



Extraction Oil & Gas

**WELD COUNTY, CO
Burroughs South Pad
Burroughs South 11**

Burroughs South 11

Survey: Survey #1

Standard Survey Report

28 March, 2017



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Burroughs South 11
Project:	WELD COUNTY, CO	TVD Reference:	New KB @ 4972.00ft (Cyclone 37)
Site:	Burroughs South Pad	MD Reference:	New KB @ 4972.00ft (Cyclone 37)
Well:	Burroughs South 11	North Reference:	True
Wellbore:	Burroughs South 11	Survey Calculation Method:	Minimum Curvature
Design:	Burroughs South 11	Database:	EDM 5000.1 Single User Db

Project	WELD COUNTY, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Burroughs South Pad				
Site Position:		Northing:	1,453,259.50 usft	Latitude:	40° 34' 27.390 N
From:	Lat/Long	Easting:	3,244,150.32 usft	Longitude:	104° 37' 15.949 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"	Grid Convergence:	0.57 °

Well	Burroughs South 11					
Well Position	+N/-S	0.00 ft	Northing:	1,453,259.49 usft	Latitude:	40° 34' 27.390 N
	+E/-W	0.00 ft	Easting:	3,244,150.32 usft	Longitude:	104° 37' 15.949 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,944.00 ft

Wellbore	Burroughs South 11				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/23/16	8.21	67.03	52,561

Design	Burroughs South 11				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	272.87	

Survey Program	Date	03/28/17		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
129.00	17,238.00	Survey #1 (Burroughs South 11)	MWD	MWD - Standard

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
129.00	1.10	35.70	128.99	1.01	0.72	-0.67	0.85	0.85	0.00	
161.00	1.00	23.20	160.99	1.51	1.01	-0.93	0.78	-0.31	-39.06	
352.00	1.20	52.80	351.95	4.25	3.26	-3.04	0.31	0.10	15.50	
384.00	1.40	42.30	383.94	4.74	3.79	-3.55	0.97	0.63	-32.81	
447.00	1.30	35.50	446.93	5.90	4.72	-4.42	0.30	-0.16	-10.79	
479.00	1.50	50.60	478.92	6.46	5.26	-4.93	1.31	0.63	47.19	
511.00	1.70	46.20	510.91	7.05	5.93	-5.56	0.73	0.63	-13.75	
575.00	2.50	73.20	574.86	8.11	7.95	-7.53	1.96	1.25	42.19	
606.00	2.90	83.70	605.83	8.39	9.37	-8.94	2.05	1.29	33.87	
638.00	3.00	83.90	637.79	8.57	11.01	-10.57	0.31	0.31	0.63	
670.00	3.10	82.70	669.74	8.77	12.70	-12.25	0.37	0.31	-3.75	
702.00	3.20	80.90	701.69	9.02	14.44	-13.97	0.44	0.31	-5.63	

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Wellbore:	Burroughs South 11	Survey Calculation Method:	Minimum Curvature
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734.00	2.90	81.50	733.65	9.28	16.12	-15.64	0.94	-0.94	1.88	
766.00	3.00	76.60	765.61	9.60	17.74	-17.24	0.85	0.31	-15.31	
797.00	2.90	76.20	796.56	9.97	19.29	-18.77	0.33	-0.32	-1.29	
829.00	3.00	79.30	828.52	10.32	20.90	-20.36	0.59	0.31	9.69	
861.00	2.90	80.10	860.48	10.61	22.52	-21.96	0.34	-0.31	2.50	
893.00	2.80	81.50	892.44	10.87	24.09	-23.52	0.38	-0.31	4.38	
925.00	3.50	81.30	924.39	11.13	25.83	-25.24	2.19	2.19	-0.63	
988.00	3.70	81.20	987.27	11.73	29.74	-29.11	0.32	0.32	-0.16	
1,052.00	3.80	79.30	1,051.13	12.44	33.86	-33.20	0.25	0.16	-2.97	
1,084.00	4.00	81.70	1,083.06	12.80	36.01	-35.32	0.81	0.63	7.50	
1,116.00	4.10	79.00	1,114.98	13.18	38.24	-37.53	0.67	0.31	-8.44	
1,179.00	4.20	79.90	1,177.81	14.02	42.72	-41.96	0.19	0.16	1.43	
1,273.00	4.60	71.90	1,271.53	15.79	49.69	-48.84	0.78	0.43	-8.51	
1,305.00	4.60	68.90	1,303.43	16.65	52.11	-51.21	0.75	0.00	-9.38	
1,493.00	5.30	54.30	1,490.74	24.43	66.19	-64.89	0.76	0.37	-7.77	
1,660.00	6.19	55.54	1,656.90	34.03	79.88	-78.08	0.54	0.53	0.74	
1,755.00	6.32	57.74	1,751.33	39.72	88.52	-86.42	0.29	0.14	2.32	
1,849.00	6.89	71.62	1,844.71	44.26	98.25	-95.91	1.80	0.61	14.77	
1,944.00	6.58	73.03	1,939.06	47.64	108.86	-106.34	0.37	-0.33	1.48	
2,038.00	6.41	72.63	2,032.45	50.78	119.02	-116.33	0.19	-0.18	-0.43	
2,133.00	6.01	73.25	2,126.90	53.80	128.85	-125.99	0.43	-0.42	0.65	
2,227.00	6.72	81.45	2,220.32	56.03	139.00	-136.02	1.23	0.76	8.72	
2,322.00	6.50	82.86	2,314.69	57.53	149.83	-146.76	0.29	-0.23	1.48	
2,417.00	6.10	83.96	2,409.11	58.73	160.19	-157.04	0.44	-0.42	1.16	
2,512.00	5.79	81.76	2,503.60	59.94	169.95	-166.73	0.40	-0.33	-2.32	
2,607.00	5.48	83.34	2,598.14	61.16	179.20	-175.91	0.36	-0.33	1.66	
2,701.00	4.91	83.43	2,691.76	62.14	187.65	-184.30	0.61	-0.61	0.10	
2,796.00	5.92	62.85	2,786.34	64.84	196.05	-192.56	2.29	1.06	-21.66	
2,891.00	8.22	74.84	2,880.62	68.85	206.97	-203.26	2.86	2.42	12.62	
2,985.00	7.69	77.13	2,973.71	72.01	219.58	-215.70	0.66	-0.56	2.44	
3,079.00	7.20	75.23	3,066.92	74.91	231.41	-227.37	0.58	-0.52	-2.02	
3,174.00	6.72	75.32	3,161.22	77.84	242.54	-238.34	0.51	-0.51	0.09	
3,268.00	6.32	73.12	3,254.61	80.73	252.81	-248.45	0.50	-0.43	-2.34	
3,362.00	6.19	87.35	3,348.06	82.47	262.83	-258.37	1.65	-0.14	15.14	
3,457.00	5.92	90.83	3,442.53	82.64	272.84	-268.36	0.48	-0.28	3.66	
3,552.00	5.39	91.54	3,537.06	82.45	282.20	-277.72	0.56	-0.56	0.75	
3,646.00	4.51	92.86	3,630.71	82.14	290.31	-285.83	0.94	-0.94	1.40	
3,741.00	4.99	70.25	3,725.39	83.35	297.93	-293.38	2.02	0.51	-23.80	
3,836.00	6.59	66.42	3,819.91	86.93	306.81	-302.07	1.73	1.68	-4.03	
3,930.00	7.51	78.45	3,913.20	90.32	317.78	-312.85	1.85	0.98	12.80	
4,025.00	7.51	79.73	4,007.39	92.67	329.97	-324.91	0.18	0.00	1.35	
4,119.00	8.09	83.03	4,100.52	94.57	342.58	-337.41	0.78	0.62	3.51	
4,214.00	8.31	84.53	4,194.54	96.03	356.05	-350.79	0.32	0.23	1.58	
4,309.00	8.48	84.84	4,288.53	97.32	369.86	-364.52	0.19	0.18	0.33	
4,403.00	6.89	83.65	4,381.68	98.56	382.36	-376.95	1.70	-1.69	-1.27	
4,498.00	5.30	82.33	4,476.14	99.78	392.38	-386.89	1.68	-1.67	-1.39	
4,592.00	4.68	78.05	4,569.78	101.15	400.43	-394.86	0.77	-0.66	-4.55	
4,687.00	5.79	90.04	4,664.39	101.95	409.01	-403.39	1.63	1.17	12.62	
4,782.00	6.19	93.04	4,758.87	101.68	418.92	-413.30	0.53	0.42	3.16	
4,876.00	6.10	96.34	4,852.33	100.86	428.94	-423.36	0.39	-0.10	3.51	
4,971.00	5.61	96.65	4,946.83	99.76	438.57	-433.03	0.52	-0.52	0.33	
5,064.00	4.91	98.15	5,039.44	98.67	447.03	-441.53	0.77	-0.75	1.61	
5,159.00	3.49	86.56	5,134.19	98.27	453.94	-448.45	1.73	-1.49	-12.20	
5,254.00	2.78	71.84	5,229.04	99.16	459.02	-453.47	1.12	-0.75	-15.49	

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5,348.00	2.70	77.04	5,322.94	100.37	463.34	-457.73	0.28	-0.09	5.53
5,443.00	3.18	93.74	5,417.81	100.70	468.15	-462.52	1.03	0.51	17.58
5,537.00	2.70	98.85	5,511.69	100.19	472.94	-467.33	0.58	-0.51	5.44
5,632.00	2.21	96.25	5,606.60	99.64	476.97	-471.38	0.53	-0.52	-2.74
5,727.00	2.30	93.65	5,701.53	99.32	480.69	-475.12	0.14	0.09	-2.74
5,822.00	2.12	84.36	5,796.46	99.37	484.34	-478.76	0.42	-0.19	-9.78
5,917.00	0.71	352.64	5,891.43	100.13	486.02	-480.39	2.37	-1.48	-96.55
6,011.00	1.19	355.55	5,985.42	101.68	485.87	-480.17	0.51	0.51	3.10
6,106.00	1.10	1.14	6,080.40	103.58	485.81	-480.01	0.15	-0.09	5.88
6,200.00	0.88	4.36	6,174.39	105.20	485.88	-480.00	0.24	-0.23	3.43
6,318.00	0.80	358.94	6,292.38	106.92	485.94	-479.97	0.10	-0.07	-4.59
6,413.00	1.02	341.36	6,387.36	108.39	485.65	-479.62	0.37	0.23	-18.51
6,508.00	1.50	315.36	6,482.34	110.07	484.51	-478.39	0.77	0.51	-27.37
6,602.00	14.10	272.26	6,575.31	111.41	472.15	-465.98	13.88	13.40	-45.85
6,697.00	24.08	273.85	6,664.97	113.17	441.17	-434.95	10.52	10.51	1.67
6,791.00	34.38	267.06	6,746.92	113.10	395.40	-389.24	11.50	10.96	-7.22
6,886.00	42.91	268.56	6,821.05	110.90	336.17	-330.19	9.03	8.98	1.58
6,980.00	48.39	269.92	6,886.73	110.05	268.99	-263.14	5.92	5.83	1.45
7,075.00	54.00	271.25	6,946.25	110.84	194.99	-189.20	6.00	5.91	1.40
7,169.00	60.01	269.84	6,997.41	111.55	116.19	-110.46	6.52	6.39	-1.50
7,264.00	66.42	269.75	7,040.20	111.25	31.43	-25.82	6.75	6.75	-0.09
7,358.00	71.98	269.84	7,073.57	110.94	-56.41	61.89	5.92	5.91	0.10
7,452.00	80.60	272.26	7,095.83	112.64	-147.62	153.07	9.50	9.17	2.57
7,547.00	84.00	274.42	7,108.56	118.13	-241.58	247.20	4.23	3.58	2.27
7,642.00	87.41	273.54	7,115.67	124.71	-336.07	341.90	3.71	3.59	-0.93
7,736.00	89.00	273.93	7,118.62	130.83	-429.82	435.84	1.74	1.69	0.41
7,831.00	90.72	273.85	7,118.85	137.27	-524.60	530.82	1.81	1.81	-0.08
7,926.00	88.38	273.45	7,119.59	143.32	-619.40	625.80	2.50	-2.46	-0.42
8,020.00	89.79	272.92	7,121.10	148.54	-713.24	719.78	1.60	1.50	-0.56
8,115.00	88.91	272.13	7,122.17	152.73	-808.14	814.77	1.24	-0.93	-0.83
8,210.00	90.41	271.64	7,122.74	155.85	-903.08	909.75	1.66	1.58	-0.52
8,305.00	88.60	272.44	7,123.56	159.23	-998.01	1,004.74	2.08	-1.91	0.84
8,399.00	88.11	270.85	7,126.26	161.93	-1,091.93	1,098.67	1.77	-0.52	-1.69
8,494.00	90.10	270.63	7,127.74	163.16	-1,186.91	1,193.59	2.11	2.09	-0.23
8,588.00	89.62	273.05	7,127.97	166.17	-1,280.85	1,287.57	2.62	-0.51	2.57
8,683.00	90.90	272.83	7,127.54	171.05	-1,375.72	1,382.56	1.37	1.35	-0.23
8,777.00	88.91	274.95	7,127.69	177.42	-1,469.50	1,476.54	3.09	-2.12	2.26
8,872.00	89.40	274.42	7,129.10	185.18	-1,564.17	1,571.48	0.76	0.52	-0.56
8,967.00	87.80	273.45	7,131.42	191.70	-1,658.91	1,666.43	1.97	-1.68	-1.02
9,061.00	88.91	274.02	7,134.11	197.82	-1,752.67	1,760.38	1.33	1.18	0.61
9,156.00	88.82	271.64	7,136.00	202.51	-1,847.53	1,855.35	2.51	-0.09	-2.51
9,251.00	90.50	272.13	7,136.56	205.63	-1,942.47	1,950.34	1.84	1.77	0.52
9,346.00	87.80	272.83	7,137.97	209.74	-2,037.37	2,045.31	2.94	-2.84	0.74
9,441.00	88.69	273.14	7,140.88	214.69	-2,132.19	2,140.27	0.99	0.94	0.33
9,535.00	90.90	272.52	7,141.22	219.33	-2,226.07	2,234.26	2.44	2.35	-0.66
9,631.00	90.01	270.54	7,140.45	221.89	-2,322.03	2,330.23	2.26	-0.93	-2.06
9,725.00	87.80	273.14	7,142.25	224.91	-2,415.95	2,424.18	3.63	-2.35	2.77
9,820.00	88.29	272.66	7,145.49	229.71	-2,510.77	2,519.12	0.72	0.52	-0.51
9,915.00	89.22	274.24	7,147.55	235.43	-2,605.57	2,614.09	1.93	0.98	1.66
10,009.00	88.29	271.64	7,149.60	240.25	-2,699.42	2,708.06	2.94	-0.99	-2.77
10,104.00	88.82	272.26	7,151.99	243.48	-2,794.33	2,803.02	0.86	0.56	0.65
10,199.00	89.88	272.92	7,153.07	247.77	-2,889.22	2,898.01	1.31	1.12	0.69
10,293.00	88.91	271.03	7,154.06	251.01	-2,983.16	2,991.99	2.26	-1.03	-2.01
10,388.00	90.41	270.76	7,154.63	252.49	-3,078.14	3,086.93	1.60	1.58	-0.28

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10,483.00	92.62	272.35	7,152.12	255.07	-3,173.07	3,181.86	2.87	2.33	1.67
10,578.00	90.99	271.95	7,149.12	258.63	-3,267.95	3,276.80	1.77	-1.72	-0.42
10,672.00	88.69	270.14	7,149.39	260.35	-3,361.92	3,370.74	3.11	-2.45	-1.93
10,767.00	90.10	270.76	7,150.39	261.09	-3,456.91	3,465.65	1.62	1.48	0.65
10,862.00	92.31	271.24	7,148.39	262.75	-3,551.87	3,560.57	2.38	2.33	0.51
10,957.00	90.01	272.04	7,146.47	265.47	-3,646.80	3,655.52	2.56	-2.42	0.84
11,147.00	89.79	271.64	7,146.80	271.57	-3,836.70	3,845.49	0.24	-0.12	-0.21
11,242.00	91.38	271.64	7,145.83	274.29	-3,931.66	3,940.46	1.67	1.67	0.00
11,337.00	89.70	271.25	7,144.93	276.68	-4,026.62	4,035.42	1.82	-1.77	-0.41
11,431.00	90.99	271.33	7,144.37	278.80	-4,120.59	4,129.38	1.37	1.37	0.09
11,526.00	87.41	271.25	7,145.69	280.94	-4,215.54	4,224.32	3.77	-3.77	-0.08
11,621.00	88.11	271.33	7,149.41	283.07	-4,310.45	4,319.21	0.74	0.74	0.08
11,716.00	89.79	271.33	7,151.15	285.28	-4,405.40	4,414.16	1.77	1.77	0.00
11,810.00	89.40	270.85	7,151.81	287.07	-4,499.38	4,508.11	0.66	-0.41	-0.51
11,905.00	90.41	270.45	7,151.97	288.14	-4,594.37	4,603.04	1.14	1.06	-0.42
12,001.00	88.38	269.84	7,152.98	288.39	-4,690.36	4,698.92	2.21	-2.11	-0.64
12,095.00	89.31	269.04	7,154.88	287.47	-4,784.34	4,792.73	1.30	0.99	-0.85
12,190.00	91.21	268.82	7,154.45	285.70	-4,879.32	4,887.50	2.01	2.00	-0.23
12,285.00	88.51	270.54	7,154.68	285.16	-4,974.30	4,982.34	3.37	-2.84	1.81
12,379.00	89.22	271.25	7,156.54	286.63	-5,068.27	5,076.27	1.07	0.76	0.76
12,475.00	91.52	270.94	7,155.92	288.47	-5,164.24	5,172.21	2.42	2.40	-0.32
12,570.00	88.60	273.14	7,155.82	291.85	-5,259.17	5,267.18	3.85	-3.07	2.32
12,664.00	88.82	274.73	7,157.94	298.30	-5,352.92	5,361.14	1.71	0.23	1.69
12,759.00	90.50	274.24	7,158.50	305.73	-5,447.62	5,456.10	1.84	1.77	-0.52
12,854.00	87.89	274.15	7,159.84	312.67	-5,542.35	5,551.06	2.75	-2.75	-0.09
12,948.00	89.22	273.93	7,162.21	319.29	-5,636.09	5,645.00	1.43	1.41	-0.23
13,043.00	86.79	273.93	7,165.51	325.80	-5,730.80	5,739.92	2.56	-2.56	0.00
13,137.00	87.72	273.63	7,170.02	331.99	-5,824.48	5,833.80	1.04	0.99	-0.32
13,232.00	89.70	273.63	7,172.15	338.00	-5,919.26	5,928.76	2.08	2.08	0.00
13,327.00	91.78	274.15	7,170.93	344.45	-6,014.03	6,023.74	2.26	2.19	0.55
13,422.00	87.80	272.52	7,171.28	349.97	-6,108.85	6,118.71	4.53	-4.19	-1.72
13,516.00	87.19	272.52	7,175.38	354.10	-6,202.67	6,212.62	0.65	-0.65	0.00
13,611.00	89.88	272.52	7,177.81	358.28	-6,297.54	6,307.58	2.83	2.83	0.00
13,705.00	92.31	272.04	7,176.02	362.02	-6,391.44	6,401.55	2.64	2.59	-0.51
13,799.00	89.00	271.73	7,174.94	365.11	-6,485.37	6,495.51	3.54	-3.52	-0.33
13,894.00	87.50	270.76	7,177.84	367.17	-6,580.30	6,590.43	1.88	-1.58	-1.02
13,989.00	87.32	270.94	7,182.14	368.58	-6,675.19	6,685.27	0.27	-0.19	0.19
14,084.00	89.31	271.64	7,184.93	370.72	-6,770.12	6,780.19	2.22	2.09	0.74
14,179.00	91.52	271.73	7,184.24	373.51	-6,865.07	6,875.16	2.33	2.33	0.09
14,273.00	88.29	271.16	7,184.40	375.88	-6,959.03	6,969.12	3.49	-3.44	-0.61
14,368.00	88.60	271.33	7,186.98	377.94	-7,053.97	7,064.04	0.37	0.33	0.18
14,463.00	90.72	271.25	7,187.54	380.08	-7,148.94	7,159.00	2.23	2.23	-0.08
14,558.00	93.02	270.85	7,184.44	381.82	-7,243.86	7,253.90	2.46	2.42	-0.42
14,652.00	90.59	270.63	7,181.48	383.03	-7,337.80	7,347.78	2.60	-2.59	-0.23
14,747.00	87.32	271.64	7,183.21	384.92	-7,432.75	7,442.70	3.60	-3.44	1.06
14,842.00	87.80	271.82	7,187.26	387.78	-7,527.62	7,537.60	0.54	0.51	0.19
14,937.00	90.50	271.95	7,188.66	390.91	-7,622.55	7,632.57	2.85	2.84	0.14
15,031.00	87.58	272.26	7,190.24	394.36	-7,716.47	7,726.53	3.12	-3.11	0.33
15,126.00	88.29	272.52	7,193.66	398.32	-7,811.32	7,821.47	0.80	0.75	0.27
15,221.00	90.72	272.26	7,194.48	402.28	-7,906.23	7,916.45	2.57	2.56	-0.27
15,316.00	88.51	271.55	7,195.12	405.43	-8,001.17	8,011.43	2.44	-2.33	-0.75
15,410.00	90.28	271.55	7,196.11	407.98	-8,095.12	8,105.40	1.88	1.88	0.00
15,505.00	87.19	272.13	7,198.21	411.03	-8,190.04	8,200.35	3.31	-3.25	0.61
15,600.00	87.32	272.66	7,202.76	414.99	-8,284.85	8,295.23	0.57	0.14	0.56

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Burroughs South 11
Project:	WELD COUNTY, CO	TVD Reference:	New KB @ 4972.00ft (Cyclone 37)
Site:	Burroughs South Pad	MD Reference:	New KB @ 4972.00ft (Cyclone 37)
Well:	Burroughs South 11	North Reference:	True
Wellbore:	Burroughs South 11	Survey Calculation Method:	Minimum Curvature
Design:	Burroughs South 11	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,695.00	89.31	272.74	7,205.55	419.46	-8,379.70	8,390.19	2.10	2.09	0.08
15,790.00	87.98	271.82	7,207.80	423.24	-8,474.59	8,485.15	1.70	-1.40	-0.97
15,885.00	89.22	272.13	7,210.12	426.52	-8,569.50	8,580.11	1.35	1.31	0.33
15,980.00	86.08	272.13	7,214.02	430.04	-8,664.35	8,675.01	3.31	-3.31	0.00
16,074.00	86.92	271.95	7,219.75	433.38	-8,758.11	8,768.83	0.91	0.89	-0.19
16,169.00	88.60	271.55	7,223.47	436.28	-8,852.99	8,863.73	1.82	1.77	-0.42
16,263.00	90.81	272.13	7,223.95	439.30	-8,946.94	8,957.71	2.43	2.35	0.62
16,358.00	88.20	272.66	7,224.77	443.27	-9,041.84	9,052.69	2.80	-2.75	0.56
16,453.00	88.60	272.13	7,227.43	447.24	-9,136.72	9,147.65	0.70	0.42	-0.56
16,548.00	89.88	272.52	7,228.69	451.09	-9,231.63	9,242.64	1.41	1.35	0.41
16,643.00	86.70	273.05	7,231.52	455.70	-9,326.46	9,337.58	3.39	-3.35	0.56
16,737.00	86.21	273.54	7,237.33	461.10	-9,420.13	9,431.40	0.74	-0.52	0.52
16,832.00	87.41	274.15	7,242.62	467.46	-9,514.77	9,526.24	1.42	1.26	0.64
16,927.00	88.82	273.63	7,245.74	473.90	-9,609.49	9,621.17	1.58	1.48	-0.55
17,021.00	91.52	274.64	7,245.46	480.68	-9,703.24	9,715.13	3.07	2.87	1.07
17,115.00	89.22	274.42	7,244.86	488.10	-9,796.94	9,809.09	2.46	-2.45	-0.23
Last Svy									
17,168.00	89.88	274.33	7,245.27	492.14	-9,849.78	9,862.07	1.26	1.25	-0.17
Proj Svy									
17,238.00	89.88	274.33	7,245.42	497.43	-9,919.58	9,932.04	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Burroughs South 11 Har	0.00	0.00	7,107.36	117.31	-230.62	1,453,374.51	3,243,918.55	40° 34' 28.549 N	104° 37' 18.938 W
- survey hits target center									
- Point									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
17,168.00	7,245.27	492.14	-9,849.78	Last Svy
17,238.00	7,245.42	497.43	-9,919.58	Proj Svy

Checked By: _____ Approved By: _____ Date: _____