



Triad Hunter

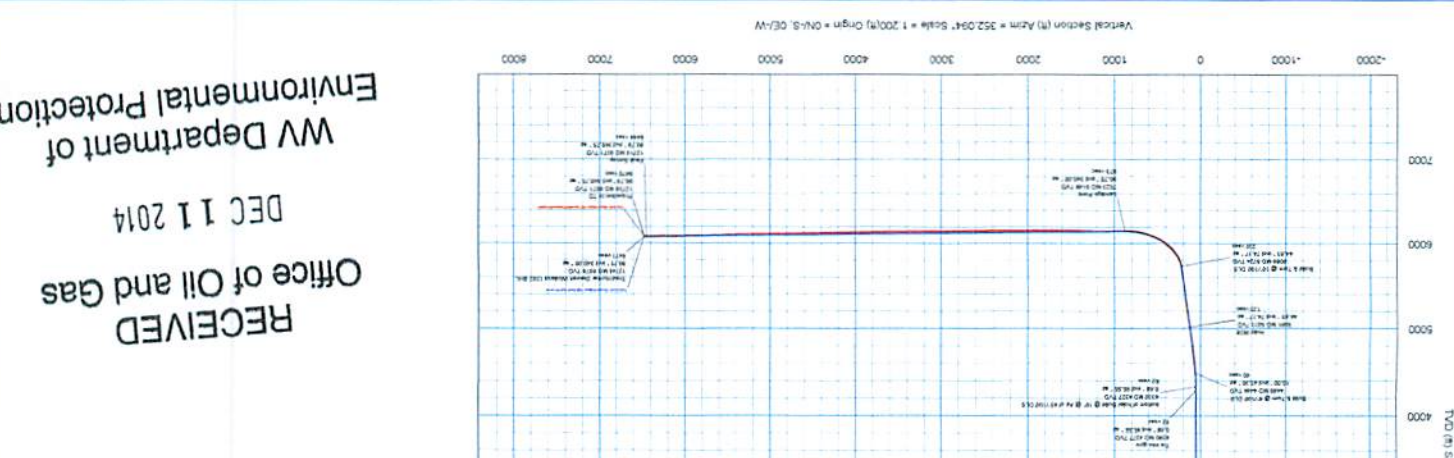
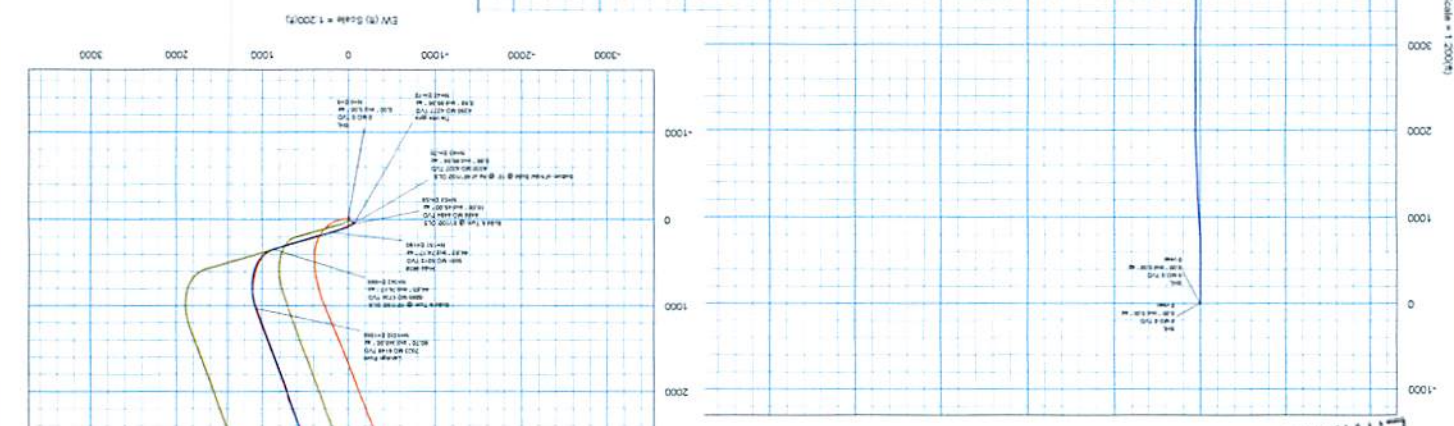
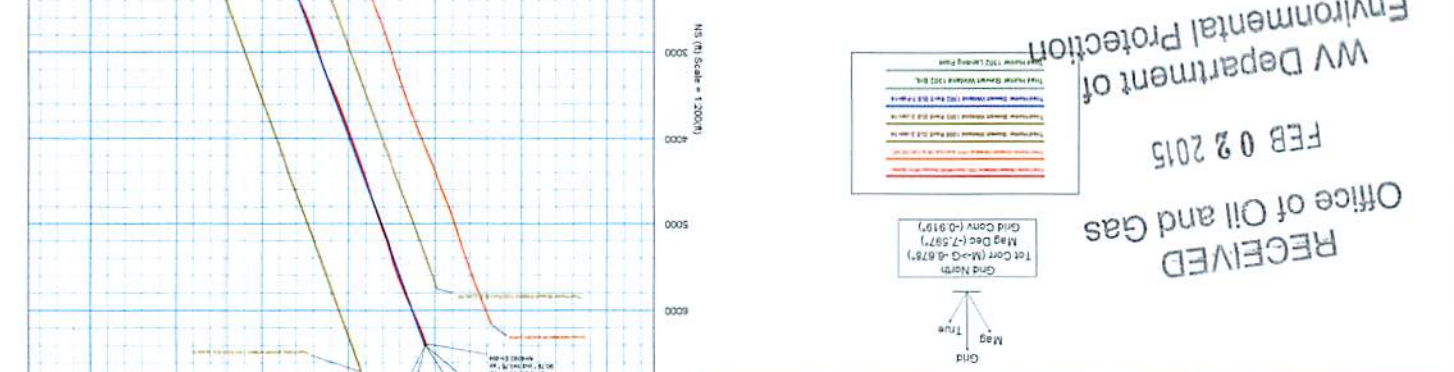
PATHFINDER
A Schlumberger Company

Borehole: Original Borehole **Well:** Triad Hunter Stewart Winland 1302 **Field:** WV Tyler County (NAD 27) **Structure:** Alpha Hunter Rig #7

Client: Schlumberger Project: Triad Hunter Date: 2014-01-29 Location: Tyler County, WV Scale: 1:2000 Drawing: 1302-01-01

Well	Field	Structure	Well ID	Field ID	Structure ID
Triad Hunter Stewart Winland 1302	WV Tyler County (NAD 27)	Alpha Hunter Rig #7	1302-01-01	WV Tyler County (NAD 27)	Alpha Hunter Rig #7

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Triad Hunter Stewart Winland 1302	WV Tyler County (NAD 27)	Alpha Hunter Rig #7	1302-01-01	WV Tyler County (NAD 27)	Alpha Hunter Rig #7



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Triad Hunter Stewart Winland 1302 Surveys 0ft to 12736ft MD Survey Geodetic Report (Def Survey)



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Report Date: February 17, 2014 - 07:30 AM
Client: Triad Hunter
Field: WV Tyler County (NAD 27)
Structure / Slot: Triad Hunter Stewart Winland Pad / Triad Hunter Stewart Winland 1302
Well: Triad Hunter Stewart Winland 1302
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Triad Hunter Stewart Winland 1302 Surveys 0ft to 12736ft MD
Survey Date: January 29, 2014
Tort / AHD / DDI / ERD Ratio: 242.455 ° / 7603.095 ft / 6.582 / 1.236
Coordinate Reference System: NAD27 West Virginia State Plane, Northern Zone, US Feet
Location Lat / Long: N 39° 30' 33.45121", W 80° 56' 25.35785"
Location Grid N/E Y/X: N 370863.000 ftUS, E 1593616.000 ftUS
CRS Grid Convergence Angle: -0.9186 °
Grid Scale Factor: 0.99994281
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 352.094 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB
TVD Reference Elevation: 928.000 ft above MSL
Seabed / Ground Elevation: 906.000 ft above MSL
Magnetic Declination: -7.597 °
Total Gravity Field Strength: 999.3381mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 52344.540 nT
Magnetic Dip Angle: 67.045 °
Declination Date: January 29, 2014
Magnetic Declination Model: HDGM 2013
North Reference: Grid North
Grid Convergence Used: -0.9186 °
Total Corr Mag North->Grid North: -6.6779 °
Local Coord Referenced To: Well Head

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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° '' ''')	Longitude (E/W ° '' ''')
SHL	0.00	0.00	0.00	0.00	-928.00	0.00	0.00	0.00	N/A	N/A	N/A	370863.00	1593616.00	N 39 30 33.45	W 80 56 25.36
	100.00	0.10	169.11	100.00	-828.00	-0.09	-0.09	0.02	0.10	0.10	0.00	370862.91	1593616.02	N 39 30 33.45	W 80 56 25.36
	200.00	0.11	124.66	200.00	-728.00	-0.24	-0.23	0.11	0.08	0.01	-44.45	370862.77	1593616.11	N 39 30 33.45	W 80 56 25.36
	300.00	0.09	319.90	300.00	-628.00	-0.24	-0.22	0.14	0.20	-0.02	-164.76	370862.78	1593616.14	N 39 30 33.45	W 80 56 25.36
	400.00	0.11	261.20	400.00	-528.00	-0.17	-0.18	-0.01	0.10	0.02	-58.70	370862.82	1593615.99	N 39 30 33.45	W 80 56 25.36
	500.00	0.11	228.99	500.00	-428.00	-0.23	-0.25	-0.17	0.06	0.00	-32.21	370862.75	1593615.83	N 39 30 33.45	W 80 56 25.36
	600.00	0.20	235.19	600.00	-328.00	-0.36	-0.42	-0.39	0.09	0.09	6.20	370862.58	1593615.61	N 39 30 33.45	W 80 56 25.36
	700.00	0.34	249.16	700.00	-228.00	-0.50	-0.62	-0.81	0.15	0.14	13.97	370862.38	1593615.19	N 39 30 33.44	W 80 56 25.37
	800.00	2.30	313.40	799.97	-128.03	1.00	0.65	-2.54	2.17	1.96	64.24	370863.65	1593613.46	N 39 30 33.46	W 80 56 25.39
	900.00	5.49	314.72	899.72	-28.28	6.37	5.40	-7.40	3.19	3.19	1.32	370868.40	1593608.60	N 39 30 33.50	W 80 56 25.45
	1000.00	5.75	312.51	999.24	71.24	14.03	12.15	-14.49	0.34	0.26	-2.21	370875.15	1593601.51	N 39 30 33.57	W 80 56 25.55
	1100.00	5.39	307.02	1098.77	170.77	21.21	18.36	-21.94	0.64	-0.36	-5.49	370881.36	1593594.06	N 39 30 33.63	W 80 56 25.64
	1200.00	4.22	296.74	1198.42	270.42	26.61	22.85	-28.97	1.45	-1.17	-10.28	370885.84	1593587.03	N 39 30 33.67	W 80 56 25.73
	1300.00	4.21	289.83	1298.15	370.15	30.41	25.75	-35.71	0.51	-0.01	-6.91	370888.75	1593580.29	N 39 30 33.70	W 80 56 25.82
	1400.00	3.76	290.31	1397.91	469.91	33.67	28.13	-42.24	0.45	-0.45	0.48	370891.13	1593573.76	N 39 30 33.72	W 80 56 25.90
	1500.00	3.43	294.56	1497.71	569.71	36.83	30.51	-48.04	0.42	-0.33	4.25	370893.51	1593567.97	N 39 30 33.75	W 80 56 25.98
	1600.00	3.33	308.64	1597.54	669.54	40.54	33.57	-53.03	0.83	-0.10	14.08	370896.57	1593562.98	N 39 30 33.77	W 80 56 26.04
	1700.00	3.39	309.56	1697.37	769.37	44.83	37.26	-57.57	0.08	0.06	0.92	370900.26	1593558.43	N 39 30 33.81	W 80 56 26.10
	1800.00	2.92	310.74	1797.22	869.22	48.92	40.81	-61.78	0.47	-0.47	1.18	370903.81	1593554.22	N 39 30 33.84	W 80 56 26.15
	1900.00	2.77	311.30	1897.09	969.09	52.66	44.07	-65.53	0.15	-0.15	0.56	370907.06	1593550.48	N 39 30 33.88	W 80 56 26.20

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	2000.00	2.10	299.87	1997.00	1069.00	55.61	46.57	-68.93	0.82	-0.67	-11.43	370909.57	1593547.07	N 39 30 33.90	W 80 56 26.25
	2100.00	0.85	280.74	2096.97	1168.97	56.97	47.63	-71.25	1.33	-1.25	-19.13	370910.62	1593544.75	N 39 30 33.91	W 80 56 26.28
	2200.00	0.83	266.63	2196.96	1268.96	57.27	47.72	-72.70	0.21	-0.02	-14.11	370910.72	1593543.30	N 39 30 33.91	W 80 56 26.30
	2300.00	0.59	266.36	2296.95	1368.95	57.36	47.65	-73.94	0.24	-0.24	-0.27	370910.64	1593542.07	N 39 30 33.91	W 80 56 26.31
	2400.00	0.58	238.84	2396.95	1468.95	57.20	47.35	-74.89	0.28	-0.01	-27.52	370910.35	1593541.12	N 39 30 33.91	W 80 56 26.32
	2500.00	0.27	194.44	2496.94	1568.94	56.78	46.86	-75.38	0.43	-0.31	-44.40	370909.86	1593540.63	N 39 30 33.90	W 80 56 26.33
	2600.00	0.23	131.68	2596.94	1668.94	56.41	46.50	-75.29	0.26	-0.04	-62.76	370909.50	1593540.72	N 39 30 33.90	W 80 56 26.33
	2700.00	0.34	138.16	2696.94	1768.94	56.01	46.15	-74.94	0.11	0.11	6.48	370909.14	1593541.07	N 39 30 33.90	W 80 56 26.32
	2800.00	0.31	138.51	2796.94	1868.94	55.54	45.72	-74.56	0.03	-0.03	0.35	370908.72	1593541.44	N 39 30 33.89	W 80 56 26.32
	2900.00	0.24	141.44	2896.94	1968.94	55.14	45.35	-74.25	0.07	-0.07	2.93	370908.35	1593541.75	N 39 30 33.89	W 80 56 26.31
	3000.00	0.22	146.64	2996.94	2068.94	54.78	45.03	-74.01	0.03	-0.02	5.20	370908.03	1593541.99	N 39 30 33.88	W 80 56 26.31
	3100.00	0.27	154.67	3096.94	2168.94	54.39	44.66	-73.81	0.06	0.05	8.03	370907.65	1593542.20	N 39 30 33.88	W 80 56 26.31
	3200.00	0.32	158.17	3196.93	2268.93	53.89	44.19	-73.60	0.05	0.05	3.50	370907.18	1593542.40	N 39 30 33.88	W 80 56 26.31
	3300.00	0.24	162.57	3296.93	2368.93	53.41	43.73	-73.44	0.08	-0.08	4.40	370906.72	1593542.57	N 39 30 33.87	W 80 56 26.30
	3400.00	0.20	157.58	3396.93	2468.93	53.04	43.37	-73.31	0.04	-0.04	-4.99	370906.36	1593542.70	N 39 30 33.87	W 80 56 26.30
	3500.00	0.04	158.75	3496.93	2568.93	52.83	43.17	-73.23	0.16	-0.16	1.17	370906.17	1593542.78	N 39 30 33.87	W 80 56 26.30
	3600.00	0.15	163.74	3596.93	2668.93	52.67	43.01	-73.18	0.11	0.11	4.99	370906.01	1593542.82	N 39 30 33.86	W 80 56 26.30
	3700.00	0.11	120.48	3696.93	2768.93	52.48	42.84	-73.06	0.10	-0.04	-43.26	370905.84	1593542.94	N 39 30 33.86	W 80 56 26.30
	3800.00	0.08	92.37	3796.93	2868.93	52.41	42.79	-72.91	0.05	-0.03	-28.11	370905.78	1593543.10	N 39 30 33.86	W 80 56 26.30
	3900.00	0.12	95.48	3896.93	2968.93	52.37	42.73	-72.73	0.04	0.04	3.11	370905.77	1593543.27	N 39 30 33.86	W 80 56 26.29
	4000.00	0.30	97.08	3996.93	3068.93	52.28	42.73	-72.57	0.18	0.18	1.60	370905.73	1593543.63	N 39 30 33.86	W 80 56 26.29
	4100.00	0.40	86.50	4096.93	3168.93	52.17	42.57	-71.76	0.11	0.10	-8.58	370905.71	1593544.24	N 39 30 33.86	W 80 56 26.28
	4200.00	0.49	89.47	4196.93	3268.93	52.08	42.72	-70.98	0.09	0.09	0.97	370905.72	1593545.02	N 39 30 33.86	W 80 56 26.27
	4280.00	0.68	85.55	4276.92	3348.92	52.01	42.76	-70.71	0.24	0.24	-4.90	370905.76	1593545.84	N 39 30 33.86	W 80 56 26.26
	4321.00	1.04	84.08	4317.92	3389.92	51.98	42.82	-69.56	0.88	0.88	-3.59	370905.82	1593546.45	N 39 30 33.86	W 80 56 26.25
	4365.00	3.79	61.77	4361.87	3433.87	52.47	43.55	-67.88	6.49	6.25	-50.70	370906.55	1593548.13	N 39 30 33.87	W 80 56 26.23
	4408.00	7.05	56.37	4404.68	3476.68	54.11	46.88	-64.43	7.67	7.58	-12.56	370906.68	1593551.58	N 39 30 33.89	W 80 56 26.19
	4452.00	9.35	57.08	4448.22	3520.22	56.79	49.12	-59.18	5.23	5.23	1.61	370912.12	1593556.83	N 39 30 33.93	W 80 56 26.12
	4496.00	11.42	59.37	4491.50	3563.50	59.99	53.28	-52.43	4.80	4.70	5.20	370916.28	1593563.57	N 39 30 33.97	W 80 56 26.04
	4539.00	13.74	61.92	4533.47	3605.47	63.39	57.86	-44.26	5.55	5.40	5.93	370920.85	1593571.74	N 39 30 34.02	W 80 56 25.93
	4583.00	15.86	63.45	4576.00	3648.00	67.12	63.00	-34.27	4.90	4.82	3.48	370926.00	1593581.73	N 39 30 34.07	W 80 56 25.81
	4627.00	18.10	64.32	4618.08	3690.08	71.13	68.65	-22.73	5.12	5.09	1.98	370931.65	1593593.27	N 39 30 34.13	W 80 56 25.66
	4670.00	20.34	65.34	4658.68	3730.68	75.32	74.67	-9.92	5.27	5.21	2.37	370937.66	1593606.08	N 39 30 34.19	W 80 56 25.50
	4714.00	22.15	66.83	4699.69	3771.69	79.71	81.12	4.66	4.29	4.11	3.39	370944.12	1593620.66	N 39 30 34.25	W 80 56 25.31
	4757.00	24.77	66.75	4739.13	3811.13	84.23	87.87	20.39	6.09	6.09	-0.19	370950.86	1593636.39	N 39 30 34.32	W 80 56 25.12
	4801.00	28.24	67.27	4778.50	3850.50	89.33	95.53	38.47	7.90	7.89	1.18	370958.53	1593654.46	N 39 30 34.40	W 80 56 24.89
	4845.00	31.25	68.81	4816.70	3888.70	94.62	103.68	58.71	7.06	6.84	3.50	370966.68	1593674.71	N 39 30 34.49	W 80 56 24.63
	4888.00	33.42	70.02	4853.03	3925.03	99.66	111.76	80.25	5.27	5.05	2.81	370974.75	1593696.24	N 39 30 34.57	W 80 56 24.36
	4932.00	35.29	70.52	4889.36	3961.36	104.75	120.14	103.62	4.30	4.25	1.14	370983.13	1593719.61	N 39 30 34.65	W 80 56 24.06
	4976.00	37.58	70.76	4924.75	3996.75	109.93	128.80	128.27	5.21	5.20	0.55	370991.79	1593744.26	N 39 30 34.74	W 80 56 23.75
	5019.00	40.16	71.40	4958.23	4030.23	115.08	137.55	153.80	6.07	6.00	1.49	371000.54	1593769.79	N 39 30 34.83	W 80 56 23.42
	5063.00	42.61	72.67	4991.24	4063.24	120.16	146.51	181.47	5.89	5.57	2.89	371009.50	1593797.46	N 39 30 34.93	W 80 56 23.07
	5107.00	44.92	73.33	5023.01	4095.01	124.96	155.40	210.57	5.35	5.25	1.50	371018.39	1593826.56	N 39 30 35.02	W 80 56 22.70
	5150.00	44.46	72.62	5053.58	4125.58	129.75	164.26	239.49	1.58	-1.07	-1.65	371027.25	1593855.47	N 39 30 35.11	W 80 56 22.34
	5194.00	44.14	71.62	5085.07	4157.07	135.08	173.69	268.73	1.75	-0.73	-2.27	371036.68	1593884.72	N 39 30 35.21	W 80 56 21.97

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	5281.00	43.00	71.92	5148.11	4220.11	145.82	192.45	325.68	1.33	-1.31	0.34	371055.44	1593941.66	N 39 30 35.40	W 80 56 21.24
	5368.00	42.45	73.27	5212.02	4284.02	155.57	210.11	382.01	1.23	-0.63	1.55	371073.10	1593997.98	N 39 30 35.59	W 80 56 20.53
	5454.00	43.01	74.64	5275.19	4347.19	163.83	226.23	438.08	1.26	0.65	1.59	371089.22	1594054.06	N 39 30 35.76	W 80 56 19.82
	5542.00	44.28	75.49	5338.87	4410.87	171.25	241.88	496.77	1.59	1.44	0.97	371104.87	1594112.74	N 39 30 35.92	W 80 56 19.07
	5630.00	45.29	75.01	5401.33	4473.33	178.64	257.67	556.72	1.21	1.15	-0.55	371120.65	1594172.68	N 39 30 36.09	W 80 56 18.31
	5717.00	44.43	74.12	5463.00	4535.00	186.68	274.00	615.87	1.22	-0.99	-1.02	371136.98	1594231.83	N 39 30 36.26	W 80 56 17.56
	5805.00	45.07	75.21	5525.50	4597.50	194.69	290.38	675.62	1.14	0.73	1.24	371153.36	1594291.58	N 39 30 36.43	W 80 56 16.80
	5892.00	44.56	74.35	5587.21	4659.21	202.49	306.47	734.78	0.91	-0.59	-0.99	371169.45	1594350.74	N 39 30 36.60	W 80 56 16.05
	5979.00	44.98	74.00	5648.98	4720.98	210.93	323.18	793.73	0.56	0.48	-0.40	371186.16	1594409.68	N 39 30 36.77	W 80 56 15.30
	6066.00	44.50	73.84	5710.77	4782.77	219.64	340.14	852.57	0.57	-0.55	-0.18	371203.12	1594468.52	N 39 30 36.95	W 80 56 14.55
	6110.00	45.15	67.69	5742.00	4814.00	225.74	350.36	881.83	9.96	1.48	-13.98	371213.34	1594497.78	N 39 30 37.05	W 80 56 14.18
	6154.00	46.55	61.50	5772.66	4844.66	235.24	363.91	910.31	10.58	3.18	-14.07	371226.89	1594526.26	N 39 30 37.19	W 80 56 13.82
	6197.00	47.76	55.89	5801.91	4873.91	247.76	380.29	937.22	9.97	2.81	-13.05	371243.27	1594553.16	N 39 30 37.36	W 80 56 13.48
	6241.00	48.43	49.81	5831.31	4903.31	263.75	400.06	963.29	10.39	1.52	-13.82	371263.03	1594579.23	N 39 30 37.56	W 80 56 13.15
	6284.00	49.25	43.38	5859.63	4931.63	282.54	422.29	986.78	11.42	1.91	-14.95	371285.26	1594602.72	N 39 30 37.78	W 80 56 12.86
	6327.00	49.49	37.44	5887.65	4959.65	304.23	447.12	1007.91	10.50	0.56	-13.81	371310.09	1594623.85	N 39 30 38.03	W 80 56 12.59
	6371.00	49.95	31.99	5916.11	4988.11	328.92	474.69	1027.01	9.51	1.05	-12.39	371337.67	1594642.95	N 39 30 38.30	W 80 56 12.35
	6414.00	50.49	26.58	5943.63	5015.63	355.23	503.50	1043.16	9.75	1.26	-12.58	371366.47	1594659.10	N 39 30 38.59	W 80 56 12.15
	6459.00	52.58	22.21	5971.63	5043.63	385.01	535.58	1057.69	8.91	4.64	-9.71	371398.55	1594673.63	N 39 30 38.91	W 80 56 11.97
	6503.00	54.77	18.08	5997.70	5069.70	416.29	568.85	1069.88	9.05	4.98	-9.39	371431.82	1594685.81	N 39 30 39.24	W 80 56 11.83
	6547.00	58.24	14.74	6021.98	5093.98	449.72	604.04	1080.22	10.11	7.89	-7.59	371467.01	1594696.15	N 39 30 39.59	W 80 56 11.70
	6590.00	61.75	12.63	6043.48	5115.48	484.34	640.22	1089.01	9.20	8.16	-4.91	371503.18	1594704.95	N 39 30 39.95	W 80 56 11.60
	6634.00	64.14	10.95	6063.50	5135.50	521.23	678.57	1097.01	6.41	5.48	-3.82	371541.53	1594712.95	N 39 30 40.33	W 80 56 11.50
	6678.00	68.46	8.90	6081.18	5153.18	559.58	718.25	1103.94	10.76	9.82	-4.66	371581.21	1594719.88	N 39 30 40.72	W 80 56 11.42
	6721.00	72.58	6.28	6095.52	5167.52	598.63	758.42	1109.28	11.17	9.58	-6.09	371621.38	1594725.22	N 39 30 41.12	W 80 56 11.36
	6765.00	75.44	2.61	6107.64	5179.64	639.94	800.58	1112.55	10.32	6.50	-8.34	371663.53	1594728.49	N 39 30 41.54	W 80 56 11.33
	6808.00	76.57	357.84	6118.05	5190.05	681.23	842.29	1112.71	11.08	6.33	-11.09	371705.24	1594728.65	N 39 30 41.95	W 80 56 11.34
	6852.00	78.86	353.78	6127.41	5199.41	724.12	885.15	1109.56	10.41	5.20	-9.23	371748.10	1594725.50	N 39 30 42.37	W 80 56 11.38
	6895.00	81.86	349.86	6134.61	5206.61	766.50	927.10	1103.53	11.38	6.98	-9.12	371790.05	1594719.46	N 39 30 42.79	W 80 56 11.47
	6939.00	82.94	346.17	6140.44	5212.44	809.99	969.76	1094.47	8.67	2.45	-8.39	371832.70	1594710.41	N 39 30 43.21	W 80 56 11.59
	6983.00	85.08	342.82	6145.03	5217.03	853.36	1011.91	1082.77	9.00	1.66	-7.61	371874.85	1594698.71	N 39 30 43.62	W 80 56 11.75
	7026.00	88.73	340.60	6147.35	5219.35	895.59	1052.67	1069.30	9.94	8.49	-5.16	371915.61	1594685.24	N 39 30 44.02	W 80 56 11.93
	7070.00	91.10	340.77	6147.42	5219.42	938.71	1094.19	1054.75	5.40	5.39	0.39	371957.13	1594670.69	N 39 30 44.43	W 80 56 12.13
	7174.00	90.62	340.14	6145.85	5217.85	1040.56	1192.19	1019.96	0.76	-0.46	-0.61	372055.12	1594635.90	N 39 30 45.39	W 80 56 12.59
	7261.00	90.07	338.26	6145.33	5217.33	1125.36	1273.51	989.07	2.25	-0.63	-2.16	372136.44	1594605.01	N 39 30 46.19	W 80 56 13.00
	7349.00	89.48	338.97	6145.68	5217.68	1210.94	1355.45	956.98	1.05	-0.67	0.81	372218.37	1594572.92	N 39 30 47.00	W 80 56 13.43
	7436.00	88.73	339.46	6147.03	5219.03	1295.74	1436.78	926.11	1.03	-0.86	0.56	372299.69	1594542.06	N 39 30 47.80	W 80 56 13.84
	7523.00	88.52	339.66	6149.12	5221.12	1380.64	1518.28	895.74	0.33	-0.24	0.23	372381.19	1594511.68	N 39 30 48.60	W 80 56 14.24
	7610.00	89.62	340.43	6150.53	5222.53	1465.71	1600.04	866.05	1.54	1.26	0.89	372462.95	1594482.00	N 39 30 49.40	W 80 56 14.64
	7698.00	90.14	340.84	6150.72	5222.72	1551.95	1683.06	836.87	0.75	0.59	0.47	372545.96	1594452.82	N 39 30 50.22	W 80 56 15.03
	7785.00	90.00	340.46	6150.61	5222.61	1637.22	1765.15	808.04	0.47	-0.16	-0.44	372628.04	1594424.00	N 39 30 51.02	W 80 56 15.41
	7872.00	90.03	340.47	6150.59	5222.59	1722.44	1847.14	778.95	0.04	0.03	0.01	372710.03	1594394.91	N 39 30 51.83	W 80 56 15.80
	7960.00	90.10	340.95	6150.49	5222.49	1808.71	1930.20	749.88	0.55	0.08	0.55	372793.08	1594365.84	N 39 30 52.64	W 80 56 16.19
	8047.00	89.97	339.56	6150.44	5222.44	1893.85	2012.08	720.49	1.60	-0.15	-1.60	372874.96	1594336.45	N 39 30 53.45	W 80 56 16.58
	8133.00	90.48	338.66	6150.10	5222.10	1977.65	2092.43	689.83	1.20	0.59	-1.05	372955.30	1594305.79	N 39 30 54.24	W 80 56 16.99

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	8221.00	90.86	338.77	6149.07	5221.07	2083.26	2174.42	657.88	0.45	0.43	0.13	373037.29	1594273.85	N 39 30 55.04	W 80 56 17.41
	8308.00	91.17	339.21	6147.53	5219.53	2147.98	2255.62	626.70	0.62	0.36	0.51	373118.49	1594242.66	N 39 30 55.84	W 80 56 17.82
	8396.00	90.27	338.35	6146.42	5218.42	2233.61	2337.65	594.85	1.41	-1.02	-0.98	373200.51	1594210.81	N 39 30 56.65	W 80 56 18.25
	8483.00	89.86	335.60	6146.32	5218.32	2317.59	2417.71	560.82	3.20	-0.47	-3.16	373280.56	1594176.79	N 39 30 57.43	W 80 56 18.70
	8570.00	89.97	335.62	6146.45	5218.45	2401.01	2496.94	524.90	0.13	0.13	0.02	373359.80	1594140.87	N 39 30 58.21	W 80 56 19.17
	8658.00	91.17	337.55	6145.58	5217.58	2485.80	2577.69	489.93	2.58	1.36	2.19	373440.53	1594105.90	N 39 30 59.00	W 80 56 19.63
	8745.00	90.76	339.59	6144.11	5216.11	2570.37	2658.66	458.15	2.39	-0.47	2.34	373521.50	1594074.12	N 39 30 59.80	W 80 56 20.06
	8832.00	91.20	340.93	6142.62	5214.62	2655.50	2740.53	428.77	1.62	0.51	1.54	373603.37	1594044.75	N 39 31 0.60	W 80 56 20.45
	8919.00	91.10	341.20	6140.88	5212.88	2740.88	2822.81	400.55	0.33	-0.11	0.31	373685.64	1594016.52	N 39 31 1.41	W 80 56 20.83
	9007.00	91.10	342.24	6139.19	5211.19	2827.42	2906.35	372.95	1.18	0.00	1.18	373769.18	1593988.93	N 39 31 2.23	W 80 56 21.19
	9094.00	90.82	343.30	6137.73	5209.73	2913.26	2989.43	347.18	1.26	-0.32	1.22	373852.25	1593963.16	N 39 31 3.05	W 80 56 21.54
	9181.00	90.38	342.63	6136.82	5208.82	2999.15	3072.61	321.70	0.92	-0.51	-0.77	373935.43	1593937.68	N 39 31 3.87	W 80 56 21.88
	9268.00	90.27	341.67	6136.33	5208.33	3084.85	3155.42	295.03	1.11	-0.13	-1.10	374018.23	1593911.01	N 39 31 4.68	W 80 56 22.24
	9355.00	89.76	338.91	6136.30	5208.30	3170.00	3237.31	265.69	3.23	-0.59	-3.17	374100.12	1593881.68	N 39 31 5.48	W 80 56 22.63
	9443.00	90.27	337.06	6136.28	5208.28	3255.34	3318.89	232.71	2.18	0.58	-2.10	374181.70	1593848.69	N 39 31 6.29	W 80 56 23.07
	9530.00	90.31	335.90	6135.84	5207.84	3339.13	3398.66	197.99	1.33	0.05	-1.33	374261.46	1593813.98	N 39 31 7.07	W 80 56 23.53
	9618.00	90.96	337.62	6134.87	5206.87	3423.98	3479.51	163.27	2.09	0.74	1.95	374342.31	1593779.26	N 39 31 7.86	W 80 56 23.99
	9704.00	90.89	338.44	6133.48	5205.48	3507.39	3559.26	131.10	0.96	-0.08	0.95	374422.05	1593747.09	N 39 31 8.64	W 80 56 24.41
	9792.00	90.96	338.74	6132.06	5204.06	3592.95	3641.17	98.98	0.35	0.08	0.34	374503.96	1593714.97	N 39 31 9.45	W 80 56 24.84
	9880.00	91.34	340.43	6130.29	5202.29	3678.84	3723.63	68.29	1.97	0.43	1.92	374586.41	1593684.29	N 39 31 10.26	W 80 56 25.25
	9967.00	91.20	340.79	6128.36	5200.36	3764.08	3805.67	39.41	0.44	-0.16	0.41	374668.45	1593655.41	N 39 31 11.07	W 80 56 25.63
	10054.00	90.82	340.29	6126.83	5198.83	3849.30	3887.69	10.44	0.72	-0.44	-0.57	374750.46	1593626.43	N 39 31 11.87	W 80 56 26.02
	10141.00	91.10	339.99	6125.37	5197.37	3934.40	3969.50	-19.12	0.47	0.32	-0.34	374832.27	1593596.88	N 39 31 12.68	W 80 56 26.41
	10229.00	91.31	340.59	6123.52	5195.52	4020.52	4052.33	-48.79	0.72	0.24	0.68	374915.09	1593567.21	N 39 31 13.49	W 80 56 26.81
	10316.00	90.72	339.99	6121.98	5193.98	4105.67	4134.22	-78.13	0.97	-0.68	-0.69	374996.97	1593537.88	N 39 31 14.29	W 80 56 27.20
	10404.00	91.20	341.03	6120.50	5192.50	4191.86	4217.16	-107.48	1.30	0.55	1.18	375079.91	1593508.52	N 39 31 15.11	W 80 56 27.59
	10491.00	91.03	340.72	6118.81	5190.81	4277.18	4299.34	-135.98	0.41	-0.20	-0.36	375162.09	1593480.03	N 39 31 15.92	W 80 56 27.97
	10578.00	90.93	341.22	6117.32	5189.32	4362.54	4381.58	-164.34	0.59	-0.11	0.57	375244.32	1593451.67	N 39 31 16.72	W 80 56 28.35
	10666.00	91.00	341.77	6115.84	5187.84	4449.02	4465.02	-192.27	0.63	0.08	0.63	375327.75	1593423.74	N 39 31 17.54	W 80 56 28.72
	10753.00	91.31	342.73	6114.09	5186.09	4534.72	4547.86	-218.79	1.16	0.36	1.10	375410.59	1593397.23	N 39 31 18.36	W 80 56 29.08
	10840.00	91.03	342.37	6112.31	5184.31	4620.50	4630.83	-244.87	0.52	-0.32	-0.41	375493.56	1593371.14	N 39 31 19.17	W 80 56 29.43
	10927.00	91.00	342.25	6110.77	5182.77	4706.22	4713.71	-271.30	0.14	-0.03	-0.14	375576.43	1593344.71	N 39 31 19.99	W 80 56 29.78
	11014.00	90.93	342.28	6109.30	5181.30	4791.93	4796.56	-297.80	0.09	-0.08	0.03	375659.28	1593318.22	N 39 31 20.80	W 80 56 30.14
	11102.00	91.37	342.85	6107.54	5179.54	4878.70	4880.50	-324.16	0.82	0.50	0.65	375743.21	1593291.86	N 39 31 21.63	W 80 56 30.49
	11189.00	91.07	342.20	6105.69	5177.69	4964.47	4963.47	-350.28	0.82	-0.34	-0.75	375826.17	1593265.74	N 39 31 22.44	W 80 56 30.84
	11276.00	91.17	342.43	6103.99	5175.99	5050.19	5046.34	-376.70	0.29	0.11	0.26	375909.04	1593239.32	N 39 31 23.26	W 80 56 31.20
	11364.00	90.07	338.75	6103.03	5175.03	5136.40	5129.32	-405.94	0.99	0.25	-4.18	375992.01	1593210.08	N 39 31 24.08	W 80 56 31.59
	11451.00	91.75	340.69	6101.65	5173.65	5221.36	5210.91	-436.09	2.95	1.93	2.23	376073.60	1593179.93	N 39 31 24.88	W 80 56 31.99
	11538.00	91.13	340.74	6099.47	5171.47	5306.62	5293.00	-464.82	1.11	-0.71	0.06	376155.68	1593151.21	N 39 31 25.68	W 80 56 32.37
	11626.00	91.48	342.48	6097.46	5169.46	5393.13	5376.48	-492.57	2.02	0.40	1.98	376239.16	1593123.46	N 39 31 26.50	W 80 56 32.74
	11713.00	91.65	343.69	6095.08	5167.08	5479.02	5459.68	-517.87	0.39	0.20	1.39	376322.36	1593098.16	N 39 31 27.32	W 80 56 33.08
	11800.00	90.82	339.07	6093.21	5165.21	5564.46	5542.09	-545.64	0.39	0.95	-5.31	376404.76	1593070.40	N 39 31 28.13	W 80 56 33.45
	11887.00	91.65	338.90	6091.33	5163.33	5649.17	5623.28	-576.83	0.97	0.95	-0.20	376485.95	1593039.21	N 39 31 28.93	W 80 56 33.87
	11975.00	91.55	337.54	6088.88	5160.88	5734.57	5704.98	-609.47	1.55	0.95	-1.55	376567.63	1593008.57	N 39 31 29.73	W 80 56 34.30
	12062.00	91.82	337.08	6086.32	5158.32	5818.65	5785.20	-643.01	2.02	0.31	-0.53	376647.85	1592973.03	N 39 31 30.52	W 80 56 34.75

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Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	12149.00	91.37	335.55	6083.90	5155.90	5902.34	5864.83	-677.95	1.83	-0.52	-1.76	376727.49	1592938.09	N 39 31 31.30	W 80 56 35.21
	12236.00	91.58	335.57	6081.66	5153.66	5985.71	5944.01	-713.93	0.24	0.24	0.02	376806.66	1592902.11	N 39 31 32.08	W 80 56 35.68
	12324.00	91.96	336.88	6078.94	5150.94	6070.32	6024.50	-749.39	1.55	0.43	1.49	376887.15	1592866.66	N 39 31 32.87	W 80 56 36.15
	12411.00	91.13	335.78	6076.59	5148.59	6154.01	6104.15	-784.30	1.58	-0.95	-1.26	376966.79	1592831.74	N 39 31 33.65	W 80 56 36.61
	12498.00	91.07	337.15	6074.92	5146.92	6237.78	6183.90	-819.04	1.58	-0.07	1.57	377046.53	1592797.01	N 39 31 34.43	W 80 56 37.07
	12586.00	91.10	338.88	6073.26	5145.26	6323.12	6265.48	-851.97	1.97	0.03	1.97	377128.11	1592764.08	N 39 31 35.23	W 80 56 37.51
	12673.00	91.03	340.92	6071.64	5143.64	6408.14	6347.17	-881.86	2.35	-0.08	2.34	377209.79	1592734.19	N 39 31 36.03	W 80 56 37.91
Final Survey	12710.00	90.79	340.75	6071.05	5143.05	6444.42	6382.11	-894.01	0.79	-0.65	-0.46	377244.73	1592722.04	N 39 31 36.38	W 80 56 38.07
Projection to TD	12736.00	90.79	340.75	6070.69	5142.69	6469.91	6406.66	-902.58	0.00	0.00	0.00	377269.28	1592713.47	N 39 31 36.62	W 80 56 38.19

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	22.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Triad Hunter Stewart Winland 1302 Surveys 0ft to 12736ft MD
	1	22.000	4280.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Triad Hunter Stewart Winland 1302 Surveys 0ft
	1	4280.000	12710.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Borehole / Triad Hunter Stewart Winland 1302 Surveys 0ft
	1	12710.000	12736.000	Act Stns	30.000	30.000	SLB_BLIND+TREND	Original Borehole / Triad Hunter Stewart Winland 1302 Surveys 0ft

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