

DRILLING MUD SERVICE REPORT

DATE 1888-01-22

REPORT NO 23

CONTRACTOR SHEHTAH RIG 1

REPORT FOR NEIL SPEERS

P. 03

Ranger Oil Limited

DAILY DRILLING REPORT



WELL NAME: RANGER NOTA CREEK C-17 DATE: 07/01/116 REPORT NO.: 23
 DEPTH: 989 mKB PROGRESS: m FORMATION: Franklin Mountain
 OPERATIONS AT 08:00 HOURS: Nipple Down
 CONTRACTOR/RIG SUPT.: Shehah Drilling Limited Tom Carrier CO. SUPERVISOR: Lee Brazel
 DAILY COST: \$ 35,650.27 CUM. COST: \$ 1,950,873.80 AFE NO: E7D-028

WELL CONTROL

DAILY RIG CHECK: X DAILY BOP CHECK: R.S.S.P.: kPa @ SPM
 TRIP RECORDS: CALCULATED HOLE FILL m3 ACTUAL HOLE FILL: m3
 BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
 CONDUCTED AT HRS. CREW PERFORMANCE
 DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES			PUMPS		
BIT NUMBER			WEIGHT (kg/m3)			No. 1 LINER (mm)		152X216
SIZE (mm)			VISCOSITY (cP)			No. 1 SPM		
TYPE			pH			No. 2 LINER (mm)		152X216
SERIAL No.			PV (mPa S)			No. 2 SPM		
NOZZLES (mm)			YP (Pa)			VOLUME (m3/min.)		
DEPTH IN (m)			GELS (Pa)			PRESSURE (kPa)		
METERS (m)			SAND (%)			D.P. ANN. VEL. (m/min.)		
HOURS			SOLIDS (%)			D.C. ANN. VEL. (m/min.)		
WOB (1000 lbs)			FILTER CAKE (mm desc.)			D.C. ANN. VEL. (m/min.)		
R.P.M.			WATER LOSS (cc)			SOLIDS CONTROL		
CONDITION			CHLORIDES (mg/l)			SHAKER SCREENS		110x140
			MBT			PUMP OUT (m3/stk)		0.01181

DRILLING ASSEMBLY

ITEMS	O.D.	I.D.	T.J. TYPE	MUD ADDITIVES			D. SILT		CENT.
Bit Sub				Sacks	Product	Cost Per Unit	O.F. (kg/m3)		
Shock sub					Caustic	\$ 77.00	U.F. (kg/m3)		
3 Drill Collars					Bentonite	\$ 15.00	VOL. (l/min.)		
Jars					Soda Ash	\$ 40.00	HOURS		
3 Drill Collars					Barite	\$ 18.00			
XO					XCD	\$ 845.00			
12 Drill Collars					Aquapac	\$ 380.00			
BHA LENGTH			m		Deaco	\$ 112.00			
HOOK LOAD			daN		Lignite	\$ 15.25			
AVAILABLE WOB			daN		Sawdust	\$ 7.25			
Joints DP. on Racks:			235		Service	\$ 350.00			
In String:					Daily Mud Cost	\$ -			
TOTAL:			235		Total Mud Cost	\$ 42,508.00			
					Time Break Down				

DRILLING OPERATIONS		EVALUATION		PROBLEMS		SUMMARY	
DRILLING		CORING		RIG REPAIR		TODAY	CUM.
TRIPPING		LOGGING		LOST CIRC.		24	
RIG SERVICE	0.25	TESTING		REAM & WASH			
SURVEY		CIRC. SAMPLE		WORK PIPE			
SLIP & CUT		HANDLE TOOLS		FISH			
COND. MUD		TRIP		TRIP			
NIPPLE UP/DN	23.75	REAM RATHOLE		Safety Meeting			
RUN CASING				Circ. & WOC			
CEMENT							
HANDLE TOOLS							
				Total Hours	24.00		

Time 24 Hour Summary Time
 Tearout 348 mm BOP's
 Rig serviced
 Tearout 348 mm BOP's, and set 348 mm X 244.5 mm manual Barber casing slips
 Cut off casing and laid down BOP's
 Dress casing and installed Barber primary 244.5 mm X 348 mm primary packoff, Rector intermediate spool 348 mm
 by 278 mm with Rector DS secondary seal 348 mm X 244.5 mm
 Pick up and install 279 mm BOP's. Clean mud tanks. Change out Hydril rubber

(FORMATIONS) Franklin Mountain (525 mKb)

SIGNED BY: Lee BrazelMOBILE No.: 403-282-8301

Ranger Oil Limited

DAILY DRILLING REPORT



WELL NAME: RANGER NOTA CREEK C-17 DATE: 97/01/15 REPORT NO.: 22
DEPTH: 589 mks PROGRESS: m FORMATION: Franklin Mountain
OPERATIONS AT 08:00 HOURS: Nipple Down
CONTRACTOR/RIG SUPT.: Shehtah Drilling Limited Tom Carrier CO. SUPERVISOR: Lee Brazel
DAILY COST: \$ 110,231.22 CUM. COST: \$ 1,915,323.86 AFE NO: E70-029

WELL CONTROL
DAILY RIG CHECK: X DAILY BOP CHECK: X R.S.S.P.: 1800 kPa @: 100 SPM
TRIP RECORDS: CALCULATED HOLE FILL m3 ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE Drilling WELL SECURED IN 2 MIN.
CONDUCTED AT 97/01/09 at 2000 HRS. CREW PERFORMANCE fair
DAYS SINCE BOP DRILL (EACH CREW): 5 MAXIMUM CASING HOLD BACK 1470 kPa

BIT PERFORMANCE			MUD PROPERTIES			PUMPS		
BIT NUMBER			WEIGHT (kg/m3)	1330		No. 1 LINER (mm)	152X218	
SIZE (mm)			VISCOSITY (cP)	47		No. 1 SPM	90	
TYPE			pH	9.5		No. 2 LINER (mm)	152X218	
SERIAL No.			PV (mPa S)	19		No. 2 SPM	90	
NOZZLES (mm)			YP (Pa)	5		VOLUME (m3/min.)	2.13	
DEPTH IN (m)			GELS (Pa)	115		PRESSURE (kPa)	2280	
METERS (m)			SAND (%)	0.004		D.P. ANN. VEL. (m/min.)		
HOURS			SOLIDS (%)	0.17		D.C. ANN. VEL. (m/min.)		
WOB (1000 lbs)			FILTER CAKE (mm desc.)	2		D.C. ANN. VEL. (m/min.)		
R.P.M.			WATER LOSS (cc)	11.5		SOLIDS CONTROL		
CONDITION			CHLORIDES (mg/l)	440		SHAKER SCREENS	110x140	
			MBT	80		PUMP OUT (m3/stk)	0.01181	

DRILLING ASSEMBLY

ITEMS	O.D.	I.D.	Y.J. TYPE
Bit Sub			
Shock sub			
3 Drill Collars			
Jars			
3 Drill Collars			
XO			
12 Drill Collars			

BHA LENGTH m
HOOK LOAD 40000 daN
AVAILABLE WOB daN
Joints DP. on Reels: 180
In String: 45
TOTAL: 235

MUD ADDITIVES

Secs	Product	Cost Per/ft
-3	Caustic	\$ 77.00
35	Bentonite	\$ 15.00
2	Soda Ash	\$ 40.00
-8	Barite	\$ 18.00
	XCD	\$ 845.00
1	Aquespec	\$ 390.00
	Desco	\$ 112.00
2	Lignite	\$ 15.25
2	Sawdust	\$ 7.25
1	Service	\$ 350.00
Daily Mud Cost		\$ 1,030.00
Total Mud Cost		\$ 42,508.00

O.F. (kg/m3)
U.F. (kg/m3)
VOL. (l/min.)
HOURS

D. SILT	CENT.

SURVEYS

DIRECTION

m		
m		
m		
m		
m		
m		
m		

DRILLING OPERATIONS		EVALUATION		PROBLEMS		SUMMARY	
DRILLING		CORING		RIG REPAIR		DRILL OP	
TRIPPING		LOGGING		LOST CIRC.		EVALUATION	
RIG SERVICE	0.75	TESTING		RFAM & WASH		PROBLEMS	
SURVEY		CIRC. SAMPLE		WORK PIPE		TOTAL	5.25
SLIP & CUT		HANDLE TOOLS		FISH		WEATHER	Clear
COND. MUD	2.00	TRIP		TRIP		TEMPERATURE	-35 C
NIPPLE UP/DN	7.00	REAM RATHOLE		Safety Meeting	0.50	ROADS	Good
RUN CASING	8.00			Circ. & WOC	5.25		
CEMENT	2.50						
HANDLE TOOLS							
				Total Hours	24.00		

Time

24 Hour Summary

Time

Log No 1 Compensated Neutron Litho Density 587.9 to 183 mKb Drillers depth 589 mKb
Log No 2 Borehole Compensated Sonic 574.6 to 25 Mkb Loggers Depth 588.2 mKb
Log No 3 Phasor Induction SFL 585.05 to 183 mKb
Ran 45 joints of 244.5 mm Prudential 53.8 Kg/m, K55, LT&C new casing. Overall length 590.4 m. Landed at 589 mKb
Rig serviced. Function tested annular
Circulated, conditioned mud and waited on Dowell Schlumberger cementers (Truck broke down)
Conducted a safety meeting with Dowell cement crew, Drilling rig crew on safety and cementing procedures
Rig to cement and cemented with 18.9 tonnes (17.3 m3, 20% excess) RFC with 1% CACL2, .2% D46, 5 Litre/tonne F52-1
Good returns. Estimated cement top 77 mKb
Tear out 330 mm BOP's to set slips

NOTE: Plug down 98101114 @ 2300 hours

(FORMATIONS) Franklin Mountain (525 mKb)

SIGNED BY: Lee Brazel

MOBILE No.: 403-282-9301

Ranger Oil Limited

DAILY DRILLING REPORT



WELL NAME: RANGER NOTA CREEK C-17 DATE: 97/01/14 REPORT NO.: 21
 DEPTH: 589 mKS PROGRESS: m FORMATION: Franklin Mountain
 OPERATIONS AT 08:00 HOURS: Run 244 mm Casing
 CONTRACTOR/RIG SUPT.: Shehtah Drilling Limited Neil Speers CO. SUPERVISOR: Lee Brazel
 DAILY COST: \$ 64,726.84 CUM. COST: \$ 1,805,092.44 AFF NO: F7D-028

WELL CONTROL

DAILY RIG CHECK: X DAILY BOP CHECK: X R.S.S.P.: 1900 kPa @: 100 SPM
 TRIP RECORDS: CALCULATED HOLE FILL m3 ACTUAL HOLE FILL: m3
 BOP DRILLS: CONDUCTED WHILE Drilling WELL SECURED IN 2 MIN.
 CONDUCTED AT 97/01/08 at 2000 HRS. CREW PERFORMANCE fair
 DAYS SINCE BOP DRILL (EACH CREW): 4 MAXIMUM CASING HOLD BACK 1470 kPa

DRILLING PARAMETERS

BIT PERFORMANCE		MUD PROPERTIES		PUMPS	
BIT NUMBER	<u>3</u>	WEIGHT (kg/m3)	<u>1335</u>	No. 1 LINER (mm)	<u>152X218</u>
SIZE (mm)	<u>311</u>	VISCOSITY (m)	<u>74</u>	No. 1 SPM	<u>110</u>
TYPE	<u>GT 28</u>	pH	<u>10</u>	No. 2 LINER (mm)	<u>152X218</u>
SERIAL No.	<u>H89YB</u>	PV (mPa S)	<u>24</u>	No. 2 SPM	<u>110</u>
NOZZLES (mm)	<u>17.5</u>	YP (Pa)	<u>13</u>	VOLUME (m3/min.)	<u>2.80</u>
DEPTH IN (m)	<u>588</u>	GELS (Pa)	<u>737</u>	PRESSURE (kPa)	<u>7350</u>
METERS (m)	<u>3</u>	SAND (%)	<u>0.006</u>	D.P. ANN. VEL. (m/min.)	<u>40</u>
HOURS	<u>2.75</u>	SOLIDS (%)	<u>0.17</u>	D.C. ANN. VEL. (m/min.)	<u>90</u>
100 (1000 ft)	<u>12000</u>	FILTER CAKE (mm disc.)	<u>2</u>	D.C. ANN. VEL. (m/min.)	<u>70</u>
R.P.M.	<u>40</u>	WATER LOSS (cc)	<u>12</u>	SOLIDS CONTROL	
CONDITION	<u>2-3-NO</u>	CHLORIDES (mg/l)	<u>400</u>	SHAKER SCREENS	<u>110x140</u>
	<u>A-E-1-NO</u>	MBT	<u>80</u>	PUMP OUT (m3/gal)	<u>0.01181</u>

DRILLING ASSEMBLY

ITEMS	O.D.	I.D.	T.J. TYPE	MUD ADDITIVES			D. SILT. CENT.	
BIT	<u>311</u>		<u>168 Reg</u>	Sacks	Product	Cost Per Sak	O.F. (kg/m3)	
Bit Sub	<u>228</u>	<u>78</u>	<u>168 Reg</u>	<u>2</u>	<u>Caustic</u>	<u>\$ 77.00</u>	U.F. (kg/m3)	
Shock sub	<u>228</u>	<u>78</u>	<u>168 Reg</u>	<u>20</u>	<u>Bentonite</u>	<u>\$ 19.00</u>	VOL. (l/min.)	
3 Drill Collars	<u>228</u>	<u>78</u>	<u>168 Reg</u>		<u>Soda Ash</u>	<u>\$ 40.00</u>	HOURS	
Jars	<u>228</u>	<u>78</u>	<u>168 Reg</u>	<u>102</u>	<u>Barite</u>	<u>\$ 18.00</u>		
3 Drill Collars	<u>228</u>	<u>78</u>	<u>168 Reg</u>		<u>XCD</u>	<u>\$ 845.00</u>	SURVEYS	DIRECTION
XO	<u>171</u>	<u>88</u>	<u>127 H80</u>		<u>Aquepac</u>	<u>\$ 380.00</u>	m	
12 Drill Collars	<u>171</u>	<u>88</u>	<u>127 H80</u>		<u>Desco</u>	<u>\$ 112.00</u>	m	
BHA LENGTH	<u>181</u>		<u>m</u>	<u>1</u>	<u>Lignite</u>	<u>\$ 18.25</u>	m	
HOOK LOAD	<u>48</u>		<u>daN</u>		<u>Sawdust</u>	<u>\$ 7.25</u>	m	
AVAILABLE WOB	<u>20000</u>		<u>daN</u>	<u>1</u>	<u>Service</u>	<u>\$ 380.00</u>	m	
Joints DP, on Reels:	<u>190</u>				Daily Mud Cost	<u>\$ 2,855.25</u>	m	
In String:	<u>45</u>				Total Mud Cost	<u>\$ 41,478.00</u>	m	
TOTAL:	<u>235</u>						m	

DRILLING OPERATIONS		EVALUATION		PROBLEMS		SUMMARY	
DRILLING		CORING		RIG REPAIR		TODAY	CUM.
TRIPPING	<u>9.00</u>	LOGGING	<u>8.75</u>	LOST CIRC.		<u>24</u>	
RIG SERVICE	<u>0.75</u>	TESTING		REAM & WASH			
SURVEY		CIRC. SAMPLE		WORK PIPE			
SLIP & CUT		HANDLE TOOLS		FISH			
COND. MUD	<u>2.50</u>	TRIP		TRIP			
NIPPLE UP/DN		REAM RATHOLE		Safety Meeting	<u>0.25</u>		
RUN CASING	<u>1.25</u>						
CEMENT							
HANDLE TOOLS	<u>1.50</u>						
				Total Hours	<u>24.00</u>		

Time	24 Hour Summary	Time
Tripped out to log		
Rig serviced. Visually inspect crown (water table, crown timbers)		
Rig to log and log with Schlumberger		
Rig serviced. Function tested blind rams		
Made up BHA and tripped in for clean out trip		
Circulated and conditioned mud to run 244 mm casing		
Rig serviced and function tested pipe upper pipe rams		
Tripped out to run 244 mm casing		
Rig to run casing		
Conducted an safety meeting with tong hand, drill crew, welder		
Run casing 244 mm casing		

NOTE: Safety meeting with Brent Harrison, Don Sorkimo, Terry Montgomery, Shehtah rig manger and field superintendent

FORMATIONS) Franklin Mountain (525 mKb)

SIGNED BY: Lee Brazel

MOBILE No.: 403-282-8301

Ranger Oil Limited

DAILY DRILLING REPORT



WELL NAME:	RANGER NOTA CREEK C-17		DATE:	97/01/12	REPORT NO.:	19
DEPTH:	588	mKB	PROGRESS:	28	m	FORMATION: Franklin Mountain
OPERATIONS AT 08:00 HOURS:			Trip for bit			
CONTRACTOR/RIG SUPT.:			Shekiah Drilling Limited		Nell Speers	
DAILY COST:			\$	45,688.50	CUM. COST:	\$ 1,714,081.00
					AFE NO.	E70-029

WELL CONTROL

DAILY RIG CHECK: X DAILY BOP CHECK: X R.S.S.P.: 2300 kPa @: 110 SPM
TRIP RECORDS: CALCULATED HOLE FILL m3 ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE Drilling WELL SECURED IN MIN.
CONDUCTED AT 97/01/09 at 2000 HRS. CREW PERFORMANCE fair
DAYS SINCE BOP DRILL (EACH CREW): 2 MAXIMUM CASING HOLD BACK 1500 kPa

DRILLING PARAMETERS

BIT PERFORMANCE		MOD PROPERTIES		PUMPS	
BIT NUMBER	2	WEIGHT (kg/m3)	1335	No. 1 LINER (mm)	152X216
SIZE (mm)	311	VISCOSITY (cP)	54	No. 1 SPM	110
TYPE	GT 28	pH	9	No. 2 LINER (mm)	152X216
SERIAL No.	H90YB	PV (mPa S)	21	No. 2 SPM	110
NOZZLES (mm)	15.9	YP (Pa)	9	VOLUME (m3/min.)	2.60
DEPTH IN (m)	285	GELS (Pa)	1.523	PRESSURE (kPa)	7350
METERS (m)	301	SAND (%)	0.005	D.P. ANN. VEL. (m/min.)	40
HOURS	100	SOLIDS (%)	0.18	D.C. ANN. VEL. (m/min.)	50
WOB (1000 Dyn)	20000	FILTER CAKE (mm desc.)	2	D.C. ANN. VEL. (m/min.)	70
R.P.M.	50	WATER LOSS (cc)	11.5	SOLIDS CONTROL	
CONDITION	8-9-BT	CHLORIDES (mg/l)	450	SHAKER SCREENS	110x140
	A-E-1-RG	MBT	57	PUMP OUT (m3/stk)	0.0118

DRILLING ASSEMBLY

ITEMS		O.D.	I.D.	T.J. TYPE	MUD ADDITIVES					O.SILT.	CENT
BIT	311		188 Reg	Sacks	Product	Cost Per Sak	O.F. (kg/m3)				
Bit Sub	228	76	168 Reg	2	Causic	\$ 77.00	U.F. (kg/m3)				
Shock sub	228	76	168 Reg	8	Bentonite	\$ 15.00	VOL (l/min.)				
3 Drill Collars	228	76	168 Reg		Soda Ash	\$ 40.00	HOURS				
Jars	228	76	168 Reg		Barite	\$ 18.00					
3 Drill Collars	228	76	168 Reg		XCD	\$ 845.00					
XO	171	66	127 H80	1	Aquepac	\$ 390.00					
12 Drill Collars	171	66	127 H80		Desco	\$ 112.00					
BHA LENGTH	171	m		10	Lignite	\$ 15.25					
HOOK LOAD	49	daN			Sawdust	\$ 7.28					
AVAILABLE WOB	24000	daN		1	Service	\$ 350.00					
Joint DP. on Racks	193			Daily Mud Cost		\$ 1,168.50					
In String	42			Total Mud Cost		\$ 37,451.00					
TOTAL	235			Time Break Down							

DRILLING OPERATIONS	EVALUATION	PROBLEMS	SUMMARY
---------------------	------------	----------	---------

DRILLING	16.75	CORING	_____	RIG REPAIR	_____	<table><tr><th>TODAY</th><th>CUM.</th></tr><tr><td>24</td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td colspan="2">Clear</td></tr><tr><td colspan="2">-44 C</td></tr><tr><td colspan="2">Good</td></tr></table>	TODAY	CUM.	24								Clear		-44 C		Good	
TODAY	CUM.																					
24																						
Clear																						
-44 C																						
Good																						
TRIPPING	4.50	LOGGING	_____	LOST CIRC.	_____																	
RIG SERVICE	0.50	TESTING	_____	REAM & WASH	_____																	
SURVEY	0.75	CIRC. SAMPLE	_____	WORK PIPE	_____																	
SLIP & CUT		HANDLE TOOLS	_____	FISH	_____																	
COND. MUD	1.50	TRIP	_____	TRIP	_____																	
NIPPLE UP/DN		REAM RATHOLE	_____		_____																	
RUN CASING	_____		_____		_____																	
CEMENT	_____		_____		_____																	
HANDLE TOOLS	_____		_____		_____																	
				Total Hours	24 00																	

Time 24 Hour Summary

Drilled 311 mm 560 to 562 mKb
Rig serviced. Function tested bottom pipe rams
Drilled 311 mm 562 to 577 mKb
Circulate & survey
Rig serviced. Function tested hydril
Drilled 311 mm 577 to 586 mKb
Circulate hole clean
Tripped for bit

(FORMATIONS) Franklin Mountain (525 mks)

SIGNED BY: Loe Brazel MOBILE No.: 403-282-8301



Ranger Oil Limited
DAILY DRILLING REPORT

WELL NAME: RANGER NOTA CREEK C-17 DATE: 97/01/11 REPORT NO.: 18
DEPTH: 580 mKB PROGRESS: 50 m FORMATION: Bear Rock
OPERATIONS AT 08:00 HOURS: Drill 311 mm main hole
CONTRACTOR/RIG GUPT.: Shehlah Drilling Limited Nail Spears CO SUPERVISOR: Lee Brazel
DAILY COST: \$ 35,089.80 CUM. COST: \$ 1,868,763.39 AFE NO: E7D-029

WELL CONTROL
DAILY RIG CHECK: X DAILY BOP CHECK: X R S S P.: 2300 kPa @: 110 SPM
TRIP RECORDS: CALCULATED HOLE FILL m3 ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE Drilling WELL SECURED IN 2 MIN.
CONDUCTED AT 97/01/09 at 2000 HRS. CREW PERFORMANCE fair
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK 1500 kPa

BIT PERFORMANCE			MUD PROPERTIES			PUMPS		
BIT NUMBER	2		WEIGHT (kg/m3)	1310		No. 1 LINER (mm)	152X218	
SIZE (mm)	311		VISCOSITY (s/l)	82		No. 1 SPM	100	
TYPE	GT 28		pH	9		No. 2 LINER (mm)	152X218	
SERIAL No	H80Y8		PV (mPa S)	21		No. 2 SPM	100	
NOZZLES (mm)	16.9		YP (Pa)	10		VOLUME (m3/min.)	2.36	
DEPTH IN (m)	285		GELS (Pa)	2138		PRESSURE (kPa)	7350	
METERS (m)	225		SAND (%)	0.006		D.P. ANN. VEL. (m/min.)	34	
HOURS	83.25		SOLIDS (%)	0.17		D.C. ANN. VEL. (m/min.)	48	
WOB (1000 lbs)	20000		FILTER CAKE (mm disc.)	2		D.C. ANN. VEL. (m/min.)	89	
R.P.M.	50		WATER LOSS (cc)	11.8		SOLIDS CONTROL		
CONDITION			CHLORIDES (mg/l)	480		SHAKER SCREENS	110X140	
			MST	57		PUMP OUT (m3/sk)	0.01181	
			Temp	42				

DRILLING ASSEMBLY				MUD ADDITIVES				D. SILT. CENT.	
ITEMS	O.D.	I.D.	T.J. TYPE	Sacks	Product	Cost Per/sk	O.F. (kg/m3)		
BIT	311		168 Reg		Caustic	\$ 77.00	U.F. (kg/m3)		
Bit Sub	228	76	168 Reg	2	Bentonite	\$ 15.00	VOL. (l/min.)		
Shock sub	228	76	168 Reg	24	Soda Ash	\$ 40.00	HOURS		
3 Drill Collars	228	76	168 Reg		Barite	\$ 18.00			
Jars	228	76	168 Reg		XCD	\$ 845.00			
3 Drill Collars	228	76	168 Reg		Aquapac	\$ 390.00			
XO	171	68	127 H90		Desco	\$ 112.00			
1 1/2 Drill Collars	171	68	127 H90		Lignite	\$ 18.25			
BHA LENGTH	171	m		10	Sawdust	\$ 7.25			
HOOK LOAD	48000	daN		1	Service	\$ 350.00			
AVAILABLE WOB	24000	daN			Daily Mud Cost	\$ 1,018.50			
Joints DP. on Racks:	195				Total Mud Cost	\$ 38,285.00			
In String:	40								
TOTAL:	235								

DRILLING OPERATIONS		EVALUATION		PROBLEMS		SUMMARY	
DRILLING	21.50	CORING		RIG REPAIR	1	DRILL OP	
TRIPPING		LOGGING		LOST CIRC.		EVALUATION	
RIG SERVICE	0.50	TESTING		REAM & WASH		PROBLEMS	
SURVEY	1.00	CIRC. SAMPLE		WORK PIPE		TOTAL	
SLIP & CUT		HANDLE TOOLS		FISH		WEATHER	Clear
COND. MUD		TRIP		TRIP		TEMPERATURE	-40 C
NIPPLE UP/DN		REAM RATHOLE				ROADS	Good
RUN CASING							
CEMENT							
HANDLE TOOLS							
				Total Hours	24.00		

Time	24 Hour Summary	Time
Drilled 311 mm 510 to 521 mKb		
Circulate & survey		
Rig serviced. Function tested hydri		
Drilled 311 mm 521 to 528 mKb		
Check rig equipment for pressure drop		
Rig serviced. Function tested bottom pipe rams		
Drilled 311 mm 528 to 549 mKb		
Circulate & survey		
Drilled 311 mm 548 to 580 mKb		

NOTE: Drilling almost 100% anhydrite throughout
(FORMATIONS) Bear Rock (315 mKb)

SIGNED BY: Lee Brazel

MOBILE No.: 403-282-9301

Wellname : RANGER OIL et al Nota Creek C-17
 Location : Nota Creek, N.W.T.
 Date : 01-08-98
 Contact : Peter Goetz (403) 232 5291

AM REPORT # 16

Depth @ 06:00 hrs : 364 m Progress last 24 hrs : 63 m

Rig activity : Drill 311mm hole.
 Last 24 hrs : Drill 311mm hole from 301m-364m.
 Next 24 hrs : Drill new hole.

Drill fluid : Gel Chem
 Density: 1310 kg/m3 Vis: 79 Wl: -- ph: 9.0

Surveys : 1 degree @ 330m.

Remarks : Drill 311mm hole from 301m-318m. Anhydrite increases Ca+ concentration in mud from 290m. Counter measures result in mud screen and shaker problems. Work on mud system and mud pumps. Circulate out high viscosity mud, bleed off pumps. Drill 311mm hole from 318m to 364m.

*Note: Progressively increasing viscosity of mud from 290m to 318m suggest presence of Anhydrite. Samples of that interval do not contain visible anhydrite. Increased ph at 318m reduced solubility of anhydrite, which then formed about 30% and higher of sample volume until 364m @ 06:00hrs.

K.B. 172.22 m

Lithology : DOLOSTONE, brn to tan, mx - f, hard, blk, plty ip, sl calc, com wh - clear ca crystals in fossil molds. Live oil in cuttings 305m-310m with strong yellow, weak purpleish to blueish fluorescence and strong yellow cut.
 DOLOSTONE, lt gy, plty, hd, opaque to translucent, tr pyr, com dol'.
 ANHYDRITE, lt gr -wh -lt brn, opaque -translucent -clear, lustre, layered ip, multi crystal facets, streaks of pyrite.

Tops :	Formation	Depth	Subsea
	Imperial	Surface	--
	Canol/Hare Indian	54	118.22
	Hume	147	25.22
	Headless	208	- 35.78
	Landry (not recognized)	--	--
	Arnica (changed from 258m)	290	- 117.78
	Bear Rock (no breccias?)	315	- 142.78

Background Gas : 5 units

Peaks : 34

STRIP LOG INTERVAL : 301 m to 364 m

Geologist : H. Wennekers
 Phone : (403) 282 9310

Ranger Oil Limited

DAILY DRILLING REPORT



WELL NAME: RANGER NOTA CREEK C-17 DATE: 97/01/08 REPORT NO.: 15
 DEPTH: 384 mKB PROGRESS: 63 m FORMATION: Bear Rock
 OPERATIONS AT 08.00 HOURS: Drill 311 mm ahead
 CONTRACTOR/RIG SUPT.: Shehah Drilling Limited Neil Speers CO. SUPERVISOR: Lee Brazel
 DAILY COST: \$ 42,384.67 CUM. COST: \$ 1,569,143.90 AFE NO: E70-029

WELL CONTROL
 DAILY RIG CHECK: x DAILY BOP CHECK: x R.S.S.P.: 2400 kPa @: 110 SPM
 TRIP RECORDS: CALCULATED HOLE FILL: m3 ACTUAL HOLE FILL: m3
 BOP DRILLS: CONDUCTED WHILE Connection WELL SECURED IN 2 MIN.
 CONDUCTED AT 97/01/08 at 1145 HRS. CREW PERFORMANCE fair
 DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK 1500 kPa

BIT PERFORMANCE			MUD PROPERTIES			PUMPS		
BIT NUMBER	<u>2</u>		WEIGHT (kg/m3)	<u>1310</u>		No. 1 LINER (mm)	<u>152X218</u>	
SIZE (mm)	<u>311</u>		VISCOSITY (cP)	<u>74</u>		No. 1 SPM	<u>110</u>	
TYPE	<u>GT 28</u>		pH	<u>8.5</u>		No. 2 LINER (mm)	<u>152X216</u>	
SERIAL No.	<u>H90YB</u>		PV (mPa s)	<u>23</u>		No. 2 SPM	<u>110</u>	
NOZZLES (mm)	<u>15.9</u>		YP (Pa)	<u>13</u>		VOLUME (m3/min.)	<u>2.60</u>	
DEPTH IN (m)	<u>384</u>		GELS (Pa)	<u>3.5/38</u>		PRESSURE (kPa)	<u>9800</u>	
METERS (m)	<u>79</u>		SAND (%)	<u>0.01</u>		D.P. ANN. VEL. (m/min.)	<u>38</u>	
HOURS	<u>25.25</u>		SOLIDS (%)			D.C. ANN. VEL. (m/min.)	<u>48</u>	
WOB (100 lbf)	<u>15000</u>		FILTER CAKE (mm desc.)	<u>2</u>		D.C. ANN. VEL. (m/min.)	<u>71</u>	
R.P.M.	<u>70</u>		WATER LOSS (cc)	<u>8.4</u>		SOLIDS CONTROL		
CONDITION			CHLORIDES (mg/l)	<u>180</u>		SHAKER SCREENS	<u>110x110</u>	
			MBT	<u>32</u>		PUMP OUT (m3/sec)	<u>0.01181</u>	
			Temp	<u>44</u>				

DRILLING ASSEMBLY

ITEMS	O.D.	I.D.	T.J. TYPE	MUD ADDITIVES			D. SILT. CENT.	
BIT	<u>311</u>		<u>188 Reg</u>	Sacks	Product	Cost Per sack	O.F. (kg/m3)	
Bit Sub	<u>228</u>	<u>76</u>	<u>188 Reg</u>	<u>8</u>	<u>Causic</u>	<u>\$ 77.00</u>	U.F. (kg/m3)	
Shock sub	<u>228</u>	<u>76</u>	<u>188 Reg</u>	<u>8</u>	<u>Bentonite</u>	<u>\$ 15.00</u>	VOL. (l/min.)	
3 Drill Collars	<u>228</u>	<u>76</u>	<u>188 Reg</u>	<u>8</u>	<u>Soda Ash</u>	<u>\$ 40.00</u>	HOURS	
Jars	<u>228</u>	<u>76</u>	<u>188 Reg</u>	<u>80</u>	<u>Berite</u>	<u>\$ 18.00</u>		
3 Drill Collars	<u>228</u>	<u>76</u>	<u>188 Reg</u>	<u>1</u>	<u>XCD</u>	<u>\$ 845.00</u>	SURVEYS	
XO	<u>171</u>	<u>68</u>	<u>127 H90</u>		<u>Aquapac</u>	<u>\$ 390.00</u>	<u>330</u> m	<u>1</u> °
12 Drill Collars	<u>171</u>	<u>68</u>	<u>127 H90</u>	<u>19</u>	<u>Desco</u>	<u>\$ 112.00</u>	m	
BHA LENGTH	<u>171</u>	m		<u>10</u>	<u>Lignite</u>	<u>\$ 16.25</u>	m	
HOOK LOAD	<u>38000</u>	daN					m	
AVAILABLE WOB	<u>24000</u>	daN		<u>1</u>	<u>Service</u>	<u>\$ 350.00</u>	m	
Joints DP. on Racks:	<u>218</u>				Daily Mud Cost	<u>\$ 5,531.50</u>	m	
In String:	<u>19</u>				Total Mud Cost	<u>\$ 33,585.00</u>	m	
TOTAL:	<u>235</u>						m	

DRILLING OPERATIONS		EVALUATION		PROBLEMS		SUMMARY	
DRILLING	<u>18.50</u>	CORING		RIG REPAIR		TODAY	CUM.
TRIPPING		LOGGING		LOST CIRC.		<u>18.25</u>	
RIG SERVICE	<u>0.25</u>	TESTING		REAM & WASH			
SURVEY	<u>0.50</u>	CIRC. SAMPLE		WORK PIPE		<u>4.75</u>	
SLIP & CUT		HANDLE TOOLS		FISH			
COND. MUD		TRIP		TRIP			
NIPPLE UP/ON		REAM RATHOLE		COND. MUD	<u>4.75</u>		
RUN CASING							
CEMENT							
HANDLE TOOLS							
				Total Hours	<u>24.00</u>		

Time 24 Hour Summary Time
 Drilled 301 to 333 mKb
 Circulated And conditioned mud as required to combat anhydrate and flip mud system
 Surveyed at 330 mKb
 Drilled 333 to 342 mKb
 Rig serviced and function pipe rams.
 Drilled 342 to 384 mKb

NOTE: Anhydrate stringers beginning at 318 mKb

(FORMATIONS) Bear Rock

SIGNED BY: Lee Brazel

MOBILE No.: 403-282-9301