

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

API NO. 15- 083-21446 0000

County Hodgeman County, Kansas

NW NW Sec. 14 Twp. 24S Rge. 23 ~~XX~~^E

660 Feet from SW (circle one) Line of Section

660 Feet from E (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or SW (circle one)

Lease Name Schaffer Well # 4-14

Field Name Wildcat

Producing Formation _____

Elevation: Ground 2352' KB 2361'

Total Depth 4750' PSTD 4700'

Amount of Surface Pipe Set and Cemented at 350 Feet

Multiple Stage Cementing Collar Used? Yes XX No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cnt.

Drilling Fluid Management Plan D+A, 8-17-98 USC
(Data must be collected from the Reserve Pit)

8-11-97

Chloride content 16000 ppm Fluid volume 1060 bbls

Desulfuring method used Evaporation

Location of fluid disposal if hauled offsite: NW

Operator Name _____

Lease Name AUG 8 License No. _____

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

County _____ Docket No. _____

Operator: License # 32110

Name: Duncan Oil Properties, Inc.

Address 100 Park Ave. - Suite 1200

City/State/Zip Oklahoma City, OK 73102

Purchaser: _____

Operator Contact Person: Jeudi Hamilton

Phone (405) 272-1837

Contractor: Name: Duke Drilling Co., Inc.

License: 5929

Wellsite Geologist: Bob Lewellyn

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

_____ Oil _____ SWD _____ SIGW _____ Temp. Abd.

_____ Gas _____ EHHR _____ SIGW

XX Dry _____ Other (Core, VSW, Expl., Cathodic, etc)

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

RELEASED

Operator: _____

Well Name: SEP 25 1998

Comp. Date _____ Old Total Depth _____

_____ Deepening _____ Re-perf. _____ Conv. to Inj/SWD

_____ Plug Back _____ PSTD

_____ Cemented _____ Docket No. _____

_____ Dual Completion _____ Docket No. _____

_____ Other (SWD or Inj) _____ Docket No. _____

07-14-97 07-23-97 07-23-97

Spud Date Date Reached TD Completion Date

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 Richard E. Humphrey

Title Drlg./Production Manager Date _____

Subscribed and sworn to before me this 8 day of August 19 97.

Notary Public Debra Koch

Date Commission Expires April 28, 2001

K.C.C. OFFICE USE ONLY		
F	<input checked="" type="checkbox"/>	Letter of Confidentiality Attached
C	<input checked="" type="checkbox"/>	Wireline Log Received
C	<input checked="" type="checkbox"/>	Geologist Report Received
Distribution		
<input checked="" type="checkbox"/>	KCC	_____ SWD/Rep
_____	KGS	_____ Plug
_____	_____	_____ NGPA
_____	_____	_____ Other
(Specify)		

Operator JAM Duncan Oil Properties, Inc.

Lease Name Schaffer

Well # 4-14

Sec. 14 Twp. 24S Rge. 23

East

County Hodgeman County, Kansas

West

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken Yes No
(Attach Additional Sheets.) ** See Attached

Samples Sent to Geological Survey Yes No

Cores Taken Yes No

Electric Log Run Yes No
(Submit Copy.)

List All E.Logs Run:

- Array Induction, GR
- Density Neutron-PE
- BHC, Sonic, Micro-Resistivity

Log Formation (Top), Depth and Datum Sample

Name	Top	Datum
KB 2361'		
Stone Corral	1515	(+846)
Heebner Shale	3942	(-1581)
Lansing Group	4028	(-1667)
Kansas City	4210	(-1849)
Marmaton Lime	4437	(-2076)
Fort Scott	4576	(-2215)
Cherokee Shale	4598	(-2237)
Penn Conglom.	4654	(-2293)
Miss Lime	4665	(-2304)
Miss Dolomite	4669	(-2308)

CASING RECORD

New Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4"	8-5/8"	23#	350'	60/40 Poz	230	3%cc 2%gel

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No

Date of First, Resumed Production, SWD or Inj.	Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
<u>D+A</u>	

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	<u>N-A</u>				

Disposition of Gas:

Vented Sold Used on Lease
(If vented, submit ACO-18.)

METHOD OF COMPLETION

Open Hole Perf. Dually Comp. Commingled
 Other (Specify) _____

Production Interval _____

CONFIDENTIAL

ORIGINAL

DST REPORT

15-083-21446-0000

GENERAL INFORMATION

DATE : 7/21/97	TICKET : 21778
CUSTOMER : DUNCAN OIL PROPERTIES INC	LEASE : SCHAFFER
WELL : #4-14 TEST: 1	GEOLOGIST: JKC
ELEVATION: 2345 GL	FORMATION: MISSISSIPPI
SECTION : 14	TOWNSHIP : 24S
RANGE : 23W	STATE : KS
GAUGE SN#: 13551	CLOCK : 12
COUNTY: HODGEMAN	
RANGE : 4150	

WELL INFORMATION

PERFORATION INTERVAL FROM: 4646.00 ft TO: 4672.00 ft TVD: 4672.0 ft
 DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
 DEPTH OF RECORDERS: 4649.0 ft 4652.0 ft
 TEMPERATURE: 124.0

DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
 WEIGHT PIPE LENGTH : 0.0 ft I.D.: AUG 8 0.000 in
 DRILL PIPE LENGTH : 4624.0 ft I.D.: 3.800 in
 TEST TOOL LENGTH : 22.0 ft TOOL SIZE CONFIDENTIAL 5.500 in
 ANCHOR LENGTH : 26.0 ft ANCHOR SIZE: 5.500 in
 SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
 MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
 PACKER DEPTH: 4641.0 ft SIZE: 6.630 in
 PACKER DEPTH: 4646.0 ft SIZE: 6.630 in
 PACKER DEPTH: 0.0 ft SIZE: 0.000 in
 PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE DRLG RIG 4	VISCOSITY : 53.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 11.200 cc
WEIGHT : 9.300 ppg	SERIAL NUMBER:
CHLORIDES : 3000 ppm	REVERSED OUT?: NO
JARS-MAKE :	
DID WELL FLOW?: NO	

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW OFF BOTTOM OF BUCKET IN 26 MINUTES. FINAL FLOW PERIOD STRONG BLOW OFF BOTTOM OF BUCKET IN 25 MINUTES.

RELEASED

SEP 25 1998

FROM CONFIDENTIAL

OVER

15-083-21446-0000
AUG 11 A 1:17
S/S
CONFIDENTIAL

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	156 FT GAS ABOVE FLUID
70.0	100.0	0.0	0.0	0.0	CLEAN OIL
112.0	4.0	0.0	36.0	60.0	OIL CUT MUD
248.0	0.0	0.0	60.0	40.0	MUDDY WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 31000 PPM

RATE INFORMATION

OIL VOLUME: 1.0447 STB
 GAS VOLUME: 0.0000 SCF
 MUD VOLUME: 2.3340 STB
 WATER VOLUME: 2.6527 STB
 TOTAL FLUID : 6.0313 STB

TOTAL FLOW TIME: 120.0000 min.
 AVERAGE OIL RATE: 13.6673 STB/D
 AVERAGE WATER RATE: 58.7087 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2341.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	62.00	73.00
INITIAL SHUT-IN	45.00		1243.00
FINAL FLOW	90.00	115.00	198.00
FINAL SHUT-IN	120.00		1275.00

FINAL HYDROSTATIC PRESSURE: 2279.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2328.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	68.35	78.83
INITIAL SHUT-IN	45.00		1243.70
FINAL FLOW	90.00	128.97	201.41
FINAL SHUT-IN	120.00		1270.90

FINAL HYDROSTATIC PRESSURE: 2292.00

REPAID

400 20 912

DATE 30 4 80 10 14

ALLIED CEMENTING CO., INC. 4598

CONFIDENTIAL

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

ORIGINAL SERVICE POINT: Miss City

DATE <u>7-14-97</u>	SEC. <u>14</u>	TWP. <u>24</u>	RANGE <u>24</u>	CALLED OUT <u>7:30 AM</u>	ON LOCATION <u>11:00 AM</u>	JOB START <u>3:15 PM</u>	JOB FINISH <u>4:00 PM</u>
LEASE <u>Schaffer</u>		WELL# <u>4-14</u>	LOCATION <u>Letmore 9s 4E 1N.</u>			COUNTY <u>Hodgeman</u>	STATE <u>KS</u>

OLD OR NEW (Circle one)

CONTRACTOR Duke Donly #4

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 350.

CASING SIZE 8 3/8 DEPTH 350.

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15 40

PERFS.

OWNER Same

AMOUNT ORDERED

COMMON	<u>138</u>	@	<u>6.10</u>	<u>841.80</u>
POZMIX	<u>92</u>	@	<u>3.15</u>	<u>289.80</u>
GEL	<u>4</u>	@	<u>9.50</u>	<u>38.00</u>
CHLORIDE	<u>7</u>	@	<u>28.00</u>	<u>196.00</u>
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>230</u>	@	<u>1.05</u>	<u>241.50</u>
MILEAGE	<u>37</u>			<u>340.40</u>

RECEIVED
KANSAS CEMENT CO. INC.

EQUIPMENT AUG 8

PUMP TRUCK CEMENTER J. Weyhous

224 HELPER B. Norton

BULK TRUCK

222 DRIVER B. White

BULK TRUCK

DRIVER

RELEASED SEP 25 1998 SERVICE TOTAL \$1947.50

REMARKS:

circ 8 3/8 cas mix 230 6/40

3% cc 2% del Deep 194 BBL

Plug Down 4:00 pm. cement

did circ. ✓

Thanks

FROM CONFIDENTIAL

DEPTH OF JOB	<u>350</u>		
PUMP TRUCK CHARGE 0-300'			<u>445.00</u>
EXTRA FOOTAGE 50'	@	<u>.41</u>	<u>20.50</u>
MILEAGE 37	@	<u>2.85</u>	<u>105.45</u>
PLUG <u>Top wood</u>	@	<u>45.00</u>	<u>45.00</u>
	@		
	@		

TOTAL \$615.95

CHARGE TO: Duncan Oil Prop.

STREET 100 Park Ave Supt 1200

CITY OK City STATE OK ZIP 73120

FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		

TOTAL

TAX -0-

TOTAL CHARGE \$2563.45

DISCOUNT 384.52 IF PAID IN 30 DAYS

Net \$2178.93

To Allied Cementing Co., Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

SIGNATURE Rinky Popp

ALLIED CEMENTING CO., INC.

6095

CONFIDENTIAL

15-083-21446-0006
SERVICE POINT:

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

ORIGINAL

Ness City

DATE <u>7-23-97</u>	SEC. <u>14</u>	TWP. <u>24</u>	RANGE <u>23</u>	CALLED OUT <u>10:00 AM</u>	ON LOCATION <u>3:00 pm</u>	JOB START <u>3:30 pm</u>	JOB FINISH <u>5:15 pm</u>
LEASE <u>Schlager</u>	WELL # <u>4-14</u>	LOCATION <u>Lotmore 10545 IN</u>			COUNTY <u>Woods</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)				NCC			

CONTRACTOR Oute Orls #4

TYPE OF JOB Rotary Plug

HOLE SIZE 7 7/8 T.D. 4750

CASING SIZE 8 7/8 DEPTH 350

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

OWNER Same

CONFIDENTIAL

AMOUNT ORDERED

205 6 9/40 6 9/40 1/4 #7 1/2 seal

COMMON	<u>123</u>	@	<u>6.10</u>	<u>750.30</u>
POZMIX	<u>82</u>	@	<u>3.75</u>	<u>258.30</u>
GEL	<u>11</u>	@	<u>9.50</u>	<u>104.50</u>
CHLORIDE		@		
<u>Flu Seal</u>	<u>51 #</u>	@	<u>1.15</u>	<u>58.65</u>
		@		
		@		
		@		
		@		
HANDLING	<u>205</u>	@	<u>1.05</u>	<u>215.25</u>
MILEAGE	<u>37</u>			<u>303.40</u>

EQUIPMENT

PUMP TRUCK CEMENTER J. Williams

224 HELPER B. Norton

BULK TRUCK

260 DRIVER D. Walls

BULK TRUCK

DRIVER

RELEASED TOTAL 1690.40

REMARKS:

SEP 25 1998

SERVICE

50 x 9 1560

80 x 6 420

50 x 6 350

10 x 6 40'

15 x RH

FROM CONFIDENTIAL

DEPTH OF JOB	<u>1560</u>		
PUMP TRUCK CHARGE			<u>445.00</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>37</u>	@	<u>2.85</u> <u>105.45</u>
PLUG <u>Top Wood</u>		@	<u>23.00</u> <u>23.00</u>
<u>Dry Hole</u>		@	
		@	

TOTAL \$ 573.45

CHARGE TO: Duncan Oil Prop.

STREET 100 Park Ave. Suite 1200

CITY OK City STATE OK ZIP 73120

FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

TOTAL

To Allied Cementing Co., Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

TAX - 0 -

TOTAL CHARGE \$ 2263.85

DISCOUNT \$ 339.58 IF PAID IN 30 DAYS

Net \$ 1924.27

SIGNATURE Barney Papp

RECEIVED
KANSAS CEMENT CO.
AUG 11 1997

ROBERT C. LEWELLYN

Petroleum Geologist

P. O. Box 2608

Wichita, Kansas 67201-2608

316-744-2567

CONFIDENTIAL

ORIGINAL

GEOLOGICAL REPORT

1500
AUG 8
CONFIDENTIAL

Duncan Oil Properties, Inc.
No. 4-14 Schaffer
NW NW Sec. 14-24S-23W
Hodgeman County, Kansas

15-083-21446

CONTRACTOR:	Duke Drilling Company, Inc.	RELEASED
SPUDDED:	July 14, 1997	SEP 25 1998
DRILLING COMPLETED:	July 23, 1997	FROM CONFIDENTIAL
SURFACE CASING:	8 5/8" @ 350/KBM	
ELECTRIC LOGS:	BPS - IES, MLS, BCA, PDS/CDS	
ELEVATIONS:	2361 KB 2360 DF 2352 GL	

FORMATION TOPS: (Electric Log)

Stone Corral Anhydrite	1515 (+ 846)
Topeka Limestone	3579 (-1218)
Heebner Shale	3942 (-1581)
Lansing Group	4028 (-1667)
Kansas City Group	4210 (-1849)
Stark Shale	4316 (-1955)
Base Kansas City Group	4424 (-2063)
Marmaton (Lenapah Limestone)	4437 (-2076)
Altamont Limestone	4470 (-2109)
Pawnee Limestone	4514 (-2153)
Fort Scott Limestone	4576 (-2215)
Cherokee Shale	4598 (-2237)
Base Cherokee Limestone	4650 (-2289)

Pennsylvanian Conglomerate	4654 (-2293)
Mississippi Limestone	4665 (-2304)
Mississippi Dolomite	4669 (-2308)
Electric Log Total Depth	4752 (-2391)

Samples were examined microscopically from 3600 feet to Rotary Total Depth (4750). Samples from potentially productive zones were examined wet and dry, viewed under a fluoroscope and checked for oil cut. Zones having shows of oil and or gas were drill stem tested. A gas detector unit from MBC Logging was in service from 4000 feet to Rotary Total Depth and any positive gas detector readings will be noted below in the zones in which they occurred. Following is a description of zones of interest, oil and gas shows, tests, etc. For a complete lithological description of all formations refer to the attached sample log.

LANSING-KANSAS CITY ZONES:

4055-4062 (B Zone) Limestone, cream, finely crystalline, fossiliferous and partly oolitic, poor intercrystalline porosity, no show of oil, considerable chalky limestone, some buff, opaque chert.

4082-4090 (C Zone) Limestone, cream to buff, finely crystalline and fossiliferous, poor to fair intercrystalline and fossil-cast porosity, no show of oil.

4128-4138 (F Zone) Limestone, cream, finely crystalline and chalky, trace of poor intercrystalline porosity, no show of oil.

4156-4190 (G Zone) Limestone, cream to buff, finely crystalline and slightly fossiliferous, poor to fair scattered vugular and intercrystalline porosity with no show of oil, traces of gilsonite in lower portion of zone, considerable chalky limestone in this interval.

4270-4276 (J Zone) Limestone, buff, finely crystalline and finely oolitic, fair to good ooliticastic porosity, no show of oil.

4278-4298 (J2 Zone) Limestone, buff, finely crystalline and finely oolitic, fair to good ooliticastic porosity, no show of oil.

4307-4312 (J3 Zone) Limestone, buff, finely crystalline and oolitic, poor to fair ooliticastic porosity, no show of oil.

4328-4337 (K Zone) Limestone, buff, some cream, finely crystalline with trace of medium crystalline, slightly fossiliferous in part, trace of poor vugular porosity, some poor intercrystalline porosity, no show of oil.

MARMATON ZONES:

4576-4598 (Fort Scott Limestone) Limestone, buff to tan to gray mottled, dense to sub-lithographic, some finely crystalline and fossiliferous, some dense-oolitic, some cream chalky, zone is mostly tight, no show of oil. This zone exhibited a substantial positive gas reading on the gas detector. In the absence of any shows or porosity in this section an investigation revealed that diesel fuel from the rig floor had been washed into the mud during rig cleanup procedures.

CONGLOMERATE ZONES:

4654-4665 White to cream fresh chert to various and varicolored (orange, pink, rose, etc.) fresh cherts with various and varicolored shales. Zone contained little or no weathered chert and is lacking in sufficient weathered chert to have reservoir quality. Microlog exhibited little or no porosity and the gamma ray curve indicates this zone to be to shaly to yield fluid.

MISSISSIPPIAN ZONES:

4669-4670 Dolomite, buff to tan, fine to medium crystalline and fossiliferous (bryzoan), fair intercrystalline porosity, good spotted to saturated stain, fair show of free oil, good odor, fluorescence and cut.

4670-4671 Dolomite, buff to tan, fine to medium crystalline and fossiliferous (bryzoan with crinoid stems and fragmental brachiopods), good vugular and fossil-cast porosity, some fair intercrystalline porosity, good spotted to saturated stain, good odor, fluorescence and cut, trace (3%) of barren porosity.

The top foot of the dolomite did not yield a positive gas detector reading. After drilling and circulating the second foot a positive gas detector reading of approximately 44 units was observed.

A difference in drillers measurements and electric log measurements make the following DST appear that the top three feet of the dolomite was tested. However, it is believed that only two feet of dolomite had been drilled at the time the test was run.

DRILL STEM TEST NO. 1

4646-4672; Open 30 minutes, shut in 45 minutes, open 90 minutes, shut in 120 minutes; Initial Flow - strong blow, off bottom of bucket in 26 minutes; Second Flow - strong blow, off bottom of bucket in 28 minutes. Recovered 156 feet of gas in drill pipe. 430 feet total fluid recovery = 70 feet of clean oil, 112 feet of Oil Cut Mud (4% oil, 36% water, 60% mud), and 248 feet of muddy water (31,000 ppm - drilling mud = 3,000 ppm). ISIP 1243# FSIP 1275# IFP 62-73# FFP 115-198# IHP2341# FHP2279# BHT 124 degrees.

4671-4677 After the DST it was necessary to drill out a bridge in the middle of the conglomerate section and ream 20 feet to bottom. The 4680, 4690, and 4700 samples were mostly conglomerate cavings. What dolomite was present appeared to be much like the top two feet described above..

4677-4681 This section is shale, gray to greenish gray, drab.

4681-4702 Dolomite, fine to medium crystalline, trace of coarsely crystalline, bryzoan, scattered fair to good vugular porosity with some dark, heavy free oil. Some dark spotted stain, abundant barren porosity in section, interval still carrying faint odor.

4702-4710 Dolomite, fine to medium crystalline with poor scattered intercrystalline porosity, some poor vugular porosity, trace poor spotted stain, faint odor. This zone is tight on the electric log.

4710-4750 Dolomite, gray to buff, medium to coarse crystalline grading to abundant amorphous, partly chalky dolomite. Some good vugular porosity, mostly barren, grading to poor porosity with scattered large isolated vugs. Some poor spotted dark to dead stain with trace of black stringy free oil, faint odor. Lower portion contains abundant buff chert, oolitic and spicular, opaque, fresh.

4750 ROTARY TOTAL DEPTH

RECOMMENDATIONS:

Sample examination, drill stem testing, electric logging, and a gas detector unit revealed no zones of potential commercial production of oil or gas. After consideration of the foregoing by all parties involved it was decided to plug and abandon the No. 4-14 Schaffer as a dry hole.

Respectfully submitted,

Robert C. Lewellyn
Petroleum Geologist

RCL:me