

W.A. No. ....

NAME Endako

SUBJECT Geological Reports

PROPERTY FILE  
093K 006-07  
(Endako)

015147

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AN APPRAISAL OF THE METALLIC MINERAL RESOURCES  
OF CENTRAL BRITISH COLUMBIA

The area concerned is between 53 degrees and 56 degrees north with irregular north-south boundaries defined in part by drainage divides. It includes the whole of the central lake land from Germansen to Tesla Lake.

SUMMARY:

Central British Columbia, as defined, is an area in which mineral production is likely to play an increasingly important role for the foreseeable future (25 years) because part of the area is highly mineralized. Production prior to 1964 was relatively insignificant totalling less than 1 million tons of all kinds of ore. Present production is significant with three major mines, Endako (molybdenum), Granisle (copper), and Pinchi (mercury), totalling about 12 million tons per year with a gross value of more than 50 million dollars. Future production may be expected to surpass this by many times for estimated reserves in known copper and molybdenum properties total some 8,000 million pounds of metal with a value at present prices of about 5,000 million dollars.

PAST PRODUCTION:

Production prior to 1964 was not large for several reasons. Originally lack of transportation was a significant inhibitant, however the main reason was that the type of deposit that is being exploited now and will be to a greater extent in the future was not economically viable until just recently. These are the large, low-grade

93K 006, 049, 063  
93L 088, 089, 145, 146  
93N 006

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General March 8, 1969

porphyry deposits. About three-quarters of past production came from one mine, the Pinchi mercury mine during the years 1940 to 1944 when it produced over 4 million pounds of mercury from about 700,000 tons of ore. About one-tenth of the production came from another mine, the Sil-Van (or Duthie) which produced lead and zinc concentrates with significant silver. Other properties are shown on the map and their production on the included table. They were mostly small lead and zinc veins which contained some gold and silver except for one other mercury mine (Takla Mercury) and one antimony (Snowbird or Stewart Lake).

93L 088,  
089)

PRESENT:

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Since 1964 three major mines have come into production and have in effect transformed the economy of the area. Endako mine started in 1965 and is now the second largest molybdenum mine in the world. Currently it mines 25,000 tons per day yielding some 15 million pounds of molybdenum a year as molybdenite concentrates and molybdic trioxide. The Granisle mine started in 1966 and produces at a rate of about 6,000 tons per day yielding 26 million pounds of copper in concentrates a year. Late in 1968 the Pinchi mine reopened in what really is an entirely new operation. It produces 800 tons per day and is expected to yield 2 to 3 million pounds of mercury a year. In addition small production has come yearly from the Cronin Babine mine and in 1967 and 1968 from the Emerald Glacier mine. The estimated gross value of products of all these mines is about 50 million dollars.

93L 145, 146

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FUTURE:

It is well known that prediction of future mineral resources is subject to gross errors because of difficulty to predict future discoveries and assess future economic considerations and inability to predict future demands that are at present non-existent. The following discussion of potential is offered with this in mind.

The mineral potential of central British Columbia is not uniform. About a third of the area has a very high mineral potential, a third has a moderate potential, and a third a low potential. The area of low potential in the south and east includes much terrain covered by Late Tertiary basalt flows or thick glacial drift and lake deposits, but the underlying geology is such that it is believed to have an intrinsically low potential. The area does however have some potential for mercury, gold, and manganese deposits. The western flank of the Coast Mountains and a belt trending northeastward from Smithers has either a very high or moderate potential. Lines shown on the map bounding the areas of various potential are based on present information but are really broad zones and are likely to be changed to some degree by more information.

In all likelihood the bulk of production in the future will be from mines of the same nature as Endako and Granisle, that is, very large low-grade porphyry type deposits of copper and/or molybdenum. To be economic these deposits must contain a minimum of 15 million tons (and generally very much more), and in an ideal mining situation they may contain as little as 0.35 per cent copper or 0.15 per cent molybdenum.

CENTRAL BRITISH COLUMBIA (PRE 1964)

Past Production -- more than 100 tons ore

		Tons	Gold Oz.	Silver Oz.	Copper Lb.	Lead Lb.	Zinc Lb.	
Cronin Babine	1917-1952; 1956-1964	18,009	196	189,071	17,840	2,195,567	2,256,066	+ cadmium
Emerald Glacier	1951-1953	4,631	38	55,364	-	1,121,951	1,061,393	
Glacier Gulch	1933-1939	183	297	1,187	-	5,992	13,345	
Golden Eagle (Tachek Mountain)	1934-1943	108	16	20,922	33,721	-	-	
Sil-Van	1923-1947; 1953-1954	79,281	3,240	1,671,437	41,534	7,614,127	6,345,877	+ cadmium
Hunter Basin	1915-1941	296	238	8,265	94,157	-	-	
Pinchi	1940-1944	691,624	-	-	-	-	-	4,018,804 lb. mercury
Snowbird	1939-1953	?	-	-	-	-	-	104,485 lb. antimony
Takla Mercury	1943-1944	11,250	-	-	-	-	-	132,088 lb. mercury
Coronado	1905-1940	140	41	7,798	-	100,289	15,755	

A large number of prospects have established reserves of about the right order and may be brought into production in the future if the economic climate permits a viable operation. The following nine potential producers, together with Endako and Granisle, have between them reserves of the order of 6,000 million pounds of copper and 2,000 million pounds of molybdenum with a combined value at current prices of about 5,000 million dollars.

Berg	copper and	molybdenum
Morrison	copper	
Newman	copper	
Glacier Gulch		molybdenum
Huckleberry	copper and	molybdenum
Lorraine	copper	
Ox Lake	copper and	molybdenum
Red Bird		molybdenum
Lucky Ship		molybdenum

Many other prospects of similar type have been explored; some do not seem viable in the near future, some need further work to establish their potential. The following is a partial list of such prospects: Serb, Big Onion, Old Fort, Huber, Whit, Hearne Hill, Sunsets Creek, Mount Thomlinson, Smith Barrett, and Nanika Lake. Other copper prospects of slightly different type offer a possible potential but are too newly discovered to evaluate, that is, Sam Goosly and Dom. Many other prospects of unknown potential are marked on the map.

Deposits of other metals also exist in some quantity and at least one silver-lead-zinc property, Nadina, is a likely producer. Another, Sil-Van, may well reopen. Mercury prospects abound and the possibility of another mercury mine

is fairly good. The geology from Stuart to Takla Lake is fairly favourable for the possible discovery of chromium, platinum, asbestos, nickel, and jade and showings of most of these metals or rocks are known. A future significant rise in the price of gold would mean that gold veins now uneconomic might produce and others be discovered.

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