

88 260

**JACQUES, WHITFORD & ASSOCIATES LIMITED**

**CONSULTING ENGINEERS**



---

88 260

WILCO MINING COMPANY LIMITED  
WINE HARBOUR PROPERTY  
EXPLORATION LICENSE 13303  
NSDME CLAIMS MAP 11F-04/B  
July 22, 1988

RECEIVED  
JUL 26 10 04 '88  
MINES  
AND ENERGY

---

DUPLICATE AVAILABLE



88 260

PROJECT NO. M1310

ASSESSMENT REPORT TO THE

NOVA SCOTIA DEPARTMENT OF MINES AND ENERGY

ON

WINE HARBOUR PROPERTY  
EXPLORATION LICENSE 13303  
NSDME CLAIMS MAP 11F-04/B  
WINE HARBOUR, NOVA SCOTIA

PREPARED BY  
Jacques, Whitford and Associates Limited  
July 22, 1988

DUPLICATE AVAILABLE



## TABLE OF CONTENTS

	Page No.
CERTIFICATE	iii
INTRODUCTION	1
MINERAL PROPERTY	1
GEOLOGY	6
HISTORY	8
Production	8
Recent Exploration	10
RECOMMENDED EXPLORATION PROGRAM	21
Exploration Budget Estimates	22
BIBLIOGRAPHY	24
✓ APPENDIX 1	Report on an Airborne Magnetic and VLF-EM Survey, Wine Harbour Gold Property, Guysborough County, NS, for Wilco Mining Company Ltd. by Terraquest Ltd., Toronto, ON, August, 1987.
✓ APPENDIX 2	Map of the Wine Harbour property survey and grid installation performed by Taylor and MacKeen Surveys Ltd..

*Woz*



LIST OF DRAWINGS

- 1 ✓ Location Map  
M1310-1 ✓ Exploration License and Diamond Drillhole Locations with Geophysics (Previous to 1987)  
2a ✓ Distribution of Gold Deposits and Geology of the Meguma Domain  
2b ✓ Geological Map of Eastern Meguma Domain  
M1310-2 ✓ Plan and Sections (after Faribault)  
M1310-3 ✓ Exploration License and Survey Grid (1987 Exploration Program)  
M1310-4 ✓ Map of Surficial Features (1987 Exploration Program)

LIST OF TABLES

- 1 ✓ Wine Harbour Property Exploration License, Claims and Expiry Dates, NSDME Claims Map 11F/04B  
2 ✓ Wine Harbour Gold Production 1862-1939  
3 ✓ Production From the Gold Districts of Nova Scotia 1862-1927  
4 ✓ Wine Harbour Exploration Activity 1966-1986  
5 ✓ Wine Harbour 1987 Exploration Program Summary

WMS



C E R T I F I C A T E

I, C. Gordon Sheppard, do hereby certify:

1. That I am a consulting mining engineer and reside at 10 Mahar Drive, Shad Bay, Nova Scotia.
2. That I am a graduate of the Technical University of Nova Scotia, 1983, with the degree of Bachelor of Mining Engineering.
3. That I have been practicing my profession since 1984.
4. That I am registered with the Association of Professional Engineers of Nova Scotia as a Professional Engineer.
5. That I do not have, nor do I expect to receive, directly or indirectly, any interest in the properties and/or securities of Wilco Mining Company Limited.
6. That my report is based on a review of all published geological data of the area, a review of all available reports, maps, and sections resulting from earlier work on the property and field work conducted by Jacques, Whitford and Associates personnel.

C. Gordon Sheppard, P.Eng.

Halifax, Nova Scotia  
July 22, 1988



## INTRODUCTION

This report has been prepared at the request of Mr. Doug Hume, President, Wilco Mining Company Limited, for the purpose of assembling and presenting historical, current and geological data related to mineral claims in the Wine Harbour Gold District, Wine Harbour, Nova Scotia (Figure 1). The document also recommends an exploration program to outline and define the nature of the gold occurrence.

It is our understanding that this report will be used by Wilco in support of applications for financing and will also be filed with the Toronto Stock Exchange and the Nova Scotia Department of Mines and Energy.

Information used in the preparation of this document was obtained from several sources; data supplied by Mr. Doug Hunter, Consultant Geologist for Wilco, files of the Nova Scotia Department of Mines and Energy (NSDME), proprietary information of Jacques, Whitford and Associates Limited (JWA) and from field work conducted by JWA personnel on behalf of Wilco. A list of references is provided in the Bibliography.

## MINERAL PROPERTY

The mineral property consists of 25 claims approximately 400 hectares located on the northwestern shore of Wine Harbour, Guysborough County, Nova Scotia (Drawing M1310-1).

Wine Harbour is situated approximately 200 km east of the City of Halifax and 80 km south of the Town of Antigonish. The claim block is accessible by an all weather, hard-surfaced road from the village of Sherbrooke, a distance of approximately 16 km. The property is covered with dense



JACQUES, WHITFORD

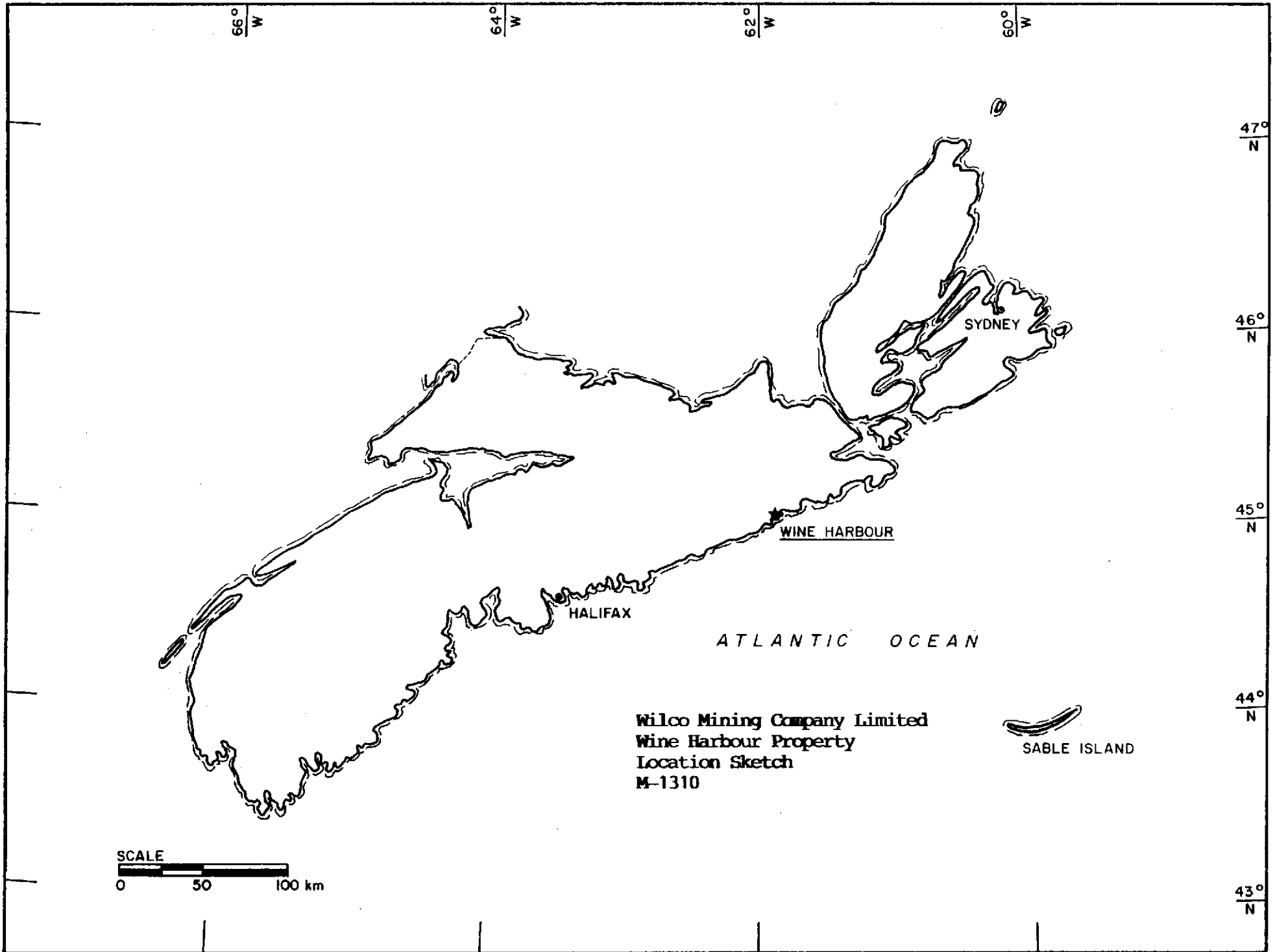
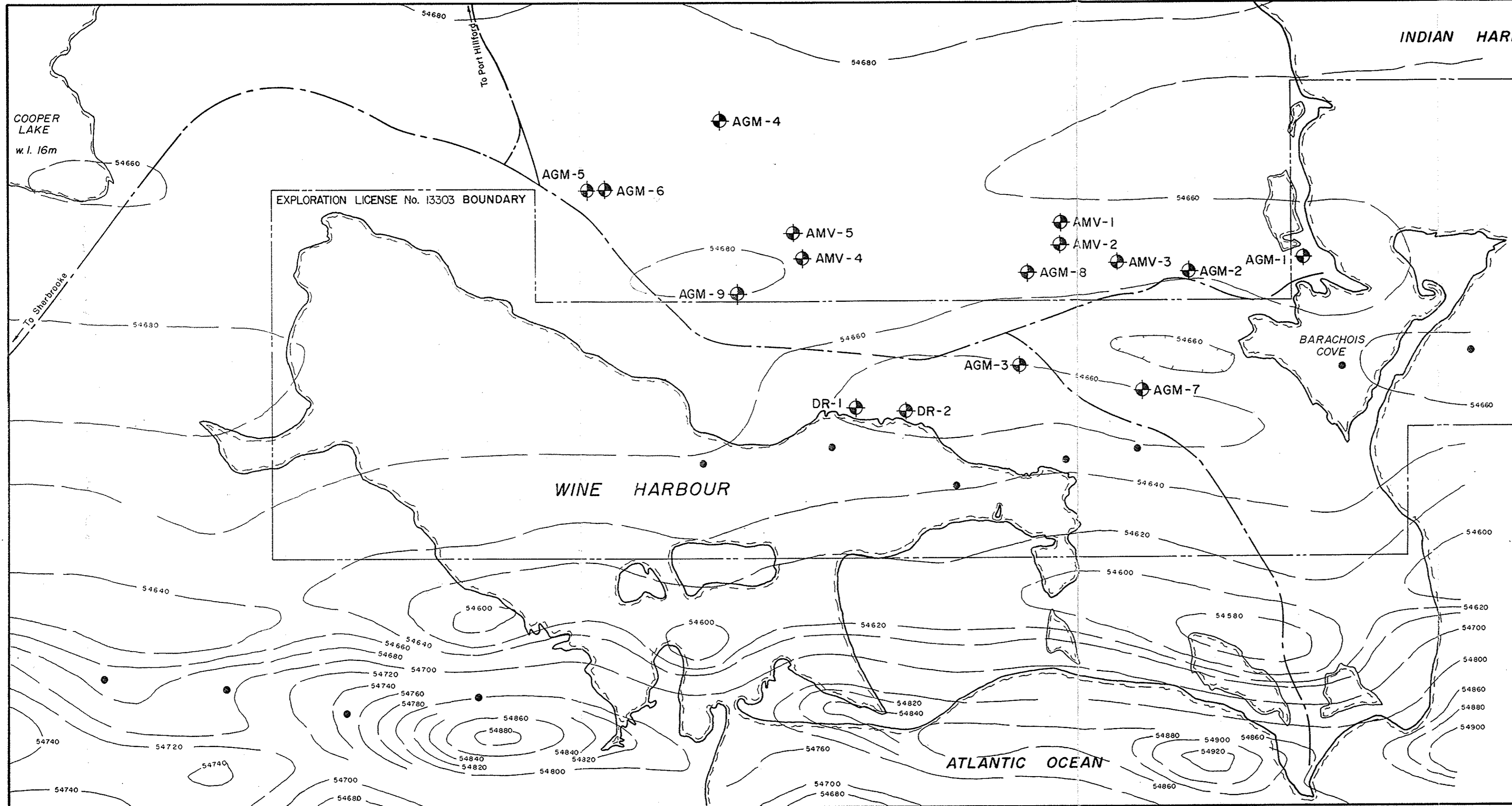


FIGURE 1





THIS DRAWING FORMS PART OF JACQUES, WHITFORD AND ASSOCIATES REPORT No. M 1310 AND SHOULD BE READ IN CONJUNCTION WITH THE REPORT.

**NOTE:**  
LICENSE BOUNDARIES AND DIAMOND DRILL HOLE LOCATIONS ARE APPROXIMATE.

**DDH LEGEND:**  
AGM - Albatros Gold Mines  
AMV - Acadia Mineral Ventures  
DR - Durham Resources

**LEGEND:**  
● 1981 Airborne VLF -EM Vert. Component Anomaly  
-54680- Isomagnetic Line, Gammas

SHEET 14	PANEAST RESOURCES INC.	MAR. '81
FIGURE 1	DURHAM RESOURCES INC.	-
FIG. WH-3	ACADIA MINERAL VENTURES LTD.	1983
11F/04-R4, S3, U2, -VI	L.R.I.S.	1977
DRWG. NO.	DESCRIPTION	DATE

REFERENCES

WILCO MINING CO., LTD.  
WINE HARBOUR  
GOLD PROPERTY  
GUYSBOROUGH CO., N. S.

EXPLORATION LICENSE AND  
DIAMOND DRILL HOLE  
LOCATIONS WITH GEOPHYSICS  
(PREVIOUS TO 1987)

Jacques, Whitford and Associates Limited  
CONSULTING ENGINEERS

DATE:	SCALE:	DRAWN BY:
04/04/88	1: 10 000	Vaughan Huntley

APPROVED BY: *John S. Jones*

DRAWING NO.: **M 1310-1**

mixed vegetation, except for the lands cleared in the past for agricultural purposes. The topographical relief of the claims area ranges from 33 m ASL to below sea level. A portion of nine of the claim areas are overlain by the waters of Wine Harbour.

The mineral rights are held pursuant to exploration license number 13303, in the name of Mr. J. H. MacMillan of Sherbrooke, Nova Scotia. All the claims are held in good standing and are all in the sixth year of renewal. Exploration license number 13303 is the result of regrouping exploration licenses 8631, 8595, 11022, 8634, 8604, 11893, and 11901 on July 27, 1987.

Details of the mineral property are listed in Table 1.

The property is under option to Wilco through a five year agreement between Mr. J.H. MacMillan and Wilco dated December 9, 1986.

In consideration for granting the right to explore and/or develop the property; Wilco has agreed to pay Mr. MacMillan a sum of cash and a royalty on each ton of ore mined and milled from the property. Wilco has agreed to conduct this work at a rate of not less than \$100,000 per year to an aggregate sum of \$500,000 and to maintain the claims in good standing.

The title to the mineral property will be transferred to Wilco upon fulfillment of all the terms of the agreement.



TABLE 1: Wine Harbour Property Exploration License, Claims  
and Expiry Dates, NSDME Claims Map 11F/04B

Exploration License	Tract	Claims	Expiry Date	Year
13303	67	ABCFGHKL	27/07/88	6
	68	ABCDEFGH		
	69	CDEFGKLOP		



## GEOLOGY

The lode gold occurrences in Nova Scotia are restricted mainly to the southern half of the province (Figure 2a). The area is underlain by metamorphic rocks of the Meguma Group which consist of slates of the Halifax Formation and greywackes of the Goldenville Formation. The rocks are folded in long southwest trending anticlines frequently intruded by gold bearing quartz veins, usually in the crest of the structure (saddle reefs). The gold mineralization is known to be associated with sulphide mineralization such as arsenopyrite, chalcopyrite, sphalerite and galena. These rocks are also commonly intruded by batholiths and plugs of Devonian granite (Figure 2b).

The long gold bearing anticline extends across the northern part of Wine Harbour, across the mouth of Barchois Bay and into Indian Harbour where it is offset by a strike-slip fault. Several northerly trending faults also cut the fold series (Drawing M1310-2).

The area is covered by a thin veneer of quartzite till derived from the underlying Goldenville Formation. Several drumlins are present, one of which is partly blocking the entrance to Wine Harbour.



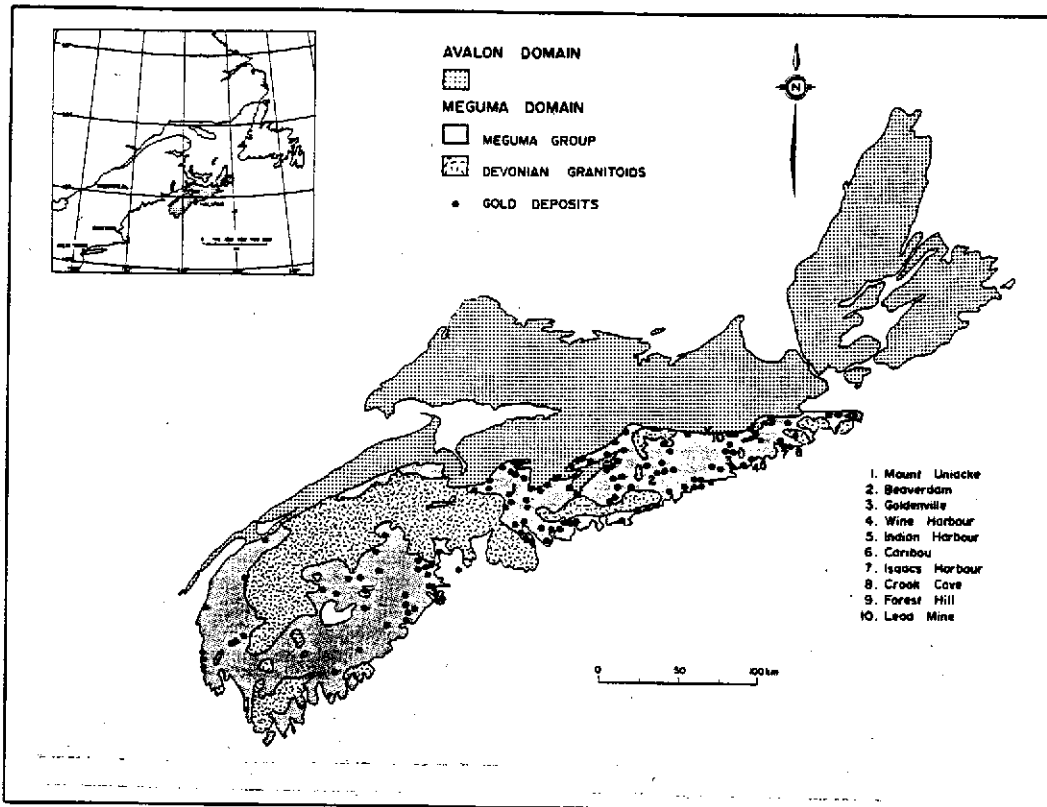


Figure 2a: Distribution of Gold Deposits and Geology of the Meguma Domain

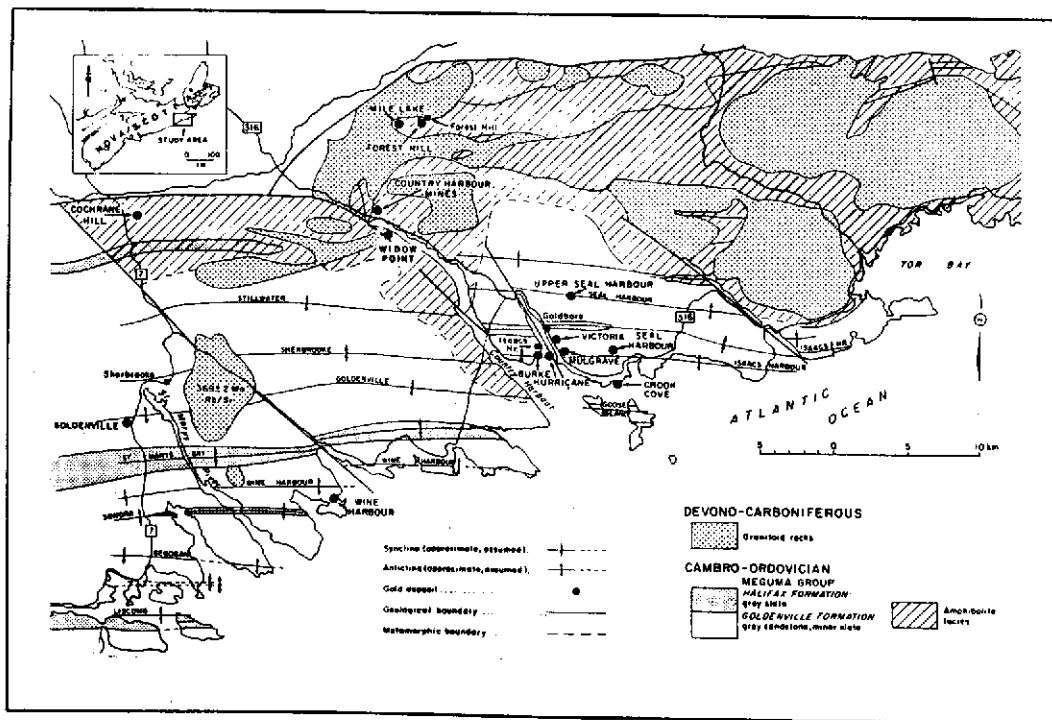


Figure 2b: Geological Map of the Eastern Meguma Domain



## HISTORY

### Production

Gold was first discovered in the Wine Harbour area in 1860. The first commercial production was recorded in 1862 and continued, with only minor interruptions, until 1874. The activity and production from the district between 1874 and 1894 was sporadic and limited to the reworking of old mine dumps and the "robbing" of underground support pillars.

The period from 1894 to 1907 was one of renewed activity in the Wine Harbour Gold District and although the yields did not equal those of the first twelve years of production; the returns of the 1874 to 1894 period were surpassed. No other mining activity was documented until 1926 when the largest amount of ore and gold ever recorded in the district were extracted. The most recent mining in the Wine Harbour Gold District occurred between 1934 to 1939.

It should be noted that these operations ceased production for reasons other than depletion of reserves, such as inefficient mining and milling techniques, no inexpensive readily available source of power, and reports of rich gold and silver discoveries in Ontario lured the development capital and skilled labour force away.

Table 2 summarizes the mining activity which was undertaken in the Wine Harbour Gold District.



TABLE 2: Wine Harbour Gold Production 1862-1939

Year	Operation	Ore Tons	Gold Ounces	Grade
1862 - 1888	Various	36,052	26,104	0.72
1889 - 1898	Napier Mill	1,144	321	0.28
1889 - 1895	El Dorado Mill	2,297	1,058	0.46
1895 - 1901	Adams Mill	1,882	992	0.56
1891 - 1894	McNaughton's	2,069	817	0.40
1898 - 1903	Snooks	2,101	592	0.28
1899 - 1900	Guysborough	1,490	1,050	0.70
1899 - 1901	Lowe	6,987	3,395	0.56
1902 - 1904	Plough	7,138	2,169	0.30
1900 - 1902	Old Provincial Pratt	2,239	450	0.20
1903 - 1905	Old Provincial Mining Co.	5,594	1,790	0.30
1906 - 1907	Wine Harbour Gold Mine Co.	7,191	1,431	0.20
1936 - 1939	Mineral Industries Ltd.	<u>6,456</u>	<u>2,014</u>	<u>0.31</u>
TOTAL		83,000	42,726	0.52



The mining works were located in five zones:

1. the Washington Belt
2. the main zone containing the Plough, Wiscasset, Caledonia, Hattie-Mitchell and Middle Belts
3. the MacKenzie Belt
4. the Eureka lead
5. the Twin and Romkey Leads

The mining techniques used were typically underground stopping, however there were some open cut operations. Ore was crushed by stamp mill and recovered by mercury amalgamation. The location of these operations; including the Lead (Belt) are illustrated on Drawing M1310-2.

A total of 1,462,997 grams (42,726 ounces) of gold were reported from 76,000 tonnes (83,000 short tons) of ore during the productive life of the Wine Harbour Gold District. It is worth noting that the previous operators had a tendency to intentionally report lower tonnages of ore mined and processed than the actual. Available statistics indicate that the District ranked tenth in the province for the production of gold. Table 3 presents the production for all the gold districts in Nova Scotia.

#### Recent Exploration

##### General

Gold exploration activity within the Meguma Group of the Province of Nova Scotia has been steadily increasing during the recent years; with obvious successes.





TABLE 3 Production From The Gold Districts of Nova Scotia  
1862 to 1927

District	Ore crushed	Total yield of gold		
	Tons	Oz.	Dwt.	Gr.
Beaver Dam.....	191	105	6	18
Blockhouse.....	1,029	1,788	0	0
Brookfield.....	102,339	42,251	3	8
Caribou.....	233,594	66,077	9	1
Carleton.....	58	37	15	2
Central Rawdon.....	13,323	9,820	9	4
Cow Bay.....	899	803	4	7
Ecum Secum.....	30	4	13	0
Fifteenmile brook.....	1,908	488	13	2
Fifteenmile stream.....	40,813	19,043	16	5
Gays River.....	11,877	1,878	16	15
Gold River.....	2,971	3,006	14	18
Harrigan Cove.....	13,052	7,920	13	23
Kemptonville.....	1,570	956	3	5
Killag.....	936	1,412	7	16
Lake Catcha.....	25,370	17,559	12	17
Lawrencetown.....	865	488	2	6
Leipsigate.....	37,915	12,936	9	22
McKay Settlement.....	12	1	16	14
Malaga.....	24,308½	20,462	7	3
Miller lake.....	39	17	0	0
Mill village.....	1,057	742	0	0
Montague.....	28,064½	45,698	14	0
Oldham.....	62,761	71,712	2	5
Ovens.....	102	441	6	14
Pleasant River Barrens.....	30	19	17	0
Renfrew.....	62,282	49,029	7	1
Salmon River.....	110,576½	35,301	1	21
Shears point (Moosehead).....	999	185	19	12
Sherbrooke.....	398,912½	168,986	8	16
Stormont.....	556,167½	127,824	9	12
Tangier.....	57,350	29,364	9	1
Uniacke.....	66,029	46,311	9	20
Wagamatkook (Middle River).....	6,093	1,670	1	3
Waverley.....	151,862½	69,688	19	22
West Caledonia (mortared).....		1	13	12
West Gore (Antimony).....	4,959	6,955	1	0
Whiteburn.....	6,992	9,984	6	18
Wine Harbour.....	76,544	40,712	18	11
Mortared.....	0	84	17	23
Unproclaimed, etc.....	80,970	54,465	9	17
	2,184,851	966,241	8	10

<sup>1</sup> Table by J. P. Messervey, Department of Mines, Halifax.

Note: Including the Wine Harbour production from 1928 to present results in 83,000 tons of ore and 42,726 ounces of gold.



Seabright Resources Incorporated have two properties, Beaverdam and Forest Hills, at the underground exploration and development stage and has poured several gold ingots at its Gays River Mill facility. Coxheath Gold Holdings Limited is conducting underground bulk sampling and development at its Tangier property and has recently announced a tentative production date of July, 1988. Acadia Mineral Ventures has also indicated that an underground sample will be taken from its Mooseland property. These companies, as do others, have many other gold properties being drilled and evaluated; all within the Meguma Group.

The results of the work being conducted in the Province is also attracting global attention. Western Mining Corporation Holding Limited of Australia has recently taken over Seabright Resources Incorporated. Hecla Mining Company Limited of the United States has optioned the Mooseland property from Acadia Mineral Ventures.

#### Wine Harbour Gold District

The Wine Harbour Gold District has been the focus of several exploration companies during the last twenty years. These works have consisted of general prospecting, geophysics (electromagnetics, magnetics, self potential), geochemistry (rock, soil/till) diamond drilling and minor trenching. Table 4 briefly summarizes these activities.



TABLE 4: Wine Harbour Exploration Activity 1966-1986

Year	Exploration Company	Work
1966	Nicholas Onassis	Geological Mapping and Geochemistry
1967	Albatross Gold Mines	Geophysics and Diamond Drilling
		Geological Mapping and Geochemistry
1975	Dickenson Mines	Geophysics and Geological Mapping
1981	Paneast Resources	Airborne Geophysics
1982	Durham Resources	Geological Mapping, Geochemistry and Diamond Drilling
1983	Acadia Mineral Ventures	Geophysics and Diamond Drilling
1987	Acadia Mineral Ventures	Diamond Drilling
1987	Wilco Mining Company Limited	Airborne Geophysics and Prospecting



Nicholas Onassis

In 1966, Mr. Nicholas Onassis of Montreal conducted a trenching program on the property to expose bedrock for mapping and sampling, to obtain samples of the till/soil cover and to determine the depth of overburden.

Fifteen trenches were reportedly dug using a tire-mounted backhoe; unfortunately a location map of the trenches is not available. The overburden depths were found to range from 0.30 m to 4.0 m. A number of quartz veins were uncovered but the ensuing analytical work was not reported. The work concluded that the Middle, Greengoods, Barachois and Barachois Brook areas warranted further work.

#### Albatross Gold Mines

Albatross Gold Mines worked in the Wine Harbour Gold District in 1967-1968 and conducted geophysical, geochemical, and geological mapping surveys prior to diamond drilling.

A 9 hole, 900 m diamond drilling program was implemented on targets located using geophysics (self potential and magnetometer). Three of these holes, AGM-1, -3, and -7 were situated within the boundaries of the licenses held by Mr. J. H. MacMillan (Drawing M1310-1) with respective depths of 85 m, 135 m and 60 m. Drill hole AGM-1 intersected quartz veins and argillite reporting gold contents ranging from trace to 1.31 grams/tonne. Holes AGM-3 and -7 intersected argillite predominantly and were not sampled.

Albatross Gold Mines also evaluated the property for its placer gold potential. In the order of 124 samples were collected from test pits dug around the shoreline of Wine



Harbour. Assay results indicated that the gold bearing sands were confined to 900 m of shoreline down slope from the past producers. Albatross concluded that the property presented definite potential for placer gold.

#### Dickenson Mines

In 1975 Dickenson Mines conducted electromagnetic and magnetic surveys in the area. Although the electromagnetic survey results were inconclusive, the magnetic survey located a strong east-west trending anomaly. The source of the magnetic anomaly was not determined.

Extensive soil sampling, continued geophysics and a diamond drilling program were recommended but not reported if implemented.

#### Paneast Resources Inc.

In 1981 Paneast Resources Inc. commissioned a helicopter borne high resolution magnetometer and electromagnetic survey on the eastern shore; including the Wine Harbour Gold District. Two east-west anomalous trends are evident on the magnetic contour and electromagnetic profile maps which were produced. These trends are presented on Drawing M1310-1.

#### Durham Resources Inc.

In 1982 Durham Resources Inc. drilled two holes to test the down-plunge extension of the ore zone of the Plough Lead (Drawing M1310-1). Drill hole DR-1 passed under the eastern most Weston ore shoot and cut the Plough Lead at a vertical depth of 140 m. Although the Plough Lead slate had been intersected; the quartz veins had attenuated and no



arsenopyrite mineralization was detected. All assays reported trace values for gold.

Drill hole DR-2 intersected the Plough Lead at a vertical depth of 120 m. A 10 m quartzite zone with interbedded slates and quartz veins 0.6 cm to 30.0 cm wide carrying arsenopyrite and pyrrhotite mineralization was intersected. Four samples returned the following gold values:

- ° 8.7 grams/t from 142.9 - 143.5 m
- ° 14.9 grams/t from 146.0 - 146.3 m
- ° 0.09 grams/t from 150.2 - 150.6 m
- ° 1.60 grams/t from 151.0 - 151.5 m

The remaining core from this drilling programme is stored at Sherbrooke, Nova Scotia on the property of Mr. J.H. MacMillan and is available for inspection.

The drilling program substantiated that the gold occurs in shoots with a definite vertical extent and plunge. Additional work was recommended; including geological mapping, soil sampling and trenching.

#### Acadia Mineral Ventures

In 1983 Acadia Mineral Ventures (AMV) drilled 5 holes on the claims north of those under option to Wilco (Drawing M1310-1). The drilling intersected greywackes, phyllite, and quartz veining. The analytical results were not reported and the present location of the core is unknown to the writer.

In 1987 Acadia Mineral Ventures conducted a second diamond drilling program, 25 holes, on the claims adjoining the Wilco property. The results of this drilling was not provided to



the writer; however information revealed to Mr. Doug Hunter, Geological Consultant to Wilco, by AMV personnel suggested that a significant auriferous zone(s) had been intersected; particularly in the area of the Cemetery. Mr Hunter was also reportedly approached by AMV management with the intent of acquiring the Wilco property.

#### Wilco Mining Company Limited

In 1987 Wilco Mining Company Limited implemented a two stage exploration program on the Wine Harbour Property. The first stage consisted of an airborne magnetic and VLF electromagnetic geophysical survey flown by Terraquest Limited of Toronto, Ontario, August, 1987 (Appendix 1). The second stage consisted of a field program as described following.

#### Surveying

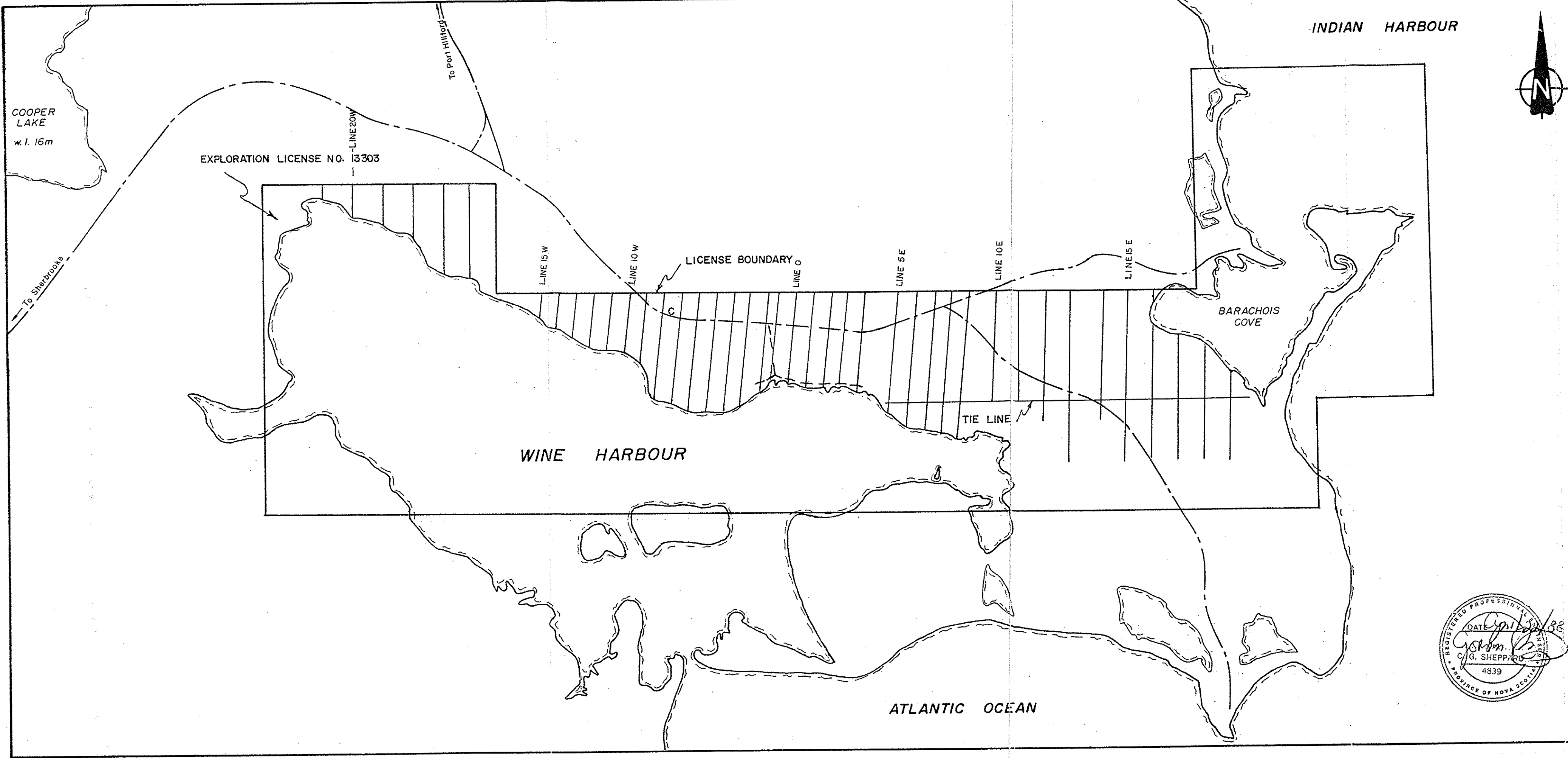
Taylor/McKeen Surveys (Registered Nova Scotia Land Surveyors) were contracted to establish the claim boundary between the Wilco property and the claims to the north held by Acadia Mineral Ventures (Appendix 2). The claim boundary and the surveyed southern tie line were cut to provide line of sight.

Taylor/McKeen also established a control grid on the property by compass and tape. The grid consists of 41 north-south lines of varying length, flagged on 50 foot stations with the claim boundary line serving as a baseline (Drawing M1310-3).

#### Mapping

The field program had three objectives; to locate and map any outcrops, old workings and the airborne geophysical anomalies. This work was performed over the entire control





THIS DRAWING FORMS PART OF JACQUES, WHITFORD AND ASSOCIATES REPORT No. M 1310 AND SHOULD BE READ IN CONJUNCTION WITH THE REPORT.

NOTE:  
 LICENSE BOUNDARIES  
 LOCATIONS ARE APPROXIMATE.

LEGEND

C - CEMETERY

IIF/04-R4, S3, U2, VI	L.R.I.S.	1977
DRWG. NO.	DESCRIPTION	DATE

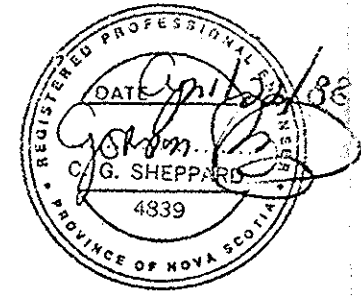
REFERENCES

WILCO MINING CO., LTD.  
 WINE HARBOUR  
 GOLD PROPERTY  
 GUYSBOROUGH CO., N. S.

EXPLORATION LICENSE AND  
 SURVEY GRID  
 (1987 EXPLORATION PROGRAM)

Jacques, Whitford and Associates Limited  
 CONSULTING ENGINEERS

DATE: 04 / 04 / 88	SCALE: 1 : 10,000	DRAWN BY: R.FITZGERALD
-----------------------	----------------------	---------------------------



APPROVED BY: *[Signature]*

DRAWING NO.: **M 1310 - 3**



grid; the results of which are illustrated on Map M1310-4. The locations of the holes drilled along the License boundary in 1987 by AMV are also presented on Drawing M1310-4.

### Outcrops

The Wine Harbour area is underlain by the metamorphic rocks of the Meguma Group which consists of slates of the Halifax Formation and greywackes of the Goldenville Formation.

The outcrop exposure on the property is limited and accounts for approximately 5 percent of the property; the remainder being covered with glacial till.

The outcrops are predominantly large blocks of greywacke, minor slate outcrops and some which are predominantly greywacke but also containing beds of slate (Bouma Series).

Most of the outcrops examined did not contain quartz veins. The relationship between the quartz veins and the meta-sedimentary host rock indicates pre- to syn-deformation introduction of the quartz. Minor amounts of sulphides were observed along the margins of some of the quartz veins.

### Old Workings

The property was mapped for remnants of old workings; pits, trenches, shafts, waste rock piles, crusher sites, etc. The locations of these features are illustrated on Map M1310-4.

Many of these sites were covered with an over growth; most of the pits, trenches, excavations etc. were partially filled with slumped material and water and as a result very little bedrock was exposed for mapping in these areas.



The pits found on the site averaged 2 to 4 m in diameter and 1 to 2 m deep. The trenches varied greatly in length and averaged 1 to 2 m wide and deep. Bedrock was exposed in the walls of three large trenches; one a known cut in the Desbarres/Middle Lead; the second an excavation on the Plough Lead by the Plough Lead Mining Company; the third was unknown. Conditions did not permit close inspection of these outcrops.

Several waste rock and mill tailings piles were located and examined. Demarcating the limits of these features was often hampered by overgrowth and slumping.

The Weston Shaft, Snow's Portal and three other unidentified main shafts were located. Nine other smaller shafts were found on the mining properties worked by the Old Provincial and the Napier mining companies. Most of these shafts have failed and are water filled.

The ruins of three crusher/stamp mills, two operated by the Old Provincial Mining Company and one by the Plough Lead Mining Company, were also discovered. The site of a roasting furnace(s), as identified on a 1978 map by Dickenson Mines Limited, was also located on the claims.

#### Airborne Geophysics Anomalies

The airborne survey conducted by Terraquest located several concurrent East-West trending VLF-EM and magnetic anomalies which parallel the geological strike. The location of the geophysical anomalies were examined in the field on the control grid as plotted on Map M1310-4.



## RECOMMENDED EXPLORATION PROGRAM

The previously described exploration program implemented in 1987 for Wilco Mining Company Limited on the Wine Harbour claims provided encouraging results from the airborne geophysics survey and from the information gathered by Mr. Hunter from Acadia Mineral Ventures management.

The airborne geophysics located two East-West trending concurrent magnetic and electromagnetic anomalies which parallel the general strike of the structure which contains previously producing zones; the Plough, Eureka, Twin and Romkey Leads (Drawing M1310-4).

Mr. Hunter was given an opportunity to briefly examine the AMV drilling data which reportedly indicates that the auriferous zones tested on the AMV property extend onto the Wilco property; especially in the area of the cemetery. AMV drilled 9 holes (Drawing M1310-4) on the license boundary in the proximity of the cemetery. AMV also approached Mr. Hunter in regard to obtaining the Wilco property which in itself suggests that the property has merit.

There has been a limited amount of diamond drilling performed within the Wine Harbour Gold District according to records available at the NSDME. Only five of the 41 holes drilled since 1967 are situated within the boundaries of the License 13303. These holes were generally shallow, averaging approximately 100 m.

It is therefore recommended that a diamond drilling program being initiated on the property, on the three targets



identified from the 1987 exploration program and through correlation with data provided by AMV:

- ° the geophysics targets
- ° the down plunge extensions of the Plough Lead
- ° the area of the Cemetery

For the purpose of this document an allowance for 3000 m of drilling has been budgeted. All of this drilling may not be implemented, depending on the results and the availability of financing, but it is recommended that several deep holes be drilled to test the down plunge extension of the previously producing zones.

Pertinent sections of core should be analyzed (whole rock) for gold and sulphides. Thin sections may also be prepared to study the mineralogical relationships of the gold bearing zones.

#### Exploration Budget Estimates

The diamond drilling program proposed in this document represents a logical progression in the investigation and evaluation of the claims in the Wine Harbour Gold District under option to Wilco and should reduce or eliminate a long standing deficiency in the geological definition of the property.

The budget estimate proposed for this exploration program is \$287,500 as summarized in Table 5.



TABLE 5: Wine Harbour 1987 Exploration Program Summary

Proposed Budget Estimate

Drill	\$240,000
Personnel	37,500
Assays	<u>10,000</u>
TOTAL	\$287,500



## BIBLIOGRAPHY

ABOLINS, U., "Drill Programme, Durham Resources Inc., Wine Harbour Property, Nova Scotia," 1982

FARQUHARSON, S. C., "Drill Logs of the Albatross Gold Mines Ltd. Wine Harbour, Nova Scotia Drilling Programme," 1967

GOODWIN, W. M., "Report on Operations in Wine Harbour Gold District," Wine Harbour, Nova Scotia, July 21, 1939

HAYNES, S. J., "Classification of Quartz Veins in Turbidite-Hosted Gold Deposits, Greenschist Facies, Eastern Nova Scotia, Canadian Institute of Mining and Metallurgy, February, 1987

HOPE, K. G., "Exploration Report on the Wine Harbour Mineral Claims of Albatross Gold Mines Limited," November 29, 1968

JOHNSTON, D., "Report on the Wine Harbour Gold Property of Nicholas Onassis," August 17, 1966

KOULOMZINE, T., "Report on the Wine Harbour Gold Deposits," Guysborough County, Nova Scotia, June 16, 1966

MALCOM, W., "Gold Fields of Nova Scotia," 1976 reprint

RANKIN, L. D., "Report on Diamond Drilling Wine Harbour Claim Group," Guysborough County, Nova Scotia, July, 1983

SAMSON, J., "An Overview of Coastal and Marine Gold Placer Occurrences in Nova Scotia and British Columbia," Division Document 1984-3, 1984



SANNES, D. L., "Preliminary Report on the Wine Harbour Gold Property," Guysborough County, Nova Scotia, August 29, 1975

WOODARD, J. A., "Self Potential and Magnetometer Survey for Albatross Gold Mines Ltd. on the Wine Harbour Property," Guysborough County, Nova Scotia, July 29, 1967







88 260

A-707

REPORT ON AN  
AIRBORNE MAGNETIC AND VLF-EM SURVEY  
WINE HARBOUR GOLD PROPERTY  
GUYSBOROUGH COUNTY, NOVA SCOTIA

for  
WILCO MINING COMPANY LIMITED

by

TERRAQUEST LTD.  
Toronto, Canada

August 18, 1987

**DUPLICATE AVAILABLE**

## TABLE OF CONTENTS

	Page
1. INTRODUCTION	1
2. THE PROPERTY	1
3. GEOLOGY	1
4. SURVEY SPECIFICATIONS	2
4.1 Instruments	2
4.2 Lines and Data	3
4.3 Tolerances	3
4.4 Photomosaics	4
5. DATA PROCESSING	4
6. INTERPRETATION	5
6.1 General Approach	5
6.2 Interpretation	5
7. SUMMARY	7

## LIST OF FIGURES

- ✓Figure 1 - General Location Map
- ✓Figure 2 - Survey Area Map
- ✓Figure 3 - Sample Record
- ✓Figure 4 - Terraquest Classification of VLF-EM Conductor Axes

## LIST OF MAPS IN JACKET

- ✓No. A-707-1, Total Magnetic Field
- ✓No. A-707-2, Vertical Magnetic Gradient
- ✓No. A-707-3, VLF-EM Survey
- ✓No. A-707-4, Interpretation

*MSZ*

## 1. INTRODUCTION

This report describes the specifications and results of a geophysical survey carried out for Wilco Mining Company Limited of 306-4198 Dundas Street West, Toronto, Ontario, M8X 1Y6 by Terraquest Ltd., 905 - 121 Richmond Street West, Toronto, Canada. The field work was performed on July 11, 1987 and the data processing, interpretation and reporting from July 12 to August 18, 1987.

The purpose of a survey of this type is two-fold. One is to prospect directly for anomalously conductive and magnetic areas in the earth's crust which may be caused by, or at least related to, mineral deposits. A second is to use the magnetic and conductivity patterns derived from the survey results to assist in mapping geology, and to indicate the presence of faults, shear zones, folding, alteration zones and other structures potentially favourable to the presence of gold and base-metal concentration. To achieve this purpose the survey area was systematically traversed by an aircraft carrying geophysical instruments along parallel flight lines spaced at even intervals, 100 metres above the terrain surface, and aligned so as to intersect the regional geology in a way to provide the optimum contour patterns of geophysical data.

## 2. THE PROPERTY

The property is located in Guysborough County, Nova Scotia, approximately 13 kilometres southeast of the town of Sherbrooke and 150 kilometres northeast of the town of Halifax. The property lies along the north shore of Wine Harbour Bay and is directly accessible by roads.

The latitude and longitude are 45 degrees 04 minutes, and 61 degrees 50 minutes respectively, and the N.T.S. reference is 11F/4.

The exploration licences are shown in figure 2 and listed below:

11022, 8631 ..... 2 Exploration Licences

## 3. GEOLOGY

### Map References

1. Geological Map of the Province of Nova Scotia. scale 1:500,000. Department of Mines and Energy, Nova Scotia 1979.
2. Wine Harbour Property, Guysborough County, Nova Scotia. scale 1:10,000. Wilco Mining Company Limited 1987.

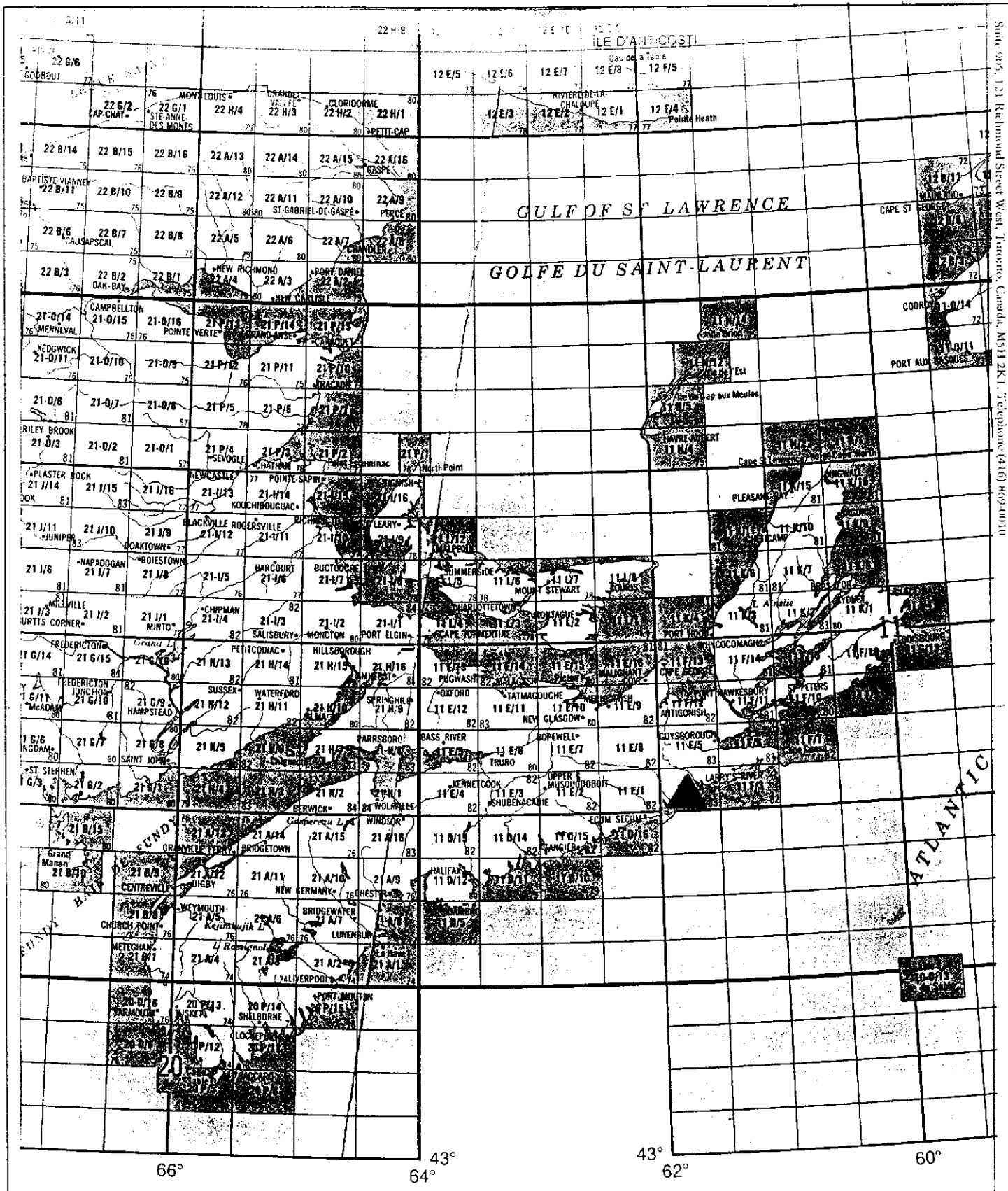


FIGURE 1. General Location

Sheet 905, 121 Richmond Street West, Toronto, Canada, M5H 2K1, Telephone (416) 869-0010

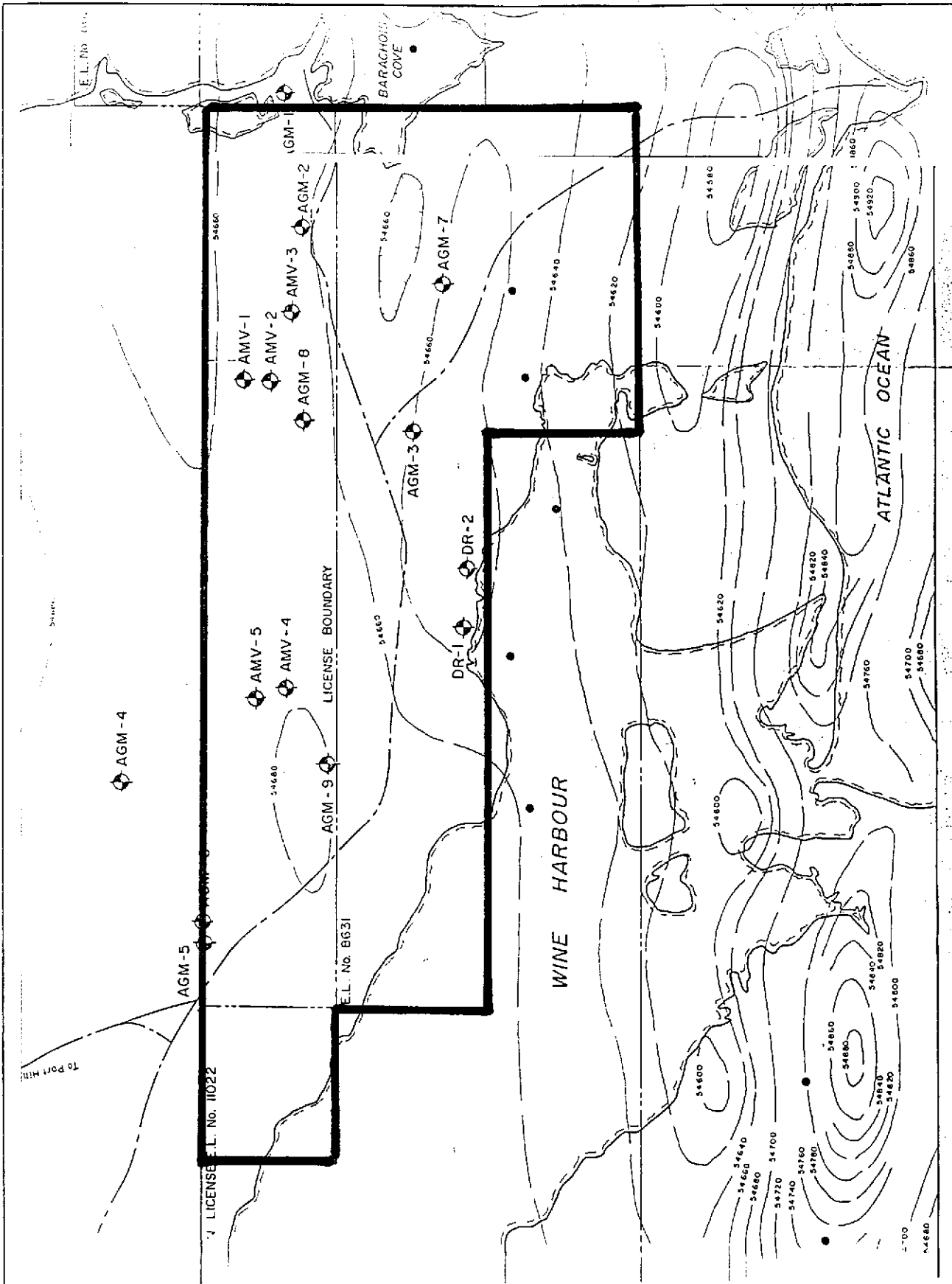


FIGURE 2. Claim Location Map  
(exact locations not certified)

The survey area is underlain by greywackes and minor slates and argillite of the Cambro-Ordovician Goldenville Formation. Narrow bands of the Halifax Formation argillites occur to the north and west. A Devonian-Carboniferous intrusive of monzogranite lies 60 kilometres along strike to the west, west of Sheet Harbour.

Locally the sediments are isoclinally folded about east-west trending axes. Major faults trend to the northwest.

This area has previously supported gold mining by the Plow Lead Mining Company and the Old Provincial Mining Company. More recently, exploration and diamond drilling have been carried out by Durham Resources, Acadia Minerals Ventures and Albatross Gold Mines. Gold occurs in the quartz veins associated with the argillitic to slaty horizons.

#### 4. SURVEY SPECIFICATIONS

##### 4.1 Instruments

The survey was carried out using a Cessna 182 aircraft, registration C-FAKK, which carries a magnetometer and a VLF electromagnetic detector.

The magnetometer is a proton precession type based on the Overhauser effect. The Overhauser effect allows for polarization of a proton rich liquid of the sensor by adding a "free radical" to it and irradiating it by RF magnetic field. Strong precession signals are generated with modest RF power. The sensor element is mounted in an extension of the right wing tip. It's specifications are as follows:

Resolution:	0.5 gamma
Accuracy:	0.5 gamma
Cycle time:	0.5 second
Range:	20,000 - 100,000 gammas in 23 overlapping steps
Gradient tolerance:	Up to 5000 gammas per metre
Model:	GSM-9BA
Manufacturer:	GEM Systems Inc., 105 Scarsdale Rd., Don Mills, Ontario, M3B 2R5

The VLF-EM unit uses three orthogonal detector coils to measure (a) the total field strength of the time-varying EM field and (b) the phase relationship between the vertical coil and both the "along line" coil (LINE) and the "cross-line" coil (ORTHO). The LINE coil is tuned to a transmitter station that is ideally positioned at right angles to

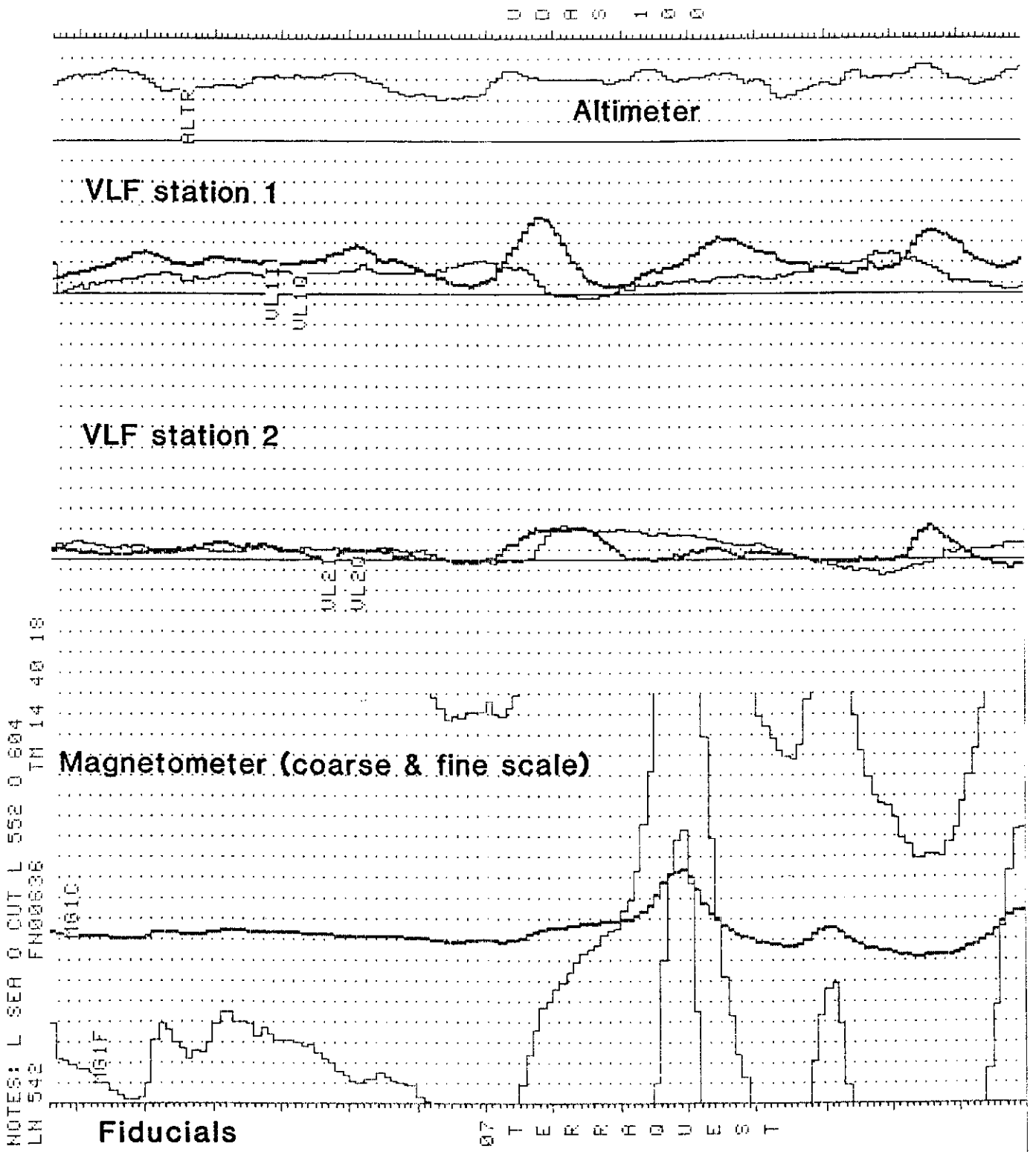


FIGURE 3. Sample of analogue data

the flight lines, while the ORTHO coil transmitter should be in line with the flight lines. It's specifications are:

Accuracy: 1%  
Reading interval: 1/2 second  
Model: TOTEM 2A  
Manufacturer: Herz Industries, Toronto

The VLF sensor is mounted in the left wing tip extension.

Other instruments are:

- . King KRA-10A Radar altimeter
- . UDAS-100 data processor with Digidata nine track tape recorder, manufactured by Urtec Ltd., Markham, Ontario.
- . Geocam video camera and recorder for flight path recovery, manufactured by Geotech Ltd., Markham, Ontario.

#### 4.2 Lines and Data

- a) Line spacing: 100 metres
- b) Line direction: 360 degrees
- c) Terrain clearance: 100 metres
- d) Average ground speed: 156 km/hr.
- e) Data point interval:
  - Magnetic: 27 metres
  - VLF-EM: 27 metres
- f) Tie Line interval: 1 kilometre
- g) Channel 1 (LINE): NAA Cutler, 24.0 kHz
- h) Channel 2 (ORTHO): NSS Annapolis. 21.4 kHz
- i) Line km over total area: 100 kilometres
- j) Line km over survey area: 82 kilometres

#### 4.3 Tolerances

- a) Line spacing: Any gaps wider than twice the line spacing and longer than 10 times the line spacing were filled in by a new line.
- b) Terrain clearance: Portions of line which were flown above 125 metres for more than one km were reflown if safety considerations were acceptable.
- c) Diurnal magnetic variation: Less than twenty gammas deviation from a smooth background over a period of two minutes or less as seen on the base station analogue record.
- d) Manoeuvre noise: Approximately +/-5 gammas.





#### 4.4 Photomosaics

For navigating the aircraft and recovering the flight path, mosaics of aerial photographs were made from existing air photos.

#### 5. DATA PROCESSING

Flight path recovery was carried out in the field using a video tape viewer to observe the flight path as recorded by the Geocam video camera system. The flight path recovery was completed daily to enable reflights to be selected where needed for the following day.

The magnetic data was levelled in the standard manner by tying survey lines to the tie lines. The IGRF has not been removed. The total field was contoured by computer using a program provided by Dataplotting Services Inc. To do this the final levelled data set is gridded at a grid cell spacing of 1/10th of an inch at map scale.

The vertical magnetic gradient is computed from the total field data using a method of transforming the data set into the frequency domain, applying a transfer function to calculate the gradient, and then transforming back into the spatial domain. The method is described by a number of authors including Grant, 1972 and Spector, 1968. The computer program for this purpose is provided by Paterson, Grant and Watson Ltd. of Toronto

The VLF data was treated automatically so as to normalize the non conductive background areas to 100 (total field strength) and zero (quadrature). The algorithms to do this were developed by Terraquest and will be provided to anyone interested by application to the company.

All of these dataprocessing calculations and map contouring were carried out by Dataplotting Services Inc. of Toronto.

- Grant, F.S. and Spector A., 1970: Statistical Models for Interpreting Aeromagnetic Data; Geophysics, Vol 35
- Grant, F.S., 1972: Review of Data Processing and Interpretation Methods in Gravity and Magnetics; Geophysics Vol 37-4
- Spector, A., 1968: Spectral Analysis of Aeromagnetic maps; unpublished thesis; University of Toronto

## INTERPRETATION

### 6.1 General Approach

To satisfy the purpose of the survey as stated in the introduction, the interpretation procedure was carried out on both the magnetic and VLF data. On a local scale the magnetic gradient contour patterns were used to outline geological units which have different magnetic intensity and patterns or "signatures". Where possible these are related to existing geology to provide a geological identity to the units. On a regional scale the total field contour patterns were used in the same way.

Faults and shear zones are interpreted mainly from lateral displacements of otherwise linear magnetic anomalies but also from long narrow "lows". The direction of regional faulting in the general area is taken into account when selecting faults. Folding is usually seen as curved regional patterns. Alteration zones can show up as anomalously quiet areas, often adjacent to strong, circular anomalies that represent intrusives. Magnetic anomalies that are caused by iron deposits of ore quality are usually obvious owing to their high amplitude, often in tens of thousands of gammas.

VLF anomalies are categorized according to whether the phase response is normal, reverse, or no phase at all. The significance of the differing phase responses is not completely understood although in general reverse phase indicates either overburden as the source or a conductor with considerable depth extent, or both. Normal phase response is theoretically caused by surface conductors with limited depth extent.

Areas showing a smooth response somewhat above background (ie. 110 or so) are likely caused by overburden which is thick enough and conductive enough to saturate at these frequencies. In this case no response from bedrock is seen.

The VLF-EM conductor axes have been identified and evaluated according to the Terraquest classification system (Figure 4). This system correlates the nature and orientation of the conductor axes with stratigraphic, structural and topographic features to obtain an association from which one or more origins may be selected. Alternate associations are indicated in parentheses.

### 6.2 Interpretation

The magnetic and VLF-EM data are shown in contoured format on maps in the back pocket. An interpretation map is also provided. The following notes are intended to supplement these maps.

FIGURE 4

TERRAQUEST CLASSIFICATION OF VLF-EM CONDUCTOR AXES

<u>SYMBOL</u>	<u>CORRELATION</u>	<u>ASSOCIATION: Possible Origins</u>
<b>a , A</b>	Coincident with magnetic stratigraphy	Bedrock magnetic horizons: stratabound mineralogic origin or shear zone
<b>b , B</b>	Parallel to magnetic stratigraphy	Bedrock non-magnetic horizons: stratabound mineralogic origin or shear zone
<b>c , C</b>	No correlation with magnetic stratigraphy	Association not known: possible small scale stratabound mineralogic origin, fault or shear zone, overburden
<b>d , D</b>	Coincident with magnetic dyke	Dyke or possible fault: mineralogic or electrolytic
<b>f , F</b>	Coincident with topographic lineament or parallel to fault system	Fault zone: mineralogic or electrolytic
<b>ob , OB</b>	Contours of total field response conform to topographic depression	Most likely overburden: clayey sediments, swampy mud
<b>cul , CUL</b>	Coincident with cultural sources	Electrical, pipe or railway lines

NOTES

- 1 - Upper case symbols denote a relatively strong total field strength
- 2 - Underlined symbols denote a relatively strong quadrature response
- 3 - Mineralogic origins include sulphides, graphite, and in fault zones, gouge
- 4 - Electrolytic origins imply conductivity related to porosity or high moisture content

The total magnetic field has a very gentle relief of only 70 gammas and shows east trending units. The vertical magnetic gradient data improves the resolution slightly in some areas and has been used to delineate the stratigraphy and structure. The relative intensities were taken from the total magnetic field.

The gentle magnetic relief is characteristic of the greywackes and argillites (Unit 1). The magnetic horizons within the survey area do not appear to be consistent with the local stratigraphic trends. Therefore these magnetic horizons are interpreted to be alteration zones characterized by increased concentrations of magnetic minerals, probably pyrrhotite or possibly magnetite.

The strongest anomaly along the extreme southern edge of the survey may be related to the Cambro-Ordovician Halifax Formation or more probably the Devonian-Carboniferous monzogranite at depth.

Numerous northwest trending faults have been interpreted based on the displacements of the magnetic horizons. Several of these are consistent with ground mapped faults and air photo lineaments.

The VLF-EM data show weak to moderate strength east-west trending conductor axes. The stronger ones to the south are most likely related to salt water conductivity of Wine Harbour Bay. One conductor axis along the east side of the property coincides with a magnetically mapped fault. Conductivity related to faults or shear zones may be caused by minerals such as graphite, sulphides or gouge, or by an ionic effect created by either porosity along the structure or conductive overburden in an overlying depression.

The remaining conductor axes either parallel or coincide with the magnetic horizons. Therefore these possess potential for bedrock sources either as sulphides or graphite and should be followed up on the ground by EM or IP methods.

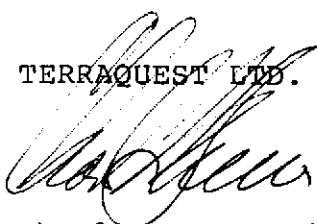
An east-west trending zone of low resistivity occurs near the highway across the property. Low resistivity may be a function of lack of conductive overburden or resistive bedrock such as silicification or carbonitization. The central part of this resistive zone appears to correlate well with areas of past gold mining in highly silicified argillites. If this correlation can be verified then future exploration should concentrate along the strike extensions of these resistive zones.

7. SUMMARY

An airborne combined magnetic and VLF-EM survey has been done on the property at line intervals of 100 metres. The total field and vertical gradient magnetic data, VLF-EM data and interpretation maps are produced at a scale of 1:10,000.

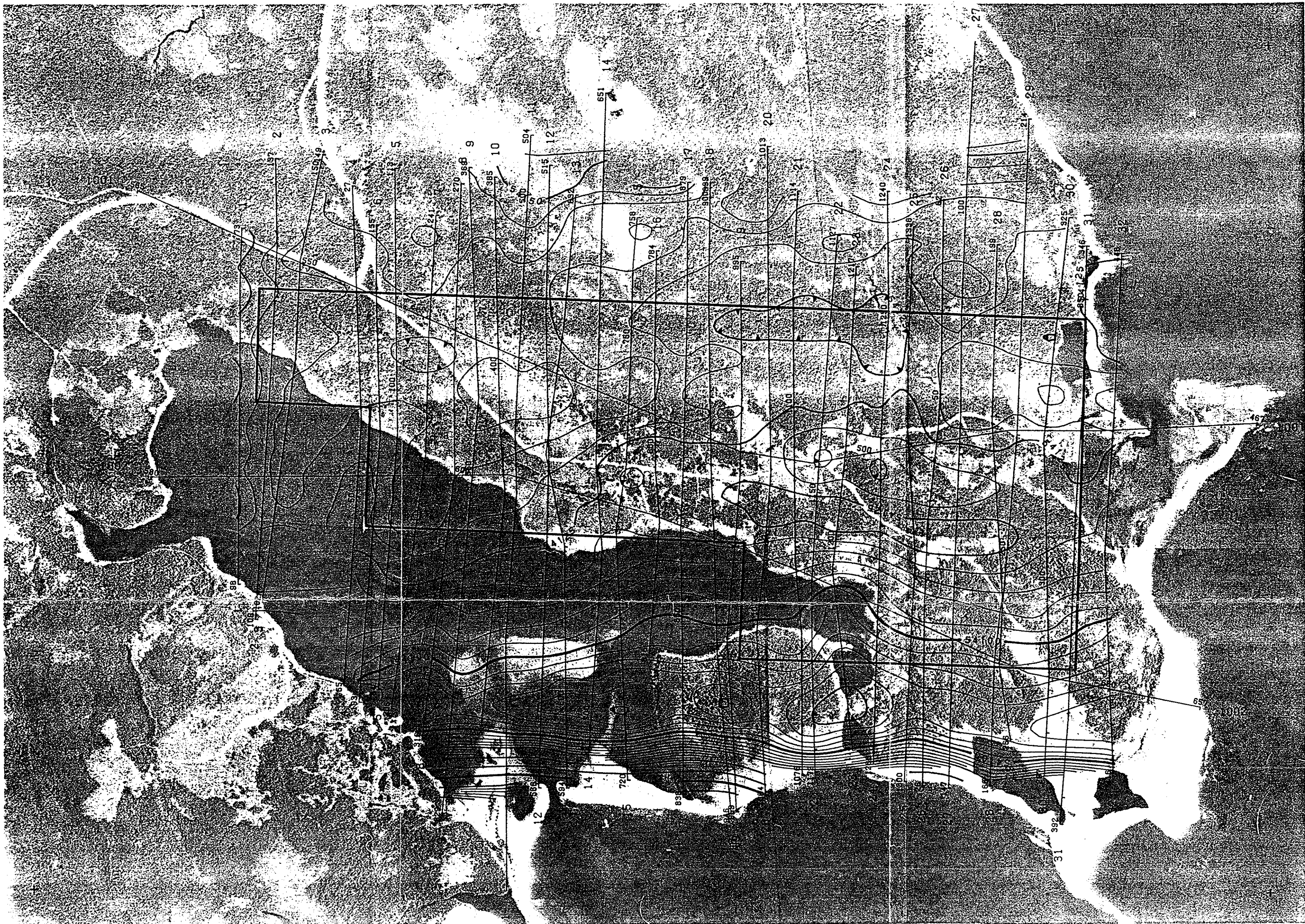
The magnetic data has been used to modify and update the existing geology and has shown some possible alteration zones and numerous faults. A number of VLF-EM conductor axes were found of which some are believed to have potential sulphide origins and have been recommended for additional investigation.

TERRAQUEST LTD.



Charles Q. Barrie, M.Sc.  
Geologist





88 260

WILCO MINING COMPANY LIMITED

AIRBORNE MAGNETIC SURVEY  
TOTAL MAGNETIC FIELD

WINE HARBOUR GOLD PROPERTY  
NOVA SCOTIA

N.T.S. NO. 11F/4

DRAWING NO. A-707-1

SCALE: 1:10,000



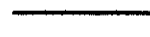
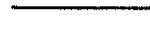
DATE: August 1987

TERRAQUEST LTD.   
TORONTO, CANADA

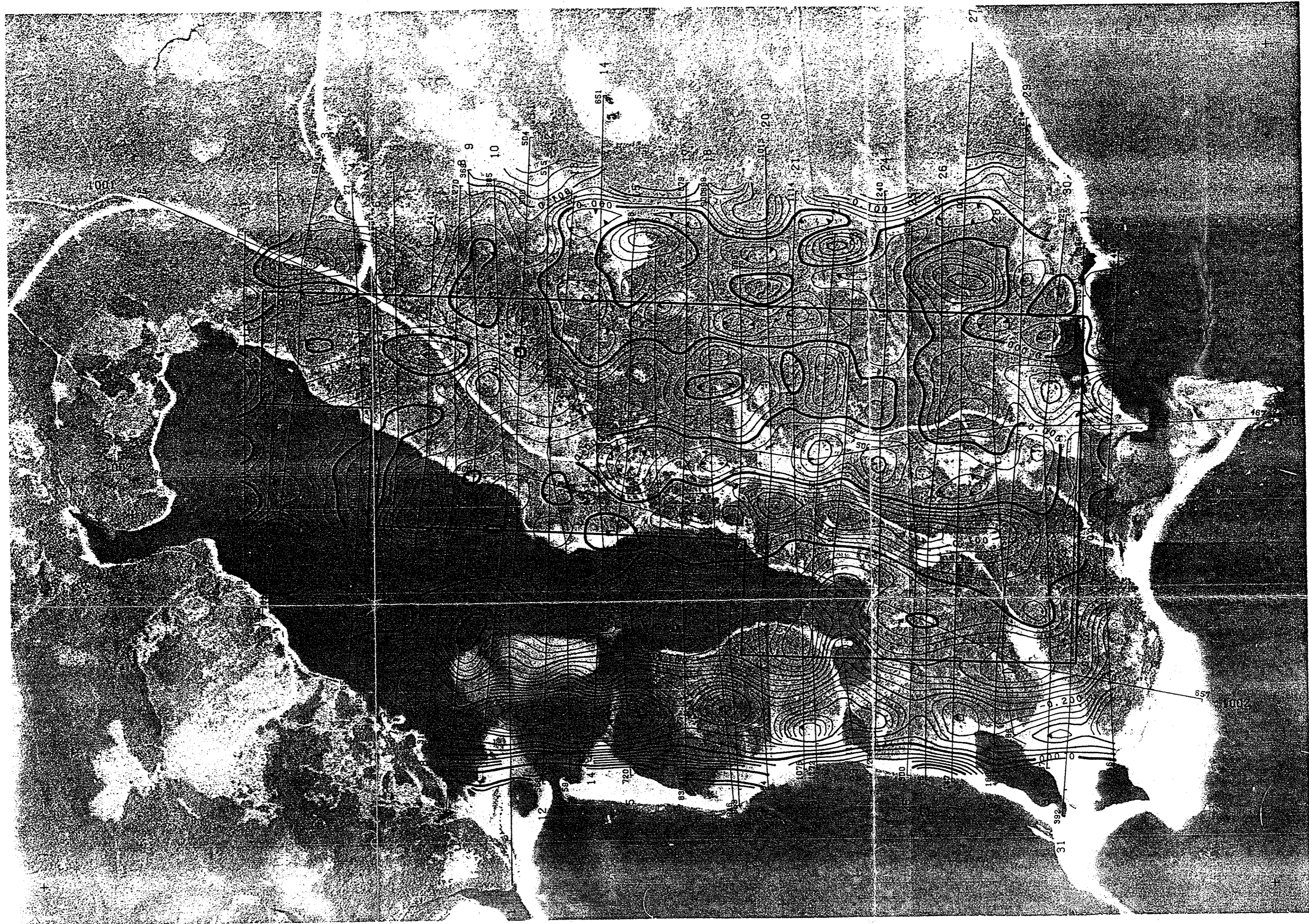
LEGEND

Terrain Clearance . . . . . 100 meters  
Line Spacing . . . . . 100 meters

TOTAL MAGNETIC FIELD

500 gammas   
100 gammas   
25 gammas   
5 gammas 





88 260



**LEGEND**

Terrain Clearance ..... 100 meters  
 Line Spacing ..... 100 meters

**VERTICAL MAGNETIC GRADIENT**  
 2.500 gammas/meter   
 .500 gammas/meter   
 .100 gammas/meter   
 .025 gammas/meter

WILCO MINING COMPANY LIMITED

**AIRBORNE MAGNETIC SURVEY**  
 VERTICAL MAGNETIC GRADIENT  
 Calculated From Total Field

WINE HARBOUR GOLD PROPERTY  
 NOVA SCOTIA

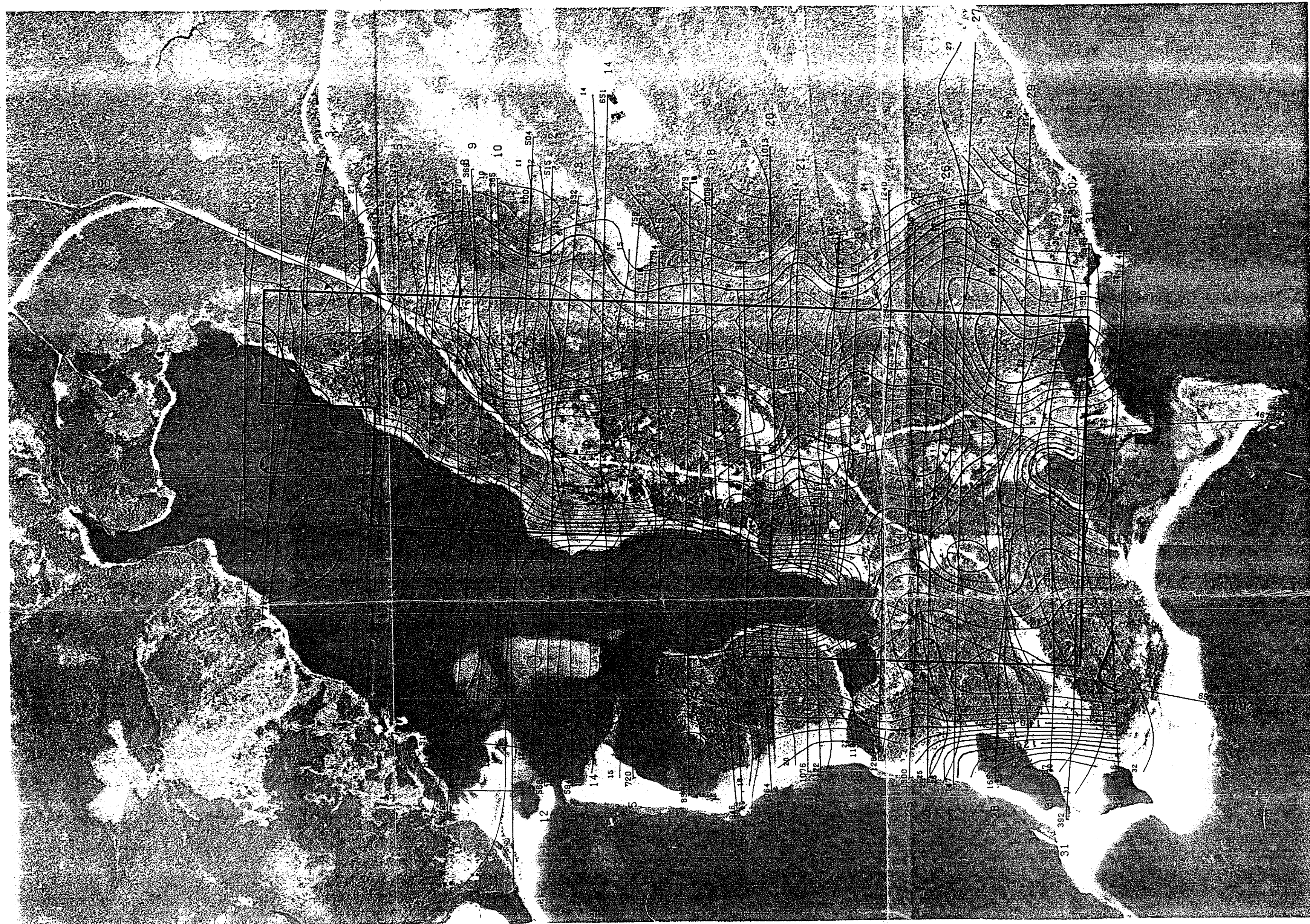
N.T.S. NO. 11F/4

DRAWING NO. A-707-2

SCALE: 1:10,000

DATE: August 1987

**TERRAQUEST LTD.**   
 TORONTO, CANADA



88 260

WILCO MINING COMPANY LIMITED

**AIRBORNE VLF-EM SURVEY**  
 CONTOURS OF TOTAL FIELD STRENGTH  
 PROFILES OF QUADRATURE

WINE HARBOUR GOLD PROPERTY  
 NOVA SCOTIA

N.T.S. NO. 11F/4

DRAWING NO. A-707-3




SCALE: 1:10,000

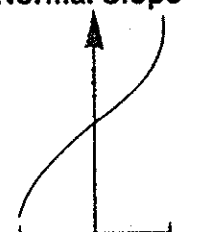
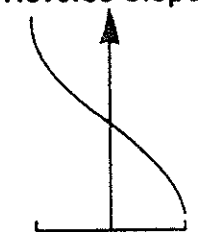
DATE: August 1987


**TERRAQUEST LTD.**   
 TORONTO, CANADA

**LEGEND**

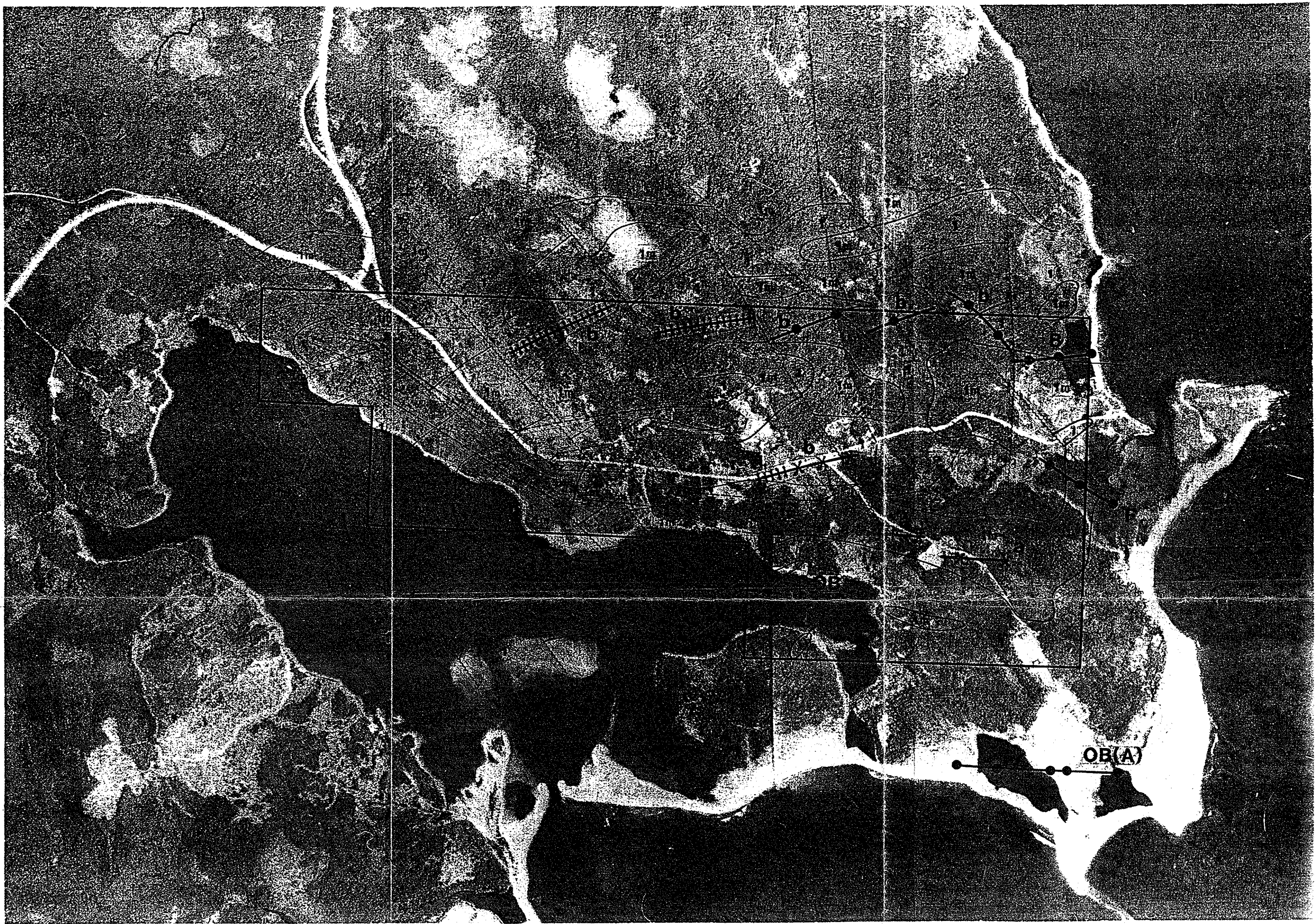
Terrain Clearance ..... 100 meters  
 Line Spacing ..... 100 meters

**TOTAL FIELD STRENGTH (Contours)**  
 50%   
 10%   
 2% 

**QUADRATURE (Profiles)**  
 Normal Slope  Reverse Slope   
 +10% -10% +10% -10%

  
 VLF Transmitter  
 NAA Cutler, 24.0 kHz  
 Azimuth 227





88 260

WILCO MINING COMPANY LIMITED

**INTERPRETATION**

WINE HARBOUR GOLD PROPERTY  
NOVA SCOTIA

N.T.S. NO. 11F/4

DRAWING NO. A-707-4

SCALE: 1:10,000

DATE: August 1987

**TERRAQUEST LTD.**   
TORONTO, CANADA

**LITHOLOGY**





GOLDENVILLE FORMATION

- 1m Magnetic unit within 1.
- 1 Greywacke


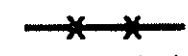
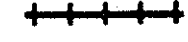
**LEGEND**

- Terrain Clearance ..... 100 meters
- Line Spacing ..... 100 meters

**INTERPRETATION**

-  Contact
-  Fault
-  Property Boundary
-  Resistive Zone

**VLF-EM Conductor Axes**

-  normal quadrature
-  reverse quadrature
-  total field only

See text for classification of  
VLF-EM conductor axes



VLF Transmitter  
NAA Cutler, 24.0 kHz  
Azimuth 227



208



Department of  
Mines and Energy

# Report of Work Performed

I, the undersigned, holder of/agent for, Exploration License No. 13303 issued on the 27 day of July 19 87, hereby report work as follows:

I have, under said License, and in conformity with the provisions of The Mineral Resources Act, performed or caused to be performed on the licensed area 2,250 days' work (eight-hour days) not reported before, totalling \$ 145,016.00 as per the attached list of expenditures. (Rate is one day's work for each \$20.00 spent.)

Expenditures relating to office overhead, transportation, lodging, freight, express, construction of roads, erection of buildings, etc., will be accepted up to a maximum of ten percent (10%) of the required work.

The said work consisted of Terraquest Limited - Airborne Geophysics Survey,  
Taylor and MacKeen Surveys Limited - Claims Boundary Survey  
Taylor and MacKeen Surveys Limited - Picket and Cut Lines  
Jacques Whitford and Associates Ltd. - Prospecting, Mapping, Reporting, Management

Attached is a geological report with applicable maps, sample results, drill logs, etc., which is submitted as evidence and initialled by me.

My Post Office address is 1046 Barrington Street, Halifax, Nova Scotia  
B3H 2R1 Tel. No. (902)423-6325

Dated this 22 day of July 19 88

Gordon Steppa/JWA  
Signature of Licensee/Agent

I hereby make oath and say that the above statement is true and correct.

Gordon Steppa/JWA  
Signature of Licensee/Agent

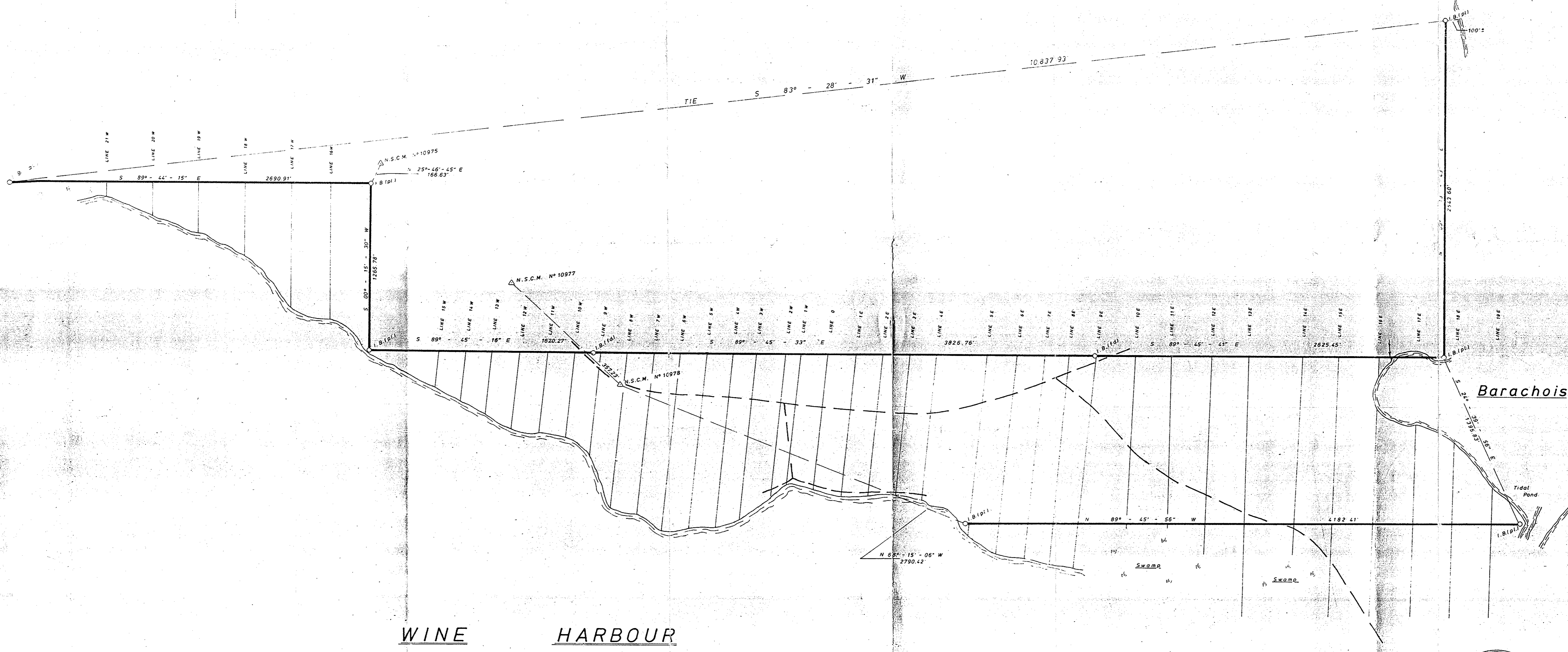
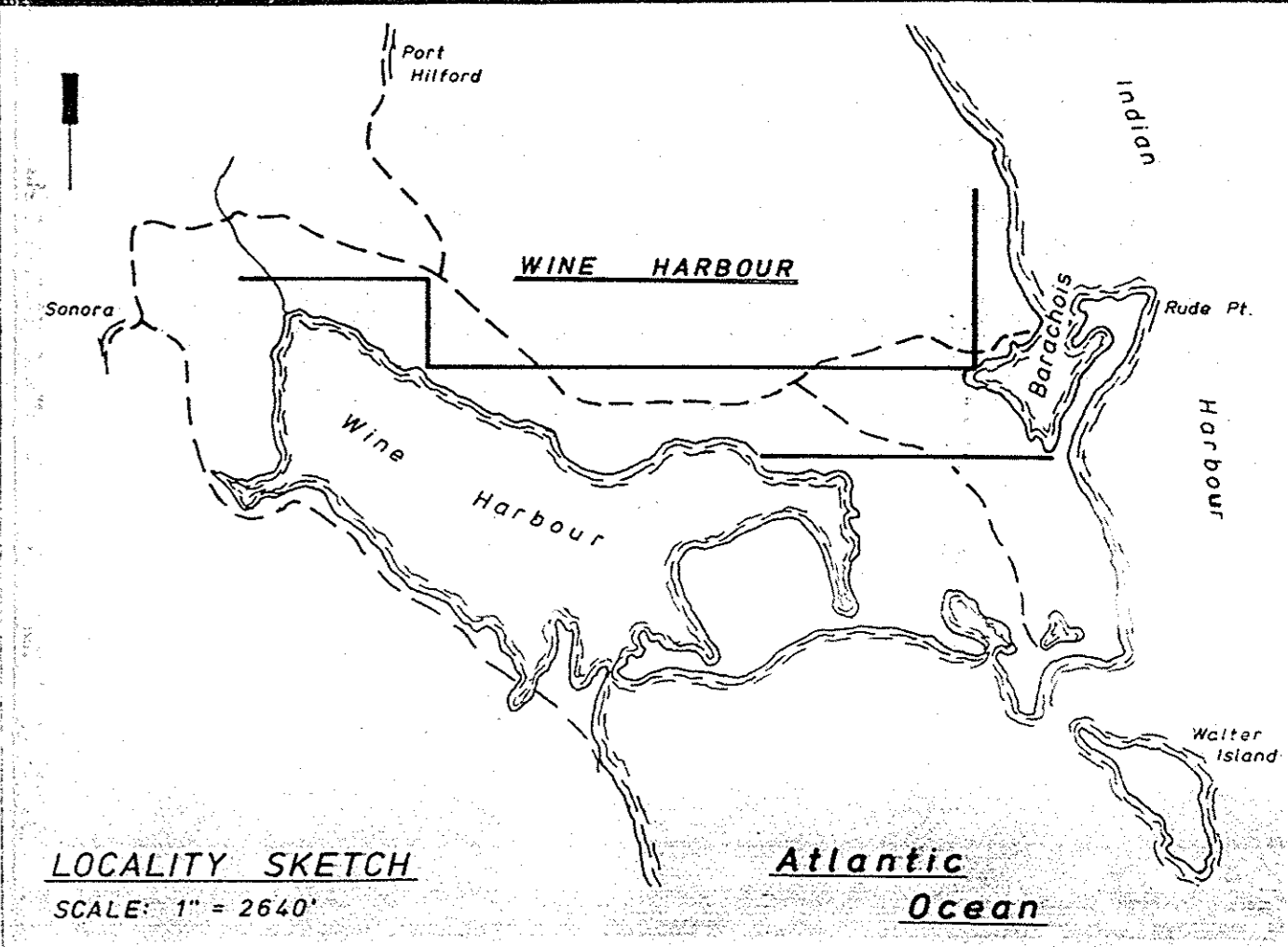
AMC  
JUL 28

Sworn to

The NAMES and ADDRESSES of the men who performed the said work and the DATES upon which each man worked in its performance are as follows:

NAME	ADDRESS	MONTH	DATES
Jacques Whitford and Associates Ltd.	1046 Barrington street Halifax, Nova Scotia B3H 2R1		
John Amirault, P. Eng.		August 1987 - April 1988	
Gordon Sheppard, P. Eng.		August 1987 - June 1988	
Teresa Drew, Dip. Tech.		October 1987 - April 1988	
Katherine Lewis, Geol.		October 1987 - April 1988	
Taylor and MacKeen Surveys Ltd.	P.O. Box 214 Guysborough County, Nova Scotia		
Clive MacKeen, NSLS		October - November 1987	
Rodman		October - November 1987	
Terraquest Limited	905 - 121 Richmond Street West Toronto, Ontario	July 11 - August 18, 1987	
Costs: Jacques Whitford and Associates Ltd.		\$	30,910.00
Taylor and MacKeen Surveys			7,200.00
Terraquest Limited			6,906.00

NOVA SCOTIA GRID MERIDIAN



**LEGEND**

○ S.M. SURVEY MARKER  
 △ N.S.C.M. NOVA SCOTIA COORDINATE MONUMENT  
 (P.I.T.) PLACED, FOUND, CALCULATED, DEED NOTATION  
 P.I.T. CENTRAL ANGLE - TANGENT  
 P.C., R. POINT OF CURVATURE, RADIUS  
 --- BOUNDARY TIE LINE  
 --- FENCE, ROCKWALL  
 --- PAVED ROAD, GRAVEL ROAD  
 --- EXISTING BUILDING  
 --- C.P., 0+00 CALCULATED POINT, CHAINAGE

SCALE: 1" = 400'

**NOTES**

REGISTRY REFERENCE:  
 THIS SURVEY WAS EXECUTED DURING SEPTEMBER, OCTOBER & NOVEMBER 1987.  
 SCALE FACTOR IS UNITY

BEARINGS AND DISTANCES SHOWN ARE ADJUSTED BY THE COMPASS RULE.

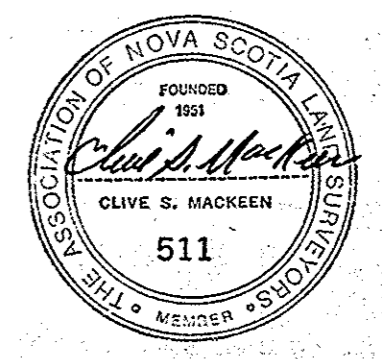
BEARINGS SHOWN ARE REFERENCED TO THE N.S. GRID MERIDIAN (61°51' WEST LONGITUDE) AND ARE DERIVED FROM:  
 N.S.C.M. No 10977 N 16 381 023 12"  
 E 908 233 01"  
 N.S.C.M. No 10978 N 16 385 259 75"  
 E 898 046 51"

**SURVEYOR'S CERTIFICATE**

I, CLIVE S. MACKEEN, NOVA SCOTIA LAND SURVEYOR, HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAN WAS CONDUCTED UNDER MY SUPERVISION, AND THAT THE SURVEY AND PLAN WERE MADE IN ACCORDANCE WITH THE NOVA SCOTIA LAND SURVEYORS ACT AND THE REGULATIONS MADE THEREUNDER.

DATED THIS 20th DAY OF NOVEMBER 1987

*Clive S. MacKeen* N.S.L.S.  
 CLIVE S. MACKEEN

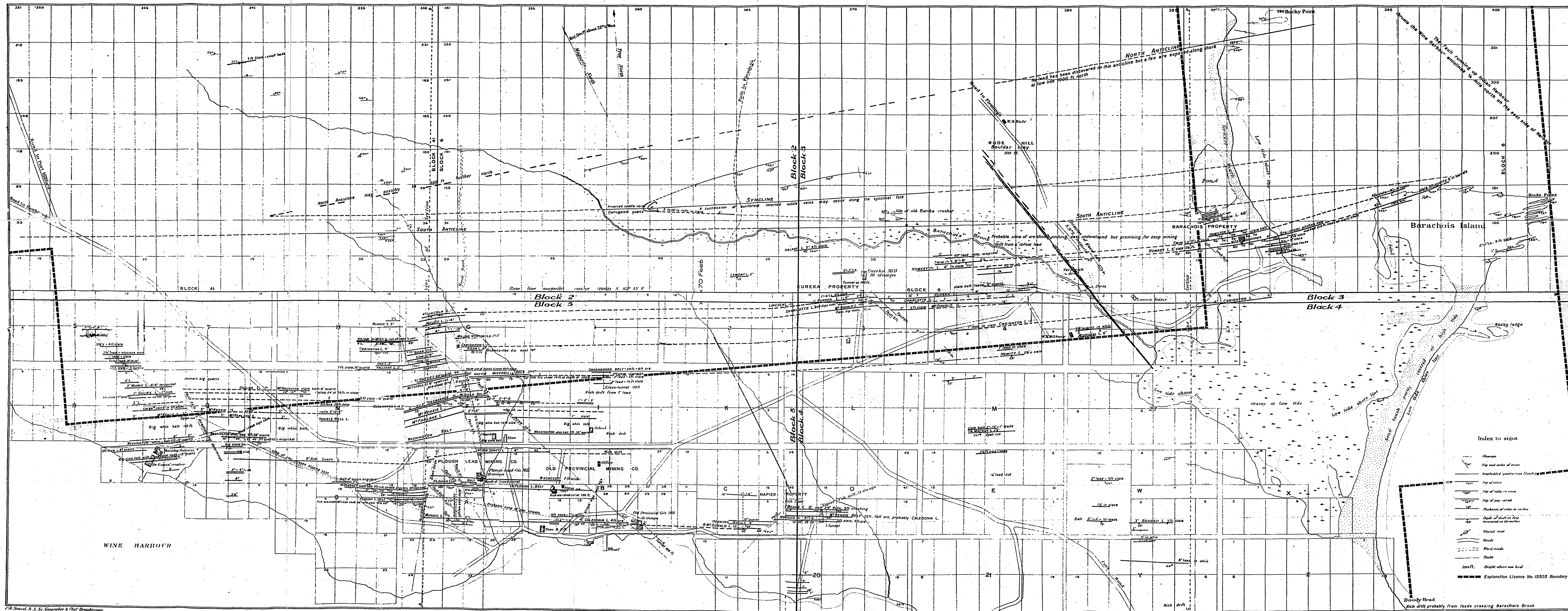


**PLAN OF SURVEY**  
 SHOWING CERTAIN MINERAL CLAIM BOUNDARIES.

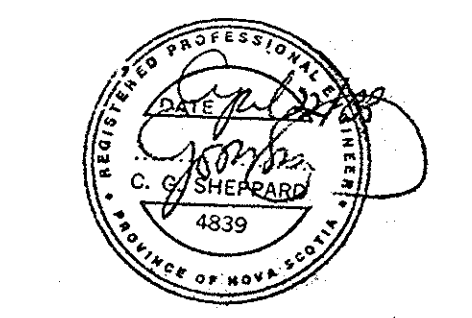
WINE HARBOUR, GUYSBOROUGH COUNTY, NOVA SCOTIA  
 DRAWING No 1292-7

TAYLOR & MACKEEN SURVEYS LTD.  
 P.O. BOX 214  
 GUYSBOROUGH, NOVA SCOTIA, B0P 1N0

88 260



88 260



NO.	DETAILS	DATE
M1310-1	JACQUES, WHITFORD & ASSOC. LTD.	25/02/87
DRWG. NO.	DESCRIPTION	DATE

REFERENCES  
 WILCO MINING CO., LTD.  
 WINE HARBOUR GOLD PROPERTY  
 GUYSBOROUGH CO., N. S.

PLAN AND SECTIONS

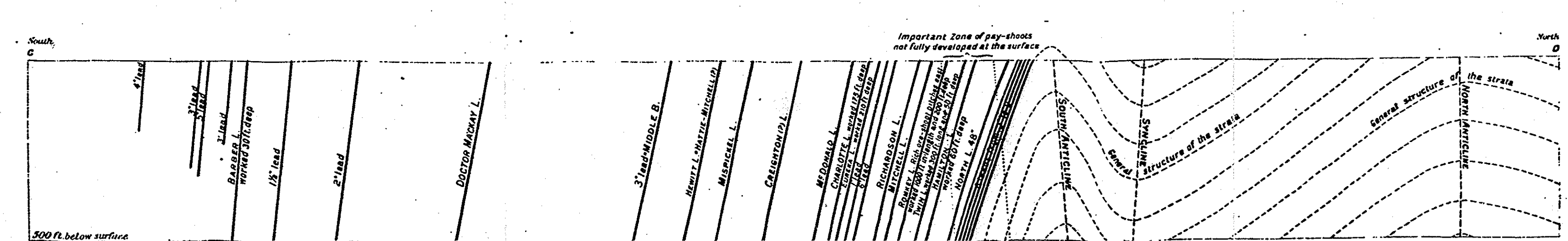
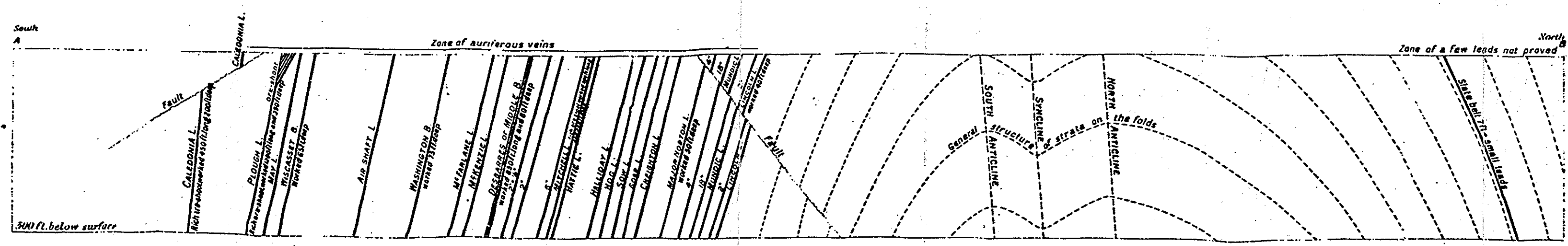
Jacques, Whitford and Associates Limited  
 CONSULTING ENGINEERS

DATE: 4 APRIL 1988 SCALE: 1" = 250' DRAWN BY: Vaughn Hamley

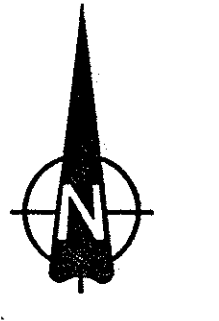
APPROVED BY: Gordon Shaw  
 DRAWING NO.: M1310-2

PLAN and SECTIONS  
 WINE HARBOUR GOLD DISTRICT,  
 GUYSBOROUGH CO., NOVA SCOTIA.

Scale 250 Feet to 1 inch



THIS DRAWING FORMS PART OF JACQUES, WHITFORD AND ASSOCIATES REPORT NO. M 1310 AND SHOULD BE READ IN CONJUNCTION WITH THE REPORT.



LEGEND	
[Symbol]	SHAFT
[Symbol]	AIRSHAFT
[Symbol]	BUILDING
[Symbol]	FOUNDATION
[Symbol]	OUT CROP
[Symbol]	VEGETATION BOUNDARY
[Symbol]	TRAIL
[Symbol]	OLD ROAD
[Symbol]	MAIN ROAD
[Symbol]	DITCH
[Symbol]	STREAM FLOW
[Symbol]	ROCK WALL
[Symbol]	ROCK WALL LENGTH UNKNOWN
[Symbol]	ROCK FILLED TRENCH
[Symbol]	TRENCH
[Symbol]	PIT
[Symbol]	WASTE ROCK PILE
[Symbol]	WASTE ROCK PILE WITH PEAK DEPRESSION
[Symbol]	DRILL HOLE (D.D.H.)
[Symbol]	CEMETARY

NO.	DETAILS	DATE

WILCO MINING CO. LTD  
WINE HARBOUR GOLD PROPERTY  
GUYSBOROUGH CO. N.S.

**MAP OF SURFICIAL FEATURES**  
(1987) EXPLORATION PROGRAM

Jacques, Whitford and Associates Limited  
CONSULTING ENGINEERS

DATE: 04/04/88 SCALE: 1:2000 DRAWN BY: R. FITZGERALD

APPROVED BY: [Signature] DRAWING NO.: M 1310-2

88 260

