

OPERATOR
WELL/LEASE
COUNTY

DEVON ENERGY PRODUCTION CO, LLP
NEW MEXICO 24 FED COM 3H
LEA

STATE OF NEW MEXICO
DEVIATION REPORT

30-025-39741

A-24-185-33E

510 FNL & 545 FEL

293	1.00
472	1.00
745	0.75
919	0.75
1,145	1.00
1,331	1.00
1,557	1.00
2,025	1.00
2,348	1.00
2,600	0.75
2,912	1.00
3,102	1.00
3,333	0.50
3,619	0.25
3,905	0.50
4,200	0.75
4,508	0.00
4,888	0.25
5,205	0.25
5,459	1.00
5,744	0.25
5,965	0.25

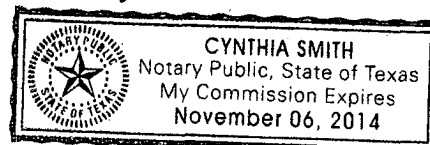
STATE OF TEXAS

BY: Linda Robinson

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on January 3, 2011 by Linda Robinson on behalf of Patterson-UTI Drilling Company LLC.

Cynthia Smith
Notary Public for Midland County, Texas
My Commission Expires:





Digital Drilling Data
Systems, LLC

Survey Report

Company: Great White Directional

Location: New Mexico

Well: New Mexico 24 Fed Com # 3 H

Rig: 41

API or UWI: 30-025-3939741

Job Number: 02523-433-22

State: NM

Operator: Justin Warnack

County: Lea

Magnetic Declination: 7.32

Comment

Proposed Azimuth: 269.51

North Reference: GRID

RECEIVED

MAR 23 2011

HOBBSD

Tiein Survey Data:

MD	Inclination	Azimuth	TVD	NS	EW
4770.00	0.53	68.61	4769.60	42.10	0.60

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4781.00	0.50	294.00	4780.60	42.14	0.60	0.82	42.14	-0.96	8.64
4814.00	1.70	285.70	4813.59	42.33	0.00	0.00	42.33	-0.36	3.66
4846.00	3.00	277.60	4845.57	42.57	-1.29	358.27	42.59	0.92	4.18
4878.00	5.30	276.90	4877.48	42.86	-3.58	355.22	43.01	3.22	7.19
4909.00	7.60	275.00	4908.28	43.21	-7.05	350.74	43.78	6.68	7.45
4940.00	11.00	273.70	4938.87	43.58	-12.04	344.55	45.21	11.67	10.99
4972.00	14.90	272.40	4970.05	43.95	-19.20	336.40	47.96	18.83	12.22
5004.00	19.00	270.30	5000.65	44.15	-28.53	327.13	52.56	28.15	12.95
5035.00	22.60	268.40	5029.63	44.01	-39.53	318.07	59.15	39.15	11.81
5067.00	26.30	267.80	5058.75	43.56	-52.77	309.54	68.42	52.39	11.59
5099.00	29.50	267.40	5087.03	42.93	-67.72	302.37	80.19	67.35	10.02
5130.00	32.40	267.40	5113.61	42.21	-83.65	296.78	93.69	83.28	9.35
5162.00	35.40	268.00	5140.17	41.50	-101.48	292.24	109.64	101.12	9.43
5194.00	38.60	268.40	5165.73	40.89	-120.73	288.71	127.46	120.37	10.03
5225.00	41.90	268.10	5189.38	40.28	-140.74	285.97	146.39	140.39	10.66
5257.00	44.70	267.10	5212.67	39.36	-162.67	283.60	167.36	162.33	9.01
5289.00	47.90	267.50	5234.77	38.27	-185.77	281.64	189.68	185.44	10.04
5320.00	51.10	268.40	5254.90	37.43	-209.33	280.14	212.65	209.00	10.56
5352.00	54.20	268.60	5274.32	36.77	-234.75	278.90	237.62	234.43	9.70

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
5384.00	56.80	268.90	5292.44	36.19	-261.12	277.89	263.61	260.80	8.16
5415.00	59.30	268.80	5308.84	35.66	-287.41	277.07	289.62	287.10	8.07
5447.00	62.30	269.30	5324.45	35.20	-315.34	276.37	317.30	315.03	9.47
5479.00	65.30	269.50	5338.58	34.90	-344.05	275.79	345.81	343.74	9.39
5510.00	67.40	269.30	5351.01	34.60	-372.44	275.31	374.05	372.13	6.80
5542.00	69.90	269.10	5362.66	34.19	-402.24	274.86	403.69	401.93	7.83
5574.00	72.70	268.70	5372.92	33.61	-432.54	274.44	433.85	432.24	8.83
5605.00	76.40	268.50	5381.18	32.88	-462.41	274.07	463.58	462.11	11.95
5637.00	78.60	268.40	5388.10	32.03	-493.64	273.71	494.67	493.34	6.88
5669.00	81.00	268.40	5393.77	31.15	-525.12	273.39	526.04	524.83	7.50
5700.00	82.50	268.10	5398.22	30.21	-555.78	273.11	556.60	555.50	4.93
5732.00	85.50	269.10	5401.56	29.44	-587.59	272.87	588.33	587.32	9.88
5763.00	88.40	266.60	5403.21	28.27	-618.52	272.62	619.17	618.25	12.34
5795.00	88.20	267.20	5404.16	26.55	-650.46	272.34	651.00	650.21	1.98
5857.00	88.40	267.70	5406.00	23.79	-712.37	271.91	712.77	712.14	0.87
5921.00	87.40	267.60	5408.35	21.17	-776.27	271.56	776.56	776.06	1.57
6016.00	86.50	267.70	5413.40	17.28	-871.06	271.14	871.23	870.88	0.95
6111.00	87.30	268.50	5418.54	14.13	-965.86	270.84	965.97	965.71	1.19
6206.00	88.30	269.30	5422.19	12.31	-1060.77	270.66	1060.85	1060.63	1.35
6301.00	88.10	269.00	5425.17	10.90	-1155.72	270.54	1155.77	1155.58	0.38
6396.00	88.50	269.50	5427.99	9.66	-1250.67	270.44	1250.70	1250.54	0.67
6491.00	88.80	269.40	5430.23	8.75	-1345.64	270.37	1345.66	1345.51	0.33
6587.00	87.40	268.80	5433.41	7.24	-1441.57	270.29	1441.59	1441.45	1.59
6682.00	88.40	269.00	5436.89	5.42	-1536.49	270.20	1536.50	1536.38	1.07
6777.00	90.30	269.10	5437.97	3.84	-1631.46	270.13	1631.47	1631.37	2.00
6872.00	91.90	269.30	5436.15	2.52	-1726.43	270.08	1726.43	1726.35	1.70
6967.00	92.30	269.30	5432.66	1.36	-1821.36	270.04	1821.36	1821.28	0.42
7062.00	91.90	268.70	5429.18	-0.30	-1916.28	269.99	1916.28	1916.22	0.76
7157.00	89.70	268.50	5427.86	-2.62	-2011.24	269.93	2011.24	2011.19	2.33
7252.00	88.10	268.50	5429.68	-5.11	-2106.19	269.86	2106.19	2106.15	1.68
7348.00	87.40	268.00	5433.45	-8.04	-2202.07	269.79	2202.08	2202.05	0.90
7443.00	88.10	268.40	5437.18	-11.02	-2296.95	269.73	2296.97	2296.96	0.85
7538.00	90.50	269.30	5438.34	-12.93	-2391.91	269.69	2391.95	2391.93	2.70
7633.00	91.40	269.40	5436.76	-14.00	-2486.89	269.68	2486.93	2486.92	0.95
7728.00	92.00	269.50	5433.95	-14.91	-2581.84	269.67	2581.89	2581.88	0.64

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
7823.00	92.60	269.40	5430.13	-15.83	-2676.76	269.66	2676.81	2676.80	0.64
7919.00	92.50	269.00	5425.86	-17.17	-2772.66	269.65	2772.71	2772.70	0.43
8014.00	93.00	269.10	5421.30	-18.74	-2867.54	269.63	2867.60	2867.59	0.54
8109.00	91.80	268.20	5417.33	-20.97	-2962.42	269.59	2962.50	2962.49	1.58
8204.00	92.20	268.40	5414.01	-23.79	-3057.32	269.55	3057.42	3057.42	0.47
8223.00	92.40	268.20	5413.25	-24.35	-3076.30	269.55	3076.40	3076.40	1.49

OPERATOR		FIELD NAME		Well name/No.		Rig Name & No.		QDM Job No.	
Devon Energy		Lea		New Mexico 24 Fed Cor		Patterson 41		02523-433-22	
MWD OPERATOR		DIR SUPERVISOR		COUNTY		STATE		Start Date	
Justin Warnack		Chad Griffith		Lea		New Mexico		04-Dec-10	
DipA:	60.69	Mag Field:		0.49047	Mag Dec.		7.32	Total Cor.:	0
Mag Spacing Req.		Mag Spacing Actual			Mag Spacing Req.			Mag Spacing Actual	
Below 9		Below 13		Above 15			Above 48		
Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		
							N/S (ft)	E/W (ft)	

Tie-In	4770.00'	0.53°	68.61°	0.00'	4769.60'	0.96'	42.10'	0.60'
1	4781.00'	0.50°	294.00°	11.00'	4780.60'	-0.96'	42.14' N	0.60' W
2	4814.00'	1.70°	285.70°	33.00'	4813.59'	-0.36'	42.33' N	0.00' E
3	4846.00'	3.00°	277.60°	32.00'	4845.57'	0.92'	42.57' N	1.29' W
4	4878.00'	5.30°	276.90°	32.00'	4877.48'	3.22'	42.86' N	3.58' W
5	4909.00'	7.60°	275.00°	31.00'	4908.28'	6.68'	43.21' N	7.05' W
6	4940.00'	11.00°	273.70°	31.00'	4938.87'	11.67'	43.58' N	12.04' W
7	4972.00'	14.90°	272.40°	32.00'	4970.05'	18.83'	43.95' N	19.20' W
8	5004.00'	19.00°	270.30°	32.00'	5000.65'	28.15'	44.15' N	28.53' W
9	5035.00'	22.60°	268.40°	31.00'	5029.63'	39.15'	44.01' N	39.53' W
10	5067.00'	26.30°	267.80°	32.00'	5058.75'	52.39'	43.56' N	52.77' W
11	5099.00'	29.50°	267.40°	32.00'	5087.03'	67.35'	42.93' N	67.72' W
12	5130.00'	32.40°	267.40°	31.00'	5113.61'	83.28'	42.21' N	83.65' W
13	5162.00'	35.40°	268.00°	32.00'	5140.17'	101.12'	41.50' N	101.48' W
14	5194.00'	38.60°	268.40°	32.00'	5165.72'	120.37'	40.89' N	120.73' W
15	5225.00'	41.90°	268.10°	31.00'	5189.38'	140.39'	40.28' N	140.74' W
16	5257.00'	44.70°	267.10°	32.00'	5212.67'	162.33'	39.36' N	162.67' W
17	5289.00'	47.90°	267.50°	32.00'	5234.77'	185.44'	38.27' N	185.77' W
18	5320.00'	51.10°	268.40°	31.00'	5254.90'	209.00'	37.43' N	209.33' W
19	5352.00'	54.20°	268.60°	32.00'	5274.32'	234.43'	36.77' N	234.75' W
20	5384.00'	56.80°	268.90°	32.00'	5292.44'	260.80'	36.19' N	261.12' W
21	5415.00'	59.30°	268.80°	31.00'	5308.84'	287.10'	35.66' N	287.41' W
22	5447.00'	62.30°	269.30°	32.00'	5324.45'	315.03'	35.20' N	315.34' W
23	5479.00'	65.30°	269.50°	32.00'	5338.58'	343.74'	34.90' N	344.05' W
24	5510.00'	67.40°	269.30°	31.00'	5351.01'	372.13'	34.60' N	372.44' W
25	5542.00'	69.90°	269.10°	32.00'	5362.66'	401.93'	34.19' N	402.24' W
26	5574.00'	72.70°	268.70°	32.00'	5372.92'	432.24'	33.61' N	432.54' W
27	5605.00'	76.40°	268.50°	31.00'	5381.18'	462.11'	32.88' N	462.41' W
28	5637.00'	78.60°	268.40°	32.00'	5388.10'	493.34'	32.03' N	493.64' W
29	5669.00'	81.00°	268.40°	32.00'	5393.77'	524.83'	31.15' N	525.12' W
30	5700.00'	82.50°	268.10°	31.00'	5398.22'	555.50'	30.21' N	555.78' W
31	5732.00'	85.50°	269.10°	32.00'	5401.56'	587.32'	29.44' N	587.59' W
32	5763.00'	88.40°	266.60°	31.00'	5403.21'	618.25'	28.27' N	618.52' W
33	5795.00'	88.20°	267.20°	32.00'	5404.16'	650.21'	26.55' N	650.46' W
34	5857.00'	88.40°	267.70°	62.00'	5406.00'	712.14'	23.79' N	712.37' W
35	5921.00'	87.40°	267.60°	64.00'	5408.35'	776.06'	21.17' N	776.27' W
36	6016.00'	86.50°	267.70°	95.00'	5413.40'	870.88'	17.28' N	871.06' W
37	6111.00'	87.30°	268.50°	95.00'	5418.54'	965.71'	14.13' N	965.86' W
38	6206.00'	88.30°	269.30°	95.00'	5422.19'	1060.63'	12.31' N	1060.77' W

Calculation Method		Minimum Curvature		
Proposed Azimuth		269.51°		
Depth Reference:		RKB		
Tie Into:		MWD		
Job Service:		Gamma-Dir.		
Closure		Dogleg	Build	Walk
Distance	Direction	Severity	Rate	Rate
(ft)	Azimuth	(° /100')	(° /100')	(° /100')

42.10'	0.82°	0.00°	0.0°	0.0°
42.14'	360.82°	8.64°	-0.3°	2049.0°
42.33'	0.00°	3.66°	3.6°	-25.2°
42.59	358.27°	4.18°	4.1°	-25.3°
43.01'	355.22°	7.19°	7.2°	-2.2°
43.78	350.74°	7.45°	7.4°	-6.1°
45.21'	344.55°	10.99°	11.0°	-4.2°
47.96	336.40°	12.22°	12.2°	-4.1°
52.56'	327.13°	12.95°	12.8°	-6.6°
59.15'	318.07°	11.81°	11.6°	-6.1°
68.42'	309.54°	11.59°	11.6°	-1.9°
80.19'	302.37°	10.02°	10.0°	-1.3°
93.69'	296.78°	9.35°	9.4°	0.0°
109.64'	292.24°	9.43°	9.4°	1.9°
127.46'	288.71°	10.03°	10.0°	1.2°
146.39'	285.97°	10.66°	10.6°	-1.0°
167.36'	283.60°	9.01°	8.8°	-3.1°
189.67'	281.64°	10.04°	10.0°	1.2°
212.65'	280.14°	10.56°	10.3°	2.9°
237.62'	278.90°	9.70°	9.7°	0.6°
263.61'	277.89°	8.16°	8.1°	0.9°
289.62'	277.07°	8.07°	8.1°	-0.3°
317.30'	276.37°	9.47°	9.4°	1.6°
345.81'	275.79°	9.39°	9.4°	0.6°
374.05'	275.31°	6.80°	6.8°	-0.6°
403.69'	274.86°	7.83°	7.8°	-0.6°
433.85'	274.44°	8.83°	8.7°	-1.3°
463.58'	274.07°	11.95°	11.9°	-0.6°
494.67'	273.71°	6.88°	6.9°	-0.3°
526.04'	273.39°	7.50°	7.5°	0.0°
556.60'	273.11°	4.93°	4.8°	-1.0°
588.33'	272.87°	9.88°	9.4°	3.1°
619.17'	272.62°	12.34°	9.4°	-8.1°
651.00'	272.34°	1.98°	-0.6°	1.9°
712.77'	271.91°	0.87°	0.3°	0.8°
776.56'	271.56°	1.57°	-1.6°	-0.2°
871.23'	271.14°	0.95°	-0.9°	0.1°
965.97'	270.84°	1.19°	0.8°	0.8°
1060.85'	270.66°	1.35°	1.1°	0.8°

[illegible]