

9-7-19W

Ad

James F. Chase - Geologist - Hu. 3-3948 - 724 Sunset - Russell, Kansas  
Computer inventoried

Bennett & Roberts Oil Opr.  
#2 Desmarteau, NE NW NW  
Sec. 9, T7S, R19W  
Rooks County, Kansas

The following is a geological report and drilling time log on your No. 2 Desmarteau, Riffe Pool, Rooks County, Kansas.

All formation tops were determined from sample analysis and time log interpretation and are corrected to rotary bushing measure.

Well was under geological supervision from 3135 to rotary total depth.

OPERATOR: Bennett & Roberts Oil Opr.

CONTRACTOR: Bennett & Roberts Drilling

RIG: Number One

COMMENCED: April 28, 1959

COMPLETED: May 6, 1959

CASING: Surface: 8 5/8 @ 190 w/125 sacks cement.  
Production: 5 1/2 @ 3553 w/150 sacks cement.

SAMPLES: 10' Interval from 2900 to 3160.  
5' Interval from 3160 to 3556.

DRILLING TIME: 1' Interval from 2900 to 3556.

TOOL PUSHER: Don L. Roberts

DRILLERS: Vernon Zorn Daylight Tour  
Floyd Weimaster Evening Tour  
Bill Weimaster Morning Tour

ELEVATION: Laughlin & Simmons  
Great Bend, Kansas

Derrick Floor 2003  
Rotary Bushing 2006

ELECTRIC LOGS: Lane Wells, Gamma Ray-Neutron-Collar Log  
inside 5 1/2" casing.

CORES: None

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SUMMARY OF FORMATIONS

Cimarron Anhydrite	1525	✓ 481	(Driller)
Topeka Lime	2956	- 950	
Heebner Shale	3158	-1152	
Toronto Lime	3187	-1181	
Lansing K.C.	3201	-1195	
Base K.C.	3441	-1435	
Conglomerate	3465	-1459	
Arbuckle	3485	-1479	
R.T.D.	3556	-1550	

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SUMMARY OF POROSITY

Topeka (2956)

- 2989-95 Limestone, subcrystalline, chalky, slight to poor intercrystalline porosity, rare stain, poor saturation. No commercial value.
- 3058-70 Limestone, tan, fine and subcrystalline, chalky to partly finely granular, slight intercrystalline porosity, no staining.
- 3112-18 Limestone, fine crystalline, fossiliferous, sucrosic, fine intercrystalline porosity, no staining.
- 3137-50 ✓ Limestone, gray-buff, fine crystalline, fossiliferous, partly sucrose, fair vugular porosity, spotted dark brown to black stain, fair saturation, slight odor, trace of free oil. Recommend perforating before abandoning hole. This zone was tested in Magnolias' #1 Desmarteau 1/4 mile East with 15' slight oil cut mud and 850 B.H.P.

Toronto (3187)

- 3187-94 Limestone, dense, fine crystalline, poor porosity, no staining.

Lansing (3201)

Zone 'A'

- 3203-05 Limestone, oolitic, good vugular porosity, spotted light to fair stain and saturation, small show of free oil. These zones were included in D.S.T. #1. Zones are believed to be water bearing.
- 3207-09

Zone B

- 3213-19 Limestone, fossiliferous, partly oolitic, finely vugular porosity, odor with show of free oil, spotted fair to light stain and saturation. This zone was included in D.S.T. #1. Recommend additional testing.

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DRILL STEEL TEST #1 Prosser Testers Inc., single packer, 19' anchor.

Depth: 3203-3222  
Tool Open: 60 minutes  
Blow: strong diminishing to good  
Recovery: 1700' gas in pipe, 350' clean oil, 90' froggy  
oil, 30' oil cut water, 180' water  
B.H.P. 705 p.s.i./20 minutes  
I.F.P. 180 p.s.i.  
F.F.P. 395 p.s.i.

Zone C  
3241-45 Limestone, fine crystalline, dense, slight to poor porosity, rare light stain, mostly unstained. This zone showed water when tested in #1 Riffe. Additional testing not recommended.

Zone D  
3260-62 Limestone, matted fossiliferous, pinpoint vugular porosity, scattered light stain and saturation. Trace of free oil with slight odor. This zone was included in D.S.T. #2.  
3267-70 Recommend additional testing.

DRILL STEEL TEST #2 Prosser Testers, single packer, 25' anchor.

Depth: 3248-3273  
Tool Open: 60 minutes  
Blow: weak 10 minutes, dead 50 minutes  
Recovery: 15' oil cut mud  
B.H.P. 175 p.s.i./20 minutes  
I.F.P. 0  
F.F.P. 0

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Zone E  
3278-82 Limestone, finely fossiliferous, slight vugular porosity, rare light stain, no odor or free oil. Additional testing not recommended.

Zone F  
3295-99 Limestone, matted fossiliferous, slight vugular porosity, rare stain, poor saturation. Zone appears to be of no commercial value. It was perforated in #5 Riffe and showed 98% water.

Zone G  
3337-39 Limestone, finely fossiliferous, slight to poor porosity, no staining.  
3342-45

Zone H  
3356-61 Limestone, matted fossiliferous, pinpoint finely vugular porosity, rare stain, mostly unstained. Zone appears to be of no commercial value.

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Zone I

3376-83 Limestone, oolitic, spotted vugular porosity, fair vugular porosity, broken streak of fair-light stain and saturation, small show of free oil, slight odor. This zone has showed oil in previous test and should be perforated.

Zone J

3397-3401 Limestone, fossiliferous, pinpoint vugular porosity, slight odor, trace of free oil, spotted rich brown stain and saturation. Recommend additional testing.

Conglomerate (3465)

3472-76 Limestone, matted finely fossiliferous, slight pinpoint vugular porosity, trace of free oil, spotted dark stain and saturation. This zone was included in D.S.T. #3. Check porosity on Neutron Log for possible additional testing.

3482-84 Sandstone, fine angular-subrounded, few clean clusters with some tight well cemented clusters, fair to good rich brown stain to a black low gravity stain and saturation, slight odor, trace of free oil. This zone was included in D.S.T. #3. Check Neutron Log and consider several test shots in this zone.

Arbuckle (3485)

3485-93 Dolomite, medium crystalline, pyritic, slight vugular porosity, rare staining, light saturation. This zone was included in D.S.T. #3. Zone appears to be tight. Do not recommend additional testing unless Neutron indicates average porosity.

3493-3500 Dolomite, granular, slightly sandy, fair vugular porosity, spotted good to light stain and saturation, light odor with small show of free oil. This zone was included in D.S.T. #3. Additional testing is recommended.

DRILL STEM TEST #3 Prosser Testers, 37' anchor, dual packers.

Depth: 3463-3500  
Tool Open: 60 minutes  
Blow: Weak 30 minutes, intermittent 30  
Recovery: 60' heavy oil cut mud  
B.H.P. 385 p.s.i./20 minutes  
I.F.P. 0  
F.F.P. 0

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3500-10 Dolomite, increase in sand with some green shale, spotted vugular porosity with black oil stain, slight odor, Dry hole to the East encountered water at a subsea datum of 1497 approximately level with this show of oil, therefore additional testing below 3500 is not recommended.

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- 3510-48 Dolomite, very sandy, highly glauconitic and some green shale broken porosity with black tar flow, no odor or show of oil. No test recommended. This zone may have water disposal possibilities. Recommend logging as much of Arbuckle as possible.
- 3548-52 Sandstone, light green, coarse and medium rounded grains, very glauconitic, some clusters, no staining, no odor.
- 3552-56 Hard, pink-white medium grained metamorphosed dolomite and a dark brown and tan shale and limestone. Material appeared to be of the type found overlying Precambrian Granite.

Rotary Total Depth (3556 -1550)

STRUCTURAL COMPARISON

Lansing: Well ran 3' higher than your #5 Riffe, 2' lower than your #3 Riffe, 8' higher than Sierra's dry hole to the last, 2' higher than your #1 Desmarteau.

REMARKS

Well was drilled to a subsea depth of 1550 with 71' of Arbuckle penetration. 5 1/2" Casing was set 3' off R.T.D. @ 3553 to test Arbuckle and Lansing shows of oil through perforations. Additional hole to possible Granite contact was not attempted as bit was worn out. Believe Granite should be encountered within the next 30'. Magnolia found Granite at a subsea minus of 1579 approximately 1 3/4 mile to the Southeast of this location.

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Respectfully submitted,

*J. F. Chase*

J.F. Chase, Geologist

JFC:mc

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Drilling Time Log  
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DRILLING TIME LOG

<u>Depth</u>	<u>Time</u>										<u>remarks</u>	
2901-10	1	1	2	2	2	4	3	4	4	4		
20	3	3	4	3	2	1	2	2	2	2		
30	2	3	2	2	2	2	1	1	1	2		
40	2	1	2	4	4	3	3	3	3	3		
50	2	3	3	2	2	1	2	2	2	2		
60	2	2	2	3	2	2	3	2	3	5		
70	6	4	3	4	4	5	4	4	4	4		
80	2	3	4	5	4	3	3	3	3	3		
90	4	2	3	3	2	3	3	4	3	2		
2991-3000	1	1	1	1	2	2	5	4	5	5		
3001-10	3	5	5	4	3	3	4	4	3	3		Mixing mud.
20	3	4	4	2	2	2	3	3	3	5		
30	7	5	5	2	2	5	1	1	1	1		
40	2	4	5	5	4	6	8	7	4	3		
50	4	2	4	5	4	3	3	2	3	5		
60	4	5	6	6	4	4	6	5	3	2		
70	4	4	3	3	3	2	2	3	3	3		
80	4	3	4	5	4	6	5	6	6	6		
90	3	3	4	4	4	4	3	3	6	6		
3091-3100	7	7	7	6	6	6	6	7	10	9		
3101-10	8	6	8	8	4	9	9	8	8	6		
20	6	4	2	2	4	4	5	3	5	7		
30	10	10	5	5	7	6	5	5	4	5		
40	5	3	4	7	7	8	6	4	3	4		Trip @ 3122, Strap pipe 3126.41=3124.72
50	5	5	4	3	2	3	3	4	5	4		
60	6	7	7	7	6	7	6	6	4	2		Circ. @ 3154.
70	2	7	8	6	8	9	8	4	4	4		
80	5	5	4	4	5	4	5	5	5	5		
90	4	3	4	4	4	2	3	4	8	6		
3191-3200	9	8	9	7	4	4	4	4	4	4		
3201-10	5	8	9	6	8	10	10	6	6	8		Circ. @ 3210
20	8	9	9	6	5	5	6	6	6	6		Vis. 37, Wt. 10.6
30	8	8	5	6	6	7	8	7	6	10		Circ. @ 3222 D.S.T. #1.
40	9	4	7	4	4	5	5	4	5	4		
50	4	5	5	5	7	7	8	8	8	11		
60	10	7	5	5	4	4	4	4	4	6		Circ. @ 3256.
70	7	7	9	8	8	7	8	8	6	8		
80	6	5	7	6	6	7	13	11	9	8		Circ. @ 3273 D.S.T. #2.
90	10	6	9	8	10	4	5	10	4	5		
3291-3300	7	8	9	8	8	4	4	4	6	9		Circ. @ 3300.
3301-10	7	7	6	8	8	6	7	6	8	7		Vis. 39, Wt. 10.3
20	9	8	8	7	7	10	9	8	8	7		
30	10	7	6	5	8	8	4	5	5	6		
40	7	5	5	4	4	9	12	9	8	9		Circ. @ 3339.
50	13	11	10	12	11	16	13	12	7	11		
60	9	6	6	4	7	10	8	10	10	9		Vis. 43, Wt. 10.3, W.L. 10,
70	9	10	12	13	10	11	12	8	7	4		Circ. @ 3353, Circ. & trip @ 3369.
80	3	5	4	4	6	8	6	4	7	6		
90	8	5	6	8	9	5	4	3	4	4		Circ. @ 3389.

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DRILLING TIME LOG

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3391-3400	4 5 5 7 4 4 6 9 9 7	
3401-10	8 5 8 8 7 8 8 6 8 5	
20	4 5 5 6 5 6 4 4 6 3	
30	2 2 3 3 1 1 2 2 1 2	
40	3 2 2 3 3 3 3 3 3 2	
50	2 3 4 3 3 2 2 3 3 3	
60	5 6 4 5 4 4 4 5 4 4	
70	4 5 4 5 6 2 4 5 4 4	Circ. C 3463
80	4 4 5 4 4 5 5 4 4 4	Circ. C 3476
90	4 4 4 3 4 8 7 7 7 5	Circ. C 3485.
3491-3500	8 8 7 5 6 5 5 4 4 5	Circ. C 3500 D.S.T. #3
3501-10	7 5 5 5 5 6 7 5 5 5	Circ. C 3510.
20	5 7 6 7 5 9 10 10 7 7	Circ. C 3520.
30	4 6 6 6 5 7 8 5 9 7	
40	8 5 9 6 5 8 10 11 9 7	Vis. 44, Wt. 10.4
50	7 6 11 8 7 7 8 8 5 4	
56	3 3 8 14 22 18	Circ. C 3556 R.T.D.

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