# N.C. CARTER, Ph.D., P.Eng. Consulting Geologist

1410 Wende Road Victoria, B.C V8P 3T5 Canada

031007

Phone 250-477-0419 Fax 250-477-0429 Email nccarter@shaw.ca

S .....

July 21, 2008

Scott Broughton, P.Eng. President & CEO Roca Mines Inc. 490-1122 Mainland Street Vancouver, B.C. V6B 5L1

Dear Mr. Broughton:

## **Re: Recent Visit to MAX Mine**

The writer spent most of Wednesday, July 9, at MAX mine examining diamond drill core with Chris Lawley. A brief underground tour was also undertaken with Chris and Luis to examine intrusive relationships exposed in new headings in #2 Adit.

A number of photographs of intrusive relationships seen in drill core and in underground headings, with captions, form the main part of this summary report.

Principal conclusions derived from the visit are as follows:

- 1. Chris Lawley has a good grasp of the geological setting of the MAX deposit and is doing a good job logging core from recent programs and re-logging the 2004 surface holes as well as sections of the 2007 underground holes.
- There are three readily identifiable intrusive phases at MAX. These include the principal equigranular to porphyritic granodiorite host and its altered, leucocratic (bleached mafic minerals) equivalent, the fine- to medium-grained intermineral granodiorite porphyry and aplite, the apparent youngest intrusive phase.
- 3. There are possibly two additional phases, including a coarser-grained variety of the intermineral granodiorite porphyry, which features 4 mm quartz eyes in a more mafic matrix. Whether or not this is simply a textural variation of the more extensive granodiorite porphyry remains subject to further investigation. The apparent late ar post-mineral leucocratic quartz-feldspar porphyry containing a 15 cm xenolith of an earlier phase, well mineralized porphyry, seen in the upper portion of MX07-03, may represent a possible fifth intrusive phase. This interval was not seen by the writer or by Chris Lawley for that matter, and appears to be missing.
- 4. Pending radiometric age determinations from samples of the various intrusive phases will be of great assistance in determining the time span between them and should clarify the apparent discrepancy between the Rhenium-Osmium dates for the age of mineralization (80 Ma) and the age of the rasin granediorite phase (70 Ma (zircon) and 76 Ma (K-Ar).
- Some core from one of the four holes completed on the Ridge Tungsten Zone was examined briefly. Best mineralization is contained in a garnet-actinolite skarn which contains pyrrhotite and scheelite. The presence of garnet is indicative of the presence of scheelite, a feature originally noted by Newmont,

6. Chris Lawley has been asked to present papers on MAX at both Roundup in January and the GAC Annual Meeting in Toronto next May. He has also been approached about giving a presentation at Minerala South in Nelson the first week of November and I recommend that the Company encourage him to do this.

Respectfully submitted,

"N.C. Carter"

.

Cc: John Baker, Terry Macauley

#### Appendix

General comments, accompanied by some photos, are as follows:

### **Diamond Drill Core**

A selected section (+300 metres depth) of surface hole MM04-01 was available for viewing. Of interest was a fine-grained granodiorite porphyry intermineral dyke featuring crowded 1 to 2 mm white feldspar phenocrysts plus up to 3 cm angular fragments of Lardeau country rocks (photo. Also evident are at least two stages of quartz veining. Note that this intrusive phase was previously referred to by the writer as quartz diorite porphyry.

Photo 2 shows a darker and coarser grained variation of the intermineral dyke which contains more mafic minerals (principally biotite) and discrete 4 mm "quartz eyes" in addition to white feldspar phenocrysts. Note that the Lardeau rock fragments in this section rarely exceed 1 cm.

The main granodiorite host rock further down the bole was seen to be essentially equigranular but with occasional quartz eyes. Cutting this is a later aplite dyke with the sharp contact essentially parallel to the core axis (photo 3). Previous observers had referred to this phase as being an alteration product but newly recognized relationships observed both in drill core and in underground workings leave no doubt that this is indeed a later intrusive phase.

...../3



Photo 1 - Hole MM04-01 - Intermineral granodiorite porphyry dyke with angular 1 - 3 cm fragments of Lardeau Gp country rocks and cut by at least 2 generations of weakly mineralized quartz veins



Photo 2 – Hole MM04-01 – Darker and coarser-grained variation of intermineral granodiorite porphyry



Photo 3 – Hole MM04-01 – Aplite dyke cutting main phase granodiorite with contact parallel to core axis (top of scale)

The section of underground hole MAX07-03 separating the two high grade intervals at depth (404.9 – 410.3 – 0.59% Mo and 419.8 – 428.6 – 0.88% Mo) was available for viewing. This writer had initially suggested (February 7/08 Roca news release) that this apparently weakly mineralized (and unsampled) interval might be representative of younger, essentially post-mineral porphyry phase similar to that observed in the upper part of the hole. (An aside - this hole interval has not been relocated and has not been seen by Chris Lawley).

The weakly mineralized interval between the two high grade intervals is clearly an altered, leucocratic phase of the main granodiorite host in which the mafic minerals have been bleached. Some 4 mm quartz eyes are also present (photo 4). This interval should be sampled even though it is quite likely to be of similar grade (0.026% Mo) as the weakly mineralized intervals of similar lithology close by in the same hole.

...../5



Photo 4 – Hole MX07-03 – Weakly mineralized leucocratic, altered (bleached) granodiorite separating two intervals of quartz vein-hosted, high grade Mo mineralization near bottom of hole. Note quartz eyes immediately right of top end of scale.

The high grade Mo interval between 419.8 and 428.6 metres, which immediately follows the interval illustrated in Photo 4, consists of patches of massive molybdenite in milky white quartz, not dissimilar to the high grade Mo seen in the HG zone where exposed in #1 Adit.

A similar intervals of good grade molybdenite mineralization was encountered at a hole depth of 324 metres in underground hole MX07-01.



Photo 5 - Hole MX07-01 - Higher grade Mo mineralization in quartz

Underground hole MX07-03 also features molybdenite mineralization on slickensided fractures and as selvages along the margins of a 1 cm wide quartz veinlet. This interval, between 207 and 211 metres, is illustrated in the following photo. Note that the following milky white quartz vein contains only modest disseminated molybdenite mineralization.



Photo 5 – Hole MX07-03 – Three styles of Mo mineralization between 211 and 214 metres

# **Underground Tour**

The drill station for the 2007 underground drilling in #1 Adit was visited prior to walking through the connection with #2 Adit to examine exposures of intrusive relationships a short distance to the northeast. Rounded fragments of the intermineral granodiorite porphyry within aplite clearly indicate that the aplite is indeed an intrusive and not an alteration phase and is the apparent youngest intrusive phase identified to date. The following photos, including one provided by Chris Lawley, are clear evidence of this.



Photo 6 - Aplite dyke (0.3 metres wide) with several cm rounded clasts of intermineral granodiorite porphyry – below with C. Lawley captions





Photo 7 – (Chris Lawley photo and captions) – Central aplite dyke with rounded fragments of intermineral granodiorite porphyry cutting Lardeau Group rocks on right and intermineral granodiorite dyke on right.

In the same general area, exposures of the intermineral granodiorite porphyry contain large, angular clasts of Lardeau country rocks as shown in the following photo.



Photo 7 - Intermineral Granodiorite porphyry with clasts of Lardeau rocks

...../9



Photo 8 – Partially resorbed fragment of Lardeau country rock in Main Phase Granodiorite