

Schlumberger

OXY

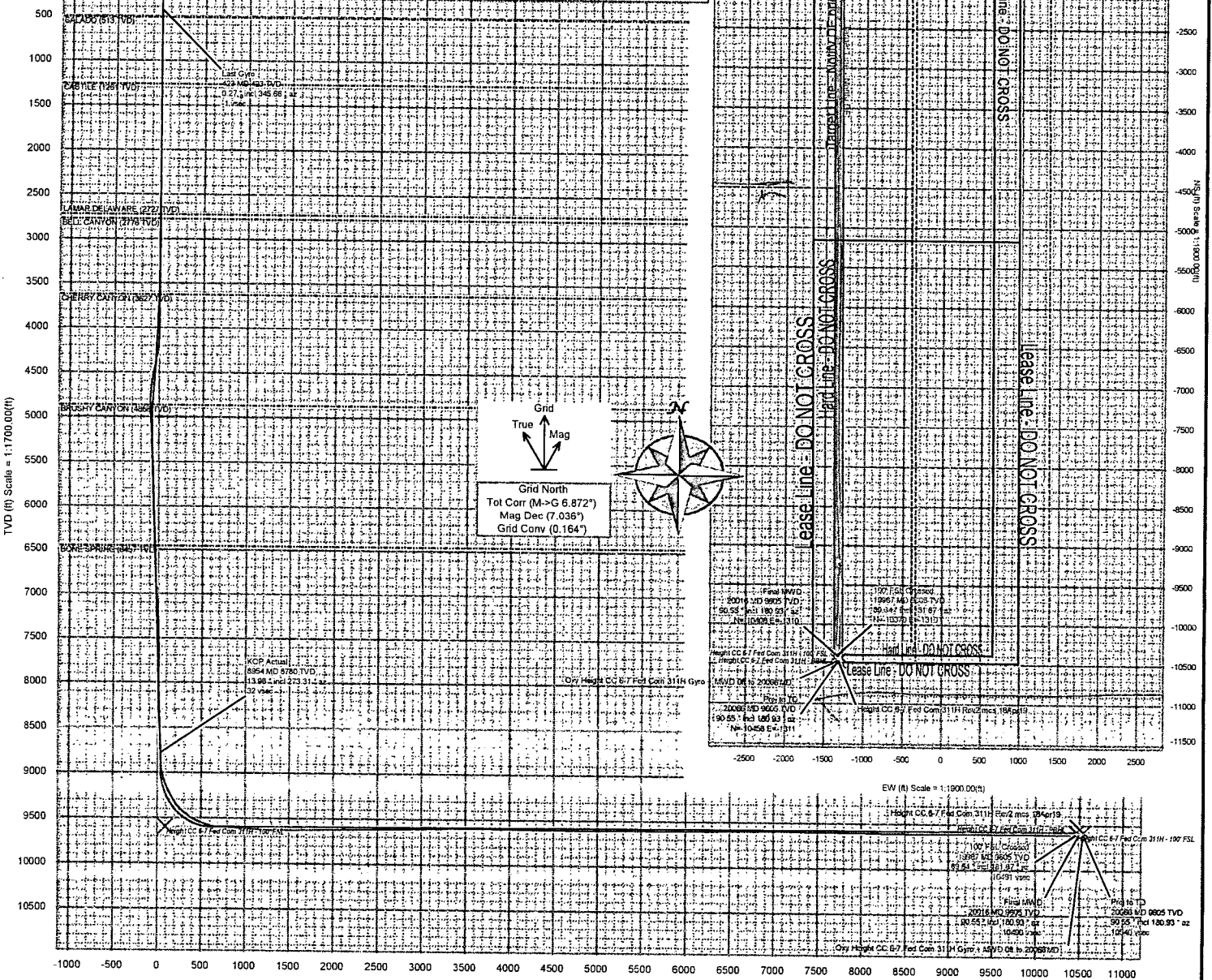


Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Height CC 6-7 Fed Com 311H	NM Eddy County (NAD 83)	Oxy Height CC 6-7 Fed Com 311H

Gravity & Magnetic Parameters				Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	IFR1	Dip:	60.922"	Date:	26-Apr-2019	Lat:	N 32 15 13.71	Northing:	456204.04ftUS	Grid Conv:	0.1636"
MagDec:	7.036"	FS:	47926.3nT	Gravity FS:	998.472mgN (8.80655 Based)	Lon:	W 104 1 36.55	Easting:	636081.76ftUS	Scale Fact:	0.99991937
								Slot: 6-7 Fed Com 311H			
								TVD Ref: RKB=25'(2982.7ft above MSL)			
								Plan: Oxy Height CC 6-7 Fed Com 311H Gyro + MWD 3ft to 20065 MD			

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(°)/S(°)	E(°)/W(°)	DLS
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL	25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
Last Gyro	422.90	0.27	345.66	422.90	-1.23	1.22	0.15	0.24
KOP Actual	8954.00	13.96	273.31	8779.55	32.21	124.63	-1248.96	1.88
100' FNL Crossed	9314.00	22.76	201.01	9121.96	87.79	79.65	-1336.77	5.88
3rd Bone Spring Sand Intersection	9517.25	33.38	179.69	9302.00	180.57	-12.47	-1347.76	4.15
100' FSL Crossed	19987.00	89.64	181.87	9605.37	10460.99	-10378.70	-1309.55	4.50
Final MWD	20016.00	90.55	180.93	9605.32	10489.84	-10407.69	-1310.26	4.50
Proj to TD	20066.00	90.55	180.93	9604.84	10539.54	-10457.68	-1311.07	0.00



Vertical Section (ft) Azim = 187.17° Scale = 1:1700.00(ft) Origin = 0N-S, 0E-W



Oxy Height CC 6-7 Fed Com 311H Gyro + MWD 0ft to 20066'MD Survey

Geodetic Report

(Def Survey)

Report Date: May 13, 2019 - 03:12 PM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Height CC 6-7 Fed Com 311H / Oxy Height CC 6-7 Fed Com 311H
Well: Oxy Height CC 6-7 Fed Com 311H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Oxy Height CC 6-7 Fed Com 311H Gyro + MWD 0ft to 20066'MD
Survey Date: April 20, 2019
Tort / AHD / DDI / ERD Ratio: 255.594' / 11957.569 ft / 6.804 / 1.243
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 15' 13.71055", W 104° 1' 36.65379"
Location Grid N/E Y/X: N 456204.040 NUS, E 636081.760 NUS
CRS Grid Convergence Angle: 0.1636°
Grid Scale Factor: 0.99991937
Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 187.169° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=25'
TVD Reference Elevation: 2982.700 ft above MSL
Seabed / Ground Elevation: 2957.700 ft above MSL
Magnetic Declination: 7.036°
Total Gravity Field Strength: 998.4718mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47926.300 nT
Magnetic Dip Angle: 60.022°
Declination Date: April 26, 2019
Magnetic Declination Model: IFR1
North Reference: Grid North
Grid Convergence Used: 0.1636°
Total Corr Mag North->Grid North: 6.8724°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	456204.04	636081.76	N 32 15 13.71 W 104	1 36.65
SHL	25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	456204.04	636081.76	N 32 15 13.71 W 104	1 36.65
	75.00	0.25	89.78	75.00	-0.01	0.00	0.11	0.50	456204.04	636081.87	N 32 15 13.71 W 104	1 36.65
	134.30	0.15	327.98	134.30	-0.09	0.07	0.20	0.60	456204.11	636081.96	N 32 15 13.71 W 104	1 36.65
	220.50	0.18	353.07	220.50	-0.31	0.30	0.12	0.09	456204.34	636081.88	N 32 15 13.71 W 104	1 36.65
	311.30	0.29	11.04	311.30	-0.68	0.66	0.15	0.14	456204.70	636081.91	N 32 15 13.72 W 104	1 36.65
	405.70	0.29	353.17	405.70	-1.15	1.14	0.17	0.10	456205.18	636081.93	N 32 15 13.72 W 104	1 36.65
	422.90	0.27	345.66	422.90	-1.23	1.22	0.15	0.24	456205.26	636081.91	N 32 15 13.72 W 104	1 36.65
	545.00	0.26	286.55	545.00	-1.54	1.58	-0.19	0.21	456205.62	636081.57	N 32 15 13.73 W 104	1 36.66
	636.00	0.13	121.95	636.00	-1.53	1.58	-0.30	0.43	456205.62	636081.46	N 32 15 13.73 W 104	1 36.66
	726.00	0.06	17.77	726.00	-1.53	1.57	-0.20	0.17	456205.61	636081.56	N 32 15 13.73 W 104	1 36.66
	808.00	0.07	275.13	808.00	-1.57	1.62	-0.23	0.12	456205.66	636081.53	N 32 15 13.73 W 104	1 36.66
	899.00	0.05	8.30	899.00	-1.61	1.66	-0.28	0.10	456205.70	636081.48	N 32 15 13.73 W 104	1 36.66
	1082.00	0.09	84.72	1082.00	-1.72	1.75	-0.13	0.05	456205.79	636081.63	N 32 15 13.73 W 104	1 36.66
	1173.00	0.06	96.50	1173.00	-1.74	1.75	-0.01	0.04	456205.79	636081.75	N 32 15 13.73 W 104	1 36.65
	1265.00	0.02	270.11	1265.00	-1.74	1.75	0.02	0.09	456205.79	636081.78	N 32 15 13.73 W 104	1 36.65
	1355.00	0.09	274.16	1355.00	-1.73	1.75	-0.06	0.08	456205.79	636081.70	N 32 15 13.73 W 104	1 36.65
	1538.00	0.16	30.32	1538.00	-1.96	1.98	-0.08	0.12	456206.02	636081.70	N 32 15 13.73 W 104	1 36.65
	1629.00	0.09	58.55	1628.99	-2.12	2.13	0.05	0.10	456206.17	636081.68	N 32 15 13.73 W 104	1 36.65
	1819.00	0.06	140.40	1818.99	-2.15	2.13	0.24	0.05	456206.17	636082.00	N 32 15 13.73 W 104	1 36.65
	1915.00	0.09	288.13	1914.99	-2.13	2.12	0.20	0.15	456206.16	636081.96	N 32 15 13.73 W 104	1 36.65
	2010.00	0.15	308.38	2009.99	-2.20	2.22	0.03	0.08	456206.26	636081.79	N 32 15 13.73 W 104	1 36.65
	2105.00	0.20	252.13	2104.99	-2.20	2.24	-0.23	0.18	456206.28	636081.53	N 32 15 13.73 W 104	1 36.66
	2200.00	0.21	228.70	2199.99	-2.00	2.08	-0.51	0.09	456206.12	636081.25	N 32 15 13.73 W 104	1 36.66
	2296.00	0.57	172.41	2295.99	-1.40	1.49	-0.58	0.51	456205.53	636081.18	N 32 15 13.73 W 104	1 36.66
	2391.00	0.42	245.65	2390.99	-0.77	0.88	-0.84	0.63	456204.92	636080.92	N 32 15 13.72 W 104	1 36.66
	2582.00	0.77	177.84	2581.98	0.87	-0.69	-1.43	0.38	456203.35	636080.33	N 32 15 13.70 W 104	1 36.67
	2677.00	0.24	184.25	2676.98	1.70	-1.53	-1.42	0.56	456202.51	636080.34	N 32 15 13.70 W 104	1 36.67
	2770.00	0.04	211.40	2769.98	1.92	-1.75	-1.45	0.22	456202.29	636080.31	N 32 15 13.70 W 104	1 36.67
	2866.00	0.09	89.65	2865.98	1.94	-1.78	-1.39	0.12	456202.26	636080.37	N 32 15 13.69 W 104	1 36.67
	2960.00	0.19	260.97	2959.98	1.97	-1.80	-1.47	0.30	456202.24	636080.29	N 32 15 13.69 W 104	1 36.67
	3056.00	0.17	298.36	3055.98	1.97	-1.76	-1.75	0.12	456202.28	636080.01	N 32 15 13.69 W 104	1 36.67
	3150.00	0.52	298.70	3149.97	1.76	-1.49	-2.25	0.37	456202.55	636079.51	N 32 15 13.70 W 104	1 36.68
	3245.00	0.59	304.91	3244.97	1.37	-1.00	-3.03	0.10	456203.04	636078.73	N 32 15 13.70 W 104	1 36.69
	3340.00	0.63	320.21	3339.96	0.79	-0.32	-3.77	0.18	456203.72	636077.99	N 32 15 13.71 W 104	1 36.70
	3531.00	0.72	307.64	3530.95	-0.54	1.22	-5.39	0.09	456205.26	636076.37	N 32 15 13.72 W 104	1 36.72
	3626.00	0.83	304.61	3625.94	-1.15	1.97	-6.43	0.12	456206.01	636075.33	N 32 15 13.73 W 104	1 36.73
	3721.00	0.95	310.12	3720.93	-1.90	2.87	-7.60	0.16	456206.91	636074.17	N 32 15 13.74 W 104	1 36.74
	3816.00	1.07	309.93	3815.92	-2.81	3.95	-8.88	0.13	456207.99	636072.88	N 32 15 13.75 W 104	1 36.76
	3912.00	1.17	305.55	3911.90	-3.76	5.09	-10.36	0.14	456209.13	636071.40	N 32 15 13.76 W 104	1 36.77
	4007.00	2.07	309.35	4006.86	-5.13	6.74	-12.48	0.95	456210.78	636069.28	N 32 15 13.78 W 104	1 36.80
	4103.00	5.02	321.48	4102.66	-8.99	11.13	-16.44	3.15	456215.17	636065.33	N 32 15 13.82 W 104	1 36.84
	4198.00	8.23	323.90	4197.02	-16.85	19.88	-23.03	3.39	456223.92	636058.73	N 32 15 13.91 W 104	1 36.92
	4293.00	11.71	321.99	4290.57	-28.60	32.97	-32.98	3.68	456237.01	636048.78	N 32 15 14.04 W 104	1 37.04
	4389.00	14.56	318.75	4384.05	-43.48	49.72	-46.94	3.07	456253.76	636034.83	N 32 15 14.20 W 104	1 37.20
	4484.00	16.86	316.66	4475.50	-60.17	68.73	-64.27	2.49	456272.76	636017.50	N 32 15 14.39 W 104	1 37.40
	4579.00	16.62	309.07	4566.48	-76.11	87.31	-84.27	2.31	456291.34	635997.49	N 32 15 14.58 W 104	1 37.63
	4674.00	16.64	295.90	4657.54	-87.66	101.82	-107.07	3.96	456305.85	635974.70	N 32 15 14.72 W 104	1 37.90
	4770.00	17.01	289.29	4749.44	-95.03	112.46	-132.69	2.03	456316.49	635949.08	N 32 15 14.83 W 104	1 38.20
	4865.00	17.18	283.68	4840.25	-99.53	120.37	-159.44	1.74	456324.40	635922.34	N 32 15 14.91 W 104	1 38.51
	4963.00	17.36	266.13	4933.89	-98.37	122.81	-188.11	5.30	456326.84	635893.67	N 32 15 14.93 W 104	1 38.84
	5056.00	17.25	262.89	5022.69	-92.32	120.17	-215.63	1.04	456334.20	635866.15	N 32 15 14.91 W 104	1 39.16
	5151.00	17.24	264.37	5113.42	-85.72	117.04	-243.62	0.46	456332.07	635838.16	N 32 15 14.88 W 104	1 39.49
	5246.00	17.07	269.74	5204.19	-80.80	115.60	-271.57	1.88	456319.63	635810.21	N 32 15 14.86 W 104	1 39.81
	5342.00	17.03	269.81	5295.98	-77.18	115.49	-299.72	0.05	456319.52	635782.06	N 32 15 14.86 W 104	1 40.14
	5437.00	17.28	269.99	5386.75	-73.63	115.44	-327.74	0.27	456319.47	635754.04	N 32 15 14.86 W 104	1 40.47
	5533.00	17.42	270.18	5478.38	-70.10	115.48	-356.37	0.16	456319.51	635725.42	N 32 15 14.86 W 104	1 40.80
	5723.00	17.09	270.76	5559.83	-63.53	115.94	-412.73	0.20	456319.97	635699.07	N 32 15 14.87 W 104	1 41.16
	5819.00	16.89	277.21	5751.65	-61.96	117.88	-440.67	1.97	456321.91	635641.13	N 32 15 14.89 W 104	1 41.78
	6009.00	16.62	273.43	5933.59	-60.21	122.97	-495.18	0.59	456327.00	635586.62	N 32 15 14.94 W 104	1 42.42
	6105.00	16.69	270.17	6025.56	-57.64	123.83	-522.67	0.98	456327.86	635559.14	N 32 15 14.95 W 104	1 42.74
	6200.00	16.20	269.69	6116.68	-54.25	123.80	-549.56	0.54	456327.83	635532.24	N 32 15 14.95 W 104	1 43.05
	6295.00	16.39	269.91	6207.86	-50.83	123.71	-576.22	0.21	456327.74	635505.59	N 32 15 14.95 W 104	1 43.36
	6390.00	15.96	269.63	6299.10	-47.42	123.60	-602.68	0.46	456327.63	635479.13	N 32 15 14.95 W 104	1 43.67
	6486.00	15.64	269.86	6391.47	-44.04	123.48	-628.82	0.34	456327.51	635452.99	N 32 15 14.95 W 104	1 43.97
	6581.00	15.13	271.27	6483.07	-41.14	123.73	-654.02	0.67	456327.76	635427.79	N 32 15 14.95 W 104	1 44.27
	6676.00	14.99	271.29	6574.80	-38.61	124.28	-678.70	0.15	456328.31	635403.12	N 32 15 14.96 W 104	1 44.55
	6772.00	14.98	271.05	6667.54	-36.01	124.79	-703.51	0.07	456328.82	635378.30	N 32 15 14.97 W 104	1 44.84
	6865.00	14.95	268.90	6757.39	-33.01	124.78	-727.53	0.60	456328.81	635354.29	N 32 15 14.97 W 104	1 45.12
	6959.00	14.38	267.68	6848.32	-29.34	124.07	-751.31	0.69	456328.10	635330.51	N 32 15 14.96 W 104	1 45.40
	7053.00	14.49	268.17	6939.36	-25.58	123.22	-774.73	0.17	456327.25	635307.10	N 32 15 14.95 W 104	1 45.67
	7148.00	15.27	268.43	7031.17	-21.82	122.50	-799.11	0.82	456326.53	635282.71	N 32 15 14.95 W 104	1 45.95
	7338.00	13.61	261.84	7215.17	-12.10	118.64	-846.26	1.23	456322.67	635235.57	N 32 15 14.91 W 104	1 46.50
	7434.00	14.78	264.25	7308.24	-6.38	115.81	-869.62	1.37	456319.84	635212.21	N 32 15 14.88 W 104	1 46.78
	7529.00	15.55	267.07	7399.93	-1.44	113.95	-894.40	1.12	456317.98	635187.4		

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northings (ft)	Easting (ft)	Latitude (N/S)	Longitude (E/W)
	7908.00	12.65	278.51	7767.15	6.12	118.07	-987.70	0.97	456322.10	635094.14	N 32 15 14.91 W 104	1 48 15
	8003.00	12.03	281.59	7859.95	5.11	121.59	-1007.69	0.95	456325.62	635074.16	N 32 15 14.84 W 104	1 48 38
	8098.00	14.00	279.51	7952.51	3.88	125.48	-1028.72	2.13	456329.51	635053.13	N 32 15 14.88 W 104	1 48 53
	8193.00	14.23	276.97	8044.64	3.45	128.80	-1051.64	0.70	456332.83	635030.20	N 32 15 15.01 W 104	1 48 50
	8288.00	14.98	268.03	8136.58	5.44	129.79	-1075.51	2.50	456333.82	635006.34	N 32 15 15.03 W 104	1 49 17
	8384.00	14.41	266.73	8229.44	9.58	128.68	-1099.83	0.69	456332.71	634982.02	N 32 15 15.01 W 104	1 49 46
	8479.00	15.81	268.46	8321.16	13.68	127.66	-1124.57	1.55	456331.69	634957.28	N 32 15 15.01 W 104	1 49 74
	8574.00	15.63	268.77	8412.60	17.51	127.04	-1150.30	0.21	456331.07	634931.55	N 32 15 15.00 W 104	1 50 04
	8669.00	15.29	268.89	8504.17	21.18	126.52	-1175.62	0.36	456330.55	634906.24	N 32 15 15.00 W 104	1 50 34
	8765.00	15.26	267.40	8596.77	25.15	125.70	-1200.90	0.41	456329.73	634880.96	N 32 15 14.99 W 104	1 50 63
	8860.00	14.89	267.25	8688.51	29.37	124.55	-1225.58	0.39	456328.58	634856.28	N 32 15 14.98 W 104	1 50 92
	8954.00	13.96	273.31	8779.55	32.21	124.63	-1248.96	1.88	456328.66	634832.90	N 32 15 14.98 W 104	1 51 19
	9045.00	15.37	276.88	8867.58	33.01	126.70	-1271.90	1.84	456330.73	634809.97	N 32 15 15.00 W 104	1 51 46
	9183.00	19.37	238.35	8999.68	47.50	116.85	-1309.67	8.64	456320.88	634772.20	N 32 15 14.90 W 104	1 51 90
	9278.00	22.40	206.45	9088.72	74.56	92.29	-1331.22	12.23	456296.33	634750.65	N 32 15 14.66 W 104	1 52 15
100' FNL Crossed	9314.00	22.76	201.01	9121.96	87.79	79.65	-1336.77	5.88	456283.69	634745.10	N 32 15 14.54 W 104	1 52 22
	9373.00	23.72	192.55	9176.19	110.70	57.41	-1343.44	5.88	456261.44	634738.43	N 32 15 14.32 W 104	1 52 30
	9467.00	31.33	180.42	9259.55	153.89	14.42	-1347.74	10.02	456218.46	634734.13	N 32 15 13.89 W 104	1 52 35
3rd Bone Spring Sand Intersection	9517.25	33.38	179.69	9302.00	180.57	-12.47	-1347.76	4.15	456191.57	634734.11	N 32 15 13.82 W 104	1 52 35
	9562.00	35.21	179.11	9338.97	205.55	-37.68	-1347.50	4.15	456166.36	634734.38	N 32 15 13.38 W 104	1 52 35
	9656.00	47.84	183.92	9409.22	267.43	-99.80	-1349.46	13.85	456104.24	634732.41	N 32 15 12.76 W 104	1 52 37
	9749.00	54.86	186.05	9467.27	339.96	-127.10	-1355.84	7.76	456031.95	634726.03	N 32 15 12.05 W 104	1 52 45
	9844.00	61.30	185.76	9517.47	420.53	-252.27	-1364.12	6.78	455951.79	634717.75	N 32 15 11.25 W 104	1 52 55
	9937.00	70.43	182.45	9555.47	505.17	-336.82	-1370.10	10.34	455867.25	634711.77	N 32 15 10.42 W 104	1 52 62
	10031.00	76.92	179.68	9581.88	594.81	-426.96	-1371.74	7.46	455777.12	634710.13	N 32 15 9.52 W 104	1 52 64
	10126.00	88.18	179.81	9594.18	688.07	-521.00	-1371.32	11.85	455683.08	634710.55	N 32 15 8.59 W 104	1 52 64
	10181.00	88.52	180.90	9595.76	742.65	-575.98	-1371.66	2.08	455628.11	634710.21	N 32 15 8.05 W 104	1 52 64
	10221.00	87.35	181.02	9597.21	782.39	-615.95	-1372.33	2.94	455588.15	634709.54	N 32 15 7.65 W 104	1 52 65
	104007.00	86.52	181.41	9607.15	967.12	-801.64	-1376.27	0.49	455402.47	634705.60	N 32 15 5.82 W 104	1 52 71
	10501.00	86.66	180.17	9612.74	1060.37	-895.46	-1377.57	1.33	455308.66	634704.31	N 32 15 4.89 W 104	1 52 72
	10594.00	87.59	180.19	9617.41	1152.57	-988.34	-1377.86	1.00	455215.78	634704.02	N 32 15 3.97 W 104	1 52 73
	10687.00	88.42	178.23	9620.64	1244.61	-1081.27	-1376.58	2.29	455122.86	634705.30	N 32 15 3.05 W 104	1 52 72
	10782.00	89.66	177.57	9622.24	1338.35	-1176.19	-1373.10	1.48	455027.95	634708.78	N 32 15 2.11 W 104	1 52 68
	10877.00	90.14	177.77	9622.40	1432.05	-1271.11	-1369.23	0.55	454933.03	634712.64	N 32 15 1.17 W 104	1 52 64
	10972.00	90.24	177.92	9622.09	1525.79	-1366.04	-1365.66	0.19	454838.11	634716.21	N 32 15 0.23 W 104	1 52 60
	11068.00	90.48	177.55	9621.50	1618.52	-1459.97	-1361.95	0.47	454744.19	634719.93	N 32 14 59.30 W 104	1 52 56
	11161.00	90.72	177.56	9620.50	1712.18	-1554.88	-1357.89	0.25	454649.29	634723.98	N 32 14 58.36 W 104	1 52 52
	11256.00	90.58	177.28	9619.42	1805.80	-1649.77	-1353.62	0.33	454554.40	634728.25	N 32 14 57.42 W 104	1 52 47
	11350.00	90.62	177.17	9618.44	1898.39	-1743.66	-1349.07	0.12	454460.53	634732.80	N 32 14 56.49 W 104	1 52 42
	11445.00	90.79	178.14	9617.27	1992.07	-1838.57	-1345.18	1.04	454365.62	634736.69	N 32 14 55.56 W 104	1 52 38
	11539.00	90.82	178.76	9615.95	2084.97	-1932.53	-1342.64	0.66	454271.67	634739.23	N 32 14 54.63 W 104	1 52 35
	11632.00	90.76	179.10	9614.67	2177.01	-2025.50	-1340.90	0.37	454178.71	634740.97	N 32 14 53.71 W 104	1 52 33
	11726.00	91.24	181.43	9613.03	2270.30	-2119.48	-1341.34	2.53	454084.74	634740.53	N 32 14 52.78 W 104	1 52 34
	11820.00	90.96	181.18	9611.22	2363.79	-2213.44	-1343.48	0.40	453990.79	634738.39	N 32 14 51.85 W 104	1 52 37
	12009.00	90.52	179.53	9608.78	2551.44	-2402.41	-1344.65	0.90	453801.83	634737.22	N 32 14 49.98 W 104	1 52 39
	12103.00	90.76	179.80	9607.73	2644.63	-2496.40	-1344.10	0.38	453707.84	634737.77	N 32 14 49.05 W 104	1 52 39
	12198.00	90.83	180.13	9606.41	2738.87	-2591.39	-1344.04	0.36	453612.86	634737.83	N 32 14 48.11 W 104	1 52 39
	12293.00	90.76	179.65	9605.09	2833.09	-2686.38	-1343.86	0.51	453517.88	634738.01	N 32 14 47.17 W 104	1 52 39
	12388.00	91.10	179.91	9603.55	2927.29	-2781.37	-1343.49	0.45	453422.90	634738.38	N 32 14 46.23 W 104	1 52 39
	12482.00	90.69	179.24	9602.08	3020.45	-2875.36	-1342.80	0.84	453328.92	634739.08	N 32 14 45.30 W 104	1 52 38
	12577.00	90.96	179.71	9600.72	3114.59	-2970.34	-1341.92	0.57	453233.94	634739.95	N 32 14 44.36 W 104	1 52 38
	12671.00	91.37	179.67	9598.81	3207.77	-3064.32	-1341.42	0.44	453139.97	634740.45	N 32 14 43.43 W 104	1 52 37
	12861.00	91.27	179.32	9594.43	3396.02	-3254.26	-1339.74	0.19	452950.05	634742.13	N 32 14 41.55 W 104	1 52 36
	12955.00	89.86	179.42	9593.50	3489.14	-3348.25	-1338.71	1.50	452856.07	634743.16	N 32 14 40.62 W 104	1 52 35
	13050.00	89.86	180.44	9593.73	3583.38	-3443.25	-1338.59	1.07	452761.08	634743.28	N 32 14 39.68 W 104	1 52 35
	13144.00	89.35	181.69	9594.38	3676.84	-3537.23	-1340.34	1.44	452667.10	634741.53	N 32 14 38.75 W 104	1 52 38
	13239.00	89.38	181.05	9595.43	3771.35	-3632.19	-1342.61	0.87	452572.15	634739.26	N 32 14 37.81 W 104	1 52 41
	13334.00	89.69	180.88	9596.21	3865.79	-3727.18	-1344.21	0.37	452477.17	634737.66	N 32 14 36.87 W 104	1 52 43
	13428.00	89.48	180.66	9596.89	3959.20	-3821.17	-1345.47	0.32	452383.19	634736.40	N 32 14 35.94 W 104	1 52 45
	13523.00	89.52	180.71	9597.72	4053.59	-3916.16	-1346.61	0.07	452288.21	634735.26	N 32 14 35.00 W 104	1 52 46
	13618.00	89.69	179.63	9598.37	4147.88	-4011.15	-1346.89	1.15	452193.22	634734.98	N 32 14 34.06 W 104	1 52 47
	13712.00	89.62	179.93	9598.94	4241.10	-4105.15	-1346.53	0.33	452099.23	634735.34	N 32 14 33.13 W 104	1 52 47
	13802.00	89.79	179.31	9599.91	4429.45	-4295.14	-1345.27	0.34	451909.25	634736.60	N 32 14 31.31 W 104	1 52 46
	13897.00	89.55	178.53	9600.46	4523.46	-4390.12	-1343.48	0.86	451814.28	634738.39	N 32 14 30.25 W 104	1 52 44
	14091.00	89.38	177.70	9601.34	4616.29	-4484.07	-1340.39	0.90	451720.34	634741.48	N 32 14 29.38 W 104	1 52 41
	14186.00	89.21	179.01	9602.51	4710.16	-4579.02	-1337.66	1.39	451625.40	634744.21	N 32 14 28.44 W 104	1 52 38
	14281.00	89.66	179.55	9603.45	4804.25	-4674.01	-1336.47	0.74	451530.42	634745.40	N 32 14 27.50 W 104	1 52 37
	14375.00	89.86	179.21	9603.84	4897.38	-4768.00	-1335.45	0.42	451436.44	634746.42	N 32 14 26.57 W 104	1 52 36
	14470.00	89.69	179.35	9603.38	4991.48	-4862.99	-1334.26	0.89	451341.45	634747.61	N 32 14 25.63 W 104	1 52 35
	14565.00	90.52	177.92	9602.38	5085.42	-4957.95	-1331.99	1.52	451246.50	634749.88	N 32 14 24.69 W 104	1 52 33
	14659.00	90.62	177.77	9601.44	5178.18	-5051.88	-1328.46	0.19	451152.57	634753.41	N 32 14 23.76 W 104	1 52 29
	14753.00	89.93	176.93	9600.99	5270.80	-5145.78	-1324.11	1.16	451058.68	634757.76	N 32 14 22.83 W 104	1 52 24
	14848.00	89.93	177.77	9601.11	5364.40	-5240.68	-1319.72	0.88	450960.80	634762.15	N 32 14 21.89 W 104	1 52 19
	14943.00	90.07	180.15	9601.11	5458.42	-5335.66	-1318.00	2.51	450868.83	634763.87	N 32 14 20.95 W 104	1 52 18
	15038.00	90.21	178.80	9600.88	5552.57	-5430.85	-1317.13	1.43	450773.84	634764.74	N 32 14 20.01 W 104	1 52 17
	15132.00	90.21	179.81	9600.53	5645.68	-5524.64	-1315.99	1.07	450679.86	634765.88	N 32 14 19.08 W 104	1 52 16

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	18068.00	89.83	180.60	9604.72	8557.31	-8459.85	-1310.96	3.23	447744.89	634770.91	N 32 13 50.04	W 104 1 52.20
	18162.00	90.10	179.05	9604.77	8650.54	-8553.84	-1310.67	1.67	447650.90	634771.20	N 32 13 49.11	W 104 1 52.20
	18257.00	90.21	179.29	9604.52	8744.62	-8648.83	-1309.29	0.28	447555.92	634772.58	N 32 13 48.17	W 104 1 52.18
	18352.00	90.58	180.70	9603.86	8838.87	-8743.83	-1309.28	1.53	447460.93	634772.58	N 32 13 47.23	W 104 1 52.19
	18446.00	90.52	180.58	9602.96	8932.25	-8837.82	-1310.33	0.14	447366.95	634771.53	N 32 13 46.30	W 104 1 52.20
	18635.00	89.93	180.34	9602.22	9119.96	-9026.81	-1311.85	0.34	447177.97	634770.02	N 32 13 44.43	W 104 1 52.23
	18825.00	89.69	179.76	9602.85	9308.49	-9216.81	-1312.02	0.33	446987.99	634769.85	N 32 13 42.55	W 104 1 52.23
	18919.00	89.93	179.87	9603.16	9401.72	-9310.81	-1311.71	0.28	446894.00	634770.16	N 32 13 41.62	W 104 1 52.23
	19109.00	89.76	178.26	9603.67	9589.81	-9500.78	-1308.61	0.85	446704.05	634773.26	N 32 13 39.74	W 104 1 52.20
	19204.00	90.10	180.10	9603.79	9683.89	-9595.76	-1307.25	1.97	446609.07	634774.61	N 32 13 38.80	W 104 1 52.19
	19298.00	89.97	180.06	9603.73	9777.17	-9689.76	-1307.38	0.14	446515.08	634774.48	N 32 13 37.87	W 104 1 52.19
	19488.00	89.97	179.97	9603.83	9965.69	-9879.76	-1307.43	0.05	446325.10	634774.43	N 32 13 35.99	W 104 1 52.20
	19676.00	89.79	180.03	9604.22	10152.22	-10067.76	-1307.43	0.10	446137.11	634774.43	N 32 13 34.13	W 104 1 52.21
	19866.00	90.21	179.51	9604.22	10340.63	-10257.76	-1306.67	0.35	445947.13	634775.20	N 32 13 32.25	W 104 1 52.21
	19961.00	88.83	182.71	9605.02	10435.09	-10352.72	-1308.51	3.67	445852.17	634773.36	N 32 13 31.31	W 104 1 52.23
Final MWD	20016.00	90.55	180.93	9605.32	10489.84	-10407.69	-1310.26	4.50	445797.21	634771.61	N 32 13 30.76	W 104 1 52.25
Proj to TD	20066.00	90.55	180.93	9604.84	10539.54	-10457.68	-1311.07	0.00	445747.22	634770.80	N 32 13 30.27	W 104 1 52.26

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	25.000	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Height CC 6-7 Fed Com 311H Gyro + MWD 0ft to 20066'MD
	1	25.000	25.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Height CC 6-7 Fed Com 311H Gyro + MWD 0ft to 20066'MD
	1	25.000	422.900	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Height CC 6-7 Fed Com 311H Gyro + MWD
	1	422.900	20066.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Height CC 6-7 Fed Com 311H Gyro + MWD

...Original Borehole\Oxy Height CC 6-7 Fed Com 311H Gyro + MWD 0ft to 20066'MD