

Standard Wellpath Report  
 Sandridge  
 Sec 16 - 34S - 6W, Kansas  
 Harper County  
 Wellbore: Robb 3406 1-16H (Actual)

**Wellbore**

Name	Created	Last Revised
Robb 3406 1-16H (Actual)	2-Jul-2013	25-Jul-2013

**Well**

Name	Government ID	Last Revised
Robb 3406 1-16H		1-Jul-2013

**Slot**

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Robb 3406 1-16H	156128.0000	2154257.0000	N37 5 39.2897	W97 58 16.1696	227.99S	1646.94W

**Installation**

Name	Easting	Northing	Coord System Name	North Alignment
Harper County	2155904.0000	156356.0001	KS-S on NORTH AMERICAN DATUM 1927 datum	Grid

**Field**

Name	Easting	Northing	Coord System Name	North Alignment
Sec 16 - 34S - 6W	2155904.0000	156356.0001	KS-S on NORTH AMERICAN DATUM 1927 datum	Grid

**Created By**

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**Comments**

<p>FINAL SURVEYS:          MD 9080 is a projection to bit @ TD</p>
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Sec 16 - 34S - 6W, Kansas  
Harper County  
Wellbore: Robb 3406 1-16H (Actual)

**Wellpath (Grid) Report**

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Easting	Northing
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	2154257.00	156128.00
690.00	0.40	178.700	689.99	2.41S	0.05E	0.06	2.36	2154257.05	156125.59
876.00	0.60	140.800	875.99	3.81S	0.68E	0.20	3.87	2154257.68	156124.19
1060.00	0.70	150.000	1059.98	5.53S	1.86E	0.08	5.80	2154258.86	156122.47
1333.00	0.70	140.600	1332.96	8.26S	3.75E	0.04	8.88	2154260.75	156119.74
1809.00	0.20	253.700	1808.94	10.74S	4.80E	0.17	11.53	2154261.80	156117.26
2282.00	0.20	317.000	2281.94	10.37S	3.44E	0.04	10.87	2154260.44	156117.63
2757.00	0.50	37.700	2756.93	8.13S	4.14E	0.11	8.83	2154261.14	156119.87
3231.00	0.80	87.100	3230.91	6.32S	8.71E	0.13	8.06	2154265.71	156121.68
3708.00	0.40	208.000	3707.89	7.62S	11.26E	0.22	9.88	2154268.26	156120.38
3740.00	0.40	213.400	3739.89	7.82S	11.14E	0.12	10.04	2154268.14	156120.18
3772.00	0.10	191.500	3771.89	7.94S	11.08E	0.97	10.14	2154268.08	156120.06
3803.00	0.40	211.000	3802.89	8.06S	11.01E	0.99	10.25	2154268.01	156119.94
3835.00	0.60	166.600	3834.89	8.31S	11.00E	1.31	10.49	2154268.00	156119.69
3866.00	2.20	159.300	3865.88	9.03S	11.24E	5.18	11.25	2154268.24	156118.97
3898.00	4.50	155.900	3897.82	10.75S	11.97E	7.21	13.08	2154268.97	156117.25
3930.00	6.70	159.100	3929.67	13.64S	13.15E	6.94	16.16	2154270.15	156114.36
3962.00	9.30	162.100	3961.35	17.85S	14.61E	8.23	20.58	2154271.61	156110.15
3993.00	11.90	164.900	3991.82	23.32S	16.22E	8.55	26.27	2154273.22	156104.68
4025.00	14.70	166.000	4022.96	30.44S	18.06E	8.79	33.62	2154275.06	156097.56
4057.00	16.20	164.600	4053.80	38.69S	20.23E	4.83	42.14	2154277.23	156089.31
4088.00	18.00	166.700	4083.43	47.52S	22.48E	6.14	51.25	2154279.48	156080.48
4120.00	20.30	169.700	4113.66	57.79S	24.61E	7.82	61.74	2154281.61	156070.21
4152.00	22.00	170.100	4143.50	69.16S	26.63E	5.33	73.28	2154283.63	156058.84
4183.00	24.00	170.200	4172.04	81.09S	28.70E	6.45	85.38	2154285.70	156046.91
4215.00	26.00	169.200	4201.04	94.40S	31.12E	6.39	98.89	2154288.12	156033.60
4247.00	28.30	168.700	4229.51	108.73S	33.92E	7.22	113.49	2154290.93	156019.27
4279.00	30.40	168.600	4257.40	124.10S	37.01E	6.56	129.17	2154294.01	156003.89
4310.00	32.50	168.200	4283.85	139.95S	40.27E	6.81	145.34	2154297.27	155988.05
4342.00	34.80	168.400	4310.48	157.31S	43.86E	7.20	163.07	2154300.86	155970.69
4374.00	37.30	168.600	4336.35	175.76S	47.61E	7.82	181.90	2154304.61	155952.23
4405.00	40.00	168.500	4360.56	194.73S	51.46E	8.71	201.25	2154308.46	155933.26
4437.00	42.50	168.300	4384.62	215.40S	55.70E	7.82	222.35	2154312.70	155912.59
4469.00	45.20	168.500	4407.69	237.11S	60.16E	8.45	244.51	2154317.16	155890.88
4500.00	48.20	168.100	4428.95	259.20S	64.73E	9.72	267.07	2154321.73	155868.79
4532.00	51.40	168.300	4449.60	283.13S	69.73E	10.01	291.50	2154326.73	155844.86
4564.00	54.50	169.200	4468.88	308.17S	74.71E	9.94	317.03	2154331.71	155819.82
4595.00	57.90	169.400	4486.12	333.48S	79.49E	10.98	342.78	2154336.49	155794.51
4627.00	61.60	169.500	4502.24	360.65S	84.55E	11.57	370.40	2154341.55	155767.33
4659.00	65.20	169.200	4516.57	388.77S	89.84E	11.28	398.99	2154346.84	155739.22
4691.00	67.60	169.300	4529.38	417.57S	95.31E	7.51	428.30	2154352.31	155710.41
4722.00	70.20	169.400	4540.54	446.00S	100.65E	8.39	457.21	2154357.65	155681.99
4754.00	73.20	169.100	4550.58	475.84S	106.32E	9.42	487.57	2154363.32	155652.14
4785.00	76.00	167.900	4558.81	505.12S	112.28E	9.77	517.45	2154369.28	155622.86
4817.00	78.10	167.200	4565.98	535.57S	119.00E	6.90	548.63	2154376.00	155592.41
4848.00	80.30	167.200	4571.79	565.27S	125.75E	7.10	579.08	2154382.75	155562.71
4880.00	82.80	167.100	4576.50	596.12S	132.78E	7.82	610.73	2154389.79	155531.85
4911.00	84.40	167.200	4579.95	626.16S	139.64E	5.17	641.54	2154396.64	155501.82
4943.00	85.60	167.300	4582.74	657.25S	146.67E	3.76	673.42	2154403.68	155470.73
4975.00	87.10	167.600	4584.78	688.42S	153.61E	4.78	705.35	2154410.62	155439.55
5006.00	87.00	167.700	4586.37	718.66S	160.23E	0.46	736.31	2154417.24	155409.31
5038.00	86.90	167.700	4588.07	749.88S	167.04E	0.31	768.26	2154424.05	155378.09
5069.00	86.80	167.700	4589.78	780.13S	173.63E	0.32	799.22	2154430.64	155347.84
5101.00	86.30	167.600	4591.70	811.33S	180.47E	1.59	831.16	2154437.47	155316.64
5133.00	86.30	167.200	4593.77	842.49S	187.43E	1.25	863.09	2154444.44	155285.48
5164.00	86.30	167.000	4595.77	872.65S	194.34E	0.64	894.02	2154451.34	155255.32
5196.00	88.60	167.100	4597.19	903.80S	201.50E	7.19	925.99	2154458.51	155224.17
5227.00	89.30	167.400	4597.76	934.03S	208.34E	2.46	956.98	2154465.35	155193.93
5241.00	89.00	167.100	4597.97	947.69S	211.43E	3.03	970.98	2154468.44	155180.28
5307.00	89.10	168.100	4599.06	1012.14S	225.60E	1.52	1036.97	2154482.61	155115.83
5369.00	89.60	167.400	4599.77	1072.72S	238.76E	1.39	1098.97	2154495.76	155055.24
5461.00	89.60	167.400	4600.41	1162.50S	258.82E	==>	1190.97	2154515.83	154965.46
5523.00	89.00	167.300	4601.17	1222.99S	272.40E	0.98	1252.96	2154529.41	154904.96
5584.00	88.30	167.400	4602.60	1282.49S	285.76E	1.16	1313.94	2154542.77	154845.46
5676.00	90.00	167.000	4603.97	1372.19S	306.13E	1.90	1405.93	2154563.15	154755.76
5737.00	91.40	167.300	4603.22	1431.66S	319.70E	2.35	1466.92	2154576.71	154696.29
5829.00	91.90	165.700	4600.57	1521.08S	341.17E	1.82	1558.86	2154598.18	154606.87
5921.00	92.60	168.200	4596.96	1610.63S	361.92E	2.82	1650.78	2154618.94	154517.32
6014.00	92.60	167.700	4592.74	1701.48S	381.32E	0.54	1743.68	2154638.33	154426.46
6106.00	91.50	168.900	4589.45	1791.51S	399.96E	1.77	1835.61	2154656.98	154336.42
6167.00	91.60	169.600	4587.80	1851.42S	411.34E	1.16	1896.56	2154668.35	154276.51
6229.00	90.20	169.000	4586.83	1912.33S	422.85E	2.46	1958.52	2154679.86	154215.60

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Slot and TVD's are from Slot ( Robb 3406 1-16H 0.00ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 167.520 degrees  
Bottom hole distance is 4807.59 Feet on azimuth 167.04 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 25-Jul-2013

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 Sandridge  
 Sec 16 - 34S - 6W, Kansas  
 Harper County  
 Wellbore: Robb 3406 1-16H (Actual)

**Wellpath (Grid) Report**

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft ]	Easting	Northing
6290.00	89.10	169.200	4587.20	1972.23S	434.38E	1.83	2019.50	2154691.40	154155.70
6381.00	88.60	168.000	4589.03	2061.41S	452.36E	1.43	2110.46	2154709.38	154066.51
6473.00	88.40	168.200	4591.43	2151.40S	471.33E	0.31	2202.42	2154728.34	153976.52
6564.00	90.20	169.300	4592.55	2240.64S	489.08E	2.32	2293.39	2154746.10	153887.27
6655.00	90.50	168.400	4591.99	2329.92S	506.67E	1.04	2384.36	2154763.69	153797.99
6750.00	90.90	167.800	4590.83	2422.87S	526.26E	0.76	2479.35	2154783.28	153705.04
6845.00	88.20	166.300	4591.58	2515.44S	547.55E	3.25	2574.33	2154804.57	153612.46
6939.00	89.10	166.300	4593.79	2606.74S	569.80E	0.96	2668.28	2154826.83	153521.16
7034.00	89.80	166.700	4594.70	2699.11S	591.98E	0.85	2763.26	2154849.00	153428.79
7129.00	89.80	165.300	4595.03	2791.29S	614.96E	1.47	2858.23	2154871.99	153336.61
7224.00	89.50	164.500	4595.61	2883.01S	639.71E	0.90	2953.13	2154896.73	153244.89
7319.00	90.50	165.800	4595.61	2974.83S	664.06E	1.73	3048.04	2154921.08	153153.06
7382.00	90.20	166.300	4595.23	3035.97S	679.24E	0.93	3111.02	2154936.27	153091.92
7445.00	91.20	167.600	4594.46	3097.34S	693.47E	2.60	3174.01	2154950.49	153030.55
7508.00	90.90	167.600	4593.31	3158.86S	706.99E	0.48	3237.00	2154964.02	152969.03
7603.00	90.70	167.200	4591.98	3251.56S	727.72E	0.47	3331.99	2154984.74	152876.32
7697.00	90.70	167.100	4590.83	3343.20S	748.62E	0.11	3425.98	2155005.65	152784.68
7792.00	91.20	166.600	4589.26	3435.69S	770.23E	0.74	3520.96	2155027.26	152692.18
7887.00	90.60	167.900	4587.76	3528.34S	791.19E	1.51	3615.94	2155048.22	152599.53
7981.00	88.10	168.300	4588.83	3620.30S	810.57E	2.69	3709.93	2155067.60	152507.56
8075.00	88.30	167.900	4591.78	3712.24S	829.95E	0.48	3803.87	2155086.98	152415.63
8169.00	88.70	167.700	4594.24	3804.08S	849.80E	0.48	3897.84	2155106.83	152323.78
8265.00	88.90	167.300	4596.25	3897.79S	870.58E	0.47	3993.82	2155127.61	152230.07
8359.00	89.80	167.700	4597.32	3989.55S	890.92E	1.05	4087.81	2155147.95	152138.30
8454.00	91.30	166.800	4596.41	4082.20S	911.89E	1.84	4182.80	2155168.92	152045.65
8549.00	91.00	166.600	4594.50	4174.64S	933.74E	0.38	4277.77	2155190.77	151953.21
8644.00	90.40	166.000	4593.34	4266.93S	956.23E	0.89	4372.74	2155213.27	151860.92
8740.00	91.40	164.600	4591.83	4359.77S	980.59E	1.79	4468.66	2155237.63	151768.07
8836.00	91.80	163.800	4589.15	4452.10S	1006.72E	0.93	4564.46	2155263.76	151675.73
8930.00	92.80	161.900	4585.38	4541.85S	1034.41E	2.28	4658.06	2155291.45	151585.99
9025.00	92.50	163.700	4580.99	4632.50S	1062.47E	1.92	4752.64	2155319.51	151495.33
9035.00	92.90	163.200	4580.52	4642.07S	1065.32E	6.40	4762.60	2155322.36	151485.76
9080.00	92.90	163.200	4578.24	4685.10S	1078.31E	==>	4807.41	2155335.35	151442.73

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