

Job Number: SVGJ-150295

Company: PDC

Lease/Well: State 22-4

Location: Weld County, CO

Rig Name: MS Energy Wireline

RKB: 0'

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

State/Country: Colorado/USA

Declination: 8.34°

Grid: East To True North

File name: W:\WINSER~1\2015SU~1\PDC\GJ\STATE\224.SVY

Date/Time: 08-Dec-15 / 15:01

Curve Name: Surface - 1700' 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 Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.69	231.16	100.00	-.38	-.47	-.38	.60	231.16	.69
200.00	.34	229.92	199.99	-.95	-1.17	-.95	1.50	230.91	.35
300.00	.33	228.31	299.99	-1.33	-1.61	-1.33	2.09	230.41	.01
400.00	.34	227.93	399.99	-1.72	-2.04	-1.72	2.67	229.91	.01
500.00	.56	240.90	499.99	-2.16	-2.69	-2.16	3.45	231.29	.24
600.00	.59	239.06	599.98	-2.66	-3.56	-2.66	4.44	233.24	.04
700.00	.63	235.39	699.98	-3.23	-4.45	-3.23	5.50	234.00	.06
800.00	.63	225.62	799.97	-3.93	-5.30	-3.93	6.60	233.42	.11
900.00	.69	213.54	899.96	-4.82	-6.02	-4.82	7.71	231.34	.15
1000.00	.71	204.42	999.96	-5.88	-6.61	-5.88	8.85	228.33	.11
1100.00	.74	195.97	1099.95	-7.07	-7.05	-7.07	9.98	224.91	.11
1200.00	.76	198.03	1199.94	-8.32	-7.43	-8.32	11.15	221.76	.03

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1300.00	.81	200.84	1299.93	-9.61	-7.89	-9.61	12.43	219.37	.06
1400.00	.79	202.92	1399.92	-10.91	-8.41	-10.91	13.77	217.62	.04
1500.00	.77	204.35	1499.91	-12.15	-8.95	-12.15	15.09	216.37	.03
1600.00	.76	209.15	1599.90	-13.35	-9.55	-13.35	16.41	215.59	.06
Last Survey Depth Recorded									
1700.00	.85	216.07	1699.89	-14.52	-10.31	-14.52	17.81	215.37	.13