

103.022646

Job Number: ADR110457
Company: HG ENERGY, LLC
Lease/Well: LS HOYT 402 - S - 6H
Location: WETZEL CO.
Rig Name: PIONEER RIG 63
State/Country: WV / USA

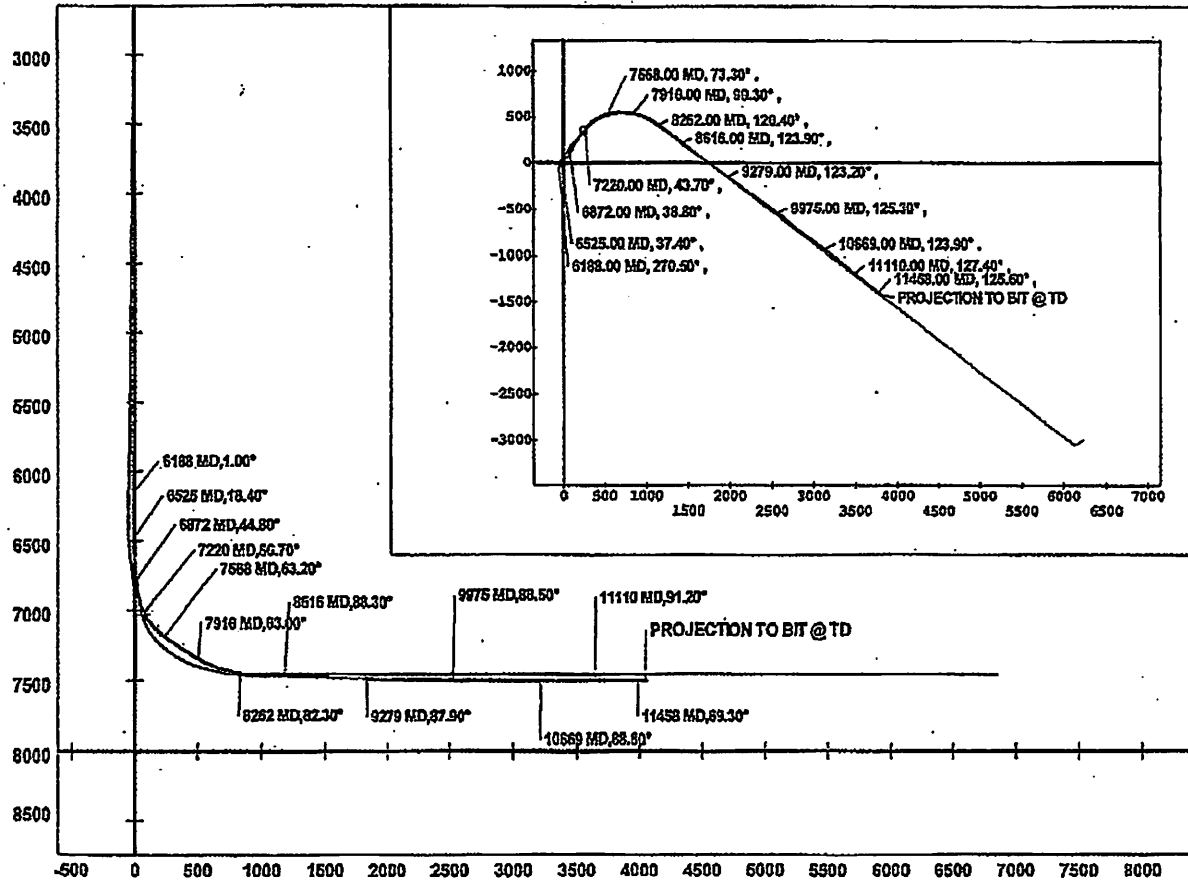
Declination: 7.93 DEGREES WEST
File name: C:\WINSERVE\ASDRIL-11201:
Date/Time: 26-Jan-12 / 10:57



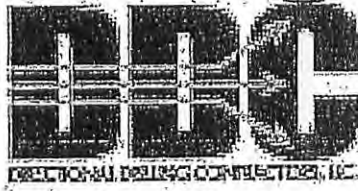
RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Department of
Environment



103.02646



Job Number: ADR110457
 Company: HG ENERGY, LLC
 Lease/Well: LS HOYT 402 - S - 6H
 Location: WETZEL CO.
 Rig Name: PIONEER RIG 63
 RKB: 20
 G.L. or M.S.L.:

State/Country: WV / USA
 Declination: 7.93 DEGREES WEST
 Grid: REFERENCED TO GRID NORTH
 File name: C:\WINSERVE\ASDRIL-1\2012\HOYT402.SVY
 Date/Time: 25-Jan-12 / 16:19
 Curve Name: LS HOYT 402 - S - 6H AS DRILLED

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 116.44
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
100.00	.61	164.20	100.00	-.76	-.06	.28	.00
200.00	.27	138.50	200.00	-1.45	.24	.86	.38
300.00	.33	224.90	300.00	-1.83	.19	.99	.41
400.00	1.06	183.90	399.99	-2.96	-.07	1.25	.84
500.00	.04	198.30	499.98	-3.91	-.15	1.61	1.02
600.00	.75	169.10	599.98	-4.59	-.03	2.01	.72
700.00	.88	204.10	699.97	-5.93	-.22	2.44	.51
800.00	.46	215.40	799.96	-6.96	-.77	2.41	.44
900.00	.67	209.70	899.96	-7.79	-1.29	2.31	.22
1000.00	.71	198.70	999.95	-8.89	-1.78	2.36	.14
1100.00	.30	137.10	1099.95	-9.67	-1.80	2.69	.63
1200.00	.86	148.40	1199.94	-10.50	-1.23	3.57	.57
1300.00	.49	131.80	1299.93	-11.42	-.52	4.62	.41
1400.00	.47	201.90	1399.93	-12.09	-.35	5.07	.55
1500.00	1.04	208.20	1499.92	-13.27	-.93	5.07	.58
1600.00	.80	244.50	1599.91	-14.37	-1.99	4.61	.62
1700.00	1.19	316.20	1699.90	-13.92	-3.34	3.21	1.21
1800.00	.37	49.60	1799.89	-12.96	-3.81	2.36	1.27
1900.00	.40	169.30	1899.89	-13.10	-3.50	2.69	.67
2000.00	.11	23.40	1999.89	-13.35	-3.40	2.90	.49
2100.00	1.07	205.70	2099.88	-14.10	-3.77	2.91	1.18
2200.00	1.43	224.40	2199.86	-15.84	-5.04	2.53	.54
2300.00	1.03	256.70	2299.84	-16.93	-6.79	1.46	.78
2400.00	1.28	294.10	2399.82	-16.69	-8.69	-.35	.78
2500.01	.50	346.80	2499.82	-15.80	-9.81	-1.74	1.05

RECEIVED
 Office of Oil and Gas

FEB 23 2016

WV Department of Environmental Protection
 04/01/2016

103.02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
2600.01	.31	298.20	2599.82	-15.25	-10.14	-2.29	.38
2700.01	.74	330.30	2699.81	-14.56	-10.70	-3.10	.51
2800.01	.12	35.80	2799.81	-13.92	-10.98	-3.62	.70
2900.01	.40	250.80	2899.81	-13.95	-11.23	-3.85	.50
3000.01	1.11	241.00	2999.80	-14.53	-12.41	-4.64	.72
3100.01	.59	266.80	3099.79	-15.03	-13.77	-5.64	.63
3200.01	.96	212.80	3199.78	-15.76	-14.74	-6.18	.78
3300.01	.63	214.90	3299.77	-16.92	-15.50	-6.35	.93
3408.00	.80	244.10	3407.75	-17.73	-16.52	-6.90	.37
3472.00	.80	282.10	3471.75	-17.84	-17.36	-7.60	.81
3535.00	.70	285.80	3534.74	-17.64	-18.16	-8.41	.17
3598.00	1.00	271.90	3597.73	-17.52	-19.08	-9.29	.57
3662.00	.70	275.10	3661.73	-17.46	-20.03	-10.16	.47
3726.00	1.00	272.60	3725.72	-17.40	-20.98	-11.03	.47
3790.00	.80	280.70	3789.71	-17.30	-21.97	-11.97	.37
3852.00	.80	277.90	3851.70	-17.16	-22.83	-12.80	.06
3914.00	.80	277.20	3913.70	-17.04	-23.69	-13.62	.02
3978.00	.90	261.00	3977.69	-17.07	-24.63	-14.45	.40
4041.00	.80	276.10	4040.69	-17.10	-25.55	-15.27	.39
4104.00	.70	275.80	4103.68	-17.01	-26.37	-16.04	.16
4167.00	.80	261.30	4166.67	-17.04	-27.19	-16.76	.34
4229.00	.80	260.60	4228.67	-17.17	-28.04	-17.46	.02
4292.00	.90	250.10	4291.66	-17.41	-28.94	-18.16	.29
4356.00	.70	260.60	4355.66	-17.65	-29.80	-18.83	.39
4419.00	.90	269.80	4418.65	-17.71	-30.68	-19.58	.38
4482.00	.80	270.80	4481.64	-17.71	-31.61	-20.42	.16
4546.00	1.10	269.40	4545.63	-17.71	-32.67	-21.37	.47
4609.00	1.10	265.80	4608.82	-17.78	-33.88	-22.43	.12
4672.00	.80	264.90	4671.61	-17.85	-34.92	-23.32	.48
4736.00	1.00	272.60	4734.61	-17.88	-35.91	-24.20	.37
4799.00	.90	267.70	4798.60	-17.86	-36.97	-25.15	.20
4862.00	.90	274.40	4861.59	-17.84	-37.96	-26.04	.17
4926.00	.70	263.80	4925.58	-17.84	-38.85	-26.84	.39
4989.00	.60	266.80	4988.58	-17.90	-39.56	-27.45	.17
5052.00	.60	256.80	5051.57	-18.00	-40.21	-27.99	.16
5115.00	.60	249.40	5114.57	-18.19	-40.84	-28.47	.12
5176.00	.60	251.20	5175.57	-18.41	-41.44	-28.91	.03
5240.00	.90	260.30	5239.56	-18.60	-42.25	-29.55	.50
5302.00	.90	264.50	5301.55	-18.73	-43.22	-30.36	.11
5365.00	.80	264.50	5364.55	-18.82	-44.15	-31.15	.16
5428.00	.80	271.50	5427.54	-18.85	-45.02	-31.92	.16
5490.00	.90	267.70	5489.53	-18.85	-45.94	-32.74	.19
5554.00	.80	265.20	5553.53	-18.91	-46.89	-33.56	.17
5617.00	1.00	274.00	5616.52	-18.91	-47.88	-34.45	.39
5681.00	1.00	267.70	5680.51	-18.89	-48.99	-35.45	.17

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Department of
Environmental Protection
04/01/2016

103.02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
5744.00	1.00	267.70	5743.50	-18.94	-50.09	-36.42	.00
5807.00	.90	273.70	5806.49	-18.93	-51.13	-37.36	.22
5871.00	.90	275.10	5870.48	-18.85	-52.14	-38.29	.03
5934.00	.80	270.80	5933.48	-18.80	-53.07	-39.15	.19
5998.00	.90	273.70	5997.47	-18.76	-54.02	-40.01	.17
6061.00	.80	271.50	6060.46	-18.72	-54.95	-40.87	.17
6125.00	.80	270.10	6124.46	-18.71	-55.84	-41.67	.03
6188.00	1.00	270.50	6187.45	-18.70	-56.83	-42.56	.32
6219.00	.90	264.20	6218.45	-18.72	-57.35	-43.01	.47
6240.00	.80	263.80	6239.44	-18.76	-57.66	-43.27	.48
6271.00	.80	267.00	6270.44	-18.79	-58.09	-43.64	.14
6303.00	1.00	5.80	6302.44	-18.52	-58.28	-43.94	4.29
6334.00	4.70	29.70	6333.39	-17.15	-57.63	-43.96	12.28
6366.00	7.80	30.40	6365.20	-14.14	-55.88	-43.74	9.69
6398.00	10.00	26.90	6396.81	-9.79	-53.52	-43.56	7.08
6429.00	11.90	26.90	6427.25	-4.54	-50.86	-43.52	6.13
6461.00	14.70	30.70	6458.39	1.90	-47.29	-43.19	9.16
6493.00	16.70	36.00	6489.19	9.11	-42.51	-42.12	7.68
6525.00	18.40	37.40	6519.70	16.84	-36.74	-40.40	5.47
6556.00	21.10	36.00	6548.88	25.24	-30.49	-38.54	8.84
6588.00	24.70	34.60	6578.35	35.41	-23.31	-36.64	11.38
6619.00	26.60	33.90	6606.29	46.50	-15.76	-34.82	6.21
6651.00	28.30	34.20	6634.69	58.73	-7.50	-32.86	5.33
6683.00	29.90	36.30	6662.65	71.43	1.49	-30.47	5.93
6715.00	32.50	38.10	6690.02	84.62	11.52	-27.37	8.63
6746.00	34.20	38.50	6715.91	98.00	22.08	-23.86	5.53
6778.00	37.00	38.80	6741.93	112.54	33.72	-19.92	8.77
6809.00	38.30	37.80	6766.48	127.40	45.45	-16.03	4.63
6841.00	42.00	37.40	6790.93	143.75	58.03	-12.04	11.59
6872.00	44.80	38.80	6813.45	160.50	71.18	-7.73	9.55
6904.00	47.70	41.60	6835.58	178.15	86.11	-2.22	11.05
6936.00	50.40	44.10	6856.55	195.85	102.55	4.61	10.29
6968.00	53.50	44.80	6876.27	213.84	120.19	12.41	9.84
6999.00	54.80	44.40	6894.43	231.73	137.84	20.24	4.32
7031.00	55.10	44.10	6912.81	250.49	156.12	28.25	1.21
7063.00	55.00	43.70	6931.14	269.39	174.30	36.12	1.07
7094.00	55.20	43.70	6948.88	287.77	191.87	43.66	.65
7126.00	55.40	43.40	6967.09	306.84	209.99	51.40	.99
7157.00	55.70	43.40	6984.63	325.42	227.56	58.86	.97
7188.00	56.10	43.00	7002.01	344.13	245.13	66.26	1.68
7220.00	56.70	43.70	7019.72	363.51	263.43	74.02	2.61
7252.00	57.80	47.20	7037.03	382.38	282.60	82.79	9.82
7284.00	58.90	50.40	7053.83	400.32	303.10	93.15	9.18
7315.00	59.90	53.60	7069.61	416.74	324.12	104.66	9.45
7347.00	61.00	55.00	7085.39	432.98	346.73	117.67	5.13

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Department of Environmental Protection
04/01/2016

103.02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
7378.00	62.30	56.70	7100.11	448.29	369.31	131.07	6.99
7410.00	63.00	59.20	7114.82	463.37	393.40	145.93	7.28
7441.00	63.10	61.70	7128.87	477.00	417.43	161.38	7.20
7473.00	62.60	64.50	7143.47	489.88	442.82	178.38	7.94
7505.00	62.30	68.00	7158.28	501.31	468.78	196.54	9.74
7536.00	62.50	70.80	7172.64	510.97	494.50	215.26	8.03
7568.00	63.20	73.30	7187.24	519.74	521.58	235.60	7.29
7599.00	63.80	76.40	7201.08	526.99	548.36	256.35	9.16
7631.00	63.80	79.60	7215.21	532.96	576.44	278.84	8.97
7662.00	63.80	81.70	7228.90	537.48	603.88	301.40	6.08
7694.00	63.20	83.80	7243.18	541.09	632.29	325.22	6.16
7725.00	62.80	86.30	7257.25	543.48	659.80	348.80	7.30
7757.00	62.80	88.70	7271.88	544.72	688.23	373.70	6.67
7789.00	63.20	91.20	7286.41	544.74	716.74	399.22	7.07
7821.00	63.50	92.90	7300.77	543.72	745.32	425.27	4.84
7853.00	63.00	94.70	7315.17	541.82	773.83	451.64	5.26
7884.00	63.00	97.50	7329.25	538.89	801.29	477.53	8.05
7916.00	63.00	99.30	7343.77	534.72	829.50	504.64	5.01
7947.00	64.10	101.70	7357.58	529.66	856.79	531.33	7.79
7978.00	65.90	103.80	7370.69	523.46	884.18	558.62	8.45
8009.00	67.60	106.30	7382.92	516.06	911.68	586.54	9.22
8041.00	69.10	108.80	7394.73	507.09	940.04	615.92	8.64
8073.00	70.80	111.90	7405.70	496.64	968.22	645.81	10.54
8105.00	72.50	114.70	7415.78	484.62	996.11	676.13	9.86
8137.00	74.70	117.60	7424.82	471.09	1023.65	706.82	11.08
8167.00	76.30	119.70	7432.33	457.16	1049.14	735.84	8.62
8199.00	79.00	120.00	7439.17	441.61	1076.25	767.04	8.49
8231.00	81.70	120.40	7444.53	425.74	1103.51	798.52	8.53
8262.00	82.30	120.40	7448.85	410.20	1129.99	829.15	1.94
8294.00	82.40	120.40	7453.11	394.16	1157.34	860.79	.31
8326.00	85.00	121.10	7456.62	377.89	1184.68	892.50	8.41
8357.00	87.20	123.50	7458.73	361.37	1210.81	923.26	10.49
8389.00	87.80	124.20	7460.12	343.56	1237.37	954.96	2.88
8421.00	88.30	124.60	7461.21	325.49	1263.75	986.64	2.00
8452.00	88.80	125.60	7462.00	307.87	1289.11	1017.27	3.61
8484.00	89.10	125.30	7462.58	289.12	1315.17	1048.87	1.33
8516.00	89.70	126.30	7462.92	270.40	1341.12	1080.44	3.64
8552.00	90.10	126.30	7462.98	249.09	1370.14	1115.91	1.11
8584.00	89.00	126.00	7463.23	230.21	1395.97	1147.45	3.56
8616.00	88.30	123.90	7463.99	211.89	1422.19	1179.09	6.92
8647.00	88.10	123.50	7464.96	194.69	1447.97	1209.83	1.44
8710.00	88.00	122.80	7467.11	160.26	1500.69	1272.36	1.12
8773.00	88.10	122.50	7469.25	126.29	1553.70	1334.95	.50
8836.00	88.50	124.60	7471.12	91.49	1606.18	1397.44	3.99
8899.00	88.50	123.90	7472.77	56.05	1658.24	1459.83	1.11

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Department of
Environmental Protection

04/01/2016

103.02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
8962.00	87.60	123.50	7474.91	21.12	1710.62	1522.29	1.56
9026.00	87.50	123.20	7477.65	-14.04	1764.03	1585.77	.49
9088.00	88.30	123.90	7479.92	-48.28	1815.67	1647.25	1.71
9152.00	88.70	123.20	7481.59	-83.64	1868.99	1710.73	1.26
9214.00	87.40	123.20	7483.70	-117.56	1920.83	1772.26	2.10
9279.00	87.90	123.20	7486.37	-153.13	1975.18	1836.76	.77
9342.00	88.20	121.80	7488.51	-186.96	2028.28	1899.37	2.27
9405.00	89.30	123.50	7489.89	-220.93	2081.31	1961.98	3.21
9468.00	89.80	123.90	7490.38	-255.89	2133.72	2024.47	1.02
9532.00	89.60	123.20	7490.72	-291.26	2187.06	2087.98	1.14
9595.00	89.40	122.80	7491.27	-325.57	2239.89	2150.56	.71
9658.00	89.30	122.50	7491.98	-369.56	2292.93	2213.19	.50
9722.00	88.70	122.50	7493.10	-393.94	2346.90	2276.82	.94
9785.00	89.30	123.50	7494.20	-428.24	2399.73	2339.40	1.85
9848.00	89.50	122.80	7494.86	-462.69	2452.47	2401.96	1.16
9912.00	88.90	124.60	7495.75	-498.20	2505.71	2465.44	2.96
9975.00	88.50	125.30	7497.18	-534.28	2557.33	2527.73	1.28
10039.00	90.00	126.70	7498.02	-571.89	2609.10	2590.83	3.21
10102.00	90.00	126.70	7498.02	-609.54	2659.61	2652.83	.00
10165.00	89.40	125.30	7498.35	-646.57	2710.58	2714.95	2.42
10229.00	90.70	126.70	7498.29	-684.19	2762.36	2778.06	2.99
10292.00	90.40	125.60	7497.69	-721.35	2813.22	2840.15	1.81
10355.00	89.40	123.50	7497.80	-757.08	2865.11	2902.52	3.69
10419.00	89.60	122.80	7498.36	-792.07	2918.69	2966.07	1.14
10481.00	89.90	122.50	7498.63	-825.52	2970.89	3027.71	.68
10544.00	90.10	123.20	7498.63	-859.69	3023.82	3090.32	1.16
10606.00	90.20	124.60	7498.47	-893.71	3074.45	3150.80	2.30
10669.00	88.80	123.90	7499.03	-929.73	3127.34	3214.20	2.45
10732.00	88.50	123.20	7500.51	-964.54	3179.83	3276.70	1.21
10795.00	89.80	125.60	7501.44	-1000.13	3231.80	3339.08	4.33
10858.00	91.30	127.80	7500.84	-1037.77	3282.31	3401.06	4.23
10888.00	91.30	127.80	7500.16	-1056.15	3306.01	3430.47	.00
10919.00	91.40	127.80	7499.43	-1075.15	3330.50	3460.85	.32
10951.00	91.30	127.80	7498.67	-1094.76	3355.77	3492.22	.31
10983.00	90.70	127.10	7498.12	-1114.21	3381.17	3523.62	2.88
11015.00	90.70	126.70	7497.73	-1133.42	3406.76	3555.09	1.25
11046.00	90.90	127.40	7497.29	-1152.10	3431.50	3585.55	2.35
11078.00	91.10	127.80	7496.73	-1171.62	3456.85	3616.94	1.40
11110.00	91.20	127.40	7496.09	-1191.14	3482.20	3648.33	1.29
11141.00	90.70	126.00	7495.58	-1209.66	3507.05	3678.83	4.79
11173.00	90.70	126.00	7495.19	-1228.47	3532.94	3710.39	.00
11205.00	90.70	125.60	7494.80	-1247.19	3558.89	3741.96	1.25
11237.00	90.30	125.30	7494.52	-1265.75	3584.96	3773.56	1.56
11268.00	88.70	124.90	7494.79	-1283.57	3610.32	3804.20	5.32
11299.00	88.20	124.20	7495.63	-1301.15	3635.84	3834.88	2.77

RECEIVED
Office of Oil and Gas

FEB 23 2016

04/01/2016
WV Department of
Environmental Protection

103-02646

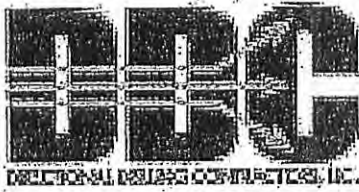
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
11331.00	88.20	123.90	7496.63	-1319.05	3662.34	3866.59	.94
11363.00	89.00	124.90	7497.41	-1337.13	3688.73	3898.27	4.00
11395.00	88.90	125.30	7498.00	-1355.53	3714.91	3929.90	1.29
11426.00	89.30	126.00	7498.49	-1373.59	3740.10	3960.49	2.60
11458.00	89.30	125.60	7498.88	-1392.31	3766.05	3992.06	1.25
11490.00	89.50	125.60	7499.21	-1410.93	3792.07	4023.66	.62
PROJECTION TO BIT @ TD							
11521.00	90.40	126.70	7499.24	-1429.22	3817.10	4054.21	4.58

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Department of
Environmental Protection

103-02646



Job Number: ADR110457
 Company: HG ENERGY, LLC
 Lease/Well: LS HOYT 402 - S - 6H
 Location: WETZEL CO.
 Rig Name: PIONEER RIG 63
 RKB: 20
 G.L. or M.S.L.: D

State/Country: WV / USA
 Declination: 7.93 DEGREES WEST
 Grid: REFERENCED TO GRID NORTH
 File name: C:\WINSERVE\ASDRIL~1\2012\HOYT402.SVY
 Date/Time: 25-Jan-12 / 16:19
 Curve Name: LS HOYT 402 - S - 6H AS DRILLED

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 116.44
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
100.00	.61	164.20	100.00	-.76	-.06	.28	.00
200.00	.27	138.50	200.00	-1.45	.24	.86	.38
300.00	.33	224.90	300.00	-1.83	.19	.99	.41
400.00	1.06	183.90	399.99	-2.96	-.07	1.25	.84
500.00	.04	198.30	499.98	-3.91	-.15	1.61	1.02
600.00	.75	169.10	599.98	-4.59	-.03	2.01	.72
700.00	.88	204.10	699.97	-5.93	-.22	2.44	.51
800.00	.46	215.40	799.96	-6.96	-.77	2.41	.44
900.00	.67	209.70	899.96	-7.79	-1.29	2.31	.22
1000.00	.71	198.70	999.95	-8.89	-1.78	2.36	.14
1100.00	.30	137.10	1099.95	-9.67	-1.80	2.69	.63
1200.00	.86	148.40	1199.94	-10.50	-1.23	3.57	.57
1300.00	.49	131.80	1299.93	-11.42	-.52	4.62	.41
1400.00	.47	201.90	1399.93	-12.09	-.35	5.07	.55
1500.00	1.04	208.20	1499.92	-13.27	-.93	5.07	.58
1600.00	.80	244.50	1599.91	-14.37	-1.99	4.61	.62
1700.00	1.19	316.20	1699.90	-13.92	-3.34	3.21	1.21
1800.00	.37	49.60	1799.89	-12.96	-3.81	2.36	1.27
1900.00	.40	169.30	1899.89	-13.10	-3.50	2.69	.67
2000.00	.11	23.40	1999.89	-13.35	-3.40	2.90	.49
2100.00	1.07	205.70	2099.88	-14.10	-3.77	2.91	1.18
2200.00	1.43	224.40	2199.86	-15.84	-5.04	2.53	.54
2300.00	1.03	256.70	2299.84	-16.93	-6.79	1.46	.78
2400.00	1.28	294.10	2399.82	-16.69	-8.69	-.35	.78
2500.01	.50	346.80	2499.82	-15.80	-9.81	-1.74	1.05

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Dept. of Environmental Protection
04/01/2016

103.02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
2600.01	.31	298.20	2599.82	-15.25	-10.14	-2.29	.38
2700.01	.74	330.30	2699.81	-14.56	-10.70	-3.10	.51
2800.01	.12	35.60	2799.81	-13.92	-10.96	-3.62	.70
2900.01	.40	250.80	2899.81	-13.95	-11.23	-3.85	.50
3000.01	1.11	241.00	2999.80	-14.53	-12.41	-4.64	.72
3100.01	.59	266.80	3099.79	-15.03	-13.77	-5.64	.63
3200.01	.96	212.80	3199.78	-15.76	-14.74	-6.18	.78
3300.01	.63	214.90	3299.77	-16.92	-15.50	-6.35	.33
3408.00	.80	244.10	3407.75	-17.73	-16.52	-6.90	.37
3472.00	.80	282.10	3471.75	-17.84	-17.36	-7.60	.81
3535.00	.70	285.60	3534.74	-17.84	-18.16	-8.41	.17
3598.00	1.00	271.90	3597.73	-17.52	-19.08	-9.29	.57
3662.00	.70	275.10	3661.73	-17.46	-20.03	-10.16	.47
3726.00	1.00	272.60	3725.72	-17.40	-20.98	-11.03	.47
3790.00	.80	280.70	3789.71	-17.30	-21.97	-11.97	.37
3852.00	.80	277.90	3851.70	-17.16	-22.83	-12.80	.06
3914.00	.80	277.20	3913.70	-17.04	-23.69	-13.62	.02
3978.00	.90	261.00	3977.69	-17.07	-24.63	-14.45	.40
4041.00	.80	276.10	4040.69	-17.10	-25.55	-15.27	.39
4104.00	.70	275.80	4103.68	-17.01	-26.37	-16.04	.16
4167.00	.80	261.30	4166.67	-17.04	-27.19	-16.76	.34
4229.00	.80	260.60	4228.67	-17.17	-28.04	-17.46	.02
4292.00	.90	250.10	4291.66	-17.41	-28.94	-18.16	.29
4356.00	.70	260.60	4355.66	-17.65	-29.80	-18.83	.39
4419.00	.90	269.80	4418.65	-17.71	-30.68	-19.58	.38
4482.00	.80	270.80	4481.64	-17.71	-31.61	-20.42	.16
4546.00	1.10	269.40	4545.63	-17.71	-32.67	-21.37	.47
4609.00	1.10	265.60	4608.62	-17.76	-33.88	-22.43	.12
4672.00	.80	264.90	4671.61	-17.85	-34.92	-23.32	.48
4735.00	1.00	272.60	4734.61	-17.86	-35.91	-24.20	.37
4799.00	.90	267.70	4798.60	-17.86	-36.97	-25.15	.20
4862.00	.90	274.40	4861.59	-17.84	-37.96	-26.04	.17
4926.00	.70	263.80	4925.58	-17.84	-38.85	-26.84	.39
4989.00	.60	266.80	4988.58	-17.90	-39.56	-27.45	.17
5052.00	.60	256.80	5051.57	-18.00	-40.21	-27.99	.16
5115.00	.60	249.40	5114.57	-18.19	-40.84	-28.47	.12
5176.00	.60	251.20	5175.57	-18.41	-41.44	-28.91	.03
5240.00	.90	260.30	5239.56	-18.60	-42.25	-29.55	.50
5302.00	.90	264.50	5301.55	-18.73	-43.22	-30.36	.11
5365.00	.80	264.50	5364.55	-18.82	-44.15	-31.15	.16
5428.00	.80	271.50	5427.54	-18.85	-45.02	-31.92	.16
5490.00	.90	267.70	5489.53	-18.85	-45.94	-32.74	.19
5554.00	.80	265.20	5553.53	-18.91	-46.89	-33.56	.17
5617.00	1.00	274.00	5616.52	-18.91	-47.88	-34.45	.39
5681.00	1.00	267.70	5680.51	-18.89	-48.99	-35.45	.17

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Dept of Environmental Protection
04/01/2016

103.02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
5744.00	1.00	267.70	5743.50	-18.94	-50.09	-36.42	.00
5807.00	.90	273.70	5806.49	-18.93	-51.13	-37.36	.22
5871.00	.90	275.10	5870.48	-18.85	-52.14	-38.29	.03
5934.00	.80	270.80	5933.48	-18.80	-53.07	-39.15	.19
5998.00	.90	273.70	5997.47	-18.76	-54.02	-40.01	.17
6061.00	.80	271.50	6060.46	-18.72	-54.95	-40.87	.17
6125.00	.80	270.10	6124.46	-18.71	-55.84	-41.67	.03
6188.00	1.00	270.50	6187.45	-18.70	-56.83	-42.56	.32
6219.00	.90	264.20	6218.45	-18.72	-57.35	-43.01	.47
6240.00	.80	263.80	6239.44	-18.76	-57.66	-43.27	.48
6271.00	.80	267.00	6270.44	-18.79	-58.09	-43.64	.14
6303.00	1.00	5.80	6302.44	-18.52	-58.28	-43.94	4.29
6334.00	4.70	29.70	6333.39	-17.15	-57.63	-43.96	12.28
6366.00	7.80	30.40	6365.20	-14.14	-55.88	-43.74	9.69
6398.00	10.00	26.90	6396.81	-9.79	-53.52	-43.56	7.08
6429.00	11.90	26.90	6427.25	-4.54	-50.86	-43.52	6.13
6461.00	14.70	30.70	6458.39	1.90	-47.29	-43.19	9.16
6493.00	16.70	36.00	6489.19	9.11	-42.51	-42.12	7.68
6525.00	18.40	37.40	6519.70	16.84	-36.74	-40.40	5.47
6556.00	21.10	36.00	6548.88	25.24	-30.49	-38.54	8.84
6588.00	24.70	34.60	6578.35	35.41	-23.31	-36.64	11.38
6619.00	26.60	33.90	6606.29	46.50	-15.76	-34.82	6.21
6651.00	28.30	34.20	6634.69	58.73	-7.50	-32.86	5.33
6683.00	29.90	36.30	6662.65	71.43	1.49	-30.47	5.93
6715.00	32.50	38.10	6690.02	84.62	11.52	-27.37	8.63
6746.00	34.20	38.50	6715.91	98.00	22.08	-23.86	5.53
6778.00	37.00	38.80	6741.93	112.64	33.72	-19.92	8.77
6809.00	38.30	37.80	6766.48	127.40	45.45	-16.03	4.63
6841.00	42.00	37.40	6790.93	143.75	58.03	-12.04	11.59
6872.00	44.80	38.80	6813.45	160.50	71.18	-7.73	9.55
6904.00	47.70	41.60	6835.58	178.15	86.11	-2.22	11.05
6936.00	50.40	44.10	6856.55	195.85	102.55	4.61	10.29
6968.00	53.50	44.80	6876.27	213.84	120.19	12.41	9.84
6999.00	54.80	44.40	6894.43	231.73	137.84	20.24	4.32
7031.00	55.10	44.10	6912.81	250.49	156.12	28.25	1.21
7063.00	55.00	43.70	6931.14	269.39	174.30	36.12	1.07
7094.00	55.20	43.70	6948.88	287.77	191.87	43.66	.65
7126.00	55.40	43.40	6967.09	306.84	209.99	51.40	.99
7157.00	55.70	43.40	6984.63	325.42	227.56	58.86	.97
7188.00	56.10	43.00	7002.01	344.13	245.13	66.26	1.68
7220.00	56.70	43.70	7019.72	363.51	263.43	74.02	2.61
7252.00	57.80	47.20	7037.03	382.38	282.60	82.79	9.82
7284.00	58.90	50.40	7053.83	400.32	303.10	93.15	9.18
7315.00	59.90	53.60	7069.61	416.74	324.12	104.66	9.45
7347.00	61.00	55.00	7085.39	432.98	346.73	117.67	5.13

RECEIVED
Office of Oil and Gas

FEB 23 2016

04/01/2016
WV Department of
Environmental Protection

103-02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
7378.00	62.30	56.70	7100.11	448.29	369.31	131.07	6.39
7410.00	63.00	59.20	7114.82	463.37	393.40	145.93	7.28
7441.00	63.10	61.70	7128.87	477.00	417.43	161.38	7.20
7473.00	62.60	64.50	7143.47	489.88	442.82	178.38	7.94
7505.00	62.30	68.00	7158.28	501.31	468.78	196.54	9.74
7536.00	62.50	70.80	7172.64	510.97	494.50	215.26	8.03
7568.00	63.20	73.30	7187.24	519.74	521.58	235.60	7.29
7599.00	63.80	76.40	7201.08	526.99	548.36	256.35	9.16
7631.00	63.80	79.60	7215.21	532.96	576.44	278.84	8.97
7662.00	63.80	81.70	7228.90	537.48	603.88	301.40	6.08
7694.00	63.20	83.80	7243.18	541.09	632.29	325.22	6.16
7725.00	62.80	86.30	7257.25	543.48	659.80	348.80	7.30
7757.00	62.80	88.70	7271.88	544.72	688.23	373.70	6.67
7789.00	63.20	91.20	7286.41	544.74	716.74	399.22	7.07
7821.00	63.50	92.90	7300.77	543.72	745.32	425.27	4.84
7853.00	63.00	94.70	7315.17	541.82	773.83	451.64	5.26
7884.00	63.00	97.50	7329.25	538.89	801.29	477.53	8.05
7916.00	63.00	99.30	7343.77	534.72	829.50	504.64	5.01
7947.00	64.10	101.70	7357.58	529.66	856.79	531.33	7.79
7978.00	65.90	103.80	7370.69	523.46	884.18	558.62	8.45
8009.00	67.60	106.30	7382.92	516.06	911.68	586.54	9.22
8041.00	69.10	108.80	7394.73	507.09	940.04	615.92	8.64
8073.00	70.80	111.90	7405.70	496.64	968.22	645.81	10.54
8105.00	72.50	114.70	7415.78	484.62	996.11	676.13	9.86
8137.00	74.70	117.60	7424.82	471.09	1023.65	706.82	11.08
8167.00	76.30	119.70	7432.33	457.16	1049.14	735.84	8.62
8199.00	79.00	120.00	7439.17	441.61	1076.25	767.04	8.49
8231.00	81.70	120.40	7444.53	425.74	1103.51	798.52	8.53
8262.00	82.30	120.40	7448.85	410.20	1129.99	829.15	1.94
8294.00	82.40	120.40	7453.11	394.16	1157.34	860.79	.31
8326.00	85.00	121.10	7456.62	377.89	1184.68	892.50	8.41
8357.00	87.20	123.50	7458.73	361.37	1210.81	923.26	10.49
8389.00	87.80	124.20	7460.12	343.56	1237.37	954.96	2.88
8421.00	88.30	124.60	7461.21	325.49	1263.75	986.64	2.00
8452.00	88.80	125.60	7462.00	307.67	1289.11	1017.27	3.61
8484.00	89.10	125.30	7462.58	289.12	1315.17	1048.87	1.33
8516.00	89.70	126.30	7462.92	270.40	1341.12	1080.44	3.64
8552.00	90.10	126.30	7462.98	249.09	1370.14	1115.91	1.11
8584.00	89.00	126.00	7463.23	230.21	1395.97	1147.45	3.56
8616.00	88.30	123.90	7463.99	211.89	1422.19	1179.09	6.92
8647.00	88.10	123.50	7464.96	194.69	1447.97	1209.83	1.44
8710.00	88.00	122.80	7467.11	160.26	1500.69	1272.36	1.12
8773.00	88.10	122.50	7469.25	126.29	1553.70	1334.95	.50
8836.00	88.50	124.60	7471.12	91.49	1606.18	1397.44	3.39
8899.00	88.50	123.90	7472.77	56.05	1658.24	1459.83	1.11

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Dept of Environmental Protection
04/04/2016

103-02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
8962.00	87.60	123.50	7474.91	21.12	1710.62	1522.29	1.56
9026.00	87.50	123.20	7477.65	-14.04	1764.03	1585.77	.49
9088.00	88.30	123.90	7479.92	-48.28	1815.67	1647.25	1.71
9152.00	88.70	123.20	7481.59	-83.64	1868.99	1710.73	1.26
9214.00	87.40	123.20	7483.70	-117.56	1920.83	1772.26	2.10
9279.00	87.90	123.20	7486.37	-153.13	1975.18	1836.76	.77
9342.00	88.20	121.80	7488.51	-186.96	2028.28	1899.37	2.27
9405.00	89.30	123.50	7489.89	-220.93	2081.31	1961.98	3.21
9468.00	89.80	123.90	7490.38	-255.89	2133.72	2024.47	1.02
9532.00	89.60	123.20	7490.72	-291.26	2187.06	2087.98	1.14
9595.00	89.40	122.80	7491.27	-325.57	2239.89	2150.56	.71
9658.00	89.30	122.50	7491.98	-359.56	2292.93	2213.19	.50
9722.00	88.70	122.50	7493.10	-393.94	2346.90	2276.82	.94
9785.00	89.30	123.50	7494.20	-428.24	2399.73	2339.40	1.85
9848.00	89.50	122.80	7494.86	-462.69	2452.47	2401.96	1.16
9912.00	88.90	124.60	7495.75	-498.20	2505.71	2465.44	2.96
9975.00	88.50	125.30	7497.18	-534.28	2557.33	2527.73	1.28
10039.00	90.00	126.70	7498.02	-571.89	2609.10	2590.83	3.21
10102.00	90.00	126.70	7498.02	-609.54	2659.61	2652.83	.00
10165.00	89.40	125.30	7498.35	-646.57	2710.58	2714.95	2.42
10229.00	90.70	126.70	7498.29	-684.19	2762.35	2778.06	2.99
10292.00	90.40	125.60	7497.69	-721.35	2813.22	2840.15	1.81
10355.00	89.40	123.50	7497.80	-757.08	2865.11	2902.52	3.69
10419.00	89.60	122.80	7498.36	-792.07	2918.69	2966.07	1.14
10481.00	89.90	122.50	7498.63	-825.52	2970.89	3027.71	.68
10544.00	90.10	123.20	7498.63	-859.69	3023.82	3090.32	1.16
10605.00	90.20	124.60	7498.47	-893.71	3074.45	3150.80	2.30
10669.00	88.80	123.90	7499.03	-929.73	3127.34	3214.20	2.45
10732.00	88.50	123.20	7500.51	-964.54	3179.83	3276.70	1.21
10795.00	89.80	125.60	7501.44	-1000.13	3231.80	3339.08	4.33
10858.00	91.30	127.80	7500.84	-1037.77	3282.31	3401.06	4.23
10888.00	91.30	127.80	7500.16	-1056.15	3306.01	3430.47	.00
10919.00	91.40	127.80	7499.43	-1075.15	3330.50	3460.85	.32
10951.00	91.30	127.80	7498.67	-1094.76	3355.77	3492.22	.31
10983.00	90.70	127.10	7498.12	-1114.21	3381.17	3523.82	2.88
11015.00	90.70	126.70	7497.73	-1133.42	3406.76	3555.09	1.25
11046.00	90.90	127.40	7497.29	-1152.10	3431.50	3585.55	2.35
11078.00	91.10	127.80	7496.73	-1171.62	3456.85	3616.94	1.40
11110.00	91.20	127.40	7496.09	-1191.14	3482.20	3648.33	1.29
11141.00	90.70	126.00	7495.58	-1209.66	3507.05	3678.83	4.79
11173.00	90.70	126.00	7495.19	-1228.47	3532.94	3710.39	.00
11205.00	90.70	125.60	7494.80	-1247.19	3558.89	3741.96	1.25
11237.00	90.30	125.30	7494.52	-1265.75	3584.96	3773.56	1.56
11268.00	88.70	124.90	7494.79	-1283.57	3610.32	3804.20	5.32
11299.00	88.20	124.20	7495.63	-1301.15	3635.84	3834.88	2.77

103-02646

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
11331.00	88.20	123.90	7496.63	-1319.05	3662.34	3866.59	.94
11363.00	89.00	124.90	7497.41	-1337.13	3688.73	3898.27	4.00
11395.00	88.90	125.30	7498.00	-1355.53	3714.91	3929.90	1.29
11426.00	89.30	126.00	7498.49	-1373.59	3740.10	3960.49	2.60
11458.00	89.30	125.60	7498.88	-1392.31	3766.05	3992.06	1.25
11490.00	89.50	125.60	7499.21	-1410.93	3792.07	4023.66	.62
PROJECTION TO BIT @ TD							
11521.00	90.40	126.70	7499.24	-1429.22	3817.10	4054.21	4.58

RECEIVED
Office of Oil and Gas

FEB 23 2016

WV Department of
Environmental Protection

103-02646

Job Number: ADR110457
Company: HG ENERGY, LLC.
Lease/Well: LS HOYT 402 - S - 6H
Location: WETZEL CO.
Rig Name: PIONEER RIG 63
State/Country: WV / USA

Declination: 7.93 DEGREES WEST
File name: C:\WINSERVE\ASDRIL-1\201:
Date/Time: 26-Jan-12 / 10:57



RECEIVED
Office of Oil and Gas

FEB 28 2016

WV Department of
Environmental Protection

