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TO: C. H. Reynolds & Bill Cox

DATE: June 26, 1961

FROM: Gene Lindsey & Gerry Brooke

SUBJECT: Progress Report, Gold Circle Mining District, Midas, ^{Elko}~~Humboldt~~ County, Nevada

The period from June 2nd to 18th was spent in Midas. The main objectives of this work was to round out our knowledge of the habits of mineralization in the district, and fully outline the arsenic anomaly indicated by the rock samples collected by Smithson last December. We also had hoped to determine the cause of this anomaly.

We were successful in all respects except determining the cause of the anomaly. Some additional work is warranted; this should consist of trenching across the strike of the anomaly, and detailed sampling. If it is possible to obtain good rock samples in these trenches, it is recommended that they be sampled the entire length, at not greater than five foot intervals. These samples should be assayed for gold and silver, and the pulps retained for an arsenic determination. Depending on the results of this work, it may be desirable to lay out some drilling.

Procedure: It was decided to proceed by mapping the claims held under lease, and those adjoining areas which would shed light on the geologic picture. In order to do this, it was necessary to construct a base map. There was no U.S.G.S. topography available, therefore the topography from Rotts' map was used, and those areas of interest not covered by his map were contoured by us. This was done by running brunton and tape traverses from Rotts' triangulation stations and carrying an altimeter for elevations.

Upon completion of the base map, the area was mapped. This work proved to be very difficult due to the widespread alteration in the district; therefore to conserve time, only a generalized picture was developed. Although generalized, this work was necessary and indeed helpful in gaining knowledge of the veins, oreshoots, etc.

Soil samples were then collected to fully outline the indicated arsenic anomaly. Some additional geochemical work was done over the unexplored portion of the Miners Gold-Elko Prince Vein, over the June Bell Vein, and between the Rex and Colorado Grande workings. An anomaly had previously been outlined over the main Elko Prince oreshoot.

Also, mapping was brought up to date in the Miners Gold workings. A few character samples were also taken here.

Geology: The oldest rock exposed in the district is the Elko Prince Rhyolite. It's most distinctive character being it's banding, which is generally thin, maybe contorted, and usually can be detected even when altered. The Elko Prince Rhyolite crops out in the northern part of the district, and is present on both walls of the Elko Prince Vein, at the surface. In the vicinity of the June Bell workings, another rock tentatively called the June Bell Rhyolite(?) crops out. This rock may actually be an intrusive, but this could not be determined in the field.

To the South there are exposed andesite and rhyolite flows; their exact age relationships were not determined. One of these exhibits a crude, or coarse banding(?), but may actually be bedding, and therefore a tuff. A large area, generally around the Gold Crown and Missing Link Veins, is so highly altered that the original character would be hard to determine without considerable work, if it is at all possible. This area was mapped merely as altered rock. Cutting all of these rocks are andesite dikes and related intrusives.

Overlying this complex is a rhyolite(?) tuff. There are only a few remnants of this rock remaining in the area mapped. It appears to have been deposited on an irregular surface, and is most certainly the youngest rock mapped. It may even be younger than the mineralization.

Only minor faulting occurred in the area mapped. There is evidence of post mineral faulting, but movement was small. Where observed movement resulted in a few feet, to not more than a few tens of feet of offset on the veins. One rather large fault at the extreme southern end of the mapped area has successfully cut off the Gold Crown, Missing Link and Grand-Jackson Veins. This fault may have been post mineral, or may have been pre-mineral and it's presence exerted a damming effect on the mineralizing solutions.

The veins in the district are north to northwest striking. They are vertical to steeply dipping, and in general very narrow. Stopping widths would average from two to four feet, although some greater widths were apparently stoped in the Elko Prince. The veins consist of quartz, iron oxide and silicified wall rock. The main veins mapped were the Elko-Prince, Gold Crown, Missing Link and the Grant-Jackson.

This is a rather incomplete geologic picture, but is the best that could be done with the time allotted. A more exact picture didn't appear warranted at the time.

Geochemical Prospecting: From previous geochemical work done over the Elko Prince ore shoot, arsenic has proven to be the most useful trace element in the Midas district, and all subsequent analyses have been for arsenic exclusively. This subsequent work has been directed at exploring the area southeast of the Elko Prince vein on the Colorado Grande claims, exploring the unprospected area between the north end of the Elko Prince workings and the south end of the Miners Gold workings, and exploring the north and south extensions of the June Bell vein. No work was done south of the Gold Crown vein on the Colorado Grande No. 1 claim, since this area has been prospected in the past by the Gebhart Tunnel and other underground workings.

From the previous and present work, background arsenic concentration is taken as $0-4 \text{ gm}^{-5}$, threshold is taken as $5-7 \text{ gm}^{-5}$, weakly anomalous is $8-19 \text{ gm}^{-5}$ and strongly anomalous is plus 20 gm^{-5} in a 3 ml. aliquot from a 4 ml. sample dilution. Using this breakdown, a strong anomaly appears near triangulate point R on the Colorado Grande No. 3 claim. This anomaly starts near the portals of two caved tunnels and proceeds northwest diagonally across a hill and dies out just north of

an east-west trending dozer cut (see 400-scale Isopach and Geologic Map). There is a suggestion that this may be a northward extension of a vein developed by the Rex Mine workings as indicated by point 18 and 79. Another southwest trending anomaly appears along the line of sample numbers 75, 87, 118, and should be further investigated.

The work done over the Elko Prince north extension and the June Bell veins failed to indicate an anomaly. The anomaly on The Colorado Grande No. 3 claim is larger and stronger than that over the Elko Prince ore shoot and therefore should be physically tested. To do this, the existing east-west dozer cut north of point R should be cleaned out and deepened. Another cut should be put in between the existing cut and point R to cross the anomaly. In addition, one or two cuts should be put in southeast of point R also to cross the anomaly. If these dozer cuts do not completely discredit the anomaly, some sort of drilling or trenching program should be initiated.

Miners Gold (Simpson): The cross-cutting and drifting done at the Miners Gold property, since Rowley's and Smithson's mapping (Dec. 2 & 3, 1959), was mapped.

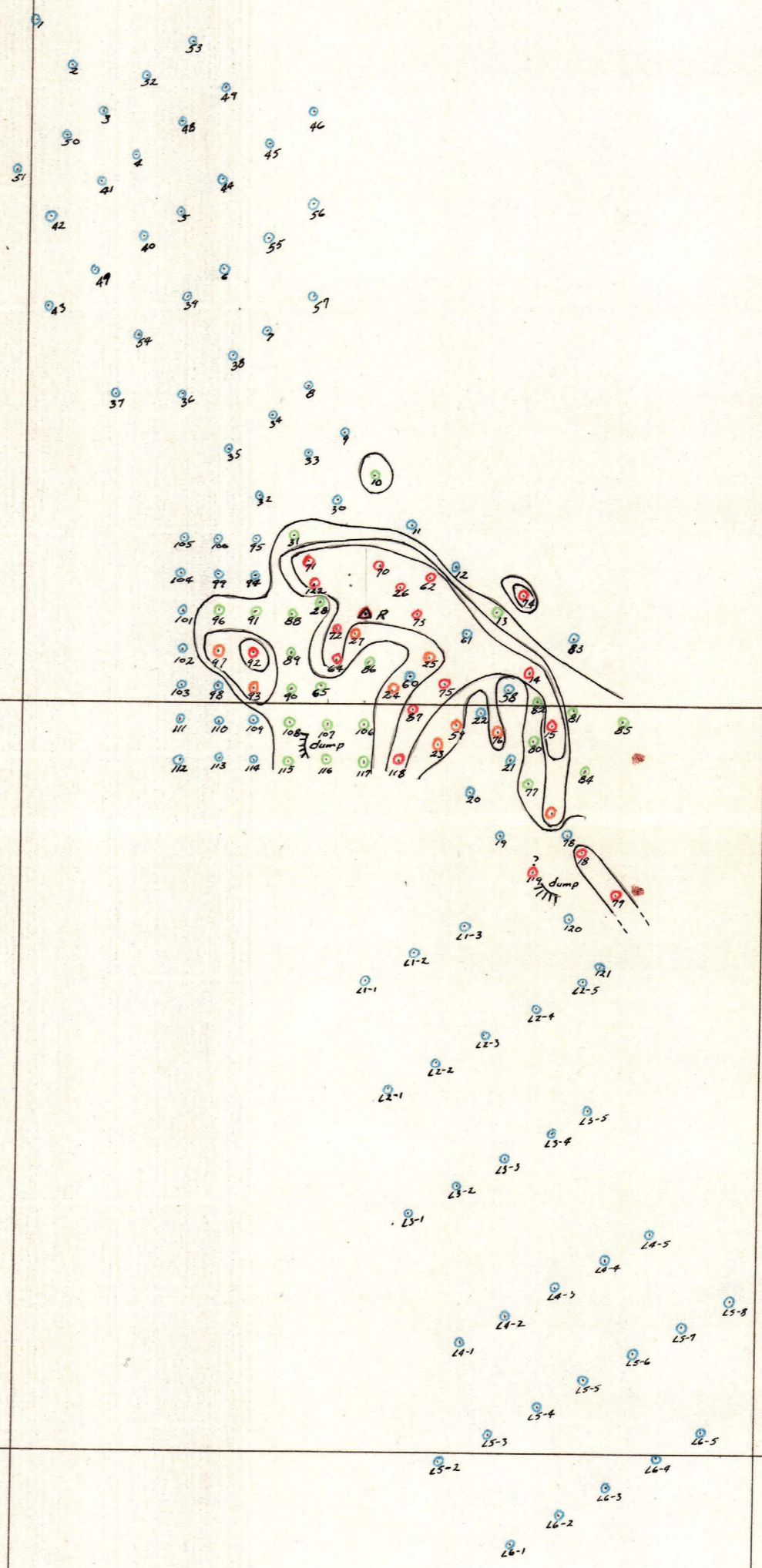
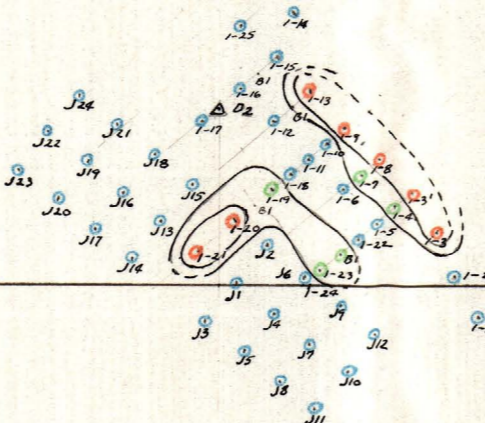
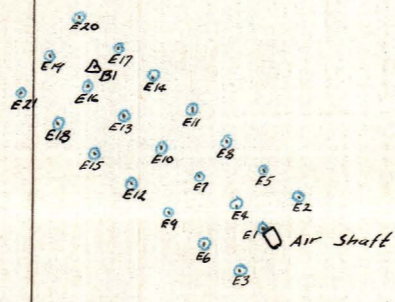
This work consisted of cross-cutting to the Elko Prince-Miners Gold Vein, then drifting 70 feet to the northwest, and 300 feet to the southeast. A quartz vein up to three feet wide, with numerous splits, was explored to the northwest. However the maximum strike length possible, on this shoot, would be 140 feet before encountering the old stopes. To the southeast this vein quickly pinches down to from one to six inches of quartz. At about 100 feet southeast of the cross-cut the vein branches and the main "lead" may actually have turned into the left rib. The remainder of the drift followed a very weak vein, sometimes merely a fracture, and probably only a weak branch of the Elko Prince-Miners Gold Vein. However, had the miners followed the main(?) lead, the outcome would probably been little different because of weakest of the vein in this direction.

ISOPACH MAP
Arsenic Concentration
Midas District
Elko County, Nevada
1"=400'

(to overlay 400-scale
Geologic Map)

- +20 gm⁻⁵
- 8-19 gm⁻⁵
- 5-7 gm⁻⁵
- 0-4 gm⁻⁵

Note: sample numbers 1-1 etc.
were collected and analyzed in
October, 1960

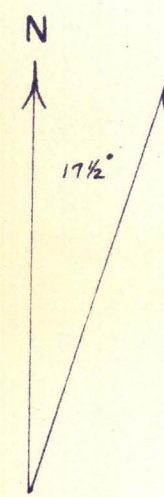


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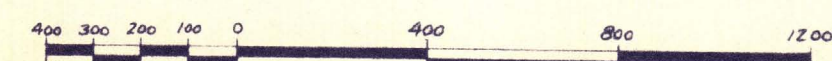


LEGEND

- Altered rock, undifferentiated
- Rhyolite (2) tuff
- Andesite (intrusive dikes, etc.)
- Andesite, undifferentiated
- Andesite flows
- Rhyolite (qtz eye)
- Rhyolite (fiaggy)
- June Bell (rhyolite 2, intrusive 2)
- Elko Prince rhyolite (banded)
- Vein
- Fault
- Flow banding
- Shaft
- Adit
- Triangulation sta.



Scale: 1" = 400'



GEOLOGY OF
NORTH CENTRAL - GOLD CIRCLE MINING DIST.,
MIDAS, ELKO CO., NEVADA
GENE LINDSEY & G. L. BROOKE

June, 1961









70
1.3.1900

GEOLOGIC MAP EAST CENTRAL PORTION OF GOLD CIRCLE MINING DISTRICT, NEVADA

SCALE 1"=1000' — CONTOUR INTERVAL 25 FT.

Geology by Edward H. Rott, Jr.
1927-1928

LEGEND

- RHYOLITE (undifferentiated) 
- RHYOLITE FLOWS & TUFFS  Post-andesite
- ANDESITE (Flows & dikes) 
- ELKO PRINCE RHYOLITE  Pre-andesite
- JUNE BELL RHYOLITE 
- ACID DIKES 
- VEINS 
- FAULTS (Dotted line hypothetical fault) 
- STRIKE & DIP OF FLOW STRUCTURE & BEDDING 