

PRODUCT PHOSPHATE  
PRODUIT

PROVINCE OR PROVINCE OU  
TERRITORY TERRITOIRE

British Columbia

N.T.S. AREA 82 G/6,11  
RÉGION DU S.N.R.C.

REF. Phs 1  
RÉF.

NAME OF PROPERTY LIZARD CREEK  
NOM DE LA PROPRIÉTÉ

OBJECT LOCATED Geographic  
OBJET LOCALISÉ

UNCERTAINTY 2000 m Lat. 49°30' Long. 115°10'  
FACTEUR D'INCERTITUDE Lat. Long.

Mining Division Fort Steele District  
Division minière District

County Township or Parish  
Comté Canton ou paroisse

Lot Concession or Range  
Lot Concession ou rang

Sec. Tp. R.  
Sect. Ct. R.

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

### DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

Phosphate in the vicinity of Fernie occurs mainly in the Permian Johnson Canyon Formation and in the basal section of the Jurassic Fernie Formation.

In the Permian, phosphate intervals are 1 metre thick or less. The type section (Telfer p. 583) comprises 5 beds of oolitic sandstone and chert over a 4.5 metre interval with assays from 9.0 to 59.3 per cent  $\text{Ca}_3\text{P}_2\text{O}_8$ .

At the base of the Fernie, the type section (Telfer p. 588) includes 3 metres of calcareous and/or shaly oolitic phosphate in 3 beds with intervening shale layers over a 4 metre interval. A six layer section, 3.8 metres thick, averaged 27 per cent  $\text{Ca}_3\text{P}_2\text{O}_8$ .

At the head of Lizard creek, faulting has change the strike from northerly to N60°W with a 60° SW dip (overtured). Repetition of beds has locally produced a showing of 104 feet of phosphate, apparently in one bed, where the true width should be 3 feet. At other locations the phosphate is faulted out entirely.

### HISTORY OF EXPLORATION AND DEVELOPMENT HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

Phosphate bearing rocks occur over a wide area on the west side of the Elk River in the vicinity of Fernie. Those areas investigated include the head of Lizard Creek some 5 miles west of Fernie, and the Fernie ski hill, some 3 miles south-southwest of Fernie.

The Consolidated Mining and Smelting Company of Canada Limited (Cominco Ltd) in about 1928 obtained Crown-granted rights to phosphate mineralization in an area extending from the head of Lizard creek southeasterly some 12 km to the Elk river (lots 13858-13860, 13865-13874). Development work on Lizard creek in 1929-30 included trenching, short crosscuts and 2 drifts, one on each side of a gulch at 4 500 feet elevation.

HISTORY OF PRODUCTION/HISTORIQUE DE LA PRODUCTION

REFERENCES/BIBLIOGRAPHIE

Telfer, L; Phosphate in the Canadian Rockies; The Canadian Institute of Mining and Metallurgy, Transactions, Vol. 36, pp. 566-605, 1933.

Butrenchuk, S.B.; Phosphate Inventory; Geological Fieldwork, 1986, pp. 289-302, BC Dept. of Mines.

Reports of Minister of Mines, British Columbia: 1929, pp. 299, 447; 1930, p. 377; 1967, pp. 311-313.

MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

Tectonic map of part of the eastern Rocky Mountains, Sc.1"= 8 miles, Fig. 1, Memoir 336, Geol. Surv. of Canada, 1965.

Map 82 G/6, Elko, (Topo.), Sc. 1: 50 000

Map 82 G/11, Fernie, (Topo.), Sc. 1: 50 000

REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR						
Date Date	09-87						

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