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George Addle
Granby Monthly reports
1962 - 1963

August 7, 1963

Mr. P. R. Matthew, Manager

Mr. George Addie, Geologist

Phoenix Field Geology

Most of the month of July was spent mapping the area immediately North and East of the Ironsides Pit. Three interesting observations were made as follows:

1. The Argillite Contact
2. Auriferous Copper Skarn
3. Possible Porphyry Copper and Mineralization Source

1. The Argillite Contact:

The sequence of sharpstone, argillite with pebbles or concretions, aeolian sandstone, and skarn or limestone has been found to be very consistent. The argillite-sandstone together, make an excellent marker horizon. This sequence is present on the footwall of Ironsides and starting at a point approximately 1100' WNW of the Brooklyn Pit and going over 3000' on a bearing of N10°E passing approximately 400' to the West of Marshall Lake. This contact has a decreasing amount of skarn going Northward. It is proposed that this contact is identical to that in the Ironsides Pit. However, there is a separation of 2800' between the end of Ironsides Pit argillite and where it is seen again WNW of the Brooklyn Pit. Probably this is due to a number of faults which have not yet been located.

Conclusion:

Neither the Stenwinder nor Brooklyn-Idaho can be structurally related to the Ironsides (although the mineralization is the same) and that when the fault problem is solved, more of the Ironsides ore will be found.

2. Auriferous Copper Skarn:

L.W. Brock has pointed out in his report of 1902-3 (GSC Vol. 15) that the ores from the North side of the Phoenix ravine has a higher gold content.

At the two pits on the argillite contact to the WNW of the Brooklyn mine, the assays are:

Massive Pyrite Cu Tr
 Ag 0.28 oz/T
 Au 0.135 oz/T

Magnetic skarn Cu 2.15%
 Ag 1.72 oz/T
 Au 0.610 oz/T
 Zn 0.60%

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Phoenix Field Geology (Cont'd)

2. Auriferous Copper Skarn: (Cont'd)

Approximately 700' E of Marshall Lake there is a pit in limestone with some magnetite which assays:

Cu	Tr
Ag	0.40 oz/T
Au	0.190 oz/T
Zn	8.60%

Conclusion:

The Argillite contact pits should be further investigated. As magnetic material is present in both pits, a ground magnetometer survey would probably give a sufficient indication of the size involved.

3. Possible Porphyry Copper and Mineralization Source:

At the Gilt Edge workings there is a fine grain, magnetic granodiorite which has been found to assay:

Granodiorite	Cu	0.52%	Skarn	Cu	0.52%
	Ag	0.12 oz/T		Ag	0.36 oz/T
	Au	0.05 oz/T		Au	0.04 oz/T
	Zn	Tr %			

While the granodiorite Ag/Au ratio indicates a higher temperature than the Ironsides Pit area, the skarn ratio fits the Ironsides Ag/Au curve very well.

It is interesting to note that the pits on the Argillite contact to the West of Marshall Lake and the pit 700' to the East have zinc values while the Gilt Edge and Ironsides do not. These pits are either a different period of mineralization (ie: Summit Camp) or they make a lower temperature zone around the thermal center.

Conclusion:

It is possible that the Gilt Edge granodiorite is the actual source of mineralization, and that a porphyry type copper ore exists in the unexplored granodiorite.

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Phoenix Field Geology (Cont'd)

New Equipment:

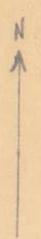
1. The plastic air photo holders are the best I have seen yet.
2. The bio-plastic makes an excellent mounting for the fossile recovered from the limestone.

Yours truly,

Ga.

George Addie,
Geologist.

GA:zmt
cc: KCF
File



Argillite Contour



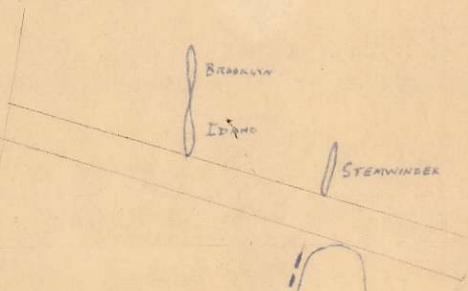
x Cu Tr
Ag 0.40 wt/T
Au 0.190 wt/T
Zn 8.60%

x Cu Tr
Ag 0.28 wt/T
Au 0.135 wt/T

x Cu Zn
Ag 1.72 wt/T
Au 0.610 wt/T
Zn 0.60%

Grt Edge
x Cu 0.52 %
Ag 0.12 wt/T
Au 0.06 wt/T
Zn Tr

MISSING ARGILLITE
FAULT PROBLEM



LOCATION SKETCH FOR JULY, 1963

Scale 1" = 1320'

October 4, 1962

Mr. P.R. Matthew, Manager

Mr. George G. Addie, Geologist

Eholt Area Mines

General:

Road traverses were made from Phoenix to the No. 3 Highway, and northward to Eholt, the purpose being to obtain geological settings for the Oro Denoro, Emma, Cyclops, and Lancashire Lass Mines.

Observations:

1. All deposits contain Magnetite
2. All deposits are on the same air magnetic anomaly
3. It is possible that all deposits are on the same lineament
4. All deposits are in Limestone
5. The Oro Denoro and Emma mines are closely associated with Granite, and could well be described as contact metamorphic deposits
6. Intrusives, with Magnetite and resembling volcanics are associated with the Oro Denoro and Emma mines (i.e. Amygdules with Calcite, rimmed with Magnetite, are present).
7. At the Emma mine, recrystallized Limestone with a replacement front of Euhedral Chalcopyrite is present
8. All deposits are nearly vertical
9. Near the Phoenix-No. 3 Highway junction a small amount of Bornite is present in the Limestone. A volcanic rock and agglomerate are present
10. Some of the mapped sharpstone conglomerates are sharpstone agglomerates
11. Some of the intrusives near the ore bodies show a great deal of differentiation

Conclusions from observations:

1. All of the above mines would have been found by present day ground magnetometer surveys

October 4, 1962

Mr. P.R. Matthew, Manager

Mr. George G. Addie, Geologist

Eholt Area Mines (Cont'd)

Conclusions from observations:(cont'd)

2. A similiar shaped air magnetometer anomaly is present to the Southwest of the above anomaly. A traverse was made to this area but no copper mineralization was found, nor any Limestone. However, at the anomaly high, Pyrrhotite in thin bedded cherts, is present
3. The overt appearance of the Limestones involved is the same as the Limestones at the Ironsides Mine. (i.e. Environment indicators such as wind blown sands are present.)
4. It is possible that the ore bearing lineaments are extensive but that only in a Limestone does ore deposition take place

New Papers:

"Mine Composite Assay Study"

Ten samples are available from April 4 to September 9, 1962 taken from the hangingwall and footwall of Ironsides, and two samples from the Snowshoe Pit. These samples indicate that both the gold and silver values are related to the copper grade. Also, the hangingwall and footwall silver gold ratios are quite different.

i.e. F.W. Copper = $\frac{\text{Silver}}{\text{Gold}} \times \frac{1}{6.48}$, and M.W. Copper = $\frac{\text{Silver}}{\text{Gold}} \times \frac{1}{11.0}$

Using these values the copper grade can be predicted to $\pm 0.1\%$ Cu.

Recommendation:

It is recommended that composite sampling be continued

Equipment received:

Stereoscope

George Addie, Geologist

GA/rmt
cc: 3

PHOENIX COPPER COMPANY LIMITED (N.P.L.)

January 9, 1963

TO..... Mr. P.R. Matthew, Manager,
FROM..... Mr. George Addie, Geologist
SUBJECT..... Phoenix Geology

General:

Most of the time has been spent in relation to the present Diamond Drill Program, with the remainder on Ironsides geological mapping. A paper was completed on the Summit Camp Zinc.

New Paper:

"Summit Camp Zinc Study"

It was found that practically all magnetic samples from the different mines in the Summit Camp have Zinc. The values for the Emma-Ora Denora group are related to heat by the relationship $\log Y(\% \text{ Zn}) = 0.862 - 0.63 \log X$, where X is the silver/gold ratio, or on log, log paper $Y = 7.278 \times 10^{-0.63X}$. This graph suggests two groups of mines, Ora Denora-Emma group and Rathmullen - BC Mine group. Also, there is the suggestion that the R. Bell Mine belongs to the Ora Denora-Emma group. Thus, although on a different magnetic anomaly, these two anomalies probably belong together having been displaced by a fault.

Yours truly,

George Addie,
Geologist.

GA/rmt
cc: KCF:File