

HALLIBURTON

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

30-015-40289

September 21, 2012

Devon Energy Production, Co

Attn: Judy Barnett

20 N. Broadway

Oklahoma City, Ok

73102

Final Survey for:

Well Name: Turquoise PWU 27-8H

County: Eddy County, NM

Rig Name: Cactus 126

Sperry Job #: 9507923

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

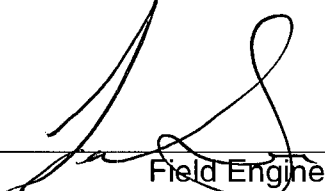
HALLIBURTON

3950 Interwood South 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 28-August-12 through 19-September-12. I did conduct or supervise the taking of a DGWD directional survey for the well from a depth of 6531' MD to a depth of 11473' 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 Company, for the well Turquoise PWU 27 8H, API No. 30-015-40289-0000 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).



Field Engineer
Lance Smith

Devon Energy Production Company
Turquoise PWU 27-8H
Eddy County, New Mexico
Cactus 126
API# 30-015-40289-0000

August 28, 2012 – September 19, 2012
HD-MJ-0009507923

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

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1. General Information
2. Directional Survey Data

GENERAL INFORMATION

Company : Devon Energy Production Company
Rig : Cactus 126
Well : Turquoise PWU 27 8-H
Field : Parkway West(1st Bone Spring)
Lease Name : Turquoise PWU
State : New Mexico
County : Eddy
Country : USA
API Number : 30-015-40289-0000
Sperry Drilling Job Number : HD-XX-0009507923
Job Start Date : 28-Aug-12
Job End Date : 19-Sep-12
North Reference : Grid
Total Correction (deg) : 7.662
Dip Angle (deg) : 60.406
Total Magnetic Field (nT) : 48697
Date of Magnetic Data : 29 August, 2012
Well Head coordinates N : 32 deg. 37 min 31.95 sec North
Well Head coordinates E : 104 deg. 4 min 12.73 sec West
Vertical section direction (deg) : 86.75
Unit Number : 11537095
MWD Engineers : Lance Smith, Raymond Medalla

Company Representatives : Floyd Lucero, Rudy Lopez
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')
21.80	0.11	347.22	21.80	0.02 N	0.00 W	0.00	0.50
111.65	0.07	294.74	111.65	0.13 N	0.07 W	-0.07	0.10
201.50	0.09	241.84	201.50	0.12 N	0.19 W	-0.18	0.08
291.35	0.14	189.16	291.35	0.02 S	0.27 W	-0.27	0.12
381.20	0.13	159.84	381.20	0.23 S	0.25 W	-0.26	0.08
471.05	0.13	130.52	471.05	0.39 S	0.14 W	-0.16	0.07
560.90	0.40	126.12	560.90	0.64 S	0.20 E	0.16	0.30
650.75	0.67	121.72	650.74	1.10 S	0.90 E	0.83	0.30
740.60	0.73	112.71	740.59	1.60 S	1.87 E	1.78	0.14
830.45	0.80	103.71	830.43	1.97 S	3.01 E	2.89	0.15
920.30	0.95	106.76	920.27	2.33 S	4.33 E	4.19	0.17
1010.15	1.11	109.81	1,010.10	2.84 S	5.86 E	5.69	0.19
1100.00	1.23	125.23	1,099.94	3.69 S	7.47 E	7.25	0.37
1189.85	1.35	140.65	1,189.76	5.07 S	8.93 E	8.63	0.41
1279.70	1.43	157.22	1,279.59	6.92 S	10.03 E	9.62	0.45
1369.55	1.50	173.78	1,369.41	9.12 S	10.59 E	10.06	0.48
1459.40	1.21	194.12	1,459.23	11.21 S	10.49 E	9.84	0.62
1549.25	0.91	214.46	1,549.07	12.72 S	9.86 E	9.12	0.53
1639.10	1.02	244.56	1,638.91	13.65 S	8.73 E	7.94	0.57
1728.95	1.13	274.65	1,728.74	13.92 S	7.12 E	6.32	0.63
1818.80	2.33	304.61	1,818.55	12.82 S	4.74 E	4.00	1.63
1908.65	3.52	334.57	1,908.29	9.29 S	2.05 E	1.52	2.11
1998.50	3.76	353.19	1,997.96	3.87 S	0.52 E	0.30	1.34
2088.35	3.99	11.82	2,087.61	2.12 N	0.81 E	0.93	1.42
2178.20	4.85	8.79	2,177.19	8.93 N	2.03 E	2.53	0.99
2268.05	5.70	5.77	2,266.66	17.12 N	3.06 E	4.02	0.99
2357.90	6.57	354.36	2,356.00	26.68 N	3.00 E	4.51	1.66
2447.75	7.45	342.96	2,445.18	37.36 N	0.79 E	2.91	1.83
2537.60	7.43	335.77	2,534.27	48.23 N	3.30 W	-0.56	1.04
2627.45	7.40	328.59	2,623.37	58.47 N	8.70 W	-5.37	1.03
2717.30	5.36	34.55	2,712.77	66.87 N	9.34 W	-5.53	7.95
2807.15	4.16	28.19	2,802.31	73.20 N	5.42 W	-1.26	1.46
2897.00	2.96	21.84	2,891.98	78.23 N	3.02 W	1.42	1.40
2986.85	3.30	16.14	2,981.70	82.86 N	1.43 W	3.27	0.51
3076.70	3.63	10.45	3,071.39	88.15 N	0.20 W	4.80	0.53
3166.55	2.93	353.39	3,161.09	93.22 N	0.05 E	5.34	1.33
3256.40	2.23	336.33	3,250.85	97.11 N	0.91 W	4.59	1.15
3346.25	1.60	333.54	3,340.65	99.83 N	2.18 W	3.49	0.71
3436.10	0.97	330.74	3,430.48	101.62 N	3.11 W	2.66	0.70
3525.95	0.74	326.89	3,520.32	102.77 N	3.79 W	2.04	0.26
3615.80	0.50	323.04	3,610.16	103.57 N	4.35 W	1.53	0.27

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (%/100')
3705.65	0.57	333.94	3,700.01	104.28 N	4.78 W	1.14	0.14
3795.50	0.64	344.85	3,789.85	105.17 N	5.11 W	0.86	0.15
3885.35	0.76	321.34	3,879.69	106.12 N	5.61 W	0.41	0.34
3975.20	0.87	297.83	3,969.54	106.90 N	6.59 W	-0.51	0.39
4065.05	0.84	289.15	4,059.38	107.43 N	7.81 W	-1.71	0.15
4154.90	0.81	280.48	4,149.22	107.77 N	9.06 W	-2.93	0.14
4244.75	1.12	278.42	4,239.05	108.01 N	10.55 W	-4.41	0.35
4334.60	1.43	276.37	4,328.88	108.26 N	12.53 W	-6.38	0.35
4424.45	1.57	298.53	4,418.70	108.97 N	14.73 W	-8.53	0.66
4514.30	1.70	320.68	4,508.52	110.59 N	16.66 W	-10.36	0.71
4604.15	1.57	306.06	4,598.33	112.35 N	18.49 W	-12.10	0.48
4694.00	1.44	291.44	4,688.15	113.49 N	20.54 W	-14.07	0.45
4783.85	1.23	285.40	4,777.97	114.16 N	22.52 W	-16.01	0.28
4873.70	1.02	279.37	4,867.81	114.54 N	24.24 W	-17.71	0.27
4963.55	1.30	289.53	4,957.64	115.01 N	25.99 W	-19.43	0.39
5053.40	1.58	299.70	5,047.46	115.97 N	28.03 W	-21.41	0.42
5143.25	1.29	308.47	5,137.28	117.21 N	29.89 W	-23.20	0.40
5233.10	1.01	317.25	5,227.11	118.42 N	31.22 W	-24.46	0.37
5322.95	1.07	330.99	5,316.95	119.74 N	32.17 W	-25.33	0.28
5412.80	1.13	344.74	5,406.78	121.32 N	32.81 W	-25.88	0.30
5502.65	1.16	348.58	5,496.62	123.07 N	33.22 W	-26.19	0.09
5592.50	1.20	352.42	5,586.45	124.89 N	33.53 W	-26.39	0.10
5682.35	1.49	343.74	5,676.27	126.95 N	33.98 W	-26.72	0.39
5772.20	1.78	335.05	5,766.08	129.33 N	34.89 W	-27.50	0.42
5862.05	2.77	323.45	5,855.86	132.34 N	36.77 W	-29.21	1.21
5951.90	3.76	320.84	5,945.57	136.37 N	39.93 W	-32.13	1.11
6041.75	3.78	311.44	6,035.22	140.62 N	44.01 W	-35.97	0.69
6131.60	3.80	311.04	6,124.88	144.53 N	48.47 W	-40.20	0.04
6221.45	3.62	307.54	6,214.54	148.22 N	52.97 W	-44.48	0.32
6311.30	3.44	314.05	6,304.22	151.82 N	57.16 W	-48.46	0.49
6401.15	3.00	319.08	6,393.93	155.47 N	60.63 W	-51.72	0.58
6491.00	2.56	334.12	6,483.67	159.05 N	63.05 W	-53.93	0.94
6531.00	3.09	324.82	6,523.62	160.74 N	64.06 W	-54.84	1.75
6562.00	1.34	26.60	6,554.60	161.74 N	64.38 W	-55.11	8.79
6594.00	4.06	99.40	6,586.57	161.89 N	63.09 W	-53.81	12.12
6625.00	9.46	111.19	6,617.34	160.79 N	59.63 W	-50.42	17.90
6657.00	16.67	104.73	6,648.50	158.67 N	52.74 W	-43.66	22.95
6688.00	22.21	97.57	6,677.72	156.77 N	42.62 W	-33.66	19.43
6720.00	26.00	96.65	6,706.93	155.16 N	29.65 W	-20.81	11.90
6752.00	29.64	93.90	6,735.22	153.81 N	14.78 W	-6.04	12.07
6784.00	31.02	94.33	6,762.84	152.65 N	1.33 E	9.99	4.35
6815.00	31.96	93.46	6,789.28	151.55 N	17.49 E	26.05	3.38
6847.00	33.22	92.70	6,816.24	150.62 N	34.70 E	43.18	4.13
6879.00	34.92	93.73	6,842.74	149.61 N	52.60 E	61.00	5.60
6911.00	36.53	95.38	6,868.72	148.13 N	71.22 E	79.50	5.87

DIRECTIONAL SURVEY DATA							
Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
6942.00	39.12	97.86	6,893.21	145.92 N	90.10 E	98.23	9.68
6974.00	40.24	102.15	6,917.84	142.37 N	110.21 E	118.10	9.26
7005.00	42.70	103.44	6,941.07	137.81 N	130.22 E	137.83	8.38
7036.00	45.12	103.78	6,963.40	132.75 N	151.12 E	158.40	7.85
7068.00	48.47	105.11	6,985.31	126.93 N	173.70 E	180.61	10.89
7099.00	51.96	104.79	7,005.14	120.79 N	196.71 E	203.24	11.31
7131.00	55.85	106.56	7,023.99	113.79 N	221.60 E	227.69	12.94
7163.00	60.44	107.65	7,040.87	105.79 N	247.57 E	253.17	14.62
7194.00	65.31	107.08	7,055.00	97.56 N	273.89 E	278.98	15.80
7226.00	69.47	107.59	7,067.30	88.76 N	302.08 E	306.63	13.09
7258.00	74.15	107.07	7,077.29	79.71 N	331.10 E	335.09	14.69
7289.00	76.95	105.86	7,085.02	71.21 N	359.88 E	363.34	9.78
7321.00	78.93	106.06	7,091.71	62.60 N	389.97 E	392.89	6.23
7352.00	82.12	105.26	7,096.81	54.35 N	419.41 E	421.81	10.61
7384.00	84.16	102.78	7,100.63	46.65 N	450.23 E	452.15	9.98
7415.00	86.54	100.01	7,103.15	40.55 N	480.51 E	482.04	11.77
7447.00	88.49	97.31	7,104.54	35.74 N	512.11 E	513.32	10.41
7479.00	87.72	93.19	7,105.60	32.82 N	543.95 E	544.94	13.08
7510.00	87.87	90.72	7,106.79	31.76 N	574.91 E	575.79	7.97
7606.00	88.27	89.36	7,110.02	31.69 N	670.85 E	671.57	1.48
7701.00	89.54	90.98	7,111.84	31.42 N	765.83 E	766.38	2.17
7796.00	88.24	89.30	7,113.68	31.19 N	860.81 E	861.19	2.23
7890.00	89.20	90.07	7,115.78	31.70 N	954.78 E	955.04	1.30
7985.00	89.14	88.56	7,117.16	32.84 N	1,049.76 E	1049.94	1.59
8079.00	89.44	88.06	7,118.32	35.61 N	1,143.71 E	1143.89	0.63
8173.00	90.46	88.07	7,118.40	38.79 N	1,237.66 E	1237.87	1.08
8268.00	91.73	87.53	7,116.58	42.43 N	1,332.57 E	1332.83	1.45
8363.00	91.42	87.01	7,113.97	46.96 N	1,427.42 E	1427.79	0.63
8457.00	89.35	86.20	7,113.34	52.52 N	1,521.25 E	1521.78	2.36
8552.00	89.63	87.18	7,114.19	58.00 N	1,616.09 E	1616.78	1.07
8646.00	90.22	87.70	7,114.31	62.20 N	1,709.99 E	1710.77	0.83
8741.00	92.13	88.73	7,112.37	65.16 N	1,804.92 E	1805.71	2.29
8836.00	91.45	89.42	7,109.40	66.69 N	1,899.86 E	1900.59	1.02
8931.00	87.28	87.11	7,110.45	69.57 N	1,994.79 E	1995.52	5.02
9027.00	86.54	87.91	7,115.62	73.74 N	2,090.55 E	2091.37	1.13
9122.00	86.66	86.23	7,121.25	78.59 N	2,185.26 E	2186.20	1.76
9217.00	88.00	85.16	7,125.67	85.71 N	2,279.89 E	2281.08	1.80
9311.00	91.39	85.47	7,126.18	93.39 N	2,373.56 E	2375.03	3.62
9406.00	92.17	84.98	7,123.23	101.29 N	2,468.18 E	2469.95	0.97
9500.00	91.30	85.58	7,120.39	109.02 N	2,561.82 E	2563.88	1.12
9595.00	90.56	85.90	7,118.85	116.08 N	2,656.54 E	2658.85	0.85
9690.00	89.69	86.62	7,118.65	122.28 N	2,751.34 E	2753.84	1.19
9784.00	88.98	87.06	7,119.74	127.45 N	2,845.19 E	2847.84	0.89
9879.00	87.47	86.93	7,122.68	132.43 N	2,940.01 E	2942.79	1.60
9974.00	87.01	88.76	7,127.25	136.00 N	3,034.83 E	3037.66	1.99

DIRECTIONAL SURVEY DATA							
Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (N)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
10068.00	87.90	87.48	7,131.43	139.08 N	3,128.68 E	3131.53	1.66
10165.00	88.21	86.92	7,134.73	143.81 N	3,225.51 E	3228.47	0.65
10259.00	87.44	86.56	7,138.30	149.14 N	3,319.29 E	3322.41	0.90
10353.00	84.13	86.35	7,145.21	154.93 N	3,412.84 E	3416.14	3.53
10479.00	84.35	86.39	7,157.86	162.86 N	3,537.95 E	3541.50	0.18
10573.00	85.46	84.98	7,166.21	169.91 N	3,631.31 E	3635.11	1.90
10666.00	85.55	85.06	7,173.50	177.95 N	3,723.68 E	3727.78	0.12
10761.00	85.80	85.01	7,180.66	186.16 N	3,818.05 E	3822.46	0.28
10856.00	86.29	85.65	7,187.21	193.87 N	3,912.51 E	3917.21	0.85
10950.00	86.07	86.19	7,193.47	200.55 N	4,006.06 E	4010.99	0.62
11045.00	86.29	86.26	7,199.79	206.78 N	4,100.65 E	4105.78	0.24
11140.00	88.39	88.23	7,204.19	211.33 N	4,195.43 E	4200.66	3.03
11235.00	86.14	87.59	7,208.72	214.79 N	4,290.25 E	4295.53	2.47
11330.00	83.40	86.67	7,217.38	219.53 N	4,384.72 E	4390.12	3.04
11424.00	82.77	85.35	7,228.70	226.02 N	4,477.81 E	4483.42	1.55
11473.00	82.44	85.15	7,235.01	230.05 N	4,526.24 E	4532.00	0.78
11565.00	82.44	85.15	7,247.11	237.76 N	4,617.11 E	4623.16	0.01
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 86.75 degrees (Grid)
- A total correction of 7.66 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 11,565.00 feet is 4,623.23 feet along 87.05 degrees (Grid)

SURVEYS CALCULATED USING THE LONG COLLAR METHOD.
 WELL ASSUMED VERTICAL AT WELLHEAD.
 SURVEYS FROM SURFACE TO 6491' MD PROVIDED BY VAUGHN ENERGY SERVICES.
 SURVEYS FROM 6531' MD TO 11473' MD PROVIDED BY SPERRY DRILLING SERVICES.
 SURVEY AT 11473' MD IS PROJECTED TO TD AT 11565' MD.
 SPERRY DRILLING ENGINEERS: LANCE SMITH, RAY MADELLA

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



A GYRO TECHNOLOGIES INC. COMPANY

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

September 12, 2012

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

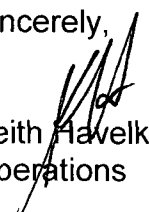
Attn: Mark Cooper

Re: **Turquoise PWU 27 No. 8H**

Please find enclosed a copy of the survey from 0' to 6,491' ran on the above referenced well.

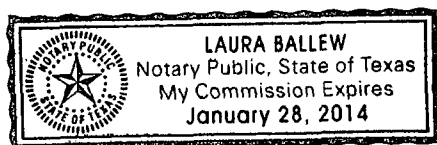
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 17th day of September
A.D., 2012, by Keith Havelka.





Laura Ballew
Notary Public, State of Texas



Company: DEVON ENERGY PRODUCTION COMPANY

Lease/Well: TURQUOISE PWU 27/NO. 8H

Rig Name: CACTUS 126

State/County: NEW MEXICO/EDDY

Latitude: 32.63

GRID North is 0.14 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB= 25 FT.

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: drop gyro.ut

Minimum Curvature Method

Report Date/Time: 9/12/2012 / 15:34

Vaughn Energy Services

Gardendale Texas

432-563-5444

Surveyor: Danny Spring

Turquoise PWU 27 No. 8H / API 30-015-40289

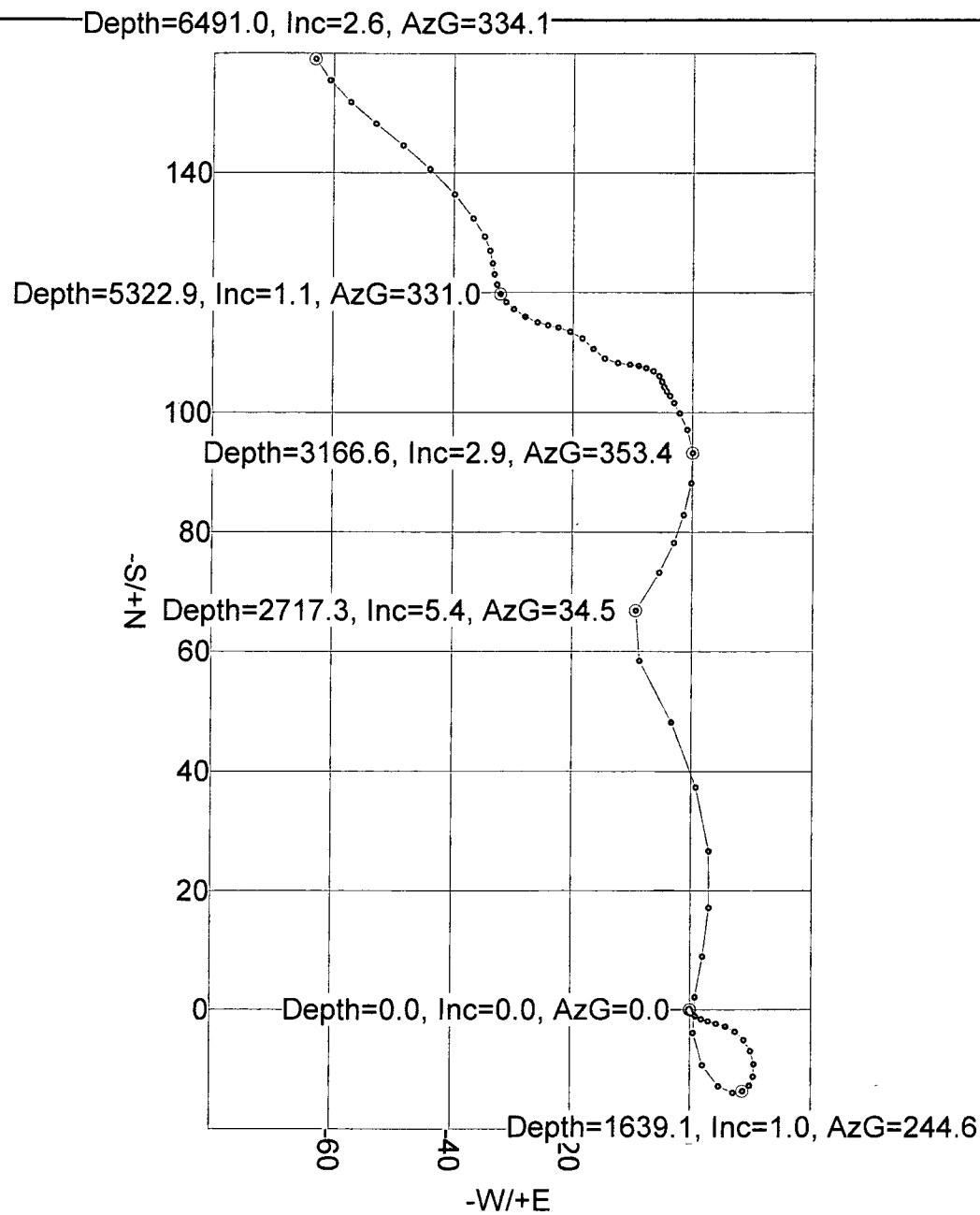
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
21.80	0.11	347.22	21.80	0.02	0.00	0.02	0.02	347.22	0.49
111.65	0.07	294.74	111.65	0.13	-0.08	0.13	0.15	329.02	0.09
201.50	0.09	241.84	201.50	0.11	-0.19	0.11	0.22	300.82	0.09
291.35	0.14	189.16	291.35	-0.02	-0.27	-0.02	0.28	264.81	0.12
381.20	0.13	159.84	381.20	-0.23	-0.26	-0.23	0.34	228.24	0.08
471.05	0.13	130.52	471.05	-0.39	-0.14	-0.39	0.42	199.83	0.07
560.90	0.40	126.12	560.90	-0.64	0.19	-0.64	0.67	163.55	0.30
650.75	0.67	121.72	650.74	-1.11	0.89	-1.11	1.42	141.12	0.30
740.60	0.73	112.71	740.59	-1.61	1.87	-1.61	2.47	130.63	0.14
830.45	0.80	103.71	830.43	-1.98	3.01	-1.98	3.60	123.28	0.15
920.30	0.95	106.76	920.27	-2.34	4.33	-2.34	4.92	118.36	0.18
1010.15	1.11	109.81	1010.10	-2.85	5.86	-2.85	6.52	115.91	0.18
1100.00	1.23	125.23	1099.94	-3.70	7.47	-3.70	8.33	116.35	0.37
1189.85	1.35	140.65	1189.76	-5.08	8.93	-5.08	10.27	119.62	0.41
1279.70	1.43	157.22	1279.59	-6.93	10.04	-6.93	12.20	124.63	0.45
1369.55	1.50	173.78	1369.41	-9.14	10.60	-9.14	13.99	130.77	0.48
1459.40	1.21	194.12	1459.23	-11.23	10.49	-11.23	15.37	136.93	0.62
1549.25	0.91	214.46	1549.07	-12.73	9.86	-12.73	16.10	142.24	0.53

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
1639.10	1.02	244.56	1638.91	-13.66	8.73	-13.66	16.22	147.41	0.57
1728.95	1.13	274.65	1728.74	-13.94	7.13	-13.94	15.65	152.91	0.63
1818.80	2.33	304.61	1818.55	-12.83	4.74	-12.83	13.67	159.72	1.63
1908.65	3.52	334.57	1908.29	-9.30	2.05	-9.30	9.52	167.55	2.12
1998.50	3.76	353.19	1997.96	-3.88	0.52	-3.88	3.91	172.41	1.34
2088.35	3.99	11.82	2087.61	2.11	0.81	2.11	2.26	20.98	1.42
2178.20	4.85	8.79	2177.19	8.92	2.03	8.92	9.15	12.81	0.98
2268.05	5.70	5.77	2266.66	17.11	3.06	17.11	17.38	10.13	1.00
2357.90	6.57	354.36	2355.99	26.67	3.00	26.67	26.84	6.42	1.67
2447.75	7.45	342.96	2445.18	37.36	0.79	37.36	37.36	1.21	1.83
2537.60	7.43	335.77	2534.27	48.22	-3.30	48.22	48.33	356.08	1.03
2627.45	7.40	328.59	2623.37	58.46	-8.70	58.46	59.10	351.53	1.03
2717.30	5.36	34.55	2712.77	66.87	-9.34	66.87	67.51	352.05	7.95
2807.15	4.16	28.19	2802.31	73.20	-5.41	73.20	73.40	355.77	1.46
2897.00	2.96	21.84	2891.98	78.23	-3.01	78.23	78.28	357.80	1.41
2986.85	3.30	16.14	2981.70	82.86	-1.43	82.86	82.87	359.01	0.51
3076.70	3.63	10.45	3071.38	88.14	-0.20	88.14	88.14	359.87	0.53
3166.55	2.93	353.39	3161.09	93.22	0.06	93.22	93.22	0.03	1.33
3256.40	2.23	336.33	3250.85	97.10	-0.91	97.10	97.10	359.46	1.15
3346.25	1.60	333.54	3340.65	99.81	-2.17	99.81	99.84	358.76	0.71
3436.10	0.97	330.74	3430.47	101.60	-3.10	101.60	101.65	358.25	0.70
3525.95	0.74	326.89	3520.31	102.74	-3.78	102.74	102.81	357.89	0.27
3615.80	0.50	323.04	3610.16	103.54	-4.33	103.54	103.63	357.60	0.26
3705.65	0.57	333.94	3700.01	104.26	-4.77	104.26	104.37	357.38	0.14
3795.50	0.64	344.85	3789.85	105.15	-5.10	105.15	105.27	357.23	0.15
3885.35	0.76	321.34	3879.69	106.09	-5.60	106.09	106.24	356.98	0.34
3975.20	0.87	297.83	3969.54	106.88	-6.57	106.88	107.08	356.48	0.39
4065.05	0.84	289.15	4059.38	107.41	-7.80	107.41	107.69	355.85	0.15
4154.90	0.81	280.48	4149.22	107.74	-9.04	107.74	108.12	355.20	0.14
4244.75	1.12	278.42	4239.05	107.99	-10.54	107.99	108.50	354.43	0.35
4334.60	1.43	276.37	4328.88	108.24	-12.52	108.24	108.96	353.40	0.35
4424.45	1.57	298.53	4418.70	108.95	-14.72	108.95	109.94	352.31	0.66
4514.30	1.70	320.68	4508.52	110.57	-16.64	110.57	111.82	351.44	0.71
4604.15	1.57	306.06	4598.33	112.33	-18.48	112.33	113.84	350.66	0.48
4694.00	1.44	291.44	4688.15	113.47	-20.53	113.47	115.31	349.74	0.45
4783.85	1.23	285.40	4777.97	114.14	-22.52	114.14	116.34	348.84	0.28
4873.70	1.02	279.37	4867.81	114.52	-24.24	114.52	117.06	348.05	0.27
4963.55	1.30	289.53	4957.64	115.00	-25.99	115.00	117.90	347.26	0.39
5053.40	1.58	299.70	5047.46	115.95	-28.03	115.95	119.29	346.41	0.42

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
5143.25	1.29	308.47	5137.28	117.19	-29.90	117.19	120.95	345.69	0.40
5233.10	1.01	317.25	5227.11	118.40	-31.23	118.40	122.45	345.23	0.37
5322.95	1.07	330.99	5316.95	119.71	-32.17	119.71	123.96	344.96	0.28
5412.80	1.13	344.74	5406.78	121.30	-32.81	121.30	125.65	344.87	0.30
5502.65	1.16	348.58	5496.61	123.04	-33.22	123.04	127.45	344.89	0.10
5592.50	1.20	352.42	5586.44	124.87	-33.52	124.87	129.29	344.97	0.10
5682.35	1.49	343.74	5676.27	126.93	-33.98	126.93	131.40	345.01	0.39
5772.20	1.78	335.05	5766.08	129.32	-34.89	129.32	133.94	344.90	0.42
5862.05	2.77	323.45	5855.86	132.33	-36.77	132.33	137.34	344.47	1.21
5951.90	3.76	320.84	5945.57	136.36	-39.93	136.36	142.08	343.68	1.11
6041.75	3.78	311.44	6035.22	140.60	-44.01	140.60	147.33	342.62	0.69
6131.60	3.80	311.04	6124.88	144.52	-48.47	144.52	152.43	341.46	0.04
6221.45	3.62	307.54	6214.54	148.20	-52.97	148.20	157.38	340.33	0.32
6311.30	3.44	314.05	6304.22	151.80	-57.16	151.80	162.21	339.37	0.49
6401.15	3.00	319.08	6393.92	155.45	-60.63	155.45	166.86	338.69	0.58
6491.00	2.56	334.12	6483.67	159.03	-63.05	159.03	171.08	338.37	0.94



Vaughn Energy Services
Gardendale Texas
432-563-5444
Surveyor: Danny Spring
Turquoise PWU 27 No. 8H / API 30-015-40289



VES Survey Date: 09/08/2012