

G E O L O G I C A L R E P O R T

Cooperative Refinery Assco.
Goodrich "B" #1
C NW SE, Sec. 9-14S-42W
Wallace County, KANERS

By

Richard E. Roby

Cooperative Refinery Assoc.
915 Central Building
Wichita, Kansas

Re: Cooperative Refinery Assoc. Goodrich "B" #1
C NW SE, Sec. 9-14S-42W
Wallace County, Kansas

General Data:

OPERATOR: G.R.A.	CONTRACTOR: Honaker-Davis
COMMENCED: 5-3-60	COMPLETED: 5-30-60
SURFACE PIPE: 8 5/8 @ 443'	OIL SPRING: None D & A
ELEVATIONS: 3859 Kelley bushing	
3956 Derrick floor	
3850 Ground level	

Sample cuttings were saved and have been examined microscopically from 2100 ft. to rotary total depth. Five (5) ft. drilling time was kept from 1550 to 3525 ft. and one (1) ft. drilling time was kept from 3700 ft. to rotary total depth of 5427 ft. A Schlumberger (Gamma Ray, Laterolog and Sonic) log was run to 4398 ft. All data reported herein has been corrected to Schlumberger measurements.

Listed below are formation tops as determined from sample cuttings and the electric log:

<u>Formation</u>	<u>Sample</u>	<u>Log</u>	<u>Sub-sea</u>
Permian	2250		(-1609)
Blaine	2400		(-1459)
Gimarron Anhydrite	2856	2855	(-1004)
Winfield?		3255	(- 624)
Ft. Riley?		3265	(- 594)
Florence?		3324	(- 535)
Neva		3454	(- 425)
Pennsylvanian	3815		(- 44)
Howard	3902	3895	(- 38)
Topoka	3948	3940	(- 81)
Heebner	4154	4150	(- 291)
Toronto	4186	4182	(- 323)
Lansing	4215	4210	(- 351)
Base Kansas City	4584	4581	(- 722)
Marvaton	4597	4594	(- 735)
Cherokee	4792	4793	(- 934)
Morrow	4998	5000	(-1141)
Mississippian (St. Louis)	5084	5084	(-1225)
(Spargen)	5256	5259	(-1400)
(Warsaw)	5328	5320	(-1461)
(Osage)	5394		(-1545)
Total depth	5427	5398	(-1568)

Porous and possible fluid bearing zones observed are as follows:

Lower Permian (Chase Gp.) All members throughout this section were shaled out for most part & wasn't recognizable from sample cuttings.

Topoka This section consisted of predominantly massive limestone beds which were porous for most part and extremely chalky. No shows of oil observed.

Lansing-Kansas City

4212-4227 Limestone, gray-cream-buff, fine crystalline, slightly porous, chalky. No show.
4252-4258 Limestone, cream, fine crystalline, fossiliferous, cherty, dolomitic, scattered light oil saturation, trace free oil.

D.S.T.#1 4252-4268 Tool open 1 hr. - good blow throughout
Rec.: 1250 ft. salty sulfur water - tested 3% salt saturation
I.F.P. 102 lbs.; F.F.P. 640 lbs.
I.B.H.P. 1160 lbs./20 min.; F.B.H.P. 1160 lbs./20 min.

4266-4282 Limestone, gray-white, fine crystalline, slightly cherty, very chalky. No show.

4303-4308 Limestone, gray-buff, fine crystalline, dolomitic, fair inter-crystalline porosity, No show.

& 4318-4322

& 4336-4340

& 4350-4359

Lansing-Kansas City (cont.)

4449-4457

Limestone, gray-buff, fine crystalline, dolomitic, fair to good porosity, no show.

4495-4496

Limestone, gray-buff, fine crystalline, slight oolitic-ocastic porosity, no show.

4527-4533

Limestone, gray-buff, fine crystalline, very chalky. No show.

Marmaton

4637-4644

Limestone, gray-buff, fine crystalline, highly oolitic, fair inter-oolitic porosity, traces free oil, fair spotty oil stain.

D.S.T. #2

4636-4651

Tool open 1 hr. weak blow 29 min.
Rec: 80 ft. watery mud with few specks of oil
I.F.P. 0 lbs.; F.F.P. 45 lbs.
I.B.H.P. 1325 lbs./20 min.; F.B.H.P. 1310 lbs./30 min.

4736-4742

Limestone, gray-buff, coarsely oolitic to highly fossiliferous, slight visible porosity, traces free oil, fair oil stain.

D.S.T. #3

4729-4744

Tool open 1 hr. - good blow throughout
Rec: 800 ft. gas in pipe, 120 ft. oil & gas cut mud, 120 ft. free oil, 150 ft. sulfur water.
I.F.P. 35 lbs.; F.F.P. 150 lbs.
I.B.H.P. 1870 lbs./20 min.; F.B.H.P. 1255 lbs./20 min.
Quantitative Analysis: Porosity 4-5% Water 100%

4768-4772

Limestone, gray-buff, fine crystalline, fair inter-oolitic porosity, fair oil stain, some free oil, slightly chalky.

D.S.T. #4

4757-4774

Tool open 2 hrs. - fair blow throughout
Rec: 500 ft. gas in pipe - 180 ft. heavy oil & gas cut mud - 220 ft. oil, gas and mud cut salt water (4.5% salt sat.)
I.F.P. 40 lbs.; F.F.P. 140 lbs.
I.B.H.P. 1275 lbs./20 min., F.B.H.P. 1255 lbs./30 min.
Quantitative Analysis: Porosity 9-12%; Water 100%

Cherokee

Consisted of interbedded dense fine crystalline dirty gray to brown cherty limestones and dark gray to black shales. No porosity or shows observed.

Morrow

5012-5019

Sandstone, gray, fine grained, glassy, shaley, slight oil stain in part, slightly porous.

D.S.T. #5

5005-5015

Tool open 1 hr. weak blow 6 min.
Rec: 50 ft. drilling mud
I.F.P. & F.F.P. 0 lbs.
I.B.H.P. 185 lbs./20 min., F.B.H.P. 0 lbs./30 min.
Quantitative Analysis: Not reliable due to shale content

Mississippian

St. Louis

The top 85 ft. consisted of gray-buff-brown, fine crystalline, chalky, fossiliferous limestone which was sandy in part, and interbedded with green to greenish gray shale. The lower 85 ft. consisted of dull gray-buff-brown, dense, finely oolitic, cherty, fine crystalline lime interbedded with zones of dense lithographic tan-brown lime. No shows observed.

Spergen -

Limestone at 5260 was dirty gray-brown, dense, fine-medium crystalline, psuedo-oolitic, cherty, chalky, and was dolomitic in part. No porosity or shows of oil.

Warsaw -

Limestone at 5320 was dirty-gray-brown, mealy and dolomitic in streaks, slightly glauconitic, fine-coarse crystalline, very fossiliferous appearing mottled for most part and was more cherty than the overlying Spergen, lower part becoming extremely chalky and very cherty. No porosity or shows of oil.

Osage -

At 5394 was a gray-buff, fine crystalline, very cherty, dolomitic limestone with porous zones as follows:

5400-5404

Dolomite, buff, sacrose, very cherty, porous, slightly limey.

& 5418-5426

Cherts were white, milky, opaque to sub-opaque, no show of oil observed.

Structure

The following nearby wells are listed for structural comparison:

	C.R.A. #1 Goodrich "B" 9-148-42W	Broderick & Gordon #1 Goodrich 9-148-42W	Skelly #1 Season 29-158-42W
Anhydrite	(-1004)	(-972)	(-966)
Hahnner	(-891)	(-822)	(-818)
Marmaton	(-753)	(-768)	(-769)
Morrow	(-1141)		(-1168)
Mississippi	(-1225)	(-1261)	(-1252)

Recommendations

All zones of porosity which had shows of oil were drill stem tested with negative results and the Schlumberger log showed no zone of possible oil or gas production, therefore, the Goodrich "B" #1 was abandoned as a dry hole at a depth of 5427 ft.

Sincerely,



Richard E. Roby

RER:er

Cooperative Refinery Assoc.
 Goodrich B #1
 C NW SE Sec. 9-14S-42W
 Wallace County, Kansas
 Elevation: 3359 Kelley bushing

DRILLING TIME LOG

Depth	Time	Remarks
1650-1660	1-2-3-2-3-4-4-4-2-2	5 ft. drilling time
1660	3-4-3-2-5-6-5-2-1-4	
1700	2-2-6-6-3-4-3-6-9-3	
1700-1750	5-5-7-10-5-9-10-7-5-3	
1800	5-7-9-8-8-8-10-11-12-10	
1800-1850	9-7-8-7-7-7-8-6-7-7	
1900	9-10-11-6-10-7-10-8-5-10	
1900-1950	13-12-13-7-6-6-7-6-7-24	Trip @ 1955 O.S.C.
2000	10-10-10-6-4-9-6-7-8-7-	
2000-2050	8-5-5-6-5-6-6-10-10-7	
2100	11-11-13-11-10-11-9-4-12-9	
2100-2150	14-10-16-12-15-15-14-17-22-19	
2200	21-19-22-22-20-24-14-19-24-24	
2200-2250	24-17-37-17-14-23-27-29-2-5	Trip @ 2240
2300	4-5-5-2-4-5-5-5-5-5	
2300-2350	4-5-6-5-7-6-6-6-7-7	
2400	7-7-6-8-8-8-8-8-8-7	
2400-2450	10-15-14-6-6-6-4-6-10-9	
2500	9-9-6-5-5-5-3-3-4-4	
2500-2550	5-4-4-5-2-3-3-3-4-4	
2600	3-4-5-2-4-4-5-3-3-3	
2600-2650	3-3-3-2-2-3-4-4-3-2	
2700	3-4-4-4-4-4-23-10-5-5	
2700-2750	5-5-5-4-4-1-3-4-5-5	
2800	5-4-6-6-4-5-6-8-9-10	
2800-2850	7-7-8-7-9-8-8-10-7-11	
2900	13-25-33-28-33-16-17-11-6-6	
2900-2950	6-7-7-7-11-10-12-9-10-10	
3000	11-9-11-14-16-12-21-19-16-20	
3000-3050	12-10-10-12-14-15-16-16-15-15	
3100	15-10-11-11-7-5-4-8-5-5	
3100-3150	6-5-6-9-7-7-11-15-13-13	
3200	10-8-8-7-13-32-34-30-29-35	
3200-3250	35-17-11-11-10-12-12-9-11-10	
3300	10-9-12-13-14-12-16-14-12-11	
3300-3350	19-19-12-20-21-21-14-14-14-30	
3400	19-18-13-17-14-23-25-23-27-22	
3400-3450	30-33-29-30-25-22-29-32-25-27	Trip @ 3445 O.W.V.
3500	23-18-16-21-17-20-19-15-10-7	
3500-3525	6-7-7-9-9	
3525-3575	Skip (Sheet lost)	
3675-3680	5-5-4-6-6	Start one foot drilling time
3690	5-4-5-2-3-3-3-4-4-3	
3700	5-4-3-1-2-3-2-2-3-3	
3700-3710	4-4-3-4-4-4-5-6-5-6	
3720	6-6-4-3-2-4-4-2-4-3	
3730	3-2-4-4-3-5-3-4-3-5	Vis. 45 Wt. 10.3
3740	5-5-4-6-5-6-6-4-5-5	
3750	4-4-3-4-5-2-6-4-3-4	
3760	5-4-4-5-4-4-4-5-3-3	
3770	2-4-4-5-5-7-5-4-4-3	
3780	4-5-2-2-5-5-3-5-4-3	
3790	4-2-4-4-3-4-4-4-4-3	
3800	5-4-5-5-4-5-4-5-6-4	Vis. 38 Wt. 10.2
3800-3810	5-4-5-4-5-4-6-5-3-3	
3820	5-5-5-3-5-4-6-4-4-3	
3830	5-6-6-2-3-4-4-5-6-5	
3840	4-6-5-5-5-5-5-5-5-5	
3850	5-3-2-2-3-5-5-4-6-5	

Cooperative Refinery Assoc. Goodrich B #1
Drilling Time Log

Depth	Time	Remarks
3850-3860	4-4-6-6-5-5-5-4-4-4	
3870	5-8-3-4-2-2-5-4-5-1	Trip @ 3865 New OWV
3880	4-4-5-2-1-3-3-3-4-4	
3890	4-4-5-4-1-1-2-3-3-2	
3900	3-3-3-3-3-4-3-3-3-2	
3900-3910	3-3-4-3-5-5-6-5-7-5	
3920	6-4-6-4-3-3-4-3-3-3	Vis. 55 Wt. 9.4
3930	7-4-5-4-5-4-2-4-1-2	
3940	2-3-3-6-5-2-4-2-2-3	
3950	3-9-2-4-4-4-3-5-7-4	
3960	4-4-7-5-5-5-6-7-5-5	
3970	6-6-3-2-4-7-5-5-6-5	
3980	7-5-5-6-5-5-5-6-5-4	
3990	3-4-3-4-5-5-4-5-4-3	
4000	3-3-3-5-2-2-3-3-3-3	
4000-4010	2-4-3-3-6-6-4-6-5-5	Circ. for samples @ 4010
4020	4-4-3-3-4-4-4-5-6-6	
4030	4-5-5-2-3-6-4-7-4-2	
4040	3-3-5-5-5-7-6-6-5-6	
4050	6-9-3-5-3-7-5-3-6-9	
4060	3-13-5-9-13-6-11-9-5-4	
4070	6-5-2-4-1-5-15-1-2-9	Trip @ 4067
4080	4-3-3-5-4-5-4-3-4-4	Vis. 33 Wt. 9.1
4090	4-4-4-4-4-5-4-4-4-4	
4100	5-5-8-5-4-4-5-4-5-6	
4100-4110	6-4-4-4-5-2-6-7-5-4	
4120	6-4-4-3-3-5-3-3-4-4	
4130	7-4-3-6-6-3-2-6-4-4	
4140	3-3-5-5-4-8-5-5-3-4	
4150	3-4-3-5-5-4-3-3-6-6	
4160	6-6-6-7-2-2-5-4-2-2	
4170	7-9-10-8-9-6-5-4-7-6	
4180	5-5-3-3-9-6-3-9-7-7	
4190	6-10-3-6-7-7-9-6-9-7	
4200	6-13-7-8-10-3-9-10-3-8	
4200-4210	9-10-10-8-8-7-5-5-8-5	
4220	5-5-5-6-6-5-4-4-3-6	
4230	5-3-7-7-8-6-3-6-7-3	Trip @ 4230
4240	6-5-10-9-9-6-5-8-6-5	
4250	5-5-5-4-5-6-6-6-4-5	
4260	6-6-6-7-7-6-6-6-7-5	
4270	9-6-10-6-5-5-9-9-6-7	D.S.T.#1 @ 4268
4280	7-6-5-7-9-9-6-7-6-8	
4290	6-4-8-10-8-11-9-13-9-11	
4300	8-12-10-11-7-9-5-13-9-12	Vis. 60 Wt. 9.9
4300-4310	12-11-8-4-10-8-8-5-4-15	
4320	10-15-9-4-6-6-5-7-9-9	
4330	3-6-6-6-9-9-12-12-9-12	Vis. 56 Wt. 9.8
4340	10-10-10-12-6-8-9-8-5-3	
4350	2-11-11-8-7-6-11-9-12-10	
4360	11-6-5-8-7-2-6-7-7-6	
4370	7-7-7-9-6-7-6-9-8-6	
4380	4-6-5-5-3-5-4-5-6-5	Trip @ 4370 New SV2
4390	5-3-4-6-5-4-4-5-4-6	
4400	5-3-6-6-5-8-5-8-7-7	
4400-4410	9-2-8-8-3-7-7-6-6-8	
4420	3-7-3-3-4-3-6-5-4-4	
4430	5-4-3-3-3-3-13-7-9-9	
4440	4-7-8-10-5-9-8-8-7-10	
4450	11-9-8-4-6-6-6-5-5-5	
4460	3-5-3-2-2-2-1-3-6-11	Vis. 54 Wt. 9.7
4470	10-11-15-8-12-12-3-9-7-7	
4480	6-8-9-8-8-6-6-6-7-6	
4490	3-7-3-6-7-3-3-5-3-7	
4500	9-6-6-6-3-8-5-3-5-8	
4500-4510	8-9-10-10-9-10-10-12-11-11	Vis. 40 Wt. 9.6
4520	8-6-6-8-12-5-12-11-12-10	
4530	10-12-10-8-5-10-10-14-12-8	
4540	3-6-7-9-3-3-13-17-16-6	Trip @ 4539 New OWV
4550	5-5-6-7-4-5-8-8-11-5	

Cooperative Refinery Assoc. Goodrich B #1
Drilling Time Log

Depth	Time	Remarks
4550-4560	9-7-9-8-8-8-4-8-7-7	
4570	8-7-8-7-7-7-10-10-4-4	
4580	5-5-7-7-4-4-8-7-8-8	
4590	7-8-8-6-4-8-4-4-4-5	
4600	3-5-8-4-8-4-4-8-7	Kelley 1 ft. short
4600-4610	7-9-5-5-4-5-4-5-7-8	
4620	10-4-9-5-5-6-8-6-10-11	Vis. 48 Wt. 9.7
4630	8-10-10-8-10-8-9-7-6-5	
4640	8-7-8-7-8-8-12-9-12-6	
4650	5-5-9-5-9-11-15-14-16-11	
4660	11-13-5-8-9-9-8-11-13-13	Circ. D.S.T.#2 @ 4652
4670	14-11-9-11-9-12-10-10-9-9	
4680	9-10-9-9-6-6-5-4-6-8	
4690	8-8-10-9-9-8-11-9-15-13	
4700	15-15-19-19-17-20-19-29-20-28	
4700-4710	20-24-9-14-12-11-15-17-15-15	Trip @ 4702
4720	14-9-13-17-19-15-16-15-17-15	Vis. 52 Wt. 9.7
4730	15-13-17-13-16-15-18-18-3-4	
4740	15-7-9-7-8-7-14-10-10-8	
4750	9-8-11-9-11-17-10-20-18-10	Circ. & D.S.T.#5 @ 4746
4760	8-8-10-9-4-12-22-30-21-21	
4770	13-10-15-15-19-13-6-5-9-15	Vis. 45 Wt. 9.6
4780	9-8-9-13-15-20-14-20-17-17	Circ. & D.S.T.#4 @ 4776
4790	16-14-22-14-13-10-7-16-14-22	Vis. 50 Wt. 9.5
4800	16-21-18-7-6-12-12-18-25-25	
4800-4810	20-25-12-15-14-35-11-10-25-15	
4820	19-16-14-18-22-16-6-9-19-22	
4830	15-5-8-6-7-19-27-30-12-13	
4840	11-6-10-10-24-26-5-7-8-8	Trip @ 4836 New CW
4850	14-14-12-15-11-6-11-7-5-5	
4860	7-6-7-7-6-6-14-15-19-15	
4870	17-15-15-13-17-25-25-12-9-7	Vis. 48 Wt. 9.7
4880	8-11-10-7-7-4-13-12-12-21	
4890	18-12-18-22-10-10-15-20-17-17	
4900	20-22-20-10-7-9-8-26-24-33	Vis. 43 Wt. 9.6
4900-4910	27-28-21-25-15-22-27-29-20-17	
4920	7-8-15-23-19-17-9-5-16-19	
4930	12-15-18-19-20-24-24-24-22-21	
4940	22-28-4-6-8-12-8-8-8-10	Trip @ 4932 New SV2
4950	10-10-7-10-8-8-7-5-9-8	added 6 more drill collars
4960	9-8-6-6-6-15-12-10-11-11	
4970	10-14-9-15-13-13-13-21-6-16	
4980	13-11-13-16-19-10-13-13-16-13	Vis. 44 Wt. 9.4
4990	8-15-15-13-14-7-12-10-10-20	
5000	13-23-16-13-18-18-15-22-14-3	
5000-5010	19-12-10-4-5-6-17-12-15-4	
5020	7-5-12-8-8-9-11-9-4-5	Circ. & D.S.T.#5 @ 5015
5030	6-5-5-5-4-2-5-5-6-3	
5040	4-5-4-4-4-4-4-6-6-6	Circ. @ 5030
5050	6-5-7-5-6-5-4-5-8-4	
5060	5-5-5-8-4-6-5-5-5-5	Vis. 49 Wt. 9.5
5070	5-5-5-5-5-5-5-5-4-4	
5080	4-6-5-4-4-6-5-5-4-3	
5090	6-6-4-4-9-6-9-2-2-2	
5100	8-8-2-7-6-6-5-5-7-8	
5100-5110	4-8-8-9-10-6-9-8-5-8	
5120	8-9-8-8-8-9-9-12-10	Vis. 57 Wt. 9.7
5130	11-8-7-5-8-12-10-10-11-12	
5140	10-12-8-12-12-10-11-10-22-12	
5150	12-12-12-12-9-15-7-12-11-6	
5160	7-10-10-8-8-10-9-12-11-10	
5170	9-12-8-12-5-7-8-9-9-8	
5180	10-13-15-15-17-18-10-11-6-7	Trip @ 5177 New G2
5190	7-6-6-5-7-6-5-6-5-6	
5200	8-7-8-8-7-8-11-11-11-10	

Cooperative Refinery Assoc. Goodrich B #1
 Drilling Time Log

Depth	Time	Remarks
5200-5210	8-11-10-10-8-11-11-10-15-14	
5220	12-14-14-12-17-16-17-15-15-16	
5230	19-18-19-17-22-15-16-17-17-16	
5240	16-16-18-18-12-15-12-10-14-12	
5250	13-20-17-15-19-18-24-27-21-8	Trip @ 5249 New OWT
5260	8-12-8-14-15-18-8-13-13-11	
5270	14-11-11-16-11-14-11-13-17-15	
5280	14-15-14-15-15-13-8-10-10-11	
5290	11-10-17-15-14-13-15-15-15	Vis. 54 Wt. 9.6
5300	16-18-15-13-17-15-13-14-13-16	Circ. @ 5300
5300-5310	15-15-9-10-11-14-13-10-12-10	Vis. 40 Wt. 9.7 W. L. 16
5320	14-17-18-20-23-6-8-9-12-10	Trip @ 5315 New W-7
5330	11-9-12-11-9-10-9-6-10-8	
5340	8-8-5-10-10-12-10-10-5-4	Vis. 56 Wt. 9.7
5350	6-8-8-8-11-10-12-10-10-14	
5360	13-13-13-13-14-13-13-13-14-13	
5370	15-11-17-15-11-13-13-13-13-14	
5380	13-10-9-14-13-14-11-14-11-12	
5390	12-11-12-12-12-11-14-13-13-13	
5400	13-10-16-15-14-12-9-9-9-9	Lost circ. Schlumberger, New bit @ 5397
5400-5410	5-4-7-8-16-13-13-11-14-17	
5420	31-24-17-17-17-12-13-8-4-2	Vis. 64 Wt. 9.4 W.L. 4.5
5430	4-4-4-4-4-4-12	Circ. @ 5427
Rotary total depth	5427	