

HOBBSD

MAR 02 2015

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OXY

Lea County, New Mexico

NBR 7 State 4H

NBR7S 4H

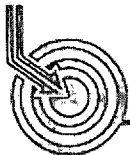
Wellbore #1

Design: Wellbore #1

30-025-42042

Standard Survey Report

17 November, 2014



Scientific Drilling

www.scientificdrilling.com

MAR 04 2015

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well NBR7S 4H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3635.00usft
Site:	NBR 7 State 4H	MD Reference:	KB @ 3635.00usft
Well:	NBR7S 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Midland District

Project	Lea County, 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	NBR 7 State 4H		
Site Position:		Northing:	509,250.74 usft
From:	Map	Easting:	723,292.07 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 23' 52.686 N
		Longitude:	103° 36' 35.604 W
		Grid Convergence:	0.39 °

Well	NBR7S 4H		
Well Position	+N/-S	0.00 usft	Northing: 509,250.74 usft
	+E/-W	0.00 usft	Easting: 723,292.07 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 23' 52.686 N
		Longitude:	103° 36' 35.604 W
		Ground Level:	3,610.00 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	8/6/2014	(°)
			7.23
			Dip Angle (°)
			60.26
			Field Strength (nT)
			48,401

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	9,900.00	0.00	0.00
			Direction (bearing)
			0.59

Survey Program	Date 11/17/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
161.00	15,163.00	Survey #1 (Wellbore #1)	SDI MWD
			Description
			SDI MWD - Standard ver 1.0.1

Survey										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
(usft)	(°)	(bearing)	(usft)	(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	
161.00	0.61	240.98	161.00	-0.42	-0.75	-0.42	0.38	0.38	0.00	
223.00	0.79	220.72	222.99	-0.90	-1.32	-0.91	0.49	0.29	-32.68	
313.00	1.15	230.03	312.98	-1.95	-2.41	-1.97	0.44	0.40	10.34	
401.00	1.06	229.26	400.96	-3.05	-3.71	-3.09	0.10	-0.10	-0.88	
491.00	1.61	221.45	490.94	-4.54	-5.17	-4.59	0.64	0.61	-8.68	
581.00	1.43	221.46	580.91	-6.33	-6.76	-6.40	0.20	-0.20	0.01	
672.00	1.42	224.91	671.88	-7.98	-8.30	-8.06	0.09	-0.01	3.79	
763.00	1.54	225.59	762.85	-9.63	-9.97	-9.73	0.13	0.13	0.75	
852.00	1.95	212.36	851.81	-11.75	-11.64	-11.87	0.64	0.46	-14.87	

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Site:	NBR 7 State 4H	MD Reference:	KB @ 3635.00usft
Well:	NBR7S 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
934.00	2.17	218.49	933.75	-14.14	-13.35	-14.28	0.38	0.27	7.48	
1,044.00	2.12	224.70	1,043.68	-17.22	-16.08	-17.38	0.22	-0.05	5.65	
1,140.00	0.57	232.45	1,139.65	-18.77	-17.71	-18.95	1.62	-1.61	8.07	
1,234.00	0.35	131.39	1,233.65	-19.25	-17.86	-19.43	0.77	-0.23	-107.51	
1,329.00	0.34	90.63	1,328.64	-19.44	-17.36	-19.62	0.25	-0.01	-42.91	
1,424.00	0.57	105.01	1,423.64	-19.57	-16.62	-19.74	0.27	0.24	15.14	
1,520.00	0.55	99.10	1,519.64	-19.76	-15.71	-19.92	0.06	-0.02	-6.16	
1,615.00	0.27	57.92	1,614.63	-19.72	-15.07	-19.87	0.41	-0.29	-43.35	
1,710.00	0.34	47.84	1,709.63	-19.41	-14.67	-19.56	0.09	0.07	-10.61	
1,805.00	0.75	49.19	1,804.63	-18.81	-13.99	-18.96	0.43	0.43	1.42	
1,900.00	0.80	68.00	1,899.62	-18.16	-12.90	-18.29	0.27	0.05	19.80	
1,995.00	0.87	72.48	1,994.61	-17.69	-11.60	-17.81	0.10	0.07	4.72	
2,090.00	0.81	66.44	2,089.60	-17.21	-10.30	-17.31	0.11	-0.06	-6.36	
2,185.00	0.81	47.95	2,184.59	-16.49	-9.18	-16.58	0.27	0.00	-19.46	
2,280.00	1.19	56.42	2,279.58	-15.49	-7.86	-15.57	0.43	0.40	8.92	
2,375.00	1.22	48.45	2,374.55	-14.28	-6.28	-14.34	0.18	0.03	-8.39	
2,471.00	1.19	53.93	2,470.53	-13.01	-4.71	-13.06	0.12	-0.03	5.71	
2,566.00	1.31	59.87	2,565.51	-11.89	-2.98	-11.92	0.19	0.13	6.25	
2,661.00	1.69	56.93	2,660.48	-10.58	-0.86	-10.59	0.41	0.40	-3.09	
2,756.00	1.56	64.57	2,755.44	-9.26	1.48	-9.24	0.27	-0.14	8.04	
2,852.00	1.48	50.72	2,851.41	-7.91	3.62	-7.87	0.39	-0.08	-14.43	
2,947.00	1.84	57.41	2,946.37	-6.31	5.85	-6.25	0.43	0.38	7.04	
3,042.00	1.85	51.95	3,041.32	-4.55	8.35	-4.46	0.19	0.01	-5.75	
3,138.00	1.79	66.98	3,137.27	-3.01	10.95	-2.89	0.50	-0.06	15.66	
3,233.00	2.00	76.46	3,232.22	-2.04	13.92	-1.89	0.40	0.22	9.98	
3,328.00	2.09	77.65	3,327.16	-1.28	17.23	-1.10	0.10	0.09	1.25	
3,423.00	2.01	81.56	3,422.10	-0.66	20.57	-0.45	0.17	-0.08	4.12	
3,518.00	2.28	75.74	3,517.03	0.05	24.05	0.29	0.36	0.28	-6.13	
3,613.00	2.02	74.03	3,611.96	0.97	27.49	1.25	0.28	-0.27	-1.80	
3,708.00	1.64	79.12	3,706.91	1.69	30.43	2.00	0.43	-0.40	5.36	
3,803.00	1.28	85.51	3,801.88	2.03	32.82	2.37	0.42	-0.38	6.73	
3,898.00	0.30	171.94	3,896.88	1.87	33.92	2.21	1.36	-1.03	90.98	
3,994.00	0.62	195.08	3,992.87	1.12	33.82	1.46	0.38	0.33	24.10	
4,089.00	0.57	157.75	4,087.87	0.18	33.86	0.53	0.40	-0.05	-39.29	
4,184.00	1.12	108.14	4,182.86	-0.54	34.92	-0.19	0.91	0.58	-52.22	
4,279.00	1.32	98.08	4,277.84	-0.99	36.89	-0.61	0.31	0.21	-10.59	
4,374.00	1.53	74.38	4,372.81	-0.80	39.19	-0.40	0.65	0.22	-24.95	
4,469.00	1.11	69.38	4,467.78	-0.13	41.28	0.29	0.46	-0.44	-5.26	
4,564.00	0.33	255.70	4,562.78	0.12	41.87	0.55	1.51	-0.82	-182.82	
4,658.00	0.70	240.03	4,656.77	-0.23	41.11	0.19	0.42	0.39	-16.67	
4,753.00	0.72	241.86	4,751.77	-0.80	40.08	-0.39	0.03	0.02	1.93	
4,772.00	0.58	210.98	4,770.77	-0.94	39.93	-0.53	1.96	-0.74	-162.53	
4,876.00	0.71	250.90	4,874.76	-1.60	39.05	-1.20	0.44	0.13	38.38	
4,939.00	0.65	256.41	4,937.75	-1.81	38.33	-1.42	0.14	-0.10	8.75	

Survey Report

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Well:	NBR7S 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
5,034.00	0.96	267.01	5,032.75	-1.98	37.02	-1.60	0.36	0.33	11.16	
5,129.00	1.11	271.46	5,127.73	-2.00	35.30	-1.64	0.18	0.16	4.68	
5,224.00	1.04	265.13	5,222.71	-2.05	33.52	-1.71	0.14	-0.07	-6.66	
5,319.00	0.94	267.03	5,317.70	-2.16	31.88	-1.84	0.11	-0.11	2.00	
5,414.00	1.01	271.42	5,412.69	-2.18	30.27	-1.87	0.11	0.07	4.62	
5,509.00	1.13	268.74	5,507.67	-2.18	28.50	-1.89	0.14	0.13	-2.82	
5,604.00	1.07	270.93	5,602.65	-2.19	26.67	-1.92	0.08	-0.06	2.31	
5,699.00	1.04	262.35	5,697.64	-2.29	24.93	-2.03	0.17	-0.03	-9.03	
5,794.00	1.00	265.18	5,792.62	-2.47	23.25	-2.24	0.07	-0.04	2.98	
5,888.00	1.04	263.62	5,886.61	-2.64	21.59	-2.42	0.05	0.04	-1.66	
5,983.00	1.11	261.86	5,981.59	-2.86	19.82	-2.66	0.08	0.07	-1.85	
6,078.00	0.34	176.39	6,076.58	-3.28	18.92	-3.08	1.19	-0.81	-89.97	
6,173.00	0.33	177.53	6,171.58	-3.83	18.95	-3.64	0.01	-0.01	1.20	
6,268.00	0.31	181.59	6,266.58	-4.36	18.96	-4.17	0.03	-0.02	4.27	
6,363.00	0.46	172.03	6,361.58	-5.00	19.00	-4.80	0.17	0.16	-10.06	
6,458.00	0.47	167.96	6,456.57	-5.75	19.14	-5.56	0.04	0.01	-4.28	
6,553.00	0.45	164.49	6,551.57	-6.49	19.32	-6.30	0.04	-0.02	-3.65	
6,647.00	0.40	146.83	6,645.57	-7.13	19.60	-6.92	0.15	-0.05	-18.79	
6,742.00	0.34	159.43	6,740.57	-7.67	19.88	-7.46	0.11	-0.06	13.26	
6,837.00	0.38	151.16	6,835.56	-8.21	20.13	-8.00	0.07	0.04	-8.71	
6,932.00	0.48	143.22	6,930.56	-8.80	20.52	-8.59	0.12	0.11	-8.36	
7,027.00	0.55	146.21	7,025.56	-9.50	21.01	-9.28	0.08	0.07	3.15	
7,122.00	0.69	144.23	7,120.55	-10.34	21.60	-10.12	0.15	0.15	-2.08	
7,217.00	0.72	132.86	7,215.54	-11.21	22.37	-10.98	0.15	0.03	-11.97	
7,311.00	0.83	139.21	7,309.54	-12.13	23.25	-11.89	0.15	0.12	6.76	
7,406.00	0.93	192.89	7,404.53	-13.40	23.53	-13.16	0.84	0.11	56.51	
7,501.00	1.05	191.56	7,499.51	-15.01	23.18	-14.77	0.13	0.13	-1.40	
7,596.00	1.13	191.60	7,594.49	-16.78	22.82	-16.54	0.08	0.08	0.04	
7,690.00	1.46	205.05	7,688.47	-18.77	22.12	-18.54	0.48	0.35	14.31	
7,785.00	0.81	241.33	7,783.45	-20.19	21.02	-19.97	0.99	-0.68	38.19	
7,880.00	0.82	273.59	7,878.44	-20.47	19.75	-20.26	0.48	0.01	33.96	
7,993.00	0.96	256.93	7,991.43	-20.63	18.03	-20.44	0.26	0.12	-14.74	
8,088.00	1.21	318.87	8,086.42	-20.06	16.59	-19.88	1.20	0.26	65.20	
8,183.00	1.47	330.77	8,181.39	-18.24	15.34	-18.08	0.40	0.27	12.53	
8,277.00	1.33	322.56	8,275.36	-16.32	14.08	-16.17	0.26	-0.15	-8.73	
8,373.00	1.22	307.76	8,371.34	-14.81	12.60	-14.68	0.36	-0.11	-15.42	
8,468.00	1.06	298.03	8,466.32	-13.78	11.02	-13.66	0.26	-0.17	-10.24	
8,563.00	1.11	288.48	8,561.30	-13.07	9.37	-12.97	0.20	0.05	-10.05	
8,658.00	1.39	275.29	8,656.28	-12.67	7.35	-12.60	0.42	0.29	-13.88	
8,753.00	0.93	272.94	8,751.26	-12.53	5.44	-12.47	0.49	-0.48	-2.47	
8,848.00	1.55	289.09	8,846.24	-12.07	3.45	-12.03	0.74	0.65	17.00	
8,943.00	1.57	293.17	8,941.20	-11.13	1.04	-11.12	0.12	0.02	4.29	
9,038.00	1.21	281.06	9,036.18	-10.43	-1.14	-10.44	0.49	-0.38	-12.75	

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well NBR7S 4H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3635.00usft
Site:	NBR 7 State 4H	MD Reference:	KB @ 3635.00usft
Well:	NBR7S 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
9,133.00	1.95	299.31	9,131.14	-9.45	-3.53	-9.48	0.93	0.78	19.21
9,228.00	1.42	307.45	9,226.10	-7.94	-5.88	-8.00	0.61	-0.56	8.57
9,259.00	1.39	307.34	9,257.09	-7.48	-6.48	-7.54	0.10	-0.10	-0.35
9,291.00	2.47	0.76	9,289.07	-6.55	-6.78	-6.62	6.20	3.38	166.94
9,323.00	5.34	26.00	9,321.00	-4.52	-6.12	-4.59	10.25	8.97	78.88
9,354.00	8.06	34.27	9,351.78	-1.43	-4.26	-1.48	9.29	8.77	26.68
9,386.00	10.21	36.37	9,383.38	2.71	-1.32	2.69	6.80	6.72	6.56
9,417.00	13.14	39.85	9,413.73	7.62	2.57	7.65	9.72	9.45	11.23
9,449.00	15.98	40.12	9,444.70	13.79	7.74	13.87	8.88	8.88	0.84
9,481.00	18.52	44.21	9,475.26	20.80	14.13	20.94	8.79	7.94	12.78
9,513.00	21.87	40.82	9,505.29	28.96	21.57	29.17	11.09	10.47	-10.59
9,545.00	27.05	35.64	9,534.41	39.39	29.71	39.69	17.51	16.19	-16.19
9,576.00	31.42	33.52	9,561.46	51.86	38.28	52.25	14.49	14.10	-6.84
9,608.00	34.14	30.59	9,588.36	66.55	47.46	67.03	9.84	8.50	-9.16
9,640.00	35.90	26.97	9,614.57	82.64	56.29	83.21	8.51	5.50	-11.31
9,671.00	37.79	22.02	9,639.38	99.55	63.97	100.20	11.35	6.10	-15.97
9,703.00	40.34	17.64	9,664.23	118.52	70.79	119.24	11.74	7.97	-13.69
9,735.00	42.89	12.32	9,688.16	139.04	76.26	139.81	13.61	7.97	-16.63
9,766.00	44.13	6.13	9,710.65	160.08	79.66	160.89	14.31	4.00	-19.97
9,798.00	44.80	359.50	9,733.50	182.45	80.75	183.26	14.66	2.09	-20.72
9,830.00	46.03	355.39	9,755.97	205.20	79.73	206.01	9.92	3.84	-12.84
9,861.00	48.83	356.74	9,776.94	227.98	78.17	228.77	9.58	9.03	4.35
9,893.00	52.36	355.44	9,797.25	252.64	76.48	253.41	11.47	11.03	-4.06
9,925.00	54.52	352.14	9,816.31	278.18	73.69	278.92	10.68	6.75	-10.31
9,956.00	57.37	347.81	9,833.68	303.46	69.20	304.15	14.78	9.19	-13.97
9,988.00	59.31	345.12	9,850.47	329.94	62.82	330.56	9.38	6.06	-8.41
10,083.00	71.97	338.31	9,889.62	411.80	35.50	412.14	14.83	13.33	-7.17
10,115.00	78.36	337.44	9,897.81	440.43	23.85	440.66	20.14	19.97	-2.72
10,159.00	83.53	337.37	9,904.73	480.54	7.16	480.59	11.75	11.75	-0.16
10,191.00	84.99	339.45	9,907.93	510.14	-4.55	510.07	7.91	4.56	6.50
10,223.00	86.06	342.10	9,910.43	540.26	-15.05	540.08	8.91	3.34	8.28
10,254.00	87.58	344.55	9,912.15	569.91	-23.93	569.63	9.29	4.90	7.90
10,286.00	88.25	347.35	9,913.31	600.93	-31.70	600.57	8.99	2.09	8.75
10,318.00	87.78	349.82	9,914.42	632.27	-38.03	631.85	7.85	-1.47	7.72
10,349.00	87.25	352.02	9,915.76	662.85	-42.91	662.38	7.29	-1.71	7.10
10,381.00	86.61	354.97	9,917.48	694.60	-46.53	694.09	9.42	-2.00	9.22
10,383.42	86.64	355.18	9,917.62	697.01	-46.74	696.49	8.84	1.33	8.75
NBR7S 4H FTP									
10,413.00	87.04	357.77	9,919.25	726.48	-48.56	725.95	8.84	1.34	8.75
10,444.00	88.86	358.82	9,920.36	757.45	-49.48	756.90	6.78	5.87	3.39
10,476.00	89.63	0.57	9,920.78	789.44	-49.65	788.89	5.97	2.41	5.47
10,539.00	89.63	2.17	9,921.19	852.42	-48.14	851.88	2.54	0.00	2.54
10,634.00	90.40	2.47	9,921.16	947.34	-44.30	946.84	0.87	0.81	0.32
10,729.00	91.18	1.66	9,919.85	1,042.27	-40.87	1,041.80	1.18	0.82	-0.85

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well NBR7S 4H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3635.00usft
Site:	NBR 7 State 4H	MD Reference:	KB @ 3635.00usft
Well:	NBR7S 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
10,824.00	92.18	1.21	9,917.07	1,137.20	-38.49	1,136.74	1.15	1.05	-0.47
10,919.00	91.34	1.80	9,914.15	1,232.12	-36.00	1,231.69	1.08	-0.88	0.62
11,014.00	89.60	0.06	9,913.37	1,327.10	-34.46	1,326.67	2.59	-1.83	-1.83
11,109.00	89.66	0.39	9,913.98	1,422.09	-34.09	1,421.67	0.35	0.06	0.35
11,204.00	90.50	2.65	9,913.85	1,517.05	-31.57	1,516.65	2.54	0.88	2.38
11,299.00	92.59	2.64	9,911.29	1,611.91	-27.18	1,611.55	2.20	2.20	-0.01
11,394.00	92.56	3.56	9,907.02	1,706.68	-22.05	1,706.36	0.97	-0.03	0.97
11,489.00	89.66	2.95	9,905.18	1,801.49	-16.66	1,801.23	3.12	-3.05	-0.64
11,584.00	88.96	4.25	9,906.33	1,896.30	-10.69	1,896.09	1.55	-0.74	1.37
11,679.00	89.70	4.92	9,907.44	1,990.99	-3.10	1,990.85	1.05	0.78	0.71
11,774.00	89.03	4.91	9,908.49	2,085.63	5.04	2,085.57	0.71	-0.71	-0.01
11,869.00	90.10	5.07	9,909.21	2,180.27	13.30	2,180.29	1.14	1.13	0.17
11,964.00	90.37	4.22	9,908.82	2,274.95	20.99	2,275.05	0.94	0.28	-0.89
12,059.00	89.83	2.75	9,908.66	2,369.77	26.77	2,369.92	1.65	-0.57	-1.55
12,154.00	88.99	1.62	9,909.63	2,464.70	30.39	2,464.88	1.48	-0.88	-1.19
12,249.00	90.40	1.65	9,910.14	2,559.65	33.10	2,559.86	1.48	1.48	0.03
12,344.00	91.21	0.82	9,908.80	2,654.62	35.15	2,654.84	1.22	0.85	-0.87
12,439.00	90.84	359.49	9,907.11	2,749.60	35.40	2,749.82	1.45	-0.39	-1.40
12,534.00	89.56	358.41	9,906.77	2,844.58	33.66	2,844.78	1.76	-1.35	-1.14
12,629.00	90.61	358.22	9,906.63	2,939.54	30.87	2,939.70	1.12	1.11	-0.20
12,724.00	91.58	357.72	9,904.82	3,034.46	27.51	3,034.58	1.15	1.02	-0.53
12,819.00	90.60	357.78	9,903.01	3,129.37	23.78	3,129.45	1.03	-1.03	0.06
12,914.00	89.73	357.67	9,902.74	3,224.29	20.01	3,224.33	0.92	-0.92	-0.12
13,009.00	89.03	357.92	9,903.76	3,319.22	16.35	3,319.21	0.78	-0.74	0.26
13,104.00	90.34	0.28	9,904.29	3,414.20	14.86	3,414.17	2.84	1.38	2.48
13,199.00	88.96	0.72	9,904.87	3,509.19	15.69	3,509.16	1.52	-1.45	0.46
13,294.00	90.17	0.90	9,905.59	3,604.17	17.03	3,604.16	1.29	1.27	0.19
13,389.00	90.57	0.35	9,904.97	3,699.17	18.07	3,699.16	0.72	0.42	-0.58
13,484.00	90.94	0.33	9,903.72	3,794.16	18.63	3,794.15	0.39	0.39	-0.02
13,579.00	91.85	359.86	9,901.41	3,889.13	18.79	3,889.11	1.08	0.96	-0.49
13,674.00	90.97	359.28	9,899.07	3,984.09	18.08	3,984.07	1.11	-0.93	-0.61
13,769.00	89.39	359.87	9,898.77	4,079.09	17.37	4,079.05	1.78	-1.66	0.62
13,864.00	87.89	359.88	9,901.03	4,174.06	17.16	4,174.01	1.58	-1.58	0.01
13,959.00	86.37	1.65	9,905.79	4,268.92	18.43	4,268.89	2.45	-1.60	1.86
14,054.00	87.62	2.22	9,910.77	4,363.74	21.63	4,363.73	1.45	1.32	0.60
14,149.00	88.92	1.53	9,913.63	4,458.64	24.74	4,458.66	1.55	1.37	-0.73
14,244.00	90.40	1.31	9,914.20	4,553.61	27.09	4,553.64	1.58	1.56	-0.23
14,339.00	91.98	1.90	9,912.22	4,648.54	29.75	4,648.61	1.78	1.66	0.62
14,434.00	90.84	2.08	9,909.89	4,743.46	33.05	4,743.55	1.21	-1.20	0.19
14,529.00	89.63	1.15	9,909.50	4,838.42	35.73	4,838.53	1.61	-1.27	-0.98
14,624.00	88.72	0.48	9,910.87	4,933.39	37.08	4,933.52	1.19	-0.96	-0.71
14,719.00	88.92	0.87	9,912.82	5,028.37	38.20	5,028.50	0.46	0.21	0.41
14,814.00	88.65	359.60	9,914.84	5,123.34	38.59	5,123.47	1.37	-0.28	-1.34

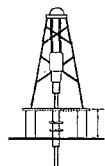
Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well NBR7S 4H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3635.00usft
Site:	NBR 7 State 4H	MD Reference:	KB @ 3635.00usft
Well:	NBR7S 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Midland District

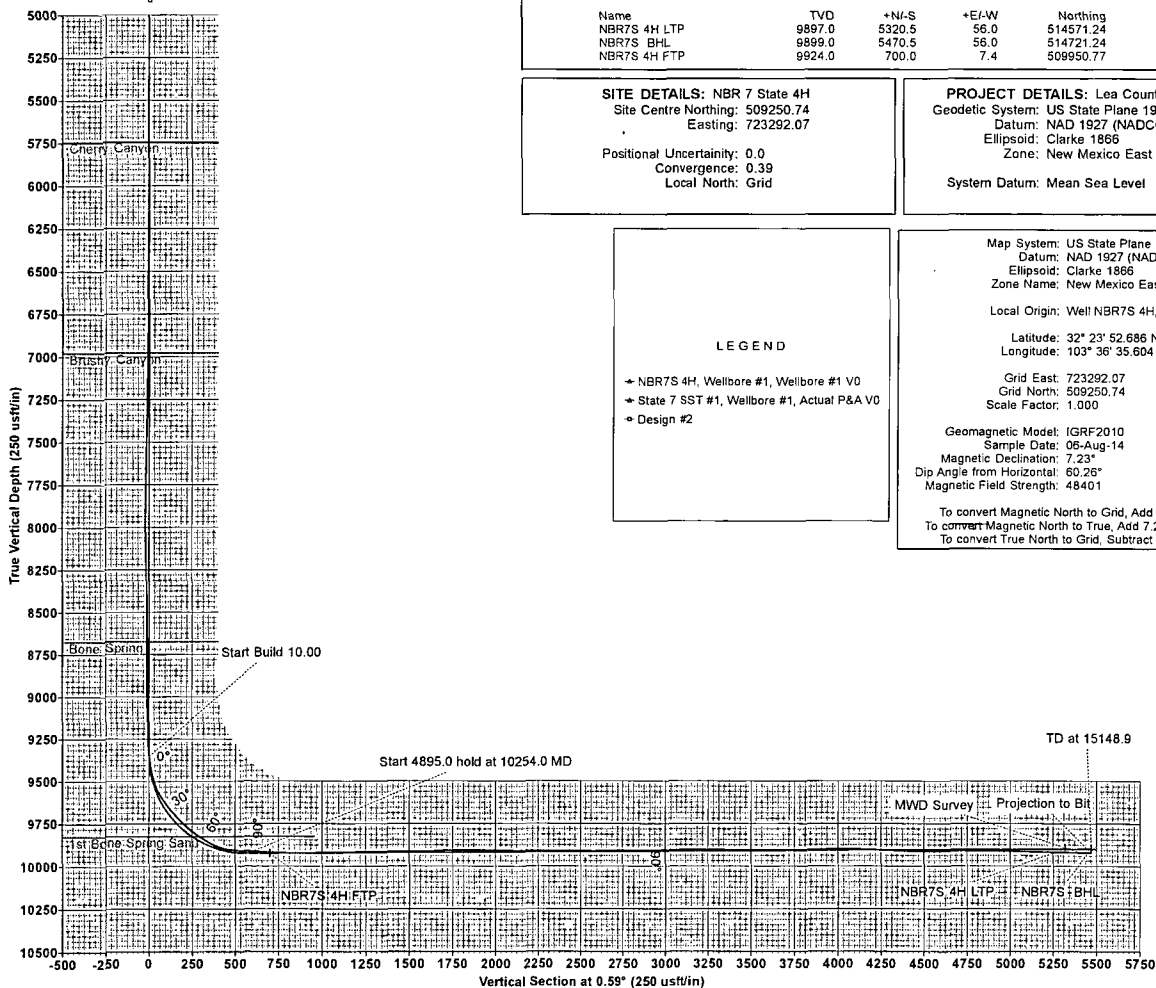
Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,909.00	89.19	358.72	9,916.63	5,218.32	37.20	5,218.42	1.09	0.57	-0.93	
15,004.00	88.62	358.18	9,918.44	5,313.26	34.63	5,313.34	0.83	-0.60	-0.57	
15,010.00	88.64	358.14	9,918.59	5,319.25	34.43	5,319.33	0.69	0.28	-0.63	
NBR7S 4H LTP										
15,099.00	88.89	357.58	9,920.51	5,408.17	31.11	5,408.21	0.69	0.28	-0.63	
MWD Survey										
15,159.81	88.89	357.58	9,921.68	5,468.92	28.55	5,468.92	0.00	0.00	0.00	
NBR7S BHL										
15,163.00	88.89	357.58	9,921.75	5,472.11	28.41	5,472.11	0.00	0.00	0.00	
Projection to Bit										



NBR 7 State 4H NBR7S 4H
Lea County, New Mexico
Northing: (Y) 509250.74
Easting: (X) 723292.07
Design #2



KB @ 3634.0usft
 Ground Level: 3610.0



WELL DETAILS:					
Ground Level: 3610.0					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	509250.74	723292.07	32° 23' 52.686 N	103° 36' 35.604 W

SECTION DETAILS									Target
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
9351.0	0.00	0.00	9351.0	0.0	0.0	0.00	0.00	0.0	
10254.0	90.29	0.59	9924.0	575.9	5.9	10.00	0.59	575.9	
15148.9	90.29	0.59	9899.0	5470.5	56.0	0.00	0.00	5470.8	NBR7S BHL

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
NBR7S 4H LTP	9897.0	532.5	56.0	514371.24	723348.12
NBR7S BHL	9899.0	5470.5	56.0	514721.24	723348.12
NBR7S 4H FTP	9924.0	700.0	7.4	509950.77	723299.44

SITE DETAILS: NBR 7 State 4H Site Centre Northing: 509250.74 Easting: 723292.07 Positional Uncertainty: 0.0 Convergence: 0.39 Local North: Grid	PROJECT DETAILS: Lea County, New Mexico 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
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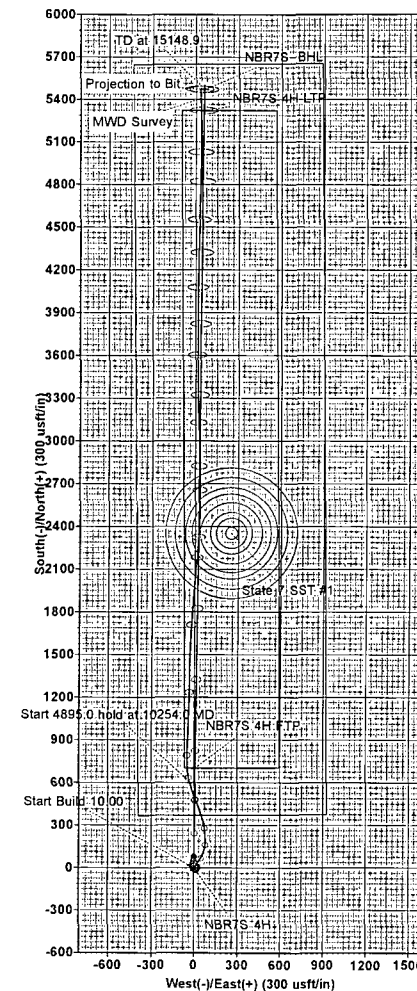
LEGEND	
+	NBR7S 4H, Wellbore #1, Wellbore #1 V0
+	State 7 SST #1, Wellbore #1, Actual P&A V0
+	Design #2
Map System: US State Plane 1927 (Exact solution) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone Name: New Mexico East 3001 Local Origin: Well NBR7S 4H, Grid North Latitude: 32° 23' 52.686 N Longitude: 103° 36' 35.604 W Grid East: 723292.07 Grid North: 509250.74 Scale Factor: 1.000 Geomagnetic Model: IGRF2010 Sample Date: 06-Aug-14 Magnetic Declination: 7.23° Dip Angle from Horizontal: 60.26° Magnetic Field Strength: 48401 To convert Magnetic North to Grid, Add 6.84° To convert Magnetic North to True, Add 7.23° East To convert True North to Grid, Subtract 0.39°	



Azimuths to Grid North
 True North: -0.39°
 Magnetic North: 6.84°

Magnetic Field
 Strength: 48400.9snT
 Dip Angle: 60.26°
 Date: 8/6/2014
 Model: IGRF2010

To convert Magnetic North to Grid, Add 6.84°
 To convert True North to Grid, Subtract 0.39°



OXY USA INC.
NBR 7 State 4H
API No. 30-025-42042

14-3/4" hole @ 990'
11-3/4" csg @ 990'
w/ 640sx-TOC-Surf-Circ.

10-5/8" hole @ 4835'
8-5/8" csg @ 4815'
w/ 1280sx-TOC-Surf-Circ.

7-7/8" hole @ 15163'
5-1/2" csg @ 15163'
w/ 1670sx-TOC-Surf-Circ.

2-7/8" tbg & pkr @ 9230'

Perfs @ 10425-14970'

TD- 15163'M 9921'V