

## MAGNETITE OCCURRENCES IN THE TULAMEEN ULTRAMAFIC COMPLEX

FYI.

Dave

LODESTONE MOUNTAIN U1 MINFILE: 92H SE 034  
 TYPE: Ultramafic Assoc. NTS: 92H 07  
 A Prospect LAT: 49 28' LONG: 120 52'  
 Figure: 40

Lodestone Mountain is 23 kilometres due west of Princeton, B.C. and 8 kilometres south of the Tulameen River. Magnetite is hosted in the hornblende clinopyroxenite phase of the Tulameen ultramafic complex and occurs as disseminations, blebs and small veins. The greatest concentration of mineralization appears along the ridge axis of the mountain and down the northeast slope.

On Lodestone Mountain the magnetite is found as disseminations and as veins averaging one inch ( 2.5 cm. ) wide and three to four feet ( <= 1 m. ) long. The largest reported pod is two feet ( 61 cm. ) wide and six feet ( 180 cm. ) long ( MMAR, 1959 ). Several assays of magnetite rich rocks yielded a range of 13.03 to 22.32 percent iron and 0.28 to 1.08 percent titanium. An assay of high grade ore from an old trench graded 49.03 percent iron and 1.98 percent titanium ( MMAR, 1959, pp. 50 & 51 ). A large portion of magnetite mineralization appears to be along the ridge axis and down the northeast side of Lodestone Mountain.

Historically, Lodestone Mountain has seen sporadic iron ore exploration since the turn of the century. Development has not been extensive, restricted to a few trenches until the 1950's. Work by the Imperial Metals and Power Ltd. from 1956 to 1959 delineated a major zone of magnetite mineralization extending 2,200 feet ( 671 m. ) northwest, greater than 900 feet ( 275 m. ) wide and at least 350 ( 107 m. ) deep with 12 to 24 percent acid soluble iron ( Lindley, 1962 ). Further work at the same time indicated 25 million tons ( 22.7 Megatonnes ) of magnetite ore with 18 percent total recovery for a total of 4.5 million tons ( 4.1 Megatonnes ) of iron ( Lea, 1962 ). Later exploration in the mid 1970's, by the Cleavland Cliffs Iron Company, estimated a total of 91,171,000 tons ( 83 Megatonnes ) of 17.3 percent recoverable iron ( Financial Post, 1978, pp. 186 ). Work on Lodestone Mountain has been relatively continuous for the last ten years. Most recently, Tiffany Resources has been working at the site.

TANGLEWOOD HILL U2 MINFILE: 92H SE 035  
 TYPE: Ultramafic Assoc. NTS: 92H 07  
 A Prospect LAT: 49 28' LONG: 120 52'  
 Figure: 40

Tanglewood Hill lies immediately east of Lodestone Mountain. The two locations have often been worked together during iron ore exploration. Tanglewood Hill is noted as having more concentrations of massive magnetite than Lodestone Mountain but the overall grades of mineralization are almost equivalent ( MMAR, 1959 ).

Tanglewood Hill has historically shown the greatest concentrations of magnetite in the area. Magnetite is hosted in the hornblende clinopyroxenite unit of the ultramafic complex. The magnetite is found as blebs and lenses. The blebs commonly range from one to five pounds ( 1/2 to 2 1/2 kg. ). Lenses vary from 1 inch to 18 feet ( 2 cm. to 5 1/2 m. )

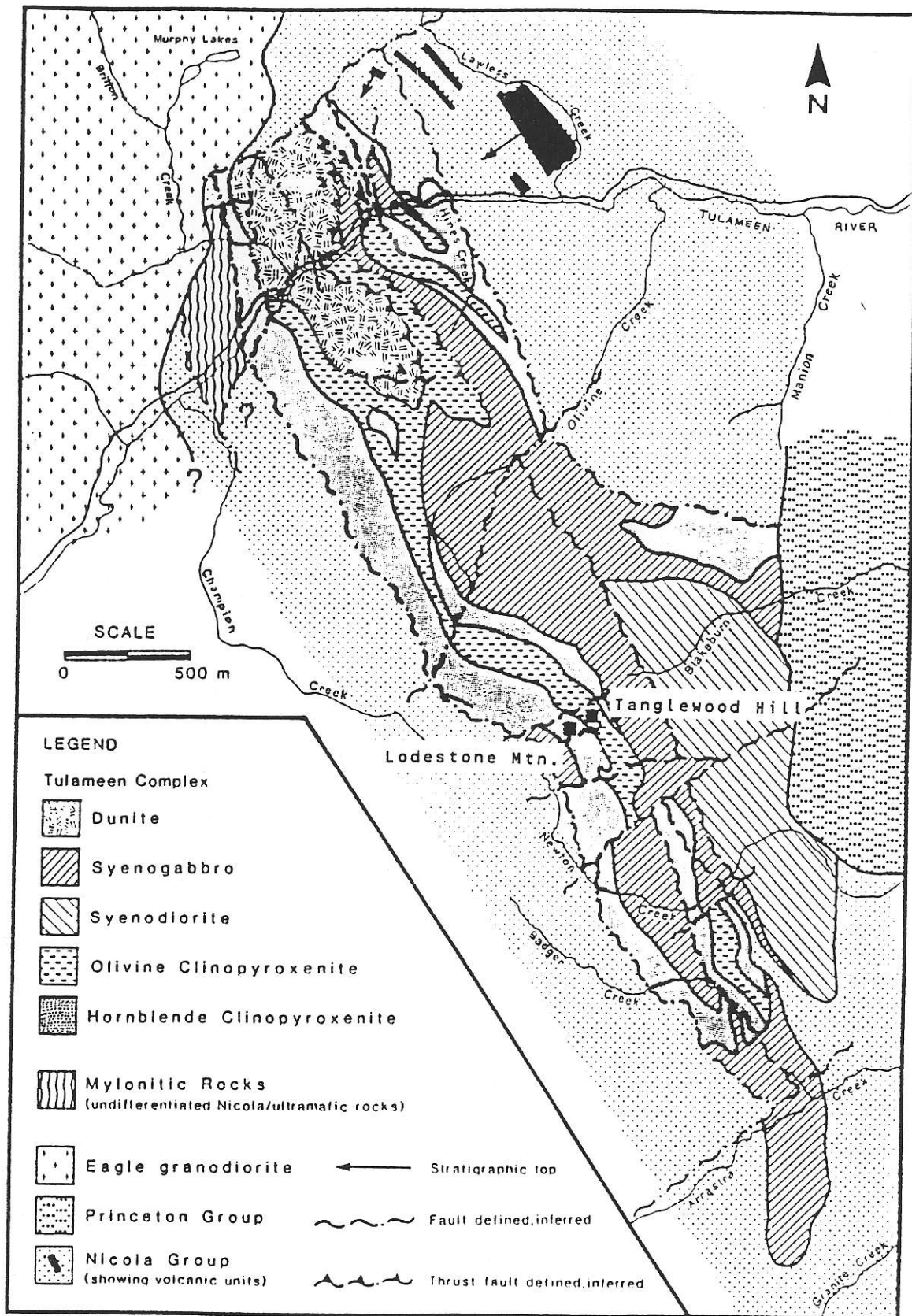


Figure 40 : Sketch geology of the Tulameen Ultramafic Complex  
( after Nixon, 1988 )