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Subject: Review of planned underground exploration programme, Elk Property

GENERAL

The following is a list of recommendations resulting from our meeting and review of the underground exploration work planned for the Siwash North deposit. Overall, the programme has been thoughtfully laid out and planned with considerable care. There are no obvious deficiencies in the mine plan at this time. Many details concerning the geological monitoring of the work were discussed and the results of these discussions form the bulk of this memo. Some recommendations concerning the geological work as it relates to potential trouble spots will be made.

SAMPLING AND ASSAYS

Assay turn-around time is not expected to be less than 48 hours. This means that, for the drifts, the data will be at least two rounds behind the advancing face. In addition, it is intended that the sampling of the drift face was to be foregone in order to concentrate on the geologic mapping. Samples were, instead, to be taken from the walls and back behind the miners as they are working. This would result in a further delay of the assay data by another round or two. In areas where there is only one structure to follow, no problems should arise. However, where the vein bifurcates, as it appears to do on all four of the proposed drift elevations, the geologist may be hard-pressed to choose the correct branch to take without timely assay data.

There are two things which should be done to minimize the risk of a wrong decision. The first is to insist that a sample of the ore be taken from each face. It needn't be a proper channel sample, but every effort should be made to quickly take, with a rock hammer, a representative chip sample. This can be done without too much delay to the miners and while it does not provide the most statistically accurate result, it yields something to go on. Detailed samples can then be taken behind the miners as planned.

The other step is the preparation of level plans for each of the drifts. This can be done quite quickly with the computer drafting and data-base software available on-site. The advantage of level plans is that they readily indicate when the drift deviates from the prescribed course. In addition, they provide the geologist with a good predictive tool for isolating potential trouble areas such as faults, vein branches and lithologic contacts. Level plans will be discussed further in the next section of this memo.

LEVEL PLANS

In addition to flagging problems with the drift advance, the level plans are essential for providing guidance to the miners with regard to safety hazards. It is a standard practise on all mine-sites that warning be given when the drift is in danger of intersecting a drillhole. Guards can then be posted to prevent surface workers from being injured by fly-rock propelled out of the collars. The miners should also be warned about faults, veins, dykes and anticipated changes in rock-type, especially where variations in ground conditions are expected. This sometimes allows them to properly prepare for bad ground or increased water flow.

Each plan should be prepared at 1:250 scale and show the mine survey grid, drillhole pierce-pts, interpreted vein traces, all other geologic contacts, and planned workings. As the drifts are advanced, other copies or overlays of the plans can show any or all of the following: drillholes encountered, actual vein traces, assay information, test-holes, lithology, alteration and drift outlines.

BRANCHING VEINS

Geologic mapping of the surface pit and interpretation of the drill sections indicate that the vein branches in several localities. The main gold-bearing structure appears more continuous and of consistently higher grade than the branches. In general, this higher grade material corresponds to the zones of strongest quartz mineralization. However, instances may occur where a branch from the main zone will appear, for a round or two in the drift, to be the stronger structure. In such circumstances, the geologist will not have assays to support a decision, and must decide which branch to follow based solely on the vein characteristics, drill interpretation and level plans.

In the drift, it may be possible to carry both branches in the face for awhile. Once the assays for each branch are returned then a relatively small correction to the heading can be made. If the branches diverge too rapidly to follow both, then the call must be made based on quartz content and the level plans, with further support from test-holes as the face is advanced. As was previously stated, the drift may be advanced as much as two rounds or more (12 feet plus) before the assays catch up. In the event of a mistake, a correction can be made by slashing at the point of the bifurcation and continuing the drift on the proper heading.

The raises provide a different challenge. They are likely to be too small to expose two branches of the vein system at any one time. In addition, if they are driven on the wrong vein, they are often much more difficult to correct and this will have a serious effect on the test stoping. Consequently, a procedure is herein proposed that should reduce the risk of following the wrong structure. The procedure is as follows:

1) Both drifts should be mapped and sampled in detail and the ore boundaries painted up and surveyed. Test-holes will have been already been drilled at regular intervals along the drifts.

2) Cross-sections should then be drawn at the centre-line of each of the raises to be driven. These sections will incorporate the test-hole, survey and assay information collected in the drift as well as any surface drilling data.

3) Designs for the raises can then be developed which assume straight-line ore boundaries between the levels. Resuing parameters can also be defined according to these assumed boundaries. Line and grade for each raise can then be determined and provided to the contractor along with layouts.

4) The contractor's engineer can provide the miners with line for the raises which can then be driven per the design parameters. Geological monitoring would consist of mapping, sampling, measuring the ore-round size and widening or narrowing the ore-rounds as required. Deviation from the design heading would be done only after careful consideration and in extreme circumstances.

The distance from level to level (13 to 15 metres) is small enough that there should not be much variation in vein orientation between them. Experience gained in the open-pit indicates that straight-line boundaries for the ore can be assumed over such small distances. Any small flexes that do occur can be accomodated by narrowing the ore rounds or slashing afterwards.

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Tne lastest drilling results indicate that tne grade of the vein say not be as consistent at depth as it is on the surface. This Means that the workings may aass through portions of the vein that do not contain gold values above the 0.5 ounce/Ton dut-off which has been established for the programme, ftgain, due to the lag time m receiving assays, there will be at least two rounds of drift or one round of raise taken before the grade of a particular round is known. By that time, under the present mine plan, that vein muck will have been blended with other material in the remuck bay. This will result in a reduction of overall ore grade. The only way to adOress this problem is to keep each ore rounc separate until the grace is known. This would mean that each ore round would have to be trammed to surface at placed in a discrete pile, labelled, and dealt with once the assays were returned. It may not be practical to do this and perhaps you may wish to just accept the lower grade material.

PIT LIMIT

As we discussed, the ultimate pit limit was designee to dome perilously close to the uppermost drift. It would pe adviseaoie to perhaps raise this pench height by two metres to prevent an inadvertant oreaktnrouqh.

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A cuick check of mine ecuipaent performance has confined that a turn radius of IS metres is ideal for tne size of equioment that you are proposing to use in future mining adtivities.

I hope you find these recomaencations reasonable and useful. I look forward to following the progress of the project and wish you the best of luck. Again, thank you very much for the site tour and I look forward to hearing from you in the near future.

Regards,

D. W. Rennie

dc. J. Stollery