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Technical Nte - Tailings Dam Extension - EL8/1996 -
2W-4W/1991
Goldfields Exploration Proprietary Limited*
Callaghan, T. 2W/1991; 3W/1991; 4

TECHNICAL NOTE

TAILINGS DAM EXTENSIONS

GOLDFIELDS EXPLORATION PTY LTD

T Callaghan

2 October 2000



EL8/196 PT2
See folio 71A

2W - 4W/191
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TECHNICAL NOTE

tailings dam

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cc : Goldfields Exploration Information Centre
From : Tim Callaghan
Date : 2 October, 2000
Subject : Tailings Dam Extensions

INTRODUCTION

This technical note is a sterilisation report for the proposed Henty Gold Mine tailings dam extension due for completion in February 2001.

The existing Henty Goldmine tailings dams are located on two easements (3W/91 and 4W/91) overlying the South Henty EL 8/96 (figure 1). The proposed tailings dam extension is located immediately south of the existing facility.

The South Henty EL is wholly owned by Goldfields Exploration Ltd. The South Henty EL is due for relinquishment in June 2001.

Exploration of the Henty Mine Lease ML7/92 over the last six years has significantly increased the resource. Development of these new resources will require an extension of the existing tailings facility. A new tailings dam has been proposed to the south of the existing dams, located on the boundary of easements 3W/91 and 4W/91.

Exploration of EL8/96 has involved detailed mapping, geophysical and geochemical surveys culminating in the drilling of several diamond drillholes. As a result of these studies it can be concluded that no economic mineralisation is likely to exist within 300m of the surface. The area required for the tailings dam extensions can be considered effectively sterilised.

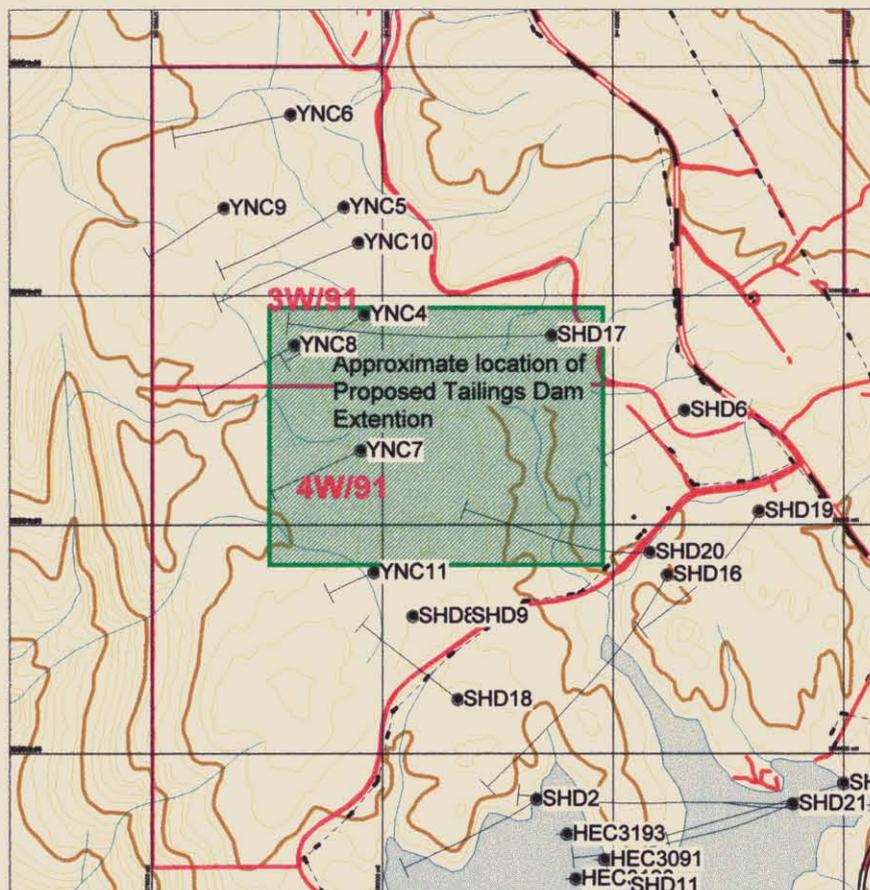


Figure 1. Tailings Dam extension location diagram.

GEOLOGY

The Tailings dam easements are located on the Mt Read Volcanics and cover the boundary between the Central Volcanic Complex and the overlying Tyndall Group as well as the Spillway Horizon. A summary of the local stratigraphic units is located in Table 1.

Tyndall Group	Zig Zag Hill Fm	Post-eruptive rhyolitic, volcanolithic conglomerate and qtz-crystal rich sandstone. <i>Ctc</i>
	Mt Julia Member	Syn-eruptive qtz-feld crystal rich sandstone. <i>Ctt</i> Massive qtz-phyric rhyolitic lavas, breccias and intrusions. <i>Ctl</i>
	Lynchford Member	Syn-eruptive feld crystal rich volcanoclastic sandstone. <i>Cttl</i> Massive carbonate and marly sediments. <i>Ccarb</i> Dacitic volcanoclastic sediments. <i>Cttld</i>
		Howard's Basalt. Fine grained basaltic andesite dykes, lavas and lithic breccias. <i>Cb</i>
CVC (Suite II)	Suite II Porphyry	Qtz-feld-hbl porphyry. Intrusive, fractionated. <i>Cp</i>
	Anthony Road Andesite	Feld-hbl phyric andesite and breccia, extrusive and intrusive. <i>Ca</i>
CVC (Suite I)	Newton Creek Dacites	Dacitic to andesitic volcanoclastic sediments. <i>Ccv</i> Dacitic, feld phyric to aphyric lavas, breccias and intrusions. <i>Ccvl</i>
		Dacitic volcanoclastic pumice breccias. <i>Ccv</i>
	Spillway Breccia	Coarse polymict and dacitic massflows with some sulphide clasts. <i>Ccvag</i>

Spillway Basalt

Massive to stratified monomictic "fire fountain" basalt breccia.
Cb

Yolande River Sequence Footwall pumice breccia

Massive feld-phyric pumice breccia. *Cymf*
Vitric siltstones and sandstones. *Cys*

The CVC-Tyndall Group contact hosts the Henty-Mt Julia mineralisation, some of the Mt Lyell deposits and numerous other prospects in the locality. The Spillway Horizon is a volcanoclastic breccia with reworked massive sulphide clasts located at the base of the Newton Creek dacites. As a consequence of these two prospective horizons the area has been extensively explored over the last 30 years for both gold and basemetal mineralisation.

A detailed, 1:5000 scale map of the area is located in Enclosure 1.

Drillhole locations within the area of the proposed tailings dam extensions are displayed in Figure 1. Diamond drillholes YNC4, YNC8 and YNC11 were drilled by Pasminco Exploration in the early 1990's. These holes were targeted on the Spillway Horizon and chlorite-carbonate alteration associated with low level Pb-Zn mineralisation (<1% Pb + Zn). Drillholes SHD6, SHD17 and SHD20 were drilled as part of the current exploration program on the South Henty EL. SHD17 and SHD20 (Figures 2 & 3) intersected low grade Pb-Zn mineralisation (<1% Pb + Zn) associated with carbonate-sericite chlorite alteration and minor Au mineralisation (<0.4 g/t Au) 300m below surface. The top part of both holes intersected barren Suite II Qtz-Feld-Hbl porphyry. The alteration represents the outer, low grade halo of the Lake Newton Prospect. The Lake Newton prospect is an extensive zoned alteration system with low grade, uneconomic Pb-Zn and Au mineralisation (Callaghan, 2000).

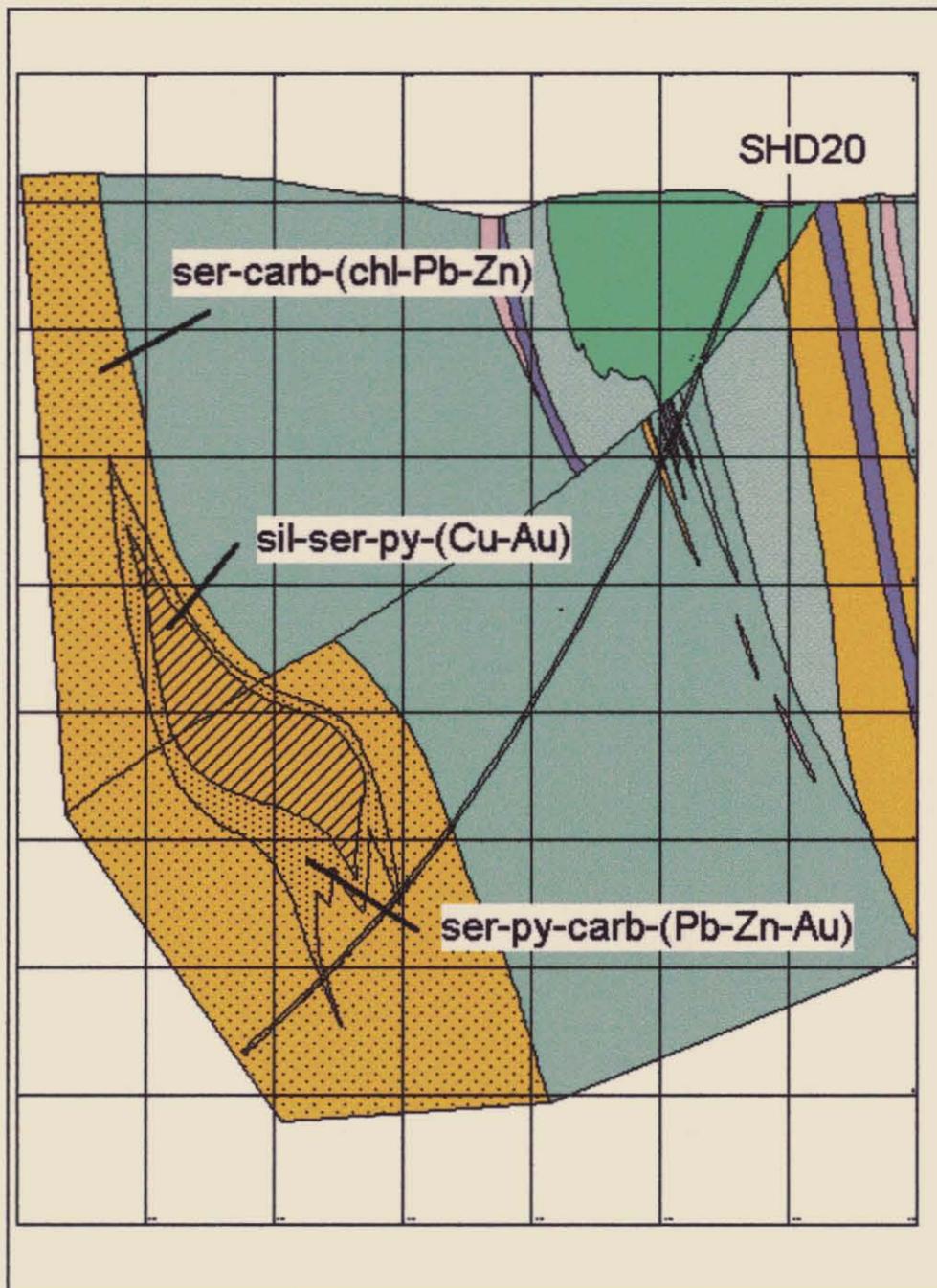


Figure 2. DDH SHD20 Section 5354980N.

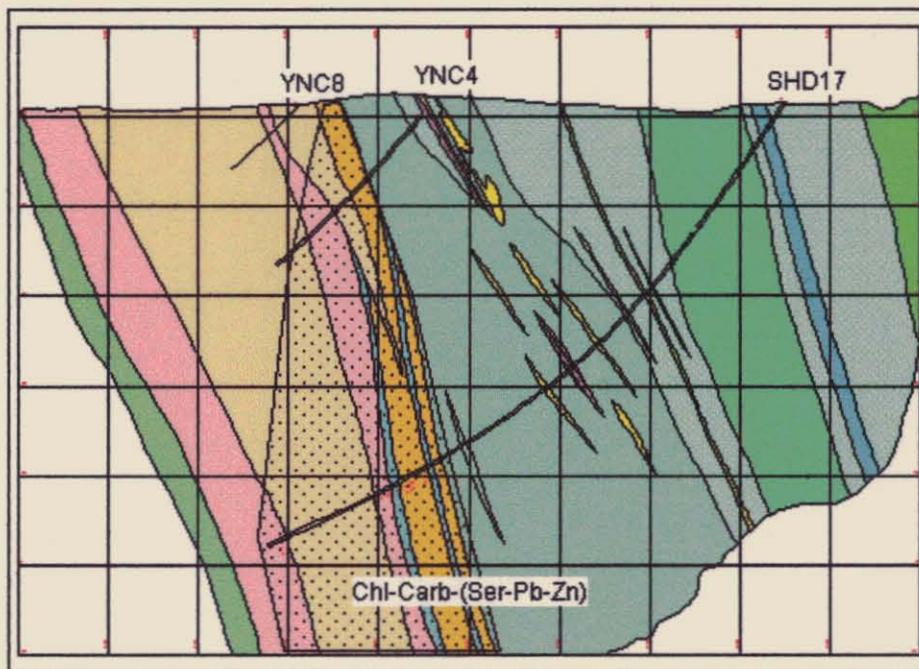
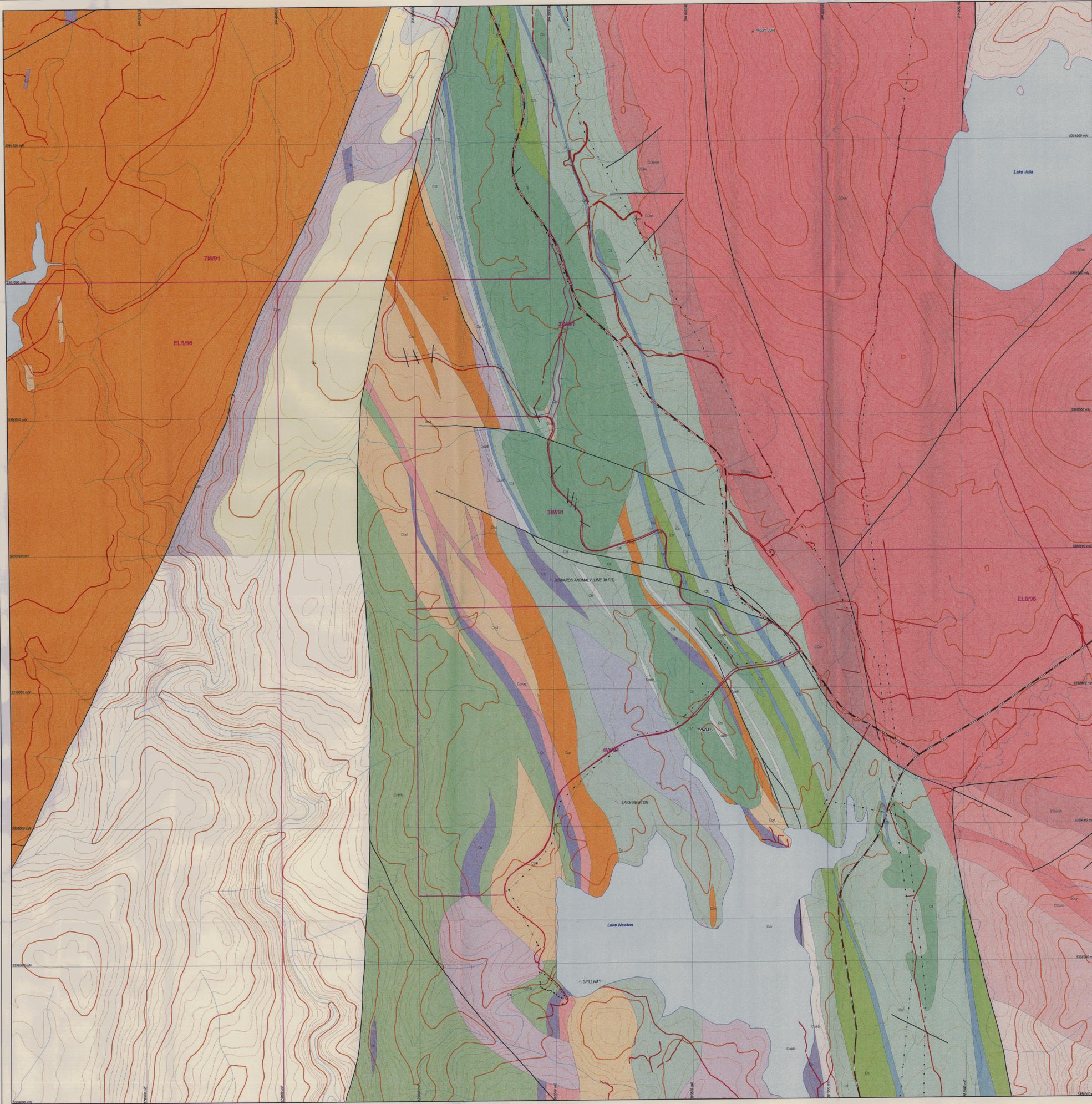


Figure 3. SHD17, YNC4 and YNC8 section 5359900N.

Geophysical surveys completed over the proposed tailings dam site include CSAMT and IP as well as DHEM surveys of the drillholes. Drillhole SHD20 was targeted on a deep (<300m) CSAMT anomaly associated with the Lake Newton Prospect. A weak IP conductivity anomaly just east of the proposed tailings dam was tested by drillhole SHD6. No significant mineralisation was identified. DHEM surveys did not detect any off hole conductors within the area of the Tailings dam extension.

CONCLUSION

The prospectivity of the Mt Read Volcanics has resulted in intense exploration activity over the last 30 years in the vicinity of the Henty Gold Mine-Howard's Anomaly area. Numerous surveys and drillholes have effectively sterilised the area required for the proposed tailings dam extension to a depth of approximately 300m from surface.



- Q_u Undifferentiated Quaternary sediments
- Q_g Mainly limestone commonly decomposed to black clay "puq"
- Q_{ou} Upper Owen correlates in Tyndall Range - Mt Murchison area. Predominantly pink sandstone & granite - pebble conglomerate, includes granite - pebble conglomerate (CO_{ou}) & grey sandstone and conglomerate (CO_{ug}).
- Q_{oua} Upper Owen correlates in Tyndall Range - Mt Murchison area. Predominantly pink sandstone and granite - pebble conglomerate, includes granite - pebble conglomerate (CO_{ou}) & grey sandstone and conglomerate (CO_{ug}).
- Q_{oum} Mainly pink to cream coloured, thickly bedded pebble-cobble to cobble-boulder conglomerate. Includes a lower unit of interbedded conglomerate & sandstones (CO_{oum}).
- Q_{ouma} Mainly pink to cream coloured, thickly bedded pebble-cobble to cobble-boulder conglomerate. Includes a lower unit of interbedded conglomerate & sandstones (CO_{oum}).
- Q_{ouma} Mainly thickly bedded quartzitic sandstone & pebbly sandstone with bands of pebble conglomerate - Newton Creek Sandstone.
- Q_{ouma} Mainly thickly bedded quartzitic sandstone & pebbly sandstone with bands of pebble conglomerate - Newton Creek Sandstone.
- Q_{ouma} Mainly pebble conglomerate with minor thickly bedded quartzitic sandstone & pebbly sandstone - Newton Creek Sandstone.
- Q_{ouma} Mainly volcaniclastic conglomerate with minor siltstone and volcaniclastic sandstone.
- Q_{ouma} Bedded sandstone - siltstone units
- Q_{ouma} Mainly crystal - rich volcanic sandstone (quartz-feldspar phyric), Comstock Tuff and correlates.
- Q_{ouma} Chert rich mass flow horizon. Basal unit to Comstock Tuff.
- Q_{ouma} Crystal - rich volcanic sandstone (feldspar-pyroxene phyric), lithic-rich bases with minor ash, sandstone & limestone. Lynchford Tuff & correlates.
- Q_{ouma} Quartz phyric lava & tuff. Possibly equivalent to Lower Tyndall Group.
- Q_{ouma} Quartz-feldspar phyric lava
- Q_{ouma} Graded crystal-rich volcanic sandstone (feldspar-quartz phyric) with interbedded black siltstone (Lynchford Tuff correlate)
- Sulphide Lenses
- Q_{ouma} Andesitic to basaltic intrusive bodies with lavas & diastolic units. Includes feldspar-hornblende-pyroxene-phyric & feldspar-pyroxene phyric types & small chlorite altered dykes.
- Q_{ouma} Thinly bedded black pyrite siltstone
- Q_{ouma} Andesitic to basaltic clastic units
- Q_{ouma} Basalt. Henry Dyke Swarm
- Q_{ouma} Interbedded basaltic lava & volcaniclastic sediments
- Q_{ouma} Interbedded basaltic lava & volcaniclastic sediments
- Q_{ouma} Interbedded dacitic volcaniclastic sandstone and siltstone
- Q_{ouma} Mainly felsic pyroclastic rocks, dominantly feldspar phyric, including pumice bearing tuff & breccia, crystal vitric tuff, vitric tuff & minor shale & sandstone
- Q_{ouma} Mainly felsic feldspar phyric lava & intrusives; massive to flow banded or auto-brecciated, with rare columnar jointing
- Q_{ouma} Mainly felsic feldspar phyric lava and intrusives; massive to flow banded or auto-brecciated, with rare columnar jointing
- Q_{ouma} Units of bedded siltstone, sandstone, tuff & agglomerate
- Q_{ouma} Undifferentiated massflows, sandstones & black siltstones
- Q_{ouma} Ashy siltstone
- Q_{ouma} Felsic porphyry bodies, intrusive & partly extrusive.
- Q_{ouma} Units of bedded siltstone, sandstone
- Q_{ouma} Black siltstone
- Q_{ouma} Dominantly greywacke & mudstone with some interbedded vitric tuff, crystal tuff & crystal-lithic tuff
- Q_{ouma} Interbedded vitric tuff, crystal tuff, siltstone, slate, sandstone & agglomerate.
- Q_{ouma} Volcaniclastics
- Q_{ouma} Undifferentiated Lower White Spur Formation
- Q_{ouma} Crystal rich volcaniclastic sandstone
- Q_{ouma} Siltstone & sandstone

- Geological boundary accurate
- Geological boundary inferred
- Fault feature
- Fault scarp accurate
- Inferred Fault
- Contoured Fault
- Major Mine site
- Mineral Deposit
- Abandoned Mine site
- Mineral Occurrence
- Built up/occupied area
- Homestead (Pasture)
- Building
- Prospect
- Railway Station
- Beacon Lighthouse
- Airport or Aerodrome
- Bridge
- Road tunnel
- Monument, State Cross
- Landmark Object
- Named Peak/Feature
- Mountain or mountain range
- Pass
- CRF Equipment Breakaway
- Saw Ridge or Saw Cuts
- Spur Spur line
- Rock
- Pileway
- Valley
- Gully Gap
- Cave Cavern
- Island
- Pier
- Pool, Pond, Waterhole, Reservoir
- Swamp
- Washfall
- Dam
- Spring
- Ford
- Watercourse
- Permanent Lake
- Highway
- Secondary Road
- Motor Road
- Walkway Foot
- Railway
- Landing Quay
- Pipeline
- Colliery line
- Watercourse
- Permanent Lake



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Mt Read Volcanics Belt Tasmania

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SHEET 32 Mount Julia

GEOLOGICAL INTERPRETATION

Workspace Path: m:\gim\mapsheet\15k\1\SHEET32\1\SH32_GEOL5K.WOR
Page Setup: A0 and landscape
Date: August 1997