

GEOLOGICAL REPORT

Wayne Lebsack Petroleum Geologist 603 S. Douglas Lyons, Kansas 67554	Steve E. McClain Geologist P.O. Box 8731 Pratt, Kansas 67124
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Lebsack Oil Production, Inc.

Foster 3-18
 660'FNL, 1420'FWL
 Sec. 18 21s-34w
 Finney County, Kansas
 API # 15-055-21,034

Contractor Abercrombie RTD, Inc., Rig #8

Date Commenced October 24, 1991, Spud at 10:30 am

Date Rotary Completed October 31, 1991 at 11:38 am

Total Depth RTD = 4980, LTD = 4976'

Casing Record Surface - 8 5/8" set at 253' KB
 Cemented with 160 sx.
 ... Lower ... Production - 4 1/2 set at 4967' KB
 Cemented with 85 sx.
 ... Upper ... Production - DV tool set 2175' KB
 Cemented with 300 sx..

Elevations Ground Level = 3054'
 Kelly Bushing = 3059'
 All Measurements taken from KB

Drilling Time Logged 2100' to 2200' Anhydrite
 2500' to 2900' Chase Group
 3700' to 4980' RTD

Samples Logged 2500' to 2900' 20' samples
 3800' to 4980' 10' samples

Open Hole Logs HLS: Spectral Density Dual Spaced
 Neutron II Log, Dual Induction
 Laterolog, Microlog, Welcal Log.

Cased Hole Log Halliburton Bond Log

Gas Detector None used.

Mud Company MUDCO, Inc. (Chemical Mud)

GEOLOGICAL FORMATION TOPS

FORMATION TOP	ELECTRIC LOG DEPTH	DRILLING TIME DEPTH	SUB-SEA DEPTH (E-LOG)
Anhydrite Top	2159	2161	+900
Anhydrite Base	2172	2175	+887
Heebner Shale	3887	3890	-828
Lansing	3939	3941	-880
Shark Shale	4326	4331	-1267
BKC	4416	4420	-1357
Marmaton	4452	4454	-1393
Cherokee Shale	4593	4582	-1534
Morrow Shale	4809	4802	-1750
Morrow Sandstone Upper	4846	4849	-1787
Morrow Sandstone Lower	4861	4865	-1802
Mississippian	4874	4874	-1815
Total Depth	4976	4980	-1917

INTERVALS CONTAINING HYDROCARBONS

Lansing	4203' to 4206'	3' thick	Oil
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Samples from this limestone were buff, medium crystalline and had a fossil fragment framework. Fair to poor interfragment porosity was visible. A slight show of oil was noted in the wet samples. The oil was not very mobile. Good odor was noted in the 4220' cup. Slight fluorescence was noted. The samples appeared tight. This zone was tested in the Foster 1-18 and was wet.

Log analysis calculates the following averages:

Porosity = .10
 Deep Induction (ohms) .. = 27 ohm-m
 Water Saturation = .45

Upper Morrow Sandstone	4846' to 4860'	14' thick	Oil
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Samples from this sandstone were clear and very fine grained, well sorted and very friable. Very few samples were noted in the sample cups, but the few clusters that were found contained a slight show of dark oil. No odor was noted and no fluorescence was seen in the wet samples. This sandstone is very friable and most of the samples must flow out to the pits as individual sand grains. This zone was tested by DST #2.

Log analysis calculates the following averages:

Porosity = .23
 Deep Induction (ohms) .. = 3.5 ohm-m
 Water Saturation = .49 (Rw=.044 from 1-18 H₂O)

DRILL STEM TEST RESULTS

DST No. 1 (Straddle after Logging) (MISRUN)			
Interval: 4790' to 4880' (90' of anchor)			
Intervals tested: Morrow Upper and Lower Sandstone			
Period	Time	Pressure	Description
IHSP		2403	
IFP	30	839-839*	Weak 1/4" blow decreasing.
ISIP	30	1020	Building slightly.
FFP	15	839-839*	Flush tool. No help.
FSIP	45	1020	Building slightly.
FHSP		2383	BHT = 112 deg. F.
Recovery:	1680' of Drilling mud. (No shows)		
	* The charts showed that the 1680' of drilling mud was already in the drill pipe when the DST tool was opened. It was found that the tool had a broken mandrel that allowed fluid to enter while going in the hole. This test was a MISRUN. The shut-in pressures recorded might be from the lower Morrow sandstone.		

DRILL STEM TEST RESULTS

DST No. 2 (Straddle after Logging)			
Interval: 4785' to 4865' (80' of anchor)			
Intervals tested: Morrow Upper Sandstone			
Period	Time	Pressure	Description
IHSP		2523	
IFP	30	114-166	Blow increasing to 2".
ISIP	60	589	Building slightly.
FFP	30	187-228	Steady surface blow.
FSIP	60	559	Building slightly.
FHSP		2403	BHT = 116 deg. F.
Recovery:	390' of fluid - 10% oil, 90% Mud, 0% water.		

**FOSTER 3-18
LOG STRUCTURAL COMPARISON**

FORMATION TOPS	Foster 3-18 660'FNL,1420'FWL 18 21s-34w Finney County (Morrow Sand Test)	Foster 1-18 810'FNL,600'FWL 18 21s-34w Finney County (Morrow Oil Well) Cumulative from May '89 to Dec.'90 17,718 Barrels.
Anhydrite Top	+900	+904
Anhydrite Base	+887	+891
Heebner Shale	-828	-827
Lansing	-880	-877
Stark Shale	-1267	-1275
BKC	-1357	-1361
Marmaton	-1393	-1395
Cherokee Shale	-1534	-1527
Morrow Shale	-1750	-1741
Morrow Sand Upper	-1787 (14')	-1775 (15')
Morrow Sand Lower	-1802 (9')	-1791 (11')
Mississippian	-1815	-1807
Total Depth	-1917	-1866

SUMMARY

The Morrow sandstone came in 12 feet low to the Foster 1-18 offset, but had good reservoir quality and tested oil and mud. Since no water was recovered from this sand during DST #2, and since the Foster 1-18 produces only a slight amount of water, 4-1/2" casing was cemented to test for production. The two sand sections from the 3-18 and the 1-18 logs look almost identical and the sample shows were very similar.

Only one other zone contained a show of oil in this well and this Lansing zone tested water in the structurally higher Foster 1-18.

Submitted by,

W. L.
Wayne Lebsack

Steve E. McClain
Steve E. McClain

LEBSACK OIL PRODUCTION, INC.
Box 489
Hays, Kansas 67601

DRILLING CONTRACTOR: Abercrombie RTD 801 Union Center Wichita, Kansas 67202 Attn: Jack Partridge Rig #5 ⁸ 3104 - +8831 Bill Craig, Pusher (913) 674-2876 Rig Phone #: (316) 872-5842 1-210-0205 316-397-2626 +8603	LOCATION: Foster 3-18 60' West of 660' FNL and 1480' FWL Sec. 18 21s-34w Finney County, Kansas Field: Christabelle API#	DIRECTIONS TO LOCATION: 10 miles west of Friend on the blacktop, then 2 miles south, then 3/4 mile west then south into.
	ELEVATIONS: GL = 30' KB = 30'	
	GEOLOGISTS: Steve E. McClain, Wayne Lebsack	

The following are the geological requirements for the referenced well:

SAMPLES: From: 2500' to 2900' - 20' Dry samples are requested.
3800' to TD - 10' Wet and Dry samples are requested. Samples should be washed thoroughly, dried and tied in 100' bundles. All bags should be properly labeled.

SPECIAL EQUIPMENT: NONE - No Gas/Logging Detector will be used on this well.

DRILLING TIME: Keep a written record of 1' drilling time from 2100' to 2200' (Anhydrite), 2500' to 2900', and 3700' to TD. Complete headings, date each sheet, note all mud checks, and note any roughness in drilling on the drilling time sheet. Make sure the date and the (am/pm) is written on the header of each drilling time sheet.

MUD: Have mud in condition for good sample returns by approximately 3700'.

CHECK DEPTH: A straight hole check should be run on the first DST. The drill pipe should also be strapped at this time. An additional straight hole test should be run at TD.

CALL DEPTH: Call the geologists when you have cut the Anhydrite and when you have reached a depth of ~~3500'~~ 4000'.

STOP POINT: Stop and circulate for samples if the geologist has not been on location by 4200'

ANTICIPATED TOPS:	2125' Anhydrite	' Topeka	3950' Lansing	4596' Cherokee Shale	4878' Mississippian
	2165' B/Anhydrite	3897' Heebner Shale	4428' BKC	4806' Morrow Shale	4950' RTD
	2650' Chase Group		4461' Marmaton	4852' Morrow Sandstone	

SERVICE COMPANIES: Cement	_____	Testing	_____	Western
Gas Det.	_____ NONE	Pipe	_____	Lebsack Oil Production, Inc.
Mud	_____	Logging	_____	HLS

PHONE NUMBERS:

Steve E. McClain	(316) 672-5417 (Home)	(316) 278-2131 (Work) 1st call
Wayne Lebsack	(316) 257-3825 (Home)	(316) 938-2396 (Work) 2nd call
Rex Curtis	(913) 625-3973 (Home)	(913) 625-3046 (Work) 3rd call

Sincerely,

Steve E. McClain

R.W. 044
 70,960. 50.975
 1.075
 50.975