



CONFIDENTIAL

OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34662
 Name: Tug Hill Operating, LLC
 Address 1: 550 BAILEY AVE, STE 510
 Address 2: _____
 City: FT. WORTH State: TX Zip: 76107 +
 Contact Person: Winnie Scott
 Phone: (817) 632-3400
 CONTRACTOR: License # 34670
 Name: Patterson-UTI Drilling Company LLC
 Wellsite Geologist: NA
 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
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

<u>08/27/2012</u>	<u>09/16/2012</u>	<u>10/30/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-033-21643-01-00
 Spot Description: _____
S2 S2 SW SW Sec. 10 Twp. 34 S. R. 18 East West
200 Feet from North / South Line of Section
660 Feet from East / West Line of Section
 Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
 County: Comanche
 Lease Name: Haley Unit Well #: 1-10H
 Field Name: Buttermilk East
 Producing Formation: Mississippi
 Elevation: Ground: 1838 Kelly Bushing: 23
 Total Depth: 9856 Plug Back Total Depth: 9856
 Amount of Surface Pipe Set and Cemented at: 802 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 cm.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 18000 ppm Fluid volume: 1300 bbls
 Dewatering method used: Evaporated
 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.

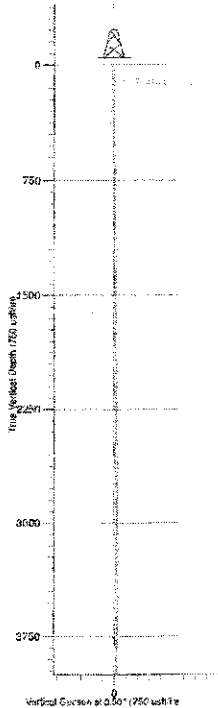
Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
 Date: 11/19/2012
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
 ALT I II III Approved by: NAOMI JAMES Date: 11/20/2012



Tug Hill Operating LLC
 Project: Comanche County, Kansas
 Site: Sec 10, T34S, R19W
 Well: Hasey Unit #1-10H
 Wellbore: Original Wellbore
 Design: Plan #3
 Lat: 37° 0' 31.228" N
 Long: 99° 16' 4.391" W
 Pad GL: 1836.0
 KB: WELL @ 1861.0usft (Original Well Elev)



Assume: in Grid North
 True North: 8.97°
 Magnetic North: 8.80°

Magnetic Field
 Strength: 51740.8ppm
 Dip Angle: 15.98°
 Date: 8/22/2012
 Model: GMRP10

WELL DETAILS: Hasey Unit #1-10H

WGS	NAD	Northings	Eastings	Latitude	Longitude
0.0	0.0	155796.02	177582.28	37° 5' 31.228" N	99° 16' 4.391" W

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVE	N-S	E-W	Latitude	Longitude
Case HLD 80.5" Inc.	8384.4	4786.2	41.9	37° 6' 18.379" N	99° 16' 4.359" W

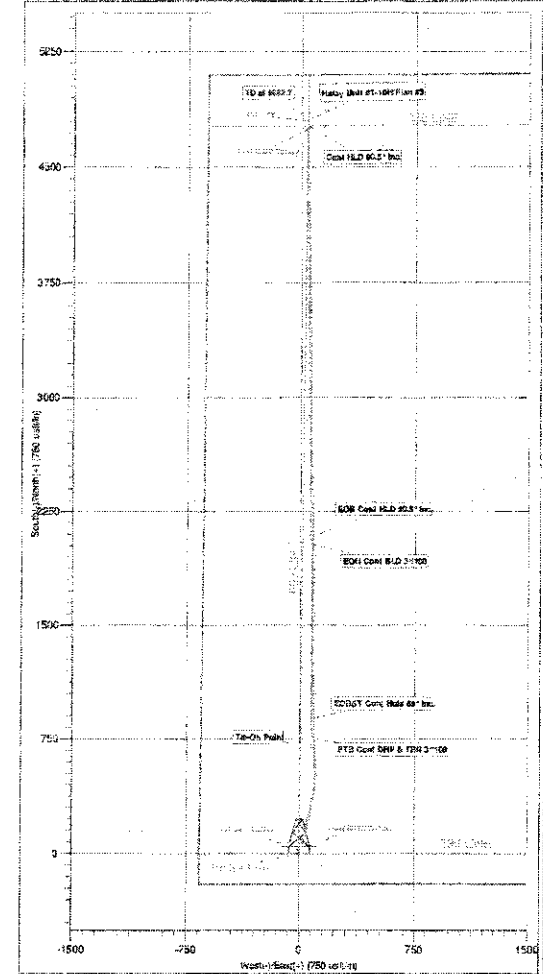
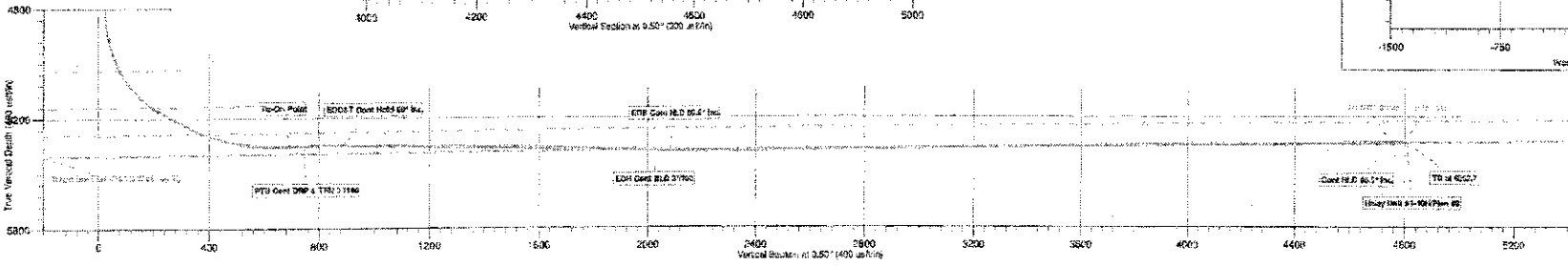
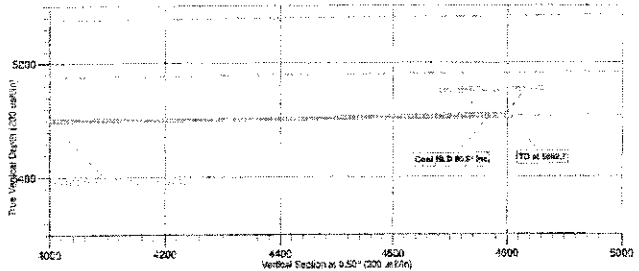
SECTION DETAILS

SD	Inc	AG	TVD	N-S	E-W	Dip	TFace	YCoord	Target
5748.0	02.25	359.59	5362.5	891.5	90.0	0.00	895.8		
5900.0	82.20	359.50	5392.5	745.5	81.7	0.00	746.4		
5941.7	88.00	359.50	5399.8	807.2	88.5	3.00	785.01	807.2	Case HLD 90.5" Inc.
7085.7	88.00	359.50	5319.8	2631.0	74.4	0.00	2525.9		
7136.7	90.50	359.50	5319.8	2281.0	74.0	3.00	2076.2		Case HLD 90.5" Inc.
8323.3	29.50	359.50	5293.8	4783.2	41.6	0.00	4750.4		Case HLD 90.5" Inc.
8623.3	60.50	359.50	5298.3	4948.2	41.1	0.00	4898.3		

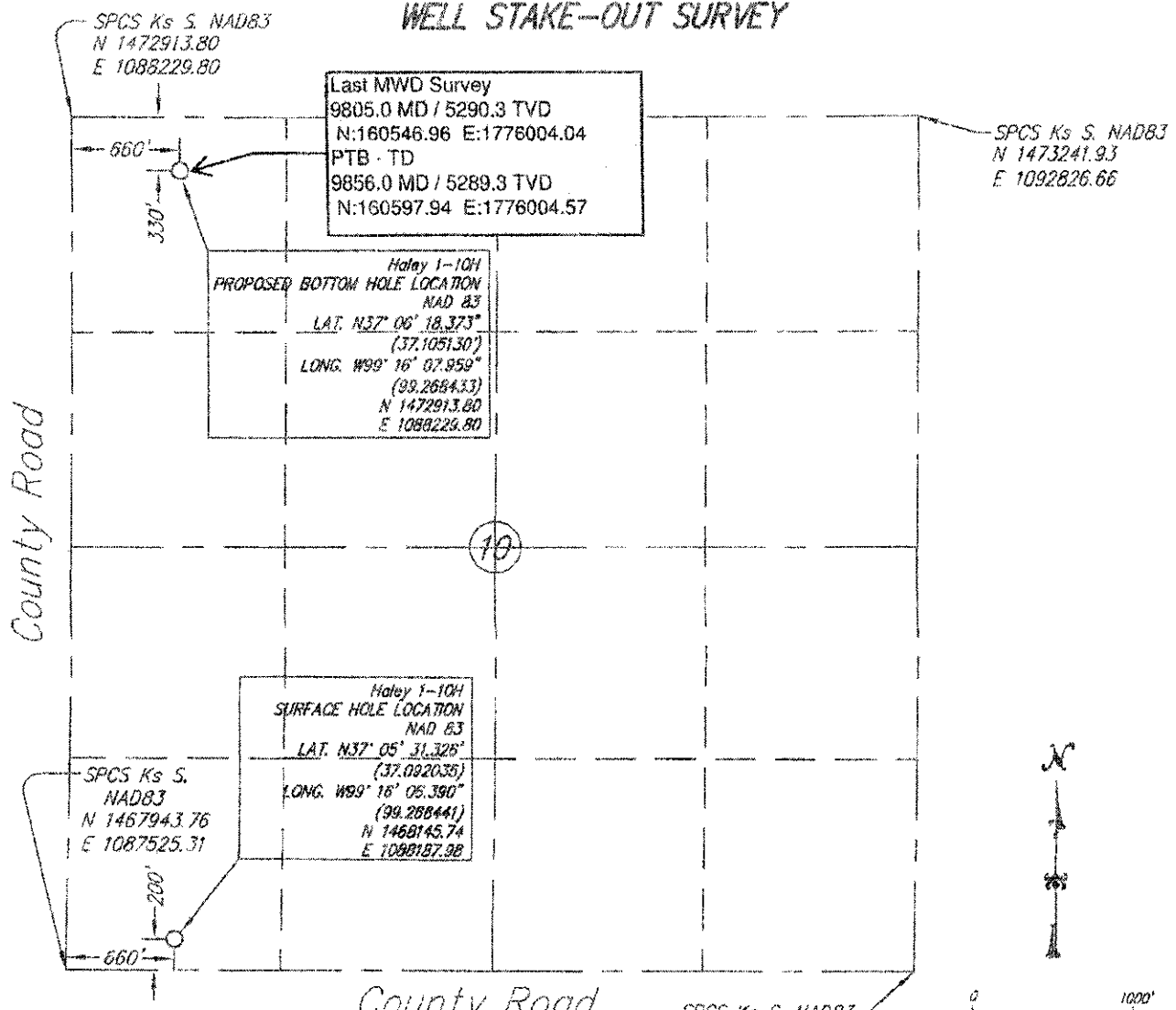
FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
4305.8	4306.0	Rehoboth	-0.50	0.50
4388.8	4389.8	Douglas	-0.50	0.50
4506.8	4506.8	Loring	-0.50	0.50
5004.4	5004.4	Hornblende	-0.50	0.50
5159.3	5159.2	Cherokee	-0.50	0.50
5358.7	5358.5	Neokochupian	-0.50	0.50
5316.4	7057.6		-0.50	0.50

Target Line 5325' @ 0° VS W0.5° Up Dip



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

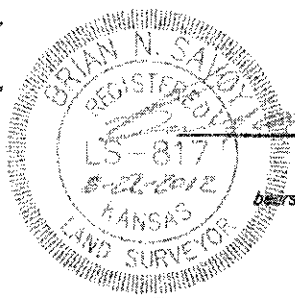
Alternate Datums:

	Harz. 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 (GCRS88)
 Vertical Datum NAVD88 (GEOID09)
 Kansas SPCS South Zone (US Feet)

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.



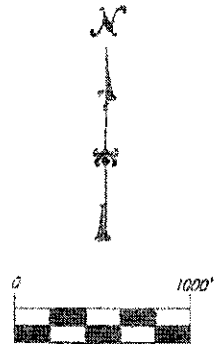
Savoy Company, P.A.
 Land Surveyors



630 S. Highland, Suite 106, Wichita, KS 67202



POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 9240 E. Central, Suite 200, Topeka, KS 67208-1242
 Phone 316/865-4114 FAX 316/863-4444





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



Company: Tug Hill Operating LLC
Project: Comanche County, Kansas
Site: Sec 10, T34S, R18W
Well: Haley Unit #1-10H
Wellbore: Original Wellbore
Design: Original Wellbore

Local Co-ordinate Reference: Site Sec 10, T34S, R18W
TVD Reference: WELL @ 1861.0usft (Original Well Elev)
MD Reference: WELL @ 1861.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project	Comanche County, Kansas		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

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

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

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

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

Survey Program	Date: 9/17/2012			
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
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

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)
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
First MWD Survey									
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

Company: Tug Hill Operating LLC
Project: Comanche County, Kansas
Site: Sec 10, T34S, R18W
Well: Haley Unit #1-10H
Wellbore: Original Wellbore
Design: Original Wellbore

Local Co-ordinate Reference: Site Sec 10, T34S, R18W
TVD Reference: WELL @ 1861.0usft (Original Well Elev)
MD Reference: WELL @ 1861.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: 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)	Bull 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	359.60	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	0.81	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

Company: Tug Hill Operating LLC
 Project: Comanche County, Kansas
 Site: Sec 10, T34S, R18W
 Well: Haley Unit #1-10H
 Wellbore: Original Wellbore
 Design: Original Wellbore

Local Co-ordinate Reference: Site Sec 10, T34S, R18W
 TVD Reference: WELL @ 1861.0usft (Original Well Elev)
 MD Reference: WELL @ 1861.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: 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
Last MWD Survey									
9,856.0	91.20	0.60	5,289.3	4,799.9	42.1	4,799.1	0.00	0.00	0.00
PTB - TD									

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: _____