

CONFIDENTIAL

AFFIDAVIT OF COMPLETION FORM ACO-1 WELL HISTORY

TYPE

SIDE ONE

Two (2) copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within thirty (30) days after the completion of a well, regardless of how the well was completed. X Attach separate letter of request if the information is to be held confidential. If confidential, only file one copy. Information on Side One will be of public record and Side Two will then be held confidential.

Applications must be made on dual completion, commingling, salt water disposal, injection and temporarily abandoned wells.

X Attach one copy only wireline logs (i.e. electrical log, sonic log, gamma ray neutron log, etc.). (Rules 82-2-105 & 82-2-125) KCC# (316) 263-3238.

LICENSE # n/a EXPIRATION DATE
OPERATOR Frontier Oil Company API NO. 15-165-20,976-0000
ADDRESS 1720 KSB Bldg. COUNTY Rush
Wichita, KS 67202 FIELD Reichel
\*\* CONTACT PERSON Terry W. Piesker PROD. FORMATION Lansing
PHONE (913)-483-5348
PURCHASER Koch Oil Company LEASE Hartman "B"
ADDRESS P.O. Box 2256 WELL NO. 1
Wichita, KS 67201 WELL LOCATION SW/4 SF/4 NE/4
330 Ft. from South Line and
990 Ft. from East Line of
the NE (Qtr.) SEC 33 TWP 16S RGE 16W.

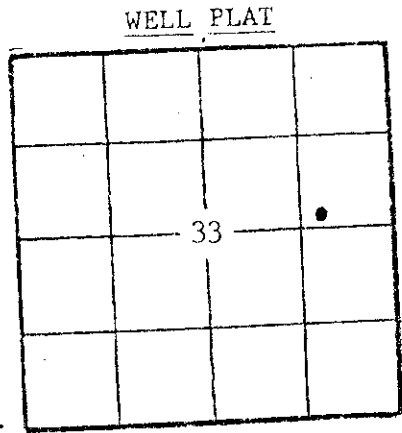
PLUGGING n/a
CONTRACTOR
ADDRESS

TOTAL DEPTH 3580' PBTD
SPUD DATE 2/15/82 DATE COMPLETED 4/12/82
ELEV: GR 1964 DF 1967 KB 1969
DRILLED WITH (CORRODED) (ROTARY) (SAND) TOOLS.
DOCKET NO. OF DISPOSAL OR REPRESSURING WELL BEING
USED TO DISPOSE OF WATER FROM THIS LEASE n/a

Amount of surface pipe set and cemented 238' DV Tool Used? yes

THIS AFFIDAVIT APPLIES TO: (Circle ONE) - (Oil) Gas, Shut-in Gas, Dry, Disposal, Injection, Temporarily Abandoned, OWWO. Other

ALL REQUIREMENTS OF THE STATUTES, RULES AND REGULATIONS PROMULGATED TO REGULATE THE OIL AND GAS INDUSTRY HAVE BEEN FULLY COMPLIED WITH.



(Office Use Only)
KCC [checked]
KGS [checked]
SWD/REP
PLG.

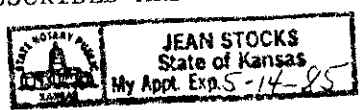
A F F I D A V I T

George A. Angle, being of lawful age, hereby certifies that:

I am the Affiant, and I am familiar with the contents of the foregoing Affidavit. The statements and allegations contained therein are true and correct.

George A. Angle (Name)

SUBSCRIBED AND SWORN TO BEFORE ME this 22nd day of April 1982.



Jean Stocks (NOTARY PUBLIC)

MY COMMISSION EXPIRES: 5/14/85

\*\* The person who can be reached by phone regarding any information concerning this

STATE RECEIVED JUL 15 1982 CONSERVATION DIVISION Wichita, Kansas

SIDE TWO

OPERATOR Frontier Oil Company

CONFIDENTIAL

ACO-1 WELL NO. 16W  
33 SEC. 16S TWP. 16W RGE.

FILL IN WELL LOG AS REQUIRED:

Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

SHOW GEOLOGICAL MARKERS, LOGS RUN, OR OTHER DESCRIPTIVE INFORMATION.

FORMATION DESCRIPTION, CONTENTS, ETC.	TOP	BOTTOM	NAME	DEPTH
Post Rock & Shale	0	190	Anhydrite	1054 (+ 916)
Shale	190	530	Brownvill Lm.	2604 (- 634)
Sand	530	700	Tarkio Lime	2706 (- 736)
Shale	700	1054	Howard	2894 (- 924)
Anhydrite	1054	1090	Topeka	2960 (- 990)
Shale	1090	1865	Heebner	3194 (- 1224)
Shale & Lime	1865	2100	Toronto	3210 (- 1240)
Lime & Shale	2100	2802	Lansing-KC	3248 (- 1278)
Lime	2802	2888	Base of KC	3481 (- 1511)
Lime & Shale	2888	2978	Cherty Congl.	3518 (- 1548)
Lime	2978	3580	Arbuckle	3530 (- 1560)
RTD		3580	RTD	3580 (- 1610)

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Report of all strings set — surface, intermediate, production, etc. CASING RECORD (New) or ~~Used~~

Purpose of string	Size hole drilled	Size casing set (in O.D.)	Weight lbs/ft.	Setting depth	Type cement	Sacks	Type and percent additives
Surface	12 1/2"	8-5/8"	24#	245'	Common	160 sx	2% Gel., 3% C.C.
Production	7-7/8"	4 1/2"	9.5#	3577'	Common	272 sx	10% Salt
DV Tool	7-7/8"	4 1/2"	—	1070'	50-50 Pozmix	550 sx	5% Gel.

LINER RECORD

PERFORATION RECORD

Top, ft.	Bottom, ft.	Sacks cement	Shots per ft.	Size & type DP's	Depth interval
			4		3443'-47'

TUBING RECORD

Size	Setting depth	Packer set at
2-3/8"	3532'	

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used	Depth interval treated
1000 Gal., 15% Reg. Acid	3443'-47'

Date of first production 4/12/82	Producing method (flowing, pumping, gas lift, etc.) Pumping	Gravity 36
RATE OF PRODUCTION PER 24 HOURS	Oil 7 bbls	Gas 0 bbls
Disposition of gas (vented, used on lease or sold)	Perforations	CFPR

JUN 1 1983

FROM CONFIDENTIAL

**CONFIDENTIAL**

GEOLOGICAL REPORT

FRONTIER OIL COMPANY

NO. 1 HARTMAN "B"

SW SE NE, 33-16S-16W

RUSH COUNTY, KANSAS

RECEIVED  
STATE CORPORATION COMMISSION

JUL 15 1982

CONSERVATION DIVISION  
Wichita, Kansas

Commenced: February 15, 1982

Date of RTD: February 25, 1982

**RELEASED**

**JUN 1 1983**

**FROM CONFIDENTIAL**

RECEIVED  
STATE CORPORATION COMMISSION

JUL 15 1982

CONSERVATION DIVISION  
Wichita, Kansas

Richard D. Parker

Frontier Oil Company  
1720 Kansas State Bank Bldg.  
Wichita, Kansas 67202

Re: Frontier Oil Company  
No. 1 Hartman "B"  
SW SE NE, 33-16S-16W  
Rush County, Kansas

Dear Sir:

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

Drilling was supervised from 2600' to 3580', rotary total depth. Samples were examined from 2600' to rotary total depth.

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

Elevation	1967 DF	-- 1970 KB
Anhydrite	1054	(+ 916)
Brownville Lime	2604	(- 634)
Tarkio Lime	2706	(- 736)
Howard	2894	(- 924)
Topeka	2960	(- 990)
Heebner	3194	(-1224)
Toronto	3210	(-1240)
Lansing-Kansas City	3248	(-1278)
Base of Kansas City	3481	(-1511)
Cherty Conglomerate	3518	(-1548)
Arbuckle	3530	(-1560)
RTD	3580	(-1610)
4½" at	3577	(-1607)

Structurally on top of the Topeka, the No. 1 Hartman "B" ran flat with the Garcia No. 1, a dry hole, located approximately one half mile Northeast. On top of the Lansing-Kansas City the No. 1 Hartman "B" ran 4' higher than the Garcia No. 1. On top of the Arbuckle the No. 1 Hartman "B" ran 36' higher than the Garcia No. 1.

#### ZONES OF INTEREST

BROWNVILLE LIME (Top 2604)  
2650-2654

Tan fine crystalline to slightly vuggy lime with some pin point porosity. Trace of oil stain. (Included in DST #1)

TARKIO LIME (Top 2706)  
2720 to 2726

Light grey, silty, micaceous sand with no show of oil.

DRILL STEM TEST No. 1 (FOC Test)  
2612 to 2802

60-30 Open 60 minutes with a weak blow throughout. Recovered 30' mud. Initial flows 136 to 165#. Shut in pressure 787#.

HOWARD (Top 2894)  
2894 to 2902

White to light tan fine crystalline lime with no show of oil. (Included in DST #2)

TOPEKA (Top 2960)  
2960 to 2970

Tan chalky to sucrosic lime with no show of oil.

DRILL STEM TEST No. 2 (FOC Test)  
2870 to 2978

120-30 Open 120 minutes with strong blow. Recovered gas to surface in 75 minutes (TSIM), 330' watery mud. Initial flows 104 to 136#. Shut in pressure 330#.

3152 to 3164

White chalky to slightly oolitic with no show of oil.

DRILL STEM TEST No. 3 (FOC Test)  
3118 to 3170

60-30 Open 60 minutes with a weak blow for 2 minutes. Recovered 50' watery mud. Initial flows 41 to 62. Shut in pressure 1000#.

TORONTO (Top 3210)  
3210 to 3222

White fine crystalline lime with no show of oil. (Included in DST #4)

LANSING-KANSAS CITY (Top 3248)  
3248 to 3254

Tan chalky to fine crystalline lime with no show of oil. (Included in DST #4)

3273 to 3276

White oolitic lime with a trace of oil stain, trace of free oil and no odor. (Included in DST #4)

3384 to 3390

White chalky to fine crystalline lime with no show of oil.

DRILL STEM TEST No. 4 (FOC Test)  
3190 to 3306

60-30-60-30 First open fair blow.  
Second open fair blow. Recovered  
400' muddy salt water. Initial flows  
104 to 207#. Final flows 207 to 311#.  
Initial shut in pressure 1024#. Final  
shut in pressure 994#.

3316 to 3320

White oolitic lime with scattered show  
of free oil, very spotted light stain  
and a faint odor. (Included in DST #5)

3330 to 3336

Tan oolitic lime with scattered show  
of free oil, spotted dark stain and  
a fair odor. (Included in DST #5)

3342 to 3350

White oolitic to oolitic lime with  
a trace of free oil and a faint odor.  
(Included in DST #5)

3370 to 3376

White chalky to tan cherty lime with  
no show of oil. (Included in DST #5)

3388 to 3396

Tan fine crystalline to dense, slightly  
fossiliferous lime with traces of  
free oil, trace of light stain and a  
fair odor.

DRILL STEM TEST No. 5 (FOC Test)  
3300 to 3400

60-30-60-30 First open fair blow.  
Second open fair blow. Recovered 240'  
mud with a few specks of oil on top  
of tool. Initial flows 83 to 145.  
Final flows 145 to 166. Initial shut  
in pressure 1117#. Final shut in  
pressure 1076#.

3404 to 3412

White oolitic lime with a trace of  
free oil, trace of dark stain and no  
odor. (Included in DST #6)

3422 to 3426

Tan fine crystalline lime with a  
trace of oil stain. (Included in DST#6)

3440 to 3445

Tan oolitic lime with scattered  
show of free oil, spotted dark stain  
and no odor.

DRILL STEM TEST No. 6 (FOC Test)  
3396 to 3444

3454 to 3460

DRILL STEM TEST No. 7 (FOC Test)  
3436 to 3460

3464 to 3472

DRILL STEM TEST No. 8 (FOC Test)  
3452 to 3490

ARBUCKLE (Top 3530)  
3530 to 3535

DRILL STEM TEST No. 9 (FOC Test)  
3452 to 3535

60-30-60-30 First open strong blow. Second open strong blow. Recovered 1480' gas in pipe, 470' heavy oil and gas cut mud. Initial flows 51 to 134. Final flows 145 to 186. Initial shut in pressure 1086#. Final shut in pressure 1076#.

Tan, dense lime with no show of oil.

60-30-60-30 First open strong blow. Second open strong blow. Recovered 1420' gas in pipe, 20' heavily oil and gas cut mud, 250' heavy oil. Initial flows 41 to 83. Final flows 145 to 166. Initial shut in pressure 994#. Final shut in pressure 1034#.

White chalky lime with no show of oil.

60-30-60-30 First open weak blow. Second open weak blow to no blow in 20 minutes. Recovered 60' mud. Initial flows 41 to 62. Final flows 62 to 83. Initial and final shut in pressure 104#.

White medium to coarse crystalline dolomite some slightly sandy with a scattered show of free oil faint odor and spotted light stain. Along with the dolomite was well rounded to sub rounded sand grain that were clear to frosted. No visible oil on the loose sand grains.

60-30 Open 60 minutes with a weak blow for 30 minutes. Recovered 10' mud. Initial flows 62 to 83. Shut in pressure 1044#.

4-1/2" pipe was set at 3577', 47' in the Arbuckle and 3' off bottom with 275 sacks of common cement 10% added salt. A Halliburton DV tool was set at 1070', with 550 sacks of 50-50 pozmix cement. Zero point is 5' AGL and the shoe joint is 38-60' long.

Sincerely,

*Richard D. Parker*  
Richard D. Parker *se*



DRILLING INFORMATION ON THE HARTMAN "B" NO. 1

Drilling Contractor: Red Tiger Drilling Co.

Drillers: Ochs  
Ogle  
Bates

Tool Pusher: W. C. Ogle

Spud Date: February 15, 1982

Date of RTD: February 25, 1982

Surface Pipe: 8-5/8" at 245'/160 sx

Casing: 4-1/2" at 3577'/275 sx  
DV at 1070'/550 sx

TOTAL FOOTAGE DRILLED PER DAY

Under surface at 2:15 AM on February 16, 1982

	Feet	At	7:00 A.M.	On	
1025	"	"	" "	"	2-16-82
2100	"	"	" "	"	2-17-82
2665	"	"	" "	"	2-18-82
2888	"	"	" "	"	2-19-82
3098	"	"	" "	"	2-20-82
3265	"	"	" "	"	2-21-82
3400	"	"	" "	"	2-22-82
3444	"	"	" "	"	2-23-82
3490	"	"	" "	"	2-24-82
3580	"	"	6:20 A.M.	"	2-25-82

BIT RECORD

<u>Bits</u>	<u>Type</u>	<u>Footage</u>
#1	Smith - DTJ	246 to 1766
#2	HTC - J22	1766 to 3170
#3	HTC - J22 (ReRun)	3170 to 3580

MUD RECORD

Surface: 20 sx aquagel, 3 sx lime, 4 sx hulls  
2665 40 sx zeogel, 30 sx starch, 5 sx hulls, 2 sx aldacide  
2978 15 sx zeogel, 10 sx starch, 2 sx hulls  
3170 15 sx zeogel, 10 sx starch  
3326 30 sx zeogel, 25 sx starch, 2 sx hulls  
3490 25 sx zeogel, 15 sx starch, 2 sx hulls  
3500 15 sx zeogel, 10 sx starch, 2 sx hulls

DRILLERS TIME LOG

FRONTIER OIL COMPANY  
No. 1 Hartman "B"

SW SE NE  
33-16S-16W  
Rush County, Kansas

Elevation: 1967 DF  
1970 KB

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DEPTH	MINUTES	REMARKS
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	1 foot drilling time	
2600 to 2610	3-3-2-2-3-4-4-5-4-4	
2620	4-4-5-5-4-4-3-3-3-3	
2630	2-3-5-4-5-4-3-2-4-3	
2640	2-3-4-3-4-4-5-3-4-4	
2650	5-4-5-6-5-6-3-2-3-3	
2660	6-4-7-5-5-5-4-5-3-3	
2670	4-3-3-3-4-4-3-3-3-2	
2680	3-2-3-2-3-2-2-2-2-2	
2690	2-2-2-2-2-2-1-1-1-1	
2700	2-2-3-2-2-2-2-3-3-2	
2700 to 2710	1-1-2-2-1-1-1-3-4-4	
2720	3-4-4-4-3-2-3-3-4-3	
2730	4-3-2-3-3-2-3-3-3-5	
2740	5-4-3-1-1-2-1-2-2-2	
2750	2-3-2-2-2-2-3-2-1-2	
2760	2-1-2-2-2-2-1-2-2-1	
2770	1-2-1-3-5-4-3-3-3-4	
2780	4-5-5-4-6-3-3-4-3-3	
2790	1-2-1-2-2-1-3-4-4-3	
2800	3-3-2-2-3-3-2-4-4-4	
2800 to 2810	3-3-3-3-2-3-3-5-4-5	
2820	6-5-5-4-5-4-4-4-4-3	
2830	3-2-2-4-3-3-3-3-2-3	
2840	3-3-3-2-4-2-5-5-5-5	
2850	6-6-3-4-3-3-5-4-3-3	
2860	3-4-4-4-3-3-5-2-3-5	
2870	2-4-4-2-4-3-6-5-5-5	
2880	2-3-2-2-2-2-2-2-3-3	
2890	2-2-2-2-2-2-2-2-2-2	
2900	2-2-3-2-3-5-6-5-4-3	

DST #1

2900 to 2910	3-4-6-6-3-4-4-4-4-6	
2920	4-3-2-3-4-3-3-2-2-3	
2930	3-2-4-5-4-2-4-4-5-4	
2940	5-4-4-4-3-4-4-4-5-4	
2950	5-6-6-4-4-4-5-2-2-2	
2960	2-2-2-2-1-2-1-2-1-2	
2970	2-3-2-4-5-4-4-3-2-2	
2980	4-4-5-5-3-4-4-5-3-4	DST #2
2990	3-2-3-3-4-4-5-5-5-5	
3000	3-4-3-5-6-4-4-4-4-3	
3000 to 3010	3-4-3-3-2-3-3-4-4-4	
3020	5-6-5-6-7-5-4-5-5-5	
3030	4-5-5-6-5-5-5-3-3-3	
3040	4-3-5-4-5-4-3-4-4-4	
3050	4-3-4-5-5-3-4-4-4-6	
3060	4-6-2-5-4-3-4-4-4-5	
3070	3-5-5-5-5-4-4-4-5-3	
3080	3-2-3-3-4-3-5-6-5-4	
3090	5-5-5-5-6-4-5-5-5-5	
3100	5-5-5-4-5-3-4-4-6-6	
3100 to 3110	6-6-5-5-5-6-2-4-2-4	
3120	3-4-5-5-4-4-4-5-4-3	
3130	3-4-3-3-3-4-4-4-4-6	
3140	4-3-4-3-3-5-5-4-5-6	
3150	7-6-5-5-5-5-3-4-5-5	
3160	4-6-5-4-4-5-4-4-3-4	
3170	4-4-4-4-4-5-5-5-5-5	DST #3
3180	4-3-4-3-4-3-4-4-4-4	
3190	6-6-7-7-6-5-5-5-5-6	
3200	6-7-6-7-7-4-2-5-6-8	
3200 to 3210	4-3-5-5-6-6-5-3-5-4	
3220	3-4-5-6-6-3-5-3-3-5	
3230	3-6-5-6-7-5-7-6-5-5	
3240	4-4-4-3-5-3-4-3-2-4	
3250	2-3-4-3-4-3-3-3-4-7	
3260	5-6-6-6-6-6-6-6-6-7	
3270	6-4-6-5-6-5-4-4-5-4	
3280	4-4-4-3-2-2-4-6-7-8	
3290	7-6-5-6-5-6-5-6-5-5	
3300	7-4-7-7-5-8-8-7-8-7	
3300 to 3310	8-6-6-7-5-5-4-5-5-6	DST #4
3320	5-5-4-6-6-4-2-2-2-6	
3330	7-6-7-6-7-6-6-7-6-5	
3340	5-3-6-4-5-5-7-6-8-7	
3350	6-6-3-3-4-4-3-3-4-4	
3360	4-4-5-6-8-5-7-6-7-6	
3370	6-6-6-6-6-4-6-5-6-6	
3380	3-5-2-2-5-4-4-5-5-5	
3390	5-6-7-6-6-6-7-6-4-4	
3400	5-4-5-5-5-7-5-7-6-8	DST #5

3400 to 3410	5-8-7-8-7-5-5-7-7-5	
3420	4-4-4-5-6-7-7-7-6-7	
3430	7-7-7-3-4-5-6-6-4-5	
3440	7-6-7-7-7-7-6-7-6-5	
3450	5-5-5-6-5-8-8-7-6-6	DST #6
3460	7-7-7-4-4-4-4-4-4-4	DST #7
3470	4-5-6-6-3-3-5-4-4-3	
3480	3-4-5-4-5-5-5-5-7-7	
3490	8-3-3-3-3-3-2-2-5-4	DST #8
3500	7-6-7-7-8-3-3-4-4-5	
3500 to 3510	4-3-2-2-4-6-5-6-5-5	
3520	4-3-4-4-4-3-4-3-4-5	
3530	3-5-4-4-4-4-4-5-4-6	
3540	5-5-4-6-6-4-6-5-6-5	DST #9
3550	4-5-6-4-3-4-5-4-4-4	
3560	4-4-3-4-4-4-5-4-4-4	
3570	4-4-4-5-5-5-4-4-4-4	
3580	4-5-5-5-5-4-5-5-6-5	