

# **DEVON ENERGY**

**Block 12**

**Andrews County, Texas**

**University 12-36 #1H**

**VH - Job #32K1010758**

**Survey: Actual**

## **SDI Standard Survey Report**

**09 November, 2010**





**Scientific Drilling International, Inc.**

2034 Trade Drive • Midland, Texas 79706

P. O. Box 9699 • Midland, Texas 79708

Tel: 432-563-1339 • Fax: 432-697-0324

State of Texas  
County of Midland

I, Joseph Sutherland, certify that; I am employed by Scientific Drilling International; that I did on the day(s) of 10/06/10 through 10/06/10 conduct or supervise the taking of a Keeper Gyro survey from a depth of 0 feet to a depth of 7454 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Scientific Drilling International; that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon Energy Production for the University 12-36 #1H Well, API# 42-003-40830 in Andrews County, Texas; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Scientific Drilling International.

  
\_\_\_\_\_  
Field Technician



# Scientific Drilling International, Inc.

## SDI Standard Survey Report

<b>Company:</b>	DEVON ENERGY	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Block 12	<b>TVD Reference:</b>	WELL @ 0.0usft (Original Well Elev)
<b>Site:</b>	Andrews County, Texas	<b>MD Reference:</b>	WELL @ 0.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	VH - Job #32K1010758	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	VH - Job #32K1010758	<b>Database:</b>	EDM-Regulatory

<b>Project</b>	Block 12		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Texas North Central Zone		

<b>Site</b>	Andrews County, Texas		
<b>Site Position:</b>		<b>Northing:</b>	6,790,233.52 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	631,814.99 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	32° 13' 9.473 N
		<b>Longitude:</b>	102° 49' 23.873 W
		<b>Grid Convergence:</b>	-2.36 °

<b>Well</b>	University 12-36 #1H, Directional (DDC)		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 6,790,233.52 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 631,814.99 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	32° 13' 9.473 N
		<b>Longitude:</b>	102° 49' 23.873 W
		<b>Ground Level:</b>	0.0 usft

<b>Wellbore</b>	VH - Job #32K1010758				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2010	10/6/2010	7.35	60.34	48,838

<b>Design</b>	VH - Job #32K1010758			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	101.76

<b>Survey Program</b>	<b>Date</b>	11/9/2010		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
100.0	7,454.0	Actual (VH - Job #32K1010758)	Keeper	Keeper Gyro

<b>Survey</b>								
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>True Vertical Depth</b>	<b>North/South (usft)</b>	<b>East/West (usft)</b>	<b>Closure Azimuth (°)</b>	<b>Closure Distance (usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	0.0
100.0	0.73	140.63	100.0	-0.5	0.4	140.63	0.6	
200.0	0.51	145.10	200.0	-1.3	1.1	141.79	1.7	
300.0	0.61	149.81	300.0	-2.2	1.6	143.92	2.7	
400.0	0.56	143.37	400.0	-3.0	2.1	144.69	3.7	
500.0	0.44	146.01	500.0	-3.7	2.7	144.66	4.6	
600.0	0.43	151.14	600.0	-4.4	3.0	145.21	5.3	
700.0	0.38	163.39	700.0	-5.0	3.3	146.56	6.0	
800.0	0.39	168.13	800.0	-5.7	3.5	148.46	6.7	
900.0	0.34	169.54	900.0	-6.3	3.6	150.21	7.3	
1,000.0	0.38	172.65	1,000.0	-6.9	3.7	151.85	7.9	
1,100.0	0.50	199.94	1,100.0	-7.7	3.6	154.84	8.5	

# Scientific Drilling International, Inc.

## SDI Standard Survey Report

<b>Company:</b>	DEVON ENERGY	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Block 12	<b>TVD Reference:</b>	WELL @ 0.0usft (Original Well Elev)
<b>Site:</b>	Andrews County, Texas	<b>MD Reference:</b>	WELL @ 0.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	VH - Job #32K1010758	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	VH - Job #32K1010758	<b>Database:</b>	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,200.0	0.57	203.53	1,200.0	-8.5	3.3	159.13	9.1
1,300.0	0.52	213.08	1,300.0	-9.4	2.8	163.32	9.8
1,400.0	0.59	206.37	1,399.9	-10.2	2.3	167.14	10.5
1,500.0	0.51	218.91	1,499.9	-11.0	1.8	170.61	11.2
1,600.0	0.30	232.99	1,599.9	-11.5	1.3	173.40	11.6
1,700.0	0.12	122.20	1,699.9	-11.7	1.2	174.10	11.8
1,800.0	0.12	119.22	1,799.9	-11.8	1.4	173.29	11.9
1,900.0	0.05	31.00	1,899.9	-11.9	1.5	172.75	12.0
2,000.0	0.19	32.64	1,999.9	-11.7	1.6	172.11	11.8
2,100.0	0.31	25.56	2,099.9	-11.3	1.8	170.82	11.4
2,200.0	0.28	21.77	2,199.9	-10.8	2.0	169.36	11.0
2,300.0	0.67	67.25	2,299.9	-10.4	2.7	165.60	10.7
2,400.0	0.76	75.58	2,399.9	-10.0	3.8	158.93	10.7
2,500.0	0.74	71.08	2,499.9	-9.6	5.1	152.05	10.9
2,600.0	0.75	73.73	2,599.9	-9.2	6.3	145.48	11.2
2,700.0	0.65	58.14	2,699.9	-8.7	7.4	139.54	11.5
2,800.0	0.63	53.88	2,799.9	-8.1	8.4	134.08	11.7
2,900.0	0.63	52.10	2,899.9	-7.4	9.3	128.83	11.9
3,000.0	0.65	52.53	2,999.9	-6.8	10.1	123.71	12.2
3,100.0	0.61	60.76	3,099.9	-6.2	11.0	119.13	12.6
3,200.0	0.55	55.94	3,199.9	-5.6	11.9	115.29	13.2
3,300.0	0.47	61.34	3,299.9	-5.2	12.7	112.17	13.7
3,400.0	0.48	59.80	3,399.9	-4.8	13.4	109.55	14.2
3,500.0	0.47	58.98	3,499.9	-4.3	14.1	107.08	14.8
3,600.0	0.41	51.70	3,599.9	-3.9	14.7	104.82	15.2
3,700.0	0.45	51.21	3,699.9	-3.4	15.3	102.63	15.7
3,800.0	0.44	52.78	3,799.9	-3.0	15.9	100.50	16.2
3,900.0	0.27	54.93	3,899.9	-2.6	16.4	98.94	16.6
4,000.0	0.20	59.33	3,999.9	-2.4	16.8	98.01	16.9
4,100.0	0.15	95.35	4,099.9	-2.3	17.1	97.63	17.2
4,200.0	0.21	125.49	4,199.9	-2.4	17.3	97.89	17.5
4,300.0	0.23	133.06	4,299.8	-2.6	17.6	98.54	17.8
4,400.0	0.28	141.63	4,399.8	-3.0	17.9	99.42	18.2
4,500.0	0.31	143.23	4,499.8	-3.4	18.2	100.51	18.6
4,600.0	0.27	135.25	4,599.8	-3.8	18.6	101.47	19.0
4,700.0	0.25	123.27	4,699.8	-4.1	18.9	102.10	19.4
4,800.0	0.18	101.94	4,799.8	-4.2	19.3	102.33	19.7
4,900.0	0.14	73.83	4,899.8	-4.2	19.5	102.15	20.0
5,000.0	0.18	12.50	4,999.8	-4.0	19.7	101.54	20.1
5,100.0	0.38	353.47	5,099.8	-3.5	19.7	100.19	20.0
5,200.0	0.24	18.07	5,199.8	-3.0	19.7	98.68	19.9
5,300.0	0.26	0.79	5,299.8	-2.6	19.8	97.44	19.9
5,400.0	0.31	357.17	5,399.8	-2.1	19.8	96.02	19.9
5,500.0	0.23	17.31	5,499.8	-1.6	19.8	94.68	19.9

# Scientific Drilling International, Inc.

## SDI Standard Survey Report

<b>Company:</b>	DEVON ENERGY	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Block 12	<b>TVD Reference:</b>	WELL @ 0.0usft (Original Well Elev)
<b>Site:</b>	Andrews County, Texas	<b>MD Reference:</b>	WELL @ 0.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	VH - Job #32K1010758	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	VH - Job #32K1010758	<b>Database:</b>	EDM-Regulatory

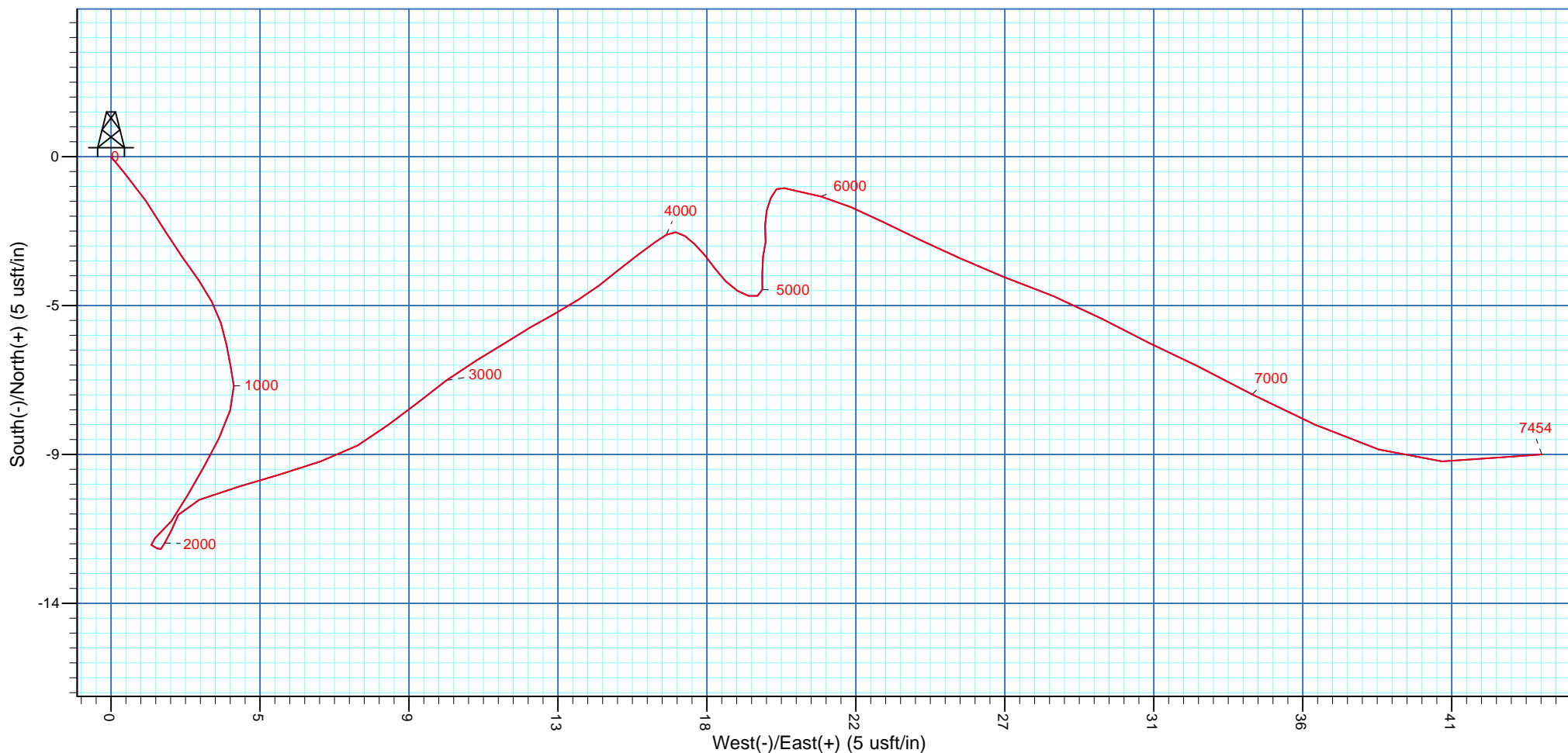
Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	0.23	20.40	5,599.8	-1.2	19.9	93.57	20.0
5,700.0	0.14	54.33	5,699.8	-1.0	20.1	92.80	20.1
5,800.0	0.16	108.10	5,799.8	-1.0	20.3	92.69	20.4
5,900.0	0.32	100.26	5,899.8	-1.0	20.7	92.89	20.8
6,000.0	0.50	104.26	5,999.8	-1.2	21.4	93.22	21.5
6,100.0	0.62	113.43	6,099.8	-1.5	22.4	93.91	22.4
6,200.0	0.63	116.72	6,199.8	-2.0	23.3	94.87	23.4
6,300.0	0.74	115.04	6,299.8	-2.5	24.4	95.87	24.6
6,400.0	0.75	114.50	6,399.8	-3.1	25.6	96.81	25.8
6,500.0	0.92	111.74	6,499.8	-3.6	26.9	97.66	27.2
6,600.0	0.95	110.85	6,599.8	-4.2	28.5	98.43	28.8
6,700.0	0.92	119.29	6,699.8	-4.9	29.9	99.30	30.3
6,800.0	0.91	115.11	6,799.8	-5.6	31.4	100.19	31.9
6,900.0	0.92	116.02	6,899.7	-6.3	32.8	100.91	33.4
7,000.0	1.23	118.38	6,999.7	-7.2	34.5	101.78	35.2
7,100.0	1.19	112.81	7,099.7	-8.1	36.4	102.55	37.3
7,200.0	1.18	109.72	7,199.7	-8.8	38.3	103.01	39.3
7,300.0	1.08	90.91	7,299.7	-9.2	40.2	102.90	41.2
7,400.0	1.20	81.74	7,399.6	-9.1	42.2	102.14	43.2
7,454.0	1.01	90.45	7,453.6	-9.0	43.2	101.76	44.1



WELL DETAILS: University 12-36 #1H  
WELL @ 0.0usft (Original Well Elev)

Ground Level: 0.0

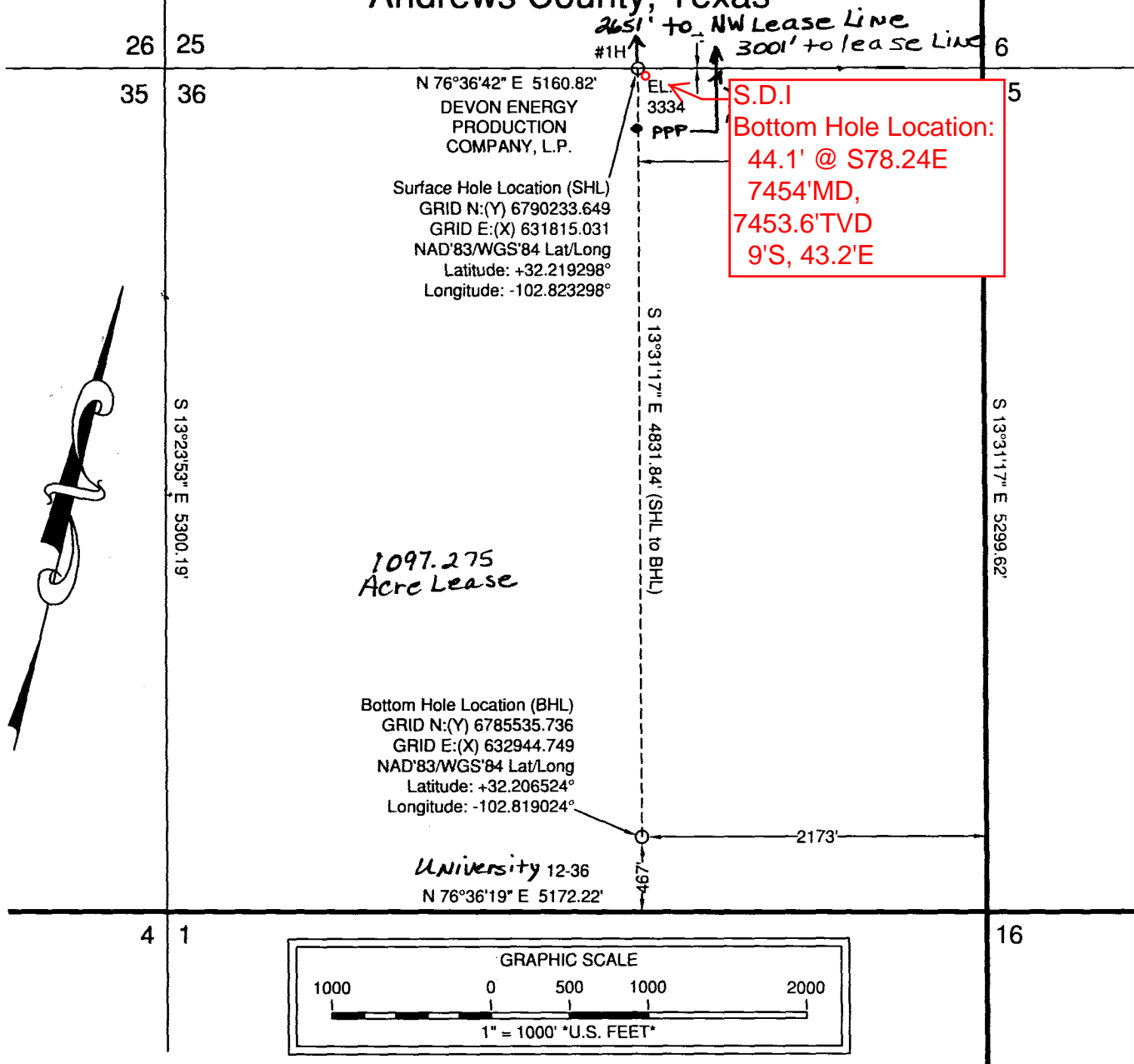
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	6790233.52	631814.99	32° 13' 9.473 N	102° 49' 23.873 W	



PROJECT DETAILS: Block 12  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Texas North Central Zone  
System Datum: Mean Sea Level

SITE DETAILS: Andrews County, Texas  
Site Centre Latitude: 32° 13' 9.473 N  
Longitude: 102° 49' 23.873 W  
Positional Uncertainty: 0.0  
Convergence: -2.36  
Local North: Grid

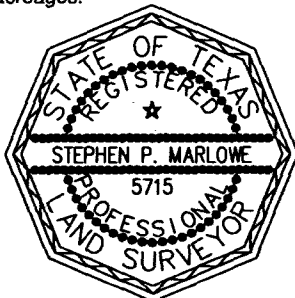
Block 12, University Lands Survey  
Andrews County, Texas



Note: City of Andrews, Texas from well location bears N 69°18'23\" E, 17.6 miles.  
Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.  
Note: Bearings and distances are based on The Texas Coordinate System of 1983, North Central Zone.  
Note: Coordinates shown herein are on The Texas Coordinate System of 1983, North Central Zone.  
Note: Acreages shown have been converted to surface acreages.



*Stephen P. Marlowe*  
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5715



May 17, 2010

100517B

P.O. Box 51622, Midland, Texas, 79710 (432) 570-6256 Fax (432) 682-3262

USGS Quadrangle Sheet: Sand Ranch, Tex.

Railroad Commission Permit Plat

DEVON ENERGY PRODUCTION COMPANY, L.P.

*University 12-36 #1H*  
1' FROM NORTH LINE  
2173' FROM EAST LINE  
*University 12-36 Lease*

Section 36, Block 12  
University Lands Survey  
Andrews County, Texas

Scale: 1" = 1000'



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Date: 12/16/2010

Railroad Commission of Texas  
Oil and Gas Division  
1701 North Congress Avenue  
Austin, Texas 78711

Attention: Pam Johns

Re: Devon Energy Production Co., L.P.  
University 12-36 #1H  
RRC Lease / ID No.  
UL  
Abstract #N/A  
Andrews County, Texas  
API No. 42-003-40830

Enclosed, please find the original and one copy of the survey performed on the referenced well by The Directional Drilling Company (DDC). (P5#851499). Other information required by your office is as follows:

<u>Name &amp; Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Bill Kasper	Original Hole	6600' – 11755'	10/07/10 – 10/22/10	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Larry Wright

Enclosures

Cc: Devon Energy Production Co., L.P.

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





## **Devon Energy- WT**

**Andrews County, TX  
Sec. 36, Block 12, University Lands Survey  
University 12-36 #1H**

**Wellbore #1**

**Survey: MWD Surveys**

## **DDC Survey Report**

**26 October, 2010**



<b>Company:</b>	Devon Energy- WT	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Andrews County, TX	<b>TVD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Site:</b>	Sec. 36, Block 12, University Lands Survey	<b>MD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	Andrews County, TX		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Texas North Central Zone		

<b>Site</b>	Sec. 36, Block 12, University Lands Survey		
<b>Site Position:</b>		<b>Northing:</b>	6,790,233.65 usft
<b>From:</b>	Map	<b>Easting:</b>	631,815.04 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 13' 9.474 N
		<b>Longitude:</b>	102° 49' 23.872 W
		<b>Grid Convergence:</b>	-2.36 °

<b>Well</b>	University 12-36 #1H		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	32° 13' 9.474 N
		<b>Longitude:</b>	102° 49' 23.872 W
		<b>Ground Level:</b>	3,334.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/16/2010	7.35	60.34	48,789

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	166.48	

<b>Survey Program</b>	<b>Date</b>	10/26/2010			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.0	6,600.0	Scientific Drilling - Gyro Surveys (Wellbore	Good_gyro	Good Gyro	
6,625.0	11,755.0	MWD Surveys (Wellbore #1)	MWD default	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
<b>Tie-In to Gyro</b>										
6,600.0	0.95	110.85	6,599.8	-4.2	28.5	10.8	0.00	0.00	0.00	
6,625.0	1.10	116.60	6,624.8	-4.4	28.9	11.0	0.73	0.60	23.00	
6,656.0	1.90	138.20	6,655.8	-4.9	29.5	11.7	3.12	2.58	69.68	
6,688.0	4.40	151.20	6,687.7	-6.4	30.5	13.3	8.08	7.81	40.63	
6,720.0	7.60	154.20	6,719.5	-9.4	32.0	16.6	10.04	10.00	9.38	
6,752.0	11.10	153.30	6,751.1	-14.0	34.3	21.7	10.95	10.94	-2.81	
6,784.0	14.80	155.20	6,782.3	-20.5	37.4	28.7	11.64	11.56	5.94	
6,818.0	19.30	157.70	6,814.8	-29.6	41.3	38.5	13.41	13.24	7.35	
6,850.0	23.80	160.10	6,844.5	-40.6	45.6	50.1	14.33	14.06	7.50	

<b>Company:</b>	Devon Energy- WT	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Andrews County, TX	<b>TVD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Site:</b>	Sec. 36, Block 12, University Lands Survey	<b>MD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,882.0	28.40	162.80	6,873.3	-54.0	50.0	64.2	14.84	14.38	8.44
6,914.0	32.40	164.90	6,900.9	-69.5	54.5	80.3	12.93	12.50	6.56
6,946.0	36.10	165.90	6,927.3	-86.9	59.0	98.3	11.70	11.56	3.13
6,978.0	39.60	166.80	6,952.6	-106.0	63.6	118.0	11.07	10.94	2.81
7,009.0	43.20	166.50	6,975.8	-126.0	68.4	138.5	11.63	11.61	-0.97
7,041.0	45.80	166.60	6,998.6	-147.8	73.6	160.9	8.13	8.13	0.31
7,073.0	48.40	167.00	7,020.4	-170.6	78.9	184.3	8.18	8.13	1.25
7,104.0	51.70	168.10	7,040.3	-193.8	84.1	208.1	10.99	10.65	3.55
7,136.0	54.90	168.80	7,059.5	-218.9	89.2	233.7	10.15	10.00	2.19
7,168.0	57.60	168.60	7,077.2	-245.0	94.4	260.3	8.45	8.44	-0.63
7,199.0	60.40	168.10	7,093.2	-271.0	99.8	286.9	9.14	9.03	-1.61
7,231.0	64.50	167.70	7,108.0	-298.8	105.7	315.2	12.86	12.81	-1.25
7,263.0	68.30	167.50	7,120.8	-327.4	112.0	344.5	11.89	11.88	-0.63
7,295.0	71.80	167.40	7,131.7	-356.8	118.6	374.6	10.94	10.94	-0.31
7,326.0	75.70	167.50	7,140.4	-385.8	125.0	404.3	12.58	12.58	0.32
7,358.0	78.20	167.20	7,147.6	-416.2	131.9	435.5	7.87	7.81	-0.94
<b>Cross Hard-Line @ 7389' MD</b>									
7,389.0	81.20	167.20	7,153.2	-446.0	138.6	466.0	9.69	9.69	0.00
7,390.0	81.30	167.20	7,153.3	-446.9	138.8	467.0	9.69	9.69	0.00
7,422.0	84.90	166.80	7,157.2	-477.9	146.0	498.8	11.32	11.25	-1.25
7,453.0	87.60	167.20	7,159.2	-508.0	152.9	529.7	8.80	8.71	1.29
7,485.0	88.50	167.00	7,160.3	-539.2	160.1	561.7	2.88	2.81	-0.63
7,517.0	90.00	167.50	7,160.7	-570.4	167.1	593.7	4.94	4.69	1.56
7,549.0	90.60	167.90	7,160.5	-601.7	173.9	625.7	2.25	1.88	1.25
7,580.0	90.90	168.10	7,160.1	-632.0	180.4	656.6	1.16	0.97	0.65
7,612.0	91.20	167.40	7,159.5	-663.2	187.2	688.6	2.38	0.94	-2.19
7,644.0	91.50	167.70	7,158.8	-694.5	194.1	720.6	1.33	0.94	0.94
7,675.0	91.40	167.40	7,158.0	-724.7	200.8	751.6	1.02	-0.32	-0.97
7,707.0	91.30	167.70	7,157.2	-756.0	207.7	783.6	0.99	-0.31	0.94
7,739.0	92.20	167.50	7,156.3	-787.2	214.5	815.6	2.88	2.81	-0.63
7,771.0	92.20	168.10	7,155.0	-818.5	221.3	847.5	1.87	0.00	1.88
7,802.0	92.20	168.10	7,153.8	-848.8	227.7	878.5	0.00	0.00	0.00
7,834.0	92.60	168.40	7,152.5	-880.1	234.2	910.4	1.56	1.25	0.94
7,866.0	91.70	168.20	7,151.3	-911.4	240.7	942.4	2.88	-2.81	-0.63
7,898.0	91.70	168.40	7,150.4	-942.7	247.2	974.4	0.62	0.00	0.63
7,930.0	90.90	167.70	7,149.6	-974.0	253.8	1,006.4	3.32	-2.50	-2.19
7,961.0	90.80	167.90	7,149.2	-1,004.3	260.3	1,037.3	0.72	-0.32	0.65
7,993.0	90.80	168.10	7,148.7	-1,035.6	267.0	1,069.3	0.62	0.00	0.63
8,025.0	90.50	167.90	7,148.4	-1,066.9	273.6	1,101.3	1.13	-0.94	-0.63
8,056.0	90.10	167.40	7,148.2	-1,097.2	280.3	1,132.3	2.07	-1.29	-1.61
8,088.0	90.00	167.90	7,148.2	-1,128.5	287.1	1,164.3	1.59	-0.31	1.56
8,120.0	90.90	167.20	7,147.9	-1,159.7	294.0	1,196.3	3.56	2.81	-2.19
8,152.0	90.90	167.20	7,147.4	-1,190.9	301.1	1,228.3	0.00	0.00	0.00



<b>Company:</b>	Devon Energy- WT	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Andrews County, TX	<b>TVD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Site:</b>	Sec. 36, Block 12, University Lands Survey	<b>MD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,184.0	91.80	168.10	7,146.7	-1,222.2	307.9	1,260.3	3.98	2.81	2.81
8,215.0	92.00	168.10	7,145.6	-1,252.5	314.3	1,291.2	0.65	0.65	0.00
8,247.0	92.00	167.90	7,144.5	-1,283.8	321.0	1,323.2	0.62	0.00	-0.63
8,279.0	92.00	167.90	7,143.4	-1,315.0	327.7	1,355.2	0.00	0.00	0.00
8,311.0	92.10	168.40	7,142.3	-1,346.3	334.2	1,387.2	1.59	0.31	1.56
8,342.0	92.20	168.10	7,141.1	-1,376.6	340.6	1,418.1	1.02	0.32	-0.97
8,374.0	92.10	167.90	7,139.9	-1,407.9	347.2	1,450.1	0.70	-0.31	-0.63
8,406.0	92.20	168.10	7,138.7	-1,439.2	353.8	1,482.0	0.70	0.31	0.63
8,437.0	91.40	168.40	7,137.7	-1,469.5	360.2	1,513.0	2.76	-2.58	0.97
8,469.0	91.40	168.10	7,136.9	-1,500.9	366.7	1,545.0	0.94	0.00	-0.94
8,501.0	91.40	168.20	7,136.2	-1,532.2	373.2	1,577.0	0.31	0.00	0.31
8,532.0	91.40	168.10	7,135.4	-1,562.5	379.6	1,607.9	0.32	0.00	-0.32
8,564.0	91.30	167.90	7,134.6	-1,593.8	386.3	1,639.9	0.70	-0.31	-0.63
8,596.0	91.30	167.70	7,133.9	-1,625.1	393.0	1,671.9	0.62	0.00	-0.63
8,628.0	91.40	167.90	7,133.2	-1,656.3	399.8	1,703.9	0.70	0.31	0.63
8,659.0	91.40	167.40	7,132.4	-1,686.6	406.4	1,734.9	1.61	0.00	-1.61
8,691.0	91.40	168.10	7,131.6	-1,717.9	413.2	1,766.9	2.19	0.00	2.19
8,723.0	91.40	167.00	7,130.8	-1,749.1	420.1	1,798.8	3.44	0.00	-3.44
8,755.0	91.50	167.20	7,130.0	-1,780.3	427.2	1,830.8	0.70	0.31	0.63
8,787.0	91.70	167.20	7,129.1	-1,811.5	434.3	1,862.8	0.63	0.63	0.00
8,819.0	91.80	167.90	7,128.2	-1,842.7	441.2	1,894.8	2.21	0.31	2.19
8,850.0	91.90	167.20	7,127.2	-1,873.0	447.9	1,925.8	2.28	0.32	-2.26
8,882.0	92.30	167.20	7,126.0	-1,904.2	455.0	1,957.8	1.25	1.25	0.00
8,914.0	92.10	167.90	7,124.8	-1,935.4	461.9	1,989.7	2.27	-0.63	2.19
8,946.0	90.90	167.40	7,123.9	-1,966.6	468.7	2,021.7	4.06	-3.75	-1.56
8,977.0	90.80	166.80	7,123.5	-1,996.8	475.6	2,052.7	1.96	-0.32	-1.94
9,009.0	90.80	167.00	7,123.0	-2,028.0	482.9	2,084.7	0.62	0.00	0.63
9,040.0	90.30	166.80	7,122.7	-2,058.2	489.9	2,115.7	1.74	-1.61	-0.65
9,073.0	90.20	166.50	7,122.6	-2,090.3	497.5	2,148.7	0.96	-0.30	-0.91
9,104.0	90.60	167.00	7,122.4	-2,120.5	504.6	2,179.7	2.07	1.29	1.61
9,136.0	91.20	167.20	7,121.9	-2,151.7	511.8	2,211.7	1.98	1.88	0.63
9,168.0	90.60	165.90	7,121.3	-2,182.8	519.2	2,243.7	4.47	-1.88	-4.06
9,200.0	90.30	165.80	7,121.1	-2,213.8	527.0	2,275.7	0.99	-0.94	-0.31
9,232.0	90.80	166.30	7,120.8	-2,244.9	534.8	2,307.7	2.21	1.56	1.56
9,263.0	91.60	166.50	7,120.1	-2,275.0	542.0	2,338.7	2.66	2.58	0.65
9,295.0	92.20	167.00	7,119.1	-2,306.1	549.4	2,370.6	2.44	1.88	1.56
9,326.0	92.70	167.00	7,117.8	-2,336.3	556.3	2,401.6	1.61	1.61	0.00
9,358.0	93.00	167.20	7,116.2	-2,367.4	563.5	2,433.6	1.13	0.94	0.63
9,390.0	92.40	166.60	7,114.7	-2,398.6	570.7	2,465.5	2.65	-1.88	-1.88
9,421.0	91.50	166.80	7,113.6	-2,428.7	577.9	2,496.5	2.97	-2.90	0.65
9,453.0	92.10	167.20	7,112.6	-2,459.9	585.0	2,528.5	2.25	1.88	1.25
9,485.0	92.40	167.00	7,111.3	-2,491.1	592.2	2,560.5	1.13	0.94	-0.63
9,517.0	91.60	167.50	7,110.2	-2,522.3	599.2	2,592.5	2.95	-2.50	1.56
9,548.0	91.10	167.50	7,109.5	-2,552.5	606.0	2,623.4	1.61	-1.61	0.00

<b>Company:</b>	Devon Energy- WT	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Andrews County, TX	<b>TVD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Site:</b>	Sec. 36, Block 12, University Lands Survey	<b>MD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,580.0	90.80	167.40	7,109.0	-2,583.7	612.9	2,655.4	0.99	-0.94	-0.31
9,612.0	91.00	166.30	7,108.5	-2,614.9	620.2	2,687.4	3.49	0.63	-3.44
9,643.0	90.80	167.40	7,108.0	-2,645.1	627.2	2,718.4	3.61	-0.65	3.55
9,675.0	91.20	167.00	7,107.4	-2,676.3	634.3	2,750.4	1.77	1.25	-1.25
9,707.0	90.50	166.80	7,106.9	-2,707.4	641.6	2,782.4	2.28	-2.19	-0.63
9,738.0	90.80	166.10	7,106.6	-2,737.6	648.8	2,813.4	2.46	0.97	-2.26
9,770.0	90.80	167.20	7,106.1	-2,768.7	656.2	2,845.4	3.44	0.00	3.44
9,802.0	90.50	167.00	7,105.8	-2,799.9	663.4	2,877.4	1.13	-0.94	-0.63
9,834.0	90.40	166.80	7,105.5	-2,831.1	670.6	2,909.4	0.70	-0.31	-0.63
9,865.0	89.90	167.40	7,105.4	-2,861.3	677.5	2,940.4	2.52	-1.61	1.94
9,897.0	89.90	167.20	7,105.5	-2,892.5	684.6	2,972.4	0.62	0.00	-0.63
9,929.0	89.70	167.40	7,105.6	-2,923.7	691.6	3,004.4	0.88	-0.63	0.63
9,961.0	89.80	167.20	7,105.8	-2,954.9	698.6	3,036.4	0.70	0.31	-0.63
9,993.0	89.70	167.00	7,105.9	-2,986.1	705.8	3,068.4	0.70	-0.31	-0.63
10,024.0	89.90	167.00	7,106.0	-3,016.3	712.8	3,099.4	0.65	0.65	0.00
10,056.0	90.70	167.70	7,105.8	-3,047.6	719.8	3,131.4	3.32	2.50	2.19
10,088.0	90.40	166.80	7,105.5	-3,078.8	726.8	3,163.4	2.96	-0.94	-2.81
10,120.0	90.80	167.40	7,105.2	-3,110.0	734.0	3,195.4	2.25	1.25	1.88
10,151.0	91.40	166.10	7,104.6	-3,140.1	741.1	3,226.4	4.62	1.94	-4.19
10,183.0	90.30	165.10	7,104.1	-3,171.1	749.0	3,258.4	4.65	-3.44	-3.13
10,215.0	90.30	166.10	7,104.0	-3,202.1	757.0	3,290.3	3.12	0.00	3.13
10,246.0	90.20	166.10	7,103.8	-3,232.2	764.4	3,321.3	0.32	-0.32	0.00
10,278.0	90.20	165.40	7,103.7	-3,263.2	772.3	3,353.3	2.19	0.00	-2.19
10,310.0	90.30	165.80	7,103.6	-3,294.2	780.3	3,385.3	1.29	0.31	1.25
10,341.0	90.50	165.40	7,103.3	-3,324.2	788.0	3,416.3	1.44	0.65	-1.29
10,373.0	90.80	165.40	7,103.0	-3,355.2	796.1	3,448.3	0.94	0.94	0.00
10,405.0	91.00	165.30	7,102.5	-3,386.2	804.1	3,480.3	0.70	0.63	-0.31
10,437.0	91.10	165.40	7,101.9	-3,417.1	812.2	3,512.3	0.44	0.31	0.31
10,469.0	91.60	165.40	7,101.1	-3,448.1	820.3	3,544.3	1.56	1.56	0.00
10,500.0	91.80	166.50	7,100.2	-3,478.1	827.8	3,575.3	3.61	0.65	3.55
10,532.0	92.20	165.90	7,099.1	-3,509.2	835.5	3,607.3	2.25	1.25	-1.88
10,564.0	92.20	166.30	7,097.9	-3,540.2	843.1	3,639.2	1.25	0.00	1.25
10,596.0	91.90	166.80	7,096.7	-3,571.3	850.6	3,671.2	1.82	-0.94	1.56
10,628.0	92.20	167.00	7,095.6	-3,602.5	857.8	3,703.2	1.13	0.94	0.63
10,659.0	91.20	166.50	7,094.7	-3,632.6	864.9	3,734.2	3.61	-3.23	-1.61
10,691.0	90.00	167.50	7,094.3	-3,663.8	872.1	3,766.2	4.88	-3.75	3.13
10,723.0	88.60	167.50	7,094.7	-3,695.1	879.0	3,798.2	4.38	-4.38	0.00
10,755.0	88.60	167.70	7,095.5	-3,726.3	885.9	3,830.1	0.62	0.00	0.63
10,786.0	88.80	166.80	7,096.2	-3,756.5	892.8	3,861.1	2.97	0.65	-2.90
10,818.0	89.10	167.70	7,096.8	-3,787.7	899.8	3,893.1	2.96	0.94	2.81
10,850.0	89.30	166.80	7,097.2	-3,818.9	906.9	3,925.1	2.88	0.63	-2.81
10,882.0	89.60	166.80	7,097.6	-3,850.1	914.2	3,957.1	0.94	0.94	0.00
10,913.0	90.00	167.50	7,097.7	-3,880.3	921.1	3,988.1	2.60	1.29	2.26

<b>Company:</b>	Devon Energy- WT	<b>Local Co-ordinate Reference:</b>	Well University 12-36 #1H
<b>Project:</b>	Andrews County, TX	<b>TVD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Site:</b>	Sec. 36, Block 12, University Lands Survey	<b>MD Reference:</b>	WELL @ 3334.0usft (Original Well Elev)
<b>Well:</b>	University 12-36 #1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,945.0	89.90	167.40	7,097.7	-3,911.5	928.0	4,020.1	0.44	-0.31	-0.31
10,976.0	89.20	165.80	7,097.9	-3,941.7	935.2	4,051.1	5.63	-2.26	-5.16
11,008.0	89.00	166.60	7,098.4	-3,972.8	942.8	4,083.1	2.58	-0.63	2.50
11,040.0	89.30	167.00	7,098.9	-4,003.9	950.2	4,115.1	1.56	0.94	1.25
11,072.0	89.50	166.50	7,099.2	-4,035.1	957.5	4,147.1	1.68	0.63	-1.56
11,103.0	89.60	167.00	7,099.5	-4,065.2	964.6	4,178.1	1.64	0.32	1.61
11,135.0	89.10	165.60	7,099.8	-4,096.3	972.2	4,210.1	4.65	-1.56	-4.38
11,167.0	89.00	165.40	7,100.4	-4,127.3	980.2	4,242.1	0.70	-0.31	-0.63
11,199.0	88.90	165.10	7,101.0	-4,158.2	988.3	4,274.1	0.99	-0.31	-0.94
11,230.0	89.60	165.40	7,101.4	-4,188.2	996.2	4,305.1	2.46	2.26	0.97
11,262.0	90.30	165.80	7,101.4	-4,219.2	1,004.2	4,337.1	2.52	2.19	1.25
11,294.0	91.10	165.80	7,101.0	-4,250.2	1,012.0	4,369.1	2.50	2.50	0.00
11,325.0	90.40	164.90	7,100.6	-4,280.2	1,019.9	4,400.0	3.68	-2.26	-2.90
11,357.0	90.80	165.90	7,100.3	-4,311.2	1,027.9	4,432.0	3.37	1.25	3.13
11,389.0	91.00	165.30	7,099.8	-4,342.2	1,035.9	4,464.0	1.98	0.63	-1.88
11,421.0	91.10	165.60	7,099.2	-4,373.2	1,043.9	4,496.0	0.99	0.31	0.94
11,453.0	90.60	166.10	7,098.7	-4,404.2	1,051.7	4,528.0	2.21	-1.56	1.56
11,484.0	90.60	166.50	7,098.4	-4,434.3	1,059.1	4,559.0	1.29	0.00	1.29
11,516.0	90.80	165.90	7,098.0	-4,465.4	1,066.7	4,591.0	1.98	0.63	-1.88
11,547.0	91.00	165.80	7,097.5	-4,495.4	1,074.3	4,622.0	0.72	0.65	-0.32
11,579.0	90.80	165.60	7,097.0	-4,526.4	1,082.2	4,654.0	0.88	-0.63	-0.63
11,611.0	90.40	166.60	7,096.7	-4,557.5	1,089.9	4,686.0	3.37	-1.25	3.13
11,643.0	89.70	166.10	7,096.6	-4,588.6	1,097.4	4,718.0	2.69	-2.19	-1.56
11,674.0	89.90	167.20	7,096.7	-4,618.7	1,104.6	4,749.0	3.61	0.65	3.55
11,701.0	90.10	166.50	7,096.7	-4,645.0	1,110.7	4,776.0	2.70	0.74	-2.59
TD @ 11755' MD / 7097' TVD									
11,755.0	90.10	166.50	7,096.7	-4,697.5	1,123.3	4,830.0	0.00	0.00	0.00

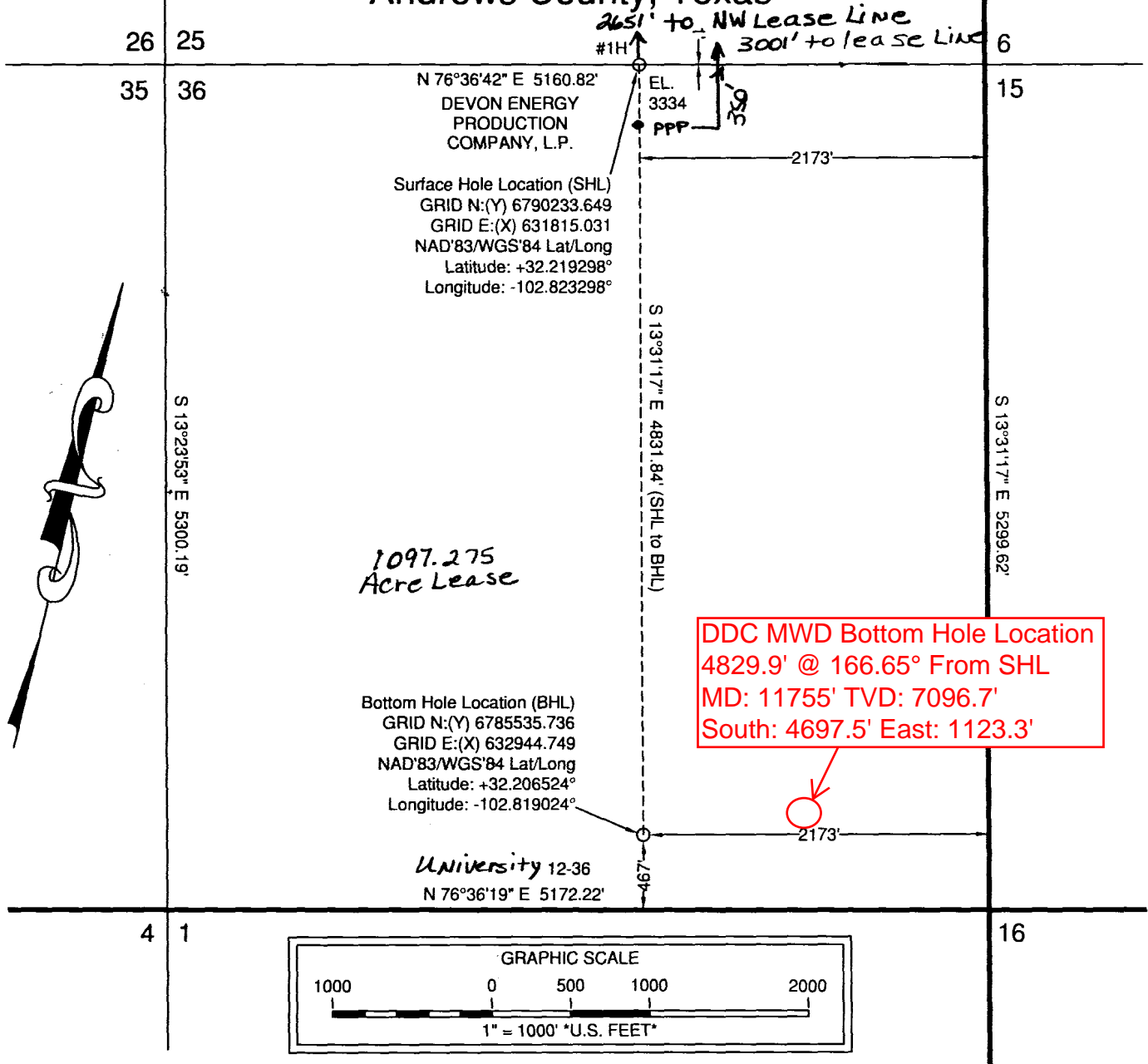
Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,600.0	6,599.8	-4.2	28.5	Tie-In to Gyro
7,389.0	7,153.2	-446.0	138.6	Cross Hard-Line @ 7389' MD
11,755.0	7,096.7	-4,697.5	1,123.3	TD @ 11755' MD / 7097' TVD

Range & Bearing  
4829.9' @ 166.65°

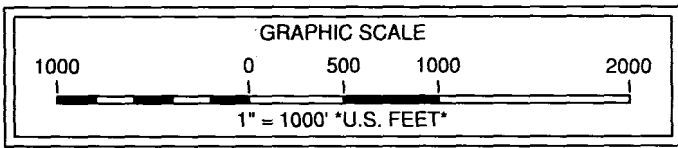
Checked By: _____	Approved By: _____	Date: _____
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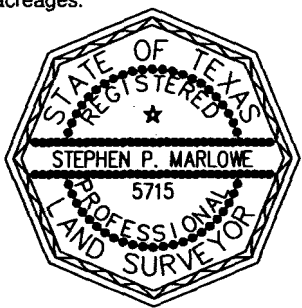
# Block 12, University Lands Survey Andrews County, Texas



**DDC MWD Bottom Hole Location**  
 4829.9' @ 166.65° From SHL  
 MD: 11755' TVD: 7096.7'  
 South: 4697.5' East: 1123.3'



Note: City of Andrews, Texas from well location bears N 69°18'23" E, 17.6 miles.  
 Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.  
 Note: Bearings and distances are based on The Texas Coordinate System of 1983, North Central Zone.  
 Note: Coordinates shown herein are on The Texas Coordinate System of 1983, North Central Zone.  
 Note: Acreages shown have been converted to surface acreages.



*Stephen P. Marlowe*  
 REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5715

May 17, 2010  
 100517B

USGS Quadrangle Sheet: Sand Ranch, Tex.  
 Railroad Commission Permit Plat  
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
*University 12-36 #1H*  
 1' FROM NORTH LINE  
 2173' FROM EAST LINE  
*University 12-36 Lease*  
 Section 36, Block 12  
 University Lands Survey  
 Andrews County, Texas  
 Scale: 1" = 1000'