CONFIDENTIAL

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21-9-23W

State Geological Survey
WICHITA, BRANCH

GEOLOGICAL REPORT

FRONTIER OIL COMPANY

NO. 1 GODDARD "TWIN"

50' W of SE SE NW, Sec. 21-9S-23W

GRAHAM COUNTY, KANSAS

RECEIVED
STATE CORPORATION COMMISSION
JUL 1 3 1982
CONSERVATION DIVISION
Wichita, Kansas

Commenced: February 18, 1982

Date of RTD: February 27, 1982

RELEASED

JUN 1 1983

FROM CONFIDENTIAL

Joel A. Alberts

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Frontier Oil Company
1720 Kansas State Bank Building
Wichita, Kansas 67202

Re: Frontier Oil Company
No. 1 Goddard "Twin"
50' W of SE SE NW, 21-9S-23W
Graham County, Kansas

Dear Sir:

The following is a Geological Report with a Time Log attached on the above captioned well.

Drilling was supervised from 3400' to 3925', rotary total depth. Samples were examined from 3400' to rotary total depth.

All formation tops, zones of porosity and staining are based on rotary bushing measurements. Any corrections in measurements made during the drilling of this well have been incorporated into this report.

Elevation (L&S)	2401 DF -- 2404 KB	
Anhydrite	1979	(+ 425)
Heebner	3688	(-1284)
Toronto	3712	(-1308)
Lansing-Kansas City	3728	(-1324)
RTD	3925	(-1521)
4½" at	3917	(-1513)

Structurally on top of the Lansing-Kansas City, the No. 1 Goddard "Twin" ran 3' high to the Heathman-Seelingson's No. 1 Edwards Est., a dry hole located 50' East.

ZONES OF INTEREST

LANSING-KANSAS CITY (Top 3728 (-1324))

3796 to 3799 — White poorly developed oolitic limestone. Trace of light stain. No odor. Slight show of free oil.

DRILL STEM TEST No. 1 (FOC Test)

3782 to 3798 — 60-30-60-30 First opening no blow-hose plugged. Second opening weak steady blow (1-1/2"). Recovered 125' of very heavy oil cut mud. Initial flow of 31 to 41. Final flow of 52 to 64. Initial shut in pressure 228. Final shut in pressure 249. (Pressures still climbing).

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3804 to 3810	White oolitic limestone. Scattered staining. No odor. Slight show of free oil.

DRILL STEM TEST No. 2 (FOC Test)

3798 to 3806	60-60-60-60 Weak blow both openings. Recovered 75' oil cut mud. Initial flow of 31 to 41. Final flow of 41 to 41. Initial shut in pressure 683. Final shut in pressure 632.

4-1/2" casing was set at 3917', 189' in the Lansing and 8' off bottom with 150 sacks of cement, 10% salt. The shoe joint is 36.46' long. Zero point is 5' A.G.L.

Sincerely,

Joel A. Alberts

Joel A. Alberts Jr

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DRILLING INFORMATION ON THE NO. 1 GODDARD "TWIN"

Drilling Contractor: Red Tiger Drilling Co.

Drillers: Tom Koehler
Kenneth Lyle
Pat Waggoner

Tool Pusher: Kenneth Lyle

Spud Date: February 18, 1982

Date of RTD: February 27, 1982

Surface Casing: 8-5/8" @ 224' w/165 sx

Production casing: 4-1/2" @ 3917' w/150 sx, 10% salt

TOTAL FOOTAGE DRILLED PER DAY

Under surface at 10:30 P.M. on February 18, 1982

1010	Feet	At	7:00 A.M.	On	2-19-82
1950	"	"	" "	"	2-20-82
2505	"	"	" "	"	2-21-82
2830	"	"	" "	"	2-22-82
3185	"	"	" "	"	2-23-82
3463	"	"	" "	"	2-24-82
3719	"	"	" "	"	2-25-82
3798	"	"	" "	"	2-26-82
3838	"	"	" "	"	2-27-82
3925	"	"	10:00 P.M.	"	2-27-82

BIT RECORD

Bits	Type	Footage
#1	S-35 Security	230' to 1102'
#2	S-86 Security	1102' to 2773'
#3	J-22 Hughes	2773' to 3925'

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MUD RECORD

Surface:	30 sx aquagel, 5 sx lime, 4 sx hulls
2081	5 sx hulls
2650	2 sx hulls
2830	3 sx hulls
3100	28 sx starch, 25 sx zeogel, 1 sx preservative
3128	7 sx starch, 20 sx zeogel, 1 sx preservative, 5 sx hulls
3185	5 sx impermix
3385	12 sx zeogel, 2 sx hulls
3463	20 sx zeogel, 10 sx starch, 2 sx hulls
3719	15 sx zeogel, 15 sx starch
3798	8 sx zeogel, 8 sx starch, 5 sx hulls
3838	8 sx zeogel, 8 sx starch, 2 sx aquagel, 2 sx hulls

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DRILLERS TIME LOG

FRONTIER OIL COMPANY
No. 1 Goddard "Twin"

50' W of SE SE NW
21-9S-23W
Graham County, Kansas

Elevation: 2401 DF
2404 KB

DEPTH	MINUTES	REMARKS
	1 foot drilling time	
3400 to 3410	5-7-8-7-8-8-8-8-7-8	
3420	5-8-9-9-8-7-6-7-5-5	
3430	4-3-4-4-2-5-7-7-8-8	
3440	9-9-9-9-8-6-5-6-9-10	
3450	9-9-8-9-8-9-7-3-4-5	
3460	4-5-5-5-5-4-2-3-3-3	
3470	2-4-6-5-6-6-4-5-5-5	
3480	6-6-5-4-6-5-5-8-8-6	
3490	3-3-7-7-7-7-6-8-7-7	
3500	7-6-6-6-6-7-7-5-7-8	
3500 to 3510	5-3-5-3-3-4-3-3-3-5	
3520	6-7-6-8-6-6-4-3-4-5	
3530	5-6-2-1-3-4-4-4-5-6	
3540	4-6-4-4-1-5-6-7-6-5	
3550	5-6-8-6-7-8-7-7-3-4	
3560	3-2-2-2-5-5-5-3-2-2	
3570	3-3-3-4-4-7-7-7-8-8	
3580	8-9-5-5-6-7-5-4-5-4	
3590	4-4-3-3-4-3-4-4-4-6	
3600	5-5-6-5-3-3-3-4-5-6	
3600 to 3610	4-5-4-4-3-3-4-9-9-7	
3620	10-6-6-6-6-7-6-6-5-8	
3630	7-6-7-9-8-8-5-5-5-7	
3640	8-5-4-4-4-2-2-3-3-4	
3650	4-3-3-3-4-9-8-6-6-6	
3660	5-4-4-5-5-4-4-3-3-4	
3670	5-4-4-4-4-5-4-6-5-4	
3680	5-5-4-2-4-4-4-6-5-6	
3690	5-5-4-4-3-3-5-6-4-4	
3700	6-8-8-9-10-9-7-7-8-8	

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3700 to 3710	8-7-8-9-8-7-7-7-7-7	
3720	6-6-7-11-9-8-10-10-8-5	
3730	6-6-6-7-8-7-4-5-6-8	
3740	7-4-5-6-8-10-9-7-9-7	
3750	9-8-6-7-7-8-7-8-9-8	
3760	8-6-5-5-5-5-6-5-6-6	
3770	8-7-6-5-3-5-5-8-7-9	
3780	9-10-12-10-10-9-8-8-8-9	
3790	10-10-9-8-8-7-8-10-9-6	
3800	8-11-12-7-11-10-6-6-6-6	DST #1 (3782-3798)
3800 to 3810	6-6-5-4-4-7-5-5-5-5	DST #2 (3798-3806)
3820	4-7-9-9-8-9-7-9-10-9	
3830	8-7-8-9-9-9-7-6-5-4	
3840	7-6-6-7-7-6-7-6-7-6	
3850	8-8-9-8-4-8-7-8-7-4	
3860	3-4-6-7-6-8-6-7-9-8	
3870	7-7-7-8-7-8-7-7-8-9	
3880	9-8-7-7-6-6-5-5-5-5	
3890	7-7-5-6-8-6-5-8-9-9	
3900	7-5-6-9-7-6-9-10-9-8	
3900 to 3910	11-9-10-11-10-11-8-9-10-9	
3920	7-6-6-8-10-8-9-8-9-11	
3925	11-10-10-9-11-x-x-x-x-x	

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