



KPK

SURVEY REPORT

WATTENBERG HENRY E UT B#2

1/28/2015



The **Ultimate Partner** In Wellbore Placement

CUSTOMER
PROJECT
FIELD

KPK
WATTENBERG HENRY E UT B#2
SPINDLE

SDI JOB NO.
SDI DISTRICT
SDI KIT/UNIT

250217
Casper

SITE INFORMATION

Site Name
Lat/Long
Northing
Easting

WELD

Section
Township
Range

23
1N
67W

MAP INFORMATION

North Reference
Grid Correction
System
Datum
Map Zone

True North



WELL INFORMATION

Lat/Long
Northing
Easting
UWI

40.03116° N, 104.85545° W

05-123-10113

DEPTH AND ELEVATION REFERENCE

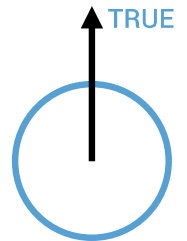
Ground Level
Reference Datum
Reference Height
Reference Elevation

4985 ft above Mean Sea Level
GL
0 ft above G.L.
4985 ft

VERTICAL SECTION REFERENCE

+N/-S
+E/-W
Proposal Direction
Calculation Method

0 ft
0 ft
Minimum Curvature



LOCAL GRAVITY REFERENCE INFORMATION

Local Gravity

999.034 mG [computed]

WELL NOTES

OPERATORS

C KIRBY

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	CLOSURE DISTANCE	CLOSURE DIRECTION	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
89.33	0.20	341.25	89.33	0.13	0.14	-0.05	0.15	341.25	0.22
123.12	0.42	301.58	123.12	0.31	0.26	-0.17	0.32	326.75	0.88
145.88	0.16	346.58	145.88	0.41	0.34	-0.25	0.42	323.37	1.45
173.81	0.15	358.99	173.81	0.47	0.41	-0.26	0.49	327.63	0.12
199.40	0.33	328.66	199.39	0.56	0.51	-0.30	0.59	329.43	0.83
222.57	0.52	334.57	222.57	0.72	0.66	-0.38	0.76	330.06	0.84
249.61	0.57	335.48	249.60	0.96	0.89	-0.49	1.02	331.32	0.20
272.78	0.56	325.33	272.78	1.17	1.09	-0.60	1.24	331.16	0.43
299.81	0.60	335.80	299.81	1.43	1.33	-0.73	1.52	331.08	0.42
322.86	0.62	328.71	322.85	1.66	1.54	-0.85	1.76	331.24	0.33
345.39	0.62	328.92	345.38	1.89	1.75	-0.97	2.01	330.94	0.01
373.13	0.54	336.80	373.12	2.15	2.00	-1.10	2.29	331.14	0.41
396.40	0.58	331.94	396.39	2.36	2.21	-1.20	2.51	331.43	0.28
423.24	0.65	336.61	423.23	2.63	2.47	-1.33	2.80	331.73	0.31
446.43	0.62	329.44	446.42	2.87	2.69	-1.44	3.05	331.85	0.36
472.69	0.72	325.31	472.68	3.16	2.95	-1.61	3.36	331.43	0.42
499.42	0.65	327.25	499.40	3.47	3.22	-1.78	3.68	330.98	0.25
522.79	0.85	317.80	522.77	3.77	3.46	-1.97	3.98	330.28	0.99
549.53	0.87	317.07	549.51	4.17	3.75	-2.24	4.37	329.11	0.09
572.74	0.93	314.50	572.71	4.53	4.01	-2.50	4.73	328.09	0.32
595.26	1.05	310.41	595.24	4.92	4.28	-2.79	5.10	326.90	0.61
622.92	0.93	307.21	622.89	5.40	4.58	-3.16	5.56	325.38	0.48
645.88	0.93	319.01	645.85	5.77	4.83	-3.43	5.92	324.62	0.83
672.91	0.95	306.56	672.87	6.21	5.13	-3.75	6.35	323.80	0.76
695.84	0.98	312.28	695.80	6.59	5.37	-4.05	6.73	322.99	0.44
722.75	0.88	316.36	722.70	7.03	5.68	-4.36	7.16	322.46	0.45
749.47	0.96	314.82	749.42	7.46	5.98	-4.66	7.59	322.07	0.33
772.61	0.98	313.58	772.56	7.85	6.26	-4.94	7.97	321.69	0.11
799.31	0.97	316.32	799.25	8.30	6.58	-5.26	8.42	321.32	0.18
822.79	0.99	314.35	822.73	8.70	6.86	-5.55	8.82	321.05	0.18
845.88	1.00	314.35	845.82	9.10	7.14	-5.83	9.22	320.76	0.04

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	CLOSURE DISTANCE	CLOSURE DIRECTION	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
873.31	1.01	311.17	873.25	9.59	7.47	-6.19	9.70	320.36	0.21
896.24	0.96	313.48	896.16	9.98	7.74	-6.48	10.09	320.05	0.29
923.20	1.00	311.26	923.13	10.44	8.05	-6.82	10.55	319.71	0.21
946.22	0.99	311.78	946.14	10.84	8.31	-7.12	10.95	319.41	0.08
973.77	0.93	317.27	973.69	11.30	8.64	-7.45	11.41	319.21	0.39
996.01	0.83	307.74	995.92	11.65	8.87	-7.70	11.74	319.03	0.80
1023.08	0.85	306.36	1022.99	12.04	9.11	-8.02	12.13	318.64	0.09
1049.59	0.92	323.14	1049.50	12.44	9.39	-8.30	12.54	318.52	1.01
1072.72	0.89	317.71	1072.63	12.80	9.67	-8.54	12.90	318.58	0.39
1095.73	0.85	315.09	1095.64	13.15	9.93	-8.78	13.25	318.52	0.26
1122.54	1.03	305.75	1122.44	13.59	10.21	-9.11	13.68	318.25	0.89
1145.29	1.01	312.00	1145.19	14.00	10.46	-9.43	14.08	317.98	0.50
1172.83	0.84	319.77	1172.72	14.44	10.78	-9.74	14.53	317.90	0.77
1199.85	0.86	320.29	1199.74	14.84	11.09	-10.00	14.93	317.96	0.06
1222.70	0.83	320.43	1222.59	15.17	11.35	-10.21	15.26	318.01	0.11
1249.59	0.88	317.85	1249.48	15.57	11.65	-10.47	15.67	318.04	0.23
1272.52	0.91	316.51	1272.40	15.92	11.91	-10.72	16.02	318.02	0.18
1299.50	0.84	315.73	1299.38	16.34	12.21	-11.00	16.44	317.98	0.28
1321.46	0.83	320.24	1321.34	16.65	12.45	-11.22	16.76	317.98	0.31
1348.75	0.72	323.25	1348.62	17.01	12.74	-11.45	17.12	318.05	0.43
1371.23	0.75	321.43	1371.10	17.30	12.96	-11.62	17.41	318.12	0.17
1399.01	0.70	325.72	1398.88	17.64	13.24	-11.83	17.76	318.23	0.26
1422.41	0.67	321.38	1422.28	17.91	13.47	-11.99	18.04	318.31	0.26
1449.42	0.62	325.07	1449.29	18.21	13.71	-12.18	18.34	318.39	0.24
1472.57	0.63	321.78	1472.44	18.45	13.91	-12.33	18.59	318.46	0.16
1499.07	0.59	323.03	1498.93	18.73	14.14	-12.50	18.87	318.52	0.13
1522.42	0.58	320.35	1522.28	18.96	14.32	-12.65	19.11	318.56	0.13
1544.89	0.53	323.47	1544.76	19.18	14.49	-12.78	19.33	318.60	0.24
1572.48	0.44	326.23	1572.34	19.41	14.69	-12.92	19.56	318.67	0.37
1599.22	0.49	322.23	1599.08	19.62	14.86	-13.04	19.77	318.73	0.25
1620.66	0.44	326.48	1620.52	19.79	15.00	-13.14	19.95	318.78	0.30
1647.37	0.51	321.04	1647.23	20.00	15.18	-13.28	20.17	318.83	0.32

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	CLOSURE DISTANCE ft	CLOSURE DIRECTION deg	DLS °/100ft
1673.33	0.50	318.84	1673.19	20.23	15.36	-13.42	20.40	318.84	0.09
1696.13	0.49	309.45	1695.98	20.43	15.49	-13.56	20.59	318.80	0.36
1722.93	0.44	312.85	1722.79	20.64	15.64	-13.73	20.81	318.72	0.20
1745.83	0.47	318.49	1745.69	20.83	15.77	-13.86	20.99	318.69	0.24
1772.49	0.38	317.05	1772.35	21.02	15.91	-13.99	21.19	318.68	0.37
1798.90	0.45	309.93	1798.75	21.21	16.04	-14.13	21.38	318.63	0.36
1821.14	0.42	306.47	1820.99	21.38	16.15	-14.26	21.54	318.55	0.20
1847.69	0.43	308.05	1847.54	21.58	16.27	-14.42	21.73	318.45	0.05
1874.40	0.45	308.81	1874.25	21.78	16.39	-14.57	21.93	318.36	0.08
1896.66	0.38	302.58	1896.51	21.94	16.49	-14.70	22.09	318.27	0.37
1923.91	0.44	310.97	1923.76	22.13	16.60	-14.86	22.28	318.17	0.31
1946.29	0.38	304.19	1946.14	22.29	16.70	-14.98	22.44	318.10	0.33
1973.45	0.44	305.58	1973.30	22.49	16.81	-15.15	22.63	317.99	0.22
1995.81	0.44	299.90	1995.66	22.66	16.91	-15.29	22.79	317.87	0.20
2022.94	0.45	305.90	2022.79	22.86	17.02	-15.47	23.00	317.74	0.18
2045.89	0.47	306.89	2045.73	23.05	17.13	-15.61	23.18	317.65	0.10
2072.40	0.48	297.69	2072.24	23.26	17.25	-15.80	23.39	317.51	0.29
2099.71	0.40	302.14	2099.55	23.47	17.35	-15.98	23.59	317.35	0.34
2122.47	0.42	292.42	2122.31	23.62	17.42	-16.12	23.74	317.22	0.31
2148.12	0.51	302.65	2147.96	23.82	17.52	-16.31	23.93	317.06	0.49
2171.21	0.43	315.30	2171.05	24.01	17.64	-16.45	24.12	316.99	0.57
2197.28	0.49	286.20	2197.12	24.21	17.74	-16.63	24.31	316.85	0.91
2220.48	0.46	295.90	2220.32	24.39	17.81	-16.81	24.49	316.65	0.37
2248.20	0.47	299.23	2248.04	24.60	17.91	-17.00	24.70	316.48	0.10
2274.81	0.46	307.54	2274.65	24.82	18.03	-17.18	24.90	316.37	0.25
2297.70	0.61	318.10	2297.54	25.03	18.17	-17.34	25.12	316.35	0.78
2324.34	0.49	312.54	2324.17	25.28	18.35	-17.52	25.37	316.34	0.49
2347.17	0.60	319.73	2347.01	25.50	18.51	-17.66	25.59	316.34	0.56
2374.49	0.63	326.88	2374.32	25.78	18.75	-17.84	25.88	316.42	0.30
2396.53	0.72	340.88	2396.36	26.02	18.98	-17.95	26.12	316.60	0.86
2423.42	0.89	354.03	2423.25	26.32	19.35	-18.03	26.44	317.02	0.93
2449.79	0.98	354.71	2449.62	26.64	19.78	-18.07	26.79	317.58	0.35

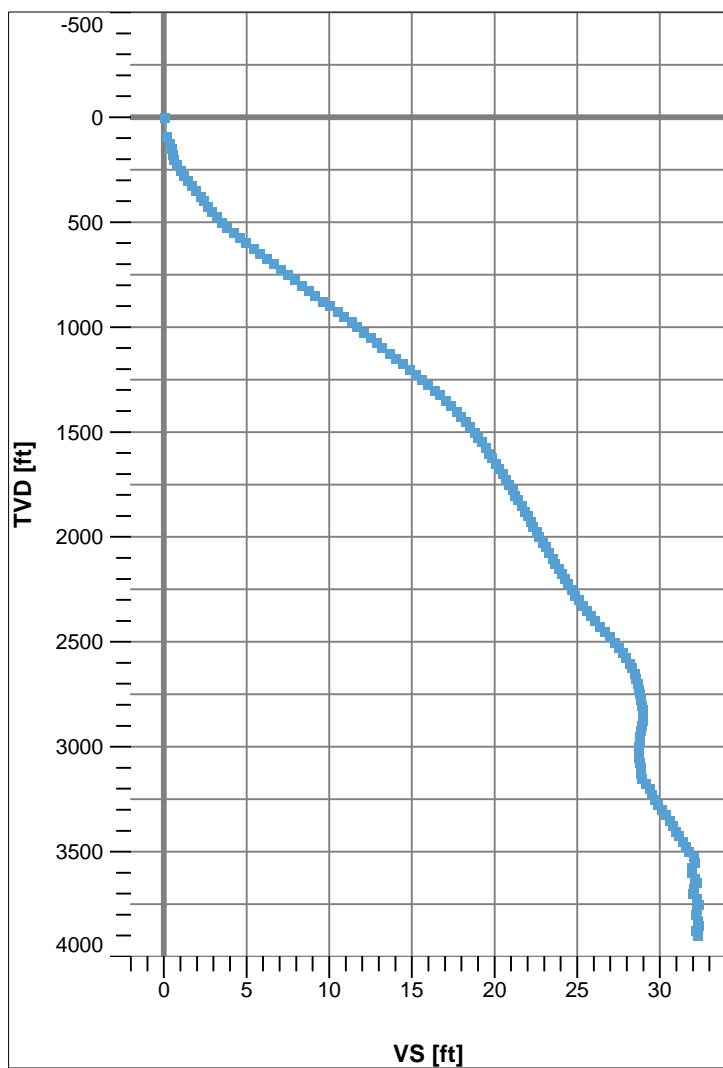
MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	CLOSURE DISTANCE ft	CLOSURE DIRECTION deg	DLS °/100ft
2472.61	0.89	359.99	2472.43	26.90	20.15	-18.09	27.07	318.08	0.55
2499.91	0.90	352.97	2499.73	27.20	20.57	-18.11	27.41	318.64	0.40
2521.99	0.81	353.22	2521.81	27.45	20.90	-18.15	27.68	319.02	0.42
2549.31	0.77	357.79	2549.12	27.72	21.27	-18.18	27.98	319.48	0.27
2572.12	0.60	356.20	2571.93	27.91	21.54	-18.20	28.20	319.81	0.75
2598.69	0.60	354.63	2598.50	28.11	21.82	-18.22	28.43	320.14	0.07
2621.48	0.49	339.99	2621.29	28.28	22.03	-18.26	28.62	320.34	0.80
2648.01	0.12	286.63	2647.82	28.40	22.14	-18.33	28.75	320.39	1.61
2670.79	0.29	307.88	2670.60	28.48	22.19	-18.40	28.82	320.34	0.83
2697.81	0.21	294.91	2697.62	28.60	22.25	-18.50	28.93	320.27	0.39
2723.80	0.16	313.84	2723.61	28.68	22.29	-18.56	29.01	320.22	0.29
2745.86	0.39	240.72	2745.67	28.74	22.28	-18.65	29.06	320.07	1.71
2772.44	0.33	242.12	2772.25	28.79	22.20	-18.80	29.09	319.74	0.23
2799.60	0.42	233.37	2799.41	28.84	22.10	-18.95	29.11	319.40	0.39
2821.76	0.37	252.08	2821.57	28.89	22.03	-19.08	29.15	319.11	0.62
2848.91	0.44	219.20	2848.72	28.93	21.92	-19.23	29.16	318.74	0.89
2871.53	0.36	199.46	2871.34	28.90	21.79	-19.31	29.11	318.45	0.71
2898.16	0.43	198.55	2897.96	28.83	21.62	-19.37	29.02	318.14	0.26
2920.83	0.37	208.25	2920.64	28.78	21.47	-19.43	28.96	317.86	0.40
2947.47	0.44	213.99	2947.28	28.75	21.31	-19.53	28.91	317.50	0.32
2973.33	0.53	211.90	2973.13	28.72	21.13	-19.65	28.85	317.08	0.32
2995.74	0.42	212.77	2995.54	28.69	20.97	-19.75	28.80	316.72	0.45
3022.60	0.66	214.22	3022.40	28.65	20.76	-19.89	28.75	316.23	0.89
3047.88	0.46	238.87	3047.68	28.66	20.59	-20.06	28.74	315.75	1.24
3074.70	0.34	247.71	3074.49	28.73	20.50	-20.22	28.79	315.39	0.50
3096.47	0.44	241.98	3096.27	28.79	20.44	-20.35	28.84	315.12	0.51
3122.87	0.54	203.73	3122.67	28.79	20.28	-20.49	28.83	314.69	1.26
3149.68	0.47	294.58	3149.48	28.85	20.21	-20.64	28.89	314.39	2.69
3171.29	0.82	302.32	3171.09	29.09	20.33	-20.86	29.12	314.26	1.63
3198.11	0.20	277.30	3197.90	29.32	20.43	-21.06	29.35	314.13	2.38
3224.14	0.55	281.66	3223.94	29.46	20.46	-21.23	29.49	313.95	1.33
3246.45	0.47	278.83	3246.25	29.63	20.50	-21.43	29.65	313.74	0.36

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	CLOSURE DISTANCE	CLOSURE DIRECTION	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
3273.09	0.53	303.47	3272.88	29.85	20.59	-21.64	29.86	313.57	0.83
3299.12	0.54	284.77	3298.91	30.07	20.68	-21.86	30.09	313.42	0.67
3321.43	0.55	309.45	3321.22	30.28	20.78	-22.04	30.29	313.31	1.05
3347.39	0.58	302.40	3347.18	30.53	20.93	-22.25	30.54	313.25	0.29
3373.67	0.34	272.10	3373.45	30.72	21.00	-22.44	30.73	313.11	1.26
3399.89	0.58	306.75	3399.68	30.91	21.08	-22.62	30.92	312.98	1.35
3421.41	0.48	336.04	3421.19	31.11	21.23	-22.75	31.12	313.03	1.32
3448.12	0.48	318.48	3447.90	31.32	21.42	-22.87	31.33	313.13	0.55
3474.80	0.45	294.31	3474.58	31.53	21.54	-23.04	31.54	313.08	0.73
3496.44	0.54	286.33	3496.23	31.70	21.61	-23.21	31.71	312.95	0.50
3523.09	0.74	321.94	3522.87	31.98	21.78	-23.44	31.99	312.90	1.64
3549.59	0.54	108.91	3549.38	32.04	21.87	-23.42	32.05	313.04	4.63
3570.99	0.24	172.77	3570.77	31.91	21.80	-23.32	31.92	313.06	2.25
3596.66	0.15	248.69	3596.44	31.89	21.73	-23.35	31.90	312.94	0.97
3622.89	0.71	293.32	3622.67	32.06	21.78	-23.53	32.06	312.79	2.34
3645.54	0.49	56.72	3645.32	32.17	21.89	-23.58	32.17	312.87	4.70
3673.54	0.63	163.21	3673.32	32.00	21.81	-23.43	32.01	312.94	3.21
3699.03	0.41	306.24	3698.81	31.98	21.73	-23.47	31.98	312.80	3.88
3722.10	0.54	307.98	3721.88	32.17	21.85	-23.62	32.17	312.77	0.54
3748.39	0.02	343.17	3748.17	32.29	21.93	-23.72	32.30	312.75	1.98
3771.07	0.50	106.93	3770.85	32.21	21.90	-23.63	32.22	312.83	2.26
3797.94	0.58	219.02	3797.72	32.09	21.76	-23.60	32.10	312.68	3.35
3824.65	0.76	300.31	3824.42	32.26	21.75	-23.84	32.27	312.37	3.31
3848.08	0.55	115.11	3847.86	32.31	21.78	-23.87	32.31	312.37	5.59
3872.43	1.02	207.72	3872.21	32.14	21.54	-23.86	32.14	312.06	4.84
3898.27	0.76	291.15	3898.04	32.25	21.39	-24.13	32.25	311.56	4.65



Name : WATTENBERG HENRY E UT B#2
Generated : 1/28/2015 10:15:24 Mountain Standard Time

VS View



Plan View

