

# ELK BASIN--OIL FIELD IN THE ROCKIES

## Deep Drilling Brings New Life To Structure Long in Production

Some of the facts behind the story of Elk Basin, Rocky mountain field rated as the nation's top oil discovery in 1943, are reproduced herewith from the "Link," publication of the Carter Oil Co. Geologists will like the information given on structural conditions, will possibly gasp slightly to learn the field may have a productive closure of 2500 feet. Montanans, noting this was a shallow field made enormously productive by deeper drilling, will wish for a similar magic wand to be waved over MORE of the state's shallow producing areas. The article follows:

Almost a mile high and surrounded by some of the scenic splendor of the Rocky mountains, 23 producing oil wells dot the horizon of the Elk Basin field, which straddles the Wyoming-Montana line.

To the northwest are the Bear Tooth mountains and the Granite range, capped by Granite peak, elevation 12,850 feet, which towers a mile and a half above the basin. To the west and southwest is the Absaroka range; on the east are the Pryor mountains, and to the southeast are the Big Horn mountains.

Yellowstone national park is about 60 miles away, to the west and southwest, and many other famous scenic spots are even closer, including the spectacular Shoshone canyon, the Buffalo Bill monument, Shoshone national forest, and Mystic cave, all near Cody, Wyo., 41 miles south. To the north and west are other national forests and the Red Lodge-Cooke City highway, one of America's greatest mountain highways, two miles high at one place. To the southwest of Cody is one of the nation's greatest paradises for hunters of big game.

Elk Basin itself is no tourist attraction. Without its picturesque surroundings, the basin holds little beauty except to geologists who are interested in surface evidences of faults, dips, and anticlines. But it was that type of beauty which led to the discovery of oil at Elk Basin, and there's an interesting story of this growing field's development.

Nettie Thompson, the first homesteader in Elk Basin, probably could tell the story of the area better than anyone, but nobody knows where she is or whether she is still alive.

A famous character in early day mineral development in the area, and now an Elk Basin tradition, Mrs. Thompson came from somewhere in the south and lived in Cody, Wyo., for a short time before homesteading a placer claim on the rim of the barren basin in 1914. The placer mines did not develop, but by 1915 the exploration of oil in the vicinity resulted in a discovery well which brought in a small production in the first Wall Creek sand at about 1350 feet.

Mrs. Thompson became firmly convinced in her own mind that her land would become a part of a great producing field. It did—

later, after she had moved away. Today, the Elk Basin field is the second largest oil producing area in the Rockies and gives promise of surpassing the Salt Creek field, 175 miles to the southeast, which has produced more than 308,000,000 barrels of crude oil since 1911. Two wells are being drilled on Nettie Thompson's homestead, and production seems assured, since there have been no dry holes so far in the Tensleep sand horizon of Elk Basin field. The outside limits of the field have not been located. It's too bad that Nettie isn't around to see her dream come true.

With the discovery of oil in the area in 1915, Mrs. Thompson guarded her claim with defiance to intruders. She backed up her sharp words by toting a revolver and a shotgun. Mrs. Thompson had a garden, a small herd of livestock, and did laundry for other homesteaders, most of them bachelors, and for a time cooked at the Ohio Oil Co. camp, walking down steep Mormon hill each morning and returning in the evening to sleep on her claim. One night a wagon driver hauling rig timbers camped on her homestead, and she stayed up all night, fully armed, taking no chances on the rig being set up on her land.

In 1921, after the first boom subsided, Mrs. Thompson became a partner in the Thompson-Elk Basin Co. Val Kirk, who later brought in the Frannie field about 15 miles east, contracted for the drilling, and several Billings men put money into the drilling venture, including J. A. Henderson, who has figured prominently in the developments, including recent ones. The company's first well got a showing of oil and gas in the Frontier sands at about 1300 feet, but didn't make commercial production. A few years later Mrs. Thompson formed a syndicate for drilling another well, but it also failed to reach commercial proportions. An attempt to go to a lower horizon

failed when tools were lost and funds became exhausted.

Nettie Thompson's money was gone, her cattle gone, and her claims were forfeited. She left broke, but was still a believer in the possibilities of the lower sands.

There are other stories of earlier day Elk Basin, but none so interesting as that of Nettie Thompson. Numerous other ventures were made by groups formed in Billings and the Wyoming towns of Cowley, Lovell, and Byron; and about 162 wells were drilled in the basin between 1915 and 1921. Some of them found oil in commercial quantities in the second Wall Creek sand, topped at about 1500 feet, and a few of those wells are still pumping. Some wells in the first Wall Creek sand had obtained about 50-barrel initial daily production, and others in the second Wall Creek sand were good for an initial production of 250 barrels. There was and is a ready market for this light crude from the Frontier formations, and since 1917, when a pipeline was laid, oil from Elk Basin has been loaded at Frannie. Later this line was connected with a line to the Stanolind refinery at Greybull, Wyo.

Meanwhile, Henderson had held on to most of his leases, in spite of discouraging reports of geologists, and in 1942 the Minnelusa Oil Corp. became interested in the Elk Basin field. A contract was signed by Minnelusa, the Henderson Producing Co., the Yale Oil Corp., and the Fain Drilling Co. As a result, the most significant discovery in the area came in December, 1942, when the Henderson No. 1 found black crude in the Tensleep sand, which was topped at 4,492 feet. A three-hour test indicated an open flow initial of 2,500 barrels a day.

Since that time, interest in Elk Basin has been revived to a high pitch, and the daily production from the Tensleep sand stands at about 13,000 barrels a day under a local pro-ration set up because of inadequate transportation facilities and the limited capacity of the Elk

Basin-Frannie pipeline. Most of the Tensleep crude is marketed to the Yale Refinery at Billings, the Independent Refinery at Laurel, Mont., and the Standard (Indiana) refinery at Greybull. Some is shipped to Spokane, Wash., and to Idaho and Canadian refineries. Only a few weeks ago PAW announced approval of plans for laying a 6 and 8 inch pipeline from Elk Basin to Billings, and a second from Elk Basin, connecting with the Stanolind's Lance Creek-to-Salt Lake City line.

Elk Basin is a thriving field and hopes are high. The Carter's interest in the area last month sprang to light with the announcement of the company's purchase of the Minnelusa corporation, one of the larger operators in the field. At present the Carter has six producing wells in the field with a combined potential in excess of 15,000 barrels a day, and each is producing about 500 barrels a day. Three others are being drilled. Drilling is slow, however, because of hard formations and steep dip of the beds demand extreme caution to prevent crooked holes. It requires about three months to drill a 5,000-foot hole.

(Continued Next Week)

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