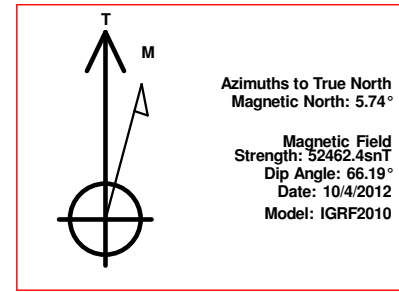




Tug Hill Operating LLC
 Project: Ness County, Kansas
 Site: Sec 32, T17S, R23W
 Well: Nichepor #1-32H
 Wellbore: Original Wellbore
 Design: Plan #5 Rev 1
 Lat: 38° 31' 24.545 N
 Long: 99° 53' 0.995 W
 Pad GL: 2344.0
 KB: WELL @ 2367.0usft (Original Well Elev)



SECTION DETAILS										
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target	
860.0	0.13	194.32	859.9	7.6	1.9	0.00	0.00	7.6		
868.7	0.00	0.00	868.6	7.6	1.9	1.50	180.00	7.6		
3782.1	0.00	0.00	3782.0	7.6	1.9	0.00	0.00	7.6		
4382.1	60.00	359.10	4278.2	294.1	-2.6	10.00	359.10	294.1		
4502.1	60.00	359.10	4338.2	398.0	-4.3	0.00	0.00	398.0		
4802.1	90.00	359.10	4415.0	684.4	-8.8	10.00	0.00	684.4	330' Hard Line PP	
8892.6	90.00	359.10	4415.0	4774.4	-73.2	0.00	0.00	4774.9	330' Hard Line PP	
8932.6	90.00	359.10	4415.0	4814.4	-73.8	0.00	0.00	4814.9	Nichepor #1-31H PBHL	

WELL DETAILS: Nichepor #1-32H						
+N-S	+E-W	Northing	Ground Level: Easting	2344.0	Latitude	Longitude
0.0	0.0	1991401.37	916495.95		38° 31' 24.545 N	99° 53' 0.995 W

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N-S	+E-W	Latitude	Longitude	
330' Hard Line PP	4415.0	4774.4	-73.2	38° 32' 11.740 N	99° 53' 1.916 W	
Nichepor #1-31H PBHL	4415.0	4814.4	-73.8	38° 32' 12.135 N	99° 53' 1.924 W	

CASING DETAILS				
TVD	MD	Name	Size	
799.9	800.0	12 1/2"	9-5/8	
4414.2	4771.0	7"	7	
4415.0	8918.5	4 1/2"	4-1/2	

FORMATION TOP DETAILS					
TVDPATH	MDPATH	Formation	DipAngle	DipDir	
3757.0	3757.1	Heebner	0.00	359.12	
3827.0	3827.1	Lansing	0.00	359.12	
4196.0	4244.7	Pawnee	0.00	359.12	
4289.0	4403.6	Fort Scott	0.00	359.12	
4319.0	4463.6	Cherokee	0.00	359.12	
4396.0	4654.2	Mississippian	0.00	359.12	
4415.0	4802.1	Target Line 4415.0' @ 0 VS W/0° Up Dip	0.00	359.12	

