

HOBBSOCD

APR 14 2015

RECEIVED

OXY

Lea County, New Mexico
Ridge Runner 7 State 2H
RR 7 S 2H

Original Wellbore

Design: Original Wellbore

Standard Survey Report

05 January, 2015

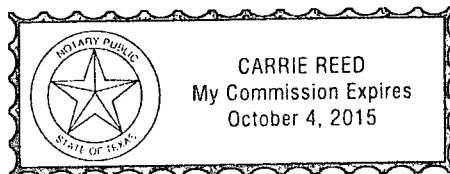
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 4th of March, 2015.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling

www.scientificdrilling.com

APR 22 2015

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well RR 7 S 2H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3637.20usft
Site:	Ridge Runner 7 State 2H	MD Reference:	KB @ 3637.20usft
Well:	RR 7 S 2H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	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	Ridge Runner 7 State 2H		
Site Position:		Northing:	513,236.38 usft
From:	Map	Easting:	720,600.78 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 24' 32.304 N
		Longitude:	103° 37' 6.682 W
		Grid Convergence:	0.38 °

Well	RR 7 S 2H		
Well Position	+N/-S	0.00 usft	Northing: 513,236.38 usft
	+E/-W	0.00 usft	Easting: 720,600.78 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 24' 32.304 N
		Longitude:	103° 37' 6.682 W
		Ground Level:	3,612.20 usft

Wellbore	Original Wellbore		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	11/5/2014	7.20
			Dip Angle
			(°)
			60.26
			Field Strength
			(nT)
			48,382

Design	Original Wellbore		
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)
			90.90

Survey Program	Date 1/5/2015		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
4.00	957.00	MS Gyro (Original Wellbore)	Generic Gyro
1,062.00	15,440.00	SDI MWD (Original Wellbore)	SDI MWD
			Description
			Generic Gyro
			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
4.00	0.13	147.88	4.00	0.00	0.00	0.00	3.25	3.25	0.00
127.00	0.52	110.04	127.00	-0.31	0.60	0.61	0.35	0.32	-30.76
219.00	0.58	114.69	218.99	-0.65	1.42	1.43	0.08	0.07	5.05
311.00	0.55	117.50	310.99	-1.05	2.23	2.25	0.04	-0.03	3.05
404.00	0.55	130.40	403.98	-1.54	2.97	2.99	0.13	0.00	13.87
496.00	0.51	136.98	495.98	-2.13	3.58	3.62	0.08	-0.04	7.15
588.00	0.48	139.18	587.98	-2.72	4.11	4.16	0.04	-0.03	2.39
680.00	0.51	145.89	679.97	-3.35	4.60	4.65	0.07	0.03	7.29
772.00	0.65	151.90	771.97	-4.15	5.07	5.14	0.17	0.15	6.53

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well RR 7 S 2H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3637.20usft
Site:	Ridge Runner 7 State 2H	MD Reference:	KB @ 3637.20usft
Well:	RR 7 S 2H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	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)
865.00	0.71	157.83	864.96	-5.15	5.54	5.62	0.10	0.06	6.38
957.00	0.77	164.75	956.96	-6.27	5.91	6.01	0.12	0.07	7.52
1,062.00	0.59	232.54	1,061.95	-7.28	5.67	5.78	0.74	-0.17	64.56
1,156.00	0.55	229.38	1,155.94	-7.87	4.94	5.07	0.05	-0.04	-3.36
1,250.00	0.57	226.95	1,249.94	-8.48	4.26	4.39	0.03	0.02	-2.59
1,344.00	0.59	225.50	1,343.94	-9.14	3.57	3.72	0.03	0.02	-1.54
1,438.00	0.74	226.75	1,437.93	-9.90	2.79	2.94	0.16	0.16	1.33
1,532.00	0.64	218.58	1,531.92	-10.72	2.02	2.18	0.15	-0.11	-8.69
1,626.00	0.44	231.99	1,625.92	-11.36	1.40	1.58	0.25	-0.21	14.27
1,721.00	0.49	184.72	1,720.92	-11.99	1.08	1.27	0.40	0.05	-49.76
1,815.00	0.46	183.57	1,814.91	-12.76	1.03	1.23	0.03	-0.03	-1.22
1,910.00	0.34	145.04	1,909.91	-13.38	1.16	1.38	0.30	-0.13	-40.56
2,004.00	0.61	127.18	2,003.91	-13.91	1.72	1.94	0.32	0.29	-19.00
2,098.00	0.71	116.13	2,097.90	-14.47	2.64	2.87	0.17	0.11	-11.76
2,192.00	0.62	117.13	2,191.89	-14.95	3.62	3.86	0.10	-0.10	1.06
2,287.00	0.89	115.47	2,286.89	-15.51	4.74	4.99	0.29	0.28	-1.75
2,381.00	1.04	106.37	2,380.87	-16.06	6.22	6.47	0.23	0.16	-9.68
2,475.00	1.31	97.42	2,474.85	-16.44	8.11	8.36	0.35	0.29	-9.52
2,569.00	1.00	90.50	2,568.83	-16.59	9.99	10.25	0.36	-0.33	-7.36
2,665.00	1.04	89.50	2,664.82	-16.58	11.70	11.96	0.05	0.04	-1.04
2,759.00	1.52	93.43	2,758.79	-16.65	13.80	14.06	0.52	0.51	4.18
2,853.00	0.90	29.68	2,852.78	-16.09	15.41	15.66	1.47	-0.66	-67.82
2,948.00	0.85	25.85	2,947.77	-14.80	16.08	16.32	0.08	-0.05	-4.03
3,042.00	0.94	48.82	3,041.75	-13.67	16.97	17.18	0.39	0.10	24.44
3,135.00	1.12	96.12	3,134.74	-13.26	18.45	18.65	0.91	0.19	50.86
3,229.00	0.20	95.71	3,228.73	-13.38	19.52	19.73	0.98	-0.98	-0.44
3,323.00	0.44	32.54	3,322.73	-13.09	19.88	20.08	0.42	0.26	-67.20
3,417.00	0.67	61.57	3,416.73	-12.52	20.56	20.75	0.38	0.24	30.88
3,512.00	0.94	41.92	3,511.72	-11.68	21.57	21.75	0.40	0.28	-20.68
3,605.00	0.71	62.03	3,604.71	-10.84	22.59	22.75	0.39	-0.25	21.62
3,699.00	0.83	94.54	3,698.70	-10.62	23.78	23.94	0.47	0.13	34.59
3,794.00	1.08	125.97	3,793.69	-11.20	25.19	25.36	0.60	0.26	33.08
3,888.00	1.08	133.33	3,887.67	-12.33	26.55	26.74	0.15	0.00	7.83
3,982.00	0.52	86.78	3,981.66	-12.91	27.62	27.82	0.87	-0.60	-49.52
4,076.00	0.96	48.07	4,075.66	-12.36	28.63	28.82	0.68	0.47	-41.18
4,171.00	1.40	54.29	4,170.64	-11.15	30.17	30.34	0.48	0.46	6.55
4,265.00	1.31	28.81	4,264.61	-9.54	31.62	31.76	0.64	-0.10	-27.11
4,359.00	1.12	343.41	4,358.59	-7.72	31.87	31.99	1.01	-0.20	-48.30
4,454.00	0.92	342.34	4,453.58	-6.10	31.38	31.47	0.21	-0.21	-1.13
4,548.00	0.93	340.07	4,547.56	-4.67	30.89	30.96	0.04	0.01	-2.41
4,642.00	0.75	310.79	4,641.55	-3.55	30.16	30.21	0.49	-0.19	-31.15
4,687.00	0.68	304.69	4,686.55	-3.20	29.72	29.77	0.23	-0.16	-13.56
4,823.00	0.54	311.17	4,822.54	-2.32	28.57	28.61	0.11	-0.10	4.76

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well RR 7 S 2H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3637.20usft
Site:	Ridge Runner 7 State 2H	MD Reference:	KB @ 3637.20usft
Well:	RR 7 S 2H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	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)
4,917.00	0.64	295.03	4,916.54	-1.81	27.76	27.79	0.21	0.11	-17.17
5,012.00	0.65	292.18	5,011.53	-1.38	26.78	26.80	0.04	0.01	-3.00
5,106.00	0.77	295.69	5,105.52	-0.91	25.72	25.73	0.14	0.13	3.73
5,200.00	0.74	294.73	5,199.52	-0.38	24.60	24.60	0.03	-0.03	-1.02
5,294.00	0.85	297.24	5,293.51	0.19	23.43	23.42	0.12	0.12	2.67
5,388.00	0.81	298.99	5,387.50	0.84	22.23	22.21	0.05	-0.04	1.86
5,482.00	0.72	298.24	5,481.49	1.44	21.13	21.10	0.10	-0.10	-0.80
5,576.00	0.79	289.49	5,575.48	1.93	20.00	19.96	0.14	0.07	-9.31
5,859.00	1.02	302.31	5,858.45	3.93	16.03	15.96	0.11	0.08	4.53
6,143.00	1.04	306.74	6,142.40	6.82	11.83	11.72	0.03	0.01	1.56
6,426.00	1.15	310.31	6,425.35	10.20	7.60	7.44	0.05	0.04	1.26
6,708.00	1.07	312.68	6,707.30	13.81	3.51	3.29	0.03	-0.03	0.84
6,991.00	1.09	291.18	6,990.25	16.58	-0.94	-1.20	0.14	0.01	-7.60
7,274.00	0.70	296.21	7,273.21	18.31	-5.00	-5.29	0.14	-0.14	1.78
7,557.00	0.90	282.54	7,556.18	19.56	-8.73	-9.03	0.10	0.07	-4.83
7,840.00	1.07	274.21	7,839.14	20.23	-13.53	-13.85	0.08	0.06	-2.94
8,123.00	2.12	244.68	8,122.03	18.19	-20.90	-21.18	0.46	0.37	-10.43
8,217.00	4.58	243.36	8,215.86	15.76	-25.82	-26.07	2.62	2.62	-1.40
8,311.00	5.78	246.72	8,309.48	12.21	-33.53	-33.72	1.32	1.28	3.57
8,405.00	5.81	246.58	8,403.00	8.45	-42.24	-42.37	0.04	0.03	-0.15
8,499.00	5.74	245.00	8,496.52	4.57	-50.87	-50.93	0.18	-0.07	-1.68
8,593.00	5.54	246.08	8,590.07	0.74	-59.27	-59.28	0.24	-0.21	1.15
8,687.00	5.17	241.63	8,683.66	-3.11	-67.15	-67.09	0.59	-0.39	-4.73
8,782.00	4.43	262.47	8,778.33	-5.62	-74.55	-74.46	1.98	-0.78	21.94
8,876.00	3.71	256.90	8,872.09	-6.79	-81.11	-81.00	0.87	-0.77	-5.93
8,970.00	4.43	253.28	8,965.86	-8.52	-87.55	-87.41	0.81	0.77	-3.85
9,064.00	3.63	251.47	9,059.62	-10.51	-93.85	-93.67	0.86	-0.85	-1.93
9,159.00	5.97	258.87	9,154.28	-12.42	-101.55	-101.34	2.54	2.46	7.79
9,253.00	5.78	254.62	9,247.79	-14.62	-110.91	-110.67	0.50	-0.20	-4.52
9,347.00	4.92	252.25	9,341.38	-17.11	-119.32	-119.03	0.94	-0.91	-2.52
9,441.00	5.70	259.90	9,434.98	-19.15	-127.75	-127.43	1.12	0.83	8.14
9,535.00	4.40	251.61	9,528.61	-21.11	-135.77	-135.42	1.58	-1.38	-8.82
9,629.00	6.16	255.44	9,622.21	-23.52	-144.07	-143.68	1.91	1.87	4.07
9,723.00	4.64	252.82	9,715.79	-25.91	-152.59	-152.16	1.64	-1.62	-2.79
9,817.00	5.98	256.95	9,809.38	-28.13	-160.99	-160.53	1.48	1.43	4.39
9,911.00	7.72	255.00	9,902.71	-30.87	-171.86	-171.35	1.87	1.85	-2.07
10,006.00	7.34	243.71	9,996.90	-35.21	-183.46	-182.89	1.61	-0.40	-11.88
10,095.00	6.39	243.44	10,085.26	-39.95	-192.99	-192.34	1.07	-1.07	-0.30
10,105.00	6.19	244.36	10,095.20	-40.43	-193.97	-193.31	2.24	-2.00	9.20
10,199.00	4.53	126.54	10,188.98	-44.84	-195.56	-194.83	9.80	-1.77	-125.34
10,230.00	7.35	96.07	10,219.82	-45.78	-192.61	-191.86	13.35	9.10	-98.29
10,262.00	9.41	72.64	10,251.48	-45.22	-188.07	-187.34	12.33	6.44	-73.22
10,293.00	13.44	70.71	10,281.86	-43.27	-182.25	-181.55	13.06	13.00	-6.23

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well RR 7 S 2H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3637.20usft
Site:	Ridge Runner 7 State 2H	MD Reference:	KB @ 3637.20usft
Well:	RR 7 S 2H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	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)
10,325.00	16.89	71.33	10,312.74	-40.55	-174.34	-173.67	10.79	10.78	1.94
10,356.00	20.23	74.81	10,342.13	-37.70	-164.89	-164.28	11.35	10.77	11.23
10,387.00	23.04	77.42	10,370.94	-34.98	-153.80	-153.23	9.58	9.06	8.42
10,419.00	25.62	79.33	10,400.10	-32.33	-140.89	-140.36	8.43	8.06	5.97
10,450.00	28.53	80.93	10,427.70	-29.92	-126.99	-126.50	9.68	9.39	5.16
10,482.00	31.42	84.14	10,455.41	-27.87	-111.14	-110.68	10.33	9.03	10.03
10,513.00	33.38	86.48	10,481.59	-26.52	-94.58	-94.16	7.50	6.32	7.55
10,545.00	34.30	86.52	10,508.17	-25.43	-76.80	-76.39	2.88	2.88	0.13
10,576.00	35.75	87.90	10,533.55	-24.57	-59.03	-58.63	5.33	4.68	4.45
10,608.00	38.79	90.60	10,559.02	-24.33	-39.66	-39.27	10.78	9.50	8.44
10,639.00	41.73	92.74	10,582.67	-24.93	-19.64	-19.24	10.48	9.48	6.90
10,670.00	43.36	93.41	10,605.51	-26.05	1.29	1.70	5.46	5.26	2.16
10,702.00	45.97	93.35	10,628.27	-27.38	23.75	24.17	8.16	8.16	-0.19
10,733.00	49.28	94.19	10,649.16	-28.89	46.59	47.04	10.86	10.68	2.71
10,765.00	51.00	94.35	10,669.67	-30.72	71.09	71.56	5.39	5.38	0.50
10,776.69	51.84	94.71	10,676.96	-31.44	80.20	80.68	7.58	7.19	3.09
HL Entry Point									
10,796.00	53.23	95.29	10,688.70	-32.78	95.47	95.97	7.58	7.20	3.00
10,827.00	57.10	95.54	10,706.41	-35.18	120.79	121.33	12.50	12.48	0.81
10,839.00	58.09	95.82	10,712.84	-36.18	130.87	131.42	8.48	8.25	2.35
RR 7S 2H FTP									
10,859.00	59.74	96.28	10,723.16	-37.99	147.91	148.49	8.48	8.25	2.29
10,890.00	63.29	96.94	10,737.95	-41.13	174.97	175.59	11.60	11.45	2.13
10,921.00	66.27	96.80	10,751.15	-44.48	202.81	203.48	9.62	9.61	-0.45
10,953.00	69.26	97.12	10,763.26	-48.07	232.21	232.93	9.39	9.34	1.00
10,984.00	72.04	96.99	10,773.53	-51.66	261.23	262.01	8.98	8.97	-0.42
11,015.00	75.60	95.62	10,782.17	-54.93	290.82	291.65	12.24	11.48	-4.42
11,047.00	79.73	94.43	10,789.00	-57.66	321.95	322.82	13.41	12.91	-3.72
11,078.00	82.73	92.56	10,793.73	-59.53	352.53	353.42	11.37	9.68	-6.03
11,106.00	84.51	91.70	10,796.84	-60.56	380.33	381.24	7.05	6.36	-3.07
11,137.00	85.80	90.62	10,799.46	-61.19	411.21	412.13	5.42	4.16	-3.48
11,168.00	88.15	90.31	10,801.10	-61.44	442.17	443.08	7.65	7.58	-1.00
11,231.00	89.19	90.49	10,802.56	-61.88	505.15	506.06	1.68	1.65	0.29
11,325.00	89.36	90.29	10,803.75	-62.52	599.14	600.05	0.28	0.18	-0.21
11,419.00	89.23	90.18	10,804.90	-62.90	693.13	694.04	0.18	-0.14	-0.12
11,513.00	89.19	89.92	10,806.20	-62.99	787.12	788.02	0.28	-0.04	-0.28
11,607.00	88.89	89.43	10,807.78	-62.45	881.11	881.98	0.61	-0.32	-0.52
11,701.00	88.93	88.58	10,809.56	-60.82	975.08	975.91	0.91	0.04	-0.90
11,796.00	89.50	89.46	10,810.86	-59.20	1,070.05	1,070.85	1.10	0.60	0.93
11,890.00	89.76	89.43	10,811.47	-58.28	1,164.04	1,164.82	0.28	0.28	-0.03
11,984.00	89.16	89.57	10,812.36	-57.46	1,258.04	1,258.79	0.66	-0.64	0.15
12,078.00	89.80	89.02	10,813.21	-56.31	1,352.02	1,352.74	0.90	0.68	-0.59
12,173.00	89.03	90.50	10,814.18	-55.91	1,447.02	1,447.72	1.76	-0.81	1.56
12,267.00	89.39	90.39	10,815.48	-56.64	1,541.00	1,541.70	0.40	0.38	-0.12

Survey Report

Company:	OXY	Local Co-ordinate Reference:	Well RR 7 S 2H
Project:	Lea County, New Mexico	TVD Reference:	KB @ 3637.20usft
Site:	Ridge Runner 7 State 2H	MD Reference:	KB @ 3637.20usft
Well:	RR 7 S 2H	North Reference:	Grid
Wellbore:	Original Wellbore	Survey Calculation Method:	Minimum Curvature
Design:	Original Wellbore	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)
12,361.00	88.62	91.90	10,817.11	-58.52	1,634.97	1,635.69	1.80	-0.82	1.61
12,455.00	89.16	91.29	10,818.93	-61.13	1,728.91	1,729.66	0.87	0.57	-0.65
12,549.00	89.16	91.12	10,820.31	-63.11	1,822.88	1,823.65	0.18	0.00	-0.18
12,643.00	89.19	90.31	10,821.66	-64.28	1,916.86	1,917.64	0.86	0.03	-0.86
12,737.00	89.43	89.74	10,822.79	-64.32	2,010.86	2,011.62	0.66	0.26	-0.61
12,831.00	88.32	90.85	10,824.64	-64.81	2,104.83	2,105.59	1.67	-1.18	1.18
12,925.00	88.45	90.69	10,827.29	-66.07	2,198.79	2,199.56	0.22	0.14	-0.17
13,019.00	88.59	90.55	10,829.72	-67.09	2,292.75	2,293.52	0.21	0.15	-0.15
13,113.00	88.66	90.81	10,831.97	-68.20	2,386.72	2,387.50	0.29	0.07	0.28
13,207.00	89.13	90.31	10,833.79	-69.12	2,480.69	2,481.48	0.73	0.50	-0.53
13,301.00	89.50	89.98	10,834.91	-69.36	2,574.69	2,575.46	0.53	0.39	-0.35
13,395.00	89.80	89.72	10,835.48	-69.11	2,668.69	2,669.44	0.42	0.32	-0.28
13,489.00	88.52	90.28	10,836.86	-69.11	2,762.67	2,763.42	1.49	-1.36	0.60
13,583.00	88.59	89.69	10,839.23	-69.09	2,856.64	2,857.38	0.63	0.07	-0.63
13,677.00	88.46	88.47	10,841.65	-67.58	2,950.60	2,951.30	1.30	-0.14	-1.30
13,772.00	89.13	87.73	10,843.65	-64.43	3,045.52	3,046.16	1.05	0.71	-0.78
13,866.00	88.29	89.94	10,845.77	-62.52	3,139.47	3,140.07	2.51	-0.89	2.35
13,960.00	86.71	90.00	10,849.87	-62.47	3,233.38	3,233.96	1.68	-1.68	0.06
14,054.00	87.62	89.93	10,854.51	-62.41	3,327.26	3,327.84	0.97	0.97	-0.07
14,148.00	88.02	90.20	10,858.09	-62.52	3,421.20	3,421.76	0.51	0.43	0.29
14,242.00	88.82	90.83	10,860.68	-63.36	3,515.16	3,515.72	1.08	0.85	0.67
14,336.00	90.87	90.86	10,860.94	-64.75	3,609.14	3,609.71	2.18	2.18	0.03
14,430.00	91.44	89.72	10,859.04	-65.23	3,703.12	3,703.69	1.36	0.61	-1.21
14,524.00	89.93	89.28	10,857.92	-64.41	3,797.10	3,797.65	1.67	-1.61	-0.47
14,618.00	89.43	90.27	10,858.44	-64.04	3,891.10	3,891.63	1.18	-0.53	1.05
14,712.00	89.83	89.71	10,859.05	-64.02	3,985.10	3,985.61	0.73	0.43	-0.60
14,806.00	89.93	90.61	10,859.25	-64.28	4,079.10	4,079.60	0.96	0.11	0.96
14,900.00	90.33	89.89	10,859.03	-64.69	4,173.09	4,173.60	0.88	0.43	-0.77
14,994.00	89.53	89.90	10,859.15	-64.52	4,267.09	4,267.58	0.85	-0.85	0.01
15,088.00	88.46	90.05	10,860.80	-64.48	4,361.08	4,361.55	1.15	-1.14	0.16
15,182.00	88.99	89.11	10,862.89	-63.79	4,455.05	4,455.50	1.15	0.56	-1.00
15,276.00	88.59	89.59	10,864.87	-62.72	4,549.02	4,549.45	0.66	-0.43	0.51
15,307.68	88.69	89.58	10,865.63	-62.50	4,580.69	4,581.11	0.32	0.32	-0.03
HL Exit Point									
15,307.86	88.69	89.58	10,865.63	-62.49	4,580.87	4,581.29	0.00	0.00	0.00
RR 7S 2H LTP									
15,371.00	88.89	89.56	10,866.96	-62.02	4,644.00	4,644.40	0.32	0.32	-0.03
MWD Survey									
15,440.00	88.89	89.56	10,868.30	-61.49	4,712.98	4,713.37	0.00	0.00	0.00
Projection to Bit/TD - RR 7S 2H BHL									

Survey Report

Company: OXY	Local Co-ordinate Reference: Well RR 7 S 2H	
Project: Lea County, New Mexico	TVD Reference: KB @ 3637.20usft	
Site: Ridge Runner 7 State 2H	MD Reference: KB @ 3637.20usft	
Well: RR 7 S 2H	North Reference: Grid	
Wellbore: Original Wellbore	Survey Calculation Method: Minimum Curvature	
Design: Original Wellbore	Database: Midland District	

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,776.69	10,676.96	-31.44	80.20	HL Entry Point
15,307.68	10,865.63	-62.50	4,580.69	HL Exit Point
15,371.00	10,866.96	-62.02	4,644.00	MWD Survey
15,440.00	10,868.30	-61.49	4,712.98	Projection to Bit/TD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



Ridge Runner 7 State 2H
Lea County, New Mexico
Northing: 513236.38
Easting: 720600.78
Plan #2



KB @ 3637.20usft
 Gr @ 3612.20



Azimuths to Grid North
 True North: -0.38°
 Magnetic North: 6.82°

Magnetic Field
 Strength: 48381.6snT
 Dip Angle: 60.26°
 Date: 11/5/2014
 Model: IGRF2010

To convert Magnetic North to Grid, Add 6.82°
 To convert True North to Grid, Subtract 0.38°

WELL DETAILS RR 7 S 2H

Ground Level: 3612.20

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	513236.38	720600.78	32° 24' 32.304 N	103° 37' 6.682 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8100.00	0.00	0.00	8100.00	0.00	0.00	0.00	0.00	0.00
8400.00	6.00	256.00	8399.45	-3.80	-15.23	2.00	256.00	-15.17
10180.50	6.00	256.00	10170.20	-48.82	-195.81	0.00	0.00	-195.02
11128.71	89.00	90.11	10800.95	-65.83	364.19	10.00	-165.84	365.18
15495.98	89.00	90.11	10877.00	-74.54	4730.79	0.00	0.00	4731.38

DESIGN TARGET DETAILS

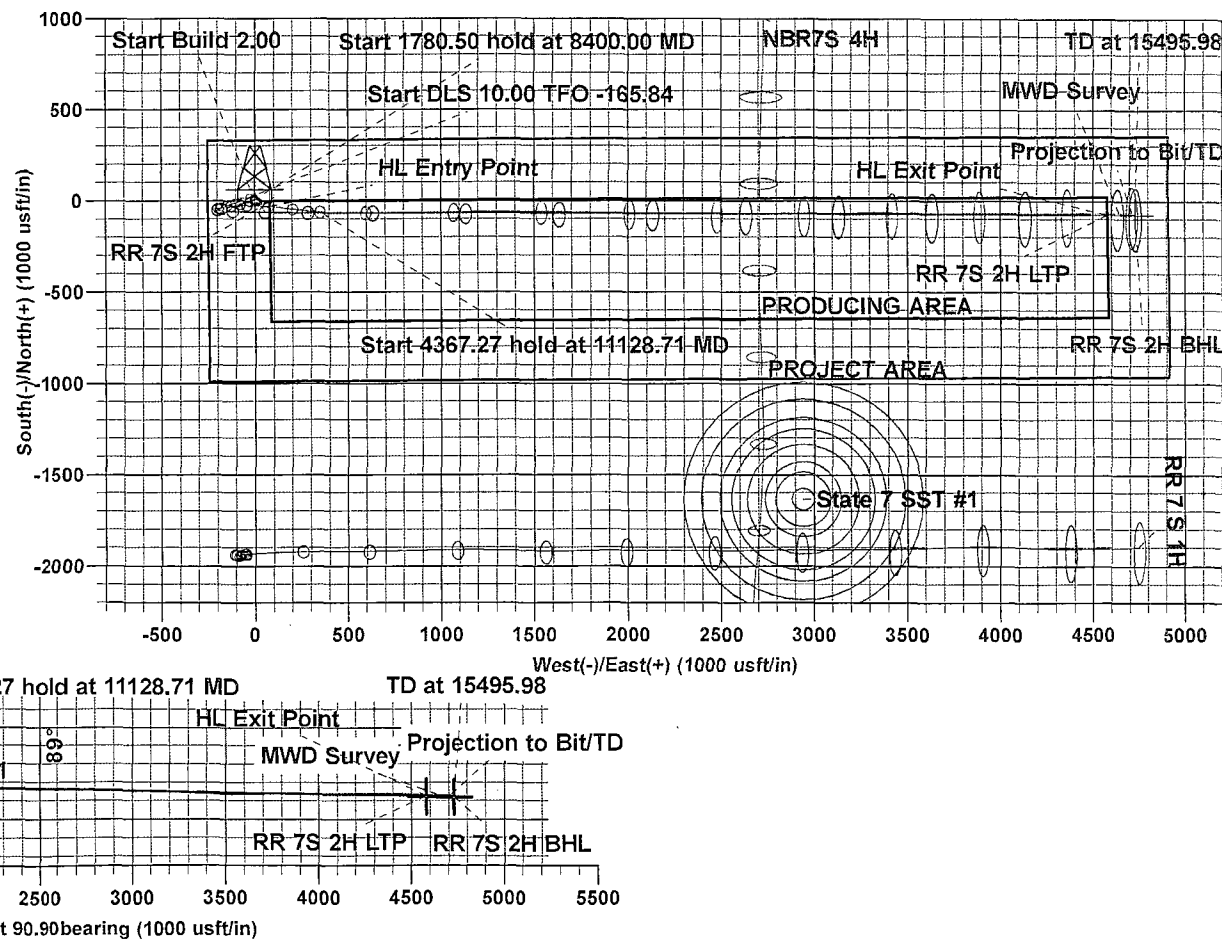
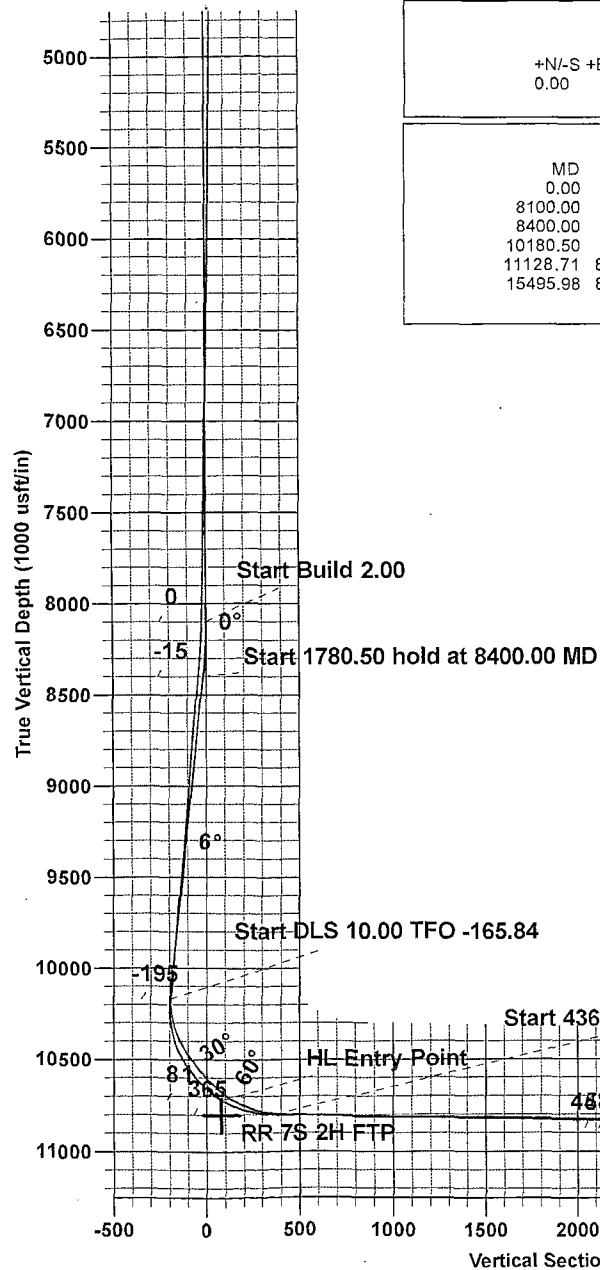
Name	TVD	+N/-S	+E/-W	Northing	Easting
RR 7S 2H FTP	10801.00	-1.26	80.00	513235.12	720680.78
RR 7S 2H LTP	10874.00	-72.18	4580.77	513164.20	725181.55
RR 7S 2H BHL	10877.00	-74.54	4730.79	513161.84	725331.57

PROJECT DETAILS:

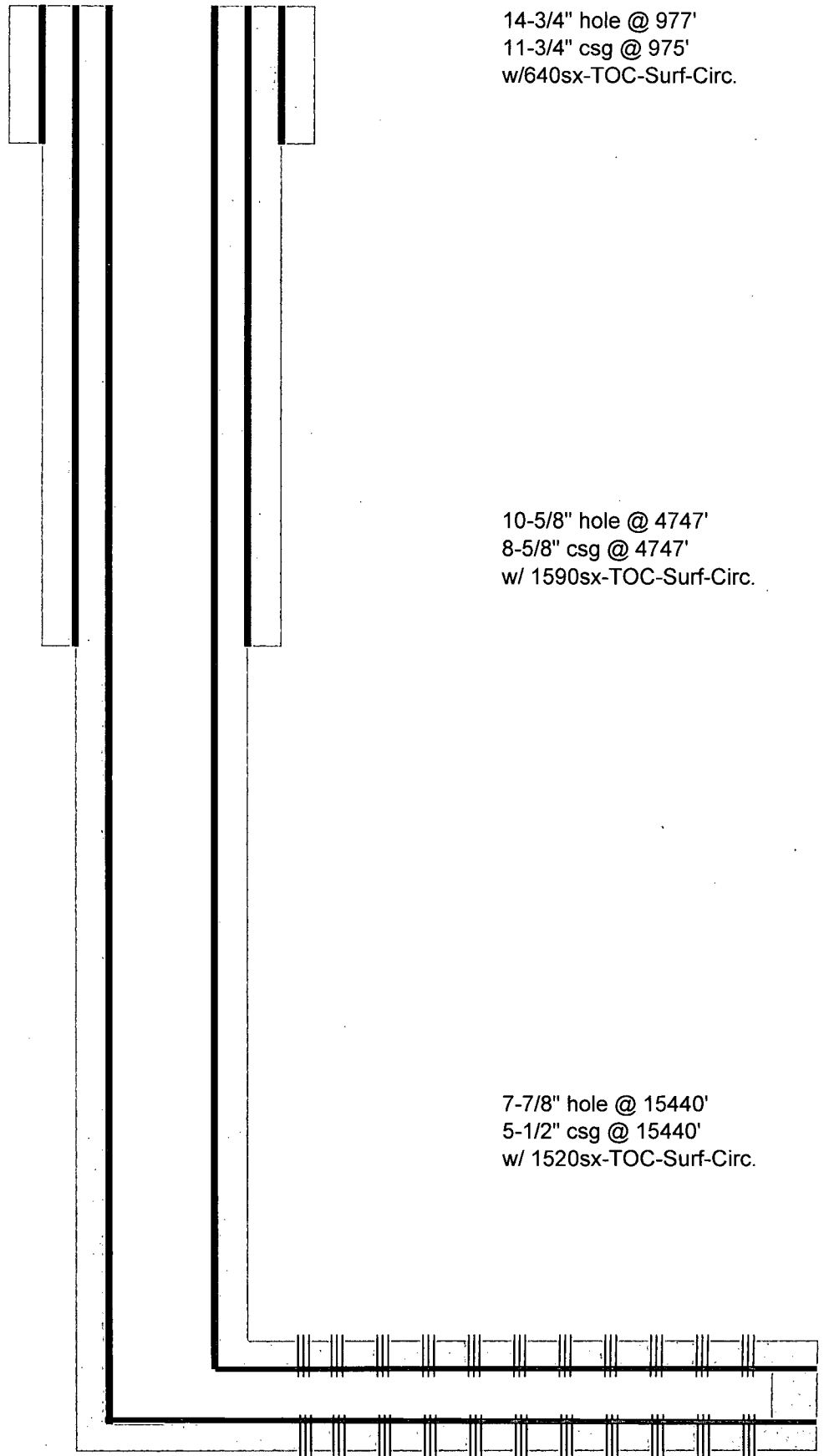
Lea County, New Mexico
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level

SITE DETAILS:

Ridge Runner 7 State 2H
 Site Centre Northing: 513236.38
 Easting: 720600.78
 Positional Uncertainty: 0.00
 Convergence: 0.38
 Local North: Grid



OXY USA INC.
Ridge Runner 7 State 2H
API No. 30-025-42269



14-3/4" hole @ 977'
11-3/4" csg @ 975'
w/640sx-TOC-Surf-Circ.

10-5/8" hole @ 4747'
8-5/8" csg @ 4747'
w/ 1590sx-TOC-Surf-Circ.

7-7/8" hole @ 15440'
5-1/2" csg @ 15440'
w/ 1520sx-TOC-Surf-Circ.

Perfs @ 11000-15177'

TD- 15440'M 10868'V