

85-131-13926

7/86

**GEOLOGICAL ASSESSMENT
REPORT ON THE
CASTLE MOUNTAIN PROPERTY
OF
CAPROCK ENERGY LTD.
OMINECA MINING DIVISION
BRITISH COLUMBIA**

**LATITUDE 57°17' North
LONGITUDE 127°07' West
NTS 94E/6E**

**Anthony Floyd
July 25, 1985**

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,926

TABLE of CONTENTS

| | |
|---|----|
| Table of Contents | |
| List of Figures | |
| Introduction | 1 |
| Location and Access | 1 |
| Physiography | 2 |
| History | 3 |
| Regional Geology Setting and Mineral Deposits | 4 |
| Property Geology and Mineralization | 6 |
| Geophysics | 7 |
| Geochemistry | 8 |
| Conclusions and Recommendations | 8 |
| Itemized Cost Statement | 10 |
| Bibliography | |
| Statement of Qualifications | |

Anthony Floyd, Consulting Geologist

LIST of FIGURES

| | | |
|----------|--------------|------------------|
| Figure 1 | Location Map | Following Page 1 |
| Figure 2 | Claim Map | Following Page 2 |
| Figure 3 | Geology Map | In Pocket |

INTRODUCTION

This report is a geological assessment report on the Castle Mountain Mineral claim group consisting of four Crown granted mineral claims and two staked claims owned by Oswood G. MacDonald, but presently under option to Caprock Energy Ltd.

The report is based on personal property examinations between July 18 to 24, 1985, the author's general knowledge of the Toodoggone area and on numerous published and unpublished reports and maps.

LOCATION and ACCESS

The property consists of 4 Crown granted minerals claims and two staked mineral claims located as per the Modified Grid System. The claims are identified as follows:

| Claim Name | Record Number | Units | Date of Record |
|----------------|---------------|-------|----------------|
| Castle Mtn. #1 | Lot 6007 | 1 | |
| Castle Mtn. #2 | Lot 6005 | 1 | |
| Castle Mtn. #3 | Lot 6009 | 1 | |
| Castle Mtn. #4 | Lot 6008 | 1 | |
| Castle Mtn. 1 | 4084 | 20 | July 27, 1981 |
| Castle Mtn. 2 | 4085 | 1 Fr. | July 27, 1981 |

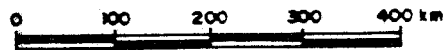
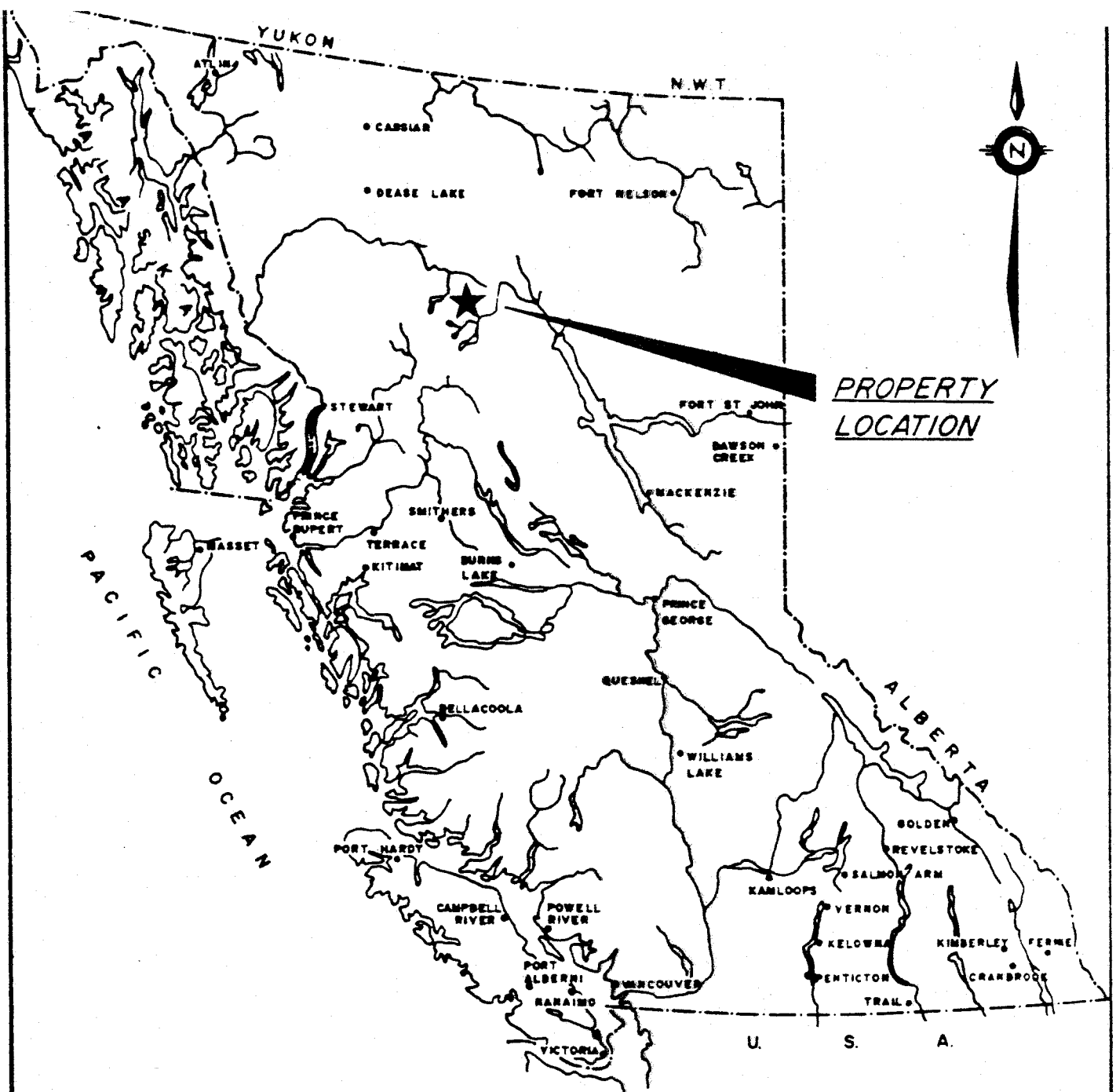



FIGURE 1
 LOCATION MAP
 CAPROCK ENERGY LTD.
 CASTLE MOUNTAIN PROPERTY
OREQUEST 

The property is located in the Omineca Mining Division on NTS Sheet 94 E/6E at 127° 07'W by 57° 17'N, approximately 20 miles northwest of Thutade Lake and 300 kilometers north of Smithers, B.C. (see Figure 1).

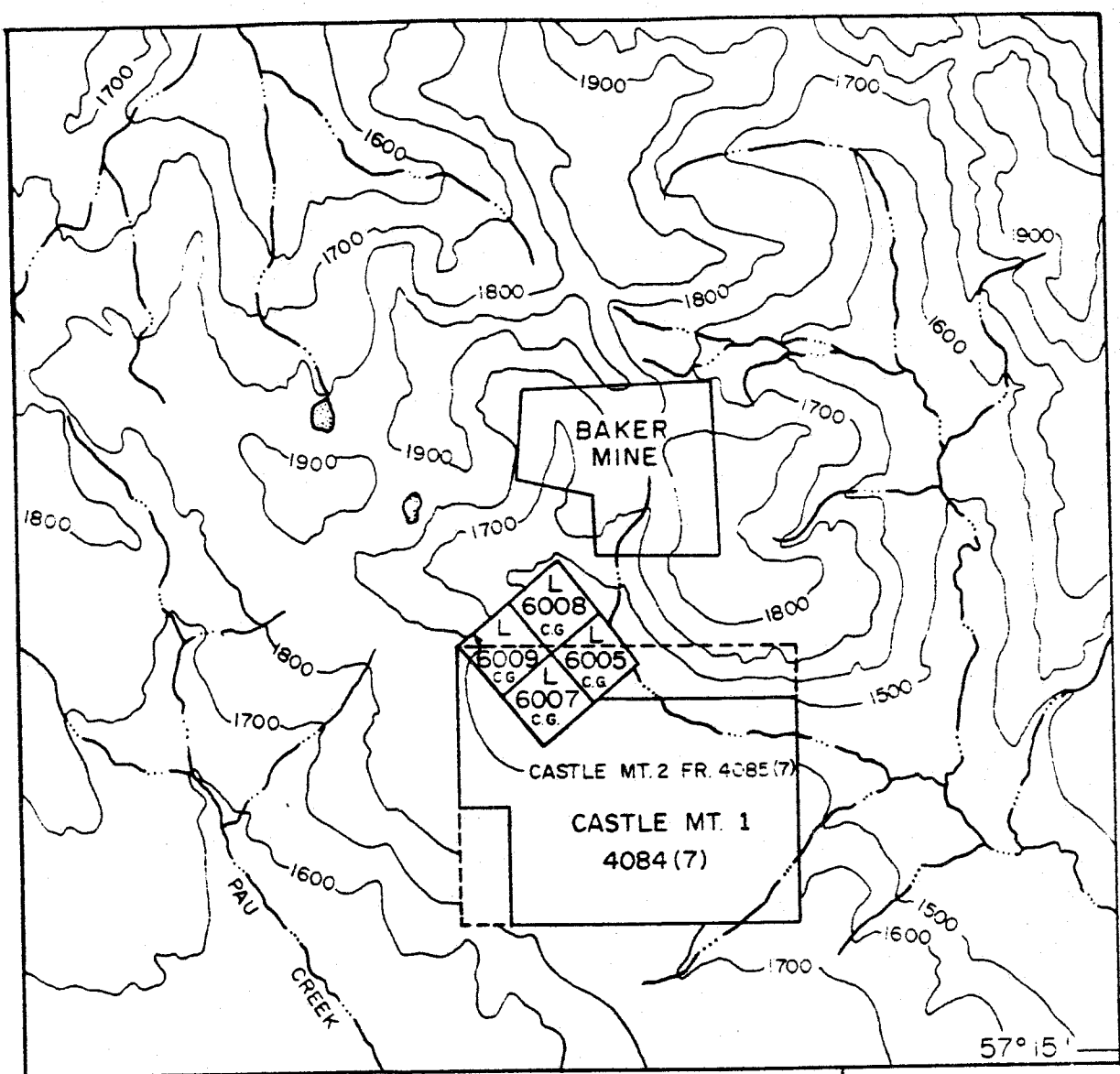
Access is best achieved by fixed wing aircraft from Smithers to a gravel strip beside the Sturdee River, and thence by truck or helicopter to the property.

PHYSIOGRAPHY

The Toodoggone River region is an upland area featuring rounded to craggy mountains and ridges dissected by broad alluvium-filled valleys.

The Castle Mtn. claims cover a rugged area south-west of the Baker Mine. Fault blocks of late Paleozoic limestone dominate the scenery whilst the more subdued terrain is underlain by Takla Group volcanic rocks or a quartz monzonite of the Omineca intrusion.

Stunted spruce, fir and balsam cover the lower talus slopes principally on Castle Mtn. #2 and #4. Bedrock exposure is almost 100% above the tree line. The area is snow free between late June and early October.



127°10'

127°05'

57°15'

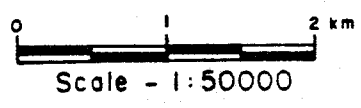


FIGURE 2
 CLAIMS LOCATION MAP
 CAPROCK ENERGY LTD.
 CASTLE MOUNTAIN PROPERTY

OREQUEST



HISTORY

The Toodoggone area was investigated for placer gold in the 1920's and 1930's. A public company, Two Brothers Valley Gold Mines Ltd., undertook considerable test work, including drilling, in 1934. Most of this work was directed to extensive gravel deposits principally near the junction of McClair Creek and the Toodoggone River.

Gold-silver mineralization was discovered on the Chappelle (Baker Mine) property by Kennco Explorations (Western) Ltd. in 1969. DuPont of Canada Exploration Ltd. acquired the property in 1974 and began production at a milling rate of 90 tonnes per day in 1980.

Numerous other gold-silver discoveries were made in the area in the 1970's and 1980's, including the Lawyers deposit which was discovered by Kennco in 1973 and optioned by SEREM Ltd. in 1979. Work on this property to date has included considerable trenching, drilling and underground development and a feasibility study is currently underway.

The Toodoggone area has been the scene of intense exploration activity during the past four years with numerous companies exploring over 3,000 mineral claim units. Exploration and development expenditures to date are estimated to be in the order of \$33 million.

Mineralization was first found on the Castle Mountain property in 1931 and the four Castle Mountain claims were staked. The original owner was the Consolidated Mining and Smelting Company of Canada Ltd. Prospecting and hand

trenching was done in 1932-1933, and the claims were surveyed for Crown granting in 1934.

The claims were subsequently acquired by Mr. Oswood G. MacDonald, and a magnetometer and electromagnetic survey was carried out in March of 1973. This work is described in Assessment Report No. 4199. In 1981, a program of soil sampling, magnetometer and V.L.F.-E.M. surveying was carried out which is described in Assessment Report No. 10,525. All work to date has been concentrated on the four crown granted mineral claims.

REGIONAL GEOLOGY SETTING and MINERAL DEPOSITS

The Toodoggone River area is situated near the eastern margin of the Intermontaine tectonic belt. Oldest rocks in the area are late Paleozoic limestones in the vicinity of Baker mine where they are in fault contact with late Triassic Takla Group volcanic rocks.

A distinctive lithologic volcanic unit of early Jurassic age, called the Toodoggone volcanics, is a subaerial pyroclastic assemblage of predominantly andesitic composition. These unconformably overlie, or are in fault contact with older rocks, principally Takla Group volcanic rocks and undivided Hazelton Group feldspar porphyry flows and fragmental rocks.

Toodoggone volcanic rocks are contained in a 100 by 25 kilometer northwest-trending belt extending from Thutade Lake in the south to Stikine River in the north.

Several major stratigraphic subdivisions of Toodoggone volcanics have been identified. These and older layered rocks of the Takla and Hazelton Groups are cut by Omineca granitic rocks of Early Jurassic age, which commonly occur along the eastern margin of the Toodoggone volcanic belt, and by subvolcanic intrusions related to Toodoggone volcanics.

Clastic sedimentary rocks of the Cretaceous-Tertiary Sustut Group overlie older layered rocks near the Stikine River and form the southwestern exposed margin of the Toodoggone volcanic belt.

Regional fault systems trend northwesterly and northerly throughout the Toodoggone area.

Several styles of economic mineralization have been identified of which the most important are epithermal precious and base metal deposits hosted principally by lower and middle units of Toodoggone volcanics and related to Toodoggone volcanic processes. Gold-silver mineralization occurs principally in fissure veins, quartz stockworks, breccia zones and areas of silicification in which ore minerals are fine-grained argentite, electrum native gold and silver and lesser chalcopyrite, galena and sphalerite. Alteration mineral assemblages are typical of epithermal deposits with internal silicification, clay minerals and locally alunite, grading outward to sericite and clay minerals, chlorite, epidote and pyrite.

Examples include Baker Mine, a fissure vein system developed in Takla volcanic rocks, but spatially related to dikes believed to be associated with

Toodoggone volcanic rocks. Pre-mining indicated reserves were 90,000 tonnes grading 30 grams/tonne gold and 600 grams/tonne silver. Recovered grades during the three year mine life were about half the indicated grades due to initial mill recovery problems and greater than expected dilution during mining.

The Lawyers deposit has gold-silver mineralization in banded chalcedony-quartz stockwork veins and breccia zones developed in Toodoggone volcanic rocks. Three potential ore zones have been defined to date and recently announced reserves are 1 million tonnes grading 7.27 grams/tonne gold and 254 grams/tonne silver. Numerous other epithermal gold-silver deposits in the area are hosted by lower and middle units of the Toodoggone volcanic sequence. These include the Sha, Saunders, Graves, Moosehorn, Mets, Metsantan, Al, JD and Golden Lion prospects.

PROPERTY GEOLOGY and MINERALIZATION

The geology of the Castle Mountain crown granted claims is described by N.C. Carter, 1971. This work revealed that Lower Paleozoic limestone and volcanic rocks of the Takla group are intruded by a granitic body related to the Omineca Intrusion. This has led to the development of the skarn type of mineralization recognized in the 1930's by Cominco and explored by trenching. Sphalerite, galena, chalcopryrite and magnetite are traceable over a strike length of 1,000-1,400 feet in a zone up to 10' thick. The silver content is erratic and ranges up to 50 ozs/ton, however, the average would appear to be closer to 2-3 ozs. Gold values are generally very low. Several northerly and northwesterly trending fault zones are indicated.

The only significant gold mineralization was reported by Cominco in 1931. A small lens of mineralization on Castle Mtn. 3 assayed 0.27 ozs Au/ton, 55.56 ozs Ag/ton and 76.6% Pb.

Past efforts were directed towards the obvious mineralization and this has likely been adequately evaluated. However, the results of exploration activity in the area over the past six years has established significant new geological relationships for precious metal mineralization which could be present on the Castle Mtn. claims.

The area mapped by Carter as Takla volcanics is often obscured by a large partly overgrown rock glacier and it is in this area, very close to the Baker Mine, that efforts should be made to locate new mineralization.

CONCLUSIONS and RECOMMENDATIONS

Exploration work to date on the claims has identified skarn type mineralization associated with the intrusion of a granitic body into Upper Paleozoic limestone. This mineralization is high in base metal content, but low in precious metals. Nearby at the Baker Mine, vein systems hosted by Takla volcanics have contained "bonanza" grade mineralization i.e. 30 grams Au/ton and 600 grams Ag/ton. Future exploration of the Castle Mountain property should be directed towards this type of target.

Since exposure is good on the majority of the claim group, the best chance of success to find as of yet undiscovered ore lies below the talus slopes and rock glacier in Castle Mtn. 2 and 4, an area thought to be underlain by Takla Volcanics.

ITEMIZED COST STATEMENT

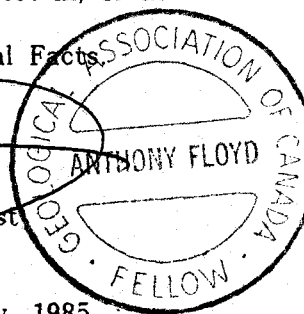
| | |
|--|-------------------|
| Mobilization and Demobilization (Fixed Cost) | \$1,200.00 |
| Expediting, Radio Rental (Fixed Cost) | 500.00 |
| Support (Fixed Wing) | 600.00 |
| 1 geologist - 4.5 days x \$280 | 1,260.00 |
| 1 technician - 4.0 days x \$200 | 800.00 |
| Camp Costs - 11.0 days x \$60 | 660.00 |
| Helicopter - 2.1 hours x \$515 | 1,081.50 |
| Supervision - 1.5 days x \$400 | 600.00 |
| Report and Drafting | 800.00 |
| | <u>\$7,501.50</u> |

QUALIFICATIONS

I, Anthony Floyd, of 3400 West 2nd Avenue, Vancouver, British Columbia hereby certify that:

1. I am a 1971 graduate of Nottingham University, England, with a BSc. Honours degree in geology.
2. I am a 1972 graduate of Leicester University, England, with a M.Sc degree in Mineral Exploration and Mining Geology.
3. I have practised my profession for the past twelve years in Canada, United States and Europe. For the past twelve years I have been a resident in British Columbia.
4. I am a Fellow of the Geological Association of Canada.
5. The information contained in this report is based on my personal examination of the property and on various government publications and company reports listed in the Bibliography.
6. I have not received, nor do I expect to receive, any interest direct or indirect in the properties or securities of Caprock Energy Ltd.
7. Caprock Energy Ltd. is hereby authorized to use this report in, or in conjunction with any Prospectus or Statement of Material Facts.


Anthony Floyd
Consulting Geologist



DATED at Vancouver, British Columbia, this 25th day of July, 1985.

BIBLIOGRAPHY

CARTER, N.C.

1972: Toodoggone River Area and Chappelle. Geology, Exploration and Mining in British Columbia 1971, p. 63-70.

CROWHURST, J.J.

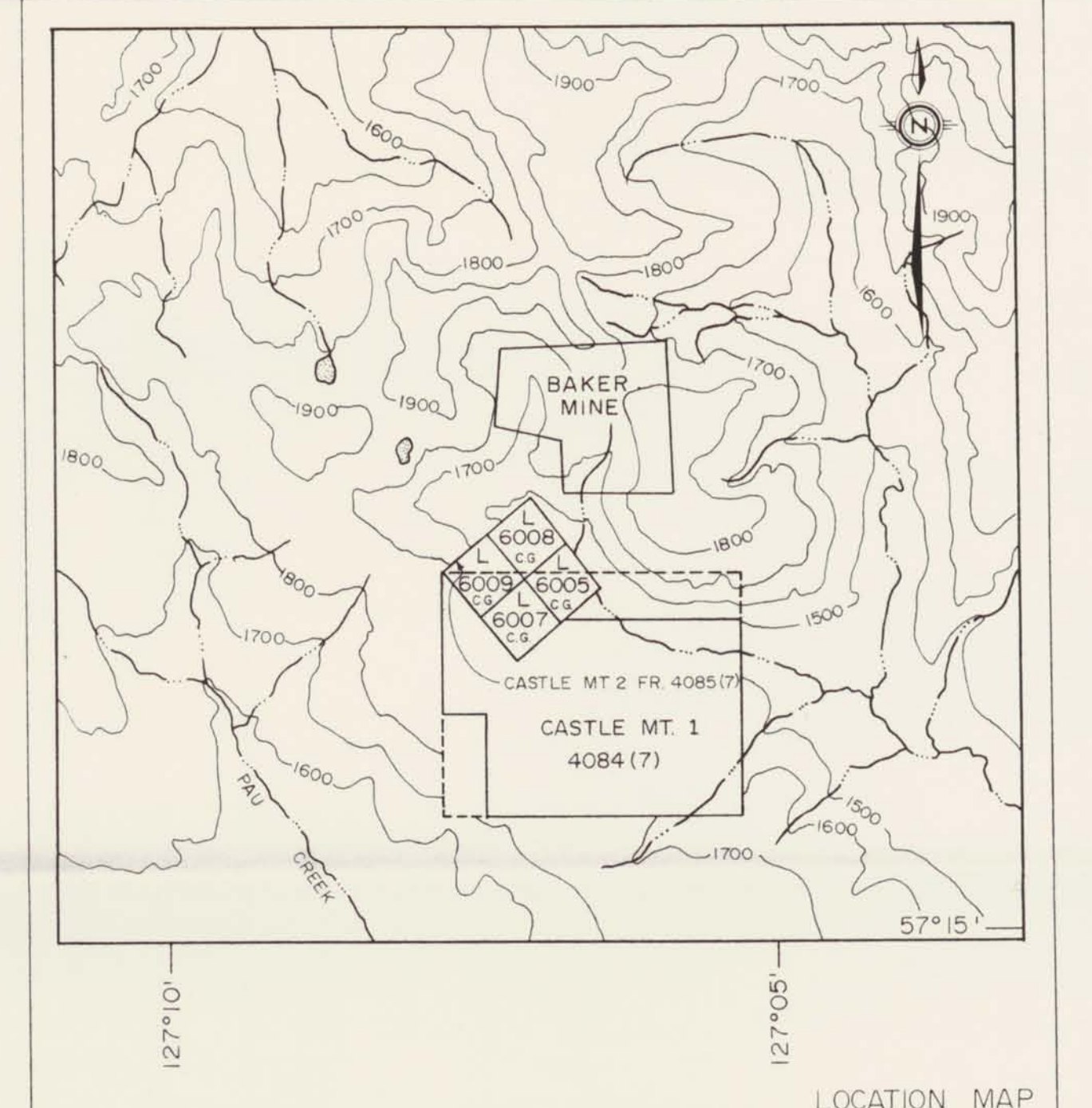
1973: Report on the Castle Mountain Property, Company Report, Unpublished.

VINCENT, J.S.

1981: A Summary Report on the Castle Mountain Property, Omineca Mining Division, Company Report, Unpublished (Assessment Report 10,525)

WHITE, G.E. and PARENT, D.

1973: Geophysical Report and Magnetometer, Electromagnetometer Surveys, Castle Mountain Mineral Claims (Assessment Report 4199).



LEGEND

- 4 Augite porphyry
- x x x Granite
- 2 Takla volcanics
- 1 Limestone
- 1a Siliceous silts, cherts

SYMBOLS

- Rock outcrop
- Trench
- Slope (gentle, moderate, steep)
- Flat level
- Talus
- Fault

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,926

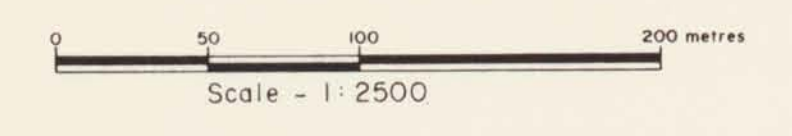


FIGURE 3

GEOLOGY

CAPROCK ENERGY LTD.

CASTLE MOUNTAIN PROPERTY

OMENICA MINING DIVISION, B.C. NTS 94 E6

OREQUEST

