

New Mexico Oil Conservation Division, District I

Federal

Form 3160-3
(August 2007)

HOBBS OGD

AUG 09 2011

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

1625 N. French Drive

Hobbs, NM 88240

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDAY
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.
LC-062178

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.
#5249. API Well No.
30-041-2064910. Field and Pool or Exploratory Area
Milnesand - San Andres11. Country or Parish, State
ROOSEVELT

1. Type of Well

☒ Oil Well☐ Gas Well☐ Other2. Name of Operator
EOR Operating Co3a. Address
200 N LORRAINE, STE 1440 MIDLAND, TX 797013b. Phone No. (include area code)
432-687-03034. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1360' FNL 90' FEL
SEC 13 T 8S R 34E

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 RECOMPLETE
	☐ 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 recomplete 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 #524 is currently producing from the San Andres perforations located @ 4536'-4568', 4576'-4616' & 4624'-4626'. Current PBTD is 4740'. EOR proposes to perform the following operation in order to recomplete this well horizontally in the San Andres formation.

1. NU 3k BOPE and POH with rods & tubing.
2. RUWL and RIH with 5 1/2" CIBP. Correlate depth and set CIBP at KOP of 4262'. 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 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 run 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 millind 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

Approved by

/S/ DAVID R. GLASS

PETROLEUM ENGINEER

Title

Date

AUG 01 2011

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

KZ

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

APPROVED FOR 12 MONTH PERIOD
 ENDING AUG 01 2012

SEE ATTACHED FOR
 CONDITIONS OF APPROVAL

AUG 11 2011



Weatherford[®]

Drilling Services

HOBBS OCD

AUG 09 2011

RECEIVED

Proposal

EOR OPERATING

MILNESAND UNIT 524

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 524 Roosevelt Co. NM

KB ELEV: 4250
GLE ELEV: 4240

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	4246.91	0.00	0.00	4246.91	0.00	0.00	0.00	0.00	0.00	
3	4261.91	3.00	90.00	4261.91	0.00	0.39	20.00	90.00	0.39	
4	4266.91	3.00	90.00	4266.90	0.00	0.65	0.00	0.00	0.65	
5	4690.96	87.81	90.00	4538.18	0.00	275.79	20.00	0.00	275.79	
6	8427.90	87.81	90.00	4681.00	0.00	4010.00	0.00	0.00	4010.00	Pbhl

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

WELL DETAILS

Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
MSU 524	0.00	0.00	956027.83	781446.40	33°37'28.632N	103°24'31.572W	N/A

TARGET DETAILS

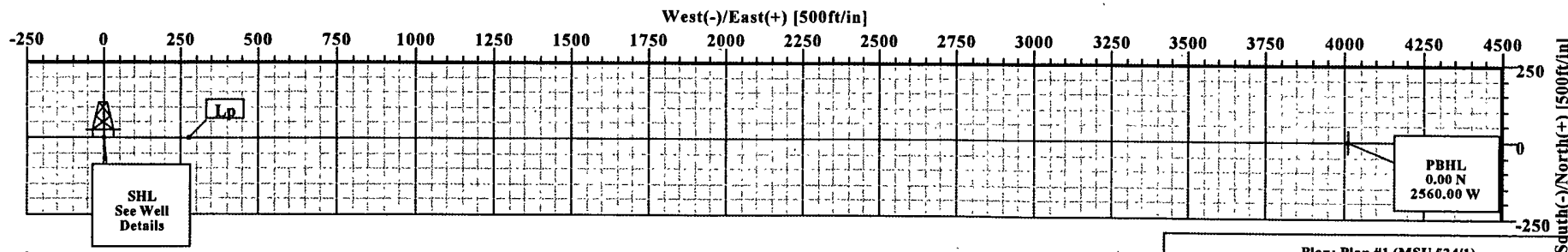
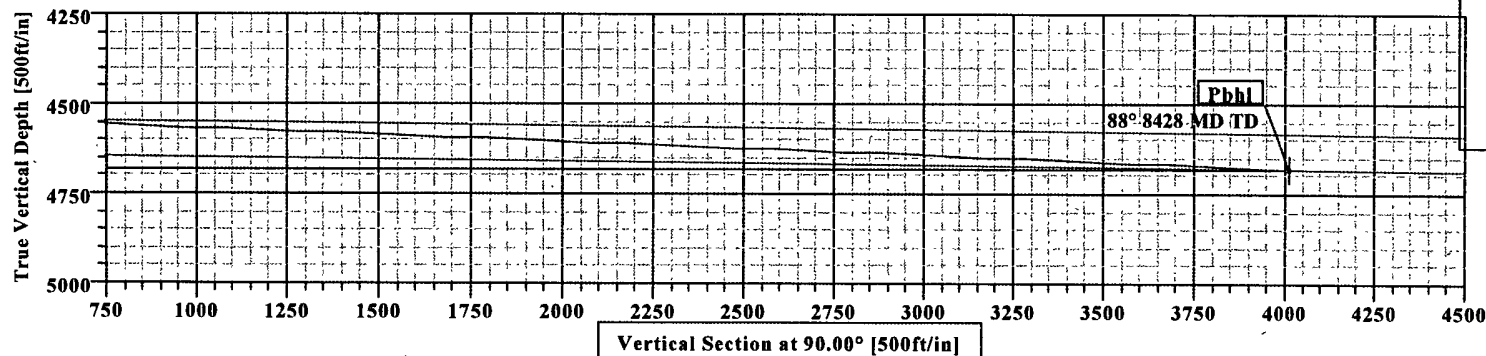
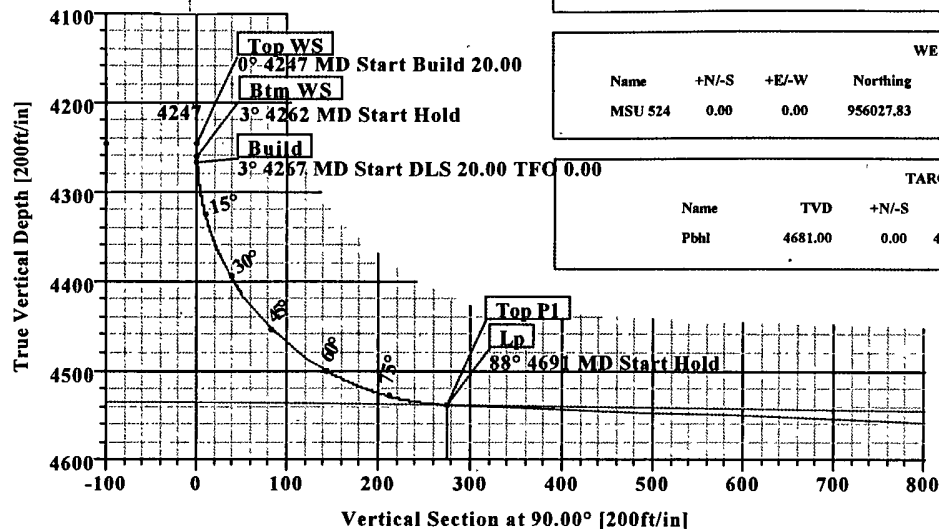
Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Pbhl	4681.00	0.00	4010.00	956063.67	785456.24	Point

SITE DETAILS

Milnesand Unit 524
Site Centre Latitude: 33°37'28.632N
Longitude: 103°24'31.572W
Ground Level: 4240.00
Positional Uncertainty: 0.00
Convergence: 0.51

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	4538.18	4690.96	Top P1



Weatherford



Azimuths to True North
Magnetic North: 7.56°
Magnetic Field
Strength: 49459nT
Dip Angle: 61.49°
Date: 11/15/2011
Model: IGRF2010

Total Correction to True North: 7.56°

Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: EOR Operating	Date: 5/25/2011	Time: 14:37:01	Page: 1
Field: Roosevelt Co, NM (Nad.27)	Co-ordinate(NE) Reference:	Well: MSU 524; True North	
Site: Milnesand Unit 524	Vertical (TVD) Reference:	SITE 4250.0	
Well: MSU 524	Section (VS) Reference:	Well (0.00N:0.00E:90.00Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Plan: Plan #1	Date Composed: 5/25/2011
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Roosevelt Co, NM (Nad 27)

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

Site: Milnesand Unit 524

Site Position:	Northing: 956027.83 ft	Latitude: 33 37 28.632 N	
From: Geographic	Easting: 781446.40 ft	Longitude: 103 24 31.572 W	
Position Uncertainty: 0.00 ft		North Reference: True	
Ground Level: 4240.00 ft		Grid Convergence: 0.51 deg	

Well: MSU 524	Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 956027.83 ft
+E/-W 0.00 ft	Easting: 781446.40 ft
Position Uncertainty: 0.00 ft	Latitude: 33 37 28.632 N
	Longitude: 103 24 31.572 W

Wellpath: 1	Drilled From: Surface	Tie-on Depth: 0.00 ft	
Current Datum: SITE	Height 4250.00 ft	Above System Datum: Mean Sea Level	
Magnetic Data: 11/15/2011		Declination: 7.56 deg	
Field Strength: 49459 nT		Mag Dip Angle: 61.49 deg	
Vertical Section: Depth From (TVD)	+N/-S	+E/-W	Direction
ft	ft	ft	deg
0.00	0.00	0.00	90.00

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	
4246.91	0.00	0.00	4246.91	0.00	0.00	0.00	0.00	0.00	0.00	
4261.91	3.00	90.00	4261.91	0.00	0.39	20.00	20.00	0.00	90.00	
4266.91	3.00	90.00	4266.90	0.00	0.65	0.00	0.00	0.00	0.00	
4690.96	87.81	90.00	4538.18	0.00	275.79	20.00	20.00	0.00	0.00	
8427.90	87.81	90.00	4681.00	0.00	4010.00	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	37	28.632	103	24	31.572	
4246.91	0.00	0.00	4246.91	0.00	0.00	0.00	0.00	33	37	28.632	103	24	31.572	Top WS
4261.91	3.00	90.00	4261.91	0.00	0.39	0.39	20.00	33	37	28.632	103	24	31.567	Btm WS
4266.91	3.00	90.00	4266.90	0.00	0.65	0.65	0.00	33	37	28.632	103	24	31.564	Build
4300.00	9.62	90.00	4299.77	0.00	4.29	4.29	20.00	33	37	28.632	103	24	31.521	
4400.00	29.62	90.00	4393.49	0.00	37.69	37.69	20.00	33	37	28.632	103	24	31.126	
4500.00	49.62	90.00	4470.13	0.00	101.13	101.13	20.00	33	37	28.632	103	24	30.376	
4600.00	69.62	90.00	4520.45	0.00	186.96	186.96	20.00	33	37	28.632	103	24	29.361	
4690.96	87.81	90.00	4538.18	0.00	275.79	275.79	20.00	33	37	28.632	103	24	28.311	Top P1
4700.00	87.81	90.00	4538.52	0.00	284.82	284.82	0.00	33	37	28.632	103	24	28.204	
4800.00	87.81	90.00	4542.34	0.00	384.75	384.75	0.00	33	37	28.632	103	24	27.022	
4900.00	87.81	90.00	4546.17	0.00	484.68	484.68	0.00	33	37	28.632	103	24	25.841	
5000.00	87.81	90.00	4549.99	0.00	584.60	584.60	0.00	33	37	28.632	103	24	24.659	
5100.00	87.81	90.00	4553.81	0.00	684.53	684.53	0.00	33	37	28.632	103	24	23.477	
5200.00	87.81	90.00	4557.63	0.00	784.46	784.46	0.00	33	37	28.632	103	24	22.296	

Weatherford International Ltd.

WFT Plan Report Lat, Long



Weatherford

Company: EOR Operating	Date: 5/25/2011	Time: 14:37:01	Page: 2
Field: Roosevelt Co, NM (Nad'27)	Co-ordinate(NE) Reference:	Well: MSU 524, True North	
Site: Milnesand Unit 524	Vertical (TVD) Reference:	SITE 4250.0	
Well: MSU 524	Section (VS) Reference:	Well (0.00N,0.00E,90.00Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

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
5300.00	87.81	90.00	4561.45	0.00	884.38	884.38	0.00	33	37	28.632	103	24 21.114
5400.00	87.81	90.00	4565.28	0.00	984.31	984.31	0.00	33	37	28.632	103	24 19.932
5500.00	87.81	90.00	4569.10	0.00	1084.24	1084.24	0.00	33	37	28.632	103	24 18.751
5600.00	87.81	90.00	4572.92	0.00	1184.16	1184.16	0.00	33	37	28.632	103	24 17.569
5700.00	87.81	90.00	4576.74	0.00	1284.09	1284.09	0.00	33	37	28.632	103	24 16.387
5800.00	87.81	90.00	4580.56	0.00	1384.02	1384.02	0.00	33	37	28.632	103	24 15.206
5900.00	87.81	90.00	4584.39	0.00	1483.95	1483.95	0.00	33	37	28.632	103	24 14.024
6000.00	87.81	90.00	4588.21	0.00	1583.87	1583.87	0.00	33	37	28.632	103	24 12.842
6100.00	87.81	90.00	4592.03	0.00	1683.80	1683.80	0.00	33	37	28.632	103	24 11.661
6200.00	87.81	90.00	4595.85	0.00	1783.73	1783.73	0.00	33	37	28.632	103	24 10.479
6300.00	87.81	90.00	4599.67	0.00	1883.65	1883.65	0.00	33	37	28.631	103	24 9.297
6400.00	87.81	90.00	4603.50	0.00	1983.58	1983.58	0.00	33	37	28.631	103	24 8.116
6500.00	87.81	90.00	4607.32	0.00	2083.51	2083.51	0.00	33	37	28.631	103	24 6.934
6600.00	87.81	90.00	4611.14	0.00	2183.43	2183.43	0.00	33	37	28.631	103	24 5.752
6700.00	87.81	90.00	4614.96	0.00	2283.36	2283.36	0.00	33	37	28.631	103	24 4.571
6800.00	87.81	90.00	4618.78	0.00	2383.29	2383.29	0.00	33	37	28.631	103	24 3.389
6900.00	87.81	90.00	4622.60	0.00	2483.21	2483.21	0.00	33	37	28.631	103	24 2.207
7000.00	87.81	90.00	4626.43	0.00	2583.14	2583.14	0.00	33	37	28.631	103	24 1.026
7100.00	87.81	90.00	4630.25	0.00	2683.07	2683.07	0.00	33	37	28.631	103	23 59.844
7200.00	87.81	90.00	4634.07	0.00	2783.00	2783.00	0.00	33	37	28.631	103	23 58.662
7300.00	87.81	90.00	4637.89	0.00	2882.92	2882.92	0.00	33	37	28.631	103	23 57.481
7400.00	87.81	90.00	4641.71	0.00	2982.85	2982.85	0.00	33	37	28.631	103	23 56.299
7500.00	87.81	90.00	4645.54	0.00	3082.78	3082.78	0.00	33	37	28.631	103	23 55.117
7600.00	87.81	90.00	4649.36	0.00	3182.70	3182.70	0.00	33	37	28.630	103	23 53.936
7700.00	87.81	90.00	4653.18	0.00	3282.63	3282.63	0.00	33	37	28.630	103	23 52.754
7800.00	87.81	90.00	4657.00	0.00	3382.56	3382.56	0.00	33	37	28.630	103	23 51.572
7900.00	87.81	90.00	4660.82	0.00	3482.48	3482.48	0.00	33	37	28.630	103	23 50.391
8000.00	87.81	90.00	4664.65	0.00	3582.41	3582.41	0.00	33	37	28.630	103	23 49.209
8100.00	87.81	90.00	4668.47	0.00	3682.34	3682.34	0.00	33	37	28.630	103	23 48.027
8200.00	87.81	90.00	4672.29	0.00	3782.27	3782.27	0.00	33	37	28.630	103	23 46.846
8300.00	87.81	90.00	4676.11	0.00	3882.19	3882.19	0.00	33	37	28.630	103	23 45.664
8400.00	87.81	90.00	4679.93	0.00	3982.12	3982.12	0.00	33	37	28.630	103	23 44.482
8427.90	87.81	90.00	4681.00	0.00	4010.00	4010.00	0.00	33	37	28.630	103	23 44.153 Pbhl

Targets

Name	Description	TVD	+N/-S	+E/-W	Map Northing	Map Easting	Latitude Deg Min Sec	Longitude Deg Min Sec
Pbhl		4681.00	0.00	4010.00	956063.67	785456.24	33 37 28.630 N	103 23 44.153 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
4690.96	4538.18	Top P1		0.66	90.00
	0.00	P3		0.66	90.00

Weatherford International Ltd.
WFT Plan Report Lat, Long



Weatherford

Company: EOR Operating	Date: 5/25/2011	Time: 14:37:01	Page: 3
Field: Roosevelt Co. NM (Nad 27)	Co-ordinate(NE) Reference:	Well: MSU 524; True North	
Site: Milnesand Unit 524	Vertical (TVD) Reference:	SITE: 4250.0	
Well: MSU 524	Section (VS) Reference:	Well: (0.00N,0.00E;90.00Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Annotation

MD ft.	TVD ft.	
4246.91	4246.91	Top WS
4261.91	4261.90	Btm WS
4266.91	4266.90	Build
4690.96	4538.18	Lp
8427.90	4681.00	Pbhl

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

GeoDec v5.03

Report Date: May 24, 2011
Job Number: _____
Customer: EOR Operating
Well Name: Milnesand Unit MSU 524
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 33.6246200 DEG	Latitude 33.6246200 DEG
Longitude -103.4087700 DEG	Longitude -103.4087700 DEG

Geodetic Location WGS84 Elevation = 0.0 Meters
Latitude = 33.62462° N 33° 37 min 28.632 sec
Longitude = 103.40877° W 103° 24 min 31.572 sec

Magnetic Declination =	7.56°	[True North Offset]
Local Gravity =	.9989 g	Checksum = 6734
Local Field Strength =	49455 nT	Magnetic Vector X = 23401 nT
Magnetic Dip =	61.49°	Magnetic Vector Y = 3107 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 43457 nT
Spud Date =	Nov 15, 2011	Magnetic Vector H = 23607 nT

Signed: _____

Date: _____

MILNESAND UNIT 524 P1 SVY

Weatherford International Ltd.
WFT Plan Report Lat, Long

Company: EOR Operating
Time: 14:37:47 Page: 1
Field: Roosevelt Co, NM (Nad 27)
Reference well: MSU 524, True North
Site: Milnesand Unit 524
Reference: SITE 4250.0
Well: MSU 524
Reference: well (0.00N,0.00E,90.00Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

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

Plan: Plan #1
5/25/2011

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 524

Site Position:
33 37 28.632 N
From: Geographic
103 24 31.572 W
Position Uncertainty: 0.00 ft
True
Ground Level: 4240.00 ft
0.51 deg

Northing: 956027.83 ft Latitude:
Easting: 781446.40 ft Longitude:
North Reference:
Grid Convergence:

Well: MSU 524

Slot Name:

Well Position: +N/-S 0.00 ft
33 37 28.632 N
+E/-W 0.00 ft
103 24 31.572 W
Position Uncertainty: 0.00 ft

Northing: 956027.83 ft Latitude:
Easting : 781446.40 ft Longitude:

Wellpath: 1
Surface

Drilled From:
Tie-on Depth:

0.00 ft
Current Datum: SITE
Datum: Mean Sea Level
Magnetic Data: 11/15/2011

Height 4250.00 ft Above System
Declination:

MILNESAND UNIT 524 P1 SVY

7.56 deg
 Field Strength: 49459 nT
 61.49 deg
 Vertical Section: Depth From (TVD) +N/-S
 Direction +E/-W
 ft ft ft
 deg
 0.00 0.00 0.00
 90.00

Plan Section Information
 MD Incl Azim TVD +N/-S +E/-W DLS Build
 Turn TFO Target
 ft 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
 4246.91 0.00 0.00 4246.91 0.00 0.00 0.00 0.00
 0.00 0.00
 4261.91 3.00 90.00 4261.91 0.00 0.39 20.00 20.00
 0.00 90.00
 4266.91 3.00 90.00 4266.90 0.00 0.65 0.00 0.00
 0.00 0.00
 4690.96 87.81 90.00 4538.18 0.00 275.79 20.00 20.00
 0.00 0.00
 8427.90 87.81 90.00 4681.00 0.00 4010.00 0.00 0.00
 0.00 0.00 Pbh
 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
37	28.632	103	24	31.572						
	4246.91	0.00	0.00		4246.91	0.00	0.00	0.00	0.00	33
37	28.632	103	24	31.572	Top WS					
	4261.91	3.00	90.00		4261.91	0.00	0.39	0.39	20.00	33
37	28.632	103	24	31.567	Btm WS					
	4266.91	3.00	90.00		4266.90	0.00	0.65	0.65	0.00	33
37	28.632	103	24	31.564	Build					
	4300.00	9.62	90.00		4299.77	0.00	4.29	4.29	20.00	33
37	28.632	103	24	31.521						
	4400.00	29.62	90.00		4393.49	0.00	37.69	37.69	20.00	33
37	28.632	103	24	31.126						
	4500.00	49.62	90.00		4470.13	0.00	101.13	101.13	20.00	33
37	28.632	103	24	30.376						
	4600.00	69.62	90.00		4520.45	0.00	186.96	186.96	20.00	33
37	28.632	103	24	29.361						
	4690.96	87.81	90.00		4538.18	0.00	275.79	275.79	20.00	33
37	28.632	103	24	28.311	Top P1					
	4700.00	87.81	90.00		4538.52	0.00	284.82	284.82	0.00	33
37	28.632	103	24	28.204						
	4800.00	87.81	90.00		4542.34	0.00	384.75	384.75	0.00	33
37	28.632	103	24	27.022						
	4900.00	87.81	90.00		4546.17	0.00	484.68	484.68	0.00	33
37	28.632	103	24	25.841						
	5000.00	87.81	90.00		4549.99	0.00	584.60	584.60	0.00	33
37	28.632	103	24	24.659						
	5100.00	87.81	90.00		4553.81	0.00	684.53	684.53	0.00	33

MILNESAND UNIT 524 P1 SVY

37	28.632	103	24	23.477					
	5200.00	87.81	90.00	4557.63	0.00	784.46	784.46	0.00	33
37	28.632	103	24	22.296					
	5300.00	87.81	90.00	4561.45	0.00	884.38	884.38	0.00	33
37	28.632	103	24	21.114					
	5400.00	87.81	90.00	4565.28	0.00	984.31	984.31	0.00	33
37	28.632	103	24	19.932					
	5500.00	87.81	90.00	4569.10	0.00	1084.24	1084.24	0.00	33
37	28.632	103	24	18.751					
	5600.00	87.81	90.00	4572.92	0.00	1184.16	1184.16	0.00	33
37	28.632	103	24	17.569					
	5700.00	87.81	90.00	4576.74	0.00	1284.09	1284.09	0.00	33
37	28.632	103	24	16.387					
	5800.00	87.81	90.00	4580.56	0.00	1384.02	1384.02	0.00	33
37	28.632	103	24	15.206					
	5900.00	87.81	90.00	4584.39	0.00	1483.95	1483.95	0.00	33
37	28.632	103	24	14.024					
	6000.00	87.81	90.00	4588.21	0.00	1583.87	1583.87	0.00	33
37	28.632	103	24	12.842					
	6100.00	87.81	90.00	4592.03	0.00	1683.80	1683.80	0.00	33
37	28.632	103	24	11.661					
	6200.00	87.81	90.00	4595.85	0.00	1783.73	1783.73	0.00	33
37	28.632	103	24	10.479					
	6300.00	87.81	90.00	4599.67	0.00	1883.65	1883.65	0.00	33
37	28.631	103	24	9.297					
	6400.00	87.81	90.00	4603.50	0.00	1983.58	1983.58	0.00	33
37	28.631	103	24	8.116					
	6500.00	87.81	90.00	4607.32	0.00	2083.51	2083.51	0.00	33
37	28.631	103	24	6.934					
	6600.00	87.81	90.00	4611.14	0.00	2183.43	2183.43	0.00	33
37	28.631	103	24	5.752					
	6700.00	87.81	90.00	4614.96	0.00	2283.36	2283.36	0.00	33
37	28.631	103	24	4.571					
	6800.00	87.81	90.00	4618.78	0.00	2383.29	2383.29	0.00	33
37	28.631	103	24	3.389					
	6900.00	87.81	90.00	4622.60	0.00	2483.21	2483.21	0.00	33
37	28.631	103	24	2.207					
	7000.00	87.81	90.00	4626.43	0.00	2583.14	2583.14	0.00	33
37	28.631	103	24	1.026					
	7100.00	87.81	90.00	4630.25	0.00	2683.07	2683.07	0.00	33
37	28.631	103	23	59.844					
	7200.00	87.81	90.00	4634.07	0.00	2783.00	2783.00	0.00	33
37	28.631	103	23	58.662					
	7300.00	87.81	90.00	4637.89	0.00	2882.92	2882.92	0.00	33
37	28.631	103	23	57.481					
	7400.00	87.81	90.00	4641.71	0.00	2982.85	2982.85	0.00	33
37	28.631	103	23	56.299					
	7500.00	87.81	90.00	4645.54	0.00	3082.78	3082.78	0.00	33
37	28.631	103	23	55.117					
	7600.00	87.81	90.00	4649.36	0.00	3182.70	3182.70	0.00	33
37	28.630	103	23	53.936					
	7700.00	87.81	90.00	4653.18	0.00	3282.63	3282.63	0.00	33
37	28.630	103	23	52.754					
	7800.00	87.81	90.00	4657.00	0.00	3382.56	3382.56	0.00	33
37	28.630	103	23	51.572					
	7900.00	87.81	90.00	4660.82	0.00	3482.48	3482.48	0.00	33
37	28.630	103	23	50.391					

MILNESAND UNIT 524 P1 SVY									
	8000.00	87.81	90.00	4664.65	0.00	3582.41	3582.41	0.00	33
37	28.630	103	23	49.209					
	8100.00	87.81	90.00	4668.47	0.00	3682.34	3682.34	0.00	33
37	28.630	103	23	48.027					
	8200.00	87.81	90.00	4672.29	0.00	3782.27	3782.27	0.00	33
37	28.630	103	23	46.846					
	8300.00	87.81	90.00	4676.11	0.00	3882.19	3882.19	0.00	33
37	28.630	103	23	45.664					
	8400.00	87.81	90.00	4679.93	0.00	3982.12	3982.12	0.00	33
37	28.630	103	23	44.482					
	8427.90	87.81	90.00	4681.00	0.00	4010.00	4010.00	0.00	33
37	28.630	103	23	44.153	Pbh1				

Targets

Map		Latitude		Longitude		Map	
Name	<----	-----	Description	TV	TV	+N/-S	+E/-W
Easting	Deg	Min	Sec	Deg	Min	ft	ft
ft			Dip.	Dir.			
Pbh1						4681.00	
785456.24	33	37	28.630	N	103	23	44.153
						W	

Casing Points	MD	TVD	Diameter	Hole Size	Name
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Formations

MD	TVD	Formations	Lithology
ft	ft	Dip Angle	
		Dip Direction	
		deg	
4690.96	4538.18	Top P1	
	0.66	90.00	
	0.00	P3	
	0.66	90.00	

Weatherford International Ltd.
WFT Plan Report Lat, Long

Company: EOR operating
Time: 14:37:47

Page: 3
Page 4

Date: 5/25/2011

MILNESAND UNIT 524 P1 SVY
 Field: Roosevelt Co, NM (Nad 27)
 Reference: well: MSU 524, True North
 Site: Milnesand Unit 524
 Reference: SITE 4250.0
 Well: MSU 524
 Reference: well (0.00N,0.00E,90.00Azi)
 Wellpath: 1
 Method: Minimum Curvature Db: Sybase

Co-ordinate(NE)
 Vertical (TVD)
 Section (VS)
 Survey calculation

Annotation

MD ft	TVD ft	
4246.91	4246.91	Top WS
4261.91	4261.90	Btm WS
4266.91	4266.90	Build
4690.96	4538.18	Lp
8427.90	4681.00	Pbhl

MILNESAND UNIT 524 P1 SVY

**PECOS DISTRICT - RFO
CONDITIONS OF APPROVAL**

OPERATORS NAME: EOR Operating Co.

LEASE NO.: LC-062178

WELL NAME & NO: Milnesand Unit Well No. 524

SURFACE HOLE FOOTAGE: 1360' FNL & 90' FEL Section 13,
T. 8 S., R. 34 E., NMPM

BOTTOM HOLE FOOTAGE: 1360' FNL & 1360' FEL Section 7,
T. 8 S., R. 35 E., NMPM

COUNTY: Roosevelt County, New Mexico

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 420-2832. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.
2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:
 - a. Setting And/Or Cementing Any Casing String That May Be Run
 - b. BOPE Tests
3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
4. This lateral will be drilled with a closed loop mud system. After milling out the 5-1/2 inch production casing window with clear fresh water, the directional interval will be drilled with a 4-3/4 inch bit using a polymer based fresh water system.

B. CASING

1. There is no required fill of cement behind the 3-1/2 inch production liner since packers with frac ports will be used for lateral and will not require cementing.
2. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
3. Any casing set shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

C. PRESSURE CONTROL:

1. Before milling out the 5-1/2 inch production casing window, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.

2. Before milling out the 5-1/2 inch production casing window, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.

3. The BOPE shall be installed before milling out the 5-1/2 inch production casing window and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

a. The BLM Roswell Field office shall be notified a minimum of 24 hours in advance for a representative to witness the tests.

b. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.

d. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.

e. Testing must be done in a safe workman like manner. Hard line connections shall be required.

D. MUD PROGRAM REQUIREMENTS:

The drilling operations of this well will be conducted in accordance with the Onshore Oil and Gas Order No. 2 as provided in 43 CFR 3164.1. This includes well control equipment and its testing, mud system and associated equipment, and the casing and cementing.

a. Sufficient quantities of mud materials shall be maintained at the well site, at all times, for the purpose of assuring well control.

b. A mud test shall be performed at least every 24 hours after mudding up to determine, as applicable density, viscosity, gel strength, filtration, and PH.

c. Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume.

E. SPECIAL STIPULATION:

If frac ponds are necessary submit for approval a right-of-way application or sundry notice (Form 3160-5) to the BLM, Roswell Field Office 2909 West Second, Roswell, NM 88201. If frac pond is located on private/State surface and support the enhanced production of federal minerals BLM approval is necessary.

The frac pond will only be authorized to contain freshwater and testing of water quality is required. Additives are not allowed without consent of the authorized officer. If at any time the water in the frac pond becomes polluted with salts or other contaminants, use of the frac pond will cease and desist, and all liquids will be removed from the frac pond and disposed of properly. Mineral materials extracted during construction of the frac pond will be stored on-location and/or used for constructing the frac pond.