

PETER E. WALCOTT & ASSOC. LTD.

A REPORT

ON

A MAGNETIC SURVEY

Dawson Area, Yukon Territory
63° 59'N, 139° 05'W
N.T.S. 115 O/14 & 116 B/3

Claims surveyed: DAWSON 127,134-137,142-145,150-152

Survey Dates: June 2nd - December 16th, 1986

FOR

Operator: LOCKWOOD PETROLEUM INC.
TIBURON PETROLEUM CORP.
Vancouver, B.C.

Owner: W. T. Dawson

by

PETER E. WALCOTT & ASSOCIATES LTD.
Vancouver, B.C.

FEBRUARY 1987

09 17 47

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 11,098.65.

PDiamond

for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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ACCOMPANYING MAPS

MAP POCKET

CLAIM & GRID LOCATION MAP ... 1:50,000	
CONTOURS OF TOTAL FIELD INTENSITY ... 1:50,000	W-393-14

INTRODUCTION.

Between August 1st and 2nd, 1986, Peter E. Walcott & Associates Limited carried out magnetic surveying over part of a property, located in the Dawson area of the Yukon Territory, for Lockwood Petroleum Inc. and Tiburon Petroleum Corp.

Measurements of the total intensity of the earth's magnetic field were taken at 25 metre intervals along ten N19° W lines using a GSM 8 proton magnetometer.

The results are presented in contour form on a plan map of the line grid - Map W-393-4, that accompanies this report.

PROPERTY, LOCATION & ACCESS

The property is located in the Dawson Mining District of the Yukon Territory, and consists of the following claims:

<u>CLAIM</u>	<u>GRANT NO.</u>	<u>ANNIVERSARY</u>
DAWSON 101-180	YA79385-462	November 21st
BETSY 1-4	YA80516-519	June 21st

These are situated at and south of the confluence of Hunker and Hester creeks some twenty kilometres east southeast of the town of Dawson.

Access is obtained by means of four wheel drive vehicle along the Hunker creek road from Hwy #2.

PREVIOUS WORK.

Work was first believed to have been carried out on the property during the Klondike gold rush of 1897-98, the colourful history of which has been documented by many.

Recently Lockwood and Tiburon conducted an airborne electromagnetic and magnetic survey, the results of which are documented in reports held by the companies.

PURPOSE.

The purpose of the survey was to (a) properly define the airborne magnetic high on the ground, and (b) investigate the magnetic response of the carbonaceous Nasina rocks - muscovitic Klondike schists contact thought to occur on the grid.

GEOLOGY.

General. The Klondike district was first mapped by Bostock (1942), and more recently by Metcalfe (1981) and Debicki (1985 and 1984). Bedrock in the Klondike area is generally grouped into five major units which are, from oldest to youngest, the Nasina Series, the Klondike Series, the Moosehide Assemblage, early Tertiary volcanics/volcanoclastics and Tertiary intrusives.

Rocks of the Nasina Series consist of graphitic schists, graphitic quartzites and siliceous marbles with minor chlorite schists and muscovite schists. These rocks have been metamorphosed to grades ranging from upper greenschist to middle amphibolite facies, and may represent metamorphosed outer shelf sediments of the ancient North American continent.

Most rocks exposed in the Klondike district predominantly belong to the Klondike Series. These are quartzofeldspathic schists containing varying amounts of chlorite, muscovite, and sericite. They have undergone upper greenschist to middle amphibolite grade metamorphism and at least four separate deformational events. This series appears to represent metamorphosed interbedded sediments and rhyolitic to andesitic tuffs. The contact between schists of the Klondike series and graphitic schists of the Nasina series is sheared, and suggests that the Klondike series represents an allocthonous assemblage which has been thrust over Nasina shelf strata. To the west the Klondike schists are in contact with a blocky weathering, granitic textured, biotite-quartz-feldspar rock which does not appear as highly metamorphosed as the Klondike schists. Thin section studies of these rocks indicate that they were originally medium to coarse grained plutonic rocks of granodioritic to quartz diorite composition, and may represent the magmatic source for those tuffs now comprising the Klondike Series.

Structurally overlying rocks of the Klondike and Nasina series are occurrences of greenstone and altered ultramafics belonging to the Moosehide Assemblage. Included in the ultramafic unit are a great variety of rock types including massive, partially serpentinized peridotite (harzburgite), massive to sheared serpentinite, silicacarbonate altered serpentinite, and talc-carbonate schist. Massive greenstone and strongly altered,

fine to medium grained diabase are exposed in several steep bluffs in the vicinity of Dawson. These rocks are unfoliated and form part of a slab of greenstone and serpentinite that underlies the southwestern slope of the Midnight Dome east of Dawson. Occurrences of greenstone and ultramafic rocks are commonly found along the sheared contact between the Klondike and Nasina series rocks. They are thought to represent exotic slices of uncertain origin structurally emplaced during the thrust faulting.

Gently folded andesitic volcanics and clastic sediments are present in the Last Chance Creek area. These rocks were considered to be early Tertiary in age; however, recent work on similar rocks in the Indian River area suggests that these rocks are middle Cretaceous in age. Intrusive rocks are present as numerous dykes and sills ranging in nature from diabase to rhyolite. Larger Tertiary intrusive bodies are rare in the Klondike except for a rhyolite porphyry stock that outcrops along Hunker Creek. Isotopic dating (Debicki) indicates that the porphyry is approximately 50 to 60 million years old.

TIB Grid. The Tib grid overlies an area of northwest trending fault sheets which separate Klondike from Nasina series schists. To the east of the fault sheets, adjacent to and along Hunker creek, are thick layers of graphitic schist. Along the fault zones are found varieties of magnetite bearing ultramafic rocks including peridotites, serpentinites, and their altered equivalents.

Placer bench workings in the area show that bedrock has been hydrothermally altered to a varying degree. On Gold Hill, an iron rich solution has been precipitated at the base of overlying gravels above pyritiferous carbonaceous schist units. On Paradise Hill, alteration of bedrock has resulted in carbonitization, and in some instances silification of ultramafic rocks, and kaolinitization of schistose rocks. Samples of these rocks show anomalous values of As, Sb, Ba, Fe, Mn, S, and P. Trace amounts of Au also have been detected in some of the altered bedrock, and a mobilization/enrichment process appears to have taken place in the Au distribution within the overlying gravels.

SURVEY SPECIFICATIONS.

The magnetic survey was carried out using a GSM-8 proton precession magnetometer manufactured by GEM Systems Ltd. of Don Mills, Ontario. This instrument measures variations in the earth's magnetic field to an accuracy of plus or minus 1 gamma. Corrections for diurnal variations were made by comparison with readings obtained on a base magnetometer manufactured by EDA Instruments Ltd. of Metropolitan Toronto, Ontario.

In all some 10.0 kilometres of surveying were carried out by this method.

DISCUSSION OF RESULTS.

The results, as shown on Map W-393-4, showed the existence of four magnetic highs on the grid, two of which were only marginally defined.

These anomalies are believed to be attributable to magnetite bearing rocks along north trending faults. Subsequent drilling has encountered ultramafic rocks in the boreholes.

SUMMARY AND CONCLUSIONS.

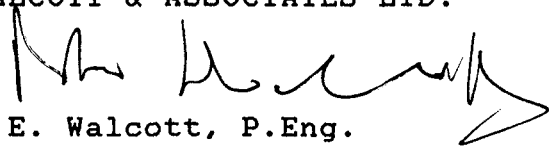
Between August 1st and 2nd, 1986, Peter E. Walcott & Associates Limited carried out a small ground magnetic survey over part of a property in the Dawson area, Yukon Territory, optioned by Lockwood Petroleum Inc. and Tiburon Petroleum Corp.

The results located the presence of four magnetic highs on the grid.

Subsequent drilling has shown these to be caused by magnetite bearing ultramafic rocks along the fault zones separating the Klondike schists from the graphitic Nasina schists along Hunker creek.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LTD.


Peter E. Walcott, P.Eng.
Geophysicist

Vancouver, B.C.

February 1987

PETER E. WALCOTT & ASSOC. LTD.

A P P E N D I X

GEOPHYSICAL SERVICES

LOK/DAW 1986
2 JUNE - 16 DECEMBER

GEOPHYSICAL SURVEY COST

<u>CONSULTANT FEES</u>	
ARCHEAN ENGINEERING	\$ 1,125.00
<u>SUPPLIES</u>	98.05
<u>TELEPHONE SERVICE</u>	6.00
<u>CONTRACTOR</u>	
P.E. WALCOTT & ASSOCIATES	<u>3,969.22</u>
<u>TOTAL GEOPHYSICAL SURVEY COST</u>	<u>\$ 5,198.27</u> =====

TIB/DAW 1986
2 JUNE - 16 DECEMBER

GEOPHYSICAL SURVEY COST

<u>FOOD & ACCOMMODATION 4 MAN DAYS @ \$60.72</u>		\$ 242.86
<u>SUPPLIES</u>		98.05
<u>FUEL</u>		95.00
<u>SALARIES & WAGES</u>		
P. GRUNENBERG, 1 DAY	\$ 163.34	
S. TOMLINSON, 2 DAYS @ \$120.20	240.40	
E. TIMOSHENKO, 1 DAY	<u>92.31</u>	496.05
<u>BENEFITS @ 20%</u>		99.21
<u>CONTRACTOR</u>		
P.E. WALCOTT		<u>4,869.21</u>
<u>TOTAL GEOPHYSICAL SURVEY COST</u>		<u>\$ 5,900.38</u> =====

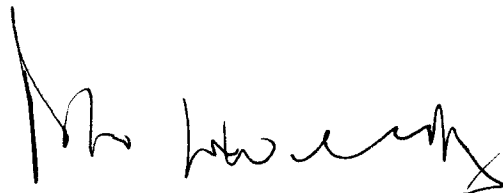
PERSONNEL EMPLOYED ON SURVEY.

<u>NAME</u>	<u>OCCUPATION</u>	<u>ADDRESS</u>	<u>DATES</u>
P. Grunenberg	Geologist	Mark Management Ltd. 1900 999 W. Hastings Vancouver, B.C.	June 2-Dec.16 1986
S. Tomlinson	"	"	"
J. Bosher	"	"	"
E. Timoshenko	"	"	"
G. MacMillan	Geophysical Operator	Peter E. Walcott & Assoc 605 Rutland Court, Coquitlam, B.C. V3J 3T8	August 1st 2nd,17th, 1986
B. Summerfield	"	"	August 1-2, 1986
V. Pashniak	"	"	Jan. 15,1987
P. Walcott	Geophysicist	"	Aug.22,1986 Jan.10,1987 15, 1987
J. Walcott	Typing	"	Feb. 20, 1987

CERTIFICATION.

I, Peter E. Walcott, of the Municipality of Coquitlam, British Columbia, hereby certify that:

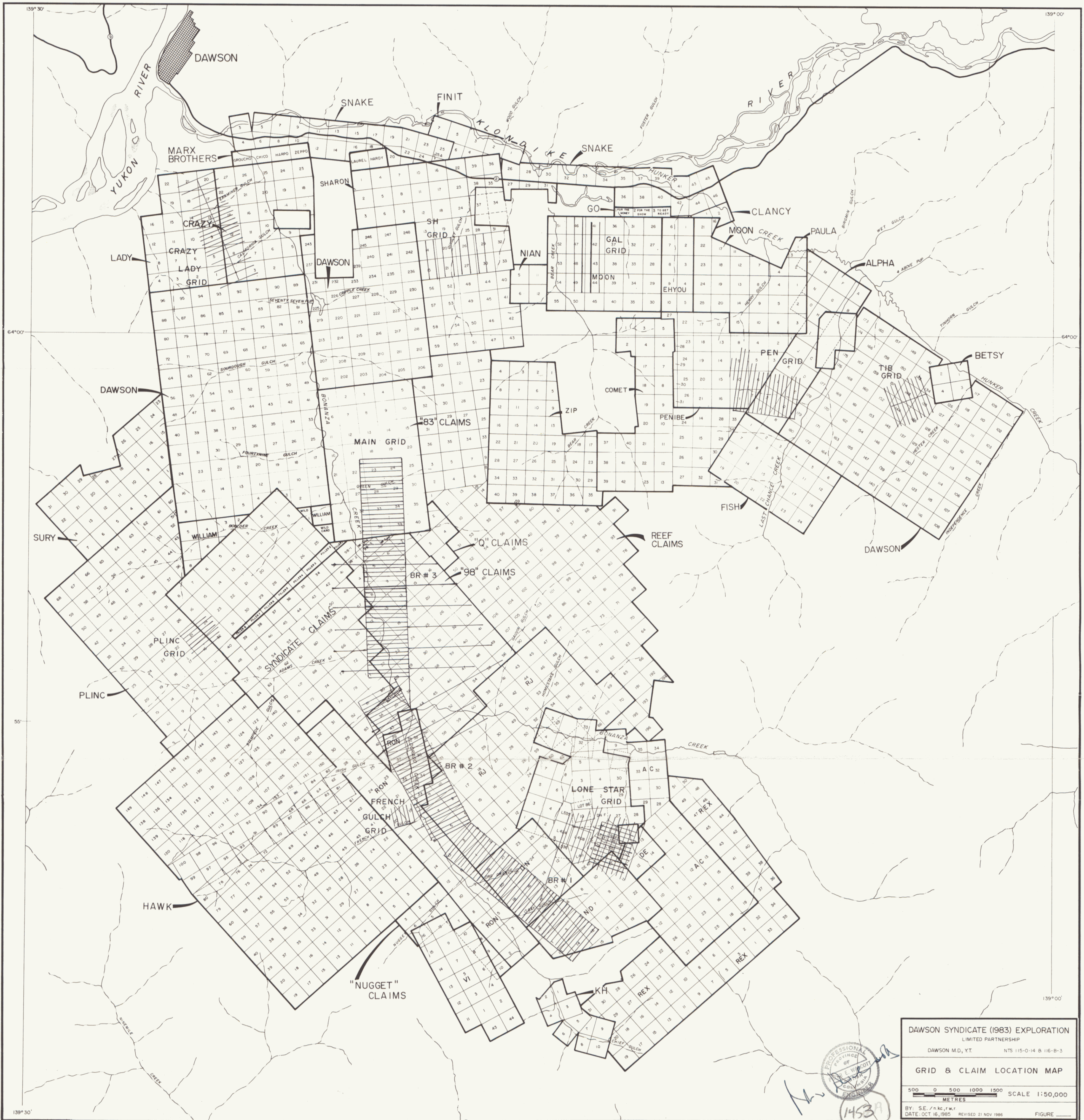
1. I am a Graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.
2. I have been practising my profession for the last twenty years.
3. I am a member of the Association of Professional Engineers of British Columbia and Ontario.
4. I hold no interest, direct or indirect, in the securities or properties of Lockwood Petroleum Inc. or Tiburon Petroleum Corp.



Peter E. Walcott, P.Eng.

Vancouver, B.C.

February 1987



DAWSON SYNDICATE (1983) EXPLORATION
 LIMITED PARTNERSHIP
 DAWSON M.D., Y.T. NTS 115-0-14 & 116-B-3
GRID & CLAIM LOCATION MAP
 500 0 500 1000 1500 SCALE 1:50,000
 METRES
 BY: S.E./n.k.c./r.w.r.
 DATE: OCT 16, 1985 REVISED 21 NOV 1986 FIGURE _____



Lockwood Petroleum Inc.

LOK P1-1

LOK/DAW 1986
2 JUNE - 16 DECEMBER

GEOPHYSICAL SURVEY COST

CONSULTANT FEES

ARCHEAN ENGINEERING

\$ 1,125.00

SUPPLIES

98.05

TELEPHONE SERVICE

6.00

CONTRACTOR

P.E. WALCOTT & ASSOCIATES

3,969.22

TOTAL GEOPHYSICAL SURVEY COST

\$ 5,198.27
=====



TIB/DAW 1986
2 JUNE - 16 DECEMBER

GEOPHYSICAL SURVEY COST

<u>FOOD & ACCOMMODATION</u> 4 MAN DAYS @ \$60.72		\$ 242.86
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