

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED
WEST COAST DEPARTMENT

GEOLOGICAL REPORT
on
COLEBROOK PROSPECT – SPL 302

By
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June 1958

401 1

02_4676

AMG REFERENCE POINTS ADDED

TT26

REPORT ON COLEBROOK COPPER PROSPECT

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L I S T O F P L A T E S

Plate 1	Locality Plan, Colebrook Copper Prospect, Scale 1" = 20 chains.
2	Plan RL 1600' and above " 1" = 100 ft.
3	Plan RL 1500-1600' " 1" = 100 ft.
4	Plan RL 1400-1500' " 1" = 100 ft.
5	Plan RL 1350-1400' " 1" = 100 ft.
6	Plan RL 1300-1350' " 1" = 100 ft.
7	Plan RL 1250-1300' " 1" = 100 ft.
8	Cross Section 5350N looking North Scale 1" = 100 ft.
9	Cross Section 5450N looking North " 1" = 100 ft.
10	Cross Section 5525N looking North " 1" = 100 ft.
11	Cross Section 5850N looking North " 1" = 100 ft.
12	Cross Section 5900N looking North " 1" = 100 ft.

Advance Summary

Approximately 12,000 tons of 1% copper mineralisation is present in the Colebrook Copper prospect. Downward continuation of the copper mineralisation is possible at the limited rate of 200 tons per vertical foot. The copper is present as Chalcopyrite, closely associated with Arsenopyrite and Pyrrhotite in short, cross-fault controlled bodies associated with more extensive gangue zones. The host rocks are silicified slates and are not highly favourable to the development of large replacement type ore bodies.

Location

Colebrook Prospect is approximately $2\frac{1}{2}$ miles west south west of Rosebery in a direct line. At 3.6 miles from Rosebery along the Zeehan road a walking track commences and rises 1300 ft. in approximately one mile, to the summit of Colebrook Hill (see Plate 1.) The workings are on the hilltop and extend down either side of it for distances of up to 800 ft.

History

The Waller Report of 1902 indicates that the majority of the workings were opened up by the Colebrook Prospecting Association NL prior to that date. Only minor production of ore took place and the workings were extensively sampled by the Association in 1908. Interest in the area was renewed by the location of an Airborne E.M. Anomaly in 1956.

Geology

The host rock for the mineralisation is a series of slightly calcareous sediments - predominantly sandstones with subordinate shales and greywackes. As they are located well to the west of the Rosebery host rocks they fall lower in the Dundas group of sediments.

In general the beds strike 355° Rosebery grid and dip 85° west. The boundaries between the various rock types are not sharply defined and in the vicinity of the workings the sediments have been strongly silicified. Some distance to the west of the prospect a 60-100 ft. wide basic dyke (now serpentinitised) has been reported. This has not been located in the immediate vicinity of the prospect, but was mapped on the road north of the commencement of the access track (see plate 1.)

Mineralisation

Large gangue zones have been mapped (see plates 2 - 4) These zones appear to follow the bedding except where cross-faulting is strong and are the result of the alteration of calcareous and siliceous beds by fluids rich in Al_2O_3 , Fe_2O_3 and $MgFeO$. This alteration has given rise to deposits of :-

Actinolite	2 CaO.	5MgFeO.	8 SiO ₂ .	2H ₂ O
Axinite	7 CaO.	Fe_2O_3 .	2 Al ₂ O ₃ .	8 SiO ₂ .
Datolite	2 CaO.	Fe_2O_3 .	2 Si O ₂ .	H ₂ O
Danburite	CaO.	Fe_2O_3 .	2 Si O ₂ .	

Within and marginal to the gangue zones are irregular shaped bodies of sulphide minerals. These are more or less truncated (as are the gangue zones) by crossfaulting at their northern extremities (see plate 2 in Blocks 55N 48E - 55N 50E and plate 4 Blocks 58N 51E.) The sulphides are predominantly pyrrhotite with minor arsenopyrite, pyrite and chalcopyrite.

Sulphides were mapped in the following areas :- (see plates 2 - 7) West open cut, B trench, 150 ft. level east, C tunnel, C 26 adit, No. 2 adit and B bench. The only sulphide body of notable dimensions is intersected by C 26 adit and C tunnel where a zone up to 50 ft. wide by 50 ft. maximum length was mapped. This zone is the location of the Airborne E.M. Anomaly (see plates 5, 6, 11 and 12.)

Ore Control

It seems certain that both gangue and sulphide minerals were introduced along well developed crossfaults striking 70° Rosebery grid and dipping 85° North. Subordinate faults of variable trend have assisted the mineralising solutions in their replacement of more favourable beds. It is notable that gangue or sulphide mineralisation is not apparent anywhere but in faulted areas.

Grade and Tonnage

The only sulphide body of interest is intersected by C 26 adit and C tunnel (see plates, 5, 6, 11 and 12). This block contains a maximum of 12,000 tons of sulphides. Based on the Colebrook Prospecting Association's sampling of C tunnel

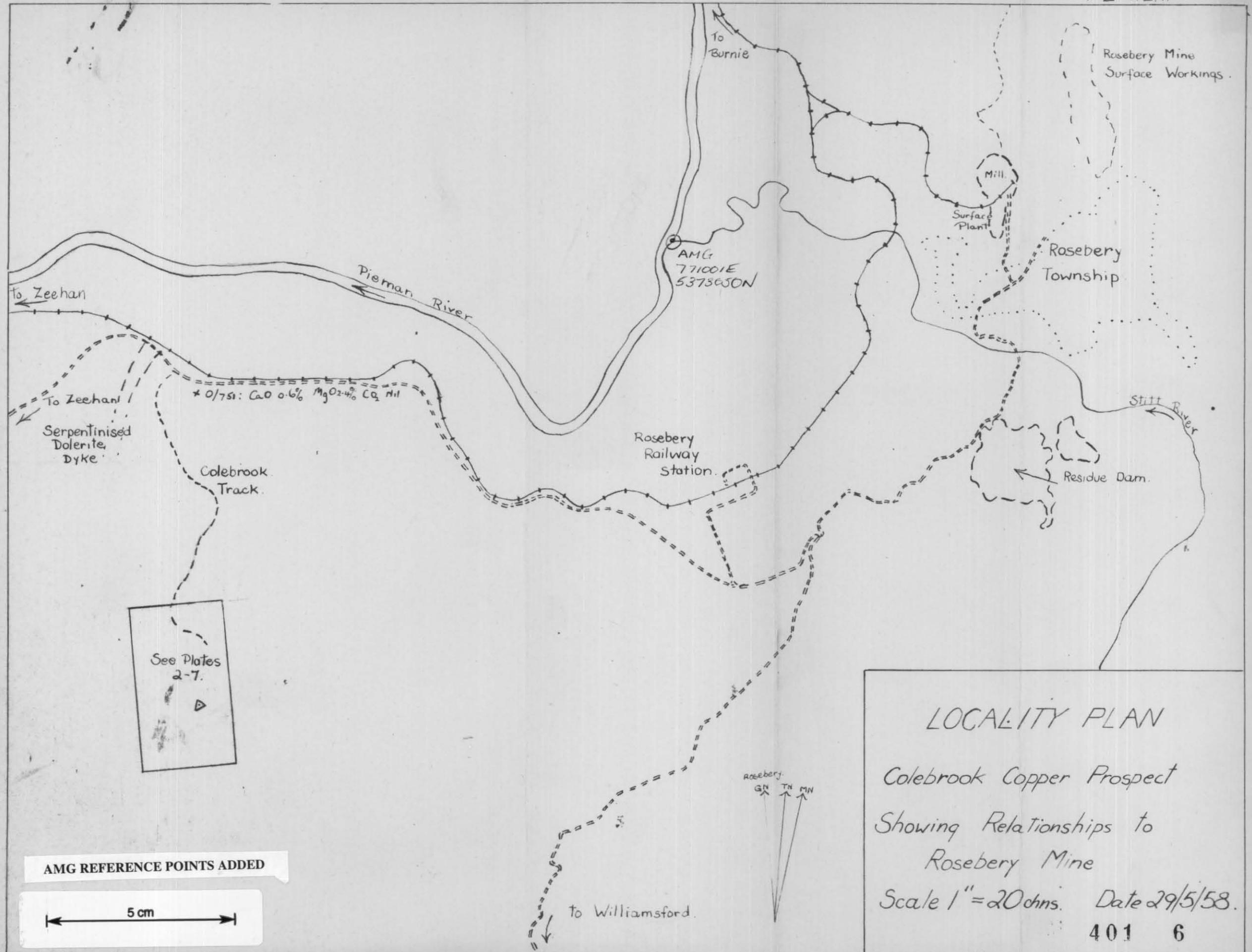
the average copper content of this body is 1.2%. A chip sample across 12 ft. of massive sulphides in C 26 adit confirmed this figure with a value of 1.1% copper (see 0/753 shown on Plate 6). This occurrence indicates that a maximum of 200 tons/vertical foot containing 1% copper is the best the prospect is likely to produce. Traces only of tin mineralisation are present - sulphides assayed 0.12% Sn and gossans 0.02 - 0.05% Sn (See plates 3 & 6)

Conclusion

In view of the relatively small tonnage of sulphide mineralisation, its low content of copper and tin, and also the fact that faulting - limited to a small area - is the major ore control, it is recommended that further testing of this prospect is not warranted.

Acknowledgement.

The writer wishes to acknowledge data included in this report which has been derived from the 1902 Report of Waller and mapping carried out by student geologists during the 1956-1957 field season.



AMG
771001E
5373650N

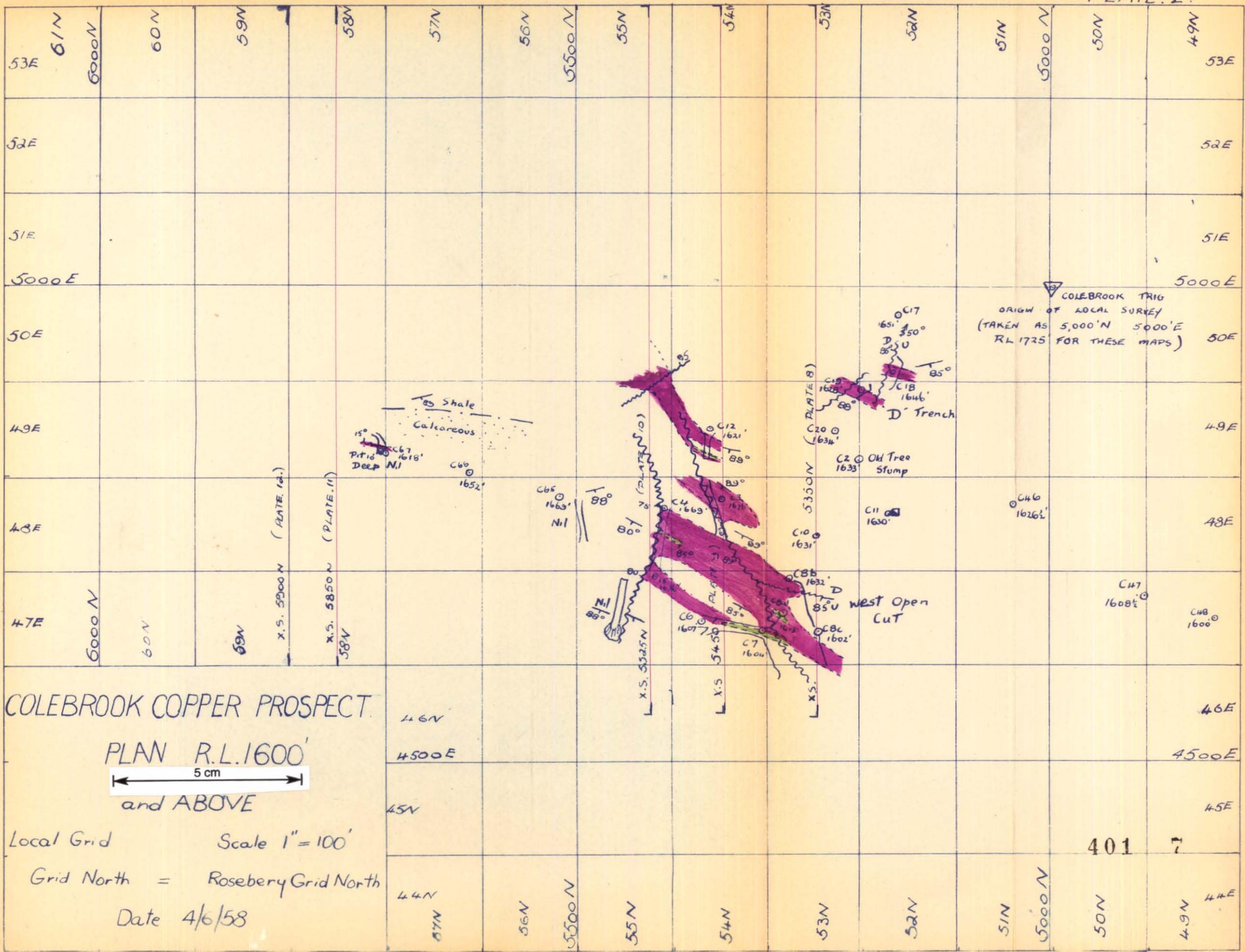
* 0/751: CaO 0.6% MgO 2.4% CO₂ Nil

See Plates
2-7.

AMG REFERENCE POINTS ADDED

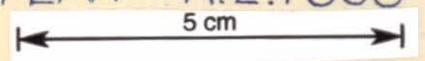
5 cm

LOCALITY PLAN
 Colebrook Copper Prospect
 Showing Relationships to
 Rosebery Mine
 Scale 1" = 20 chns. Date 29/5/58.
 401 6



COLEBROOK COPPER PROSPECT.

PLAN R.L. 1600'

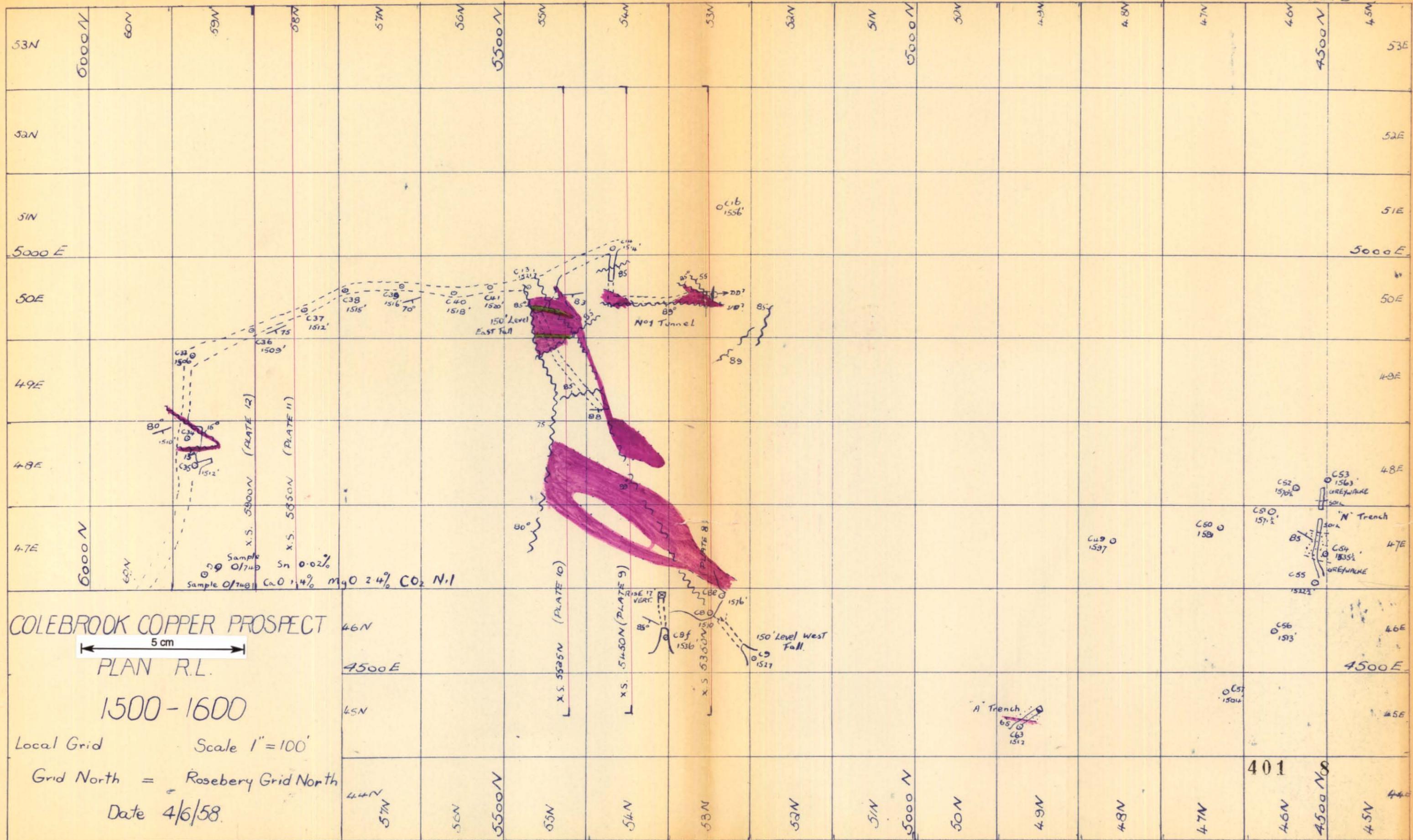


and ABOVE

Local Grid Scale 1" = 100'

Grid North = Rosebery Grid North

Date 4/6/58



COLEBROOK COPPER PROSPECT

5 cm

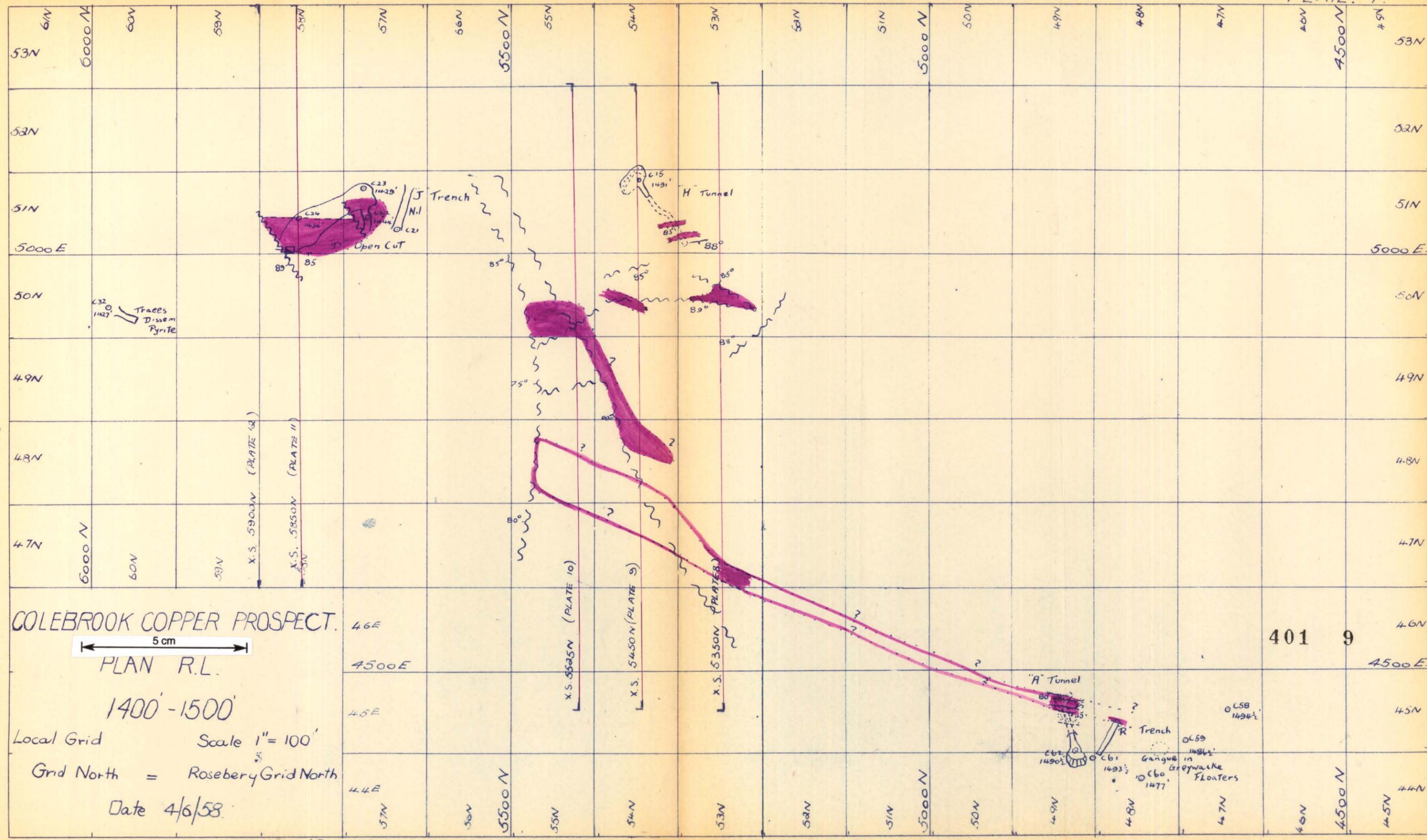
PLAN R.L.

1500-1600

Local Grid Scale 1" = 100'

Grid North = Rosebery Grid North

Date 4/6/58.



COLEBROOK COPPER PROSPECT.

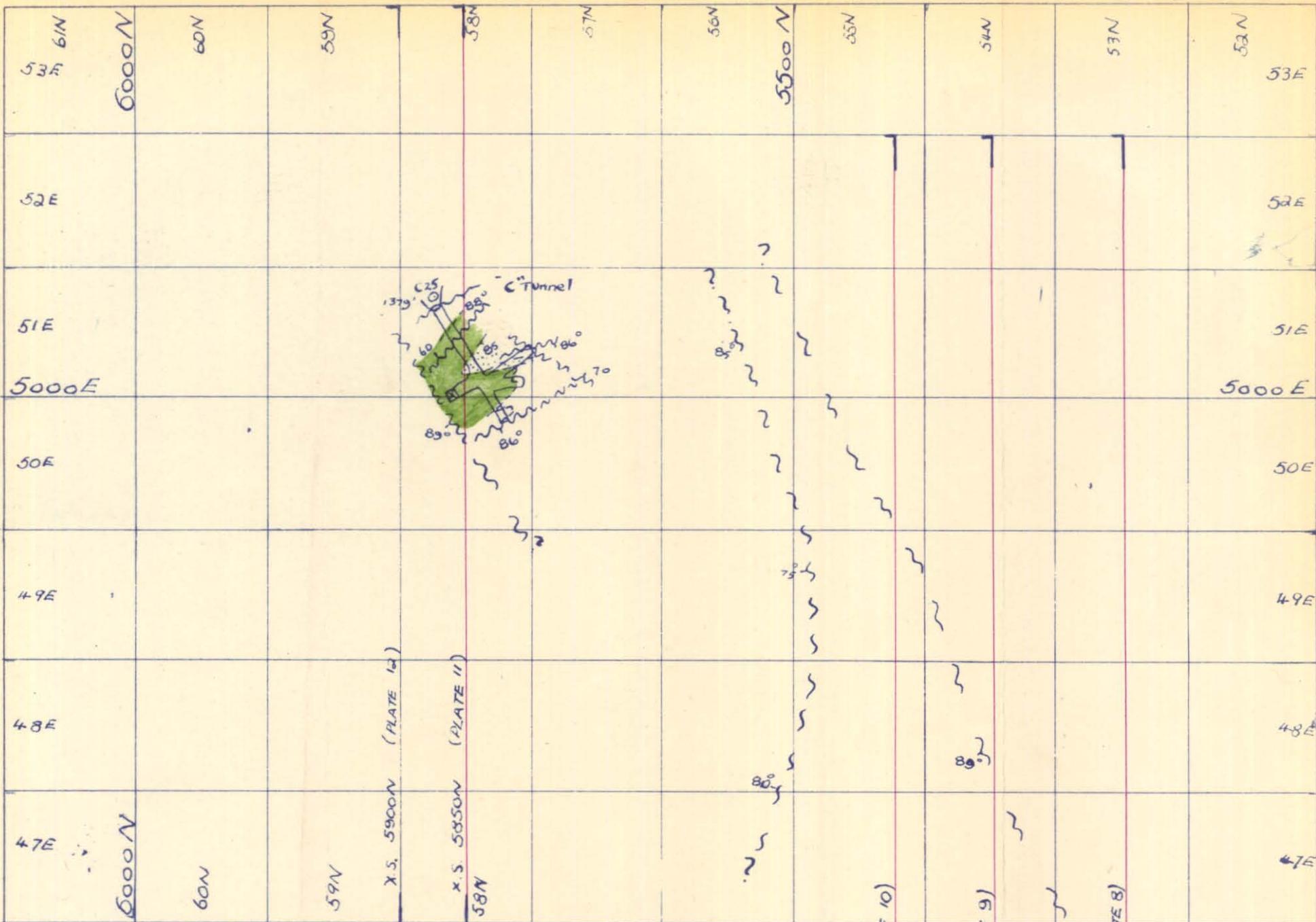
5 cm

PLAN R.L.

1400' - 1500'

Local Grid Scale 1" = 100'
Grid North = Rosebery Grid North

Date 4/6/58.



COLEBROOK COPPER PROSPECT

PLAN R.L. 401 10

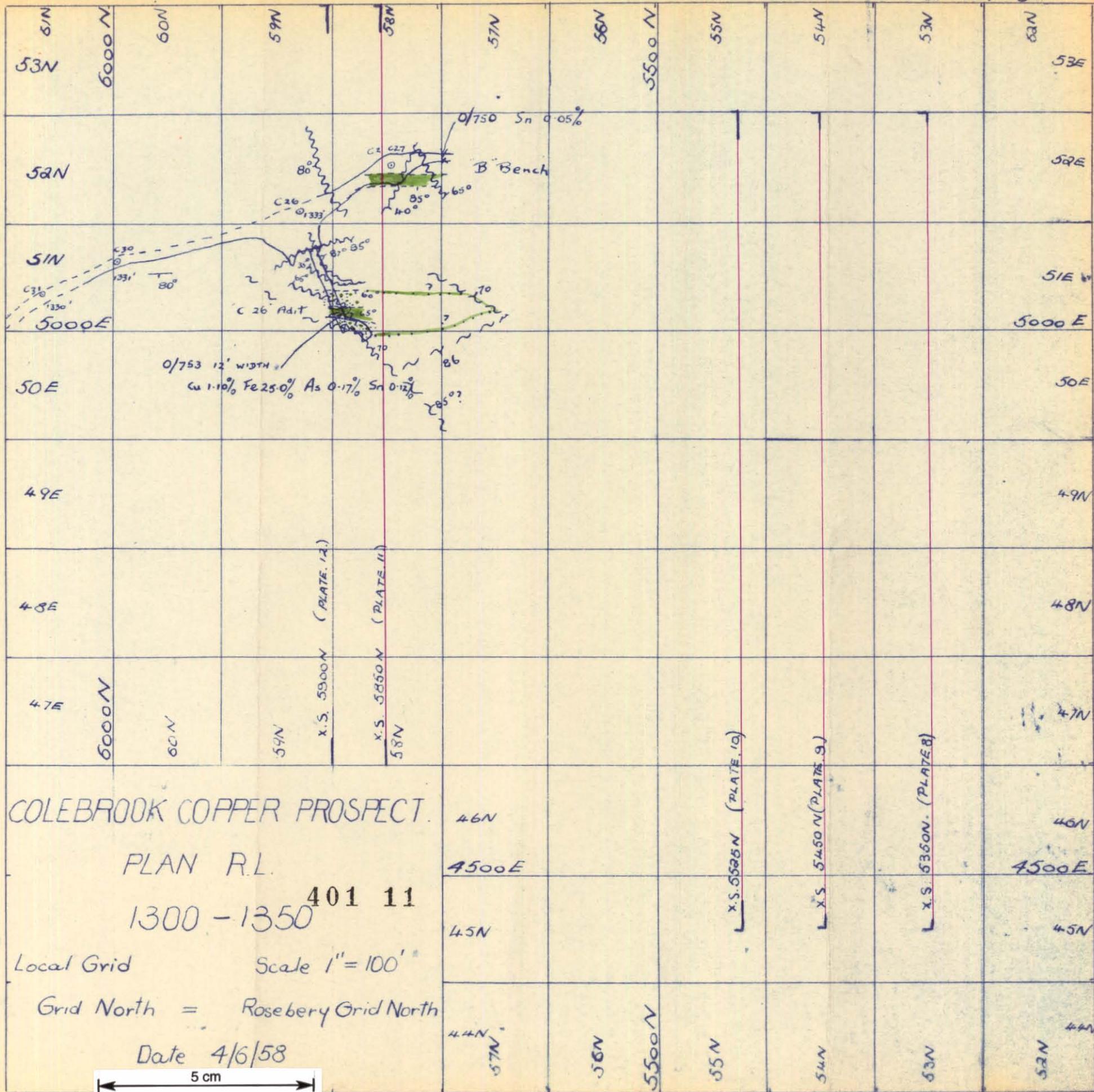
1350'-1400'

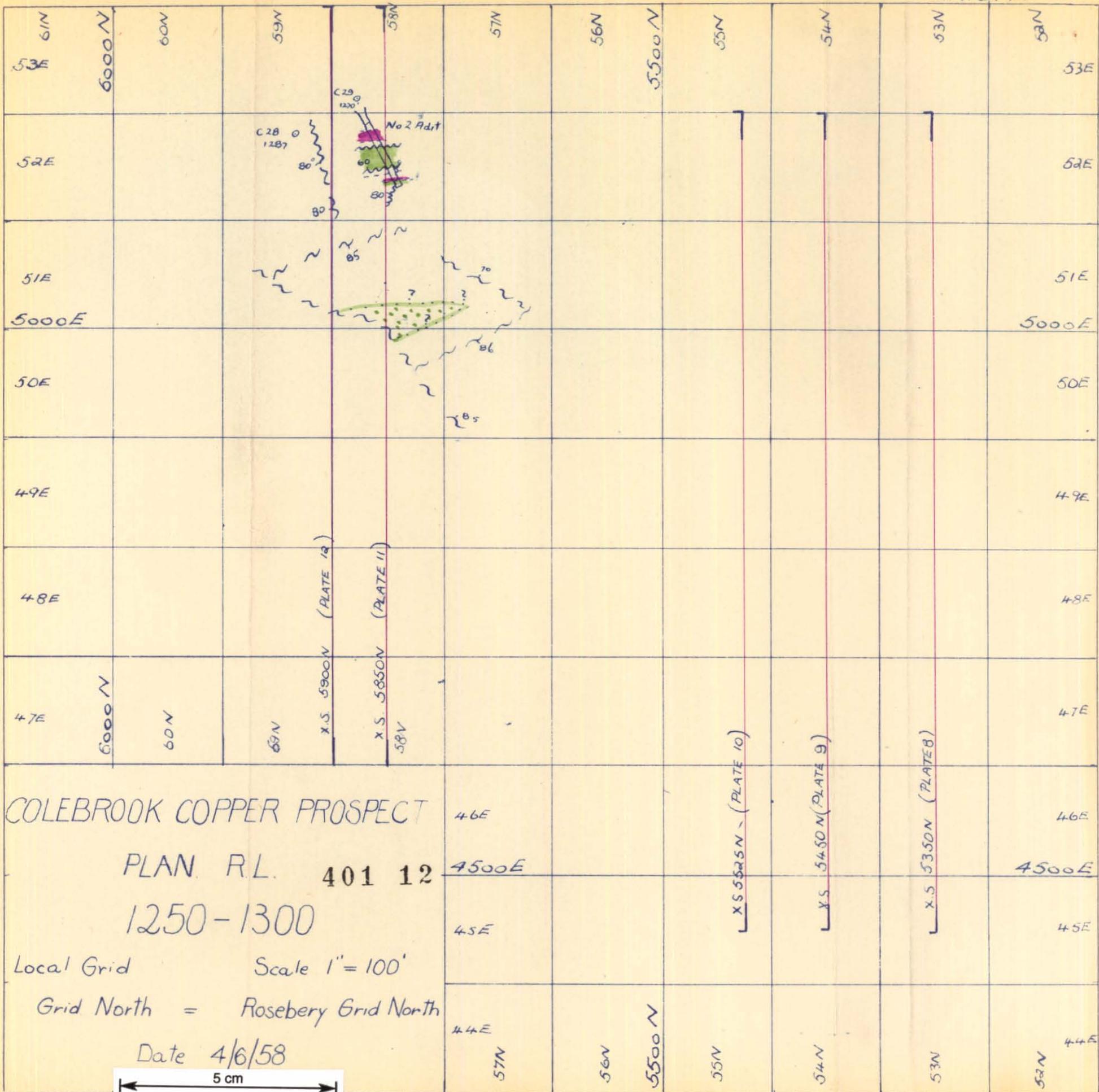
Local Grid Scale 1" = 100'

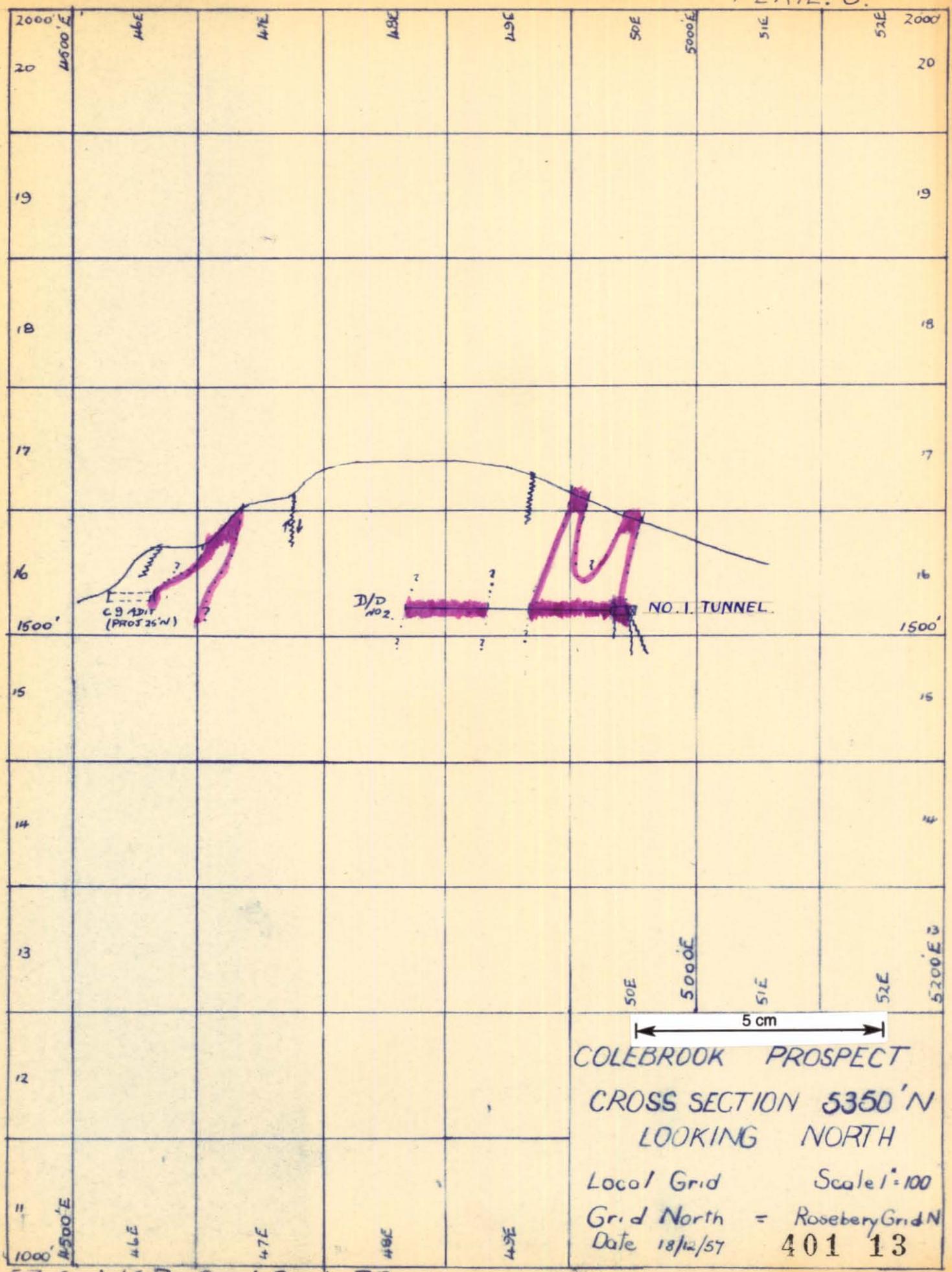
Grid North = Rosebery Grid North

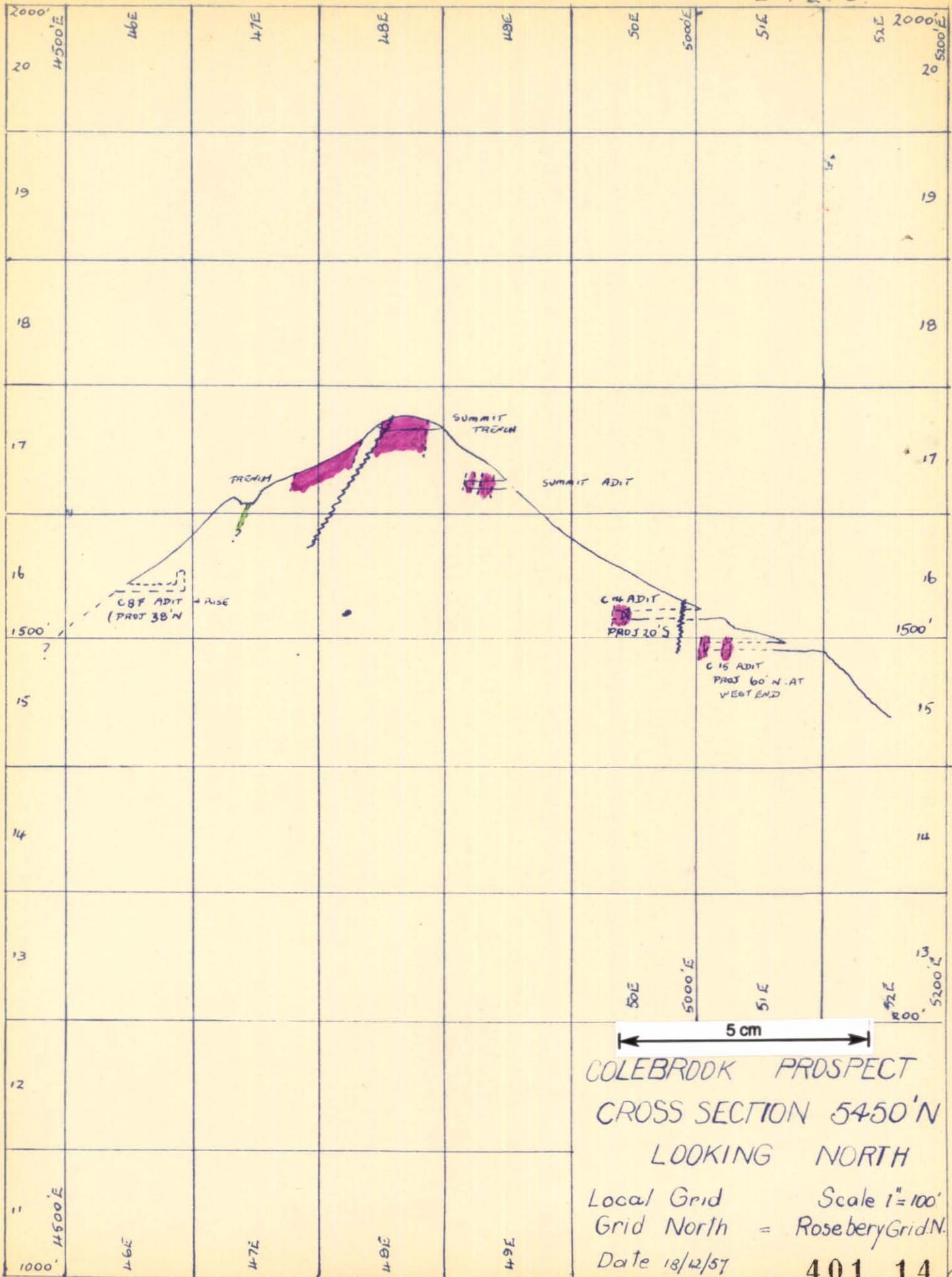
Date 4/6/58.

5 cm



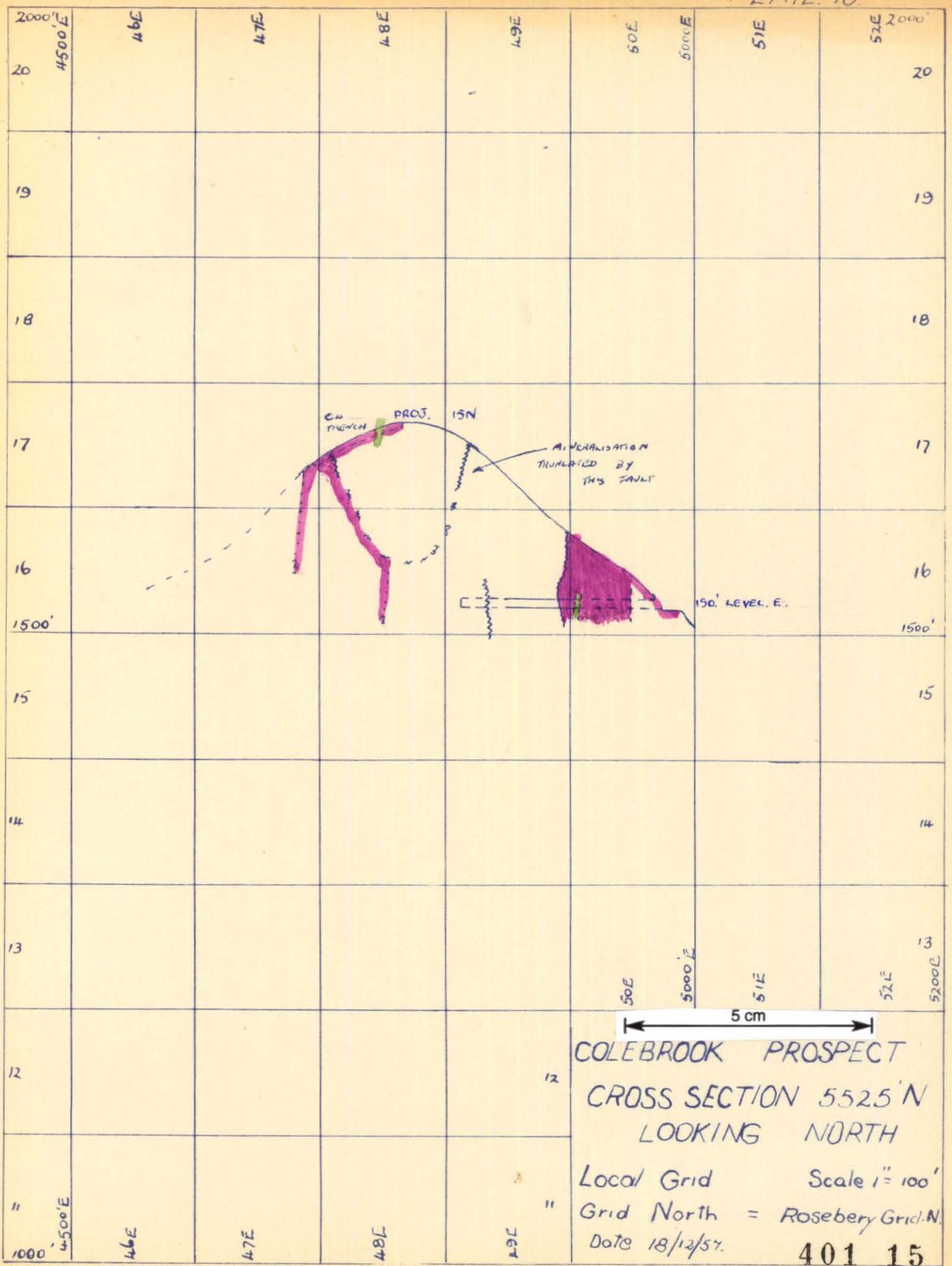


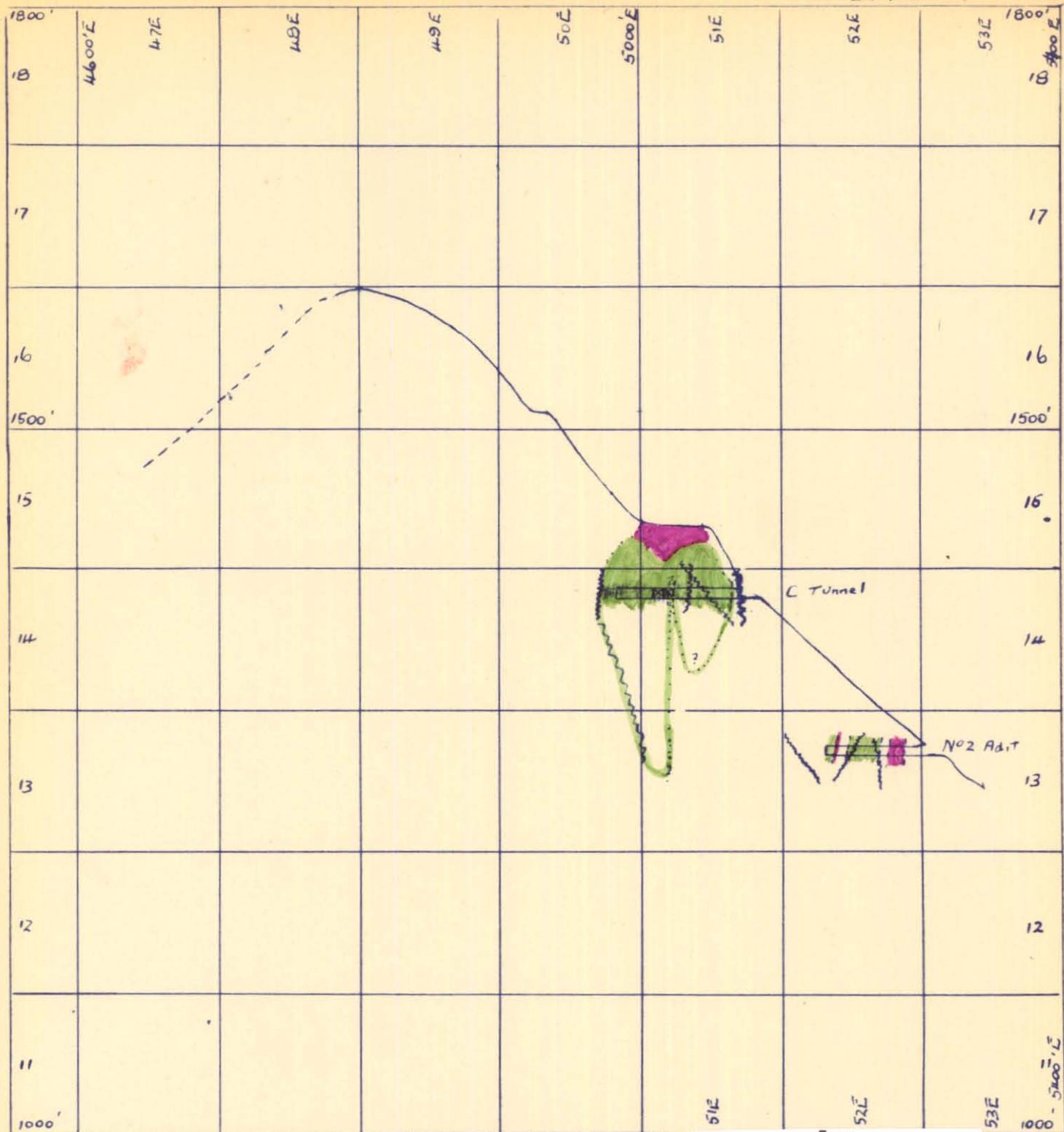




COLEBROOK PROSPECT
 CROSS SECTION 5450' N
 LOOKING NORTH

Local Grid Scale 1"=100'
 Grid North = Rosebery Grid N.
 Date 18/12/57 401 14

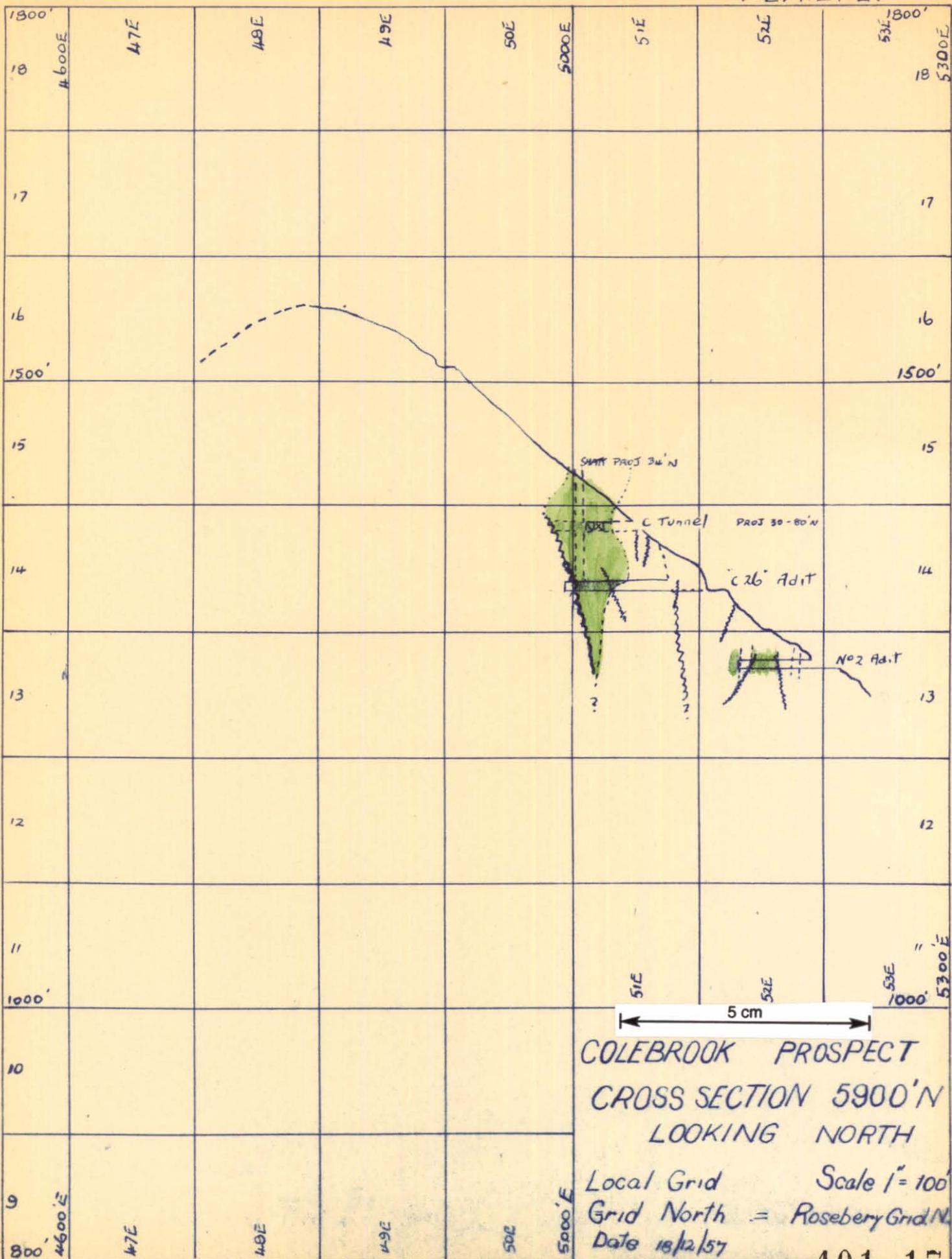




51E 52E 53E 1000' 5400'E
 5 cm

COLEBROOK PROSPECT
 CROSS SECTION 5850' N
 LOOKING NORTH

Local Grid Scale 1" = 100'
 Grid North = Rosebery Grid. N.
 Date 18/12/57. 401 16



COLEBROOK PROSPECT
 CROSS SECTION 5900' N
 LOOKING NORTH

Local Grid Scale 1" = 100'
 Grid North = Rosebery Grid N
 Date 18/12/57