

Shell Exploration and Production Company

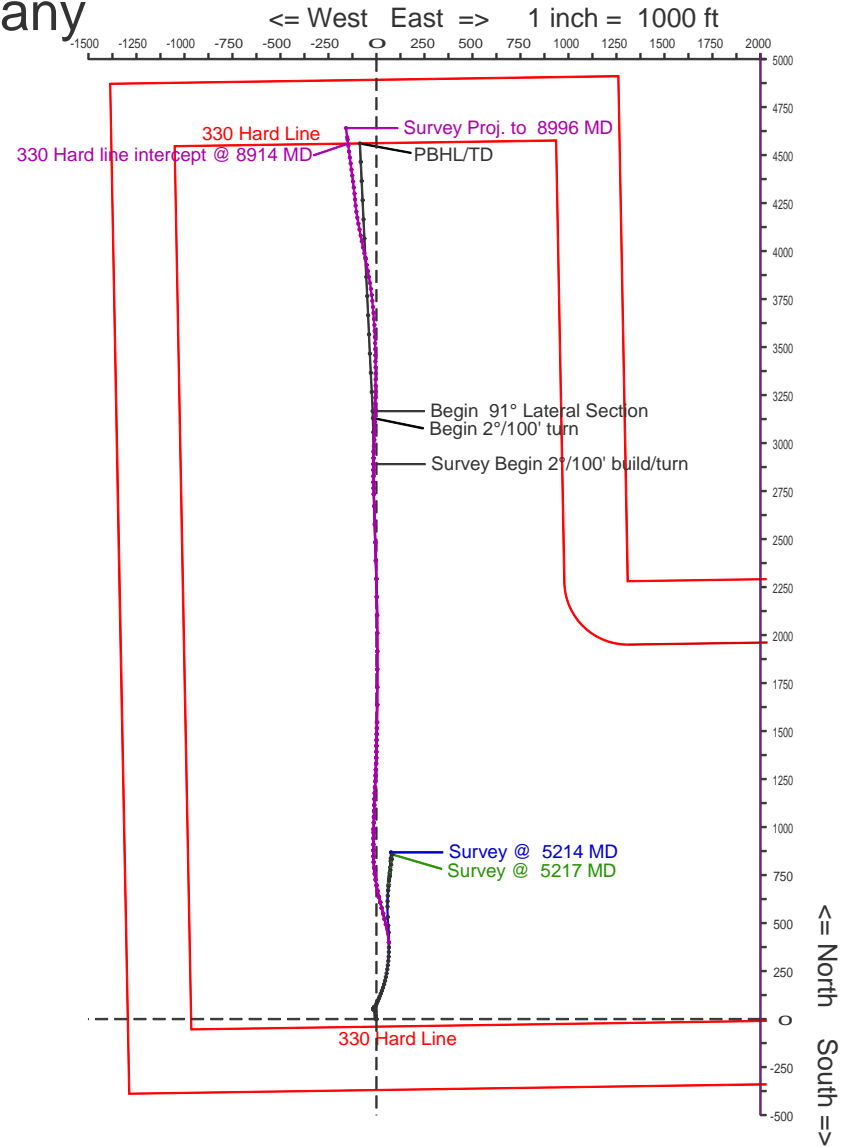
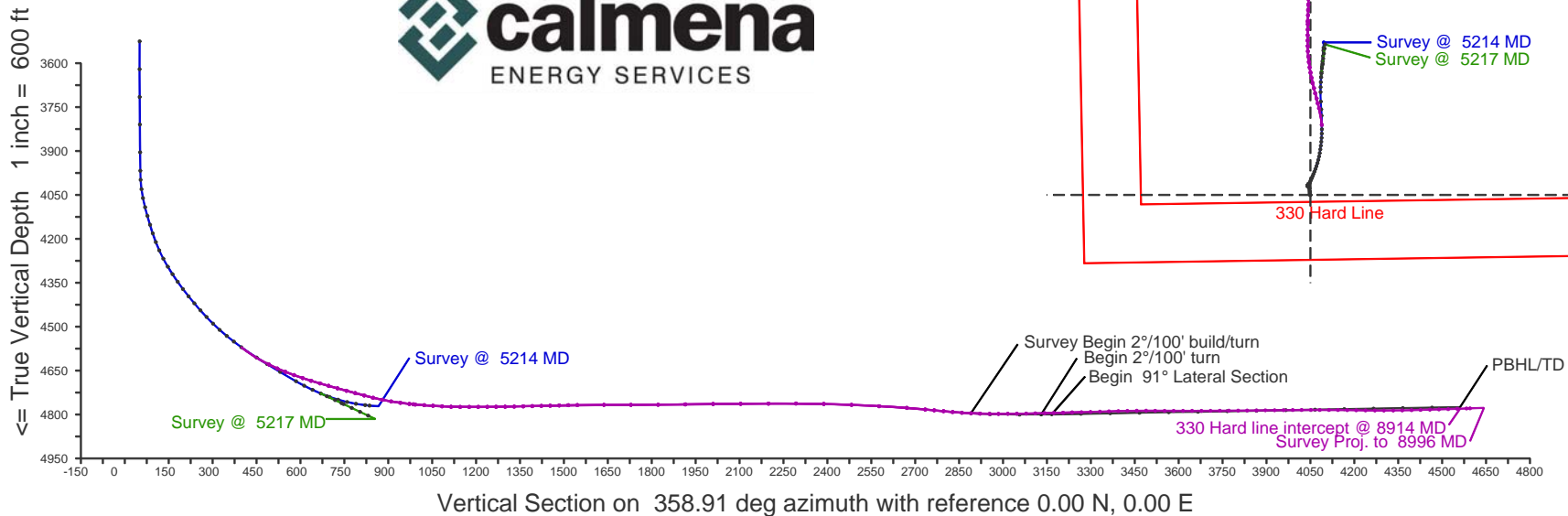


Croft Farms 3407 #30-1H

Harper County, Kansas

WELL PROFILE DATA rev5							
MD	Inc.	Azi.	TVD	N-S	E-W	DLS	Comment
7234	87.10	0.80	4796	2891	-16	0.00	Survey Begin 2°/100' build/turn
7474	91.00	357.98	4800	3131	-18	2.01	Begin 2°/100' turn
7510	91.00	357.26	4799	3166	-20	2.00	Begin 91° Lateral Section
8906	91.00	357.26	4775	4560	-86	0.00	PBHL/TD

WELL PROFILE DATA svys							
MD	Inc.	Azi.	TVD	N-S	E-W	DLS	Comment
8914	92.04	352.47	4780	4559	-148	0.70	330 Hard line intercept @ 8914 MD
8996	91.90	352.40	4777	4641	-159	0.00	Survey Proj. to 8996 MD



Calmena Energy Services

Company: Shell Exploration and Production Company
 Well: Croft Farms 3407 #30-1H
 Location: Harper County, Kansas

Date: 25-Aug-2012
 Surveys ST2
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 Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 358.91° (feet)	Az Grid Y	NAD27 Ks South gr elev=1329 RKB=1350.68 Grid X	Comments
Surface Location								140456.71	2109796.88	
4695.00	53.70	359.08	4570.12	399.12	64.90	0.00	397.81	140855.83	2109861.78	Tie into original hole.
4808.00	63.30	342.90	4629.38	493.57	49.21	14.84	492.54	140950.28	2109846.09	
4840.00	66.80	346.70	4642.88	521.56	41.62	15.35	520.67	140978.27	2109838.50	
4871.00	69.20	346.10	4654.49	549.49	34.86	7.95	548.73	141006.20	2109831.74	
4903.00	70.90	344.80	4665.41	578.61	27.31	6.54	577.98	141035.32	2109824.19	
4935.00	72.10	345.60	4675.56	607.95	19.56	4.44	607.46	141064.66	2109816.44	
4966.00	73.40	346.70	4684.76	636.69	12.47	5.39	636.34	141093.40	2109809.35	
4998.00	74.20	348.50	4693.69	666.70	5.87	5.95	666.47	141123.41	2109802.75	
5029.00	74.50	350.10	4702.05	696.03	0.33	5.06	695.90	141152.74	2109797.21	
5061.00	74.70	351.40	4710.55	726.48	-4.63	3.97	726.44	141183.19	2109792.25	
5093.00	75.00	353.00	4718.91	757.08	-8.82	4.92	757.11	141213.79	2109788.06	
5124.00	75.10	354.60	4726.91	786.86	-12.05	5.00	786.94	141243.57	2109784.83	
5156.00	75.20	356.50	4735.11	817.69	-14.45	5.75	817.82	141274.40	2109782.43	
5187.00	76.20	358.50	4742.77	847.70	-15.76	7.03	847.85	141304.41	2109781.12	
5219.00	78.40	359.90	4749.80	878.91	-16.20	8.09	879.06	141335.62	2109780.68	
5250.00	81.00	1.20	4755.34	909.41	-15.90	9.35	909.55	141366.12	2109780.98	
5282.00	82.30	1.00	4759.99	941.06	-15.29	4.11	941.18	141397.77	2109781.59	
5313.00	83.70	1.00	4763.77	971.83	-14.76	4.52	971.93	141428.54	2109782.12	
5327.00	84.40	1.30	4765.22	985.75	-14.48	5.44	985.84	141442.46	2109782.40	
5333.00	84.80	1.30	4765.79	991.72	-14.34	6.67	991.81	141448.43	2109782.54	
5364.00	86.30	1.10	4768.19	1022.62	-13.70	4.88	1022.69	141479.33	2109783.18	
5394.00	86.50	1.00	4770.07	1052.55	-13.15	0.75	1052.61	141509.26	2109783.73	
5425.00	86.40	1.20	4771.99	1083.49	-12.55	0.72	1083.53	141540.20	2109784.33	
5456.00	87.90	1.80	4773.54	1114.44	-11.74	5.21	1114.46	141571.15	2109785.14	
5487.00	89.90	2.50	4774.13	1145.41	-10.58	6.84	1145.40	141602.12	2109786.30	
5518.00	90.10	2.90	4774.13	1176.38	-9.12	1.44	1176.34	141633.09	2109787.76	
5549.00	90.20	3.00	4774.05	1207.33	-7.52	0.46	1207.26	141664.04	2109789.36	
5580.00	90.30	2.90	4773.91	1238.29	-5.93	0.46	1238.18	141695.00	2109790.95	
5610.00	90.50	2.90	4773.70	1268.25	-4.41	0.67	1268.11	141724.96	2109792.47	
5641.00	90.90	2.20	4773.33	1299.22	-3.03	2.60	1299.04	141755.93	2109793.85	

Calmena Energy Services

Company: Shell Exploration and Production Company
 Well: Croft Farms 3407 #30-1H
 Location: Harper County, Kansas

Date: 25-Aug-2012
 Surveys ST2
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 Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
5672.00	91.00	1.80	4772.81	1330.20	-1.95	1.33	1329.99	141786.91	2109794.93	
5703.00	91.30	0.80	4772.19	1361.18	-1.25	3.37	1360.96	141817.89	2109795.63	
5734.00	91.40	0.80	4771.46	1392.17	-0.81	0.32	1391.93	141848.88	2109796.07	
5765.00	91.60	1.10	4770.65	1423.16	-0.30	1.16	1422.90	141879.87	2109796.58	
5795.00	91.60	1.50	4769.81	1453.14	0.38	1.33	1452.87	141909.85	2109797.26	
5826.00	91.30	1.60	4769.03	1484.11	1.22	1.02	1483.82	141940.82	2109798.10	
5857.00	91.30	1.60	4768.32	1515.09	2.08	0.00	1514.78	141971.80	2109798.96	
5888.00	90.70	1.60	4767.78	1546.08	2.95	1.94	1545.74	142002.79	2109799.83	
5979.00	90.10	359.60	4767.15	1637.07	3.90	2.29	1636.70	142093.78	2109800.78	
6071.00	89.90	0.10	4767.15	1729.06	3.66	0.59	1728.68	142185.77	2109800.54	
6164.00	90.60	0.30	4766.74	1822.06	3.99	0.78	1821.66	142278.77	2109800.87	
6257.00	91.00	0.00	4765.44	1915.05	4.23	0.54	1914.63	142371.76	2109801.11	
6352.00	90.60	359.70	4764.12	2010.04	3.98	0.53	2009.60	142466.75	2109800.86	
6446.00	90.10	359.00	4763.54	2104.03	2.91	0.92	2103.60	142560.74	2109799.79	
6541.00	90.80	359.10	4762.79	2199.02	1.34	0.74	2198.59	142655.73	2109798.22	
6635.00	89.60	358.60	4762.47	2293.00	-0.55	1.38	2292.59	142749.71	2109796.33	
6730.00	88.80	358.20	4763.79	2387.95	-3.20	0.94	2387.58	142844.66	2109793.68	
6825.00	87.20	358.50	4767.11	2482.85	-5.93	1.71	2482.51	142939.56	2109790.95	
6919.00	87.30	358.30	4771.62	2576.70	-8.56	0.24	2576.40	143033.41	2109788.32	
7014.00	85.60	357.90	4777.50	2671.47	-11.70	1.84	2671.20	143128.18	2109785.18	
7077.00	84.70	357.90	4782.83	2734.20	-14.00	1.43	2733.97	143190.91	2109782.88	
7108.00	84.60	358.60	4785.72	2765.05	-14.94	2.27	2764.83	143221.76	2109781.94	
7140.00	84.90	359.20	4788.65	2796.91	-15.55	2.09	2796.70	143253.62	2109781.33	
7171.00	85.00	359.70	4791.37	2827.79	-15.85	1.64	2827.58	143284.50	2109781.03	
7203.00	85.90	0.00	4793.91	2859.68	-15.93	2.96	2859.47	143316.39	2109780.95	
7234.00	87.10	0.80	4795.81	2890.62	-15.72	4.65	2890.40	143347.33	2109781.16	
7265.00	88.20	1.60	4797.08	2921.59	-15.07	4.39	2921.35	143378.30	2109781.81	
7297.00	89.20	1.90	4797.80	2953.57	-14.09	3.26	2953.30	143410.28	2109782.79	
7328.00	90.40	2.10	4797.91	2984.55	-13.01	3.92	2984.26	143441.26	2109783.87	
7360.00	90.60	2.20	4797.63	3016.52	-11.81	0.70	3016.20	143473.23	2109785.07	

Calmena Energy Services

Company: Shell Exploration and Production Company
 Well: Croft Farms 3407 #30-1H
 Location: Harper County, Kansas

Date: 25-Aug-2012
 Surveys ST2
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 Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
7391.00	90.60	2.10	4797.31	3047.50	-10.65	0.32	3047.15	143504.21	2109786.23	
7423.00	90.90	2.00	4796.89	3079.48	-9.50	0.99	3079.10	143536.19	2109787.38	
7454.00	91.20	1.90	4796.32	3110.45	-8.45	1.02	3110.05	143567.16	2109788.43	
7486.00	91.30	1.90	4795.62	3142.43	-7.39	0.31	3142.00	143599.14	2109789.49	
7517.00	91.40	1.40	4794.89	3173.41	-6.49	1.64	3172.96	143630.12	2109790.39	
7549.00	91.70	1.40	4794.03	3205.39	-5.71	0.94	3204.91	143662.10	2109791.17	
7580.00	91.80	1.40	4793.08	3236.36	-4.95	0.32	3235.87	143693.07	2109791.93	
7612.00	91.70	0.60	4792.10	3268.34	-4.40	2.52	3267.83	143725.05	2109792.48	
7643.00	91.60	0.20	4791.21	3299.33	-4.18	1.33	3298.81	143756.04	2109792.70	
7675.00	92.10	0.00	4790.18	3331.31	-4.12	1.68	3330.79	143788.02	2109792.76	
7706.00	91.50	359.10	4789.20	3362.30	-4.37	3.49	3361.77	143819.01	2109792.51	
7738.00	91.70	359.00	4788.31	3394.28	-4.90	0.70	3393.76	143850.99	2109791.98	
7769.00	91.20	358.00	4787.52	3425.26	-5.71	3.61	3424.75	143881.97	2109791.17	
7801.00	90.50	359.40	4787.05	3457.24	-6.44	4.89	3456.74	143913.95	2109790.44	
7833.00	89.70	359.50	4786.99	3489.24	-6.74	2.52	3488.74	143945.95	2109790.14	
7864.00	89.40	359.30	4787.24	3520.24	-7.07	1.16	3519.74	143976.95	2109789.81	
7896.00	89.70	358.10	4787.49	3552.23	-7.79	3.87	3551.74	144008.94	2109789.09	
7927.00	90.20	357.10	4787.52	3583.20	-9.09	3.61	3582.73	144039.91	2109787.79	
7959.00	90.00	356.90	4787.46	3615.16	-10.77	0.88	3614.71	144071.87	2109786.11	
7990.00	89.90	356.00	4787.49	3646.10	-12.69	2.92	3645.68	144102.81	2109784.19	
8022.00	89.80	354.80	4787.57	3677.99	-15.25	3.76	3677.62	144134.70	2109781.63	
8053.00	90.60	354.10	4787.46	3708.85	-18.25	3.43	3708.52	144165.56	2109778.63	
8085.00	90.40	353.90	4787.18	3740.67	-21.59	0.88	3740.41	144197.38	2109775.29	
8116.00	90.50	353.10	4786.94	3771.47	-25.10	2.60	3771.27	144228.18	2109771.78	
8148.00	90.50	352.00	4786.66	3803.20	-29.25	3.44	3803.07	144259.91	2109767.63	
8179.00	90.50	350.70	4786.39	3833.85	-33.91	4.19	3833.80	144290.56	2109762.97	
8211.00	90.60	349.30	4786.08	3865.36	-39.47	4.39	3865.41	144322.07	2109757.41	
8242.00	90.70	350.80	4785.73	3895.89	-44.83	4.85	3896.04	144352.60	2109752.05	
8274.00	90.40	349.50	4785.42	3927.41	-50.30	4.17	3927.66	144384.12	2109746.58	
8305.00	90.70	347.60	4785.13	3957.79	-56.45	6.20	3958.15	144414.50	2109740.43	

Calmena Energy Services

Company: Shell Exploration and Production Company
 Well: Croft Farms 3407 #30-1H
 Location: Harper County, Kansas

Date: 25-Aug-2012
 Surveys ST2
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 Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
8337.00	90.70	347.20	4784.74	3989.02	-63.43	1.25	3989.51	144445.73	2109733.45	
8368.00	89.90	348.20	4784.57	4019.31	-70.04	4.13	4019.91	144476.02	2109726.84	
8400.00	90.20	348.40	4784.55	4050.64	-76.53	1.13	4051.37	144507.35	2109720.35	
8431.00	90.10	349.40	4784.46	4081.06	-82.50	3.24	4081.89	144537.77	2109714.38	
8463.00	89.90	348.70	4784.46	4112.48	-88.57	2.28	4113.42	144569.19	2109708.31	
8494.00	89.40	349.70	4784.65	4142.93	-94.38	3.61	4143.98	144599.64	2109702.50	
8526.00	89.20	350.20	4785.04	4174.44	-99.97	1.68	4175.58	144631.15	2109696.91	
8557.00	89.10	352.00	4785.50	4205.06	-104.76	5.81	4206.29	144661.77	2109692.12	
8589.00	89.20	354.10	4785.98	4236.82	-108.63	6.57	4238.12	144693.53	2109688.25	
8621.00	89.50	355.10	4786.34	4268.67	-111.64	3.26	4270.03	144725.38	2109685.24	
8652.00	90.00	353.70	4786.48	4299.52	-114.67	4.80	4300.93	144756.23	2109682.21	
8684.00	90.40	353.20	4786.37	4331.32	-118.32	2.00	4332.78	144788.03	2109678.56	
8715.00	91.30	352.70	4785.91	4362.08	-122.12	3.32	4363.61	144818.79	2109674.76	
8747.00	91.40	352.50	4785.15	4393.80	-126.24	0.70	4395.41	144850.51	2109670.64	
8778.00	91.40	352.40	4784.39	4424.52	-130.32	0.32	4426.20	144881.23	2109666.56	
8810.00	91.70	352.50	4783.53	4456.24	-134.52	0.99	4457.99	144912.95	2109662.36	
8841.00	91.80	352.50	4782.58	4486.96	-138.56	0.32	4488.78	144943.67	2109658.32	
8873.00	92.00	352.60	4781.52	4518.67	-142.71	0.70	4520.57	144975.38	2109654.17	
8904.00	92.10	352.50	4780.41	4549.39	-146.73	0.46	4551.35	145006.10	2109650.15	
8914.00	92.04	352.47	4780.05	4559.29	-148.03	0.70	4561.29	145016.00	2109648.85	330 Hard line intercept
8936.00	91.90	352.40	4779.30	4581.09	-150.93	0.70	4583.13	145037.80	2109645.95	
8948.00	91.90	352.40	4778.90	4592.98	-152.52	0.00	4595.05	145049.69	2109644.36	
8996.00	91.90	352.40	4777.31	4640.53	-158.86	0.00	4642.71	145097.24	2109638.02	Survey Proj. to 8996 MD