S.E.R.E.M. LTD

827181

MOUNT SICKER PROPERTY

VICTORIA MINING DIVISION, BRITISH COLUMBIA, CANADA

DIAMOND DRILLING

Location:	NTS 92 B 13 (E and W)
	Latitude 48°52'N
	Longitude 123°46'W
Claim Names:	CF Group # 8
	Richard III
	Belle
	Seattle
	Little Nugget

by

P.A. RONNING

80-MON-35

JULY 1980

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FIGURES

Introduction

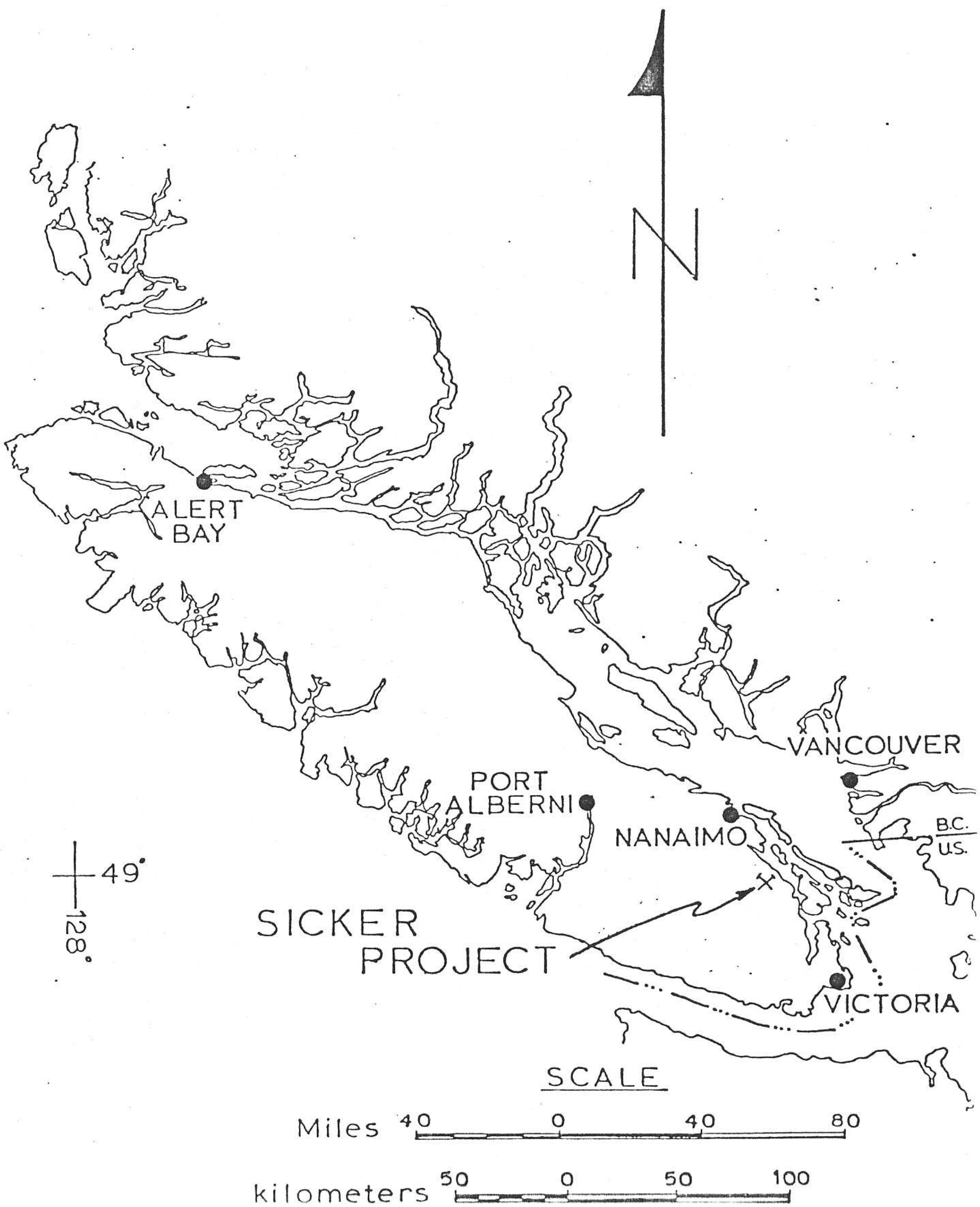
From March 20, 1980 to April 2, 1980 and from April 16, 1980 to May 19, 1980, S.E.R.E.M. Ltd. did 1,236 meters of diamond drilling on the Mt. Sicker property. A summary of the drilling done follows:

DDH #	Length	Claim	Lot or Record No.
SRM 12	306.3	Richard III	L 26 or L 39-G
SRM 13	196.6	CF Group # 8	14157
SRM 14	141.7	CF Group # 8	14157
SRM 15	197.5	Belle	L 55G; 15
SRM 16	132.9	Little Nugget	L 33G; 14
SRM 17	107.0	Seattle	L 57G; 17
SRM 18	153.9	Little Nugget	L 33G; 14

This report describes the results of that drilling. Some of the material accompanying this report duplicates that submitted with an earlier summary report on DDH SRM 12.

Location Map

Fig. 1



Richard III Area

(DDH SRM 12)

Setting and Purpose

DDH SRM 12 was collared on the Richard III Claim, about 125 meters north and slightly east of the Richard III shaft. It was intended to test an hypothesis that the ore horizon of the old Richard III, Tyee and Lenora Mines might have been displaced to the north, east of the Richard III shaft. It was also intended to look at the area immediately east of the Richard III shaft itself, at a depth of about 180 meters.

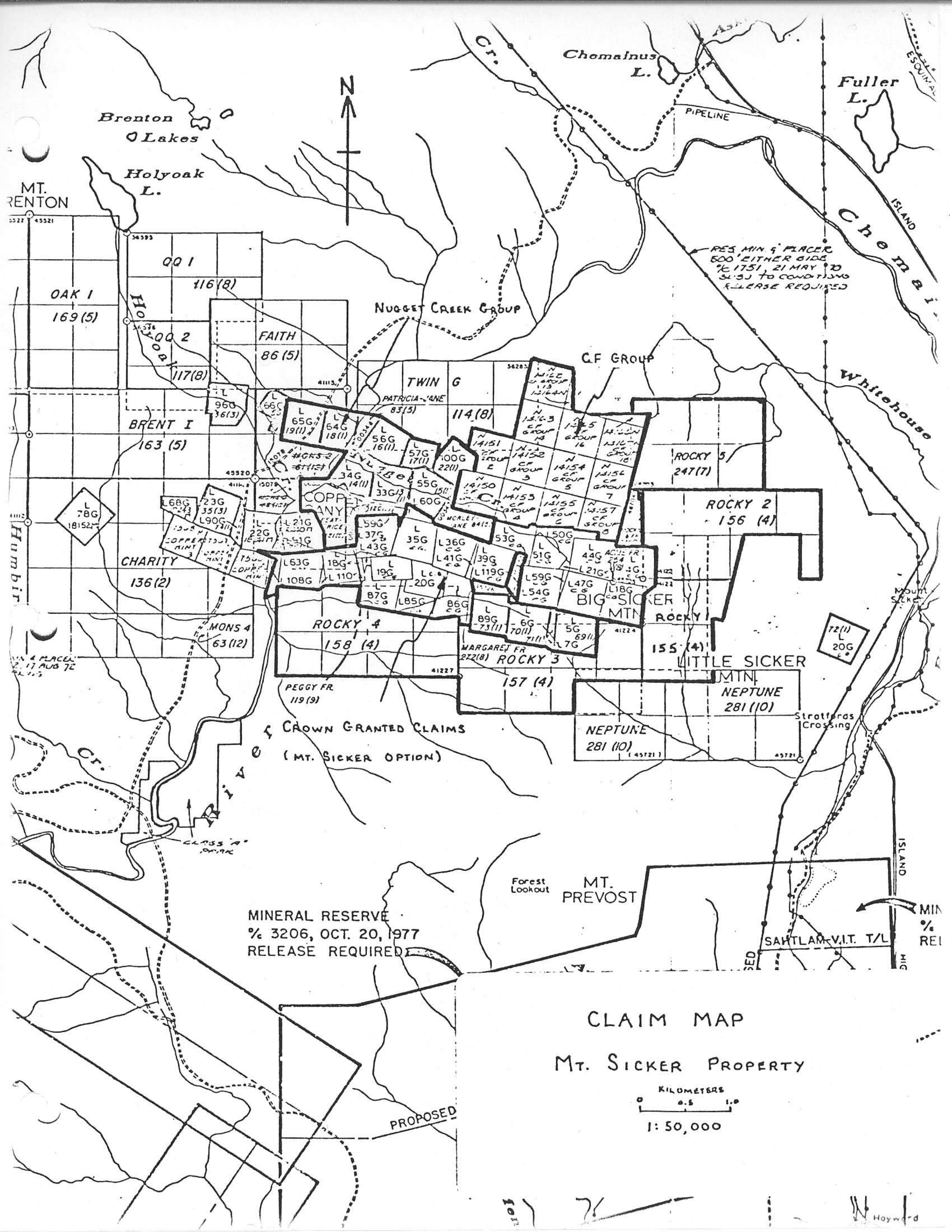
Results

The first 157 meters of the hole passed through a series of felsic volcanics with a few intermediate tuffs. Most of the volcanics have the aspect of a dacite or rhyo-dacite porphyry, with feldspar phenocrysts and some quartz eyes. They are variably schistose, but the schistosity hasn't completely destroyed the original textures. Pyrite is present as disseminations and in seams and quartz veinlets, averaging around 1%. Trace amounts of chalcopyrite sometimes accompany the pyrite.

There are fractured, gougy zones throughout this section but major faulting only begins to appear in about the last 5 meters.

From 157 to 184.5 meters, diabase and chlorite sericite quartz schist alternate every three to five meters, with the schist usually fractured and gougy. At the end of this interval is a small amount of graphitic gouge. This probably marks the mine fault.

Below 184.5 meters, with the exception of a 10 meter section of diabase and gabbro, are 122 meters of hornblende andesite porphyry, some of which appears tuffaceous. The andesite is massive and unfoliated, with some epidotization and chloritization. It carries trace amounts of pyrite but only rare traces of chalcopyrite.


CLAIM MAP
Mt. Sicker Property
KILOMETERS
0
0.5
1.0
1: 50,000
Brenton
Lakes
Holyoak
L.
MT.
RENTON
Chemainus
L.
Fuller
L.
PIPELINE
ESQUIMALT
ISLAND
Chemainus
Cr.
RES MIN & PLACER
500' EITHER SIDE
% 1751, 21 MAY 70
SUBJ TO CONDITIONS
RELEASE REQUIRED
N
OAK I
169 (5)
QQ I
116 (8)
QQ 2
117 (8)
Holyoak
FAITH
86 (5)
NUGGET CREEK GROUP
TWIN G
114 (8)
PATRICIA-JANE
83 (5)
C.F. GROUP
Whitehouse
BRENT I
163 (5)
L
960
36 (3)
L
65G
19 (1)
L
64G
18 (1)
L
56G
16 (1)
L
57G
17 (1)
L
100G
22 (1)
ROCKY 5
247 (7)
ROCKY 2
156 (4)
COPPER CANYON
L
78G
18152
Humbird
L 68G
L
23G
35 (3)
L 90G
L
22G
L 21G
L
34G
14 (1)
L
33G
L
55G
L 60G
L 59G
L 37G
L 43G
L
35G
L 36G
L 41G
L
39G
L 119G
L
53G
L
50G
L
51G
L
44G
L 21G
L 59G
L 54G
L 47G
L18G
BIG SICKER
MTN
ROCKY
CHARITY
136 (2)
L 63G
L 108G
18G
L 110
L
19G
L
20G
L
87G
L85G
86G
L
89G
73 (1)
L
6G
70 (1)
L
5G
69 (1)
7G
MONS 4
63 (12)
ROCKY 4
158 (4)
MARGARET FR.
272 (8)
ROCKY 3
157 (4)
155 (4)
LITTLE SICKER
MTN.
NEPTUNE
281 (10)
72 (1)
L
20G
Mount Sicker
PEGGY FR.
119 (9)
CROWN GRANTED CLAIMS
(MT. SICKER OPTION)
NEPTUNE
281 (10)
Stratfords
Crossing
River
Cr.
CLASS 'A' PARK
Forest
Lookout
MT.
PREVOST
MINERAL RESERVE
% 3206, OCT. 20, 1977
RELEASE REQUIRED
SAHTLAM-V.I.T. T/L
ISLAND
PROPOSED
Hayward

C Zone

(DDH SRM 13, 14)

Setting and Purpose

In the east central part of the Mt. Sicker property is an area known as the C Zone. It extends from about 44 E to 80 E, beginning within 150 meters of the O N base line and extending 300 to 400 meters north. Within it, no bedrock is exposed.

Most of the C Zone was covered by both Pulse EM and IP surveys in 1979. A persistent 1 to 2 channel EM anomaly runs east-west through the C Zone. A 200 m to 250 m wide zone of low resistivity, with some moderately high frequency effects also trends approximately east-west across the C Zone.

The strongest geophysical responses are on line 60 E at about 3+90 N, and these were tested by drilling. Since the geophysical information was ambiguous as to the dip of the conductive zone, it was decided to try a south dipping hole first, looking for a north dipping zone, and if the results of that were inconclusive to try a north dipping hole. In the event, both holes were drilled. DDH SRM 13 was collared at about 60 E, 4+80 N plunging 55° to the south while DDH SRM 14 was collared near 60 E, 3+10 N plunging 55° to the north.

Results

The results of holes SRM 13 and 14 are shown graphically on Figs. 5, 6, and 7. SRM 13 was in gabbro for most of its length, although it passed through 20.7 meters of schistose volcanics at 94.2 m and a couple of shorter intervals of the same before the end of the gabbro at 172.7 meters. The final 24 meters of the hole, to 196.6 m, were in dacite. Most of the gabbro contains quartz-calcite veinlets and may be partly epidotized. One 1.7 m wide quartz vein in gabbro contains about 5% chalcopyrite.

Much of the rock in SRM 13 is partly fractured and a couple of intensely fractured and mylonitized zones were crossed, from 156 m to 159 m and at 194 m.

SRM 14 passed through 41.5 m of overburden before hitting bedrock. The first 11 m of bedrock consisted of intensely fractured and mylonitized dacite, where less than 10% core recovery was attained. Similar fractured rock was found from 64.6 to 66.1 meters and from 87.5 to 90.5 meters, where the dacite ends. Next is one meter of semi-massive pyrite in quartz, followed by 1½ meters of gabbro and 12.3 meters of very siliceous chlorite sericite quartz schist. The last 36½ meters of the hole are in gabbro.

With the exception of the chalcopyrite-bearing quartz vein already mentioned, only traces of mineralization were found by either hole, scattered through the quartz-calcite-epidote bearing gabbro.

The only explanation available to account for the geophysical anomalies seems to be the fault zones encountered in both holes. All the sections of fractured, mylonitized rock are probably part of a major fault zone, perhaps being the eastward extension of the Nugget Creek Fault.

No further drilling or exploration work is needed in the C Zone.

Nugget Creek Group

(DDH SRM 15, 16, 17, 18)

Setting and Purpose

The four holes on the Nugget Creek Group were drilled in an area of favourable geological, geochemical and geophysical indications. They are on a northwest facing hillside underlain by felsic, variably siliceous schists that originated as tuffs and flows. Fifty to a hundred meters north of the drill holes there is a transition to andesitic rocks. The nature of this contact (stratigraphic or facies change) is unclear.

A structural interpretation (Fig. 9) suggests that the holes are drilled into a south-dipping "panel" of schist with hanging and foot walls of gabbro.

Near the collar of SRM 15, in a road cut at the southwest end of a bulldozer trench, is a small zinc showing in sericite schist, from which selected samples assay around 7% zinc. There is some suspicion that the showing is in a large boulder which has sloughed down the hillside from above, but the presence of the zinc is, nevertheless, intriguing.

Soil sampling revealed a zinc anomaly in soils that covers the areas of SRM 15, 16 and 17, extending from there about four hundred meters to the northeast. There is a copper anomaly downslope from these holes to the west.

A pulse EM survey showed a conductor running from 130 meters west of SRM 16 southeast for about 800 meters.

Drill holes SRM 15 and SRM 16 were intended to test the geophysical anomaly near lines 8 W and 12 W. During the drilling of SRM 16 there were some indications that the hole might have been going down the dip of the lithologic horizons so it was decided to try drilling SRM 17 in the opposite direction. SRM 18 was designed to complement SRM 16, so that the two holes together would cover the complete width of the schist panel between the upper and lower gabbros.

Results

Lithologies

Figures 10, 12 and 13 show holes SRM 15, 16, 17 and 18 in profile with, respectively, the lithologies, visual estimates of the sulphide contents and averaged assay results.

Excluding gabbro, rock in all four holes falls into two main types. The first is a rock never seen elsewhere on Mt. Sicker; a very soft, crumbly, friable dark green sericite chlorite schist (Unit 3b on Fig. 10). Sericite and chlorite are by far the major constituents of it, with chlorite dominating. It is usually slightly talcose. Quartz is a minor constituent, occurring as scattered crystals less than 2 mm long, sometimes idiomorphic and sometimes oval. Lenses, streaks and pods a few millimeters thick of very fine silty material sometimes occur, parallelling the schistosity. Occurring with the silty material, or in its absence, are thin, faint anastomosing colour bands, also parallel to the schistosity. Lighter coloured, fine grained spots up to 5 mm wide, sometimes elongated parallel to the schistosity, could be remnants of fragments.

This chlorite-rich rock is probably an alteration product formed by iron and/or magnesium rich hydrothermal fluids. In the siliceous schists occurring deeper in the drill holes are occasional veins and seams of chlorite that could be feeders for a hydrothermal system.

The remaining original textures suggest that the chloritized rocks began as tuffs and lapilli tuffs. They occur from 23.8 m to 38.9 m in SRM 15, above 70.7 m in SRM 16 and above 30.9 m in SRM 17. In SRM 15 the section above 23.8 m is also chloritized and in many ways resembles the other chloritized rock but contains enough quartz to be called a quartz schist.

Located below the chloritized rock in SRM 15 and 16, below it but separated by 14 m in SRM 17 and throughout SRM 18 are quartz schists. Most of them are chlorite sericite augen quartz schists (Unit 1d), with the exception of SRM 16 where they lack augen. These rocks are light grey to white, sometimes speckled with green. Though all are siliceous, their hardness, fissility and competence are highly variable, depending on the amount of quartz present. They usually have a very fine grained groundmass which probably consists of a mixture of quartz, sodic plagioclase, orthoclase, sericite and chlorite. Quartz "augen" vary from 1 to a few millimeters in size and are not always true augen, sometimes being only rounded quartz crystals. A few percent of feldspar phenocrysts or light coloured "spots" suggesting relict feldspars are usually present.

The quartz schists probably originated as rhyolites and/or dacites. The remaining original textures are not often diagnostic of flows or tuffs but with some exceptions most of the quartz schists are more suggestive of flows or of a rhyolite "plug" than of tuff.

The quartz schists are criss-crossed by white quartz and quartz-calcite veins a few millimeters to a few centimeters wide. Sometimes they form breccias with angular fragments of the schist in white quartz and calcite. There is usually pyrite and lesser chalcopyrite associated with the quartz and calcite.

Separating the quartz schist from the chlorite schist in SRM 17 are 14 meters of chlorite-bearing sericite schist (Unit 2c), with a couple of bands of chlorite schist and 3 bands of cherty quartz. This cherty quartz is very pyritiferous (greater than 10% pyrite) and appears to replace chlorite schist. It is strongly reminiscent of Unit 10, "cryptocrystalline quartz" in the Northeast Copper Zone.

Mineralization

Sulphide mineralization found in drill holes SRM 15, 16, 17 and 18 consists entirely of pyrite and chalcopyrite. The quartz schist and the chloritized schist each have their characteristic forms of sulphide occurrence.

In the quartz schist, pyrite and chalcopyrite occur as disseminations or associated with quartz-calcite veins and breccias. Disseminated mineralization may be coarse to fine; that associated with veins may occur as envelopes, cores or spots several millimeters to a oentimeter in diameter.

In the chlorite schist, disseminated mineralization also occurs but quartz veins are less frequent and less likely to contain sulphides. It is common, however, to see sulphides concentrated along the schistosity as fine to coarse grains, often oval and elongated with the schistosity.

The sulphide content of the core often changes when the rock type does (Figs. 12 and 13) but there isn't a systematic relationship between rock types and sulphide content. Generally speaking, the chloritized schist is sulphide rich (5% to 10%) but the quartz schist can be equally rich, though the mode of sulphide occurrence is different. Only the cherty quartz bands in SRM 17 always have a high sulphide content.

Most of the drill core was assayed for copper and zinc and check assays were also run for lead, silver, gold and barium at frequent intervals. The results are tabulated in Appendix 1 .

Copper is the only assayed element which is frequently present in anomalously high amounts. This was expected, since chalcopyrite was the only sulphide other than pyrite seen in the core. The highest copper assay obtained was 3.16% in SRM 15, but only over 28 cm. Most assays were under 0.5% Cu.

To make the assay results more comprehensible, averages were calculated for copper over sections of core with similar levels. These averages are tabulated in Appendix 1 and shown graphically on Fig. 13 .

Comparing Figures 10 and 13 demonstrates a few things. In holes SRM 15, 16 and 17, which had considerable variations of rock type, copper levels are quite variable. In these three holes the highest, but also the most erratic, copper values occur in or near the chloritized schists. For example, in SRM 18 an average of 0.37% Cu lasts for 4.6 meters, followed three meters later by 0.008% Cu over 9 meters, all in chloritized schist.

SRM 15 also intersected three sections of better than 0.1% Cu in the lower part of the hole near quartz breccias, though the breccias themselves are not particularly well mineralized.

In SRM 18, which cut a comparatively monotonous section of rhyolite porphyry, copper levels remain fairly constant over long intervals and are lower than in SRM 15 and 16.

Looking at Figures 12 and 13 , there is no particular relationship between copper assays and visual estimates of total sulphides (pyrite plus chalcopyrite) so the variable copper levels must reflect a variable copper-iron ratio in the sulphides. Note that visual estimates of the amount of chalcopyrite don't compare well with the assays; much of the chalcopyrite is very fine and intimately mixed with pyrite, making such visual estimates unreliable.

The average assays for the four holes in the Nugget Creek area are 0.083% Cu, 0.081% Cu, 0.044% Cu, and 0.058% Cu for SRM 15, 16, 17 and 18 respectively.

To put the above copper assays in some perspective, they can be compared with results from other holes drilled on Mt. Sicker. For example, SRM 1 was drilled through the ore horizon (though not through an orebody) in the old Tyee section of the mine. The best section obtained was 4 meters of 0.33% Cu in the ore horizon. In the underlying stringer zone the best copper average was 0.04% over 8 meters, and the average assay for the hole was only 0.036%, exceeded by all four holes in the Nugget Creek Area.

On the other hand, SRM 6, drilled on the Richard III claim, intersected no ore horizon but did intersect a couple of hundred feet of stringer type mineralization, and maintained an assay average of 0.104% Cu, higher than any of the Nugget Creek holes. SRM 10 and SRM 11, also in stringer type mineralization, had assay averages of 0.079% Cu and 0.115% Cu, respectively, though they were assayed much more selectively than the Nugget Creek holes.

Assay results for lead are uninteresting, fluctuating in the range 0.01% Pb to 0.03% Pb.

Zinc assays fluctuate in the range of 0.01% to 0.1%, with rare ones exceeding 0.1% but never 0.2%. There is a zonation to the zinc assays, with the bottom 40 meters of SRM 15 and all of SRM 16 having the highest averages, 0.07% Zn and 0.08% Zn, respectively. Everywhere else the average is in the range 0.02% Zn to 0.04% Zn.

Sometimes above average zinc assays accompany higher copper assays but this relationship isn't consistent.

Silver is usually less than 0.10 oz/ton, with an occasional slightly higher value accompanying a higher than average copper value.

Gold rarely exceeds 0.002 oz/ton except in SRM 15, where a couple of short intervals (27 cm. and 28 cm. long) reach 0.005% Au.

Barium assays hover around background level for felsic rocks on Mt. Sicker.

Interpretation, Recommendations

Results of holes SRM 15, 16 and 17 are interesting but inconclusive. The sulphide mineralization is abundant but can be equalled in a number of other places on Mt. Sicker. The unique feature of this area is the intensely chloritized rock in SRM 15, 16 and 17. This chloritization could be a clue to the proximity of an orebody; the problem is to determine what is the true shape of the body of chloritization and which direction to look for an orebody.

Three general shapes seem possible for the original chloritized rock. Hydrothermal solutions could have ascended more or less vertically through a fracture system (or any kind of porosity), completely altering the rocks they passed through, giving rise to a chloritized body with a vertical orientation. They could have risen through a fracture system in an otherwise impermeable rock, affecting it little, until they reached a favourable, porous horizon, spreading laterally through that horizon and chloritizing it. Finally, they could have risen through a fracture system all the way to the seafloor and there formed a layer of "chloritite".

Any one of the above three possibilities, or a combination of them, could have been the case here. However, what evidence exists suggests the second possibility. The chloritized rock has some remnants of tuffaceous textures, suggesting that the chlorite altered or replaced an existing rock. Veins and seams of chlorite in the quartz schists indicate that chlorite-forming solutions passed through them without appreciably affecting the wall rocks. Thus the following scenario suggests itself: chlorite-forming hydrothermal solutions rose upwards through fractures in relatively impermeable rhyolite (now quartz schist). Upon reaching a permeable tuffaceous horizon, the fluids spread laterally, altering or replacing the tuff.

The chloritization and the introduction of pyrite and chalcopyrite into the quartz and chlorite schists appear to have been distinct events but they were probably part of a series of volcanically-related activities which took place within a narrow time span. Thus if an orebody exists in the vicinity it is likely to be stratigraphically close to the chloritized rock. Following the chloritized rock along strike could be a good exploration guide.

The Pulse EM anomaly on which holes SRM 15 and 16 were targeted is not particularly strong or well defined and it appears the instrument was responding to the chloritized zones. The anomaly continues to the southeast, with some disruption in the vicinity of 4W. At 4E, 8+70 N it becomes a well defined 5 channel anomaly, with a good 4 channel response at 8E, 8+70 N.

These anomalies on 4E and 8E are on a ridge formed by gabbro. It is believed to be a folded dike-like body with a fairly shallow southerly dip and with schist in the footwall, but one would have expected the schist to be of the order of 100 meters below the surface in that area. An orebody at that depth wouldn't be expected to give such a clear anomaly. However, our direct knowledge of the subsurface geology in that area is non-existent, so the gabbro might be thinner than expected. The geophysical anomaly is interesting enough to follow up.

The anomaly is at the south end of the surveyed area and is not closed off to the south. The survey should be extended farther to the south, and to the east as well. The logical approach would be to survey as far as 40 E, to tie in with the Pulse EM survey of the Fortuna Area. This would involve around 5 km.

To date, the Pulse EM system has not had great success on Mt. Sicker, but it still seems to be the best available. However, it could be worthwhile to test the anomalies near 4E and 8E with some other system, such as Turam.

The terrain from 0E to 40E, on either side of the 26N base line, where EM surveying would be done, is very rough and steep, so the job could take 2 to 3 weeks.

If it is decided to drill in this area, drill set-ups will probably have to be hand logged and blasted, with the drill brought in by helicopter. Because of this, the number of drill holes it will be feasible to try initially is limited to 1 or 2 and every effort should be made to locate them as precisely as possible by geophysical methods.

APPENDIX

ASSAYS

ASSAYS

DDH SRM 15

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
23.3	7.10						
		0.050	0.01	0.04	0.08	0.002	
26.3	8.02						
		0.062		0.03			
37.0	11.28						
		0.038		0.03			
47.0	14.33						
		0.200		0.17			
57.0	17.37						
		0.310		0.02			
68.0	20.73						
		0.018		0.03			
78.0	23.77						
		0.189		0.04			
81.0	24.69						
		0.591		0.05			
85.0	25.91						
		0.014		0.03			
88.0	26.82						
		0.033	0.01	0.07	0.10	0.002	
98.0	29.87						
		0.081		0.03			
103.0	31.39						
		0.073		0.05			
108.0	32.92						
		0.051		0.02			0.18
113.0	34.44						
		0.030		0.03			0.16
119.0	36.27						
		0.039		0.01			0.23

DDH SRM 15 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
123.5	37.64						
		0.397	0.01	0.02	0.09	0.003	0.20
125.6	38.28						
		0.169		0.02			0.31
128.8	39.26						
		0.011		0.01			0.28
138.0	42.06						
		0.030		0.02			0.24
148.0	45.11						
		0.021		0.01			
158.0	48.16						
		0.049		0.01			
168.0	51.21						
		0.046		0.01			
178.0	54.25						
		0.036		0.02			
188.0	57.30						
		0.037		0.02			
200.5	61.11						
		0.086		0.02			
210.0	64.01						
		0.072		0.01			
220.0	67.06						
		0.042		0.01			
230.0	70.10						
		0.079		0.01			
241.0	73.46						
		0.014	0.01	0.02	0.04	0.002	0.25
243.5	74.22						
		0.010		0.02			
248.0	75.59						
		0.029		0.02			

DDH SRM 15 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
258.0	78.64						
		0.021		0.02			
268.0	81.69						
		0.086		0.01			
278.0	84.73						
		0.122		0.01			
288.0	87.78						
		0.141		0.02			
298.0	90.83						
		0.062	0.01	0.01	0.03	0.003	0.31
308.0	93.88						
		0.081		0.01			
318.0	96.93						
		0.049		0.02			
328.0	99.97						
		0.088		0.02			
341.3	104.03						
		0.068		0.02			
343.0	104.55						
		0.076		0.02			
353.0	107.59						
		0.072		0.01			
363.0	110.64						
		0.038		0.01			
373.0	113.69						
		0.039		0.01			
383.0	116.74						
		0.057	0.01	0.02	0.03	0.003	0.27
393.0	119.79						
		0.031		0.01			
403.0	122.83						
		0.059		0.01			
413.0	125.88						
		0.055		0.01			

DDH SRM 15 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
423.0	128.93						
		0.057		0.02			
433.0	131.98						
		0.127		0.02			
443.9	135.30						
		3.160	0.01	0.09	0.34	0.005	0.10
444.8	135.58						
		0.263		0.02			
448.6	136.73						
		0.123		0.03			
452.0	137.77						
		0.178		0.03			
462.0	140.82						
		0.071		0.02			
472.0	143.87						
		0.080		0.02			
482.1	146.94						
		0.030		0.04			
492.0	149.96						
		0.116		0.02			
494.0	150.57						
		0.282	0.01	0.02	0.10	0.004	0.20
499.7	152.31						
498.7	152.00						
		1.125	0.01	0.06	0.18	0.004	0.10
499.7	152.31						
		0.027		0.01			
504.0	153.62						
		0.071		0.02			
515.4	157.09						
		0.430	0.03	0.08	0.17	0.003	0.24

DDH SRM 15 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
516.3	157.37						
		0.113		0.03			
526.0	160.32						
		0.113		0.08			
536.0	163.37						
		0.122		0.06			
546.0	166.42						
		0.070		0.08			
556.0	169.47						
		0.043		0.07			
566.0	172.52						
		0.049		0.06			
576.0	175.56						
		0.042		0.06			
580.9	177.06						
		0.429	0.03	0.09	0.15	0.002	0.22
581.8	177.33						
		0.038		0.08			
592.0	180.44						
		0.045		0.06			
602.0	183.49						
		0.046		0.05			
612.0	186.54						
		0.042		0.07			
620.3	189.07						
		0.908	0.02	0.20	0.28	0.005	0.19
621.2	189.34						
		0.042		0.10			
631.0	192.33						
		0.031		0.09			
642.0	195.68						
		0.031		0.08			
648.0	197.51						

AVERAGED COPPER ASSAYS

DDH SRM 15

Feet	Meters	% Cu
23.3	7.10	
		0.050
47.0	14.33	
		0.258
68.0	20.73	
		0.018
78.0	23.77	
		0.419
85.0	25.91	
		0.046
123.5	37.64	
		0.259
128.8	39.26	
		0.033
200.5	61.11	
		0.070
241.0	73.46	
		0.021
268.0	81.69	
		0.086
363.0	110.64	
		0.048
433.0	131.98	
		0.182
482.1	146.94	
		0.030
492.0	149.96	
		0.239
499.7	152.31	
		0.027
504.0	153.62	
		0.103
556.0	169.47	
		0.053
648	197.51	

Average value for all assays in hole = 0.083% Cu.

AVERAGED ZINC ASSAYS

DDH SRM 15

Feet	Meters	% Zn
23.3	7.10	
		0.03
47.0	14.33	
		0.17
57.0		
	17.37	
		0.02
515.4	157.09	
		0.07
648.0	197.51	

Average value for all assays in hole = 0.03%.

ASSAYS

DDH SRM 16

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
29.0	8.84						
		0.039		0.06			
34.0	10.36						
		0.005	0.02	0.08	0.06	0.001	0.06
39.0	11.89						
		0.011		0.08			
44.0	13.41						
		0.068		0.09			
49.0	14.94						
		0.053		0.08			
54.0	16.46						
		0.120	0.02	0.10	0.09	0.001	0.02
59.0	17.98						
		0.027		0.06			
64.0	19.51						
		0.032		0.08			
69.0	21.03						
74.0	22.56						
		0.356		0.06			
84.0	25.60						
		0.403		0.10			
89.0	27.13						
		0.038		0.11			
94.0	28.65						
		0.055		0.09			
99.0	30.18						
		0.009		0.10			

DDH SRM 16 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
104.0	31.70						
		0.006		0.06			
111.0	33.83						
		0.010	0.02	0.09	0.09	0.001	0.11
114.0	34.75						
		0.009		0.08			
119.0	36.27						
		0.008		0.07			
124.0	37.80						
		0.010		0.09			
129.0	39.32						
		0.052		0.08			
134.0	40.84						
		0.023	0.03	0.05	0.06	0.002	0.21
139.0	42.37						
		0.009		0.07			
143.0	43.59						
		0.023		0.09			
148.0	45.11						
		0.017		0.08			
153.0	46.63						
		0.105		0.09			
158.0	48.16						
		0.036		0.05			
163.9	49.96						
		0.011	0.02	0.09	0.03	0.001	0.24
169.0	51.51						
		0.049		0.07			
174.0	53.04						
		0.024		0.06			
179.0	54.56						
		0.043		0.08			

DDH SRM 16 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
184.0	56.08						
		0.090		0.09			
189.0	57.61						
		0.047		0.08			
194.0	59.13						
		0.053		0.04			
199.0	60.66						
		0.095	0.03	0.05	0.10	0.001	0.13
204.0	62.18						
		0.013		0.08			
209.0	63.70						
		0.014		0.09			
214.0	65.23						
		0.043		0.06			
219.0	66.75						
		0.013		0.07			
224.0	68.28						
		0.037		0.08			
229.0	69.80						
233.4	71.14						
		0.052	0.03	0.07	0.06	0.001	0.22
236.5	72.09						
238.4	72.66						
		0.013	0.02	0.07	0.05	0.002	0.17
240.8	73.40						
		0.142		0.08			
243.0	74.07						
		0.091	0.02	0.08	0.07	0.001	0.22
248.9	75.86						
250.6	76.38						
		0.325		0.08			
256.0	78.03						
		0.079		0.09			

DDH SRM 16 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
262.5	80.01						
		0.183	0.03	0.08	0.08	0.002	0.24
268.0	81.69						
		0.075	0.02	0.09	0.05	0.002	0.23
272.0	82.91						
		0.471		0.11			
274.2	83.58						
		0.140	0.02	0.10	0.06	0.001	0.26
279.0	85.04						
		0.093		0.07			
284.9	86.84						
318.5	97.08						
		0.202	0.03	0.05	0.09	0.001	0.13
323.8	98.69						

AVERAGED COPPER ASSAYS

DDH SRM 16

Feet	Meters	% Cu
29.0	8.84	
		0.018
44.0	13.41	
		0.080
59.0	17.98	
		0.030
69.0	21.03	
74.0	22.56	
		0.372
89.0	27.13	
		0.047
99.0	30.18	
		0.008
129.0	39.32	
		0.040
240.8	73.40	
		0.158
284.9	86.84	
318.5	97.08	
		0.202
323.8	98.69	

Average value for all assays in hole = 0.081% Cu.

AVERAGED ZINC ASSAYS

Average value for all assays in hole = 0.08% Zn.

ASSAYS

DDH SRM 17

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
30.0	9.14						
		0.038		0.04			
32.7	9.97						
		0.200	0.01	0.04	0.10	0.001	0.09
35.2	10.73						
		0.010	0.02	0.02	0.09	0.001	0.11
40.0	12.19						
		0.008	0.01	0.04	0.09	0.001	0.10
46.3	14.11						
		0.108	0.01	0.04	0.09	0.003	0.13
51.0	15.54						
		0.026		0.04			
57.0	17.37						
		0.005	0.02	0.04	0.09	0.002	0.16
63.5	19.35						
		0.004		0.04			
67.5	20.57						
		0.003		0.06			
71.0	21.64						
		0.003		0.04			
75.0	22.86						
		0.005		0.06			
79.0	24.08						
		0.005	0.03	0.05	0.10	0.002	0.13
87.0	26.52						
		0.006		0.07			
91.0	27.74						
		0.043		0.05			

DDH SRM 17 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
96.0	29.26						
		0.020		0.06			
101.0	30.78						
		0.015	0.02	0.04	0.09	0.003	0.14
107.0	32.61						
		0.011	0.01	0.04	0.09	0.002	0.06
112.6	34.32						
		0.016	0.01	0.03	0.10	0.003	0.10
117.0	35.66						
		0.022	0.02	0.04	0.09	0.001	0.09
120.1	36.61						
124.0	37.80						
		0.025	0.02	0.04	0.10	0.001	0.10
127.8	38.95						
		0.008	0.01	0.02	0.07	0.002	0.02
129.0	39.32						
		0.006		0.02			
132.5	40.39						
		0.011		0.01			
134.0	40.84						
		0.022		0.02			
139.5	42.52						
		0.040		0.03			
144.5	44.04						
		0.050	0.02	0.02	0.09	0.001	0.18
147.2	44.87						
		0.112		0.01			
157.0	47.85						
		0.054		0.01			
167.0	50.90						
		0.010		0.01			
177.0	53.95						
187.0	57.00						
		0.036		0.01			

DDH SRM 17 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
196.0	59.74						
201.0	61.26						
		0.026		0.01			
211.0	64.31						
		0.008		0.01			
221.0	67.36						
		0.029		0.01			
231.0	70.41						
		0.036	0.02	0.01	0.06	0.001	0.23
241.0	73.46						
		0.037		0.02			
251.0	76.50						
		0.057		0.02			
261.0	79.55						
		0.045		0.01			
271.0	82.60						
		0.096		0.01			
281.0	85.65						
		0.122		0.07			
291.0	88.70						
		0.082		0.02			
301.0	91.74						
		0.094	0.02	0.01	0.04	0.002	0.18
311.0	94.79						
		0.079		0.01			
321.0	97.84						
		0.064		0.02			
328.6	100.16						
		0.045		0.02			
332.0	101.19						
		0.048	0.02	0.01	0.03	0.002	0.15
344.0	104.85						
		0.010	0.03	0.01	0.04	0.002	0.20
351.0	106.98						

AVERAGED ZINC ASSAYS

DDH SRM 17

Feet	Meters	% Zn
30.0	9.14	
		0.04
127.8	38.95	
		0.02
351.0	106.98	

Average value for all assays in hole = 0.02% Zn.

ASSAYS

DDH SRM 18

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
53.0	16.15						
		0.004		0.02			
63.0	19.20						
		0.005		0.01			
73.0	22.25						
		0.006		0.01			
83.0	25.30						
		0.039		0.02			
93.0	28.35						
		0.115	0.01	0.01	0.07	0.002	0.23
103.0	31.39						
		0.013		0.01			
113.0	34.44						
		0.024		0.02			
123.0	37.49						
		0.023		0.02			
133.0	40.54						
		0.034		0.02			
143.0	43.59						
		0.046	0.01	0.02	0.06	0.001	0.20
153.0	46.63						
		0.038		0.01			
163.0	49.68						
		0.028		0.01			
173.0	52.73						
		0.044		0.01			
183.0	55.78						
		0.031		0.01			

DDH SRM 18 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
193.0	58.83						
		0.039		0.02			
203.0	61.87						
		0.062	0.01	0.02	0.03	0.001	0.14
213.0	64.92						
		0.061		0.01			
223.0	67.97						
225.1	68.61						
		0.220	0.02	0.02	0.09	0.001	0.16
225.9	68.85						
		0.038		0.01			
236.0	71.93						
		0.028		0.02			
246.0	74.98						
		0.070		0.01			
256.0	78.03						
		0.089		0.01			
266.0	81.08						
		0.026	0.02	0.01	0.07	0.001	0.17
276.0	84.12						
		0.027		0.02			
286.0	87.17						
		0.070		0.01			
289.5	88.24						
		0.035		0.01			
299.0	91.14						
		0.049		0.01			
309.0	94.18						
		0.031		0.02			
319.0	97.23						
		0.074		0.02			

DDH SRM 18 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
329.0	100.28						
		0.116	0.02	0.02	0.06	0.001	0.18
333.0	101.50						
		0.056		0.02			
349.0	106.38						
		0.106		0.01			
359.0	109.42						
		0.090		0.01			
369.0	112.47						
		0.128		0.02			
379.0	115.52						
		0.116		0.02			
389.0	118.57						
		0.216		0.01			
393.7	120.00						
		0.323	0.02	0.02	0.10	0.002	0.19
394.2	120.15						
		0.061		0.02			
396.3	120.79						
		0.574	0.01	0.02	0.11	0.001	0.12
397.2	121.07						
		0.031		0.02			
407.0	124.05						
		0.106		0.02			
417.0	127.10						
		0.064		0.02			
423.0	128.93						
		0.102		0.02			
426.2	129.91						
		0.441	0.02	0.04	0.19	0.001	0.02
427.9	130.42						
		0.058		0.01			

DDH SRM 18 (Cont'd)

Feet	Meters	% Cu	% Pb	% Zn	Oz/ton Ag	Oz/ton Au	% Ba
430.4	131.19						
		0.090		0.02			
440.0	134.11						
		0.108		0.02			
450.0	137.16						
		0.054		0.01			
460.0	140.21						
		0.015		0.02			
470.0	143.26						
		0.036		0.02			
478.0	145.69						
		0.049	0.01	0.02	0.04	0.001	0.13
486.0	148.13						
		0.022		0.01			
492.8	150.21						
		0.011	0.01	0.02	0.07	0.001	0.16
496.5	151.33						
		0.082		0.02			
505.0	153.92						

AVERAGED COPPER ASSAYS

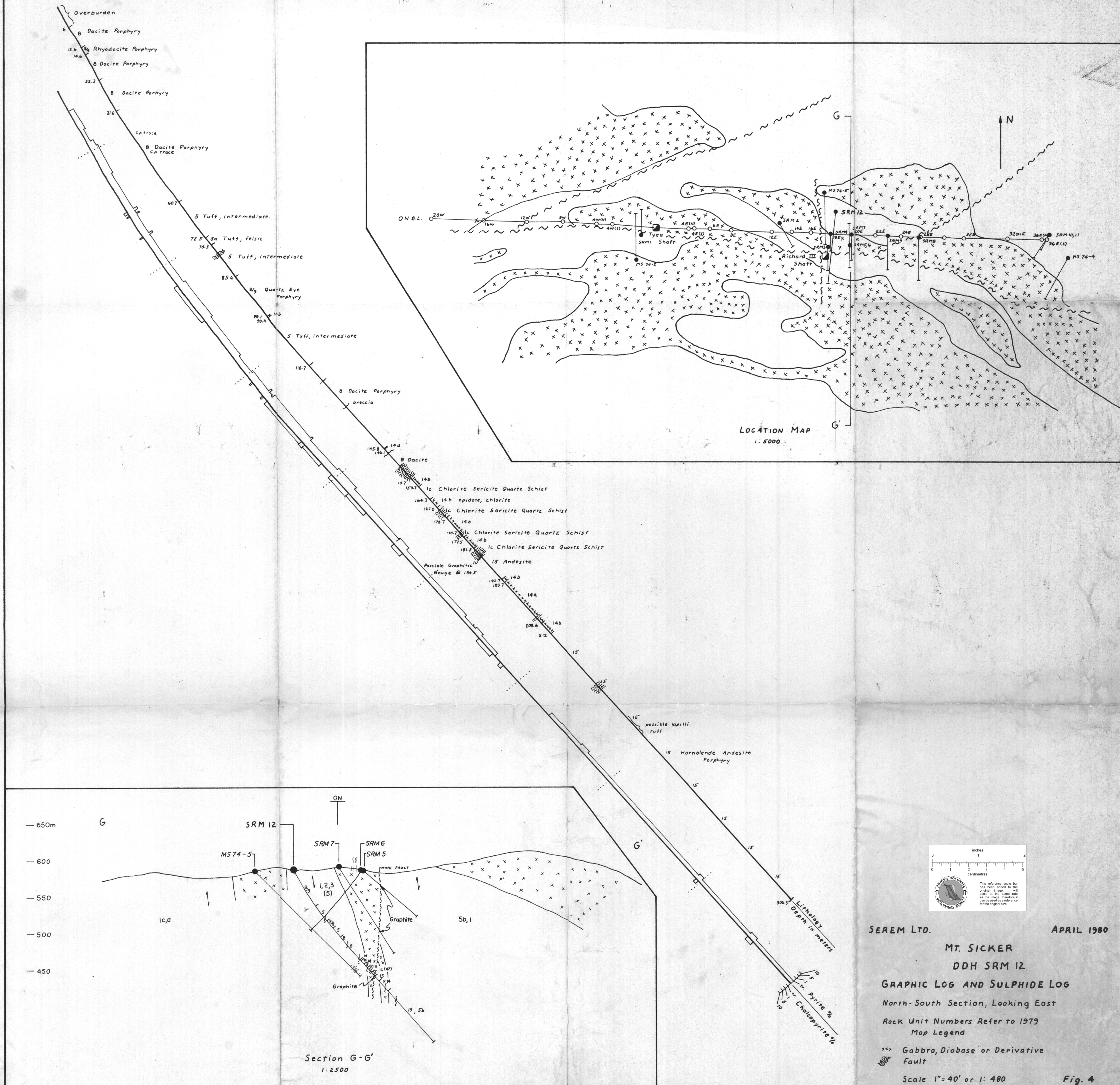
DDH SRM 18

Feet	Meters	% Cu
53.0	16.15	
		0.005
83.0	25.30	
		0.039
93.0	28.35	
		0.115
103.0	31.39	
		0.041
319.0	97.23	
		0.100
460.0	140.21	
		0.038
505.0	153.92	

Average value for all assays in hole = 0.058% Cu.

AVERAGED ZINC ASSAYS

Average value for all assays in hole = 0.02% Zn.



SEREM LTD. APRIL 1980

MT. SICKER
DDH SRM 12
GRAPHIC LOG AND SULPHIDE LOG

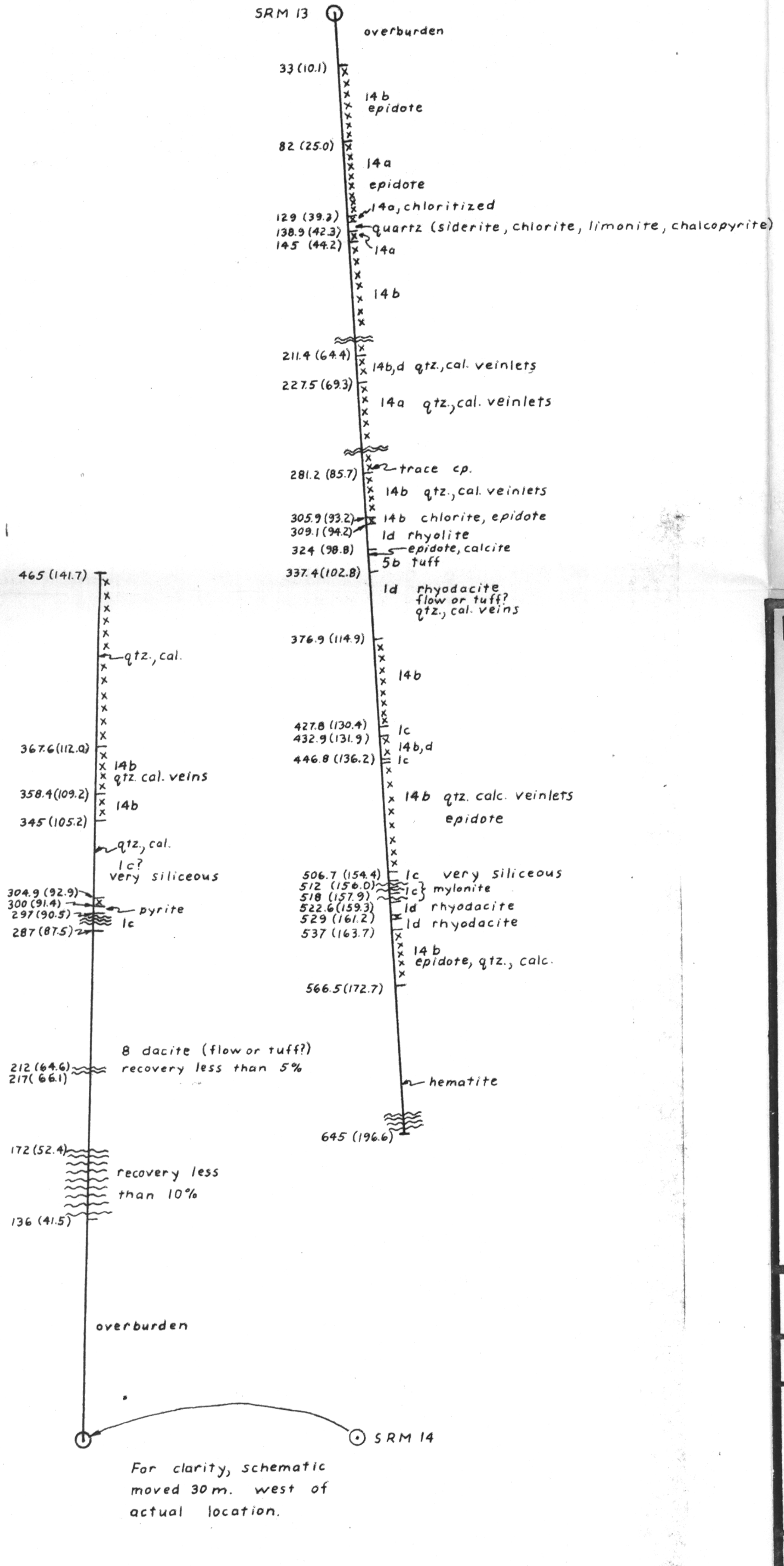
North-South Section, Looking East

Rock Unit Numbers Refer to 1979 Map Legend

x x x Gabbro, Diabase or Derivative
Fault

Scale 1" = 40' or 1: 480

Fig. 4



LEGEND:

1. Quartz Schist
   - c. chlorite sericite
   - d. chlorite sericite augen

8 Dacite

14. Gabbroic Rocks
   - a. gabbro
   - b. diabase
   - d. schistose derivative of a. or b.

x Gabbro

Fault

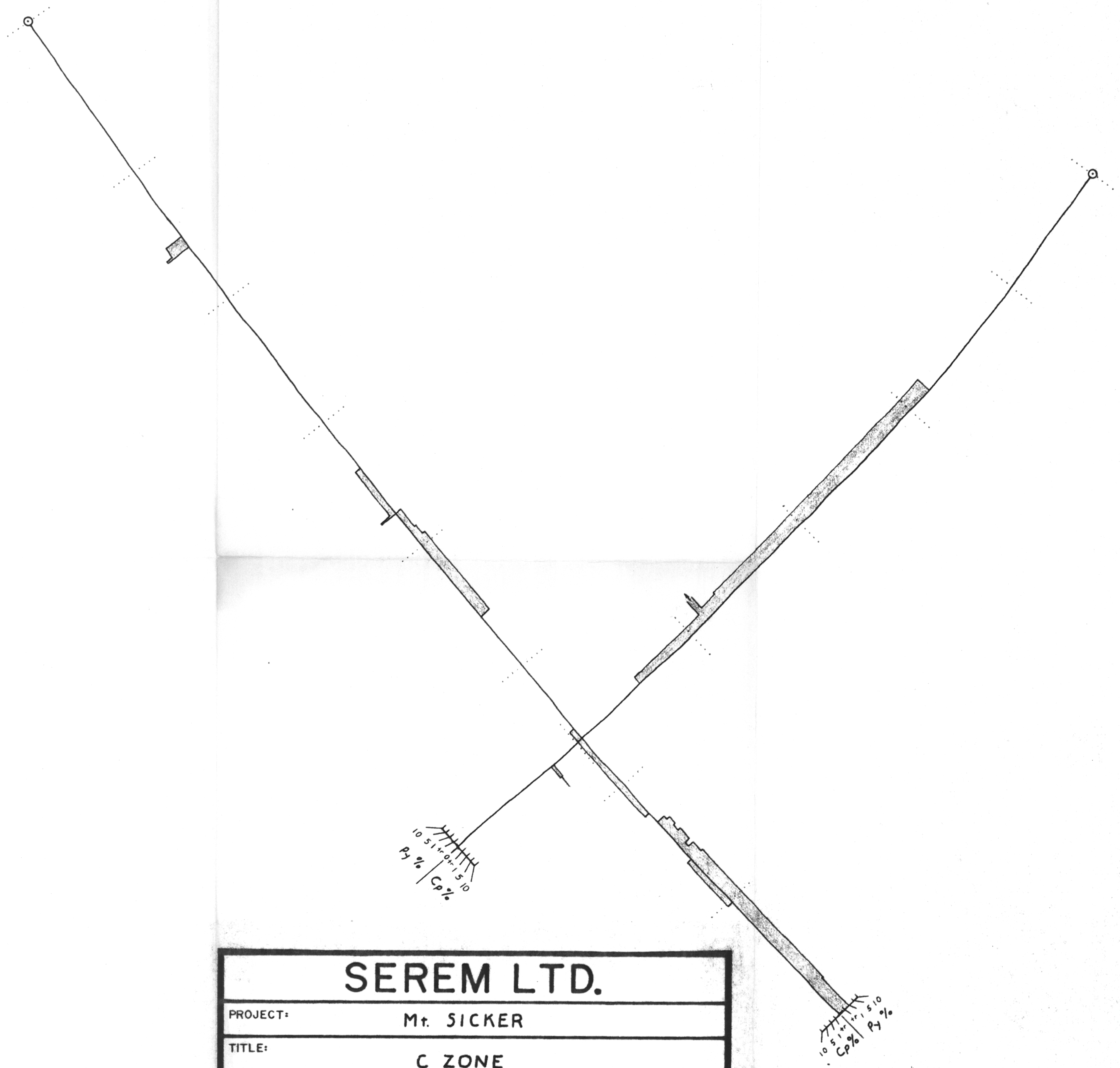
Schistosity

SEREM LTD.

PROJECT: Mt. SICKER

TITLE: C ZONE
DDH SRM 13,14
GRAPHIC LOG

NTS:	SCALE: 1:480	DATA: CVH	FIGURE
92 B 13W	Plan View	DRAWN: PAR	6
		DATE: JUNE, 1980	



SEREM LTD.

PROJECT: Mt. SICKER

TITLE: C ZONE
DDH SRM 13,14
GRAPHIC SULPHIDE LOG

NTS:	SCALE: 1:480	DATA: CVH	FIGURE
92 B 13 W	projection on to vertical north-south plane	DRAWN: PAR	7
		DATE: JUNE, 1980	

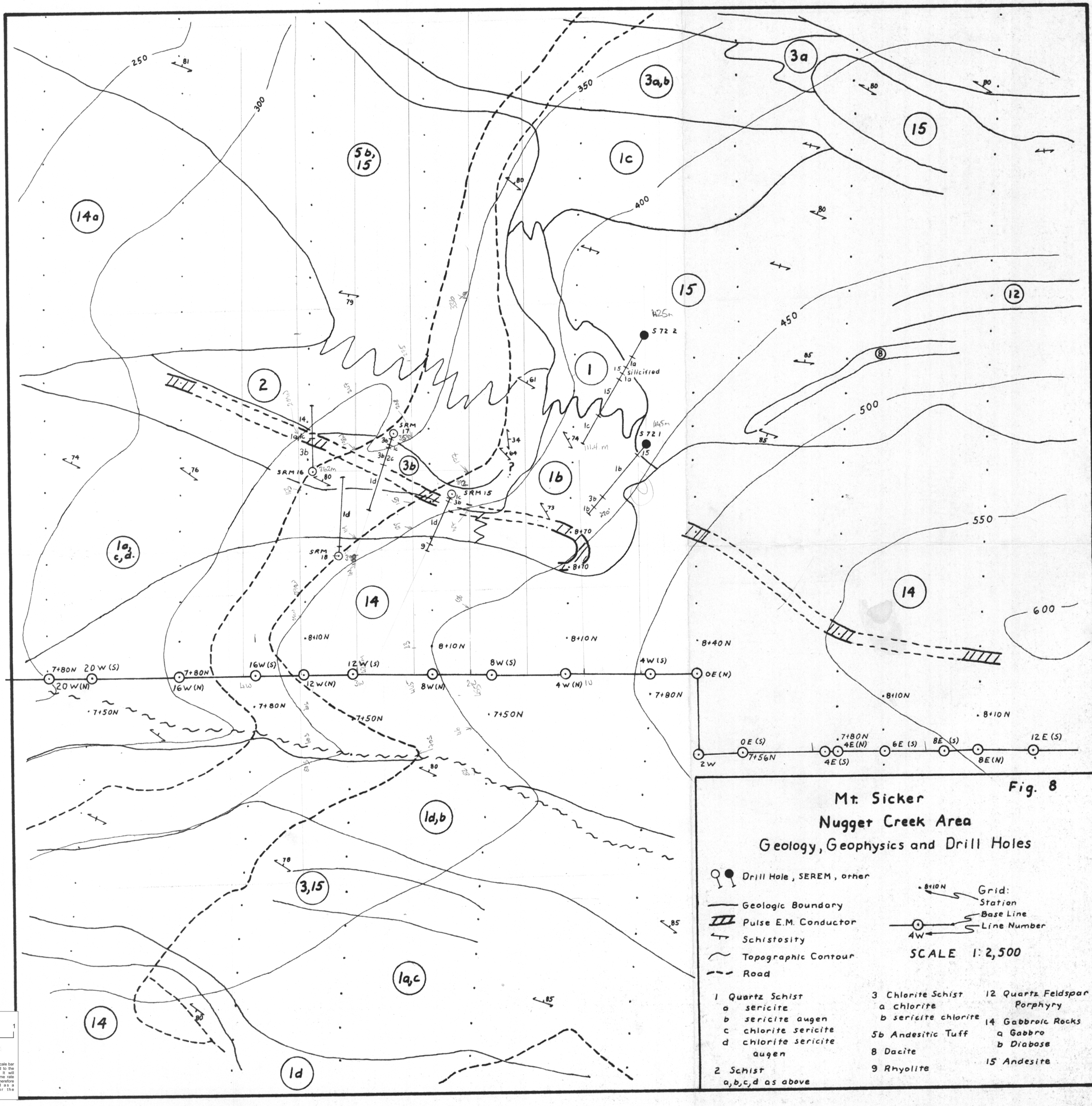
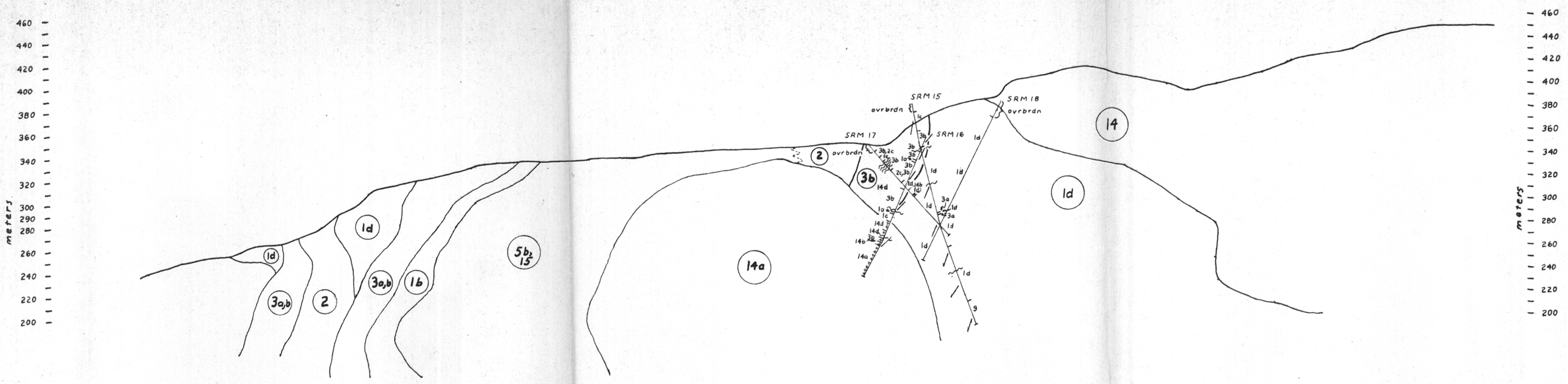


Fig. 8
Mt. Sicker
Nugget Creek Area
Geology, Geophysics and Drill Holes
Drill Hole, SEREM, other
Geologic Boundary
Pulse E.M. Conductor
Schistosity
Topographic Contour
Road
Grid:
Station
Base Line
Line Number
8+10N
4W
SCALE 1: 2,500
1 Quartz Schist
a sericite
b sericite augen
c chlorite sericite
d chlorite sericite augen
2 Schist
a,b,c,d as above
3 Chlorite Schist
a chlorite
b sericite chlorite
5b Andesitic Tuff
8 Dacite
9 Rhyolite
12 Quartz Feldspar Porphyry
14 Gabbroic Rocks
a Gabbro
b Diabase
15 Andesite
3a
3a,b
15
5b, 15
1c
14a
12
8
2
1
1b
3b
1a, c, d.
14
1d,b
3,15
1a,c
1d
250
300
350
400
450
500
550
600
S722
S721
SRM 15
SRM 16
SRM 17
SRM 18
silicified
8+70
8+10N
8+40N
7+80N
7+50N
7+56N
20W(S)
20W(N)
16W(S)
16W(N)
12W(S)
12W(N)
8W(S)
8W(N)
4W(S)
4W(N)
0E(N)
0E(S)
2W
4E(N)
4E(S)
6E(S)
8E(S)
8E(N)
12E(S)



LEGEND:

1. Quartz Schist
   a. sericite
   b. sericite augen
   c. chlorite sericite
   d. chlorite sericite augen
2. Schist
   a. sericite
   b. sericite augen
   c. chlorite sericite
   d. chlorite sericite augen
3. Chlorite Schist
   a. chlorite
   b. sericite chlorite

5.b. Andesitic Tuff

9. Rhyolite

14. Gabbroic Rocks
   a. gabbro
   b. diabase

15 Andesite

Drill Hole

Geologic Boundary

Fault, Fault Zone

Topographic Surface

inches
0 1
0 1 2
centimetres

BRITISH COLUMBIA GEOLOGICAL SURVEY

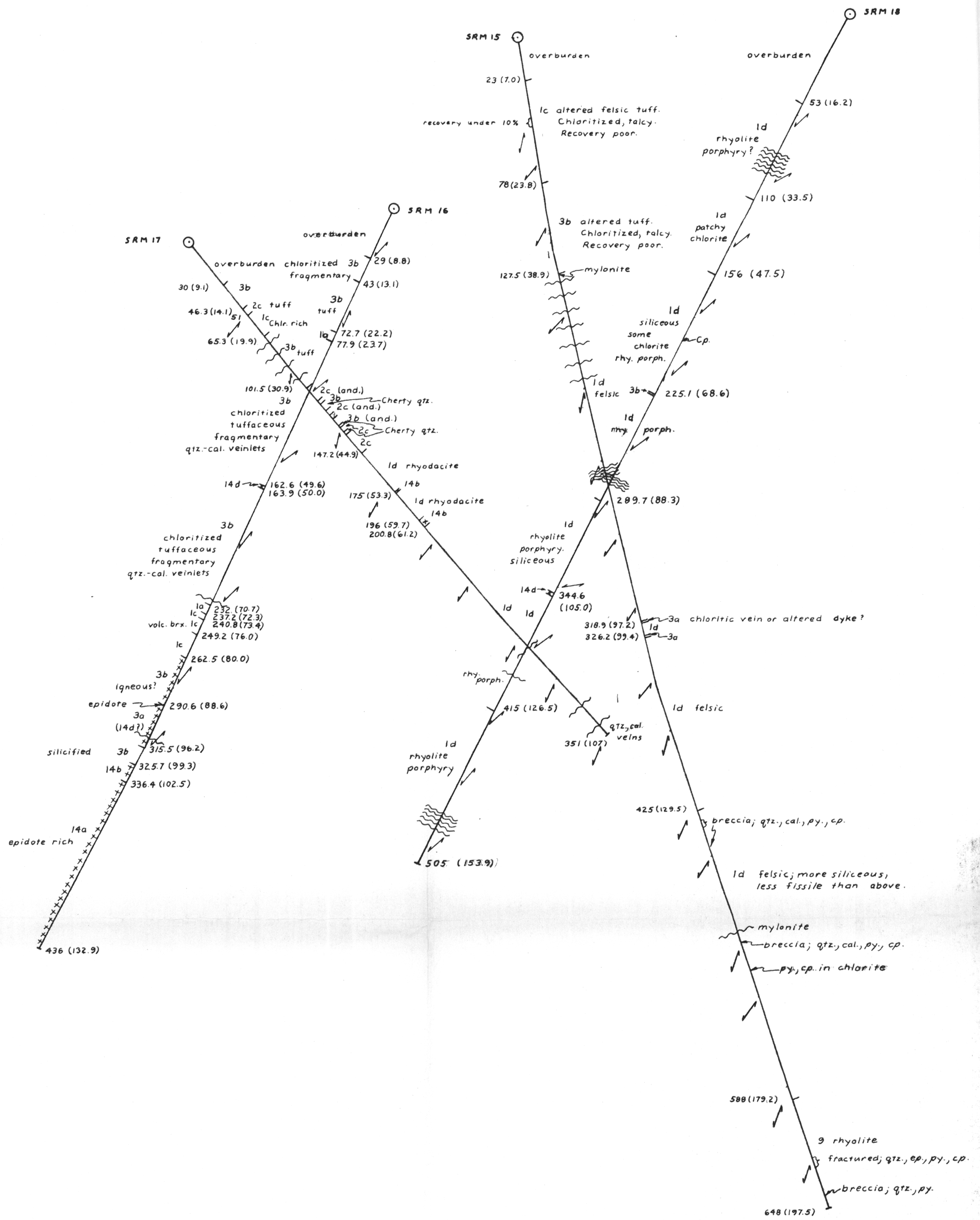
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

SEREM LTD.

PROJECT: Mt. SICKER

TITLE: NUGGET CREEK AREA
GEOLOGICAL CROSS SECTION

NTS:	SCALE:	DATA: GA, PAR, CVH	FIGURE
92 B 13 W	1: 2,500	DRAWN: PAR	9
		DATE: JUNE, 1980	



LEGEND:

1. Quartz Schist
   a. sericite
   b. sericite augen
   c. chlorite sericite
   d. chlorite sericite augen

2. Schist
   a. sericite
   b. sericite augen
   c. chlorite sericite
   d. chlorite sericite augen

3. Chlorite Schist
   a. chlorite
   b. sericite chlorite

9. Rhyolite

14. Gabbroic Rocks
   a. gabbro
   b. diabase
   c. diorite
   d. schistose derivative of a, b or c

Gabbro

Fault

Schistosity

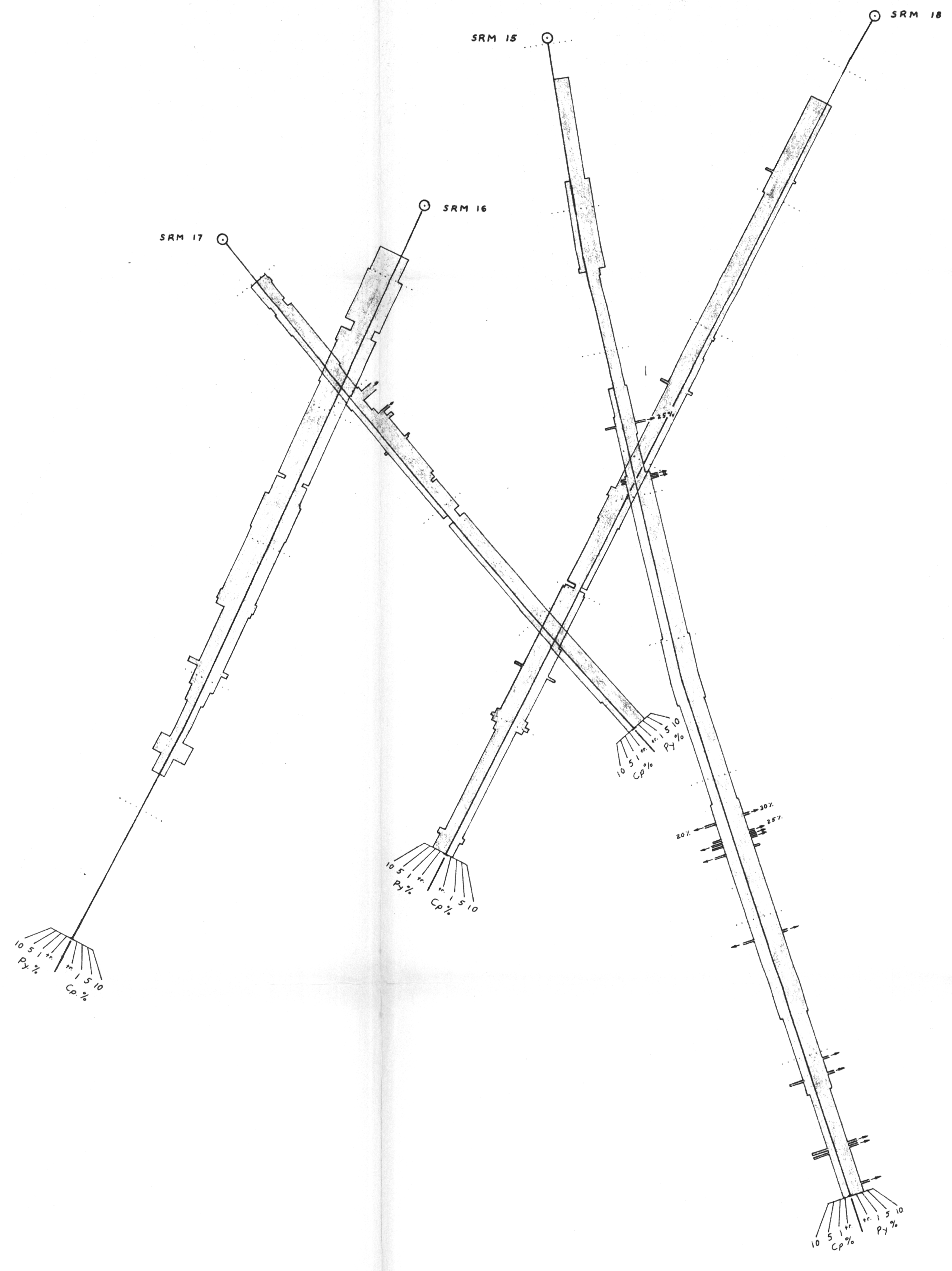
*projection on to vertical north-south plane

SEREM LTD.

PROJECT: Mt. SICKER

TITLE: NUGGET CREEK AREA
DDH SRM 15, 16, 17, 18
*GRAPHIC LOG

NTS:	SCALE:	DATA: CVH	FIGURE
92 B 13 W	1 : 480	DRAWN: PAR	10
		DATE: JUNE 1980	

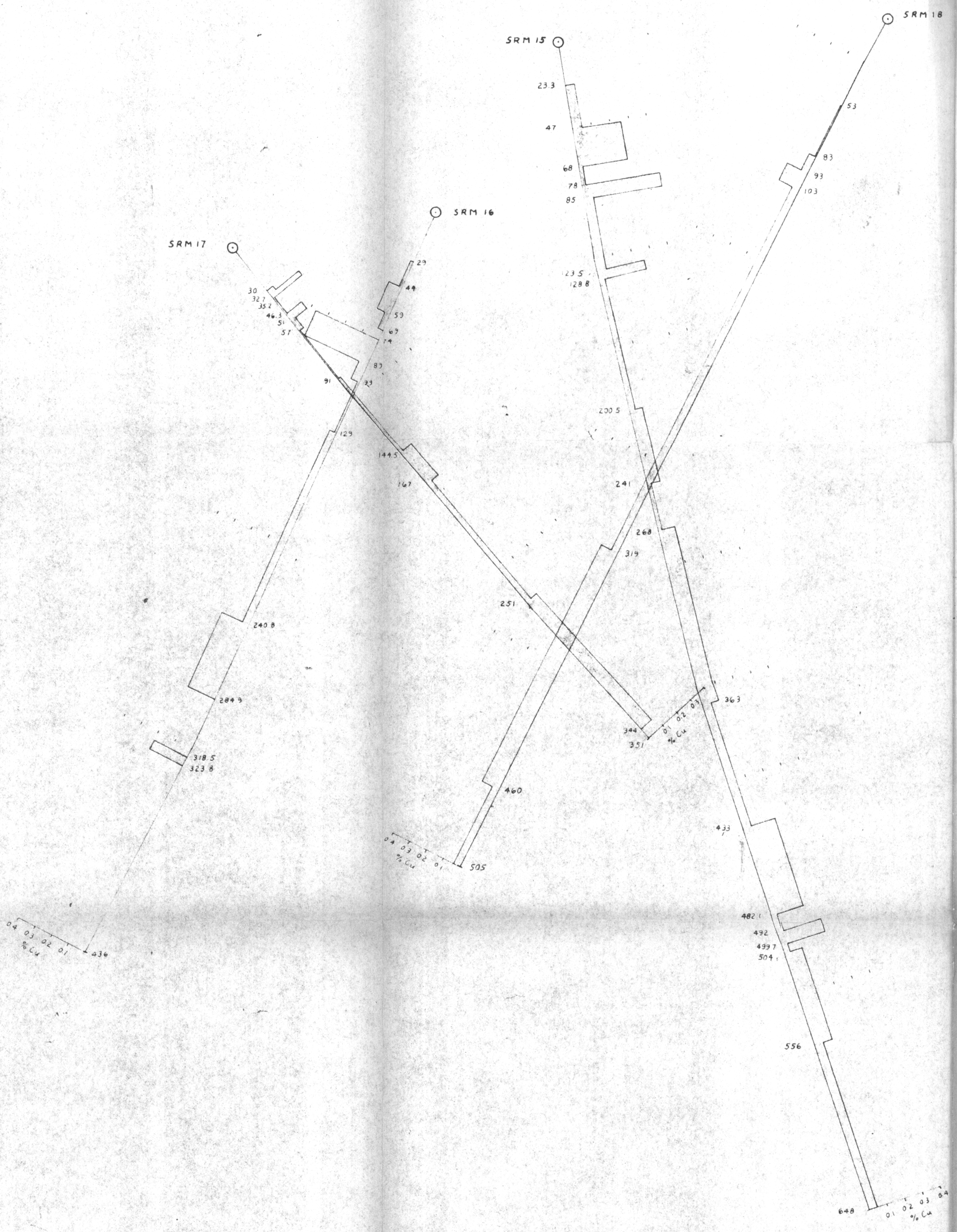


SEREM LTD.

PROJECT: Mt. SICKER

TITLE: NUGGET CREEK AREA
DDH SRM 15, 16, 17, 18
GRAPHIC SULPHIDE LOG
PYRITE, CHALCOPYRITE

NTS:	SCALE: 1:480	DATA: CVH	FIGURE
92 B 13 W	projection on to vertical north-south plane	DRAWN: PAR	12
		DATE: JUNE 1980	



80-MON-35

SEREM LTD.

PROJECT: Mt. SICKER

TITLE: NUGGET CREEK AREA
DDH SRM 15, 16, 17, 18
GRAPHIC ASSAY LOG
COPPER

NTS: 92 B 13 W	SCALE: 1 480 projection on to vertical north-south plane	DATA: CVH DRAWN: PAR DATE: JUNE 1980	FIGURE 13