Results of Directional Survey

API number:	30-025-41511			
OGRID:		Operator:	CONOCOPHILLIPS COMPANY	
		Property:	WILDER 29 FEDERAL	# 2H

surface	ULSTR:	B	29	T	26S	R	32E
				330	FNL	2116	FEL

BH Loc	ULSTR:	O	29	T	26S	R	32E
13890	MD	9244.9	TVD	274	FSL	1694	FEL
				5006	FNL		

Top Perf/OH	ULSTR:	B	29	T	26S	R	32E
9469	MD	9161.1	TVD	588	FNL	1718	FEL

Bot Perf/OH	ULSTR:	O	29	T	26S	R	32E
13365	MD	9240.0	TVD	798	FSL	1716	FEL
				4482	FNL		

	MD	N/S	E/W	VD
	9437.00	-226.30	399.10	9155.00
TOP PERFS/OH	**9469.00**	-257.70	398.20	9161.10
	9469.00	-257.70	398.20	9161.10
	13308.00	-4094.70	398.70	9238.60
BOT PERFS/OH	**13365.00**	-4151.70	399.85	9239.99
	13402.00	-4188.70	400.60	9240.90

NEXT TO LAST	13839.00	-4625.10	419.70	9242.50
LAST READING	13890.00	-4676.00	421.70	9244.90
TD	**13890.00**	-4676.00	421.70	9244.90

Surface Location	330	FN	2116	FE
Projected BHL	5006	FN	1694	FE
Location of				
Top Perfs/OH	588	FN	1718	FE
Bottom Perfs/OH	4482	FN	1716	FE

SUMMARY of Subsurface Locations

Surface Location	B-29-26S-32E	330	FN	2116	FE	Vert. Depth
Top Perfs/OH	B-29-26S-32E	588	FN	1718	FE	9161.10
Bottom Perfs/OH	O-29-26S-32E	4482	FN	1716	FE	9239.99
Projected TD	O-29-26S-32E	5006	FN	1694	FE	9244.90

ConocoPhillips

Conoco Phillips

Lea County, New Mexico
Sec 28, T26S, R32E
Wilder Federal AC 29 #2H

Wellbore #1

30-025-41511

Survey: MWD

DDC Survey Report

12 February, 2014

DDC
The DIRECTIONAL DRILLING COMPANY

The DIRECTIONAL DRILLING COMPANY

Survey Certification Sheet

Conoco Phillips	GC-140062	2/12/14
Company	Job Number	Date

Sec28, T26S, R32E	Wilder Federal AC 29 #2H	Lea, NM
Lease	Well Name	County & State

API: 30-025-41511

Surveyed from a depth of: 141 feet to 13890 feet MD

Type of Survey: MWD

Directional Supervisor/Surveyor: Andrew Fisher

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by **The Directional Drilling Company (DDC)**. This report represents a true and correct Directional survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

Digitally signed by Larry Wright
DN: cn=Larry Wright, o=The Directional Drilling Company, ou=GM of Guidance Services, email=larryw@directionaldrillers.com, c=US
Date: 2014.02.18 15:50:00 -06'00'

Larry Wright
MWD General Manager

• 11390 FM 830 • Willis, Texas 77318 •
• PH 936-856-4332 • FAX 936-856-8678 •

Company:	Conoco Phillips	**Local Co-ordinate Reference:**	Well Wilder Federal AC 29 #2H
Project:	Lea County, New Mexico	**TVD Reference:**	WELL @ 3168.0usft (Original Well Elev)
Site:	Sec 28, T26S, R32E	**MD Reference:**	WELL @ 3168.0usft (Original Well Elev)
Well:	Wilder Federal AC 29 #2H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Project Lea County, New Mexico

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 Sec 28, T26S, R32E

Site Position:		**Northing:**	371,284.70 usft	**Latitude:**	32° 1' 8.615 N
From:	Map	**Easting:**	704,476.40 usft	**Longitude:**	103° 40' 24.926 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.35 °

Well Wilder Federal AC 29 #2H

Well Position	**+N/-S**	0.0 usft	**Northing:**	371,519.81 usft	**Latitude:**	32° 1' 11.336 N
	+E/-W	0.0 usft	**Easting:**	697,850.42 usft	**Longitude:**	103° 41' 41.869 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,143.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	1/17/2014	7.42	59.90	48,252

Design Wellbore #1

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	174.90

Survey Program **Date** 2/12/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
141.0	13,890.0	MWD (Wellbore #1)	MWD default	MWD - Standard

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)
FIRST SURVEY @ 141' MD / 141' TVD									
141.0	0.70	40.50	141.0	0.7	0.6	-0.6	0.50	0.50	0.00
236.0	0.20	38.50	236.0	1.2	1.0	-1.1	0.53	-0.53	-2.11
329.0	0.70	59.60	329.0	1.6	1.6	-1.5	0.56	0.54	22.69
422.0	0.30	65.10	422.0	2.0	2.3	-1.8	0.43	-0.43	5.91
517.0	0.40	126.30	517.0	1.9	2.8	-1.7	0.39	0.11	64.42
671.0	1.80	123.10	671.0	0.3	5.3	0.2	0.91	0.91	-2.08
764.0	2.30	123.60	763.9	-1.5	8.1	2.2	0.54	0.54	0.54
858.0	1.90	114.10	857.8	-3.2	11.1	4.2	0.56	-0.43	-10.11
953.0	1.90	106.90	952.8	-4.3	14.0	5.5	0.25	0.00	-7.58

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Well:	Wilder Federal AC 29 #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
1,048.0	2.20	101.50	1,047.7	-5.1	17.3	6.7	0.38	0.32	-5.68
1,110.0	1.40	104.80	1,109.7	-5.6	19.2	7.2	1.30	-1.29	5.32
1,205.0	3.30	51.20	1,204.6	-4.1	22.5	6.1	2.86	2.00	-56.42
1,300.0	5.80	52.10	1,299.3	0.5	28.4	2.0	2.63	2.63	0.95
1,394.0	8.30	54.70	1,392.6	7.4	37.7	-4.0	2.68	2.66	2.77
1,489.0	8.80	53.50	1,486.5	15.6	49.1	-11.2	0.56	0.53	-1.26
1,584.0	8.40	53.30	1,580.5	24.1	60.5	-18.6	0.42	-0.42	-0.21
1,679.0	8.60	52.30	1,674.4	32.6	71.7	-26.1	0.26	0.21	-1.05
1,773.0	8.50	52.30	1,767.4	41.1	82.7	-33.6	0.11	-0.11	0.00
1,868.0	8.10	53.50	1,861.4	49.4	93.7	-40.9	0.46	-0.42	1.26
1,963.0	7.20	54.70	1,955.5	56.8	103.9	-47.4	0.96	-0.95	1.26
2,058.0	7.10	52.30	2,049.8	63.9	113.4	-53.5	0.33	-0.11	-2.53
2,152.0	8.60	46.30	2,142.9	72.3	123.1	-61.1	1.82	1.60	-6.38
2,247.0	8.60	42.40	2,236.8	82.4	133.0	-70.3	0.61	0.00	-4.11
2,342.0	8.40	39.10	2,330.8	93.1	142.2	-80.1	0.55	-0.21	-3.47
2,436.0	7.60	38.00	2,423.9	103.3	150.3	-89.5	0.87	-0.85	-1.17
2,531.0	6.60	39.80	2,518.2	112.4	157.7	-98.0	1.08	-1.05	1.89
2,626.0	5.80	44.90	2,612.6	120.0	164.6	-104.9	1.02	-0.84	5.37
2,721.0	6.00	45.90	2,707.1	126.9	171.5	-111.1	0.24	0.21	1.05
2,815.0	6.80	48.00	2,800.5	134.0	179.2	-117.6	0.89	0.85	2.23
2,910.0	8.30	52.40	2,894.7	142.0	188.8	-124.6	1.69	1.58	4.63
3,005.0	8.40	56.10	2,988.7	150.0	200.0	-131.7	0.58	0.11	3.89
3,099.0	7.60	56.60	3,081.8	157.3	210.9	-137.9	0.85	-0.85	0.53
3,194.0	7.20	54.90	3,176.0	164.2	221.0	-143.9	0.48	-0.42	-1.79
3,289.0	8.70	54.00	3,270.1	171.8	231.7	-150.5	1.58	1.58	-0.95
3,383.0	9.00	53.70	3,362.9	180.3	243.4	-158.0	0.32	0.32	-0.32
3,478.0	7.70	53.80	3,456.9	188.5	254.5	-165.1	1.37	-1.37	0.11
3,573.0	7.90	56.10	3,551.0	195.9	265.1	-171.6	0.39	0.21	2.42
3,668.0	8.50	63.10	3,645.1	202.7	276.7	-177.3	1.22	0.63	7.37
3,762.0	8.70	70.00	3,738.0	208.3	289.6	-181.7	1.12	0.21	7.34
3,857.0	7.70	70.90	3,832.1	212.8	302.4	-185.1	1.06	-1.05	0.95
3,951.0	7.90	68.20	3,925.2	217.3	314.3	-188.5	0.44	0.21	-2.87
4,046.0	8.00	69.50	4,019.3	222.0	326.6	-192.1	0.22	0.11	1.37
4,141.0	7.60	71.40	4,113.4	226.4	338.7	-195.3	0.50	-0.42	2.00
4,236.0	6.80	64.70	4,207.6	230.8	349.8	-198.8	1.22	-0.84	-7.05
4,330.0	5.80	65.40	4,301.1	235.1	359.1	-202.3	1.07	-1.06	0.74
4,419.0	4.90	66.80	4,389.7	238.5	366.7	-204.9	1.02	-1.01	1.57
4,474.0	4.60	69.80	4,444.5	240.2	370.9	-206.2	0.71	-0.55	5.45
4,568.0	4.90	65.80	4,538.2	243.1	378.1	-208.5	0.48	0.32	-4.26
4,663.0	5.00	66.70	4,632.8	246.4	385.6	-211.2	0.13	0.11	0.95
4,758.0	4.50	64.20	4,727.5	249.7	392.8	-213.8	0.57	-0.53	-2.63
4,852.0	3.90	64.00	4,821.2	252.7	399.0	-216.2	0.64	-0.64	-0.21
4,947.0	4.00	53.00	4,916.0	256.1	404.5	-219.1	0.80	0.11	-11.58
5,042.0	4.00	50.80	5,010.8	260.2	409.8	-222.7	0.16	0.00	-2.32

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Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**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)
5,137.0	2.40	76.30	5,105.6	262.7	414.3	-224.9	2.22	-1.68	26.84
5,231.0	0.60	124.10	5,199.6	262.9	416.6	-224.9	2.18	-1.91	50.85
5,326.0	1.10	148.20	5,294.6	261.9	417.5	-223.7	0.64	0.53	25.37
5,421.0	1.00	159.10	5,389.6	260.3	418.2	-222.1	0.23	-0.11	11.47
5,516.0	0.80	129.10	5,484.6	259.1	419.1	-220.9	0.53	-0.21	-31.58
5,610.0	0.70	155.30	5,578.6	258.2	419.8	-219.9	0.38	-0.11	27.87
5,705.0	0.80	153.90	5,673.6	257.1	420.3	-218.7	0.11	0.11	-1.47
5,800.0	0.20	257.40	5,768.5	256.5	420.5	-218.1	0.91	-0.63	108.95
5,894.0	0.40	275.10	5,862.5	256.4	420.0	-218.1	0.23	0.21	18.83
5,989.0	0.50	270.60	5,957.5	256.5	419.2	-218.2	0.11	0.11	-4.74
6,084.0	0.60	267.60	6,052.5	256.5	418.3	-218.3	0.11	0.11	-3.16
6,179.0	0.60	259.80	6,147.5	256.4	417.3	-218.2	0.09	0.00	-8.21
6,273.0	0.90	313.50	6,241.5	256.8	416.3	-218.8	0.77	0.32	57.13
6,368.0	1.20	324.00	6,336.5	258.1	415.2	-220.2	0.37	0.32	11.05
6,463.0	1.20	324.50	6,431.5	259.7	414.0	-221.9	0.01	0.00	0.53
6,558.0	1.20	322.60	6,526.5	261.3	412.8	-223.6	0.04	0.00	-2.00
6,652.0	1.30	319.80	6,620.4	262.9	411.6	-225.3	0.12	0.11	-2.98
6,747.0	1.30	313.80	6,715.4	264.5	410.1	-227.0	0.14	0.00	-6.32
6,842.0	1.40	309.40	6,810.4	266.0	408.4	-228.6	0.15	0.11	-4.63
6,936.0	1.30	304.10	6,904.4	267.3	406.6	-230.1	0.17	-0.11	-5.64
7,031.0	0.70	258.30	6,999.4	267.8	405.2	-230.7	1.00	-0.63	-48.21
7,126.0	0.90	247.50	7,094.3	267.4	403.9	-230.4	0.26	0.21	-11.37
7,221.0	0.30	186.70	7,189.3	266.8	403.2	-229.9	0.84	-0.63	-64.00
7,315.0	0.40	148.90	7,283.3	266.3	403.3	-229.4	0.26	0.11	-40.21
7,410.0	0.50	163.00	7,378.3	265.6	403.6	-228.7	0.16	0.11	14.84
7,505.0	0.60	174.60	7,473.3	264.7	403.8	-227.8	0.16	0.11	12.21
7,599.0	1.00	135.60	7,567.3	263.7	404.4	-226.7	0.70	0.43	-41.49
7,694.0	1.30	132.40	7,662.3	262.3	405.8	-225.2	0.32	0.32	-3.37
7,789.0	1.40	134.70	7,757.3	260.8	407.4	-223.5	0.12	0.11	2.42
7,884.0	1.40	141.20	7,852.3	259.1	409.0	-221.7	0.17	0.00	6.84
7,978.0	1.50	145.80	7,946.2	257.2	410.4	-219.7	0.16	0.11	4.89
8,073.0	0.50	109.00	8,041.2	256.0	411.5	-218.4	1.20	-1.05	-38.74
8,167.0	0.40	75.10	8,135.2	256.0	412.2	-218.3	0.30	-0.11	-36.06
8,262.0	0.30	77.60	8,230.2	256.1	412.7	-218.4	0.11	-0.11	2.63
8,357.0	0.30	98.30	8,325.2	256.1	413.2	-218.4	0.11	0.00	21.79
8,451.0	0.20	133.60	8,419.2	256.0	413.6	-218.2	0.19	-0.11	37.55
8,546.0	0.20	175.50	8,514.2	255.7	413.7	-217.9	0.15	0.00	44.11
8,601.0	0.30	216.60	8,569.2	255.5	413.7	-217.7	0.36	0.18	74.73
8,648.0	0.50	183.70	8,616.2	255.2	413.6	-217.4	0.63	0.43	-70.00
8,679.0	3.80	180.00	8,647.2	254.0	413.6	-216.2	10.65	10.65	-11.94
8,711.0	8.10	179.00	8,679.0	250.7	413.6	-212.9	13.44	13.44	-3.13
8,743.0	12.10	179.00	8,710.5	245.1	413.7	-207.3	12.50	12.50	0.00
8,774.0	15.60	179.00	8,740.6	237.7	413.8	-199.9	11.29	11.29	0.00

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Design:	Wellbore #1	**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)
8,806.0	18.90	180.70	8,771.1	228.2	413.8	-190.5	10.43	10.31	5.31
8,837.0	21.20	182.50	8,800.3	217.6	413.5	-179.9	7.68	7.42	5.81
8,869.0	24.50	183.40	8,829.7	205.1	412.9	-167.6	10.37	10.31	2.81
8,900.0	26.60	181.10	8,857.7	191.8	412.4	-154.4	7.49	6.77	-7.42
8,932.0	28.50	179.00	8,886.1	177.0	412.4	-139.6	6.67	5.94	-6.56
8,963.0	30.70	177.20	8,913.0	161.7	412.9	-124.3	7.65	7.10	-5.81
8,995.0	34.50	178.60	8,940.0	144.5	413.5	-107.1	12.11	11.88	4.38
9,027.0	38.30	180.70	8,965.7	125.5	413.6	-88.2	12.50	11.88	6.56
9,058.0	42.10	182.30	8,989.4	105.5	413.1	-68.3	12.70	12.26	5.16
9,090.0	45.90	183.60	9,012.4	83.3	411.9	-46.3	12.21	11.88	4.06
9,121.0	49.20	183.60	9,033.4	60.5	410.5	-23.7	10.65	10.65	0.00
9,153.0	53.10	182.50	9,053.4	35.6	409.2	0.9	12.48	12.19	-3.44
9,185.0	56.80	181.80	9,071.8	9.4	408.2	26.9	11.70	11.56	-2.19
9,216.0	60.30	181.30	9,088.0	-17.0	407.5	53.2	11.37	11.29	-1.61
9,248.0	64.70	180.90	9,102.7	-45.4	406.9	81.4	13.79	13.75	-1.25
9,279.0	68.80	182.10	9,115.0	-73.9	406.2	109.7	13.70	13.23	3.87
9,311.0	72.30	182.70	9,125.6	-104.0	404.9	139.6	11.08	10.94	1.88
9,343.0	75.90	182.30	9,134.4	-134.7	403.6	170.1	11.31	11.25	-1.25
9,374.0	77.60	182.70	9,141.5	-164.9	402.3	200.0	5.63	5.48	1.29
9,406.0	77.70	183.20	9,148.3	-196.1	400.6	230.9	1.56	0.31	1.56
9,437.0	77.40	182.50	9,155.0	-226.3	399.1	260.9	2.41	-0.97	-2.26
9,469.0	80.60	181.10	9,161.1	-257.7	398.2	292.1	10.88	10.00	-4.38
9,500.0	84.30	180.00	9,165.2	-288.5	397.9	322.7	12.44	11.94	-3.55
9,522.0	86.60	179.20	9,166.9	-310.4	398.0	344.5	11.07	10.45	-3.64
9,553.0	89.90	178.10	9,167.9	-341.4	398.7	375.5	11.22	10.65	-3.55
9,585.0	90.80	178.10	9,167.7	-373.3	399.8	407.4	2.81	2.81	0.00
9,616.0	90.60	177.80	9,167.3	-404.3	400.9	438.4	1.16	-0.65	-0.97
9,711.0	90.10	178.10	9,166.7	-499.3	404.3	533.2	0.61	-0.53	0.32
9,806.0	89.50	179.20	9,167.1	-594.2	406.5	628.0	1.32	-0.63	1.16
9,900.0	89.40	180.90	9,168.0	-688.2	406.5	721.6	1.81	-0.11	1.81
9,993.0	88.70	181.30	9,169.5	-781.2	404.7	814.1	0.87	-0.75	0.43
10,088.0	89.30	180.70	9,171.2	-876.2	403.0	908.5	0.89	0.63	-0.63
10,183.0	90.80	178.80	9,171.1	-971.2	403.4	1,003.2	2.55	1.58	-2.00
10,277.0	90.70	179.20	9,169.9	-1,065.1	405.1	1,096.9	0.44	-0.11	0.43
10,372.0	90.20	179.70	9,169.1	-1,160.1	406.0	1,191.6	0.74	-0.53	0.53
10,467.0	87.60	180.00	9,170.9	-1,255.1	406.2	1,286.2	2.75	-2.74	0.32
10,562.0	87.10	180.70	9,175.3	-1,350.0	405.7	1,380.7	0.90	-0.53	0.74
10,656.0	88.00	180.40	9,179.4	-1,443.9	404.8	1,474.2	1.01	0.96	-0.32
10,751.0	87.40	181.30	9,183.2	-1,538.8	403.3	1,568.6	1.14	-0.63	0.95
10,846.0	89.30	180.20	9,185.9	-1,633.8	402.1	1,663.0	2.31	2.00	-1.16
10,941.0	88.80	180.20	9,187.5	-1,728.7	401.8	1,757.6	0.53	-0.53	0.00
11,035.0	88.70	180.40	9,189.5	-1,822.7	401.3	1,851.2	0.24	-0.11	0.21
11,130.0	88.00	180.20	9,192.3	-1,917.7	400.8	1,945.7	0.77	-0.74	-0.21

Company:	Conoco Phillips	**Local Co-ordinate Reference:**	Well Wilder Federal AC 29 #2H
Project:	Lea County, New Mexico	**TVD Reference:**	WELL @ 3168.0usft (Original Well Elev)
Site:	Sec 28, T26S, R32E	**MD Reference:**	WELL @ 3168.0usft (Original Well Elev)
Well:	Wilder Federal AC 29 #2H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**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)
11,225.0	87.40	181.10	9,196.1	-2,012.6	399.7	2,040.2	1.14	-0.63	0.95
11,320.0	88.40	179.20	9,199.6	-2,107.5	399.5	2,134.7	2.26	1.05	-2.00
11,414.0	89.60	178.80	9,201.2	-2,201.5	401.1	2,228.4	1.35	1.28	-0.43
11,509.0	89.30	179.00	9,202.1	-2,296.5	402.9	2,323.2	0.38	-0.32	0.21
11,604.0	88.40	180.00	9,204.0	-2,391.4	403.8	2,417.9	1.42	-0.95	1.05
11,699.0	88.00	180.70	9,207.0	-2,486.4	403.2	2,512.4	0.85	-0.42	0.74
11,793.0	87.10	180.60	9,211.0	-2,580.3	402.1	2,605.8	0.96	-0.96	-0.11
11,888.0	88.30	180.60	9,214.8	-2,675.2	401.1	2,700.3	1.26	1.26	0.00
11,983.0	87.40	181.10	9,218.4	-2,770.1	399.7	2,794.7	1.08	-0.95	0.53
12,078.0	88.60	180.60	9,221.7	-2,865.1	398.3	2,889.1	1.37	1.26	-0.53
12,173.0	87.80	180.70	9,224.7	-2,960.0	397.2	2,983.6	0.85	-0.84	0.11
12,267.0	88.50	179.00	9,227.7	-3,054.0	397.5	3,077.2	1.95	0.74	-1.81
12,363.0	90.10	178.60	9,228.9	-3,149.9	399.5	3,173.0	1.72	1.67	-0.42
12,457.0	90.10	179.00	9,228.7	-3,243.9	401.4	3,266.8	0.43	0.00	0.43
12,552.0	89.50	180.00	9,229.1	-3,338.9	402.3	3,361.4	1.23	-0.63	1.05
12,647.0	91.10	179.90	9,228.6	-3,433.9	402.4	3,456.1	1.69	1.68	-0.11
12,741.0	90.20	180.20	9,227.5	-3,527.9	402.3	3,549.7	1.01	-0.96	0.32
12,836.0	89.30	180.90	9,227.9	-3,622.9	401.4	3,644.2	1.20	-0.95	0.74
12,930.0	88.30	181.30	9,229.9	-3,716.8	399.6	3,737.7	1.15	-1.06	0.43
13,024.0	89.40	180.00	9,231.8	-3,810.8	398.5	3,831.2	1.81	1.17	-1.38
13,119.0	89.10	179.90	9,233.0	-3,905.8	398.6	3,925.8	0.33	-0.32	-0.11
13,213.0	88.10	180.00	9,235.3	-3,999.8	398.7	4,019.4	1.07	-1.06	0.11
13,308.0	87.90	179.90	9,238.6	-4,094.7	398.7	4,114.0	0.24	-0.21	-0.11
13,402.0	89.30	177.80	9,240.9	-4,188.7	400.6	4,207.7	2.68	1.49	-2.23
13,497.0	91.60	177.40	9,240.2	-4,283.6	404.6	4,302.6	2.46	2.42	-0.42
13,592.0	91.00	177.20	9,238.0	-4,378.4	409.1	4,397.5	0.67	-0.63	-0.21
13,686.0	89.30	177.40	9,237.8	-4,472.3	413.5	4,491.4	1.82	-1.81	0.21
13,781.0	87.90	177.80	9,240.1	-4,567.2	417.5	4,586.3	1.53	-1.47	0.42
13,839.0	87.30	177.80	9,242.5	-4,625.1	419.7	4,644.1	1.03	-1.03	0.00
TD @ 13890' MD / 9245' TVD									
13,890.0	87.30	177.80	9,244.9	-4,676.0	421.7	4,695.0	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
141.0	141.0	0.7	0.6	FIRST SURVEY @ 141' MD / 141' TVD
13,890.0	9,244.9	-4,676.0	421.7	TD @ 13890' MD / 9245' TVD

Checked By: _____ Approved By: _____ Date: _____