

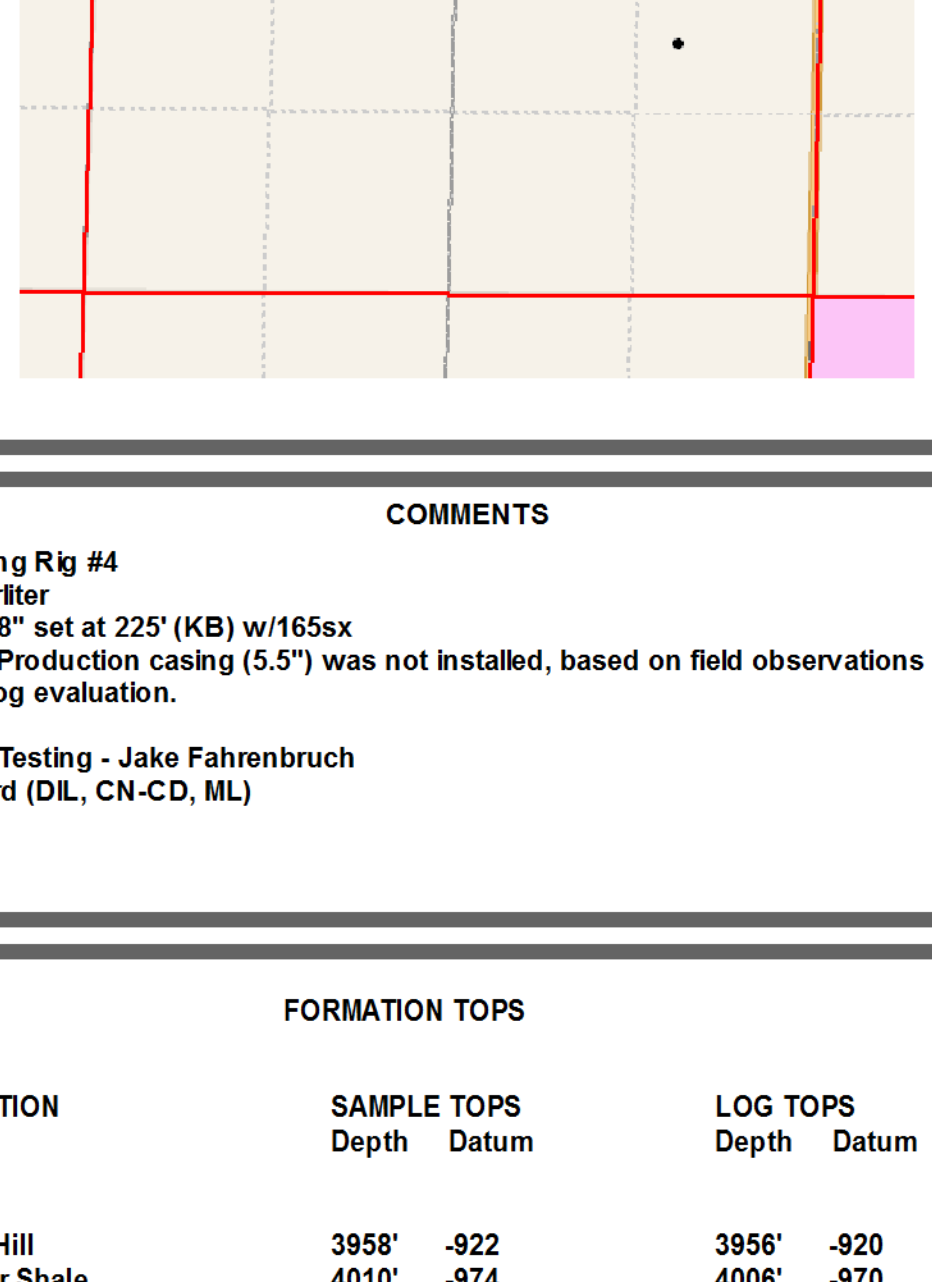
**Scale 1:240 (5"=100') Imperial
Measured Depth Log**

Well Name: Hess-Smith 1-22
Location: 2414' FNL, 1864' FWL, 22-12s-32w, Logan County, Kansas
License Number: API: 15-109-21178
Spud Date: 05/09/2013
Surface Coordinates: Lat: 38.9969402 Long: -100.8625563
Bottom Hole: Vertical hole
Coordinates:
Ground Elevation (ft): 3027' **K.B. Elevation (ft):** 3036'
Logged Interval (ft): 3800' **To:** RTD **Total Depth (ft):** 4735'
Formation: Mississippian at RTD
Type of Drilling Fluid: Chemical

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

GEOLOGIST

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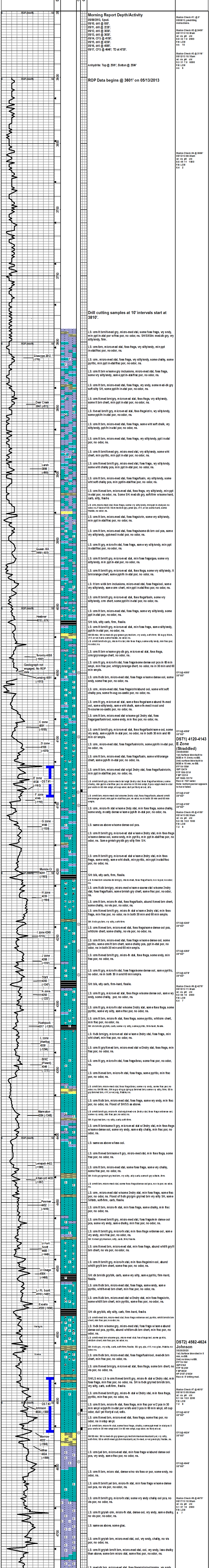


COMMENTS

Contractor: Val Drilling Rig #4
Pusher: Larry Hinderliter
Surface Casing: 8 5/8" set at 225' (KB) w/165x
Production Casing: Production casing (5.5") was not installed, based on field observations of drill cuttings, DST results and electric log evaluation.
Mud by: MudCo
DST's by: Diamond Testing - Jake Fahrenbruch
Logs by: Weatherford (DIL, CN-CD, ML)
RTD = 4735'
LTD = 4734'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Queen Hill	3958'	-922	3956'	-920
Heebner Shale	4010'	-974	4006'	-970
Toronto	4038'	-1002	4035'	-999
Lansing	4051'	-1015	4048'	-1012
Muncie Creek Shale	4201'	-1165	4200'	-1164
Stark Shale	4283'	-1247	4279'	-1243
Hushpuckney Shale	4317'	-1281	4313'	-1277
Marmaton	4384'	-1348	4379'	-1343
Upper Fort Scott	4485'	-1449	4482'	-1446
Little Osage Shale	4504'	-1468	4503'	-1467
Exello Shale	4530'	-1494	4528'	-1492
Johnson Zone	4604'	-1568	4602'	-1566
Morrow	4630'	-1594	4630'	-1594
Mississippian	4634'	-1598	4633'	-1597
RTD	4735'	-1699		
LTD			4734'	-1698



Drill cutting samples at 10' intervals start at 3810'

DST #1 4120-4143 E Zone (Straddled)

DST #2 4582-4624 Johnson

DST #3 4610-4617 Johnson

DST #4 4642-4647 Johnson

DST #5 4647-4650 Johnson

DST #6 4650-4653 Johnson

DST #7 4653-4656 Johnson

DST #8 4656-4659 Johnson

DST #9 4659-4662 Johnson

DST #10 4662-4665 Johnson

DST #11 4665-4668 Johnson

DST #12 4668-4671 Johnson

DST #13 4671-4674 Johnson

RTD 4735' - 1699
LTD 4734' - 1698