



## **Extraction Oil & Gas**

**Weld County, CO (NAD83)**

**Sec32-T6N-R67W**

**Milkshake 23C**

**OH / Job #60511**

**Survey: Phoenix MWD Surveys**

## **Standard Survey Report**

**17 November, 2016**



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Milkshake 23C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	RKB @ 4980.00usft (Patterson 346)
<b>Site:</b>	Sec32-T6N-R67W	<b>MD Reference:</b>	RKB @ 4980.00usft (Patterson 346)
<b>Well:</b>	Milkshake 23C	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH / Job #60511	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Patterson 346)	<b>Database:</b>	Compass 5000 RMR

<b>Project</b>	Weld County, CO (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Sec32-T6N-R67W			
Site Position:		Northing:	1,403,778.11 usft	Latitude:	40° 26' 25.253 N
From:	Map	Easting:	3,160,062.89 usft	Longitude:	104° 55' 29.795 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	Milkshake 23C					
Well Position	+N/-S	0.00 usft	Northing:	1,403,778.11 usft	Latitude:	40° 26' 25.253 N
	+E/-W	0.00 usft	Easting:	3,160,062.89 usft	Longitude:	104° 55' 29.795 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,955.00 usft

<b>Wellbore</b>	OH / Job #60511				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	11/4/2016	8.55	66.88	52,488

<b>Design</b>	Surveys (Patterson 346)				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	1,562.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	176.05	

<b>Survey Program</b>	<b>Date</b>	11/17/2016			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
94.00	1,602.00	Surface Surveys (OH / Surface)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,681.00	17,369.00	Phoenix MWD Surveys (OH / Job #60511)	MWD+HDGM	OWSG Rev.2 MWD + HDGM	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
1,554.00	13.80	159.40	1,526.07	-257.61	26.30	258.81	0.00	0.00	0.00	
1,681.00	12.18	156.90	1,649.81	-284.11	36.89	285.98	1.35	-1.28	-1.97	
<b>First Phoenix MWD Survey</b>										
1,775.00	13.69	162.68	1,741.43	-303.85	44.09	306.17	2.11	1.61	6.15	
1,870.00	14.21	173.45	1,833.64	-326.17	48.77	328.76	2.78	0.55	11.34	
1,965.00	13.81	183.97	1,925.83	-349.07	49.31	351.64	2.71	-0.42	11.07	
2,059.00	11.17	185.98	2,017.60	-369.32	47.59	371.72	2.85	-2.81	2.14	
2,154.00	9.61	177.47	2,111.04	-386.40	46.98	388.72	2.30	-1.64	-8.96	
2,249.00	9.98	184.98	2,204.66	-402.52	46.61	404.78	1.40	0.39	7.91	
2,344.00	8.90	179.19	2,298.38	-418.07	46.00	420.25	1.51	-1.14	-6.09	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Milkshake 23C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	RKB @ 4980.00usft (Patterson 346)
<b>Site:</b>	Sec32-T6N-R67W	<b>MD Reference:</b>	RKB @ 4980.00usft (Patterson 346)
<b>Well:</b>	Milkshake 23C	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH / Job #60511	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Patterson 346)	<b>Database:</b>	Compass 5000 RMR

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
2,438.00	9.71	182.63	2,391.14	-433.26	45.74	435.38	1.04	0.86	3.66	
2,532.00	10.22	184.20	2,483.72	-449.50	44.77	451.51	0.61	0.54	1.67	
2,627.00	10.22	183.67	2,577.22	-466.31	43.61	468.21	0.10	0.00	-0.56	
2,721.00	9.46	185.62	2,669.83	-482.32	42.32	484.09	0.88	-0.81	2.07	
2,816.00	10.10	175.99	2,763.46	-498.41	42.14	500.12	1.85	0.67	-10.14	
2,911.00	11.37	179.06	2,856.79	-516.08	42.87	517.81	1.47	1.34	3.23	
3,005.00	10.77	178.58	2,949.04	-534.12	43.24	535.83	0.65	-0.64	-0.51	
3,100.00	9.91	179.84	3,042.50	-551.17	43.49	552.86	0.94	-0.91	1.33	
3,194.00	9.97	183.50	3,135.09	-567.38	43.01	569.00	0.68	0.06	3.89	
3,289.00	9.07	184.94	3,228.78	-583.05	41.87	584.55	0.98	-0.95	1.52	
3,383.00	9.07	183.12	3,321.61	-597.83	40.82	599.22	0.31	0.00	-1.94	
3,478.00	9.39	171.21	3,415.39	-612.97	41.60	614.38	2.04	0.34	-12.54	
3,572.00	9.12	172.71	3,508.16	-627.94	43.72	629.46	0.39	-0.29	1.60	
3,667.00	10.01	184.64	3,601.85	-643.64	44.01	645.14	2.28	0.94	12.56	
3,761.00	10.35	184.10	3,694.37	-660.20	42.74	661.58	0.38	0.36	-0.57	
3,855.00	10.56	184.25	3,786.81	-677.21	41.50	678.46	0.23	0.22	0.16	
3,950.00	10.79	185.80	3,880.16	-694.74	39.96	695.84	0.39	0.24	1.63	
4,044.00	9.83	185.00	3,972.65	-711.49	38.37	712.44	1.03	-1.02	-0.85	
4,139.00	9.33	180.81	4,066.32	-727.27	37.55	728.13	0.90	-0.53	-4.41	
4,234.00	9.83	179.27	4,160.00	-743.08	37.55	743.90	0.59	0.53	-1.62	
4,328.00	11.99	183.05	4,252.29	-760.85	37.13	761.60	2.42	2.30	4.02	
4,422.00	11.40	182.52	4,344.34	-779.88	36.20	780.53	0.64	-0.63	-0.56	
4,517.00	10.92	181.04	4,437.55	-798.26	35.62	798.82	0.59	-0.51	-1.56	
4,611.00	9.65	178.68	4,530.03	-815.04	35.64	815.56	1.42	-1.35	-2.51	
4,705.00	11.32	181.59	4,622.46	-832.14	35.57	832.61	1.86	1.78	3.10	
4,800.00	10.83	182.31	4,715.69	-850.38	34.95	850.77	0.54	-0.52	0.76	
4,895.00	9.98	181.41	4,809.13	-867.53	34.39	867.83	0.91	-0.89	-0.95	
4,989.00	8.74	180.08	4,901.88	-882.81	34.18	883.07	1.34	-1.32	-1.41	
5,083.00	6.37	178.53	4,995.05	-895.17	34.30	895.40	2.53	-2.52	-1.65	
5,178.00	5.86	178.79	5,089.51	-905.28	34.54	905.51	0.54	-0.54	0.27	
5,272.00	3.93	186.38	5,183.17	-913.28	34.28	913.48	2.16	-2.05	8.07	
5,367.00	2.63	177.06	5,278.01	-918.70	34.03	918.86	1.47	-1.37	-9.81	
5,461.00	1.32	307.38	5,371.98	-920.19	33.28	920.30	3.86	-1.39	138.64	
5,555.00	1.61	299.98	5,465.95	-918.88	31.28	918.85	0.37	0.31	-7.87	
5,650.00	1.82	286.90	5,560.91	-917.77	28.68	917.57	0.47	0.22	-13.77	
5,744.00	1.35	345.97	5,654.87	-916.26	26.98	915.95	1.72	-0.50	62.84	
5,839.00	0.37	105.24	5,749.87	-915.26	27.01	914.94	1.65	-1.03	125.55	
5,933.00	0.68	140.68	5,843.86	-915.77	27.65	915.50	0.46	0.33	37.70	
6,028.00	0.22	203.77	5,938.86	-916.37	27.94	916.12	0.64	-0.48	66.41	
6,122.00	0.24	222.15	6,032.86	-916.68	27.73	916.42	0.08	0.02	19.55	
6,244.00	0.55	289.35	6,154.86	-916.68	27.01	916.36	0.42	0.25	55.08	
6,338.00	0.68	282.98	6,248.85	-916.40	26.04	916.02	0.16	0.14	-6.78	
6,433.00	0.73	283.65	6,343.84	-916.13	24.90	915.67	0.05	0.05	0.71	

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<b>Wellbore:</b>	OH / Job #60511	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Patterson 346)	<b>Database:</b>	Compass 5000 RMR

Survey									
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6,528.00	0.89	275.82	6,438.83	-915.92	23.58	915.37	0.20	0.17	-8.24
6,622.00	1.02	279.98	6,532.82	-915.70	22.03	915.04	0.16	0.14	4.43
6,716.00	1.18	268.31	6,626.80	-915.58	20.24	914.80	0.29	0.17	-12.41
6,811.00	1.15	253.63	6,721.78	-915.88	18.35	914.97	0.31	-0.03	-15.45
6,905.00	14.98	273.59	6,814.63	-915.38	5.25	913.57	14.79	14.71	21.23
6,999.00	17.81	271.66	6,904.80	-914.20	-21.25	910.57	3.07	3.01	-2.05
7,094.00	28.25	268.90	6,992.11	-914.21	-58.35	908.03	11.05	10.99	-2.91
7,189.00	41.79	269.78	7,069.73	-914.77	-112.74	904.84	14.26	14.25	0.93
7,283.00	50.12	270.04	7,135.03	-914.86	-180.25	900.29	8.86	8.86	0.28
7,377.00	58.27	271.47	7,189.98	-913.81	-256.41	894.00	8.76	8.67	1.52
7,472.00	65.93	270.34	7,234.40	-912.52	-340.29	886.93	8.13	8.06	-1.19
7,567.00	74.86	265.57	7,266.26	-915.81	-429.60	884.07	10.52	9.40	-5.02
7,661.00	86.36	266.09	7,281.57	-922.53	-521.94	884.42	12.25	12.23	0.55
7,756.00	86.36	264.73	7,287.60	-930.12	-616.44	885.49	1.43	0.00	-1.43
7,850.00	84.88	263.50	7,294.78	-939.73	-709.67	888.65	2.04	-1.57	-1.31
7,945.00	88.74	268.67	7,300.07	-946.19	-804.25	888.59	6.78	4.06	5.44
8,039.00	92.86	272.03	7,298.75	-945.62	-898.21	881.56	5.66	4.38	3.57
8,134.00	89.74	272.42	7,296.60	-941.93	-993.10	871.35	3.31	-3.28	0.41
8,228.00	87.58	271.76	7,298.80	-938.51	-1,087.00	861.46	2.40	-2.30	-0.70
8,323.00	88.73	270.52	7,301.86	-936.62	-1,181.93	853.04	1.78	1.21	-1.31
8,417.00	88.60	271.25	7,304.05	-935.17	-1,275.90	845.13	0.79	-0.14	0.78
8,512.00	89.86	272.98	7,305.32	-931.66	-1,370.82	835.10	2.25	1.33	1.82
8,606.00	89.42	270.71	7,305.91	-928.64	-1,464.76	825.61	2.46	-0.47	-2.41
8,700.00	89.26	270.48	7,307.00	-927.66	-1,558.75	818.17	0.30	-0.17	-0.24
8,795.00	92.13	270.51	7,305.84	-926.84	-1,653.73	810.81	3.02	3.02	0.03
8,889.00	92.14	270.27	7,302.34	-926.20	-1,747.66	803.71	0.26	0.01	-0.26
8,983.00	90.54	269.59	7,300.14	-926.31	-1,841.63	797.36	1.85	-1.70	-0.72
9,078.00	89.34	268.82	7,300.24	-927.63	-1,936.62	792.13	1.50	-1.26	-0.81
9,172.00	88.52	268.20	7,302.00	-930.08	-2,030.57	788.10	1.09	-0.87	-0.66
9,266.00	90.55	268.27	7,302.76	-932.97	-2,124.52	784.53	2.16	2.16	0.07
9,361.00	89.94	267.80	7,302.36	-936.23	-2,219.46	781.24	0.81	-0.64	-0.49
9,455.00	90.31	266.88	7,302.15	-940.59	-2,313.36	779.13	1.05	0.39	-0.98
9,550.00	90.17	270.08	7,301.75	-943.11	-2,408.31	775.11	3.37	-0.15	3.37
9,644.00	89.49	271.45	7,302.03	-941.86	-2,502.30	767.39	1.63	-0.72	1.46
9,739.00	89.18	270.39	7,303.13	-940.33	-2,597.28	759.33	1.16	-0.33	-1.12
9,834.00	88.73	269.29	7,304.87	-940.60	-2,692.26	753.05	1.25	-0.47	-1.16
9,928.00	89.98	270.42	7,305.92	-940.83	-2,786.25	746.82	1.79	1.33	1.20
10,022.00	91.01	271.92	7,305.11	-938.91	-2,880.22	738.44	1.94	1.10	1.60
10,117.00	90.62	271.00	7,303.76	-936.49	-2,975.18	729.49	1.05	-0.41	-0.97
10,211.00	90.70	270.50	7,302.68	-935.26	-3,069.17	721.79	0.54	0.09	-0.53
10,305.00	89.62	268.59	7,302.42	-936.01	-3,163.16	716.07	2.33	-1.15	-2.03
10,400.00	90.69	269.79	7,302.16	-937.35	-3,258.15	710.87	1.69	1.13	1.26
10,494.00	90.27	272.02	7,301.37	-935.87	-3,352.12	702.92	2.41	-0.45	2.37

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<b>Wellbore:</b>	OH / Job #60511	<b>Survey Calculation Method:</b>	Minimum Curvature
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Survey										
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10,589.00	88.95	270.67	7,302.02	-933.64	-3,447.09	694.16	1.99	-1.39	-1.42	
10,683.00	90.38	274.49	7,302.57	-929.41	-3,540.98	683.48	4.34	1.52	4.06	
10,778.00	90.83	274.33	7,301.56	-922.10	-3,635.69	669.67	0.50	0.47	-0.17	
10,873.00	90.53	274.39	7,300.44	-914.88	-3,730.41	655.95	0.32	-0.32	0.06	
10,967.00	90.48	274.20	7,299.61	-907.84	-3,824.14	642.47	0.21	-0.05	-0.20	
11,061.00	90.73	273.69	7,298.62	-901.38	-3,917.91	629.56	0.60	0.27	-0.54	
11,156.00	89.80	271.71	7,298.18	-896.90	-4,012.80	618.57	2.30	-0.98	-2.08	
11,250.00	89.51	271.22	7,298.74	-894.50	-4,106.77	609.70	0.61	-0.31	-0.52	
11,345.00	90.43	269.89	7,298.79	-893.58	-4,201.76	602.25	1.70	0.97	-1.40	
11,440.00	89.82	269.87	7,298.59	-893.78	-4,296.76	595.91	0.64	-0.64	-0.02	
11,534.00	91.19	269.18	7,297.76	-894.56	-4,390.75	590.22	1.63	1.46	-0.73	
11,629.00	91.36	268.47	7,295.64	-896.50	-4,485.70	585.62	0.77	0.18	-0.75	
11,724.00	91.18	267.36	7,293.54	-899.96	-4,580.62	582.54	1.18	-0.19	-1.17	
11,818.00	91.68	269.43	7,291.19	-902.59	-4,674.54	578.70	2.26	0.53	2.20	
11,912.00	88.30	270.16	7,291.21	-902.93	-4,768.53	572.56	3.68	-3.60	0.78	
12,007.00	88.68	268.52	7,293.71	-904.02	-4,863.49	567.12	1.77	0.40	-1.73	
12,101.00	88.38	267.09	7,296.12	-907.62	-4,957.38	564.25	1.55	-0.32	-1.52	
12,196.00	89.98	269.60	7,297.48	-910.36	-5,052.32	560.45	3.13	1.68	2.64	
12,291.00	90.26	269.33	7,297.28	-911.25	-5,147.32	554.79	0.41	0.29	-0.28	
12,385.00	89.19	271.70	7,297.73	-910.41	-5,241.31	547.48	2.77	-1.14	2.52	
12,480.00	89.10	269.76	7,299.15	-909.20	-5,336.28	539.74	2.04	-0.09	-2.04	
12,574.00	89.61	269.07	7,300.21	-910.15	-5,430.27	534.23	0.91	0.54	-0.73	
12,669.00	90.01	270.49	7,300.53	-910.52	-5,525.27	528.05	1.55	0.42	1.49	
12,763.00	90.54	272.19	7,300.07	-908.32	-5,619.24	519.39	1.89	0.56	1.81	
12,857.00	90.76	271.51	7,299.01	-905.29	-5,713.18	509.90	0.76	0.23	-0.72	
12,952.00	89.26	271.50	7,298.99	-902.79	-5,808.15	500.87	1.58	-1.58	-0.01	
13,046.00	89.63	270.74	7,299.90	-900.95	-5,902.12	492.57	0.90	0.39	-0.81	
13,140.00	90.03	271.05	7,300.18	-899.49	-5,996.11	484.64	0.54	0.43	0.33	
13,235.00	90.65	270.16	7,299.62	-898.48	-6,091.10	477.10	1.14	0.65	-0.94	
13,330.00	90.65	272.65	7,298.54	-896.15	-6,186.06	468.24	2.62	0.00	2.62	
13,425.00	91.17	272.49	7,297.03	-891.90	-6,280.95	457.46	0.57	0.55	-0.17	
13,519.00	88.91	273.01	7,296.96	-887.39	-6,374.84	446.50	2.47	-2.40	0.55	
13,613.00	89.47	272.71	7,298.29	-882.70	-6,468.71	435.36	0.68	0.60	-0.32	
13,708.00	89.92	271.57	7,298.80	-879.15	-6,563.64	425.28	1.29	0.47	-1.20	
13,802.00	92.37	268.85	7,296.92	-878.80	-6,657.61	418.47	3.89	2.61	-2.89	
13,897.00	92.91	268.74	7,292.55	-880.80	-6,752.48	413.93	0.58	0.57	-0.12	
13,991.00	90.59	270.94	7,289.67	-881.06	-6,846.43	407.72	3.40	-2.47	2.34	
14,085.00	88.93	269.51	7,290.07	-880.69	-6,940.42	400.89	2.33	-1.77	-1.52	
14,180.00	89.21	268.75	7,291.61	-882.13	-7,035.40	395.79	0.85	0.29	-0.80	
14,274.00	89.69	267.96	7,292.51	-884.83	-7,129.35	392.01	0.98	0.51	-0.84	
14,369.00	91.40	269.69	7,291.61	-886.78	-7,224.32	387.42	2.56	1.80	1.82	
14,463.00	90.50	268.32	7,290.05	-888.41	-7,318.29	382.58	1.74	-0.96	-1.46	
14,558.00	90.12	268.70	7,289.54	-890.88	-7,413.26	378.51	0.57	-0.40	0.40	
14,653.00	89.69	268.29	7,289.69	-893.38	-7,508.22	374.46	0.63	-0.45	-0.43	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Milkshake 23C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	RKB @ 4980.00usft (Patterson 346)
<b>Site:</b>	Sec32-T6N-R67W	<b>MD Reference:</b>	RKB @ 4980.00usft (Patterson 346)
<b>Well:</b>	Milkshake 23C	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH / Job #60511	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Patterson 346)	<b>Database:</b>	Compass 5000 RMR

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,747.00	90.52	269.02	7,289.52	-895.58	-7,602.20	370.19	1.18	0.88	0.78
14,842.00	91.51	269.48	7,287.84	-896.83	-7,697.17	364.90	1.15	1.04	0.48
14,936.00	91.71	268.65	7,285.20	-898.36	-7,791.12	359.96	0.91	0.21	-0.88
15,031.00	90.88	268.49	7,283.05	-900.73	-7,886.07	355.79	0.89	-0.87	-0.17
15,125.00	89.10	269.61	7,283.07	-902.29	-7,980.05	350.87	2.24	-1.89	1.19
15,219.00	88.31	268.53	7,285.19	-903.81	-8,074.01	345.93	1.42	-0.84	-1.15
15,314.00	89.71	268.91	7,286.83	-905.94	-8,168.97	341.51	1.53	1.47	0.40
15,408.00	91.57	271.03	7,285.78	-905.98	-8,262.95	335.09	3.00	1.98	2.26
15,503.00	92.59	270.06	7,282.33	-905.08	-8,357.88	327.65	1.48	1.07	-1.02
15,598.00	90.45	271.65	7,279.81	-903.66	-8,452.83	319.71	2.81	-2.25	1.67
15,692.00	89.84	271.13	7,279.58	-901.38	-8,546.80	310.96	0.85	-0.65	-0.55
15,786.00	89.72	271.64	7,279.94	-899.11	-8,640.77	302.23	0.56	-0.13	0.54
15,881.00	88.62	270.59	7,281.31	-897.26	-8,735.74	293.85	1.60	-1.16	-1.11
15,976.00	89.55	270.47	7,282.83	-896.38	-8,830.73	286.43	0.99	0.98	-0.13
16,070.00	89.14	268.86	7,283.91	-896.93	-8,924.72	280.51	1.77	-0.44	-1.71
16,165.00	89.09	268.13	7,285.37	-899.43	-9,019.67	276.46	0.77	-0.05	-0.77
16,262.00	90.40	272.42	7,285.80	-898.96	-9,116.64	269.32	4.62	1.35	4.42
16,353.00	90.19	271.81	7,285.34	-895.61	-9,207.58	259.72	0.71	-0.23	-0.67
16,448.00	88.88	270.18	7,286.11	-893.96	-9,302.56	251.53	2.20	-1.38	-1.72
16,542.00	88.48	269.57	7,288.27	-894.16	-9,396.53	245.27	0.78	-0.43	-0.65
16,637.00	88.42	269.26	7,290.84	-895.13	-9,491.49	239.70	0.33	-0.06	-0.33
16,731.00	90.61	271.14	7,291.64	-894.80	-9,585.48	232.90	3.07	2.33	2.00
16,826.00	90.21	271.07	7,290.96	-892.97	-9,680.46	224.54	0.43	-0.42	-0.07
16,921.00	89.97	270.78	7,290.81	-891.44	-9,775.44	216.47	0.40	-0.25	-0.31
17,015.00	89.74	270.66	7,291.05	-890.25	-9,869.44	208.82	0.28	-0.24	-0.13
17,110.00	92.33	271.79	7,289.33	-888.22	-9,964.39	200.26	2.97	2.73	1.19
17,204.00	91.94	271.14	7,285.83	-885.82	-10,058.29	191.40	0.81	-0.41	-0.69
17,297.00	90.92	270.49	7,283.51	-884.50	-10,151.25	183.68	1.30	-1.10	-0.70
Final Phoenix MWD Survey									
17,369.00	90.92	270.49	7,282.35	-883.89	-10,223.24	178.11	0.00	0.00	0.00
Projection to TD									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,681.00	1,649.81	-284.11	36.89	First Phoenix MWD Survey
17,297.00	7,283.51	-884.50	-10,151.25	Final Phoenix MWD Survey
17,369.00	7,282.35	-883.89	-10,223.24	Projection to TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_