GEOLOGICAL REPORT

Dan A. Nixon, Petroleum Geologist - Licensed & Certified

Well Name:	#9-24 Sander
Location:	NW SW NE Section 30, T13S-R16W Ellis County, Kansas
Operator:	Taurus Oil Company P.O. Box 981 Hays, KS 67601
Contractor:	VonFeldt Drilling Company 719 West Witt Avenue Russell, Kansas 67665
Elevation:	Central Kansas Surveying and Mapping 2344 Washington Great Bend, Kansas 67530 Rotary Bushing: 1973' Ground Level: 1968'
Samples:	Ten foot samples from 2900' to 3170' and five foot samples from 3170' to 3520' RTD.
Time Log:	One foot intervals from 2900' to 3520' RTD. A copy of the time log is included in this report.
Surface Casing:	8 5/8" @ 1106' w/425 sx. of 60/40 Pozmix
Production Casing:	5½" @ 3523' w/100 sacks of ASC cement
Port Collar or DV Tool:	None
Spud Date:	10.07.02
Completion Date:	10.13.02
API #:	15-051-25164-0000

#9-24 Sander NW SW NE of Section 30, T13S-R16W Ellis County, Kansas

ORIGINAL

FORMATION TOPS:	SAMPLE DEPTH	LOG DEPTH	MINUS DATUM
Anhydrite (driller's)	1103'	1104'	+869
Anhydrite Base (driller's)	1142'	1142'	+831
Topeka	2932'	2934'	-961
Heebner Shale	3186'	3186'	-1213
Toronto Lime	3207'	3207'	-1234
Lansing	3232'	3235'	-1262
Base of the Kansas City	3457'	3459'	-1486
Arbuckle Dolomite	3475'	3477'	-1504
Total Depth	3520'	3524'	-1551

SAMPLE ANALYSIS OF ZONES OF INTEREST: (corrected to the electric log)

Lansing	3235'-48'	Dense, white, fine crystalline limestone, cherty in part, with a trace of rare spotty stain and tight. Very slight show of free oil and very faint odor in the wet samples. Tight on the electric log. Not worthy of testing.
	3262'-67'	Chalky, white limestone, trace of very slight vugular porosity and rare spotty stain. Very slight show of free oil and no odor in the wet samples. Tight on the electric log. Not worthy of testing.
	3306'-09'	Gray, buff oolitic limestone with poor to fair inter-oolitic and vugular porosity. Had rare to occasional spotty stain and a very slight show of free oil and odor in the wet samples. Calculated 15% porosity and 23% water saturation on the electric log. Should be considered for testing prior to abandoning well.
	3358'-61'	Fine, crystalline, white limestone with trace of poor vuggy porosity and rare spotty stain. No show of free oil or odor in the wet samples. Calculated 8% porosity and 23% water saturation in the electric. Not worthy of testing.
	3391'-94'	Tight, fine crystalline, white, buff limestone, trace of rare spotty stain and no shows of free oil or odor in the wet samples. Log indicated this to be tight. Not worthy of testing.
	3411'-14'	Lime as above. No shows of free oil or odor in the wet samples. Calculated 6% porosity and 30% water saturation. Not worthy of testing.

Arbuckle Dolomite	3477'-86'	Sucrosic, fine crystalline, buff dolomite, saturated stain, trace of spotty stain. Fair inter-crystalline porosity. Occasional fair vugular porosity. Wet samples had a good show of free oil and a strong odor. Upper portion calculated 10% porosity and 63% water saturation on the electric log from 3477'-81'. From 3481'-86' electric log calculated 15-17% porosity and 18-44% water saturation. Test this portion from 3481'-86'.
	3486'-94'	Sucrosic dolomite as above with increasing percentage of spotty stain. Fair inter-crystalline and vuggy porosity. Had a good show of free oil and odor in the wet samples. Calculated 20% porosity and 35-60% water saturation. Considered water bearing and not worthy of testing.
	3494'-3520'	Fine and medium crystalline buff, white dolomite. Large percentage of rare spotty stain and increasing barren stain. Fair to good intercrystalline and vuggy porosity. Calculated 20-22% porosity and 58-63% water saturation on the electric log in the top portion. All is considered water bearing and not worthy of testing.

REMARKS:

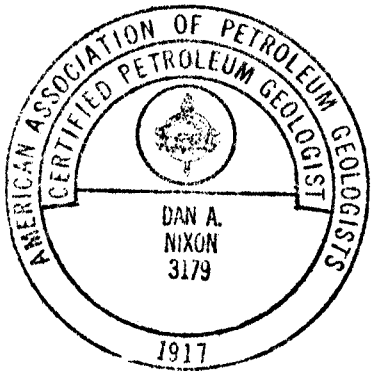
Structurally, the Lansing top on the #9-24 Sander ran 10' low to the #5 P.J. Sander (Travis Bros.), the plugged Arbuckle producer to the north ½ location, 4' low to the Arbuckle producer one location north, the #8-23 Sander (Taurus Oil), 3' low to the plugged Arbuckle well to the north ½ location and west ½ location, the #2 Dreiling (R.P. Nixon Oper.), and 1' high to the plugged Arbuckle producer to the east one location, the #4 Sanders (Gleo Oil & Gulf).

The Arbuckle top on the #9-24 Sander ran 4' low to the same #5 P.J. Sander, 1' low to the same #8-23 Sander, 11' high to the same #2 Dreiling, and 2' low to the same #4 Sanders.

Although the #9-24 Sander is structurally lower on the Arbuckle to all but one of the nearest Arbuckle wells, 5½" casing was cemented at 3523' with 100 sacks for further testing. This decision was based on the favorable electric log calculations and good show of oil in the upper portion of the Arbuckle formation.

Respectfully Submitted,

Dan A. Nixon, Petroleum Geologist
Kansas License #179
AAPG Certification #3179



DRILLING TIME LOG

2900'-2925'	1-1-1-1-1	2-½-1-1-1	2-3-2-2-2	2-2-1-1-2	4-1-1-1-2
2925'-2950'	3-2-3-3-1	1-2-3-3-3	4-4-4-4-3	4-3-4-3-3	4-5-4-5-4
2950'-2975'	4-5-5-5-3	2-1-1-1-1	1-1-1-5-4	5-3-5-5-5	4-4-5-4-5
2975'-3000'	3-4-5-4-5	4-3-2-4-4	3-4-3-3-3	3-3-3-2-3	3-3-3-3-3
3000'-3025'	2-2-2-3-2	3-3-2-4-2	3-3-3-2-3	2-3-2-3-3	2-2-2-4-2
3025'-3050'	2-2-2-2-2	2-2-1-1-1	2-2-2-2-2	2-2-2-2-2	3-2-2-2-2
3050'-3075'	2-2-2-1-1	1-2-2-2-2	2-3-2-3-2	2-2-1-2-2	2-2-2-2-3
3075'-3100'	2-2-2-2-2	3-2-2-2-2	3-2-3-2-2	2-2-1-2-3	3-2-2-3-3
3100'-3125'	3-2-2-1-1	3-3-3-2-2	3-3-2-2-2	2-1-1-2-3	2-3-3-2-2
3125'-3150'	3-2-3-2-3	3-3-2-3-4	2-3-2-3-3	1-3-2-2-2	3-2-3-3-2
3150'-3175'	3-2-1-2-2	2-1½-1½-2-2	2-2-2-2-2	3-2-2-2-3	2-2-3-2-3
3175'-3200'	3-2-2-2-2	2-2-3-2-3	3-½-½-3½-2½	2½-2½-1-1-3	2-2-2-2-2
3200'-3225'	1-2-2-2-2	2-2-4-3-4	3-2-3-3-3	3-2-2-2-2	3-1-1-1-1
3225'-3250'	1-1-1-1-1	1-1-3-3-2	2-3-2-3-2	3-2-2-2-2	4-3-2-3-2
3250'-3275'	3-3-2-2-3	2-2-2-2½-2½	4-4½-3-2-4	2-4-2-4-4	2-4-3-2-1
3275'-3300'	1-2-4-3-3	4-3-3-3-3	3-3-3-3-3	3-3-3-3-3	3-3-4-2-2
3300'-3325'	3-3-3-3-3	3-4-4-5-5	6-5-2-2-4	5-5-6-4-5	5-5-4-3-5
3325'-3350'	4-4-3-5-4	5-4-4-3-5	4-3-4-3-4	4-2-4-4-5	3-3-3-4-4
3350'-3375'	4-3-3-3-4	3-3-2-3-3	3-3-3-3-3	3-4-3-4-5	4-5-4-5-5
3375'-3400'	4-4-4-4-4	5-5-3-4-4	5-3-2-3-4	4-5-5-5-4	6-5-5-4-3
3400'-3425'	3-2-3-2-4	3-3-3-2-4	3-3-4-3-3	3-3-3-4-3	3-2-3-4-4
3425'-3450'	3-3-3-3-3	3-6-5-5-5	5-6-6-6-5	5-5-6-5-6	4-5-4-3-3
3450'-3475'	5-5-5-5-5	6-6-4-4-3	4-4-4-3-4	3-3-4-2-2	2-2-2-2-2
3475'-3500'	3-2-3-2-2	1-½-1½-2-2-2	1-1½-1½-1½-1	1-1½-1½-1-2	1-1-1-2-1
3500'-3520'	1-1-2-2-2	1-2-1-2-2	1-2-2-2-2	1-2-3-1-1	

CFS @ 3520' - 60"
3520' RTD 3524' LTD