



Report On

AN EXPLORATION PROGRAM

<u>for</u>

WOLLASTONITE, GARNET, APATITE, & RARE EARTH ELEMENTS, TALC

<u>In</u>

SNOWDEN, GALWAY, CAVENDISH, MONMOUTH, FARADAY, WOLLASTON, LIMERICK, ASHBY, MAYO, BROUGHAM, NORTH CANONTO & SOUTH CANONTO TOWNSHIPS

---Southeastern Ontario---

This Is An O.P.A.P. funded Project (O.P.A.P. Number OP92-244)

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December 1, 1992



Drawing Number	Drawing Title
DRAWI Project	ings (in pocket of report)
Receipts Fo	S (Expense Account)
APPENDIX C -DAILY WORK	-MAPPING SHEETS
	ON ANALYSISB12 - B18 Systems Inc., per Glenn Brown)
INDEX PAGE Multi-Eleme	IN SECTION ANALYSIS (Results) ent geochemical AnalysisB1 - B11 ay Laboratories)
Appendix A -LIST OF SAM GEOLOGY DES	MPLES COLLECTED WITH SCRIPTIONA1 - A6
4.0 GEOLOGICAL DESCRIP (Discussions, Recomm	
3.0 GEOLOGICAL MAPPING	METHODS AND WORK DONE5,6
2.0 MINOR CHANGES TO P	ROPOSED PROJECT5
1.1 LOCATION LOCATION	DESCRIPTION
1.0 PROJECT LOCATION AND	D ACCESS

	PIOJEC	L		
Drawing	Number	_		<u>Drawing Title</u>
92-1	13	Geological	Dlan-	Ruby Garnet Property, Ashby Twp.
		•		
92-2	1	•		Snowden Twp.
92-3	2	Geological	Plan-	Galway Twp.
92-4	3	Geological	Plan-	Cavendish Twp1.
92-5	4	Geological	Plan-	Cavendish Twp2.
92-6	6	Geological	Plan-	Monmouth Twp.
92-7	7	Geological	Plan-	Faraday Twp1.
92-8	8	Geological	Plan-	Faraday Twp2.
92-9	9	Geological	Plan-	Wollaston Twp.
92-10	10	_		Limerick Twp.
92-11	11	Geological	Plan-	Ashby & Mayo Twps.
92-12	12	Geological	Plan-	Ashby Twp.
92-13	14	Geological	Plan-	Brougham Twp.
92-14	15	-		Brougham & North Canonto Twp.
92-15	16	Geological	Plan-	South Canonto Twp.

DATE: November 20, 1992

NAME: Ralph V. Stewart

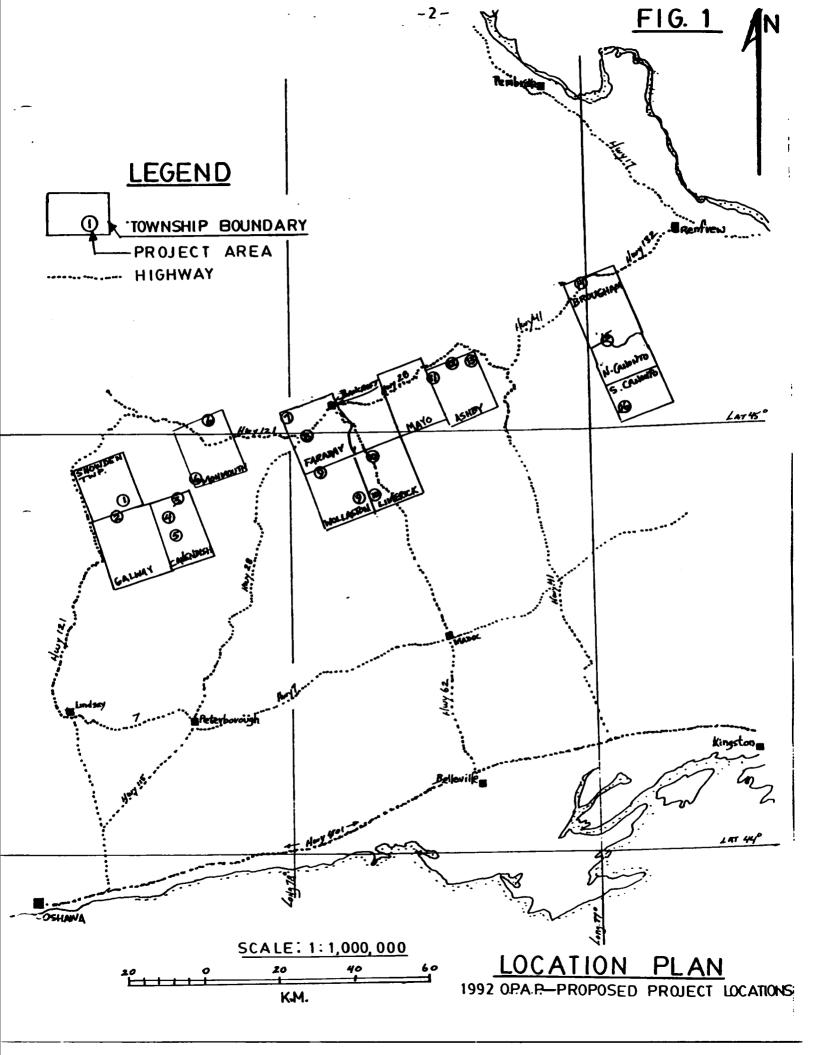
1.0 PROJECT LOCATION & ACCESS -1992 OPAP FILE OP92-244

1.1 PROJECT LOCATION

The fifteen AREA locations explored under this grant cover specific zones within an east-northeasterly trending belt of precambrian (Grenville) age rocks, along a strike length of approximately 150 KM. See Figure 1?? for the location of these proposed areas, which are listed as follows:

AREA(S) (NumberSee Drawings)	CONNCOLTY	Township	Mining <u>DIVISION</u>	NTS <u>Sheet</u>	Latitude	<u>Long i tude</u>
1	Wollastonite	Snowden	8. Ontario	31D/15	44 51	78 32.8'
2	Mollastonite	Galway	-	310/15	44 48.8	78 33.8'
3 4 5	Wollastonite	Cavendish Cavendish Cavendish	2 -		44 51.1 44 48.4 44 46.0	78 22.0' 78 23.4' 78 22.5'
•	Wollastonite	Honsouth		31E/1 31D/16	44 53.9 45 2.0	78 18.5° 78 15.9°
7 8	Wollastonite	Faraday 1 Faraday 2	-	31E/1 31C/13 31F/4		78 00.0° 77 55.3°
9	Wollastonite	Wo11aston	•	31C/13	44 55.2 & 44 51.1	77 53.4° 77 45.8°
10	Wollastonite	Limerick	•	31C/13	44 57.2 8 44 51.8	77 42.7' 77 42.2'
11	Wollastonite	Ashby & M	ayo "	31F/4 4 31F/3	45 7.5	77 30.0'
12	Wollastonite, Base & Precious Hetal -Talc	Achby	-	31F/3	45 9.5	77 28.3*
13	Garnet	Ashby	•	31F/3	45 10.2	77 24.0'
14	Apatite, Fluorite Rare Earth Elements Wollastonite	Broughem	•	31F/6	45 20.8	77 00.9'
15	Wollastonite	Morth Can	onto/ "	31F/2	45 12.4	76 56.3'
16	Wollastonite	South Can	onto "	31F/2	45 2.7	76 53.4"

^{*} This project was not completed, see notes on page 5.



1.2 PROJECT ACCESS

PROPERTY NUMBER & TWP.

ACCESS DESCRIPTION

- 1-Snowden Twp-- Take Route 35 north of highway 401 to Lindsay, then routes 36 & 649 north to the village of Kinmount. Take route 121 north of Kinmount a short distance, and turn east on highway 503. Follow 503 northeast a distance of approximately 9 KM to the property.
- 2-Galway Twp-- Similar to Snowden access, except the Galway property is some 6KM east of Highway 121, and located due south of Highway 503.
- 3-Cavendish

 Take highway 28 east to route 507 (west of Lakefield) and turn north on route 507. Continue north some 53 KM to the north boundary of Cavendish Twp. Cavendish 1 area is accessible by a woods road, a distance of 1.2 KM east of highway 507. Cavendish 2 area is south on 507 (from the woods road) some 6.5 KM. The work area is some 1.6 KM due west of route 507.
- 6-Monmouth North Area Take route 503 some 16KM east of Gooderham, to route 648. Turn north on this highway a distance of 6KM to Wilberforce. From Wilberforce take route 4 west one KM, to a secondary road which leads north approximately 0.5 to 1 KM to the work area.

 South Area Take highway 507 south of Gooderham a distance of 1.6 KM. At this point a secondary road leads east a distance of some 3.7 KM to Trooper Lake. At this point a trail leads east some 2.4 KM to the work area.
- 7-Faraday-1 Take highway 28, west of Bancroft some 11.3 KM.
 At this point a road leads north some 3.5 KM to the
 north end of Littlefools Lake. Take Monk Road
 west 1.4 KM to a secondary road which turns north and
 accesses the west portion of the work area.
 To access the east portion of the work area, go
 west from Bancroft on a secondary road which passes due
 north of Faraday Lake. Turn south onto the Albion
 Lake road at approximately 11 K.M. west of Bancroft.
 The work area is due west of Albion Lake.
- 8-Faraday~ 2-- Take route 28 west of Bancroft some 9.3 KM. At this point a secondary road leads southwest some 1.9 KM. Approximately 300 metres east of this point, the planned traverse begins, and heads east as indicated.

- 9- Wollaston -- N.W. SECTOR- Take highway 62 north of Madoc some 48 KM to route 620. Continue west on 620 to Coe Hill. At Coe Hill turn north on a secondary road and continue for 7.2 KM. At this point turn west and continue some 4.4 KM to Deception Lake. Here the road swings south for 2.3 KM, at which point a trail traverses the work area in a southwest direction.
 - E. SECTOR- Some 12.3 KM west of Coe Hill on route 620, a secondary road turns south and follows the township line. The work area is immediately west of this road some 3.0 KM south of route 620.
- 10- Limerick -- WEST SECTOR- Similar access to the above E. Sector of Wollaston Twp., but the work area is some 4.4 KM south of that area, along the township boundary line.

 NORTH SECTOR- Take highway 62 north of Madoc a distance of 4.4 KM beyond the route 604 turnoff. At this point a secondary road turns east, and at a point some 2.7 KM from hwy. 62, a woods road turns north, and continues some 2.2 KM across the work area.
- 11- Ashby/Mayo--Take highway 28 east of Bancroft to McArthur Mills, a distance of some 24 KM. At this village take a secondary road south for some 4.2 KM, at which point a trail leads east 1.6 KM to the work area. The western sector of this project can best be reached by continuing east of McArthur Mills, a distance of 6.5 KM. At this point a woods road turns south and continues some 3.4 KM to Parkhurst Lake and the property
- 12- Ashby-1--Some 6.4 KM east of the Parkhurst Lake/Route 28 road intersection (on route 28) another road turns south and continues a distance of 4.8 KM to Trout (Len) Lake, and the work area.
- 13-Ashby-2--Take hwy. 28 east of Bancroft a distance of 41 KM to Horwood Lake and continue east on route 28 a distance of 4 KM to the Snake River. On the east side of the river, an old road turns south off hwy. 28, and leads to Ruby Lake, and the work area a distance of some 2.0 KM.
- 14-Brougham/-- NORTH SECTOR- The work areas are in the vicinity of the intersection of Hwy. 41, and the Green Lake Forest Access Road. The Forest Access Road leaves highway 41, at a point 6.3 KM west of highway 132/41 intersection.
- 15-N. Canonto/--For the South Sector of Brougham Twp.,take Brougham--route 508 southwest from hwy. 17 to

Calabogie, a distance of 23 KM. At this point, highway 508 continues in a southwest direction an additional 15 KM to Black Donald Lake. The work area lies immediately south of 508, and in the area of a hydro line, some 3.2 KM southwest of Black Donald Lake.

For the N. Canonto Sector, continue by road southwest from route 508 past the south sector Brougham Project to the Mountain Chute Hydro Dam. Just beyond this dam a road crosses the Madawaska river in a southwest direction. The work area is approximately 3KM south west of this bridge, along a dirt road.

16-S. Canonto--Take highway 509 north of route 7 to the village of Ompah, then northeast some 8.3 KM to the mosque Lake turn-off. From this turn, a secondary road leads north, and follows the hydro line north of Mosque Lake to the work areas, distances of 6.5KM and 13 KM respectively.

2.0 CHANGES TO PROPOSED PROJECT

The following two minor changes were made to the program.

PROJECT 5 (Cavendish Township-3)— This was not completed, as the two other projects (numbers 3 & 4) in Cavendish Township, yielded negative results, and it was felt prudent to concentrate on other areas with more potential.

<u>PROJECT 6 (Monmouth Township)</u> An outcrop of diopsidic marble in lot 27, Cons. XVI, was not visited due to private land restrictions.

PROJECT 12 (Ashby Township) - One additional traverse (D), was completed to the east of Trout Lake (Drawing S 92-12).

3.0 GEOLOGICAL MAPPING METHODS AND WORK DONE

All traverses were completed with the aid of a brunton compass and hip chain instrument. All outcrops traversed were plotted on graph paper (scale 1" = 200'), and these daily work sheets are included in Appendix C. Grab samples of typical rock and/or mineral samples were collected as required. The detailed descriptions of samples collected are contained in Appendix A. Those samples selected for chemical and/or thin section analysis, are so indicated in the Appendix A listing, and are also shown on the drawings which accompany this report.

Traverses, prospecting, and geological mapping were completed on

all the projects listed on page 1. Traverses were completed as proposed in the Application For Funding Report, with exceptions as indicated in section 2.0 The location of all traverses are shown on each of the drawings accompanying this report.

4.0 GEOLOGY DESCRIPTIONS (Discussions & Recommendations)

AREA OR PROJECT NUMBER

1. SNOWDEN TWP. (Dwg. S 92-2)

ROCK DESCRIPTIONS:

Rocks were mainly calcitic and/or dolomitic marbles. These rocks (especially the dolomites), contain variable amounts of white to bluish white, bladed, acicular tremolite. Along Traverse C, tremolite content up to 50% (sample S 92-40) was observed.

Sample 92-77, collected within a skarn zone in Traverse F, contains massive magnetite and disseminated sulphides. This sample was analyzed for base and precious metals <u>and</u> rare earth elements, but anomalous values were not detected.

ECONOMIC CONSIDERATIONS:

If uses for acicular tremolite can be established, this area will warrant further exploration and evaluation of the "richer" tremolitic zones. Some outcrops of white dolomite may be of interest as a source of white "mineral filler". A thin section analysis of Sample S 92-80 (Traverse D) indicates a tremolite content of 75%.

2. GALWAY TWP.(Dwg. S 92-3)

ROCK DESCRIPTIONS:

Rocks underlying traverses A,B, & C are calcitic limestone (with minor graphite), which have been intruded by bodies of gabbro, and smaller bodies of granodiorite. All rocks have been moderately fractured, a n d locally there is silicification of the calcitic limestones, with accompanying disseminated pyrite.

ECONOMIC CONSIDERATIONS:

There does not appear to have been adequate sources of silisic acid here to produce wollastonite. Along Traverse B, Sample S 92-32 (highly silicified limestone) contains significant "visual" amounts of pyrite, and minor chalcopyrite. On assay, slightly elevated values of Ni(49 ppm) and Cu(99 ppm), were detected.

3. CAVENDISH TWP.-1(Dwg. S 92-4)

ROCK DESCRIPTIONS:

Silicated dolomites were observed in close contact with granite and gabbro intrusives. Minor amounts of tremolite, talc, & diopside were noted in a few of the outcrops.

ECONOMIC CONSIDERATIONS:

The rocks examined do not show potential for industrial minerals. The paucity of calcitic limestones, and lack of silicification do not bode well for the formation of wollastonite.

4. CAVENDISH TWP.-2(Dwg. S 92-5)

ROCK DESCRIPTIONS:

Interlayered calcitic/dolomitic marbles were observed, close to their contacts with syenitic and granitic intrusives. Minor amounts of tremolite, diopside, and philogopite were observed in some of the outcrops.

ECONOMIC CONSIDERATIONS:

Minor silicification has altered some of these rocks but does not appear to have been intense enough to produce wollastonite.

6. MONMOUTH TWP.-N.E. & S.W.(Dwg. S 92-6)

ROCK DESCRIPTIONS:

Calcitic and diopsidic marble were examined close to their contacts with granitic and gabbro intrusives. Some 3-5% disseminated pyrite was noted in diopsidic/silicified "gossaned" skarn zones.

ECONOMIC CONSIDERATIONS:

Multielement chemical analysis of samples (S 92-22A & 92-23) within "gossaned" skarn zones did not return anomalous values in base and precious metals. Wollastonite mineralization was not noted. A number of old trenches were observed along Traverse A, probably completed to test for uranium.

7. FARADAY TWP. # 1.(S 92-7)

ROCK DESCRIPTIONS:

Traverses D & E, examined calcitic marbles which have been intruded by granite pegmatite dykes, close to a large granodiorite body. These carbonate rocks have been moderately altered (silicified), with the formation of tremolite, philogopite and minor diopside.

Traverses A & B were along marble outcrops close to their contact with gabbro intrusives. The marbles appear to be relatively free of accessory minerals, and formed in a geological environment unsuitable for wollastonite formation.

ECONOMIC CONSIDERATIONS:

Traverses D & E were completed in an area where anomalous uranium values are known to exist. Only minor diopside was noted in outcrop. The calcitic limestones examined in A & B traverses were not silicified to the extent required to produce wollastonite.

8. FARADAY TWP. # 2.(Dwg. S 92-8)

ROCK DESCRIPTIONS:

A traverse north of Laundry Lake, was conducted along a band of tremolitic, calcitic/dolomitic marble. Tremolite content in some of the outcrops is as high as 70% and the marbles are mildly to moderately silicified.

ECONOMIC CONSIDERATIONS:

If markets for bladed and acicular tremolite can be established, this area definitely warrants additional investigation. A thin section cut from sample S 92-16 indicated 85% tremolite.

9. WOLLASTON TWP.(N.W. & E. Sectors)

ROCK DESCRIPTIONS:

Close to the east boundary of the township, outcrops of diopsidic/calcitic marble were examined along the township road. These rocks lie immediately north of a large body of gabbro.

In the northwest sector of the township (south end of traverse A), a body of green diopsidic marble is in contact with a large granite batholith. The marbles close to the granite are highly silicified, and contain wollastonite. Sample 91-54 was evaluated in thin section, and short crystals of wollastonite make up 20% of the minerals present. Similiar marbles were observed near the north end of this traverse (sample S 92-56).

ECONOMIC CONSIDERATIONS:

In view of the wollastonite detected in sample 91-54, additional prospecting is warranted near the north end of Traverse A, and around the north granite/carbonate contact. Further evaluation of the outcrop hosting sample 91-54 should also be completed.

10. LIMERICK TWP. --N.W. & S.W. SECTIONS--(Dwg. S 92-10) ROCK DESCRIPTIONS:

N.W. Sector- Traverse E, completed along an old woods road, examined a series of calcitic limestone outcrops, locally silicified, with the development of mica and sillimanite. The carbonate rocks evaluated occur close to their contact with a large granite batholith. A few narrow "gabbroic" dykes intersect carbonate rock outcrops. Sample S 92-46 was selected for thin section analysis, and comes from a "laminated marble band" containing a number of heavy minerals (oxides, apatite, tourmaline).

S.W. Sector- Traverses A, B, & C examined diopsidic limestones, interlayered with a few outcrops of silicated limestones. Near the north end of traverse B, silicated limestones (some skarns) were observed in contact with a large gabbro intrusive body.

ECONOMIC CONSIDERATIONS:

In the N.W. sector (Traverse E), a thin section analysis of sample S 92-46, indicated 5-10% heavy minerals, in a laminated carbonate rock. Additional evaluation and assay of this rock type to check for metallic constituents should be completed.

11. ASHBY & MAYO TOWNSHIPS(Dwg. S 92-11)

ROCK DESCRIPTIONS: (Mayo-Ashby Boundary Area)

Traverse A, along the Little Mississippi River, defined limestone (skarn) outcrops. They are silicated and contain fine disseminated sulphides. A multielement assay of sample 92-9 (10% sulphides) yielded anomalous values in Zinc (583 ppm), and Cu (140 ppm). Traverse B outcrops are calcitic and silicated(skarn) rocks, which contain minor tremolite. A thin section cut from 92-11 indicated 50% fibrous tremolite, 20 % diopside and the possibility of wollastonite mineralization.

ECONOMIC CONSIDERATIONS: (Mayo-Ashby Boundary Area)

Sample 92-11 material should be analyzed by X Ray Diffraction to determine if wollastonite may be associated with the acicular tremolite. The anomalous base metal values detected in sample S 92-9 appear to support the theory of enrichment in metallic minerals (alteration halo) around the "Parkhurst Granite Intrusive", explained below.

ROCK DESCRIPTIONS: (South of Parkhurst Lake)

Traverses C & F are a continuation of traverses completed under the 1991 OPAP program (OP 91-335). Traverse C defined interlayered, silicified chloritic schists, and black pyritized meta sediments. Most of the samples collected in 1992 (ie Nos. 106, 107, 110, & 111) yielded moderately anomalous (ppm) values in zinc.

ECONOMIC CONSIDERATIONS: (South Of Parkhurst Lake)

Anomalous base metal values obtained in the 1991 and 1992 programs appear to be located in an "alteration halo", which extends at least 2000 feet outside the "Parkhurst Granite Intrusive" contact, in volcanic/sedimentary rocks. It is also possible that a major north-south trending fault in the vicinity of the 1992 traverses acted as a channelway for contact metamorphic mineral solutions. Additional mapping and prospecting for base metals (especially zinc) within the alteration halo of the "Parkhurst Intrusive" is warranted.

12. ASHBY TWP.--1 (Len or Trout Lake Area) [Dwg. S 92-12]

ROCK DESCRIPTIONS (Traverse A)

Traverse A was completed to check the reported occurrence of talc (OGS Report 26..page 31), and to determine it's economic potential. "Talcy" outcrops of calcitic/dolomitic marble, are exposed near the west end of Len(Trout) lake. Rocks examined were tremolitic marbles, containing up to 50% tremolite, and at least one narrow, talc rich band, some 2 to 3 feet in width. Talc content of this band was estimated to be approximately 30%. A few old trenches located some 200 feet further west, have exposed tremolitic marble, containing only minor amounts of talc.

ECONOMIC CONSIDERATIONS: (Traverse A)

The narrow talc rich band described above is of some interest, but there does not appear to be enough talc content overall, to warrant further exploration. The host marble body is some 1500 feet in strike length, and some 500 feet in width, but if one assumes a 3 foot wide band extending 1500 feet in length, and 100 feet down dip, an ore tonnage (30% talc) of only 35,000 is indicated. Further stripping would have to be completed to change these projections.

ROCK DESCRIPTIONS (Traverses B to G Inclusive)

Most rocks examined were white colored calcitic or dolomitic marbles, with varying amounts (5%-50%) of prismatic tremolite crystals. In traverse G, calcitic marbles were noted close to their contact with meta-gabbro rocks.

ECONOMIC CONSIDERATIONS(Traverses B to G Inclusive)

If economic applications for acicular tremolite are developed, this area warrants further investigation, especially in the area of Traverse D.

13. ASHBY TWP--2.(S 92-1)

ROCK DESCRIPTIONS

Interlayered garnet bearing, and non garnet bearing quartz/hornblende/mica gneisses are common in the northeast corner of Ashby township. Rocks of this composition were mapped by the writer in 1991, and the current 1992 program also defined rocks of similar composition. In general, the garnet content of the gneisses mapped in 1992 is lower than those mapped in 1991. In addition, the size (1/16"-1/8") of the garnets mapped in the current program were smaller. Under the current program, garnet bearing zones were traced to the southern end of Ruby Lake.

ECONOMIC CONSIDERATIONS

The 1991 OPAP program on the Ruby Property defined some 1.8 million tons of garnet bearing gneiss ore (+30% garnet) in the northeast

corner of Ashby township (drawing S 91-1). The current 1992 program expanded this mapping to the south, and defined an additional 3.0 million tonnes of garnet bearing ore grading + 20% garnet content. The quantity of garnets defined in both the 1991 & 1992 programs is substantial, and additional testing is now warranted to determine the quality of these major reserves.

14. BROUGHAM TWP. (Dwg. S 92-13) ROCK DESCRIPTIONS:

TRAVERSE G--- Outcrops of calc/silicate gneiss, close to a pink coloured granitic pegmatite dyke were examined and evaluated. Five small outcrops of calcitic gneiss adjacent to the "woods road", carry 5-10% apatite and trace to 5% fine grained red fluorite. The calc/silicate rocks continue sporadically to the east, a distance of at least 1000 feet, close to the pegmatite dyke. Unfortunately the apatite/fluorite content decreases significantly, east of the woods road. A thin section cut from sample S 92-57 indicated 3% apatite, and traces of sphene and zircon.

TRAVERSE A,B,C,D, & F--- Rocks examined consisted mainly of calc/silicate gneiss (skarns), lying close to their contact with mafic, pegmatitic, or alkalic (syenite) intrusive rocks. Minor amounts of apatite and fluorite were noted.

TRAVERSE E & H--- Both traverses examined diopsidic marbles for possible wollastonite, apatite and fluorite content.

ECONOMIC CONSIDERATIONS:

Traverse G--The apatite/fluorite content is not high enough to be of economic interest. Although the calc/silicate rocks carrying these minerals continues at least 1000 east of the "woods road", the apatite/fluorite content drops off significantly to the east. The content of apatite/fluorite noted in the remaining traverses is low, and not of economic significance. No indication of wollastonite mineralization was observed. Rare earth indications in or close to granitic pegmatites are known to exist, but areas of economic potential for all these elements were not found in the current work.

15. NORTH CANONTO/BROUGHAM TWPS. (Dwg. S 92-14)

ROCK DESCRIPTIONS (BROUGHAM TWP.-Traverses A,B,C,D,E, & F)
Interlayered calcitic and dolomitic marbles were observed along the north-northwest contact of a large trondhjemite intrusive body.
Minor bodies of hornblende-quartz gneiss also occur in the marbles, close to the trondjemite. Calcitic marbles become more silicified and "skarney" close to the intrusive contact, with the formation of sporadic tremolite. Limonitic granitic/calcitic skarns occur, notably along Traverse D. Two samples (\$ 92-95A & -97) were sent for multielement assay, and anomalous values in nickel(100 ppm), copper(526 ppm), and zinc(113 ppm). were detected in sample 92-95A.

ECONOMIC CONSIDERATIONS(Traverses A,B,C,D,E, & F)

Wollastonite mineralization was not observed in outcrop, and while rock conditions seem suitable, silicification may not have been widespread or intensive enough. The anomalous base metals in sample 92-95A, occur in gossaned skarn zones, which do not appear to be large enough to be of economic significance.

ROCK DESCRIPTIONS (NORTH CANONTO TWP.-Traverses G,H,I,J,J-1, & K. Calcitic marbles and silicified carbonates (skarns) were examined and mapped. The more highly silicated carbonates and skarns, lie within 600 to 700 feet of the trondhjemite intrusive.

Along traverses G,H, & I, at approximately 300 feet northwest of the intrusive/carbonate contact, a series of narrow granitic pegmatite dykes were observed. The carbonate rocks close to these pegmatites are more highly silicified, with minor development of tremolite.

Along traverses J. J-1, & K, a body of pure quartz (+98% SiO2-sample S 92-68) was discovered approximately 300 feet northwest of the trondhjemite, and appears to occupy the same "stratigraphic position" as the granitic pegmatites examined in traverses G,H, & I. In the immediate vicinity of this quartz body, the calcitic/dolomitic marbles are richer in diopside, and light green in colour. Thin section analysis was completed on sample S 92-91, and examination indicated an 85% diopside content. Wollastonite mineralization was not detected.

ECONOMIC CONSIDERATIONS(Traverses G,H,I,J,J-1, & K)

The quartz body which was discovered along traverses J & J-1 appears to have some economic potential, assuming additional tonnages of this material can be discovered. Sample S 92-68 is a grab sample, but appears to be representative of the overall SiO2 content of 97.8%. Prospecting for additional silica bodies should be completed, along strike and along the south side of the trondhjemite/carbonate contact. Although wollastonite has not been detected to date in the area, further prospecting and mapping for this commodity appears warranted, notably close to the carbonate/trondjemite contact, and in association with diopside.

16. SOUTH CANONTO TWP. (Dwg. S 92-15) ROCK DESCRIPTIONS:

Traverse A defined a number of calcitic & dolomitic outcrops, within 200 to 400 feet of a gabbro intrusive body. The carbonates have been silicated with the formation of skarn zones, a significant amount of tremolite, and minor diopside. Thin sections cut from samples 92-84 & 92-86, indicate a high percentage (50-90%) of tremolite. Fine disseminated sulphides (5-10%) occur interlayered with some of the carbonates.

Traverse B crossed the following rock sequences, at right angles

to, and approaching the gabbro intrusive: Hornblende/granite gneiss, interlayered carbonate/granitic gneiss, skarney "tremolitic marble" with disseminated sulphides, and massive gabbro. A multielement assay was completed on sample S 92-88, but yielded negative base and precious metal values.

Traverses C & D defined rock outcrops consisting mainly of calcitic marbles, and silicated diopside marble, both intruded by dykes of pink coloured granitic pegmatite dykes. Traces of garnet were noted in a few of the silicified carbonate outcrops.

ECONOMIC CONSIDERATIONS: (Traverses A,B,C, & D. Wollastonite mineralization was not detected, but significant amounts of acicular tremolite were defined. If economic uses are found for this type of tremolite, the area definitely will warrant additional exploration and further evaluation.

Roph Attum

APPENDIX

LIST OF SAMPLES COLLECTED-WITH GEOLOGY DESCRIPTION

Grab			
Sample	Project Nur	nber	Sample Descriptions (See drawings
<u>Numbers</u>	And Townsh	<u>ip</u>	for locations)
92-38	1-Snowden	Γwp.	White interbanded tremolitic dolomite
		•	& minor calcitic limestone.
92-39	•	••	White calcitic dolomite with
	1	tremolite).
92-40	•	H	Calcitic dolomite w/ 50% tremolite.
92-41	••	••	Similar to 92-40 (Sample selected
			along escarpment face).
92-42	••		"Bouldery" outcrop of calcitic
			dolomite with 35% tremolite.
92-43	••	••	Red/white "spotted" calcitic
JE 43			marble.
92-74	••	••	
32-14			Gray to white and pinkish gray
			calcitic dolomite w/ 15-30% "glassey"
	**	9 2	tremolite.
92-75	-	-	White to gray calcitic limestone with
	80		10% "glassy" tremolite?
92-76	-	•	Grayish blue calcitic limestone with
			minor tremolite & fine disseminated
			sulphides.
92-77***	"	**	Brown coloured "gossaned magnetite"
			along gabbro-carbonate contact zone.
92-78	••	•	White calcitic dolomite with 1%
			disseminated sulphides.
92-79	••	•	White to gray & black coloured
			tremolitic dolomite.
92-80***	"		White calcitic dolomite
			with 30% tremolite.
****Sam	noles selecte	d for th	in section analysis See Appendix B-
Jan Jan			in occurren analysis oss appendix b

92-30	2 Galway T	wp.	Gossaned (pyrite) and silicified skarn.
92-31	•	••	Altered calcitic limestone with the development of brown & black mica.
92-32**	•	3)	Altered massive outcrop of calcitic limestone with massive pyrite from small pit adjacent road.
92-33	•	••	Brown oxidized & silicated limestone with diopside & disseminated pyrite.

^{****} Selected for thin section analysis--Appendix B.

** Selected for multielemeny assay--See Appendix B.

Sample Analysis	Project Number And Township	Sample Descriptions (See drawings for locations)
92-1	3. Cavendish Twp. 1	Dark gray siliceous skarn rock.
92-2	и р. т	Boulders of white dolomitic limestone w/ tremolite.
92-3	•	Calcitic limestone with "seams" of tremolite.
92-4		Diopside rich carbonate rock.
	4. Cavendish	Whitish gray "laminated" calcitic
<u>to</u> -27	Twp. 2	limestone with minor alteration.
92-28	•	Contact zone between dolomite & a quartz vein (dolomitic limestone
92-29	•	with tremolite). Very white silicified limestone.
	5. Cavendish Twp. 3	No samples collected.
92-20A	6. Monmouth Twp.(N. West)	White to green "crumbly" calcitic limestone.
92-20B	n n	Granular limestone with disseminated
92-22 A		sulphides. Green coloured diopsidic rock (gossaned) with disseminated
92−22B * *		sulphides. Gossaned diopsidic rock with
32-220++		disseminated sulphides.
92-23**		Gossaned diopsidic rock (somewhat silicified) with 5% disseminated
92-24	** **	sulphide mineralization. Green diopsidic marble with very
92-34	" (S. West)	minor sulphide mineralization. Brownish white silicated skarn along escarpment face w/ fine
92-34B	и и	disseminated sulphides.
92-346 92-35 &	80 80	Skarn rock with minor garnets. Quartz-feldspar rock with fine -
36		disseminated (1%) pockets of pyrite
**Samp1	es selected for mult	ielement assaySee Appendix B
92-81	•	Green diopsidic limestone-silicified
	-#1	

Sample Number	Project Number And Township	Sample Descriptions (See drawings for locations)
92-82	7. Faraday Twp. - # 1	Contact material between limestone & pegmatite dykes.
92-13	8. Faraday Twp.	Grayish white calcitic dolomite with minor tremolite crystals.
92-14	10	White to gray calcitic (tremolite rich) rock.
92-15	•	Calcitic limestone w/ "glassy tremolite".
92-16***		Gray to white calcitic limestone with 70% tremolite.
92-17	80	Calcitic dolomite with 20-30% bluish- white tremolite.
92-18	98	Similar to 92-16 (70% tremolite).
***	Samples selected f	or analysis See Appendix B

92-42A 9. Wollaston Twp. Greenish gray calcitic limestone, (East Sector) with green diopside. 92-42B Greenish coloured, silicified skarn. 92-53 (N.W. Sector) Pale green diopsidic, calcitic, limestone. 92-54*** Pale green, silicified diopsidic marble. Silicified diopsidic limestone. 92-55

Very white calcitic marble.

****--Samples selected for analysis--See Appendix B--

92-56

92-43	10. Limerick Twp.	Whitish gray calcitic limestone with
		interlayered silicified zones.
92-44	•	Bluish gray calcitic limestone with minor tremolite.
92-45	••	Black, medium grained gabbro with sillimanite.
92-46***	•	Bluish gray "laminated" calcitic limestone with tremolite.

****-- Samples selected for analysis--See Appendix B--

		-A4-
Grab		
Sample	Project Number	Sample Descriptions (See drawings
<u>Number</u>	<u>And Township</u>	for locations)
92-47	10. Limerick Twp.	Dark gray coloured, fine grained
		skarn.
92-48	M	White to gray silicated limestone
		with develoipment of tremolite.
92-49	**	Greenish gray (diopsidic) calcitic
		limestonegneissic.
92-50	•	Brownish-white, granular silicated
		limestone, with black hornblende.
92-51	•	Silicated limestonecontact rock
-		with the development of diopside.
92-52	••	Diopsidic marble (calcitic)
32 32		oreported man by a contract,
92-5	11. Ashby/Mayo Twp.	Interlayered calcitic & silicated
		limestone with finely disseminated
	(pyrite.
92-6	•	Finely banded "skarney" limestone
32 3		with fine grained sulphide
		mineralization.
92-7	••	Silicified skarn zone, with
32-1		interlayered garnet and tremolite
		bearing zones.
92-8	80	White fibrous (tremolitic) calcitic
92-8		· · · · · · · · · · · · · · · · · · ·
00.0	80	limestone.
92-9		Highly siliceous skarn, with 4% fine
	••	disseminated sulphides.
92-10	-	White/mauve coloured calcitic
		limestone with minor brown mica
		flakes.
92-11***	•	White calcitic limestone with
		tremolite.
92-105**	(Parkhurst LK.	Brown "gossaned" quartzitic gneiss
	Sector)	with 5% disseminated pyrite.
92-106**	•	Dark green, fine grained
		volcanic schist with 8% disseminated
		sulphides.
92-107**	•	Similar to 92-106.
92-108**	•	Similar to 92-106.
92-109	•	Mica/quartz gneiss with minor
		sillimanite.
92-110**	•	Gossaned, silicified skarn zone in
- · · •		dark green silcated volcanic schist.
92-111**		Similar to 92-106
92-112**		Siliceous quartzitic volcanic gneiss
JE 11277		with disseminated sulphides.
**** 6=	mnles selected for th	vin section analyses

****-- Samples selected for thin section analyses--See Appendix B** -Samples selected for multielement assay analysis--Appendix B

Grab Sample <u>Number</u>	Project Number And Township	Sample Descriptions (See drawings for locations)
92-69	12. Ashby Twp1 (Trout Lk. Area)	Tremolite in white dolomitic rock.
92-70	•	Talcy, tremolitic dolomite.
92-71	**	Green coloured, silicated dolomite with 70% tremolite.
92-72	••	Calcitic limestone with 30% tremolite.
92-73	••	White tremolitic, calcitic limestone.
92-102***	* "	White coloured calcitic limestone with 30% tremolite.
92-103	"	White "glassy tremolite bearing" calcitic limestone.

****-- Samples selected for thin section analysis--See Appendix B----- 13. Ashby Twp.-2 No samples collected. (Ruby Garnet property) 92-57*** 14. Brougham Twp. Black fine grained, calc.-silicate gneiss with < 5% apatite and minor small red fluorite crystals. 92-58 Fine-coarse grained calc-silicate gneiss with minor fluorite. 92-59 Pink to mauve coloured, silicated contact rock. Coarse grained calc-silicate gneiss 92-60 with minor (5%) apatite. 92-61 White-green coloured calc-silicate gneiss, with 30% green garnets? Similar to sample 92-61. 92-62 92-62A Diopsidic marble in calc-silicate groundmass. 92-62B Massive white silicated limestone. 92-63 Gossaned calc-silicate interlayered with calcitic limestone.

****-- Samples selected for thin section analysis--See Appendix B

92-64	North Canonto/	White dolomite.
92-65	Brougham Twps. (Brougham Sector)	Brown/red coloured, gossaned & silicated skarn.
	(Brougham Sector)	Silicated Skarn.

Grab Sample <u>Number</u>	Project Number And Township	Sample Descriptions (See drawings And locations)
92-66	15. North Canonto /Brougham Twp.	Brown coloured, "gossaned", silicated skarn.
92-67	(N. Canonto	White silicated skarn (gneissic).
92-68**	Sector)	Glassy, vitreous quartz sample.
92-90	99	Diopsidic marble.
92-91***	**	Diopside marble with tremolite.
92-92		White calcitic/diopsidic
92-93		Calcitic limestone with white tremolite.
92-94	44	White tremolitic, calcitic limestone.
92-95	89	Gray calcitic (tremolitic) limestone.
92-95A**	(Brougham Twp. Sector)	Highly gossaned, limonitic skarn rock.
92-96	80	Pyritiferous gray siliceous skarn.
92-97**		Massive nodule of highly gossaned, sulphide bearing skarn.
92-98	•	Skarn zone along highway, close to hydro line crossing.

***-- Samples selected for thin section analysis--See Appendix B
** -- Samples selected for multielement assay-See Appendix B

92-83	16.		Canonto	White dolomitic marble with tremolite.
92-84***		Twp.	•	Dolomitic limestone with glassy tremolite crystals.
92-85			86	Green diopsidic marble with tremolite.
92-86***			ð1	White calcitic dolomite with tremolite.
92~87			••	Similar to 92-86.
92-88			••	Silicated granitic rock, gossaned (pyritized).
92-89			•	Silicated, dolomitic limestone with 5% disseminated pyrite.
92-99			••	Impure calcitic limestone with minor mica and 20-30% green diopside.
92-100			••	Impure calcitic skarn with trace of garnet.
91-101			••	Impure silicified calcitic limestone with green diopside.

****-- Samples selected for thin section analysis--See Appendix B **--Samples selected for multielement assay--See Appendix B

APPENDIX B.

INDEX PAGE FOR MULTIELEMENT CHEMICAL ANALYSIS AND THIN SECTIONS

ITEM	
1.0 GEOCHEMICAL AN	ALYSIS
Geochemical Method	sB−1.
Multielement geoch analysis for sampl 92-23, 92-32, 92-9 92-105, 92-106, 92 92-110	es 92-22B, 5A, 92-97,
Rare Earth Analysi	s, No. 92-77B-4 & B-5.
Whole Rock Analysi	s, No. 92-68B-6.
Multielement geoch for samples 92-9, 92-112	
2.0 THIN SECTION D	<u>ESCRIPTIONS</u>
Samples numbered:	92-11



X-RAY ASSAY LABORATORIES

A DIVISION OF SGS SUPERVISION SERVICES INC.

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CERTIFICATE OF ANALYSIS

REPORT 20784

TO: RALPH V. STEWART

244 KEEWATIN STREET SOUTH

OSHAWA, ONTARIO

L1H 6Z8

CUSTOMER No.

40

DATE SUBMITTED

6-Oct-92

REF. FILE 13482-B2

Total Pages 5

12 ROCKS

	METHOD	DETECTION LIMIT		METHOD	DETECTION LIMIT
AU PPB	FADCP	1.	AG PPM	DCP	.5
NA PPM	DCP	100.	CD PPN	DCP	1.
WRMAJ %	UR	.01	LA PPM	MA	.1
MG PPM	DCP	100.	CE PPM	NA	1.
P PPM	DCP	10.	ND PPM	NA	3.
TI PPM	DCP	2.	SM PPM	NA	.01
CR PPM	DCP	2.	EU PPM	NA	.05
WRMIN PPM	WR	10.	TB PPM	NA	.1
MN PPM	DCP	2.	YB PPM	NA	.05
FE PPM	DCP	100.	LU PPM	NA	.01
CO PPM	DCP	1.	PT PPB	FADCP	10.
NI PPM	DCP	1.	PB PPM	DCP	2.
CU PPM	DCP	.5	TH PPM	NA	.2
ZN PPM	DCP	.5	U PPM	NA	.1
MO PPM	DCP	1.			

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS *** AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 13-NOV-92

CERTIFIED BY

eck, Genéral Manager Jean H.L. Opdet

Member of the SGS Group (Société Générale de Surveillance)



NOTE:

As per our list of upper limits in our current schedule of services, some of the results are outside the applicable analytical range. Please contact us should you require assays.



13-NOV-92

REPORT 20784

REF.FILE 13482-B2 PAGE 1 OF 5

SAMPLE	AU PPB	NA PPH	MG PPM	P PPM	TI PPM	CR PPM	MN PPH	FE PPN	CO PPN
92-22B	7	3670	75500	270	538	49	862	17200	6
92-23	5	7280	101000	535	1130	55	1010	31000	11
92-32	11	4990	56200	1750	7540	43	208	278000	62
92- 9 5A	<1	16800	20300	698	1820	37	198	40700	6
92-97	<1	2780	10100	959	6390	9	362	356000	127
92-105	3	6050	34200	860	4150	84	2100	77600	32
92-106	3	4270	23100	1190	3570	67	2600	61800	28
92-107	7	6600	25200	2570	3530	86	2240	42900	26
92-1 08	6	6710	22700	1230	3260	70	1930	38100	22
92-110	5	14500	103000	652	3130	73	3150	24300	16
92-77		14500	47400	1610	679	12	333	272000	15



13-MOV-92

REPORT 20784

REF.FILE 13482-B2

PAGE 2 OF 5

SAMPLE	NI PPM	CU PPH	ZN PPH	NO PPN	AG PPN	CD PPN	LA PPN	CE PPH	ND PPH
92-228	9	20.3	161.	132	<.5	<1			
92-23	6	39.5	197.	63	<.5	<1			••
92-32	49	99.0	71.1	1	1.4	<1			••
92- 95 A	11	22.5	120.	13	<.5	<1			
92- 97	100	526.	113.	22	.6	<1			••
92-105	63	68.1	135.	3	<.5	<1			
92-106	84	73.9	575.	80	<.5	6		••	
92-107	143	77.6	423.	70	<.5	3	••		
92-108	96	65.2	164.	105	<.5	2	••	••	
92-110	25	71.6	71.0	4	<.5	1			
92-77	2	5.9	37.2	<1	<.5	<1	5.8	14	9



13-NOV-92

REPORT 20784

REF.FILE 13482-82

PAGE 3 OF 5

SAMPLE	SM PPM	EU PPN	TB PPM	YB PPM	LU PPM	PT PPB	PB PPM	TH PPM	U PPM
92-228		•••	•••			<10	19		
92-23				••		10	9		••
92-32						<10	6		
92-95A		••			••	10	2		
92-97	••					<10	<2		
92-105					••	<10	23		••
92-106						14	22		
92-107						<10	8		
92-1 08						<10	6		
92-110	••		••			<10	5		
92-77	2.57	.62	.4	1.63	.28		<2	2.1	.5



XRF - WHOLE ROCK ANALYSIS 13-NOV-92

REPORT 20784 REFERENCE FILE 13482

SAMPLE \ X	\$102	AL203	CAO	MGO	NA20	K20		MMO	T102	P205	roi	SUM
92-68	97.8	<.01	1.23	.42	<.01	<.01	.04	.01	.022	.03	.75	100.3

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES



XRF - WHOLE ROCK ANALYSIS 13-NOV-92

REPORT 20784 REFERENCE FILE 13482

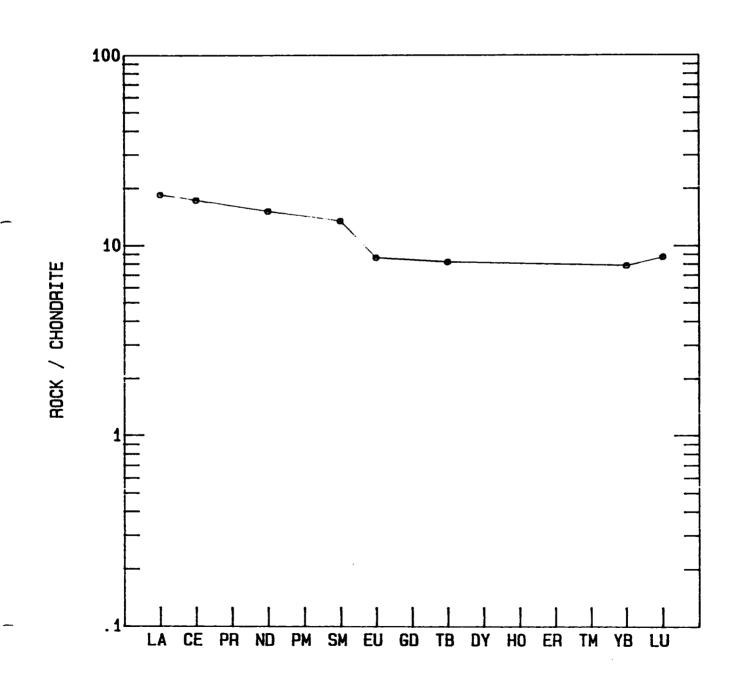
PAGE 5 of 5

SAMPLE \ PPM	CR	RB	SR	Y	ZR	MB	BA
92-68	24	11	<10	<10	<10	25	27

X-RAY ASSAY LABORATORIES 13-NOV-92 RARE EARTH CHONDRITE PLOTS

RALPH V. STEWART (REF# 13482)

92-77





CHONDRITE NORMALIZED VALUES X-RAY ASSAY LABORATORIES 13-NOV-92 RALPH V. STEWART (REF# 13482) SM EU GD TB DY HO LA CE PR 18.4 17.2 .0 15.1 13.4 8.6 .0 8.2 .0 .0 .0 .0 7.8 8.7 92-77 CHONDRITE RARE EARTH ELEMENT FACTORS USED TO NORMALIZE THE SAMPLE DATA :

LA .3150 CE .8130 PR .1000 ND .5970 SN .1920 EU .0722 GD .2590 TB .0490 DY .3250 HO .0720 ER .2130 TM .0320 YB .2090 LU .0323



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CERTIFICATE OF ANALYSIS

REPORT 21176

TO: RALPH V. STEWART

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OSHAWA, ONTARIO

L1H 6Z8

CUSTOMER No.

40

DATE SUBMITTED

3-Nov-92

REF. FILE 13692-C4

Total Pages 2

4 ROCKS

	METHOD	DETECTION	LIMIT
AU PPB	FADCP	1.	
NA PPM	DCP	100.	
MG PPM	DCP	100.	
P PPM	DCP	10.	
TI PPM	DCP	2.	
CR PPM	DCP	2.	
MN PPM	DCP	2.	
FE PPM	DCP	100.	
CO PPM	DCP	1.	
NI PPM	DCP	1.	
CU PPM	DCP	.5	
ZN PPM	DCP	.5	
MO PPM	DCP	1.	
AG PPM	DCP	.5	
CD PPM	DCP	1.	
PT PPB	FADCP	10.	
PB PPM	DCP	2.	

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS *** AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 24-NOV-92

CERTIFIED BY

Jean H.L. Opdebeeck, General Manager

Member of the SGS Group (Société Générale de Surveillance)



24-NOV-92

REPORT 21176

REF.FILE 13692-C4

PAGE 1 OF 2

SAMPLE	AU PPB	NA PPN	NG PPN	P PPN	TI PPM	CR PPM	MN PPM	FE PPM	CO PPN
92-9	<1	22500	33300	1560	19500	86	805	83300	40
92 -88	1	1090	8530	854	2130	54	217	73400	8
92-111	<1	11100	14700	1230	3770	58	1330	34800	16
92-112	<1	3100	35200 `	823	3520	62	1760	38300	22





24-NOV-92

REPORT 21176

REF.FILE 13692-C4

PAGE 2 OF 2

SAMPLE	NI PPM	CU PPM	ZN PPH	MO PPM	AG PPM	CD PPN	PT PPB	PB PPN
92-9	56	140.	583.	9	<.5	2	<10	38
92-88	40	89.1	42.1	21	<.5	<1	15	5
92-111	59	50.8	146.	94	<.5	1	<10	13
92-112	63	54.1	376.	28	<.5	4	<10	25

HYDRISAR SYSTEMS INC.

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-11

ROCK NAME: Calc-silicate (skarn)

ROCK DESCRIPTION:

The sample is coarse-grained consisting of white to cream acicular amphibole minerals.

THIN SECTION DESCRIPTION:

Medium grained throughout the section. Acicular amphibole minerals occur in bundles. Calcite found in fractures. Metamorphic paragenisis is low-grade (greenschist facies). The protolith is an impure limestone.

MINERALS:

50% fiberous tremolite

20% diopside (biaxial + pyroxene)

<5% carbonate

<5% biotite

<5% talc

ECONOMIC NOTES:

Tale is insignificant. This sample should be analyzed by XRD for minor wollastonite.

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-16 ROCK NAME: Tremolitite

ROCK DESCRIPTION:

Light-coloured minerals with equigranular medium grained crystalline texture, weathers dark-grey.

THIN SECTION DESCRIPTION:

The rock is comprised of bands of amphiboles with carbonate dissolution. The minerals display granoblastic texture with a slight decussate tendency.

MINERALS:

85% tremolite

10% carbonate

<5% apatite

ECONOMIC NOTES:

No comment

SAMPLE NUMBER: 92-80

ROCK NAME: Calc-silicate (skarn)

ROCK DESCRIPTION:

Light to cream coloured acicular minerals with 2 cm maximum length. Inside core of sample buff-white, massive.

THIN SECTION DESCRIPTION:

Coarse porphyroblasts floating in a carbonate groundmass. Sample shows grain size zonation. Large euhedral grains are found in the interior and the edge shows dissolution to calcite.

MINERALS:

75% tremolite

10% diopside

15% carbonate

ECONOMIC NOTES:

No comment.

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-46
ROCK NAME: laminated marble

ROCK DESCRIPTION:

The sample has light grey to dark grey bands of varying thickness.

THIN SECTION DESCRIPTION:

Large carbonate crystals, slightly pleochroic phlogopite. Limestone protolith. Darker bands have high heavy mineral content. The crystals have a slight parallel alingment with curved grain boundaries and minor exosolution of the carbonate.

MINERALS:

80% carbonate

10% quartz

5% phlogopite (KMg3Al(OH)Si4O₁₀)

5-10% heavy minerals: -oxides, apatite, touramaline

ECONOMIC NOTES:

There are a variety of heavy minerals present in this sample, imparting the dark colour is some laminations. An analysis should be done on the sample to determine metallic consistents. This sample may contain graphite topacues:

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-54 ROCK NAME: siliceous marble

ROCK DESCRIPTION:

Dark to light green in hand-specimen. Fine-grained, granoblastic texture.

THIN SECTION DESCRIPTION:

Equigranular grains exhibiting granoblastic texture, subhedral carbonate, exsolution of randomly oriented feldspars common.

Sutured quartz.

MINERALS:

35% quartz

20% wollastonite (biaxial -, 84°cleavage, short crystals)

20% feldspar

15% carbonate

5% scapolite

<5% zoisite (epidote group, titanite)

ECONOMIC NOTES:

This sample should be analyzed by XRD to confirm wollastonite mineralization.

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-57 ROCK NAME: Amphibolite

ROCK DESCRIPTION:

The hand specimen is medium to fine grained with schistose structure.

THIN SECTION DESCRIPTION:

There is anomalous sphene in this sample. The equigranular calcic feldspars show dissolutions and faint parallel alignment. The protolith is likely a mafic volcanic.

MINERALS:

30% quartz

30% hornblende

20% biotite

10% feldspar

<5% sphene

3% apatite

<2% zircon

ECONOMIC NOTES:

B-17

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-86

ROCK NAME: Calc-silicate (skarn)

ROCK DESCRIPTION:

The sample consists of white coarse to medium grained amphibole crystals with a granoblastic texture.

THIN SECTION DESCRIPTION:

Metamorphic paragenesis is low-grade (greenschist facies). The protolith is an impure limestone.

MINERALS:

60% tremolite

20% diopside

20% carbonate

ECONOMIC NOTES:

No comment.

SAMPLE NUMBER: 92-91 ROCK NAME: Diopsidic marble

ROCK DESCRIPTION:

The sample is coarse-grained consisting of light green, with medium sized amphibole minerals and dark alteration on the weathered surface.

THIN SECTION DESCRIPTION:

Medium grained throughout the section with decussate texture. Twinned amphibole crystals.

MINERALS:

85% diopside

<5% secondary carbonate

ECONOMIC NOTES:

No comment.

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THIN SECTION ANALYSIS

SAMPLE NUMBER: 92-102 ROCK NAME: tremolite marble

ROCK DESCRIPTION:

White prismatic crystals with parallel alignment, minor occurences of soft sub-metallic mineral, thought to be graphite.

THIN SECTION DESCRIPTION:

This rock consists of a melange of tremolite crystals and carbonate, with minor talc. Main textural feature is granoblastic while some grains reveal exosolution features.

MINERALS:

55% carbonate

40% tremolite

<5% talc

ECONOMIC NOTES:

Minor tale and possibly graphite (opaque).

SAMPLE NUMBER: 92-84 ROCK NAME: Tremolitite

ROCK DESCRIPTION:

Grey acicular mineral of medium size with pyrite grains averaging 1-3 mm in size.

THIN SECTION DESCRIPTION:

The rock is comprised of bands of amphiboles and carbonates with an aligned texture. Carbonate pseudomorphs around a central opaque grain are common. Texture is grano-blastic showing plastic deformation by intragranular glide.

MINERALS:

90% tremolite

15% carbonate

<5% opaques

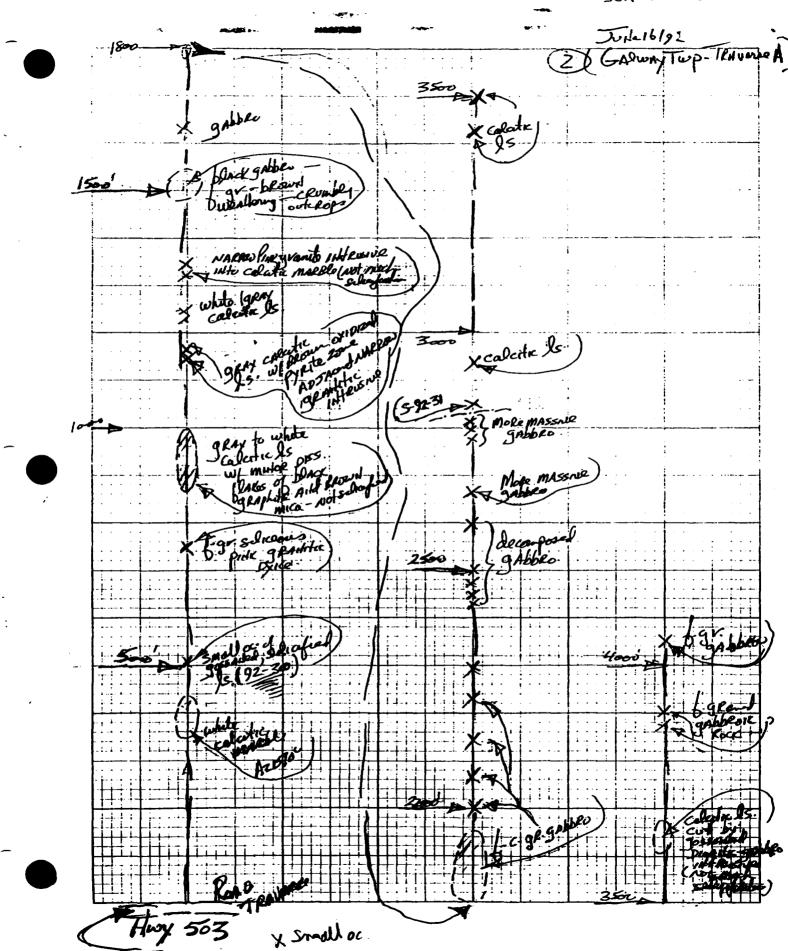
ECONOMIC NOTES:

No comment.

APPENDIX C.

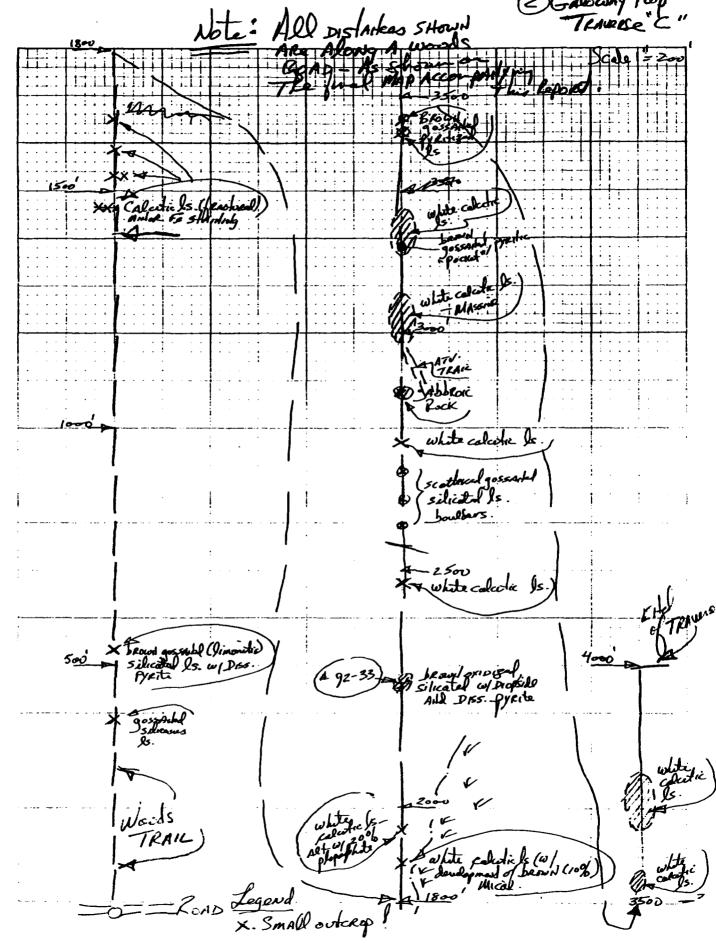
June 23/92 (1) SNOWDEN NUP Az 290 white because it with There is a grant of the state of th AZ1850 whitecolodic Polonie W/ 10% Hand to fine DISS AZIBSO 4 Top of thell 20% 50% Lite late / Defente w/ 200/ STEP EXARPRO Boulders (TAlos) AZ 1100

4 RIVER



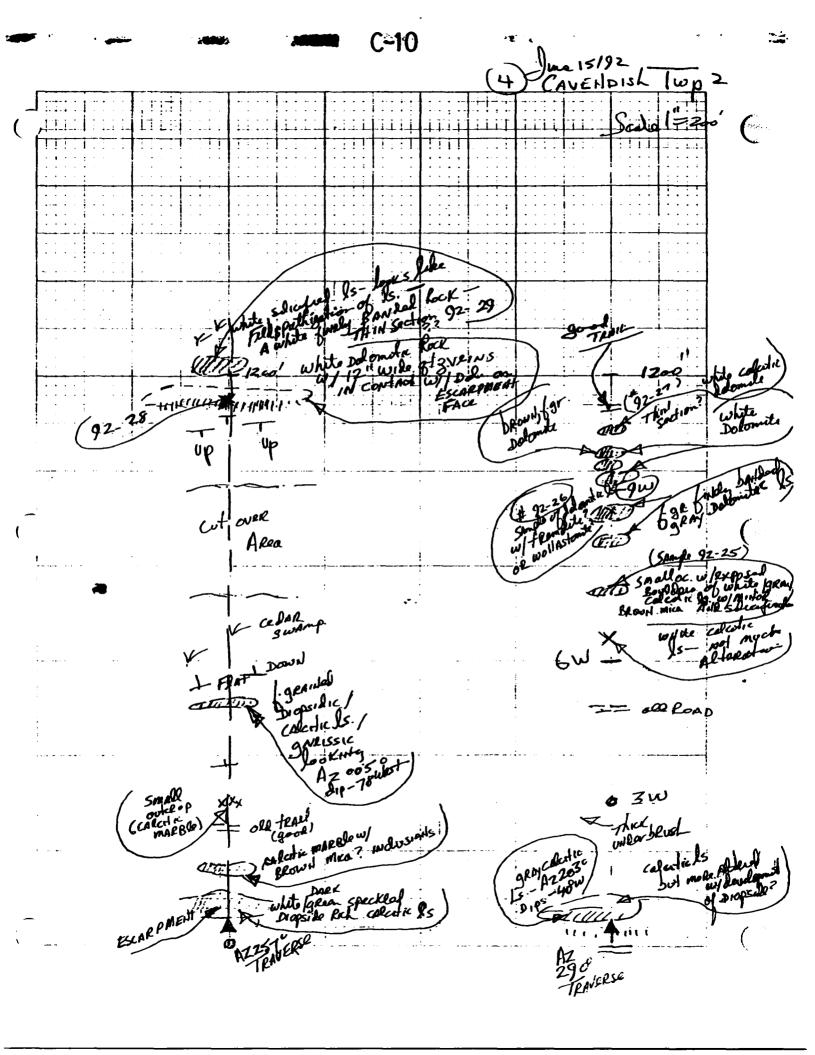
Ine 16/92 E GACWAY TURP B 3 45000 Scale-1"= 200 gr. grano gabbeo A white colorie Is

Hwx. 503 x Small ac.



9E DARK GRAY SILICAS KARN ROCK POCK ١ė. 35 3 E ζ9 · 1920 4

June 15/92 CAVENDUST Tup 2 **C-9** $\mathbf{m}(\mathbf{n})$ Diopsidie/LS W/ Specifical
Diopsidie/LS W/ Specifical
And Specifical
Appropriate
Appropria 3% Read (Starting point)



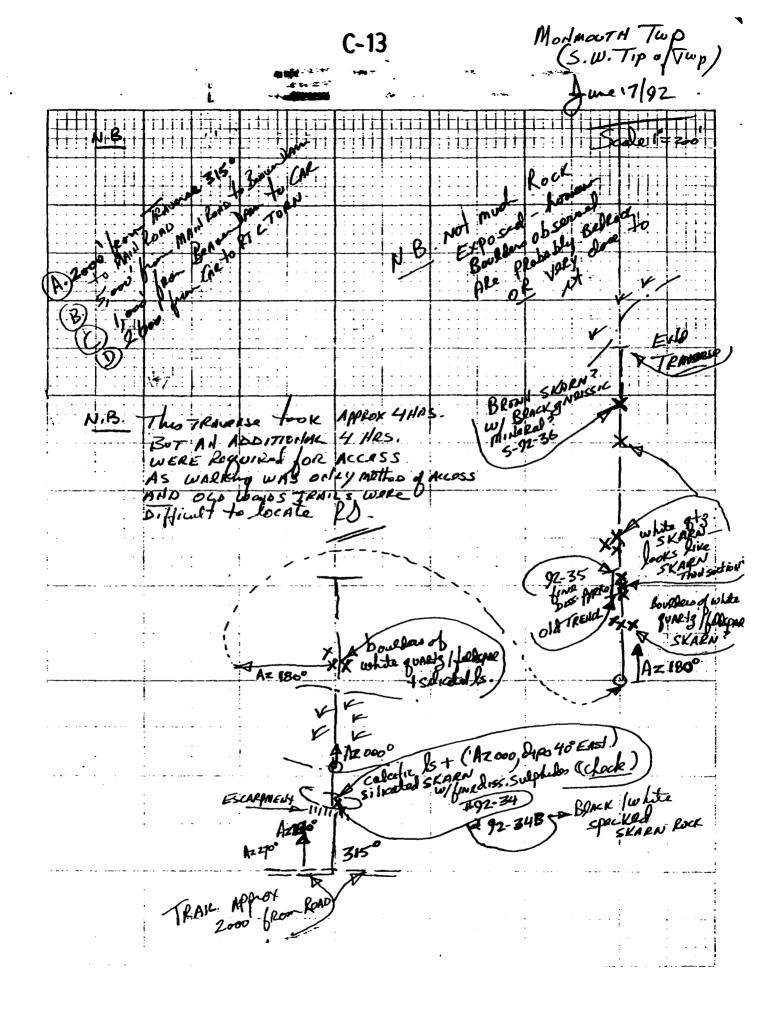
C-12 PALEGRAP DIOPSIDE MARESTE WITH

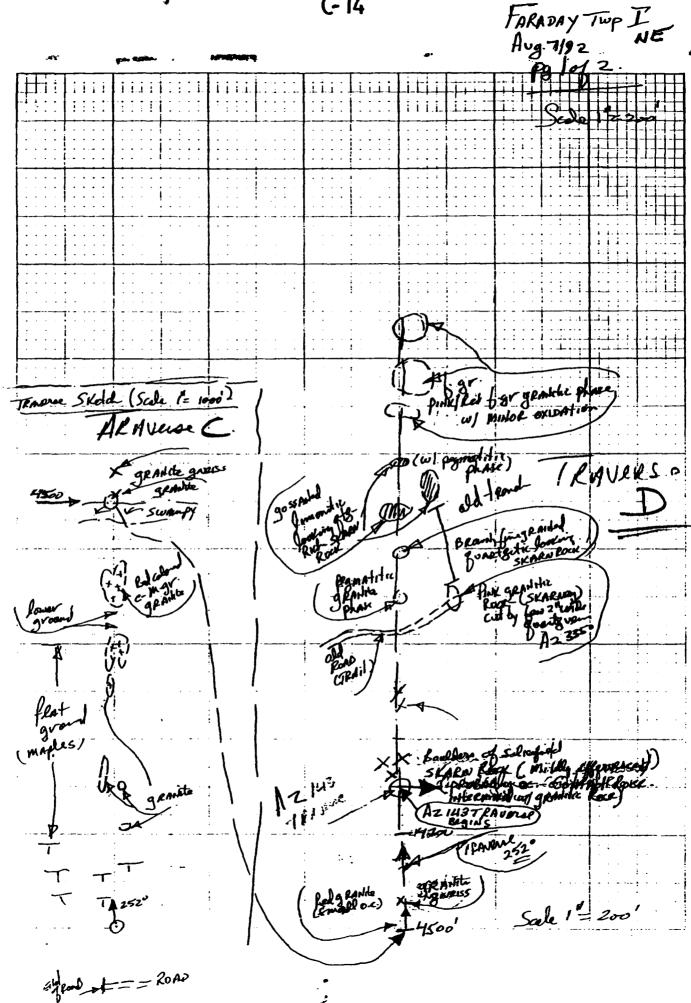
PALEGRAP DIOPSIDE (70% DIOPSIDE)

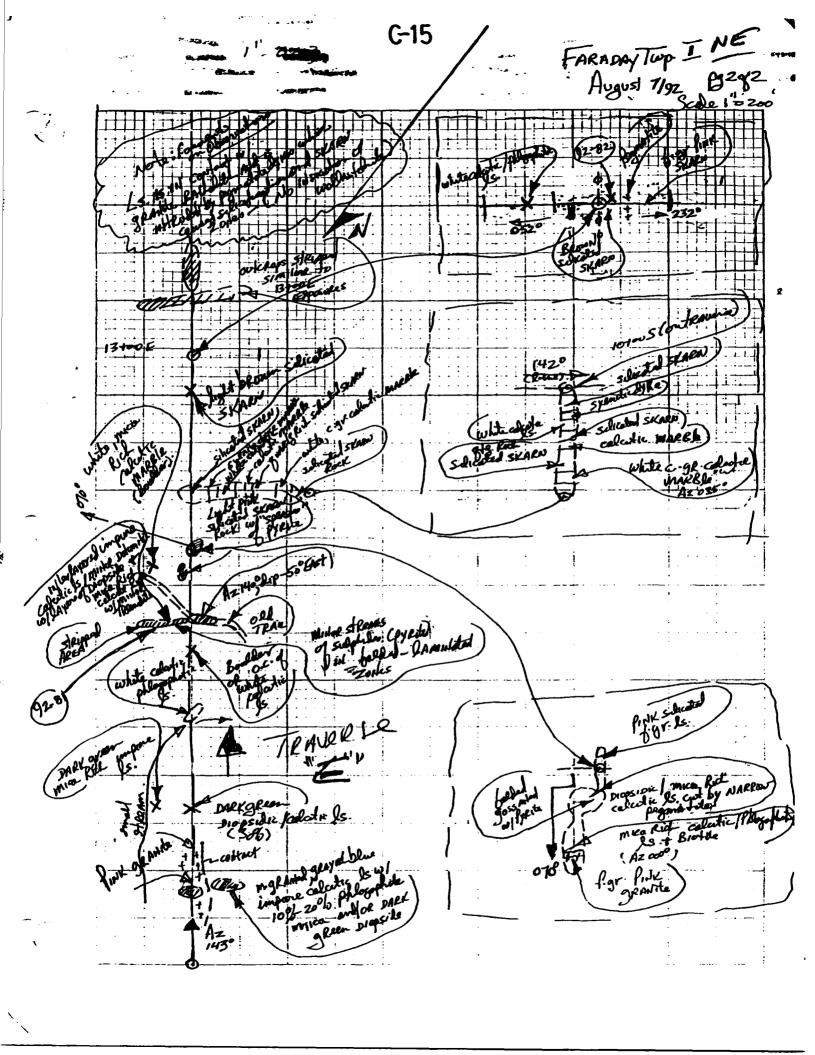
Not much pyrteor oxidates

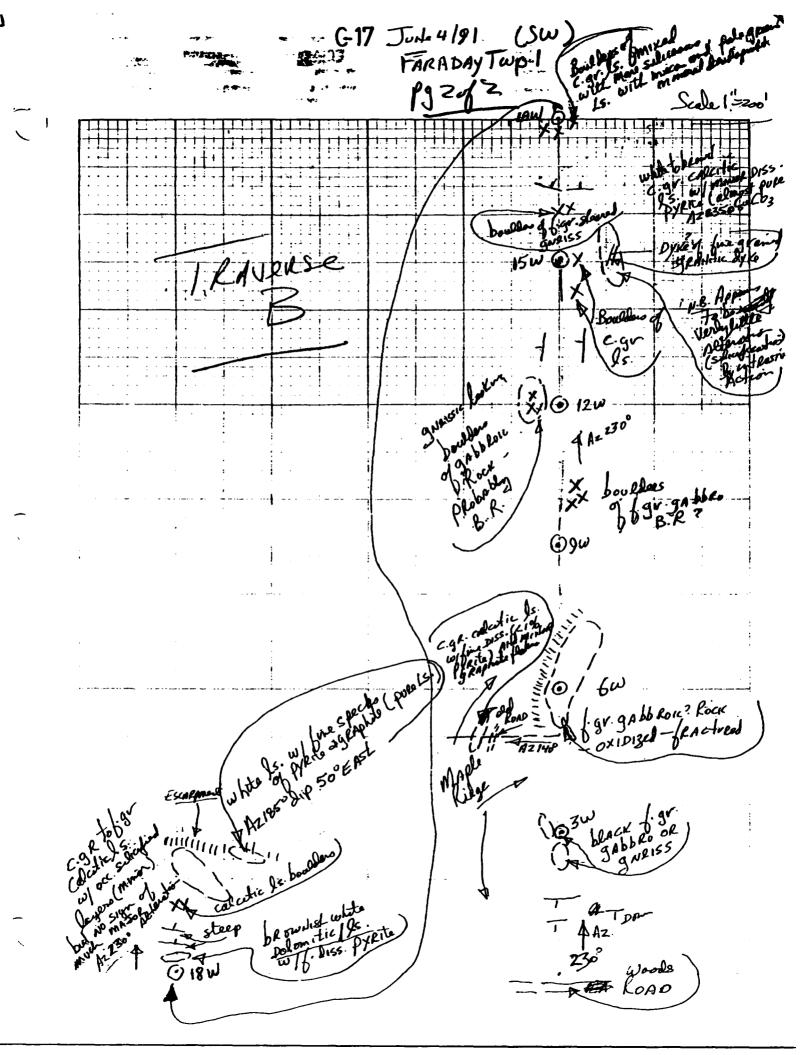
Don't A fairly big trand Az 090°

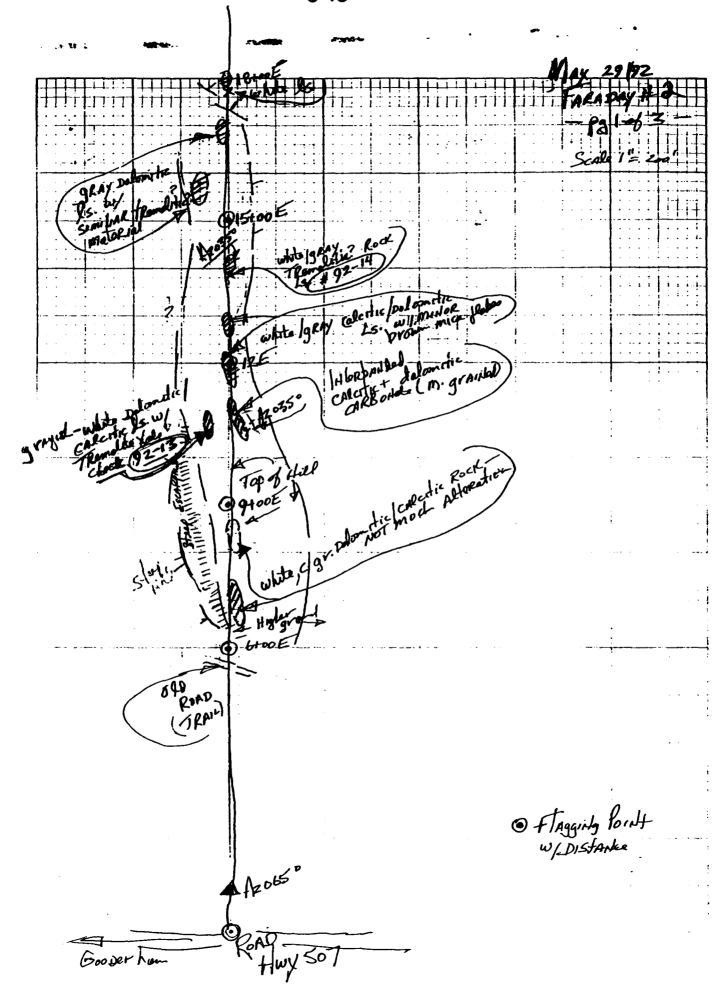
Scale 1=2001.

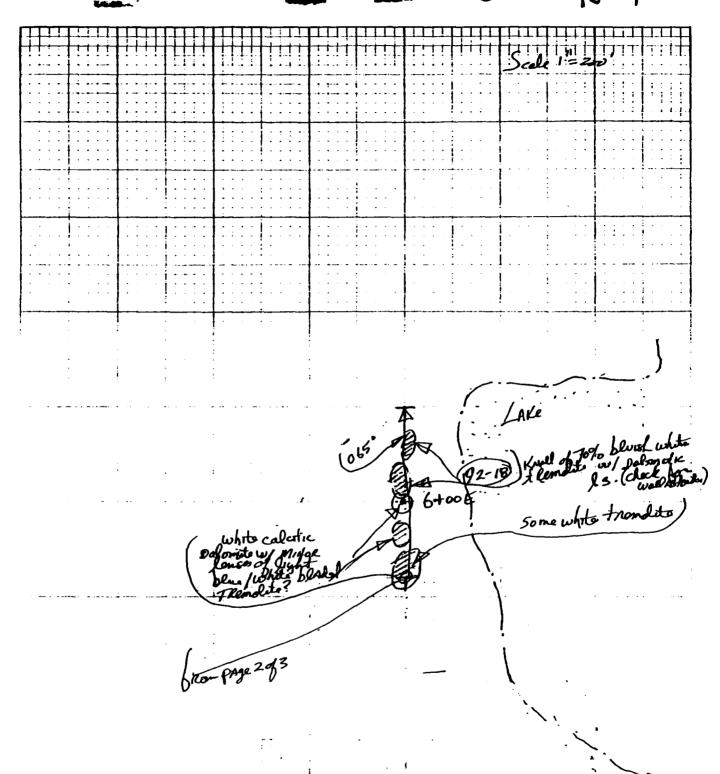


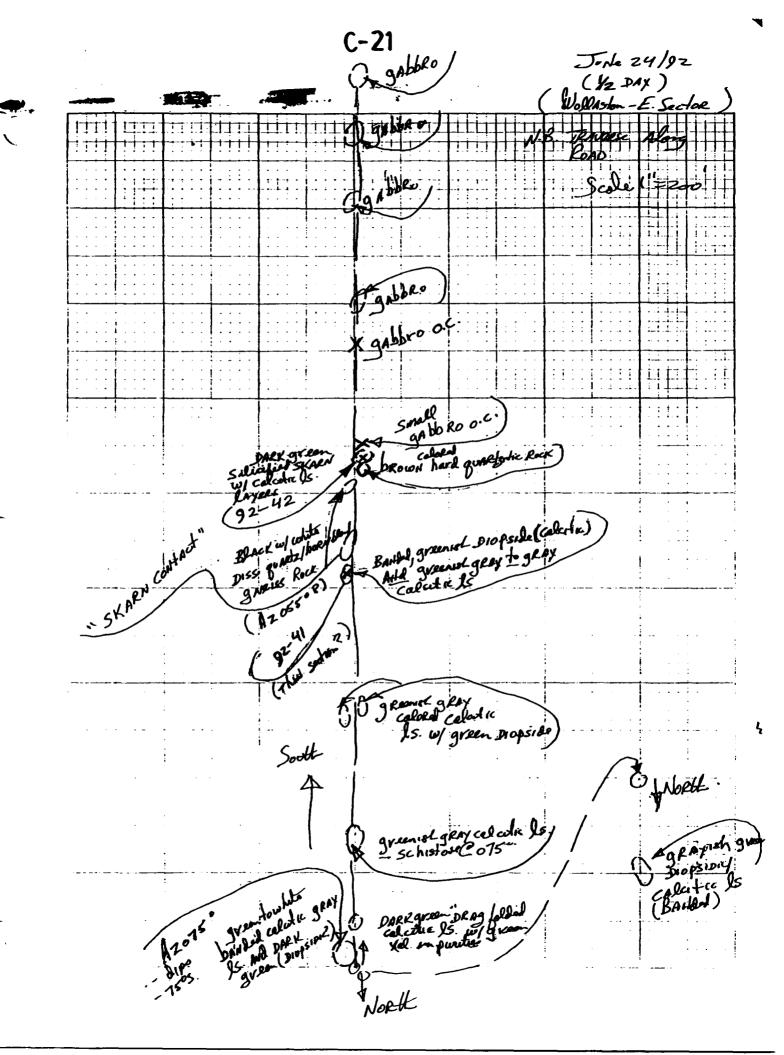


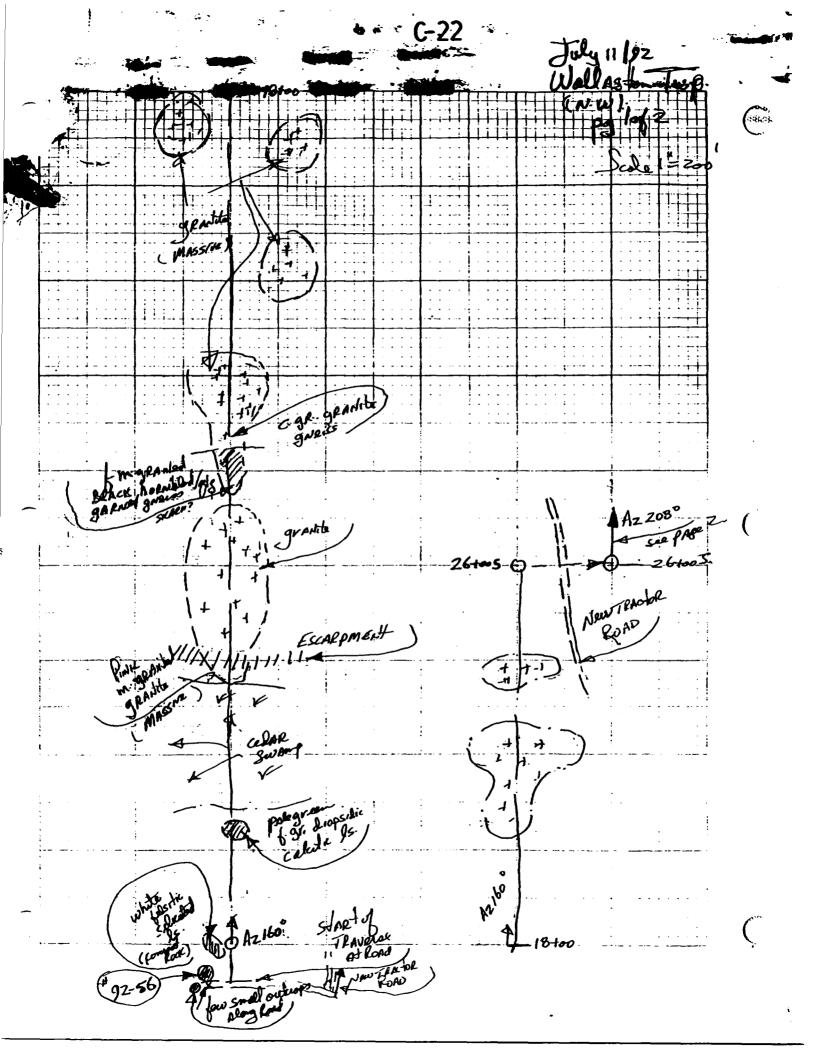


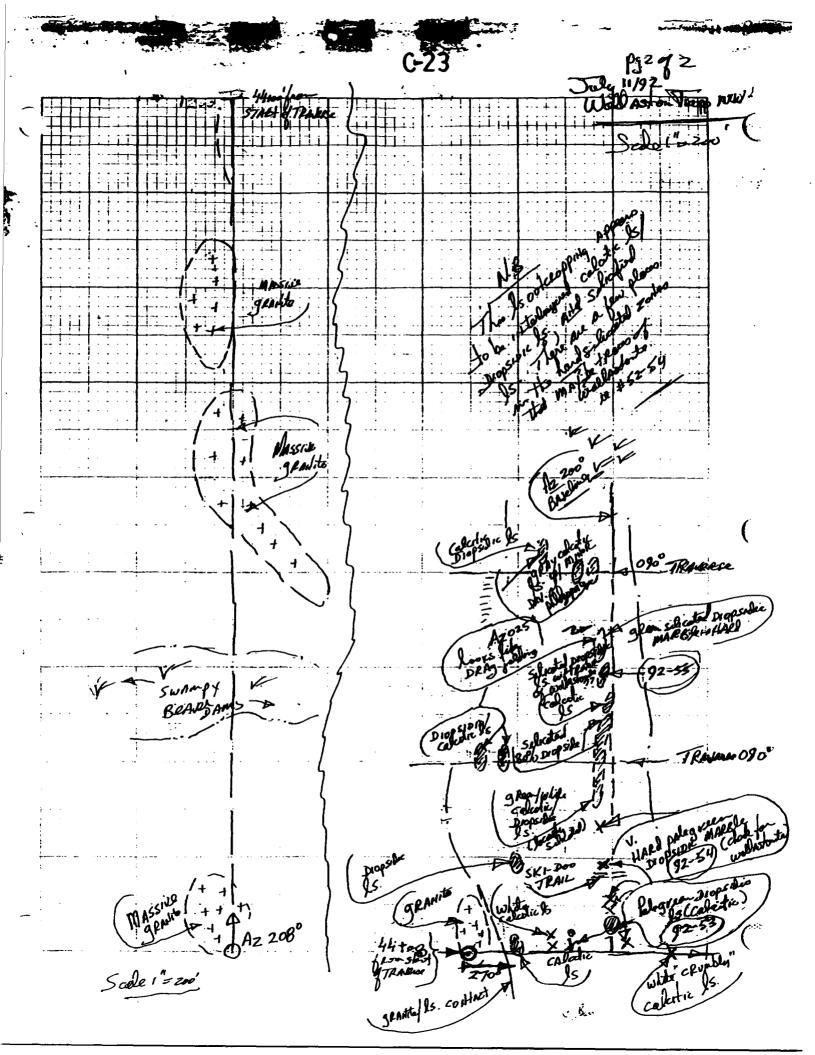




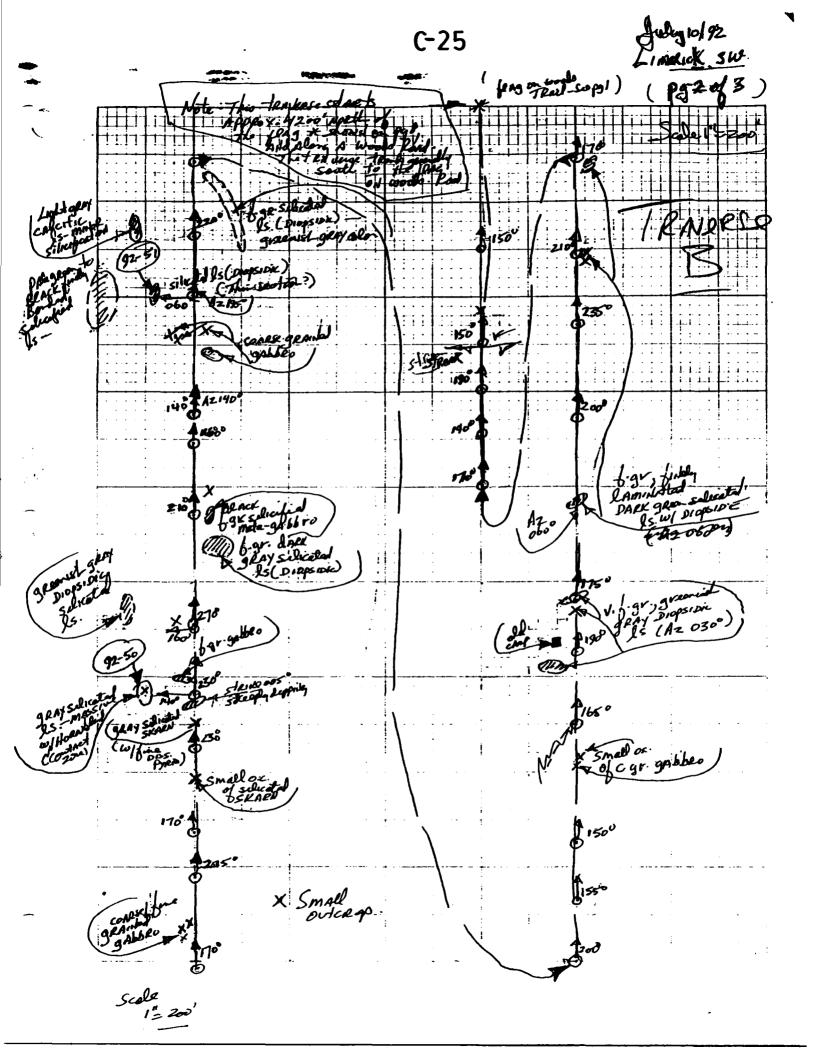








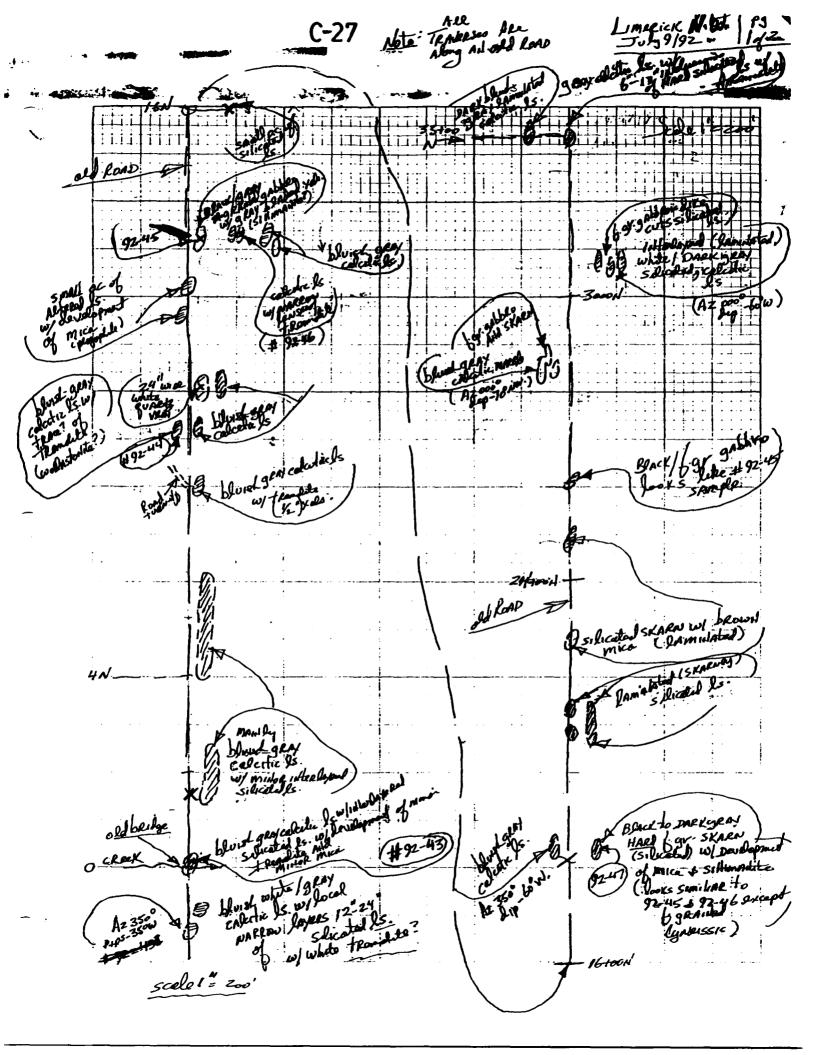
C-24 Woods Road Celar Swamp Diopsipic (5) Scole 1"=200' ROAD



July 10/92 Limerak SW. pg 3 g 3

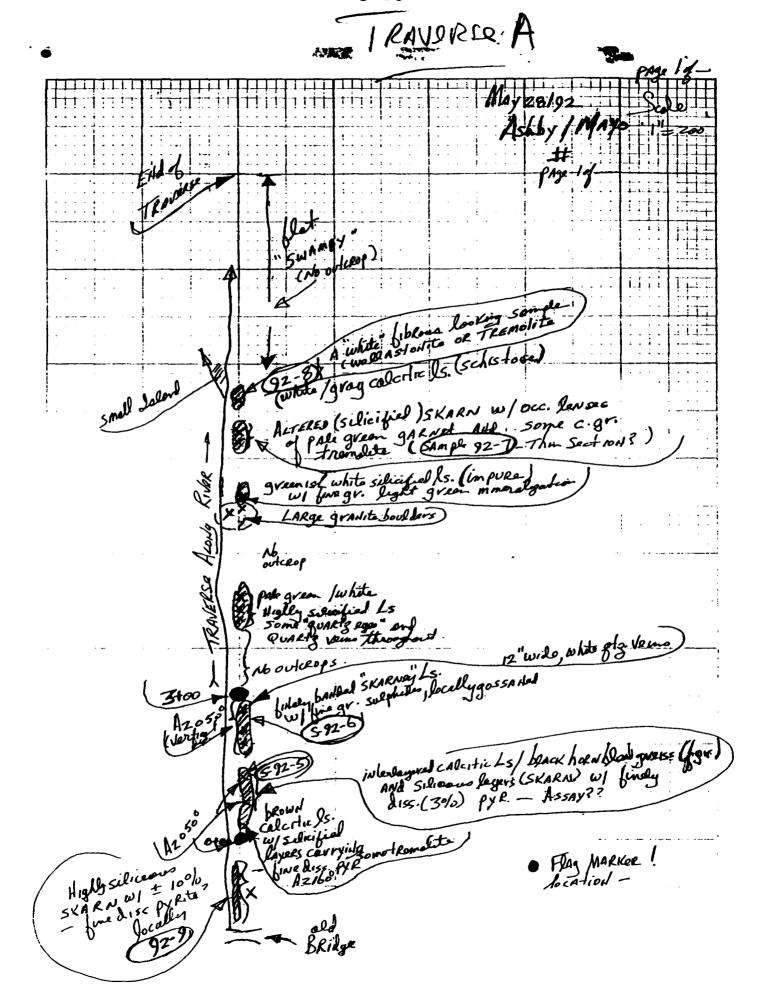
Reck Highly chicated (completed plantic land)

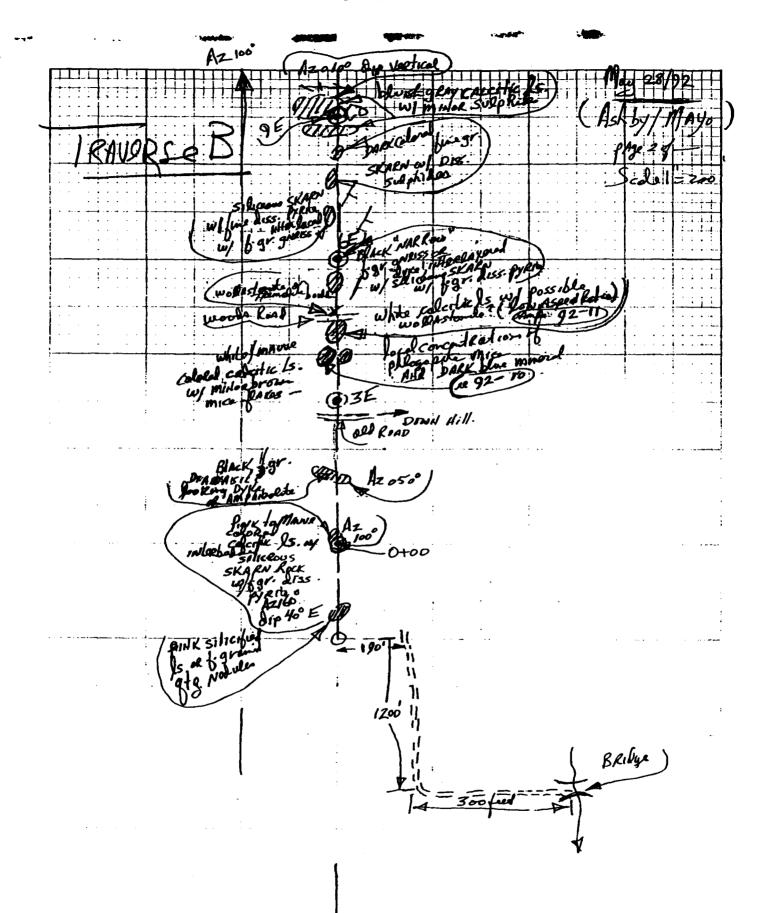
15.) finally possible of properties produced on properties posted on properties posted on the properties of the X small outcrap gray calcutic balls ROAD HADRE

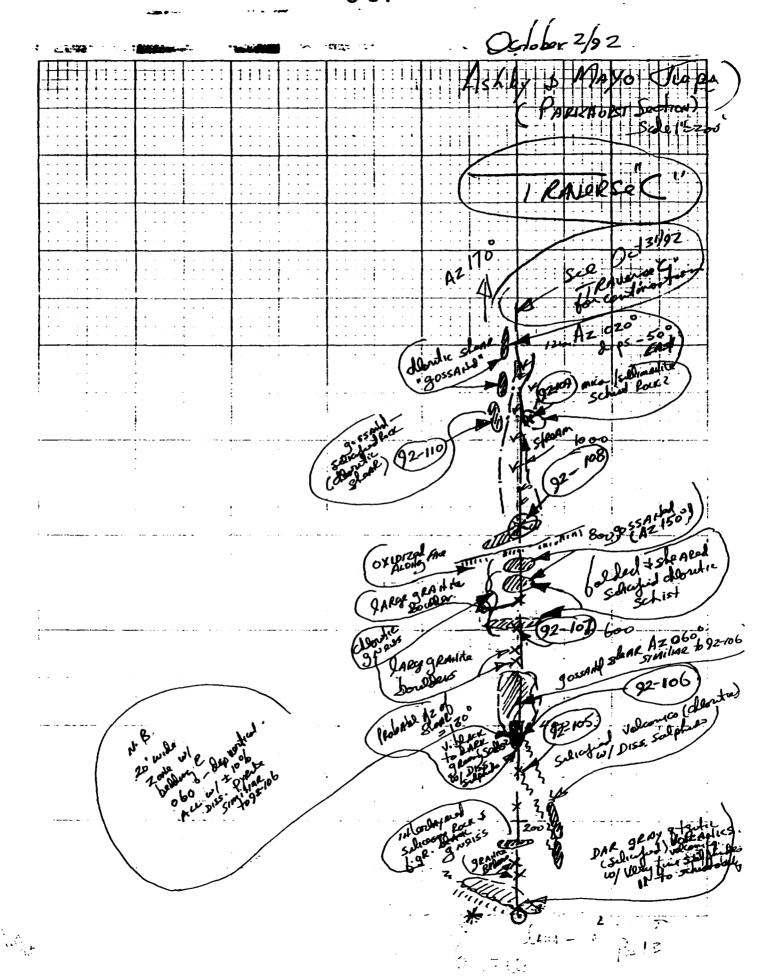


LINGLIK NET

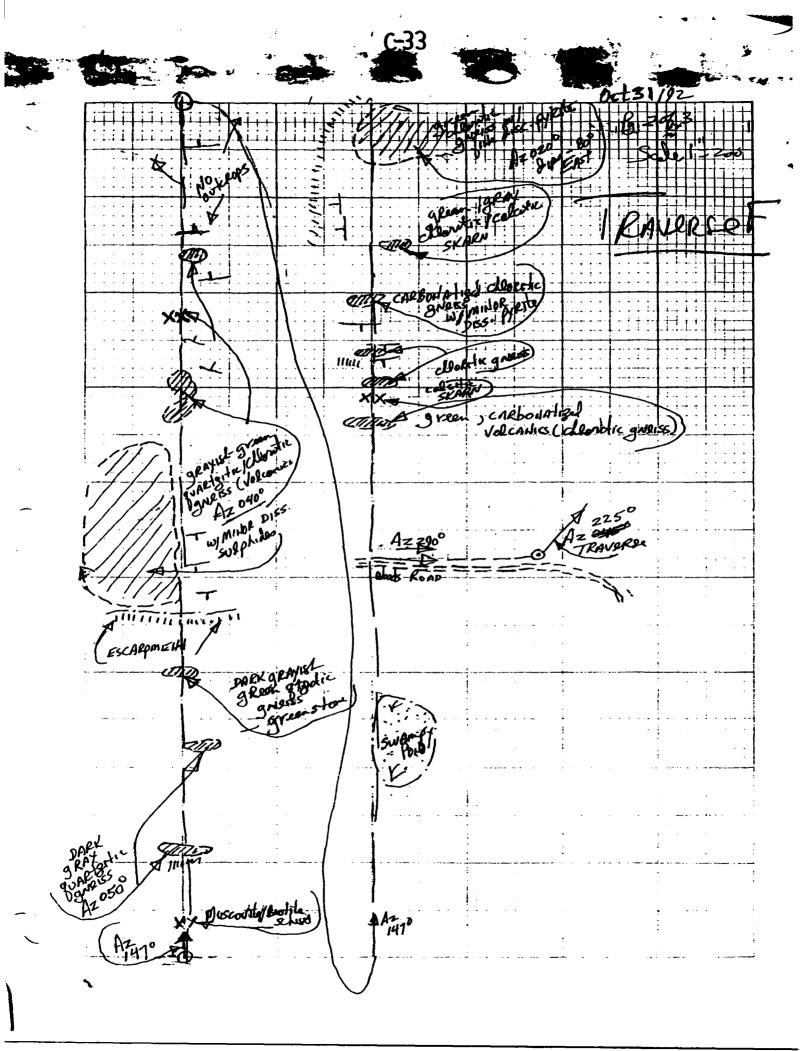
Pg 282 white gray apay colorin)s Scale 1"= 200'

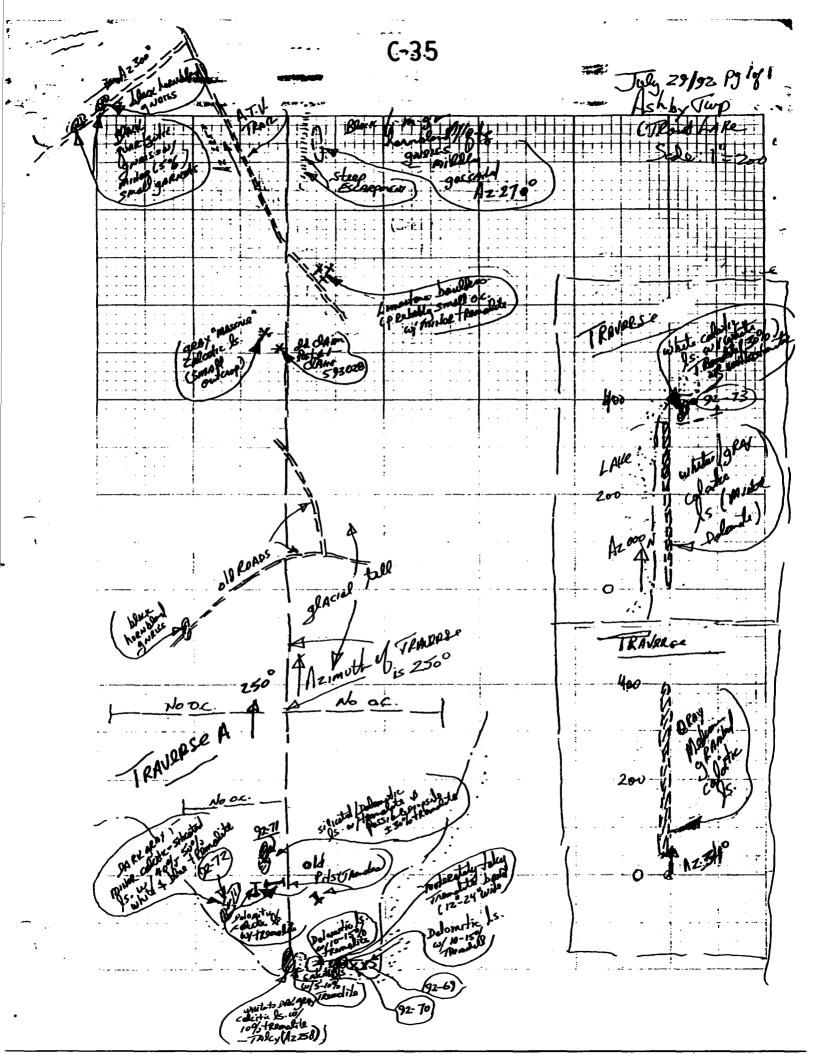




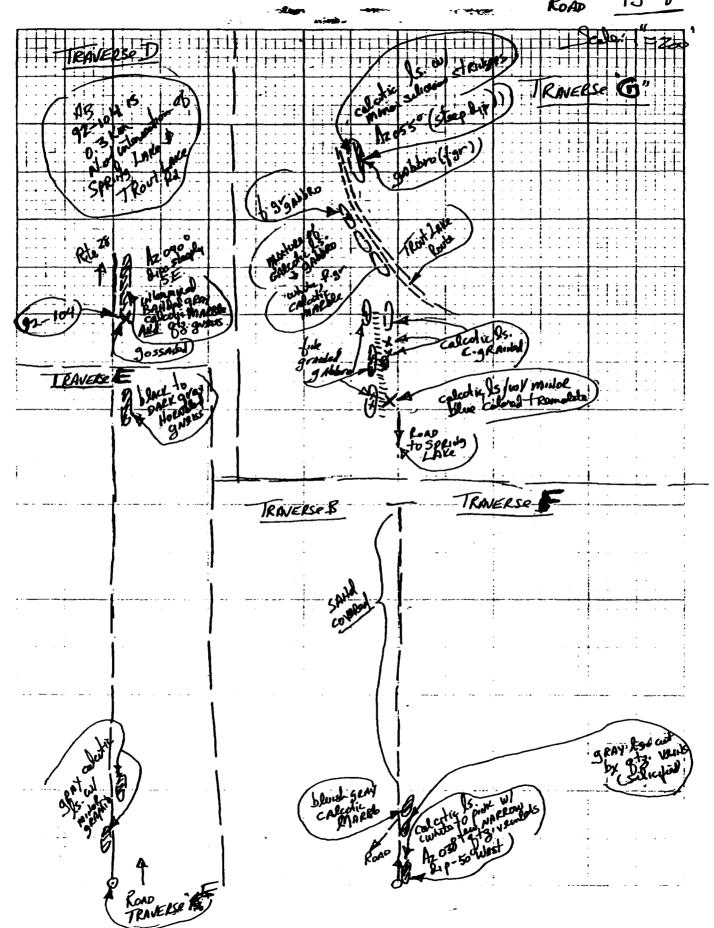


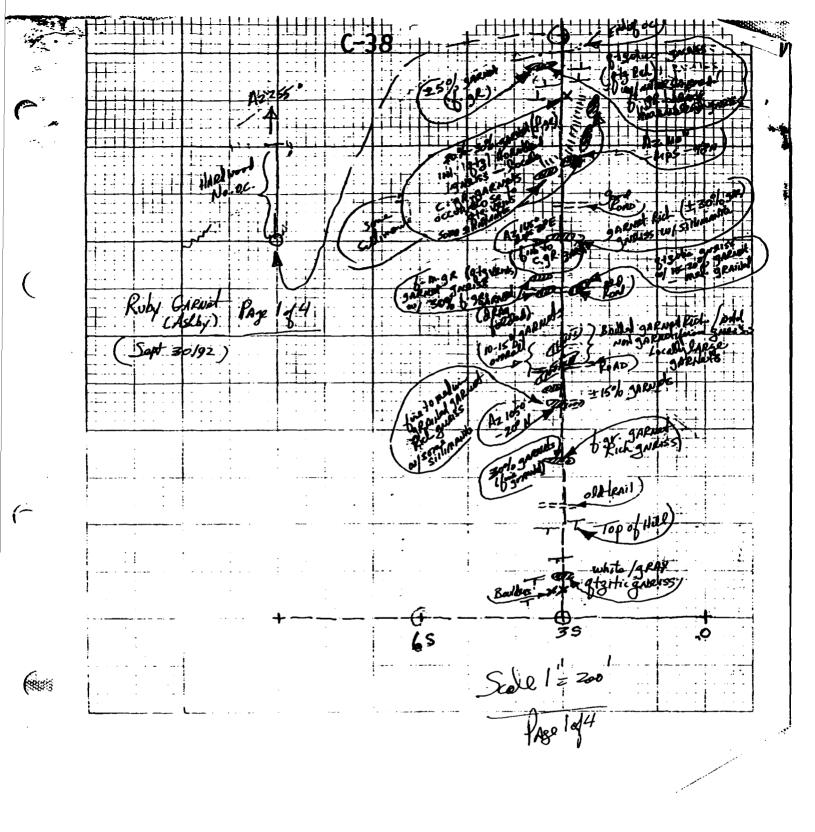
PARKHUPET C-3 12 170 - 18 danse 1RAVerse RANGESE ("((out))

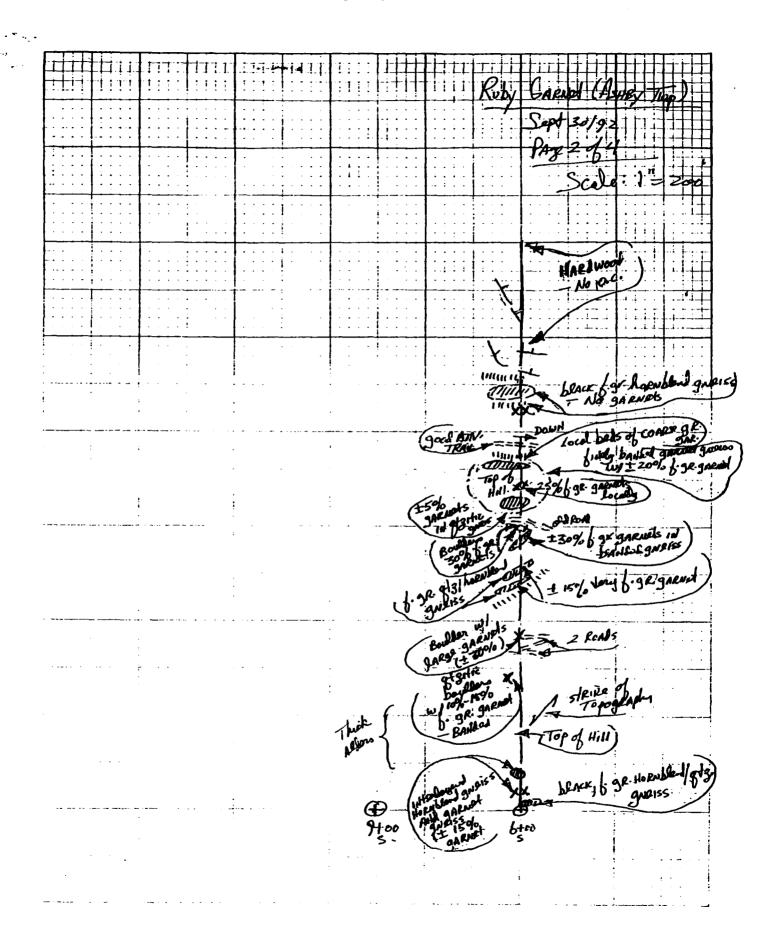


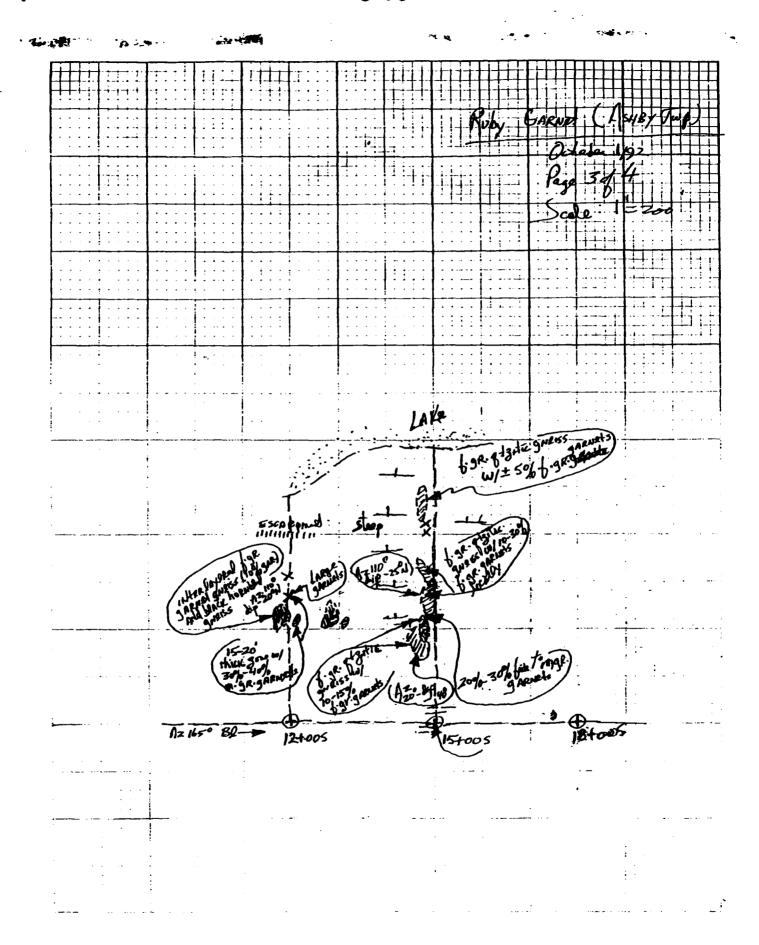


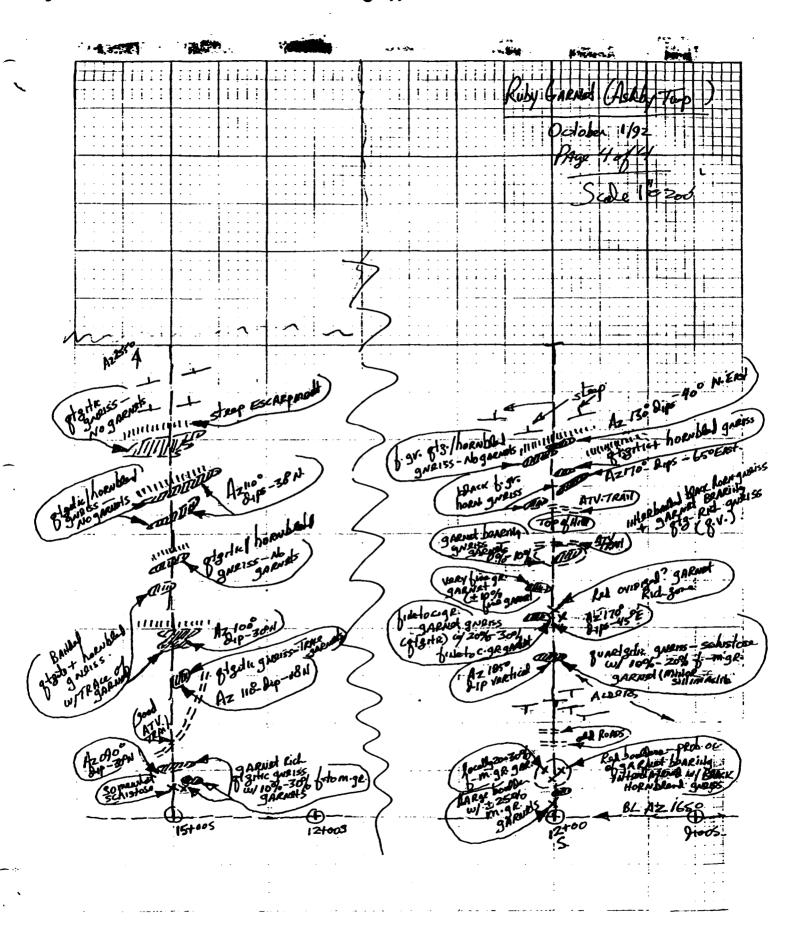
Sept 2/92
TROOF LAKE pg 20/2
ROAD

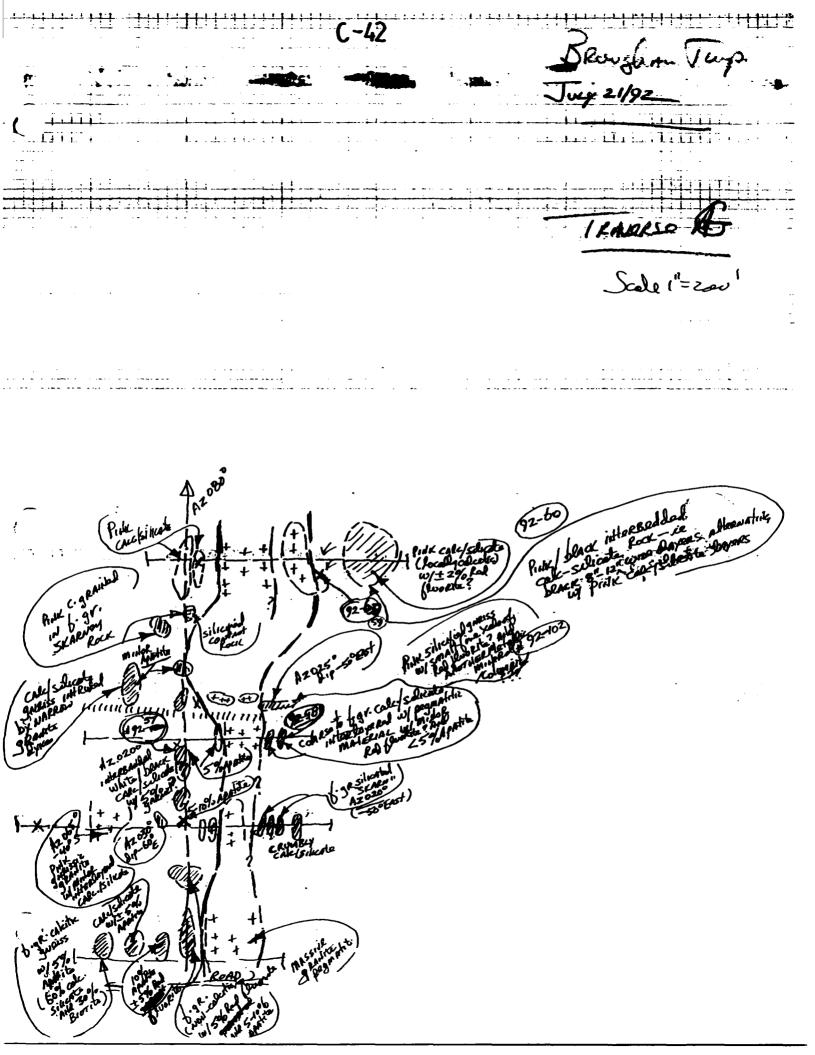




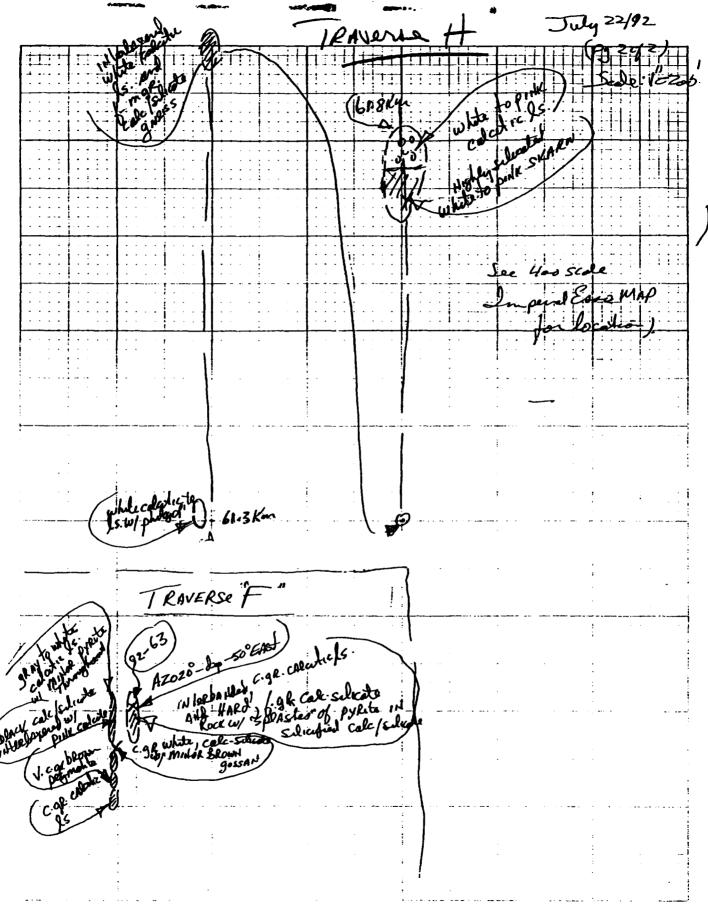


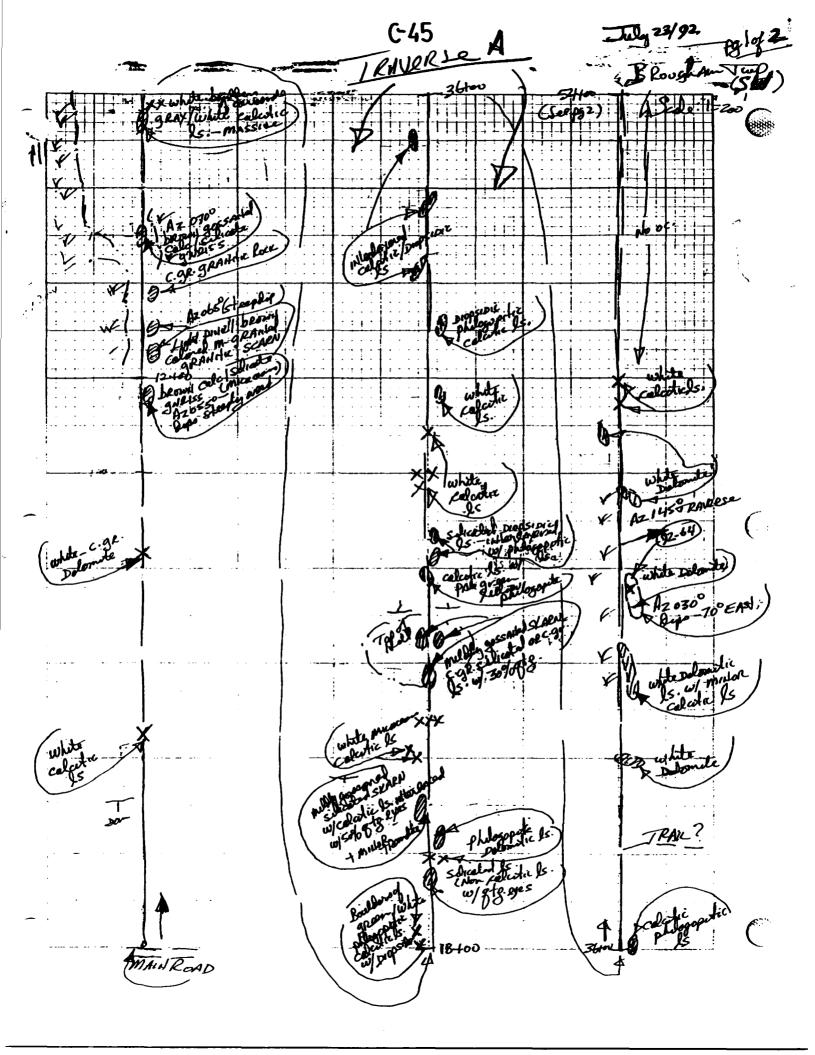


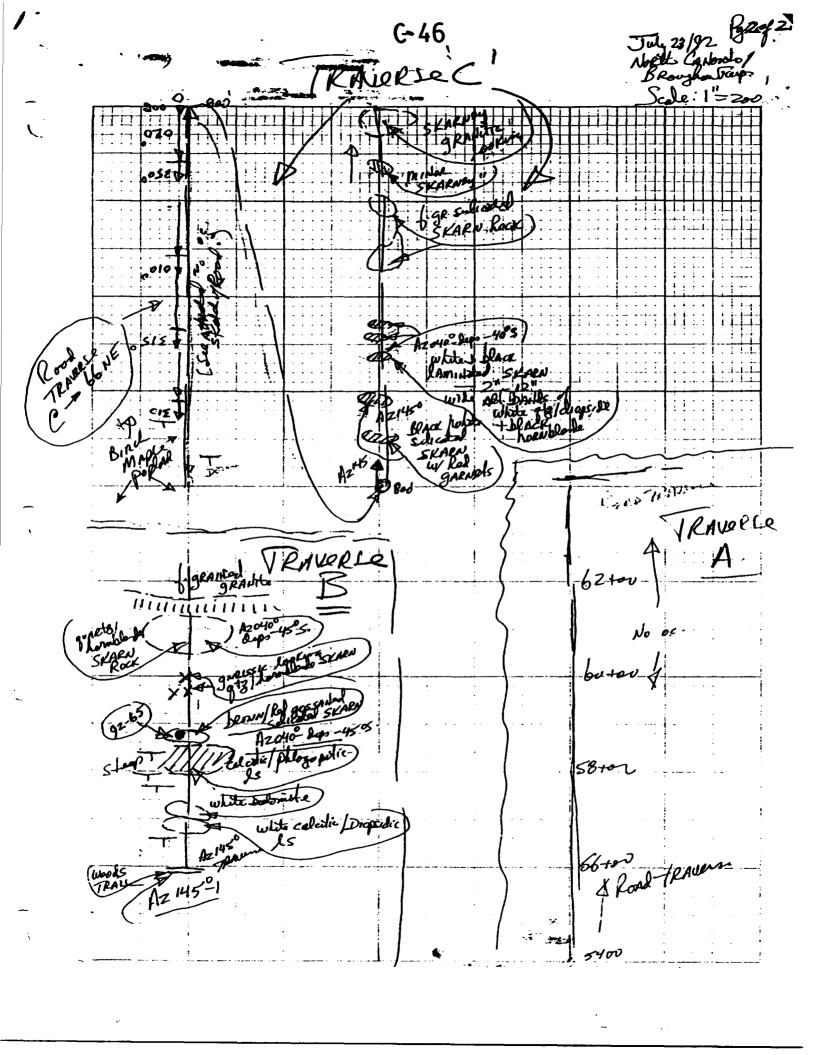


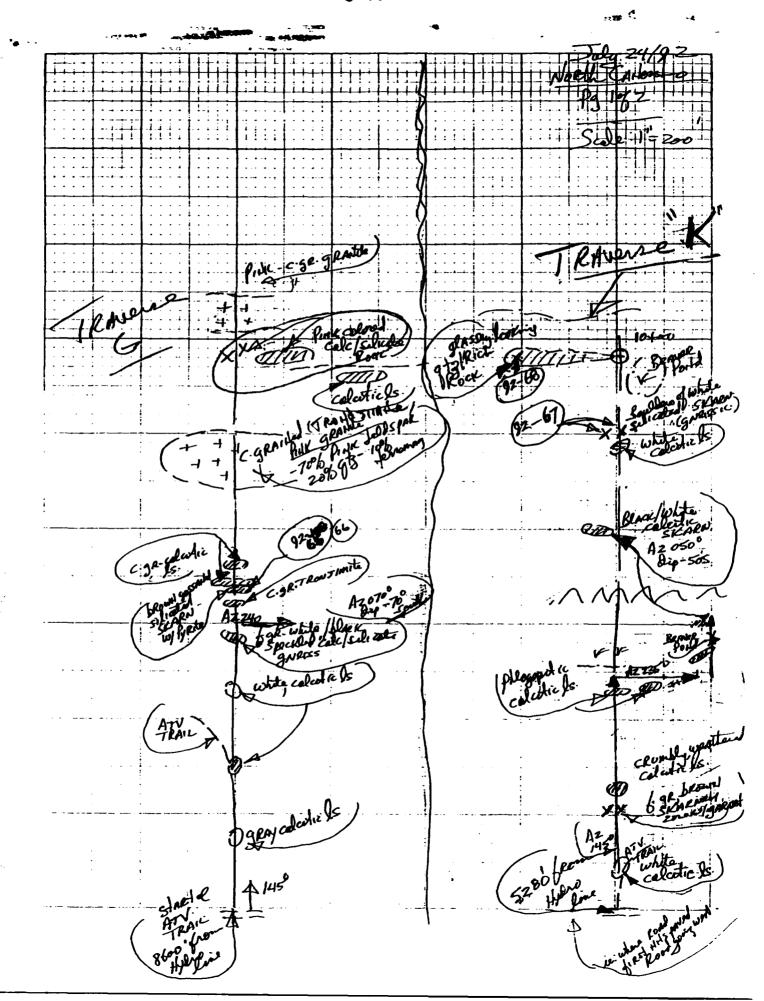


BROUGHAM TUP

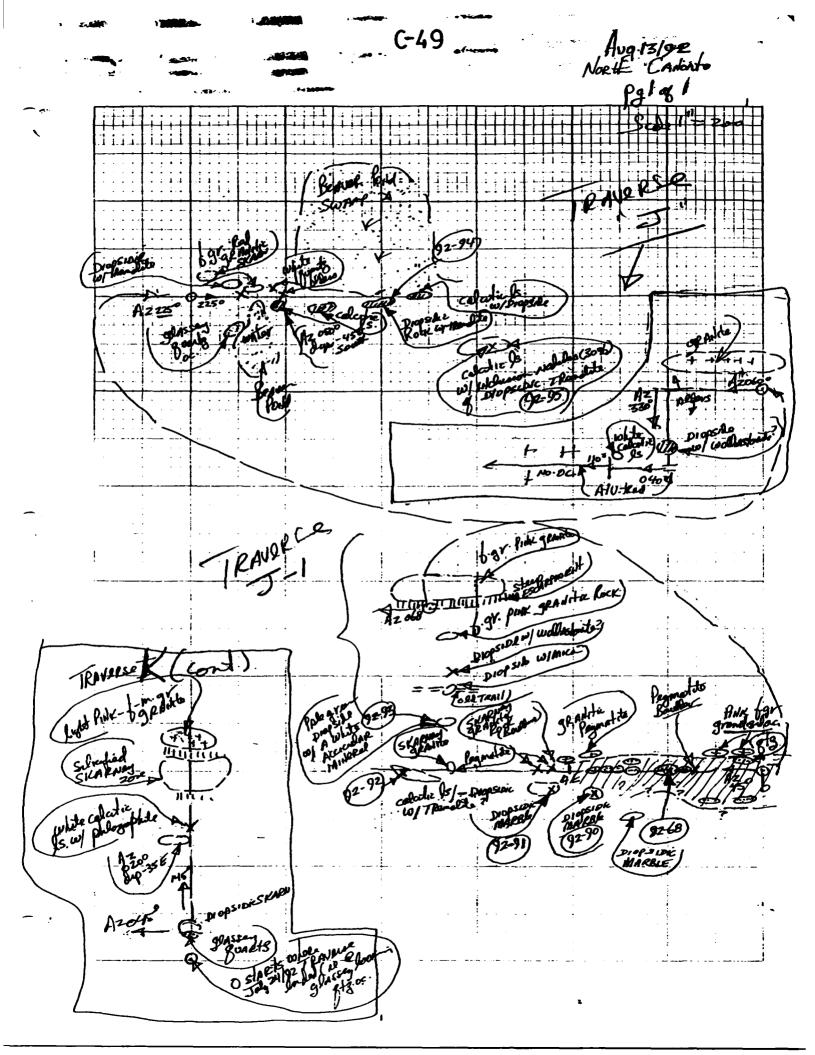


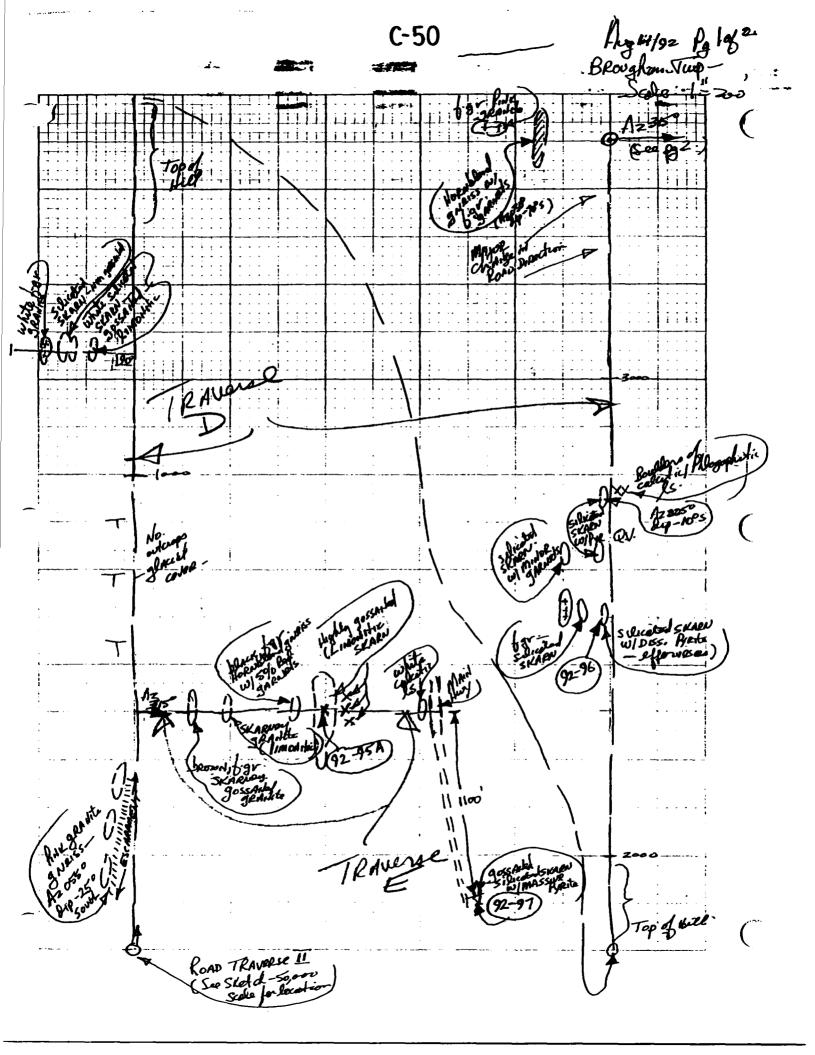




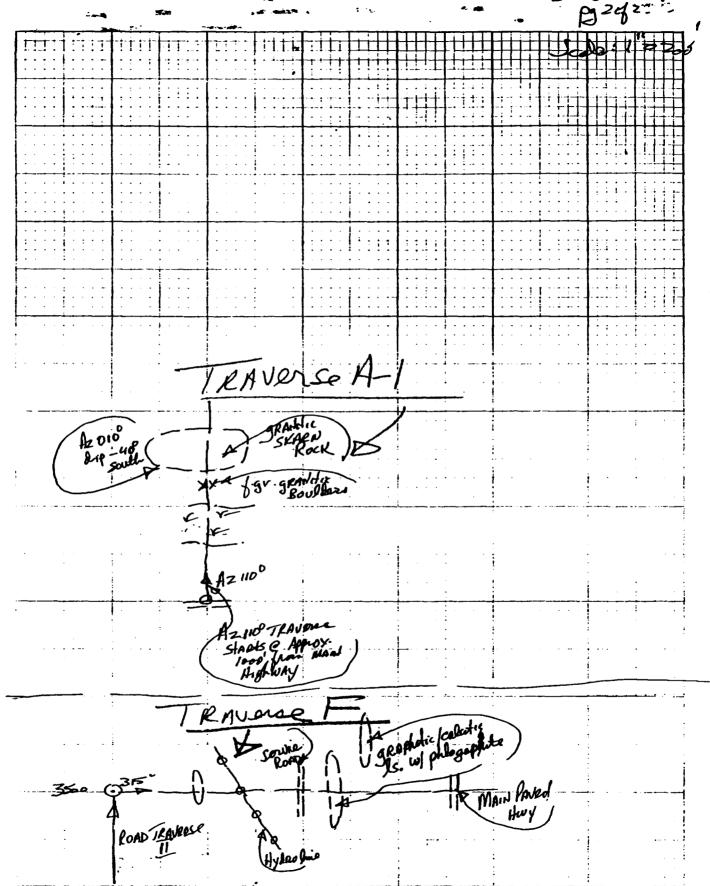


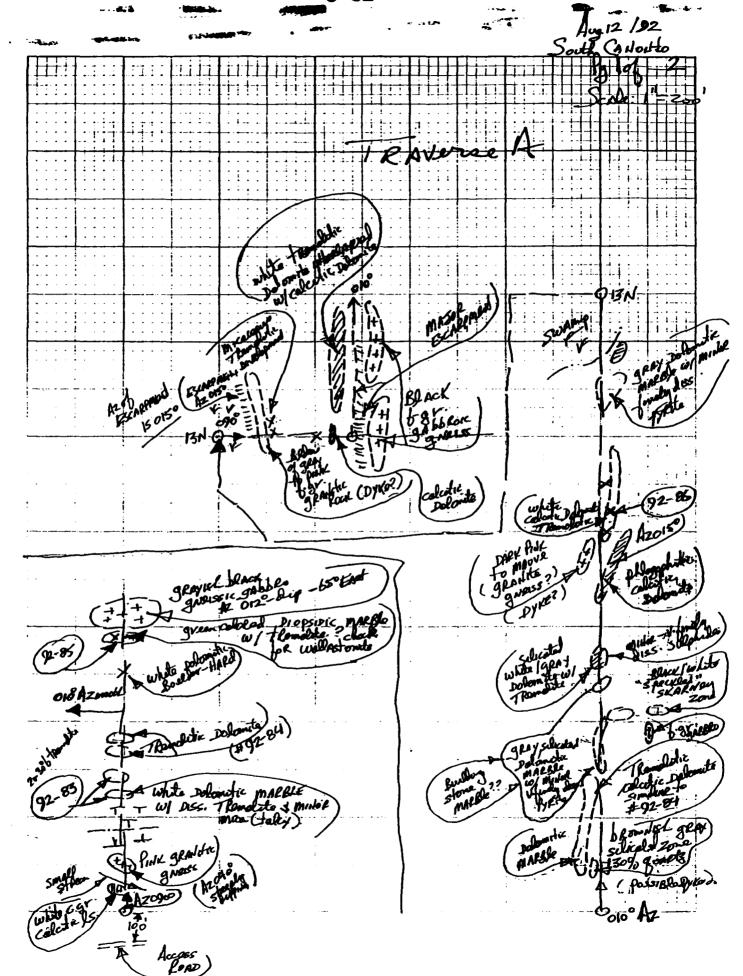
C-48 AZ145

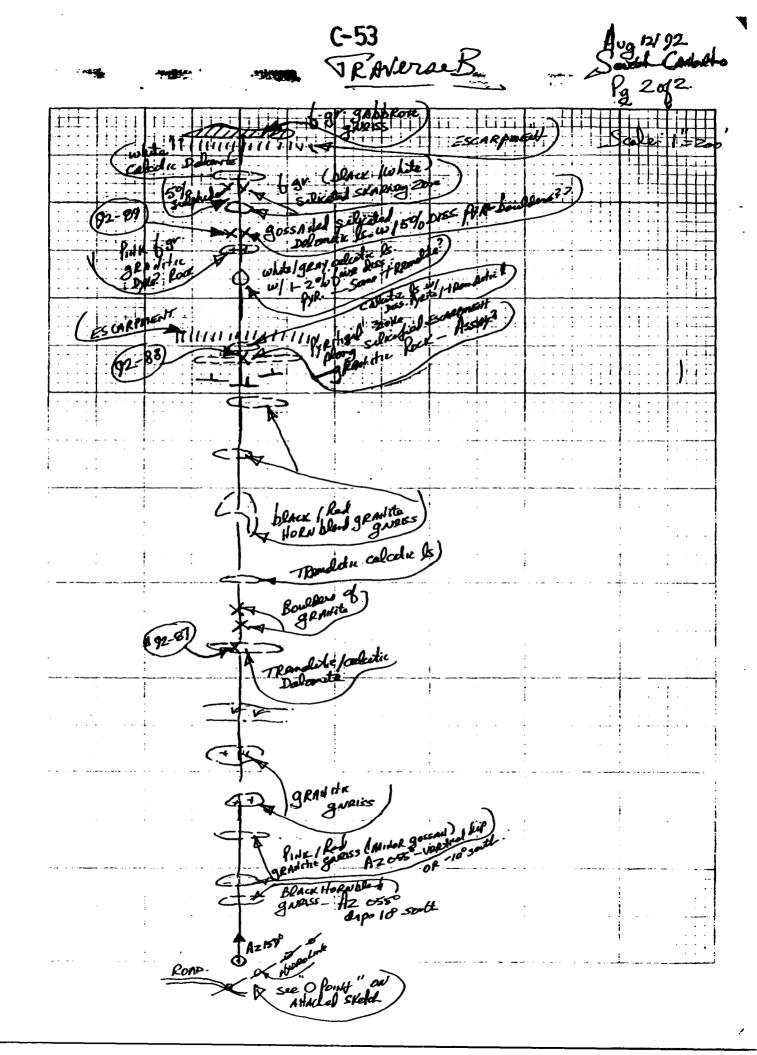




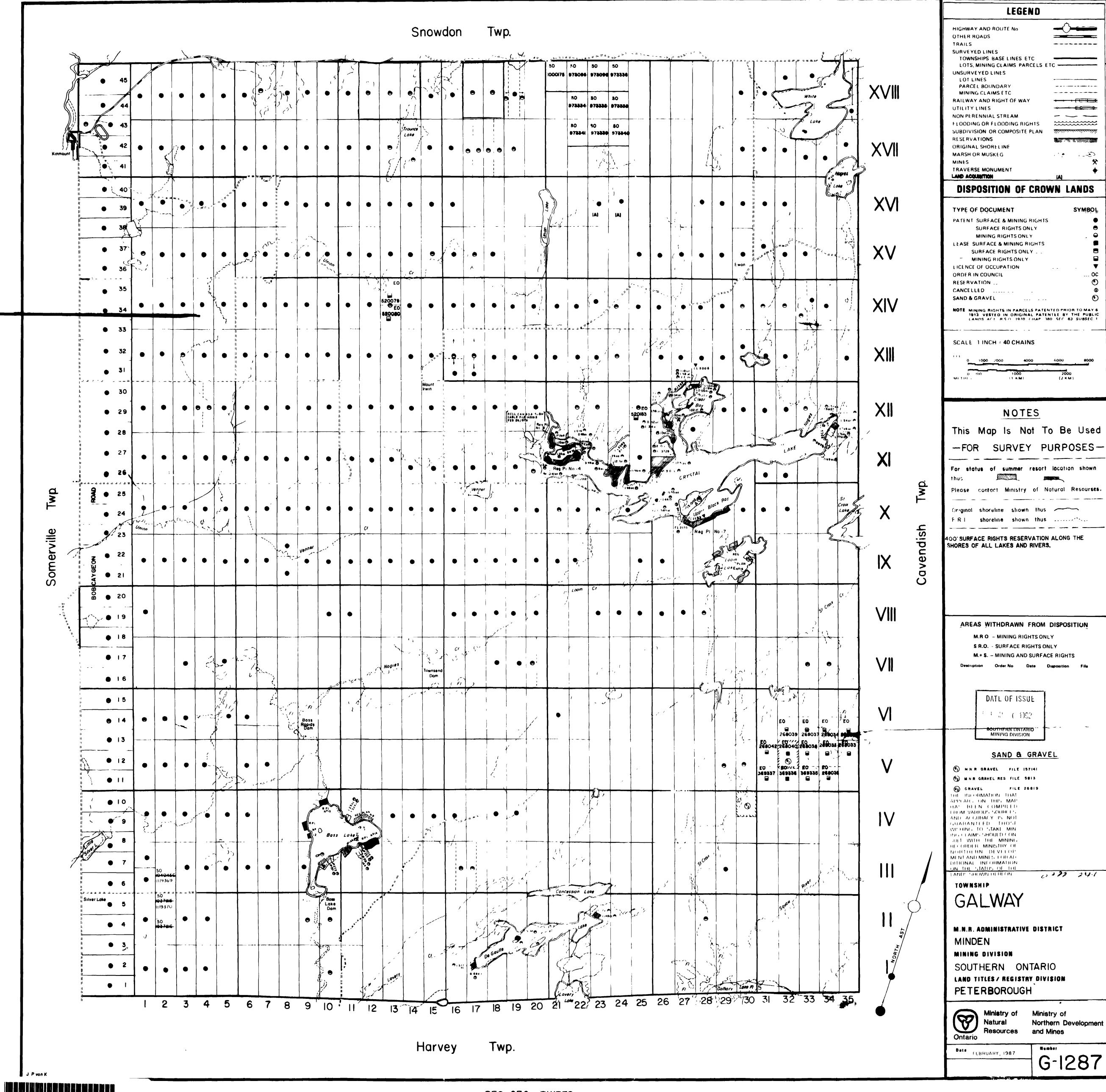
Aug 14/92
Blooghow Tup



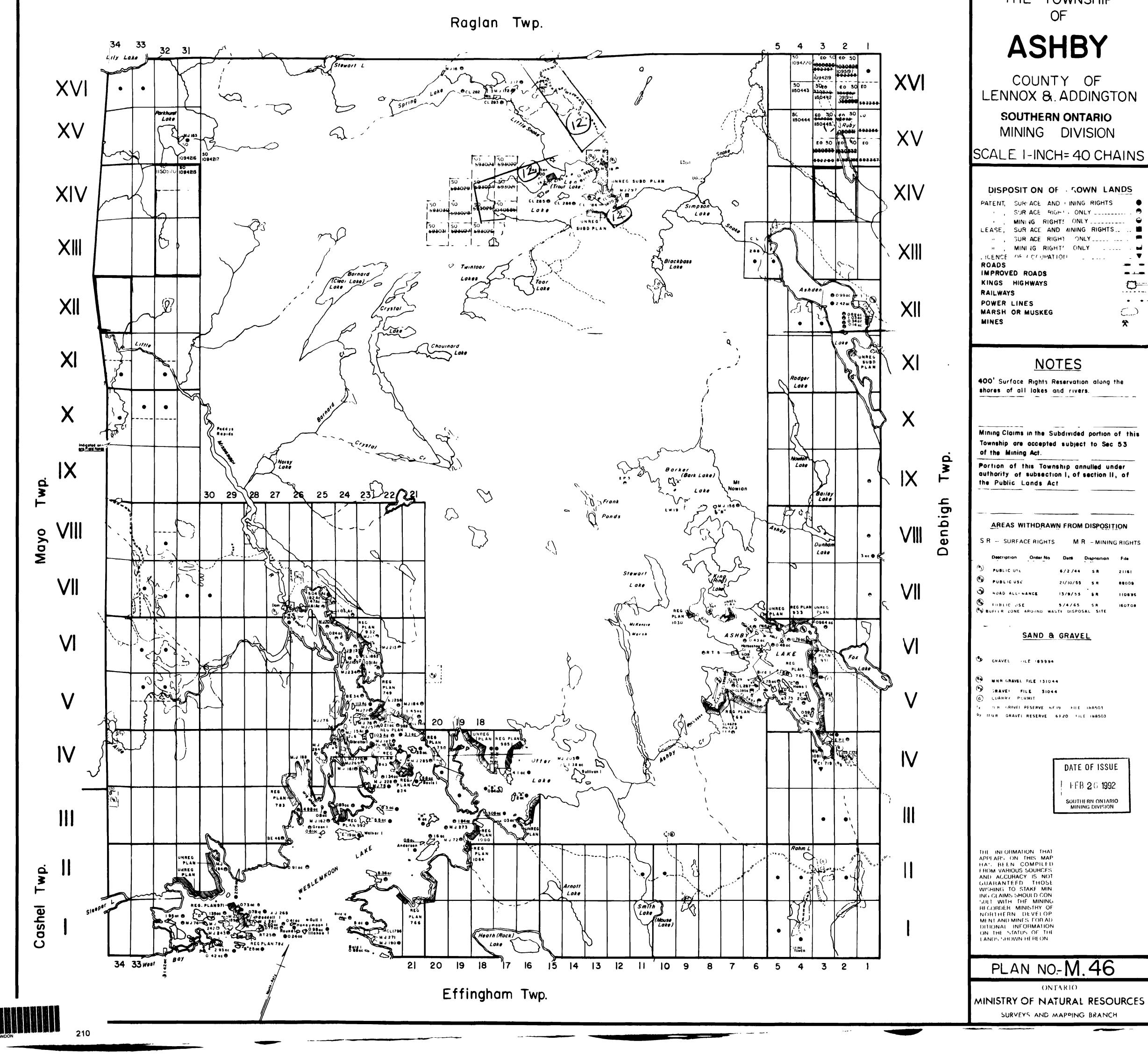




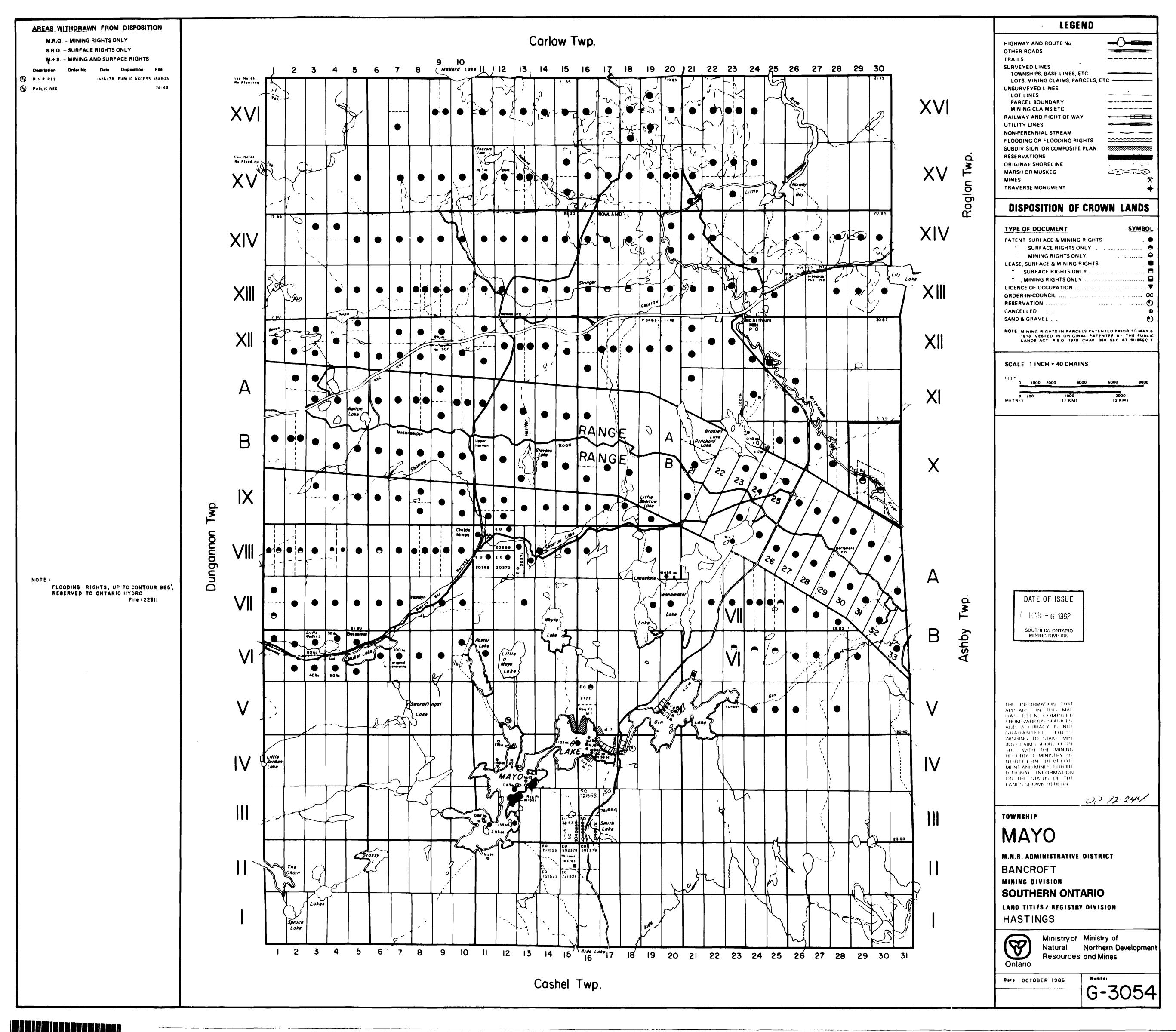
235



3/E078W0001 OP822/14 SNOVOG

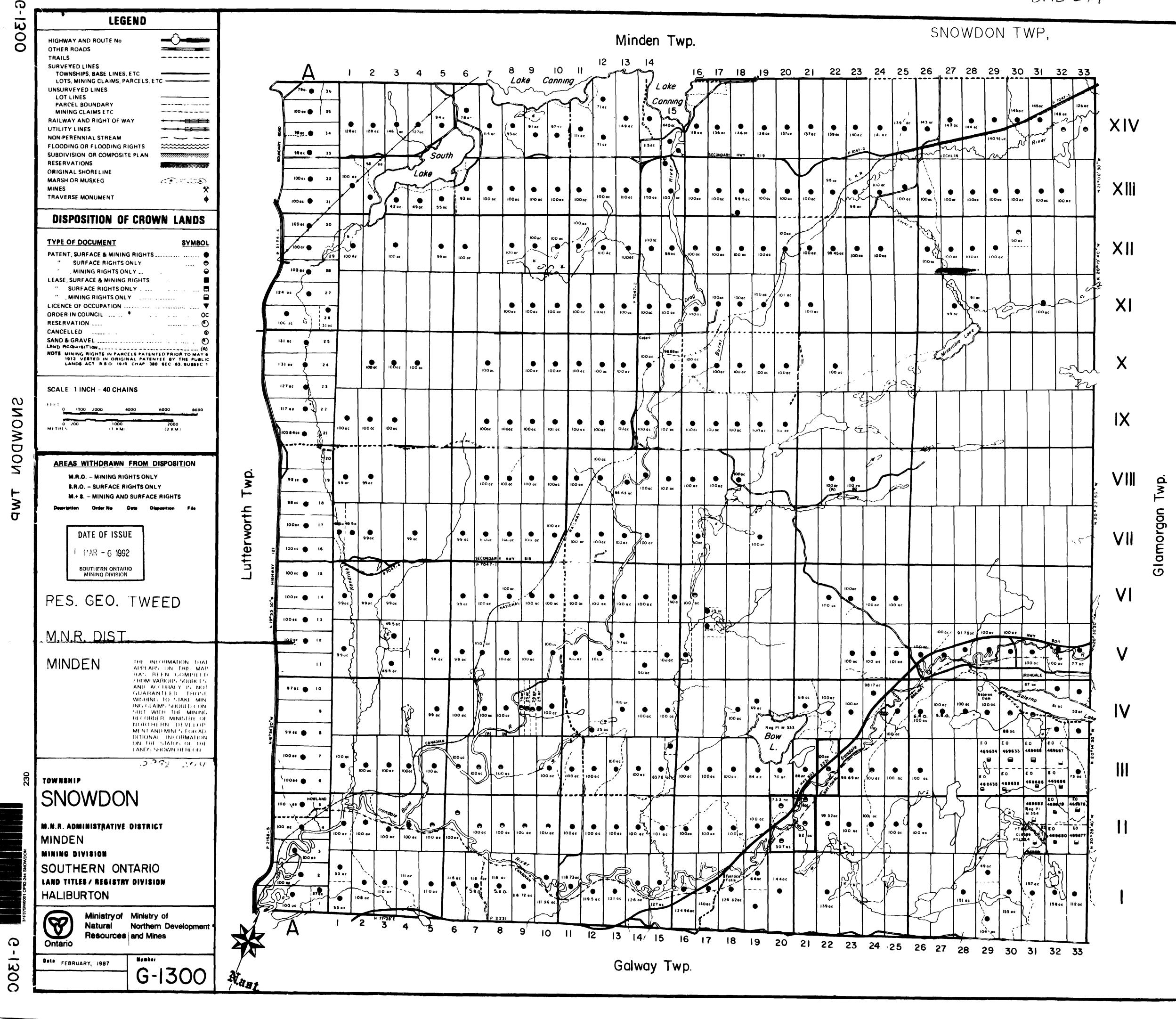


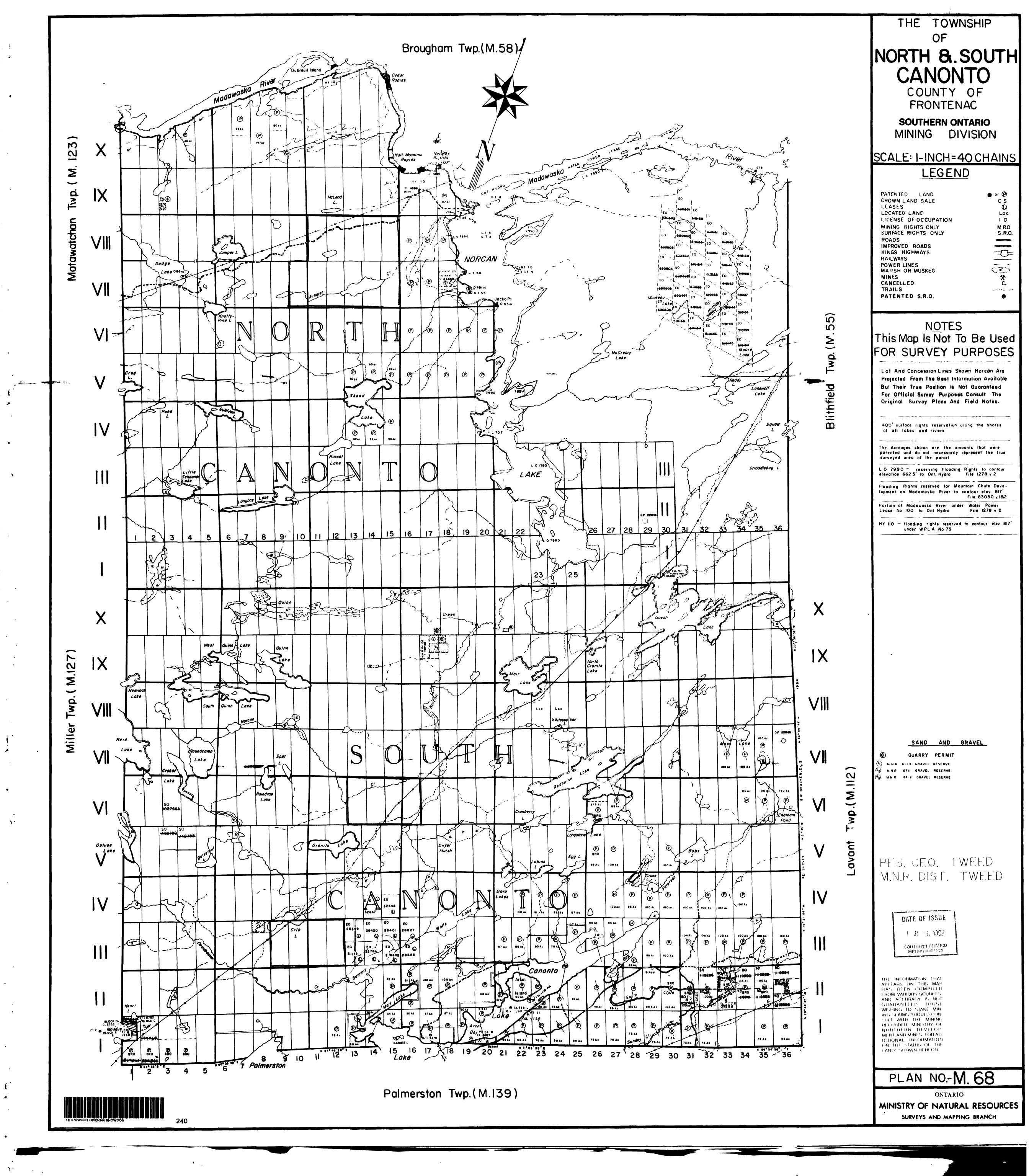
THE TOWNSHIP

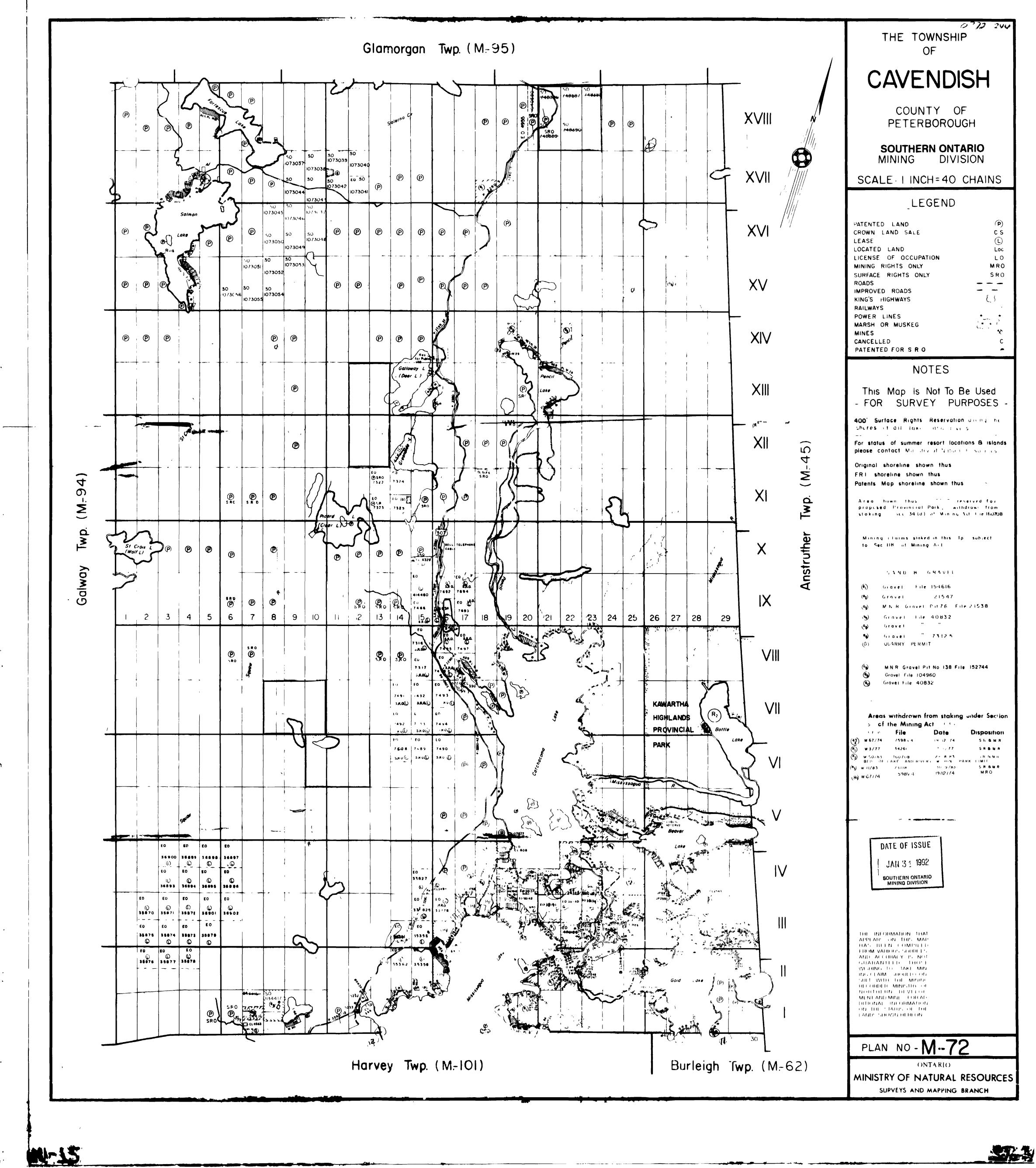


31F075W0001 OP62-244 SNOWDON

RES. GEO. TWEED [BANCROFT]



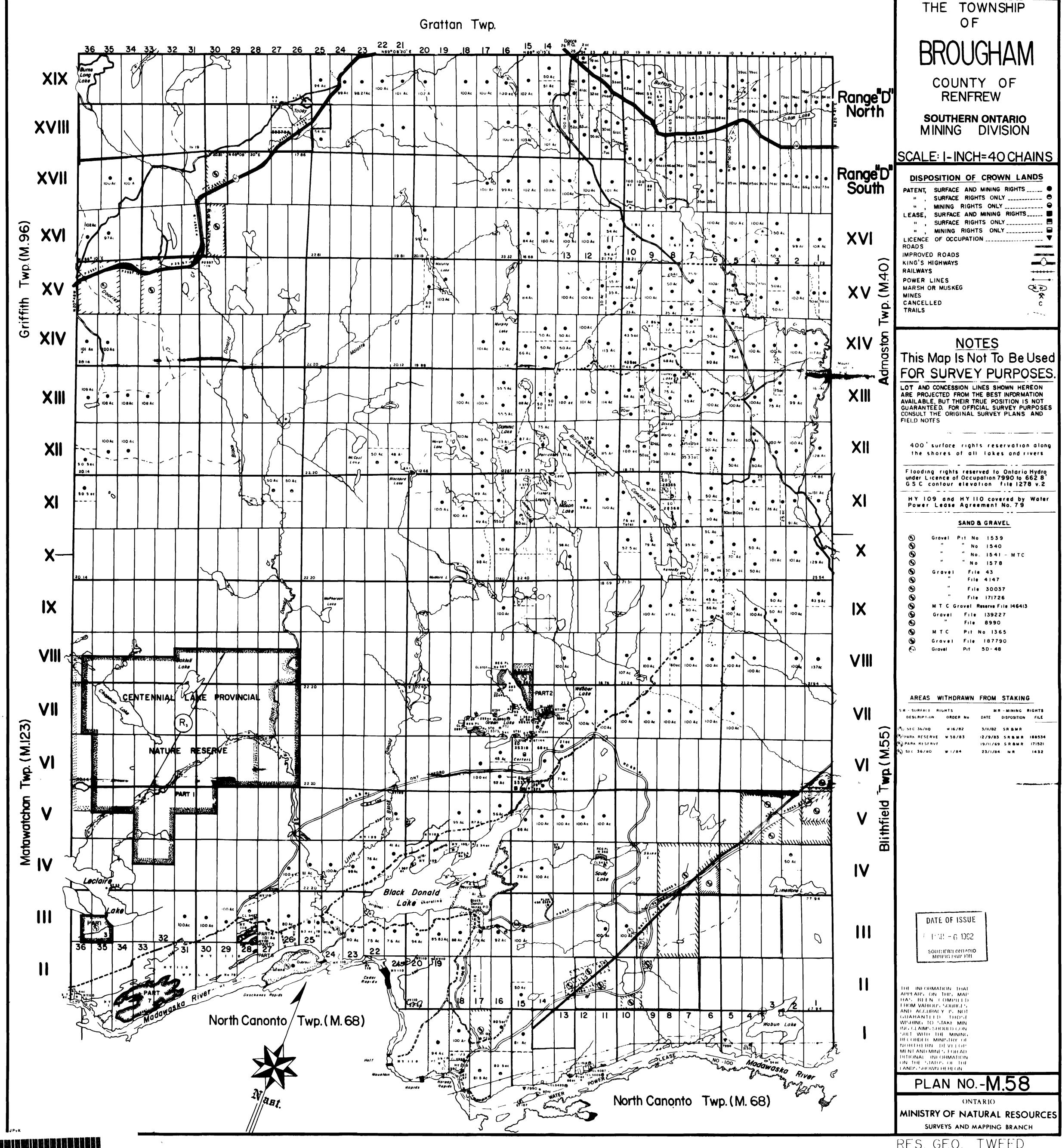




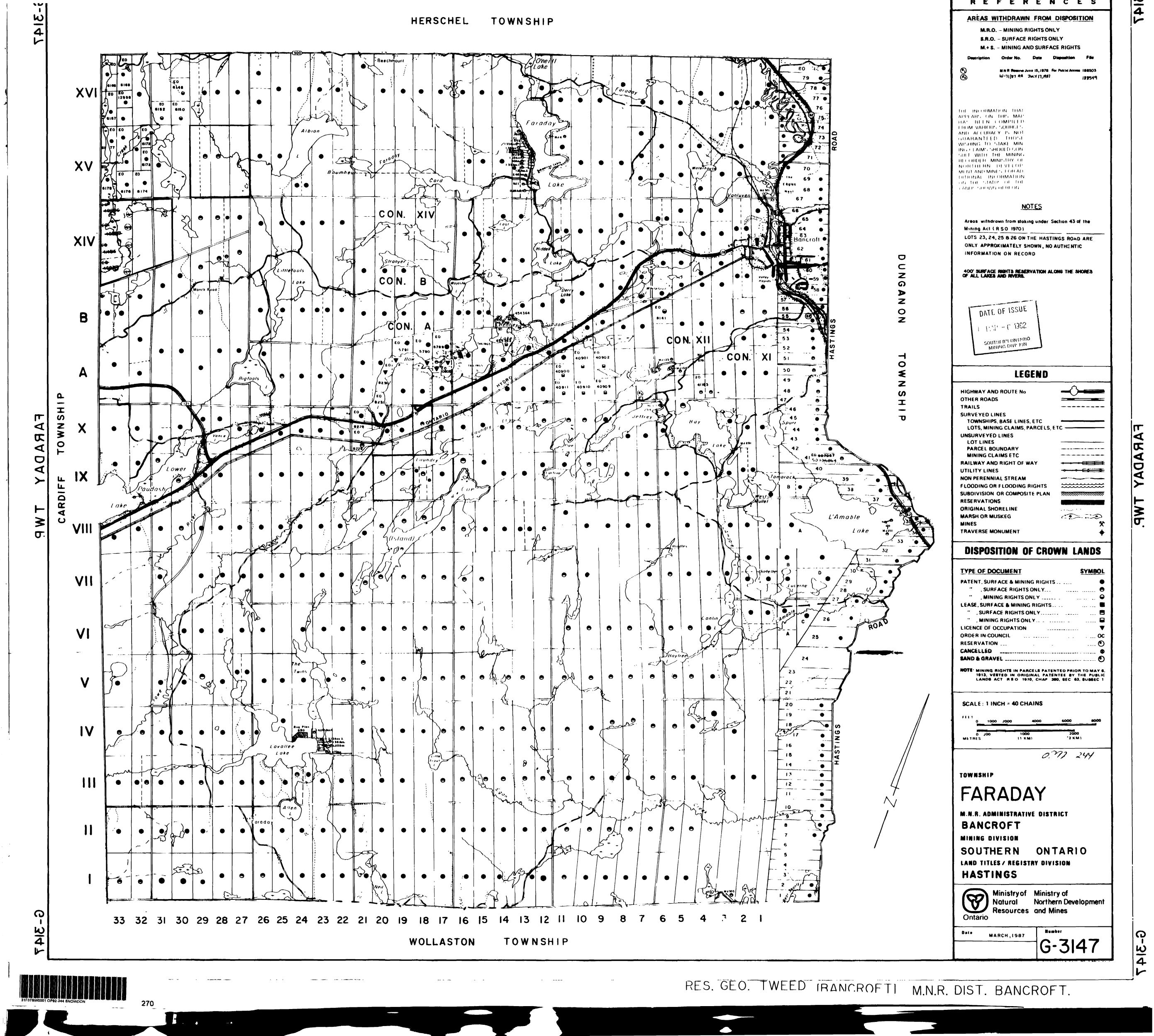
31F07EW0001 OP92-244 SNOWDON

RES. GEO. TWEED [BANCROFT]

M.N.R. DIST. MINDEN



RFS. GEO. TWEED

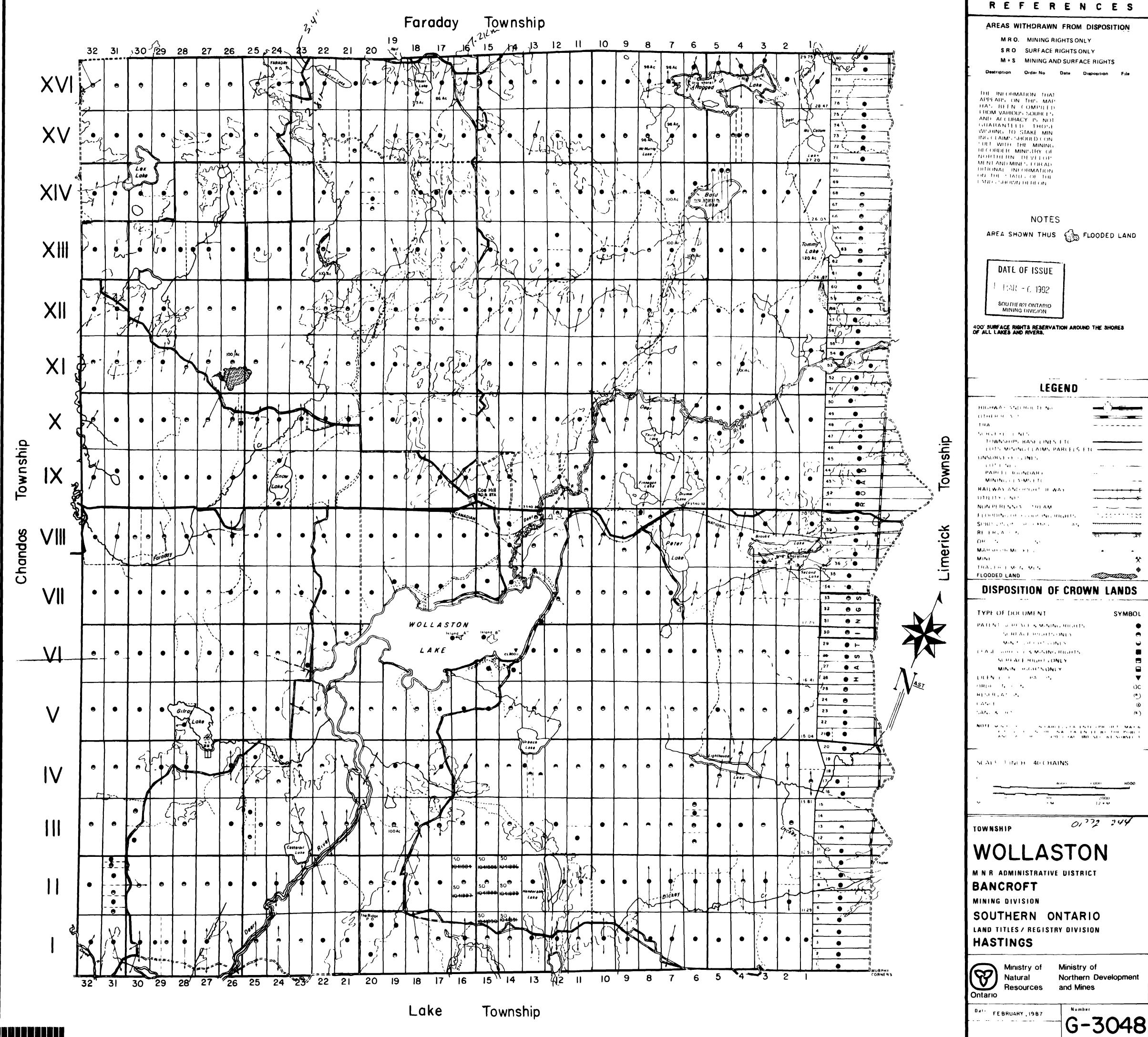


AGABA

C-3147

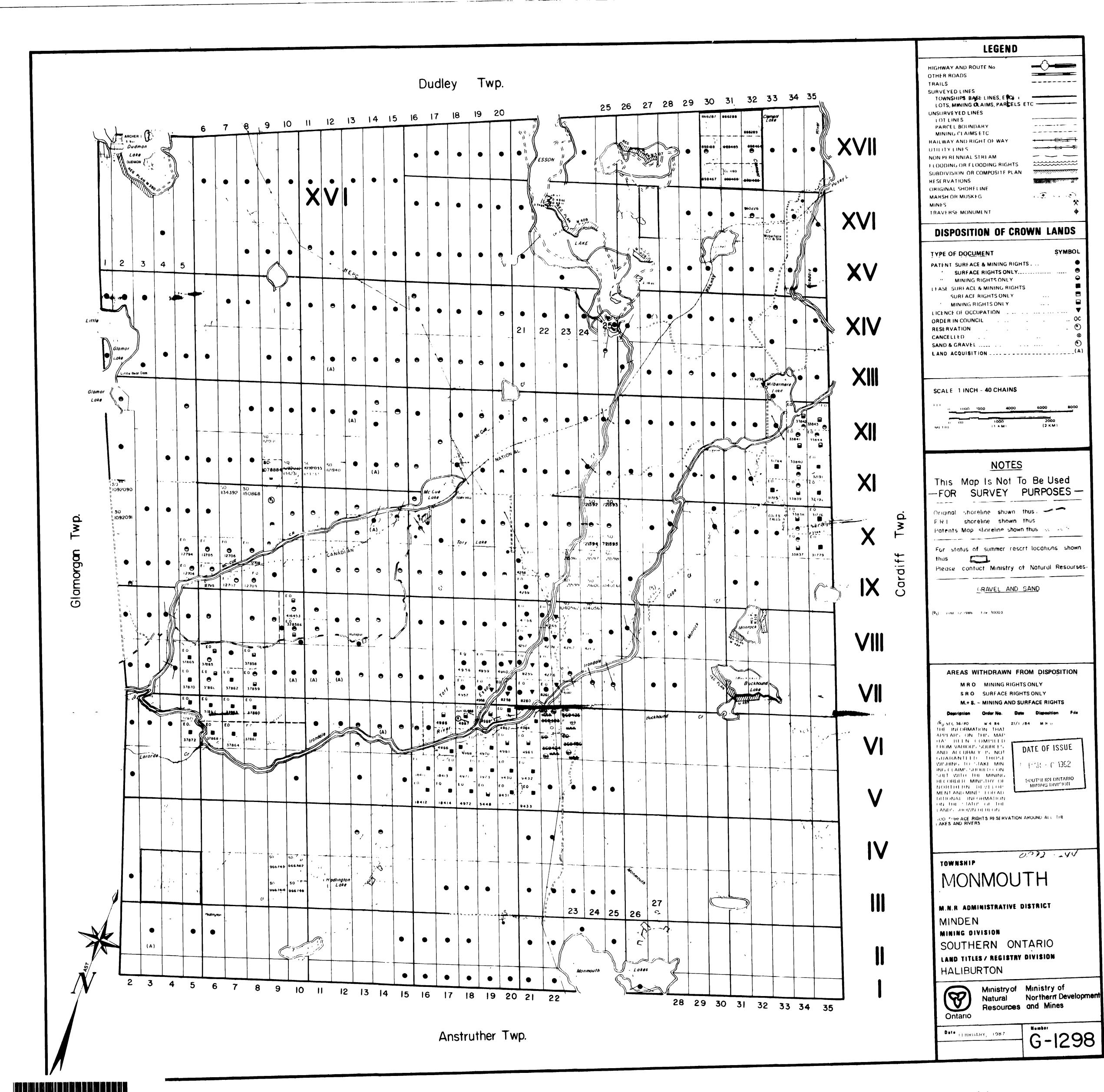
ПОП

MOLLAS

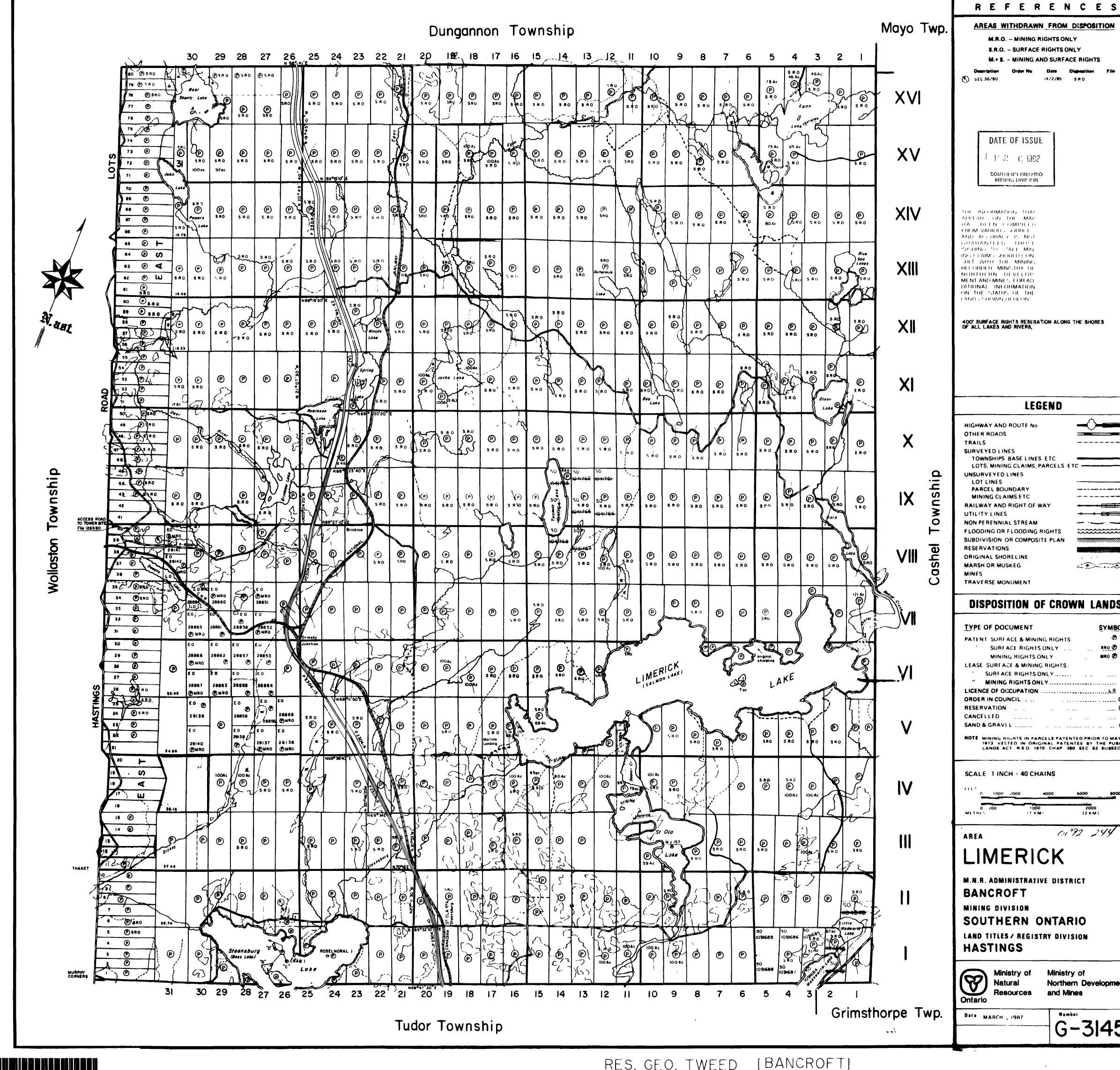


31F078W0001 OPB2-244 SNOWDON

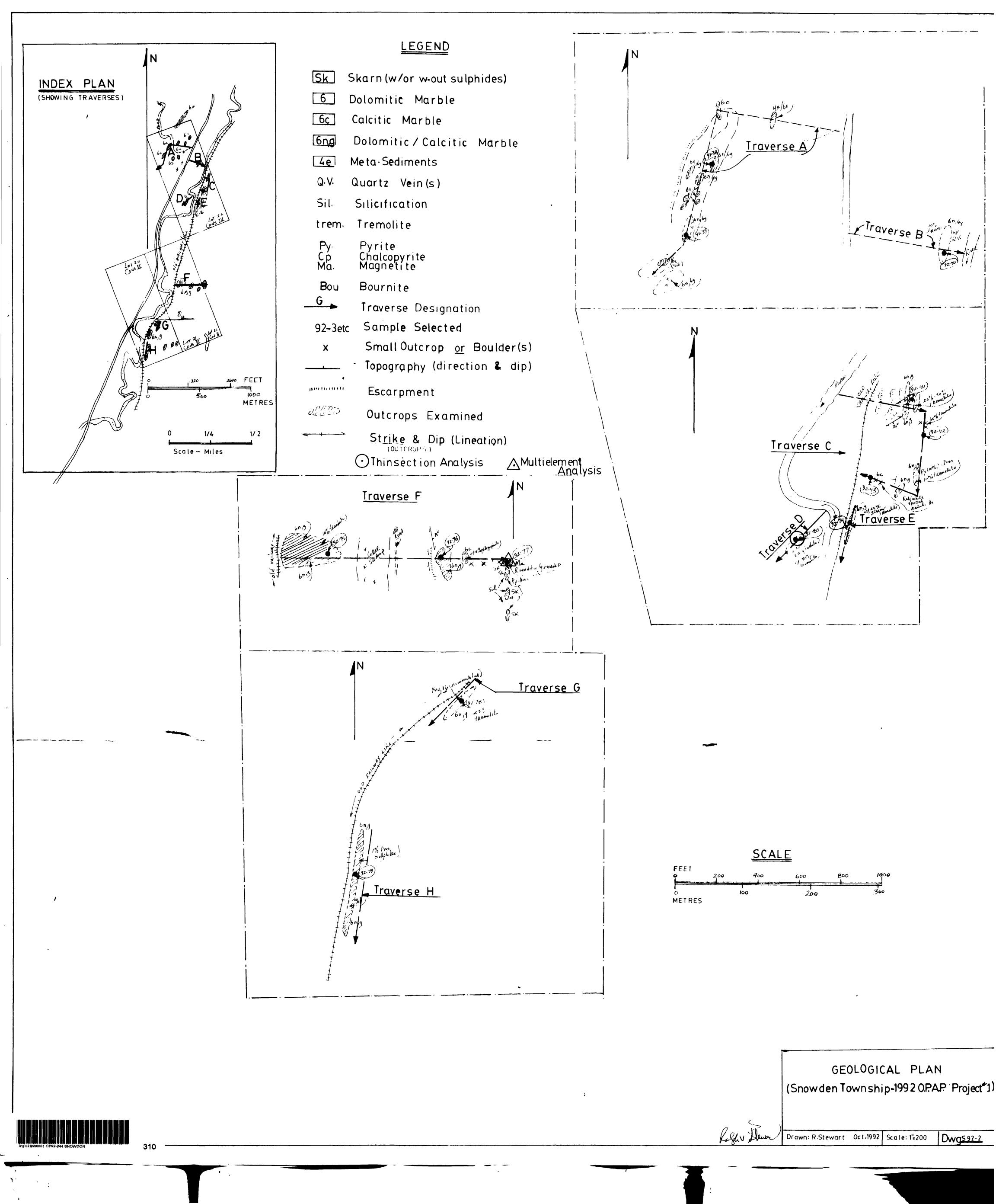
RES. GEOL. TWEED MNR DIST. BANCROFT

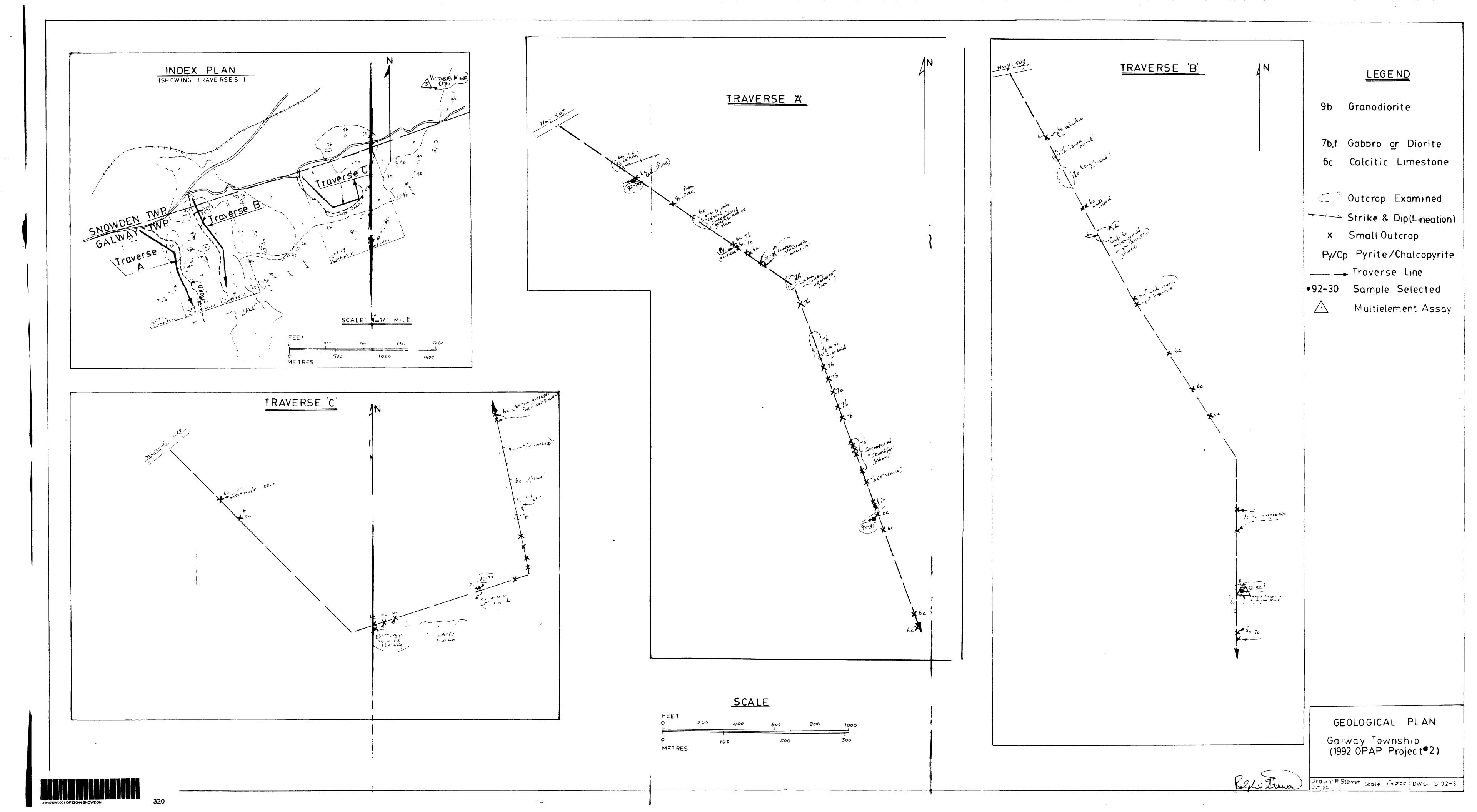


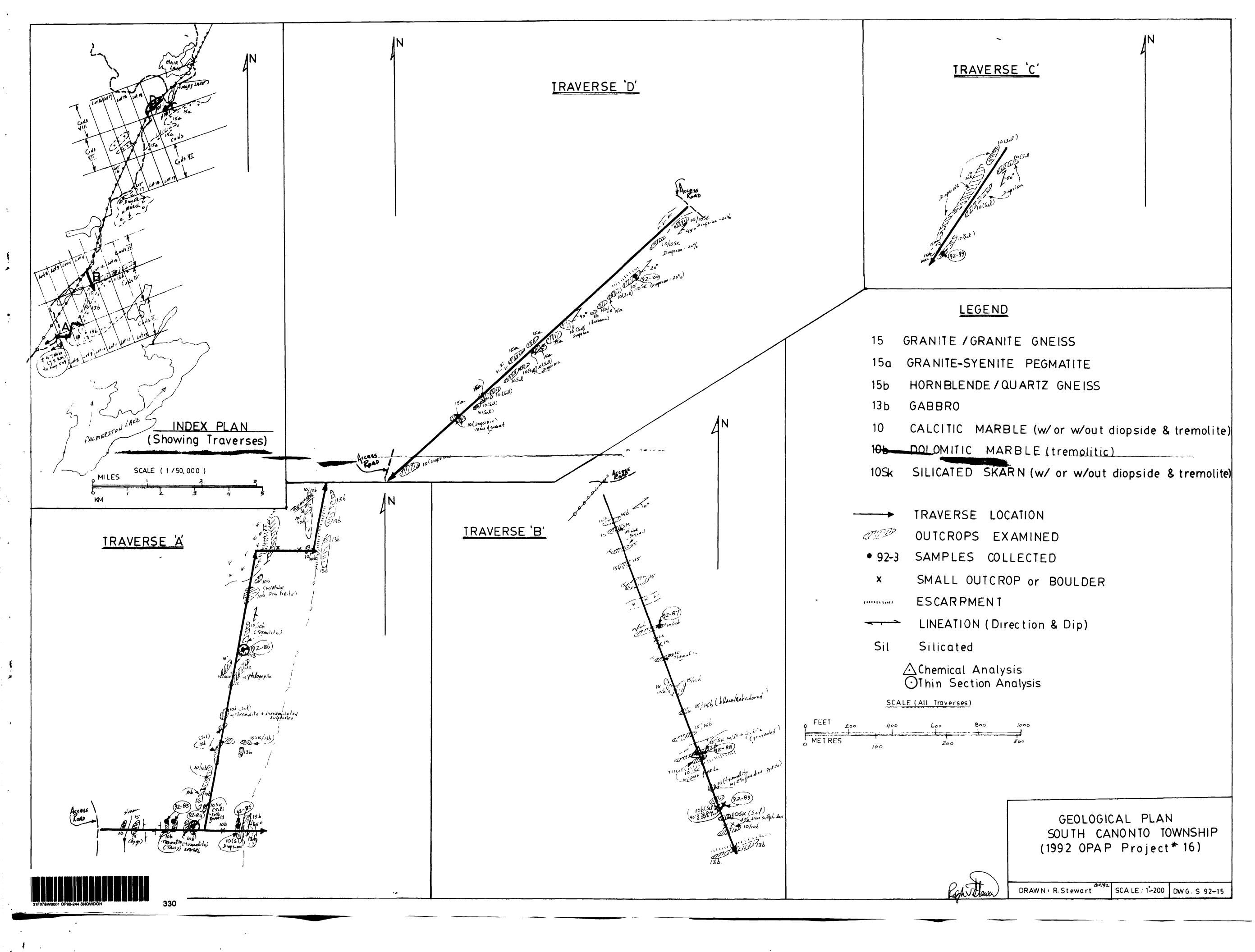
MS OF OF TWIFE

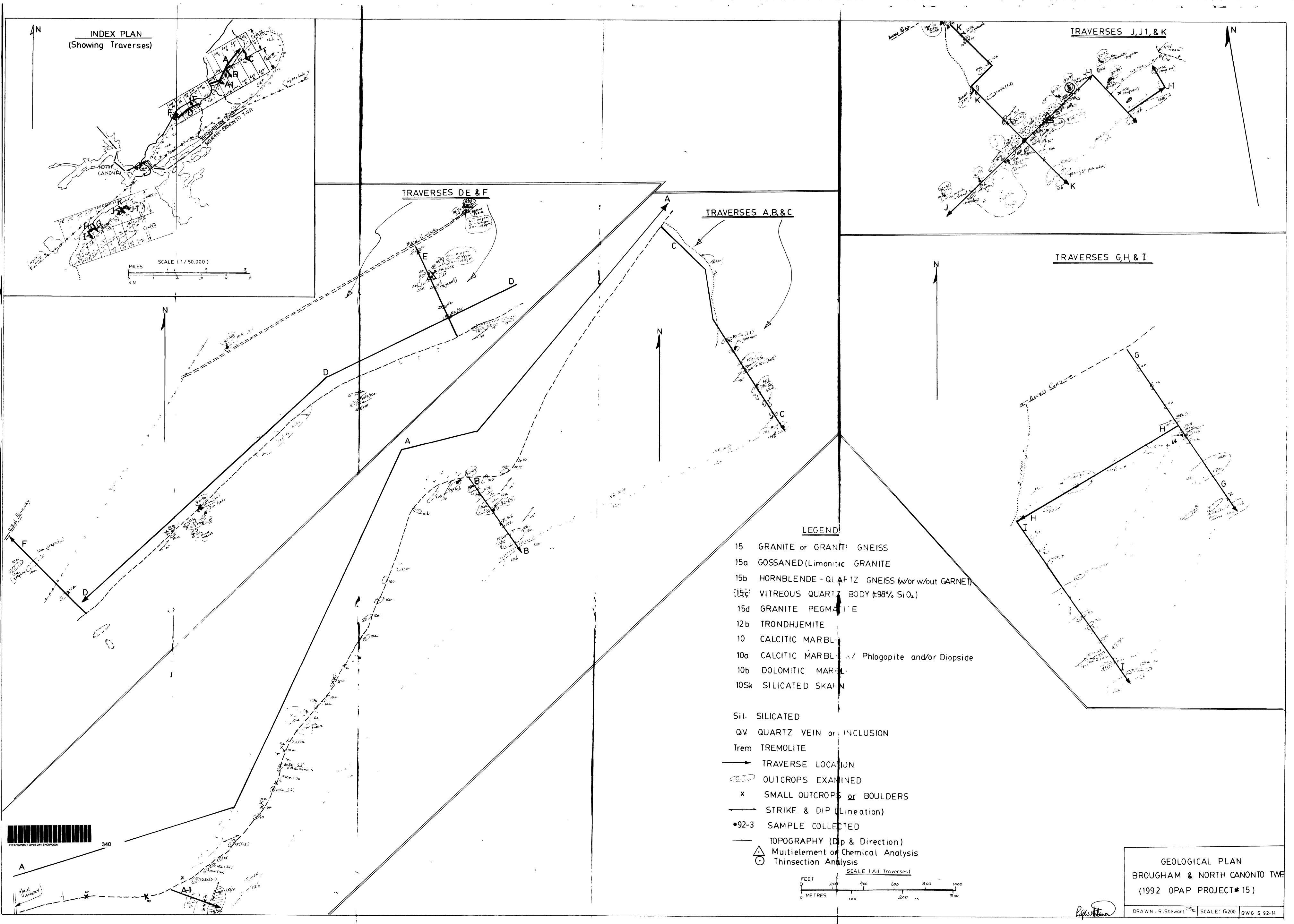


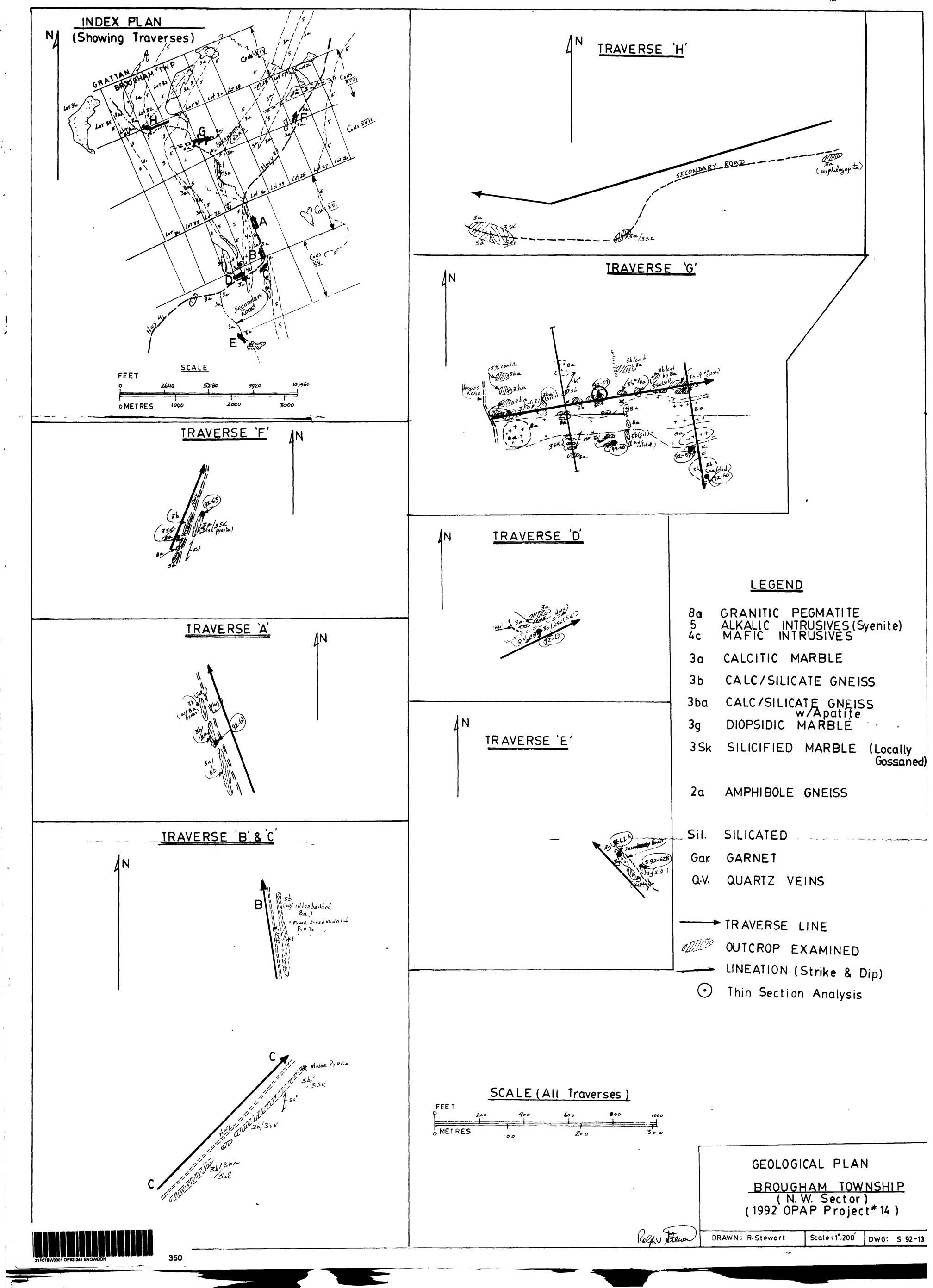
RES. GEO. TWEED

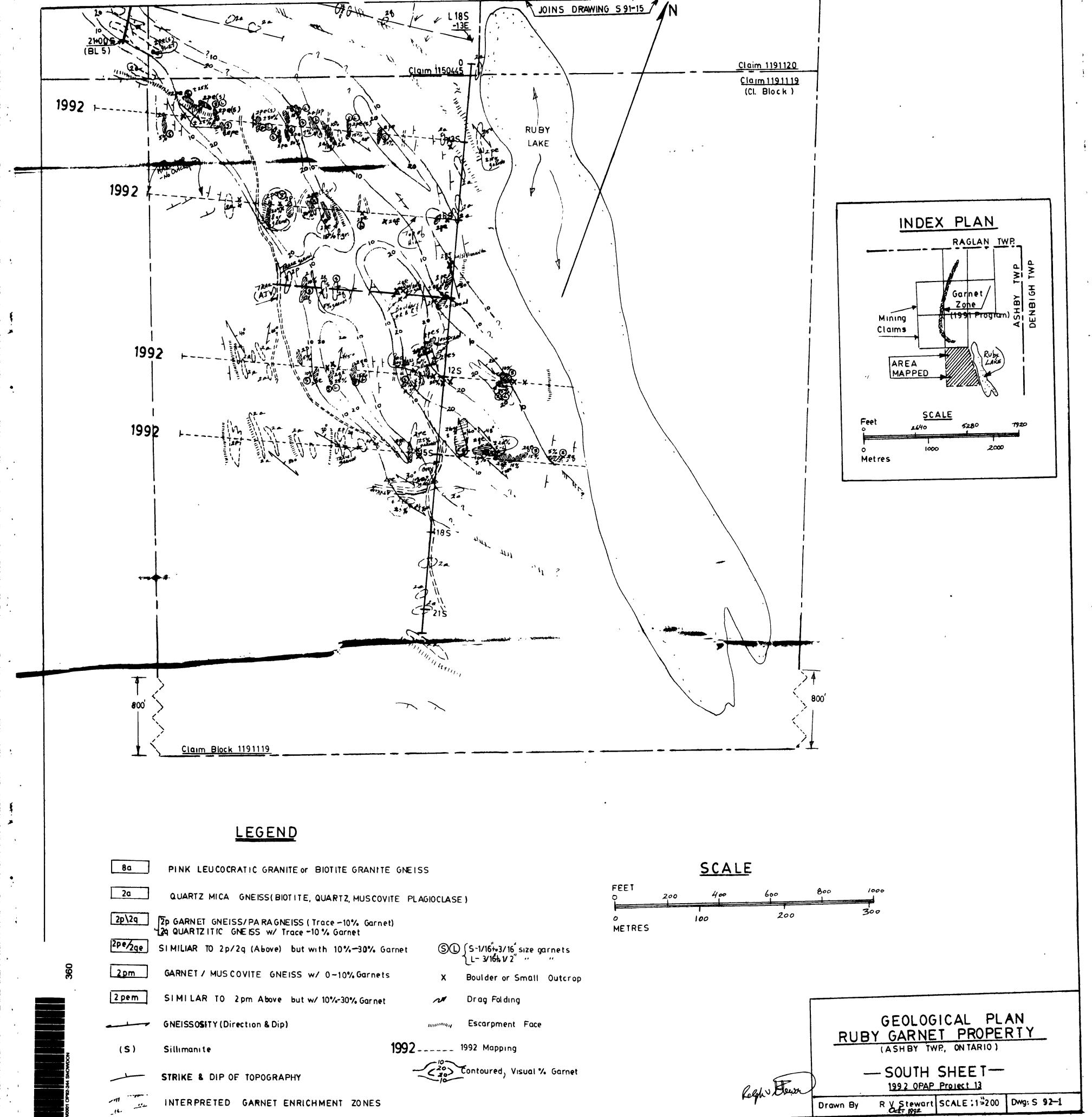


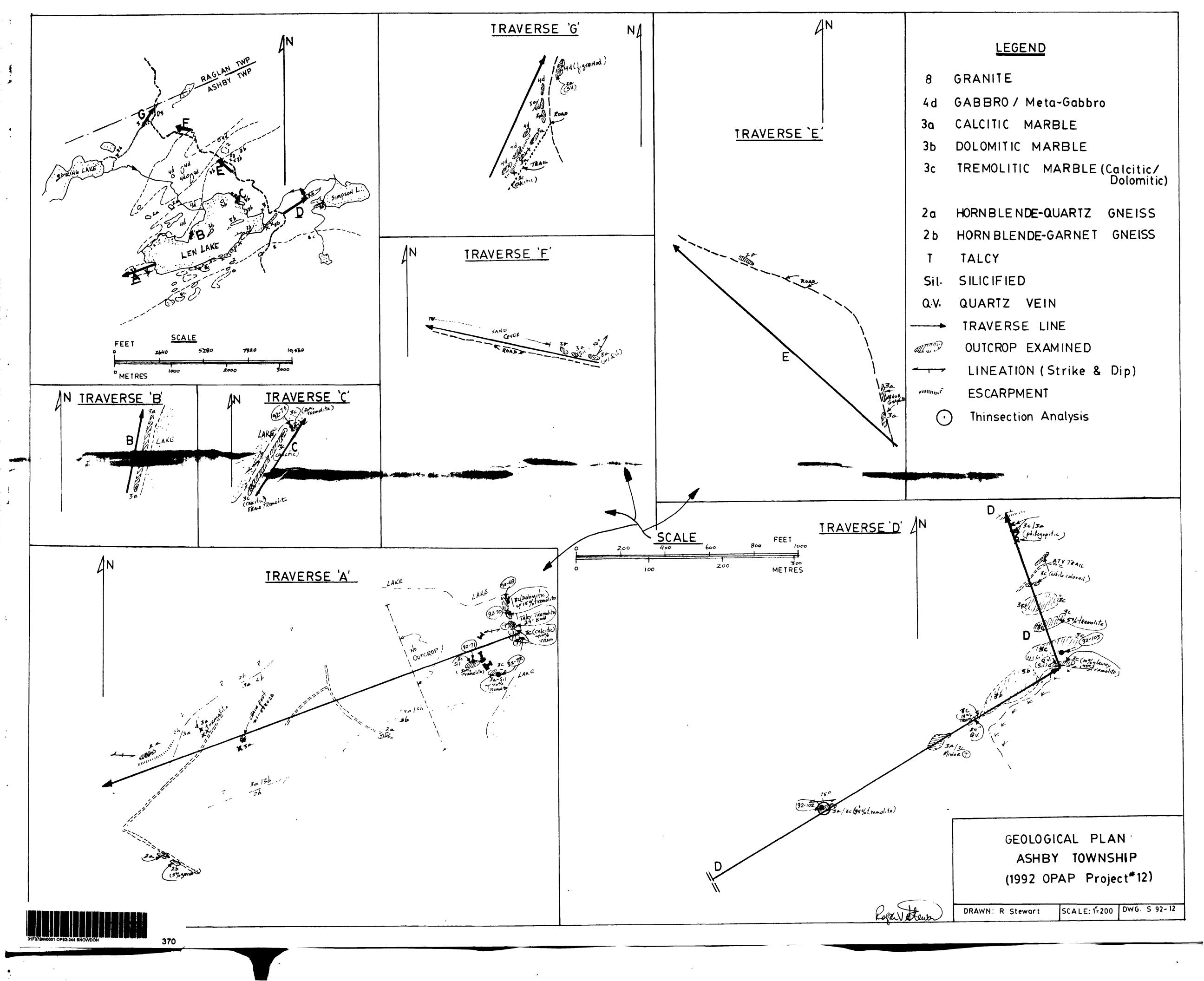


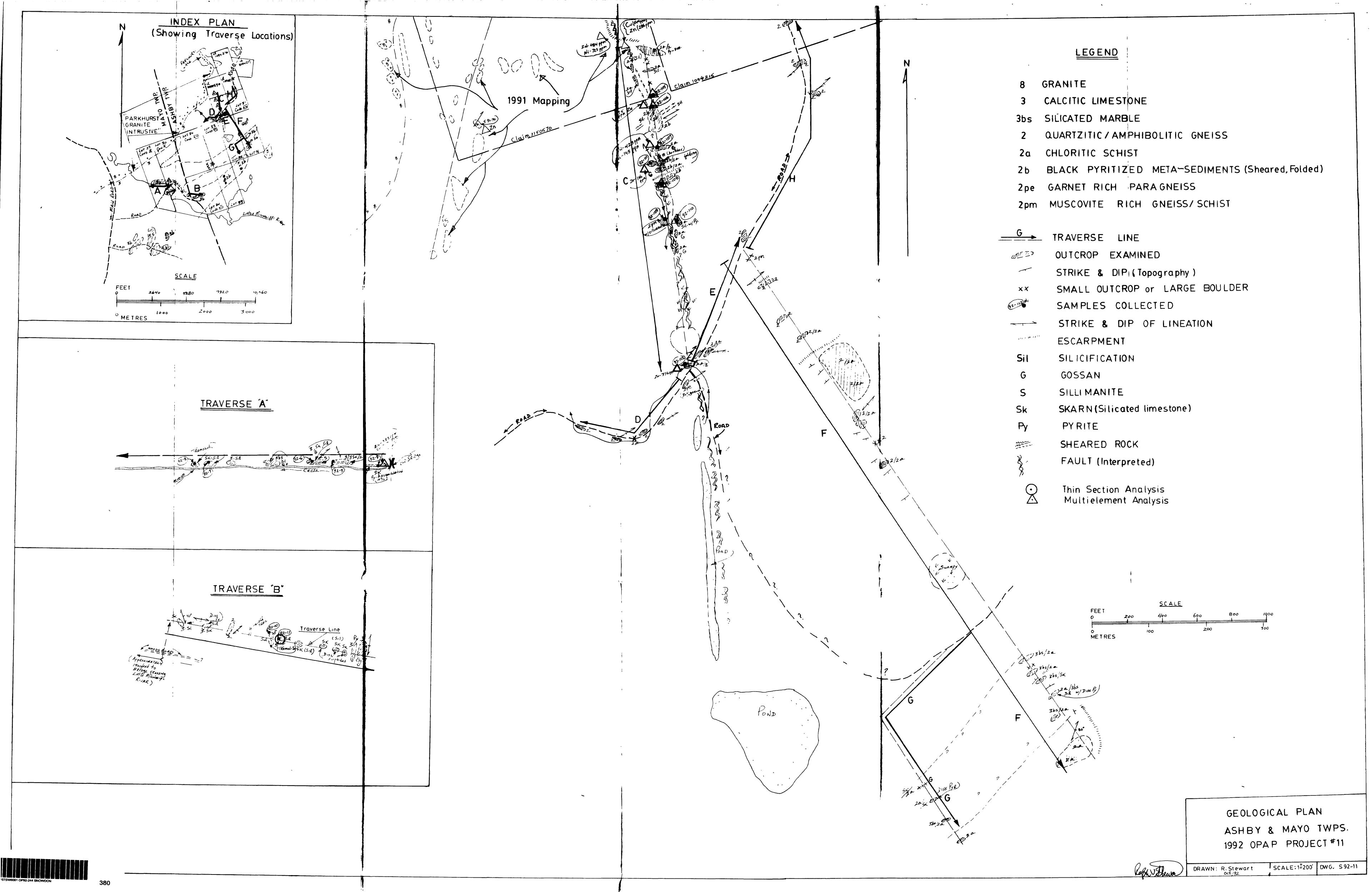


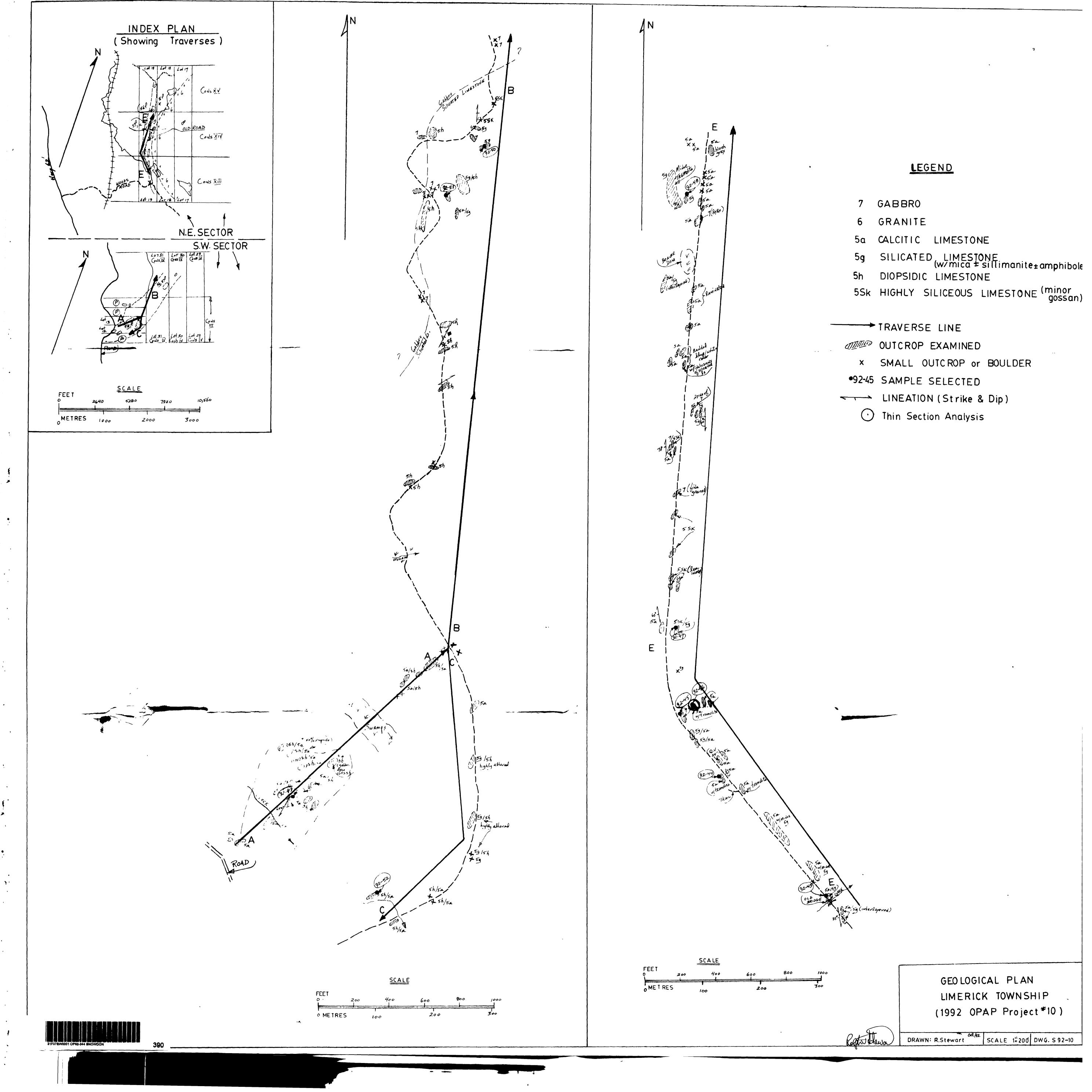


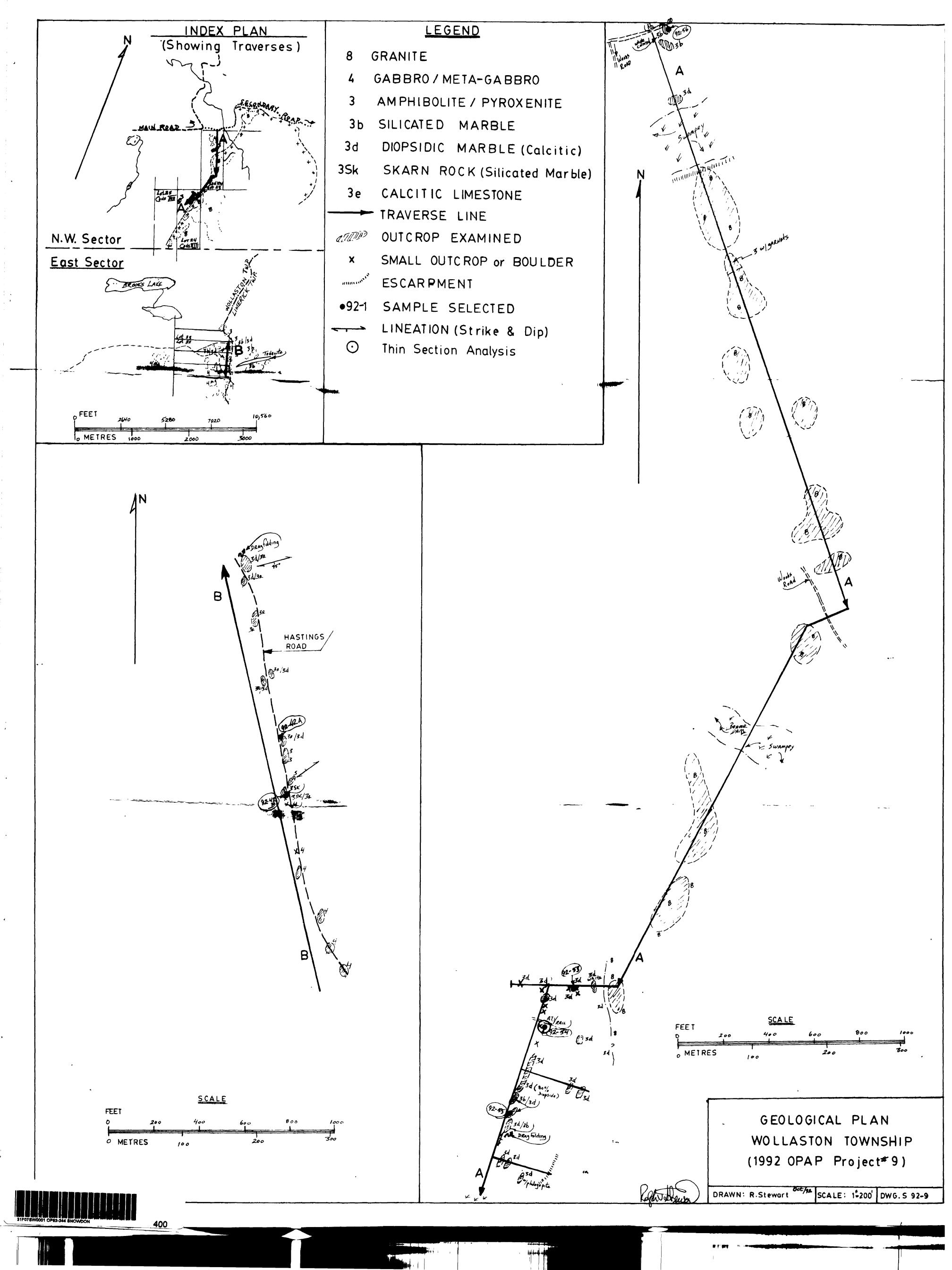


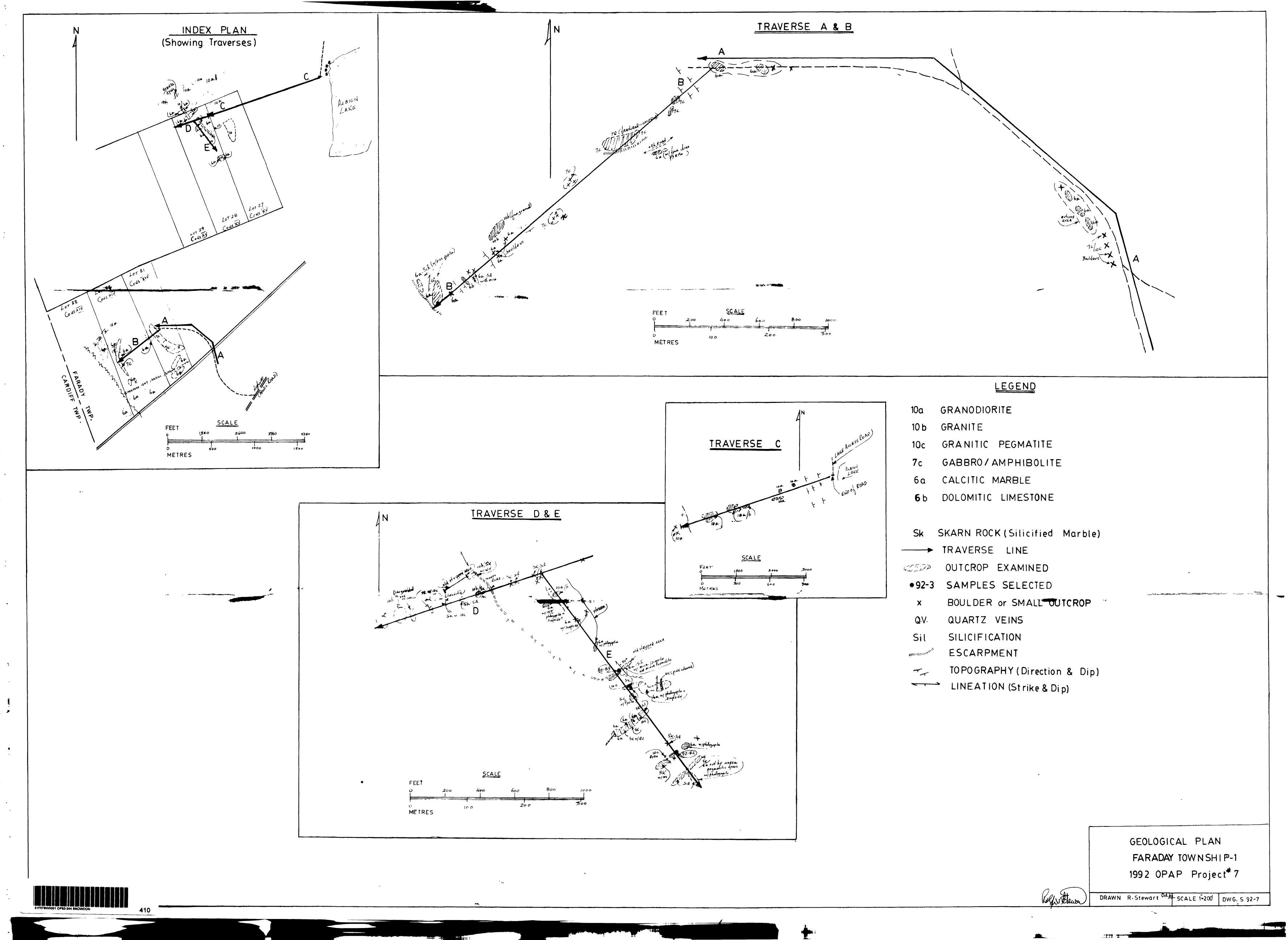


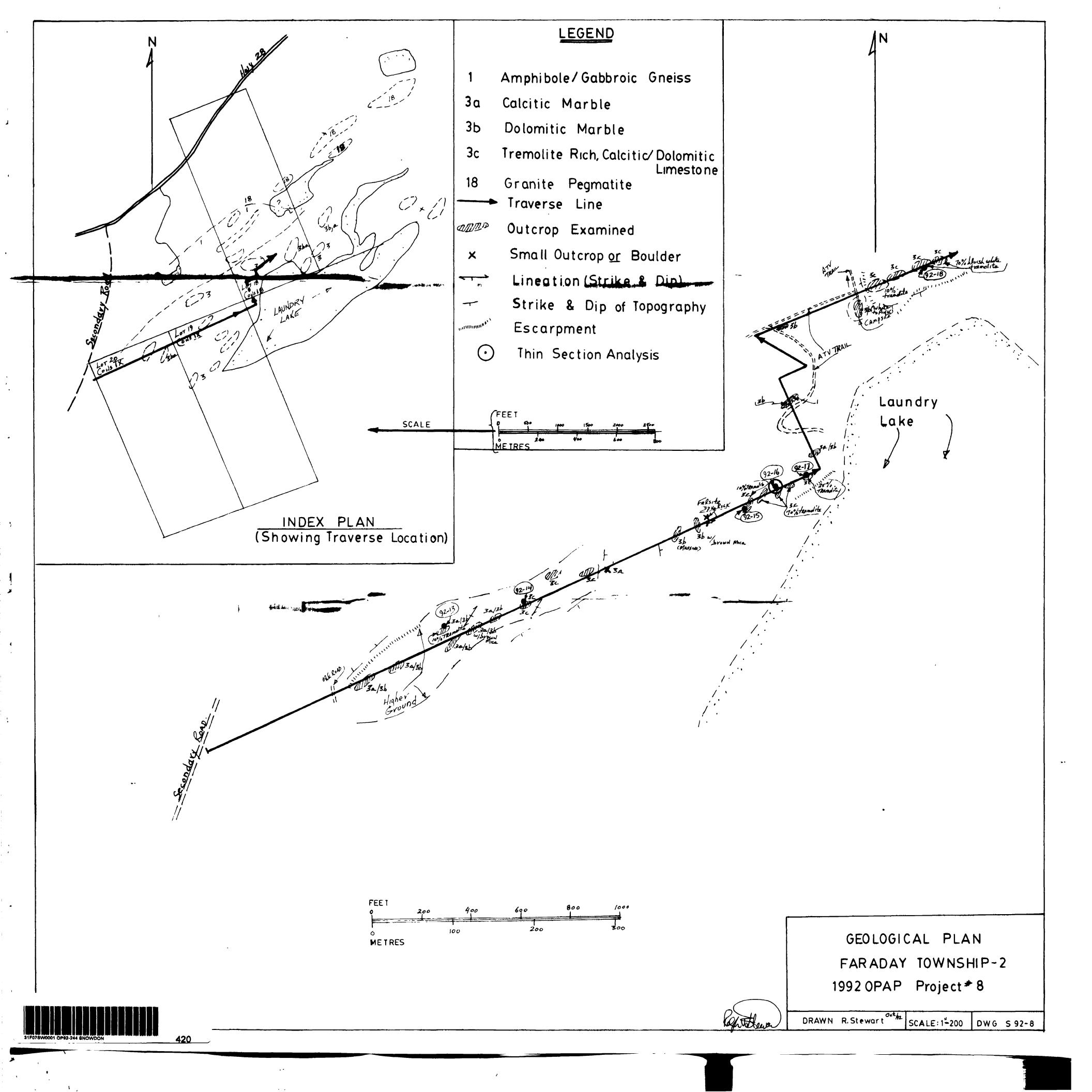


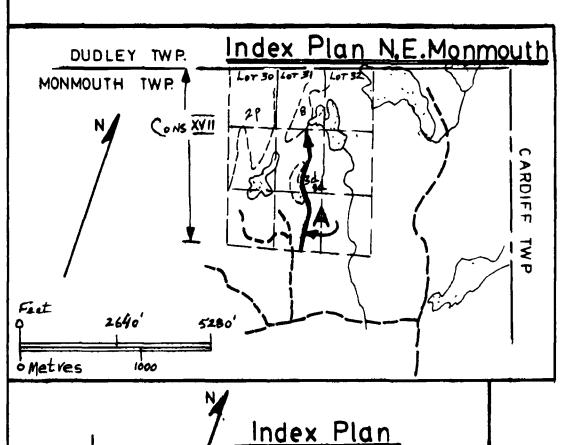


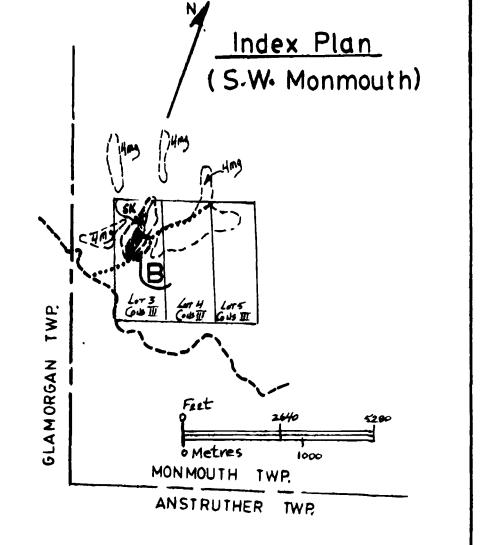












LEGEND

Granitic Rocks

4mg Meta Gabbro

- Calcitic Limestone
- ³3d Diopsidic Marble
- 3 Sk; Skarn (Contact Rock)

Traverse Line

COMIGO Outcrops Examined

• 92-20 Sample Selected

Strike & Dip (Lineation)

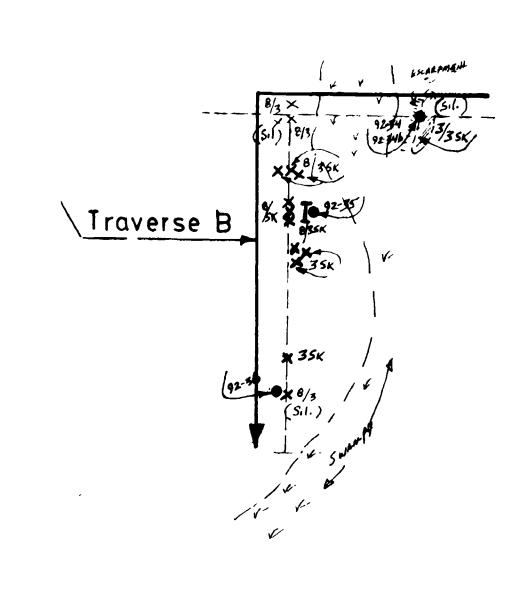
Old Trench

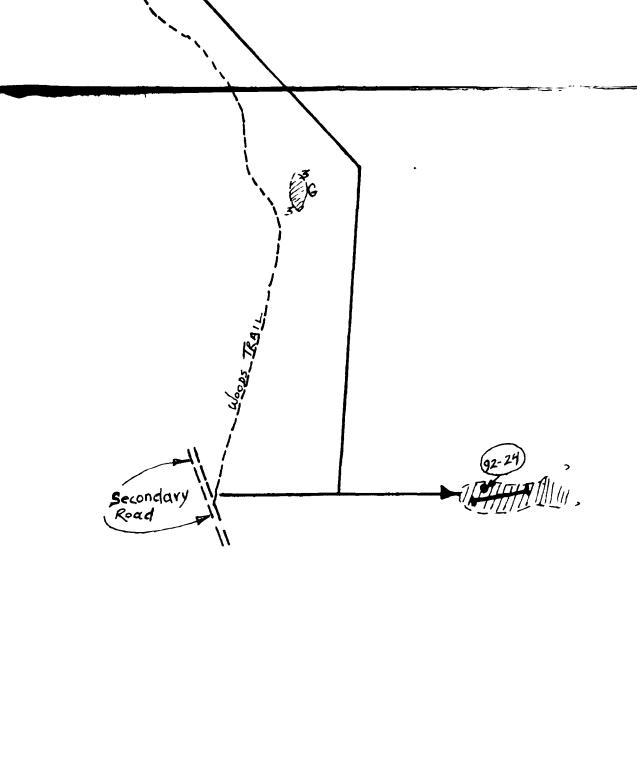
Small Outcrops)

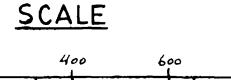
Gossaned

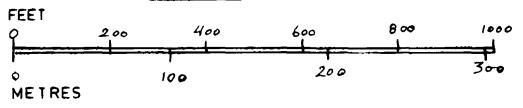
Silicification Sil

Multielement Analysis







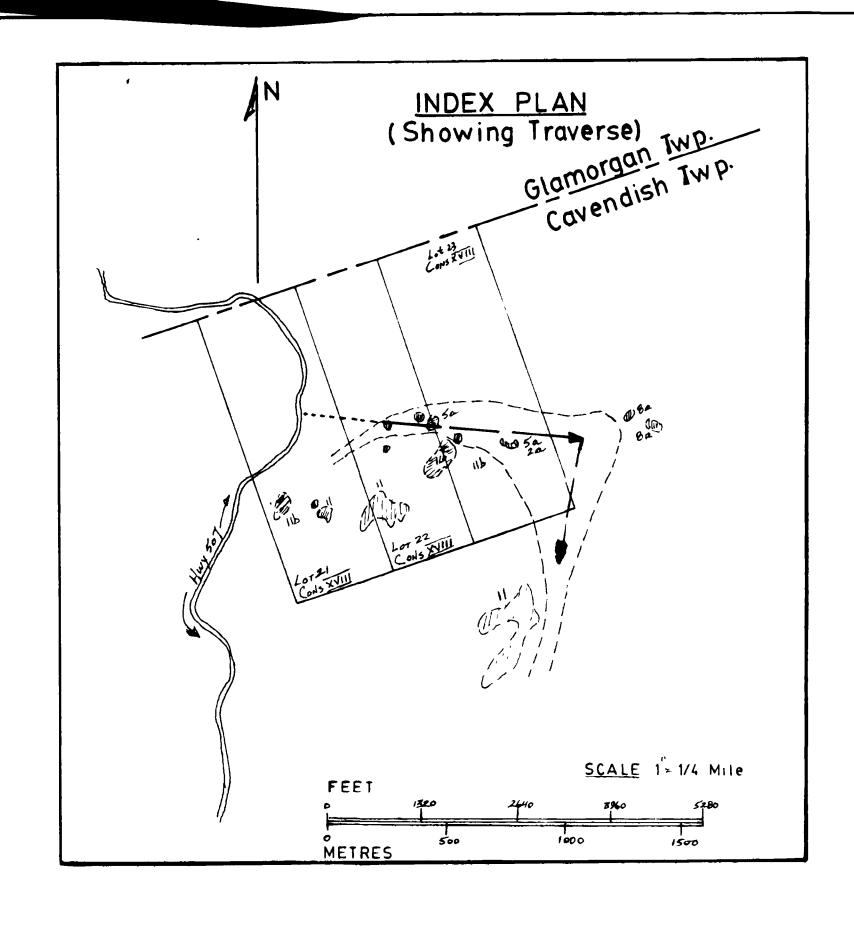


GEOLOGICAL PLAN Monmouth Township (1992 OPAP Project #6)

Traverse

DRAWN: R.STEWART

SCALE 1-200 Dwg S 92-6



440

LEGEND

Skarn (Silicated Contact/Dolomite-Granite) Granite/Granodiorite 8a-Gabbro or Granodiorite Meta-Volcanics (felsic) Meta Volcanics (mafic) Siliceous Dolomite 5**b** Dolomitic Marble trem Tremolite Pyrite Py Traverse Line Comment of Outcrop Examined 92-4 Sample Selected X Small Outcrop or boulder

