



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1232799  
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
-----------------------------------	-----------------	---

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: \_\_\_\_\_

1232799

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
--	---

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
----------------	-------	---------	------------	---

Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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> _____ _____
--	--	---



# Tapstone Energy

## Leann 21-34-9 1H

Drilling Superintendent Billy Goodnight  
 Drilling Engineer Lacey Wright  
 Rig Supervisor Daniel Miller  
 Rig Supervisor Malcolm Sumrall  
 Property Number 130321  
 AFE Number DC14020

Spud Date 9/25/2014  
 County, State Harper, KS  
 Legal Information Sec 1-35S-9W  
 Contractor Nomac 14  
 KB Elevation 1266

WELL DATA	
Open Hole Size ( Inch )	12.25
Hole MD / TVD (m)	824
Previous Casing Size ( Inch )	9.63
Last CSG MD/ TVD :	98
Open Hole Theoretical Volume ( bbl )	
Open Hole Caliper Volume ( bbl )	
Cased Hole Theoretical Volume ( bbl )	
Hole Inclination	0.400

CASING DATA						
Description	Size inch	Weight lb/ft	Grade	Conn	Length ft	Set. Depth ft
TEXAS SHOE	8.75	36	P110	LTC	1	824
CASG	8.75	36	P110	LTC	43.51	779.49
FC	8.75	36	P110	LTC	1	778.49
CASG	8.75	36	P110	LTC	785.43	-6.94

MUD DATA	
Mud Type	SPUD
Mud Weight ( ppg )	9
Mud PV / YP	2.4

PUMPING SCHEDULE				
Description	ppg	bbl	bpm	minutes
H2O	8.3	10	5	5
LEAD	12.4	85.9	5	20
TAIL	14.8	30.5	5	10
H2O	8.3	50.7	5	10
H2O	8.3	10	3	5

CENTRALIZATION PROGRAM		
Manufacturer	Type	Quantity & Placement
WETHERFORD	BOW	OF SECOND JOINT, EVERY FOURTH JOINT

SEQUENCE OF OPERATIONS				
Date	From	To	Time	Operation Description and Sequence
9/27/2014	5:05:00	5:10:00	10.00	TEST TO 2000 PSI
9/27/2014	5:10:00	5:15:00		PUMP 10 BBL FRESH WATER
9/27/2014	5:15:00	5:35:00		PUMP LEAD CEMENT
9/27/2014	5:35:00	5:45:00		PUMP TAIL CEMENT
9/27/2014	5:45:00	5:50:00		DROP PLUG
9/27/2014	5:50:00	6:05:00		PUMP DISPLACEMENT, 50 BBLS OF CEMENT BACK AT SURFACE
9/27/2014	6:05:00	6:10:00		LAND PLUG 500 PSI OVER AND CHECK FLOATS

JOB EVALUATION		DEVIATION FROM PLAN AND INCIDENTS	
Returns	YES		
Top of Cement	SURFACE		
Cement Bond			
Losses (bbl)			
Bump Plug	YES		
NPT (hours & %)			

Chemicals used for xxx bbls Spacer 1				
Products	Units		\$ / Unit	\$
H2O	BBL	10		
Total				

Chemicals used for xxx bbl Lead, including dead volume in tanks				
Products	Units		\$ / Unit	\$
TEX LITE PREM.+				
6% GEL- 2% CC- 1/4 PPS CELLOFLAKE				
240 SACKS				
Total				

Chemicals used for xxx bbls Tail, including dead volume in the tanks				
Products	Units		\$ / Unit	\$
PREM. PLUS CLACC C	130 SACKS			
2% CC- 1/4 PPS CELLOFLAKE				
Total				

Chemicals used for xxx bbl Displacement				
Products	Units		\$ / Unit	\$
H2O	BBL	61		
Total				

Total Job Cost		
Description	bbl	\$
Spacer 1		
Lead		
Tail		
Displacement		
Total		

POTENTIAL FOR IMPROVEMENT

### JOB LOG

<b>PROJECT NUMBER</b> SOK 4245		<b>TICKET DATE</b> 09/27/14	
<b>COMPANY</b> Tapstone Energy		<b>COUNTRY</b> USA	
<b>LEASE NAME</b> Leann 21-34-9 1H		<b>EMPLOYEE NAME</b> John Hall	
<b>FIELD</b>		<b>SEC / TWP / RNG</b> 28/34S/9W	
<b>API/UWI #</b> 15-077-22093-01-00		<b>JOB PURPOSE</b> Surface	
		<b>STATE</b> Kansas	
		<b>COUNTY</b> Harper	
		<b>CUSTOMER REP</b>	
		<b>TICKET AMOUNT</b> #REF!	
		<b>WELL TYPE</b> Oil & Gas	

	Time	Rate (BPM)	Volume (BBL)(GAL)	Press.(PSI)		Job Description / Remarks
				CSG.	Tbg	
9/26/2014	130am					TIME ARRIVED IN YARD
	140am					Fit for duty meeting
	230am					Headed to location from yard!
	400am					Arrived On Location
	410am					Safety Meeting
9/27/2014	300am					Rig Up
	430am					Safety Meeting
	505am			2,000		Test Lines
	510am	5.0	10.0	200		Pump Water Spacer
	515am	5.0	85.9	200		Pump Lead @12.4
	535am	5.0	30.5	200		Pump Tail @ 14.8
	545am					Drop Plug
	550am	5.0	50.7	300		Start Displacement
	600am	3.0	10.0	300		Slow To Land Plug
	605am			800		Land Plug
	610am					Test Floats
	615am					Rig Down
	700am					Head Back to Yard
	<b>SUPERVISOR SIGNATURE</b>					
<b>Bumped</b>	<b>Final lift</b>	<b>Floats</b>	<b>PSI ON</b>	<b>CEMENT</b>	<b>X</b>	
<b>Plug</b>	<b>Psi</b>	<b>Held</b>	<b>CSG</b>	<b>SURFACE</b>		
<b>YES</b>	<b>300</b>	<b>YES</b>	<b>800.0</b>	<b>yes</b>		
				<b>50bbbls</b>		

<b>JOB SUMMARY</b>			PROJECT NUMBER <b>SOK 4245</b>	TICKET DATE <b>09/27/14</b>
COUNTY <b>Harper</b>	State <b>Kansas</b>	COMPANY <b>Tapstone Energy</b>	CUSTOMER REP <b>0</b>	
LEASE NAME <b>Leann 21-34-9</b>	Well No. <b>1H</b>	JOB TYPE <b>Surface</b>	EMPLOYEE NAME <b>John Hall</b>	

EMP NAME <b>John Hall</b>					
<b>Louis Arney</b>					
<b>David Settlemier</b>					
<b>0.00</b>					

Form. Name \_\_\_\_\_ Type: \_\_\_\_\_  
 Packer Type \_\_\_\_\_ Set At **0**  
 Bottom Hole Temp. **80** Pressure \_\_\_\_\_  
 Retainer Depth \_\_\_\_\_ Total Depth **800**

Date	Called Out	On Location	Job Started	Job Completed
	<b>9/26/2014</b>	<b>9/26/2014</b>	<b>9/27/2014</b>	<b>9/27/2014</b>
Time	<b>130am</b>	<b>400am</b>	<b>430am</b>	<b>700am</b>

Type and Size	Qty	Make
Auto Fill Tube	<b>0</b>	<b>IR</b>
Insert Float Va	<b>0</b>	<b>IR</b>
Centralizers	<b>0</b>	<b>IR</b>
Top Plug	<b>0</b>	<b>IR</b>
HEAD	<b>0</b>	<b>IR</b>
Limit clamp	<b>0</b>	<b>IR</b>
Weld-A	<b>0</b>	<b>IR</b>
Texas Pattern Guide Shoe	<b>0</b>	<b>IR</b>
Cement Basket	<b>0</b>	<b>IR</b>

Well Data						
	New/Used	Weight	Size	Grade	From	To
Casing		<b>36#</b>	<b>9"</b>		<b>Surface</b>	<b>830</b>
Liner						
Liner						
Tubing			<b>0</b>			
Drill Pipe						
Open Hole			<b>12 1/4"</b>		<b>Surface</b>	<b>824</b>
Perforations						<b>Shots/Ft.</b>
Perforations						
Perforations						

Materials			
Mud Type	<b>WBM</b>	Density	<b>9</b> Lb/Gal
Disp. Fluid	<b>Fresh Water</b>	Density	<b>8.33</b> Lb/Gal
Spacer type	<b>resh Wate BBL.</b>		<b>10</b> <b>8.33</b>
Spacer type	BBL.		
Acid Type	Gal.		%
Acid Type	Gal.		%
Surfactant	Gal.		In
NE Agent	Gal.		In
Fluid Loss	Gal/Lb		In
Gelling Agent	Gal/Lb		In
Fric. Red.	Gal/Lb		In
MISC.	Gal/Lb		In
Perfpac Balls	Qty.		
Other			
Other			
Other			
Other			
Other			

Hours On Location		Operating Hours		Description of Job
Date	Hours	Date	Hours	
<b>9/26</b>	<b>20.0</b>	<b>9/27</b>	<b>2.5</b>	<b>Surface</b>
<b>9/27</b>	<b>7.0</b>			
<b>Total</b>	<b>27.0</b>	<b>Total</b>	<b>2.5</b>	

Pressures	
<b>MAX 2,000 PSI</b>	<b>AVG. 300 psi</b>
<b>Average Rates in BPM</b>	
<b>MAX 6 BPM</b>	<b>AVG 4 bpm</b>
<b>Cement Left in Pipe</b>	
<b>Feet 46</b>	<b>Reason SHOE JOINT</b>

Cement Data						
Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
<b>1</b>	<b>240</b>	<b>TEX Lite Premium Plus 65</b>	<b>(6% Gel) 2% Calcium Chloride - 1/4pps Cello-Flake - 0.2% X-Air</b>	<b>11.11</b>	<b>2.01</b>	<b>12.40</b>
<b>2</b>	<b>130</b>	<b>Premium Plus (Class C)</b>	<b>2% Calcium Chloride - 1/4pps Cello-Flake</b>	<b>6.32</b>	<b>1.32</b>	<b>14.80</b>
<b>3</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0.00</b>	<b>0.00</b>

Summary							
Preflush Breakdown		Type: <b>MAXIMUM</b>	<b>1,500 PSI</b>	Preflush: BBI	<b>10.00</b>	Type: <b>Fresh Water</b>	
		Lost Returns: <b>NO/FULL</b>		Load & Bkdn: Gal - BBI	<b>N/A</b>	Pad: Bbl - Gal	<b>N/A</b>
		Actual TOC	<b>SURFACE</b>	Excess /Return BBI	<b>50</b>	Calc. Disp Bbl	<b>61</b>
Average		Bump Plug PSI: <b>300</b>		Calc. TOC:	<b>SURFACE</b>	Actual Disp.	<b>60.70</b>
ISIP	<b>5 Min.</b>	<b>10 Min.</b>	<b>15 Min.</b>	Final Circ. PSI:	<b>800</b>	Disp: Bbl	<b>60.70</b>
				Cement Slurry BBI	<b>116.4</b>		
				Total Volume BBI	<b>187.10</b>		

CUSTOMER REPRESENTATIVE *John Hall* SIGNATURE

# Job Data Sheet



COMPANY <b>Tapstone Energy</b>	PROJECT NUMBER <b>SOK 4245</b>	AFE/WORK ORDER <b>DC14020</b>	DATE <b>9/26/2014</b>
CONTRACTOR <b>Unit #303</b>	Owner <b>Same</b>	LEGAL DESCRIPTION <b>28/34S/9W</b>	API <b>15-077-22093-01-00</b>
LEASE & WELL # <b>Leann 21-34-9 1H</b>	COUNTY <b>Harper</b>	STATE <b>Kansas</b>	MILEAGE <b>100</b>
DIRECTIONS  <b>HWY 58 &amp; STATE LINE - 4.5 MILES NORTH (NE CORNER)</b>			

Pumping Services	<input checked="" type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Long String	<input type="checkbox"/> Plug Back						
	<input type="checkbox"/> Squeeze	<input type="checkbox"/> Acid	<input type="checkbox"/> PTA	<input type="checkbox"/> Other	( ) H2S					
	Casing Size <b>9 5/8"</b>	Casing Weight <b>36#</b>	Thread <b>LTC</b>	Tbng/DP Size	Thread	Plug. Cont. <b>YES</b>	Swage <b>YES</b>	Top Plug <b>YES</b>	Bottom Plug <b>NO</b>	% Excess <b>150%</b>
	Number and Type Units <b>Pump Truck &amp; Bulk Materials</b>							Casing Depth <b>800'</b>	Hole Depth <b>800'</b>	Hole Size <b>12 1/4"</b>
	Remarks						Est. BHST <b>80°</b>	Tubing Depth	Depth-TVD	Mud Weight/Type

Materials	<b>LEAD</b>	# of Sacks <b>240</b>	Type O-TEX Lite Premium Plus 65/35	Additives  <b>(6% Gel) 2% Calcium Chloride - 1/4pps Cello-Flake - 0.2% X-Air</b>	
	<b>H2O TO MIX</b>	Weight PPG <b>12.40</b>	Yield Ft3/Sk <b>2.01</b>		Water Gal/Sk <b>11.11</b>
	<b>TAIL</b>	# of Sacks <b>130</b>	Type Premium Plus (Class C)		Additives  <b>2% Calcium Chloride - 1/4pps Cello-Flake</b>
	<b>H2O TO MIX</b>	Weight PPG <b>14.80</b>	Yield Ft3/Sk <b>1.32</b>		
	<b>TOP OUT</b>	# of Sacks	Type	Additives	
	<b>H2O TO MIX</b>	Weight PPG	Yield Ft3/Sk		Water Gal/Sk
	ACID	Type	Additives		
		Inhibitor	Surfactant	clay cont.	<b>TAKE 50 # Sugar</b>
	Spacer or Flush	Quantity <b>10 BBL</b>	Type <b>Fresh Water</b>	Additives	
	Spacer or Flush	Quantity	Type	Additives	
Other	Quantity	Type	Additives		

Crew Called	<b>Cementer</b>	<b>Pumper</b>	<b>Bulky</b>	<b>Bulky</b>	<b>Bulky</b>
	John Hall	Louis Arney	David Settlemier		

CEOL	<b>9 5/8" 8RD SWAGE, SW, DW, BALE RACK</b>
------	--

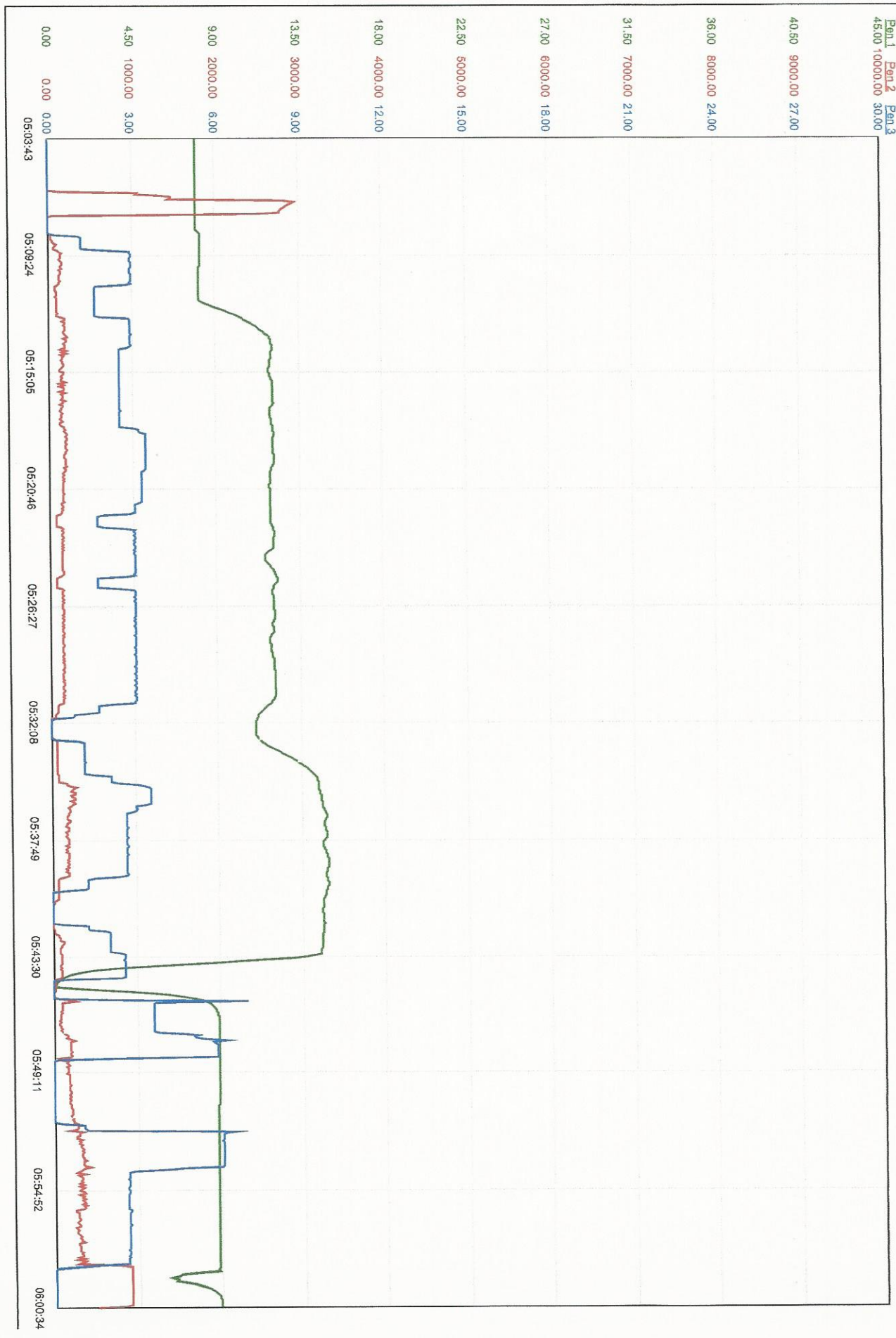
Sales Items	Casing Size <b>9 5/8"</b>	Casing Weight <b>36#</b>	Thread <b>LTC</b>
	Guide Shoe	Float Shoe	Float Collar Insert Float Valve
	Centralizers - Number	Size	Type
	Wall Cleaners - Number	Type	MSC (DV Tool) MSC Plug Set
	Limit Clamps	Thread lock	Other
	Remarks		

Customer Rep. <b>0</b>	Cell Phone <b>0</b>	Office Phone	Fax	Time of Call
Call Taken By <b>Jared Sisco</b>				Date Ready <b>9/26/2014</b>
Crew Called <b>John Hall</b>				Location Time <b>1:00</b>
				Yard Time <b>0:00</b>

SERVICE COMPANY: O-Tex  
 TICKET NO: DC 14020  
 CUSTOMER NAME: Tapstone Energy  
 WELL NAME: Leann 21349 1H  
 WELL LOCATION: Harper CO. OK  
 DATE RECORDED: 09/27/2014  
 JOB NO: SOK 4245  
 UNIT DESCRIPTION: Unit #303  
 UNIT NOTES: 9 5/8 Surface  
 FILE NAME: Tapstone Energy\Leann 21349 1H\_14\_09\_27\_#1.csv



Pen 1: Density 1 (Density : lb/gal) Pen 2: Pressure 1 (Density : lb/gal) Pen 3: Flowrate 1 (Pressure : psi)





<b>JOB SUMMARY</b>			PROJECT NUMBER <b>SOK 4285</b>	TICKET DATE <b>10/03/14</b>
COUNTY <b>Harper</b>	State <b>Kansas</b>	COMPANY <b>Tapstone Energy</b>	CUSTOMER REP <b>0</b>	
LEASE NAME <b>Leann 21-34-9</b>	Well No. <b>1H</b>	JOB TYPE <b>Intermediate</b>	EMPLOYEE NAME <b>Joseph Klemm</b>	

EMP NAME							
Joseph Klemm							
Cody Bonitz							
David Settlemier							
0.00							

Form. Name \_\_\_\_\_ Type: \_\_\_\_\_

Packer Type \_\_\_\_\_ Set At **0**

Bottom Hole Temp. **155** Pressure \_\_\_\_\_

Retainer Depth \_\_\_\_\_ Total Depth **5077'**

	Called Out	On Location	Job Started	Job Completed
Date	<b>10/3/2014</b>	<b>10/3/2014</b>	<b>10/3/2014</b>	<b>10/3/2014</b>
Time	<b>0230</b>	<b>0500</b>	<b>0545</b>	<b>1030</b>

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing	26#	7"		Surface	5077'	5,000
Liner						
Liner						
Tubing		0				
Drill Pipe						
Open Hole			8 1/2"	Surface	5077'	Shots/Ft.
Perforations						
Perforations						
Perforations						

Materials			
Mud Type	WBM	Density	9 Lb/Gal
Disp. Fluid	Fresh Water	Density	8.33 Lb/Gal
Spacer type	Gel	BBL.	30 8.40
Spacer type	BBL.		
Acid Type	Gal.		%
Acid Type	Gal.		%
Surfactant	Gal.		In
NE Agent	Gal.		In
Fluid Loss	Gal/Lb		In
Gelling Agent	Gal/Lb		In
Fric. Red.	Gal/Lb		In
MISC.	Gal/Lb		In
Perfpac Balls		Qty.	
Other			
Other			
Other			
Other			
Other			


Hours On Location		Operating Hours		Description of Job
Date	Hours	Date	Hours	
10/3	5.5	10/3	5.2	Intermediate
Total	5.5	Total	5.2	

Pressures	
MAX	5,000 PSI
AVG.	450
Average Rates in BPM	
MAX	7 BPM
AVG.	5
Cement Left in Pipe	
Feet	84
Reason	SHOE JOINT

Cement Data						
Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	140	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.1% C-37 - 0.2% X-Air	6.93	1.43	13.60
2	90	Premium	0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.2 X-Air	5.19	1.19	15.60
3	0	0		0	0.00	0.00

Summary					
Preflush Breakdown	Type: _____	MAXIMUM _____	Lost Returns- <b>N</b>	Actual TOC _____	Bump Plug PSI: _____
Average ISIP	5 Min. _____	10 Min. _____	15 Min. _____	Final Circ. PSI: _____	Cement Slurry BBI _____
				Total Volume BBI	276.00
				Preflush: BBI	30.00
				Load & Bkdn: Gal - BBI	N/A
				Excess /Return BBI	N/A
				Calc. TOC:	3,159
				Final Circ. PSI:	620
				Disp:Bbl	191.30
				Actual Disp.	191.30
				Pad:Bbl -Gal	N/A
				Calc.Disp Bbl	191

CUSTOMER REPRESENTATIVE \_\_\_\_\_ SIGNATURE *D.J.C. Miller*

<b>JOB LOG</b>					PROJECT NUMBER	TICKET DATE
COMPANY <b>Tapstone Energy</b>		COUNTRY <b>USA</b>			STATE <b>Kansas</b>	COUNTY <b>Harper</b>
LEASE NAME <b>Leann 21-34-9 1H</b>		Well No.	EMPLOYEE NAME <b>Joseph Klemm</b>			CUSTOMER REP
FIELD		SEC / TWP / RNG <b>28/34S/9W</b>			TICKET AMOUNT <b>9,888.26</b>	
API/UWI # <b>15-077-22093-01-00</b>		JOB PURPOSE <b>Intermediate</b>			WELL TYPE <b>Oil &amp; Gas</b>	
Time	Rate (BPM)	Volume (BBL)(GAL)	Press.(PSI)		Job Description / Remarks	
			CSG.	Tbg		
10/3/14	0230				<b>TIME ARRIVED IN YARD</b>	
	0240				<b>Fit for duty meeting</b>	
	0330				<b>Headed to location from yard!</b>	
	0500				<b>Arrive on location</b>	
	0510				<b>Safety meeting</b>	
	0545				<b>Rig up</b>	
	0730				<b>Safety meeting</b>	
	0753			<b>5000</b>	<b>Pressure test</b>	
	0757	<b>2.8</b>	<b>30.0</b>	<b>300</b>	<b>Start gel spacer</b>	
	0813				<b>Weigh cement w/ hand scales/Match densometer</b>	
	0815	<b>5.0</b>	<b>35.6</b>	<b>600</b>	<b>Start lead cement @ 13.6/ppg</b>	
	0823	<b>4.0</b>	<b>19.0</b>	<b>380</b>	<b>Start tail cement @ 15.6/ppg</b>	
	0831				<b>Drop plug</b>	
	0834	<b>7.0</b>		<b>250</b>	<b>Start displacement</b>	
	0841	<b>7.0</b>	<b>50.0</b>	<b>280</b>	<b>Check rate and pressure</b>	
	0847	<b>7.0</b>	<b>90.0</b>	<b>320</b>	<b>Check rate and pressure</b>	
	0852	<b>5.7</b>	<b>120.0</b>	<b>380</b>	<b>Caught cement</b>	
	0859	<b>5.0</b>	<b>160.0</b>	<b>600</b>	<b>Check rate and pressure</b>	
	0904	<b>3.0</b>	<b>180.0</b>	<b>620</b>	<b>Slow to land plug</b>	
	0907		<b>191.0</b>	<b>1200</b>	<b>Land plug</b>	
	0912		<b>1.0</b>		<b>Test floats</b>	
	0920				<b>Rig down</b>	
	1030				<b>Leave location</b>	
					<b>SUPERVISOR SIGNATURE</b>	
<b>Bumped Plug</b>	<b>Final lift</b>	<b>Floats</b>	<b>PSI ON</b>	<b>CEMENT</b>	X 	
<b>YES</b>	<b>620</b>	<b>YES</b>	<b>1200.0</b>	<b>SURFACE</b>		
				<b>NO</b>		

# Job Data Sheet



COMPANY <b>Tapstone Energy</b>		PROJECT NUMBER <b>SOK 4285</b>	AFE/WORK ORDER <b>DC14020</b>	DATE <b>10/3/2014</b>						
CONTRACTOR <b>Unit #303</b>		Owner <b>Same</b>	LEGAL DESCRIPTION <b>28/34S/9W</b>	API <b>15-077-22093-01-00</b>						
LEASE & WELL # <b>Leann 21-34-9 1H</b>		COUNTY <b>Harper</b>	STATE <b>Kansas</b>	MILEAGE <b>100</b>						
DIRECTIONS <b>HWY 58 &amp; STATE LINE - 4.5 MILES NORTH (NE CORNER)</b>										
Pumping Services	<input type="checkbox"/> Surface		<input checked="" type="checkbox"/> Intermediate		<input type="checkbox"/> Long String		<input type="checkbox"/> Plug Back			
	<input type="checkbox"/> Squeeze		<input type="checkbox"/> Acid		<input type="checkbox"/> PTA		<input type="checkbox"/> Other		() H2S	
	Casing Size	Casing Weight	Thread	Tbng/DP Size	Thread	Plug. Cont.	Swage	Top Plug	Bottom Plug	% Excess
	<b>7"</b>	<b>26#</b>	<b>LTC</b>			<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>40%</b>
	Number and Type Units							Casing Depth	Hole Depth	Hole Size
<b>Pump Truck &amp; Bulk Materials</b>							<b>5077'</b>	<b>5077'</b>	<b>8 3/4"</b>	
Remarks <b>TAKE 7" TOP &amp; BOTTOM PLUG</b>						Est. BHST <b>155</b>	KOP	Depth-TVD	Mud Weight/Type <b>9.2ppg WBM</b>	
Materials	<b>LEAD</b>	# of Sacks	Type		Additives					
	<b>35.66</b>	<b>140</b>	<b>50/50 POZ PREMIUM</b>		<b>4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.1% C-37 - 0.2% X-Air</b>					
	<b>H2O TO MIX</b>	Weight PPG	Yield Ft3/Sk	Water Gal/Sk						
	<b>23.10</b>	<b>13.60</b>	<b>1.43</b>	<b>6.93</b>						
	<b>TAIL</b>	# of Sacks	Type		Additives					
	<b>19.07</b>	<b>90</b>	<b>Premium</b>		<b>0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.2 X-Air</b>					
	<b>H2O TO MIX</b>	Weight PPG	Yield Ft3/Sk	Water Gal/Sk						
	<b>11.12</b>	<b>15.60</b>	<b>1.19</b>	<b>5.19</b>						
		# of Sacks	Type		Additives					
		Weight PPG	Yield Ft3/Sk	Water Gal/Sk						
	ACID	Type		Additives						
	Inhibitor	Surfactant	clay cont.							
	Spacer or Flush	Quantity	Type		Additives					
		<b>30 bbls</b>	<b>Gel Spacer</b>		<b>900#s Bentonite Gel</b>					
	Displace	Quantity	Type		Additives					
	Other	Quantity	Type		Additives					
Crew Called	<b>Cementer</b>	<b>Pumper</b>	<b>Bulky</b>	<b>Bulky</b>	<b>Bulky</b>					
	<b>Joseph Klemm</b>	<b>Cody Bonitz</b>	<b>David Settlemier</b>							
CEOL	<b>7" 8RD SWAGE, SW, DW, BALE RACK</b>									
Sales Items	Casing Size	<b>7"</b>	Casing Weight	<b>26#</b>	Thread		<b>LTC</b>			
	Guide Shoe		Float Shoe		Float Collar	Insert Float Valve				
	Centralizers - Number		Size		Type					
	Wall Cleaners - Number		Type		MSC (DV Tool)			MSC Plug Set		
	Limit Clamps		Thread lock		Other					
	Remarks	<b>TAKE 7" TOP &amp; BOTTOM PLUG</b>								
Customer Rep.	Cell Phone	Office Phone	Fax	Time of Call						
<b>0</b>	<b>0</b>									
Call Taken By	Date Ready							Location Time		
<b>Jared Sisco</b>	<b>10/3/14</b>							<b>500 AM</b>		
Crew Called	Yard Time									
<b>Joseph Klemm</b>	<b>10/3/14 230 AM</b>									

SERVICE COMPANY: O-Tex  
 TICKET NO: DC14020  
 CUSTOMER NAME: Tapstone  
 WELL NAME: Leann 21349 1H  
 WELL LOCATION: Harper Co.

DATE RECORDED: 10/03/2014  
 JOB NO: SOK 4285  
 UNIT DESCRIPTION: Unit #303  
 UNIT NOTES: 7" Intermediate  
 FILE NAME: Tapstone\_Leann\_21349\_1H\_14\_10\_03\_#1.csv



Pen 1: Density 2 (Density : lb/gal) Pen 2: Pressure 1 (Density : lb/gal) Pen 3: Pressure 2 (Pressure : psi) Pen 4: Calc SturryRate (Pressure : psi)

Pen 1 Pen 2 Pen 3 Pen 4  
 25.00 6000.00 6000.00 18.00

22.50 5400.00 5400.00 16.20

20.00 4800.00 4800.00 14.40

17.50 4200.00 4200.00 12.60

15.00 3600.00 3600.00 10.80

12.50 3000.00 3000.00 9.00

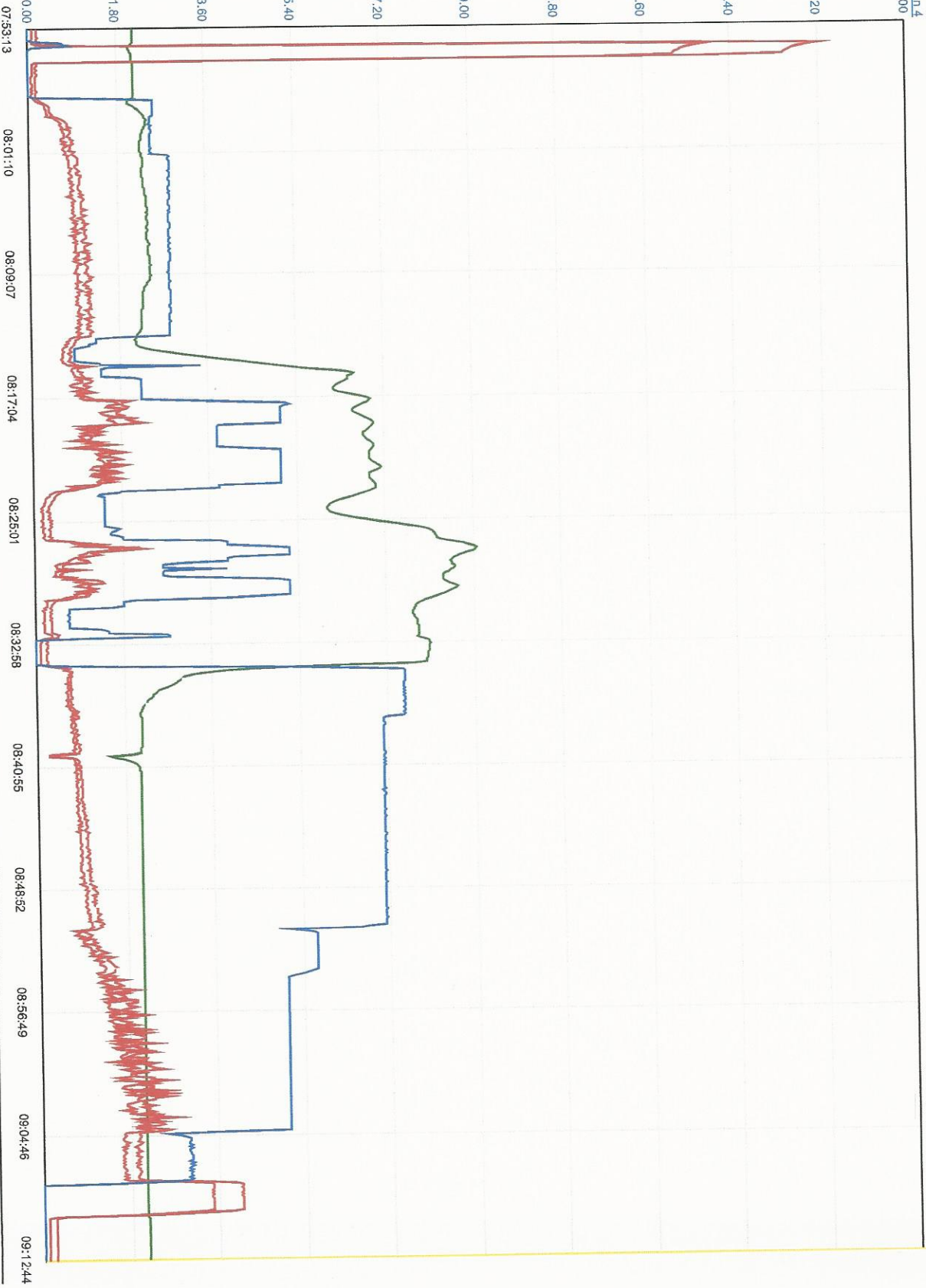
10.00 2400.00 2400.00 7.20

7.50 1800.00 1800.00 5.40

5.00 1200.00 1200.00 3.60

2.50 600.00 600.00 1.80

0.00 0.00 0.00 0.00



09:12:44 PC Data Recording Stopped

**Tapstone Energy**  
**Leann 21-34-9 1H**  
**API# 15-077-22093-01-00**

**Vertical Section Azimuth @354.12 Degrees**

Surveys from 892' MD to 9530' MD provided by Sperry Drilling Services. Final survey is a straight line projection to the bit at 9581' MD.

<u>Date/Time</u>	<u>Depth</u>	<u>Inc</u>	<u>Azm</u>	<u>TVD</u>	<u>N/-S</u>	<u>E/-W</u>	<u>VS</u>	<u>DLS</u>	<u>Moter Yield</u>
9/28/2014 8:55	892.00	0.48	110.38	891.99	-1.3	3.5	-1.65	0.05	
9/28/2014 10:11	1082.00	0.39	72.45	1081.98	-1.38	4.86	-1.87	0.16	
9/28/2014 11:36	1271.00	0.31	58.57	1270.98	-0.92	5.91	-1.52	0.06	
9/28/2014 13:07	1461.00	0.22	82.10	1460.98	-0.6	6.71	-1.29	0.07	
9/28/2014 15:16	1650.00	0.29	84.57	1649.98	-0.51	7.55	-1.28	0.04	
9/28/2014 17:12	1839.00	0.33	99.41	1838.97	-0.55	8.57	-1.43	0.05	
9/28/2014 19:10	2028.00	0.15	50.70	2027.97	-0.48	9.31	-1.43	0.14	
9/28/2014 20:38	2217.00	0.06	226.42	2216.97	-0.39	9.43	-1.36	0.11	
9/28/2014 22:04	2405.00	0.46	5.72	2404.97	0.3	9.44	-0.67	0.27	
9/28/2014 23:24	2593.00	0.20	104.91	2592.97	0.97	9.82	-0.04	0.28	
9/29/2014 1:12	2783.00	0.32	108.35	2782.97	0.72	10.63	-0.37	0.06	
9/29/2014 5:39	2972.00	0.27	150.05	2971.96	0.18	11.35	-0.99	0.11	
9/29/2014 6:50	3161.00	0.33	79.27	3160.96	-0.1	12.1	-1.34	0.18	
9/29/2014 7:55	3349.00	0.17	64.99	3348.96	0.12	12.88	-1.2	0.09	
9/29/2014 9:17	3537.00	0.32	82.44	3536.96	0.31	13.66	-1.09	0.09	
9/29/2014 10:15	3725.00	0.13	129.71	3724.96	0.24	14.33	-1.23	0.13	
9/29/2014 11:30	3818.00	0.34	109.88	3817.96	0.08	14.67	-1.42	0.25	
9/29/2014 12:35	3850.00	0.48	7.46	3849.96	0.18	14.78	-1.33	2.03	
9/29/2014 13:36	3881.00	2.24	354.14	3880.95	0.91	14.74	-0.6	5.72	8.45
9/29/2014 14:46	3913.00	4.47	351.60	3912.89	2.77	14.49	1.27	6.97	11.38
9/29/2014 15:48	3944.00	7.08	350.38	3943.73	5.85	14	4.38	8.44	14.51
9/29/2014 16:37	3976.00	9.39	349.15	3975.40	10.36	13.18	8.95	7.24	10.51
9/29/2014 17:48	4007.00	10.76	348.67	4005.92	15.68	12.13	14.35	4.43	7.48
9/29/2014 18:46	4039.00	12.04	349.94	4037.29	21.9	10.96	20.66	4.09	7.27
9/29/2014 20:13	4070.00	13.53	352.75	4067.52	28.68	9.94	27.51	5.2	8.5
9/29/2014 22:05	4102.00	14.92	352.66	4098.53	36.48	8.94	35.37	4.34	6.9
9/29/2014 23:43	4133.00	17.55	352.81	4128.30	45.08	7.84	44.04	8.48	10.51
9/30/2014 1:34	4165.00	20.97	353.22	4158.50	55.55	6.56	54.59	10.7	13.16
9/30/2014 3:33	4197.00	24.25	354.83	4188.04	67.79	5.3	66.89	10.44	10.7
9/30/2014 5:26	4228.00	26.28	355.88	4216.07	80.98	4.23	80.12	6.7	11.11
9/30/2014 7:03	4260.00	28.95	355.45	4244.42	95.77	3.11	94.94	8.38	16.74
9/30/2014 8:56	4291.00	31.35	354.34	4271.23	111.27	1.71	110.51	7.92	10.6
9/30/2014 10:34	4322.00	33.59	353.49	4297.38	127.82	-0.05	127.15	7.37	9.8
9/30/2014 11:54	4353.00	35.81	352.74	4322.86	145.34	-2.17	144.79	7.31	15.06
9/30/2014 13:25	4385.00	38.79	352.31	4348.32	164.56	-4.7	164.18	9.36	13.6
9/30/2014 14:41	4417.00	41.39	352.72	4372.79	184.99	-7.38	184.77	8.15	9.33
9/30/2014 16:22	4449.00	42.82	352.60	4396.53	206.27	-10.12	206.22	4.48	7.17
9/30/2014 17:57	4480.00	45.14	352.88	4418.84	227.62	-12.84	227.74	7.5	12.33
9/30/2014 22:04	4511.00	47.57	352.82	4440.24	249.88	-15.63	250.17	7.84	11.04
10/1/2014 0:27	4542.00	49.95	352.37	4460.67	272.99	-18.64	273.47	7.77	10.44
10/1/2014 4:15	4573.00	53.15	352.49	4479.94	297.06	-21.84	297.73	10.33	12.31
10/1/2014 6:34	4605.00	56.91	352.91	4498.28	323.06	-25.17	323.94	11.78	11.8
10/1/2014 8:25	4636.00	59.89	353.17	4514.53	349.27	-28.37	350.33	9.64	12.04
10/1/2014 10:56	4668.00	61.32	353.67	4530.23	376.96	-31.56	378.21	4.68	7.8
10/1/2014 12:03	4699.00	61.33	353.96	4545.11	404	-34.49	405.41	0.82	
10/1/2014 13:16	4731.00	61.03	354.40	4560.53	431.89	-37.34	433.45	1.54	
10/1/2014 15:02	4762.00	61.29	354.78	4575.48	458.93	-39.9	460.6	1.36	8.07

10/1/2014 17:04	4793.00	61.72	354.86	4590.27	486.06	-42.36	487.84	1.4	11.28
10/1/2014 19:34	4825.00	61.78	355.46	4605.42	514.15	-44.74	516.03	1.67	2.02
10/1/2014 22:25	4857.00	63.99	355.57	4620.01	542.54	-46.96	544.5	6.92	13.82
10/2/2014 0:22	4889.00	67.54	354.91	4633.14	571.62	-49.38	573.67	11.26	12.98
10/2/2014 2:02	4918.00	71.05	354.31	4643.39	598.62	-51.93	600.79	12.27	14.22
10/2/2014 3:53	4950.00	74.44	354.00	4652.88	629.02	-55.05	631.35	10.62	12.14
10/2/2014 6:07	4981.00	77.19	353.45	4660.48	658.89	-58.33	661.4	9.04	13.14
10/2/2014 8:22	5011.00	79.41	354.19	4666.56	688.09	-61.5	690.77	7.76	11.67
10/4/2014 7:54	5100.00	85.62	354.89	4678.15	775.89	-69.89	778.97	7.03	10.5
10/4/2014 8:56	5132.00	88.70	354.57	4679.73	807.71	-72.82	810.92	9.69	10.68
10/4/2014 9:40	5163.00	90.06	353.54	4680.07	838.54	-76.03	841.92	5.49	
10/4/2014 10:28	5194.00	90.06	352.26	4680.03	869.3	-79.86	872.91	4.14	
10/4/2014 11:06	5225.00	90.62	351.79	4679.85	900	-84.16	903.89	2.34	
10/4/2014 12:14	5257.00	90.00	351.92	4679.68	931.68	-88.7	935.86	1.97	
10/4/2014 13:17	5289.00	91.91	353.37	4679.15	963.41	-92.79	967.85	7.5	
10/4/2014 14:39	5320.00	89.91	353.13	4678.65	994.19	-96.43	998.84	6.52	
10/4/2014 15:25	5352.00	89.81	353.47	4678.73	1025.97	-100.17	1030.83	1.09	
10/4/2014 16:15	5384.00	89.45	352.73	4678.94	1057.74	-104.01	1062.83	2.58	
10/4/2014 17:33	5415.00	89.14	353.98	4679.32	1088.53	-107.6	1093.82	4.16	
10/4/2014 18:04	5447.00	88.34	354.61	4680.02	1120.36	-110.78	1125.81	3.2	
10/4/2014 19:21	5478.00	87.94	354.41	4681.03	1151.2	-113.74	1156.8	1.45	
10/4/2014 20:19	5510.00	90.00	354.44	4681.61	1183.04	-116.85	1188.79	6.45	
10/4/2014 20:44	5541.00	89.57	354.09	4681.73	1213.89	-119.95	1219.79	1.79	
10/4/2014 21:13	5573.00	89.38	353.67	4682.02	1245.7	-123.36	1251.79	1.45	
10/4/2014 22:30	5635.00	90.59	353.73	4682.03	1307.33	-130.16	1313.78	1.94	
10/4/2014 22:54	5667.00	90.62	353.76	4681.70	1339.14	-133.64	1345.78	0.14	
10/4/2014 23:29	5730.00	91.05	354.19	4680.78	1401.78	-140.25	1408.77	0.97	
10/5/2014 0:09	5793.00	91.29	355.11	4679.50	1464.49	-146.12	1471.76	1.51	
10/5/2014 1:04	5856.00	89.94	354.61	4678.82	1527.23	-151.77	1534.75	2.29	
10/5/2014 1:46	5919.00	90.83	355.35	4678.40	1589.99	-157.28	1597.74	1.84	
10/5/2014 2:10	5951.00	91.39	355.29	4677.77	1621.88	-159.89	1629.72	1.76	
10/5/2014 3:03	6014.00	89.78	354.80	4677.13	1684.64	-165.33	1692.71	2.66	
10/5/2014 3:45	6077.00	90.03	355.07	4677.23	1747.39	-170.89	1755.7	0.57	
10/5/2014 4:22	6140.00	90.37	355.62	4677.01	1810.18	-176.01	1818.69	1.02	
10/5/2014 6:06	6202.00	90.40	354.96	4676.59	1871.97	-181.1	1880.67	1.06	
10/5/2014 7:43	6265.00	90.77	355.27	4675.95	1934.74	-186.46	1943.66	0.77	
10/5/2014 10:04	6329.00	90.03	353.76	4675.50	1998.44	-192.58	2007.66	2.62	
10/5/2014 11:45	6392.00	89.75	353.82	4675.62	2061.07	-199.39	2070.65	0.45	
10/5/2014 15:00	6486.00	89.38	351.97	4676.33	2154.34	-211.02	2164.63	2.01	
10/5/2014 17:01	6549.00	90.43	352.02	4676.43	2216.73	-219.79	2227.58	1.67	
10/5/2014 18:06	6612.00	90.86	352.69	4675.72	2279.16	-228.17	2290.55	1.27	
10/5/2014 19:13	6675.00	90.99	351.83	4674.70	2341.58	-236.66	2353.51	1.38	
10/5/2014 21:14	6738.00	90.68	351.58	4673.79	2403.92	-245.75	2416.44	0.63	
10/5/2014 23:02	6801.00	90.62	351.05	4673.07	2466.19	-255.26	2479.36	0.84	
10/6/2014 1:12	6865.00	91.75	351.58	4671.75	2529.44	-264.92	2543.27	1.96	
10/6/2014 3:20	6928.00	89.54	352.13	4671.04	2591.8	-273.84	2606.21	3.62	
10/6/2014 17:30	6990.00	90.99	352.77	4670.75	2653.26	-281.99	2668.19	2.55	
10/6/2014 18:50	7053.00	91.20	352.06	4669.55	2715.69	-290.3	2731.15	1.18	
10/6/2014 20:27	7115.00	91.02	354.44	4668.35	2777.25	-297.59	2793.12	3.85	
10/6/2014 21:11	7178.00	91.11	354.08	4667.18	2839.92	-303.89	2856.11	0.58	
10/6/2014 22:06	7241.00	90.90	354.65	4666.08	2902.61	-310.08	2919.1	0.96	
10/6/2014 22:56	7304.00	90.83	354.86	4665.13	2965.33	-315.84	2982.09	0.35	
10/6/2014 23:39	7367.00	90.18	353.65	4664.57	3028.01	-322.15	3045.09	2.18	
10/7/2014 1:07	7430.00	91.14	354.76	4663.84	3090.69	-328.52	3108.08	2.33	
10/7/2014 1:53	7493.00	91.48	354.90	4662.40	3153.41	-334.19	3171.06	0.58	
10/7/2014 3:30	7557.00	91.11	354.59	4660.96	3217.13	-340.05	3235.04	0.75	
10/7/2014 4:34	7620.00	90.96	356.16	4659.82	3279.91	-345.14	3298.01	2.5	
10/7/2014 6:17	7683.00	90.31	356.05	4659.13	3342.76	-349.42	3360.97	1.04	

10/7/2014 7:07	7746.00	91.08	355.93	4658.37	3405.6	-353.82	3423.93	1.23
10/7/2014 8:59	7809.00	88.43	354.75	4658.64	3468.38	-358.94	3486.91	4.6
10/7/2014 10:40	7872.00	89.82	353.72	4659.60	3531.06	-365.27	3549.9	2.73
10/7/2014 12:14	7935.00	89.97	354.12	4659.72	3593.7	-371.94	3612.9	0.68
10/7/2014 14:18	7998.00	92.49	353.54	4658.37	3656.32	-378.7	3675.88	4.11
10/7/2014 15:36	8058.00	90.19	352.71	4656.97	3715.87	-385.88	3735.85	4.08
10/7/2014 17:21	8118.00	93.26	354.06	4655.16	3775.43	-392.79	3795.81	5.59
10/7/2014 18:14	8178.00	94.40	354.32	4651.16	3834.99	-398.85	3855.67	1.94
10/7/2014 20:32	8239.00	93.12	352.97	4647.16	3895.48	-405.6	3916.54	3.04
10/7/2014 22:58	8299.00	92.13	353.51	4644.41	3955	-412.65	3976.46	1.89
10/8/2014 0:34	8360.00	90.49	353.12	4643.01	4015.57	-419.75	4037.44	2.76
10/8/2014 2:33	8421.00	91.51	355.38	4641.95	4076.24	-425.86	4098.43	4.06
10/8/2014 4:27	8483.00	91.17	354.60	4640.50	4137.99	-431.27	4160.4	1.37
10/8/2014 22:47	8545.00	86.97	354.25	4641.50	4199.68	-437.29	4222.38	6.8
10/9/2014 0:34	8575.00	89.75	354.81	4642.36	4229.52	-440.15	4252.36	9.47
10/9/2014 2:51	8605.00	92.10	355.80	4641.88	4259.42	-442.6	4282.35	8.5
10/9/2014 4:16	8635.00	92.07	355.66	4640.78	4289.31	-444.84	4312.32	0.5
10/9/2014 5:16	8665.00	90.55	354.44	4640.10	4319.19	-447.43	4342.3	6.48
10/9/2014 6:12	8695.00	90.99	355.06	4639.70	4349.06	-450.17	4372.3	2.53
10/9/2014 7:30	8725.00	90.83	355.81	4639.22	4378.96	-452.56	4402.29	2.57
10/9/2014 8:34	8755.00	91.39	355.60	4638.64	4408.87	-454.8	4432.27	2.01
10/9/2014 10:06	8785.00	90.59	355.49	4638.12	4438.78	-457.13	4462.26	2.71
10/9/2014 10:48	8815.00	88.03	354.63	4638.48	4468.66	-459.72	4492.25	9.01
10/9/2014 12:36	8845.00	87.26	354.86	4639.72	4498.51	-462.47	4522.22	2.68
10/9/2014 14:00	8875.00	88.80	354.99	4640.75	4528.37	-465.12	4552.2	5.17
10/9/2014 15:42	8905.00	88.40	354.19	4641.48	4558.23	-467.94	4582.19	3
10/9/2014 17:49	8935.00	88.36	354.29	4642.33	4588.07	-470.95	4612.18	0.36
10/9/2014 19:13	8965.00	89.66	354.31	4642.85	4617.91	-473.93	4642.17	4.32
10/9/2014 21:02	8995.00	88.95	354.05	4643.21	4647.76	-476.97	4672.17	2.52
10/9/2014 23:01	9025.00	91.32	354.76	4643.14	4677.61	-479.9	4702.17	8.25
10/10/2014 1:25	9055.00	93.36	354.62	4641.92	4707.46	-482.67	4732.14	6.82
10/10/2014 3:56	9085.00	92.68	354.88	4640.34	4737.29	-485.41	4762.09	2.44
10/10/2014 5:33	9115.00	90.31	354.73	4639.55	4767.15	-488.13	4792.08	7.93
10/11/2014 9:40	9154.00	89.72	354.81	4639.54	4805.99	-491.68	4831.08	1.51
10/11/2014 10:31	9190.00	91.35	355.91	4639.20	4841.87	-494.6	4867.06	5.46
10/11/2014 11:46	9217.00	91.70	355.55	4638.48	4868.79	-496.61	4894.04	1.84
10/11/2014 12:56	9248.00	91.42	355.65	4637.64	4899.68	-498.98	4925.02	0.97
10/11/2014 13:55	9280.00	91.73	355.98	4636.76	4931.59	-501.32	4957	1.4
10/11/2014 15:33	9311.00	93.15	355.84	4635.44	4962.48	-503.52	4987.95	4.62
10/11/2014 17:05	9343.00	90.03	356.09	4634.56	4994.38	-505.77	5019.92	9.78
10/11/2014 17:55	9375.00	88.46	355.67	4634.98	5026.3	-508.07	5051.9	5.1
10/11/2014 19:10	9406.00	90.52	356.05	4635.25	5057.21	-510.31	5082.88	6.79
10/11/2014 19:51	9438.00	91.54	356.60	4634.68	5089.14	-512.36	5114.85	3.6
10/11/2014 21:06	9469.00	91.05	356.24	4633.98	5120.07	-514.3	5145.82	1.96
10/12/2014 1:19	9530.00	89.88	354.95	4633.49	5180.89	-518.99	5206.8	2.85
10/12/2014 1:41	9581.00	89.88	354.95	4633.60	5231.69	-523.48	5257.79	0.01

**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

HARPER

County, Kansas

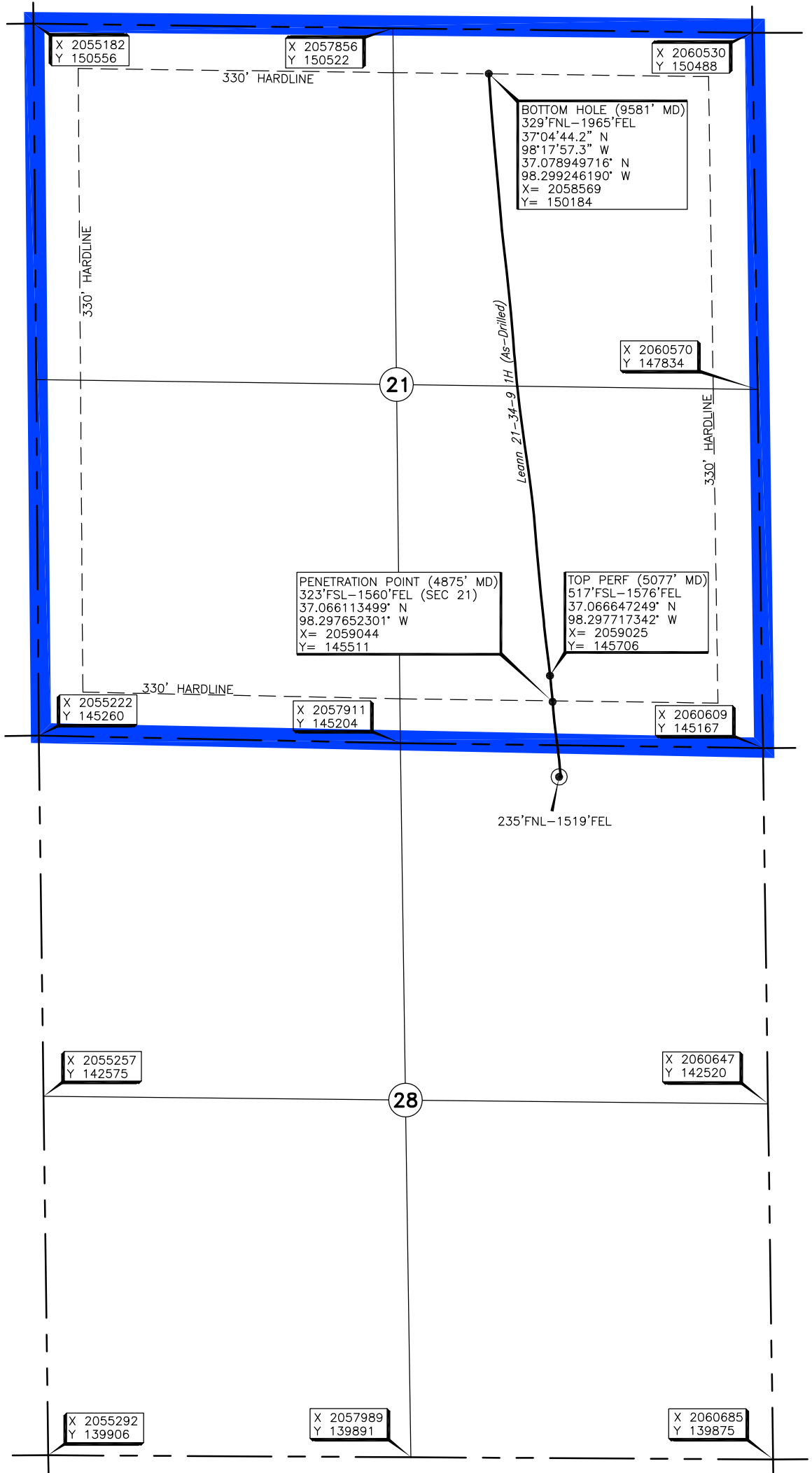
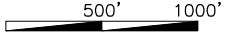
235'FNL-1519'FEL Section 28 Township 34S Range 9W P.M.



GRID  
 NAD-27  
 Kansas South  
 US Feet

Note:  
 3.280833 Ft.=1 Meter

Scale:  
 1" = 1000'



Operator: TAPSTONE ENERGY  
 Lease Name: LEANN 21-34-9

Well No.: 1H

ELEVATION:  
 1270' Gr. at level pad

Topography & Vegetation Location fell on an existing pad ±95' North of existing well.

Good Drill Site? Yes

Reference Stakes or Alternate Location  
 Stakes Set None

Best Accessibility to Location From North off county road.

Distance & Direction From Hwy Jct or Town From State Hwy. 58 at State Line, go North ±4.5 miles to the NE corner of Section 28-T34S-R9W

233176 Date of Drawing: Oct. 22, 2014

Invoice # 229604 Date Staked: Aug. 27, 2014 JP

**FINAL AS-DRILLED PLAT**

AS-DRILLED INFORMATION  
 FURNISHED BY TAPSTONE ENERGY

DATUM: NAD-27  
 LAT: 37°03'52.5" N  
 LONG: 98°17'51.0" W  
 LAT: 37.064578252° N  
 LONG: 98.297490864° W  
 STATE PLANE  
 COORDINATES (US FEET):  
 ZONE: KS SOUTH  
 X: 2059093  
 Y: 144952

This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy