

JEWEL MINE
82E-2E

July, 1987 JTB

ORE SHOWS

3-LEVEL 0-95' of shaft no ore : .04 - .09^{Am}, .09 - 0.31^{Ag}, 25'-42'
 - sect. 0-39' S : .01 - .18^{Am}, .01 - 1.4^{Ag}, 18'-80'
 .. 39' S - 87' S : $\frac{0.7734^{Am} \cdot 6.15^{Ag}}{8.4'} / 48' L. (see Sect)$
 87' S - 130' S : $\approx .05^{Am} \cdot 0.4^{Ag} / 43' L / 18'$
 130' S - 137' S : $\frac{0.466^{Am} \cdot 2.75^{Ag}}{2.0} \times 12' L. (see Sect)$

note sect show
26.5' of .296, 1.85/2.9'
near end

S. DRAFT

0-27' S : no assay.
 27-49' S : $\frac{0.539^{Am} \cdot 2.58^{Ag}}{1.9'} \times 22' L.$
 49'-59' S : $\frac{0.147^{Am} \cdot 0.74^{Ag}}{1.9} \times 10' L.$
 59' S - 81' S : one sample 0.037^{Am}, 0.19^{Ag}.
 81' S - 87' S : $\frac{.466^{Am} \cdot 2.41}{1.33}$
 87'-99' S : $\approx \frac{0.028^{Am} \cdot 0.18^{Ag}}{1.5} \times 12' L.$
 99' S - 105' S : $\frac{.185^{Am} \cdot 0.7^{Ag}}{16''} \times 6' L.$
 105 - 111' S : $\frac{.06^{Am} \cdot 0.31^{Ag}}{10''} \times 6' L.$
 111' S - 201' S = no sample ?
 201' S - ?
 ? face $\frac{1.17^{Am} \cdot 6.10^{Ag}}{2.75} \times ?$

- ① Note old wire plans show no ore all L6. 0.01 → 0.02 Am in vein. - Jewel.
- ② " " do not indicate ore far over bottom L. enterprise - no stopping shows.
- ③ Visual examination of rock, can est ore grade 1kg grade - no grade, by dark minerals & galena - forms bands, streaks, and scattered blebs & blotches.

JEWEL MINE, 82E-2E

EXPLORATION FOR POTENTIAL ORE

July 1984-JB

- ① 170^L from Denoro Grande hdq to Jewel 300^L, distance 450', Backs 40' to circumference
- ② 250^L " " " " 400^L, " 220', Backs 80' to 170^L
- ③ 400^L " " " " Shaft (87' below Jewel 500^L) Dist 800', Backs 156' to 250^L

Assume historical average of finding striping ore along 23% of drifting, then

- | | | | | | |
|---|--------------|--|------------|--|--|
| ① | potential is | $450' \times 23\% \times 40' \times 4.5' (\text{thick}) \div 12 =$ | 1553 tons. | } Assume ore sheets continuous along dip length. Actual would be less. | |
| ② | " " | $220' \times 23\% \times 80' \times 4.5' (\text{thick}) \div 12 =$ | 1518 " | | |
| ③ | " " | $800' \times 23\% \times 156' \times 4.5' (") \div 12 =$ | 10,764 " | | |
| | | | | 13,835 tons | |

- ④ 475^L from Dentonia S. Hdq to south end of property, distance is say 2000', backs 400'
- ∴ Potential is $2000 \times 23\% \times 400' \times 4.5' \div 12 = 69,000$ tons.

① to ④ Total Potential is 82,800 tons of say present development av. of 0.4^{oz} Au, 2.8^{oz} Ag.

ESTIMATED COST OF PRODUCTION IS \$150 per ton.

∴ equivalent to $\frac{\$150}{1555/ton} = 0.33^{oz}/ton$ Au equiv.

PRESERVE ORE OF 0.376^{oz} Au and 2.27^{oz} Ag per ton

RECOVERY 95% of Gold & 80% Ag.

THE RECOVERED GRADE IS 0.357^{oz} Au and 1.82^{oz} Ag.

PRICE OF Au @ \$455/oz and Ag @ \$9.75/oz

GROSS REC. VALUE IS $0.357^{oz} Au \times \$455 = \162 /ton

(or) $1.82^{oz} Ag \times \$9.75 = 17$ /ton

TOTAL RECOVERED \$179 less Smelter charges.

NET PROFIT/TON, before taxes, is about $175 - 150 = \$25$ per ton.

∴ NOT ENOUGH TO PAY ORE CAPITAL COST.

5^L 88' L. one in 600 Drifting = 15^L in over
4^L 200' L. one in 400 Drifting = 50^L in over
250^L 110' L. one in 500 " = 22^L " " } 22^L

U.S. Hally 1941 (Worked done 1939 2 ms.)

Geol. of camp consists of gabbro sels, gneiss, granite & many dykes. Both gabbro & gneiss are intruded by granite which in turn is intruded by pre-m. dykes, gabbro veins & post-m. dykes. Post-m. dykes are tertiary in age.

The Denton vein found from the Jewel to Robert ^{Em} is a dist. of one mile. It has been developed by shaft in the Jewel; by adit & shaft @ the Centipede, & by shaft adit (& shaft?) @ the Anchor & Ethiopia. The vein is in granite at the south end, it crosses the belt of gneiss & is in gabbro at N. end.

Denton vein str. is a irreg. fault zone dip E to SE @ 30-60°. Variable in str. & dip, there is also variation in outcrop str. in the W @. Vein str. gabbro breccia - widths up to 15' (some) of 600' dr. examined 23^h is in steeply sloping zone.

Veins occur in well-min. shaft within large bod. of gabbro. Gen. wide gabbro tends to occur in the U.S. str. above strike in NE. Factors. One shaft tend to occur in flatter rather than steeper part of U. str.

NOTE

1. From Jewel shaft southward the ore deepens to 90' and then is 35' of oxidized + fract'd + unstable ground.
2. Jewel prod'n 128,383 tons $0.296 \frac{\text{oz Au}}{\text{t}}$, $1.71 \frac{\text{oz Ag}}{\text{t}}$.
3. Denver Granite selected silica ore mined 2227 tons @ $0.307 \frac{\text{oz Au}}{\text{t}}$, $1.92 \frac{\text{oz Ag}}{\text{t}}$.

Note: Selected ore from higher grade sections & gen. from exposed wider vein structures. Also noted that H.W. usually broken into white f.w. was followed closely - to enhance free flow of rock. H.W. quartzite gen. often slabs off

4. Mineralogy & Metallurgy Nelson Consultants Aug / 79

Mingite predom along fault, slips & shears, small quantity distrib through gangue. Gangue just all white ^{mass} quartz, also calcite & chlorite in oxid. quartz. Ferr mag. min small quartz. Galena, pyrite, chalcocite & tetrahedrite. & telluride. Gen. c. 9 min chrys. shears & shear structures - summary of sulph. Test sample did not contain the high Zn, Sb, As as shipped to trail smelter. Ore should be easy to crush down to 3" size but after that the gangue becomes increasingly competent & tough. Min along shear & fault \therefore should probably be a c. grind.

maybe more complex mineralogy.

Xerox =

- ① Rainbow Property, Midway (Grid M.1) $49^{\circ}02'N$ $118^{\circ}40'W$ 82E/2W
R.E. Reid + V.L. Nielson Geol. + Geol. Mag. Xerox pages 2-13.
Jan/84 Work: July 11 - Oct 5/83
printed Maps: Geol. Mag., Misc.
- ② The TANI O'SHANNON PROPERTY $49^{\circ}06'N$ $118^{\circ}43'W$ 82E/2E.
H.H. Stear Mar 13/84 Xerox pages 1-17, plus Geol. Map Fig 3.
- ③ JEWEL GEO-SILVER PROPERTY
James M. Dawson. June 27/83 Xerox Report pages 1-12
- ④ Geology of THE JEWEL LAKE (AND EASTERN PART) AND DISTRICT AREA
M.S. Hedley 1941 Xerox pages all.
- ⑤ Report # 92 - Xerox Jewel Vein Plan of Workings.
- ⑥ Metallurgy Melrose Consultants 74 Aug. pages 1-3. Xerox

