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REVIEW OF CONDITIONS IN THE ROCK CREEK OIL FIELD.

The Rock Creek oil field is located in Carbon County in T. 20 N., R. 78 W., and in T. 19 N., R. 78 W., about eight miles southwest of Rock River, Wyoming. Certain areas in the west part of T. 19 N., R. 77 W., and the southwest part of T. 20 N., R. 77 W., are also being prospected, but so far no oil has been discovered except in the two townships first name. The area so far known to be oil producing is confined to portions of Sections 26, 27, 34, and 35, in T. 20 N., R. 78 W., and portions of Section 2, 11, 14, in T. 19 N., R. 78 W. On the other hand it is almost certain that all of portions of the following sections will prove to be oil-bearing:

Sections 25 and 36, T. 20 N., R. 78 W.  
Section 1, 12, 13, 23, 24, T. 19 N., R. 78 W.

In addition wells are being drilled east, northeast, and west of the above described lands, and it is probable that at least some of them will bring in oil, although at much greater depth.

The structure in this field is that of an elongated

and rather narrow dome, the major axis bearing almost north and south from the NE<sup>1</sup>/<sub>4</sub> Section 23, T. 19 N., R. 78 W., to about the west quarter corner of Section 26, T. 20 N., R. 78 W. The dips of the rim rock surrounding the field are very steep. On the east side of the axis the dips average about 21 degrees and on the west side about thirty degrees.

In addition to the principal structure where oil has been discovered, there appear to be two small anticlines, or "fingers", extending or radiating in a northeasterly direction from the north end of the proven field. These structures parallel Rock Creek and lie mostly in flat valley lands or in gravel terraces, so that it is very difficult to determine their extent and as to whether or not they are closed. However, it will not be a great while until the drill will settle that question.

The Rock Creek field proper is located to a large extent on flat, bottom lands and terrace deposits and is traversed in a northeasterly direction by Rock Creek. The escarpment surrounding this field exposes the Mesaverde formation, including the Teapot sandstone overlain by the Lewis Shale. The underlying formation, which is the Steele, or Pierre, shale, is eroded in the field to the extent of 1,000 feet or more of strata. The following is a generalized section of the formations at the apex of the dome from the surface to the producing sands:

Group	Formation	Description	Thickness ft.
Quater- nary		Soil and gravel	0-to 20
Montana	Steele or	Dark brown and black shale	

Group	Formation	Description	Thickness
	Pierre shale	Containing a thin sand at about 1200 ft., with a showing of oil....	20-1400
Colorado	Niobrara	Light and gray calcareous shales and shells	1400 to 1600
" "	Benton	Brown and black shales containing several thin seams of bentonite, also thin oil sands in Frontier at about 1650, 1900, and 2200 feet 1st muddy sand, 2570-2600 ft.-oil. Shale, 2600-2670. 2nd Muddy sand, 2670-2695 - oil shale 2695-2725.	1600 to 2700
Lower Cretaceous-cloverly		Dakota sand (big pay)	2725 to 2775

#### DEVELOPMENT AND PRODUCTION.

There are at the present time eleven producing wells in the Rock Creek field, with another producer being deepened to the third, or Dakota sand for the purpose of obtaining larger production. These wells are located in Sections 34 and 35, T. 20 N., R. 78 W., and Sections 2, 11, and 14, T. 19 N., R. 78 W. Five of the producers are taking oil from the first sand, four from the second, and two from the third. The heaviest production is from the lowest sand, and as the production falls off in the upper sands, the wells are being drilled to the third sand. The average daily production per well from the first sand is 260 barrels; from the second sand, 220 barrels; and from the third, 1430 barrels. The total production from the field at

The present time is about 5000 barrels daily. Five of the wells in the field are on the pump, and the others are flowing. The following table shows the wells producing and drilling, with the location, operating company, etc., and is self-explanatory.

T. 20 N., R. 78 W.

Sec.	Quarter	Well No.	Depth ft.	Daily Production bbls.	Company	Remarks.
24	SE <sup>1</sup> / <sub>4</sub>	1	2017		Inland Oil Co.	Shut down.
24	NW <sup>1</sup> / <sub>4</sub>	2	3750		"	"
25	NE <sup>1</sup> / <sub>4</sub>	1	260		"	"
25	SW <sup>1</sup> / <sub>4</sub>	1	1813		Ohio Oil Co.	Drilling.
34	NE <sup>1</sup> / <sub>4</sub>	1	2745	53	"	Pumping.
34	"	2	3015	1400	"	Flowing.
34	"	3	900		"	Drilling.
34	SE <sup>1</sup> / <sub>4</sub>	1	2850	75	"	Pumping.
34	"	Tr-1*	3410		"	Shut down.
35	NW <sup>1</sup> / <sub>4</sub>	1	2736	150	"	Pumping.
35	"	2	3037		"	Drilling deeper
35	"	3	2841	210	"	Flowing
35	SW <sup>1</sup> / <sub>4</sub>	1	2648	400	"	"
35	SW <sup>1</sup> / <sub>4</sub>	3	2782	1465	"	"
35	"	4	2635	250	"	"
35	"	2	1980		"	Drilling.
35	"	6	1900		"	"
35	SE <sup>1</sup> / <sub>4</sub>	5	2020		"	"
36	SW <sup>1</sup> / <sub>4</sub>	1	2900		P.&R. Copr.**	Rigging up
36	"	2	2840		"	Drilling

T. 19 N., R. 78 W.

2	NE <sup>1</sup> / <sub>4</sub>	3	2030		Ohio Oil Co.	Drilling
2	SW <sup>1</sup> / <sub>4</sub>	1	3090	825	"	Flowing.
2	SE <sup>1</sup> / <sub>4</sub>	2	3157		"	Drilling.
4	SE <sup>1</sup> / <sub>4</sub>	1	3420		Hutton Lake Oil	"
11	NE <sup>1</sup> / <sub>4</sub>	2	3187	125	Ohio Ohio Co.	Pumping.
11	SE <sup>1</sup> / <sub>4</sub>	2	2524		"	Drilling.
10	SE <sup>1</sup> / <sub>4</sub>	1	2210		Lance Co.Royalty	Shut Down.
14	NE <sup>1</sup> / <sub>4</sub>	1	3310	100	Ohio Oil Co.	Pumping
14	NW <sup>1</sup> / <sub>4</sub>	1	3395	water	"	Drilling deeper
24	NW <sup>1</sup> / <sub>4</sub>	1	3100		"	Fishing.
24	SE <sup>1</sup> / <sub>4</sub>	1	1350		P.&R. Corp.**	Shut Down.

T. 20 N., R. 77 W.

18	SE <sup>1</sup> / <sub>4</sub>	1	1680		L.R.D. Oil Co.***	Shut Down.
12	NW <sup>1</sup> / <sub>4</sub>	1	2560		Associated OilCo.	Shut Down.
2	SE <sup>1</sup> / <sub>4</sub>	2			"	spudded in.

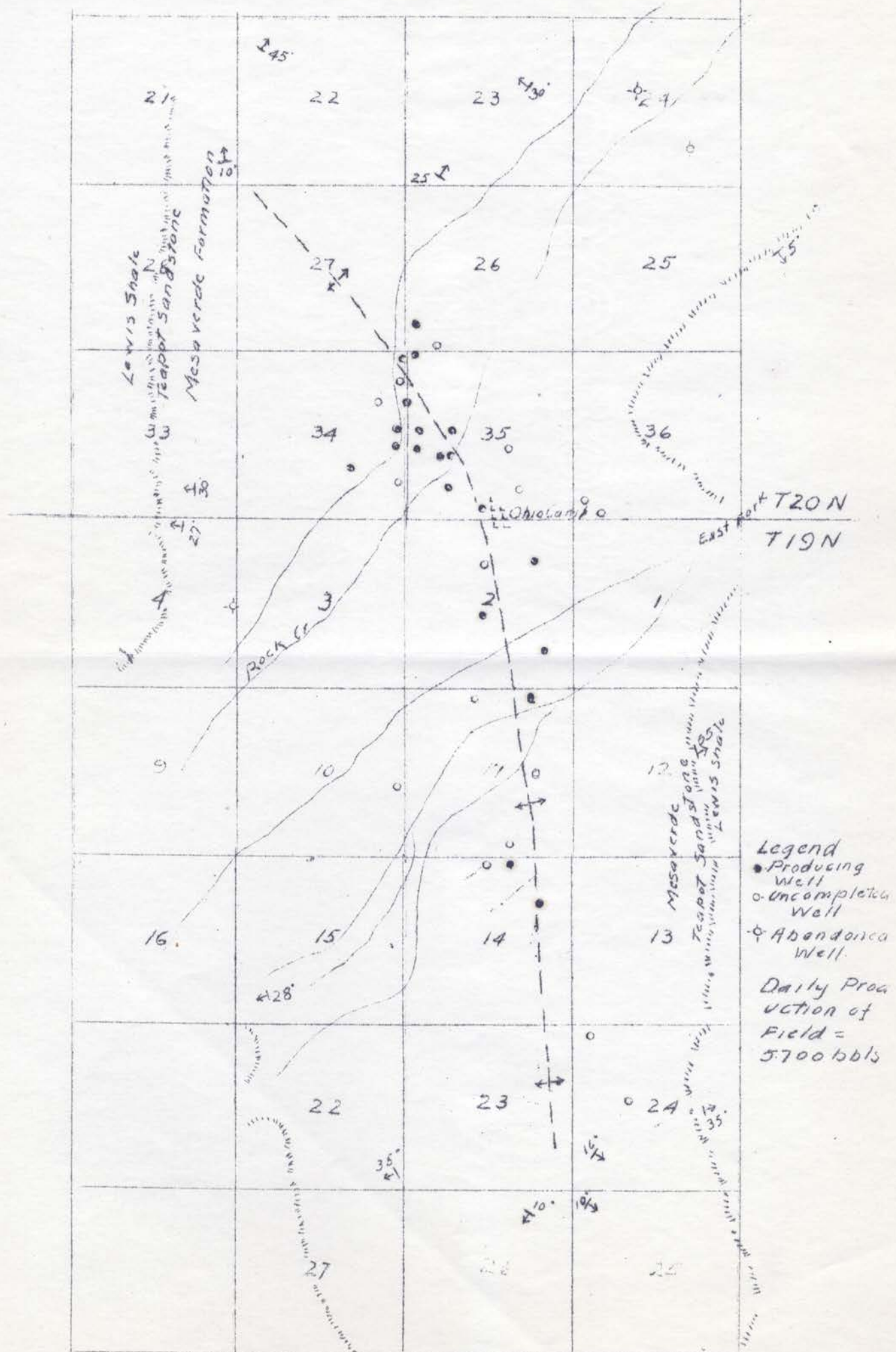
- \* Trapshooter, No. 1.
- \*\* Producers and Refiners Corporation.
- \*\*\* Laramie Red Desert Oil Company.

The Rock Creek field is one of the most promising fields in Wyoming to-day and probably will rank next to Salt Creek in ultimate recovery of oil per acre. The third or Dakota sand, which has been opened up within the last few weeks, increases the value and productivity of the field at least 100 per cent. There is some question as to whether or not this is the Dakota sand. However, an examination of the outcrops near Medicine Bow shows that the Dakota occurs very close to the overlying Muddy sands and that there is a decided change in the characteristics of the formations just below the second Muddy sand. The Dakota sand measures about 55 feet in thickness at this outcrop. In practically no other field in the State except perhaps Greybull has oil been found in large quantities in the Dakota or Cloverly sand. In certain localities it is very prolific in gas, but in many places throughout the State it has been found to contain only water. The finding of a rich oil reservoir and strong pressure in this sand tends not only to increase the possibilities in the Rock Creek field but to encourage deeper drilling in fields where the Dakota sand has not yet been prospected.

Unfortunately, the first Muddy sand in this field has shown water in a well in the NW<sup>1</sup>/<sub>4</sub> of Section 14, T. 29 N., R. 78 W. This well is only 500 feet from a well producing oil from the same sand, but is 190 feet lower on the structure. It is believed that the second and third sands will show oil in this well instead of water. However, this will soon be determined. As the well will

Shortly be drilled in the lower sands.

The limits of the field have not yet been defined by the drill. Probably the producing area will be rather narrow toward the south end and will broaden out considerably toward the center and the north end. The Rock Creek field proper will probably contain more than 3000 acres of oil land, and if the structures to the northeast are found to be productive a large acreage will be added to this field. The Rock Creek dome is so situated as to have a fairly large area for oil drainage, which is a very good indication of strong reserves. Wells near the center of the structure, producing from the first and second sands, are holding up better than the average in other fields. Those near the outside are becoming pumpers, as the gas pressure has gone off to practically nothing. From the third sand we may expect a large and long continued production. This sand is fairly thick and is capable of high saturation. Well No. 3 in the SW<sup>1</sup>/<sub>4</sub> of Section 35, which was brought in March 15, producing from the third sand, shows practically no decline in flush production to date.



ROCK CREEK OIL FIELD Oct. 31-1920  
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