



Well: WFU Durham #2-31
Location: 5N 90W Sec 31 SW SE SE-Lat.

Declination Corr.: -10.33
Grid Corr.: _____

Calculation Method Minimum Curvature
Proposed Azimuth 145 From True North
Depth Reference KB 6708

Rig: _____

Total Corr.: _____

Tie Into: _____

Built on 2-11-2010, Modified 4-7-2010 and Modified again on 5-6-2010

Survey Tool Type	Survey Depth (ft)	Inclina- tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
Tie In Coordinates													
Surface					0	0							
Kick Off Point	150	0	180		150	0							
Planned	250	0	180	100	250	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	350	0	180	100	350	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	450	0	180	100	450	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	550	0	180	100	550	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	650	0	180	100	650	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	750	0	180	100	750	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	850	0	180	100	850	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	950	0	180	100	950	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	1050	0	180	100	1050	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	1150	0	180	100	1150	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	1250	0	180	100	1250	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	1350	0	180	100	1350	#DIV/0!	0.00 N	0.00 E	0.00	#DIV/0!	0.00	0.00	0.00
Planned	1450	3	180	100	1450	2	2.62 S	0.00 E	2.62	180.00	3.00	3.00	0.00
Planned	1550	6	180	100	1550	9	10.46 S	0.00 E	10.46	180.00	3.00	3.00	0.00
Planned	1650	9	180	100	1649	19	23.51 S	0.00 E	23.51	180.00	3.00	3.00	0.00
Planned	1750	10	180	100	1747	33	40.02 S	0.00 E	40.02	180.00	1.00	1.00	0.00
Planned	1850	10	180	100	1846	47	57.38 S	0.00 E	57.38	180.00	0.00	0.00	0.00
Planned	1950	10	180	100	1944	61	74.75 S	0.00 E	74.75	180.00	0.00	0.00	0.00
Planned	2050	10	180	100	2043	75	92.11 S	0.00 E	92.11	180.00	0.00	0.00	0.00
Planned	2150	10	180	100	2141	90	109.48 S	0.00 E	109.48	180.00	0.00	0.00	0.00
Planned	2250	12	180	100	2239	105	128.56 S	0.00 E	128.56	180.00	2.00	2.00	0.00
Planned	2350	14	180	100	2337	124	151.05 S	0.00 E	151.05	180.00	2.00	2.00	0.00
Planned	2450	16	180	100	2433	145	176.93 S	0.00 E	176.93	180.00	2.00	2.00	0.00
Planned	2550	18	180	100	2529	169	206.17 S	0.00 E	206.17	180.00	2.00	2.00	0.00
Planned	2650	20	180	100	2624	196	238.72 S	0.00 E	238.72	180.00	2.00	2.00	0.00
Planned	2750	22	180	100	2717	225	274.56 S	0.00 E	274.56	180.00	2.00	2.00	0.00
Planned	2850	24	180	100	2809	257	313.63 S	0.00 E	313.63	180.00	2.00	2.00	0.00
Planned	2950	26	180	100	2900	292	355.89 S	0.00 E	355.89	180.00	2.00	2.00	0.00
Planned	3050	28	180	100	2989	329	401.29 S	0.00 E	401.29	180.00	2.00	2.00	0.00
Buck Peak @3159 MD 3083 TVD	3150	32	180	100	3075	370	451.28 S	0.00 E	451.28	180.00	4.00	4.00	0.00
Planned	3250	37	180	100	3158	416	507.90 S	0.00 E	507.90	180.00	5.00	5.00	0.00
Planned	3350	43	180	100	3234	469	572.15 S	0.00 E	572.15	180.00	6.00	6.00	0.00
Planned	3400	46	180	50	3270	497	607.19 S	0.00 E	607.19	180.00	6.00	6.00	0.00
Planned	3450	49	180	50	3304	528	644.05 S	0.00 E	644.05	180.00	6.00	6.00	0.00
Planned	3500	52	180	50	3336	559	682.63 S	0.00 E	682.63	180.00	6.00	6.00	0.00
Planned	3550	55	180	50	3365	592	722.81 S	0.00 E	722.81	180.00	6.00	6.00	0.00
Top of Niobrara	3665	60	177	115	3427	673	819.72 S	2.61 E	819.72	179.82	4.87	4.35	-2.61
Casing Point	3695	60	175	30	3442	695	845.64 S	4.42 E	845.65	179.70	5.77	0.00	-6.67
Planned	3850	65	170	155	3514	817	981.82 S	22.49 E	982.08	178.69	4.31	3.23	-3.23
Planned	3950	70	165	100	3552	902	1,071.94 S	42.54 E	1,072.78	177.73	6.81	5.00	-5.00
Planned	4,050	75.0	160	100	3582	993	1,162.82 S	71.25 E	1,165.00	176.49	6.91	5.00	-5.00
Planned	4,150	80.0	155	100	3604	1089	1,252.94 S	108.63 E	1,257.64	175.04	6.99	5.00	-5.00
Planned	4,250	85.0	150	100	3617	1187	1,340.81 S	154.40 E	1,349.67	173.43	7.04	5.00	-5.00
Planned	4,350	90.0	145	100	3621	1287	1,425.01 S	208.05 E	1,440.12	171.69	7.07	5.00	-5.00
Planned	4,450	93.0	140	100	3618	1386	1,504.29 S	268.88 E	1,528.13	169.87	5.83	3.00	-5.00
Planned	4,550	93.0	137	100	3613	1486	1,579.07 S	335.04 E	1,614.23	168.02	3.00	0.00	-3.00
Planned	4,650	93.0	135	100	3608	1584	1,650.91 S	404.41 E	1,699.72	166.24	2.00	0.00	-2.00
Planned	4,750	93.0	133	100	3603	1682	1,720.27 S	476.24 E	1,784.98	164.53	2.00	0.00	-2.00
Planned	4,850	93.0	133	100	3598	1780	1,788.38 S	549.28 E	1,870.83	162.93	0.00	0.00	0.00
Planned	4,950	93.0	133	100	3592	1878	1,856.49 S	622.31 E	1,958.01	161.47	0.00	0.00	0.00
Planned	5,050	93.0	133	100	3587	1975	1,924.59 S	695.35 E	2,046.35	160.14	0.00	0.00	0.00
Planned	5,150	93.0	131	100	3582	2073	1,991.41 S	769.56 E	2,134.93	158.87	2.00	0.00	-2.00
Planned	5,300	93.0	130	150	3574	2218	2,088.69 S	883.46 E	2,267.85	157.07	0.67	0.00	-0.67
Planned	5,500	93.0	130	200	3564	2411	2,217.07 S	1,036.46 E	2,447.38	154.94	0.00	0.00	0.00
Planned	5,700	93.0	130	200	3553	2604	2,345.46 S	1,189.46 E	2,629.82	153.11	0.00	0.00	0.00
Planned	5,900	93.0	128	200	3543	2796	2,471.14 S	1,344.67 E	2,813.30	151.45	1.00	0.00	-1.00
Planned	6,100	93.0	125	200	3532	2985	2,589.93 S	1,505.20 E	2,995.56	149.84	1.50	0.00	-1.50
MWD	6,300	93.0	122	200	3522	3171	2,700.15 S	1,671.73 E	3,175.77	148.24	1.50	0.00	-1.50
Total Depth	6,585	93.0	118	285	3507	3429	2,842.43 S	1,918.16 E	3,429.10	145.99	1.40	0.00	-1.40