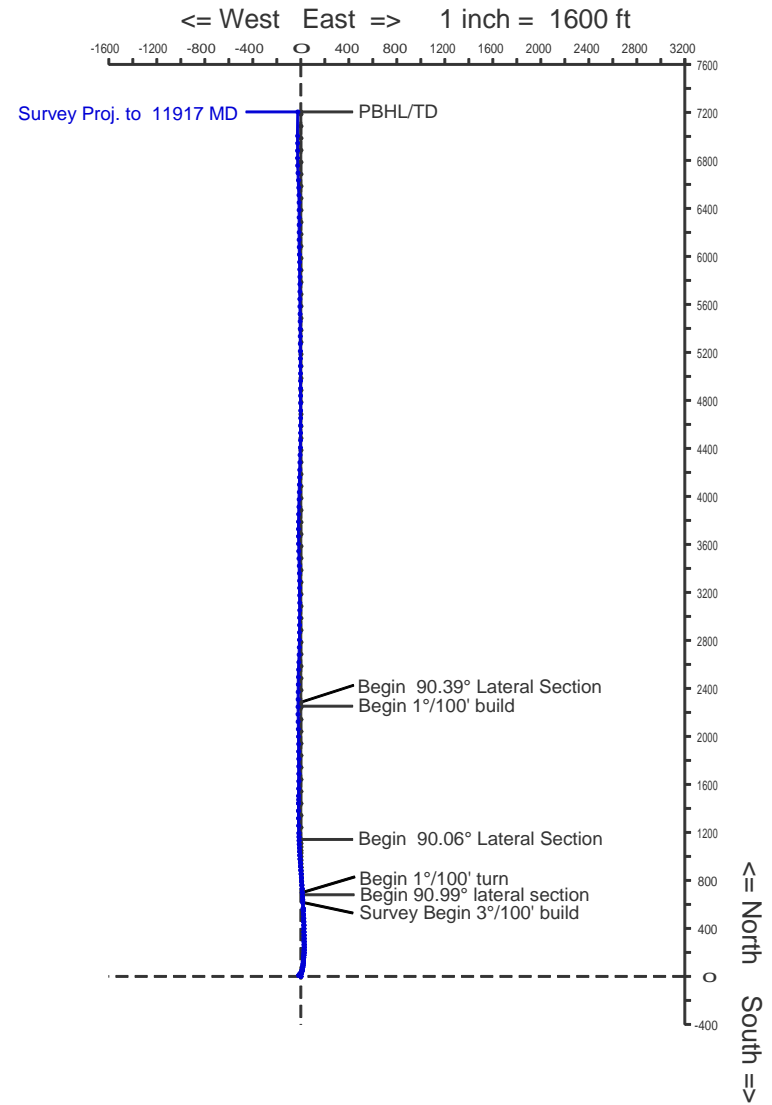
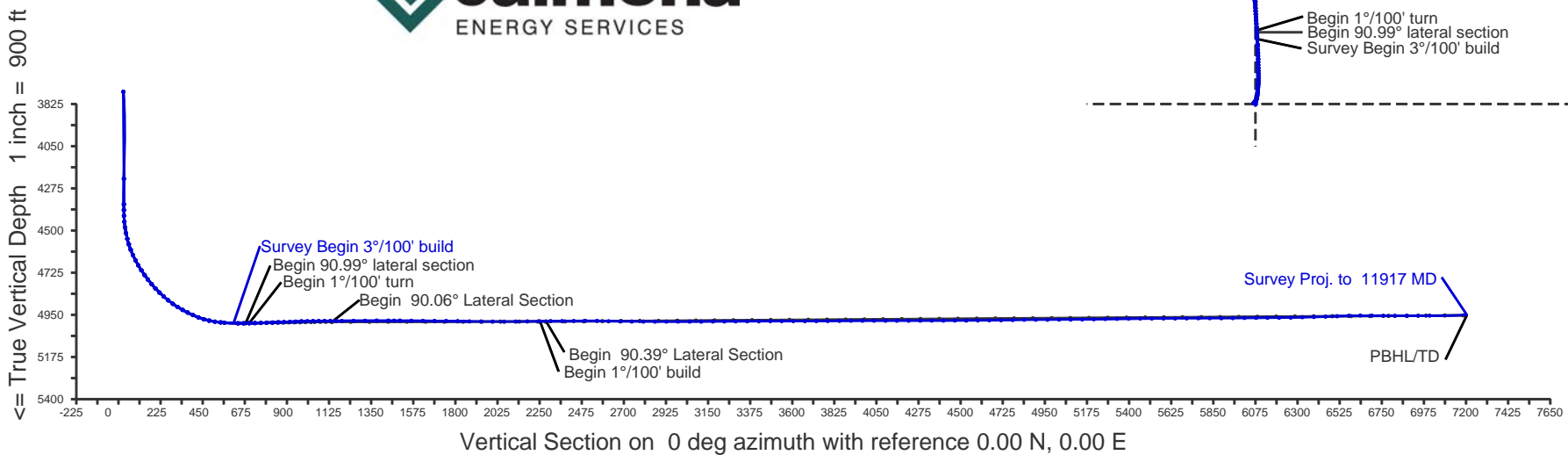


Osage Resources

Osage No. 3313 18-07 HC

WELL PROFILE DATA rev2							
MD	Inc.	Azi.	TVD	N/S	E/W	DLS	Comment 11-17-2012
5325	89.04	356.50	4994	615	16	0.00	Survey Begin 3°/100' build
5390	90.99	356.50	4994	680	12	3.00	Begin 90.99° lateral section
5409	90.99	356.50	4994	699	11	0.00	Begin 1°/100' turn
5852	90.06	0.00	4987	1141	-0	1.00	Begin 90.06° Lateral Section
6963	90.06	0.00	4986	2253	0	0.00	Begin 1°/100' build
6996	90.39	360.00	4986	2285	0	1.00	Begin 90.39° Lateral Section
11914	90.39	360.00	4953	7204	0	0.00	PBHL/TD

WELL PROFILE DATA svys							
MD	Inc.	Azi.	TVD	N/S	E/W	DLS	Comment 11-28-2012
11917	91.00	0.40	4950	7204	-26	0.00	Survey Proj. to 11917 MD



Calmena Energy Services

Company: Osage Resources
 Well: Osage No. 3313 18-07 HC
 Location:

Date: 28-Nov-2012
 Surveys
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 Job# : 6883

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 0.00° Az (feet)	Comments
Surface Location								N 37.17471 W 98.7817 RKB=1876
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
510.00	0.60	305.10	509.99	1.54	-2.18	0.12	1.54	
974.00	0.80	317.60	973.96	5.32	-6.36	0.05	5.32	
1441.00	0.60	277.40	1440.92	8.05	-10.98	0.11	8.05	
1910.00	0.50	252.70	1909.90	7.75	-15.37	0.05	7.75	
2373.00	0.70	20.00	2372.89	9.81	-16.33	0.23	9.81	
2832.00	0.50	33.00	2831.87	14.13	-14.28	0.05	14.13	
3296.00	1.50	48.00	3295.79	19.89	-8.66	0.22	19.89	
3760.00	0.80	36.40	3759.69	26.56	-2.23	0.16	26.56	
4224.00	0.50	84.00	4223.67	29.38	1.71	0.13	29.38	
4360.00	0.50	104.60	4359.66	29.29	2.87	0.13	29.29	
4391.00	0.60	78.90	4390.66	29.29	3.16	0.85	29.29	
4422.00	2.50	29.70	4421.65	29.91	3.66	6.96	29.91	
4453.00	5.70	18.40	4452.57	31.95	4.48	10.60	31.95	
4484.00	8.20	17.40	4483.33	35.53	5.62	8.07	35.53	
4515.00	11.50	16.00	4513.87	40.61	7.14	10.67	40.61	
4546.00	14.60	15.30	4544.07	47.35	9.02	10.01	47.35	
4577.00	18.10	13.20	4573.81	55.81	11.15	11.45	55.81	
4607.00	21.20	10.50	4602.06	65.68	13.20	10.76	65.68	
4638.00	24.50	7.90	4630.63	77.56	15.11	11.13	77.56	
4669.00	27.80	6.80	4658.45	91.11	16.85	10.76	91.11	
4700.00	30.70	5.40	4685.49	106.17	18.45	9.61	106.17	
4731.00	32.90	5.60	4711.84	122.43	20.02	7.10	122.43	
4762.00	35.80	5.10	4737.43	139.84	21.65	9.40	139.84	
4792.00	38.20	4.70	4761.39	157.83	23.19	8.04	157.83	
4823.00	40.10	4.00	4785.43	177.35	24.67	6.29	177.35	
4854.00	42.60	2.60	4808.70	197.79	25.84	8.60	197.79	
4885.00	45.50	1.20	4830.98	219.33	26.55	9.87	219.33	
4916.00	48.40	0.30	4852.14	241.98	26.84	9.59	241.98	
4947.00	51.20	359.40	4872.14	265.65	26.77	9.30	265.65	

Calmena Energy Services

Company: Osage Resources
 Well: Osage No. 3313 18-07 HC
 Location:

Date: 28-Nov-2012
 Surveys
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 Job# : 6883

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 0.00° Az (feet)	Comments
4978.00	54.40	359.60	4890.88	290.34	26.56	10.34	290.34	
5009.00	58.50	358.90	4908.01	316.17	26.22	13.36	316.17	
5040.00	61.20	358.90	4923.58	342.97	25.70	8.71	342.97	
5071.00	63.50	359.30	4937.97	370.42	25.27	7.51	370.42	
5102.00	66.10	358.90	4951.16	398.46	24.83	8.47	398.46	
5133.00	68.90	359.30	4963.03	427.10	24.38	9.11	427.10	
5163.00	72.80	358.60	4972.87	455.43	23.86	13.19	455.43	
5194.00	77.30	358.00	4980.86	485.36	22.97	14.64	485.36	
5225.00	81.70	357.20	4986.51	515.80	21.69	14.42	515.80	
5256.00	84.60	356.50	4990.21	546.53	20.00	9.62	546.53	
5276.00	85.40	356.50	4991.95	566.42	18.79	4.00	566.42	
5348.00	89.50	357.10	4995.15	638.22	14.77	5.75	638.22	
5378.00	90.60	356.90	4995.13	668.18	13.20	3.73	668.18	
5409.00	91.10	356.80	4994.67	699.13	11.50	1.64	699.13	
5440.00	91.40	356.60	4993.99	730.07	9.72	1.16	730.07	
5471.00	91.90	356.60	4993.10	761.00	7.88	1.61	761.00	
5503.00	92.00	356.20	4992.01	792.92	5.87	1.29	792.92	
5534.00	92.00	356.20	4990.93	823.83	3.82	0.00	823.83	
5565.00	92.20	355.90	4989.79	854.74	1.68	1.16	854.74	
5596.00	91.60	356.00	4988.76	885.64	-0.51	1.96	885.64	
5627.00	92.10	356.00	4987.76	916.55	-2.67	1.61	916.55	
5658.00	92.70	355.90	4986.46	947.45	-4.86	1.96	947.45	
5689.00	92.30	355.90	4985.11	978.34	-7.07	1.29	978.34	
5720.00	91.60	356.20	4984.06	1009.25	-9.20	2.46	1009.25	
5751.00	91.30	356.00	4983.27	1040.17	-11.31	1.16	1040.17	
5781.00	90.70	357.50	4982.75	1070.11	-13.01	5.38	1070.11	
5812.00	90.30	358.00	4982.48	1101.09	-14.23	2.07	1101.09	
5843.00	89.50	358.70	4982.53	1132.07	-15.12	3.43	1132.07	
5874.00	89.40	358.30	4982.83	1163.06	-15.93	1.33	1163.06	
5905.00	89.80	358.50	4983.05	1194.05	-16.80	1.44	1194.05	

Calmena Energy Services

Company: Osage Resources
 Well: Osage No. 3313 18-07 HC
 Location:

Date: 28-Nov-2012
 Surveys
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 Job# : 6883

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 0.00° Az (feet)	Comments
5967.00	90.90	358.50	4982.67	1256.02	-18.42	1.77	1256.02	
6029.00	90.70	359.00	4981.80	1318.00	-19.77	0.87	1318.00	
6091.00	90.40	359.70	4981.21	1380.00	-20.48	1.23	1380.00	
6153.00	89.70	1.00	4981.15	1441.99	-20.10	2.38	1441.99	
6215.00	90.00	1.00	4981.31	1503.98	-19.02	0.48	1503.98	
6276.00	89.00	1.00	4981.85	1564.97	-17.95	1.64	1564.97	
6338.00	89.60	0.60	4982.60	1626.96	-17.09	1.16	1626.96	
6400.00	90.00	359.90	4982.82	1688.96	-16.82	1.30	1688.96	
6462.00	89.00	0.10	4983.36	1750.96	-16.82	1.64	1750.96	
6524.00	89.20	359.60	4984.34	1812.95	-16.98	0.87	1812.95	
6586.00	89.80	359.00	4984.88	1874.94	-17.74	1.37	1874.94	
6648.00	89.20	358.90	4985.42	1936.93	-18.87	0.98	1936.93	
6710.00	89.40	358.50	4986.17	1998.91	-20.28	0.72	1998.91	
6772.00	90.00	358.30	4986.50	2060.88	-22.01	1.02	2060.88	
6834.00	90.90	358.20	4986.01	2122.85	-23.90	1.46	2122.85	
6896.00	90.80	0.30	4985.09	2184.83	-24.71	3.39	2184.83	
6958.00	90.80	0.30	4984.23	2246.83	-24.39	0.00	2246.83	
7020.00	90.20	0.60	4983.69	2308.82	-23.90	1.08	2308.82	
7082.00	90.50	0.60	4983.31	2370.82	-23.25	0.48	2370.82	
7144.00	90.40	1.30	4982.82	2432.81	-22.23	1.14	2432.81	
7206.00	91.10	0.80	4982.01	2494.79	-21.09	1.39	2494.79	
7268.00	88.30	2.00	4982.33	2556.76	-19.57	4.91	2556.76	
7330.00	88.70	2.20	4983.96	2618.70	-17.30	0.72	2618.70	
7392.00	89.30	1.70	4985.04	2680.66	-15.19	1.26	2680.66	
7454.00	90.00	1.10	4985.42	2742.63	-13.68	1.49	2742.63	
7516.00	89.40	0.60	4985.74	2804.63	-12.76	1.26	2804.63	
7578.00	90.00	0.40	4986.07	2866.62	-12.22	1.02	2866.62	
7639.00	90.80	0.30	4985.64	2927.62	-11.85	1.32	2927.62	
7701.00	89.60	1.00	4985.42	2989.61	-11.14	2.24	2989.61	
7763.00	89.50	0.30	4985.91	3051.61	-10.44	1.14	3051.61	

Calmena Energy Services

Company: Osage Resources
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 Location:

Date: 28-Nov-2012
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 Job# : 6883

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 0.00° Az (feet)	Comments
7825.00	90.30	359.90	4986.02	3113.61	-10.33	1.44	3113.61	
7887.00	91.00	359.70	4985.32	3175.60	-10.55	1.17	3175.60	
7949.00	89.80	359.60	4984.88	3237.60	-10.93	1.94	3237.60	
8009.00	90.60	359.40	4984.67	3297.59	-11.45	1.37	3297.59	
8071.00	90.20	358.70	4984.24	3359.58	-12.48	1.30	3359.58	
8133.00	90.20	358.00	4984.02	3421.56	-14.26	1.13	3421.56	
8194.00	90.70	357.80	4983.55	3482.51	-16.50	0.88	3482.51	
8255.00	89.60	358.20	4983.39	3543.48	-18.63	1.92	3543.48	
8317.00	89.80	359.00	4983.71	3605.46	-20.14	1.33	3605.46	
8379.00	90.70	359.40	4983.44	3667.45	-21.01	1.59	3667.45	
8440.00	90.00	0.60	4983.07	3728.45	-21.01	2.28	3728.45	
8501.00	90.80	0.60	4982.64	3789.44	-20.37	1.31	3789.44	
8564.00	90.40	1.70	4981.98	3852.42	-19.10	1.86	3852.42	
8625.00	91.10	2.00	4981.18	3913.39	-17.14	1.25	3913.39	
8687.00	89.40	1.50	4980.91	3975.35	-15.24	2.86	3975.35	
8748.00	89.90	1.30	4981.29	4036.33	-13.75	0.88	4036.33	
8810.00	90.20	0.80	4981.23	4098.32	-12.62	0.94	4098.32	
8871.00	89.90	1.30	4981.18	4159.31	-11.50	0.96	4159.31	
8933.00	90.30	1.10	4981.07	4221.30	-10.20	0.72	4221.30	
8995.00	90.20	1.10	4980.80	4283.29	-9.01	0.16	4283.29	
9057.00	90.10	2.40	4980.64	4345.26	-7.12	2.10	4345.26	
9119.00	90.60	1.50	4980.26	4407.22	-5.01	1.66	4407.22	
9180.00	89.80	0.80	4980.05	4468.21	-3.78	1.74	4468.21	
9241.00	90.00	0.40	4980.15	4529.20	-3.14	0.73	4529.20	
9303.00	91.20	0.30	4979.50	4591.20	-2.76	1.94	4591.20	
9365.00	90.00	0.10	4978.85	4653.19	-2.55	1.96	4653.19	
9427.00	90.60	0.10	4978.53	4715.19	-2.44	0.97	4715.19	
9489.00	91.50	359.70	4977.39	4777.18	-2.55	1.59	4777.18	
9551.00	91.00	359.90	4976.04	4839.16	-2.76	0.87	4839.16	
9613.00	89.60	359.70	4975.72	4901.16	-2.98	2.28	4901.16	

Calmena Energy Services

Company: Osage Resources
 Well: Osage No. 3313 18-07 HC
 Location:

Date: 28-Nov-2012
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MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 0.00° Az (feet)	Comments
9675.00	90.10	359.70	4975.88	4963.16	-3.31	0.81	4963.16	
9737.00	90.80	359.60	4975.39	5025.16	-3.68	1.14	5025.16	
9799.00	89.90	359.20	4975.01	5087.15	-4.33	1.59	5087.15	
9861.00	90.90	359.70	4974.58	5149.15	-4.93	1.80	5149.15	
9923.00	91.20	359.60	4973.44	5211.13	-5.31	0.51	5211.13	
9984.00	91.00	359.90	4972.27	5272.12	-5.57	0.59	5272.12	
10047.00	91.20	359.40	4971.06	5335.11	-5.96	0.85	5335.11	
10109.00	90.50	359.70	4970.14	5397.10	-6.44	1.23	5397.10	
10171.00	91.10	359.70	4969.28	5459.09	-6.77	0.97	5459.09	
10233.00	89.60	359.00	4968.90	5521.09	-7.47	2.67	5521.09	
10295.00	89.90	358.30	4969.17	5583.07	-8.93	1.23	5583.07	
10357.00	90.40	1.00	4969.01	5645.06	-9.31	4.43	5645.06	
10419.00	90.90	0.40	4968.30	5707.05	-8.55	1.26	5707.05	
10481.00	90.10	359.70	4967.76	5769.05	-8.50	1.71	5769.05	
10542.00	89.70	359.40	4967.87	5830.05	-8.98	0.82	5830.05	
10604.00	90.20	359.00	4967.92	5892.04	-9.85	1.03	5892.04	
10665.00	90.90	358.30	4967.34	5953.02	-11.28	1.62	5953.02	
10728.00	90.70	358.50	4966.46	6015.99	-13.04	0.45	6015.99	
10790.00	90.50	358.90	4965.81	6077.97	-14.45	0.72	6077.97	
10851.00	90.10	359.90	4965.49	6138.96	-15.09	1.77	6138.96	
10913.00	90.30	0.60	4965.27	6200.96	-14.82	1.17	6200.96	
10975.00	91.30	359.70	4964.41	6262.95	-14.65	2.17	6262.95	
11037.00	91.90	359.60	4962.68	6324.93	-15.03	0.98	6324.93	
11099.00	91.10	359.90	4961.05	6386.91	-15.30	1.38	6386.91	
11161.00	92.00	359.60	4959.38	6448.88	-15.57	1.53	6448.88	
11223.00	92.30	358.90	4957.05	6510.83	-16.38	1.23	6510.83	
11285.00	92.20	357.60	4954.62	6572.75	-18.28	2.10	6572.75	
11347.00	90.00	357.10	4953.43	6634.67	-21.14	3.64	6634.67	
11408.00	88.70	356.60	4954.12	6695.58	-24.49	2.28	6695.58	
11470.00	89.50	358.20	4955.09	6757.50	-27.31	2.88	6757.50	

Calmena Energy Services

Company: Osage Resources
Well: Osage No. 3313 18-07 HC
Location:

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MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 0.00° Az (feet)	Comments
11532.00	90.10	359.70	4955.31	6819.49	-28.44	2.61	6819.49	
11594.00	90.50	1.10	4954.98	6881.48	-28.01	2.35	6881.48	
11656.00	90.20	359.90	4954.60	6943.48	-27.47	2.00	6943.48	
11717.00	91.00	0.40	4953.97	7004.48	-27.31	1.55	7004.48	
11917.00	91.00	0.40	4950.48	7204.44	-25.91	0.00	7204.44	Survey projected