1909

Canadian Petroleum Engineering Inc. — Daily Completions Report

Well:	Devlan et al Thunder River N-73		**Date:** 12/2/03	**Page:**	1
Objective:	Complete & Test well			**Day No:**	5
Formation:	Lone Mountain	**Open Perfs:** 815 -824 mKB			AFE #
PBTD:	1131 - by wireline	**Squeeze Perfs:** Bridge Plug & Cement @ 967 mKB			Amount
Csg Dia	139 mm	**Liner Dia**	**Liner top**		Sup Amount
Tubing Dia:	38.1 mm	**Landed at**	**Packer Size**	m KB	Total
Present Operation:	RIH w/ Gauge Ring & Check Fluid Level				

BOP Pressure Test: 1400 Lo, 14000 Hi. **Satisfactory- YES** **BOP Function Test- YES**

11/2/03 OPERATIONS SUMMARY

Time	ACTIVITY
0:00	Continue w/ 6 hr build up. PSI from 10 to 12 kPa.
3:00	Rig to & RIH w/ 111 mm gauge ring. Tag fluid level @ 720 meters up from 815 meters
3:45	RIH w/ coil tbg to 975 m & blow well down. Recovered 2.75 m3 fluid. 132000 ppm salt, PH 8 Total recovered from well 33.75 m3. for 13.75 m3 new fluid
9:00	POH w/ coil tbg. Pump 20 m3 fluid down well. Fill well w/ 12 & squeeze away 8 m3.
11:00	Rig to & RIH w/ drillable bridge plug & set @ 975 mKB.
12:00	PSI test bridge plug to 7000 kPa 10 min - OK. Dump bail 8 linear meters of cement on top of bridge plug in 2 runs. Rig down Tucker wire line.
14:00	RIH w/ coil tbg to 925 mKB. Blow well down through testers. POH w/ coil tbg. Rig down coli tbg.
16:30	Rig in Tucker wire line & pick up 9 meters of perforating guns. 101.6 mm HSC w/ 32 gram, 90* phasing charges. 13 SPM. Perforate Lone Mountain foremation in 2 runs. Total 119 shots. All shots fired. Fluid level @ 795 mKB. Rig down wire line.
18:00	Shoot gun run #1 819 to 824 mKB. Well pressure 10 -12 kPa.
19:00	Shoot gun run #2 819 to 824 mKB. Well PSI built from 50 to 411 kPa durring initial shut in period of 3 hrs.
22:00:00	Open well to flow. Well dead in minutes.
23:59	Continue w/ flow pereiod.

Prod Fluid Sum.:	**Daily:**	**Cumulative:**	**Packer set at**	**m KB**
Gas:	**e3m3/d**	**e3m3/d**	**Casing Annulus Volume**	**m3**
Oil or Condensate:	**m3/d**	**m3/d**	**Tubing Volume**	**m3**
Water:	**m3/d**	**m3/d**	**Bottom to Perf Volume**	**m3**
Time Swabbed / Flowed:	**hrs.**	**hrs.**	**Total**	**m3**

Load Fluid Type: Fresh Water **Used today:** **Cum. Used:**
Rec. today: **Cum. Rec:** **Left to recover:**
New Fluid:

Service Rig Hours: **Daily -** **Cum. -** **Downtime:** **Cum. Downtime**
Personell on Location: 17 **Equip. On Location: 1.5: GEOS CTU, Opsco Test Equip. BJ Pumper Tucker Wire Line.**

Weather: Cold, Lite wind -25 C **Roads: Rough Winter Cond.** **Reported by: Richard Slater**

1909

Canadian Petroleum Engineering Inc.

LOCATION: Devlan et al Thunder River N-73 DATE: Feb 2003 AFE #

ESTIMATING ASSUMPTIONS:

WELL TYPE: GAS BY: Richard Slater PRESENT STATUS:

Date

AFE NO.	SUBSID CODE	PREVIOUS COST	DAY: 01 7-Feb	DAY: 02 8-Feb	DAY: 03 9-Feb	DAT: 04 10-Feb	DAY: 05 11-Feb	DAY: 06 12-Feb	DAY: 07 13-Feb	CUMM COST:
	9300		TANGIBLE COMPLETION COSTS							
Sep, Build	300									0
Well Head	401									0
	402									0
	403									0
	404									0
	405									0
	406									0
	9400		INTANGIBLE COMPLETION COSTS							
	400									0
	410									0
	411									0
	412									0
	413									0
	414									0
	415									0
BJ Pump	416					6925				6,925
Acid + Add	417					2249				2,249
Drill Tools	418			7800						7,800
Bits	419		1300							1,300
Mud Motor	420									0
Coil/Snb	421		8870	8870	8870	8870				35,480
	422									0
Wire Line	423		8579	8579	8579	8579				34,316
Water	424		2420	2420	2420	2420				9,680
	425									0
Acid Trport	426									0
Prod Test	427		3920	3920	3920	4200				15,960
Glycol	428		3530							3,530
Fork Lift	429									0
Rentals	430		5946	5946	5946	5946				23,784
Tow Cats	431									0
Trucking	432		17190		6840					24,030
Camp	433		5500	5500	5,500	5500				22,000
Crew Trvl	434									0
	435									0
Rig Mats	436		500	1000	1000	1000				3,500
Fuel	437									0
Supervisor	438		900	900	900	900				3,600
	450									0
					TOTAL TANGIBLE COSTS					
	490									0
	491									0
					TOTAL CONT. & OVERHEAD					
DAILY	TOTALS:	0	58,655	44,935	43,975	46,589	0	0	0	194,154
CUMM	COST:		58,655	103,590	147,565	194,154	194,154	194,154	194,154	194,154

Canadian Petroleum Engineering Inc. — Daily Completions Report

Well:	Devlan et al Thunder River N-73			**Date:**	11/2/03	**Page:**	1
Objective:	Complete & Test well					**Day No:**	4
Formation:	Bear Rock	**Open Perfs:**	1018 -1024 mKB				AFE #
PBTD:	1131 - by wireline	**Squeeze Perfs:**					Amount
Csg Dia	139 mm	**Liner Dia**		**Liner top**			Sup Amount
Tubing Dia:	38.1 mm	**Landed at**		**Packer Size**	m KB		Total
Present Operation:	Rig to acidize Bear Rock						

BOP Pressure Test: 1400 Lo, 14000 Hi. **Satisfactory- YES** **BOP Function Test-** **YES**

10/2/03 — OPERATIONS SUMMARY

Time	ACTIVITY
0:00	Monitor well pressures. Wait for morning.
7:00	Rig in BJ pumper to coil tbg. RIH w/ coil tbg to top of fish @ 976.5 m.
8:30	Hold acid pre-job safety meeting. Pressure test lines to 18000 kPa. Start pump & fill coil tbg & well w/ 3.6 m3 3% KCl water. Break circulation. Start acid - 6 m3 of 15% HCL + additives.
10:00	Spot at bottom of tbg in annulus. All acid out of tbg. POH w/ coil tbg. Switch pump lines.
10:45	Start squeeze. Pressure up well to 2000 kPa. Pressure bled of to 1000 kPa. Pressure up to 2560 kPa, pressure broke to 1250 kPa feeding @ 0.17 m3/min. Increase rate to 0.24 m3/min. pressure slowly climbed to 2500 kPa then broke back to 2460 kPa at 6 m3 into formation. Stop pumping with all acid in zone. Initial pressure @ 2460 kPa, 15 min SIP @ 640 kPa.
11:30	Rig down BJ acid pumper.
12:00	RIH w/ coil tbg to 975 mKB. Blow well down w/ air to test equip.
14:00	Flow well to testers
16:00	No flow, SIP @ 1 kPa. Start compressor and unload water from well.
17:00	Well dry. Recovered total of 31 m3 of fluid. Load fluid & acid = 21 m3, w/ 10 m3 of new fluid No gas to surface.
18:30:00	Shut down air & POH w/ coil tbg.Monitor well shut in pressure build up. Pressure down to 38 kPa & slowly built to 60 kPa
20:15	Rig to & RIH w/ 111 mm guage ring & junk basket & check fluid level. Found fluid @ 815 mKB.
21:00	Well shut in. Start 6 hour shut in build up test.
23:59	Continue w/ build up.

Prod Fluid Sum.:	**Daily:**	**Cumulative:**	**Packer set at**	**m KB**
Gas:	e3m3/d	e3m3/d	**Casing Annulus Volume**	m3
Oil or Condensate:	m3/d	m3/d	**Tubing Volume**	m3
Water:	m3/d	m3/d	**Bottom to Perf Volume**	m3
Time Swabbed / Flowed:	hrs.	hrs.	**Total**	m3

Load Fluid Type: Fresh Water **Used today: 21 m3** **Cum. Used: 21 m3**
Rec. today: 31 m3 **Cum. Rec: 31 m3** **Left to recover: 0**
New Fluid: 10 m3

Service Rig Hours: **Daily -** **Cum. -** **Downtime:** **Cum. Downtime**
Personell on Location: 17 **Equip. On Location: 1.5: GEOS CTU, Opsco Test Equip. BJ Pumper Black Max Motor Tucker Wire Line.**

Weather:Overcast, light snow -17*C **Roads: Rough Winter Cond.** **Reported by: Richard Slater**

Canadian Petroleum Engineering Inc. **Daily Completions Report**

Well:	Devlan et al Thunder River N-73			**Date:**	10/2/03	**Page:**	1
Objective:	Complete & Test well					**Day No:**	3
Formation:	Bear Rock	**Open Perfs:**	1018 -1024 mKB				**AFE #**
PBTD:	1131 - by wireline	**Squeeze Perfs:**					**Amount**
Csg Dia	139 mm	**Liner Dia**	**Liner top**				**Sup Amount**
Tubing Dia:	38.1 mm	**Landed at**	**Packer Size**		**m KB**		**Total**
Present Operation:		Rig to acidize Bear Rock					

BOP Pressure Test: 1400 Lo, 14000 Hi. **Satisfactory- YES** **BOP Function Test- YES**

9/2/03 **OPERATIONS SUMMARY**

Time	ACTIVITY
0:00	Continue to blow well down to rig tank w/ air. POH w/ coil tbg.
1:30	Pick up 6 meter 101 mm, HSC. Csg gun w/ 32 gram, 90* phasing. RIH w/ guns. Log on depth.
3:00	Perforate the Bear Rock Formation, 1081 to 1024 mKB. Total 79 shots. No gas to suface. Guns jumped @firing & pulled tight as log up comenced. Pulled up to 1008 mKB. Guns stuck @1008 m. Work cable pulling up to 6000 to 8000 lbs pull. (string wt @ 2000) Pull cable apart w/ just over 8000 lbs pull. POH w/ cable. Rig down wire line.
4:00	Shut in well & monitor any pressure build up.
5:00	Pressure @ 2 kPa. Rig in CTU & tag guns. Drive down hard 25 to 30 times, on to the top of fish to jar loose. No progress. POH w/ coil tbg. Found bottom 5 meters plugged w/ grey, mud like, pasty substance.
8:30	Well shut in. Monitor any pressure build up. Wait on orders.
10:00	Spot BJ pumping unit on location. Rig up BJ to do acid wash & squeeze. Mix up 22 m3 of 3% KCl water. RIH w/ coil tbg. Fill well w/ 3% KCl.
16:00	Hold safety meeting. PST test lines to 18000 kPa. Go to start acid and encountered acid tanker, pump problems. Repairing pump.
17:30:00	Drain BJ pumping unit. POH w/ coil tbg & blow out w/ air, so as not to freeze up. Tear pump down,gear & impeller assembly binding on cover plate. Replace gasket and try pump. Working OK.
19:00	Wait until morning to perform acid job. Continue to monitor any well head build up.
23:59	Continue to monitor well.

Prod Fluid Sum.:	**Daily:**	**Cumulative:**	**Packer set at**	**m KB**
Gas:	**e3m3/d**	**e3m3/d**	**Casing Annulus Volume**	**m3**
Oil or Condensate:	**m3/d**	**m3/d**	**Tubing Volume**	**m3**
Water:	**m3/d**	**m3/d**	**Bottom to Perf Volume**	**m3**
Time Swabbed / Flowed:	**hrs.**	**hrs.**	**Total**	**m3**

Load Fluid Type: Fresh Water **Used today** **Cum. Used**
Rec. today **Cum. Rec.** **Left to recover**

Service Rig Hours: **Daily -** **Cum. -** **Downtime:** **Cum. Downtime**
Personell on Location: 17 **Equip. On Location: 1.5: GEOS CTU, Opsco Test Equip. BJ Pumper Black Max Motor Tucker Wire Line.**
Weather:Overcast, light snow -17*C **Roads: Rough Winter Cond.** **Reported by: Richard Slater**

Canadian Petroleum Engineering Inc.

[redacted] LOCATION: Devlan et al Thunder River N-73 DATE: Feb 2003 AFE #

ESTIMATING ASSUMPTIONS:

WELL TYPE: GAS BY: Richard Slater PRESENT STATUS:

Date

AFE	SUBSID	PREVIOUS	DAY: 01	DAY: 02	DAY: 03	DAT: 04	DAY: 05	DAY: 06	DAY: 07	CUMM
NO.	CODE	COST	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	COST:
	9300		TANGIBLE COMPLETION COSTS							
Sep, Build	300									0
Well Head	401									0
	402									0
	403									0
	404									0
	405									0
	406									0
	9400		INTANGIBLE COMPLETION COSTS							
	400									0
	410									0
	411									0
	412									0
	413									0
	414									0
	415									0
	416									0
	417									0
Drill Tools	418			7800						7,800
Bits	419		1300							1,300
	420									0
Coil/Snb	421		8870	8870						17,740
	422									0
Wire Line	423		8579	8579						17,158
Water	424		2420	2420						4,840
	425									0
	426									0
Prod Test	427		3920	3920						7,840
Glycol	428		3530							3,530
	429									0
Rentals	430		5946	5946						11,892
	431									0
Trucking	432		17190							17,190
Camp	433		5500	5500						11,000
Crew Trvl	434									0
	435									0
Rig Mats	436		500	1000						1,500
Fuel	437									0
Supervisor	438		900	900						1,800
	450									0
					TOTAL TANGIBLE COSTS					
	490									0
	491									0
					TOTAL CONT. & OVERHEAD					
DAILY	TOTALS:	0	58,655	44,935	0	0	0	0	0	103,590
CUMM	COST:		58,655	103,590	103,590	103,590	103,590	103,590	103,590	103,590

Canadian Petroleum Engineering Inc.

LOCATION: Devlan et al Thunder River N-73 DATE: Feb 2003 AFE #

ESTIMATING ASSUMPTIONS:

WELL TYPE: GAS BY: Richard Slater PRESENT STATUS:

Date

AFE	SUBSID	PREVIOUS	DAY: 01	DAY: 02	DAY: 03	DAT: 04	DAY: 05	DAY: 06	DAY: 07	CUMM
NO.	CODE	COST	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb	12-Feb	13-Feb	COST:
	9300		TANGIBLE COMPLETION COSTS							
Sep, Build	300									0
Well Head	401									0
	402									0
	403									0
	404									0
	405									0
	406									0
	9400		INTANGIBLE COMPLETION COSTS							
	400									0
	410									0
	411									0
	412									0
	413									0
	414									0
	415									0
	416									0
	417									0
Drill Tools	418			7800						7,800
Bits	419		1300							1,300
	420									0
Coil/Snb	421		8870	8870	8870					26,610
	422									0
Wire Line	423		8579	8579	8579					25,737
Water	424		2420	2420	2420					7,260
	425									0
	426									0
Prod Test	427		3920	3920	3920					11,760
Glycol	428		3530							3,530
	429									0
Rentals	430		5946	5946	5946					17,838
	431									0
Trucking	432		17190							17,190
Camp	433		5500	5500	5,500					16,500
Crew Trvl	434									0
	435									0
Rig Mats	436		500	1000	1000					2,500
Fuel	437									0
Supervisor	438		900	900	900					2,700
	450									0
					TOTAL TANGIBLE COSTS					
	490									0
	491									0
					TOTAL CONT. & OVERHEAD					
DAILY	TOTALS:	0	58,655	44,935	37,135	0	0	0	0	140,725
CUMM	COST:		58,655	103,590	140,725	140,725	140,725	140,725	140,725	140,725

1909

Canadian Petroleum Engineering Inc. — Daily Completions Report

Well:	Devlan et al Thunder River N-73		**Date:**	9/2/03	**Page:** 1
Objective:	Complete & Test well				**Day No:** 2
Formation:	Bear Rock	**Open Perfs:**	1018 -1024 mKB		**AFE #**
PBTD:	1131 - by wireline	**Squeeze Perfs:**			**Amount**
Csg Dia	139 mm	**Liner Dia**	**Liner top**		**Sup Amount**
Tubing Dia:	38.1 mm	**Landed at**	**Packer Size**	**m KB**	**Total**

Present Operation:

BOP Pressure Test — **Satisfactory-** — **BOP Function Test-**

8/2/03 — **OPERATIONS SUMMARY**

Time	ACTIVITY
0:00	Pick up rig pump & break circulation @ well head & check mud motor is operational.
0:30	Start drilling surface ice plug w/ 0.3 m3/min,15000 kPa pump pressure. Drill from surface to 112 m.
2:15	Drilled thru ice plug,RIH to 947.5 mKB tbg tally. Drill on cement & stage tool w/ 0.3 to 0.37 m3/min @ 19000 to 22000 kPa pump rate & pressure, WOB @ 2000 to 4000 dN.
7:00	Drilled 1 m of cement & top of tools. No more progress. POH w/ mud motor #1 & make up & RIH w/ motor #2. Continue drilling stage tool.
13:00	Drilled through stage tool & through 6 meters of cement below. RIH to PBTD @ 1130 mKB tbg tally. Circulate well clean.
14:00	POH w/ mud motor #2. Rig down motor & lay down bit & motor.
15:00	Make up & RIH w/ 139.7 mm csg scraper on 38.1 mm coil tbg, w/ no bit on bottom. Tag stage collar @ 953.6 m, would not pass through stage collar. Work scraper through upper interval from 800 to 850 mKB. POH w/ scraper.
17:00	Rig up Tucker Wireline & RIH w/ 111 mm guage ring & junk basket. Run through stage tool to PBTD @ 1131 m. POH w/ gauge ring.
18:00	RIH w/ CBL-VDL-CCL-GR Corelation log tools 1131 to 775 mKB. Log cement top @ 435 mKB. Do pressure pass over same interval. Rig down wire line.
20:30	Nipple up BOP & PSI test blind rams to 1400 kPa low & 14000 kPa high, 10 min each - OK.
22:30	Rig up Tucker Wireline & RIH w/ 111 mm guage ring & junk basket to PBTD. RIH w/ CTU to & blow well down w/ air.
23:59	Continue to blow well down.

Prod Fluid Sum.:	**Daily:**	**Cumulative:**	**Packer set at**	**m KB**
Gas:	**e3m3/d**	**e3m3/d**	**Casing Annulus Volume**	**m3**
Oil or Condensate:	**m3/d**	**m3/d**	**Tubing Volume**	**m3**
Water:	**m3/d**	**m3/d**	**Bottom to Perf Volume**	**m3**
Time Swabbed / Flowed:	**hrs.**	**hrs.**	**Total**	**m3**

Load Fluid Type: Fresh Water — **Used today** — **Cum. Used** — **Rec. today** — **Cum. Rec.** — **Left to recover**

Service Rig Hours: **Daily -** **Cum. -** **Downtime:** **Cum. Downtime**

Personell on Location: 16 **Equip. On Location: 1.5: GEOS CTU, Opsco Test Equip. Black Max Motor Tucker Wire Line.**

Weather:Overcast, light snow -11*C **Roads: Rough Winter Cond.** **Reported by: Richard Slater**