



A GYRO TECHNOLOGIES INC. COMPANY

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

November 27, 2012

30 015 40222

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

Attn: Patti Riechers

Re: **SPICA 25 Federal No. 002H**

Please find enclosed a copy of the survey from 0' to 7,711.58' ran on the above referenced well.

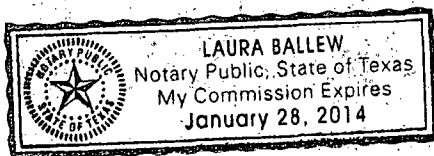
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

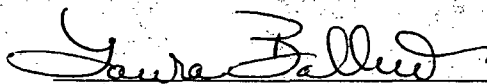
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 27th day of November, A.D., 2012, by Keith Havelka.





Laura Ballew
Notary Public, State of Texas



Company: Devon Energy Production Company
Lease/Well: SPICA 25 Federal/No. 002H
Location: S25 T19s R31e
Rig Name: McVay #10
State/County: New Mexico/Eddy
Latitude: 32.63, Longitude: -103.83
GRID North is 0.27 Degrees East of True North
VS-Azi: 0.00 Degrees



RKB : 20 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: spica 25 fed #2h gyro survey.ut

Minimum Curvature Method

Report Date/Time: 11/27/2012 / 12:07

Vaughn Energy Services

(432) 563-5444

Gardendale, TX

Surveyor: Dustin Wedel

SPICA 25 Federal No. 002H / API 30-015-40222

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	****
96.87	0.12	276.23	96.87	0.01	-0.10	0.01	0.10	276.23	0.12
191.33	0.23	194.55	191.33	-0.16	-0.24	-0.16	0.29	236.02	0.26
285.79	0.50	184.91	285.79	-0.76	-0.33	-0.76	0.83	203.27	0.29
380.25	0.77	175.27	380.24	-1.81	-0.31	-1.81	1.83	189.77	0.30
474.71	0.81	163.11	474.69	-3.08	-0.06	-3.08	3.08	181.19	0.18
569.17	0.86	150.96	569.14	-4.34	0.47	-4.34	4.37	173.76	0.19
663.63	0.90	148.01	663.59	-5.59	1.21	-5.59	5.72	167.78	0.06
758.09	0.86	143.06	758.04	-6.78	2.03	-6.78	7.07	163.35	0.09
852.55	1.06	119.83	852.49	-7.78	3.21	-7.78	8.41	157.58	0.46
947.01	1.26	96.60	946.93	-8.33	5.00	-8.33	9.71	149.04	0.54
1041.47	1.15	107.80	1041.37	-8.74	6.93	-8.74	11.15	141.58	0.28
1135.93	1.04	119.01	1135.81	-9.44	8.58	-9.44	12.76	137.75	0.25
1230.39	0.91	95.62	1230.26	-9.93	10.07	-9.93	14.15	134.59	0.44
1324.85	0.79	72.23	1324.71	-9.80	11.45	-9.80	15.07	130.58	0.39
1419.31	0.75	63.69	1419.16	-9.33	12.63	-9.33	15.70	126.47	0.13
1513.77	0.71	55.15	1513.61	-8.72	13.66	-8.72	16.21	122.57	0.12
1608.23	0.66	56.07	1608.06	-8.09	14.59	-8.09	16.68	119.00	0.05
1702.69	0.62	60.98	1702.52	-7.53	15.49	-7.53	17.22	115.94	0.07



Weatherford[®]

Evaluation, Drilling & Intervention

10000 West County Rd. 116

P.O. Box 61028

Midland, TX USA 79711

Tel. (432) 561-8892 Fax (432) 561-8895

Devon Energy
333 W. Sherridan Ave
Oklahoma City, OK, 73102

Date: December 4, 2012

Attention: John Prejean

Re: Devon Energy
Well: Spica 25 Fed 2H
Eddy County, New Mexico

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Justin Nguyen MWD Supervisor	2H	7745' MD 13704' MD	11/15/2012 12/1/2012	Measurement While Drilling

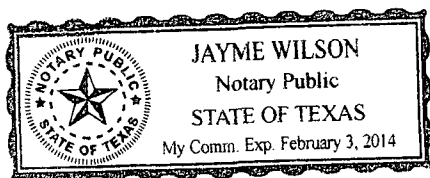
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Jesse Aguilar
MWD Ops Coordinator

On this, the 4th day of December, 2012, before me a notary public, the undersigned officer, personally appeared Jesse Aguilar, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

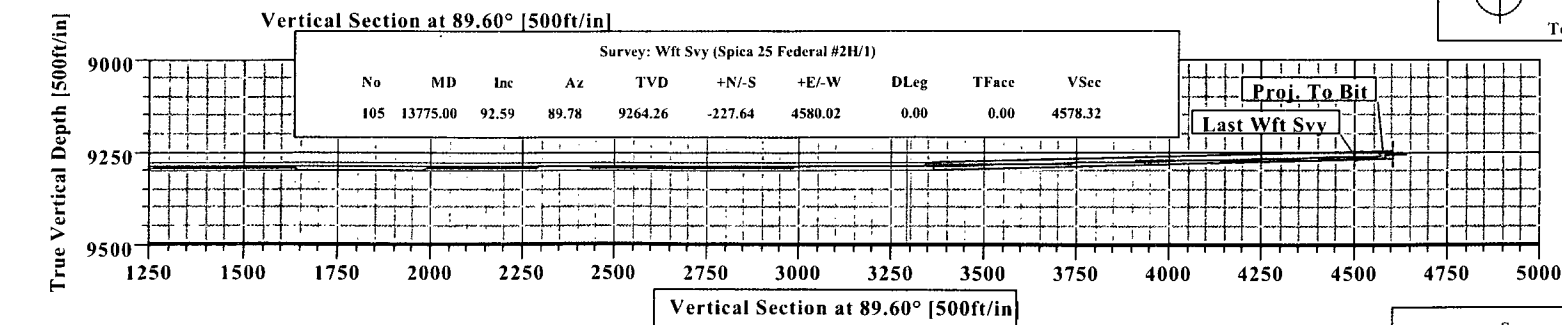
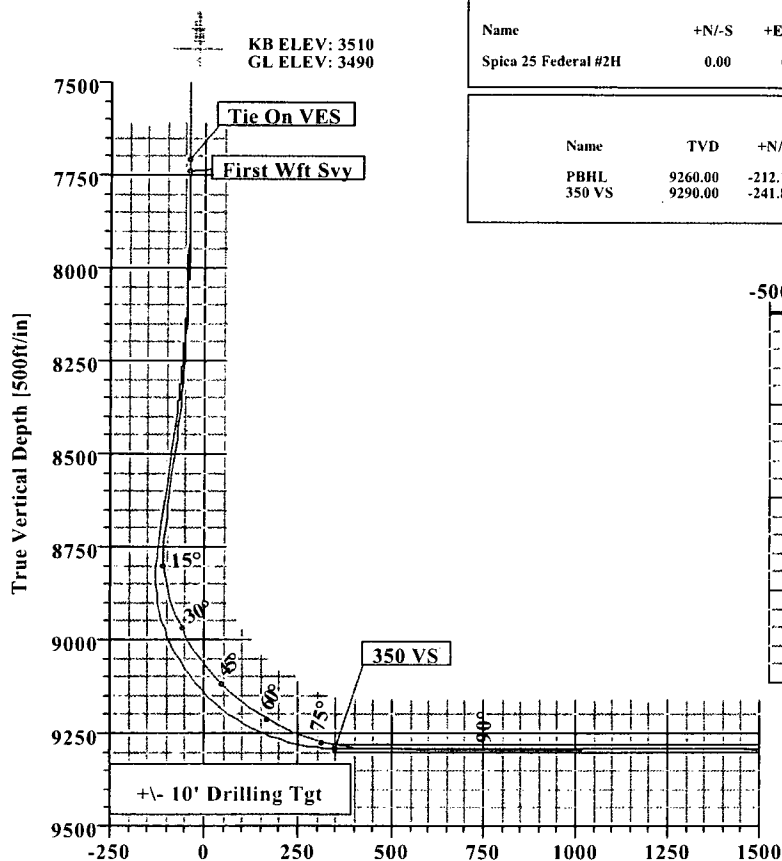
In witness hereof, I hereunto set my hand and official seal.

Notary Public



devon

Spica 25 Federal #2H Eddy Co, NM



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	7711.58	0.23	10.01	7708.43	19.45	-42.00	0.00	0.00	-41.86	
2	7891.35	0.23	10.01	7888.20	20.16	-41.87	0.00	0.00	-41.73	
3	8398.70	15.00	209.74	8389.85	-36.19	-74.47	3.00	-160.56	-74.72	
4	8786.48	15.00	209.74	8764.41	-123.35	-124.26	0.00	0.00	-125.12	
5	9598.72	90.00	89.60	9290.00	-241.87	349.99	12.00	-119.28	348.29	350 VS
6	12615.42	90.00	89.60	9290.00	-220.79	3366.62	0.00	0.00	3365.00	
7	12662.63	91.42	89.60	9289.42	-220.46	3413.82	3.00	0.00	3412.20	
8	13852.88	91.42	89.60	9260.00	-212.15	4603.68	0.00	0.00	4602.09	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Spica 25 Federal #2H	0.00	0.00	594488.16	696211.20	32°37'59.830N	103°49'48.864W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	9260.00	-212.15	4603.68	594276.01	700814.88	Rectangle (1240x50)
350 VS	9290.00	-241.87	349.99	594246.29	696561.19	Rectangle (3020x50)

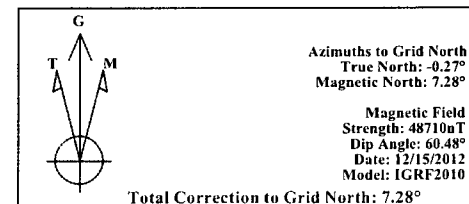
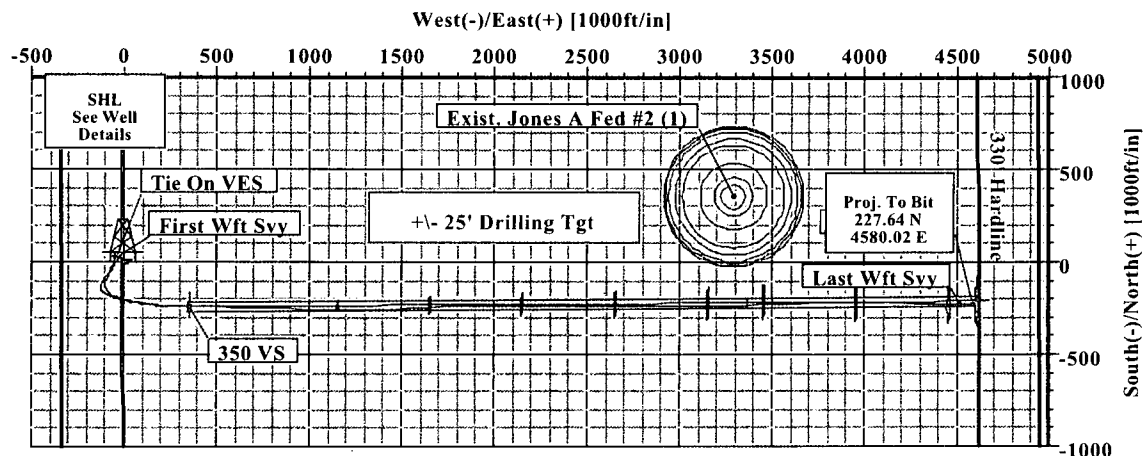
FIELD DETAILS

Eddy Co., NM (NAD 83)
Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

Spica 25 Federal #2H
Site Centre Northing: 594488.16
Easting: 696211.20
Ground Level: 3490.00
Positional Uncertainty: 0.00
Convergence: 0.27



Weatherford

Survey: Wft Svy (Spica 25 Federal #2H/1)

Created By: Russell W. Joyner

Date: 12/3/2012



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy Date: 12/3/2012 Time: 07:27:03 Page: 1
Field: Eddy Co. NM (NAD 83) Co-ordinate(NE) Reference: Well: Spica 25 Federal #2H, Grid North
Site: Spica 25 Federal #2H Vertical (TVD) Reference: SITE 3510.0
Well: Spica 25 Federal #2H Section (VS) Reference: Well (0.00N;0.00E;89.60Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Wft Svy Start Date: 11/19/2012
Company: Weatherford International Ltd. Engineer: Russell Joyner
Tool: MWD;MWD - Standard Tied-to: User Defined

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983 Map Zone: New Mexico, Eastern Zone
Geo Datum: GRS 1980 Coordinate System: Well Centre
Sys Datum: Mean Sea Level Geomagnetic Model: IGRF2010

Site: Spica 25 Federal #2H

Site Position: Northing: 594488.16 ft Latitude: 32 37 59.830 N
From: Map Easting: 696211.20 ft Longitude: 103 49 48.864 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3490.00 ft Grid Convergence: 0.27 deg

Well: Spica 25 Federal #2H Slot Name:
Well Position: +N/-S 0.00 ft Northing: 594488.16 ft Latitude: 32 37 59.830 N
+E/-W 0.00 ft Easting: 696211.20 ft Longitude: 103 49 48.864 W
Position Uncertainty: 0.00 ft

Wellpath: 1 Drilled From: Surface
Current Datum: SITE Height 3510.00 ft Tie-on Depth: 0.00 ft
Magnetic Data: 12/15/2012 Above System Datum: Mean Sea Level
Field Strength: 48710 nT Declination: 7.55 deg
Vertical Section: Depth From (TVD) +N/-S Mag Dip Angle: 60.48 deg
ft ft +E/-W Direction
deg
0.00 0.00 0.00 89.60

Survey

MD	Incl	Azim	TVD	N/S	E/W	DLS	VS	MapN	MapE	Comment
ft	deg	deg	ft	ft	ft	deg/100ft	ft	ft	ft	
7711.58	0.23	10.01	7708.43	19.45	-42.00	0.00	-41.86	594507.61	696169.20	Tie On VES
7745.00	0.51	342.88	7741.85	19.66	-42.03	0.97	-41.89	594507.82	696169.17	First Wft Svy
7777.00	0.35	282.50	7773.85	19.82	-42.17	1.42	-42.03	594507.98	696169.03	
7808.00	0.95	214.28	7804.84	19.63	-42.41	2.85	-42.27	594507.79	696168.79	
7839.00	1.79	205.54	7835.84	18.98	-42.76	2.78	-42.63	594507.14	696168.44	
7871.00	2.34	200.21	7867.81	17.91	-43.20	1.82	-43.08	594506.07	696168.00	
7902.00	2.47	198.09	7898.79	16.68	-43.63	0.51	-43.51	594504.84	696167.57	
7934.00	2.47	201.66	7930.76	15.39	-44.10	0.48	-43.99	594503.55	696167.10	
7966.00	2.99	198.51	7962.72	13.96	-44.62	1.69	-44.52	594502.12	696166.58	
7997.00	3.73	197.36	7993.67	12.23	-45.17	2.40	-45.09	594500.39	696166.03	
8029.00	3.97	195.90	8025.60	10.17	-45.79	0.81	-45.71	594498.33	696165.41	
8060.00	4.19	206.10	8056.52	8.12	-46.58	2.44	-46.52	594496.28	696164.62	
8092.00	4.88	197.21	8088.42	5.77	-47.50	3.07	-47.45	594493.93	696163.70	
8123.00	5.75	197.23	8119.28	3.03	-48.35	2.81	-48.32	594491.19	696162.85	
8155.00	6.85	197.87	8151.09	-0.32	-49.41	3.44	-49.41	594487.84	696161.79	
8186.00	7.59	200.22	8181.84	-4.00	-50.68	2.57	-50.71	594484.16	696160.52	
8218.00	8.40	200.41	8213.53	-8.18	-52.23	2.53	-52.28	594479.98	696158.97	
8249.00	9.29	200.46	8244.16	-12.64	-53.89	2.87	-53.98	594475.52	696157.31	
8281.00	10.29	202.36	8275.70	-17.71	-55.88	3.28	-56.00	594470.45	696155.32	
8312.00	11.34	204.30	8306.15	-23.04	-58.19	3.58	-58.35	594465.12	696153.01	
8343.00	12.34	204.94	8336.49	-28.83	-60.84	3.25	-61.04	594459.33	696150.36	
8375.00	13.02	206.66	8367.71	-35.15	-63.90	2.43	-64.14	594453.01	696147.30	
8407.00	13.99	208.54	8398.82	-41.77	-67.37	3.33	-67.66	594446.39	696143.83	
8438.00	14.39	208.25	8428.88	-48.45	-70.98	1.31	-71.32	594439.71	696140.22	



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co. NM (NAD 83)
Site: Spica 25 Federal #2H
Well: Spica 25 Federal #2H
Wellpath: 1

Date: 12/3/2012
Co-ordinate(NE) Reference: Well: Spica 25 Federal #2H, Grid North
Vertical (TVD) Reference: SITE: 3510.0
Section (VS) Reference: Well (0.00N, 0.00E, 89.60Azi)
Survey Calculation Method: Minimum Curvature
Db: Sybase

Time: 07:27:03
Page: 2

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
8470.00	14.58	207.41	8459.86	-55.53	-74.72	0.89	-75.10	594432.63	696136.48	
8501.00	14.52	207.46	8489.86	-62.44	-78.30	0.20	-78.74	594425.72	696132.90	
8532.00	14.36	207.59	8519.88	-69.30	-81.88	0.53	-82.36	594418.86	696129.32	
8564.00	14.39	207.80	8550.88	-76.33	-85.57	0.19	-86.10	594411.83	696125.63	
8658.00	14.31	207.20	8641.95	-97.00	-96.33	0.18	-97.00	594391.16	696114.87	
8688.00	13.95	206.55	8671.04	-103.53	-99.64	1.31	-100.36	594384.63	696111.56	
8721.00	13.83	206.02	8703.08	-110.63	-103.15	0.53	-103.92	594377.53	696108.05	
8754.00	12.86	199.76	8735.19	-117.63	-106.12	5.27	-106.94	594370.53	696105.08	
8787.00	12.56	181.50	8767.39	-124.68	-107.45	12.16	-108.32	594363.48	696103.75	
8818.00	14.76	166.24	8797.52	-131.89	-106.60	13.56	-107.52	594356.27	696104.60	
8849.00	17.71	154.23	8827.29	-139.97	-103.61	14.37	-104.59	594348.19	696107.59	
8880.00	21.50	146.07	8856.49	-148.94	-98.39	15.06	-99.42	594339.22	696112.81	
8912.00	23.57	138.22	8886.06	-158.58	-90.85	11.40	-91.95	594329.58	696120.35	
8943.00	24.99	131.78	8914.32	-167.56	-81.83	9.69	-83.00	594320.60	696129.37	
8975.00	27.48	125.41	8943.03	-176.35	-70.77	11.74	-72.00	594311.81	696140.43	
9006.00	30.04	119.36	8970.21	-184.30	-58.18	12.50	-59.46	594303.86	696153.02	
9038.00	32.04	113.51	8997.63	-191.62	-43.41	11.30	-44.74	594296.54	696167.79	
9069.00	33.57	108.27	9023.69	-197.59	-27.72	10.40	-29.10	594290.57	696183.48	
9101.00	35.69	105.90	9050.02	-202.92	-10.34	7.85	-11.76	594285.24	696200.86	
9132.00	38.73	103.18	9074.71	-207.61	7.80	11.15	6.35	594280.55	696219.00	
9164.00	41.56	101.03	9099.17	-211.92	27.97	9.85	26.49	594276.24	696239.17	
9195.00	45.08	98.98	9121.72	-215.60	48.91	12.23	47.41	594272.56	696260.11	
9227.00	48.72	98.17	9143.58	-219.08	72.01	11.52	70.48	594269.08	696283.21	
9258.00	51.49	97.46	9163.46	-222.31	95.58	9.11	94.02	594265.85	696306.78	
9290.00	54.71	97.21	9182.67	-225.58	120.95	10.08	119.38	594262.58	696332.15	
9321.00	57.81	97.00	9199.89	-228.77	146.53	10.02	144.93	594259.39	696357.73	
9352.00	60.60	96.52	9215.76	-231.90	172.97	9.10	171.35	594256.26	696384.17	
9384.00	63.70	96.09	9230.70	-235.00	201.09	9.76	199.45	594253.16	696412.29	
9415.00	65.61	95.14	9243.97	-237.74	228.97	6.76	227.31	594250.42	696440.17	
9447.00	68.67	93.57	9256.41	-239.98	258.37	10.58	256.69	594248.18	696469.57	
9479.00	71.85	91.95	9267.21	-241.42	288.45	11.02	286.76	594246.74	696499.65	
9510.00	75.73	90.86	9275.87	-242.15	318.20	12.96	316.50	594246.01	696529.40	
9542.00	79.37	90.97	9282.76	-242.65	349.44	11.38	347.74	594245.51	696560.64	
9573.00	83.06	91.05	9287.50	-243.19	380.06	11.91	378.36	594244.97	696591.26	
9603.00	86.29	90.48	9290.28	-243.59	409.93	10.93	408.22	594244.57	696621.13	
9634.00	88.67	90.41	9291.64	-243.83	440.90	7.68	439.18	594244.33	696652.10	
9699.00	88.95	90.57	9292.99	-244.38	505.88	0.50	504.16	594243.78	696717.08	
9793.00	88.95	91.07	9294.72	-245.73	599.85	0.53	598.12	594242.43	696811.05	
9887.00	89.16	91.71	9296.27	-248.01	693.81	0.72	692.06	594240.15	696905.01	
9981.00	90.21	91.02	9296.78	-250.25	787.78	1.34	786.02	594237.91	696998.98	
10076.00	90.63	91.58	9296.09	-252.40	882.75	0.74	880.97	594235.76	697093.95	
10170.00	90.77	92.18	9294.94	-255.49	976.70	0.66	974.89	594232.67	697187.90	
10264.00	90.98	90.63	9293.50	-257.79	1070.65	1.66	1068.83	594230.37	697281.85	
10359.00	89.72	89.05	9292.92	-257.52	1165.65	2.13	1163.82	594230.64	697376.85	
10454.00	89.79	89.25	9293.33	-256.12	1260.64	0.22	1258.82	594232.04	697471.84	
10549.00	90.49	90.20	9293.10	-255.66	1355.63	1.24	1353.82	594232.50	697566.83	
10643.00	88.95	89.41	9293.56	-255.34	1449.63	1.84	1447.81	594232.82	697660.83	
10737.00	88.88	87.17	9295.34	-252.54	1543.56	2.38	1541.76	594235.62	697754.76	
10832.00	89.30	86.80	9296.84	-247.54	1638.42	0.59	1636.65	594240.62	697849.62	
10926.00	89.86	87.44	9297.53	-242.82	1732.30	0.90	1730.56	594245.34	697943.50	
11021.00	90.07	88.43	9297.59	-239.39	1827.23	1.07	1825.52	594248.77	698038.43	
11115.00	90.28	88.90	9297.30	-237.20	1921.21	0.55	1919.51	594250.96	698132.41	



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy Date: 12/3/2012 Time: 07:27:03 Page: 3
Field: Eddy Co. NM (NAD:83) Co-ordinate(NE) Reference: Well: Spica 25 Federal #2H; Grid North
Site: Spica 25 Federal #2H Vertical (TVD) Reference: SITE 3510.0
Well: Spica 25 Federal #2H Section (VS) Reference: Well (0.00N;0.00E,89.60Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
11210.00	90.63	89.59	9296.55	-235.95	2016.20	0.81	2014.50	594252.21	698227.40	
11304.00	90.98	90.11	9295.23	-235.71	2110.19	0.67	2108.49	594252.45	698321.39	
11399.00	91.12	91.05	9293.49	-236.67	2205.16	1.00	2203.46	594251.49	698416.36	
11493.00	91.33	91.86	9291.48	-239.05	2299.11	0.89	2297.39	594249.11	698510.31	
11588.00	89.23	90.75	9291.01	-241.22	2394.08	2.50	2392.34	594246.94	698605.28	
11682.00	88.81	89.48	9292.62	-241.41	2488.06	1.42	2486.32	594246.75	698699.26	
11776.00	89.02	89.97	9294.40	-240.95	2582.04	0.57	2580.30	594247.21	698793.24	
11871.00	89.30	90.79	9295.80	-241.58	2677.03	0.91	2675.28	594246.58	698888.23	
11965.00	90.07	91.59	9296.31	-243.54	2771.01	1.18	2769.24	594244.62	698982.21	
12059.00	91.47	89.92	9295.05	-244.78	2864.99	2.32	2863.21	594243.38	699076.19	
12154.00	91.75	89.58	9292.38	-244.36	2959.95	0.46	2958.17	594243.80	699171.15	
12249.00	90.77	87.99	9290.29	-242.35	3054.90	1.97	3053.13	594245.81	699266.10	
12343.00	90.28	87.84	9289.43	-238.93	3148.83	0.55	3147.09	594249.23	699360.03	
12438.00	90.77	88.82	9288.56	-236.16	3243.79	1.15	3242.06	594252.00	699454.99	
12532.00	91.54	89.29	9286.66	-234.61	3337.75	0.96	3336.03	594253.55	699548.95	
12626.00	90.49	87.68	9285.00	-232.12	3431.70	2.04	3430.00	594256.04	699642.90	
12721.00	90.21	87.34	9284.42	-228.00	3526.61	0.46	3524.93	594260.16	699737.81	
12815.00	90.91	87.91	9283.50	-224.10	3620.52	0.96	3618.87	594264.06	699831.72	
12910.00	91.19	88.60	9281.76	-221.21	3715.46	0.78	3713.83	594266.95	699926.66	
13004.00	91.54	88.95	9279.52	-219.20	3809.41	0.53	3807.79	594268.96	700020.61	
13099.00	92.31	89.60	9276.33	-218.00	3904.35	1.06	3902.74	594270.16	700115.55	
13193.00	90.56	90.71	9273.97	-218.25	3998.32	2.20	3996.70	594269.91	700209.52	
13288.00	89.86	90.79	9273.63	-219.50	4093.31	0.74	4091.68	594268.66	700304.51	
13382.00	90.14	91.63	9273.63	-221.48	4187.29	0.94	4185.64	594266.68	700398.49	
13476.00	90.42	92.47	9273.17	-224.84	4281.22	0.94	4279.55	594263.32	700492.42	
13571.00	91.33	90.85	9271.72	-227.60	4376.17	1.96	4374.47	594260.56	700587.37	
13665.00	91.96	89.74	9269.02	-228.08	4470.13	1.36	4468.43	594260.08	700681.33	
13704.00	92.59	89.78	9267.47	-227.92	4509.10	1.62	4507.39	594260.24	700720.30	Last Wft Svy
13775.00	92.59	89.78	9264.26	-227.64	4580.02	0.00	4578.32	594260.52	700791.22	Proj. To Bit

Annotation

MD ft	TVD ft	
7711.58	7708.43	Tie On VES
7745.00	7741.85	First Wft Svy
13704.00	9267.47	Last Wft Svy
13775.00	9264.26	Proj. To Bit