

Job Number: 1010xxxx
Company: Black Hills E&P
Lease/Well: Ute #34-41
Location: La Plata County, Colorado
Rig Name: ☐
RKB: 7337'
G.L. or M.S.L.: 7326'

State/Country: CO
Declination: ☐
Grid: ☐
File name: Y:\JOB DAT~1\BLACKH~1\2010\UTE#34~4\#34-41.SVY
Date/Time: 05-Feb-10 / 16:25
Curve Name: Ute #34-41 plan 2-05-10

Ute #34-41 plan 2-05-10

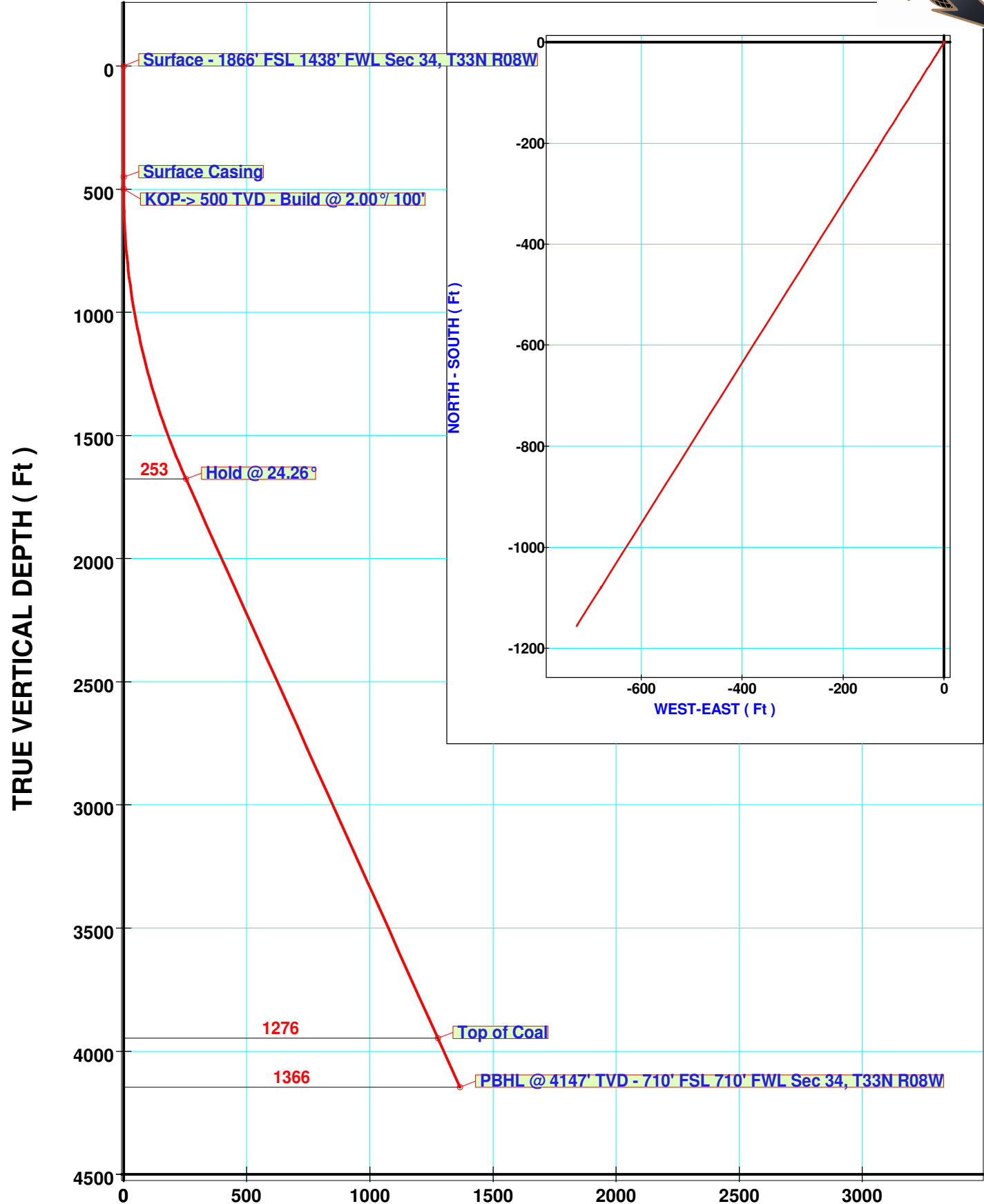
WINSERVE PROPOSAL REPORT
Minimum Curvature Method
Vertical Section Plane 212.20
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

<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 - 1866' FSL 1438' FWL 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', 212.2° Azimuth									
500.00	.00	212.20	500.00	.00	.00	.00	.00	.00	.00
530.00	.60	212.20	530.00	-.13	-.08	.16	.16	212.21	2.00
560.00	1.20	212.20	560.00	-.53	-.33	.63	.63	212.20	2.00
590.00	1.80	212.20	589.99	-1.20	-.75	1.41	1.41	212.20	2.00
620.00	2.40	212.20	619.96	-2.13	-1.34	2.51	2.51	212.20	2.00
650.00	3.00	212.20	649.93	-3.32	-2.09	3.93	3.93	212.20	2.00
680.00	3.60	212.20	679.88	-4.78	-3.01	5.65	5.65	212.20	2.00
710.00	4.20	212.20	709.81	-6.51	-4.10	7.69	7.69	212.20	2.00
740.00	4.80	212.20	739.72	-8.50	-5.35	10.05	10.05	212.20	2.00
770.00	5.40	212.20	769.60	-10.76	-6.78	12.71	12.71	212.20	2.00
800.00	6.00	212.20	799.45	-13.28	-8.36	15.69	15.69	212.20	2.00
830.00	6.60	212.20	829.27	-16.07	-10.12	18.99	18.99	212.20	2.00
860.00	7.20	212.20	859.05	-19.12	-12.04	22.59	22.59	212.20	2.00
890.00	7.80	212.20	888.80	-22.43	-14.12	26.51	26.51	212.20	2.00
920.00	8.40	212.20	918.50	-26.01	-16.38	30.73	30.73	212.20	2.00
950.00	9.00	212.20	948.15	-29.85	-18.80	35.27	35.27	212.20	2.00
980.00	9.60	212.20	977.76	-33.95	-21.38	40.12	40.12	212.20	2.00
1010.00	10.20	212.20	1007.31	-38.31	-24.13	45.28	45.28	212.20	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
				FT	FT	FT	Distance FT	Direction Deg	
1040.00	10.80	212.20	1036.81	-42.94	-27.04	50.74	50.74	212.20	2.00
1070.00	11.40	212.20	1066.25	-47.83	-30.12	56.52	56.52	212.20	2.00
1100.00	12.00	212.20	1095.62	-52.97	-33.36	62.60	62.60	212.20	2.00
1130.00	12.60	212.20	1124.93	-58.38	-36.77	68.99	68.99	212.20	2.00
1160.00	13.20	212.20	1154.18	-64.05	-40.33	75.69	75.69	212.20	2.00
1190.00	13.80	212.20	1183.35	-69.97	-44.07	82.69	82.69	212.20	2.00
1220.00	14.40	212.20	1212.44	-76.16	-47.96	90.00	90.00	212.20	2.00
1250.00	15.00	212.20	1241.46	-82.60	-52.02	97.62	97.62	212.20	2.00
1280.00	15.60	212.20	1270.40	-89.30	-56.24	105.53	105.53	212.20	2.00
1310.00	16.20	212.20	1299.25	-96.25	-60.62	113.75	113.75	212.20	2.00
1340.00	16.80	212.20	1328.02	-103.46	-65.16	122.27	122.27	212.20	2.00
1370.00	17.40	212.20	1356.69	-110.93	-69.86	131.09	131.09	212.20	2.00
1400.00	18.00	212.20	1385.27	-118.65	-74.72	140.21	140.21	212.20	2.00
1430.00	18.60	212.20	1413.75	-126.62	-79.74	149.63	149.63	212.20	2.00
1460.00	19.20	212.20	1442.13	-134.84	-84.92	159.35	159.35	212.20	2.00
1490.00	19.80	212.20	1470.41	-143.31	-90.25	169.36	169.36	212.20	2.00
1520.00	20.40	212.20	1498.59	-152.04	-95.75	179.67	179.67	212.20	2.00
1550.00	21.00	212.20	1526.65	-161.01	-101.40	190.28	190.28	212.20	2.00
1580.00	21.60	212.20	1554.60	-170.23	-107.20	201.18	201.18	212.20	2.00
1610.00	22.20	212.20	1582.43	-179.70	-113.17	212.37	212.37	212.20	2.00
1640.00	22.80	212.20	1610.15	-189.41	-119.29	223.85	223.85	212.20	2.00
1670.00	23.40	212.20	1637.74	-199.37	-125.56	235.62	235.62	212.20	2.00
1700.00	24.00	212.20	1665.21	-209.58	-131.98	247.67	247.67	212.20	2.00
Begin Hold @ 24.26°, 212.20° Azm									
1713.01	24.26	212.20	1677.09	-214.08	-134.82	252.99	252.99	212.20	2.00
1813.01	24.26	212.20	1768.25	-248.85	-156.71	294.08	294.08	212.20	.00
1913.01	24.26	212.20	1859.42	-283.61	-178.61	335.17	335.17	212.20	.00
2013.01	24.26	212.20	1950.59	-318.38	-200.50	376.26	376.26	212.20	.00
2113.01	24.26	212.20	2041.76	-353.15	-222.40	417.34	417.34	212.20	.00
2213.01	24.26	212.20	2132.93	-387.92	-244.29	458.43	458.43	212.20	.00
2313.01	24.26	212.20	2224.10	-422.69	-266.19	499.52	499.52	212.20	.00
2413.01	24.26	212.20	2315.27	-457.45	-288.09	540.61	540.61	212.20	.00
2513.01	24.26	212.20	2406.44	-492.22	-309.98	581.70	581.70	212.20	.00
2613.01	24.26	212.20	2497.61	-526.99	-331.88	622.78	622.78	212.20	.00
2713.01	24.26	212.20	2588.77	-561.76	-353.77	663.87	663.87	212.20	.00
2813.01	24.26	212.20	2679.94	-596.53	-375.67	704.96	704.96	212.20	.00
2913.01	24.26	212.20	2771.11	-631.29	-397.56	746.05	746.05	212.20	.00
3013.01	24.26	212.20	2862.28	-666.06	-419.46	787.14	787.14	212.20	.00
3113.01	24.26	212.20	2953.45	-700.83	-441.35	828.22	828.22	212.20	.00
3213.01	24.26	212.20	3044.62	-735.60	-463.25	869.31	869.31	212.20	.00
3313.01	24.26	212.20	3135.79	-770.37	-485.14	910.40	910.40	212.20	.00
3413.01	24.26	212.20	3226.96	-805.13	-507.04	951.49	951.49	212.20	.00
3513.01	24.26	212.20	3318.13	-839.90	-528.93	992.58	992.58	212.20	.00
3613.01	24.26	212.20	3409.30	-874.67	-550.83	1033.66	1033.66	212.20	.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 Distance FT	Direction Deg	Dogleg Severity Deg/100
3713.01	24.26	212.20	3500.46	-909.44	-572.73	1074.75	1074.75	212.20	.00
3813.01	24.26	212.20	3591.63	-944.21	-594.62	1115.84	1115.84	212.20	.00
3913.01	24.26	212.20	3682.80	-978.97	-616.52	1156.93	1156.93	212.20	.00
4013.01	24.26	212.20	3773.97	-1013.74	-638.41	1198.02	1198.02	212.20	.00
4113.01	24.26	212.20	3865.14	-1048.51	-660.31	1239.10	1239.10	212.20	.00

Top of Coal									
4202.80	24.26	212.20	3947.00	-1079.73	-679.97	1276.00	1276.00	212.20	.00
4213.01	24.26	212.20	3956.31	-1083.28	-682.20	1280.19	1280.19	212.20	.00
4313.01	24.26	212.20	4047.48	-1118.05	-704.10	1321.28	1321.28	212.20	.00
4413.01	24.26	212.20	4138.65	-1152.81	-725.99	1362.37	1362.37	212.20	.00
PBHL @ 4147' TVD - 710' FSL 710' FWL Sec 34, T33N R08W									
4422.17	24.26	212.20	4147.00	-1156.00	-728.00	1366.13	1366.13	212.20	.00



VERTICAL SECTION (Ft) @ 212.20°