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GEOPHYSICAL REPORT

on the

GROUND MAGNETIC AND VLF-EM SURVEY

on the

THE DOMINIC GROUP OF CLAIMS

DOMINIC LAKE, CHERRY CREEK MAP AREA

KAMLOOPS MINING DIVISION, BRITISH COLUMBIA.

LOCATION:	50 35'N, 120 43'W
	16 Miles S30W of Kamloops
	Map 92-I/10
CLAIM NUMBERS:	473(8), 474(8), 475(8)
SURVEY DATE:	August, 1977
REPORT BY:	John B. Davies B.SC.,M.S.
	Geophysicist
	QUILUM EXPLORATIONS LTD.
	Box 380,
	Sechelt, B.C.
for:	Charles Boitard
	2245 West 13th Avenue,
	Vancouver, B.C.
dated:	September 12, 1977

TABLE OF CONTENTS

SUMMARY

A combined magnetic and VLF-EM survey was carried out over the Dominic Group of claims located near Dominic Lake about 16 miles South-west of Kamloops in the Kamloops Mining Division, B.C. Access tc the property is by road and/or water. The terrain is high plateau, many swamps cross the claims, and thick bush exists. The object of the survey was to locate potential areas for sulphide deposits.

The property, according to G.S.C. Map 886A, is mainly underlain by country rock, composed of greenstone, andesite and basalt, with minor argillite and limestone. The sediments are cut by numerous intrusive plugs, stocks and dykes. Many copper and other sulphide occurrences are found in the area. New copper mines are producing only a few miles to the north at Afton and to the west in the Highland Valley.

For the survey, the instruments used were a Columbia portable flux-gate magnetometer and a Sabre VLF-EM instrument. The surveys were traversed on line spacings of 400 feet with readings taken at 100 foot intervals. These values were plotted on maps, analysed and interpreted.

The magnetic survey and the VLF field strength and dip-angle surveys both indicate anomalies. There is a large increase in electro-magnetic conductivity in the North-east section of the property. In the South-west section two intense magnetic anomalies indicate probable magnetite deposits.

RECOMMENDATIONS

1. The property should be thoroughly prospected and the geology mapped. This will assist in interpreting geophysical and/or geochemical data as well as help to assess the mineral potential of the property.

2. The property should be soil sampled and the samples tested for copper, silver and other base metals.

3. An induced polarization survey is recommended.

Respectfully submitted,

John B. Davies

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INTRODUCTION AND GENERAL REMARKS

This report discusses the procedure, compilation and interpretation of a combined ground magnetometer and very low frequency electromagnetic (VLF-EM) survey carried out over the DOMINIC group of claims during July and August, 1977. A total of twenty-five (25) survey miles was traversed.

The object of the survey was to search for economic sulphide mineralization. The purpose of the magnetometer was to search for magnetic mineral bodies, associated with magnetite and/or pyrrhotite. That of the VLF-EM instrument was to search for sulphides in massive form. A secondary objective of both instruments was to obtain information on the structural geology of the property.

FIELD PERSONNEL

S. Hill - Instrument Operator and Field Supervisor

J. Weirman - Instrument Operator and Electronic Technician

W. Gibson - Instrument Operator

They are experienced field crew who have carried out numerous surveys throughout Western Canada for QUILUM EXPLORATION, Box 380, Sechelt, B.C. VON 3AO

LOCATION AND ACCESS

The property is located immediately west of Dominic Lake which is located approximately 16 miles South-30-west (S30W) of Kamloops in the Cherry Creek map area of the Kamloops Mining Division.

The geographical coordinates of the Dominic property are 50 35'N latitude and 120 43'W longitude.

Access is by road and/or water.

PROPERTY AND OWNERSHIP

The property is comprised of 38 contiguous mineral claims described below.

Claim Name	Record No.	Recording Date
Dominic Lake 1-8	473(8)	Aug. 16,1976
Dominic North 1-10	474(8)	Aug. 16,1976
Dominic South 1-20	475(8)	Aug. 16,1976

The property is wholly owned by Charles Boitard of Vancouver, British Columbia.

PHYSIOGRAPHY

The property is located within part of the physiographic division known as the Interior Plateau. The claims are on fairly mild terrain with easy slopes and elevations that range from 4500 to 6000 feet a.s.l.

Good timber exists on the claims. Large numbers of windfalls render travel difficult.

HISTORY OF PREVIOUS WORK

No work known to the writer has previously been done on the claims.

GEOLOGY

The regional geology is shown on Open File Map 886A published by the Geological Survey of Canada in 1971. This map indicates the property to be underlain by the Nicola group of greenstones, andesites and basalts with minor argillite and limestone of Triassic age. Small plugs, stocks and dykes of Coast Intrusions cut these sedimentary rocks.

Numerous occurences of mineralization are known in the general region. Many veins and disseminations of copper minerals have been found in the rocks of the Nicola group. Vein deposits containing gold and silver, with lead, zinc and copper minerals occur in the Triassic greenstones at Stump Lake (20 miles, S-45-E) and similar veins occur with replacement deposits in the greenstones and limestones of Swakum Mountain (20 miles due

South). Twelve (12) miles to the North-east, the Iron Mask batholith contains copper deposits and veins of magnetite.

INSTRUMENTATION AND THEORY

1. Magnetometer Survey

The magnetic data was detected using a Columbia portable flux-gate magnetometer. This measures the absolute value of the earth's magnetic field intensity. The sensitivity is 10 gamma and the absolute calibration is governed by a crystal-controlled oscillator so that it cannot drift.

Only two commonly occuring minerals are strongly magnetic; magnetite and pyrrhotite. Hence, magnetic surveys, both ground and airborne, are used to detect the presence of these minerals in varying concentrations. Magnetic data are also useful as a reconnaissance tool for mapping geological lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

2. VLF-EM SURVEY

A VLF-EM receiver manufactured by Sabre Electronics of Vancouver, B.C was used for the VLF-EM survey. This instrument is designed to measure the current induced, in a vertical coil, by the primary and secondary fields of the very low frequency electromagnetic field (VLF-EM) transmitted at 18.6 khz from Seattle, Washington. Both the dip angle and field strengths are measured by this instrument.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic field (primary) by a strong alternating current usually through a coil of wire. If a conductive mass such as a sulphide body is within this magnetic field, a secondary alternating current is induced within it which in turn induces a secondary field that distorts the primary magnetic field. It is this distortion that the EM receiver measures. The VLF-EM uses a frequency range from 16 to 24 khz. whereas most EM instruments use frequencies ranging from a few hundred to a few thousand hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore it is more susceptible to clay beds, electrolyte-filling fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other E.M methods to pick up. Consequently, the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization (in places it can be used instead of I.P). However, its susceptibility to less conductive bodies results in a number of anomalies, many of them difficult to explain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or cross correlating with other geophysical and geochemical surveys.

SURVEY PROCEDURE

The survey was carried out by traversing pre-established lines drawn on a blown up map of the area. Lines were 400 feet

apart and traversed in an east-west direction. All stations were ribboned, numbered and recorded and plotted on the maps. All stations in a line were 100 feet apart.

COMPILATION OF DATA

1. Magnetic Survey

All values were entered into an IBM-370 computer and plotted on a grid. They were then displayed at the appropriate intervals, after averaging over the nearest neighbours in order to yield a smooth representation.

2. VLF Survey

The field strength values were entered into an IBM-370, averaged as explained above, plotted on a grid, and displayed at the appropriate interval. The dip-angle is smoothed by averaging nearest neighbours and the dip-angle is plotted. This procedure allows the easiest recognition of VLF anomalies as explained below.

Interpretation

1. Magnetic Survey

The values vary over a range of greater than 3,000 gammas. This is a wide variation and anomalies are readily observable. The background is at approximately 55,000 gammas. In the southwest area of the property, two large anomalies are observed with maxima greater than 57,000 gammas. As magnetite is known to occur in this region, these anomalies, with values greater than 2,000 gammas above background, indicate the possible presence of

a magnetite-bearing formation. However pyrrhotite, in large concentrations, could also explain these anomalies.

2. VLF Survey

The VLF yields two variables which allow interpretation; field strength and dip angle. In general the field strength will increase over an electromagnetic conductor, while the dip angle will have a sharp change at the boundary between a good and poor conductor. However fault zones and rock unit changes can produce similar effects. Topography is not expected to have much effect on the VLF data in this plateau region.

The field strength contour map shows a gradual increase from the South-west toward the North-east of the property. The range is from a low of 20 E.M units to a high of greater than 60 E.M units which occurs in the North-east section.

There appears in this Northerly section to be an almost linear anomalous structure affecting the field strength contours. Whether this is a conductor or fault zone can not be determined from this data alone.

Examination of the dip angle figure allows some further general conclusions. Two anomalies are indicated from the large dip angle changes in the South-west corner of the property. These may possibly be related to the large magnetic anomalies in the same region.

The general trend of the dip angle plots show an angle change running intermittenly from the South-east corner toward the North-west section. This is in good agreement with the field strength values which show a definite increase on the North-east as compared to the South-west region of the property.

These results, both magnetic and VLF electromagnetic, are indicative of anomalous conductors. In the South-west region, they are indicative of two localised anomalies. In the North-east section, the results appear to show a large increase in E.M conductivity over a wide area. Such a large anomalous area would be more indicative of a general increase in the conductivity of the rock. This could correspond to an increase in content of conducting sulphides in the material comprising this region.

SELECTED BIBLIOGRAPHY

Geology Map, Nicola, Kamloops and Yale Districts, British Columbia, Geol. Surv of Canada, Map 886A, 1971.

GEOPHYSICIST'S CERTIFICATE

I, JOHN B. DAVIES, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Quilum Explorations Ltd., Box 380, Sechelt, British Columbia.

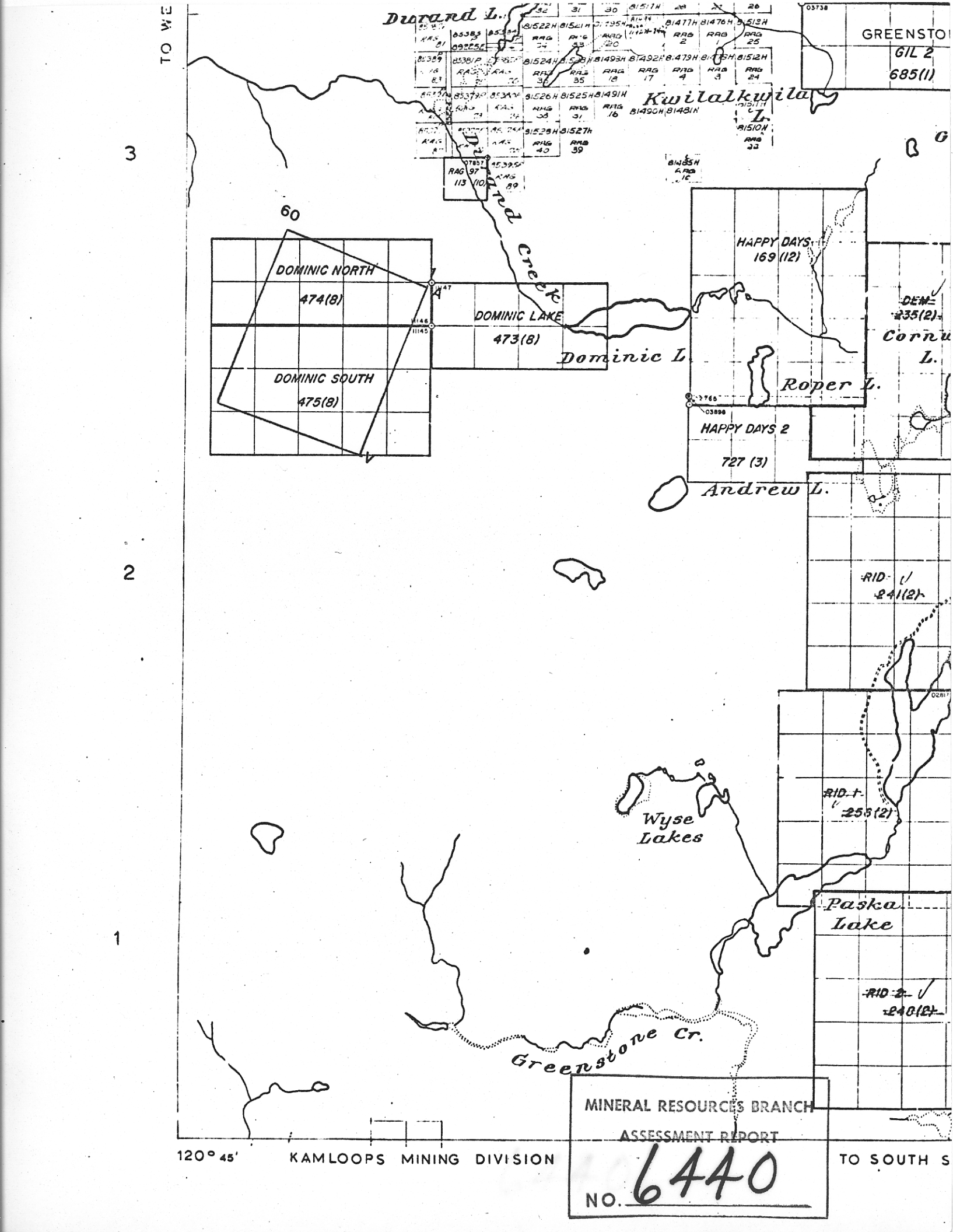
I further certify that:

1. I am a graduate of the California Institute of Technology (1967) and hold a M.S. Degree in Geophysics.
2. I have been practising in my profession for the past seven years and have been active in the geo-exploration industry for the past fourteen years.
3. This report is compiled from data by a magnetic and VLF-EM survey carried out in August,1977, on the Dominic Group of Claims, Kamloops Mining Division, British Columbia.
4. I have no direct or indirect interest in the properties nor do I expect to receive any interest therein.

John B. Davies

John B. Davies

september 12,1977



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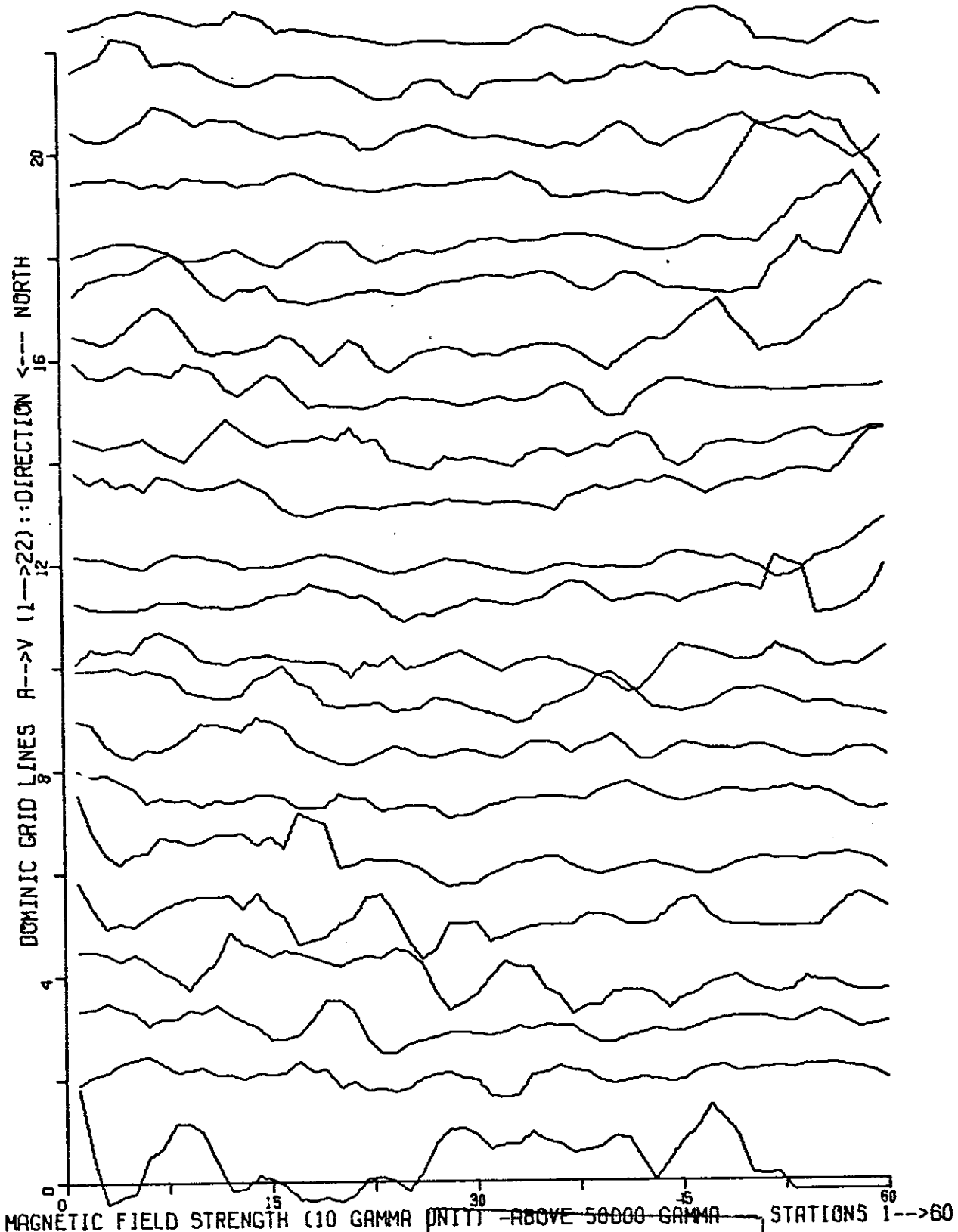

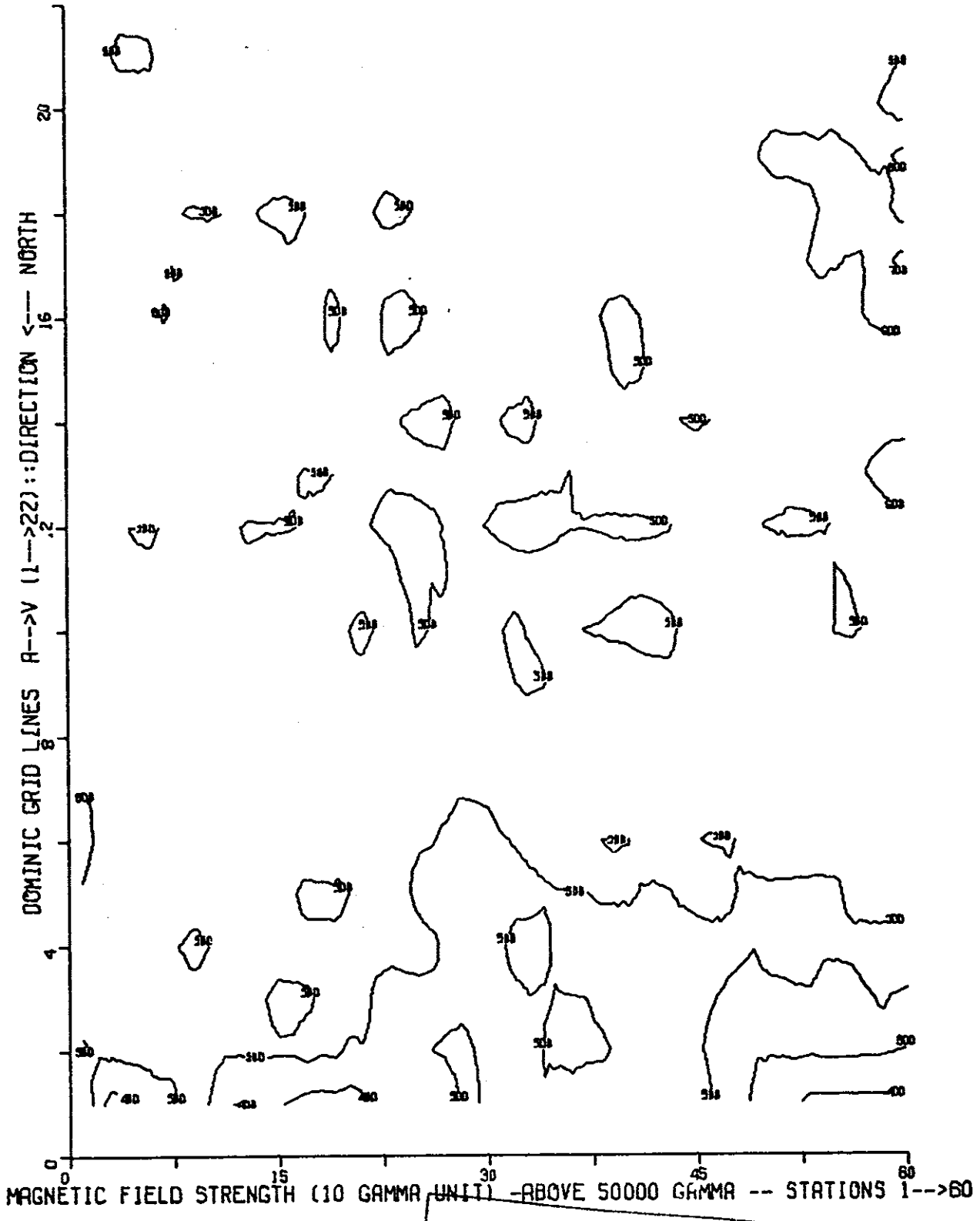

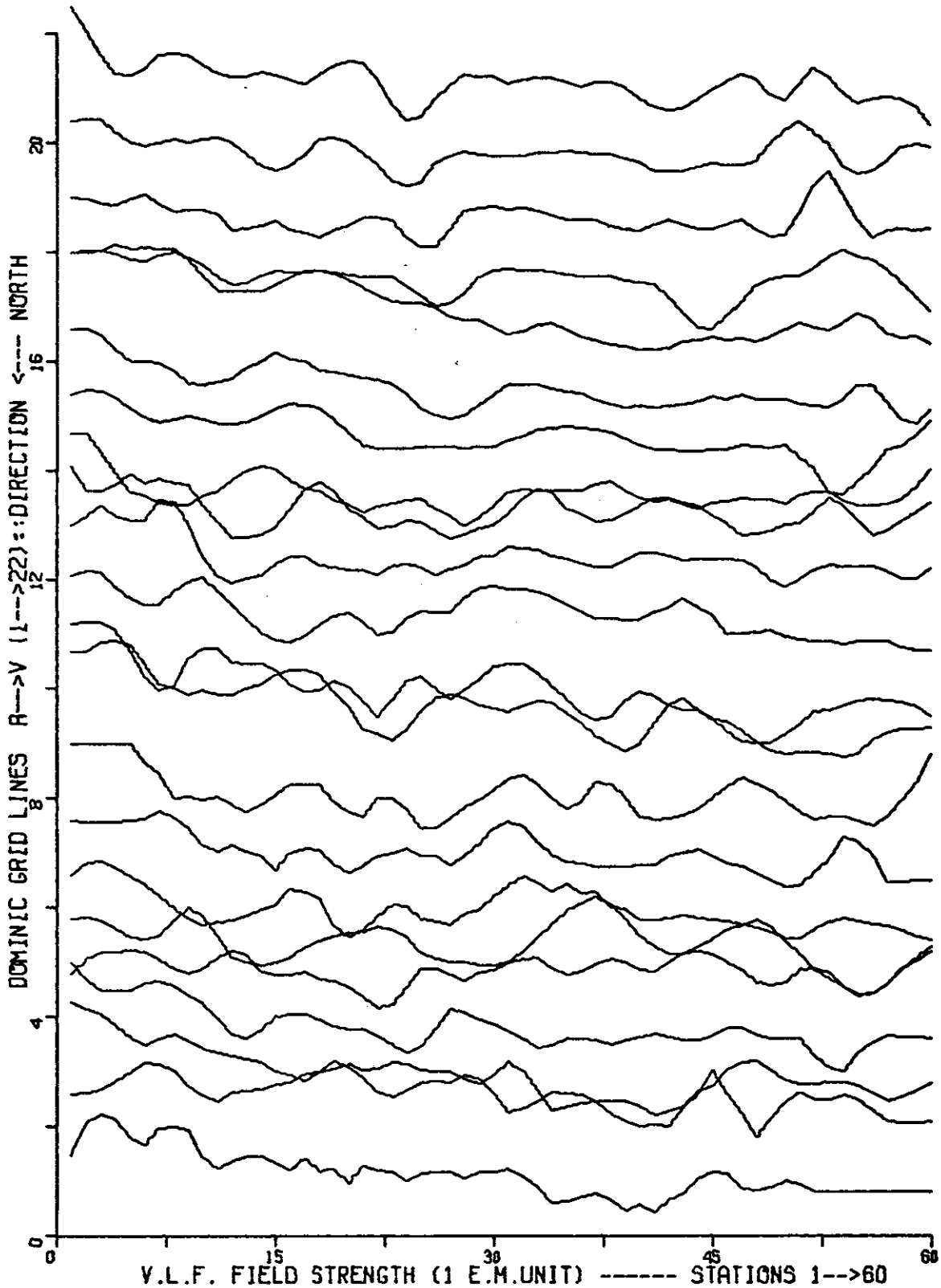

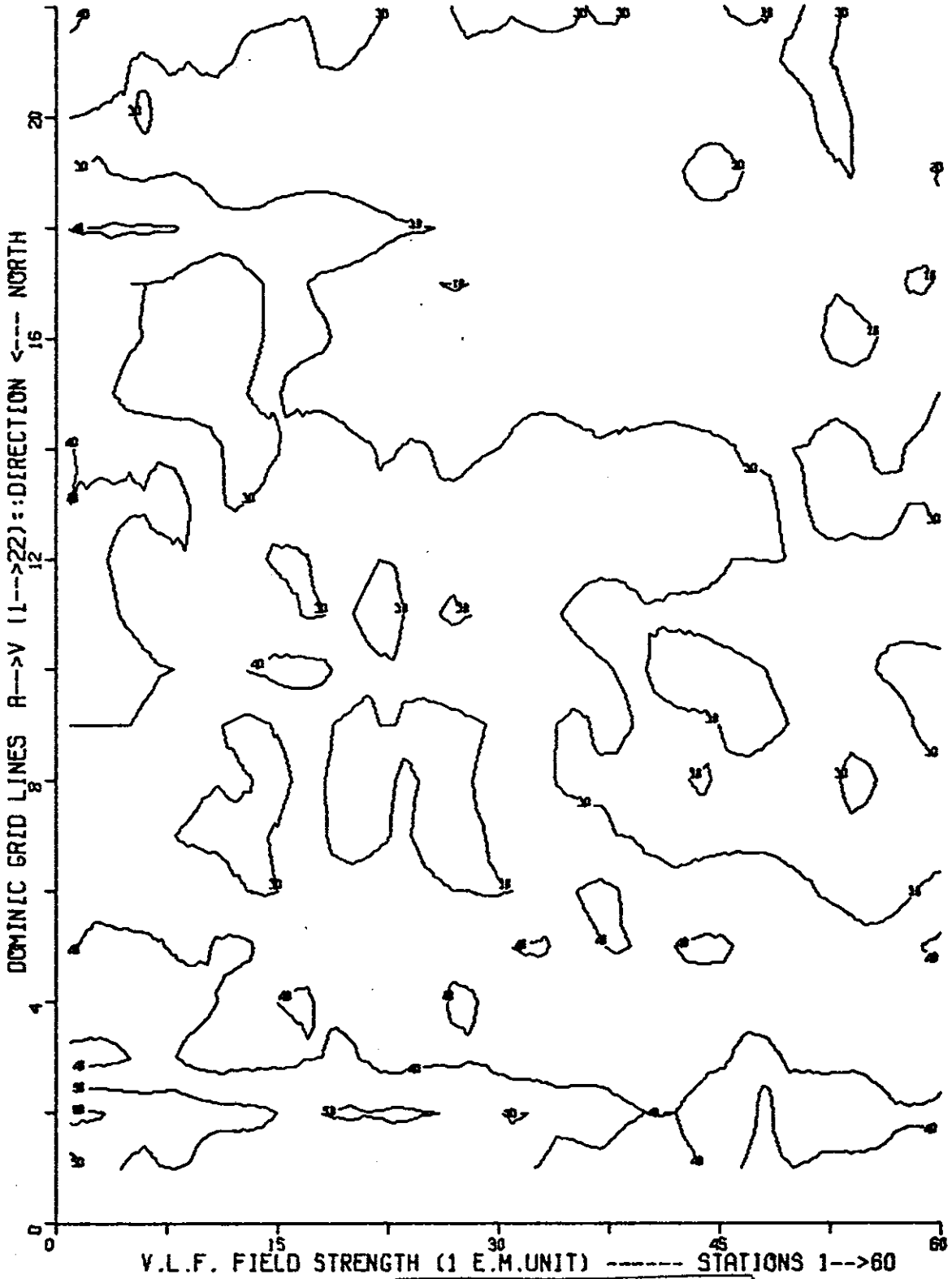

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VALUATION OF WORK PERFORMED FOR CHARLES BOTARD

Dominic CLAIMS

a) 3 employees x 20 days, July 25 - Aug 13	
b) @ $40.00 per day (3 x $800.00)	$ 2400.00
c) Expenses - food & accomodation	300.00
d) Expenses - transportation (4x4 truck)	250.00
e) —	
f) Instrument rental	350.00
g) —	
h) Cost of report preparation	500.00
Total cost	$ 3800.00

John Davies