

21-19-24W

HESS OIL COMPANY

412 East Douglas, Suite One
Wichita, Kansas 67202

Computer Inventoried

(316) 263-2243

KCC
MAY 05 1992

GEOLOGICAL REPORT

EKEY #1

API 15-135-23598

NE NW SE of

SECTION 21 - 19S - 24W

NESS COUNTY, KANSAS

Commenced: 9-6-91

Elevations: 2305' GR,
2313' KB

Completed: 9-13-91

Surface Pipe: 200' of 8-5/8"

Contractor: Mallard J.V.

Production Pipe: 5½"

Production: Mississippian Dolomite

One foot drilling time was kept from 1560' to 1660' KB and from 3600' to total depth. Ten foot samples (wet & dry) were also kept from 3800' to total depth.

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

ANHYDRITE 1596 (+717)

BASE ANHYDRITE 1638 (+675)

RECEIVED
KANSAS CORPORATION COMMISSION

JAN 17 1992

CONSERVATION DIVISION
WICHITA, KS

HESS OIL COMPANY

412 East Douglas, Suite One
Wichita, Kansas 67202

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Ekey #1
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HEEBNER 3721 (-1408)

LANSING 3764 (-1451)

BASE KANSAS CITY 4091 (-1778)

MARMATON 4123 (-1810)

PAWNEE 4193 (-1880)

FORT SCOTT 4273 (-1960)

4291-95' KB

Tan, very finely crystalline, dense, fossiliferous, limestone. Slight show of free oil in poor intercrystalline porosity, no odor, a weak stain, and a fair cut.

CHEROKEE SHALE 4301 (-1988)

MISSISSIPPI 4373 (-2060)

4373-77' KB

White, very finely crystalline, dense, dolomite. Fair show of free oil in poor to very poor intercrystalline porosity, strong odor, fair stain, strong cut.

4378-82' KB

Tan, fine to medium crystalline, dense, dolomite. Great show of free oil in fair intercrystalline porosity, strong odor, good stain, and a very strong cut.

DRILL STEM TEST #1 4316' to 4382' KB 66' Anchor

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

Recovered: 160' Clean Oil
60' Slightly Mud Cut Oil
120' Muddy Oil

Pressures: IH 2278# IF 96-117# ISIP 1262#
FH 2194# FF 170-191# FSIP 1283#

RTD 4382 (-2069)

HESS OIL COMPANY

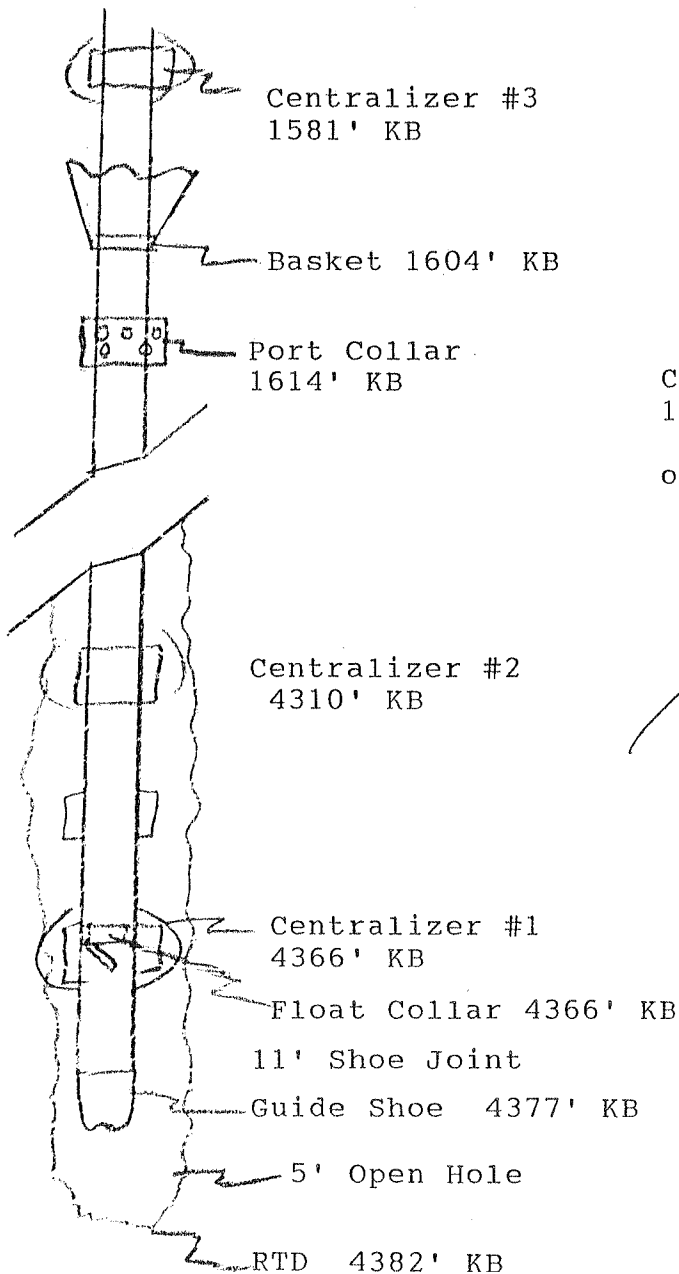
412 East Douglas, Suite One

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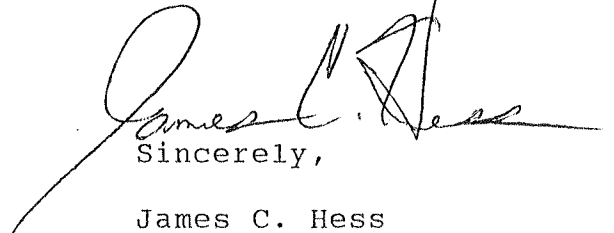
(316) 263-2243

Ekey #1
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It was decided to run 5½" casing to produce the Mississippian Dolomite. Since there was no specific reason for a Log --- no logs were run. A port collar was run for alternate 2 cementing in order to keep excessive pressure off of our oil zone. The well was cemented with 20 bbls salt flush and 100 sx of 60/40 poz mix cement. Plug was down at 12:45 am on 9-13-91.



Cemented with 20 bbls salt flush,
100 sx of 60/40 poz mix 2% gel.
& 10% salt. Plug down 12:45 am
on 9-13-91.


Sincerely,
James C. Hess
Geologist

CRUDE OIL TESTING, INC.

DATE: 12Sep91
TEST TICKET NUMBER: 5260
DST NUMBER: 1

Company: Hess Oil
Address: 412 E. Douglas Suite 1
City: Wichita
State: KS
Zip: 67202

Well Name: Ekey
Well Number: #1
Code: E1
Section: 21
Township: 19S
Range: 24W
County: Ness
State: KS

ENGINEERING DATA

Elevation:	2313	KB	Drill Pipe Length:	3976
Mud Viscosity:	50		Weight Pipe Length:	0
Mud Weight:	9.5		Drill Collar Length:	304
Water Loss:	6.8		Top Packer Depth:	4311
Type Mud:	Chemical		Bottom Packer Depth:	4316
Anchor Length:	66	Feet	Tool Joint Size:	4.5xH
Hole Size:	7 7/8		Test Tool Size:	5 1/2"
Casing Size:	8 5/8		Packer Size:	6 3/4"
Surface Choke:	3/4		Reversed Out:	No
Bottom Choke:	3/4		Recorder:	6
Extra Equip:	Safety joint		Recorder Number:	10994

REMARKS 10994-4373-19124
13248-4379-25115

FORMATION

Zone:	Miss.	Test Type:	Conventional
Interval:	4316 to 4382	Total Depth:	4382
I Open:	60	I Shut In:	30
F Open:	60	F Shut In:	45
Packer Set:	7:22 AM	Off Bottom:	10:40 AM
BLOW 1st Opening: Weak 1" blow increase to 6" good blow			
BLOW 2nd Opening: Weak 1" blow increase to 5" good blow			

RECOVERY

Total Feet:	340	
Recovered:	160 Feet Of	Clean oil
Recovered:	60 Feet Of	Sl. mud cut oil
Recovered:	120 Feet Of	Muddy oil

CALCULATED RECOVERY

Gas:	36.00 Feet	Gravity (Oil):	41
Oil:	241.00 Feet	Water Chlorides:	0 PPM
Water:	0.00 Feet	Test Area Temp:	125 F
Mud:	63.80 Feet	Mud Chlorides:	0 PPM

PRESSURE

	FIELD READING	OFFICE READING
(A) Initial Hydrostatic Mud	2278	2335 PSI
(B) First Initial Flow Pressure	96	101 PSI
(C) First Final Flow Pressure	117	125 PSI
(D) Initial Closed-In Pressure	1262	1286 PSI
(E) Second Initial Flow Pressure	170	187 PSI
(F) Second Final Flow Pressure	191	200 PSI
(G) Final Closed-In Pressure	1283	1319 PSI
(H) Final Hydrostatic Mud	2194	2257 PSI

PRESSURE BREAKDOWN

RECORDER NUMBER:	10994	DATE:	12Sep91
CLOCK NUMBER:	19124	TEST TICKET:	5260
		DST NUMBER:	1

First Flow		Initial Shut-In		Second Flow		Final Shut-In	
Minutes	Press.	Minutes	Press.	Minutes	Press.	Minutes	Press.
0	101	0	125	0	187	0	200
3	101	3	591	3	187	3	577
6	101	6	989	6	187	6	853
9	101	9	1136	9	187	9	1102
12	102	12	1195	12	187	12	1166
15	102	15	1218	15	187	15	1202
18	102	18	1235	18	189	18	1230
21	102	21	1251	21	189	21	1247
24	103	24	1265	24	190	24	1256
27	103	27	1276	27	190	27	1266
30	103	30	1286	30	192	30	1276
33	104			33	192	33	1284
36	104			36	194	36	1294
39	105			39	194	39	1302
42	108			42	197	42	1310
45	110			45	198	45	1319
48	111			48	199		
51	115			51	200		
54	122			54	200		
57	124			57	200		
60	125			60			

DATE: 12Sep91
 TEST TICKET: 5260
 DST NUMBER: 1

Well Name: Ekey
 Well Number: #1
 Code: E1
 Section: 21
 Township: 19S
 Range: 24W
 County: Ness
 State: KS

	Tool #	Tool	Length Feet	ID Inches	OD Inches
1	1	Drill Pipe 4.5"	3976.00	3.826	4.50
2	5	Drill Collar 6.25"	304.00	2.250	6.25
3	8	Circulating Sub	1.00	3.000	5.00
4	9	Shut-In Tool	5.45	0.870	5.00
5	10	Hydraulic Tool	5.60	1.000	5.00
6	13	Safety Joint	2.31	3.000	5.00
7	14	Packer	5.35	1.530	6.75
8	14	Packer	15.00	1.530	6.75
9	6	Anchor	6.00	2.750	5.00
10	7	Changeover Sub	5.00	3.000	5.00
11	6	Anchor	31.00	2.750	5.00
12	6	Anchor	20.00	2.750	5.00
13	15	Recorder Carrier	1.00	0.000	5.00
14	6	Anchor	3.00	2.750	5.00
15	16	Bull Plug	2.00	0.000	5.00
16	0	None	0.00	0.000	0.00
17	0	None	0.00	0.000	0.00
18	0	None	0.00	0.000	0.00
19	0	None	0.00	0.000	0.00
20	0	None	0.00	0.000	0.00

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Calculated Depth 4382.71

CALCULATED RECOVERY ANALYSIS

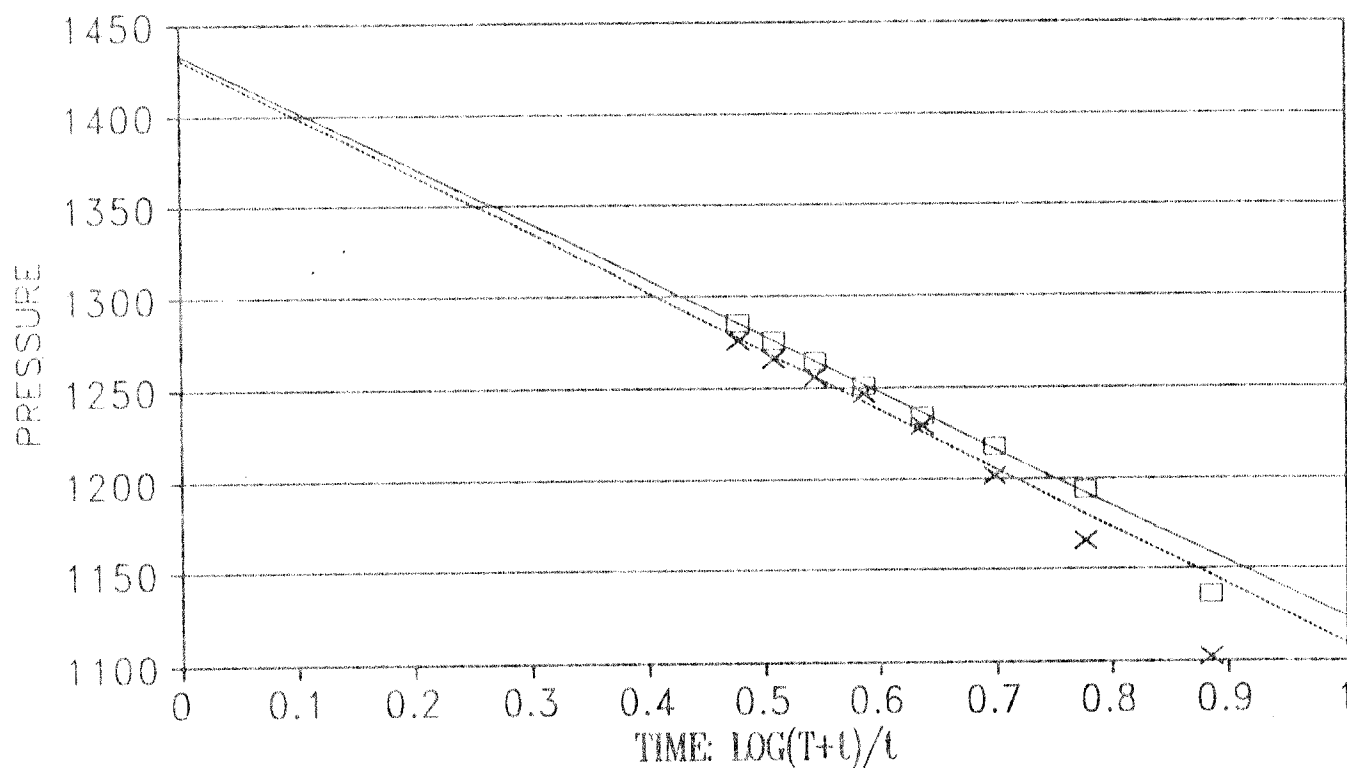
DATE: 12Sep91
 TEST TICKET: 5260
 DST NUMBER: 1

Total Feet	***** GAS %	***** Feet	***** OIL %	***** Feet	***** MUD %	***** Feet
40	0.00	0.00	100.00	40.00	0.00	0.00
60	0.00	0.00	100.00	60.00	0.00	0.00
60	10.00	6.00	90.00	54.00	0.00	0.00
60	0.00	0.00	55.00	33.00	45.00	27.00
60	10.00	6.00	60.00	36.00	30.00	18.00
60	40.00	24.00	30.00	18.00	30.00	18.00
0	0.00	0.00	0.00	0.00	0.00	0.00
0	0.00	0.00	0.00	0.00	0.00	0.00
0	0.00	0.00	0.00	0.00	0.00	0.00
0			0.00			
=====						
340	10.59	36.00	70.88	241.00	18.53	63.00
340						

**** WATER %	**** Feet	Chlorides (PPM)	Resistivity (Ohms)	Temp (Deg F)
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
=====				
0.00	0.00			

CRUDE OIL TESTING, INC.

TEST 5260 DST 1



□ Initial Shut-In × Final Shut-In

CRUDE OIL TESTING, INC.
TEST 5260 DST 1

