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ITEM #21

McDERMITT–MERCURY

Alternate names: None

Commodities: Hg

LOCATION-OWNERSHIP

County ..... Humboldt.
Mining district ..... Opalite (Cordero).
Elevation ..... 1,402 m.
Topography ..... Flat.
Domain..... Mixed; BLM administered, public lands-private.

General location ..... About 10 km southwest of McDermitt.
Meridian ..... Mount Diablo.
Tract..... Sec. 27, T 47 N, R 37 E.
Latitude ..... 41°55′13″ N.
Longitude..... 117°48′37″ W.

Owner-operator ..... Placer U.S. Inc., San Francisco, CA (subsidiary of Placer Development Ltd., Vancouver, BC, Canada), 51% (1983).
Owner..... Sterling Mineral Venture, 49% (1983).

GEOLOGY

Type of ore body ..... Sedimentary, replacement.
Origin..... Hydrothermal, sedimentation.
Shape of ore body ..... Tabular overall.
Ore controls..... Faulting, bedding.
Strike and dip of mineralized zone. N 45° W: 4° E.
Age of mineralization... Miocene.
Mineralized zone average dimensions, m:
Length ..... 760.
Width ..... 670.
Thickness..... 6.
Depth ..... 30.
Mineral names ..... Cinnabar, corderoite, montmorillonite, chalcedony, iron and manganese oxides, calcite, cristobalite, gypsum, alunite, apatite, stibnite, alpha tridynite.

Host formation ..... Tuffaceous sediment (lake beds).
Geologic age..... Miocene.
Rock relationships..... Clay, is ore, encloses ore. Chert, under ore, is ore.
Alteration ..... Argillic.
Size ..... Medium.

DEVELOPMENT

Current status..... Active-producer.
Type of operation ..... Surface.
Mining method ..... Open pit; overall stripping ratio is about 4.7:1 waste:ore.

Year of discovery ..... 1941 (drill penetration of ore body).
Discovery method ..... Geological inference.

Initial production ..... 1975 (stripping began in 1974).
Past production ..... 237,000 t, 4.51 kg/t Hg ore milled; 489,000 kg Hg metal production (1981) (*564*).
273,000 t, 4.06 kg/t Hg ore milled; 452,000 kg Hg metal production (1982) (*564*).
Annual production rate . About 240,000 t ore and 20,000 flasks.

Distance to water supply ... On-site wells.
Road requirement ..... None.
Distance to power supply ... On-site.
Mill location ..... On-site.
Mill status ..... Active.
Milling method ..... Flotation, distillation.
Process rate ..... 2,200 t/d ore, 90 t/h (furnace–0.45 t/h Hg concentrate).

Product type ..... Refined mercury.
Distance shipped ..... 4,348 km.
Destination ..... New York, NY, and various other national locations.

PUBLISHED RESERVES-RESOURCES

Class	*Quantity*	*Grade*	*Year*	*Reference*
1..Indicated	3,000,000 tons	10 lb Hg/ton	1976	596
2..Measured	1,648,000 t	0.5 wt pct Hg	1980	563
3.. Do	1,410,000 t	5.15 kg/t Hg	1981	564
4.. Do	1,202,000 t	4.44 kg/t Hg	1982	564

REFERENCES

7, 29, 104, 202, 229, 276, 406, 466, 468, 474, 563, 564, 596, 602, 615, 639, 642, 643, 673, 725, 801, 845.

USGS quad maps ..... McDermitt, 1:250,000. Jordan Meadows, 15′.
USBM sequence number ..... 0320130259.
USGS MRDS number ..... MO54731.
Mid number ..... 2600646.

Comments: Largest mercury producer in the United States. Individual ore bodies are asymmetric lenslike bodies that thin and decrease in grade away from hot spring centers of mineralization. Reported final pit depth will be about 50 m. The ore body is estimated to contain 400,000 flasks of mercury.

Information Circular 9035

Principal Deposits of Strategic and Critical Minerals in Nevada

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