



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1101989  
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: \_\_\_\_\_



1101989

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](mailto: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> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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## **Tug Hill Operating LLC**

**Comanche County, Kansas**

**Sec 10, T34S, R18W**

**Haley Unit #1-10H**

**Original Wellbore**

**Survey: MWD Surveys**

## **Standard Survey Report**

**17 September, 2012**



<b>Company:</b>	Tug Hill Operating LLC	<b>Local Co-ordinate Reference:</b>	Site Sec 10, T34S, R18W
<b>Project:</b>	Comanche County, Kansas	<b>TVD Reference:</b>	WELL @ 1861.0usft (Original Well Elev)
<b>Site:</b>	Sec 10, T34S, R18W	<b>MD Reference:</b>	WELL @ 1861.0usft (Original Well Elev)
<b>Well:</b>	Haley Unit #1-10H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Wellbore	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	Comanche County, Kansas		
<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>	Sec 10, T34S, R18W				
<b>Site Position:</b>		<b>Northing:</b>	155,798.02 usft	<b>Latitude:</b>	37° 5' 31.229 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,775,962.48 usft	<b>Longitude:</b>	99° 16' 4.991 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.47 °

<b>Well</b>	Haley Unit #1-10H					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	155,798.02 usft	<b>Latitude:</b>	37° 5' 31.229 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,775,962.48 usft	<b>Longitude:</b>	99° 16' 4.991 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,838.0 usft

<b>Wellbore</b>	Original Wellbore				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/22/2012	5.35	65.09	51,741

<b>Design</b>	Original Wellbore				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0		359.36

<b>Survey Program</b>	<b>Date</b>	9/17/2012			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.0	4,730.0	Gyro Surveys (Original Wellbore)	NS-GYRO-SS	NS Gyro single shots	
4,798.0	9,856.0	MWD Surveys (Original Wellbore)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
4,730.0	0.90	318.54	4,729.9	22.7	-0.3	22.7	0.00	0.00	0.00	
4,798.0	2.00	4.60	4,797.8	24.3	-0.5	24.3	2.24	1.62	67.74	
<b>First MWD Survey</b>										
4,829.0	5.60	20.80	4,828.8	26.2	0.1	26.2	12.00	11.61	52.26	
4,861.0	9.30	22.00	4,860.5	30.1	1.6	30.1	11.57	11.56	3.75	
4,893.0	12.80	21.60	4,891.9	35.8	3.9	35.7	10.94	10.94	-1.25	
4,925.0	16.20	23.00	4,922.9	43.2	6.9	43.1	10.68	10.63	4.38	
4,957.0	19.00	24.60	4,953.4	52.0	10.8	51.9	8.88	8.75	5.00	
4,989.0	22.50	24.60	4,983.3	62.3	15.5	62.2	10.94	10.94	0.00	
5,021.0	26.50	22.90	5,012.4	74.5	20.9	74.3	12.69	12.50	-5.31	



<b>Company:</b>	Tug Hill Operating LLC	<b>Local Co-ordinate Reference:</b>	Site Sec 10, T34S, R18W
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<b>Site:</b>	Sec 10, T34S, R18W	<b>MD Reference:</b>	WELL @ 1861.0usft (Original Well Elev)
<b>Well:</b>	Haley Unit #1-10H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Wellbore	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,052.0	31.20	20.80	5,039.5	88.4	26.4	88.1	15.51	15.16	-6.77	
5,084.0	35.50	17.40	5,066.3	105.0	32.1	104.6	14.65	13.44	-10.63	
5,116.0	40.70	15.00	5,091.5	124.0	37.6	123.5	16.89	16.25	-7.50	
5,148.0	45.70	14.40	5,114.8	145.1	43.2	144.7	15.68	15.63	-1.88	
5,179.0	50.50	13.70	5,135.5	167.5	48.8	167.0	15.57	15.48	-2.26	
5,211.0	55.20	11.30	5,154.8	192.4	54.3	191.8	15.86	14.69	-7.50	
5,242.0	60.40	10.40	5,171.3	218.2	59.2	217.5	16.95	16.77	-2.90	
5,273.0	62.30	10.90	5,186.2	244.9	64.2	244.2	6.29	6.13	1.61	
5,305.0	62.60	10.90	5,201.0	272.8	69.6	272.0	0.94	0.94	0.00	
5,336.0	62.20	11.10	5,215.3	299.7	74.8	298.9	1.41	-1.29	0.65	
5,368.0	60.00	11.10	5,230.8	327.2	80.2	326.3	6.88	-6.88	0.00	
5,399.0	65.30	11.40	5,245.0	354.2	85.6	353.2	17.12	17.10	0.97	
5,431.0	69.80	11.10	5,257.2	383.2	91.4	382.2	14.09	14.06	-0.94	
5,462.0	73.30	9.30	5,267.1	412.2	96.6	411.0	12.56	11.29	-5.81	
5,494.0	76.00	7.20	5,275.5	442.7	101.0	441.5	10.55	8.44	-6.56	
5,526.0	77.60	4.40	5,282.8	473.7	104.1	472.5	9.88	5.00	-8.75	
5,558.0	78.60	0.40	5,289.4	505.0	105.5	503.7	12.62	3.13	-12.50	
5,589.0	80.10	357.90	5,295.2	535.4	105.0	534.2	9.29	4.84	-8.06	
5,621.0	83.70	357.40	5,299.7	567.1	103.7	565.9	11.36	11.25	-1.56	
5,652.0	86.00	357.40	5,302.5	597.9	102.3	596.7	7.42	7.42	0.00	
5,683.0	90.00	357.90	5,303.5	628.9	101.0	627.7	13.00	12.90	1.61	
5,746.0	92.20	356.50	5,302.3	691.8	98.0	690.6	4.14	3.49	-2.22	
5,825.0	91.60	355.60	5,299.7	770.5	92.5	769.4	1.37	-0.76	-1.14	
5,917.0	90.50	356.70	5,298.0	862.3	86.3	861.3	1.69	-1.20	1.20	
6,009.0	89.50	358.50	5,298.0	954.2	82.5	953.2	2.24	-1.09	1.96	
6,101.0	89.30	359.10	5,299.0	1,046.2	80.6	1,045.2	0.69	-0.22	0.65	
6,193.0	89.00	359.90	5,300.4	1,138.2	79.8	1,137.2	0.93	-0.33	0.87	
6,285.0	89.50	0.10	5,301.6	1,230.2	79.8	1,229.2	0.59	0.54	0.22	
6,377.0	88.80	1.30	5,302.9	1,322.2	80.9	1,321.2	1.51	-0.76	1.30	
6,469.0	89.60	1.60	5,304.2	1,414.1	83.2	1,413.1	0.93	0.87	0.33	
6,561.0	89.90	1.20	5,304.6	1,506.1	85.5	1,505.0	0.54	0.33	-0.43	
6,653.0	89.30	0.00	5,305.2	1,598.1	86.4	1,597.0	1.46	-0.65	-1.30	
6,745.0	88.00	359.80	5,307.4	1,690.0	86.3	1,689.0	1.43	-1.41	-0.22	
6,837.0	88.20	359.80	5,310.5	1,782.0	85.9	1,780.9	0.22	0.22	0.00	
6,930.0	88.60	0.60	5,313.1	1,875.0	86.3	1,873.9	0.96	0.43	0.86	
7,022.0	88.00	359.10	5,315.8	1,966.9	86.0	1,965.8	1.76	-0.65	-1.63	
7,114.0	87.60	358.80	5,319.3	2,058.8	84.3	2,057.8	0.54	-0.43	-0.33	
7,209.0	88.70	358.50	5,322.4	2,153.8	82.1	2,152.7	1.20	1.16	-0.32	
7,304.0	90.30	358.40	5,323.2	2,248.7	79.5	2,247.7	1.69	1.68	-0.11	
7,399.0	90.80	358.70	5,322.3	2,343.7	77.1	2,342.7	0.61	0.53	0.32	
7,495.0	91.30	358.90	5,320.5	2,439.6	75.1	2,438.6	0.56	0.52	0.21	
7,590.0	90.80	358.80	5,318.8	2,534.6	73.2	2,533.6	0.54	-0.53	-0.11	
7,685.0	90.60	358.00	5,317.6	2,629.6	70.6	2,628.6	0.87	-0.21	-0.84	

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<b>Wellbore:</b>	Original Wellbore	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Wellbore	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,780.0	91.30	358.50	5,316.1	2,724.5	67.7	2,723.6	0.91	0.74	0.53	
7,876.0	90.20	358.90	5,314.8	2,820.5	65.5	2,819.6	1.22	-1.15	0.42	
7,971.0	91.00	359.40	5,313.8	2,915.4	64.1	2,914.5	0.99	0.84	0.53	
8,066.0	90.90	359.50	5,312.2	3,010.4	63.2	3,009.5	0.15	-0.11	0.11	
8,161.0	91.60	359.80	5,310.2	3,105.4	62.6	3,104.5	0.80	0.74	0.32	
8,256.0	90.30	359.60	5,308.6	3,200.4	62.1	3,199.5	1.38	-1.37	-0.21	
8,350.0	90.40	359.70	5,308.0	3,294.4	61.5	3,293.5	0.15	0.11	0.11	
8,445.0	91.10	0.70	5,306.8	3,389.4	61.8	3,388.5	1.28	0.74	1.05	
8,540.0	90.60	359.10	5,305.4	3,484.4	61.7	3,483.4	1.76	-0.53	-1.68	
8,635.0	90.60	359.00	5,304.4	3,579.3	60.1	3,578.4	0.11	0.00	-0.11	
8,730.0	91.70	359.60	5,302.5	3,674.3	58.9	3,673.4	1.32	1.16	0.63	
8,826.0	90.20	358.60	5,300.9	3,770.3	57.4	3,769.4	1.88	-1.56	-1.04	
8,921.0	91.00	358.30	5,299.9	3,865.2	54.9	3,864.4	0.90	0.84	-0.32	
9,016.0	90.50	358.00	5,298.6	3,960.2	51.8	3,959.4	0.61	-0.53	-0.32	
9,111.0	90.20	357.70	5,298.1	4,055.1	48.2	4,054.3	0.45	-0.32	-0.32	
9,206.0	89.40	358.50	5,298.4	4,150.1	45.1	4,149.3	1.19	-0.84	0.84	
9,301.0	89.90	358.90	5,299.0	4,245.0	42.9	4,244.3	0.67	0.53	0.42	
9,396.0	91.10	359.30	5,298.1	4,340.0	41.4	4,339.3	1.33	1.26	0.42	
9,491.0	91.60	359.80	5,295.9	4,435.0	40.7	4,434.3	0.74	0.53	0.53	
9,586.0	91.10	0.20	5,293.7	4,530.0	40.7	4,529.2	0.67	-0.53	0.42	
9,680.0	90.70	0.20	5,292.2	4,624.0	41.0	4,623.2	0.43	-0.43	0.00	
9,776.0	90.90	0.20	5,290.9	4,719.9	41.4	4,719.2	0.21	0.21	0.00	
9,805.0	91.20	0.60	5,290.3	4,748.9	41.6	4,748.2	1.72	1.03	1.38	
<b>Last MWD Survey</b>										
9,856.0	91.20	0.60	5,289.3	4,799.9	42.1	4,799.1	0.00	0.00	0.00	
<b>PTB - TD</b>										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
4,798.0	4,797.8	24.3	-0.5	First MWD Survey	
9,805.0	5,290.3	4,748.9	41.6	Last MWD Survey	
9,856.0	5,289.3	4,799.9	42.1	PTB - TD	

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

Well Name: Haley 1-10H

Contractor/Rig: Patterson-UTI 421

State: KS

County: Comanche

SHL: 200 FSL & 660 FWL

Township:

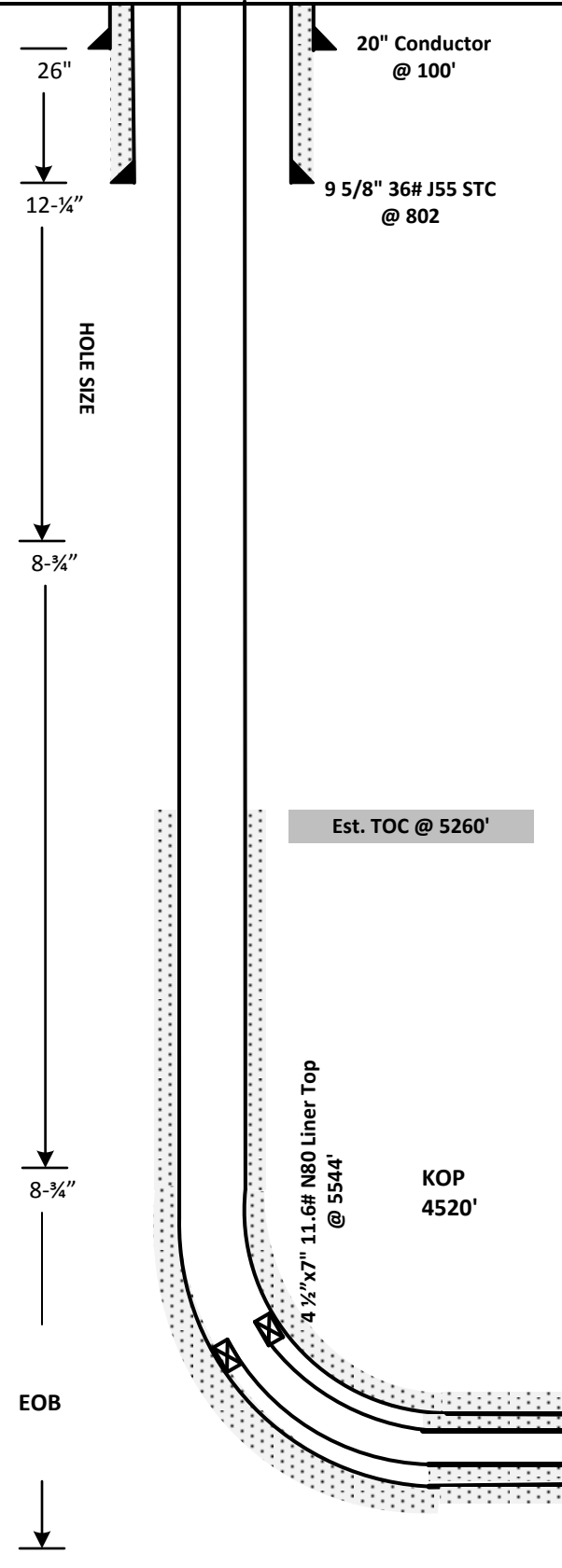
As Run

GL Elev: 1838 KB: 23 KB Elev:

BHL: 330' FNL & 660' FWL

AFE: 12-0121

Permit/API Number: 15-033-21643-01-00



Tubular Details

	20"	9 5/8"	7"	4-1/2"
Weight	94 lb/ft	36 lb/ft	26 lb/ft	15.10 lb/ft
Grade	X-42	J-55	P-110	N-80
Burst	3590 psi	3520 psi	9960 psi	10480 psi
Collapse	NA	2020 psi	6230 psi	11080 psi
Wall Thickness	0.438"	0.352"	0.724"	0.337"
ID	19.124"	8.921"	6.276"	3.826"
Setting Depth	100'	802'	5751'	9855'

Cement Details

Interval	Company	Excess	Est. Vol
Surface			
Intermediate			
Production Lead			
Production Tail			

See attachments for slurry details







# Daily Drilling Report

11/19/2012 2:49 PM

## Well Information

Well Haley Unit 1-10H		AFE Number 12-0139		Report Date 6/14/2012	
Country USA	State KS	County Comanche	Field Buttermilk East		Lease 200' FSL 660' FWL/SW SW
API / IPO UWI Comanche		Orig KB Elev (ft)		Ground Elevation (ft) 1838.0	KB-GRD (ft) -1838.0
Qtr/Qtr, Block, Sec, Town, Range .10,34S,18W				Spud Date 8/27/2012	Rig Release Date 9/16/2012

## Daily Operations

24 Hour Summary  
Crew to location. PJSM. Drill 26" mouse hole T/ 73'. P/U 30" Bit clean out conductor hole T/ 104'. P/U 20" welded conductor pipe with 2" line pipe welded on side w/ mule shoe cut on bottom, RIH T/ 104'. P/U 16" welded mouse hole w/ 2" line pipe welded to side w/ mule shoe cut on bottom. RIH T/ 73'. MIRU Allied cementers. PJSM. Texas Transco for fresh water. Mix and Pump 375 sks class A w/ 2% CC. 78 BBL Cement. Circulate cement to surface on both conductor and mouse hole. Leave rig over the hole. Wash up, RDMO Cementers. SDFN. Crew to yard.

### 24 Hr Forecast

Load up rig move to the Einsel Lease.  
Called KCC talked to: Jack Mc Caskey for 24 hour spud notice on the Einsel # 1 SWD & 1-8H

### Operations At Report Time

Wait on Daylight

Daily Total (Cost) \$22009.00	Cum Daily Total (cost) \$57357.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor Jay Lewis	Supervisor Phone 570-560-2611
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## Time Log

## Mud Checks

Type	Depth (ftKB)	Source	Density (lb/gal)	Funnel Viscosity (s/qt)	Filtrate (mL/30min)			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)		PV(cp)	YP (lb/100ft <sup>2</sup> ) pH			
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> )	Gel 10 min (lb/100ft <sup>2</sup> )			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

## BHA

## Drilling Parameters

Start Depth (ftKB)	End Depth (ftKB)	Cum Depth Drilled (ft) 0	Total ROP (ft/hr) NaN	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGas Inj (ft <sup>3</sup> /min)	Drilling Time (hr)	Rotating Time (hr)	Circulation Time (hr)
Cum Drilling Time (hr) 0.00	SPP (psi)	Flow Rate (gpm)	TFA (incl Noz) (in <sup>2</sup> )	Weight on Bit (lbf)	String Wt (lbf)

## Pump Operations

## Hydraulic Data

## Survey Data

# ALLIED CEMENTING CO., LLC. 32698

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
*Medicine Lodge*

DATE <i>9-9-12</i>	SEC <i>10</i>	TWP <i>3 1/2</i>	RANGE <i>18 W</i>	CALLED OUT <i>2:30 AM</i>	ON LOCATION <i>4:30 AM</i>	JOB START <i>4:00 PM</i>	JOB FINISH <i>5:00 PM</i>
LEASE <i>High</i>		WELL # <i>1-10 H</i>	LOCATION <i>Buttermilk Rd T 3 E to y, 15</i>	COUNTY <i>Comanche</i>	STATE <i>KS</i>		
OLD OR NEW (Circle one) <u>NEW</u>			<i>around Curve N into</i>				

CONTRACTOR <i>Patterson #421</i>	OWNER <i>Tug Hill</i>
TYPE OF JOB <i>Intermediate</i>	CEMENT
HOLE SIZE <i>8 3/4"</i>	T.D. <i>5800</i>
CASING SIZE <i>7"</i>	DEPTH <i>5751</i>
TUBING SIZE	DEPTH <i>2 1/2" x 3 3/8 FL-160 + Defamer</i>
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX <i>1460</i>	MINIMUM
MEAS. LINE	SHOE JOINT <i>41.50</i>
CEMENT LEFT IN CSG <i>41.50</i>	
PERFS.	
DISPLACEMENT <i>218 3/4</i>	

EQUIPMENT		COMMON	<i>225 @ 17.90</i>	<i>4,027.50</i>
PUMP TRUCK	CEMENTER <i>Ron Gilley</i>	POZMIX	@	
# <i>548-555</i>	HELPER <i>Eddie Piper</i>	GEL	<i>4 @ 23.40</i>	<i>93.60</i>
BULK TRUCK		CHLORIDE	@	
# <i>356-250</i>	DRIVER <i>Scott Priddy / James Bowen</i>	ASC	@	
BULK TRUCK		FL-160	<i>63 @ 18.90</i>	<i>1,190.70</i>
#	DRIVER	Defamer	<i>37 @ 9.40</i>	<i>349.80</i>
		Salt	<i>6 @ 26.35</i>	<i>158.10</i>
		ASF	<i>12 Bbl @ 58.70</i>	<i>704.40</i>
			@	
			@	
			@	
		HANDLING	<i>243 @ 2.42</i>	<i>602.04</i>
		MILEAGE	<i>388.50 @ 2.60</i>	<i>1,010.10</i>
		TOTAL		<i>8,090.84</i>

REMARKS:

*See Cement log*  
*830-18 Cement log Cook*  
*HFE 12-0139*

SERVICE

DEPTH OF JOB	<i>5800</i>
PUMP TRUCK CHARGE	<i>2,765.25</i>
EXTRA FOOTAGE	@
MILEAGE	<i>35 @ 7.70</i>
MANIFOLDS <i>5 Head</i>	@
Light Veh	<i>35 @ 4.40</i>
	@

TOTAL *3,464.25*

CHARGE TO: *Tug Hill*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

*7"* PLUG & FLOAT EQUIPMENT

<i>1-Rubber Plug</i>	@	<i>99.45</i>
	@	
	@	
	@	
	@	

TOTAL *99.45*

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME *X Tony Earnest*

SIGNATURE *X Tony Earnest*

SALES TAX (If Any) *408.72*

TOTAL CHARGES *11,654.54*

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

*\$ 7,575.45*

*D 4079.09*





# Daily Drilling Report

11/19/2012 2:49 PM

## Well Information

Well Haley Unit 1-10H			AFE Number 12-0139		Report Date 9/10/2012	
Country USA	State KS	County Comanche	Field Buttermilk East		Lease 200' FSL 660' FWL/SW SW	
API / IPO UWI Comanche			Orig KB Elev (ft)	Ground Elevation (ft) 1838.0		KB-GRD (ft) -1838.0
Qtr/Qtr, Block, Sec, Town, Range .10,34S,18W				Spud Date 8/27/2012		Rig Release Date 9/16/2012

## Daily Operations

24 Hour Summary  
FIN/RUN 140 JTS 7" 26# N-80 CSG (5752') WASH F/ 5138 TO 5752 AND LAND CSG HANGER IN WH, CIRC & R/U ALLIED AND CEMENT 7" CSG W/ 225 SX CLASS A CEMENT, MIX WT 15.0 ppg, YLD 1.35 cu ft/sx. PLUG DOWN AT 5:00PM, FLOAT HELD, R/D CEMENTERS, SET & TEST 7" CSG PACK OFF, CLEAN MUD PITS AND FILL W/ WATER, CUT & SLIP DL, P/U DIR. BHA AND FUNCTION TEST, CHANGE OUT TOP DRIVE WEAR SUB.

24 Hr Forecast  
TIH W/ DIR. TOOLS AND BIT, TEST 7" CSG, DRILL FLOAT EQUIP. AND DIRECTIONAL DRILL AHEAD

Operations At Report Time  
CHANGE OUT TOP DRIVE WEAR SUB

Daily Total (Cost) \$52277.00	Cum Daily Total (cost) \$1425816.99	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor TONY EARNEST	Supervisor Phone 281-833-2373
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## Time Log

Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	14:00	8.00	5800.0	5800.0	RCSG	FIN/ RUN 7" 26# N-80 LT&C CSG, 140 JTS 5752 AND LAND CSG HANGER IN WH, SHOE SET AT 5752, FC AT 5707, MARKER JT TOP 4,785. WASH CSG IN HOLE F/ 5138 TO 5752
14:00	15:30	1.50	5800.0	5800.0	CMNT	CIRC 7" CSG W/ RIG PUMP
15:30	16:00	0.50	5800.0	5800.0	CMNT	SAFETY MEETING AND R/U ALLIED CEMENTER
16:00	17:00	1.00	5800.0	5800.0	CMNT	CEMENT 7" CSG. PUMP 12 FLUSH + 3 BBLs SPACER AND MIX & PUMP 250 SX CLASS A CEMENT+5% SALT+2% GEL+.3% FL-160+DEFOAMER, MIX WT 15.0 ppg, YLD 1.35 cu ft/sx, RELEASED PLUG AND DISPLACED W/ 220 BBLs WATER, BUMP PLUM W/ 800 psi AND PRESS UP TO 1300, RELEASED PRESS TO FLOAT HELD AT 5:00PM
17:00	18:00	1.00	5800.0	5800.0	CMNT	R/D CEMENTERS
18:00	19:00	1.00	5800.0	5800.0	RCSG	BREAK DOWN FILUP TOOL AND CHANGE OUT ELEV. BAILS AND ELEV.
19:00	23:00	4.00	5800.0	5800.0	TEST	RUN & SET GE 7" CSG. PACK OFF AND TEST TO 5000 psl OK, TRANSFER MUD TO FRAC TANK AND CLEAN MUD PITS
23:00	1:00	2.00	5800.0	5800.0	CSDL	CUT & SLIP DRILL LINE
1:00	4:30	3.50	5800.0	5800.0	DIR	M/U DIR. BHA AND ORIENT TOOL FACE TO MWD AND FUNCTION TEST W/ RIG PUMP. M/U BIT #6, HAL.6 1/8 EM64D, SN 754145 AND RUN IN HOLE W/ 5 DP
4:30	6:00	1.50	5800.0	5800.0	RREP	CHANGE OUT TOP DRIVE WEAR SUB

## Mud Checks

Type	Depth (ftKB) 5800.0	Source	Density (lb/gal) 8.350	Funnel Viscosity (s/qt) 27.000	Filtrate (mL/30min)			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl) 0.000	Mud Lost (Surf) (bbl) 0.000	PV(cp)	YP (lb/100ft <sup>2</sup> )	pH			
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 sec (lb/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> )	Gel 10 min (lb/100ft <sup>2</sup> )			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

Bit Number	Size	Make	Model	Serial No.	Depth In	Depth Out	Footage
					0.0	In Hole	9,856.0

## BHA

BHA #	Item Number	Component Type	OD	ID	Length	Cumulative Length	Fishing Neck	Top Connection





# Daily Drilling Report

11/19/2012 2:49 PM

## Drilling Parameters

Start Depth (ftKB) 5800.0		End Depth (ftKB) 5800.0	Cum Depth Drilled (ft) 0.0	Total ROP (ft/hr) #Error	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGas Inj (ft³/min)	Drilling Time (hr) 0.00	Rotating Time (hr)	Circulation Time (hr)	
Cum Drilling Time (hr) 146.50		SPP (psi)	Flow Rate (gpm) 610.00	TFA (incl Noz) (in²)	Weight on Bit (lbf)	String Wt (lbf)

## Pump Operations

Pump #	Make	Model	Liner Size (in)	Stroke (in)	PMax (psi)
1	NATIONAL	1600	6.000	12.000	2750.000
2	MAXUM	1600	6.000	12.000	2100.000

## Hydraulic Data

Pump #	Strokes (spm)	QFlow (gpm)	P (psi)	Eff (%)	Slow Pump Rate	Slow Pump Pressure
1	50.000	210.000	2750.000	95.00		
2	95.000	400.000	2100.000	95.00		

## Survey Data



# ALLIED OIL & GAS SERVICES, LLC <sup>KB</sup> 052461

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Liberal

DATE <u>0-28-12</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Haley</u>	WELL # <u>4-10H</u>		LOCATION <u>Vec Butter Milk KS East</u>		COUNTY <u>Comanche</u>	STATE <u>KS</u>	
OLD OR (NEW) (Circle one)							

CONTRACTOR <u>Patterson Rig 421</u>	
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>812</u>
CASING SIZE <u>9 5/8</u>	DEPTH <u>801.97</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>44.9'</u>
CEMENT LEFT IN CSG. <u>44.9</u>	
PERFS.	
DISPLACEMENT <u>58.5 barrels</u>	
EQUIPMENT	

OWNER	
CEMENT	
AMOUNT ORDERED <u>200 sk Class A 3% cc</u>	
<u>2% cc - 45 2% cc seal - 25' flo seal - 11.9 ppf</u>	
<u>150 sk Class A 2% cc</u>	
COMMON <u>350</u>	@ <u>16.25</u> <u>5687.50</u>
POZMIX	@
GEL	@
CHLORIDE <u>10</u>	@ <u>58.20</u> <u>582.00</u>
ASC	@
<u>GP SL - Gyp seal 4</u>	@ <u>34.20</u> <u>136.80</u>
<u>Sodium Metasilicate 376</u>	@ <u>3.00</u> <u>1128.00</u>
<u>Flo seal 50</u>	@ <u>2.70</u> <u>135.00</u>
HANDLING <u>378</u>	@ <u>2.10</u> <u>793.80</u>
MILEAGE <u>605.50</u>	@ <u>2.35</u> <u>1422.93</u>
<u>Drayage TM</u>	
<u>605.50</u>	
TOTAL <u>\$9886.03</u>	

PUMP TRUCK # <u>530-484</u>	CEMENTER <u>Lenny Baeka - Michael Barnett</u>
BULK TRUCK # <u>562-554</u>	HELPER <u>Richard Caldwell 2</u>
BULK TRUCK #	DRIVER <u>Jesus Vega 3</u>
BULK TRUCK #	DRIVER

REMARKS:  
Lead Cement 108.99 Slurry  
Tail Cement 31.52 Slurry

CHARGE TO: Tug Hill Operating  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Jim Queenbury

SIGNATURE Jim Queenbury AFG: 12-0139 CODE: 830.18

**SERVICE**

DEPTH OF JOB <u>801.97</u>	
PUMP TRUCK CHARGE <u>\$1125.00</u>	
EXTRA FOOTAGE <u>500</u>	@ <u>.95</u> <u>475.00</u>
MILEAGE <u>35</u>	@ <u>7.00</u> <u>245.00</u>
MANIFOLD <u>I</u>	@ <u>200.00</u> <u>200.00</u>
<u>Light Vehicle Mileage 35</u>	@ <u>4.00</u> <u>140.00</u>
TOTAL <u>\$2105</u>	

**PLUG & FLOAT EQUIPMENT**

<u>Top Rubber Plug 1</u>	@ <u>158.00</u> <u>158.00</u>
	@
	@
	@
	@
TOTAL <u>158.00</u>	

SALES TAX (If Any) 493.11  
TOTAL CHARGES \$12,229.03  
DISCOUNT (35) 4280.16 IF PAID IN 30 DAYS

Net \$ 7948.87





# Daily Drilling Report

11/19/2012 2:49 PM

Well Information						
Well Haley Unit 1-10H			AFE Number 12-0139		Report Date 8/29/2012	
Country USA	State KS	County Comanche	Field Buttermilk East		Lease 200' FSL 660' FWL/SW SW	
API / IPO UWI Comanche			Orig KB Elev (ft)	Ground Elevation (ft) 1838.0	KB-GRD (ft) -1838.0	
Qtr/Qtr, Block, Sec, Town, Range ,10,34S,18W				Spud Date 8/27/2012	Rig Release Date 9/16/2012	

Daily Operations		
24 Hour Summary DRILL 700-760. SURVEY. DRILL 760-812. CIRCULATE. P.O.O.H. TO 100'. TIH TO 812'. CIRCULATE. P.O.O.H.. R/U CASING TOOLS & P/U MACHINE ( R/D 5J CRANE ). RAN 9-5/8" FLOAT SHOE, 1 JT. OF CASING, FLOAT COLLAR & 17 JTS. OF 9-5/8" 36# J-55 LT&C CASING. SET @ 797'. R/D CASING TOOLS & P/U MACHINE. CIRCULATE & R/U ALLIED CEMENTERS. P/T TO 2,000 PSI. MIX / PUMP 200 SX. CLASS "A" CEMENT @ 11.4 PPG + ADDITIVES, MIX / PUMP 150 SX. CLASS "A" CEMENT @ 15.6 PPG + ADDITIVES. DROP PLUG. DISPLACE W/ 58.5 BBLs. WATER. BUMP PLUG @ 1,000 PSI. FLOATS HELD. CIRCULATED 68 BBLs. CEMENT TO SURFACE. R/D ALLIED. W.O.C.. WELDER CUT OFF CONDUCTOR & 9-5/8" CASING.		
24 Hr Forecast WELD ON GE WELL HEAD. N/U B.O.P.'S. TEST B.O.P.'S. DRILL CEMENT / FLOAT EQUIPMENT. DRILL.		
Operations At Report Time WELDER WELDING ON WELL HEAD		
Daily Total (Cost) \$312438.00	Cum Daily Total (cost) \$661136.99	Total AFE (Cost) \$0.00

Daily Contacts	
Wellsite Supervisor JIM QUESENBURY	Supervisor Phone 281-833-2373

Time Log						
Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	7:00	1.00	700.0	760.0	DRLG	DRILL 700-760
7:00	7:30	0.50	760.0	760.0	DEV	SURVEY
7:30	8:30	1.00	760.0	812.0	DRLG	DRILL 760-812
8:30	9:00	0.50	812.0	812.0	COND	CIRCULATE
9:00	10:00	1.00	812.0	812.0	TOH	TOH TO 100'
10:00	11:00	1.00	812.0	812.0	TIH	TIH TO 812'
11:00	13:00	2.00	812.0	812.0	COND	CIRCULATE
13:00	14:30	1.50	812.0	812.0	TOH	P.O.O.H.
14:30	17:00	2.50	812.0	812.0	RCSG	R/U CSG. TOOLS / P/U MACHINE ( R/D 5J CRANE )
17:00	19:00	2.00	812.0	812.0	RCSG	RUN CASING
19:00	19:45	0.75	812.0	812.0	RCSG	R/D CSG TOOLS / P/U MACHINE
19:45	21:45	2.00	812.0	812.0	COND	CIRCULATE
21:45	0:00	2.25	812.0	812.0	CMNT	ALLIED CEMENTED CASING
0:00	4:00	4.00	812.0	812.0	WOC	W.O.C.
4:00	6:00	2.00	812.0	812.0	NUND	CUT OFF CASING

Mud Checks									
Type	Depth (ftKB) 812.0	Source	Density (lb/gal) 8.500	Funnel Viscosity (s/qt) 27.000	Filtrate (mL/30min)				
HTHP Filtrate (ml/30min)		Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)		PV(cp)	YP (lb/100ft²)	pH		
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100ft²)		Gel 30 min (lb/100ft²)	Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)	

Bit Record							
Bit Number	Size	Make	Model	Serial No.	Depth In	Depth Out	Footage
1	12.25	SMITH RR	XRC	PX1549	123.0	700.0	577.0

BHA								
BHA #	Item Number	Component Type	OD	ID	Length	Cumulative Length	Fishing Neck	Top Connection





# Daily Drilling Report

11/19/2012 2:49 PM

## Drilling Parameters

Start Depth (ftKB) 700.0		End Depth (ftKB) 812.0	Cum Depth Drilled (ft) 112.0	Total ROP (ft/hr) 56.00	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGas Inj (ft³/min)	Drilling Time (hr) 2.00	Rotating Time (hr)	Circulation Time (hr)	
Cum Drilling Time (hr) 15.50		SPP (psi)	Flow Rate (gpm) 0.00	TFA (incl Noz) (in²)	Weight on Bit (lbf)	String Wt (lbf)

## Pump Operations

Pump #	Make	Model	Liner Size (in)	Stroke (in)	PMax (psi)
1	NATIONAL	1600	6.000	12.000	
2	MAXUM	1600	6.000	12.000	

## Hydraulic Data

Pump #	Strokes (spm)	QFlow (gpm)	P (psi)	Eff (%)	Slow Pump Rate	Slow Pump Pressure
1	67.000			95.00		
2						

## Survey Data

MD (ft/KB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	EW (ft)	NS (ft)	Method
760.000	0.500		760.000				

# ALLIED OIL & GAS SERVICES, LLC 053914

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Medicine Lodge KS

DATE <u>09/15/12</u>	SEC. <u>10</u>	TWP. <u>34s</u>	RANGE <u>18w</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Haley Unit</u>		WELL # <u>1-10H</u>		LOCATION <u>Butternut KKS, East on Rd T 3mi,</u>		COUNTY <u>Comanche</u>	STATE <u>KS</u>
OLD OR <u>(NEW)</u> (Circle one)				<u>Turn right at Y on second curve, 1 mi, North into</u>			

CONTRACTOR Patterson  
 TYPE OF JOB Liner  
 HOLE SIZE 6 1/2 T.D. 9856  
 CASING SIZE 4 1/2 DEPTH 9855  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES-MAX 3.000 MINIMUM  
 MEAS. LINE SHOE JOINT 47  
 CEMENT LEFT IN CSG. 47  
 PERFS.  
 DISPLACEMENT 116

OWNER Tug Hill  
 CEMENT  
 AMOUNT ORDERED 450sx Class H 50:50 P. 2+ 2%  
Gel + 5% Salt + .6% FL-10 + .1% CD-31 + .1% SA-SI +  
1/4 # Defender

EQUIPMENT

PUMP TRUCK CEMENTER Juan Thimoch  
 # 558/555 HELPER Daren Franklin  
 BULK TRUCK  
 # 421/252 DRIVER Branden Boor  
 BULK TRUCK  
 # DRIVER

COMMON <u>Class H</u>	<u>225sx</u>	@	<u>21.20</u>	<u>4770</u>
POZMIX	<u>225sx</u>	@	<u>20.35</u>	<u>4578.75</u>
GEL	<u>8sx</u>	@	<u>23.90</u>	<u>187.20</u>
CHLORIDE		@		
ASC		@		
FL-160	<u>187lls</u>	@	<u>18.90</u>	<u>3572.10</u>
Defender	<u>112lls</u>	@	<u>9.80</u>	<u>1097.60</u>
CD-31	<u>28lls</u>	@	<u>10.20</u>	<u>291.40</u>
Salt	<u>191sx</u>	@	<u>26.35</u>	<u>314.20</u>
SA-SI	<u>28lls</u>	@	<u>17.55</u>	<u>666.90</u>
		@		
		@		
HANDLING	<u>491 cu ft</u>	@	<u>2.48</u>	<u>1217.68</u>
MILEAGE	<u>700 tn/mi x</u>		<u>2.60</u>	<u>1820</u>
TOTAL				<u>18617.83</u>

REMARKS:

Plug Held  
AFE 12-0139  
Cementing Code 830.12

SERVICE

DEPTH OF JOB	<u>9855</u>		
PUMP TRUCK CHARGE			<u>5920.20</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>35mi</u>	@	<u>7.70</u>
MANIFOLD		@	
LV	<u>35mi</u>	@	<u>4.40</u>
		@	

TOTAL 6343.70

CHARGE TO: Tug Hill  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____

TOTAL NA

SALES TAX (If Any) 981.55

TOTAL CHARGES 24961.53

DISCOUNT 35% IF PAID IN 30 DAYS

Net 16,224.99

D 8736.53

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Tony Earnest

SIGNATURE Tony Earnest





# Daily Drilling Report

11/19/2012 2:49 PM

## Well Information

Well Haley Unit 1-10H		AFE Number 12-0139		Report Date 9/15/2012	
Country USA	State KS	County Comanche	Field Buttermilk East		Lease 200' FSL 660' FWL/SW SW
API / IPO UWI Comanche		Orig KB Elev (ft)		Ground Elevation (ft) 1838.0	KB-GRD (ft) -1838.0
Qtr/Qtr, Block, Sec, Town, Range .10,34S,18W			Spud Date 8/27/2012		Rig Release Date 9/16/2012

## Daily Operations

### 24 Hour Summary

FIN/ TOH, SM & R/U CSG TOOLS, M/U BABER FS AND LANDING COLLAR 1 JT UP AND P/U 111 JTS (4,280') 4 1/2" 11.6# LT&C CSG. + BAKER LINER HANGER & PACKER. TIH W/ LINER ON 4" DP TO 9856 AND P/U CEMENT CONTROL HEAD. CIRC W/ RIG PUMP AND R/U ALLIED CEMENTERS. ALLIED TEST LINES TO 4,000 psi, PUMP DOWN BALL AND SET LINER HANGER SLIPS W/ CSG SHOE AT 9854' AND TOL AT 5,544'. PUMP 10 BBLs SPACER AND MIX & PUMP 450 sx 50/50 POZ CLASS H CEMENT+2% GEL +5% SALT + .6%FL-160 + .1% SA-51 + DEFOAMER, MIX WT.14.0 ppg, YLD 1.35 cu ft/sx, RELEASED PLUG AND DISPLACED W/ 105 BBLs WATER, SET LINER TOP PACKER AND RELEASED RUNNING TOOL. TEST PKR TO 1,500 psi OK, REVERSED OUT 20 BBLs CEMENT. AND CONTINUE REVERSE OUT UNTIL CLEAN WATER CAME AROUND. R/D CEMENTER AND BAKER CEMENT CONTROL HEAD.

### 24 Hr Forecast

L/D DRILL PIPE, N/D BOP AND INSTALL DRY HOLE TREE, CLEAN MUD TANKS AND RELEASE RIG'

### Operations At Report Time

R/U LAY DOWN MACHINE

### Daily Total (Cost)

\$146928.00

### Cum Daily Total (cost)

\$1785707.99

### Total AFE (Cost)

\$0.00

## Daily Contacts

### Wellsite Supervisor

TONY EARNEST

### Supervisor Phone

281-833-2373

## Time Log

Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	12:00	6.00	9856.0	9856.0	TOH	TOH SLOW UNTIL IN CSG & FINISH TOH
12:00	13:00	1.00	9856.0		DIR	L/D DIR. BHA
13:00	14:30	1.50	9856.0		RCSG	R/U CSG TOOLS
14:30	15:30	1.00	9856.0		LUBE	SER. RIG
15:30	19:30	4.00	9856.0	9856.0	RCSG	P/U 4 1/2" BAKER SHOE + LC 1 JT UP AND 10 JTS 11.6 P-110 LT&C (425') + 101 JTS 11.6 N-80 LT&C (3854.72') TOTAL 4,279.72 AND P/U BAKER LINER HANGER & PACKER. ASSY, INSTALL A TURBOLIZER ON EVERY 10 JTS
19:30	20:00	0.50	9856.0		RCSG	R/D CASING CREW
20:00	0:00	4.00	9856.0		TIH	TIH HOLE W/ 4 1/2" LINER ON 4" DP TO 9856, P/U BAKER CEMENT CONTROL HEAD.
0:00	1:30	1.50	9856.0		COND	CIRC. W/ RIG PUMP, TRIP GAS 846U, SAFETY MEETING W/ CEMENTERS
1:30	2:30	1.00	9856.0		CMNT	ALLIED PUMP BALL DOWN AND SET BAKER LINER HANGER SLIPS W/ CSG SHOE AT 9,854 AND TOL AT 5,544'
2:30	3:30	1.00	9856.0		CMNT	PUMP 10 BBLs SPACER AND MIX & PUMP 450 sx 50/50 POZ CLASS H CEMENT + 2% GEL + 5% SALT + .6% FL-160 + .1% CD-31 + .1 SA-31 + DEFOAMER, MIX WT 14.0 ppg, YLD 1.35 cu ft/sx, RELEASED PLUG AND DISPLACED W/ 105 BBLs WATER, PLUG DOWN AT 03:45 AM, FLOAT HELD.
3:30	4:00	0.50	9856.0		CMNT	SET LINER TOP PACKER AT 5,544'
4:00	5:00	1.00	9856.0		CMNT	TEST LINER TOP PACKER TO 1,500 psi OK, AND REVERSED OUT 20 BBLs CEMENT AND CONTINUE REVERSING W/ WATER UNTIL RETURNS WAS CLEAR
5:00	5:30	0.50	9856.0		CMNT	R/D CEMENTER AND BABER CEMENT CONTROL HEAD
5:30	6:00	0.50	9856.0	9856.0	TOH	R/U LAY DOWN MACHINE

## Mud Checks

Type	Depth (ftKB) 9856.0	Source	Density (lb/gal)	Funnel Viscosity (s/qt)	Filtrate (mL/30min)	
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)	PV(cp)	YP (lb/100ft <sup>2</sup> )	pH	
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> )	Gel 10 min (lb/100ft <sup>2</sup> )	
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	
				Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)





# Daily Drilling Report

11/19/2012 2:49 PM

## Bit Record

Bit Number	Size	Make	Model	Serial No.	Depth In	Depth Out	Footage
					0.0	In Hole	9,856.0

## BHA

BHA #	Item Number	Component Type	OD	ID	Length	Cumulative Length	Fishing Neck	Top Connection

## Drilling Parameters

Start Depth (ftKB) 9856.0	End Depth (ftKB) 9856.0	Cum Depth Drilled (ft) 0.0	Total ROP (ft/hr) 0.00	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGas Inj (ft <sup>3</sup> /min)	Drilling Time (hr) 13.50	Rotating Time (hr)	Circulation Time (hr)
Cum Drilling Time (hr) 232.50	SPP (psi)	Flow Rate (gpm) 0.00	TFA (incl Noz) (in <sup>2</sup> )	Weight on Bit (lbf)	String Wt (lbf)

## Pump Operations

## Hydraulic Data

## Survey Data

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

November 19, 2012

Winnie Scott  
Tug Hill Operating, LLC  
550 BAILEY AVE, STE 510  
FT. WORTH, TX 76107

Re: ACO1  
API 15-033-21643-01-00  
Haley Unit 1-10H  
SW/4 Sec.10-34S-18W  
Comanche County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Winnie Scott



Tug Hill Operating LLC  
 Project: Comanche County, Kansas  
 Site: Sec 10, T34S, R18W  
 Well: Haley Unit #1-10H  
 Wellbore: Original Wellbore  
 Designer: Ryan K3  
 Ltr: 30-031229 N  
 Wellbore ID: 14830  
 Ltr: 30-031229 W  
 Wellbore ID: 14830  
 KB: WELL @ 1861 dust (Original Well Elev)



WELL DETAILS: Haley Unit #1-10H

+	N/S	E/W	Northings	Ground Level	Eastings	Latitude	Longitude
0.0	N/S	0.0	15778302	1830.0	177589248	37° 5' 31.229 N	99° 18' 43.91 W

WELLBORE TARGET DETAILS (LAT/LONG)

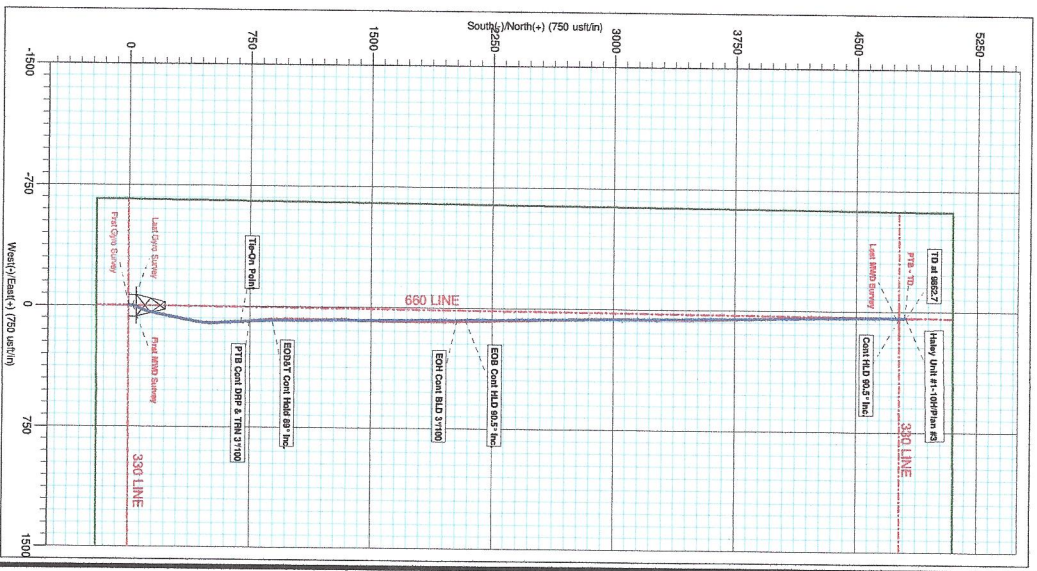
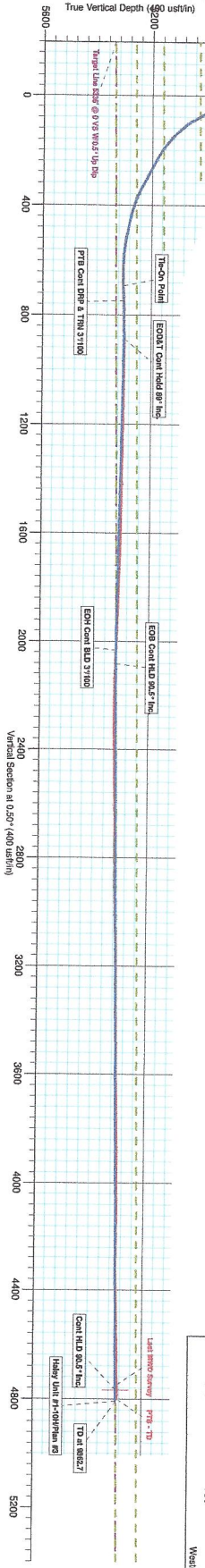
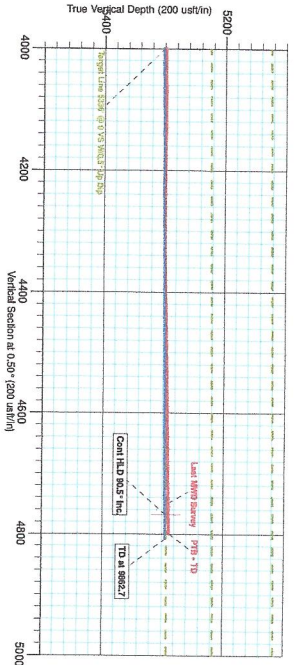
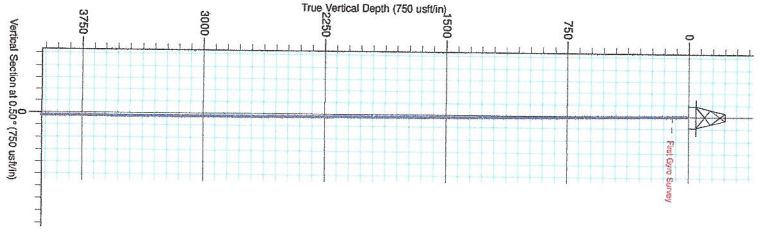
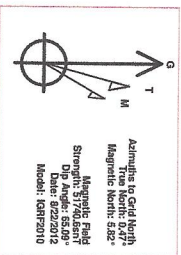
Height	TVD	+N/S	+E/W	Latitude	Longitude
Cont HLD 90.5' Inc.	5294.4	47882	419	37° 0' 10.274 N	99° 18' 43.99 W

SECTION DETAILS

MD	Inc	Ad	+N/S	+E/W	Dip	Treq	Vsect	Target
5290.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5300.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5310.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5320.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5330.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5340.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5350.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5360.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5370.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5380.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5390.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5400.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5410.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5420.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5430.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5440.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5450.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5460.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5470.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5480.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5490.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	
5500.0	62.20	3585.0	5202.3	88.0	0.00	0.00	692.5	

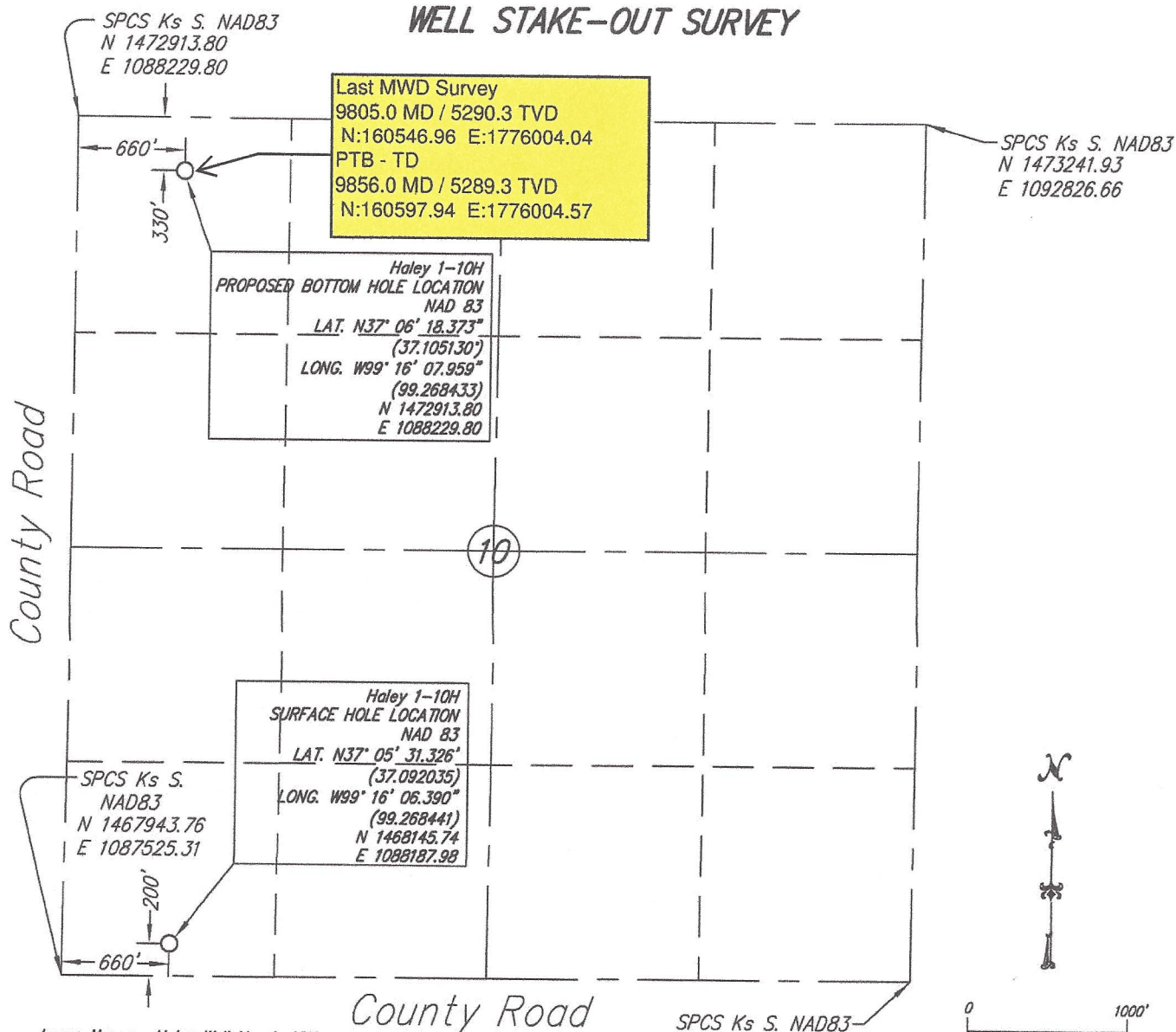
FORMATION TOP DETAILS

TY/Depth	MD/Dep	Formation	Dip/Angle	DR/BT
4305.8	4306.0	Heaber	-0.50	0.50
4389.8	4389.0	Douglas	-0.50	0.50
5026.4	5026.4	Dwight	-0.50	0.50
5026.4	5026.4	Dwight	-0.50	0.50
5158.3	5217.2	Cherokee	-0.50	0.50
5226.7	5429.3	Mississippian	-0.50	0.50
5318.4	7057.8		-0.50	0.50





# WELL STAKE-OUT SURVEY



Lease Name: Haley Well No. 1-10H  
 Surface Hole Elevation at Stake: 1838.31 NAVD88  
 Bottom Hole Elevation at Stake: 1879.01 NAVD88  
 Well Location Co./State: Comanche County, Kansas  
 Well Location Section: 10-T34S-R18W

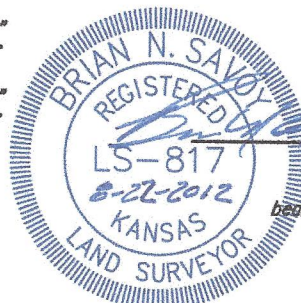
SPCS Ks S. NAD83  
 N 1467959.76  
 E 1092782.80



**Alternate Datums:**

	Horz. Datum NAD 27	
Haley #1-10H Surface Hole	Lat. N37°05'31.230" N 37.092008°	Long. W99°16'04.990" W99.268053°
Haley #1-10H Bottom Hole	Lat. N37°06'18.373" N37.105104°	Long. W99°16'04.959" W99.268044°

**SURVEY DATUMS (shown on drawing)**  
 Horizontal Datum NAD83 (CORS96)  
 Vertical Datum NAVD88 (GEOID09)  
 Kansas SPCS South Zone (US Feet)



Brian N. Savoy, RLS #817  
 This survey is valid only if print  
 bears Surveyor's seal, signed in blue ink.

State of Kansas )  
 ) SS  
 Sedgwick County )

This is to certify that this map or plat and the survey on which it is based was made by me or under my direct supervision and that, to the best of my knowledge and belief, this is a true and correct exhibit of said survey. The wells shown hereon were staked May 3, 2012 at the coordinate location noted.



**Savoy Company, P.A.**  
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 FAX (316) 265-0225  
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