

SOME 1966 CONCLUSIONS

- 1) There is no present production of sulphur and the possibility of finding large tonnages amenable to production of pure sulphur are poor.
- 2) Directly mined, high grade ore, say over 70%, could be available in only small tonnages.
- 3) There is a better possibility of producing limited tonnages of sulphur rock for agricultural uses. In relation to percentage of total sulphur, it might be advantageous from a price standpoint to produce agricultural sulphur.
- 4) Based on the evidence now available, the properties would be rated in the following order of potential economic significance:
 - a) Sulphur
 - b) Alum
 - c) Deep Gulch
 - d) Hot Springs Point
 - e) San Emidio
 - f) Tognoni
 - g) Humboldt
 - h) Cuprite.
- 5) Bi-product material might enhance the value of some ores. This is particularly true of mercury. Cinnabar is known to be present in significant quantities at the Sulphur and San Emidio properties.
- 6) Transportation must be considered in property evaluation. The Sulphur, Hot Springs Point and Humboldt areas are well situated near railroads, but the others are poorly situated at distances of 45 miles or more from railroads. Soil conditioner, mainly for Central California market, might not be dependent on railroad location; it might be better transported by truck.

SULPHUR DISTRICT

Humboldt County:

This district is along the northwest edge of the Kamma Mountains, principally in sections 35 and 36, T. 35 N., R. 29 E. The Western Pacific Railroad goes through the settlement of Sulphur several miles northwest of the area. The patented claims that cover this area are optioned to Canyon State Mining Company and/or Pacific Sulphur Company. One or both of these companies is a subsidiary of Great American Industries, a New York based firm.

The main part of the district has an exposed length of about 6,500 feet and an average width of about 1,800 feet, with a north-northeast trend. This is expressed topographically, with the sulphur district situated on an irregular, hilly terrace. This terrace is bounded on the west by a bluff that extends down to the valley floor, and is bounded on the east by another bluff that leads to the higher mountains further east. There is evidence that the bluffs are actually fault scarps.

The rocks exposed on this terrace are water-lain sediments of Tertiary age. The pre-dominant rock is well cemented conglomerate but some sandstones probably are present in the southwestern part. Generally the rocks dip eastward at low angles. The bluffs are composed of resistant, partly opalized and silicified conglomerates. Alteration within the confines of the terrace is variable. Most of the area is underlain by a light-colored---or locally red stained---friable, siliceous material; in the strongest altered places an occasional unaltered pebble is the only evidence of the original character of the rock.

Sulphur has been mined from about a dozen pits. These range in size from one about 250 by 150 feet (The Mercury pit) to some less than 50 feet in diameter. Outside the pit areas there is only occasionally any evidence of sulphur mineralization. Structural control of the mineralization is not apparent although north-northeasterly trending faults or fissures may have exercised some influence.

The sulphur occurs as disseminated grains, preferential replacement of the conglomerate matrix, irregular veins and masses and coatings on fracture surfaces. The average grade of material mined in the past is said to have been 15 to 38 percent. The most abundant accompanying materials are silica minerals, alunite and some gypsum. Mercury is present in some of the material; conceivably it could be a bi-product. Silver mineralization is present along the western bluff at the south end but there is no sulphur in this area.

There are several other sulphur occurrences outside the area discussed above. The most important of these is the Peterson pit area about one mile to the northeast, but still within the claim group. Sulphur occurs as fairly high-grade material along a north-northeast fault zone (parallel to the faults mentioned above) that brings conglomerate of the west down against older volcanic rocks. This area and the Mercury pit have the best sulphur reserves seen on the property.

SULPHUR DISTRICT

Humboldt County:

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Drilling was started this April (1966). It was stopped early in October but apparently is to start again. It was estimated that 150 rotary holes had been drilled; these are irregularly spaced throughout the altered area, but have a denser distribution in the old pit areas. The maximum depth observed was 300 feet, but the average depth was less than 100 feet. Examination of the cutting piles from many holes showed a surprising lack of sulphur in much of the area. With few exceptions only holes in or close to the old pits seemed to have encountered much sulphur and then generally only in the upper part of the holes.

Evaluation of the potential of the district is difficult without a detailed analysis of drill hole results. Almost certainly this district will never be a major source of sulphur, particularly if one is referring to pure, bright sulphur. However, in view of the area size and the number of pits it is not impossible that several million tons with grade in the order of 30% might be developed.

Certainly this district has the best sulphur potential of any in Nevada.