



**OXY**

Lea County, New Mexico  
Speakeasy Federal Unit 4H  
SEFU 4H

Wellbore #1

Design: Wellbore #1

HOBBS OCD

APR 13 2015

RECEIVED

30-025-42266

# Standard Survey Report

23 January, 2015

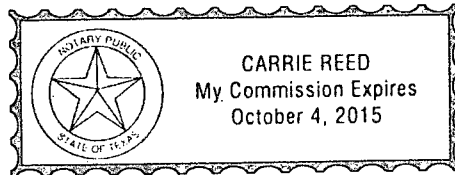
This survey is correct to the best of my knowledge and is supported by actual field data.

*Richard*

Notarized this date 4th of March, 2015.

*Carrie Reed*

Notary Signature  
County of Midland  
State of Texas



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APR 22 2015



**Scientific Drilling, Int'l**  
Survey Report



Company:	OXY	Local Co-ordinate Reference:	Well SEFU 4H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3667.20usft
Site:	Speakeasy Federal Unit 4H	MD Reference:	RKB @ 3667.20usft
Well:	SEFU 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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	Speakeasy Federal Unit 4H				
Site Position:		Northing:	518,131.16 usft	Latitude:	32.42252
From:	Map	Easting:	715,362.65 usft	Longitude:	-103.63539
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

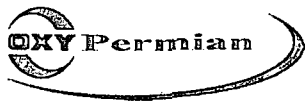
Well	SEFU 4H					
Well Position	+N-S	0.00 usft	Northing:	518,131.20 usft	Latitude:	32.42252
	+E-W	0.00 usft	Easting:	715,362.60 usft	Longitude:	-103.63539
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,642.20 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2014/08/04	7.24	60.28	48,413

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	89.38	

Survey Program	Date	2015/01/22			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
225.00	16,668.00	SDI MWD (Wellbore #1)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.60	151.47	225.00	-1.04	0.56	0.55	0.27	0.27	0.00
493.00	0.53	143.69	492.98	-3.27	1.97	1.93	0.04	-0.03	-2.90
766.00	0.30	306.65	765.98	-3.86	2.14	2.10	0.30	-0.08	59.69
1,020.00	0.32	34.36	1,019.98	-2.88	2.01	1.98	0.17	0.01	34.53
1,324.00	1.07	75.62	1,323.95	-1.47	5.24	5.22	0.28	0.25	13.57
1,607.00	1.56	78.44	1,606.88	-0.04	11.57	11.57	0.17	0.17	1.00
1,890.00	1.87	61.35	1,889.75	2.94	19.40	19.43	0.21	0.11	-6.04
2,173.00	1.96	71.23	2,172.60	6.72	28.03	28.10	0.12	0.03	3.49
2,457.00	2.62	84.69	2,456.37	8.88	39.09	39.19	0.30	0.23	4.74



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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
2,741.00	2.04	79.92	2,740.13	10.36	50.53	50.64	0.22	-0.20	-1.68	
3,024.00	1.08	32.84	3,023.04	13.49	56.94	57.08	0.54	-0.34	-16.64	
3,308.00	0.77	71.21	3,307.00	16.35	60.20	60.37	0.24	-0.11	13.51	
3,591.00	2.27	213.90	3,589.94	12.31	58.87	59.00	1.03	0.53	50.42	
3,874.00	3.47	238.45	3,872.59	3.18	48.45	48.48	0.60	0.42	8.67	
4,158.00	2.46	245.27	4,156.21	-3.87	35.58	35.54	0.38	-0.36	2.40	
4,441.00	2.21	240.12	4,438.97	-9.13	25.34	25.24	0.12	-0.09	-1.82	
4,688.00	0.82	239.85	4,685.88	-12.39	19.68	19.54	0.56	-0.56	-0.11	
4,826.00	0.65	270.36	4,823.87	-12.88	18.04	17.90	0.30	-0.12	22.11	
4,920.00	0.36	268.48	4,917.86	-12.89	17.21	17.07	0.31	-0.31	-2.00	
5,015.00	0.21	260.17	5,012.86	-12.92	16.74	16.60	0.16	-0.16	-8.75	
5,109.00	0.35	281.73	5,106.86	-12.89	16.29	16.15	0.18	0.15	22.94	
5,204.00	0.98	259.57	5,201.85	-12.98	15.21	15.07	0.70	0.66	-23.33	
5,298.00	1.59	262.30	5,295.83	-13.30	13.13	12.98	0.65	0.65	2.90	
5,393.00	2.44	276.08	5,390.77	-13.27	9.81	9.67	1.02	0.89	14.51	
5,487.00	4.19	278.44	5,484.61	-12.55	4.42	4.29	1.87	1.86	2.51	
5,582.00	5.70	278.45	5,579.25	-11.35	-3.68	-3.80	1.59	1.59	0.01	
5,676.00	6.64	271.72	5,672.71	-10.50	-13.73	-13.84	1.26	1.00	-7.16	
5,771.00	6.47	272.28	5,767.09	-10.12	-24.56	-24.67	0.19	-0.18	0.59	
5,865.00	6.43	271.51	5,860.49	-9.77	-35.12	-35.22	0.10	-0.04	-0.82	
5,960.00	6.08	270.32	5,954.93	-9.60	-45.47	-45.57	0.39	-0.37	-1.25	
6,055.00	6.09	269.23	6,049.39	-9.64	-55.54	-55.64	0.12	0.01	-1.15	
6,149.00	5.90	269.19	6,142.88	-9.78	-65.35	-65.46	0.20	-0.20	-0.04	
6,243.00	6.55	275.06	6,236.33	-9.37	-75.52	-75.62	0.97	0.69	6.24	
6,338.00	6.53	276.97	6,330.71	-8.24	-86.28	-86.37	0.23	-0.02	2.01	
6,433.00	5.96	275.71	6,425.14	-7.09	-96.55	-96.62	0.62	-0.60	-1.33	
6,527.00	5.52	276.17	6,518.67	-6.12	-105.90	-105.96	0.47	-0.47	0.49	
6,621.00	5.83	269.12	6,612.21	-5.71	-115.17	-115.23	0.81	0.33	-7.50	
6,716.00	6.64	271.16	6,706.65	-5.67	-125.49	-125.54	0.88	0.85	2.15	
6,810.00	6.08	271.69	6,800.07	-5.41	-135.90	-135.95	0.60	-0.60	0.56	
6,905.00	6.06	269.96	6,894.54	-5.27	-145.94	-145.99	0.19	-0.02	-1.82	
6,999.00	6.68	271.34	6,987.96	-5.15	-156.37	-156.42	0.68	0.66	1.47	
7,094.00	6.63	273.13	7,082.32	-4.72	-167.37	-167.41	0.22	-0.05	1.88	
7,188.00	6.13	271.74	7,175.73	-4.27	-177.80	-177.84	0.56	-0.53	-1.48	
7,283.00	5.69	270.44	7,270.23	-4.08	-187.58	-187.62	0.48	-0.46	-1.37	
7,377.00	5.76	272.86	7,363.76	-3.81	-196.95	-196.98	0.27	0.07	2.57	
7,472.00	6.16	276.95	7,458.25	-2.95	-206.78	-206.80	0.61	0.42	4.31	
7,566.00	5.71	279.36	7,551.74	-1.58	-216.40	-216.40	0.55	-0.48	2.56	
7,661.00	5.27	276.81	7,646.31	-0.30	-225.39	-225.38	0.53	-0.46	-2.68	
7,755.00	6.05	269.02	7,739.85	0.13	-234.63	-234.62	1.16	0.83	-8.29	
7,850.00	6.10	264.76	7,834.32	-0.41	-244.66	-244.65	0.48	0.05	-4.48	
7,945.00	5.75	265.74	7,928.81	-1.23	-254.43	-254.43	0.38	-0.37	1.03	
8,039.00	5.88	271.51	8,022.33	-1.45	-263.94	-263.94	0.64	0.14	6.14	
8,134.00	5.70	269.30	8,116.84	-1.38	-273.53	-273.52	0.30	-0.19	-2.33	



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8,228.00	4.96	267.75	8,210.44	-1.60	-282.25	-282.25	0.80	-0.79	-1.65	
8,323.00	3.77	280.31	8,305.16	-1.20	-289.43	-289.43	1.60	-1.25	13.22	
8,417.00	2.48	292.37	8,399.02	0.13	-294.35	-294.33	1.53	-1.37	12.83	
8,512.00	1.49	266.68	8,493.96	0.84	-297.49	-297.46	1.38	-1.04	-27.04	
8,606.00	1.22	264.27	8,587.94	0.67	-299.70	-299.68	0.29	-0.29	-2.56	
8,701.00	1.24	254.69	8,682.91	0.29	-301.70	-301.68	0.22	0.02	-10.08	
8,795.00	0.07	254.71	8,776.91	0.01	-302.74	-302.72	1.24	-1.24	0.02	
8,890.00	0.47	185.22	8,871.91	-0.39	-302.83	-302.81	0.47	0.42	-73.15	
8,984.00	1.19	179.13	8,965.90	-1.75	-302.85	-302.85	0.77	0.77	-6.48	
9,079.00	1.30	192.43	9,060.87	-3.79	-303.06	-303.09	0.32	0.12	14.00	
9,173.00	0.42	45.54	9,154.87	-4.59	-303.05	-303.08	1.77	-0.94	-156.27	
9,268.00	0.31	317.76	9,249.86	-4.16	-302.97	-303.00	0.54	-0.12	-92.40	
9,363.00	0.36	293.73	9,344.86	-3.85	-303.42	-303.44	0.16	0.05	-25.29	
9,457.00	0.62	289.34	9,438.86	-3.56	-304.17	-304.19	0.28	0.28	-4.67	
9,552.00	0.56	316.33	9,533.85	-3.05	-304.97	-304.99	0.30	-0.06	28.41	
9,646.00	0.36	5.67	9,627.85	-2.43	-305.26	-305.27	0.45	-0.21	52.49	
9,741.00	0.60	49.63	9,722.85	-1.81	-304.85	-304.86	0.44	0.25	46.27	
9,835.00	0.77	11.95	9,816.84	-0.87	-304.35	-304.34	0.50	0.18	-40.09	
9,930.00	0.87	3.77	9,911.83	0.47	-304.17	-304.15	0.16	0.11	-8.61	
10,024.00	0.81	358.53	10,005.82	1.85	-304.14	-304.10	0.10	-0.06	-5.57	
10,119.00	0.70	321.26	10,100.82	2.97	-304.52	-304.47	0.52	-0.12	-39.23	
10,213.00	1.09	315.78	10,194.80	4.06	-305.50	-305.44	0.42	0.41	-5.83	
10,308.00	1.37	300.67	10,289.78	5.29	-307.11	-307.03	0.45	0.29	-15.91	
10,402.00	1.58	304.66	10,383.75	6.60	-309.14	-309.05	0.25	0.22	4.24	
10,497.00	1.27	340.16	10,478.72	8.33	-310.58	-310.47	0.97	-0.33	37.37	
10,591.00	1.07	333.39	10,572.70	10.10	-311.32	-311.20	0.26	-0.21	-7.20	
10,686.00	0.50	272.18	10,667.70	10.91	-312.13	-312.00	0.99	-0.60	-64.43	
10,781.00	0.79	235.58	10,762.69	10.55	-313.09	-312.96	0.52	0.31	-38.53	
10,875.00	1.38	222.16	10,856.67	9.35	-314.38	-314.26	0.68	0.63	-14.28	
10,970.00	0.98	213.02	10,951.65	7.82	-315.59	-315.49	0.46	-0.42	-9.62	
11,064.00	1.04	205.67	11,045.64	6.38	-316.40	-316.31	0.15	0.06	-7.82	
11,153.00	1.43	191.64	11,134.62	4.56	-316.98	-316.91	0.55	0.44	-15.76	
11,248.00	8.55	101.23	11,229.26	2.02	-310.27	-310.23	9.13	7.49	-95.17	
11,342.00	16.85	92.76	11,320.88	0.00	-289.78	-289.76	9.03	8.83	-9.01	
11,437.00	22.74	92.29	11,410.23	-1.40	-257.65	-257.65	6.20	6.20	-0.49	
11,531.00	24.55	93.81	11,496.34	-3.42	-220.01	-220.03	2.03	1.93	1.62	
11,626.00	33.38	88.92	11,579.38	-4.24	-174.09	-174.12	9.62	9.29	-5.15	
11,721.00	41.38	83.59	11,654.83	-0.24	-116.65	-116.64	9.08	8.42	-5.61	
11,815.00	52.69	79.19	11,718.81	10.28	-48.81	-48.70	12.50	12.03	-4.68	
11,910.00	63.57	81.92	11,768.90	23.38	30.66	30.91	11.71	11.45	2.87	
11,949.06	66.01	83.12	11,785.54	27.98	65.69	65.99	6.83	6.24	3.08	
<b>SEFU 4H FTP</b>										
12,005.00	69.51	84.77	11,806.71	33.43	117.17	117.53	6.83	6.26	2.94	

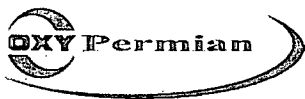


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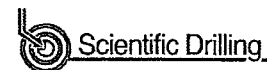


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12,102.00	78.88	92.19	11,833.13	35.76	210.30	210.67	12.14	9.66	7.65
12,122.00	83.00	93.61	11,836.28	34.76	230.02	230.38	21.76	20.60	7.10
12,201.00	94.21	96.00	11,838.20	28.15	308.59	308.87	14.51	14.19	3.03
12,296.00	93.69	96.02	11,831.66	18.23	402.84	403.01	0.55	-0.55	0.02
12,390.00	93.90	93.79	11,825.44	10.21	496.28	496.36	2.38	0.22	-2.37
12,484.00	92.31	91.82	11,820.34	5.62	590.03	590.05	2.69	-1.69	-2.10
12,579.00	90.57	87.16	11,817.96	6.46	684.96	684.99	5.23	-1.83	-4.91
12,673.00	88.42	84.06	11,818.78	13.66	778.67	778.77	4.01	-2.29	-3.30
12,768.00	88.99	85.03	11,820.93	22.69	873.21	873.40	1.18	0.60	1.02
12,862.00	88.22	87.41	11,823.22	28.88	966.97	967.23	2.66	-0.82	2.53
12,957.00	87.88	88.44	11,826.45	32.32	1,061.85	1,062.14	1.14	-0.36	1.08
13,051.00	88.05	86.98	11,829.79	36.07	1,155.71	1,156.04	1.56	0.18	-1.55
13,146.00	89.53	89.07	11,831.80	39.34	1,250.63	1,250.98	2.70	1.56	2.20
13,240.00	90.50	91.52	11,831.77	38.86	1,344.62	1,344.96	2.80	1.03	2.61
13,335.00	90.13	91.80	11,831.25	36.11	1,439.58	1,439.88	0.49	-0.39	0.29
13,429.00	90.37	90.88	11,830.84	33.91	1,533.55	1,533.83	1.01	0.26	-0.98
13,524.00	91.04	89.27	11,829.67	33.79	1,628.54	1,628.81	1.84	0.71	-1.69
13,618.00	91.04	90.23	11,827.97	34.20	1,722.52	1,722.79	1.02	0.00	1.02
13,713.00	90.97	92.25	11,826.30	32.14	1,817.48	1,817.72	2.13	-0.07	2.13
13,807.00	89.80	89.11	11,825.67	31.03	1,911.46	1,911.68	3.56	-1.24	-3.34
13,902.00	89.83	91.50	11,825.97	30.52	2,006.45	2,006.66	2.52	0.03	2.52
13,996.00	88.96	89.82	11,826.97	29.44	2,100.43	2,100.63	2.01	-0.93	-1.79
14,091.00	89.73	90.76	11,828.05	28.96	2,195.42	2,195.61	1.28	0.81	0.99
14,185.00	89.40	91.66	11,828.77	26.97	2,289.40	2,289.56	1.02	-0.35	0.96
14,280.00	90.03	90.50	11,829.24	25.18	2,384.38	2,384.51	1.39	0.66	-1.22
14,374.00	89.90	89.87	11,829.30	24.88	2,478.38	2,478.50	0.68	-0.14	-0.67
14,469.00	90.13	87.69	11,829.27	26.90	2,573.35	2,573.49	2.31	0.24	-2.29
14,563.00	90.40	88.37	11,828.84	30.13	2,667.29	2,667.46	0.78	0.29	0.72
14,658.00	90.74	89.86	11,827.89	31.60	2,762.27	2,762.45	1.61	0.36	1.57
14,752.00	89.70	90.91	11,827.53	30.97	2,856.27	2,856.44	1.57	-1.11	1.12
14,847.00	90.40	91.17	11,827.45	29.24	2,951.25	2,951.40	0.79	0.74	0.27
14,941.00	89.23	89.85	11,827.75	28.41	3,045.24	3,045.37	1.88	-1.24	-1.40
15,036.00	89.16	90.14	11,829.09	28.41	3,140.24	3,140.36	0.31	-0.07	0.31
15,130.00	89.80	89.55	11,829.94	28.67	3,234.23	3,234.35	0.93	0.68	-0.63
15,225.00	90.23	90.29	11,829.91	28.80	3,329.23	3,329.35	0.90	0.45	0.78
15,318.00	91.38	88.54	11,828.61	29.75	3,422.21	3,422.33	2.25	1.24	-1.88
15,413.00	91.31	87.77	11,826.38	32.81	3,517.13	3,517.28	0.81	-0.07	-0.81
15,507.00	92.02	89.47	11,823.65	35.07	3,611.06	3,611.23	1.96	0.76	1.81
15,601.00	92.59	88.70	11,819.87	36.57	3,704.97	3,705.15	1.02	0.61	-0.82
15,695.00	92.42	89.47	11,815.76	38.07	3,798.87	3,799.06	0.84	-0.18	0.82
15,789.00	90.74	88.91	11,813.17	39.40	3,892.82	3,893.02	1.88	-1.79	-0.60
15,883.00	91.28	87.71	11,811.51	42.17	3,986.76	3,986.99	1.40	0.57	-1.28
15,977.00	90.20	87.33	11,810.29	46.24	4,080.67	4,080.93	1.22	-1.15	-0.40
16,072.00	89.43	87.94	11,810.60	50.16	4,175.58	4,175.88	1.03	-0.81	0.64



**Scientific Drilling, Int'l**  
Survey Report



Company:	OXY	Local Co-ordinate Reference:	Well SEFU 4H
Project:	Lea County, New Mexico	TVD Reference:	RKB @ 3667.20usft
Site:	Speakeasy Federal Unit 4H	MD Reference:	RKB @ 3667.20usft
Well:	SEFU 4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,166.00	90.23	88.15	11,810.88	53.36	4,269.53	4,269.86	0.88	0.85	0.22
16,260.00	90.54	86.82	11,810.25	57.49	4,363.43	4,363.80	1.45	0.33	-1.41
16,354.00	90.77	86.70	11,809.17	62.80	4,457.28	4,457.70	0.28	0.24	-0.13
16,448.00	91.21	87.99	11,807.55	67.15	4,551.16	4,551.62	1.45	0.47	1.37
16,517.31	91.48	87.77	11,805.92	69.72	4,620.41	4,620.89	0.50	0.39	-0.32
<b>SEFU 4H LTP</b>									
16,543.00	91.58	87.69	11,805.24	70.73	4,646.06	4,646.56	0.50	0.39	-0.32
16,609.00	91.68	86.88	11,803.36	73.86	4,711.96	4,712.49	1.24	0.15	-1.23
<b>MWD Survey</b>									
16,666.43	91.68	86.88	11,801.68	76.98	4,769.29	4,769.84	0.00	0.00	0.00
<b>SEFU 4H BHL</b>									
16,668.00	91.68	86.88	11,801.63	77.07	4,770.85	4,771.40	0.00	0.00	0.00
<b>Projection to Bit/TD</b>									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
16,609.00	11,803.36	73.86	4,711.96	MWD Survey
16,668.00	11,801.63	77.07	4,770.85	Projection to Bit/TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



**Speakeasy Federal Unit 4H**  
**Lea County, New Mexico**  
**Northing: 518131.20**  
**Easting: 715362.60**  
**Plan #4**

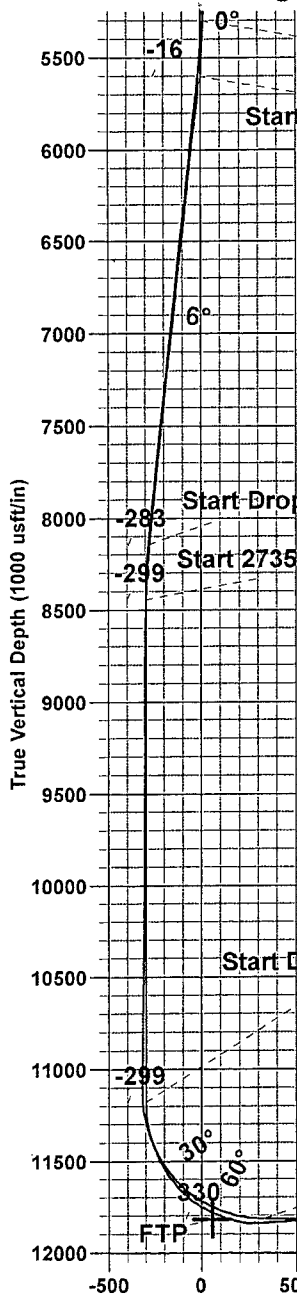


Azimuths to Grid North  
 True North: -0.37°  
 Magnetic North: 6.87°

Magnetic Field  
 Strength: 48413.3snT  
 Dip Angle: 60.28°  
 Date: 2014/08/04  
 Model: IGRF2010

To convert Magnetic North to Grid, Add 6.87°  
 To convert True North to Grid, Subtract 0.37°

RKB @ 3667.20usft  
 Gr @ 3642.20



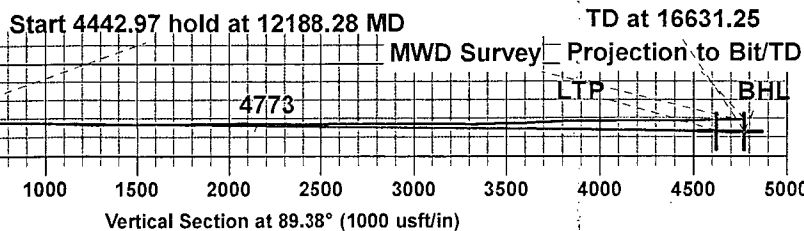
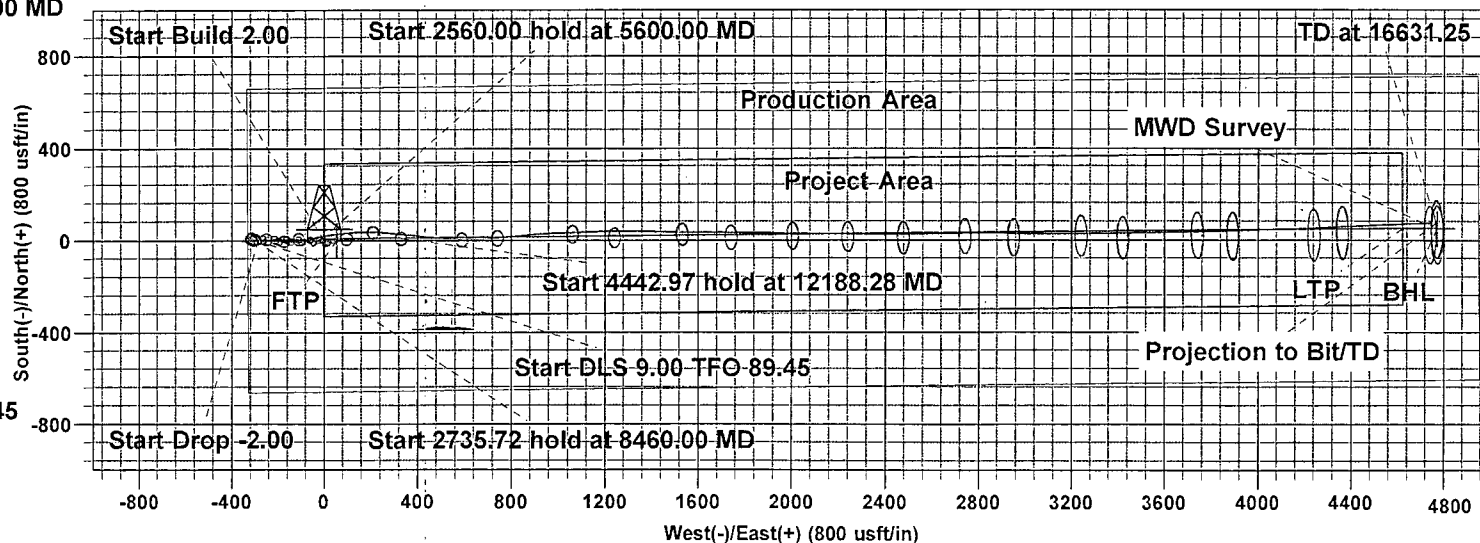
WELL DETAILS SEFU:4H					
Ground Level: 3642.20					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	518131.20	715362.60	32.42252	-103.63539

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
SEFU 4H FTP	11817.20	0.55	55.04	518131.75	715417.64
SEFU 4H LTP	11867.30	49.91	4622.65	518181.11	719985.25
SEFU 4H BHL	11869.08	51.59	4772.65	518182.79	720135.25

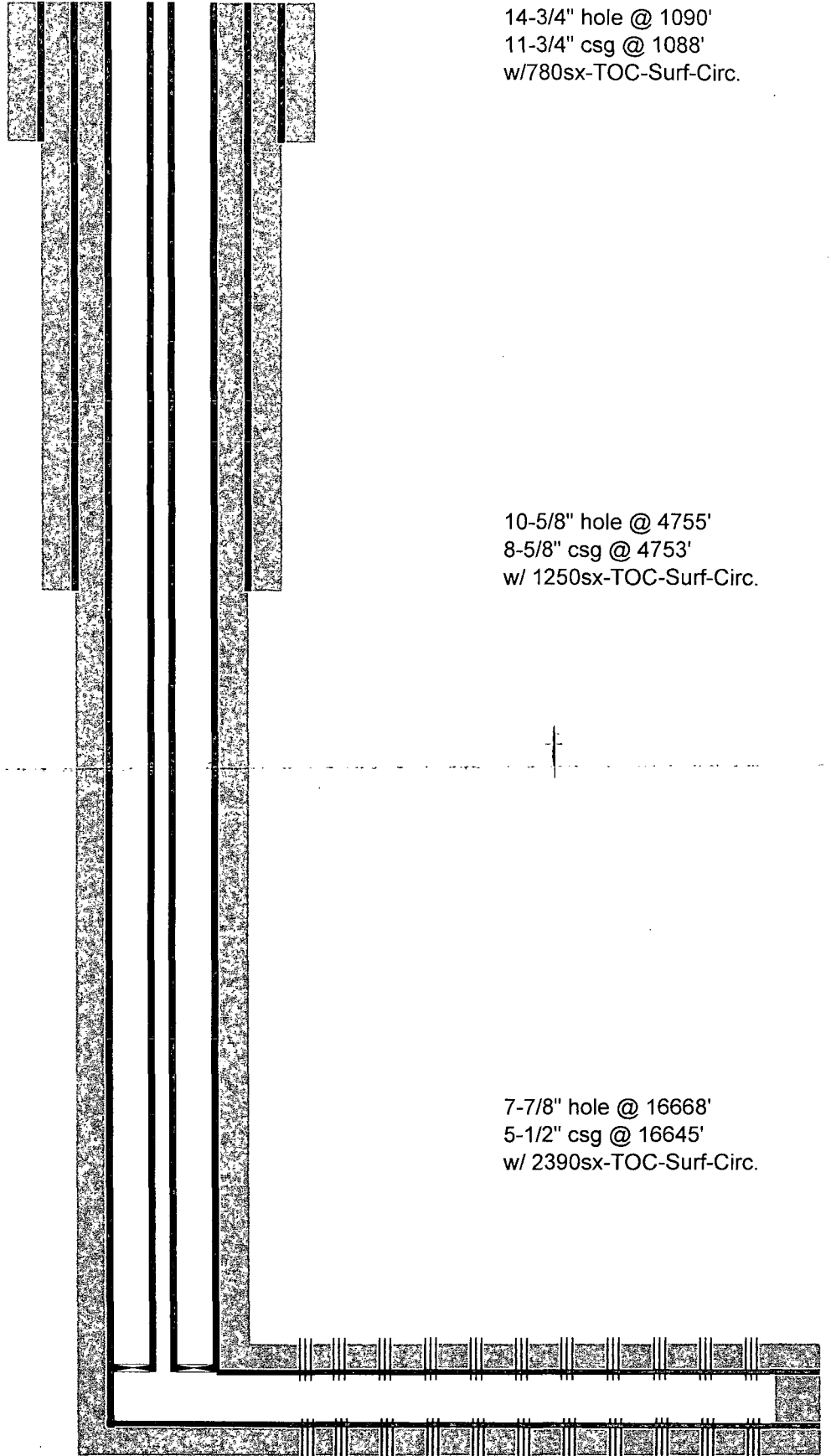
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	0.00	
5600.00	6.00	270.55	5599.45	0.15	-15.69	2.00	270.55	-15.69	
8160.00	6.00	270.55	8145.43	2.72	-283.27	0.00	0.00	-283.23	
8460.00	0.00	0.00	8444.88	2.87	-298.97	2.00	180.00	-298.92	
11195.72	0.00	0.00	11180.60	2.87	-298.97	0.00	0.00	-298.92	
12188.28	89.33	89.45	11817.18	8.91	330.19	9.00	89.45	330.26	
16631.25	89.33	89.45	11869.08	51.59	4772.65	0.00	0.00	4772.93	

**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:**  
 Speakeasy Federal Unit 4H  
 Site Centre Northing: 518131.16  
 Easting: 715362.65  
 Positional Uncertainty: 0.00 -  
 Convergence: 0.37  
 Local North: Grid



OXY USA INC.  
Speak Easy Federal Unit 4H  
API No. 30-025-42266



14-3/4" hole @ 1090'  
11-3/4" csg @ 1088'  
w/780sx-TOC-Surf-Circ.

10-5/8" hole @ 4755'  
8-5/8" csg @ 4753'  
w/ 1250sx-TOC-Surf-Circ.

7-7/8" hole @ 16668'  
5-1/2" csg @ 16645'  
w/ 2390sx-TOC-Surf-Circ.

2-7/8" tbg & pkr @ 11105'

Perfs @ 12450-16387'

TD- 16668'M 11801'V