



Job Number: C131166

Company: Mewbourne Oil Company

Lease/Well: Delaware Ranch 12 NC Fed Com # 10

Location: Eddy County

Rig Name: Patterson UTI Rig # 36

RKB: N/A

G.L. or M.S.L.: N/A

State/Country: New Mexico / USA

Declination: 7.35° Corrected To Grid

Grid: 7.35°

File name: C:\WINSERVE\DOCS\C131166.SVY

Date/Time: 23-Dec-13 / 09:22

Curve Name: SES MWD SURVEY RAN ON 11-19-13

30-015-41719

Stryker Energy Directional Services, LLC.

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 358.63

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
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Tie-In Data Provided by MS Gyro Survey

7590.00	1.10	276.42	7586.82	-47.53	-65	-47.50	47.53	180.78	.00
7639.00	1.10	302.50	7635.81	-47.22	-1.51	-47.17	47.25	181.84	1.01
7671.00	3.60	355.20	7667.78	-46.06	-1.86	-46.00	46.10	182.31	9.57
7702.00	7.50	358.70	7698.63	-43.06	-1.98	-43.00	43.11	182.64	12.62
7734.00	11.10	1.90	7730.21	-37.90	-1.93	-37.84	37.95	182.92	11.36
7766.00	14.50	2.60	7761.41	-30.81	-1.65	-30.77	30.86	183.06	10.64
7798.00	17.70	2.30	7792.15	-21.95	-1.27	-21.91	21.99	183.31	10.00
7829.00	20.00	1.90	7821.48	-11.94	-90	-11.92	11.97	184.33	7.43
7861.00	21.80	1.90	7851.38	-.53	-.53	-.52	.75	224.68	5.62
7893.00	24.30	.80	7880.82	11.99	-.24	12.00	12.00	358.87	7.93
7925.00	26.60	359.60	7909.71	25.74	-.19	25.74	25.74	359.57	7.37
7957.00	28.90	358.70	7938.03	40.64	-.42	40.64	40.64	359.41	7.31
7988.00	31.90	358.40	7964.77	56.32	-.82	56.32	56.32	359.17	9.69
8020.00	34.70	357.50	7991.51	73.87	-1.45	73.89	73.89	358.87	8.88
8052.00	38.10	357.70	8017.26	92.84	-2.25	92.87	92.87	358.61	10.63
8084.00	41.90	357.70	8041.77	113.39	-3.07	113.43	113.43	358.45	11.87
8116.00	44.90	358.40	8065.02	135.36	-3.82	135.42	135.42	358.39	9.49
8148.00	47.20	357.70	8087.23	158.39	-4.60	158.45	158.45	358.34	7.36
8179.00	48.80	357.30	8107.97	181.40	-5.61	181.48	181.49	358.23	5.25
8211.00	50.40	357.70	8128.71	205.75	-6.67	205.85	205.86	358.14	5.09
8243.00	51.80	358.00	8148.80	230.63	-7.60	230.75	230.76	358.11	4.44
8272.00	52.80	359.80	8166.54	253.57	-8.04	253.69	253.70	358.18	6.00
8304.00	54.70	359.30	8185.46	279.38	-8.25	279.49	279.50	358.31	6.07
8336.00	58.50	359.60	8203.07	306.09	-8.50	306.20	306.20	358.41	11.90

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
8367.00	62.10	359.60	8218.43	333.01	-8.69	333.12	333.12	358.51	11.61
8399.00	64.50	358.60	8232.81	361.59	-9.14	361.70	361.71	358.55	8.00
8431.00	67.50	357.50	8245.82	390.80	-10.14	390.93	390.93	358.51	9.89
8462.00	71.20	357.20	8256.75	419.77	-11.48	419.93	419.93	358.43	11.97
8494.00	73.60	357.50	8266.43	450.24	-12.89	450.42	450.43	358.36	7.55
8526.00	75.70	358.00	8274.90	481.07	-14.10	481.27	481.28	358.32	6.73
8557.00	79.20	.00	8281.63	511.32	-14.62	511.53	511.53	358.36	12.93
8589.00	81.40	1.00	8287.02	542.86	-14.35	543.05	543.05	358.49	7.53
8621.00	83.90	1.50	8291.12	574.59	-13.66	574.75	574.75	358.64	7.96
8653.00	88.10	2.30	8293.35	606.49	-12.60	606.61	606.62	358.81	13.36
8675.00	90.00	2.60	8293.71	628.46	-11.66	628.56	628.57	358.94	8.74
8715.00	91.40	2.30	8293.22	668.42	-9.95	668.47	668.49	359.15	3.58
8747.00	92.20	2.30	8292.22	700.38	-8.66	700.39	700.43	359.29	2.50
8778.00	91.70	2.60	8291.16	731.33	-7.34	731.30	731.37	359.43	1.88
8809.00	92.10	3.00	8290.14	762.28	-5.83	762.20	762.30	359.56	1.82
8841.00	91.50	2.10	8289.13	794.23	-4.40	794.11	794.24	359.68	3.38
8872.00	90.10	1.40	8288.70	825.21	-3.46	825.06	825.22	359.76	5.05
8904.00	90.10	1.20	8288.64	857.20	-2.73	857.02	857.21	359.82	.62
8936.00	89.60	.70	8288.73	889.20	-2.20	889.00	889.20	359.86	2.21
8968.00	89.60	.10	8288.95	921.20	-1.98	920.98	921.20	359.88	1.87
8999.00	89.10	359.30	8289.30	952.19	-2.14	951.97	952.20	359.87	3.04
9031.00	89.40	359.10	8289.72	984.19	-2.59	983.97	984.19	359.85	1.13
9063.00	89.10	358.20	8290.14	1016.18	-3.34	1015.97	1016.18	359.81	2.96
9094.00	89.30	357.50	8290.57	1047.15	-4.50	1046.96	1047.16	359.75	2.35
9126.00	89.30	357.50	8290.96	1079.12	-5.90	1078.95	1079.13	359.69	.00
9158.00	89.60	357.30	8291.27	1111.08	-7.35	1110.94	1111.11	359.62	1.13
9190.00	90.10	357.50	8291.35	1143.05	-8.80	1142.93	1143.09	359.56	1.68
9222.00	88.90	357.90	8291.63	1175.02	-10.09	1174.93	1175.07	359.51	3.95
9253.00	88.70	358.60	8292.28	1206.00	-11.03	1205.92	1206.05	359.48	2.35
9285.00	89.00	357.90	8292.92	1237.98	-12.01	1237.91	1238.04	359.44	2.38
9316.00	89.30	357.70	8293.38	1268.95	-13.20	1268.91	1269.02	359.40	1.16
9348.00	89.50	357.90	8293.72	1300.93	-14.43	1300.90	1301.01	359.36	.88
9380.00	89.80	357.50	8293.91	1332.90	-15.71	1332.90	1332.99	359.32	1.56
9412.00	88.60	357.00	8294.36	1364.86	-17.25	1364.88	1364.97	359.28	4.06
9444.00	88.50	357.00	8295.17	1396.81	-18.92	1396.86	1396.94	359.22	.31
9475.00	88.60	357.00	8295.96	1427.76	-20.54	1427.84	1427.90	359.18	.32
9507.00	88.80	357.30	8296.68	1459.71	-22.13	1459.82	1459.88	359.13	1.13
9538.00	89.30	357.00	8297.20	1490.66	-23.67	1490.80	1490.85	359.09	1.88
9570.00	89.50	357.20	8297.53	1522.62	-25.29	1522.79	1522.83	359.05	.88
9602.00	88.50	357.30	8298.09	1554.58	-26.83	1554.78	1554.81	359.01	3.14
9633.00	88.50	357.20	8298.90	1585.53	-28.31	1585.76	1585.79	358.98	.32
9665.00	88.50	357.50	8299.74	1617.49	-29.79	1617.74	1617.76	358.94	.94
9728.00	89.00	357.30	8301.11	1680.41	-32.65	1680.71	1680.73	358.89	.85
9791.00	89.30	356.80	8302.05	1743.32	-35.89	1743.68	1743.69	358.82	.93
9854.00	89.30	356.10	8302.82	1806.19	-39.79	1806.63	1806.63	358.74	1.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				FT	FT	FT	Distance FT	Direction Deg	
9917.00	90.20	357.70	8303.09	1869.10	-43.20	1869.59	1869.60	358.68	2.91
9980.00	90.60	357.90	8302.65	1932.05	-45.62	1932.59	1932.59	358.65	.71
10043.00	90.90	357.90	8301.83	1995.00	-47.93	1995.58	1995.58	358.62	.48
10106.00	89.80	358.40	8301.44	2057.96	-49.96	2058.57	2058.57	358.61	1.92
10170.00	89.50	358.00	8301.83	2121.93	-51.97	2122.57	2122.57	358.60	.78
10233.00	89.90	358.00	8302.16	2184.89	-54.17	2185.56	2185.56	358.58	.63
10296.00	90.70	358.60	8301.83	2247.86	-56.04	2248.56	2248.56	358.57	1.59
10359.00	90.00	358.90	8301.45	2310.85	-57.41	2311.56	2311.56	358.58	1.21
10423.00	89.80	358.90	8301.56	2374.83	-58.64	2375.56	2375.56	358.59	.31
10486.00	88.20	359.10	8302.66	2437.81	-59.74	2438.54	2438.55	358.60	2.56
10549.00	88.50	359.10	8304.47	2500.78	-60.73	2501.52	2501.52	358.61	.48
10613.00	88.60	359.10	8306.09	2564.75	-61.73	2565.49	2565.49	358.62	.16
10677.00	89.40	358.60	8307.21	2628.73	-63.02	2629.48	2629.48	358.63	1.47
10740.00	90.00	358.40	8307.54	2691.70	-64.67	2692.48	2692.48	358.62	1.00
10804.00	90.30	358.20	8307.37	2755.68	-66.57	2756.48	2756.48	358.62	.56
10867.00	90.70	358.40	8306.82	2818.65	-68.44	2819.48	2819.48	358.61	.71
10931.00	89.70	358.70	8306.60	2882.62	-70.06	2883.48	2883.48	358.61	1.63
10993.00	89.50	359.30	8307.03	2944.61	-71.14	2945.47	2945.47	358.62	1.02
11056.00	90.00	358.90	8307.31	3007.60	-72.13	3008.47	3008.47	358.63	1.02
11120.00	89.10	359.80	8307.81	3071.60	-72.85	3072.46	3072.46	358.64	1.99
11183.00	89.60	.00	8308.52	3134.59	-72.96	3135.44	3135.44	358.67	.85
11247.00	88.80	359.60	8309.42	3198.59	-73.19	3199.42	3199.42	358.69	1.40
11311.00	88.80	359.80	8310.76	3262.57	-73.52	3263.40	3263.40	358.71	.31
11374.00	88.70	359.10	8312.13	3325.55	-74.13	3326.37	3326.38	358.72	1.12
11434.00	88.90	357.70	8313.39	3385.51	-75.80	3386.36	3386.36	358.72	2.36
11496.00	89.30	356.80	8314.36	3447.43	-78.77	3448.33	3448.33	358.69	1.59
11560.00	90.60	356.80	8314.42	3511.33	-82.35	3512.30	3512.30	358.66	2.03
11623.00	90.80	356.60	8313.65	3574.22	-85.97	3575.26	3575.26	358.62	.45
11686.00	91.50	356.50	8312.39	3637.10	-89.76	3638.20	3638.20	358.59	1.12
11750.00	90.80	358.40	8311.10	3701.02	-92.61	3702.17	3702.18	358.57	3.16
11813.00	89.50	358.60	8310.94	3763.99	-94.26	3765.17	3765.17	358.57	2.09
11877.00	89.00	358.70	8311.77	3827.97	-95.77	3829.17	3829.17	358.57	.80
11940.00	89.50	358.60	8312.60	3890.95	-97.25	3892.16	3892.16	358.57	.81
12003.00	90.10	358.40	8312.82	3953.92	-98.90	3955.16	3955.16	358.57	1.00
12067.00	89.20	358.70	8313.21	4017.90	-100.52	4019.16	4019.16	358.57	1.48
12130.00	88.90	358.70	8314.25	4080.88	-101.95	4082.15	4082.15	358.57	.48
12194.00	89.30	358.70	8315.26	4144.85	-103.40	4146.14	4146.14	358.57	.63
12257.00	89.80	358.90	8315.75	4207.84	-104.72	4209.14	4209.14	358.57	.85
12321.00	90.20	358.90	8315.75	4271.83	-105.95	4273.14	4273.14	358.58	.62
12384.00	89.30	359.10	8316.03	4334.81	-107.05	4336.13	4336.14	358.59	1.46
12448.00	89.20	359.10	8316.87	4398.80	-108.05	4400.13	4400.13	358.59	.16
12512.00	89.60	358.60	8317.54	4462.78	-109.34	4464.12	4464.12	358.60	1.00
12575.00	90.00	358.70	8317.76	4525.77	-110.82	4527.12	4527.12	358.60	.65
12639.00	90.20	358.70	8317.64	4589.75	-112.27	4591.12	4591.12	358.60	.31
12702.00	90.20	359.10	8317.42	4652.74	-113.48	4654.12	4654.12	358.60	.63

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
12756.00	90.30	359.10	8317.19	4706.73	-114.33	4708.12	4708.12	358.61	.19
Projection to Total Depth									
12809.00	90.30	359.10	8316.91	4759.72	-115.16	4761.12	4761.12	358.61	.00