

Dem

Completions  
Report

**APACHE PARAMOUNT NOGHA**  
**300/B23-66-40-125-45/0**

2

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6

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0

1

2

5

4

5



File: WID# 1995, 1998, 2006 & 2007  
10 August 2004

Mr. Greg D. Hladun  
Senior Staff Drilling Engineer  
Apache Canada Ltd.  
1000, 700 - 9<sup>th</sup> Avenue SW  
Calgary, AB T2P 3V4

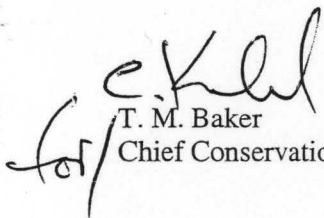
Dear Mr. Hladun:

**Well Termination Record for Apache Paramount Lac Maunoir C-34 (1995), Apache Paramount Nogha B-23 (1998), Apache Paramount West Nogha K-14 (2006) & Apache Paramount Tunago Lake E-44 (2007)**

Thank you for your submission of the Well Termination Record forms for the said wells. Please note that the spud date is the date when a particular drilling unit (which has been approved to drill) first penetrates the earth. Although an approved Approval to Drill a Well is required to set conductor pipe with a rat hole rig, spud-in occurs when the approved drilling unit begins the drilling of a proposed well. We have made changes to the Well Termination Record forms that have been submitted to reflect the above. Additionally, a few minor corrections were made to the forms.

If you have any questions, please do not hesitate to contact Chris Knoechel at 299-3866.

Yours truly,

  
T. M. Baker  
Chief Conservation Officer

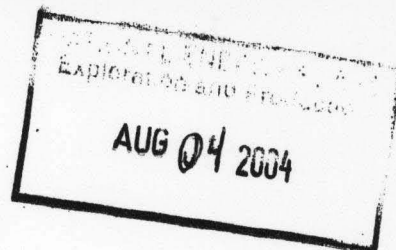
Attachment

c.c. Mimi Fortier - DIAND

National Energy  
Board



Office national  
de l'énergie



## WELL TERMINATION RECORD

This record is submitted in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

Well Name: Apache Paramount Nughan B-23 Area: Nughan  
Grid Area: 66°40', 125°45' Field / Pool: N/A  
Interest Identifier: Sahito Settlement Final Coordinates: Lat: 66°32'05.692" Long: 125°49'33.237"  
Drilling Unit: Nughan's Rig #62 Elevations-KB/RT: 315.75 (ASL) GL/Seafloor: 311.27  
Spud Date: Feb 9 2004 surface R.R.: 3/19/2004 Total Depth: 1476

O.D. (mm)	Weight (kg/m)	Grade	Depth Set (m KB)	Cement (m³)
<u>339.7</u>	<u>101.2</u>	<u>K-55</u>	<u>60</u>	<u>7.9m³ Arctic Set</u>
<u>244.5</u>	<u>59.53</u>	<u>L-BD</u>	<u>604</u>	<u>8.1m³ Arctic Set 27.3m³ G</u>
<u>177.8</u>	<u>43.16</u>	<u>L-BD</u>	<u>1476</u>	<u>22.0m³ Class G</u>

*Tepped up with 6.9m³ Arctic Set*

### PLUGGING PROGRAM

Approval of the following program was obtained by (person)

from (person)

of the

by means of

on

Type of Plug

Interval (m KB)

Felt

Cement (m³)

Cased to T.D. & cemented to surface.

Lost Circulation/Overpressure Zones: 90% losses from 142-152. Drilled blind

Equipment left on Seafloor (Describe): N/A from 152-604m

Provision for Re-entry (Describe and attach sketch):

Cores:

Type:

N/A

Intervals:

N/A

Other Downhole Completion/Suspension Equipment:

### CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed:

Greg Hladun P.Eng.

Title:

Senior Drilling Engineer

Name:

Greg Hladun

Date:

June 29, 2004

Company:

Apache Canada Ltd.

Well Status

Suspended ☐

Completed ☐

Abandoned ☐

Acknowledged by:

C. Kell  
for Chief Conservation Officer

Date:

Aug 10/04

File: 9211-A075-2-1

UWI: 300B236640125450

WID: 1998



# INTEGRATED PRODUCTION SERVICES



## Project Management & Engineering

**CLEAN OUT/SWABBING**

**APACHE CANADA LIMITED**

**Well Name: APACHE NOGHA B-23**

**UWI: 300\_B-23-66-40 125-45-0**

**FIELD: COLVILLE LAKE**

**FORMATION: MOUNT CLARK**

**TEST DATE: March 22 - April 4, 2004**

**DISTRIBUTION:** *Walter Stock, Calgary, AB*  
*via email: walterf.stock@apachecorp.com*  
*Lee Forbes, Calgary, AB*  
*via email: lee.forbes@apachecorp.com*

**PREPARED BY:** *Roberta (Robbie) Lailey*

Project Management & Engineering, A Division of Integrated Production Services  
Property Management Production Optimization Exploitation / Engineering Services Pressure Transient Analysis  
1000, 840 - 7<sup>th</sup> Avenue S. W. Calgary, Alberta T2P 3G2 Tel: (403) 266-0909 Fax: (403) 269-4136  
Website: [www.ipsadvantage.com](http://www.ipsadvantage.com)



APACHE CANADA LIMITED  
300 B-23-66-40 125-45-0  
Start Test Date: 2004/03/22  
Final Test Date: 2004/04/04

## Integrated Production Services Field Measurements

APACHE NOGHA B-23  
Formation: MOUNT CLARK

Job Number: CX04-201

		Clock								Gas	Cum	Fld		Oil	Cum	H2O	Cum			
	Date	Time	Tbg	Csg	WHT	Orifice	Static	Diff	Temp	Rate	Gas	Vol	BSW	Gain	Oil	Gain	H2O	pH	Salinity	API
	yyyy/mm	hh:mm:ss	kPa(g)	kPa(g)	°C	mm	kPa(g)	kPa	°C	10 <sup>3</sup> m <sup>3</sup> /	10 <sup>3</sup> m <sup>3</sup>	m <sup>3</sup>	%	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>		ppm	° API
1	2004/03/22	16:00:00	Drop bar to perforate. (2 min 9sec).																	
2			Tubing on vacuum.																	
3			Open to bleed off vacuum.																	
4		16:30:00	6																	
5	2004/03/23	08:00:00	Snowed in, wait on road crew to clear roads.																	
6	2004/03/24	09:00:00	Arrive on location, spot and rig in test equipment.																	
7		10:00:00	0		0.0															
8	2004/03/25	12:30:00	225																	
9			Released, secure well head overnight.																	
10	2004/03/26	09:00:00	200		26.0															
11			Pressure test pump lines to 21 MPa.																	
12			Start pumping to fill tubing and pump 2 to 3 m <sup>3</sup> down tubing.																	
13		13:00:00	Hole is tight, feed rate very slow, rig out pumper, wait on service rig, and acid.																	
14	2004/03/27	09:30:00	3977																	
15	2004/03/28	08:00:00	3600																	
16			Spot and rig in Shetah service rig.																	
17			Rig up wireline.																	
18			Open well to bleed off pressure.																	
19		13:30:00	0																	
20			Wireline running in hole to drop TCP.																	
21			Wireline at surface, redress tool, rerun for confirmation of TCP drop.																	
22			Wireline running in hole.																	
23		15:15:00	Wireline at surface, rig out wireline.																	
24			Rig up to swab.																	
25		17:00:00	Swab #1 : Tag - 5m, Pull - 280m, Recover - 1.0m <sup>3</sup> .																	
26			Swab #2 : Tag - 260m, Pull - 560m, Recover - 1.0m <sup>3</sup> , Total - 2.0m <sup>3</sup> .																	
27			Swab #3 : Tag - 560m, Pull - 875m, Recover - 1.0m <sup>3</sup> , Total - 3.0m <sup>3</sup> .																	
28		18:00:00	Swab #4 : Tag - 875m, Pull - 1150m, Recover - 1.0m <sup>3</sup> , Total - 3.0m <sup>3</sup> .																	
29			Swab #5 : Tag - 875m, Pull - 1395m, Recover - 0.75m <sup>3</sup> , Total - 3.75m <sup>3</sup> .																	
30	2004/03/29	07:30:00	Arrive on location.																	
31			Tubing on vacuum.																	



APACHE CANADA LIMITED

300 B-23-66-40 125-45-0

Start Test Date: 2004/03/22

Final Test Date: 2004/04/04

## Integrated Production Services

APACHE NOGHA B-23

Formation: MOUNT CLARK

Job Number: CX04-201

[illegible]



APACHE CANADA LIMITED

300 B-23-66-40 125-45-0

Start Test Date: 2004/03/22

Final Test Date: 2004/04/04

## Integrated Production Services Field Measurements

APACHE NOGHA B-23

Formation: MOUNT CLARK

Job Number: CX04-201

[illegible]



APACHE CANADA LIMITED  
300 B-23-66-40 125-45-0  
Start Test Date: 2004/03/22  
Final Test Date: 2004/04/04

# Integrated Production Services

## Field Measurements

APACHE NOGHA B-23  
Formation: MOUNT CLARK

Job Number: CX04-201

	Clock									Gas	Cum	Fld		Oil	Cum	H2O	Cum			
	Date	Time	Tbg	Csg	WHT	Orifice	Static	Diff	Temp	Rate	Gas	Vol	BSW	Gain	Oil	Gain	H2O	pH	Salinity	API
	yyyy/mm	hh:mm:ss	kPa(g)	kPa(g)	°C	mm	kPa(g)	kPa	°C	10 <sup>3</sup> m <sup>3</sup> /	10 <sup>3</sup> m <sup>3</sup>	m <sup>3</sup>	%	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>		ppm	° API
94	2004/04/02																			
95		15:00:00																		
96																				
97																				
98																				
99		18:00:00																		
100																				
101	2004/04/03	07:30:00																		
102																				
103																				
104																				
105		08:30:00																		
106																				
107		10:30:00																		
108																				
109																				
110		11:00:00																		
111																				
112																				
113		12:00:00																		
114																				
115																				
116																				
117		13:45:00																		
118																				
119																				
120		14:00:00	30																	
121		14:30:00	56																	
122		15:00:00	69																	
123		15:30:00	79																	
124		16:00:00	88																	



APACHE CANADA LIMITED  
300 B-23-66-40 125-45-0  
Start Test Date: 2004/03/22  
Final Test Date: 2004/04/04

# Integrated Production Services

## Field Measurements

APACHE NOGHA B-23  
Formation: MOUNT CLARK  
Job Number: CX04-201

	Clock									Gas	Cum	Fld		Oil	Cum	H2O	Cum			
	Date	Time	Tbg	Csg	WHT	Orifice	Static	Diff	Temp	Rate	Gas	Vol	BSW	Gain	Oil	Gain	H2O	pH	Salinity	API
	yyyy/mm	hh:mm:ss	kPa(g)	kPa(g)	°C	mm	kPa(g)	kPa	°C	10 <sup>3</sup> m <sup>3</sup> /	10 <sup>3</sup> m <sup>3</sup>	m <sup>3</sup>	%	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>		ppm	° API
125	2004/04/03		Secure well over night.																	
126	2004/04/04	07:45:00	Arrive on location.																	
127		07:50:00	600																	
128			Obtain Corelab gas samples off wellhead - #'s V0005965 and V0005148.																	
129			Rig in frac pump.																	
130		09:00:00	Attend safety meeting.																	
131			Begin acid squeeze.																	
132			Squeeze complete.																	
133		11:00:00	Rig out pump.																	
134		11:10:00	6800																	
135			Pressure up to choke and open to flow 38.1mm choke.																	
136		11:15:00	0																	
137			Shut in.																	
138		11:22:00	5750																	
139			Open to flow 38.1mm.																	
140		11:22:00	0																	
141			Shut in.																	
142		11:26:00	5000																	
143			Open to flow.																	
144		11:26:00	0																	
145			Rig up to swab.																	
146		11:45:00	4100																	
147			Open to flow.																	
148		11:45:00	0																	
149		12:00:00	Swab #1 : Tag - surface, Pull - 300m, Recover - 1.0m <sup>3</sup> .																	
150			Swab #2 : Tag - 260m, Pull - 550m, Recover - 1.0m <sup>3</sup> , Total - 2.0m <sup>3</sup> .																	
151			Swab #3 : Tag - 550m, Pull 1000m, Recover - 1.25m <sup>3</sup> , Total - 3.25m <sup>3</sup> .																	
152		13:05:00	Swab #4 : Tag - 1000m, Pull - 1395m, Recover - 0.5m <sup>3</sup> , Total - 3.75m <sup>3</sup> .																	
153			Returns are 100 % frac oil.																	
154			Swab #5 : Tag - 1250m, Pull - 1395m, Recover - 1.0m <sup>3</sup> , Total - 4.75m <sup>3</sup> .																	
155		13:45:00	Swab #6 : Tag - 1360m, Pull - 1395m, Recover - 0.0m <sup>3</sup> , Total - 4.75m <sup>3</sup> .																	

APACHE CANADA LIMITED  
300 B-23-66-40 125-45-0  
Start Test Date: 2004/03/22  
Final Test Date: 2004/04/04

# Integrated Production Services

## Field Measurements

APACHE NOGHA B-23  
Formation: MOUNT CLARK

Job Number: CX04-201

	Clock									Gas	Cum	Fld		Oil	Cum	H2O	Cum			
	Date	Time	Tbg	Csg	WHT	Orifice	Static	Diff	Temp	Rate	Gas	Vol	BSW	Gain	Oil	Gain	H2O	pH	Salinity	API
	yyyy/mm	hh:mm:ss	kPa(g)	kPa(g)	°C	mm	kPa(g)	kPa	°C	10 <sup>3</sup> m <sup>3</sup> /	10 <sup>3</sup> m <sup>3</sup>	m <sup>3</sup>	%	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>		ppm	° API
156	2004/04/04		Shut in wing valve, monitor pressure.																	
157		13:50:00	0																	
158		13:55:00	0																	
159		14:00:00	0																	
160		14:15:00	0																	
161		14:30:00	0																	
162		14:45:00	0																	
163			Rig up wireline to run recorders and plug.																	
164			End of Clean Up																	
165			Shut in master valve, secure well and rig out test equipment																	
166		15:00:00	0	0	0.0	0.00	0	0.0	0.0	0.000	0.000	0.000	0.0	0.000	0.000	0.000	0.000			









**APACHE CANADA LTD.**  
**DAILY OPERATIONS WELL ACTIVITY**

**DATE:** 2004-03-21  
**REPORT No.:** 03

<b>WELL NAME:</b> APACHE NOGHA B-23		Licence No: WID 1998		<b>PAGE No:</b> 1 of 4	
<b>LOCATION:</b> 300-B-23-66°-40'-125°-45'-0		<b>AFE No.</b> NT-04-0504			
<b>OBJECTIVE:</b> Complete the Lower & Upper Mount Clark for gas production		<b>AFE Amount:</b> \$1,034,000.00			
<b>Formation:</b>		<b>Formation:</b>		<b>Rig In Date:</b> 2004-02-09	
Mt Clark (Proposed)		Perforations (mKB): 1,441.5 to 1,444.5		<b>Rig Out Date:</b> yyyy-mm-dd	
				<b>Rig Contractor / No.:</b> Nabors # 62	
				Csg. Dia (mm): 177.80 Set At (mKB): 1,476.00	
				Liner (mm): N/A Top At (mKB): N/A	
				Liner Bot. (mKB): N/A PBTD (mKB): 1,453.50	
				Tbg. O.D. (mm): 73.00 Landed (mKB): 1,435.00	
				Packer (mm): 177.80 Set at (mKB): 1,428.24	
BOP Press. Test (Yes / No): Y Satisfactory (Yes / No): Y Function Test (Yes / No): Y Safety Meeting: 7:00 2004-03-20					
<b>24 Hr. Ops. Summary:</b> Off load tbg jts. RIH w/bit & scraper, tag PBTD at 1,456 mKB. Circulate well to frac oil. POOH. R/U E-line, run CBL-VDL-GR-CCL log.					
<b>Tomorrow's Plan:</b> M/U & RIH with 127 mm "TCP" gun assembly.					
<b>NEB NOTIFICATIONS:</b> Rig Move 2004-02-09 Flaring					
<b>OPERATION SUMMARY</b> SCV (KPa) 0 SICP (KPa) 0 SITP (KPa) 0					
<b>Operations for 2004-03-20</b>					
<b>2400-0800:</b> Hold safety & operations meeting, discuss potential dangers concerning "TCP" gun assemblies. M/U & RIH with the following assembly:					
1 - 127.0 mm ERHSC gun w/39 gr "DP" charges, 17 spm, 60° phasing (3.0 m)					
1 - 60.3 mm Mechanical firing head (1.55 m)					
1 - 60.3 mm EUE, pup jt (3.08 m)					
1 - 60.3 mm x 47.63 mm gun release sub (0.36 m)					
3.0 mm Flow sub c/w 8-25.4 mm holes (0.24 m)					
1 - 60.3 mm x 73.0 mm x/o (0.20 m)					
1 - 73.0 mm Otis "RN" nipple w/55.58 mm profile & 51.05 mm no-go (0.50 m)					
1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt (2.47 m)					
1 - 73.0 mm Otis "R" nipple w/55.58 mm profile (0.47 m)					
1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt (2.49 m)					
1 - 177.8 mm Halliburton "PLT" 10K "DGP" production pkr (1.90 m)					
1 - 177.8 mm Halliburton "XXL" HD on-off tool w/55.58 mm "R" profile (1.06 m)					
1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt (3.10 m)					
1 - 73.0 mm EUE, 9.67 kg/m, L-80 tbg jt (9.63 m)					
1 - 73.0 mm Otis "X" nipple w/58.75 mm profile (0.36 m)					
1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt - marker jt (1.25 m)					
147 - 73.0 mm EUE, 9.67 kg/m, L-80 tbg jts (1,410.54 m)					
Set packer, install tbg hanger, land tbg in 8,000 DaN compression. R/U E-Line, RIH w/GR-CCL log for confirmation pass. Log indicates gun landed 0.5 m deep, inform Calgary of results, received confirmation to leave gun as is - will perforate 1,441.5-1444.5 mKB (Original interval was 1,441.0-1,444.0 mKB)					
<b>Con't on next page.....</b>					
<b>Reservoir Fluid Summary</b>		<b>Daily</b>		<b>Cumulative</b>	
Gas: E <sup>3</sup> m <sup>3</sup> /d		0.00		0.00	
Oil / Condensate: m <sup>3</sup> /d		0.00		0.00	
Water: m <sup>3</sup> /d		0.00		0.00	
Swab / Flow Time: Hrs		0.00		0.00	
<b>Load Fluid Type:</b> Frac oil		<b>Amount Used (m<sup>3</sup>):</b> 27.00		<b>Recovered (m<sup>3</sup>):</b> 27.00	
		<b>Cum. Recovered (m<sup>3</sup>):</b> 27.00		<b>Left To Recover (m<sup>3</sup>):</b> 27.00	
<b>Packer set at (m):</b> 1428.24		<b>Casing annulus volume (m<sup>3</sup>):</b> 21.69		<b>Tubing volume (m<sup>3</sup>):</b> 4.33	
		<b>Bottom to perf. Volume (m<sup>3</sup>):</b> 0.38		<b>TOTAL WELL VOLUME (m<sup>3</sup>):</b> 26.40	
<b>Man Down Drill</b>		<b>BOP TESTS</b>			<b>BOP Drill</b>
<b>Drilling Rig Hours.</b>	<b>Personnel on Location</b>	<b>Component</b>	<b>Low</b>	<b>High</b>	<b>Time</b>
12.0	Rig: 10	Annular			
Cumulative: 38.0	Service: 4	Pipe			
Downtime: 0.0	ACL: 1	Blind			
Cum. Downtime: 0.0	Total: 15	Valves			
Weather Conditions: High -33°C, Low -44°C, Overcast, 15 km/hr wind					
Road Conditions: Icy					
Engineer: Bruce Beveridge Phone No: 403-261-1385					
Reported To: Phone No:					
Reported By: Walter F. Stock Phone No: 600-700-7716					





APACHE CANADA LTD.  
DAILY OPERATIONS WELL ACTIVITY

DATE: 2004-03-21  
REPORT No.: 03

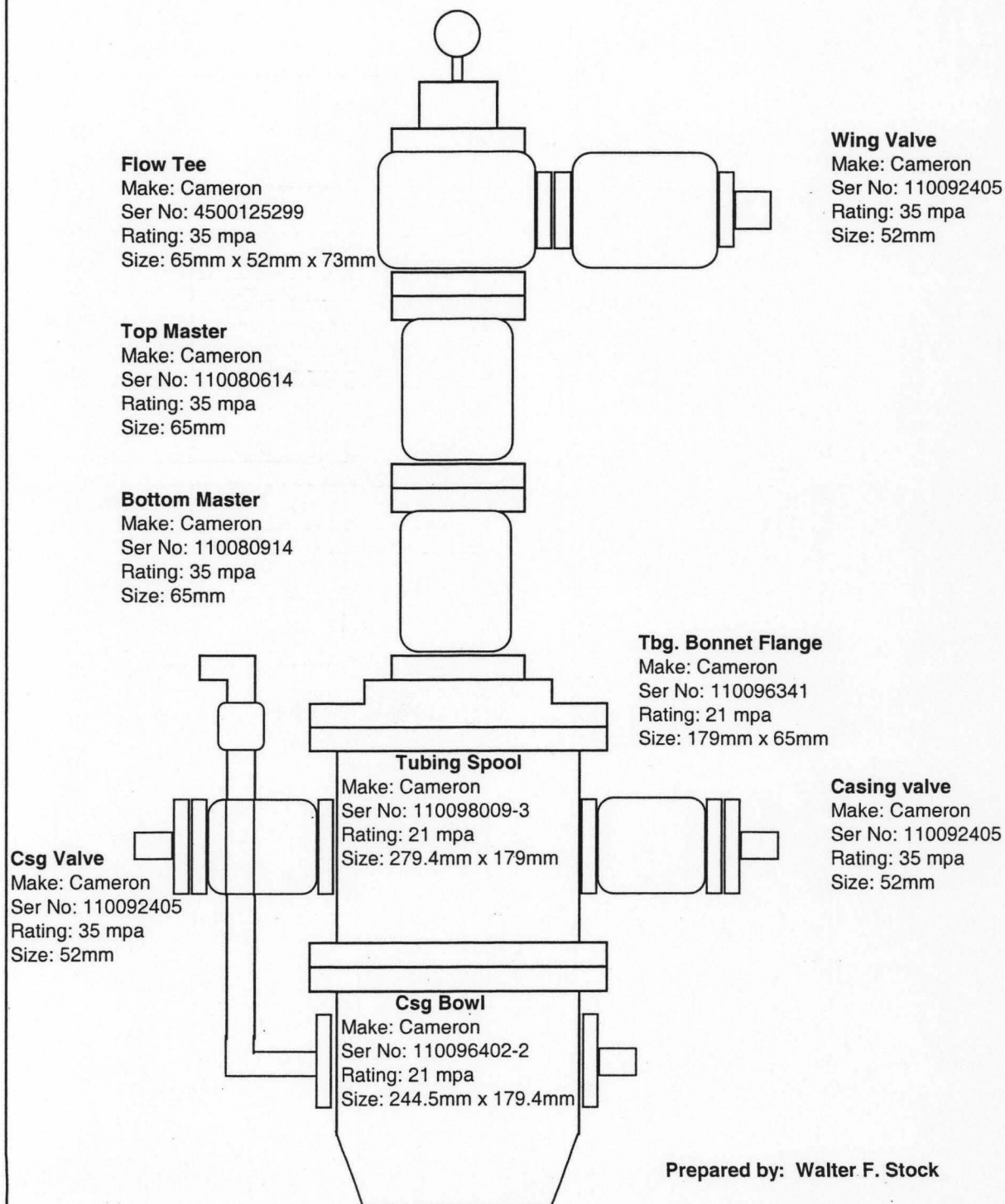
WELL NAME: APACHE NOGHA B-23		Licence No: WID 1998		PAGE No: 2 of 4	
LOCATION: 300-B-23-66°-40'-125°-45'-0				AFE No. NT-04-0504	
OBJECTIVE: Complete the Lower & Upper Mount Clark for gas production				AFE Amount: \$1,034,000.00	
				Rig In Date: 2004-02-09	
Formation: Perforations (mMD):		Formation: Perforations (m):		Rig Out Date: yyyy-mm-dd	
Mt Clark (Proposed) 1,441.0 to 1,444.0				Rig Contractor / No.: Nabors # 62	
				Csg. Dia (mm): 177.80 Set At (mKB): 1,476.00	
				Liner (mm): N/A Top At (mKB): N/A	
				Liner Bot. (mKB): N/A PBTD (mKB): 1,453.50	
				Tbg. O.D. (mm): 73.00 Landed (mKB): 1,435.00	
				Packer (mm): 177.80 Set at (mKB): 1,428.24	

Operations for 2004-03-20 Continued from page 1

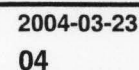
**0800-1400:** P/T packer assembly & csg to 7.0 Mpa for 15 min - ok, release pressure. R/O E-Line. N/D BOP. N/U & P/T wellhead assembly to 21.0 Mpa - ok. Wellhead secured, turn operations back over to Drilling Dept to commence with rigging out of drilling rig & related equipment.

Well will not be perforated until drilling rig has been moved off of location.





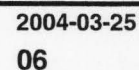




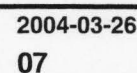
WELL NAME:		APACHE NOGHA B-23				Licence No:		WID 1998		PAGE No:		1 of 1	
LOCATION:		300-B-23-66°-40'-125°-45'-0								AFE No.		NT-04-0504	
OBJECTIVE:		Complete the Lower & Upper Mount Clark for gas production								AFE Amount:		\$1,034,000.00	
										Rig In Date:		2004-02-09	
Formation:		Perforations (mKB):		Formation:		Perforations (mKB):		Rig Out Date:		2004-03-21			
Mt Clark (Open)		1,441.5 to 1,444.5				to		Rig Contractor / No.:					
		to				to		Csg. Dia (mm):		177.80		Set At (mKB): 1,476.00	
		to				to		Liner (mm):		N/A		Top At (mKB): N/A	
		to				to		Liner Bot. (mKB):		N/A		PBTD (mKB): 1,453.5	
		to				to		Tbg. O.D. (mm):		73.00		Landed (mKB): 1,435.00	
		to				to		Packer (mm):		177.80		Set at (mKB): 1,428.24	
BOP Press. Test (Yes / No):		N/A		Satisfactory (Yes / No):		N/A		Function Test (Yes / No):		N/A		Safety Meeting: 15:00 2004-03-22	
24 Hr. Ops. Summary:		Drop bar, detonate "TCP" gun assembly.											
Tommorow's Plan:		R/U Schlumberger to pump 2.0 m³ frac oil											
NEB NOTIFICATIONS:		Rig Move				Flaring							
OPERATION SUMMARY		SCV (KPa) 0		SICP (KPa) 0		SITP (KPa) 137							
		Operations for 2004-03-22											
		1500-1700: Travel from Traver's base camp to location. Load Schlumberger E-line unit on to low-boy (broken rear springs), haul back to Norman Wells.											
		Hold safety meeting, remove cap from wellhead - drop bar. Detonate gun assembly, perforate the Mount Clark interval 1,441.5 - 1,444.5 mKB.											
		Well went on initial vacuum, monitor pressure, 15 min SITP = 137 Kpa. Shut-in & re well.											
		Unable to stay on location due to blizzard conditions, extremly high winds ~ 65 to 70 km/hr. Travel back to base camp.											
												</	

WELL NAME:		APACHE NOGHA B-23				Licence No: WID 1998		PAGE No:		1 of 1	
LOCATION:		300-B-23-66°-40'-125°-45'-0						AFE No.		NT-04-0504	
OBJECTIVE:		Complete the Lower & Upper Mount Clark for gas production						AFE Amount:		\$1,034,000.00	
								Rig In Date:		2004-02-09	
Formation:		Perforations (mKB):		Formation:		Perforations (mKB):		Rig Out Date:		2004-03-21	
Mt Clark (Open)		1,441.5 to 1,444.5				to		Rig Contractor / No.:			
		to				to		Csg. Dia (mm):		177.80 Set At (mKB): 1,476.00	
		to				to		Liner (mm):		N/A Top At (mKB): N/A	
		to				to		Liner Bot. (mKB):		N/A PBTD (mKB): 1,453.00	
		to				to		Tbg. O.D. (mm):		73.00 Landed (mKB): 1,435.00	
		to				to		Packer (mm):		177.80 Set at (mKB): 1,428.24	
BOP Press. Test (Yes / No):		N/A		Satisfactory (Yes / No):		N/A		Function Test (Yes / No):		N/A Safety Meeting: 8:00 2004-03-23	
24 Hr. Ops. Summary:		Shut down, roads require plowing									
Tommorow's Plan:		R/U Schlumberger to pump 2.0 m³ frac oil									
NEB NOTIFICATIONS:		Rig Move				Flaring					
OPERATION SUMMARY		SCV (KPa) 0		SICP (KPa) 0		SITP (KPa) 137		COST SUMMARY			
Operations for 2004-03-23								Contractor	Service Provided	Code	Amount
0800: Operations suspended due to blizzard conditions overnight, unable to access location as all roads require plowing. Roads will be cleared by ~2100 hrs.								IPS	E-Line	70049	\$6,200.00
								IPS	Tester's	70035	\$3,200.00
								Schlumberger	Pumper	70034	\$17,963.00



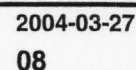


Man Down Drill		BOP TESTS				BOP Drill			
Drilling Rig Hours.	Personnel on Location	Component	Low	High	Time	Weather Conditions: High -28°C, Low -39°C, Clear, 15 km/hr wind			
0.0	0	Annular				Road Conditions: Icy			
Cumulative: 0.0	Service: 1	Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime: 0.0	ACL: 1	Blind				Reported To:		Phone No:	
Cum. Downtime: 0.0	Total: 2	Valves				Reported By:	Walter F. Stock	Phone No:	600-700-7716



Man Down Drill				BOP TESTS				BOP Drill			
Drilling Rig Hours.		Personnel on Location		Component	Low	High	Time	Weather Conditions: High -28°C, Low -39°C, Clear, 15 km/hr wind			
0.0	Rig:	0	Annular					Road Conditions: Icy			
Cumulative:	0.0	Service:	5	Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime:	0.0	ACL:	1	Blind				Reported To:		Phone No:	
Cum. Downtime:	0.0	Total:	6	Valves				Reported By:	Walter F. Stock	Phone No:	600-700-7716





Man Down Drill				BOP TESTS				BOP Drill			
Drilling Rig Hours.		Personnel on Location		Component	Low	High	Time	Weather Conditions: High -31°C, Low -41°C, Clear, 10 km/hr wind			
:	0.0	Rig:	0	Annular				Road Conditions: Icy			
Cumulative:	0.0	Service:	5	Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime:	0.0	ACL:	1	Blind				Reported To:		Phone No:	
Cum. Downtime:	0.0	Total:	6	Valves				Reported By:	Walter F. Stock	Phone No:	600-700-7716

<b>WELL NAME:</b>	APACHE NOGHA B-23			Licence No:	WID 1998	<b>PAGE No:</b>	1	of	1
<b>LOCATION:</b>	300-B-23-66°-40'-125°-45'-0					<b>AFE No.</b>	NT-04-0504		
<b>OBJECTIVE:</b>	Complete the Lower & Upper Mount Clark for gas production					<b>AFE Amount:</b>	\$1,034,000.00		
						<b>Rig In Date:</b>	2004-02-09		
<b>Formation:</b>	Perforations (mKB):		<b>Formation:</b>	Perforations (mKB):		<b>Rig Out Date:</b>	2004-03-21		
Mt Clark (Open)	1,441.5	to	1,444.5		to	<b>Rig Contractor / No.:</b>			
		to			to	<b>Csg. Dia (mm):</b>	177.80	<b>Set At (mKB):</b>	1,476.00
		to			to	<b>Liner (mm):</b>	N/A	<b>Top At (mKB):</b>	N/A
		to			to	<b>Liner Bot. (mKB):</b>	N/A	<b>PBTD (mKB):</b>	1,453.50
		to			to	<b>Tbg. O.D. (mm):</b>	73.00	<b>Landed (mKB):</b>	1,435.00
		to			to	<b>Packer (mm):</b>	177.80	<b>Set at (mKB):</b>	1,428.24

BOP Press. Test (Yes / No):	N/A	Satisfactory (Yes / No):	N/A	Function Test (Yes / No):	N/A	Safety Meeting:	8:00	2004-03-27
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24 Hr. Ops. Summary:	Wait on Shehtah service rig & related equipment to arrive from Norman Wells
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Tommorow's Plan:	Rig in service rig
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NEB NOTIFICATIONS:	Rig Move	Flaring	
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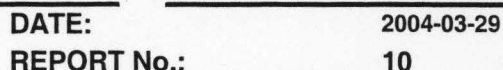
OPERATION SUMMARY			SCV (KPa) 0	SICP (KPa) 0	SITP (KPa) 3977	COST SUMMARY
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Operations for 2004-03-27		Contractor	Service Provided	Code	Amount
<b>0800-1930:</b> Wait on service rig & equipment to arrive from location.		IPS	E-Line	70049	\$6,200.00
		IPS	Tester's	70035	\$3,200.00
<b>1930-2100:</b> Off load equipment on location, rig arrived on wheeler, off load service rig. Shutdown for night.		Mackenzie Valley	Trucking	70074	\$2,600.00
		Akita	Camp	70005	\$2,500.00
		AOGS	Catering	70005	\$2,500.00
		Auburn	Wellsite Trailer	70031	\$180.00
		Regs	Water Truck		\$200.00
		Daily Cost:	\$17,380.00		
		Previous Cost:	\$361,885.00		
		Cum. Cost:	\$379,265.00		

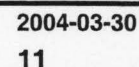
Reservoir Fluid Summary		Daily	Cumulative	Load Fluid Type:		Frac oil	Packer set at (m):	1428.24
Gas:	E³ m³/d	0.00	0.00	Amount Used (m³):	0.00	Frac Oil	Casing annulus volume (m³):	21.69
Oil / Condensate:	m³/d	0.00	0.00	Recovered (m³):	0.00		Tubing volume (m³):	4.33
Water:	m³/d	0.00	0.00	Cum. Recovered (m³):	0.00		Bottom to perf. Volume (m³):	0.38
Swab / Flow Time:	Hrs	0.00	0.00	Left To Recover (m³):	27.00	Frac Oil	<b>TOTAL WELL VOLUME (m³):</b>	<b>26.40</b>

Man Down Drill			BOP TESTS				BOP Drill			
Drilling Rig Hours.		Personnel on Location	Component	Low	High	Time	Weather Conditions: High -31°C, Low -41°C, Clear, 10 km/hr wind			
:	0.0	Rig:	0	Annular			Road Conditions: Icy			
Cumulative:	0.0	Service:	5	Pipe			Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime:	0.0	ACL:	1	Blind			Reported To:		Phone No:	
Cum. Downtime:	0.0	Total:	6	Valves			Reported By:	Walter F. Stock	Phone No:	600-700-7716





WELL NAME:		APACHE NOGHA B-23				Licence No: WID 1998				PAGE No:		1		of		1	
LOCATION:		300-B-23-66°-40'-125°-45'-0										AFE No.		NT-04-0504			
OBJECTIVE:		Complete the Lower & Upper Mount Clark for gas production										AFE Amount:		\$1,034,000.00			
												Rig In Date:		2004-03-28			
Formation:		Perforations (mKB):		Formation:		Perforations (mKB):				Rig Out Date:							
Mt Clark (Open)		1,441.5 to 1,444.5				to				Rig Contractor / No.:		Shehtah #14					
		to				to				Csg. Dia (mm):		177.80		Set At (mKB):		1,476.00	
		to				to				Liner (mm):		N/A		Top At (mKB):		N/A	
		to				to				Liner Bot. (mKB):		N/A		PBTD (mKB):		1,453.5	
		to				to				Tbg. O.D. (mm):		73.00		Landed (mKB):		1,435.00	
		to				to				Packer (mm):		177.80		Set at (mKB):		1,428.24	
BOP Press. Test (Yes / No):		N/A		Satisfactory (Yes / No):		N/A		Function Test (Yes / No):		N/A		Safety Meeting:		8:00		2004-03-28	
24 Hr. Ops. Summary:		R/U Shehtah service rig, hold safety meeting, conduct rig inspection - ok. R/U S-Line, drop perf gun to cellar															
		Pulled 8 swabs, recovered 4.3 m³ frac fluid															
Tommorow's Plan:		Rig in acidizing equipment															
NEB NOTIFICATIONS:		Rig Move		25-Mar-04		Flaring											
OPERATION SUMMARY		SCV (KPa) 0		SICP (KPa) 0		SITP (KPa) 3600		COST SUMMARY									
		Operations for 2004-03-28															
<p><b>0800-1330:</b> SITP = 3,600 Kpa (dead weight). Spot equipment on location. Rig in equipment to Apache &amp; NEB regulations. Hold safety &amp; operations meeting. Rig in &amp; fire boiler. Lay out pump lines. Conduct full rig inspection - ok.</p> <p><b>1330-1500:</b> R/U IPS S-Line unit, bleed off tbq pressure to bullet, pressure bled down to 0 Kpa on 10 min, no burnable gas was observed at surface. M/U &amp; RIH with Otis "B" shifting tool to drop guns, locate gun release at 1,436 mKB. Drop to bottom of hole. Con't to RIH tag top of guns at 1,447.7 mKB (3.2 m below bottom shot). POOH w/slickline. R/O &amp; release S-Line unit. Slickline is required on C-34.</p> <p><b>1500-1900:</b> R/U swab equipment, to swab out frac oil prior to pumping 2.0 m³ acid. Pulled a total of 8 swabs, recovered 4.3 m³ frac oil, last swab also had signs of gas, swabbed well down to top of Otis "X" profile at 1,414 mKB. Lay down swab equipment, shut-in &amp; secure well for night.</p>		Contractor		Service Provided		Code		Amount									
		IPS		E-Line		70049		\$6,200.00									
		IPS		Tester's		70035		\$3,200.00									
		Shehtah		Rig 14		70019		\$7,890.00									
		Akita		Camp		70005		\$2,500.00									
		AOGS		Catering		70005		\$2,500.00									
		Auburn		Wellsite Trailer		70031		\$180.00									
		Regs		Water Truck		70074		\$200.00									
		EMS Sahtu		Medic		70017		\$820.00									
		MacKenzieValley		Haul in Rig		70074		\$33,570.00									
		IPS		S-Line		70049		\$1,225.00									



WELL NAME:		APACHE NOGHA B-23				Licence No:		WID 1998		PAGE No:		1		of		1	
LOCATION:		300-B-23-66°-40'-125°-45'-0								AFE No.		NT-04-0504					
OBJECTIVE:		Complete the Lower & Upper Mount Clark for gas production										AFE Amount:		\$1,034,000.00			
												Rig In Date:		2004-03-28			
Formation:		Perforations (mKB):		Formation:		Perforations (mKB):		Rig Out Date:		Rig Contractor / No.: Shehtah #14							
Mt Clark (Open)		1,441.5 to 1,444.5				to											
		to				to		Csg. Dia (mm): 177.80		Set At (mKB): 1,476.00							
		to				to		Liner (mm): N/A		Top At (mKB): N/A							
		to				to		Liner Bot. (mKB): N/A		PBTD (mKB): 1,453.50							
		to				to		Tbg. O.D. (mm): 73.00		Landed (mKB): 1,435.00							
		to				to		Packer (mm): 177.80		Set at (mKB): 1,428.24							
BOP Press. Test (Yes / No):		N/A		Satisfactory (Yes / No):		N/A		Function Test (Yes / No):		N/A		Safety Meeting:		8:00		2004-03-29	
24 Hr. Ops. Summary:		Clean equipment															
Tommorow's Plan:		R/U acidizing equipment (Schlumberger)															
NEB NOTIFICATIONS:		Rig Move		25-Mar-04		Flaring											
OPERATION SUMMARY		SCV (KPa) 0		SICP (KPa) 0		SITP (KPa) TSTM		COST SUMMARY									
<p><b>Operations for 2004-03-29</b></p> <p><b>0800-1600:</b> SITP = TSTM, SICP = 0 Kpa. Hold safety &amp; operations meeting. Perform checks on equipment - clean equipment.</p> <p>Schlumberger delayed due to late arrival of plastic totes from High Level, equipment to be on location for 0800 hrs Tuesday March 30.</p> <p>It should be noted that Schlumberger had no way of hauling acid from Norman Wells to location. Plastic totes were flown in from High Level and are being rented from Airborne Energy Solutions.</p>								Contractor		Service Provided		Code		Amount			
								IPS		E-Line		70049		\$6,200.00			
								IPS		Tester's		70035		\$3,200.00			
								Shehtah		Rig 14		70019		\$7,890.00			
								Akita		Camp		70005		\$2,500.00			
								AOGS		Catering		70005		\$3,000.00			
								Auburn		Wellsite Trailer		70031		\$180.00			
								Regs		Water Truck		70074		\$200.00			
								EMS Sahtu		Medic		70017		\$820.00			
								Daily Cost:									
Previous Cost:												\$437,550.00					
Cum. Cost:												\$461,540.00					
Reservoir Fluid Summary		Daily		Cumulative		Load Fluid Type:		Frac oil		Packer set at (m):		1428.24					
Gas: E³ m³/d		0.00		0.00		Amount Used (m³):		0.00 Frac Oil		Casing annulus volume (m³):		21.69					
Oil / Condensate: m³/d		0.00		0.00		Recovered (m³):		4.30 Frac Oil		Tubing volume (m³):		4.33					
Water: m³/d		0.00		0.00		Cum. Recovered (m³):		4.30 Frac Oil		Bottom to perf. Volume (m³):		0.38					
Swab / Flow Time: Hrs		0.00		0.00		Left To Recover (m³):		22.70 Frac Oil		TOTAL WELL VOLUME (m³):		26.40					
Man Down Drill				BOP TESTS				BOP Drill									
Drilling Rig Hours.		Personnel on Location		Component		Low		High		Time		Weather Conditions: High -19°C, Low -26°C, Clear, 35 km/hr wind					
8.0		Rig: 5		Annular								Road Conditions: Icy					
Cumulative: 19.0		Service: 5		Pipe								Engineer: Bruce Beveridge Phone No: 403-261-1385					
Downtime: 0.0		ACL: 1		Blind								Reported To: Phone No:					
Cum. Downtime: 0.0		Total: 11		Valves								Reported By: Walter F. Stock Phone No: 600-700-7716					





**APACHE CANADA LTD.**  
**DAILY OPERATIONS WELL ACTIVITY**

**DATE:** 2004-03-31  
**REPORT No.:** 12

<b>WELL NAME:</b> APACHE NOGHA B-23		Licence No: WID 1998		<b>PAGE No:</b> 1 of 1	
<b>LOCATION:</b> 300-B-23-66°-40'-125°-45'-0				<b>AFE No.</b> NT-04-0504	
<b>OBJECTIVE:</b> Complete the Lower & Upper Mount Clark for gas production				<b>AFE Amount:</b> \$1,034,000.00	
				<b>Rig In Date:</b> 2004-03-28	
				<b>Rig Out Date:</b>	
				<b>Rig Contractor / No.:</b> Shehtah #14	
<b>Formation:</b>	<b>Perforations (mKB):</b>	<b>Formation:</b>	<b>Perforations (mKB):</b>	<b>Csg. Dia (mm):</b> 177.80	<b>Set At (mKB):</b> 1,476.00
Mt Clark (Open)	1,441.5 to 1,444.5		to	<b>Liner (mm):</b> N/A	<b>Top At (mKB):</b> N/A
	to		to	<b>Liner Bot. (mKB):</b> N/A	<b>PBTD (mKB):</b> 1,453.50
	to		to	<b>Tbg. O.D. (mm):</b> 73.00	<b>Landed (mKB):</b> 1,435.00
	to		to	<b>Packer (mm):</b> 177.80	<b>Set at (mKB):</b> 1,428.24
<b>BOP Press. Test (Yes / No):</b> N/A <b>Satisfactory (Yes / No):</b> N/A <b>Function Test (Yes / No):</b> N/A <b>Safety Meeting:</b> 8:00    2004-03-30					
<b>24 Hr. Ops. Summary:</b>		Perform rig maintenance, man down drills			
<b>Tomorrow's Plan:</b>		R/U Schlumberger, acidize lower Mount Clark			
<b>NEB NOTIFICATIONS:</b>		<b>Rig Move</b>	<b>25-Mar-04</b>	<b>Flaring</b>	
<b>OPERATION SUMMARY</b>		<b>SCV (KPa)</b> 0	<b>SICP (KPa)</b> 0	<b>SITP (KPa)</b> TSTM	<b>COST SUMMARY</b>
<b>Operations for 2004-03-30</b>					
<b>0800-2000:</b> SITP = TSTM, SICP = 0 Kpa. Hold safety & operations meeting. Function test ESD's on rig & rig pump.					
Spoke with Jason Kelly (Schlumberger Acid Supervisor) at ~0930 hrs, he had indicated to me that they were having problems with there tractor trailer unit at km 60 on the Nogha which is ~35 km from our location. The front chain which secures the front end of the skid pump unit had broken causing the front of the pump skid to slid ~ 3ft to one side, as a third party truck (tractor unit) had pulled up to offer assistance they noticed oil leaking from the tractor unit. Upon investigation it was discovered that a rod had gone through the side of the engine block. The Schlumberger tractor unit was unhitched and loaded on to a low boy. The third party tractor unit hitched up to the trailer.					
After this was done it was noticed that the pipe rack containing Schlumbergers line pipe, sweeps & chicksans had broken, they had lost all of their line pipe, etc.					
Jason Kelly than called me back again to inform me of the situation and that he was going back down the road to locate the missing equipment. At that time I had instructed him to park the pump unit at the Akita Camp which is located at km 68. At ~1745 hrs I had received a third phone call from Jason Kelly indicating that he had located enough of his lost line pipe, sweeps & chicksans that we would be able to commence with the acid job.					
Given the time of day and also deteriorating weather conditions (high winds & heavy snowfall) it was decided to start with the acid job the following morning.					
		<b>Daily Cost:</b> \$82,400.00			
		<b>Previous Cost:</b> \$461,540.00			
		<b>Cum. Cost:</b> \$543,940.00			
<b>Reservoir Fluid Summary</b>		<b>Daily</b>	<b>Cumulative</b>	<b>Load Fluid Type:</b> Frac oil	<b>Packer set at (m):</b> 1428.24
Gas:	E <sup>3</sup> m <sup>3</sup> /d	0.00	0.00	Amount Used (m <sup>3</sup> ): 0.00	Casing annulus volume (m <sup>3</sup> ): 21.69
Oil / Condensate:	m <sup>3</sup> /d	0.00	0.00	Recovered (m <sup>3</sup> ): 0.00	Tubing volume (m <sup>3</sup> ): 4.33
Water:	m <sup>3</sup> /d	0.00	0.00	Cum. Recovered (m <sup>3</sup> ): 4.30	Bottom to perf. Volume (m <sup>3</sup> ): 0.38
Swab / Flow Time:	Hrs	0.00	0.00	Left To Recover (m <sup>3</sup> ): 22.70	<b>TOTAL WELL VOLUME (m<sup>3</sup>):</b> 26.40
<b>Man Down Drill</b>		<b>30-Mar-04</b>		<b>BOP TESTS</b>	
<b>Drilling Rig Hours.</b>	<b>Personnel on Location</b>	<b>Component</b>	<b>Low</b>	<b>High</b>	<b>Time</b>
12.0	Rig:	5	Annular		
Cumulative:	31.0	Service:	5	Pipe	
Downtime:	0.0	ACL:	1	Blind	
Cum. Downtime:	0.0	Total:	11	Valves	
<b>BOP Drill</b>					
Weather Conditions: High -16°C, Low -21°C, Snow, 15 km/hr wind					
Road Conditions: Icy					
Engineer: Bruce Beveridge    Phone No: 403-261-1385					
Reported To:    Phone No:					
Reported By: Walter F. Stock    Phone No: 600-700-7716					



APACHE CANADA LTD.  
DAILY OPERATIONS WELL ACTIVITY

DATE: 2004-04-01  
REPORT No.: 13a

WELL NAME:	APACHE NOGHA B-23			Licence No:	WID 1998	PAGE No:	1	of	2
LOCATION:	300-B-23-66°-40'-125°-45'-0					AFE No.	NT-04-0504		
OBJECTIVE:	Complete the Lower & Upper Mount Clark for gas production					AFE Amount:	\$1,034,000.00		
						Rig In Date:	2004-03-28		
Formation:	Perforations (mKB):		Formation:	Perforations (mKB):		Rig Out Date:			
Mt Clark (Open)	1,441.5	to 1,444.5		to		Rig Contractor / No.:	Shehtah #14		
	to			to		Csg. Dia (mm):	177.80	Set At (mKB):	1,476.00
	to			to		Liner (mm):	N/A	Top At (mKB):	N/A
	to			to		Liner Bot. (mKB):	N/A	PBTD (mKB):	1,453.50
	to			to		Tbg. O.D. (mm):	73.00	Landed (mKB):	1,435.00
	to			to		Packer (mm):	177.80	Set at (mKB):	1,428.24

BOP Press. Test (Yes / No): N/A Satisfactory (Yes / No): N/A Function Test (Yes / No): N/A Safety Meeting: 8:00 2004-03-31

24 Hr. Ops. Summary:

Tomorrow's Plan:

NEB NOTIFICATIONS: Rig Move 25-Mar-04 Flaring

OPERATION SUMMARY SCV (KPa) 0 SICP (KPa) 0 SITP (KPa) TSTM

Operations for 2004-03-31

**0800-1100:** SITP = TSTM, SICP = 0 Kpa. Spot Schlumberger acidizing equipment on location, rig in pump lines, off load acid totes. Repair fuel system on pump unit.

**1100-1430:** Hold safety & operations meeting. Function test ESD's on rig, rig pump and acid unit - ok. P/T surface treating lines to 35.0 Mpa - ok. Blend chemicals for acid on location (15% HCl + 20% K046 (methanol) + 0.2% A262 + 2.5% F105). Perform **titration test on acid = 15.1%**. Pump 2.0 m3 acid followed with 2.25 m3 oil (tbg volume = 4.25 m3). Displace with an additional 2.0 m3 frac oil. Tubing pressure increased to 27.1 Mpa when break down was observed, pressure fell and maintained 22.3 Mpa, tbg pressure than fell to 17.0 Mpa when acid reached perforations.

Total fluid pumped into formation = 4.0 m3. Stop pump. ISITP = 17.0 Mpa, 15 min SITP = 15.2 Mpa. Rig off Schlumberger pump equipment.

**1430-1900:** Rig in testers line, prepare to open well to test vessel. SITP = 9,600 Kpa. Open well, tubing pressure bled down to 0 Kpa with no after flow. R/U swab equipment.

Pulled 7 swabs, recovered 4.04 m3 frac oil & 0.46 m3 acid water. Well was swabbed dry with TSTM gas flow after each swab. Well was shut-in for 1.0 hr. SITP = TSTM with no fluid entry. Inform Calgary of results. Shut-in & secure well for night.

See attached swab report

COST SUMMARY

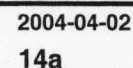
Contractor	Service Provided	Code	Amount
IPS	E-Line	70049	\$6,200.00
IPS	Tester's	70035	\$3,200.00
Shehtah	Rig 14	70019	\$7,800.00
Akita	Camp	70005	\$2,500.00
AOGS	Catering	70005	\$2,500.00
Auburn	Wellsite Trailer	70031	\$180.00
Regs	Water Truck	70074	\$200.00
EMS Sahtu	Medic	70017	\$820.00
Schlumberger	Acid & Equipment	70034	\$20,365.00
MacKenzie Valley	Trucking	70074	\$4,680.00

Reservoir Fluid Summary	Daily	Cumulative	Load Fluid Type:	Frac oil	Packer set at (m):	1428.24
Gas: E <sup>3</sup> m <sup>3</sup> /d	0.00	0.00	Amount Used (m <sup>3</sup> ):	6.00 4.0m <sup>3</sup> oil & 2.0m <sup>3</sup> HCl	Casing annulus volume (m <sup>3</sup> ):	21.69
Oil / Condensate: m <sup>3</sup> /d	0.00	0.00	Recovered (m <sup>3</sup> ):	4.50 4.0m <sup>3</sup> oil & 0.54m <sup>3</sup> HCl	Tubing volume (m <sup>3</sup> ):	4.33
Water: m <sup>3</sup> /d	0.00	0.00	Cum. Recovered (m <sup>3</sup> ):	0.00	Bottom to perf. Volume (m <sup>3</sup> ):	0.38
Swab / Flow Time: Hrs	0.00	0.00	Left To Recover (m <sup>3</sup> ):	1.54	TOTAL WELL VOLUME (m <sup>3</sup> ):	26.40

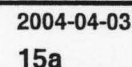
Man Down Drill		30-Mar-04		BOP TESTS			BOP Drill		
Drilling Rig Hours.	Personnel on Location	Component	Low	High	Time	Weather Conditions:	High -22°C, Low -27°C, Snow, 35 km/hr wind		
Daily: 12.0	Rig: 5	Annular				Road Conditions:	Icy		
Cumulative: 43.0	Service: 8	Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime: 0.0	ACL: 1	Blind				Reported To:	Phone No:		
Cum. Downtime: 0.0	Total: 14	Valves				Reported By:	Walter F. Stock	Phone No:	600-700-7716

**APACHE CANADA LTD.**  
**SWAB REPORT**



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**APACHE CANADA LTD.**  
**SWAB REPORT**

[illegible]





**APACHE CANADA LTD.**  
**DAILY OPERATIONS WELL ACTIVITY**

**DATE:** 2004-04-03  
**REPORT No.:** 15b

WELL NAME:	APACHE NOGHA B-23			Licence No:	WID 1998	PAGE No:			2	of	2
LOCATION:	300-B-23-66°-40'-125°-45'-0					AFE No.			NT-04-0504		
OBJECTIVE:	Complete the Lower & Upper Mount Clark for gas production					AFE Amount:			\$1,034,000.00		
						Rig In Date:			2004-03-28		
Formation:	Perforations (mKB):		Formation:	Perforations (mKB):		Rig Out Date:					
Mt Clark (Open)	1,441.5	to 1,444.5		to		Rig Contractor / No.:			Shehtah #14		
Mt Clark (Proposed)	1,420.0	to 1,426.0		to		Csg. Dia (mm):			177.80	Set At (mKB):	1,476.00
		to		to		Liner (mm):			N/A	Top At (mKB):	N/A
		to		to		Liner Bot. (mKB):			N/A	PBTD (mKB):	1,453.50
		to		to		Tbg. O.D. (mm):			73.00	Landed (mKB):	1,439.27
		to		to		Packer (mm):			177.80	Set at (mKB):	1,415.00

**Operations for 2004-04-02**

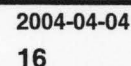
**Bottom Hole Assembly:**

- 1) 1 - 73.0 mm Wireline re-entry guide ( 0.15 m )
- 2) 1 - 73.0 mm Otis "RN" nipple c/w 55.58 mm profile & 51.05 mm no-go ( 0.50 m )
- 3) 1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt ( 2.47 m )
- 4) 1 - 73.0 mm Otis "R" nipple c/w 55.58 mm profile ( 0.48 m )
- 5) 1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt ( 2.47 m )
- 6) 1 - 177.8 mm x 73.0 mm Halliburton G-77 Hydraulic set production packer c/w 11,000 DaN strait up pull emergency shear release ( 1.68 m )
- 7) 1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt ( 1.25 m )
- 8) 1 - 73.0 mm Otis "XA" sliding sleeve c/w 58.75 mm profile ( 1.12 m )
- 9) 1 - 73.0 mm EUE, 9.67 kg/m, L-80 tbg jt ( 9.63 m )
- 10) 1 - 73.0 mm Otis "X" nipple c/w 58.75 mm profile ( 0.37 m )
- 11) 1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt ( 2.47 m )
- 12) 1 - 177.8 mm x 73.0 mm Halliburton G-77 Hydraulic set production packer c/w 11,000 DaN strait up pull emergency shear release ( 1.68 m )
- 13) 1 - 177.8 mm x 73.0 mm "XL" HD on-off tool c/w 58.75 mm "X" profile ( 0.67 m )
- 14) 1 - 73.0 mm EUE, 9.67 kg/m, L-80 pup jt ( 3.09 m )
- 15) 1 - 73.0 mm Otis "X" nipple c/w 58.75 mm profile ( 0.37 m )
- 16) 147 - 73.0 mm EUE, 9.67 kg/m, L-80 tbg jts ( 1,410.54 m )
- 17) 1 - 179.4 mm x 73.0 mm Extended neck tubing hanger ( 0.18 m )

**Tubing & BHA** = 1,439.12  
**KB Diff** = 1.76  
**Total Tally** = 1,440.88

**Packer Stroke** = - 0.43  
**Wireline correction** = - 1.27

**Tubing Bottom at** = 1,439.18

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**APACHE CANADA LTD.**  
**SWAB REPORT**





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**APACHE CANADA LTD.**  
**DAILY OPERATIONS WELL ACTIVITY**

**DATE:** 2004-04-05  
**REPORT No.:** 17b

<b>WELL NAME:</b>		APACHE NOGHA B-23		Licence No:	WID 1998	<b>PAGE No:</b>		2	of	3	
<b>CATION:</b>		300-B-23-66°-40'-125°-45'-0				<b>AFE No.</b>		NT-04-0504			
<b>OBJECTIVE:</b>		Complete the Lower & Upper Mount Clark for gas production				<b>AFE Amount:</b>		\$1,034,000.00			
						<b>Rig In Date:</b>		2004-03-28			
<b>Formation:</b>		Perforations (mKB):		<b>Formation:</b>		Perforations (mKB):		<b>Rig Out Date:</b>			
Mt Clark (Isolated)		1,441.5	to	1,444.5			to		<b>Rig Contractor / No.:</b>		
Mt Clark (Open)		1,420.0	to	1,426.0			to		Shehtah #14		
			to				to		Csg. Dia (mm): 177.80 Set At (mKB): 1,476.00		
			to				to		Liner (mm): N/A Top At (mKB): N/A		
			to				to		Liner Bot. (mKB): N/A PBTD (mKB): 1,453.50		
			to				to		Tbg. O.D. (mm): 73.00 Landed (mKB): 1,439.27		
			to				to		Packer (mm): 177.80 Set at (mKB): 1,415.00		

**Operations for 2004-04-04**

**1500-1530:** Bleed off tubing pressure to bullet. RIH with swab equipment, pull from 1,400 mKB - dry swab. Inform Calgary of results. Rig out swab equipment.

**1530-0700:** R/U IPS S-Line, RIH & set tandem EMR's c/w bombwells into 58.75 mm "X" profile located in sliding sleeve assembly landed at 1,428.96 mKB, RIH and set collar stop. RIH w/Otis 58.75 mm plug assembly to isolate recorders & tubing from Upper Mt Clark interval at 1,420.0-1,426.0 mKB. Fill tubing with 4.1 m<sup>3</sup> diesel. P/T plug & tbg to 7.0 Mpa for 15 min - ok. Bleed off pressure, R/O & release IPS S-Line. Chain & lock wellhead.

**1700-2000:** R/O service rig & related equipment. R/O IPS test equipment - all equipment will be located at central staging point prior to trucking into Norman Wells.

**END OF REPORT**



**APACHE CANADA LTD.**  
**SWAB REPORT**

<b>WELL NAME:</b>	APACHE NOGHA B-23			Licence No:	WID 1998	<b>PAGE No:</b>	1	<b>of</b>	1
<b>CATION:</b>	300-B-23-66°-40'-125°-45'-0								
<b>OBJECTIVE:</b>	Complete the Lower & Upper Mount Clark for gas production								
<b>Formation:</b>	<b>Perforations (mKB):</b>			<b>Formation:</b>	<b>Perforations (mKB):</b>				
Mt Clark (Isolated)	1,441.5	to	1,444.5		to				
Mt Clark (Open)	1,420.0	to	1,426.0		to				
		to			to				
		to			to				
		to			to				
		to			to				
						<b>Rig Contractor / No.:</b>	Shehtah #14		
						<b>Csg. Dia (mm):</b>	177.80	<b>Set At (mKB):</b>	1,476.00
						<b>Liner (mm):</b>	N/A	<b>Top At (mKB):</b>	N/A
						<b>Liner Bot. (mKB):</b>	N/A	<b>PBTD (mKB):</b>	1,453.50
						<b>Tbg. O.D. (mm):</b>	73.00	<b>Landed (mKB):</b>	1,439.27
						<b>Packer (mm):</b>	177.80	<b>Set at (mKB):</b>	1,415.00

BOP Press. Test (Yes / No):	N	Satisfactory (Yes / No):	N/A	Function Test (Yes / No):	N/A	Safety Meeting:	8:00
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24 Hr. Ops. Summary:	Move rig, equip & camp
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Tommorow's Plan:	
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NEB NOTIFICATIONS:	Rig Move	25-Mar-04	Flaring		
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<b>OPERATION SUMMARY</b> SCV (KPa) 0			SICP (KPa) 0	SITP (KPa) 600	<b>COST SUMMARY</b>
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Move rig , equip & camp to Norman Wells.  
Costs include rooms & meals @ Makenzie Valley Hotel.

COST SUMMARY			
Contractor	Service Provided	Code	Amount
SRP	Truck fuel	70074	\$3,750.00
SRP ESSO	Fuel	70037	\$15,000.00
North Wright Air	Plane	70002	\$2,200.00
Mackenzie Valley	Move in rig	70064	\$20,860.00
SRP	Move rig to N. W.	70064	\$154,550.00
Mackenzie Hotel	Rooms	70005	\$20,000.00
Daily Cost:	\$216,360.00		
Previous Cost:	\$818,880.00		
Cum. Cost:	\$1,035,240.00		

Reservoir Fluid Summary	Daily	Cumulative	Load Fluid Type:	Frac oil	Packer set at (m):	1,415.00
Gas: E <sup>3</sup> m <sup>3</sup> /d	0.00	0.00	Amount Used (m <sup>3</sup> ):	8.50 5.5m <sup>3</sup> oil & 3.0m <sup>3</sup> HCl	Casing annulus volume (m <sup>3</sup> ):	21.69
Oil / Condensate: m <sup>3</sup> /d	0.00	0.00	Recovered (m <sup>3</sup> ):	6.50 4.7m <sup>3</sup> oil & 1.3m <sup>3</sup> HCl	Tubing volume (m <sup>3</sup> ):	4.33
Water: m <sup>3</sup> /d	0.00	0.00	Cum. Recovered (m <sup>3</sup> ):	6.50	Bottom to perf. Volume (m <sup>3</sup> ):	0.38
Swab / Flow Time: Hrs	2.50	2.50	Left To Recover (m <sup>3</sup> ):	2.00	<b>TOTAL WELL VOLUME (m<sup>3</sup>):</b>	<b>26.40</b>

Man Down Drill		30-Mar-04		BOP TESTS (Mpa)				BOP Drill				2-Apr-04	
Drilling Rig Hours.		Personnel on Location		Component	Low	High	Time	Weather Conditions:					
Daily:		Rig:		Annular				Road Conditions:					
Cumulative: 91.0		Service:		Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385		
Downtime: 0.0		ACL:		Blind				Reported To:		Phone No:			
Cum. Downtime: 0.0		Total: 0		Valves				Reported By:	Walter F. Stock	Phone No:	600-700-7716		

<b>WELL NAME:</b>	APACHE NOGHA B-23			Licence No:	WID 1998	<b>PAGE No:</b>	1	of	1
<b>LOCATION:</b>	300-B-23-66°-40'-125°-45'-0					<b>AFE No.</b>	NT-04-0504		
<b>OBJECTIVE:</b>	Complete the Lower & Upper Mount Clark for gas production					<b>AFE Amount:</b>	\$1,034,000.00		
						<b>Rig In Date:</b>	2004-03-28		
<b>Formation:</b>	Perforations (mKB):		<b>Formation:</b>	Perforations (mKB):		<b>Rig Out Date:</b>			
Mt Clark (Isolated)	1,441.5	to 1,444.5			to	<b>Rig Contractor / No.:</b>			
Mt Clark (Open)	1,420.0	to 1,426.0			to	<b>Csg. Dia (mm):</b>	177.80	<b>Set At (mKB):</b>	1,476.00
		to			to	<b>Liner (mm):</b>	N/A	<b>Top At (mKB):</b>	N/A
		to			to	<b>Liner Bot. (mKB):</b>	N/A	<b>PBTD (mKB):</b>	1,453.50
		to			to	<b>Tbg. O.D. (mm):</b>	73.00	<b>Landed (mKB):</b>	1,439.27
		to			to	<b>Packer (mm):</b>	177.80	<b>Set at (mKB):</b>	1,415.00

BOP Press. Test (Yes / No):	N	Satisfactory (Yes / No):	N/A	Function Test (Yes / No):	N/A	Safety Meeting:	8:00
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24 Hr. Ops. Summary:	Moved heliportable equip to B-23
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Tommorow's Plan:	Finish moving last piece to location, rig up, pull plug & recorders, rig out.
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NEB NOTIFICATIONS:	Rig Move		Flaring		
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OPERATION SUMMARY			SCV (KPa)	SICP (KPa)	SITP (KPa)	COST SUMMARY
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Moved equipment from Norman wells to B-23 except for 1 piece which will be moved in A.M.

Costs for IPS & First Air for mobiliziing equipment is half the cost to bring in equipment from Edmonton to Norman Wells. The other half will be charged to M-17. Costs for Airborne is half & the other half will be charged to M-17. Costs for supervision is also split in half.

Contractor	Service Provided	Code	Amount
First Air	Fly equip to N.W.	70002	\$10,000.00
CENS	Supervision	70021	\$3,300.00
IPS	Slickline	70049	\$15,400.00
Airborne	Helicopter	70002	\$12,500.00
			</

Reservoir Fluid Summary	Daily	Cumulative	Load Fluid Type:	Frac oil		Packer set at (m):	1,415.00
Gas: E <sup>3</sup> m <sup>3</sup> /d	0.00	0.00	Amount Used (m <sup>3</sup> ):	8.50	5.5m <sup>3</sup> oil & 3.0m <sup>3</sup> HCl	Casing annulus volume (m <sup>3</sup> ):	21.69
Oil / Condensate: m <sup>3</sup> /d	0.00	0.00	Recovered (m <sup>3</sup> ):	6.50	4.7m <sup>3</sup> oil & 1.3m <sup>3</sup> HCl	Tubing volume (m <sup>3</sup> ):	4.33
Water: m <sup>3</sup> /d	0.00	0.00	Cum. Recovered (m <sup>3</sup> ):	6.50		Bottom to perf. Volume (m <sup>3</sup> ):	0.38
Swab / Flow Time: Hrs	2.50	2.50	Left To Recover (m <sup>3</sup> ):	2.00		<b>TOTAL WELL VOLUME (m<sup>3</sup>):</b>	<b>26.40</b>

Man Down Drill		30-Mar-04		BOP TESTS (Mpa)				BOP Drill			
Drilling Rig Hours.		Personnel on Location		Component	Low	High	Time	Weather Conditions:			
Daily:		Rig:		Annular				Road Conditions:			
Cumulative: 91.0		Service:		Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime: 0.0		ACL:		Blind				Reported To:		Phone No:	
Cum. Downtime: 0.0		Total: 0		Valves				Reported By:	Mike Periard	Phone No:	780-926-0118



<b>WELL NAME:</b>	APACHE NOGHA B-23			Licence No:	WID 1998	<b>PAGE No:</b>	1	of	1
<b>LOCATION:</b>	300-B-23-66°-40'-125°-45'-0					<b>AFE No.</b>	NT-04-0504		
<b>OBJECTIVE:</b>	Complete the Lower & Upper Mount Clark for gas production					<b>AFE Amount:</b>	\$1,034,000.00		
						<b>Rig In Date:</b>	2004-03-28		
<b>Formation:</b>	Perforations (mKB):			<b>Formation:</b>	Perforations (mKB):	<b>Rig Out Date:</b>			
Mt Clark (Isolated)	1,441.5	to 1,444.5			to	<b>Rig Contractor / No.:</b>			
Mt Clark (Open)	1,420.0	to 1,426.0			to	<b>Csg. Dia (mm):</b>	177.80	<b>Set At (mKB):</b>	1,476.00
		to			to	<b>Liner (mm):</b>	N/A	<b>Top At (mKB):</b>	N/A
		to			to	<b>Liner Bot. (mKB):</b>	N/A	<b>PBTD (mKB):</b>	1,453.50
		to			to	<b>Tbg. O.D. (mm):</b>	73.00	<b>Landed (mKB):</b>	1,439.27
		to			to	<b>Packer (mm):</b>	177.80	<b>Set at (mKB):</b>	1,415.00

BOP Press. Test (Yes / No):	N	Satisfactory (Yes / No):	N/A	Function Test (Yes / No):	N/A	Safety Meeting:	8:00
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24 Hr. Ops. Summary:	Rigged up equip, pulled top plug & top set of recorders, moved to M-17
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Tommorow's Plan:	Leave B-23 shut in for next few days
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NEB NOTIFICATIONS:	Rig Move	Flaring	
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OPERATION SUMMARY			SCV (KPa)	SICP (KPa)	SITP (KPa)	COST SUMMARY
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Operations for 2004-05-11		Contractor	Service Provided	Code	Amount
Moved last piece of equipment to B-23. Sahtu flew up crew.		Airborne	Helicopter	70002	\$8,840.00
Rigged in equip.		CENS	Supervision	70021	\$1,650.00
Pulled prong & plug from 58.75mm X profile @ 1410.68 mkb.		IPS	Slickline	70049	\$24,296.00
Pulled recorders from the X profile in On/Off @ 1414.14 mkb.		Sahtu Helicopters	Helicopter	70002	\$12,000.00
Secured well. Leave well shut in for next few days to see if gas will migrate w/o surface to catch sample.					
Rigged out equip, moved & rigged up on M-17.					
FN.					
SITP after pulling plug = 140 kpa.					
BHP = 15169 kpa.					
BHT = 22.4 oC.					
Fluid @ surface.					
<b>NOTE:</b> P-bottom & ring on plug eaten away along with part of bomb well.					
Daily Cost:		\$46,786.00			
Previous Cost:		\$1,076,440.00			
Cum. Cost:		\$1,123,226.00			

Reservoir Fluid Summary	Daily	Cumulative	Load Fluid Type:	Frac oil	Packer set at (m):	1,414.81
Gas: E <sup>3</sup> m <sup>3</sup> /d	0.00	0.00	Amount Used (m <sup>3</sup> ):	8.50 5.5m <sup>3</sup> oil & 3.0m <sup>3</sup> HCl	Casing annulus volume (m <sup>3</sup> ):	21.69
Oil / Condensate: m <sup>3</sup> /d	0.00	0.00	Recovered (m <sup>3</sup> ):	6.50 4.7m <sup>3</sup> oil & 1.3m <sup>3</sup> HCl	Tubing volume (m <sup>3</sup> ):	4.33
Water: m <sup>3</sup> /d	0.00	0.00	Cum. Recovered (m <sup>3</sup> ):	6.50	Bottom to perf. Volume (m <sup>3</sup> ):	0.38
Swab / Flow Time: Hrs	2.50	2.50	Left To Recover (m <sup>3</sup> ):	2.00	<b>TOTAL WELL VOLUME (m<sup>3</sup>):</b>	<b>26.40</b>

Man Down Drill		30-Mar-04		BOP TESTS (Mpa)				BOP Drill			
Drilling Rig Hours.		Personnel on Location		Component	Low	High	Time	Weather Conditions: Low - 12oC, High + 6oC, clear			
Daily:		Rig:		Annular				Road Conditions:			
Cumulative: 91.0		Service: 4		Pipe				Engineer: Bruce Beveridge Phone No: 403-261-1385			
Downtime: 0.0		ACL: 1		Blind				Reported To: Walter Stock Phone No:			
Cum. Downtime: 0.0		Total: 5		Valves				Reported By: Mike Periard Phone No: 780-926-0118			

<b>WELL NAME:</b>	APACHE NOGHA B-23			Licence No:	WID 1998	<b>PAGE No:</b>	1	of	2
<b>LOCATION:</b>	300-B-23-66°-40'-125°-45'-0					<b>AFE No.</b>	NT-04-0504		
<b>OBJECTIVE:</b>	Complete the Lower & Upper Mount Clark for gas production					<b>AFE Amount:</b>	\$1,034,000.00		
<b>Formation:</b>	Perforations (mKB):		<b>Formation:</b>	Perforations (mKB):		<b>Rig In Date:</b>	2004-03-28		
Lower Mt Clark	1,441.5	to 1,444.5			to	<b>Rig Out Date:</b>			
Upper Mt Clark	1,420.0	to 1,426.0			to	<b>Rig Contractor / No.:</b>			
						<b>Csg. Dia (mm):</b>	177.80	<b>Set At (mKB):</b>	1,476.00
						<b>Liner (mm):</b>	N/A	<b>Top At (mKB):</b>	N/A
						<b>Liner Bot. (mKB):</b>	N/A	<b>PBTD (mKB):</b>	1,453.50
						<b>Tbg. O.D. (mm):</b>	73.00	<b>Landed (mKB):</b>	1,439.27
						<b>Packer (mm):</b>	177.80	<b>Set at (mKB):</b>	1,415.00

BOP Press. Test (Yes / No):	N	Satisfactory (Yes / No):	N/A	Function Test (Yes / No):	N/A	Safety Meeting:	8:00
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24 Hr. Ops. Summary:	Rigged up, closed sleeve, pulled plug & recorders, run plug into X nipple, moved 2 loads to C-34, SDFN.
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Tommmorow's Plan:	Final report
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NEB NOTIFICATIONS:	Rig Move	Flaring	
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OPERATION SUMMARY			SCV (KPa)	SICP (KPa)	SITP (KPa) 913	COST SUMMARY
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[illegible]

Reservoir Fluid Summary	Daily	Cumulative	Load Fluid Type:	Frac oil		Packer set at (m):	1,414.81
Gas: E <sup>3</sup> m <sup>3</sup> /d	0.00	0.00	Amount Used (m <sup>3</sup> ):	8.50	5.5m <sup>3</sup> oil & 3.0m <sup>3</sup> HCl	Casing annulus volume (m <sup>3</sup> ):	21.69
Oil / Condensate: m <sup>3</sup> /d	0.00	0.00	Recovered (m <sup>3</sup> ):	6.50	4.7m <sup>3</sup> oil & 1.3m <sup>3</sup> HCl	Tubing volume (m <sup>3</sup> ):	4.33
Water: m <sup>3</sup> /d	0.00	0.00	Cum. Recovered (m <sup>3</sup> ):	6.50		Bottom to perf. Volume (m <sup>3</sup> ):	0.38
Swab / Flow Time: Hrs	2.50	2.50	Left To Recover (m <sup>3</sup> ):	2.00		<b>TOTAL WELL VOLUME (m<sup>3</sup>):</b>	<b>26.40</b>

Man Down Drill		30-Mar-04		BOP TESTS (Mpa)				BOP Drill			
Drilling Rig Hours.		Personnel on Location		Component	Low	High	Time	Weather Conditions: Low - 2oC, High + 6oC, clear			
Daily:		Rig:		Annular				Road Conditions:			
Cumulative:	91.0	Service:	4	Pipe				Engineer:	Bruce Beveridge	Phone No:	403-261-1385
Downtime:	0.0	ACL:	1	Blind				Reported To:	Walter Stock	Phone No:	
Cum. Downtime:	0.0	Total:	5	Valves				Reported By:	Mike Periard	Phone No:	780-926-0118