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247

## ROUND MOUNTAIN—GOLD

ITEM 59

Alternate names: Smoky Valley Mine, Round Mountain Common Operation  
 Related names: Sunnyside Pit, Southeast Pit

Commodities: Au, Ag  
 (Au-Ag ratio ≈ 1:2)

## LOCATION-OWNERSHIP

County ..... Nye.  
 Mining district ..... Round Mountain (Jefferson Canyon).  
 Elevation ..... 1,920 m.  
 Topography ..... Hilly.  
 Domain ..... Mixed; private and BLM administered.  
 General location ..... About 80 km north of Tonopah.  
 Meridian ..... Mount Diablo.  
 Tract ..... Sec. 19, T 10 N, R 44 E.  
 Latitude ..... 38°42'30" N.  
 Longitude ..... 117°05'00" W.  
 Owner ..... Louisiana Land and Exploration Co. (LL & E), Lakewood, CO, 50%; Felmont Oil, New York, NY, 25%; Case, Pomeroy and Co., 25% (1984). (Echo Bay Mines Ltd., Edmonton, AB, Canada, bought LL & E's 50% interest subject to completion of definitive agreement, expected in January 1985.)  
 Operator ..... Smoky Valley Mining Division of Copper Range Co. (subsidiary of LL & E) (1984).

## GEOLOGY

Type of ore body ..... Disseminated, fissure vein, stockwork.  
 Origin ..... Hydrothermal, oxidation.  
 Shape of ore body ..... Unknown.  
 Ore controls ..... Fracturing, lithology.  
 Strike and dip of mineralized zone ..... Northwest: southwest.  
 Age of mineralization ..... Miocene (25 million yr).  
 Mineralized area dimensions (excluding outlying placer areas), m:  
   Length ..... 1,800.  
   Width ..... 1,200.  
   Thickness ..... >750.  
 (Disseminated zone is about 600 m wide and 1,700 m long.)  
 Mineral names ..... Electrum, auriferous pyrite, free gold, pyrite, limonite, adularia, quartz, fluorite, realgar, alunite, calcite.  
 Principal host formation ..... Tertiary Volcanics (Jefferson Caldera).  
 Geologic age ..... Oligocene.  
 Rock relationships ..... Quaternary gravel, is ore (resource unknown).  
   Densely welded rhyolite ignimbrite, is ore, in veins and stockwork.  
   Poorly welded rhyolite ignimbrite, is ore, disseminated (contains largest ore reserves).  
   Lithic tuff, is ore in veins.  
   Shale, slate, quartzite (Ordovician), is ore in veins.  
   Granite (Cretaceous Shoshone), is ore in veins.  
 Alteration ..... Sericitic, propylitic, argillic, silicification, oxidation.  
 Size ..... Large.

## DEVELOPMENT

Current status ..... Active-producer, expansion feasibility.  
 Type of operation ..... Surface.  
 Mining method ..... Open pit; with 1983 production rate of 9,000 t/d ore, 23,000 t/d waste.  
 Distance to water supply ..... 13.7 km to stream from Jett Canyon.  
 Road requirement ..... About 1 km.  
 Distance to power supply ..... On-site.  
 Mill location ..... On-site.  
 Mill status ..... Active.  
 Milling method ..... Cyanide heap leach, carbon adsorption, electrowinning, smelting.  
 Pad process rate ..... 48-d cycle, 9,000 t/d.  
 Product type ..... Dore bullion (2/3 Au, 1/3 Ag).  
 Year of discovery ..... 1901 (district lode gold); 1906 placer gold; 1979 (LL & E).  
 Discovery method ..... Ore mineral in place, drilling.  
 Initial production ..... 1906; again in 1976 (LL & E).  
 Past production ..... 16,700 kg Au (district) (1901-59) (422).  
   7,493.6 kg Au and 3,940.2 kg Ag (1977-81) (422).  
   2,256.9 kg Au (1982).  
   2,900 kg Au, 1,700 kg Ag (1983).  
   3,100 kg Au planned (1984) (670).

## PUBLISHED RESERVES-RESOURCES

Class	Quantity	Grade	Year	Reference
1..Not reported in reference	11,617,000 tons	0.061 tr oz/ton Au, 0.07 tr oz/ton Ag (original reserves, cutoff grade 0.02 tr oz Au).	1974	412
2..Proven and probable	195,400,000 tons	0.043 tr oz/ton Au, 0.023 tr oz/ton Ag (114,400,000 tons proven and 81,000,000 tons probable (undiluted)).	1981	388
3..Indicated	228,300,000 tons	0.03715 tr oz/ton Au	1983	189

## REFERENCES

46, 61, 83, 84, 90, 169, 187, 193, 195, 196, 301, 303, 312, 357, 368, 378, 387, 388, 404, 408, 412, 416, 422, 431, 447, 492, 550, 616, 620, 621, 622, 670, 767, 795, 840.  
 USGS quad maps ..... Tonopah, 1:250,000.  
 USBM sequence number ..... 0320230149.  
 USGS MRDS number ..... W001574.  
 Mid number ..... 2600594.

Comments: A 36,000-t/d (40,000-ton/d) mill to attain 90% recovery of reserves is under study. Reserves reported in 1983 delineated from 1977 through 1982. This reserve includes production in the intervening years.

**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**