

Results of Directional Survey

API number:	30-025-40583		
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP
		Property:	COTTON DRAW 32 STATE FEDERAL COM # 1H

surface	ULSTR:	I	32	T 24S	R 32E
				2310 FSL	660 FEL

BH Loc	ULSTR:	P	05	T 25S	R 32E
15522	MD	8467.7	TVD	321 FSL	807 FEL
				4959 FNL	

Top Perf/OH	ULSTR:	I	32	T 24S	R 32E
8709	MD	8466.1	TVD	1845 FSL	508 FEL

Bot Perf/OH	ULSTR:	P	05	T 25S	R 32E
15507	MD	8467.9	TVD	336 FSL	806 FEL
				4944 FNL	

	MD	N/S	E/W	VD
	8708	-464.00	151.68	8465.89
TOP PERFS/OH	8709	-464.98	151.68	8466.11
	8739	-494.24	151.67	8472.71
	15454	-7201.09	-143.14	8468.84
BOT PERFS/OH	15507	-7254.00	-146.06	8467.94
	15522	-7268.98	-146.89	8467.68

NEXT TO LAST	15454	-7201.09	-143.14	8468.84
LAST READING	15522	-7268.98	-146.89	8467.68
TD	15522	-7268.98	-146.89	8467.68

Surface Location	2310	FS	660	FE
Projected BHL	4959	FN	807	FE
Location of				
Top Perfs/OH	1845	FS	508	FE
Bottom Perfs/OH	4944	FN	806	FE

SUMMARY of Subsurface Locations

Surface Location	I-32-24S-32E	2310	FS	660	FE	Vert. Depth
Top Perfs/OH	I-32-24S-32E	1845	FS	508	FE	8466.11
Bottom Perfs/OH	P-05-25S-32E	4944	FN	806	FE	8467.94
Projected TD	P-05-25S-32E	4959	FN	807	FE	8467.68



Company: Devon Energy
Lease/Well: Cotton Draw 32 State Fed Com/#1H
Location: SEC32 T24S R32E
Rig Name: HP 214
State/County: New Mexico/Lea
Latitude: 32.17, Longitude: -103.69
GRID North is 0.34 Degrees East of True North
VS-Azi: 180.87 Degrees



SUR: I-32-T24S-R32E, 2310/S & 660/E
BHL: P-05-25S-32E, 4959/N & 807/E
API # 30-025-40583

FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB= 25 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 7/29/2012 / 08:12

Vaughn Energy Services

12006 East Highway 158

Gardendale, TX 79758

(432) 563-5444

Surveyor: Colby Ware

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
118.62	0.08	24.92	118.62	0.08	0.03	-0.08	0.08	24.92	0.07
213.17	0.14	14.66	213.17	0.25	0.09	-0.25	0.26	20.44	0.07
307.72	0.17	46.94	307.72	0.46	0.23	-0.46	0.51	26.32	0.10
402.27	0.21	79.23	402.27	0.59	0.50	-0.59	0.77	40.33	0.12
496.82	0.49	97.06	496.82	0.57	1.07	-0.58	1.21	61.99	0.32
591.37	0.78	114.89	591.36	0.25	2.05	-0.28	2.06	83.10	0.36
685.92	1.03	132.04	685.90	-0.59	3.26	0.54	3.31	100.28	0.39
780.47	1.29	149.20	780.43	-2.07	4.44	2.00	4.90	115.04	0.45
875.02	1.29	127.87	874.96	-3.64	5.82	3.55	6.86	122.00	0.50
969.57	1.29	106.54	969.48	-4.59	7.68	4.48	8.95	120.88	0.51
1064.12	1.37	81.93	1064.01	-4.74	9.82	4.59	10.91	115.76	0.60
1158.67	1.44	57.31	1158.53	-3.94	11.94	3.76	12.57	108.27	0.64
1253.22	1.34	17.73	1253.06	-2.25	13.27	2.04	13.46	99.60	1.00
1347.77	1.25	338.15	1347.58	-0.24	13.23	0.04	13.23	91.02	0.93
1442.32	1.11	332.73	1442.11	1.53	12.42	-1.72	12.52	82.96	0.18
1536.87	0.98	327.30	1536.65	3.03	11.57	-3.20	11.96	75.34	0.18
1631.42	0.97	324.34	1631.18	4.36	10.67	-4.52	11.52	67.78	0.05
1725.97	0.96	321.37	1725.72	5.63	9.70	-5.77	11.22	59.88	0.05
1820.52	0.76	310.37	1820.26	6.66	8.73	-6.79	10.97	52.66	0.27
1915.07	0.56	299.36	1914.80	7.29	7.84	-7.41	10.71	47.08	0.25
2009.62	0.49	283.92	2009.35	7.62	7.05	-7.72	10.38	42.78	0.17
2104.17	0.41	268.48	2103.90	7.70	6.32	-7.80	9.97	39.38	0.15
2198.72	0.48	236.97	2198.44	7.48	5.65	-7.56	9.37	37.08	0.27
2293.27	0.56	205.46	2292.99	6.85	5.12	-6.92	8.55	36.80	0.31
2387.82	0.51	185.61	2387.54	6.01	4.88	-6.09	7.75	39.08	0.20
2482.37	0.47	165.77	2482.08	5.22	4.94	-5.30	7.19	43.39	0.18
2576.92	0.60	152.22	2576.63	4.41	5.26	-4.49	6.87	50.04	0.20
2671.47	0.74	138.67	2671.17	3.51	5.90	-3.60	6.86	59.27	0.22

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
2766.02	1.09	124.93	2765.71	2.53	7.04	-2.64	7.48	70.23	0.43
2860.57	1.44	111.20	2860.24	1.59	8.89	-1.72	9.03	79.88	0.49
2955.12	1.54	109.72	2954.76	0.73	11.20	-0.90	11.22	86.28	0.12
3049.67	1.65	108.25	3049.27	-0.13	13.69	-0.08	13.69	90.54	0.12
3144.22	1.79	107.23	3143.78	-0.99	16.39	0.74	16.42	93.46	0.15
3238.77	1.93	106.21	3238.28	-1.87	19.33	1.58	19.42	95.54	0.15
3333.32	2.40	106.84	3332.76	-2.89	22.75	2.55	22.93	97.24	0.49
3427.87	2.86	107.47	3427.21	-4.17	26.90	3.76	27.22	98.82	0.50
3522.42	2.88	98.11	3521.64	-5.22	31.50	4.74	31.93	99.40	0.50
3616.97	2.89	88.76	3616.07	-5.50	36.24	4.95	36.65	98.63	0.50
3711.52	3.04	67.67	3710.50	-4.50	40.94	3.87	41.19	96.27	1.16
3806.07	3.19	46.58	3804.91	-1.73	45.18	1.05	45.21	92.20	1.22
3900.62	4.14	33.47	3899.27	2.92	48.97	-3.66	49.06	86.59	1.33
3995.17	5.08	20.35	3993.51	9.69	52.31	-10.48	53.20	79.51	1.49
4089.72	5.50	19.26	4087.66	17.89	55.25	-18.72	58.08	72.06	0.45
4184.27	5.91	18.17	4181.74	26.79	58.27	-27.67	64.13	65.31	0.46
4278.82	5.91	18.19	4275.79	36.04	61.30	-36.97	71.11	59.55	0.00
4373.37	5.91	18.22	4369.84	45.29	64.35	-46.26	78.69	54.86	0.00
4467.92	5.29	46.80	4463.95	52.91	69.05	-53.95	86.99	52.54	2.99
4562.47	4.67	75.38	4558.16	56.86	75.95	-58.01	94.88	53.18	2.67
4657.02	4.63	87.84	4652.40	57.98	83.49	-59.24	101.65	55.22	1.07
4751.57	4.59	100.30	4746.65	57.45	91.02	-58.82	107.63	57.74	1.06
4846.12	4.39	109.95	4840.91	55.54	98.14	-57.02	112.76	60.49	0.82
4940.67	4.19	119.60	4935.20	52.60	104.54	-54.18	117.03	63.29	0.79
5035.22	4.28	121.59	5029.49	49.05	110.54	-50.72	120.94	66.07	0.18
5129.77	4.36	123.58	5123.77	45.21	116.54	-46.97	125.01	68.80	0.18
5224.32	4.32	111.92	5218.05	41.89	122.84	-43.75	129.79	71.17	0.93
5318.87	4.28	100.26	5312.34	39.93	129.62	-41.90	135.63	72.88	0.92
5413.42	4.21	96.10	5406.63	38.94	136.54	-41.01	141.98	74.08	0.33
5507.97	4.15	91.94	5500.93	38.45	143.41	-40.62	148.48	74.99	0.33
5602.52	3.57	92.02	5595.26	38.23	149.78	-40.50	154.58	75.68	0.61
5697.07	3.00	92.09	5689.65	38.04	155.19	-40.39	159.79	76.23	0.61
5791.62	3.09	91.13	5784.07	37.90	160.22	-40.33	164.64	76.69	0.11
5886.17	3.19	90.18	5878.48	37.84	165.40	-40.35	169.67	77.11	0.12
5980.72	2.93	73.42	5972.90	38.52	170.34	-41.10	174.64	77.26	0.98
6075.27	2.66	56.67	6067.34	40.41	174.49	-43.06	179.11	76.96	0.90
6169.82	2.09	44.45	6161.80	42.85	177.53	-45.54	182.63	76.43	0.80
6264.37	1.52	32.23	6256.31	45.14	179.40	-47.86	184.99	75.88	0.73
6358.92	1.59	32.68	6350.82	47.30	180.78	-50.04	186.86	75.34	0.08
6453.47	1.66	33.12	6445.33	49.55	182.23	-52.31	188.85	74.79	0.08
6548.02	1.04	26.89	6539.86	51.46	183.37	-54.24	190.45	74.32	0.67
6642.57	0.42	20.66	6634.40	52.55	183.88	-55.33	191.24	74.05	0.66
6737.12	0.45	14.60	6728.95	53.23	184.09	-56.02	191.64	73.87	0.06
6831.67	0.49	8.55	6823.49	53.99	184.25	-56.78	192.00	73.67	0.07
6926.22	0.63	179.02	6918.04	53.87	184.32	-56.67	192.03	73.71	1.18
7020.77	0.77	349.49	7012.59	53.98	184.21	-56.77	191.96	73.67	1.47
7115.32	0.84	319.41	7107.13	55.13	183.65	-57.91	191.74	73.29	0.45
7209.87	0.91	289.34	7201.67	55.90	182.49	-58.66	190.86	72.97	0.49
7304.42	1.04	249.43	7296.21	55.85	180.98	-58.59	189.40	72.85	0.71

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
7398.97	1.16	209.52	7390.74	54.71	179.70	-57.44	187.85	73.07	0.80
7493.52	1.41	200.36	7485.27	52.79	178.83	-55.50	186.45	73.55	0.34
7588.07	1.66	191.19	7579.78	50.35	178.15	-53.05	185.13	74.22	0.37
7682.62	1.52	191.42	7674.30	47.78	177.64	-50.47	183.96	74.94	0.15
7777.17	1.37	191.65	7768.82	45.45	177.16	-48.13	182.90	75.61	0.15
7871.72	1.06	194.45	7863.35	43.49	176.72	-46.17	181.99	76.17	0.34
7966.27	0.74	197.25	7957.88	42.07	176.32	-44.74	181.27	76.58	0.34
8060.82	0.91	178.74	8052.42	40.73	176.16	-43.40	180.80	76.98	0.33
8155.37	1.09	160.23	8146.96	39.14	176.48	-41.81	180.76	77.50	0.39
8249.92	1.22	161.15	8241.49	37.34	177.11	-40.02	181.00	78.09	0.14
8344.47	1.35	162.08	8336.02	35.33	177.77	-38.02	181.25	78.76	0.14
8439.02	1.29	154.16	8430.54	33.31	178.58	-36.01	181.66	79.44	0.20
8533.57	1.23	146.25	8525.07	31.50	179.61	-34.23	182.35	80.05	0.19
8628.12	0.85	141.08	8619.60	30.11	180.61	-32.85	183.11	80.53	0.41
8722.67	0.48	135.91	8714.15	29.28	181.33	-32.03	183.68	80.83	0.40
8817.22	0.62	141.55	8808.69	28.60	181.92	-31.36	184.15	81.06	0.16
8911.77	0.76	147.19	8903.24	27.68	182.57	-30.45	184.66	81.38	0.16
9006.32	0.85	150.15	8997.78	26.55	183.26	-29.33	185.17	81.76	0.11
9100.87	0.94	153.11	9092.32	25.25	183.96	-28.04	185.68	82.18	0.11
9195.42	0.95	155.63	9186.85	23.84	184.63	-26.65	186.16	82.64	0.05
9289.97	0.96	158.14	9281.39	22.39	185.25	-25.20	186.60	83.11	0.05
9384.52	0.87	161.00	9375.93	20.98	185.78	-23.79	186.96	83.56	0.11
9479.07	0.77	163.85	9470.47	19.68	186.19	-22.51	187.23	83.97	0.11
9573.62	0.88	170.10	9565.01	18.35	186.50	-21.18	187.40	84.38	0.15
9668.17	1.00	176.34	9659.55	16.81	186.67	-19.65	187.43	84.85	0.16
9762.72	1.06	178.41	9754.08	15.12	186.75	-17.95	187.36	85.37	0.08
9857.27	1.13	180.49	9848.61	13.31	186.77	-16.15	187.24	85.92	0.08
9951.82	1.12	182.55	9943.14	11.45	186.72	-14.29	187.07	86.49	0.04
10046.37	1.12	184.62	10037.68	9.61	186.60	-12.44	186.85	87.05	0.04
10140.92	1.18	184.93	10132.21	7.72	186.44	-10.55	186.60	87.63	0.06
10235.47	1.23	185.24	10226.74	5.74	186.27	-8.57	186.36	88.24	0.06
10330.02	1.18	185.29	10321.27	3.76	186.09	-6.59	186.12	88.84	0.06
10424.57	1.12	185.35	10415.80	1.88	185.91	-4.70	185.92	89.42	0.06
10519.12	0.94	190.11	10510.33	0.19	185.69	-3.01	185.69	89.94	0.21
10613.67	0.77	194.87	10604.87	-1.19	185.39	-1.62	185.39	90.37	0.20
10708.22	0.69	193.48	10699.41	-2.36	185.09	-0.45	185.11	90.73	0.09
10802.77	0.61	192.09	10793.96	-3.40	184.85	0.59	184.89	91.05	0.09
10897.32	0.46	195.88	10888.50	-4.25	184.65	1.45	184.70	91.32	0.16
10991.87	0.31	199.68	10983.05	-4.86	184.46	2.06	184.52	91.51	0.16
11086.42	1.52	202.53	11077.59	-6.26	183.89	3.47	184.00	91.95	1.28
11180.97	2.73	205.38	11172.07	-9.45	182.44	6.68	182.69	92.97	1.29
11275.52	3.20	214.57	11266.49	-13.66	179.98	10.93	180.50	94.34	0.70
11370.07	3.67	223.76	11360.87	-18.02	176.39	15.34	177.31	95.83	0.76
11464.62	3.14	230.56	11455.26	-21.85	172.30	19.23	173.68	97.23	0.70
11559.17	2.61	237.37	11549.69	-24.65	168.49	22.09	170.29	98.32	0.66
11653.72	2.44	235.77	11644.15	-26.94	165.01	24.44	167.20	99.27	0.19
11748.27	2.27	234.17	11738.62	-29.17	161.83	26.71	164.44	100.22	0.19
11842.82	2.26	236.35	11833.09	-31.30	158.76	28.89	161.82	101.15	0.09

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
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HORIZONTAL DISPLACEMENT IS
161.82 FEET AT 101.15 DEGREES



10000 West County Road 116
P.O. Box 61028
Midland, Texas 79711
Phone (432) 561-8892

September 3, 2012

Eric Cogburn

20 North Broadway
Oklahoma City, OK 73102

Reference Well Name : Cotton Draw Unit 32 Fed Com #1H
Location : Lea County, New Mexico
Wft Job # : 4026976
Rig : H&P 214

SUR: I-32-24s-32e, 2310/S & 660/E
BHL: P-05-25s-32e, 4959/N & 807/E
API # 30-025-40583

Dear Mr. Cogburn

Thank you for allowing us the opportunity to provide our services on your Cotton Draw Unit 32 Fed Com #1H in Lea County, New Mexico.

Please find the final End Of Well (EOW) report enclosed behind this coverletter.

The EOW report contains the following information :

Section 1 - Weatherford (Wft) Final Definitive Survey & 8.5" x 11".

* Note: This survey contains the Directional Survey's obtained by Weatherford Drilling Services via Weatherford MWD Services, and any gyro survey needed for Tie On (if required).

Section 2- Days vs. Feet Drilled (24 hrs) and Days vs. Depth Graphs

Section 3- Wft Gamma Logs

Section 4 - Wft Final BHA reports (BHA Graphic Reports, BHA Detail Reports, Motor Evaluation Reports, and BHA Slide Reports).

Section 5 - Wft Final Daily Drilling reports.

Section 6 - Wft Personnel list with contact numbers.

We at *Weatherford Drilling Services'* understand the importance of this project to you and hope that you were satisfied with our Directional Drilling and MWD services provided.

Please feel free to contact me if you have any questions.

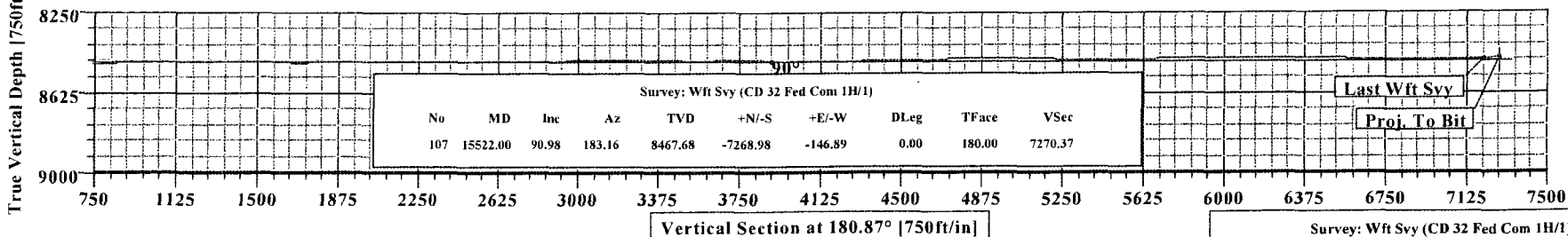
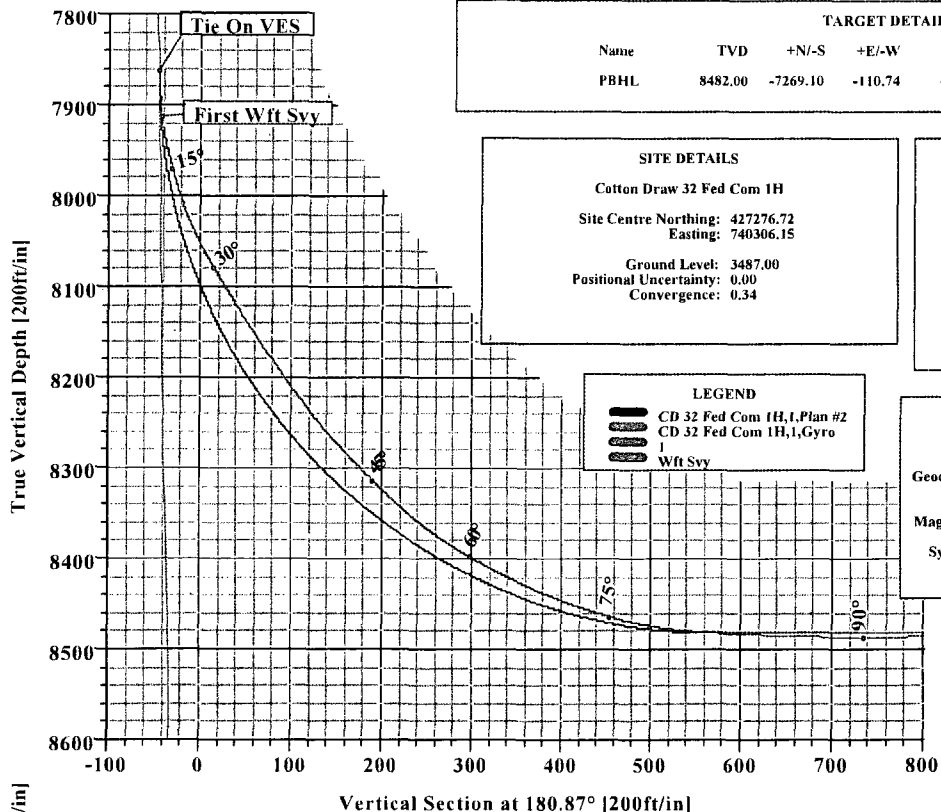
Sincerely,

Damien Tarpley
Area Manager
Weatherford Drilling Services
Midland, TX (432) 561-8892

devon

Cotton Draw 32 Fed Com 1H Lea County, New Mexico

KB ELEV: 3487
GL ELEV: 3513



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	7871.72	1.06	194.45	7863.35	43.49	176.72	0.00	0.00	-46.17	
2	7885.00	1.01	194.74	7876.62	43.26	176.66	0.34	173.58	-45.93	
3	7900.00	2.98	182.24	7891.61	42.74	176.61	13.33	-18.79	-45.42	
4	7905.00	2.98	182.24	7896.61	42.48	176.60	0.00	0.00	-45.16	
5	8842.84	90.00	182.25	8482.00	-573.69	152.39	9.28	0.01	571.31	
6	15543.42	90.00	182.25	8482.00	-7269.10	-110.74	0.00	0.00	7269.94	PBHL

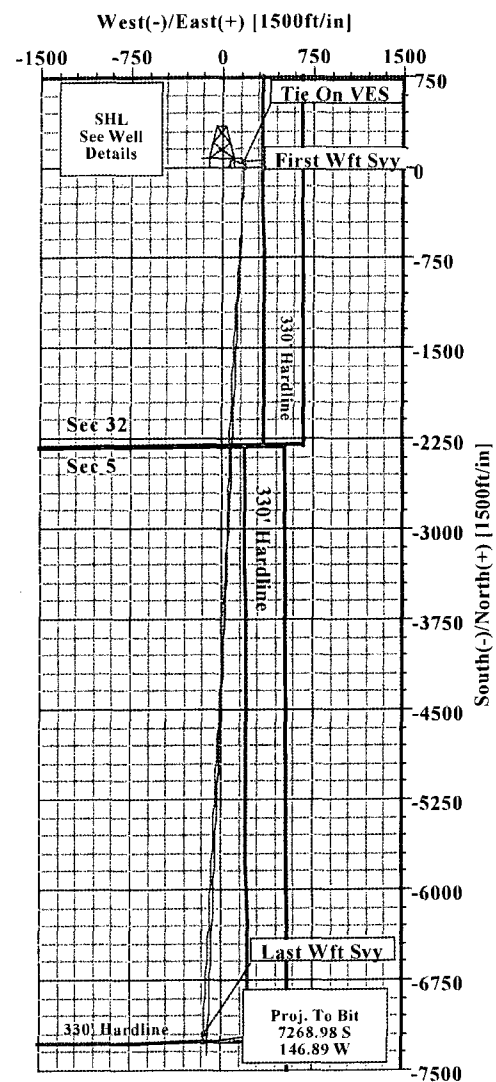
WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
CD 32 Fed Com 1H	0.00	0.00	427276.72	740306.15	32°10'22.889N	103°41'24.988W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8482.00	-7269.10	-110.74	420007.62	740195.41	Point

SITE DETAILS
Cotton Draw 32 Fed Com 1H
Site Centre Northing: 427276.72
Easting: 740306.15
Ground Level: 3487.00
Positional Uncertainty: 0.00
Convergence: 0.34

LEGEND
CD 32 Fed Com 1H, I, Plan #2
CD 32 Fed Com 1H, I, Gyro
Wft Svy

FIELD DETAILS
Lea County, New Mexico (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





Weatherford

WFT Survey Report X & Y's



Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 32 Fed Com 1H
Well: CD 32 Fed Com 1H
Wellpath: 1

Date: 9/4/2012 Time: 07:04:20 Page: 1
Co-ordinate(NE) Reference: Well: CD 32 Fed Com 1H, Grid North
Vertical (TVD) Reference: SITE 3513.0
Section (VS) Reference: Well (0.00N,0.00E,180.87Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Wft Svy

Start Date: 8/15/2012

Company: Weatherford
Tool: MWD;MWD - Standard

Engineer: Russell W. Joyner
Tied-to: User Defined

Field: Lea County, New Mexico (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: Cotton Draw 32 Fed Com 1H

Site Position: Northing: 427276.72 ft Latitude: 32 10 22.889 N
From: Map Easting: 740306.15 ft Longitude: 103 41 24.988 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3487.00 ft Grid Convergence: 0.34 deg

Well: CD 32 Fed Com 1H

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 427276.72 ft Latitude: 32 10 22.889 N
+E/-W 0.00 ft Easting: 740306.15 ft Longitude: 103 41 24.988 W
Position Uncertainty: 0.00 ft

Wellpath: 1

Current Datum: SITE Height 3513.00 ft
Magnetic Data: 8/1/2012
Field Strength: 48485 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.00 0.00 0.00 180.87

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.50 deg
Mag Dip Angle: 60.09 deg
+E/-W Direction
ft deg

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
7871.72	1.06	194.45	7863.35	43.49	176.72	0.00	-46.17	427320.21	740482.87	Tie On VES First Wft Svy
7922.00	7.82	176.54	7913.45	39.62	176.81	13.56	-42.30	427316.34	740482.96	
7956.00	12.00	176.25	7946.93	33.78	177.18	12.29	-36.47	427310.50	740483.33	
7987.00	15.74	172.66	7977.02	26.39	177.93	12.37	-29.09	427303.11	740484.08	
8018.00	19.72	172.84	8006.55	17.03	179.12	12.84	-19.75	427293.75	740485.27	
8049.00	25.02	177.32	8035.20	5.28	180.08	17.95	-8.02	427282.00	740486.23	
8081.00	28.66	185.28	8063.76	-9.13	179.69	15.96	6.40	427267.59	740485.84	
8112.00	31.14	187.93	8090.63	-24.47	177.90	9.06	21.77	427252.25	740484.05	
8144.00	32.06	184.33	8117.89	-41.14	176.12	6.56	38.46	427235.58	740482.27	
8175.00	32.81	183.31	8144.06	-57.73	175.01	2.99	55.06	427218.99	740481.16	
8206.00	33.88	185.16	8169.95	-74.72	173.75	4.76	72.07	427202.00	740479.90	
8238.00	34.80	186.63	8196.38	-92.67	171.89	3.87	90.05	427184.05	740478.04	
8269.00	37.28	187.07	8221.44	-110.78	169.71	8.04	108.19	427165.94	740475.86	
8300.00	39.81	185.72	8245.68	-129.97	167.57	8.60	127.41	427146.75	740473.72	
8332.00	41.65	183.60	8269.93	-150.78	165.88	7.19	148.24	427125.94	740472.03	
8363.00	43.60	181.79	8292.74	-171.75	164.90	7.43	169.22	427104.97	740471.05	
8394.00	45.04	181.37	8314.92	-193.40	164.30	4.74	190.88	427083.32	740470.45	
8426.00	47.37	181.54	8337.07	-216.49	163.72	7.29	213.98	427060.23	740469.87	
8457.00	51.41	181.82	8357.24	-240.01	163.02	13.05	237.50	427036.71	740469.17	
8488.00	54.99	182.68	8375.81	-264.80	162.05	11.76	262.31	427011.92	740468.20	
8520.00	59.13	184.52	8393.21	-291.60	160.35	13.81	289.13	426985.12	740466.50	
8551.00	61.57	184.68	8408.54	-318.45	158.19	7.88	316.01	426958.27	740464.34	
8583.00	64.72	184.62	8422.99	-346.90	155.87	9.85	344.50	426929.82	740462.02	
8614.00	67.29	183.63	8435.60	-375.15	153.84	8.79	372.77	426901.57	740459.99	



Weatherford

WFT Survey Report X & Y's



Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 32 Fed Com 1H
Well: CD 32 Fed Com 1H
Wellpath: 1

Date: 9/4/2012 Time: 07:04:20 Page: 2
Co-ordinate(NE) Reference: Well: CD 32 Fed Com 1H, Grid North
Vertical (TVD) Reference: SITE 3513.0
Section (VS) Reference: Well (0.00N,0.00E,180.87Azi)
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
8645.00	69.71	182.35	8446.96	-403.95	152.34	8.70	401.59	426872.77	740458.49	
8677.00	72.31	180.19	8457.37	-434.19	151.67	10.33	431.84	426842.53	740457.82	
8708.00	75.80	179.77	8465.89	-464.00	151.68	11.33	461.64	426812.72	740457.83	
8739.00	78.79	180.28	8472.71	-494.24	151.67	9.78	491.88	426782.48	740457.82	
8771.00	82.77	181.35	8477.83	-525.81	151.22	12.87	523.45	426750.91	740457.37	
8813.00	86.78	183.04	8481.66	-567.60	149.62	10.35	565.26	426709.12	740455.77	
8844.00	87.76	183.00	8483.13	-598.52	147.98	3.16	596.20	426678.20	740454.13	
8876.00	87.55	183.34	8484.44	-630.44	146.22	1.25	628.15	426646.28	740452.37	
8907.00	88.18	183.60	8485.60	-661.36	144.34	2.20	659.10	426615.36	740450.49	
8939.00	88.39	184.04	8486.55	-693.28	142.21	1.52	691.04	426583.44	740448.36	
8970.00	89.58	184.40	8487.10	-724.19	139.93	4.01	721.98	426552.53	740446.08	
9033.00	91.68	184.09	8486.41	-787.01	135.27	3.37	784.86	426489.71	740441.42	
9127.00	92.17	184.42	8483.25	-880.70	128.30	0.63	878.65	426396.02	740434.45	
9221.00	90.28	183.46	8481.24	-974.45	121.84	2.26	972.48	426302.27	740427.99	
9315.00	89.72	182.02	8481.24	-1068.34	117.35	1.64	1066.43	426208.38	740423.50	
9409.00	90.07	182.19	8481.42	-1162.27	113.89	0.41	1160.41	426114.45	740420.04	
9503.00	90.21	182.89	8481.19	-1256.18	109.73	0.76	1254.37	426020.54	740415.88	
9597.00	89.16	182.59	8481.70	-1350.07	105.23	1.16	1348.32	425926.65	740411.38	
9691.00	89.51	183.23	8482.79	-1443.94	100.46	0.78	1442.25	425832.78	740406.61	
9785.00	89.72	183.20	8483.43	-1537.79	95.19	0.23	1536.17	425738.93	740401.34	
9879.00	89.37	183.37	8484.17	-1631.63	89.80	0.41	1630.08	425645.09	740395.95	
9973.00	90.35	182.09	8484.40	-1725.52	85.33	1.71	1724.03	425551.20	740391.48	
10067.00	90.84	182.20	8483.43	-1819.45	81.81	0.53	1818.00	425457.27	740387.96	
10161.00	90.84	182.30	8482.05	-1913.37	78.12	0.11	1911.96	425363.35	740384.27	
10255.00	91.26	182.59	8480.33	-2007.27	74.11	0.54	2005.91	425269.45	740380.26	
10349.00	89.79	181.61	8479.46	-2101.20	70.67	1.88	2099.88	425175.52	740376.82	
10443.00	89.93	181.72	8479.69	-2195.16	67.93	0.19	2193.87	425081.56	740374.08	
10537.00	90.21	182.24	8479.58	-2289.10	64.69	0.63	2287.85	424987.62	740370.84	
10631.00	89.30	181.40	8479.98	-2383.05	61.70	1.32	2381.84	424893.67	740367.85	
10725.00	89.58	181.79	8480.90	-2477.01	59.09	0.51	2475.83	424799.71	740365.24	
10819.00	90.00	181.91	8481.24	-2570.96	56.05	0.46	2569.81	424705.76	740362.20	
10913.00	89.86	182.04	8481.36	-2664.90	52.81	0.20	2663.79	424611.82	740358.96	
11007.00	91.12	181.90	8480.55	-2758.84	49.58	1.35	2757.77	424517.88	740355.73	
11101.00	91.33	181.49	8478.55	-2852.78	46.80	0.49	2851.74	424423.94	740352.95	
11195.00	91.61	181.81	8476.13	-2946.71	44.09	0.45	2945.70	424330.01	740350.24	
11289.00	90.35	180.69	8474.53	-3040.67	42.04	1.79	3039.68	424236.05	740348.19	
11383.00	90.84	181.69	8473.55	-3134.64	40.09	1.18	3133.67	424142.08	740346.24	
11478.00	89.30	182.20	8473.43	-3229.59	36.87	1.71	3228.65	424047.13	740343.02	
11572.00	89.37	182.67	8474.52	-3323.49	32.87	0.51	3322.61	423953.23	740339.02	
11666.00	89.37	183.42	8475.56	-3417.35	27.88	0.80	3416.54	423859.37	740334.03	
11759.00	89.16	183.53	8476.75	-3510.18	22.25	0.25	3509.43	423766.54	740328.40	
11853.00	90.56	182.41	8476.98	-3604.05	17.38	1.91	3603.37	423672.67	740323.53	
11947.00	90.98	182.26	8475.72	-3697.96	13.55	0.47	3697.33	423578.76	740319.70	
12041.00	89.16	181.79	8475.60	-3791.90	10.22	2.00	3791.30	423484.82	740316.37	
12135.00	89.30	182.18	8476.87	-3885.83	6.97	0.44	3885.28	423390.89	740313.12	
12229.00	89.44	182.25	8477.90	-3979.75	3.34	0.17	3979.25	423296.97	740309.49	
12323.00	90.49	182.10	8477.96	-4073.69	-0.23	1.13	4073.22	423203.03	740305.92	
12417.00	90.28	181.89	8477.33	-4167.63	-3.50	0.32	4167.20	423109.09	740302.65	
12511.00	90.28	182.40	8476.87	-4261.56	-7.02	0.54	4261.17	423015.16	740299.13	
12605.00	90.63	182.13	8476.12	-4355.48	-10.74	0.47	4355.14	422921.24	740295.41	
12700.00	90.91	182.34	8474.84	-4450.40	-14.44	0.37	4450.11	422826.32	740291.71	
12794.00	91.54	182.45	8472.83	-4544.30	-18.37	0.68	4544.05	422732.42	740287.78	



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 32 Fed Com 1H
Well: CD 32 Fed Com 1H
Wellpath: 1

Date: 9/4/2012 Time: 07:04:20 Page: 3
Co-ordinate(NE) Reference: Well; CD 32 Fed Com 1H, Grid North
Vertical (TVD) Reference: SITE 3513.0
Section (VS) Reference: Well (0.00N,0.00E,180.87Azi)
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
12889.00	91.47	182.39	8470.34	-4639.18	-22.38	0.10	4638.98	422637.54	740283.77	
12983.00	90.63	182.29	8468.62	-4733.08	-26.22	0.90	4732.94	422543.64	740279.93	
13076.00	90.98	182.84	8467.31	-4825.98	-30.38	0.70	4825.89	422450.74	740275.77	
13147.00	91.47	183.17	8465.79	-4896.87	-34.10	0.83	4896.82	422379.85	740272.05	
13170.00	91.54	183.17	8465.19	-4919.82	-35.37	0.30	4919.79	422356.90	740270.78	
13264.00	89.02	182.78	8464.73	-5013.69	-40.25	2.71	5013.72	422263.03	740265.90	
13358.00	88.46	182.51	8466.79	-5107.57	-44.58	0.66	5107.65	422169.15	740261.57	
13452.00	89.37	182.68	8468.57	-5201.45	-48.84	0.98	5201.59	422075.27	740257.31	
13546.00	89.65	182.59	8469.38	-5295.35	-53.16	0.31	5295.55	421981.37	740252.99	
13641.00	90.07	182.61	8469.61	-5390.25	-57.47	0.44	5390.50	421886.47	740248.68	
13735.00	89.44	182.34	8470.01	-5484.16	-61.53	0.73	5484.46	421792.56	740244.62	
13830.00	90.77	182.36	8469.84	-5579.08	-65.43	1.40	5579.43	421697.64	740240.72	
13924.00	90.49	182.69	8468.81	-5672.98	-69.57	0.46	5673.38	421603.74	740236.58	
14018.00	90.84	182.64	8467.71	-5766.87	-73.94	0.38	5767.33	421509.85	740232.21	
14112.00	90.56	182.64	8466.57	-5860.77	-78.27	0.30	5861.28	421415.95	740227.88	
14206.00	90.28	182.50	8465.88	-5954.67	-82.48	0.33	5955.24	421322.05	740223.67	
14300.00	89.65	182.44	8465.93	-6048.58	-86.53	0.67	6049.20	421228.14	740219.62	
14395.00	90.07	182.54	8466.17	-6143.49	-90.66	0.45	6144.16	421133.23	740215.49	
14489.00	90.21	182.79	8465.94	-6237.39	-95.03	0.30	6238.11	421039.33	740211.12	
14579.00	89.72	183.04	8465.99	-6327.27	-99.61	0.61	6328.06	420949.45	740206.54	
14673.00	89.37	183.16	8466.74	-6421.13	-104.69	0.39	6421.98	420855.59	740201.46	
14767.00	88.95	182.97	8468.12	-6514.99	-109.72	0.49	6515.90	420761.73	740196.43	
14861.00	90.14	183.33	8468.86	-6608.84	-114.88	1.32	6609.82	420667.88	740191.27	
14956.00	88.74	183.57	8469.79	-6703.66	-120.60	1.50	6704.72	420573.06	740185.55	
15050.00	88.88	182.55	8471.74	-6797.51	-125.61	1.10	6798.63	420479.21	740180.54	
15144.00	90.63	182.34	8472.15	-6891.42	-129.62	1.88	6892.59	420385.30	740176.53	
15239.00	89.93	182.33	8471.68	-6986.34	-133.49	0.74	6987.56	420290.38	740172.66	
15334.00	90.91	182.46	8470.98	-7081.25	-137.46	1.04	7082.52	420195.47	740168.69	
15428.00	91.12	182.81	8469.32	-7175.13	-141.78	0.43	7176.46	420101.59	740164.37	
15454.00	90.98	183.16	8468.84	-7201.09	-143.14	1.45	7202.44	420075.63	740163.01	Last Wft Svy
15522.00	90.98	183.16	8467.68	-7268.98	-146.89	0.00	7270.37	420007.74	740159.26	Proj. To Bit

Annotation

MD ft	TVD ft	
7871.72	7863.35	Tie On VES
7922.00	7913.45	First Wft Svy
15454.00	8468.84	Last Wft Svy
15522.00	8467.68	Proj. To Bit