

HEADER

WellSight Systems
Scale 1:240 (5"-100') Imperial
Measured Depth Log

Well Name: #2 HESS 21C
Location: sec 21 - Twp 13S - Rge 31W Gove County
License Number: API 15-063-22,178
Spud Date: 19 FEB 2014
Surface Coordinates: 2,200 FSL & 1,625' FWL
Bottom Hole Coordinates: @ 4,670 RTD
Ground Elevation (ft): 2,873 K.B. Elevation (ft): 2,881
Logged Interval (ft): 3,500 To: 4,670 Total Depth (ft): 4,670
Formation: WABASSUNEE to MISSISSIPPIAN
Type of Drilling Fluid: CHEMICAL: displacer @ approximately 3,400
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Ritchie Exploration, Inc. license # 4767
Address: P.O. Box 783188
Wichita, Kansas 67278-3188

GEOLOGIST

Name: Ted Jochems, Jr.
Company: Consulting Geologist
Address: 212 North Market ste 517
Wichita, Kansas 67202

COMMENTS

CONTRACTOR: Discovery Drilling rig #1
MUD: Mud-Co (Red Atkins, Tyler Lang)
DRILL STEM TESTS: Superior Testers
ELECTRIC LOGS: Nabers Services (Jeff Luebbbers)
SURFACE CASING: 8.625" @ MISSISSIPPIAN
PRODUCTION CASING: 4.5" @ MISSISSIPPIAN

DRILL STEM TEST #1

3,348 - 3,970 30 - 45 - 45 - 60 LKC ZONE
COMMENT: one joint of drill collar above tool
ISIP: no blowback
FFP: weak blow built to 1"
FSIP: surface blowback at end of shut-in period
REC: 25' OCM (4% O, 96% DM)
25' total fluid
FP: 41 - 57# / 57-59#
SIP: 1,010 - 1,972#
HP: 1,964 - 1,887#
COMMENT: charts indicate fair permeability.

DRILL STEM TEST #2

3,969 - 4,022 30 - 45 - 45 - 60 LKC D-E-F zones
COMMENT: one joint of drill collar above tool
ISIP: no blowback
FFP: weak surface blowback at end of shut-in period
FSIP: good blow built to BOB
REC: 183' OCWIM (1% O, 79% M, 20% W)
71' very slightly oil spotted SW (100% W)
CHLORIDES: 42,000 ppm recovery (2,400 ppm system)
Rw: 0.2 ohms @ 56 degrees F
FP: 59 - 118# / 120 - 176#
SIP: 1,154 - 1,118#
SIP: 1,996 - 1,924#
BHT: 117 degrees F
COMMENT: shut-in curves indicate very good permeability.

DRILL STEM TEST #3

4,072 - 4,130 30 - 45 - 45 - 60 LKC H&I zones
COMMENT: one joint of drill collar above tool
ISIP: no blow built to 1.5"
FFP: weak blow built to 1"
FSIP: no blowback
REC: 28' DM (100% M)
28' total fluid
FP: 56 - 62# / 64 - 71#
SIP: 335 - 333#
BHT: 2,065 - 2,034#
BHT: 121 degrees F
COMMENT: shut-in curves indicate fair permeability

DRILL STEM TEST #4

4,128 - 4,158 30 - 45 - 45 - 60 LKC J zone
COMMENT: one joint of drill collar above tool
ISIP: weak surface blowback
FFP: fair blow built to 7.5"
FSIP: weak surface blowback
COMMENT: tester advises that blowback is probably due to very cold pipe warming downhole
REC: 135' muddy SW (20% M, 80% W)
135' total recovery
CHLORIDES: 32,000 ppm recovery (2,600 ppm system)
Rw: 0.23 ohms @ 55 degrees F
FP: 42 - 75# / 77 - 107#
SIP: 443 - 411#
HP: 2,003 - 1,960#
BHT: 110 degrees F
COMMENT: shut-in curves indicate good permeability

DRILL STEM TEST #5

4,160 - 4,226 30 - 45 - 45 - 60 LKC K & L zones
COMMENT: one joint of drill collar above tool
ISIP: no blowback
FFP: good blow built to BOB
FSIP: no blowback
REC: 387' MW w/ SO (25% M, 75% W)
387' total recovery
CHLORIDES: 65,000 ppm recovery (4,200 ppm system)
Rw: 0.133 ohms @ 56 degrees F
FP: 66 - 163# / 167 - 240#
SIP: 742 - 625#
HP: 2,084 - 2,075#
BHT: 113 degrees F
COMMENT: shut-in curves indicate fair to good permeability

DRILL STEM TEST #6

4,380 - 4,473 30 - 45 - 45 - 60 MYRICK STATION - FORT SCOTT - CHEROKEE LIMES
COMMENT: one joint of drill collar above tool
ISIP: weak blow built to 2.75"
FFP: no blowback
FSIP: no blowback
REC: 85' oily DM (15% O, 85% M)
85' total recovery
FP: 73 - 88# / 82 - 89#
SIP: 965 - 907#
HP: 2,125 - 2,185#
BHT: 119 degrees F
COMMENT: shut-in curves indicate very poor permeability

DRILL STEM TEST #7

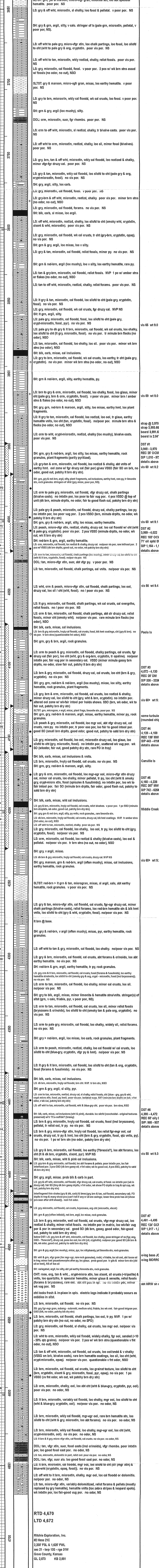
4,461 - 4,495 30 - 45 - 45 - 60 JOHNSON zone
COMMENT: one joint of drill collar above tool
ISIP: good blow built to BOB 9 min
FFP: good blow built to BOB / 6 min
FSIP: good blow built to 5" / 60 min
REC: 124' CGMO (10% G, 70% O, 20% M)
83' CGO (5% G, 95% O)
1,085' (100% G)
GRAVITY: 31 degrees API (corrected)
FP: 51 - 79# / 85 - 124#
SIP: 1,317 - 1,230#
HP: 2,278 - 2,242#
BHT: 117 degrees F
COMMENT: shut-in curves indicate very good permeability, possibly with a second pressure source kicking in halfway through both shut-in periods.

DAILY PENETRATION table with columns: DATE, DEPTH, REMARKS. Includes dates from 19 FEB 2014 to 02 MAR 2014.

MUD LOG table with columns: RPT DEPTH, WT, VIS, FIL, pH, PY, YP, GELS, CHLOR, SOLIDS, BTMS UP. Includes data for depths 2 to 11.

ROCK TYPES legend showing patterns for Coal, Congl, Dol, Gyp, Igne, Lmst, Meta, Mst, Salt, Shale, Shcol, Shst, Shst, Sst, Tll.

OTHER SYMBOLS legend showing symbols for OIL SHOW, Even, Spotted, Cues, Dead Gas, INTERVAL, Core, Dst, EVENT, Conn, Rft, Sidewall.



RTD 4,670
LTD 4,672
Ritchie Exploration, Inc.
#2 Hess 21C
2,200 FSL & 1,625' FWL
sec 21 - Twp 13S - Rge 31W
Gove County, Kansas
GL 2.873 KB 2.881