

## GENERAL GEOL. of the AREA.

- Within the Purcell Anticlinorium - N. plunging tectonic unit
- Helikian strata → Purcell Group.
- Purcell Group - Series of sedimentary wedges that thicken & become more argillaceous westward.
- Purcell Group is divided into Lower and Upper
- Lower Purcell fm are what one finds with in P.O.I.  
2 properties

- Lower Purcell consists of:

oldest Aldridge Fm: grey, rusty weathering, argillaceous quartzite and argillites - can be divided up into upper middle and lower.

youngest Creston Fm: green purple and grey, argillaceous qtz, some argillites, can be  $\div$  up.

Kitchener-Siyeh Fm.: chiefly varicolored magnesian limestone & argillite calcareous quartzite

## Geol. of the ARM.

- consists of a large body of Creston fm bounded by 2 faults
- the east fault separates Creston fm from Kitchener-Siyeh.
- the west fault separates Creston from Creston.
- As one proceeds west from the west fault (above) one goes from Creston fm. to Kitchener-Siyeh then in to Eager fm. An unconformity acts as the boundary between the Kitchener & the Eager fm. from the Eager one passes into the Cranbrook fm. (this is at the N.W. corner of the Area.) EAGER & Cranbrook are lower

## Geol of the Cooper

- The Cooper is <sup>1/3</sup> ~~the~~ Creston fm.
- the Aldridge fm. makes up the other <sup>2/3</sup> & is located within the eastern edge of the property
- there are a few small to med. size shear / fault zones throughout the property.
- The Cooper is located at the S.W. end of a series of long linear magnetic highs which trend - N.E. - S.W.

## ASSESSMENT REPORTS AROUND THE ARM & COOPER CLAIMS

- ✓ · 17573
- ✓ · 15284
- ✓ · 13609
- ✓ · 16656
- ✓ · 14718, 15387
- ✓ · 13610
- ✓ · 13007, 14212, 15649
- ✓ · 12983
- ✓ · 13053
- ✓ · 17150
- ✓ · 11465
- ✓ · 12574 14254
- ✓ · 4131
- ✓ · 12504
- ✓ · 16706 15622 15766
- ✓ · 13633
- ✓ · 17514 - not in files
- ✓ · 7103 7723 8598 9850 11802
- ✓ · 12934.

Ass. No. 17573 - Swenson Claim Group - Ft. Steel mining D.

- 82F8 49' 25' North lat. 116' 14' W. long.

- March 1988

- Au

- traverse prospecting program with samples taken at mineralized zones → 300m of base lines surveyed for VLF-EM Survey

- Found old ADITS with qtz veins - The veins are mineralized and contain py, cpy, native Cu and traces of malachite at the widest part of the qtz vein. "Au is visible to the ~~not~~ eye occurring as small flake ... and associated with native Cu!".

- NO RESULTS present in this report.

Ass no. 15284 - CND Claims - Ft steel M.D.

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- Dec 85

- Au

- Soil geochem., BASE MAP <sup>with</sup> 2 Trenches shafts and ADITS

- Small soil line with values ranging from 315 to trace amts with the average being around 20 PPB.

- There is an interesting section of the line which extends for about 500m the assay results are:

40, 295, 70, 315, 175, 215, 160, 130, 80, 95. (PPB)

- NOTE: No text was found just MAPS.

Ass. no. 13609 - Paul 1, 2, 3, Mike 2-7 Claims & Mickey #1 Fractional Claims

- 82G12, 82G13 49° 46' N 115° 41.5' W

- May 1985

- Pb, Fe, Cu, Zn, Au

- line cutting, ground I.P. Geophysical survey,  
Heavy mineral geochem., Geology

- 250 bulk ( $\pm 10$  kg) glacial drift samples

→ nuclear activation → Au, As, Sb

→ atomic absorption → Cu, Pb, Zn, Ag

→ para mag. → Pb, Mo, Ag

- Pb values above 160 ppm were assoc. 2 anomalous  
I.P. areas

- A considerable no. of -20 HN conc. yield anomalous  
Au results up to & exceeding 130x the threshold  
of about 150 ppb Au determined from the  
Au results of 554 vicinity HN conc. of  
stream samples.

- most of the AREA was overburden.

- July - Aug an Induced Polarization survey  
was carried out on the Paul & Mike claims.

Ass no. 16656 - CND Mineral Claims Ft steel M.D.

- 82F8E 49° 25' 8" LAT. 116° 9' 52" Long.

- Dec 15, 1987

- Au

- Ground mag & VIF-EM surveys, soil sample,  
prospecting, mapping, RX sampling.

- large portion 2/3 of the samples taken in 85  
were anomalous; author feels that gold  
bearing gravels of the area do not contribute  
to anomaly

- Au in Perry Cr. area occurs in 3 different  
geol. settings - i) large Qtz veins 20m wide - subeconomic  
amounts ii) smaller Qtz veins 2m wide - can carry up to  
several ounces of gold iii) major shear (fault) zones  
up to 100m in width which incorporate both  
brecciated Qtz veins & host rx - most important of  
the 3.

- Au geochem values range from trace to 1000 ppb  
with average being below 20 ppb - There are  
some fairly impressive runs of Au values.

ASS. NO. 14718 - Hawk #1 claim Ft. Steel M.D.

- 82F8E 49° 26' N Lat 116° 10' W Long.

- Sept 1985

- Au, Pb, Cu, Ag

- mapping, prospecting

- Min. found. Pb, Cu, galena, sphalerite

- Rock Assay - Pb, Cu, Ag, Au one sample  
yield Au 0.891 oz./ton.

ASS. NO. 15387 - Hawk #1 claim Ft. Steel M.D.

- 82F8E

- Dec 23, 1986

- Soil geochem, VLF-EM & Mag. surveys

- Au, Ag - Pb, Cu

- This report makes little to no mention  
of the results obtained

Ass. no. 13610 - Shorty Claim Group Ft. Steele M.D.

- April 6, 1985
- B2F8E 49° 27' N Lat 116° 08' W Long.
- Geophysical report
- VLF-EM Survey
- Primary direction on the property are northeasterly with the secondary direction being northwesterly

Ass no. 13007 - Perry Creek Property Ft. Steele M.D.

- B2F8E, 9E 49° 29' Lat. 116° 6' Long
- NOV. 1984
- geological geochem, geophysical surveys over highlights of previous surveys.
- Au
- Iode Au mineralization in the Perry Cr. area is assoc. with qtz veins, qtz stockworks & siliceous zones in the vicinity of microdiorite bodies
- Soils → Au, Cu, Pb, Zn, Ag
- bulks soil collect over microdiorite bodies
- fluxgate mag. survey
- geol. mapping & Rx chip samples.
- Rx sample Au 5350 ppb (near old workings, 260 qtz stockwork in maroon qtz)
- 'B' horizon soil samples were not effective in this area ∴ bulk samples must be collect for geochem to be useful.

ASS no. 14212 - Perry Cr. Property. Ft Steel M.D.

- 82F8E

- NOV 1985

- Au

- Geol., Geochem, Geo phy.

- Detailed soils taken over sed. & intru contacts, shear zones & mineralized qtz veins.

- Detailed Bulk soils AS Above

- 2 detailed ~~photo~~ proton mag surveys were conduct in an attempt to delineate shear zones.

- Back hoe trenching

- Heavy minerals done on Creeks.

- Assoc of Gold AS in 13007

- soils - Au assoc.  $\approx$  Cu, Fe, Bi, Pb, Mn

- Ag assoc bi, Pb, Cu.

- Au in some areas  $\rightarrow$  <sup>upto</sup> 10,000 ppb

Ag " " "  $\rightarrow$  21.0 ppm

Cu 6046 ppm

Pb > 9999 ppm.

Taken over  
qtz hill pit.

- Rx chips - show better high Au values.

ASNO. 15649 - Perry Cr. Property Ft. Steel. M.D.

- 82F8E

- 1986

- Au.

- 1:10,000 scale mapping & prospecting,

sampling on areas of known showings,

Diamond drill on qtz hill & Petra claims



- Rx chip sample - 2 of am interest 0.408 oz/ton,  
0.304 oz/ton both are quartz

### - Mineralization assoc.

- 1.) large qtz veins 20m wide
- 2.) small qtz veins 2m wide
- 2.) Zones of remobilized qtz forming irregular lenses, pods, or veins
- 3.) Mineral deposits assoc. w the Major Intrusion primarily in Shear zones with water alteration & irregular veins occurring as shear infill (eg. Quartz hill) primarily on the west side of Perry Cr.

- most significant type of deposit seems to be 2 & 3

→ Quartz hill Drill program.

- mineral assoc with qtz veining or qtz stockwork.
- qtz veins are hosted in more competent qtz & siliceous siltstone
- " Assay values obtained from surface samples & Drill core at the Qtz hill pit on the whole were disappointing!!

ASS NO. 12983 - Walsh Claim Fort Steel MD.

- 82F8E

- NOV 1984

- VLF-EM survey with some geological mapping.

- Structures strike Northwest & Northeast.

ASS NO. 13053 - NOKE Group Ft Steel MD. (Cominco)

- 82F8 82G5

- NOV. 1984

- Cu, Pb, Zn, Au, Ag, Sb, Bi

- Geochem soil samples - contour

- " there is nothing to indicate the presence of economic quantities of gold."

ASS NO. 17150 - Buck claims Ft. steel Mining Div.

- 82F8E, 9E

- Feb 20, 1988

- prospecting, geochem., soil sample, silt sample.

- soil sample not effective

- V. POOR ASSAY RESULTS.

Ass. No. 11465 - NOKE Group Ft Steel M.D. (Cominco)

- 82FB 82G5

- Oct 1983

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- Geol. mapping

- NO SAMPLES taken strictly mapping

Ass. No. 12574 - Prospectors Dream, Old ABE, Ben D'or, Ken HoB

- Weaver 1,3,5 & 2,4,7,8

- 82FB

- March 1984

- Geol, soil geochem., magnetometer, trenches  
Rx samples.

- Au, Ag

- The Rx chips in this report average  
about 0.020 oz/ton with the odd  
one up to 3.6 oz/ton

- " There is in excess of 1,000,000 tons

of possible low grade gold ore or marginal  
gold ore on the Fenway Resources Claims.

- nearly all qtz veins carry low grade  
gold values.

- Small string of high Au values in  
soils from 5 ppb to +1000 ppb

Property submitted for  
our review  
Sept 89. M.G.

ASS no. 14254 - Frost Group & Weaver 2, 4, 7 & 8

- 82 FBE

- 1984

- Geol, Geochem, prospecting

- Au

- mineralization confined to qtz veins.

- Au assoc. with py & becomes highly conc. with weathering. QTZ veins appear to fill voids caused by faulting & differential folding & movement. The veins are confined to a structural orientation & not to lithology.

- 22% of soil samples were greater than 20 ppb

ASS no. 4131 - ICE Group - Cooper Lake Area Ft Steel M.D.

- 1973

- Geophy survey

- elongated narrow anomaly aligned  $\approx$  N-W. The anomaly is  $\approx$  4000 ft long & reaches 2000 gammas above background.

- causative body is an almost vertical tabular body  $\approx$  125 ft thick - depth to top 50  $\approx$  100 ft

ASS NO. 12504 - PLACER LEASE 9840 FT STEELE M.D.

- 1983 - Moyie R.
- SEISMIC refraction study
- Over burden varies from 1 to 13m
- average 2 to 3m

ASS NO. 16706 - PLACER LEASE 1902, 1080, 1775, 1773

- 82F SE - Moyie R.
- 1988
- Bulk Sampling program.

ASS NO. 15622 - Placer lease AS Above

- 82F SE - Moyie R.
- 1986
- Over burden drilling

ASS NO. 15766 Placer lease AS Above

- 1986
- Bulk sampling.

ASS NO. 13633 - Nurse 1 & 2 Claims Ft Steel M.D.

- 82F~~8~~, 8E, 9E
- 1985
- Air borne Magnetic & VLF-EM Surveys
- property underlain by sed which may be intruded by moyie meta-intrusives
- VLF-EM survey revealed 3 main conductors throughout the property

ASS NO. 7103 - Janet, Janet 1 et al.

- 82F 8E, 9E
- 1978
- Geol. & geochem. - Soil & stream sed.
- Au
- One soil sample @ 1050 ppb but the rest range from 0 - 30 ppb - mean 10ppb for Au.

ASS NO. 7723 - Janet et al.

- 82F 8E, 9E
- 1980
- Geophy, Geochem, prospecting

ASS NO. 8598 - Janet et al.

- 82F 8E 9E
- 1981
- Au
- Geochem & Geophysical, trenching
- Geochem yield a no. of anomalous Au values - "it is not always clear whether the Au values is assoc. with the fill or underlying R<sub>x</sub>".
- Both EM-16 & flux gate mag were used over a known structure but both could not discriminate the structure from local background.
- There are a few continuous Au (soil) anomalies range from 10 - 30 ppb in the ASSAYS.

ASS NO. 11802 - Perry Cr. Property Ft Steel M.D.

- 82F/8E, 19E

- 1984

- Au

- Geol., Geophy., Geochem.

- "... lode gold min. in the Perry Cr. area is assoc. with extrusive & intrusive bodies of andesites & meta diorite in the vicinity of shear zones.

- Geochem - detailed silt & H.M.

- Geol. mapping & rx chip

- VLF - electromag survey

- piece of qtz from dump 0.384 oz/T  
Rx sample

ASS NO 12934 - ME 1-4 Mineral Claims

- 82FE #9

- 1983

- Geol., Geochem.

- Sullivan Type - looking for.

- Ag, Au

- Geochem silt, soil

