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ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 23-Mar-13	REPORT 26	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 27	FORMATION Hume		WEATHER CONDITIONS Partial Cloud -23					
06:00 STATUS: Run 177.8mm csg											
0600 DEPTH 2146	LAST REPORT 2146	PROGRESS 0	BIT #	BIT Type	BIT SIZE		TOTAL MTRS		Bit Hrs		
DRILLING FLUID Versaclean	DEN (kg/m^3) 990	VISCOSITY 93	WATER LOSS	pH	DAILY DRLG HRS		ROP (m/hr)				
OPERATIONS SUMMARY - PAST 24 HOURS											
Log run#4 CMR, log run#5 RST (1st attempt failed) POOH and switch components & re-run RST, run#7 USIT log, POOH, lay down logging tools and rig out Schlumberger, rig in lay down truck and pick-up & run 177.8mm casing.											
OPERATIONS FORECAST - NEXT 24 HOURS											
Run casing and cement same.											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)					
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology	
FORMATION / MARKER TOPS											
FORMATION	PROGNOSIS		SAMPLE			FORMATION	PROGNOSIS		SAMPLE		
MARKER TOPS	TVD	SS	MD	TVD	SS	MARKER TOPS	TVD	SS	MD	TVD	SS
Quaternary	5	281									
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Artic Red	792	-505	829.0	829.0	-543						
Sans Sault	962	-675	988.0	988.0	-702						
Martin House	1037	-750.0	1138.0	1138.0	-852						
Imperial	1112	-825.0	1172.5	1172.5	-886						
Upper Canol	1892	-1605.0	1931.0	1931.0	-1645						
Lower Canol	1927	-1640.0	1966.0	1966.0	-1680						
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-1795.0	2093.5	2093.5	-1807						
TD	2132	-1845.0	2146.0	2146.0	-1859						
COMMENTS											

ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA					ConocoPhillips			
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 22-Mar-13	REPORT 25	REPORTING TO Dave Oakley			WELLSITE GEOLOGIST Dave Lawrence	CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13		DAY No. 26	FORMATION Hume		WEATHER CONDITIONS Partial Cloud -30				
06:00 STATUS: Log with Schlumberger											
0600 DEPTH 2146	LAST REPORT 2146	PROGRESS 0		BIT #	Bit Type	BIT SIZE		TOTAL MTRS	Bit Hrs		
DRILLING FLUID Versaclean	DEN (kg/m^3) 990	VISCOSITY 93		WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)				
OPERATIONS SUMMARY - PAST 24 HOURS											
Log with Schlumberger, run# 2 OBMI, GPIT, PPC, MISP, PBC, EDTC, then run#3 UBI											
OPERATIONS FORECAST - NEXT 24 HOURS											
Log with Schlumberger, run in with Run#4 CMR											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)					
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology	
FORMATION / MARKER TOPS											
FORMATION	PROGNOSIS		SAMPLE			FORMATION	PROGNOSIS		SAMPLE		
	TVD	SS	MD	TVD	SS		MARKER TOPS	TVD	SS	MD	TVD
MARKER TOPS											
Quaternary	5	281									
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Artic Red	792	-505	829.0	829.0	-543						
Sans Sault	962	-675	988.0	988.0	-702						
Martin House	1037	-750.0	1138.0	1138.0	-852						
Imperial	1112	-825.0	1172.5	1172.5	-886						
Upper Canol	1892	-1605.0	1931.0	1931.0	-1645						
Lower Canol	1927	-1640.0	1966.0	1966.0	-1680						
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-1795.0	2093.5	2093.5	-1807						
TD	2132	-1845.0	2146.0	2146.0	-1859						
COMMENTS											

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ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 21-Mar-13	REPORT 24	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 25	FORMATION Hume			WEATHER CONDITIONS Partial Cloud -37				
06:00 STATUS: Log with Schlumberger											
0600 DEPTH 2146	LAST REPORT 2146	PROGRESS 0	BIT #	Bit Type		BIT SIZE	TOTAL MTRS	Bit Hrs			
DRILLING FLUID Versaclean	DEN (kg/m^3) 990	VISCOSITY 93		WATER LOSS		pH	DAILY DRLG HRS	ROP (m/hr)			
OPERATIONS SUMMARY - PAST 24 HOURS											
POOH sideways, rig out lay down truck, pull wear bushing, lay down kelly & swivel, clean & prepare rig, rig up Schlumberger & log Run#1 AIT, lithoscanner, TLD, HGNS, GR, TLD2, finish run #1.											
OPERATIONS FORECAST - NEXT 24 HOURS											
Log with Schlumberger											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)					GAS SHOWS (Units, 100 Units = 1%)						
From 2108	To 2146	ROP 3.0	Max 110	Avg 55	Gross Lith. Limestone	From	To	Max	Prev.	Lithology	
FORMATION / MARKER TOPS											
FORMATION MARKER TOPS	PROGNOSIS		SAMPLE		FORMATION		PROGNOSIS		SAMPLE		
	TVD 5	SS 281	MD	TVD 20.0	SS 20.0	MARKER TOPS	TVD 265	SS	MD	TVD	SS
Quaternary											
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Arctic Red	792	-505	829.0	829.0	-543						
Sans Sault	962	-675	988.0	988.0	-702						
Martin House	1037	-750.0	1138.0	1138.0	-852						
Imperial	1112	-825.0	1172.5	1172.5	-886						
Upper Canol	1892	-1605.0	1931.0	1931.0	-1645						
Lower Canol	1927	-1640.0	1966.0	1966.0	-1680						
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-1795.0	2093.5	2093.5	-1807						
TD	2132	-1845.0	2146.0	2146.0	-1859						
COMMENTS											

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ConocoPhillips				DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME		LOCATION / UWI			CONTRACTOR			RIG #				
COPRC Mirror Lake N-20		300N206500126450			Beaver Drilling Ltd.			2				
DATE	REPORT	REPORTING TO		WELLSITE GEOLOGIST		CELL PHONE	RIG PHONE					
20-Mar-13	23	Dave Oakley		Dave Lawrence		403-536-6939	587-794-4599					
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION		WEATHER CONDITIONS						
286.5	281.3	2/25/13	24	Hume		Partial Cloud -32						
0600 STATUS:				POOH sideways to log								
0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs					
2146	2108	38	1RR	Reed MSR616	222	38	12.25					
DRILLING FLUID	DEN (kg/m^3)	VISCOSITY	WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)						
Versaclean	990	93			12.25	3.1						
OPERATIONS SUMMARY - PAST 24 HOURS												
Pick up drill collars, RIH, drill ahead to TD 2146m, circ btrms up. 5 stand wiper trip, circ & cond mud, POOH sideways to log												
OPERATIONS FORECAST - NEXT 24 HOURS												
POOH sideways, log with Schlumberger.												
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)						
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology		
2108	2146	3.0	110	55	Limestone							
FORMATION / MARKER TOPS												
FORMATION MARKER TOPS	PROGNOSIS			SAMPLE		FORMATION		PROGNOSIS		SAMPLE		
	TVD	SS	MD	TVD	SS	MARKER TOPS	TVD	SS	MD	TVD	SS	
Quaternary	5	281										
Little Bear	22	265	20.0	20.0	265							
Slater River	217	70	241.0	241.0	46							
Arctic Red	792	-505	829.0	829.0	-543							
Sans Sault	962	-675	988.0	988.0	-702							
Martin House	1037	-750.0	1138.0	1138.0	-852							
Imperial	1112	-825.0	1172.5	1172.5	-886							
Upper Canol	1892	-1605.0	1931.0	1931.0	-1645							
Lower Canol	1927	-1640.0	1966.0	1966.0	-1680							
Hare Indian	2037	-1750.0										
Bluefish Member	2062	-1775.0										
Hume	2082	-1795.0	2093.5	2093.5	-1807							
TD	2132	-1845.0	2146.0	2146.0	-1859							
COMMENTS												

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ConocoPhillips

DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

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0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
2108	2108	0	1RR	Reed MSR616	222	0	0
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY	WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)	
Versaclean	980	78			0	0.0	

OPERATIONS SUMMARY - PAST 24 HOURS

Wireline out and recover core#8, rig in wireline and wireline in with drill rod and attempt to seat, attempt to drill, drill rod did not seat, circ, POOH, lay down drill rod & core bbls, pick up drill bit & drill assembly & drill collars.

OPERATIONS FORECAST - NEXT 24 HOURS

RIH, drill to TD, circ, wiper trip, POOH sideways to log.

BACKGROUND TOTAL GAS (Units, 100 Units = 1%)

GAS SHOWS (Units, 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

TD will be 2146m.

ConocoPhillips		DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips					
WELL NAME COPRC Mirror Lake N-20		LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.		RIG # 2				
DATE 18-Mar-13	REPORT 21	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939	RIG PHONE 587-794-4599				
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 22	FORMATION Hume		WEATHER CONDITIONS Partial Cloud -25					
06:00 STATUS: Wireline out Core # 8											
0600 DEPTH 2108	LAST REPORT 2081	PROGRESS 27	BIT # 2C	Bit Type NOV CEPR5135	BIT SIZE 222	TOTAL MTRS 81	Bit Hrs 11.75				
DRILLING FLUID Versaclean	DEN (kg/m^3) 980	VISCOSITY 78	WATER LOSS		pH	DAILY DRLG HRS 3.75	ROP (m/hr) 7.2				
OPERATIONS SUMMARY - PAST 24 HOURS											
Wireline out and recover core#7, cut core # 8 and wireline out with same.											
OPERATIONS FORECAST - NEXT 24 HOURS											
Wireline out and recover core#8, wireline in drill rod and drill to TD.											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)					GAS SHOWS (Units, 100 Units = 1%)						
From 2081	To 2108	ROP 7.0	Max 225	Avg 150	Gross Lith. Shale & Limestone	From	To	Max	Prev.	Lithology	
FORMATION / MARKER TOPS											
FORMATION MARKER TOPS	PROGNOSIS		SAMPLE		FORMATION		PROGNOSIS		SAMPLE		
	TVD 5	SS 281	MD	TVD 20.0	SS 20.0	MARKER TOPS 265	TVD 46	SS -543	MD	TVD	SS
Quaternary											
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Artic Red	792	-505	829.0	829.0	-543						
Sans Sault	962	-675	988.0	988.0	-702						
Martin House	1037	-750.0	1138.0	1138.0	-852						
Imperial	1112	-825.0	1172.5	1172.5	-886						
Upper Canol	1892	-1605.0	1931.0	1931.0	-1645						
Lower Canol	1927	-1640.0	1966.0	1966.0	-1680						
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-1795.0	2093.5	2093.5	-1807						
TD	2132	-1845.0									
COMMENTS											
Weight of core indicates good recovery.											

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ConocoPhillips		DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA					ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20		LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2			
DATE 17-Mar-13	REPORT 20	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 21	FORMATION Canol		WEATHER CONDITIONS Partial Cloud -23					
		06:00 STATUS: Wireline out Core # 7									
0600 DEPTH 2081	LAST REPORT 2054	PROGRESS 27	BIT # 2C	Bit Type NOV CEPR5135	BIT SIZE 222	TOTAL MTRS 54	Bit Hrs 8				
DRILLING FLUID Versaclean		DEN (kg/m^3) 980	VISCOSITY 74		WATER LOSS	pH	DAILY DRLG HRS 3	ROP (m/hr) 9.0			
OPERATIONS SUMMARY - PAST 24 HOURS											
Wireline out and recover core#6, cut core # 7 and wireline out with same.											
OPERATIONS FORECAST - NEXT 24 HOURS											
Wireline out and recover core#7, cut core # 8 and wireline out with same.											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)					GAS SHOWS (Units, 100 Units = 1%)						
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology	
2054	2081	9.0	527	275	Shale						
FORMATION / MARKER TOPS											
FORMATION	PROGNOSIS		SAMPLE			FORMATION	PROGNOSIS		SAMPLE		
MARKER TOPS	TVD	SS	MD	TVD	SS	MARKER TOPS	TVD	SS	MD	TVD	SS
Quaternary	5	281									
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Artic Red	792	-505	829.0	829.0	-543						
Sans Sault	962	-675	988.0	988.0	-702						
Martin House	1037	-750.0	1138.0	1138.0	-852						
Imperial	1112	-825.0	1172.5	1172.5	-886						
Upper Canol	1892	-1605.0	1931.0	1931.0	-1645						
Lower Canol	1927	-1640.0	1966.0	1966.0	-1680						
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-17995.0									
TD	2132	-1845.0									
COMMENTS											
Weight of core indicates good recovery.											

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

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WELL NAME		LOCATION / UWI		CONTRACTOR		RIG #	
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2	
DATE	REPORT	REPORTING TO	WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE		
16-Mar-13	19	Dave Oakley	Dave Lawrence	403-536-6939	587-794-4599		
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS		
286.5	281.3	2/25/13	20	Canol	Clear -37		
06:00 STATUS: Wireline out Core # 6							
0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
2054	2027	27	2C	NOV CEPR5135	222	27	5
DRILLING FLUID	DEN (kg/m^3)	VISCOSITY	WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)	
Versaclean	980	78		5		5.4	

OPERATIONS SUMMARY - PAST 24 HOURS

RIH while drifting drill pipe, pick up 21 singles, circ & cond, pull 3 stands, rig in schlumberger and attempt to pull drill rod, pull drill rod on 2nd attempt, run in 3 stands and pump down inner bbls, cut core # 6 from 2027 - 2054m, Cut:27m, circ bmtms up, rig in Schlumberger and wireline out with Core # 6.

OPERATIONS FORECAST - NEXT 24 HOURS

Wireline out and recover core#6, cut core # 7 and wireline out with same.

BACKGROUND TOTAL GAS (Units, 100 Units = 1%)

GAS SHOWS (Units, 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

Weight of core indicates good recovery.

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

ConocoPhillips

WELL NAME		LOCATION / UWI		CONTRACTOR		RIG #
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2
DATE	REPORT	REPORTING TO	WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE	
15-Mar-13	18	Dave Oakley	Dave Lawrence	403-536-6939	587-794-4599	
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS	
286.5	281.3	2/25/13	19	Canol	Clear -37	
06:00 STATUS:		RIH while drifting drill pipe				

0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
2027	2027	0	1C	NOV PR513	222	135.5	16
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY	WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)	
Versaclean	1010	81					

OPERATIONS SUMMARY - PAST 24 HOURS

Trip out of hole & recover core#5 from drill pipe and outer core bbls, lay down collars and inspect, make up core BHA and circ clean, pull out of hole and install drill rod, trip in hole while drifting drill pipe. Current trip depth is 1561 meters.

OPERATIONS FORECAST - NEXT 24 HOURS

Finish tripping in hole, circ hole clean, wireline out drill rod, cut core#6 and wireline out of hole.

BACKGROUND TOTAL GAS (Units. 100 Units = 1%)

GAS SHOWS (Units, 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

Estimate almost full recovery from Core#5.

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

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WELL NAME		LOCATION / UWI		CONTRACTOR		RIG #
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2
DATE	REPORT	REPORTING TO		WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE
13-Mar-13	16	Dave Oakley		Dave Lawrence	403-536-6939	587-794-4599
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS	
286.5	281.3	2/25/13	17	Canol	Partial Cloud -25	
06:00 STATUS:		Recover Core#4				

0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
2000	1973	27	1C	NOV PR513	222	108.5	12.5
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY		WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)
Versaclean	970	72				3.75	7.2

OPERATIONS SUMMARY - PAST 24 HOURS

Lay down Core#3, pull 4 stands, circ btrms up, pump down inner bbls, cut core#4 from 1973 - 2000m, circ btrms up, pull 3 stands, rig in wireline and wireline core# 4 out of hole and recover same.

OPERATIONS FORECAST - NEXT 24 HOURS

Finish recover core#4, pump down inner bbls and cut core#5 and recover same, pump down new inner bbls and cut core# 6

BACKGROUND TOTAL GAS (Units. 100 Units = 1%)

GAS SHOWS (Units. 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

Core weight indicates good recovery

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

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WELL NAME		LOCATION / UWI		CONTRACTOR		RIG #
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2
DATE	REPORT	REPORTING TO	WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE	
12-Mar-13	15	Dave Oakley	Dave Lawrence	403-536-6939	587-794-4599	
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS	
286.5	281.3	2/25/13	16	Canol	Partial Cloud -23	
06:00 STATUS:		Recover Core#3				

0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
1973	1946	27	1C	NOV PR513	222	81.5	8.75
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY	WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)	
Versaclean	970	72			2.75	9.8	

OPERATIONS SUMMARY - PAST 24 HOURS

Wireline out & recover core # 2, pump down new inner bbls & cut core#3 from 1946 - 1973m, cut 27m, wireline out with core#3 & recover same.

OPERATIONS FORECAST - NEXT 24 HOURS

Finish recover core#3, pump down inner bbls and cut core#4 and recover same, pump down new inner bbls and cut core# 5

BACKGROUND TOTAL GAS (Units, 100 Units = 1%)

GAS SHOWS (Units, 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

Core weight indicates good recovery

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

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WELL NAME		LOCATION / UWID		CONTRACTOR		RIG #
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2
DATE	REPORT	REPORTING TO	WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE	
11-Mar-13	14	Dave Oakley	Dave Lawrence	403-536-6939	587-794-4599	
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS	
286.5	281.3	2/25/13	15	Canol	Light snow -17	
06:00 STATUS:		Wireline out Core#2				

0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
1946	1919	27	1C	NOV PR513	222	54.5	6
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY		WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)
Versaclean	970	72				3	9.0

OPERATIONS SUMMARY - PAST 24 HOURS

Wireline out & recover core # 1, pump down new inner bbls & cut core#2 from 1919 - 1927m, cut 27m, wireline out with core#2.

OPERATIONS FORECAST - NEXT 24 HOURS

Finish wireline out with core#2 and recover same, pump down new inner sleeves and cut core#3 anf recover same.

FORMATION / MARKER TOPS

COMMENTS

Core weight indicates good recovery

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CONOCO PHILLIPS CANADA

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0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
1919	1891.5	27	1C	NOV PR513	222	27	2.5
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY		WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)
Versaclean	970	72				2.5	10.0

OPERATIONS SUMMARY - PAST 24 HOURS

Pick up core BHA and RIH with same, tag bottom, 1.5m depth correction to 1891.5, retrieve drill rod with wireline, pump down inner sleeves, cut core#1, from 1891.5-1919m, cut 27.5m, circ btrms up, rig in wireline & wireline out with core#1.

OPERATIONS FORECAST - NEXT 24 HOURS

Finish wireline out with core#1 and recover same, pump down new inner sleeves and cut core#2 anf recover same.

BACKGROUND TOTAL GAS (Units. 100 Units = 1%)

GAS SHOWS (Units, 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

Core weight indicates good recovery

ConocoPhillips

DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

ConocoPhillips

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V10

WELL NAME		LOCATION / UWI		CONTRACTOR		RIG #
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2
DATE	REPORT	REPORTING TO	WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE	
09-Mar-13	12	Dave Oakley	Dave Lawrence	403-536-6939	587-794-4599	
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS	
286.5	281.3	2/25/13	13	Imperial	Partial Cloud -22	
06:00 STATUS:			Pick up core BHA			

0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
1890	1775	115	1	Reed MSR616M	222	1289	83.5
DRILLING FLUID	DEN (kg/m ³)	VISCOSITY		WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)
Versaclean	970	72			8		14.4

OPERATIONS SUMMARY - PAST 24 HOURS

Drill ahead & survey as required to corepoint 1890 meters, circ btms up, POOH, lay down directional tools, prepare to & pick up core bbls & BHA.

OPERATIONS FORECAST - NEXT 24 HOURS

Pick up core BHA, RIH, cut core#1 & recover same.

FORMATION / MARKER TOPS

COMMENTS

Last survey @ 1875.34m was 2.59 degrees, 38.89 AZ

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA



WELL NAME		LOCATION / UWI		CONTRACTOR		RIG #
COPRC Mirror Lake N-20		300N206500126450		Beaver Drilling Ltd.		2
DATE	REPORT	REPORTING TO	WELLSITE GEOLOGIST	CELL PHONE	RIG PHONE	
06-Mar-13	9	Dave Oakley	Dave Lawrence	403-536-6939	587-794-4599	
KB (m)	GL (m)	SPUD DATE	DAY No.	FORMATION	WEATHER CONDITIONS	
286.5	281.3	2/25/13	10	Martin House	Partial Cloud -31	
06:00 STATUS:		Drilling 222mm hole				

0600 DEPTH	LAST REPORT	PROGRESS	BIT #	Bit Type	BIT SIZE	TOTAL MTRS	Bit Hrs
1145	820	325	1	Reed MSR616M	222	544	33.25
DRILLING FLUID	DEN (kg/m^3)	VISCOSITY	WATER LOSS	pH	DAILY DRLG HRS	ROP (m/hr)	
Versaclean	990	62			19.5	17.0	

OPERATIONS SUMMARY - PAST 24 HOURS

Drill ahead & survey as required

OPERATIONS FORECAST - NEXT 24 HOURS

Drill ahead & survey as required.

BACKGROUND TOTAL GAS (Units, 100 Units = 1%)

GAS SHOWS (Units, 100 Units = 1%)

FORMATION / MARKER TOPS

COMMENTS

Last survey @ 1131.2m was 1.71 degrees, 79.41 AZ

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DAILY GEOLOGICAL REPORT
CONOCO PHILLIPS CANADA

ConocoPhillips

ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips							
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2					
DATE 04-Mar-13	REPORT 7	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599						
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13		DAY No. 8		FORMATION Slater River		WEATHER CONDITIONS Partial Cloud -23						
06:00 STATUS: Pick up dir tools														
0600 DEPTH 601		LAST REPORT 601		PROGRESS 0		BIT #		BIT TYPE		BIT SIZE		TOTAL MTRS		Bit Hrs
DRILLING FLUID		DEN (kg/m^3)		VISCOSITY		WATER LOSS		pH		DAILY DRLG HRS		ROP (m/hr)		
OPERATIONS SUMMARY - PAST 24 HOURS														
WOC, nipple down diverter, nipple up & pressure test, slip & cut 30m drill line, pick up directional tools.														
OPERATIONS FORECAST - NEXT 24 HOURS														
Pick up directional tools, RIH, drill out, drill ahead.														
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)								
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology				
FORMATION / MARKER TOPS														
FORMATION MARKER TOPS	PROGNOSIS		SAMPLE			FORMATION		PROGNOSIS		SAMPLE				
	TVD	SS	MD	TVD	SS	MARKER TOPS	TVD	SS	MD	TVD	SS			
Quaternary	5	281												
Little Bear	22	265	20.0	20.0	265									
Slater River	217	70	241.0	241.0	46									
Arctic Red	792	-505												
Sans Sault	962	-675												
Martin House	1037	-750.0												
Imperial	1112	-825.0												
Upper Canol	1892	-1605.0												
Lower Canol	1927	-1640.0												
Hare Indian	2037	-1750.0												
Bluefish Member	2062	-1775.0												
Hume	2082	-17995.0												
TD	2132	-1845.0												
COMMENTS														
Mudlogging gear rigged up and running OK.														

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V7

ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips			
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2	
DATE 03-Mar-13	REPORT 6	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599		
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 7	FORMATION Slater River			WEATHER CONDITIONS Partial Cloud -18			
06:00 STATUS: WOC										
0600 DEPTH 601	LAST REPORT 601	PROGRESS 0	BIT # 1A	Bit Type Varel HE04JMRS	BIT SIZE 311		TOTAL MTRS 601	Bit Hrs 54.5		
DRILLING FLUID Gel Chem	DEN (kg/m^3) 1100	VISCOSITY 73	WATER LOSS		pH 8	DAILY DRLG HRS 0	ROP (m/hr) 0.0			
OPERATIONS SUMMARY - PAST 24 HOURS										
POOH to log, lay down 9 inch drill collars, rig in Schlumberger and log AIT-DSI-PPC-GPIT, inspection by NEB, rig out schlumberger, rig to and run 244.5mm surface casing and cement same, WOC										
OPERATIONS FORECAST - NEXT 24 HOURS										
Nipple down diverter & nipple up BOPs & pressure test.										
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)				
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology
						601	601	170	50	Casing trip gas
FORMATION / MARKER TOPS										
FORMATION MARKER TOPS	PROGNOSIS		SAMPLE		FORMATION MARKER TOPS	PROGNOSIS		SAMPLE		
	TVD	SS	MD	TVD		SS	TVD	SS	MD	TVD
Quaternary	5	281								
Little Bear	22	265	20.0	20.0	265					
Slater River	217	70	241.0	241.0	46					
Arctic Red	792	-505								
Sans Sault	962	-675								
Martin House	1037	-750.0								
Imperial	1112	-825.0								
Upper Canol	1892	-1605.0								
Lower Canol	1927	-1640.0								
Hare Indian	2037	-1750.0								
Bluefish Member	2062	-1775.0								
Hume	2082	-17995.0								
TD	2132	-1845.0								
COMMENTS										
Logging run#2 cancelled over hole concerns.										

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ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 02-Mar-13	REPORT 5	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 6	FORMATION Slater River			WEATHER CONDITIONS Cloudy -22				
06:00 STATUS: POOH to log											
0600 DEPTH 601	LAST REPORT 529	PROGRESS 72	BIT # 1A	Bit Type Varel HE04JMRS	BIT SIZE 311		TOTAL MTRS 601	Bit Hrs 54.5			
DRILLING FLUID Gel Chem	DEN (kg/m^3) 1100	VISCOSITY 73	WATER LOSS		pH 8	DAILY DRLG HRS 7.75	ROP (m/hr) 9.3				
OPERATIONS SUMMARY - PAST 24 HOURS											
Drill ahead to 532m, mix pill for lost circ, build volume & work pipe, drill ahead and survey as required to 601m (surface TD), circ & cond mud & build volume, wiper trip to collars, RIH, hit bridge @ 469m, ream & clean to 540m, RIH, clean from 585 - 601m, circ & cond mud, POOH to log.											
OPERATIONS FORECAST - NEXT 24 HOURS											
POOH, rig to & log with Schlumberger, run casing											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)					GAS SHOWS (Units, 100 Units = 1%)						
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology	
525	601	9.0	125	105	Shale						
FORMATION / MARKER TOPS											
FORMATION MARKER TOPS	PROGNOSIS			SAMPLE		FORMATION MARKER TOPS	PROGNOSIS		SAMPLE		
	TVD	SS	MD	TVD	SS		TVD	SS	MD	TVD	SS
Quaternary	5	281									
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Arctic Red	792	-505									
Sans Sault	962	-675									
Martin House	1037	-750.0									
Imperial	1112	-825.0									
Upper Canol	1892	-1605.0									
Lower Canol	1927	-1640.0									
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-17995.0									
TD	2132	-1845.0									
COMMENTS											
Last survey @ 547m was 0.1 degrees											

ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 01-Mar-13	REPORT 4	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13		DAY No. 5		FORMATION Slater River		WEATHER CONDITIONS Clear -30			
06:00 STATUS: Drilling 311mm hole											
0600 DEPTH 529	LAST REPORT 368	PROGRESS 161		BIT # 1A	Bit Type Varel HE04JMRS	BIT SIZE 311		TOTAL MTRS 529	Bit Hrs 46.75		
DRILLING FLUID Gel Chem	DEN (kg/m^3) 1100	VISCOSITY 73		WATER LOSS		pH 8	DAILY DRLG HRS 13.75	ROP (m/hr) 11.7			
OPERATIONS SUMMARY - PAST 24 HOURS											
Drill ahead & survey as required to 444m, circ btms up, wiper trip to surface, check bit, bit OK, change out kelly spinner, RIH, clean up hole from 267 - 301m, RIH, drill ahead & survey as required											
OPERATIONS FORECAST - NEXT 24 HOURS											
Drill ahead to 9m prior to casing point, wiper trip, drill to surface TD, POOH, rig to & log surface hole with Schlumberger											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)					
From 365	To 525	ROP 12.0	Max 160	Avg 100	Gross Lith. Shale	From 502	To 504	Max 372	Prev. 100	Lithology Sand	
FORMATION / MARKER TOPS											
FORMATION MARKER TOPS	PROGNOSIS		SAMPLE		FORMATION		PROGNOSIS		SAMPLE		
	TVD 5	SS 281	MD 20.0	TVD 20.0	SS 265	MARKER TOPS	TVD 46	SS 46	MD 241.0	TVD 241.0	SS 241.0
Quaternary											
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Arctic Red	792	-505									
Sans Sault	962	-675									
Martin House	1037	-750.0									
Imperial	1112	-825.0									
Upper Canol	1892	-1605.0									
Lower Canol	1927	-1640.0									
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-17995.0									
TD	2132	-1845.0									
COMMENTS											
Last survey @ 509m was 0 degrees											

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ConocoPhillips		DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips	
WELL NAME COPRC Mirror Lake N-20		LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.		RIG # 2
DATE 28-Feb-13	REPORT 3	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence	CELL PHONE 403-536-6939	RIG PHONE 587-794-4599	
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 4	FORMATION Slater River	WEATHER CONDITIONS Partial Cloud -22		
		06:00 STATUS:		Drilling 311mm hole			
0600 DEPTH 368	LAST REPORT 300	PROGRESS 68	BIT # 1A	Bit Type Varel HE04JMRS	BIT SIZE 311	TOTAL MTRS 300	Bit Hrs 33
DRILLING FLUID Gel Chem	DEN (kg/m^3) 1050	VISCOSITY 78	WATER LOSS	pH 9	DAILY DRLG HRS 5	ROP (m/hr) 13.6	
OPERATIONS SUMMARY - PAST 24 HOURS							
Work tite hole & stuck pipe @ 153m, free pipe and pull to 112m, stuck pipe, pick up surface jars and jar free, back ream and pull tite hole to 60m / partial lost circ, POOH, inspect bit, laydown jars, RIH to 151m, ream & clean to btm, drill ahead.							
OPERATIONS FORECAST - NEXT 24 HOURS							
Drill ahead.							
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)					GAS SHOWS (Units, 100 Units = 1%)		
From 300	To 365	ROP 13.0	Max 67	Avg 55	Gross Lith. Shale	From	To
						Max	Prev.
						Lithology	
FORMATION / MARKER TOPS							
FORMATION MARKER TOPS	PROGNOSIS TVD 5	SAMPLE SS 281	FORMATION MARKER TOPS	PROGNOSIS TVD 5	SAMPLE MD 281		
Quaternary	22	265	217	70	241.0		
Little Bear	217	70	241.0	241.0	46		
Slater River	792	-505					
Arctic Red	962	-675					
Sans Sault	1037	-750.0					
Martin House	1112	-825.0					
Imperial	1892	-1605.0					
Upper Canol	1927	-1640.0					
Lower Canol	2037	-1750.0					
Bluefish Member	2062	-1775.0					
Hume	2082	-17995.0					
TD	2132	-1845.0					
COMMENTS							
Last survey @ 355m was 0.9 degrees							

ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 27-Feb-13	REPORT 2	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 286.5	GL (m) 281.3	SPUD DATE 2/25/13	DAY No. 3	FORMATION Slater River			WEATHER CONDITIONS Ice Fog -25				
06:00 STATUS: Work tite hole @ 153m											
0600 DEPTH 300	LAST REPORT 135	PROGRESS 165	BIT # 1A	Bit Type Varel HE04JMRS	BIT SIZE 311		TOTAL MTRS 300	Bit Hrs 28			
DRILLING FLUID Spud Mud	DEN (kg/m^3) 1040	VISCOSITY 54	WATER LOSS		pH 9.5	DAILY DRLG HRS 15.5	ROP (m/hr) 10.6				
OPERATIONS SUMMARY - PAST 24 HOURS											
Drill ahead and survey as required to 300m, wiper trip out of hole to 111m, work tite hole @ 153m.											
OPERATIONS FORECAST - NEXT 24 HOURS											
Work tite hole, finish wiper trip, drill ahead											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)						GAS SHOWS (Units, 100 Units = 1%)					
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology	
135	300	11.0	51	45	Shale						
FORMATION / MARKER TOPS											
FORMATION	PROGNOSIS		SAMPLE			FORMATION	PROGNOSIS		SAMPLE		
MARKER TOPS	TVD	SS	MD	TVD	SS	MARKER TOPS	TVD	SS	MD	TVD	SS
Quaternary	5	281									
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70	241.0	241.0	46						
Artic Red	792	-505									
Sans Sault	962	-675									
Martin House	1037	-750.0									
Imperial	1112	-825.0									
Upper Canol	1892	-1605.0									
Lower Canol	1927	-1640.0									
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-17995.0									
TD	2132	-1845.0									
COMMENTS											
Last survey @ 287m was 0.1 degrees											

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ConocoPhillips			DAILY GEOLOGICAL REPORT CONOCO PHILLIPS CANADA				ConocoPhillips				
WELL NAME COPRC Mirror Lake N-20			LOCATION / UWI 300N206500126450			CONTRACTOR Beaver Drilling Ltd.			RIG # 2		
DATE 26-Feb-13	REPORT 1	REPORTING TO Dave Oakley		WELLSITE GEOLOGIST Dave Lawrence		CELL PHONE 403-536-6939		RIG PHONE 587-794-4599			
KB (m) 281.3	GL (m) 286.5	SPUD DATE 2/25/13	DAY No. 2	FORMATION Little Bear			WEATHER CONDITIONS Partial Cloud -22				
06:00 STATUS: Drilling 311mm hole											
0600 DEPTH 135	LAST REPORT 0	PROGRESS 135	BIT # 1A	Bit Type Varel HE04JMRS\	BIT SIZE 311		TOTAL MTRS 135	Bit Hrs 12.5			
DRILLING FLUID Spud Mud	DEN (kg/m^3) 1120	VISCOSITY 65	WATER LOSS		pH 9.5	DAILY DRLG HRS 12.5	ROP (m/hr) 11.0				
OPERATIONS SUMMARY - PAST 24 HOURS											
Rig to spud, spud well, drill ahead and survey as required											
OPERATIONS FORECAST - NEXT 24 HOURS											
Drill surface											
BACKGROUND TOTAL GAS (Units, 100 Units = 1%)					GAS SHOWS (Units, 100 Units = 1%)						
From	To	ROP	Max	Avg	Gross Lith.	From	To	Max	Prev.	Lithology	
0	135	11.0	39	35	Sand						
FORMATION / MARKER TOPS											
FORMATION	PROGNOSIS		SAMPLE			FORMATION	PROGNOSIS		SAMPLE		
MARKER TOPS	TVD	SS	MD	TVD	SS	MARKER TOPS	TVD	SS	MD	TVD	SS
Quaternary	5	281									
Little Bear	22	265	20.0	20.0	265						
Slater River	217	70									
Arctic Red	792	-505									
Sans Sault	962	-675									
Martin House	1037	-750.0									
Imperial	1112	-825.0									
Upper Canol	1892	-1605.0									
Lower Canol	1927	-1640.0									
Hare Indian	2037	-1750.0									
Bluefish Member	2062	-1775.0									
Hume	2082	-17995.0									
TD	2132	-1845.0									
COMMENTS											
Last survey @ 92m was 0.4 degrees											