



T C Energy
Coco B 12644, Kanawha, SideTrac #1 As Drill

Job No. 11324
Survey Date: Saturday, July 20, 2024

True North Directional Services
Survey Report

Monday, July 22, 2024

Surface Coordinates: 514,713.14 N, 1,864,679.21 E (38° 24' 45.3520" N, 81° 28' 20.1960" W)
Grid Coordinate System: NAD27 West Virginia State Planes, Southern Zone, US Foot

Surface Coordinates relative to Coco B 12644: 0.00 N, 0.00 E (Grid)

Kelly Bushing Elevation: 866.00ft above Mean Sea Level
Kelly Bushing Elevation: 866.00ft above Mean Sea Level
Kelly Bushing Elevation: 19.00ft above Ground Level
Ground Level: 847.00ft above Mean Sea Level

Survey Ref: svy1274

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Coco B 12644



Survey Report for Kanawha, 12644, SideTrac #1 As Drill

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)		
4,400.00	33.48	168.30	4,169.47	478.76 S	682.00 E	-156.40		0.00 B	0.00 L
4,477.00	33.04	172.52	4,233.87	520.38 S	689.04 E	-132.49	3.059	0.43 B	0.04 R
4,536.00	31.55	174.34	4,283.74	551.69 S	692.66 E	-113.29	3.015	2.00 B	0.17 L
4,581.00	30.83	178.85	4,322.24	574.93 S	694.05 E	-98.11	5.430	3.99 B	0.15 R
4,626.00	32.49	187.47	4,360.56	598.46 S	692.71 E	-80.77	10.700	3.94 B	1.74 R
4,671.00	33.57	194.03	4,398.30	622.52 S	688.12 E	-60.72	8.297	0.98 B	4.58 R
4,715.00	34.34	198.16	4,434.80	646.12 S	681.30 E	-39.40	5.526	3.15 A	7.60 R
4,760.00	35.93	202.75	4,471.61	670.36 S	672.24 E	-16.02	6.849	7.44 A	11.00 R
4,805.00	37.18	206.98	4,507.76	694.66 S	660.96 E	8.99	6.248	11.84 A	14.89 R
4,849.00	37.41	206.15	4,542.76	718.50 S	649.04 E	34.15	1.257	15.65 A	18.03 R
4,894.00	38.70	207.35	4,578.20	743.27 S	636.55 E	60.35	3.304	19.20 A	19.99 R
4,939.00	39.92	209.79	4,613.02	768.30 S	622.91 E	87.56	4.376	22.53 A	21.59 R
4,983.00	41.33	212.38	4,646.41	792.82 S	608.12 E	115.26	4.995	25.56 A	23.26 R
5,028.00	42.74	212.46	4,679.84	818.26 S	591.96 E	144.56	3.136	28.41 A	24.55 R
5,073.00	43.67	213.10	4,712.64	844.16 S	575.28 E	174.57	2.285	30.82 A	24.97 R
5,118.00	44.33	213.29	4,745.01	870.32 S	558.17 E	205.06	1.496	32.44 A	24.59 R
5,162.00	46.08	214.66	4,776.01	896.21 S	540.72 E	235.61	4.550	33.55 A	23.71 R
5,207.00	47.54	216.00	4,806.81	922.97 S	522.74 E	267.86	3.904	34.47 A	22.64 R
5,252.00	48.33	216.87	4,836.95	949.84 S	501.90 E	300.82	2.268	34.75 A	21.33 R
5,297.00	49.54	218.43	4,866.52	976.70 S	481.17 E	334.39	3.750	34.30 A	19.89 R
5,341.00	51.57	222.37	4,894.48	1,002.56 S	459.15 E	368.20	8.311	33.60 A	19.29 R
5,386.00	53.04	224.74	4,921.99	1,028.35 S	434.61 E	403.78	5.295	32.76 A	19.87 R
5,431.00	52.85	224.42	4,949.11	1,053.93 S	409.40 E	439.68	0.707	30.96 A	20.34 R
5,476.00	54.39	225.63	4,975.80	1,079.53 S	383.77 E	475.90	4.049	28.12 A	20.37 R
5,520.00	56.20	226.47	5,000.85	1,104.63 S	357.73 E	512.07	4.403	25.15 A	20.37 R
5,565.00	57.78	226.95	5,025.37	1,130.51 S	330.26 E	549.80	3.623	21.93 A	20.13 R
5,610.00	58.90	226.94	5,048.99	1,156.66 S	302.27 E	588.10	2.489	18.26 A	19.37 R
5,654.00	61.84	226.81	5,070.74	1,182.80 S	274.36 E	626.34	6.687	14.66 A	17.93 R
5,699.00	66.43	226.81	5,090.36	1,210.51 S	244.85 E	666.81	10.200	12.35 A	15.68 R
5,744.00	68.51	227.37	5,107.60	1,238.80 S	214.41 E	708.37	4.763	11.15 A	12.88 R
5,789.00	68.50	227.38	5,124.09	1,267.16 S	183.60 E	750.22	0.030	9.24 A	9.58 R
5,814.00	70.46	227.44	5,132.86	1,283.00 S	166.36 E	773.63	7.843	7.88 A	7.46 R
5,923.00	78.50	228.30	5,162.00	1,353.38 S	88.53 E	878.50	7.415	5.96 A	3.62 L
5,967.00	83.30	232.20	5,168.96	1,381.14 S	55.13 E	921.80	13.984	7.63 A	7.52 L
6,012.00	85.20	235.90	5,173.47	1,407.42 S	18.89 E	966.11	9.206	10.43 A	9.25 L
6,057.00	85.50	237.60	5,177.12	1,432.01 S	18.61 W	1,010.16	3.824	12.58 A	9.55 L
6,102.00	85.50	239.10	5,180.65	1,455.55 S	56.80 W	1,053.96	3.323	13.32 A	9.26 L
6,146.00	85.50	240.80	5,184.10	1,477.52 S	94.77 W	1,096.51	3.852	12.59 A	8.38 L
6,191.00	85.80	241.00	5,187.51	1,499.34 S	133.98 W	1,139.85	0.801	10.44 A	7.39 L
6,217.00	87.10	242.60	5,189.12	1,511.60 S	156.84 W	1,164.80	7.920	8.90 A	6.69 L
6,280.00	89.20	248.10	5,191.16	1,537.85 S	214.05 W	1,224.14	9.340	6.85 A	1.17 L
6,325.00	90.10	249.20	5,191.43	1,554.23 S	255.96 W	1,265.63	3.158	6.60 A	5.38 R
6,370.00	90.10	248.80	5,191.35	1,570.36 S	297.97 W	1,307.02	0.889	6.71 A	12.25 R
6,414.00	91.30	245.90	5,190.82	1,587.30 S	338.57 W	1,347.96	7.132	7.25 A	17.61 R
6,459.00	92.40	244.00	5,189.36	1,606.34 S	379.31 W	1,390.47	4.877	8.72 A	21.21 R
6,504.00	92.00	241.40	5,187.64	1,626.96 S	419.27 W	1,433.51	5.842	10.39 A	23.04 R
6,548.00	91.50	239.70	5,186.29	1,648.59 S	457.56 W	1,476.06	4.026	11.71 A	23.22 R
6,593.00	88.70	238.90	5,186.21	1,671.56 S	496.25 W	1,519.82	6.471	11.80 A	22.42 R
6,637.00	88.60	238.60	5,187.25	1,694.38 S	533.86 W	1,562.71	0.719	10.77 A	21.22 R
6,682.00	88.50	238.30	5,188.39	1,717.92 S	572.19 W	1,606.62	0.703	9.64 A	19.76 R

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Survey Report for Kanawha, 12644, SideTrac #1 As Drill

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)		
6,726.00	88.70	238.40	5,189.46	1,741.00 S	609.64 W	1,649.57	0.508	8.56 A	18.25 R
6,771.00	89.70	238.30	5,190.09	1,764.61 S	647.94 W	1,693.50	2.233	7.91 A	16.70 R
6,816.00	90.80	238.60	5,189.90	1,788.15 S	686.29 W	1,737.42	2.534	8.10 A	15.24 R
6,860.00	89.60	237.30	5,189.74	1,811.50 S	723.58 W	1,780.45	4.021	8.27 A	13.43 R
6,905.00	89.80	237.30	5,189.98	1,835.81 S	761.45 W	1,824.56	0.444	8.03 A	11.05 R
6,950.00	90.00	237.10	5,190.06	1,860.19 S	799.27 W	1,868.68	0.629	7.95 A	8.61 R
6,995.00	89.80	237.20	5,190.14	1,884.60 S	837.08 W	1,912.82	0.497	7.87 A	6.12 R
7,039.00	88.90	237.50	5,190.63	1,908.33 S	874.12 W	1,955.94	2.156	7.37 A	3.84 R
7,083.00	88.70	238.00	5,191.56	1,931.81 S	911.32 W	1,998.99	1.224	6.45 A	1.86 R
7,128.00	89.30	239.50	5,192.34	1,955.15 S	949.79 W	2,042.85	3.590	5.66 A	0.63 R
7,173.00	89.50	240.40	5,192.81	1,977.68 S	988.74 W	2,086.50	2.049	5.19 A	0.35 R
7,217.00	90.20	240.70	5,192.93	1,999.31 S	1,027.05 W	2,129.07	1.731	5.07 A	0.53 R
7,262.00	91.00	240.60	5,192.46	2,021.37 S	1,066.27 W	2,172.58	1.792	5.54 A	0.79 R
7,306.00	90.90	240.80	5,191.73	2,042.90 S	1,104.64 W	2,215.11	0.508	6.27 A	1.08 R
7,351.00	90.30	240.40	5,191.26	2,064.99 S	1,143.84 W	2,258.63	1.602	6.74 A	1.30 R
7,396.00	89.10	240.50	5,191.49	2,087.18 S	1,182.99 W	2,302.18	2.676	6.51 A	1.41 R
7,440.00	89.00	240.40	5,192.22	2,108.88 S	1,221.26 W	2,344.76	0.321	5.78 A	1.51 R
7,485.00	89.90	240.70	5,192.65	2,131.00 S	1,260.44 W	2,388.30	2.108	5.35 A	1.69 R
7,530.00	91.20	240.80	5,192.22	2,152.99 S	1,299.70 W	2,431.79	2.897	5.78 A	2.03 R
7,574.00	90.70	240.50	5,191.49	2,174.55 S	1,338.05 W	2,474.33	1.325	6.51 A	2.29 R
7,618.00	89.50	237.30	5,191.41	2,197.27 S	1,375.72 W	2,517.19	7.767	6.59 A	1.20 R
7,663.00	90.10	237.60	5,191.57	2,221.49 S	1,413.65 W	2,561.28	1.491	6.43 A	1.05 L
7,708.00	90.30	237.70	5,191.41	2,245.57 S	1,451.66 W	2,605.33	0.497	6.59 A	3.14 L
7,752.00	92.40	239.00	5,190.38	2,268.65 S	1,489.11 W	2,648.28	5.613	7.63 A	4.65 L
7,797.00	92.70	239.10	5,188.38	2,291.77 S	1,527.66 W	2,692.06	0.703	9.64 A	5.65 L
7,841.00	91.00	239.40	5,186.96	2,314.25 S	1,565.45 W	2,734.84	3.923	11.05 A	6.47 L
7,886.00	89.50	239.30	5,186.76	2,337.19 S	1,604.17 W	2,778.60	3.341	11.24 A	7.23 L
7,931.00	89.70	239.50	5,187.07	2,360.10 S	1,642.90 W	2,822.35	0.629	10.93 A	7.95 L
7,975.00	89.80	239.30	5,187.27	2,382.49 S	1,680.77 W	2,865.14	0.508	10.74 A	8.65 L
8,020.00	90.20	239.50	5,187.27	2,405.40 S	1,719.50 W	2,908.89	0.994	10.74 A	9.37 L
8,064.00	90.40	239.80	5,187.03	2,427.63 S	1,757.47 W	2,951.63	0.819	10.97 A	9.88 L
8,109.00	90.80	241.50	5,186.56	2,449.69 S	1,796.69 W	2,995.14	3.881	11.44 A	9.62 L
8,153.00	90.90	241.50	5,185.91	2,470.68 S	1,835.36 W	3,037.51	0.227	12.09 A	8.71 L
8,182.00	91.00	241.30	5,185.43	2,484.56 S	1,860.81 W	3,065.45	0.771	12.57 A	8.16 L

Bit Projection

8,230.00	91.00	241.30	5,184.59	2,507.61 S	1,902.91 W	3,111.71	0.000	13.41 A	7.34 L
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All data is in Feet (US Survey) unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to 12644. Northings and Eastings are relative to Coco B 12644.

The dogleg severity is in Degrees per 100 feet (US Survey). Vertical Section is from Coco B 12644 calculated along an azimuth of 225.89° (Grid).

Based upon minimum curvature calculations, at a measured depth of 8,230.00ft, the bottom hole displacement is 3,147.88ft, in the direction of 217.19° (Grid).

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Survey Report for Kanawha, 12644, SideTrac #1 As Drill

Comments associated with 12644, SideTrac #1 As Drill

Station Coordinates						
Survey Depth (ft)	Incl. (°)	(Grid) Azimuth (°)	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Comment
4,400.00	33.48	168.30	4,169.47	478.76 S	682.00 E	Wash in 4509' to 4535'
4,477.00	33.04	172.52	4,233.87	520.38 S	689.04 E	Dress Cement down to 4540
4,493.00	32.63	173.00	4,247.31	528.98 S	690.13 E	Slide 8' then trough 15' back up & Down Time drill 15'
5,610.00	58.90	226.94	5,048.99	1,156.66 S	302.27 E	Downlink To EM Tool & Relog Gama
5,843.00	72.60	227.68	5,142.04	1,301.56 S	146.06 E	Washh In Drill Float and shoe From 5546
5,852.00	73.26	227.75	5,144.69	1,307.35 S	139.70 E	FiT Test
6,217.00	87.10	242.60	5,189.12	1,511.60 S	156.84 W	Make up bit
6,219.00	87.17	242.77	5,189.22	1,512.52 S	158.62 W	Screw in @ 5924, orient motor and wash to bottom
6,682.00	88.50	238.30	5,188.39	1,717.92 S	572.19 W	Stacking out just outside of shoe. Screw in @5880, w
7,138.00	89.34	239.70	5,192.46	1,960.21 S	958.41 W	Wash Down 5894' To 5974'
7,414.00	89.06	240.46	5,191.78	2,096.05 S	1,198.65 W	Wash to bottom
7,414.00	89.06	240.46	5,191.78	2,096.05 S	1,198.65 W	Change bit inspect motor. Change float
7,424.00	89.04	240.44	5,191.95	2,100.98 S	1,207.35 W	Wash to bottom
7,603.00	89.91	238.39	5,191.34	2,189.29 S	1,363.02 W	Wash In From 6422' to 7651
7,603.00	89.91	238.39	5,191.34	2,189.29 S	1,363.02 W	Test Motor & MWD @ Surface
7,603.00	89.91	238.39	5,191.34	2,189.29 S	1,363.02 W	Pick up BHA

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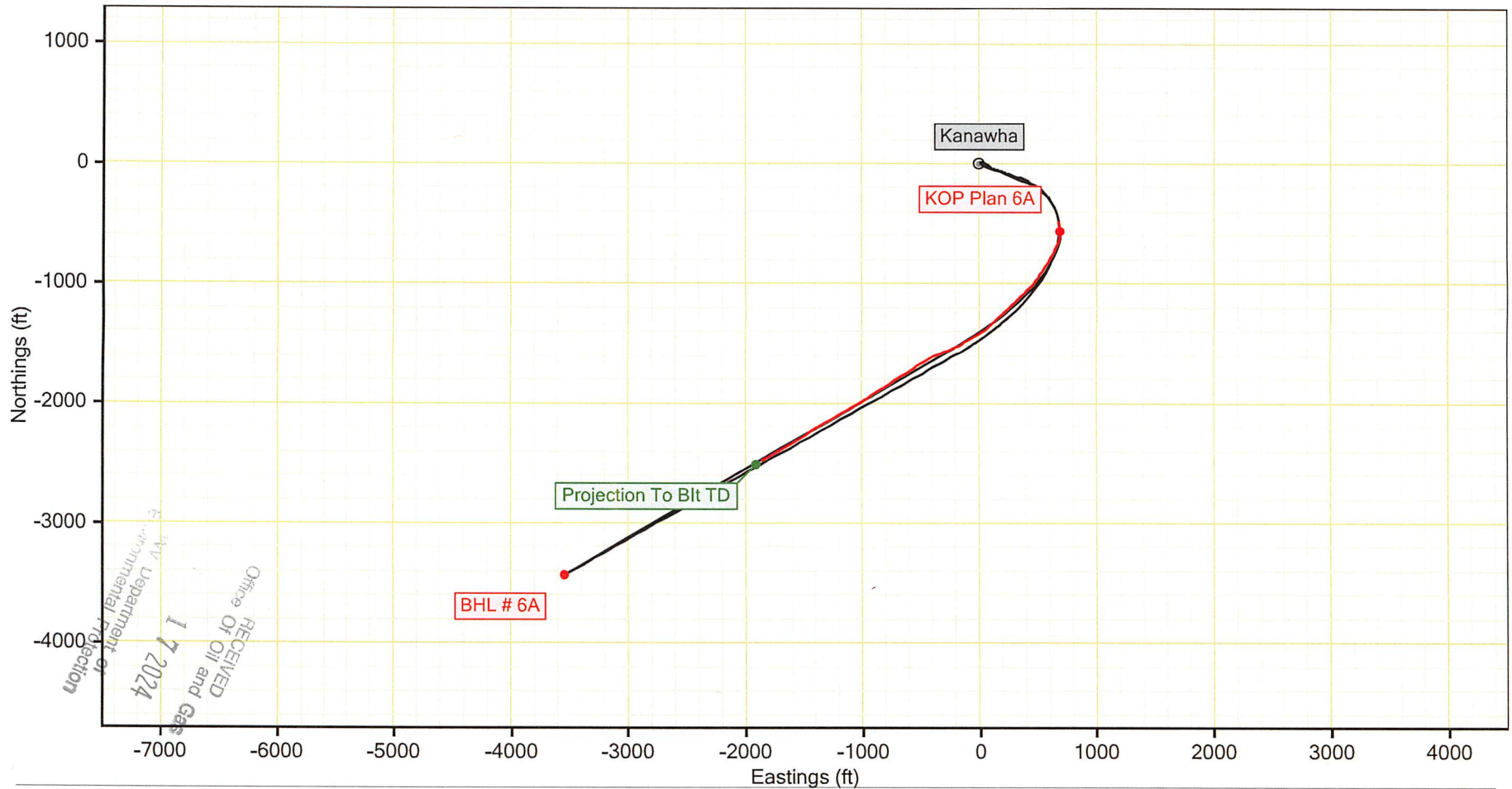


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Horizontal Section



Kanawha, 12644





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Kanawha, 12644

