



Job Number: 1010xxxx
Company: Black Hills E&P
Lease/Well: Ute #34-34
Location: La Plata County, Colorado
Rig Name: ☐
RKB: 7209'
G.L. or M.S.L.: 7198'

State/Country: CO
Declination: ☐
Grid: ☐
File name: Y:\JOB DAT~1\BLACKH~1\2010\UTE#34~3\#34-34.SVY
Date/Time: 05-Feb-10 / 16:17
Curve Name: Ute #34-34 plan 2-05-10

Ute #34-34 plan 2-05-10

WINSERVE PROPOSAL REPORT
Minimum Curvature Method
Vertical Section Plane 27.65
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 Distance FT</i>	<i>Direction Deg</i>	<i>Dogleg Severity Deg/100</i>
Surface - 882' FSL 1237' FEL Sec 34, T33N R08W									
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Surface Casing									
450.00	.00	.00	450.00	.00	.00	.00	.00	.00	.00
KOP-> 500 TVD Begin Build @ 2.00% 100', 27.65° Azimuth									
500.00	.00	27.65	500.00	.00	.00	.00	.00	.00	.00
530.00	.60	27.65	530.00	.14	.07	.16	.16	27.64	2.00
560.00	1.20	27.65	560.00	.56	.29	.63	.63	27.65	2.00
590.00	1.80	27.65	589.99	1.25	.66	1.41	1.41	27.65	2.00
620.00	2.40	27.65	619.96	2.23	1.17	2.51	2.51	27.65	2.00
650.00	3.00	27.65	649.93	3.48	1.82	3.93	3.93	27.65	2.00
680.00	3.60	27.65	679.88	5.01	2.62	5.65	5.65	27.65	2.00
710.00	4.20	27.65	709.81	6.82	3.57	7.69	7.69	27.65	2.00
740.00	4.80	27.65	739.72	8.90	4.66	10.05	10.05	27.65	2.00
770.00	5.40	27.65	769.60	11.26	5.90	12.71	12.71	27.65	2.00
800.00	6.00	27.65	799.45	13.90	7.28	15.69	15.69	27.65	2.00
830.00	6.60	27.65	829.27	16.82	8.81	18.99	18.99	27.65	2.00
860.00	7.20	27.65	859.05	20.01	10.48	22.59	22.59	27.65	2.00
890.00	7.80	27.65	888.80	23.48	12.30	26.51	26.51	27.65	2.00
920.00	8.40	27.65	918.50	27.22	14.26	30.73	30.73	27.65	2.00
950.00	9.00	27.65	948.15	31.24	16.37	35.27	35.27	27.65	2.00
980.00	9.60	27.65	977.76	35.54	18.62	40.12	40.12	27.65	2.00
1010.00	10.20	27.65	1007.31	40.11	21.01	45.28	45.28	27.65	2.00

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
1040.00	10.80	27.65	1036.81	44.95	23.55	50.74	50.74	27.65	2.00
1070.00	11.40	27.65	1066.25	50.07	26.23	56.52	56.52	27.65	2.00
1100.00	12.00	27.65	1095.62	55.45	29.05	62.60	62.60	27.65	2.00
1130.00	12.60	27.65	1124.93	61.12	32.02	68.99	68.99	27.65	2.00
1160.00	13.20	27.65	1154.18	67.05	35.12	75.69	75.69	27.65	2.00
1190.00	13.80	27.65	1183.35	73.25	38.37	82.69	82.69	27.65	2.00
1220.00	14.40	27.65	1212.44	79.73	41.76	90.00	90.00	27.65	2.00
1250.00	15.00	27.65	1241.46	86.47	45.30	97.62	97.62	27.65	2.00
1280.00	15.60	27.65	1270.40	93.48	48.97	105.53	105.53	27.65	2.00
1310.00	16.20	27.65	1299.25	100.76	52.78	113.75	113.75	27.65	2.00
1340.00	16.80	27.65	1328.02	108.31	56.74	122.27	122.27	27.65	2.00
1370.00	17.40	27.65	1356.69	116.12	60.83	131.09	131.09	27.65	2.00
1400.00	18.00	27.65	1385.27	124.20	65.06	140.21	140.21	27.65	2.00
1430.00	18.60	27.65	1413.75	132.55	69.44	149.63	149.63	27.65	2.00
1460.00	19.20	27.65	1442.13	141.15	73.94	159.35	159.35	27.65	2.00
1490.00	19.80	27.65	1470.41	150.03	78.59	169.36	169.36	27.65	2.00
1520.00	20.40	27.65	1498.59	159.16	83.38	179.67	179.67	27.65	2.00
Begin Hold @ 20.77°, 27.65° Azm									
1538.66	20.77	27.65	1516.06	164.97	86.42	186.24	186.24	27.65	2.00
1638.66	20.77	27.65	1609.56	196.39	102.88	221.70	221.70	27.65	.00
1738.66	20.77	27.65	1703.05	227.81	119.34	257.17	257.17	27.65	.00
1838.66	20.77	27.65	1796.55	259.22	135.80	292.64	292.64	27.65	.00
1938.66	20.77	27.65	1890.05	290.64	152.25	328.10	328.10	27.65	.00
2038.66	20.77	27.65	1983.55	322.06	168.71	363.57	363.57	27.65	.00
2138.66	20.77	27.65	2077.05	353.47	185.17	399.04	399.04	27.65	.00
2238.66	20.77	27.65	2170.55	384.89	201.63	434.51	434.51	27.65	.00
2338.66	20.77	27.65	2264.05	416.31	218.09	469.97	469.97	27.65	.00
2438.66	20.77	27.65	2357.55	447.73	234.54	505.44	505.44	27.65	.00
2538.66	20.77	27.65	2451.05	479.14	251.00	540.91	540.91	27.65	.00
2638.66	20.77	27.65	2544.55	510.56	267.46	576.37	576.37	27.65	.00
2738.66	20.77	27.65	2638.05	541.98	283.92	611.84	611.84	27.65	.00
2838.66	20.77	27.65	2731.54	573.39	300.38	647.31	647.31	27.65	.00
2938.66	20.77	27.65	2825.04	604.81	316.83	682.77	682.77	27.65	.00
3038.66	20.77	27.65	2918.54	636.23	333.29	718.24	718.24	27.65	.00
3138.66	20.77	27.65	3012.04	667.65	349.75	753.71	753.71	27.65	.00
3238.66	20.77	27.65	3105.54	699.06	366.21	789.18	789.18	27.65	.00
3338.66	20.77	27.65	3199.04	730.48	382.67	824.64	824.64	27.65	.00
3438.66	20.77	27.65	3292.54	761.90	399.13	860.11	860.11	27.65	.00
3538.66	20.77	27.65	3386.04	793.31	415.58	895.58	895.58	27.65	.00
3638.66	20.77	27.65	3479.54	824.73	432.04	931.04	931.04	27.65	.00
3738.66	20.77	27.65	3573.04	856.15	448.50	966.51	966.51	27.65	.00
3838.66	20.77	27.65	3666.54	887.57	464.96	1001.98	1001.98	27.65	.00
3938.66	20.77	27.65	3760.04	918.98	481.42	1037.45	1037.45	27.65	.00
Top of Coal									
4001.73	20.77	27.65	3819.00	938.80	491.80	1059.81	1059.81	27.65	.00

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	
4038.66	20.77	27.65	3853.53	950.40	497.87	1072.91	1072.91	27.65	.00
4138.66	20.77	27.65	3947.03	981.82	514.33	1108.38	1108.38	27.65	.00
PBHL @ 4019' TVD - 1888' FSL 710' FEL Sec 34, T33N R08W									
4215.63	20.77	27.65	4019.00	1006.00	527.00	1135.68	1135.68	27.65	.00

