MAR 19680003: BEATTY-THOMPSON LAKES

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PHOTOGEOLOGICAL STUDY
ON THE
BEATTY-THURSTON LAKES AREA
ALBERTA

BY

R. D. WESEMANN, P. ENG.

JUNE 8, 1968

C O N T E N T S

INTRODUCTION

A photogeological study of the Beatty-Thurston Lakes area in the Cameron Hills was undertaken for Mr. Newton Wolverton of Vancouver, British Columbia. The purpose of this study was to outline areas structurally favorable for mineralization. The area studied lies between latitudes 59°47' and 59°59' and longitudes 118°00' and 118°30'. It covers approximately 250 square miles and includes Quartz Mineral Exploration Permit No 5. A photo mosaic was constructed from Alberta Government air photos at a scale of one inch to 3,400 feet. The results of this study were plotted on this mosaic. (see Figure 1)

REGIONAL GEOLOGY

The area is underlain by formations of Lower Cretaceous age. In general the formations dip at a very low angle to the southwest. Little published geologic information is available on the Cameron Hills region. It has been theorized that major basement faults exposed on the Canadian Shield may extend into this area. These

faults are thought to be related to Devonian reef development and to mineral concentrations. The Pine Point mineral deposits are thought to be so related. Lead-zinc mineralization found in chip samples from oil and gas wells drilled in the Cameron Hills area enhance this possibility.

SURFACE GEOLOGY

The study area has been extensively glaciated by at least two major glacial advances. Lineations from an early advance indicate a south 44° west movement. A later advance moved in a direction of south 60° west. This later advance left thick moraine deposits in the northeast and south central portions of the area.

The photo study was undertaken to locate surface indications of major basement faults. No direct or geomorphic indications of a major fault were found. The glacial advances and moraines obliterated all evidence which may have been in existence.

CONCLUSIONS AND RECOMMENDATIONS

The photo study did not provide encouragment for futher mineral exploration in this area. Although lead and zinc mineralization has been reported in several oil and gas wells in this vicinity, it is felt these occurrences are much too deep to be economic at this time.

The study also indicates little usefull information will be obtained by surface prospecting in this area. Geophysical methods will have to be used to locate drilling targets. Considering these facts and the large expenditures involved in a geophysical and drilling program, it is felt the risk in this area is too great to recommend further exploration at this time.

June 8, 1968

Respectfully submitted

[redacted]

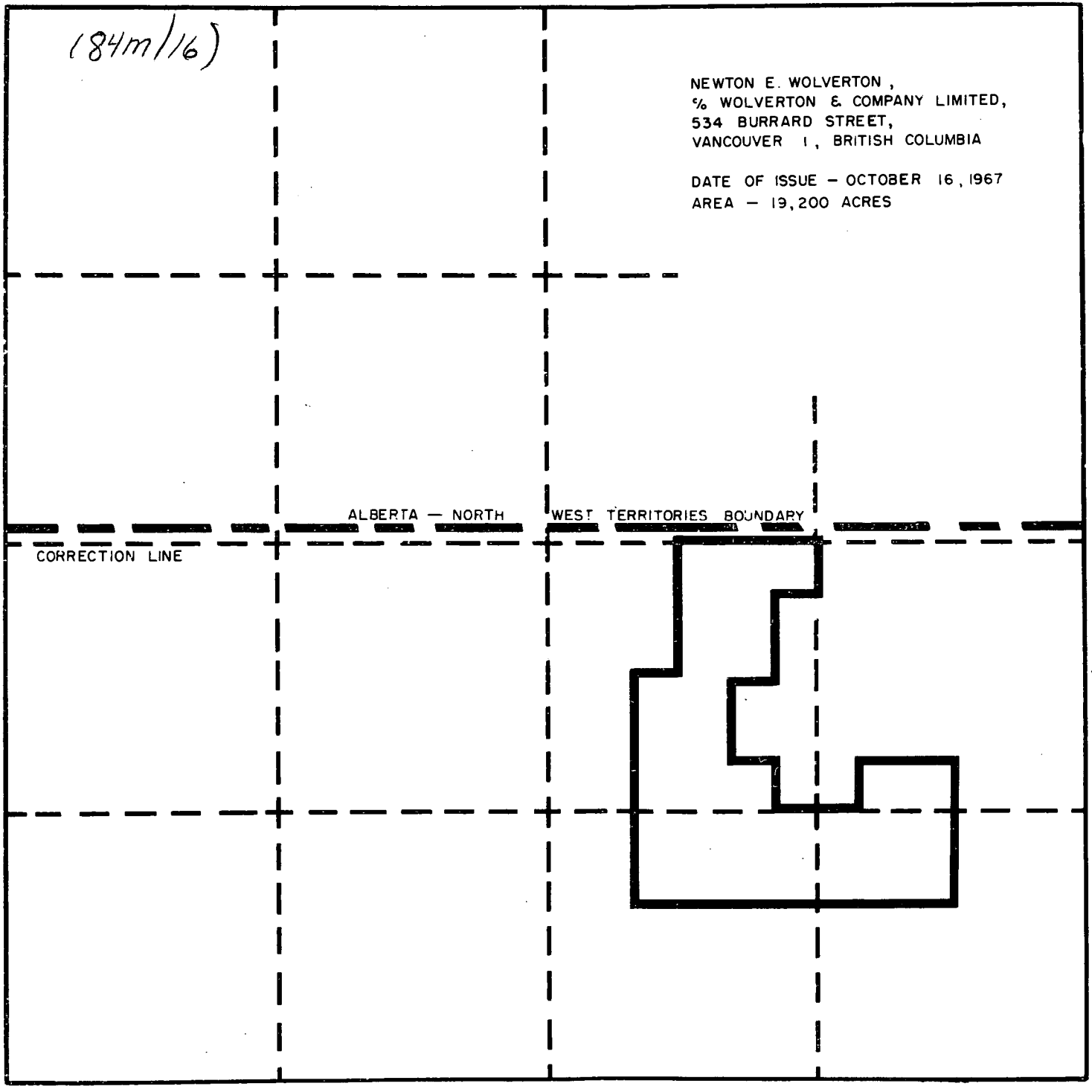
R. D. Wesemann, P. Eng.

[redacted] QUARTZ MINERAL EXPLORATION PERMIT No. 5

(84m/16)

NEWTON E. WOLVERTON,
% WOLVERTON & COMPANY LIMITED,
534 BURRARD STREET,
VANCOUVER 1, BRITISH COLUMBIA

DATE OF ISSUE – OCTOBER 16, 1967
AREA – 19,200 ACRES



ALBERTA

HON. NORMAN WILLMORE
MINISTER

H. G. JENSEN
DEPUTY MINISTER

DEPARTMENT OF LANDS AND FORESTS
FOREST SURVEYS BRANCH

FOREST COVER SERIES

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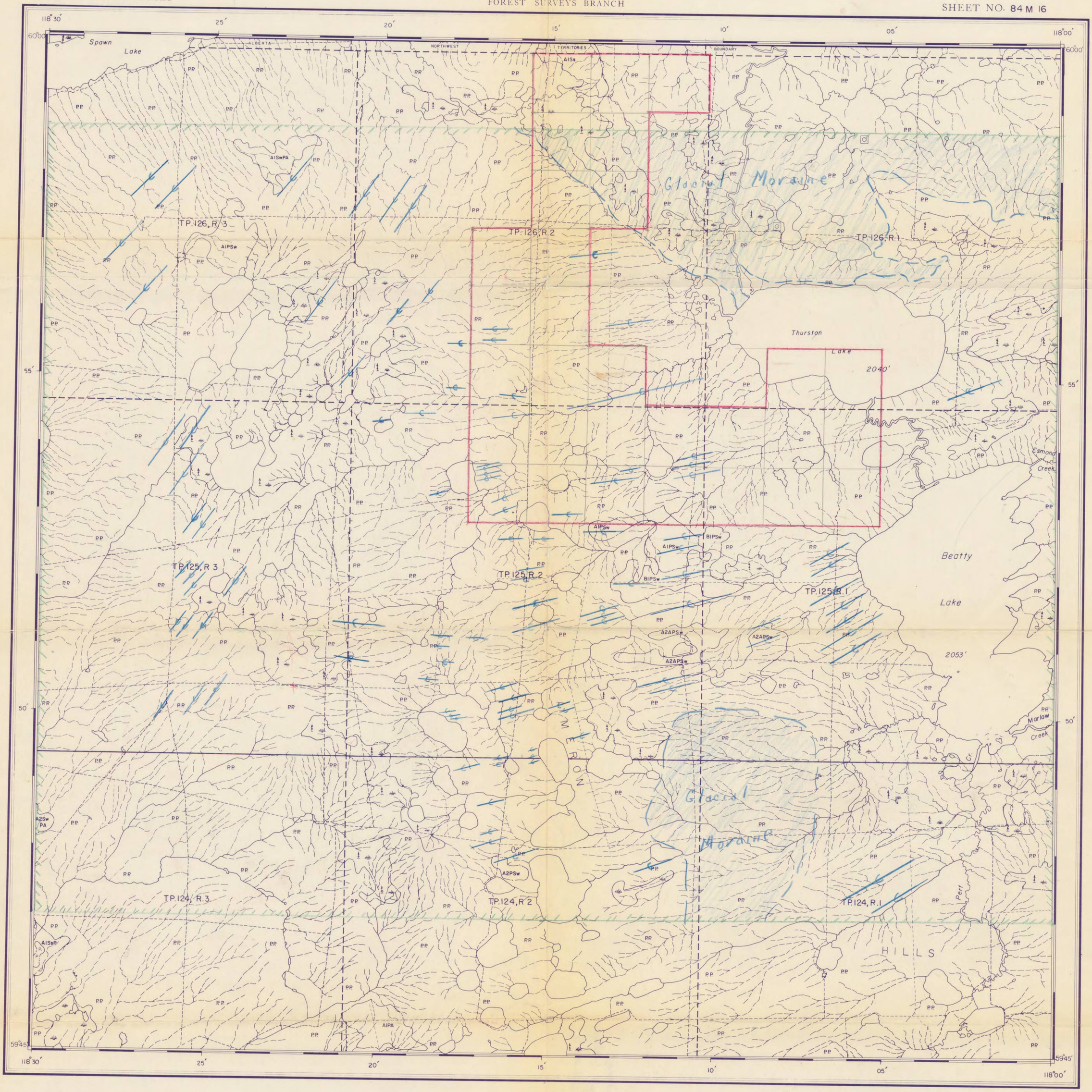

PUBLISHED IN 1955

Basic road information-1954
Road Additions:
from photographs
from geophysical records
April 1959 to Sept 1966
Fires and survey revised annually

Average Magnetic Declination in 1955 33°00′ East decreasing 7′ annually

RAILWAY
TOWNSHIP LINES SURVEYED
TOWNSHIP LINES UNSURVEYED
SECTION LINES SURVEYED
QUARTER SECTION LINES
FOREST RESERVE BOUNDARY
OIL FIELD BOUNDARY
FOREST TYPE LINE
HEIGHT OF LAND
SADDLE IN HEIGHT OF LAND
HILLTOP OR MOUNTAIN TOP
RIVER OVER 1 CHAIN WIDE
CREEK UNDER 1 CHAIN WIDE
INTERMITTENT CREEK
RAPIDS
GRAVEL BAR, SAND OR MUD
CUTBANK
LAKE
INTERMITTENT LAKE
BRIDGE
FERRY
FORD
TRANSMISSION LINE

WEST OF SIXTH MERIDIAN

Scale: One Inch to One Mile 1 : 63,360

0 1/4 1/2 3/4 1 2 3 4 5 6

FOREST CLASSIFICATION LEGEND

Recent clear cut
Recent partial cut
Potentially Productive (PP)
Burned over area and year of burn (PP '56 or 1956)
Recent windfall
Stunted due to elevation
Brushland
Grassland
Hay meadow
Marsh, bog or open muskeg
Treed muskeg
Barren above timber line
Barren rock
Agricultural or other cleared lands

DENSITY
A - Sparsely stocked
B - Medium stocked
C - Fully stocked
D - Overstocked

HEIGHT
1 - up to 30 feet
2 - 31 to 60 feet
3 - 61 to 80 feet
4 - 81 feet and over

SUB - TYPE
Pj or P - Jack pine
Pl - Lodgepole pine
Sb - Black spruce
Sw - White spruce
Ss - Mixed white and black spruce
A - Deciduous
Fb - Balsam fir
Lt - Tamarack

Poor forest sites are indicated by: z — Overmature stands are indicated by: I

HIGHWAYS
paved - gravelled (2)
ALL WEATHER ROAD
gravelled
DRY WEATHER ROAD
dirt
TRUCK TRAIL
SEISMOGRAPH LINE OR TRAIL
TELEPHONE OR TELEGRAPH LINE
PIPE LINE
BUILDING
SETTLEMENT
MILL SITE (M.S.)
DIVISIONAL FOREST HEADQUARTERS
RANGER STATION
FORESTRY CABIN
LOOKOUT POINT or CRAWL TOWER
LOOKOUT TOWER
USABLE AIRSTRIP (AIRSTRIP)
AIRSTRIP CONDITION UNKNOWN (C.U.)
WELL AND WELL SITE
STORAGE TANKS AND CLEARING
OIL AND GAS FIELD BOUNDARY
CAMPGROUND