DESCRIPTIVE MODEL OF W SKARN DEPOSITS

By Dennis P. Cox

DESCRIPTION Scheelite in talc-silicate contact metasomatic rocks.

GENERAL REFERENCE Einaudi and Burt (1982), Einaudi and others (1981).

GEOLOGICAL ENVIRONMENT

Rock Types Tonalite, granodiorite, quartz monzonite; limestone.

Textures Granitic, granoblastic.

Age Range Mainly Mesozoic, but may be any age.

Depositional Environment Contacts and roof pendants of batholith and thermal aureoles of apical zones of stocks that intrude carbonate rocks.

Tectonic Setting(s) Orogenic belts. Syn-late erogenic.

Associated Deposit Types Sn-W skarns, Zn skarns.

DEPOSIT DESCRIPTION

Mineralogy Scheelite ± molybdenite ± pyrhotite ± sphalerite ± chalcopyrite ± bornite ± arsenopyrite ± pyrite ± magnetite ± traces of wolframite, fluorite, cassiterite, and native bismuth.

Alteration Diopside-hedenbergite + grossular-andradite. Late stage spessartine + almandine. Outer barren wollastonite zone. Inner zone of massive quartz may be present.

Ore Controls Carbonate rocks in thermal aureoles of intrusions.

Geochemical Signature W, Mo, Zn, Cu, Sn, Bi, Be, As.

EXAMPLES

Pine Creek, USCA	(Newberry, 1982)
MacTung, CNBC	(Dick and Hodgson, 1982)
Strawberry, USCA	(Nokleberg, 1981)

GRADE AND TONNAGE MODEL OF W SKARN DEPOSITS

By W. David Menzie and Gail M. Jones

COMMENTS All mines associated with the contact zone of a particular intrusive with a favorable host rock were combined to form a single deposit. In the absence of detailed geologic information, mines within 10 km of each other were combined. See figs. 32, 33.

DEPOSITS

Name	Country	Name	Country
Bailey	CNYT	Lost Creek	USMT
Brejui	BRZL	Lucky Mike	CNBC
Cab	CNYT	Mactung	CNNT
Calvert (Red Button)	USMT	Maykhura	URTD
Cantung	CNNT	Milford area	USUT
Dublin Gulch (GSZ)	CNYT	Nevada-Massachusetts	USNV
Emerald-Dodger	CNBC	Nevada-Scheelite	USNV
Iron Mountain	USNM	Osgood Range	USNV
King Island	AUTS	Pine Creek	USCA

Quixaba	BRZL	Tyrny-Auz	URRS
Ray Gulch	CNYT	Uludag	TRKY
Sang Dong	SKOR	Victory	CNBC
Stormy Group	CNYT	Yellow Pine district	USID
Tern Piute district	USNV	Ysxjoberg	SWDN

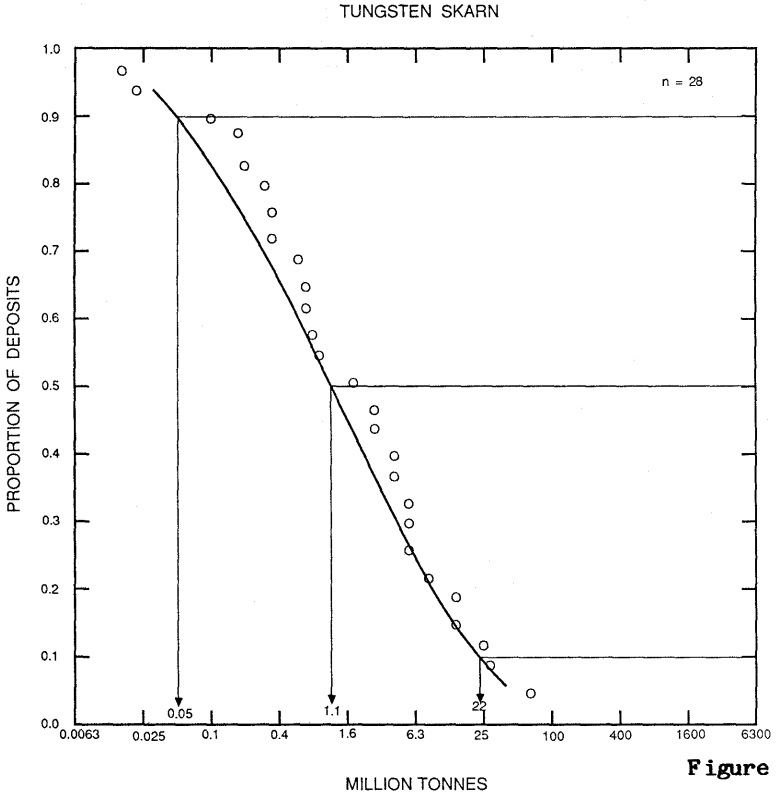

Figure 32. Tonnages of W skarn deposits.

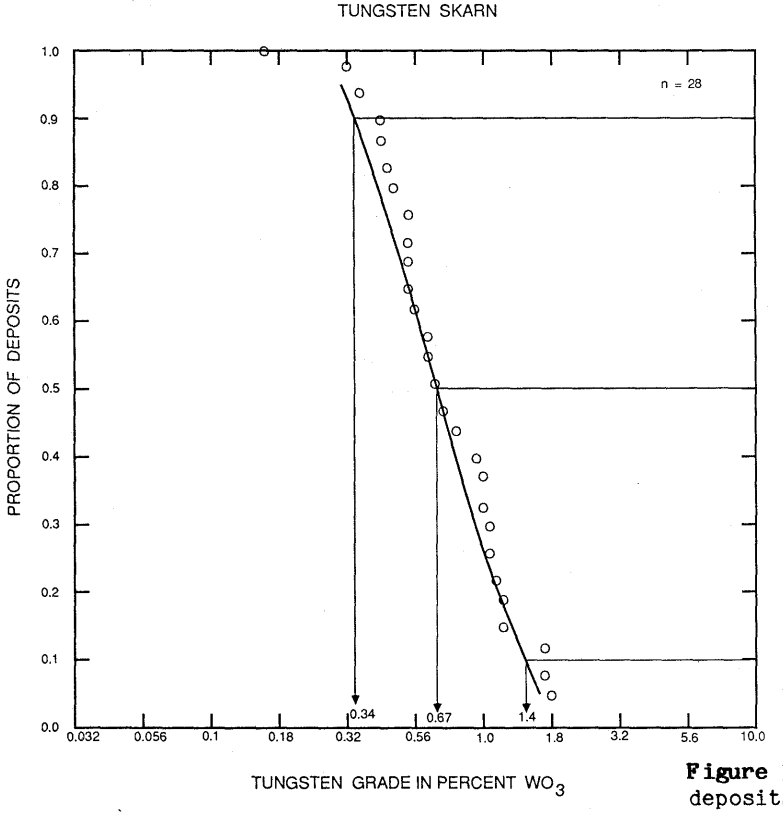

Figure 33. Tungsten grades of W skarn deposits.