

(316) 265-3000  
FAX: (316) 265-3455

1700 N. WATERFRONT PARKWAY  
BLDG. 600  
WICHITA, KANSAS 67206-5514

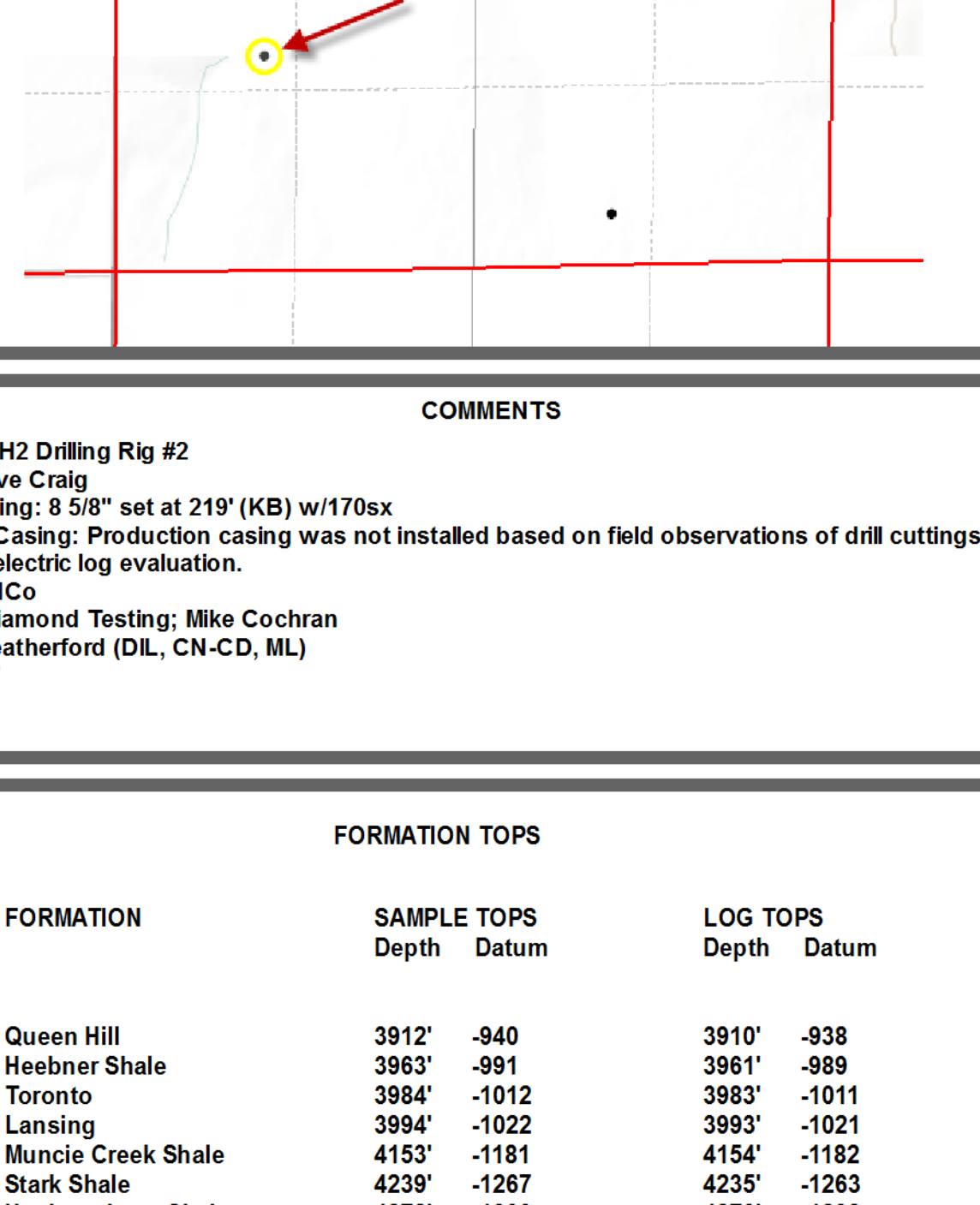
Scale 1:240 (5"=100') Imperial  
Measured Depth Log

<p><b>Well Name:</b> Hess 2-23  <b>Location:</b> 1567' FSL, 1050' FWL, 23-12s-32w, Logan County, Kansas  <b>License Number:</b> API: 15-109-21180  <b>Spud Date:</b> 05/28/2013  <b>Surface Coordinates:</b> Lat: 38.9935535                  Long: -100.8468444  <b>Bottom Hole Coordinates:</b> Vertical hole  <b>Ground Elevation (ft):</b> 2961'  <b>Logged Interval (ft):</b> 3800'  <b>Formation:</b> Mississippi at RTD  <b>Type of Drilling Fluid:</b> Chemical</p>	<p><b>Region:</b> Logan County  <b>Drilling Completed:</b> 06/08/2013  <b>K.E. Elevation (ft):</b> 2972'  <b>Total Depth (ft):</b> 4700'</p> <p style="text-align: center;">To: RTD</p>
---	---

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### GEOLOGIST

**Name:** Kent R. Matson  
**Company:** Matson Geological Services, LLC  
**Address:** 33300 W. 15th Street S.  
 Garden Plain, Kansas 67050  
 316-644-1975

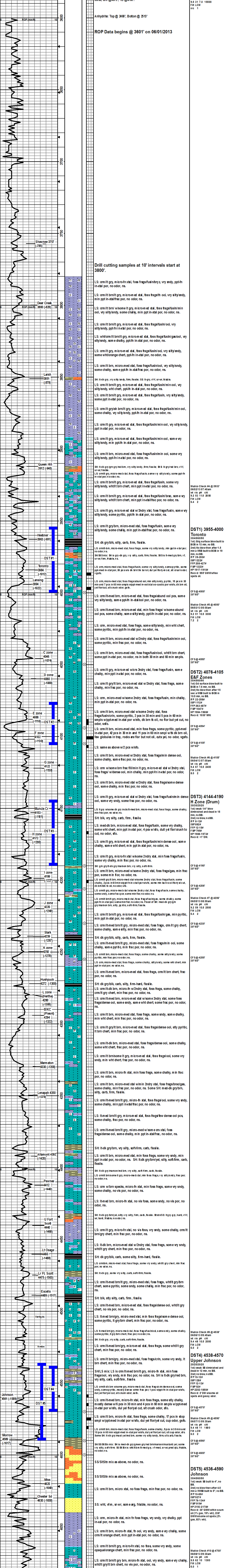


### COMMENTS

**Contractor:** H2 Drilling Rig #2  
**Pusher:** Steve Craig  
**Surface Casing:** 8 5/8" set at 219' (KB) w/170sx  
**Production Casing:** Production casing was not installed based on field observations of drill cuttings, DST results and electric log evaluation.  
**Mud by:** MudCo  
**DST's by:** Diamond Testing; Mike Cochran  
**Logs by:** Weatherford (DIL, CN-CD, ML)  
**RTD = 4700'**  
**LTD = 4700'**

### FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Queen Hill	3912'	-940	3910'	-938
Heebner Shale	3963'	-991	3961'	-989
Toronto	3984'	-1012	3983'	-1011
Lansing	3994'	-1022	3993'	-1021
Muncie Creek Shale	4153'	-1181	4154'	-1182
Stark Shale	4239'	-1267	4235'	-1263
Hushpuckney Shale	4272'	-1300	4270'	-1298
Marmaton	4330'	-1358	4328'	-1356
Upper Fort Scott	4440'	-1468	4437'	-1465
Little Osage Shale	4460'	-1488	4459'	-1487
Excello Shale	4489'	-1517	4486'	-1514
Johnson Zone	4561'	-1589	4559'	-1587
Morrow	4589'	-1617	4591'	-1619
Mississippian	4620'	-1648	4619'	-1647
RTD	4700'			
LTD			4700'	-1728



RTD 4700', -1728  
LTD 4700', -1728