

## ANVIL RANGE MINING CORPORATION

## LITHOLOGIC LOG

DDH # MM96-01-01

Units: Feet / Metres

Date: AUG. 31

Logged By: D. MATTEA

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From	To	No.	Unit	Modifiers	Description
0'	14'				CASING - OVERBOPDEN
14'	260'	1	SDA		ASKIN QUARTZITE, DOLOMITE, LIMESTONE <ul style="list-style-type: none"> <li>- DOLOMITE - limy, lt → med gray → dark gray.</li> <li>- former bedding planes are distinctly visible as a result of darker (former limestone) interbeds</li> <li>- presence of calc. in several fractures, veins.</li> <li>- minor disseminated PYR (&lt;1%) below 90' and 100'</li> <li>- Fe oxide coating on fracture margins in this area.</li> <li>- limy area terminates in regular dolomite @ ~180'</li> <li>- dolomite end of zone is gradual @ 211'</li> <li>- possible quartzite stringers visible @ random</li> </ul>
260'	303'	2	CPau's		ULTRAMAFIC - SERPENTINIZED DUNITE <ul style="list-style-type: none"> <li>- dark gray, schistose</li> <li>- highly sheared and fractured</li> <li>- trace presence of pyrite</li> <li>- close examination reveals characteristic presence of dunite</li> <li>- quartzite (?) and chlorite in matrix units present.</li> </ul>
303'	401'	3	CTpos		CALC-SILICATE SCHIST <ul style="list-style-type: none"> <li>- light to med gray</li> <li>- micaceous, phyllic</li> <li>- moderately fractured</li> <li>- Fe oxide coating on margins of fractures from 338' - 401'</li> <li>- a few small dunite stringers (&lt;12mm) visible up to 311'</li> <li>- minor calcite veining throughout</li> <li>- 1-2% disseminated pyrite</li> </ul>

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From	To	No.	Unit	Modifiers	Description
407'	411'	4	CPauls		ULTRAMAFIC - SERPENTINIZED DUNITE - SAME AS ABOVE
411'	476.5'	5	CTRes		VARIABLY GRAPHITIC CALC-SILICATE SCHIST - light → med. gray - micaceous - sporadic presence of minimal graphite along foliation planes - moderate Qtz veining and lenses - minor brecciation (especially near intervals of 427' and 460') - presence of PyR (<1%) - found disseminated and in small nodules (~2mm and less). Qtz clasts - sub angular up to 3cm - minimal calcite veining in some fracture zones
476.5'	680'	6	Mps		GRAPHITIC FERROUS FELTIC SCHIST - med to dark gray - micaceous; presence of chlorite and muscovite interbedded  - disseminated garnet (~1-6mm) from top to bottom of zone (2-5%) (average 1-2mm in diameter) - minor muscovite veins (up to ~12mm width). ranges from unit located between 671' - 672.5' - minimal calcite veining - ~1% PyR disseminated throughout occasional bands - more band of pyrite lenses found from 680' - 741'. some visible amounts of galena (Pb) are in these bands - slightly graphitic

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From	To	No.	Unit	Modifiers	Description
680'	837'	7	Mbs		<p>MUSCOVITE CHLORITE QUARTZ SCHIST (?) WITH BANDED SULPHIDES - ZONE 1</p> <ul style="list-style-type: none"> <li>- fine grained, med → dark gray</li> <li>- qtz lenses (eye shaped and irregular shaped) up to 60mm in places</li> <li>- PYR (3-4%) disseminated throughout with smaller bands approx 1mm up to 5mm across</li> <li>- sections of qtz visible appear as a mottled feature</li> <li>- some bands of pyrite appear oxidized and are reddish/brown in color - in old fractured areas and F2 foliation.</li> <li>- slightly graphitic</li> <li>- traces of banded sphalerite @ 766.5, 767.5, 782, and at random (HR) around qtz.</li> <li>- traces of disseminated galena - more so in upper half of zone</li> <li>- minor calcite veining</li> <li>- lower half of zone - mineralization appears to dissipate to trace amounts @ 803'</li> <li>- banded pyrrhotite @ 757 and 763</li> </ul> <p>NOTE: FROM 803' - 837', the rock type is the same, however, only very trace amounts of PYR and pyrrhotite are seen.</p>
837'	976'	8	Mbs		<p>MUSCOVITE CHLORITE QUARTZ SCHIST WITH BANDED SULPHIDES - ZONE 2</p> <ul style="list-style-type: none"> <li>- fine grained, med → dark gray</li> <li>- qtz lenses (eye shaped and irregularly shaped) up to 40mm with the majority of them 30-40mm. Some qtz sections appear mottled.</li> <li>- minor calcite veining</li> <li>- PYR (2-3%) disseminated throughout, with smaller bands at random locations eg 846.5, 852.5</li> <li>- PZ (21%) disseminated, with PYR in some random bands eg @ 831'</li> <li>- traces of banded sphalerite (&lt;1%)</li> <li>- slightly graphitic</li> <li>- minor qtz veining</li> </ul>

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From	To	No.	Unit	Modifiers	Description
					<ul style="list-style-type: none"> <li>- Sphalerite lessens to trace amount after 957' - no longer found in bands</li> <li>- Pyrrhotite and PYR (disseminated) - 1-2% for duration of zone to 977'</li> <li>- Possibly actinolite and epidote (trace amounts) at 966.5'</li> <li>- large QTZ. vein (~25cm.) at 974'</li> <li>- all bands of mineralization seems to follow bedding (SO) planes.</li> </ul>
976'	1025.5'	9	SDA		<p style="text-align: center;"><b>QUARTZITE (SILICEOUS ASH OR CHERT?)</b></p> <ul style="list-style-type: none"> <li>- light to med. gray.</li> <li>- possible buff(?) stringer from 989'-990'</li> <li>- few large qtz veins (up to 7.5cm, average 2-3cm.) with trace amt of Pyrr, PYR, Sphalerite</li> <li>- minor schistose layers (1-2cm.) at random locations.</li> <li>- unit appears to show flow bedding similar to schist zones.</li> </ul>
1025.5'	1140'	10	M6S		<p style="text-align: center;"><b>QUARTZOSE BIOTITE CHLORITE SCHIST - ZONE 3(?)</b></p> <ul style="list-style-type: none"> <li>- LIGHT to med. gray to green. Numerous sphalerite bands (1-2mm) - 1025.5' - 1036'</li> <li>- unit appears with interbedded chloritic and biotitic layers</li> <li>- numerous qtz veins found (1-2.5cm.) - most mineralization associated with these areas - PYRRHOTITE (~1%), Sphalerite (~1%), PYR (1%).</li> <li>- traces of epidote around areas (~1.0-1.5cm) like 1064' and 1085'</li> <li>- fairly massive areas of Pyrrhotite and Sphalerite @ 1057.5' and 1060.5' (2-3% for each), also 1069.5'.</li> <li>- smaller qtz nodules visible after 1057' with mineralization associated Pyrr (~1% dia.) Sphalerite (~1% dia.)</li> <li>- siliceous (cherty?) area of this zone from 1076' - 1102'.               <ul style="list-style-type: none"> <li>- this area contains interbedded biotite chlorite schist. - some minor qtz veins also visible, some PYR (&lt;1%) PYRR (&lt;1%) Sphalerite (&lt;1%)</li> <li>- siliceous <sup>area</sup> appears moderately fractured.</li> </ul> </li> </ul>

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From	To	No.	Unit	Modifiers	Description
					<ul style="list-style-type: none"> <li>- another siliceous cherty area appears from 1131.5' - 1132'</li> <li>- contains interbeds of QTZ, biotite chlorite schist.</li> <li>- microplitolite vein above siliceous area - highly fractured</li> <li>- some banded (~10-12mm) sulphides (PYR ~1%, PYRR ~1%) appear between 1130' and 1131'</li> </ul>
1140'	1190'	11	SDA		<p style="text-align: center;">QUARTZITE (SILICEOUS ASH OR CHERT?)</p> <ul style="list-style-type: none"> <li>- light to med. gray.</li> <li>- moderate to highly fractured.</li> <li>- moderate QTZ, veining to 1161', minor to 1190'</li> <li>- minor calcite veining</li> <li>- all mineralization appears along old fracture, - PYR (&lt;1%) PYRR ~1%</li> <li>- massive banded pyrrhotite vein appears between 1169' and 1169.5' - 5-6% PYRR, &lt;1% PYR.</li> </ul>
1190'	1267'	12	Mva1		<p style="text-align: center;">Biotite chlorite muscovite schist</p> <ul style="list-style-type: none"> <li>- med - dark gray - green</li> <li>- minor gty veining.</li> <li>- minimal calcite veining</li> <li>- feature shows chlorite layers interbedded with biotite and muscovite.</li> <li>- minor gty nodules appear deformed or flattened (most ~6mm across)</li> <li>- PYRR (&lt;1%) PYR (&lt;1%) - both disseminated.</li> <li>- trace of garnet</li> <li>- trace of chloropyrite @ 1243'</li> <li>- moderately fractured</li> </ul>

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1267	1627'	13	Mva1+U	DMS	<p>CHLORITE BIOTITE SCHIST</p> <ul style="list-style-type: none"> <li>- med to dark gray - green</li> <li>- minor qtz veining</li> <li>- moderate calcite veining</li> <li>- 2-4% PYRRHOTITE - DISSEMINATED with most aligned along schistosity planes - appears in nodules up to 8mm across with most 1-2mm across or less. PYRR appears in upper third of zone.</li> <li>- banded pyrrhotite from 1291' - 1292', bands ranging from 2mm - 8mm across (~4-5% PYRR) in this area.</li> <li>- presence of epidote @ 1302', 1315', 1428', 1601', 1615'.</li> <li>- PYRR percentage count taper off @ 1317' - PYRR (&lt;1%)</li> <li>- Trace of pyrr around 1307'. Becomes more pyrrhotite after 1331' → ~1% PYR - fine gr.</li> <li>- band of fluorite @ 1349.5 and 1400' along calcite veins</li> <li>- chlorite nodules (5-8mm average in size) appear after 1367' with most being rounded and oblong.</li> <li>- 1413 - 1418' chlorite appears quite mottled.</li> <li>- only trace amounts of PYRR and PYR exist after 1407'</li> <li>- presence of PYRR + PYR increase after 1457' with both &lt;1%.</li> <li>- PYR + PYRR appear mostly in fracture infill but not always the ca.</li> <li>- minor garnet at 1476'.</li> <li>- a mottled texture is visible from 1477' - 1495'.</li> <li>- FAULT ZONE - 1500' - 1541' - see fault sheet               <ul style="list-style-type: none"> <li>- friable from 1507' - 1525'</li> <li>- leached out from 1507' - 1533'</li> <li>- some PYR (~10%) - 1510' - 1512'</li> </ul> </li> <li>- PYR concentration increases from 1-2% dies - no PYRR</li> <li>- trace of hematite @ 1613'</li> <li>- more traces of epidote @ 1619'.</li> </ul>

E. D. H.