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ITEM 25

RELIEF CANYON—GOLD

Alternate names: (site of) Emerald Spar Fluorite deposit

Commodities: Au, Ag,
CaF₂ (nonrecoverable)

LOCATION-OWNERSHIP

County Pershing.
Mining district Relief-Antelope Springs.
Elevation 1,645 m.
Topography Rugged.
Domain Mixed, Federal, private lease.

General location About 24 km east of Lovelock.
Meridian Mount Diablo.
Tract Sec. 16, T 27 N, R 34 E.
Latitude 40°12'15" N.
Longitude 118°10'13" W.

Owner-operator Lacana Mining Corp., Toronto, ON, Canada (1985).
(The development of the property is a joint venture; Lacana's partner is unknown.)

GEOLOGY

Type of ore body Disseminated epithermal gold,
stratabound.
Origin Hydrothermal.
Shape of ore body Irregular triangular wedge or
bell-shape in plan.
Ore controls Faulting, lithology.
Age of mineralization ... Unknown, possibly from Late
Cretaceous to Late Tertiary.
Mineralized zone aver-
age dimensions, m:
Length 730.
Width 550.
Thickness 0 to >30.
(deposit open to the southwest)
Mineral names Native gold or electrum, quartz, pyrite,
sericite, hematite, fluor spar, jasperoid, clay.

Host formations Grass Valley.
Natchez Pass (Cane Springs).
Geologic age Late Triassic.
Rock relationships Argillite, quartzite, siltstone,
shale (Grass Valley), adjacent and
above principal ore zone.
Jasperoid breccia zone, contains
ore.
Carbonaceous dolomitic limestone,
minor shale and siltstone (Natchez
Pass), adjacent and below principal
ore zone.
Alteration Jasperoid silicification, argillic,
iron staining, intense oxidation.
Size Small.

DEVELOPMENT

Current status Active-producer.
Type of operation Surface.
Mining method Conventional open pit; mine 4,500 t/d
ore, and about 6,400 t/d waste.
Year of discovery 1979-82.
Discovery method Mapping, stream sediment sampling,
drilling by Duval Corp.

Distance to water supply ... <5 km.
Road requirement <5 km.
Distance to power supply ... <5 km.
Mill location On-site.
Mill status Active.
Milling method Agglomeration, sodium cyanide heap
leach, carbon column recovery.
Process rate About 4,500 t/d.

Initial production September-October 1984.
Past production None.
Annual production rate . 762 kg (24,500 tr oz) Au.

PUBLISHED RESERVES-RESOURCES

Class	Quantity	Grade	Year	Reference
1..Not reported in reference	7,000,000 tons	0.042 tr oz/ton Au	1983	530
2.. Do ¹	8,000,000 tons	0.04 tr oz/ton Au (diluted ore; stripping ratio = 1.5:1).	1983	199
3.. Do ²	9,000,000 tons	0.032 tr oz/ton Au (stripping ratio = 2:1)	1984	658

REFERENCES

90, 199, 224, 329, 331, 496, 525, 530, 658, 662, 755,
810.

USGS quad maps Lovelock, 1:250,000.
Buffalo Mountain, 15'.
USBM sequence number 0320270720.

Comments: Gold is in and near jasperoid silicification principally within a sedimentary breccia at the contact between the above 2 host formations.

¹Resource is referred to as preliminary pit plan diluted reserves.

²Resource is referred to as minable reserves.

Information Circular 9035

Principal Deposits of Strategic and Critical Minerals in Nevada

By N. T. Lowe, Russell G. Raney, and John R. Norberg



UNITED STATES DEPARTMENT OF THE INTERIOR
Donald Paul Hodel, Secretary

BUREAU OF MINES
Robert C. Horton, Director