

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

*February*

W.S.R.
K.C.G.
J.H.S. ✓
E.F.
R.D.C.
B.C.B.
<b>P.M.K.</b>
G.W.M.
R.O.M.
C.K.W.
J.B.S.
G.P.R.
K.F.L.
J.I.B.
E.C.J.

To W. M. Sirola From P. M. Kavanagh  
 Subject Attitude of Main Mineralized Zone, Swim Lakes 'A' Group, Yukon. Date February 7th, 1966

This is prompted by your memorandum of February 2nd entitled "Structure and Diamond Drilling". I have gone over it and the data attached to it with Dunc Crone.

Although one drill hole on the second tier should dispel all doubt about the zone's attitude - and perhaps we shouldn't be laboring the point beforehand - I do appreciate your preparing us for this alternative possibility.

I must say however that both Dunc and myself continue to favor the steep northeast dip. He considers that the very definite and quick buildup in the 10° to 20° EM readings range would be very difficult to obtain from a source extending northward with a flat dip, but is very easy to explain with the steep dip alternative.

Considering that the steep dip is still a very possible alternative, I think that two comments in your memorandum which might have been phrased differently are:

1) "..... and the top of the mineralized zone at Swim Lakes is at 160 ft. of depth if the zone is flatly dipping; if the zone is steeply dipping northward, the top of the zone may reach bedrock, and A-3 may well have not penetrated its hanging wall.

2) "..... and (b), the drilling layout would have to be changed, rather than must be changed.

If you know some neutral person, both Dunc and I would be very willing to let him hold \$10.00 bets for us, that is if you and Clyde would like to support your ideas with the same conviction.

*PMK*

Paul M. Kavanagh  
Chief Geologist - Exploration.

FEB 3 1966

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To: P.M. KAVANAGH From: W.M. SIROLA

Subject: SWIM LAKES "A" GROUP - STRUCTURE AND DIAMOND DRILLING Date: February 2nd, 1966

As a direct result of our geological and geophysical review of the Vangorda deposit, we now feel that there is at least a 50-50 chance that the Swim Lakes deposit is flat, or nearly so. Clyde Smith has drawn numerous cross sections of the Vangorda deposit, and, by comparing the geophysical results there with those at Swim Lakes, we have concluded that it is not possible geophysically to determine the dip of either deposit. Gravity results are more affected by varying thicknesses of sulphides than by the actual dip of the lenticular structures. The electrical methods we use are effective only to 100 ft. of depth, and the top of the mineralized zone at Swim Lakes is at 160 ft. of depth. Even if the dip of the graphitic schist is being somewhat reflected by E.M. profiles, this does not determine the dip of the sulphide zone since the outline of the graphitic schist in profile can be quite ragged. Because of erratic magnetite distribution, magnetics are of little help in determining dip.

The economic significance of all this is that (a), we may have an open pit situation on our hands, and (b), the drilling layout must be changed. The accompanying sketch shows this layout superimposed on the residual gravity anomaly. The total footage could be as much as 26,390 ft., but we have shown the area which could be drilled with the original 15,000 ft. estimate.

Should it become quickly obvious that the dip is indeed flat, subsequent holes could be vertical rather than inclined. However, A-6 should be drilled at  $-60^\circ$ , and a second drill could be working on a  $-60^\circ$  hole 200 ft. north of A-4. Until the dip is determined on the main zone, the third drill should perhaps be drilling a vertical hole in the eye of the smaller anomaly to the west. The fourth drill will probably start on Line 13 E.

In the past, as you know, I have felt that the dip probably was not flat. The reasoning for this was that I felt a flat dip would manifest itself geophysically down the hill from the gravity anomaly. The accompanying section, however, suggests that this need not be the

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To.....From.....

Subject.....Date.....

contd..

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case, and that a structure such as Clyde has shown would not be reflected geophysically, and indeed is much more in keeping with the other two known deposits in the area. The argument for a flat dip is further bolstered by the core angles in Hole A-3. This change in core angle could, of course, be attributed to tight folding in the rocks, but none the less must be duly weighted in the light of evidence presented.

I am sure you will agree after reviewing the material that we must be prepared for both eventualities.

*Steve Wilson*  
p/s William M. Sirola.

WMS:iw

Encls:

- |   | <u>Scale:</u> |
|---|---------------|
| (1) Geologic Cross Sections 1-10, Vangorda Ore Body.                          | 1" = 200'     |
| (2) " " " 11-18, " " "  | 1" = 200'     |
| (3) Hypothetical Geologic Cross Section of Mineralized Zone<br>at Swim Lakes. | 1" = 100'     |
| (4) Longitudinal Geologic Cross Section at Swim Lakes.                        | 1" = 100'     |
| (5) Sketch Showing Alternative Drilling Programme.                            | 1" = 200'     |