

Survey Report						30-045-33636					
Vertical Section Plane: 131.37°						Total Correction: 10.59° East to True					
Calculation Method: Minimum Curvature						Survey Reference: Wellhead					
North Aligned to: True North						Well: State J Com #2H					
RKB: 13' ROTARY TO GROUND						FIELD: BASIN FRUITLAND COAL					
Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	Rect Co-ord North (ft)	Rect Co-ord East (ft)	Closure Distance (ft)	Closure Direction (deg)	Dog-leg Severity (dg/hft)	Temp (deg F)
TIE-IN AT SURFACE											
0.00	0.00	0.00	0.00		-0.00	0.00 N	0.00 E	0.00	0.00		
THE FOLLOWING ARE PATHFINDER MWD SURVEYS											
400.00	0.62	79.23	399.99	400.00	1.33	0.40 N	2.13 E	2.16	79.23	0.16	61.30
590.00	0.44	81.34	589.98	190.00	2.43	0.71 N	3.86 E	3.92	79.62	0.10	64.88
720.00	0.53	71.15	719.98	130.00	3.05	0.97 N	4.92 E	5.01	78.79	0.09	68.50
899.00	0.44	16.30	898.97	179.00	3.16	1.90 N	5.89 E	6.19	72.11	0.25	68.50
960.00	1.58	111.49	959.97	61.00	3.86	1.82 N	6.74 E	6.98	74.91	2.76	72.11
1052.00	12.31	114.83	1051.16	92.00	14.48	2.78 S	16.85 E	17.08	99.37	11.66	75.72
1142.00	24.62	115.44	1136.36	90.00	41.82	14.91 S	42.59 E	45.12	109.29	13.68	82.95
1232.00	35.17	125.11	1214.32	90.00	85.76	37.95 S	80.85 E	89.32	115.15	12.86	86.57
1323.00	42.47	138.30	1285.29	91.00	142.49	76.08 S	122.86 E	144.51	121.77	12.08	90.18
1415.00	46.69	129.33	1350.87	92.00	206.87	120.55 S	169.49 E	207.99	125.42	8.23	90.18
1511.00	58.39	127.31	1409.16	96.00	282.82	167.63 S	229.23 E	283.98	126.18	12.30	90.18
1596.00	67.88	133.64	1447.55	85.00	358.50	216.89 S	286.69 E	359.49	127.11	12.99	75.72
1691.00	73.69	126.87	1478.83	95.00	448.09	274.72 S	355.14 E	448.99	127.72	9.08	86.57
1787.00	87.49	128.63	1494.49	96.00	542.37	332.58 S	429.83 E	543.47	127.73	14.49	90.18
1883.00	92.33	128.98	1494.64	96.00	638.25	392.72 S	504.62 E	639.43	127.89	5.05	90.18
1978.00	91.45	130.03	1491.50	95.00	733.15	453.12 S	577.87 E	734.34	128.10	1.44	90.18
2072.00	88.64	132.85	1491.43	94.00	827.13	515.32 S	648.32 E	828.18	128.48	4.23	93.80
2167.00	90.66	129.33	1492.02	95.00	922.10	577.75 S	719.91 E	923.07	128.75	4.27	97.41
2261.00	89.60	127.13	1491.80	94.00	1015.96	635.91 S	793.74 E	1017.06	128.70	2.59	97.41
2358.00	88.64	126.96	1493.29	97.00	1112.67	694.34 S	871.15 E	1114.01	128.56	1.01	101.02
2452.00	88.55	127.84	1495.60	94.00	1206.41	751.41 S	945.81 E	1207.96	128.47	0.94	101.02
2545.00	89.52	129.07	1497.17	93.00	1299.27	809.24 S	1018.63 E	1300.95	128.47	1.68	101.02
2641.00	89.69	132.06	1497.83	96.00	1395.25	871.65 S	1091.55 E	1396.87	128.61	3.12	101.02
2735.00	91.71	132.32	1496.67	94.00	1489.23	934.77 S	1161.19 E	1490.69	128.83	2.17	101.02
2830.00	91.54	131.88	1493.98	95.00	1584.18	998.43 S	1231.65 E	1585.51	129.03	0.50	97.41
2925.00	90.92	131.62	1491.94	95.00	1679.16	1061.67 S	1302.51 E	1680.38	129.18	0.71	97.41
STRAIGHT LINE PROJECTION TO BIT @ 2988'											
2988.00	90.92	131.62	1490.92	63.00	1742.15	1103.51 S	1349.60 E	1743.32	129.27	0.01	

Horiz

Surface

BH L 2
BH L 1

1805/S

743/S

1412/S

640/W "L"

1260/W "N"

1165/W "L"

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XTO ENERGY
STATE S Com #2H

SHL: 1805' FSL x 660' FWL

1ST PERF @ 1846.59 LAST PERF @: 2844.05

FROM SURVEYS:

MD	N/S	E/W
1787	332.58S	429.83 E
1883	392.72S	504.62 E

BY INTERPOLATION,

0.62 DIF. FACTOR $\Rightarrow$ N/S = 369.86'S
 $\Rightarrow$ E/W = 476.19' E

1ST PERF @ 1435.13' FSL & 1164.62' FWL

FROM SURVEYS:

MD	N/S	E/W
2830'	998.43S	1231.65 E
2925'	1061.67S	1302.51 E

BY INTERPOLATION

0.147 DIF FACTOR $\Rightarrow$ N/S = 1007.73'S
 $\Rightarrow$ E/W = 1242.06' E

LAST PERF @ 838.86' FSL & 1902.06' FWL