



Company: NOBLE
Lease/Well: SCHLEGEL JACOB/# 1

Location:

Rig Name: PRODUCTION
State/County: COLORADO/WELD COUNTY

Latitude: 40.18
GRID North is 0.53 Degrees East of True North
VS-Azi: 0.00 Degrees



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : GL

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: run1-01.ut
Minimum Curvature Method
Report Date/Time: 4/12/2011 / 07:51

Vaughn Energy Services
Rifle, Colorado
970-456-2071
Garry Fowler
Schlegel Jacob 1/05-123-07755

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.21	276.62	100.00	0.02	-0.19	0.02	0.19	276.62	0.21
200.00	0.50	296.29	200.00	0.24	-0.76	0.24	0.79	287.21	0.30
300.00	0.52	318.00	299.99	0.77	-1.45	0.77	1.64	297.79	0.19
400.00	0.57	323.69	399.99	1.50	-2.05	1.50	2.54	306.23	0.07
500.00	0.25	314.41	499.99	2.05	-2.50	2.05	3.23	309.41	0.32
600.00	0.32	304.44	599.99	2.36	-2.88	2.36	3.73	309.33	0.09
700.00	0.31	312.02	699.98	2.70	-3.31	2.70	4.27	309.18	0.04
800.00	0.62	310.93	799.98	3.23	-3.92	3.23	5.08	309.51	0.32
900.00	0.36	282.67	899.98	3.66	-4.64	3.66	5.91	308.27	0.35
1000.00	0.54	291.53	999.97	3.90	-5.38	3.90	6.64	305.93	0.19
1100.00	0.83	306.81	1099.97	4.51	-6.40	4.51	7.83	305.16	0.35
1200.00	0.68	278.57	1199.96	5.03	-7.57	5.03	9.09	303.62	0.40
1300.00	0.74	277.07	1299.95	5.20	-8.80	5.20	10.22	300.59	0.07
1400.00	0.69	310.07	1399.94	5.67	-9.90	5.67	11.41	299.79	0.41
1500.00	0.76	289.45	1499.94	6.28	-11.00	6.28	12.67	299.74	0.27
1600.00	0.90	296.53	1599.92	6.85	-12.33	6.85	14.10	299.07	0.17
1700.00	0.91	309.73	1699.91	7.71	-13.64	7.71	15.67	299.49	0.21
1800.00	0.90	345.83	1799.90	8.98	-14.44	8.98	17.01	301.88	0.56
1900.00	0.85	344.90	1899.89	10.46	-14.83	10.46	18.15	305.20	0.05
2000.00	0.80	303.38	1999.88	11.56	-15.61	11.56	19.42	306.53	0.59
2100.00	0.48	335.60	2099.87	12.33	-16.36	12.33	20.48	306.99	0.47
2200.00	0.13	85.07	2199.87	12.71	-16.42	12.71	20.77	307.75	0.53
2300.00	0.32	177.15	2299.87	12.45	-16.29	12.45	20.50	307.37	0.35
2400.00	0.64	204.63	2399.87	11.66	-16.51	11.66	20.22	305.23	0.38
2500.00	1.24	230.78	2499.85	10.47	-17.58	10.47	20.46	300.79	0.72
2600.00	1.48	221.99	2599.83	8.83	-19.28	8.83	21.21	294.61	0.32
2700.00	1.71	230.28	2699.79	6.92	-21.30	6.92	22.39	287.99	0.33
2800.00	1.71	232.53	2799.74	5.05	-23.63	5.05	24.17	282.06	0.07
2900.00	1.82	243.32	2899.70	3.43	-26.24	3.43	26.46	277.45	0.35
3000.00	1.72	251.84	2999.65	2.25	-29.08	2.25	29.17	274.42	0.28
3100.00	1.28	240.09	3099.61	1.22	-31.48	1.22	31.50	272.22	0.53

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
3200.00	0.96	266.99	3199.60	0.62	-33.29	0.62	33.29	271.07	0.61
3300.00	0.45	227.36	3299.59	0.31	-34.42	0.31	34.42	270.51	0.68
3400.00	0.39	294.74	3399.59	0.18	-35.02	0.18	35.02	270.30	0.47
3500.00	0.62	0.22	3499.58	0.86	-35.32	0.86	35.33	271.40	0.58
3600.00	0.88	37.48	3599.57	2.01	-34.85	2.01	34.91	273.30	0.54
3700.00	1.02	71.62	3699.56	2.90	-33.53	2.90	33.66	274.94	0.58
3800.00	1.10	65.14	3799.54	3.59	-31.81	3.59	32.01	276.43	0.14
3900.00	1.66	74.82	3899.51	4.37	-29.54	4.37	29.86	278.42	0.60
4000.00	1.64	62.83	3999.47	5.40	-26.87	5.40	27.40	281.37	0.35
4100.00	1.40	80.08	4099.44	6.27	-24.39	6.27	25.19	284.41	0.51
4200.00	0.98	61.33	4199.42	6.89	-22.44	6.89	23.47	287.07	0.56
4300.00	0.36	71.51	4299.41	7.40	-21.39	7.40	22.63	289.09	0.64
4400.00	0.23	27.32	4399.41	7.68	-21.00	7.68	22.36	290.09	0.25
4500.00	0.30	266.11	4499.41	7.84	-21.16	7.84	22.57	290.34	0.46
4600.00	0.21	230.61	4599.41	7.71	-21.56	7.71	22.90	289.68	0.17
4700.00	0.21	246.57	4699.41	7.52	-21.87	7.52	23.13	288.98	0.06
4800.00	0.45	220.95	4799.41	7.15	-22.31	7.15	23.42	287.77	0.28
4900.00	0.36	157.69	4899.40	6.56	-22.45	6.56	23.39	286.29	0.43
5000.00	0.70	110.28	4999.40	6.06	-21.75	6.06	22.58	285.57	0.53
5100.00	0.72	106.34	5099.39	5.67	-20.57	5.67	21.34	285.41	0.05
5200.00	0.50	133.92	5199.39	5.19	-19.66	5.19	20.33	284.80	0.36
5300.00	0.15	153.63	5299.38	4.77	-19.29	4.77	19.87	283.91	0.36
5400.00	0.07	299.03	5399.38	4.68	-19.28	4.68	19.84	283.66	0.21
5500.00	0.23	214.82	5499.38	4.55	-19.44	4.55	19.97	283.17	0.23
5600.00	0.51	82.63	5599.38	4.44	-19.11	4.44	19.62	283.09	0.68
5700.00	0.50	109.61	5699.38	4.36	-18.26	4.36	18.77	283.42	0.24
5800.00	0.49	340.28	5799.38	4.61	-18.00	4.61	18.58	284.37	0.89
5900.00	0.37	319.44	5899.37	5.26	-18.35	5.26	19.09	285.99	0.19
6000.00	0.15	112.75	5999.37	5.45	-18.44	5.45	19.23	286.47	0.51
6100.00	0.41	313.95	6099.37	5.65	-18.58	5.65	19.42	286.92	0.55
6200.00	0.44	20.07	6199.37	6.26	-18.70	6.26	19.72	288.51	0.47
6300.00	0.47	23.64	6299.37	7.00	-18.40	7.00	19.69	290.84	0.04
6400.00	0.83	46.65	6399.36	7.88	-17.71	7.88	19.39	293.97	0.43
6500.00	0.97	64.54	6499.35	8.73	-16.43	8.73	18.60	298.00	0.31
6600.00	0.89	66.89	6599.34	9.40	-14.95	9.40	17.66	302.16	0.09
6700.00	0.93	84.23	6699.32	9.79	-13.43	9.79	16.62	306.07	0.28
6800.00	1.01	99.17	6799.31	9.73	-11.76	9.73	15.26	309.60	0.26
6900.00	1.21	144.74	6899.29	8.72	-10.28	8.72	13.48	310.32	0.88
7000.00	1.46	175.62	6999.27	6.59	-9.57	6.59	11.62	304.55	0.75
7100.00	1.53	202.23	7099.23	4.09	-9.98	4.09	10.79	292.29	0.69
7175.00	1.34	224.44	7174.21	2.54	-10.97	2.54	11.26	283.05	0.78

HORIZONTAL DISPLACEMENT IS
11.26 FEET AT 283.05 DEGREES