



Job Number: SVMO-150031
 Company: OXY USA, Inc.
 Lease/Well: Ivore 35 Fed 3H
 Location: Eddy County, NM
 Rig Name: H&P #621
 RKB: 25'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.32°
 Grid: East To Grid North
 File name: S:\2015SU~1\OXY\MO\IVORE\35FED3H.SVY
 Date/Time: 12-Jan-15 / 09:16
 Curve Name: Surface - 491' M.D. (Rate Gyro) (API 30-015-41410)

MS SURVEY

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 491' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
Daniel West 11/2/15
 MS Energy Services Date

30-015-41410 (line)
 30-015-41410 (line)
 NM OIL CONSERVATION
 ARTESIA DISTRICT
 MAR 25 2015
 RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
135.00	.27	356.83	135.00	.32	-.02	.32	.32	356.83	.20
226.00	.37	338.87	226.00	.81	-.14	.81	.82	350.46	.15
317.00	.47	320.77	317.00	1.37	-.48	1.37	1.45	340.78	.18
408.00	.43	276.94	407.99	1.70	-1.05	1.70	2.00	328.23	.37

Last Survey Depth Recorded

491.00	1.29	297.78	490.98	2.17	-2.19	2.17	3.08	314.79	1.09
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OXY

Eddy County, NM (NAD 27 NME)

Ivore 35 Fed 3H

3H

OH

Design: OH

Standard Survey Report

27 January, 2015

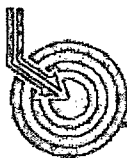
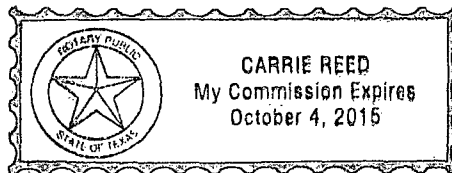
This survey is correct to the best of my knowledge and is supported by actual field data.

K. Wharton

Notarized this date 4th of March, 2015.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling

www.scientificdrilling.com

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well 3H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	KB @ 3457.20usft
Site:	Ivofe 35 Fed 3H	MD Reference:	KB @ 3457.20usft
Well:	3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project:	Eddy County, NM (NAD 27 NME), New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Ivofe 35 Fed 3H		
Site Position:		Northing:	622,231.10 usft
From:	Map	Easting:	622,577.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 42' 35.918 N
		Longitude:	103° 56' 5.338 W
		Grid Convergence:	0.22 °

Well:	3H		
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 42' 35.918 N
		Longitude:	103° 56' 5.338 W
		Ground Level:	3,432.20 usft

Wellbore:	OH		
Magnetics:	Model Name	Sample Date	Declination
	BGGM2014	1/8/2015	7.53
			Dip Angle
			60.48
			Field Strength
			48,461

Design:	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			266.35

Survey Program	Date 1/22/2015		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
135.00	491.00	MS Gyro (OH)	Generic Gyro
597.00	12,940.00	SDI MWD (OH)	SDI MWD
			SDI MWD - Standard ver 1.0.1

Survey										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(bearing)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
135.00	0.27	356.83	135.00	0.32	-0.02	0.00	0.20	0.20	0.00	
226.00	0.37	338.87	226.00	0.81	-0.14	0.08	0.15	0.11	-19.74	
317.00	0.47	320.77	317.00	1.37	-0.48	0.39	0.18	0.11	-19.89	
408.00	0.43	276.94	407.99	1.70	-1.05	0.94	0.37	-0.04	-48.16	
491.00	1.29	297.78	490.98	2.17	-2.19	2.05	1.09	1.04	25.11	
597.00	1.40	327.20	596.96	3.82	-3.95	3.69	0.65	0.10	27.75	
689.00	1.35	327.05	688.93	5.67	-5.14	4.77	0.05	-0.05	-0.16	
781.00	1.29	333.47	780.90	7.51	-6.20	5.70	0.17	-0.07	6.98	
873.00	1.17	336.24	872.88	9.29	-7.04	6.43	0.15	-0.13	3.01	

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well 3H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	KB @ 3457.20usft
Site:	Ivère 35 Féd 3H	MD Reference:	KB @ 3457.20usft
Well:	3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
965.00	1.27	341.15	964.86	11.12	-7.74	7.02	0.16	0.11	5.34
1,057.00	1.05	354.84	1,056.84	12.92	-8.15	7.31	0.38	-0.24	14.88
1,149.00	0.93	10.39	1,148.83	14.50	-8.09	7.15	0.32	-0.13	16.90
1,243.00	0.59	69.17	1,242.82	15.42	-7.50	6.50	0.85	-0.36	62.53
1,338.00	0.53	99.33	1,337.82	15.52	-6.61	5.61	0.31	-0.06	31.75
1,432.00	0.47	79.74	1,431.81	15.52	-5.80	4.80	0.19	-0.06	-20.84
1,527.00	0.57	85.09	1,526.81	15.63	-4.95	3.94	0.12	0.11	5.63
1,621.00	0.75	83.21	1,620.80	15.74	-3.87	2.86	0.19	0.19	-2.00
1,716.00	0.82	84.66	1,715.80	15.88	-2.58	1.56	0.08	0.07	1.53
1,810.00	0.78	80.06	1,809.79	16.05	-1.28	0.25	0.08	-0.04	-4.89
1,905.00	0.80	85.32	1,904.78	16.22	0.02	-1.05	0.08	0.02	5.54
1,999.00	0.72	89.58	1,998.77	16.28	1.27	-2.30	0.10	-0.09	4.53
2,094.00	0.69	83.83	2,093.76	16.34	2.43	-3.47	0.08	-0.03	-6.05
2,188.00	0.77	79.42	2,187.75	16.52	3.62	-4.66	0.10	0.09	-4.69
2,283.00	0.79	78.82	2,282.75	16.76	4.89	-5.94	0.02	0.02	-0.63
2,377.00	0.96	68.75	2,376.73	17.17	6.25	-7.34	0.24	0.18	-10.71
2,471.00	0.62	121.64	2,470.73	17.19	7.42	-8.50	0.82	-0.36	56.27
2,566.00	0.70	132.32	2,565.72	16.53	8.29	-9.32	0.15	0.08	11.24
2,660.00	0.88	179.00	2,659.71	15.42	8.73	-9.69	0.69	0.19	49.66
2,755.00	0.99	183.28	2,754.70	13.87	8.69	-9.56	0.14	0.12	4.51
2,849.00	0.93	177.07	2,848.69	12.30	8.68	-9.45	0.13	-0.06	-6.61
2,943.00	1.01	232.38	2,942.68	11.03	8.07	-8.75	0.96	0.09	58.84
3,038.00	1.21	246.70	3,037.66	10.13	6.48	-7.11	0.36	0.21	15.07
3,132.00	1.09	257.61	3,131.64	9.54	4.70	-5.30	0.27	-0.13	11.61
3,227.00	0.94	262.71	3,226.62	9.25	3.04	-3.62	0.18	-0.16	5.37
3,321.00	0.77	260.34	3,320.61	9.05	1.65	-2.23	0.18	-0.18	-2.52
3,415.00	0.71	268.32	3,414.61	8.92	0.45	-1.02	0.13	-0.06	8.49
3,510.00	0.96	273.77	3,509.60	8.96	-0.93	0.36	0.28	0.26	5.74
3,534.00	0.93	285.06	3,533.59	9.02	-1.32	0.74	0.78	-0.13	47.04
3,700.00	0.88	279.98	3,699.57	9.59	-3.88	3.26	0.06	-0.03	-3.06
3,794.00	0.71	287.43	3,793.56	9.89	-5.14	4.50	0.21	-0.18	7.93
3,889.00	0.62	280.08	3,888.56	10.16	-6.21	5.55	0.13	-0.09	-7.74
3,983.00	0.71	283.51	3,982.55	10.38	-7.28	6.60	0.10	0.10	3.65
4,078.00	0.65	298.86	4,077.54	10.78	-8.32	7.62	0.20	-0.06	16.16
4,172.00	0.59	112.33	4,171.54	10.85	-8.34	7.63	1.32	-0.06	184.54
4,266.00	0.93	91.27	4,265.53	10.65	-7.13	6.44	0.46	0.36	-22.40
4,361.00	1.08	84.98	4,360.52	10.71	-5.47	4.78	0.20	0.16	-6.62
4,455.00	1.45	64.30	4,454.50	11.31	-3.52	2.79	0.62	0.39	-22.00
4,550.00	1.10	92.63	4,549.47	11.79	-1.52	0.77	0.75	-0.37	29.82
4,644.00	1.31	108.27	4,643.45	11.41	0.40	-1.13	0.41	0.22	16.64
4,739.00	1.47	88.85	4,738.42	11.09	2.65	-3.35	0.52	0.17	-20.44
4,833.00	0.20	100.38	4,832.41	11.09	4.02	-4.71	1.36	-1.35	12.27
4,928.00	0.34	305.58	4,927.41	11.22	3.95	-4.66	0.56	0.15	-162.95

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well 3H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	KB @ 3457.20usft
Site:	Ivóre 35 Fed 3H	MD Reference:	KB @ 3457.20usft
Well:	3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,022.00	0.67	15.68	5,021.41	11.91	3.87	-4.62	0.68	0.35	74.57
5,116.00	1.21	5.71	5,115.40	13.43	4.12	-4.97	0.60	0.57	-10.61
5,211.00	0.59	353.15	5,210.38	14.91	4.16	-5.10	0.68	-0.65	-13.22
5,305.00	0.85	16.88	5,304.38	16.06	4.31	-5.32	0.42	0.28	25.24
5,400.00	0.64	182.56	5,399.37	16.21	4.49	-5.51	1.56	-0.22	174.40
5,495.00	0.62	225.68	5,494.37	15.32	4.09	-5.06	0.49	-0.02	45.39
5,589.00	0.64	246.57	5,588.36	14.75	3.25	-4.18	0.24	0.02	22.22
5,684.00	0.59	236.76	5,683.36	14.27	2.35	-3.26	0.12	-0.05	-10.33
5,778.00	0.83	257.07	5,777.35	13.86	1.29	-2.17	0.37	0.26	21.61
5,873.00	1.04	262.60	5,872.34	13.59	-0.24	-0.63	0.24	0.22	5.82
5,967.00	1.28	269.74	5,966.32	13.48	-2.14	1.27	0.30	0.26	7.60
6,062.00	1.07	218.59	6,061.30	12.78	-3.75	2.93	1.09	-0.22	-53.84
6,156.00	1.05	212.90	6,155.29	11.37	-4.77	4.03	0.11	-0.02	-6.05
6,251.00	0.52	197.32	6,250.28	10.23	-5.37	4.70	0.60	-0.56	-16.40
6,345.00	0.44	183.05	6,344.27	9.46	-5.51	4.90	0.15	-0.09	-15.18
6,440.00	0.20	170.91	6,439.27	8.93	-5.51	4.93	0.26	-0.25	-12.78
6,534.00	0.18	127.27	6,533.27	8.68	-5.36	4.80	0.15	-0.02	-46.43
6,629.00	0.17	311.68	6,628.27	8.68	-5.35	4.79	0.37	-0.01	-184.83
6,723.00	0.44	0.79	6,722.27	9.14	-5.45	4.86	0.38	0.29	52.24
6,818.00	0.42	1.23	6,817.27	9.85	-5.44	4.80	0.02	-0.02	0.46
6,912.00	0.85	32.44	6,911.26	10.78	-5.05	4.36	0.57	0.46	33.20
7,007.00	1.12	47.21	7,006.25	12.01	-4.00	3.22	0.39	0.28	15.55
7,101.00	1.59	55.08	7,100.22	13.38	-2.25	1.39	0.54	0.50	8.37
7,196.00	0.77	110.23	7,195.20	13.91	-0.57	-0.32	1.38	-0.86	58.05
7,290.00	1.84	147.55	7,289.18	12.42	0.83	-1.62	1.40	1.14	39.70
7,385.00	0.75	179.20	7,384.15	10.51	1.66	-2.32	1.33	-1.15	33.32
7,479.00	0.40	51.10	7,478.15	10.10	1.92	-2.56	1.11	-0.37	-136.28
7,573.00	0.17	72.19	7,572.15	10.35	2.31	-2.96	0.26	-0.24	22.44
7,667.00	0.45	33.91	7,666.15	10.70	2.65	-3.32	0.35	0.30	-40.72
7,762.00	0.36	37.38	7,761.15	11.25	3.04	-3.75	0.10	-0.09	3.65
7,856.00	0.41	176.62	7,855.14	11.15	3.24	-3.94	0.77	0.05	148.13
7,881.00	0.54	171.26	7,880.14	10.94	3.26	-3.95	0.55	0.52	-21.44
7,964.00	2.95	238.68	7,963.10	9.44	1.49	-2.09	3.36	2.90	81.23
7,995.00	7.97	252.27	7,993.95	8.37	-1.24	0.70	16.61	16.19	43.84
8,027.00	12.14	256.80	8,025.46	6.93	-6.63	6.17	13.25	13.03	14.16
8,058.00	16.38	259.07	8,055.49	5.35	-14.10	13.73	13.79	13.68	7.32
8,090.00	19.75	259.71	8,085.91	3.53	-23.85	23.58	10.55	10.53	2.00
8,121.00	23.57	258.17	8,114.72	1.33	-35.07	34.92	12.46	12.32	-4.97
8,153.00	26.75	257.89	8,143.68	-1.50	-48.38	48.38	9.94	9.94	-0.88
8,184.00	29.62	259.08	8,171.00	-4.41	-62.73	62.88	9.43	9.26	3.84
8,216.00	31.50	260.70	8,198.55	-7.26	-78.74	79.05	6.41	5.88	5.06
8,247.00	33.38	260.60	8,224.72	-9.96	-95.15	95.59	6.07	6.06	-0.32
8,279.00	35.97	260.72	8,251.03	-12.92	-113.11	113.71	8.10	8.09	0.38

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well 3H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	KB @ 3457.20usft
Site:	Ivory 35 Fed 3H	MD Reference:	KB @ 3457.20usft
Well:	3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,310.00	37.50	262.59	8,275.87	-15.60	-131.46	132.18	6.11	4.94	6.03
8,342.00	40.52	264.18	8,300.74	-17.91	-151.46	152.30	9.94	9.44	4.97
8,373.00	43.35	265.69	8,323.80	-19.74	-172.10	173.00	9.69	9.13	4.87
8,404.00	47.52	267.74	8,345.55	-20.99	-194.14	195.08	14.25	13.45	6.61
8,436.00	51.38	268.65	8,366.35	-21.75	-218.44	219.38	12.25	12.06	2.84
8,467.00	54.00	268.87	8,385.13	-22.28	-243.09	244.01	8.47	8.45	0.71
8,499.00	56.73	268.71	8,403.32	-22.84	-269.41	270.31	8.54	8.53	-0.50
8,530.00	59.70	267.56	8,419.65	-23.70	-295.74	296.65	10.09	9.58	-3.71
8,562.00	60.88	268.62	8,435.51	-24.62	-323.52	324.43	4.68	3.69	3.31
8,593.00	61.15	269.32	8,450.53	-25.11	-350.63	351.52	2.16	0.87	2.26
8,625.00	64.02	268.78	8,465.26	-25.58	-379.03	379.89	9.09	8.97	-1.69
8,656.00	67.96	267.19	8,477.87	-26.58	-407.32	408.19	13.55	12.71	-5.13
8,688.00	72.42	265.46	8,488.72	-28.52	-437.36	438.28	14.84	13.94	-5.41
8,719.00	74.38	264.52	8,497.57	-31.11	-466.95	467.98	6.96	6.32	-3.03
8,751.00	78.42	264.10	8,505.09	-34.20	-497.89	499.06	12.69	12.63	-1.31
8,782.00	80.91	263.73	8,510.66	-37.43	-528.21	529.53	8.12	8.03	-1.19
8,814.00	83.10	263.90	8,515.11	-40.85	-559.72	561.18	6.86	6.84	0.53
8,833.00	85.13	264.64	8,517.05	-42.73	-578.52	580.07	11.36	10.68	3.89
8,864.00	87.22	264.60	8,519.12	-45.63	-609.31	610.98	6.74	6.74	-0.19
8,896.00	89.66	265.49	8,519.99	-48.39	-641.18	642.96	8.12	7.63	2.78
8,990.00	92.82	266.55	8,517.96	-54.92	-734.92	736.92	3.55	3.36	1.13
9,085.00	92.72	266.52	8,513.37	-60.65	-829.63	831.81	0.11	-0.11	-0.03
9,179.00	92.62	266.35	8,508.99	-66.49	-923.35	925.71	0.21	-0.11	-0.18
9,273.00	92.89	266.47	8,504.47	-72.37	-1,017.06	1,019.60	0.31	0.29	0.13
9,368.00	92.92	266.25	8,499.66	-78.39	-1,111.74	1,114.48	0.23	0.03	-0.23
9,462.00	90.44	266.60	8,496.90	-84.25	-1,205.51	1,208.43	2.66	-2.64	0.37
9,557.00	90.34	266.26	8,496.25	-90.17	-1,300.33	1,303.43	0.37	-0.11	-0.36
9,651.00	90.44	266.32	8,495.61	-96.25	-1,394.13	1,397.43	0.12	0.11	0.06
9,745.00	90.47	266.30	8,494.87	-102.30	-1,487.93	1,491.42	0.04	0.03	-0.02
9,839.00	90.27	265.87	8,494.26	-108.72	-1,581.71	1,585.42	0.50	-0.21	-0.46
9,934.00	90.13	265.98	8,493.93	-115.47	-1,676.47	1,680.42	0.19	-0.15	0.12
10,028.00	90.30	265.51	8,493.58	-122.44	-1,770.21	1,774.41	0.53	0.18	-0.50
10,122.00	90.54	265.36	8,492.89	-129.92	-1,863.91	1,868.40	0.30	0.26	-0.16
10,217.00	90.40	264.70	8,492.11	-138.15	-1,958.55	1,963.37	0.71	-0.15	-0.69
10,311.00	90.67	264.35	8,491.23	-147.12	-2,052.11	2,057.32	0.47	0.29	-0.37
10,406.00	91.04	265.73	8,489.81	-155.33	-2,146.74	2,152.28	1.50	0.39	1.45
10,500.00	90.10	266.48	8,488.88	-161.72	-2,240.52	2,246.27	1.28	-1.00	0.80
10,595.00	90.27	266.66	8,488.57	-167.40	-2,335.35	2,341.27	0.26	0.18	0.19
10,689.00	90.74	266.63	8,487.74	-172.90	-2,429.18	2,435.26	0.50	0.50	-0.03
10,784.00	90.97	266.75	8,486.33	-178.39	-2,524.01	2,530.25	0.27	0.24	0.13
10,878.00	91.11	266.81	8,484.62	-183.67	-2,617.85	2,624.23	0.16	0.15	0.06
10,972.00	91.28	267.05	8,482.66	-188.70	-2,711.70	2,718.21	0.31	0.18	0.26
11,067.00	91.41	267.08	8,480.43	-193.56	-2,806.54	2,813.18	0.14	0.14	0.03
11,161.00	90.87	267.20	8,478.56	-198.25	-2,900.41	2,907.15	0.59	-0.57	0.13

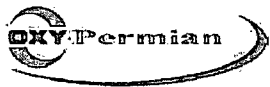
Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well 3H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	KB @ 3457.20usft
Site:	Ivora 35 Fed 3H	MD Reference:	KB @ 3457.20usft
Well:	3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,255.00	91.81	267.37	8,476.36	-202.70	-2,994.28	3,001.11	1.02	1.00	0.18
11,350.00	90.90	268.10	8,474.11	-206.46	-3,089.17	3,096.05	1.23	-0.96	0.77
11,444.00	91.17	267.78	8,472.42	-209.84	-3,183.10	3,190.00	0.45	0.29	-0.34
11,538.00	92.08	267.84	8,469.75	-213.43	-3,276.99	3,283.93	0.97	0.97	0.06
11,633.00	90.27	268.24	8,467.80	-216.67	-3,371.91	3,378.86	1.95	-1.91	0.42
11,727.00	90.44	268.24	8,467.22	-219.56	-3,465.86	3,472.81	0.18	0.18	0.00
11,821.00	90.23	268.08	8,466.67	-222.58	-3,559.81	3,566.76	0.28	-0.22	-0.17
11,915.00	90.27	267.76	8,466.26	-225.99	-3,653.75	3,660.73	0.34	0.04	-0.34
12,010.00	90.30	267.10	8,465.79	-230.25	-3,748.65	3,755.71	0.70	0.03	-0.69
12,104.00	90.54	265.99	8,465.10	-235.92	-3,842.48	3,849.70	1.21	0.26	-1.18
12,198.00	89.90	264.80	8,464.74	-243.46	-3,936.17	3,943.69	1.44	-0.68	-1.27
12,292.00	89.97	263.91	8,464.84	-252.71	-4,029.72	4,037.63	0.95	0.07	-0.95
12,387.00	90.34	263.26	8,464.59	-263.32	-4,124.12	4,132.52	0.79	0.39	-0.68
12,481.00	89.50	264.49	8,464.72	-273.35	-4,217.58	4,226.43	1.58	-0.89	1.31
12,576.00	89.83	264.00	8,465.27	-282.88	-4,312.10	4,321.36	0.62	0.35	-0.52
12,670.00	89.03	264.94	8,466.21	-291.94	-4,405.66	4,415.31	1.31	-0.85	1.00
12,764.00	89.50	264.51	8,467.41	-300.58	-4,499.25	4,509.26	0.68	0.50	-0.46
12,859.00	89.80	263.96	8,468.00	-310.12	-4,593.77	4,604.19	0.66	0.32	-0.58
12,893.00	89.93	263.81	8,468.08	-313.74	-4,627.57	4,638.16	0.58	0.38	-0.44
MWD Survey									
12,940.00	89.93	263.81	8,468.13	-318.81	-4,674.30	4,685.12	0.00	0.00	0.00
Projection to Bit - Fed 3H BHL									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
12,893.00	8,468.08	-313.74	-4,627.57	MWD Survey
12,940.00	8,468.13	-318.81	-4,674.30	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____



Ivory 35 Fed 3H
Eddy County, NM (NAD 27 NME)
Northing: 622231.10
Easting: 622577.30
Plan #1



Azimuths to Grid North
True North: -0.21°
Magnetic North: 7.32°

Magnetic Field
Strength: 48461.4snT
Dip Angle: 60.48°
Date: 1/8/2015
Model: BGGM2014

To convert Magnetic North to Grid, Add 7.31°
To convert True North to Grid, Subtract 0.22°



KB @ 3457.20usft
Gr @ 3432.20

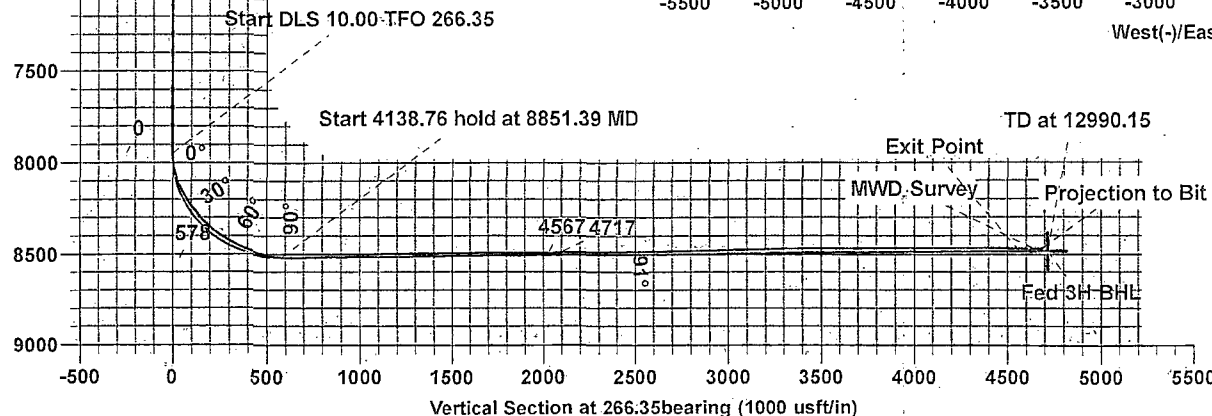
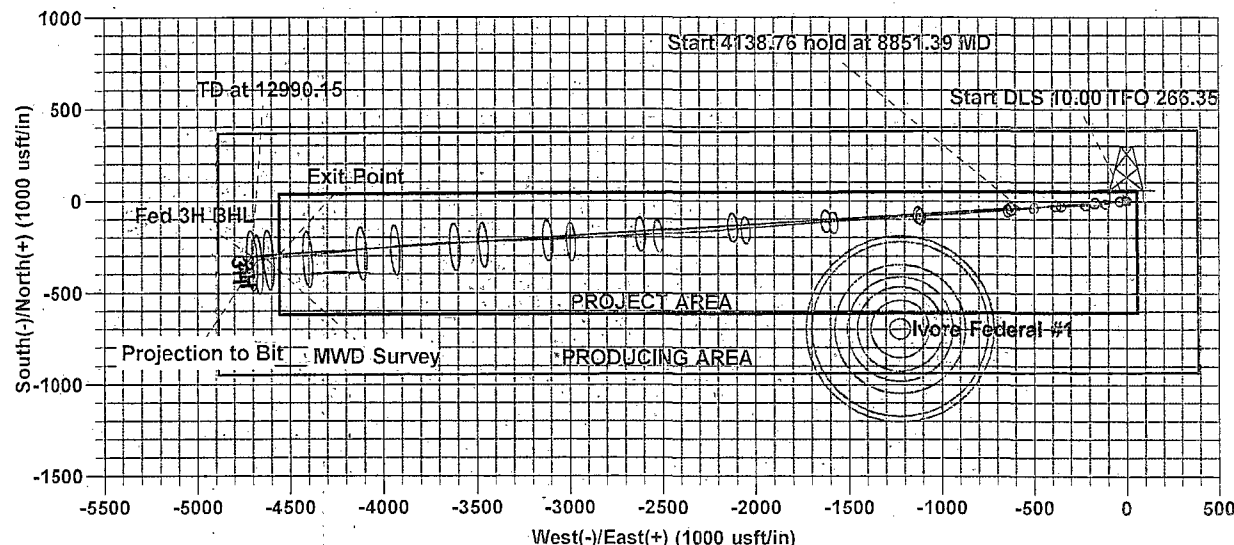
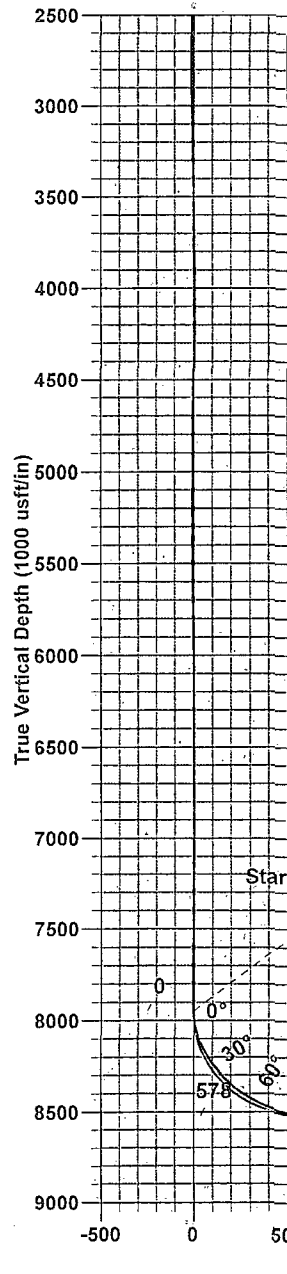
WELL DETAILS 3H						
Ground Level: 3432.20						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	622231.10	622577.30	32° 42'	35.918° N	103° 56' 5.338° W

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7946.27	0.00	0.00	7946.27	0.00	0.00	0.00	0.00	0.00
8851.39	90.51	266.35	8519.20	-36.84	-576.91	10.00	266.35	578.08
12990.15	90.51	266.35	8482.20	-300.56	-4707.09	0.00	0.00	4716.68

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
Fed 3H BHL	8482.20	-300.56	-4707.09	621930.54	617870.21	

PROJECT DETAILS:
Eddy County, NM (NAD 27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

SITE DETAILS:
Ivory 35 Fed 3H
Site Centre Northing: 622231.10
Easting: 622577.30
Positional Uncertainty: 0.00
Convergence: 0.22
Local North: Grid



OXY USA WTP LP
Ivory 35 Federal Com 3H
API No. 30-015-41410

14-3/4" hole @ 508'
11-3/4" csg @ 508'
w/ 610sx-TOC-Surf-Circ.

10-5/8" hole @ 3595'
8-5/8" csg @ 3580'
w/ 1230sx-TOC-Surf-Circ.

7-7/8" hole @ 12940'
5-1/2" csg @ 12921'
w/ 1730sx-TOC-Surf-Circ.

2-7/8" tbg & ESP @ 7903'

Perfs @ 8717-12765'

TD- 12940'M 8468'V