JOHNS AND MAGATHAN
CONSULTING GEOLOGISTS
501 BITTING BUILDING
WICHITA 2, KANSAS

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TELEPHONE 3-1540

35-25S-13W
NE-NE-SE

July 24, 1953

R. W. Rine Drilling Company
320 Central Building
Wichita, Kansas

Geological Report: Rine #1 Boughner
NE/NE/SE; 35-25S-13W
Stafford County, Kansas
Elevation: 1910' derrick floor
1913' rotary bushing
Contractor: R. W. Rine Drilling Co.

Gentlemen:

The #1 Boughner was spudded June 6, 1953, and was drilled from the surface to the total depth of 4400' with rotary tools. Samples were saved and a time log was kept from 3000' to the total depth.

A Schlumberger, Gamma-Ray Laterolog Microlaterolog combination was run on this well and it agreed to within a foot or two with drilling measurements. The drilling measurements have been used throughout this report.

The following is a list of formation tops and other data of interest. Unless otherwise noted, all information is from my sample log which has been corrected for sample lag by use of the time log. All measurements are from the top of the rotary bushing which is three feet above the derrick floor. The rotary bushing elevation has been used to compute all distances from sea level.

Formation Name	Depth Below Surface	Distance From Sea Level	Remarks
			200 sacks cement & 300# c.c.
8 5/8"surface casing	318'		
Stone Corral Anhydrite	772 - 796	+1141 to +1117	Electric log top
Top Topeka	3166	-1253	
Heebner shale	3502 - 07	-1589 to -1594	
Top Brown Lansing	3668	-1755	
Top Lansing	3697	-1784	
(1) Porous zone	3725 - 34		Slight show free oil, no odo
			DST
(2) Porous zone	3752 - 58		No show
(3) Porous zone	3786 - 98		No show
(4) Porous zone	3812 - 29		No show
(5) Porous zone	3835 - 39		No show
(6) Porous zone	3868 - 73		Slight trace free oil, no od
(7) Porous zone	3881 - 88		No show
(8) Porous zone	3911 - 21		No show
Base Kansas City	3986	-2073	
Top Marmaton	3986	-2073	
Top Conglomerate	4052	-2139	
(1) Porous zone	4067 - 76		Slight show free oil; DST

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NE NE SE

Formation Name	Depth Below Surface	Distance From Sea Level	Remarks
Top Mississippi	4096	-2183	
(1) Porous zone	4096 - 4103		No show or odor
(2) Porous zone	4107 - 11		No show or odor
Top Kinderhook	4111	-2198	
(1) Porous zone (shaly)	4128 - 44		Spotted porosity, no odor o show
Top Viola	4147	-2234	
(1) Porous zone	4149 - 69		Fair show free oil; DST
(2) Porous zone	4171 - 76		Fair show free oil; DST
(3) Porous zone	4190 - 94		Fair show free oil; DST
(4) Porous zone	4206 - 10		Very good show free oil; DS
Top Simpson	4263	-2350	
(1) Porous sand	4269 - 81		Spotted to good saturation; DST
(2) Porous sand	4281 - 86		Spots good saturation and o No DST
(3) Porous sand	4293 - 97		No show
Top Arbuckle	4341	-2428	
(1) Porous zone	4341 - 52		No show
(2) Porous zone	4364 - 67		No show
(3) Porous zone	4378 - 82		No show
(4) Porous zone	4392 - 96		No show
5½" casing	4330	-2417	150 sacks cement
Total depth	4400	-2487	

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The #1 Boughner was plugged and abandoned as a dry hole July 21, 1953

DRILL STEM TEST DATA:

The following drill stem tests were taken on the #1 Boughner:

LANSING-KANSAS CITY:

(1) 3715-3735; open 1 hour; weak blow throughout test
Recovered 60' mud, no oil, gas or water
Bottom hole pressure 135# (15 min.)

CONGLOMERATE:

(2) 4058-4080; open ½ hour; weak intermittent blow for 5 min
Recovered 5' mud
Bottom hole pressure 0# (15 min.)

VIOLA:

(3) 4154-4210; open 1 hour; small blow which increased to good blow after 5 min; gas to surface in 55 min
Recovered 50' heavily oil and gas cut mud
93' heavily oil and gas cut mud and muddy oil
Bottom hole pressure 1297# (20 min.)

SIMPSON:

(4) 4259-4281; open 1 hour; fair blow which weakened and died in 45 min.
Recovered 50' medium oil and gas cut mud
60' salt water
Bottom hole pressure 1100# (20 min.)

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CORING DATA:

One Diamond core was taken on the #1 Boughner at a depth of 4230-81 in the Viola and Simpson. The description of the core is as follows:

Cored 4230-81; Recovered 51'

1'	Blue-white to white, vitreous, opaque fractured chert with calcareous material in fractures.
7'	Limestone, gray to pink, dense, dolomitic, lithographic. Contains large chert boulders and tiger eyes of various colors, pink to brown to yellow.
6"	Light pale green to green-white sub-crystalline limestone; thin streaks dull green shale
2'	Light gray to olive, coarsely crystalline limestone with large, pink, dense dolomite nodules.
2'-6"	Brown to gray, sub-crystalline to coarsely crystalline limestone, many calcitic crystals; interfingered streaks pale green shale
6"	Light to dark gray limestone, dense, lithographic, conglomeratic, nodules of brown, coarsely crystalline dolomitic limestone; green calcareous shale inclusions.
4245 1'-6"	Limestone, brown to gray, coarsely crystalline, slightly dolomitic; partings of pale green, waxy, shiny shale, glauconitic
15'-6"	Limestone, tan to brown, dense to coarsely crystalline
2'-6"	Limestone, white to light tan, coarsely crystalline, many large, poorly sorted slightly frosted sand grains in limestone, very conglomeratic in appearance with partings of dark forrest green, calcareous shale; many spots bright red, coarsely crystalline sandy limestone
4263 2'	Shale, bright green, sandy; inclusions of tan to white, poorly sorted, sub-angular to sub-rounded sand with few spots bleeding oil.
1'-6"	Sand, medium to fine grain, white, sub-rounded to sub-angular, very shaly; interfingered streaks bright green sandy shale.
2'-6"	Sand, white to pale green, dolomitic, sub-angular to angular, fairly well sorted; few thin bright green sandy shale partings
2'-6"	Sand, brown, sub-angular, medium grained, well sorted; good odor and very good saturation; bleeding oil and gas
2'	Sand, as above, tight; few thin interfingered streaks bright green sandy shale; spotted saturation, good odor, some bleeding
2'	Sand, white to light gray, medium grained, calcareous; many thin interfingered green shale streaks; slight spotted saturation, bleeding in a few spots
76 1'-6"	Sand, brown, medium grained, few thin bright green, sandy shale partings; good saturation and odor in spots.
1'	Bright green sandy shale; many sand inclusions bleeding oil
1'	Sand, brown, well sorted, sub-angular to rounded; few thin interfingered streaks bright green sandy shale; bleeding heavily, good odor and saturation.
2'	Sand, green, shaly; and shale green, sandy; spots good saturation, some bleeding.

COMPLETION DATA:

Drilled plug to 4297
Perforated 36 holes 4267-73; swabbed 22 gal. water per hour with slight rainbow for 16 hours.
Plug back to 4250
Perforated 23 holes 4160-68
Perforated 47 holes 4152-60; gas to surface in 4 minutes
Filled up 700' fluid in one hour
Bailed overnight at rate of 38 gal. oil / 2 gal. wtr/hr.
Acidized with 500 gal. Dowell XF32 acid at 300# pressure - went in on vacuum at end test.
Swabbed back raw acid
Bail 1 barrel fluid per hour - half oil and half water

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(Completion data cont'd.)

Fractured with gel-acid-frac
1500 gal. gel. / 2000# sand
Maximum pressure 3200#
Dropped to 2100# at end treatment
Swabbed load back
Swab 3 barrels fluid per hour (2½ barrels water & 3/4 barrels oil per hour)
Plugged 7/21/53

STRUCTURAL POSITION:

On top of the Lansing the #1 Boughner is 26' higher than Cities Service's #1 Long in sec2-26S-13W, approximately 1¼ miles south; 10' lower than the Lindas #1 Sparks in sec 3-26S-13W, approximately 1½ miles southwest and 26' lower than the Armer #1 Walters in sec. 36-25S-13W, approximately ½ mile southeast. On top of the Arbuckle the #1 Boughner is 29' higher than the Cities Service #1 Long, 20' lower than the Lindas #1 Sparks and 45' lower than the Armer #1 Walters.

POSSIBLE PRODUCING HORIZONS:

LANSING-KANSAS CITY:

The only zones in the Lansing-Kansas City which contained shows of oil were zone #1 (3725-34) and zone #6 (3868-73). Zone #1 was drill stem tested and recovered no oil or gas. Zone #6 had a slight show of free oil which was not considered worthy of a test. The ratio between the Laterolog and Microlaterolog is fairly low (7 to 2½ or 3 to 1) and indicates that the zone would probably make water if it made any fluid at all.

None of the remaining zones in the Lansing-Kansas City contained any oil in the samples and the electric log indicates that all zones that are not too tight would probably produce water.

CONGLOMERATE:

The chert zone in the Conglomerate which contained a slight show of free oil in the samples was drill stem tested and recovered no oil or gas.

MISSISSIPPI:

The Mississippi chert was poorly developed in this well and contained neither a show of oil nor an odor. It was not considered worthy of a test.

VIOLA:

The Viola chert was perforated and thoroughly tested in the section where the porosity was best developed. Since this section was in the uppermost part of the Viola and produced largely water after it was fractured, the thin porous zones below this point were considered not worth testing.

SIMPSON:

The uppermost sand in the Simpson produced only a few gallons of water per hour with a slight rainbow so the Simpson was abandoned without further tests. The electric log indicates that all sand zones below this point will produce water.

ARBUCKLE:

No odors or shows were encountered in any of the porous zones in the Arbuckle.

Very truly yours,
Willis Jack Magathan
Willis Jack Magathan

WJM:bjm