

30-025-42699



**PHOENIX
TECHNOLOGY SERVICES**

September 28, 2016

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

Dear District 1 - Hobbs

Re: McElvain Energy, Inc.
EK 29 BS2 Federal Com 3H
Lea Co., New Mexico
API #30-025-42699
Job No. 60185

HOBBS OCD
OCT 04 2016
RECEIVED

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	
Bill Oehlert	3H	1,833	14,759	08/13/16	08/30/16	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 5609

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER **60185**

ENERGY COMPANY **McElvain Energy Inc.**

WELL NAME **EK 29 BS2 Federal Com 3H**

COUNTY & STATE

Lea New Mexico

API WELL NUMBER **30-025-42699**

PROPOSED DIRECTION

357.19

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
1,785.00 ft	1,784.94 ft	0.31	178.49	-2.39 ft	11.76 ft	Gyro

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
13-Aug-16	1,833.00 ft	0.40	104.90

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
30-Aug-16	14,759.00 ft	92.90	351.60

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
30-Aug-16	14,814.00 ft	92.90	351.60

William (Bill) Oehlert

PRINT YOUR NAME ABOVE

Bill Oehlert

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.41
DECLINATION OR GRID	GRID

8/31/2016

TODAY'S DATE

MWD SUPERVISOR 1

BILL OEHLERT

DIRECTIONAL DRILLER 1

Drew Wright

MWD SUPERVISOR 2

0

DIRECTIONAL DRILLER 2

0

12329 Cutten Rd., Houston, Texas 777066 (713)337-0600 (Voice), (713)337-0599 (Fax)



McElvain Energy, Inc.

Lea County, NM (NAD83)

EK 29 BS2 Federal Com

3H

OH / Job 60185

Survey: Phoenix MWD Surveys

Standard Survey Report

30 August, 2016





Phoenix Technology Services LP

Survey Report



Company: McElvain Energy, Inc.
 Project: Lea County, NM (NAD83)
 Site: EK 29 BS2 Federal Com
 Well: 3H
 Wellbore: OH / Job 60185
 Design: Surveys (H&P 497)

Local Co-ordinate Reference: Well 3H
 TVD Reference: RKB @ 3968.00usft (H&P 497)
 MD Reference: RKB @ 3968.00usft (H&P 497)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Compass 5000 GCR

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site EK 29 BS2 Federal Com

Site Position: Northing: 623,533.90 usft Latitude: 32° 42' 42.98578 N
 From: Map Easting: 769,543.90 usft Longitude: 103° 35' 28.94512 W
 Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: 0.40 °

Well 3H

Well Position +N/-S 0.00 usft Northing: 623,679.60 usft Latitude: 32° 42' 44.27059 N
 +E/-W 0.00 usft Easting: 771,797.20 usft Longitude: 103° 35' 2.56113 W
 Position Uncertainty 0.00 usft Wellhead Elevation: 0.00 usft Ground Level: 3,943.00 usft

Wellbore OH / Job 60185

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/25/2016	6.82	60.78	48,467

Design Surveys (H&P 497)

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 (°)
	0.00	0.00	0.00	357.19

Survey Program Date 8/30/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
118.00	1,785.00	VES Gyro Surveys (OH / Job 60185 (Surfa	NS-GYRO-MS	North sensing gyrocompassing m/s
1,833.00	14,814.00	Phoenix MWD Surveys (OH / Job 60185)	PHX+MWD+HDGM	PHX+OWSG 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)
1,785.00	0.31	178.49	1,784.94	-2.39	11.76	-2.96	0.00	0.00	0.00
1,785.01	0.31	178.49	1,784.95	-2.39	11.76	-2.96	0.00	0.00	0.00
Tie In to VES Gyros									
1,833.00	0.40	104.90	1,832.94	-2.56	11.93	-3.14	0.90	0.19	-153.33
First Phoenix MWD Survey									
1,928.00	0.30	83.90	1,927.94	-2.62	12.49	-3.23	0.17	-0.11	-22.11
2,069.00	0.30	155.70	2,068.94	-2.92	13.01	-3.55	0.25	0.00	50.92
2,163.00	0.30	148.90	2,162.94	-3.35	13.24	-4.00	0.04	0.00	-7.23
2,258.00	0.30	90.20	2,257.94	-3.57	13.62	-4.23	0.31	0.00	-61.79



Phoenix Technology Services LP

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 MD Reference: RKB @ 3968.00usft (H&P 497)
 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)
2,352.00	0.50	132.60	2,351.94	-3.85	14.17	-4.54	0.37	0.21	45.11
2,446.00	0.40	122.40	2,445.93	-4.30	14.74	-5.02	0.14	-0.11	-10.85
2,540.00	0.50	131.00	2,539.93	-4.74	15.33	-5.49	0.13	0.11	9.15
2,635.00	0.90	99.70	2,634.92	-5.14	16.38	-5.94	0.57	0.42	-32.95
2,729.00	1.00	100.50	2,728.91	-5.42	17.91	-6.29	0.11	0.11	0.85
2,823.00	1.10	87.00	2,822.89	-5.52	19.62	-6.47	0.28	0.11	-14.36
2,918.00	1.10	93.80	2,917.88	-5.53	21.44	-6.58	0.14	0.00	7.16
3,012.00	1.10	84.10	3,011.86	-5.50	23.24	-6.63	0.20	0.00	-10.32
3,106.00	1.40	94.70	3,105.84	-5.50	25.28	-6.73	0.40	0.32	11.28
3,200.00	1.10	100.60	3,199.81	-5.76	27.31	-7.09	0.35	-0.32	6.28
3,295.00	0.60	96.70	3,294.80	-5.99	28.70	-7.39	0.53	-0.53	-4.11
3,389.00	0.80	105.70	3,388.80	-6.22	29.82	-7.67	0.24	0.21	9.57
3,483.00	0.40	240.10	3,482.79	-6.56	30.17	-8.03	1.19	-0.43	142.98
3,578.00	0.40	258.50	3,577.79	-6.79	29.56	-8.23	0.13	0.00	19.37
3,672.00	0.40	271.60	3,671.79	-6.85	28.91	-8.26	0.10	0.00	13.94
3,766.00	0.40	263.90	3,765.79	-6.87	28.25	-8.25	0.06	0.00	-8.19
3,861.00	0.70	275.50	3,860.78	-6.85	27.35	-8.19	0.34	0.32	12.21
3,955.00	0.50	295.40	3,954.78	-6.62	26.41	-7.91	0.30	-0.21	21.17
4,049.00	0.60	262.40	4,048.77	-6.51	25.55	-7.76	0.35	0.11	-35.11
4,144.00	0.40	279.80	4,143.77	-6.52	24.73	-7.73	0.26	-0.21	18.32
4,238.00	0.80	284.60	4,237.76	-6.30	23.77	-7.46	0.43	0.43	5.11
4,333.00	0.70	273.80	4,332.76	-6.10	22.55	-7.19	0.18	-0.11	-11.37
4,427.00	0.60	274.00	4,426.75	-6.02	21.48	-7.07	0.11	-0.11	0.21
4,522.00	0.80	278.40	4,521.74	-5.89	20.33	-6.88	0.22	0.21	4.63
4,616.00	0.60	299.30	4,615.74	-5.55	19.25	-6.49	0.34	-0.21	22.23
4,711.00	0.80	280.90	4,710.73	-5.19	18.17	-6.07	0.31	0.21	-19.37
4,805.00	0.80	297.00	4,804.72	-4.76	16.94	-5.59	0.24	0.00	17.13
4,878.00	0.50	285.60	4,877.72	-4.45	16.18	-5.23	0.45	-0.41	-15.62
5,010.00	1.00	309.90	5,009.70	-3.55	14.74	-4.27	0.44	0.38	18.41
5,105.00	0.80	304.20	5,104.69	-2.65	13.56	-3.31	0.23	-0.21	-6.00
5,199.00	0.70	292.30	5,198.68	-2.06	12.48	-2.67	0.20	-0.11	-12.66
5,294.00	0.70	275.70	5,293.68	-1.78	11.37	-2.34	0.21	0.00	-17.47
5,388.00	0.60	260.60	5,387.67	-1.81	10.31	-2.31	0.21	-0.11	-16.06
5,483.00	1.00	258.70	5,482.66	-2.05	9.01	-2.49	0.42	0.42	-2.00
5,577.00	1.00	255.10	5,576.65	-2.42	7.41	-2.78	0.07	0.00	-3.83
5,672.00	1.50	252.70	5,671.62	-3.01	5.42	-3.27	0.53	0.53	-2.53
5,767.00	1.60	266.30	5,766.59	-3.46	2.91	-3.60	0.40	0.11	14.32
5,861.00	1.80	276.10	5,860.55	-3.39	0.13	-3.39	0.37	0.21	10.43
5,956.00	1.60	273.70	5,955.51	-3.14	-2.67	-3.01	0.22	-0.21	-2.53
6,050.00	1.60	280.50	6,049.47	-2.82	-5.27	-2.56	0.20	0.00	7.23
6,145.00	1.20	262.20	6,144.44	-2.71	-7.56	-2.34	0.63	-0.42	-19.26
6,239.00	1.60	180.20	6,238.42	-4.16	-8.54	-3.74	1.98	0.43	-87.23
6,333.00	3.60	163.50	6,332.32	-8.30	-7.71	-7.91	2.25	2.13	-17.77



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6,428.00	4.70	157.60	6,427.07	-14.76	-5.38	-14.48	1.24	1.16	-6.21
6,522.00	5.80	159.30	6,520.68	-22.76	-2.23	-22.63	1.18	1.17	1.81
6,617.00	5.70	159.40	6,615.20	-31.67	1.12	-31.69	0.11	-0.11	0.11
6,711.00	5.80	159.10	6,708.73	-40.48	4.46	-40.65	0.11	0.11	-0.32
6,806.00	5.50	162.20	6,803.26	-49.30	7.56	-49.61	0.45	-0.32	3.26
6,900.00	5.70	165.30	6,896.82	-58.10	10.13	-58.53	0.39	0.21	3.30
6,994.00	5.40	170.30	6,990.38	-66.98	12.06	-67.49	0.61	-0.32	5.32
7,089.00	5.70	173.10	7,084.93	-76.07	13.38	-76.63	0.43	0.32	2.95
7,183.00	5.60	176.00	7,178.47	-85.28	14.26	-85.87	0.32	-0.11	3.09
7,278.00	5.60	176.90	7,273.02	-94.53	14.83	-95.14	0.09	0.00	0.95
7,372.00	5.40	176.30	7,366.59	-103.52	15.36	-104.15	0.22	-0.21	-0.64
7,467.00	5.20	175.60	7,461.18	-112.27	15.98	-112.92	0.22	-0.21	-0.74
7,561.00	4.70	178.10	7,554.83	-120.37	16.44	-121.03	0.58	-0.53	2.66
7,656.00	4.70	186.40	7,649.51	-128.13	16.13	-128.77	0.72	0.00	8.74
7,750.00	5.70	188.20	7,743.12	-136.58	15.04	-137.15	1.08	1.06	1.91
7,845.00	5.50	189.00	7,837.67	-145.74	13.65	-146.24	0.23	-0.21	0.84
7,939.00	5.00	188.20	7,931.28	-154.25	12.36	-154.67	0.54	-0.53	-0.85
8,033.00	4.60	191.70	8,024.95	-161.99	11.01	-162.34	0.53	-0.43	3.72
8,128.00	5.10	183.20	8,119.61	-169.94	10.01	-170.22	0.92	0.53	-8.95
8,222.00	5.00	185.30	8,213.24	-178.19	9.40	-178.43	0.22	-0.11	2.23
8,317.00	4.60	185.30	8,307.91	-186.10	8.66	-186.30	0.42	-0.42	0.00
8,411.00	5.90	167.40	8,401.52	-194.57	9.37	-194.80	2.21	1.38	-19.04
8,506.00	6.00	167.40	8,496.01	-204.18	11.51	-204.50	0.11	0.11	0.00
8,601.00	5.30	165.20	8,590.54	-213.27	13.72	-213.69	0.77	-0.74	-2.32
8,695.00	4.80	162.10	8,684.18	-221.21	16.04	-221.73	0.61	-0.53	-3.30
8,789.00	4.40	161.10	8,777.88	-228.36	18.41	-228.99	0.43	-0.43	-1.06
8,883.00	4.10	157.30	8,871.62	-234.88	20.88	-235.62	0.44	-0.32	-4.04
8,978.00	4.20	159.60	8,966.37	-241.27	23.40	-242.13	0.20	0.11	2.42
9,072.00	3.00	163.90	9,060.18	-246.86	25.28	-247.80	1.31	-1.28	4.57
9,166.00	2.90	160.80	9,154.06	-251.47	26.75	-252.48	0.20	-0.11	-3.30
9,260.00	1.70	191.90	9,247.98	-255.08	27.24	-256.11	1.80	-1.28	33.09
9,355.00	1.40	191.60	9,342.95	-257.59	26.72	-258.59	0.32	-0.32	-0.32
9,434.00	1.20	193.50	9,421.93	-259.34	26.33	-260.32	0.26	-0.25	2.41
9,528.00	5.60	1.00	9,515.80	-255.71	26.18	-256.69	7.21	4.68	178.19
9,560.00	12.00	355.30	9,547.41	-250.83	25.94	-251.80	20.16	20.00	-17.81
9,591.00	17.50	352.80	9,577.38	-242.99	25.09	-243.93	17.86	17.74	-8.06
9,623.00	21.20	351.70	9,607.57	-232.49	23.65	-233.37	11.62	11.56	-3.44
9,654.00	25.60	350.80	9,636.01	-220.32	21.77	-221.12	14.24	14.19	-2.90
9,685.00	29.40	349.70	9,663.50	-206.22	19.33	-206.92	12.37	12.26	-3.55
9,717.00	31.70	351.20	9,691.06	-190.18	16.64	-190.77	7.57	7.19	4.69
9,748.00	33.50	354.20	9,717.17	-173.62	14.53	-174.12	7.80	5.81	9.68
9,780.00	35.20	354.40	9,743.59	-155.65	12.74	-156.09	5.32	5.31	0.63
9,811.00	36.80	353.60	9,768.67	-137.53	10.83	-137.90	5.38	5.16	-2.58
9,842.00	38.60	353.10	9,793.20	-118.70	8.64	-118.98	5.89	5.81	-1.61



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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)
9,874.00	40.60	351.60	9,817.85	-98.49	5.92	-98.66	6.93	6.25	-4.69
9,905.00	43.40	351.10	9,840.89	-77.98	2.79	-78.03	9.10	9.03	-1.61
9,937.00	46.50	351.70	9,863.53	-55.63	-0.58	-55.54	9.78	9.69	1.88
9,968.00	49.40	352.30	9,884.30	-32.84	-3.78	-32.62	9.46	9.35	1.94
10,000.00	51.50	353.30	9,904.67	-8.36	-6.87	-8.02	6.99	6.56	3.13
10,031.00	54.20	354.30	9,923.39	16.20	-9.54	16.65	9.08	8.71	3.23
10,063.00	56.40	355.20	9,941.61	42.40	-11.94	42.93	7.25	6.88	2.81
10,094.00	59.10	355.60	9,958.15	68.53	-14.04	69.13	8.78	8.71	1.29
10,126.00	64.10	355.10	9,973.36	96.57	-16.33	97.26	15.69	15.63	-1.56
10,157.00	67.20	355.80	9,986.14	124.72	-18.56	125.48	10.21	10.00	2.26
10,189.00	69.90	355.70	9,997.84	154.42	-20.77	155.25	8.44	8.44	-0.31
10,220.00	72.10	356.80	10,007.94	183.67	-22.69	184.56	7.85	7.10	3.55
10,251.00	74.70	358.90	10,016.79	213.35	-23.80	214.26	10.61	8.39	6.77
10,283.00	77.60	0.80	10,024.45	244.42	-23.88	245.29	10.74	9.06	5.94
10,314.00	81.30	3.10	10,030.13	274.87	-22.84	275.66	13.99	11.94	7.42
10,340.00	83.40	3.50	10,033.59	300.59	-21.35	301.28	8.22	8.08	1.54
10,371.00	85.70	3.70	10,036.53	331.39	-19.41	331.94	7.45	7.42	0.65
10,403.00	87.80	2.80	10,038.35	363.28	-17.60	363.71	7.14	6.56	-2.81
10,434.00	89.90	1.00	10,038.97	394.26	-16.58	394.59	8.92	6.77	-5.81
10,528.00	93.10	358.70	10,036.51	488.21	-16.82	488.44	4.19	3.40	-2.45
10,623.00	91.50	357.50	10,032.70	583.07	-19.97	583.35	2.10	-1.68	-1.26
10,717.00	90.00	357.50	10,031.47	676.97	-24.07	677.34	1.60	-1.60	0.00
10,811.00	90.60	357.90	10,030.97	770.89	-27.84	771.33	0.77	0.64	0.43
10,906.00	92.50	358.60	10,028.40	865.81	-30.74	866.28	2.13	2.00	0.74
11,000.00	93.60	358.70	10,023.40	959.65	-32.95	960.11	1.18	1.17	0.11
11,095.00	93.80	358.70	10,017.27	1,054.43	-35.10	1,054.88	0.21	0.21	0.00
11,189.00	92.80	359.60	10,011.86	1,148.26	-36.49	1,148.67	1.43	-1.06	0.96
11,284.00	91.70	359.90	10,008.13	1,243.18	-36.91	1,243.50	1.20	-1.16	0.32
11,378.00	92.90	358.00	10,004.36	1,337.09	-38.63	1,337.37	2.39	1.28	-2.02
11,472.00	92.10	356.00	10,000.26	1,430.86	-43.54	1,431.28	2.29	-0.85	-2.13
11,567.00	93.40	355.80	9,995.70	1,525.51	-50.33	1,526.14	1.38	1.37	-0.21
11,661.00	92.60	355.70	9,990.78	1,619.12	-57.28	1,619.98	0.86	-0.85	-0.11
11,756.00	92.10	356.00	9,986.88	1,713.79	-64.15	1,714.87	0.61	-0.53	0.32
11,850.00	91.60	354.90	9,983.85	1,807.44	-71.61	1,808.78	1.28	-0.53	-1.17
11,945.00	93.80	354.70	9,979.38	1,901.94	-80.21	1,903.59	2.33	2.32	-0.21
12,039.00	94.10	355.40	9,972.90	1,995.37	-88.30	1,997.30	0.81	0.32	0.74
12,133.00	91.30	356.00	9,968.47	2,088.99	-95.34	2,091.15	3.05	-2.98	0.64
12,227.00	92.10	356.40	9,965.68	2,182.74	-101.56	2,185.10	0.95	0.85	0.43
12,322.00	91.30	356.20	9,962.87	2,277.50	-107.69	2,280.04	0.87	-0.84	-0.21
12,416.00	92.10	356.00	9,960.08	2,371.24	-114.08	2,373.98	0.88	0.85	-0.21
12,510.00	90.50	355.90	9,957.94	2,464.98	-120.72	2,467.93	1.71	-1.70	-0.11
12,604.00	89.10	355.90	9,958.27	2,558.73	-127.44	2,561.91	1.49	-1.49	0.00
12,699.00	90.90	355.40	9,958.27	2,653.46	-134.65	2,656.87	1.97	1.89	-0.53



Phoenix Technology Services LP
Survey Report



Company: McElvain Energy, Inc.
Project: Lea County, NM (NAD83)
Site: EK 29 BS2 Federal Com
Well: 3H
Wellbore: OH / Job 60185
Design: Surveys (H&P 497)

Local Co-ordinate Reference: Well 3H
TVD Reference: RKB @ 3968.00usft (H&P 497)
MD Reference: RKB @ 3968.00usft (H&P 497)
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)
12,793.00	90.00	356.00	9,957.53	2,747.19	-141.69	2,750.83	1.15	-0.96	0.64
12,887.00	91.70	355.60	9,956.14	2,840.92	-148.58	2,844.79	1.86	1.81	-0.43
12,981.00	91.80	356.00	9,953.27	2,934.63	-155.46	2,938.72	0.44	0.11	0.43
13,076.00	90.40	357.10	9,951.45	3,029.43	-161.17	3,033.69	1.87	-1.47	1.16
13,170.00	92.10	356.80	9,949.39	3,123.27	-166.17	3,127.66	1.84	1.81	-0.32
13,264.00	91.50	357.40	9,946.44	3,217.11	-170.93	3,221.62	0.90	-0.64	0.64
13,359.00	93.20	357.30	9,942.55	3,311.92	-175.31	3,316.53	1.79	1.79	-0.11
13,453.00	92.60	357.50	9,937.79	3,405.70	-179.57	3,410.41	0.67	-0.64	0.21
13,547.00	91.70	357.40	9,934.26	3,499.54	-183.75	3,504.34	0.96	-0.96	-0.11
13,641.00	90.70	357.40	9,932.30	3,593.42	-188.02	3,598.32	1.06	-1.06	0.00
13,735.00	92.80	357.20	9,929.43	3,687.27	-192.44	3,692.27	2.24	2.23	-0.21
13,829.00	90.90	357.30	9,926.39	3,781.11	-196.95	3,786.22	2.02	-2.02	0.11
13,923.00	91.80	357.50	9,924.18	3,874.99	-201.21	3,880.19	0.98	0.96	0.21
14,018.00	93.60	356.90	9,919.70	3,969.76	-205.85	3,975.08	2.00	1.89	-0.63
14,112.00	93.80	356.90	9,913.64	4,063.43	-210.92	4,068.88	0.21	0.21	0.00
14,207.00	92.30	356.60	9,908.58	4,158.14	-216.30	4,163.74	1.61	-1.58	-0.32
14,301.00	93.30	355.50	9,903.99	4,251.80	-222.76	4,257.61	1.58	1.06	-1.17
14,395.00	93.50	354.20	9,898.41	4,345.25	-231.19	4,351.36	1.40	0.21	-1.38
14,489.00	92.00	354.20	9,893.90	4,438.66	-240.68	4,445.13	1.60	-1.60	0.00
14,584.00	92.20	353.00	9,890.42	4,533.01	-251.26	4,539.87	1.28	0.21	-1.26
14,679.00	92.80	352.90	9,886.28	4,627.20	-262.91	4,634.52	0.64	0.63	-0.11
14,759.00	92.90	351.60	9,882.30	4,706.37	-273.68	4,714.13	1.63	0.13	-1.63
Final Phoenix MWD Survey									
14,814.00	92.90	351.60	9,879.52	4,760.71	-281.71	4,768.79	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)	
1,785.01	1,784.95	-2.39	11.76	Tie In to VES Gyros
1,833.00	1,832.94	-2.56	11.93	First Phoenix MWD Survey
14,759.00	9,882.30	4,706.37	-273.68	Final Phoenix MWD Survey
14,814.00	9,879.52	4,760.71	-281.71	Projection to TD