



A GYRO TECHNOLOGIES INC. COMPANY

P.O. Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

March 20, 2014

30015 40825

Devon Energy Production Co., LP
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 08 2014

RECEIVED

Attn: David Cook

Re: **Harroun Trust 31 No 003H**

Please find enclosed a copy of the survey from 0' to 2,631.09' ran on the above referenced well.

If I can be of any further service, please do not hesitate to call me at 800-606-4976.

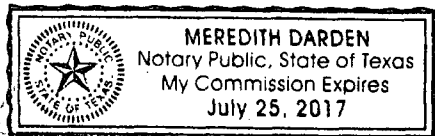
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 20th day of March, A.D., 2014, by Keith Havelka.

Meredith Darden
Notary Public, State of Texas





Company: DEVON ENERGY
Lease/Well: HARROUN TRUST 31/No 003H

Rig Name: H&P #214
State/County: NEW MEXICO/EDDY
Latitude: 32.26, Longitude: -103.03
GRID North is 0.70 Degrees East of True North
VS-Azi: 1.35 Degrees



Depth Reference : RKB 25 FEET

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: gyro_surveyru-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 3/20/2014 / 16:25

Vaughn Energy Services

Woodward, OK

580-254-5000

Surveyor: Vincent Marasco

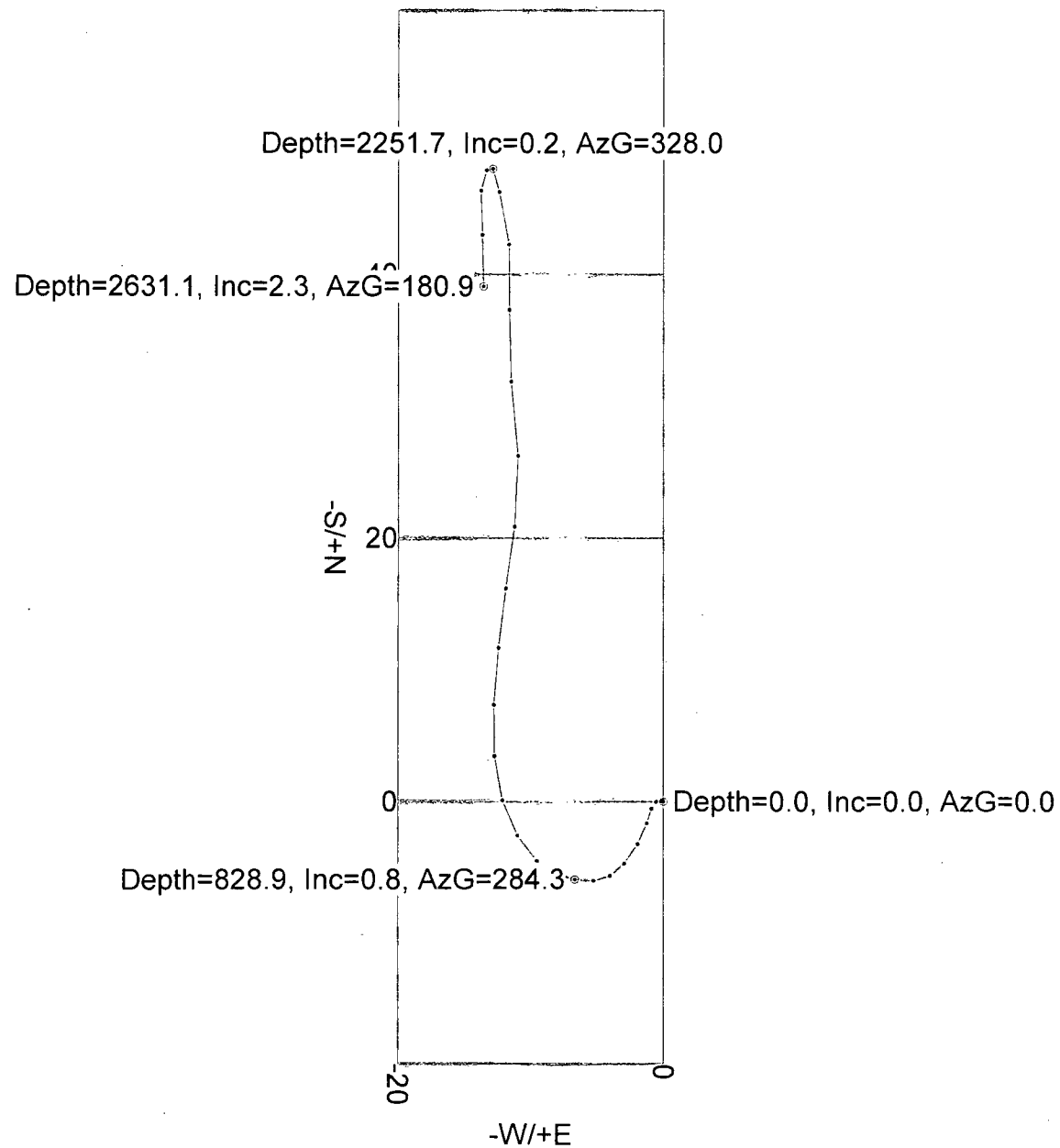
Harroun Trust 31 No 003H / API 30-015-40825

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
70.14	0.25	285.05	70.14	0.04	-0.15	0.04	0.16	285.05	0.36
164.99	0.27	239.51	164.99	-0.02	-0.54	-0.03	0.54	268.27	0.21
259.84	0.53	202.78	259.84	-0.53	-0.90	-0.56	1.05	239.36	0.38
354.69	0.89	195.75	354.68	-1.65	-1.27	-1.68	2.08	217.67	0.38
449.54	1.20	208.50	449.51	-3.23	-1.95	-3.27	3.77	211.08	0.41
544.39	1.00	220.57	544.35	-4.73	-2.96	-4.80	5.58	212.02	0.32
639.24	0.74	240.10	639.19	-5.67	-4.03	-5.76	6.95	215.42	0.41
734.09	0.87	264.65	734.03	-6.04	-5.28	-6.16	8.02	221.15	0.38
828.94	0.85	284.33	828.87	-5.93	-6.67	-6.09	8.93	228.37	0.31
923.79	0.93	290.38	923.70	-5.49	-8.08	-5.68	9.77	235.80	0.13
1018.64	1.23	313.98	1018.54	-4.51	-9.54	-4.73	10.55	244.68	0.56
1113.49	1.72	329.28	1113.36	-2.58	-11.00	-2.84	11.30	256.80	0.65
1208.34	1.86	343.73	1208.16	0.12	-12.15	-0.17	12.16	270.55	0.50
1303.19	2.29	354.95	1302.95	3.48	-12.75	3.18	13.22	285.25	0.62
1398.04	2.45	3.03	1397.72	7.39	-12.81	7.08	14.79	299.96	0.39
1492.89	2.79	6.28	1492.47	11.70	-12.45	11.41	17.09	313.22	0.39
1587.74	2.67	7.25	1587.21	16.18	-11.92	15.90	20.10	323.62	0.14
1682.59	3.08	8.93	1681.94	20.89	-11.25	20.62	23.72	331.70	0.44

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1777.44	3.43	357.27	1776.64	26.24	-10.99	25.97	28.44	337.28	0.79
1872.29	3.43	352.09	1871.32	31.88	-11.51	31.60	33.90	340.15	0.33
1967.14	3.18	5.69	1966.01	37.31	-11.64	37.03	39.09	342.67	0.87
2061.99	2.83	352.46	2060.73	42.25	-11.69	41.97	43.84	344.53	0.81
2156.84	2.05	345.51	2155.50	46.22	-12.42	45.92	47.86	344.96	0.88
2251.69	0.16	328.03	2250.33	47.98	-12.92	47.66	49.68	344.93	2.00
2346.54	0.56	241.72	2345.17	47.87	-13.39	47.54	49.71	344.37	0.60
2441.39	1.60	179.99	2440.01	46.33	-13.80	45.99	48.34	343.41	1.50
2536.24	2.45	176.93	2534.80	42.98	-13.69	42.64	45.11	342.33	0.91
2631.09	2.26	180.87	2629.57	39.08	-13.61	38.75	41.38	340.80	0.27



Vaughn Energy Services
Woodward, OK
580-254-5000
Surveyor: Vincent Marasco
Harroun Trust 31 No 003H / API 30-015-40825



VES Survey Date: 03/04/2014

HARROUN TRUST 31-3H

WEST UNRESTRICTED

AUG 08 2014



Directional Survey

RECEIVED

District DELAWARE BASIN	County EDDY	Field Name CULEBRA BLUFF SOUTH	Project Group DELAWARE BASIN REG	RECEIVED Date/Province NM			
Surface Legal Location SEC31 T23S R29E	API/UWI 3001540825	Latitude (°) 32° 15' 18.69" N	Longitude (°) 104° 1' 40.66" W	Ground Elev... 2,957.10	KB - GL (ft) 25.00	Orig KB Elev (ft) 2,982.10	Tubing Head Elevation (ft)

Wellbores				
Wellbore Name OH	Parent Wellbore	SAP Well ID		Kick Off Depth (ftKB) 1.35
Actual Deviation Survey ACTUAL SURVEYS, Proposed? No		Definitive? Yes	Proposed? No	Proposed Deviation Survey

Deviation Survey					
Date 3/5/2014		Description ACTUAL SURVEYS			
MD Tie In (ftKB) 0.00	TVD Tie In (ftKB) 0.00	Inclination Tie In (°) 0.00	Azimuth Tie In (°) 0.00	NSTie In (ft) 0.00	EW Tie In (ft) 0.00

Date	MD (ftKB)	Incl(°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
3/11/2014	0.00	92.24	2.38	0.00	0.00	0.00	0.00	0.00	MWD	WEATHERFORD
3/5/2014	70.14	0.25	285.05	70.14	0.04	0.04	-0.15	0.36	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	259.84	0.53	202.78	259.84	-0.68	-0.66	-0.89	0.29	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	354.69	0.89	195.75	354.68	-1.80	-1.78	-1.26	0.39	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	449.54	1.20	208.50	449.51	-3.40	-3.36	-1.93	0.41	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	544.39	1.00	220.57	544.35	-4.93	-4.86	-2.94	0.32	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	639.24	0.74	240.10	639.18	-5.89	-5.79	-4.01	0.41	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	734.09	0.87	264.65	734.03	-6.29	-6.17	-5.26	0.38	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	828.94	0.85	284.33	828.87	-6.21	-6.06	-6.66	0.31	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	923.79	0.93	290.38	923.70	-5.80	-5.62	-8.06	0.13	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,018.64	1.23	313.98	1,018.54	-4.86	-4.64	-9.52	0.56	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,113.49	1.72	329.28	1,113.36	-2.97	-2.71	-10.98	0.66	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,208.34	1.86	343.73	1,208.16	-0.29	-0.01	-12.13	0.50	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,303.19	2.29	354.95	1,302.95	3.06	3.36	-12.73	0.62	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,398.04	2.45	3.03	1,397.72	6.97	7.27	-12.79	0.39	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,492.89	2.79	6.28	1,492.47	11.29	11.59	-12.43	0.39	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,587.74	2.67	7.25	1,587.21	15.79	16.07	-11.90	0.14	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,682.59	3.08	8.93	1,681.94	20.51	20.78	-11.23	0.44	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,777.44	3.43	357.27	1,776.64	25.87	26.13	-10.97	0.79	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,872.29	3.43	352.09	1,871.32	31.50	31.78	-11.49	0.33	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	1,967.14	3.18	5.69	1,966.01	36.92	37.21	-11.62	0.87	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,061.99	2.83	352.46	2,060.73	41.86	42.15	-11.67	0.82	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,156.84	2.05	345.51	2,155.50	45.81	46.11	-12.40	0.88	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,251.69	0.16	328.03	2,250.32	47.55	47.87	-12.89	2.00	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,346.54	0.56	241.72	2,345.17	47.43	47.76	-13.37	0.60	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,441.39	1.60	179.99	2,440.01	45.88	46.21	-13.78	1.50	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,536.24	2.45	176.93	2,534.80	42.53	42.87	-13.67	0.90	GYRO	VAUHG N ENERGY SERVICES
3/5/2014	2,631.09	2.26	180.87	2,629.57	38.64	38.97	-13.59	0.26	GYRO	VAUHG N ENERGY SERVICES
3/8/2014	2,815.00	1.75	202.34	2,813.37	32.39	32.75	-14.71	0.49	MWD	WEATHERFORD
3/8/2014	2,878.00	1.86	202.71	2,876.34	30.54	30.91	-15.47	0.18	MWD	WEATHERFORD
3/8/2014	2,973.00	1.57	132.22	2,971.30	28.25	28.62	-15.11	2.10	MWD	WEATHERFORD
3/8/2014	3,068.00	3.45	91.24	3,066.21	27.41	27.68	-11.28	2.62	MWD	WEATHERFORD
3/9/2014	3,162.00	4.49	70.91	3,159.99	28.70	28.82	-4.98	1.85	MWD	WEATHERFORD
3/9/2014	3,257.00	5.32	70.89	3,254.64	31.54	31.48	2.70	0.87	MWD	WEATHERFORD
3/9/2014	3,352.00	6.25	71.07	3,349.16	34.87	34.60	11.75	0.98	MWD	WEATHERFORD
3/9/2014	3,447.00	7.26	70.86	3,443.50	38.76	38.25	22.31	1.06	MWD	WEATHERFORD
3/9/2014	3,542.00	8.50	68.74	3,537.60	43.56	42.76	34.53	1.34	MWD	WEATHERFORD
3/9/2014	3,637.00	8.36	67.54	3,631.57	49.05	47.95	47.45	0.24	MWD	WEATHERFORD
3/9/2014	3,731.00	8.07	66.47	3,724.61	54.58	53.19	59.82	0.35	MWD	WEATHERFORD
3/9/2014	3,825.00	8.16	65.50	3,817.67	60.27	58.59	71.94	0.17	MWD	WEATHERFORD
3/9/2014	3,920.00	8.76	71.11	3,911.63	65.71	63.73	84.92	1.07	MWD	WEATHERFORD
3/9/2014	4,014.00	8.90	71.31	4,004.52	70.68	68.38	98.58	0.15	MWD	WEATHERFORD
3/9/2014	4,109.00	8.93	70.79	4,098.37	75.79	73.16	112.50	0.09	MWD	WEATHERFORD
3/9/2014	4,204.00	8.79	69.67	4,192.24	81.06	78.10	126.27	0.23	MWD	WEATHERFORD
3/9/2014	4,299.00	8.61	68.88	4,286.14	86.46	83.19	139.71	0.23	MWD	WEATHERFORD
3/9/2014	4,393.00	9.46	69.81	4,378.98	91.98	88.39	153.52	0.92	MWD	WEATHERFORD
3/9/2014	4,488.00	9.66	70.15	4,472.66	97.73	93.79	168.35	0.22	MWD	WEATHERFORD



HARROUN TRUST 31-3H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name CULEBRA BLUFF SOUTH	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location SEC31 T23S R29E	API/UWI 3001540825	Latitude (°) 32° 15' 18.69" N	Longitude (°) 104° 1' 40.66" W	Ground Elev... 2,957.10	KB - GL (ft) 25.00	Orig KB Elev (ft) 2,982.10	Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
3/9/2014	4,583.00	9.79	69.60	4,566.29	103.61	99.31	183.42	0.17	MWD	WEATHERFORD
3/9/2014	4,677.00	10.05	68.68	4,658.89	109.73	105.08	198.55	0.32	MWD	WEATHERFORD
3/9/2014	4,772.00	10.21	68.02	4,752.41	116.26	111.25	214.08	0.21	MWD	WEATHERFORD
3/9/2014	4,867.00	10.20	67.41	4,845.90	123.01	117.63	229.65	0.11	MWD	WEATHERFORD
3/9/2014	4,961.00	9.93	66.19	4,938.46	129.83	124.10	244.75	0.37	MWD	WEATHERFORD
3/9/2014	5,056.00	9.99	65.93	5,032.03	136.85	130.77	259.77	0.08	MWD	WEATHERFORD
3/9/2014	5,151.00	9.92	65.09	5,125.60	144.01	137.57	274.71	0.17	MWD	WEATHERFORD
3/9/2014	5,246.00	10.00	68.57	5,219.16	150.82	144.03	289.81	0.64	MWD	WEATHERFORD
3/9/2014	5,341.00	9.54	68.82	5,312.79	157.03	149.89	304.83	0.49	MWD	WEATHERFORD
3/9/2014	5,435.00	9.30	67.63	5,405.52	163.07	155.60	319.12	0.33	MWD	WEATHERFORD
3/9/2014	5,530.00	10.13	66.92	5,499.16	169.61	161.79	333.90	0.88	MWD	WEATHERFORD
3/9/2014	5,625.00	10.10	66.91	5,592.68	176.52	168.33	349.25	0.03	MWD	WEATHERFORD
3/10/2014	5,720.00	10.09	66.15	5,686.21	183.51	174.97	364.53	0.14	MWD	WEATHERFORD
3/10/2014	5,803.00	10.28	66.16	5,767.90	189.75	180.90	377.95	0.23	MWD	WEATHERFORD
3/10/2014	5,877.00	11.65	61.63	5,840.55	196.27	187.12	390.56	2.19	MWD	WEATHERFORD
3/11/2014	5,909.00	13.21	52.11	5,871.80	200.18	190.90	396.29	8.03	MWD	WEATHERFORD
3/11/2014	5,941.00	15.17	37.84	5,902.83	205.87	196.45	401.75	12.49	MWD	WEATHERFORD
3/11/2014	5,972.00	17.61	26.74	5,932.58	213.37	203.85	406.35	12.77	MWD	WEATHERFORD
3/11/2014	6,004.00	20.21	17.72	5,962.86	223.05	213.44	410.21	12.20	MWD	WEATHERFORD
3/11/2014	6,036.00	23.95	14.01	5,992.50	234.69	225.01	413.47	12.47	MWD	WEATHERFORD
3/11/2014	6,067.00	27.74	16.64	6,020.40	247.79	238.03	417.06	12.77	MWD	WEATHERFORD
3/11/2014	6,099.00	31.29	17.69	6,048.24	262.96	253.09	421.72	11.21	MWD	WEATHERFORD
3/11/2014	6,131.00	35.47	19.17	6,074.96	279.78	269.79	427.29	13.31	MWD	WEATHERFORD
3/11/2014	6,162.00	37.85	18.94	6,099.82	297.41	287.28	433.34	7.69	MWD	WEATHERFORD
3/11/2014	6,194.00	39.73	18.66	6,124.77	316.53	306.26	439.79	5.90	MWD	WEATHERFORD
3/11/2014	6,225.00	41.68	16.00	6,148.27	335.97	325.55	445.81	8.42	MWD	WEATHERFORD
3/11/2014	6,257.00	44.81	14.48	6,171.57	357.25	346.71	451.56	10.31	MWD	WEATHERFORD
3/11/2014	6,288.00	48.12	13.37	6,192.92	379.18	368.52	456.96	10.99	MWD	WEATHERFORD
3/11/2014	6,320.00	52.47	12.26	6,213.36	403.30	392.52	462.41	13.85	MWD	WEATHERFORD
3/11/2014	6,351.00	55.12	8.05	6,231.68	428.01	417.13	466.81	13.90	MWD	WEATHERFORD
3/11/2014	6,383.00	57.55	4.44	6,249.42	454.54	443.60	469.69	12.07	MWD	WEATHERFORD
3/11/2014	6,414.00	61.29	2.72	6,265.19	481.20	470.23	471.35	12.98	MWD	WEATHERFORD
3/11/2014	6,446.00	63.69	1.87	6,279.97	509.58	498.59	472.48	7.86	MWD	WEATHERFORD
3/11/2014	6,478.00	66.72	1.63	6,293.39	538.62	527.62	473.37	9.49	MWD	WEATHERFORD
3/11/2014	6,509.00	69.71	1.89	6,304.89	567.41	556.39	474.25	9.68	MWD	WEATHERFORD
3/11/2014	6,541.00	72.21	1.91	6,315.33	597.65	586.62	475.26	7.81	MWD	WEATHERFORD
3/11/2014	6,573.00	73.48	1.92	6,324.77	628.23	617.18	476.28	3.97	MWD	WEATHERFORD
3/11/2014	6,604.00	75.48	2.02	6,333.06	658.09	647.03	477.31	6.46	MWD	WEATHERFORD
3/11/2014	6,636.00	77.58	2.14	6,340.51	689.21	678.12	478.44	6.57	MWD	WEATHERFORD
3/11/2014	6,667.00	80.01	1.81	6,346.54	719.61	708.51	479.48	7.91	MWD	WEATHERFORD
3/11/2014	6,699.00	82.48	1.70	6,351.41	751.24	740.12	480.45	7.73	MWD	WEATHERFORD
3/11/2014	6,730.00	84.39	1.86	6,354.95	782.03	770.90	481.41	6.18	MWD	WEATHERFORD
3/11/2014	6,762.00	85.73	1.59	6,357.71	813.91	802.77	482.37	4.27	MWD	WEATHERFORD
3/11/2014	6,793.00	86.64	1.46	6,359.77	844.84	833.69	483.19	2.97	MWD	WEATHERFORD
3/11/2014	6,825.00	87.69	1.39	6,361.35	876.80	865.64	483.99	3.29	MWD	WEATHERFORD
3/11/2014	6,857.00	88.46	1.19	6,362.43	908.78	897.61	484.71	2.49	MWD	WEATHERFORD
3/11/2014	6,888.00	88.95	1.08	6,363.13	939.78	928.60	485.32	1.62	MWD	WEATHERFORD
3/11/2014	6,920.00	89.02	0.50	6,363.70	971.77	960.59	485.76	1.83	MWD	WEATHERFORD
3/11/2014	6,952.00	89.93	1.40	6,363.99	1,003.77	992.59	486.29	4.00	MWD	WEATHERFORD
3/11/2014	7,003.00	91.54	2.14	6,363.33	1,054.76	1,043.55	487.87	3.47	MWD	WEATHERFORD
3/11/2014	7,097.00	92.31	2.16	6,360.18	1,148.70	1,137.43	491.39	0.82	MWD	WEATHERFORD
3/11/2014	7,192.00	91.33	2.21	6,357.16	1,243.64	1,232.32	495.01	1.03	MWD	WEATHERFORD
3/11/2014	7,287.00	91.54	1.82	6,354.78	1,338.60	1,327.23	498.35	0.47	MWD	WEATHERFORD
3/11/2014	7,381.00	92.87	2.02	6,351.16	1,432.52	1,421.10	501.50	1.43	MWD	WEATHERFORD
3/11/2014	7,476.00	90.70	1.76	6,348.21	1,527.47	1,516.00	504.63	2.30	MWD	WEATHERFORD



HARROUN TRUST 31-3H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name CULEBRA BLUFF SOUTH	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location SEC31 T23S R29E	API/UWI 3001540825	Latitude (°) 32° 15' 18.69" N	Longitude (°) 104° 1' 40.66" W	Ground Elev... 2,957.10	KB - GL (ft) 25.00	Orig KB Elev (ft) 2,982.10	Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
3/11/2014	7,571.00	89.86	1.96	6,347.74	1,622.46	1,610.95	507.71	0.91	MWD	WEATHERFORD
3/11/2014	7,665.00	89.79	1.64	6,348.03	1,716.46	1,704.90	510.66	0.35	MWD	WEATHERFORD
3/11/2014	7,759.00	89.65	1.44	6,348.49	1,810.46	1,798.87	513.19	0.26	MWD	WEATHERFORD
3/11/2014	7,854.00	89.86	1.48	6,348.89	1,905.46	1,893.83	515.61	0.23	MWD	WEATHERFORD
3/11/2014	7,949.00	88.88	1.91	6,349.94	2,000.45	1,988.79	518.42	1.13	MWD	WEATHERFORD
3/11/2014	8,043.00	89.37	1.82	6,351.37	2,094.43	2,082.72	521.48	0.53	MWD	WEATHERFORD
3/11/2014	8,138.00	89.79	1.87	6,352.07	2,189.43	2,177.67	524.54	0.45	MWD	WEATHERFORD
3/11/2014	8,233.00	89.02	1.99	6,353.06	2,284.42	2,272.61	527.74	0.82	MWD	WEATHERFORD
3/11/2014	8,328.00	89.16	2.00	6,354.57	2,379.40	2,367.54	531.04	0.15	MWD	WEATHERFORD
3/11/2014	8,422.00	90.35	2.31	6,354.97	2,473.39	2,461.47	534.58	1.31	MWD	WEATHERFORD
3/11/2014	8,517.00	92.24	2.38	6,352.82	2,568.34	2,556.37	538.46	1.99	MWD	WEATHERFORD
3/11/2014	8,612.00	90.56	1.85	6,350.50	2,663.30	2,651.27	541.97	1.85	MWD	WEATHERFORD
3/11/2014	8,707.00	89.72	0.47	6,350.27	2,758.30	2,746.25	543.89	1.70	MWD	WEATHERFORD
3/11/2014	8,802.00	89.79	0.59	6,350.67	2,853.29	2,841.24	544.77	0.15	MWD	WEATHERFORD
3/11/2014	8,897.00	91.33	0.97	6,349.75	2,948.27	2,936.22	546.06	1.67	MWD	WEATHERFORD
3/11/2014	8,991.00	90.84	0.81	6,347.97	3,042.25	3,030.20	547.52	0.55	MWD	WEATHERFORD
3/11/2014	9,085.00	90.63	1.15	6,346.76	3,136.24	3,124.17	549.13	0.43	MWD	WEATHERFORD
3/11/2014	9,180.00	89.51	0.77	6,346.64	3,231.24	3,219.16	550.72	1.24	MWD	WEATHERFORD
3/11/2014	9,274.00	88.18	0.72	6,348.54	3,325.21	3,313.13	551.94	1.42	MWD	WEATHERFORD
3/11/2014	9,369.00	88.67	0.85	6,351.15	3,420.17	3,408.09	553.25	0.53	MWD	WEATHERFORD
3/11/2014	9,464.00	89.23	0.75	6,352.89	3,515.15	3,503.06	554.57	0.60	MWD	WEATHERFORD
3/11/2014	9,559.00	89.16	0.66	6,354.22	3,610.14	3,598.04	555.74	0.12	MWD	WEATHERFORD
3/11/2014	9,662.00	88.74	359.67	6,356.11	3,713.10	3,701.02	556.04	1.04	MWD	WEATHERFORD
3/11/2014	9,757.00	89.16	0.10	6,357.85	3,808.05	3,796.01	555.85	0.63	MWD	WEATHERFORD
3/11/2014	9,852.00	90.00	1.01	6,358.55	3,903.04	3,891.00	556.77	1.30	MWD	WEATHERFORD
3/11/2014	9,946.00	91.26	1.95	6,357.52	3,997.03	3,984.96	559.19	1.67	MWD	WEATHERFORD
3/11/2014	10,041.00	90.00	0.14	6,356.47	4,092.01	4,079.93	560.93	2.32	MWD	WEATHERFORD
3/11/2014	10,135.00	89.72	359.94	6,356.70	4,185.99	4,173.93	560.99	0.37	MWD	WEATHERFORD
3/11/2014	10,230.00	89.37	358.27	6,357.46	4,280.91	4,268.91	559.51	1.80	MWD	WEATHERFORD
3/11/2014	10,324.00	90.35	358.86	6,357.69	4,374.80	4,362.88	557.15	1.22	MWD	WEATHERFORD
3/11/2014	10,419.00	90.07	358.07	6,357.34	4,469.67	4,457.85	554.61	0.88	MWD	WEATHERFORD
3/11/2014	10,609.00	89.58	358.15	6,357.92	4,659.37	4,647.74	548.34	0.26	MWD	WEATHERFORD
3/11/2014	10,704.00	89.93	0.82	6,358.32	4,754.31	4,742.73	547.49	2.83	MWD	WEATHERFORD
3/11/2014	10,798.00	91.40	2.01	6,357.23	4,848.30	4,836.69	549.81	2.01	MWD	WEATHERFORD
3/11/2014	10,893.00	92.24	2.05	6,354.22	4,943.24	4,931.58	553.17	0.89	MWD	WEATHERFORD
3/11/2014	10,988.00	90.14	2.49	6,352.24	5,038.20	5,026.48	556.94	2.26	MWD	WEATHERFORD
3/11/2014	11,082.00	90.00	2.56	6,352.13	5,132.19	5,120.39	561.08	0.17	MWD	WEATHERFORD
3/11/2014	11,177.00	89.65	2.59	6,352.42	5,227.16	5,215.29	565.35	0.37	MWD	WEATHERFORD
3/11/2014	11,272.00	89.16	1.75	6,353.40	5,322.15	5,310.22	568.94	1.02	MWD	WEATHERFORD
3/11/2014	11,367.00	89.16	1.59	6,354.80	5,417.14	5,405.17	571.71	0.17	MWD	WEATHERFORD
3/11/2014	11,461.00	88.88	1.83	6,356.40	5,511.12	5,499.11	574.52	0.39	MWD	WEATHERFORD
3/11/2014	11,556.00	88.95	1.83	6,358.20	5,606.10	5,594.04	577.55	0.07	MWD	WEATHERFORD
3/11/2014	11,650.00	89.79	2.30	6,359.24	5,700.08	5,687.98	580.94	1.02	MWD	WEATHERFORD
3/11/2014	11,745.00	90.77	3.93	6,358.77	5,795.03	5,782.83	586.10	2.00	MWD	WEATHERFORD
3/11/2014	11,840.00	89.79	2.72	6,358.31	5,889.97	5,877.67	591.61	1.64	MWD	WEATHERFORD
3/11/2014	11,934.00	89.72	1.24	6,358.71	5,983.96	5,971.61	594.85	1.58	MWD	WEATHERFORD
3/11/2014	12,029.00	90.42	3.00	6,358.59	6,078.95	6,066.54	598.37	1.99	MWD	WEATHERFORD
3/11/2014	12,124.00	90.49	4.00	6,357.84	6,173.88	6,161.36	604.17	1.06	MWD	WEATHERFORD
3/11/2014	12,218.00	89.44	3.45	6,357.90	6,267.80	6,255.16	610.27	1.26	MWD	WEATHERFORD
3/11/2014	12,313.00	89.37	4.25	6,358.88	6,362.70	6,349.94	616.65	0.85	MWD	WEATHERFORD
3/11/2014	12,408.00	90.14	4.81	6,359.29	6,457.55	6,444.64	624.16	1.00	MWD	WEATHERFORD
3/11/2014	12,502.00	89.65	3.36	6,359.46	6,551.44	6,538.40	630.85	1.63	MWD	WEATHERFORD
3/11/2014	12,597.00	89.51	0.11	6,360.16	6,646.43	6,633.34	633.73	3.42	MWD	WEATHERFORD
3/11/2014	12,692.00	90.63	0.95	6,360.04	6,741.41	6,728.33	634.61	1.47	MWD	WEATHERFORD
3/11/2014	12,786.00	90.98	2.01	6,358.72	6,835.40	6,822.29	637.03	1.19	MWD	WEATHERFORD



HARROUN TRUST 31-3H

WEST UNRESTRICTED

Directional Survey

District DELAWARE BASIN	County EDDY	Field Name CULEBRA BLUFF SOUTH	Project Group DELAWARE BASIN REG	State/Province NM			
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Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
3/11/2014	12,881.00	90.84	2.51	6,357.21	6,930.38	6,917.20	640.78	0.55	MWD	WEATHERFORD
3/11/2014	12,976.00	91.19	5.35	6,355.53	7,025.26	7,011.95	647.29	3.01	MWD	WEATHERFORD
3/11/2014	13,071.00	90.00	3.23	6,354.54	7,120.12	7,106.68	654.39	2.56	MWD	WEATHERFORD
3/11/2014	13,168.00	89.58	3.16	6,354.90	7,217.07	7,203.52	659.80	0.44	MWD	WEATHERFORD
3/11/2014	13,235.00	89.58	3.16	6,355.39	7,284.03	7,270.42	663.49	0.00	BIT	WEATHERFORD