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DIAMOND DRILLING

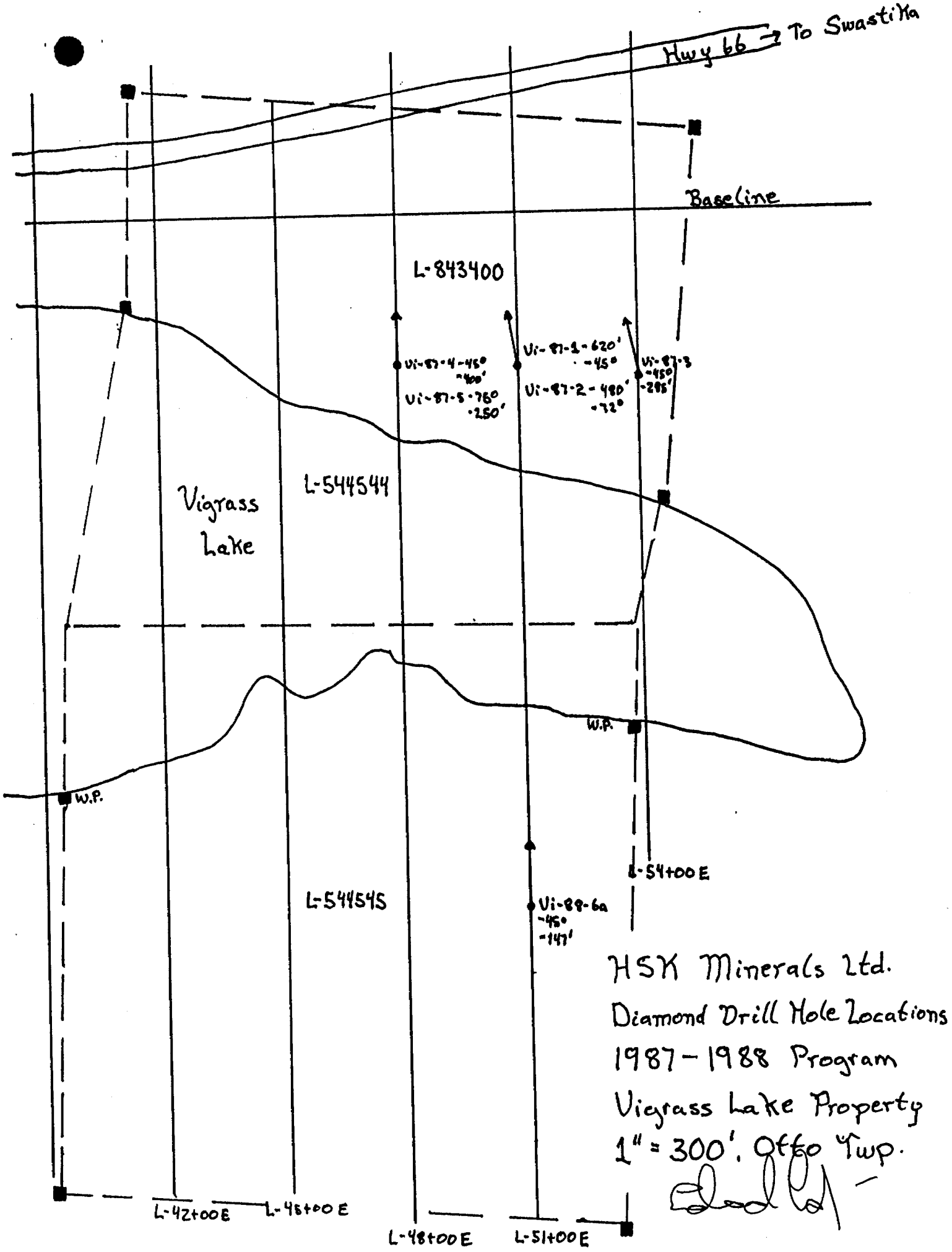
TOWNSHIP: OTTO TWP. REPORT NO:25

WORK PERFORMED FOR: HSK Minerals Ltd.

RECORDED HOLDER: Same as Above [xx]
: Other [ ]

Claim No.	Hole No.	Footage	Date	Note
L 843400	Vi-87-1	620'	Dec/87	(1)
	Vi-87-2	480'	Dec/87	(1)
	Vi-87-3	285'	Dec/87	(1)
	Vi-88-4	400'	Jan/88	(1)
	Vi-88-5	250'	Jan/88	(1)
L 544545	Vi-88-6a	147'	Jan/88	(1)
		2182'		

NOTES: (1) #W8808.040, filed in June/88



HSK Minerals Ltd.
Diamond Drill Hole Locations
1987-1988 Program
Vigrass Lake Property
1" = 300'. Otto Twp.

DIAMOND DRILL RECORD

Core Size: AQ

NAME OF PROPERTY HSK Minerals - Vigrass Lake Property
HOLE NO. Vi-87-1 LENGTH 620'
LOCATION North Vigrass L-51+00E - 3+75S
LATITUDE _____ DEPARTURE _____
ELEVATION _____ AZIMUTH _____ DIP -45°
STARTED Dec. 10, 1987 FINISHED Dec. 14, 1987

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45°	345°			
300	-43°	345°			
600	-40°	345°			

HOLE NO. Vi-87-1 SHEET NO. 1 of 3
REMARKS _____
LOGGED BY Eduard Ludwig

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON
0	7	Overburden									
7	62	Basaltic Komatiite Flow - massive, quartz-carbonate stringers throughout, - fine grained, random beef-string spinifex and pyroxene crystal spinifex - patchy - over 3"-7" core lengths - weakly carbonated - from -58'-62' - more fracturing - gradational lower contact									
62	122	Fracture Zone (Altered Komatiites) - light brown to light green - Baked appearance - 1%-3% pyrite throughout - fractures healed by quartz stringers - carbonated weakly within unit - extreme ground quartz stringers - predominant fracture orientation - C.A. 34°									
122	208	Massive Andesite Flow - weakly carbonated, fine grained - medium green - few quartz stringers, with minor pyrite - up to 1%									

LANGRIDGES – TORONTO – 366-1168
FORM 1

DIAMOND DRILL RECORD

NAME OF PROPERTY North Vigrass Lake

HOLE NO. Vi-87-1 SHEET NO. 2 of 3

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	ASSAYS
		Massive Andesite Flow - Con't -unit becoming more chloritic towards lower end of hole - with weak but distorted foliation -Non magnetic										
208	272	Syenite Porphry - massive Intrusive -up to 2% specularite within unit -~~no~~ patchy attraction to magnet - over 1"-2" core lengths - non carbonated, equigranular, medium grained, dark brick red, euhedral - trace pyrite -minerals - K-spar, biotite, amphiboles., plagioclase 55% 10% 20% 10% accessory - 5%										
272	440	Basaltic Komatiite Flow -massive, fine grained, minor fractures filled with quartz stringers -weakly magnetic, sharp upper contact -minor pyrite associated with quartz stringers - very uniform unit - dark green -minor beef-string spinifex -chlorite developed along fractures										

LANGRIDGES – TORONTO – 366-1168

DIAMOND DRILL RECORD

NAME OF PROPERTY North Vigrass Lake

HOLE NO. Vi-87-1 SHEET NO. 3 of 3

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
440	590	Highly Silicified Unit - light orange → light brown - fine grained - up to 4% pyrite through unit - moderately carbonated, very silicified, uniform - Highly altered Syenite?? Rhyolite??										
590	620'	Basaltic Komatiite Flow - massive, dark green, fine grained, weakly carbonated, very uniform - no pyrite, non magnetic - similar to unit - 272' - 440'										
	620'	END OF HOLE										

LANGRIDGES – TORONTO – 366-1168

FORM 2

DIAMOND DRILL RECORD

Core Size : AQ

NAME OF PROPERTY HSK Minerals
HOLE NO. Vi-87-2 LENGTH 480'
LOCATION North Vigrass - L 51+00E, 3+75S
LATITUDE _____ DEPARTURE _____
ELEVATION _____ AZIMUTH 345° DIP -72°
STARTED Dec. 15, 1987 FINISHED Dec 19, 1987

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	72°	345°			
480	67°	345°			

HOLE NO. Vi-87-2 SHEET NO. 1 of 2
REMARKS _____

LOGGED BY Edward Ludwig

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
0	7	Overburden										
7	160	Basaltic Komatiite Flow - massive, fine grained, quartz-carbonate stringers throughout; minor fractures, trace pyrite - random beef-string spinifex - weakly carbonated - weakly magnetic from 142'-153.5' - becoming more ~~silific~~ Silicified towards lower contact										
160	210	Silicified Fracture Zone - extremely magnetic - 30-40% quartz veining throughout - altered Iron Formation?? - up to 7% pyrite - minor Scheelite - assoc. with quartz stringer - 1-2 specks chalcopyrite - very distorted - moderately carbonated - seams of ~~magnetite~~ magnetite										

LANGRIDGES – TORONTO – 366-1168

FORM 1

DIAMOND DRILL RECORD

NAME OF PROPERTY Vigrass Lake

HOLE NO. Vi-87-2 SHEET NO. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
210	480	Basaltic Komatiite Flow - spinifex development as patches with in unit - fine grained, massive - 1% py associated with ¼" quartz stringers - weakly carbonated - pyroxene spinifex grades from randomly orientated crystals to beef-string-type - non magnetic										
	480	End of Hole										

LANGRIDGES — TORONTO — 368-1168

FORM 2

DIAMOND DRILL RECORD

CORE SIZE : AQ

NAME OF PROPERTY Vigrass Lake – HSK Minerals
HOLE NO. Vi-87-3 LENGTH 285'
LOCATION North Vigrass L-53+00E - 4+00S
LATITUDE _____ DEPARTURE _____
ELEVATION _____ AZIMUTH 360° DIP -45°
STARTED Dec. 20, 1987 FINISHED Dec. 23, 1987

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	45°	360°			
285	42°	360°			

HOLE NO. Vi-87-3 SHEET NO. 1 of 2
REMARKS _____
LOGGED BY E. Ludwig

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
0	7	Overburden										
7	185	Basaltic Komatiite Flow - Massive, finegrained - up to 1% pyrite - multiple quartz-carbonate stringers throughout - weakly carbonated -125'→137' - pyroxene crystal spinifex -remaining portions of unit→ beef string spinifex - Dark green - chlorite developed along fractures										
185	20	Fracture Zone (Altered Komatiite) -light brown → light green - Baked appearance 1-5% pyrite throughout - 7" qtz-vein @ 193' -unit moderately carbonated - multiple quartz-carb stringers - 10% in unit										

LANGRIDGES – TORONTO – 368-1168

FORM 1

DIAMOND DRILL RECORD

NAME OF PROPERTY North Uigrass

HOLE NO. Ui-87-3 SHEET NO. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
210	285	Massive, Basaltic Komatiite Flow - Dark green, unaltered, beef-string spinifex - no pyrite, non carbonated										
	285	End of Hole										

LANGRIDGES — TORONTO — 366-1168

FORM 2

DIAMOND DRILL RECORD

Core Size: AQ

NAME OF PROPERTY HSK Minerals - Vigrass Lake Pr
HOLE NO. Vi-88-4 LENGTH 400'
LOCATION North Vigrass L-48+00E, 3+55S
LATITUDE _____ DEPARTURE _____
ELEVATION _____ AZIMUTH _____ DIP -45°
STARTED JAN 3, 1989 FINISHED JAN 6, 1989

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	47°	360°			
350	42°	360°			

HOLE NO. Vi-4 SHEET NO. 1 of 4
REMARKS _____
LOGGED BY Eduard Ludwig

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
0	9	Overburden										
9	65	Basaltic Komatiitic Flow - massive, slightly magnetic, fractured with quartz-carbonate stringers throughout - occassional cube of pyrite - becomes carbonated after 50' - random oriented Beef-Stiing Spinifex through-out - fine grained										
65	71	Basaltic Komatiite Flow - With Pyroxene Spinifex - radiating and unoriented pyroxene crystals densely spaced within unit - weakly magnetic - minor quartz stringers - no carbonate - fine grained										
71	86.5	Altered Syenite Intrusion - equigranular, subhedral feldspar grains - medium grained, sericitic in places - minor chlorite clots										

LANGRIDGES – TORONTO – 366-1168

FORM 1

DIAMOND DRILL RECORD

NAME OF PROPERTY Vigrass Lake

HOLE NO. Vi-88-4 SHEET NO. 2 of 4

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	ASSAYS
86.5	128	Basaltic Komatiite Flow -weakly magnetic, massive, finegrained -occassional cube of pyrite, upper contact marked by 4" quartz vein - from 103-128 unit is cut by numerous quartz carbonate stringers -occassional pink veinlet (K-spar alteration)										
128	142	Extremely Fractured Komatiite Flow -up to 15% qtz-carb. stringers -up to 2% pyrite -patchy - Dark brown in places - extremely baked -non carbonated unit - only associated with stringers - brecciated in places.										
142	164.5	Fracture Zone - light to dark brown - green patched - brecciated quartz veinlets + stringers - very carbonated between 163.5 + 164.5 - up to 2% throughout										

LANGRIDGES – TORONTO – 366-1188

FORM 2

DIAMOND DRILL RECORD

NAME OF PROPERTY Vigrass Lake

HOLE NO. Vi-88-4 SHEET NO. 3 of 4

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ TON	
164.5	204	Spherulitic Flows - spherules become smaller towards bottom of hole - Andesitic in composition - fine grained groundmass - Pominent Spherules @ 170' – 176' 182 – 185.5 } Flow Tops - very weakly carbonated, massive unit										
204	217	Extremely Fractured Andesite Flow - Qtz-stringers boudinaged into knots - extremely baked sections (light green-brown) - Finely disseminated pyrite - up to 2% - brecciated and healed with quartz - visible carbonate minerals, calcite, Ankerite - fractures at random orientations - sharp lower contact (est. C.A. 30°) - baked sections silicified and very fine grained										
217	312	Massive Andesite - Basalt Flows - well fractured from 277 – 286 - ground Core @ 243.5, multiple quaitz-carb. stringers up to ½" wide - pyrite associated with quartz veinlets as halo's on either side of veinlet										

LANGRIDGES – TORONTO – 366-1168

FORM 2

DIAMOND DRILL RECORD

NAME OF PROPERTY Vigrass Lake

HOLE NO. Vi-83-4 SHEET NO. 4 of 4

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	
312	342	Extremely Fractured Andesite - light green → light brown colour, fine grained - very broken core – no sulfide present - up to 20% quartz–carb. stringers within unit – brecciated near upper contact – both upper & lower contacts gradational – no orientation of fractures.										
342	401	Greywacke – ~~Bedd~~ Bedded unit of massive greywacke – occassional pebble. – occassional cube of pyrite. – C.A. @ 40°										
	401	END OF HOLE										

LANGRIDGES – TORONTO – 366-1168

FORM 2

DIAMOND DRILL RECORD

CORE SIZE: AQ

NAME OF PROPERTY HSK Minerals - Vigrass Lake North
HOLE NO. Vi-88-5 LENGTH 250 feet
LOCATION L-48+00E , 3+55S
LATITUDE _____ DEPARTURE _____
ELEVATION _____ AZIMUTH 360° DIP -75°
STARTED JAN. 9, 1988 FINISHED JAN 13, 1988

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	75°	360°			
250	68°	360°			

HOLE NO. Vi-5 SHEET NO. 1 of 1
REMARKS _____
LOGGED BY Eduard Ludwig

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON
0	9	Overburden									
9	210	Basaltic Komatiite Flow - Spinifex development as patches throughout unit - pyroxene spinifex grades from randomly orientated crystals to a string-beef type. - entire flow is fractured, weakly carbonated - and randomly magnetic, very dark green - unit becomes more schistose (talc-chlorite) towards lower contact, massive at start of hole - quartz stringers, up to ¼", odd cube pyrite									
210	250	Fracture Zone - Highly deformed Komatiite Basalts, fractured and silicified, gradational upper contact, 2-5% pyrite massive in fractures, disseminated in unit - moderately carbonated - quartz carbonate stringers - up to 2" - colour is light to dark brown (Baked) containing dark green sections - gradational lower contact - to less unaltered material - 240' → 250 Basaltic Komatiite Flow -									
		250 → END OF HOLE									

LANGRIDGES — TORONTO — 366-1168

FORM 1

DIAMOND DRILL RECORD

Core Size: AQ

NAME OF PROPERTY 45K Minerals - Vigrass Lake South
HOLE NO. Vi-88-6a LENGTH 147 feet
LOCATION L 51+00E, ~~3+75S~~ 17+00S
LATITUDE _____ DEPARTURE _____
ELEVATION _____ AZIMUTH 360° DIP -45°
STARTED JAN 16, 1988 FINISHED JAN. 18, 1988

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45°	360			
147	-45°	360			

HOLE NO. 6a SHEET NO. 1 of 1
REMARKS _____
LOGGED BY Edward Ludwig

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	SAMPLE % SULPHIDES	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE FOOTAGE TOTAL	ASSAYS %	ASSAYS %	ASSAYS OZ/TON	ASSAYS OZ/TON	ASSAYS
0	31	Overburden - Sandy, pebble Till										
31	147	Altered Quartz Feldspar Porphry - highly fractured throughout unit, quartz-carbonate stringers cut core at no perferred orientation - up to 1% pyrite throughout core - feldspar and quartz phenocrysts have rounded edges - subhedral crystals - up to $\frac{1}{8}$", matrix dark gray groundmass containing little or no mafic minerals - quartz stringers up to $\frac{1}{4}$"										
	147	End of Hole										

LANGRIDGES – TORONTO – 366-1168

Ass. Lib.

Ministry of Natural Resources — Ontario

Report of Work

DOCUMENT No. 040
W8808 · 034
Mi

42A01SE0125 25 OTTO

900

Name and Postal Address of Recorded Holder

HSK MINERALS LIMITED

800-111 Richmond Street West Toronto, Ontario M5H 2G4

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed: 2182

for Performance of the following work. (Check one only)

- ☐ Manual Work
- ☐ Shaft Sinking Drifting or other Lateral Work.
- ☐ Compressed Air, other Power driven or mechanical equip.
- ☐ Power Stripping
- ☒ Diamond or other Core drilling
- ☐ Land Survey

Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.
L	843400	77	L	892088	200			
	842660	83		927914	200			
	842782	87		927927	200			
	842767	123		892085	200			
	843837	123		894181	120			
	843171	123		891856	123			
	892089	200		891860	123			
	927921	200						

All the work was performed on Mining Claim(s): 843400, 544545

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

Diamond Drill Contractor

Nighthawk Diamond Drilling
Box 599
Porcupine,
P0N 1C0

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES
OFFICE
FEB 23 1988
RECEIVED

LARDER LAKE
MINING DIV.
RECEIVED
FEB 17 1988
AM 2:00 PM
7 8 9 10 11 12 1 2 3 4 5 6

RECORDED
FEB 17 1988
Receipt # _____

Drilling Dates:

December 10, 1987 to February 10, 1988

Core Size : AQ

Date of Report	Recorded Holder or Agent (Signature)
February 12/88	C.E. Page

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

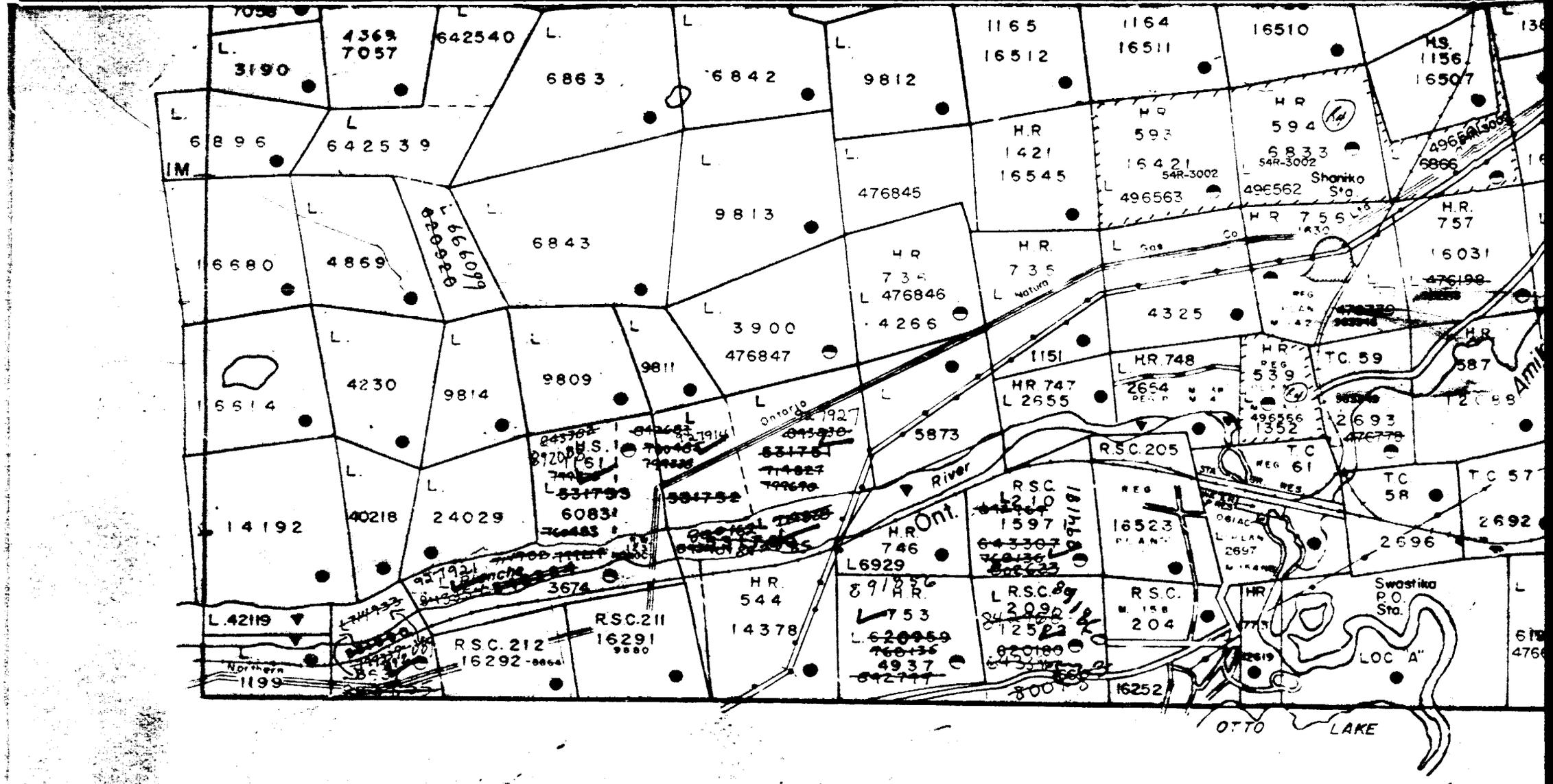
C.E. Page
1454 Westbury Avenue Burlington, Ont. L7P 1M2

Date Certified	Certified by (Signature)
February 12/88	C.E. Page

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other Information (Common to 2 or more types)	Attachments
Manual Work; Shaft Sinking, Drifting or other Lateral Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Compressed air, other power driven or mechanical equip.	Type of equipment		
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping done.	
Diamond or other core drilling	Signed core log showing; footage, diameter of core, number and angles of holes.		Work Sketch (as above) in duplicate
Land Survey	Name and address of Ontario land surveyor.	Nil	Nil

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VI
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EBY TP. - M.345
TWP. OTTO


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593
16421
54R-3002
496563
H.R.
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54R-3002
496562
Shanko
Sta
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H.R.
735
L 476846
4266
H.R.
735
L Natural
4325
H.R.
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9811
3900
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1151
HR 748
2654
HR 747
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TC 59
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587
5873
River
Ontario
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