



## Hocker #3-35 La Plata County, CO



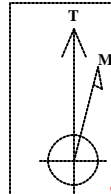
KB ELEV: 6328  
GL ELEV: 6316

### SITE DETAILS

Hocker #3-35

Site Centre Latitude: 37°03'21.888N  
Longitude: 107°34'23.520W

Ground Level: 6316.00  
Positional Uncertainty: 0.00  
Convergence: -1.27



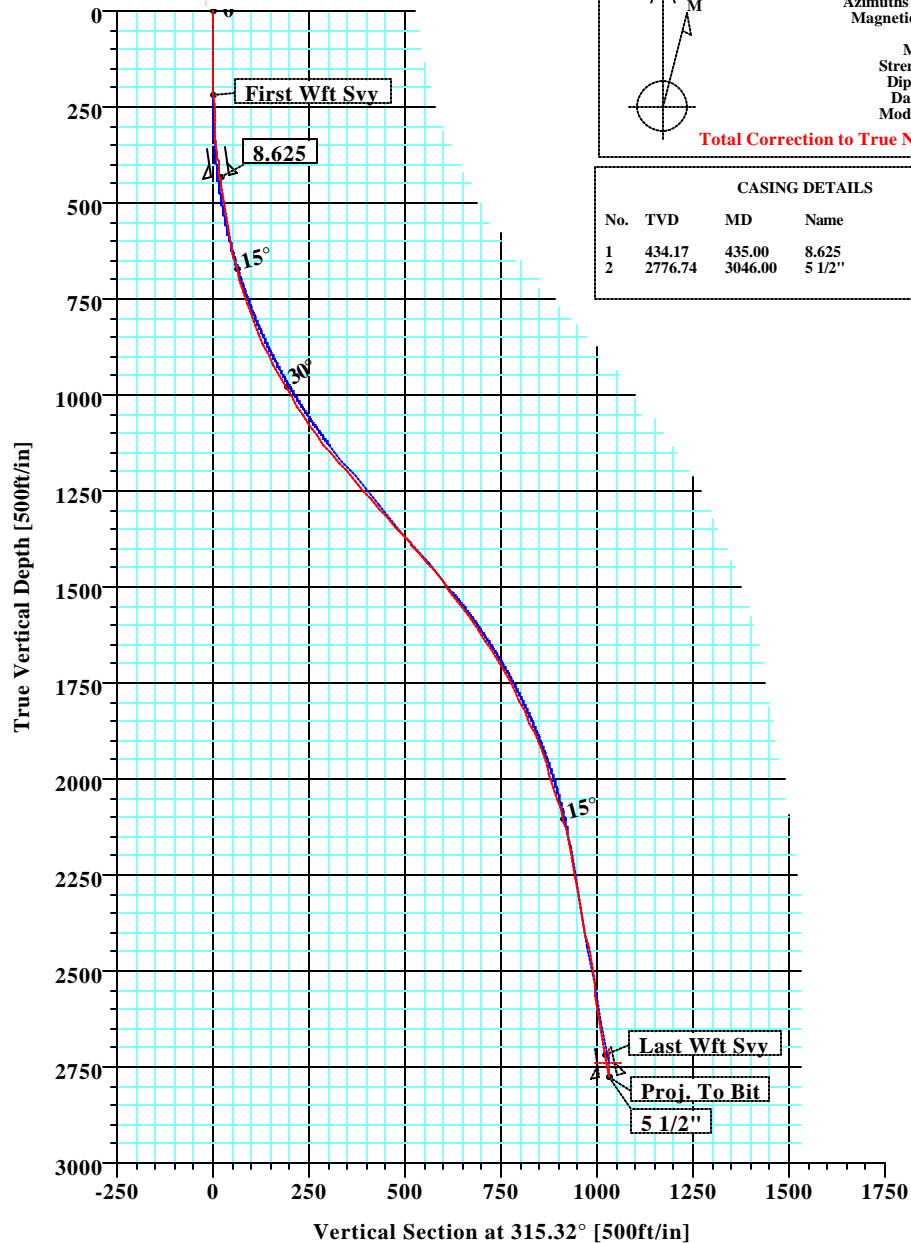
Azimuths to True North  
Magnetic North: 9.82°

Magnetic Field  
Strength: 50956nT  
Dip Angle: 63.76°  
Date: 10/20/2011  
Model: IGRF2010

Total Correction to True North: 9.82°

### CASING DETAILS

No.	TVD	MD	Name	Size
1	434.17	435.00	8.625	8.625
2	2776.74	3046.00	5 1/2"	5.500



### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	315.32	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	315.32	250.00	0.00	0.00	0.00	0.00	0.00	
3	1250.00	40.00	315.32	1170.73	238.29	-235.63	4.00	315.32	335.12	
4	1688.08	40.00	315.32	1506.31	438.52	-433.62	0.00	0.00	616.71	
5	2438.08	10.00	315.32	2178.31	661.33	-653.95	4.00	180.00	930.06	
6	3009.45	10.00	315.32	2741.00	731.88	-723.72	0.00	0.00	1029.28	Pbhl

### WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Hocker #3-35	0.00	0.00	1148510.63	2395035.37	37°03'21.888N	107°34'23.520W	N/A

### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Pbhl	2741.00	731.88	-723.72	37°03'29.124N	107°34'32.448W	Point

### FIELD DETAILS

La Plata County, CO (NAD 83)

Geodetic System: US State Plane Coordinate System 1983  
Ellipsoid: GRS 1980  
Zone: Colorado, Southern Zone  
Magnetic Model: IGRF2010

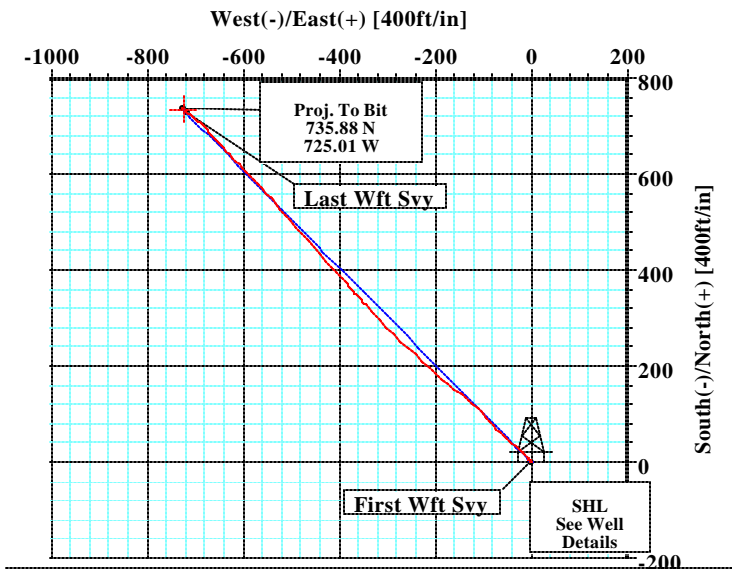
System Datum: Mean Sea Level  
Local North: True North

### FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	1137.00	1201.10	Ojo Alamo
2	1231.00	1324.24	Kirtland Shale
3	2046.00	2301.88	Fruitland Formation
4	2304.00	2566.48	Upper Fruitland Coal
5	2416.00	2680.24	Middle Fruitland Coal
6	2478.00	2743.16	Pictured Cliffs Tongue
7	2673.00	2940.79	Lower Fruitland Coal
8	2688.00	2955.99	Pictured Cliffs

### Survey: Wft Svy (Hocker #3-35/1)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
89	3046.00	9.68	309.70	2776.74	735.88	-725.01	0.00	180.00	1033.03



Survey: Wft Svy (Hocker #3-35/1)

Created By: Russell W. Joyner

Date: 11/28/2011



# Weatherford International Ltd.

## WFT Survey Report Lat, Long



<b>Company:</b> XTO	<b>Date:</b> 11/28/2011	<b>Time:</b> 06:54:23	<b>Page:</b> 1
<b>Field:</b> La Plata County, CO (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: Hocker #3-35, True North		
<b>Site:</b> Hocker #3-35	<b>Vertical (TVD) Reference:</b> SITE 6328.0		
<b>Well:</b> Hocker #3-35	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,315.32Azi)		
<b>Wellpath:</b> 1	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

<b>Survey:</b> Wft Svy	<b>Start Date:</b> 11/22/2011
<b>Company:</b> Weatherford International Ltd.	<b>Engineer:</b> Keith Noack
<b>Tool:</b> MWD;MWD - Standard	<b>Tied-to:</b> From Surface

**Field:** La Plata County, CO (NAD 83)

<b>Map System:</b> US State Plane Coordinate System 1983	<b>Map Zone:</b> Colorado, Southern Zone
<b>Geo Datum:</b> GRS 1980	<b>Coordinate System:</b> Well Centre
<b>Sys Datum:</b> Mean Sea Level	<b>Geomagnetic Model:</b> IGRF2010

**Site:** Hocker #3-35

<b>Site Position:</b>	<b>Northing:</b> 1148510.63 ft	<b>Latitude:</b> 37 3 21.888 N
<b>From:</b> Geographic	<b>Easting:</b> 2395035.37 ft	<b>Longitude:</b> 107 34 23.520 W
<b>Position Uncertainty:</b> 0.00 ft		<b>North Reference:</b> True
<b>Ground Level:</b> 6316.00 ft		<b>Grid Convergence:</b> -1.27 deg

<b>Well:</b> Hocker #3-35	<b>Slot Name:</b>
<b>Well Position:</b> +N/-S 0.00 ft	<b>Northing:</b> 1148510.63 ft
+E/-W 0.00 ft	<b>Easting:</b> 2395035.37 ft
<b>Position Uncertainty:</b> 0.00 ft	
	<b>Latitude:</b> 37 3 21.888 N
	<b>Longitude:</b> 107 34 23.520 W

<b>Wellpath:</b> 1	<b>Drilled From:</b> Surface
<b>Current Datum:</b> SITE	<b>Tie-on Depth:</b> 0.00 ft
<b>Magnetic Data:</b> 10/20/2011	<b>Above System Datum:</b> Mean Sea Level
<b>Field Strength:</b> 50956 nT	<b>Declination:</b> 9.82 deg
<b>Vertical Section:</b> Depth From (TVD)	<b>Mag Dip Angle:</b> 63.76 deg
ft	+E/-W
	ft
	<b>Direction</b>
	deg
0.00	0.00
	0.00
	315.32

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37	3	21.888	107	34	23.520	First Wft Sv
221.00	1.02	325.07	220.99	1.61	-1.13	1.94	0.46	37	3	21.904	107	34	23.534	
252.00	1.57	322.25	251.98	2.17	-1.54	2.63	1.79	37	3	21.909	107	34	23.539	
282.00	2.52	317.19	281.96	2.98	-2.24	3.70	3.22	37	3	21.917	107	34	23.548	
312.00	3.94	317.07	311.91	4.22	-3.39	5.39	4.73	37	3	21.930	107	34	23.562	
342.00	5.06	315.57	341.82	5.92	-5.02	7.74	3.75	37	3	21.946	107	34	23.582	
372.00	6.44	316.95	371.67	8.10	-7.10	10.75	4.62	37	3	21.968	107	34	23.608	
382.00	6.81	316.95	381.60	8.94	-7.88	11.90	3.70	37	3	21.976	107	34	23.617	
435.00	7.78	317.33	434.17	13.87	-12.46	18.63	1.83	37	3	22.025	107	34	23.674	8.625
453.00	8.11	317.44	452.00	15.70	-14.15	21.11	1.83	37	3	22.043	107	34	23.695	
485.00	8.35	316.55	483.67	19.05	-17.27	25.69	0.85	37	3	22.076	107	34	23.733	
516.00	8.70	312.67	514.33	22.28	-20.54	30.28	2.17	37	3	22.108	107	34	23.773	
548.00	9.75	311.57	545.91	25.72	-24.35	35.41	3.33	37	3	22.142	107	34	23.820	
579.00	10.75	311.32	576.42	29.37	-28.48	40.91	3.23	37	3	22.178	107	34	23.871	
611.00	12.06	311.70	607.78	33.56	-33.22	47.22	4.10	37	3	22.220	107	34	23.930	
642.00	13.31	312.07	638.03	38.11	-38.29	54.02	4.04	37	3	22.265	107	34	23.992	
673.00	14.88	311.95	668.09	43.16	-43.90	61.55	5.07	37	3	22.315	107	34	24.062	
704.00	16.31	312.20	697.95	48.74	-50.08	69.87	4.62	37	3	22.370	107	34	24.138	
735.00	17.52	313.04	727.61	54.85	-56.72	78.88	3.98	37	3	22.430	107	34	24.220	
767.00	18.69	314.07	758.02	61.71	-63.92	88.82	3.79	37	3	22.498	107	34	24.309	
797.00	20.00	314.57	786.33	68.65	-71.03	98.76	4.40	37	3	22.567	107	34	24.396	
828.00	21.25	316.45	815.34	76.44	-78.68	109.68	4.56	37	3	22.644	107	34	24.491	
857.00	22.63	317.70	842.24	84.38	-86.06	120.51	5.02	37	3	22.722	107	34	24.582	
887.00	24.25	317.82	869.77	93.21	-94.08	132.43	5.40	37	3	22.810	107	34	24.681	



# Weatherford International Ltd.

## WFT Survey Report Lat, Long



<b>Company:</b> XTO	<b>Date:</b> 11/28/2011	<b>Time:</b> 06:54:23	<b>Page:</b> 2
<b>Field:</b> La Plata County, CO (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: Hocker #3-35, True North		
<b>Site:</b> Hocker #3-35	<b>Vertical (TVD) Reference:</b> SITE 6328.0		
<b>Well:</b> Hocker #3-35	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,315.32Azi)		
<b>Wellpath:</b> 1	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
917.00	26.19	316.45	896.91	102.58	-102.78	145.20	6.75	37	3	22.902	107	34	24.788	
947.00	27.81	314.57	923.63	112.29	-112.32	158.82	6.10	37	3	22.998	107	34	24.906	
977.00	28.51	311.59	950.09	121.95	-122.67	172.96	5.24	37	3	23.094	107	34	25.033	
1007.00	29.69	309.95	976.30	131.48	-133.72	187.51	4.75	37	3	23.188	107	34	25.170	
1037.00	31.25	309.57	1002.15	141.20	-145.41	202.65	5.24	37	3	23.284	107	34	25.314	
1069.00	32.38	308.95	1029.35	151.88	-158.47	219.42	3.68	37	3	23.390	107	34	25.475	
1099.00	33.57	308.73	1054.51	162.12	-171.19	235.65	3.99	37	3	23.491	107	34	25.632	
1129.00	34.63	308.95	1079.35	172.67	-184.29	252.36	3.56	37	3	23.595	107	34	25.793	
1160.00	36.63	310.70	1104.55	184.24	-198.15	270.33	7.24	37	3	23.709	107	34	25.964	
1190.00	38.44	312.07	1128.34	196.32	-211.86	288.56	6.64	37	3	23.829	107	34	26.134	
1220.00	39.88	312.51	1151.60	209.07	-225.88	307.48	4.89	37	3	23.955	107	34	26.306	
1252.00	40.25	312.07	1176.09	222.93	-241.11	328.05	1.46	37	3	24.092	107	34	26.494	
1283.00	40.63	313.57	1199.68	236.60	-255.86	348.14	3.37	37	3	24.227	107	34	26.676	
1315.00	40.56	313.32	1223.98	250.91	-270.98	368.95	0.55	37	3	24.369	107	34	26.863	
1346.00	40.69	314.95	1247.51	264.97	-285.46	389.13	3.45	37	3	24.508	107	34	27.042	
1378.00	41.66	316.44	1271.60	280.05	-300.18	410.19	4.31	37	3	24.657	107	34	27.223	
1410.00	42.00	317.57	1295.44	295.66	-314.73	431.52	2.58	37	3	24.811	107	34	27.403	
1442.00	42.13	317.32	1319.20	311.45	-329.23	452.95	0.66	37	3	24.967	107	34	27.581	
1474.00	42.25	317.07	1342.91	327.22	-343.83	474.43	0.64	37	3	25.123	107	34	27.762	
1568.00	41.06	317.77	1413.14	373.21	-386.11	536.86	1.36	37	3	25.578	107	34	28.283	
1599.00	40.85	317.43	1436.55	388.22	-399.81	557.16	0.99	37	3	25.726	107	34	28.452	
1630.00	39.19	318.45	1460.29	403.02	-413.16	577.08	5.76	37	3	25.873	107	34	28.617	
1662.00	38.69	318.07	1485.18	418.02	-426.55	597.16	1.73	37	3	26.021	107	34	28.782	
1694.00	38.50	317.70	1510.19	432.83	-439.94	617.10	0.93	37	3	26.167	107	34	28.947	
1757.00	36.88	318.57	1560.05	461.51	-465.65	655.57	2.71	37	3	26.451	107	34	29.264	
1789.00	35.30	319.54	1585.90	475.75	-478.00	674.38	5.25	37	3	26.592	107	34	29.417	
1821.00	33.94	319.57	1612.24	489.58	-489.80	692.51	4.25	37	3	26.728	107	34	29.562	
1852.00	32.44	319.19	1638.18	502.46	-500.84	709.44	4.88	37	3	26.856	107	34	29.698	
1882.00	31.88	318.07	1663.58	514.45	-511.39	725.38	2.73	37	3	26.974	107	34	29.829	
1913.00	31.21	319.73	1690.00	526.67	-522.06	741.57	3.54	37	3	27.095	107	34	29.960	
1942.00	30.13	319.70	1714.94	537.95	-531.62	756.31	3.72	37	3	27.207	107	34	30.078	
1972.00	28.56	319.07	1741.09	549.11	-541.19	770.98	5.33	37	3	27.317	107	34	30.196	
2003.00	26.94	318.07	1768.52	559.94	-550.74	785.39	5.44	37	3	27.424	107	34	30.314	
2034.00	25.81	317.95	1796.30	570.17	-559.95	799.14	3.65	37	3	27.525	107	34	30.428	
2064.00	25.08	317.45	1823.39	579.70	-568.62	812.02	2.54	37	3	27.619	107	34	30.535	
2095.00	24.06	316.70	1851.58	589.14	-577.40	824.91	3.44	37	3	27.713	107	34	30.643	
2125.00	22.13	314.95	1879.17	597.59	-585.60	836.67	6.83	37	3	27.796	107	34	30.744	
2153.00	20.63	314.04	1905.25	604.74	-592.87	846.88	5.49	37	3	27.867	107	34	30.834	
2184.00	19.88	315.07	1934.33	612.27	-600.52	857.61	2.68	37	3	27.941	107	34	30.928	
2215.00	19.03	316.42	1963.56	619.66	-607.73	867.93	3.10	37	3	28.014	107	34	31.017	
2245.00	18.45	316.42	1991.97	626.65	-614.37	877.57	1.93	37	3	28.083	107	34	31.099	
2276.00	18.50	316.29	2021.37	633.75	-621.15	887.39	0.21	37	3	28.154	107	34	31.183	
2306.00	17.13	316.20	2049.93	640.38	-627.50	896.57	4.57	37	3	28.219	107	34	31.261	
2336.00	16.06	315.07	2078.68	646.51	-633.49	905.14	3.73	37	3	28.280	107	34	31.335	
2366.00	14.88	315.45	2107.59	652.19	-639.12	913.14	3.95	37	3	28.336	107	34	31.404	
2396.00	13.75	316.45	2136.66	657.52	-644.28	920.55	3.86	37	3	28.389	107	34	31.468	
2426.00	12.25	317.95	2165.89	662.47	-648.87	927.30	5.12	37	3	28.438	107	34	31.525	
2456.00	10.65	319.26	2195.29	666.94	-652.81	933.24	5.40	37	3	28.482	107	34	31.573	
2487.00	10.38	319.95	2225.77	671.24	-656.48	938.88	0.96	37	3	28.524	107	34	31.619	
2516.00	10.19	319.45	2254.31	675.19	-659.83	944.05	0.72	37	3	28.563	107	34	31.660	
2546.00	10.19	316.32	2283.83	679.13	-663.38	949.35	1.85	37	3	28.602	107	34	31.704	
2577.00	10.00	315.95	2314.35	683.05	-667.15	954.78	0.65	37	3	28.641	107	34	31.750	



# Weatherford International Ltd.

## WFT Survey Report Lat, Long



<b>Company:</b> XTO	<b>Date:</b> 11/28/2011	<b>Time:</b> 06:54:23	<b>Page:</b> 3
<b>Field:</b> La Plata County, CO (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: Hocker #3-35, True North		
<b>Site:</b> Hocker #3-35	<b>Vertical (TVD) Reference:</b> SITE 6328.0		
<b>Well:</b> Hocker #3-35	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,315.32Azi)		
<b>Wellpath:</b> 1	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Lat	Min	Sec	Long	Min	Sec	Comment
2609.00	10.06	316.07	2345.87	687.06	-671.02	960.35	0.20	37	3	28.681	107	34	31.798	
2640.00	10.06	316.69	2376.39	690.98	-674.76	965.77	0.35	37	3	28.719	107	34	31.844	
2671.00	10.19	317.20	2406.91	694.96	-678.48	971.21	0.51	37	3	28.759	107	34	31.890	
2702.00	10.13	317.45	2437.42	698.98	-682.18	976.68	0.24	37	3	28.799	107	34	31.936	
2734.00	9.34	312.99	2468.96	702.82	-685.99	982.09	3.41	37	3	28.837	107	34	31.983	
2766.00	9.25	311.45	2500.54	706.30	-689.81	987.25	0.83	37	3	28.871	107	34	32.030	
2798.00	9.13	310.95	2532.13	709.66	-693.66	992.34	0.45	37	3	28.904	107	34	32.077	
2829.00	9.19	310.45	2562.73	712.88	-697.40	997.26	0.32	37	3	28.936	107	34	32.123	
2861.00	9.56	309.57	2594.31	716.23	-701.39	1002.45	1.24	37	3	28.969	107	34	32.173	
2893.00	9.50	309.32	2625.86	719.60	-705.48	1007.72	0.23	37	3	29.002	107	34	32.223	
2925.00	9.44	310.07	2657.43	722.96	-709.54	1012.96	0.43	37	3	29.036	107	34	32.273	
2955.00	9.45	310.18	2687.02	726.13	-713.30	1017.87	0.07	37	3	29.067	107	34	32.319	
2987.00	9.68	309.70	2718.58	729.54	-717.38	1023.16	0.76	37	3	29.101	107	34	32.370	Last Wft Svy
3046.00	9.68	309.70	2776.74	735.88	-725.01	1033.03	0.00	37	3	29.163	107	34	32.464	5 1/2"

### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
435.00	434.17	8.625	8.625	8.625
3046.00	2776.74	5.500	5.500	5 1/2"

### Annotation

MD ft	TVD ft	
221.00	220.99	First Wft Svy
2987.00	2718.58	Last Wft Svy
3046.00	2776.74	Proj. To Bit

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1201.10	1137.00	Ojo Alamo		0.00	0.00
1324.24	1231.00	Kirtland Shale		0.00	0.00
2301.88	2046.00	Fruitland Formation		0.00	0.00
2566.48	2304.00	Upper Fruitland Coal		0.00	0.00
2680.24	2416.00	Middle Fruitland Coal		0.00	0.00
2743.16	2478.00	Pictured Cliffs Tongue		0.00	0.00
2940.79	2673.00	Lower Fruitland Coal		0.00	0.00
2955.99	2688.00	Pictured Cliffs		0.00	0.00