

007487

MAR 26 1965

PROPOSED DEVELOPMENT OF
SILVER POTENTIAL OF
A PORTION OF THE MAYO DISTRICT
YUKON

Submitted to Peso Silver Mines *→ file*
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Vancouver 1, B.C.

K.
J.H.S.
E.F.
R.D.S.
R.C.B.
P.M.K. ✓
G.W.M.
R.O.M.
C.K.W.
J.B.S.
G.P.N.
K.F.L.
J.I.B.
E.C.I.

Dear Sirs:

The undeveloped silver-lead-zinc-cadmium potential of the Mayo district has been shown geologically to be in the order of magnitude of over a billion dollars gross value, partly held by United Keno Hill Mines and partly by Peso Silver Mines, Silver Titan Mines, and associated companies. The geologic potential held under Peso is in the order of several million dollars gross, and recent work is giving strong confirmation of this potential. (See attached paper on Mineral Potential of the Mayo District by A.E. Aho, Western Miner, October, 1964 p. 80-89).

The main silver-lead ore deposits of this district occur at repeated intervals in northeast- to east-west-striking veins which have been productive mainly in brittle Keno-Hill-type quartzite rock formation and to a lesser extent in greenstone. The main new ore deposits awaiting to be developed will also be found largely within these types of host rock, and therefore long-range plans should favour the vein systems with the greatest thicknesses of quartzite or similar competent rock.

This geologic potential is based on (a) thickness of favourable quartzite, (b) presence of strong branching vein structures and (c) presence of varied and high silver-lead ratios indicative of complex and rich mineralization.

The actual physical existence of the main silver-lead-zinc potential is being confirmed by present developments on the Shanghai, Haldane, and Formo properties. I am confident that continued development will unfold major ore bodies of Keno Hill type on several of the properties and that recent favourable results are only a beginning.

The deposits consist of two types, (a) the silver-lead-zinc veins of the central Keno-Hill quartzite portion of the district and (b) the silver-lead-antimony veins of the Peso and Rex properties in the Haggart Creek schist-quartzite belt to the north.

Copy sent to Sivola

Proposed development of the ore deposits of this district is shown on the accompanying plan and described below.

(A) Proposed Development of Silver-lead deposits in the Keno Hill quartzite area

The general course of development and amounts of expenditures required have been ably presented by Dr. D.D. Campbell. To this amount should be added about \$300,000 for exploration and development of the Haldane property on which a small tonnage of milling ore has been proven and several faces of ore have been opened up for immediate development.

The course of optimum development proposed is thus as follows:

Phase 1 Development to September 30, 1965

1. Drift, raise, and drill into the new ore sections on Shanghai	\$ 50,000
2. Drift on Middlecoff and drill Johnson zone on Haldane	50,000
3. Complete drilling on Formo	10,000
4. Crosscut into Gold Queen vein	10,000
5. Shaft on Duncan-Ladue	5,000
Total	<u><u>\$ 125,000</u></u>

Phase 2 Development to March 31, 1966

1. Develop Shanghai for production	200,000
2. Develop Middlecoff zone and explore Johnson zone by drifting on Haldane	250,000
3. Equip Shanghai, Haldane, Formo, Duncan-Ladue and possibly Gold Queen for production	150,000
Total	<u><u>\$ 600,000</u></u>

Overburden drilling costing \$50,000 should also be carried out during Phase 2 on the Shanghai, Galena Hill, Haldane, and other vein systems to prove up more potential.

Phase 3

4. Build central concentrator at Shanghai	<u><u>\$ 400,000</u></u>
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From present indications, if this development is carried out with any reasonable success, it should be possible to construct a 200-ton-per-day concentrator next season and start operation late in 1966.

The concentrator should be situated on the downstream side of the Shanghai portal, with local camp buildings nearby.

From Galena Hill a road should be built across from the Silver King to serve the Formo property and also the Galena Hill property when it is developed.

From Mt. Haldane a road should be built to join the Proctor and Shanghai roads to take production directly to the concentrator. Eventual deep-level development of the Haldane property would be from the south side of the mountain.

As soon as profitable production is established, a portion of the capital so generated should be returned to further development of the other properties. From this further development it is anticipated that annual production might be increased eventually to the order of 10 million ounces of silver or more.

By this time a central independent townsite could be developed around Haldane Creek with an airport in McQuesten Valley about 3 miles upstream to serve both our operations and those of United Keno Hill Mines.

(B) Proposed Development of Silver-lead-antimony deposits of Peso-Rex and Haggart Creek vicinity

With further rise in silver prices, important potential may be developed in this area by further exploration.

However, it appears that a separate concentrator would be necessary for this area for two reasons (a) the ores are antimonial and concentrates would differ from those of the silver-lead-zinc part of the district and (b) transportation of raw ore from this area to any central mill would probably be too costly because of greater distance.

Further exploration and development in this area may eventually justify a 100-ton-per day concentrator.

CONCLUSIONS AND RECOMMENDATIONS

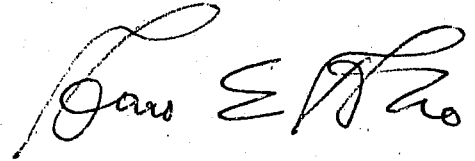
The silver-lead-zinc potential of the Mayo district is now being confirmed by recent developments on the Shanghai, Haldane, and Formo properties.

Immediate exploration and development should be continued, aimed toward production from these three properties with a central concentrator at the Shanghai property.

Cost of the initial phase of exploration is estimated to be about \$125,000, cost of development \$600,000, and cost of building concentrator \$400,000, requiring a total of about \$1,250,000 to achieve production at a milling capacity of 200 tons per day.

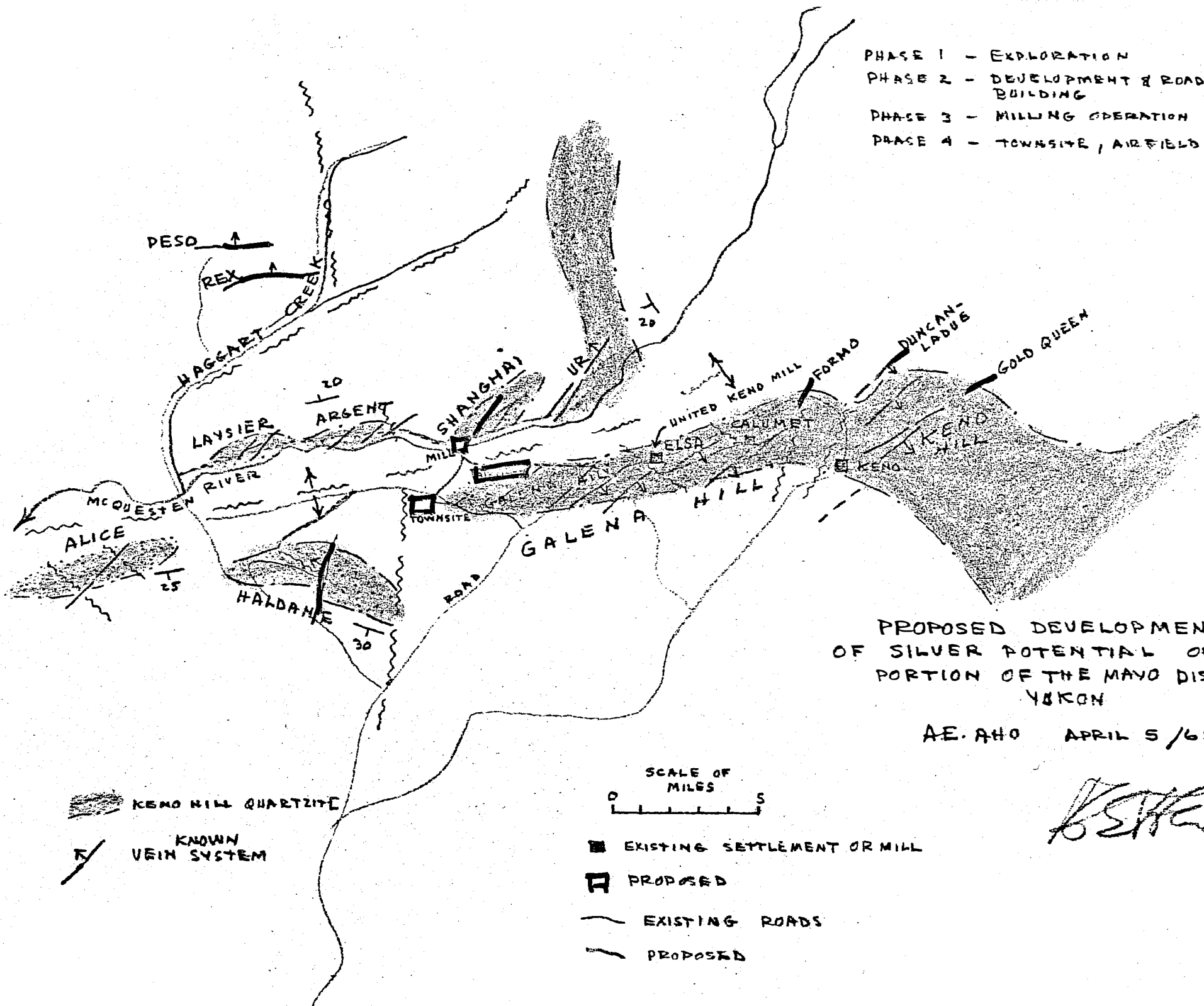
Any initial profitable operation should then be expanded to maximum ultimate capacity which might be in the order of 10 million ounces of silver annually.

Respectively Submitted,

A handwritten signature in cursive script, appearing to read "Dr. A.E. Aho".

Dr. A.E. Aho

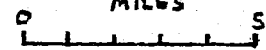
- PHASE 1 - EXPLORATION
- PHASE 2 - DEVELOPMENT & ROAD BUILDING
- PHASE 3 - MILLING OPERATION
- PHASE 4 - TOWNSITE, AIRFIELD, ETC.



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YUKON

AE. AHO APRIL 5 / 65

SCALE OF
MILES



KENDO HILL QUARTZITE

KNOWN VEIN SYSTEM

EXISTING SETTLEMENT OR MILL

PROPOSED

EXISTING ROADS

PROPOSED

AE. AHO