OPEN-FILE REPORT 80-252 SHEET 1 OF 2

→ URANIUM MINE

X URANIUM PROSPECT

ABANDONED OIL-AND-GAS TEST HOLE--Showing operator, well name, and Kern Co. Lond I Sowmill Hill TO H49

+ SOIL PROFILE--Study site of examination in a pit or exposed face on a terrace; used to differentiate terrace levels

LOCATION OF MEASURED COAL SECTION--Circled number identifies coal section USGS MESOZOIC FOSSIL LOCALITY

ECONOMIC GEOLOGY

The Sawmill Mountain quadrangle was mapped as part of the U.S. Geological Survey's program of classifying and evaluating mineral lands in the public domain. Resources of economic interest in the quadrangle include coal, uranium and vanadium, sand and gravel, and ground water. Oil and gas may be of potential interest.

Lenticular coal beds of minable thickness (1.2 m (4 ft) or more) crop out below the Trout Creek Sandstone Member of the Iles Formation and in the Williams Fork Formation. Coals crop out in the Iles in a zone 60 m thick, which correlates with the Black Diamond zone as designated by Hancock and Eby (1930) in the Meeker quadrangle (about 11.3 km to the west). Coal bed A (see sheet 2, coal sections), which averages 1.5 m in thickness, was traced for about 1.6 km along the outcrop and may be present throughout that part of the quadrangle underlain by the Iles Formation. Hancock and Eby (1930) reported an average Btu/1b value of 11,355 and an average sulfur content of 0.5 percent for the coal at the Black Diamond mine in the Meeker quadrangle.

Measured sections and isolated outcrops indicate the presence of at least three minable coal beds in the exposed part (the basal 45 m) of the Williams Fork Formation. Poorly exposed outcrops prevented the tracing of these beds. The 1.18-m bed B, shown at the top of coal section 3, is probably equivalent to one of the two beds exposed at the old Bloomfield mine, located in the adjacent Rattlesnake Mesa quadrangle approximately 0.4 km west of the quadrangle boundary (NE\s\s\s\s\s\z\ sec. 30, T. 2 N., R. 92 W.). Both Bloomfield coal beds may be present in U.S. Geological Survey coal test drill-hole D-9-RM (see coal section) located about 0.9 km west of the quadrangle boundary (NE\s\s\s\s\s\z\ sec. 30, T. 2 N., R. 92 W.).

Oil and gas may be present in the Yellowjacket anticline or its subsidiary folds and flanks, although several unsuccessful test holes have been drilled in it. Oil shows were reported from carbonates in the Eagle Valley Evaporite in local wells, but porosity and permeability were too low to allow production (Bookstrom, 1961). Oil and gas fields to the north and northwest, including the Nine Mile, Wilson Creek, and Thornburg fields, produce from Mowry Shale Member of the Mancos Shale, Dakota Sandstone, Morrison Formation, Entrada and Glen Canyon Sandstones, basal part of the Chinle Formation, and Weber Sandstone.

Uranium and vanadium occur in minable amounts in the Salt Wash (?) Member of the Morrison Formation where it crops out along the flanks of the Yellowiacket anticline. Major ore minerals are tyuyamunite and green vanadium clay, with a 1:5 ratio of U308 to V₂O₅; the minerals are disseminated in light-gray sandstone. Mineralization was most intense near the crest of the anticline and decreased down the flanks. Local mines have operated sporadically since 1905; combined production as of 1955, from the Sawmill Mountain quadrangle and the Thornburgh* quadrangle to the north, was less than 9,000 metric tons (Isachsen, 1955). Almost the entire area surrounding Uranium Peak (just north of the quadrangle) has been claimed at one time or another. In addition to the Morrison Formation, prospects occur in the Dakota Sandstone, Entrada and Glen Canyon Sandstones, and Moenkopi and Maroon Formations. Many of the minor prospects in these nonmineralized formations are not shown on the map.

Abundant sand and gravel occur in the Quaternary pediment deposits; however, there are no gravel pits in operation.

Ground water for domestic and stock use is drawn mainly from the Iles and Williams Fork Formations, Mancos Shale, and Quaternary alluvium. Springs occur in the Mancos Shale, Morrison Formation, Maroon Formation, and landslide areas. Other formations, such as the Dakota, Entrada, Glen Canyon, and Weber Sandstones, may be aquifers.

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Abstracts with Programs, v. 10, no. 5, p. 236.

*Spelling of quadrangle name changed from Thornburg to
Thornburgh in June 1969; oil-and-gas field name retains the earlier

This report has not been edited for conformity with U.S. Geological Survey editorial standards.

CONVERSION TABLE

To convert
METRIC UNITS

Multiply by
ENGLISH UNITS

Centimeters

0.3937
Inches
Meters

3.281
Feet
Kilometers

.6214

Miles

GEOLOGIC MAP AND COAL SECTIONS OF THE SAWMILL MOUNTAIN QUADRANGLE, RIO BLANCO COUNTY, COLORADO

1980

