

KINGSLEY ENERGY SERVICES, LLC

OPERATOR: ENDURING RESORUCES, LLC

START: NOV 28, 2012

WELL: University 12 #1001H

FINISH: DEC 14, 2012

LOCATION: Reagan County, Texas

DIR. DRILLE T. Iselt / D. Gresham

Rig: Ensign 765

CO. REP. M. Doyle

TIE-IN SURVEY PROVIDED BY: VES to 3100

Commer Directional by Marksmen Directional

DECLINATION (+E / -W 6.96

API:42-383-37902

Grid Conv.

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

PROPOSED DIR.: 1.17

*****Survey Input*****

Survey No.	Measured Depth	INC	TRUE AZM	TVD	North + - South	East + - West	Vertical Section	DLS/ 100
Tie in	3100	3.36	251.09	3096.71	-8.19	-134.61	-8.19	0.37
1	3233	2.9	229.4	3229.516	-11.6427	-140.852	-14.5164	0.948112
2	3421	2.9	232.1	3417.275	-17.659	-148.216	-20.6818	0.072654
3	3609	2.4	226.6	3605.074	-23.2851	-154.828	-26.4416	0.298081
4	3797	1.1	200	3792.985	-27.6856	-158.306	-30.9123	0.797646
5	3985	1.2	140.4	3980.953	-30.8983	-157.668	-34.1113	0.609719
6	4173	2	104.5	4168.883	-33.2366	-153.237	-36.3586	0.662571
7	4361	2.1	98.1	4356.763	-34.5433	-146.651	-37.5306	0.132795
8	4549	1.9	108.2	4544.649	-36.0021	-140.28	-38.8589	0.215156
9	4737	1.2	98.1	4732.579	-37.2529	-135.37	-40.0092	0.39828
10	4926	0.9	50.5	4921.55	-36.5876	-132.266	-39.2807	0.471299
11	5114	0.4	28.6	5109.538	-35.0722	-130.812	-37.736	0.29229
12	5302	0.2	65.1	5297.535	-34.3579	-130.2	-37.0093	0.142115
13	5490	0.2	342.4	5485.535	-33.907	-130.002	-36.5544	0.140565
14	5679	0.2	257.7	5674.534	-33.6628	-130.424	-36.3189	0.142573
15	5867	0.2	244	5862.533	-33.8766	-131.039	-36.5452	0.025377
16	6055	0.2	177.3	6050.532	-34.3482	-131.319	-37.0224	0.116969
17	6243	0.3	203.5	6238.53	-35.1273	-131.5	-37.805	0.079484
18	6432	0.2	182.7	6427.528	-35.9105	-131.713	-38.5925	0.070632
19	6538	0.3	168.4	6533.527	-36.3672	-131.665	-39.0481	0.110495
20	6664	0.4	165	6659.525	-37.1151	-131.485	-39.7922	0.081025
21	6695	1.4	27.8	6690.522	-36.8847	-131.281	-39.5576	5.532766
22	6727	4.7	15.6	6722.473	-35.2757	-130.746	-37.938	10.45219
23	6758	8.8	12.1	6753.251	-31.7323	-129.907	-34.3782	13.28611
24	6789	12.5	9.8	6783.712	-26.1059	-128.838	-28.7312	12.01164
25	6821	15.9	9.2	6814.73	-18.3641	-127.548	-20.9647	10.63481
26	6852	19.4	11.2	6844.266	-9.11897	-125.868	-11.6872	11.45692
27	6884	22.7	14	6874.127	2.08886	-123.341	-0.43007	10.77801
28	6915	25.7	16.7	6902.401	14.33411	-119.962	11.88163	10.31268
29	6946	28.8	18.6	6929.958	27.85304	-115.647	25.48584	10.38515
30	6978	32	18.9	6957.554	43.18407	-110.441	40.91998	10.01122
31	7009	35	18.8	6983.402	59.3748	-104.914	57.22019	9.679056
32	7041	37.8	18.9	7009.156	77.34379	-98.7789	75.3107	8.751964

33	7072	40.4	19.7	7033.211	95.79282	-92.3141	93.88789	8.543407
34	7103	43	20.3	7056.355	115.1685	-85.259	113.4036	8.485271
35	7135	46.2	21.1	7079.137	136.1823	-77.3138	134.5752	10.15274
36	7166	49.2	20.5	7099.999	157.6148	-69.1754	156.1695	9.782646
37	7197	51.8	19.5	7119.716	180.0915	-60.9987	178.8084	8.748475
38	7229	54.5	18.4	7138.905	204.3089	-52.6882	203.1905	8.874347
39	7260	57.3	17.8	7156.283	228.7066	-44.7162	227.7459	9.173284
40	7292	59.6	17.2	7173.026	254.7129	-36.5183	253.9142	7.362918
41	7323	62.9	17.3	7187.935	280.6653	-28.4595	280.0257	10.64892
42	7354	66.1	17.2	7201.279	307.3835	-20.1636	306.9077	10.32669
43	7386	68.9	16.3	7213.524	335.6908	-11.6465	335.383	9.127553
44	7417	72.4	15.5	7223.794	363.8166	-3.63694	363.6664	11.54978
45	7449	75.7	14.2	7232.586	393.5529	4.244523	393.5575	11.02724
46	7480	79.2	12.5	7239.322	422.9894	11.22703	423.1305	12.49456
47	7511	83.1	10	7244.091	453.0242	17.1977	453.2809	14.89105
48	7543	86	6.3	7247.131	484.5492	21.70994	484.8915	14.64872
49	7574	87.7	3	7248.835	515.3951	24.21811	515.7822	11.96001
50	7606	89.1	2.3	7249.728	547.3475	25.69693	547.7581	4.890996
51	7669	89.7	2.5	7250.388	610.2884	28.33494	610.7398	1.003892
52	7763	89.7	3.3	7250.88	704.166	33.09057	704.6949	0.851052
53	7857	89.1	4.2	7251.865	797.9582	39.238	798.593	1.150661
54	7951	89.8	3	7252.767	891.7661	45.13983	892.5019	1.477863
55	8046	89.5	2.7	7253.347	986.6466	49.86327	987.4591	0.44659
56	8140	88.4	1.8	7255.07	1080.556	53.55311	1081.424	1.511876
57	8234	90.1	2.3	7256.3	1174.484	56.9153	1175.401	1.885093
58	8328	90.3	2.8	7255.972	1268.39	61.09743	1269.373	0.572887
59	8422	88.8	1.3	7256.71	1362.322	64.45979	1363.354	2.256658
60	8516	90.4	1.1	7257.367	1456.296	66.42825	1457.348	1.715373
61	8610	89.9	1.1	7257.121	1550.278	68.2328	1551.348	0.531916
62	8705	91.8	1.5	7255.711	1645.238	70.38767	1646.332	2.043828
63	8799	92	1.6	7252.595	1739.152	72.9289	1740.279	0.237854
64	8893	91.7	2.1	7249.56	1833.054	75.96194	1834.223	0.620076
65	8987	90	359.9	7248.166	1927.02	77.60173	1928.203	2.957482
66	9082	89.9	0.6	7248.248	2022.018	78.01624	2023.19	0.744323
67	9175	88.1	359.9	7249.871	2114.999	78.4221	2116.159	2.076637
68	9270	90.2	1	7251.281	2209.979	79.16834	2211.134	2.495336
69	9364	90.2	1.7	7250.953	2303.951	81.38293	2305.133	0.744676
69	9458	88	0.7	7252.429	2397.912	83.35137	2399.114	2.57078
70	9552	90	1.5	7254.069	2491.875	85.15575	2493.094	2.291496
70	9646	90.7	2.3	7253.495	2585.82	88.27221	2587.084	1.130851
71	9740	90.2	2.8	7252.757	2679.724	92.45424	2681.053	0.752229
72	9834	87.8	0.4	7254.398	2773.659	95.07881	2775.022	3.610352
73	9928	90.7	1.1	7255.628	2867.632	96.30918	2869.001	3.173676
74	10023	89.1	0.2	7255.794	2962.622	97.38687	2963.993	1.93236
75	10117	87.9	359.8	7258.254	3056.588	97.38696	3057.939	1.345602
76	10211	89.9	0.7	7260.059	3150.564	97.79726	3151.904	2.333069
77	10305	89.8	1.2	7260.305	3244.55	99.35575	3245.903	0.542447

78	10399	88.9	1.2	7261.371	3338.523	101.3242	3339.896	0.957447
79	10494	89.1	2	7263.029	3433.47	103.9763	3434.878	0.867897
80	10588	89	3.2	7264.588	3527.359	108.2398	3528.834	1.280846
81	10682	89.1	0.5	7266.147	3621.288	111.2737	3622.805	2.873916
82	10776	88	359.8	7268.525	3715.256	111.5198	3716.758	1.386931
83	10870	90.3	359.5	7269.92	3809.237	110.9456	3810.709	2.467528
84	10964	91.5	0.5	7268.443	3903.223	110.9455	3904.674	1.661659
85	11058	90.9	359.9	7266.475	3997.201	111.2735	3998.64	0.90259
86	11152	90.3	1.2	7265.49	4091.189	112.1758	4092.626	1.523098
87	11246	89	1.1	7266.064	4185.166	114.0623	4186.623	1.387065
88	11341	88.4	1.6	7268.22	4280.115	116.2998	4281.597	0.822044
89	11435	89.3	0.5	7270.106	4374.078	118.0218	4375.575	1.511796
90	11529	90	0.6	7270.681	4468.071	118.9241	4469.568	0.752241
91	11623	89	2	7271.501	4562.04	121.0565	4563.56	1.830221
92	11718	92	2.5	7270.672	4656.952	124.7855	4658.529	3.201441
93	11812	91.5	1.4	7267.801	4750.852	127.9824	4752.474	1.284931
94	11906	91.5	2.6	7265.34	4844.76	131.2618	4846.431	1.276158
95	12000	90.4	1.2	7263.782	4938.692	134.3776	4940.406	1.893917
96	12094	88.2	0.6	7264.93	5032.667	135.854	5034.392	2.425883
97	12188	87.4	0.9	7268.539	5126.589	137.0835	5128.319	0.908853
98	12282	89.7	359.6	7270.917	5220.55	137.4929	5222.269	2.810343
99	12377	87.4	358.3	7273.321	5315.495	135.7533	5317.159	2.78076
100	12471	89.7	358.7	7275.7	5409.426	133.2938	5411.02	2.483508
101	12565	91	359.1	7275.125	5503.405	131.4893	5504.942	1.44696
102	12659	89.8	358.3	7274.469	5597.376	129.3567	5598.85	1.534258
103	12754	87.9	358.1	7276.376	5692.305	126.3735	5693.699	2.011045
104	12848	89.7	1.4	7278.345	5786.267	125.9644	5787.633	3.998122
105	12942	89	0.9	7279.411	5880.241	127.8509	5881.626	0.91512
106	13036	89.4	2.4	7280.724	5974.19	130.5572	5975.61	1.651355
107	13131	88.8	2.5	7282.216	6069.091	134.6177	6070.575	0.640289
108	13225	88.2	2.6	7284.676	6162.965	138.7984	6164.515	0.647097
109	13319	89.9	2.7	7286.235	6256.849	143.1437	6258.467	1.811636
110	13413	89.5	2.3	7286.727	6350.757	147.2439	6352.44	0.601789
111	13507	87.4	2	7289.27	6444.652	150.769	6446.386	2.256705
112	13601	90.6	1.9	7290.91	6538.571	153.9666	6540.351	3.405917
113	13695	89.8	1.2	7290.582	6632.534	156.5092	6634.347	1.130861
114	13789	87.1	359.6	7293.124	6726.486	157.166	6728.293	3.338402
115	13883	89.5	358.8	7295.913	6820.428	155.8538	6822.188	2.691163
116	13977	91.2	358.4	7295.339	6914.394	153.5573	6916.088	1.857894
117	14071	92.3	359.2	7292.468	7008.328	151.5895	7009.962	1.446724
118	14165	92.7	359.9	7288.368	7102.234	150.8519	7103.834	0.85707
119	14260	92.4	359	7284.141	7197.135	149.9408	7198.696	0.997724
120	14354	92.3	359.5	7280.287	7291.047	148.7114	7292.564	0.54201
121	14448	92.3	358.8	7276.514	7384.961	147.3181	7386.429	0.744082
122	14542	90.4	358.6	7274.3	7478.906	145.1861	7480.311	2.032437
123	14637	88.8	358.6	7274.963	7573.872	142.8652	7575.211	1.684211
124	14731	88	358.3	7277.588	7667.801	140.3236	7669.067	0.908893

125	14825	87.1	358.3	7281.606	7761.672	137.5375	7762.862	0.957447
126	14919	86.5	357.4	7286.853	7855.458	134.0168	7856.557	1.149463
127	15013	85.8	357.8	7293.165	7949.163	130.0893	7950.162	0.85721
128	15107	85.4	357.5	7300.376	8042.807	126.2464	8043.708	0.531352
129	15152	84.7	357.2	7304.259	8087.591	124.1736	8088.44	1.691416
PBHL	15330	84.7	357.2	7320.701	8264.618	115.5156	8265.254	3.22E-07