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Caulkins Oil Company
No. 1 Fankhauser

C NW SE, Sec. 21-185-39W,
Greeley County, Kansas

WELL REPORT

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INTRODUCTION

The Caulkins Oil Company No. 1 Fankhauser is located 6 1/2 miles east of the town of Tribune, 130 feet North and 100 feet east of the C NW SE of Section 21, Township 18 South, Range 39 West, Greeley County, Kansas.

The well was spudded on May 27, 1953, and plugged as a dry hole on June 13, 1953, with a total depth of 5,205 feet in the Mississippian. No commercial shows of oil or gas were encountered throughout the drilling of the well. This was ascertained by careful observation of sample cuttings from 3970 feet to T.D., a drill stem test of the 2900 foot zone which exhibited gas on the Baroid Gas detector, the employment of the gas detector from under intermediate casing @ 2302 feet to total depth, and by careful qualitative examination of the Schlumberger electrical survey and microlog.

The primary objective, the Morrow Sand, was not developed. The zone was explored by diamond coring.

Sample cuttings and core chips were saved and taken to the Liberal, Kansas Sample Cut. The record of the Baroid portable mud gas detector is preserved in this office. A Schlumberger Laterolog and Gamma Ray log was run from 415 - 2610 feet, and an electrical survey and Microlog were run from 2305 to the total depth of 5205 feet.

Tom Ware

Tom Ware
Geologists
June 21, 1953

No oil or gas shows of commercial quality were observed throughout the drilling of the No. 1 Fankhauser. This fact was corroborated by careful sample observation, the use of a Baroid portable mud gas detector unit from 2300 feet to T.D., a drill stem test of the zone from 2850 to 2910, and by careful observation of the electrical survey and microlog curves.

Permian Sand. A Permian Sand in the 2800 foot zone registered Methane gas readings as high as 70 units on the Baroid portable mud gas detector. A drill stem test of the upper portion of this sand from 2850 - 2910 gave up 840 feet of salt water. The sand section is also definitely indicated as water bearing from the character of the resistivity curves of the E. S. The zone must thus be considered as non-potential in this well.

Pennsylvanian Lime. Many of the Pennsylvanian limes exhibit microlog permeability, have a general porous nature, and show some indications of a resistivity gradient on the E. S. However, these zones did not exhibit staining or was any indication of hydrocarbons registered on the gas detector. The upper lime of the Lansing from 4180-4210 exhibited some slight staining but gave no gas detector show, and a quantitative analysis of the zone from the E.S. gives a water saturation of 45-50% with a 12.5 porosity. These figures are considered far too low for commercial production.

Morrow Sand. The Morrow Sand was very poorly developed in the No. 1 Fankhauser. Only 3-4 feet were present in the upper streak, with a lower zone of 3 feet of porous green sand. Neither streak exhibited any staining, fluorescence, or methane gas show. The upper sand gave a wet gas reading of 7 1/2 units on the gas detector, possibly from the blk shale or from sulphur waters. The lower sand streak was bleeding salt water. The Morrow Zone is non-potential in this well.

Pre-Morrow. No shows of oil or gas were encountered in the 121 feet of Mississippian penetrated.

Operator: Caulkins Oil Company
720 N. W. 50th Street
Oklahoma City, Oklahoma

Farm: No. 1 Fankhauser

Location: 130' N & 100' E of C NW SE, Section 21, Township
18 South, Range 39 West, Greeley County, Kansas

Elevation: 3468 DF
3499KB
3459 GL

Contractor: Rine Drilling Company, Wichita, Kansas

Type Rig: Rotary

Mud Control: Baroid and Bomud
Baroid Portable Mud-logging Unit from 2300' to T.D.

Drill Stem Testing: Johnson Testers

Hole Size: 12 1/2" to 2600'; 7 7/8" from 2600 to 5205'.

Electric Logging: Schlumberger, Wakeeney, Kansas

HISTORY:

Location Staked: 5-21-56 by V. T. Chapman, Scott City, Kansas

Rigged Up: 5-23-56

Spudded: 5-27-56

Surface Casing: 5-27-56
Amount: 418' of 13 3/8" OD. Cem. with 350 sx common 1% CaCl.
Drilled out under Surface: 5-28-56

Intermediate Casing: 6-1-56
Amount: 2602' of 8 5/8" OD. Cem. with 200 sx common, 2% gel.

Drill Stem Tests: #1 Permian Sand 6-4-56, 2850-2910, 840' salt water.

Diamond Cores: Hillmac Corp., Oklahoma City
Core No. 1 6-12-56 5016-36, cut 20', rec. 20'
Core No. 2 6-13-56 5036-56, cut 20', rec. 18'
Core No. 3 6-14-56 5031-5101, cut 40', rec. 33'

Electric Logs: Run No. 1: 6-1-56 418-2610, Laterolog and Gamma Ray
Run No. 2: 6-15-56 2603-5204, ES and Microlog.

Drilling Completed: 6-14-56

Total Drilling Time: 19 days

Total Depth: 5205' Driller, 5204' Schlumberger

Production: D & A

Plugged Hole: 6-15-56 @ 2500' w/30 sacks cement.
6-16-56 @ 30' w/20 sacks cement.

Salvaged Casing: 932.58 feet of 8 5/8".

CAULKINS OIL COMPANY

NO. 1 FANKHAUSER

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GEOLOGICAL AND ELECTRICAL LOG TOPS

<u>FORMATION</u>	<u>GEOLOGICAL</u>	<u>ELECTRIC LOG</u>	<u>SUBSEA</u>
Dakota Sand		958	/2810
Kiowa Shale		1147	/2321
Cheyenne Sand		1262	/2208
Morrison		1314	/2154
Permian		1362	/2108
Blaine Gypsum		1793	/1875
Base Cimarron		2488	/ 369
Chase		3212	/ 255
Topeka (Virgil)		3908	- 440
Lansing (Missouri)	4190	4198	- 728
Marmaton	4350	4354	- 868
Cherokee	4585	4588	-1118
Atoka	4775	4776	-1308
Morrow Shale	4912	4908	-1440
Morrow Sand	5031	5031	-1593
Mississippian	5083	5084	-1616
Mississippian	5160	5170	-1702
(stratigraphic zone correlative interval-wise with Miss. top) on Caulkins No. 1 Brunswig.)			
Total Depth	5205	5204	-1736

DRILL STEM TESTS

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DST #1 Formation: Permian Sand

Interval: 2850 -2910

Date: 6-4-56

Tester: Johnson Hydraulic

Packer set @ 5850'

Anchor: 60 Feet

Tool Open: 1 hour

Shut in Time: 20 Minutes

Blow: strong blow throughout test

Recovery: 840' salt water, 30,000 ppm Cl.

Initial Flow Pressure: 195#

Final Flow Pressure: 420#

Bottom hole Shut in Pressure: 600#

SAMPLE DESCRIPTION

(This description is corrected for drilling time, but is not corrected to Electric Log. See tops earlier in this report for this correction. N.S. means no show of oil or gas and indicates that no stain, taste, odor, fluorescence, or gas detector show was encountered, unless otherwise stated.)

LITHOLOGY

From:	To:	
3970	3980	(Begin. description by Boone Pickens, Consulting Geologist, Amarillo, Texas.) Lime: buff, sl. sdy.
	3985	Lime: buff, xln/dense.
	3990	Shale: blk., carb.
	4010	Lime: white/buff, xln, w/shale as above
	4030	w/some milky opaque chert
	4040	Lime: buff/grey, soft.
	4070	Lime: buff, soft
	4072	w/some brownish maroon shale
4072	4090	Lime; white/buff, soft
	4100	w/tr. oolites
	4128	Lime as above
	4140	Shale: varigated w/lime as above
	4150	Lime as above, w/some dk grey shale
	4170	w/some white opaque chert
	4180	Trace lime: grey, oolitic
	4190	Lime: buff, gran., soft.
4190	4200	<u>Lansing (Missouri)</u> : Lime w/some grey spic. chert.
	4220	Lime: buff/tan, oolitic, pos. stain. No gas show. (ES indicates 45-50% Sw w/12% porosity)
	4240	Lime: buff/tan, xln. w/some ind. chert. w/stk blk. carb. shale.
	4250	Lime: tan/grey, v. dense
	4260	Lime: buff, soft, w/trace oolites
4260	4270	Lime: buff, fine xln/dense.
	4280	Shale: grey, sdy.
	4300	Lime: as above w/some incl. chert
	4303	Shale: grey
	4308	Lime: buff/grey, xln, w;some incl. chert.
	4320	Shale: grey
	4340	Lime: buff, oolitic w/excellent collicastic por. N.S.
	4350	Lime: buff/tan, xln.
4350	4354	<u>Marmaton</u> : Shale: blk., carb.
	4400	Lime w/incl. grey opaque chert
	4418	Lime: buff, sl. sdy, w/trace oolites & blk. shale stk @ base.
	4420	Trace clear, sub-rd. isolated qtz. grains
	4450	Lime: buff/tan, soft, w/trace crinoids w/stks grey/blk carb. shale
	4460	Lime: buff, oolitic
4460	4468	Lime: buff, sdy. oolitic
	4495	Shale: grey, red & maroon, varigated
	4520	Lime: buff/t an, xln, w/trace ooliticastic mat.
	4543	Shale: blk, carb. w/some blk chert & some lime
	4550	Shale: varigated
	4558	Shale: green, waxy
	4565	Lime:oolitic
	4575	Shale
	4580	Lime: cherty
	4585	Shale: varigated
4585	4597	<u>Cherokee</u> : Lime: buff, oolitic

From	To	Lithology (continued)
	4615	Shale: blk carb. w/buff/lt. grey. xln. lime
	4625	Shale: blk, carb.
	4636	Lime: grey, xln/dense, w/trace oolites
	4643	Shale: blk carb.
	4655	Lime: buff, xln, w/incl. tan chert w/interbed blk carb. sh.
	4690	Lime: buff, oolitic w/some dense.
	4700	Sand: white, v. limey, grading to a very sdy. lime. N.S.
4700	4716	Lime: buff, dense, w/interbed, grey & blk. shale
	4727	Shale: grey & blk.
	4735	Lime
	4745	Shale
	4750	Lime: buff, sdy.
	4768	Shale: grey & blk w/incl sdy. lime as above.
	4775	Lime: as above
4775	4780	<u>Atoka</u> : Shale: blk.
	4786	Lime: buff, xln/dns., w/incl. tan chert
	4803	Shale: green, waxey
	4825	Lime: tan & grey, xln, "dirty", w/some incl. chert. blk & tan
	4835	Shale
	4847	Lime as above. Trace of oolites
	4850	Shale
4850	4860	No description
	4863	Cherty lime as above
	4875	Shale: blk. splintery. (End description by Boone Pickens) (Begin description by Tom Ware)
	4892	Lime: Crm/tan/dk. mot. brn., fine xln, sl. greasy stained
appear.		No odor, taste, fluor. No gas show.
	4895	V/some blk. platey sh.
	4901	Lime as above. Some showing sl. yel. fluor. 10-unit methane kick on Baroid gas detector.
	4912	Circ. 4915. Lime & shale as above w/some sand: White, fine grained, loose, por. w/10% loose rd. sand grains
4912	4916	<u>Morrow Shale</u> . Shale: blk, platey
	4920	V/some cse. sub-rd. qtz. sand grains
	4930	Shale: blk. platey w/some green spots. w/some stks. sl. sdy. w/some incl. glauc. Circ. 4933 & 4960 Gas show of 10 units from 4922 to 4933. Gas show of 15 units @ 4950. Both prob. shale gas & exhibit recycling.
4930	4975	Shale: as above w/trace crm., med xln. glauc. sdy. lime
	4982	Shale: green, blk & v. lt. purple, platey w/stk. v. tile mot. grey glauc. sand. N.S.
	4989	Circ. 4986. Shale: blk, platey
	4993	Circ. 4994. Lime: mot. brn., med. xln, v. sdy, w/med. rd. grains. Some glauc. Many fossils.
	5003	V/some blk. sh. Cir. 5005, 1 hr. v. fossilif. sdy. lime, w/80% blk. platey shale.
	5016	Lime: mot. crm., med. xln. some v. sdy. w/lge. sub-rd. sand grains. Stks. Sand - white, fine grained. No stain, odor, or gas show. Circ. @ 5016 for Diamond Core. No. 1. Ran in junk basket before cutting final 2 feet. Circ. 1 1/2 hours.
(5016	5033)	<u>Diamond Core No. 1</u> . Cored 20 feet., Recovered 20 feet. Coring time in min/ft. from top to bottom: 16-18-18-20-21-21-14-14-13-15-16-16-14-14-19-17-14-14-12-13. (10 units total gas, 5 units methane from 5016-22, on Baroid gas detector.)
5016	5022	Shale: blk, hd., mass., cal., fossilif.
5022	5025	Lime: mot. tan., cse. xln. hd., tile w/many cleavage faces. Trace glauc. some sl. shaley.
5025	5028	Shale: green-grey/blk. v. platey, waxey, soft.
5028	5030	Lime: mot. green-grey/tan, med. xln. fossilif., v. shaley/ limey shale.

Lithology

K G S LARRY

From	To	
5030	5033	Shale: blk, mass/platey., fossilif.
(5036)	(5056)	Diamond Core No. 2. Cored 20 feet., recovered 18 feet. Coring time in min./ft. from top to bottom: 18-17-15-14-15-11-12-10-10-10-15-13-11-11-15-17-18-19-19. (5 units wet gas from 5039-41 on Baroid gas detector.)
5033	5037	No Recovery. Prob. blk. shale as above.
5037	5040	Lime: med. grey, fine even xln., hd., fossilif. w/some blk & sl. crumpled shale ptgs.
5040	5043	Lime as above, v. hd. fine xln/sucr. med. grey/tan w/some blk shale @ base.
5043	5048	Lime: tan appear., cse. xln, composed of crm/pnk. fossil frags. (crinoid, bryozoan) w/some sl. sdy/congl. w/cse. rd. sand grains in matrix of bright green shale. N.S.
5048	5049	Shale: blk, platey, carb.
5049	5051	Lime: grey-tan, cse. xln., hd., made up almost entirely of fossil frags w/calcite groundmass., w/incl. mega-brachiopods (producteds)
5051	5053	Lime: mot. green/crm. cse. xln/congl. w/much incl. sand; med/cse. grained, ang. w/green shale groundmass. Gen. tite w/green shale ptgs. N.S.
5053	5056	No recovery. Prob. blk slickensided shale from rock @ base of core.
5056	5061	Drilled after reaming. Prob. blk. shale as above from ES.
(5061)	(5101)	Diamond Core No. 3. Cored 40 feet, recovered 36 feet. Coring time in min./ft. from top to bottom: 10-5-7-9-12-12-12-15-15-15-15-15-14-13-12-12-14-10- 8- 6-4-5-9-12-11-11-13-10-12-10-11-11-12-12-11-11-13-12-14-13. (7 1/2 units wet gas from 5067-69) Fracture of core suggests minimum dip of 20°
5061	5064	Morrow Sand. Sand: white, fin/med. grained, sub-rd., sl. por. No stain, odor, or fluor. No methane kick. 7 1/2 units on gas detector from 5067-69. prob. from this zone, was wet in character. Sl. salt taste.
5064	5066	As above. More tite with much incl. green shaley mat. w/gen. congl. appear w/lge. sub-ang. limey sand & shale frags.
5066	5069	Lime: v. lt. crm. grey, med. xln., hd. w/much incl. fine ang. sd. N.S.
5069	5074	Lime: lt. tan, lithographic, hard.
5074	5077	Lime: lt. crm., fine even xln.
5077	5080	Lime: Mot. crm. med. xln., oolitic, w/sl. oblong crm. ooliths. also many cse. rd. sand grains. Hd., tite. N.S.
5080	5083	Sand: v. lt. green, fine grained, sub-ang. well-sorted. Gen loose, porous., bleeding water w/s lt taste. N.S.
5083	5090	Mississippian. Lime: crm-grey, fine xln w/many fine, sub-ang. sand grains. Hd., tite..
5090	5091	Sand: white, cse. grained, sub-ang/sub-rd., hd., tite, limey, w/many blk. grains. N.S.
5091	5097	Lime: Crm-grey, fine xln, w/many fine, sub-ang. sand grains. Hd. tite.
5097	5101	No recovery. Prob. sdy. lime as above.
	5110	Sdy. lime as above.
	5120	Shale: grey, blk & green, platey.
	5130	Lime: crm, fine xln., med/w. sdy. sl oolitic.
	5140	Becom. more sdy. w/some cse. grns. w/larger oblong crm. ooliths.
	5145	Shale: blk, platey, brittle.
	5150	v/sime maroon. (cave?)
	5155	Blk. shale as above. w/some green, mot., w/some sand: white, fine grained, loose, por. N.S.
	5160	Becom. crm., v. sdy. lime w/blk rd sd.
5160	5170	Mississippian (Zone prob. stratigraphically correlative interval-wise w/ Miss. top in Caulkins Oil Co. No. 1 Brunswick) Lime: crm, med. xln., sl. sdy, w/ooliths, oblong, crm. N.S.