

# HESS OIL COMPANY

225 N. Market, Suite 300  
Wichita, Kansas 67202

(316) 263-2243

## GEOLOGICAL REPORT

JUDITH #1-9

910' FSL, 1760' FWL of

SECTION 9 - 30S - 15W

BARBER COUNTY, KANSAS

Commenced:	8-14-08	Elevations:	1940' GR, 1945' KB
Completed:	8-23-08	Surface Pipe:	8-5/8" @ 418' KB
Contractor:	Mallard J.V.	Production Pipe:	none

One foot drilling time was kept to the nearest  $\frac{1}{2}$  min. from 3700' to RTD. Ten foot drilling samples (wet & dry) were kept from 4500' to rotary total depth. The dry samples were turned in to the KGS sample library.

Following are sample tops, descriptions of zones of interest (including all shows of oil & gas), and the results of all drill stem tests.

<u>HEEBNER</u>	<u>3858</u>	<u>(-1913)</u>
<u>LANSING</u>	<u>4052</u>	<u>(-2107)</u>

RECEIVED  
KANSAS CORPORATION COMMISSION

OCT 08, 2008

CONSERVATION DIVISION  
WICHITA, KS

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Judith #2

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<u>BASE KANSAS CITY</u>	<u>4430</u>	<u>(-2485)</u>
<u>MASSEY</u>	<u>4485</u>	<u>(-2540)</u>
<u>CHEROKEE SHALE</u>	<u>4550</u>	<u>(-2605)</u>
<u>MAQUOKETA</u>	<u>4604</u>	<u>(-2659)</u>

4604-10' KB Various colored, sharp & weathered, cherts. Slight show of free oil in very poor "on edge" porosity, no odor, slight stain, and a very weak cut.

4610-20' KB Mostly white, some various colored, sharp and tripolitic, chert. Weak show of free oil in very poor "on edge" porosity, no odor, slight stain, and a slight cut.

4620-30' KB Clear, sharp, chert. Slight show of free oil in very poor "on edge" porosity, no odor, very slight stain, and a slight cut.

Note: only 4 pieces in tray !?!

<u>VIOLA</u>	<u>4647</u>	<u>(-2702)</u>
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4647-60' KB Tan. very finely crystalline, dense, dolomite. Pieces of various colored, sharp, chert with weak show of free oil in very poor "on edge" porosity. No odor, slight stain, and a weak cut.

<u>DRILL STEM TEST #1</u>	<u>4600 to 4660' KB</u>	<u>60' Anchor</u>
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Blow: Packer did not seat right away and drank some mud. 8½" blow in 3 min. -- same in 15 min.

Blew down & reshut top of drill pipe -- no blow. 2nd opening - no blow, flushed tool, few bubbles, no blc

Times: Open 45, Closed 45, Open 45, Closed 45.

Recovered: 250' Mud (No SW, No Oil)

Pressures:	IH 2310#	IF 121 - 144#	ISIP 695#
	FH 2276#	FF 141 - 151#	FSIP 206#

Note: No plugging action, valid test. Pulled 2x string weight to get loose, due to cuttings plugging off packer leak.

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VIOLA (cont. )

4660-4667' KB White, tripolitic, chert (with large holes). Fair show of free oil in fair vuggy & "on edge" porosity, no odor, fair stain, and a fair cut.

DRILL STEM TEST #2 4655 to 4675' KB 20' Anchor

Blow: Weak, building to 1½" in 60 min. 2nd opening - no blow.

Times: Open 60, Closed 45, Open 30, Closed 45.

Recovered: 40' Mud  
40' SW cut Mud (30% SW, 70% Mud)

Pressures: IH 2372# IF 35 - 55# ISIP 1169#  
FH 2350# FF 59 - 63# FSIP 1115#

4695- 4705' KB Cream to tan, fine to medium crystalline, dolomite. (some V.C. cherts with shows too.) Good show of light free oil (good flor.) in fair intercrystalline porosity, slight odor, good light stain, and a strong cut.

DRILL STEM TEST #3 4685 to 4705' KB 20' Anchor

Blow: Bottom of bucket in 24 min. 2nd opening - slow build to bottom of bucket in 35 min.

Times: Open 45, Closed 45, Open 45, Closed 90.

Recovered: 30' Gas 30' Oil & Mud cut SW (5% oil)  
500' Slightly Mud cut SW

Pressures: IH 2386# IF 36 - 186# ISIP 1265#  
FH 2306# FF 192 - 265# FSIP 1298#

4705-12' KB Cream to tan, fine to medium crystalline, dense, dolomite. Weak show of free oil in fair intercrystalline porosity, no odor, fair stain and a fair cut.

ROTARY TOTAL DEPTH 4730 (-2785)

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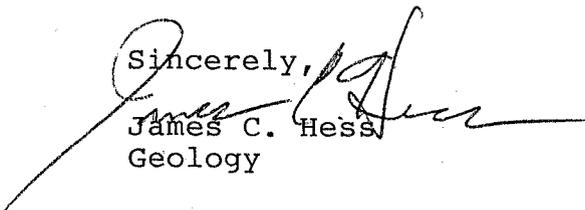
ROTARY TOTAL DEPTH (cont. )

It was decided to run a set of Dual Induction, Compensated Neutron Density logs. The logs showed all the sample tops were close to correct through the Cherokee Shale. The well lithology changed from it' neighbors at the point I expected the Viola to appear. On the logs - you could call the top of the Viola at 4600' or 4668' KB. It is clear that there is no dolomite porosity in the samples or on logs till 4668' KB.

To me the cross over in the section from 4600-68' KB is chert and a few loose sand grains (no clusters were seen). Therefore, I choose to call the above section Maquoketa and the Viola log top at 4668' KB. This area on the South end of the Pratt anticline has show itself to be very complex, with 100' or more sections of lithology intruding or disappearing in less than a mile.

I tested all shows, except the slight show above the Cherokee Shale, and did not find a comercial oil well. The Judith #2 was plugged on August 23, 2008.

Sincerely,



James C. Hess  
Geology