GEOLOGICAL AND GEOPHYSICAL INVESTIGATIONS OF THE JASPERSON PROPERTY, HESS TOWNSHIP, ONTARIO

AUGUST, 1982

Prepared By: Avrom E. Howard, B.Sc.
John E. Buckle, B.Sc.

INTRODUCTION

The Jasperson Property consists of eight claims located in the north-central sector of Hess Township, approximately 20 miles north-east of the town of Cartier, in the Sudbury District. In addition, it is situated 1.5 miles east of the Geneva Lake Mine, a former producer of zinc and lead, and in a regional sense is on-strike with it. The property includes three patented claims (S6631-3), two claims staked in 1980 (S600759-60), and three staked in July 1982 (469265-7). In order to fully evaluate the economic mineral potential of this property, a geologist and a geophysicist were commissioned to carry out geological mapping and a self-potential ("SP") survey respectively, across the property. In addition, a VLF survey was conducted as well. Past exploration efforts, which were integrated with the current one, include a pedogeochemical and SP survey conducted over parts of the property.

ACCESS, TOPOGRAPHY

The property lies just north of and straddles an old logging road travelling east from highway 144, and road access is available during the snow-free months only, as the road is not plowed. The topography of the area is characterized by a few low-lying ridges which occur in a north-east direction and are steep in places. In addition, there are a number of similarly-oriented hills composed of glacial debris, and a number of isolated rocky hills of various lithologies. Groundcover generally consists of mixed forest with alder swamp and spruce bog occurring locally. Lakes are typically shallow and marshy, with one in the west part of the property having been almost completely drained, resulting in a flat, wet, grassy field. The creek which runs through and north from this marsh connects directly with the tailings pond of the Geneva Lake Mine about a mile upstream, and is therefore, quite contaminated and rusty.

GEOPHYSICS

Self-Potential Survey

The self-potential equipment used in this survey consisted of two porous porceline pots containing saturated solutions of copper sulphate as electrode probes, a reel containing twenty chains of sixteen ohm wire and a voltmeter with a sensitivity of ± one millivolt.

The gradient array was employed to sample voltages along the survey lines at 1/2 chain intervals with reference to an established zero base station.

The procedure is to determine the voltage difference between the porous pots, if any, at the base station, then advance the pot given the positive polarity along the line recording the voltage difference between it and the second pot which remains stationary as a zero reference.

Very Low Frequency Electro-magnetic Survey

The VLF survey was conducted with a Crone RADEM VLF receiver. The transmitter at Seattle, Washington (NLK) at a frequency of 24.8 KHz was used.

Dip angle and field strength readings were taken at one chain intervals on the grid.

Survey Results and Interpretation

The accompanying equipotential contour map indicates eight zones of interest in the survey area. Contours of greater than negative fifty millivolts are considered significant.

Anomaly "A"

Anomaly is located on lines 12 and 15 west between 18 and 25 north. It is the strongest response of the survey, having a maximum value of -236 millivolts. The strike appears to be north west, however the data is insufficient to positively establish the strike direction. The trend of the response terminates sharply to the east, possibly being truncated by faulting. The shape indicates a rather localized concentration of sulphide mineralization.

The anomaly lies within a Nipissing Diabase dyke which often carry disseminated pyrite, pyrrhotite and magnetite suggesting that a concentration of these sulphides may be the source. The SP values would indicate a high percentage of metallic minerals, however, the lack of a significant VLF response established that the source is not a conductor and therefore must be disseminated.

Anomaly "B"

Anomaly 'B' is a broad and discontinuous zone striking approximately east-west between 25 and 30 north from 15 east to 15 west. The response increases in size and strength from east to west. The values are significant enough to suggest a metalic sulphide or graphitic source. However, again the lack of a VLF conductor indicates a disseminated source. The geology of the anomaly area is felsic intrusives.

Anomaly "C"

This anomaly is in the showing "B" area mentioned in previous reports on the property. The best response is located between 7 and 8 north on line 12 west. The SP anomaly is isolated and cannot readily be tied in with other responses. A strike length and direction is difficult to establish, possibly due to the complexity of the local geology. This anomaly is undoubtedly due to the sulphide-bearing metasediments found in the old trenches.

Anomaly "D"

Anomaly 'D' is located in the area of showing 'A'. This response is similar to anomaly 'C' and although there is no indication of a trend joining these responses it seems apparent that they are directly related.

Anomaly "E"

Anomaly 'E' is a broad trend extending across the survey grid from 18 W to 18 E. The anomaly is locally stronger on lines 15 W, 3 E and 9 E. It would seem to be a formational trend, however the anomaly lies within massive felsic intrusives. It should be noted that the response of line 15 W at the baseline is the strongest, having millivolt values greater than -150. The geology of the local area of this response indicates at least two geological contacts. It is recommended that this area of Anomaly 'E' be considered for further investigation.

Anomaly "F"

Although Anomaly 'F' appears to be isolated it is suggested that this response is related to the Nipissing diabase dyke of anomaly 'A'. It is of particular interest because it is on or near the contact between the diabase and the felsic intrusives. There is also a correlation with a weak VLF response in this area.

Anomaly "G"

Anomaly 'G' on line 8 W at 15 N is a small, isolated, weak to moderate SP response. The geology is felsic intrusives, where mapped, however there is little outcrop in the immediate

area of the anomaly. The VLF field strength supports the validity of this anomaly even though there is no distinct conductor axis indicated.

Anomaly "H"

This anomaly is isolated and weak. Its significance lies in its proximity to an SP positive. It is difficult to correlate this response to anomalous trends, however it would appear to be a valid anomaly.

Anomaly "I"

Anomaly 'I' is a moderate SP response. It is isolated and of short strike length. The VLF field strength response indicates that this anomaly is significant. The VLF dip angle does not show it to be a good conductor. The source is beyond speculation as there is very little outcrop close to this response. The rock type is assumed to be felsic intrusives in this area. Further investigation is warranted.

VLF Conductors

Two major conductor axes have been determined. Both responses have been determined. Both responses lie within wet and swampy regions of the survey area. Their source is unlikely to be anything other than conductive swamp sediments. Other weak VLF responses have been indicated on the accompanying VLF dip angle map. VLF responses have been previously mentioned when they were applicable to the self-potential interpretation.

GEOLOGY

Straddling the eastern tip of the Benny Greenstone Belt, one of the smaller volcano-sedimentary complexes in the Superior Structural Province, the area within the Jasperson Property is characterized by an assemblage of dominantly intermediate volcanic and sedimentary units which are repeatedly intruded by granitic rocks in increasing proportions towards the north and east. In addition, there are three generations of mafic intrusives, varying both in chemistry and orientation which cut the two rock units above in a number of locations.

The volcanic rocks are commonly well-banded and quite gneissic in appearance, due to the high level of metamorphism in this area, but are distinguished by the presence of highly flattened fragments, with flattening ratios of over 10:1 observed. Due to the frequent disruption of these units by felsic intrusives no distinct pattern of distribution is discernable, but overall there are more volcanic rocks (as opposed to sediments) in the southern part of the property, and within this zonation there tends to be more mafic volcanics towards the south and less so towards the north. Sedimentary and/or volcanically-derived sedimentary rocks occur at various stratigraphic intervals among the volcanic rocks and consist of impure siltstones, cherty sediments, and chert. In the north-eastern part of the property some of these rocks are locally epidotized in a nebulous fashion, the epidotization not corressponding to any significant orientation in particular.

Within the sedimentary units are three locations where sulphides, possibly stratiform, accompany chert and cherty sediments. The first two, known as Showing "A" and "B" respectively, very likely occur on-strike with each other and are quite possibly on-strike with the northern sulphide-bearing stratigraphic unit at the Geneva Lake Mine (Showing "A" occurs at L12+25E/11+00N, and Showing "B" occurs at L13+00W/07+50N). Up to 3-4 percent combined pyrite and chalcopyrite (+/- sphalerite) occurs within and parallel to banded cherty sediments as discontinuous stringers and disseminations. Locally the sulfide content may be upwards of 5-6 percent. Unfortunately, neither showing has much lateral continuity as Showing "A" is cut off by a gabbro dyke to the east, quartz monzonite to the south, and swamp to the west and north. Showing "B" appears to be almost completely surrounded by felsic intrusive rocks and overburden. Both showings have a corressponding SP anomaly associated with them, and the SP and VLF surveys conducted as part of this effort should shed more light on these showings, and the trend as a whole. It should also be noted that a sample taken at Showing "A" last year assayed 0.43% Cu, and 0.24% Zn which is encouraging. In addition, both showings have been surface blasted and large pits exist at both locations.

A third location, known as Showing "X" occurs just north of the west entrance to "John's Road", and consists of a sequence of rusty cherty sediments on either side of a thin unit (4 ins.) of almost pure chert, very likely of a chemical exhalative origin. The sediments contain 1-2% pyrite as with the chert, in both cases as narrow discontinuous stringers and disseminations parallel to bedding/banding. Overlying the sulphide-bearing sediments is a possible felsic flow followed by more intermediate sediments. Two felsic sills intrude this sequence. Once again, there is not much continuity to this showing as it occurs on the edge of a low-lying ridge, with felsic intrusive to the south-west, and over-burden to the east and north-east. It is possible that this unit, and the chert layer in particular, is correlative with the main sulphide-bearing strata at the Geneva Lake Mine.

Felsic intrusive rocks of quartz monzonite composition (Card & Innes, 1981) constitute the dominant rock type in the area, occurring extensively throughout. They vary from narrow foliated sill-like bodies between units of volcanic and/or sedimentary rocks, to larger relatively unfoliated bodies of irregular dimensions, cutting the greenstones at various orientations, or replacing them entirely. Within the larger outcrops of intrusive, various phases occur, including; medium to coarse-grained, porphyritic and/or leucocratic, and porphyritic and/or biotitic quartz monzonite, with dykes of pegmatite and aplite occurring locally.

Intruding both the intrusive and volcano-sedimentary rocks are three seperate units of mafic intrusive, differing both in age and composition. The oldest of these consists of a swarm of south- to north-west trending narrow (under 10 ft.) fine-grained mafic dykes, and are almost basaltic in appearance. They commonly occur parallel and sub-parallel to the regional rock fabric giving them a sill-like appearance, but range from south-west to north-west in strike overall. These dykes occur commonly throughout the property, but are somewhat more prevalent towards the south and south-west sectors.

A second mafic intrusive phase cuts almost diagonally across the property from north-west to sout-east, and is composed of granophyric metagabbro with a zone of hornblende metagabbro at the north-western corner of the property. These rocks belong to an intrusive body (and episode) known as the Nippissing Diabase which occurs commonly throughout this part of Ontario and which in certain areas is associated with remobilized-type mineral deposits. At the "A" Showing it is this unit which cuts off the mineralized sediments towards the east.

Finally, there is a third, and minor mafic intrusive phase which takes the form of two west, north-west trending dykes cutting across the north and south sectors of the property, and con-

sisting of diabase and olivine diabase respectively. Both are relatively young in age and unmetamorphosed, and are only seen in a few locations.

Much of the property is coverd by glacial overburden in the form of till sheets, eskers, and local accumulations of very large boulders, which to a large extent obscure the underlying geology and may even affect the geophysical and geochemical signatures of the area as well.

Structurally, the area is rather erratic on a local scale with a strike variance of over 30 degrees within 200 feet not uncommon. As well, small tight folds and drag folds occur locally, along with broad arc-like folds often intimately related to nearby felsic intrusives. Regionally, however, the strike within the greenstones is fairly consistent and is in a west, south-west direction. Rock fabric in the intrusive phases is less consistent, particularly in the later mafic intrusive phases, but in the felsic intrusives is generally in a west, south-west direction as well.

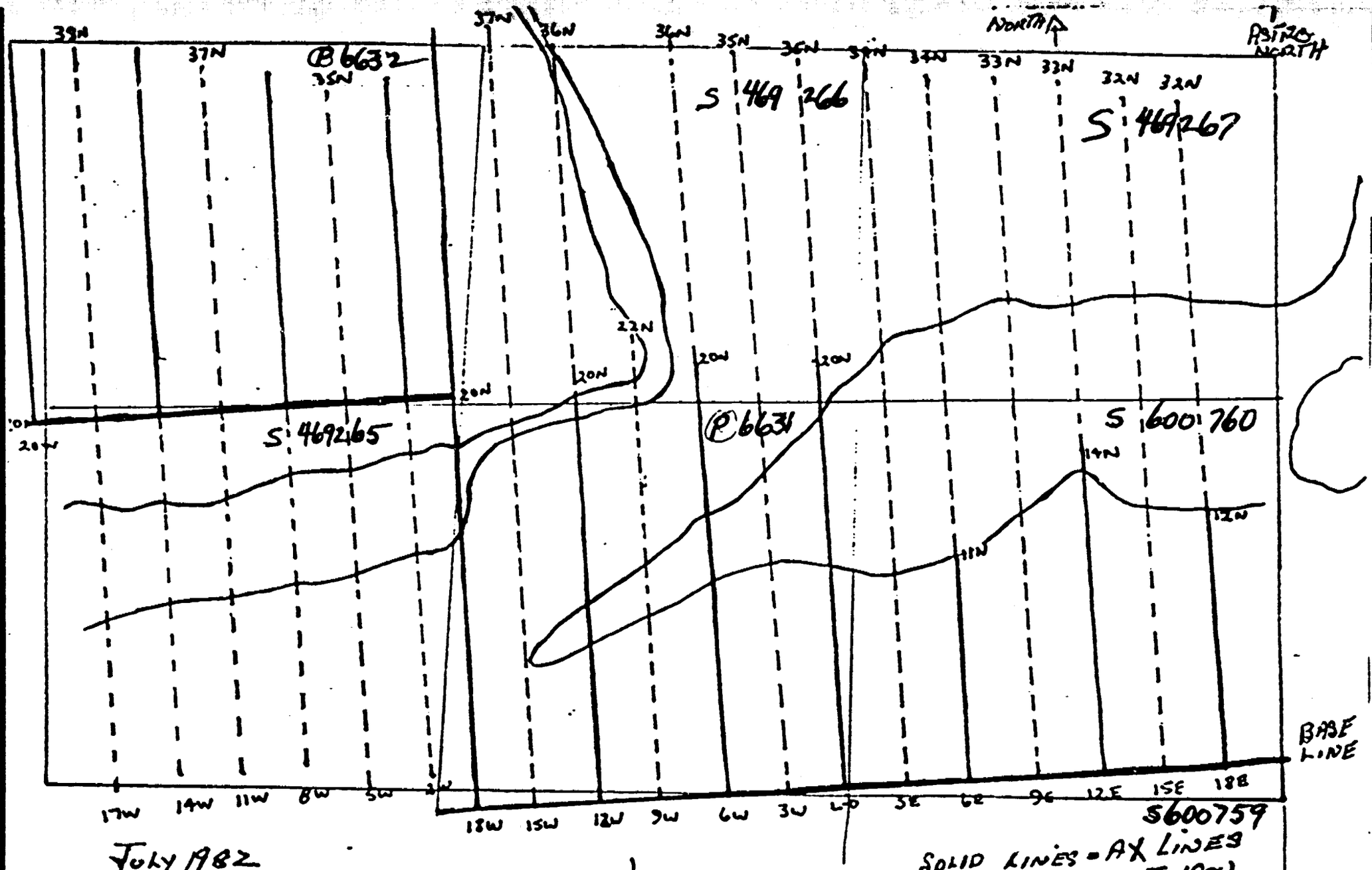
CONCLUSIONS & RECOMMENDATIONS

Both the geophysical surveys and prospecting/mapping have deliniated areas which are worthy of further investigation. From a geophysical point of view, the self-potential survey indicates several zones of interest, although the VLF survey does not provide any significant conductors worthy of further investigation. The possibility of an occurrence of disseminated sulphides, however, should not be entirely overlooked. It is recommended that the SP anomalies be examined by trenching where possible, along with detailed SP in the immediate area. In addition, a proton magnetometer survey should be carried out over the entire property, in order to accurately deliniate the several crosscutting dykes and complex geological contacts located within. Diamond drilling should be considered following the follow-up investigations.

From a geological point of view, the field data indicates that although there are a few locations of significant interest with respect to a Geneva Lake Mine type of occurrence, the intense and widespread intrusive pattern indicates that they would be small and discontinuous. It is quite likely, however, that the time/stratigraphic horizons eqivalent to those containing massive sulphides at the Geneva Lake deposit pass through the property, and it is the areas containing this that deserve further attention, if any is to be given at all. This includes the areas immediately surrounding Showings "A" and "B" as well as the zone inbetween, and Showing "X" and a zone passing through it parallel to the "A"-"B" zone. Follow-up work should consist of trenching and geophysical surveys, as indicated above, with special attention paid to the major and minor element chemistry of the zones sampled by trenching, in order to help determine the existence and extent of any possible accumulation of metals. Drilling would then follow, depending upon the results of these efforts.

B.Sc.

B.Sc.



JULY 1982
LINE CUTTING JERRY LONGHURST
ON ASPERSON CLAIMS
EAST END BENNY GREENSTONE BELT

DASH LINES - CHAIN SAW LINES

SOLID LINES = AX LINES
PREVIOUSLY CUT. 1981
SCALE = 1" = 6 chains

1" = 6 ch.

020

THE JASPERSON PROPERTY: AN EXPLORATION UPDATE

Summer field work on the Jasperson Property has been completed, and a few areas deserving further investigation have been located. This is based upon both geological and geophysical criteria. The next stage of exploration, therefore, should involve a more thorough investigation of these locations in order to better determine their nature and extent. The following proposal discusses the details of such a program.

Although VLF and SP data have already been obtained, with a number of anomalies located as a result, the lack of Mag data has not allowed for a clear structural picture to develop at these locations, and within the property as a whole. The first phase of this program, therefore, will involve a Mag survey of the entire property in order to accomplish this goal, and to perhaps locate other hitherto unknown areas of interest as well. Following this, the Mag data will be correlated with that previously obtained, and the five best anomalies will be selected (geological/geophysical) for trenching and sampling. This selection and evaluation process prior to drilling will ensure more fruitful and less expensive drilling.

Costs for this program are based on a per mile/trench basis, and includes; labour, equipment rental/purchase, mobilization, data preparation and complete reports on both the geological and geophysical investigations. Costs are as follows:

Mag Survey
12.5 miles, @ $240.00/mile (incldg detailing)....$3000.00

Trenching
10 trenches, @ $400.00/trench..... 4000.00

Grand Total.....$7000.00

Hopefully, these terms will meet with your approval, so that field work may begin within the next few weeks.

Submitted Most Respectfully...

Avrom E. Howard, B.Sc.

John E. Buckle, B.Sc.

Exploration

X-RAY ASSAY LABORATORIES
LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO

JASPERSON
THREE VALLEYS DRIVE
MILLS, ONTARIO
M3A 3L8

ITTED TO.

JOHN K. JASPERSON
182 THREE VALLEYS DRIVE
DON MILLS, ONTARIO
M3A 3L8

CUSTOMER NO. 224

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
16671	03-DEC-82	12351	22-NOV-82

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

P.O. NO.	CLIENT PROJECT NO		TYPE OF SAMPLES SUBMITTED
			ROCK

REC'D	SHIPPED VIA	WAY BILL NO	SHIPPED FROM
BOX	SELF		

QUANTITY	DESCRIPTION	METHOD	NATIONAL CODE	UNIT COST	AMOUNT
13	AU, AG	FA	10, 7, 0, 0, 0	12.00	156.00
8	AU	FADCP	10, 7, 0, 0, 0	6.50	52.00
8	WHOLE ROCK (2)		6, 0, 0, 0, 0	27.50	220.00
13	FE %	XRF	5, 0, 0, 0, 0	8.50	110.50
5	NI %	XRF	5, 0, 0, 0, 0	7.00	35.00
13	CU %	XRF	5, 0, 0, 0, 0	6.00	78.00
13	ZN %	XRF	5, 0, 0, 0, 0	7.00	91.00
8	PB %	XRF	5, 0, 0, 0, 0	7.00	56.00
8	DIGESTION		7, 0, 0, 0, 0	1.25	10.00
1	DILUTION		7, 0, 0, 0, 0	0.60	0.60
8	FE PPM	DCP	7, 0, 0, 0, 0	0.90	7.20
8	CU PPM	DCP	7, 0, 0, 0, 0	0.90	7.20
8	ZN PPM	DCP	7, 0, 0, 0, 0	0.90	7.20
8	AG PPM	DCP	7, 0, 0, 0, 0	0.90	7.20
8	CD PPM	DCP	7, 0, 0, 0, 0	0.90	7.20
8	PB PPM	DCP	7, 0, 0, 0, 0	0.90	7.20
21	PREPARATION ROCK		1, 0, 0, 0, 0	2.50	52.50

ASSAY ON PATENTED CLAIMS

90.48
- 7.57 - (assay on patented claims)

			SUB-TOTAL	$ 904.80
SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES	
OTHER	817.6		SURCHARGE - RUSH SERVICE	
			TOTAL IN CANADIAN FUNDS	$ 904.80

AL INVOICE

assay on unpatented claims

Corporation

JUNE 25 82

June 25 19 82

S. V. BURR, M.A.
CONSULTING GEOLOGIST

TELEPHONE
~~GE. 9-7904~~
964-3238

~~130 ELLIOTT STREET~~
~~LONDON, ONT.~~
211-145 Carlton St.

In Account with TORONTO M5A 3W1

John Jasperson JOHN JASPERSON

To Professional Services, $ 400.00

Evaluation of Geoscientific Surveys on the Hess Twp Property

EVALUATION OF GEOSCIENTIFIC SURVEYS ON THE HESS TWP PROPERTY

Paid 3/12/82 cheque 20 Canada Trust

Aargo Exploratio
consultants & contractors in Minerals Explo.

Office: RR 1, Breslau, Ont. N0B 1M0 (519) 648-3016 • Residence: 41 Shallmar Blvd, Toronto, Ont. M6C 2K1 (416) 787-711

Report on the Proton Precession Magnetometer Survey of the

Jasperson Property

Hess Township, Ontario

October, 1982

Prepared by: John E. Buckle, B.Sc.

INTRODUCTION

The Jasperson Property consists of eight claims located in the north-central sector of Hess Township, approximately 20 miles north-east of the town of Cartier, in the Sudbury, District. In addition, it is situated 1.5 miles east of the Geneva Lake Mine, a former producer of zinc and lead, and in a regional sense is on-strike with it. The property includes three patented claims (S6631-3), two claims staked in 1980 (S600759-60), and three staked in July 1982 (469265-7). In order to fully evaluate the economic mineral potential of this property, a geologist and a geophysicist were commissioned to carry out geological mapping and a self-potential (SP) survey respectively, across the property. In addition, a VLF survey was conducted. Prior to the above mentioned surveys pedogeochemical and SP surveys had been conducted over parts of the property. Finally, a proton precession magnetometer survey was conducted over the entire property to be followed by trenching or possibly diamond drilling. This report covers the magnetometer survey conducted on the Jasperson Property in October of 1982.

ACCESS, TOPOGRAPHY

The property lies just north of and straddling an old logging road running east from highway 144, and road acess is available by two-wheel drive vehicle during the snow-free months. The topography of the area is characterized by a few ridges striking nort-east and are steep in places and glacial features with similar strike direction. Two extensive swamps,

one located in the east (spruce-Labrador tea) and the other in the west which is almostly completely overgrown with grasses.

Survey Proceedure and Equipment

The magnetometer survey was conducted by the authour between the 19th and 23rd of October 1982 on a pre-established, picketed grid having line spacing of 3 chains and stations picketed at 1 chain intervals.

In order to correct for diurnal drift the values at all baseline stations were ascertained at least twice with time intervals between readings not greater than 1½ hours. With the baseline values established the survey lines were run and subsequently adjusted for drift to the control line(baseline)

Interpretation

The most notable feature of the survey data is the Nippissing diabase dike striking northwest-southeast across the survey area. Local variations within the dike are probably due to topographic changes.

Anomaly #1

This anomaly exhibits a dipole response characteristic and thus is probably an isolated response reflecting a contact metamorphic variation between the intermediate metavolcanics and the felsic intrusives.

Anomaly#2

Anomaly #2 is of some interest as it seems to represent a significant response in both size and strength.

The significance of this response is enchanced by a coincident self-potential anomaly.

Anomaly #3

This anomaly would seem to strike parallel to the dike, however due to lack of data this can only be assumed. The strength of the anomaly would indicate a high concentration of magnetic minerals, possibly iron formation or pyrrhotite.

Anomaly #4

Although arealy small this anomaly is valid and warrants investigation. Little geological information is available for this area and it is difficult to guess a probable source. It is possible that this response may relate to anomaly #3 as an outlier or a faulted offset.

Anomaly #5

Anomaly #5 is the most interesting of the survey most notably because it is coincident with a self-potential anomaly. Topographically the anomaly is on a high outcropping ridge. This anomaly is likely a metallic bedrock source.

Also of note in the survey results are the anomalies on lines 8w and 6w. These mag highs are probably associated with hornblende gabbro mapped in outcrops in the area of the anomalies.

The response lying south of showing "B" shows a broad zone of moderate magnetic susceptibility with an adjacent low. Coincidentally showing "A"also has an associated mag low.

Recommendations and Conclusions

The magnetometer survey has helped to determine not only the geological boundaries which had previously been interpreted but also has given sufficient evidence to substantiate the interpretation of the structure. Notably the existance of the offsetting fault in the Nippissing Diabase dike.

It is recommended that the S.P. anomalies located in previous surveys and enhanced by magnetic high values be trenched and sampled to determine the source. The areas recommended specifically are anomalies #1, #2, #4 and #5.

An area of further investigation is recommended. On lines 9W, 12W and 15W between 20 and 35N, insufficient S.P. and mag data has been available to conclusively eliminate the potential of the zone.

With the indication of a possible fault line zone of weakness it may be prudent to gather more data in this area.

Generally, the survey work conducted on the property has been thorough and the probabilities of a large mineral deposit are slight. In this light, only limited further work is suggested.

John E.Buckle, B.Sc.

John K Jasperson
182 Three Valleys Dr
Don Mills, Ont M3A 3L8
447-6557

SAMPLE LIST

Sample No.	Location	Rock Type	Analysis
3933	12.5E/4.5S	mafic dyke w/ Py	Cu,Zn,Fe,Ni,Au,Ag
3934	12.5E/4.5S	volcaniclastics	Whole Rock, Trace
3935	17E/4N	mafic dyke	Cu,Zn,Fe,Ni,Au,Ag
3936	17E/4N	mafic dyke	Whole Rock, Trace
3937	17.5E/31.5N	mafic dyke	Cu,Zn,Fe,Ni,Au,Ag
3938	17.5E/31.5N	mafic dyke	Whole Rock, Trace
3939	16E/33N	mafic dyke	Cu,An,Fe,Ni,Au,Ag
3940	16E/33N	mafic dyke	Whole Rock, Trace
3941	16E/33N	volcaniclastics	Whole Rock, Trace
3942	3.5W/3.5N	monzonite	Cu,Zn,Fe,Pb,Au,Ag
3943	3.5W/3.5N	monsonite	Whole Rock, Trace
3944	11.5E/4.5S	mafic dyke	Cu,Zn,Fe,Ni,Au,Ag
3945	11.5E/4.5S	volcaniclastics	Whole Rock, Trace
3946	11.5E/4.5S	volcaniclastics	Cu,Zn,Fe,Pb,Au,Ag
3947	11.5E/4.5S	monzonite	Cu,Zn,Fe,PB,Au,Ag
3948	11W/10S	cherty sediments	Cu,Zn,Fe,Pb,Au,Ag
3949	11W/10S	cherty sediments	Cu,Zn,Fe,Pb,Au,Ag
3950	11W/10S	chert (exhalite)	Whole Rock, Trace
3951	11W/10S	chert (w/ Py)	Whole Rock, Trace
3952	11W/10S	cherty sediments	Cu,Zn,Fe,Pb,Au,Ag
3953	11W/10S	spotted chert	Cu,Zn,Fe,Pb,Au,Ag
3954	11W/10S	chert (w/ biot., ser.)	Cu,Zn,Fe,Pb,Au,Ag

† 3936 17E 4N WR & Trace may be missing

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: JOHN K. JASPERSON
182 THREE VALLEYS DRIVE
DON MILLS, ONTARIO
M3A 3L8

CUSTOMER NO. 774

DATE SUBMITTED
22-NOV-82

REPORT 16671

REF. FILE 12351-Q1

21 ROCKS

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU OZ/TON	FA	0.001
AU PPB	FADCP	2.000
WRMAJ %	XRF	0.010
FE %	XRF	0.010
FE PPM	DCP	2.000
NI %	XRF	0.010
CU %	XRF	0.010
CU PPM	DCP	0.500
ZN %	XRF	0.010
ZN PPM	DCP	0.500
WRMIN PPM	XRF	10.000
AG OZ/TON	FA	0.100
AG PPM	DCP	0.500
CD PPM	DCP	1.000
PB %	XRF	0.010
PB PPM	DCP	2.000

X-RAY ASSAY LABORATORIES LIMITED

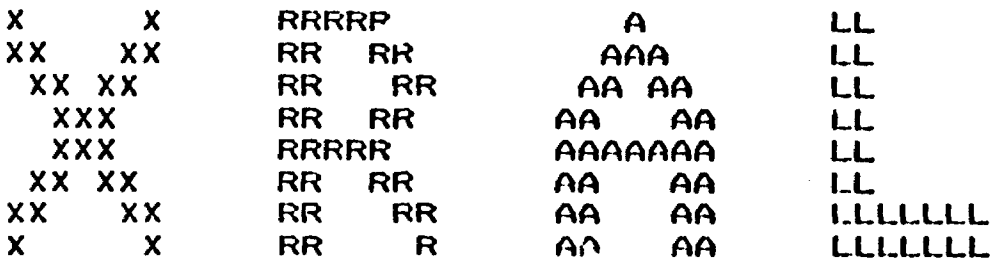
DATE 03-DEC-82

CERTIFIED BY .....

SAMPLE	AU OZ/TON	AU PPB	FE %	FE PPM	NI %
3933	NIL	--	5.25	--	TRACE
3934	--	<2	--	50000	--
3935	NIL	--	6.10	--	0.01
3937	NIL	--	5.10	--	TRACE
3938	--	<2	--	62000	--
3939	NIL	--	5.18	--	0.01
3940	--	<2	--	130000	--
3941	--	<2	--	14000	--
3942	NIL	--	0.64	--	--
3943	--	<2	--	7700	--
3944	NIL	--	6.79	--	0.01
3945	--	<2	--	55000	--
3946	NIL	--	6.21	--	--
3947	NIL	--	0.79	--	--
3948	NIL	--	2.26	--	--
3949	NIL	--	5.45	--	--
3950	--	<2	--	12000	--
3951	--	<2	--	37000	--
3952	NIL	--	2.28	--	--
3953	NIL	--	2.55	--	--
3954	NIL	--	2.95	--	--

SAMPLE	CU %	CU PPM	ZN %	ZN PPM	AG OZ/TON
3933	0.01	--	0.02	--	NIL
3934	--	52.0	--	110.	--
3935	NIL	--	0.02	--	NIL
3937	NIL	--	0.01	--	NIL
3938	--	8.5	--	33.0	--
3939	NIL	--	0.01	--	NIL
3940	--	6.0	--	130.	--
3941	--	6.0	--	18.0	--
3942	NIL	--	TRACE	--	NIL
3943	--	4.5	--	13.0	--
3944	0.06	--	0.02	--	NIL
3945	--	79.0	--	90.0	--
3946	NIL	--	0.02	--	NIL
3947	NIL	--	TRACE	--	NIL
3948	NIL	--	0.01	--	NIL
3949	NIL	--	0.04	--	NIL
3950	--	11.0	--	20.0	--
3951	--	41.0	--	380.	--
3952	NIL	--	0.01	--	NIL
3953	NIL	--	TRACE	--	NIL
3954	TRACE	--	TRACE	--	NIL

SAMPLE	AG PPM	CD PPM	PB %	PB PPM
3933	--	--	--	--
3934	0.5	<1	--	8
3935	--	--	--	--
3937	--	--	--	--
3938	1.0	<1	--	28
3939	--	--	--	--
3940	0.5	<1	--	18
3941	<0.5	<1	--	4
3942	--	--	0.02	--
3943	<0.5	<1	--	26
3944	--	--	--	--
3945	0.5	<1	--	16
3946	--	--	TRACE	--
3947	--	--	TRACE	--
3948	--	--	TRACE	--
3949	--	--	TRACE	--
3950	<0.5	<1	--	34
3951	0.5	2	--	44
3952	--	--	0.01	--
3953	--	--	0.01	--
3954	--	--	0.01	--



XRF - WHOLE ROCK ANALYSIS

JOHN K. JASPERSON

REPORT 16671 03-DEC-82

XRF W. R. A. SUMS INCLUDE ALL ELEMENTS DETERMINED.
FOR SUMMATION ELEMENTS ARE CALCULATED AS OXIDES.

X-RAY ASSAY LABORATORIES 03-DEC-82 REPORT 16671 REFERENCE FILE 12351 PAGE 1

SAMPLE	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TI02	P205	CR203	LOI	SUM
3934	65.2	14.1	1.91	2.83	3.71	1.37	7.76	0.13	0.61	0.13	0.01	1.85	99.7
3938	42.5	8.23	18.2	4.31	1.72	0.23	9.57	0.21	0.69	0.08	0.00	14.1	99.9
3940	39.5	15.9	1.69	11.2	1.18	0.80	20.3	0.20	1.90	0.20	0.01	6.16	99.1
3941	81.8	8.79	0.22	1.28	1.38	1.99	2.60	0.02	0.10	0.02	0.02	1.31	99.6
3943	72.3	13.9	0.75	0.54	4.05	5.00	1.25	0.01	0.23	0.08	0.01	0.62	98.9
3945	63.7	13.5	2.23	3.04	2.52	3.21	8.65	0.09	0.58	0.14	0.01	1.16	98.8
3950	83.3	7.12	0.10	0.25	1.13	3.87	1.51	0.00	0.11	0.02	0.02	1.00	98.5
3951	66.3	12.6	1.42	1.41	0.60	7.51	5.71	0.05	0.46	0.10	0.01	2.47	98.7

SAMPLE	RB	SR	ZR
3934	40	150	160
3938	0	120	50
3940	20	0	160
3941	70	0	100
3943	150	220	170
3945	180	230	140
3950	60	80	180
3951	120	140	270

To: Mr. John Jasperson:

EVALUATION OF GEOSCIENTIFIC SURVEYS ON THE HESS TOWNSHIP PROPERTY

GENERAL COMMENTS

After detailed studies, the writer is satisfied that each of the four surveys: Geological, Self Potential, VLF and Magnetic, were conducted in an efficient manner. There are some unusual features on the S.P. map, which will be reviewed below.

Two of the surveys deserve special comments.

MAGNETOMETER SURVEY

The most interesting feature of this survey is the flexure indicating a NNE to NE fault offsetting the magnetic diabase dyke at the north end of Line 9W, suggesting a west side throw of some 160 feet north. A creek valley coincides. In view of the S.P. results, this fault may have economic interest.

SELF POTENTIAL SURVEY

Most of the several anomalies found, including those over the two old mineralized trenched areas, are short and narrow, and are not considered high priority targets, although they should not be ignored.

The larger, un known anomalies, "A", "B" and "E", do warrant more immediate investigation next Spring.

"A" - This strong anomaly runs up Line 12W north of the creek, and weaker anomalies from the base line all the way up. This cross-cutting anomalous condition would be questionable were it not that the original Jasperson survey showed similar anomalous values on the same line. As it is, this line should be re-checked and, if anomalous conditions are found, traverses east-west at 100 to 200 foot intervals should be conducted as shown on page 13, Figure 7, of the writer's paper: "A GUIDE TO PROSPECTING BY THE SELF-POTENTIAL METHOD".

The interesting feature of this anomaly is its close proximity to the magnetically-indicated fault.

"B-1" - This strong anomaly is on Line 12W north of "A" (although the two may intersect) and near the north boundary of the diabase dyke. It may be the westerly extension of the somewhat weaker "B-2" anomaly on the eastern side of the fault. With some detailed "peaking" (Fig 9, page 14 (see above)), "B-1" should be accessible to manual stripping.

"E" - which lies just north of the base line, is of interest because of its length (2200) feet plus, and width. It may link up with the old copper area (Anomaly D).

A rather unusual feature is two localized areas of strong positives (Line 2W, south of creek, and Line 3W, north end.) At first glance, one might suspect an operator error OR MANGANESE. Neither, however, seem likely. The writer has run into similar local high positives on at least two occasions. All are located besides known or suspected NE faults. His explanation is that these are local areas of compression due to fault movement, such that the rock became much more dense and, therefore, much more resistant(non-conducting) than neighbouring rocks.

NOTES

(1) To satisfy Assessment (and OMEP) requirements, a Magnetometer Report is needed. This should wrap up the four surveys so that any inter-relationships are pointed out.

(2) ALL maps should show claim posts, claim lines and claim numbers, north arrows (astro and magnetic), and grid lines (including the geological map)

RECOMMENDATIONS

After break-up (or later in the drier season), anomalies "A", "B-1" and "E" should be investigated to see if they can be exposed manually. (See also comments under "A" and "B-1" above).

S. V. Burr

S. V. Burr
November 24, 1982.

900

	OMEP	DATA WORK CREDITS	MINING RECORDER

OMEP DOCUMENTS
- FORM 2 ✓
- EXPLANATION OF CHARGE ✓
- VOUCHERS ✓

TECHNICAL DOCUMENTS: RPTS; MAPS; VOUCHERS

AUG 82 RPT	✓	✓	
SP MAP	✓	✓	
" TECH APPNDX		✓	
GEOLOGICAL MAP	✓	✓	
" TECH APPNDX		✓	
VLF DIP ANGLE MAP	✓	✓	
" FIELD STRNGTH "	✓	✓	
" TECH APPNDX		✓	
LINE CUTTING MAP	✓	✓	
TRENCHING MAP	✓	✓	
ASSAY RESULTS	✓	✓	
TRENCHING VOUCHER		✓	
ASSAY "		✓	
[illegible]			
MAGNETOMETER RPT	✓	✓	
MAG CONTOUR MAP	✓	✓	
" CORRECTD DATA	✓	✓	
" TECH APPNDX		✓	
WORK CREDIT REPT		✓	✓
EVALUATING REPT	✓	✓	
COMPLATION MAP	✓	✓	

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) SELF POTENTIAL

Township or Area HESS TOWNSHIP

Claim Holder(s) J. JASPERSON

Survey Company Hargo Explorations

Author of Report John Buckle

Address of Author 958 Eglinton Ave E #106, Tor.

Covering Dates of Survey July 21 - Aug 27/82
(linecutting to office)

Total Miles of Line Cut _____

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim

Geophysical
- Electromagnetic _____
- Magnetometer _____
- Radiometric _____
- Other S.P. 40

Geological _____

Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Dec. 15 '82 SIGNATURE: John Buckle
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	6632
P	6633
S	469 265 ✓
S	469 266 ✓
S	469 267 ✓
S	600 760

If space insufficient, attach list

TOTAL CLAIMS _____

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations 910 Number of Readings 910

Station interval 1/2 chain (33 ft) Line spacing 3 chains

Profile scale

Contour interval 25 millivolts

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument

Coil configuration

Coil separation

Accuracy

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency (specify V.L.F. station)

Parameters measured

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time Frequency

– Off time Range

– Delay time

– Integration time

Power

Electrode array

Electrode spacing

Type of electrode

SELF POTENTIAL

Instrument Digital millivolt meter Range ± 1 millivolt.

Survey Method gradient. (fixed pot - base - moving pot)

Corrections made pot difference & base station

RADIOMETRIC

Instrument

Values measured

Energy windows (levels)

Height of instrument Background Count

Size of detector

Overburden

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey

Instrument

Accuracy

Parameters measured

Additional information (for understanding results)

AIRBORNE SURVEYS

Type of survey(s)

Instrument(s)

(specify for each type of survey)

Accuracy

(specify for each type of survey)

Aircraft used

Sensor altitude

Navigation and flight path recovery method

Aircraft altitude Line Spacing

Miles flown over total area Over claims only

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) MAGNETOMETER

Township or Area HESS TOWNSHIP

Claim Holder(s) J. JASPERSON

Survey Company Aurgo Explorations

Author of Report John Buckle

Address of Author 958 Eglinton Ave E #104, Toronto

Covering Dates of Survey Oct. 10 & Oct 20/82
(linecutting to office)

Total Miles of Line Cut 8 miles

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	
–Magnetometer	20
–Radiometric	
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Dec. 15 '82 SIGNATURE: John Buckle
Author of Report or Agent

Res. Geol. _____ Qualifications 3833

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

P 6631
P 6632
P 6633
S 600 759
S 600 760
S 469 265
S 469 266
S 469 267

If space insufficient, attach list

TOTAL CLAIMS _____

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations ~~1270~~ 750 Number of Readings ~~1300~~ 800

Station interval 1 chain Line spacing 3 chains

Profile scale

Contour interval 200 gammas

MAGNETIC

Instrument Scintrex MP2

Accuracy – Scale constant ± 1 gamma, digital

Diurnal correction method Base station, distributed in d/gram

Base Station check-in interval (hours) < 2 hours

Base Station location and value base line control established
by 0+00, 0+00 and 18+50 W, 17+00 N

ELECTROMAGNETIC

Instrument

Coil configuration

Coil separation

Accuracy

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency
(specify V.L.F. station)

Parameters measured

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time Frequency

– Off time Range

– Delay time

– Integration time

Power

Electrode array

Electrode spacing

Type of electrode

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) VLF

Township or Area HESS TOWNSHIP

Claim Holder(s) J. JASPERSON

Survey Company Aargo Explorations

Author of Report John Buckle

Address of Author 458 Eglinton Ave E. #106, Toronto

Covering Dates of Survey ~~Field~~ Aug 4 to Aug 27/82 (linecutting to office)

Total Miles of Line Cut 8 miles

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	20
–Magnetometer	
–Radiometric	
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____ (enter days per claim)

DATE: Dec 15 '82 SIGNATURE: John Buckle
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	6631
P	6632
P	6633
S	600759
S	600 760
S	469 265
S	469 266
S	469 267

If space insufficient, attach list

TOTAL CLAIMS _____

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations 1270 Number of Readings 1270

Station interval 1/2 chain (33 ft) Line spacing 200' (3 chains)

Profile scale 1" = 25°

Contour interval 25 %

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument CRONE RADEM

Coil configuration

Coil separation

Accuracy ± 2 degrees inphase ± 5% field strength

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency 24.8 KHz, SEATTLE WASHINGTON (NLK)
(specify V.L.F. station)

Parameters measured Dip angle + Field strength ratio

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument

Method ☐ Time Domain ☐ Frequency Domain

Parameters -- On time Frequency

-- Off time Range

-- Delay time

-- Integration time

Power

Electrode array

Electrode spacing

Type of electrode

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geological

Township or Area Hess Township

Claim Holder(s) T. Jasperson

Survey Company Hugo Explorations

Author of Report A E Hennigs

Address of Author 41 Shallmar Blvd, Toronto

Covering Dates of Survey ~~Aug 6~~ (linecutting to office) – Aug 27/82

Total Miles of Line Cut _____

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	
–Magnetometer	
–Radiometric	
–Other	
Geological	20
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Dec. 15 '82 SIGNATURE: John Bradley
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	6631
P	6632
P	6633
S	600 759
S	600 760
S	469 265
S	469 266
S	469 267

If space insufficient, attach list

TOTAL CLAIMS _____

OFFICE USE ONLY

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General Geological mapping along the soil grid survey lines and outcrops

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)
Extraction Method _____
Analytical Method _____
Reagents Used _____

Field Laboratory Analysis
No. (_____ tests)
Extraction Method _____
Analytical Method _____
Reagents Used _____

Commercial Laboratory (_____ tests)
Name of Laboratory _____
Extraction Method _____
Analytical Method _____
Reagents Used _____

General _____

SUMMARY OF 1982 WORK CREDITS
JASPERSON CLAIMS HESS TWP.
JOHN BUCKLE GEOPHYSICIST & AURORA HOWARD GEOLOGIST

	SELF POTENTIAL 1ST SURVEY NEW CLAIMS	SELF POTENTIAL EXTENDED SURVEY	MAGNETOMETER	VLF	GEOLOGICAL	TRENCHING	1982 TOTAL
S 469265	40		20	20	20		100
S 6	40		20	20	20	100	200
S 7	40		20	20	20	1	101
S 600760		20	20	20	20	80	160
S 600759			20	20	20	100	160
	JOHN BUCKLE	JOHN BUCKLE	JOHN BUCKLE AURORA HOWARD	JOHN BUCKLE AURORA HOWARD	AURORA HOWARD	AURORA HOWARD	721

John K. Jasperson
182 Three Valleys Dr.
Don Mills, Ont. M3A 3L8
447-6557

1983 01 07 2.5319

Mining Recorder
Ministry of Natural Resources
199 Larch Street
Sudbury, Ontario
P3E 5P9

Dear Sir:

We have received data for Assaying and reports and maps for a Geological, Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims S 469265 et al in the Township of Hess.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

DW:sc

cc: Mr. John K. Jasperson
Don Mills, Ontario

cc: MR. John Buckle
Toronto, Ontario

- DO not use shaded areas below

Type of Survey(s): SELF POT @ VLF @ MAGNETOMETER & GEOLOGICAL — Township or Area: HESS

Claim Holder(s): JOHN K JASPERSON — Prospector's Licence No: A44575

Address: 182 THREE VALLEYS 1212 DON MILLS M3A 3L8 — DON MILLS M3A 3L8

Survey Company: AURORE HOWARD GEOLOGIST & JOHN BUCKLE GEOPHYS — Date of Survey (from & to): Day 5 Mo 8 Yr 82 / Day 30 Mo Oct Yr 82 — Total Miles of line Cut: 5.04 + .875 = 5.42

Name and Address of Author (of Geo-Technical report): JOHN BUCKLE GEOPHYS 958 EGLINTON AVE E PO BOX 106 M4G 2L3 — GEOLOGIST AURORE HOWARD 41 SHELLMAR BLVD TORONTO M1C 2K1

Credits Requested per Each Claim in Columns at Right

Special Provisions

For first survey:
Enter 40 days. (This includes line cutting)

For each additional survey: using the same grid:
Enter 20 days (for each)

	Days per Claim
Geophysical - Electromagnetic SELF POTENTIAL	40
Geophysical - Magnetometer	20
Geophysical - Radiometric	
Geophysical - Other VLF	20
Geological	20
Geochemical	

Man Days

Complete reverse side and enter total(s) here

	Days per Claim
Geophysical	
- Electromagnetic	
- Magnetometer	
- Radiometric	
- Other	
Geological	
Geochemical	

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.

	Days per Claim
Electromagnetic	
Magnetometer	
Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	469265	100
	469266	100
	469267	100
	600760	80
	600759	60

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

Total number of mining claims covered by this report of work.

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions

Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date | Recorded Holder or Agent (Signature)

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

John K. Jasperson
182 Three Valleys Dr.
Don Mills, Ont M3A 3L8
447-5562

Date Certified: Dec 14/82 — Certified by (Signature): [signature]

(81/9)

Ontario Resources

(Geophysical, Geological, Geochemical and Expenditures)

The Mining Act

Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL)

Township or Area: HOSS TOWNSHIP (M-930)

Claim Holder(s): JOHN K JASPERSON (JOHN K JASPERSON)

Prospector's Licence No.: A44575

Address: 182 THREE VALLEYS DR

Survey Company: HARGO EXPLORATIONS

Date of Survey (from & to): Day 1 Mo. 8 Yr. 82 — Day 30 Mo. 12 Yr. 82

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): ARLENE HOWARD 41 SHALMAR BLVD TORONTO ONT M6C2K1

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical – SELF-POTENTIAL ~~– Electromagnetic~~	40
	– Magnetometer	20
For each additional survey: using the same grid: Enter 20 days (for each)	– Radiometric	
	– Other VLF	20
	Geological	20
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	– Electromagnetic	
	– Magnetometer	
	– Radiometric	
	– Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	469265	
	469266	
	469267	
	S600759	40
	S600760	70

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
FEB – 8 1983
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 5

Expenditures (excludes power stripping)

Type of Work Performed: GEOCHEMICAL ANALYSES

Performed on Claim(s): S600759, S600760

Calculation of Expenditure Days Credits

Total Expenditure: $ 904.80 ÷ 15 = Total Days Credits: 60

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
560	Feb 4/83	J.C. Miller
	Date Approved as Recorded	Branch Director

Date: Jan 18/83 Recorded Holder or Agent (Signature): John K. Jasperson

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Arlene E. Howard 41 Shalmar Blvd Toronto M6C 2K1

Date Certified: JAN 19/83 Certified by (Signature):

Ontario — Geochemical and Expenditures)

The Mining Act

Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): TRENCHING	Township or Area: HESS
Claim Holder(s): JOHN K. JASPERSON	Prospector's Licence No.: A44575
Address: 182 THREE VALLEYS DR DON MILLS M3P3L8	
Survey Company	Date of Survey (from & to): Day NOV Mo. 82 Yr. — Day NOV Mo. 82 Yr.
Total Miles of line Cut	
Name and Address of Author (of Geo-Technical report): AUROM E HOWARD 41 SHALMAR BLVD TORONTO M6C 2K1	

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	469265	
	469266	100
	469267	1
	600760	80
	600759	100

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

Total number of mining claims covered by this report of work.

Expenditures (excludes power stripping)

Type of Work Performed: TRENCHING + ASSAYING

Performed on Claim(s): 600759, 600760, 469266, 469267

$3600 + 617.8 = 4217.8$

Calculation of Expenditure Days Credits

Total Expenditures: $ 4217.8 ÷ 15 = Total Days Credits: 281

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date	Recorded Holder or Agent (Signature)
DEC 14/82	

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address: John K. Jasperson
182 Three Valleys Dr.
Don Mills, Ont. M3A 3J8

Date Certified | Certified by (Signature)

Summary of 1982 Work Credits

Jasperson Claims - Hess Twp.

CLAIM	Inst SP	cont'd SP	MAG	VLF	GEOL.	TRENCHING & ASSAYING	TOTAL
S469265	40		20	20	20		100
469266	40		20	20	20		100
469267	40		20	20	20		100
S 600759			20	20	20	40	100
600760		20	20	20	20	~~37~~ 42 M	117

40 days applied to all claims.

DATE Dec 14 1982 57843

RECEIVED FROM MR. JOHN JASPERSON

NINE HUNDRED AND FOUR — ~~$~~ DOLLARS IS 904.89

FOR INVOICE # 16671 X-RAY ASSAY LABORATORIES LIMITED

FROM 1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4

416-445-5755

HOW PAID			ACCOUNT		
CASH			AMT. OF ACCT.		
CHEQUE	✓		AMT. PAID		
MONEY ORDER			BALANCE DUE		

BY

Ontario Approval

Mining Lands Comments

- Colour outcrops on Geol. map
Colour OUTCROPS ON GEOL MAPS

☐ To: Geophysics

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☑ To: Geology - Expenditures Mr. Kustra

Comments

geology maps should have been colored. Don't need to see it again
ok.

☒ Approved ☐ Wish to see again with corrections | Date June 20/83 | Signature C Kustra

☐ To: Geochemistry

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

Ontario Resources

Approval

Mining Lands Comments

☑ To: Geophysics R Barlow

Comments		
☑ Approved ☐ Wish to see again with corrections	Date July 26/83	Signature Douglas H. Pitcher

☐ To: Geology - Expenditures

Comments		
☐ Approved ☐ Wish to see again with corrections	Date	Signature

☐ To: Geochemistry

Comments		
L.D.		
☐ Approved ☐ Wish to see again with corrections	Date	Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

August 5, 1983 2.5319

John K. Jasperson
182 Three Valleys Drive,
Don Mills, Ontario
M3A 3L8

Dear Sir:

RE: Geological and Geophysical (Electromagnetic, Magnetometer, and Self-Potential) Survey submitted on Mining Claims S 469265 et al in the Township of Hess.

Enclosed are the plans, in duplicate, for the above-mentioned Geological survey. Please show the outcrops designated by colour and return them to this office.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

D. Kinvig:mc

Encl.

cc: Mining Recorder
Sudbury, Ontario

Ministry of Natural Resources

Ontario

Notice of Intent

for Technical Reports

1983 11 25

2.5319

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

Ministry of Natural Resources

Dec 12/83

Your file

1983 11 25

Our file: 2.5319

Mr. V.C. Miller
Mining Recorder
Ministry of Natural Resources
199 Larch Street
Sudbury, Ontario
P3E 5P9

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

D. Kinvig:mc

Encls:

cc: John K. Jasperson
182 Three Valleys Drive
Don Mills, Ontario
M3A 3L8

CC: MR G.H FERGUSON
MINING & LANDS COMMISSIONER
TORONTO, ONTARIO

Ontario Natural Resources

Work Credits

2.5319

Date: 1983 11 25

Mining Recorder's Report of Work No

Recorded Holder: JOHN K. JASPERSON

Township or Area: HESS TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	S 469265 to 67 inclusive 600760
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
SELF POTENTIAL 40 days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☐ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☒ not sufficiently covered by the survey ☐ Insufficient technical data filed

S 600759

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on

Ontario

1983 11 25 | Work No.

Recorded Holder
JOHN K, JSAPERSON

Township or Area
HESS TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic 20 days Magnetometer 20 days Radiometric ____ days Induced polarization ____ days Other ____ days Section 77 (19) See "Mining Claims Assessed" column Geological ____ days Geochemical ____ days Man days ☐ Airborne ☐ Special provision ☒ Ground ☒ ☒ Credits have been reduced because of partial coverage of claims. ☐ Credits have been reduced because of corrections to work dates and figures of applicant.	S 469265 to 67 inclusive 600760

Special credits under section 77 (16) for the following mining claims

15 DAYS MAGNETOMETER AND 10 DAYS ELECTROMAGNETIC

S 600759

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19) — 60:

Ontario Natural Resources

Work Credits

2.5319

Date	Mining Recorder's Report of Work No.
1983 11 25	

Recorded Holder: JOHN K. JASPERSON

Township or Area: HESS TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	S 469265 to 67 inclusive 600759 - 60
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 20 days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19) — 60;

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.5319

Date 1983 11 25

Mining Recorder's Report of Work No 83-20

Recorded Holder	JOHN K. JASPERSON
Township or Area	HESS TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	$904.80 spent on assaying samples taken from mining claims S 600759-60
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	60 days credit allowed which may be grouped in accordance with Section 76(6) of the Mining Act
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☐ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ Insufficient technical data filed

The Mining Recorder may reduce the above credits as necessary in order that the total number of approved assessment days recorded on

1983 12 20

Your File: 83-20
Our File : 2.5319

Mining Recorder
Ministry of Natural Resources
99 Larch Street
Sudbury, Ontario
P3E 5P9

Dear Sir:

RE: Sample Assay Expenditures
on Mining Claims S 469265 et al in the
Township of Hess.

The Sample Assay Expenditures assessment work credits as shown on the attached statement have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

D. Kinvig:sc

cc: John K. Jasperson
Don Mills, Ontario

cc: Resident Geologist
Sudbury, Ontario

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

1983 12 20

Your File: 83-20

Our File : 2.5319

Mining Recorder
Ministry of Natural Resources
59 Larch Street
Sudbury, Ontario
P3E 5P9

Dear Sir:

RE: Geological & Geophysical (Electromagnetic, Magnetometer, and Self-Potential) Survey submited on Mining Claims S 469265 et al in the Township of Hess.

The Geological & Geophysical (Electromagnetic, Magnetometer, and Self Potential) Survey assessment work credits as listed with my Notice of Intent dated November 25, 1983 have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

D. Kinvig:sc

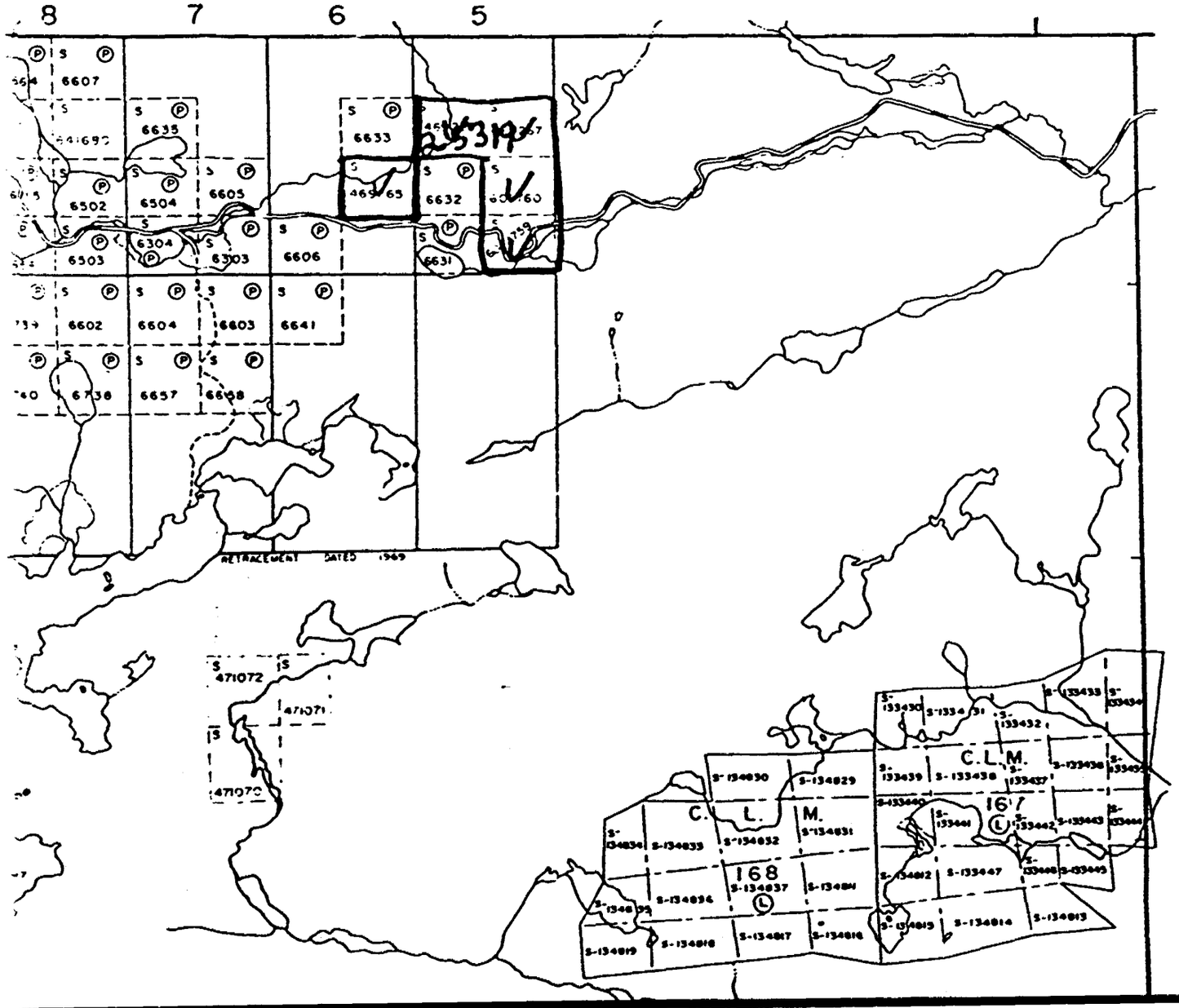
cc: John K. Jasperson
182 Three Valleys Drive
Don Mills, Ontario
M3A 3L8

cc Resident Geologist
Sudbury, Ontario

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

MUNSTER TWP. M.880

LEINSTER TWP. M.985



TY TWP. M.920

TOWNSHIP OF

HESS

M-930

DISTRICT OF SUDBURY

SUDBURY MINING DIVISION

SCALE : 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.
PATENTED FOR SURFACE RIGHTS ONLY	⊖

FOR ADDITIONAL INFORMATION SEE MAPS:

HESS-0026 # (1-8)

17W 14W 11W 8W 5W 2W 1SW 1SW 9W 6W 3W 0 3E 6E 9E 12E 15E 18E

S6633

BASE LINE-2

469266

469267

Old Bog

Gone Lake Marsh

N

BASE LINE

S600760

S6632

469265

Benny Road

Geneva Lake Mine, approx. ½ miles

Field Camp

John's Road

Marshy Lake

Beaver Lake

S6631

S600759

JASPERSON PROPERTY

Hess Township, Ontario

HESS-0026 #1

DATA BY: DATE:

Scale: 1 inch = 3 chains

2.5319

JASPERSON PROPERTY

Hess Township, Ontario

Geology Map

Data By: A.H. Howard Date: Aug. '82

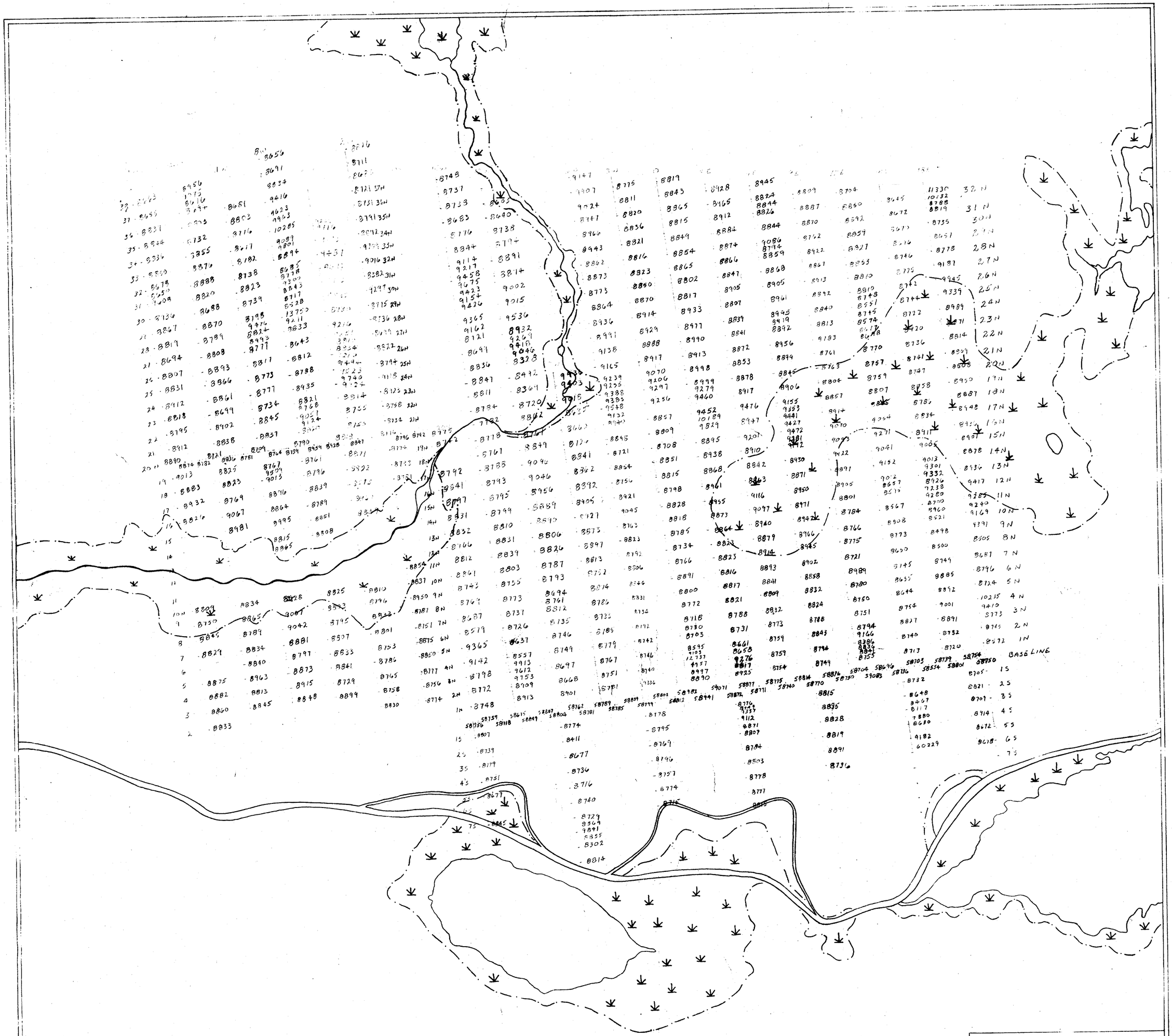
Scale: 1 inch = 3 chains

HESS-0026- #2

2.5319

41114SW0024 0026 HESS

220



Background Datum 59,000 γ

HESS-0026 #4

JASPERSON PROPERTY

Hess Township, Ontario

TOTAL FIELD PROTON PRECESSION

CORRECTED MAGNETOMETER SURVEY

DATA BY: John Buckle DATE: Oct 82

Scale: 1 inch = 3 chains

2.5319

Profile Scale
1" = 25°
Conductor Axis
Assumed Conductor Axis

HESS-0026 #5

JASPERSON PROPERTY

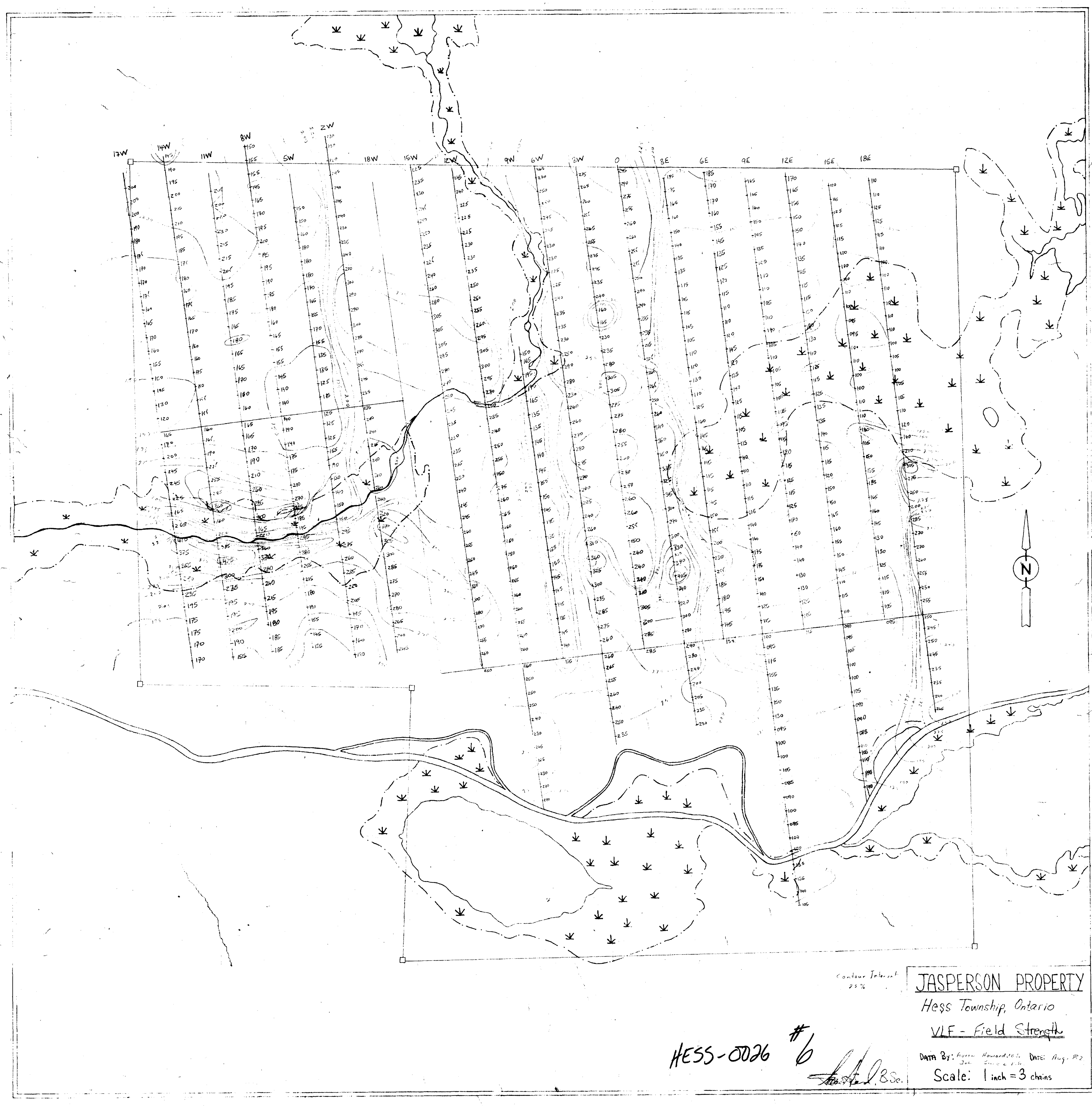
Hess Township, Ontario

VLF - Dip Angle

DATA BY: A. Howard, T. Buckle DATE: Aug. '82

Scale: 1 inch = 3 chains

2 5819


JASPERSON PROPERTY
Hess Township, Ontario
VLF - Field Strength
Scale: 1 inch = 3 chains
HESS-0026 #6

2.5319

250

Grid	
2W	20N
5W	20N
8W	20N
11W	20N
14W	20N
17W	20N

Base Sta.	
Line	Sta.
18E	12N
15E	16N
12E	16N
9E	6N
6E	16N
3E	16N
0	20N
3W	20N
6W	19N
9W	20N
12W	19N
15W	19N

CONTOUR Interval
25 millivolts

JASPERSON PROPERTY

Hess Township, Ontario

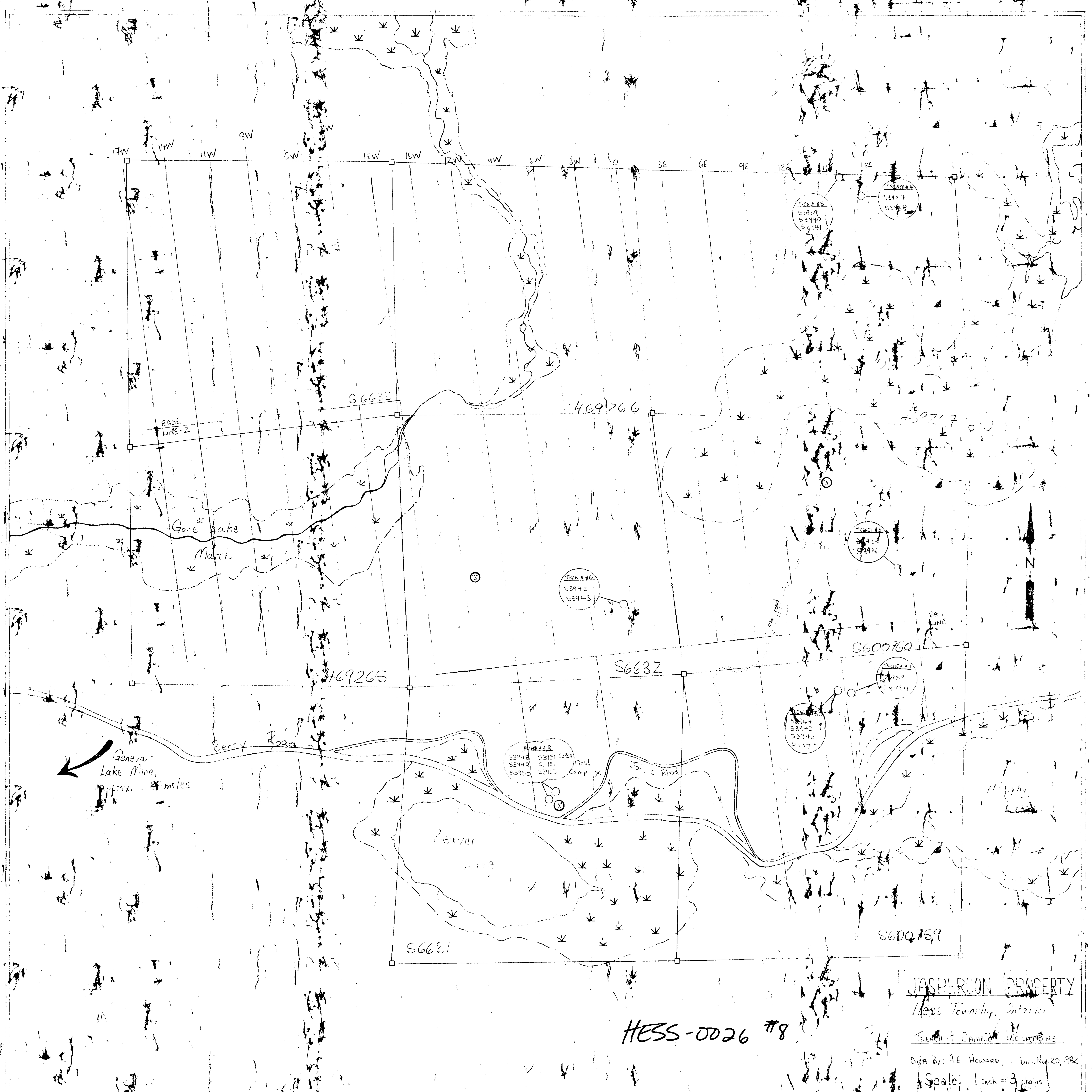
SP EQUIPOTENTIAL MAP

DATA By: J. Buckle, B.Sc. DATE: Aug '82
Geol. Bemble B.Sc.

Scale: 1 inch = 3 chains

HESS-0026 #7

2.5319


17W
14W
11W
8W
5W
18W
15W
12W
9W
6W
3W
0
3E
6E
9E
12E
15E
18E
S6632
469266
BASE LINE-2
Gone Lake
Marsh
N
469265
S6632
S600760
Berry Road
Geneva Lake Mine
Field Camp
Beaver
S6631
S600759
JASPERSON PROPERTY
Hess Township, Ontario
TRENCH & SAMPLE LOCATIONS
Data By: A.E HOWARD
Nov. 20, 1982
Scale; 1 inch = 3 chains
HESS-0026 #8

270

2.5319