

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

API NO. 15- 185-01043 **ORIGINAL**
County Stafford
NW NE SE Sec. 26 Twp. 21S Rge. 12 X E

Operator: License # 03672
Name: HELM ENERGY COMPANY
Address 6104 E. 32nd Street
Suite 207

2,310 Feet from (S) (circle one) Line of Section
990 Feet from (E) (circle one) Line of Section

City/State/Zip Tulsa, OK 74135

Footages Calculated from Nearest Outside Section Corner:
NE, (SE) NW or SW STATE CORPORATION COMMISSION
Well # RECEIVED

Purchaser: KOCH Oil Company

Lease Name Widener
Field Name MAX

Operator Contact Person: John S. Helm

Producing Formation Wichita, Kansas
Elevation: Ground 1,820' 830'

Phone (918) 665 3740

Total Depth 3,752' PBDT 3,750'

Contractor: Name: Duke Drilling Company

Amount of Surface Pipe Set and Cemented at 233 Feet

License: 5929

Multiple Stage Cementing Collar Used? Yes X No

Wellsite Geologist: Karl Kriegh

If yes, show depth set _____ Feet

Designate Type of Completion
_____ New Well X Re-Entry _____ Workover

If Alternate II completion, cement circulated from 233

X Oil _____ SWD _____ S10W _____ Temp. Abd.
_____ Gas _____ ENHR _____ SIGW
_____ Dry _____ Other (Core, WSW, Expl., Cathodic, etc)

feet depth to Surface w/ 225 sx cmt.

If Workover/Re-Entry: old well info as follows:

Drilling Fluid Management Plan 6-10-93
(Data must be collected from the Reserve Pit)

Operator: Thomas H. Allen

Chloride content 35,000 ppm Fluid volume 1,200 bbls

Well Name: Widener #1

Dewatering method used Tank Trucks

Comp. Date 11-27-56 Old Total Depth 3,655

Location of fluid disposal if hauled offsite: _____

X Deepening _____ Re-perf. _____ Conv. to Inj/SWD
_____ Plug Back _____ PBDT
_____ Commingled _____ Docket No. _____
_____ Dual Completion _____ Docket No. _____
_____ Other (SWD or Inj?) _____ Docket No. _____

Operator Name _____

10-3-91 10-4-91 10-14-91
Spud Date Date Reached TD Completion Date
2-17-92

Lease Name _____ License No. _____

Quarter _____ Sec. _____ Twp. _____ S Rng. _____ E/W

County _____ Docket No. _____

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature [Signature]

Title President Date 6-23-92

Subscribed and sworn to before me this 23rd day of June 19 92.

Notary Public [Signature]

Date Commission Expires March 7, 1993

K.C.C. OFFICE USE ONLY
F _____ Letter of Confidentiality Attached
C ✓ Wireline Log Received
C ✓ Geologist Report Received
Distribution
✓ KCC _____ SWD/Rep _____ NGPA
_____ KGS _____ Plug _____ Other
(Specify)

For

HELM ENERGY CORPORATION
6104 E. 32nd St., Suite 208
Tulsa, Oklahoma 74135

A Geological Report
and Sample Description

on the

WIDENER # 1 Re-entry

NW/4 NE/4 SE/4 Section 26
T. 21 S., R. 12 W.
Stafford County, Kansas

COPY

ELEVATIONS: Kelly Bushing - - - - - 1830'
Ground Level - - - - - 1820'

CONTRACTOR: LOBO DRILLING COMPANY
GREAT BEND, KANSAS

WASHDOWN COMMENCED: 10/3/91
WASHDOWN COMPLETED: 10/4/91

CASING: Surface (existing): 233' 8 5/8"
Production: 3747' new 5 1/2"

MUD PROGRAM: Old salt mud in hole and gel
Mud-Co., Inc., Great Bend
Great Bend, KS

DRILL STEM TESTS
& CORES: None

ELECTRIC LOGS: HLS: Great Bend, KS
Dual Induction
Spectral Density/Neutron II
Microlog

TOTAL DEPTH: Driller: 3,750' (Drilled 95' new hole)
Logger: 3,752'

WELLSITE GEOLOGIST: Karl R. Kriegh
1036 Philtower Bldg.
Tulsa, Okla. 74103

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Wichita, Kansas

STRATIGRAPHY

Depths from Dual Induction Log.

Zone	Depth	Elevation
Anhydrite	606'	+1224'
Severy Shale	2782'	- 952'
Topeka Lime	2818'	- 988'
Heebner Shale	3115'	-1285'
Toronto Lime	3134'	-1304'
Douglas Shale	3147'	-1317'
Lansing Fm.	3266'	-1436'
Base of Kansas City	3502'	-1672'
Conglomerate Zone	3511'	-1681'
Viola (Chert)	3553'	-1723'
Simpson Shale	3595'	-1765'
Arbuckle Dolomite	3644'	-1814'
Driller's Total Depth	3750'	-1920'
Log Total Depth	3752'	-1922'

LITHOLOGY and HYDROCARBON SHOWS INTEGRATED with INDUCTION LOG

Samples were examined from 3,655' through total depth (3,7507). Overall sample quality was poor. There were abundant cavings from the shallower shales in the hole. (N.S. = no oil stain, N.F. = no fluorescence, L.F. = lighter fluid).

Arbuckle:

3,655' - 3,665', Red and green shale with traces of crystalline lime with bright fluorescence.

3,665' - 3,675', Red and green shale with beige to light grey lime with spotted stain, some pieces with bright fluorescence. No cut in L.F.

3,675' - 3,680', as above with some coarse crystalline lime.

3,680' - 3,690', Red shale and lime with few pieces honey colored chert, no fluorescence.

3,690' - 3,700' Fine to medium crystalline lime and dolomite with spotted stain and moderate yellow fluorescence, milky cut in L.F., abundant asphaltic stains.

3,700' - 3,720' Red and green shale with tan crystalline dolomite with asphaltic stain.

3,720' - 3,735' Vugular dolomite and medium crystalline lime with asphaltic stain, brown dense dolomite, some patchy dull fluorescence.

3,735' - 3,750' White crystalline lime and tan dolomite, N.S., abundant white chalk.

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COMPLETION RECOMMENDATIONS

This well was re-entered for the purpose of testing the Viola Chert. For evaluation, modern logs of this well are compared to logs from the recently drilled Sittner #3, 1/2 mile south. The rugosity of the hole across the Viola chert interval throws a degree of uncertainty on the porosity reading there (by means of the compensation curve). There also is some porosity compensation indicated in the Sittner #3. Overall, the porosity in the Widener #1 is judged to be nearly equal to, if not better, than the porosity in the Sittner #3. Thus, porosity ranges from 16% in the top to 20-25% near the base. Resistivity is nearly constant across the interval with a low of 6 ohms in the top to a low of 8 ohms in the bottom. This is lower than the 20 ohms in the top of the Viola in the Sittner #3, however, it is only one ohm less than in the base.

Since the Sittner #3 continues to produce oil without water, an appropriate R_w factor may well be .05. Using this R_w , water saturations in the Sittner #3 are at their greatest with 36% near the top (3508-10') and 37% within the bottom (3538-40').

Using the same R_w (.05) and uncorrected porosities, the following saltwater calculations result for the Widener #1 Re-entry:

Selected Log Interval	Ohms	Porosity	Saltwater Saturation
3554 - 56	14	16	37
3561 - 63	5 3/4	23	41
3572 - 74	8	24	33
3576 - 78	6 1/2	26	34
3586 - 88	8	28	28

Lessor (corrected) porosities would result in higher water saturations. The base appears to harbor the best looking intervals. This is highlighted by the fact that resistivity remains constant as the porosity increases (apparently) towards the base. This corresponds to the better show described in the old sample report on the original well (11/56). The recovery of 20' of heavily oil cut mud upon a DST, also on the original well, gives a strong clue as to formation content. It has occurred to the author that the actual oil bearing interval may be the basal portion of the chert, as was also suggested by the samples of the Sittner #3.

My recommendation is to perforate and fracture the interval 3,554' - 3,594', as was done in the Sittner #3.

Karl R. Kriegh

Karl R. Kriegh
Consulting Geologist

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