GEOLOGICAL SURVEY OF WYOMING
MINERAL REPORT # MR79-1

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EVALUATION OF STATE SECTION 16,T.12N.,R.73W. FOR MINERALIZATION AND KIMBERLITE OCCURRENCES

State Section 16,T.12N.,R.73W. was evaluated for its mineral potential after John Milnor applied for a diamond lease on the state owned lands. John Milnor is the present owner of the M-5 Ranch located west of Tie Siding and grazes cattle on his adjoining private land, and on the State School Section under a grazing lease.

The evaluation of the State section occurred over a period of three field days. Eleven alluvial samples were collected from drainages which drain Section 16, and a reconnaissance geologic map was prepared with the aid of aerial photographs. The heavy mineral concentrates of the processed alluvial samples were examined for pyrope garnet, magnesian ilmenite, and chrome diopside. None of the eleven samples contained the typical indicator minerals.

In addition, Section 16 was examined for surface mineralization and gossan. Near the center of the NW/4 of Section 16 (see attached map) some minor and very restricted hydrothermal alteration of the granite occurred in the form of magnetite oxidation to hematite and epidotization of ferro-magnesium minerals. Some 'bull' quartz scattered on the surface indicated a nearby pegmatite dike, however, the amount of pegmatitic quartz suggested that the pegmatite would be of very limited size. In the NE/4, similar alteration was noted associated with a shear zone in the granite.

In summary, a limited reconnaissance survey gave no indication of

kimberlite or diamond occurrences, and no evidence of economic mineralization within the State land. The nearest significant mineralization, to that of Section 16, lies about 3/4 of a mile to the east at the old King Solomon Mine. Here, mineralization occurs as copper carbonate stains in a native copper impregnated arkose. The arkose occurs at the contact between Pennsylvanian Fountain Formation (reported as Casper Formation by Darton and Siebenthal) and Precambrian Sherman Granite (Darton and Sebiebenthal, 1909).

It is not known how much ore, if any, was extracted from the King Solomon Mine in that the mine dump and shaft were destroyed during the construction of the Milnor ranch house. During my visit at the Milnor ranch, Mrs. John Milnor explained that the ranch house was constructed over the entry shaft, and that the only evidence of the mine was a small ventilation shaft located about 30 feet north of the house. Some copper staining could be seen in the arkosic rocks surrounding the ventilation shaft.

Darton, N.H., and Siebenthal, C. E., 1909, Geology and mineral resources of the Laramie Basin, Wyoming: U.S.G.S. Bull. 364, p. 66 & 67.

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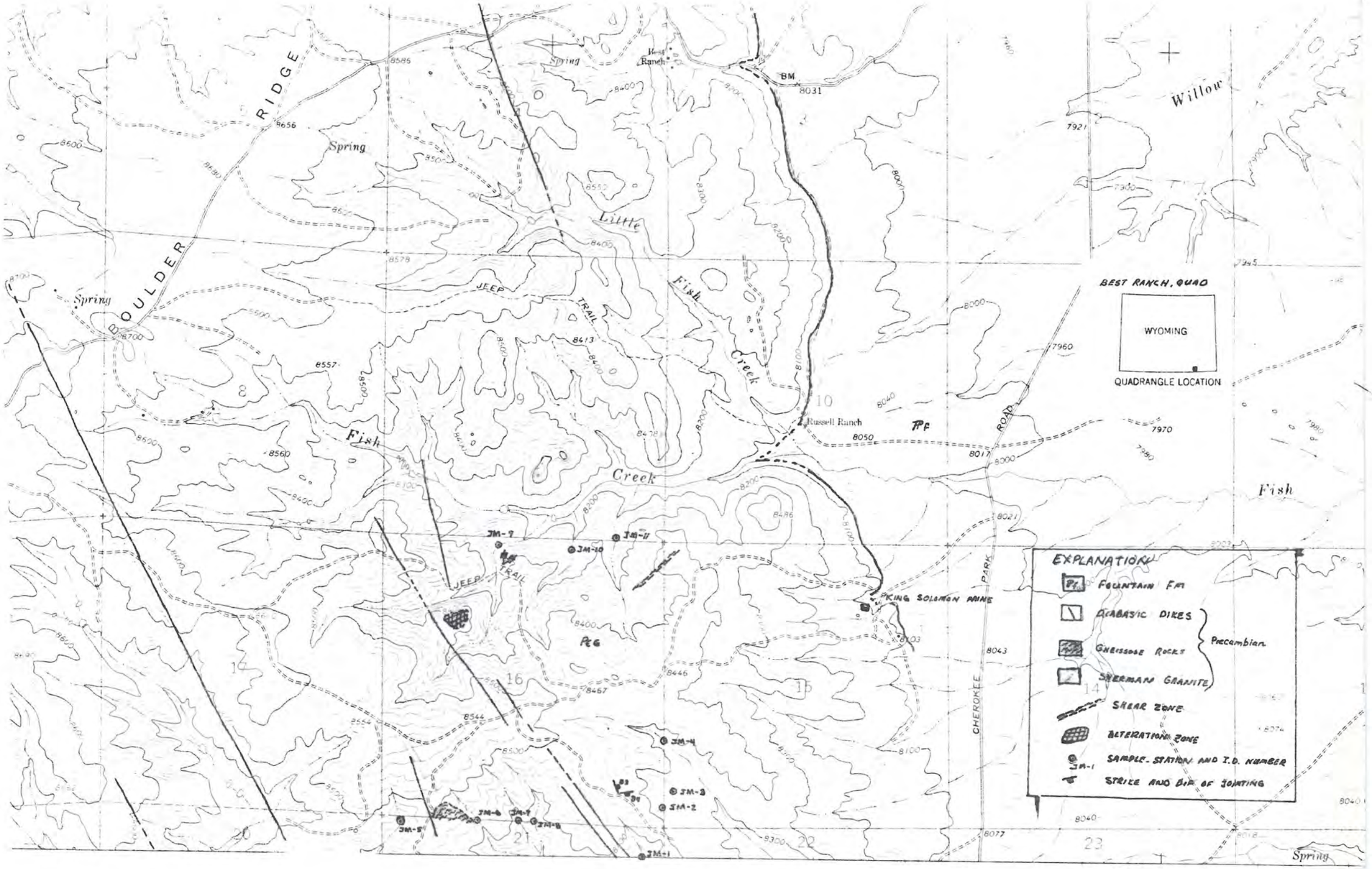
BOULDER RIDGE
Spring
Little Fish Creek
Fish Creek
JEEP TRAIL
Russell Ranch
KING SOLOMON MINE
CHEROKEE PARK ROAD
Willow
Fish
BM 8031
BEST RANCH, QUAD
WYOMING
QUADRANGLE LOCATION
EXPLANATION
FOUNTAIN FM
DIABASIC DIKES
GNEISSOIDE ROCKS
SHERMAN GRANITE
Precambrian
SHEAR ZONE
ALTERATION ZONE
SAMPLE STATION AND I.D. NUMBER
STRIKE AND DIP OF JOINTING