



PHOENIX
TECHNOLOGY SERVICES

April 7, 2017

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 17 2017

RECEIVED

Dear District 2 - Artesia

Attention: Regulatory Department

Re: BC Operating
Chicken Fry Federal Com #1H
Eddy County, NM
API #30-015-42882
Job No. 60992

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Larry Seebeck	1	447	14,359	03/15/17	03/30/17	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

Phoenix Technology Services APR 17 2017
SURVEY DATA CERTIFICATION
RECEIVED



PHOENIX JOB NUMBER 60992

ENERGY COMPANY BC Operating

WELL NAME Chicken Fry Federal Com #1H

COUNTY & STATE

Eddy, New Mexico

API WELL NUMBER	30-015-42882
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PROPOSED DIRECTION	181.34
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TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
402.00 ft	401.99 ft	1.30	146.28	-.15 ft	.50 ft	Gyro

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
15-Mar-17	447.00 ft	1.61	123.98

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
30-Mar-17	14,359.00 ft	88.20	179.10

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
30-Mar-17	14,415.00 ft	88.20	179.10

Larry Seebeck

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.14
DECLINATION OR GRID	GRID

30-Mar

TODAY'S DATE

MWD SUPERVISOR 1 Larry Seebeck

DIRECTIONAL DRILLER 1

Vinn Adams

MWD SUPERVISOR 2 Michael Johnson

DIRECTIONAL DRILLER 2

Ruben Cano



BC Operating, Inc.

**Eddy County, New Mexico (NAD27)
Chicken Fry Federal Com
1H**

OH / Job #60992

Survey: Phoenix MWD Surveys

Standard Survey Report

03 April, 2017

**NM OIL CONSERVATION
ARTESIA DISTRICT
APR 17 2017
RECEIVED**



Company: BC Operating, Inc.
Project: Eddy County, New Mexico (NAD27)
Site: Chicken Fry Federal Com
Well: 1H
Wellbore: OH / Job #60992
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 1H
TVD Reference: GL + KB @ 3027.50usft (Patterson 244)
MD Reference: GL + KB @ 3027.50usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

Project	Eddy County, New Mexico (NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Chicken Fry Federal Com

Site Position: **From:** Map **Northing:** 439,972.50 usft **Latitude:** 32° 12' 33.55702 N
Position Uncertainty: 0.00 usft **Easting:** 582,311.70 usft **Longitude:** 104° 4' 1.92440 W
Slot Radius: 13-3/16 " **Grid Convergence:** 0.14 °

Well 1H
Well Position **+N/-S** 0.00 usft **Northing:** 439,972.50 usft **Latitude:** 32° 12' 33.55702 N
+E/-W 0.00 usft **Easting:** 582,311.70 usft **Longitude:** 104° 4' 1.92440 W
Position Uncertainty 0.00 usft **Wellhead Elevation:** 0.00 usft **Ground Level:** 2,999.00 usft

Wellbore OH / Job #60992

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/31/2017	7.30	60.05	48,133

Design Surveys (Patterson 244)

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	9,600.00	0.00	0.00	181.34

Survey Program Date 4/3/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
447.00	14,415.00	Phoenix MWD Surveys (OH / Job #60992)	MWD+HDGM	OWSG Rev.2 MWD + HDGM

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)
402.00	1.30	146.28	401.99	-0.15	0.50	0.14	0.00	0.00	0.00
Tie In									
447.00	1.61	123.98	446.98	-0.93	1.31	0.90	1.42	0.69	-49.56
First Phoenix MWD Survey									
508.00	1.58	126.35	507.95	-1.91	2.70	1.84	0.12	-0.05	3.89
599.00	0.60	27.73	598.94	-2.23	3.93	2.13	1.95	-1.08	-108.37
689.00	1.21	339.80	688.93	-0.92	3.82	0.83	1.03	0.68	-53.26
781.00	1.60	307.10	780.90	0.77	2.46	-0.83	0.95	0.42	-35.54
873.00	1.71	302.56	872.86	2.28	0.28	-2.29	0.19	0.12	-4.93
965.00	1.75	296.58	964.82	3.65	-2.14	-3.60	0.20	0.04	-6.50

Company: BC Operating, Inc.
Project: Eddy County, New Mexico (NAD27)
Site: Chicken Fry Federal Com
Well: 1H
Wellbore: OH / Job #60992
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 1H
TVD Reference: GL + KB @ 3027.50usft (Patterson 244)
MD Reference: GL + KB @ 3027.50usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

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)
1,058.00	1.83	287.34	1,057.78	4.73	-4.82	-4.61	0.32	0.09	-9.94
1,149.00	1.80	275.80	1,148.73	5.30	-7.63	-5.12	0.40	-0.03	-12.68
1,241.00	1.59	274.78	1,240.69	5.56	-10.34	-5.31	0.23	-0.23	-1.11
1,332.00	1.58	279.32	1,331.66	5.87	-12.84	-5.56	0.14	-0.01	4.99
1,424.00	1.89	273.96	1,423.61	6.18	-15.60	-5.81	0.38	0.34	-5.83
1,516.00	2.72	316.18	1,515.55	7.86	-18.63	-7.42	1.99	0.90	45.89
1,610.00	2.97	322.96	1,609.43	11.41	-21.64	-10.90	0.45	0.27	7.21
1,704.00	3.22	321.86	1,703.29	15.43	-24.74	-14.85	0.27	0.27	-1.17
1,798.00	3.13	318.20	1,797.15	19.42	-28.08	-18.76	0.24	-0.10	-3.89
1,893.00	2.37	339.51	1,892.04	23.19	-30.49	-22.47	1.33	-0.80	22.43
1,987.00	2.30	41.16	1,985.98	26.43	-29.93	-25.73	2.55	-0.07	65.59
2,081.00	1.98	58.74	2,079.91	28.70	-27.30	-28.05	0.77	-0.34	18.70
2,175.00	2.44	78.98	2,173.84	29.92	-23.95	-29.35	0.96	0.49	21.53
2,269.00	2.88	93.84	2,267.74	30.15	-19.63	-29.68	0.87	0.47	15.81
2,364.00	3.33	102.23	2,362.60	29.40	-14.55	-29.05	0.67	0.47	8.83
2,458.00	3.80	102.39	2,456.42	28.15	-8.84	-27.94	0.50	0.50	0.17
2,545.00	2.38	104.88	2,543.29	27.07	-4.28	-26.96	1.64	-1.63	2.86
2,641.00	1.44	97.70	2,639.24	26.40	-1.16	-26.36	1.01	-0.98	-7.48
2,735.00	1.15	61.64	2,733.22	26.69	0.84	-26.70	0.90	-0.31	-38.36
2,829.00	1.44	25.47	2,827.19	28.20	2.18	-28.25	0.90	0.31	-38.48
2,923.00	2.13	4.66	2,921.15	31.01	2.83	-31.07	1.00	0.73	-22.14
3,019.00	2.71	0.78	3,017.06	35.06	3.01	-35.12	0.63	0.60	-4.04
3,113.00	3.51	357.50	3,110.92	40.15	2.91	-40.21	0.87	0.85	-3.49
3,207.00	4.29	352.08	3,204.70	46.51	2.30	-46.55	0.92	0.83	-5.77
3,301.00	4.42	341.49	3,298.43	53.43	0.67	-53.43	0.87	0.14	-11.27
3,395.00	4.81	336.26	3,392.13	60.47	-2.07	-60.41	0.61	0.41	-5.56
3,490.00	5.27	331.66	3,486.76	67.96	-5.74	-67.80	0.64	0.48	-4.84
3,584.00	5.19	332.32	3,580.37	75.52	-9.77	-75.27	0.11	-0.09	0.70
3,678.00	4.85	331.09	3,674.01	82.76	-13.66	-82.42	0.38	-0.36	-1.31
3,772.00	4.51	332.67	3,767.70	89.53	-17.28	-89.10	0.39	-0.36	1.68
3,867.00	4.41	332.25	3,862.41	96.08	-20.70	-95.57	0.11	-0.11	-0.44
3,962.00	4.68	332.77	3,957.11	102.76	-24.17	-102.16	0.29	0.28	0.55
4,056.00	4.67	333.41	4,050.80	109.59	-27.64	-108.91	0.06	-0.01	0.68
4,151.00	3.98	334.04	4,145.53	116.01	-30.81	-115.26	0.73	-0.73	0.66
4,245.00	4.44	333.52	4,239.27	122.20	-33.86	-121.37	0.49	0.49	-0.55
4,340.00	4.84	337.84	4,333.96	129.20	-37.02	-128.30	0.56	0.42	4.55
4,435.00	4.69	338.89	4,428.63	136.54	-39.93	-135.57	0.18	-0.16	1.11
4,529.00	4.57	341.18	4,522.33	143.67	-42.52	-142.63	0.23	-0.13	2.44
4,623.00	4.71	336.20	4,616.02	150.74	-45.28	-149.64	0.45	0.15	-5.30
4,717.00	4.39	329.35	4,709.72	157.37	-48.68	-156.19	0.67	-0.34	-7.29
4,812.00	4.57	328.54	4,804.43	163.73	-52.50	-162.45	0.20	0.19	-0.85
4,906.00	4.75	330.88	4,898.12	170.32	-56.35	-168.96	0.28	0.19	2.49
5,000.00	5.10	327.32	4,991.78	177.24	-60.50	-175.77	0.49	0.37	-3.79

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5,094.00	4.60	321.58	5,085.44	183.71	-65.10	-182.13	0.74	-0.53	-6.11
5,188.00	4.83	325.43	5,179.12	189.92	-69.69	-188.24	0.42	0.24	4.10
5,283.00	4.75	327.18	5,273.79	196.52	-74.09	-194.73	0.18	-0.08	1.84
5,377.00	3.83	324.30	5,367.53	202.34	-78.03	-200.46	1.00	-0.98	-3.06
5,471.00	3.89	325.33	5,461.31	207.51	-81.68	-205.54	0.10	0.06	1.10
5,566.00	4.68	329.69	5,556.05	213.51	-85.47	-211.45	0.90	0.83	4.59
5,660.00	4.11	327.26	5,649.77	219.65	-89.22	-217.50	0.64	-0.61	-2.59
5,755.00	5.04	325.96	5,744.47	225.97	-93.40	-223.73	0.98	0.98	-1.37
5,849.00	5.45	325.73	5,838.07	233.08	-98.23	-230.72	0.44	0.44	-0.24
5,943.00	4.71	325.11	5,931.70	239.94	-102.95	-237.46	0.79	-0.79	-0.66
6,038.00	4.13	325.09	6,026.42	245.94	-107.14	-243.37	0.61	-0.61	-0.02
6,132.00	4.13	326.61	6,120.18	251.54	-110.94	-248.88	0.12	0.00	1.62
6,226.00	4.72	332.98	6,213.90	257.81	-114.56	-255.07	0.82	0.63	6.78
6,320.00	4.45	345.35	6,307.60	264.79	-117.23	-261.98	1.09	-0.29	13.16
6,415.00	3.30	349.89	6,402.38	271.05	-118.65	-268.20	1.25	-1.21	4.78
6,509.00	4.76	321.80	6,496.15	276.78	-121.53	-273.86	2.57	1.55	-29.88
6,603.00	4.21	306.21	6,589.87	281.88	-126.73	-278.84	1.42	-0.59	-16.59
6,697.00	2.94	285.01	6,683.69	284.54	-131.84	-281.38	1.93	-1.35	-22.55
6,791.00	4.31	312.16	6,777.50	287.54	-136.79	-284.26	2.30	1.46	28.88
6,885.00	5.51	313.97	6,871.16	293.04	-142.66	-289.63	1.29	1.28	1.93
6,979.00	4.90	292.16	6,964.78	297.69	-149.62	-294.11	2.19	-0.65	-23.20
7,073.00	4.44	332.94	7,058.49	302.45	-155.00	-298.74	3.49	-0.49	43.38
7,168.00	6.01	344.26	7,153.09	310.51	-158.02	-306.73	1.97	1.65	11.92
7,262.00	5.92	344.18	7,246.59	319.91	-160.68	-316.06	0.10	-0.10	-0.09
7,356.00	5.04	343.02	7,340.16	328.52	-163.20	-324.62	0.94	-0.94	-1.23
7,451.00	4.23	336.04	7,434.84	335.71	-165.85	-331.75	1.04	-0.85	-7.35
7,545.00	3.19	327.73	7,528.65	341.09	-168.65	-337.06	1.24	-1.11	-8.84
7,640.00	3.46	328.90	7,623.49	345.78	-171.54	-341.68	0.29	0.28	1.23
7,734.00	3.50	334.90	7,717.31	350.81	-174.22	-346.64	0.39	0.04	6.38
7,829.00	2.83	330.10	7,812.17	355.47	-176.62	-351.24	0.76	-0.71	-5.05
7,923.00	3.85	331.29	7,906.01	360.25	-179.30	-355.96	1.09	1.09	1.27
8,017.00	3.17	324.69	7,999.83	365.14	-182.31	-360.78	0.84	-0.72	-7.02
8,112.00	2.72	317.46	8,094.71	368.94	-185.36	-364.51	0.61	-0.47	-7.61
8,206.00	3.05	327.38	8,188.59	372.69	-188.21	-368.19	0.64	0.35	10.55
8,300.00	3.87	338.66	8,282.42	377.75	-190.72	-373.19	1.13	0.87	12.00
8,395.00	2.96	333.76	8,377.25	382.94	-192.97	-378.32	1.01	-0.96	-5.16
8,489.00	3.30	337.89	8,471.11	387.62	-195.06	-382.96	0.43	0.36	4.39
8,584.00	2.86	348.13	8,565.97	392.48	-196.57	-387.77	0.74	-0.46	10.78
8,678.00	1.70	1.97	8,659.89	396.16	-197.01	-391.45	1.36	-1.23	14.72
8,773.00	3.20	355.40	8,754.81	400.22	-197.17	-395.50	1.60	1.58	-6.92
8,867.00	2.98	353.21	8,848.67	405.26	-197.67	-400.53	0.27	-0.23	-2.33
8,911.00	2.91	346.79	8,892.61	407.48	-198.06	-402.74	0.77	-0.16	-14.59
8,935.00	2.89	347.23	8,916.58	408.66	-198.34	-403.92	0.12	-0.08	1.83
9,013.00	0.50	280.10	8,994.54	410.64	-199.11	-405.88	3.51	-3.06	-86.06

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Survey

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9,060.00	5.52	186.95	9,041.47	408.43	-199.58	-403.65	11.85	10.68	-198.19
9,107.00	11.23	181.81	9,087.95	401.61	-200.00	-396.82	12.24	12.15	-10.94
9,154.00	16.79	181.17	9,133.53	390.24	-200.28	-385.45	11.83	11.83	-1.36
9,201.00	21.20	179.48	9,177.96	374.94	-200.35	-370.16	9.45	9.38	-3.60
9,248.00	25.35	180.50	9,221.13	356.38	-200.36	-351.60	8.87	8.83	2.17
9,295.00	29.76	181.74	9,262.79	334.65	-200.80	-329.86	9.46	9.38	2.64
9,343.00	33.68	184.15	9,303.61	309.45	-202.12	-304.65	8.58	8.17	5.02
9,390.00	36.98	184.99	9,341.95	282.37	-204.30	-277.51	7.10	7.02	1.79
9,437.00	40.95	184.09	9,378.49	252.91	-206.63	-248.01	8.53	8.45	-1.91
9,484.00	45.39	181.22	9,412.76	220.80	-208.08	-215.88	10.33	9.45	-6.11
9,532.00	50.04	177.07	9,445.06	185.32	-207.50	-180.42	11.60	9.69	-8.65
9,579.00	55.10	177.01	9,473.61	148.06	-205.58	-143.21	10.77	10.77	-0.13
9,627.00	59.02	176.33	9,499.71	107.85	-203.23	-103.07	8.25	8.17	-1.42
9,674.00	62.18	176.29	9,522.78	66.99	-200.60	-62.29	6.72	6.72	-0.09
9,721.00	66.51	175.66	9,543.12	24.74	-197.62	-20.12	9.29	9.21	-1.34
9,766.00	72.16	177.12	9,559.00	-17.26	-194.98	21.81	12.92	12.56	3.24
9,816.00	77.68	180.31	9,572.00	-65.50	-193.92	70.02	12.64	11.04	6.38
9,863.00	82.52	182.21	9,580.08	-111.77	-194.94	116.30	11.04	10.30	4.04
9,879.00	83.15	182.35	9,582.08	-127.64	-195.57	132.17	4.03	3.94	0.88
9,990.00	89.64	181.06	9,589.05	-238.31	-198.86	242.89	5.96	5.85	-1.16
10,084.00	89.24	180.53	9,589.97	-332.29	-200.16	336.88	0.71	-0.43	-0.56
10,177.00	88.99	180.10	9,591.41	-425.28	-200.68	429.85	0.53	-0.27	-0.46
10,272.00	91.87	181.01	9,590.70	-520.26	-201.60	524.83	3.18	3.03	0.96
10,364.00	91.80	180.90	9,587.75	-612.20	-203.13	616.78	0.14	-0.08	-0.12
10,458.00	90.00	180.41	9,586.27	-706.18	-204.20	710.76	1.98	-1.91	-0.52
10,551.00	88.23	179.54	9,587.71	-799.16	-204.16	803.72	2.12	-1.90	-0.94
10,646.00	88.96	179.47	9,590.04	-894.13	-203.34	898.64	0.77	0.77	-0.07
10,740.00	89.36	179.28	9,591.42	-988.11	-202.32	992.57	0.47	0.43	-0.20
10,834.00	89.47	179.21	9,592.38	-1,082.10	-201.08	1,086.51	0.14	0.12	-0.07
10,928.00	91.34	179.82	9,591.71	-1,176.09	-200.28	1,180.45	2.09	1.99	0.65
11,022.00	90.17	179.13	9,590.48	-1,270.08	-199.42	1,274.39	1.44	-1.24	-0.73
11,116.00	89.83	177.82	9,590.48	-1,364.04	-196.92	1,368.27	1.44	-0.36	-1.39
11,210.00	91.99	176.30	9,588.98	-1,457.90	-192.10	1,461.99	2.81	2.30	-1.62
11,304.00	89.66	175.89	9,587.63	-1,551.66	-185.70	1,555.58	2.52	-2.48	-0.44
11,398.00	88.85	174.88	9,588.85	-1,645.35	-178.14	1,649.06	1.38	-0.86	-1.07
11,492.00	93.25	174.80	9,587.13	-1,738.93	-169.69	1,742.42	4.68	4.68	-0.09
11,586.00	88.40	173.80	9,585.78	-1,832.43	-160.35	1,835.67	5.27	-5.16	-1.06
11,681.00	90.64	175.89	9,586.57	-1,927.03	-151.82	1,930.05	3.22	2.36	2.20
11,775.00	87.73	175.01	9,587.91	-2,020.71	-144.36	2,023.53	3.23	-3.10	-0.94
11,869.00	92.55	177.78	9,587.68	-2,114.49	-138.46	2,117.15	5.91	5.13	2.95
11,964.00	93.31	178.62	9,582.82	-2,209.31	-135.48	2,211.88	1.19	0.80	0.88
12,058.00	93.33	178.40	9,577.38	-2,303.12	-133.03	2,305.60	0.23	0.02	-0.23
12,152.00	93.00	177.69	9,572.19	-2,396.93	-129.83	2,399.31	0.83	-0.35	-0.76

Company: BC Operating, Inc.
Project: Eddy County, New Mexico (NAD27)
Site: Chicken Fry Federal Com
Well: 1H
Wellbore: OH / Job #60992
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 1H
TVD Reference: GL + KB @ 3027.50usft (Patterson 244)
MD Reference: GL + KB @ 3027.50usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

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)
12,247.00	92.13	180.72	9,567.94	-2,491.81	-128.52	2,494.13	3.32	-0.92	3.19
12,341.00	88.07	180.64	9,567.77	-2,585.78	-129.63	2,588.11	4.32	-4.32	-0.09
12,436.00	88.91	179.27	9,570.28	-2,680.75	-129.56	2,683.04	1.69	0.88	-1.44
12,529.00	91.26	179.49	9,570.14	-2,773.73	-128.55	2,775.98	2.54	2.53	0.24
12,623.00	92.18	179.02	9,567.32	-2,867.68	-127.33	2,869.88	1.10	0.98	-0.50
12,718.00	89.52	179.19	9,565.91	-2,962.65	-125.85	2,964.78	2.81	-2.80	0.18
12,812.00	86.47	179.85	9,569.20	-3,056.58	-125.06	3,058.67	3.32	-3.24	0.70
12,907.00	87.42	179.79	9,574.26	-3,151.44	-124.76	3,153.50	1.00	1.00	-0.06
13,001.00	88.30	179.80	9,577.77	-3,245.38	-124.42	3,247.40	0.94	0.94	0.01
13,095.00	88.54	178.52	9,580.36	-3,339.33	-123.05	3,341.29	1.38	0.26	-1.36
13,189.00	91.40	178.00	9,580.41	-3,433.28	-120.19	3,435.15	3.09	3.04	-0.55
13,283.00	92.66	178.82	9,577.08	-3,527.18	-117.59	3,528.96	1.60	1.34	0.87
13,378.00	92.18	178.00	9,573.07	-3,622.05	-114.95	3,623.75	1.00	-0.51	-0.86
13,472.00	91.57	176.73	9,569.99	-3,715.90	-110.63	3,717.47	1.50	-0.65	-1.35
13,566.00	87.71	178.21	9,570.58	-3,809.79	-106.48	3,811.24	4.40	-4.11	1.57
13,660.00	90.45	179.28	9,572.09	-3,903.74	-104.43	3,905.12	3.13	2.91	1.14
13,755.00	90.36	178.35	9,571.42	-3,998.72	-102.46	4,000.02	0.98	-0.09	-0.98
13,849.00	89.33	179.27	9,571.68	-4,092.70	-100.51	4,093.93	1.47	-1.10	0.98
13,943.00	92.30	179.85	9,570.34	-4,186.67	-99.79	4,187.86	3.22	3.16	0.62
14,038.00	94.76	181.92	9,564.49	-4,281.47	-101.25	4,282.67	3.38	2.59	2.18
14,132.00	93.08	181.79	9,558.06	-4,375.20	-104.29	4,376.44	1.79	-1.79	-0.14
14,225.00	89.58	180.65	9,555.91	-4,468.14	-106.26	4,469.40	3.96	-3.76	-1.23
14,309.00	88.61	179.18	9,557.23	-4,552.12	-106.14	4,553.36	2.10	-1.15	-1.76
Hardline Crossing									
14,319.00	88.50	179.00	9,557.48	-4,562.12	-105.98	4,563.35	2.10	-1.15	-1.76
14,359.00	88.20	179.10	9,558.63	-4,602.10	-105.31	4,603.30	0.79	-0.75	0.25
Final Phoenix MWD Survey									
14,415.00	88.20	179.10	9,560.39	-4,658.06	-104.44	4,659.23	0.00	0.00	0.00
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
402.00	401.99	-0.15	0.50	Tie In
447.00	446.98	-0.93	1.31	First Phoenix MWD Survey
14,309.00	9,557.23	-4,552.12	-106.14	Hardline Crossing
14,359.00	9,558.63	-4,602.10	-105.31	Final Phoenix MWD Survey
14,415.00	9,560.39	-4,658.06	-104.44	Projection to TD