



Job Number: SVGJ-131146

Company: PDC

Lease/Well: Bryce 1

Location: Weld County, CO

Rig Name: Production

RKB: 0'

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

State/Country: Colorado/USA

Declination: 8.57°

Grid: East To True North

File name: S:\2013SU~1\PDC\GJ\BRYCE\1.SVY

Date/Time: 04-Nov-13 / 12:10

Curve Name: Surface - 7285' M.D. (Rate Gyro)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

<i>Measured Depth FT</i>	<i>Incl Angle Deg</i>	<i>Drift Direction Deg</i>	<i>True Vertical Depth</i>	<i>N-S FT</i>	<i>E-W FT</i>	<i>Vertical Section FT</i>	<i>C L O S U R E</i>		<i>Dogleg Severity Deg/100</i>
							<i>Distance FT</i>	<i>Direction Deg</i>	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.12	200.95	100.00	-.10	-.04	-.10	.10	200.95	.12
200.00	.40	210.83	200.00	-.50	-.25	-.50	.56	207.13	.28
300.00	.45	261.42	300.00	-.85	-.82	-.85	1.18	223.88	.37
400.00	.56	276.11	399.99	-.86	-1.70	-.86	1.90	243.09	.17
500.00	.46	311.66	499.99	-.54	-2.48	-.54	2.54	257.69	.33
600.00	.78	292.78	599.98	-.01	-3.41	-.01	3.41	269.82	.38
700.00	.57	319.78	699.98	.63	-4.36	.63	4.40	278.26	.38
800.00	.63	282.12	799.97	1.13	-5.22	1.13	5.34	282.20	.39
900.00	.53	295.28	899.97	1.44	-6.17	1.44	6.34	283.14	.17

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	
1000.00	.81	247.77	999.96	1.37	-7.24	1.37	7.37	280.71	.60
1100.00	.80	258.23	1099.95	.96	-8.58	.96	8.64	276.39	.15
1200.00	.76	231.97	1199.94	.41	-9.79	.41	9.80	272.40	.36
1300.00	.71	229.39	1299.93	-.40	-10.78	-.40	10.79	267.86	.06
1400.00	1.07	227.82	1399.92	-1.43	-11.94	-1.43	12.03	263.16	.36
1500.00	1.13	231.35	1499.90	-2.68	-13.40	-2.68	13.67	258.71	.09
1600.00	1.12	239.52	1599.88	-3.79	-15.02	-3.79	15.49	255.85	.16
1700.00	.87	225.96	1699.87	-4.81	-16.41	-4.81	17.10	253.66	.34
1800.00	.89	240.83	1799.86	-5.72	-17.63	-5.72	18.53	252.03	.23
1900.00	.50	231.55	1899.85	-6.37	-18.65	-6.37	19.71	251.15	.40
2000.00	.34	226.38	1999.85	-6.84	-19.21	-6.84	20.39	250.39	.16
2100.00	.24	223.49	2099.84	-7.20	-19.56	-7.20	20.85	249.80	.10
2200.00	.31	279.45	2199.84	-7.31	-19.98	-7.31	21.27	249.91	.27
2300.00	.57	274.84	2299.84	-7.22	-20.74	-7.22	21.96	250.80	.26
2400.00	.55	274.18	2399.84	-7.14	-21.71	-7.14	22.86	251.79	.02
2500.00	.57	309.73	2499.83	-6.79	-22.57	-6.79	23.57	253.26	.34
2600.00	1.01	302.04	2599.82	-6.00	-23.70	-6.00	24.45	255.78	.45
2700.00	1.01	294.17	2699.81	-5.18	-25.25	-5.18	25.78	258.42	.14
2800.00	1.26	301.25	2799.79	-4.25	-27.00	-4.25	27.33	261.06	.29
2900.00	1.40	314.47	2899.76	-2.82	-28.81	-2.82	28.95	264.41	.34
3000.00	1.36	310.25	2999.73	-1.20	-30.59	-1.20	30.61	267.76	.11
3100.00	1.32	306.66	3099.70	.26	-32.42	.26	32.42	270.46	.09
3200.00	.93	306.78	3199.68	1.43	-33.99	1.43	34.02	272.41	.39
3300.00	.94	278.80	3299.67	2.04	-35.45	2.04	35.51	273.30	.45
3400.00	.61	271.99	3399.66	2.19	-36.79	2.19	36.86	273.40	.34
3500.00	.49	275.52	3499.66	2.25	-37.75	2.25	37.82	273.41	.12
3600.00	.15	28.94	3599.66	2.40	-38.11	2.40	38.19	273.61	.57
3700.00	.11	317.26	3699.66	2.59	-38.12	2.59	38.20	273.88	.16
3800.00	.30	147.63	3799.66	2.44	-38.04	2.44	38.12	273.67	.41

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	
3900.00	.77	221.00	3899.65	1.71	-38.34	1.71	38.38	272.55	.74
4000.00	.76	217.69	3999.64	.68	-39.19	.68	39.19	270.99	.05
4100.00	.24	214.15	4099.64	-.02	-39.71	-.02	39.71	269.97	.52
4200.00	.06	297.11	4199.64	-.17	-39.88	-.17	39.88	269.75	.24
4300.00	.17	237.72	4299.64	-.23	-40.05	-.23	40.05	269.68	.15
4400.00	.48	264.00	4399.64	-.35	-40.59	-.35	40.59	269.51	.34
4500.00	.44	284.48	4499.63	-.30	-41.38	-.30	41.38	269.59	.17
4600.00	1.14	267.95	4599.62	-.24	-42.74	-.24	42.74	269.68	.73
4700.00	1.19	257.01	4699.60	-.51	-44.75	-.51	44.75	269.35	.23
4800.00	1.04	266.72	4799.58	-.79	-46.67	-.79	46.67	269.03	.24
4900.00	1.40	269.33	4899.56	-.86	-48.79	-.86	48.80	268.99	.36
5000.00	1.36	275.21	4999.53	-.76	-51.20	-.76	51.20	269.15	.15
5100.00	1.19	265.63	5099.51	-.74	-53.42	-.74	53.42	269.21	.27
5200.00	.96	266.52	5199.49	-.87	-55.29	-.87	55.29	269.10	.23
5300.00	.48	285.86	5299.48	-.80	-56.53	-.80	56.53	269.19	.53
5400.00	.59	275.44	5399.48	-.64	-57.44	-.64	57.45	269.36	.15
5500.00	.72	311.63	5499.47	-.17	-58.42	-.17	58.42	269.83	.43
5600.00	1.17	316.40	5599.46	.98	-59.60	.98	59.61	270.95	.46
5700.00	1.78	322.34	5699.42	2.95	-61.25	2.95	61.32	272.76	.63
5800.00	1.79	306.24	5799.38	5.11	-63.46	5.11	63.66	274.60	.50
5900.00	1.50	287.32	5899.34	6.42	-65.97	6.42	66.28	275.56	.61
6000.00	1.48	275.55	5999.30	6.93	-68.50	6.93	68.85	275.78	.31
6100.00	1.42	274.46	6099.27	7.16	-71.02	7.16	71.38	275.75	.07
6200.00	1.45	271.12	6199.24	7.28	-73.52	7.28	73.88	275.65	.09
6300.00	1.21	277.46	6299.21	7.44	-75.84	7.44	76.20	275.60	.28
6400.00	.68	290.16	6399.20	7.78	-77.44	7.78	77.83	275.74	.57
6500.00	.84	286.54	6499.19	8.19	-78.70	8.19	79.12	275.94	.17
6600.00	.89	301.69	6599.18	8.81	-80.06	8.81	80.55	276.28	.23
6700.00	.75	306.71	6699.17	9.61	-81.25	9.61	81.81	276.74	.16

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	
6800.00	.57	295.87	6799.16	10.22	-82.22	10.22	82.85	277.08	.22
6900.00	.70	284.34	6899.15	10.59	-83.26	10.59	83.93	277.25	.18
7000.00	.69	289.42	6999.15	10.94	-84.42	10.94	85.13	277.38	.06
7100.00	.82	308.37	7099.14	11.58	-85.55	11.58	86.33	277.71	.28
7200.00	.69	336.58	7199.13	12.58	-86.35	12.58	87.26	278.29	.39

Last Survey Depth Recorded									
7285.00	.48	338.80	7284.13	13.38	-86.68	13.38	87.71	278.77	.25