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:** 01-Mar-01 **Day:** 6

Depth: 319 mKB **Progress:** 9 m **Drlg.:** 1.25 hrs. **Drill Rate:** 7.20 m/hr **Rig:** Akita #14

Operation: Working on shaker motor.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition
1	200	L127	158872	310		9	1.25	8/10	95	3 x 11.1	IN

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	120		Flow Rate, l/min			
Volume	1.25		Operating Hours			

Pump Pressure: 4,400 kPa **Ann. Vel.: DC:** 22 m/min **DP** 18 m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Bit, bit sub, 12 - 159mm DCs, X-over, 101mm drill pipe to surface.

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	0
			Oil				Well Cost	4,622

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

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

RIG TIME

1. Drill	1.25	7. Clean to Bottom		13. Cement		19. Rig Up	
2. Rig Service		8. Core		14. WOC	5.25	20. Leak Off Test	0.50
3. Trip	1.00	9. DST		15. Nipple Up	4.25	21. Drill Out	1.25
4. Survey		10. Log		16. Pressure Test	6.50	22. Weld On Bowl	2.50
5. Circ./Cond.	0.25	11. Handle Tools		17. Repair	1.00	23. Held BOP Drill	0.25
6. Ream		12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 1315: Wait on cement and wait on welder. 1315 - 1545: Cut conductor and weld on bowl. Pressure test weld to 10.0 Mpa. 1545 - 2000: Remove diverter from cellar. Install BOPs, valves, manifold line, etc. Nipple up BOPs. 2000 - 0100: Pressure test blind rams, manifold, HCR and all outside BOP valves to 1400 kPa low and 7000 kPa high for 15 minutes each. 0100 - 0200: Make up BHA and run in with bit #1. 0200 - 0330: Pressure test pipe rams and all inside BOP valves to 1400 kPa low and 7000 kPa high for 15 minutes each. Check motor kills, okay. 0330 - 0345: Held BOP drill. 0345 - 0500: Drill out float, cement and shoe with fresh water. 0500 - 0615: Drill 200mm hole to 319m KB. 0615 - 0630: Circulate and condition. 0630 - 0700: Perform leak off test. 0700 - 0800: Repair the shaker motor. Stopped pumping at 7000 kPa, pressure bled down slowly, stabilized at 4500 kPa.

Well Cost: 120,116 **Cum. Cost:** 551,933 **AFE No.:** **AFE Amount**

Weather: Light Snow -19C **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter

DEVLAN Exploration Inc:

Devlan et-al Thunder River "N-73"

AKITA # 14

Mar: 1-2001

Tested with BJ . 114mm x 203 mm - 0.0062 m3/stroke

10 stroke readings (.062 m3)

Testing fluid-- fresh water	Gradient 9.81	Depth 314

10	Stks	0.062	m3	120	Kpa
20	Stks	0.124	m3	1320	Kpa
30	Stks	0.186	m3	4600	Kpa
38	**Stks**	**0.2356**	**m3**	**7000**	**Kpa**
	Stks	0	m3		Kpa
	Stks	0	m3		Kpa

Stopped pumping @ 7000 Kpa,(38 strokes) (Pre determined limit)

Pressure decreased and stabled @ 4600 Kpa.

Hydrostatic	3080	Kpa
Applied Pressure	4600	Kpa
Pressure at shoe	7680	Kpa

Fracture Pressure	7680	Kpa
80% of Fracuture Pressure	6144	Kpa

Fracture Pressure Gradient **19.6 Kpa/m**

DAILY GEOLOGICAL REPORT

#REF!

WELL NAME	LOCATION	OPERATOR	RIG
DEVLAN et al THUNDER RIVER N-73	SECTION 73 N67° 22' 52" W	DEVLAN EXPLORATION INC.	AKITA 14

DATE	REPORT TIME	REPORTING TO	GEOLOGIST	RIG PHONE	MY CELL	TEMP
1-Mar-01	800	SCOTT PATTERSON	KEITH ROBERTSON	403 997 2529	SAME	-15°

K.B.(m)	G.L.(m)	K.B.-G.L. (m)	SPUD DATE	DAY No.	FORMATION	CURRENT CONDITIONS
124.2	120.1	4.1	24 Feb, 2001	6	FORT CREEK	SLIGHTLY COLD;SNOW

CURRENT DATA

DEPTHS: CURRENT	LAST REPORT	PROG.	BIT#	MAKE	TYPE	IN AT	METERS	TOTAL BIT HRS
600	319	310	9	5	VAREL	L127	310	9	1

DRILLING FLUID	DEN (kg/m^3)	VISCOSITY	WATER LOSS	pH	CHLOR. (ppm)	HRS DRLG	AVG ROP (m/hr)
GEL CHEM					500	1	9.0

OPERATIONS SUMMARY FOR PAST 24 HOURS

WOC; CUT CASING BOWL; PRESSURE TEST;

OPERATIONS FORECAST

PREFORM LEAK OFF TEST; DRILL MAIN HOLE

SURVEYS

DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.

GAS REPORT

BACKGROUND TOTAL GAS (UNITS, 100u = 1%)

FROM	TO	ROP	AVE	MAX	GROSS LITHOLOGY

GAS SHOWS (UNITS, 100u = 1%)

FROM	TO	MAX	PREV.	LITHOLOGY

FORMATION/MARKER TOPS

FORMATION/MARKER	PROGNOSIS MD	PROGNOSIS SS	SAMPLE MD	SAMPLE SS	FORMATION/MARKER	PROGNOSIS MD	PROGNOSIS SS	SAMPLE MD	SAMPLE SS
FLUVIAL	1.0	123.2			#REF!		124.2		
#REF!		124.2			#REF!		124.2		
#REF!		124.2			FORT CREEK	70.5	53.7		
#REF!		124.2			RAMPARTS (HUME)		124.2		
#REF!		124.2			GOSSAGE		124.2		
#REF!		124.2			LONE MOUNTAIN		124.2		
#REF!		124.2			BEAR ROCK	0.0	124.2		
#REF!		124.2			LOWER LONE MTN	0.0	124.2		
#REF!		124.2			ORDOVICIAN	0.0	124.2		
#REF!		124.2			TD	0.0	124.2		
#REF!		124.2							

COMMENTS & REMARKS

started drilling at 0500 this morning; drilled 1 kelly and preformed leak off test, then drilled ahead.
no log or descriptions this morning as only 1 sample was caught.

1909 C

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:** 28-Feb-01 **Day:** 5

Depth: 310 mKB **Progress:** 22 m **Drlg.:** 4.00 hrs. **Drill Rate:** 5.50 m/hr **Rig:** Akita #14

Operation: Wait on cement.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition
4A	311	L-127	137231	240	310	70	8.75	6/8	180	4 x 12.7	2-1-I

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	120		Flow Rate, l/min			
Volume	1.25		Operating Hours			

Pump Pressure: 3,470 kPa **Ann. Vel.: DC:** 22 m/min **DP** 18 m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Bit, bit sub, 12 - 159mm DCs, X-over, 101mm drill pipe to surface.

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1275	Gel	42		
305	2.25		Viscosity	104	Desco	2		
			pH	9.0				
			Water Loss	10.4				
			P.V.	35.0				
			Y.P.	15.0				
			Gels	14/20				
			Filter Cake	1.8				
			Solids	0.17			Day Cost	987
			Oil				Well Cost	4,622

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

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

RIG TIME

1. Drill	4.00	7. Clean to Bottom		13. Cement	2.00	19. Rig Up	
2. Rig Service	0.25	8. Core		14. WOC	3.00	20. Circulate Casing	2.50
3. Trip	6.50	9. DST		15. Nipple Up		21.	
4. Survey	0.25	10. Log		16. Pressure Test		22.	
5. Circ./Cond.	2.00	11. Handle Tools		17. Repair		23.	
6. Ream	4.00	12. Run Casing	3.50	18. Slip/Cut		24.	

REMARKS

0800 - 1200: Ream from 288 - 310m KB. 1200 - 1300: Circulate and condition hole, raise viscosity to 104. 1300 - 1315: Rig service. 1315 - 1330: Survey. 1330 - 1830: Trip out of hole. 1830 - 1930: Circulate and condition hole. 1930 - 2100: Chain out. 2100 - 0030: Rig to and run casing. Ran 22 joints of 219.1mm, 35.72 kg/m, J-55, ST&C casing with guide shoe and float collar = 311.18m. Landed at 310.0 mKB. 0030 - 0300: Circulate casing, condition hole and mud. Mix up cement. 0300 - 0500: Rig to and cement with BJ Services. Cemented with 30 tonnes Polar Set + 0.1% R7C. Displaced plug to 296 mKB with 9.83m3 of fresh water. Plug down at 0500 hours 2001-02-28. 8.25m3 cement returns. Float held, no slump. 0500 - 0800: Wash out diverter, center casing. Wait on cement. Nipple down diverter system.

Well Cost: 60,283 **Cum. Cost:** 431,817 **AFE No.:** **AFE Amount**

Weather: Overcast -18C **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter

DAILY GEOLOGICAL REPORT

#REF!

WELL NAME	LOCATION	OPERATOR	RIG
DEVLAN THUNDER RIVER N-73	SECTION 73 N67° 22' 52" W	DEVLAN EXPLORATION INC.	AKITA 14

DATE	REPORT TIME	REPORTING TO	GEOLOGIST	RIG PHONE	MY CELL	TEMP
28-Feb-01	800	SCOTT PATTERSON	KEITH ROBERTSON	403 997 2529	SAME	-15°

K.B.(m)	G.L.(m)	K.B.-G.L. (m)	SPUD DATE	DAY No.	FORMATION	CURRENT CONDITIONS
124.2	120.1	4.1	24 Feb, 2001	5	FORT CREEK	CLEAR, SLIGHTLY COLD

CURRENT DATA

DEPTHS: CURRENT	LAST REPORT	PROG.	BIT#	MAKE	TYPE	IN AT	METERS	TOTAL BIT HRS
600	310	270	40	4A	VAREL	L127	240	70	8.75

DRILLING FLUID	DEN (kg/m^3)	VISCOSITY	WATER LOSS	pH	CHLOR. (ppm)	HRS DRLG	AVG ROP (m/hr)
GEL CHEM	1280	101		9	500	6.75	5.9

OPERATIONS SUMMARY FOR PAST 24 HOURS

REAM PILOT HOLE TO TD, CIRCULATE AND COND MUD; DUMMY TRIP TO CASING; HOLE TIGHT; RIH AND CIRCULATE; INCREASE VISCOSITY TO 101; POOH; RUN CASING ; CEMENT SAME;

OPERATIONS FORECAST

WOC; CUT CASING BOWL; PRESSURE TEST;

SURVEYS

DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.
305	2.25°													

GAS REPORT

BACKGROUND TOTAL GAS (UNITS, 100u = 1%)

FROM	TO	ROP	AVE	MAX	GROSS LITHOLOGY

GAS SHOWS (UNITS, 100u = 1%)

FROM	TO	MAX	PREV.	LITHOLOGY

FORMATION/MARKER TOPS

FORMATION/MARKER	PROGNOSIS MD	PROGNOSIS SS	SAMPLE MD	SAMPLE SS
FLUVIAL	1.0	123.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		
#REF!		124.2		

FORMATION/MARKER	PROGNOSIS MD	PROGNOSIS SS	SAMPLE MD	SAMPLE SS
#REF!		124.2		
#REF!		124.2		
FORT CREEK	70.5	53.7		
RAMPARTS (HUME)		124.2		
GOSSAGE		124.2		
LONE MOUNTAIN		124.2		
BEAR ROCK	0.0	124.2		
LOWER LONE MTN	0.0	124.2		
ORDOVICIAN	0.0	124.2		
TD	0.0	124.2		

COMMENTS & REMARKS

The first dummy trip pulled very tight; viscosity was increased to 101 and that seemed to heal our problem. Probably lots of gravel falling in on top of pipe. We have to wait on a welder, but as soon as he arrives and cuts the casing bowl we can continue with pressure tests. If things go well we could be drilling main hole tomorrow, morning would be nice but afternoon is more probable.

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:** 27-Feb-01 **Day:** 4

Depth: 288 mKB **Progress:** 115 m **Drlg.:** 11.75 hrs. **Drill Rate:** 9.79 m/hr **Rig:** Akita #14

Operation: Reaming 200mm hole out to 311mm.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition
2A	200	L-127	158870	173	310	137	22.25	4/5	180	3 x 12.7	3-1-I
3A RR	311	L-127	140640	173	240	67	7.00	6/8	180	4 x 12.7	3-1-I
4A	311	L-127	137231	240		48	4.75	6/8	180	4 x 12.7	

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	120		Flow Rate, l/min			
Volume	1.25		Operating Hours			

Pump Pressure: 3,470 kPa **Ann. Vel.: DC:** 22 m/min **DP** 18 m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Bit, bit sub, 12 - 159mm DCs, X-over, 101mm drill pipe to surface.

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1230	Gel	16		
310	2.00		Viscosity	51	Sawdust	10		
			pH	9.0				
			Water Loss	12.6	INVENTORY			
			P.V.	11.0	ADJUSTMENT			
			Y.P.	5.0	Pipe Out	1		
			Gels	7/12	Vis Plus	1		
			Filter Cake	1.5	Soda Ash	1		
			Solids	0.15			Day Cost	993
			Oil				Well Cost	3,635

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

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

RIG TIME

1. Drill	11.75	7. Clean to Bottom	2.25	13. Cement		19. Rig Up	
2. Rig Service	0.75	8. Core		14. WOC		20. Work Tight Hole	1.25
3. Trip	5.50	9. DST		15. Nipple Up		21.	
4. Survey	0.50	10. Log		16. Pressure Test		22.	
5. Circ./Cond.		11. Handle Tools		17. Repair	2.00	23.	
6. Ream	11.75	12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 0845: Hoist out. 0845 - 0900: Rig service. 0900 - 1100: Make up 311mm main bit and run in. Clean bridge at 87m. 1100 - 1300: Work on shale shaker, replace power cord to one motor. 1300 - 1400: Clean to bottom. 1400 - 1730: Run in to 173 mKB and ream hole out to 311mm to 240 mKB. 1730 - 1745: Rig service. 1745 - 1800: Survey. 1800 - 2130: Ream hole. Torque increase for 233 mKB to 240 mKB. Decision was made to trip. 2130 - 2245: Work tight hole at 233 mKB up to 158 mKB. 2245 - 0130: Hoist out for bit change. 0130 - 0145: Rig service. 0145 - 0300: Run in with new bit, clean to bottom from 155 mKB to 240 mKB (shale slivers and gravel). 0300 - 0315: Survey. 0315 - 0800: Ream hole to 288m KB.

Well Cost: 64,197 **Cum. Cost:** 371,534 **AFE No.:** **AFE Amount**

Weather: -27C **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter

MRW

DAILY GEOLOGICAL REPORT

#REF!

WELL NAME	LOCATION	OPERATOR	RIG
DEVLAN et al THUNDER RIVER N-73	SECTION 73 N67° 22' 52" W	DEVLAN EXPLORATION INC.	AKITA 14

DATE	REPORT TIME	REPORTING TO	GEOLOGIST	RIG PHONE	MY CELL	TEMP
27-Feb-01	800	SCOTT PATTERSON	KEITH ROBERTSON	403 997 2529	SAME	-25°

K.B.(m)	G.L.(m)	K.B.-G.L. (m)	SPUD DATE	DAY No.	FORMATION	CURRENT CONDITIONS
124.2	120.1	4.1	24 Feb, 2001	4	FORT CREEK	CLEAR, SLIGHTLY COLD

CURRENT DATA

DEPTHS:	CURRENT	LAST REPORT	PROG.	BIT#	MAKE	TYPE	IN AT	METERS	TOTAL BIT HRS
600	270	173	97	4A	VAREL	L127	240	30	2.75

DRILLING FLUID	DEN (kg/m^3)	VISCOSITY	WATER LOSS	pH	CHLOR. (ppm)	HRS DRLG	AVG ROP (m/hr)
GEL CHEM	1235	68	12.8	9	500	10.5	9.2

OPERATIONS SUMMARY FOR PAST 24 HOURS

TRIP FOR BIT; REAM PILOT HOLE; TRIP FOR BIT; REAM PILOT HOLE

OPERATIONS FORECAST

REAM PILOT HOLE TO TD, CIRCULATE AND COND MUD; RUN SURFACE CASING

SURVEYS

DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.	DEPTH	INCL.	AZ.
199	2.5°													
247	2.25°													

GAS REPORT

BACKGROUND TOTAL GAS (UNITS, 100u = 1%)						GAS SHOWS (UNITS, 100u = 1%)				
FROM	TO	ROP	AVE	MAX	GROSS LITHOLOGY	FROM	TO	MAX	PREV.	LITHOLOGY

FORMATION/MARKER TOPS

FORMATION/MARKER	PROGNOSIS MD	PROGNOSIS SS	SAMPLE MD	SAMPLE SS	FORMATION/MARKER	PROGNOSIS MD	PROGNOSIS SS	SAMPLE MD	SAMPLE SS
FLUVIAL	1.0	123.2			#REF!		124.2		
#REF!		124.2			#REF!		124.2		
#REF!		124.2			FORT CREEK	70.5	53.7		
#REF!		124.2			RAMPARTS (HUME)		124.2		
#REF!		124.2			GOSSAGE		124.2		
#REF!		124.2			LONE MOUNTAIN		124.2		
#REF!		124.2			BEAR ROCK	0.0	124.2		
#REF!		124.2			LOWER LONE MTN	0.0	124.2		
#REF!		124.2			ORDOVICIAN	0.0	124.2		
#REF!		124.2			TD	0.0	124.2		
#REF!		124.2							

COMMENTS & REMARKS

REAMED TO 240 METRES LAST NIGHT; HAD TO TRIP FOR BIT; CONTINUED REAMING WITH NB 4A.
SHOULD BE FINISHED WITH REAMING BY 9 OR 10 OCLOCK THIS MORNING; RUNNING CASING THIS AFTERNOON?

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:** 26-Feb-01 **Day:** 3

Depth: 310 mKB **Progress:** 125 m **Drlg.:** 20.50 hrs. **Drill Rate:** 6.10 m/hr **Rig:** Akita #14

Operation: Hoisting pilot bit.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition
1A	311	L-127	140640	15	173	158	13.00	5/13	180	4 x 12.7	2-1-I
2A	200	L-127	158870	173	310	137	22.25	4/5	180	3 x 12.7	pilot
3A RR	311	L-127	140640	173		137					

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	120		Flow Rate, l/min			
Volume	1.25		Operating Hours			

Pump Pressure: 4,460 kPa **Ann. Vel.: DC:** 22 m/min **DP** 18 m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Bit, bit sub, 12 - 159mm DCs, X-over, 101mm drill pipe to surface.

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1260	Gel	35		
195	2.25		Viscosity	60	Caustic	1		
218	2.13		pH	9.5				
245	2.00		Water Loss					
276	2.25		P.V.					
			Y.P.					
			Gels					
			Filter Cake					
			Solids				Day Cost	726
			Oil				Well Cost	2,642

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

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

RIG TIME

1. Drill	20.50	7. Clean to Bottom		13. Cement		19. Rig Up	
2. Rig Service	0.75	8. Core		14. WOC		20.	
3. Trip	0.75	9. DST		15. Nipple Up		21.	
4. Survey	1.25	10. Log		16. Pressure Test		22.	
5. Circ./Cond.	0.75	11. Handle Tools		17. Repair		23.	
6. Ream		12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 1045: Drill 200m pilot hole. Fanning connections. 1045 - 1100: Rig service. 1100 - 1115: Survey. 1115 - 1600: Drill 200mm pilot hole. Fanning connections. 1600 - 1615: Rig service. 1615 - 2330: Drill 200mm pilot hole. Fanning connections. 2330 - 2400: Survey. 0000 - 0015: Rig service. 0015 - 0145: Drill 200mm pilot hole. Fanning connections. 0145 - 0200: Survey. 0200 - 0615: Drill 200mm pilot hole. Fanning connections. 0615 - 0700: Circulate hole clean. 0700 - 0715: Survey. 0715 - 0800: Hoist out with 200mm pilot bit.

Well Cost: 43,992 **Cum. Cost:** 307,337 **AFE No.:** **AFE Amount**

Weather: -34C Clear **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter

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:** 25-Feb-01 **Day:** 2

Depth: 185 mKB **Progress:** 144 m **Drlg.:** 14.75 hrs. **Drill Rate:** 9.76 m/hr **Rig:** Akita #14

Operation: Drilling pilot hole.

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition
1A	311	L-127	140640	15	173	158	13.00	5-13	180	4 x 12.7	
2A	200	L-127	158870	173		12	1.75	4-5000	180	3 x 12.7	

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	120		Flow Rate, l/min			
Volume	1.25		Operating Hours			

Pump Pressure: 3,900 kPa **Ann. Vel.: DC:** 22 m/min **DP** 18 m/min **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Bit, bit sub, 3 - 171 mm DC, C/O.

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1040	Gel	40		
60	0.75		Viscosity	55	Sapp	3		
95	0.25		pH	9.5	Sawdust	4		
133	2.00		Water Loss		Bi-carb	3		
163	2.25		P.V.					
			Y.P.					
			Gels					
			Filter Cake					
			Solids				Day Cost	1,263
			Oil				Well Cost	1,916

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

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

RIG TIME

1. Drill	14.75	7. Clean to Bottom		13. Cement		19. Rig Up	
2. Rig Service	0.75	8. Core		14. WOC		20.	
3. Trip	7.00	9. DST		15. Nipple Up		21.	
4. Survey	1.00	10. Log		16. Pressure Test		22.	
5. Circ./Cond.	0.50	11. Handle Tools		17. Repair		23.	
6. Ream		12. Run Casing		18. Slip/Cut		24.	

REMARKS

0800 - 1045: Drill ahead, gravel problems at 75m. 1045 - 1100: Survey. 1100 - 1115: Rig service. 1115 - 1145: Drill ahead. 1145 - 1215: Mix mud. Build viscosity and work hole clean. 1215 - 1545: Drill ahead. 1545 - 1600: Survey. Surface went out rapidly to 2 degrees. 1600 - 1630: Fan connections and drill with reduced weight on bit to correct drift. 1630 - 1645: Rig service. 1645 - 2200: Drill ahead. 2200 - 2230: Survey. Drift still increased to 2.25 degrees. 2230 - 0300: Hoist out, tight, kelly up several times. Very tight hole from 140 - 70m KB. 0300 - 0315: Rig service. 0315 - 0545: Laid down 171mm DCs. Make up pilot bit and run in. Clean 13m to bottom. 0545 - 0800: Drill 200mm pilot hole.

Well Cost: 49,525 **Cum. Cost:** 263,345 **AFE No.:** **AFE Amount**

Weather: -43 C, clear, calm **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter

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:** 24-Feb-01 **Day:** 1

Depth: 41 mKB **Progress:** 9 m **Drlg.:** 0.50 hrs. **Drill Rate:** 18.00 m/hr **Rig:** Akita #14

Operation:

Bit No.	Size	Type	Serial Number	In	Out	Meters	Hours	Weight	RPM	Nozzles	Condition
1A	311	L-127	140640	32		9	0.50	4-5	85	3 x 12.7	In

	Pump No. 1	Pump No. 2		Desander	Desilter	Centrifuge
Model	F-500		Underflow Density			
Liner/Stroke	152 x 191		Overflow Density			
SPM	125		Flow Rate, l/min			
Volume	1.30		Operating Hours			

Pump Pressure: 2,000 kPa **Ann. Vel.: DC:** 23 m/mi **DP** 19 m/mi **Jet Vel.:** m/sec **kW:**

Drilling Assembly: Bit, bit sub, 3 - 171mm DC's, C/O.

SURVEYS			MUD		ADDITIVES (SACKS)			
Depth (mKB)	Inclination (deg)	Direction (deg)	Weight	1040	Gel	25		
			Viscosity	42	Caustic	1		
			pH	9.5	Sawdust	10		
			Water Loss					
			P.V.					
			Y.P.					
			Gels					
			Filter Cake					
			Solids				Day Cost	653
			Oil				Well Cost	653

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

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

RIG TIME

1. Drill	0.50	7. Clean to Bottom		13. Cement	0.75	19. Rig Up	
2. Rig Service	0.25	8. Core		14. WOC	5.50	20. Nipple BOP	6.25
3. Trip		9. DST		15. Nipple Up		21. Weld Bowl	3.00
4. Survey		10. Log		16. Pressure Test		22. Held Safety Meeting	0.25
5. Circ./Cond.		11. Handle Tools		17. Repair	0.75	23. Miscellaneous	2.00
6. Ream		12. Run Casing		18. Slip/Cut		24. Other	4.75

REMARKS

0800-0845: Cement, mixed 13 tonnes "Polar Set" till returns in cellar. Displaced 2.75 m3 water. Closed valve, centered casing. 0845-1415: Wait on cement. 1415-1715: Cut conductor, cleaned up flange, welded on flange. 1715-2100: Headed up diverter system. 2100-2400: Drilled rathole, trouble with gravel and rocks. 2400-0015: Rig service. 0015-0200: Drill rathole. 0200-0430: BOP. Assemble flow nipple and line, make up bit and 171 mm DC, ran in hole. 0430-0445: Held safety meeting. 0445-0615: Drill cement from 14 m to 21 m. 0615-070: Repair, replace head and liner in pump. 0700-0730: Drill cement from 21 m to 32 m. Cement top at 18 mKB. 0730-0800: Drill ahead. Spudded at 0730 hours, 02-24-01.

Well Cost: 55,703 **Cum. Cost** 92,696 **AFE No.:** **AFE Amount**

Weather: - 40 C, clear, calm **Supervisor:** Erwin Alyea **Mobile:** 403-997-2529 **Taken By:** Michael Woofter