Schlumberger

OXY

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Pure Gold MDP1 29-17 Federal Com 1H	NM Eddy County (NAD 83)	Oxy Pure Gold MDP1 29-17 Federal Com 1H

Gravity & Magnetic Parameters

Model: IFR1 Dip: 59.992° Date: 10-May-2019
MagDec: 6.858° FS: 47970.1nT Gravity FS: 998.452mgn (9.80665 Based)

Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet

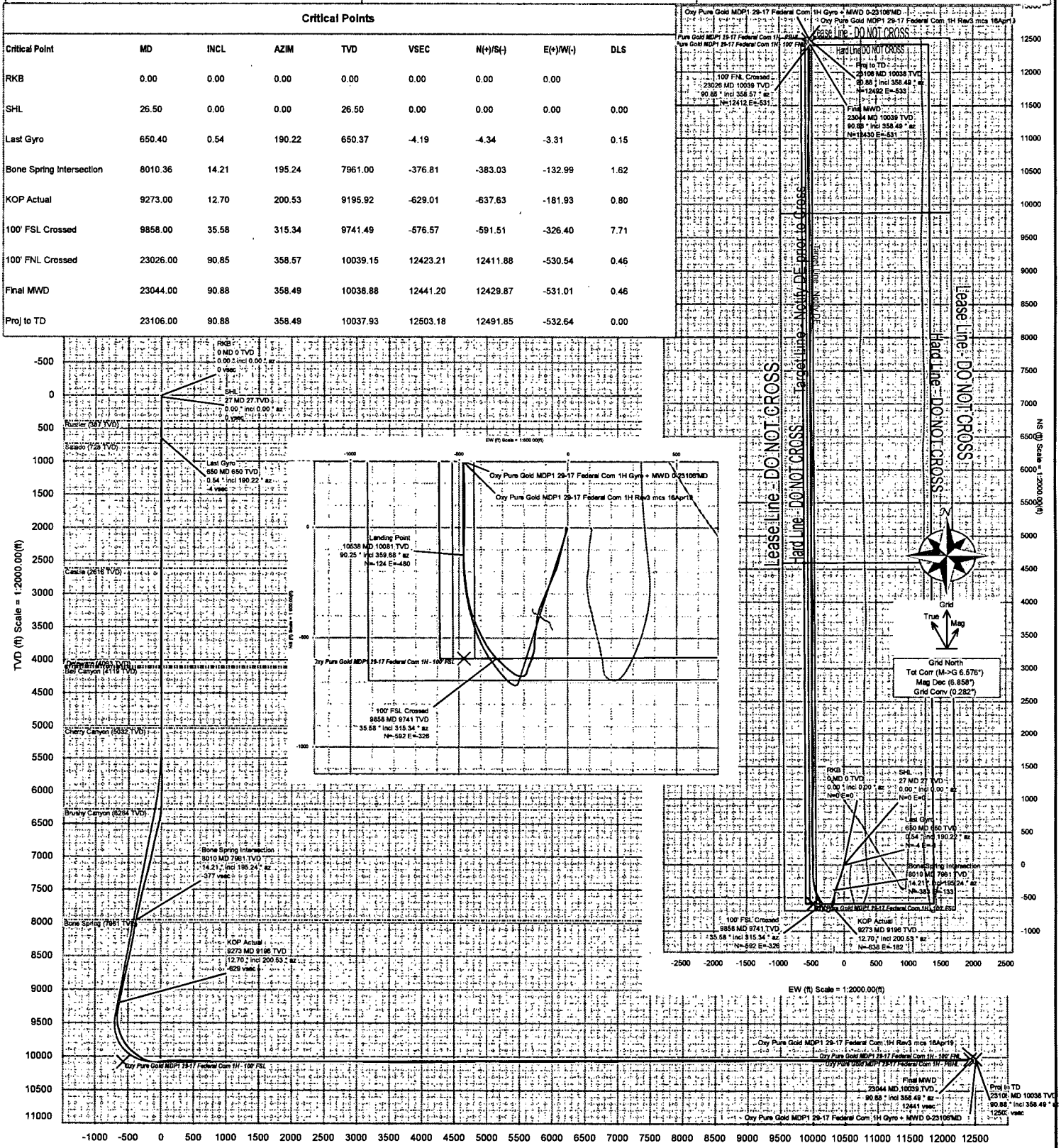
Lat: N 32 16 12.26 Northing: 462387.11ftUS Grid Conv: 0.2819°
Lon: W 103 48 19.37 Easting: 704815.79ftUS Scale Fact: 0.99993959

Miscellaneous

Slot: Oxy Pure Gold MDP1 29-17 Federal Com 1H TVD Ref: RKB=26.5'(3375.9ft above MSL)
Plan: Oxy Pure Gold MDP1 29-17 Federal Com 1H Gyro + MWD 0-23106'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	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00
Last Gyro	650.40	0.54	190.22	650.37	-4.19	-4.34	-3.31	0.15
Bone Spring Intersection	8010.36	14.21	195.24	7961.00	-376.81	-383.03	-132.99	1.62
KOP Actual	9273.00	12.70	200.53	9195.92	-629.01	-637.63	-181.93	0.80
100' FSL Crossed	9858.00	35.58	315.34	9741.49	-576.57	-591.51	-326.40	7.71
100' FNL Crossed	23026.00	90.85	358.57	10039.15	12423.21	12411.88	-530.54	0.46
Final MWD	23044.00	90.88	358.49	10038.88	12441.20	12429.87	-531.01	0.46
Proj to TD	23106.00	90.88	358.49	10037.93	12503.18	12491.85	-532.64	0.00



Vertical Section (ft) Azim = 357.48° Scale = 1:2000.00(ft) Origin = 0N/-S, 0E/-W

Schlumberger

Oxy Pure Gold MDP1 29-17 Federal Com 1H Gyro + MWD 0-23106'MD
Survey Geodetic Report
(Def Survey)

Report Date:	May 23, 2019 - 09:05 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	357.477 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Pure Gold MDP1 29-17 Federal Com 1H / Oxy Pure Gold MDP1 29-17 Federal Com 1H	**TVD Reference Datum:**	RKB=26.5'
Well:	Oxy Pure Gold MDP1 29-17 Federal Com 1H	**TVD Reference Elevation:**	3375.900 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3349.400 ft above MSL
UWI / API#:	Unknown / 30-015-45645	**Magnetic Declination:**	6.858 °
Survey Name:	Oxy Pure Gold MDP1 29-17 Federal Com 1H Gyro + MWD 0-23106'MD	**Total Gravity Field Strength:**	998.4524mgn (9.80665 Based)
Survey Date:	April 10, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	338.759 ° / 14014.988 ft / 7.037 / 1.390	**Total Magnetic Field Strength:**	47970.100 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.992 °
Location Lat / Long:	N 32° 16' 12.26424", W 103° 48' 19.37271"	**Declination Date:**	May 10, 2019
Location Grid N/E Y/X:	N 462387.110 ftUS, E 704515.790 ftUS	**Magnetic Declination Model:**	IFR1
CRS Grid Convergence Angle:	0.2819 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99993959	**Grid Convergence Used:**	0.2819 °
Version / Patch:	2.10.760.0	**Total Corr Mag North->Grid North:**	6.5761 °
		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	462387.11	704515.79	N 32 16 12.26	W 103 48 19.37
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	462387.11	704515.79	N 32 16 12.26	W 103 48 19.37
	92.60	0.54	228.04	92.60	-0.20	-0.21	-0.23	0.82	462386.90	704515.56	N 32 16 12.26	W 103 48 19.38
	180.20	0.80	226.92	180.19	-0.86	-0.90	-0.99	0.30	462386.21	704514.80	N 32 16 12.26	W 103 48 19.38
	269.60	0.55	237.41	269.59	-1.48	-1.56	-1.80	0.31	462385.55	704513.99	N 32 16 12.25	W 103 48 19.39
	364.40	0.48	213.28	364.38	-2.03	-2.14	-2.40	0.24	462384.97	704513.39	N 32 16 12.24	W 103 48 19.40
	458.90	0.46	201.94	458.88	-2.69	-2.82	-2.76	0.10	462384.29	704513.03	N 32 16 12.24	W 103 48 19.41
	553.50	0.47	204.33	553.48	-3.39	-3.52	-3.06	0.02	462383.59	704512.73	N 32 16 12.23	W 103 48 19.41
Last Gyro	650.40	0.54	190.22	650.37	-4.19	-4.34	-3.31	0.15	462382.77	704512.48	N 32 16 12.22	W 103 48 19.41
	680.00	0.44	250.21	679.97	-4.36	-4.51	-3.44	1.68	462382.60	704512.35	N 32 16 12.22	W 103 48 19.41
	770.00	0.67	232.81	769.97	-4.76	-4.95	-4.19	0.31	462382.16	704511.60	N 32 16 12.22	W 103 48 19.42
	861.00	0.18	189.68	860.97	-5.20	-5.41	-4.63	0.61	462381.70	704511.16	N 32 16 12.21	W 103 48 19.43
	951.00	0.20	30.44	950.97	-5.21	-5.41	-4.58	0.42	462381.70	704511.21	N 32 16 12.21	W 103 48 19.43
	1136.00	0.20	211.07	1135.96	-5.21	-5.41	-4.58	0.22	462381.70	704511.21	N 32 16 12.21	W 103 48 19.43
	1226.00	0.15	284.98	1225.96	-5.30	-5.52	-4.78	0.24	462381.59	704511.01	N 32 16 12.21	W 103 48 19.43
	1317.00	0.15	291.69	1316.96	-5.22	-5.44	-5.00	0.02	462381.67	704510.79	N 32 16 12.21	W 103 48 19.43
	1409.00	0.20	224.50	1408.96	-5.28	-5.51	-5.23	0.22	462381.60	704510.56	N 32 16 12.21	W 103 48 19.43
	1503.00	0.15	193.66	1502.96	-5.51	-5.75	-5.37	0.11	462381.36	704510.42	N 32 16 12.21	W 103 48 19.44
	1597.00	0.15	20.03	1596.96	-5.51	-5.75	-5.36	0.32	462381.36	704510.43	N 32 16 12.21	W 103 48 19.44
	1786.00	0.15	279.45	1785.96	-5.23	-5.48	-5.52	0.12	462381.63	704510.27	N 32 16 12.21	W 103 48 19.44
	1880.00	0.20	183.52	1879.96	-5.37	-5.62	-5.65	0.28	462381.49	704510.14	N 32 16 12.21	W 103 48 19.44
	1975.00	0.15	33.72	1974.96	-5.43	-5.68	-5.59	0.36	462381.43	704510.20	N 32 16 12.21	W 103 48 19.44
	2069.00	0.20	27.71	2068.96	-5.19	-5.44	-5.44	0.06	462381.67	704510.35	N 32 16 12.21	W 103 48 19.44
	2164.00	0.20	120.35	2163.96	-5.14	-5.37	-5.22	0.30	462381.74	704510.57	N 32 16 12.21	W 103 48 19.43
	2258.00	0.15	3.43	2257.96	-5.11	-5.33	-5.07	0.32	462381.78	704510.72	N 32 16 12.21	W 103 48 19.43
	2352.00	0.20	12.16	2351.96	-4.82	-5.05	-5.03	0.06	462382.06	704510.76	N 32 16 12.21	W 103 48 19.43
	2447.00	0.15	53.96	2446.96	-4.60	-4.82	-4.90	0.14	462382.29	704510.89	N 32 16 12.22	W 103 48 19.43
	2541.00	0.15	9.04	2540.96	-4.41	-4.62	-4.78	0.12	462382.49	704511.01	N 32 16 12.22	W 103 48 19.43
	2636.00	0.15	264.37	2635.96	-4.29	-4.51	-4.88	0.25	462382.60	704510.91	N 32 16 12.22	W 103 48 19.43
	2730.00	0.15	88.03	2729.96	-4.30	-4.52	-4.88	0.32	462382.59	704510.91	N 32 16 12.22	W 103 48 19.43
	2824.00	0.20	104.43	2823.96	-4.35	-4.56	-4.60	0.07	462382.55	704511.19	N 32 16 12.22	W 103 48 19.43
	2919.00	0.15	317.84	2918.96	-4.30	-4.50	-4.52	0.35	462382.61	704511.27	N 32 16 12.22	W 103 48 19.43
	3013.00	0.15	91.23	3012.96	-4.21	-4.42	-4.48	0.29	462382.69	704511.31	N 32 16 12.22	W 103 48 19.43
	3108.00	0.20	204.70	3107.96	-4.37	-4.57	-4.43	0.31	462382.54	704511.36	N 32 16 12.22	W 103 48 19.42
	3202.00	0.15	46.27	3201.96	-4.43	-4.63	-4.41	0.37	462382.48	704511.38	N 32 16 12.22	W 103 48 19.42
	3297.00	0.20	66.24	3296.96	-4.29	-4.48	-4.17	0.08	462382.63	704511.62	N 32 16 12.22	W 103 48 19.42
	3391.00	0.15	29.65	3390.96	-4.13	-4.31	-3.95	0.13	462382.80	704511.84	N 32 16 12.22	W 103 48 19.42
	3486.00	0.15	72.26	3485.96	-3.99	-4.16	-3.77	0.11	462382.95	704512.02	N 32 16 12.22	W 103 48 19.42
	3580.00	0.15	23.18	3579.96	-3.85	-4.01	-3.61	0.13	462383.10	704512.18	N 32 16 12.22	W 103 48 19.41
	3675.00	0.15	80.62	3674.96	-3.72	-3.88	-3.44	0.15	462383.23	704512.35	N 32 16 12.23	W 103 48 19.41
	3769.00	0.15	171.89	3768.96	-3.83	-3.98	-3.30	0.23	462383.13	704512.49	N 32 16 12.23	W 103 48 19.41
	3863.00	0.15	145.26	3862.96	-4.06	-4.20	-3.21	0.07	462382.91	704512.58	N 32 16 12.22	W 103 48 19.41
	3958.00	0.11	304.75	3957.96	-4.11	-4.25	-3.22	0.27	462382.86	704512.57	N 32 16 12.22	W 103 48 19.41
	4052.00	0.12	337.33	4051.96	-3.96	-4.11	-3.33	0.07	462383.00	704512.46	N 32 16 12.22	W 103 48 19.41
	4109.00	0.20	4.79	4108.96	-3.80	-3.95	-3.34	0.19	462383.16	704512.45	N 32 16 12.23	W 103 48 19.41
	4277.00	0.22	297.14	4276.96	-3.35	-3.52	-3.60	0.14	462383.59	704512.19	N 32 16 12.23	W 103 48 19.41
	4466.00	0.34	315.88	4465.95	-2.75	-2.95	-4.32	0.08	462384.16	704511.47	N 32 16 12.24	W 103 48 19.42
	4654.00	0.34	317.13	4653.95	-1.91	-2.14	-5.09	0.00	462384.97	704510.70	N 32 16 12.24	W 103 48 19.43
	4749.00	0.40	330.62	4748.95	-1.40	-1.64	-5.44	0.11	462385.47	704510.35	N 32 16 12.25	W 103 48 19.44
	4843.00	0.47	330.57	4842.94	-0.76	-1.02	-5.79	0.07	462386.09	704510.00	N 32 16 12.25	W 103 48 19.44
	4938.00	0.51	327.32	4937.94	-0.05	-0.33	-6.21	0.05	462386.78	704509.58	N 32 16 12.26	W 103 48 19.45
	5032.00	0.43	320.05	5031.94	0.59	0.30	-6.66	0.11	462387.41	704509.13	N 32 16 12.27	W 103 48 19.45
	5126.00	0.45	324.04	5125.94	1.18	0.87	-7.11	0.04	462387.98	704508.68	N 32 16 12.27	W 103 48 19.46
	5221.00	0.50	333.27	5220.93	1.87	1.54	-7.51	0.10	462388.65	704508.28	N 32 16 12.28	W 103 48 19.46
	5315.00	0.49	327.43	5314.93	2.59	2.24	-7.91	0.05	462389.35	704507.88	N 32 16 12.29	W 103 48 19.46
	5409.00	0.45	334.10	5408.93	3.28	2.91	-8.29	0.07	462390.02	704507.50	N 32 16 12.29	W 103 48 19.47
	5504.00	0.39	333.18	5503.92	3.91	3.54	-8.60	0.06	462390.65	704507.19	N 32 16 12.30	W 103 48 19.47
	5598.00	0.45	306.36	5597.92	4.44	4.04	-9.04	0.22	462391.15	704506.75	N 32 16 12.30	W 103 48 19.48
	5692.00	0.08	197.14	5691.92	4.61	4.20	-9.36	0.51	462391.31	704506.43	N 32 16 12.31	W 103 48 19.48
	5786.00	0.18	20.60	5785.92	4.68	4.27	-9.32	0.28	462391.38	704506.47	N 32 16 12.31	W 103 48 19.48
	5881.00	0.17	137.22	5880.92	4.71	4.31	-9.18	0.31	462391.42	704506.61	N 32 16 12.31	W 103 48 19.48
	5975.00	0.25	6.06	5974.92	4.81	4.41	-9.06	0.41	462391.52	704506.73	N 32 16 12.31	W 103 48 19.48
	6082.00	0.22	6.00	6081.92	5.24	4.85	-9.01	0.03	462391.96	704506.78	N 32 16 12.31	W 103 48 19.48
	6133.00	0.41	38.67	6132.92	5.47	5.09	-8.89	0.50	462392.20	704506.90	N 32 16 12.32	W 103 48 19.48
	6227.00	3.53	169.22	6226.86	2.86	2.51	-8.14	4.05	462389.62	704507.65	N 32 16 12.29	W 103 48 19.47
	6321.00	5.81	176.53	6320.54	-4.76	-5.09	-7.31	2.50	462382.02	704508.48	N 32 16 12.21	W 103 48 19.46
	6416.00	10.53	187.80	6414.56	-18.12	-18.49	-8.20	5.22	462368.62	704507.59	N 32 16 12.08	W 103 48 19.47
	6510.00	14.45	194.60	6506.32	-37.78	-38.36	-12.32	4.45	462348.75	704503.47	N 32 16 11.89	W 103 48 19.52
	6698.00	13.58	194.75	6688.72	-81.28	-82.41	-23.85	0.46	462304.71	704491.94	N 32 16 11.45	W 103 48 19.66
	6793.00	12.18	194.70	6781.33	-101.50	-102.89	-29.24	1.47	462284.23	704486.56	N 32 16 11.25	W 103 48 19.72
	6983.00	13.39	193.70	6966.62	-141.77	-143.65	-39.53	0.65	462243.47	704476.26	N 32 16 10.84	W 103 48 19.84
	7077.00	12.69	193.40	7058.19	-162.15	-164.27	-44.50	0.75	462222.85	704471.29	N 32 16 10.64	W 103 48 19.90
	7195.00	15.42	203.13	7172.66	-188.76	-191.31	-53.67	3.05	462195.81	704462.12	N 32 16 10.37	W 103 48 20.01
	7360.00	16.60	203.83	7331.26	-229.66	-233.05	-71.81	0.72	462154.08	704443.98	N 32 16 9.96	W 103 48 20.22
	7455.00	15.81	203.76	7422.49	-253.42	-257.30	-82.51	0.83	462129.82	704433.29	N 32 16 9.72	W 103 48 20.35
	7549.00	14.97	202.39	7513.12	-275.91	-280.25	-92.29	0.97	462106.88	704423.50	N 32 16 9.50	W 103 48 20.46
	7643.00	14.40	202.83	7604.05	-297.49	-302.25	-101.45	0.62	462084.88	704414.34	N 32 16 9.28	W 103 48 20.57

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 ° ' ")
	7833.00	13.08	202.89	7788.60	-338.26	-343.83	-118.98	0.69	462043.30	704396.81	N 32 16 8.87	W 103 48 20.78
	7927.00	13.57	200.19	7880.07	-358.04	-363.98	-126.93	0.84	462023.15	704388.87	N 32 16 8.67	W 103 48 20.87
Bone Spring Intersection	*8010.36*	*14.21*	*195.24*	*7961.00*	*-376.81*	*-383.03*	*-132.99*	*1.62*	*462004.10*	*704382.81*	*N 32 16 8.48*	*W 103 48 20.94*
	8022.00	14.31	194.58	7972.28	-379.54	-385.80	-133.73	1.62	462001.33	704382.07	N 32 16 8.45	W 103 48 20.95
	8116.00	11.05	190.74	8063.98	-399.42	-405.90	-138.33	3.58	461981.23	704377.47	N 32 16 8.25	W 103 48 21.01
	8210.00	8.01	183.01	8156.67	-414.71	-421.30	-140.36	3.50	461965.84	704375.44	N 32 16 8.10	W 103 48 21.03
	8305.00	10.44	188.67	8250.44	-429.75	-436.42	-142.00	2.73	461950.72	704373.80	N 32 16 7.95	W 103 48 21.05
	8399.00	11.19	189.22	8342.77	-447.03	-453.84	-144.75	0.81	461933.30	704371.05	N 32 16 7.78	W 103 48 21.08
	8493.00	11.33	185.36	8434.96	-465.11	-472.04	-147.07	0.82	461915.10	704368.73	N 32 16 7.60	W 103 48 21.11
	8587.00	14.09	185.97	8526.65	-485.57	-492.62	-149.12	2.94	461894.52	704366.68	N 32 16 7.40	W 103 48 21.14
	8682.00	13.76	181.12	8618.86	-508.29	-515.41	-150.55	1.28	461871.73	704365.25	N 32 16 7.17	W 103 48 21.16
	8777.00	10.71	180.68	8711.69	-528.38	-535.54	-150.87	3.21	461851.60	704364.93	N 32 16 6.97	W 103 48 21.16
	8871.00	13.29	192.56	8803.64	-547.54	-554.83	-153.33	3.79	461832.32	704362.47	N 32 16 6.78	W 103 48 21.19
	8965.00	13.05	196.79	8895.17	-567.99	-575.53	-158.74	1.06	461811.61	704357.06	N 32 16 6.58	W 103 48 21.25
	9060.00	10.83	199.00	8988.11	-586.41	-594.24	-164.75	2.39	461792.90	704351.05	N 32 16 6.39	W 103 48 21.33
	9154.00	13.45	203.10	9080.00	-604.49	-612.65	-171.91	2.93	461774.50	704343.89	N 32 16 6.21	W 103 48 21.41
KOP Actual	9273.00	12.70	200.53	9195.92	-628.01	-637.63	-181.93	0.80	461749.52	704333.87	N 32 16 5.96	W 103 48 21.53
	9367.00	10.18	194.57	9288.05	-646.46	-655.35	-187.64	2.96	461731.80	704328.16	N 32 16 5.79	W 103 48 21.60
	9462.00	10.09	232.99	9381.67	-659.21	-668.50	-196.41	6.99	461718.65	704319.39	N 32 16 5.66	W 103 48 21.70
	9556.00	20.18	277.25	9472.55	-661.13	-671.43	-219.20	15.61	461715.72	704296.61	N 32 16 5.63	W 103 48 21.96
	9651.00	24.98	306.28	9560.52	-645.72	-657.44	-251.74	12.62	461729.71	704264.07	N 32 16 5.77	W 103 48 22.34
	9746.00	26.52	312.11	9646.09	-618.24	-631.34	-283.65	3.12	461755.81	704232.16	N 32 16 6.03	W 103 48 22.71
	9840.00	35.00	313.16	9726.80	-584.15	-598.77	-318.95	9.04	461788.38	704196.86	N 32 16 6.35	W 103 48 23.12
100' FSL Crossed	*9858.00*	*35.58*	*315.34*	*9741.49*	*-576.57*	*-591.51*	*-326.40*	*7.71*	*461795.63*	*704189.41*	*N 32 16 6.43*	*W 103 48 23.21*
	9935.00	38.46	323.98	9803.00	-539.96	-556.18	-356.25	7.71	461830.97	704159.56	N 32 16 6.78	W 103 48 23.55
	10029.00	45.97	332.42	9872.63	-484.85	-502.46	-389.16	10.00	461884.68	704126.66	N 32 16 7.31	W 103 48 23.93
	10124.00	55.00	335.49	9933.02	-417.68	-436.64	-421.18	9.82	461950.49	704094.63	N 32 16 7.96	W 103 48 24.30
	10219.00	53.51	345.14	9988.60	-344.18	-364.21	-447.16	8.39	462022.92	704068.66	N 32 16 8.68	W 103 48 24.60
	10314.00	63.18	351.47	10038.44	-264.46	-285.13	-463.29	11.65	462101.99	704052.53	N 32 16 9.47	W 103 48 24.78
	10408.00	76.15	354.94	10071.04	-176.76	-197.80	-473.58	14.22	462189.32	704042.24	N 32 16 10.33	W 103 48 24.90
	10504.00	91.79	1.19	10081.11	-81.64	-102.73	-476.72	17.52	462284.39	704039.10	N 32 16 11.27	W 103 48 24.93
	10569.00	95.78	1.30	10076.82	-16.94	-37.90	-475.31	6.14	462349.21	704040.51	N 32 16 11.91	W 103 48 24.91
	10598.00	96.41	1.52	10073.74	11.83	-9.07	-474.60	2.30	462378.04	704041.22	N 32 16 12.20	W 103 48 24.90
	10692.00	94.13	0.75	10065.10	105.23	84.51	-472.75	2.56	462471.61	704043.07	N 32 16 13.12	W 103 48 24.87
	10787.00	90.41	358.21	10061.34	200.08	179.40	-473.61	4.74	462566.50	704042.21	N 32 16 14.06	W 103 48 24.88
	10871.00	90.33	357.01	10060.80	284.07	263.33	-477.12	1.43	462650.42	704038.70	N 32 16 14.89	W 103 48 24.91
	10965.00	88.41	355.88	10061.83	378.05	357.13	-482.94	2.37	462744.22	704032.88	N 32 16 15.82	W 103 48 24.98
	11058.00	88.82	358.35	10064.08	471.01	449.98	-487.62	2.69	462837.06	704028.20	N 32 16 16.74	W 103 48 25.03
	11152.00	88.65	358.68	10066.16	564.97	543.93	-490.06	0.39	462931.00	704025.76	N 32 16 17.67	W 103 48 25.05
	11245.00	88.37	359.97	10068.57	657.89	636.89	-491.15	1.42	463023.96	704024.67	N 32 16 18.59	W 103 48 25.06
	11338.00	88.68	0.92	10070.97	750.73	729.85	-490.43	1.07	463116.92	704025.39	N 32 16 19.51	W 103 48 25.04
	11432.00	90.64	2.27	10071.53	844.48	823.81	-487.81	2.53	463210.87	704028.01	N 32 16 20.44	W 103 48 25.01
	11525.00	89.47	1.74	10071.44	937.19	916.75	-484.56	1.38	463303.80	704031.26	N 32 16 21.36	W 103 48 24.96
	11618.00	88.61	2.38	10072.99	1029.88	1009.67	-481.22	1.15	463396.72	704034.60	N 32 16 22.28	W 103 48 24.92
	11712.00	89.61	4.54	10074.46	1123.35	1103.48	-475.55	2.53	463490.53	704040.27	N 32 16 23.21	W 103 48 24.85
	11805.00	89.68	3.48	10075.03	1215.74	1196.25	-469.04	1.14	463583.29	704046.78	N 32 16 24.12	W 103 48 24.77
	11898.00	90.74	1.28	10074.69	1308.39	1289.17	-465.18	2.63	463676.20	704050.64	N 32 16 25.04	W 103 48 24.72
	11992.00	90.37	359.98	10073.78	1402.24	1383.15	-464.15	1.44	463770.18	704051.67	N 32 16 25.97	W 103 48 24.70
	12085.00	89.64	358.87	10073.77	1495.19	1476.15	-465.08	1.43	463863.16	704050.74	N 32 16 26.89	W 103 48 24.70
	12179.00	90.33	0.46	10073.80	1589.12	1570.14	-465.63	1.84	463957.15	704050.19	N 32 16 27.82	W 103 48 24.71
	12272.00	90.47	0.30	10073.15	1682.00	1663.14	-465.01	0.23	464050.14	704050.81	N 32 16 28.74	W 103 48 24.69
	12365.00	89.82	359.23	10072.91	1774.92	1756.13	-465.40	1.35	464143.13	704050.42	N 32 16 29.66	W 103 48 24.69
	12458.00	89.75	358.75	10073.26	1867.89	1849.12	-467.03	0.52	464236.11	704048.78	N 32 16 30.58	W 103 48 24.71
	12553.00	90.23	357.99	10073.28	1962.87	1944.08	-469.74	0.95	464331.07	704046.08	N 32 16 31.52	W 103 48 24.73
	12648.00	90.44	356.53	10072.72	2057.87	2038.97	-474.28	1.55	464425.95	704041.54	N 32 16 32.46	W 103 48 24.78
	12743.00	90.02	356.46	10072.34	2152.85	2133.79	-480.09	0.45	464520.76	704035.73	N 32 16 33.40	W 103 48 24.84
	12837.00	90.33	355.67	10072.05	2246.82	2227.56	-486.54	0.90	464614.54	704029.28	N 32 16 34.33	W 103 48 24.91
	12931.00	90.57	358.11	10071.32	2340.81	2321.42	-491.64	2.61	464708.38	704024.19	N 32 16 35.26	W 103 48 24.97
	13026.00	90.16	358.49	10070.71	2435.80	2416.37	-494.45	0.59	464803.33	704021.37	N 32 16 36.20	W 103 48 24.99
	13120.00	90.37	0.41	10070.28	2529.73	2510.36	-495.36	2.05	464897.32	704020.46	N 32 16 37.13	W 103 48 25.00
	13215.00	90.71	0.96	10069.38	2624.58	2605.35	-494.22	0.68	464992.30	704021.60	N 32 16 38.07	W 103 48 24.98
	13309.00	90.50	1.04	10068.39	2718.40	2699.33	-492.58	0.24	465086.27	704023.24	N 32 16 39.00	W 103 48 24.96
	13404.00	89.68	0.38	10068.24	2813.25	2794.32	-491.40	1.11	465181.26	704024.42	N 32 16 39.94	W 103 48 24.94
	13498.00	88.48	0.63	10069.75	2907.10	2888.30	-490.57	1.30	465275.23	704025.25	N 32 16 40.87	W 103 48 24.92
	13593.00	88.89	0.91	10071.93	3001.92	2983.27	-489.30	0.52	465370.19	704026.52	N 32 16 41.81	W 103 48 24.90
	13688.00	88.89	0.80	10073.77	3096.74	3078.24	-487.88	0.12	465465.16	704027.94	N 32 16 42.75	W 103 48 24.88
	13783.00	88.82	0.76	10075.67	3191.56	3173.21	-486.59	0.08	465560.13	704029.23	N 32 16 43.69	W 103 48 24.86
	13877.00	88.96	0.71	10077.49	3285.39	3267.19	-485.38	0.16	465654.10	704030.44	N 32 16 44.62	W 103 48 24.84
	13972.00	88.89	1.13	10079.27	3380.20	3362.16	-483.86	0.45	465749.06	704031.96	N 32 16 45.56	W 103 48 24.82
	14066.00	89.64	0.96	10080.48	3474.01	3456.14	-482.14	0.82	465843.03	704033.68	N 32 16 46.49	W 103 48 24.79
	14161.00	88.06	0.34	10082.38	3568.84	3551.11	-481.07	1.79	465938.00	704034.75	N 32 16 47.43	W 103 48 24.77
	14255.00	90.13	0.50	10083.87	3662.70	3645.09	-480.38	2.21	466031.97	704035.44	N 32 16 48.36	W 103 48 24.76
	14350.00	89.92	0.59	10083.82	3757.57	3740.08	-479.47	0.24	466126.96	704036.35	N 32 16 49.30	W 103 48 24.74
	14444.00	90.54	0.52	10083.45	3851.43	3834.08	-478.56	0.66	466220.95	704037.26	N 32 16 50.23	W 103 48 24.73
	14538.00	90.50	0.19	10082.59	3945.31	3928.07	-477.98	0.35	466314.94	704037.84	N 32 16 51.16	W 103 48 24.71
	14633.00	91.02	358.30	10081.33	4040.25	4023.05	-479.23	2.06	466409.91	704036.59	N 32 16 52.10	W 103 48 24.72
	14727.00	91.40	358.89	10079.35	4134.21	4117.00	-481.45	0.84	466503.86	704034.37	N 32 16 53.03	W 103 48 24.74
	14822.00	90.68	358.32	10077.62	4229.17	4211.96	-483.68	1.04	466598.81	704032.14	N 32 16 53.96	W 103 48 24.77
	14916.00	89.37	356.90	10077.58	4323.16	4305.87	-487.60	2.06	466692.72	704028.22	N 32 16 54.89	W 103 48 24.81
	15010.00	90.64	358.26	10077.58	4417.16	4399.79	-491.57	1.98	466786.62	704024.25	N 32 16 55.82	W 103 48 24.85
	15105.00	91.40	357.98	10075.88	4512.14	4494.72	-494.69	0.85	466881.55	704021.13	N 32 16 56.76	W 103 48 24.88
	15199.00	91.57	358.61	10073.45	4606.10	4588.65	-497.48	0.69	466975.47	704018.34	N 32 16 57.69	W 103 48 24.90
	15294.00	89.82	357.55	10072.30	4701.08	4683.58	-500.67	2.15	467070.40	704015.15	N 32 16 58.63	W 103 48 24.94
	15388.00	91.19	358.40	10071.47	4795.07	4777.51	-503.99	1.72	467164.33	704011.83	N 32 16 59.56	W 103 48 24.97
	15577.00	90.30	359.53	10069.01	4983.98	4966.46	-507.40	0.76	467353.26	704008.42	N 32 17 1.43	W 103 48 25.00
	15672.00	89.20	1.04	10069.42	5078.87	5061.46	-506.93	1.97	467448.25	704008.89	N 32 17 2.37	W 103 48 24.99
	15767.00	89.54	1.65	10070.47	5173.64	5156.42	-504.70	0.74	467543.21	704011.12	N 32 17 3.31	W 103 48 24.96
	15861.00	89.27	1.27	10071.45	5267.41	5250.39	-502.30	0.50	467637.17	704013.52	N 32 17 4.24	W 103 48 24.92
	15956.00	89.47	359.95	10072.49	5362.26	5345.37	-501.29	1.41	467732.15	704014.53	N 32 17 5.18	W 103 48 24.91
	16050.00	89.54	1.41	10073.30	5456.11	5439.36	-500.18	1.55	467826.13	704015.64	N 32 17 6.11	W 103 48 24.89
	16145.00	90.61	1.65	10073.18	5550.87	5534.33	-497.64	1.15	467921.09	704018.18	N 32 17 7.05	W 103 48 24.85
	16239.00	90.85	1.11	10071.98	5644.64	5628.29	-495.38	0.63	468015.05	704020.44	N 32 17 7.98	W 103 48 24.82
	16334.00	90.54	1.08	10070.83	5739.45	5723.27	-493.56	0.33	468110.02	704022.26	N 32 17 8.92	W 103 48 24.79
	16428.00	90.75	1.29	10069.77	5833.24	5817.24	-491.62	0.32	468203.99	704024.20	N 32 17 9.85	W 103 48 24.77
	16523.00	90.50	1.35	10068.73	5928.02	5912.21	-489.43	0.27	468298.95	704026.39	N 32 17 10.79	W 103 48 24.73
	16617.00	90.61	1.25	10067.82	6021.81	6006.18	-487.30	0.16	468392.92	704028.52	N 32 17 11.72	W 103 48 24.70
	16712.00	90.64	359.42	10066.79	6116.68	6101.17	-486.74	1.93	468487.90	704029.08	N 32 17 12.66	W 103 48 24.69
	16806.00	90.57	358.67	10065.79	6210.64	6195.15	-488.31	0.80	468581.87	704027.51	N 32 17 13.59	W 103 48 24.71
	16900.00	90.61	358.49	10064.83	6304.62	6289.12	-490.64	0.20	468675.83	704025.18	N 32 17 14.52	W 103 48 24.73
	16995.00	90.47	358.56	10063.93	6399.60	6384.08	-493.08	0.16	468770.79	704022.74	N 32 17 15.46	W 103 48 24.75
	17089.00	90.02	358.50	10063.53	6493.58	6478.05	-495.49	0.48	468864.75	704020.33	N 32 17 16.39	W 103 48 24.77
	17184.00	90.06	358.15	10063.46	6588.57	6573.01	-498.27	0.37	468959.71	704017.55	N 32 17 17.33	W 103 48 24.80
	17278.00	90.20	358.38	10063.25	6682.56	6666.96	-501.12	0.29	469053.66	704014.70	N 32 17 18.26	W 103 48 24.83
	17373.00	90.13	358.22	10062.98	6777.55	6761.92	-503.94	0.18	469148.61	704011.89	N 32 17 19.20	W 103 48 24.86
	17467.00	90.57	357.99	10062.40	6871.54	6855.87	-507.04	0.53	469242.55	704008.78	N 32 17 20.13	W 103 48 24.89
	17657.00	90.47	358.65	10060.68	7061.51	7045.78	-512.61	0.35	469432.45	704003.21	N 32 17 22.01	W 103 48 24.94
	17846.00	89.89	358.71	10060.08	7250.47	7234.73	-516.97	0.31	469621.39	703998.85	N 32 17 23.88	W 103 48 24.98

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 ° ' ")
	18036.00	89.89	359.09	10060.45	7440.41	7424.69	-520.62	0.20	469811.34	703995.21	N 32 17 25.76	W 103 48 25.01
	18130.00	90.13	359.49	10060.43	7534.36	7518.68	-521.78	0.50	469905.32	703994.04	N 32 17 26.69	W 103 48 25.02
	18225.00	90.50	1.51	10059.91	7629.23	7613.67	-520.95	2.16	470000.31	703994.87	N 32 17 27.63	W 103 48 25.00
	18414.00	89.78	1.36	10059.45	7817.77	7802.61	-516.22	0.39	470189.24	703999.60	N 32 17 29.50	W 103 48 24.94
	18509.00	89.78	1.06	10059.81	7912.57	7897.59	-514.21	0.32	470284.21	704001.61	N 32 17 30.44	W 103 48 24.91
	18697.00	90.06	1.61	10060.07	8100.14	8085.54	-509.83	0.33	470472.14	704005.99	N 32 17 32.29	W 103 48 24.85
	18886.00	90.47	1.41	10059.20	8288.67	8274.47	-504.85	0.24	470661.06	704010.97	N 32 17 34.16	W 103 48 24.78
	18980.00	89.89	1.29	10058.91	8382.46	8368.44	-502.64	0.63	470755.03	704013.18	N 32 17 35.09	W 103 48 24.75
	19075.00	90.23	1.42	10058.81	8477.24	8463.42	-500.39	0.38	470850.00	704015.43	N 32 17 36.03	W 103 48 24.72
	19169.00	88.58	1.54	10059.78	8571.00	8557.38	-497.96	1.76	470943.95	704017.86	N 32 17 36.96	W 103 48 24.68
	19264.00	92.15	1.94	10059.18	8665.72	8652.32	-495.08	3.78	471038.89	704020.74	N 32 17 37.90	W 103 48 24.64
	19358.00	88.72	359.96	10058.46	8759.53	8746.28	-493.52	4.21	471132.85	704022.30	N 32 17 38.83	W 103 48 24.62
	19453.00	91.06	0.24	10058.65	8854.42	8841.27	-493.36	2.48	471227.83	704022.47	N 32 17 39.77	W 103 48 24.61
	19547.00	93.57	0.69	10054.85	8948.21	8935.19	-492.59	2.71	471321.74	704023.23	N 32 17 40.70	W 103 48 24.60
	19642.00	92.43	0.41	10049.88	9042.94	9030.05	-491.68	1.24	471416.60	704024.14	N 32 17 41.64	W 103 48 24.58
	19736.00	90.47	358.47	10047.50	9136.85	9124.01	-492.60	2.93	471510.55	704023.22	N 32 17 42.57	W 103 48 24.59
	19830.50	89.92	357.38	10047.18	9231.34	9218.44	-496.02	1.29	471604.98	704019.80	N 32 17 43.50	W 103 48 24.62
	19925.00	90.02	357.22	10047.23	9325.84	9312.84	-500.48	0.20	471699.37	704015.35	N 32 17 44.44	W 103 48 24.67
	20020.00	88.85	356.55	10048.16	9420.83	9407.69	-505.64	1.42	471794.21	704010.18	N 32 17 45.38	W 103 48 24.72
	20115.00	89.75	357.68	10049.32	9515.82	9502.56	-510.42	1.52	471889.08	704005.40	N 32 17 46.32	W 103 48 24.77
	20209.00	90.26	356.98	10049.32	9609.82	9596.46	-514.80	0.92	471982.97	704001.03	N 32 17 47.25	W 103 48 24.82
	20304.00	89.03	356.81	10049.90	9704.81	9691.31	-519.94	1.31	472077.82	703995.88	N 32 17 48.18	W 103 48 24.87
	20398.00	91.88	357.19	10049.16	9798.79	9785.17	-524.86	3.06	472171.67	703990.96	N 32 17 49.11	W 103 48 24.93
	20493.00	87.89	357.81	10049.35	9893.77	9880.06	-529.00	4.25	472266.56	703986.82	N 32 17 50.05	W 103 48 24.97
	20588.00	90.09	357.67	10051.02	9988.75	9974.97	-532.75	2.32	472361.46	703983.07	N 32 17 50.99	W 103 48 25.01
	20682.00	89.54	357.10	10051.33	10082.75	10068.87	-537.04	0.84	472455.35	703978.79	N 32 17 51.92	W 103 48 25.05
	20776.00	89.37	357.21	10052.22	10176.74	10162.75	-541.70	0.22	472549.22	703974.12	N 32 17 52.85	W 103 48 25.10
	20871.00	89.34	356.90	10053.29	10271.73	10257.62	-546.58	0.33	472644.09	703969.24	N 32 17 53.79	W 103 48 25.15
	20965.00	89.95	358.95	10053.87	10365.72	10351.55	-549.99	2.28	472738.01	703965.84	N 32 17 54.72	W 103 48 25.19
	21060.00	89.58	359.03	10054.26	10460.69	10446.53	-551.66	0.40	472832.99	703964.16	N 32 17 55.66	W 103 48 25.20
	21155.00	89.64	359.19	10054.91	10555.65	10541.52	-553.14	0.18	472927.97	703962.69	N 32 17 56.60	W 103 48 25.21
	21249.00	89.89	358.90	10055.29	10649.61	10635.50	-554.70	0.41	473021.95	703961.12	N 32 17 57.53	W 103 48 25.23
	21344.00	90.13	359.50	10055.28	10744.57	10730.49	-556.03	0.68	473116.93	703959.79	N 32 17 58.47	W 103 48 25.24
	21438.00	90.61	1.05	10054.67	10838.45	10824.49	-555.58	1.73	473210.92	703960.25	N 32 17 59.40	W 103 48 25.22
	21533.00	90.26	1.52	10053.95	10933.24	10919.46	-553.45	0.62	473305.89	703962.38	N 32 18 0.34	W 103 48 25.19
	21627.00	90.13	1.21	10053.63	11027.02	11013.43	-551.21	0.36	473399.86	703964.61	N 32 18 1.27	W 103 48 25.16
	21721.00	89.99	2.27	10053.53	11120.76	11107.39	-548.36	1.14	473493.81	703967.47	N 32 18 2.20	W 103 48 25.12
	21816.00	90.37	2.01	10053.23	11215.45	11202.32	-544.81	0.48	473588.73	703971.02	N 32 18 3.14	W 103 48 25.08
	21910.00	90.81	1.46	10052.26	11309.18	11296.27	-541.96	0.75	473682.68	703973.86	N 32 18 4.07	W 103 48 25.04
	22004.00	90.99	1.34	10050.79	11402.95	11390.23	-539.67	0.23	473776.63	703976.16	N 32 18 5.00	W 103 48 25.01
	22099.00	90.88	1.04	10049.24	11497.74	11485.20	-537.69	0.34	473871.59	703978.13	N 32 18 5.94	W 103 48 24.98
	22194.00	91.12	1.26	10047.58	11592.53	11580.17	-535.79	0.34	473966.55	703980.04	N 32 18 6.88	W 103 48 24.95
	22288.00	91.05	1.45	10045.80	11686.30	11674.12	-533.56	0.22	474060.51	703982.26	N 32 18 7.80	W 103 48 24.92
	22382.00	91.54	2.19	10043.68	11780.00	11768.05	-530.58	0.94	474154.43	703985.24	N 32 18 8.73	W 103 48 24.88
	22477.00	91.09	2.05	10041.50	11874.66	11862.96	-527.07	0.50	474249.33	703988.76	N 32 18 9.67	W 103 48 24.83
	22571.00	89.27	359.11	10041.20	11968.51	11956.94	-526.12	3.68	474343.31	703989.71	N 32 18 10.60	W 103 48 24.82
	22666.00	90.40	0.30	10041.47	12063.44	12051.94	-526.60	1.73	474438.29	703989.22	N 32 18 11.54	W 103 48 24.82
	22760.00	89.34	359.62	10041.69	12157.34	12145.93	-526.67	1.34	474532.29	703989.15	N 32 18 12.47	W 103 48 24.81
	22855.00	90.88	359.43	10041.50	12252.28	12240.93	-527.46	1.63	474627.27	703988.37	N 32 18 13.41	W 103 48 24.82
	22949.00	90.71	358.89	10040.20	12346.23	12334.91	-528.84	0.60	474721.25	703986.99	N 32 18 14.34	W 103 48 24.83
100' FNL Crossed	*23026.00*	*90.85*	*358.57*	*10039.15*	*12423.21*	*12411.88*	*-530.54*	*0.46*	*474798.22*	*703985.28*	*N 32 18 15.10*	*W 103 48 24.84*
Final MWD	23044.00	90.88	358.49	10038.88	12441.20	12429.87	-531.01	0.46	474816.21	703984.82	N 32 18 15.28	W 103 48 24.85
Proj to TD	23106.00	90.88	358.49	10037.93	12503.18	12491.85	-532.64	0.00	474878.18	703983.18	N 32 18 15.90	W 103 48 24.86

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 (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H Gyro + MWD 0-23106'MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H Gyro + MWD 0-23106'MD
	1	26.500	650.400	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H
	1	650.400	5409.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H
	1	5409.000	5975.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H
	1	5975.000	9154.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H
	1	9154.000	9273.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H
	1	9273.000	23106.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Pure Gold MDP1 29-17 Federal Com 1H