

New Map Covers Cut Bank, West Kevin-Sunburst

Timely U. S. G. S. Publication Covers Area Now In Limelight

Covering an area in which there is mounting interest, the U. S. geological survey has ready for public distribution a new map of the Cut Bank oil and gas field and the western portion of the Kevin-Sunburst field.

The new map is a thorough revision of the preliminary structure-contour map of the Cut Bank region by C. E. Erdmann and N. A. Davis, which was released by the survey in May, 1939, and contributed to the exploration and development of the south Cut Bank district, Blacktail area, Twin Rivers nose (Reagan pool), Blackfoot nose, Hay Lake nose, and other areas.

Field and office work on the revision was started in September, 1943, by C. E. Erdmann and was continued during the fall and winter of 1945 and 1946 by William Beer and J. W. Nordquist.

The revision embraces all elements of the older map, which covered Twps. 30N to 37N, inclusive, and Rgs. 3W to 8W, inclusive, an area of 1,728 square miles.

The practice of showing structure contours on the top of the Colorado shale at 100-foot intervals has been continued, but the accuracy of the contours has been improved and an interpretation of faulting has been added. Other significant changes and additions include stratigraphy of the lower Kootenai productive sands, areal geology, culture (roads, airport, etc.), field development (approximately 1,100 new well locations, oil and gas pipelines, refinery ownership) and figures of oil and gas production for the Cut Bank field. The map now shows by standard symbol the productive status on April 1, 1946, of more than 1,950 wells drilled for oil and gas. A stratigraphic cross section across the Chalk Butte nose and the north Cut Bank and west Kevin districts is included, as in the earlier edition.

The map may be purchased from the director, geological survey, Washington 25, D. C., at 25 cents a copy and is also available for over-the-counter sale at the geological survey offices at 314 Boston building, Denver, Colo.; 305 Federal building, Casper, Wyo., and Commercial club, Billings, Mont.

The surface of the region is occupied by widespread deposits of glacial drift and alluvium that are not shown on the map. All exposed rocks are of Upper Cretaceous age. Recognized formations are, in downward sequence, the Horsethief sandstone, Bearpaw shale, Two Medicine formation, Virgelle sandstone and Transition Zone (Telegraph Creek equivalent) that constitute the Montana group, and the upper one-third of the Colorado shale. Concealed rocks consist of the remainder of the Colorado shale, including the Blackleaf sandy member, the Kootenai formation of Lower Cretaceous age, the Ellis group of Jurassic age, the Madison limestone of Lower and Middle Mississippian age, and the Three Forks shale and Jefferson dolomite of Devonian age. Pre-Devonian Paleozoic sediments are doubtless present but have not been drilled into in the map area. This general sequence, with significant variations in thickness and character, is shown in a columnar section on the map.

The geologic structure of the region is dominantly homoclinal with an inclination of about 100 feet per mile west from the crest of the Sweetgrass arch, which is a few miles east of the map. This condition is diversified by a series of terraces and anticlinal noses that plunge north-northwest, some of which include areas of small local closure. Several small epi-anticlinal faults have been developed by contouring in Cut Bank oil field. Sub-surface evidence for their existence is suggestive, but it is not conclusive, and they are not expressed at the surface. There is some additional structural and iso-oil gravity contour evidence that similar faults may cut the sands that yield the oil and gas. If this is so, operators might bear in mind that such faults may serve to divide the field into units that may have a significant effect on both production and secondary recovery programs.

Production in the map area is chiefly from the Cut Bank oil and gas field, and from various oil pools in the west Kevin district. Smaller producing areas are the nearly exhausted Border-Red Coulee field and the Darling, High Gravity, Reagan and Thorpe pools.

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Hanlon Has Two More, Cat Creek

According to incomplete reports from the Cat Creek field, Bill Hanlon has completed the eighth and ninth in an unbroken series of commercial wells drilled by him to the deep sands on the field's East dome. His No. 8 Gov't., a north offset to his original East dome discovery well, in C SE SE NW 6-14N-31E, cored oil in the Brindley sand, topped at 1680, then got oil in the top of the Ellis at 1788. Pipe was landed at 1780, after drilling to 1796. Oil rose 1,000 feet in the hole in 12 hours and the well is now on pump tests, with indications it will

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Reagan Nose Wildcat Tops Lime At 3694

The Montana Power Company has topped the Madison lime at 3694 feet in its interesting wildcat on the Reagan nose structure and is running pipe to bottom, 3697 feet, following which rotary will be moved off and operations suspended until spring, when the well will be drilled into the breaks in the lime with spudder.

With a rotary table elevation of 4105 feet, this well topped the Colorado at 1220 and the Cut Bank sand at 3494. No showings were reported to present depth.

Location of this test is at the north end of the Blackfeet Indian reservation, about a mile and a half south of the Alberta-Montana border, more than 10 miles northwest of the nearest Madison lime production in the Cut Bank field.

Warren Wildcat Makes Hole, 1960

East Elk Basin and Big Horn Basin Oil companies, in a joint test, have cemented off cave and are drilling ahead past 1960 feet in their wildcat on the Warren structure, north of the Frannie field on the Montana-Wyoming border. Bit is believed working in Madison lime.

Well On Kicking Horse Misses Gas

Husky Refining-McDermott No. 1 on the Kicking Horse structure, C 1/2 SW SW 9-36N-1E, is reported waiting for orders at 1925 feet where it is bottomed in black lime. The Sunburst was dry at 1585. Gas flows totaling about 600,000 cubic feet have been found to present depth.

Pondera Extension Well Drilling, 700

Attempting to extend the Pondera field producing area to the east, C. W. Stephens, et al-Venez No. 1, NE NE SE 29-27N-3W, is making hole past 700 feet. Operations were delayed during the past week by broken jars. This well is being drilled with spudder.

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Union Launches Lime Test In Main Cut Bank Gas Area

Another interesting and important attempt to open up additional Madison lime production, near the central part of what has been hitherto developed as the main gas area of the Cut Bank field, is being launched by the Union Oil Company of California.

The company has made location for a lime test on the A. E. Teterud farm, in C SE NE 34-36N-5W, on a 320-acre tract on which one gas well has heretofore been drilled, and in an area surrounded by gas production.

The location is almost equidistant between Carter-Brindley No. 1, original lime discovery well in the north part of the Cut Bank field, and Consolidated Oil & Gas Company's No. 1 Barkuloo, most westerly oil producer in the Kevin-Sunburst field.

It is approximately 1 1/2 miles northwest of the original Cut Bank field gas discovery well drilled in 1926 by the Sandpoint interests.

Tying it in with more recent history, it is 3 1/2 miles northeast of Union's No. 7 McGuinness that opened up a new vista for the field a short time ago, when it got oil in a break in the Madison lime, below a 9,000,000-foot gas flow in the Cut Bank sand. The oil was plugged off, to save the gas, and a twin well is now being drilled to the oil zone.

Finding of oil in the Madison lime by Union-Teterud No. 2 would logically lead to several developments.

One would be adoption of a policy of looking at the Madison lime in

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Bad Weather Slows Work, North Field

Operations in the Kevin-Sunburst field were virtually at a standstill during the week, due to continued adverse weather conditions, with roads virtually impassable in many areas.

One well was completed and two are drilling in.

The completion, on which initial testing has not been finished, is Sorrell & Smith-Sorrell No. 1, SW NW SE 7-34N-2W. It is reported making 35 barrels of oil and 250 barrels of water initially, but what it will finally do is not likely to be determined until further testing is done.

Ready to drill in are two Prevot & Shay wells on the west side of

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Montana HAS A Conservation Law Cobb Calls Krug's Attention To Error In Chicago Speech

Interior Secretary Krug was quite definitely off the beam when in a recent Chicago speech he listed Montana as among states needing oil and gas conservation laws.

Strongly calling attention to this fact is the following letter sent Krug this week by A. B. Cobb, chairman of the Montana Oil Conservation board. Says Cobb's letter, in full:

My attention has been directed to an article published in the Nov. 21, 1946, issue of "Oil," a weekly newspaper issued from Los Angeles, California, which is widely circulated and read, I understand, by people interested in the petroleum industries of the western states, wherein you were quoted as having made the statements in your speech delivered at the convention of the American Petroleum Institute, recently held in Chicago, (read by Mr. R. K. Davies in your absence), which I quote as follows, viz:

"Far Western states were bluntly warned by Secretary of the Interior J. A. Krug in his API convention address (read by R. K. Davies in his absence) that state oil conservation legislation is necessary to insure an adequate supply of petroleum in the area best suited to serve the needs of the Pacific."

"The Secretary mentioned specifically California, as well as Montana, Wyoming, Colorado and Utah as states which do not have such laws."

Assuming that you were correctly quoted, I respectfully note an exception to your statement insofar as you included Montana as one of the states having no oil conservation law. That was a mis-statement of fact and so unfair to the progressively minded leaders in the oil industries of this state, as well as many legislators and officials of the state government who have been in the office during the past twelve years, including our present

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Texaco Deep Tests Make Hole In Lime

Approximately 155 miles apart, two important Texaco deep tests are now making hole in the Madison lime.

On the southeast flank of the Bears Den field, offsetting a well that had a moderate flow of gas at high pressure above the lime, Texaco-Sorrell No. 1, C NE NW 29-36N-6E, is drilling at 3085 after topping the Madison at 2899.

On Bowdoin dome, Texaco-Gov't. No. 1, C SW SW 8-32N-32E, is drilling at 3657 feet (after topping the Madison at 3201).

Fogarty Gets RMOGA Post

Frank Fogarty, former sales manager for the Home Oil & Refining Company at Great Falls, has been named executive secretary of the Rocky Mountain Oil & Gas association, to succeed H. O. "Tex" English, who recently resigned to accept the managership of the oil department of the Casper National bank. Fogarty, who has been living in Denver, will make his headquarters at Casper.