1909c

CODECO CONSULTING (2000) INC.
DAILY DRILLING REPORT

410, 311 - 6th Avenue S.W.
Calgary, Alberta T2P 3H2
Phone: (403)237-7808
Fax: (403)265-1760

Well Name: Devlan et al Thunder River N-73 67°30'131°15' **Date:** 16-Mar-01 **Day:** 20

Depth: 1146 mKB **Progress:** m **Drlg.:** hrs. **Drill Rate:** m/hr **Rig:** Akita #14

Operation: Rig released at 2400 hours 2001-03-15.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model			Underflow Density			
Liner/Stroke			Overflow Density			
SPM			Flow Rate, l/min			
Volume			Operating Hours			

Pump Pressure: kPa **Ann. Vel.: DC:** m/min **DP** m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly:

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight					
			Viscosity					
			pH					
			Water Loss					
			P.V.					
			Y.P.					
			Gels					
			Filter Cake					
			Solids				Day Cost	
			Oil				Well Cost	

Core No. **Size/Type:** **In:** mKB **Out:** mKB **Meters** **Rec.:** %

DST No.: **Formation:** **Interval:** to **PF:** **ISI:** **VO:** **FSI:**

RIG TIME

1. Drill		7. Clean to Bottom		13. Cement		19. Rig Up	
2. Rig Service		8. Core		14. WOC	8.00	20. Rig Out	8.00
3. Trip		9. DST		15. Nipple Up		21.	
4. Survey		10. Log		16. Pressure Test		22.	
5. Circ./Cond.		11. Handle Tools		17. Repair		23.	
6. Ream		12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 1600: Wait on cement. Monitor well. Wait on wellhead. Filled annulus with water at 0900hours, it took 2.67m3 / 0.0179 = approximately 145m, this is the top of the fluid above the cement, not cement top. 1600 - 2400: Tear out degassser lines, premix tank, shale sloop etc. BOPs left on with hydraulic lines. Moved all standby, back up equipment to new location. Nipple down BOPs and lift stack. Set slips. Cut off casing and install wellhead. Rig released at 2400 hours 2001-03-15. Well secure.

Well Cost: 71,196 **Cum. Cost:** 1,484,267 **AFE No.:** **AFE Amount**

Weather: Clear & Calm -38C **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter

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Well Name: Devlan et al Thunder River N-73 67°30'131°15' Date: 15-Mar-01 Day: 19

Depth: 1146 mKB Progress: m Drlg.: hrs. Drill Rate: m/hr Rig: Akita #14

Operation: Wait on production casing cement.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	50		Flow Rate, l/min			
Volume	0.52		Operating Hours			

Pump Pressure: 970 kPa Ann. Vel.: DC: 45 m/min DP 23 m/min Jet Vel.: m/sec kW:

Drilling Assembly: Down

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1045				
			Viscosity	74				
			pH	9.5				
			Water Loss	10.8				
			P.V.	26.0				
			Y.P.	12.0				
			Gels	6/10				
			Filter Cake	3.0				
			Solids	0.03			Day Cost	0
			Oil				Well Cost	38,176

Core No. Size/Type: In: mKB Out: mKB Meters Rec.: %

DST No.: Formation: Interval: to PF: ISI: VO: FSI:

RIG TIME

1. Drill		7. Clean to Bottom		13. Cement	5.00	19. Rig Up	
2. Rig Service		8. Core		14. WOC	5.00	20.	
3. Trip		9. DST		15. Nipple Up		21.	
4. Survey		10. Log		16. Pressure Test		22.	
5. Circ./Cond.	14.00	11. Handle Tools		17. Repair		23.	
6. Ream		12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 2200: Circulating through stage tool, sweeping periodic LCM pills. No effect on losses. Losses still remain at 2.25m3 per hour. Spot LCM pill outside casing and staged it up the hole at 100 strokes every 15 minutes, no effect. Load big tank on sow, ready chemicals to cement. 2200 - 0300: Mix chemicals and cement. Held safety meeting and cemented casing as follows:
6m3 of fresh water preflush then 16 tonnes Fill Lite 2-100 + 1% CaCl2 followed by 6 tonnes 0:1:0 "G" + 0.3% FL-63 + 0.5% CD-31. Displace plug to 953m with 12.3m3 of water, staged last 3m3. Closed stage tool. Stage tool closed at 0300 hours 2001-03-15. Full returns while mixing cement, dropped while releasing plug, back after 1m3. Dropped while staging last 2.5m3. Calculations show cement was up to approximately 265 mKB when returns stopped. 0300 - 0800: Wait on cement and monitor well.

Well Cost: 106,495 Cum. Cost: 1,413,071 AFE No.: AFE Amount

Weather: Clear -37C Supervisor: Erwin Alyea Mobile: 403-997-2529 Taken By: Michael Woofter

HAWK 1909

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Phone: (403)237-7808
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Well Name: Devlan et al Thunder River N-73 67°30'131°15' **Date:** 14-Mar-01 **Day:** 18

Depth: 1146 mKB **Progress:** m **Drlg.:** hrs. **Drill Rate:** m/hr **Rig:** Akita #14

Operation: Circulating through stage tool.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 1919		Overflow Density			
SPM	50		Flow Rate, l/min			
Volume	0.52		Operating Hours			

Pump Pressure: 970 kPa **Ann. Vel.: DC:** 45 m/min **DP** 23 m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Down

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1040	Gel	114		
			Viscosity	57	Soda Ash	2		
			pH	10.0	Caustic	1		
			Water Loss	9.0	Celloflake	4		
			P.V.	20.0	Sawdust	20		
			Y.P.	7.0	Aquapac	1		
			Gels	6/9	Kwik Seal	10		
			Filter Cake	2.5				
			Solids	0.02			Day Cost	3,668
			Oil				Well Cost	38,176

Core No. **Size/Type:** **In:** mKB **Out:** mKB **Meters** **Rec.:** %

DST No.: **Formation:** **Interval:** to **PF:** **ISI:** **VO:** **FSI:**

RIG TIME

1. Drill		7. Clean to Bottom		13. Cement		19. Rig Up	
2. Rig Service		8. Core		14. WOC		20. Lay Down DP & DCs	2.25
3. Trip		9. DST		15. Nipple Up		21.	
4. Survey		10. Log		16. Pressure Test		22.	
5. Circ./Cond.	21.75	11. Handle Tools		17. Repair		23.	
6. Ream		12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 0945: Circulate through stage tool. 0945 - 1000: Pumped 2 pills of LCM (3m3 each) down casing and spotted same outside of casing. 1000 - 1200: Top filled annulus as fluid dropped until fill equaled pill size then circulate well 1 cycle and spot another pill. Losses were up to 3.5m3 in 20 minutes, slowed down to 2.25 m3/hr, original loss rate. Pumping pressure at 50 spm went up to 1040 kPa. 1200 - 0800: Circulate through stage tool, got down to 950 kPa. Original circulating pressure was 840 kPa.

The ID of the stage tool is 76mm.

Well Cost: 53,461 **Cum. Cost:** 1,306,576 **AFE No.:** **AFE Amount**

Weather: Overcast -31C **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter