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STATE DIVISION OF MINES & MINERALS
DEPARTMENT OF NATURAL RESOURCES

PROSPECT EXAMINATION REPORT

WHEELER, BETTS, DIMMICK, & STAUDE LODE-GOLD PROPERTY
GRUBSTAKE GULCH, WILLOW CREEK MINING DISTRICT
ANCHORAGE, ALASKA

by

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CONTENTS

REFERENCES:

1/ Map 1, attached

2/ USGS Bulletin 1004 pg. 83 and
USGS Bulletin 592 pg. 250-253

3/ USGS Bulletin 1004 pg. 78

4/ USGS Bulletin 1004 pg. 37

REPORT ON
GRUBSTAKE GULCH GOLD-QUARTZ PROSPECT
WILLOW CREEK DISTRICT, ANCHORAGE QUADRANGLE

INTRODUCTION

Discovery and location of this prospect followed several seasons of prospecting in this section of the Willow Creek Mining District by Vernon A. Wheeler, C.W. Betts, Clyde Dimmick, and Gerhard Staude. An examination of the property was made August 3rd, 1962.

LOCATION AND ACCESSIBILITY

Situated on the steep mountain slope on northeast side (right limit) of the main southeasterly trending valley of the short Grubstake Gulch drainage basin, the "discovery" is about 2 miles southeast of this streams confluence with Willow Creek. It is 1 mile N85E of the Thorpe millsite and 2 miles due south of the Lucky Shot campsite. Elevation at the showing is about 3800.

The District is served by two gravelled roads:- the original one from Wasilla via Little Susitna Lodge and Hatcher Pass to the Lucky Shot Mine, a distance of 26 miles; and the more recent one from Willow Station following the Willow Creek valley 25 miles easterly to its connection with the old road at Lucky Shot. Neither of these roads have been kept open during the winter and spring months in recent years. 1/

The 2 miles of road built from the bridge crossing Willow Creek to the Old Clyde Thorpe property has not been maintained in recent years, but is traveled occasionally by 4 to 6 wheel drive vehicles. A few days of grading and cleaning out drainage ditchs and culverts with tractor equipment should restore the road to good condition.

To obtain easy access to area of this prospect an old road to site of the early day placer operations above Grubstake canyon can be reconditioned and extended, or a new route taking-off from the Thorpe road between the 2600 and 2800 elevation should be completed within 4 or 5 days.

HISTORY AND OWNERSHIP

The first mineral discoveries and claim locations in the Willow Creek district were the gold placers on Willow Creek immediately above and below the mouth of Grubstake Gulch, and above Grubstake Canyon during period of 1897 to 1900. Efforts to mine the alluvials proved unprofitable, discouraging serious interest in prospecting for lode-gold occurrences in the schist area. With the discovery of the high-grade gold-quartz veins in the quartz diorite several miles to the northeast along the Craigie Creek valley in 1907, interest in the placers declined, and since then only periodic efforts have been made to mine them. The total placer gold production of the district is not known but is believed to have been less than $75,000.00. 2/

For many years the only serious and persistent effort made to locate lode-gold occurrences in the Grubstake area was limited to the work done by Clyde Thorpe.

A discovery was made and staked by him in the 1920's near head of Grubstake Gulch's West Fork. During the next 25 to 30 years he drove an estimated 1500 feet of adits, drifts, cross-cuts, and raises. The small oreshoots or "pockets" occasionally found and mined were delivered by aerial tram to a 10 to 15 ton mill built and owned by Mr. Thorpe. His production record is not known but it is certain that it was not an over all profitable operation. 3/

During the late 1930's, W.E. Dunkle reported having sampled the schists in this area at a number of points across considerable widths; values obtained from this work were said to have averaged around $1.00 per ton. Location of these trenches and their length were not given; time spent upon this work was limited to "several weeks".

Since the summer of 1959, Messrs Wheeler, Betts, Dimmick, and Staude have been prospecting the Grubstake Gulch area above the canyon. During 1962 their efforts were largely concentrated on the right limit (northeast) mountain slopes of the main stream, through use of a soil testing auger, which led to discovery of a gold-quartz occurrence of interest and possible economic importance. 1/ Their adaptation of this required tool for geochemical soil testing demonstrates it can be of real aid to the gold lode prospector in schist (and other) areas where the formation has a considerable residually weathered soil cover, and a pronounced "bank creep" obscuring natural outcrops. The mineralized zone is reported to have been traced over a mile in length through use of this tool, and claims were staked to cover that section.

GEOLOGY

The Grubstake Gulch area formation is limited to a mica schist that is considered much older than the districts quartz-diorite (Jurassic?), within which latter formation past lode-gold production has been confined. 4/

The mica schist-quartz diorite contact is obscured throughout the district by a glacial "drift" cover; the nearest quartz-diorite is 1.75 miles to the northeast. While the area is mapped as mica schist, the open-cut at point of discovery is highly graphitic. It was also noted that the unusually well stratified "recent" gravels in south bank of the Mrak bulk sampling pit, situated 1000 feet upstream from the Thorpe bridge crossing Willow Creek, was composed almost entirely of the same graphitic schist and quartz of local origin; much of the gold in these fine gravels was "punched" through graphitic scales or had graphitic fragments attached to it.

The numerous faults encountered in adits on the Thorpe property do not indicate individual major displacements; they suggest that similar conditions will be prevalent throughout this area.

The new discovery made by Wheeler and associates appears to lie within a very strong shear zone, cutting the schist foliation strike and dip more or less at right angles. Its apparent strike at point of discovery is N30W and dip 55°SW; apparent strike of the schist formation at same point was taken to be N65 to 70E and dip 50° to 55°NW.

The 17 inch width of vein filling - 9 inches of quartz, 4 inches of short, discontinuous, narrow, and irregular hematite stringers, and two bands of graphitic

schist of 2 inch width each - are "crushed", suggesting strong post-mineral movement along the shear zone.

Along projected "apparent" strike of the shear zone (taken as N30W in the open-cut) slight depressions and "humps" suggested those points to be surface expressions of that structure. This was reported to have been confirmed by the owners later in the season after tracing the zone over one mile in length by auger sampling.

No dikes were noted in the brief investigation and none reported having been found by the prospectors. The 16 inch "acid dike" intersected in lower adit cross-cut on the Thorpe property is the only one apparently reported in this area to date. 5/ Other dikes and intrusives will no doubt be found as prospecting and development of the area progresses.

Mineralization

Minerals noted in the quartz vein section exposed and sampled is limited to a small amount of disseminated pyrite, and cryptocrystalline hematite in short, irregular stringers or small lenses up to 2 inch width. While no "free" gold" was visible in face of open-cut sampled, the 17 inch vein width carried high gold values, and "panning" of vein material from floor of the open-cut showed "fair" prospects.

It was not certain that full vein width is exposed in the open-cut as the crushed quartz and other vein filling is "slumped over" in a 90 degree arc from its dip, and loses its identity in the "creeping" soil cover.

SAMPLING

With some former miners in the district and a few present day prospectors having belief that the presence of hematite is a "marker" for possible high-grade gold values, in addition to taking a sample across full width of vein exposed, separate samples of the three types of vein "filling" were taken. An assay of these showed values in the quartz and hematite sections to be about equal, and that of the two graphitic schist sections to be about four times greater. The assayers report shows the following values:-

SAMPLING RESULTS

SAMPLE NO.	WIDTH INCHES	GOLD OZ	SILVER OZ	VALUE	DESCRIPTION
373A	17	17.6	Tr	$597.10	17" width of vein exposed in open-cut. Composed of 9" crushed qtz, 4" hematite with little crushed qtz, and 4" graphitic schist.
374A	4	0.8	Nil	28.00	4" hematite section with little crushed qtz included.
375A	4	3.4	Tr	106.40	4" of graphitic schist section.
376A	9	0.76	Nil	26.60	9" of crushed qtz section.

Grab samples taken by the owners later in the season at number of points on the vein located to southeast of open-cut samples above had the following gold values:-

Sample no.	Width inches	Gold oz	Silver oz	Value	Description
A	Grab	0.04		$ 1.40	
A	Grab	0.20		7.00	
B	Grab	0.70		24.50	
C	Grab	0.80		28.00	
D	Grab	0.40		14.00	
E	Grab	2.20		77.00	
F	Grab	0.90		31.50	
G	Grab	0.60		21.00	
I	Grab	2.80		98.00	
I	Grab	2.40		84.00	
K	Grab	0.60		21.00	
L	Grab	0.76		26.60	

Since the "grab" samples do not represent full width of the vein, they are indicative only of section "grabbed" of the mineralized zone. However, as they were reportedly taken at intervals along several hundred feet to southeast of the open-cuts, they are of interest and offer the possibility of there being an oreshoot of economic importance in that area. Stripping along the strike, or open-cuts at regular intervals exposing the full width of the mineralized zone for sampling, are required and justified.

CONCLUSIONS

With work on this 1962 discovery limited to date to the discovery open-cut and a number of small cuts along a several hundred foot section to the southeast (with latter cuts reported insufficient to expose full width of the mineralized shear zone), values present in the channel sampling of the exposed 17 inches of vein filling plus the 12 "grab" samples taken by the owners, suggest this occurence to be one of possible economic interest.

The use and application of the geochemical soil sampling auger proved to be an invaluable tool in, (1) making the initial discovery, and (2) tracing the mineralized shear zone a reported 6,000 feet. Its use is also reported to have confirmed that the noted slight depressions and soil covered "ribs" and low bluffs, rising slightly above the fairly uniform mountain slope along the projected "apparent" strike of the shear zone, is a surface "marker" for this strong structure.

The abundance of graphitic schist as a vein filling component within the limited section of the mineralized shear zone exposed in the "discovery" open-cut suggests the movement (both pre- and post-mineral) along this structure may have been of some magnitude.

The Wheeler and associates discovery open-cut suggests it to be somewhat similar to the one that received the most attention on the Clyde Thorpe property, where a narrower shear zone (6 to 8 inches in width) with very little visible quartz carried high values. 4/ At the Wheeler discovery cut the graphitic schist section carried the higher values.

Panning of the auger cuttings from numerous holes put down in tracing the 1962 discovery shear zone 6,000 feet reportedly found good "prospects" with values steadily increasing up the slope to a maximum a short distance below the shear zones location. Although this soil sampling was not along lines an equal distance apart, it does suggest that gold distribution in this shear zone is more extensive than that found in the Thorpe property. The information obtained from last years prospecting justifies a more thorough and systematic trenching, open-cut, and sampling program along the known 6,000 foot length of the shear zone. Results of this work will determine whether or not an underground exploration program is warranted, as well as the most desirable location for an adit level.

RECOMMENDATIONS

The following exploration program is recommended for the 1963 season:-

1. Use of tractor equipment to trench the shear zone along its strike as far as practical on the prevailing slopes.

2. Trenching across the shear zone at 25 to 50 feet intervals where inaccessible for the tractor.

3. Sampling the shear zone at 5 foot intervals as rapidly as possible after it has been uncovered. It is desirable to make complete description of each sample - that is, type of material and its location.

4. Continue use of the soil sampling auger to trace and isolate its approximate location. It would be desirable to put down the auger holes at regular intervals, with lines suggested at 100 foot intervals at right angles to the shear zones strike, with spacing of holes along the lines also at regular intervals. It would also be desirable to (certainly of interest) pan-down the cuttings from each hole and weigh up separately.

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Anchorage
April 19, 1963

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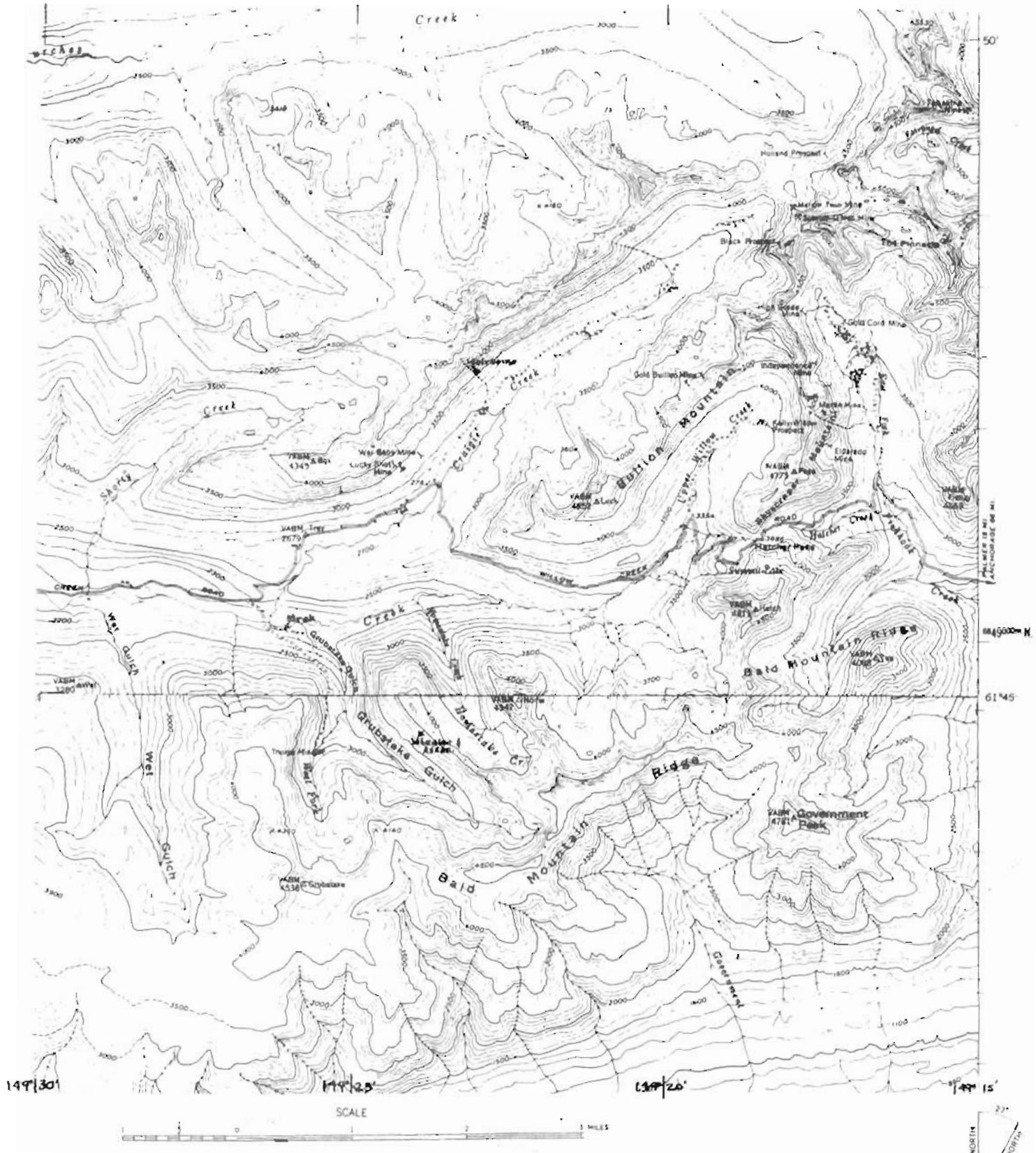

MAP OF WILLOW CREEK DISTRICT
Showing
LOCATION OF MOST GOLD-QUARTZ & PLACER PROPERTIES
Adapted from USGS Maps C-7 & D-7
Anchorage Quadrangle
by
M. W. Jasper, Min. Eng. State Div. of M. & M.
Anchorage, Alaska December 1962

MAP I

ROAD CLASSIFICATION

ALL WEATHER ROADS		DRY WEATHER ROADS	
Hard surface	Stone	Improved dirt	
Other		Unimproved dirt	
		Trails	