



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1215275  
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: \_\_\_\_\_

1215275

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)*

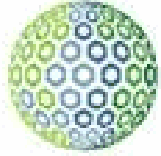
Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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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> _____ _____
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**tapstone**  
ENERGY

## **TAPSTONE ENERGY**

**Harper County, KS  
Ralph 36-34-9 No. 1H  
No. 1H  
Original Hole**

**Design: Original Hole**

## **Wellpath Report**

**10 July, 2014**





# Professional Directional Wellpath Report



<b>Company:</b> TAPSTONE ENERGY	<b>Local Co-ordinate Reference:</b> Well No. 1H
<b>Project:</b> Harper County, KS	<b>TVD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Site:</b> Ralph 36-34-9 No. 1H	<b>MD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b> No. 1H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Original Hole	<b>Database:</b> Well_Planner1

<b>Project</b> Harper County, KS	
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)	
<b>Map Zone:</b> Kansas South 1502	

<b>Site</b> Ralph 36-34-9 No. 1H		
<b>Site Position:</b>	<b>Northing:</b> 134,756.00 usft	<b>Latitude:</b> 37° 2' 11.364 N
<b>From:</b> Map	<b>Easting:</b> 2,072,116.00 usft	<b>Longitude:</b> 98° 15' 10.640 W
<b>Position Uncertainty:</b> 3.30 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> 0.15 °

<b>Well</b> No. 1H		
<b>Well Position</b>	<b>Northing:</b> 134,756.00 usft	<b>Latitude:</b> 37° 2' 11.364 N
<b>+N/-S</b> 0.00 usft	<b>Easting:</b> 2,072,116.00 usft	<b>Longitude:</b> 98° 15' 10.640 W
<b>+E/-W</b> 0.00 usft	<b>Wellhead Elevation:</b> usft	<b>Ground Level:</b> 1,264.00 usft
<b>Position Uncertainty</b> 1.10 usft		

<b>Wellbore</b> Original Hole					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/10/2014	4.48	65.08	51,581

<b>Design</b> Original Hole				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.00		
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	359.11

<b>Survey Program</b> Date 7/10/2014				
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
862.00	9,158.00	Pro MWD (Original Hole)		



# Professional Directional Wellpath Report



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<b>Site:</b> Ralph 36-34-9 No. 1H	<b>MD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b> No. 1H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Original Hole	<b>Database:</b> Well_Planner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	134,756.00	2,072,116.00	0.00	
862.00	0.00	248.80	862.00	0.00	0.00	0.00	0.00	134,756.00	2,072,116.00	248.80	
925.00	0.10	207.60	925.00	-0.05	-0.03	-0.05	0.16	134,755.95	2,072,115.97	207.60	
988.00	0.10	9.90	988.00	-0.04	-0.04	-0.04	0.31	134,755.96	2,072,115.96	171.15	
1,051.00	0.20	119.10	1,051.00	-0.04	0.06	-0.04	0.40	134,755.96	2,072,116.06	131.27	
1,114.00	0.10	140.60	1,114.00	-0.14	0.20	-0.14	0.18	134,755.86	2,072,116.20	161.09	
1,177.00	0.10	9.00	1,177.00	-0.13	0.24	-0.13	0.29	134,755.87	2,072,116.24	-155.80	
1,240.00	0.20	336.70	1,240.00	0.03	0.20	0.03	0.20	134,756.03	2,072,116.20	-57.13	
1,303.00	0.20	237.00	1,303.00	0.07	0.07	0.07	0.49	134,756.07	2,072,116.07	-139.85	
1,366.00	0.40	262.60	1,366.00	-0.02	-0.24	-0.01	0.37	134,755.98	2,072,115.76	47.08	
1,429.00	0.30	256.90	1,429.00	-0.08	-0.62	-0.07	0.17	134,755.92	2,072,115.38	-163.64	
1,492.00	0.40	253.30	1,492.00	-0.18	-0.99	-0.17	0.16	134,755.82	2,072,115.01	-14.21	
1,556.00	0.60	226.80	1,555.99	-0.48	-1.45	-0.46	0.47	134,755.52	2,072,114.55	-62.91	
1,619.00	0.40	209.00	1,618.99	-0.90	-1.80	-0.87	0.40	134,755.10	2,072,114.20	-150.84	
1,682.00	0.50	210.40	1,681.99	-1.33	-2.04	-1.29	0.16	134,754.67	2,072,113.96	6.98	
1,746.00	0.50	216.50	1,745.99	-1.79	-2.35	-1.75	0.08	134,754.21	2,072,113.65	93.05	
1,809.00	0.40	219.10	1,808.98	-2.18	-2.65	-2.14	0.16	134,753.82	2,072,113.35	169.76	
1,871.00	0.40	219.40	1,870.98	-2.52	-2.93	-2.47	0.00	134,753.48	2,072,113.07	90.15	
1,935.00	0.50	233.00	1,934.98	-2.86	-3.29	-2.81	0.23	134,753.14	2,072,112.71	53.82	
1,997.00	0.30	230.70	1,996.98	-3.12	-3.63	-3.07	0.32	134,752.88	2,072,112.37	-176.56	
2,060.00	0.20	220.50	2,059.98	-3.31	-3.83	-3.25	0.17	134,752.69	2,072,112.17	-161.05	
2,123.00	0.30	204.10	2,122.98	-3.55	-3.97	-3.48	0.19	134,752.45	2,072,112.03	-43.97	
2,186.00	0.30	204.00	2,185.98	-3.85	-4.11	-3.78	0.00	134,752.15	2,072,111.89	-90.05	
2,250.00	0.20	197.60	2,249.98	-4.11	-4.21	-4.04	0.16	134,751.89	2,072,111.79	-167.58	
2,313.00	0.20	216.00	2,312.98	-4.30	-4.31	-4.23	0.10	134,751.70	2,072,111.69	99.20	
2,376.00	0.20	204.00	2,375.98	-4.49	-4.41	-4.42	0.07	134,751.51	2,072,111.59	-96.00	
2,440.00	0.30	220.30	2,439.98	-4.72	-4.57	-4.65	0.19	134,751.28	2,072,111.43	43.75	



**Professional Directional**  
Wellpath Report



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<b>Site:</b>	Ralph 36-34-9 No. 1H	<b>MD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b>	No. 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Well_Planner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)	
2,503.00	0.40	220.40	2,502.97	-5.01	-4.82	-4.94	0.16	134,750.99	2,072,111.18	0.40	
2,567.00	0.30	235.80	2,566.97	-5.28	-5.10	-5.20	0.21	134,750.72	2,072,110.90	144.28	
2,629.00	0.30	281.10	2,628.97	-5.34	-5.39	-5.25	0.37	134,750.66	2,072,110.61	112.65	
2,692.00	0.30	294.40	2,691.97	-5.24	-5.71	-5.15	0.11	134,750.76	2,072,110.29	96.65	
2,755.00	0.30	295.40	2,754.97	-5.10	-6.01	-5.01	0.01	134,750.90	2,072,109.99	90.50	
2,819.00	0.50	324.70	2,818.97	-4.80	-6.32	-4.70	0.44	134,751.20	2,072,109.68	60.93	
2,882.00	0.50	343.80	2,881.97	-4.31	-6.55	-4.21	0.26	134,751.69	2,072,109.45	99.55	
2,945.00	0.60	339.80	2,944.96	-3.74	-6.74	-3.63	0.17	134,752.26	2,072,109.26	-23.01	
3,007.00	0.70	347.80	3,006.96	-3.06	-6.94	-2.95	0.22	134,752.94	2,072,109.06	46.27	
3,070.00	0.70	359.50	3,069.96	-2.30	-7.02	-2.19	0.23	134,753.70	2,072,108.98	95.85	
3,133.00	0.70	5.60	3,132.95	-1.53	-6.99	-1.43	0.12	134,754.47	2,072,109.01	93.05	
3,196.00	0.80	18.60	3,195.95	-0.73	-6.81	-0.63	0.31	134,755.27	2,072,109.19	66.17	
3,258.00	0.90	51.00	3,257.94	-0.02	-6.29	0.08	0.78	134,755.98	2,072,109.71	94.75	
3,322.00	1.10	66.60	3,321.93	0.54	-5.34	0.63	0.53	134,756.54	2,072,110.66	61.67	
3,385.00	1.30	67.00	3,384.92	1.06	-4.13	1.13	0.32	134,757.06	2,072,111.87	2.60	
3,448.00	1.30	54.20	3,447.90	1.76	-2.89	1.80	0.46	134,757.76	2,072,113.11	-96.40	
3,511.00	1.20	50.10	3,510.88	2.60	-1.80	2.63	0.21	134,758.60	2,072,114.20	-140.23	
3,575.00	1.10	43.80	3,574.87	3.47	-0.86	3.49	0.25	134,759.47	2,072,115.14	-131.46	
3,637.00	1.00	32.40	3,636.86	4.36	-0.16	4.36	0.37	134,760.36	2,072,115.84	-121.21	
3,701.00	1.10	23.70	3,700.85	5.39	0.38	5.39	0.29	134,761.39	2,072,116.38	-62.30	
3,765.00	1.00	14.90	3,764.84	6.50	0.78	6.48	0.30	134,762.50	2,072,116.78	-126.15	
3,828.00	1.20	7.00	3,827.83	7.68	1.00	7.67	0.40	134,763.68	2,072,117.00	-41.17	
3,892.00	2.00	0.20	3,891.80	9.46	1.08	9.45	1.28	134,765.46	2,072,117.08	-16.77	
3,923.00	3.10	357.50	3,922.77	10.84	1.05	10.83	3.57	134,766.84	2,072,117.05	-7.58	
3,955.00	4.00	358.90	3,954.71	12.82	0.99	12.81	2.83	134,768.82	2,072,116.99	6.20	
3,987.00	5.30	0.30	3,986.60	15.42	0.97	15.40	4.08	134,771.42	2,072,116.97	5.69	
4,018.00	6.50	3.40	4,017.44	18.60	1.09	18.58	4.00	134,774.60	2,072,117.09	16.42	



# Professional Directional Wellpath Report



<b>Company:</b> TAPSTONE ENERGY	<b>Local Co-ordinate Reference:</b> Well No. 1H
<b>Project:</b> Harper County, KS	<b>TVD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Site:</b> Ralph 36-34-9 No. 1H	<b>MD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b> No. 1H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Original Hole	<b>Database:</b> Well_Planner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)
4,050.00	7.90	4.70	4,049.19	22.60	1.37	22.58	4.40	134,778.60	2,072,117.37	7.28
4,081.00	10.00	5.10	4,079.81	27.41	1.79	27.37	6.78	134,783.41	2,072,117.79	1.90
4,113.00	12.80	4.00	4,111.17	33.71	2.28	33.67	8.78	134,789.71	2,072,118.28	-4.98
4,145.00	15.10	3.40	4,142.23	41.41	2.78	41.36	7.20	134,797.41	2,072,118.78	-3.89
4,177.00	18.00	1.20	4,172.90	50.51	3.13	50.46	9.27	134,806.51	2,072,119.13	-13.25
4,208.00	21.10	0.30	4,202.11	60.89	3.26	60.83	10.05	134,816.89	2,072,119.26	-5.97
4,239.00	24.00	1.10	4,230.73	72.77	3.41	72.71	9.41	134,828.77	2,072,119.41	6.41
4,284.00	28.70	1.30	4,271.05	92.73	3.83	92.66	10.45	134,848.73	2,072,119.83	1.17
4,316.00	30.50	1.90	4,298.87	108.53	4.27	108.45	5.70	134,864.53	2,072,120.27	9.61
4,347.00	33.10	2.00	4,325.21	124.86	4.83	124.77	8.39	134,880.86	2,072,120.83	1.20
4,379.00	36.90	0.80	4,351.42	143.20	5.27	143.10	12.07	134,899.20	2,072,121.27	-10.76
4,411.00	40.10	1.50	4,376.46	163.12	5.67	163.01	10.09	134,919.12	2,072,121.67	8.03
4,442.00	42.00	2.00	4,399.84	183.46	6.30	183.34	6.22	134,939.46	2,072,122.30	9.99
4,474.00	44.40	2.50	4,423.17	205.35	7.16	205.21	7.58	134,961.35	2,072,123.16	8.30
4,505.00	47.00	3.10	4,444.81	227.51	8.24	227.35	8.50	134,983.51	2,072,124.24	9.59
4,537.00	49.80	3.50	4,466.06	251.40	9.62	251.22	8.80	135,007.40	2,072,125.62	6.23
4,569.00	52.70	3.10	4,486.09	276.31	11.06	276.10	9.11	135,032.31	2,072,127.06	-6.27
4,600.00	55.90	3.50	4,504.17	301.44	12.51	301.21	10.38	135,057.44	2,072,128.51	5.91
4,632.00	58.60	2.90	4,521.48	328.31	14.01	328.05	8.58	135,084.31	2,072,130.01	-10.75
4,664.00	61.10	2.50	4,537.55	355.94	15.31	355.66	7.89	135,111.94	2,072,131.31	-7.98
4,695.00	62.80	0.70	4,552.13	383.29	16.07	382.99	7.51	135,139.29	2,072,132.07	-43.49
4,726.00	64.00	0.40	4,566.01	411.01	16.34	410.70	3.97	135,167.01	2,072,132.34	-12.67
4,758.00	65.10	359.90	4,579.76	439.90	16.41	439.59	3.72	135,195.90	2,072,132.41	-22.42
4,789.00	65.90	359.70	4,592.62	468.11	16.31	467.80	2.65	135,224.11	2,072,132.31	-12.86
4,821.00	66.70	359.50	4,605.48	497.41	16.11	497.10	2.56	135,253.41	2,072,132.11	-12.93
4,853.00	66.70	358.80	4,618.14	526.80	15.67	526.49	2.01	135,282.80	2,072,131.67	-90.14
4,884.00	67.00	358.40	4,630.33	555.29	14.98	554.99	1.53	135,311.29	2,072,130.98	-50.88





**Professional Directional**  
Wellpath Report



<b>Company:</b>	TAPSTONE ENERGY	<b>Local Co-ordinate Reference:</b>	Well No. 1H
<b>Project:</b>	Harper County, KS	<b>TVD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Site:</b>	Ralph 36-34-9 No. 1H	<b>MD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b>	No. 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Well_Planner1

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)		
4,916.00	67.50	357.80	4,642.70	584.79	14.00	584.50	2.33	135,340.79	2,072,130.00	-48.01		
4,948.00	67.50	357.50	4,654.95	614.32	12.78	614.05	0.87	135,370.32	2,072,128.78	-90.06		
4,979.00	67.80	357.20	4,666.73	642.97	11.46	642.71	1.32	135,398.97	2,072,127.46	-42.82		
5,011.00	67.60	356.70	4,678.88	672.53	9.88	672.30	1.57	135,428.53	2,072,125.88	-113.48		
5,042.00	67.60	355.70	4,690.69	701.13	7.98	700.92	2.98	135,457.13	2,072,123.98	-90.19		
5,074.00	68.20	355.40	4,702.73	730.69	5.68	730.51	2.07	135,486.69	2,072,121.68	-24.91		
5,105.00	69.20	355.20	4,713.99	759.47	3.32	759.33	3.28	135,515.47	2,072,119.32	-10.59		
5,185.00	74.40	356.20	4,738.97	835.23	-2.37	835.16	6.61	135,591.23	2,072,113.63	10.51		
5,217.00	76.90	356.80	4,746.90	866.17	-4.26	866.13	8.02	135,622.17	2,072,111.74	13.16		
5,249.00	79.40	357.10	4,753.47	897.44	-5.93	897.42	7.87	135,653.44	2,072,110.07	6.73		
5,280.00	82.40	357.00	4,758.37	928.01	-7.50	928.01	9.68	135,684.01	2,072,108.50	-1.89		
5,312.00	85.40	357.70	4,761.77	959.79	-8.97	959.81	9.62	135,715.79	2,072,107.03	13.10		
5,343.00	88.70	357.70	4,763.37	990.72	-10.21	990.76	10.65	135,746.72	2,072,105.79	0.00		
5,375.00	90.70	358.00	4,763.54	1,022.69	-11.42	1,022.75	6.32	135,778.69	2,072,104.58	8.53		
5,406.00	91.60	357.90	4,762.91	1,053.67	-12.52	1,053.73	2.92	135,809.67	2,072,103.48	-6.34		
5,438.00	92.40	358.50	4,761.80	1,085.63	-13.53	1,085.71	3.12	135,841.63	2,072,102.47	36.84		
5,469.00	91.70	358.60	4,760.69	1,116.60	-14.31	1,116.69	2.28	135,872.60	2,072,101.69	171.87		
5,500.00	90.60	358.90	4,760.07	1,147.59	-14.99	1,147.68	3.68	135,903.59	2,072,101.01	164.74		
5,563.00	91.20	358.10	4,759.08	1,210.56	-16.64	1,210.67	1.59	135,966.56	2,072,099.36	-53.12		
5,626.00	92.50	358.20	4,757.04	1,273.49	-18.67	1,273.63	2.07	136,029.49	2,072,097.33	4.39		
5,689.00	92.80	358.20	4,754.13	1,336.39	-20.65	1,336.55	0.48	136,092.39	2,072,095.35	0.00		
5,752.00	92.30	358.10	4,751.33	1,399.30	-22.68	1,399.48	0.81	136,155.30	2,072,093.32	-168.70		
5,815.00	91.60	358.70	4,749.18	1,462.23	-24.44	1,462.44	1.46	136,218.23	2,072,091.56	139.40		
5,878.00	91.00	358.50	4,747.75	1,525.20	-25.98	1,525.42	1.00	136,281.20	2,072,090.02	-161.57		
5,941.00	89.60	358.60	4,747.42	1,588.18	-27.57	1,588.41	2.23	136,344.18	2,072,088.43	175.91		
6,002.00	89.20	358.50	4,748.06	1,649.15	-29.11	1,649.41	0.68	136,405.15	2,072,086.89	-165.96		
6,063.00	89.50	358.30	4,748.75	1,710.13	-30.82	1,710.40	0.59	136,466.13	2,072,085.18	-33.69		



# Professional Directional Wellpath Report



<b>Company:</b> TAPSTONE ENERGY	<b>Local Co-ordinate Reference:</b> Well No. 1H
<b>Project:</b> Harper County, KS	<b>TVD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Site:</b> Ralph 36-34-9 No. 1H	<b>MD Reference:</b> WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b> No. 1H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Original Hole	<b>Database:</b> Well_Planner1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)
6,123.00	90.00	358.30	4,749.02	1,770.10	-32.60	1,770.39	0.83	136,526.10	2,072,083.40	0.00
6,183.00	90.60	357.60	4,748.70	1,830.06	-34.74	1,830.38	1.54	136,586.06	2,072,081.26	-49.40
6,244.00	90.30	357.80	4,748.22	1,891.01	-37.19	1,891.36	0.59	136,647.01	2,072,078.81	146.31
6,304.00	89.90	357.90	4,748.12	1,950.96	-39.44	1,951.34	0.69	136,706.96	2,072,076.56	165.96
6,364.00	90.40	358.10	4,747.96	2,010.93	-41.54	2,011.33	0.90	136,766.93	2,072,074.46	21.80
6,424.00	90.70	358.30	4,747.39	2,070.90	-43.42	2,071.32	0.60	136,826.90	2,072,072.58	33.69
6,485.00	90.80	357.90	4,746.59	2,131.86	-45.44	2,132.30	0.68	136,887.86	2,072,070.56	-75.96
6,546.00	91.00	358.20	4,745.63	2,192.81	-47.52	2,193.29	0.59	136,948.81	2,072,068.48	56.30
6,606.00	91.00	358.50	4,744.58	2,252.78	-49.24	2,253.27	0.50	137,008.78	2,072,066.76	90.00
6,666.00	90.90	358.90	4,743.59	2,312.76	-50.61	2,313.26	0.69	137,068.76	2,072,065.39	104.03
6,727.00	90.70	359.70	4,742.74	2,373.74	-51.35	2,374.26	1.35	137,129.74	2,072,064.65	104.03
6,788.00	90.40	0.00	4,742.15	2,434.74	-51.51	2,435.25	0.70	137,190.74	2,072,064.49	135.00
6,848.00	90.10	0.40	4,741.89	2,494.74	-51.30	2,495.24	0.83	137,250.74	2,072,064.70	126.87
6,911.00	90.60	0.50	4,741.50	2,557.74	-50.81	2,558.22	0.81	137,313.74	2,072,065.19	11.31
6,974.00	90.20	0.40	4,741.06	2,620.73	-50.31	2,621.20	0.65	137,376.73	2,072,065.69	-165.96
7,038.00	89.90	359.70	4,741.01	2,684.73	-50.26	2,685.19	1.19	137,440.73	2,072,065.74	-113.20
7,101.00	90.00	359.80	4,741.06	2,747.73	-50.53	2,748.19	0.22	137,503.73	2,072,065.47	45.00
7,165.00	90.00	359.60	4,741.06	2,811.73	-50.87	2,812.18	0.31	137,567.73	2,072,065.13	-90.00
7,227.00	90.50	359.60	4,740.79	2,873.73	-51.30	2,874.18	0.81	137,629.73	2,072,064.70	0.00
7,290.00	90.30	359.10	4,740.35	2,936.72	-52.01	2,937.18	0.85	137,692.72	2,072,063.99	-111.80
7,353.00	92.00	359.00	4,739.09	2,999.70	-53.06	3,000.16	2.70	137,755.70	2,072,062.94	-3.36
7,416.00	91.60	359.00	4,737.11	3,062.66	-54.16	3,063.13	0.63	137,818.66	2,072,061.84	180.00
7,479.00	90.90	359.40	4,735.73	3,125.64	-55.04	3,126.11	1.28	137,881.64	2,072,060.96	150.26
7,542.00	91.10	359.20	4,734.64	3,188.62	-55.81	3,189.10	0.45	137,944.62	2,072,060.19	-44.99
7,605.00	91.30	359.30	4,733.32	3,251.60	-56.63	3,252.09	0.35	138,007.60	2,072,059.37	26.56
7,668.00	91.70	359.40	4,731.67	3,314.58	-57.34	3,315.07	0.65	138,070.58	2,072,058.66	14.03
7,732.00	90.50	359.50	4,730.44	3,378.56	-57.96	3,379.05	1.88	138,134.56	2,072,058.04	175.24



Professional Directional  
Wellpath Report



<b>Company:</b>	TAPSTONE ENERGY	<b>Local Co-ordinate Reference:</b>	Well No. 1H
<b>Project:</b>	Harper County, KS	<b>TVD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Site:</b>	Ralph 36-34-9 No. 1H	<b>MD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b>	No. 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Well_Planner1

Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	TFace (°)		
7,795.00	90.30	359.00	4,730.00	3,441.55	-58.78	3,442.05	0.85	138,197.55	2,072,057.22	-111.80		
7,858.00	89.80	359.30	4,729.94	3,504.55	-59.72	3,505.05	0.93	138,260.55	2,072,056.28	149.04		
7,921.00	89.10	359.80	4,730.55	3,567.54	-60.21	3,568.05	1.37	138,323.54	2,072,055.79	144.47		
7,984.00	89.80	0.10	4,731.15	3,630.54	-60.27	3,631.04	1.21	138,386.54	2,072,055.73	23.20		
8,048.00	90.20	0.10	4,731.15	3,694.54	-60.16	3,695.03	0.62	138,450.54	2,072,055.84	0.00		
8,111.00	89.60	359.90	4,731.26	3,757.54	-60.16	3,758.02	1.00	138,513.54	2,072,055.84	-161.57		
8,173.00	89.70	359.80	4,731.64	3,819.54	-60.32	3,820.01	0.23	138,575.54	2,072,055.68	-45.00		
8,236.00	91.00	359.80	4,731.26	3,882.53	-60.54	3,883.01	2.06	138,638.53	2,072,055.46	0.00		
8,299.00	89.50	0.30	4,730.98	3,945.53	-60.48	3,945.99	2.51	138,701.53	2,072,055.52	161.56		
8,362.00	88.90	0.70	4,731.86	4,008.52	-59.93	4,008.97	1.14	138,764.52	2,072,056.07	146.32		
8,425.00	89.20	0.70	4,732.91	4,071.51	-59.16	4,071.94	0.48	138,827.51	2,072,056.84	0.00		
8,488.00	89.70	0.50	4,733.51	4,134.50	-58.50	4,134.91	0.85	138,890.50	2,072,057.50	-21.80		
8,551.00	90.20	0.30	4,733.57	4,197.50	-58.06	4,197.90	0.85	138,953.50	2,072,057.94	-21.80		
8,614.00	90.90	359.80	4,732.96	4,260.50	-58.01	4,260.88	1.37	139,016.50	2,072,057.99	-35.53		
8,677.00	91.50	359.10	4,731.64	4,323.48	-58.61	4,323.87	1.46	139,079.48	2,072,057.39	-49.39		
8,741.00	90.20	359.40	4,730.69	4,387.47	-59.45	4,387.86	2.08	139,143.47	2,072,056.55	167.00		
8,804.00	91.40	359.80	4,729.81	4,450.46	-59.89	4,450.85	2.01	139,206.46	2,072,056.11	18.43		
8,867.00	89.20	359.70	4,729.48	4,513.45	-60.17	4,513.84	3.50	139,269.45	2,072,055.83	-177.40		
8,929.00	88.00	359.30	4,731.00	4,575.43	-60.71	4,575.82	2.04	139,331.43	2,072,055.29	-161.57		
8,992.00	88.40	359.60	4,732.98	4,638.39	-61.31	4,638.79	0.79	139,394.39	2,072,054.69	36.86		
9,055.00	88.60	359.60	4,734.63	4,701.37	-61.75	4,701.76	0.32	139,457.37	2,072,054.25	0.00		
9,100.00	89.80	359.30	4,735.25	4,746.36	-62.18	4,746.76	2.75	139,502.36	2,072,053.82	-14.04		
<b>Last Survey: 9100' MD 4735.25' TVD</b>												
9,158.00	89.80	359.30	4,735.46	4,804.36	-62.89	4,804.76	0.00	139,560.36	2,072,053.11	0.00		
<b>No. 1H TD/PBHL</b>												



**Professional Directional**  
Wellpath Report



<b>Company:</b>	TAPSTONE ENERGY	<b>Local Co-ordinate Reference:</b>	Well No. 1H
<b>Project:</b>	Harper County, KS	<b>TVD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Site:</b>	Ralph 36-34-9 No. 1H	<b>MD Reference:</b>	WELL @ 1280.00usft (RKB: 16' + GL: 1264')
<b>Well:</b>	No. 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Well_Planner1

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,100.00	4,735.25	4,746.36	-62.18	Last Survey: 9100' MD 4735.25' TVD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



# CEMENTING LOG

STAGE NO. \_\_\_\_\_

Date 7/2/14 District MadLodge KS Ticket No. 62836  
 Company Tapstone Rig Norac 14  
 Lease Ralph 3634 Well No. 9-14  
 County Harper State KS  
 Location Vic Hazleton KS Field 36-34-9

CEMENT DATA:  
 Spacer Type: 20 BBL Super Flush  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density 8.5 PPG

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 7 Type \_\_\_\_\_ Weight 26 Collar \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type 50/50+2%6e14  
.4%FL-160+1%6-51 Excess \_\_\_\_\_  
 Amt. 150 Sks Yield 1.4 ft<sup>3</sup>/sk Density 13.6 PPG  
 TAIL: Pump Time \_\_\_\_\_ hrs. Type Class At. 8%  
FL-160+2% (D-31) Excess \_\_\_\_\_  
 Amt. 90 Sks Yield 1.18 ft<sup>3</sup>/sk Density 15.6 PPG  
 WATER: Lead 6.75 gals/sk Tail 5.17 gals/sk Total \_\_\_\_\_ Bbls.

Casing Depths: Top \_\_\_\_\_ Bottom 5152

Pump Trucks Used 892/555  
 Bulk Equip. 561/553

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 8 1/4 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

Floater Equip: Manufacturer \_\_\_\_\_  
 Shoe: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Floater: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type \_\_\_\_\_ Amt. \_\_\_\_\_ Bbls. Weight \_\_\_\_\_ PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

**CAPACITY FACTORS:**

Casing: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

COMPANY REPRESENTATIVE Buck Fogla

CEMENTER Jason Thimesch

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	AM/PM	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	
7/3 4:30 PM						Order Safety meeting. Run casing
4:40 AM						Spot in, Safety meeting. Rig up, Safety meeting
5:45 AM		5000		1/8 BBL	1/4	Press test
5:49 AM		400		20 BBL	6	Pump Preflush / Bottom Plug
						<del>Pump Preflush / Bottom Plug</del> Plug Top of Spacer 2426
5:55 AM		400		37 1/2 BBL	4	Mix + Pump 1d cement Slurry TOC 3172
6:07 AM		175		19 BBL	3	Mix + Pump 7d cement Slurry TOC 4567
6:15 AM						Shutdown / Release Top Plug / Clean Water Screen out
6:27 AM					7	Start Displacement
		150		30 BBL	6 1/2	
		250		120 BBL	6 1/2	
		300		130 BBL	6 1/4	
		375		140 BBL	6 1/2	
		450		150 BBL	6 1/4	
		575		160 BBL	6	
		675		170 BBL	5 1/2	
		600		180 BBL	3	Slow to Pump
7:10 AM		1100		190 BBL	0	Bump Plug
						Release, Floater did hold

FINAL DISP. PRESS: 600 PSI BUMP PLUG TO 1100 PSI BLEEDBACK 1 BBLs. THANK YOU

MILLER PRINTERS, INC. - Great Bend, KS



Date 6-17-14 District M.L. 22 Ticket No. 62831  
 Company Tea Stone Energy Rig Nance 14  
 Lease Ralph Well No. 3624-9-1H  
 County Harper State Ks  
 Location Hazelton Ks, San Triv. City Field  
Rd to T. E. on Blk Top 1+T, 1 1/2 S, 1 1/2 E  
 CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 9 5/8 Type \_\_\_\_\_ Weight 36 Collar \_\_\_\_\_

CEMENT DATA:  
 Spacer Type: 10 Bbls Fresh H<sub>2</sub>O  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type 65:35:69 gpl  
+290cc + 1/4 #Flt Excess \_\_\_\_\_  
 Amt. 255 Sks Yield 1.87 ft<sup>3</sup>/sk Density 12.7 PPG  
 TAIL: Pump Time \_\_\_\_\_ hrs. Type Class "A" + 290cc  
+ 1/4 # Flt Seal Excess \_\_\_\_\_  
 Amt. 150 Sks Yield 1.20 ft<sup>3</sup>/sk Density 15.6 PPG  
 WATER: Lead 10.05 gals/sk Tail 5.22 gals/sk Total \_\_\_\_\_ Bbls.

Casing Depths: Top \_\_\_\_\_ Bottom 831

Pump Trucks Used 558/545  
 Bulk Equip. \_\_\_\_\_

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 12 1/4 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.  
 CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

Floater Equip: Manufacturer Weatherford  
 Shoe: Type Saw Tooth Depth \_\_\_\_\_  
 Float: Type Sure Seal Collar Depth \_\_\_\_\_  
 Centralizers: Quantity 7 Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type Fresh H<sub>2</sub>O Amt. \_\_\_\_\_ Bbls. Weight 8.34 PPG  
 Mud Type + 2423 Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE SKIP Skypen Gray CEMENTER Jason T

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
730 PM						Onloc Spot in Rig up Safetyinning
915 PA	2000		1/4 BBL		1/4	Press test
918 PA	200		10 BBL		7	Pump Proof Test
919 <del>917</del> PA	150		25 BBL		4 1/2	Mix + Pump 2d cement Slurry
937 <del>917</del> PA	150		32 BBL		4 1/2	Mix + Pump 7L cement Slurry TOC 321
944 PA						Release Pls
950 PM	600				9 1/2	Displace
	350		45 BBL		3	Slow to Bump
1000 PA	900		58 BBL		0	Bump Plug
						Release
						Float Held
						Circ 30 BBL cement to Surface

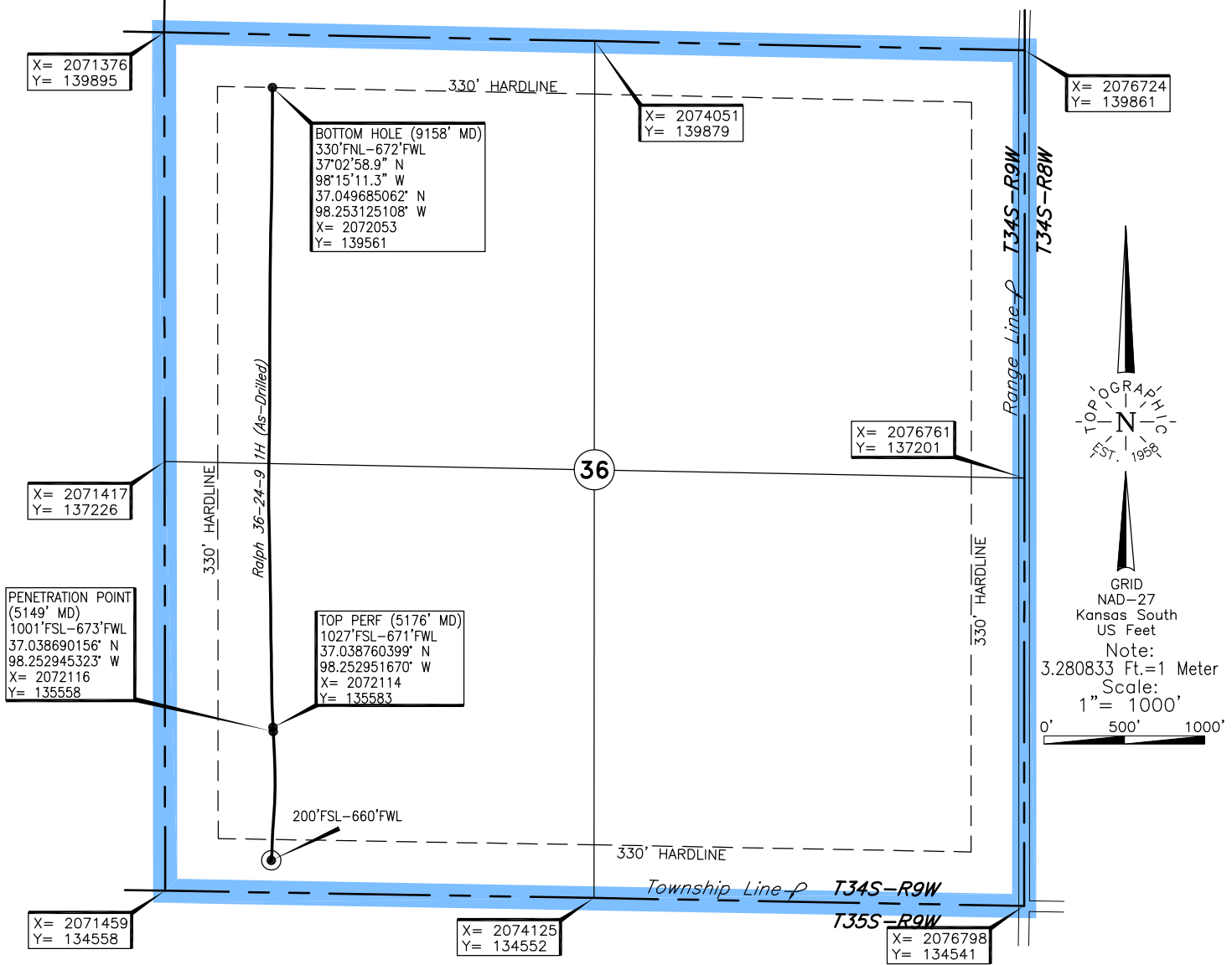
**TOPOGRAPHIC LAND SURVEYORS**

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

200'FSL-660'FWL Section 36 Township 34S Range 9W P.M.



Operator: TAPSTONE ENERGY  
 Lease Name: RALPH 36-34-9 Well No.: 1H **ELEVATION:** 1264' Gr. at Stake  
 Topography & Vegetation Loc. fell in sandy, hilly pasture, ±200' North of E-W fence

Good Drill Site? Yes Reference Stakes or Alternate Location Stakes Set None  
 Best Accessibility to Location From South off lease road  
 Distance & Direction From Oklahoma & Kansas state line on St Hwy 58, go ±1.1 mi. North on county road to lease road East, follow lease road East & NE-East ±1.75 mi. to trail road North ±0.5 mi., then take sandy trail road North-NE ±0.25 mi to SW corner of Section 36-T34S-R9W

DATUM: NAD-27  
 LAT: 37°02'11.4"N  
 LONG: 98°15'10.6"W  
 LAT: 37.036489920°N  
 LONG: 98.252953248°W  
 STATE PLANE  
 COORDINATES: (US Feet)  
 ZONE: KS SOUTH  
 X: 2072116  
 Y: 134756

227987 Date of Drawing: Jul. 28, 2014  
 Invoice # 220483 Date Staked: Apr. 23, 2014 JP

**FINAL AS-DRILLED PLAT**

AS-DRILLED INFORMATION  
 FURNISHED BY TAPSTONE ENERGY

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