Completion Reports

Feb. 20, 98 to Mar. 30, 98

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A		Date: 98-03-30
Purpose of Job:	Completion		Report #: 33
Report From:	Wayne Casler	Report To: Leroy Brown	
Current Operation:	Demobilize the equipment		

Contractor:	Nil
Road/Lease:	Fair
Weather:	Clear + 12°C
Contact Phone:	403-232-5340
Zone:	Nahanni
Perforations:	Under daily costs
SITP	0 KPa @ 2400
SICP	0 KPa @ 2400
Rig Hr	Nil Cum Rig Hrs.: 458.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	Nil	
Total Hauled from Lease:	412.59	
Total in Tanks:	Nil	
Initial Well Fluid:	Water/Standnil	
Total Load Fluids:	209.12	
Non-recov. Ann. Fluids:	94.70	
Recovery Last 24 hrs.	Nil	
Recovery to Date:	460.04	
Load to Recover (+New)	345.62	

AFE # E80-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
3324.0 m - 3334.0 m KB.		
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3146.0 m KB.		
3126.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$10,330
Previous Costs:		$1,342,978
Cummulative Costs:		$1,353,308
AFE Estimate:		$3,331,790

TIME	OPERATION
	Demobilize the equipment.
	We are waiting on a light plant to come from Beaver Enterprises. We will load out the Precision light plant and the First Aid Wellsite unit tonight. The camp well go on stand-by at midnight tonight. The Satilight phone well be shut down in the morning along with the Satellite dish.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-29
Purpose of Job:	Completion	Report #:	32
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Demobilize the equipment		

		Fluid Vol. m3	Water	Oil
Contractor:	Nil	Total Hauled to Lease:	Nil	
Road/Lease:	Fair	Total Hauled from Lease:	412.59	
Weather:	Clear + 14°C	Total in Tanks:	Nil	
Contact Phone:	403-232-5340	Initial Well Fluid:	Water/Standrill	
Zone:	Nahanni	Total Load Fluids:	209.12	
Perforations:	Under daily costs	Non-recov. Ann. Fluids:	94.70	
SITP 0	KPa @ 2400	Recovery Last 24 hrs.	Nil	
SICP 0	KPa @ 2400	Recovery to Date:	460.04	
Rig Hr: Nil	Cum Rig Hrs.: 456.0	Load to Recover (+New)	345.62	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to LF: 10.33 m
KB. to THF: 8.80 m

Daily Cost Summary

Code	Item	Amount
3324.0 m - 3334.0 m KB		
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3246.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3126.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		537,407
Previous Costs:		31,328,671
Cummulative Costs:		$1,342,078
AFE Estimate:		$3,331,700

TIME	OPERATION
	Rigging out and demobilize all the equipment. Haul the Central Production Testing equipment to Grande Prairie. Cleaned the ice out of the culverts. Returned the Light towers to Fort Nelson.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-68-A		Date: 98-03-28
Purpose of Job:	Completion		Report #: 31
Report From:	Wayne Casler	Report To: Leroy Brown	Daily Cost Summary
Current Operation:	Demobilize the equipment		

		Fluid Vol. m3	Water	Oil
Contractor:	Nil	Total Hauled to Lease:	Nil	
Road/Lease:	Fair	Total Hauled from Lease:	412.59	
Weather:	Clear +11°C	Total in Tanks:	Nil	
Contact Phone:	403-232-5340	Initial Well Fluid:	Water/Stand	nil
Zone:	Nahanni	Total Load Fluids:	209.12	
Perforations:	Under daily costs	Non-recov. Ann. Fluids:	94.70	
SITP 0	KPa @ 2400	Recovery Last 24 hrs.	Nil	
SICP 0	KPa @ 2400	Recovery to Date:	460.04	
Rig Hr: Nil	Cum Rig Hrs.: 458.0	Load to Recover (+New)	345.62	

AFE # ESD-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Code	Item	Amount
	3324.0 m - 3334.0 m KB	
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3246.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
	Daily Costs:	$40,830
	Previous Costs:	$1,264,741
	Cummulative Costs:	$1,305,571
	AFE Estimate:	$3,331,700

TIME	OPERATION
	Rigging out and demobilize all the equipment.
	Hauled out the last of the produced water and the water out of the fine heater.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-27
Purpose of Job:	Completion	Report #:	30
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Demobilize the equipment		

Contractor:	Nil	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair	Total Hauled to Lease:	Nil		
Weather:	Clear - 7°C	Total Hauled from Lease:	399.59		
Contact Phone:	403-232-5340	Total in Tanks:	9.08		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	Under daily costs	Total Load Fluids:	209.12		
SITP	0 KPa @ 2400	Non-recov. Ann. Fluids:	94.70		
SICP	0 KPa @ 2400	Recovery Last 24 hrs.	Nil		
Rig Hr.	Nil / Cum Rig Hrs.: 458.0	Recovery to Date:	460.04		
		Load to Recover (+New)	345.62		

AFE # E9D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary	
Daily Costs:	$34,031
Previous Costs:	$1,250,710
Cummulative Costs:	$1,284,741
AFE Estimate:	$3,301,700

Code	Item	Amount
	3324.0 m - 3334.0 m KB	
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3160.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	

TIME	OPERATION
0000	Wait on a Wireline truck.
0230	Rig up the Solid Wireline equipment.
0400	Hold a safety meeting.
0415	Install the Wireline BOP'S and lubricator on top of the Crown valve.
0445	Equalize the lubricator. The shut in tubing pressure is 21520 kPa.
0455	Run in the hole with a Otis "PX" mandrel and set same in the Otis "X" nipple at 3072.5 m CF.
0615	The Wireline is at surface. Close the upper master valve and bleed off the lubricator.
0630	Equalize the lubricator.
0635	Run in the hole with a "JDC" running tool c/w a equalizing prong and set same in the Otis "PX" mandrel.
0730	The Wireline is out of the hole. Close the upper master valve and bleed off the lubricator. Install the wellhead cap on top of the Crown valve.
0735	Open the upper master valve and the wing valve to the choke on the separator. Begin to bleed off the tubing through the flare stack.
0800	The tubing has bled down to 9850 kPa.
0815	The tubing has bled down to 250 kPa.
0820	The tubing pressure is at 0 kPa. Monitor the tubing.
0900	Rig in Dowell Schlumberger.
0915	Hold a safety meeting.
0930	Fill the tubing using 19.85 m³ of inhibited water.
0945	Pressure test the 88.9 mm tubing, Otis "PX" plug and the wellhead to 28000 kPa.
1000	The pressure test is good. Rig out Dowell Schlumberger.
1010	Rig up ABB Vetco Gray Canada Inc. to run a 88.9 mm Back Pressure Valve in the dognut.
1400	The safety valve is set. Rig out the Central Production Testing equipment.
1700	Remove the top section of the wellhead. Break all the valves off the cross. Build a new adapter bonnet and master valve. Remove the old bonnet and master valve and install the new bonnet and master valve. Install the upper master valve, cross, two wing valves, crown valve and top cap. Install plugs in all the valves.
	Rig out and demobilize the equipment.

FieldNotes

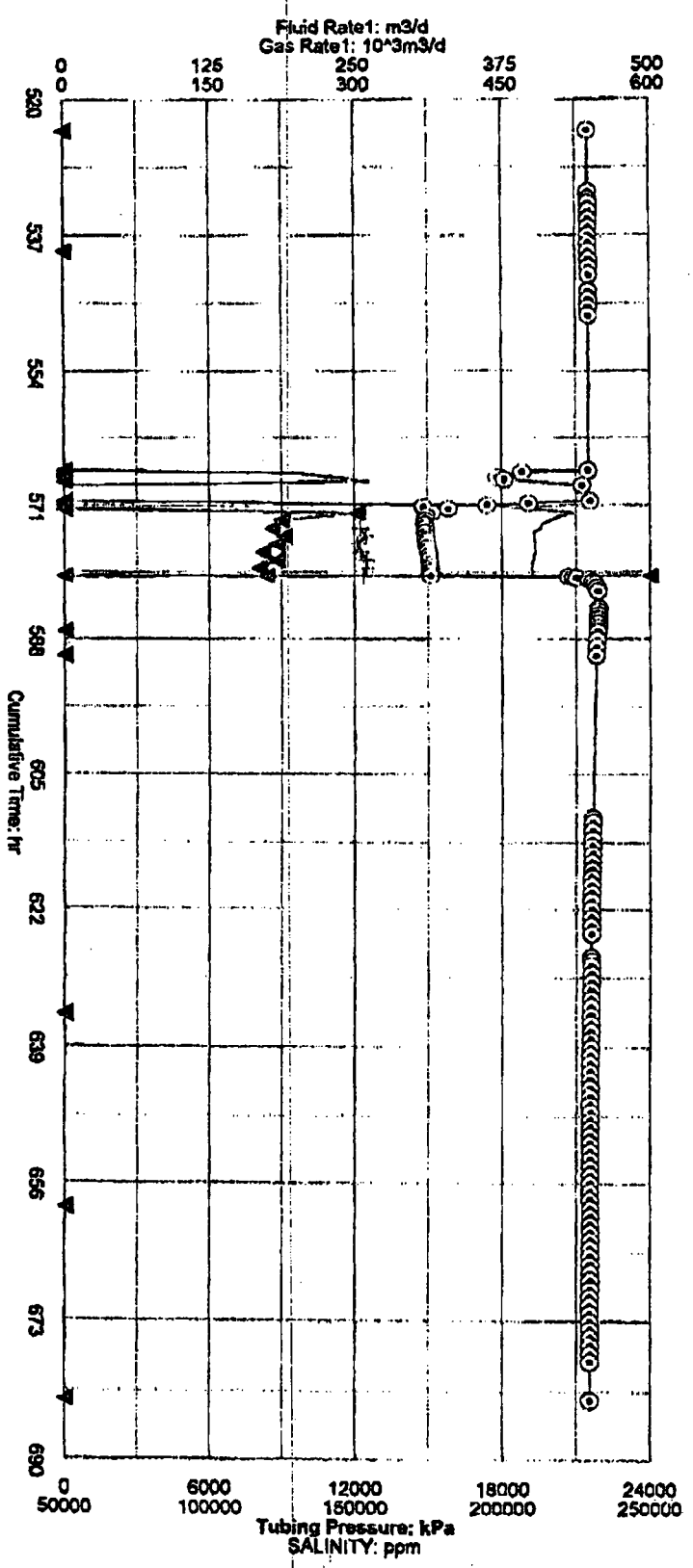
Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 88 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orifi1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
657	1998/03/27	07:35:00	Wireline out of hole and cap secured. Pressure up to choke to bleed down tubing. Pressure @ 21500 kPa.																				
658		07:35:00	Begin bleeding off tubing to flare at a slow rate.																				
659		08:00:00	9850							88.900													
660		08:00:00	2 high pressure gas samples taken from meter run: AGAT: cyl # 5094 & #17806 at 750 kPa and 38 C.																				
661		08:15:00	250																				
662		08:30:00	0																				
663		08:45:00	0																				
664		09:00:00	Rig up to pressure test plug with inhibited water.																				
665		09:30:00	Tubing began to pressure up after 13.8 M3 pumped. Slow down pump rate and continue pressure test.																				
666		09:45:00	Pressure test good to 28 MPa. Bleed off and rig out pressure truck.																				
667		10:00:00	No gas build up present. Rig up to run surface safety valve.																				
668		14:00:00	Surface safety valve set. Begin rigging out test equipment.																				
669		15:00:00	Casing pressure @ 1500 kPa. Bleed to 0.																				

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
628	1998/03/26	08:00:00	21540		1850					88.900													
629		09:00:00	21540		1850																		
630		10:00:00	21540		1850																		
631		11:00:00	21540		1850																		
632		12:00:00	21540		1850																		
633		13:00:00	21530		1850																		
634		14:00:00	21530		1860																		
635		15:00:00	21530		1860																		
636		16:00:00	21530		1870																		
637		17:00:00	21530		1870																		
638		18:00:00	21520		1880																		
639		19:00:00	21520		1880																		
640		20:00:00	21520		1880																		
641		21:00:00	21520		1880																		
642		22:00:00	21520		1880																		
643		23:00:00	21520		1880																		
644	1998/03/27	00:00:00	21520		1880																		
645		01:00:00	21520		1880																		
646		01:05:00	Sample casing gas with Gas-Tech : showed no H2S present. Bled casing down to 1000 Kpa. Check at end of bleed off for H2S : None present.																				
647		02:00:00	21520		1190																		
648		02:33:00	Solid wireline on location.																				
649		03:00:00	Shut in master valves and bled off wellhead to flare stack. Close all valves on wellhead.																				
650		04:00:00	Hold safety meeting.																				
651		05:15:00	Wireline running in hole with plug mandril.																				
652		06:00:00	Wireline at surface. Bleed off wellhead to stack.																				
653		06:30:00	Wireline preparing to run in well with prong.																				
654		06:35:00	21520		1450	0.00	0	0.0	10	88.900	0.000	1314.227	65.53	0.0	0.00	0.00	0.000	467.87	0.00				
655		06:36:00	Wireline running in well with prong.																				



Ranger Fort Liard P - 66 - A

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-26
Purpose of Job:	Completion	Report #:	29
Report From:	Wayne Casler	Report To:	Leroy Brown

Current Operation: Wait on a Wireline truck

Contractor:	Nil	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair	Total Hauled to Lease:	Nil		
Weather:	Clear - 4°C	Total Hauled from Lease:	399.59		
Contact Phone:	403-232-5340	Total in Tanks:	9.08		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	Under daily costs	Total Load Fluids:	209.12		
SITP 21540	KPa @ 0700	Non-recov. Ann. Fluids:	94.70		
SICP 1500	KPa @ 0700	Recovery Last 24 hrs.	Nil		
Rig Hr: Nil	Cum Rig Hrs.: 458.0	Recovery to Date:	460.04		
		Load to Recover (+New)	345.82		

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
	3324.0 m - 3334.0 m KB	
	3296.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3278.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3129.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$11,024
Previous Costs:		$1,219,686
Cummulative Costs:		$1,230,710
AFE Estimate:		$3,031,700

TIME	OPERATION
	Wait on a Solid Wireline truck to run a plug in the Otis "X" nipple.

TU 10 FLOWLINE

SAFETY VALVE: Ser. No. E818179; Fig. No. 129; Steel 50 LT; Trim KM HF HF

FLANGE: HT 28028; LUD PSL1; TN24160; TN27386

FROM WELLHEAD

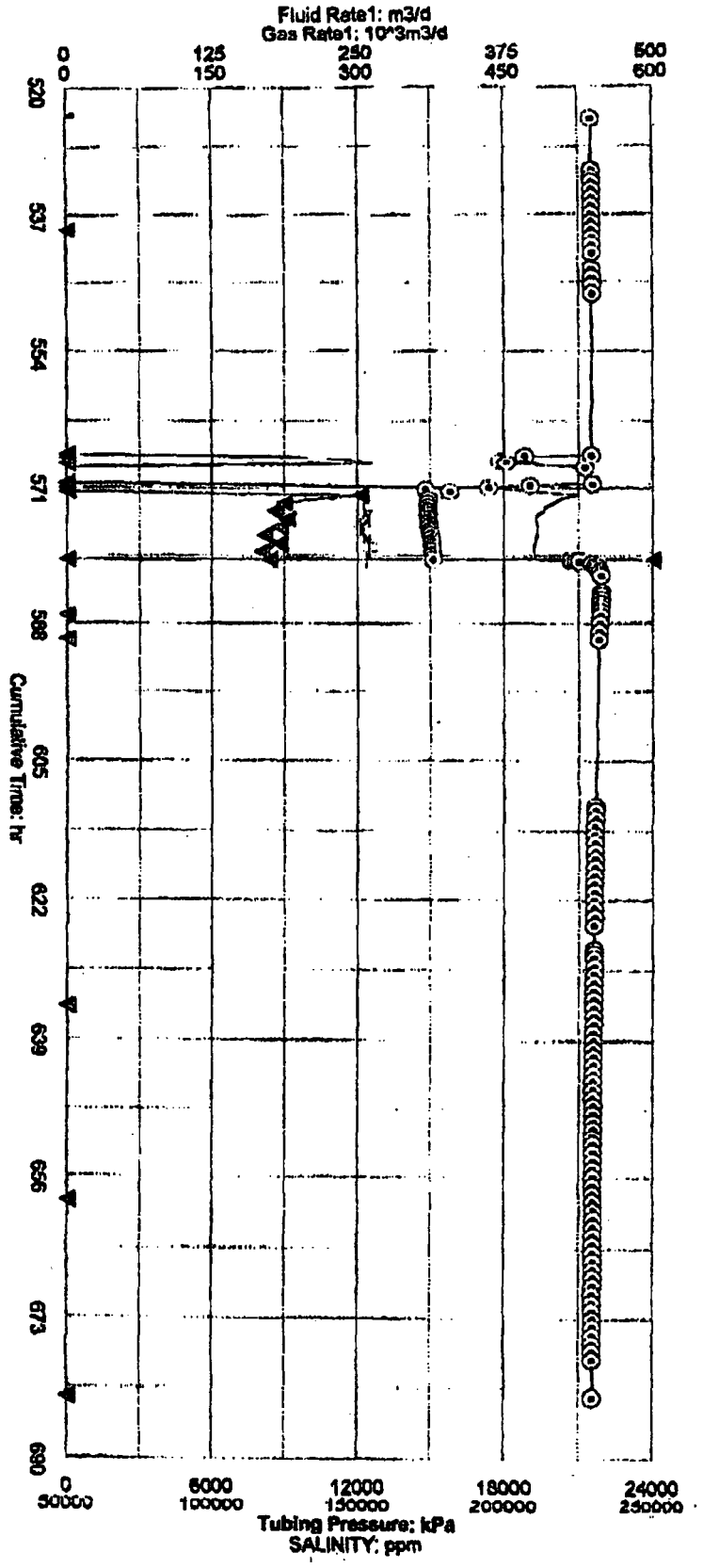
#1 509-532 (swing)
#2 110 (pup)
#3 146 (swing)
#4 114 (pup)
#5 141 (thermowell swing)
#6 120 (swing)
#7 115 (pup)
#8 108 (full joint)
#9 103 (full joint)
#10 105 (full joint)
#11 101 (full joint)
#12 106 (full joint)
#13 122 (swing)
#14 117 (swing)
#15 771 (last swing before line heater)

FLOWLINE DONE JUNE 5TH 1997

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil gain	Wat1 gain	Cum Oil	Cum Wat	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
628	1998/03/26	08:00:00	21540		1850					88.900													
629		09:00:00	21540		1850																		
630		10:00:00	21540		1850																		
631		11:00:00	21540		1850																		
632		12:00:00	21540		1850																		
633		13:00:00	21530		1850																		
634		14:00:00	21530		1860																		
635		15:00:00	21530		1860																		
636		16:00:00	21530		1870																		
637		17:00:00	21530		1870																		
638		18:00:00	21520		1880																		
639		19:00:00	21520		1880																		
640		20:00:00	21520		1880																		
641		21:00:00	21520		1880																		
642		22:00:00	21520		1880																		
643		23:00:00	21520		1880																		
644	1998/03/27	00:00:00	21520		1880																		
645		01:00:00	21520		1880																		
646		01:05:00	Sample casing gas with Gas-Tech ; showed no H2S present.Bled casing down to 1000 Kpa.Check at end of bleed off for H2S ; None present.																				
647		02:00:00	21520		1190																		
648		02:33:00	Solid wireline on location.																				
649		03:00:00	Shut in master valves and bled off wellhead to flare stack.Close all valves on wellhead.																				
650		04:00:00	Hold safety meeting.																				
651		05:15:00	Wireline running in hole with plug mandril.																				
652		06:00:00	Wireline at surface.Bleed off wellhead to stack.																				
653		06:30:00	Wireline preparing to run in well with prong.																				
654		06:35:00	21520		1450	0.00	0	0.0	10	88.900	0.000	1314.227	65.53	0.0	0.00	0.00	0.000	467.87	0.00				
655		06:36:00	Wireline running in well with prong.																				



Ranger Fort Liard P - 68 - A

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-58-A	Date:	98-03-25
Purpose of Job:	Completion	Report #:	28
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Production Log/Flow test.		

Contractor:	Nil				
Road/Lease:	Fair				
Weather:	Clear + 8°C				
Cell Phone:	403 393 6320				
Zone:	Nahanni				
Perforations:	Under daily costs				
SITP	N/A	KPa @	0700		
SICP	N/A	KPa @	0700		
Rig Hr:	Nil	Cum Rig Hrs.:	458.0		
AFE #	E8D-011				

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	Nil	
Total Hauled from Lease:	399.59	
Total in Tanks:	9.08	
Initial Well Fluid:	Water/Standoil	
Total Load Fluids:	209.12	
Non-recov. Ann. Fluids:	94.70	
Recovery Last 24 hrs.	Nil	
Recovery to Date:	460.04	
Load to Recover (+New)	345.62	

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

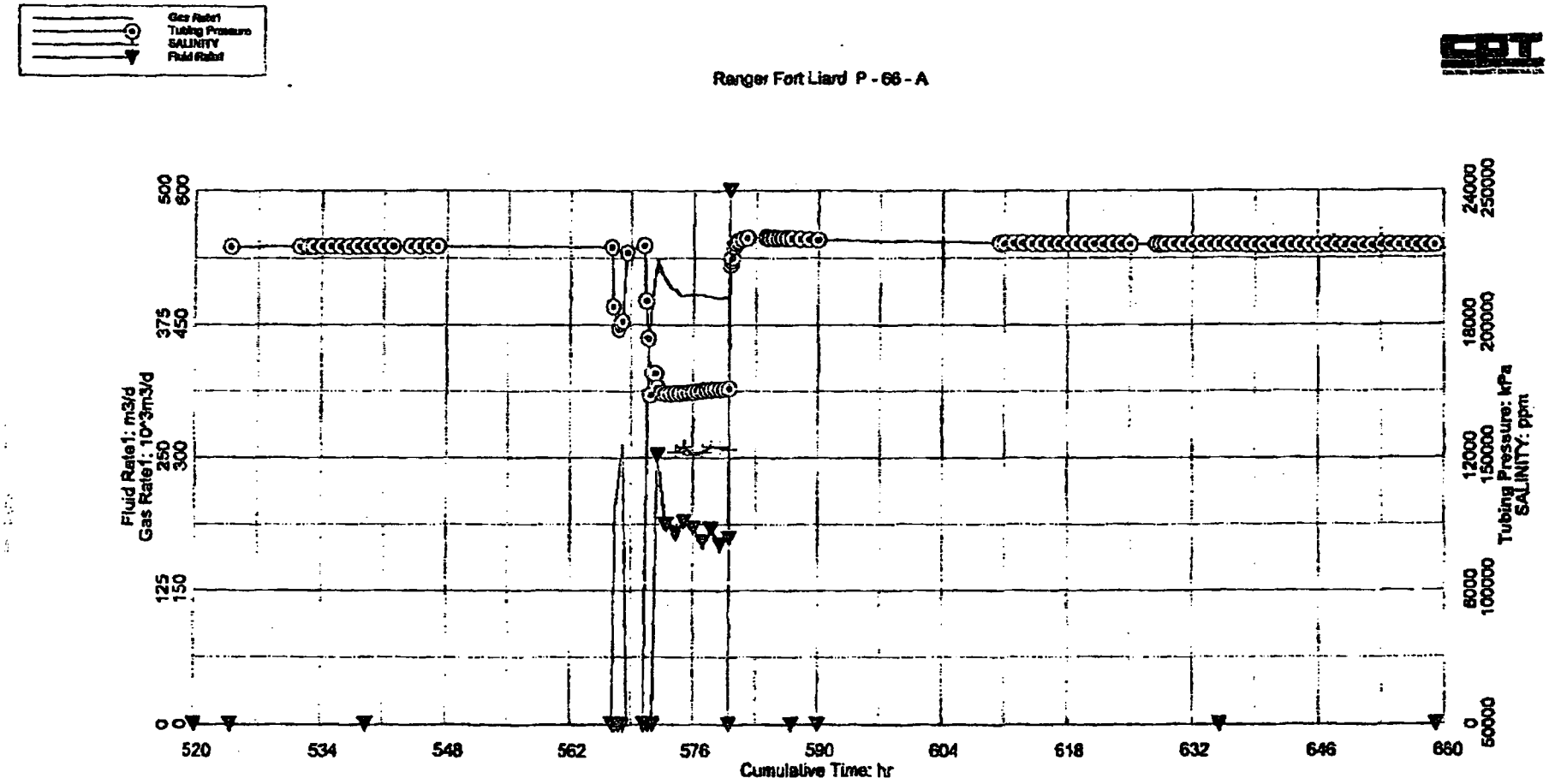
Daily Cost Summary

Code	Item	Amount
3324.0 m - 3334.0 m KB		
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3158.0 m KB.		
3134.0 m - 3148.0 m KB.		
3126.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$21,424
Previous Costs:		$1,199,202
Cummulative Costs:		$1,219,646
AFE Estimate:		$3,931,700

TIME

OPERATION

Had a meeting with Don Sorkilmo, Leroy Brown, Laul Lamew, Brent Harrison and Al Tokarchik. We went over all The operations leading up to the indent. Visually inspected all the equipment and the lay out of the equipment. We discussed surface and down hole integrity of the existing equipment . Formulated a field recommendation to be discussed with the Calgary office.


Gas Rate1
Tubing Pressure
SALINITY
Fluid Rate1
Ranger Fort Liard P - 66 - A
Fluid Rate1: m3/d
Gas Rate1: 10^3m3/d
Tubing Pressure: kPa
SALINITY: ppm
Cumulative Time: hr
0
125
150
250
300
375
450
500
800
0
8000
12000
18000
24000
50000
100000
150000
200000
250000
520
534
548
562
576
590
604
618
632
646
660

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
604	1998/03/25	08:00:00	21575		1665					88.900													
605		09:00:00	21575		1675																		
606		10:00:00	21560		1700																		
607		11:00:00	21560		1725																		
608		12:00:00	21550		1745																		
609		13:00:00	21550		1765																		
610		14:00:00	21540		1775																		
611		15:00:00	21540		1775																		
612		16:00:00	21530		1775																		
613		17:00:00	21530		1800																		
614		18:00:00	21520		1800																		
615		19:00:00	21550		1800																		
616		20:00:00	21540		1810																		
617		21:00:00	21540		1810																		
618		22:00:00	21540		1820																		
619		23:00:00	21540		1820																		
620	1998/03/26	00:00:00	21540		1830																		
621		01:00:00	21540		1830																		
622		02:00:00	21540		1830																		
623		03:00:00	21540		1840																		
624		04:00:00	21540		1840																		
625		05:00:00	21540		1840																		
626		06:00:00	21540		1850																		
627		07:00:00	21540		1850	0.00	0	0.0	10	88.900	0.000	1314.227	65.53	0.0	0.00	0.00	0.000	467.87	0.00				

Fast

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-86-A		Date: 98-03-24
Purpose of Job:	Completion		Report #: 27
Report From:	Wayne Casler	Report To: Leroy Brown	
Current Operation:	Production Log/Flow test.		

Contractor:	Nil	Fluid Vol. m3	Water	Oil
Road/Lease:	Fair	Total Hauled to Lease:	Nil	
Weather:	Clear + 16°C	Total Hauled from Lease:	899.59	
Contact Phone:	403-232-5340	Total In Tanks:	9.06	
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill	
Perforations:	Under daily costs	Total Load Fluids:	209.12	
SITP 21575 KPa @ 0700		Non-recov. Ann. Fluids:	94.70	
SICP 1640 KPa @ 0700		Recovery Last 24 hrs.	Nil	
Rig Hr: Nil	Cum Rig Hrs.: 458.0	Recovery to Date:	460.04	
		Load to Recover (+New)	345.62	

AFE #: E80-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
	3324.0 m - 3334.0 m KB.	
	3296.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3278.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3166.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$10,978
Previous Costs:		$1,187,288
Cummulative Costs:		$1,198,262
AFE Estimate:		$3,831,700

TIME:	OPERATION
0000	Waiting on the logging tools to arrive from Edmonton.
1130	Received orders to suspend operations until a assessment of the current situation has bean established.

RANGER OIL LIMITED

SCHEDULE OF DAILY COSTS

LOCATION: Ranger Fort Liard P-66-A
AFE No: E8D-011
Date: 98-03-24

FROM: WAYNE CASLER.

Code	Company	Items and Descriptions	Ticket No.	Cost	Code
258	Beaver Enterprises	Camp	N/A	$3,375	
262	Walmar	Haul water for the camp	N/A	$600	
316	Central Production Testing	Supply men and equipment to test the well	40727	$3,091	
316	Am-Gas	Supply a scrubber for the fluid storage tanks	4562	$30	
322	Misty Holdings	Supervision	N/A	$725	
323	Husky Tank Rentals	Tank farm	N/A	$300	
323	Beaver Enterprises	Loader	N/A	$400	
323	Buzzard	1 Wellsite trailer	N/A	$165	
323	Precision Drilling	Light plant for camp	N/A	$150	
323	ICG Propane	Propane tanks	N/A	$10	
400	Infosat	Communications (Satlight phone)	N/A	$250	
401	Direct Industrial	Ambulance and First Aid Attendent	N/A	$350	
401	Tek Air Safety Inc	Supply air safety services	2008	$1,530	
		Daily Cost		**$10,976**	
		Previous		**$1,187,286**	
		TOTAL		**$1,198,262**	

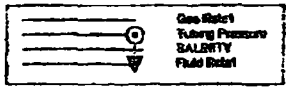
FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P-66-A
Formation: NAHANNI

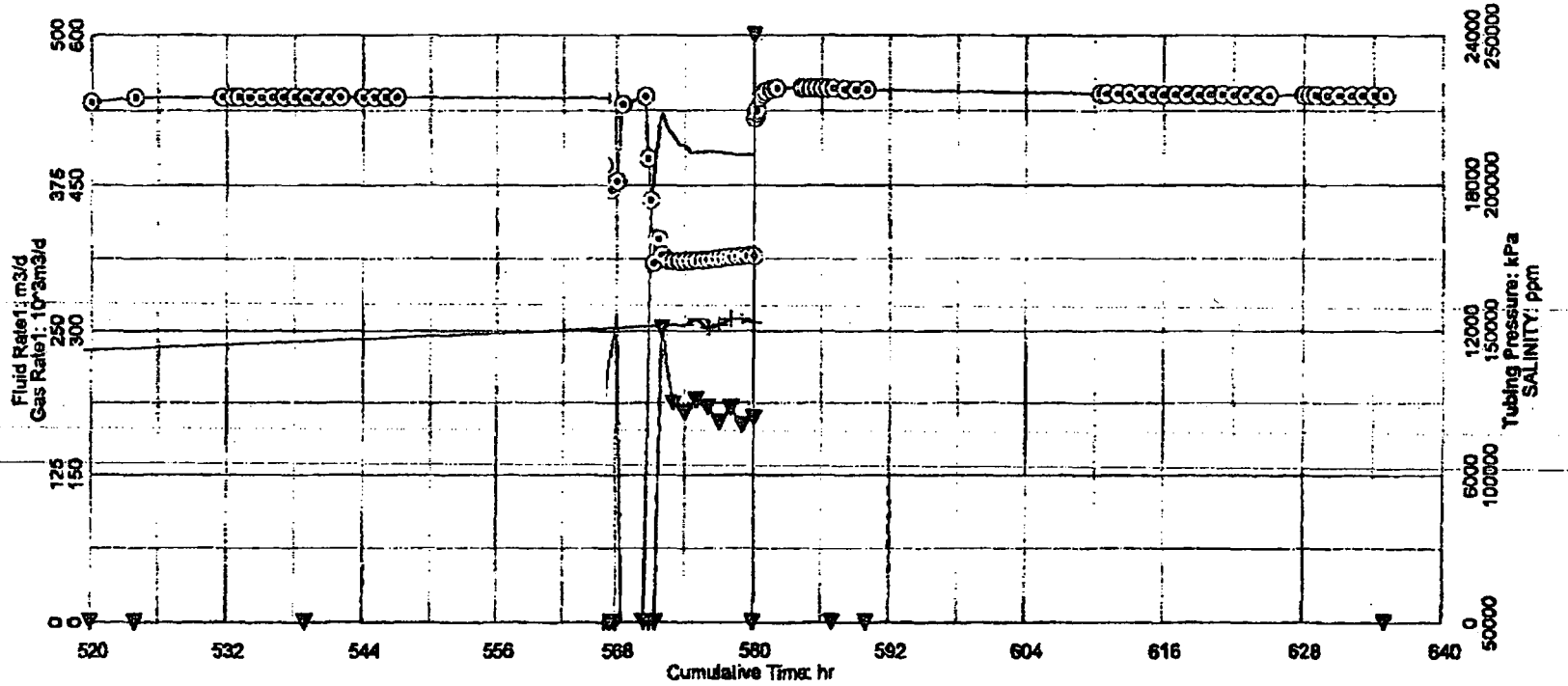
CPT CENTRAL PRODUCTION TESTING LTD.

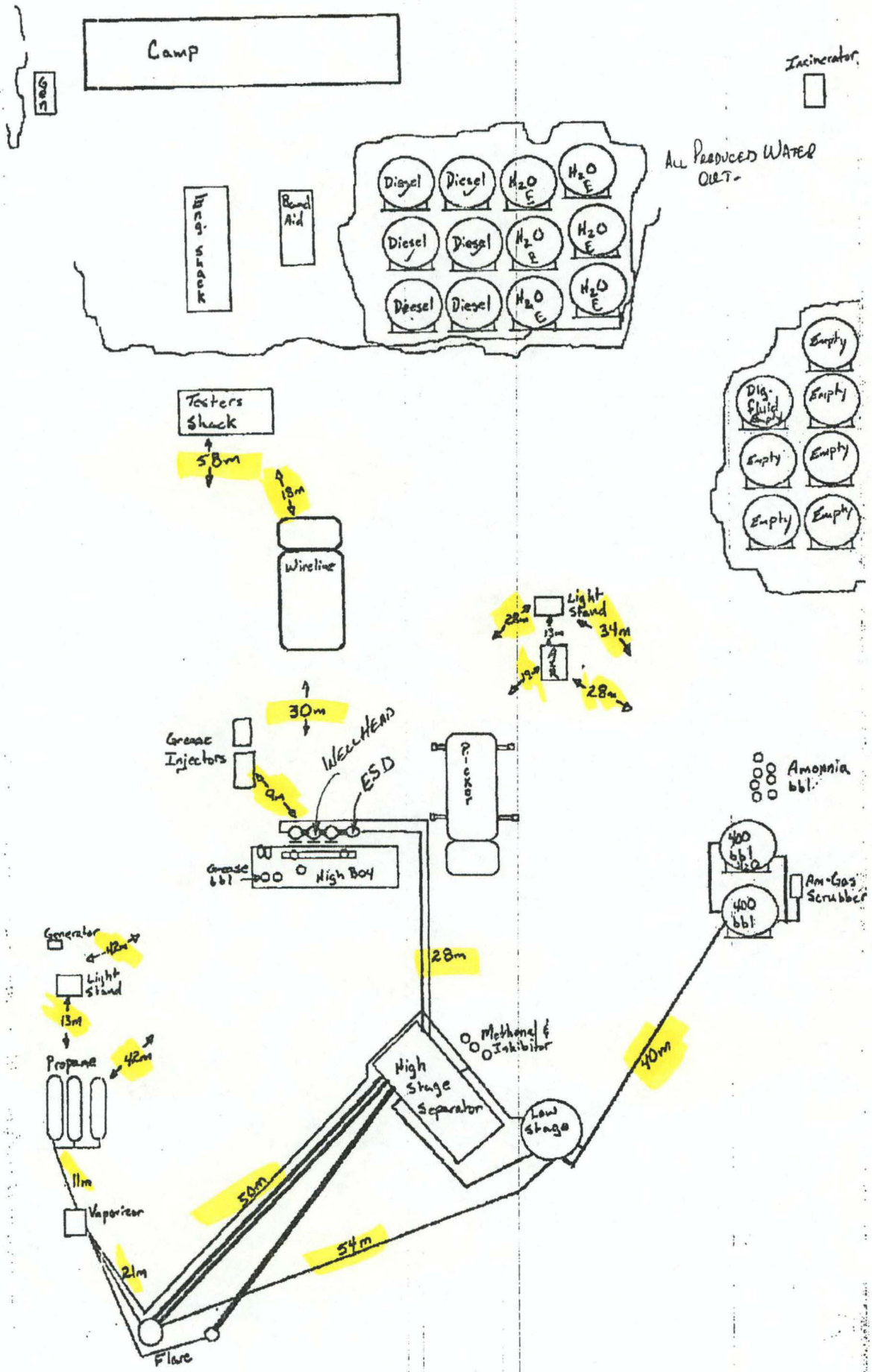
Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
576	1998/03/24	08:00:00	21640		1600					88.900													
577		09:00:00	21640		1600																		
578		10:00:00	21630		1600																		
579		11:00:00	21630		1625																		
580		12:00:00	21620		1650																		
581		13:00:00	21620		1650																		
582		14:00:00	21615		1675																		
583		15:00:00	21615		1700																		
584		15:05:00	Bleed casing to 1000 kPa. Note: Sweet gas/air. No fluid present during bleed down.																				
585		16:00:00	21610		1200																		
586		17:00:00	21610		1250																		
587		18:00:00	21600		1300																		
588		19:00:00	21600		1330																		
589		20:00:00	21595		1350																		
590		21:00:00	21595		1385																		
591		21:15:00	High pressure injection pump repaired. Shut in wing valve to deadweight line and prepare to pressure test with diesel / cronox mixture.																				
592		21:45:00	Pressure up deadweight line to 35.0 Mpa.																				
593		23:30:00	Deadweight line pressure still at 35.0 Mpa.																				
594		23:45:00	Open wing valve and resume monitoring wellhead pressures.																				
595	1998/03/25	00:00:00	21590		1475																		
596		00:30:00	21585		1500																		
597		01:00:00	21585		1520																		
598		02:00:00	21585		1540																		
599		03:00:00	21580		1560																		
600		04:00:00	21580		1580																		
601		05:00:00	21580		1600																		
602		06:00:00	21580		1620																		
603		07:00:00	21575		1640	0.00	0	0.0	5	88.900	0.000	1314.227	65.53	0.0	0.00	0.00	0.000	467.87	0.00				

Fast



Ranger Fort Liard P - 66 - A




Camp
Incinerator
All Produced Water Out
Diesel
H_2O E
Eng. Shack
Band Aid
Empty
Dig. Fluid
Testers Shack
58m
18m
Wireline
Light Stand
28m
13m
34m
19m
30m
Grease Injectors
Wellhead
ESD
Picker
Amonnia bbl.
400 bbl
Am-Gas Scrubber
Grease bbl
High Boy
Generator
42m
Light Stand
13m
Propane
11m
Vaporizer
21m
Flare
50m
54m
28m
Methanol & Inhibitor
High Stage Separator
Low Stage
40m

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-86-A	Date:	98-03-23
Purpose of Job:	Completion	Report #:	28
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Production Log/Flow test.		

Contractor:	Nil	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair	Total Hauled to Lease:	Nil		
Weather:	Clear + 15°C	Total Hauled from Lease:	399.59		
Contact Phone:	403-232-5340	Total in Tanks:	9.06		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	Under daily costs	Total Load Fluids:	209.12		
SITP	21880 KPa @ 0700	Non-recov. Ann. Fluids:	94.70		
SICP	Vac KPa @ 0700	Recovery Last 24 hrs.	57.70		
Rig Hr:	Nil Cum Rig Hrs.: 458.0	Recovery to Date:	460.04		
		Load to Recover (+New)	345.82		

AFE #: E&D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	3324.0 m - 3334.0 m KB	
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$18,159
Previous Costs:		$1,169,127
Cummulative Costs:		$1,187,286
AFE Estimate:		$3,321,700

TIME	OPERATION
0000	Shut in the well for a build up. The final flowing tubing pressure was 15095 kPa.
0200	Rig in Computalog.
0400	Equalize the lubricator. Run in the hole with a Temperature, Density, Spinner, GR/CCL Log. We ran in the hole to 2750.0 m KB. and the logging tools quit working. Pull out of the hole with the logging tools.
0700	The logging tools are at surface. Close the upper master valve and bleed off the lubricator. Change out the Temperature tool.
0745	Equalize the lubricator and run in the hole with the production logging tools. We got down to 3040.0 m KB. and the logging tools quit working. Start to pull out of the hole with the logging tools.
1015	We were coming out of the hole and the logging tools were at 749.0 m KB. when the 50.8 mm bull plug that was screwed into the flange on the wing valve and was hooked into the dead weight line parted. The well blew out the wing valve through a 50.8 mm opening. All the personnel on the location went to the safe area and a head count was taken. We noticed that the Wireline was blowing out of the wing valve. When it appeared that all the line was out of the hole the safety man and myself went to the wellhead and closed in the upper master valve and the flow stopped. Closed the lower master valve and counted the turns. The lower valve was closed with the proper amount of turns. Opened the upper master valve and the lower valve is holding. Closed the upper master valve counting the turns. The upper valve is closed with the proper amount of turns. Removed the lubricator and the Wireline BOP'S. Installed the top cap and closed the wing valve. Installed a new flange on the downstream side of the wing valve c/w a 50.8 mm threaded opening. Installed a Double X heavy duty bull plug in the flange c/w a 12.7 mm needle nose valve. The well is secured.
1100	We started to take apart the lubricator and found that the tool string was jammed up in the lubricator.
1130	Phoned Leroy Brown and informed him of the situation.
1245	Contacted Computalog and they will send up a new tool string, lubricator and Wireline BOP'S. Note: Changed out the upper master valve, two wing valves and the crown valve. We pressure tested the wellhead and valves to 35000 kPa.

FieldNotes

JobNumber: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LWRC
Well Location: P-58-A
Formation: NAHANI

CPT CENTRAL PRODUCTION TESTING LTD

Rev	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pre	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil gain	Wat gain	Cum Oil	Cum Wat	Wat Rate1	H2S	CO2	SALINITY	pH
	yymmdd	clock	kPa	C	kPa	mm	kPa	mm of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
59	19980323	07:45:00	Wireline beginning down hole.																				
59		0800:00	21830							88.900													
59		0900:00	21810																				
59		1000:00	21795		0.03		0	0.0	0	88.900	0.00	1314.227	65.53	0.0	0.00	0.00	0.00	467.87	0.00				
59		1015:00	Deadweight line connection lowing valve parted at 2 inch 1/2 inch blow plug.																				
59		1020:00	Well secured. Wireline tools at surface. Remove damaged parts and wait for parts.																				
59		1030:00	Rig off flowline from wellhead. Disassemble wellhead above over master valve.																				
59		1200:00	Install new upper master valve, new wing valves (2) and new crown (work) valve.																				
59		1300:00	Shut EST and fill wellhead with diesel / cronox mixture to lower master valve and prepare to pressure test.																				
59		1330:00	Pressure test wellhead to 35.0 Mpa for 5 minutes. Passed.																				
59	19980324	0000:00	Rig in flowline and fill with diesel / cronox mixture.																				
59		0230:00	Rebuild deadweight line and pressure test to 35.0 Mpa.																				
59		0300:00	Packing gland nut blew out of injection pump at 27.5 Mpa. Check valve on pump held at 27.5 Mpa and maintained 27.25 Mpa in deadweight line.																				
59		0315:00	Deadweight line passed pressure test of 27.25 Mpa.																				
59		0330:00	With multiple pump down, the pressure test on the flowline has been deferred till morning.																				
59		0345:00	Prepare to take deadweight of well.																				
59		0355:00	Open lower master valve then upper master valve. Open wing valve to needle valve before deadweight line.																				
59		0400:00	Upon opening new needle valve to deadweight line, the needle valve started leaking out stem.																				
59		0430:00	Shut in well, bled pressure into flowline (pressure test on flowline of 3500 Kpa) and remove faulty needle valve. Replace and reconnect deadweight line.																				
59		0445:00	Pressure test deadweight line with 21.0 Mpa taken pump.																				
59		0500:00	Pressure test of 22.0 Mpa on deadweight line passed.																				
59		0515:00	Shut in all valves and wait on day break to continue with pressure testing.																				
59		0815:00	Check deadweight line pressure test. Pressure maintaining at 20.0 Mpa. Open wellhead to deadweight.																				
59		0830:00	21645																				
59		0900:00	21645																				

Fast

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-22
Purpose of Job:	Completion	Report #:	25
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Acid wash/squeeze/flow/production log/flow		

Contractor:	Nil
Road/Lease:	Fair
Weather:	Clear + 15°C
Contact Phone:	403-232-5340
Zone:	Nahanni
Perforations:	Under daily costs
SITP	21540 KPa @ 1430
SICP	Vac KPa @ 1430
Rig Hr:	Nil Cum Rig Hrs.: 458.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	Nil	
Total Hauled from Lease:	399.59	
Total in Tanks:	9.06	
Initial Well Fluid:	Water/Standnil	
Total Load Fluids:	209.12	
Non-recov. Ann. Fluids:	94.70	
Recovery Last 24 hrs.	67.70	
Recovery to Date:	460.04	
Load to Recover (+New)	345.62	

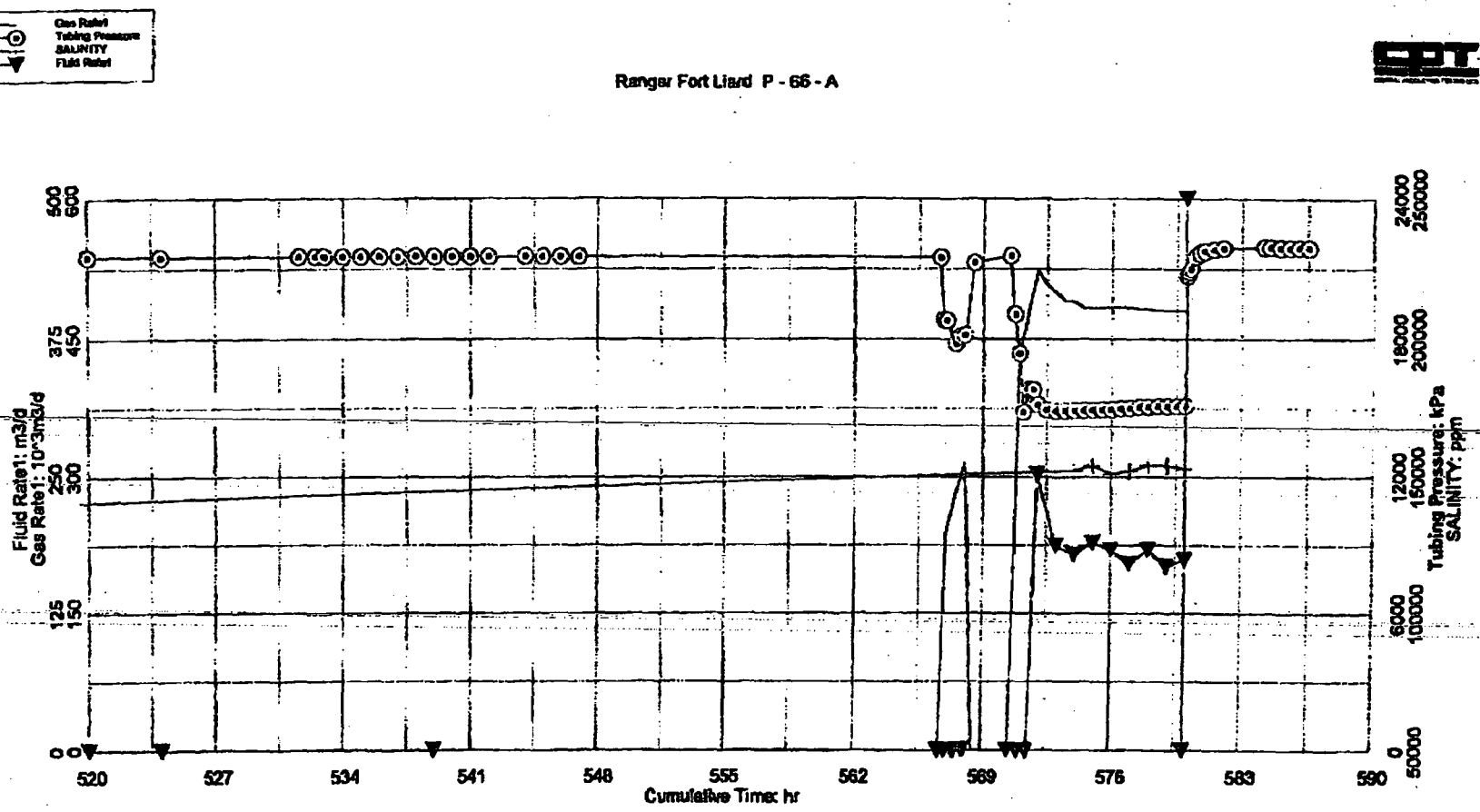
AFE # ESD-011

KB Elevation:	469.89 m
KB. to CF:	10.35 m
KB. to THF:	8.60 m

Daily Cost Summary

Code	Item	Amount
	3324.0 m - 3334.0 m KB	
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$73,906
Previous Costs:		$1,095,221
Cummulative Costs:		$1,169,127
AFE Estimate:		$3,331,700

TIME	OPERATION
0000	Well shut in and secured.
0400	Install the injector on top of the 38.1 mm coil tubing BOP'S.
0545	Hold a safety meeting.
0600	Cool down the N2 pumper
0625	Fill the 38.1 mm coil tubing with N2 and pressure test the 38.1 mm coil tubing and the Central Production testers flow line to 35000 kPa.
0645	Open the master valve
0648	Start to run in the hole with the 38.1 mm coil tubing to do a 1.0 m^3 acid soak and squeeze job using 15.0 % HCL acid.
0945	Start to pump acid.
0954	The acid is away. Start pumping 420.0 L of water.
0955	Start to displace the acid across the perforations at 3324.0 m - 3334.0 m KB.
1002	The acid is at the end of the coil. Start to pull the coil up laying the acid across the perforations.
1005	Stop pumping N2. The acid is across the perforations. The coil tubing pressure is 17705 kPa.
1007	Stop moving the coil tubing.
1023	Start pumping N2. The ciol tubing pressure is down to 14656 kPa.
1025	Start to run in the hole with the coil tubing to 3350.0 m KB.
1037	Open the well to flow.
1045	Start pumping N2.
1053	Start to pull out of the hole with the 38.1 mm coil tubing.
1108	Stop pumping N2 and continue pulling out of the hole.
1131	Fluid present. Unable to obtain a salinity. The fluid sample obtained contained apperance of drilling mud mixed with water.
1200	The coil tubing is near surface. Shut in the well at the wing valve.
1230	The coil tubing is at surface. Shut in the wing valve and bleed down the coil tubing to 0 kPa through the separator.
1240	Rig out Dowell Schlumberger.
1430	Check the wellhead for pressure. There is 21540 kPa on the tubing and the casing is on a vacuum.
1431	Open the well through the Central Production Testing separator.
1445	Fluid to surface. There is no drilling mud present in the water sample.
1800	We have a tubing flowing pressure of 15140 kPa, and we are flowing through a 15.08 mm choke to clean up the well.


Gas Rate1
Tubing Pressure
SALINITY
Fluid Rate1
Ranger Fort Liard P - 66 - A
Fluid Rate1: m3/d
Gas Rate1: 10^3m3/d
Tubing Pressure: kPa
SALINITY: ppm
Cumulative Time: hr
0
125
150
250
300
375
450
500
600
0
6000
12000
18000
24000
50000
100000
150000
200000
250000
520
527
534
541
548
555
562
569
576
583
590

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
461	1998/03/22	09:30:00	Coil on bottom, begin pumping first stage of acid.																				
462		10:30:00	Finish second stage of pumping and run back down below the perfs.																				
463		10:40:00	21480				0	0.0	0	88.900	0.000	1108.211	0.00		0.00	0.00	0.000	402.34	0.00				
484		10:40:00	Open well through separator to flare. Flammable gas to surface.																				
485		10:50:00	18800		100	7.94																	
486		11:00:00	18775	20	100	7.94	3000	25.0	34	88.900	238.251	1111.520	0.00		0.00	0.00	0.000	402.34	0.00				
487		11:05:00	Shut down N2 and begin coming out of hole. Short slug of fluid present but unable to measure.																				
488		11:12:00				8.33																	
489		11:16:00				8.73																	
490		11:23:00				9.13																	
491		11:30:00	17800	22	100	9.13	3000	32.0	18		278.978	1116.908	0.00		0.00	0.00	0.000	402.34	0.00				
492		11:31:00	Fluid present. Unable to obtain salinity. Fluid sample obtained contained appearance of drilling mud mixture and water.																				
493		11:45:00	18090	24		9.13																	
494		12:00:00	18155	24	100	9.13	3550	32.0	6		314.481	1123.089	0.00		0.00	0.00	0.000	402.34	0.00				
495		12:00:00	Coil near surface. Shut in well at wing valve. Note: 2.4 m3 of water is needed to reach first sight glass reading in pressure tank.																				
496		12:30:00	21240		100																		
497		12:30:00	Coil at surface. Close master valve and bleed coil to 0. Rig out coil tubing unit.																				
498		14:30:00	Open well to separator to flare on cleanup.																				
499		14:30:00	21540		100		0	0.0	0	88.900	0.000	1123.089	0.00		0.00	0.00	0.000	402.34	0.00				
500		14:45:00	19050	26		10.32																	
501		14:45:00	Fluid to surface. Note: No drilling mud present in water sample.																				
502		15:00:00	17370	28	100	11.11	3200	70.0	14		431.140	1132.072	0.00		0.00	0.00	0.000	402.34	0.00			14000	6.0
503		15:15:00	14800	34		14.29																	
504		15:30:00	15800	38		14.29	3130	94.0	26		480.679	1141.570	0.00	100.0	0.00	0.00	0.000	402.34	0.00				
505		15:45:00	15790	41																			
506		16:00:00	15140	41	400	15.08	3050	114.0	26	88.900	522.316	1152.018	5.25	100.0	0.00	5.25	0.000	407.59	252.00				4.0
507		16:30:00	14900	46	600	15.08	3000	112.0	32		506.791	1162.737											
508		17:00:00	14860	51	800	15.08	2990	111.0	36	88.900	499.540	1173.220	13.04	100.0	0.00	7.79	0.000	415.38	186.96				4.0

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P.-66 - A
Formation: NAHANNI

FieldNotes

CPT

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Stati1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
509	1998/03/22	17:30:00	14875	57	1000	15.08	2975	111.0	44	88.900	490.425	1183.532											
510		18:00:00	14885	59	1300	15.08	2975	111.0	45	88.900	489.480	1193.740	20.48	100.0	0.00	7.44	0.000	422.82	178.56			152000	5.0
511		18:30:00	14890	63	1700		2950	109.0	46		482.015	1203.859											
512		19:00:00	14910	66	2200	15.08	2980	109.0	48	88.900	482.685	1213.908	28.38	100.0	0.00	7.90	0.000	430.72	189.60			154000	6.0
513		19:30:00	14920	68	2550		2990	109.0	49		482.602	1223.963											
514		20:00:00	14935	70	2900	15.08	3000	110.0	51	88.900	483.827	1234.030	36.01	100.0	0.00	7.63	0.000	438.35	183.17			151000	6.0
515		20:30:00	14970	73	4200		3010	110.0	53		482.853	1244.100											
516		21:00:00	15000	74	4700	15.08	3010	111.0	55	88.900	483.265	1254.164	43.11	100.0	0.00	7.10	0.000	445.45	170.35			152000	6.0
517		21:30:00	15035	76	5250		3020	111.0	58		481.448	1264.213											
518		22:00:00	15045	78	5500	15.08	3030	111.0	59	88.900	481.392	1274.242	50.73	100.0	0.00	7.62	0.000	453.07	182.88	1.3	16.6	154000	6.0
519		22:30:00	15065	79	5800		3030	111.0	61		479.669	1284.253											
520		23:00:00	15080	81	1600	15.08	3030	111.0	61	88.900	479.669	1294.246	57.72	100.0	0.00	6.99	0.000	460.06	167.76			154000	6.0
521		23:30:00	15085	82	1950		3030	111.0	61		479.669	1304.240											
522		23:45:00	Bled down casing to 1300 Kpa.																				
523		23:59:59	15095	83	2400	15.08	3040	111.0	62	88.900	479.620	1314.227	64.97	100.0	0.00	7.25	0.000	467.31	174.05			153000	6.0
524	1998/03/23	00:00:00	Shut in well and record build ups.																				
525		00:00:00	Shipped 57.7 M3 water off location.																				
526		00:00:01	15100	83	2400	0.00	0	0.0	0	88.900	0.000	1314.227	65.53	100.0	0.00	0.56	0.000	467.82	4192.00				
527		00:00:02	Fluid listed at 00:00:01 Hrs. is what was in the high stage separator prior to dump activating.																				
528		00:00:03	15120		2400	0.00	0	0.0	0	88.900	0.000	1314.227	65.53	100.0	0.00	0.00	0.000	467.87	0.00				
529		00:05:00	20670		1800																		
530		00:10:00	20860		1300																		
531		00:15:00	20990		900																		
532		00:30:00	21500		625																		
533		00:45:00	21640		500																		
534		01:00:00	21735		450																		
535		01:30:00	21820		400																		
536		01:30:00	Wake up Cumpulalog to come down and rig in.																				

fast

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 68 - A
Formation: NAHANNI

FieldNotes

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
537	1998/03/23	02:05:00	Shut in wellhead master valves and bled off wellhead.Rig in wireline.																				
538		04:05:00	Wireline rigged in and starting to run in hole.Casing on vacuum.																				
539		04:10:00	21900		0					88.900													
540		04:30:00	21890		0																		
541		05:00:00	21880		0																		
542		05:30:00	21875		0																		
543		06:00:00	21870		0																		
544		06:30:00	21865		0																		
545		06:59:59	21860		0		0	0.0	0		0.000	1314.227	65.53		0.00	0.00	0.000	467.87	0.00				
546			DAILY: (11.5 hrs.) Gas Flared = 206.016 E3M3; Water Prod. = 65.53 M3; Oil Prod. = 0.0 M3																				
547			CUMULATIVE TO DATE: (587 hrs.) Gas Flared = 1314.227 E3M3; Water Prod. = 467.87 M3; Oil Prod. = 0.0 M3.																				
548			Water shipped off location in last 24 hours = 57.7 M3; Water on location @ 07:00 hrs. = 9.06 M3.																				
549			Gas sample : H2S = 1.3% ; CO2 = 16.6%																				
550	1998/03/23	07:00:00	Water sample : Salinity = 153000 ppm w/ Ph of 6.0																				

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-21
Purpose of Job:	Completion	Report #:	24
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Perforate/Acid wash and squeeze		

Contractor:	Nil	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair	Total Hauled to Lease:	Nil		
Weather:	Clear + 12°C	Total Hauled from Lease:	341.89		
Contact Phone:	403-232-5340	Total In Tanks:	4.49		
Zone:	Nahanni	Initial Well Fluid:	Water/Standni		
Perforations:	Under daily costs	Total Load Fluids:	209.12		
SITP 21510	KPa @ 1145	Non-recov. Ann. Fluids:	94.70		
SICP Nil	KPa @ 1145	Recovery Last 24 hrs.	Nil		
Rig Hr: Nil	Cum Rig Hrs.: 458.0	Recovery to Date:	402.34		
		Load to Recover (+New)	+ 287.92		

AFE # E80-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

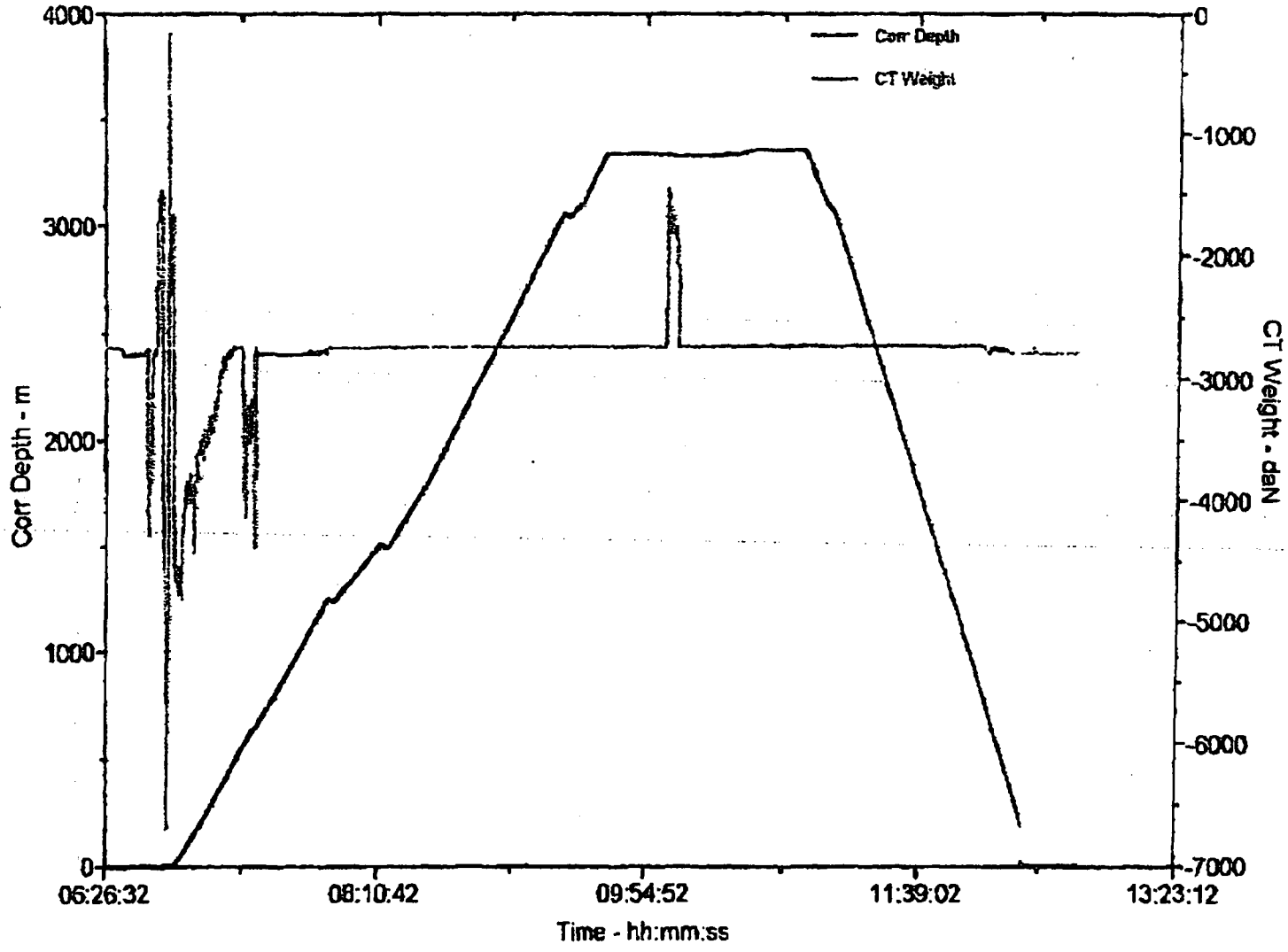
Code	Item	Amount
	3324.0 m - 3334.0 m KB	
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3278.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3146.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$28,190
Previous Costs:		$1,067,031
Cummulative Costs:		$1,066,221
AFE Estimate:		$3,331,700

TIME	OPERATION
0000	Running in the hole with a 43.0 mm Spiral Shogun perforating gun. Attempted to perforate the Nahanni formation from 3324.0 m - 3329.0 m KB. The gun would not fire.
0315	The perforating gun is at surface. Close the upper master valve and bleed off the lubricator. Lay down the perforating gun. Safe out the gun, trace out and repair the short in the shooting assembly.
0615	Pick up and install the lubricator. Equalize the lubricator. The wellhead tubing pressure is 21510 kPa.
0620	Run in the hole with a 43.0 mm Spiral Shogun perforating gun to perforate the Nahanni formation from 3324.0 m - 3329.0 m KB. We logged the gun into place and attempted to fire the gun. We dont think that the gun went off.
0930	The perforating gun is at surface. Close the upper master valve and bleed off the lubricator. Lay down the perforating gun. The gun did not fire. We found that the through wire to the cap was skinned and broken. Check and repair the perforating gun.
1145	Equalize the lubricator. The wellhead tubing pressure is 21510 kPa.
1150	Run in the hole with a 43.0 mm Spiral Shogun perforating gun and perforate the Nahanni formation from 3324.0 m - 3329.0 m KB. 20 SPM, 60° phasing, 9.5 gram charges. We did not see any change in the tubing pressure when we fired the gun.
1545	The perforating gun is at surface. Close the top master valve and bleed off the lubricator. The gun fired and we recovered the gun carrier.
1600	Rig out Computalog.
1700	Spot the Dowell Schlumberger equipment and rig up same.
1915	Hold a safety meeting.
1930	Pressure test the coil tubing BOP'S to 6000 kPa low test and 35000 kPa high test.
2200	Cap and secure the well for the night.

CCAT*

DEPTH/WIEGHT

Ranger Oil Ltd.
P-66
811-0365
03-22-1998

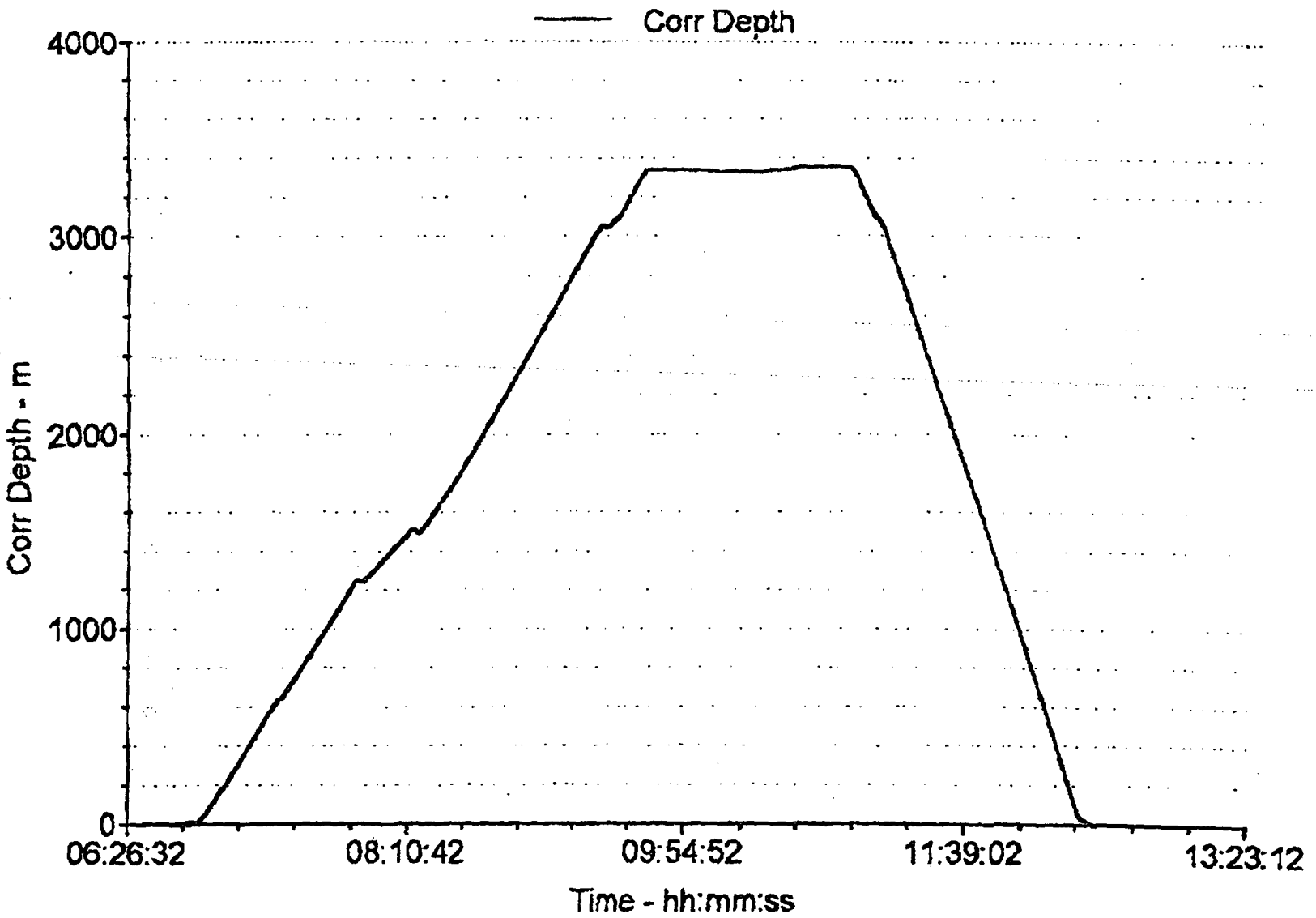


(c) Schlumberger Dowell 1994-96

CCAT*

Depth Vs Time

Ranger Oil Ltd.
P-66
811-0385
03-22-1998



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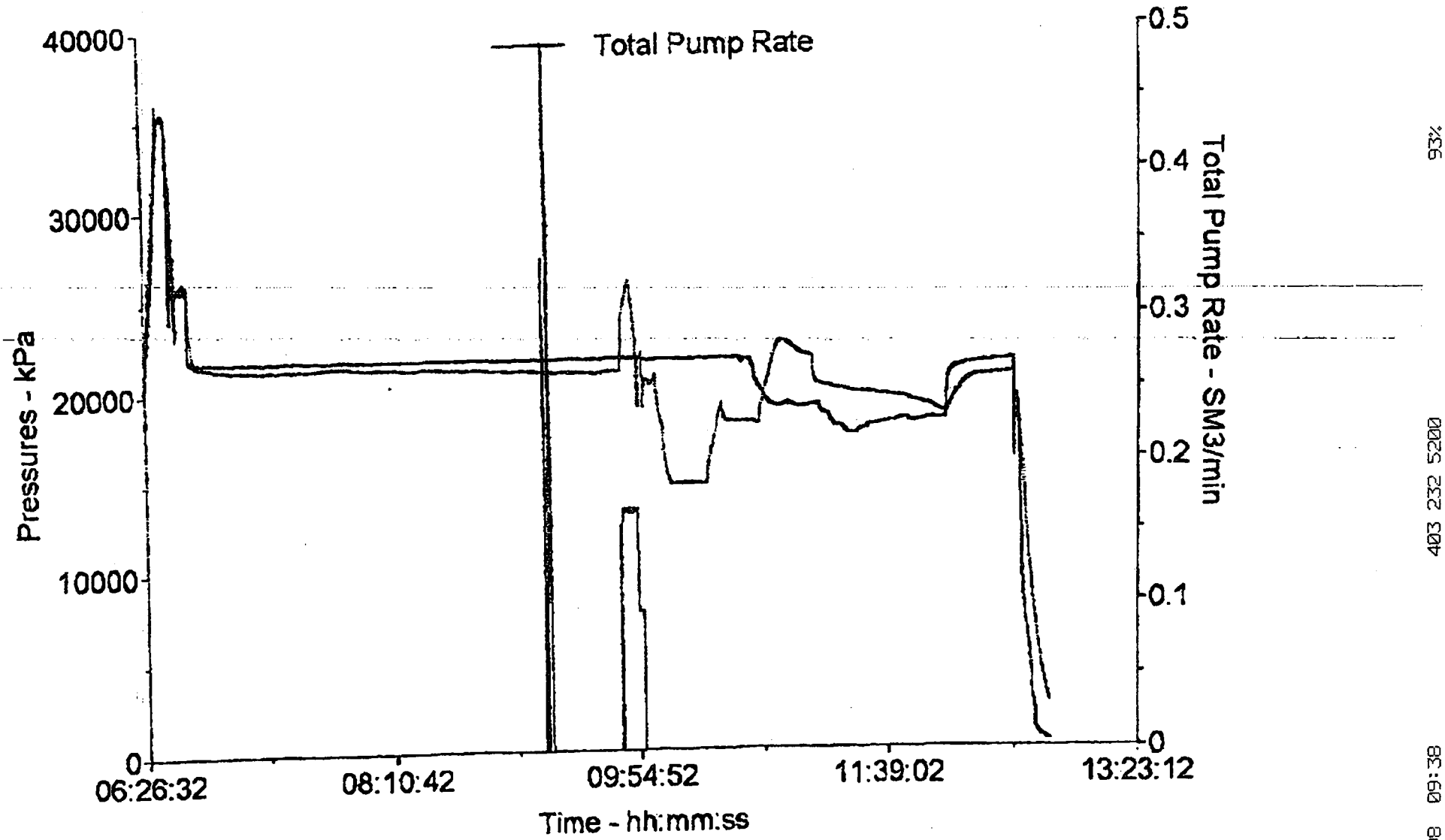
CCAT*

Pressure and Rate

Ranger Oil Ltd.
P-66
811-0365
03-22-1998



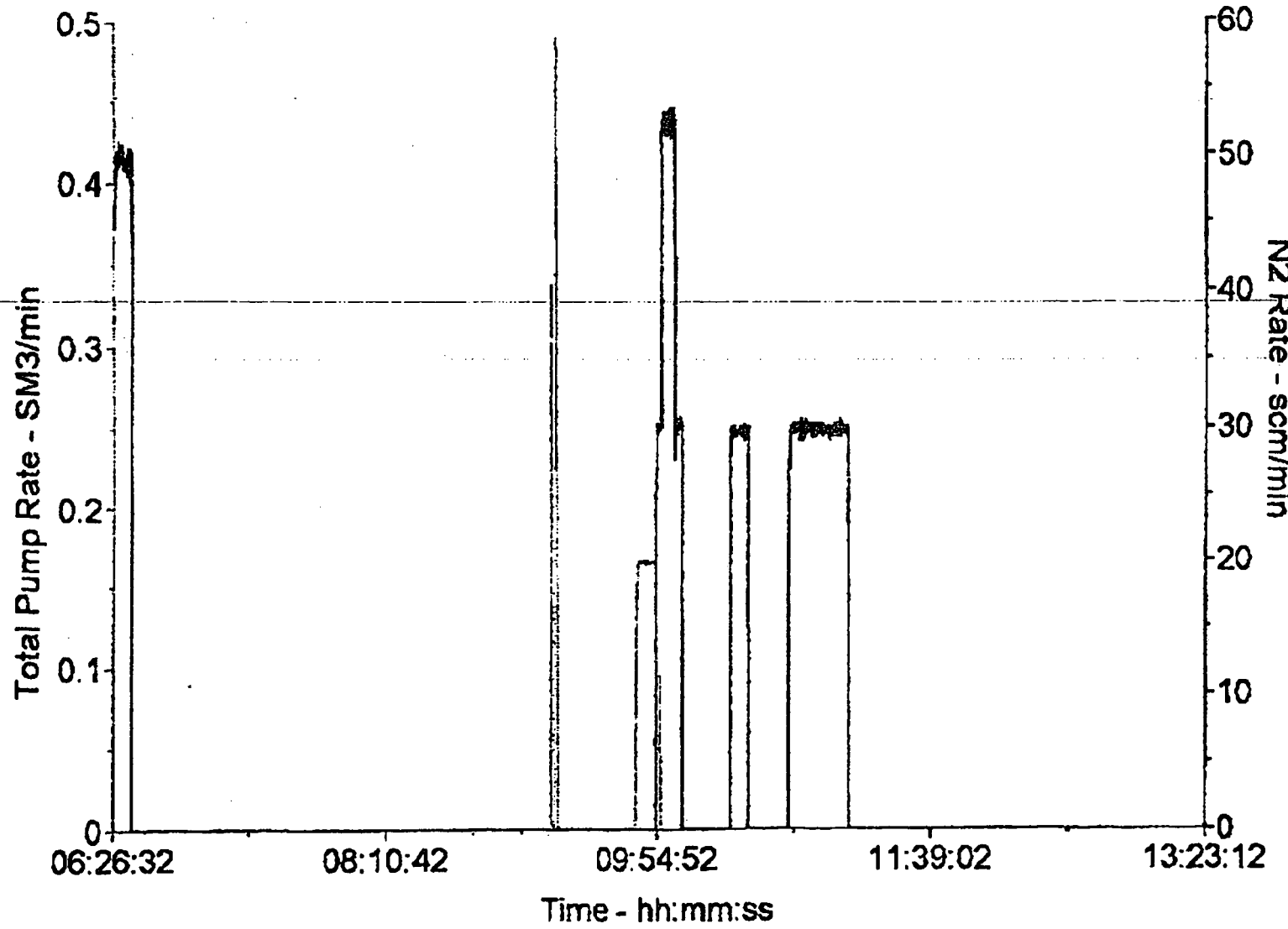
Dowell

(c) Schlumberger Dowell 1994-96

CCAT*

Foam Circulation

Ranger Oil Ltd.
P-66
811-0365
03-22-1998



(c) Schlumberger Dowell 1994-96

Dowell

Client : Ranger Oil Ltd.
Well : P-86
Formation : Tight Hole
District : COIL TUBING GAB
Country : Canada

Section 1: Job Messages

#	Time	Message	Circ Pres (kPa)	Wellhead Pres (kPa)	N2 Pump Rate (scm/min)	Pump 1 Rate (SM3/min)	Tot Fluid Vol (m3)
1	6:25:12	Started Acquisition	0	0	0	0.00	0.000
2	6:34:19	Stop pumping N2	35338	35169	0	0.00	0.000
3	6:44:45	Open master valve	25656	26018	0	0.00	0.000
4	6:48:03	Begin RIH CT	21518	21679	0	0.00	0.000
5	7:52:24	PULL TEST AT METERS	21303	21654	0	0.00	0.000
6	8:13:02	PULL TEST AT METERS	21168	21607	0	0.00	0.000
7	8:23:41	PULL TEST AT METERS	20978	21699	0	0.00	0.845
8	8:42:33	Stop at 3334.13 mKB	20916	21602	0	0.00	0.650
9	8:43:08	Reset Volume	20925	21600	0	0.00	0.650
10	8:44:56	Start Pumping Acid	20924	21608	0	0.00	0.000
11	8:46:32	Reset Volume	20921	21605	0	0.00	0.246
12	8:54:03	Stop pumping acid	22857	21624	0	0.17	1.126
13	8:54:20	Start Water	22453	21619	0	0.18	1.168
14	8:54:37	Start pumping N2	20185	21624	28	0.10	1.210
15	8:56:36	Stop pumping water	21923	21562	30	0.09	1.398
16	10:02:29	Pull up to 3324	20105	21513	30	0.00	1.407
17	10:05:10	Stop pumping N2	17705	21541	0	0.00	1.407
18	10:07:04	Stop pulling up and wait for 15 min	15304	21530	0	0.00	1.407
19	10:23:14	Start pumping N2	14656	21542	27	0.00	1.407
20	10:25:43	Recommence RIH CT	16673	21548	30	0.00	1.407
21	10:30:22	Stop pumping N2	18532	21566	0	0.00	1.407
22	10:37:24	Stop RIH and flow well	18086	21555	0	0.00	1.407
23	10:45:19	Start pumping N2	17960	20062	27	0.00	1.407
24	10:53:40	Begin POH CT	22388	18884	29	0.00	1.407
25	11:08:07	Stop pumping N2	21225	18931	0	0.00	1.407
26	12:26:58	CT Back at Surface	20621	21345	0	0.00	1.407
27	12:30:38	Close master valve and bleed off coil	20644	21387	0	0.00	1.407
28	12:49:55	Rig out equipment	0	0	0	0.00	0.000

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-20
Purpose of Job:	Completion	Report #:	23
Report From:	Wayne Casler	Report To:	Leroy Brown

Current Operation: Perforate/Acid wash and squeeze

Contractor:	Nil
Road/Lease:	Fair
Weather:	Clear + 11°C
Contact Phone:	403-232-5340
Zone:	Nahanni
Perforations:	Under daily costs
SITP	21490 KPa @ 1500
SICP	Nil KPa @ 1500
Rig Hr.	Nil Cum Rig Hrs.: 456.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	Nil	
Total Hauled from Lease:	341.89	
Total in Tanks:	4.49	
Initial Well Fluid:	Water/Standrill	
Total Load Fluids:	209.12	
Non-recov. Ann. Fluids:	94.70	
Recovery Last 24 hrs.	Nil	
Recovery to Date:	402.34	
Load to Recover (+New)	+ 287.92	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3278.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		

Daily Costs:	$32,603
Previous Costs:	$1,034,289
Cummulative Costs:	$1,067,091
AFE Estimate:	$1,054,400

TIME	OPERATION
0000	Rigging up Computalog. Move in the Dowell Schlumberger Coil Tubing unit, C&A pump truck, N2 pumper and a Turbine Frac pumper.
0700	Check fire through the shooting assembly and we had a short in the system. Trace and repair the power panels and the shooting assembly.
1400	Hold a safety meeting.
1415	Cap up the gun and install same in the lubricator.
1445	Pick up and install the lubricator on top of the Wireline BOP'S.
1500	Pumped up the grease injector and equalized the lubricator. We have 21490 kPa on the tubing.
1540	Run in the hole with a Spiral Shogun perforating gun and perforate the Nihanni formation from 3329.0 m - 3334.0 m KB. 20 SPM, 60° phasing, 9.5 gram charges. We did not see any pressure change on the tubing when we fired the gun.
2100	We are at surface with the perforating gun. Close in the upper master valve. Bleed off the lubricator and close the crown valve. When we removed the gun from the lubricator we found that we only had 1.5 m of the Spiral gun left.
2130	Service the release sub and the collar locator.
2245	Pick up and install the lubricator. Equalize the lubricator. The wellhead tubing pressure is 21510 kPa.
2300	Run in the hole with a 43.0 mm Spiral Shogun perforating gun.

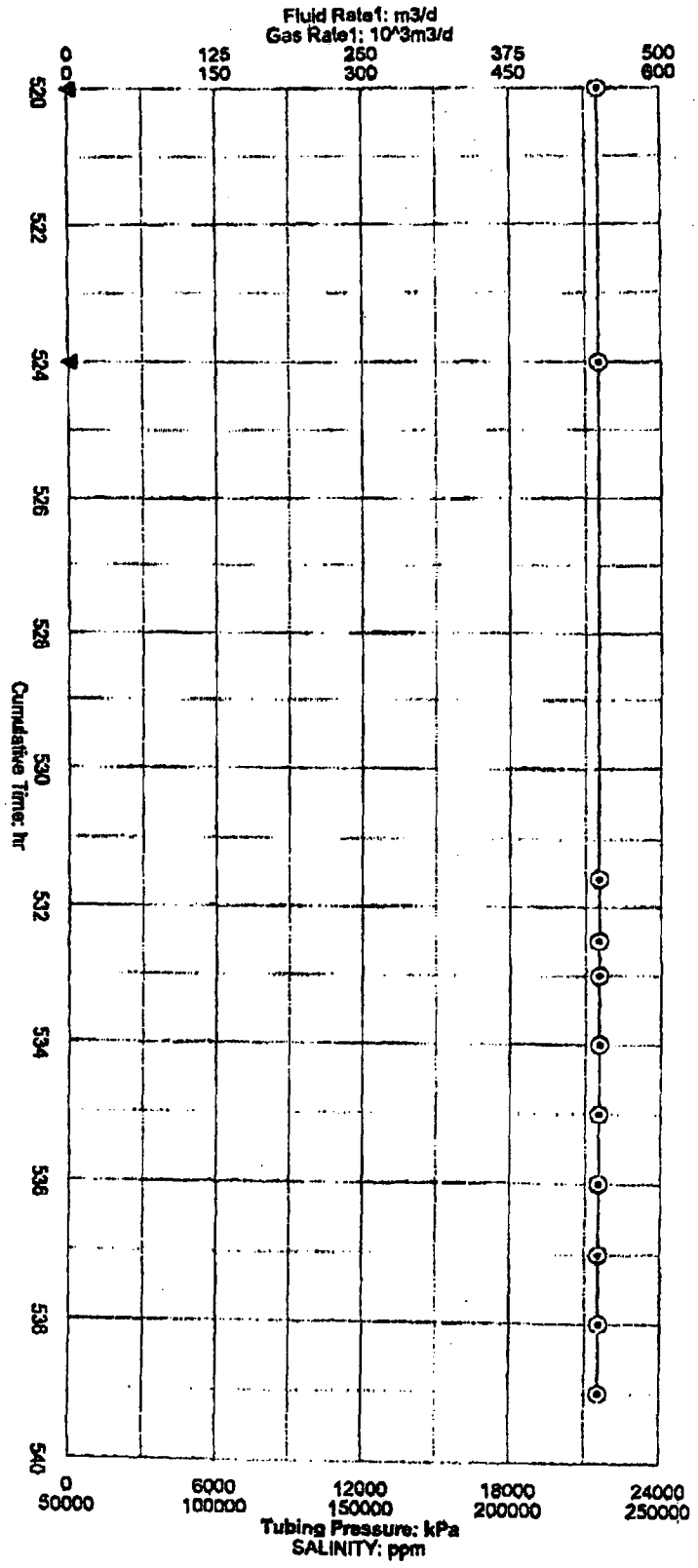
Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT UIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	GasRate1	Cum.Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	Oil Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	In of H2O	C	mm	10^m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	m3/d	%	%	ppm	
449	1998/03/20	16:00:00	21490	0	0		0	0.0	0	95.250	).000	1108.211	0.00		0.00	0.00	0.000	402.34	0.0	0.00				
450		16:00:00	Begin running in to perforate.																					
451		19:45:00	Wireline at surface.Rig off wireline to set up for second run.																					
452		23:20:00	Wireline rigging back up to run second perforating run.																					
453		23:35:00	21510	0																				
454		23:35:00	Casing under vaccum.																					
455	1998/03/21	00:30:00	21510	0																				
456		01:00:00	21510	0																				
457		02:00:00	21510	0																				
458		03:00:00	21510	0																				
459		03:15:00	Wireline at surface.Rig off wireline.Perferating guns didn't fire																					
460		04:00:00	21510	0																				
461		05:00:00	21510	0																				
462		06:00:00	21510	0																				
463		06:15:00	Wireline running in to perforate.																					
464	1998/03/21	07:00:00	21510	0																				

Fast



Ranger Fort Liard P - 66 - A

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A		Date: 98-03-19
Purpose of Job:	Completion		Report #: 22
Report From:	Wayne Casler	Report To: Leroy Brown	
Current Operation:	Rig up and perforate the well		

Contractor:	Nil	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair	Total Hauled to Lease:	Nil		
Weather:	Clear + 17°C	Total Hauled from Lease:	341.89		
Contact Phone:	403-232-5340	Total in Tanks:	4.49		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	Under daily costs	Total Load Fluids:	209.12		
SITP	N/A KPa @	Non-recov. Ann. Fluids:	84.70		
SICP	N/A KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr:	Nil Cum Rig Hrs.: 458.0	Recovery to Date:	402.34		
		Load to Recover (+New)	+ 287.92		

AFE # E8D-011

KB Elevation: 459.88 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	3285.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3158.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
	Daily Costs:	$20,065
	Previous Costs:	$1,014,163
	Cummulative Costs:	$1,034,228
	AFE Estimate:	$1,654,400

TIME

OPERATION

Rig up the safety trailer. Install the ABB Vetco Gray lubricator and pull the plug out of the dognut. Spot the Central Production Testing equipment and rig up same. Install the Computalog wireline BOP'S and night cap the wellhead. Spot the Computalog equipment and rig up the lubricator. Flush inhibitor through the Separator.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-18
Purpose of Job:	Completion	Report #:	21
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Pull plug in dognut/rig in services.		

Contractor:	Nil	Fluid Vol. m3	Water	Oil
Road/Lease:	Fair	Total Hauled to Lease:	Nil	
Weather:	Clear + 11°C	Total Hauled from Lease:	341.89	
Contact Phone:	403-232-5340	Total In Tanks:	4.49	
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill	
Perforations:	Under daily costs	Total Load Fluids:	209.12	
SITP N/A KPa @		Non-recov. Ann. Fluids:	94.70	
SICP N/A KPa @		Recovery Last 24 hrs.	Nil	
Rig Hr: Nil	Cum Rig Hrs.: 456.0	Recovery to Date:	402.34	
		Load to Recover (+New)	+ 287.92	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$4,389
Previous Costs:		$1,009,774
Cummulative Costs:		$1,014,163
AFE Estimate:		$1,854,400

TIME:

OPERATION

The Central Production Testing crew and the Tek Air safety crew arrived on the location. The ABB Vetco Gray crew will arrive in the morning to pull the plug in the dognut.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-17
Purpose of Job:	Completion	Report #:	20
Report From:	Wayne Casler	Report To:	Leroy Brown
Current Operation:	Mobile all the Service Companys.		

		Fluid Vol. m3	Water	Oil
Contractor:	Nil	Total Hauled to Lease:	Nil	
Road/Lease:	Fair	Total Hauled from Lease:	341.89	
Weather:	Clear + 13°C	Total in Tanks:	4.49	
Contact Phone:	403-232-5340	Initial Well Fluid:	Water/Standrill	
Zone:	Nahanni	Total Load Fluids:	209.12	
Perforations:	Under daily costs	Non-recov. Ann. Fluids:	94.70	
SITP N/A	KPa @	Recovery Last 24 hrs.	Nil	
SICP N/A	KPa @	Recovery to Date:	402.34	
Rig Hr: Nil	Cum Rig Hrs.: 456.0	Load to Recover (+New)	+ 287.92	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	3295.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	

Daily Costs:	$9,611
Previous Costs:	$1,060,163
Cummulative Costs:	$1,069,774
AFE Estimate:	$1,654,400

TIME	OPERATION
	Phoned all the Service Company's and they will mobilize the crews to start to drive to the location.

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-19 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: HEAT INVERT MUD AND LOAD OUT SAME
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO. SUPERVISOR: Art Schritt
DAILY COST: $ -2,210 CUM. COST: $ 24,495,662 AFE NO: E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @ SPM
TRIP RECORDS: CALCULATED HOLE FILL m^3 ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES	MUD TANKS	PUMPS	
BIT NUMBER			WEIGHT (kg/m^3)		No. 1 LINER (mm)	
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m^3)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C. ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		**SOLIDS CONTROL**	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILLING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D.	I.D.	T.J. TYPE

MUD ADDITIVES

	D. SILT.	CENT.
U.F. (kg/m^3)		
OF. (kg/m^3)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

COST

BHA LENGTH		M	JTS. D.P. : ON RACKS	
HOOK LOAD		daN	: IN STRING	
AVAILABLE WOB		daN	: TOTAL	

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG MOVE		TRIP		HANDLE TOOLS	
NIPPLEUP/DN		HEAT INVERT &		REAM RATHOLE			
RUN CASING		LOAD OUT	12	CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	CLEAR	
TEMPTERATURE	+ 4 c	
ROADS	GOOD	

24 SUMMARY

Heat invert with Anderson heat exchanger - Load out 22m3 invert mud

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-18 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: HEAT INVERT MUD AND LOAD OUT SAME
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO SUPERVISOR: Art Schritt
DAILY COST $ -108,687 CUM. COST: $ 24,497,872 AFE NO. E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @: SPM
TRIP RECORDS: CALCULATED HOLE FILL m³ ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES MUD TANKS		PUMPS	
BIT NUMBER			WEIGHT (kg/m³)		No. 1 LINER (mm)	
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m³)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C. ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL (m/min.)	
R.P.M.			FLUID LOSS (cc)		SOLIDS CONTROL	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D.	I.D.	T.J. TYPE

MUD ADDITIVES

COST

	D. SILT	CENT.
U.F. (kg/m³)		
OF (kg/m³)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

BHA LENGTH		M	JTS. D.P.: ON RACKS	
HOOK LOAD		daN	: IN STRING	
AVAILABLE WOB		daN	: TOTAL	

TIME BREAKDOWN

DRILLING OPERATIONS			EVALUATION		PROBLEMS	
DRILLING	CEMENT		CORING		REPAIR	
TRIP	BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE	HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY	CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT	PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD	RIG MOVE	4	TRIP		HANDLE TOOLS	
NIPPLEUP/DN	LOAD out mud	10	REAM RATHOLE			
RUN CASING			CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	CLEAR	
TEMPERATURE	-4 C	
ROADS	GOOD	

24 SUMMARY

Load out drill pipe and miscellaneous on LAND trucks - Load out casing and centralizers on PeBen trucks
Heat invert mud and load out 22m3 - Load out mud and chemicals
All dry mud and chemicals - casing and rig equipment off location

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-17 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: LOAD OUT RIG
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO. SUPERVISOR: Art Schritt
DAILY COST: $ 33,320 CUM. COST: $ 24,606,559 AFE NO: E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @: SPM
TRIP RECORDS: CALCULATED HOLE FILL m³ ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES MUD TANKS		PUMPS	
BIT NUMBER			WEIGHT (kg/m³)		No. 1 LINER (mm)	
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m³)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C. ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		SOLIDS CONTROL	
CONDITION			CHLORIDES		SHAKER SCREENS	
			Ca		DRYER SCREENS	

DRILLING ASSEMBLY

ITEM	O.D.	I.D.	T.J. TYPE

MUD ADDITIVES

	D. SILT.	CENT.
U.F. (kg/m³)		
OF. (kg/m³)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m °	°
	m °	°
	m °	°
	m °	°
	m °	°

COST

BHA LENGTH	M	JTS. D.P. : ON RACKS		
HOOK LOAD	daN	: IN STRING		
AVAILABLE WOB	daN	: TOTAL		

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG MOVE	12	TRIP		HANDLE TOOLS	
NIPPLEUP/DN				REAM RATHOLE			
RUN CASING				CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	CLOUDY	
TEMPERATURE	-5 c	
ROADS	GOOD	

24 SUMMARY

Load our drill pipe - BOP and matting - Blade road and level lease

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-16 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: LOAD OUT RIG
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO SUPERVISOR: Art Schritt
DAILY COST: $ 93,815 CUM. COST: $ 24,573,239 AFE NO. E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @. SPM
TRIP RECORDS: CALCULATED HOLE FILL m³ ACTUAL HOLE FILL m3
BOP DRILLS CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES MUD TANKS		PUMPS	
BIT NUMBER			WEIGHT (kg/m³)		No. 1 LINER (mm)	140
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	127
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m³)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C.ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		SOLIDS CONTROL	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D	I.D.	T.J. TYPE

MUD ADDITIVES

	D. SILT	CENT.
U.F. (kg/m³)		
OF. (kg/m³)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

COST

BHA LENGTH	M	JTS. D.P.: ON RACKS	433
HOOK LOAD	daN	: IN STRING	
AVAILABLE WOB	daN	: TOTAL	433

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG DOWN	12	TRIP		HANDLE TOOLS	
NIPPLEUP/DN				REAM RATHOLE			
RUN CASING				CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	CLOUDY	
TEMPTERATURE	-5 c	
ROADS	GOOD	

24 SUMMARY

Load out 37 loads of rig - Blade road and tow trucks on km16 hill

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202 (403) 424-8050

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-15 REPORT NO:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: RIG DOWN AND LOAD OUT
CONTRACTOR/RIG SUPT: Precision Drlg Rig #426E Terry Gorgichuk CO SUPERVISOR: Art Schritt
DAILY COST: $ 54,215 CUM. COST: $ 24,479,424 AFE NO: E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @ SPM
TRIP RECORDS: CALCULATED HOLE FILL m³ ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES	MUD TANKS	PUMPS	
BIT NUMBER			WEIGHT (kg/m³)		No. 1 LINER (mm)	140
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	127
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m³)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C. ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		**SOLIDS CONTROL**	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILLING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D.	I.D	T.J. TYPE

MUD ADDITIVES	
COST	
JTS. D.P.: ON RACKS	433
: IN STRING	
: TOTAL	433

	D. SILT.	CENT.
U.F. (kg/m³)		
OF. (kg/m³)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

BHA LENGTH M
HOOK LOAD daN
AVAILABLE WOB daN

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG DOWN	12	TRIP		HANDLE TOOLS	
NIPPLE UP/DN				REAM RATHOLE			
RUN CASING				CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	CLOUDY	
TEMPTERATURE	-8 c	
ROADS	GOOD	

24 SUMMARY

Rig down - 1 crane 2 bed trucks and picker on location - Load out substructure - mud tanks - water tank fuel tank - mud pumps and crown section

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202 (403) 424-8050

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-14 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: RIG DOWN AND LOAD OUT
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO SUPERVISOR: Art Schritt
DAILY COST: $ 42,994 CUM. COST: $ 24,425,209 AFE NO. E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @: SPM
TRIP RECORDS: CALCULATED HOLE FILL m^3 ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW). MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES	MUD TANKS	PUMPS	
BIT NUMBER			WEIGHT (kg/m^3)		No. 1 LINER (mm)	140
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	127
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m^3)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C. ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		**SOLIDS CONTROL**	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D.	I.D.	T.J. TYPE

MUD ADDITIVES

COST

	D. SILT	CENT.
U.F. (kg/m^3)		
O.F. (kg/m^3)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

BHA LENGTH	M	JTS. D.P. : ON RACKS	433
HOOK LOAD	daN	: IN STRING	
AVAILABLE WOB	daN	: TOTAL	433

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG DOWN	12	TRIP		HANDLE TOOLS	
NIPPLEUP/DN				REAM RATHOLE			
RUN CASING				CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	CLOUDY	
TEMPTERATURE	-13 c	
ROADS	GOOD	

24 SUMMARY

Rig down - 1 crane 2 bed trucks and picker on location - Rig down floor and lights - Move wellsite trailers to camp site
Rig down prefabs - Load out 5 rig loads - Loaded out 2 loads X-95 drill pipe to Nisku - 2 loads 59 joints 177.8mm casing
1 load 20 joints 244.5mm 69.9 kg/m casing - Load out 5 loads mud and chemicals

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202 (403) 424-8050

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-13 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: RIG DOWN WITH CRANE AND BED TRUCK
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO. SUPERVISOR: Art Schritt
DAILY COST: $ -34,000 CUM. COST: $ 24,382,215 AFE NO: E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @: SPM
TRIP RECORDS: CALCULATED HOLE FILL m^3 ACTUAL HOLE FILL: m3
BOP DRILLS: CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES	MUD TANKS	PUMPS	
BIT NUMBER			WEIGHT (kg/m^3)		No. 1 LINER (mm)	140
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	127
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m^3)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C. ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		**SOLIDS CONTROL**	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILLING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D.	I.D.	T.J. TYPE

MUD ADDITIVES		D. SILT.	CENT.
	U.F. (kg/m^3)		
	OF. (kg/m^3)		
	VOL. (l/min.)		
	HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

COST			
BHA LENGTH	M	JTS. D.P. : ON RACKS	433
HOOK LOAD	daN	: IN STRING	
AVAILABLE WOB	daN	: TOTAL	433

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG DOWN	12	TRIP		HANDLE TOOLS	
NIPPLEUP/DN				REAM RATHOLE			
RUN CASING				CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP		
EVALUATION		
PROBLEMS		
TOTAL		7
WEATHER	LIGHT SNOW	
TEMPTERATURE	- 10 c	
ROADS	GOOD	

24 SUMMARY

Rig down - 1 crane 1 bed truck on location - Rig down racking platform - Lay down derrick
Rig down prefabs - Load out 2 rig loads
Load out 3 loads mud and chemicals - Installed plug in tubing dognut

SIGNED BY: ART SCHRITT MOBILE NO: (403)210-1202 (403) 424-8050

RANGER OIL LIMITED

WELL: Ranger Fort Liard P-66-A DATE: 98-03-12 REPORT NO.:
DEPTH: 3500 m PROGRESS: 0 m FORMATION: NAHANNI
OPERATIONS AT 06:00 HOURS: RIG DOWN
CONTRACTOR/RIG SUPT.: Precision Drlg Rig #426E Terry Gorgichuk CO. SUPERVISOR: Art Schritt
DAILY COST: $ 80,660 CUM. COST: $ 24,916,200 AFE NO: E8D 011 - E6D 015

WELL CONTROL

DAILY RIG CHECK: DAILY BOP CHECK: R.S.S.P.: kPa @: SPM
TRIP RECORDS: CALCULATED HOLE FILL m³ ACTUAL HOLE FILL m3
BOP DRILLS CONDUCTED WHILE WELL SECURED IN MIN.
CONDUCTED AT HRS. CREW PERFORMANCE
DAYS SINCE BOP DRILL (EACH CREW): MAXIMUM CASING HOLD BACK kPa

DRILLING PARAMETERS

BIT PERFORMANCE			MUD PROPERTIES	MUD TANKS	PUMPS	
BIT NUMBER			WEIGHT (kg/m³)		No. 1 LINER (mm)	140
SIZE (mm)			VISCOSITY (s/l)		No. 1 STROKES PER MINUTE	
TYPE			pH		No. 2 LINER (mm)	127
SERIAL No.			PV (mPa S)		No. 2 STROKES PER MINUTE	
NOZZLES (mm)			YP (Pa)		VOLUME (m³)	
DEPTH IN (m)			GELS (Pa)		PRESSURE (kPa)	
METERS (m)			SAND (%)		D.P. ANNULAR VEL. (m/min.)	
HOURS			SOLIDS (%)		D.C.ANNULAR VEL.	
WOB (1000 daN)			FILTER CAKE (mm desc.)		D.C. ANNULAR VEL. (m/min.)	
R.P.M.			FLUID LOSS (cc)		**SOLIDS CONTROL**	
CONDITION			CHLORIDES		SHAKER SCREENS	
DRILING ASSEMBLY			Ca		DRYER SCREENS	

ITEM	O.D.	I.D.	T.J. TYPE

MUD ADDITIVES

	D. SILT	CENT.
U.F. (kg/m³)		
OF. (kg/m³)		
VOL. (l/min.)		
HOURS		

SURVEYS	ANGLE	DIRECTION
	m	°
	m	°
	m	°
	m	°
	m	°

COST

BHA LENGTH	M	JTS. D.P. : ON RACKS	433
HOOK LOAD	daN	: IN STRING	
AVAILABLE WOB	daN	: TOTAL	433

TIME BREAKDOWN

DRILLING OPERATIONS				EVALUATION		PROBLEMS	
DRILLING		CEMENT		CORING		REPAIR	
TRIP		BOP DRILL		LOGGING		WASH TO BOTT.	
RIG SERVICE		HANDLE TOOLS		TESTING		CIRCULATE	
SURVEY		CIRCULATE		CIRC. SAMPLE		FISH	
SLIP & CUT		PRESSURE TEST		HANDLE TOOLS		TRIP	
COND. MUD		RIG DOWN	24	TRIP		HANDLE TOOLS	
NIPPLEUP/DN				REAM RATHOLE			
RUN CASING				CIRCULATE			

SUMMARY	TODAY	CUM.
DRILL OP	24	7735.75
EVALUATION		239
PROBLEMS		1793.25
TOTAL	24	9768
WEATHER	SNOW	
TEMPERATURE	- 12 c	
ROADS	GOOD	

24 SUMMARY

Rig down - Finish drill string inspection - Rig up ABB Vector lubricator and attempt run plug into dog nut
Lubricator packing failed unable to run plug - Wait on lubricator repairs
Rig released 15:00 Hours 98-03-09

Rig Release

SIGNED BY ART SCHRITT MOBILE NO: (403)210-1202 (403) 424-8050

AGAT Laboratories

WATER ANALYSIS

CONTAINER IDENTIFICATION: PB 1A

LABORATORY NUMBER: WF23608A

OPERATOR NAME: RANGER OIL LIMITED

UNIQUE WELL IDENTIFIER:

WELL NAME: RANGER FORT LIARD 5-066-A/

ELEVATIONS KB m: GRD m:

FIELD OR AREA: FORT LIARD

POOL OR ZONE:

NAME OF SAMPLER:

COMPANY: CENTRAL PRODUCT

TEST TYPE:

NO:

TEST RECOVERY:

SAMPLING POINT: SEPARATOR

AMT & TYPE OF CUSHION:

MUD RESISTIVITY Ω m @ 25°C

TEST INTERVAL OR PERFS:

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³ m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 98-03-01

DATE RECEIVED (Y-M-D): 98-03-04

DATE REPORTED (Y-M-D): 98-03-09

ANALYST: LN NCO

OTHER INFORMATION:

ION	mg/L	MASS FRACTION	mmol/L
Na	22100.0	0.281	959.0
K	2560.0	0.032	65.5
Ca	5250.0	0.067	132.0
Mg	350.0	0.004	14.4
Ba	N.A.	N.A.	N.A.
Sr	N.A.	N.A.	N.A.
Fe	1.0	TRC*	TRC+

ION	mg/L	MASS FRACTION	mmol/L
Cl	47500.0	0.603	1340.0
Br	N.A.	N.A.	N.A.
I	N.A.	N.A.	N.A.
HCO_3	610.0	0.008	10.0
SO_4	226.0	0.003	2.3
CO_3	NIL	NIL	NIL
OH	NIL	NIL	NIL
H_2S	145.0	0.002	4.3

DISSOLVED TOTAL SOLIDS mg/L

EVAPORATED AT 110° C:

EVAPORATED AT 180° C:

AT IGNITION:

CALCULATED: 78800.0

RELATIVE DENSITY: 1.049 @ 25°C

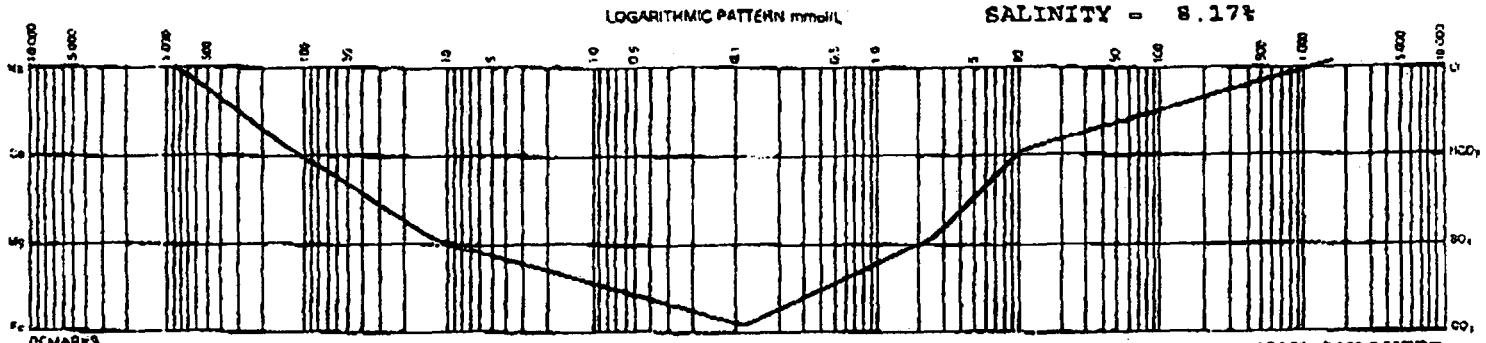
REFRACTIVE INDEX: N.A. @ 25°C

OBSERVED pH: 6.48 @ 25°C

RESISTIVITY OHM m: 0.10 @ 25°C

LOGARITHMIC PATTERN mmol/L

SALINITY = 8.17%



REMARKS

TRC+= LESS THAN 0.1 N.D.= NOT DETECTED NIL= 0.0 TRC*= LESS THAN 0.001 N.A.= NOT ANALYZED

AGAT Laboratories

GAS ANALYSIS

CONTAINER IDENTIFICATION: AGAT 19267

LABORATORY NUMBER: GP23608A

OPERATOR NAME: RANGER OIL LIMITED

UNIQUE WELL IDENTIFIER:

WELL NAME: RANGER FORT LIARD p-066-A/

ELEVATIONS KB m: GRD m:

FIELD OR AREA: FORT LIARD

POOL OR ZONE:

NAME OF SAMPLER:

COMPANY: CENTRAL PRODUCT

TEST TYPE: NO:

TEST RECOVERY:

TEST INTERVAL OR PERFS:

SAMPLING POINT: METER RUN

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa				2620	2620	760
TEMPERATURE °C				45	45	21

DATE SAMPLED (Y-M-D): 98-03-01

DATE RECEIVED (Y-M-D): 98-03-04

DATE REPORTED (Y-M-D): 98-03-09

ANALYST: LQ NCO

OTHER INFORMATION:

COMP	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	PETROLEUM LIQUID CONTENT mL · m⁻³
H_2	0.0002	0.0003	
He	0.0011	0.0013	
N_2	0.0490	0.0581	
CO_2	0.1492	0.0000	
H_2S	0.0080	0.0000	
C_1	0.7925	0.9403	
C_2	0.0000	0.0000	
C_3	0.0000	0.0000	0.0
iC_4	0.0000	0.0000	0.0
nC_4	0.0000	0.0000	0.0
iC_5	0.0000	0.0000	0.0
nC_5	0.0000	0.0000	0.0
C_6	0.0000	0.0000	0.0
C_7 +	0.0000	0.0000	0.0
C_8			
C_9			
C_{10}+			
TOTAL	1.0000	1.0000	0.0

GROSS HEATING VALUE MJ·m⁻³ 15° C AND 101.325 kPa

MOISTURE AND ACID GAS FREE: 35.52

AIR FREE AS RECEIVED: 30.15

VAPOUR PRESSURE PENTANES PLUS: 0.0 kPa

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED		MOISTURE AND ACID GAS FREE	
MEASURED	CALCULATED	MEASURED	CALCULATED
	0.723		0.577

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED		ACID GAS FREE	
pPc (abs)	pTc	pPc (abs)	pTc
4989 kPa	205.6 K	4528 kPa	186.5 K

RELATIVE MOLECULAR MASS

TOTAL GAS	C_{7+}
20.9	0.0

H_2S g/m³: 11.43

REMARKS:

EXCEED NORMAL LIMITS : CO2
FIELD H2S = 0.70%/LAB = 0.80%

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-10
Purpose of Job:	Completion	Report #:	19
Report From:	W. Casler	Report To:	Leroy Brown

Current Operation: Shut in well/Rig out rig

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil
Road/Lease:	Fair	Total Hauled to Lease:	Nil	
Weather:	Clear - 12 °C	Total Hauled from Lease:	264.89	
Contact Phone:	403-232-5340	Total in Tanks:	81.49	
Zone:	Halfway	Initial Well Fluid:	Water/Standrill	
Perforations:	As below	Total Load Fluids:	399.13	
SITP	N/A KPa @ 2400	Non-recov. Ann. Fluids:	94.70	
SICP	N/A KPa @ 2400	Recovery Last 24 hrs.	Nil	
Rig Hr:	24.0 Cum Rig Hrs.: 456.0	Recovery to Date:	402.34	
		Load to Recover (+New)	+ 287.92	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
PERFS	Daily cost sheet	
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
[illegible]		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$30,450
Previous Costs:		$969,704
Cummulative Costs:		$1,000,153
AFE Estimate:		$1,854,400

TIME	OPERATION
	Tear out the rig. We hauled out 30.0 m^3 of produced water to the CNRL Roger Disposal in Fort Nelson. There will be trucks comming tonight to load mud.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-09
Purpose of Job:	Completion	Report #:	18
Report From:	W. Casler	Report To:	Leroy Brown
Current Operation:	Shut in well/Rig out rig		

Contractor:	Precision Drilling		Fluid Vol. m3	Water	Oil
Road/Lease:	Fair		Total Hauled to Lease:	Nil	
Weather:	Clear - 20 °C		Total Hauled from Lease:	234.89	
Contact Phone:	403-232-5340		Total in Tanks:	111.49	
Zone:	Nahanni		Initial Well Fluid:	Water/Standrill	
Perforations:	As below		Total Load Fluids:	209.12	
SITP	N/A KPa @ 2400		Non-recov. Ann. Fluids:	94.70	
SICP	0 KPa @ 2200		Recovery Last 24 hrs.	Nil	
Rig Hrs:	24.0	Cum Rig Hrs.: 432.0	Recovery to Date:	402.34	
			Load to Recover (+New)	+ 287.92	

AFE #: E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$47,727
Previous Costs:		$921,977
Cummulative Costs:		$969,704
AFE Estimate:		$1,054,400

TIME	OPERATION
0000	The well is shut in. Wait on a service man from ABB Vetco Gray.
1200	Harvey Tallman with ABB Vetco Gray arrived on location. We discussed the events leading up to shutting in the wellhead.
1230	Open the upper master valve. Open the wing valve to the separator and open the crown valve. Install the bleed valve in the lower master valve body. We could not bleed off the valve body. Install the bleed valve in the upper master valve body. We opened the bleed valve and bled off the valve body. There is very little grease in the valve. Greased and serviced the upper master valve, 2-wing valves, 2-casing valves, 2-annulas valves and the crown valve. Installed the bleed valve in the lower master valve. Injected the valve body with grease. We can now bleed off the body on the lower master valve. We removed the wing valve that was tied into the dead weight and installed a companion flange on the block. We examined the valve body and we have some indication of corrosion. The valve will be services tomorrow in Fort St. John and then we will have a better idea on corrosion and wear.
1600	Received orders to tear out and move the rig to a rack site in Fort Nelson.
	Tear out the safety equipment and test unit.
	Start to tear out the rig.

RANGER OIL LIMITED

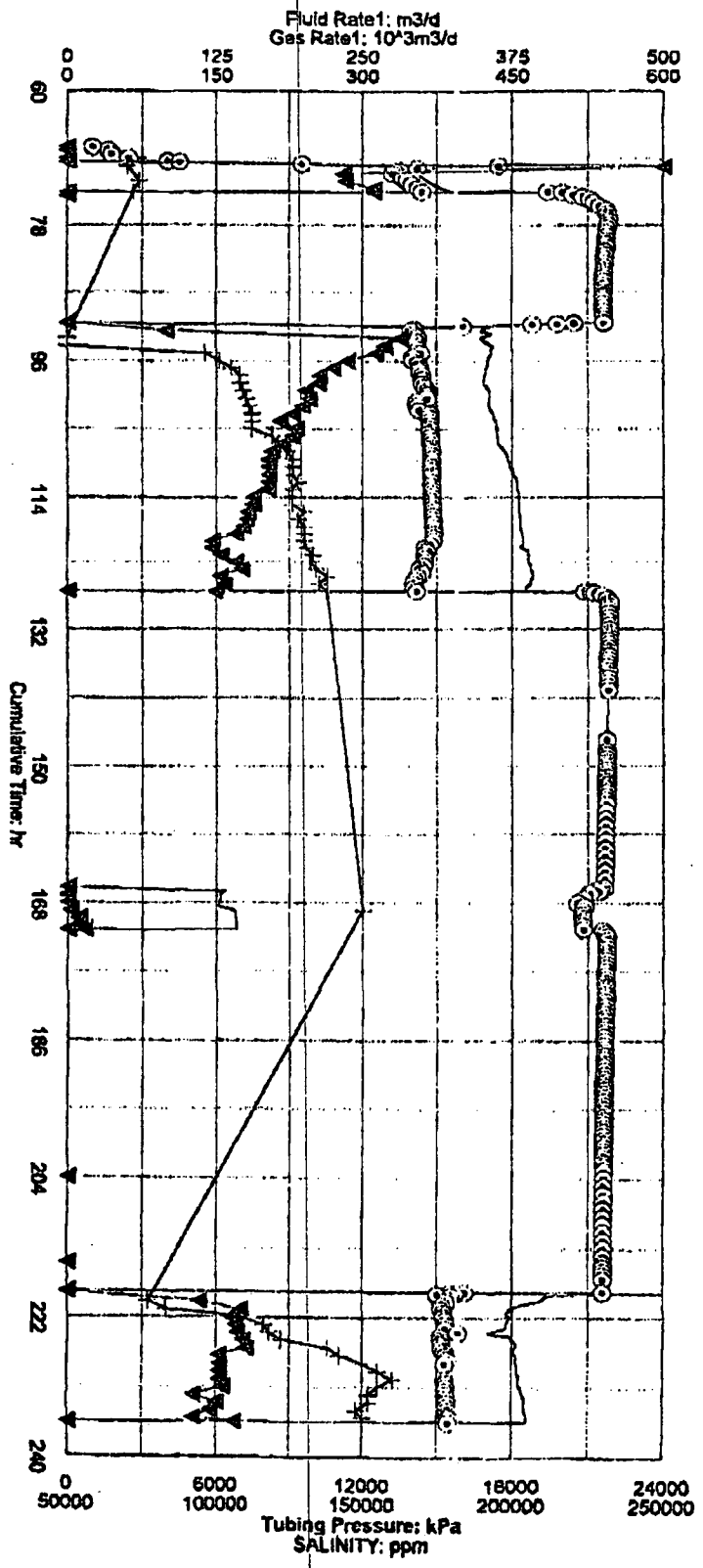
WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A		Date: 98-03-07
Purpose of Job:	Completion		Report #: 16
Report From:	W. Casler	Report To: Leroy Brown	
Current Operation;	Flow well on clean up		
Contractor:	Precision Drilling		
Road/Lease:	Fair		
Weather:	Clear - 28 °C		
Contact Phone:	403-232-5340		
Zone:	Nahanni		
Perforations:	As below		
SITP	21825 KPa @ 2400		
SICP	0 KPa @ 2200		
Rig Hr:	24.0	Cum Rig Hrs.: 384.0	
AFE #	EBD-011	KB Elevation: 459.69 m	
		KB. to CF: 10.35 m	
		KB. to THF: 8.60 m	

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	Nil	
Total Hauled from Lease:	234.89	
Total In Tanks:	16.43	
Initial Well Fluid:	Water/Standrill	
Total Load Fluids:	208.12	
Non-recov. Ann. Fluids:	94.70	
Recovery Last 24 hrs.	47.41	
Recovery to Date:	359.19	
Load to Recover (+New)	+ 244.77	

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3278.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3246.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3158.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$40,126
Previous Costs:		$859,539
Cummulative Costs:		$899,665
AFE Estimate:		$1,864,400

TIME	OPERATION
0000	Record build up pressures and prepare to Perforate.
0930	Hold a Safety meeting.
0950	Pick up the lubricator and perforating guns. Check the Wireline BOP'S.
1015	Pump up the grease injector and equalize the lubricator.
1030	Start to run in the hole with the perforating gun.
1120	We got in the hole with the perforating gun to 515.0 m KB and we got a leak in a union on the lubricator. Pull out of the hole with the perforating guns.
1150	Close the upper master valve an bleed off the lubricator. Close the crown valve and repair the lubricator.
1235	Install the lubricator. Pump up the grease injector an equalize the lubricator.
1250	Run in the hole with a 43.0 mm spiral gun carrier c/w 20 SPM, 9 gram charges, 60° phasing.
1515	Phoned Leroy Brown and discussed problems with the gun swelling after perforating.
1530	Pull out of the hole with the perforating gun. We lost our grease seal twice on the way out of the hole.
2100	The perforating gun is at surface. Close the upper master valve and bleed off the lubricator. Rig out the Wireline BOP'S. Install the wellhead flange cap on top of the crown valve and pressure test same with the wellhead pressure.
2239	Check the wellhead for pressure. The tubing pressure is 21580 kPa.
2240	Open the well to flow. Slowly increase the choke to 15.08 mm (38/64).
2244	The choke is set at 15.08 mm.
2258	Fluid to surface.
	Flowing the well through the Central Production Testing separator.



Ranger Fort Liard P-68-A

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1	gainWat1	gainCum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
420	1998/03/08	08:00:00	15300	86	4400	15.08	2255	130.0	53	88.900	453.685	964.658	55.55	100.0	0.00	5.30	0.000	364.49	127.16			150000	6.0
421		08:15:00	Obstruction in deadweight line. Trying to locate problem.																				
422		08:30:00		87			2275	130.0	54		454.888	974.123											
423		09:00:00		87	5000	15.08	2275	130.0	55		454.089	983.591	60.85	100.0	0.00	5.30	0.000	369.79	127.20			155000	6.0
424		09:30:00		88			2300	130.0	55		456.577	993.077											
425		09:50:00	Unaible to clear deadwight line. Change pressure source to needle valve upstream of choke.																				
426		10:00:00	15300	89	5800	15.08	2300	130.0	56		455.777	1002.581	66.15	100.0	0.00	5.30	0.000	375.09	127.20			160000	6.0
427		10:30:00	15320	90			2320	130.0	58		456.162	1012.080											
428		11:00:00	15350	91	6250	15.08	2320	131.0	58		457.920	1021.602	71.56	100.0	0.00	5.41	0.000	380.50	129.84			155000	6.0
429		11:15:00	Bleed casing to 2000 kPa.																				
430		11:30:00	15320	91			2320	132.0	58		459.672	1031.160											
431		12:00:00	15360	91	2450	15.08	2340	132.0	59		460.849	1040.749	75.93	100.0	0.00	4.37	0.000	384.87	104.88			152000	6.0
432		12:30:00	15410	92			2360	132.0	59		462.814	1050.370											
433		13:00:00	15390	92	2750	15.08	2330	133.0	59	88.900	461.609	1060.000	81.13	100.0	0.00	5.20	0.000	390.07	124.80			152000	6.0
434		13:30:00	15390	93			2330	133.0	59		461.609	1069.617											
435		14:00:00	15440	93	3350	15.08	2345	133.0	60		462.292	1079.241	86.12	100.0	0.00	4.99	0.000	395.06	119.76			146000	6.0
436		14:30:00	15410	93			2360	133.0	60		463.768	1088.887											
437		15:00:00	15440	93	3600	15.08	2360	133.0	60		463.768	1098.549	90.49	100.0	0.00	4.37	0.000	399.43	104.88			150000	6.0
438		15:30:00	15440	93			2360	133.0	60		463.768	1108.211	93.40	100.0	0.00	2.91	0.000	402.34	139.68			150000	6.0
439		15:35:00	Close upper master toservice wellhead (Wait on valve tech.). Blow down separator and lines to tank. < 30 m/s Flow.																				
440		15:35:00	15440	93	3600	0.00	0	0.0	60	88.900	0.000	1108.211	93.40	0.0	0.00	0.00	0.000	402.34	0.00				
441		15:35:00	Water recovered sinceopening well @ 22:40 hrs. 98/03/08 = 90.56 M3 (17 hours)																				
442		18:00:00	Close lowwer master ulve once wellhead was cooled down.																				
443		19:00:00	Transfer fluid from production tanks to storage tanks.																				
444	1998/03/09	06:59:59	Monitor equipment fornight.Do not adjust any valve on wellhead til valve technician arrives and services valves.																				
445			Daily production (24 Hs. : Only 8.5 Hrs. of flow) : Gas = 162.456 E3M3 ; Water = 43.15 M3 ; Condensate = 000.00 M3																				
446			Cumulative productionfor flow of 177.25 Hrs. (Report of 251.0 Hrs.) : Gas = 1108.211 E3M3 ; Water = 402.34 M3 ; Condensate = 000.00 M3																				
447			Water sample at 1500 hrs. of March 8th 1998 = Salinity = 150000 ppm w/ Ph of 6.0																				
448			No Gas samples taken in past 24 hours.																				
449		07:00:00																					

73%

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A		Date: 98-03-08
Purpose of Job:	Completion		Report #: 17
Report From:	W. Casler	Report To: Leroy Brown	Daily Cost Summary

Current Operation: Well shut in/wait on Vetco Gray

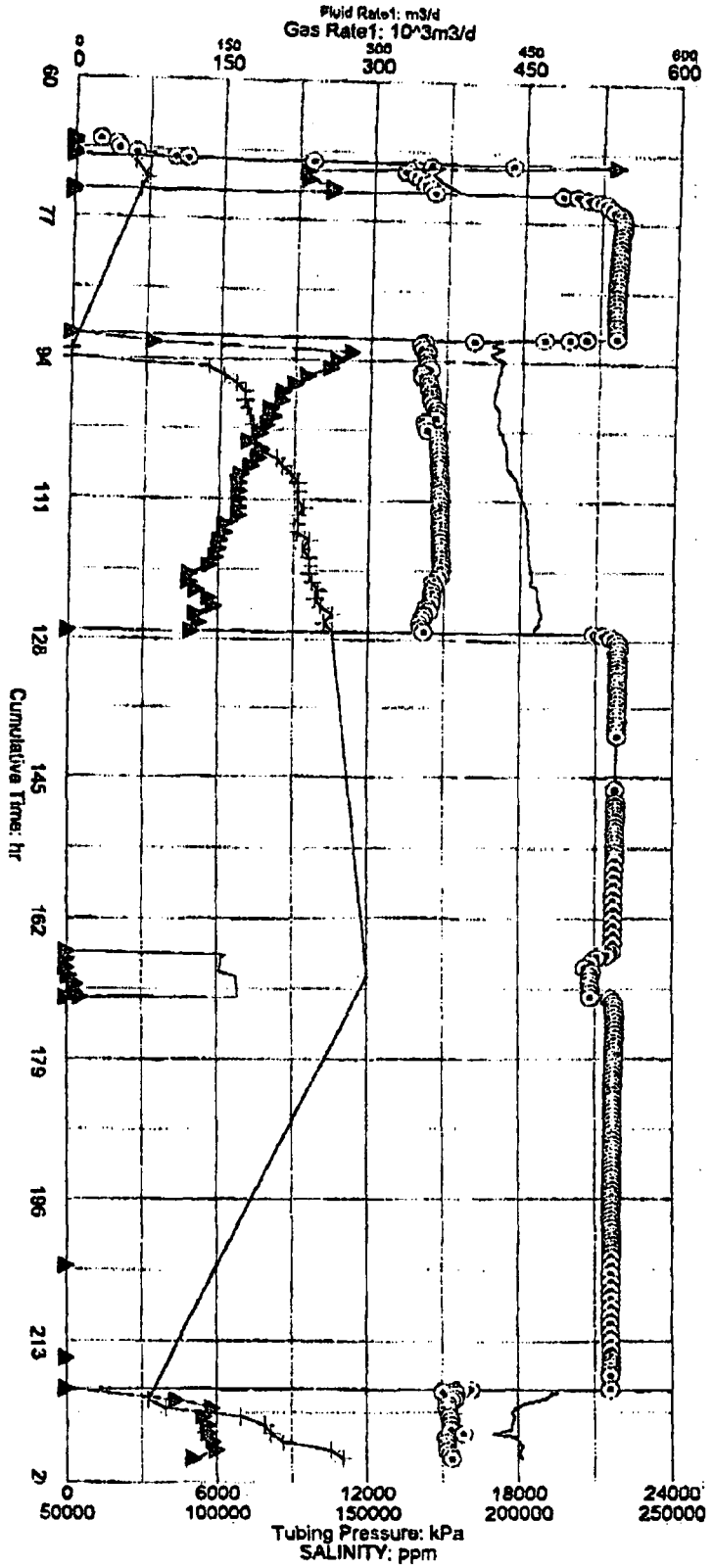
Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Fair	Total Hauled to Lease:	Nil		
Weather:	Clear - 21 °C	Total Hauled from Lease:	234.89		
Contact Phone:	403-232-5340	Total in Tanks:	16.43		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	209.12		
SITP N/A	KPa @ 2400	Non-recov. Ann. Fluids:	94.70		
SICP 0	KPa @ 2200	Recovery Last 24 hrs.	43.15		
Rig Hr: 24.0	Cum Rig Hrs.: 408.0	Recovery to Date:	402.34		
		Load to Recover (+New)	+ 287.92		

Codo	Item	Amount
PERFS	Daily cost sheet	
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$22,312
Previous Costs:		$899,665
Cumulative Costs:		$921,977
AFE Estimate:		$1,054,400

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 3.50 m

TIME	OPERATION
0000	Flowing the well on clean-up.
0400	The flowing tubing pressure is 15835 kPa. Rock the choke to free up a blockage in same.
0430	The flowing tubing pressure is at 15140 kPa.
0815	We have an obstruction in the dead weight line. Trying to locate the problem.
0950	We are unable to clear the dead weight line. Change the pressure source to the needle valve upstream of the choke.
1115	The casing pressure is up to 6250 kPa. Bleed the casing pressure down to 2000 kPa.
1300	We noticed that the wing valve going to the dead weight would not close. We checked the bottom master valve and we could not turn the valve at all. Checked the upper master valve and we could turn the valve two turns. We did not try to turn the valve any more as we were flowing the well. We did not try to close the wing valve to the separator.
1330	Phoned ABB Vetco Gray and talked to them about the state of the wellhead valves.
1345	Phoned Leroy Brown and informed him of the situation in regards to the wellhead.
1530	The flowing tubing pressure is 15440 kPa with a flow rate of 463.768 $10^3/m^3/d$.
1535	Close in the choke on the separator. Close the top master valve and close the wing valve going to the separator. The wellhead is shut in.
1745	Close the lower master valve. We still cant close the wing valve going to the dead weight. Wait on a service man from ABB Vetco Gray.



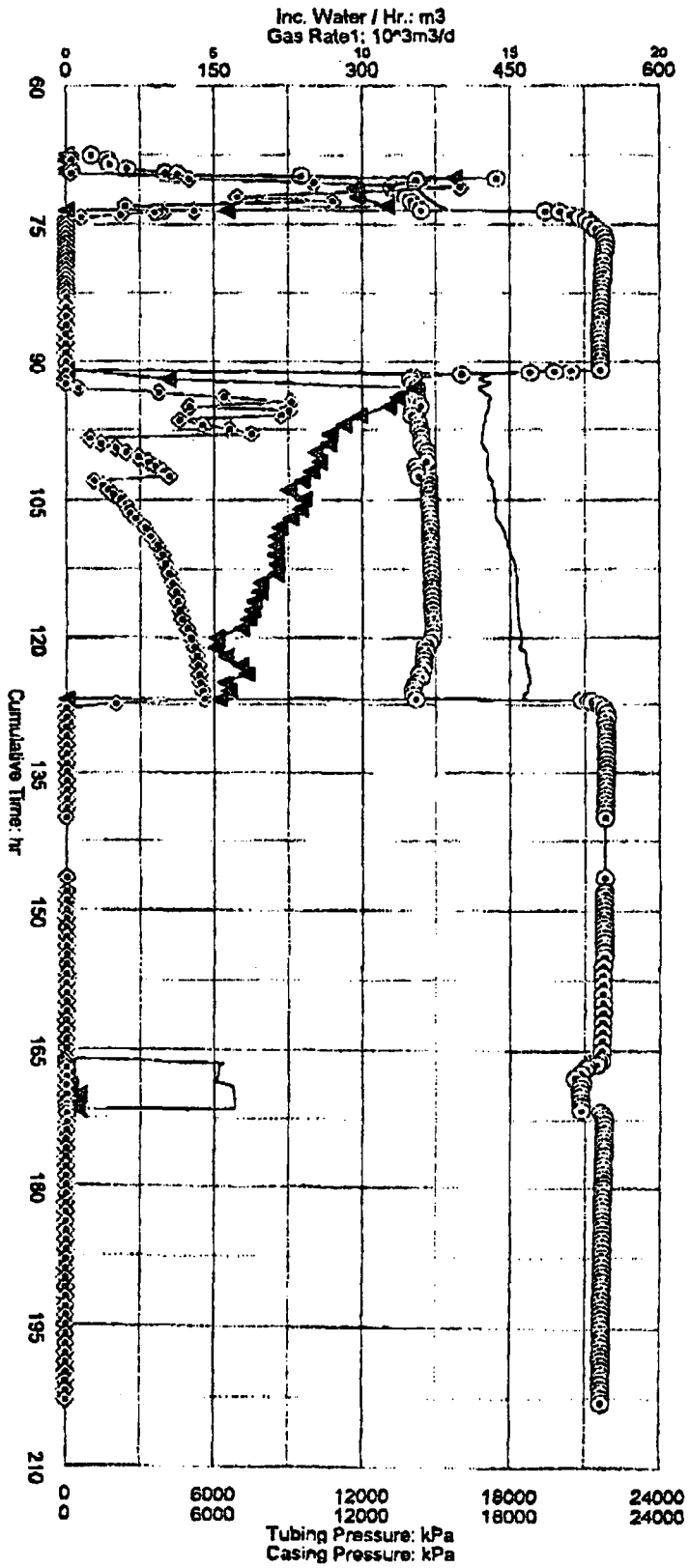
Ranger Fort Liard P-66-A

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 86 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
368	1998/03/07	08:00:0	21605		0		0	0.0	0	88.900	0.000	786.689	2.84		0.00	0.00	0.000	311.78	0.00				
369		09:00:0	21600		0																		
370		10:00:0	21595		0																		
371		11:00:0	21595		0																		
372		12:00:0	21595		0																		
373		13:00:0	21595		0																		
374		14:00:0	21590		0																		
375		15:00:0	21590		0																		
376		16:00:0	21585		0																		
377		17:00:0	21585		0																		
378		18:00:0	21585		0																		
379		19:00:0	21585		0								2.84		0.00	0.00	0.000	311.78	0.00				
380		19:30:0	21585		0																		
381		20:00:0	21585		0																		
382		20:30:0	21580		0																		
383		21:00:0	21580		0																		
384		Wireline at surface.Bleed off wireline and rig them off the well.																					
385		Install wellhead flange cap and pressure test to sut in pressure.																					
386		Pressure up to choke and prepare to flow well.																					
387		22:39:5	21580		0	0.00	0	0.0	0	88.900	0.000	786.689	2.84	0.0	0.00	0.00	0.000	311.78	0.00				
388		22:40:0	Open well to flow.Slowly increase choke to 15.08mm (38/64).																				
389		22:44:0	Choke set at 15.08mm (38/64).																				
390		22:45:0	16120		0	15.08	3225	147.0	-5	88.900	659.109	788.965											
391		22:50:0	15740				2990	134.0	-2		598.809	791.169											
392		22:55:0	15500				3000	136.0	3		596.676	793.244											
393		22:58:0	Fluid to surface.																				
394		23:00:0	15010	43	0	15.08	2480	120.0	16		491.687	795.134											
395		23:15:0	15550	44	0		2525	114.0	19		481.586	800.203											



Ranger Fort Liard P - 66 - A

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vl1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H20	C	mm	10^3m3/d	10^3m3	m	%	m3	m3	m3	m3	m3/d	%	%	ppm	
343	1998/03/06	21:30:00	21630							88.900													
344		22:00:00	21630		0																		
345		22:30:00	21625																				
346		23:00:00	21625		0																		
347		23:30:00	21625																				
348		23:59:59	21625		0																		
349	1998/03/07	00:30:00	21625																				
350		01:00:00	21625		0																		
351		01:30:00	21620																				
352		02:00:00	21615		0																		
353		02:30:00	21615																				
354		03:00:00	21610		0																		
355		03:15:00	Wireline on location with perforating guns.																				
356		03:30:00	21610																				
357		04:00:00	21610		0																		
358		04:30:00	21610																				
359		05:00:00	21610		0																		
360		05:30:00	21610																				
361		06:00:00	21615		0																		
362		06:30:00	21615																				
363		06:59:59	21615		0																		
364			Daily Productoin (24 Hrs): Gas = 000.000 E3M3 , Water = 000.00 M3 , Condesate = 000.00 M3																				
365			Cumulative Production of 160.5 Hrs. of flow (203 Hr. Report): Gas = 786.689 E3M3 , Water = 311.78 M3 , Condensate = 000.00 M3																				
366			No samples taken in past 24 Hrs. Note: Adjusted previous cuml. water shippeoff location after re-gauging tanks.																				
367	1998/03/07	07:00:00	Fluid on location = 16.43 M3 , Fluid hauled off location past 24 Hrs.= 86.95 M3 ,Cumulative fluid hauled off location (203 Hrs.) = 246.68 M3.																				

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 68 - A
Formation: NAHANNI

FieldNotes

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
396	1998/03/07	23:30:00	15500	47	0		2510	114.0	17	88.900	481.143	805.217											
397		23:45:00	15500	48	0		2525	113.0	18		479.463	810.220											
398	1998/03/07	23:59:59	15370	51	0	15.08	2470	112.0	18	88.900	471.924	815.170	8.98	100.0	0.00	6.14	0.000	317.92	110.52			77000	6.0
399	1998/03/08	00:30:00	15190	55	0		2375	110.0	21		455.422	824.835											
400		01:00:00	15175	58	0	15.08	2350	108.0	23	88.900	446.946	834.235	15.06	100.0	0.00	6.08	0.000	324.00	145.86			83000	6.0
401		01:30:00	15240	62	0		2360	108.0	28		443.373	843.509											
402		02:00:00	15260	65	0	15.08	2400	109.0	31	88.900	446.574	852.779	20.78	100.0	0.00	5.72	0.000	329.72	137.28			108000	6.0
403		02:30:00	15320	66	0		2400	109.5	34		444.962	862.066											
404		03:00:00	15330	68	0	15.08	2400	109.5	36	88.900	443.234	871.318	26.66	100.0	0.00	5.88	0.000	335.60	141.12			116000	6.0
405		03:30:00	15330	70	25		2400	110.0	37		443.392	880.554											
406		04:00:00	15835	72	200	15.08	2320	105.0	38	88.900	424.976	889.599	32.58	100.0	0.00	5.92	0.000	341.52	142.08			118000	6.0
407		04:01:00	Rock choke to free up blockage.																				
408		04:30:00	15140	76	550		2470	113.0	46		448.328	898.696											
409		05:00:00	15160	77	1000	15.08	2480	114.0	47	88.900	450.402	908.058	38.71	100.0	0.00	6.13	0.000	347.65	147.12			122000	6.0
410		05:30:00	15170	79	1500		2510	115.0	48		454.303	917.482											
411		06:00:00	15190	81	2400	15.08	2495	115.0	49	88.900	452.099	926.924	44.96	100.0	0.00	6.25	0.000	353.90	150.00	1.6	18.0	138000	6.0
412		06:30:00	15300	82	3100		2510	115.0	52		451.006	936.331											
413		06:59:59	15370	85	3500	15.08	2260	130.0	53	88.900	454.187	945.755	50.25	100.0	0.00	5.29	0.000	359.19	127.00			142000	6.0

414 Daily Production (24 Hrs.) : Gas = 159.066 E3M3 ; Water = 47.41 M3 ; Condensate = 000.00 M3
415 Cumulative Production of 166.75 Hrs of flow (227 Hr.Report) : Gas = 945.755 E3M3 ; Water = 359.19 M3 ; Condesate = 000.00 M3
416 Water Sample : Salinity = 142000 ppm w/ Ph of 6.0
417 Gas Sample @ 0600 Hrs. : H2S = 1.6% or 16000 ppm ; CO2 = 18.0% or 180000 ppm
418 Fluid on location = 63.85 M3 ; Fluid hauled off location past 24 Hrs. = 000.00 M3 ; Cumulative fluid hauled off location (227 Hrs.) = 246.68 M3

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-06
Purpose of Job:	Completion	Report #:	15
Report From:	W. Casler	Report To:	Leroy Brown
Current Operation:	Perforate/Production Logging		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil
Road/Lease:	Fair	Total Hauled to Lease:	Nil	
Weather:	Clear - 28 °C	Total Hauled from Lease:	246.68	
Contact Phone:	403-232-5340	Total in Tanks:	16.43	
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill	
Perforations:	As below	Total Load Fluids:	209.12	
SITP 21625	KPa @ 2400	Non-recov. Ann. Fluids:	94.70	
SICP 0	KPa @ 2200	Recovery Last 24 hrs.	Nil	
Rig Hr: 24.0	Cum Rig Hrs.: 360.0	Recovery to Date:	311.78	
		Load to Recover (+New)	+ 197.36	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
3285.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$30,284
Previous Costs:		$829,255
Cummulative Costs:		$859,539
AFE Estimate:		$1,854,400

TIME	OPERATION
0000	Start pass number 7 (log down)
0025	Pass number 7 is completed. Pull back up to 3110.0 m KB.
0045	Start pass number 8 (log down)
0110	Pass number 8 is completed. Pull out of the hole with the logging tools.
0340	The logging tools are at surface. Bleed off the lubricator and night cap the Wlerline BOP'S.
0400	Record build up pressures.
1400	Recieved orders to Perforate and Production log.
	Record build up pressures. Wait on Perforating equipment.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-05
Purpose of Job:	Completion	Report #:	14
Report From:	W. Casler	Report To:	Leroy Brown
Current Operation:	Production Logging		

Contractor:	Precision Drilling		
Road/Lease:	Good		
Weather:	Clear - 16 °C		
Contact Phone:	403-232-5340		
Zone:	Nahanni		
Perforations:	As below		
SITP	21680 KPa @ 2400		
SICP	0 KPa @ 2200		
Rig Hr:	24.0	Cum Rig Hrs.:	336.0

Fluid Vol. m3	Water	Oil
Total Hauled to Lease:	Nil	
Total Hauled from Lease:	152.00	
Total in Tanks:	10.00	
Initial Well Fluid:	Water/Standrill	
Total Load Fluids:	209.12	
Non-recov. Ann. Fluids:	94.70	
Recovery Last 24 hrs.	1.18	
Recovery to Date:	311.78	
Load to Recover (+New)	+ 197.36	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
	3296.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	
Daily Costs:		$29,582
Previous Costs:		$799,673
Cummulative Costs:		$829,255
AFE Estimate:		$1,854,400

TIME	OPERATION
0000	Wait on a grease injector.
1300	Unload the grease injector and rig up same.
1415	Pick up and install the lubricator. Pump up the grease head. Equalize the lubricator. There is 21680 kPa on the tubing.
1500	Run in the hole with a Flow Meter, Temperature, Pressure, Fluid Density, GR/CCL log.
1720	Start to log down on our first static pass from 3050.0 m - 3325.0 m KB.
1800	Open the well through the separator and stabilize the flow rate.
2115	Start pass number 2 (log up) The flow meter and fluid density tool is not working.
2150	Start pass number 3 (log down) The fluid density tool started to work part way through the logging pass.
2220	Start pass number 4 (log up)
2245	Start pass number 5 (log down)
2315	Start pass number 6 (log up)
2340	Shut in the well.

Ranger Fort Liard P.-66-A

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pr	Tbg Ter	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate	Cum Gas	Fld Vol1	BSW1	Oil1 gal	Wat1 gal	Cum Oil	Cum Wa	Wat Rate	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
259	1998/03/05	07:30:00	Clear obstruction in deadweight line.																				
260		08:00:00	21705		0					88.900													
261		09:00:00	21700		0																		
262		10:00:00	21700		0																		
263		11:00:00	21695		0																		
264		12:00:00	21690		0																		
265		13:00:00	21690		0																		
266		14:00:00	21685		0																		
267		14:55:00	Wireline begin running in hole for flowing gradient.																				
268		15:00:00	21680		0																		
269		16:00:00	21670		0																		
270		17:00:00	21660		0																		
271		18:00:00	21655		0		0	0.0	0		0.000	748.919	1.66		-260.27	0.00	0.000	310.60	0.00				
272		18:00:00	Open well through separator to flare. Wireline sitting on bottom.																				
273		18:10:00	21500			5.56																	
274		18:15:00	21330			5.95																	
275		18:20:00				6.75																	
276		18:30:00	21440	43	0	6.75	1165	28.0	28		159.099	752.234											
277		18:45:00	21080	45		6.75	1135	27.0	29		154.017	753.865											
278		19:00:00	20990	45	0	6.75	1135	27.0	29	88.900	154.017	755.469	1.66	0.0	0.00	0.00	0.000	310.60	0.00				
279		19:30:00	20825	45		6.75	1135	27.0	28		154.298	758.681											
280		20:00:00	20575	46	0	6.75	1470	20.5	26	88.900	152.879	761.880	1.66	100.0	0.00	0.00	0.000	310.60	0.00				
281		20:30:00	20870	47		6.75	1400	21.0	25		151.377	765.050											
282		20:34:00	Increase choke to 7.14mm (18/64).																				
283		21:00:00	20785	49	0	7.14	1800	20.3	23	88.900	168.918	768.386	1.77	100.0	0.00	0.11	0.000	310.71	2.64			150000	5.5
284		21:30:00	20785	49			1800	20.5	24		169.624	771.913											
285		22:00:00	20780	50	0	7.14	1800	20.5	23	88.900	169.958	775.450	2.17	100.0	0.00	0.40	0.000	311.11	9.60				
286		22:30:00	20810	50			1810	20.5	23		170.429	778.996											
287		23:00:00	20810	50	0	7.14	1810	20.5	23	88.900	170.429	782.546	2.50	100.0	0.00	0.33	0.000	311.44	7.92				

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
287	1998/03/05	23:00:00	20810	50	0	7.14	1810	20.5	23	88.900	170.429	782.546	2.50	100.0	0.00	0.33	0.000	311.44	7.92				
288		23:30:00	20810	50			1810	20.5	23		170.429	786.097											
289		23:35:00	20810	50	0	7.14	1810	20.5	23	88.900	170.429	786.689	2.84	100.0	0.00	0.34	0.000	311.78	13.99				
290		23:35:00	Shut in well with wireline still logging.																				
291		23:35:01	20820		0	0.00	0	0.0	23	88.900	0.000	786.689	2.84	0.0	0.00	0.00	0.000	311.78	0.00				
292		23:40:00	21580																				
293		23:45:00	21600																				
294		23:50:00	21630																				
295	1998/03/06	00:05:00	21690		0																		
296		00:30:00	21740																				
297		01:00:00	21740		0																		
298		01:30:00	21740																				
299		02:00:00	21740		0																		
300		02:30:00	21740																				
301		03:00:00	21740		0																		
302		03:30:00	21740																				
303		04:00:00	21740		0																		
304		04:30:00	21740																				
305		05:00:00	21705		0																		
306		05:30:00	21705																				
307		06:00:00	21705		0																		
308		06:30:00	21705																				
309		06:59:59	21705		0																		
310			Gas produced past 24 Hrs.									= 37.770 E3M3											
311			Liquid (water) produced past 24 Hrs.									= 1.18 M3											
312			Cumulative gas produced past 175 Hrs.									= 786.689 E3M3											
313			Cumulative liquid (water) produced past 175 Hrs.									= 311.78 M3											
314			Water Salinity = 150000 ppm w/ Ph of 5.5 (taken during flowing log survey)																				
315		07:00:00	Water on location = 132.86 M3; Daily water shipped off location = 30.0 M3; Cuml. water shipped off location = 115.41 M3.																				

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A		Date: 98-03-04
Purpose of Job:	Completion		Report #: 13
Report From:	W. Casler	Report To: Leroy Brown	Daily Cost Summary
Current Operation:	Flow testing		

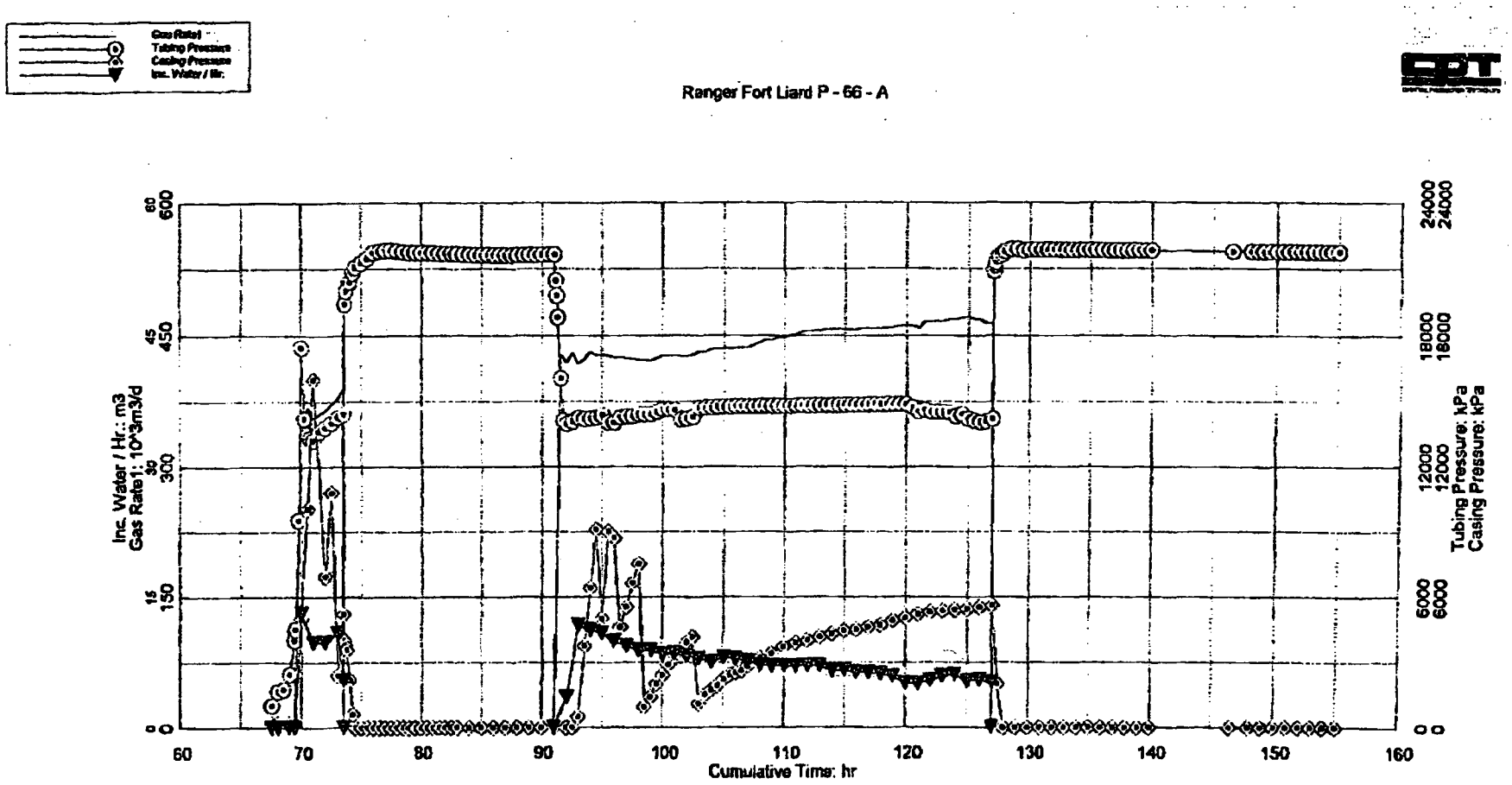
Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 21 °C	Total Hauled from Lease:	60.00		
Contact Phone:	403-232-5340	Total in Tanks:	10.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	209.12		
SITP 21740	KPa @ 2200	Non-recov. Ann. Fluids:	94.70		
SICP 0	KPa @ 2200	Recovery Last 24 hrs.	15.96		
Rig Hr: 24.0	Cum Rig Hrs: 312.0	Recovery to Date:	310.60		
		Load to Recover (+New)	+ 196.18		

Code	Item	Amount
PERFS	Daily cost sheet	
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$30,092
Previous Costs:		$768,581
Cummulative Costs:		$799,673
AFE Estimate:		$1,654,420

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.36 m
KB. to THF: 8.60 m

TIME	OPERATION
0000	Flow testing the well through the Central Production Testers Separator.
0300	Shut in the well.The final flowing pressure was 14180 kPa. The gas rate was 463.088 $10^3 M^3/D$. We have a reading of 1.25% H2S and a CO2 reading of 15.7%. We have recovered a total of 310.60 m^3 of fluid. We have recovered 196.18 m^3 of fluid over hole volume. Wait on the Computalog Production Loggers.
1600	Rig up Computalog.
1830	Hold a safety meeting.
1850	Pick up and install the lubricator.
2000	Pressure up on the grease injector. When we went to equalize the lubricator we lost our seal on the grease head. We are not getting grease to the head. Bled off the lubricator and work on the grease injector.
2200	Pump up the grease injector and equalize the lubricator. There is 21740 kPa on the tubing.
2215	Run in the hole with a Flow Meter, Temperature, Pressure, Fluid Density, GR/CCL log.
2240	We were at 347.0 m and the grease head started to leak. Packed off the grease injector, switched to the back up grease injector pump and regained our grease seal. Pulled out of the hole with the logging tools. Close in the well and bled off the lubricator.
2330	Lay down the logging tools and wait on a grease injector.


Ranger Fort Liard P - 66 - A
Gas Rate1
Tubing Pressure
Casing Pressure
Inc. Water / Hr.
Inc. Water / Hr.: m3
Gas Rate1: 10^3m3/d
Tubing Pressure: kPa
Casing Pressure: kPa
Cumulative Time: hr
0
15
30
45
60
150
300
450
600
6000
12000
18000
24000
60
70
80
90
100
110
120
130
140
150
160

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

Row	Date	Clk Tim	Tbg Pn	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate	Cum Gas	Fld Vol1	BSW1	Oil1 gai	Wat1 gai	Cum Oil	Cum Wa	Wat Rate	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
211	1998/03/04	07:30:00	21830							88.900													
212		08:00:00	21830		0																		
213		08:30:00	21830																				
214		09:00:00	21825		0																		
215		09:30:00	21825																				
216		10:00:00	21825		0																		
217		10:30:00	21825																				
218		11:00:00	21820		0																		
219		11:30:00	21820																				
220		12:00:00	21820		0																		
221		12:30:00	21810																				
222		13:00:00	21810		0																		
223		13:30:00	21800																				
224		14:00:00	21800		0																		
225		14:30:00	21800																				
226		15:00:00	21790		0																		
227		15:30:00	21790																				
228		16:00:00	21790		0																		
229		16:00:00	Close master to rig up wireline.																				
230		18:00:00	**** Shipped 60.0 M3 oilfluid off location via Energetic tank truck. ****																				
231			Wireline rigged up.Prepare to pressure test.																				
232			Pressure up lubricator.At 17.0 Mpa pack off on lubricator started toleak.Shut in well and rig down wireline to repair pack off.																				
233			Repairs completed.Rig up wireline and pressure up lubricator.																				
234		22:15:00	Wireline preparing to start running.																				
235		22:30:00	21750		0																		
236		22:45:00	Grease injector can't keep pace.Pack off started to leak.Wireline puling to surface.																				
237			Wireline at surface.Blec off and rig down wireline.																				
238			Crown valve on wellhead stiff.Inject valve with gease and put in second grease stick.																				
239		23:59:59	21740		0																		

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P-55-A
Formation: NAHANNI

FieldNotes

Row	Date	Clk Tm	Tbg Pr	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate	Cum Gas	Fld Vol1	BSW1	Oil1 gai	Wat1 gai	Cum Oil	Cum Wa	Wat Rate	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
240	1998/03/05	00:30:00	21740							88.900													
241		01:00:00	21740		0																		
242		01:30:00	21740																				
243		02:00:00	21740		0																		
244		02:30:00	21740																				
245		03:00:00	21740		0																		
246		03:30:00	21740																				
247		04:00:00	21740		0																		
248		04:30:00	21740																				
249		05:00:00	21740		0																		
250		05:30:00	21740																				
251		06:00:00	21740		0																		
252		06:30:00	21740																				
253		06:59:59	21740		0																		
254			Gas produced past 24 Hrs. = 000.000 E3m3																				
255			Liquid (water) produced past 24 Hrs.= 000.00 M3																				
256			Total gas produced past 155 Hrs.= 748.919 E3M3																				
257			Total liquid produced past 155 Hrs.= 310.60 M3																				
258			No samples taken.Well was not flowed in past 24Hrs.																				
259			Fluid on location = 158.26 M3																				

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-68-A	Date:	98-03-03
Purpose of Job:	Completion	Report #:	12
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown
Current Operation:	Flow testing		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 6 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	10.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	209.12		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	94.70		
SICP N/A	KPa @	Recovery Last 24 hrs.	163.21		
Rig Hr: 24.0	Cum Rig Hrs.: 264.0	Recovery to Date:	284.64		
		Load to Recover (+New)	+ 180.22		

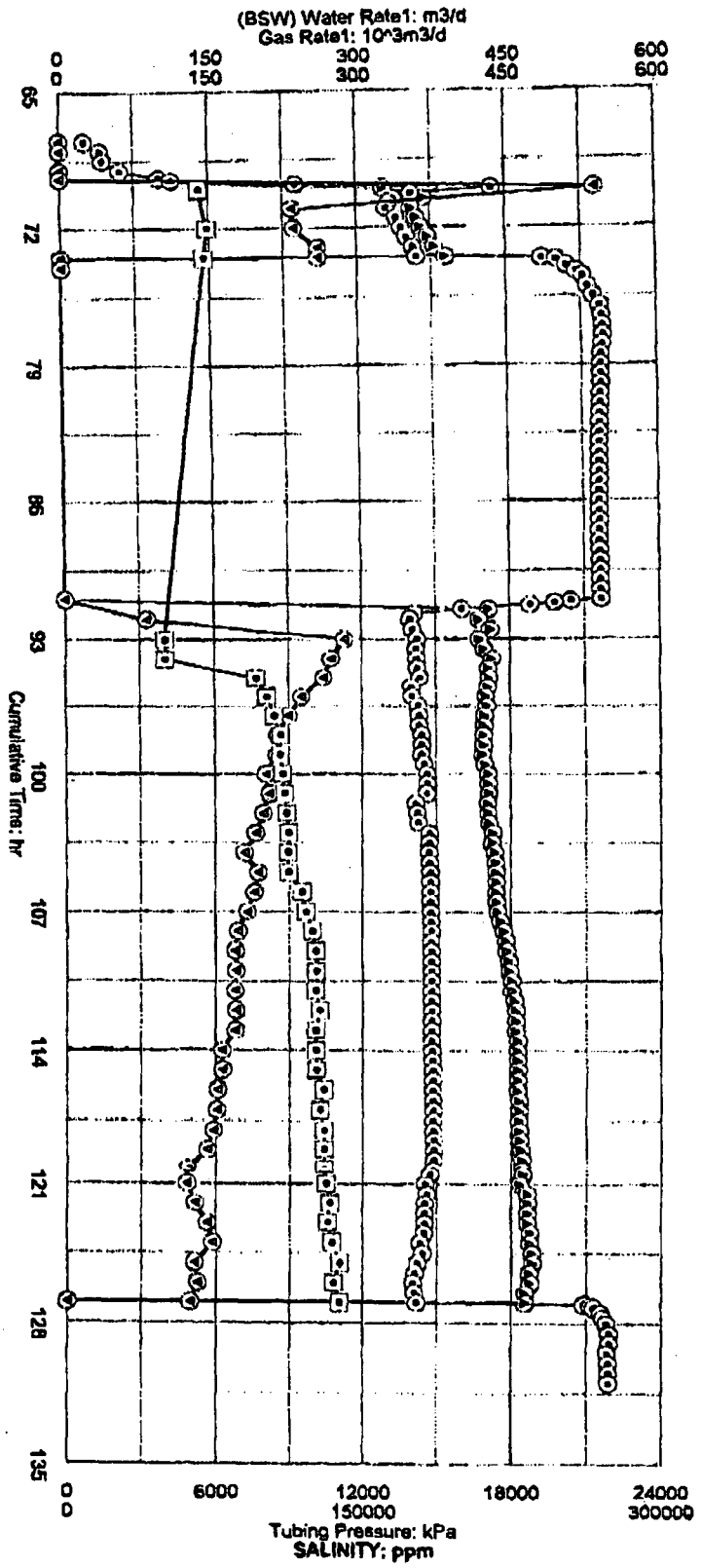
AFE # EBD-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
PERFS	Daily cost sheet	
3296.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$34,780
Previous Costs:		$734,801
Cummulative Costs:		$769,581
AFE Estimate:		$1,054,400

TIME:	OPERATION
0000	Flow testing the well through the Central Production Testers Separator.



Ranger Fort Liard P - 66 - A

Static Gradient

Ranger Fort Liard

March 02, 1998

Location P-66-a

Ranger Oil Limited: Static Gradient

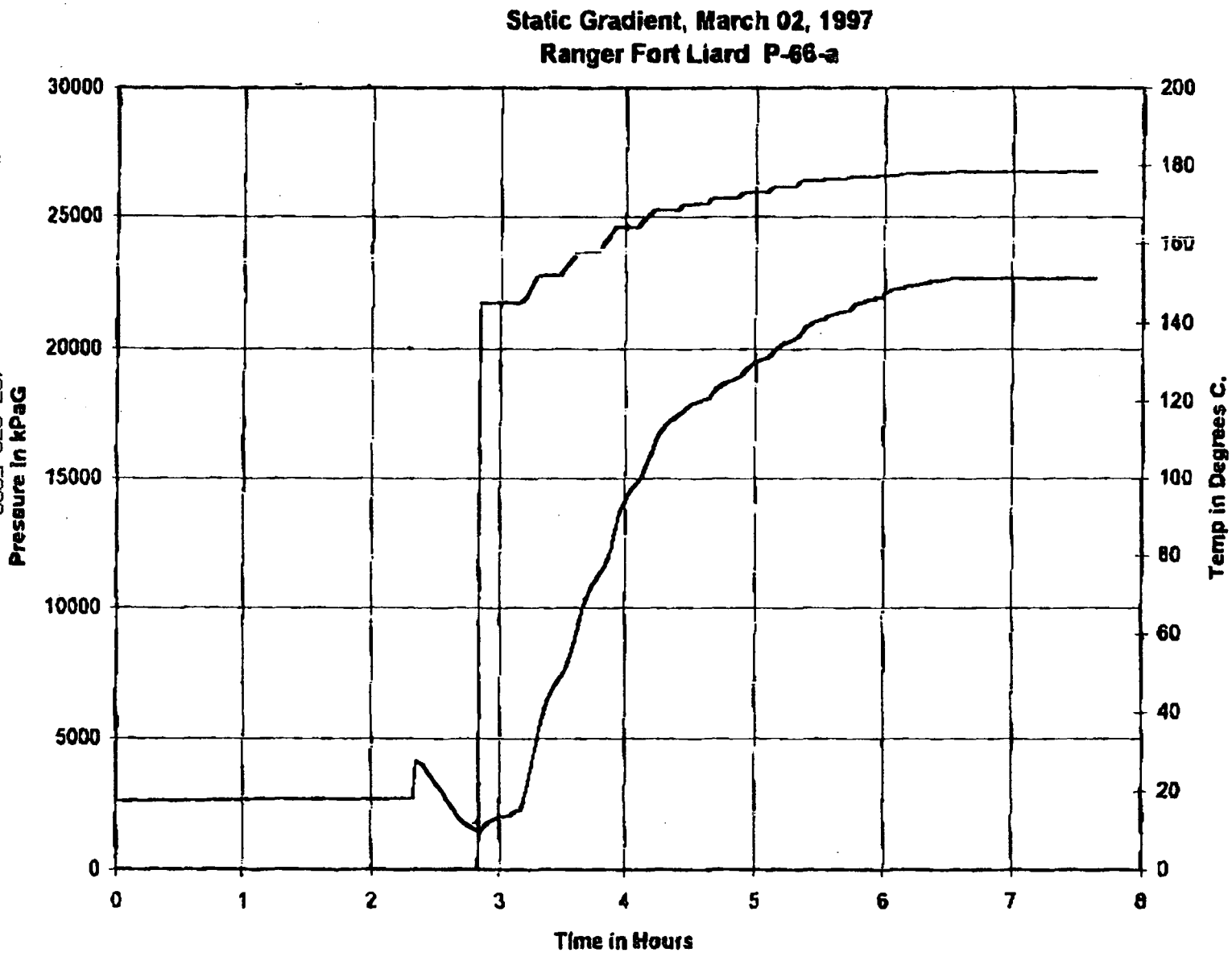
Ranger Fort Liard P-66-a

2-Mar-98

Depth MCF	Pressure in kPaG	Temp. Deg. C	Pres. Grd. kPa/M	Temp. Grd Deg C./M
0.0	21729.5	13.5		
500.0	22749.8	48.3	2.040	0.070
1000.0	23893.7	74.3	1.889	0.052
1500.0	24592.4	98.3	1.797	0.048
2000.0	25257.1	115.2	1.329	0.034
2200.0	25483.1	120.4	1.130	0.026
2400.0	25713.5	125.7	1.152	0.027
2600.0	25944.2	130.9	1.154	0.026
2800.0	26177.3	135.5	1.165	0.023
3000.0	26411.1	140.4	1.169	0.025
3050.0	26486.2	142.5	1.502	0.042
3100.0	26545.7	144.8	1.190	0.046
3150.0	26602.6	148.3	1.138	0.070
3200.0	26659.5	149.5	1.138	0.024
3250.0	26713.9	150.5	1.088	0.020
3276.4	26749.6	150.9	1.352	0.015

ATTN: LEROY BROWN

Genco Pressure Control Ltd.
Phone: (403) 250-3600
Fax: (403) 250-9635



ATTN: LEROY BROWN

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

low	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
146	1998/03/03	07:45:00	Decrease static pressure.																				
147		08:00:00	14780	91	3200		2620	112.0	68	88.900	442.258	385.926	145.58	100.0	0.00	7.17	0.000	194.25	172.03			124000	6.0
148		08:30:00	14770	91			2630	113.0	68		445.085	395.169											
149		09:00:00	14780	91	3400		2635	113.0	68		445.510	404.446	152.65	100.0	0.00	7.07	0.000	201.32	169.68			126000	6.0
150		09:30:00	14780	91			2635	114.0	68		447.483	413.748											
151		10:00:00	14780	92	3700		2640	114.0	68		447.910	423.075	159.73	100.0	0.00	7.08	0.000	208.40	169.92			126000	6.0
152		10:30:00	14780	92			2645	115.0	68		450.304	432.432											
153		11:00:00	14790	92	3900	15.08	2650	115.0	68	88.900	450.732	441.818	166.79	100.0	0.00	7.06	0.000	215.46	169.44			126000	6.0
154		11:30:00	14790	92			2660	116.0	68		453.552	451.237											
155		12:00:00	14790	92	4000		2675	116.0	68		454.837	460.700	173.87	100.0	0.00	7.08	0.000	222.54	169.92			126000	6.0
156		12:30:00	14790	92			2675	116.0	68		454.837	470.175											
157		13:00:00	14800	92	4150		2675	116.0	68		454.837	479.651	180.93	100.0	0.00	7.06	0.000	229.60	169.44			126000	6.0
158		13:30:00	14800	92			2675	117.0	68		456.799	489.147											
159		14:00:00	14810	92	4300		2680	117.0	69		456.456	498.660	187.44	100.0	0.00	6.51	0.000	236.11	156.24			126000	6.0
160		14:30:00	14810	92			2680	117.0	69		456.456	508.170											
161		15:00:00	14820	93	4450	15.08	2680	117.0	69	88.900	456.456	517.679	193.95	100.0	0.00	6.51	0.000	242.62	156.24			126000	6.0
162		15:30:00	14830	93			2680	117.0	69		456.456	527.189											
163		16:00:00	14830	93	4500		2680	117.0	69		456.456	536.698	200.27	100.0	0.00	6.32	0.000	248.94	151.68			130000	6.0
164		16:30:00	14830	93			2680	118.0	70		457.636	546.220											
165		17:00:00	14840	93	4600		2680	118.0	70		457.636	555.754	206.54	100.0	0.00	6.27	0.000	255.21	150.48			128000	6.0
166		17:30:00	14850	93			2680	118.0	70		457.636	565.288											
167		18:00:00	14850	93	4700		2685	118.0	70		458.065	574.827	212.68	100.0	0.00	6.14	0.000	261.35	147.36			130000	6.0
168		18:30:00	14870	93			2690	118.0	70		458.494	584.374											
169		19:00:00	14870	93	4900	15.08	2700	118.0	70		459.350	593.935	218.56	100.0	0.00	5.88	0.000	267.23	141.12	1.4	12.0	130000	6.0
170		19:30:00	14860	93			2710	118.0	70		460.204	603.514											
171		20:00:00	14850	93	5025		2710	118.0	70		460.204	613.102	223.62	100.0	0.00	5.06	0.000	272.29	121.44			130000	6.0
172		20:30:00	14710	93			2720	118.0	70		461.057	622.698											
173		21:00:00	14520	92	5200		2720	120.0	79		458.090	632.273	228.65	100.0	0.00	5.03	0.000	277.32	120.72			131000	6.0

Fast

Field Notes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORTLIARD
Well Location: 3-66-A
Formation: NAHANNI

CPT

Row	Date	Clk Tim	Tg Pa	Tbg	Temp	Cag	Fas	Choke	Static	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil gain	Wat1 gain	Cum Oil1	Cum Wa	Wat Rate1	H2S	CO2	SALINITY	pH
	y/m/m/d	clock	kPa	C	kP		mm	kPa	in of H2O	C	mm	(10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
174	1998/03/03	21:30:00	4510	92				2725	120.0	70	88.900	465319	641.892											
175		22:00:00	4500	92	530			2730	120.0	70		465618	651.592	234.01	100.0	0.00	5.36	0.000	282.68	128.64			131000	6.0
176		22:30:00	4500	93				2730	120.0	70		465618	661.297											
177		23:00:00	4500	93	530			2730	120.0	70		465618	671.001	239.89	100.0	0.00	5.88	0.000	283.56	141.12			132000	6.0
178		23:30:00	4470	93				2735	121.0	70		468112	680.731											
179		23:59:59	4430	93	540			2730	121.0	70		467701	690.475	245.97	100.0	0.00	6.08	0.000	294.64	145.96			131000	6.0
180	1998/03/04	00:30:00	4410	93				2740	122.0	71		469709	700.245											
181		01:00:00	4200	93	540			2740	122.0	70		470511	710.041	251.31	100.0	0.00	5.34	0.000	293.99	128.12			133000	6.0
182		01:30:00	4100	93				2730	121.0	70		467701	719.815											
183		02:00:00	4030	93	525			2725	122.0	71		463415	729.563	256.78	100.0	0.00	5.47	0.000	305.45	131.28			133000	6.0
184		02:30:00	4070	93				2730	119.0	71		463018	739.272								12.5	15.7		
185		03:00:00	4110	93	500	1503		2730	119.0	71		463018	748.919	261.93	100.0	0.00	5.15	0.000	310.60	123.60			133000	6.0
186		03:00:00	Sut in well and reck build ups.																					
187		03:00:01	4130	93	500	000		0	0.0	70		0.000	748.919	261.93	0.0	0.00	0.00	0.000	310.60	0.00				
188		03:05:00	0830																					
189		03:10:00	1135																					
190		03:15:00	1250																					
191		03:30:00	1545		200																			
192		03:45:00	1620																					
193		04:00:00	1755		0			casing on vacuum																
194		04:30:00	1855																					
195		05:00:00	1955		0																			
196		05:30:00	1795																					
197		06:00:00	1830		0																			
198		06:30:00	1845																					
199		07:00:00	1830		0																			

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

FieldNotes

CPT CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	Wat Rate1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	%	m3	m3	m3	m3	m3/d	%	%	ppm	
200	1998/03/04									88.900													
201			Gas produced past 24 Hrs. = 318.305 E3M3																				
202			Fluid produced past 24 Hrs. = 123.52 M3																				
203			Total gas produced past 131 Hrs. = 748.919 E3M3																				
204			Total fluid (water) produced past 131 Hrs. = 310.60 M3																				
205			Water : Salinity = 138000 ppm w/ Ph of 6.0																				
206			H2S @ 0600 Hrs = 125000 ppm (12.5%)																				
207			CO2 @ 0600 Hrs = 157000 ppm (15.7%)																				
208			Fluid on locatior : Production Tanks : #1 = 21.84 M3 & #2 = 18.62 M3 = 40.46 M3																				
209			Storage Tanks : A = 49.30 M3 & B = 56.89 & C = 45.45 M3 & D = 56.16 M3 = 207.80 M3																				
210			Total on location = 248.26 M3																				
211																							
212																							
213																							

Fast

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-02
Purpose of Job:	Completion	Report #:	11
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown
Current Operation:	Flow testing		

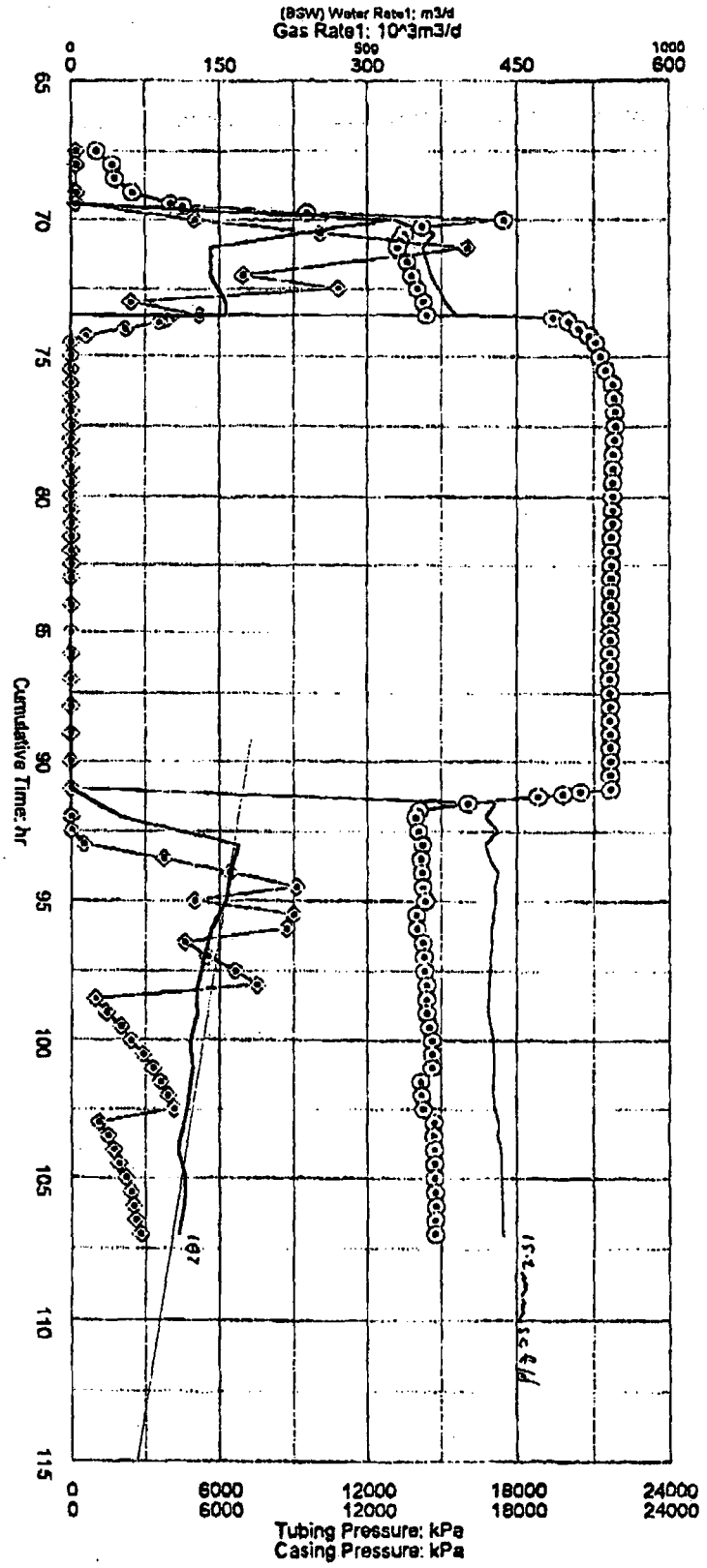
Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 4 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total In Tanks:	10.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	209.12		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	94.70		
SICP N/A	KPa @	Recovery Last 24 hrs.	131.43		
Rig Hr: 24.0	Cum Rig Hrs.: 264.0	Recovery to Date:	131.43		
		Load to Recover (+New)	+ 17.01		

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
3295.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3158.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$36,418
Previous Costs:		$699,383
Cummulative Costs:		$734,801
AFE Estimate:		$1,854,400

TIME	OPERATION
0000	The well is shut in for a build up.
0330	The shut in tubing pressure is 21720 kPa. Rig up Genco to run a static gradient.
0345	Equalize the lubricator. The top Electronic gauge number is T-20881 and the bottom recorder number is B-20880.
0355	Do 10.0 min. stops at surface, 500.0 m, 1000.0 m, 1500.0 m, 2000.0 m, 2200.0 m, 2400.0 m, 2600.0 m, 2800.0 m, 3000.0 m, 3050.0 m, 3100.0 m, 3150.0 m, 3200.0 m, 3250.0 m, with a 240.0 min. stop at 3276.40 m GL.
1155	Attemp to pull out of the hole with the recorders. We could not pull up with the wireline but we could go down. We kept working the wireline through the packing on top of the lubricator. Worked the wireline free and pulled out of the hole with the recorders.
1400	Rig out Genco and rig up to flow the well.
1500	Check the wellhead for pressure. There is 21630 kPa on the casing. Open the well to the separator to continue the clean up. Gas to surface.
1530	The tubing pressure is 16050 kPa. We have fluid to surface. Flowing the well through the Central Production Testers separator.


Gas Rate1
Tubing Pressure
Casing Pressure
(BSW) Water Rate1
Ranger Fort Liard P - 56 - A
(BSW) Water Rate1: m3/d
Gas Rate1: 10^3m3/d
0
150
300
450
600
Cumulative Time: hr
65
70
75
80
85
90
95
100
105
110
115
0
6000
12000
18000
24000
Tubing Pressure: kPa
Casing Pressure: kPa

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formaon: MAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	Fld1 gain	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	H2S	CO2	SALINITY	pH
	y/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	m3	%	m3	m3	m3	m3	%	%	ppm	
77	198/03/02	07:30:00	21635							88.900													
78		08:00:00	Wireline running static gradient.																				
79		08:00:00	21620		0																		
80		08:30:00	21610																				
81		09:00:00	21615		0																		
82		09:30:00	21610																				
83		10:00:00	21600		0																		
84		10:30:00	21595																				
85		11:00:00	21595		0																		
86		11:30:00	21600																				
87		12:00:00	21605		0																		
88		12:30:00	21605																				
89		13:00:00	21610		0																		
90		13:30:00	21615																				
91		14:00:00	21620		0																		
92		14:30:00	21625																				
93		15:00:00	21630		0		0	0.0	0	88.900	0.000	82.360	0.21	0.00		0.00	0.00	0.000	48.88				
94		15:00:00	Open well to separator and continue cleanup. Gas to surface.																				
95		15:05:00	20450			9.53																	
96		15:10:00	19780			10.32																	
97		15:15:00	18800	32		11.51																	
98		15:15:00	Note: Very abrupt obstruction at choke. Could not clear and switched to alternate choke increasing rapidly to 11.51 mm.																				
99		15:30:00	16050	37		11.91	3240	72.0	26		428.320	91.283											
100		15:30:00	Fluid to surface.																				
101		15:45:00	14100	40		15.08																	
102		16:00:00	13950	45	0	15.08	3035	76.0	33		418.965	100.109	3.64	3.43	100.0	0.00	3.43	0.000	52.31				
103		16:30:00	14050	49	0		3100	80.0	38		430.226	108.955											
104		17:00:00	14230	46	500	15.08	3100	77.0	42	88.900	418.716	117.798	15.39	11.75	100.0	0.00	11.75	0.000	64.06			50000	6.0

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 - A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	Fld1 gain	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	m3	%	m3	m3	m3	m3	%	%	ppm	
105	1998/03/02	17:30:00	14180	58	3750		3100	79.0	43	88.900	423.295	126.569											
106		18:00:00	14200	62	6400	15.08	3100	83.0	46	88.900	431.372	135.472	26.56	11.17	100.0	0.00	11.17	0.000	75.23	1.5	14.5	50000	6.0
107		18:30:00	14250	65	9100		3100	82.0	47		427.937	144.423											
108		18:45:00	Bled Casing to 4000 Kpa																				
109		19:00:00	14350	67	5000	15.08	3135	82.0	49	88.900	428.779	153.347	37.42	10.86	100.0	0.00	10.86	0.000	86.09			96000	6.0
110		19:30:00	14000	70	9000		3135	82.0	51		427.158	162.263											
111		20:00:00	14000	74	6700	15.08	3135	82.0	54	88.900	424.768	171.137	47.31	9.89	100.0	0.00	9.89	0.000	95.98			101000	6.0
112		20:30:00	14250	76	4600		3135	83.0	56		425.779	179.997											
113		21:00:00	14300	75	5525	15.08	3135	83.0	58	88.900	424.225	188.851	56.67	9.36	100.0	0.00	9.36	0.000	105.34			105000	6.0
114		21:30:00	14300	78	6625		3135	83.0	59		423.456	197.681											
115		22:00:00	14400	81	7500	15.08	3135	83.0	60	88.900	422.691	206.495	65.55	8.88	100.0	0.00	8.88	0.000	114.22			108000	6.0
116		22:15:00	Bled Casing to 0 Kpa																				
117		22:30:00	14400	83	950		3150	83.0	62		422.205	215.296											
118		23:00:00	14400	83	1400	15.08	3150	83.0	63	88.900	421.452	224.084	74.39	8.84	100.0	0.00	8.84	0.000	123.06			108000	6.0
119		23:30:00	14500	84	2000		3160	84.0	64		423.922	232.890											
120		23:59:59	14625	85	2400	15.08	3170	85.0	64	88.900	427.131	241.751	82.76	8.37	100.0	0.00	8.37	0.000	131.43			109000	6.0
121		Water sample taken in 1 litre plastic sample container (dated and timed).																					
122	1998/03/03	00:30:00	14625	86	2900		3185	85.0	65		427.405	250.657											
123		01:00:00	14600	86	3300	15.08	3200	85.0	66	88.900	427.677	259.564	91.28	8.52	100.0	0.00	8.52	0.000	139.95			110000	6.0
124		01:30:00	14160	88	3600		3200	85.0	67		426.927	268.466											
125		02:00:00	14200	88	3900	15.08	3210	85.0	68	88.900	426.861	277.360	99.53	8.25	100.0	0.00	8.25	0.000	148.20			111000	6.0
126		02:30:00	14260	88	4150		3215	85.0	67		427.948	286.264											
127		02:40:00	Bled casing to 1000 Kpa.																				
128		03:00:00	14700	88	1100	15.08	3235	86.0	67	88.900	431.828	295.220	107.46	7.93	100.0	0.00	7.93	0.000	156.13			112000	6.0
129		03:30:00	14700	89	1475		3235	86.0	68		431.072	304.209											
130		04:00:00	14700	89	1700	15.08	3240	87.0	68	88.900	433.918	313.219	114.93	7.47	100.0	0.00	7.47	0.000	163.60			112000	6.0
131		04:30:00	14720	89	1900		3250	87.0	68		434.601	322.266											
132		05:00:00	14730	90	2200	15.08	3260	87.0	68	88.900	435.284	331.327	122.96	8.03	100.0	0.00	8.03	0.000	171.63			112000	6.0

75%

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P - 66 A
Formation: NAHANI

FieldNotes

CENTRAL PRODUCTION TESTING LTD.

Row	Date	Clk Tm	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	Fld1 gain	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clok	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	m3	%	m3	m3	m3	m3	%	%	ppm	
133	1998/03/03	05:00:00	14730	90	2400		3270	87.0	69	88.900	435.205	340.395											
134		06:00:00	14750	90	2500	15.08	3280	87.0	70	88.900	435.127	349.461	130.84	7.88	100.0	0.00	7.88	0.000	179.51			119000	6.0
135		06:30:00	14750	90	2600		3290	87.0	70		435.804	358.533											
136		06:45:00	Water sample taken in 1 litre plastic sample container (dated and timed).																				
137		06:59:59	14750	90	2600	15.08	3300	87.0	70	88.900	436.480	367.614	138.41	7.57	100.0	0.00	7.57	0.000	187.08			121000	6.0
138			Gas produced past 24 Hrs. = 285.254 E3M3																				
139			Fluid (water) produced past 24 Hrs. = 138.200 M3																				
140			Total gas produced past 107 Hrs. = 367.614 E3M3																				
141			Total fluid (water) produced past 107 Hrs. = 187.08 M3																				
142			Water Salinity = 121000 ppm w/ Ph of 6.0																				
143			H2S = 12500 ppm @ 0600 Hrs.																				
144			CO2 = 12.5 % @ 0600 Hrs.																				

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-03-01
Purpose of Job:	Completion	Report #:	10
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown

Current Operation: Run a production/flow test the well.

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Rig/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 9 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403 232 5340	Total in Tanks:	10.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	122.34		
SITP:	N/A KPa @	Non recov. Ann. Fluids:	Nil		
SICP:	N/A KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr:	24.0 Cum Rig Hrs.: 240.0	Recovery to Date:	Nil		
		Load to Recover (+New)	209.12		

Daily cost sheet	
3295.0 m - 3302.0 m KB.	
3285.0 m - 3292.0 m KB.	
[illegible]	
3260.0 m - 3272.0 m KB.	
3234.0 m - 3248.0 m KB.	
3166.0 m - 3172.0 m KB.	
3152.0 m - 3159.0 m KB.	
3134.0 m - 3148.0 m KB.	
3125.0 m - 3130.0 m KB.	
3116.0 m - 3122.0 m KB.	

AFE # E8D-011

KB Elevation: 459.80 m
KB. to CF: 10.35 m
KB. to THF: 6.00 m

Daily Cost Summary		
Code	Item	Amount
Daily Costs:		$26,907
Previous Costs:		$672,476
Cumulative Costs:		0000,000
AFE Estimate:		$1,654,400

TIME	OPERATION
0200	Open the Hydril and latch onto the on-off tool. Land the dognut in 9000 daN compression. Insert the lag screws.
0300	Pressure test the 244.5 mm casing, 177.8 mm liner and liner top, Halliburton "BWB" packer and the on-off tool to 28000 kPa.
0600	Rig out the BOP'S and dig up the Wellhead. Install the "ESD" valve.
1030	Rig up and pressure test the wellhead and dognut to 34925 kPa.
1115	Pressure test the Central Production Testers flow line to 28000 kPa.
1210	Rig out Tube Test
1245	Rig up Genco.
1340	Run in the hole with a Otis "RB" 50.8 mm pulling tool and tag the top of the prong at 3072.0 m CF. Latch onto the prong. Jar the prong out of the Otis "PR" plug. When we got out of the hole with the prong we had 1500 kPa on the 88.9 mm tubing.
1545	Check the wellhead for pressure. There is 1500 kPa on the tubing and the casing is dead. Equalize the lubricator. Run in the hole with a "CS" modified pulling tool to pull the Otis "R" mandrill. When we latched onto the plug we had 1700 kPa on the tubing. Jar the plug out of the Otis "R" nipple. Pull out of the hole with the plug.
1710	Rig out Genco.
1735	Check the wellhead for pressure. There is 4000 kPa on the tubing. Open the well to Central Production Testers. Note: Flowing the well on clean - up.
2130	Shut in the well for a build up. The tubing pressure at 2130 hours was at 14400 kPa. We have flowed back a total of 48.88 m^3 of fluid. The tubing volume was 13.82 m^3. We are 35.05 m^3 over tubing volume. The last H2S reading was 0.7 % and the CO2 content was 19.0 %. We were flowing the well on a 15.08 mm choke.

FieldNotes

Job Number: 2720
Customer: RANGER OIL LIMITED
Wellname: RANGER FORT LIARD
Well Location: P-56-A
Formation: NAHANNI

Row	Date	Clk Tim	Tbg Pre	Tbg Tem	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	Fld1 gain	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	m3	%	m3	m3	m3	m3	%	%	ppm	
21	1998/03/01	15:30:00	1000		200					88.900			1.56	0.00		0.00	0.00	0.000	0.00				
22		15:30:00	Retrieve prong.																				
23		16:00:00	1650		200								1.56	0.00		0.00	0.00	0.000	0.00				
24		16:30:00	1750																				
25		17:00:00	2450		200		0	0.0	0		0.000	21.171	1.56	0.00		0.00	0.00	0.000	0.00				
26		17:10:00	Wireline at surface with plug. Pressure test to choke.																				
27		17:25:00	4000		200		0	0.0	0		0.000	21.171	1.56	0.00		0.00	0.00	0.000	0.00				
28		17:25:00	Open well through separator to flare on gradually increasing choke sizes. Water at surface.																				
29		17:30:00	4500			6.35																	
30		17:45:00	9500			7.94																	
31		18:00:00	17450	32	5000	11.91	3105	45.0	32	88.900	326.826	29.115	14.66	13.10	100.0	0.00	13.10	0.000	13.10			70000	7.0
32		18:15:00	14200	32		13.49																	
33		18:30:00	13500	38	10050	15.08	2345	76.0	32		367.619	36.349											
34		18:45:00	13300	41		15.08																	
35		19:00:00	13200	44	16000	15.08	2310	73.0	35		355.450	43.881	24.40	9.74	100.0	0.00	9.74	0.000	22.84				
36		19:15:00	Bleed off casing to 3000 kPa.																				
37		19:30:00	13600	50		15.08	2345	75.0	39		360.281	51.336											
38		20:00:00	13800	53	6950	15.08	2415	76.0	44	88.900	364.675	58.688	34.22	9.82	100.0	0.00	9.82	0.000	32.66	0.7	18.0	74000	7.0
39		20:30:00	14000	58	10800	15.08	2480	78.0	48		371.693	66.559											
40		21:00:00	14250	60	2400	15.08	2550	79.0	50		377.996	74.368	45.03	10.81	100.0	0.00	10.81	0.000	43.47				
41		21:15:00	Samples taken in Agat bomb #'s 18151 (not purged) & 19267 (purged)																				
42			Also 4 litre of stock water.																				
43		21:30:00	14400	64	5200	15.08	2620	80.0	45	88.900	389.241	82.360	50.44	5.41	100.0	0.00	5.41	0.000	48.88	0.7		72000	7.0
44		21:30:00	Shut in well and record build ups.																				
45		21:30:01	14400	64	5200	0.00	0	0.0	45		0.000	82.360	50.44	0.00	100.0	0.00	0.00	0.000	48.88				
46		21:35:00	19400		4000																		
47		21:40:00	19980		3800																		
48		21:45:00	20000		3575																		

Job Number: 2720
Customer: RANGER OIL LIMITED
Vellname: RANGER FORT LIARD
Well Location: P - 86 - A
Formation: NAHANNI

FieldNotes

Row	Date	Clk Tim	Tbg Pre	Tbg Temp	Csg Pres	Choke	Static1	Diff1	Temp1	Orif1	Gas Rate1	Cum Gas1	Fld Vol1	Fld1 gain	BSW1	Oil1 gain	Wat1 gain	Cum Oil1	Cum Wat1	H2S	CO2	SALINITY	pH
	yy/mm/dd	clock	kPa	C	kPa	mm	kPa	in of H2O	C	mm	10^3m3/d	10^3m3	m3	m3	%	m3	m3	m3	m3	%	%	ppm	
49	1998/03/01	22:00:00	20400		2200					88.900													
50		22:15:00	20788		600																		
51		22:30:00	21050		0																		
52		22:30:00	Casing under vacuum.																				
53		23:00:00	21230		0																		
54		23:30:00	21445		0																		
55		23:59:59	21720		0																		
56	1998/03/02	00:30:00	21775		0																		
57		01:00:00	21815		0																		
58		01:30:00	21815		0																		
59		02:00:00	21787		0																		
60		02:30:00	21745		0																		
61		03:00:00	21720		0																		
62		03:30:00	21720		0																		
63		03:35:00	Wireline running into well to preform stalic gradient.																				
64		04:00:00	21720		0																		
65		04:30:00	21710		0																		
66		05:00:00	21705		0																		
67		05:30:00	21665		0																		
68		06:00:00	21660		0																		
69		06:30:00	21655		0																		
70		06:59:00	21650		0																		
71			Gas produced past 24 Hrs.						=	61.189 E3M3													
72			Fluid (water) produced past 24 Hrs.						=	48.88 M3													
73			Total gas produced past 83 Hrs.						=	82.360 E3M3													
74			Total fluid (water) produced past 83 Hrs.						=	48.88 M3													
75			Water salinity = 74000 ppm w/ Ph of 7.0																				
76			H2S during flowing of well = 7000ppm																				
77			CO2 during flowing of well = 18.0%																				

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-02-28
Purpose of Job:	Completion	Report #:	9
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown
Current Operation:	Pressure test/install wellhead/pull plug/flow well		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 18 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	10.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	122.34		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	Nil		
SICP N/A	KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr. 24.0	Cum Rig Hrs.: 216.0	Recovery to Date:	Nil		
		Load to Recover (+New)	209.12		

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
3285.0 m - 3302.0 m KB.		
3285.0 m - 3292.0 m KB.		
3276.0 m - 3280.0 m KB.		
3260.0 m - 3272.0 m KB.		
3234.0 m - 3248.0 m KB.		
3165.0 m - 3172.0 m KB.		
3152.0 m - 3159.0 m KB.		
3134.0 m - 3148.0 m KB.		
3125.0 m - 3130.0 m KB.		
3115.0 m - 3122.0 m KB.		
Daily Costs:		$180,687
Previous Costs:		$491,789
Cummulative Costs:		$672,476
AFE Estimate:		$1,854,400

TIME	OPERATION
0000	Running in the hole with 166 joints of 88.9 mm, 13.69 kg/m, L-80 NS-CT tubing. We installed a Otis NS-CT 'X' nipple c/w a 71.45 mm profile. 1-88.9 mm x 3.02 m pup joint, 160 joints of 88.9 mm, 13.69 kg/m, L-80, NS-CT tubing and latch onto the Halliburton on-off tool. Pull test the packer to 10000 daN tension. Set 9000 daN compression on the packer. Release from the on-off tool. Pull 3 joints of 88.9 mm, 13.69 kg/m, L-80 NS-CT tubing and space out. Run in the hole with a 88.9 mm x 1.73 m L-80 NS-CT pup joint, 1-joint of 88.0 mm, 13.69 kg/m, L-80 NS-CT tubing and install the dognut.
1930	Pressure test the dognut to 55880 kPa.
2015	Circulate the well over to fresh water plus 1.0 % Baker MEP-426 Oxygen scavenger, Biocide and a corrosion inhibitor.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A		Date: 98-02-27
Purpose of Job:	Completion		Report #: 8
Report From:	W. Casler/A. Schritt	Report To: Leroy Brown	Daily Cost Summary
Current Operation:	Pressure test packer/run tubing.		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 15 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	10.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	122.34		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	Nil		
SICP N/A	KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr: 24.0	Cum Rig Hrs.: 192.0	Recovery to Date:	Nil		
		Load to Recover (+New)	209.12		

Code	Item	Amount
PERFS	Daily cost sheet	
	3285.0 m - 3302.0 m KB.	
	3285.0 m - 3292.0 m KB.	
	3276.0 m - 3280.0 m KB.	
	3260.0 m - 3272.0 m KB.	
	3234.0 m - 3248.0 m KB.	
	3165.0 m - 3172.0 m KB.	
	3152.0 m - 3159.0 m KB.	
	3134.0 m - 3148.0 m KB.	
	3125.0 m - 3130.0 m KB.	
	3115.0 m - 3122.0 m KB.	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Costs:	$35,850
Previous Costs:	$456,139
Cummulative Costs:	$491,789
AFE Estimate:	$1,854,400

OPERATION

TIME	
0000	Start to fill the casing with Water/Standrill completion fluid. It took 86.78 m^3 of fluid to fill the hole.
0300	Pressure test the casing, packer and the plug in the Otis "R" nipple to 20000 kPa.
0400	Rig out Computalog.
0800	Rig in the Power Tongs, Computer and the Tube Test equipment.
0900	Hold a safety meeting.
1000	Pick up and run in the hole with a 73.0 mm Otis mule shoe re-entry guide, 73.0 mm Otis "VTR" seal unit, 177.8 mm x 88.9 mm Halliburton J - Slot latching head c/w a NS - CT thread, 1 joint of 88.9 mm, 13.69 kg/m, L-80 NS -CT tubing, 88.9 mm NS-CT Otis "XN" nipple c/w a 69.85 mm profile and a 66.93 mm NO-GO, 1-88.9 mm x 3.10 m L-80 NS-CT pup joint. Running in the hole with the 88.9 mm, 13.69 kg/m, L-80 L-80 NS-CT tubing. We are tube testing the tubing to 55860 kPa.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A			Date:	98-02-26
Purpose of Job:	Completion			Report #:	7
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown	Daily Cost Summary	
Current Operation:	Pressure test packer/run tubing.			Code / Item	Amount
				PERFS / Daily cost sheet	
Contractor:	Precision Drilling	Fluid Vol. m3	Water / Oil	3295.0 m - 3302.0 m KB.	
Road/Lease:	Good	Total Hauled to Lease:	Nil	3285.0 m - 3292.0 m KB.	
Weather:	Clear - 3 °C	Total Hauled from Lease:	Nil	3276.0 m - 3280.0 m KB.	
Contact Phone:	403-232-5340	Total in Tanks:	15.00	3260.0 m - 3272.0 m KB.	
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill	3234.0 m - 3248.0 m KB.	
Perforations:	As below	Total Load Fluids:	122.34	3165.0 m - 3172.0 m KB.	
SITP	N/A KPa @	Non-recov. Ann. Fluids:	Nil	3152.0 m - 3159.0 m KB.	
SICP	19000 KPa @ 2030	Recovery Last 24 hrs.	Nil	3134.0 m - 3148.0 m KB.	
Rig Hr:	24.0 Cum Rig Hrs.: 168.0	Recovery to Date:	Nil	3125.0 m - 3130.0 m KB.	
AFE #	E8D-011	Load to Recover (+New)	122.34	3115.0 m - 3122.0 m KB.	
	KB Elevation: 459.89 m			Daily Costs:	$78,745
	KB. to CF: 10.35 m			Previous Costs:	$377,393
	KB. to THF: 8.60 m			Cummulative Costs:	$456,138
				AFE Estimate:	$1,804,400

TIME:	OPERATION
0000	Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3119.0 m - 3122.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 16800 kPa on the casing when we fired the gun. When we got out of the hole with the perforating gun there was 17000 kPa on the casing.
0300	Check the wellhead for pressure. There is 17200 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3115.0 m - 3119.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 17500 kPa on the casing when we fired the gun. There was 17500 kPa on the casing when we got out of the hole with the perforating gun.
0800	Check the wellhead for pressure. There is 17500 kPa on the casing. Equalize the lubricator. Run in the hole with a junk basket and a 147.0 mm gauge ring to 3082.0 m KB. When we got out of the hole with the gauge ring there was 18600 kPa on the casing.
1600	Check the wellhead for pressure. There is 18600 kPa on the casing. Equalize the lubricator. Run in the hole with a 73.0 mm x 177.8 mm Incoloy 925 Halliburton "BWB" permanet packer. Wireline set the packer with the middle of the rubbers at 3072.0 m KB. The Incoloy 925 NS-CT pup joint is at 3072.91 m KB. The 73.0 mm NS-CT Otis Nicole 925 "X" nipple c/w a 58.75 mm profile is landed at 3073.97 m KB. The 73.0 mm NS-CT pup joint is landed at 3074.27 m KB. The Otis "R" nipple c/w a 55.58 mm profile and a plug in place is landed at 3077.26 m KB. The 73.0 mm perforated pup joint is landed at 3077.57 m KB. The top of the 73.0 mm pup joint is landed at 3078.81 m KB. The top of the Otis "RN" nipple c/w a 55.58 mm profile and a 51.05 mm NO-GO is landed at 3081.85 m KB. The bottom of the re-entry guide is landed at 3082.44 m KB. When we got out of the hole with the setting tool the casing pressure was at 18900 kPa.
2030	Check the wellhead for pressure. There is 19000 kPa on the casing. Open the well through the Central Production Testers Separator to the flare stack to bleed down the casing.
	Filled Hole w/86.8 m³ Standrill water & Pressure Test Packer Set To 21 MPa ok.
08:00	Rig To Run Tubing.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-02-25
Purpose of Job:	Completion	Report #:	6
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown
Current Operation:	Perforating the Nahanni formation		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 7 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	15.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	122.34		
SITP	N/A KPa @	Non-recov. Ann. Fluids:	Nil		
SICP	16200 KPa @ 2345	Recovery Last 24 hrs.	Nil		
Rig Hr	24.0 Cum Rig Hrs.: 144.0	Recovery to Date:	Nil		
AFE #	E6D-011	Load to Recover (+New)	122.34		

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary		
Code	Item	Amount
PERFS	Daily cost sheet	
Daily Costs:		$41,803
Previous Costs:		$335,790
Cummulative Costs:		$377,393
AFE Estimate:		$1,654,400

PERFORATIONS
3295.0 m - 3302.0 m KB
3285.0 m - 3292.0 m KB.
3276.0 m - 3280.0 m KB
3260.0 m - 3272.0 m KB.
3234.0 m - 3248.0 m KB.
3165.0 m - 3172.0 m KB
3152.0 m - 3159.0 m KB.
3134.0 m - 3148.0 m KB
3125.0 m - 3130.0 m KB.

TIME	OPERATION
0000	Pick up the guns.
0030	Check the wellhead for pressure. There is 6300 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun to perforate the Nahanni formation from 3141.0 m - 3148.0 m KB. 14 SPM,36 gram high temperature charges, 90 ° phasing. There was 7400 kPa on the casing when we attempted to fire the gun. When we got out of the hole with the perforating gun there was 8000 kPa on the casing. The gun did not fire. Change out the detonator.
0345	Check the wellhead for pressure. There is 8500 kPa on the casing. Equalize the lubricator. Run in the hole to perforate the Nahanni formation from 3141.0 m - 3148.0 m KB. When we went to fire the perforating gun we had 8900 kPa on the casing. The gun did not fire. When we got out of the hole with the perforating gun there was 9400 kPa on the casing. Re-head the Wireline rope socket.
0800	Check the wellhead for pressure. There is 10800 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun to perforate the Nahanni formation from 3141.0 m - 3148.0 m KB. There was 11800 kPa on the casing when we went to fire the gun. When we got out of the hole with the perforating gun there was 12400 kPa on the casing.
1115	Check the wellhead for pressure. There is 13000 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun to perforate the Nahanni formation from 3134.0 m - 3141.0 m KB.there was 13500 kPa on the casing when we went to fire the perforating gun. The gun did not fire. When we got out of the hole with the perforating gun there was 14000 kPa on the casing. Re-head the line.
1610	Check the wellhead for pressure. There is 15000 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3134.0 m - 3141.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 15200 kPa on the casing when we fired the gun. When we got out of the hole with the perforating gun we had 16000 kPa on the casing.
1830	Check the wellhead for pressure. There is 16000 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3125.0 m - 3131.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 16100 kPa on the casing when we fired the gun. When we got out of the hole with the perforating gun there was 16200 kPa on the casing.
2330	Check the wellhead for pressure. There is 16600 kPa on the casing. Equalize the lubricator.

OPERATION: 08:00 MADE FINAL PERFORATING RUN & PERFORATE 3115 - 3118 m KB.
PREPARE TO RUN JUNK BASKET & GAUGE
SICP = 17,500

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A					Date:	98-02-24
Purpose of Job:	Completion					Report #:	5
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown			Daily Cost Summary	
Current Operation:	Perforating the Nahanni formation					Code / Item	Amount
		Fluid Vol. m3	Water	Oil		As per daily cost sheet	
Contractor:	Precision Drilling	Total Hauled to Lease:	Nil				
Road/Lease:	Good	Total Hauled from Lease:	Nil				
Weather:	Clear - 15 °C	Total in Tanks:	15.00				
Contact Phone:	403-232-5340	Initial Well Fluid:	Water/Standrill				
Zone:	Nahanni	Total Load Fluids:	122.34				
Perforations:	As below	Non-recov. Ann. Fluids:	Nil				
SITP N/A	KPa @	Recovery Last 24 hrs.	Nil				
SICP 6000	KPa @ 2345	Recovery to Date:	Nil				
Rig Hr. 24.0	Cum Rig Hrs.: 120.0	Load to Recover (+New)	122.34				

AFE #	E8D-011	KB Elevation:	459.89 m	3234.0-3248.0	Daily Costs:	$39,044
Perfs:	3295.0 m - 3302.0 m	KB. to CF:	10.35 m	3165.0-3172.0	Previous Costs:	$296,746
	3285.0 m - 3292.0 m	KB. to THF:	8.60 m	3152.0-3159.0	Cummulative Costs:	$335,790
	3276.0 m - 3280.0 m	3260.0 m - 3272.0 m			AFE Estimate:	$1,854,400

TIME	OPERATION
0000	Running in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3260.0 m - 3266.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. The casing was dead after we fired the perforating gun. When we got out of the hole with the perforating gun there was a slight blow on the casing. TSTM.
0130	Check the wellhead for pressure. We have 200 kPa on the casing. Before we had a chance to equalize the lubricator the blind rams were opened. The wellhead pressure launched the perforating gun into the top of the grease injector cutting the Wireline. The perforating gun dropped down the hole.
0230	Lay down the grease injector and re-head the Wireline rope socket.
0700	Check the wellhead for pressure. We have 1300 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3241.0 m - 3248.0 m KB. 14 spm, 36 gram high temperature charges, 90 ° phasing. There was 1400 kPa on the casing when we fired the perforating gun. When we got out of the hole with the perforating gun there was 1500 kPa on the casing.
1115	Check the wellhead for pressure. We have 1600 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3234.0 m - 3241.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 1775 kPa on the casing when we fired the gun. When we got out of the hole with the perforating gun there was 1800 kPa on the casing.
1445	Check the wellhead for pressure. We have 1875 kPa on the casing.Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun to perforate the Nahanni formation from 3165.0 m - 3172.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 2025 kPa on the casing when we attempted to fire the perforating gun. When we got out of the hole with the perforating gun there was 2200 kPa on the casing. The gun did not fire. Re-head the Wireline rope socket.
1845	Check the wellhead for pressure. There is 2350 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3165.0 m - 3172.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 3200 kPa on the casing when we fired the gun. When we got out of the hole with the perforating gun there was 3600 kPa on the casing.
2145	Check the wellhead for pressure. There is 4200 kPa on the casing. Equalize the lubricator. Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3152.0 m - 3159.0 m KB. 14 SPM, 36 gram high temperature charges, 90 ° phasing. There was 4600 kPa on the casing when we fired the gun. When we got out of the hole with the perforating gun there was 6000 kPa on the casing.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-02-23
Purpose of Job:	Completion	Report #:	4
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown
Current Operation:	Perforating the Nahanni formation		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:	Clear - 16 °C	Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	15.00		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	As below	Total Load Fluids:	122.34		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	Nil		
SICP N/A	KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr: 24.0	Cum Rig Hrs.: 96.0	Recovery to Date:	Nil		
		Load to Recover (+New)	122.34		

Daily Cost Summary		
Code	Item	Amount
As per daily cost sheet		

AFE #	E8D-011	KB Elevation:	459.89 m
Perfs:	3295.0 m - 3302.0 m	KB. to CF:	10.35 m
	3285.0 m - 3292.0 m	KB. to THF:	8.60 m
	3266.0 m - 3272.0 m		

Daily Costs:	$34,487
Previous Costs:	$262,259
Cummulative Costs:	$296,746
AFE Estimate:	$1,954,400

TIME	OPERATION
0000	Wait on Computalog and the Anchor truck.
0230	Install the rig anchors for the flare stack and the flow line.
0300	Spot the Computalog line truck and picker.
0330	Rig up the 177.8 mm lubricator and Wireline BOP'S and grease injector.
0700	Pressure test the 177.8 mm lubricator, grease injector and the Wireline BOP'S to 28000 kPa.
0810	Rig in the lubricator and the BOP'S to the top of the Hydril.
1000	Hold a safety meeting.
1030	Run in the hole with a 127.0 mm ERHSC perforating gun loaded with 14 SPM, 36 gram High temperature charges, 90° phasing. The hole is full of a Water/Standrill production fluid. Plug back total depth was at 3478.30 m KB. Perforate the Nahanni formation from 3295.0 m - 3302.0 m KB. The casing was dead after we fired the gun. When we got out of the hole with the perforating gun the casing was dead.
1320	Run in the hole with a 127.0 mm ERHSC perforating gun to perforate the Nahanni formation from 3285.0 m - 3292.0 m KB. with 14 SPM, 36 gram high temperature charges, 90 ° phasing. When we fired the gun it did not appear that the gun fired. We pulled out of the hole with the perforating gun and found that the gun had not fired. (We had a open short) The casing is dead.
1530	Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nihanni formation from 3285.0 m - 3292.0 m KB. with 14 SPM, 36 gram high temperature charges, 90 ° phasing. The casing was dead after we fired the perforating gun. When we pulled out of the hole with the perforating gun the casing was dead.
1715	Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nihanni formation from 3276.0 m - 3280.0 m KB. with 14 SPM, 36 gram high temperature charges, 90 ° phasing. The casing was dead after we fired the perforating gun. When we got out of the hole with the perforating gun the casing was dead.
1945	Run in the hole with a 127.0 mm ERHSC perforating gun and perforate the Nahanni formation from 3266.0 m - 3272.0 m KB. with 14 SPM, 36 gram high temperature charges, 90 ° phasing. The casing was dead after we fired the perforating gun. When we got out of the hole with the perforating gun the casing was dead. We made a new rope socket on the perforating line.
2300	Run in the hole with a 127.0 mm ERHSC perforating gun.

OPERATION @ 08:00 HRS. RIH W/GUN #6 TO PERF 3248-3241

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-02-22
Purpose of Job:	Completion	Report #:	3
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown

Current Operation: Rigging up to complete the well.

			Fluid Vol. m3	Water	Oil
Contractor:	Precision Drilling		Total Hauled to Lease:	Nil	
Road/Lease:	Good		Total Hauled from Lease:	Nil	
Weather:	Clear - 21 °C		Total in Tanks:	Nil	
Contact Phone:	403-232-5340		Initial Well Fluid:	Water/Standrill	
Zone:	Nahanni		Total Load Fluids:	122.34	
Perforations:	N/A		Non-recov. Ann. Fluids:	Nil	
SITP	N/A	KPa @	Recovery Last 24 hrs.	Nil	
SICP	N/A	KPa @	Recovery to Date:	Nil	
Rig Hr.	24.0	Cum Rig Hrs.: 72.0	Load to Recover (+New)	122.34	

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	As per daily cost sheet	

Daily Costs:	$22,767
Previous Costs:	$239,492
Cummulative Costs:	$262,259
AFE Estimate:	$1,854,400

TIME	OPERATION
0000	De-ice the rig.
0700	Attempt to install the rig anchors. The ground is to hard and this anchor truck can not get the rig anchors into the ground so we can get a pull test. Phoned for anouther anchor truck.
1300	Dressed the 88.9 mm tubing and strapped the first row.
1400	Pressure tested the flow line and manafold to the Central Production Test unit to 1400 kPa low test and 28000 kPa high test.
2000	Wait on Computalog and the Anchor truck.

PRESSURE TESTING LUBRICATOR

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-02-21
Purpose of Job:	Completion	Report #:	2
Report From:	W. Casler/A. Schritt	Report To:	Leroy Brown
Current Operation:	Rigging up to complete the well.		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:		Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	Nil		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	N/A	Total Load Fluids:	122.34		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	Nil		
SICP N/A	KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr. 24.0	Cum Rig Hrs.: 48.0	Recovery to Date:	Nil		
		Load to Recover (+New)	122.34		

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	As per daily cost sheet	

Daily Costs:	$50,448
Previous Costs:	$189,046
Cummulative Costs:	$239,492
AFE Estimate:	$1,854,400

TIME	OPERATION
0000	Rig up the kill lines.
0300	Remove the ice from under the sub.
1400	Unload and spot the Central Production Testing equipment. Assemble the flare stack.
1800	Wait on a anchor truck and de-ice matting.

RANGER OIL LIMITED

WELL COMPLETION REPORT

Well Name:	Ranger Fort Liard P-66-A	Date:	98-02-20
Purpose of Job:	Completion	Report #:	1
Report From:	W. Casler/A. Schrit	Report To:	Leroy Brown
Current Operation:	Rigging up to complete the well.		

Contractor:	Precision Drilling	Fluid Vol. m3	Water	Oil	
Road/Lease:	Good	Total Hauled to Lease:	Nil		
Weather:		Total Hauled from Lease:	Nil		
Contact Phone:	403-232-5340	Total in Tanks:	Nil		
Zone:	Nahanni	Initial Well Fluid:	Water/Standrill		
Perforations:	N/A	Total Load Fluids:	122.34		
SITP N/A	KPa @	Non-recov. Ann. Fluids:	Nil		
SICP N/A	KPa @	Recovery Last 24 hrs.	Nil		
Rig Hr. 24.0	Cum Rig Hrs.: 24.0	Recovery to Date:	Nil		
		Load to Recover (+New)	122.34		

AFE # E8D-011

KB Elevation: 459.89 m
KB. to CF: 10.35 m
KB. to THF: 8.60 m

Daily Cost Summary

Code	Item	Amount
	As per daily cost sheet	

Daily Costs:	$189,046
Previous Costs:	Nil
Cummulative Costs:	$189,046
AFE Estimate:	$1,854,400

TIME	OPERATION
0000	Nipple down the BOP'S.
0230	Install the tubing hanger.
0600	Nipple up the BOP'S.
1600	Function test the BOP'S.
1630	Pressure test the 244.5 mm casing, liner lap and the 177.8 mm liner to 1400 kPa low test and 30000 kPa high test. Pressure test the Hydril and the 88.9 mm pipe rams to 1400 kPa low test and 30000 kPa high test. Test all the valves and check valves to 1400 kPa low test and 30000 kPa high test. Check the accumulator. The accumulator starting pressure was 19100 kPa. Close the Hydril and the accumulator pressure went down to 17500 kPa., close the pipe rams and the accumulator pressure went down to 16900 kPa., open the pipe rams and the accumulator pressure went down to 16100 kPa. Start the pump and the accumulator pressure went back up to 19100 kPa in 30.0 seconds.