



Job Number: SVGJ-150179
Company: Extraction Oil & Gas
Lease/Well: Rocky Mountain Fuel 24-32
Location: Weld County, CO
Rig Name: MS Energy Wireline
RKB: 0'
G.L. or M.S.L.: GL

State/Country: Colorado/USA
Declination: 8.61°
Grid: East To True North
File name: W:\WINSER~1\2015SU~1\EXTRAC~1\GJ\ROCKYM~1\2432.SVY
Date/Time: 08-Sep-15 / 09:32
Curve Name: Surface - 4600' M.D. (Rate Gyro)

MS Survey

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane .00
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		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.95	40.54	100.00	.63	.54	.63	.83	40.54	.95
200.00	.87	51.92	199.98	1.73	1.68	1.73	2.41	44.11	.20
300.00	.27	46.51	299.98	2.36	2.44	2.36	3.40	46.02	.60
400.00	.21	311.11	399.98	2.64	2.48	2.64	3.62	43.16	.36
500.00	.54	275.96	499.97	2.81	1.87	2.81	3.38	33.63	.39
600.00	.50	268.63	599.97	2.85	.97	2.85	3.01	18.71	.08
700.00	.42	273.69	699.97	2.86	.16	2.86	2.87	3.26	.09
800.00	.46	287.39	799.96	3.01	-.59	3.01	3.06	348.97	.11
900.00	.66	294.50	899.96	3.36	-1.49	3.36	3.68	336.07	.21
1000.00	.61	274.42	999.95	3.64	-2.55	3.64	4.45	325.04	.23
1100.00	.59	254.20	1099.95	3.55	-3.57	3.55	5.03	314.77	.21
1200.00	.52	252.41	1199.94	3.27	-4.50	3.27	5.56	305.98	.07

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
							Distance FT	Direction Deg	
1300.00	.50	275.15	1299.94	3.17	-5.37	3.17	6.24	300.56	.20
1400.00	.65	270.61	1399.93	3.22	-6.37	3.22	7.14	296.78	.16
1500.00	.58	260.33	1499.93	3.14	-7.44	3.14	8.07	292.87	.13
1600.00	.48	259.87	1599.92	2.98	-8.35	2.98	8.86	289.63	.10
1700.00	.41	278.86	1699.92	2.96	-9.11	2.96	9.58	287.99	.16
1800.00	.47	286.61	1799.92	3.13	-9.86	3.13	10.35	287.62	.08
1900.00	.54	290.91	1899.91	3.42	-10.69	3.42	11.23	287.72	.08
2000.00	.45	321.49	1999.91	3.89	-11.38	3.89	12.03	288.88	.28
2100.00	.57	351.17	2099.91	4.69	-11.70	4.69	12.60	291.85	.29
2200.00	.76	315.43	2199.90	5.66	-12.24	5.66	13.48	294.80	.45
2300.00	.61	313.47	2299.89	6.49	-13.09	6.49	14.61	296.38	.15
2400.00	.94	309.66	2399.88	7.38	-14.11	7.38	15.93	297.62	.33
2500.00	1.41	324.03	2499.86	8.90	-15.46	8.90	17.84	299.93	.55
2600.00	1.80	335.81	2599.82	11.33	-16.83	11.33	20.29	303.95	.51
2700.00	1.19	314.85	2699.79	13.50	-18.21	13.50	22.67	306.54	.81
2800.00	.60	292.29	2799.78	14.43	-19.43	14.43	24.20	306.59	.68
2900.00	.20	302.92	2899.78	14.72	-20.06	14.72	24.88	306.27	.41
3000.00	.48	258.05	2999.77	14.73	-20.62	14.73	25.34	305.54	.37
3100.00	.57	268.55	3099.77	14.63	-21.53	14.63	26.03	304.20	.13
3200.00	.58	251.36	3199.76	14.46	-22.50	14.46	26.75	302.72	.17
3300.00	.38	335.19	3299.76	14.59	-23.12	14.59	27.34	302.26	.66
3400.00	1.20	317.49	3399.75	15.67	-23.97	15.67	28.63	303.17	.85
3500.00	.60	323.82	3499.74	16.86	-24.98	16.86	30.14	304.01	.61
3600.00	.41	299.64	3599.74	17.46	-25.60	17.46	30.99	304.29	.28
3700.00	.25	310.50	3699.73	17.78	-26.08	17.78	31.57	304.28	.17
3800.00	.62	275.30	3799.73	17.97	-26.79	17.97	32.26	303.86	.44
3900.00	.93	283.50	3899.72	18.21	-28.11	18.21	33.50	302.93	.33
4000.00	1.04	244.20	3999.71	18.01	-29.72	18.01	34.75	301.21	.67
4100.00	1.20	233.72	4099.69	16.99	-31.38	16.99	35.69	298.43	.26
4200.00	1.23	237.32	4199.67	15.79	-33.13	15.79	36.70	295.49	.08
4300.00	.89	253.06	4299.65	14.99	-34.78	14.99	37.87	293.31	.44
4400.00	1.20	277.16	4399.63	14.89	-36.56	14.89	39.47	292.16	.53
4500.00	1.00	283.68	4499.61	15.23	-38.44	15.23	41.35	291.61	.24

Last Survey Depth Recorded

4600.00	1.00	291.38	4599.60	15.75	Page 2 -40.10	15.75	43.09	291.44	.13
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