

30-025-43095



**PHOENIX
TECHNOLOGY SERVICES**

August 17, 2016

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

HOBBS OCD

AUG 29 2016

RECEIVED

Dear District 1 - Hobbs

Re: BC Operating
Mammoth Federal 1H
Lea County, NM
API #30-025-43095
Job No. 60209

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. 606018). 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	1H	164	13,684	07/25/16	08/10/16	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,

Claudia Carreon

Claudia Carreon
Operations Administrator

Certified mail receipt number: 7015 0640 0000 9907 5555

Phoenix Technology Services
SURVEY DATA CERTIFICATION

AUG 29 2016

RECEIVED



PHOENIX JOB NUMBER

60209

ENERGY COMPANY BC Operating

WELL NAME Mammoth Federal 1H

COUNTY & STATE

Lea, New Mexico

API WELL NUMBER

30-025-43095

PROPOSED DIRECTION

359.50

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
.00 ft	.00 ft	0.00	0.00	.00 ft	.00 ft	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
25-Jul-16	164.00 ft	0.31°	221.96

SURVEY INSTRUMENT
TYPE

Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
10-Aug-16	13,684.00 ft	86.90	359.40

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

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
10-Aug-16	13,743.00 ft	86.90	359.40

Larry Seebeck

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

12-Aug

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.87
DECLINATION OR GRID	GRID

MWD SUPERVISOR 1

Larry Seebeck

DIRECTIONAL DRILLER 1

Vinn Adams

MWD SUPERVISOR 2

Jeff Arenas

DIRECTIONAL DRILLER 2

Ruben Cano



BC Operating, Inc.

Lea County, NM (NAD27 NME)

Mammoth Federal

1H

OH / Job 60209

Survey: Phoenix MWD Surveys

Standard Survey Report

11 August, 2016

HOBBS OCD

AUG 29 2016

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Company: BC Operating, Inc.
Project: Lea County, NM (NAD27 NME)
Site: Mammoth Federal
Well: 1H
Wellbore: OH / Job 60209
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB @ 3308.90usft (Patterson 244)
MD Reference: RKB @ 3308.90usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

Project	Lea County, NM (NAD27 NME)		
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 Mammoth Federal

Site Position:		Northing:	388,802.04 usft	Latitude:	32° 3' 56.20040 N
From:	Map	Easting:	784,204.93 usft	Longitude:	103° 24' 57.20704 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.49 °

Well 1H

Well Position	+N/-S	0.00 usft	Northing:	388,802.04 usft	Latitude:	32° 3' 56.20040 N
	+E/-W	0.00 usft	Easting:	784,204.93 usft	Longitude:	103° 24' 57.20704 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,280.40 usft

Wellbore OH / Job 60209

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/18/2016	6.87	59.82	48,029

Design Surveys (Patterson 244)

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	189.86

Survey Program Date 8/11/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
164.00	13,743.00	Phoenix MWD Surveys (OH / Job 60209)	PHX+MWD+HDGM	PHX+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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164.00	0.31	221.96	164.00	-0.33	-0.30	0.38	0.19	0.19	0.00
First Phoenix MWD Survey									
282.00	0.40	173.75	282.00	-0.98	-0.47	1.04	0.26	0.08	-40.86
398.00	0.51	156.65	397.99	-1.85	-0.22	1.86	0.15	0.09	-14.74
513.00	0.40	173.57	512.99	-2.72	0.03	2.68	0.15	-0.10	14.71
603.00	0.20	185.09	602.99	-3.19	0.05	3.13	0.23	-0.22	12.80
663.00	0.31	204.96	662.99	-3.44	-0.03	3.40	0.23	0.18	33.12
757.00	0.40	213.17	756.99	-3.95	-0.31	3.94	0.11	0.10	8.73
851.00	0.20	206.27	850.98	-4.37	-0.56	4.40	0.22	-0.21	-7.34
945.00	0.31	217.09	944.98	-4.72	-0.79	4.78	0.13	0.12	11.51

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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)
1,039.00	0.40	197.79	1,038.98	-5.23	-1.04	5.34	0.16	0.10	-20.53
1,076.00	0.51	196.56	1,075.98	-5.52	-1.13	5.63	0.30	0.30	-3.32
1,219.00	0.68	200.31	1,218.97	-6.92	-1.61	7.09	0.12	0.12	2.62
1,313.00	0.64	204.43	1,312.97	-7.92	-2.02	8.15	0.07	-0.04	4.38
1,407.00	0.62	208.27	1,406.96	-8.85	-2.47	9.14	0.05	-0.02	4.09
1,500.00	0.65	219.01	1,499.96	-9.70	-3.05	10.08	0.13	0.03	11.55
1,594.00	0.69	218.98	1,593.95	-10.56	-3.74	11.04	0.04	0.04	-0.03
1,688.00	0.69	225.60	1,687.94	-11.39	-4.50	11.99	0.08	0.00	7.04
1,783.00	0.60	219.42	1,782.94	-12.18	-5.22	12.89	0.12	-0.09	-6.51
1,877.00	0.57	211.24	1,876.93	-12.96	-5.78	13.75	0.09	-0.03	-8.70
1,971.00	0.65	200.94	1,970.93	-13.85	-6.21	14.71	0.14	0.09	-10.96
2,066.00	0.15	57.68	2,065.92	-14.29	-6.30	15.16	0.82	-0.53	-150.80
2,159.00	0.24	35.36	2,158.92	-14.07	-6.08	14.90	0.12	0.10	-24.00
2,253.00	0.41	54.63	2,252.92	-13.71	-5.69	14.48	0.21	0.18	20.50
2,346.00	0.53	58.61	2,345.92	-13.29	-5.06	13.96	0.13	0.13	4.28
2,441.00	0.50	54.72	2,440.92	-12.83	-4.34	13.38	0.05	-0.03	-4.09
2,535.00	0.59	57.24	2,534.91	-12.33	-3.60	12.76	0.10	0.10	2.68
2,629.00	0.89	62.51	2,628.90	-11.73	-2.55	11.99	0.33	0.32	5.61
2,723.00	1.13	58.89	2,722.89	-10.91	-1.10	10.94	0.26	0.26	-3.85
2,817.00	1.34	66.76	2,816.87	-10.00	0.70	9.73	0.29	0.22	8.37
2,911.00	1.64	70.43	2,910.83	-9.12	2.98	8.47	0.33	0.32	3.90
3,005.00	1.81	72.25	3,004.79	-8.21	5.66	7.12	0.19	0.18	1.94
3,099.00	1.13	39.60	3,098.76	-7.05	7.66	5.63	1.12	-0.72	-34.73
3,193.00	1.32	39.64	3,192.74	-5.50	8.94	3.89	0.20	0.20	0.04
3,287.00	1.56	37.79	3,286.71	-3.65	10.42	1.82	0.26	0.26	-1.97
3,381.00	2.02	43.32	3,380.67	-1.44	12.34	-0.70	0.52	0.49	5.88
3,475.00	1.42	38.19	3,474.62	0.68	14.20	-3.10	0.66	-0.64	-5.46
3,569.00	1.13	25.89	3,568.60	2.43	15.32	-5.02	0.42	-0.31	-13.09
3,663.00	1.53	19.78	3,662.57	4.45	16.15	-7.15	0.45	0.43	-6.50
3,757.00	1.74	13.20	3,756.54	7.02	16.90	-9.81	0.30	0.22	-7.00
3,851.00	0.70	334.09	3,850.51	8.92	16.98	-11.70	1.36	-1.11	-41.61
3,944.00	1.48	255.42	3,943.50	9.13	15.57	-11.66	1.62	0.84	-84.59
4,039.00	1.68	259.45	4,038.46	8.57	13.01	-10.67	0.24	0.21	4.24
4,133.00	1.20	279.34	4,132.44	8.48	10.68	-10.18	0.73	-0.51	21.16
4,227.00	1.30	279.79	4,226.41	8.82	8.66	-10.17	0.11	0.11	0.48
4,321.00	1.51	278.65	4,320.38	9.19	6.39	-10.14	0.23	0.22	-1.21
4,415.00	1.72	279.31	4,414.35	9.60	3.77	-10.10	0.22	0.22	0.70
4,509.00	1.75	254.18	4,508.31	9.44	1.00	-9.47	0.80	0.03	-26.73
4,603.00	1.62	239.42	4,602.27	8.37	-1.53	-7.98	0.48	-0.14	-15.70
4,698.00	1.20	221.81	4,697.24	6.94	-3.35	-6.27	0.63	-0.44	-18.54
4,791.00	1.10	211.63	4,790.22	5.46	-4.47	-4.61	0.24	-0.11	-10.95
4,885.00	1.17	188.08	4,884.20	3.74	-5.07	-2.82	0.50	0.07	-25.05
4,979.00	1.80	154.93	4,978.17	1.45	-4.58	-0.65	1.11	0.67	-35.27

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5,073.00	2.59	141.94	5,072.10	-1.56	-2.65	1.99	0.99	0.84	-13.82
5,167.00	1.17	154.49	5,166.05	-4.09	-0.92	4.19	1.56	-1.51	13.35
5,261.00	0.53	171.98	5,260.04	-5.39	-0.45	5.39	0.73	-0.68	18.61
5,333.00	0.61	174.72	5,332.03	-6.10	-0.37	6.08	0.12	0.11	3.81
5,399.00	0.81	173.03	5,398.03	-6.92	-0.28	6.86	0.30	0.30	-2.56
5,493.00	0.81	173.42	5,492.02	-8.24	-0.12	8.14	0.01	0.00	0.41
5,587.00	0.81	170.35	5,586.01	-9.55	0.06	9.40	0.05	0.00	-3.27
5,681.00	0.79	166.70	5,680.00	-10.84	0.32	10.62	0.06	-0.02	-3.88
5,774.00	0.85	173.80	5,772.99	-12.15	0.55	11.87	0.13	0.06	7.63
5,866.00	0.97	170.10	5,864.98	-13.59	0.75	13.26	0.15	0.13	-4.02
5,959.00	0.99	167.73	5,957.97	-15.15	1.06	14.75	0.05	0.02	-2.55
6,052.00	0.99	173.75	6,050.95	-16.74	1.32	16.26	0.11	0.00	6.47
6,144.00	1.03	171.22	6,142.94	-18.34	1.53	17.81	0.07	0.04	-2.75
6,236.00	1.11	169.24	6,234.92	-20.04	1.82	19.43	0.10	0.09	-2.15
6,328.00	1.05	170.23	6,326.91	-21.74	2.13	21.06	0.07	-0.07	1.08
6,421.00	0.89	174.81	6,419.89	-23.30	2.34	22.56	0.19	-0.17	4.92
6,513.00	1.04	180.54	6,511.88	-24.85	2.40	24.07	0.19	0.16	6.23
6,605.00	0.14	267.76	6,603.87	-25.69	2.28	24.92	1.13	-0.98	94.80
6,698.00	0.10	2.45	6,696.87	-25.61	2.17	24.86	0.19	-0.04	101.82
6,790.00	0.16	342.24	6,788.87	-25.41	2.13	24.67	0.08	0.07	-21.97
6,883.00	0.22	355.00	6,881.87	-25.11	2.08	24.38	0.08	0.06	13.72
6,975.00	0.20	331.25	6,973.87	-24.79	1.99	24.08	0.10	-0.02	-25.82
7,067.00	0.27	336.73	7,065.87	-24.45	1.82	23.78	0.08	0.08	5.96
7,161.00	0.11	332.22	7,159.87	-24.17	1.69	23.52	0.17	-0.17	-4.80
7,255.00	0.17	293.13	7,253.87	-24.03	1.52	23.42	0.12	0.06	-41.59
7,349.00	0.19	271.31	7,347.87	-23.97	1.24	23.41	0.08	0.02	-23.21
7,443.00	0.15	236.51	7,441.87	-24.04	0.98	23.51	0.12	-0.04	-37.02
7,537.00	0.30	208.55	7,535.87	-24.32	0.76	23.83	0.19	0.16	-29.74
7,631.00	0.32	208.66	7,629.87	-24.77	0.52	24.31	0.02	0.02	0.12
7,726.00	0.54	228.80	7,724.86	-25.30	0.05	24.91	0.28	0.23	21.20
7,820.00	0.70	219.81	7,818.86	-26.03	-0.65	25.76	0.20	0.17	-9.56
7,914.00	0.82	220.48	7,912.85	-26.98	-1.45	26.83	0.13	0.13	0.71
8,008.00	1.06	207.26	8,006.84	-28.27	-2.29	28.24	0.34	0.26	-14.06
8,102.00	0.67	265.64	8,100.83	-29.08	-3.23	29.20	0.97	-0.41	62.11
8,196.00	0.97	271.15	8,194.82	-29.11	-4.58	29.46	0.33	0.32	5.86
8,290.00	0.21	353.71	8,288.81	-28.92	-5.39	29.42	1.03	-0.81	87.83
8,384.00	0.33	62.42	8,382.81	-28.62	-5.17	29.09	0.34	0.13	73.10
8,479.00	2.28	15.52	8,477.79	-26.67	-4.42	27.04	2.18	2.05	-49.37
8,526.00	3.52	11.56	8,524.72	-24.36	-3.88	24.67	2.67	2.64	-8.43
8,573.00	6.69	2.11	8,571.53	-20.21	-3.49	20.51	6.96	6.74	-20.11
8,620.00	11.31	358.54	8,617.94	-12.86	-3.51	13.27	9.90	9.83	-7.60
8,667.00	15.15	358.27	8,663.69	-2.11	-3.81	2.73	8.17	8.17	-0.57
8,714.00	19.53	358.39	8,708.54	11.89	-4.22	-10.99	9.32	9.32	0.26

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8,761.00	24.10	358.05	8,752.16	29.34	-4.77	-28.09	9.73	9.72	-0.72
8,808.00	29.21	358.04	8,794.15	50.40	-5.49	-48.72	10.87	10.87	-0.02
8,855.00	34.57	359.21	8,834.04	75.22	-6.06	-73.07	11.48	11.40	2.49
8,902.00	39.83	0.35	8,871.47	103.62	-6.15	-101.04	11.29	11.19	2.43
8,949.00	43.91	0.92	8,906.46	134.98	-5.80	-132.00	8.72	8.68	1.21
8,996.00	47.34	0.42	8,939.33	168.57	-5.41	-165.15	7.34	7.30	-1.06
9,043.00	51.16	359.92	8,970.00	204.17	-5.31	-200.24	8.17	8.13	-1.06
9,090.00	55.62	359.75	8,998.02	241.89	-5.42	-237.39	9.49	9.49	-0.36
9,137.00	59.18	358.82	9,023.34	281.47	-5.92	-276.30	7.76	7.57	-1.98
9,184.00	61.61	357.84	9,046.56	322.31	-7.12	-316.34	5.48	5.17	-2.09
9,231.00	63.91	357.16	9,068.07	364.06	-8.94	-357.15	5.06	4.89	-1.45
9,278.00	67.49	358.04	9,087.41	406.85	-10.73	-399.01	7.81	7.62	1.87
9,325.00	74.17	358.87	9,102.83	451.20	-11.92	-442.50	14.31	14.21	1.77
9,372.00	81.18	0.00	9,112.86	497.09	-12.37	-487.63	15.10	14.91	2.40
9,419.00	83.92	0.28	9,118.95	543.69	-12.25	-533.56	5.86	5.83	0.60
9,466.00	87.33	1.96	9,122.54	590.53	-11.33	-579.87	8.08	7.26	3.57
9,513.00	89.94	2.17	9,123.66	637.48	-9.64	-626.42	5.57	5.55	0.45
9,607.00	91.93	1.09	9,122.12	731.43	-6.97	-719.43	2.41	2.12	-1.15
9,701.00	89.21	357.29	9,121.19	825.39	-8.30	-811.78	4.97	-2.89	-4.04
9,796.00	90.89	356.05	9,121.11	920.22	-13.82	-904.27	2.20	1.77	-1.31
9,890.00	90.52	357.00	9,119.95	1,014.04	-19.51	-995.73	1.08	-0.39	1.01
9,984.00	89.15	359.61	9,120.22	1,107.99	-22.29	-1,087.81	3.14	-1.46	2.78
10,078.00	90.53	2.24	9,120.48	1,201.96	-20.77	-1,180.66	3.16	1.47	2.80
10,172.00	88.67	1.48	9,121.14	1,295.91	-17.72	-1,273.74	2.14	-1.98	-0.81
10,266.00	89.66	2.74	9,122.51	1,389.83	-14.26	-1,366.87	1.70	1.05	1.34
10,360.00	89.49	0.19	9,123.21	1,483.79	-11.86	-1,459.85	2.72	-0.18	-2.71
10,454.00	90.57	0.59	9,123.16	1,577.79	-11.22	-1,552.57	1.23	1.15	0.43
10,548.00	90.81	0.29	9,122.02	1,671.78	-10.50	-1,645.29	0.41	0.26	-0.32
10,642.00	90.86	359.97	9,120.65	1,765.77	-10.29	-1,737.93	0.34	0.05	-0.34
10,736.00	91.43	0.49	9,118.78	1,859.75	-9.91	-1,830.59	0.82	0.61	0.55
10,830.00	91.17	359.88	9,116.64	1,953.72	-9.61	-1,923.23	0.71	-0.28	-0.65
10,924.00	91.03	359.61	9,114.84	2,047.70	-10.02	-2,015.75	0.32	-0.15	-0.29
11,018.00	92.21	359.66	9,112.18	2,141.66	-10.62	-2,108.22	1.26	1.26	0.05
11,112.00	89.57	359.45	9,110.72	2,235.64	-11.35	-2,200.68	2.82	-2.81	-0.22
11,206.00	88.76	358.78	9,112.09	2,329.62	-12.80	-2,293.02	1.12	-0.86	-0.71
11,297.00	88.20	359.00	9,114.51	2,420.57	-14.57	-2,382.33	0.66	-0.62	0.24
11,392.00	89.30	359.90	9,116.58	2,515.54	-15.48	-2,475.74	1.50	1.16	0.95
11,486.00	89.60	2.60	9,117.48	2,609.50	-13.43	-2,568.67	2.89	0.32	2.87
11,580.00	88.50	0.30	9,119.04	2,703.45	-11.05	-2,661.64	2.71	-1.17	-2.45
11,674.00	89.60	3.50	9,120.60	2,797.37	-7.93	-2,754.71	3.60	1.17	3.40
11,768.00	88.70	2.00	9,121.99	2,891.25	-3.42	-2,847.97	1.86	-0.96	-1.60
11,862.00	88.00	0.40	9,124.70	2,985.19	-1.46	-2,940.86	1.86	-0.74	-1.70
11,956.00	88.20	359.40	9,127.82	3,079.13	-1.62	-3,033.39	1.08	0.21	-1.06
12,050.00	88.40	359.10	9,130.60	3,173.09	-2.85	-3,125.74	0.38	0.21	-0.32

Company: BC Operating, Inc.
Project: Lea County, NM (NAD27 NME)
Site: Mammoth Federal
Well: 1H
Wellbore: OH / Job 60209
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 1H
TVD Reference: RKB @ 3308.90usft (Patterson 244)
MD Reference: RKB @ 3308.90usft (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)
12,144.00	90.80	359.50	9,131.26	3,267.07	-4.00	-3,218.14	2.59	2.55	0.43
12,238.00	91.40	358.90	9,129.46	3,361.04	-5.31	-3,310.50	0.90	0.64	-0.64
12,332.00	92.00	358.30	9,126.67	3,454.97	-7.60	-3,402.65	0.90	0.64	-0.64
12,426.00	92.00	356.90	9,123.39	3,548.83	-11.54	-3,494.45	1.49	0.00	-1.49
12,520.00	92.20	356.60	9,119.94	3,642.61	-16.86	-3,585.94	0.38	0.21	-0.32
12,614.00	92.00	356.80	9,116.50	3,736.40	-22.27	-3,677.41	0.30	-0.21	0.21
12,709.00	91.60	356.60	9,113.51	3,831.19	-27.74	-3,769.87	0.47	-0.42	-0.21
12,802.00	91.50	356.90	9,111.00	3,924.01	-33.01	-3,860.41	0.34	-0.11	0.32
12,897.00	89.30	358.20	9,110.33	4,018.91	-37.07	-3,953.22	2.69	-2.32	1.37
12,991.00	88.40	358.60	9,112.22	4,112.85	-39.69	-4,045.33	1.05	-0.96	0.43
13,085.00	87.30	357.80	9,115.75	4,206.74	-42.64	-4,137.32	1.45	-1.17	-0.85
13,179.00	91.50	359.00	9,116.73	4,300.67	-45.27	-4,229.42	4.65	4.47	1.28
13,273.00	90.60	358.90	9,115.01	4,394.64	-46.99	-4,321.70	0.96	-0.96	-0.11
13,367.00	88.30	358.60	9,115.91	4,488.61	-49.04	-4,413.93	2.47	-2.45	-0.32
13,461.00	88.70	359.10	9,118.37	4,582.56	-50.92	-4,506.17	0.68	0.43	0.53
13,556.00	88.30	359.20	9,120.86	4,677.51	-52.33	-4,599.48	0.43	-0.42	0.11
13,650.00	87.50	359.10	9,124.30	4,771.44	-53.73	-4,691.78	0.86	-0.85	-0.11
13,684.00	86.90	359.40	9,125.96	4,805.40	-54.17	-4,725.16	1.97	-1.76	0.88
Final Phoenix MWD Survey									
13,743.00	86.90	359.40	9,129.16	4,864.31	-54.79	-4,783.10	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)	
164.00	164.00	-0.33	-0.30	First Phoenix MWD Survey
13,684.00	9,125.96	4,805.40	-54.17	Final Phoenix MWD Survey
13,743.00	9,129.16	4,864.31	-54.79	Projection to TD