

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1235760  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1235760

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*  
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*  
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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**TOPOGRAPHIC LAND SURVEYORS**

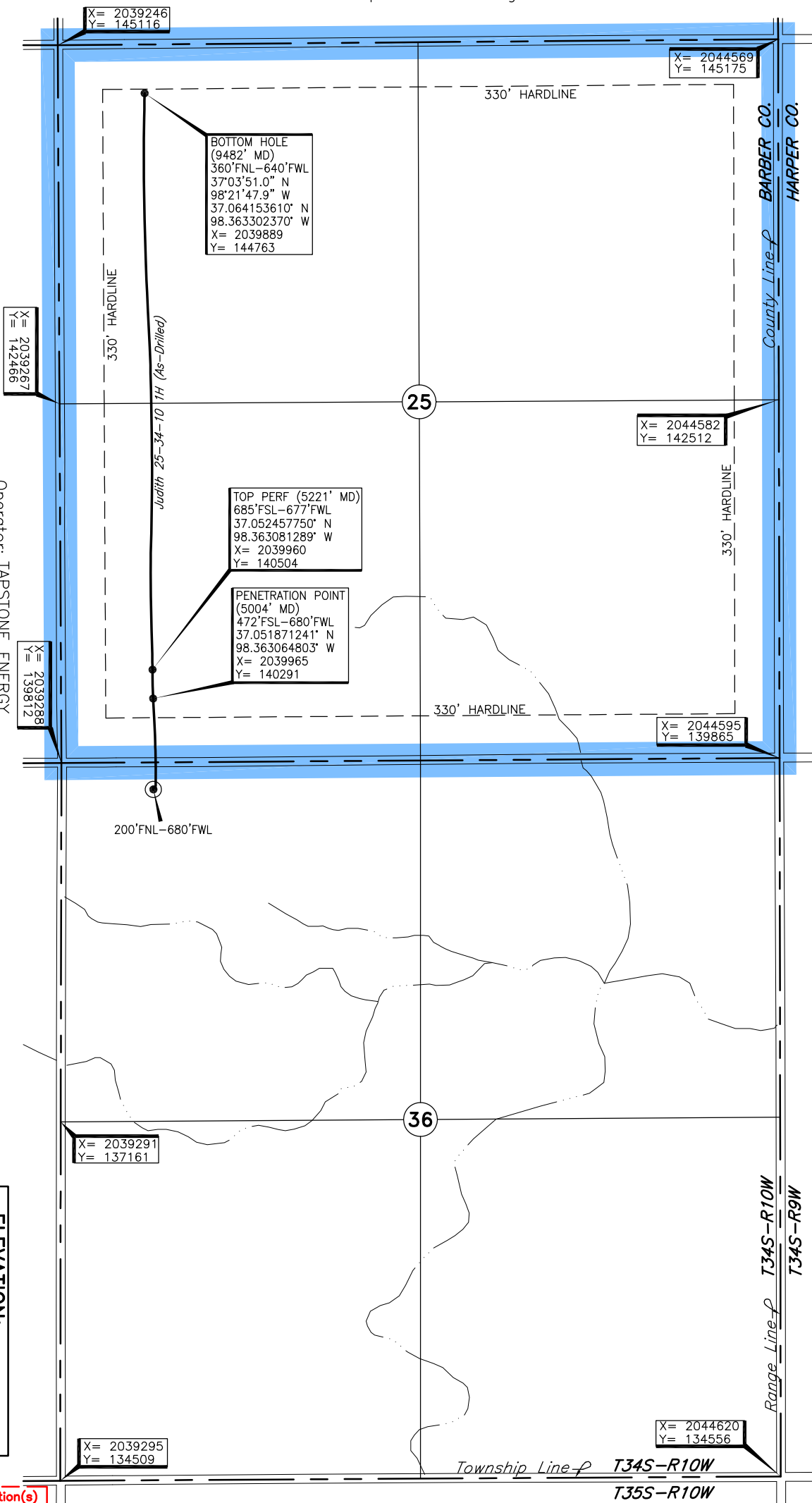
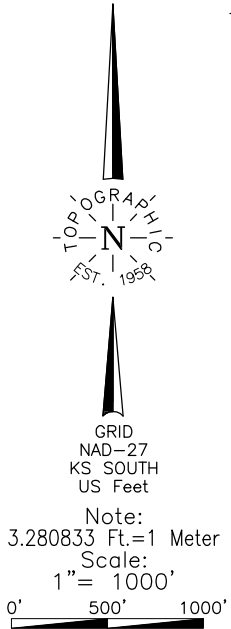
6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 \* LOCAL (405) 843-4847 \* OUT OF STATE (800) 654-3219

Certificate of Authorization No. LS-99, Exp. Dec. 31, 2015

BARBER

County, Kansas

200'FNL - 680'FWL Section 36 Township 34S Range 10W P.M.



Operator: TAPSTONE ENERGY  
 Lease Name: JUDITH 25-34-10  
 Topography & Vegetation: Loc. fell in gently sloping wheat field  
 Well No.: 1H  
 ELEVATION: 1301' Gr. at Stake

Good Drill Site? Yes  
 Reference Stakes or Alternate Location: Stakes Set None

Best Accessibility to Location: From North off county road  
 Distance & Direction: From Kiowa, KS, go ±3.5 mi. East on paved road, then ±1.3 mi. North, then ±3.0 mi. East, then ±1.0 mi. North to the NW Cor. of Sec. 36-T34S-R10W

**A boundary survey of the said section(s) shown hereon was not performed per the request of the operator shown hereon.**

DATUM: NAD-27  
 LAT: 37°03'00.1"N  
 LONG: 98°21'47.0"W  
 LAT: 37.050026535° N  
 LONG: 98.363054758° W  
 STATE PLANE COORDINATES: (US Feet)  
 ZONE: KS SOUTH  
 X: 2039969  
 Y: 139619

237215 Date of Drawing: Dec. 05, 2014  
 Invoice # 232758 Date Staked: Oct. 22, 2014 JP

**FINAL AS-DRILLED PLAT**

AS-DRILLED INFORMATION  
 FURNISHED BY TAPSTONE ENERGY

# MWD SURVEYS

Customer: Tapstone Energy  
 Well: Judith 25-34-10 #1H  
 Field/Block: Mississippi Lime  
 Co./Parish: Barber Co.  
 State: KS

PGS Job #: LKS6115414  
 MWD Operator: Ken Mitchell  
 Directional Driller: Kyle Underwood  
 Date of First Survey: November 19, 2014  
 Date of Last Survey: November 29, 2014



Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

Measured		Coordinates				Closure			Vib/Shk						
Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N/-S	+E/-W	Dist.	Angle	DLS	Mtr Yield	Temp (°F)	Color	Date	Time	Flow Rate
Survey's are tied into: MWD										Date Received: 11/19/14					
Company: Pro Directional															
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
1	902.00	0.30	211.40	902.00	-2.00	-2.02	-1.23	2.36	211.40	0.03	0.00	68 °F	Green	11/19/14	7:32 633 (gpm)
2	1091.00	0.30	49.80	1,090.99	-2.11	-2.12	-1.11	2.39	207.66	0.31	0.00	77 °F	Green	11/19/14	8:36 633 (gpm)
3	1280.00	0.70	348.10	1,279.99	-0.66	-0.67	-0.97	1.18	235.40	0.33	0.00	86 °F	Green	11/19/14	9:45 633 (gpm)
4	1470.00	1.20	343.80	1,469.96	2.40	2.38	-1.76	2.96	323.41	0.27	0.00	93 °F	Green	11/19/14	10:56 605 (gpm)
5	1660.00	0.80	11.00	1,659.93	5.61	5.59	-2.07	5.96	339.71	0.32	0.00	104 °F	Green	11/19/14	14:05 605 (gpm)
6	1846.00	0.60	32.50	1,845.92	7.70	7.69	-1.30	7.79	350.43	0.18	0.00	109 °F	Green	11/19/14	15:57 605 (gpm)
7	2037.00	0.30	355.00	2,036.91	9.04	9.03	-0.80	9.06	354.92	0.21	0.00	113 °F	Green	11/19/14	17:17 605 (gpm)
8	2223.00	0.80	18.60	2,222.91	10.75	10.74	-0.43	10.75	357.71	0.29	0.00	113 °F	Green	11/19/14	18:39 605 (gpm)
9	2410.00	0.80	359.00	2,409.89	13.28	13.29	-0.04	13.29	359.84	0.15	0.00	113 °F	Green	11/19/14	19:58 605 (gpm)
10	2598.00	0.70	50.10	2,597.87	15.32	15.33	0.82	15.36	3.07	0.35	0.00	113 °F	Green	11/19/14	21:35 605 (gpm)
11	2786.00	1.10	73.00	2,785.85	16.56	16.60	3.43	16.95	11.67	0.28	0.00	124 °F	Green	11/19/14	23:30 605 (gpm)
12	2972.00	0.60	97.50	2,971.83	16.92	16.99	6.10	18.06	19.75	0.33	0.00	86 °F	Green	11/20/14	3:53 605 (gpm)
13	3160.00	0.80	125.80	3,159.82	16.00	16.10	8.14	18.04	26.83	0.21	0.00	93 °F	Green	11/20/14	5:35 605 (gpm)
14	3346.00	0.80	116.80	3,345.80	14.63	14.75	10.35	18.02	35.06	0.07	0.00	102 °F	Green	11/20/14	7:10 605 (gpm)
15	3535.00	0.80	143.20	3,534.78	12.96	13.10	12.32	17.98	43.25	0.19	0.00	108 °F	Green	11/20/14	8:34 605 (gpm)
16	3723.00	0.70	92.20	3,722.77	11.84	12.01	14.26	18.64	49.90	0.35	0.00	113 °F	Green	11/20/14	9:58 605 (gpm)
17	3817.00	0.80	105.10	3,816.76	11.63	11.81	15.46	19.46	52.62	0.21	0.00	115 °F	Green	11/20/14	10:38 605 (gpm)
18	3910.00	0.70	6.30	3,909.75	12.02	12.21	16.15	20.25	52.92	1.23	0.00	113 °F	Green	11/20/14	13:34 387 (gpm)
19	3941.00	3.90	356.60	3,940.72	13.26	13.45	16.11	20.99	50.14	10.36	10.30	113 °F	Green	11/20/14	14:29 387 (gpm)
20	3972.00	7.40	0.80	3,971.57	16.31	16.50	16.08	23.04	44.26	11.36	11.30	116 °F	Green	11/20/14	15:27 387 (gpm)
21	4003.00	10.70	3.40	4,002.18	21.18	21.37	16.27	26.86	37.29	10.72	10.70	115 °F	Green	11/20/14	16:50 387 (gpm)
22	4034.00	13.10	3.60	4,032.51	27.55	27.75	16.67	32.37	30.99	7.74	12.00	115 °F	Green	11/20/14	18:11 387 (gpm)
23	4065.00	14.90	1.90	4,062.59	35.04	35.24	17.02	39.13	25.78	5.96	12.00	113 °F	Green	11/20/14	19:35 390 (gpm)
24	4096.00	15.90	1.00	4,092.48	43.26	43.47	17.22	46.76	21.62	3.32	12.00	113 °F	Green	11/20/14	20:20 390 (gpm)
25	4128.00	18.30	359.80	4,123.06	52.67	52.88	17.28	55.63	18.10	7.58	12.00	113 °F	Green	11/20/14	21:13 390 (gpm)
26	4160.00	20.00	359.90	4,153.29	63.17	63.37	17.26	65.68	15.23	5.31	12.00	115 °F	Green	11/20/14	22:12 390 (gpm)

# MWD SURVEYS

Customer: Tapstone Energy  
Well: Judith 25-34-10 #1H  
Field/Block: Mississippi Lime  
Co./Parish: Barber Co.  
State: KS

PGS Job #: LKS6115414  
MWD Operator: Ken Mitchell  
Directional Driller: Kyle Underwood  
Date of First Survey: November 19, 2014  
Date of Last Survey: November 29, 2014



Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

	<i>Measured</i>		<i>Coordinates</i>				<i>Closure</i>			<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Vib/Shk</i>				
	<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>			<i>DLS</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>
27	4192.00	21.80	358.90	4,183.18	74.58	74.79	17.13	76.72	12.90	5.73	11.50	115 °F	Green	11/20/14	23:25	390 (gpm)
28	4223.00	23.70	358.20	4,211.77	86.57	86.77	16.83	88.39	10.97	6.19	11.50	117 °F	Green	11/21/14	0:36	390 (gpm)
29	4254.00	26.10	358.10	4,239.88	99.62	99.81	16.40	101.15	9.33	7.74	13.00	117 °F	Green	11/21/14	1:56	390 (gpm)
30	4286.00	28.80	359.70	4,268.28	114.36	114.56	16.13	115.69	8.01	8.75	14.00	117 °F	Green	11/21/14	3:17	390 (gpm)
31	4317.00	31.70	1.00	4,295.05	129.98	130.18	16.23	131.18	7.11	9.59	14.00	118 °F	Green	11/21/14	4:08	390 (gpm)
32	4348.00	33.70	0.50	4,321.14	146.72	146.92	16.45	147.84	6.39	6.51	14.00	120 °F	Green	11/21/14	5:22	390 (gpm)
33	4379.00	35.30	0.00	4,346.69	164.27	164.48	16.53	165.31	5.74	5.24	13.50	120 °F	Green	11/21/14	6:43	422 (gpm)
34	4411.00	37.30	0.20	4,372.48	183.22	183.42	16.56	184.17	5.16	6.26	18.20	122 °F	Green	11/21/14	7:53	422 (gpm)
35	4442.00	39.50	359.80	4,396.77	202.47	202.68	16.56	203.35	4.67	7.14	14.80	122 °F	Green	11/21/14	8:38	422 (gpm)
36	4473.00	41.50	359.10	4,420.34	222.60	222.81	16.36	223.41	4.20	6.62	14.60	124 °F	Green	11/21/14	9:29	422 (gpm)
37	4504.00	43.90	358.70	4,443.12	243.62	243.82	15.96	244.35	3.74	7.79	16.00	124 °F	Green	11/21/14	10:29	422 (gpm)
38	4536.00	46.20	357.90	4,465.73	266.26	266.46	15.28	266.90	3.28	7.40	14.80	124 °F	Green	11/21/04	11:30	422 (gpm)
39	4567.00	48.70	357.60	4,486.69	289.09	289.28	14.38	289.63	2.85	8.10	14.80	126 °F	Green	11/21/14	12:40	422 (gpm)
40	4599.00	51.30	357.90	4,507.26	313.59	313.77	13.42	314.06	2.45	8.16	15.30	127 °F	Green	11/21/14	13:35	422 (gpm)
41	4630.00	54.00	358.40	4,526.06	338.23	338.40	12.63	338.63	2.14	8.80	15.10	127 °F	Green	11/21/14	14:31	422 (gpm)
42	4661.00	56.60	358.20	4,543.71	363.71	363.87	11.87	364.06	1.87	8.40	15.30	129 °F	Green	11/21/14	15:47	422 (gpm)
43	4693.00	59.60	358.10	4,560.62	390.86	391.02	11.00	391.17	1.61	9.38	15.80	129 °F	Green	11/21/14	16:35	422 (gpm)
44	4724.00	62.00	357.60	4,575.74	417.91	418.06	9.98	418.18	1.37	7.87	13.60	131 °F	Green	11/21/14	17:37	422 (gpm)
45	4755.00	63.00	357.30	4,590.05	445.40	445.53	8.76	445.62	1.13	3.34	14.00	131 °F	Green	11/21/14	18:33	422 (gpm)
46	4786.00	63.80	357.20	4,603.93	473.10	473.22	7.43	473.27	0.90	2.60	0.00	131 °F	Green	11/21/14	19:20	422 (gpm)
47	4817.00	64.40	357.20	4,617.47	500.96	501.07	6.06	501.11	0.69	1.94	0.00	131 °F	Green	11/21/14	20:31	422 (gpm)
48	4849.00	64.60	357.20	4,631.25	529.83	529.92	4.65	529.94	0.50	0.63	0.00	131 °F	Green	11/21/14	21:42	422 (gpm)
49	4881.00	64.90	356.80	4,644.90	558.74	558.82	3.14	558.83	0.32	1.47	0.00	131 °F	Green	11/21/14	22:43	422 (gpm)
50	4912.00	65.60	356.40	4,657.88	586.86	586.92	1.47	586.92	0.14	2.54	0.00	136 °F	Green	11/21/14	23:49	422 (gpm)
51	4944.00	66.10	355.80	4,670.97	616.02	617.62	-0.52	616.05	359.95	2.32	12.00	136 °F	Green	11/22/14	0:58	422 (gpm)
52	4976.00	68.00	356.50	4,683.45	645.44	645.45	-2.50	645.46	359.78	6.27	12.00	136 °F	Green	11/22/14	2:11	422 (gpm)
53	5007.00	71.40	357.30	4,694.20	674.48	674.48	-4.07	674.49	359.65	11.23	14.00	135 °F	Green	11/22/14	3:20	422 (gpm)
54	5038.00	75.40	357.80	4,703.06	704.17	704.15	-5.33	704.18	359.57	13.00	15.00	135 °F	Green	11/22/14	4:54	422 (gpm)
55	5069.00	78.60	358.40	4,710.03	734.36	734.34	-6.33	734.37	359.51	10.49	16.30	135 °F	Green	11/22/14	6:24	471 (gpm)

# MWD SURVEYS

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 Well: Judith 25-34-10 #1H  
 Field/Block: Mississippi Lime  
 Co./Parish: Barber Co.  
 State: KS

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Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

	Measured		Coordinates				Closure			Mtr Yield	Temp (°F)	Vib/Shk				
	Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N/-S	+E/-W	Dist.	Angle			DLS	Color	Date	Time	Flow Rate
56	5101.00	80.90	358.50	4,715.72	765.85	765.82	-7.19	765.85	359.46	7.19	14.40	135 °F	Green	11/22/14	7:37	471 (gpm)
57	5132.00	82.90	359.00	4,720.09	796.53	796.50	-7.85	796.54	359.44	6.65	20.60	135 °F	Green	11/22/14	8:50	471 (gpm)
58	5163.00	85.10	359.20	4,723.33	827.36	827.32	-8.34	827.36	359.42	7.13	21.20	135 °F	Green	11/22/14	10:10	471 (gpm)
59	5243.00	88.40	359.40	4,727.87	907.22	907.18	-9.31	907.22	359.41	4.13	0.00	131 °F	Green	11/24/14	0:21	240 (gpm)
60	5275.00	88.50	359.10	4,728.73	939.21	939.16	-9.73	939.21	359.41	0.99	0.00	131 °F	Green	11/24/14	1:14	240 (gpm)
61	5306.00	88.90	358.70	4,729.43	970.20	970.15	-10.33	970.20	359.39	1.82	0.00	127 °F	Green	11/24/14	1:59	260 (gpm)
62	5338.00	89.40	358.50	4,729.91	1,002.20	1,002.13	-11.11	1,002.20	359.36	1.68	0.00	127 °F	Green	11/24/14	3:16	260 (gpm)
63	5370.00	89.20	357.90	4,730.30	1,034.19	1,034.12	-12.11	1,034.19	359.33	1.98	0.00	127 °F	Green	11/24/14	4:07	260 (gpm)
64	5401.00	89.10	357.50	4,730.76	1,065.17	1,065.09	-13.36	1,065.17	359.28	1.33	0.00	127 °F	Green	11/24/14	5:20	260 (gpm)
65	5433.00	89.60	358.50	4,731.12	1,097.16	1,097.07	-14.48	1,097.16	359.24	3.49	0.00	127 °F	Green	11/24/14	5:58	218 (gpm)
66	5464.00	89.90	358.80	4,731.26	1,128.16	1,128.06	-15.21	1,128.16	359.23	1.37	0.00	129 °F	Yellow	11/24/14	6:38	218 (gpm)
67	5496.00	89.80	358.70	4,731.34	1,160.16	1,160.05	-15.90	1,160.16	359.21	0.44	0.00	129 °F	Yellow	11/24/14	7:07	228 (gpm)
68	5559.00	90.60	358.40	4,731.12	1,223.15	1,223.03	-17.50	1,223.15	359.18	1.36	0.00	129 °F	Yellow	11/24/14	8:13	228 (gpm)
69	5591.00	90.90	358.10	4,730.70	1,255.14	1,255.01	-18.47	1,255.15	359.16	1.33	0.00	131 °F	Yellow	11/24/14	8:43	228 (gpm)
70	5653.00	90.60	358.40	4,729.89	1,317.12	1,316.98	-20.37	1,317.13	359.11	0.68	0.00	133 °F	Yellow	11/24/14	9:48	228 (gpm)
71	5684.00	90.50	358.50	4,729.59	1,348.12	1,347.96	-21.21	1,348.13	359.10	0.46	0.00	133 °F	Yellow	11/24/14	10:22	264 (gpm)
72	5746.00	90.90	358.60	4,728.84	1,410.11	1,409.94	-22.78	1,410.12	359.07	0.67	0.00	135 °F	Yellow	11/24/14	11:44	264 (gpm)
73	5807.00	90.80	359.30	4,727.93	1,471.10	1,470.92	-23.89	1,471.11	359.07	1.16	0.00	135 °F	Yellow	11/24/14	12:54	264 (gpm)
74	5838.00	90.90	359.50	4,727.47	1,502.10	1,501.92	-24.22	1,502.11	359.08	0.72	0.00	136 °F	Yellow	11/24/14	13:44	264 (gpm)
75	5868.00	90.20	359.80	4,727.18	1,532.09	1,531.91	-24.40	1,532.11	359.09	2.54	0.00	136 °F	Yellow	11/24/14	14:18	264 (gpm)
76	5930.00	89.80	359.90	4,727.18	1,594.09	1,593.91	-24.56	1,594.10	359.12	0.67	0.00	138 °F	Yellow	11/24/14	14:59	264 (gpm)
77	5960.00	89.70	0.20	4,727.31	1,624.09	1,623.91	-24.54	1,624.10	359.13	1.05	0.00	138 °F	Yellow	11/24/14	15:35	264 (gpm)
78	5991.00	89.70	359.90	4,727.48	1,655.09	1,654.91	-24.51	1,655.09	359.15	0.97	0.00	140 °F	Yellow	11/24/14	16:04	264 (gpm)
79	6022.00	90.00	0.40	4,727.56	1,686.08	1,685.91	-24.43	1,686.09	359.17	1.88	0.00	138 °F	Yellow	11/24/14	16:56	264 (gpm)
80	6052.00	90.50	0.60	4,727.43	1,716.08	1,715.91	-24.17	1,716.08	359.19	1.80	0.00	140 °F	Yellow	11/24/14	17:45	264 (gpm)
81	6083.00	90.80	0.80	4,727.08	1,747.06	1,746.91	-23.79	1,747.07	359.22	1.16	0.00	140 °F	Yellow	11/24/14	18:47	264 (gpm)
82	6114.00	91.40	1.10	4,726.48	1,778.05	1,777.90	-23.27	1,778.05	359.25	2.16	0.00	140 °F	Yellow	11/24/14	19:42	264 (gpm)
83	6144.00	91.80	1.40	4,725.64	1,808.02	1,807.88	-22.62	1,808.02	359.28	1.67	0.00	140 °F	Yellow	11/24/14	20:35	264 (gpm)
84	6175.00	92.00	1.60	4,724.62	1,838.98	1,838.85	-21.81	1,838.98	359.32	0.91	0.00	140 °F	Yellow	11/24/14	21:08	264 (gpm)

# MWD SURVEYS

Customer: Tapstone Energy  
Well: Judith 25-34-10 #1H  
Field/Block: Mississippi Lime  
Co./Parish: Barber Co.  
State: KS

PGS Job #: LKS6115414  
MWD Operator: Ken Mitchell  
Directional Driller: Kyle Underwood  
Date of First Survey: November 19, 2014  
Date of Last Survey: November 29, 2014



Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

	<i>Measured</i>				<i>Coordinates</i>				<i>Closure</i>				<i>Vib/Shk</i>			
	<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N/-S</i>	<i>+E/-W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>
85	6206.00	92.10	1.60	4,723.51	1,869.93	1,869.82	-20.94	1,869.93	359.36	0.32	0.00	140 °F	Yellow	11/24/14	22:06	264 (gpm)
86	6236.00	92.20	1.20	4,722.38	1,899.89	1,899.79	-20.21	1,899.89	359.39	1.37	0.00	142 °F	Yellow	11/24/14	22:53	264 (gpm)
87	6267.00	92.20	1.10	4,721.19	1,930.86	1,930.76	-19.59	1,930.86	359.42	0.32	0.00	142 °F	Yellow	11/24/14	22:43	264 (gpm)
88	6298.00	91.50	0.50	4,720.19	1,961.83	1,961.74	-19.16	1,961.83	359.44	2.97	0.00	142 °F	Yellow	11/25/14	0:24	264 (gpm)
89	6328.00	91.30	0.50	4,719.46	1,991.81	1,991.73	-18.90	1,991.82	359.46	0.67	0.00	142 °F	Yellow	11/25/14	1:15	264 (gpm)
90	6357.00	91.30	0.40	4,718.80	2,020.80	2,020.72	-18.67	2,020.81	359.47	0.34	0.00	142 °F	Yellow	11/25/14	1:56	264 (gpm)
91	6388.00	91.30	0.50	4,718.10	2,051.79	2,051.71	-18.42	2,051.79	359.49	0.32	0.00	142 °F	Yellow	11/25/14	2:39	264 (gpm)
92	6417.00	91.40	0.90	4,717.41	2,080.77	2,080.70	-18.07	2,080.78	359.50	1.42	0.00	142 °F	Yellow	11/25/14	3:26	264 (gpm)
93	6447.00	91.40	0.90	4,716.68	2,110.75	2,110.69	-17.60	2,110.76	359.52	0.00	0.00	145 °F	Yellow	11/25/14	4:04	264 (gpm)
94	6478.00	91.40	0.80	4,715.92	2,141.73	2,141.68	-17.14	2,141.74	359.54	0.32	0.00	145 °F	Yellow	11/25/14	4:47	264 (gpm)
95	6508.00	91.50	0.90	4,715.16	2,171.71	2,171.66	-16.69	2,171.73	359.56	0.47	0.00	145 °F	Yellow	11/25/14	5:40	264 (gpm)
96	6569.00	91.10	0.40	4,713.78	2,232.68	2,232.64	-16.00	2,232.70	359.59	1.05	0.00	147 °F	Yellow	11/25/14	7:12	246 (gpm)
97	6629.00	90.50	359.70	4,712.94	2,292.67	2,292.64	-15.95	2,292.69	359.60	1.54	0.00	147 °F	Yellow	11/25/14	8:16	246 (gpm)
98	6659.00	90.40	359.60	4,712.71	2,322.66	2,322.63	-16.13	2,322.69	359.60	0.47	0.00	147 °F	Yellow	11/25/14	8:45	246 (gpm)
99	6719.00	90.10	359.60	4,712.44	2,382.66	2,382.63	-16.55	2,382.69	359.60	0.50	0.00	147 °F	Yellow	11/25/14	9:42	246 (gpm)
100	6749.00	90.20	359.60	4,712.37	2,412.66	2,412.63	-16.76	2,412.69	359.60	0.33	0.00	147 °F	Yellow	11/25/14	10:23	246 (gpm)
101	6809.00	88.50	358.90	4,713.05	2,472.66	2,472.62	-17.55	2,472.68	359.59	3.06	0.00	147 °F	Yellow	11/25/14	11:11	246 (gpm)
102	6840.00	88.10	358.70	4,713.97	2,503.64	2,503.60	-18.20	2,503.67	359.58	1.44	0.00	147 °F	Yellow	11/25/14	11:55	246 (gpm)
103	6870.00	87.80	358.90	4,715.04	2,533.62	2,533.57	-18.82	2,533.64	359.57	1.20	0.00	145 °F	Yellow	11/25/14	12:46	225 (gpm)
104	6899.00	89.40	359.20	4,715.75	2,562.61	2,562.56	-19.30	2,562.63	359.57	5.61	0.00	145 °F	Yellow	11/25/14	13:44	246 (gpm)
105	6930.00	90.70	359.50	4,715.72	2,593.61	2,593.56	-19.66	2,593.63	359.57	4.30	0.00	147 °F	Yellow	11/25/14	15:08	246 (gpm)
106	6960.00	92.30	359.70	4,714.93	2,623.60	2,623.55	-19.87	2,623.62	359.57	5.37	0.00	147 °F	Yellow	11/25/14	15:46	246 (gpm)
107	6990.00	92.70	359.30	4,713.63	2,653.57	2,653.52	-20.13	2,653.59	359.57	1.88	0.00	147 °F	Yellow	11/25/14	16:26	246 (gpm)
108	7020.00	92.80	359.50	4,712.19	2,683.54	2,683.48	-20.44	2,683.56	359.56	0.74	0.00	149 °F	Yellow	11/25/14	17:22	246 (gpm)
109	7050.00	92.20	359.20	4,710.88	2,713.51	2,713.45	-20.78	2,713.53	359.56	2.24	0.00	149 °F	Yellow	11/25/14	18:26	246 (gpm)
110	7080.00	91.90	358.90	4,709.81	2,743.49	2,743.43	-21.28	2,743.51	359.56	1.41	0.00	149 °F	Yellow	11/25/14	19:33	246 (gpm)
111	7110.00	91.60	358.90	4,708.89	2,773.47	2,773.41	-21.85	2,773.49	359.55	1.00	0.00	149 °F	Yellow	11/25/14	20:29	246 (gpm)
112	7140.00	91.70	358.80	4,708.03	2,803.46	2,803.39	-22.46	2,803.48	359.54	0.47	0.00	149 °F	Yellow	11/25/14	21:43	246 (gpm)
113	7170.00	91.30	358.60	4,707.24	2,833.45	2,833.37	-23.14	2,833.46	359.53	1.49	0.00	149 °F	Yellow	11/25/14	22:45	246 (gpm)



# MWD SURVEYS

Customer: Tapstone Energy  
Well: Judith 25-34-10 #1H  
Field/Block: Mississippi Lime  
Co./Parish: Barber Co.  
State: KS

PGS Job #: LKS6115414  
MWD Operator: Ken Mitchell  
Directional Driller: Kyle Underwood  
Date of First Survey: November 19, 2014  
Date of Last Survey: November 29, 2014



Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

	<i>Measured</i>		<i>Coordinates</i>				<i>Closure</i>			<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Vib/Shk</i>				
	<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N/-S</i>	<i>+E/-W</i>	<i>Dist.</i>	<i>Angle</i>			<i>DLS</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>
114	7200.00	90.70	358.30	4,706.72	2,863.44	2,863.35	-23.95	2,863.45	359.52	2.24	0.00	149 °F	Yellow	11/25/14	21:15	246 (gpm)
115	7230.00	90.90	358.20	4,706.30	2,893.43	2,893.34	-24.86	2,893.44	359.51	0.75	0.00	147 °F	Yellow	11/25/14	0:10	246 (gpm)
116	7261.00	91.70	358.60	4,705.59	2,924.42	2,924.32	-25.73	2,924.43	359.50	2.89	0.00	147 °F	Yellow	11/26/14	1:18	246 (gpm)
117	7292.00	92.00	358.90	4,704.59	2,955.40	2,955.29	-26.40	2,955.41	359.49	1.37	0.00	149 °F	Yellow	11/26/14	2:52	246 (gpm)
118	7322.00	91.40	358.90	4,703.70	2,985.39	2,985.27	-26.98	2,985.40	359.48	2.00	0.00	149 °F	Yellow	11/26/14	4:23	246 (gpm)
119	7353.00	89.90	358.70	4,703.35	3,016.38	3,016.26	-27.63	3,016.39	359.48	4.88	0.00	149 °F	Yellow	11/26/14	5:29	246 (gpm)
120	7383.00	89.40	358.40	4,703.54	3,046.38	3,046.25	-28.39	3,046.39	359.47	1.94	0.00	151 °F	Yellow	11/26/14	6:12	249 (gpm)
121	7413.00	89.40	358.20	4,703.85	3,076.37	3,076.24	-29.28	3,076.38	359.45	0.67	0.00	151 °F	Yellow	11/26/14	7:30	235 (gpm)
122	7443.00	89.80	358.40	4,704.06	3,106.37	3,106.23	-30.17	3,106.37	359.44	1.49	0.00	147 °F	Green	11/26/14	18:10	235 (gpm)
123	7473.00	89.90	358.30	4,704.14	3,136.36	3,136.21	-31.03	3,136.37	359.43	0.47	0.00	147 °F	Green	11/26/14	18:55	235 (gpm)
124	7505.00	89.40	357.50	4,704.33	3,168.35	3,168.19	-32.21	3,168.35	359.42	2.95	0.00	149 °F	Green	11/26/14	19:55	235 (gpm)
125	7536.00	89.40	357.40	4,704.66	3,199.33	3,199.16	-33.58	3,199.33	359.40	0.32	0.00	149 °F	Green	11/26/14	20:50	235 (gpm)
126	7568.00	89.30	357.60	4,705.02	3,231.31	3,231.13	-34.98	3,231.31	359.38	0.70	0.00	149 °F	Green	11/26/14	21:45	235 (gpm)
127	7600.00	89.30	357.90	4,705.41	3,263.30	3,263.10	-36.24	3,263.30	359.36	0.94	0.00	149 °F	Green	11/26/14	23:00	235 (gpm)
128	7631.00	89.60	357.30	4,705.71	3,294.28	3,294.07	-37.53	3,294.28	359.35	2.16	0.00	149 °F	Green	11/27/14	1:00	235 (gpm)
129	7663.00	90.40	357.00	4,705.71	3,326.26	3,326.03	-39.13	3,326.26	359.33	2.67	0.00	149 °F	Green	11/27/14	2:30	235 (gpm)
130	7695.00	90.50	356.90	4,705.46	3,358.23	3,357.98	-40.83	3,358.23	359.30	0.44	0.00	151 °F	Green	11/27/14	4:00	235 (gpm)
131	7,726.00	90.50	356.00	4,705.19	3,389.19	3,388.92	-42.75	3,389.19	359.28	2.90	0.00	151 °F	Green	11/27/14	5:20	235 (gpm)
132	7,758.00	90.80	356.80	4,704.82	3,421.15	3,420.86	-44.76	3,421.15	359.25	2.67	0.00	151 °F	Yellow	11/27/14	6:39	235 (gpm)
133	7,789.00	91.60	356.70	4,704.17	3,452.11	3,451.80	-46.51	3,452.11	359.23	2.60	0.00	153 °F	Yellow	11/27/14	7:52	235 (gpm)
134	7,821.00	91.30	356.80	4,703.37	3,484.06	3,483.74	-48.33	3,484.07	359.21	0.99	0.00	153 °F	Yellow	11/27/14	9:21	235 (gpm)
135	7,852.00	90.60	357.00	4,702.85	3,515.03	3,514.69	-50.00	3,515.04	359.18	2.35	0.00	153 °F	Yellow	11/27/14	10:31	235 (gpm)
136	7,884.00	90.30	357.20	4,702.60	3,547.01	3,546.65	-51.62	3,547.02	359.17	1.13	0.00	153 °F	Yellow	11/27/14	11:46	235 (gpm)
137	7,915.00	89.30	357.80	4,702.71	3,577.99	3,577.62	-52.97	3,578.01	359.15	3.76	0.00	153 °F	Yellow	11/27/14	12:40	235 (gpm)
138	7,946.00	89.50	358.00	4,703.03	3,608.98	3,608.59	-54.11	3,609.00	359.14	0.91	0.00	154 °F	Yellow	11/27/14	13:52	235 (gpm)
139	7,978.00	90.90	357.30	4,702.92	3,640.96	3,640.57	-55.42	3,640.99	359.13	4.89	0.00	154 °F	Yellow	11/27/14	14:55	235 (gpm)
140	8,009.00	91.70	356.80	4,702.22	3,671.93	3,671.52	-57.02	3,671.96	359.11	3.04	0.00	154 °F	Yellow	11/27/14	16:28	235 (gpm)
141	8,040.00	90.90	357.30	4,701.51	3,702.90	3,702.47	-58.61	3,702.93	359.09	3.04	0.00	147 °F	Yellow	11/28/14	5:30	235 (gpm)
142	8,071.00	89.10	357.50	4,701.51	3,733.88	3,733.43	-60.02	3,733.92	359.08	5.84	0.00	151 °F	Yellow	11/28/14	6:20	235 (gpm)

# MWD SURVEYS

Customer: Tapstone Energy  
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Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

	Measured					Coordinates		Closure			Mtr Yield	Temp (°F)	Vib/Shk			
	Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N/-S	+E/-W	Dist.	Angle	DLS			Color	Date	Time	Flow Rate
143	8,103.00	88.80	357.60	4,702.10	3,765.86	3,765.40	-61.39	3,765.90	359.07	0.99	0.00	151 °F	Yellow	11/28/14	7:04	235 (gpm)
144	8,134.00	89.00	357.50	4,702.70	3,796.84	3,796.36	-62.71	3,796.88	359.05	0.72	0.00	151 °F	Yellow	11/28/14	7:51	235 (gpm)
145	8,165.00	89.40	357.50	4,703.13	3,827.82	3,827.33	-64.06	3,827.87	359.04	1.29	0.00	151 °F	Yellow	11/28/14	8:42	235 (gpm)
146	8,197.00	89.50	357.50	4,703.44	3,859.80	3,859.30	-65.46	3,859.86	359.03	0.31	0.00	151 °F	Yellow	11/28/14	9:15	235 (gpm)
147	8,228.00	89.60	357.50	4,703.68	3,890.78	3,890.27	-66.81	3,890.84	359.02	0.32	0.00	153 °F	Yellow	11/28/14	9:49	235 (gpm)
148	8,260.00	89.80	357.50	4,703.85	3,922.77	3,922.24	-68.21	3,922.83	359.00	0.63	0.00	153 °F	Yellow	11/28/14	10:36	235 (gpm)
149	8,291.00	90.40	358.10	4,703.79	3,953.76	3,953.22	-69.40	3,953.82	358.99	2.74	0.00	153 °F	Yellow	11/28/14	11:17	235 (gpm)
150	8,323.00	90.50	358.20	4,703.54	3,985.75	3,985.20	-70.43	3,985.82	358.99	0.44	0.00	153 °F	Yellow	11/28/14	12:23	235 (gpm)
151	8,355.00	90.60	358.40	4,703.23	4,017.74	4,017.18	-71.38	4,017.82	358.98	0.70	0.00	153 °F	Yellow	11/28/14	13:01	235 (gpm)
152	8,387.00	90.90	358.30	4,702.82	4,049.73	4,049.17	-72.30	4,049.81	358.98	0.99	0.00	153 °F	Yellow	11/28/14	14:00	235 (gpm)
153	8,418.00	91.30	358.40	4,702.22	4,080.72	4,080.15	-73.19	4,080.80	358.97	1.33	0.00	153 °F	Yellow	11/28/14	14:42	235 (gpm)
154	8,450.00	91.60	358.50	4,701.41	4,112.71	4,112.13	-74.06	4,112.79	358.97	0.99	0.00	153 °F	Yellow	11/28/14	15:39	235 (gpm)
155	8481.00	91.10	359.00	4,700.68	4,143.70	4,143.11	-74.73	4,143.78	358.97	2.28	0.00	153 °F	Yellow	11/28/14	16:06	235 (gpm)
156	8512.00	90.30	358.70	4,700.30	4,174.70	4,174.10	-75.36	4,174.78	358.97	2.76	0.00	153 °F	Yellow	11/28/14	17:02	235 (gpm)
157	8544.00	89.30	358.60	4,700.41	4,206.69	4,206.09	-76.11	4,206.78	358.96	3.14	0.00	153 °F	Yellow	11/28/14	17:45	235 (gpm)
158	8576.00	89.00	358.30	4,700.89	4,238.69	4,238.08	-76.98	4,238.77	358.96	1.33	0.00	153 °F	Yellow	11/28/14	18:30	235 (gpm)
159	8607.00	89.20	358.20	4,701.37	4,269.68	4,269.06	-77.92	4,269.77	358.95	0.72	0.00	153 °F	Yellow	11/28/14	19:15	235 (gpm)
160	8639.00	89.80	358.40	4,701.65	4,301.67	4,301.04	-78.87	4,301.77	358.95	1.98	0.00	154 °F	Yellow	11/28/14	20:00	235 (gpm)
161	8670.00	90.20	358.60	4,701.65	4,332.67	4,332.03	-79.68	4,332.76	358.95	1.44	0.00	155 °F	Yellow	11/28/14	20:30	235 (gpm)
162	8701.00	90.50	358.40	4,701.46	4,363.66	4,363.02	-80.49	4,363.76	358.94	1.16	0.00	155 °F	Yellow	11/28/14	21:10	235 (gpm)
163	8733.00	91.20	358.20	4,700.99	4,395.65	4,395.00	-81.44	4,395.76	358.94	2.28	0.00	155 °F	Yellow	11/28/14	22:15	235 (gpm)
164	8765.00	91.70	359.20	4,700.18	4,427.64	4,426.98	-82.17	4,427.75	358.94	3.49	0.00	155 °F	Yellow	11/28/14	23:15	235 (gpm)
165	8796.00	90.90	359.60	4,699.48	4,458.63	4,457.97	-82.49	4,458.74	358.94	2.89	0.00	155 °F	Yellow	11/29/14	0:00	235 (gpm)
166	8828.00	90.40	359.50	4,699.11	4,490.63	4,489.97	-82.75	4,490.73	358.94	1.59	0.00	155 °F	Green	11/29/14	1:00	235 (gpm)
167	8859.00	91.00	359.40	4,698.74	4,521.63	4,520.97	-83.04	4,521.73	358.95	1.96	0.00	155 °F	Green	11/29/14	1:30	235 (gpm)
168	8890.00	91.40	359.20	4,698.09	4,552.62	4,551.96	-83.42	4,552.72	358.95	1.44	0.00	155 °F	Green	11/29/14	2:30	235 (gpm)
169	8922.00	91.00	359.40	4,697.42	4,584.61	4,583.95	-83.81	4,584.71	358.95	1.40	0.00	155 °F	Green	11/29/14	3:30	235 (gpm)
170	8953.00	90.50	359.80	4,697.01	4,615.61	4,614.94	-84.03	4,615.71	358.96	2.07	0.00	155 °F	Green	11/29/14	4:30	235 (gpm)
171	8984.00	89.50	359.80	4,697.01	4,646.61	4,645.94	-84.14	4,646.71	358.96	3.23	0.00	156 °F	Green	11/29/14	5:30	235 (gpm)

# MWD SURVEYS

Customer: Tapstone Energy  
Well: Judith 25-34-10 #1H  
Field/Block: Mississippi Lime  
Co./Parish: Barber Co.  
State: KS

PGS Job #: LKS6115414  
MWD Operator: Ken Mitchell  
Directional Driller: Kyle Underwood  
Date of First Survey: November 19, 2014  
Date of Last Survey: November 29, 2014



Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

	Measured			Coordinates				Closure			Mtr Yield	Temp (°F)	Vib/Shk			
	Depth	Inc.	Azm.	T.V.D.	Ver. Sect.	+N / -S	+E / -W	Dist.	Angle	DLS			Color	Date	Time	Flow Rate
172	9016.00	89.10	359.80	4,697.40	4,678.61	4,677.94	-84.25	4,678.70	358.97	1.25	0.00	156 °F	Green	11/29/14	6:17	235 (gpm)
173	9047.00	89.40	359.60	4,697.81	4,709.60	4,708.94	-84.41	4,709.69	358.97	1.16	0.00	156 °F	Green	11/29/14	7:25	235 (gpm)
174	9079.00	90.10	359.70	4,697.95	4,741.60	4,740.94	-84.61	4,741.69	358.98	2.21	0.00	156 °F	Green	11/29/14	8:49	235 (gpm)
175	9110.00	89.60	0.10	4,698.03	4,772.60	4,771.94	-84.66	4,772.69	358.98	2.07	0.00	156 °F	Green	11/29/14	10:07	235 (gpm)
176	9142.00	87.90	0.90	4,698.73	4,804.58	4,803.93	-84.38	4,804.67	358.99	5.87	0.00	156 °F	Green	11/29/14	11:05	235 (gpm)
177	9173.00	87.60	1.30	4,699.94	4,835.55	4,834.90	-83.79	4,835.62	359.01	1.61	0.00	160 °F	Green	11/29/14	12:06	235 (gpm)
178	9205.00	87.80	0.90	4,701.23	4,867.50	4,866.86	-83.17	4,867.58	359.02	1.40	0.00	160 °F	Yellow	11/29/14	13:00	235 (gpm)
179	9236.00	87.40	0.60	4,702.52	4,898.47	4,897.83	-82.77	4,898.53	359.03	1.61	0.00	160 °F	Yellow	11/29/14	13:58	235 (gpm)
180	9267.00	88.00	0.40	4,703.77	4,929.44	4,928.81	-82.50	4,929.50	359.04	2.04	0.00	160 °F	Yellow	11/29/14	14:54	235 (gpm)
181	9299.00	88.50	0.60	4,704.75	4,961.41	4,960.79	-82.22	4,961.47	359.05	1.68	0.00	162 °F	Yellow	11/29/14	15:38	235 (gpm)
182	9362.00	88.30	0.90	4,706.51	5,024.37	5,023.76	-81.39	5,024.42	359.07	0.57	0.00	162 °F	Yellow	11/29/14	17:16	235 (gpm)
183	9427.00	89.00	0.70	4,708.04	5,089.33	5,088.74	-80.49	5,089.37	359.09	1.12	0.00	162 °F	Yellow	11/29/14	18:45	235 (gpm)
<b>PTB</b>	<b>9482.00</b>	<b>89.00</b>	<b>0.70</b>	<b>4,709.00</b>	<b>5,144.31</b>	<b>5,143.72</b>	<b>-79.81</b>	<b>5,144.34</b>	<b>359.11</b>	<b>0.00</b>	<b>0.00</b>	<b>162 °F</b>	<b>Yellow</b>	<b>11/29/14</b>	<b>18:45</b>	<b>235 (gpm)</b>

# MWD SURVEYS

Customer: Tapstone Energy  
 Well: Judith 25-34-10 #1H  
 Field/Block: Mississippi Lime  
 Co./Parish: Barber Co.  
 State: KS

PGS Job #: LKS6115414  
 MWD Operator: Ken Mitchell  
 Directional Driller: Kyle Underwood  
 Date of First Survey: November 19, 2014  
 Date of Last Survey: November 29, 2014



Total Correction: 4.41 East Grid

Vertical Section Plane: 359.33 Nominal Dip Angle: 65.06 Magnetic Field Strength: 0.515

<i>Measured</i>		<i>Coordinates</i>				<i>Closure</i>			<i>Vib/Shk</i>						
<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>



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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Measured</i>			<i>Coordinates</i>				<i>Closure</i>			<i>Vib/Shk</i>					
<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>



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<i>Depth</i>	<i>Inc.</i>	<i>Azm.</i>	<i>T.V.D.</i>	<i>Ver. Sect.</i>	<i>+N / -S</i>	<i>+E / -W</i>	<i>Dist.</i>	<i>Angle</i>	<i>DLS</i>	<i>Mtr Yield</i>	<i>Temp (°F)</i>	<i>Color</i>	<i>Date</i>	<i>Time</i>	<i>Flow Rate</i>

# MWD SURVEYS

Customer: Tapstone Energy  
 Well: Judith 25-34-10 #1H  
 Field/Block: Mississippi Lime  
 Co./Parish: Barber Co.  
 State: KS

PGS Job #: LKS6115414  
 MWD Operator: Ken Mitchell  
 Directional Driller: Kyle Underwood  
 Date of First Survey: November 19, 2014  
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Total Correction: 4.41 East Grid

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# Post Job Report

## **Tapstone Energy**

11/18/2014

Judith 25-34-10 1H

Barber County, KS





Tapstone Energy  
Judith 25-34-10 1H  
Barber County, KS.

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2.0 Job Summary.....4

    2.1 Job Event Log.....4

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3.0 Customer Satisfaction Survey.....6



Tapstone Energy  
Judith 25-34-10 1H  
Barber County, KS.

## 1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Judith 25-34-10 1H Surface Casing.

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 1000 psi. After a successful test we began the job by pumping 5 bbls of preflush spacer. We then mixed and pumped the following cements:

85 Bbls (255 sacks) of 12.7 ppg Lead slurry:  
65:35 Class A:Poz Blend - 1.87 Yield  
6.0% Gel  
2%cc  
¼# Floseal

32 Bbls (150 sacks) of 15.6 ppg Tail slurry:  
2% cc                      1.20 Yeild  
¼# Floseal

The top plug was then released and displaced with 59.5 of fresh water. The plug did not bump. Pressure was released and floats held.

All real time data is shown on the graph in the attachment section.

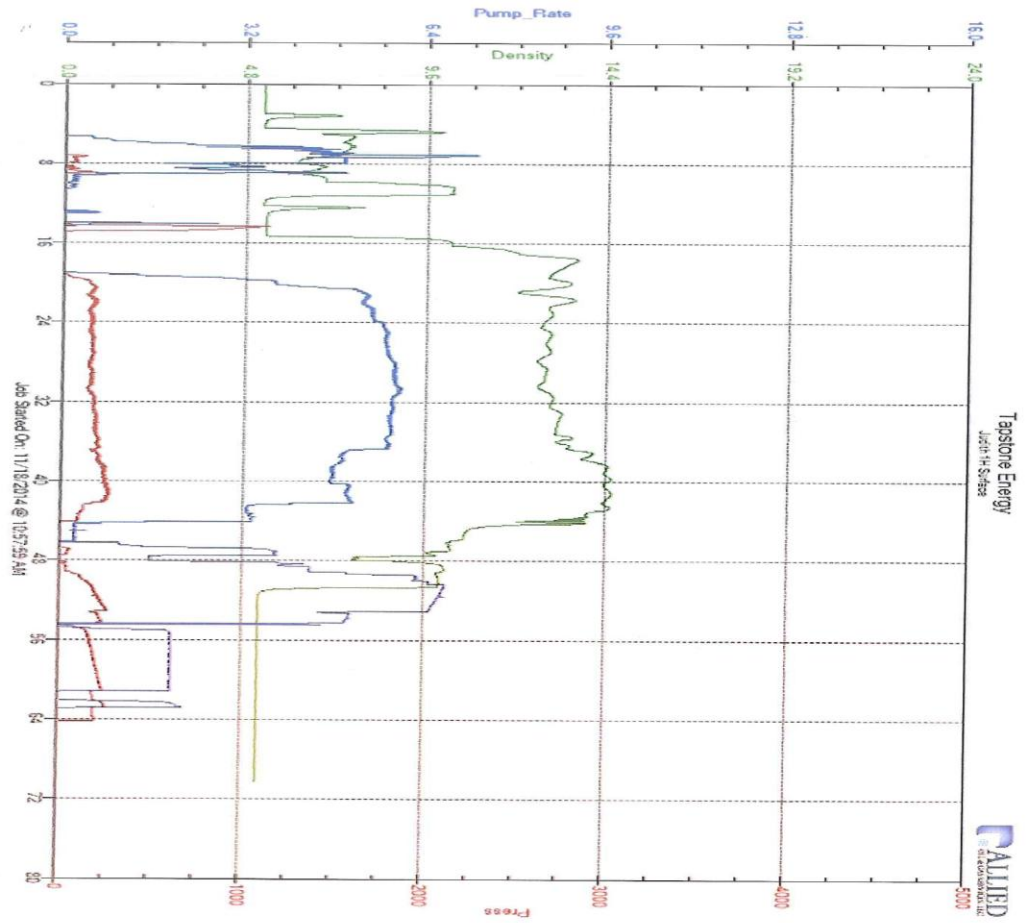
Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestions are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs.





2.2 Job Summary Chart





Tapstone Energy  
 Judith 25-34-10 1H  
 Barber County, KS.

3.0 Customer Satisfaction Survey

Customer: Tapstone Energy  
 Date: 11-18-14  
 Well Name: Judith 25-34-10 1H  
 Well Location: 1H  
 Supervisor: Clint Symes  
 Equipment Operators: Pump = Jeremy Vance Bulk = Rom Reed



Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the job performed in a professional manner?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the calculations prepared and explained properly?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the correct services dispatched to the job site?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the services performed as requested?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the job site environment remain unchanged?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the equipment perform in the manner expected?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the materials meet your expectations?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the crew prepared for the job?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the crew prompt in the rig-up and actual job?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were reasonable recommendations given, as requested?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the crew perform safely?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the job performed to your satisfaction?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Customer Signature: <u>Shannon Green</u>		
Additional Comments:		Date: <u>11/18/14</u>



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# Post Job Report

## **Tapstone Energy**

Judith #25-34-10 #1-H

11/23/2014

Intermediate Casing

Barber County, KS





SandRidge Energy  
Judith #25-34-10 1H  
Barber County, KS.

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SandRidge Energy  
Judith #25-34-10 1H  
Barber County, KS.

## 1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Judith #25-34-10 1H Intermediate Casing.

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 2000 psi. After a successful test we began the job by pumping 20 bbls of preflush spacer. We then mixed and pumped the following cements:

32.5 Bbls (130 sacks) of 13.6 ppg Lead slurry:  
50:50 Class A:Poz Blend - 1.4 Yield  
2.0% Gel  
0.4% FL-160  
0.1% SA-51

19 Bbls (90 sacks) of 15.6 ppg Tail slurry:  
Class A - 1.18 Yield  
0.8% FL-160  
0.2% CD-31

The top plug was then released and displaced with 196.5 Bbls of fresh water. The plug bumped and pressured up to 1600 psi. Pressure was released and floats held.

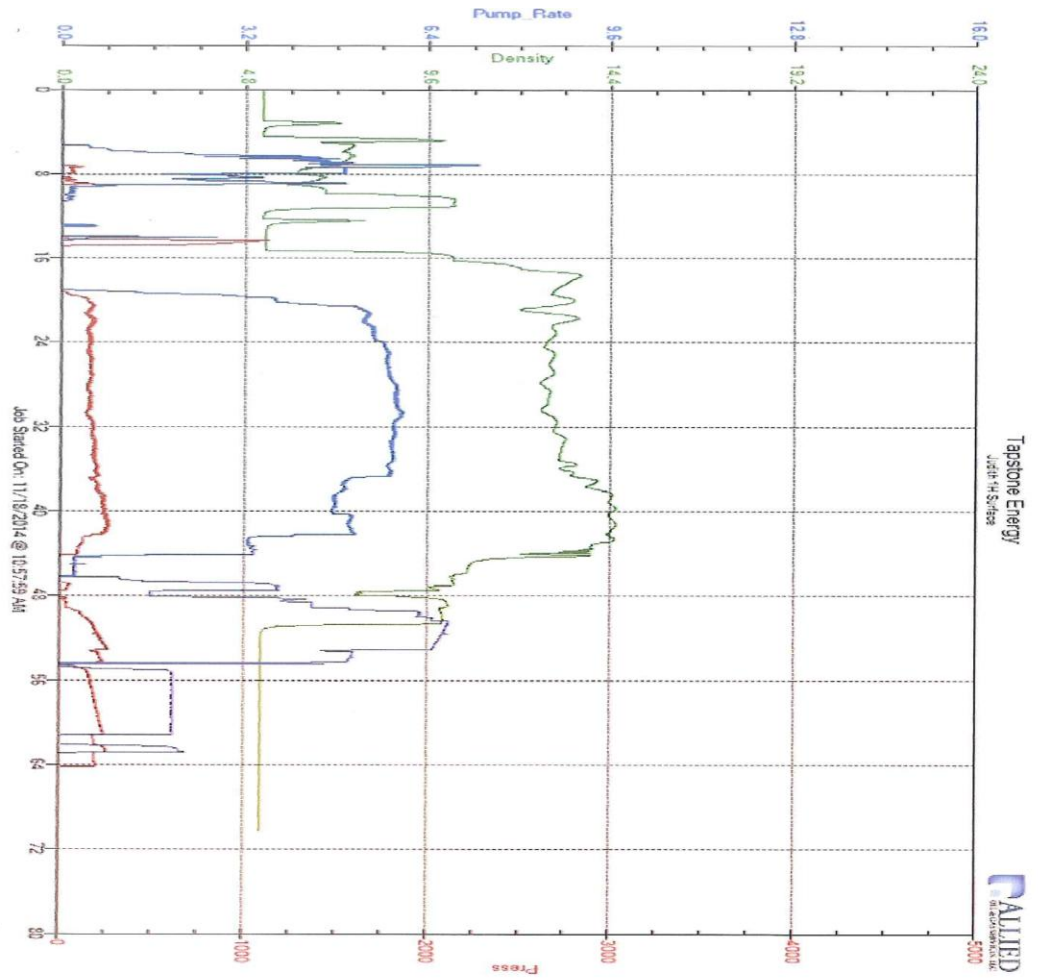
All real time data is shown on the graph in the attachment section.

Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestions are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs.



2.2 Job Summary Chart





SandRidge Energy  
 Judith #25-34-10 1H  
 Barber County, KS.

3.0 Customer Satisfaction Survey

Customer: Tapstone Energy  
 Date: 11-18-14  
 Well Name: Judith 25-34-10 1H  
 Well Location: 1H  
 Supervisor: Clint Symes  
 Equipment Operators: Pump = Jeremy Vance Bulk = Roman Reed



Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the job performed in a professional manner?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the calculations prepared and explained properly?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the correct services dispatched to the job site?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were the services performed as requested?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the job site environment remain unchanged?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the equipment perform in the manner expected?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the materials meet your expectations?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the crew prepared for the job?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the crew prompt in the rig-up and actual job?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Were reasonable recommendations given, as requested?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Did the crew perform safely?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Was the job performed to your satisfaction?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Customer Signature: <u>Shayne Geane</u> Date: <u>11/18/14</u>		
Additional Comments:		