1		1	
	77	11	ブゴ						SHKR 2	<b>_</b>	60/100	24
AST	51 24	2 5	2 2						SHKR 4			
<b>≜£</b> T	1.	15/2/2119 7							DESAND	11.3	8×12	24
Barold Drilling Fluids, Inc.  Date 28th 2: 9 91 Depth 1353   135 Depth 135 Depth 1353   135												
ATIVE	275 146 3	1 32	5 4									
1									ļ			
									7	<b> </b>		
OID REPRESENTATIVE		PENTH.		ELEPHONE	·			~ <				03
JOE MCLAUGH	WAREHOUSE	Ancia	TE TE	ELEPHONE			\$21	424 37		\$ 1	3574	, ,
U-C I I MANAPA	- F-1	- 1011-2-14-2		•								

....

L.		ı		DRILLIN	NG MUD F	REPORT	NO.	9	<b>t</b>				
	ido la		币	DATE	291	4 DE	٠.		91	DEPTH	155	اا	☐ ft
Baroid Drilling Fl	luius, iii	ic.	里		DATE			PR		ACTIVITY A	F)HE	Av)	
OR C			CONTRACTO		$\sim$					RIG NO.			
LAS + THEL EXP	LORATION		REPORT FOR		YEA!	RHA				SECTION, TO	)WNSHIP, F	ANGE	
FOR GERARD NI	<u> </u>				And		PERI	<u>C</u>	Ist	ATE/PROVIN	JCF (		
ME AND NO. DOCKY CRE	FIELL FIELD	OR BLOCK	NO. 		COUNTY OFFSHO			سم		43,2	الالرد	TORIA	
PILLING ASSEMBLY CASIN		JD VOLUM		☐ m³						TION DATA ANNUĻAR VI		□#min □	m/min
JET SIZE SURFACE	1840 318 -	350	PITS	<u> </u>	PUMP SI			8"		DP	- the D	C <u>#7</u>	183
TYPE LENGTH INTERMED	IATE TOTA	AL CIRCULATI	ING VOLUME		PUMP M	AKE, MOI	8_	ASSL EFF	JMED 9 <b>C</b> %	PRESSURE	N 9,		∏ psi ∏ kPa
TYPE LENGTH INTERMED	NATE IN ST	ORAGE	LUCIOUS	5 <sup>+</sup>	vol/stk		267	Si	tk/min	BOTTOMS UP (min)	49	8	
AR SIZE LENGTH PRODUCTION OF	OR LINER MUD	TYPE KC				<u>\$</u> .			ol/min	TOTAL CIRC	17	20	
6 4 168.5 SET@	MU	D PROPER		T			MUD			SPECIFICA	TIONS		
rom		□ F.L. □•Pl		PIT W	EIGHT			visco			FILTRATE		
mple Taken	1900	050	اه	в	Y AUTHO	RITY 🖁	OPERA OPERA	TOR'S V TOR'S F	VRITTEN REPRESI	DRILLING	OTHER	TOR	
Temperature □°F □°C	37	_38_		[		F	RECO	MEN	DED T	OUR TREA	TMENT		<del>.                                    </del>
☐ft ☐m ☐b/gal ☐lb/cu.ft. ☐Sp.G. ☐kg/m³	1484	<u>1550</u>			7	nll.	- G	ah	و هد	I throws	mah -	Paral	le
/iscosity□sec/qt API @ °F □ sec/L @ _24°C	4(	44	1				T		Η.	se de	$\mathcal{J}_{\alpha}$	esent.	دڪ
ecosity cP @ □ °F . <b>.25</b> □°C	10	_اعــ			1		× ~	٠ - ١	- 1		د ، سا ۱۰	16:	
t ☐ Ub/100 ft² ☐ Pa	<del> </del>	16	<del>.                                       </del>		10	duci.	ָל ל	3e\	00	(-		Tree	100
ngth (10 sec/10 min) ☐4b/100 ft² ☐ Pa API cm³/30 min	7.2	7.		$\dashv$	جيري.	~ P *	~et	Z	FOI	piem	e of	+ red	يي
Filtrate cm³/30 min @ °F @ °C			<b>^</b>		MITT.	ام جا م	ے لید مرکز	as'	<b>-</b>	y iais			
kness API/HTHP @2nd in mm	11	н	1		Ca	٠٠٠٠		• •					
Content (% by Vol.)		4	<del>-   ,</del>										
ntent (% by Vol.) Oil/Water	96	7(c							REM	ARKS			
tent (% by Vol.) ne Blue Capacity	0·2	8	<b>`</b>										
°F°C		9.5											
Aud (P <sub>m</sub> ) ml	Tr	0.3											
y Filtrate (P#Mr) ml/ml	1-351 -75	·47 1	.59 /										
e Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml mg/L	16000	1900	S .										
ness as Calcium, mg/L								L	Leve	s bhlc	Seine	ره ک مي	لسا
	IUO	SO								~ ~ ~ ~ ~	<b>-</b> ~\	a	
Idule (mg/L)	140	180			h	لجحود.	<	- مح		1 6	21. 1	~- <b>?</b> :	1
	140				٦	ost Ste	( c	سمحد ماماه و	۔ ک	bbls last	24 he	~ s = <b>3</b>	<u>\</u>
pante (mg/c)	140	180			ا ا ا	.55t 12te	( a	يم. . ماما و 	ع ا ا			oL EQUIPN	
Ante (mg/s)	2.5	3.	<b>\$</b> [		ر 	ost sale	( c	یم. ماماو	د ن ا		CONTRO	)L EQUIPN	
ROID (BULK) ROID (BULK) LCCC NAGEL CCCC	140	3.			ر ا ا ا	ost sake	( c	بر ما ما و ا	£		CONTRO		MENT
BAROID (REG)  AQUAGEL  Sorc	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	See 1947	- Sura 424			ost ote	( a	200e	¿ ,-		CONTRO	OL EQUIPM	MENT HRS
BAROID (BULN)  BAROID (REG)  AQUAGEL  Sorc	2.5	See 1947	<b>\$</b> [			ost obe		ماراد		SOLIDS	CONTRO	SIZE/ SCREENS	HRS
BAROID (BULK)  AQUAGEL  SALOR  SALOR	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	See 1947	- Sura 424			ost obe		30e	£	SOLIDS SHKR 1 SHKR 2 SHKR 3	CONTRO	SIZE/ SCREENS	HRS
TOTAL CANANCELL (NAME CONTINUES)  ST. 12 46	2.5	180 30 2000 1000 1000 1000 1000 1000 1000 10	20			ost cle		Je de		SOLIDS SHKR 1 SHKR 2 SHKR 3 SHKR 4	MAKE/ BRAND	SIZE/ SCREENS 62/83	HRS 2
DAME (NEC)  BAROID (REG)  BAROID (REG)  AQUAGEL  12  14  15  17  18  18  18  18  18  18  18  18  18	2.5	180 200000000000000000000000000000000000	# 73.7 20			ost ale		300e		SOLIDS OF SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND	MAKE/ BRAND	SIZE/ SCREENS 62/82 62/12:	HRS 2 4
Cort	2.5	180 30 2000 1000 1000 1000 1000 1000 1000 10	20			ost ate		30°E		SOLIDS SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT	MAKE/ BRAND	SIZE/ SCREENS 62/83	HRS 2 4
ST 12 46	2.5 2.5 34 63 2 11 9 3	180 30 2000 1000 1000 1000 1000 1000 1000 10	20 - 4			ost pake		300e		SOLIDS OF SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND	MAKE/ BRAND	SIZE/ SCREENS 62/82 62/12:	HRS 2 4
ST 12 46  146 4319 10  178 4319 10  178 4319 10  178 4319 10	140 2.5 2.5 34 63 2 11 9 3 47 516 51	180 3. 180 3. 2. 180 2. 190 2. 190 2. 190 2. 190 3.	20 - 4 - 5454			ost pale	( a	000		SOLIDS SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR	MAKE/ BRAND	SIZE/ SCREENS 62/82 62/12:	HRS 2 4
3 61 154 9  ST 12 46  146 93 90 100 100 100 100 100 100 100 100 100	140 2.5 2.5 34 63 2 11 9 3 27 516 51	180 3. 180 180 2 190 2 190 2 190 2 190 6 6	4 77.55 20 4 59.54 4			ost ote		300e		SOLIDS SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR CENT 1 CENT 2	MAKE/ BRAND	SIZE/ SCREENS 62/82 62/12: 8 x12"	HRS 2 4
Cor	140 2.5 34 63 2 11 9 3 27 516 51 42 42 1	180 3. 44073 30 2 1 2 1 2 4 29	4 77.55 20 4 59.54 4				- NAILY C			SOLIDS SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR CENT 1 CENT 2	MAKE/ BRAND	SIZE/ SCREENS 63/83 63/13: 8 x/2" /Q x6"	HRS 24 24 24 24 24
ST 12 46  146, 631, 631, 631, 631, 631, 631, 631, 63	140 2.5 2.5 34 63 2 11 9 3 47 516 51	180 3. 4403 30 4 30 4 29	20 20 4 5954 - 4							SOLIDS SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR CENT 1 CENT 2	MAKE/ BRAND	SIZE/ SCREENS 63/83 63/13: 72 x6"	HRS 24 24 24 24 24

THIS COPY TO BAROID TECHNICAL DEPARTMENT

	oggi hadi							l	<b>—</b>	DRIL	LING MU	D REPO	ORT NO.		9				
	oid E		lina	FI	uide	ln	C			DAT	E_3	014	Dec	19_	9,	_DEPTH_	11_11		_   t
Dai	old L	/I II	9	,	uius	,	<b>U.</b>	_	T	-	D DATE.	<del></del>		PI		TACTIVITY	٠٠.	E'STIC	
NOR O								Ico	NTRACTO					<u></u>		RIG NO.			
MAS	+ '	اسة	<u> </u>	<u> </u>	Poe	<u> </u>	<u> </u>				GEA	244	22			SECTION,	Z_ TOWNSHII	P PANGE	<u> </u>
RT-FOR .	SERE	40 S	1 6	ع.ز	6			HE	PORT FO	<u>"                                    </u>	<u> </u>	2	epee	رد					
LE AND NO.	~		_	REE	11	FIELD	OR BLO	CK NO.				TY, PARI	SH OR	هنت	<u>ج</u> ا	TATE/PROV	INCE		
DRILLING ASSEM	IBLY	T		ASING		1	D VOL		اکھرا	□ m <sup>2</sup>			<u></u>			ATION DAT			
C / State	JET SIZE	1_	SI	JREACE		<del> </del>			PITS 33	3 \	PUMP	SIZE	,	8"		ANNULAR DP	VEL.		□ m/min
PE TYPE	スメ・2 LENGTH	1 35	T@ C	RMEDI	ATE 31			LATING	VOLUME	<u> </u>	PUMP	MAKE, N	MODEL	IASS	UMED	CIRCULAT	ION		□psi
Y'H E	357 LENGTH	SE	INTE	RMEDI	ATE	IN STO	PRAGE	70	WEIGHT	····	vol/stk	DPZ	8		95% stk/min	PRESSURI	•	160	□kPa
118 400	<u> </u>		т@			<u> </u>	20			.6	VOI/Sun		<u> </u>			UP (min)		51	
AR SIZE	LENGTH		PRODUC ET @	TION O	RLINER	MUDI		Kcc	1PH	PA		4	5.9	,	vol/min	TOTAL CIF		117	
						MUD	PROF	PERTI					MUD	PROF	ERTY	SPECIFIC	ATIONS		
e l m	·				□F.L.□		] F.L. [		□F.L.□	]PIT \	WEIGHT			visco			FILTRA		
le Taken				/	161	0		<u>ပ</u>			BY AUTH	IORITY	☐ OPER	ATOR'S	WRITTE REPRES	N DRILLIN ENTATIVE [	IG CONTR OTHER	ACTOR	
Temperature			□°F [		35		3.	3,11								TOUR TRE		Т	
□lb/gal □l	b/cu.ft.	∃Sn.€			_16/1 9.1			.2		-	*	<u> </u>	ah	~ (T	#	P. II.	Q	elfast	
/iscosity ☐ sec/qt AP				_℃	#5		4	_<	1			fi ll	ين مل		-	177		0 -	
Viscosity	cP @	. □ °F	281	<b>□</b> %	12		14				13	فلعحص	وميها	ما المراد ( حري	H∸i	K SE	ا ين	KυP.	. ii ‡
oi		_\ <b>t</b> b/1	00 ft² [	∃Pa			18				D. D.	ev	11/400	100r	3	4000	THO	r Ne	એ <b>આ</b>
igth (10 sec/10 min	) !	_ 16/10	00 ft <sup>2</sup>	∃Pa		2		2			al.	H.	wil-	- B1	4	10 4.	<b>4</b> < <b>6</b>	an Han	<del>3</del> ~
. PI cm <sup>3</sup> /30 min H iltrate cm <sup>3</sup> /30 mi			F@	_ ℃	_6.	8		.2			1-0	5W &	بالثالث	SS.	N. A.	70m ( Z	29 f	0 1857	<del>7.</del>
hess API/HTHP			<u>rw.                                    </u>					7	7		12	POPT	134	£-'	لذماكا	<b>)</b> .			
ontent (% by Vol.)			ed □4	/	5	$\neg$	S		· ·					٠					
ant (% by Vol.) O	il/Water				99	5	9		1									e:	
nt (% by Vol.)					0.:	25		. 2								ARKS	· · · · · · · · · · · · · · · · · · ·		
	□lb/bbl eq				<u> </u>		7.				Do	عالت	ય ,,						
	☐ Meter	<u>@ —</u>	<u> </u>	<u>-°C</u>	9.		9	ے		-		3006	3 11	mpp					
y and (P <sub>m</sub> ) ml	nl				· 27 ·		251	.75	1										
Alkalinity Filtrate (F		i			<del></del>	- 1	+		1									~	
э, <b>Ту</b> /L					1851	ی	٠ ٪ ر	د ي			1.,	٠, ,	_	ک. ر لا	έċ	7 846	. ر	رومد سرات	- , <sup>1</sup>
ess as Calcium,						- 1	8	ب			e- 1	ر آ مان	es . 👟	J J	) I,	J4575	1, 64	اجر زائ	ho ·
phixe (my					اعد		10				-			_ ,			3 ! .	- 7	
de luro	<u>/a)</u>				3.9	3	3.2	2			w		(A	SCO	. ~	C.S.	2410	-15 = -4	7 )
	Т			$\Box$	111	1	: 1	ТТ		T	TT		П		П	Ī		<del></del>	
Jucky	(2)			1 1	1 1 4	, <b>}</b> {										SOLIDS	CONTR	OL EQUIP	MENT
Urangara SAROID (BULK)	BAROID (REG)	AQUAGEL	9 2	1	3 10	્ર્વું ડું											MAKE/	SIZE/	Ť
BARK	BARC	AQU,	2 2	🐧 '	791	45												SCREENS	HRS
3	<del>                                     </del>	49	10	54	75	24	<u> </u>	Ť	1	T -	1		1			SHKR 1	Beans	83/100	15
3	1147	-T 1	[ , S	13,	+2		-	$\vdash$	┪	╂	+	<del> </del>	1		ļ	SHKR 2		15 60/10	
-	<del>                                     </del>			-	1		<u> </u>	+-		╂	-			<del> </del>	<del> </del>	SHKR 3		-	
37	15	12	34	1		<u>, 2</u>	ļ	<del> </del>		<del> </del>	<b></b>	<u> </u>	<b> </b>	<b> </b> -	<b> </b>	SHKR 4			ļ
	16/4	<i>Ψ</i> <sub>6</sub> "	688.	Stru	3000	'57 <sup>5</sup> '		<u> </u>		ļ			<u> </u>	<u> </u>		DESAND	10.2	8x12	16
		مدث	/					<u>L</u>								DESILT	11.3	12×6	6
Æ	35		226	45	47	8								_		M CLNR	-		<del> </del>
.,	¥32	37			4	22	<u> </u>	T								CENT 1	<del> </del>	+	<del> </del>
] lb/bbi	137	۳۰	<u> </u>	1 ··· /	<del>'  </del>				1	<del>                                     </del>	1	1	1		1	CENT 2			+
kg/m³	II	OFF	CE/HOMI	É	£44-		Ц	TELEPH	HONE	<u> </u>		1	DAILY C	OST	<u>l:</u>	<del></del>	CUMULA	TIVE COST	
REPRESENTA		<b> </b>	EHOUSE		<del></del>	· 		TELEPH				-	4	ار ا	182	63	1. 0	<i>u</i> 53 (	. 3
- Mrha	uchli	TVAR	LUOUSE	<u> </u>	I do	مر	$U_{\perp}$	·CLEPT	IONE								• - •		
_	$\mathcal{O}$																		

Baroid Drilling Fluids, Inc.    DATE STORE   SPECIAL PRESENT ACTIVITY   SPUD DATE 21ST DEC   PRESENT ACTIVITY   SECTION, TOWNSHIP, RANGE	/min_
Baroid Drilling Fluids, Inc.    DATE 315 DEC 19 91 DEPTH 16 5	/min
SPUD DATE 21ST DEC CA DOOR 45 STATE.  ATOR  GEARHART  REPORT FOR  REPORT FOR  REPORT FOR  CONTRACTOR  REPORT FOR  SECTION, TOWNSHIP, RANGE  SECTION, TOWNSHIP, RANGE  SECTION, TOWNSHIP, RANGE  STATE.  STATE.	<u>18-</u> 5 pei
ATOR	<u>18-</u> 5 pei
REPORT FOR SECTION, TOWNSHIP, RANGE  RECOMMENDED TOUR TREATMENT	<u>18-</u> 5 pei
FOR GRAND NO.  RILLING ASSEMBLY  CASING  MUD VOLUME  FIELD OR BLOCK NO.  OFFSHORE AREA  OFFSHORE  OFFSHORE AREA  OFFSHORE  OFFSHORE	<u>18-</u> 5 pei
PRILLING ASSEMBLY  CASING  MUD VOLUME    Dot   Drs   D	<u>18-</u> 5 pei
PRILLING ASSEMBLY  CASING  MUD VOLUME  E SUPE JET SIZE  SURFACE  SUBJECT  S	<u>18-</u> 5 pei
SET @ SUPEACE STER STER SUPEACE STER STER SUPEACE STER STER SUPEACE STER SUPEACE STER STER STER STER STER STER STER STE	per
PRESURE  TYPE LENGTH INTERMEDIATE IN STORAGE WEIGHT  TYPE LENGTH SET @ TOTAL CIRCULATING VOLUME  FILE TYPE LENGTH SET @ TOTAL CIRCULATING VOLUME  FILE TYPE LENGTH SET @ TOTAL CIRCULATING VOLUME  FILE TYPE LENGTH PRODUCTION OR LINER MUD TYPE  FILE TYPE LENGTH PRODUCTION OR LINER MUD TYPE  FILE TYPE LENGTH SET @ TOTAL CIRCULATING VOLUME  FILE TYPE SET @ TOTAL CIRCUL	kPa
TYPE LENGTH SET @ INSTORAGE WEIGHT SET @ TOTAL CIRC. TIME (min) 52  PRODUCTION OR LINER MUD TYPE OF A WEIGHT SET @ TOTAL CIRC. TIME (min) 120  MUD PROPERTIES MUD PROPERTY SPECIFICATIONS  MUD PROPERTIES WEIGHT VISCOSITY FILTRATE  SET @ SET &	
MUD PROPERTIES  MUD PROPERTIES  MUD PROPERTY SPECIFICATIONS  MUD PROPERTY SPECIFICATIONS  MUD PROPERTY SPECIFICATIONS  FILTRATE  Sample Taken  The Temperature  PRODUCTION OR LINER MUD TYPE  PRODUCTION OR LINER MUD TYPE  PRODUCTION OR LINER MUD TYPE  WEIGHT  WEIGHT  VISCOSITY  FILTRATE  DOPERATOR'S WRITTEN   DRILLING CONTRACTOR  OPERATOR'S REPRESENTATIVE   OTHER  RECOMMENDED TOUR TREATMENT	
MUD PROPERTIES  MUD PROPERTY SPECIFICATIONS  MUD PROPERTY SPECIFICATIONS  MUD PROPERTY SPECIFICATIONS  MID PROPERTY SPECIFICATIONS  FILTRATE  PROPERTY SPECIFICATIONS  FILTRATE  BY AUTHORITY OPERATOR'S WRITTEN OPERATOR'S REPRESENTATIVE OTHER  THE TEMPERATURE  THE THE MANY OPERATOR'S REPRESENTATIVE OTHER  RECOMMENDED TOUR TREATMENT	
F.L.   DIT   F.L.   DIT   F.L.   DIT   WEIGHT   OPERATOR'S WRITTEN   DRILLING CONTRACTOR   WEIGHT   OPERATOR'S WRITTEN   DRILLING CONTRACTOR   WEIGHT   OPERATOR'S REPRESENTATIVE   OTHER   WEIGHT   WEIGHT   WEIGHT   OPERATOR'S REPRESENTATIVE   OTHER   WEIGHT   WE	
### Sample Taken  THE Temperature  THE TEMPERATURE TO BE ACTION TO DEPARTOR'S REPRESENTATIVE TO THE TEMPERATURE TO THE TEMPERAT	
TH 1642 16-73	
Blb/gal   lb/cu.tt   sp.G.   kg/m3 9.2 9.3   Dall ahead to 1673m. Crc	
IViscosity Sec/qt API@_ °F Sec/L@_ °C 40 42 /	
COSILY OF COSILY	. 4
1	rt.
ength (10 sec/10 min)	
Filtrate cm³/30 min	
Content (% by Vol.)   Seculated   Security   Seculated   Security   Seculated   Security   Seculated   Security   Seculated   Security   Seculated   Security   Secur	
Thortest (% by Vol.) OilWater 95 94 /	
tent (% by Vol.) Oil/Water REMARKS  ntent (% by Vol.) O · 2 O · 2	
ntent (% by Vol.)  ene Blue Capacity Dustable equiv. Dans mud of 9.5    Strip Deter @ F 0 9.5 9.0   The Cease of Coldinary of Ezmus    Mud (Pm) ml   Tero Tero     Thy Fittrate (Ps/Ms) ml/ml   1.51 1.1.28.8   Of Relies of Mud Share.	4 KCE
Mud (Pm) ml 7ero 7ero 10 1 Pull to the line	J. UP
ity Filtrate (Py/My) ml/ml .5/1.1.28.8/	` ^
dness as Calcium, mg/L 80 180 Society in circum of the wall, so	11
inter Alkalinity Filtrate (P,P) mi/ml  19000 19000  Call the filter case off the wall, so all the filter case of the wall, so see a calcium, mg/L  1. P. H. F. (Mg/L)  3.5 3.6  Addled 250 bh/s 5 water 1a.1 20	tho
1 ( word ) 3.5 3.6 Added 250 bhis 3 water 123	-
Solids Control Equipm	ENT
SOLIDS CONTROL EQUIPM  MAKE/ SIZE/ BRAND SCREENS  SOLIDS CONTROL EQUIPM	unc
NG 74 48 71 22 29	24
SHKR3	
CLIVO 4	
AST 70 11 8 2 1 SHKR4 — DESAND 9.7 8x12	13
AST 70 11 8 2 1 SHKR4 — DESAND 9.7 8x12 DESILT 11.3 12x6"	13
AST 70 11 8 2 1 SHKR4 — DESAND 9.7 8×12  THIT 1417 1217 1198 5284 34.7  DESILT 11.3 12×6	
AST 70 11 8 2 1 SHKR4 DESAND 9.7 8×12  THIS 1417 1217 1198 5284 34,9  DESAND 9.7 8×12  DESILT 11.3 12×6"  M CLNR  ATIVE 296 59 57 10 7	
AST 70 11 8 2 1 SHKR 4 DESAND 9.7 9x12  TIVE ED MCLNR  ATIVE 296 59 57 10 7 CENT 1  TOTAL 20 11 8 2 1 CENT 2  TOTAL 20 11 8 2 1 CENT 2	
AST 70 11 8 2 1  TO 11 8 2 1  DESAND 9.7 9x12  DESILT 11.3 17x6"  M CLNR  ATIVE 70 439 13 23 28  CENT 1  CENT 2  CHMILATIVE COST	24
AST 70 11 8 2 1  TO 11 8 2 1  DESAND 9.7 8×12  DESILT 11.3 12×6  M CLNR  CENT 1  CENT 2  CENT 2	24

			i	DRIL	: LING MUD REPO	RT NO.			<u> </u>		
Baroid D	rilling Fl	uids, l	nc.				PRESENT	ACTIVITY,	1673		
			<u> </u>		ID DATE 21 SI	DEC9	1				=
BATOR PRILING ASSENBLY  CASING MUD VOLUME DISCOND.  CONTRACTOR  CIRCULATION DATA  PRILING ASSENBLY  CASING MUD VOLUME DISCOND.  CONTRACTOR  CIRCULATION DATA  CONCRETE SET © STORY TOWNSHE PINNOE  CONTRACTOR  CON											
T FOR	a Nic	<u></u>	RE	PORT FOR	JUAS SE	احمرر				GE .	
		. 450	ELD OR BLOCK NO		COUNTY, PARIS	SH OR					
AS OCTOBER OF			WILD VOLUME								
	SUBPAC		OLE	PITS		1 8	(1			t/min / 🗆 m	/min
			TAL CIRCULATIN	IG VOLUME	PUMP MAKE, N	(ODE)	ASSUMED.	CIRCULATIO	ON /		
<u>[1]</u>	SET@		6	65		- 7 <b>5</b> -		воттомѕ			<u> </u>
4/4 Had 5.6	SET@								·		<del></del>
SOLLAR SIZE / LENGTH			uce			MUD DE			TIONS		
					WEIGHT			, LOHIOA			
		1				COPERATO	R'S WRITTEN	DRILLING	CONTRACTO	R	
	□°F □¢€		1	1		COLCINIC					
			1673		<u> </u>					1	<del></del> .
				<del>                                     </del>	K.	4 W	1- 2	757 17	90C-7	نـ لا برہ	41.
				<del> '</del>	Ker	# 3	c. Po	DH 1	41-12	34 7H	
leaded.i.j		1									
		<del></del>	11/2	1	1 44	+ W/	19	~ ` ~	トラスト	المام	<b>&gt;</b>
		,	6.5		Broc	KEY	JEK	> X=	,>XT.		
			1 2	+	1	•					
			<del>- </del>	<del>  '</del>	1					•	
		1		1				NDVC	Ø.		<del></del>
			0.2		ļ		/ HEM/	AHKS			It 1
			9.3	•	1 C_	ماه	al m	nd f	· ~	<b>X</b> ,	AT
	<u>@+</u> °		700			~ hic	-11/-	) - لم م،	f=70	1D /	
				\$ /	] ptt, =	7	att.=	10/4			170
nate Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/m	ni		1		+ if Int	/= 1	21.75/	kce.	- 3/2	CL=	. 10
				D	1")		S				
	10				AK =	40	ي لاه	s 7.5 F	ilt=13	PM =	معع
K( 1 9/0 LM	)'-	3.2			ELLOI CO	مراووليه.	$p_{n} = 0/2.7$	ر کو آ	7000 K	20 74	. 48
			<del></del>	<del></del>	1, -,	64/24	111	1	<u>(                                    </u>		
(S) (S)								SOLIDS	CONTROL	EQUIPM	ENT
0 (BU	ig								MAKE/	SIZE/	
INIT C	O O O								BRAND SC	REENS	
		<del>`                                     </del>	<del>-   -  </del>					SHKR 1	BRNOTE	80/10	2 4
N RY		+ +	<del></del>			+		SHKR 2	BOLAN	60/15	
	1/2	<del>() (/)</del>							<del>  -</del>		
٦ ا	11.4					+-+		<b>———</b>	<del>                                     </del>		<del>/-</del>
٦	101	4				++		DESILT	<del>                                     </del>		
VED	14					++		M CLNR			
OLATIVE O								CENT 1			·
Baroid Drilling Fluids, Inc.  DATE 1 TO 19 DEPTH 1647 D											
								<u> </u>		E 000=	<u>L</u> _
ROID REPRESENTATIVE	OFFICE/HOME	PGAT	† TE	LEPHONE		DAILY CO	ST ZENL	, I	CUMULATIV		_63
SOC MChaugh	WAREHOUSE	POGA	TE	LEPHONE		1			72	279	<u> </u>
DE I'I MANAGE	<u></u>	J GLUI.									1 -

<b>.</b>							<i>:</i>		:					
	e		-	• [	不	DRILLI	ING MUD REPO		12			11 ~-	· · · · · · · · · · · · · · · · · · ·	□#
ARIII) Ba	roid D	rilling Fl	uids,	Inc.	刊	DATE		<u>TAN</u>	199 PRE	SENT A	ACTIVITY	1673		<u>- 🗆 🗠 .</u>
						SPUD	DATE 2151	DEC	<u> </u>	<u>ڪي ۽</u>	AMIN	<u>ic</u> 10	1501	<u> </u>
ATOR C				<	CONTRACTO	OR (	GEARHA	27			RIG NO.	<u>a</u>	DAY: T	
FOR	S+++				REPORT FO	R		FRIL	_	_	SECTION, TO	JWNSHIP,	HANGE	
AME AND NO.	Sea Sea		. IFI	TELD OR BLOC	KNO.	<i>ه</i> ارکست	COUNTY, PAR	ISH OR			ATE/PROVIN	VCE	(TORIA	<u>.                                      </u>
	<u> 600</u>		=141		PEP 1		OFFSHORE AF	MEA O			SASING TION DATA		•	
DRILLING ASSE	EMBLY JET SIZE	CASIN SURFAC		IOLE	JME DE		DI MAD SIZE	1			ANNULAR VE	EL.	∐tt/min [	] m/min
ZE TYPE		SET@ GS/8	18 318 L	365	S 3	22	PUMP MAKE, I	6× 9	ASSUM	MED	CIRCULATIO		DC	□lesi
PIPE TYPE	LENGTH	INTERMED SET @			705		GDPZ	. દ્વ	EFF =	75%	PRESSURE		<del>/                                    </del>	□kPa
E, TYPE	LENGTH 556	INTERMED SET @	IATE II	N STORAGE	WEIGHT		vol/stk	6.0	67 stk		UP (min)			
GULAR SIZE	LENGTH		OR LINER N	MUD TYPE	KCL 1PH	2A			vol	l/min	TOTAL CIRC TIME (min)			
6,14	1 165 37	SET @		MUD PROPI	ERTIES			MUD	PROPE	RTYS	PECIFICA			
From					prt [F.L.[				viscosi		E 80"	FILTRATE		
sample Taken			1900	200		L	BY AUTHORITY				DRILLING			
ne Temperature		□°F □%	433		3			RECO	MMEND	DED TO	OUR TREA	TMEÑT	·	
			1673	3 167		<del>[2</del> ]					۱ ۸	َ ساه:	P.~	<u>*</u>
		ີ່ Sp.G. □ kg/m³ ເມ <b>ອ</b> ໌ເ/L@°C		30		<del>}</del>	Poor	H W	1- k	s)<	اللعطر (	2 .z.	, ihr	-
I Viscosity ☐ sec/qt III iscosity	tAPI@ — °F cP @ —		<del>                                     </del>	14	12		Scel	e.	_				7	
iscosity int		☐ Ib/100 ft² ☐ Pa	T	14	18		Poor Scale R.H.	-ا ت	601	P+ -	coreb	errel	. Kag	£~~;
rength (10 sec/10 r		] lb/100 ft² ☐ Pa		2 21	2 21	ų	Kaht	hole "	from	. יי	358 t	14	184.	
e API cm³/30 min			6.2	8.2			ې		<u>1</u>	1.1		Ruo	اعدا	ht
P Filtrate cm <sup>3</sup> /30				<del>  =</del>			ملا، H	-4m	310	لل	<u>ن</u> د د د	<b>∪</b> ⊓⊓		<b>)</b>
mickness API/HTI	<del></del>	32nd in. □mm		-		-	R.H hole	man	120	<u>-دد</u>	ء کود	a		
Content (% by Vol	<del>''</del>	alculated retort		4								- 2		
ontent (% by Vol			96		•	.2				REMA	ARKS			
ntent (% by Vol.		uiv. 🗆 cm³/cm³ mud									<del>_</del>			
Tene Blue Capacity			1	9.5	4.									
Mud (P <sub>m</sub> ) ml			0.25											
nity Filtrate (P <sub>f</sub> /M <sub>f</sub> )			J 65 5 /	1.6.59		1.0								
ate Alkalinity Filtrat	te (P <sub>1</sub> /P <sub>2</sub> ) ml/m	ni	+=-	-+				/	4 4	<u>_</u> ^	Shaho	( c-	الحاشد	! <b>!</b>
, mg/L			2300			200	1 det	۱۲۸۵ ۵	11 12 41 12	~~	II - 1	نت ده	-2131	Kocu
Tardness as Calciu			180	े १०० १००			domin	C+47	of	~	ili Car	مۍ لم	~~~·¢	-
alphte (M			180	3.		.6	1 with	coré t	, per	ref	ı	1.	1 21.	her
T CUT			<u> </u>				LISE	100	10615	<u>ں د</u>	Males	16)		
	,   _		(TTT		\$ 1 TT	11					SOLIDS	CONTR	OL EQUIF	MENT
PR(COST UNIT COST	HEG)	_	441	K = 1	4						COLIDS			
PROTECTION OF THE PROPERTY OF	BAROID (REG)	AQUAGEL RP (C)	肾量	100								MAKE/	SIZE/	g unc
UNIT	BAR	Age of C	1 4 4	ক্রম.	1 1 1	11	111	44	<del>                                     </del>		CDND 4	BHAND	SCREEN	
RTING NERY	437		37 63	28 20	4						SHKR 1	-	80/1	
	<del>-   ~ 2</del> <del> </del>	-71007			.	$\sqcap$					SHKR 2 SHKR 3	+	+ 50/15	1
LAST	<del>- - </del>	<del></del>	+-		+	1	+		1		SHKR 4	+		一
T ST			2 3	, 41 -	<del> </del>   -	—	+		+	<del>                                     </del>	DESAND	<del>  _</del>	8×17	1 -
3	1-1	1 243 /	11.97	<u>36° 59</u>	<u> </u>	+-	+		+	<del> </del>	DESILT	<del>  _</del>	124	
VED VED	_ /	1/	41						1		M CLNR	1=	+===	<del></del>
ULATIVE )	30	294 308	61 60	8 12					4	<b> </b>	CENT 1	1	+	1
1 Dv	437	ماصموا سيا		27 18							CENT 2	†	-	·
ICT [] Ib/bbl	<del>-   239</del>	· · · · · · · · · · · · · · · · · · ·			1	$\exists \top$								$\perp$
<u>NC. □ kg/m³</u>		OFFICE/HOME		<del></del>	TELEPHONE	!		DAILY		88	Ţ.	CUMULA	ATIVE COS	T 5
ROID REPRES			DERIH		TELEPHONE			1 4	901	55 	-	\$	236	_
× Mga	-GHL.N	WAREHOUSE	4) DELA	hoE	I COLLINGIA									

							l	-			MUD RE			<u> 13</u>	<u>3                                    </u>				1.64
	4 D-	::::-	E	: :::::	de de	Inc	, .	11)	DA	TE_	3 <sup>RS</sup>	JA	<u> </u>	19_9		CFIN.	682		] ft Choo
Baroi	וזע סו	HHI	ıg F	iul	uo,	1116.		1			ATE 2			PRES	ENT AC	<u> </u>	pen C	مزد لحدد	<u>.</u>
OR O							C	ONTRAC			ARHE			- 		IG NO.	2		
LAS	+ F					و المارية	<b>&gt;-&gt;</b>	REPORT I			92		، ۾ نيو	~	s	ECTION, TOV	WNSHIP, RA	ANGE	
OR	GERF	PRI	N	کرد د	<u> </u>						COUNTY, I				STAT	E/PROVING	CE _	^ -	
ME AND NO.	300	-,6-	102	ECU	41	FIELD OR	BLOCK	10.	<u> </u>		OFFSHOR		0	سم	73	305C	2 OIC	TORIE	<del>1</del>
RILLING ASSEMBL	Y	•	CASI	NG		MUD \		IE □ø								ON DATA	L 1	⊒#min □n	n/min
TYPE J	ET SIZE	SET	SURE/	ACE /	1215	HOLE	390	PITS	290		PUMP SIZ	(	x 8	۲,		NNULAR VEL	1 Levik	93/14	<u>16-</u>
1:2	ENGTH	I	INTERME	DIATE	<u> </u>		RCULAT	ING VOLUE	ME	1	PUMP MA	KE, MOD	EL	ASSUM EFF C		RESSURE	<u>' 5s</u>		] psi ] kPa
112 E	ENGTH	SET@	INTERME	DIATE		IN STORA	AGE	WEIGH	IT		vol/stk			stk/i	min E	OTTOMS JP (min)	67		•
11 14.090 5	<u>55. 69</u>	SET@	)		JEB	MUD TYP	<u>හිට_</u>	<del></del> _	8.6				.06'			OTAL CIRC.	14	5	
LAR SIZE	ENGTH	PRO SET @	DUCTION	N OK LI			K	cep	HPA	<del></del> _			-·7 MUD P	vol/		TIME (min) PECIFICAT		<u> </u>	
				_		MUD P				WEI	GUT			VISCOSIT			FILTRATE		
om								ff □F.	<u> РП</u>		AUTHOF	RITY []	OPERAT	OP'S WR	ITTEN	DRILLING	CONTRAC	TOR	
ple Taken			°F 🗅°		33 2100		050 24	- اد		╬	7011101	,,,, <u> </u>	OPERAT	OR'S RE	PRESEN	UR TREAT	JIHEH		
emperature			1ft []	_	33 1574		1682			1								. علا	#.
□/fb/gal □ lb/	cu.ft. 🗆 S				9.2		9.2			4	He	civi .	Fro	^ _	120	~ ~~ ~	- 21 20 - 20	with w	Fill.
scosity Dec/qt API	@ <b>-79</b> °F□	ec/L	<u>@—"</u>		39		41		1	4	310	bils	ی ہی	C	٠٠.	- ( . Cq .	ن∓ر ا ہ	ا مر	1
cosity cP	@ <b>_7</b> 9_[	]PF _		c	9		9_			-	Poor	H . '	R.H	اد		30 ft	Local	800 m	مأر
			ft² 🗆 F		16	_	15	-		$\dashv$	Rec	. م	18~	to	pot	bw.	74=	800 W	. · · · ·
gth (10 sec/10 min)		15/100	ft² □ F	a	1/	2	7.0			$\dashv$	-	< 1		14	72	- 168	2~	Роон	
Cm³/30 min		°F@	a	<del>.</del>	76	-	<u>+···</u>				Co	e (	mon	16	· • •	160	<u></u>		•
Filtrate cm <sup>3</sup> /30 min			<u></u>		1		7		1										
ontent (% by Vol.)					4		4			_									
ntent (% by Vol.) Oil					96		96			╀					REMAI	RKS	•		
tent (% by Vol.)					6.2		0.3	5		+							_	. 1	- <u></u>
	New Idol			-	8:7		<b>4</b> ⋅6	<del>.   -</del>		十	<b>8</b> F	lkal	٠٠٠٤٩	نب	licate	25 Ci	22 (2)	ntonin s.	CHO
	☐ Meter @		<u>*F</u>	<del>*C -</del>	q. Zer		Zen	_ 1			4	- M	ا قار	pJ	<b>8</b> ∞	Unit	mb St		
Aud (P <sub>m</sub> ) ml Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml	 			1	· 15/	.89	151 .	8	1										
Alkalinity Filtrate (P,								-   _		$\dashv$									
ng/L					180	00	240			$\dashv$									
ness as Calcium, n	ng/L	n	-	_	10		12			$\dashv$				•					*
Johnte So	dum	4	9/4	-+	<u> </u>		<u>60</u>			$\dashv$	Use	ل₂	100	>	الماط	م دے ا	er la	st 24	has 9
1121/2	<u> </u>		<u> </u>	-	<u>3·</u>	2	4.	<del>-</del>					_						
	П	T	$\top$	$\dashv$	1	1		TT	11	1						SUI IDS (	CONTRO	L EQUIPN	/ENT
UNIT-COST BAROID (BULK)	leg)	,	}	44	4	1.4	<u>:</u> <u>:</u> <u>:</u> <u>:</u> -	4								30000			
20 JOE	BAROID (REG)	AQUAGEL	48	4 1	L 13	41	- 3 4	7 7									MAKE/	SIZE/ SCREENS	HRS
BARC	BARC	Ag.	\$ \$	20,	14	(R)	40	3 '9		1_	$\sqcup \sqcup$				<u> </u> -	SHKR 1	BRAND	G 82/13	3
	472	37	to	.35	60	28	27	16								SHKR 1		360/10	10
	3.4	<del>`</del>		<u></u>												SHKR 3			
ST	+	$\dashv$	-	<u> </u>	1=	1	<del>-</del>	, <del>,</del> ,		* ^	Von	72.	LING	Puna	X65	SHKR 4	<del>  "=</del>		T
	14	4	33	<u>2</u>	3	5 -0	2 - 9	8,89	-+		YOW.	1001	7.7.7			DESAND	<del>                                     </del>	8 x12'	0
	1-4	4	668	1140	M9	289	36"	8685			-	<del>                                     </del>			-	DESILT		12×6	0
TIVE ED	1	_		_	1	-	1					<del> </del>	<del> </del>	-	<del> </del>	M CLNR			
TVE .	30	299	341	63	63	13	9	5				<b> </b>		<del> </del>	<b> </b>	CENT 1			
	437	37	159				26	15						<u> </u>		CENT 2			<u> </u>
T [] lb/bbl	+-7	<del> </del>	٠٠,٠	٠٠٠	1	1	1		•									<u></u>	
kg/m³	<u> </u>	OFFIC	E/HOME		5-0	<u> </u>	<del>' </del>	TELEPHO	NE				DAILY	COST	_	,	CUMULA	TIVE COST	57
OID REPRESENTA		<del>   </del>			HER.			TELEPHO	NE			-	\$	130	SO	6	as	5002	•
a Mchauc	1H1.00	WARE	HOUSE	<u>1</u>	DELF	HDC								• • •					
OMMENDATION	S MADE	HEREC	ON SH	ALL N	OT BE	CONS	TRUED	AS AUT	HORIZI	NG T	HE INF	RINGEN	MENT C	F ANY	VALID	PATENT,	AND AR	E MADE W	VITHOUT
OMMENDATION OF ANY LIA	S MADE	HERE( BAROII	ON SHA D DRILL	ALL N JNG FI	OT BE	CONST	TRUED ITS AG	AS AUT ENTS, AN	HORIZII ND ARE	NG TI STATI	HE INFF	RINGEN OF OP	IENT C	OF ANY ONLY.	VALID	PATENT,	AND AR	E MADE W	VIIHOU

THIS COPY TO BAROID TECHNICAL DEPARTMENT

E2 10/1/89

			. 1	~ C	RILLIN	G MUD REPOR	T NO.	14	<del></del>			- ;
	line Elvi	ide l	nc	ID [	DATE.	474 3	AN	19 92	DEPTH	835		]ft <u>1</u> 00/
ARUI) Baroid Drill	ııng rıu	ius, II	110.	エノト				PRESENT	ACTIVITY	HEAD		
	<i></i>		10	ONTRACTOR		DATE 215T		1	RIG NO.	<u> </u>		
TATOR CAS + +	JEL EX	PLORA	frian			GEARH	ART	<del></del>	SECTION, TO	WNSHIP, RA	NGE	
FOR CERANI			A	EPORT FOR	1		EPER	رد				🐧
NAME AND NO.	Creed #		LD OR BLOCK	104		COUNTY, PARIS OFFSHORE ARE		<b>.</b>	TATE/PROVIN			
■RILLING ASSEMBLY	CASING	N	AUD VOLUM	E 13461 [					TION DATA		-	-/min
E SEPÉ JET SIZE	SURFACE		A30	PITS 28	Ö	PUMP SIZE	6×8	ч	DP_LOH	- Hupo	118/1	365 365
	INTÉRMÉDIAT	SIXLE TO	TAL CIRCULATI	NG VOLUME		IDIIMP MAKE M	ODEL	ASSUMED EFF GC	CIRCULATIO PRESSURE	N 925	5	Lesi ] kPa
SIPE TYPE LENGTH SE	INTERMEDIATI	E IN:	STORAGE	WEIGHT		Made		مادالاتلام مادالاتلام	BOTTOMS UP (min)	58		<u>.</u>
1/12 Has SE	ET @ PRODUCTION OR I		JD TYPE			<u> </u>		Is Kolimin	TOTAL CIRC			
JULIAN SIZE / LELISTIC	ET@		Ke	e phen					TIME (min) SPECIFICA		<u>.                                    </u>	
		F.L. (SPIT	UD PROPER	f DF.LDF	PIT WE	EIGHT		/ISCOSITY		FILTRATE		
From Sample Taken		1800	053			YAUTHORITY	OPERATO	OR'S WRITTE	N DRILLING ENTATIVE D	CONTRACT	OR	: %:
sample Taken	□°F □%	36	38						OUR TREA			
h		19-20	182		_				2€. €		NX I	uts $\frac{1}{4}$
□ Ub/gal □ Ib/cu.ft. □ Sp.		9.2	9.2	<del>-</del>	$\dashv$	C CQ .	SE N	of miso	س۹. م	of th	oce. D	KILLED!
Viscosity		<u>45</u> 12	10	<del></del>	$\exists$	DEC >SEC >SEC >SEC	1140	over	MAARG	Form	-ATION	ن خ 🛨 👌
	100 ft² □ Pa	18	15			# EUM	eralla	Form	ation.			
	100 ft² □ Pa	2/3			_					1 100	0 1000	16284
te API cm³/30 min	***	6.8	6.9	8		46X	2-1-12 €	) Pir	vol with	4 -	- 1500	العد
	°F@°C ndin. □mm	<del></del>	1	1.		Premix	eo . ¥ (	5 hLl=	desola	pte(	1114	
111101111000111111111111111111111111111	ited Dretort	<del>-</del>	4			TRKC	· ~ .	J	1			5X) #
d ontent (% by Vol.) Oil/Water		95	96		├-			REM	IARKS			<del></del> &
ntent (% by Vol.)		0.25										
lene Blue Capacity		9.0	8.5								:	رة با
Mud (P <sub>m</sub> ) ml		Zero	Zero	5								¥ •
ity Filtrate (P <sub>f</sub> /M <sub>f</sub> ) ml/ml		·29 ·8			_							
nate Alkalinity Filtrate (P <sub>1</sub> /P <sub>2</sub> ) ml/ml		<u> </u>	240		$\dashv$					ŕ		••
ra dness as Calcium, mg/L		72 <u>00</u>	120	i i								:
Down Slabite Ima	1.)	60	60							,		•
In Supplie (mg		4.5	4-2			Used	150	bbls	:- la	ct 21	+ 100-	······
	1111		1417				TIT	111				
T VULK)	\$	12/4	149						SOLIDS	CONTRO	L EQUIPM	IENI
PRICE COST UNIT COST BAROID (BULK) BAROID (REG)	ACC SAL	138	Series Ougte							MAKE/	SIZE/	UDE
PHC UNIT COST BAROID (BL BAROID (RE	भ न प	186	790		凵	<del>                                     </del>	111	1	SHKR 1	BHAND	SCREENS SO/18	) ) ) -
1 u32 37		2 57	17 26						SHKR 1		862/12	
	111		///						SHKR 3			<u></u>
AST	10 5	4	2 1						SHKR 4			
T ST	22228		5784 3697	3					DESAND	11019	84.5"	18
ATIVE	1 42 4 A	777							DESILT	٠.٦	1246	0
/ED	1 201 10	1.1	15 20		1	1-1-	1		M CLNR			
35 2					+-	+	+		CENT 1			-
TURY #32 3		53	15 25		+-	+	+		CENT 2	+		
CT [Jb/obl	- 147 1.	3 1.1	14	ELEPHONE		1	DAILY C	OST _		CUMULAT	IVE COST	<del></del>
ROID REPRESENTATIVE	LASSHOW T	) C.A.	¥					11823	2	\$2	6184	89
Joe Mangerin	AREHOUSE	PERTH	- [	ELEPHONE			1 4	1100			- 10 1	

.

												=								
								ı	~		DRILL	ING MUD R	EPORT	NO.	15		·			
					• • • •	<b></b> .	 		11	) [	DAT	E 5/H	Jan		19.91	_	EPTH	198		
	Baroi	d Dr	illir	ng F	·lui	as,	ınc.	·	4	/	UAT			ÆC <sup>©</sup>				BPB		<u> </u>
	• • •							1			SPU	D DATE	Na I	کور ۵				DYD	, 034	≥ ;
RATOR	<u> </u>		_					C	ONTR	ACTOF	1	TEAR				ĮF	RIG NO.	2	•	
(	JAS_	+ 4	LLE	<u> </u>	Ex	عصر	<b>≪</b> 113×	<del>]  </del>	REPOR	TEOR		1000	_				SECTION, TOV	WNSHIP, RA	NGE	
FOR		سدي	10	_//:	کھ	,					1	NAN		PER	ال	ICTA:	TE/PROVING	OF -		<del>-</del> :
ME AND NO	).	7		0.1	يلا	1	IELD OR	BLOCK	NO.			COUNTY, OFFSHO		OR O	TWA		SASIN	Vic	TORIA	:
		5044	<u> </u>	CASI	NG	~	MUD V	OLLIM	E D	ИбЫ		3	- :		CIRC	ULATI	ON DATA			
DRILLING A		T SIZE							PITS			PUMP SIZ	ZE /	2×8	4		ANNULAR VEI	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		m/min <b>X3</b>
	278 1	ZXII		95		マルスル	FOTAL CI	45	NG VOI		<u>50</u>	PUMP MA	XKI- MUN	DEL DEL	INSSUM	ED.	CIRCULATION	<del></del>		
PIPE TYP	E L	NGTH	SET@	INTERME	DIATE		OTALCI	HOULAI	795	- CIVIL		L CC	290	8	EFF G	8	PRESSURE BOTTOMS	950		<u> kPa</u>
17/0	E a LE	NGTH,		INTERME	DIATE	1	N STORA		WEI	GHT S.	7	vol/stk		067	طاط	SK	UP (min)	6		
12 4	100	SS ·6		DUCTION	N OR LII	VER	MUD TYP	Ē	-01				5	.9	vol/i		TOTAL CIRC. TIME (min)	135	-	
LAR SIZE	14 15	7.87	SET @						-	PHF	<u>'A</u>			MUD P			PECIFICAT	IONS		
- <b></b>					+-		MUD PI	L. $\Box$ P		F.L. 🗆	PIT I	WEIGHT		-	VISCOSIT			FILTRATE		
rom						F.L. DAP		.L. L. P	<del>"   "</del>	<u> </u>		BY AUTHO	RITY 🗆	OPERAT	OR'S WR	ITTEN	DRILLING	CONTRACT	TOR	
Sample Taken				<b>₹</b> □°		<u> </u>	+		- -		_	J. AUTHO	····	OPERAT	OR'S RE	PRESEN	HAINE DC	Inen		
nine Temperatur	<u>e                                      </u>					38	<del>,   -</del>		$\dashv$		$\neg$		F				UR TREAT			
th	gal □lb/o	uft □				7.3	1		$\neg \vdash$				ルシ	a	head	0 1	6 F	700~	· · · C	· · · · ·
el Viscosity □se			]sec/L			41	$\neg$	1		1			_				trip -	Poo	>+t .	
tichiscosity	cP			0.		10						10	<b>S</b>	ر) تا						
nt			UB/100			16			1			a	a H	W1-		BPE	LOGG	i. l	حتς.	
trength (10 sec	:/10 min)		Ub√100	ft² □F	Pa	1/ 3	<u> </u>	15					••	. 1			•			
ate API cm³/30 m						6.4			1			1								
H P Filtrate cn	n³/30 min	@_	°F	~	<u>°C  </u>				+			•	•						•	
mickness API	/HTHP			n. 🗆 m	_		-+-		-			1				•				
_s Content (% b			culated	Dueli	ort	5_		<u> </u>	+			1								
id ontent (% b		Water			+	95			$\dashv$							REMA	RKS			
ntent (% by		ib/bbl equi	. C-	m3/cm3 m	nud	0:1		<u></u>	1											
/lene Blue Car	Dacity U				<del>~</del>	9.5		<u>خ</u>				]					100			
"r Mud (P <sub>m</sub> )		Timerer (	<del></del>	·==	十	0.1		<u> </u>				]							.11.	
nity Filtrate (P						0.6		ş		1		1 54	4	loss	es c	lo	sahac		lds   hr	
nate Alkalinity		P <sub>2</sub> ) ml/ml				+	-	<b>₹</b>		1		اعتد	110	, <del>, , , , , , , , , , , , , , , , , , </del>	•		f i		: 11	- 1
orie, mg/L						ڪاھ	<u>,                                    </u>	\$				1//	-0-0		san	lcr	off (	cs P	-441·S	om' 1
dness as						80				•		\( \bu_{\bu_{\bu}} \)	MIL	ch n	Uns	+ +	off of herp	mu	Juerd	it at
Lin	Sulp	hite				102						- 1 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	3 985	ອ	_		,	1 .	~ · ·	_
Te C	Jr0/	(د			_	3.9	-					- us	ed 1	$\infty$	66	<b>د</b> د	actes	1524	24 4	<u></u>
<b></b>	<del></del>				<del>,</del>		1 11	1 1	<del></del> -		1	1	Πİ	II	TT		ì			
	ट्ट	<u>6</u>	1			ار و .	1	1 H X		1 1						1	SOLIDS	CONTRO	L EQUIP	MENT
DST.	9	C (RE	<u>, j</u>	14	9=	\$ 3	· } 4	\$ #										MAKE/	SIZE/	
PR UNIT COST	ВАВОІВ (ВИСК)	BAROID (REG)	AQUAGEL	\$ 3	A 7	4	\$ 4	46										BRAND	SCREENS	HRS
E 5	Æ	á	ξ		14	Ψ			1	├-	<del> </del> '	<del>' </del>			-	<del></del>	SHKR 1	RAN	_B8)/10	22
₹TING N RY		432	37	149	<i>5</i> 3	28	15	25		<b></b>	1		<b> </b>				SHKR 2		860/10	22
-1 D			_	7	-	_		_									SHKR 3			
LAST			<del></del>	28		2	,	2									SHKR 4			
1. T ST		9	0		دے		93		<del>                                     </del>	+	+						DESAND	10.8	8x 12	13
٦.		d	0	56+	449	1714	3,93	2892		┼	+-			<del>                                     </del>	<b></b> -	<b></b> -	DESILT		12×6	1-
VED			_			_		_					<b> </b>	<b> </b>			M CLNR			
JLATIVE		30	294	379	70	70	16	1501	þ	L					· .		CENT 1			
1								24		T	T						CENT 2	1		T
JCT Dib/bbi		431	37	121	50	26	14	~ <del>4</del>	1	+-	+		1				}- <del></del>		1	1
JCT ∐16/661 JNC. ☐ kg/m³			-	<u> </u>		<u> </u>	<u></u>	<u> </u>	<u> </u>	1			1-	DAILY C	OST	L	1	CUMULA	TIVE COST	
ROID REF	PRESENTA	TIVE	OFFK	CE/HOME	_	EN	H_		TELEPH	ONE			- 1			96	•	•		74
	Mah	والدور و	WAR	EHOUSE			A196	<u>.</u> [	TELEPH	IONE				<u>\$11</u>	76		<u>:</u> _l	P.0	1738	<u>'</u>
	11176	-USM	ره.		<del>',</del>	-													<b></b> ·	
																1/41/5	DATENT	AND ARE	= MADE \	NITHOLIT

á							_		1		: NG MUD I	חבחסי	: TNO	M					
								1	<b>5</b> i		11	Ja		<u>طا</u> 19	2	DEPTH	1900		
<b>(M)</b>	Bar	oid D	rilli	ng F	luids,	In	<b>C.</b>	F	ノ	DATE	-6-			Inne	CENIT A	CTIVITY			<u></u>
							·	<u>ر</u> 			DATE_c	<u> </u>	DEC C	U F	<i>port</i>	RIG NO.	<u>د سرد</u>	ER TR	<u>₩</u> .
3	Cae	4	FUE	ر E	KPL OR	ATIO	امد	CONT	RACTOR	(	JEAR+	HART			l	SECTION, TO	2	ANGE -	
OR	<del>\(\frac{1}{1}\)</del>		and		ارى			REPO	RT FOR	1	VAN	SĒ	PER	C	1			VINGE 7	·.
E AND N	NO.	THE T			,	FIELD	OR BLOCK	NO.			COUNTY		H OR	XVV.		TE/PROVIN		• •	
	ASSEM	DOG	47	CASIN			D VOLU			□ m³	Orrono	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				ION DATA	\		
	YPE YPE	JET SIZE	+-		<sup>₹</sup> 69 3%	HOLE		PIT			PUMP SI	ZE	6x8	, L I		ANNULAR VE		□#min □ C	m/min
- T	YPE	LENGTH	SET	INTERMED		TOTAL	L CIRCULAT	TING VO		<u>~</u> _	PUMPM	AKE, MO	DEL	ASSUM		CIRCULATIO PRESSURE	N		□ #6F □ kPa
2	YPE	LENGTH	SET	@ INTERMED	DIATE		ORAGE_	سلمسيت	> EIGHT		vol/stk	<b>Σ</b>	8	67 <sup>stk</sup>		BOTTOMS UP (min)		/	<del></del>
13 1	//_ \		SET				ze 10	, ,	<u> </u>		+					TOTAL CIRC	. /		
AR SIZE	lu	LENGTH	SET		T. MINER		<u> </u>		PHPA				MUD			TIME (min) PECIFICA	TIONS		
					□ F.L. □ I		PROPE		) F.L. [] [	PIT W	EIGHT			viscosi	TY		FILTRATE		
m le Take	n				U1-LU1		OHO				Y AUTHO	RITY [	OPERA	TOR'S WE	RITTEN	DRILLING	CONTRAC OTHER	CTOR	
mperat				]°F []%	1		34	_ _		十						OUR TREA			
	<i>t</i> =	111-1		☐ft ☐pr		_+	190 9.3			十	2	),	Dr	B	1.0	C.S.		er G	
		lb/cu. ft.     Pl @ °F			, ,	2	4.3				4	<i>.</i> ~~			<u>س</u>	7-1	DLP - A	٠ ١ ١	203
cosity	- South	cP @	□°F				14						(a)	, M	11 3 - 1	MRS-	css.	-	
				0ft² □Pa		-	17		,	$\dashv$			(3	) P	, DZ -	- CN5			
	ec/10 min	n)	<u>∃</u> 16/10	00ft² □Pa	+ *	$\dashv$	<u> </u>	2		$\dashv$			Y	V	eloc	بالم			:
Filtrate	cm <sup>3</sup> /30 m	nin @	°f	-@°	<del></del>						,	$\hat{\mathbf{D}}$	/-	. دی	ימדני	ے	inc 3	2 hou	<b>~</b> .
	PI/HTHP	• • •		lin. 🗆 mn	- V		1/		1	_		~ u, Po=	s As	R	.ن می	386	3 10	2 hou Run	RFT
	by Vol.)		alculate	ed Director	<del>'  \</del>	-	<u>5</u> 95	_	<del></del>	$\dashv$					•				
tent (% tent (% l		Oil/Water		·	1		9.5								REMA	ARKS			
	apacity			cm³/cm³ mu			8	$\bot$											
		p ☐ Meter	<u>@</u>	_°F°	3 3		Zero	$\dashv$			-	•		1				•	
Mud (P <sub>m</sub> Filtrate (1	.) mi P <sub>f</sub> /M <sub>f</sub> ) mi	l/ml			15		0.8		1										
		(P₁/P₂) ml/r	nl		131				1										
mg/L							240	<u> </u>											
0.5	Calcium				-		80	$\neg$						•					
<u> </u>	H %	>					4.1												
		<del></del>			<del></del>			$\dashv$	11			ı	ī		1	T			
	SES.	( <u>E</u> G														SOLIDS	CONTRO	OL EQUIPI	MENT
SON IND	BAROID (BULK)	BAROID (REG)	AQUAGEL														MAKE/	SIZE/	
5	BARC	BARC	AQU	466								<u> </u>		$\sqcup \sqcup$		0,00	BRAND	SCREENS	1
,				121												SHKR 1 SHKR 2	+	60/13	2
		_		17												SHKR 3	1		<u> </u>
	1		-	30												SHKR 4			+
•	-	-		607		1	1	П	1							DESAND			+
VE.	<del> </del>	_		1007		T	+	$\vdash$					1			DESILT	<u> </u>		ļ
VE	<del>                                     </del>	_	-	1120	_	+-	+	$\vdash$	$\top$	T	1		1			M CLNR	<del> </del>	+=	+-
	<del> </del>	-	<u> </u>	409		+-	-	1	+	$\top$			1	1		CENT 1	-	-	*
Y   Ib/bbl	<del>                                     </del>			91		╁		-	+	+-	-	1	1	1		Joeni 2	+	+	1 36
☐ kg/m	3		1	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	<del>-</del>		<del></del>	TELEP	HONE			<del>1</del> −¬	DAILY (	COST				TIVE COST	~ 2
					TEO	<u> </u>							\$	660	7 50	)	\$ 2	2798	9
	PRESEN ACLE	NTATIVE		REHOUSE	-HEO -DDE			TELEPI					\$	603	7 50	)			72.4

ž.									ı		DR	ILLING	G MUD RE	EPORT	TNO.		7					
	16	-	_,	===		4	'd^ '	Inc		币	\ F	ATE_	Min .	JA		_ 19_ 9	12	DEPTH	1900		□ ft _ □ m	
	y Ba	ıroi	id Dr	rillii	ng f	-ıui	ıus,	IIIC.	•	T	·		DATE_2			山門		ACTIVITY	inys			
P					· · ·				-11-00	ONTRAC								RIG NO.	2			
ATOR		AS	+ F	<u> ۱۳۲</u>	E	<u>-Puc</u>	3 ALI	رص		EPORT F			EAR					SECTION, TO	WNSHIP, R	ANGE		-
FOR		C.	ERAL	D 1	<u>ب</u> ذ	or							VANO			درد	ISTA	ATE/PROVIN	NCE			- 4
ME A	ND NO.	<b>₽</b>	XXM.	C0-	لا ربع	11	TF	FIELD OR I	BLOCKN	10.			COUNTY, F OFFSHORE	PARISH RE AREA	CR		1 2	35100	Victo	MA_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-
!	ING ASSI			LEE	CASI	ING		MUD V		E Db		m³					CULAT	TION DATA		☐ ft/min [	_lm/~¹-	7
DRILLI	ING ASSI		ET SIZE	1	SURFA	ACE	95/8 H		145	PITS	300		PUMP SIZE	Œ 6	2	6×8	8''	ANNULAR VE	DC			= 17,
6 2 PIPE			ENGTH		INTERME			TOTAL CIF	RCULATIN	NG VOLUM			PUMP MAI	KE, MO	)DEL	ASSUM EFF (	MED	CIRCULATION PRESSURE	ON	$\angle$	□ psi □ kPa	
!	TYPE	1 -		SET@				IN STORA	1	745 WEIGH			vol/stk	-		ctl	7.3	BOTTOMS UP (min)		/	,	
Par	TYPE	الد	ENGTH	SET@	@					<u> </u>			-		·06			TOTAL CIRC.	:/	•		_
LARS	SIZE DC	۳ ا م	LENGTH	PRO SET @	ODUCTION @	N OR L		MUD TYPE	1/10	ce le	,HPA		L		<u></u>		nim\c	TIME (min) SPECIFICAT				_
						<b>上</b>		MUD PF	ROPER	TIES_						VISCOSI			FILTRATE			_ :
olerom							F.L. DP			F □F.I	<u>.∟ ⊔ РІ</u>		Y AUTHOR	3ITV F	T OBERAT	ATOR'S WE	VEITTEN		G CONTRAC			
	Taken				]°F □9				<u>36</u>	+		_ <del> </del> _	. AUIHOI		OPERAT	ATOR'S RE	EPRESE	OUR TREA	OTHER			<b>-</b> , , , , ,
ne Temp	perature				]°F []•				1900	1		<u> </u>					יבט די	JUN IKEA	······EIX1	٠.		
	[]Kinal		cu.ft. 🛘					2 (	9.3			1	£	Zun.	O RI	FT.						
	sity Dec/q						1/4	<del></del>	42		1	4	,	1.	208	HOEL	sau	. CIR 15	•	*		
ic Viscosi			°@	□°F -	<u> </u>		-2	-	8	-		4		,	~ ~		,	<i>~ ~</i>	( 2)	how	<b>S</b>	
ș nt					Oft² □F			-	12	-	<del></del>	$\dashv$	R	۲,4	w/	- (	57T.	, C 1 K		-		
1	(10 sec/10	) min)	<u>_</u>	¥15/100	Oft² □ F	ra	12		6.8			-	P	100 r	1 81	106-	سهمد	12				
	m <sup>3</sup> /30 min	<u> </u>		°F(	<u> </u>	·c	<del>- K</del>	+	<u></u>	_		<b>ゴ</b>	•			•						•
	trate cm <sup>3</sup> /3 ess API/HT				<u>@</u> in. □m				1	丁		コ					-					>
	nt (% by Vo				d Desi		TY.	工	96	工		_] .			٠.	. · · .		`		_		
	nt (% by Vo					工	1	$\bot$	i)	1	. /	+					REMA	ARKS				
ten	nt (% by Vo	ol.)				1	_بم	+	0.2			+		<del></del>		,,	IVI	1 /	<u> </u>	-	2000	<u> </u>
	lue Capaci	ity 🗅	Dbi equi				<del>-'\$-</del>		7-6	<u>v   </u>		$\dashv$	R	aise	۽ ليء	PH.	MU	io Plic	or te	_ , _		J
		Strip [	☐ Meter @	<u>@</u>	<u>-°F</u>	.°C	<del>-3</del> -	+-	10	$\overline{}$		一	Ca	Sing	5.		-	ARKS				
	d (P <sub>m</sub> ) ml rate (P <sub>f</sub> /M <sub>f</sub> )	) mi/~-'				十,	72		1-28 1			$\exists$		(	·	٠	-					
	rate (P <sub>f</sub> /M <sub>f</sub> ) calinity Filtra			<u></u>		士	区;		<del></del>		1	$\Box$				-						
orie mg		<u>'` '</u>				工		工	3000	20		$\dashv$										
	ess as Calc		$\overline{}$			1			60	-		$\dashv$				•						
305	2- (A	49/4	<u>ب</u>		····	+		+	60 5%	+		$\dashv$	lle	ى .	60	bbls	لى	saler 1	last	24 h	المام	<b>S</b> .
The same		<u>نار</u> ه	<u>(a)</u>			+		+	_ <b>&gt;</b> */:	<u>-</u>		$\dashv$	~~									
			Т		11	+		1	11	TT	$\sqcap$	<del></del> ,		1	IT	11	1	801100	CONTRO	ϽL FΩ'''	PME	١T
:	3	BULK.	ÉĞ	_ 1	'	1	134	1 1/3	न्या ।				111	١   ,		11,		SOLIDS	NITH	<del>,</del>		
COST		BAROID (BULK)	BAROID (REG)	AQUAGEL	See	7	1 1 1	Scource Pr. Pir	1 7 7					1					MAKE/	SIZE/		35
PF UNIT COS		BAR	BARC	AQU.	S Kee	246	141	ज द	3 6			1	111	Ш_	+-	1	1-	SHAD 4	BHAND	SCREEN 80/,		
TING	-		<del>                                     </del>	37	-	50	24		24			_						SHKR 1	+	60/1		
NT RY ≡N D			++	<u> </u>	1	<u></u>	15	1/-	7							$\perp$		SHKR 2 SHKR 3	+	+ ~~//	<del>-</del> -	
AST	=		++	4	-	<u> </u>	+	+	<del>-                                    </del>				1		1	1	T	SHKR 3	+	1	+	
1.			1-1	7	1	1	+	1	2.93	-+	<del>-</del> *	<u> </u>	1.7	t-	1	1	1	DESAND	1-	1	十	
ΤΙ 3 <b>Τ</b> 3.			11	8524	1/	149	57"	1	357	$\Box$	<u>'</u>	03		Pr	COME	pt	+-	DESILT	1	1	十	
VED	<u> </u>				اكا	1	1	1/	1	igcup	11	SI	Mr.	<del></del>	+	+	+	M CLNR	1	I	丁	
VED	=			1			]				<u> </u>		1	1	4		4-	CENT 1	<u> </u>	I	丁	
SI	<del></del>		1	30	9,	40	9 25	14	23	1	1	1		L			1	CENT 2	I		$oldsymbol{\mathbb{I}}$	_
ICT [	] lb/bbl		+	اعدا	<del>                                     </del>	+-	<del> </del>	1	1		<u> </u>		T				1				$\perp$	
.NC. [	_ kg/m³			10==	ICE/HOME	<u></u>	1	1	<del></del>	TELEPHON	NE				DAILY	COST		7	CUMULA	ATIVE CO	ST	64
E RO	DID REPRE					-	2501			TELEPHON					4	3:	29 <sup>3</sup>	٠. ١	1 \$.	283	18	
08	WET	ALC	GHL.~	WAR	REHOUSE	<u> </u>	10EU	A-DE							<u> </u>				<u></u>	<del></del>		

1 .	DRILLI	ING MUD REPORT	NO.	<u> </u>				<del></del>
1	DATE	8/H JAN	<u>ا 19</u>	72	DEPTH	1900		
•   \$				SENT	ACTIVITY OLACONS	· (c	icus	
				- 12	RIG NO.	2		
	(	<del>-</del>		· ·	SECTION, TO	OWNSHIP, RA	NGE .	
				ST/	ATE/PROVI	NCE -	• .	<del></del> :
BLOCK NO.	10y		DOWA	<u> </u>	BASIN	Victo	MIA	·
VOLUME	□bbl □ m³		CIR	CULAT			∃ft/min □	m/min
1	PITS	PUMP SIZE			DP	DC	/	
IRCULATING	VOLUME	PUMP MAKE, MO	DEL ASSU EFF	MED %	PRESSURE	N		⊔ psi ∐ kPa
AGE	WEIGHT	vol/stk	. st	k/min	BOTTOMS UP (min)		<u></u>	
<u> </u>	10.00	1 7		al/min	TOTAL CIRC	F 1/ 1		
						TIONS		
		WEIGHT	viscos	SITY		FILTRATE		
		BY AUTHORITY	OPERATOR'S W	VRITTEN EPRESE	DRILLING NTATIVE	CONTRACT OTHER	OR	
							N RA	 
<del>-,</del>	<del>                                     </del>							
			•					
		(suc	Nr. D	rspi	ACE U	س -اد	ATER	•
1		0					٠. م	
	<del> </del>	PRETAG	שיין ניטים	as Soci	15 E++>	OD CA	3124	)
	1	42 44		S. 10	L. Fe	Core t	1996)	1
		א ר	Samm.	our	mu -	( i.>	נשץץ	
1	1			DEM	ARKS	٠.		
							· · · · · · · · · · · · · · · · · · ·	
		Dum	8 + Cx	EAN	Mug	TANK	is Fox	_
· · · · · · · · · · · · · · · · · · ·		Com	PLETION	Bu	ins.			
1	1	-		•				
	1		,					
	<del> </del>							
			•					
	1			П	1			
, , ,					1		L EQUIPN	VENT
					SOLIDS	CONTRO		
					SOLIDS			
					SOLIDS	MAKE/	SIZE/ SCREENS	
					SOLIDS SHKR 1	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3 SHKR 4	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR	MAKE/	SIZE/ SCREENS	o
					SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR CENT 1 CENT 2	MAKE/ BRAND	SIZE/ SCREENS BSO/18	o
TELE	PHONE		DAILY COST		SHKR 1 SHKR 2 SHKR 3 SHKR 4 DESAND DESILT M CLNR CENT 1 CENT 2	MAKE/	SIZE/ SCREENS BSO/10 GO/10	o
CRAMID NICE    PRODE FOR   PRO								

DATE 213T DEC 91  PRESENT ACTIVITY  DATE 213T DEC 91  PRESENT ACTIVITY  RIG NO.  SECTION, TOWNSHIP, RANGE  COUNTY, PARISH OR OFFSHORE AREA  CIRCULATION DATA  PUMP SIZE  PUMP MAKE, MODEL  ASSUMED  PUMP MAKE, MODEL  PUMP MAKE, MODEL  PUMP MAKE, MODEL  PUMP SIZE  PUMP MAKE, MODEL  ASSUMED  PUMP MAKE, MODEL  ASSUMED  PUMP MAKE, MODEL  ASSUMED  PUMP (GROULATION)  PRESSURE  PUMP (Mini)  WOW/min  TOTAL CIRC.  TIME (min)  MUD PROPERTY SPECIFICATIONS  PRESONTE OFFRATOR'S REPRESENTATIVE OTHER  RECOMMENDED TOUR TREATMENT  PREPARED  PRESENTATIVE OTHER  RECOMMENDED TOUR TREATMENT  PREPARED  PRESENTATIVE OTHER  RECOMMENDED TOUR TREATMENT  PREPARED  PRESENTATIVE OTHER  PRE
PRESENT ACTIVITY  PRESENT ACTIVITY  RIG NO.  SECTION, TOWNSHIP, RANGE  COUNTY, PARISH OR OFFSHORE AREA  CIRCULATION DATA  PUMP SIZE  PUMP SIZE  PUMP MAKE, MODEL  ASSUMED  PUMP MAKE, MODEL  ASSUMED  PRESSURE  PRESSURE  PRESSURE  STATE/PROVINCE  CIRCULATION DATA  ANNULAR VEL  DP  PRESSURE  PRESENTATION  TOTAL CIRC.  TIME (min)  TOTAL CIRC.  TIME (min)  TOTAL CIRC.  TIME (min)  PRESSURE  PRESCULATION  PRESCULATION  PRESSURE  PRESCULATION  PRES
RIGNO.  SECTION, TOWNSHIP, RANGE  COUNTY, PARISH OR OFFSHORE AREA  CIRCULATION DATA  PUMP SIZE  PUMP MAKE, MODEL  ASSUMED  PUMP MAKE, MODEL  ASSUMED  PRESSURE  PUMP MAKE, MODEL  ASSUMED  BFF 95 %  FILTRATE  BY AUTHORITY  OPERATOR'S WRITTEN  OPERATOR'S WRITTEN  OPERATOR'S WRITTEN  OPERATOR'S WRITTEN  OPERATOR'S REPRESENTATIVE  OTHER  RECOMMENDED TOUR TREATMENT  No bingup  9-2  PO  SECTION, TOWNSHIP, RANGE  STATE/PROVINCE  STA
SECTION, TOWNSHIP, RANGE    COUNTY, PARISH OR OFFSHORE AREA OTHAM   STATE/PROVINCE   CINCULATION DATA
COUNTY, PARISH OR OFFSHORE AREA  CIRCULATION DATA  PUMP SIZE  PUMP MAKE, MODEL  GDP2  ASSUMED DP.  PRESSURE  VOI/STK  TOTAL CIRC.  TIME (min)  TOTAL CIRC.  TIME (min)  MUD PROPERTY SPECIFICATIONS  VOI/STY  FILTRATE  SY AUTHORITY OPERATOR'S WRITTEN OTHER  RECOMMENDED TOUR TREATMENT  VOI/STR
CIRCULATION DATA  PUMP SIZE  CIRCULATION DATA  PUMP MAKE, MODEL  ASSUMED  PRESSURE  POLYMIN  STANDLAR VEL  DP.  ANNULAR VEL  DR.  DC.  PRICULATION  PRESSURE  BOTTOMS  UP (min)  TOTAL CIRC.  TIME (min)  MUD PROPERTY SPECIFICATIONS  FILTRATE  SY AUTHORITY OPERATOR'S WRITTEN DRILLING CONTRACTOR  RECOMMENDED TOUR TREATMENT  Noting Pressure  RECOMMENDED TOUR TREATMENT  Noting Pressure  Completes the function of the pressure of the
CIRCULATION DATA  PUMP SIZE    S ''
PUMP MAKE, MODEL PUMP MAKE, MODEL PUMP MAKE, MODEL PEFF 95% PRESSURE PRESSU
PUMP MAKE, MODEL ASSUMED EFF 95% PRESSURE PRESSU
WOU/SIK  WOWNIN  STATE  MUD PROPERTY SPECIFICATIONS  WEIGHT  WISCOSITY  FILTRATE  BY AUTHORITY  OPERATOR'S WRITTEN  OPERATOR'S REPRESENTATIVE  OPERATOR'S REPRESENTATIVE  OTHER  RECOMMENDED TOUR TREATMENT  Notingup  9-2 ppg (SS 15/1561)  Sochum  Chloncle  Completion  flux
MUD PROPERTY SPECIFICATIONS  VISCOSITY FILTRATE  SY AUTHORITY OPERATOR'S WRITTEN OTHER  RECOMMENDED TOUR TREATMENT  Notingup 9-2 ppg (SS 15/1661)  Sochum Chlonile Completion fluc
MUD PROPERTY SPECIFICATIONS  JEIGHT VISCOSITY FILTRATE  BY AUTHORITY OPERATOR'S WRITTEN ORILLING CONTRACTOR  RECOMMENDED TOUR TREATMENT  Notingup 9.2 ppg (SS 15/1661)  Sodium Chlonde Completion flu
RECOMMENDED TOUR TREATMENT  Nothingup 9.2 ppg (SS 16/1661)  Sochum Chlonile Completion flu
RECOMMENDED TOUR TREATMENT  Natingup 9.2 ppg (SS 15/1661)  Sochum Chloncle Completion flu
RECOMMENDED TOUR TREATMENT  Natingup 9.2 ppg (SS 15/1601)  Sodium Chloride Completion flu
Preparing Tans for 2 tubin
Preparing rans for 2 tubin
REMARKS
engan en Engan engan en
·
<u> </u>
SOLIDS CONTROL EQUIPMEN
MAKE/ SIZE/
BRAND SCREENS HR
SHKR 1
SHKR 2
SHKR 3
DESAND
DESILT
M CLNR
CENT 1
CENT 1 CENT 2

						1	-	D	RILLI	ING MUD REPOR	RT NC	<u>).</u>	20	2					
	oid Dı	-illi-	ام ا	Juide	Hr	1C	Ĺ	D. I	DATE	E 1014 JA	<u>س</u>		19 97	<b>2</b> D	ZEFIR	1900	<u> </u>	_   ft _   <b>Diar</b>	
IIII) Bar	uia Di	11111	y F	JUIUS	, 11	10.	عر. ـ	: /  -		D DATE 218		:c91	PRESI	ENT	CTIVITY W/	- Tu	وامغ		:
R -			•			<del></del>	CON	TRACTOR		GEARH				R	RIG NO.	2	·		
	45 + F				رد، ک	~		ORT FOR						s	SECTION, TOW	VNSHIP, R	ANGE .	`	
	GELAL	0 1	<u> ۱۷، زه</u>	<u></u>	Tere	D OR BLOCK		<del> </del>	4	COUNTY, PARIS	ISH OR			STAT	TE/PROVINC	Œ			<del>-</del>
ME AND NO.	Bocqui	Cae				DEP IS	24		· .	OFFSHORE ARI		Ore		JLATI	ON DATA	<u>~</u>	<u> </u>		<b>-</b>
RILLING ASSEN			CASIN			UD VOLUM		PITS		PUMP SIZE	<del></del>		Unul	A	ANNULAR VEL	L. E	□ ft/min 【	□ m/miı	in .
TYPE	JET SIZE			<u>@34</u>	سالم	234		78	10	PUMP MAKE, M	AODEL		ASSUME	ED C	CIRCULATION			□ psi	
TYPE	LENGTH	SET@		as rice	<u> </u>			·		vol/stk_				% F	PRESSURE BOTTOMS			Kr	<b>=</b>
TYPE	LENGTH	SET@				STORAGE 40		WEIGHT			<u>-</u>	<del></del>		-   L	UP (min) TOTAL CIRC.	<u></u>			_
AR SIZE	LENGTH	PRO SET @	ODUCTION @	OR LINER		G.2 pp	Ne	ice Con	.ple	Han Rud	<u>C</u>	10.55	vol/m	min ]	TIME (min) PECIFICAT	IONS			-
				1		JD PROPE	RTIE	ES	_		M		ROPER ISCOSM			FILTRATE			
om				□F.L.□	_PIT	OF.L.OF	-1[	□ F.L. □ P		WEIGHT BY AUTHORITY		DEDATO	אפר war	ITTEN	DRILLING (	CONTRACT	TOR		
ple Taken emperature			)°F □°C						士		□ OP	PERATO	OR'S REP	PRESEN	OUR TREAT	JIREN			_
			□ft □m	1			_1		ᅷ										•
	] lb/cu.ft. [				2	1		1	$\dashv$	Mohe	ч	P	n V	د،	pill.				
cosity sec/qt /		□sec/L □°F _	°						$\exists$	Made	uc	28	dd ce	ols :	of c	1·2 p	PP9	:	
t		⊒lb/100	)ft² □Pa	a			$\vec{-}$	ļ	_	Sodie	. می	cl	None	le	ام سرم	ومنا م	_ bn	ne	
gth (10 sec/10 m	nin) C	⊒1Ь/100	oft² □Pa	a	<u>'</u>	1	$\dashv$	<del></del>	$\dashv$	1	•	. #							
PI cm³/30 min Filtrate cm³/30	min @	°F(	<u></u> °	<u></u>					•	1					•			* *, .	
kness API/HTHI	P C	32nd ir	in. 🗆 mn	n /		1		1		<b>1</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				•					
ntent (% by Vol.)	) □⇔	liculated	d □ retor		<del>,</del>	+ -			<del></del>									<u> </u>	<b>—</b> ., ·
ntent (% by Vol.)		<del>-</del>			<u>-</u>	<del></del>								REMA	RKS				٠
tent (% by Vol.) e Blue Capacity	□ ltb/bbl equ					<b></b>	<u> </u>	1						:			in <sub>Ser</sub> siyeta		
☐ Str	rip Meter				2			+	<u></u>	1	• • .			Ġ,		•			
Mud (P <sub>m</sub> ) ml	nl/ml			-	<del></del>	+-,		1		<u></u>							•		
Filtrate (P <sub>f</sub> /M <sub>f</sub> ) n Alkalinity Filtrate		1		士	<u></u>	1 7		1		4			ā						
mg/L				<b>T</b>				+		-			·-						
iness as Calciu	ım, mg/L			-		+		+		_									
						<u> </u>	_	1		]									
				<u></u>	<del></del>	<del></del>		1,-		1 1 1 1		11	11	$\neg$		<u> </u>			
8	6		\$	1 3						1	1				SOLIDS	CONTRO	OL EQU	IIPMEI	NT
JNIT COST	BAROID (REG)	GEL	BARACA	EZ Mus	325											MAKE/	SIZE/		<u> </u>
UNIT COST	ARO	AQUAGEL	250	E B	"				1.1			$\coprod$			2:::::	BRAND	SCREE	NS H	IRS
3			2	<del>*   *</del>	314		T	$\top$	Γ						SHKR 1 SHKR 2		+	+	
Y	-		×	ه ا	士		+		1		T				SHKR 3	<del>                                     </del>	+	1	
ST ST		$\vdash$	1	4 2			+		+	$\neg \neg \neg$	丁				SHKR 4			丁	
<del>r  </del>		-	1	229 219		D	+		+	11	丁	$\exists$			DESAND		1	工	
ve ve		<del>                                     </del>	PXV	<u> </u>	4	—	+	—	+	11	十	一			DESILT	<del></del>	4	+	<del></del>
TIVE	_	-	1	7/-	1	-	+	-	十		十				M CLNR	+	+-	+	
			2		14	-	+	-	+	11	+		1		CENT 1	+ '	+	+	
tY □ lb/bbl		-	0	21	64		+	_	十		+				]		工		
. kg/m³		10	CEMONE	井		<u>·                                      </u>	TELF	EPHONE			TDA	AILY CO	OST	<del></del>		CUMULA	TIVE CO	ST	٠
OID REPRESI		<del>                                     </del>	REHOUSE	<u> </u>	a TH		_	EPHONE			一.	\$	26	,37	2	\$	324	491	8 3
, 204	ag HIIN	/ WAR	REHOUSE	ADG	LAN.	<u>)E</u>	T												

猛									j		_	DRIL	LING MU	D REPO	RT NO.	21					
	Rar	hio	Dr	illi:	na l	Fli	uids,	In	C.	1		DA	re <u>lv</u>	(4 -	<u>Jan</u>	19	<u> </u>	DEPTH	19.	<u>ుల</u>	☐ft □Low
		JIU			ສ '						ľ	SPI	ID DATE	215	1)40	GPRE	SENT	ACTIVITY			
OR	$\cap$	•	(						1	CON	ITRACTO	OR .			HART			RIG NO.	ス		
FOR		MS_X	<u> </u>	1 <del>-</del> C						REP	ORT FO	٦ /			epen			SECTION, T	OWNSHIP,	RANGE	
	ND NO.	JEN.	any	<u> </u>	<u>را، ده</u>			FIELD	OR BLOC	KNO.			COUN	TY, PARIS	SH OR		ST	ATE/PROVI	NCE,		·
		<del>1500</del>	344	1			#1_		· ee	7 10				HORE AR	EA OT	ひ <u>ん</u>		TION DATA		onia	;
DRILL ZE	ING ASSEI	MBLY JET SI	ZE		CAS	FACE	:	HOLE	D VOLL	li li	PITS		PUMP	SIZE		Onto	<del>500</del>	ANNULAR V	ÆL.	ft/min	☐ m/min
E	TYPE	LENG		SET (	@ 95		<u>ه ۱۲۶</u>	TOTA	234 LCIRCUL	ATING	VOLUME_	<u> </u>	PUMP	MAKE, M	ODEL	ASSUN		CIRCULATION	ON		☐ psi
				SET (		(2)	19am		ORAGE		WEIGHT	44	vol/stk			EFF stk	/min	PRESSURE BOTTOMS		/	☐ kPa
E	TYPE	LENG		SET (				MUD	TVDE									UP (min) TOTAL CIR	c. /		
LLARŞ	SIZE	LENG	iri	SET (		- T	- UNER	<u> </u>			e B	مىھ			14110		/min	TIME (min) PECIFICA	:		
<b></b>					· · · · · ·	$\dashv$	□ F.L. □ I		PROPI			) PIT	WEIGHT		MUD	VISCOSI		, LOII-IOA	FILTRATE	<u> </u>	
From nple	Taken					$\dashv$	المادادي		<u></u>				BY AUTH	IORITY	OPERA	TOR'S WE	RITTEN	DRILLIN	G CONTRA	CTOR	
	perature				)°F 🗆	°C												OUR TREA			
					_ft			$\dashv$			<del>,</del>			<del></del>		1					
	□lb/gal □ ity□sec/qt A						· · ·	$\dashv$	1				•	ابد، ک	~	1-	س اس	مر مر			
iscosi		<u></u>		]°F .							·		(	Leve	rse i	CIC	· ~	ر س -/د	بم لو		
int					ft² 🗆	Pa		$\Box$						Sc	تسا	24	ےیہ	4 (0)	٠٠٠.		
	10 sec/10 m	in)		lb/100	ft² 🗆	Pa						-	,	 ) .		ر	. 1	سر بازج	D.	11 _ 4	Sind
	n <sup>3</sup> /30 min rate cm <sup>3</sup> /30 r	min		°F	<u> </u>	-€							*	eve	ገራ	CIC	_ {	~ 413		· TF '	
	ss API/HTHF				n. 🗆 n	-			1		1			Pele	asec	<b>5</b> .					
	nt (% by Vol.)			ulated	d □ ret	tort		$\Box$							- ۱۰۰۰	/					
	it (% by Vol.)		er			$\dashv$							<del>                                     </del>			-	REMA	RKS	e <sup>r</sup>		
	(% by Vol.) ue Capacity		viupe k	/. □a	m³/cm³ n	nud		$\dashv$													
	<u>`</u>	ip □M				.℃							1					÷			
_	I (P <sub>m</sub> ) ml	1/1		<u></u>				-			<del>                                     </del>		1								
	ate (P <sub>f</sub> /M <sub>f</sub> ) m Unity Filtrate		nl/ml		·	ᅱ	1		<del>/</del>		<del>                                     </del>										
e, mg/													]			•					
dnes	ss as Calciur	n, mg/L						-					-								
								-					1								
													1	,				·			
	SER)	9																SOLIDS	CONTR	OL EQUI	PMENT
UNIT COST	BAROID (BULK)	BAROID (REG)		AQUAGEL	8														MAKE/	SIZE/	T
NO.	BARC	BARC		À	Mece														BRAND	SCREEN	SHR
G DRY				$\neg$	64													SHKR 1	<b> </b>	<u> </u>	
<u> </u>		_	十	十							1	1	$\top$	1				SHKR 2 SHKR 3	<del> </del>		+-
Т			十	一	64				1	1		1		1				SHKR 4	<del>                                     </del>	<del>                                     </del>	1
ST			+	十	4409	,			1	T		T						DESAND			
IVE		$\neg \vdash$	+	一十					1	T		$\top$			1			DESILT		ļ	4-
TIVE		$\dashv$	+	一	384		1			T	$\top$	十			1			M CLNR	-	-	+-
<u>.</u>	_	+	+	$\dashv$			1.		1	1	$\top$	1		1				CENT 1	<del> </del>	+	-
	o/bbl	-	$\dashv$	+	-			$\vdash$	1	1	$\top$	$\top$		1	1				+	1	+
		NTATIVE	<u>· [</u>	OFFIC	E/HOME		<u> </u>		1	TELEP	HONE	<del></del>		<del></del>	DAILY	OST		<u>'                                     </u>	CUMULA	TIVE COS	Τ,,
POIL										TELEF	HONE		····	_,	4	409	6		\$32	934	i 6'
. □ I					C E/HOME							<u> </u>		`	DAILY C	COST G	16.		CUMULA \$32	TIVE COS	1 6

W1148-



11 February 1992

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

gentary with the car the second of the care

Attention: John Foster

REPORT: 009/1538

CLIENT REFERENCE:

RH

MATERIAL:

Water Sample ( From mud pit

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.

Bi Will

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

Amdel Core Services Pty Limited shall not be liable or responsible for any loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from any information or interpretation given in this report. In no case shall Amdel Core Services Pty Ltd be responsible for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report.



### CLASSIC LABORATORIES



This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

Water Analysis Report

Job No. 2AD0191

Method WAT 2 Page W2

Sample 1D.	BUGGI CR				====
1	Chemical	Composit	ion	Derived Data	!
		mg/L	me/L	mg,	٦.
Cations   Calcium   Magnesium   Sodium	(Ca) (Mg) (Na)	136.0 46.6 3110.0 5475.0	3.84 135.28	Total Dissolved Solids A. Based on E.C. 1796 B. Calculated (HCO3=CO3) 1876	•
Potassium	(K)	5415.0	140.05	1 TO GOT THAT GRADE	31 ¦ 31 ¦
Anions  Hydroxide	(OH)			Non-Carbonate Hardness	į
Carbonate Bi-Carbonate Sulphate	(CO3)	704.0 272.0		Total Alkalinity 5 (Each as CaCO3)	80 ¦
Chloride	(Cl)	9354	263.48	Totals and Bala	nce
Nitrate	(NO3)	0.5	0.01	Cations (me/L) 285.9 Diff= 5. Anions (me/L) 280.7 Sum = 566.	23 62
,				ION BALANCE (Diff*100/Sum) = 0.	92%
Other Analys	es			Sodium / Total Cation Ratio 47	.3%
1				Remarks	
1 1 1 6					1
					1 1 1
Reaction - p	(E.C)	<b>V</b>	7.8 26000		1 1
(micro -  Resistivity	S/cm at 2 Ohm.M at		0.385		i ! !
) ( )				Note: mg/L = Milligrams per li   me/L = MilliEqivs.per li	

Name:

Ms R.TAMKE

Address:

AMDEL CORE SERVICES

FLEMINGTON STREET

FREWVILLE

Date Collected

16-1-92

Date Received Collected by

23-1-92

CLIENT ( From mud pit