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FILE

MEMORANDUM

DATE: October 28, 1986

À TO: L. D. Pirie

824640

COPIES À COPIES TO: A. J. Davidson

DE FROM: G. S. Wells

SUJET SUBJECT: Rea Gold Silver Zone: September - October 1986 Drill Program

Introduction

Twelve diamond drill holes totalling 3253.4 meters (10,671 feet) tested the strike and down-dip extent of the Silver Zone which was discovered earlier in 1986. The drilling was done by G & D Drilling Ltd. of Kamloops during the period: September 12, 1986 to October 26, 1986. Field copies of the drill sections at a scale of 1:500 have been completed. Assay data is still awaited for holes RG-87 and RG-88.

Results

Zones of significant mineralization that were intersected in holes for which assays are available have been compiled in Table 1.

Holes RG-78, 79, 80 and 81 tested the southeastern extent of the Silver Zone. Weakly mineralized zones with sub-economic grades are present in each of the holes. The best assay was obtained from a sulphide-bearing chert which stratigraphically underlies the Muddy Tuff unit in hole RG-79 (Table 1). In hole RG-81, thin, semi-massive pyrite zones which are proximal to a dextral, southwesterly dipping fault are slightly enriched in precious metal contents (Table 1).

Hole RG-82 and RG-77 tested the down-dip potential of mineralization encountered in RG-75 (i.e. 0.68% Cu, 2.99% Pb, 4.46% Zn, 332 g/T Ag, 0.46 g/T Au over 4.24m; and 3.43% Cu, 2.48% Pb, 4.68% Zn, 1415 g/T Ag, 3.60 g/T Au over 0.30m). The best value obtained in RG-82 occurs within the Muddy Tuff at the contact with a chert and sericitic tuff unit. At the same stratigraphic level in RG-77 which is 65 meters down-dip, only anomalous metal values are present. However, near the stratigraphic top of the Muddy Tuff, siliceous areas with higher metal contents are present (Table 1).

Hole RG-85, which tested the Silver Zone 100 meters to the northwest of RG-77, intersected 11.05 meters of massive sulphides. Pyrite, which was the primary sulphide, exhibits a frambroidal texture locally. In addition, the sulphides are weakly bedded. Although the sulphide zone has modest zinc and lead values, the precious metal content is sub-economic (Table 1). The Muddy Tuff which occurs stratigraphically below the massive sulphides has mineralized (sph, tet, gal) siliceous areas with low but anomalous metal values.

Hole RG-86 tested the down-dip (75m) potential of the massive sulphide zone intersected in RG-85. A weakly mineralized Muddy Tuff unit with anomalous metal values was intersected. No massive sulphides are present.

Holes RG-87 and RG-88 tested the strike extent of the RG-85 massive sulphides. The Muddy Tuff which contains mineralized (sph, tet, gal) siliceous areas is present in both holes but no massive sulphides were intersected. Assays for RG-87 and RG-88 are awaited.

Trenching was done to try and expose the surface expression of the Silver Zone. A well-mineralized quartz vein which occurs immediately above graphitic argillites was uncovered (Figure 1). This vein was exposed in 3 trenches (#3, 4 and 5) covering a strike length of 80 meters. The southeastern-most trench (#3) has a 0.4 meter zone of massive sulphides (gal, sph, cp) which occurs at the contact between the quartz vein and graphitic argillites. Chip sampling of the mineralized zones in each of these trenches yielded the following results:

Trench	Interval (m)	% Cu	% Pb	% Zn	g/T Ag (oz/T)	g/T Au (oz/T)
3	3.1	1.84	17.8	3.3	2854.5(83.0)	4.46(0.13)
4	0.85	4.22	24.9	1.37	8750 (255.0)	11.1(0.324)
5	4.8	1.75	8.65	0.82	2733.5(79.7)	1.64(0.048)

Two short holes, RG-83 and RG-84, tested the extent of the mineralization exposed in these trenches. RG-83, which was drilled beneath trench #5, intersected a zone of quartz veining over 13.4 meters which has high Ag and anomalous Ba values (Table 1). This vein was intersected approximately 60 meters down-dip of the surface showing. Immediately below the quartz-veined zone is a well-defined fault structure which is interpreted to have a shallow southwesterly dip on the drill section. The vein is either not present on the northeastern side of

this fault or it has been displaced significantly to the southwest as it was not intersected in hole RG-73 which tested the Muddy Tuff downdip of RG-83.

Hole RG-84 intersected a wide zone (8.3m) of quartz veining which occurs below a well-defined fault structure. However only 0.3 meters of this quartz vein is well mineralized (Table 1). The zone of quartz veining correlates with the wide quartz vein intersected in the down-dip hole: RG-65.

The Muddy Tuff was intersected in both RG-83 and RG-84 but no mineralization or siliceous zones are present.

Discussion

The Silver Zone mineralization is hosted in the pyritic Muddy Tuff unit and the silver content seems to be directly correlative with the abundance of siliceous patches and quantity of sphalerite, tetrahedrite and galena. Quartz veins also occur in the mafic pyroclastic unit but invariably have low metal contents. The sulphide-rich Muddy Tuff appears to be a favourable site for the deposition of metals carried by these silica-rich solutions.

A similar analogy can be made with some of the richer gold mines in Canada and the U.S.A. The Lupin mine, Homestake mine and Agnico-Eagle's Joutel mine are all gold deposits hosted within sulphide-rich iron formations (pyrite and/or pyrrhotite). Each has an abundance of quartz and/or carbonate vein material within the iron formation where there is significant gold mineralization. Although the gold is generally associated with the sulphides rather than the veins, one of the current theories is that the veins are the remnants of solutions which carried the gold. It is deposited with the sulphides due to the reducing environment present.

The graphitic argillites which immediately overly the quartz vein at the surface showings would also represent a reducing environment. This would explain the high metal content of the showing even though the host rocks are sediments rather than pyritic Muddy Tuff. The high barium content of the quartz veins from the surface showings may be related to the barite horizons located further to the northwest.

It is felt that the silver zone mineralization is due to epigenetic veins. This would help explain the presence of more than one zone within the Muddy Tuff and the limited extent of some of these zones. In addition, tetrahedrite is quite commonly associated with vein-type deposits. The exact timing of the

mineralization is still a matter of debate. Perhaps some Pb or O isotope would help resolve this.

The silica-sericite alteration in the mafic pyroclastics is either associated with quartz-carbonate veining or occurs near the contact with the stratigraphically overlying sediments and/or Muddy Tuff. No cross-cutting alteration zone was intersected during the fall drilling program. The question arises as to whether or not the alteration at the top of the mafic pyroclastics is associated with a hydrothermal system or is a seafloor weathering phenomenum. If the answer is the former hypothesis then the location of the center of the hydrothermal system may help lead us to the "mother lode".

Recommendations

Additional drilling is required to fill in the gaps between the known Silver Zone intersections. This drilling will also help determine the continuity of the mineralization in the Muddy Tuff.

A series of shallow holes spaced at 30 to 50 meter intervals in the plane of the vein is also recommended to evaluate the down-dip and strike extent of the quartz vein exposed at the surface showings. The quartz vein is not exposed and unexplored to the northwest and drilling is also required between the surface showings (L99NW) and the barite intersections of RC-44 and 45 (L102NW) to see what, if any, relationship there is between the two.

Lastly, in order to get an idea of possible silver "build-ups" and to see what has actually been sampled, it is suggested that all silver assays be plotted on the 1:500 scale sections.

G. S. Wells

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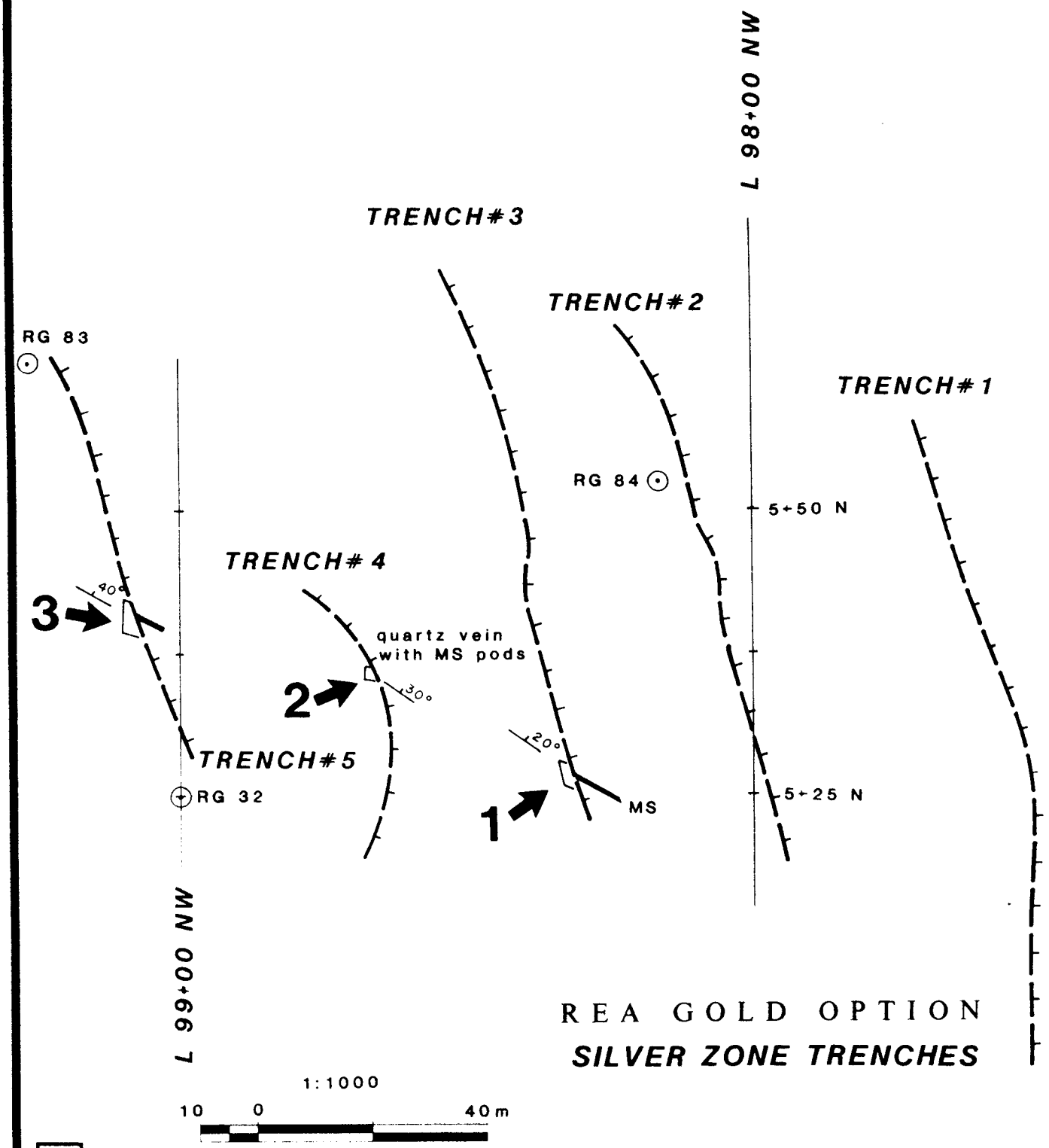
TABLE 1: Zones of Significant Mineralization - Rea Gold Silver Zone

Hole #	Total Depth	Mineralization							Comment
	(m)	% Cu	% Pb	% Zn	g/T Ag	g/T Au	% Ba	Width(m)	
RG-77	346.6	0.11	2.08	4.50	15.5	0.2		2.1	siliceous zone in muddy tuff
		0.027	1.82	3.24	10.4	0.02		0.3	massive pyrite in muddy tuff
		0.43	1.36	3.28	109.6	0.16		3.0	siliceous zone in muddy tuff
RG-78	270.4	no significant values							
RG-79	286.5	1.75	1.16	2.03	125.0	0.38		0.9	sulphide-rich chert
RG-80	242.9	no significant values							
RG-81	311.8				95.6	2.0		0.7	semi-massive pyrite zone in muddy tuff
					32.4	1.49		0.8	semi-massive pyrite zone in muddy tuff
			1.18	1.8	10.8	0.51		1.4	siliceous zone in muddy tuff
RG-82	294.7	1.35	1.28	1.81	450.0	0.28		1.05	siliceous zone at base of muddy tuff
RG-83	96.3	0.46	0.35	0.63	191.1	0.89	0.92	13.4	qtz veins in sediments correlates with trench 5 showing
RG-84	113.7	0.64	0.02	5.01	760.0	1.15		0.3	qtz vein in sediments
RG-85	294.7	0.28	2.6	2.89	43.5	0.34		11.05	massive sulphides
RG-86	358.7	no significant values							
RG-87	360.6	assays awaited							
RG-88	276.5	assays awaited							

AREA	% Cu	% Pb	% Zn	g/T Ag	g/T Au	metres (true width)
1	1.84	17.8	3.3	2855 (83)	4.46 (0.13)	3.1
2	4.22	24.9	1.37	8750 (255)	11.10 (0.324)	0.85
3	1.75	8.65	0.82	2734 (79.7)	1.64 (0.048)	4.8

(oz per ton)



REA GOLD OPTION

SILVER ZONE TRENCHES

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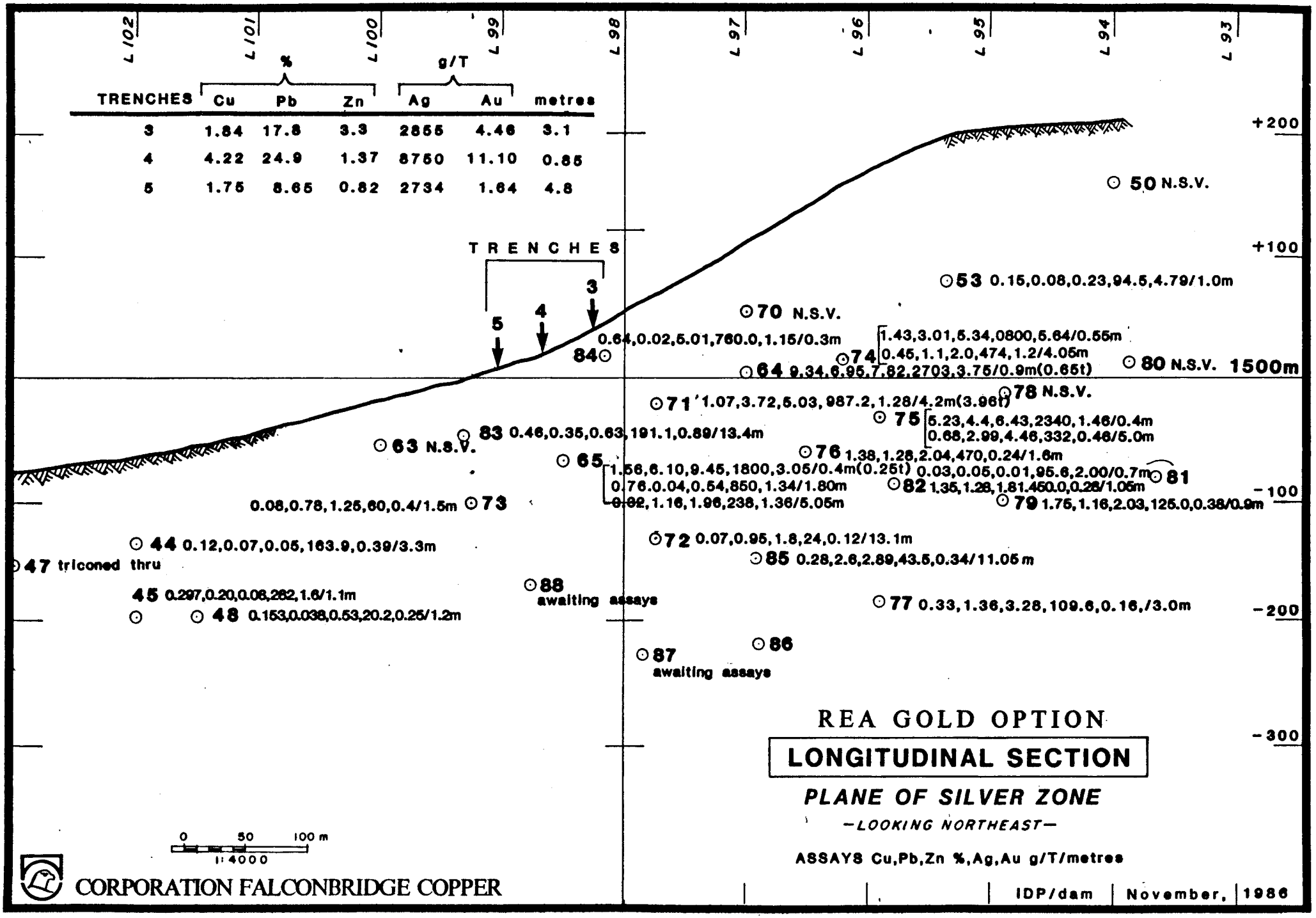

TRENCHES	% Cu	% Pb	% Zn	g/T Ag	g/T Au	metres
3	1.84	17.8	3.3	2855	4.46	3.1
4	4.22	24.9	1.37	8750	11.10	0.85
5	1.75	8.65	0.82	2734	1.64	4.8

REA GOLD OPTION

LONGITUDINAL SECTION

PLANE OF SILVER ZONE

—LOOKING NORTHEAST—

ASSAYS Cu,Pb,Zn %,Ag,Au g/T/metres

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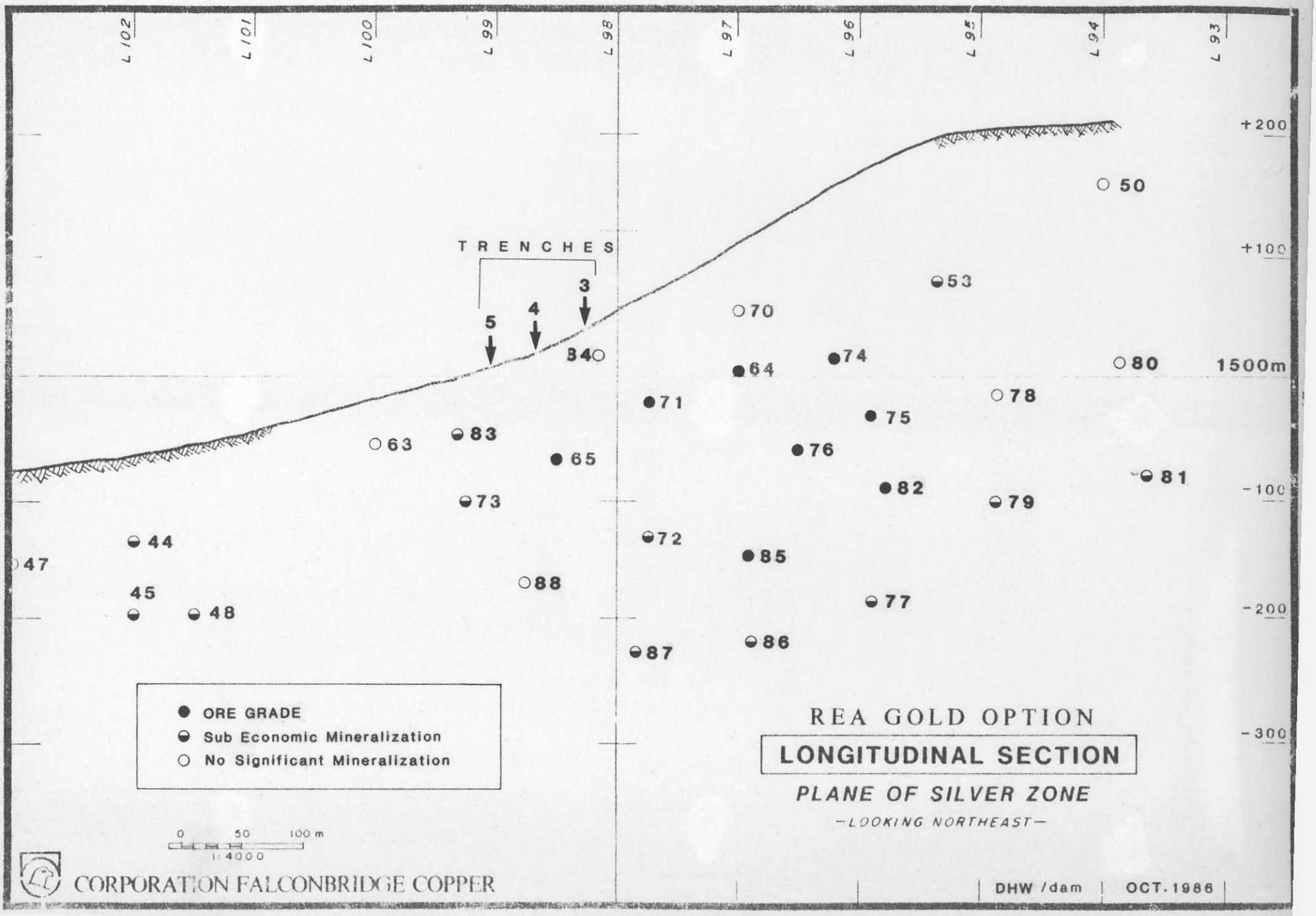
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L 99
L 98
L 97
L 96
L 95
L 94
L 93
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+100
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-100
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TRENCHES
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83
76
65
81
82
73
79
72
44
47
85
88
45
77
48
87
86
ORE GRADE
Sub Economic Mineralization
No Significant Mineralization
0 50 100 m
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REA GOLD OPTION
LONGITUDINAL SECTION
PLANE OF SILVER ZONE
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