



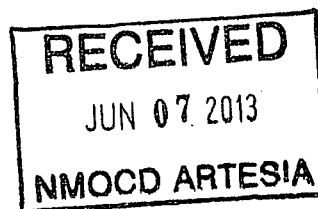
A GYRO TECHNOLOGIES INC. COMPANY

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

January 4, 2013

30-015-40514

Devon Energy Production Company
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010



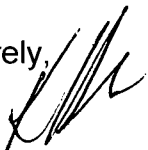
Attn: Patti Riechers

Re: **Onyx PWU 29 No 006H**

Please find enclosed a copy of the survey from 0' to 8,041.71' 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.

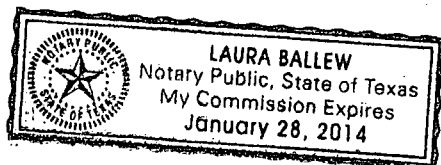
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 4th day of January
A.D., 2013, by Keith Havelka.


Laura Ballew
Notary Public, State of Texas





Company: Devon Energy Production Co., LP
 Lease/Well: Onyx PWU/No 006H
 Location: S29 T19s R29e
 Rig Name: Cactus 126
 State/County: New Mexico/Eddy
 Latitude: 32.63, Longitude: -104.09
 GRID North is 0.13 Degrees East of True North
 VS-Azi: 0.00 Degrees



RKB : 25 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: onyx pwu 29 #6h.ut
 Minimum Curvature Method
 Report Date/Time: 1/4/2013 / 08:45

Vaughn Energy Services
 (432) 563-5444
 Gardendale, TX
 Surveyor: Dustin Wedel
 Onyx PWU 29 No 006H / API 30-015-40514

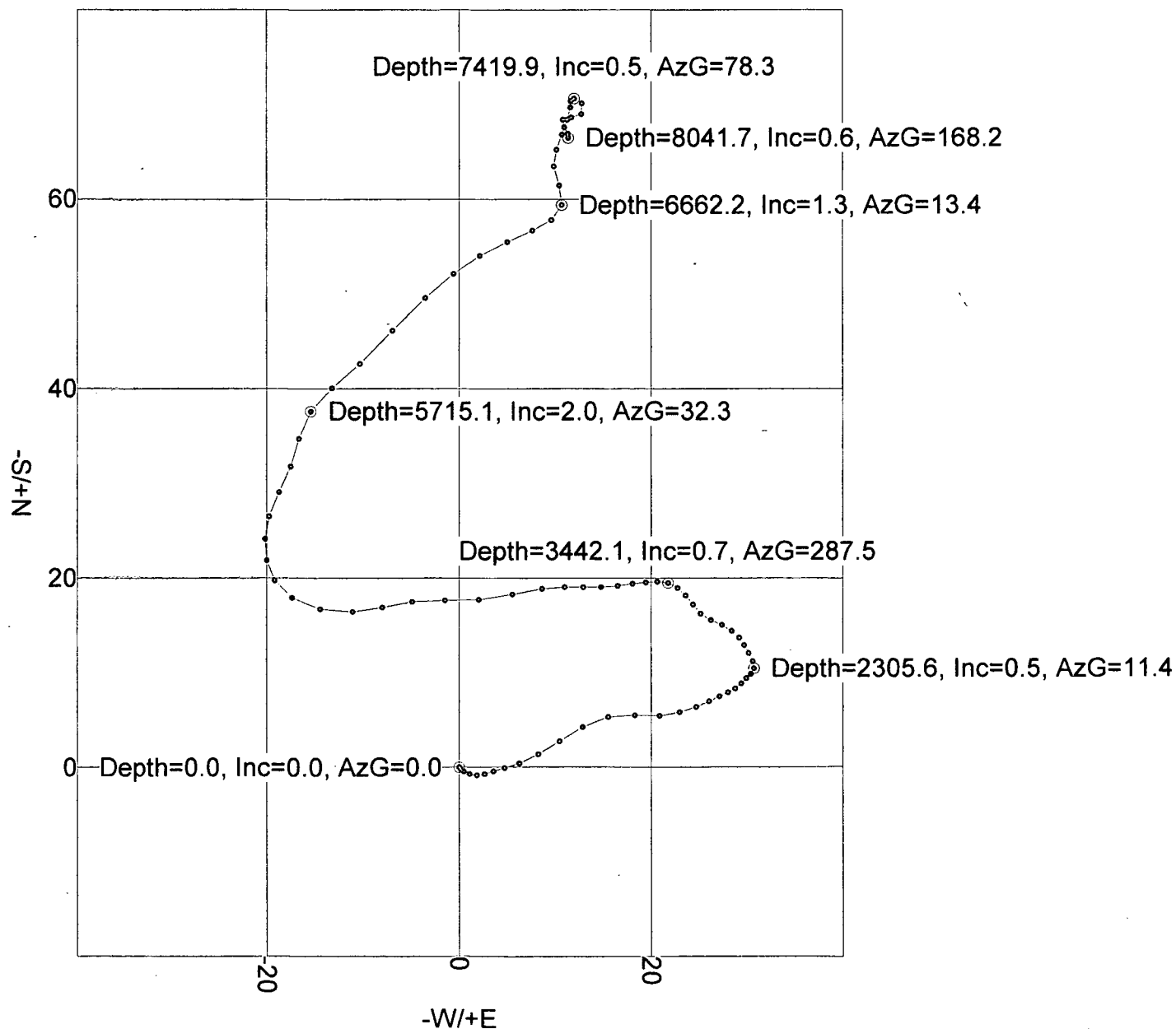
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
127.26	0.20	139.59	127.26	-0.17	0.15	-0.17	0.23	139.59	0.16
221.97	0.34	120.70	221.97	-0.44	0.50	-0.44	0.67	131.78	0.17
316.68	0.47	109.81	316.68	-0.72	1.10	-0.72	1.32	123.06	0.16
411.39	0.49	90.75	411.38	-0.86	1.88	-0.86	2.06	114.51	0.17
506.10	0.51	71.69	506.09	-0.73	2.69	-0.73	2.78	105.16	0.18
600.81	0.66	72.01	600.79	-0.43	3.60	-0.43	3.63	96.77	0.15
695.52	0.80	76.32	695.50	-0.10	4.76	-0.10	4.76	91.25	0.16
790.23	1.15	68.29	790.19	0.40	6.28	0.40	6.30	86.32	0.40
884.94	1.51	60.25	884.88	1.38	8.25	1.38	8.37	80.54	0.42
979.65	1.65	56.59	979.55	2.74	10.47	2.74	10.82	75.32	0.18
1074.36	1.78	58.93	1074.22	4.25	12.87	4.25	13.55	71.71	0.16
1169.07	1.73	77.42	1168.89	5.33	15.53	5.33	16.42	71.07	0.60
1263.78	1.67	95.89	1263.55	5.50	18.30	5.50	19.11	73.29	0.58
1358.49	1.43	84.93	1358.23	5.46	20.85	5.46	21.55	75.33	0.41
1453.20	1.18	73.96	1452.92	5.83	22.96	5.83	23.69	75.75	0.37
1547.91	0.99	68.58	1547.61	6.40	24.66	6.40	25.48	75.45	0.23
1642.62	0.79	63.19	1642.31	6.99	26.00	6.99	26.93	74.95	0.22
1737.33	0.67	64.94	1737.01	7.52	27.09	7.52	28.11	74.48	0.14

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
1832.04	0.54	66.68	1831.71	7.93	28.00	7.93	29.10	74.18	0.13
1926.75	0.51	55.77	1926.42	8.35	28.76	8.35	29.95	73.81	0.11
2021.46	0.49	44.85	2021.13	8.87	29.40	8.87	30.71	73.20	0.10
2116.17	0.44	42.61	2115.83	9.43	29.93	9.43	31.38	72.52	0.06
2210.88	0.38	50.37	2210.54	9.89	30.41	9.89	31.98	71.98	0.08
2305.59	0.46	11.44	2305.25	10.47	30.73	10.47	32.47	71.19	0.31
2400.30	0.54	332.51	2399.95	11.23	30.60	11.23	32.60	69.85	0.36
2495.01	0.63	332.43	2494.66	12.09	30.16	12.09	32.49	68.16	0.10
2589.72	0.53	332.36	2589.37	12.94	29.71	12.94	32.41	66.47	0.11
2684.43	0.61	319.33	2684.07	13.71	29.18	13.71	32.24	64.83	0.16
2779.14	0.70	306.31	2778.77	14.44	28.38	14.44	31.84	63.04	0.18
2873.85	0.75	297.90	2873.48	15.07	27.37	15.07	31.24	61.16	0.12
2968.56	0.80	289.50	2968.18	15.58	26.20	15.58	30.48	59.26	0.13
3063.27	0.77	316.36	3062.88	16.26	25.14	16.26	29.94	57.10	0.39
3157.98	0.75	323.22	3157.58	17.22	24.33	17.22	29.80	54.71	0.10
3252.69	0.72	318.55	3252.28	18.15	23.57	18.15	29.75	52.39	0.07
3347.40	0.69	309.90	3346.99	18.96	22.74	18.96	29.61	50.17	0.12
3442.11	0.69	287.49	3441.69	19.50	21.76	19.50	29.22	48.13	0.28
3536.82	0.69	265.10	3536.39	19.62	20.65	19.62	28.48	46.45	0.28
3631.53	0.79	267.45	3631.10	19.55	19.43	19.55	27.56	44.83	0.11
3726.24	0.89	261.81	3725.80	19.41	18.05	19.41	26.51	42.92	0.14
3820.95	1.00	262.06	3820.49	19.19	16.51	19.19	25.32	40.70	0.12
3915.66	1.11	268.32	3915.19	19.05	14.78	19.05	24.11	37.80	0.17
4010.37	1.15	271.67	4009.88	19.05	12.92	19.05	23.02	34.14	0.08
4105.08	1.18	269.03	4104.57	19.07	11.00	19.07	22.01	29.97	0.07
4199.79	1.66	262.87	4199.25	18.88	8.65	18.88	20.77	24.63	0.53
4294.50	2.14	256.73	4293.91	18.30	5.57	18.30	19.13	16.93	0.55
4389.21	2.15	265.23	4388.55	17.75	2.08	17.75	17.87	6.68	0.34
4483.92	2.17	271.76	4483.19	17.66	-1.49	17.66	17.72	355.19	0.26
4578.63	2.00	263.12	4577.84	17.51	-4.92	17.51	18.19	344.31	0.38
4673.34	1.83	254.50	4672.50	16.91	-8.02	16.91	18.71	334.64	0.35
4768.05	1.98	267.98	4767.16	16.45	-11.11	16.45	19.85	325.97	0.50
4862.76	2.13	281.47	4861.81	16.74	-14.47	16.74	22.13	319.17	0.53
4957.47	1.77	305.24	4956.46	17.93	-17.38	17.93	24.98	315.90	0.93
5052.18	1.41	329.01	5051.14	19.77	-19.17	19.77	27.54	315.88	0.78
5146.89	1.38	348.90	5145.82	21.89	-19.99	21.89	29.64	317.60	0.51
5241.60	1.36	2.78	5240.50	24.14	-20.16	24.14	31.45	320.14	0.35
5336.31	1.57	15.35	5335.18	26.52	-19.76	26.52	33.07	323.31	0.41
5431.02	1.78	27.92	5429.85	29.07	-18.72	29.07	34.58	327.22	0.45

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
5525.73	1.83	19.58	5524.51	31.80	-17.53	31.80	36.31	331.14	0.28
5620.44	1.88	13.24	5619.18	34.73	-16.66	34.73	38.52	334.37	0.22
5715.15	1.97	32.25	5713.83	37.62	-15.44	37.62	40.66	337.68	0.68
5809.86	2.06	51.26	5808.49	40.06	-13.24	40.06	42.19	341.71	0.71
5904.57	2.65	46.59	5903.12	42.63	-10.32	42.63	43.86	346.39	0.65
5999.28	3.24	41.91	5997.70	46.13	-6.95	46.13	46.65	351.44	0.67
6093.99	2.65	47.67	6092.28	49.59	-3.54	49.59	49.72	355.92	0.69
6188.70	2.07	51.42	6186.91	52.13	-0.58	52.13	52.14	359.36	0.64
6283.41	1.99	59.45	6281.56	54.04	2.17	54.04	54.08	2.30	0.31
6378.12	1.91	67.47	6376.22	55.48	5.05	55.48	55.71	5.20	0.30
6472.83	1.55	62.41	6470.89	56.68	7.64	56.68	57.19	7.68	0.41
6567.54	1.19	57.33	6565.57	57.80	9.61	57.80	58.60	9.44	0.40
6662.25	1.29	13.39	6660.26	59.37	10.69	59.37	60.33	10.20	0.99
6756.96	1.39	333.45	6754.95	61.44	10.42	61.44	62.31	9.63	0.97
6851.67	1.20	357.70	6849.63	63.45	9.87	63.45	64.22	8.84	0.61
6946.38	1.01	21.95	6944.32	65.22	10.14	65.22	66.01	8.84	0.53
7041.09	1.02	17.40	7039.02	66.80	10.71	66.80	67.65	9.11	0.09
7135.80	1.02	20.85	7133.71	68.39	11.26	68.39	69.31	9.35	0.06
7230.51	0.61	4.65	7228.41	69.68	11.60	69.68	70.64	9.45	0.49
7325.22	0.21	348.45	7323.12	70.35	11.60	70.35	71.30	9.37	0.44
7419.93	0.52	78.26	7417.83	70.61	11.99	70.61	71.62	9.64	0.59
7514.64	0.84	148.07	7512.54	70.10	12.78	70.10	71.26	10.33	0.87
7609.35	0.82	217.28	7607.24	68.98	12.74	68.98	70.15	10.46	0.99
7704.06	0.80	286.48	7701.94	68.63	11.70	68.63	69.62	9.67	0.97
7798.77	0.61	211.62	7796.64	68.38	10.80	68.38	69.23	8.98	0.92
7893.48	0.66	130.14	7891.35	67.60	10.95	67.60	68.48	9.20	0.88
7988.19	0.41	185.39	7986.06	66.91	11.34	66.91	67.86	9.62	0.57
8041.71	0.59	168.24	8039.57	66.44	11.37	66.44	67.41	9.71	0.43



Vaughn Energy Services
(432) 563-5444
Gardendale, TX
Surveyor: Dustin Wedel
Onyx PWU 29 No 006H / API 30-015-40514



VES Survey Date: 12/23/2012

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
10092.00	92.35	265.95	6,951.96	126.95 S	3,304.04 W	3305.84	2.73
10123.00	92.25	265.43	6,950.72	129.28 S	3,334.93 W	3336.76	1.72
10219.00	93.35	264.45	6,946.03	137.74 S	3,430.44 W	3432.41	1.53
10319.00	93.95	265.40	6,939.66	146.57 S	3,529.84 W	3531.96	1.12
10414.00	94.66	267.46	6,932.53	152.47 S	3,624.38 W	3626.60	2.29
10508.00	92.93	270.71	6,926.31	153.97 S	3,718.15 W	3720.38	3.91
10603.00	93.85	271.61	6,920.69	152.05 S	3,812.96 W	3815.14	1.35
10698.00	95.50	272.23	6,912.94	148.88 S	3,907.59 W	3909.69	1.85
10794.00	94.16	271.47	6,904.86	145.79 S	4,003.19 W	4005.22	1.60
10888.00	92.22	270.53	6,899.63	144.16 S	4,097.03 W	4099.01	2.30
10983.00	90.92	269.22	6,897.03	144.36 S	4,191.99 W	4193.95	1.94
11078.00	90.71	270.30	6,895.67	144.76 S	4,286.98 W	4288.93	1.16
11173.00	89.41	271.58	6,895.57	143.21 S	4,381.96 W	4383.87	1.92
11268.00	94.01	272.42	6,892.73	139.90 S	4,476.83 W	4478.67	4.92
11363.00	91.36	271.60	6,888.29	136.57 S	4,571.66 W	4573.42	2.92
11458.00	91.11	270.93	6,886.24	134.48 S	4,666.62 W	4668.31	0.75
11553.00	91.51	271.34	6,884.07	132.59 S	4,761.57 W	4763.22	0.61
11608.00	91.63	271.01	6,882.56	131.46 S	4,816.54 W	4818.15	0.64
11705.00	91.63	271.01	6,879.80	129.75 S	4,913.48 W	4915.05	0.00

SURVEY FOOTER
DIRECTIONAL SURVEY DATA NOTES

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of 268.93 degrees (Grid)
- A total correction of 7.64 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 11,705.00 feet is 4,915.20 feet along 268.49 degrees (Grid)

SURVEYS CALCULATED USING THE LONG COLLAR METHOD.

WELL ASSUMED VERTICAL AT WELLHEAD.

SURVEYS FROM 127.26 TO 6283.41' MD PROVIDED BY VAUGHN ENERGY SERVICES.

SURVEYS FROM 6336' MD TO 11608' MD PROVIDED BY SPERRY DRILLING SERVICES.

SURVEY AT 11608' MD IS PROJECTED TO TD AT 11705' MD.

SPERRY DRILLING ENGINEERS: LANCE SMITH, KENNETH

WARRANTY

HALLIBURTON ENERGY SERVICES, INC. WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON ENERGY SERVICES, INC. CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION, AND PRODUCTION OPERATION. HALLIBURTON ENERGY SERVICES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON ENERGY SERVICES, INC. SERVICES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON ENERGY SERVICES, INC.

HALLIBURTON

Sperry Drilling

Halliburton / Sperry Drilling Services
3950 Interwood Dr.
Houston, Texas 77032
Phone: 281-986-4400
Fax: 281-986-4498

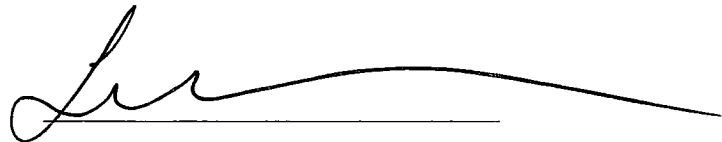
HALLIBURTON

14103 Interwood S. Parkway • Houston, TX 77032

PHONE 281.986.4400 • FAX 281.986.4499

State of New Mexico, Eddy County

I, Lance Smith certify that I am employed by Halliburton Energy Services, Inc. (AKA Sperry Drilling) and that on the dates of 24, December 2012 through 08, January 2013 I did conduct or supervise the taking of DGWD directional surveys for the well Onyx PWU 29 6H from a depth of 6336' MD to a depth of 11608' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling). I am authorized and qualified to make this report and this survey was conducted at the request of Devon Energy Productions Co, for the Onyx 29 6H 1H API No. 30-015-40514 in Eddy County, New Mexico. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling).

A handwritten signature in black ink, appearing to read 'Lance Smith', is written over a horizontal line.

Field Engineer

Devon Energy Production Company
Onyx PWU 29 6H
Eddy County, New Mexico
Cactus 126
API# 30-015-40514-0000

December 24, 2012 – January 8, 2013
HD-MJ-0900056529

Sperry Drilling
MWD Survey Report

Submitted by Lance Smith
3950 Interwood South Parkway
Houston, TX 77032
Ph: 281.986.4400

HALLIBURTON

Drilling and Formation
Evaluation

TABLE OF CONTENTS

1. General Information
2. Directional Survey Data

GENERAL INFORMATION

Company	: Devon Energy Production Company
Rig	: Cactus 126
Well	: Onyx PWU 29 6H
Field	: Permian Basin(Bone Spring Sand)
Lease Name	: Onyx PWU 29
State	: New Mexico
County	: Eddy
Country	: USA
API Number	: 30-015-40514
Sperry Drilling Job Number	: HD-XX-0900056529
Job Start Date	: 24-Dec-12
Job End Date	: 08-Jan-13
North Reference	: Grid
Total Correction (deg)	: 7.644
Dip Angle (deg)	: 60.402
Total Magnetic Field (nT)	: 48660
Date of Magnetic Data	: 24 December, 2012
Well Head coordinates N	: 32 deg. 38 min 5.3 sec North
Well Head coordinates E	: 104 deg. 5 min 18.79 sec West
Vertical section direction (deg)	: 268.93
Unit Number	: 11310664
MWD Engineers	: Lance Smith, Kenneth Marshall
Company Representatives	: Sam Madrid, Floyd Lucero, Wilbur Motley
Company Geologist:	: Curt Mckinney,

DIRECTIONAL SURVEY DATA

Tie-in

0.00

0.00

0.00

0.00

0.00 N

0.00 E

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
127.26	0.20	139.59	127.26	0.17 S	0.14 E	-0.14	0.16
221.97	0.34	120.70	221.97	0.44 S	0.49 E	-0.48	0.17
316.68	0.47	109.81	316.68	0.71 S	1.10 E	-1.09	0.16
411.39	0.49	90.75	411.38	0.85 S	1.87 E	-1.85	0.17
506.10	0.51	71.69	506.09	0.72 S	2.68 E	-2.66	0.18
600.81	0.66	72.01	600.79	0.42 S	3.59 E	-3.59	0.16
695.52	0.80	76.32	695.50	0.10 S	4.76 E	-4.75	0.16
790.23	1.15	68.29	790.19	0.41 N	6.28 E	-6.29	0.40
884.94	1.51	60.25	884.88	1.38 N	8.25 E	-8.27	0.43
979.65	1.65	56.59	979.55	2.75 N	10.47 E	-10.52	0.18
1074.36	1.78	58.93	1,074.22	4.26 N	12.87 E	-12.94	0.16
1169.07	1.73	77.42	1,168.89	5.33 N	15.52 E	-15.62	0.60
1263.78	1.67	95.89	1,263.55	5.50 N	18.29 E	-18.39	0.58
1358.49	1.43	84.93	1,358.23	5.46 N	20.84 E	-20.94	0.40
1453.20	1.18	73.96	1,452.92	5.84 N	22.95 E	-23.06	0.37
1547.91	0.99	68.58	1,547.61	6.41 N	24.65 E	-24.77	0.23
1642.62	0.79	63.19	1,642.31	7.00 N	26.00 E	-26.12	0.23
1737.33	0.67	64.94	1,737.01	7.53 N	27.08 E	-27.22	0.13
1832.04	0.54	66.68	1,831.71	7.94 N	27.99 E	-28.14	0.14
1926.75	0.51	55.77	1,926.42	8.35 N	28.75 E	-28.90	0.11
2021.46	0.49	44.85	2,021.13	8.88 N	29.39 E	-29.55	0.10
2116.17	0.44	42.61	2,115.83	9.43 N	29.92 E	-30.09	0.06
2210.88	0.38	50.37	2,210.54	9.90 N	30.41 E	-30.59	0.09
2305.59	0.46	11.44	2,305.25	10.47 N	30.72 E	-30.91	0.31
2400.30	0.54	332.51	2,399.96	11.24 N	30.59 E	-30.80	0.36
2495.01	0.63	332.43	2,494.66	12.10 N	30.15 E	-30.37	0.10
2589.72	0.53	332.36	2,589.37	12.95 N	29.70 E	-29.94	0.11
2684.43	0.61	319.33	2,684.07	13.72 N	29.17 E	-29.42	0.16
2779.14	0.70	306.31	2,778.77	14.44 N	28.38 E	-28.64	0.18
2873.85	0.75	297.90	2,873.48	15.08 N	27.36 E	-27.64	0.12
2968.56	0.80	289.50	2,968.18	15.59 N	26.19 E	-26.48	0.13
3063.27	0.77	316.36	3,062.88	16.27 N	25.13 E	-25.43	0.39
3157.98	0.75	323.22	3,157.58	17.23 N	24.32 E	-24.63	0.10
3252.69	0.72	318.55	3,252.28	18.17 N	23.55 E	-23.89	0.07
3347.40	0.69	309.90	3,346.99	18.98 N	22.72 E	-23.07	0.12
3442.11	0.69	287.49	3,441.69	19.52 N	21.74 E	-22.10	0.28
3536.82	0.69	265.10	3,536.39	19.64 N	20.63 E	-20.99	0.28
3631.53	0.79	267.45	3,631.10	19.56 N	19.41 E	-19.77	0.11
3726.24	0.89	261.81	3,725.80	19.43 N	18.03 E	-18.39	0.14
3820.95	1.00	262.06	3,820.49	19.21 N	16.48 E	-16.84	0.12
3915.66	1.11	268.32	3,915.19	19.07 N	14.74 E	-15.10	0.17

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
4010.37	1.15	271.67	4,009.88	19.07 N	12.88 E	13.23	0.08
4105.08	1.18	269.03	4,104.57	19.08 N	10.95 E	11.31	0.06
4199.79	1.66	262.87	4,199.25	18.89 N	8.62 E	-8.97	0.53
4294.50	2.14	256.73	4,293.91	18.32 N	5.53 E	-5.88	0.55
4389.21	2.15	265.23	4,388.55	17.76 N	2.04 E	-2.37	0.34
4483.92	2.17	271.76	4,483.19	17.67 N	1.52 W	1.19	0.26
4578.63	2.00	263.12	4,577.84	17.53 N	4.95 W	4.62	0.38
4673.34	1.83	254.50	4,672.50	16.93 N	8.05 W	7.73	0.35
4768.05	1.98	267.98	4,767.16	16.46 N	11.14 W	10.83	0.50
4862.76	2.13	281.47	4,861.81	16.76 N	14.50 W	14.19	0.53
4957.47	1.77	305.24	4,956.46	17.95 N	17.42 W	17.08	0.93
5052.18	1.41	329.01	5,051.14	19.79 N	19.22 W	18.84	0.79
5146.89	1.38	348.90	5,145.82	21.91 N	20.04 W	19.62	0.51
5241.60	1.36	2.78	5,240.50	24.15 N	20.20 W	19.75	0.35
5336.31	1.57	15.35	5,335.18	26.53 N	19.80 W	19.31	0.40
5431.02	1.78	27.92	5,429.85	29.08 N	18.77 W	18.23	0.45
5525.73	1.83	19.58	5,524.52	31.80 N	17.58 W	16.98	0.28
5620.44	1.88	13.24	5,619.18	34.74 N	16.71 W	16.06	0.22
5715.15	1.97	32.25	5,713.83	37.63 N	15.49 W	14.78	0.68
5809.86	2.06	51.26	5,808.49	40.07 N	13.29 W	12.54	0.71
5904.57	2.65	46.59	5,903.12	42.64 N	10.37 W	9.58	0.65
5999.28	3.24	41.91	5,997.70	46.14 N	7.00 W	6.13	0.67
6093.99	2.65	47.67	6,092.28	49.60 N	3.59 W	2.66	0.70
6188.70	2.07	51.42	6,186.91	52.14 N	0.63 W	-0.34	0.63
6283.41	1.99	59.45	6,281.56	54.05 N	2.12 E	-3.13	0.31
6336.00	1.33	55.28	6,334.13	54.86 N	3.41 E	-4.43	1.28
6462.00	11.57	273.39	6,459.34	56.44 N	8.06 W	7.00	10.03
6494.00	15.80	263.61	6,490.43	56.15 N	15.59 W	14.54	15.01
6525.00	19.92	265.71	6,519.93	55.28 N	25.06 W	24.02	13.47
6556.00	22.78	266.23	6,548.80	54.49 N	36.32 W	35.29	9.24
6588.00	24.51	267.23	6,578.11	53.76 N	49.13 W	48.12	5.53
6619.00	26.20	265.66	6,606.13	52.93 N	62.38 W	61.38	5.88
6651.00	26.83	264.25	6,634.76	51.68 N	76.61 W	75.63	2.78
6682.00	27.57	259.60	6,662.34	49.68 N	90.63 W	89.68	7.26
6714.00	28.98	255.48	6,690.52	46.40 N	105.41 W	104.53	7.53
6745.00	30.44	250.59	6,717.45	41.90 N	120.09 W	119.29	9.11
6777.00	32.49	245.64	6,744.75	35.66 N	135.57 W	134.88	10.31
6809.00	35.18	242.67	6,771.33	27.89 N	151.59 W	151.05	9.85
6840.00	38.45	238.29	6,796.15	18.72 N	167.73 W	167.35	13.53
6871.00	41.69	235.09	6,819.87	7.75 N	184.39 W	184.21	12.38
6903.00	45.79	232.61	6,842.99	5.31 S	202.24 W	202.30	13.89
6934.00	50.48	231.98	6,863.67	19.43 S	220.50 W	220.82	15.20
6966.00	54.78	233.48	6,883.09	34.82 S	240.73 W	241.34	13.94
6997.00	58.96	233.65	6,900.03	50.24 S	261.61 W	262.51	13.48
7029.00	63.23	233.87	6,915.49	66.79 S	284.20 W	285.40	13.36

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
7060.00	66.62	235.13	6,928.63	83.09 S	307.06 W	308.56	11.55
7092.00	69.36	236.05	6,940.62	99.85 S	331.54 W	333.35	8.97
7124.00	72.59	238.74	6,951.05	116.14 S	357.02 W	359.13	12.83
7155.00	75.49	241.75	6,959.57	130.93 S	382.89 W	385.27	13.21
7187.00	79.61	244.42	6,966.47	145.06 S	410.75 W	413.39	15.22
7213.00	82.31	247.41	6,970.56	155.53 S	434.19 W	437.02	15.40
7245.00	85.58	251.20	6,973.93	166.77 S	463.95 W	466.98	15.59
7277.00	89.17	255.03	6,975.40	176.05 S	494.53 W	497.73	16.39
7309.00	91.70	259.08	6,975.16	183.22 S	525.70 W	529.03	14.92
7340.00	92.49	261.93	6,974.03	188.33 S	556.25 W	559.67	9.53
7370.00	92.68	262.24	6,972.67	192.45 S	585.94 W	589.43	1.22
7434.00	91.39	264.58	6,970.40	199.79 S	649.47 W	653.09	4.17
7465.00	90.65	266.09	6,969.85	202.31 S	680.36 W	684.02	5.42
7532.00	89.14	269.00	6,969.98	205.18 S	747.29 W	750.99	4.90
7564.00	89.02	269.03	6,970.49	205.73 S	779.28 W	782.99	0.39
7627.00	89.23	270.02	6,971.46	206.26 S	842.27 W	845.98	1.61
7658.00	89.38	270.61	6,971.83	206.08 S	873.27 W	876.97	1.97
7722.00	89.78	271.92	6,972.30	204.67 S	937.25 W	940.91	2.13
7754.00	89.78	272.09	6,972.42	203.55 S	969.23 W	972.86	0.54
7848.00	88.77	272.20	6,973.61	200.03 S	1,063.16 W	1066.71	1.09
7943.00	88.92	272.38	6,975.52	196.24 S	1,158.06 W	1161.52	0.25
8037.00	90.12	271.76	6,976.31	192.84 S	1,251.99 W	1255.38	1.44
8132.00	91.45	270.76	6,975.01	190.76 S	1,346.96 W	1350.29	1.75
8226.00	92.25	270.83	6,971.97	189.45 S	1,440.90 W	1444.19	0.86
8321.00	93.76	270.82	6,966.99	188.08 S	1,535.76 W	1539.00	1.59
8416.00	93.54	271.76	6,960.94	185.94 S	1,630.54 W	1633.73	1.01
8447.00	92.90	272.22	6,959.19	184.87 S	1,661.47 W	1664.63	2.54
8510.00	93.24	273.21	6,955.82	181.89 S	1,724.31 W	1727.40	1.66
8605.00	91.51	272.80	6,951.89	176.91 S	1,819.09 W	1822.08	1.87
8637.00	90.28	272.42	6,951.39	175.45 S	1,851.05 W	1854.01	4.03
8700.00	89.81	271.99	6,951.34	173.03 S	1,914.01 W	1916.91	1.01
8794.00	89.44	272.68	6,951.95	169.20 S	2,007.93 W	2010.74	0.84
8889.00	89.48	273.00	6,952.84	164.49 S	2,102.81 W	2105.51	0.34
8984.00	89.29	273.32	6,953.87	159.25 S	2,197.66 W	2200.25	0.38
9078.00	92.09	274.29	6,952.73	153.02 S	2,291.43 W	2293.89	3.15
9173.00	90.83	273.48	6,950.31	146.59 S	2,386.18 W	2388.50	1.58
9267.00	90.15	273.11	6,949.50	141.18 S	2,480.02 W	2482.22	0.82
9363.00	90.15	273.75	6,949.24	135.44 S	2,575.85 W	2577.93	0.66
9457.00	89.75	273.11	6,949.32	129.81 S	2,669.68 W	2671.64	0.80
9552.00	88.77	272.82	6,950.55	124.89 S	2,764.54 W	2766.39	1.08
9648.00	87.88	271.77	6,953.36	121.05 S	2,860.42 W	2862.18	1.43
9743.00	87.99	270.51	6,956.78	119.16 S	2,955.34 W	2957.05	1.34
9838.00	89.94	270.11	6,958.49	118.65 S	3,050.32 W	3052.00	2.09
9933.00	91.64	268.28	6,957.19	119.98 S	3,145.29 W	3146.98	2.63
10028.00	91.85	267.62	6,954.30	123.37 S	3,240.19 W	3241.93	0.73

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
10092.00	92.35	265.95	6,951.96	126.95 S	3,304.04 W	3305.84	2.73
10123.00	92.25	265.43	6,950.72	129.28 S	3,334.93 W	3336.76	1.72
10219.00	93.35	264.45	6,946.03	137.74 S	3,430.44 W	3432.41	1.53
10319.00	93.95	265.40	6,939.66	146.57 S	3,529.84 W	3531.96	1.12
10414.00	94.66	267.46	6,932.53	152.47 S	3,624.38 W	3626.60	2.29
10508.00	92.93	270.71	6,926.31	153.97 S	3,718.15 W	3720.38	3.91
10603.00	93.85	271.61	6,920.69	152.05 S	3,812.96 W	3815.14	1.35
10698.00	95.50	272.23	6,912.94	148.88 S	3,907.59 W	3909.69	1.85
10794.00	94.16	271.47	6,904.86	145.79 S	4,003.19 W	4005.22	1.60
10888.00	92.22	270.53	6,899.63	144.16 S	4,097.03 W	4099.01	2.30
10983.00	90.92	269.22	6,897.03	144.36 S	4,191.99 W	4193.95	1.94
11078.00	90.71	270.30	6,895.67	144.76 S	4,286.98 W	4288.93	1.16
11173.00	89.41	271.58	6,895.57	143.21 S	4,381.96 W	4383.87	1.92
11268.00	94.01	272.42	6,892.73	139.90 S	4,476.83 W	4478.67	4.92
11363.00	91.36	271.60	6,888.29	136.57 S	4,571.66 W	4573.42	2.92
11458.00	91.11	270.93	6,886.24	134.48 S	4,666.62 W	4668.31	0.75
11553.00	91.51	271.34	6,884.07	132.59 S	4,761.57 W	4763.22	0.61
11608.00	91.63	271.01	6,882.56	131.46 S	4,816.54 W	4818.15	0.64
11705.00	91.63	271.01	6,879.80	129.75 S	4,913.48 W	4915.05	0.00

SURVEY FOOTER

DIRECTIONAL SURVEY DATA NOTES

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of 268.93 degrees (Grid)
- A total correction of 7.64 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 11,705.00 feet is 4,915.20 feet along 268.49 degrees (Grid)

SURVEYS CALCULATED USING THE LONG COLLAR METHOD.

WELL ASSUMED VERTICAL AT WELLHEAD.

SURVEYS FROM 127.26 TO 6283.41' MD PROVIDED BY VAUGHN ENERGY SERVICES.

SURVEYS FROM 6336' MD TO 11608' MD PROVIDED BY SPERRY DRILLING SERVICES.

SURVEY AT 11608' MD IS PROJECTED TO TD AT 11705' MD.

SPERRY DRILLING ENGINEERS: LANCE SMITH, KENNETH

WARRANTY

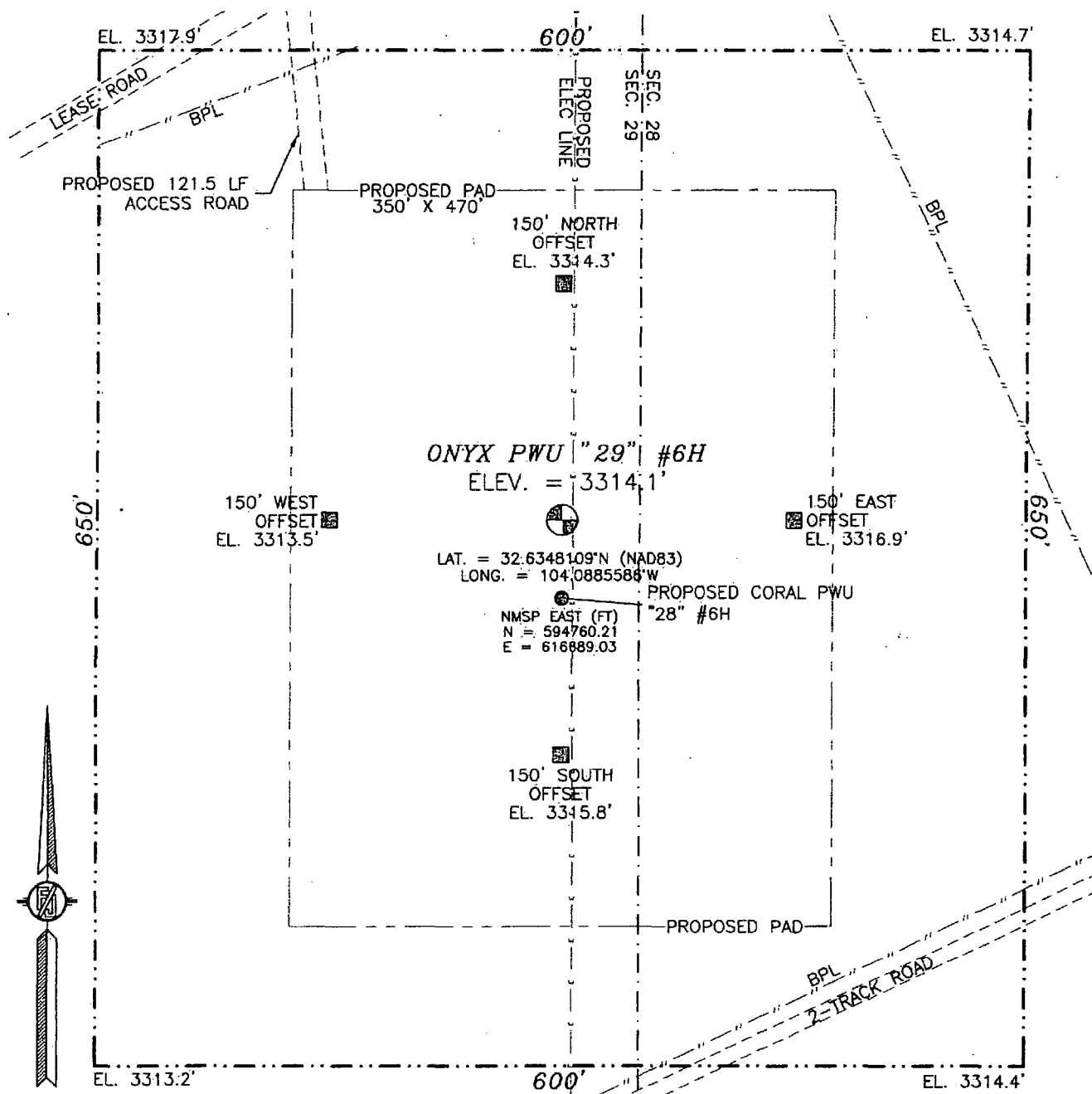
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HALLIBURTON

Sperry Drilling

Halliburton / Sperry Drilling Services
3950 Interwood Dr.
Houston, Texas 77032
Phone: 281-986-4400
Fax: 281-986-4498

SECTION 29, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF Cr 210 (OLD LOCO) AND Cr 235 (CURRY COMB) GO NORTHWEST ON Cr 235 FOR APPROXIMATE 1.6 MILES. TURN SOUTH ON LEASE ROAD (YELLOW CATTLE GUARD) AND GO SOUTH APPROXIMATE 1.8 MILES. GO EAST-NORTHEAST APPROXIMATE 1.2 MILES. LOCATION IS APPROXIMATE 373 FT SOUTHEAST.

DEVON ENERGY PRODUCTION COMPANY, L.P.

ONYX PWU "29" #6H

LOCATED 1550 FT. FROM THE NORTH LINE
AND 50 FT. FROM THE EAST LINE OF
SECTION 29, TOWNSHIP 19 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 24, 2012

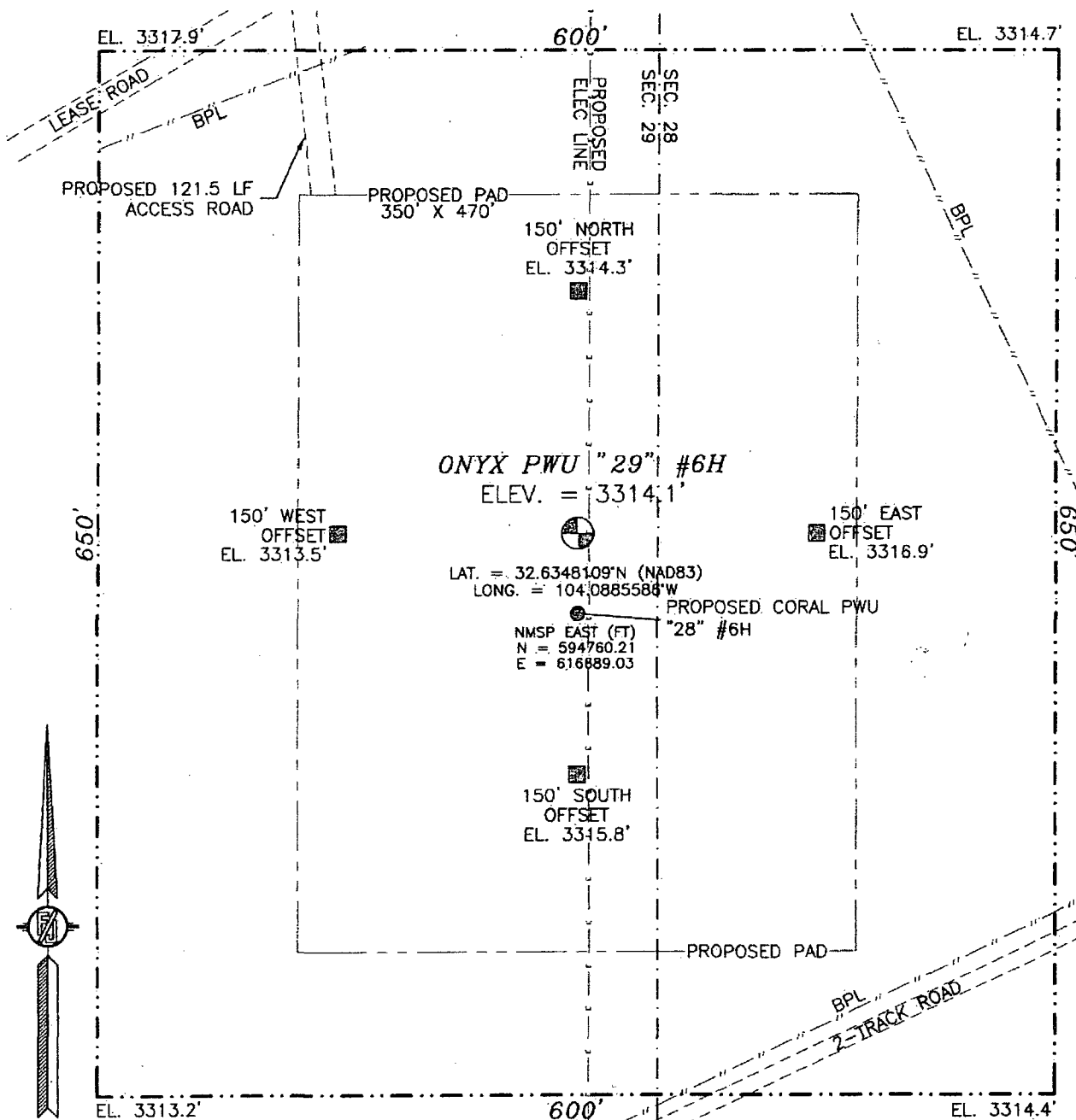
SURVEY NO. 949

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SECTION 29, TOWNSHIP 19 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF Cr 210 (OLD LOCO) AND Cr 235 (CURRY COMB) GO NORTHWEST ON Cr 235 FOR APPROXIMATE 1.6 MILES. TURN SOUTH ON LEASE ROAD (YELLOW CATTLE GUARD) AND GO SOUTH APPROXIMATE 1.8 MILES. GO EAST-NORTHEAST APPROXIMATE 1.2 MILES. LOCATION IS APPROXIMATE 373 FT SOUTHEAST.

DEVON ENERGY PRODUCTION COMPANY, L.P.

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SECTION 29, TOWNSHIP 19 SOUTH,
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EDDY COUNTY, STATE OF NEW MEXICO

MARCH 24, 2012

SURVEY NO. 949

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

HALLIBURTON

3950 Interwood South Pkwy Houston, TX 77032
Phone 281-986-4416 Fax 281-986-4499

January 16, 2013

Devon Energy Production, Co

Attn: Judy Barnett

20 N. Broadway

Oklahoma City, Ok

73102

Final Survey for:

Well Name: Onyx PWU 29 6H

County: Eddy County, NM

Rig Name: Cactus 126

Sperry Job #: 9E+08

Judy Barnett

Enclosed you will find the following survey information on the above referenced well:

0 *Survey Report(s)*

0 *MWD End of Well Report(s)*

2 Certified Letters for New Mexico NMOCD

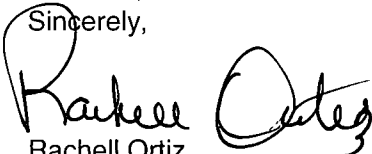
We appreciate the opportunity to serve you and welcome any comments or suggestions that you may have regarding our service. You may contact your local sales representative,

Ryan Annesley @ 405-231-1868

Should you have any questions or require additional information regarding the enclosed information, please do not hesitate to contact me at (281) 986-4400.

Once again, we thank you for your business.

Sincerely,



Rachell Ortiz

Sperry Drilling Services

HALLIBURTON

14103 Interwood S. Parkway • Houston, TX 77032

PHONE 281.986.4400 • FAX 281.986.4499

State of New Mexico, Eddy County

I, Lance Smith certify that I am employed by Halliburton Energy Services, Inc. (AKA Sperry Drilling) and that on the dates of 24, December 2012 through 08, January 2013 I did conduct or supervise the taking of DGWD directional surveys for the well Onyx PWU 29 6H from a depth of 6336' MD to a depth of 11608' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling). I am authorized and qualified to make this report and this survey was conducted at the request of Devon Energy Productions Co, for the Onyx 29 6H 1H API No. 30-015-40514 in Eddy County, New Mexico. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling).

A handwritten signature in black ink, appearing to read 'Lance Smith', is written over a horizontal line.

Field Engineer

Devon Energy Production Company
Onyx PWU 29 6H
Eddy County, New Mexico
Cactus 126
API# 30-015-40514-0000

December 24, 2012 – January 8, 2013
HD-MJ-0900056529

Sperry Drilling
MWD Survey Report

Submitted by Lance Smith
3950 Interwood South Parkway
Houston, TX 77032
Ph: 281.986.4400

HALLIBURTON

Drilling and Formation
Evaluation

TABLE OF CONTENTS

1. General Information
2. Directional Survey Data



GENERAL INFORMATION

Company	: Devon Energy Production Company
Rig	: Cactus 126
Well	: Onyx PWU 29 6H
Field	: Permian Basin(Bone Spring Sand)
Lease Name	: Onyx PWU 29
State	: New Mexico
County	: Eddy
Country	: USA
API Number	: 30-015-40514
Sperry Drilling Job Number	: HD-XX-0900056529
Job Start Date	: 24-Dec-12
Job End Date	: 08-Jan-13
North Reference	: Grid
Total Correction (deg)	: 7.644
Dip Angle (deg)	: 60.402
Total Magnetic Field (nT)	: 48660
Date of Magnetic Data	: 24 December, 2012
Well Head coordinates N	: 32 deg. 38 min 5.3 sec North
Well Head coordinates E	: 104 deg. 5 min 18.79 sec West
Vertical section direction (deg)	: 268.93
Unit Number	: 11310664
MWD Engineers	: Lance Smith, Kenneth Marshall
Company Representatives	: Sam Madrid, Floyd Lucero, Wilbur Motley
Company Geologist:	: Curt Mckinney,

DIRECTIONAL SURVEY DATA

Tie-in

0.00

0.00

0.00

0.00

0.00 N

0.00 E

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
127.26	0.20	139.59	127.26	0.17 S	0.14 E	-0.14	0.16
221.97	0.34	120.70	221.97	0.44 S	0.49 E	-0.48	0.17
316.68	0.47	109.81	316.68	0.71 S	1.10 E	-1.09	0.16
411.39	0.49	90.75	411.38	0.85 S	1.87 E	-1.85	0.17
506.10	0.51	71.69	506.09	0.72 S	2.68 E	-2.66	0.18
600.81	0.66	72.01	600.79	0.42 S	3.59 E	-3.59	0.16
695.52	0.80	76.32	695.50	0.10 S	4.76 E	-4.75	0.16
790.23	1.15	68.29	790.19	0.41 N	6.28 E	-6.29	0.40
884.94	1.51	60.25	884.88	1.38 N	8.25 E	-8.27	0.43
979.65	1.65	56.59	979.55	2.75 N	10.47 E	-10.52	0.18
1074.36	1.78	58.93	1,074.22	4.26 N	12.87 E	-12.94	0.16
1169.07	1.73	77.42	1,168.89	5.33 N	15.52 E	-15.62	0.60
1263.78	1.67	95.89	1,263.55	5.50 N	18.29 E	-18.39	0.58
1358.49	1.43	84.93	1,358.23	5.46 N	20.84 E	-20.94	0.40
1453.20	1.18	73.96	1,452.92	5.84 N	22.95 E	-23.06	0.37
1547.91	0.99	68.58	1,547.61	6.41 N	24.65 E	-24.77	0.23
1642.62	0.79	63.19	1,642.31	7.00 N	26.00 E	-26.12	0.23
1737.33	0.67	64.94	1,737.01	7.53 N	27.08 E	-27.22	0.13
1832.04	0.54	66.68	1,831.71	7.94 N	27.99 E	-28.14	0.14
1926.75	0.51	55.77	1,926.42	8.35 N	28.75 E	-28.90	0.11
2021.46	0.49	44.85	2,021.13	8.88 N	29.39 E	-29.55	0.10
2116.17	0.44	42.61	2,115.83	9.43 N	29.92 E	-30.09	0.06
2210.88	0.38	50.37	2,210.54	9.90 N	30.41 E	-30.59	0.09
2305.59	0.46	11.44	2,305.25	10.47 N	30.72 E	-30.91	0.31
2400.30	0.54	332.51	2,399.96	11.24 N	30.59 E	-30.80	0.36
2495.01	0.63	332.43	2,494.66	12.10 N	30.15 E	-30.37	0.10
2589.72	0.53	332.36	2,589.37	12.95 N	29.70 E	-29.94	0.11
2684.43	0.61	319.33	2,684.07	13.72 N	29.17 E	-29.42	0.16
2779.14	0.70	306.31	2,778.77	14.44 N	28.38 E	-28.64	0.18
2873.85	0.75	297.90	2,873.48	15.08 N	27.36 E	-27.64	0.12
2968.56	0.80	289.50	2,968.18	15.59 N	26.19 E	-26.48	0.13
3063.27	0.77	316.36	3,062.88	16.27 N	25.13 E	-25.43	0.39
3157.98	0.75	323.22	3,157.58	17.23 N	24.32 E	-24.63	0.10
3252.69	0.72	318.55	3,252.28	18.17 N	23.55 E	-23.89	0.07
3347.40	0.69	309.90	3,346.99	18.98 N	22.72 E	-23.07	0.12
3442.11	0.69	287.49	3,441.69	19.52 N	21.74 E	-22.10	0.28
3536.82	0.69	265.10	3,536.39	19.64 N	20.63 E	-20.99	0.28
3631.53	0.79	267.45	3,631.10	19.56 N	19.41 E	-19.77	0.11
3726.24	0.89	261.81	3,725.80	19.43 N	18.03 E	-18.39	0.14
3820.95	1.00	262.06	3,820.49	19.21 N	16.48 E	-16.84	0.12
3915.66	1.11	268.32	3,915.19	19.07 N	14.74 E	-15.10	0.17

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
4010.37	1.15	271.67	4,009.88	19.07 N	12.88 E	13.23	0.08
4105.08	1.18	269.03	4,104.57	19.08 N	10.95 E	11.31	0.06
4199.79	1.66	262.87	4,199.25	18.89 N	8.62 E	-8.97	0.53
4294.50	2.14	256.73	4,293.91	18.32 N	5.53 E	-5.88	0.55
4389.21	2.15	265.23	4,388.55	17.76 N	2.04 E	-2.37	0.34
4483.92	2.17	271.76	4,483.19	17.67 N	1.52 W	1.19	0.26
4578.63	2.00	263.12	4,577.84	17.53 N	4.95 W	4.62	0.38
4673.34	1.83	254.50	4,672.50	16.93 N	8.05 W	7.73	0.35
4768.05	1.98	267.98	4,767.16	16.46 N	11.14 W	10.83	0.50
4862.76	2.13	281.47	4,861.81	16.76 N	14.50 W	14.19	0.53
4957.47	1.77	305.24	4,956.46	17.95 N	17.42 W	17.08	0.93
5052.18	1.41	329.01	5,051.14	19.79 N	19.22 W	18.84	0.79
5146.89	1.38	348.90	5,145.82	21.91 N	20.04 W	19.62	0.51
5241.60	1.36	2.78	5,240.50	24.15 N	20.20 W	19.75	0.35
5336.31	1.57	15.35	5,335.18	26.53 N	19.80 W	19.31	0.40
5431.02	1.78	27.92	5,429.85	29.08 N	18.77 W	18.23	0.45
5525.73	1.83	19.58	5,524.52	31.80 N	17.58 W	16.98	0.28
5620.44	1.88	13.24	5,619.18	34.74 N	16.71 W	16.06	0.22
5715.15	1.97	32.25	5,713.83	37.63 N	15.49 W	14.78	0.68
5809.86	2.06	51.26	5,808.49	40.07 N	13.29 W	12.54	0.71
5904.57	2.65	46.59	5,903.12	42.64 N	10.37 W	9.58	0.65
5999.28	3.24	41.91	5,997.70	46.14 N	7.00 W	6.13	0.67
6093.99	2.65	47.67	6,092.28	49.60 N	3.59 W	2.66	0.70
6188.70	2.07	51.42	6,186.91	52.14 N	0.63 W	-0.34	0.63
6283.41	1.99	59.45	6,281.56	54.05 N	2.12 E	-3.13	0.31
6336.00	1.33	55.28	6,334.13	54.86 N	3.41 E	-4.43	1.28
6462.00	11.57	273.39	6,459.34	56.44 N	8.06 W	7.00	10.03
6494.00	15.80	263.61	6,490.43	56.15 N	15.59 W	14.54	15.01
6525.00	19.92	265.71	6,519.93	55.28 N	25.06 W	24.02	13.47
6556.00	22.78	266.23	6,548.80	54.49 N	36.32 W	35.29	9.24
6588.00	24.51	267.23	6,578.11	53.76 N	49.13 W	48.12	5.53
6619.00	26.20	265.66	6,606.13	52.93 N	62.38 W	61.38	5.88
6651.00	26.83	264.25	6,634.76	51.68 N	76.61 W	75.63	2.78
6682.00	27.57	259.60	6,662.34	49.68 N	90.63 W	89.68	7.26
6714.00	28.98	255.48	6,690.52	46.40 N	105.41 W	104.53	7.53
6745.00	30.44	250.59	6,717.45	41.90 N	120.09 W	119.29	9.11
6777.00	32.49	245.64	6,744.75	35.66 N	135.57 W	134.88	10.31
6809.00	35.18	242.67	6,771.33	27.89 N	151.59 W	151.05	9.85
6840.00	38.45	238.29	6,796.15	18.72 N	167.73 W	167.35	13.53
6871.00	41.69	235.09	6,819.87	7.75 N	184.39 W	184.21	12.38
6903.00	45.79	232.61	6,842.99	5.31 S	202.24 W	202.30	13.89
6934.00	50.48	231.98	6,863.67	19.43 S	220.50 W	220.82	15.20
6966.00	54.78	233.48	6,883.09	34.82 S	240.73 W	241.34	13.94
6997.00	58.96	233.65	6,900.03	50.24 S	261.61 W	262.51	13.48
7029.00	63.23	233.87	6,915.49	66.79 S	284.20 W	285.40	13.36

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
7060.00	66.62	235.13	6,928.63	83.09 S	307.06 W	308.56	11.55
7092.00	69.36	236.05	6,940.62	99.85 S	331.54 W	333.35	8.97
7124.00	72.59	238.74	6,951.05	116.14 S	357.02 W	359.13	12.83
7155.00	75.49	241.75	6,959.57	130.93 S	382.89 W	385.27	13.21
7187.00	79.61	244.42	6,966.47	145.06 S	410.75 W	413.39	15.22
7213.00	82.31	247.41	6,970.56	155.53 S	434.19 W	437.02	15.40
7245.00	85.58	251.20	6,973.93	166.77 S	463.95 W	466.98	15.59
7277.00	89.17	255.03	6,975.40	176.05 S	494.53 W	497.73	16.39
7309.00	91.70	259.08	6,975.16	183.22 S	525.70 W	529.03	14.92
7340.00	92.49	261.93	6,974.03	188.33 S	556.25 W	559.67	9.53
7370.00	92.68	262.24	6,972.67	192.45 S	585.94 W	589.43	1.22
7434.00	91.39	264.58	6,970.40	199.79 S	649.47 W	653.09	4.17
7465.00	90.65	266.09	6,969.85	202.31 S	680.36 W	684.02	5.42
7532.00	89.14	269.00	6,969.98	205.18 S	747.29 W	750.99	4.90
7564.00	89.02	269.03	6,970.49	205.73 S	779.28 W	782.99	0.39
7627.00	89.23	270.02	6,971.46	206.26 S	842.27 W	845.98	1.61
7658.00	89.38	270.61	6,971.83	206.08 S	873.27 W	876.97	1.97
7722.00	89.78	271.92	6,972.30	204.67 S	937.25 W	940.91	2.13
7754.00	89.78	272.09	6,972.42	203.55 S	969.23 W	972.86	0.54
7848.00	88.77	272.20	6,973.61	200.03 S	1,063.16 W	1066.71	1.09
7943.00	88.92	272.38	6,975.52	196.24 S	1,158.06 W	1161.52	0.25
8037.00	90.12	271.76	6,976.31	192.84 S	1,251.99 W	1255.38	1.44
8132.00	91.45	270.76	6,975.01	190.76 S	1,346.96 W	1350.29	1.75
8226.00	92.25	270.83	6,971.97	189.45 S	1,440.90 W	1444.19	0.86
8321.00	93.76	270.82	6,966.99	188.08 S	1,535.76 W	1539.00	1.59
8416.00	93.54	271.76	6,960.94	185.94 S	1,630.54 W	1633.73	1.01
8447.00	92.90	272.22	6,959.19	184.87 S	1,661.47 W	1664.63	2.54
8510.00	93.24	273.21	6,955.82	181.89 S	1,724.31 W	1727.40	1.66
8605.00	91.51	272.80	6,951.89	176.91 S	1,819.09 W	1822.08	1.87
8637.00	90.28	272.42	6,951.39	175.45 S	1,851.05 W	1854.01	4.03
8700.00	89.81	271.99	6,951.34	173.03 S	1,914.01 W	1916.91	1.01
8794.00	89.44	272.68	6,951.95	169.20 S	2,007.93 W	2010.74	0.84
8889.00	89.48	273.00	6,952.84	164.49 S	2,102.81 W	2105.51	0.34
8984.00	89.29	273.32	6,953.87	159.25 S	2,197.66 W	2200.25	0.38
9078.00	92.09	274.29	6,952.73	153.02 S	2,291.43 W	2293.89	3.15
9173.00	90.83	273.48	6,950.31	146.59 S	2,386.18 W	2388.50	1.58
9267.00	90.15	273.11	6,949.50	141.18 S	2,480.02 W	2482.22	0.82
9363.00	90.15	273.75	6,949.24	135.44 S	2,575.85 W	2577.93	0.66
9457.00	89.75	273.11	6,949.32	129.81 S	2,669.68 W	2671.64	0.80
9552.00	88.77	272.82	6,950.55	124.89 S	2,764.54 W	2766.39	1.08
9648.00	87.88	271.77	6,953.36	121.05 S	2,860.42 W	2862.18	1.43
9743.00	87.99	270.51	6,956.78	119.16 S	2,955.34 W	2957.05	1.34
9838.00	89.94	270.11	6,958.49	118.65 S	3,050.32 W	3052.00	2.09
9933.00	91.64	268.28	6,957.19	119.98 S	3,145.29 W	3146.98	2.63
10028.00	91.85	267.62	6,954.30	123.37 S	3,240.19 W	3241.93	0.73