

012992

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FIELD NOTES

RACKLA RIVER MINES LTD

KATHLEEN LAKE PROPERTY

RECON GEOLOGY

MAYO MINING DIVISION

YUKON TERR.

9-16 JULY 1974

by: U. JANSONS  
ANVIL MINING CORP  
P.O. Box 1000  
FARO, Y. T.

ORIGINAL COPR BY J. C. PARKER

MADE IN U.S.A.

LEFF PHILADELPHIA, PA

N.B. Mag. Decl. set @  $27^{\circ}$  and should be  $34^{\circ}$ . All compass readings should be adjusted for this.

SOME CORRECTIONS MADE 15 JULY  
IN FIELD NOTES.

AIR PHOTO STATIONS

photo A12238-363, A12238-167

1. SHALE

S<sub>0</sub>(?) N<sup>57</sup>80°E 22°S

2. SHALE 135

S<sub>1</sub> 128° 13° N

3. SHALE (IN CREEK)

S<sub>1</sub>(?) N<sup>63</sup>86°E Vertical

4. Oolitic limestone interbedded with tan-light brown weathering ls.

N<sup>47</sup>80°E 80°N

NB: Attitudes variable. Above is average approx

5. Ls as #4. N<sup>57</sup>86°E 52°N

6. As @ #1,2,3 24

S<sub>1</sub>(or S<sub>0</sub>??) N 19°E 34°N

7. Ls fetid, oolitic?

N<sup>88</sup>81°E 38°N

8. Zone of coarse oolitic dolomite unit appears extensive and continues to road west from RRM camp site

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AIR PHOTO ENLARGEMENT

9. FISSILE CARBONATE SHALE.  
MAY BE SHEARED UNIT 8, OR  
UNIT WITHIN 8.

10. FISSILE CO<sub>2</sub> SHALE of Unit 2 as  
Sta # 9, above,  
N 56<sup>63</sup> E 29° S  
Interlayered dol & ls

1072

10 July 74

Rackla River Mines Ltd

Kathleen Lake Prop

10628, Mayo MB TR. MK. REG. U.S. PAT. OFF.

Work plotted on

A. Allan & also Daigles Maps.

(1) Interlayered orange weathering dolts & egg weath ls. Similar to top of ridge area of zone B

N35E 11°S Note lots of loose & rubble frags & strike & dip only approximate.

2.) Limestone, fetid, finegr to 2. fetid marble.

Loc tied approx to #1 of Dago 3. Loc on Daigles map is probably out by 1500'.

3. Trench @ DDH 1072 Dark brown oxid dolom.

Pb-Zn(?) vein highly oxidized w/ jarosite present. Vein strikes

Vein & walls hold calc. fill 3-4' thick. Some of these frags in stree shows slickensides. ∴ fault mineralized?

NB zone around mineralization is dark "chocolate" brown w/ vein cutting through zone.

#1 <sup>East</sup> Trench  
Vein up to 25' wide or two strands that far apart.

2/12

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4. DDH-4 - Core. Intercepted several Mn<sup>(II)</sup> oxid zones. Note that brown weathering material is a carbonate strat horizon since some core has weathered brown since drilling. Occasional galena @ 100-131.



DDH 3 Core Various carbonate units in core (possibly 563) sphal 572 - 583 mineralized brecciated zone.

↳ with interlayering of graphitic shale & carbonate shale units.

557 - 564 Massive pyrite, to gal sphal in breccia zone

DDH 3 —————

NB Striped white-gray dol @ ~270 - ~360, followed by graphitic zone to ~500 then brecciated mineralized zone

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1283

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Kathleen Lake  
Maya MD  
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NOTES RE PREVIOUS WORK:

1. PROSPECTOR'S AIRWAYS REGIONAL GEOLOGY MORE RELIABLE THAN A. ALLAN'S FOR RACKLA RIVER MINES. HOWEVER NOT ALL ROCK TYPES ARE IDENTIFIED ON MAP LEADING TO CONFUSION & DIFFERENCES BETWEEN MAPS. DAIGLE'S MAP SHOWS SHALE UNIT IN MORE THAN 1 LOCATION. THIS MAY & PROBABLY DOES REPRESENT TWO DISTINCT SHALE UNITS -
  - 1.) AT BOTTOM OF ORANGE WEATHERING DOZ (UNIT 2) AND MAY BE TOP OF UNIT 1 OF NASH CREEK MAP AREA.
  - 2.) TOP OF UNIT 2 (BOTTOM OF UNIT 8) THIS MAY BE A BROWN WEATHERING DOLOMITE OR LIMESTONE.

(2)

MINERALIZATION AT DDH 1, 2, 3, 4, OF TINTINA SILVER MINES IS AT BROWN WEATHERING UNIT NOTED ABOVE.

AT DRILL HOLES THE MINERALIZATION IS FRACTURE CONTROLLED & Mn STAIN MAY REPRESENT THE ALTERATION ENVELOPE. NOTE HOWEVER THAT A SIMILAR SITUATION IS FOUND AT THE SOUTHERN ZONE OF PROSP. AIRWAYS MAP. - WITH

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RE MINES

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MAYO M. D. 10668

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A MINERALIZED VEIN ENVELOPED  
BY BROWN - BLACK LS. <sup>55</sup>

ALTERNATIVE EXPLANATION  
WOULD BE THAT THIS IS A ZONE  
OF MINERALIZATION AND IS  
STRATIGRAPHICALLY CONTROLLED.

DRILLING AT DDH 4 INTER-  
CEPTED SIGNIFICANT MINERALIZA-  
TION IN CORE WHERE ROCK WAS  
BRECCIATED, BUT ALSO HAD A  
GREEN COLOUR (CHLORITIC) ON  
EXPOSURE TO WEATHER THE  
TOP HALF OF LONG SECTIONS OF  
CORE HAD TURNED DARK PURPLE  
WHILE THE PART OF CORE IN THE  
TRAY HAD NOT CHANGED COLOR.  
FROM THIS IT APPEARS THE GOSSAN  
ZONE AS MAPPED IS PROBABLY  
A RESULT OF WEATHERING OF  
A STRAT. UNIT.

3. TRENCHES ON PROSP. AIRWAYS  
MAP ARE HAND TRENCHES,  
SOME OF THESE HAVE BEEN  
MODIFIED BY BULLDOZER  
AND NEW TRENCHES HAVE  
BEEN ADDED.

A. ALLAN'S DETAIL AROUND  
TRENCHES APPEARS TO BE  
RELIABLE.

3 B 3

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4. IN GENERAL THE LS ON TOP OF MINERALIZED RIDGE THROUGH DAGO 3, 5 & 6 MINERAL CLAIMS APPEARS TO BE AN INFOLDED SYNCLINE (SYNFOLD) ONLY 2 ROCK UNITS DOU & LS, UNITS 2 and B ARE PRESENT. A SHALE, (POSSIBLY UNIT 1) CROPS OUT IN CREEK VALLEY BETWEEN OLD & NEW CAMP SITES (SEE MAP)

5. SOME CREEKS AND CAMP SITES ON A. ALLAN'S MAP ARE GROSSLY MISLOCATED.

H

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## Stratigraphy Section

Two days of investigation of the geology was completed on 10 and 11 July '74 in an attempt to explain the inconsistencies in the maps of Daigle and Allan, A.

Investigation shows that Daigle's map is more detailed and in general more reliable of the two. In the case where Allan has subdivided the area in shale and limestone the more detailed map also has a dolomite unit indicated between the shale and limestone.

The general conclusion that is reached is that two main rock units - a gray weathering limestone (unit 8 of GSC) and a orange-weathering limestone and dolomite (unit 2 of GSC). Unit 2 can be further subdivided into a lower shale which apparently undergoes a facies change from carbonate in the west to non-carbonate in the east. This "shale" unit is approximately 300 feet thick (estimated) and is overlain by interbedded

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units of orange weathering dolomite and shale. This section is estimated as 200' thick. The interlayered units range from less than 1" thick to several 10's of feet. This section is overlain by highly crystalline dolomite unit of unknown thickness but it is probably not over 100' thick, and more likely is near 50'. It is in and near <sup>or above</sup> this unit in which ankeritic limestone, which forms the "gossan" zones, is located.

Gray weathering limestones of unit B (Road River equivalent) rocks overlie the orange weathering rocks as probably best defined by Daigle.

Note that A. Allan subdivided rocks into limestone and shale (probably carbonate shale). No attempt is made to distinguish dolomite from limestone or orange from gray weathering carbonate units. All orange weathering rocks may be enclosed with A. Allan's shale unit.

"A" GEOCHEM  
GRID

1 of 6

12 July 74  
RACKLE PUBLISHING  
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MAYO MD

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10638

(1.) SEE A. ALLAN MAP FOR LOCATION  
LIMESTONE RIDGE & ONLY LS FLOAT  
NOTED FROM "MEADOW" TO POSTS  
#1 CON 15 etc.

COULD NOT LOCATE SITE ON PHOTO,  
ALSO SEE PHOTO (-LATER LOCATION)

(PHOTO)

(2.) LIMESTONE, GRAY, ROUND WEATHERING.  
PROBABLY OLITIC SINGLE  
HEMISPHERICAL POCKMARKS COMMON  
ON WEATHERED SURFACE.

SOME ANKERITE FILLED FRACTURES  
N ~~40~~<sup>47</sup> E 26° S

(3.) INTERLAYERED ORANGE WEATHERING  
DOLomite AND GRAY WEATHERING LS.  
LOOKS LIKE PILE OF RUBBLE & ATTITUDES  
NOT MEASURABLE. BUT PROB. AS (2.)  
LS BANDS UP TO 3-4" THICK.

(4.) C. COR # 18 Con 18, 2d Con 16

Orange weathering shale float.  
No outcrop.

4-5 Traversing from #1 post of Cor 18 to  
S10 W Area mass covered w/ only  
orange weathering  $CO_2$  shale frags  
as float. One outcrop found under  
moss

(5) Zone of gray weathering limestone <sup>within bands of an. dot</sup>  
which is cut by a N80E trending  
ankeritic <sup>limestone</sup> dolomite zone along  
<sup>dark brown</sup> which are located fragments  
of a <sup>white</sup> calcite vein up to foot thick.  
Slickensides well developed on  
calcite suggesting  $CaCO_3$  was  
fill in active fault zone. Attitude  
of fault not determinable.

<sup>47</sup>  
Beds N40E 18°S

(6) Limestone <sup>med</sup> gray weathering w/ some  
light gray bands. Thin sections  
of orange weathering ls on outcrop as  
float. May still be part of Unit 2  
of GSC.

(7) Brecciated limestone cemented  
by ankeritic carbonate, w/  $CaCO_3$  veinlets.  
10' hand trench on zone

326  
"A" Area

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(8) LIMESTONE, GRAY WEATHERING  
N<sup>22</sup> E<sup>5</sup> 34 N BEST AVAILABLE.  
MUCH RUBBLE AROUND.

(9) LIMESTONE, GRAY WEATHERING.  
GOOD MEASUREMENT N<sup>47</sup> 06 52 S

(10) Limestone, gray weathering  
167  
160° 16° E (good measurement)

(11) INTERLAYERED ORANGE & GRAY WEATH  
LS + DOL FLOAT IN 30' x 30' AREA. PROBABLY  
CLOSE TO SOURCE. NOT NOTED IN OUTCROP.

(12) Downslope 100' FROM (11). Float of  
coarse crystalline CaCO<sub>3</sub> - tan to light brown  
weathering and also CaCO<sub>3</sub> schist

(13) Limestone, <sup>Edgemoorite</sup> interlayered orange and  
gray weathering. Rock IN PLACE.  
Beds up to 10" THICK. (APPROX).  
N<sup>47</sup> E 25° S

426  
"A" Area

(14.) LIMESTONE, DK GR, LT GR WEATHERING  
FLOAT, BUT ONLY ROCK TYPE PRESENT. PROBABLY  
CLOSE TO SOURCE,

(15.) Continuation of (14.). Whole  
area is probably a thin layer of ls. Orange  
weathering shale float to N of (15.)

(16.) Limestone & thin (~1") beds of  
dolomite. SOME DOL. BANDS BROKEN UP  
AS INTRAFORMATIONAL BRECCIA  
N <sup>67</sup> 18° E

(17.) LIMESTONE, GRAY  
BEDDING NOT DETERMINED. NOT  
MEASURED.

OUTCROP PATTERN TREND IS  
OPPOSITE TO (16) & OTHER STATIONS

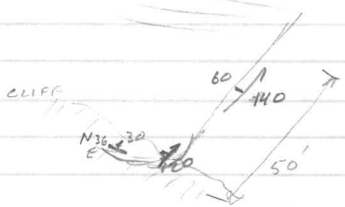
(18.) Shale, ankeritic brown all  
surface float, also some  
coarse xline calcite vein  
fragments

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5 of 6  
 "A" Area

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(19) Limestone strong monoclinial fold - small change in dip  
 $147^\circ$   
 $140^\circ$   $60^\circ$  E,  $120^\circ$   $40^\circ$  E and  
 $43^\circ$   
 $N 36^\circ$  E  $30^\circ$  S



SEVERAL SLICKENSIDED PIECES IN  
 FLOAT, REPRESENT BEDDING  
 PLANE MOVEMENT DURING FOLDING

(20) Orange and gray weathering ls, thin  
 bedded some is shaly.  
 Strike  $153^\circ$   
 $146^\circ$   
 Dip  $60^\circ$  E

(21) Shale, non carbonate, gray  
 weathering  
 Bedding?  $188^\circ$  E  $80^\circ$  S

(22) As (21)  
 $33^\circ$   
 Bedding  $N 26^\circ$  E  $28^\circ$  S  
 Cleavage  $127^\circ$   $46^\circ$  SW

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6066  
"A" Area12 July  
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(23) as (21, 22)

Shale non carb, dark gray

N <sup>63°</sup> 56 E 30 SE (schistosity)  
axial plane cleavage?(24.) Orange & gray weather ls & dol  
beds 1.5" - 2" thick.N <sup>36°</sup> 79 E 24 S

1064

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GEOLOGICAL TRAVERSE TO "8" GRID AREA

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(101.) Posts Y 14388, Y 14389, Y 14386, Y 14387  
INTERLAYERED THIN & MEDIUM  
LAYERED ORANGE WEATHERING "SHALY"  
DOLOMITE & LIMESTONE  
shaly & flaggy  
Same as N. of Dego 5.  
117°  
110° 44 S

(102.) <sup>Gray weath.</sup> LIMESTONE "FLOAT" (?) TOP OF  
RIDGE. NO ATTITUDES NOTED  
Possibly part of UNIT 2 top ls.  
beds.

(103.) LIMESTONE, Gray weath.  
UNIT 8  
N <sup>79°</sup> 72 E 52 S

(104.) Orange weathering thin bedded  
flaggy dolomite & limestone.

87°  
N 88 E 50° S

(105.) LIMESTONE, GRAY WEATHERING  
APPEARS TO OVERLIE (104) ROCKS  
110° 117° 45 S Syn Fold (?) NEAR AXIS.  
Possibly oolitic as weathered surface  
has hemispherical rock marks.

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2 of 4

"B" GRID AREA

(106) Orange weath. dol-ls. small  
outcrop on crest of ridge. Map loc  
only approximate

Stn.  $107^{\circ}$   
 $100^{\circ}$   $42^{\circ}$  S

(107) Limestone, gray weathering  
ATTITUDE SIMILAR TO (106)  
NB. Locations of outcrops on Ridge  
from (104) DOWN ARE POORLY  
LOCATED DUE TO LACK OF REFERENCE  
POINTS AND SMALL SCATTERED OUTCROP.

(108.) Coarse crystalline  $\text{CaCO}_3$   
pink-orange weathering.  
Location only approximate.

(109) Orange and gray weathering  
limestone & dolomite float  
probably near source. Many loose  
boulders. Sta. 3200 S 20+00 W  
"B" GRID

(110) SHALE-SLATE <sup>weakly</sup> ~~NON~~  $\text{CO}_3$  SAMPLE  
#110 87  
Bedding N ~~80~~E 36W But sl. variable  
Az pl CHV (S 88 E) 60 S  
corrected  
for declination

3 of 4

"B" GRID AREA

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(111.) LIMESTONE, GRAY WEATH., DK5  
 LT GR BEDS  $\sim 1-3"$   
 S ~~SE~~ E 345

40' N of #1 of Y 57745

(112.) Limestone, gray weathering  
 rounded edges. Hemispherical  
 pock marks (oolites?) on surface.  
 Strike 144 Dip  $30^{\circ}$  E  $\leftarrow$   
 Meas @ rock face  $\rightarrow$   
 Back  $\frac{1}{4}$  from rock face  
 N 34 E  $8^{\circ}$  E  $\leftarrow$   
 Meas 50' apart.  $\rightarrow$

(113.) Orange weathering 1 1/2' det.  
 juxtapositioned to gray weath.  
 ls.

Appears to strike right into (112)  
 N  $76^{\circ}$  E 25 S Approx due  
 to loose nature of  
 rock face.

N  $57^{\circ}$  E 27 S @ East end of OC

2' BAND OF INTRAFORMATIONAL  
 BRECCIA CONFORMS TO N57E ATTITUDE

Also INTERBEDDED to 6" Bands

4 of 4

"B" GRID AREA

OF LS (GRAY) IN ORANGE  
WEATHERING DOL.

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(114) Ls. Gy Weathering  
N <sup>77°</sup> E 255  
Joints N15E 90°±

(115) Orange weath. dol.  
N <sup>17°</sup> E 50 E

INTERLAYERED w/ GRAY BANDS  
OF 3"-4"-5" GRAY LS.

(114) APPEARED TO DIP UNDER

(115)

Mon

1064

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MARY MD 10638

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(201) Loc 200' s of NEW CAMP COOK TRAILER.

N4' WIDE  $CaCO_3$  vein. Coarse x line  
Thin bedded "shaly" orange weath  
 $CO_3$  on east; gray weathering  
Ls on west.

Slickensides Strike <sup>167</sup>  $100^\circ$  dip  $48W$   
—— " —— Plunge <sup>57</sup>  $N42E$   $50W$

(202) LIMESTONE, GRAY WEATHERING  
~~N  $90^\circ$  E~~  $24^\circ$  S  
S  $83E$

(203) LIMESTONE, GRAY WEATHERING  
ABOUT 200 - 300' FROM (202)  
Both O.C. TO N OF MINIALIZED ZONE W/HAND  
TRENCHES.  
N  $50W$   $50^\circ$  N

(204) LIMESTONE, GRAY WEATHERING  
FOLD ZONE  
BEDS <sup>E</sup> N  $74E$   $50S$   
N <sup>69</sup>  $62E$   $40S$  \* Better averaging.  
PLUNGE TRACE OF AXIAL PLANE OF DRAG FOLD  
 $125^\circ$   $40S$   
 $132$

AXIAL PLANE CLEAVAGE  
<sup>1270</sup>  
 $120^\circ$   $86$   $S$

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(205) LIMESTONE, GRAY WEATHERING

AS. (204)

N  $60^{\circ}$  E 36 S

(206) LIMESTONE, GRAY WEATHERING,

S. LIMB OF SYNCLINE.

H46° 50° N

153

(207) LIMESTONE, GRAY WEATHERING

Rods E! top up. Syncline E. Anti. U

Bedding  $117^{\circ}$   
H0° 50° EAx pl cleav  $127^{\circ}$   
H20° 52° W

Plunge of drag folds.

H20°  $127^{\circ}$  11° S

(208) LIMESTONE, GRAY WEATHERING

Fold zone. Numerous minor folds

Bedding  $173^{\circ}$   
H66° 46° NAx pl cleav  $137^{\circ}$   
H30° 58° S

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(209) LIMESTONE, GRAY WEATHERING  
Minor open folds in o.c.  
Bedding <sup>47</sup>N40E 36S \* good value  
also @ SEND <sup>117</sup>H40 40°S  
A.P. Cleau <sup>115</sup>108° 56S

(210) Orange weath ddt + gk. thin  
1/2" - 1" beds. Small oc in brush  
NS 24°E  
(N7E)

(211) Orange weath ddt. NOT INTER  
LAYERED AS (210)  
<sup>47</sup>N40E 54S  
<sup>47</sup>N40E 50S

(212) LIMESTONE, GRAY WEATHERING  
BEDDING <sup>147</sup>H40 30°S

(213) LIMESTONE, GRAY WEATHERING  
AT TOP OF RIDGE.  
<sup>49</sup>BEDDING 42E 34S

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(214) Orange weathering coarse  
grained dolomite  
Strike N-S to N10E 28E  
N 7E

(215) Orange weathering "slate"  
and  
N <sup>67</sup> 60E 42S

(216) As 215  
Max stain 50' w/ of OC, in float  
N <sup>65</sup> 58E 42S

(217) As (215) and (216)  
Some minor sloughing at face of OC  
N <sup>67</sup> 50E 25S

Tue 4

P. 1. 1/8 1

15 July 1974  
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\* DECLINATION SET TO

34°

(300) INTERLAYERED GRAY WEATHERING  
LIMESTONE AND ORANGE WEATHER-  
ING DOLOMITE,

Strike 106° 69 S

(301) TRENCH ON BRECCIATED  
ANKERITIC LIMESTONE 60' N/S  
WIDTH IN TRENCHES. AT SOUTH END OF  
SHALLOW TRENCH - BLACK FINE GR  
LIMESTONE. NO ATTITUDES OBTAINED  
TWO SAMPLES.

(302) ORANGY WEATHERING CONGLOMER-  
ATIC LIMESTONE.  
BROWNISH COLOR FROM  
LIMONITE FROM WEATHERING  
ANKERITE. SAMPLE 302,  
5021111 -  
BEDDING NOT IDENTIFIED

(303) AS 302

ORIGINAL COPR 1 BY J. C. PARKER  
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#1 DAGO #3 TO L 8E + 7N

Bear 262 180'

#1 Dago 3 to Drill

#1-TP1 Bear 262 310'

TP1-Drill- Bear 230' 610'

P 1 of 9

RR 74-1  
BACKLICK RIVER MINES  
KATHLEEN LAKE 1988  
MAYO MD YUKON  
FRANKFORD S. PA OFF.

RR 75 X 1 - 45°, BEAR 352'  
LOCN 4+3<sup>3</sup>/<sub>4</sub>N

0-28' OVERBURDEN

28-53 DOLOMITE LT-MED GRAY

2 STAGES OF FRACTURING HEALED BY  
CaCO<sub>3</sub> CEMENTING

Occasional trace shaly sections

BEDDING - 70° FROM AXIS OF CORE

P<sub>y</sub> in occasional small < 1/4" CLOTS. ONLY SULFIDE NOTED = P<sub>y</sub>

53-68' LIMESTONE + sh shale banding  
LIGHT & MED GR CaCO<sub>3</sub> bands

MINOR AMOUNTS OF SHALE.

APPEARS TO BE A GRADATION FROM  
28-53 DOL UNIT TO LS UNIT

BEDDING @ 58' 70° FROM AXIS  
OF CORE



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RR 74-1

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18 August 1968

68-86 Dolomite, AS 28-53, WITH  
ADDITION OF BROWN WEATHERING  
CARBONATE (ANKERITE BANDS) IN  
SHORT RANDOMLY DISTRIBUTED BANDS  
HAIRLINE MINOR FRACT. FILLED W/BLACK - GALena;  
BEDDING AS BEFORE

86-121 Dolomite, GRAY LIT. TO MED,  
(WITHOUT ANKERITE SECTIONS) AS  
28-56, NOT AS FRACTURED

MINERALIZATION PY, SPHAL, (+) GAL?,  
FRACT FILLING. 1

1) 85 1/2 - 86. PY SPHAL + GAL

2) 100 - 100 1/2 FRACT FILL

MAINLY CALC + LIMONITE (OXID  
PY?) + ANKERITE.

100 1/4 - 100 1/2 CALC. VEIN

3) 120 1/4 - 120 1/2 FRACT FILL W/50% LIMONITE

105-107 CaCO<sub>3</sub> FILL FRACT. VUGGY  
SHALY MED TO LIGHT GRAY  
121-146 LIMESTONE  
BANDIED, ONLY MINOR CaCO<sub>3</sub>  
CEMENTED FRACTURES, ONLY MINOR  
FRACTURING.

S<sub>0</sub> 75° TO AXIS OF CORE @ 128'

S<sub>1</sub> 45° TO AXIS OF CORE @ 127'

146-165 DOLOMITE MED GRAY, SHALY,  
MINOR  $\text{CaCO}_3$  OR  $\text{CO}_2$  VEINING.

## BRECCIA ZONES

150' - 152 LIMONITE? FILLING VUGGY  
CAVITY || TO AXIS OF CORE

152-159 LIMONITE FILLED RANDOMLY

## BRECCIATED ZONE

MINOR PY IN  $\text{SiO}_2$ ,  $\text{CO}_2$  VEN @ 158'

ABOVE LIMONITE FILLED BRECCIA

165' - 179' BRECCIATED GRAY SHALY  
DOLOMITE

166-167 IN PART ANKERITIC W/  
OCCASIONAL TO  $\frac{1}{8}$ " LIMONITE BANDS  
 $\text{S}_1$  W  $20^\circ$  TO CORE

BRECCIA BANDS W  $70^\circ$  TO CORE

167-170  $\text{S}_1$  @ 167  $45^\circ$  BANDED MED FINE  
GRAY DOL + CH.

170-179 BRECCIATED GRAY DOL  
W/  $\text{CO}_2$ ,  $\text{SiO}_2$  + PY MINOR GALENA + SHALY  
Total sulfides w 5-10% Galena  
+ sphalto. 0.5%

ALL AS FRACTURE FILLING  
IN BRECCIA, FORMING CEMENT

178-179 - BRECCIA AS 165-170 w/  
 PY w/  $\frac{1}{2}$  CEMENTING MATERIAL  
 TOTAL SULF. 10%

179-187 BULGITE GRAY  
 S<sub>0</sub> w 70° TO AXIS OF CORE,

182-183 FRACT ZONE = FIO, MINOR PY.

187-257 BRECCIA ZONE IN GRAY  
 (MED - LT) DOL.

INTENSE ZONES OF BRKA

187-189 - STRONGLY PURIFIED &  
 SOME SPHAL. W/ SIO<sub>2</sub> / CO<sub>2</sub> FILLING  
 FRACTURES

189-198 PY CEMENTING BRKA  
 w/ LESSER SPHAL. ALL  
 SULF. MIN IS FRACT FILLING.

BRECCIATION RANDOMLY ORIENTED  
 UP TO 3-5% SPAL IN SHORT  
 SECTIONS BUT ESTIMATED LESS  
 THAN 1% FOR SECTION PY  
 VARIES 5-10%, w 3-5% FOR  
 RUN.

108 - 202 MINOR BRECCIA, TRACES OF  
SULFIDES.

202 - 208 HIGHLY FRACT W/ INCREASE IN  
LIMONITE STAINING, PART IN PART DUE TO  
ANKERITE SULFIDES CONTENT VARIABLE  
W 5% AVG W/ SHORT SECTIONS  
10%

208 - 246 AS 202-208 BUT PY  
CONTENT 1-3% SPHAL  
AS TRACES IN OCCASIONAL  
FRACTURES

246 - 257 AS ABOVE TOTAL  
SULFIDES 1% OR LESS

### NB. IN SECTION

187 - 257 CORE GENERALLY  
RUGGY W/ SPHAL CONTENT  
VARIABLE, TRACES OF GALENA  
THROUGHOUT CORE.

LOST  $H_2O$  @ 231 - 237  
NO RETURN BAST SECTION.

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RR 74-1  
RACKLA RIVER M. WES  
KATHLEEN LAKE 106 D 8  
MAYO M.D. YUKON  
107 R. ALBERTA S. PATLOR.

257-267

AS 200' 257

with 1/2 to 1' ANKERITE(?) ZONES  
RANDOMLY SPACED

SULFIDES MAINLY PYRITE & SPHAL.  
CONCENTRATED IN BRECCIA ZONES

ONLY ONE TIME OF FRACT IS  
SULFIDE MINERALIZED. SEVERAL

2 OR MORE(?) ZONES PRESENT. THESE  
ARE CaCO<sub>3</sub> FILLED.

BEST MIN ZONES

- 264 1/2 - 265 1/2 Py SPHAL + MINOR GAL

- 259 1/2 - 260 Py GAL SPHAL

TOTAL SULF 2-5%

267-269

THIN BEDDED SH + LS 1/32" - 1/16" BEDS

FRACT. HIGHLY MINERALIZED W/ SPHAL

5-10%. POSSIBLY SPH IN BEDDING

268-269.

269-272

THIN BEDDED LS & SH AS 267-269

BRECCIATED BUT ONLY TRACES OF

SPHAL IN OCCASIONAL BLENDS IN

FRACT.

272-284

LT GR - MED <sup>SHALY</sup> LS WITH ZONES

BROWN ALTERATION (ANKERITE ALONG

SOME FRACTURES.

SULFIDES NOT NOTED.

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RR 74-1  
RACKLA RIVER MINES  
KATHLEEN LAKE 106D8  
MAYO M.D. YUKON  
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77.09

20 Aug 1974 U.I.

284 - 289 GY SANDY DOLOMITIC SHALE, HIGHLY BRECCIATED TRACES SPHAL & GAL IN BRECCIA CEMENT WHICH IS MAINLY CaCO<sub>3</sub>

289 - 330 SANDY Dol(?) TO SHALE w/ SHORT SHALY SECTIONS 290 - 290 1/2 ANKERITE ZONES 301 - 302 303 - 303 1/2

MINERALIZATION

MINOR SPHAL ON OCCASIONAL FRACT SURFACES  
TRACES GALEND ON OCCAS. FRACT

Sample →

323 - 326 BEST SPH GAL IN. 4YA  
2AMS  
HIGHLY BRECCIATED 300 - 321  
328 - 326  
?

310 - 330 ROCK BECOMES UNIFORMLY BANDED (=BEDDED LT & MED GR) LIGHTER BANDS MORE CaCO<sub>3</sub> DARKER Dol + THIN BANDS OF SHALE

BEDDING 60° TO CORE @ 316 1/2

330 - 427 LS + L+SH + Dol + SH THIN BEDDED LESS THAN 1" RHYTHMIC LT & MED GRAY BANDS WITH ONLY OCCASIONAL MINOR 2"-3" ANKERITE BANDS

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P 8 1/2 9

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PACKLA RIVER MINES  
KATHLEEN LAKE 106 D 8  
MAYO M.D. YUKON  
20 APR 1971 S. PAT. OFF.

U.J.

BRECCIATED 338 - 341  
368 - 369

MIN.

TR. SPHAL 368-369  
" " " 356-357

NS ROCK 330 - 427 HAS  
FEN & SHORT BRECCIA ZONES  
CR. UNIT ABOVE. MORE UNIFORM  
LESS FRACT W/ DEPTH  
BREAKS IN DISKS.  
BE

BEDDING 75-80° FROM CORE @ 391

427 - 466 AS & 330 - 427  
INTERLAYERED LS+SH & SHALE  
IN THIN BEDS

ANKERITIC 456 - 457  
NO MINERALIZATION NOTED  
75" FROM AXIS OF CORE.

BRECCIATED 438 1/2 - 439 1/2  
SH+LS frags w/ 1/2' CaCO<sub>3</sub> "vein"  
cementing frags. ANKERITE  
AT ROCK CONTACT ABOVE & BELOW  
CaCO<sub>3</sub> MINOR LIMONITE

P 9. 89

466 - 483 SLS + LS, GRADATIONAL  
CHANGE TO INCREASED SLS/LS  
SOME SANDY LS(?) DO(?) SECTIONS

MINERALIZATION NOT NOTED

483 - <sup>493</sup> SLIGHTLY HIGHER CaCO<sub>3</sub> BUT  
SAME AS 466-482 W/  
ANKERITIC BANDS

MINOR GAL W/LS BAND @ 482

8

UNGLY 48<sup>9</sup> - 493 PARTLY CEMENTED  
FRACTURE ZONE ALSO 492 - 493  
ANKERITIC ZONES 488 - 489  
492 - 493 1/2

BEDDING AS BEFORE

493 - 500 Medgy shale INTERBEDDED  
W/ THIN BANDS OF CaCO<sub>3</sub>  
MAINLY SHALE

MINOR GALENA W/ pyrite @ 499  
IN @ A 1/2" CaCO<sub>3</sub> bed  
Occasional traces of gal on  
frag

Beds 75° to axis of core @ 500.

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P 1 of 5

RR 74-2

RACKLA RIVER MINES

KATHLEEN LAKE 10608

MAYO MD YUKON

TR. MK. REG. U.S. PAT. OFF.

22 Aug 74

HOLE LOCATION

CLAIM CON 38

900' W FROM COR 2 OF CON 38  
50' N of LINE.

To TEST 1800 ppm Pb  
36480 ppm Zn ANOMALY  
ON RACKLA RIVER  
MINES GEOCHEM MAP  
BY A. ALLAN, 1971.

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74-2

22 Aug. 1974 U.S.

0 - 14 OVERBURDEN

14 - 21 L<sup>S</sup> LIMESTONE, MED GRAY, MED GRAY  
 SANDY INTERBEDDED WITH GRAY BROWN SHALE  
 WHICH IS ANKERITIC (BROWN WEATHERED)  
 FROM 18½ TO 20½

BRECCIATED  $\text{CaCO}_3$  CEMENTED TO  
 18½ GALENA GRAINS TO ¼" IN W/ $\text{CaCO}_3$   
 FILL, BEDDING 75° FROM AXIS OF CORE

MINERALIZATION NOT APPARENT  
 EXCEPT BROWN MARKS 18½ - 19 IN ANK. ZONE

21 - 27½ BRECCIA ZONE W/ SH + LS  
 CEMENTED BY  $\text{CaCO}_3$  WITH  
 OCCASIONAL THIN ZONES OF  
 LIMONITE BROWN MARK + ANKERITE  
 PRIMARY MINERALIZATION NOT NOTED

27½ - 44½ LIMESTONE, SANDY, MED GRAY  
 LT - MED GRAY HOMOGENEOUS  
 SLIGHTLY FRACTURED

ONLY SLIGHTLY FRACTURED

W/  $\text{CaCO}_3$  FILLING + SOME BROWN  
 LIMONITE, PROBABLY FROM ANKERITE  
 BEDDING AS BEFORE

22 Aug 1974 U.S.

44 $\frac{1}{2}$  - 45 $\frac{1}{2}$  LIMESTONE, THIN BEDDED SANDY  
INTER BEDDED WITH THIN SHALY UNITS  
AS SECTION 1A-21

SOME SECTIONS BROWN (ANERITIC)  
NOTABLY AT 46 $\frac{1}{2}$  - 48, HERE ALSO  
VUGGY AND THIN BEDS AT  
49 - 49 $\frac{1}{2}$

Occasional thin (to  $\frac{1}{4}$ " ) limonite filled  
fractures

49 $\frac{1}{2}$  - 202 LIMESTONE, ALTERNATING  
GRADATIONAL CHANGES FROM COARSE  
SANDY, MEDIUM GRAY, TO MED GRAIN  
SANDY, TO DARK GRAY BLACK SHALES  
MINOR FRACT IS  $CaCO_3$ , W OCCGR. BROWN  $CO_2$  FILL  
INTERLAYERED SANDY (SHALY) LS

49 $\frac{1}{2}$  - 70

70 - 116 MED GRY LS + SH ~ 90%  
LS, GENERALLY LT TO MED GRAY

116 - 117 PRECIPIATED LS,  
INTRAFORMATIONAL W/ LT GRAY <sup>WEDGE</sup> LS  
CEMENTED BY COARSE GR. LS.

117 - 124 $\frac{1}{2}$  INCREASE IN SHALE  
OVER 70 - 116 SECTION

VUGGY, PARTIAL FRACT FILL AT

118 $\frac{1}{2}$  - 119 $\frac{1}{2}$

22 Aug 1974

124 $\frac{1}{2}$  - 144 $\frac{1}{2}$  LS, <sup>LT</sup> MED GRAY MAINLY  
 INTERLAYERED WITH LT GRAY.

BEDDING 55° FROM AXIS OF CORE  
 AT 132'

144 $\frac{1}{2}$  - 153 LIMESTONE, MAINLY LT GRAY  
 INTERLAYERED W/ MED GRAY SHALY  
 LS IN BEDS LESS THAN 1' THICK  
 Occasional sandy beds.

153 - 159 LT  $\frac{1}{2}$  MED GRAY BEDS  
 MAINLY SANDY LS BUT RANGING  
 DOWN TO THIN SHALY BEDS

159 - 162 SHALY LIMESTONE, DARK  
 GRAY - BLACK.

162 - 165 DK-MED GRAY LS <sup>INTERBEDDED</sup> BANDS  
 IN BEDS TO 1" THICK

165 - 203 LIMESTONE MED - LT GRAY  
 VERY MINOR SHALY. APPEARS TO  
 BE NEARLY HOMOGENEOUS.

PS of 5

RR 74-1  
PACKLA RIVER MINES  
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203 - 211 LS MED GR, LT GR, SANDY  
AS 165-203

211 - 250  $\frac{1}{2}$  INTERLAYERED THIN BEDDED  
MED GR LS AND DK GR SHALEY LS.  
LS BEDS - 2 to 3" thick shaly  
up to  $\frac{1}{2}$ " Avg  $\frac{1}{8}$  to  $1\frac{1}{4}$ ".

BENDING AT 242 55° FROM  
AXIS OF CORE

TRACE SULF. <sup>(P)</sup> GRAINS <sup>PS</sup> IN CORE

COARSE GR PEBBLY 222-223  
(positive)

DRECCATED W CO<sub>2</sub> CEMENT  
239-240 -

TD 250  $\frac{1}{2}$

1974

U. S.

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MINERALIZATION

TWO TYPES OF MINERALIZATION -  
SULFIDE IN FRACTURES AND CALCITE  
FILLING OF FAULT ZONES AS WELL  
AS SOME ANKERITE AND PYRO-  
LOUSITE(?) MnOx ASSOCIATED  
WITH THE PRIME - DRILLED -  
SULFIDE SHOW. THE TREND OF  
THIS SHOW IS

SIMILAR GANGUE IS FOUND IN OTHER  
AREAS OF THE CLAIMS. SEVERAL  
OF THESE FRACTURE SYSTEMS  
APPEAR TO HAVE BEEN IDENTIFIED  
IN SOIL GEOCHEMICAL SURVEYS.

OTHER ZONES OF SOIL ANOMALIES  
APPARENTLY OUTLINE ZONES  
IMMEDIATELY UNDERLYING THE  
GRAY WEATHERING LIMESTONE, WITH  
THIS LIMESTONE YIELDING NO  
ANOMALIES EXCEPT WHERE THEY  
ARE CUT BY LATER MINERALIZED  
FISSURES.

THAT SEVERAL OF THESE ARE ON EXTENSIVE LINEAR FEATURES INDICATING DEEPER, OR REGIONAL, CONTROL TO SOME OF THE MINERALIZATION AND FRACTURING,

9  
0 { See if faults are shears related to same forces causing folding, or is there any relation of volcanics - regionally - to this fault set or direction }

FAULTING

FAULT ZONES ARE FAIRLY COMMON IN THE AREA AND ARE BEST IDENTIFIED BY SUGGESTED SLICKENSIDED VEIN LANGUE, OFF-SETS OF A 1000 FEET HORIZONTAL CAN BE MEASURED, IN GENERAL THE OFF-SETS DO NOT APPEAR TO ALTER THE MAIN GEOLOGY PICTURE SIGNIFICANTLY. SOME MEASURED ATTITUDES OF THE IDENTIFIED FAULTS ARE:

OF SIGNIFICANCE ARE THE SULFIDE MINERALIZED FAULTS. OF THESE THE BEST IS DESIGNATED HERE AS FAULT "A". OTHER FAULTS OF THIS NATURE AND ATTITUDE ARE:

LOCATION OF THE FAULTS AND MINERALIZED ZONES ON AIR PHOTOGRAPHS SHOWS


BY MAPPING OF DRAGFOLD AND  
AXIAL BLEAVAGE PLANE ATTITUDES,

IN BOTH SITUATIONS THE LIMESTONE  
APPEARS TO REPRESENT THE  
INFOLDED KEELS OF SYNCLINES

STRUCTURE

OPEN SYNCLINAL FOLDING APPEARS TO BE THE THE MAJOR STRUCTURAL ELEMENT WITH MINOR POST FOLDING FAULTING OFF-SETTING BEDS AND MARKER HORIZONS OF SIGNIFICANCE ARE SOME FAULTS WHICH ARE MINERALIZED, THESE ARE PARALLEL(?) TO THE AXIS OF THE SYNCLINAL FOLDS.

MULTI STAGES OF MOVEMENT ARE SHOWN BY STRIATED CALCITE VEIN FILLING.

FOLDING

FOLD STRUCTURES ARE BEST RETAINED AND MAPPED WITHIN THE YOUNGER GRAY WEATHERING CARBONATE UNIT. ON THE AREA GRID THE FOLD CLOSURE CAN BE TRACED OUT IN SEVERAL CLOSELY SPACED OUTCROPS. HERE BOTH THE GRAY WEATHERING LIMESTONE (UNIT B) AND ORANGE WEATHERING DOLOMITE AND LIMESTONE ARE AFFECTED BY THE FOLDING.

IN THE MAIN "MINERALIZED" ZONE FOLD STRUCTURES AND THEIR ATTITUDES ARE BEST DISCERNED

WEATHERING LIMESTONE. THE RELATIONSHIP BETWEEN THESE UNITS IS GIVEN AS AN UNCONFORMITY BY THE GSC

THE LOWER ORANGE WEATHERING DOLOMITE CAN BE RELIABLY SUBDIVIDED INTO THE FOLLOWING UNITS:

- ① ? COARSE GRAINED LIMESTONE AND DOLOMITE
- ② INTERLAYERED ORANGE WEATHERING DOLOMITE AND GRAY WEATHERING LIMESTONE. BEDS VARY IN THICKNES FROM LESS THAN 1" TO 1' OR MORE,
- ③ LIMESTONE UNIT
- ④ "SHALY" ORANGE WEATHERING DOLOMITIC CARBONATE AND SHALE
- ⑤ ? OR POSSIBLY UNDERLYING FORMATION "SLATE" - NON CARBONATE.

THE OVERLYING GRAY WEATHERING LIMESTONE HAS MINOR COLOR DIFFERENCES BUT THESE WERE NOT USEFUL IN SUBDIVIDING THE UNIT FOR RECON MAPPING.

16 July 1974

RACKLA RIVER MINE

KATHLEEN LAKE

MAYO M. D. 106 DB

TR. MK. REG. U.S. PAT. OFF.

## GEOLOGY

Five days were spent mapping most of the 68 mineral claims held by Rackla River Mine Ltd as the Con, Bud, and Dago claims. This mapping was to resolve discrepancies between the maps of Daigle of Prospectors Airways and A. Allen for Rackla River Mines. In addition to resolving the above discrepancies there appeared to be a correlation between the distribution of geochemical soil anomalies and rock contacts or rock types.

Most of the mapping was confined to determine the stratigraphic relations and to resolve the major structural relations including folds and faults.

## STRATIGRAPHY

Two main mappable stratigraphic units can be traced over most of the mapped area. These units are the underlying orange weathering dolomite (unit 2 of G.S.C.) and a younger gray