

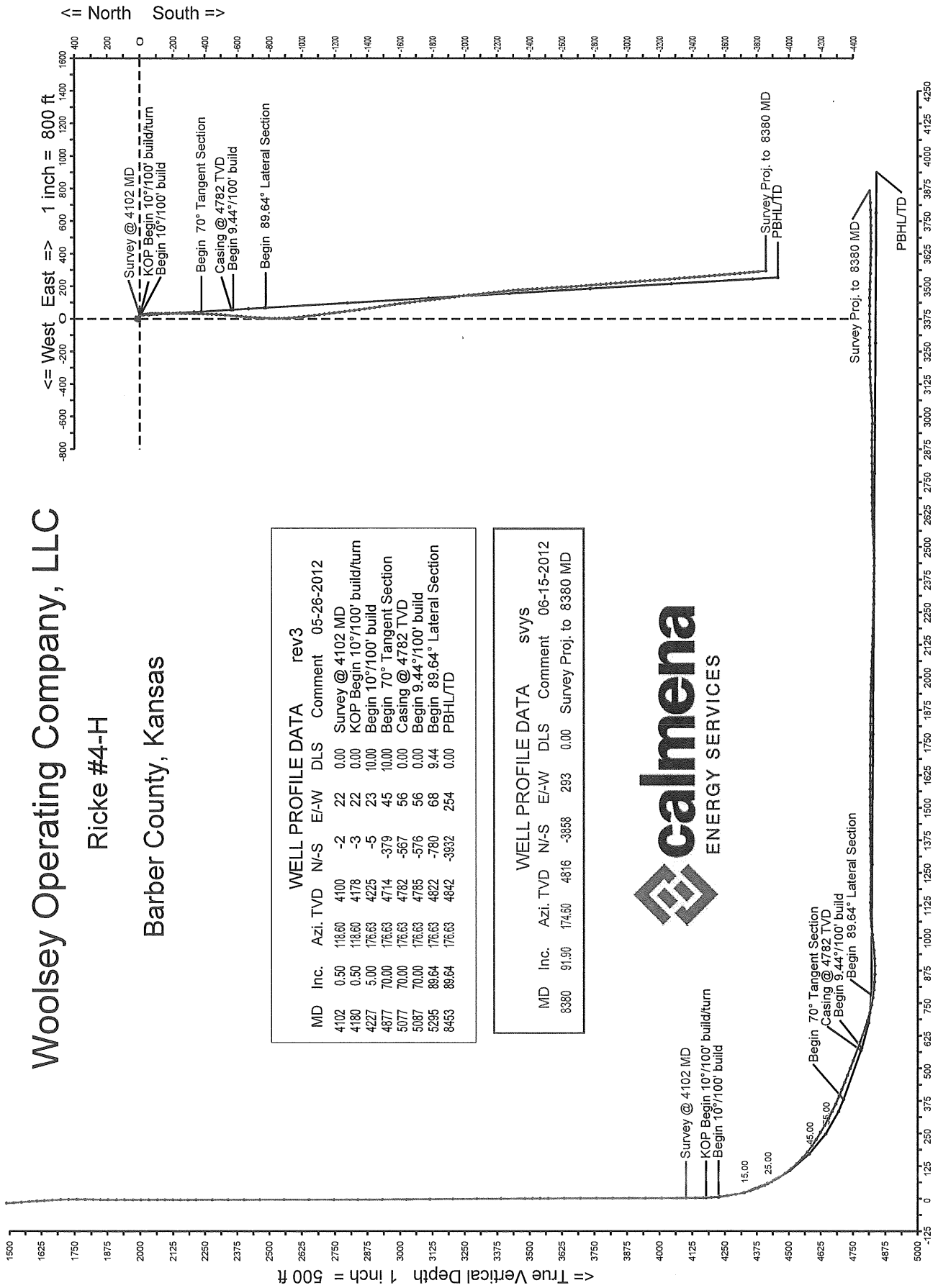
Woolsey Operating Company, LLC

Ricke #4-H

Barber County, Kansas

WELL PROFILE DATA rev3						
MD	Inc.	Azi.	TVD	NI-S	E-W	DLS Comment
4102	0.50	118.60	4100	-2	22	0.00 Survey @ 4102 MD
4180	0.50	118.60	4178	-3	22	0.00 KOP Begin 10°/100' build/turn
4227	5.00	176.63	4225	-5	23	10.00 Begin 10°/100' build
4877	70.00	176.63	4714	-379	45	10.00 Begin 70° Tangent Section
5077	70.00	176.63	4782	-567	56	0.00 Casing @ 4782 TVD
5087	70.00	176.63	4785	-576	56	0.00 Begin 9.44°/100' build
5295	89.64	176.63	4622	-780	68	9.44 Begin 89.64° Lateral Section
8453	89.64	176.63	4842	-3932	254	0.00 PBHL/TD

WELL PROFILE DATA svys						
MD	Inc.	Azi.	TVD	NI-S	E-W	DLS Comment
8380	91.90	174.60	4816	-3858	293	0.00 Survey Proj. to 8380 MD



Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
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Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/S (feet)	E/W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
Surface Location										
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1445743.09	1298492.65	
847.00	2.30	33.30	846.77	14.21	9.33	0.27	-13.58	1445743.09	1298492.65	
876.00	2.30	27.90	875.75	15.21	9.92	0.75	-14.54	1445757.29	1298501.98	
907.00	2.10	23.30	906.73	16.28	10.44	0.86	-15.57	1445758.29	1298502.57	
966.00	1.50	343.70	965.70	18.01	10.65	2.28	-17.29	1445759.37	1298503.09	
								1445761.10	1298503.30	
998.00	1.60	323.30	997.69	18.77	10.27	1.74	-18.07	1445761.86	1298502.91	
1029.00	1.70	322.30	1028.68	19.48	9.73	0.34	-18.82	1445762.57	1298502.37	
1092.00	2.00	292.80	1091.64	20.65	8.14	1.56	-20.08	1445763.74	1298500.79	
1122.00	2.20	293.10	1121.62	21.08	7.13	0.67	-20.57	1445764.17	1298499.78	
1184.00	3.30	285.60	1183.55	22.03	4.32	1.86	-21.70	1445765.11	1298496.96	
1213.00	3.60	281.80	1212.50	22.44	2.62	1.30	-22.22	1445765.52	1298495.27	
1245.00	3.70	283.40	1244.43	22.88	0.63	0.45	-22.79	1445765.97	1298493.28	
1276.00	3.70	280.30	1275.37	23.29	-1.32	0.65	-23.33	1445766.38	1298491.32	
1307.00	3.30	271.10	1306.31	23.49	-3.20	2.22	-23.64	1445766.57	1298489.45	
1337.00	3.00	254.60	1336.27	23.30	-4.82	3.17	-23.56	1445766.38	1298487.83	
1367.00	3.00	236.40	1366.23	22.65	-6.23	3.16	-23.01	1445765.74	1298486.42	
1397.00	3.50	215.50	1396.18	21.47	-7.42	4.26	-21.91	1445764.56	1298485.23	
1426.00	4.10	206.70	1425.12	19.83	-8.40	2.88	-20.33	1445762.91	1298484.25	
1458.00	4.40	204.10	1457.03	17.68	-9.41	1.11	-18.25	1445760.77	1298483.23	
1487.00	4.30	203.00	1485.94	15.67	-10.29	0.45	-16.30	1445758.75	1298482.36	
1516.00	4.30	201.80	1514.86	13.66	-11.12	0.31	-14.35	1445756.74	1298481.53	
1547.00	4.00	198.50	1545.78	11.55	-11.89	1.24	-12.30	1445754.64	1298480.75	
1578.00	4.20	195.10	1576.70	9.43	-12.53	1.02	-10.22	1445752.52	1298480.11	
1608.00	4.30	188.70	1606.62	7.26	-12.99	1.61	-8.08	1445750.35	1298479.66	
1637.00	4.20	184.90	1635.54	5.13	-13.24	1.03	-5.97	1445748.21	1298479.40	
1668.00	3.30	178.30	1666.47	3.10	-13.32	3.22	-3.96	1445746.19	1298479.33	
1700.00	2.30	174.60	1698.43	1.54	-13.23	3.17	-2.39	1445744.63	1298479.42	
1729.00	1.00	173.20	1727.42	0.71	-13.14	4.48	-1.56	1445743.80	1298479.50	
1760.00	0.40	325.40	1758.42	0.53	-13.17	4.41	-1.38	1445743.62	1298479.47	
1790.00	0.70	340.60	1788.42	0.79	-13.29	1.10	-1.65	1445743.88	1298479.35	

Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
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Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
1819.00	0.80	353.00	1817.42	1.16	-13.38	0.66	-2.02	1445744.25	1298479.27	
1848.00	0.70	22.40	1846.41	1.52	-13.33	1.35	-2.38	1445744.61	1298479.31	
1879.00	0.80	53.70	1877.41	1.83	-13.09	1.34	-2.67	1445744.91	1298479.56	
1911.00	1.00	73.90	1909.41	2.04	-12.64	1.16	-2.85	1445745.12	1298480.01	
1942.00	1.10	80.50	1940.40	2.16	-12.09	0.51	-2.94	1445745.25	1298480.56	
1973.00	1.20	85.30	1971.40	2.24	-11.47	0.45	-2.97	1445745.32	1298481.18	
2003.00	1.10	84.40	2001.39	2.29	-10.87	0.34	-2.99	1445745.38	1298481.78	
2034.00	1.10	82.70	2032.39	2.36	-10.28	0.11	-3.02	1445745.44	1298482.37	
2065.00	1.00	80.60	2063.38	2.44	-9.72	0.35	-3.06	1445745.53	1298482.93	
2094.00	1.00	84.40	2092.38	2.51	-9.21	0.23	-3.10	1445745.59	1298483.43	
2125.00	1.00	83.40	2123.37	2.56	-8.68	0.06	-3.12	1445745.65	1298483.97	
2154.00	1.00	89.30	2152.37	2.60	-8.17	0.35	-3.12	1445745.68	1298484.48	
2183.00	1.10	91.60	2181.36	2.59	-7.64	0.37	-3.08	1445745.68	1298485.01	
2215.00	1.10	88.40	2213.36	2.59	-7.03	0.19	-3.04	1445745.68	1298485.62	
2278.00	1.00	87.00	2276.34	2.64	-5.87	0.16	-3.01	1445745.72	1298486.77	
2340.00	0.90	90.80	2338.34	2.66	-4.85	0.19	-2.97	1445745.75	1298487.80	
2403.00	1.00	94.80	2401.33	2.61	-3.80	0.19	-2.85	1445745.69	1298488.84	
2464.00	0.90	90.80	2462.32	2.55	-2.79	0.20	-2.73	1445745.64	1298489.85	
2558.00	1.00	89.90	2556.31	2.55	-1.23	0.11	-2.62	1445745.63	1298491.41	
2652.00	0.90	87.30	2650.29	2.58	0.32	0.12	-2.56	1445745.67	1298492.97	
2746.00	0.90	82.00	2744.28	2.72	1.79	0.09	-2.60	1445745.81	1298494.44	
2839.00	1.00	88.60	2837.27	2.84	3.33	0.16	-2.62	1445745.93	1298495.97	
2933.00	1.00	100.70	2931.25	2.71	4.95	0.22	-2.38	1445745.80	1298497.60	
3024.00	1.10	110.70	3022.24	2.25	6.55	0.23	-1.82	1445745.34	1298499.20	
3115.00	0.90	125.40	3113.23	1.53	7.95	0.36	-1.01	1445744.62	1298500.60	
3206.00	1.00	118.70	3204.21	0.73	9.23	0.16	-0.14	1445743.82	1298501.88	
3299.00	1.00	110.70	3297.20	0.06	10.70	0.15	0.63	1445743.14	1298503.35	
3390.00	1.00	97.70	3388.19	-0.33	12.23	0.25	1.12	1445742.76	1298504.88	
3482.00	0.80	105.00	3480.17	-0.60	13.64	0.25	1.48	1445742.48	1298506.29	
3513.00	0.80	118.50	3511.17	-0.76	14.04	0.61	1.67	1445742.32	1298506.69	

Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
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Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
3542.00	0.90	98.30	3540.17	-0.89	14.45	1.08	1.82	1445742.19	1298507.09	
3573.00	0.80	98.90	3571.16	-0.96	14.90	0.32	1.92	1445742.13	1298507.55	
3635.00	0.90	110.10	3633.16	-1.20	15.79	0.31	2.21	1445741.89	1298508.43	
3697.00	0.70	105.30	3695.15	-1.46	16.61	0.34	2.53	1445741.62	1298509.26	
3758.00	1.00	98.50	3756.15	-1.64	17.50	0.52	2.77	1445741.45	1298510.14	
3821.00	1.00	94.60	3819.14	-1.77	18.59	0.11	2.96	1445741.32	1298511.23	
3884.00	0.60	100.20	3882.13	-1.87	19.46	0.65	3.12	1445741.22	1298512.11	
3946.00	0.60	98.40	3944.13	-1.97	20.10	0.03	3.27	1445741.11	1298512.75	
4008.00	0.60	99.20	4006.12	-2.07	20.74	0.01	3.41	1445741.02	1298513.39	
4069.00	0.80	116.30	4067.12	-2.31	21.44	0.47	3.69	1445740.78	1298514.09	
4102.00	0.50	118.60	4100.12	-2.48	21.77	0.91	3.88	1445740.60	1298514.42	
4137.00	1.00	132.00	4135.11	-2.76	22.13	1.50	4.18	1445740.33	1298514.78	
4168.00	2.00	153.30	4166.10	-3.42	22.58	3.64	4.87	1445739.66	1298515.22	
4199.00	3.70	162.20	4197.06	-4.86	23.13	5.65	6.34	1445738.23	1298515.77	
4230.00	5.80	166.00	4227.95	-7.33	23.81	6.85	8.85	1445735.75	1298516.46	
4261.00	7.90	168.70	4258.73	-10.94	24.61	6.85	12.51	1445732.15	1298517.25	
4292.00	10.40	170.60	4289.33	-15.79	25.48	8.12	17.40	1445727.29	1298518.13	
4323.00	13.10	172.80	4319.68	-22.04	26.38	8.83	23.70	1445721.05	1298519.03	
4352.00	16.50	173.90	4347.72	-29.40	27.23	11.76	31.09	1445713.69	1298519.88	
4384.00	20.60	172.10	4378.05	-39.50	28.49	12.94	41.25	1445703.59	1298521.13	
4413.00	24.20	172.40	4404.85	-50.44	29.97	12.42	52.27	1445692.64	1298522.62	
4444.00	28.20	175.10	4432.67	-64.05	31.44	13.46	65.94	1445679.04	1298524.09	
4474.00	31.60	178.90	4458.67	-78.97	32.20	12.97	80.89	1445664.11	1298524.84	
4505.00	35.40	181.30	4484.52	-96.08	32.15	12.98	97.95	1445647.01	1298524.80	
4534.00	39.20	180.60	4507.58	-113.64	31.86	13.18	115.46	1445629.44	1298524.51	
4565.00	43.30	179.50	4530.88	-134.08	31.85	13.43	135.86	1445609.01	1298524.50	
4596.00	47.60	179.00	4552.63	-156.16	32.15	13.92	157.91	1445586.92	1298524.79	
4626.00	51.30	178.30	4572.13	-178.95	32.69	12.46	180.68	1445564.14	1298525.33	
4655.00	54.60	179.10	4589.60	-202.08	33.21	11.59	203.81	1445541.00	1298525.85	
4684.00	57.50	180.20	4605.79	-226.14	33.35	10.48	227.82	1445516.95	1298526.00	

Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
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Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
4716.00	59.30	180.90	4622.56	-253.39	33.09	5.93	255.00	1445489.70	1298525.73	
4747.00	60.40	181.30	4638.13	-280.19	32.57	3.72	281.71	1445462.90	1298525.22	
4778.00	61.30	181.60	4653.23	-307.25	31.89	3.02	308.67	1445435.83	1298524.53	
4809.00	62.60	181.60	4667.81	-334.60	31.12	4.19	335.91	1445408.49	1298523.77	
4840.00	64.90	181.40	4681.52	-362.39	30.40	7.44	363.60	1445380.69	1298523.04	
4872.00	67.30	181.60	4694.48	-391.64	29.63	7.52	392.73	1445351.45	1298522.28	
4901.00	68.00	182.10	4705.51	-418.44	28.76	2.89	419.43	1445324.64	1298521.41	
4930.00	68.40	182.10	4716.28	-445.35	27.78	1.38	446.22	1445297.73	1298520.42	
4959.00	68.20	183.10	4727.00	-472.27	26.55	3.28	473.00	1445270.82	1298519.20	
4989.00	68.40	184.20	4738.09	-500.09	24.78	3.47	500.64	1445243.00	1298517.43	
5020.00	68.70	184.70	4749.43	-528.85	22.54	1.79	529.20	1445214.24	1298515.19	
5096.00	69.70	185.30	4776.42	-599.63	16.35	1.51	599.43	1445143.46	1298509.00	
5127.00	70.00	185.20	4787.10	-628.61	13.69	1.01	628.18	1445114.48	1298506.33	
5157.00	71.10	185.10	4797.09	-656.78	11.15	3.68	656.13	1445086.31	1298503.79	
5186.00	73.00	184.60	4806.02	-684.27	8.81	6.75	683.41	1445058.82	1298501.46	
5217.00	75.40	183.60	4814.46	-714.02	6.68	8.34	712.96	1445029.07	1298499.33	
5248.00	78.10	183.30	4821.57	-744.14	4.87	8.76	742.90	1444998.95	1298497.52	
5277.00	81.90	183.60	4826.60	-772.64	3.15	13.14	771.23	1444970.45	1298495.80	
5307.00	84.10	181.50	4830.26	-802.38	1.83	10.10	800.83	1444940.70	1298494.47	
5338.00	87.00	180.70	4832.66	-833.28	1.23	9.70	831.62	1444909.81	1298493.88	
5367.00	87.70	178.90	4834.00	-862.25	1.33	6.65	860.54	1444880.84	1298493.98	
5399.00	90.50	177.30	4834.51	-894.22	2.40	10.08	892.51	1444848.87	1298495.04	
5428.00	93.70	176.30	4833.44	-923.15	4.01	11.56	921.49	1444819.93	1298496.66	
5459.00	95.70	174.00	4830.90	-953.93	6.62	9.81	952.37	1444789.15	1298499.27	
5489.00	96.20	174.40	4827.79	-983.62	9.64	2.13	982.19	1444759.47	1298502.29	
5520.00	96.10	174.00	4824.47	-1014.28	12.75	1.32	1012.99	1444728.80	1298505.40	
5551.00	94.90	173.40	4821.50	-1044.95	16.14	4.32	1043.82	1444698.13	1298508.79	
5583.00	93.90	172.70	4819.05	-1076.62	20.00	3.81	1075.67	1444666.46	1298512.65	
5614.00	92.10	172.50	4817.42	-1107.32	23.99	5.84	1106.56	1444635.77	1298516.63	
5644.00	89.00	172.30	4817.14	-1137.05	27.95	10.35	1136.49	1444606.03	1298520.60	

Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
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Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
5675.00	87.70	172.20	4818.03	-1167.76	32.13	4.21	1167.40	1444575.33	1298524.78	
5705.00	88.90	172.60	4818.92	-1197.48	36.10	4.22	1197.31	1444545.61	1298528.75	
5737.00	89.80	173.10	4819.28	-1229.23	40.08	3.22	1229.25	1444513.86	1298532.73	
5768.00	90.30	173.10	4819.25	-1260.00	43.81	1.61	1260.21	1444483.08	1298536.45	
5800.00	91.50	172.90	4818.75	-1291.76	47.71	3.80	1292.15	1444451.33	1298540.35	
5829.00	91.40	172.70	4818.02	-1320.52	51.34	0.77	1321.08	1444422.56	1298543.99	
5861.00	91.70	172.50	4817.15	-1352.25	55.46	1.13	1353.01	1444390.84	1298548.11	
5892.00	91.10	171.70	4816.40	-1382.94	59.72	3.23	1383.91	1444360.15	1298552.37	
5924.00	89.10	171.10	4816.34	-1414.58	64.50	6.53	1415.79	1444328.51	1298557.15	
5954.00	89.70	171.20	4816.65	-1444.22	69.12	2.03	1445.67	1444298.87	1298561.77	
5985.00	90.30	171.30	4816.65	-1474.86	73.83	1.96	1476.55	1444268.23	1298566.48	
6017.00	90.90	171.00	4816.32	-1506.48	78.76	2.10	1508.42	1444236.61	1298571.40	
6049.00	90.50	171.10	4815.93	-1538.09	83.73	1.29	1540.28	1444205.00	1298576.38	
6080.00	89.30	172.10	4815.98	-1568.75	88.26	5.04	1571.18	1444174.34	1298580.91	
6111.00	89.20	173.30	4816.39	-1599.50	92.20	3.88	1602.11	1444143.59	1298584.85	
6142.00	90.00	173.20	4816.60	-1630.28	95.85	2.60	1633.07	1444112.81	1298588.49	
6173.00	90.60	172.90	4816.44	-1661.05	99.60	2.16	1664.02	1444082.04	1298592.24	
6206.00	89.50	172.90	4816.41	-1693.80	103.68	3.33	1696.96	1444049.29	1298596.32	
6237.00	89.30	173.20	4816.74	-1724.57	107.43	1.16	1727.91	1444018.52	1298600.07	
6269.00	89.30	173.20	4817.13	-1756.34	111.21	0.00	1759.86	1443986.75	1298603.86	
6298.00	89.60	173.10	4817.41	-1785.13	114.67	1.09	1788.81	1443957.95	1298607.32	
6329.00	89.60	173.30	4817.62	-1815.92	118.34	0.65	1819.77	1443927.17	1298610.99	
6360.00	89.70	172.90	4817.81	-1846.69	122.07	1.33	1850.72	1443896.40	1298614.72	
6389.00	89.60	172.80	4817.99	-1875.46	125.68	0.49	1879.67	1443867.62	1298618.32	
6420.00	88.80	173.00	4818.42	-1906.22	129.51	2.66	1910.61	1443836.87	1298622.16	
6452.00	88.50	172.70	4819.18	-1937.97	133.49	1.33	1942.54	1443805.12	1298626.14	
6481.00	88.20	172.10	4820.01	-1966.70	137.32	2.31	1971.46	1443776.39	1298629.97	
6511.00	87.90	173.20	4821.03	-1996.43	141.16	3.80	2001.38	1443746.65	1298633.81	
6542.00	87.90	174.70	4822.17	-2027.24	144.43	4.84	2032.33	1443715.85	1298637.07	
6573.00	88.00	174.80	4823.28	-2058.09	147.26	0.46	2063.30	1443685.00	1298639.91	

Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
 Page 6

Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
6605.00	88.50	174.60	4824.25	-2089.94	150.21	1.68	2095.28	1443653.15	1298642.86	
6636.00	88.30	174.10	4825.12	-2120.78	153.27	1.74	2126.25	1443622.31	1298645.91	
6668.00	88.20	173.80	4826.10	-2152.58	156.64	0.99	2158.20	1443590.51	1298649.28	
6699.00	88.10	173.80	4827.10	-2183.39	159.98	0.32	2189.16	1443559.70	1298652.63	
6729.00	88.00	173.50	4828.12	-2213.18	163.30	1.05	2219.11	1443529.90	1298655.95	
6759.00	88.80	173.20	4828.96	-2242.97	166.77	2.85	2249.06	1443500.12	1298659.42	
6788.00	89.00	173.20	4829.51	-2271.76	170.20	0.69	2278.01	1443471.33	1298662.85	
6818.00	89.50	174.10	4829.91	-2301.57	173.52	3.43	2307.97	1443441.51	1298666.17	
6847.00	88.90	175.70	4830.31	-2330.45	176.10	5.89	2336.96	1443412.63	1298668.75	
6878.00	88.70	175.80	4830.96	-2361.36	178.40	0.72	2367.95	1443381.73	1298671.04	
6907.00	89.20	176.50	4831.49	-2390.29	180.34	2.97	2396.95	1443352.80	1298672.99	
6937.00	89.70	177.30	4831.78	-2420.25	181.97	3.14	2426.94	1443322.84	1298674.61	
6966.00	90.10	176.70	4831.83	-2449.21	183.48	2.49	2455.94	1443293.88	1298676.13	
6996.00	91.30	176.70	4831.46	-2479.15	185.21	4.00	2485.94	1443263.93	1298677.86	
7025.00	92.50	176.40	4830.50	-2508.09	186.95	4.27	2514.92	1443235.00	1298679.60	
7057.00	93.70	176.50	4828.77	-2539.98	188.93	3.76	2546.87	1443203.11	1298681.58	
7089.00	93.50	176.20	4826.76	-2571.85	190.97	1.13	2578.81	1443171.24	1298683.61	
7118.00	91.90	176.80	4825.40	-2600.76	192.73	5.89	2607.78	1443142.33	1298685.38	
7147.00	90.80	176.30	4824.71	-2629.70	194.48	4.17	2636.77	1443113.39	1298687.13	
7179.00	90.60	176.40	4824.32	-2661.63	196.52	0.70	2668.77	1443081.46	1298689.16	
7208.00	89.60	175.80	4824.27	-2690.56	198.49	4.02	2697.77	1443052.52	1298691.14	
7239.00	89.30	175.30	4824.57	-2721.47	200.89	1.88	2728.76	1443021.62	1298693.54	
7269.00	89.90	175.40	4824.78	-2751.37	203.33	2.03	2758.76	1442991.72	1298695.97	
7298.00	90.80	175.50	4824.60	-2780.28	205.63	3.12	2787.75	1442962.81	1298698.27	
7330.00	91.60	175.60	4823.93	-2812.17	208.11	2.52	2819.74	1442930.91	1298700.76	
7359.00	91.20	175.30	4823.22	-2841.07	210.41	1.72	2848.73	1442902.01	1298703.05	
7391.00	88.80	175.60	4823.22	-2872.97	212.95	7.56	2880.72	1442870.12	1298705.59	
7420.00	89.10	175.10	4823.75	-2901.87	215.30	2.01	2909.72	1442841.22	1298707.94	
7451.00	88.50	174.90	4824.40	-2932.75	218.00	2.04	2940.70	1442810.34	1298710.65	
7482.00	88.30	174.90	4825.27	-2963.61	220.75	0.65	2971.68	1442779.48	1298713.40	

Calmena Energy Services

Company: Woolsey Operating Company, LLC
 Well: Ricke #4-H
 Location: Barber County, Kansas

Date: 14-Jun-2012
 Surveys
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Job#: 6425
 NAD83 Ks South gr elev=1370 RKB=1392

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 176.30° Az (feet)	Grid Y	Grid X	Comments
7513.00	90.90	175.60	4825.49	-2994.50	223.32	8.69	3002.67	1442748.59	1298715.97	
7542.00	94.20	176.40	4824.20	-3023.40	225.34	11.71	3031.64	1442719.69	1298717.99	
7571.00	94.10	176.20	4822.10	-3052.26	227.21	0.77	3060.56	1442690.83	1298719.85	
7601.00	93.40	175.90	4820.13	-3082.13	229.27	2.54	3090.50	1442660.96	1298721.92	
7630.00	93.00	176.00	4818.52	-3111.01	231.31	1.42	3119.45	1442632.08	1298723.96	
7660.00	92.00	175.70	4817.21	-3140.90	233.48	3.48	3149.42	1442602.19	1298726.13	
7691.00	90.60	176.00	4816.50	-3171.81	235.73	4.62	3180.41	1442571.28	1298728.37	
7722.00	90.30	175.80	4816.26	-3202.73	237.94	1.16	3211.41	1442540.36	1298730.59	
7752.00	90.80	175.50	4815.97	-3232.64	240.22	1.94	3241.41	1442510.45	1298732.86	
7783.00	91.40	175.50	4815.38	-3263.54	242.65	1.94	3272.40	1442479.55	1298735.30	
7814.00	90.20	175.70	4814.94	-3294.45	245.03	3.92	3303.39	1442448.64	1298737.67	
7843.00	89.10	175.30	4815.12	-3323.36	247.30	4.04	3332.39	1442419.73	1298739.95	
7875.00	89.50	175.00	4815.51	-3355.24	250.01	1.56	3364.38	1442387.85	1298742.65	
7904.00	90.70	174.80	4815.46	-3384.12	252.59	4.20	3393.37	1442358.97	1298745.23	
7935.00	90.80	175.50	4815.06	-3415.01	255.21	2.28	3424.36	1442328.08	1298747.85	
7966.00	89.00	174.90	4815.11	-3445.90	257.80	6.12	3455.35	1442297.19	1298750.45	
7997.00	87.40	175.50	4816.08	-3476.77	260.39	5.51	3486.33	1442266.31	1298753.04	
8028.00	88.00	175.00	4817.33	-3507.64	262.96	2.52	3517.30	1442235.45	1298755.60	
8060.00	89.00	174.80	4818.17	-3539.50	265.80	3.19	3549.28	1442203.58	1298758.45	
8090.00	88.30	175.10	4818.87	-3569.38	268.44	2.54	3579.26	1442173.71	1298761.09	
8121.00	88.80	175.80	4819.66	-3600.27	270.90	2.77	3610.25	1442142.82	1298763.55	
8152.00	89.30	175.60	4820.17	-3631.18	273.22	1.74	3641.24	1442111.91	1298765.87	
8183.00	90.00	175.40	4820.36	-3662.08	275.66	2.35	3672.24	1442081.00	1298768.30	
8215.00	90.30	175.10	4820.28	-3693.97	278.31	1.33	3704.23	1442049.11	1298770.95	
8244.00	90.70	174.90	4820.02	-3722.86	280.83	1.54	3733.22	1442020.23	1298773.48	
8274.00	91.20	174.60	4819.53	-3752.73	283.58	1.94	3763.21	1441990.36	1298776.23	
8303.00	91.30	175.00	4818.89	-3781.61	286.21	1.42	3792.19	1441961.48	1298778.85	
8332.00	91.90	174.60	4818.08	-3810.47	288.83	2.49	3821.17	1441932.61	1298781.48	
8380.00	91.90	174.60	4816.49	-3858.24	293.35	0.00	3869.12	1441884.85	1298785.99	Survey projected

PACKERS PLUS - PACKER PLACEMENT

Ricke #4H					
Item	Description	Length	Landed @	Accumulated	Proposed
			Actual MD		
			8357.04		
	Guide Shoe	0.92	8356.12	0.92	
	Float Collar	1.32	8354.80	2.24	
	Pup	6.12	8348.68	8.36	
	Float Collar	1.34	8347.34	9.70	
	Toe Circulating Sub	2.73	8344.61	12.43	
	Pup	6.12	8338.49	18.55	
1	Joint 4.50" 11.60ppf L-80	45.56	8292.93	64.11	
	Pup	3.08	8289.85	67.19	
	Dual Hydraulic Fracport	4.33	8285.52	71.52	
	Pup	6.13	8279.39	77.65	
2	Joint 4.50" 11.60ppf L-80	45.55	8233.84	123.20	
3	Joint 4.50" 11.60ppf L-80	45.58	8188.26	168.78	
	Pup	3.09	8185.17	171.87	
	RSIS	7.17	8178.00	179.04	
	Pup	6.10	8171.90	185.14	
4	Joint 4.50" 11.60ppf L-80	45.54	8126.36	230.68	
	Pup	3.09	8123.27	233.77	
	RSII	5.23	8118.04	239.00	
	Pup	6.10	8111.94	245.10	
5	Joint 4.50" 11.60ppf L-80	45.57	8066.37	290.67	
6	Joint 4.50" 11.60ppf L-80	45.57	8020.80	336.24	
	2.125" Fracport	2.65	8018.15	338.89	
7	Joint 4.50" 11.60ppf L-80	45.55	7972.60	384.44	
8	Joint 4.50" 11.60ppf L-80	45.54	7927.06	429.98	
	Pup	3.09	7923.97	433.07	
	RSII	5.22	7918.75	438.29	
	Pup	6.11	7912.64	444.40	
9	Joint 4.50" 11.60ppf L-80	45.54	7867.10	489.94	
10	Joint 4.50" 11.60ppf L-80	45.50	7821.60	535.44	
	2.250" Fracport	2.65	7818.95	538.09	
11	Joint 4.50" 11.60ppf L-80	45.58	7773.37	583.67	
12	Joint 4.50" 11.60ppf L-80	45.56	7727.81	629.23	
13	Joint 4.50" 11.60ppf L-80	45.58	7682.23	674.81	
	Pup	3.09	7679.14	677.90	
	RSII	5.24	7673.90	683.14	
	Pup	5.82	7668.08	688.96	
14	Joint 4.50" 11.60ppf L-80	45.58	7622.50	734.54	
15	Joint 4.50" 11.60ppf L-80	45.56	7576.94	780.10	
	2.375" Fracport	2.65	7574.29	782.75	
16	Joint 4.50" 11.60ppf L-80	45.55	7528.74	828.30	
17	Joint 4.50" 11.60ppf L-80	45.53	7483.21	873.83	
18	Joint 4.50" 11.60ppf L-80	45.55	7437.66	919.38	
	Pup	3.08	7434.58	922.46	
	RSII	5.23	7429.35	927.69	

PACKERS PLUS - PACKER PLACEMENT

	Pup	6.09	7423.26	933.78	
19	Joint 4.50" 11.60ppf L-80	45.52	7377.74	979.30	
20	Joint 4.50" 11.60ppf L-80	45.53	7332.21	1024.83	
✓	2.50" Fracport	2.65	7329.56	1027.48	
21	Joint 4.50" 11.60ppf L-80	45.54	7284.02	1073.02	
22	Joint 4.50" 11.60ppf L-80	45.50	7238.52	1118.52	
23	Joint 4.50" 11.60ppf L-80	45.58	7192.94	1164.10	
✓	Pup	3.08	7189.86	1167.18	
	RSII	5.24	7184.62	1172.42	
	Pup	6.08	7178.54	1178.50	
24	Joint 4.50" 11.60ppf L-80	45.57	7132.97	1224.07	
25	Joint 4.50" 11.60ppf L-80	45.53	7087.44	1269.60	
✓	2.625" Fracport	2.65	7084.79	1272.25	
26	Joint 4.50" 11.60ppf L-80	45.58	7039.21	1317.83	
27	Joint 4.50" 11.60ppf L-80	45.55	6993.66	1363.38	
28	Joint 4.50" 11.60ppf L-80	45.55	6948.11	1408.93	
✓	Pup	3.06	6945.05	1411.99	
	RSII	5.24	6939.81	1417.23	
	Pup	6.13	6933.68	1423.36	
29	Joint 4.50" 11.60ppf L-80	45.58	6888.10	1468.94	
30	Joint 4.50" 11.60ppf L-80	45.55	6842.55	1514.49	
✓	2.75" Fracport	2.65	6839.90	1517.14	
31	Joint 4.50" 11.60ppf L-80	45.58	6794.32	1562.72	
32	Joint 4.50" 11.60ppf L-80	45.58	6748.74	1608.30	
33	Joint 4.50" 11.60ppf L-80	45.53	6703.21	1653.83	
✓	Pup	3.08	6700.13	1656.91	
	RSII	5.24	6694.89	1662.15	
	Pup	6.14	6688.75	1668.29	
34	Joint 4.50" 11.60ppf L-80	45.54	6643.21	1713.83	
35	Joint 4.50" 11.60ppf L-80	45.54	6597.67	1759.37	
✓	2.875" Fracport	2.65	6595.02	1762.02	
36	Joint 4.50" 11.60ppf L-80	45.52	6549.50	1807.54	
37	Joint 4.50" 11.60ppf L-80	45.58	6503.92	1853.12	
38	Joint 4.50" 11.60ppf L-80	45.58	6458.34	1898.70	
✓	Pup	3.08	6455.26	1901.78	
	RSII	5.23	6450.03	1907.01	
	Pup	6.15	6443.88	1913.16	
39	Joint 4.50" 11.60ppf L-80	45.58	6398.30	1958.74	
40	Joint 4.50" 11.60ppf L-80	45.55	6352.75	2004.29	
✓	3.00" Fracport	2.65	6350.10	2006.94	
41	Joint 4.50" 11.60ppf L-80	45.48	6304.62	2052.42	
42	Joint 4.50" 11.60ppf L-80	45.52	6259.10	2097.94	
✓	Pup	3.08	6256.02	2101.02	
	RSII	5.24	6250.78	2106.26	
	Pup	6.11	6244.67	2112.37	
43	Joint 4.50" 11.60ppf L-80	45.53	6199.14	2157.90	
44	Joint 4.50" 11.60ppf L-80	45.52	6153.62	2203.42	
✓	3.125" Fracport	2.65	6150.97	2206.07	

PACKERS PLUS - PACKER PLACEMENT

45	Joint 4.50" 11.60ppf L-80	45.50	6105.47	2251.57	
46	Joint 4.50" 11.60ppf L-80	45.51	6059.96	2297.08	
47	Joint 4.50" 11.60ppf L-80	45.52	6014.44	2342.60	
✓	Pup	3.09	6011.35	2345.69	
	RSII	5.24	6006.11	2350.93	
	Pup	6.13	5999.98	2357.06	
48	Joint 4.50" 11.60ppf L-80	45.52	5954.46	2402.58	
49	Joint 4.50" 11.60ppf L-80	45.54	5908.92	2448.12	
✓	3.25" Fracport	2.65	5906.27	2450.77	
50	Joint 4.50" 11.60ppf L-80	45.52	5860.75	2496.29	
51	Joint 4.50" 11.60ppf L-80	45.51	5815.24	2541.80	
52	Joint 4.50" 11.60ppf L-80	45.54	5769.70	2587.34	
✓	Pup	3.09	5766.61	2590.43	
	RSII	5.23	5761.38	2595.66	
	Pup	6.12	5755.26	2601.78	
53	Joint 4.50" 11.60ppf L-80	45.54	5709.72	2647.32	
54	Joint 4.50" 11.60ppf L-80	45.55	5664.17	2692.87	
✓	3.375" Fracport	2.65	5661.52	2695.52	
55	Joint 4.50" 11.60ppf L-80	45.54	5615.98	2741.06	
56	Joint 4.50" 11.60ppf L-80	45.50	5570.48	2786.56	
57	Joint 4.50" 11.60ppf L-80	45.53	5524.95	2832.09	
✓	Pup	3.09	5521.86	2835.18	
	RSII	5.24	5516.62	2840.42	
	Pup	6.13	5510.49	2846.55	
58	Joint 4.50" 11.60ppf L-80	45.50	5464.99	2892.05	
59	Joint 4.50" 11.60ppf L-80	45.55	5419.44	2937.60	
60	Joint 4.50" 11.60ppf L-80	45.58	5373.86	2983.18	
61	Joint 4.50" 11.60ppf L-80	45.56	5328.30	3028.74	
62	Joint 4.50" 11.60ppf L-80	45.54	5282.76	3074.28	
63	Joint 4.50" 11.60ppf L-80	45.52	5237.24	3119.80	
64	Joint 4.50" 11.60ppf L-80	45.50	5191.74	3165.30	
65	Joint 4.50" 11.60ppf L-80	45.52	5146.22	3210.82	
66	Joint 4.50" 11.60ppf L-80	45.52	5100.70	3256.34	
67	Joint 4.50" 11.60ppf L-80	45.51	5055.19	3301.85	
68	Joint 4.50" 11.60ppf L-80	45.50	5009.69	3347.35	
✓	SF Hanger	9.91	4999.78	3357.26	



**Do It Once
Do It Right**

Job Record V1.1.2

Operator:	Woolsey Operating Company	Base Point:	20600 Conway
Company Rep:	Mike Tharp	Packers Plus Rep:	Gary Goodman/Tim Jones
Well Name:	Ricke 4-H	Date Started:	6/15/2012
Ticket Number:	SOU004926	Date Completed:	6/27/2012
County/State:	Barber Co, KS	Type of Job:	StackFrac HD
Field	Stranathan	Formation	Mississippi
Rig Name	Dan-D 11	Well API #	-

DETAIL THE JOB - THIS FORM USED TO REPORT WHAT ACTUALLY TOOK PLACE - FILL OUT COMPLETELY

General Well Information				Stages			
Well Profile	Open Hole Horizontal			Number of Stages	12		
Depth TVD	4,815	Feet		MD to Packer 1	202		
Depth MD	8,380	Feet		Packer 1 to Packer 2	194.07		
Lateral Length	3,309	Feet		Packer 2 to Packer 3	239.61		
				Packer 3 to Packer 4	239.32		
KOP	4,152	Feet		Packer 4 to Packer 5	239.49		
				Packer 5 to Packer 6	239.57		
Hole Size	6.250	Inch		Packer 6 to Packer 7	239.68		
				Packer 7 to Packer 8	239.63		
BHP	0	PSI		Packer 8 to Packer 9	194.01		
				Packer 9 to Packer 10	239.43		
BHT	106	°F		Packer 10 to Packer 11	239.5		
				Packer 11 to Packer 12	239.52		
Reamer run?	yes	Size	6				
Build Rate	9.44/100	*/100 FT					
Max Dog Leg	9	*/100 FT					
Angle of Perma Plus	4999.78' @ 61 degrees						
Planned Depth Bullet Guide	8,357	Feet					
Actual Depth Bullet Guide	8,357	Feet					
Distance Off	0	Feet					
				Average Stage Length	229	Feet	

WORK STRING INFORMATION

Casing	Weight	Thread	ID	Capacity	Grade	Shoe		
7	23	LTC	6.366	0.039368521	J55	5071		
				0				
Drill Pipe	Weight	Thread	ID	Capacity	Grade	Length	Torque	
4	14	IF	3.34	0.010836992	XH	3789.61	10K	
Heavy Weight	Weight	Thread	ID	Capacity	Grade	Length	Torque	
4	27.2	IF	2.3125	0.005194925	XH	1233.52	10K	
Drill Collar	Weight	Thread	ID	Capacity	Grade	Length	Torque	
0	0	0	0	0	0	0	0	
Liner	Weight	Thread	ID	Capacity	Grade	Length	Torque	
4.5	11.6	LTC	4	0.015543035	L80	3096.82	2280	

Well Data

MD	TVD	KOP	Shoe	Lateral	Open Hole Size	Capacity
8380	4815	4152	5071	3309	6.25	0.03794686 bbl/ft

FLUIDS

Mud Weight	Mud Type	Fill Fluid	Fill Weight	LCM (if yes-amount- ppg)	Viscosity	
8.34	WATER BASE	FRESH WATER	8.34	8 ppg	28	
Fluid Level in Annulus Start	full	PUMP TYPE	SPM	BPS	Rig Type	Weight
Fluid Level in Annulus Change	full	DH-7000	75	0.079	Kelly	50K

AS RUN IN HOLE WEIGHTS

Liner	Air	Mud	Push Pipe	Air	Mud	H.W.D.P.	Air	Mud	D.P.	Air	Mud
0	0	31,339	0	0	0	0	0	29,271	0	0	46,439
Calculated Neutral Weight Including Blocks:			78K			Weight When Released From PermaPlus:			78K		
						Pipe Stretch in Inches Before Releasing:			24"		

Setting Tool Part Number	PN 108425-000001	FracPORT Part Number	PN 121332-000022
Elastomer / Metallurgy / Pinned to	HSN P110 2800psi	Elastomer / Metallurgy / Pinned to	1890psi
Packer Part Number	PN 121381-000001	Other Part Number	3.5" IF Handling Sub PPHS 012 AR
Elastomer / Metallurgy / Pinned to	HSN p-110 1944psi	Elastomer / Metallurgy / Pinned to	n/a
FTR	Yes	Problem on Job	Dropped Fracports from Rig Floor

Notes: