See section
Grasmere 1978
675838
Cirque 94F/11

Wayne Roberts - Gataga River area strat PbZn

Cyprus Amax / Hud. Bay O & G Calgary - 50/50 J.V.
Area: 200 km, Robb Lk to Kechika Short. Slightly E of Ware, 250 km to Ft Nelson, 300 km NW of Mackenzie.

① Thrust fold anticlin. of block plastic in this area
② Discuss some deposits in the Gunsteel Fm; detail on Cirque property.

Column

1. Besa R Fm - tan weathering silty shale, siltstone beds 5-50 m thick - on platform to E & to N in Macdonald Pass area. Tan weath. orange siltstones overlain by m D Dunedin, then recessive weath. Besa R. Siltstones are Silurian.
   Thinks Besa R is a distal turbidite. No current directions, but may be derived from E since it is now calcareous since not shed off the calcareous Paleozoic platform. Besa R is thick, prominent in Southern area, along the Ospika R, thick in Kwadacha R area ~ 500 m, also in Gataga Mtns area it is thick.
2. Gunsteel Fm - olive grey weathering, very carbonaceous, siliceous black shale, chert, minor siltstone. Typical Road Fm equivalent, locally unconformable on Sil. siltstone, with both Besa R & Dunedin eroded, often overthrust by Sil siltstone (NW of Cirque). Thick section of Gunsteel on CIRQUE cl.; sits on Sil siltstone; thrust plate of Silurian rocks overrides. Barite horizons are buff weathering here. Turbidite texture: e.g. silty horizons in carbonaceous black shale. 'Pinstripes' silty beds.
3. 'Warneford Fm' - Emperal Gp equiv. SE current directions. Grain size increases toward the SE. - from GSC.

Thick Warneford - mid-fan region; chert pebble polymictic cgl beds intbd c̄ thin bedded shales. Small pebble cgl - no large clasts

- Gunsteel has nodular & massive barite horizons. No py & PbZn mm
- Pyrite mm. in Gunsteel abundant. Highly deformed locally. (and barite)
  mainly diss. Abund sed pyrite, devoid of PbZn.
  Many large gossans - 100's of acres. In Gunsteel, pyritic.

Fluke cl. - geochem. find, 70 ppm Pb in stream, several 1000 ppm Zn. Laminar banded pyrite in black argillite. Few metres wide. Not well exposed. Grabs 10-15% PbZn, 2:1 Zn:Pb. Avg across showing 5% combined PbZn.

Elf cl. geochem find. Trib. of Akie R. 100 ppm Pb, no Zn. Hygrade boulders barite-hosted glen-splr. 30-50% comb. 1:1 Zn:Pb. 2-4 oz Ag. More work planned.

Kwadacha Park - barite hosted PbZn discovered.

Cirque claims - structural problem - NE verging isoclinal folds complicated by imbricate system of thrusting. From various, O-D black shale prob equiv to Road River → Ord limestone → Sil sltstn (bioturbated, sponges, dolomitic). Imbricate panels of u Dev above these units: 3 panels of u D rocks that cannot be intercorrelated. Diff. units in panels. From E to W the panels are 1. BR silty shales uncont on Sil sltstn. 2. Very thick accum. of silty argillite related to basin on the CIRQUE, doesn't match with BR + sltstn. 3. Cherty rocks - host mineralization + barren barite deposits.

Barren barite - several deposits, traceable over long dist. in cirque. Mineralization assd with lower of two barite horizons - at least so far as present mapping shows.

~~Ed Kuran~~

K showing in headwall of cirque – anomalous ~~geochem~~ target, visual find – barite talus, barite horizon + MS.
2-5% galena no ZnS in this zone. 10-15% in boulders in showing area (PbZn) + massive pyrite.
6 km strike length on Pb geoch. anomaly. Discontinuous – facies change into massive barite upslope. May hit MS at depth.
Isoclinal folds, mineralized keels – difficult to hit with drilling.
Pb:Zn 1:1 in massive barite. 5 m of 8.7% PbZn + 37 gm Ag overlain by 'normal' argillites, then laminar beds of massive pyrite + 3-5% PbZn, 15-20 gm Ag, 1-5 m thick
Zn increases up section. 3:1 to 5:1 in pyrite beds.

Massive barite PbZn in section DDH 5-6 sits on 'subbasin' of black chert/shale (like DDH4) lying on grey shale.
Cgl bed between two barite horizons + silty shale horiz.
above is lamin. banded massive pyrite, then thick success. of silty argillite
DDH 5 4.4 m of 7.12% comb + 28 gm/tonne Ag.
Barite, vfg pyrite little galena, sphal in lamin banded horizons. 5-6% comb, low Ag values < 20 gm/tonne

Ribbon banded cht/shale is anomalous in PbZn, well before impulse of massive barite & PbZn occurred.

Model NW trending trough right along the edge of the Paleozoic platform. Rift or trough along edge of continental slope. Gunsteel Fm shows subbasins –

ex. the ribbon banded bayou - suggests a Red Sea type setting with brine pools. Many barite occurrences between the deposits. Brine pools are zoned, due to metals coming out of fractures or faults along the edge of the rift.