

Dorreen (Fidler)
671670 103I/16

KNOWSS
199.

Treadwell
Seems to
own

TABLE OF CONTENTS

	<u>Page</u>
HISTORY	1
SUMMARY AND CONCLUSIONS	2
RECOMMENDATIONS FOR FURTHER DEVELOPMENT	4
PROPERTY	7
LOCATION, ACCESS, ETC.	7
EQUIPMENT	8
DEVELOPMENT	8
GENERAL GEOLOGY AND MINERALIZATION	8
DESCRIPTION OF VEINS	9
CORRELATION OF VEINS	12
LOCALIZATION OF ORE SHOOTS	12
ESTIMATED ORE RESERVES	14

APPENDIX

- Figure 1 - Surface Geology
- Figure 2 - Upper Adit - Geology and Assay Plan
- Figure 3 - Lower Adit and showings Southwest of Upper Adit
-- Geology and Assay Plan
- Figure 4 - Reference Map 101N showing Location of Claims.
Assay Certificates.

- - - - -

REPORT ON "THE FIDDLER GROUP", DOREEN, B. C.

From July 25th to July 30th, 1948, inclusive, the writer examined the main showings on the Fiddler Group, but time did not permit detailed traversing of other parts of the property. Two men assisted with the surveying and sampling and in addition made four open cuts. The surveying was done with a chain and Brunton compass, elevations being taken from an initial aneroid barometer reading of 2060 feet above sea level at the portal of the Lower Adit. Seventy-two moiled channel samples were taken, the assays of which are given on the assay plans, Figs. 2 and 3.

HISTORY¹

Development of the Fiddler group began in 1914 when an adit, here referred to as the Upper Adit, was driven 140 feet along a quartz vein containing values in gold, silver, copper, lead, and zinc. Two years later an attempt was made to reach the vein from a point some 450 feet lower in elevation than the Upper Adit, but heavy glacial drift was encountered and the project was abandoned after driving 183 feet through unconsolidated material. In 1923 the Upper Adit workings were extended and a second adit, here referred to as the Lower Adit, 150 feet lower in elevation than the Upper Adit, was driven 50 feet along what was presumed to be the same vein. The following year 80 tons of ore was shipped. This is said to have averaged: 1.67 oz. per ton gold, 6.0 oz. per ton silver, 1.3% copper, 6.2% lead, and 5.8% zinc. The latest work was done in 1926 when 100 tons of ore was shipped. The first car load (35 tons) is recorded as having averaged: 1.23 oz. per ton gold, 5.3 oz. per ton silver, 6.1% lead, and 3.8% zinc.

¹Kindle, E.D. (1937): Mineral Resources, Usk to Cedarvale, Terrace area, Coast District, British Columbia; Geol. Surv., Canada, Mem. 212, page 41. Also B. C. Annual Report, 1916, p. 101.

SUMMARY AND CONCLUSIONS

1. Quartz veins on the Fiddler group of three Crown-granted claims contain values in gold, silver, copper, lead, and zinc. The veins occur along bedding faults in gently dipping greywacke and volcanics cut by a large dyke of granodiorite. The veins are fairly persistent but narrow, ranging from 6 to 38 inches wide.
2. The vein on which most of the development work has been done is in the Upper Adit workings, elevation 2210 feet. It is believed that the best ore shoot in this vein is localized near and parallel to the intersection of the vein and the granodiorite dyke. This intersection, and hence the ore shoot, plunges 15° in the direction North 35° West. The ore shoot averages 15 inches in width, has a slope length of 180 feet, and may extend indefinitely down its rake.
3. A second vein, followed 70 feet by the Lower Adit, elevation 2050 feet, which has a similar attitude to the Upper Adit vein and occupies about the same stratigraphic position, may represent the continuation of the Upper Adit vein southeast of the granodiorite dyke. By analogy, the logical place to expect an ore shoot in the Lower Adit vein would be near the dyke contact.
4. A third vein, exposed on the surface at two places some 400 feet southwest of the Upper Adit portal, lies about 75 feet stratigraphically above the Upper Adit vein. However, its continuation for any distance to the northeast is problematical. This vein, 15 to 18 inches wide, contains only low values in gold, silver, and base metals.
5. Ore reserves including blocked out and probable ore amount to 5513 tons, of which 2513 tons is considered blocked out. The estimated average

content is 0.54 oz. per ton gold, 1.14 oz. per ton silver, 0.21% copper, and 1.0% lead. In addition, although zinc determinations were not made, the ore probably contains about 0.5% zinc.

6. There is little chance that further development would prove reserves sufficient for a medium or large operation. There is, however, a fair possibility that sufficient ore could be developed to supply a 25- or 50-ton mill.
7. Providing sufficient ore reserves could be developed, it is estimated that the production cost on a 50-ton per day basis would not exceed \$15.00 per ton. Factors favorably affecting the production cost are as follows:

1. The property is easily accessible from the railroad; hence local transportation cost would be low.
2. Timber and water are readily available.
3. The vein walls are strong, requiring little support.
4. Complications due to faults are not anticipated.
5. The mineralogy of the ore is simple. Although milling tests have not been made, it appears likely that a high grade bulk flotation concentrate could be made at about 20:1 concentration ratio.
6. As over 70% of the value is gold, if necessary the operation would be eligible for Government assistance.

Factors unfavorably affecting the cost of production are as follows:

1. Where the vein is less than minimum stoping width (30 inches) some method of stoping sorting would be necessary to prevent excessive dilution.

2. Because of the gentle dip stopes would require scraping.
3. The plan of development here suggested involves hauling the ore up a 15° incline.
4. The cost of shipping concentrate to any smelter selected would be relatively high. For example, the shipping cost in carload lots by rail and water to Tacoma amounts to \$16.00 per ton.

RECOMMENDATIONS FOR FURTHER DEVELOPMENT

It is recommended that development of this property be undertaken on a modest basis. Capital expenditure should be kept to a minimum so that work could be suspended at any time without great loss. It is recommended that during the first summer season an amount not exceeding \$20,000 for labor and supplies, exclusive of the cost of a compressor plant and small hoist, be expended for the development program suggested below:

1. The first step would be to repair the road for truck haulage. The cost of this work is estimated as \$6,000, and the assistance of the Department of Mines to the extent of at least half the cost should be sought.
2. A winze or slope on the vein would be driven from the portal of the Upper Adit parallel to and about 10 feet up the dip from the intersection of the vein and the granodiorite dyke. The direction of this working would be about North 35° West and its inclination about 15°. Such a winze is preferred to a long cross-cut through the dyke at a lower elevation because ore is developed as the work proceeds. A drive of 150 feet in this winze should prove whether or not the hypothesis of

a flatly-raking ore shoot is correct. If in this distance the widths and values found are inferior to those in the drift above, the work should be discontinued. If, however, widths and values are satisfactory the winze should be continued a total distance of 500 feet. This would develop a tonnage of approximately 20,000 tons above the winze - sufficient to justify the installation of a 50-ton mill. One geological factor which could prove disastrous to this underground program would be the enlargement downward and eastward of the quartz-orthoclase porphyry body in the Upper Adit in which the vein almost pinches out. Should this rock be encountered in large quantity the work should be discontinued.

3. Some stripping southwest of Sta. 12 would be done to prospect the extension of the Upper Adit vein and the vein outcrop between Sta. 12 and Sta. 17 should be investigated further.
4. An open cut would be made approximately along the line XY in Figure 1 to prospect the extension of the Lower Adit vein near the dyke contact. This would be a large cut as the overburden may be between 4 and 12 feet deep.
5. Open cuts would be made at intervals between Sta. 21 and Sta. 24 to prospect this vein. If it should prove continuous between these points and contain values of interest, its continuation to the southeast would be investigated.
6. A crew of about 10 men is suggested. For summer operations accommodation would consist of a tent camp built on the

site of former camp buildings which is in timber about $\frac{1}{2}$ -mile northeast of the workings at an elevation of 1750 feet. An old pipe-line to a nearby creek could be re-conditioned to supply domestic water.

7. The following equipment and mining supplies will be required:

300 c.f.m. compressor, preferably portable and

Diesel-driven.

Small air tugger and 500 feet of $\frac{1}{2}$ -inch cable.

1-ton truck, preferably 4-wheel drive.

Camp equipment for crew of 10 men.

Leyner-type drill, spare parts, and accessories.

Air and water line (Water sufficient for drilling and compressor may be available from seepage into the Upper Adit.)

Ventillating fan and pipe (may be required when the winze exceeds 200 feet in length.)

$\frac{1}{2}$ -ton mine cars (2 are on the property, but these should be equipped with safety dogs when used in the winze.)

Track - (The track in the Upper Adit could be used in the winze).

Miscellaneous small tools.

* * * *

PROPERTY

Three Crown-granted claims, Boulder, L.6317, Indicator, L.6318, and Intrusive, L.6319, comprise the property. The claims are assessed in the names of L. W. Paterson, 504 Central Bldg., Victoria, B. C. and Jesse Ward Tredway, Yellowknife, N.W.T. At the time of this examination no ground adjoining these claims was held, and it is suggested that if further development is contemplated about 16 claims be staked without delay to protect the original property.

LOCATION, ACCESS, ETC.

As shown on Figure 4, the property is on the northwest side of Knauss Creek, a tributary of Fiddler Creek, about 4 miles southwest of Doreen. This is a flag-stop on the Canadian National Railway 125 miles East of Prince Rupert. The lower part of the steep-sided Knauss Creek valley is filled with glacial debris into which the stream has cut as much as 200 feet, leaving narrow benches on either side. Elevations on the property range from 1700 feet at the Creek to more than 5000 feet among the precipitous bluffs forming the northwest side of the valley. Bedrock is rarely seen on the lower slopes which are covered with slide rock and densely overgrown by brush; but frequent rock exposures occur in the bluffs above elevation 2200 feet.

During former operations a well-graded road 4 1/2 miles in length was built from Doreen, elevation 410 feet, to the workings, elevation 2200 feet. This road is now impassable to any but foot traffic because of brush, wind-falls, and wash-outs. Repair of this road for truck traffic would involve brushing out, re-grading, and the construction of four small bridges. The snowfall in this area is not heavy and but little

plowing would be necessary to maintain year-round access. The last mile of road would give the most trouble where the open slopes are subject to snow-slides.

Stands of spruce, hemlock, cedar, and fir adequate for mining purposes grow on the property. Knauss Creek would provide enough water for ordinary mining and milling purposes. Its flow is, however, insufficient for mine power requirements.

EQUIPMENT

Equipment left from former operations, still in usable condition includes: complete track in the Upper Adit; two $\frac{1}{2}$ -ton mine cars; and several hundred feet of $\frac{1}{2}$ -inch iron pipe.

DEVELOPMENT

Underground workings in the two adits totals 540 feet of drifts and raises. The Lower Adit, elevation 2060 feet is 50 feet long; and the Upper Adit, elevation 2210 feet is 285 feet long and contains two raises and, near the portal, a small stope. Other than some stripping and a small open-cast stope on the outcrop above the Upper Adit, little surface prospecting appears to have been done.

Altogether some 300 tons of vein material has been mined in the Upper Adit. As only 180 tons of ore was shipped, it would appear that some sorting was done prior to shipment.

GENERAL GEOLOGY AND MINERALIZATION

The general geology is shown on Figure 1. On this map drift-covered areas are left blank. The rock is mainly graywacke containing some beds of tuff and flows of andesite, all belonging to the Hazelton Group. The graywacke is dark-colored, fine-grained rock showing

sedimentary features such as grain-gradation and cross-bedding, and in places containing brachiopod and ammonite fossils. The andesite, well exposed in bluffs some 400 feet southwest of the Upper Adit, is quite porphyritic, superficially resembling an intrusive rock. This body apparently thins to the northeast, being represented in the bluffs above the Upper Adit only by several thin beds of fine-grained andesite and tuff.

These Hazelton Group rocks strike North 80° West and dip 22° to 30° East. No local flexures on this regional structure were seen.

A dyke of medium-grained, pinkish granodiorite which ranges in width from 110 feet to 140 feet cuts the Hazelton Group rocks. This strikes North 30° West and dips 65° southwest. The portal of the Upper Adit is only a few feet from the foot-wall contact of this dyke. In the Upper Adit from 60 to 80 feet from the portal quartz-orthoclase porphyry appears in the walls (Figure 2). The drift has cut what appears to be the top of a small, irregular intrusive body which plunges gently to the South. The relationship of this porphyry body to the granodiorite dyke is unknown.

The mineral deposits are quartz veins in bedding faults in the greywacke and andesite. The vein material is white quartz with discontinuous bands and irregular areas containing pyrite and minor amounts of galena, sphalerite, and chalcopyrite. Although locally abundant in small areas, the sulphides average less than 5% of the vein material. Gold, although present nearly everywhere in the veins, is too fine to be visible in hand specimens. Apparently much of it is

free in the quartz - not intimately associated with the sulphides.

DESCRIPTION OF THE VEINS

UPPER ADIT:

This working follows a vein 236 feet on its strike and two raises explore it a distance of about 90 feet up its dip (Figure 2). The vein is in a bedding fault and an inch or two of gouge occurs on both walls. The dip of the vein varies slightly from 22 to 29°. From the Portal to a point 180 feet along the drift the vein ranges in width from 8 to 36 inches, averaging 15 inches; but from this point to the face and up the dip to the face of No. 2 Raise the vein is only 6 inches wide. In No. 1 Raise the first 40 feet shows vein widths of from 12 to 17 inches; but beyond this point to the face the vein is again only about 6 inches wide. The vein pinches to a few inches where the vein fault cuts through the small body of quartz-orthoclase porphyry exposed in the drift. A short drift turns off to the left at Sta. G, following a narrow branch vein which strikes southwesterly and dips gently to the northwest. Near the face of this short drift the branch vein frays into several small stringers. Several northerly-striking faults cut but only slightly offset the main vein.

LOWER ADIT:

A deep rock cut 40 feet long continued as a drift a further 50 feet explores a narrow quartz vein similar in appearance to the vein in the Upper Adit. The vein is from 5 to 10 inches wide, strikes North 80° West and dips 30° North. Near the portal it is joined by several narrow veins, barren of sulphides, which strike northwesterly and dip about 40° northeastward. Near the face of the drift the main vein frays into several stringers curving to the North.

SURFACE EXPOSURES

The Upper Adit vein encounters the foot-wall of the granodiorite dyke 12 feet North of the portal. The vein pinches out abruptly at the contact and the vein fracture represented by brecciated rock continues only 3 feet into the dyke. A complete section of the dyke is exposed in a small draw about 100 feet East of the Upper Adit portal. Nowhere in this section could the vein fault be seen.

Southwesterly from the portal the Upper Adit vein is exposed intermittently by open cuts as far as Sta. 12 - a distance up the dip of 170 feet. In this distance the vein narrows from 53 to 15 inches. It is sparsely and irregularly mineralized and appears much the same as in the first 180 feet of the drift. Overburden obscures its continuation beyond Sta. 12.

A 13-inch vein was discovered and stipped at a point midway between Sta. 12 and Sta. 17. This vein strikes a few degrees more westerly than the main vein and its dip is slightly less. It may be either a branch or a separate vein en echelon with the main vein. In any case it does not extend far to the northeast as it could not be found in the bluffs above the Upper Adit.

A 6-inch vein was found at a point 125 feet northwest of the Upper Adit portal and 200 feet higher. This is a bedded vein in gray-wacke similar in attitude and appearance to the other veins.

Exposures of what may be one vein were examined at Sta. 21 and Sta. 24 (Figures 1 and 3). At Sta. 21 the vein is 11 inches wide, and 18 inches wide at Sta. 24. At both places the strike is North 85° West;

but the dip at Sta. 21 is 25° North, whereas at Sta. 24 it is 45° North. Both exposures are quartz containing minor amounts of oxidized sulphides. A third exposure of quartz was seen under a tree root at Sta. 22, but evidently was not in place. This vein (or veins) occurs in a thick bed of porphyritic andesite. No other outcrops of the vein were seen but quartz float found 150 feet to the northwest of Sta. 21 suggests some extension of the vein in that direction.

CORRELATION OF VEINS

Although conclusive proof of correlation of the veins in the Upper and Lower Adits is lacking the evidence leads to the conclusion that the two veins occupy the same structural horizon on either side of the granodiorite dyke.

1. The projected positions of the two veins on the hanging wall-side of the dyke correspond approximately.
2. A peculiar light-colored stratum composed of cross-bedded grains parallels the footwall of the Upper Adit vein for its entire exposed length. This stratum is consistently 42 inches below the vein. A similar stratum, at the same distance below the vein, is present in the Lower Adit.

The exposures at Sta. 21 and Sta. 24 probably represent the same vein; structurally this vein lies 75 feet above the Upper Adit vein.

LOCALIZATION OF ONE SHOOTS

Inspection of the assay plan, Figure 2, brings out the following points in regard to the distribution of widths and values in the Upper Adit vein:

1. The gold values are on the whole remarkably constant and not closely related to the base metal content.
2. The best part of the vein both as to widths and values is that section from the portal to a point 180 feet along the strike. Good widths and values are present also in the first 40 feet of No. 1 Raise. On the surface the vein maintains a width in excess of 30 inches as far as Sta. 11 and some interesting assays are obtained along the outcrop.
3. A straight line drawn northwesterly through Sta. 11, a point in No. 1 Raise 40 feet up the dip from the collar, and a point in the drift 180 feet from the portal, divides the vein into two parts. That part northeast of this line is wider and of better grade than the part to the southwest. Specifically, the average content of the part northeast of this line is 10 inch-ounces of gold; whereas to the southwest the average content is 3 inch-ounces of gold.
4. On Figure 1. is shown the trace of the intersection of the vein and the granodiorite dyke. This intersection bears North 35° West and plunges 15 to the North. The line mentioned above is also shown on Figure 1 and it is evident that this line is almost parallel to the intersection.

From the above and other considerations already discussed the

following conclusions are drawn regarding the localization of ore in the Upper Adit vein:

1. The ore is localized in a bedding fault which extends to but does not cut the granodiorite dyke. It is thought that the fault may have originated as a consequence of intrusion of the dyke. If so, the fault is a local structure which may be expected to die out as the distance from the dyke increases.
2. The best ore, both as to width and value, is localized in an ore shoot having a steep length of 100 feet which parallels the intersection of the vein and dyke. Hence its rake will be about 15° in a direction North 35° West.

Regarding the Lower Adit vein, evidence has been presented suggesting that it occupies the same structural horizon as the Upper Adit vein. As presently exposed in the Lower Adit the vein is of little value, but a fair possibility exists that it will improve in both width and grade up the dip nearer the dyke.

No such hope of improvement can be offered for the vein exposed at Sta. 21 because a change of rock is involved. At this place the vein is in porphyritic andesite. To the northeast, nearer the dyke, the vein fault must pass into greywacke and the chances are that near the change of rock it would branch or become otherwise discontinuous.

ESTIMATED ORE RESERVES

<u>UPPER ADIT:</u>	<u>Tons</u>	<u>AU</u>	<u>AG</u>	<u>CU</u>	<u>PB</u>
		<u>Oz/ton</u>	<u>Oz/ton</u>	<u>%</u>	<u>%</u>
Blocked out - above adit level	2518	0.50	1.15	0.23	1.15
Probable - above adit level to elevation 2510	600	0.56	0.6	Tr	0.5
- below adit level to elevation 2155	2000	0.61	1.3	0.25	1.0
<u>LOWER ADIT:</u>					
Blocked out -	Nil	-	-	-	-
Probable -	200	0.41	1.0	0.25	1.0
TOTAL BLOCKED OUT AND PROBABLE:	5518	0.54	1.14	0.21	1.0

No concrete estimate of the possible ore reserves is attempted. The possible ore reserve in the Upper Adit shoot may be as large as the reader's optimism permits because there is no structural reason to expect an early termination of the ore shoot down its rake. The same statement applies to a possible ore shoot in the Lower Adit vein near the granodiorite dyke.

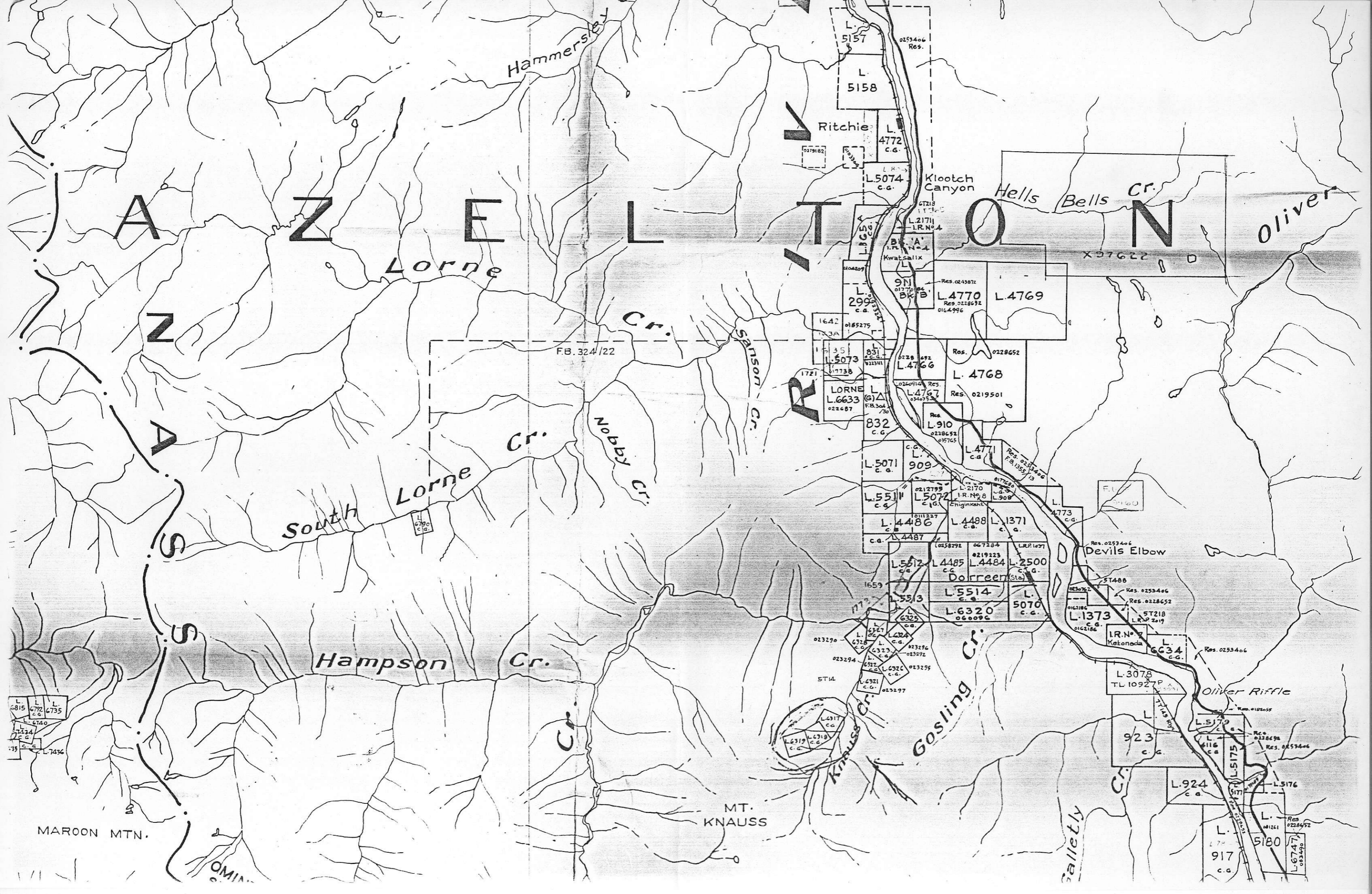
* * * *

Respectfully submitted,

"Wm. H. White"

Wm. H. White

August 25th, 1948.



ANTARCTICA

Lorne

Cr.

South Lorne Cr.

Hampson Cr.

MT. KNAUSS

Gosling Cr.

Hells Bells Cr.

Oliver

MAROON MTN.

Ritchie

Klootch Canyon

X 97622

FB. 324/22

Devils Elbow

Oliver Riffle

L. 3078
TL 10927P

923
c.c.

L. 924
c.c.

L. 5180

L. 917
c.c.

L. 4772
c.c.

L. 5074
c.c.

L. 4770
Res. 0228692
0164996

L. 4769

L. 4766

L. 4768

LORNE
L. 6633
FB. 304/30
022487

L. 4767
Res. 0219501

L. 910
Res. 0228652
03765

L. 5071
c.c.

L. 909

L. 5511
c.c.

L. 5072
c.c.

L. 4486
c.c.

L. 4488

L. 1371
c.c.

L. 4487

L. 5512
c.c.

L. 4485

L. 4484

L. 2500
c.c.

L. 5513

L. 5514

L. 6320

L. 5070
c.c.

L. 6325

L. 6326

L. 6327

L. 6328

L. 6329

L. 6330

L. 6331

L. 6332

L. 6333

L. 6334

L. 6335

L. 6336

L. 6337

L. 6338

L. 6339

L. 6340

L. 6341

L. 6342

L. 6343

L. 6344

L. 6345

L. 6346

L. 6347

L. 6348

L. 6349

L. 6350

L. 6351

L. 6352

L. 6353

L. 6354

L. 6355

L. 6356

L. 6357

L. 6358

L. 6359

L. 6360

L. 6361

L. 6362

L. 6363

L. 6364

L. 6365

L. 6366

L. 6367

L. 6368

L. 6369

L. 6370

L. 6371

L. 6372

L. 6373

L. 6374

L. 6375

L. 6376

L. 6377

L. 6378

L. 6379

L. 6380

L. 6381

L. 6382

L. 6383

L. 6384

L. 6385

L. 6386

L. 6387

L. 6388

L. 6389

L. 6390

L. 6391

L. 6392

L. 6393

L. 6394

L. 6395

L. 6396

L. 6397

L. 6398

L. 6399

L. 6400

L. 6401

L. 6402

L. 6403

L. 6404

L. 6405

L. 6406

L. 6407

L. 6408

L. 6409

L. 6410

L. 6411

L. 6412

L. 6413

L. 6414

L. 6415

L. 6416

L. 6417

L. 6418

L. 6419

L. 6420

L. 6421

L. 6422

L. 6423

L. 6424

L. 6425

L. 6426

L. 6427

L. 6428

L. 6429

L. 6430

L. 6431

L. 6432

L. 6433

L. 6434

L. 6435

L. 6436

L. 6437

L. 6438

L. 6439

L. 6440

L. 6441

L. 6442

L. 6443

L. 6444

L. 6445

L. 6446

L. 6447

L. 6448

L. 6449

L. 6450

L. 6451

L. 6452

L. 6453

L. 6454

L. 6455

L. 6456

L. 6457

L. 6458

L. 6459

L. 6460

L. 6461

L. 6462

L. 6463

L. 6464

L. 6465

L. 6466

L. 6467

L. 6468

L. 6469

L. 6470

L. 6471

L. 6472

L. 6473

L. 6474

L. 6475

L. 6476

L. 6477

L. 6478

L. 6479

L. 6480

L. 6481

L. 6482

L. 6483

L. 6484

L. 6485

L. 6486

L. 6487

L. 6488

L. 6489

L. 6490

L. 6491

L. 6492

L. 6493

L. 6494

L. 6495

L. 6496

L. 6497

L. 6498

L. 6499

L. 6500

L. 6501

L. 6502

L. 6503

L. 6504

L. 6505

L. 6506

L. 6507

L. 6508

L. 6509

L. 6510

L. 6511

L. 6512

L. 6513

L. 6514

L. 6515

L. 6516

L. 6517

L. 6518

L. 6519

L. 6520

L. 6521

L. 6522

L. 6523

L. 6524

L. 6525

L. 6526

L. 6527

L. 6528

L. 6529

L. 6530

L. 6531

L. 6532

L. 6533

L. 6534

L. 6535

L. 6536

L. 6537

L. 6538

L. 6539

L. 6540

L. 6541

L. 6542

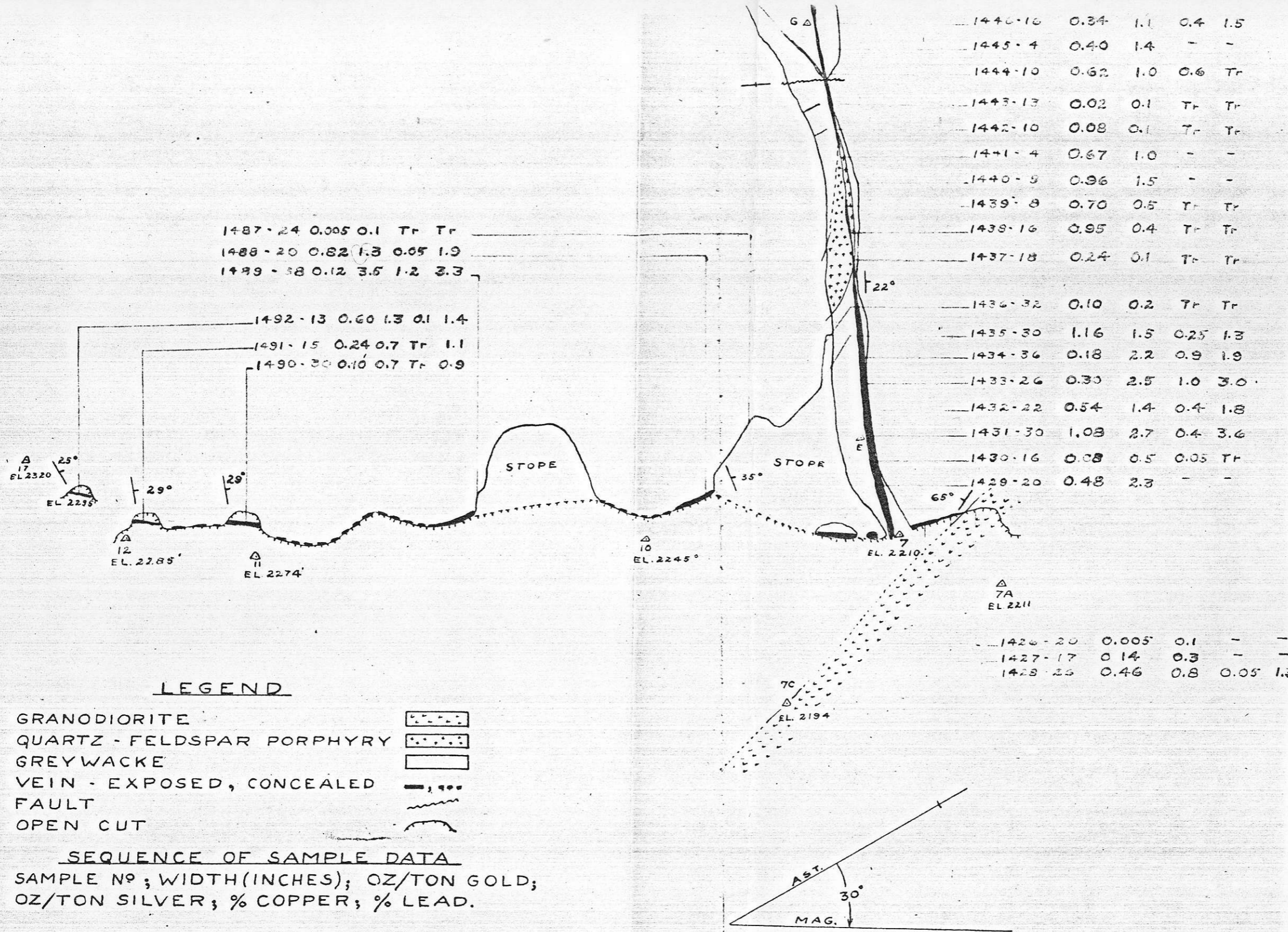
L. 6543

L. 6544

L. 6545

L. 6546

L. 6547



LEGEND

- GRANODIORITE
- QUARTZ - FELDSPAR PORPHYRY
- GREYWACKE
- VEIN - EXPOSED, CONCEALED
- FAULT
- OPEN CUT

SEQUENCE OF SAMPLE DATA

SAMPLE N^o; WIDTH (INCHES); OZ/TON GOLD;
OZ/TON SILVER; % COPPER; % LEAD.

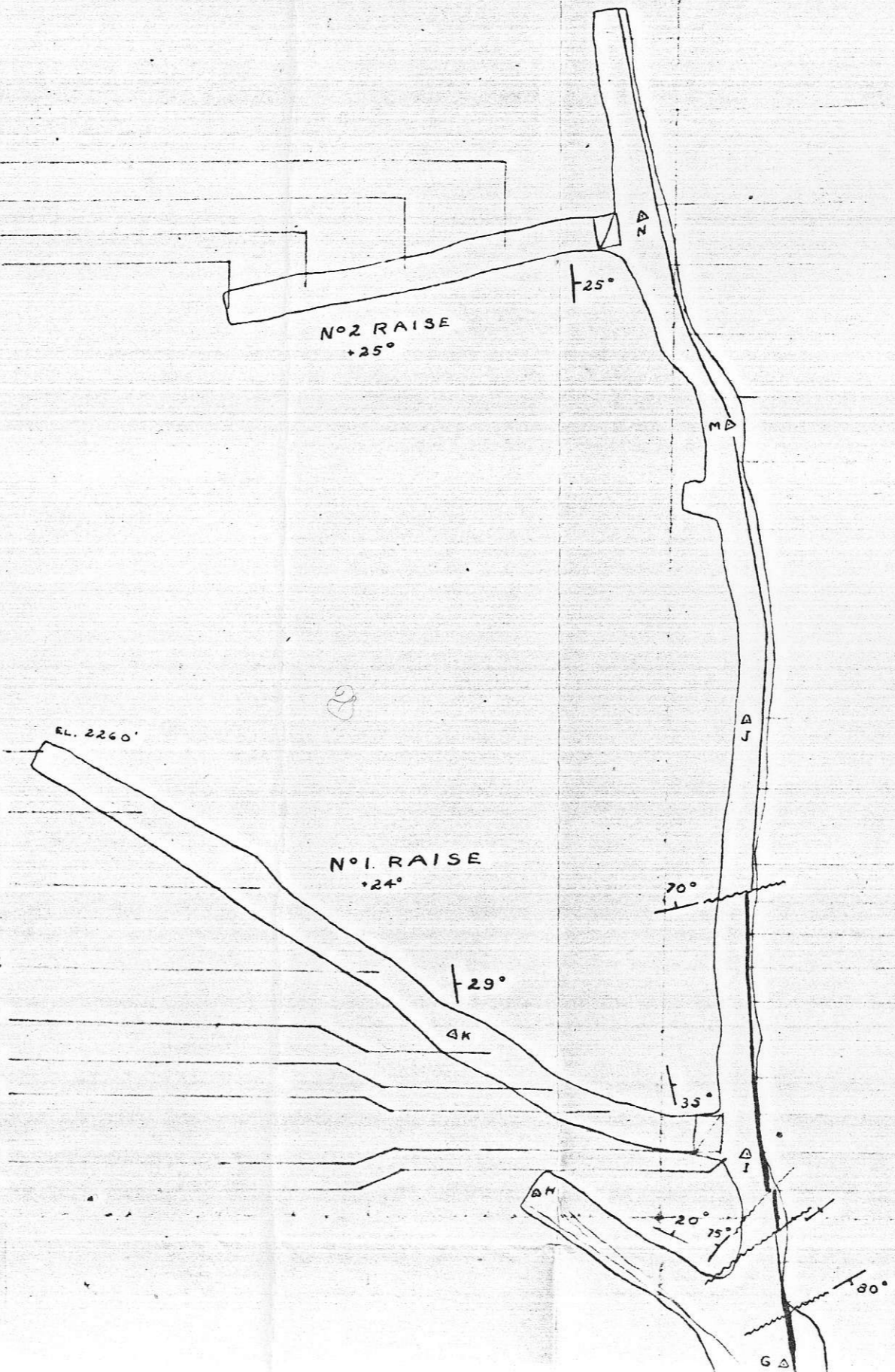
SCALE: 1 IN. = 20 FT.

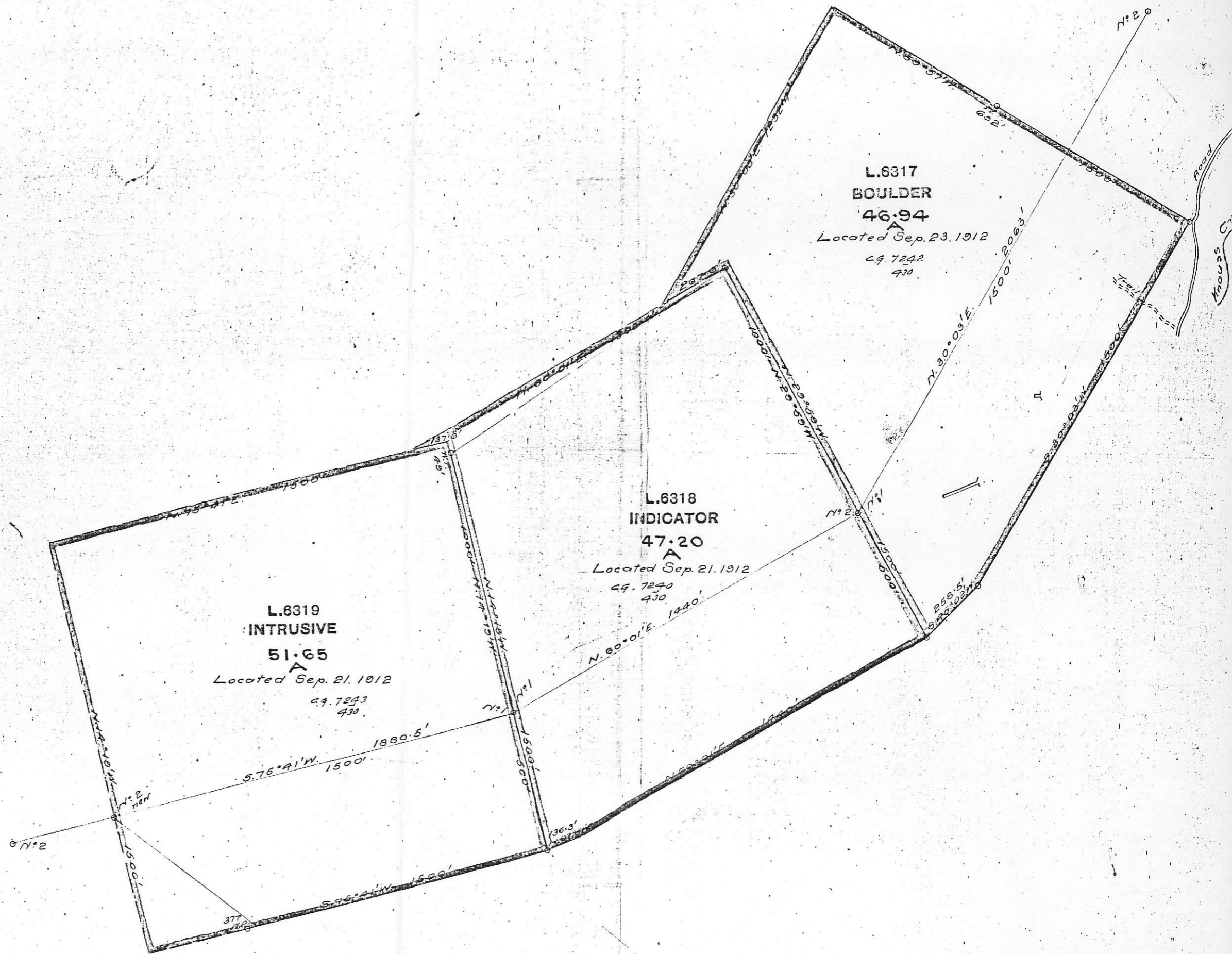
FIGURE 2: UPPER ADIT - GEOLOGY AND ASSAY PLAN

1481	-	5	0.82	1.2	-	-
1482	-	6	1.40	1.3	-	-
1483	-	5	0.68	0.6	-	-
1484	-	6	1.35	1.1	-	-

1450	-	5	0.15	0.6	Tr	Tr
1479	-	5	0.44	1.2	0.1	1.2
1478	-	6	0.34	0.8	Tr	0.6
1477	-	7	0.62	0.3	Tr	0.2
1476	-	12	0.62	1.9	0.4	2.7
1475	-	7	0.24	0.2	0.05	0.1
1474	-	13	0.41	0.8	0.1	0.2
1473	-	17	2.08	3.0	0.3	5.3
1472	-	17	1.12	1.0	0.2	0.8

1471	-	4	0.24	0.2	-	-
1470	-	5	1.70	1.2	-	-
1469	-	5	1.02	0.8	-	-
1468	-	5	0.12	Tr	-	-
1467	-	7	0.42	0.6	-	-
1466	-	6	0.06	Tr	-	-
1465	-	6	0.02	Tr	-	-
1464	-	8	0.17	0.2	-	-
1463	-	8	0.20	0.3	-	-
1462	-	5	0.87	0.8	-	-
1461	-	6	2.14	1.4	-	-
1460	-	12	1.00	1.3	Tr	Tr
1459	-	11	2.30	2.2	0.4	1.8
1458	-	13	0.84	1.2	0.1	1.1
1457	-	15	0.94	2.1	0.25	2.5
1456	-	10	0.62	1.9	0.25	1.8
1455	-	7	1.74	2.9	0.3	2.9
1454	-	15	1.09	1.5	0.15	1.4
1453	-	17	0.34	0.5	0.1	Tr
1452	-	17	0.24	1.1	0.25	1.3
1451	-	10	0.76	2.5	0.5	3.2
1450	-	8	1.76	1.4	0.25	1.4
1449	-	13	2.04	2.7	0.5	3.9
1448	-	19	0.12	0.2	Tr	Tr
1447	-	20	0.18	2.2	0.2	4.5
1446	-	16	0.34	1.1	0.4	1.5





L.6317
BOULDER
46.94
A
Located Sep. 23. 1912
C.G. 7242
430

L.6318
INDICATOR
47.20
A
Located Sep. 21. 1912
C.G. 7240
430

L.6319
INTRUSIVE
51.65
A
Located Sep. 21. 1912
C.G. 7243
430

Moose Cr.

N 2 0

N 2 0

N 2 0

N 2 1

N 2 1

N 2 1

N 2 1

5.75° 41' W. 1500'

1860.5'

N. 60° 01' E. 1440'

255.5'

578.02'

1500'

600'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

652'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

1500'

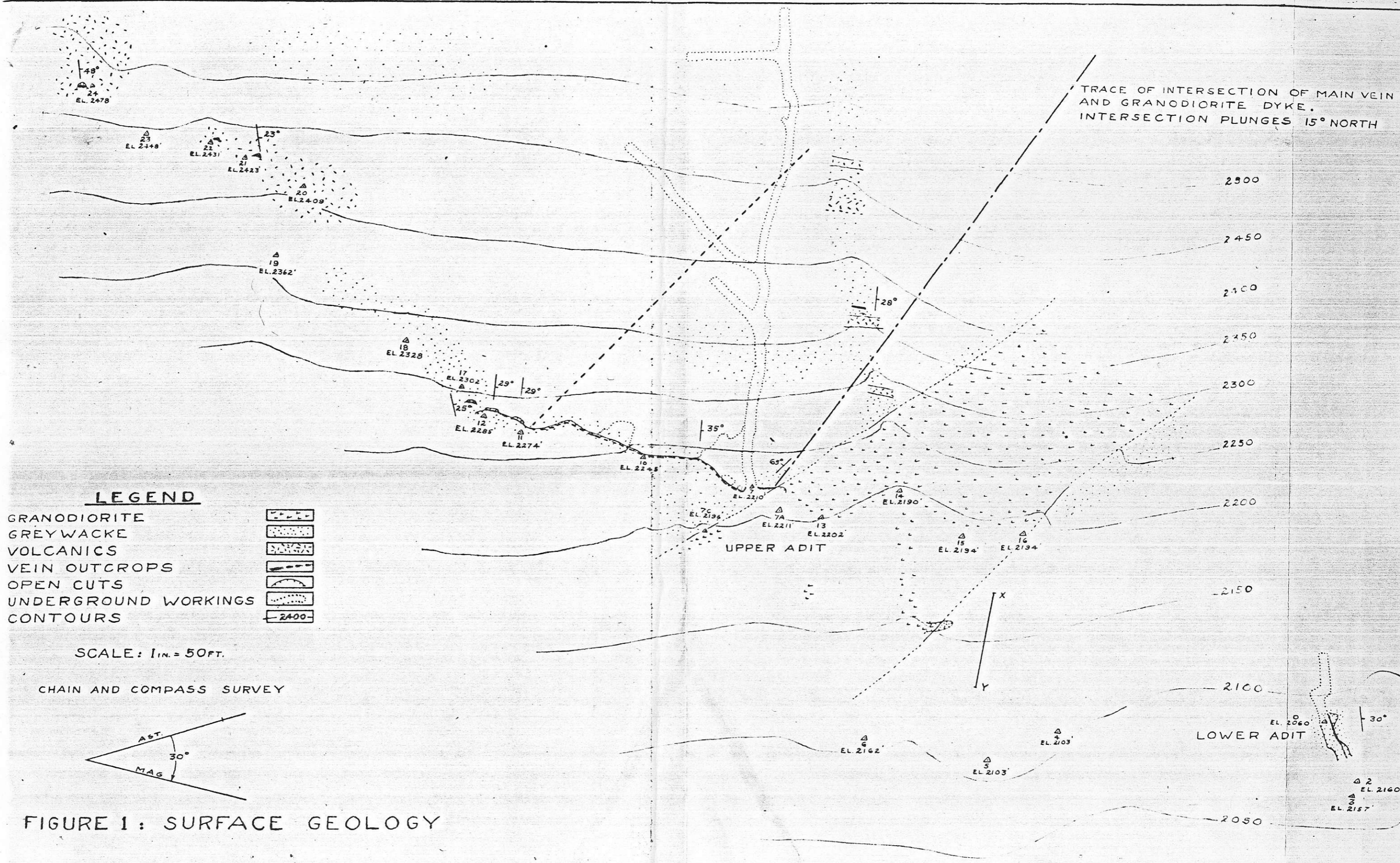
1500'

1500'

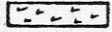

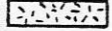


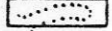
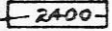
1500'

1500'

1500'



LEGEND

- GRANODIORITE 
- GREYWACKE 
- VOLCANICS 
- VEIN OUTCROPS 
- OPEN CUTS 
- UNDERGROUND WORKINGS 
- CONTOURS 

SCALE: 1 IN. = 50 FT.

CHAIN AND COMPASS SURVEY

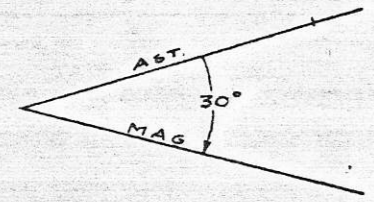


FIGURE 1: SURFACE GEOLOGY