OCTOBER 1979

DOLLY CLAIM GROUP

673284

OMINECA MINING DIVISION
N.T.S. 94 E 9

HISTORY:

The mineral showings on which the 4 claims were staked were discovered first in 1950 by E. Bronlund, P.Eng. At that time a brief examination and a few preliminary samples indicated a deposit of silver-lead ore of some importance. The showings were reexamined in 1951 and some claims were staked to cover the most essential outcrop area. The main showing was stripped, trenched and sampled. The local geology was mapped in some detail, based on close traverses by chain and Brunton survey. In 1968 the area was staked by the writer for Union Carbide and further mapping and sampling was done. Union Carbide Exploration returned the claims to the staker since target minerals did not include Lead and interest in Silver was only minor. The claims were left to run out in 1971 and no further work was done. In August of 1979 the claims were restaked and a limited amount of work was done. This work includes cutting out the Access Trail and Heliport. A plan accompanying this report, showing location, topography, assays and geology.

PROPERTY:

The Dolly claims were staked August 6, 1979 by the writer and recorded at Vancouver, B.C. August 8, 1979. The No. 1 Posts are situated East of the Main showing. The location line is plainly marked.

LOCATION:

Cutoff Lake, Finlay River area, Omineca Mining Division, approximately 23 miles (37 km) north west of Fort Ware,B.C.

The showings are situated 1.5 miles (2.4 km) southwest of the junction of Cutoff Creek with a small creek from the south(local name Bear Creek). In later years the access was by floatplane to Cutoff Lake, which is 3 miles (4.8 km) long and 4 miles (6.4 km) by trail from the showings. Helicoptor can land on open flats in the valley 1.5 miles (2.4 km) from the showings. A heliport was constructed within a few hundred feet of the showing as shown on the plan. Under normal wind conditions this heliport is still operational. The claims are on the northeasterly slope of Mnt. Basnett at an elevation of about 4000' (1219 m) in fairly open jackpine country cut up by ravines and draws, some of which carry water.

WORK DONE:

Work done so far was done on the Main South showing only, in order to get maximum information in the allotted time. The natural vein outcrop was stripped and cleaned for sampling, and trenches were dug to hanging and footwall, providing the overburden did not get too deep.

AREA GEOLOGY:

The rock formations exposed in the Cutoff Creek Area consist of a thick series of interbedded limestone, calcschists,

quartzite, slates, phyllites, chlorite and sericite schists. These rocks are similar to the Ingenika Group mapped by Armstrong and Roots in the Aiken Lake area to the southeast and there designated as of Lower Cambrian age. The rocks are highly folded and in place deformed and metamorphosed. Cuttoff Creek from its mouth to McConnell Pass lies roughly along the axis of an anticlinal fold. The synclinal troughs have been tightly compressed and show flowage and shearing with varying steep to vertical dips. They contain longitudinal quartz veins of great size with a little pyrite and chalcopyrite but usually poorly mineralized. The limbs of the Cutoff Creek anticline show complicated local folds and the Dolly showing is contained in one of these. No granitic rocks have been found in this area, but small dykes and stocks of feldspar porphyry cut Ingenika Group rocks 8 miles (12.8 km) to the southeast.

LOCAL GEOLOGY:

The showings are situated on a timbered slope which steepens rapidly towards timberline at approximately 4800' level (1463 m). The slope surface is cut up by gullies which were eroded by postglacial waters leaving a hilly topography suggestive of geological control. The central area of each hill is covered by poorly sorted sand and gravel deposits while bedrock is showing around their margins. The gullies have been partly re-filled with colluvial material. In the vicinity of

the showings the depth of overburden is estimated to be up to 10 ft. (3m) in depth.

The local bedrock geology was mapped on a scale of 40 ft. to one inch. Some observations and measurements of structures were made outside the map area. The bedrock exposures show a succession of folded, metamorphosed sedimentary rocks, consisting of quartzite, slate, phyllite, dolomite and sericite schist. They have a northwesterly trend and have been affected by faulting. A northeasterly striking fault displaces the assemblage into a northerly and a southerly block which are structurally somewhat alike. The ore showings occur in the southerly block in a buff to rusty weathering, dolomitized bed which has a thickness of 340 feet (103 m) and is exposed for about 600 ft. (183 m) along its strike. The dolomite shows no remnant of bedding or structure, has a uniform coarse orystalline texture with a marked increase in grain size, and generally fits the description of alteration effects caused by ore solutions passing through limestone. Similar altered dolomite occur elsewhere in this district, where the transition into thinbedded limestone can be seen. These all show some copper-lead mineralization. The dolomite is overlain to the southwest by thinbedded slates and phyllite which in turn grade into quartzite containing bands of quartz-chlorite schist, the whole sequence being apparently conformable.

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To the northeast the dolomite is underlain by rusty weathering, partly siliceous sericite schist which appears to be an alteration product along a zone of disturbance. The sericite schist gradually becomes mere siliceous to the northeast and geological section shows a thickness of 250 feet (76 m) which is almost wholly quartz with ribbons and inclusion of schist. The quartz is of a glassy, crystalline high temperature variety and contains an unknown fibrous mineral. Certain zones are completely leached and honeycombed with coasts after a sulphide mineral.

The northerly block consists entirely of slate, phyllite and quartzite with bands of quartz-chlorite schist. The slate has been largely altered to schist and contain discontinuous lenses of glassy quartz. The quartzite contains two large veinlike bodies of massive white quartz, remarkably pure and suggestive of pegmatite origin.

FAULTING:

Besides some minor longitudinal shearing, there are two faults striking across the formation. The first one strikes due north and dips 80^{o} west. It shows horizontal displacement of about 250 feet (76.2 m). The second fault strikes northeasterly and dips 65^{o} northerly. It forms the northerly boundary of the dolomite and ore structure and is believed to be associated with the mineralizing stage. Its displacement must be considerable as the structure and to some extent,

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lithology of the block to the north are quite different. One set of fractures and shears in the ore veins has very nearly the same attitude which would at least indicate late movements along the same system.

VEINS:

There are 7 known veins containing galena and grey copper in a gangue of glassy, translucent to white quartz with occasional nests of carbonate and sericite. Three of the veins called the North Veins, outcrop on the steep bluffs of a ravine at the northwest end of the dolomite. The 4 south veins outcrop some 500 feet (152 m) to the southeast on the banks of a draw. The intervening area is covered by overburden. The veins have frozen walls, and strike from 5^{o} to 30^{o} east of north, with dips from 70^{o} to 85^{o} to the west. The North Veins have the steeper dips. The veins strike across the dolomite at a small angle. The possible length would be in the order of 350 feet (107 m).

The smallest vein is 6 inches wide, the largest one from 25 to 40 feet wide (7.6 - 12.2 m). Galena and grey copper (tetrahedrite) with traces of pyrite and sphalerite are the only sulphide minerals noted and they occur replacing the quartz as a coarse grained intergrowth in high grade shoots, or as finer grained scattered bunches. The ore is mainly confined to the quartz, but occasionally encroaches on the carbonate wall rock.

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ORE SHOWINGS:

North Veins: Of the 3 known veins the largest is 13 feet wide and is exposed for a length of about 75 feet and a depth of 60 feet. It contains some massive bunches of grey copper and scattered grains of suphides. The outcrop area is on the average low grade but slabs of good ore lie below in the talus and there is much copper-stained rock. Another fair sized vein is indicated 30 feet to the west buried in a rock slide. Not much is known of it except that it contains some galena. Fifty feet to the east there are two small veins 9 feet apart exposed for a depth of 80 feet. The first one is 8 inches wide at the top, widening to 16 inches at the bottom. The other is 6 inches wide. Both show persistent good galena-grey copper ore. Only minor work was done on these veins and they were not sampled. At the bottom they run into talus and at the top into overburden.

South Veins: The 4 known veins outcrop on the banks of a dry gully near the west contact of the dolomite some 500 feet south of the North Veins and 120 feet lower elevation. They are spaced 25 to 50 feet apart. Little is known about 3 of them except that one is 8 feet wide, the other two about 1 foot wide and sparsely mineralized with galena and grey copper. The 4th vein is the main showing and was stripped, trenched and sampled. It has a westerly dip of 70^{o} and about the same strike as the others. At its south end it is 25 feet wide

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which increases to about 44 feet in a distance of 80 feet along its strike. Total length indicated so far is about 120 feet. To the south this vein runs into talus, to the north under overburden. The quartz shows slickensides and brecciation along shear zones almost parallel to the walls. Cross fractures are numerous. Coarse galena is the dominant sulphide and occurs with grey copper as rich shoots irregularly spaced throughout the quartz at intersections of fractures and as elongate shoots along the shearzones. One shoot of solid ore near the north end, cuts right across the veing. The rest of the quartz is all mineralized but low grade.

SAMPLING:

The following 12 sections were cut with prospecting pick:

No.	Au,oz	Ag,oz	Cu,%	Pb,%	Width
44708	.03	4.6	.35	13.1	6.0'
703	.03	13.9	.35	40.2	4.0'
707	tr.	.8	.05	2.6	5.0'
706	.01	10.38	.65	21.0	8.0'
702	.01	1.4	.25	4.7	5.0'
709	tr.	3.2	.45	7.1	5.0'
710	tr.	2.4	.05	9.9	18.0'
701	.01	4.3	.75	8.8	6.0'
705	tr.	12.76	1.1	37.8	1.5'
704	.12	23.0	4.7	33.5	2.0'
711	tr.	6.2	.05	23.8	2.0'
712	.09	14.2	3.2	14.0	2.0'

The vein surface is hard, quite irregular and not easy to sample. All samples were taken across the trend of the ore. Six of them represent definite high grade shoots which

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extend in both directions from the sample cut. The others are indicative of the leaner ore. Sample section #44708: this ore extends north and south under overburden and may be part of a shoot that follows the hanging wall and possibly connects with #711 and 712.

Section 44703: this ore extends southerly under talus and may be part of the same shoot as #706.

Section 44705: this high grade shoot is continuous from the footwall to #704 and some distance beyond, possibly up to the hanging wall.

Section 44709, 710, 702: these are typical of the low grade areas containing streaks and nests of disseminated sulphides but no high grade lenses.

It is not possible to estimate the actual grade of this vein on the basis of present samples. A weighted average would not mean anything unless and until the continuity of values has been established by much closer sampling. However, from visual inspection of the unsampled areas it is estimated that the average for the whole exposed vein area, should be well within profitable grade at present metal prices.

THEORETICAL CONSIDERATIONS:

The veins are fracture fillings and therefore would be expected to have varying attitudes. This is noticeable, and while the dip variations are within 15^{o}, the strike variations may be up to 25^{o}. It is likely therefore that

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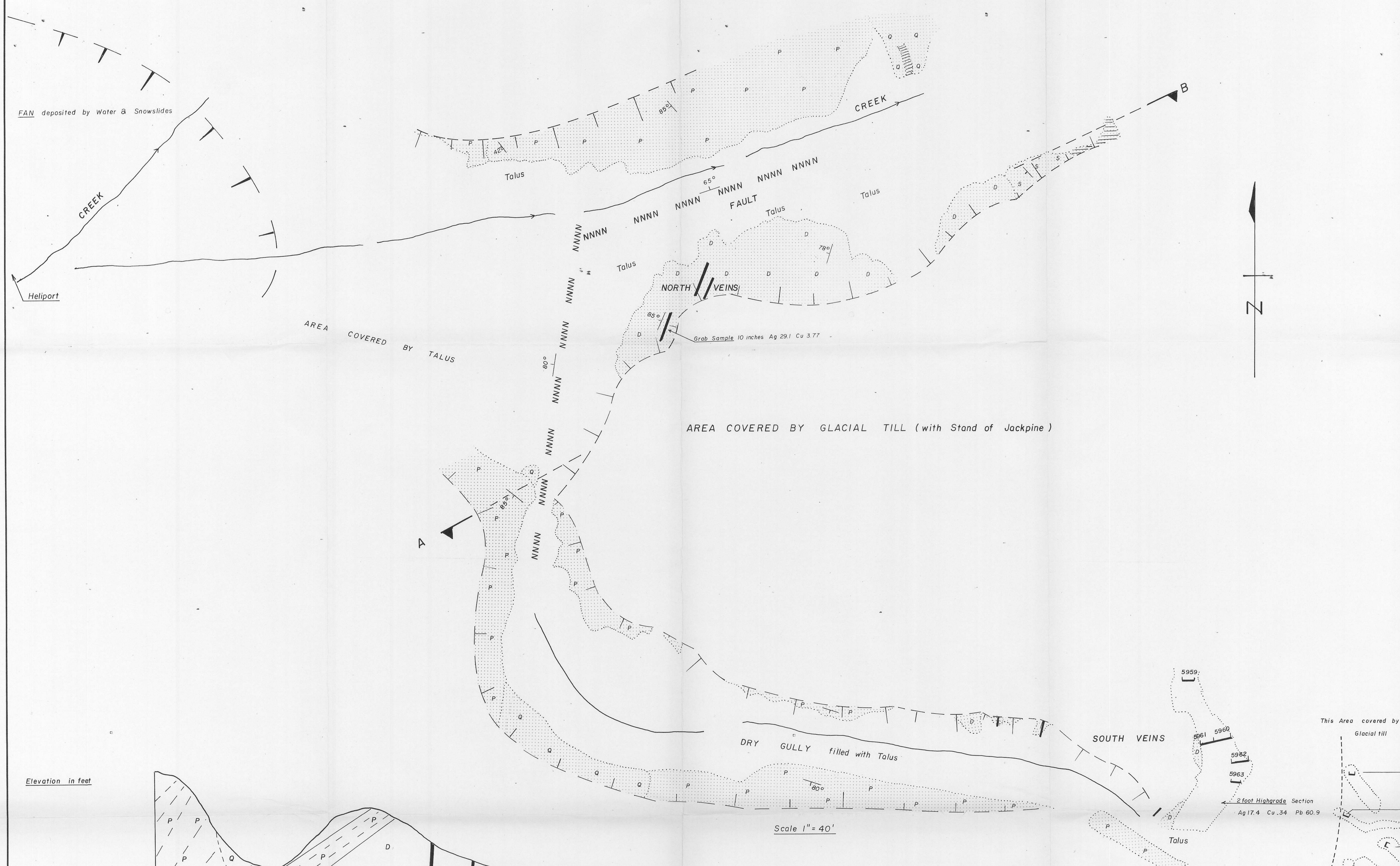
some of the veins will join or intersect at depth. As the rich ore shoots seem to favor zones of strong fracturing which in turn may have developed best where the quartz is the widest, it follows that vein intersections at depth may be good places to look for ore. Conversely, dolomitization is the one specific factor that is common to all mineral showings in the area and as the present outcrops are probably close to the original top of the mineralized structure which may not have been so very deeply buried at time of formation, it is conceivable that the quartz may represent filling of open fractures which may play out at no great depth, probably turning into replacement ore in carbonate.

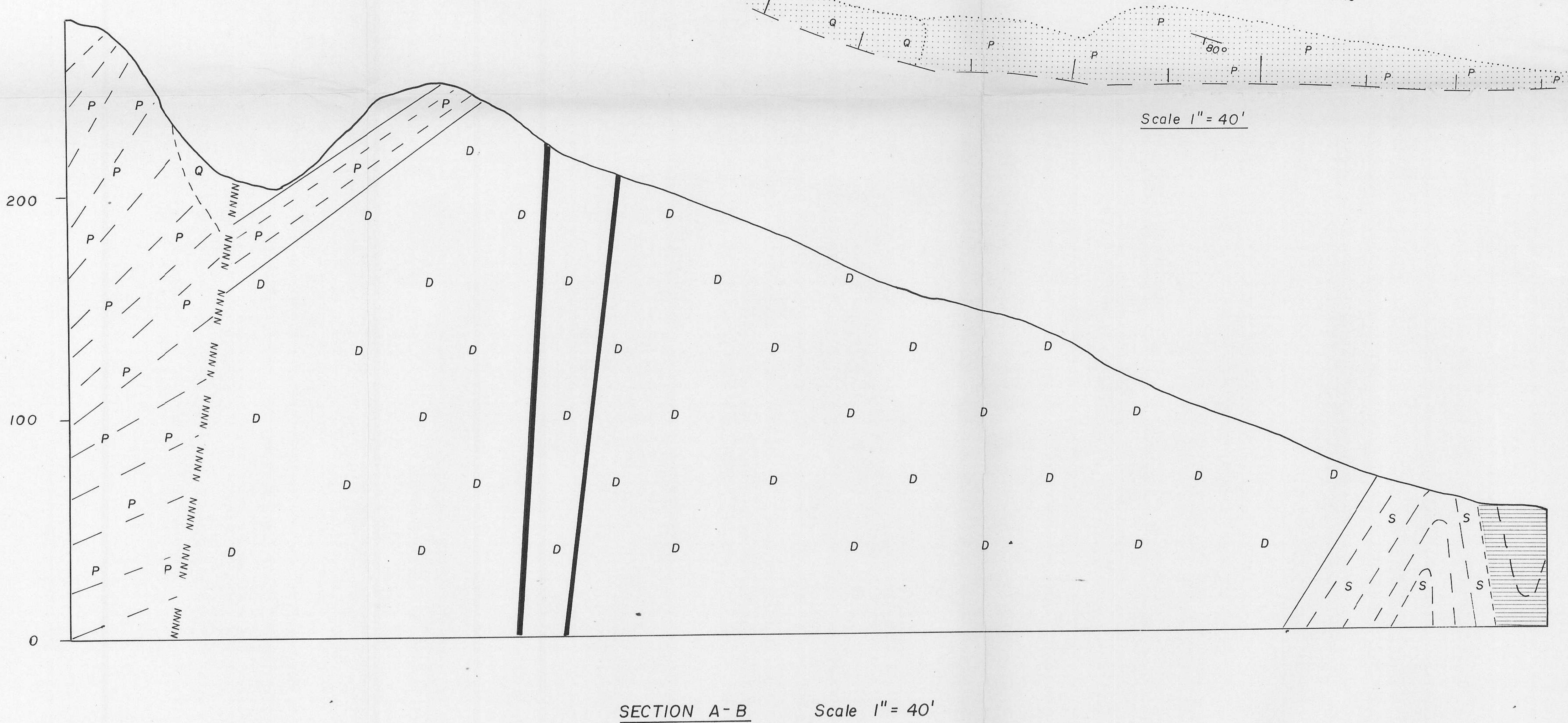
If the conception of the local structure is correct, it would imply the existence of a northeast limb and possibly a repetition of the dolomite and ore not far to the northeast of the present showings. There are no outcrops in that area but a collection of ore float were found to the northeast which can not easily be explained as coming from the known outcrops.

Compilation of data by P. J. Weishaupt.

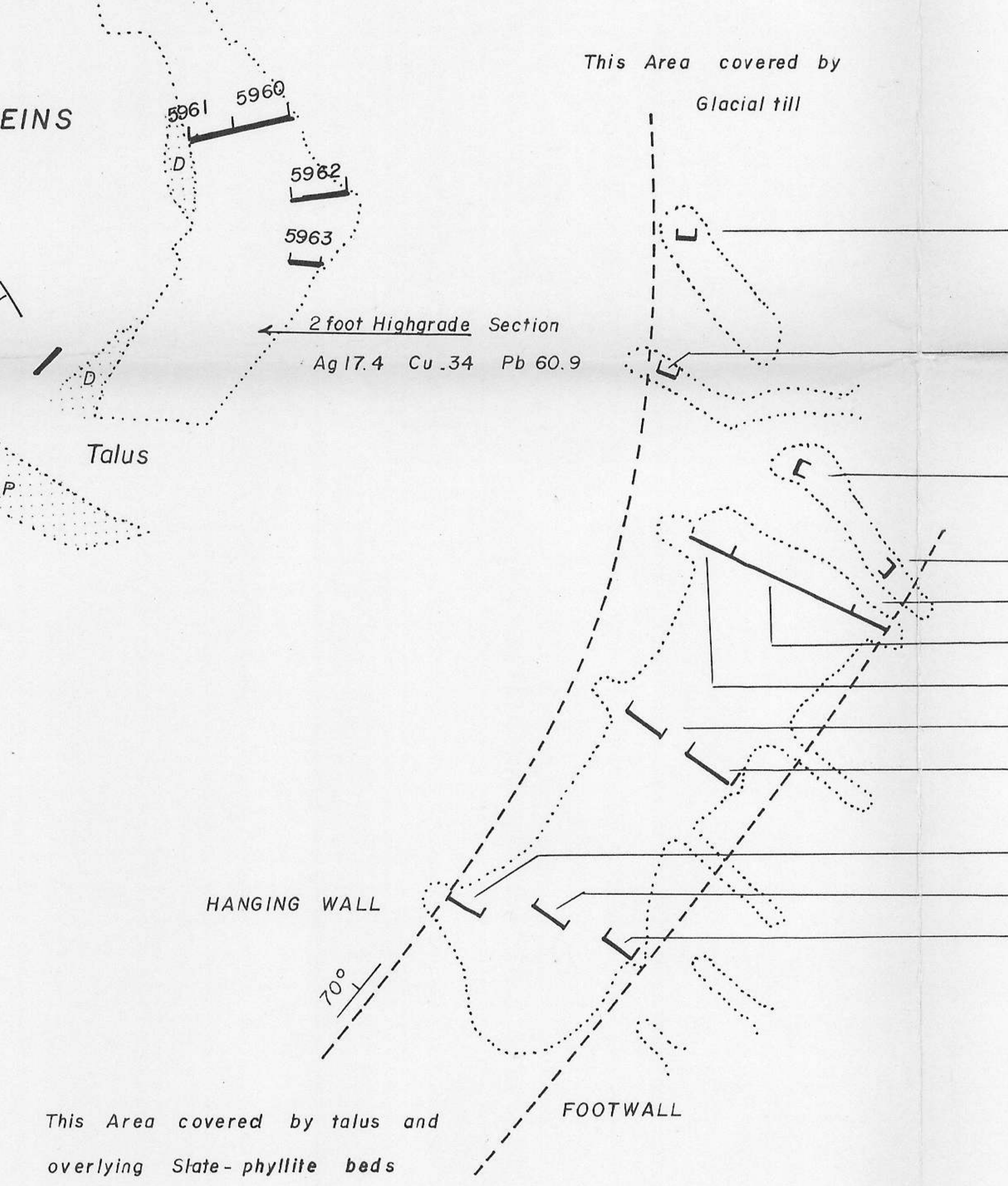
P. J. Weishaupt

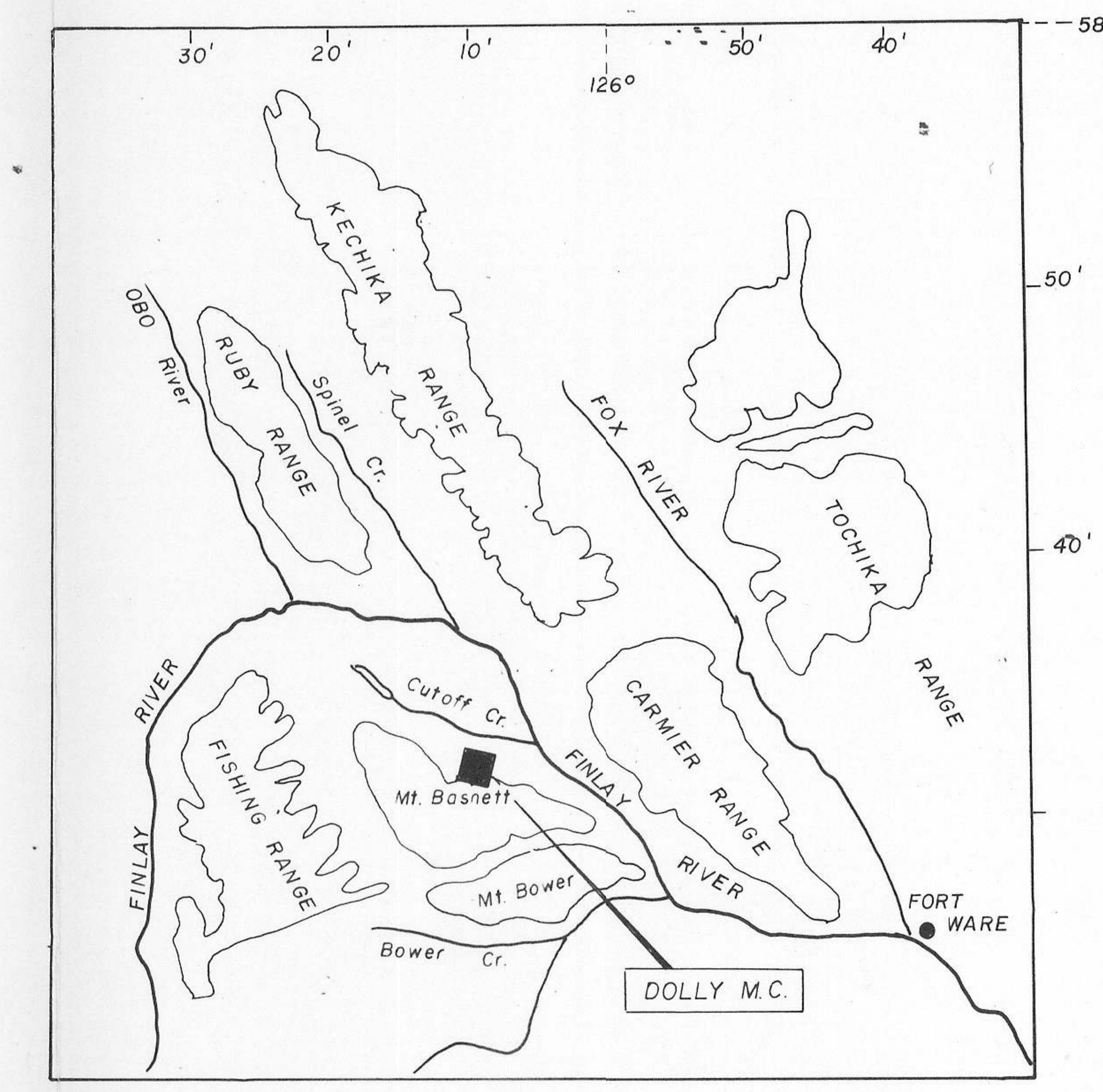


Scale 1" = 40'



SECTION A-B Scale 1" = 40'





LOCATION PLAN Scale 1: 500,000

LEGEND

- Q Q QUARTZITE
- P P PHYLLITE, SLATE
- D D DOLOMITE
- S S SERICITE SCHIST
- BARREN QUARTZ
- QUARTZ- SULPHIDE VEINS

ASSAYS AND DETAIL OF MAINE SOUTH VEIN

Work performed 1952 Supervision: E. Bronlund

Scale 1" = 20'

Sample No.	Au	Ag	Cu	Pb	Width in feet
44712	.09	14.2	3.2	14.0	2.0
44711	tr.	6.2	.05	23.8	2.0
704	.12	23.0	4.7	33.5	2.0
705	tr.	12.76	1.1	37.8	1.5
701	.01	4.3	.75	8.8	6.0
710	tr.	2.4	.05	9.9	18.0
709	tr.	3.2	.45	7.1	5.0
702	.01	1.4	.25	4.7	5.0
706	.01	10.38	.65	21.0	8.0
707	tr.	.8	.05	2.6	5.0
703	.03	13.9	.35	40.2	4.0
44708	.03	4.6	.35	13.1	6.0

ASSAYS OF TRENCHES 1968

Supervision P. J. Weishaupt

5959	0	.47	.04	1.27	7.0
5960	0	8.17	.61	19.05	9.0
5961	0	1.04	.28	3.03	8.0
5962	0	7.94	.27	27.98	8.0
5963	0	8.25	.06	31.10	5.0

DRAWN BY: P.J.W. TRACED BY: MAP BY: E. Bronlund P.Eng. 1952 P.J. Weishaupt 1968 P.J.W. 1979 SCALE: as shown	DOLLY M.C. OMINECA MINING DIVISION 94E9 GEOLOGICAL PLAN AND SECTION WITH SAMPLE RESULTS	DATE: October 1979 REVISED: Drawing Number. -