



Job Number: SVGJ-110580

Company: Exxon Mobil

Lease/Well: PCU 296-5A9

Location: Rio Blanco County, CO

Rig Name: N/A

RKB: 0'

G.L. or M.S.L.: GL

State/Country: Colorado/USA

Declination: 12.30°

Grid: Grid North (Grid Conv. -1.74)

File name: F:\SURVEY\2011SU~1\EXXONM~1\PCU296-5A9.SVY

Date/Time: 25-Jul-11 / 17:59

Curve Name: Surface - 13650' M.D. (Rate Gyro)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 249.10
 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	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.70	281.23	200.00	.24	-1.20	1.03	1.22	281.23	.35
400.00	3.17	258.01	399.87	-.67	-7.81	7.53	7.84	265.07	1.27
600.00	7.74	255.10	598.91	-5.29	-26.24	26.40	26.77	258.61	2.29
800.00	13.17	251.02	795.52	-16.17	-60.83	62.59	62.94	255.11	2.74
1000.00	15.29	247.54	989.37	-33.66	-106.75	111.73	111.93	252.50	1.14
1200.00	15.53	247.59	1182.18	-53.94	-155.87	164.86	164.94	250.91	.12
1400.00	15.59	247.34	1374.85	-74.50	-205.42	218.49	218.52	250.07	.04
1600.00	15.93	249.14	1567.34	-94.63	-255.87	272.79	272.81	249.70	.30
1800.00	15.90	248.08	1759.67	-114.63	-306.94	327.63	327.64	249.52	.15

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	
2000.00	16.13	248.06	1951.91	-135.23	-358.12	382.80	382.80	249.31	.12
2200.00	16.46	249.19	2143.87	-155.68	-410.38	438.91	438.91	249.23	.23
2400.00	16.07	249.25	2335.87	-175.55	-462.75	494.93	494.93	249.22	.20
2600.00	15.88	248.38	2528.15	-195.44	-514.07	549.97	549.97	249.18	.15
2800.00	15.07	246.33	2720.89	-215.96	-563.32	603.30	603.30	249.02	.49
3000.00	16.33	249.26	2913.43	-236.36	-613.43	657.39	657.39	248.93	.74
3200.00	16.81	248.97	3105.13	-256.70	-666.72	714.43	714.43	248.94	.24
3400.00	17.57	248.31	3296.19	-278.23	-721.77	773.53	773.54	248.92	.39
3600.00	17.62	247.57	3486.83	-300.94	-777.80	833.98	833.98	248.85	.11
3800.00	16.89	249.96	3677.83	-322.44	-833.07	893.29	893.30	248.84	.51
4000.00	16.18	249.29	3869.56	-342.25	-886.43	950.20	950.21	248.89	.37
4200.00	16.29	248.48	4061.59	-362.40	-938.59	1006.12	1006.13	248.89	.13
4400.00	16.50	247.76	4253.46	-383.44	-990.98	1062.56	1062.57	248.85	.15
4600.00	16.55	247.37	4445.19	-405.15	-1043.56	1119.43	1119.44	248.78	.06
4800.00	16.43	244.73	4636.97	-428.18	-1095.43	1176.10	1176.14	248.65	.38
5000.00	16.99	243.26	4828.53	-453.40	-1147.10	1233.37	1233.46	248.43	.35
5200.00	16.18	248.89	5020.22	-476.59	-1199.20	1290.31	1290.43	248.33	.90
5400.00	13.20	249.54	5213.66	-494.61	-1246.60	1341.02	1341.14	248.36	1.49
5600.00	9.82	247.84	5409.61	-509.03	-1283.80	1380.92	1381.03	248.37	1.70
5800.00	6.78	250.12	5607.49	-519.48	-1310.70	1409.78	1409.89	248.38	1.53
6000.00	2.94	258.67	5806.74	-524.51	-1326.84	1426.65	1426.75	248.43	1.95
6200.00	.48	294.17	6006.63	-525.17	-1332.63	1432.30	1432.38	248.49	1.28
6400.00	.77	235.21	6206.62	-525.59	-1334.50	1434.20	1434.27	248.50	.33
6600.00	.90	228.33	6406.60	-527.40	-1336.78	1436.97	1437.06	248.47	.08
6800.00	1.01	186.64	6606.58	-530.20	-1338.16	1439.25	1439.37	248.39	.34
7000.00	1.08	197.88	6806.54	-533.74	-1338.94	1441.25	1441.40	248.27	.11
7200.00	1.20	153.70	7006.51	-537.42	-1338.59	1442.23	1442.44	248.13	.43
7400.00	1.95	105.37	7206.44	-540.20	-1334.38	1439.29	1439.58	247.96	.73
7600.00	1.71	121.14	7406.34	-542.64	-1328.55	1434.71	1435.09	247.78	.28

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	
7800.00	1.41	165.41	7606.27	-546.57	-1325.37	1433.15	1433.65	247.59	.60
8000.00	1.49	171.86	7806.21	-551.52	-1324.38	1433.99	1434.63	247.39	.09
8200.00	1.59	178.69	8006.13	-556.87	-1323.95	1435.50	1436.30	247.19	.10
8400.00	1.80	186.26	8206.05	-562.77	-1324.23	1437.86	1438.85	246.98	.15
8600.00	1.69	194.48	8405.95	-568.74	-1325.31	1441.00	1442.19	246.77	.14
8800.00	2.27	198.71	8605.83	-575.35	-1327.32	1445.24	1446.65	246.56	.30
9000.00	2.95	216.78	8805.63	-583.22	-1331.67	1452.11	1453.79	246.35	.53
9200.00	3.09	217.91	9005.35	-591.60	-1338.06	1461.07	1463.01	246.15	.08
9400.00	3.31	214.53	9205.04	-600.61	-1344.65	1470.44	1472.69	245.93	.14
9600.00	3.44	215.91	9404.69	-610.22	-1351.44	1480.21	1482.82	245.70	.08
9800.00	3.68	210.23	9604.31	-620.63	-1358.19	1490.23	1493.27	245.44	.21
10000.00	4.30	210.80	9803.82	-632.62	-1365.26	1501.11	1504.71	245.14	.31
10200.00	5.04	204.42	10003.16	-647.06	-1372.73	1513.24	1517.59	244.76	.45
10400.00	5.03	205.39	10202.39	-662.98	-1380.13	1525.83	1531.11	244.34	.04
10600.00	5.18	206.25	10401.59	-678.99	-1387.88	1538.78	1545.07	243.93	.08
10800.00	5.44	207.75	10600.73	-695.48	-1396.29	1552.52	1559.91	243.52	.15
11000.00	5.44	213.45	10799.83	-711.78	-1405.93	1567.34	1575.84	243.15	.27
11200.00	5.60	219.08	10998.91	-727.27	-1417.30	1583.49	1593.00	242.84	.28
11400.00	5.55	216.84	11197.96	-742.58	-1429.25	1600.12	1610.65	242.55	.11
11600.00	5.86	216.94	11396.97	-758.48	-1441.19	1616.94	1628.59	242.24	.16
11800.00	6.49	214.48	11595.81	-775.96	-1453.72	1634.89	1647.85	241.91	.34
12000.00	6.22	226.13	11794.59	-792.79	-1467.93	1654.17	1668.33	241.63	.66
12200.00	6.49	231.65	11993.36	-807.31	-1484.61	1674.93	1689.91	241.46	.33
12400.00	6.73	243.59	12192.04	-819.54	-1503.97	1697.37	1712.76	241.41	.70
12600.00	7.28	266.05	12390.59	-825.62	-1527.11	1721.17	1736.01	241.60	1.39
12800.00	5.83	260.65	12589.28	-828.15	-1549.78	1743.24	1757.17	241.88	.79
13000.00	5.09	254.35	12788.37	-832.19	-1568.34	1762.03	1775.46	242.05	.48
13200.00	4.05	248.30	12987.73	-837.19	-1583.45	1777.92	1791.15	242.13	.57
13400.00	3.99	247.23	13187.24	-842.50	-1596.43	1791.94	1805.10	242.18	.05

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	
13550.00	3.93	228.66	13336.89	-847.91	-1605.10	1801.97	1815.30	242.15	.85
Last Survey Depth Recorded									
13650.00	4.09	233.60	13436.64	-852.29	-1610.54	1808.62	1822.16	242.11	.38