

Job Number: SVGJ-120470 State/Country: Colorado/USA (N 40 25 57.5) (W 104 52 58.4)
 Company: Anadarko Petroleum Corporation Declination: 8.80° East To True - NAD 27
 Lease/Well: Shur View 18-3 Grid: Referenced To True North
 Location: Weld County, CO File name: F:\SURVEY\2012SU~1\ANADARKO\LORENZ\SHURV
 Rig Name: Cable Wireline Date/Time: 17-Apr-12 / 15:17
 RKB: 0' Curve Name: Surface - 7000' M.D. (Rate Gyro) (API 05-123-24030)
 G.L. or M.S.L.: GL

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane .00

Vertical Section Referenced to offset from Wellhead: EW =.00 Ft , NS=.00 Ft

Rectangular Coordinates Referenced to Wellhead

Measured	Incl	Drift	TRUE	N-S	E-W	Vertical	CLOSURE	CLOSURE
Depth	Angle	Direction	Vertical	FT	FT	Section	Distance	Direction
FT	Deg	Deg	Depth			FT	FT	Deg
0	0	0	0	0	0	0	0	0
100	0.49	306.75	100	0.26	-0.34	0.26	0.43	306.75
200	0.5	291.88	200	0.67	-1.09	0.67	1.28	301.74
300	0.49	291.01	299.99	0.99	-1.89	0.99	2.14	297.6
400	0.53	279.08	399.99	1.22	-2.75	1.22	3.01	293.86
500	0.54	276.71	499.98	1.34	-3.67	1.34	3.91	290.1
600	0.52	290.52	599.98	1.56	-4.57	1.56	4.83	288.84
700	0.39	260.9	699.98	1.66	-5.33	1.66	5.58	287.34
800	0.36	276.72	799.97	1.65	-5.98	1.65	6.2	285.4
900	0.4	290.72	899.97	1.81	-6.62	1.81	6.86	285.28
1000	0.73	270.26	999.97	1.93	-7.58	1.93	7.82	284.31
1100	0.8	276.54	1099.96	2.02	-8.91	2.02	9.13	282.75
1200	0.9	261.8	1199.95	1.98	-10.38	1.98	10.57	280.82
1300	0.98	300.46	1299.93	2.3	-11.89	2.3	12.12	280.97
1400	1.05	301.03	1399.92	3.21	-13.42	3.21	13.8	283.46
1500	1.16	293.71	1499.9	4.09	-15.13	4.09	15.67	285.13
1600	1.25	288.2	1599.88	4.84	-17.09	4.84	17.76	285.8
1700	1.18	290.6	1699.86	5.54	-19.09	5.54	19.88	286.18
1800	1	286.76	1799.84	6.15	-20.89	6.15	21.78	286.42
1900	1.19	258.29	1899.82	6.2	-22.74	6.2	23.57	285.24
2000	1.23	252.48	1999.8	5.66	-24.78	5.66	25.42	282.87
2100	1.34	247.76	2099.77	4.9	-26.89	4.9	27.33	280.32
2200	1.35	248.5	2199.74	4.02	-29.07	4.02	29.35	277.88
2300	1.24	225.21	2299.72	2.83	-30.93	2.83	31.06	275.22
2400	1.14	214.44	2399.7	1.24	-32.26	1.24	32.29	272.21
2500	1.21	209.47	2499.68	-0.49	-33.34	-0.49	33.35	269.15
2600	1.08	212.42	2599.66	-2.21	-34.37	-2.21	34.44	266.32
2700	0.78	232.37	2699.64	-3.42	-35.41	-3.42	35.58	264.48

2800	1.04	227.95	2799.63	-4.44	-36.63	-4.44	36.9	263.08
2900	0.68	256.17	2899.62	-5.19	-37.88	-5.19	38.23	262.19
3000	0.5	272.11	2999.62	-5.32	-38.89	-5.32	39.25	262.21
3100	0.61	252.41	3099.61	-5.46	-39.83	-5.46	40.21	262.19
3200	0.58	257.91	3199.61	-5.73	-40.83	-5.73	41.23	262.01
3300	0.41	260.78	3299.6	-5.89	-41.68	-5.89	42.1	261.95
3400	0.65	222.05	3399.6	-6.37	-42.42	-6.37	42.89	261.46
3500	0.44	256.83	3499.59	-6.88	-43.17	-6.88	43.71	260.94
3600	0.53	258.19	3599.59	-7.06	-44	-7.06	44.56	260.88
3700	0.75	229.19	3699.58	-7.59	-44.94	-7.59	45.58	260.42
3800	0.58	242.1	3799.58	-8.25	-45.89	-8.25	46.62	259.81
3900	0.29	280.55	3899.57	-8.44	-46.58	-8.44	47.34	259.73
4000	0.34	233.79	3999.57	-8.57	-47.07	-8.57	47.85	259.68
4100	0.44	241.57	4099.57	-8.93	-47.65	-8.93	48.48	259.39
4200	0.36	272.54	4199.57	-9.1	-48.3	-9.1	49.15	259.33
4300	0.48	268.22	4299.57	-9.1	-49.03	-9.1	49.87	259.49
4400	0.07	268.58	4399.56	-9.11	-49.51	-9.11	50.34	259.57
4500	0.09	229.17	4499.56	-9.16	-49.63	-9.16	50.47	259.54
4600	0.17	190.26	4599.56	-9.36	-49.72	-9.36	50.59	259.34
4700	0.08	28.84	4699.56	-9.45	-49.71	-9.45	50.6	259.24
4800	0.23	221.39	4799.56	-9.54	-49.81	-9.54	50.71	259.16
4900	0.12	334.86	4899.56	-9.59	-49.99	-9.59	50.9	259.14
5000	0.19	97.96	4999.56	-9.52	-49.87	-9.52	50.77	259.19
5100	0.21	240.48	5099.56	-9.63	-49.86	-9.63	50.78	259.07
5200	0.16	308.72	5199.56	-9.64	-50.13	-9.64	51.05	259.12
5300	0.13	333.14	5299.56	-9.45	-50.29	-9.45	51.17	259.36
5400	0.23	292.69	5399.56	-9.27	-50.53	-9.27	51.37	259.61
5500	0.42	341.51	5499.56	-8.84	-50.83	-8.84	51.59	260.13
5600	0.54	332.05	5599.56	-8.08	-51.17	-8.08	51.8	261.03
5700	0.89	306.93	5699.55	-7.2	-52.01	-7.2	52.5	262.12
5800	0.81	327.28	5799.54	-6.14	-53.01	-6.14	53.36	263.4
5900	1.05	319.15	5899.52	-4.85	-53.99	-4.85	54.21	264.87
6000	1.4	329.66	5999.5	-3.1	-55.21	-3.1	55.3	266.79
6100	2.38	323.17	6099.45	-0.38	-57.07	-0.38	57.07	269.61
6200	2.28	323.3	6199.36	2.87	-59.5	2.87	59.57	272.76
6300	1.61	306.55	6299.31	5.3	-61.82	5.3	62.05	274.9
6400	0.52	261	6399.29	6.07	-63.4	6.07	63.69	275.47
6500	0.46	199.14	6499.29	5.62	-63.98	5.62	64.22	275.02
6600	0.62	178.91	6599.28	4.7	-64.1	4.7	64.27	274.19
6700	0.66	123.03	6699.28	3.84	-63.61	3.84	63.72	273.46
6800	0.65	118.68	6799.27	3.26	-62.63	3.26	62.71	272.98
6900	0.99	114.01	6899.26	2.64	-61.34	2.64	61.4	272.46
7000	0.72	132.06	6999.25	1.86	-60.08	1.86	60.11	271.78

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Dogleg
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