



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

15-43305

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 01 2016

RECEIVED

November 5, 2015

COG, LLC
One Concho Center
600 W. Illinois Ave.
Midland, TX 79701

RE: Bone Yard 11 Fee 12H
170' FSL & 1460' FWL
Sec. 2, T20S, R25E
Eddy County, New Mexico

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 01 2016

RECEIVED

Dear Sir,

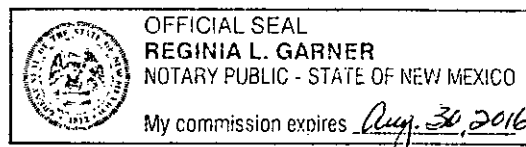
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 5th day of November, 2015.

Notary Public

3
Bone Yard 11 Fee 12H

Date	Depth	Deviation	Direction
10/26/2015	120	0.40	108.10
10/26/2015	153	0.90	130.40
10/27/2015	245	2.00	133.80
10/27/2015	336	3.60	150.60
10/27/2015	422	5.60	160.20
10/27/2015	599	6.60	161.80
10/27/2015	688	6.90	164.90
10/27/2015	812	6.00	177.80
10/27/2015	907	6.70	181.50
10/27/2015	1001	5.60	184.50
10/28/2015	1156	5.20	169.30
10/28/2015	1220	5.10	168.80
10/28/2015	1315	5.00	169.00
10/28/2015	1409	6.20	147.60
10/29/2015	1504	6.20	149.50
10/29/2015	1599	6.20	148.00
10/29/2015	1693	5.40	162.70
10/29/2015	1788	5.40	162.50
10/29/2015	1882	4.50	169.10
10/29/2015	1977	4.60	170.10
10/29/2015	2070	4.30	166.10
10/29/2015	2164	4.50	166.50
10/29/2015	2258	4.40	164.30
10/29/2015	2353	4.50	164.50
10/29/2015	2385	6.50	166.70
10/29/2015	2416	8.90	165.60
10/29/2015	2448	11.70	164.10
10/29/2015	2479	14.40	164.90
10/29/2015	2510	17.20	166.60
10/29/2015	2542	20.90	166.20
10/29/2015	2574	24.30	159.30
10/29/2015	2605	27.80	157.20
10/29/2015	2637	30.70	
10/29/2015	2668	33.80	160.10
10/29/2015	2700	37.50	161.10
10/29/2015	2731	41.00	161.20
10/30/2015	2794	48.40	162.20
10/30/2015	2826	51.20	162.90
10/30/2015	2858	54.50	163.10
10/30/2015	2890	58.00	163.20
10/30/2015	2921	61.60	163.60
10/30/2015	2952	64.60	163.00
10/30/2015	2984	67.10	164.10

Date	Depth	Deviation	Direction
10/30/2015	3015	69.80	164.10
10/30/2015	3047	72.70	163.40
10/30/2015	3079	75.80	163.60
10/30/2015	3110	79.50	163.30
10/30/2015	3142	81.50	163.10
10/30/2015	3173	83.70	163.60
10/30/2015	3204	84.30	166.10
10/31/2015	3328	86.60	170.20
10/31/2015	3423	88.30	171.90
10/31/2015	3518	89.90	173.80
10/31/2015	3612	91.00	176.00
10/31/2015	3707	90.90	178.80
10/31/2015	3801	91.10	180.70
10/31/2015	3896	91.10	180.40
10/31/2015	3990	90.20	182.40
10/31/2015	4085	90.10	182.30
10/31/2015	4178	90.10	181.90
10/31/2015	4274	90.00	181.70
10/31/2015	4368	89.90	181.40
11/1/2015	4463	90.00	181.50
11/1/2015	4558	89.90	181.30
11/1/2015	4653	90.20	187.30
11/1/2015	4746	90.30	181.40
11/1/2015	4841	90.70	181.00
11/1/2015	4935	91.00	181.00
11/1/2015	5028	91.30	181.10
11/1/2015	5123	91.30	180.80
11/1/2015	5217	90.60	182.50
11/1/2015	5312	91.20	182.30
11/1/2015	5406	89.70	183.20
11/1/2015	5500	90.20	183.00
11/1/2015	5595	88.50	182.80
11/1/2015	5734	89.10	181.40
11/1/2015	5784	89.30	181.30
11/1/2015	5878	89.30	181.20
11/1/2015	5973	89.30	181.30
11/2/2015	6068	89.20	181.10
11/2/2015	6162	90.40	180.90
11/2/2015	6256	90.70	181.00
11/2/2015	6351	90.90	181.20
11/2/2015	6445	90.90	181.10
11/2/2015	6540	90.70	181.00
11/2/2015	6635	90.60	181.10
11/2/2015	6730	91.80	181.30
11/2/2015	6825	90.60	181.80

Date	Depth	Deviation	Direction
11/2/2015	6920	90.40	181.70
11/2/2015	7015	91.30	182.10
11/2/2015	7110	91.60	182.20
11/2/2015	7205	90.60	182.30
11/2/2015	7300	90.50	182.30
11/2/2015	7393	90.80	181.10
11/3/2015	7488	90.90	181.00
11/3/2015	7582	91.10	180.70



12/12/15

State of New Mexico
County of Eddy

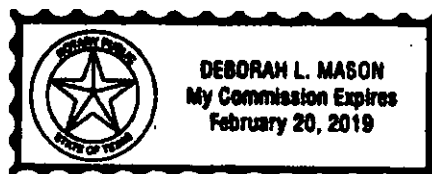
I, Donald D. Mason, certify that: I am employed by Terra Directional Services LLC; that I did on the day(s) of 10/26/2015 through 11/02/2015 conduct or supervise the taking of a MWD survey from a depth of 120 feet to a depth of 7645 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Terra Directional Services LLC; that I am authorized and qualified to make this report; that this survey was conducted at the request of COG Operating LLC for the Bone Yard 11 Fee #12H Well API 30-015-43305 in Eddy County, New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Terra Directional Services LLC.

A handwritten signature in black ink, appearing to read "Donald D. Mason", written over a horizontal line.

Donald D. Mason
President

State of Texas
County of Burnet

Before me, a notary public, on this day personally appeared Donald D. Mason, known to me to be the person whose name is subscribed to the foregoing document and, being by me first duly sworn, declared that the statements therein contained are true and correct.

A handwritten signature in black ink, appearing to read "Deborah L. Mason", written over a horizontal line.
Notary Public's Signature



NM OIL CONSERVATION
ARTESIA DISTRICT
FEB 01 2016

COG Operating LLC

RECEIVED

Eddy County, NM (NAD-27 2015)

Bone Yard 11 Fee #12H

SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N

PP: 449.6' FNL, 1650.8' FWL, Sec 11, T20S, R25E, Unit C

BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N

API #: 30-015-43305

Design: BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N

Standard Survey Report

03 November, 2015





TDS
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N
Project:	Eddy County, NM (NAD-27 2015)	TVD Reference:	KB @ 3416.00usft (Silver Oak 3)
Site:	Bone Yard 11 Fee #12H	MD Reference:	KB @ 3416.00usft (Silver Oak 3)
Well:	SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N	North Reference:	Grid
Wellbore:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Survey Calculation Method:	Minimum Curvature
Design:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Database:	EDM 5000.1 Single User Db

Project	Eddy County, NM (NAD-27 2015)		
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	Bone Yard 11 Fee #12H		
Site Position:		Northing:	580,433.80 usft
From:	Map	Easting:	461,347.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32° 35' 44.359 N
		Longitude:	104° 27' 31.820 W
		Grid Convergence:	-0.07 °

Well	SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 35' 44.359 N
		Longitude:	104° 27' 31.820 W
		Ground Level:	3,398.00 usft

Wellbore	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	10/15/2015	7.57
			Dip Angle
			(°)
			Field Strength
			(nT)
			60.28
			48,234

Design	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			178.02

Survey Program	Date 11/3/2015		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
120.00	7,645.00	TDS MWD #1 (BHL: 350' FSL, 1680' FWL)	MWD
			Description
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00	0.40	108.10	120.00	-0.13	0.40	0.14	0.33	0.33	0.00
153.00	0.90	130.40	153.00	-0.33	0.71	0.36	1.67	1.52	67.58
245.00	2.00	133.80	244.97	-1.91	2.41	2.00	1.20	1.20	3.70
336.00	3.60	150.60	335.86	-5.50	4.96	5.67	1.96	1.76	18.46
422.00	5.60	160.70	421.58	-11.82	7.68	12.07	2.50	2.33	11.74
512.00	6.10	163.60	511.11	-20.55	10.48	20.90	0.65	0.56	3.22
599.00	6.60	161.80	597.57	-29.73	13.34	30.17	0.62	0.57	-2.07



TDS
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N
Project:	Eddy County, NM (NAD-27 2015)	TVD Reference:	KB @ 3416.00usft (Silver Oak 3)
Site:	Bone Yard 11 Fee #12H	MD Reference:	KB @ 3416.00usft (Silver Oak 3)
Well:	SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N	North Reference:	Grid
Wellbore:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Survey Calculation Method:	Minimum Curvature
Design:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Database:	EDM 5000.1 Single User Db

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)
688.00	6.90	164.90	685.96	-39.75	16.33	40.29	0.53	0.34	3.48
749.00	6.60	170.30	746.53	-46.74	17.88	47.33	1.15	-0.49	8.85
812.00	6.00	177.80	809.15	-53.60	18.62	54.21	1.61	-0.95	11.90
907.00	6.70	181.50	903.57	-64.11	18.66	64.71	0.85	0.74	3.89
1,001.00	5.60	184.50	997.03	-74.16	18.16	74.74	1.22	-1.17	3.19
1,061.00	5.50	177.70	1,056.75	-79.95	18.04	80.53	1.11	-0.17	-11.33
1,156.00	5.20	169.30	1,151.34	-88.73	19.03	89.33	0.88	-0.32	-8.84
1,220.00	5.10	168.80	1,215.08	-94.37	20.12	95.01	0.17	-0.16	-0.78
1,315.00	5.00	169.00	1,309.71	-102.58	21.73	103.27	0.11	-0.11	0.21
1,409.00	6.20	147.60	1,403.27	-110.88	25.23	111.69	2.54	1.28	-22.77
1,504.00	6.20	149.50	1,497.71	-119.64	30.58	120.62	0.22	0.00	2.00
1,599.00	6.20	148.00	1,592.16	-128.41	35.90	129.57	0.17	0.00	-1.58
1,693.00	5.40	162.70	1,685.68	-136.94	39.91	138.23	1.79	-0.85	15.64
1,788.00	5.40	162.50	1,780.26	-145.47	42.58	146.85	0.02	0.00	-0.21
1,882.00	4.50	169.10	1,873.91	-153.31	44.61	154.75	1.13	-0.96	7.02
1,977.00	4.60	170.10	1,968.61	-160.72	45.97	162.21	0.13	0.11	1.05
2,070.00	4.30	166.10	2,061.33	-167.78	47.45	169.31	0.46	-0.32	-4.30
2,164.00	4.50	166.50	2,155.05	-174.78	49.16	176.38	0.22	0.21	0.43
2,258.00	4.40	164.30	2,248.77	-181.84	50.99	183.49	0.21	-0.11	-2.34
2,353.00	4.50	164.50	2,343.48	-188.94	52.97	190.66	0.11	0.11	0.21
2,385.00	6.50	166.70	2,375.33	-191.91	53.73	193.65	6.28	6.25	6.88
2,416.00	8.90	165.60	2,406.05	-195.94	54.73	197.71	7.76	7.74	-3.55
2,448.00	11.70	164.10	2,437.53	-201.46	56.23	203.28	8.79	8.75	-4.69
2,479.00	14.40	164.90	2,467.73	-208.21	58.10	210.09	8.73	8.71	2.58
2,510.00	17.20	166.60	2,497.56	-216.39	60.16	218.34	9.15	9.03	5.48
2,542.00	20.90	166.20	2,527.80	-226.54	62.62	228.57	11.57	11.56	-1.25
2,574.00	24.30	159.30	2,557.34	-238.25	66.31	240.39	13.46	10.63	-21.56
2,605.00	27.80	157.20	2,585.19	-250.88	71.37	253.20	11.67	11.29	-6.77
2,637.00	30.70	157.90	2,613.11	-265.33	77.34	267.84	9.13	9.06	2.19
2,668.00	33.80	160.10	2,639.32	-280.78	83.25	283.48	10.69	10.00	7.10
2,700.00	37.50	161.10	2,665.32	-298.37	89.44	301.28	11.70	11.56	3.13
2,731.00	41.00	161.20	2,689.32	-316.93	95.77	320.04	11.29	11.29	0.32
2,763.00	45.00	161.40	2,712.72	-337.59	102.77	340.94	12.51	12.50	0.63
2,794.00	48.40	162.20	2,733.98	-359.02	109.81	362.60	11.13	10.97	2.58
2,826.00	51.20	162.90	2,754.63	-382.34	117.13	386.15	8.91	8.75	2.19
2,858.00	54.50	163.10	2,773.95	-406.73	124.59	410.79	10.32	10.31	0.63
2,890.00	58.00	163.20	2,791.73	-432.19	132.30	436.50	10.94	10.94	0.31
2,921.00	61.60	163.60	2,807.32	-457.86	139.95	462.42	11.67	11.61	1.29
2,952.00	64.60	163.90	2,821.34	-484.40	147.69	489.21	9.72	9.68	0.97
2,984.00	67.10	164.10	2,834.43	-512.47	155.73	517.53	7.83	7.81	0.63
3,015.00	69.80	164.10	2,845.82	-540.19	163.63	545.52	8.71	8.71	0.00

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Design:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)	
3,047.00	72.70	163.40	2,856.10	-569.28	172.11	574.88	9.30	9.06	-2.19	
3,079.00	75.80	163.60	2,864.79	-598.81	180.86	604.69	9.71	9.69	0.63	
3,110.00	79.50	163.30	2,871.42	-627.83	189.48	634.00	11.97	11.94	-0.97	
3,142.00	81.50	163.10	2,876.70	-658.04	198.60	664.50	6.28	6.25	-0.63	
3,173.00	83.70	163.60	2,880.69	-687.49	207.41	694.24	7.27	7.10	1.61	
3,204.00	84.30	166.10	2,883.93	-717.25	215.47	724.26	8.25	1.94	8.06	
3,299.00	87.00	170.70	2,891.14	-810.01	234.50	817.62	5.60	2.84	4.84	
3,328.00	86.60	170.20	2,892.76	-838.56	239.31	846.32	2.21	-1.38	-1.72	
3,423.00	88.30	171.90	2,896.99	-932.31	254.07	940.52	2.53	1.79	1.79	
3,518.00	89.90	173.80	2,898.48	-1,026.55	265.89	1,035.11	2.61	1.68	2.00	
3,612.00	91.00	176.00	2,897.74	-1,120.17	274.24	1,128.96	2.62	1.17	2.34	
3,707.00	90.90	178.80	2,896.17	-1,215.05	278.55	1,223.94	2.95	-0.11	2.95	
3,801.00	91.10	180.70	2,894.53	-1,309.03	278.96	1,317.87	2.03	0.21	2.02	
3,896.00	91.10	180.40	2,892.70	-1,404.00	278.05	1,412.76	0.32	0.00	-0.32	
3,990.00	90.20	182.40	2,891.64	-1,497.96	275.76	1,506.59	2.33	-0.96	2.13	
4,085.00	90.10	182.30	2,891.39	-1,592.88	271.86	1,601.32	0.15	-0.11	-0.11	
4,178.00	90.10	181.90	2,891.22	-1,685.82	268.45	1,694.08	0.43	0.00	-0.43	
4,274.00	90.00	181.70	2,891.14	-1,781.77	265.44	1,789.87	0.23	-0.10	-0.21	
4,368.00	89.90	181.40	2,891.22	-1,875.74	262.89	1,883.69	0.34	-0.11	-0.32	
4,463.00	90.00	181.50	2,891.31	-1,970.71	260.49	1,978.52	0.15	0.11	0.11	
4,558.00	89.90	181.30	2,891.39	-2,065.68	258.17	2,073.36	0.24	-0.11	-0.21	
4,653.00	90.20	181.30	2,891.31	-2,160.66	256.01	2,168.20	0.32	0.32	0.00	
4,746.00	90.30	181.40	2,890.90	-2,253.63	253.82	2,261.05	0.15	0.11	0.11	
4,841.00	90.70	181.00	2,890.07	-2,348.60	251.83	2,355.90	0.60	0.42	-0.42	
4,935.00	91.00	181.00	2,888.68	-2,442.58	250.19	2,449.76	0.32	0.32	0.00	
5,028.00	91.30	181.10	2,886.81	-2,535.54	248.49	2,542.61	0.34	0.32	0.11	
5,123.00	91.30	180.80	2,884.65	-2,630.51	246.91	2,637.46	0.32	0.00	-0.32	
5,217.00	90.60	182.50	2,883.10	-2,724.45	244.21	2,731.26	1.96	-0.74	1.81	
5,312.00	91.20	182.30	2,881.60	-2,819.36	240.23	2,825.97	0.67	0.63	-0.21	
5,406.00	89.70	183.20	2,880.87	-2,913.24	235.72	2,919.64	1.86	-1.60	0.96	
5,500.00	90.20	183.00	2,880.95	-3,007.10	230.64	3,013.27	0.57	0.53	-0.21	
5,595.00	88.50	182.80	2,882.03	-3,101.97	225.83	3,107.92	1.80	-1.79	-0.21	
5,689.00	89.10	181.40	2,883.99	-3,195.89	222.39	3,201.66	1.62	0.64	-1.49	
5,784.00	89.30	181.20	2,885.32	-3,290.85	220.23	3,296.49	0.30	0.21	-0.21	
5,878.00	89.30	181.20	2,886.47	-3,384.82	218.26	3,390.34	0.00	0.00	0.00	
5,973.00	89.30	181.30	2,887.63	-3,479.79	216.19	3,485.18	0.11	0.00	0.11	
6,068.00	89.20	181.10	2,888.87	-3,574.76	214.20	3,580.03	0.24	-0.11	-0.21	
6,162.00	90.40	180.90	2,889.20	-3,668.75	212.56	3,673.90	1.29	1.28	-0.21	
6,256.00	90.70	181.00	2,888.30	-3,762.73	211.00	3,767.77	0.34	0.32	0.11	
6,351.00	90.90	181.20	2,886.97	-3,857.70	209.18	3,862.63	0.30	0.21	0.21	
6,445.00	90.90	181.10	2,885.50	-3,951.67	207.29	3,956.47	0.11	0.00	-0.11	



TDS
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N
Project:	Eddy County, NM (NAD-27-2015)	TVD Reference:	KB @ 3416.00usft (Silver Oak 3)
Site:	Bone Yard 11 Fee #12H	MD Reference:	KB @ 3416.00usft (Silver Oak 3)
Well:	SHL: 170' FSL, 1460' FWL, Sec 2, T20S, R25E, Unit N	North Reference:	Grid
Wellbore:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Survey Calculation Method:	Minimum Curvature
Design:	BHL: 350' FSL, 1680' FWL, Sec 11, T20S, R25E, Unit N	Database:	EDM 5000.1 Single User Db

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)
6,540.00	90.70	181.00	2,884.17	-4,046.65	205.55	4,051.33	0.24	-0.21	-0.11
6,635.00	90.60	181.10	2,883.09	-4,141.63	203.81	4,146.19	0.15	-0.11	0.11
6,730.00	91.80	181.30	2,881.10	-4,238.58	201.82	4,241.02	1.28	1.26	0.21
6,825.00	90.80	181.80	2,879.11	-4,331.53	199.25	4,335.82	1.37	-1.26	0.53
6,920.00	90.40	181.70	2,878.28	-4,426.48	196.35	4,430.62	0.24	-0.21	-0.11
7,015.00	91.30	182.10	2,876.87	-4,521.41	193.20	4,525.39	1.04	0.95	0.42
7,110.00	91.60	182.20	2,874.47	-4,616.32	189.64	4,620.11	0.33	0.32	0.11
7,205.00	90.60	182.30	2,872.65	-4,711.22	185.91	4,714.83	1.06	-1.05	0.11
7,300.00	90.50	182.30	2,871.73	-4,806.14	182.10	4,809.56	0.11	-0.11	0.00
7,393.00	90.80	181.10	2,870.68	-4,899.09	179.34	4,902.37	1.33	0.32	-1.29
7,488.00	90.90	181.00	2,869.27	-4,994.07	177.60	4,997.22	0.15	0.11	-0.11
7,582.00	91.10	180.70	2,867.63	-5,088.04	176.21	5,091.09	0.38	0.21	-0.32
Final MWD Survey									
7,645.00	91.10	180.70	2,866.42	-5,151.03	175.44	5,154.01	0.00	0.00	0.00
Projection to Bit/TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,582.00	2,867.63	-5,088.04	176.21	Final MWD Survey
7,645.00	2,866.42	-5,151.03	175.44	Projection to Bit/TD

Checked By: Deborah L. Mason Approved By: [Signature] Date: 12/12/2015

