RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/31**	
Purpose of Job:	**Workover**				Report #:	**47**	
Report From:	**R. Elliott**	Report To:	**KEN KINDJERSKI**		Daily Costs:		$367,299
					Previous Costs:		$3,034,065
Current Operation:	Pull recorder's				Cummulative Costs:		$3,401,364
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	Cloudy - Rain	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ 06:00 hrs	Recovery Last 24 hrs.					
SICP	KPa @ 06:00 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
6:00	Continue to bleed gas head off annulus & Tbg to Bonnetts flare stack - observe well statis -15 min. Fill tbg. W/ 13.5m3 fresh inhibited water (1% MEP426) and pressure to 7mPa pressure was slowly dropping Fill annulus w/ 26m3 fresh inhibited water as above and pressure up on ann to 28mPa - the tbg. Was building annular pressure increased we then pumped the tbg, up to 28mPa and monitored both annulus and tbg. For 15 mir w/ no pressure loss. Plug is holding. (We pumped a 1/2m3 of deisel fuel ahead of the hole fill fluid on both sides to insure tops wouldn't freeze durring the winter Bled back tbg and annulus pressure and installed ABB VETCO - BPV and rigged down the equipment and shut-ir and secured the well head chaining & locking the valve handles.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99/08/30**
Purpose of Job:	**Workover**					Report #:	**46**
Report From:	**R. Elliott**		Report To:	**KEN KINDJERSKI**		Daily Costs:	
Current Operation:	Pull recorder's					Previous Costs:	$3,034,065
						Cummulative Costs:	$3,034,065
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000,000
Contractor:			Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	O.K.		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather:	sunny - warm		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:			**Notes:**	
Perforations:			Non-recov. Ann. Fluids:				
SITP 7000	KPa @ 06:00	hrs	Recovery Last 24 hrs.				
SICP 210	KPa @ 06:00	hrs	Recovery to Date:				
Rig Hr:	Cum Rig Hrs.:		Load to Recover (+New)				

TIME	OPERATION
06:00	Wait for gradient results to confirm next operation
12:30	Make up Otis 'PX' plug and Pick up and pressure test lubricator 1.4 & 28mPa OK - Run in and set plug in the 'X' nipple at 2950 mKb - Hard to set due we suspect the emulsion. POOH w/ setting tool. Make up 'PX'plug prong and run in and set in plug - POOH - Prong did not shear - it was coated w/ this same tar like substance. Redress
18:30	and rerun prong after testing lubricator as above set prong in 'PX' plug and POOH w/ setting tool
21:00	Bleed tbg off through Bonnetts 1/2" flare line while observing annulus both were at 21.8 mPa - tbg bled off to flare
04:00	with the annulus dropping to 20760kpa.w/ tbg @ 210kpa and holding - then bleed annulus through flare line dropping to 7000 kpa at 06:00 hrs - tbg. Pressure climbed to 210kpa

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99/08/29**
Purpose of Job:	**Workover**					Report #:	**45**
Report From:	**R. Elliott**	Report To:	**KEN KINDJERSKI**			Daily Costs:	
Current Operation:	Pull recorder's					Previous Costs:	$3,034,065
						Cummulative Costs:	$3,034,065
Contractor:		Fluid Vol. m3		Water	Oil	AFE Estimate:	$4,000,000,000
		Total Hauled to Lease:				**AFE#**	E9D-006
Road/Lease:	O.K.	Total Hauled from Lease:				**KB Elev:**	459.89 m
Weather:	sunny - warm	Total in Tanks:				**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:				**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Total Load Fluids:				**Notes:**	
Perforations:		Non-recov. Ann. Fluids:					
SITP 21800	KPa @ 06:00 hrs	Recovery Last 24 hrs.					
SICP 21800	KPa @ 06:00 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
8 :00	Load trucks and equip on barge and cont. to lease - Spot equip & Hold pre-job safety & proceedural meetinç w/ all personnel
12:30	Make up and pick-up Bonnetts lub. Double set BOP's and pressure test to 1.4 & 28mPa w/ methanol - O.K Open tbg. To lubricator - Tbg. Press. = 21.8 mPa w/ Csg. Press. = 21.8mPa also - RIH w/70.87mm Gaugerinç Otis 'X' nipple @ 2953mKB. POOH w/ G/Ring assy. Make up Type 'GS' pulling tool assy P/U tool's and lub. & press.test 1.4 & 28mPa -O.K. and RIH to top of recorder collar stop and - Latch on to collar stop and POOH - Recovered all recorders but both 4000 LMR type and the one (1) spartec - heat seeker - failed w/ the remaining 3000LMR type ran for 521 hours then quit. We were able tc down load this data to the hard drive but unable to zip the file for transmission Called and discussed the situatior w/ Ken - we were unable to get our gradient on the way out due to the tool failure We then made up a tandem set of recorders - 1 x 3000 LMR type and 1 x Spartec heat seeker type and ran in the hole to 3180mKB w/ a 10 min stop the proceeded to POOH w/ stops as per the program
5:00	Down load data from the recorders to disc for transission to Calgary. The bottom 200 meters of the hole was holding us up while running in and we had to pull over to come up through this area. The tools were coated witl that same black tar like substance as before.
	** I traveled to Ft St John and proceeded up to location w/ Bonnetts and the Patch safety hand and unit to Ft. Liarc on the previous day.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/11**	
Purpose of Job:	**Workover**				Report #:	**44**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$63,720
Current Operation:	Flow test well				Previous Costs:		$2,970,345
					Cummulative Costs:		$3,034,065
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	sunny - warm	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Wait on barge
12:00	Load and haul the remainder of test equip. to barge landing in Liard for Chevron's use Back haul 3 400BBl. Tanks and light stands and matting to Ft. Nelson for return

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/10**	
Purpose of Job:	**Workover**				Report #:	**43**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$25,380
Current Operation:	Flow test well				Previous Costs:		$2,944,956
					Cummulative Costs:		$2,970,336
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	sunny - warm	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Cont. to rig out equip for move
12:00	Lay-down flare stack and haul to Norwood Grande Prairie -Rig out asssorted test equip and move to barge landing at Ft. Liard for Chevron - incomplete - Haul 60m3 of produced water for disposal

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/09**	
Purpose of Job:	**Workover**				Report #:	**42**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$13,765
Current Operation:	Flow test well				Previous Costs:		$2,931,200
					Cummulative Costs:		$2,944,965
Contractor:		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	rain/low cloud cover	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Cont to rig out Norward testers equip. Wait for picker to L/D flare stack. (barge to arrive tomorrow @ noon)

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/08**	
Purpose of Job:	**Workover**				Report #:	**41**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$22,673
Current Operation:	Flow test well				Previous Costs:		$2,908,527
					Cummulative Costs:		$2,931,200
Contractor:		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	rain/low cloud cover	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 13930 kpa with a flowline temperature of 96^C. Gas Rate = 690.1/10^m^/d with 4.5m3 of fluid produced in the past 10hr's or 0.45m3/hr salinity was 16,000ppm and the Ph - 5
21:00	Shut in well after 192Hr. Flow test - final flowing pressure was 13840kPa w/ a Gas Rate of 687/10^m^/d - flowline temperature was @95^C and Water rate @ 14.4m3/d w/ a salinity of 14000ppm
21:01	Monitor and record tbg pressures.rig out test equipment 21:05 - 19600 21:10 - 20000 21:15 -20 130 21::30 - 20340 21:45 - 20450 22:00 - 20480 22:30 - 20550 06:00 - 20740 Hauled out the wet sleepers 2 went to Liard - Beaver's yard and 1 was racked at gravel pit on the other side of the river - (Beavers truck did not show up as requested) Husky Transport arrived at location w/ 2 trucks - 1 truck broke down on the way here - Hauled 61m3 of produced water for disposal - Hauled Lycal medic shack to G.P and 2 - 400BBl tanks to FSJ.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/07**	
Purpose of Job:	**Workover**				Report #:	**40**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$14,635
					Previous Costs:		$2,893,892
Current Operation:	Flow test well				Cummulative Costs:		$2,908,527
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	rainy	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 13930 kpa with a flowline temperature of 94^C. Gas Rate = 699.7/10^m^/d with 5.79m3 of fluid produced in the past 10hr's or 0.58m3/hr salinity was 18,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 691.7/10^m^/d (down 8.0 dec's in 14 hr's Tubing pressure = 13900kpa w/ a flowline Temperature of 98^C- Collect 2 gas & water samples Produced 5.3m3 of fluid - 0.44m3/hr in the past 14 hr's w/ the Salinity @12,000ppm - Ph = 5 - 168Hr's into tes
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 690.1/10^m^/d Tubing pressure decreased 30kpa to 13870kpa in past 10 hr;s w/ a flowline Temperature of 98^C Produced 4.9.m3 of fluid - 0.49m3/hr in the past 10 hr's w/ the Salinity @16,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/06**	
Purpose of Job:	**Workover**				Report #:	**39**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$15,760
					Previous Costs:		$2,878,132
Current Operation:	Flow test well				Cummulative Costs:		$2,893,892
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	warm - cloudy	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14030 kpa with a flowline temperature of 97^C. Gas Rate = 699.1/10^m^/d with 5.0m3 of fluid produced in the past 10hr's or 0.50m3/hr salinity was 24,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 696.1/10^m^/d (down 3.0 dec's in 14 hr's Tubing pressure = 13970kpa w/ a flowline Temperature of 95^C- Produced 6.7m3 of fluid - 0.48m3/hr in the past 14 hr's w/ the Salinity @24,000ppm - Ph = 5 - 144Hr's into tes
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 695.2/10^m^/d Tubing pressure decreased 40kpa to 13930kpa in past 10 hr;s w/ a flowline Temperature of 97^C Produced 5.9.m3 of fluid - 0.59m3/hr in the past 10 hr's w/ the Salinity @20,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/05**	
Purpose of Job:	**Workover**				Report #:	**38**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$15,760
Current Operation:	Flow test well				Previous Costs:		$2,862,372
					Cummulative Costs:		$2,878,132
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	hot - sunny	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ 1300 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14030 kpa with a flowline temperature of 83^C. Gas Rate = 702.75/10^m^/d with 5.0m3 of fluid produced in the past 10hr's or 0.50m3/hr salinity was 26,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 700.1/10^m^/d (down 2.6 dec's in 14 hr's Tubing pressure = 13990kpa w/ a flowline Temperature of 84^C- Produced 5.7m3 of fluid - 0.41m3/hr in the past 14 hr's w/ the Salinity @30,000ppm - Ph = 5 - 120Hr's into tes
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 700.3-10^m^/d Tubing pressure increased 10kpa to 14000kpa w/ a flowline Temperature of 97^C Produced 4,5.m3 of fluid - 0.45m3/hr in the past 10 hr's w/ the Salinity @26,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99/08/04**
Purpose of Job:	**Workover**	Report #:	**37**
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**

Daily Costs:		Current Operation:	Flow test well	Fluid Vol. m3	Water	Oil
Previous Costs:	$2,846,612	Contractor:		Total Hauled to Lease:		
Cummulative Costs:	$2,846,612	Road/Lease:	O.K.	Total Hauled from Lease:		
AFE Estimate:	$4,000,000,000	Weather:	hot - sunny	Total in Tanks:		
AFE#	E9D-006	Contact Phone:	403-303-7654	Initial Well Fluid:		
KB Elev:	459.89 m	Zone:	**Nihanni**	Total Load Fluids:		
KB. to CF:	10.35 m	Perforations:		Non-recov. Ann. Fluids:		
KB. to THF:	8.60 m	SITP	KPa @ hrs	Recovery Last 24 hrs.		
Notes:		SICP	KPa @ 1300 hrs	Recovery to Date:		
		Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)		

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14090 kpa with a flowline temperature of 87^C. Gas Rate = 704.810^m^/d with 5.22m3 of fluid produced in the past 10hr's or 0.52m3/hr. salinity was 42,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 700.510^m^/d (down 4.3 dec's in 14 hr's) Tubing pressure = 14085kpa w/ a flowline Temperature of 87^C- up to 98^C @ 19:00 hr's Produced 7.35m3 of fluid - 0.53m3/hr in the past 14 hr's w/ the Salinity @12,000ppm - Ph = 5 - 72Hr's into test
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 702.75-10^m^/d (down 1 in the last 10 hr's) Tubing pressure dropped 55kpa to 14030kpa w/ a flowline Temperature of 82^C Produced 5.m3 of fluid - 0.50m3/hr in the past 10 hr's w/ the Salinity @28,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99/08/04**
Purpose of Job:	**Workover**	Report #:	**37**
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Flow test well		

Contractor:	
Road/Lease:	O.K.
Weather:	hot - sunny
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP	KPa @ hrs
SICP	KPa @ 1300 hrs
Rig Hr:	Cum Rig Hrs.:

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:		
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:		
Non-recov. Ann. Fluids:		
Recovery Last 24 hrs.		
Recovery to Date:		
Load to Recover (+New)		

Daily Costs:		
Previous Costs:		$2,846,612
Cummulative Costs:		$2,846,612
AFE Estimate:		$4,000,000,000
AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14090 kpa with a flowline temperature of 87^C. Gas Rate = 704.810^m^/d with 5.22m3 of fluid produced in the past 10hr's or 0.52m3/hr. salinity was 42,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 700.510^m^/d (down 4.3 dec's in 14 hr's) Tubing pressure = 14085kpa w/ a flowline Temperature of 87^C- up to 98^C @ 19:00 hr's Produced 7.35m3 of fluid - 0.53m3/hr in the past 14 hr's w/ the Salinity @12,000ppm - Ph = 5 - 72Hr's into test
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 702.75-10^m^/d (down 1 in the last 10 hr's) Tubing pressure dropped 55kpa to 14030kpa w/ a flowline Temperature of 82^C Produced 5.m3 of fluid - 0.50m3/hr in the past 10 hr's w/ the Salinity @28,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99/08/04**
Purpose of Job:	**Workover**	Report #:	**37**
Report From: **R. Elliott**	Report To: **Mr. Leroy Brown**	Daily Costs:	
		Previous Costs:	$2,846,612
Current Operation:	Flow test well	Cummulative Costs:	$2,846,612
		AFE Estimate:	$4,000,000,000

		Fluid Vol. m3	Water	Oil			
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	hot - sunny	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ 1300 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14090 kpa with a flowline temperature of 87^C. Gas Rate = 704.810^m^/d with 5.22m3 of fluid produced in the past 10hr's or 0.52m3/hr. salinity was 42,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 700.510^m^/d (down 4.3 dec's in 14 hr's) Tubing pressure = 14085kpa w/ a flowline Temperature of 87^C- up to 98^C @ 19:00 hr's Produced 7.35m3 of fluid - 0.53m3/hr in the past 14 hr's w/ the Salinity @12,000ppm - Ph = 5 - 72Hr's into test
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 702.75-10^m^/d (down 1 in the last 10 hr's) Tubing pressure dropped 55kpa to 14030kpa w/ a flowline Temperature of 82^C Produced 5.m3 of fluid - 0.50m3/hr in the past 10 hr's w/ the Salinity @28,000ppm - Ph = 5

25 MMSCFD

3.3 bbl/hr

FTP 2044#

78.5 bbl/d.

3 bbl/MM

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/03**	
Purpose of Job:	**Workover**				Report #:	**36**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$14,635
Current Operation:	Flow test well				Previous Costs:		$2,831,977
					Cummulative Costs:		$2,846,612
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	hot - sunny	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ 1300 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14120 kpa with a flowline temperature of 86^C. Gas Rate = 707.310^m^/d with 5.77m3 of fluid produced in the past 10hr's or 0.58m3/hr. salinity was 54,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 705.710^m^/d (down 1.5 dec's in 14 hr's) Tubing pressure = 14120kpa w/ a flowline Temperature of 86^C Produced 7.75m3 of fluid - 0.55m3/hr in the past 14 hr's w/ the Salinity @46,000ppm - Ph = 5 - 72Hr's into test
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 704.8-10^m^/d (down 1 in the last 10 hr's) Tubing pressure dropped 30kpa to 14090kpa w/ a flowline Temperature of 87^C (up 1^/10hr's Produced 5.2m3 of fluid - 0.52m3/hr in the past 10 hr's w/ the Salinity @42,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/02**	
Purpose of Job:	**Workover**				Report #:	**35**	
Report From:	**R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		
					Previous Costs:		$2,815,842
Current Operation:	Flow test well				Cummulative Costs:		$2,815,842
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	O.K.	Total Hauled from Lease:			**KB Elev:**	459.89	m
Weather:	warm - sunny	Total in Tanks:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP 2800	KPa @ 1300 hrs	Recovery to Date:					
Rig Hr: 12.0	Cum Rig Hrs.: 12.0	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well on test through 20.64mm choke setting. Tubing pressure = 14150 kpa with a flowline temperature of 86^C. Gas Rate = 705.510^m^/d with 5.8m3 of fluid produced in the past 10hr's or 0.58m3/hr. salinity was 52,000ppm and the Ph - 5
21:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 706.0-10^m^/d (up 2 dec's in 14 hr's) Tubing pressure = 14120kpa w/ a flowline Temperature of 87^C Produced 8.44 m3 of fluid - 0.60m3/hr in the past 14 hr's w/ the Salinity @ 112,000ppm - Ph = 5
07:00	Cont to flow well through 20.64mm choke w/ a Gas Rate of 707.4-10^m^/d (up 1 dec in the last 10 hr's) Tubing pressure remained the same @ 14120kpa w/ a flowline Temperature of 87^C (up 1^/10hr's Produced 5.06m3 of fluid - 0.50m3/hr - in the past 10 hr's w/ the Salinity @50,000ppm - Ph = 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/08/01**	
Purpose of Job:	**Workover**				Report #:	**34**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$16,798
					Previous Costs:		$2,800,507
Current Operation:	Moving in equipment and rigging up same.				Cummulative Costs:		$2,817,305
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	dry rough	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	sunny - clear	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Continue to flow well for extened rate.through a 20.64mm choke setting - Tbg pressure 14170 kpa w/ flow line temperature of 86^C - Gas rate = 712.5 10^m^/d w/ a water rate of 16.8m3/d and a salinity of 68,000ppm
19:00	After 12 hrs Tbg pressure = 14150 kpa @ 84^C Gas rate = 704.3 10^m^/d w/ a salinity of 68,000 ppm Water produced in the last 12 hr's was 7.64m3 for an average of 0.63m3/hr w/ a Ph of 5
07:00	Tbg pressure = 14150kpa through a 20.64mm choke setting and a flowline temp of 86^C Gas rate = 704.3 10^m^/d w/ a salinity of 56,000 ppm and a Ph of 5 Water produced in the last 12 hr's was 7.45m3 for an average of 0.62m3/hr w/ a Ph of 5

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99/07/31**	
Purpose of Job:	**Workover**				Report #:	**33**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$44,464
					Previous Costs:		$2,756,043
Current Operation:	Moving in equipment and rigging up same.				Cummulative Costs:		$2,800,507
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:		Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	dry rough	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	sunny - clear	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
07:00	Flowing well @ rate # 2 - tbg Pressure = 17,000 kpa through 16.67mm choke setting and 88.89mm orfice w/ a gas rate of 561.6 10^m^/d @ 78^C and a water rate of 0.725m3/d over last 10 hr's
09:00	Start Rate # 3 - Open choke to 30.16mm w/ a 101.6mm Orfice in meter run - Tbg press. = 10,800 kpa w/ a Gas Rate of 838.710^m^/d and a tbg temp. @ 82^C and a water rate of 40.8m^/d and a salinity of 50,000ppm
21:00	End of flow test # 3 tbg press = 9990 kpa down 90kpa in 12 hr's -temperature 84^C -up 2^C and a gas rate of 833.8 10^m^/d - down 5^ in 12 hr's it made 11.41m3 of fluid in 12 hr's - or 0.95m3/hr. the salinity climbed to 12,000ppm - Choke setting remained at 30.16mm through out the test
21:01	Started flow rate # 4 (8/day-193/hr) - Set choke at 20.64mm Tbg. Press. = 14,150 kpa - Flow line temp @ 85^C Gas rate of 709.5 10^m^/d Water Rate = 14.4 m3/d w/ a salinity of 84,000ppm
07:00	Choke setting @ 20.64mm (unchanged) Tbg press. = 14170 kpa Gas rate = 712.5 10^m^/d - Flowline Temp = 86^C Water rate = 16.8m3/d w/ a Salinity of 68,000ppm PH has remained @ 5 constantly We hauled 193m3 of fluids from the mud sumps to Ft St John for disposal - all the fluids are now gone from the sumps and the solids ready to be moved

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-30**
Purpose of Job:	**Workover**					Report #:	**32**
Report From:	**W. Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$15,335
						Previous Costs:	$2,740,708
Current Operation:	Flow testing the well on a multi rate flow test.					Cummulative Costs:	$2,756,043
		Fluid Vol. m3		Water	Oil	AFE Estimate:	$4,000,000
Contractor:		Total Hauled to Lease:				**AFE#**	E9D-006
Road/Lease:	Fair/wet	Total Hauled from Lease:				**KB Elev:**	459.89 m
Weather	Sunny + 18 °C	Total in Tanks:				**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:				**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Total Load Fluids:				**Notes:**	
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ 0700 hrs	Recovery Last 24 hrs.					
SICP	KPa @ 0700 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.: 668.0	Load to Recover (+New)					

TIME	
0900	The shut in tubing pressure is 21690 kPa and the casing pressure is 1300 kPa.
0903	Open the well on a 15.08 mm choke
0913	The tubing pressure is at 17700 kPa and the casing pressure is at 950 kPa. We are bleeding the casing pressure off. The gas rate is at 496.195 $10^3/m^3/d$. Cut the choke to 14.29 mm.
0918	The tubing pressure is at 18000 kPa and the casing pressure is at 750 kPa. We are flowing at 453.449 $10^3/m^3/d$.
0922	Cut the chole to 13.49 mm.
0930	We have 18890 kPa on the tubing and 400 kPa on the casing. We have a fflow rate of 399.168 $10^3/m^3/d$.
0933	Open the choke to 13.89 mm.
1100	The tubing pressure is 18720 kPa and the flowing temperature is at 42 °C. The gas rate is 429.231 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 78000 PPM. W e have made 840.0 L of water in the last hour, 1.65 m^3 total.
1400	We have 18740 kPa on the tubing. The flow rate is 434.982 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 60000 PPM.
1700	The tubing pressure is 18790 kPa and the flowing temperature is 60 ° C. The gas rate is 440.270 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 50000 PPM.
21:00	Final flowing rate on #1 was 430.534 103 m3/d on a 13.89mm choke setting - tbg pressure = 18820 kpa w/ a water rate of 14.4m3/d w/ a salinity of 40,000 ppm
21:01	Start flow rate # 2 w/ a choke setting of 15.88mm then open to 16.67mm @ 570.495-10 3 m3/d W/ a flowing pressure of 17070 kpa.
00:00	Flowing pressure 16960 kpa through 16.67mm choke @ 573.849 10-3m3/d w/ a water rate of 14.4m3/d w/ a salinity of 58,000 ppm
06:00	Flowing pressure 17,000 kpa through 16.67mm choke @ 570.602 10-3m3/d w/ a water rate of 14.7m3/d w/ a salinity of 50.000 ppm
07:00	Staying the same as 06:00 hr's

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-29**
Purpose of Job:	**Workover**	Report #:	**31**
Report From:	**W. Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Monitor tubing build up. Start multi rate flow test.		

Contractor:	Bonus	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair/wet	Total Hauled to Lease:	92.00		
Weather	Cloudy + 16 °C	Total Hauled from Lease:			
Contact Phone:	403-303-7654	Total in Tanks:			
Zone:	**Nihanni**	Initial Well Fluid:			
Perforations:		Total Load Fluids:	120.45		
SITP 21300 KPa @ 0700 hrs		Non-recov. Ann. Fluids:	93.02		
SICP 2000 KPa @ 0700 hrs		Recovery Last 24 hrs.	68.00		
Rig Hr:	Cum Rig Hrs.: 668.0	Recovery to Date:	183.56		
		Load to Recover (+New)	Plus 63.11		

Daily Costs:	$107,631
Previous Costs:	$2,657,017
Cummulative Costs:	$2,764,648
AFE Estimate:	$4,000,000
AFE#	E9D-006
KB Elev:	459.89 m
KB. to CF:	10.35 m
KB. to THF:	8.60 m
Notes:	

TIME	
0700	Flowing the well on clean up. The tubing pressure is 16460 kPa and the flow rate is 581.253 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 74000 PPM.
0830	Shut in the well for a build up. The final flowing pressure is 16450 kPa and the flow rate is 581.253 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 74000 PPM. We have recovered 8.27 m^3 of fluid over hole volume.
0835	The tubing pressure has built up to 20900 kPa.
0845	The tubing pressure has built up to 21300 kPa.
0900	The tubing pressure has built up to 21440 kPa.
0915	The tubing pressure is at 21680 kPa.
0920	Shut in the master valve and bleed off the wellhead. Take apart the ball catcher and recovered 347 balls.
1115	Pressure test the flow line, ball catcher, top master valve and the Bonnett`s Wireline upper and lower Wireline BOP`S to 1400 kPa low test and 28000 kPa high test. Install the lubricator and pressure test same to 1400 kPa low test and 28000 kPa high test.
1245	Open the upper master valve. We have 21600 kPa on the tubing. Run in the hole with a 69.5 mm gauge ring and a 63.5 mm Camco "JUC" pulling tool and tag the Otis "XN" nipple at 2954.50 m CF.
1415	Close the upper master valve and bleed off the lubricator. Close the upper crown valve.
1500	Pressure test the lubricator to 1400 kPa low test and 28000 kPa high test.
1520	Open the master valve. We have 21460 kPa on the tubing. Run in the hole with a 69.85 mm Otis "XN" nipple lock and set same in the Otis "XN" nipple at 2954.50 m CF. The recorders were run from the top down as follows. (1) LMR-4000 Sera 49901 the clock was on at 1424 hours 99-07-29 (2) LMR-4000 Sera 49903 the clock was on at 1429 hours 99-07-29 (3) LMR-3000 Sera 9302 the clock was on at 1432 hours 99-07-29 (4) Spartek (Heat Seeker) Sera 20003 the clock was on at 1436 hours 99-07-29
1626	The recorders are on bottom.
1745	We are out of the hole with the Wireline tools. Rig out Bonnett`s Wireline Services. Remove the ESD valve and install a corrosion coupon and reinstall the ESD valve. Pressure test the flow line to 1400 kPa low test and 28000 kPa high test.
2100	Open the master valve and monitor the tubing pressures.
00:00	Tubing pressure @ 21430 kPa
06:00	Tubing pressure @ 21380 kPa
0700	Tubing pressure @ 21300 kPa

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-28**
Purpose of Job:	**Workover**	Report #:	**30**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**

Daily Costs:	$111,795
Previous Costs:	$2,545,222
Cummulative Costs:	$2,657,017
AFE Estimate:	$4,000,000

Current Operation: Flowing the well on clean up.

Contractor:	Bonus
Road/Lease:	Fair/wet
Weather	Rain + 12 ^{0} C
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP	KPa @ 0700 hrs
SICP	KPa @ 0700 hrs
Rig Hr:	Cum Rig Hrs.: 668.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	92.00	
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:	120.45	
Non-recov. Ann. Fluids:	93.02	
Recovery Last 24 hrs.	68.00	
Recovery to Date:	183.56	
Load to Recover (+New)	Plus 63.11	

AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	
0700	Flowing the well on clean up.
0800	We are flowing the well through a 15.88 mm choke. The tubing pressure is 16800 kPa and the casing pressure is 0 kPa. The gas rate is 498.153 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 138000 PPM. We need to recover a total of 20.24 m^3 of load fluid since the acid job.
1000	The tubing pressure is 17050 kPa, casing 0 kPa. The gas rate is 504.851 $10^3/m^3/d$. We have a pH of 5.0 and the Salinity is 132000 PPM. We have 16.34 m^3 left to recover.
1200	Tubing pressure is 17150 kPa, casing is 0 kPa. The gas rate is 510.351 $10^3/m^3/d$. The Salinity is 118000 PPM. We have 13.45 m^3 left to recover.
1230	Increase the choke to 17.46 mm.
1400	The tubing pressure is 16090 kPa, casing pressure is 0 kPa. Flowing the well at 568.998 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 118000 PPM. We have 9.65 m^3 left to recover.
1800	The tubing pressure is 16230 kPa. We have a gas rate of 528.789 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 96000 PPM. We are 4.18 m^3 short of load fluid after the acid job.
	99-07-29
0001	Shut in the well. The final flowing tubing pressure was 16350 kPa and the final rate was 582.869 $10^3/m^3/d$. The Salinity is down to 88000 PPM. We are 2.17 m^3 over load fluid.
0100	The tubing pressure has built up to 21550 kPa. Open the well on a 17.46 mm choke.
0105	The meter is in service with a 88.89 mm orifice plate.
0200	The tubing pressure is 17460 kPa and the gas rate is 585.759 $10^3/m^3/d$. The Salinity is 88000 PPM. We are 3.12 m^3 over load fluid after the acid job. Shut in the well.
0300	The tubing pressure is 21600 kPa. Open the well on a 17.46 mm choke.
0600	The tubing pressure is at 16400 kPa and the casing pressure is 1460 kPa. The gas rate is 581.105 $10^3/m^3/d$. The Salinity is 80000 PPM and the pH is 5.0. We are 6.17 m^3 of load fluid.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-27**
Purpose of Job:	**Workover**	Report #:	**29b**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**
Current Operation:			

Daily Costs:	$135,167				
Previous Costs:	$2,410,055				
Cummulative Costs:	$2,545,222				
AFE Estimate:	$4,000,000				
AFE#	E9D-006				
KB Elev:	459.89	m			
KB. to CF:	10.35	m			
KB. to THF:	8.60	m			
Notes:					

Contractor:	Bonus			Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair/wet			Total Hauled to Lease:	92.00		
Weather	Sunny + 18 ^{0} C			Total Hauled from Lease:			
Contact Phone:	403-303-7654			Total in Tanks:			
Zone:	**Nihanni**			Initial Well Fluid:			
Perforations:				Total Load Fluids:	120.45		
SITP	KPa @	0700	hrs	Non-recov. Ann. Fluids:	93.02		
SICP	KPa @	0700	hrs	Recovery Last 24 hrs.	75.78		
Rig Hr: 8.0	Cum Rig Hrs.:		668.0	Recovery to Date:	115.56		
				Load to Recover (+New)	4.89		

TIME	
0600	We are flowing the well on a 15.88 mm choke. The tubing pressure is 16900 kPa. Casing pressure is 400 kPa The gas rate is 459.090 10^3m3/d. The PH is 5.0 and we have recovered a total of 65.91 m3 of fluid. Salinity is @ 162000 PPM and the wellhead temperature is @ 56* C. **(H2S by Kitagawa = 1.3%)**
0700	We are flowing the well on a 15.88 mm choke. The tubing pressure is 16760 kPa. Casing pressure is 400 kPa The gas rate is 490.438 10^3m3/d. The PH is 5.0 and we have recovered a total of 69.41 m3 of fluid. Salinity is @ 150000 PPM and the wellhead temperature is @ 54* C. **TOTAL LOAD TO RECOVER FROM FORMATION FRACTURE = 92.0 m3.** **TOTAL LOAD FLUID RECOVERED @ 0700 hrs = 69.41 m3.** **TOTAL LOAD FLUID LEFT TO RECOVER = 22.59 m3.**

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-27**
Purpose of Job:	**Workover**	Report #:	**29a**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**
Current Operation:			

Daily Costs:	$135,167				
Previous Costs:	$2,410,055				
Cummulative Costs:	$2,545,222				
AFE Estimate:	$4,000,000				
AFE#	E9D-006				
KB Elev:	459.89	m			
KB. to CF:	10.35	m			
KB. to THF:	8.60	m			
Notes:					

Contractor:	Bonus			Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair/wet			Total Hauled to Lease:	92.00		
Weather	Sunny + 18 ° C			Total Hauled from Lease:			
Contact Phone:	403-303-7654			Total in Tanks:			
Zone:	**Nihanni**			Initial Well Fluid:			
Perforations:				Total Load Fluids:	120.45		
SITP	KPa @	0700	hrs	Non-recov. Ann. Fluids:	93.02		
SICP	KPa @	0700	hrs	Recovery Last 24 hrs.	75.78		
Rig Hr: 8.0	Cum Rig Hrs.:		668.0	Recovery to Date:	115.56		
				Load to Recover (+New)	4.89		

TIME	
1900	Continued to flow the well on a 11.11 mm choke. The tubing pressure is 7500 kPa. Casing pressure is 650 kPa. Flowing wellhead temperature is 38* C, Salinity is 226000 PPM. Made 5.70 m3 fluid in .5 hr. The total load fluid to recover from the formation fracture = 92.0 m3.
1930	We are starting to see an increase in the tubing pressure and gas @ surface. Cumm rec = 23.70 m3. Put meter in service (88.90 mm Orfice plate).
2000	We are flowing the well on a 11.11 mm choke. The tubing pressure is 10750 kPa. Casing pressure is 200 kPa. The gas rate is 49.545 10^3m3/d. The PH is 5.0 and we have recovered a total of 26.59 m3 of fluid. Salinity is @ 240000 PPM and the wellhead temperature is @ 40* C.
2100	We are flowing the well on a 11.11 mm choke. The tubing pressure is 14600 kPa. Casing pressure is 300 kPa. The gas rate is 86.849 10^3m3/d. The PH is 5.0 and we have recovered a total of 32.89 m3 of fluid. Salinity is @ 224000 PPM and the wellhead temperature is @ 40* C.
2200	We are flowing the well on a 11.11 mm choke. The tubing pressure is 16270 kPa. Casing pressure is 250 kPa. The gas rate is 119.368 10^3m3/d. The PH is 5.0 and we have recovered a total of 37.87 m3 of fluid. Salinity is @ 222000 PPM and the wellhead temperature is @ 43* C.
2300	We are flowing the well on a 11.11 mm choke. The tubing pressure is 17290 kPa. Casing pressure is 250 kPa. The gas rate is 138.634 10^3m3/d. The PH is 5.0 and we have recovered a total of 42.02 m3 of fluid. Salinity is @ 208000 PPM and the wellhead temperature is @ 43* C.
	99/07/28
0000	We are flowing the well on a 11.11 mm choke. The tubing pressure is 17960 kPa. Casing pressure is 250 kPa. The gas rate is 154.132 10^3m3/d. The PH is 5.0 and we have recovered a total of 45.34 m3 of fluid. Salinity is @ 200000 PPM and the wellhead temperature is @ 38* C. **(Increased choke size to 12.70 mm @ 0035 hrs)**
0100	We are flowing the well on a 12.70 mm choke. The tubing pressure is 17700 kPa. Casing pressure is 250 kPa. The gas rate is 165.972 10^3m3/d. The PH is 5.0 and we have recovered a total of 48.49 m3 of fluid. Salinity is @ 197000 PPM and the wellhead temperature is @ 40* C.
0200	We are flowing the well on a 12.70 mm choke. The tubing pressure is 18150 kPa. Casing pressure is 300 kPa. The gas rate is 231.919 10^3m3/d. The PH is 5.0 and we have recovered a total of 52.54 m3 of fluid. Salinity is @ 188000 PPM and the wellhead temperature is @ 46* C.
0300	We are flowing the well on a 12.70 mm choke. The tubing pressure is 18550 kPa. Casing pressure is 300 kPa. The gas rate is 243.502 10^3m3/d. The PH is 5.0 and we have recovered a total of 56.05 m3 of fluid. Salinity is @ 176000 PPM and the wellhead temperature is @ 44* C.
0400	We are flowing the well on a 12.70 mm choke. The tubing pressure is 18650 kPa. Casing pressure is 300 kPa. The gas rate is 265.310 10^3m3/d. The PH is 5.0 and we have recovered a total of 58.75 m3 of fluid. Salinity is @ 170000 PPM and the wellhead temperature is @ 46* C.
0500	We are flowing the well on a 12.70 mm choke. The tubing pressure is 19100 kPa. Casing pressure is 300 kPa. The gas rate is 275.548 10^3m3/d. The PH is 5.0 and we have recovered a total of 60.85 m3 of fluid. Salinity is @ 166000 PPM and the wellhead temperature is @ 46* C. **(Increased choke size to 15.88 mm @ 0505 hrs)**

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-27**
Purpose of Job:	**Workover**	Report #:	**29**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**

Daily Costs:	$135,167
Previous Costs:	$2,410,055
Cummulative Costs:	$2,545,222
AFE Estimate:	$4,000,000

Current Operation: Continue to flow well on clean-up.

Contractor:	Bonus
Road/Lease:	Fair/wet
Weather	Sunny + 18 ° C
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP 16760 KPa @ 0700 hrs	
SICP 400 KPa @ 0700 hrs	
Rig Hr: 8.0	Cum Rig Hrs.: 668.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	92.00	
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:	120.45	
Non-recov. Ann. Fluids:	93.02	
Recovery Last 24 hrs.	75.78	
Recovery to Date:	115.56	
Load to Recover (+New)	4.89	

AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	
0800	We are flowing the well on a 15.88 mm choke. The tubing pressure is 17520 kPa and the casing pressure is 11600 kPa. We are flowing the well at 526.582 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 66000 PPM.
0900	The tubing pressure is 17530 kPa and the casing pressure is 12000 kPa. The flow rate is 522.230 $10^3/m^3/d$. The pH is 5.0 and the Salinity is 64000 PPM. We made 1.10 m^3 of fluid in the last hour. We are 13.53 m^3 over total load fluids since the acid wash and squeeze.
0944	Open the choke to 17.46 mm and change the orifice plate to 88.9 mm.
1130	We are flowing the well on a 17.46 mm choke. The tubing pressure is 16610 kPa and the casing pressure is 8700 kPa. We are bleeding off the casing at a slow rate. The gas rate is 594.359 $10^3/m^3/d$. We have recovered a total of 29.76 m^3 of fluid. We are 16.70 m^3 of fluid over hole volume. The pH is 5.0 and the Salinity is 60000 PPM.
1230	The tubing pressure is 16615 kPa and the casing pressure is 8200 kPa. The gas rate is the same. We have recovered a total of 46.15 m^3. We are 17.70 m^3 over hole volume. The pH is 5.0 and the Salinity is 50000 PPM. Shut in the well and monitor the build-up.
1235	Tubing pressure is 21500 kPa and the casing pressure is 7500 kPa. The tubing pressure stayed the same for 10.0 min.
1245	The tubing pressure is up to 21570 kPa and the casing pressure is 7100 kPa.
1300	The tubing pressure is 21700 kPa and the casing pressure is 6750 kPa.
1305	Rig up Tree Saver and Dowell Schlumberger
1410	Hold a safety meeting.
1425	Set the casing pop valve at 28500 kPa.
1430	Prim the pumpers and pressure test lines to 65000 kPa.
1446	Open the TSI master valve and start to pump 20.0 m^3 of fresh filtered water pre-flush.
1454	Start to pump 10.0 m^3 of 15.0 % HCL acid. Increased the pump rate to 4.0 m^3/min. The treating pressure was 16800 kPa.
1456	Start to pump 40.0 m^3 of 15.0 % HCL acid. We dropped 100 ball 0.9 S.G. ball sealers every 6.0 m^3 of acid pumped. The injection rate was 17800 kPa.
1458	Increase the pump rate to 4.50 m^3/min. We seen balling action every time a batch of balls hit the perforations.
1507	Start to flush the tubing using 20.0 m^3 of fresh filtered water. The tubing pressure was 26500 kPa.
1513	Stop the pumps. The maximum treating pressure was 29800 kPa and the average treating pressure was 23000 kPa. The I.S.I.P. was 8000 kPa and the 15.0 min. shut in pressure was 2600 kPa.
1530	Rig out TSI and Dowell Schlumberger.
1700	Check the wellhead for pressure. There is 1000 kPa on the tubing and 1200 kPa on the casing. Open the well on a 9.53 mm choke.
1708	Increase the choke to 11.11 mm.
1730	We have 2250 kPa on the tubing and 900 kPa on the casing. We have recovered 4.95 m^3 of fluid. We to recover a total of 92.0 m^3 of acid and water load fluids.
1800	The tubing pressure is up to 2960 kPa and the casing pressure is 700 kPa. Recovered 5.85 m^3 of fluid in 30.0 min.
1830	We have 3920 kPa on the tubing and 650 kPa on the casing. We recovered 3.25 m^3 of fluid in the last 30.0 min.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-26**
Purpose of Job:	**Workover**					Report #:	**28**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$30,942
Current Operation:						Previous Costs:	$2,282,170
						Cummulative Costs:	$2,313,112
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus		Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	Fair/wet		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather	Sunny + 19 ^{0} C		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:	28.45		**Notes:**	
Perforations:			Non-recov. Ann. Fluids:	93.02			
SITP	KPa @ 0700 hrs		Recovery Last 24 hrs.				
SICP	KPa @ 0700 hrs		Recovery to Date:				
Rig Hr: 24.0	Cum Rig Hrs.: 660.0		Load to Recover (+New)				

TIME	
1810	Put the Meter in service with a 50.8 mm orface plate.
1900	We are flowing the well through a 11.11 mm choke. The tubing pressure is 18700 kPa and the casing pressure is 13400 kPa. The gas rate is 229.240 $10^3/m^3$/d. The PH is 4.0 and we have recovered a total of 17.3 m^3 of fluid.
2100	Flowing the well on a 11.11 mm choke. The tubing pressure is 19450 kPa. We are bleeding off the casing pressure. The gas rate is 253.435 $10^3/m^3$/d.The PH is 5.0 and we have recovered a total of 20.25 m^3 of fluid. Salinity is 114000 PPM.
2201	Open choke to 15.88 mm - meter out of surface to change orfice plate.
2215	Meter in service with a 69.85 mm orfice plate (2.75").
2300	Flowing the well on a 15.88 mm choke. The tubing pressure is 16900 kPa. We are bleeding off the casing pressure. The gas rate is 526.395 10^3m3/d.The PH is 5.0 and we have recovered a total of 25.55 m3 of fluid. Salinity is 100000 PPM and the wellhead temperature is @ 39* C. **H2S by kitagawa = 1.4%**
	99/07/27
0000	Flowing the well on a 15.88 mm choke. The tubing pressure is 16950 kPa. We are bleeding off the casing pressure. The gas rate is 519.609 10^3m3/d. The PH is 5.0 and we have recovered a total of 28.40 m3 of fluid. Salinity is @ 90000 PPM and the wellhead temperature is @ 42* C.
0100	Flowing the well on a 15.88 mm choke. The tubing pressure is 17050 kPa. We are bleeding off the casing pressure. The gas rate is 522.044 10^3m3/d. The PH is 5.0 and we have recovered a total of 30.57 m3 of fluid. Salinity is @ 90000 PPM and the wellhead temperature is @ 47* C.
0200	Flowing the well on a 15.88 mm choke. The tubing pressure is 17250 kPa. We are bleeding off the casing pressure. The gas rate is 527.997 10^3m3/d. The PH is 5.0 and we have recovered a total of 32.37 m3 of fluid. Salinity is @ 80000 PPM and the wellhead temperature is @ 51* C.
0300	Flowing the well on a 15.88 mm choke. The tubing pressure is 17250 kPa. We are bleeding off the casing pressure. The gas rate is 522.607 10^3m3/d. The PH is 5.0 and we have recovered a total of 34.07 m3 of fluid. Salinity is @ 82000 PPM and the wellhead temperature is @ 55* C. **H2S by kitagawa = 1.2%**
0400	Flowing the well on a 15.88 mm choke. The tubing pressure is 17300 kPa. We are bleeding off the casing pressure. The gas rate is 527.858 10^3m3/d. The PH is 5.0 and we have recovered a total of 35.52 m3 of fluid. Salinity is @ 74000 PPM and the wellhead temperature is @ 55* C.
0500	Flowing the well on a 15.88 mm choke. The tubing pressure is 17400 kPa. We are bleeding off the casing pressure. The gas rate is 526.460 10^3m3/d. The PH is 5.0 and we have recovered a total of 36.97 m3 of fluid. Salinity is @ 60000 PPM and the wellhead temperature is @ 57* C.
0600	Flowing the well on a 15.88 mm choke. The tubing pressure is 17400 kPa. We are bleeding off the casing pressure. The gas rate is 522.385 10^3m3/d. The PH is 5.0 and we have recovered a total of 38.37 m3 of fluid. Salinity is @ 68000 PPM and the wellhead temperature is @ 58* C.
0700	Flowing the well on a 15.88 mm choke. The tubing pressure is 17400 kPa. We are bleeding off the casing pressure. The gas rate is 534.091 10^3m3/d. The PH is 5.0 and we have recovered a total of 39.78 m3 of fluid. Salinity is @ 64000 PPM and the wellhead temperature is @ 63* C. **The well is making approximatly 1.62 m3 h20/hr for the past 7 hrs of flow. New fluid recovered = 11.33 m3.**

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-26**
Purpose of Job:	**Workover**	Report #:	**28**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**

Daily Costs:	$127,885
Previous Costs:	$2,282,170
Cummulative Costs:	$2,410,055
AFE Estimate:	$4,000,000

Current Operation: Spotting and rigging in all related frac equipment

Contractor:	Bonus
Road/Lease:	Fair/wet
Weather	Sunny + 19 ^{0} C
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP	KPa @ 0700 hrs
SICP 11100	KPa @ 0700 hrs
Rig Hr: 24.0	Cum Rig Hrs.: 660.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:		
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:	28.45	
Non-recov. Ann. Fluids:	93.02	
Recovery Last 24 hrs.	39.78	
Recovery to Date:	39.78	
Load to Recover (+New)	plus 11.33	

AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	
0700	2.0 m3 Xylene solution across interval, shut down pumper and let soak for 1.0 hour.
0800	Start pumping fresh water @ 155 l/min, pull coil up from 3175.0 m KB to 2970.0 m KB to spot additional 2.0 m3 Xylene across interval.
0825	Closed in coil tubing annulus, squeezed 3.0 m3 fresh water from surface establishing a feed rate of 160 l/min @ 13500 kPa (represents 2.0 m3 overflush to place Xylene into interval).
0840	Shut down pumper, Coil Tubing annulus ISIP - 15000 kPa, 10 minutes - 2200 kPa.
0850	Started fresh water down coil @ 200 l/min with good returns up the coil tubing annulus, ran in the hole with the coil tubing from 2970.0 m KB to 3175.0 m KB. Displaced Xylene out of the hole with 15.0 m3 fresh water - lost 1.90 m3.
1015	Started 15% HCL acid from surface @ 160 l/min, pulled coil tubing from 3175.0 m KB to above the perforations @ 3110.0 m KB.
1034	15% HCL acid @ the nozzle, decreased pump rate to 100 l/min, ran in the hole with the coil tubing @ 5.0 m/min to 3175.0 m KB **(wash #1)** 1.66 m3 acid gone.
1054	Pulled coil tubing up from 3175.0 m KB to 3110.0 m KB @ 5.0 m/min to wash perfs **(wash #2)** 3.33 m3 acid gone.
1110	Ran in with coil from 3110.0 m KB to 3175.0 m KB @ 10 m/min to wash perfs **(wash #3)** 4.98 m3 acid gone.
1120	On bottom with coil tubing (3.0 m below perfs), closed in annulus. Increased pump rate to 150 l/min - annulus pressure was @ 728 kPa. Increased pump rate to 200 l/min - annulus pressure was @ 769 kPa. Increased pump rate to 250 l/min - annulus pressure was @ 795 kPa (not seeing much pressure increase during squeeze).
1125	Switched over to fresh water, pulled coil tubing up from 3175.0 m KB to above the perforations @ 3110.0 m KB. Continued to squeeze acid while displacing coil over to water @ 220 l/min @ 800 kPa with an additional 3.50 m3 fresh water. Total acid used during washes = 4.98 m. Total acid squeezed = 4.5 m3. Total acid used = 9.48 m3.
1143	Finished flushing coil tubing, stopped pumper. ISIP - 560 kPa, 3 min - 560 kPa.
1146	Pulled out of the hole with coil tubing @ 30 m/min to surface. Fluid used for treatment = 72.5 m3. Fluid recovered during treatment = 44.05 m3. Fluid left to recover = 28.45 m3.
1207	We are at 2700.0 m with the coil tubing. We had 550 kPa on the coil tubing/tubing annulas. Open the well on a 19.05 mm choke.
1215	We are at 2425.0 m with the coil tubing and have recovered 550.0 L of fluid.
1228	We are at 2080.0 m with the coil tubing. We have recovered 2.70 m^3 of fluid. Shut in the choke. When we shut in the choke the tubing pressure went from 575 kPa to 1900 kPa.
1245	We are at 1535.0 m with the coil tubing and the wellhead pressure is up to 3020 kPa.
1300	We are at 1040.0 m with the coil tubing and the wellhead pressure is 4000 kPa.
1330	We are at surface with the coil tubing and we have 6600 kPa on the tubing. Close the top master valve.
1335	Blow the coil tubing down with Nitrogen and rig out Dowell Schlumberger coil tubing unit. Install the top section of the wellhead and install the top cap.
1610	We have 11400 kPa on the tubing. Open the wing valve to the choke.
1615	Open the well through a 9.53 mm choke.
1645	Increase the choke to 11.11 mm. **NOTE:** The Meter was in and out of service as the well was slugging fluid.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-25**
Purpose of Job:	**Workover**	Report #:	**27**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**
Current Operation:			

Daily Costs:	$30,942
Previous Costs:	$2,251,228
Cummulative Costs:	$2,282,170
AFE Estimate:	$4,000,000

Contractor:	Bonus
Road/Lease:	Fair/wet
Weather	Sunny + 19 ^{0} C
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP 0 KPa @ 0700 hrs	
SICP 0 KPa @ 0700 hrs	
Rig Hr: 24.0	Cum Rig Hrs.: 636.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:		
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:		
Non-recov. Ann. Fluids:		
Recovery Last 24 hrs.		
Recovery to Date:		
Load to Recover (+New)		

AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	
0700	Pumped a total of 5.0 m3 Xylene product down the coil tubing with good returns up the coil tubing annulus, followed by .50 m3 fresh water to spot Xylene across the interval. Shut down pumper to let solution soak for 1 hour.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-25**
Purpose of Job:	**Workover**	Report #:	**27**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**
Current Operation:	Do Xylene wash and soak/wash and squeeze acid		

Contractor:	Bonus			Fluid Vol. m3	Water	Oil
Road/Lease:	Fair/wet			Total Hauled to Lease:		
Weather	Sunny + 19 ^{0} C			Total Hauled from Lease:		
Contact Phone:	403-303-7654			Total in Tanks:		
Zone:	**Nihanni**			Initial Well Fluid:		
Perforations:				Total Load Fluids:		
SITP	90	KPa @	0700 hrs	Non-recov. Ann. Fluids:		
SICP	200	KPa @	0700 hrs	Recovery Last 24 hrs.		
Rig Hr:	24.0	Cum Rig Hrs.:	636.0	Recovery to Date:		
				Load to Recover (+New)		

Daily Costs:			$30,942
Previous Costs:			$2,251,228
Cummulative Costs:			$2,282,170
AFE Estimate:			$4,000,000
AFE#	E9D-006		
KB Elev:	459.89	m	
KB. to CF:	10.35	m	
KB. to THF:	8.60	m	
Notes:			

TIME

0730 Latch onto the 69.85 mm Otis "X" mandrel with a 76.20 mm "GS" pulling tool. There is 5800 kPa on the tubing and 2500 kPa on the casing. We worked the plug up from 2949.80 m to 2942.80 m CF and we came free. When we came out of the hole we were out on our depths. It looks like the depth counter is slipping. We found that we had sheared off the 76.20 mm "GS" pulling tool. There is 2100 kPa on the tubing.

1300 Lay down the tool string. Cut off 50.0 m of 0.125 mm wire line. Rehead the rope socket and service the Hydraulic jars. Service the "GS" pulling tool and repin same with a steel pin.

1435 Install the Wireline lubricator and pressure test same to 1400 kPa low test and 28000 kPa high test.

1500 Open the upper master valve. We have 2700 kPa on the tubing and 2700 kPa on the casing. Run in the hole with a Otis 76.20 mm "GS" pulling tool.

1545 Work the pulling tool down onto the 69.85 mm Otis "X" mandrel. There is 5700 kPa on the tubing. Spang on the plug.

1802 The tubing pressure is 5700 kPa. Bled the tubing pressure to 0 kPa through the manifold. Continue to spang on the plug.

1845 The plug came free. Pulled out of the hole with the plug. We found a black tar like Ashphaltines and a light brown substance in the plug.

1930 Rig out Bonnett`s Wireline Services.

2000 Spotted and rigged in Dowell Schlumberger Coil Tubing Unit, Acid Pumper and Nitrogen equipment to regulations. Held pre-job discussion and safety meeting with all onsite personnel.

2200 Pressure tested blind rams (bottom set of B.O.P's), manifold, surface lines, injector and wellhead connection to 1400 kPa low and 35000 kPa high for 10 minutes each - O.K.
Pressure tested blind rams (top set of B.O.P's) and same to 1400 kPa and 35000 kPa high for 10 min each - O.K. Rigged in Acid Pumper to coil tubing unit, filled coil with 3.4 m3 fresh water. Pressure tested full body and coil tubing to 1400 kPa low and 35000 kPa high for 10 minutes each - O.K. Pressure tested pipe rams (top B.O.Ps) to 1400 kPa low and 35000 kPa high for 10 minutes each - O.K. Pressure tested pipe rams (bottom B.O.P's) to 1400 kPa low and 35000 kPa high for 10 minutes each - O.K. All pressure tests were good.

99/07/26

0010 Held safety meeting.

0020 Opened well to testers facility, SITP - 325 kPa. Ran in the hole with 43 mm jet nozzle, 38.1 mm coil tubing @ 25 m/min (conducting pull tests every 500 m) to 1000 m, started to pump fresh water down the coil @ 46 l/min to keep nozzle open. Ran coil down through the tailpipe @ 2964.04 m KB (never tagged any obstructions) to a depth 3100 m KB.

0300 Increased pump rate to 150 l/min, continued to run in the hole to tag Guiberson 10K permanent bridge plug @ 3221.0 m KB. Increased pump rate to 200 l/min. Reciprocatd coil tubing 3221 - 2940.0 m KB (wash profiles), then to PBTD @ 3221.0 m KB. Continued to pump fresh water monitoring returns @ surface - took samples throughout.

0410 Bottoms up - recovered some muddy water +/- 6% BSW. Pumped 1.5 tubing volumes (22 m3) - returns are clean.

0530 Stop pump, coil tubing @ 3100.0 m KB. Rig in Compass Transfer (Xylene), rig in to Acid tank. Safety meeting.

0615 Started Xylene from surface @ 155 l/min, ran coil tubing bottom to 3175.0 m KB (3 m below bottom perforation).

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-24**
Purpose of Job:	**Workover**	Report #:	**26**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**

Daily Costs:	$96,171
Previous Costs:	$2,155,057
Cummulative Costs:	$2,251,228
AFE Estimate:	$4,000,000

Current Operation: Trying to pull "PX" plug body from Otis "X" profile.

Contractor:	Bonus
Road/Lease:	Fair/wet
Weather	Overcast + 16 ^{0} C
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP 0	KPa @ 0700 hrs
SICP 0	KPa @ 0700 hrs
Rig Hr: 24.0	Cum Rig Hrs.: 612.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:		
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:		
Non-recov. Ann. Fluids:		
Recovery Last 24 hrs.		
Recovery to Date:		
Load to Recover (+New)		

AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	
0700	Load out the rig and move same across the river to the rack site. Hook up the ESD, ball catcher and flowline to the manifold.
1300	Pressure test the flow line, ball catcher, lower master valve and lower crown valve to 1400 kPa low test and 35000 kPa high test. Close the ESD valve and pressure test same to 35000 kPa.
1415	Install the ABB Vetco Gray lubricator. Open the lower master valve and the upper crown valve.
1435	Pressure test the lubricator to 1400 kPa low test and 28000 kPa high test.
1500	Run in and latch into the two way check valve. There is 4000 kPa below the plug. Remove the plug from the dognut and recover same.
1530	Rig out the ABB Vetco Gray lubricator.
1540	Install the Bonnett`s Wireline adapter flange on top of the upper crown valve.
1600	Install the upper and lower Wireline BOP`S and pressure test same to 1400 kPa low test and 28000 kPa high test.
1710	Install the lubricator and pressure test same to 1400 kPa low test and 28000 kPa high test.
1750	Open the master valve. We have 3500 kPa on the tubing and 4400 kPa on the casing. Run in the hole with a 50.8 mm Camco "JDC" pulling tool and latch onto the prong of the 69.85 mm Otis "PX" plug at 2949.80 m CF.
1920	We are out of the hole with the prong and have 2000 kPa on the tubing.
1940	Pressure test the Wireline lubricator to 1400 kPa low test and 28000 kPa high test.
2005	Run in the hole with a 76.2 mm Otis "GS" pulling tool. When we got to bottom we had 4200 kPa on the tubing. Latched onto the plug. Pulled a overpull of 300 lbs. And pull out of the hole. We did not have the plug, the pulling tool was sheared. There was 350 kPa on the tubing. Redress "GS" pulling tool, pressure test lubricator to 1400 kPa low test and 28000 kPa high test.
2230	Tubing pressure is 0 kPa. Run in the hole with pulling tool to tag "PX" plug in the Otis "X" nipple @ 2949.80 m CF, the tubing pressure was @ 3800 kPa. Worked plug with hydraulic jars to pull from profile pulling 600 lbs over line weight (we were seeing releasing action but then the weight was going back down to line weight with no increase). Continued to try and latch into plug body but were not having any success. Pull out of the hole with slickline.
0030	When @ surface we discovered that the pulling tool was sheared again and we did not have the plug. The tubing pressure was @ 1900 kPa. Redressed pulling tool using a steel shear pin instead of a brass shear pin.
0130	Pressure tested lubricator to 1400 kPa low and 28000 kPa high.The tubing pressure was @ 0 kPa. Run in the hole with redressed pulling tool to tag "PX" plug in the Otis "X" profile @ 2947.5 m CF (2.3 m higher ?). The tubing pressure was @ 3000 kPa. Worked slickline to try and latch into plug body pulling 600 lbs over line weight again (jars would fire and then the weight would drop off to line weight - same results). Tubing pressure was @ 2000 kPa.
0330	Pulled out of the hole and discovered that the pulling tool was sheared again. Tubing pressure was @ 1400 kPa.
0515	Redressed pulling tool, pressure tested lubricator 1400 kPa low and 28000 kPa high. The tubing pressure was @ 2400 kPa. Run in the hole with pulling tool again to tag "PX" plug in the Otis "X" profile @ 2947.5 m CF. The tubing pressure was @ 4400 kPa. Pulled up to fire hydraulic jars @ 700 lbs over line weight. Pulled out of the hole (never bothered to work slickline downward once we pulled up and lost weight to avoid shearing and losing the plug). The tubing pressure was @ 5000 kPa. Slickline @ surface, no plug and the pulling tool was not sheared.
0700	Added 3.0 m of sinkerbars above pulling tool to top of pulling tool. Pressure tested lubricator to 1400 kPa low and 28000 kPa high

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-23**
Purpose of Job:	**Workover**					Report #:	**25**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$77,406
						Previous Costs:	$2,077,651
Current Operation:	Hauling rig to rack site/rig in Norward.					Cummulative Costs:	$2,155,057
		Fluid Vol. m3		Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus	Total Hauled to Lease:				**AFE#**	E9D-006
Road/Lease:	Fair/wet	Total Hauled from Lease:				**KB Elev:**	459.89 m
Weather	Overcast + 16 ° C	Total in Tanks:				**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:				**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Total Load Fluids:				**Notes:**	
Perforations:		Non-recov. Ann. Fluids:					
SITP 0	KPa @ 0700 hrs	Recovery Last 24 hrs.					
SICP 0	KPa @ 0700 hrs	Recovery to Date:					
Rig Hr: 24.0	Cum Rig Hrs.: 588.0	Load to Recover (+New)					

TIME	
0700	Waiting on the tug from Fort Liard.
1430	The tug arrived from Fort Liard. We hooked onto the barge and pulled it free.
1700	We have the barge free. Hooked up the tug to the barge and brought the barge to the barge landing. We unloaded the three trucks that were stuck on the barge overnight. We made three trips with the barge and then hooked onto the tug and pulled it off the sand bar. We used two barges and tugs to clear the backload of equipment that was waiting to get across the river.
1830	Moved rig and related equipment to the side of location to prepare for rig move to the rack site @ daybreak.
2345	Respotted stairs and walkway @ the wellhead with forklift assistance.
0100	Rigged in Norward Production Testers Ball Catcher, E.S.D and Corrosion Coupon onto the wing valve.
0700	Waiting on ABB Vetco to arrive to pull the 2-way check valve from the tubing hanger.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-22**
Purpose of Job:	**Workover**					Report #:	**24**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$183,207
						Previous Costs:	$1,894,444
Current Operation:	Rig out rig. Waiting on barge to move equipment.					Cummulative Costs:	$2,077,651
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus		Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	Fair/wet		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather	Rain + 15 °C		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:			**Notes:**	
Perforations:			Non-recov. Ann. Fluids:				
SITP 0	KPa @ 0700	hrs	Recovery Last 24 hrs.				
SICP 0	KPa @ 0700	hrs	Recovery to Date:				
Rig Hr: 24.0	Cum Rig Hrs.:	564.0	Load to Recover (+New)				

TIME	
0700	Pressure test the 88.9 mm tubing, on-off tool, seal assembly and tubing plug to 28000 kPa.
0900	Rig up ABB Vetco Gray and run a two way check valve in the dognut.
1000	Pressure test the two way check valve in the dognut to 35000 kPa.
1030	Rig out the ABB Vetco Gray lubricator.
1100	Rig out the BOP`S.
1330	Install the wellhead.
1430	Pressure test the wellhead and extended neck dognut to 35000 kPa.
1530	Rig out the rig.
1700	Lay down the derrick.
1745	Rig out the rig and prepare to move same across the river to the rack site.
2300	Remove the rental Blind/Shear Rams from the service rig B.O.P stack, reinstall same.
0200	Continued to wrap up hoses, move filter unit, light towers, thread protectors and garbage.
0700	Cleaned location of all futile debris, waiting on trucks to arrive on barge.

NOTE:

The barge got stuck on a sand bar coming across the river with the bed truck and two trucks to haul mud. Attempted to work the barge free. The tug got stuck while moving around to free the barge.
We have the other tug coming down from Fort Liard to pull our tug free and get the barge moving.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-21**
Purpose of Job:	**Workover**	Report #:	**23**
Report From:	**W. Casler/ B. Weishaar**	Report To:	**Mr. Leroy Brown**
Current Operation:	Nipple down BOP`S/rig up wellhead/rig out rig.		

Contractor:	Bonus			Fluid Vol. m3	Water	Oil
Road/Lease:	Dry			Total Hauled to Lease:		
Weather	Sunny and windy			Total Hauled from Lease:		
Contact Phone:	403-303-7654			Total in Tanks:		
Zone:	**Nihanni**			Initial Well Fluid:		
Perforations:				Total Load Fluids:		
SITP	0	KPa @	0700 hrs	Non-recov. Ann. Fluids:		
SICP	0	KPa @	0700 hrs	Recovery Last 24 hrs.		
Rig Hr:	24.0	Cum Rig Hrs.:	540.0	Recovery to Date:		
				Load to Recover (+New)		

Daily Costs:	$58,408
Previous Costs:	$1,836,036
Cummulative Costs:	$1,894,444
AFE Estimate:	$4,000,000
AFE#	E9D-006
KB Elev:	459.89 m
KB. to CF:	10.35 m
KB. to THF:	8.60 m

Notes: There is pitting on + - 10.0 % of the tubing that was ran in the hole. All the joints were Tube Tested to 35000 kPa.

TIME	
0700	Continued to tally, drift, threadwash and tubetest an additional 32 - 88.9 mm NSCT tubing joints, made up and installed OTIS "X" nipple (.31 m long, 71.45 mm profile), 1 - 3.03 m x 88.9 mm NSCT pup joint, 159 - 88.9 mm NSCT tubing joints to tag Guiberson 177.8 mm Incology 925 Magnum permanent packer @
2300	Latched into packer, pressure tested annulus to 28000 kpa while monitoring the tubing for returns, good solid 10 minute test. Bled off pressure, annulus dead.
2345	Pulled and layed out layed out tag joint # 312, pulled and layed out top single # 311, made up and run in hole with 3 - 88.9 mm NSCT pup joints (3.09 m, 1.74 m, 0.52 m), made up and rih with top single # 311, installed and made up 88.9 mm NSCT x 88.9 mm EUE tubing hanger for space out of string. Tested all connections to 35000 kpa - O.K.
0215	Rigged in all related circulating equipment, lowered tubing string to put tubing hanger below annular preventer.
0250	Reverse circulated annulus over with 95.0 m^3 1% Baker Cronox MEP-426 corrosion inhibited water @ 500.0 L/min.
0500	Lowered tbg string to latch Guiberson Premium Latch Mule Shoe seal assy into the permanent packer with 1000 DaN compression. Pulled 5000 DaN tension into tubing string to ensure seal assembly is latched - O.K. Relanded tubing hanger and confirmed 1000 DaN compression - O.K. String weight is 37000 DaN.
0620	Pressure tested annulus and seal assembly to 28000 kpa while monitoring tubing - Good solid 15 minute test.
0700	Rigged in steel line to tubing. Pressure testing the tubing to 28000 kPa.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-20**
Purpose of Job:	**Workover**	Report #:	**22**
Report From:	**R. Elliott B. Weishaar**	Report To:	**Mr. Leroy Brown**

Daily Costs:						$78,239
Previous Costs:						$1,757,797
Cummulative Costs:						$1,836,036
AFE Estimate:						$4,000,000
Contractor:	Bonus			Fluid Vol. m3	Water	Oil
Road/Lease:	dry & rough			Total Hauled to Lease:		
Weather	Clear and sunny			Total Hauled from Lease:		
Contact Phone:	403-303-7654			Total in Tanks:		
Zone:	**Nihanni**			Initial Well Fluid:		
Perforations:				Total Load Fluids:		
SITP	0	KPa @	0700 hrs	Non-recov. Ann. Fluids:		
SICP	0	KPa @	0700 hrs	Recovery Last 24 hrs.		
Rig Hr:	24.0	Cum Rig Hrs.:	516.0	Recovery to Date:		
				Load to Recover (+New)		

AFE#	E9D-006		
KB Elev:	459.89	m	
KB. to CF:	10.35	m	
KB. to THF:	8.60	m	

Notes:

TIME	OPERATION
0700	Make-up packer assy as follows 1 - wireline re-entry guide 120.65mm x 74..8mm x0.15m x 1 - 89mm x 1.89m pup Jt x 1 - 89mm x 3.10m EUE pup Jt x 1 - `XN' nipple 56.93mm no-go x 0.43m x 1 - 89mm x 3.08m EUE pup Jt x 1 - 89mm x 1.22m perforated pup Jt x 1 - 89mm x 150.81mm x 76mm x0.28m tbg centrilizer x 1 - 89mm `X' nipple w/ 69.85mm profile x0.34m x 1 - 89mm x 2.95m NS-CT pup Jt x 1 - `X' nipple w/ 69.85 mm profile x0.34m x 1 - 89mm x1.12m NS-CT pup Jt x 1 - 177.8mm x 101.6mm x 0.94m Guiberson AVA Magmum CT packer on Computalog wireline. Pick up packer and wireline lubricator & BOPE and pressure test to 35 mPa 10min - OK Ran in the hole to liner top @ 2909mKB - had to work the packer assy into the liner then ran in to 2948.8mKB then got stuck and were unable to pull out or run in futher Called Leroy in Calgary and a decision was made to set the packer at this depth with the bottom of the re-entry guide @2964mKB
1500	Pull out of the hole - log up to insure depth - OK - pressure test packer annulus to 28mPa for 20 min - held solid it took 0.43m3 water to fill ann.
1600	Rig down Computalog rig up pipe handlers - release SNUBCO and Weatherford drill pipe / collars and pipe handling rentals and send to town. Held pre-job discussion and safety meeting with all onsite personnel.
1900	Made up and run in hole with Guiberson 177.8 mm NSCT premium latch seal assembly c/w extra seal unit and lead in sub (76.2 mm I.D) x 1.14 m long (top to landing coupler = .47 m), 1 - 177.8 mm x 88.9 mm type "XL" on/off tool c/w 71.45 mm "X" profile and double bonded aflas seals (.77 m long), 1 - 88.9 mm x 2.96 m NSCT pup joint, 1 - 88.9 mm x .31 m "X" nipple c/w 71.45 mm profile, 1 - 88.9 mm x .31 m NSCT tubing centralizer (150.81 mm O.D x 76 mm I.D), 1 - 88.9 mm x 3.01 m NSCT pup jt, 1 - 88.9 mm x .31 m NSCT tubing centralizer (150.81 mm O.D x 76 mm I.D), 1 - 88.9 mm x 3.00 m NSCT pup jt, 1 - 88.9 mm x .31 m NSCT tubing centralizer (150.81 mm O.D x 76 mm I.D), 1 - 88.9 mm x 1.76 m NSCT pup jt, 121 - 88.9 mm NSCT tubing joints (tallying, drifting, thread washing and tubetesting to 35000 kPa on the way in the hole.
0700	NOTE: A TOTAL OF 6 - 88.9 mm TBG JOINTS HAVE BEEN DISCARDED DUE TO DAMAGED PIN ENDS.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-19**
Purpose of Job:	**Workover**	Report #:	**21**
Report From:	**R. Elliott B. Weishaar**	Report To:	**Mr. Leroy Brown**

Daily Costs:	$82,315
Previous Costs:	$1,530,626
Cummulative Costs:	$1,612,941
AFE Estimate:	$4,000,000

Current Operation: Rigging in all Computalog related equipment.

weather:	warm slightly cloudly	Fluid Vol. m3	Water	Oil	AFE# E9D-006
Contractor:	Bonus	Total Hauled to Lease:			
Road/Lease:	Soft/wet	Total Hauled from Lease:			KB Elev: 459.89 m
Weather:	clear & sunny	Total in Tanks:			KB. to CF: 10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:			KB. to THF: 8.60 m
Zone:	**Nihanni**	Total Load Fluids:			Notes:
Perforations:		Non-recov. Ann. Fluids:			
SITP 0	KPa @ 0700 hrs	Recovery Last 24 hrs.			
SICP 0	KPa @ 0700 hrs	Recovery to Date:			
Rig Hr: 24.0	Cum Rig Hrs.: 468.0	Load to Recover (+New)			

TIME	OPERATION
0700	Set upper bridge plug @ 3215 mKB - pull setting tool to 3210mKB then run back down to 3215mKB & tag to confirm depth - O.K. Pull out of the hole - lay down tools and rig out wireline lubricator - BOP's and shooting nipple. Logging correlated to Computalog Sector Bond Log Dated Feb 17 1998.
0930	Nipple up bell nipple and flow trough - Make up Guiberson Uni-v1 mechanical packer and run in the hole on 89mm drill pipe from derrick tagged bridge plug @3217.72 mKB SLM, pick up and set retrievable packer @ 3207mKB slm pressure test down drill pipe to 28 mPa 15 min -OK
1830	Unset packer and pull out of the hole into 244.5mm casing standing 17 stands in derrick - rig up pipe handlers and flow check well. Had to slip and cut drilling line due to damaged line. Well still supporting coloum of fluid.
2100	Continued to pull and lay out drill pipe and packer assy. Rigged down kelly and all drill pipe related equipment.
0700	Rigged down flow trough, rigging in Computalog Wireline related equipment, prepare to run permanent packer.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-18**
Purpose of Job:	**Workover**					Report #:	**20**
Report From:	**R. Elliott B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$40,273
						Previous Costs:	$1,530,626
Current Operation:	RIH w/ wireline to set second B.P. @ 3215					Cummulative Costs:	$1,570,899
weather:		Fluid Vol. m3		Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus	Total Hauled to Lease:				**AFE#**	E9D-006
Road/Lease:	Soft/wet	Total Hauled from Lease:				**KB Elev:**	459.89 m
Weather:	clear & sunny	Total in Tanks:				**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:				**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Total Load Fluids:				**Notes:**	
Perforations:		Non-recov. Ann. Fluids:					
SITP 0	KPa @ 0700 hrs	Recovery Last 24 hrs.					
SICP 0	KPa @ 0700 hrs	Recovery to Date:					
Rig Hr: 24.0	Cum Rig Hrs.: 468.0	Load to Recover (+New)					

TIME	OPERATION
0700	Pick up - make up 154mm gauge ring / junk-basket w/ CCL . Pressure test lubricator 1.4 & 35 mPa 10min ea - OK Run in the hole to 3250 mKB the tool got stuck - worked tool free and pulled out of the hole. Recovered 1/3 of a 5 gallon pail of black crud wpth solids and metal throughout. A sample was collected for analysis Pick up and rerun tools to 3230mKb - above the second set of perf's - seemed to tag heavier fluid just in the liner at 2920mKb - pull out of the hole - recover 1/4 of a pail of sludge w/ some solids (possibly invert drilling fluids from the formation)
1430	Pump 40 m3 of 1150 kg/m thix drilling fluid followed by 20 m3 of 1150 kg/m brine @ 1 m3/min. @ 8000Kpa
1630	Re-run gauge-ring junk basket tools to 3230 mKB drag at 2920 mKB was no longer present- pulled out of the hole the junk basket had some fresh water scale but little sludge.
1800	Make up Multi sensor caliper casing inspection tool (60 fingers) - pressure tested lubricator 1.4 - 35mPa 10 min. ea. - OK- Run in the hole and log 177.8mm casing from 3230 mKb to top of liner @ 2909 mKb then the 224.5mm casing from liner lap to 2848 Mkb, both the 177.8 mm and the 244.5 mm casing strings looked to be in good condition. Pull out of hole with Multi sensor inspection tool.
2030	Pumped 20 m3 fresh h20 down the casing @ 1.0 m3/min @ 8 mpa. Well on strong vacuum.
2125	Made up and run in hole with 154 mm gauge ring/junk basket/CCL tool to 3225 Mkb. Pulled junk basket to surface.
0010	Broke and layed out gauge ring/junk basket assembly (very small amount of scale present).
0030	Held safety meeting with all onsite personnel.
0045	Made up and rih with 177.8 mm Guiberson 10K permanent bridge plug #1 (.75 m long), setting tool and CCL to 3225 Mkb, logged plug into place and set @ 3220 Mkb. Pulled setting tool up to 3210 Mkb, ran back in to tag bridge plug for confirmation - O.K. Pulled setting tool to surface. Attempted to fill hole but well is supporting coloum of fluid.
0330	Made up and rih with 177.8 mm Guiberson 10K permanent bridge plug #2 (.75 m long), setting tool and CCL to tag bridge plug #1 @ 3220 Mkb, logged plug into place - misrun, unable to detonate. Pulled plug to surface. Attempted to fill hole again but the well is still supporting a coloum of fluid and remaining dead.
0700	Re-run 177.8 mm bridge plug to repeat above step.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-17**
Purpose of Job:	**Workover**					Report #:	**19**
Report From:	**R. Elliott B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$45,458
						Previous Costs:	$1,530,626
Current Operation:	Rigging in computalog wireline related equipment.					Cummulative Costs:	$1,576,084
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus		Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	Soft/wet		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather:	clear & sunny		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:			**Notes:**	
Perforations:			Non-recov. Ann. Fluids:				
SITP 0	KPa @ 0700	hrs	Recovery Last 24 hrs.				
SICP 0	KPa @ 0700	hrs	Recovery to Date:				
Rig Hr: 24.0	Cum Rig Hrs.:	444.0	Load to Recover (+New)				

TIME	OPERATION
0700	Push packer to 3097mkb - the brakes on the rig pilled up - wait on pads to be sent by air to location.
1400	Replace break-pads w/ new pads from town
1600	Mill and push packer assy to 3338mKB w/ packer hanging up on probable csg collars
1830	Packer @ 3338.0 Mkb, pull up and rack back kelly.
1900	Pull and stand 24 - jts 88.9 mm drill pipe in derrick to put shoe bottom @ 3108.64 Mkb, ran back in hole to put shoe bottom @ 3338.0 Mkb (never encountered any tight spots on way in hole, packer remains downhole).
2200	Pull and stand 344 - jts 88.9 mm drill pipe in derrick (filling hole on trip out)
0500	Broke and layed out 6 - 4 3/4" drill collars, x - sub c/w pump through plug in place, hydraulic jars, drive sub, 5 3/4" wash pipe and burn shoe.
0700	Rig down flow tee off of B.O.P stack, rigged in Computalog Wireline related equipment.

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-16**
Purpose of Job:	**Workover**					Report #:	**18**
Report From:	**R. Elliott B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$59,125
						Previous Costs:	$1,530,626
Current Operation:	Running to bottom to ensure packer below perforations.					Cummulative Costs:	$1,589,751
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus		Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	Soft/wet		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather:	clear & sunny		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:			**Notes:**	
Perforations:			Non-recov. Ann. Fluids:				
SITP 0	KPa @ 0700	hrs	Recovery Last 24 hrs.				
SICP 0	KPa @ 0700	hrs	Recovery to Date:				
Rig Hr: 24.0	Cum Rig Hrs.:	420.0	Load to Recover (+New)				

TIME	OPERATION
0700	Lay down seal assy and fish - 12 ft (3.6m) of perforating strip guns w/ no charges attatched. The coil tbg fish - ie jet nozzel and skirt were not on top of the fish and there didn't appear to be any way for them to get past the plugged seal assy ??? Checked w/ Calgary and insured that the packer in the hole was what was reported
1100	Pick-up make - up B.H.A. to mill out Halco 73mm x 177.8mm BWB permanent packer as follows - 4.87" x 5.875" Burn shoe (0.81m long) x 5 3/4" wash pipe pup (2.69m) x drive sub (0.95m) x 4 3/4" hydrolic jars (2.53m) x profile sub c/w pump through plug installed on surface x 6 - 4 3/4" drill collars on XH 3 1/2" drill pipe string - Tally and drift drill pipe off racks.
1530	After running 67 Jt's of drill pipe hole is full and displacing we picked up and made up the kelly.
1745	Continued to tally, drift and run in hole with 88.9 mm drill pipe filling the drill string on the way in the hole.
0030	Ran a total of 300 - jts 88.9 mm drill pipe to touch liner top @ 2913.71 Mkb (tubing tally depth), rotated drill string through liner top. Ran an additional 16 - jts 88.9 mm drill pipe to tag packer top @ 3066.93 Mkb (tubing tally depth).
0115	Pulled and layed out tag joint, rigged in kelly and all related drilling equipment. Retagged packer. Broke circulation down the tbg up the casing with 1150 kg/m3 brine h20 pumping @ .22 m3/min @ 4.5 mpa.
0230	Rotated drill string from 3066.93 - 3071.03 Mkb with ease to tag solid @ 3071.03 Mkb. Increased rotary table speed to 80 R.P.M to mill on packer constantly monitoring returns (good throughout).
0630	Finished milling on packer, racked back kelly and related drilling equipment.
0700	Continued to tally, drift and rih with drill pipe to ensure packer is below perforations.

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-15**
Purpose of Job:	**Workover**					Report #:	**17**
Report From:	**R. Elliott B. Weishaar**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$84,584
						Previous Costs:	$1,446,042
Current Operation:	Nipple up BOP`S /wait on mud products					Cummulative Costs:	$1,530,626
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus		Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	Soft/wet		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather:	clear & sunny		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:			**Notes:**	
Perforations:			Non-recov. Ann. Fluids:				
SITP 0	KPa @ 0700	hrs	Recovery Last 24 hrs.				
SICP 0	KPa @ 0700	hrs	Recovery to Date:				
Rig Hr: 24.0	Cum Rig Hrs.:	372.0	Load to Recover (+New)				

TIME	OPERATION
0700	Mix 110 m3 1150kg/m brine for volume
1200	Csg. Pressure built to 2080 kpa in 6 hours - bleed gas through test unit to 0 kpa /10 min w/ no fluid back Pump down tbg/ann - initial circ. Pressure - 0.6m3 L/min @ 500 kpa - pumped 2.5m3 of brine then pressured up to 6000 kpa @ 0.33m3 / min - pumped a total 50m3 well on vacuum - while pumping down the annulus the tbg. pressured up to 4200 kpa but bled to 0kpa after pumping then went on vacuum. Observe well 15 min. then pulled out of the hole and laid down tbg. The collar on jt. # 67 the collar was pitted on the outside -this condition continued throughout the string on the trip out for a total of 48 - 88.9 mm NSCT tubing jts that need collars changed out. While pulling the tubing string we were pumping 2.0 m3 1150 kg/m3 (11.27 kpa/m) brine H_2O down the annulus every hour to maintain well control.
0715	Out of the hole with the original tubing string configuration, Halliburton j-slot latching head, Otis VTR seal assy and mule shoe (stuck in the seal unit and mule shoe was a long piece of charge holder of a strip gun). Broke and layed out same, seals on seal unit were in very poor condition. Total number of tubing rejects due to thread damage on the pin ends (getting hot while breaking out) = 6 jts.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-14**
Purpose of Job:	**Workover**	Report #:	**16**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Nipple up BOP`S /wait on mud products		

Daily Costs:	$66,689						
Previous Costs:	$1,376,595						
Cummulative Costs:	$1,443,284						
AFE Estimate:	$4,000,000						
Contractor:	Bonus	Fluid Vol. m3	Water	Oil	**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled to Lease:			**KB Elev:**	459.89	m
Weather:	Rain/ + 12 ° C	Total Hauled from Lease:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Total in Tanks:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Initial Well Fluid:					
Perforations:		Total Load Fluids:			**Notes:**		
SITP	KPa @ hrs	Non-recov. Ann. Fluids:					
SICP	KPa @ hrs	Recovery Last 24 hrs.					
Rig Hr: 24.0	Cum Rig Hrs.: 372.0	Recovery to Date:					
		Load to Recover (+New)					

TIME	OPERATION
0700	Wait on mud material
1030	Off-load mud material and mix carbwate into previous made 60m3 thix kill fluid and transfer to 400bbl tank
1130	Transfer 60m3 -1150kpa/m brine to mud tank and mix to thix kill fluid
2000	Finished mixing thix mix mud system, 163 m3 1150 kg/m3 (11.27 kpa/m) usable mud on location.
2030	Bled well off to testers facility, SITP - 4150 kpa, SICP - 2 - 2250 kpa. The tubing pressure bled off to 0 kpa, no fluid was recovered. Bled down the annulus, started to surge water to surf surface, closed in and monitored same. Rigged in all circulating related equipment, filled tubing with .80 m3 thix mix, pumped an additional 15.2 m3 mud.
2100	Well dead on both sides and showing no signs on influx from the wellbore.
2300	Installed handling pup joint with safety valve into the tbg hanger, picked up on tbg string, (string started to move @ 24000 DaN). Reciprocated tbg string up and down trying to get right hand torque @ the on/off connector. Encountered difficulties getting torque @ on/off, pulled tbg string up to 50000 DaN several times and then back to neutral but still had no releasing action. Repeated step @ 58000 DaN and on the second time we had releasing action. The well showed no signs of u-tubing and remained dead. String weight is 38000 DaN.
	99 - 07 - 15
0030	Rigged in all circulating related equipment, filled tbg with 1.30 m3 thix mix pumping @ a rate of .47 m3/min @ 4 mpa attempting to break circulation. Pressure increased to 6.2 mpa but we never seen any returns on the annulus side. Pumped a total of 95 m3 thix mix down the tbg, shut down pump, annulus venting a small amount of sweet gas surface. Pumped 1.0 m3 thix mix down the annulus, prepare to pooh with 88.9 mm NSCT tubing string.
0500	Went to start to pooh with the tubing string but are pulling over string weight 3 m above tubing position where we trying to circulate. Worked tbg string up and down, attempted to rotate string through possible tight spot, continued to pooh.
0700	Pulled and layed out a total of 15 - 88.9 mm NSCT tbg jts. (1 - 88.9 mm x 1.73 m pup jt).

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-13**
Purpose of Job:	**Workover**					Report #:	**15**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$66,689
						Previous Costs:	$1,227,606
Current Operation:	Nipple up BOP`S /wait on mud products					Cummulative Costs:	$1,294,295
			Fluid Vol. m3	Water	Oil	AFE Estimate:	$4,000,000
Contractor:	Bonus		Total Hauled to Lease:			**AFE#**	E9D-006
Road/Lease:	Soft/wet		Total Hauled from Lease:			**KB Elev:**	459.89 m
Weather:	Rain/ + 12 ° C		Total in Tanks:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654		Initial Well Fluid:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**		Total Load Fluids:			**Notes:**	
Perforations:			Non-recov. Ann. Fluids:				
SITP	KPa @	hrs	Recovery Last 24 hrs.				
SICP	KPa @	hrs	Recovery to Date:				
Rig Hr: 24.0	Cum Rig Hrs.:	348.0	Load to Recover (+New)				

TIME	OPERATION
0700	The tubing pressure is 6540 kPa. We are mixing Thix mix mud.
0800	The tubing pressure is 6930 kPa.
0900	There is 7290 kPa on the tubing.
1000	We have 7640 kPa on the tubing. Pick up and make up the Bonnett`s Wireline upper and lower BOP`S. Pressure test the BOP`S to 1400 kPa low test and 35000 kPa high test. Install the lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.
1230	Hold a safety meeting.
1240	Pressure up on the wing valve to 10000 kPa. Open the upper and lower master valves.
1250	Start to pump 17.0 m^3 of Thix mix mud. The initial pumping pressure was 9200 kPa with a pump rate of 450.0 L/min.
1258	Wehave pumped 3.80 m^3 of Thix mix and the tubing pressure is 8600 kPa. The pressure went down to 5500 kPa after pumping 14.2 m^3. The pressure started to increase after pumping15.0 m^3.
1325	Stop the pump. The final pumping pressure was 7100 kPa. The ISIP was 2600 kPa.
1327	The well went on a vacuum and took 500.0 L of fluid then slowed down.
1335	Shut in the well and the manifold. We lost 650.0 L out of the tanks.
1338	Open the upper and lower crown valves and run in the hole with a 69.85 mm Otis "TXN" circulating valve. The fluid level was at 76.0 m when we ran in the hole. Set the plug in the Otis "XN" nipple at 3060.39 m KB. Pull out of the hole with the Wireline setting tools. The fluid level was at 276.0 m when we came out of the hole.
1615	Rig out Bonnett`s Wireline Services.
1645	Rig up the ABB Vetco Gray lubricator.
1715	Pressure test the lubricator to 21000 kPa.
1730	Install the two way back pressure valve in the dognut.
1755	Pressure test the back pressure valve to 1400 kPa low test and 28000 kPa high test.
1820	Rig out the ABB Vetco Gray lubricator.Nipple down wellhead nipple up BOPE
2200	Pressure test BOP equipment x tbg. Spool x shooting nipple conn. & valve 1.4 &35 mPa 10 min. ea. OK
2300	Remove TWCV from tbg. Hanger - rig out dowell pumper - roll acid in 400 bbl tank - transfer mud from 400bbl tank to rig tank to complete mixing (need to add additional carboweight material) and nipple up bell nipple and flow trough. Pick up pipe handling equipment to floor.
0700	Wait on mud material to build volume

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-12**
Purpose of Job:	**Workover**	Report #:	**14**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Flow check the tubing/mix thix mix mud.		

Contractor:	Bonus	Fluid Vol. m3	Water	Oil	AFE Estimate: $4,000,000,000
Road/Lease:	Soft/wet	Total Hauled to Lease:			**AFE#** E9D-006
Weather:	Rain/ + 14 ° C	Total Hauled from Lease:			**KB Elev:** 459.89 m
Contact Phone:	403-303-7654	Total in Tanks:			**KB. to CF:** 10.35 m
Zone:	**Nihanni**	Initial Well Fluid:			**KB. to THF:** 8.60 m
Perforations:		Total Load Fluids:			**Notes:**
SITP 6120	KPa @ 0600 hrs	Non-recov. Ann. Fluids:			
SICP 2050	KPa @ 0600 hrs	Recovery Last 24 hrs.			
Rig Hr: 24.0	Cum Rig Hrs.: 324.0	Recovery to Date:			
		Load to Recover (+New)			

		Daily Costs:	$66,689
		Previous Costs:	$1,160,917
		Cummulative Costs:	$1,227,606

TIME	OPERATION
0700	Monitor the well. We have 200 kPa on the tubing.
0800	There is 440 kPa on the tubing.
0900	The tubing has built up to 850 kPa.
1000	We have 1150 kPa on the tubing. Start to mix up a 1.0 m^3 Calcium Carbonate pill using the medium and fine grind.
1100	There is 1360 kPa on the tubing.
1130	Hold a safety meeting.
1145	The tubing pressure is 1510 kPa. Pressure up the Dowell Schlumberger treating lines to 1600 kPa. Open the wellhead and start to pump 5.0 m^3 of Thix mix mud. We pumped 3.8 m^3 of Thix mix mud and the pump pressure went up from 500 kPa to 1200 kPa.
1200	Start to pump the Calcium Carbonate pill.
1210	Start to pump 17.0 m^3 of Brine water at 500.0 L/min. The tubing pressure is down to 400 kPa.
1245	Stop the pump. We have pumped a total of 17.0 m^3 of brine water. The final pump pressure was 4700 kPa. The ISIP was 2100 kPa. The pressure went down to 0 kPa in 10.0 - 15.0 seconds.
1255	The well has pulled 850.0 L of brine water out of the tanks is 10.0 min. Shut in the wing valve and monitor the tubing pressure.
1500	The tubing is on a vacuum. Start to mix mud into the rig tank.
1800	The tubing is still on a vacuum.
1900	The well is still on a vacuum.
2100	The tubing has started blow. We have 150 kPa on the tubing and 2000 kPa on the casing.
2300	The tuning pressure is up to 1875 kPa. The pressure has came up 1475 kPa in 2 hours.
	99-07-13
0230	There is 4500 kPa on the tubing. We transferred 60.0 m^3 of Thix mix to a 63.0 m^3 tank and transferred brine to the rig tank. Mix Thix mix in the rig tank.
0600	The tubing pressure is up to 6120 kPa.

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-11**
Purpose of Job:	**Workover**	Report #:	**13**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Flow check the tubing.		

Contractor:	Bonus			Fluid Vol. m3	Water	Oil	
Road/Lease:	Soft/wet			Total Hauled to Lease:			
Weather:	Rain/ + 12 ° C			Total Hauled from Lease:			
Contact Phone:	403-303-7654			Total in Tanks:			
Zone:	**Nihanni**			Initial Well Fluid:			
Perforations:				Total Load Fluids:			
SITP	200	KPa @	0700 hrs	Non-recov. Ann. Fluids:			
SICP	2300	KPa @	0700 hrs	Recovery Last 24 hrs.			
Rig Hr:	24.0	Cum Rig Hrs.:	300.0	Recovery to Date:			
				Load to Recover (+New)			

Daily Costs:			$54,208
Previous Costs:			$1,106,709
Cummulative Costs:			$1,160,917
AFE Estimate:			$4,000,000,000
AFE#	E9D-006		
KB Elev:	459.89	m	
KB. to CF:	10.35	m	
KB. to THF:	8.60	m	
Notes:			

TIME	OPERATION
0700	Running in the hole with the taper tap. Work the taper tap on bottom. We pulled 600 lbs. over string weight. Worked the Wireline free and came out of the hole.
0805	The tools are at surface. We did not have the fish but we have some marks on the taper tap.
0900	Pressurea
0930	Open the master valve. We have 6600 kPa on the tubing. Run in the hole with a 58.74 mm short catch overshot loaded with a 42.86 mm grapple.
1015	Work the overshot on the fish. We had a overpull coming off bottom.
1030	Pull out of the hole with the Wireline fishing tools.
1100	We are out of the hole. The tubing pressure is 7430 kPa. We did not have the fish.
1115	Install the lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.
1150	Open the master valve. There is 7850 kPa on the tubing. Run in the hole with a taper tap.
1225	Work the taper tap on the fish.
1240	Pull out of the hole with the Wireline fishing tools.
1325	We are out of the hole with the fishing tools. We did not get the fish. The tubing pressure is 8690 kPa.
1355	Install the lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.
1420	Open the master valve. We have 9350 kPa on the tubing. Run in the hole with a 55.0 mm Bowen magnet. Set down on the fish with a magnet. Pull out of the hole.
1550	We are out of the hole with the fishing tools. We did not recover anything on the magnet. There is 10250 kPa on tubing and 2650 kPa on the casing.
1605	Rig out Bonnett`s Wireline Services.
1615	Phoned Leroy Brown.
1620	Mix up 45.0 m^3 of Thix mud in the mud tank and a1.0 m^3 Calcium Carbonate pill using the fine and medium grit.
2200	Pressure test the Dowell Schlumberger pump lines to 35000 kPa. Open the Master valve. We have 13910 kPa on the tubing. Pump 6.30 m^3 of produced water with a initial pumping pressure of 14500 kPa, 10.0 m^3 of Thix mix mud, 1.0 m^3 of Calcium Carbonate pill fallowed by 17.0 m^3 of Thix mix mud. Stop the pump and left the suction tank open. The well took 700.0 L of fluid in 10.0 min. We pumped the plug at 400.0 - 500.0 L/min. and the final pumping pressure was 370 kPa.
2230	Shut in the well. The tubing was on vacuum. Monitor the well with readings every 15.0 min. throughout the night.
0530	The well stayed on a vacuum until 0530 hours then we started to get a slight blow on the tubing.
0600	We have 20.0 kPa on the tubing.
0630	We have 70.0 kPa on the tubing.

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WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-10**
Purpose of Job:	**Workover**	Report #:	**12**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Running taper tap on Wireline.		

Daily Costs:	$54,880						
Previous Costs:	$1,051,829						
Cummulative Costs:	$1,106,709						
AFE Estimate:	$4,000,000,000						
Contractor:	Bonus	Fluid Vol. m3	Water	Oil	**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled to Lease:			**KB Elev:**	459.89	m
Weather:	Rain/ + 12 ° C	Total Hauled from Lease:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Total in Tanks:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Initial Well Fluid:			**Notes:**		
Perforations:		Total Load Fluids:					
SITP 4050	KPa @ 0700 hrs	Non-recov. Ann. Fluids:					
SICP 2400	KPa @ 0700 hrs	Recovery Last 24 hrs.					
Rig Hr: 24.0	Cum Rig Hrs.: 276.0	Recovery to Date:					
		Load to Recover (+New)					

TIME	OPERATION
0700	Pressure testing the lubricator.
0715	Open the master valve. We have 4757 kPa on the tubing. Start in the hole with the taper tap. We are having problems getting down with the Wireline. The grease tubes seem to be holding us up.
0815	Pull out of the hole and service the grease head.
0915	Install the Wireline lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.
1005	Open the master valve. We have 5000 kPa on the tubing. Start in the hole with the taper tap. We had to run in the hole slowly as the tools will not drop if we run in fast.
1235	We are on bottom with the taper tap. We have something holding us up from running in the hole at a normal speed. We either have something holding us back on the grease tubes of something is floating around down the hole. Work the taper tap on bottom. Pull out of the hole with the fishing tools.
1405	We are out of the hole. The tubing pressure is at 5000 kPa. We have lost 1-rooler stem, 50.8 mm Camco "JUC" pulling tool and the taper tap down the hole. The roller stem backed off the spangs. It looks like the tools backed off while pulling out of the hole as there is no marks on the pin end of the spangs.
1415	Wait on Wireline overshots to be hot shotted out from Fort St.John by plane.
2000	Pick up and make up a 54.0 mm Bowen overshot dressed with a 38.1 mm grapple. Pressure test the lubricator to 1400 kPa low test and 35000 kPa high test.
	99-07-11
0100	Tag the top of the fish at 3052.80 m CF. We worked the overshot on bottom to engage the fish. We are not getting much spang action.
0150	Pull out of the hole with the Wireline fishing tools.
0230	We are out of the hole with the fishing tools but we don't have the fish. There is no marks on the skirt of the overshot
0300	The tubing pressure is at 5790 kPa. Pump 20.0 m^3 of fresh filtered water down the tubing at 600.0 L/min. The initial pumping pressure was 6000 kPa. And the final pumping pressure was 3000 kPa at 600.0 L/min. The ISIP was 375.0 kPa and there was 450 kPa on the tubing after 5.0 min.
0330	Pressure test the lubricator to 1400 kPa low test and 35000 kPa high test.
0425	Open the master valve. We have 1320 kPa on the tubing. Run in the hole with the Bowen overshot as before.
0500	We are on bottom with the overshot. Work the overshot down over the fish at 3062.80 m CF. Pull out of the hole and recover the fish. There is marks on the taper tap. Modify the taper tap to a shorter catch.
0600	Pick up the Wireline tools and taper tap. We did not run any roller stem. Pressure test the Lubricator to 1400 kPa low test and 35000 kPa high test.
0645	Open the master valve. There is 4050 kPa on the tubing. Run in the hole with the fishing tools.

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-09**
Purpose of Job:	**Workover**	Report #:	**11**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Fishing wit hslick line and a taper tap.		

Daily Costs:	$65,989						
Previous Costs:	$985,840						
Cummulative Costs:	$1,051,829						
AFE Estimate:	$4,000,000,000						
Contractor:	Bonus	Fluid Vol. m3	Water	Oil	**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled to Lease:			**KB Elev:**	459.89	m
Weather:	Sunny + 25 ^{0} C	Total Hauled from Lease:			**KB. to CF:**	10.35	m
Contact Phone:	403-303-7654	Total in Tanks:			**KB. to THF:**	8.60	m
Zone:	**Nihanni**	Initial Well Fluid:					
Perforations:		Total Load Fluids:			**Notes:**		
SITP 4757	KPa @ 07000 hrs	Non-recov. Ann. Fluids:					
SICP 1700	KPa @ 0700 hrs	Recovery Last 24 hrs.					
Rig Hr: 24.0	Cum Rig Hrs.: 252.0	Recovery to Date:					
		Load to Recover (+New)					

TIME	OPERATION
0700	Pressure test and repair the coil tubing BOP`S. Pressure test the upper and lower pipe/slip rams and the upper and lower shear/blind rams to 1400 kPa low test and 35000 kPa high test. Pressure test the quick coupler at 1400 kPa low test and 35000 kPa high test.
1345	Make up the fishing tools. Install the injector into the quick latch connector.
1405	Pressure test the quick connect to 1400 kPa low test and 35000 kPa high test.
1435	Pressure test the Dowell Schlumberger pump lines to 35000 kPa.
1422	Pressure up on the top master valve to 24000 kPa. Open the upper and lower master valves. We have 10928 kPa on the tubing.
1452	Start to pump fresh filtered water down the coil tubing/tubing annulas. We pumped a total of 15.0 m^3 of fluid and stopped the pump. We have988 kPa on the tubing.
1520	Switch the pump lines over and start to pump down the 38.1 mm coil tubing at 50.0 L/min. The coil tubing pumping pressure is 32000 kPa.
1525	Start in the hole with a Bowen Series 20 short grab overshot dressed with a 48.0 mm grapple and the 38.1 mm coil tubing.
1915	We are at the fish. Worked the grapple on bottom.
1945	Pull out of the hole with the coil tubing. We pumped 50.0 L of filtered fresh water over the pipe displacement volume while coming out of the hole with the coil tubing.
2200	We are out of the hole with the coil tubing and overshot. There is no fish. The bottom of the overshot is slightly marked but there is no sign of the fish entering into the grapple. Talked to Leroy Brown in Calgary. Rig out the Dowell Schlumberger coil tubing unit.
2300	Rig in Bonnett`s Wireline Services. Pressure test the upper and lower Wireline BOP`S and lubricator to 1400 kPa low test and 35000 kPa high test.
	99-07-10
0200	The tubing pressure is at 3447 kPa. Start in the hole with a 8.0 mm - 33.27 mm taper tap. We tagged the fish at 3064.0 m CF and worked the taper tap on bottom.
0400	We are out of the hole with the taper tap. There is no fish but the bottom of the taper tap was bent. We modified the taper tap by cutting 101.6 mm off the bottom of the taper tap and ground the end to a bevel. The bottom of the taper tap is now 21.0 mm and the top of the tap is at 33.27 mm with the catch point up 72.0 mm from the bottom of the tap.
0430	Pressure test the lubricator to 1400 kPa low test and 35000 kPa high test. Start to run in the hole with the taper tap
0530	The packing on the lubricator is holding up the Wireline running in the hole. Pulled out of the hole and service the grease tubes. There is 4447 kPa on the tubing.
0630	Install the lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99-07-08**	
Purpose of Job:	**Workover**				Report #:	**10**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$50,802
					Previous Costs:		$935,038
Current Operation:	Pressure test coil tubing BOP,S/run fishing tools.				Cummulative Costs:		$985,840
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	Sunny + 22 ° C	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP 1500	KPa @ 0700 hrs	Recovery to Date:					
Rig Hr: 24.0	Cum Rig Hrs.: 228.0	Load to Recover (+New)					

TIME	OPERATION
0700	Pulling out of the hole with the coil tubing.
1005	Stop pumping fluid. We are out of the hole with the coil tubing. We have left the gauge ring and the end of the jetting tool down the hole. Rig out the Dowell Schlumberger coil tubing unit. We had to pull out the chokes in the manifold to clean out the black tar like ashfaultines. We rebuilt 1 choke.
1220	Pressure test the manifold to 1400 kPa low test and 35000 kPa.
1428	Pressure test the Bonnett`s Wireline BOP`S to 1400 kPa low test and 35000 kPa. Pressure test the lubricator to 1400 kPa low test and 35000 kPa high test.
1540	Open the well. We have 6130 kPa on the tubing. Run in the hole with a 69.0 mm gauge ring. We ran a 63.5 mm Camco "JDC" running tool above the gauge ring.
1630	We are at 2500.0 m with the gauge ring and we have 6690 kPa on the tubing. Tagged the Otis "XN" nipple at 3055.5 m CF. MD.
1715	We are at 200.0 m and the tubing pressure is at 7170 kPa. We have been picking up a black residue on the .125 mm Wireline from 927.0 m.
1740	Pressure test the lubricator to 1400 kPa low test and 35000 kPa high test.
1805	Open the master valve. There is 7584 kPa on the tubing. Run in the hole with a 55.9 mm impression block. We tagged an obstruction at 3064.40 m CF. MD.
1910	Pull out of the hole with the impression block. It appears that the bottom of the fish is in the 88.9 mm x 73.0 mm swedge and laying against the wall of the 88.9 mm tubing.
2115	Pressure test the lubricator to 1400 kPa low test and 35000 kPa high test. Open the master valve and we have 9030 kPa on the tubing. Run in the hole with a 66.5 mm impression block. Worked the impression block down through the Otis "XN" nipple and tagged the fish. Pull out of the hole with the impression block.
	99-07-09
0030	We are at surface with the Wireline tools. The tubing pressure is at 9998 kPa. This run seems to confirm that the fishing neck is laying along the side of the 88.9 mm tubing.
0100	Rig out Bonnett`s Wireline.
0130	Rig up the Dowell Schlumberger duel combination coil tubing BOP stack. Pressure test the bottom shear rams to 1400 kPa low test and 35000 kPa high test. When we went to pressure test the top blind shear rams we have a leak. We opened the doors on the upper rams and replaced all the seals.

RANGER OIL LIMITED

WELL COMPLETION REPORT

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Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-07**
Purpose of Job:	**Workover**	Report #:	**9**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Jetting out the plug in the tubing.		

Contractor:	Bonus			Fluid Vol. m3	Water	Oil	
Road/Lease:	Soft/wet			Total Hauled to Lease:			
Weather:	Sunny + 22 ° C			Total Hauled from Lease:			
Contact Phone:	403-303-7654			Total in Tanks:			
Zone:	**Nihanni**			Initial Well Fluid:			
Perforations:				Total Load Fluids:			
SITP		KPa @	hrs	Non-recov. Ann. Fluids:			
SICP	1500	KPa @ 0700	hrs	Recovery Last 24 hrs.			
Rig Hr:	24.0	Cum Rig Hrs.:	204.0	Recovery to Date:			
				Load to Recover (+New)			

Daily Costs:		$107,408
Previous Costs:		$827,630
Cummulative Costs:		$935,038
AFE Estimate:		$4,000,000,000
AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m
Notes:		

TIME	OPERATION
0900	We have washed down to 3015.0 m. Pulled up to work the coil tubing and we have tight hole. Pulled up to 2964.0 m. Run back to bottom.
1010	We are at 3015.0 m. Pump 500.0 L of 7.5% HCL acid.
1013	The acid is away.
1032	The acid is at the coil. Start out of the hole with the 38.1 mm coil tubing.
1220	The bottom of the coil is up to 2650.0 m and we still seam to be dragging fines up the hole with us. Start to pump 500.0 L of 7.5% HCL acid. Run the coil tubing back down to 2680.0 m.
1240	The acid is at the coil.
1345	We are at 2967.0 m with the coil tubing and the 500.0 L acid wash has cleared the annulus. Shut down the pumper and take on acid.
1400	Start the pump. The coil tubing pressures and fluid returns are back to normal.
1415	Start to pump 500.0 L of 7.5% HCL acid. We are back down to 3015.0 m with the coil tubing.
1418	Acid is away.
1437	The acid is at the coil. We have made 10.0 m.
1500	We are at 3035.0 m. Start to pump 500.0 L of 7.5% HCL acid.
1503	The acid is away.
1522	The acid is at the coil. We are at 3045.0 m. Work the coil back up to 2982.0 m and we started pulling tight. Dropped down 10.0 m and pulled back up through 2982.0 m with no problems. We pulled tight at 2974.0 m.
1540	Start to pump 500.0 L of 7.5% HCL acid.
1543	The acid is away.
1604	The acid is at the coil.
1637	We can`t get up past 2974.0 m. Start to pump 500.0 L of 500.0 m of 7.5% HCL acid.
1641	The acid is away.
1700	The well started to unload. We pulled the coil tubing up to 2947.0 m. Closed down on the choke.
1712	Start back in the hole. We tagged up at 2967.0 m. We are holding 14800 kPa on the choke.
1748	We are down to 3045.0 m. We worked the tubing up to 3039.0 m and hit a tight spot.
1810	Worked the coil tubing up to 3030.0 m and hit a tight hole. We lost returns.
1818	Worked the coil tubing and pulled up to 3004.0 m.
1820	Run back in the hole.
1837	Ran down to 3050.0 m. Work the coil tubing back up to 3000.0 m.
1850	Started to run back down to bottom.
1855	We started to get returns. We are getting + - 15.0% returns.
1910	Ran in to 3055.0 m. Pull up the coil tubing to 3050.0 m
2100	Tagged a tight spot at 3063.0 m. Attempted to work the coil tubing down through the tight spot. The circulation pressure dropped down to + - 15000 kPa. And the tubing string went down to 3074.0 m. Pulled up and the coil tubing was free. We lost returns at surface.

RANGER OIL LIMITED

WELL COMPLETION REPORT

v

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-07**
Purpose of Job:	**Workover**					Report #:	**9-a**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$107,408
						Previous Costs:	$827,630
Current Operation:	Jetting out the plug in the tubing.					Cummulative Costs:	$935,038
		Fluid Vol. m3		Water	Oil	AFE Estimate:	$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:				**AFE#**	E9D-006
Road/Lease:	Soft/wet	Total Hauled from Lease:				**KB Elev:**	459.89 m
Weather:	Sunny + 22 ° C	Total in Tanks:				**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:				**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Total Load Fluids:				**Notes:**	
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP 1500	KPa @ 0700 hrs	Recovery to Date:					
Rig Hr: 24.0	Cum Rig Hrs.: 204.0	Load to Recover (+New)					

TIME	OPERATION
2200	We could not work the coil tubing down past 3074.0 m. Start to pull out of the hole with the coil tubing at 15.0 m/min We are pumping fresh filtered water at 170.0 L/min. with no returns to surface.
2300	We have gas to surface. We attempted to circulate the kick out of the hole. We are unable to kill the well at this depth.
0115	Run in the hole with the coil tubing to 3050.0 m. We are pumping down the coil tubing at 240.0 L/min. with + - 25.0 % returns. The coil tubing circulating pressure is + - 15000 kPa. With the coil tubing/tubing annulus at 2800 kPa. Circulate to kill the well.
0330	We are still at 3050.0 m with the coil tubing. The well is still slugging gas. Rigged up the rig pump to the coil tubing/ tubing annulus. Started to pump the 1147kg/m NaCl water at 350.0 L/min. We pumped 5.0 m^3 of fluid and then slowed the pump rate to 170.0 L/min. We pumped 6.0 m^3 of NaCl water and then slowed the pump rate down to 70.0 L/min. We pumped 50.0 L/min. down the coil tubing. Start to pull out of the hole with the coil tubing.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-06**
Purpose of Job:	**Workover**	Report #:	**8**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Jetting out the plug in the tubing.		

Daily Costs:	$41,130
Previous Costs:	$786,500
Cummulative Costs:	$827,630
AFE Estimate:	$4,000,000,000

Contractor:	Bonus
Road/Lease:	Soft/wet
Weather:	Sunny + 20 ° C
Contact Phone:	403-303-7654
Zone:	**Nihanni**
Perforations:	
SITP	KPa @ hrs
SICP 1500	KPa @ 0700 hrs
Rig Hr: 24.0	Cum Rig Hrs.: 180.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:		
Total Hauled from Lease:		
Total in Tanks:		
Initial Well Fluid:		
Total Load Fluids:		
Non-recov. Ann. Fluids:		
Recovery Last 24 hrs.		
Recovery to Date:		
Load to Recover (+New)		

AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes:

TIME	OPERATION
0700	Wait on tools.
1030	Rig up Dowell Schlumberger and install a scale blaster on the bottom of the coil tubing.
1205	Start to pressure test the Quick latch to 1400 kPa low test and 35000 kPa high test.
1240	There is 1490 kPa on the wellhead. Open the well through the choke to the Frac recovery tank.
1245	Start to run in the hole with the 38.1 mm Coil tubing. We started to pump fresh filtered water at 50.0 L/min. when we were at 500.0 m with the coil tubing.
1600	We are at 2500.0 m with the coil tubing. Increased the pump rate to 150.0 L/min.
1635	We tagged up at 2844.87 m. Did a pull test.
1640	Started to work the coil tubing on the plug. Increased the pump rate to 175.0 L/min.
1642	Start to pump 500.0 L of 7.5% HCL acid.
1645	The acid is away. Work the coil down to 2847.49 m.
1705	The acid is at the coil. We are at 2852.77 m.
1712	We are at 2855.0 m. Did a pull test up to 2845.0 m. We could not get back down past 2846.0 m. Work the coil.
1735	We are up to 2817.50 m and we can`t go back down. Start to pump 500.0 L of 7.5% HCL acid.
1738	The acid is away. Work the coil down to 2847.49 m.
1800	Shut in the choke and pressure up the coil tubing to 11800 kPa.
1825	The coil tubing pressure is down to 5220 kPa.
1827	Open the choke and start the pump. We are pumping at 170.0 L/min. at 21000 kPa.
1830	Pull up to 2800.0 m and start back into the hole. We are running in the hole with no problem.
1900	Tagged up at 2855.0 m. We are jetting ahead and working the coil.
	99-07-07
0001	We are jetting ahead at 2950.0 m and working the coil tubing every 5.0 - 10.0 m.
0300	We are jetting ahead and working the coil tubing. We have worked and jetted the coil tubing down to 2964.0 m. There seems to be hard stringers in the plug .
0600	We are down to 2986.0 m. There is 74.0 m of plug left to jet out to get to the top of the Otis "XN" nipple.
0700	We are still trying to work down past 2987.0 m. This is the hardest part of the plug so far. It seems that the deeper we go the harder the plug gets to jet out.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-05**
Purpose of Job:	**Workover**	Report #:	**7**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Wait on parts/clean out plug/kill well		

Daily Costs:	$68,313					
Previous Costs:	$718,187					
Cummulative Costs:	$786,500					
AFE Estimate:	$4,000,000,000					
Contractor:	Bonus	Fluid Vol. m3	Water	Oil	**AFE#**	E9D-006
Road/Lease:	Soft/wet	Total Hauled to Lease:			**KB Elev:**	459.89 m
Weather:	Sunny + 18 °C	Total Hauled from Lease:			**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Total in Tanks:			**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Initial Well Fluid:			**Notes:**	
Perforations:		Total Load Fluids:				
SITP	KPa @ 0630 hrs	Non-recov. Ann. Fluids:				
SICP	KPa @ 0630 hrs	Recovery Last 24 hrs.				
Rig Hr: 24.0	Cum Rig Hrs.: 156.0	Recovery to Date:				
		Load to Recover (+New)				

TIME	OPERATION
0700	We jetted on the top of the plug but we could not make any head way.
0745	Shut down the pumper and take on acid.
0853	Start to pump 500.0 L of 7.5% HCL acid with a 2.0 m^3 spacer of filtered fresh water.
0925	The acid is on bottom. Work the coil tubing down to 2836.0 m. We worked the coil tubing after making 1.0 - 2.0 m. We pulled up to 2831.0 m and when we went back down we tagged up at 2834.0 m. When we went to pull up we had tight hole. We kept circulating and working the coil tubing.
0952	The coil tubing came free. We pulled up to 2634.0 m. Ran back into 2836.0 m and tagged up. We did a pull test and everything is good. Ran back down to 2836.0 m and worked the tubing down to 2837.17 m. When we went to pull up the coil tubing was stuck. Worked the coil tubing.
1100	The tubing came free. Pulled up to 2634.0 m. We ran back in the hole to 2836.0 m. Worked our way down to 2840.26 m. Did pull tests and worked our way down to 2847.60 m. We have worked this spot for 1 hour and not made any hole.
1335	Pull up with the 38.1 mm coil tubing to 2746.0 m. Ran back in the hole and tag the plug at 2849.27 m. We worked the coil tubing. We pumped 500.0 L of 7.5% HCL acid and washed by the plug.
1430	Start to pump 500.L of 15.0% HCL acid fallowed by 3.30 m^3 of fresh filtered water.
1500	Close in the choke and pressure up on the coil tubing to 12400 kPa.
1530	The coil tubing pressure is down to 7900 kPa. Open the choke and start to work the coil tubing. We got down to 2848.70 m and could not make any hole.
1548	Start to pump 700.0 L of 7.5% HCL acid to wash by the top of the plug. Work the coil tubing and did not make any hole.
1655	Start to pump 500.0 L of 15.0% HCL acid.
1720	Close the choke and pressure up on the coil tubing to 11900 kPa.
1805	The tubing pressure is down to 4500 kPa. Open the choke and circulate the well and work the coil tubing down to 2848.70 m. We can`t get by this spot.
1845	Start out of the hole with the coil tubing.
2030	We are at surface with the coil tubing. Shut in the well. Wait on parts to come in from Edmonton and Grande Prairie

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-04**
Purpose of Job:	**Workover**	Report #:	**6**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:			

Daily Costs:	$121,700				
Previous Costs:	$596,487				
Cummulative Costs:	$718,187				
AFE Estimate:	$4,000,000,000				
AFE#	E9D-006				
KB Elev:	459.89	m			
KB. to CF:	10.35	m			
KB. to THF:	8.60	m			
Notes:					

Contractor:	Bonus			Fluid Vol. m3	Water	Oil	
Road/Lease:	Soft/wet			Total Hauled to Lease:			
Weather:	Sunny/rain + 18 ° C			Total Hauled from Lease:			
Contact Phone:	403-303-7654			Total in Tanks:			
Zone:	**Nihanni**			Initial Well Fluid:			
Perforations:				Total Load Fluids:			
SITP	5450	KPa @	0630 hrs	Non-recov. Ann. Fluids:			
SICP	2800	KPa @	0630 hrs	Recovery Last 24 hrs.			
Rig Hr:	24.0	Cum Rig Hrs.:	132.0	Recovery to Date:			
				Load to Recover (+New)			

TIME	OPERATION
0700	Monitor the tubing pressure while waiting for the Coil tubing unit.
1430	The Dowell Schlumberger Coil tubing unit arrived on location.
1445	Rig in the Dowell Schlumberger pumper and pressure test lines to 30000 kPa.
1500	The tubing pressure is 5290 kPa. Pressure up the test lines to 8000 kPa. Open the wing valve and start to pump NACL water. We pumped at total of 1.20 m^3 of NACL water and the tubing pressure went up to 16800 kPa.
1527	Stop the pump.
1543	The tubing pressure has dropped down to 16600 kPa. Close in the Dowell Schlumberger line to the manifold.
1550	Open the well through the choke manifold to the Frac recovery tank.
1610	Shut in the well. The tubing pressure is down to 2200 kPa and we have recovered a total of 2.60 m^3 of fluid.
1615	Rig in the Dowell Schlumberger Coil tubing unit.
1945	Fill the 38.1 mm coil tubing using 4.0 m^3 of water. Start to pressure test the 38.1 mm Coil tubing and the flanges down to the top master valve. The low test to 1400 kPa was good but the top Bowen connector started to leak when we started the high test. Repair the Bowen connector and service the master valves.
2145	Hold a safety meeting.
2200	Pressure test the 38.1 mm coil tubing and the wellhead connections to 1400 kPa low test and 35000 kPa high test.
2330	Pressure test the upper and lower Coil tubing BOP pipe rams to 1400 kPa low test and 35000 kPa
	99-07-05
0015	Pressure test the lower and upper blind rams to 1400 kPa low test and 35000 kPa high test.
0206	Open the well through the choke manifold to the Frac recovery tank. Start in the hole with the 38.1 mm coil tubing. We started to circulate water through the coil at 50.0 L/min. We started to get returns to surface after pumping 1.65 m^3 of filtered water. We ran in the hole 10.0 - 15.0 m/min. doing pull tests every 300.0 m. We did not get any solids returning to surface. We are getting 100 % returns.
0620	We are at 2500.0 m KB MD with the coil tubing. Shut in the choke and pressure up the coil tubing and tubing annulus to 12000 kPa. The pressure did not bleed off after 2.0 min. Open the choke and continue to run in the hole with the coil tubing.
0652	Tag an obstruction in the tubing at 2818.0 m KB MD. Start to jet through the plug.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99-07-03**	
Purpose of Job:	**Workover**				Report #:	**5**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$61,218
					Previous Costs:		$535,269
Current Operation:	Waiting on a coil tubing unit				Cummulative Costs:		$596,487
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	Cloudy/rain + 12 °C	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP 5450	KPa @ 0630 hrs	Recovery Last 24 hrs.					
SICP 2800	KPa @ 0630 hrs	Recovery to Date:					
Rig Hr: 24.0	Cum Rig Hrs.: 108.0	Load to Recover (+New)					

TIME	OPERATION
0700	Monitor the tubing pressure while waiting for the Coil tubing unit. We have the Husky trucks sitting at the Chevron barge landing. We are waiting for the road to dry up enough to go in and load the acid. We hauled in another 8 man sleeper unit as the camp is full. The barge will stay down at our landing untill we get the Coil Tubing unit, shower unit, acid and mud to the location. We will then send the barge back up the river to haul the acid from Chevron back down to our location. **99-07-04** The tubing pressure has bled ddown to 5450 kPa.
0630	

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**	Date:	**99-07-02**
Purpose of Job:	**Workover**	Report #:	**4**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**
Current Operation:	Recording build up/Run gradiant/pump calcium carbonate pill		

Contractor:	Bonus			Fluid Vol. m3	Water	Oil	
Road/Lease:	Soft/wet			Total Hauled to Lease:			
Weather:	Sunny + 20 ^{0} C			Total Hauled from Lease:			
Contact Phone:	403-303-7654			Total in Tanks:			
Zone:	**Nihanni**			Initial Well Fluid:			
Perforations:				Total Load Fluids:			
SITP	21512 KPa @	0950	hrs	Non-recov. Ann. Fluids:			
SICP	KPa @		hrs	Recovery Last 24 hrs.			
Rig Hr:	24.0 Cum Rig Hrs.:	84.0		Recovery to Date:			
				Load to Recover (+New)			

Daily Costs:		$46,827
Previous Costs:		$488,442
Cummulative Costs:		$535,269
AFE Estimate:		$4,000,000,000
AFE#	E9D-006	
KB Elev:	459.89	m
KB. to CF:	10.35	m
KB. to THF:	8.60	m

Notes: Wait 24 hours (0900 99-07-02) for a recorded buils up.

TIME	OPERATION
0700	Install the Wireline BOP`S.
0800	Pressure test the upper and lower Wireline BOP`S to 1400 kPa low test and 35000 kPa high test.
0850	Install the Lubricator on top of the Wireline BOP,S. Pump 60.0 L of Methanol into the lubricator and pressure test the lubricator to 1400 kPa low test and 35000 kPa high test.
0950	Open the lower and upper Master valves. We have 21512 kPa on the tubing.
0955	Run in the hole with a 72.77 mm gauge ring. We tagged a small hydrate plug at 27.0 m. We pushed the hydrate down the hole. The hydrate was gone at 150.0 m. We ran down to 850.0 m CF and the tubing was clean.
1040	Pump 60.0 L of Methanol into the Wireline lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.
1140	Open the upper Master valve. We have 21374 kPa on the tubing. Run in the hole with a 50.8 mm Camco "JDC" pulling tool. Latch onto the recorders and pull same off bottom at 1155 hours 99-07-02. Run a gradient on the way out of the hole with 10.0 min. stops at 3000.0 m, 2950.0 m, 2900.0 m, 2800.0 m, 2700.0 m, 2500.0 m, 2000.0 m, 1500.0 m, 1000.0 m, 500.0 m, and at surface.
1422	We are at surface with the recorders. The tubing pressure is at 21650 kPa. Dump the recorders.
1500	Rig out the Wireline BOP`S and install a night cap. The bottom hole pressure is 26441 kPa at 151.24 ^{0} C.
1515	Hold a safety meeting.
1532	Fill and pressure test the Dowell Schlumberger lines to 35000 kPa.
1538	Pressure up the lines to 22000 kPa. Open the top Master valve and pump 20.0 m^3 of fresh filtered water.
1622	Stop the pump. The tubing pressure is down to 500 kPa.
1625	Rig up and mix a 6.0 m^3 Calcium Carbonate pill.
1737	Open the well to the Dowell Schlumberger pumped. We 2600 kPa on the tubing. Displace the pill into the tubing.
1912	The pill is away. Start to displace the pill using NACL water. We pumped 1.60 m^3 of NACL water and the tubing pressured up to 26000 kPa.
1918	Bled the tubing pressure back to the Dowell Schlumberger unit. We recovered 600.0 L of NACL water.
1921	Start to pump NACL water. We started to get pressure after pumping 50.0 L. We pumped 150.0 L of NACL water and the tubing pressure is up to 4000 kPa. We have pumped 380.0 L of fluid and the tubing pressured up to 10000 kPa. Close the wing valve. The top of the plug is at + - 355.0 m and the bottom of the plug is at + - 1688.0 m.
2030	Open the well and bleed down the tubing to 0 kPa.
2035	Shut in well and monitor pressure.
2230	The tubing pressure is at 9000 kPa. The pressure has been stable for 30.0 min.
2235	Attempt to pump down the tubing. We pumped 1.60 m^3 of NACL water and the tubing pressure went up to 17600 kPa. Stop the pump and monitor the pressure.
	99-07-03
0005	The tubing pressure is at 17300 kPa. Started to bleed down the tubing. We bled back 200.0 L of fluid and the tubing pressure was down to 8550 kPa and we started to get gas returns. Shut in the well and monitored the tubing pressure.
0700	The tubing pressure is down to 7100 kPa.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-07-01**
Purpose of Job:	**Workover**					Report #:	**3**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$65,203
						Previous Costs:	$423,239
Current Operation:	Recording build up/Run gradiant/pump calcium carbonate pill					Cummulative Costs:	$488,442
				Fluid Vol. m3	Water	Oil	AFE Estimate: $4,000,000,000
Contractor:	Bonus			Total Hauled to Lease:			**AFE#** E9D-006
Road/Lease:	Soft/wet			Total Hauled from Lease:			**KB Elev:** 459.89 m
Weather:	Cloudy+ 18 °C			Total in Tanks:			**KB. to CF:** 10.35 m
Contact Phone:	403-303-7654			Initial Well Fluid:			**KB. to THF:** 8.60 m
Zone:	**Nihanni**			Total Load Fluids:			**Notes:** Wait 24 hours (0900 99-07-02) for a recorded buils up.
Perforations:				Non-recov. Ann. Fluids:			
SITP	KPa @	hrs		Recovery Last 24 hrs.			
SICP	KPa @	hrs		Recovery to Date:			
Rig Hr: 24.0	Cum Rig Hrs.:	60.0		Load to Recover (+New)			

TIME	OPERATION
0700	Open the Wireline BOP`S and hooked up another Methanol line to the wing valve. Pumped Methanol through the wing valve and the Bottom Wireline BOP injection port. Worked the tool string by hand up through the hydrate.
0900	Close the top Master valve and bled the Wireline lubricator off to the flare stack through the manifold and test unit. When we broke off the Wireline lubricator there was hydrates around the tool string. When we took the Wireline BOP`S apart we found that one control arm was broke on the rams. We will have a new Wireline BOP flown in and be ready to pull the recorders in the morning.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99-06-30**	
Purpose of Job:	**Workover**				Report #:	**2**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$48,613
					Previous Costs:		$374,626
Current Operation:	Moving in equipment and rigging up same.				Cummulative Costs:		$423,239
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	Rain + 15 °C	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP 20375	KPa @ 1911 hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr: 24.0	Cum Rig Hrs.: 36.0	Load to Recover (+New)					

TIME	OPERATION
0700	Pressure test the ABB Vetco Gray lubricator to 1400 kPa low test and 35000 kPa high test.
0900	Open the lower and upper master valves and lubricate into the wellhead with the control rod. Open the back pressure valve. We had 2758 kPa on the lubricator. Screw into the back pressure valve and retrieve same.
0940	Close the upper and lower crown valves and open the well to the manifold. The tubing pressure bled down to 0 kPa immediately. We had no fluid returns to the test unit.
1000	Pressure test the upper and lower master valves to 1400 kPa low test and 35000 kPa high test.
1050	Rig up Bonnett`s Wireline Services.
1105	Pressure test the upper and lower Wireline BOP`S to 1400 kPa low test and 35000 kPa high test.
1145	Install the Wireline lubricator and pressure test same to 1400 kPa low test and 35000 kPa high test.
1215	Run in the hole with a 50.8 mm Camco "JDC" pulling tool and pull the prong. The tubing pressure was TSTM when we got to surface with the prong.
1400	Pressure test the Wireline lubricator to 1400 kPa low test and 35000 kPa high test.
1425	Open the well and equalize the lubricator. We have 1500 kPa on the tubing. Run in the hole with a 76.2 mm Otis "GS" pulling tool and pull the Otis "PXN" plug. When we got out of the hole with the plug we had 2000 kPa on the tubing.
1630	Close the upper and lower crown valves and remove the Wireline lubricator and night cap the Wireline BOP`S.
1650	Hold a safety meeting.
1705	Open the well to the manifold. We have 2100 kPa on the tubing.
1720	Open the well through a 9.525 mm choke.
1721	Increase the choke setting to 11.11 mm.
1730	Cut the choke back to 8.73 mm and switch to the test unit.
1733	Switch back to the pressure tank.
1736	Open the choke to 11.9 mm.
1748	Cut the choke back to 10.32 mm. We are getting back almost all gas.
1755	Shut in the well. We have a shut in pressure of 19500 kPa on the tubing. We recovered a total of 11.80 m^3 of fluid
1830	Rig up the Bonnatt`s Wireline lubricator.
1840	Pressure test the Wireline lubricator to 1400 kPa low test and 35000 kPa high test.
1911	Open the Upper master valve. There is 20375 kPa on the tubing. Run a gradient doing 10.0 min. stops at surface, 500.0 m, 1000.0 m, 1500.0 m, 2000.0 m, 2500.0 m, 2700.0 m, 2800.0 m, 2900.0 m, 3000.0 m and land the recorders in the Otis "XN" nipple at 3054.0 m CF. MD. The recorders were on bottom at 2155 hours. Pull out of the hole with the running tools to 27.0 m. and we started to get some tight hole. Start to pump Methanol down through the Wireline lubricator. We pumped 60.0 L of Methanol and ran the tool string back down to 60.0 m. Started to pull back out of the hole and got the tool string up to 4.0 m. Pumped Methanol and worked the tool string up to 2.7 m. We can't get the tool string to move up or down. Attempted to close the Wireline BOP`S and they will not close all the way so we can get a seal.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99-06-29**	
Purpose of Job:	**Workover**				Report #:	**1**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$165,258
					Previous Costs:		$209,368
Current Operation:	Moving in equipment and rigging up same.				Cummulative Costs:		$374,626
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	Soft/wet	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	Rain + 14 °C	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP 2800	KPa @ 1300 hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
	Rigging up the rig. Clean the mud tanks. Lay the flare line and hook up the manifold to the Separator. Mix brine water.
1200	Hold a Pre Job Safety Meeting.
1300	Check the wellhead for pressure. There is 55 kPa between the top Master valve and the bottom Crown valve. There is 2800 kPa on the casing.
1315	Pressure test the tubing hanger primary and secondary seals to 30000 kPa. Bleed off the pressure between the primary and secondary seals on the 244.5 mm casing hanger.
1345	Remove the flange and corrosion coupon from the wellhead wing valve. Lay the flow line from the manifold to the wellhead. We had to install the ESD valve on the ground as the beam on the sub structure would not allow us to install it next to the wing valve.
1800	Torque the wing valve flange with a Hydraulic wrench.
1900	Purge all the test equipment with propane.
2000	Hold a safety meeting.
2015	Fill the flow lines and manifold with water and pressure test the manifold and the choke on the line heater to 2300 kPa low test and 35000 kPa high test. Pressure test the line to the Separator to 1400 kPa. Pressure tested the ESD valve, upper and lower crown valves and flow line valves to 1400 kPa low test and 35000 kPa high test. Filled the annulas and pressure tested same to 28000 kPa. When we bled the pressure back to the Dowell Schlumberger unit we were 150.0 L short of getting back total fluid used.
0300	Wait on daylight.
0600	We have finished mixing the brine water. Rig up ABB Vetco Gray to pull the back pressure valve.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**					Date:	**99-06-28**
Purpose of Job:	**Workover**					Report #:	**2-a**
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**			Daily Costs:	$104,396
						Previous Costs:	$104,972
Current Operation:	Moving in equipment and rigging up same.					Cummulative Costs:	$209,368
		Fluid Vol. m3		Water	Oil	AFE Estimate:	$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:				**AFE#**	E9D-006
Road/Lease:	Soft/good	Total Hauled from Lease:				**KB Elev:**	459.89 m
Weather:	Clear + 21 °C	Total in Tanks:				**KB. to CF:**	10.35 m
Contact Phone:	403-303-7654	Initial Well Fluid:				**KB. to THF:**	8.60 m
Zone:	**Nihanni**	Total Load Fluids:				**Notes:**	
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
	Repaired the trucks and hauled the rig to the location. Rig up the rig. Spot all the test equipment. Stand the rig. Bonus flew in the night crew for the rig. Released all the Cooper trucks. Started to fill two storage tanks with filtered water. We will bring in the rest of the equipment in the morning and then we should be able to send the Barge up river to load the acid from Chevron.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	**Ranger Fort Liard P-66-A**				Date:	**99-06-27**	
Purpose of Job:	**Workover**				Report #:	**1-a**	
Report From:	**Wayne Casler/R. Elliott**	Report To:	**Mr. Leroy Brown**		Daily Costs:		$104,972
					Previous Costs:		$0
Current Operation:	Moving in equipment and rigging up same.				Cummulative Costs:		$104,972
		Fluid Vol. m3	Water	Oil	AFE Estimate:		$4,000,000,000
Contractor:	Bonus	Total Hauled to Lease:			**AFE#**	E9D-006	
Road/Lease:	Soft/good	Total Hauled from Lease:			**KB Elev:**	459.89 m	
Weather:	Rain + 17 °C	Total in Tanks:			**KB. to CF:**	10.35 m	
Contact Phone:	403-303-7654	Initial Well Fluid:			**KB. to THF:**	8.60 m	
Zone:	**Nihanni**	Total Load Fluids:			**Notes:**		
Perforations:		Non-recov. Ann. Fluids:					
SITP	KPa @ hrs	Recovery Last 24 hrs.					
SICP	KPa @ hrs	Recovery to Date:					
Rig Hr:	Cum Rig Hrs.:	Load to Recover (+New)					

TIME	OPERATION
	99-06-17 Drove to Calgary and went over the program with Leroy Brown. **99-06-18** Attended the Pre-Spud meeting in Calgary. Went over the milling job with CanFish. We went through the program with Tom Farwell and Mike Schrieber with Bonus. **99-06-21** Picked up Roy Elloitt and drove to Grande Prairie. **99-06-22** Did a rig inspection and went over the move with Neil Withers Trucking. We went over the program with Dave Woodward with Dowell Schlumberger. Drove to Fort St. John and picked up the Radio`s and drove to Fort Nelson. **99-06-23** Talked to Mike and Milton Cooper about the rig move and Barge utilization. Drove to Fort Liard and talked to Doug Graham who is the New General Manager with Beaver Enterprises Ltd. Talked to Bob and he will start working on the road in the morning. **99-06-24** Contacted all the services and went over the arrival times for them to be at the Barge landing. Started up the Barge and hauled all test equipment from the Barge landing at Chevron to the Barge landing at Fort Liard. **99-06-25** Loaded the Barge with some camp buildings in Fort Liard and sent the Barge down the river to our Barge landing. Trucked the remainder of the camp to the rack site at km 92. We unloaded the cats on the location side of the river and re-built the Barge landing and ramp. Started to Barge the camp and support equipment across the river. **99-06-26** Hauled the remainder of the camp to the location and set up same. The rig arrived and was unloaded at the rack site. We have all the test equipment and four loads of the rig at the location. **99-06-27** We are Barging and hauling the rig and equipment to the location. We have all the rig equipment to the location except the rig. We twisted off the drive shaft in one truck and took the winch out of the other bed truck.