

New Mexico Oil Conservation Division, District I

1625 N. French Drive

Form 3160-3
(August 2007)

UNITED STATES Hobbs, NM 88240

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010HOBBS OCD
AUG 17 2011**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMLC-062178 FEE
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.
Milnesand Unit8. Well Name and No.
#1239. API Well No.
30-041-0003010. Field and Pool or Exploratory Area
Milnesand - San Andres11. Country or Parish, State
Roosevelt Co, NM

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
EOR Operating Co

3a. Address

200 N. Loraine, STE 1440 Midland, TX 79701

3b. Phone No. (include area code)

432-687-0303

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1980' FSL & 660' FWL
Sec 7 T 8S R 35E

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other RECOMPLICATE
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	HORIZONTALLY
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

The MSU #123 is currently producing from the San Andres perforations located @ 4580'-4662'. Current PBTD is 4665'. EOR proposes to perform the following operation in order to recomplate this well horizontally in the San Andres formation.

1. NU 3K BOPE and POH with rods and tubing.
2. RUWL and RIH with 5 1/2" CIBP. Correlate depth and set CIBP at KOP of 4264'. POH and RDWL.
3. PU 4 3/4" bit and 5 1/2" scraper on tubing. RIH and tag CIBP and test weight, POH and LD bit and scraper.
4. Run 5 1/2" whipstock on tubing to CIBP. Orient whipstock with gyro and set bottom trip anchor on CIBP, POH.
5. PU milling BHA, tag whipstock and mill window in 5 1/2" casing and 8' of new hole. POH with mill assembly.
6. PU drilling BHA and commence drilling with a 20"/100' build rate as per the attached directional drilling plan and survey.
7. At TD, run 3 1/2" 9.3# L80 FJ liner and set from TD to vertical section of 5 1/2" casing. Liner will have packers (PEAK or equivalent) with frac ports and will not be cemented. Number of ports and packers will be dictated by length and number of shows and porous interval drilled.
8. Fracture treat through ports separated by packers.

This lateral will be drilled with a closed loop mud system. After milling out the casing window with clear fresh water, the directional interval will be drilled with a polymer based fresh water system using the following parameters:

Hole Size(Inches)	Depth MD/TVD(ft)	Mud Density(ppg)	Viscosity(sec/1000cc)	Plastic Viscosity(cP)	Yield Point(lb/100ft 2)	API Fluid Loss(ml)	pH	LGS%
4.75	KOP-TD	8.4-8.7	34-36	4-10	4-12	10-12	9.5-10.0	<6

Bond No. RLB0011896

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Jana True

Title Prod. Asst.

Signature

Jana True

Date

6/27/11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

ACCEPTED FOR RECORD

/S/ DAVID R. GLASS

Title

Office

Date

AUG 18 2011

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowing fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DAVID R. GLASS
PETROLEUM ENGINEER

Accepted For Record Only On AUG 08 2011! The BLM Does Not Approve The Recompletion Of This Well! Approval Is Subject To Approval By The New Mexico Oil Conservation Division Only! Please Call David Glass At (575) 627-0275 If You Have Any Questions About This!

30-041-00030



WeatherfordTM

HOBBS OCD

AUG 17 2011

Drilling Services

RECEIVED

Proposal

EOR OPERATING

MILNESAND UNIT 123

ROOSEVELT CO, NM

WELL FILE: **PLAN 1**

MAY 25, 2011

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com

EOR Operating

Milnesand Unit 123 Roosevelt Co, NM

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4263.77	0.00	0.00	4263.77	0.00	0.00	0.00	0.00	0.00	
3	4278.77	3.00	315.00	4278.76	0.28	-0.28	20.00	315.00	0.39	
4	4283.77	3.00	315.00	4283.75	0.46	-0.46	0.00	0.00	0.65	
5	4696.45	85.54	315.00	4554.37	186.99	-186.99	20.00	0.00	264.45	
6	5835.46	85.54	315.00	4643.00	989.95	-989.95	0.00	0.00	1400.00	Pbhl

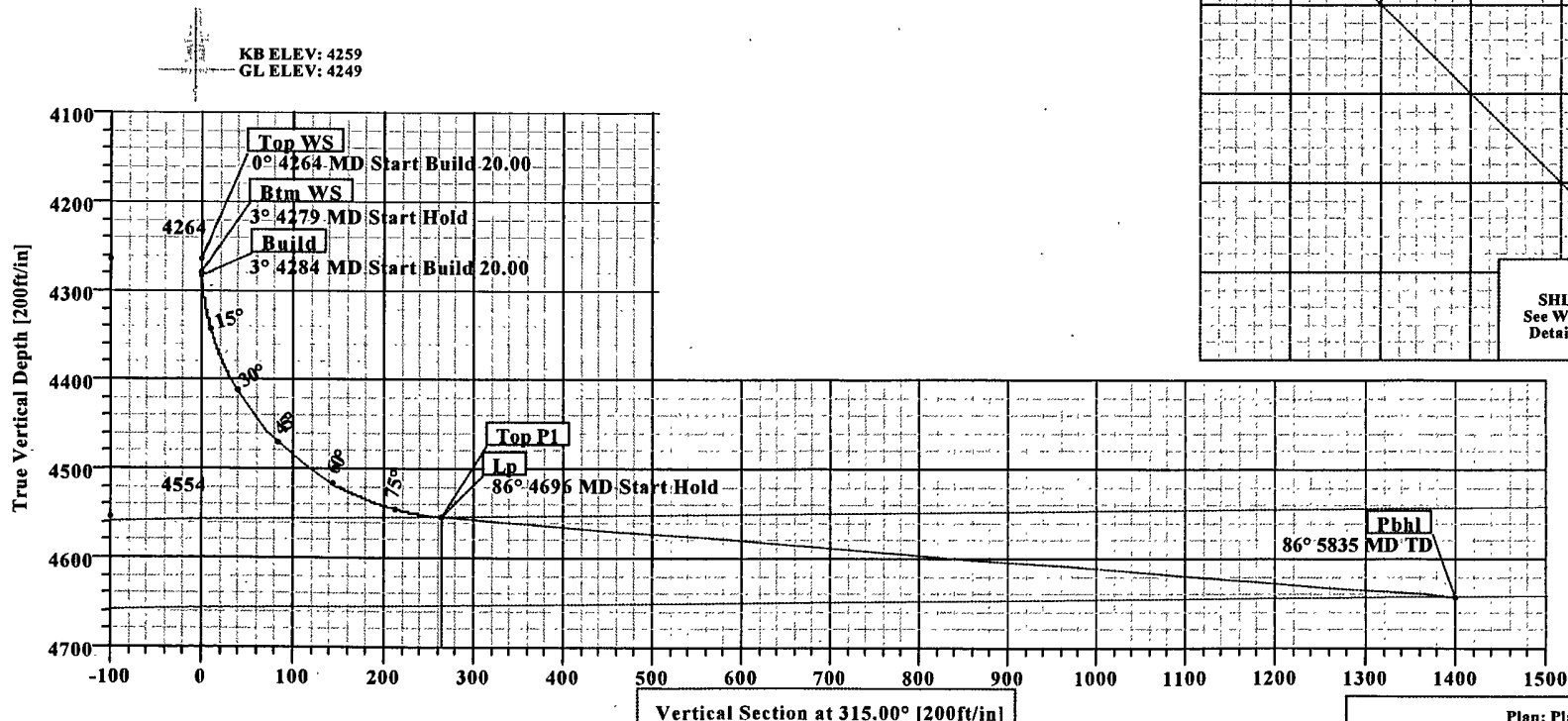
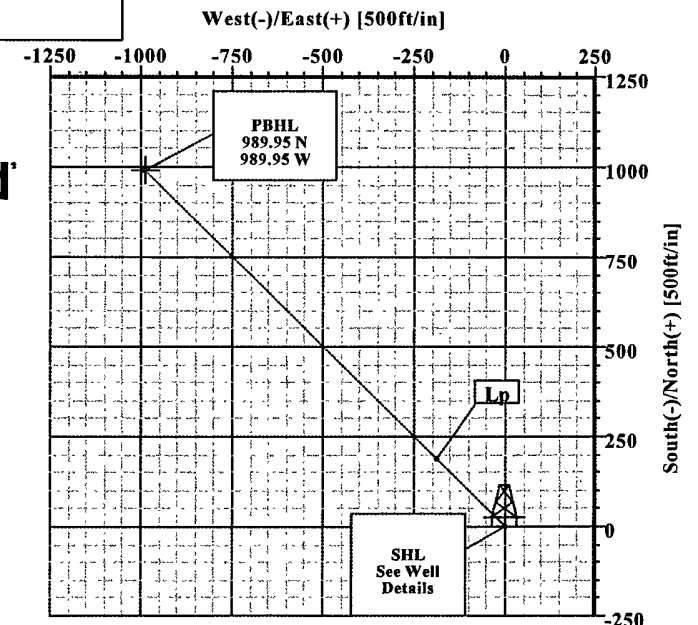
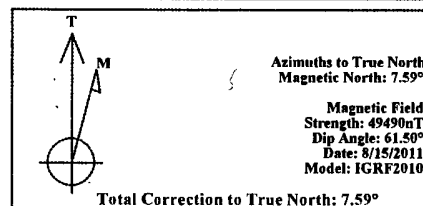
WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
MSU 123	0.00	0.00	959374.65	782140.99	33°38'01.680N	103°24'23.004W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	4643.00	989.95	-989.95	960355.69	781142.21	Point

FIELD DETAILS	
Roosevelt Co, NM (Nad 27)	
Geodetic System:	US State Plane Coordinate System 1927
Ellipsoid:	NAD27 (Clarke 1866)
Zone:	New Mexico, Eastern Zone
Magnetic Model:	IGRF2010
System Datum:	Mean Sea Level
Local North:	True North

SITE DETAILS	
Milnesand Unit 123	
Site Centre Latitude:	33°38'01.680N
Longitude:	103°24'23.004W
Ground Level:	4249.00
Positional Uncertainty:	0.00
Convergence:	0.51

FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	4554.37	4696.46	Top P1



Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: EOR Operating Field: Roosevelt Co, NM (Nad 27) Site: Milnesand Unit 123 Well: MSU 123 Wellpath: 1	Date: 5/25/2011 Co-ordinate(NE) Reference: Well: MSU 123, True North Vertical (TVD) Reference: SITE 4259.0 Section (VS) Reference: Well (0.00N;0.00E;315.00Azi) Survey Calculation Method: Minimum Curvature	Time: 14:28:33 Page: 1 Db: Sybase
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Plan: Plan #1 Principal: Yes	Date Composed: 5/24/2011 Version: 1 Tied-to: From Surface
---	--

Field: Roosevelt Co, NM (Nad 27)

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: Milnesand Unit 123

Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 4249.00 ft	Northing: 959374.65 ft Easting: 782140.99 ft	Latitude: 33 38 1.680 N Longitude: 103 24 23.004 W North Reference: True Grid Convergence: 0.51 deg
---	---	--

Well: MSU 123 Well Position: +N/-S 0.00 ft Position Uncertainty: 0.00 ft	Slot Name: Northing: 959374.65 ft Easting: 782140.99 ft Latitude: 33 38 1.680 N Longitude: 103 24 23.004 W
---	---

Wellpath: 1 Current Datum: SITE Magnetic Data: 8/15/2011 Field Strength: 49490 nT Vertical Section: Depth From (TVD) ft	Height 4259.00 ft +N/-S ft +E/-W ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 7.59 deg Mag Dip Angle: 61.50 deg Direction deg
0.00	0.00	0.00 315.00

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4263.77	0.00	0.00	4263.77	0.00	0.00	0.00	0.00	0.00	0.00	
4278.77	3.00	315.00	4278.76	0.28	-0.28	20.00	20.00	0.00	315.00	
4283.77	3.00	315.00	4283.75	0.46	-0.46	0.00	0.00	0.00	0.00	
4696.45	85.54	315.00	4554.37	186.99	-186.99	20.00	20.00	0.00	0.00	
5835.46	85.54	315.00	4643.00	989.95	-989.95	0.00	0.00	0.00	0.00	Pbhl

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat Min	Sec	Long Min	Sec	Comment	
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	33	38	1.680	103	24 23.004	Top WS Btm WS Build
4263.77	0.00	0.00	4263.77	0.00	0.00	0.00	0.00	33	38	1.680	103	24 23.004	
4278.77	3.00	315.00	4278.76	0.28	-0.28	0.39	20.00	33	38	1.683	103	24 23.007	
4283.77	3.00	315.00	4283.75	0.46	-0.46	0.65	0.00	33	38	1.685	103	24 23.009	
4300.00	6.25	315.00	4299.93	1.39	-1.39	1.96	20.00	33	38	1.694	103	24 23.020	
4400.00	26.25	315.00	4395.45	21.07	-21.07	29.80	20.00	33	38	1.888	103	24 23.253	Top P1
4500.00	46.25	315.00	4475.69	62.67	-62.67	88.63	20.00	33	38	2.300	103	24 23.745	
4600.00	66.25	315.00	4530.97	121.16	-121.16	171.35	20.00	33	38	2.879	103	24 24.437	
4696.45	85.54	315.00	4554.37	186.99	-186.99	264.45	20.00	33	38	3.530	103	24 25.215	
4700.00	85.54	315.00	4554.64	189.50	-189.50	267.99	0.00	33	38	3.555	103	24 25.245	
4800.00	85.54	315.00	4562.43	259.99	-259.99	367.68	0.00	33	38	4.252	103	24 26.079	
4900.00	85.54	315.00	4570.21	330.49	-330.49	467.38	0.00	33	38	4.950	103	24 26.913	
5000.00	85.54	315.00	4577.99	400.98	-400.98	567.08	0.00	33	38	5.647	103	24 27.746	
5100.00	85.54	315.00	4585.77	471.48	-471.48	666.77	0.00	33	38	6.344	103	24 28.580	
5200.00	85.54	315.00	4593.55	541.98	-541.98	766.47	0.00	33	38	7.042	103	24 29.414	

Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: EOR Operating Field: Roosevelt Co. NM (Nad 27) Site: Milnesand Unit 123 Well: MSU 123 Wellpath: 1	Date: 5/25/2011 Time: 14:28:33 Page: 2 Co-ordinate(NE) Reference: Well: MSU 123, True North Vertical (TVD) Reference: SITE 4259.0 Section (VS) Reference: Well (0.00N 0.00E 315.00Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat Min	Sec	Long Min	Sec	Comments
5300.00	85.54	315.00	4601.33	612.47	-612.47	866.17	0.00	33	38	7.739	103	24 30.248
5400.00	85.54	315.00	4609.12	682.97	-682.97	965.86	0.00	33	38	8.437	103	24 31.081
5500.00	85.54	315.00	4616.90	753.47	-753.47	1065.56	0.00	33	38	9.134	103	24 31.915
5600.00	85.54	315.00	4624.68	823.96	-823.96	1165.26	0.00	33	38	9.832	103	24 32.749
5700.00	85.54	315.00	4632.46	894.46	-894.46	1264.96	0.00	33	38	10.529	103	24 33.583
5800.00	85.54	315.00	4640.24	964.95	-964.95	1364.65	0.00	33	38	11.226	103	24 34.416
5835.46	85.54	315.00	4643.00	989.95	-989.95	1400.00	0.00	33	38	11.474	103	24 34.712 Pbhl

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
Pbhl			4643.00	989.95	-989.95	960355.69	781142.21	33 38 11.474 N	103 24 34.712 W
-Plan hit target									

Casing Points

MD	TVD	Diameter	Hole Size	Name

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
4696.46	4554.37	Top P1		-0.57	315.00
	0.00	P3		-0.57	315.00

Annotation

MD ft	TVD ft	
4263.77	4263.77	Top WS
4278.77	4278.76	Btm WS
4283.77	4283.76	Build
4696.45	4554.37	Lp
5835.45	4643.00	Pbhl

**Weatherford®****Weatherford Drilling Services**

GeoDec v5.03

Report Date: May 24, 2011
Job Number: _____
Customer: EOR Operating
Well Name: Milnesand Unit MSU 123
API Number: _____
Rig Name: _____
Location: Roosevelt Co, NM
Block: _____
Engineer: RWJ

Geodetic Latitude / Longitude	Geodetic Latitude / Longitude
System: Latitude / Longitude	System: Latitude / Longitude
Projection: Geodetic Latitude and Longitude	Projection: Geodetic Latitude and Longitude
Datum: NAD 1927 (NADCON CONUS)	Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866	Ellipsoid: Clarke 1866
Latitude 33.6338000 DEG	Latitude 33.6338000 DEG
Longitude -103.4063900 DEG	Longitude -103.4063900 DEG

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude = 33.63380° N	33° 38 min	1.680 sec
Longitude = 103.40639° W	103° 24 min	23.004 sec
Magnetic Declination =	7.59°	[True North Offset]
Local Gravity =	.9989 g	Checksum = 6652
Local Field Strength =	49486 nT	Magnetic Vector X = 23403 nT
Magnetic Dip =	61.50°	Magnetic Vector Y = 3120 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 43491 nT
Spud Date =	Aug 15, 2011	Magnetic Vector H = 23610 nT

Signed: _____

Date: _____

EOR MILNESAND UNIT 123 P1 SVY

Weatherford International Ltd.
WFT Plan Report Lat, Long

Company: EOR Operating
Time: 14:29:02 Page: 1
Field: Roosevelt Co, NM (Nad 27)
Reference: well: MSU 123, True North
Site: Milnesand Unit 123
Reference: SITE 4259.0
Well: MSU 123
Reference: well (0.00N,0.00E,315.00Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

Date: 5/25/2011
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Plan: Plan #1
5/24/2011

Date Composed:

1
Principal: Yes
From Surface

Version:

Tied-to:

Field: Roosevelt Co, NM (Nad 27)

Map System:US State Plane Coordinate System 1927
New Mexico, Eastern Zone
Geo Datum: NAD27 (Clarke 1866)
Well Centre
Sys Datum: Mean Sea Level
IGRF2010

Map Zone:
Coordinate System:
Geomagnetic Model:

Site: Milnesand Unit 123

Site Position:
33 38 1.680 N
From: Geographic
103 24 23.004 W
Position Uncertainty: 0.00 ft
True
Ground Level: 4249.00 ft
0.51 deg

Northing: 959374.65 ft Latitude:
Easting: 782140.99 ft Longitude:
North Reference:
Grid Convergence:

Well: MSU 123

Slot Name:

Well Position: +N/-S 0.00 ft
33 38 1.680 N
+E/-W 0.00 ft
103 24 23.004 W
Position Uncertainty: 0.00 ft

Northing: 959374.65 ft Latitude:
Easting : 782140.99 ft Longitude:

Wellpath: 1
Surface

Drilled From:

Tie-on Depth:

0.00 ft
Current Datum: SITE
Datum: Mean Sea Level
Magnetic Data: 8/15/2011

Height 4259.00 ft Above System
Declination:

EOR MILNESAND UNIT 123 P1 SVY

7.59 deg
Field Strength: 49490 nT
61.50 deg
Vertical Section: Depth From (TVD) +N/-S +E/-W
Direction ft ft ft
deg 0.00 0.00 0.00
315.00

Plan Section Information
MD Incl Azim TVD +N/-S +E/-W DLS Build
Turn TFO Target
ft deg deg deg ft ft ft
deg/100ft deg/100ft deg/100ft deg
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4263.77 0.00 0.00 4263.77 0.00 0.00 0.00 0.00
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4278.77 3.00 315.00 4278.76 0.28 -0.28 20.00 20.00
0.00 315.00 0.00 0.00 0.00 0.00 0.00 0.00
4283.77 3.00 315.00 4283.75 0.46 -0.46 0.00 0.00
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
4696.45 85.54 315.00 4554.37 186.99 -186.99 20.00 20.00
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
5835.46 85.54 315.00 4643.00 989.95 -989.95 0.00 0.00
0.00 0.00 Pbh1
Survey

Min	MD Sec ft	Incl Long deg	Azim Min deg	Sec	TVD ft	N/S Comment ft	E/W ft	VS ft	DLS deg/100ft	Lat
	4200.00	0.00	0.00		4200.00	0.00	0.00	0.00	0.00	33
38	1.680	103	24	23.004						
	4263.77	0.00	0.00		4263.77	0.00	0.00	0.00	0.00	33
38	1.680	103	24	23.004	Top WS					
	4278.77	3.00	315.00		4278.76	0.28	-0.28	0.39	20.00	33
38	1.683	103	24	23.007	Btm WS					
	4283.77	3.00	315.00		4283.75	0.46	-0.46	0.65	0.00	33
38	1.685	103	24	23.009	Build					
	4300.00	6.25	315.00		4299.93	1.39	-1.39	1.96	20.00	33
38	1.694	103	24	23.020						
	4400.00	26.25	315.00		4395.45	21.07	-21.07	29.80	20.00	33
38	1.888	103	24	23.253						
	4500.00	46.25	315.00		4475.69	62.67	-62.67	88.63	20.00	33
38	2.300	103	24	23.745						
	4600.00	66.25	315.00		4530.97	121.16	-121.16	171.35	20.00	33
38	2.879	103	24	24.437						
	4696.45	85.54	315.00		4554.37	186.99	-186.99	264.45	20.00	33
38	3.530	103	24	25.215	Top P1					
	4700.00	85.54	315.00		4554.64	189.50	-189.50	267.99	0.00	33
38	3.555	103	24	25.245						
	4800.00	85.54	315.00		4562.43	259.99	-259.99	367.68	0.00	33
38	4.252	103	24	26.079						
	4900.00	85.54	315.00		4570.21	330.49	-330.49	467.38	0.00	33
38	4.950	103	24	26.913						
	5000.00	85.54	315.00		4577.99	400.98	-400.98	567.08	0.00	33
38	5.647	103	24	27.746						
	5100.00	85.54	315.00		4585.77	471.48	-471.48	666.77	0.00	33

EOR MILNESAND UNIT 123 P1 SVY									
38	6.344	103	24	28.580					
	5200.00	85.54	315.00	4593.55	541.98	-541.98	766.47	0.00	33
38	7.042	103	24	29.414					
	5300.00	85.54	315.00	4601.33	612.47	-612.47	866.17	0.00	33
38	7.739	103	24	30.248					
	5400.00	85.54	315.00	4609.12	682.97	-682.97	965.86	0.00	33
38	8.437	103	24	31.081					
	5500.00	85.54	315.00	4616.90	753.47	-753.47	1065.56	0.00	33
38	9.134	103	24	31.915					
	5600.00	85.54	315.00	4624.68	823.96	-823.96	1165.26	0.00	33
38	9.832	103	24	32.749					
	5700.00	85.54	315.00	4632.46	894.46	-894.46	1264.96	0.00	33
38	10.529	103	24	33.583					
	5800.00	85.54	315.00	4640.24	964.95	-964.95	1364.65	0.00	33
38	11.226	103	24	34.416					
	5835.46	85.54	315.00	4643.00	989.95	-989.95	1400.00	0.00	33
38	11.474	103	24	34.712	Pbh1				

Targets

Map	Name	Latitude	Description	Longitude	TVD	+N/-S	+E/-W	Map
Easting	Deg	Min	Dip.	Deg	Min	Sec	ft	Northing
ft								
	Pbh1					4643.00	989.95	-989.95
781142.21	33	38	11.474 N	103	24	34.712 W		960355.69
	-Plan hit target							

Casing Points	MD	TVD	Diameter	Hole Size	Name
---------------	----	-----	----------	-----------	------

Formations

MD	TVD	Formations	Lithology
ft	ft	Dip Angle	Dip Direction
		deg	deg
4696.46	4554.37	Top P1	
	-0.57	315.00	
	0.00	P3	
	-0.57	315.00	

Annotation

MD	TVD	
ft	ft	
4263.77	4263.77	Top WS
4278.77	4278.76	Btm WS
4283.77	4283.76	Build
4696.45	4554.37	Lp
5835.45	4643.00	Pbh1

EOB MILNESAND UNIT 123 P1 SVY