675819
Robb Lake
94B/13

This is incomplete report on Ric Property
COMINCO LTD
near headwaters of RICHARDS CREEK

DRAFT

INTRODUCTION

The Ric property is located in the Main Ranges of the Northern Rocky Mountains. The claims straddle part of a north-northwest trending belt of lower and middle Paleozoic miogeoclinal carbonate rocks, quartzites, siltstones and shales which are exposed in a series of folded thrust panels that have undergone northeasterly directed tectonic transport. Several zinc and lead showings occur in the upper part of the Stone Formation, a thick dolomite of middle Devonian age.

STRATIGRAPHY

A thick succession of carbonate and epiclastic rocks of Cambro-Ordovician, Silurian and Devonian ages crop out on the claim area. An attempt was made to keep major stratigraphic subdivisions consistent with those of Taylor and Stott (1973) in the Tuchodi Lakes Map-Area north of Richards Creek, however no distinction was made between the Cambrian (Atan Group) and the Ordovician (Kechika Group), and the basal Devonian Munch-McConnell Formation was not recognized, and the Wokkpash Formation was included with the Lower Devonian Stone Formation.

The Cambro-Ordovician succession is divided into four

lithologically distinct units (refer to figures ..... and .....). The lowest unit (ϵO_{rls}) is composed of tan weathering ribbed limestone. Within this unit is a thin distinctive light grey micritic limestone marker (ϵO_{mls}). A recessive brown weathering bioturbated silty dolomite (ϵO_{bd}) separates the ribbed limestones from the upper unit of cliff-forming grey dolomite with sandstone interbeds (ϵO_{d}).

The ribbed limestone unit consists of interbedded and interlaminated grey limestone (and dolomitic limestone) and tan weathering dolomitic silstone and sandstone. Many beds contain small-scale crossbeds, ripple laminations and load features. Beds, a few feet thick, of massive light-grey weathering fine grained dolomite laced with hairline subvertical fractures filled with white sparry dolomite are common in the lower part of the unit. The micritic limestone marker unit is approximately 150 feet thick and contains numerous stylolites parallel to bedding. The bioturbated silty dolomite is approximately 300 feet thick and is conspicuous because of its recessive weathering nature. It is thin bedded to laminated, and cross bedding is present throughout. The upper dolomite unit is

lithologically variable. Massive fine crystalline grey dolomite is interbedded with cross stratified dolomitic sandstone and siltstone, thin orthoquartzites, and a distinctive pisolite bed. Scour and fill features, mudcracks, burrows and ripple laminations are common in most sandy beds.

The Silurian Nonda Formation (Sn) consists of medium grey dolomite and dolomitic sandstone with a white 30 foot thick orthoquartzite marker bed (Sn_q) at its base. Fossiliferous beds from which Halysites sp., Syringopora sp., Favosites sp., Synaptaphylum sp. and Horncorals were identified, occur throughout the section. Upper part of the succession is medium to dark grey and thin-bedded with thin argillite interbeds; this may belong to the Devonian Muncho-McConnell Formation which was not recognized in the field.

HOW ABOUT ORTHOQUARTZITE HORIZON IN MIDDLE OF UNIT?

A conspicuous change in colouration from medium to light grey was used to distinguish between the Silurian and the Devonian successions. This corresponds with a change in lithology from the darker thin bedded dolomites to light blocky dolomitic sandstone, and sandy dolomite with thin orthoquartzite beds . These lithologies grade discontinuously upward into massive beds of fine and medium crystalline dolomite with sandy intervals.

This thick succession of dolomites was mapped as the Stone Formation, including the basal dolomitic sandstones and orthoquartzites which probably belong to the Wokkpash Formation (Taylor, 19___). Upper part of the Stone Formation consists of blocky fine crystalline dolomite with thin interbeds of micritic limestone near its upper contact. Some beds are finely laminated with apparent stromatolitic structures. Vugs filled with coarse sparry dolomite and quartz are common in some beds.

Overlying the Stone Formation are light to medium grey micritic limestones of the middle Devonian Dunedin Formation. The Formation comprises at least several hundred feet (a complete section is not preserved) of laminated micritic limestone, oolitic limestone and occasional interbeds of bioturbated micritic limestone.

The Besa River Formation is a recessive, black moderately fissile shale which overlies the Dunedin fault contact with the Stone and Dunedin Formations.

STRUCTURE

Structure of the Richards Creek area is shown in figure ..... a structure cross section of the map area. Folding and thrust faulting dominate the structural style and have had the effect of

repeating the stratigraphy. The Devonian carbonate units have responded as broadly folded competent thrust panels whereas the less competent and lithologically more variable Cambro-Ordovician and Silurian rocks and the Besa River shale have been intricately folded at the mesoscopic and regional scales into tight northeasterly overturned folds, often with ruptured axial planes. The Cambro-Ordovician forms a large recumbent, nearly isoclinal nappe in the western portion of the map area (see figure .....) with its lower limb truncated by the thrust fault shown in figure (...). Adjacent to the anticline is an upright broad syncline with the Stone and Dunedin Formations in its core.

Mineralization:

The lead-zinc occurrences are confined to the upper part of the Stone Formation and lower part of the Dunedin Formation. Fourteen occurrences are known to date which are divided between separate thrust panels of the Stone and Dunedin Formations. Two showings have received considerable examination: the "Bunker Creek showing" is in the lower thrust panel approximately one hundred feet stratigraphically below the Stone-Dunedin contact; the "upper showing" is situated in the overlying

thrust panel in and adjacent to Richards Creek. Sixteen diamond drill holes ~~with a total footage of~~ totalling 3,381 feet were drilled in the summers of 1972 and 1974, five into the 'Bunker Creek Showing' and 11 into the 'upper showing'.

Pyrite, marcasite, sphalerite and galena are the sulphide minerals present. They occur as irregular massive pods, along fractures, and associated with white sparite and quartz filled cavities. The massive mineralization (see figure ....) normally constitutes a fine grained mixture of pyrite and marcasite containing irregular patches, blebs and fracture fillings of later coarser-grained sphalerite. Remnants of dolomite with diffuse boundaries and containing fine pyrite and marcasite suggest replacement by the latter. The fracture fillings (figure ....) tend to be perpendicular to or parallel to bedding, but may coalesce into irregular networks of veins containing fragments of dolomite. Coarse grained sphalerite is most common with some patches of fine pyrite and marcasite which appear to have replaced original dolomite. The cavity fillings are spacially related to the fractures and are filled with very coarse sparry dolomite and quartz, sphalerite pyrite and marcasite. Galena ~~does~~ occurs in most showings but only as a minor constituent. Coarse dolomite breccias (Fig. —) ~~(figure ...)~~

typical of the Robb Lake area are present in the Stone Formation (Figs.) but they do not appear to be important with regard to lead-zinc mineralization. At present there is no obvious explanation for the distribution of showings. Fractures appear to have provided the necessary permeability for migration of metal bearing fluids.

GREAT AS FAR AS IT GOES BUT

WHO DID THE WORK, OWNS THE PROPERTY ETC

HOW DO YOU REGARD THE SHOWINGS - SIGNIFICANT - INTERESTING INDICATORS OF OTHER POSSIBILITIES, INSIGNIFICANT

GOOD PHOTOS

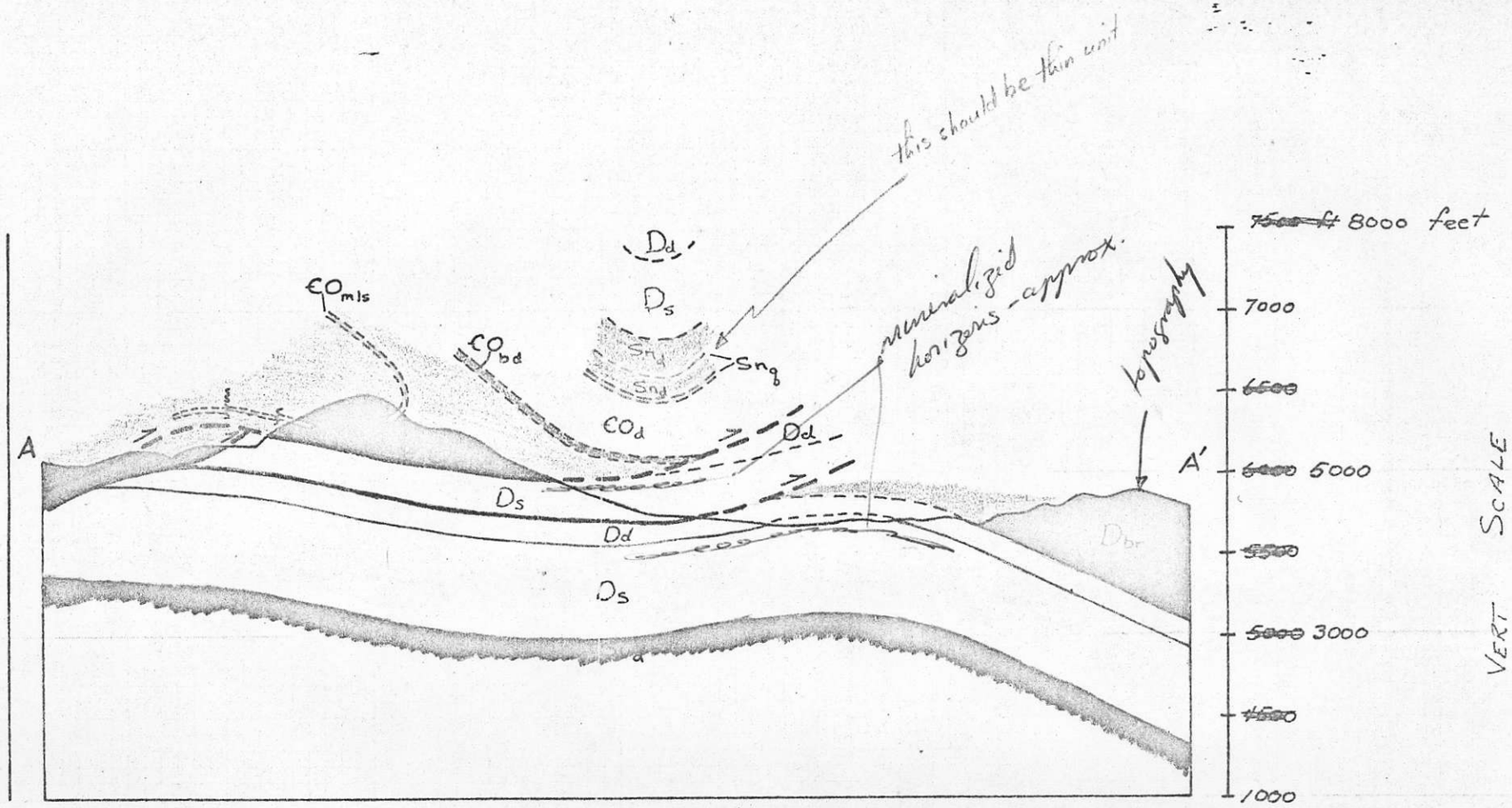


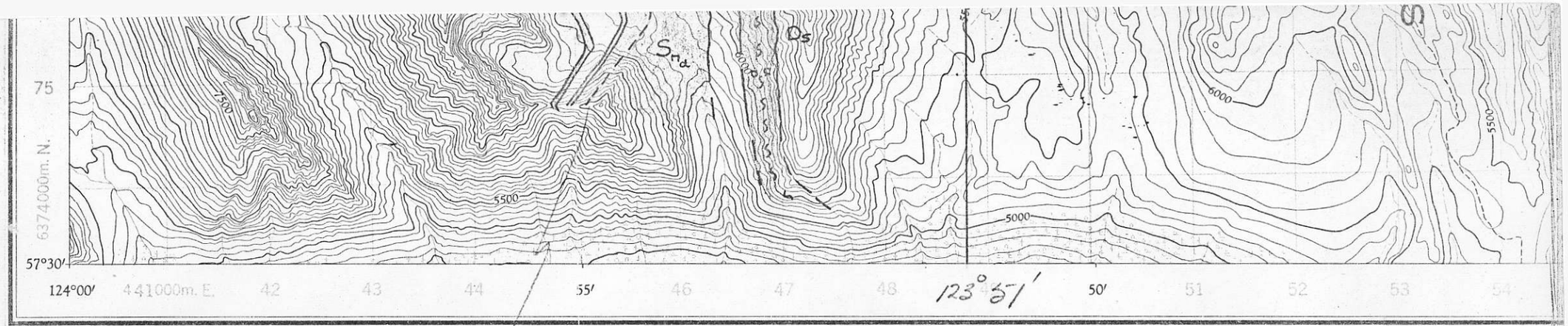
Figure : Structure cross section of the Richards Creek area

HORIZONTAL SCALE

0 1 2 3 miles

0 1000 2000 3000 4000 metres

0 3000 6000 9000 12000 feet



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Copies may be obtained from the Map Distribution Office, Department of Mines and Technical Surveys, Ottawa.

(Joins Redfern Lake 94G/5W)

RICHARDS CREEK

PEACE RIVER DISTRICT

94G-12W

BRITISH COLUMBIA

this should be a double line to represent rock unit but very thin.

Rédigée en 1963, par la DIRECTION DES LEVÉS ET DE MINISTÈRE DES MINES ET DES RELEVÉS TECHN graphies aériennes prises en 1960. Levés sur le terrain en 1

Ces cartes sont en vente au Bureau de distribution des carte ministère des Mines et des Relevés techniques, Ottawa

SCALE 1:50,000 ÉCHELLE

Miles 1 — 0 — 1 — 2 — 3 Milles

Metres 1000 — 500 — 0 — 1000 — 2000 — 3000 — 4000 Mètres

Yards 1000 — 500 — 0 — 1000 — 2000 — 3000 — 4000 Verges

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTANCE DES COURBES 100 PIEDS
Élévations en pieds au-dessus du niveau moyen de la mer
Réseau géodésique nord-américain unifié (1927)
Projection transverse de Mercator

Routes:

	toute saison	
	période sèche	
	de terre	
	sentier ou portage	
ge, single track	Chemin de fer, voie unique (écartement normal)	siding / voie d'évitement; station / gare
line	Ligne de transport d'énergie	
	Mine ou fosse à ciel ouvert	
oint, with elevation	Point géodésique avec cote	454 △
evation	Repère de nivellement avec cote	BM 157→

Building	Bâtiment		B
School	École		P
Church	Église		C
Lighthouse	Phare		
River with bridge	Rivière avec pont		
Stream, intermittent or dry	Cours d'eau intermittent		
Lake intermittent; indefinite	Lac intermittent, rive ind		
Marsh or Swamp	Marais ou marécage		
Depression contours	Courbes de cuvette		

936 D_{br} Besa River Fm

D_d Dunedin Fm

D_s Stone Fm

945 S_{nd} Grey & tan dolomite and sandy dolomite

915 S_{nq} Ortho quartzite

924 $\in O_d$ grey & tan dolomite

946 $\in O_{bd}$ bioturbated silty dolomite

903 $\in O_{m.l.s.}$ micritic l.s.

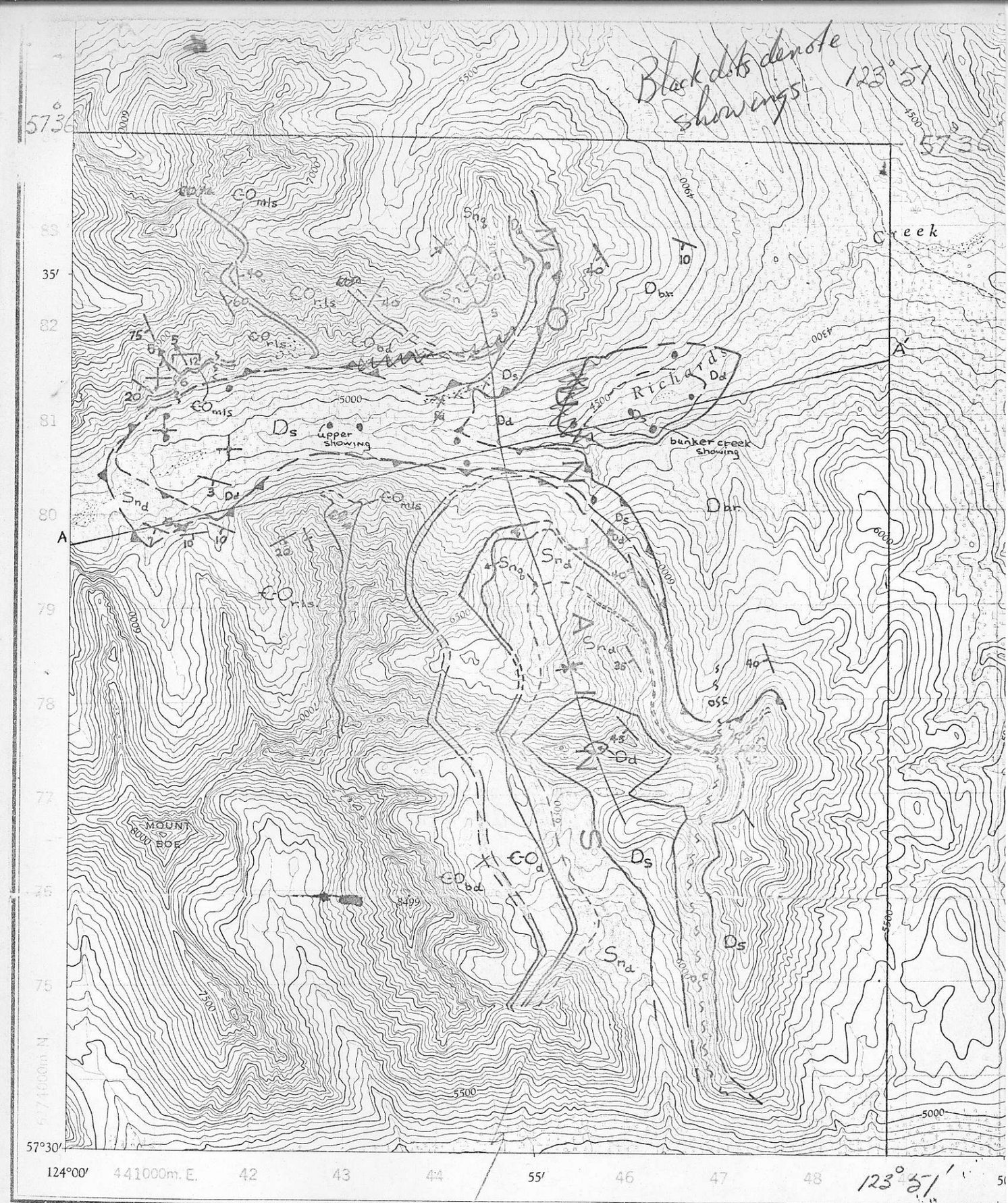
932 $\in O_{r.l.s.}$ ribbed silty l.s.

NB lettering of units is as follows:

D_{br} $\in O_{mls}$
D_d
D_s $\in O_{rls}$
S_{nd}
S_{nq}
$\in O_d$
$\in O_{bd}$

SYSTÈME NATIONAL

FIGURE : Geologic map of Richards Creek Area.



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- Ligne de transport d'énergie
- Mine ou fosse à ciel ouvert
- Point géodésique avec cote 454
- Repère de nivellement avec cote ..... BM 157

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTANCE DES COURBES 100 PIEDS
Élévations en pieds au-dessus du niveau moyen de la
Réseau géodésique nord-américain unifié (1927)
Projection transverse de Mercator

936 Dbr — Besa River Fm

Dd — Dunedin Fm

Ds — Stone Fm

946 CO bd — bioturbated silty dolomite

CO d — grey & tan dolomite

CO mls — micritic ls

Location map of showings