Schlumberger

OXY

HOBBS OCD

AUG 22 2018

RECEIVED

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Mesa Verde BS Unit 14H	NM Lea County (NAD 83)	Oxy Mesa Verde BS Unit 14H

Gravity & Magnetic Parameters

Model:	HDGM 2019	Dip:	59.928°	Date:	04-May-2018
MagDec:	6.833°	FS:	48007.818nT	Gravity FS:	999.429mgn (9.80665 Based)

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

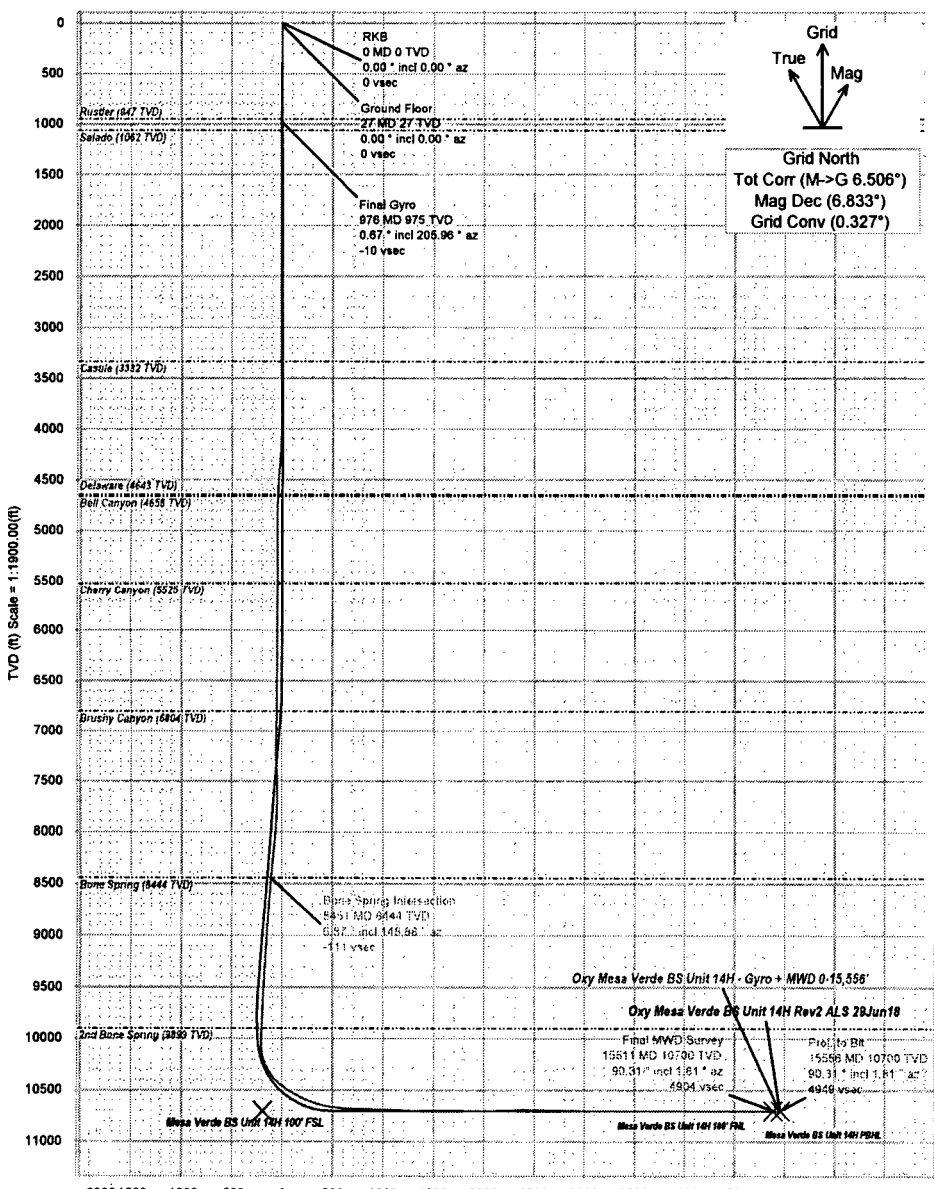
Lat:	N 32 12 39.62	Northing:	441030.17ftUS	Grid Conv:	0.3272°
Lon:	W 103 43 10.18	Easting:	731194.81ftUS	Scale Fact:	0.9999037

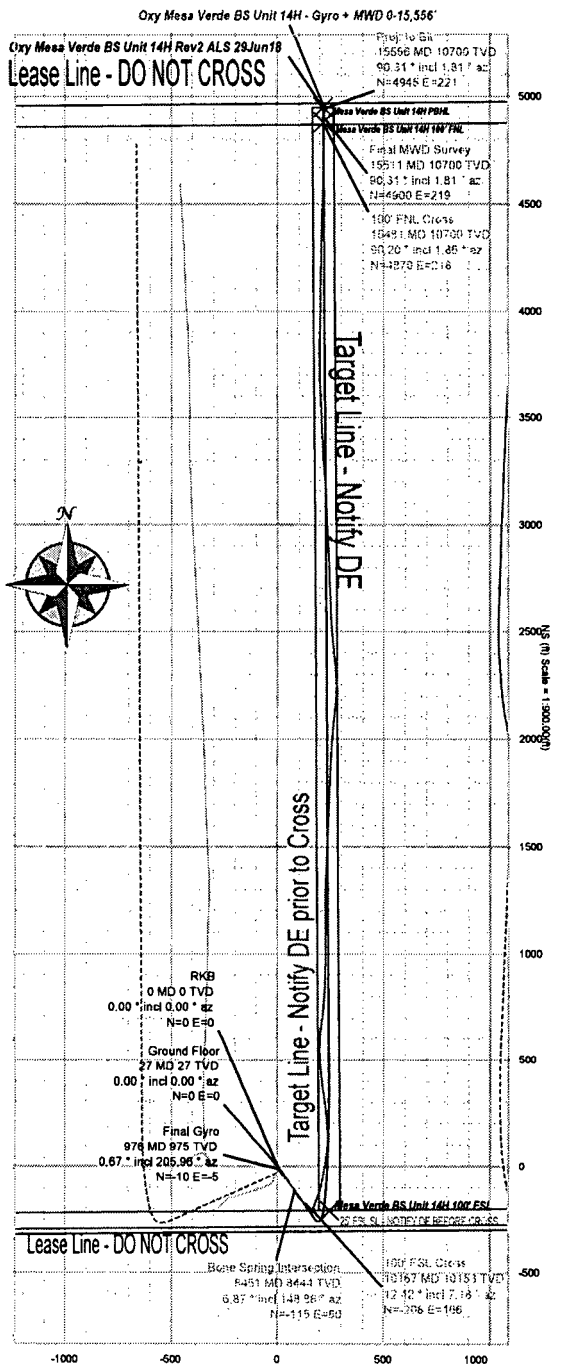
Miscellaneous

Slot:	Oxy Mesa Verde BS Unit 14H	TVD Ref:	RKB=26.5'(3589.1ft above MSL)
Plan:	Oxy Mesa Verde BS Unit 14H Rev2 ALS 29Jun18		

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler	947.00	0.00	144.76	947.00	0.00	0.00	0.00	0.00
Salado	1062.00	0.00	144.76	1062.00	0.00	0.00	0.00	0.00
Castile	3332.00	0.00	144.76	3332.00	0.00	0.00	0.00	0.00
Delaware	4643.00	0.00	144.76	4643.00	0.00	0.00	0.00	0.00
Bell Canyon	4658.00	0.00	144.76	4658.00	0.00	0.00	0.00	0.00
Cherry Canyon	5525.00	0.00	144.76	5525.00	0.00	0.00	0.00	0.00
Build 2°/100'	6504.00	0.00	144.76	6504.00	0.00	0.00	0.00	0.00
Hold Tangent	6803.82	6.00	144.76	6803.27	-12.38	-12.80	9.04	2.00
Brushy Canyon	6804.55	6.00	144.76	6804.00	-12.44	-12.86	9.09	0.00
Bone Spring	8453.57	6.00	144.76	8444.00	-148.54	-153.57	108.48	0.00
Turn 2°/100'	9572.94	6.00	144.76	9557.24	-240.92	-249.07	175.95	0.00
2nd Bone Spring	9915.64	3.97	60.42	9899.00	-248.76	-257.85	196.63	2.00
Build/Turn 10°/100'	10063.27	6.00	35.00	10046.08	-239.52	-249.00	205.50	2.00
Landing Point	11127.13	90.00	359.66	10700.00	475.17	464.81	241.01	8.00
Mesa Verde BS Unit 14H PBHL	15611.82	90.00	359.66	10700.00	4954.06	4949.43	214.36	0.00





Schlumberger

Oxy Mesa Verde BS Unit 14H - Gyro + MWD 0-15,556' Survey Geodetic Report

(Def Survey)

Report Date:	July 27, 2018 - 09:39 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	2.574 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Mesa Verde BS Unit 14H / Oxy Mesa Verde BS Unit 14H	**TVD Reference Datum:**	RKB=26.5'
Well:	Oxy Mesa Verde BS Unit 14H	**TVD Reference Elevation:**	3599.100 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3572.600 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.815 °
Survey Name:	Oxy Mesa Verde BS Unit 14H - Gyro + MWD 0-15,556'	**Total Gravity Field Strength:**	998.4285mgn (9.80665 Based)
Survey Date:	July 13, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	237.247 ° / 5499.543 ft / 6.278 / 0.514	**Total Magnetic Field Strength:**	47985.474 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.920 °
Location Lat / Long:	N 32° 12' 39.52283", W 103° 43' 10.17993"	**Declination Date:**	July 13, 2018
Location Grid N/E Y/X:	N 441030.170 ftUS, E 731184.810 ftUS	**Magnetic Declination Model:**	HDGM 2018
CRS Grid Convergence Angle:	0.3272 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99995037	**Grid Convergence Used:**	0.3272 °
Version / Patch:	2.10.740.0	**Total Corr Mag North->Grid North:**	6.4879 °
		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	441030.17	731184.81	N 32 12 39.52	W 103 43 10.18
Ground Floor	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	441030.17	731184.81	N 32 12 39.52	W 103 43 10.18
	73.40	0.38	131.55	73.40	-0.10	-0.10	0.12	0.81	441030.07	731184.93	N 32 12 39.52	W 103 43 10.18
	132.90	0.39	173.94	132.90	-0.42	-0.44	0.29	0.47	441029.73	731185.10	N 32 12 39.52	W 103 43 10.18
	225.40	0.55	192.17	225.40	-1.17	-1.18	0.23	0.23	441028.99	731185.04	N 32 12 39.51	W 103 43 10.18
	314.90	0.72	202.74	314.89	-2.12	-2.12	-0.08	0.23	441028.05	731184.73	N 32 12 39.50	W 103 43 10.18
	410.00	0.82	207.60	409.98	-3.30	-3.28	-0.63	0.13	441026.90	731184.18	N 32 12 39.49	W 103 43 10.19
	505.00	0.95	206.69	504.97	-4.63	-4.58	-1.30	0.14	441025.59	731183.51	N 32 12 39.48	W 103 43 10.20
	600.00	1.01	213.81	599.96	-6.07	-5.98	-2.12	0.14	441024.19	731182.69	N 32 12 39.46	W 103 43 10.20
	694.90	0.97	217.65	694.84	-7.44	-7.31	-3.07	0.08	441022.86	731181.74	N 32 12 39.45	W 103 43 10.22
	790.10	0.72	224.01	790.03	-8.55	-8.38	-3.98	0.28	441021.79	731180.83	N 32 12 39.44	W 103 43 10.23
	884.90	0.67	231.54	884.82	-9.36	-9.15	-4.83	0.11	441021.02	731179.98	N 32 12 39.43	W 103 43 10.24
Final Gyro	975.50	0.67	205.96	975.42	-10.19	-9.96	-5.48	0.33	441020.21	731179.33	N 32 12 39.42	W 103 43 10.24
	1120.00	0.06	36.35	1119.92	-10.91	-10.66	-5.80	0.50	441019.51	731179.01	N 32 12 39.42	W 103 43 10.25
	1259.00	0.06	154.13	1258.92	-10.91	-10.66	-5.73	0.07	441019.51	731179.08	N 32 12 39.42	W 103 43 10.25
	1444.00	0.11	287.08	1443.92	-10.95	-10.70	-5.85	0.08	441019.47	731178.96	N 32 12 39.42	W 103 43 10.25
	1633.00	0.11	22.64	1632.92	-10.74	-10.48	-5.96	0.09	441019.69	731178.85	N 32 12 39.42	W 103 43 10.25
	1727.00	0.06	239.06	1726.92	-10.68	-10.42	-5.96	0.17	441019.75	731178.85	N 32 12 39.42	W 103 43 10.25
	1916.00	0.00	129.28	1915.92	-10.73	-10.47	-6.05	0.03	441019.70	731178.76	N 32 12 39.42	W 103 43 10.25
	2011.00	0.06	105.49	2010.92	-10.74	-10.48	-6.00	0.06	441019.69	731178.81	N 32 12 39.42	W 103 43 10.25
	2105.00	0.00	64.10	2104.92	-10.75	-10.50	-5.95	0.06	441019.67	731178.86	N 32 12 39.42	W 103 43 10.25
	2200.00	0.06	63.57	2199.91	-10.73	-10.48	-5.91	0.06	441019.70	731178.90	N 32 12 39.42	W 103 43 10.25
	2389.00	0.00	159.13	2388.91	-10.68	-10.43	-5.82	0.03	441019.74	731178.99	N 32 12 39.42	W 103 43 10.25
	2483.00	0.06	164.48	2482.91	-10.73	-10.48	-5.81	0.06	441019.69	731179.00	N 32 12 39.42	W 103 43 10.25
	2578.00	0.08	61.31	2577.91	-10.74	-10.49	-5.74	0.12	441019.68	731179.07	N 32 12 39.42	W 103 43 10.25
	2672.00	0.06	359.46	2671.91	-10.66	-10.41	-5.68	0.08	441019.76	731179.13	N 32 12 39.42	W 103 43 10.25
	2767.00	0.00	66.51	2766.91	-10.61	-10.36	-5.68	0.06	441019.81	731179.13	N 32 12 39.42	W 103 43 10.25
	2861.00	0.06	67.72	2860.91	-10.59	-10.35	-5.63	0.06	441019.82	731179.18	N 32 12 39.42	W 103 43 10.25
	2956.00	0.06	58.03	2955.91	-10.54	-10.30	-5.55	0.01	441019.87	731179.26	N 32 12 39.42	W 103 43 10.25
	3050.00	0.06	82.12	3049.91	-10.50	-10.27	-5.46	0.03	441019.90	731179.36	N 32 12 39.42	W 103 43 10.24
	3144.00	0.08	225.75	3143.91	-10.54	-10.31	-5.45	0.14	441019.86	731179.36	N 32 12 39.42	W 103 43 10.24
	3333.00	0.36	316.49	3332.91	-10.23	-9.97	-5.96	0.20	441020.20	731178.85	N 32 12 39.42	W 103 43 10.25
	3428.00	0.56	334.09	3427.91	-9.61	-9.33	-6.37	0.26	441020.84	731178.45	N 32 12 39.43	W 103 43 10.25
	3616.00	0.50	342.33	3615.90	-8.03	-7.73	-7.02	0.05	441022.44	731177.79	N 32 12 39.45	W 103 43 10.26
	3711.00	0.28	2.58	3710.90	-7.41	-7.10	-7.13	0.27	441023.07	731177.68	N 32 12 39.45	W 103 43 10.26
	3805.00	0.13	225.73	3804.90	-7.26	-6.94	-7.20	0.41	441023.23	731177.61	N 32 12 39.45	W 103 43 10.26
	3900.00	1.35	148.81	3899.89	-8.27	-7.98	-6.69	1.40	441022.19	731178.12	N 32 12 39.44	W 103 43 10.26
	4089.00	3.25	126.37	4088.73	-13.10	-13.06	-1.23	1.09	441017.11	731183.58	N 32 12 39.39	W 103 43 10.20
	4278.00	4.77	142.78	4277.27	-22.12	-22.49	7.84	1.00	441007.68	731192.65	N 32 12 39.30	W 103 43 10.09
	4372.00	5.74	148.14	4370.88	-29.00	-29.60	12.69	1.16	441000.57	731197.50	N 32 12 39.23	W 103 43 10.03
	4467.00	5.04	140.21	4465.46	-36.00	-36.84	17.86	1.07	440993.33	731202.67	N 32 12 39.16	W 103 43 9.97
	4562.00	4.40	135.03	4560.13	-41.55	-42.63	23.11	0.81	440987.55	731207.92	N 32 12 39.10	W 103 43 9.91
	4656.00	3.06	129.48	4653.93	-45.49	-46.77	27.60	1.47	440983.40	731212.40	N 32 12 39.06	W 103 43 9.86
	4751.00	2.06	125.78	4748.84	-47.94	-49.38	30.94	1.07	440980.79	731215.75	N 32 12 39.03	W 103 43 9.82
	4940.00	0.53	121.84	4937.78	-50.23	-51.83	34.44	0.81	440978.35	731219.25	N 32 12 39.01	W 103 43 9.78
	5034.00	0.13	86.87	5031.78	-50.43	-52.05	34.92	0.46	440978.12	731219.72	N 32 12 39.01	W 103 43 9.78
	5129.00	0.06	11.30	5126.78	-50.37	-52.00	35.03	0.14	440978.18	731219.84	N 32 12 39.01	W 103 43 9.78
	5223.00	0.08	37.54	5220.78	-50.27	-51.89	35.08	0.04	440978.28	731219.89	N 32 12 39.01	W 103 43 9.78
	5317.00	0.22	338.77	5314.78	-50.05	-51.67	35.06	0.20	440978.50	731219.86	N 32 12 39.01	W 103 43 9.78
	5412.00	0.18	296.03	5409.78	-49.82	-51.44	34.86	0.16	440978.73	731219.66	N 32 12 39.01	W 103 43 9.78
	5601.00	0.28	256.35	5598.78	-49.83	-51.42	34.14	0.10	440978.75	731218.95	N 32 12 39.01	W 103 43 9.79
	5695.00	0.16	228.45	5692.78	-49.99	-51.56	33.82	0.17	440978.61	731218.63	N 32 12 39.01	W 103 43 9.79
	5789.00	0.24	209.01	5786.78	-50.26	-51.82	33.63	0.11	440978.35	731218.43	N 32 12 39.01	W 103 43 9.79
	5978.00	0.13	8.91	5975.78	-50.40	-51.95	33.47	0.19	440978.22	731218.28	N 32 12 39.01	W 103 43 9.79
	6167.00	0.08	211.66	6164.78	-50.30	-51.85	33.43	0.11	440978.32	731218.24	N 32 12 39.01	W 103 43 9.79
	6262.00	0.13	287.90	6259.78	-50.33	-51.88	33.29	0.14	440978.30	731218.10	N 32 12 39.01	W 103 43 9.80
	6356.00	0.16	261.49	6353.78	-50.33	-51.86	33.06	0.08	440978.31	731217.87	N 32 12 39.01	W 103 43 9.80
	6451.00	0.18	181.67	6448.78	-50.50	-52.03	32.93	0.23	440978.14	731217.74	N 32 12 39.01	W 103 43 9.80
	6640.00	0.56	188.29	6637.77	-51.72	-53.24	32.79	0.20	440976.93	731217.59	N 32 12 38.99	W 103 43 9.80
	6735.00	0.18	136.65	6732.77	-52.28	-53.81	32.82	0.49	440976.36	731217.63	N 32 12 38.99	W 103 43 9.80
	6924.00	1.08	145.24	6921.76	-53.91	-55.49	34.04	0.48	440974.68	731218.85	N 32 12 38.97	W 103 43 9.79
	7018.00	1.24	154.87	7015.74	-55.51	-57.14	34.98	0.27	440973.03	731219.79	N 32 12 38.96	W 103 43 9.78
	7113.00	1.74	166.75	7110.71	-57.81	-59.47	35.74	0.62	440970.70	731220.55	N 32 12 38.93	W 103 43 9.77
	7207.00	0.91	175.24	7204.68	-59.92	-61.61	36.13	0.90	440968.57	731220.94	N 32 12 38.91	W 103 43 9.76
	7302.00	3.06	347.83	7299.64	-58.22	-59.88	35.66	4.17	440970.29	731220.47	N 32 12 38.93	W 103 43 9.77
	7396.00	3.56	3.94	7393.49	-52.87	-54.51	35.33	1.12	440975.66	731220.14	N 32 12 38.98	W 103 43 9.77
	7491.00	1.30	98.54	7488.42	-50.03	-51.73	36.60	4.09	440978.44	731221.41	N 32 12 39.01	W 103 43 9.76
	7585.00	0.06	265.62	7582.41	-50.15	-51.89	37.61	1.45	440978.28	731222.41	N 32 12 39.01	W 103 43 9.75
	7680.00	0.06	301.91	7677.41	-50.13	-51.87	37.52	0.04	440978.30	731222.32	N 32 12 39.01	W 103 43 9.75
	7774.00	1.65	147.72	7771.40	-51.22	-52.99	38.20	1.81	440977.18	731223.00	N 32 12 39.00	W 103 43 9.74
	7869.00	4.55	143.73	7866.25	-55.28	-57.18	41.16	3.06	440972.99	731225.96	N 32 12 38.95	W 103 43 9.70
	7963.00	7.06	144.07	7959.76	-62.70	-64.87	46.75	2.67	440965.30	731231.56	N 32 12 38.88	W 103 43 9.64
	8057.00	7.17	144.56	8053.04	-71.85	-74.33	53.54	0.13	440955.85	731238.35	N 32 12 38.78	W 103 43 9.56
	8246.00	6.96	146.50	8240.60	-90.39	-93.48	66.70	0.17	440936.69	731251.51	N 32 12 38.59	W 103 43 9.41
	8435.00	7.02	148.93	8428.20	-109.26	-112.93	78.98	0.16	440917.25	731263.79	N 32 12 38.40	W 103 43 9.27
	8624.00	5.26	148.20	8616.11	-126.03	-130.18	89.51	0.93	440899.99	731274.32	N 32 12 38.23	W 103 43 9.15
	8718.00	4.20	148.78	8709.79	-132.45	-136.79	93.57	1.13	440893.39	731278.37	N 32 12 38.16	W 103 43 9.10
	8812.00	4.16	146.36	8803.54	-138.06	-142.57	97.24	0.19	440887.61	731282.04	N 32 12 38.11	W 103 43 9.06
	8907.00	4.68	139.28	8898.25	-143.66	-148.38	101.68	0.79	440881.80	731286.48	N 32 12 38.05	W 103 43 9.01

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 ° ' ")	
	9001.00	5.80	138.78	8991.88	-149.88	-154.86	107.31	1.19	440875.32	731292.11	N 32 12 37.98	W 103 43	8.94
	9095.00	6.00	132.86	9085.36	-156.49	-161.77	114.04	0.68	440868.41	731298.84	N 32 12 37.92	W 103 43	8.86
	9190.00	6.29	130.57	9179.82	-162.90	-168.53	121.63	0.40	440861.65	731306.43	N 32 12 37.85	W 103 43	8.78
	9283.00	7.37	127.48	9272.16	-169.45	-175.48	130.23	1.23	440854.70	731315.04	N 32 12 37.78	W 103 43	8.68
	9472.00	5.22	138.52	9460.01	-182.57	-189.29	145.55	1.30	440840.88	731330.35	N 32 12 37.64	W 103 43	8.50
	9566.00	3.75	137.13	9553.72	-187.80	-194.75	150.48	1.57	440835.43	731335.28	N 32 12 37.59	W 103 43	8.44
	9661.00	3.60	143.05	9648.53	-192.28	-199.41	154.38	0.43	440830.77	731339.18	N 32 12 37.54	W 103 43	8.40
	9755.00	3.48	145.49	9742.35	-196.83	-204.12	157.77	0.20	440826.06	731342.57	N 32 12 37.49	W 103 43	8.36
	9842.00	3.53	148.22	9829.18	-201.15	-208.57	160.68	0.20	440821.61	731345.48	N 32 12 37.45	W 103 43	8.32
	9988.00	3.59	161.20	9974.90	-209.11	-216.72	164.52	0.55	440813.46	731349.32	N 32 12 37.37	W 103 43	8.28
	10056.00	1.13	166.70	10042.84	-211.74	-219.39	165.36	3.83	440810.79	731350.16	N 32 12 37.34	W 103 43	8.27
	10151.00	10.57	1.94	10137.35	-203.90	-211.57	165.87	12.28	440818.61	731350.67	N 32 12 37.42	W 103 43	8.26
	10246.00	22.26	19.72	10228.37	-177.89	-185.82	172.26	13.26	440844.36	731357.07	N 32 12 37.67	W 103 43	8.19
	10341.00	31.78	20.46	10312.91	-136.80	-145.35	187.11	10.03	440884.83	731371.91	N 32 12 38.07	W 103 43	8.01
	10435.00	43.52	13.52	10387.24	-81.25	-90.47	203.40	13.26	440939.70	731388.20	N 32 12 38.62	W 103 43	7.82
	10530.00	53.08	10.51	10450.37	-11.35	-21.16	218.01	10.34	441009.01	731402.81	N 32 12 39.30	W 103 43	7.64
	10624.00	57.16	8.09	10504.12	65.21	54.92	230.42	4.83	441085.09	731415.22	N 32 12 40.05	W 103 43	7.49
	10719.00	61.98	359.10	10552.29	146.96	136.53	235.39	9.60	441166.69	731420.19	N 32 12 40.86	W 103 43	7.43
	10814.00	66.27	354.98	10593.76	231.99	221.84	230.93	5.97	441252.00	731415.72	N 32 12 41.70	W 103 43	7.48
	10907.00	73.35	351.05	10625.84	317.98	308.40	220.25	8.58	441338.55	731405.05	N 32 12 42.56	W 103 43	7.60
	11002.00	78.33	353.43	10649.08	408.57	399.63	207.84	5.78	441429.78	731392.64	N 32 12 43.47	W 103 43	7.73
	11097.00	81.61	355.43	10665.62	501.15	492.72	198.77	4.03	441522.87	731383.57	N 32 12 44.39	W 103 43	7.83
	11192.00	86.56	3.68	10675.43	595.41	587.10	198.07	10.09	441617.24	731382.87	N 32 12 45.32	W 103 43	7.84
	11286.00	87.45	7.82	10680.34	689.11	680.48	207.47	4.50	441710.62	731392.27	N 32 12 46.24	W 103 43	7.72
	11378.00	88.56	4.98	10683.54	780.84	771.84	217.72	3.31	441801.97	731402.52	N 32 12 47.15	W 103 43	7.59
	11472.00	88.38	1.97	10686.06	874.78	865.62	223.41	3.21	441895.75	731408.21	N 32 12 48.08	W 103 43	7.52
	11567.00	88.21	1.05	10688.88	969.72	960.55	225.92	0.98	441990.67	731410.71	N 32 12 49.01	W 103 43	7.49
	11662.00	87.87	359.49	10692.13	1064.59	1055.49	226.36	1.68	442085.60	731411.16	N 32 12 49.95	W 103 43	7.48
	11756.00	87.69	359.80	10695.77	1158.40	1149.42	225.78	0.38	442179.53	731410.58	N 32 12 50.88	W 103 43	7.48
	11850.00	88.28	0.54	10699.08	1252.25	1243.36	226.06	1.01	442273.46	731410.86	N 32 12 51.81	W 103 43	7.47
	11944.00	88.66	2.23	10701.59	1346.20	1337.29	228.33	1.84	442367.39	731413.13	N 32 12 52.74	W 103 43	7.43
	12133.00	89.72	1.99	10704.26	1535.17	1526.14	235.29	0.58	442556.23	731420.09	N 32 12 54.61	W 103 43	7.34
	12322.00	90.72	2.30	10703.53	1724.16	1715.01	242.36	0.55	442745.09	731427.16	N 32 12 56.48	W 103 43	7.24
	12416.00	90.72	2.60	10702.35	1818.15	1808.91	246.38	0.32	442838.99	731431.18	N 32 12 57.41	W 103 43	7.19
	12511.00	90.28	2.27	10701.52	1913.15	1903.82	250.42	0.58	442933.89	731435.21	N 32 12 58.35	W 103 43	7.14
	12700.00	90.83	6.81	10699.69	2101.98	2092.17	265.37	2.42	443122.23	731450.17	N 32 13 0.21	W 103 43	6.95
	12794.00	91.48	4.32	10697.80	2195.82	2185.70	274.49	2.74	443215.76	731459.28	N 32 13 1.13	W 103 43	6.84
	12888.00	93.65	357.24	10693.59	2289.62	2279.53	275.77	7.87	443309.58	731460.56	N 32 13 2.06	W 103 43	6.82
	12982.00	90.96	353.45	10689.80	2382.77	2373.12	268.15	4.94	443403.17	731452.94	N 32 13 2.99	W 103 43	6.90
	13077.00	88.07	353.98	10690.61	2476.62	2467.54	257.75	3.09	443497.58	731442.54	N 32 13 3.92	W 103 43	7.02
	13172.00	89.11	357.69	10692.95	2570.92	2562.24	250.85	4.05	443592.28	731435.65	N 32 13 4.86	W 103 43	7.09
	13266.00	89.14	357.83	10694.38	2664.58	2656.16	247.18	0.15	443686.19	731431.97	N 32 13 5.79	W 103 43	7.13
	13361.00	88.83	357.65	10696.06	2759.22	2751.07	243.43	0.38	443781.09	731428.23	N 32 13 6.73	W 103 43	7.16
	13456.00	89.28	357.76	10697.63	2853.87	2845.98	239.63	0.49	443876.00	731424.43	N 32 13 7.67	W 103 43	7.20
	13550.00	88.97	356.53	10699.07	2947.43	2939.85	234.95	1.35	443969.87	731419.74	N 32 13 8.60	W 103 43	7.25
	13644.00	89.52	357.95	10700.31	3041.01	3033.73	230.42	1.62	444063.74	731415.22	N 32 13 9.53	W 103 43	7.30
	13739.00	89.86	358.22	10700.82	3135.72	3128.67	227.25	0.46	444158.68	731412.04	N 32 13 10.47	W 103 43	7.33
	13834.00	89.69	355.14	10701.19	3230.21	3223.50	221.75	3.25	444253.50	731406.54	N 32 13 11.41	W 103 43	7.38
	13929.00	90.07	356.57	10701.39	3324.55	3318.25	214.88	1.56	444348.25	731399.68	N 32 13 12.34	W 103 43	7.46
	14023.00	89.97	357.14	10701.36	3418.08	3412.11	209.72	0.62	444442.10	731394.52	N 32 13 13.27	W 103 43	7.51
	14118.00	89.97	358.66	10701.41	3512.76	3507.04	206.24	1.60	444537.03	731391.04	N 32 13 14.21	W 103 43	7.55
	14213.00	90.48	355.79	10701.04	3607.34	3601.92	201.64	3.07	444631.90	731386.44	N 32 13 15.15	W 103 43	7.59
	14308.00	90.17	359.56	10700.50	3701.97	3696.82	197.79	3.98	444726.80	731382.59	N 32 13 16.09	W 103 43	7.63
	14403.00	89.72	359.93	10700.59	3796.86	3791.82	197.37	0.61	444821.79	731382.17	N 32 13 17.03	W 103 43	7.63
	14497.00	90.24	2.26	10700.62	3890.82	3885.80	199.16	2.54	444915.77	731383.96	N 32 13 17.96	W 103 43	7.60
	14592.00	90.00	0.39	10700.42	3985.79	3980.77	201.36	1.98	445010.73	731386.16	N 32 13 18.90	W 103 43	7.57
	14687.00	89.83	0.85	10700.56	4080.74	4075.76	202.39	0.52	445105.72	731387.19	N 32 13 19.84	W 103 43	7.55
	14782.00	90.14	1.13	10700.59	4175.70	4170.75	204.03	0.44	445200.70	731388.83	N 32 13 20.78	W 103 43	7.53
	14876.00	89.69	359.77	10700.73	4269.63	4264.74	204.77	1.52	445294.69	731389.57	N 32 13 21.71	W 103 43	7.51
	14971.00	90.17	2.52	10700.84	4364.59	4359.71	206.66	2.94	445389.66	731391.46	N 32 13 22.65	W 103 43	7.48
	15066.00	89.93	1.42	10700.76	4459.59	4454.65	209.93	1.19	445484.59	731394.73	N 32 13 23.59	W 103 43	7.44
	15161.00	89.97	1.58	10700.84	4554.57	4549.62	212.42	0.17	445579.56	731397.22	N 32 13 24.53	W 103 43	7.40
	15256.00	90.03	1.54	10700.84	4649.56	4644.59	215.00	0.08	445674.52	731399.80	N 32 13 25.47	W 103 43	7.37
	15350.00	90.17	359.84	10700.68	4743.50	4738.58	215.97	2.03	445768.50	731400.77	N 32 13 26.40	W 103 43	7.35
	15445.00	90.07	1.92	10700.48	4838.44	4833.56	217.26	2.40	445863.48	731402.06	N 32 13 27.34	W 103 43	7.33
Final MWD Survey	15511.00	90.31	1.81	10700.26	4904.44	4899.53	219.41	0.40	445929.44	731404.21	N 32 13 27.99	W 103 43	7.30
Proj. to Bit	15556.00	90.31	1.81	10700.02	4949.43	4944.50	220.83	0.00	445974.42	731405.63	N 32 13 28.44	W 103 43	7.28

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
Assumed Vertical From RKB to Ground	1	0.000	26.500	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Mesa Verde BS Unit 14H - Gyro + MWD 0-15,556'
Assumed Vertical From RKB to Ground	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Mesa Verde BS Unit 14H - Gyro + MWD 0-15,556'
	1	26.500	975.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Mesa Verde BS Unit 14H - Gyro + MWD
	1	975.500	15556.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Mesa Verde BS Unit 14H - Gyro + MWD