

GEOLOGICAL WORK COMPLETED ON CLAIMS
DAVIES 1 - 6, OLIN 1 - 8, ALBERT 1 - 8,
AL 9 - 14 AND AL 17 - 26
AROUND STAND-TO HILL
AT LATITUDE 64 04 N, LONGITUDE 135 10 W
IN THE MAYO MINING DISTRICT, YUKON TERRITORY

UNDER THE DIRECTION OF

BRIAN W. HESTER, P. ENG.

FROM

26TH - 31ST AUGUST, 1961

AND

11TH JULY - 15TH AUGUST, 1962

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CER 4

THE YUKON CONSOLIDATED GOLD CORPORATION, LIMITED

WORK COMPLETED ON THE STAND-TO HILL CLAIM GROUP
MAYO MINING DIVISION, Y. T. DURING 1961 AND 1962

LOCATION:

The group consists of 38 unsurveyed mineral claims, of full size, around the head of Homestead Creek in the Davidson Mountains. This is within the boundaries of the Mayo Mining Division and at a latitude of about 64 degrees 04 minutes north, and a longitude of about 135 degrees 10 minutes west. The nearest habitation is the village of Keno City, which is eight miles to the south-west.

ACCESS:

In summer months it is possible to rent a helicopter at Mayo Landing, about 40 miles south-west of the claim group. By this means the group may be reached in 35 minutes. Another practical approach is by float plane from Mayo Landing to Ladue Lake, and from there, northwards by foot along the trail up Homestead Creek for two miles.

OWNERSHIP:

The property is held in the name of "Brian W. Hester", who is agent for The Yukon Consolidated Gold Corporation, Limited and Asbestos Corporation, Limited, in the names of which companies the work described here was conducted. The following claims form the property on which work was conducted:

Davies	Nos. 1 - 6, inclusive
Olin	Nos. 1 - 8, inclusive
Albert	Nos. 1 - 8, inclusive
Al	Nos. 9 - 14, inclusive
Al	Nos. 17 - 26, inclusive

PREVIOUS WORK:

According to W. E. Cockfield, who reports his observations in the area in Geological Survey of Canada Summary Report, 1921, Part "A", the first claims were staked there in August, 1920. He noted several trenches and an adit, about 50 feet long, on a vein. Since that time the area has been staked many times, but there is no evidence of further exploration or development work.

L. H. Green mapped the general area in which the claim group lies in greater detail than Cockfield in 1958. His results were published in Geological Survey of Canada Paper 58-4, "McQueston Lake and Scougale Creek Map Areas, Yukon Territory". Green, in conjunction with K. C. McTaggart, attempted an interpretation of the structural geology of the Davidson Mountains in "Structural Studies in the Mayo District, Yukon Territory" in Geological Survey of Canada reprint 26, 1961.

PRESENT WORK:

A brief examination was made in 1961 of most of the outcrops of known mineralization in the area and a number of character samples of mineralization were collected. Evidence of northerly striking faults through the saddle east of Stand-to Hill was noted. Detailed sections were made of the stratigraphic succession on each side of this zone of faulting, in an attempt to determine the amount of displacement. The known mineralization appeared to be closely related to these faults. At this point 48 claims were staked. Ten have since been dropped.

During the winter of 1961-1962 all the information relevant to the area was compiled on a scale of 1 inch to 1,000 feet. The structural geology of the area was interpreted from aerial photographs and superimposed on the compilation. This work appeared to confirm the relation between the mineralization and faults.

PRESENT WORK (Cont'd.):

Two men were employed for thirty-five days in detailed geological mapping and prospecting the surface of the claims and adjacent ground during the summer of 1962. The trail between Ladue Lake and the claims was also brushed out. A map and sections on a scale of 1 inch to 1,000 feet to show the results of this work have been prepared and are attached to this report. Also attached is a geological map of the adit referred to in Cockfield's report, and two stratigraphic sections made of the south side of the Homestead Creek Valley near the adit.

GENERAL GEOLOGY:

Phyllitic, quartz-mica schists and quartzites of a wide range of textures form the principal bedrock formation in the area covered by the claim group. Extensive intrusions in the form of sills of a basic "Greenstone" rock occur in the sedimentary rocks throughout the area. McTaggart and Green have recognized a recumbent anticline in the core of the Davidson Range, but this is too large scale a structure to be recognizable in the area mapped. There is, however, much evidence of the intense tectonic disturbance noted by these two authors.

Rocks of similar types are the hosts of the high grade, lead-silver mineralization on the property of United Keno Hill Mines, Limited and adjacent properties five to ten miles to the southwest.

Outcrop in the Davidson Mountains is generally plentiful but, on account of extensive frost heaving and sliding, it is difficult to measure correct attitudes with much certainty. A combination of these phenomena, with the preferential weathering of mineralization, tends to obscure the veins at surface.

GEOLOGY OF THE CLAIM GROUPS:

The dip of bedding throughout the claim area is everywhere southwards at angles between 10 and 35 degrees. At the eastern end of the claims group, on claims Gun 1 and 2, a number of westerly dips were seen.

GEOLOGY OF CLAIM GROUPS (Cont'd.):

From these observations it is concluded that the principal structure in the immediate area is a westerly plunging syncline, the southern limb of which is overturned. A minor, parallel anticline, of similar plunge was observed along the southern limit of the claim group. A number of plunge directions were measured on minor folds. These indicate a general plunge to the west, but there were insufficient measurements to permit a precise estimate of direction.

At the top of the ridge along the south side of the head of Homestead Creek, several lenticular bodies of greenstone were seen. It is thought that these represent boudins which resulted from the stretching of a greenstone sill. The rock between the successive lens of greenstone has been intensely sheared.

Faulting has been both widespread and intense throughout the area of the claims. Two attitudes of fault planes predominate. One, strikes roughly northwards and dips steeply west. The other strikes southeastwards and dips to the southwest. Both directions of faulting are exposed in the adit on the north slope of Stand-to-Hill on Claim A19. Galena mineralization occurs in a fault of the north-striking direction. The dip is vertical, and prominent slickensiding plunges south at 35 degrees. The steep dip of the fault appears to be of only local extent. Surface mapping shows this fault to have the well-defined westerly dip mentioned above. The slickensiding indicates that at least the latest movement on the fault has been dominantly in a sub-horizontal direction. Slickensiding is down dip on the two faults with a southwest dip which are exposed in the adit. On Forbes Hill and elsewhere, the indication is that the movement on the faults with this direction is also down dip, and of normal displacement. No mineralization is associated with these latter faults.

MINERALIZATION:

Argentiferous galena occurs, with more or less sphalerite and chalcopyrite, in a siderite gangue along sections of the north striking faults. The association is very evident from the attached map of the claim groups. The greatest width of this type of mineralization seen on the property is in the adit where a vein width of two feet is attained. On surface immediately above this section, the vein is hardly visible on account of weathering and frost heaving. Exposure is virtually 100%, but very little of the bedrock is in situ. The presence of the vein can only be proved by removing about one foot of rubble with a grub hoe. There is a small amount of manganese oxide staining on rock fragments in the general vicinity of veins.

In the creek bank below the adit much of the rock rubble has been cemented with limonite. This material is found on the same bank as the mineralization and it is presumed that it owes its origin to the mineralization above it. Further downstream, on the right limit and about 1,000 feet above the creek bed, is an occurrence of manganese and iron oxides with minor sphalerite cementing a brecciated area in the sediments. Rock rubble in the creek bank below this mineralization is also cemented with limonite. These two occurrences of cemented rock rubble appear to be definitely relatable to known mineralization, but no such correlation has been found for the many other occurrences which have been reported from other creeks in the Davidson and Patterson Ranges.

Throughout the area it is recognized that, for an ore shoot to develop on any vein, one wall at least must be a competent rock. Both greenstones and more massive quartzites are sufficiently competent to qualify. Those sections of the faults which have both walls of competent rocks are presumed to be the best locations for ore grade mineralization, if such exists. Sections have been drawn along the planes of the three main faults with northerly strike, which occur on the claim group. On these sections, the rock types on both foot and hanging

MINERALIZATION (Cont'd.)

walls have been superimposed. This work has indicated four target areas with the desired conditions. These are coloured red on the attached section, and number one to four. In all except number 3, greenstones are brought into juxtaposition. At that locality, the greenstone is thought, on a basis of extrapolation, to provide the hanging wall, while the footwall is a massive, white quartzite, identical in hand specimen with a quartzite found on the walls of many ore bodies at the United Keno Hill Mines, Limited mine at Calumet. The target area at 3 is ill-defined, but has every appearance of being substantial. The same remark applies to 4, where two thick greenstone sills have been brought together. Target No. 2 is probably too small to be of any significance, especially as depth possibilities are limited by change in rock types. Number 1 is the only target in which mineralization is known. At that locality, it looks as if some improvement over the results of the adit may be expected in depth.

A vitiating feature of the lead-silver mineralization in the Davidson Range as a whole has been the low lead to silver ratio there compared with the lead to silver ratio of the mineralization to the south and west in the productive area. Five character samples of galena from various places in the claim group gave ratios between 0.65 and 1.67. These results confirm the 1.33 quoted by Cockfield and are about one quarter those obtained in the producing properties. It should be noted, however, that none of the samples from the Stand-to area were from veins with the dimensions of an ore body. It is quite conceivable that the ratio of lead to silver in the target areas discussed above might be appreciably higher. In any event, the lead-silver ratio must be interpreted in the light of present metal prices.

RECOMMENDATIONS:

1. Investigation of target areas 1, 3 and 4 with a packsack drill during the summer of 1963 is recommended.
2. A study of the aerial photographs of the Davidson Range is recommended. Further faults with a northerly strike may be present. These should be prospected with a view to drilling any accessible target areas.

B. W. Hester

B. W. Hester,
Registered Professional Engineer
in the Yukon Territory and Ontario

DAWSON, Y. T.

DECEMBER 19TH, 1962.

STATEMENT OF QUALIFICATIONS

The work described in this report was conducted
under my supervision by:

Murray A. Nichol, Graduate in Geology
from the University
of Saskatchewan.

Wilfred M. Parker, Graduate in Geology
from the University
of New Brunswick.

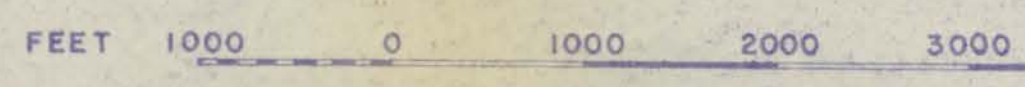
David A. Williams, Graduate in Physics & Geology
from the University of
British Columbia.

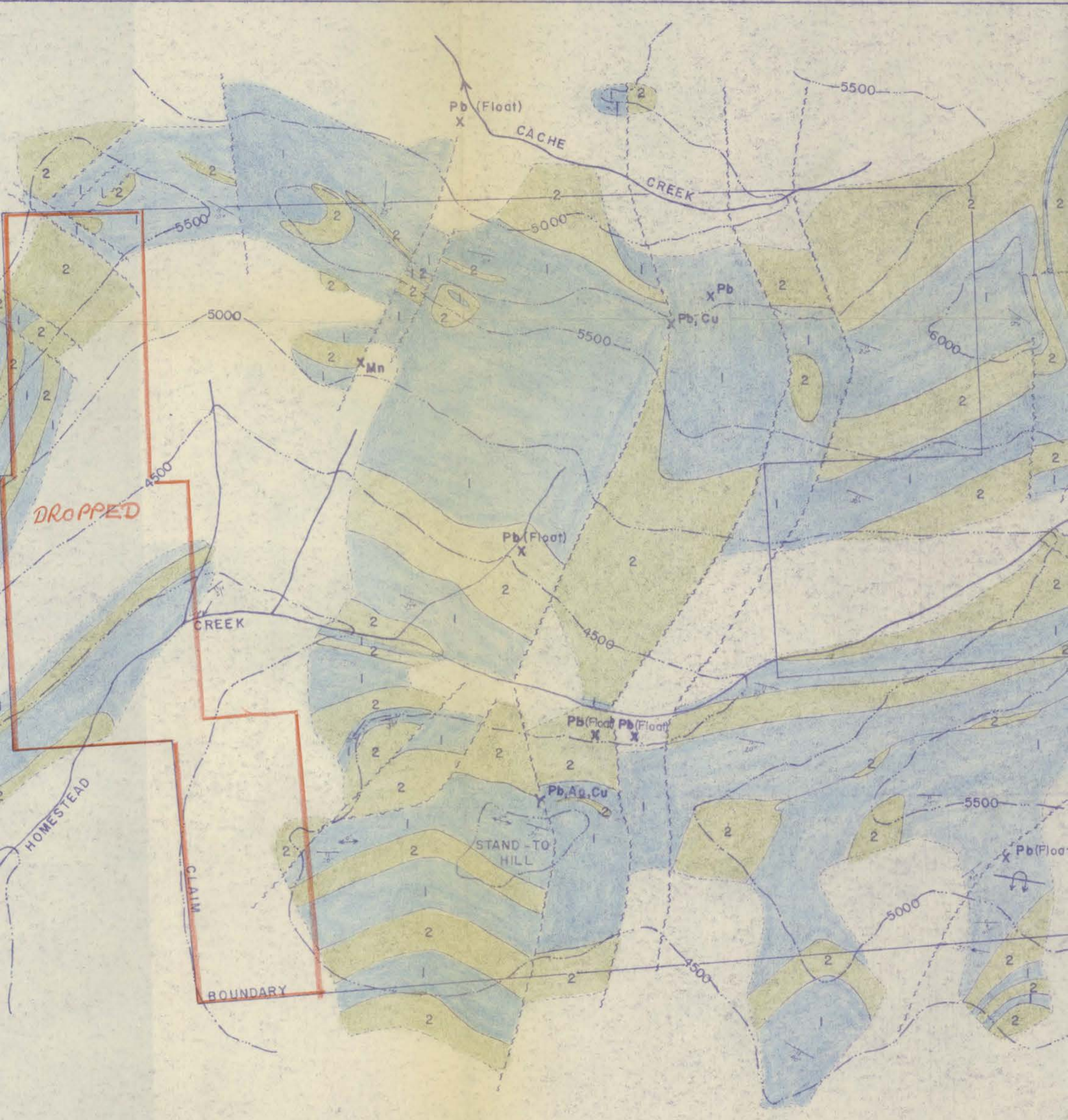
I am a graduate in Mining Geology from the
Royal School of Mines, London, and a Registered Professional
Engineer in the Yukon Territory and Ontario.

Brian W. Hester.

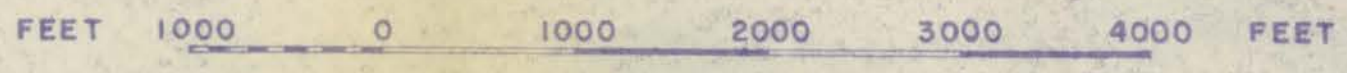


SCALE





SCALE





LEGEND

- 1 THINLY BEDDED QUARTZITE, PHYLLITE, AND MINOR MASSIVE QUARTZITE.
- 2 GREENSTONE SILL-LIKE BODIES
- BEDDING (BEDS OVERTURNED)
- BEDDING (TOPS UNKNOWN)
- PLUNGE DIRECTION
- FAULT
- OVERTURNED ANTICLINE
- GEOLOGICAL BOUNDARY
- OUTCROP AREA
- X Pb MINERAL OCCURRENCE
- Y ADIT
- CONTOURS, INTERVAL 500 FEET

YUKON CONS. GOLD CORP.

STAND-TO HILL

DAVIDSON MTNS., MAYO AREA, YUKON

GEOLOGY BY: W. PARKER DATE: SEPT. 12, 1962
 M. NICHOL DRAWN BY: *W. Parker*

LEGEND



THINLY BEDDED QUARTZITE



BLOCKY QUARTZITE



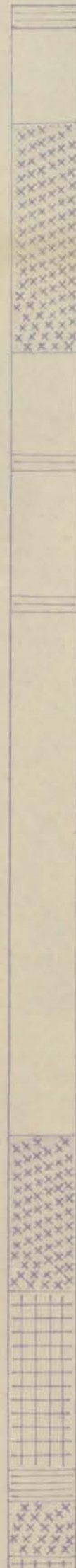
PHYLLITE



DIORITE



SECTION 1
Claim A13



SECTION 2
Claim A19

Section 1 near head of
Homestead Cr.

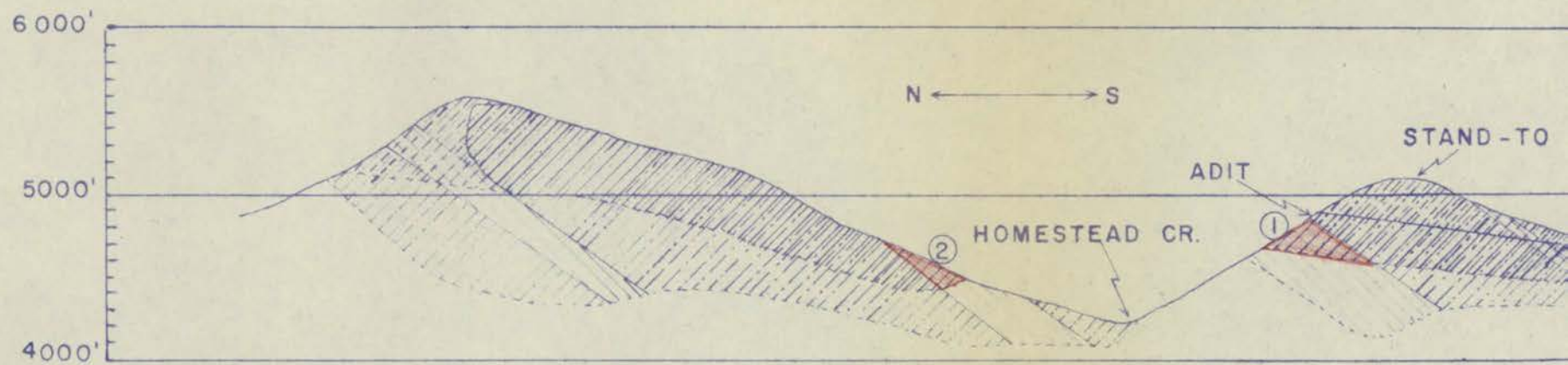
Section 2 near old cabin
on Homestead Cr. (below adit)

DAVIDSON MTNS. GEOLOGICAL SECTIONS

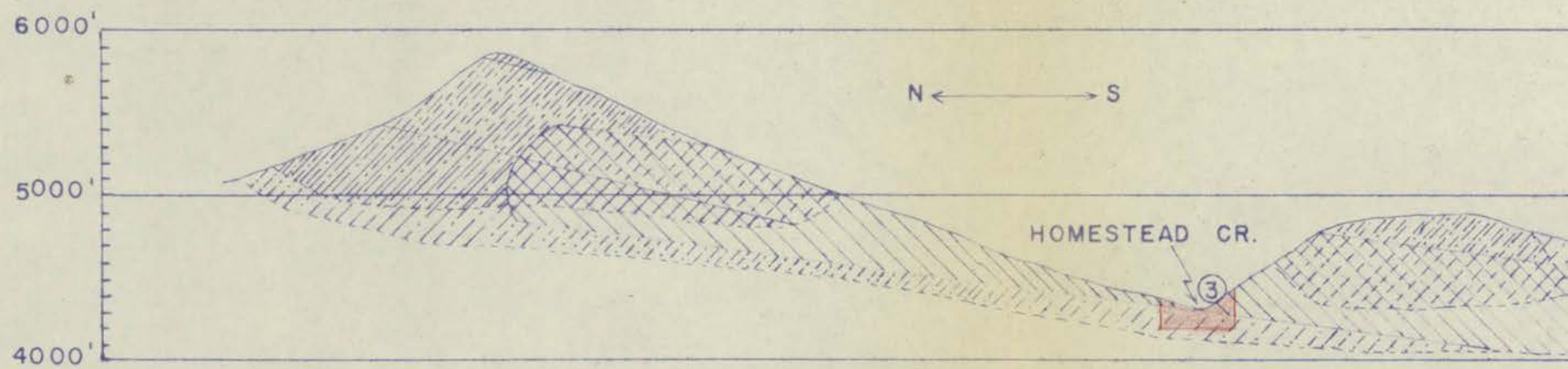
SCALE: 1" = 100'

SEPT. 20, 1961

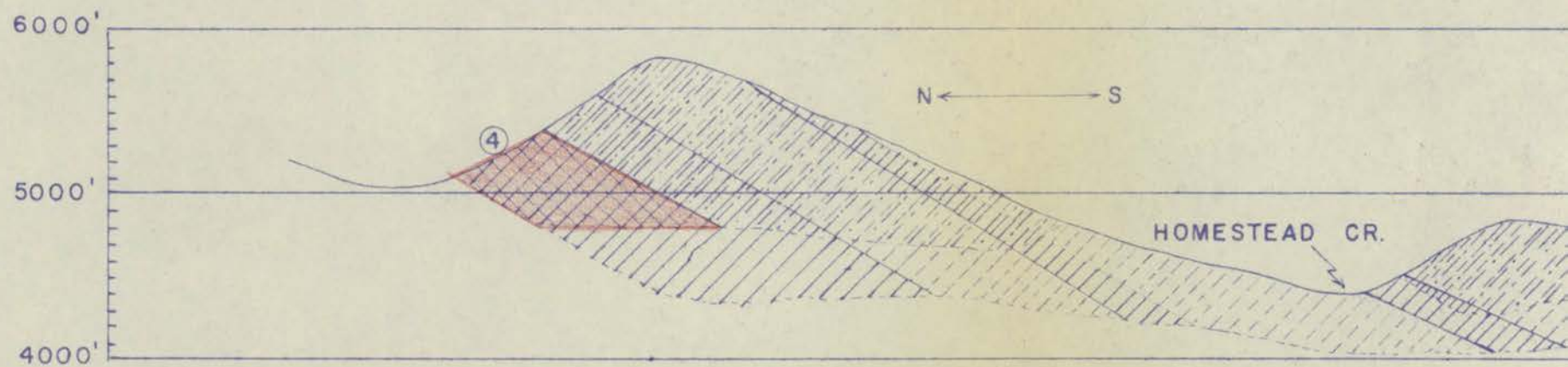
BY: *H. Parker*



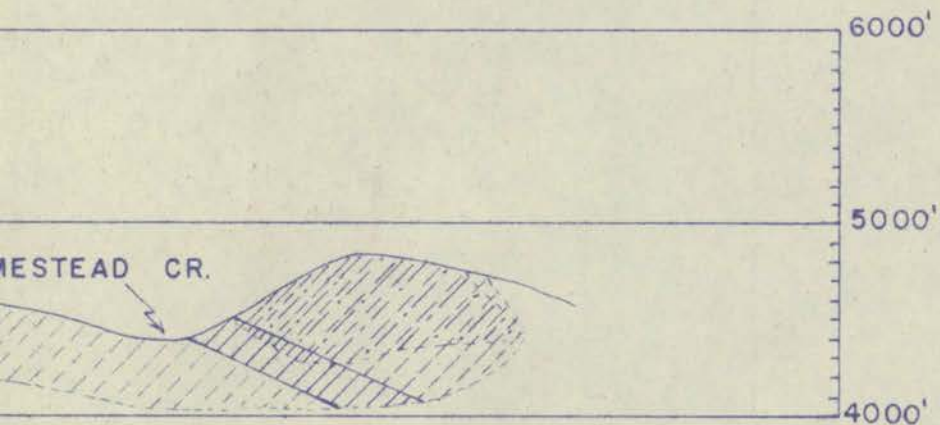
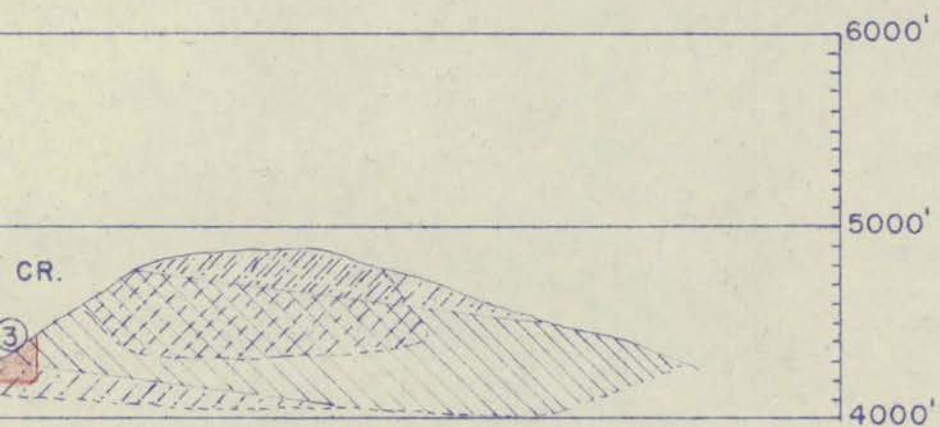
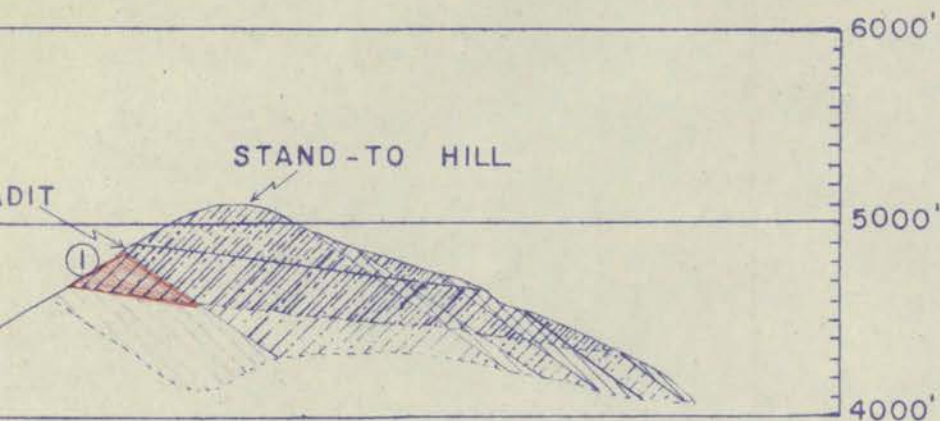
SECTION 1



SECTION 2



SECTION 3



LEGEND

GREENSTONE ON FOOTWALL



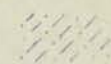
GREENSTONE ON HANGING WALL



SEDIMENTS ON FOOTWALL



SEDIMENTS ON HANGING WALL



SECTION 1 WESTERN FAULT

SECTION 2 CENTRAL FAULT

SECTION 3 EASTERN FAULT

YUKON CONS. GOLD CORP.

STAND-TO HILL

DAVIDSON MTNS., MAYO AREA, YUKON

SECTIONS ALONG THREE MAJOR NORTH-SOUTH FAULTS

SCALE: 1" = 1000'

DATE: OCT. 22, 1962

DRAWN BY: *H. Parker*

diorite



diorite
flat contact
slate

undulating bedding

- fault or vein
- dip of fault or vein
- ↔ slickenside
- dip of bedding
- ||||| cliff

2 feet gouge and quartz

2 feet galena-sphalerite siderite

Plan of Adit Workings Stand-to Mt.

1 inch to 20 feet

14 SEPT. 61

B.W. HESTER



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