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Decker Lake

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REPORT ON

CERON CREEK PROSPECT

DECKER LAKE OMINEGA AREA

BRITISH COLUMBIA

FOR

CYPRUS EXPLORATION CORP. LTD.

VANCOUVER, B.C.
NOVEMBER 20TH, 1968

ROSS KIDD
CONSULTING MINING ENGINEER

ASK
11/68

INTRODUCTION

THIS REPORT IS A COMPILATION OF DATA DERIVED FROM AN EXAMINATION OF THE PROSPECT ON OCTOBER 31ST, 1968, PLUS INFORMATION SUPPLIED BY CHARLES J. BROWN, GEOLOGICAL ENGINEER, CONCERNING PREVIOUS WORK DONE ON THE SHOWING.

LOCATION AND OWNERSHIP

THE SHOWING IS LOCATED ON GEROW CREEK, ABOUT 2 MILES WEST OF DECKER LAKE STATION ON THE CANADIAN NATIONAL RAILWAY LINE BETWEEN PRINCE GEORGE AND PRINCE RUPERT, AND ABOUT 6 MILES NORTHWEST OF THE SIZABLE TOWN OF BURNS LAKE, BRITISH COLUMBIA.

A GOOD TRACTOR ROAD EXTENDS ABOUT ONE MILE WESTERLY FROM THE WEST SHORE OF DECKER LAKE TO THE SHOWING.

32 CLAIMS HAVE BEEN STAKED ON THE SHOWING, AND THEY ARE NAMED GLE 1 TO 22, AND 33 TO 42. THEIR LOCATIONS ARE SHOWN ON THE ACCOMPANYING CLAIM SKETCH.

THE CLAIMS ARE HELD BY K. E. WICKSTROM AND ASSOCIATES, OF VANCOUVER, B.C.

GENERAL GEOLOGY

THE CLAIMS ARE UNDERLAIN BY VOLCANIC ROCKS, CHIEFLY ANDESITE. THESE ROCKS ARE OF MESOZOIC AGE, AND ARE MEMBERS OF THE HAZELTON SERIES. A LARGE GRANITE MASS LIES SOME 2 MILES TO THE EAST. THE GENERAL GEOLOGY IS SHOWN ON MAP 907A (FORT ST. JAMES SHEET) OF THE GEOLOGICAL SURVEY OF CANADA.

DESCRIPTION OF SHOWING

THE SHOWING IS A CARBONATE VEIN ZONE IN WELL-OXIDIZED AND FRACTURED ANDESITE. THE VEIN ZONE IS ABOUT 12 FEET WIDE. IT STRIKES 297° T AND DIPS NEAR-VERTICALLY.

COPPER OCCURS, AS CHALCOPYRITE, WITHIN THE BANDS OF CARBONATE AND QUARTZ-CARBONATE WHICH MAKE UP THE ZONE. A LITTLE GALENA ALSO OCCURS, AND THE OCCASIONAL SPECK OF SPHALERITE IS PRESENT. PYRITE AND PYRRHOTITE ARE RARE.

MY SURFACE SAMPLE ACROSS THE ZONE ASSAYED 2.75% COPPER, 0.95 OZS. SILVER, AND 0.02 OZS. GOLD, ACROSS A WIDTH OF 12.0 FEET.

PREVIOUS WORK

NARROW (ONE FOOT OR LESS) QUARTZ VEINS CARRYING GALENA, SPHALERITE, AND CHALCOPYRITE HAVE BEEN KNOWN ON GEROW CREEK SINCE ABOUT 1900. THREE ADITS WERE PUT IN IN EARLIER YEARS, TWO ABOUT 1100 FEET UPSTREAM FROM THE PRESENT COPPER SHOWING, AND THE THIRD JUST SOUTHEAST OF THE BEND IN GEROW CREEK, SHOWN ON THE ACCOMPANYING SKETCH MAP. ALL THREE ADITS ARE CAVED IN. PRESUMABLY THE VEINS DID NOT CARRY MUCH SILVER OR GOLD. THE CLAIM GROUPS OF THE EARLY ERA WERE KNOWN AS THE GOLDEN GLORY AND THE SILVER GLANCE GROUPS, AND BRIEF DESCRIPTIONS OF THE VEINS ARE GIVEN IN MEMOIR 252, PAGES 176-77, OF THE GEOLOGICAL SURVEY OF CANADA.

IT IS NOT CLEAR WHEN THE COPPER ZONE WAS FOUND. IN 1954 SEVEN SHORT DRILL HOLES WERE PUT DOWN ALONG A 120 FOOT LENGTH OF THE COPPER ZONE, IN THE AREA OF THE TRENCH WHICH I SAMPLED. SIX OF THE HOLES INTERSECTED THE ZONE, AND THE AVERAGE OF THE INTERSECTIONS WAS 3.15% COPPER ACROSS 11.5 FEET, FOR THE 120 FOOT LENGTH. THIS WORK WAS DONE BY A. B. GOODRIDGE AND C. KEYES, OF VANCOUVER.

IN 1955, TRICO EXPLORATIONS LTD. AND MONETA PORCUPINE MINES LTD. DRILLED SIX HOLES ALONG A 400 FOOT LENGTH OF THE ZONE, WHICH INCLUDED THE SECTION DRILLED THE YEAR BEFORE. ALTHOUGH THE COMPLETE RESULTS OF THIS WORK ARE NOT AT HAND, IT APPEARS THAT THE RESULTS WERE NOT AS GOOD AS THE EARLIER DRILL RESULTS. HOLE 8, THE BEST HOLE, GOT 4.8% COPPER ACROSS 2.3 FEET. HOLE 13 GOT 0.81% COPPER ACROSS 8.0 FEET, AND THE REMAINING HOLES GOT ONLY LOW VALUES AND NARROW WIDTHS. THE POSITIONING OF THE HOLES SUGGESTS THAT HOLES 8, 9, 12, AND 13 SHOULD HAVE INTERSECTED THE ZONE, WHILE HOLES 10 AND 11 DID NOT REACH IT.

THE LOCATIONS OF THE VARIOUS DRILL HOLES ARE SHOWN ON THE SKETCH MAP ACCOMPANYING.

AT SOME TIME SINCE 1955, SOME BULLDOZING HAS BEEN DONE ALONG GEROW CREEK BELOW THE SHOWING AND ALSO ON THE GRAVEL RIDGE ABOVE THE SHOWING. THE COURSE OF THE CREEK HAS BEEN CHANGED HERE AND THERE, AND THE COLLARS OF SOME OF THE DRILL HOLES HAVE BEEN BURIED IN RUBBLE. THIS WORK DOES NOT SEEM TO HAVE BEEN INFORMATIVE.

THERE HAS ALSO BEEN CONSIDERABLE GEOPHYSICAL WORK CARRIED OUT IN THE VICINITY, JUDGING BY THE NUMBER OF RED RIBBONS TIED TO TREES. I AM INFORMED BY CARL LANGLOIS THAT PICKET LINES HAVE BEEN CUT OVER THE GROUND SOME 1000 FEET TO THE WEST, WHICH HE SAW WHILE CHECKING CLAIM LOCATION LINES.

IT IS CLEAR THAT RECORDS OF THESE GEOPHYSICAL SURVEYS MUST EXIST SOMEWHERE, AND I PROPOSE TO MAKE ENQUIRIES WITH THE OBJECT OF ADDING THESE RESULTS TO THE PRESENT REPORT.

GEOPHYSICAL CHECK WORK

I RAN SIX ELECTROMAGNETIC CHECK TRAVERSES ACROSS THE AREA, AND THESE ARE SHOWN ON THE ACCOMPANYING SKETCH MAP AS TRAVERSES "A" TO "F". RONKA EM 16 EQUIPMENT WAS USED, READING THE JIM CREEK TRANSMITTER AT 18.6 KHZ.

THE COPPER ZONE RESPONDS WEAKLY, BUT DEFINITELY. THE WEAK RESPONSE IS EXPECTED, SINCE THE TOTAL SULFIDE CONTENT OF THE ZONE IS ONLY ABOUT 10%, AND IN ADDITION THE SULFIDE PARTICLES ARE NOT WELL CONNECTED.

THE ZONE WAS TRACED FOR 1300 FEET IN LENGTH, AND SEEMS TO BE WEAKENING AT EACH END. ITS LOCATION IS SHOWN ON THE SKETCH MAP.

ANOTHER DISCONTINUOUS AND PARALLEL WEAK CONDUCTOR WAS LOCATED ABOUT 200 FEET TO THE NORTH. IT HAS, GENERALLY SPEAKING, BETTER CONDUCTIVITY THAN THE COPPER ZONE CONDUCTOR. THE COPPER ZONE CONDUCTOR DISPLAYS MARKED CHANGES IN CONDUCTIVITY ALONG ITS LENGTH, INDICATING THAT THE MINERAL-

IZATION MAY BE DISCONTINUOUS AND IN SHOOTS.

THE SURFACE TRENCH ON THE COPPER ZONE WAS CHECKED FOR RADIOACTIVITY. NO INCREASE ABOVE BACKGROUND WAS NOTED.

THEORETICAL DISCUSSION OF FINDINGS

KEEPING IN MIND THE MINIMUM PROFIT OBJECTIVE OF CYPRUS, WHICH IS \$2,000,000 PER YEAR BEFORE TAXES, THE FOLLOWING CALCULATIONS ARE MADE:

ASSUMING THAT THE DEPOSIT HAS A LENGTH OF 1500 FT, A WIDTH OF 12 FT., AND A DEPTH EXTENT OF 1000 FT., THE TONNAGE POTENTIAL IS THEN 1,500,000 TONS. SINCE THERE IS EVIDENCE, BOTH FROM THE TRICO-MONETA DRILLING AND FROM THE GEOPHYSICAL RESULTS, THAT THE COPPER MINERALIZATION IS IN DISCONTINUOUS SHOOTS, IT SEEMS PRUDENT TO REDUCE THIS POTENTIAL FIGURE BY HALF, TO 750,000 TONS.

ASSUMING AN AVERAGE GRADE OF 3% COPPER, 1 OUNCE SILVER, AND NEGLIGIBLE GOLD, THE GROSS VALUE OF THIS TONNAGE WOULD BE \$25.00 PER TON, AND THE NET VALUE ABOUT \$19.00 PER TON.

AT AN OPERATING RATE OF 700 TONS PER DAY, THE TONNAGE POTENTIAL WOULD BE EXTRACTED IN ABOUT THE $3\frac{1}{2}$ YEAR TAX-FREE PERIOD. OPERATING COSTS AT COAST COPPER, GIANT MASCOT, AND COWICHAN COPPER, AT ABOUT THAT RATE OF MILLING, RANGE BETWEEN \$6.25 AND \$8.00 PER TON. COSTS ARE THEREFORE ASSUMED TO BE \$7.00 PER TON.

THE PROFIT POTENTIAL IS \$19.00-\$7.00 = \$12.00 PER TON.

THE YEARLY PROFIT POTENTIAL WOULD BE \$12.00 TIMES
700 TIMES 360 = \$3,024,000.

THE TOTAL PROFIT POTENTIAL WOULD BE: $\frac{750,000}{700 \times 360} \times \3 MILLION
= \$ 10,000,000 (APPROX.)

WHILE, OF COURSE, THESE FIGURES ARE BASED ONLY UPON UNPROVEN ASSUMPTIONS, THEY MAY STILL BE USED VALIDLY AS A GENERAL INDICATION OF WHETHER THE DEPOSIT HAS ANYTHING LIKE THE POTENTIAL NEEDED TO INTEREST CYPRUS.

THE INDICATED GENERAL CONCLUSION IS THAT:

1. THE YEARLY PROFIT POTENTIAL IS GREATER THAN THE REQUIRED MINIMUM.
2. THE TOTAL PROFIT POTENTIAL OF \$10,000,000 IS AMPLE TO REPAY THE CAPITAL COST OF PLACING THE DEPOSIT IN PRODUCTION. THIS ESTIMATED COST IS \$6,000,000.
3. THE PROFIT POTENTIAL, THEN, IS GREAT ENOUGH TO FULFILL THE MINIMUM REQUIREMENTS.

CONCLUSIONS

1. FURTHER INVESTIGATION OF THE DEPOSIT IS JUSTIFIED.

RECOMMENDATIONS

- A. PICKET LINES SHOULD BE CUT OVER THE INTERESTING AREA, AND DETAILED EM AND GEOCHEMICAL WORK CARRIED OUT. THE EM WORK DESCRIBED IN THIS REPORT WAS DONE BY PACE AND COMPASS TRAVERSING, AND IS NOT PRECISE ENOUGH

RECOMMENDATIONS (CONT'D)

TO PROPERLY GUIDE DRILLING.

- B. TEN SHORT DRILL HOLES, EACH ABOUT 100 FEET LONG, SHOULD BE PUT DOWN TO TEST THE CONDUCTOR. THESE HOLES SHOULD BE DRILLED AT 100 FOOT INTERVALS ALONG THE UNEXPLORED LENGTHS OF THE CONDUCTOR.
- C. IF ORE-GRADE INTERSECTIONS ARE ENCOUNTERED, THEN FURTHER DRILLING SHOULD BE DONE TO ESTABLISH THE DIMENSIONS AND AVERAGE GRADE OF THE INDIVIDUAL ORE SHOOTS.
- D. WHILE THE DRILLING IS BEING DONE, FURTHER RECONNAISSANCE-TYPE EM WORK SHOULD BE DONE ON THE REMAINDER OF THE CLAIM GROUP.

COST ESTIMATES

- A. DETAILED EM-GEOCHEMICAL WORK \$ 2,000.00
- B. 1,000 FEET AXT DRILLING @ \$12 ... 12,000.00
- C. FURTHER DRILLING ... NOT ESTIMABLE
- D. EM RECONNAISSANCE WORK 3,000.00
- E. SUPERVISION, ASSAYING CAMPS, TRAVEL..3,000.00

TOTAL = \$ 20,000.00

Ross Kidd

VANCOUVER, B.C.
NOVEMBER 20TH, 1968

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SKETCH MAP GEROW CREEK SHOWING

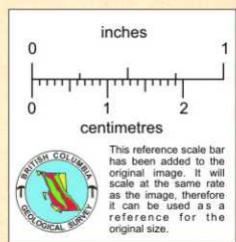
DECKER LAKE OMINECA area B.C.

Scale: 1 IN. = 100 FT.

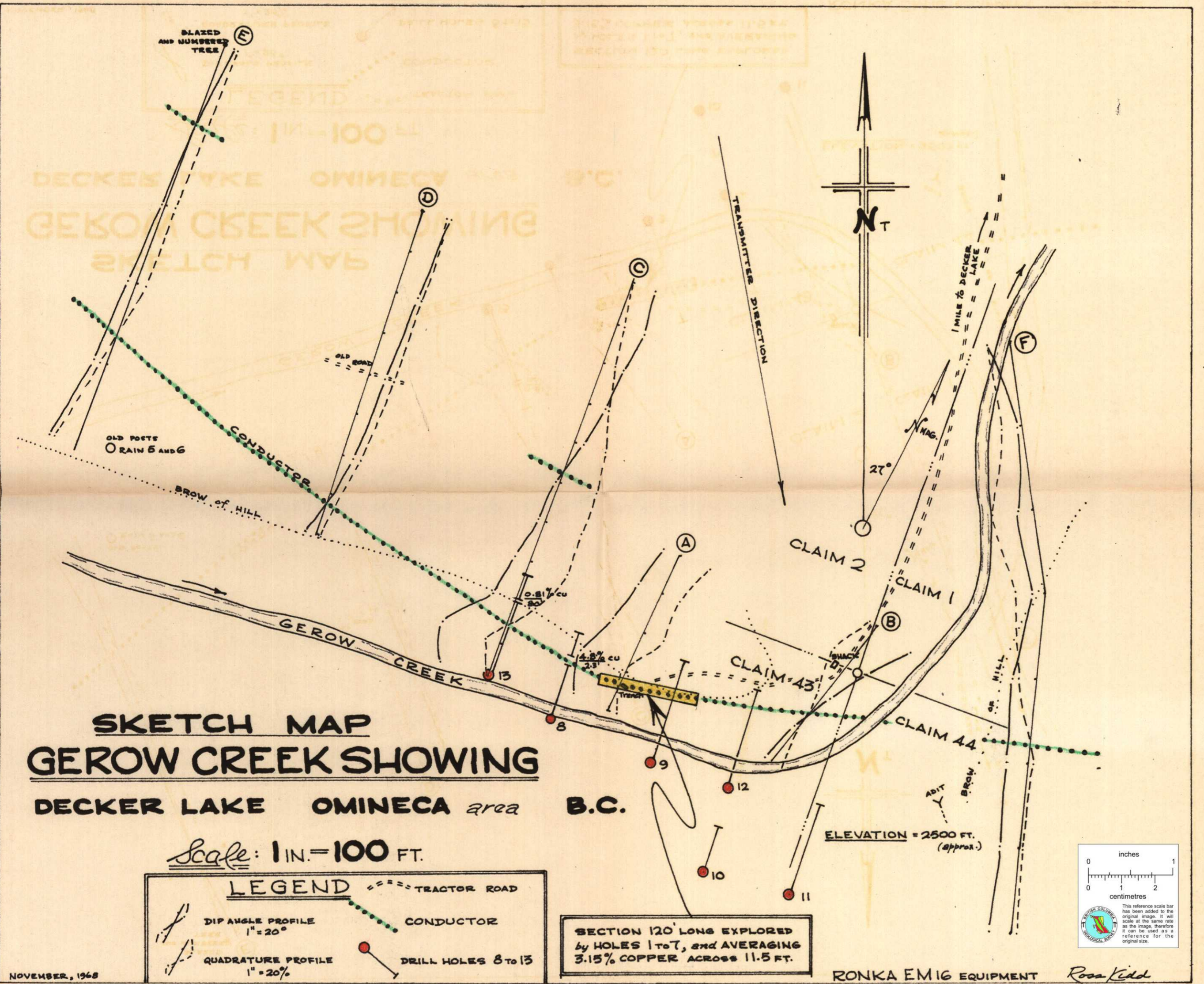
LEGEND	
	TRACTOR ROAD
	CONDUCTOR
	DRILL HOLES 8 TO 13
	DIP ANGLE PROFILE 1" = 20°
	QUADRATURE PROFILE 1" = 20%

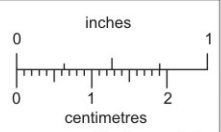
SECTION 120' LONG EXPLORED
by HOLES 1 to 7, and AVERAGING
3.15% COPPER ACROSS 11.5 FT.

ELEVATION = 2500 FT.
(approx.)



RONKA EMIG EQUIPMENT *Rosa Kidd*





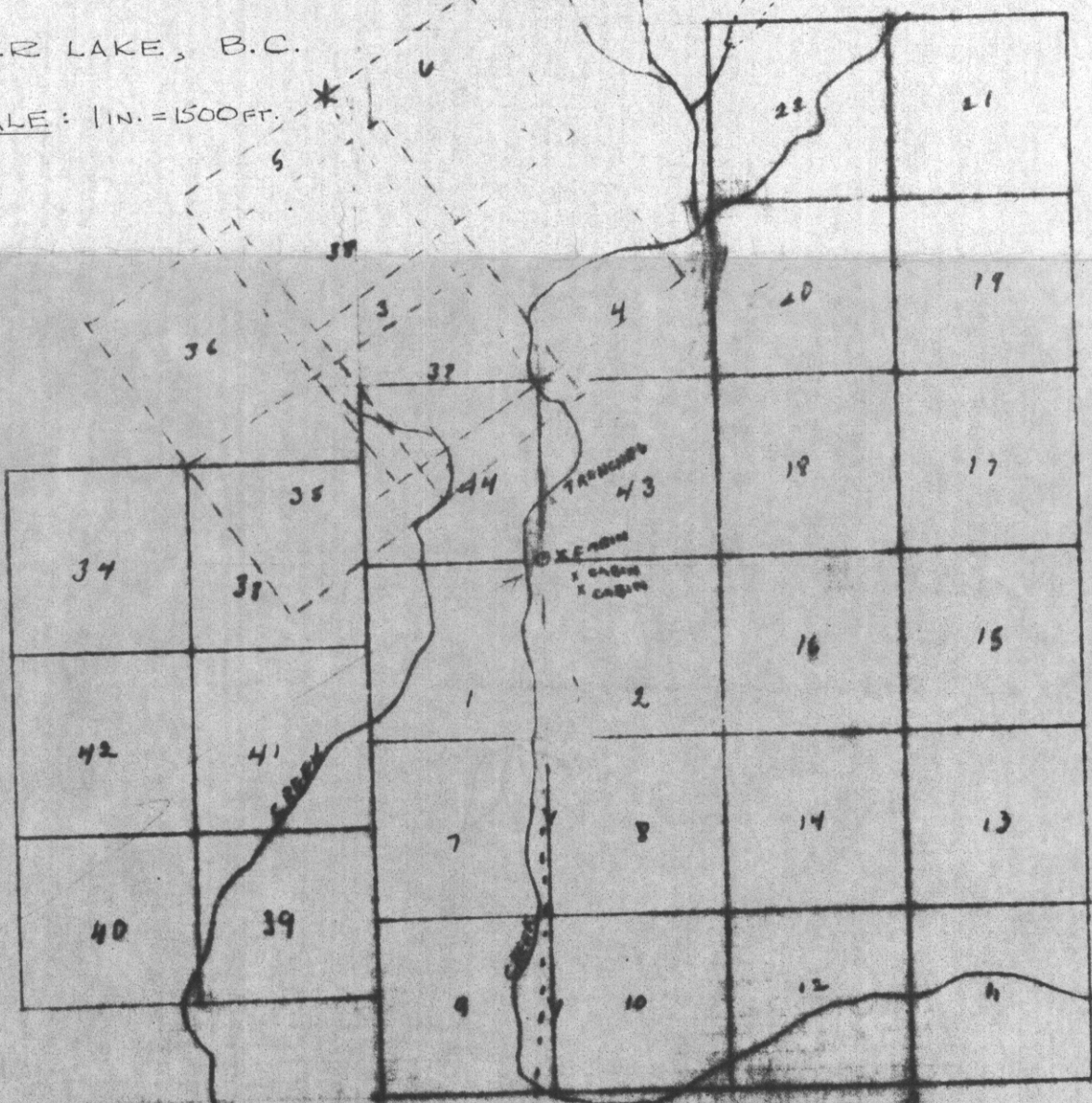
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CLAIM SKETCH

GEROW CREEK
PROSPECT

DECKER LAKE, B.C.

SCALE: 1 IN. = 1500 FT.



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NO FINAL
POSTS
ON THIS.