

13-8-21E

Martin K. Dubois

Consulting Geologist

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August 6, 1984

GEOLOGIC REPORT
 Cascade Exploration, Inc.
 #1 Sachse
 SE NE SE 13-8S-21E
 Leavenworth County, Kansas

Daily Progress:

8/2 Set 7" surface casing at 40 feet
 8/3 Drilled out beneath surface casing, 1080' at 9:45 p.m.
 SDON
 8/4 Reached RTD 1280' at 11:30 p.m.
 8/5 Finished running E-Logs at 5:45 p.m.

Service Companies:

Contractor: Triple E Drilling
 Cement: Consolidated
 Mud for killing blow out: Consolidated

Formation Tops (E-Log):

Formations	#1 Sachse	Structural	Relation to
	SE NE SE	#1 Frey	#1 Hund
	13-8S-21E	NE SE NW	Appx. SW SW
	GL 851	18-8S-22E	18-8S-22E
Lansing	133 (+718)		
B. Kansas City	455 (+396)	-3	
Cherokee	696 (+155)	+4	
Coal Marker	1066 (-215)	+1	Flat
L. Cherokee SS	1080 (-229)	-1	-1
Upper McLouth	1152 (-301)	+20	+9
Lower McLouth	1171 (-320)	Abs	+10
L. McLouth Porosity	1185 (-334)	Abs	+15
Burgess SS	1234 (-383)	+7	-3
Miss. St. Louis	1259 (-408)	-13	-1
Spergen	1266 (-415)	-17	
Total Depth	1280 (-429)		

Hydrocarbon Shows (E-Log Depths):

1080-90 Lower Cherokee Sandstone
 Sandstone, fine to medium grained, subangular, moderately sorted, mostly tight, some fair porosity with show of dead oil and trace of tar.
 E-Logs indicate this is a possible gas zone.

- 1152-63 Upper McLouth Sandstone
Sandstone, fine-grained, subrounded, well sorted, good porosity, good show of gassy oil, circulated oil in mud.
E-Logs indicate this is a gas zone.
- 1171-85 Lower McLouth Sandstone
Sandstone, fine-grained, shaley, subrounded, poor porosity, show of gassy oil, circulated some oil in mud.
The interval is shaley and tight.
- 1185-1204 Lower McLouth Sandstone Porosity
Description same as Upper McLouth (1152-63).
E-Logs indicate this zone should be oil productive.

Discussion of Blowout:

The mud in the hole unloaded and the well blew out when drill pipe was being run in the hole after short trip in preparation to run logs. The bit was 100 feet off bottom when the hole unloaded at 1:10 a.m. The flow is estimated at 6-8 MMCF with a spray of oil through a 4 inch bouy line. Consolidated killed the blow easily with barite mud after the well blew for 5 hours. Mud weight was 9.2 ppg. The gas most likely came from the Upper McLouth Sandstone (1152-1163).

Log Analysis: (using m=1.8, RW=0.20)

<u>Depth</u>	<u>ϕ</u>	<u>Rt</u>	<u>SW</u>	<u>Remarks</u>
Lower Cherokee SS				
1080-82	20*	12	55	gas effect present
82-84	21.5*	12	51	"
84-86	20	9	63	"
86-88	20	6.5	75	
Upper McLouth SS				
1152-54	20.5*	37	31	gas effect present
54-56	21.5*	37	29	"
56-58	22*	37	29	"
58-60	22	37	29	
60-62	22	37	29	
Lower McLouth SS				
1186-88	25*	48	22	possible gas effect
88-90	25	48	22	
90-92	26	51	21	
92-94	22	56	23	
94-96	23	58	22	
96-98	24	58	21	
98-1200	26	55	20	
1200-02	28	50	20	
02-04	24	47	24	
04-06	23	42	26	
06-08	24	36	27	
08-10	25	32	28	
10-12	24	31	25	

* x-Plot Neutron-Density ϕ

Summary and Recommendations:

Production casing was run to further test the Upper and Lower McLouth. Sample shows and log calculations indicate both zones should be commercially productive. A show in a Lower Cherokee Sandstone (1080-1090) was insignificant, however this zone should be evaluated in future wells in the area.

The Upper McLouth (1152-63) is most likely the gas zone that caused the blowout. The upper 6 feet has strong neutron-density crossover (gas effect). The lower 5 feet has no crossover and has good oil saturation, however it is doubtful that it could be completed as an oil only zone.

The porous portion of the Lower McLouth (1185-1214) all calculates pay. It is recommended that this sand be perforated from 1192-1202. There is a strong possibility the upper 4 to 6 feet is a gas cap which should be avoided. Also, the lower portion is likely to contain heavier oil and should also not be perforated.

Respectfully Submitted

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Re: *Shaefer*
#1 Sasche
SE NE SE 13-8S-21E
Leavenworth Co., Kansas

Gentleman:

Please adhere to the following instructions while drilling the captioned well:

Samples: Save 10' samples from 350 to 1150, and 5' samples from 1150 to TD, washed and sacked, marked with company name, well number, lease name.

Drillers Log: Keep an accurate driller's log from surface to TD.

Surface Casing: 7" @ 40'

Call Points: Call me when you are moving on location and then again when surface casing is set and you know when you will drill out. (office: 316-221-0428, home: 316-221-4129).

Estimated Formation Tops *

135	Lansing Limestone	121
457	Base Kansas City	450
607	Altamont Limestone	601
785	Cherokee Shale	711
	Coal Marker	1065
	Upper McLouth Sandstone	1167
	Lower McLouth Sandstone	1203
	Burgess Sandstone	1235
	Miss. St. Louis Limestone	1246
	Total Depth	1270

* Depths to formations for ground level elevation of Adjust when true elevation is obtained.

Potential Pay Zones

There are no good marker beds between the Base of Kansas City and the Mississippi. Six five-foot limestones in the Marmaton section (Altamont to Cherokee) can usually be differentiated and they make fair markers. Otherwise the interval between the Base Kansas City and the Mississippi is all shale and drills fairly quickly. Be sure to accurately note the Base Kansas city and the Marmaton Limestones on your drillers logs.

Sincerely,

Martin K. Dubois
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MKD:td