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Item 33

ALPINE

Nightingale Mining District

Pershing County, Nevada

Sections 13, 14, 24, T. 25 N., R. 24 E.

Charles P. Seel

CHARLES P. SEEL

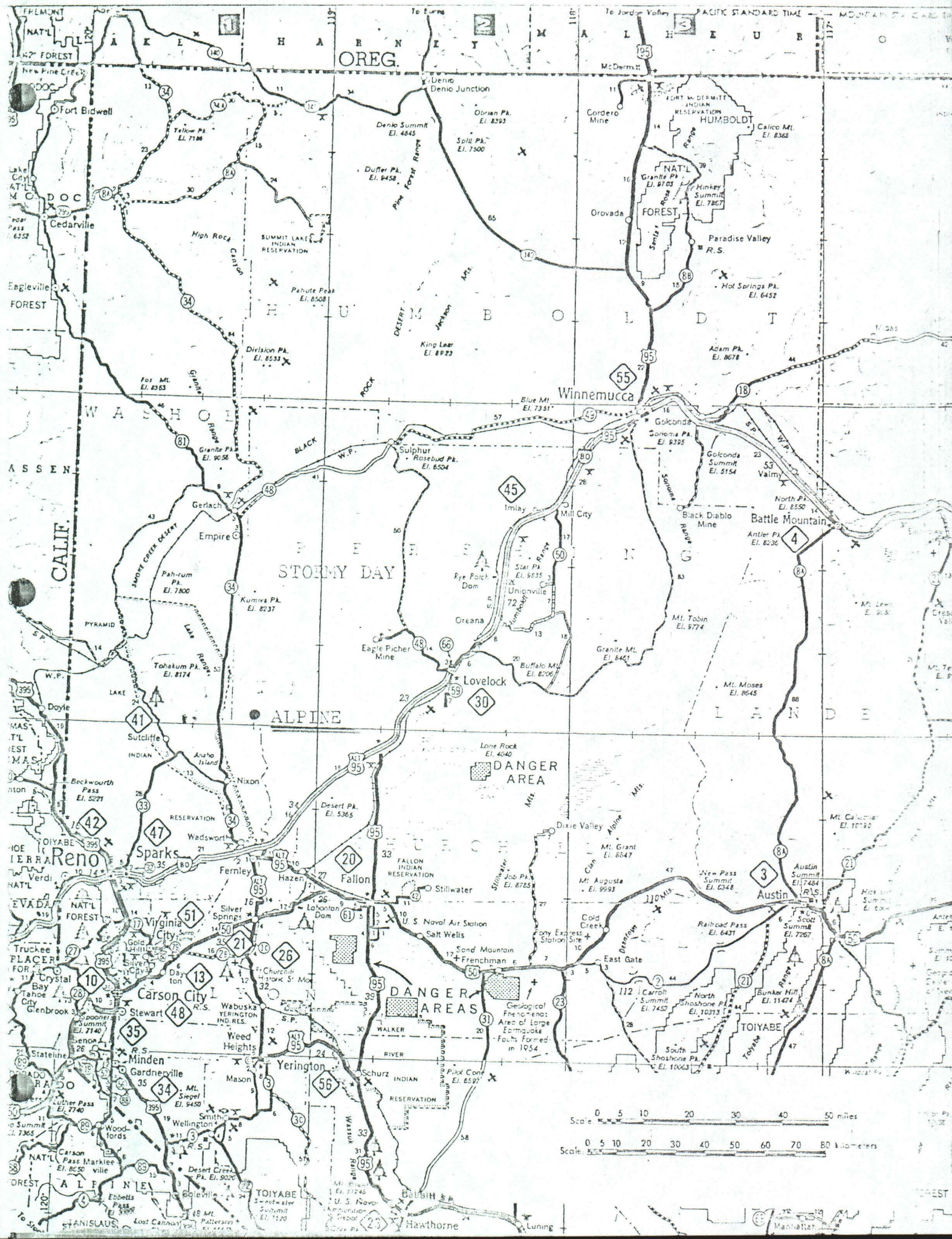
INTRODUCTION

The Alpine tungsten prospect was brought to the attention of General Electric Company by:

J. L. "Pat" Gould
20 E. Conkill Lane
Fallon, Nevada 89406
Tel: 702-423-3884

Pat, in partnership with Ed Bloyed and their respective sons (Mike and Dave), has recently completed construction of a small gravity concentration plant about 15 miles south of Lovelock, Nevada and has been scouting the countryside for possible ore to feed the plant. Pat claimed that he had recently leased the Alpine prospect but then added that the lease had not yet been formally executed because the owner was asking for \$500.00 per month as advanced royalty payments and that he was hopeful of negotiating a \$100,000.00 loan from General Electric to be secured by his plant (Pat and his son control 85 percent). He further proposed that the loan, to be used to rehabilitate the mine and start production, be repaid out of concentrates to be produced and sold to General Electric.

May 19, 1977 was spent on the property accompanied by Mr. Gould who has been advised that General Electric does not at present have a program of financial assistance for small operators.



LOCATION AND ACCESS

The Alpine claim group is situated about 50 miles northeast of Reno, Nevada at an elevation of 6,000 feet at the crest and down the west flank of the rugged Nightingale Range overlooking the dry Winnemucca Lake bed along the western border of Pershing County (figure 1).

There are two points of access to the district. From Reno proceed eastward on Interstate 80 about 53 miles to the Hot Springs - Nightingale #65 exit and then northwesterly along Sage Hen Wash about 20 miles to the property. Access from Lovelock is southwesterly on Interstate 80 about 12 miles to the Toulon exit and then by graded dirt road about 60 miles westerly over Ragged Top pass, across Copper Valley and Sage Hen Valley (which has some soft spots) to the property.

PROPERTY AND OWNERSHIP

The Alpine prospect consists of 7 contiguous unpatented lode mining claims located in Sections 13, 14 and 24, Township 25 North, Range 24 East (unsurveyed) in the Nightingale Mining District of Pershing County, Nevada as follows:

Olag
Olga
Tony
Percy
Victory
National
Summit

Records at the courthouse at Lovelock indicate that the original locations date back to 1921 (E. W. Dingee and Ewing Smoot) and 1943 (Leopold P. Meyer). According to Johnson and Benson (1963) the property

was acquired in 1943 by Rare Metal, Inc. This is presumed to be Rare Metals Corp. of Sonora, California controlled by the Segerstrom family. An affidavit of annual assessment work covering the Alpine claim group through the 1975-76 assessment year was filed on August 30, 1976 by Wolfram Company. The connecting link between Rare Metals and Wolfram Company appears to be

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who filed the Alpine claim Map #84165 on August 31, 1972 (figure 2) and who is reported to be a part owner of the Wolfram Company and possibly of Rare Metals Corp.

The Alpine claim group is one of several claim groups in the Nightingale Mining District (figure 3).

HISTORY AND PRODUCTION

Pat Gould did not seem to have any background information about the Alpine property. Johnson and Benson (1963) are not much help either except to report that, "No production was recorded from the Alpine mine until the property was acquired on a lease and option arrangement by the Rare Metals, Inc. in the early part of 1943" and "Production from the mine amounted to 47,000 tons from which 564,000 pounds of concentrate were obtained that contained 70 percent WO_3 . The property has been idle since 1945." Incidentally the production figures quoted calculate to 19,740 STU and a recoverable ore grade of 0.42% WO_3 .

The obvious production working consisted of a 100' long by 70' wide

open cut (partially filled with slumped material) from which headings were driven along bedded ore. Access today is via a short crosscut adit which opens to a maze of underground gopher holes and 160 foot deep dry inclined shaft. The lowest level, at about 120 feet from the collar of the shaft, consists of a short crosscut and drift perhaps 30 feet combined. Ore was apparently handled several times and bucket hoisted on a timber slide. While the walls appear to be firm, considerable preparation work will be required prior to any renewed sustained production.

GEOLOGY AND MINERALIZATION

The geology and mineralization is summarized by Johnson and Benson (1965) as follows.

"Rocks in the area consist of granodiorite and a thick sequence of metamorphosed argillaceous and calcareous sediments. The metamorphic sequence includes thin-bedded quartzites, slate argillate, hornfels, limestone, marble and fine-grained biotite schist. These formations have a general strike N. 35° W. and dip at steep angles northeast or southwest. These beds are engulfed or surrounded by granodiorite. It is possible the sedimentary beds exposed remain as a float block in the granodiorite.

"Adjacent to the granodiorite contact the sedimentary sequence has been metamorphosed in a zone of varying thickness. Areas of schist and limestone are invaded by several granodiorite tongues parallel to the bedding, thus forming irregular-shaped blocks separated by tongues of granodiorite. A few aplite dikes cut the metamorphic rocks, and some of these dikes grade into quartz and silicated minerals carrying scheelite.

"Post mineral faults of small displacement are exposed underground and on surface.

"Scheelite mineralization occurs only in the tactite which is composed of quartz, garnet, and minerals of the pyroxene and amphibole groups. Occasionally small amounts of pyrite, galena, and zinc are found in the area."

I should like to add that garnet tactite was developed at the intrusive contact and along certain favorable beds. Several beds are metasomatized for an unknown distance from the contact as seen in the

open cut and which results in side-by-side parallel stopes underground. Moreover, there are just enough cross faults present so that one is not quite sure which heading is on which bed. Scheelite mineralization occurs best in the high quartz-garnet-tactite as finely disseminated grains to scattered BB size and occasional crystals to 1 inch in cross section.

ORE RESERVES AND POTENTIAL

Without some preliminary surveying and geologic mapping an ore estimate is not possible. However, there are good ore showings in the backs of several stopes, in some level faces and as far as could be seen in the shaft below the lowest level. I would hazard a guess that there are readily available, as partially developed ore, scattered throughout the mine workings on the order of 10,000 tons which might go 0.7% WO_3 or 7,000 STU.

Total potential at this stage of development, is also a guess but appears to be limited along strike by the granodiorite intrusive. In other words, when Johnson and Benson (1963) refer to a "float block" in granodiorite, they are correctly describing the Alpine metasediments as a remnant of older rocks lying wholly within a younger intrusive on roof pendant. Total potential of the Alpine prospect is therefore dependent upon the total depth of the pendant. Topography in the area is rugged thereby providing a good look at the rock types and structure. The metasediments have an outcrop length of about 200 feet before being terminated by the intrusive. If one assumes that the pendant will plunge to a minimum depth equal to its strike length then it should reasonably be expected to extend to a depth of 200 feet. Note that the internal inclined shaft is already down 160 feet and exhibits the same

strength of tungsten mineralization as on the upper workings. Such a block of ground might well contain 30,000 to 50,000 STU or once again as much as the mine has already produced.

CONCLUSIONS AND RECOMMENDATIONS

Based on what was seen at the Alpine property while crawling around underground plus the substantial production history, I am led to conclude that the property has a number of ingredients for a successful small mining operation. Offhand, there are a number of things I like, such as:

1. Ore generally occurs as hard reasonably coarse grained disseminations which should aid mill recovery at a coarse grind.
2. A potential of perhaps 50,000 units occurs within a small compact chunk of ground within 200 feet of the surface.
3. Ore shoots, averaging perhaps 3 to 10 feet in width, ^{are} ~~one~~ steeply inclined to facilitate mining.
4. Both tactite and wallrocks have stood up well over the years.
5. There exists a number of faces where good grade ore is readily available for mining.
6. I would not rule out the possibility of mining by open pit.
7. The question of depth of ore can be quickly answered with a few shallow inclined diamond drill holes.

While it is unlikely that Alpine will ever make a large or long lived mine, it does appear to have sufficient potential to sustain production on a modest scale with an equally modest investment commitment. Here I must mention that both Perry (1972) and Ettinger (1972) assign to the

the Nightingale district of which Alpine is a member, a low probability rank for developing the number of tungsten units for a viable mining operation. The obvious problems are remote location, lack of water, relatively narrow orebodies and ownership.

It is recommended that the entire Nightingale district be examined to determine whether it might be possible to find and develop enough tungsten ore for a unit operation. Smith and Gould (1942) assign an ore estimate to the entire Nightingale district of only 50,000 tons averaging between 0.25 and 0.50% WO_3 which is not encouraging. If, after examination, it is determined that districtwise targets are simply too small then there is still the possibility of Alpine ore being available as tributary ore to a central mill.

REFERENCES

- Johnson, A. C., and Benson, W. T., 1963 Tungsten Resources of Nevada; U.S.B.M. report.
- Perry, J. K., 1972, Literature Review of United States Tungsten Deposits; Private report prepared for G.E. by Hazen Research, Inc.
- Ettinger, L. J., 1972, Preliminary Land Status Review of Selected United States Tungsten Deposits; Private report prepared for G.E. by Hazen Research, Inc.
- Smith, W. C., and Guild, P. W., 1942, Tungsten Deposits of the Nightingale District, Pershing County, Nevada; U.S.B.M. Bull. 936-B.
- Lovelock, Nevada - California, Army Map Service Map 1:250,000, 1970.

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Standing Office Group

Figure 3

ALPINE CLAIM GROUP
Nightingale Mining District
Pershing County, Nevada

