

GEOPHYSICAL ASSESSMENT REPORT

on the

PATHFINDER PROPERTY

Greenwood Mining Division British Columbia

for

CASSIDY GOLD CORP. 220 - 141 Victoria Street Kamloops, B.C. V2C 1Z5

- Field Work: July 3 July 20, 1999
 - 58 units

Location:

Claims:

- 18 km north of Grand Forks, B.C.
- NTS Map No. 82E/1W
- Latitude: 49°121 ' North
- Longitude: 118°25 ' West

Prepared By

GEOQUEST CONSULTING LTD. GFOLOGICAL SURVEY BRANCH

W. Gruenwald, P. Geo. August 17, 1999

SCHORES REPORT

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SUMMARY

The Pathfinder property is situated approximately 18 kilometres north of Grand Forks, B.C. and is easily road accessible. A total of 58 units comprise the Pathfinder property. Cassidy Gold Corporation may acquire by option a 100% interest in the claims from the owners, Mr. John Kemp and Mr. George Nakade.

The property lies within the Phoenix-Boundary mining camp that dates back to the late 1890's. Numerous precious and base metal mineral deposits are found in the region. Since it's discovery in the 1890's, the Pathfinder property has been worked by numerous individuals and several junior companies. Several shipments of ore totalling 1,230 tons were produced from the Pathfinder and Little Bertha deposits. Gold and silver, along with minor copper and lead were produced. Some shipments exceeded one ounce/ton gold.

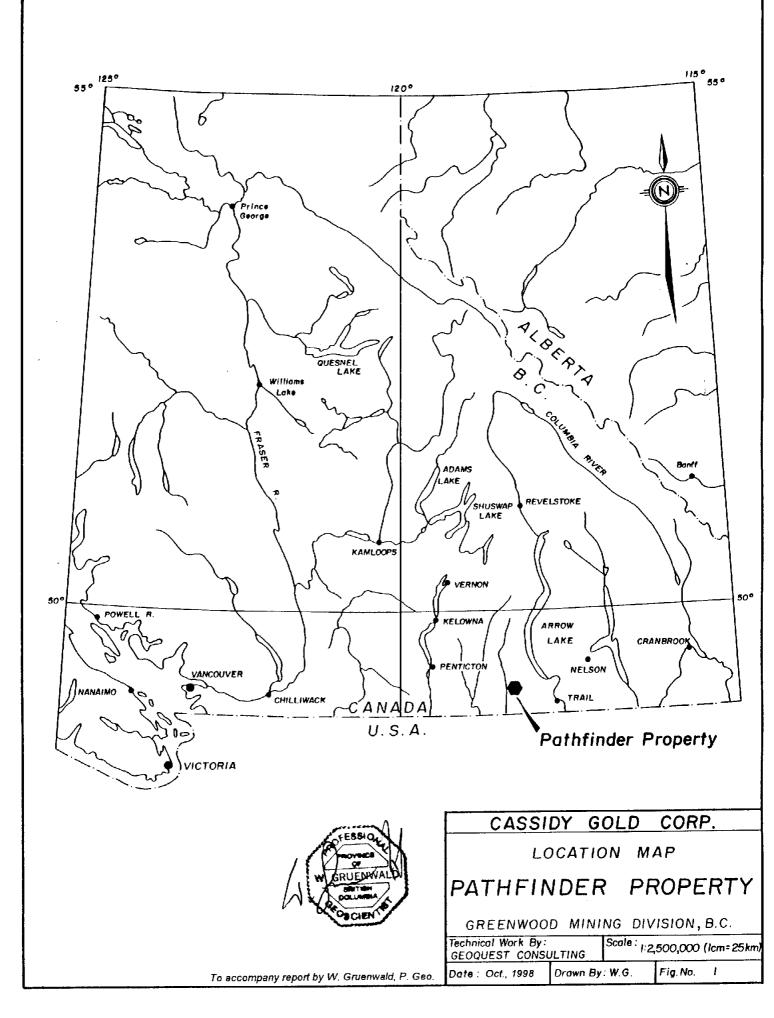
The property is situated within a belt of weakly metamorphosed volcanic and sedimentary rocks west of and in fault contact with Precambrian gneisses of the Grand Forks Group. Faulting related to the Granby River Fault dissects areas of the property. Intruding the region are granitic rocks of the Nelson and Coryell intrusions.

Mineralization is present in many areas of the property as evidenced by numerous old trenches, small shafts and adits. Three historic areas of mineralization are documented and referred to as the Pathfinder, Diamond Hitch and Little Bertha Zones. The first two zones consist of massive sulphide bodies in altered volcanics and sediments. The Little Bertha Vein consists of north-north-easterly trending, gold bearing, mesothermal quartz vein(s) hosted by intrusive rocks. Another precious and base metal bearing vein near an old adit occurs some 800 metres southeast of the Little Bertha Vein. Previously unrecognized skarn zones have been delineated, some of which appear proximal to known mineral occurrences. In other skarns, erratic gold and tungsten values have been reported. The genesis of these deposits is not well understood, however the combination of intrusive activity and major fault zones in the area have likely played a significant role in localizing mineralization.

Recent exploration programs (1980 to present) have included geochemical, geophysical and geological surveys along with trenching and diamond drilling. Encouraging results have been obtained locally on the Pathfinder and Diamond Hitch showings. The Little Bertha Vein was primarily explored in the early history of the property. This vein has by all accounts never been successfully drill intersected.

Exploration by Cassidy Gold Corp during 1996 resulted in the delineation of several skarn zones, a gold bearing metasedimentary unit and a sulphide zone. Geochemical and geophysical surveys outlined exploration targets believed to host precious and/or base metal mineralization. In 1997, two old exploration roads were reopened to allow access for trenching and/or drilling. Detailed sampling was conducted at a recently discovered old adit driven on vein hosted gold and base metal mineralization. Due to a recent downturn in the resource sector, no drilling has been conducted. In 1998, work focussed on an area south of Hornet creek in an under explored area with geology thought to be similar to that in the historically known areas. Soil sampling and a magnetometer survey were conducted over a 600 x 800 metre grid. Several geochemical and geophysical anomalies were outlined.

During 1999, an IP survey was completed over an 8.8 km grid. Strong IP responses were indicated over the sulphide zones and an area of metasediments containing disseminated iron sulphides. Unfortunately, the results do not indicate any evidence of a connection between the zones suggesting that these are isolated pods of relatively small size. The skarn zones and Bertha vein zone did not yield any significant IP responses.



INTRODUCTION

During 1999 Cassidy Gold Corp. continued to explore the Pathfinder property north of Grand Forks, B.C. The program consisted of the establishment of a cut grid over which an IP survey was completed. The primary focus of the program was to determine the extent and relationship of two sulphide occurrences known as the Pathfinder and Diamond Hitch zones. The geophysical grid also extended over a number of other exploration targets. The results of the 1999 program are the subject of this report.

LOCATION AND ACCESS

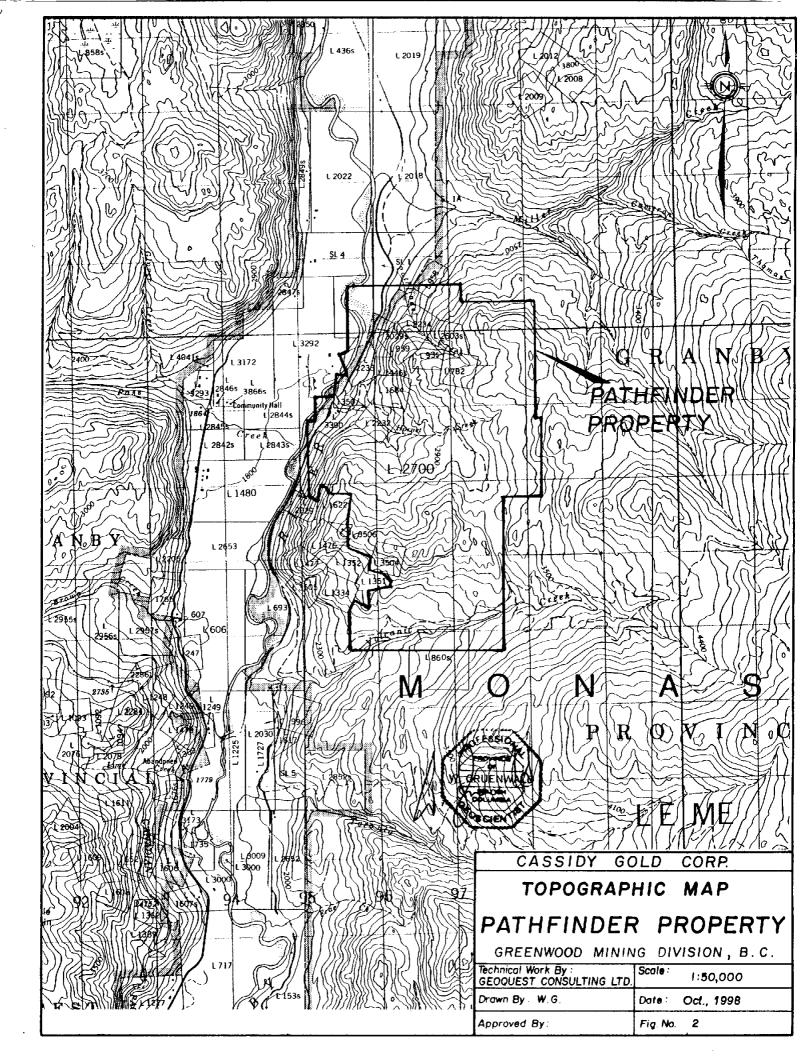
The Pathfinder property is favourably located in southern British Columbia approximately 18 kilometres north of Grand Forks (Figure 1). Geographic co-ordinates for the property are 49°121 ' north latitude and 118°25' west longitude on NTS Map No. 82E/1W.

The property is readily accessible from Grand Forks via a paved road along the east bank of the Granby River. Along the western margin of the claim block a gravel road heads uphill and easterly to a series of roads that provide good access to most of the historical workings. Travel time from Grand Forks is approximately ½ hour.

TERRAIN

The Pathfinder property is situated along the west flank of the Christina Range of the Columbia Mountains. The property is transected by three westerly flowing creeks that drain into the Granby River. These are from north to south, Pathfinder, Hornet and Volcanic Creeks (Figure 2). Slopes are generally moderate to the northwest except along creek gullies where slope directions are highly variable. Some steep slopes are present but no areas are in-accessible. Elevations range from 580 metres along the Granby River to 1,160 metres along the castern boundary of the claim block. The uppermost workings (Pathfinder) are situated at the 1,000 to 1,050 metre elevations while the lowest (Little Bertha) range from 625 to 680 metres in elevation. The property is generally free of snow from early April until November.

The entire property is forested with moderate stands of fir, pine, cedar and assorted deciduous growth. Local patches of grassland are present on ridges and several steep, westerly facing slopes. Overburden appears to be thin except in areas such as the lower portions of Hornet Creek. For the most part, the terrain should not prohibit the construction of roads or drill sites.



PROPERTY

Claim Name	Record No.	No of Units	Expiry Date*
Pathfinder	214128	1	Feb 17, 2002
Diamond Hitch	214221	1	Feb 28, 2002
Christina	214218	1	Feb 23, 2002
Derby	214219	1	Feb 23, 2002
Jasper Fraction	214216	1	Fcb 23, 2002
Iron Bell Fraction	214215	1	Feb 21, 2002
London (Bannock)	214214	1	Feb 21, 2002
Little Bertha	214213	1	Fcb 21, 2002
Lonestar Fraction	214217	1	Feb 23, 2002
Path #1 - #8	214429 - 214436	8	Mar 04, 2002
Hike #1 - #2	214661 -214662	2	Mar 14, 2002
Lucky #1 - #4	214437 -214440	4	Mar 04, 2002
Finder #1 - #2	345447 -345448	2	Apr 19, 2002
Finder #3 - #6	345449-345452	4	Apr 20, 2002
Richmond	339162	1	Aug 09, 2002
Hornet #1 - #12	336554 -336565	12	May 25, 2002
Volcanic	345956	16	May 08, 2002

The Pathfinder property is comprised of a package of reverted crown grants, two post and modified grid claims totalling 58 units (Figure 3). The claims are located in the Greenwood Mining Division.

*Expiry date base on acceptance of 1999 assessment work.

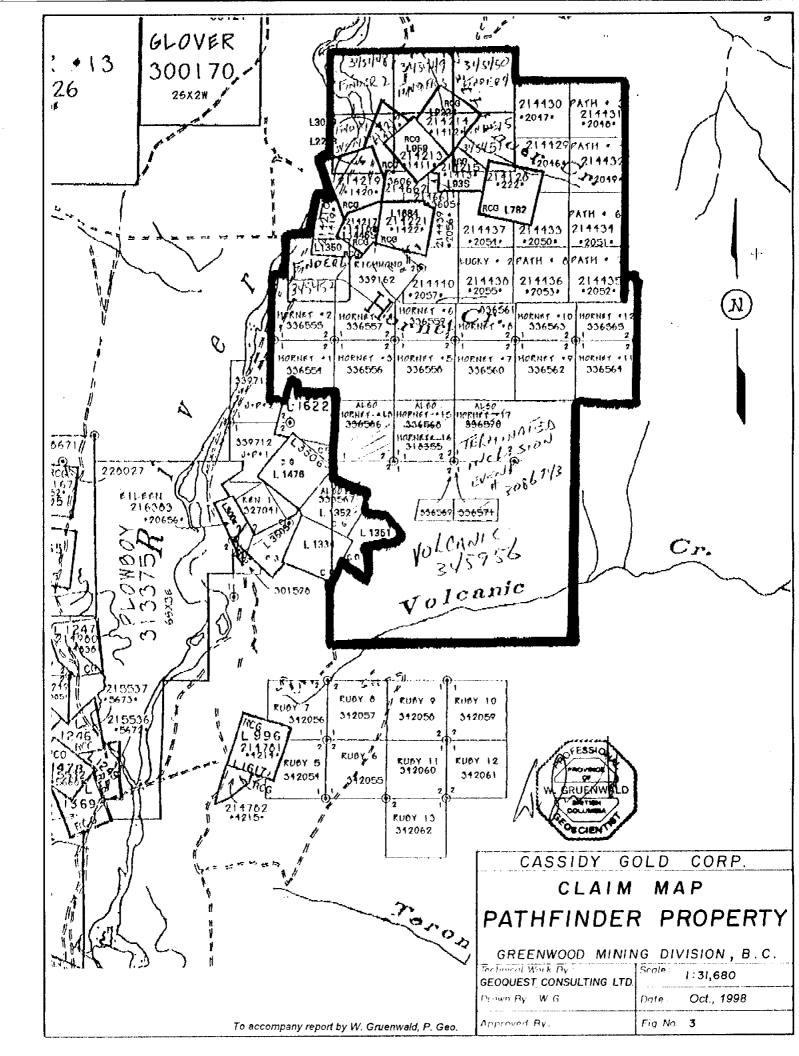
The registered owners of the claims are Mr. John Kemp and Mr. George Nakade of Grand Forks, B.C. Cassidy Gold Corp. has had these claims under option since 1996. With the exception of a small parcel of private land in the southwest, the vast majority of the property is situated on crown land.

HISTORY

The Greenwood - Grand Forks area has witnessed a long period of mining activity dating back to the late 1800's. Mining activity was directed primarily toward copper-gold deposits such as the Phoenix, Dentonia, Lexington and Oro Denoro. The bulk of mineral production came from copper "skarns" such as the Phoenix which between 1900 and 1978 produced 236,000 tonnes of copper and 28,083 kg of gold (816,326 oz).

The discovery of the Pathfinder property dates back to the 1890's. During this time, and into the 1930's, the property was extensively explored with the excavation of numerous hand trenches and several short adits and shafts. Shipments totalling 1,230 tons of material were made from the Little Bertha and Pathfinder claims.

Exploration activity recommenced on the property in the 1960's and since then the Pathfinder property has received sporadic attention from several companies and individuals.



HISTORICAL WORK ON THE PATHFINDER PROPERTY

YEARS	WORK BY	AREAS EXPLORED	SCOPE OF WORK	RESULTS	DOCUMENTATION
1895- 1920'S		Little Bertha Pathfinder Diamond Hitch	Open cuts, trenches, adits, shafts ,mining, ore shipments to Cominco.	Produced gold, silver, copper and lead from Little Bertha and Pathfinder Shipments to- talled 1,115 tonnes (1229 tons).	Minfile reports B.C. Gov't Minister of Mines Reports
1960's	Hecla Mining Co.?	Property	Trenching areas between Pathfinder and Little Bertha.	Exposed possible skarn and massive sulphide mineralization.	None
1960's	Alwin Mining Co. Ltd.	Little Bertha	Reopening adits, trenching, 12 diamond drill holes.	Unknown	No public information
1980	Aries Resources Inc.	Little Bertha	Geological, magnetometer surveys on western half of property, 3 diamond drill holes (284 m).	Holes terminated before encountering vein?	Assessment Report #8945
1980	Dolmage. Campbell and Associates (R. Saunders)	Property	Geological mapping	Lithologies/structures identified	Map only
1983	Nu-Lady Gold Mines	Diamond Hitch	Diamond Drilling (3 holes)	DDH 83-03 - 0.7 m1.4 oz/t Au	Assessment Report
1984	Nu-Lady Gold Mines Ltd.	Diamond Hitch	Diamond Drilling - 4 holes totalling 195 me- tres to follow-up 1983 drill intersections.	Did not expand on 1983 work. Best intersec- tion was 0.9 m of .028 oz/t Au.	Assessment Report
1985	Nu-Lady Gold Mines Ltd.	Pathfinder	Diamond Drilling - 13 holes totalling 921 metres. Centred around shaft and Adit	Massive sulphides intersected. Grades unknown.	Data not available
1987	Ber Resources Ltd. (H. Kim)	Pathfinder Diamond Hitch	Trenching, reconnaissance geochem, geo- physics and geology on eastern portion of property (Pathfinder zone)	Trench "A" on Pathfinder yielded 0.235 oz/t Au over a 5 m section. Trenching of anoma- lous zones revealed magnetite- pyrite mineralization, low gold-silver values	Assessment Report
1992	Niagara Developments (H. Kim)	Little Bertha Pathfinder	Grid & VLF on Little Bertha area. Prospecting and trench sampling on Pathfinder zone	Delineated Little Bertha vein and possible faulted sections. Magnetic signature suggests SE extension of Pathfinder sulphide zones.	Assessment Report
1994	Niagara Developments (R.E. Miller)	Pathfinder	Magnetometer survey over 500 x 1000 metre grid established primarily east- southeast of the Pathfinder shaft.	Delineated known and possible extensions of massive sulphide mineralization.	Assessment Report
1996	Cassidy Gold Corp.	Between Little Bertha and Path- finder	Established grid from Little Bertha to Path- finder showings. Extensive soil and rock sampling program. Geological mapping. Magnetometer and VLF-EM surveys.	Delineated large gold anomaly centred around metasediment roof pendant. Several coincident As-Zn geochem and geophysical anomalies. Mapped several areas of skarn.	Assessment Report #24894
1997	Cassidy Gold Corp.	Between Little Bertha and Path- finder	Reopened two old exploration roads and sampled recently discovered old adit. Extended and sampled grid line toward south elaim boundary	Locally high grade Au values from vein near old adit	Private report to Cassidy Gold Corp.
1998	Cassidy Gold Corp.	Area south of Hornet Creek	Established 6.2 km grid along which soil and rock sampling and magnetometer survey were conducted	Several low order, gold, arsenic and zinc soil anomalies within metasedimentary terrain. Some correlation between geochemistry and magnetometer survey.	Assessment Report #25692

GEOLOGY

Regional:

The Pathfinder property is situated within a belt of Permian-Carboniferous rocks immediately west of the fault contact with a Precambrian gneiss complex (Grand Forks Group). The northerly trending Granby River Fault is inferred to be the eastern margin of the Republic Graben, a fault bounded package of rocks that extends north from Washington, USA (Figure 4). The Permian-Carboniferous rocks, commonly referred to as the Anarchist Group, consist primarily of greenstone, chert, argillite, and minor limestone. Recent mapping by Fyles (1990) has reclassified this sequence into the Attwood and Knob Hill Groups. Intruding the region are plutons of Jurassic/Cretaceous granitic rocks of the Nelson Batholith. The youngest rocks in the region consist of Tertiary dikes, sills and intrusions commonly referred to as the Coryell Intrusions.

Property:

Representatives of the aforementioned rocks are found on the Pathfinder property. Reconnaissance mapping by R. Saunders, P. Eng. (1980) identified three major map units. An assessment report by H. Kim (1993) outlined the geology of the property as follows:

UNIT 1 Anarchist Group (Attwood/Knob Hill)

- weathered (limonitic), bedded cherts containing disseminated pyrite.
- dacite and andesite flows, often finely porphyritic and commonly altered.

UNIT 2 Nelson Batholith

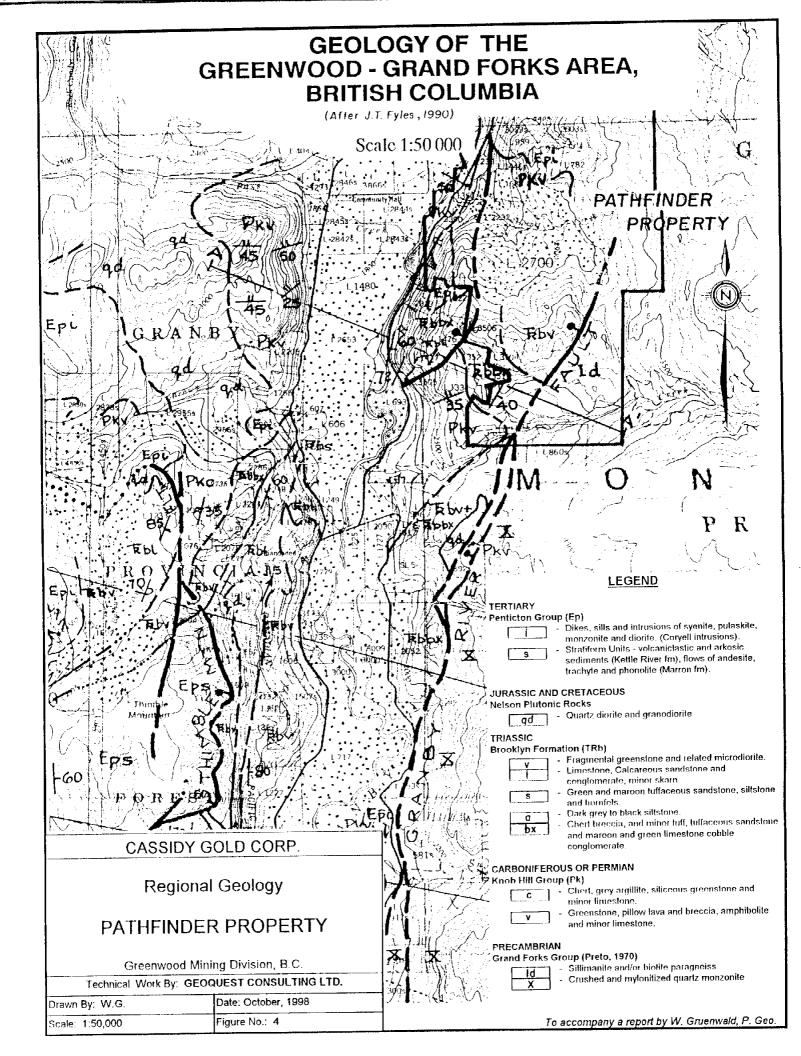
- intrusive complex underlies much of the property.
- includes quartz diorite, granodiorite, diorite, alaskite and finer grained variations.
- ranges from fine to medium grained, fresh to very altered (chlorite-epidote).
- zones of quartzitic rock inferred to be silicified dacite and diorite or may be roof pendants?

UNIT 3 Coryell Intrusions (Penticton Group - J.T. Fyles)

- primarily medium grained monzonite containing white and pink feldspars.
- rocks containing only pink feldspars mapped as syenite.
- fine grained, pink equivalents mapped as trachyte.
- contacts with Unit 2 are sharp.

Mapping, primarily during 1996, revealed a complex geological setting and identified seven distinct rock units, most of which represent the above three major map units. These are detailed in the writer's 1996 assessment report.

The structural fabric of the Pathfinder property is dominated by the north-northeast trending normal fault referred to as the Granby River Fault. This fault marks the boundary between the previously discussed lithologies and the Precambrian Grand Forks Group comprised of highly metamorphosed and deformed rocks (Figure 4).



Property mapping has identified faults, shears and topographic linears oriented in two basic directions. The more dominant and common direction is north-northeast to northeast. These are likely structures parallel to the Granby River Fault. The Little Bertha and several other veins appear to be at least partially controlled by such a fault. Several small scale faults, shears and topographic linear features show orientations of north-northwest to north-westerly. These may reflect conjugate tensional structures associated with the major regional trend. Such crosscutting structures could have a significant role in localizing mineralization and/or determining extensions to structures such as the Little Bertha Vein.

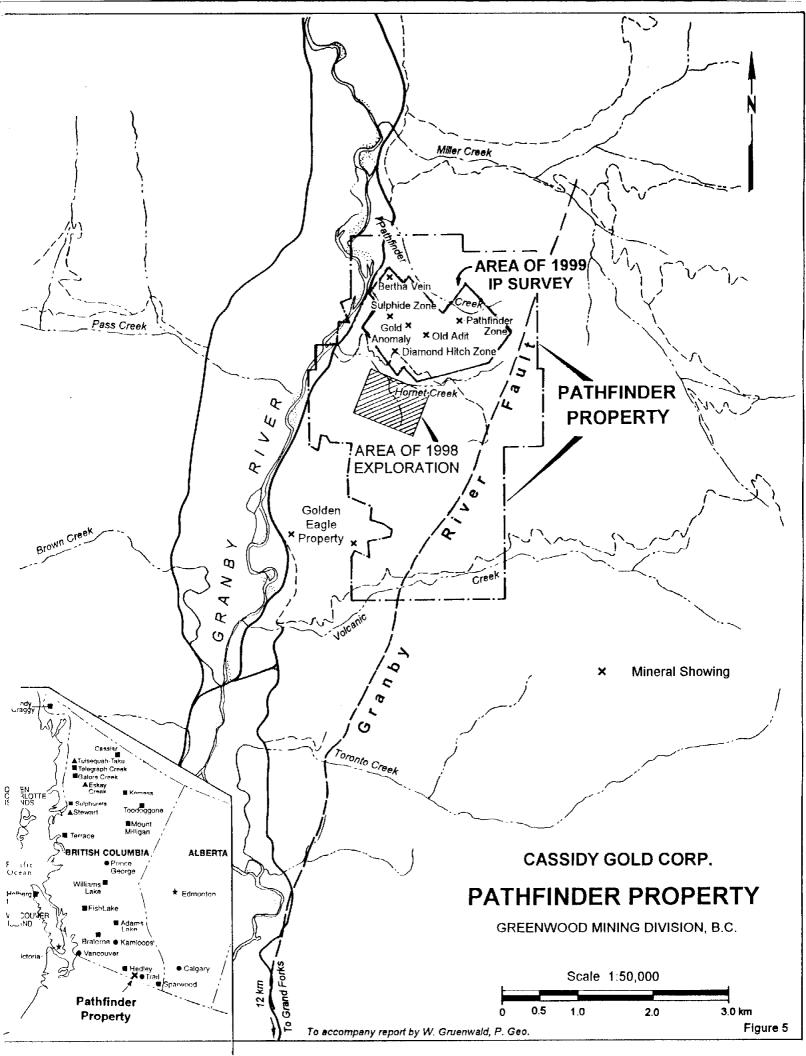
MINERALIZATION

Work to date has revealed the Pathfinder property to host numerous mineral showings that occur in several distinct environments. The historical occurrences are grouped into three areas known as the Pathfinder, Diamond Hitch and Little Bertha Zones (Figure 5).

The *Pathfinder* and *Diamond Hitch* showings are situated in the eastern and southern portions of the grid area respectively. Mineralization consists primarily of semi-massive to massive sulphides in altered (chlorite-epidote) metavolcanics and metasediments of the Anarchist Group. Evidence indicates these showings to be spatially related to the contact zones of the Coryell intrusives and likely formed as hydrothermal replacements and fracture fillings in the sheared host rocks. The two showings are approximately one kilometre apart. Sulphide mineralogy consists primarily of pyrrhotite, pyrite and chalcopyrite. Some reports indicate that crude banding was observed in the Pathfinder zone sulphides. Records indicate that in 1916, 263 tons of material were mined with recovered grades of 0.09 oz/ton gold, 0.49 oz/ton silver and 0.98% copper. Substantially higher grades were reported in some Minister of Mines Annual Reports. This showing was explored by several trenches and shallow shafts. In 1983, values of up to 1.40 oz/ton gold across 0.7 metres were obtained from a shallow diamond drill hole.

The *Little Bertha* showing consists of one or more north-northeasterly trending, cast dipping veins in dioritic rocks of the Nelson intrusions. Evidence of faulting is seen in the uppermost workings (stope) where a slickensided fault plane marks the hanging wall of the vein. The vein ranges up to 2 metres in. The estimated strike length of the vein is approximately 100 metres and is considered open in both directions. Local concentrations of sulphides were noted near the hanging wall contact. Sampling by the writer in July, 1996 returned values of 0.782 oz/ton gold, 13.88 oz/ton silver and approximately 1.5% combined lead and zinc from a *selected* sample of sulphide rich vein.

Based on the mineralogy and analytical results it would appear that the Little Bertha Vein(s) are "mesothermal" in nature, that is formed at moderate depth and pressure. Historical records from the Little Bertha Vein indicated a total of 966 tons were mined (1900 - 1939) from which 426 oz gold, 3,866 oz silver and minor copper and lead were produced. This yields an overall average of 0.44 oz/ton gold and 4.0 oz/ton silver. Production records for some years returned gold grades in excess of one ounce/ton. Situated uphill and southeast of the Bertha Vein is



an old open cut where dump material returned values of 0.279 oz/ton gold and 3.34 oz/ton silver. This zone may represent a parallel vein structure.

Approximately 150 to 500 metres south-southwest of the Bertha Vein are a number of small adits that have exposed sulphide and/or vein mineralization (Figure 6). These poorly understood zones have locally returned gold values up to 0.160 oz/ton. The relationship of these zones to the Bertha Vein is not known.

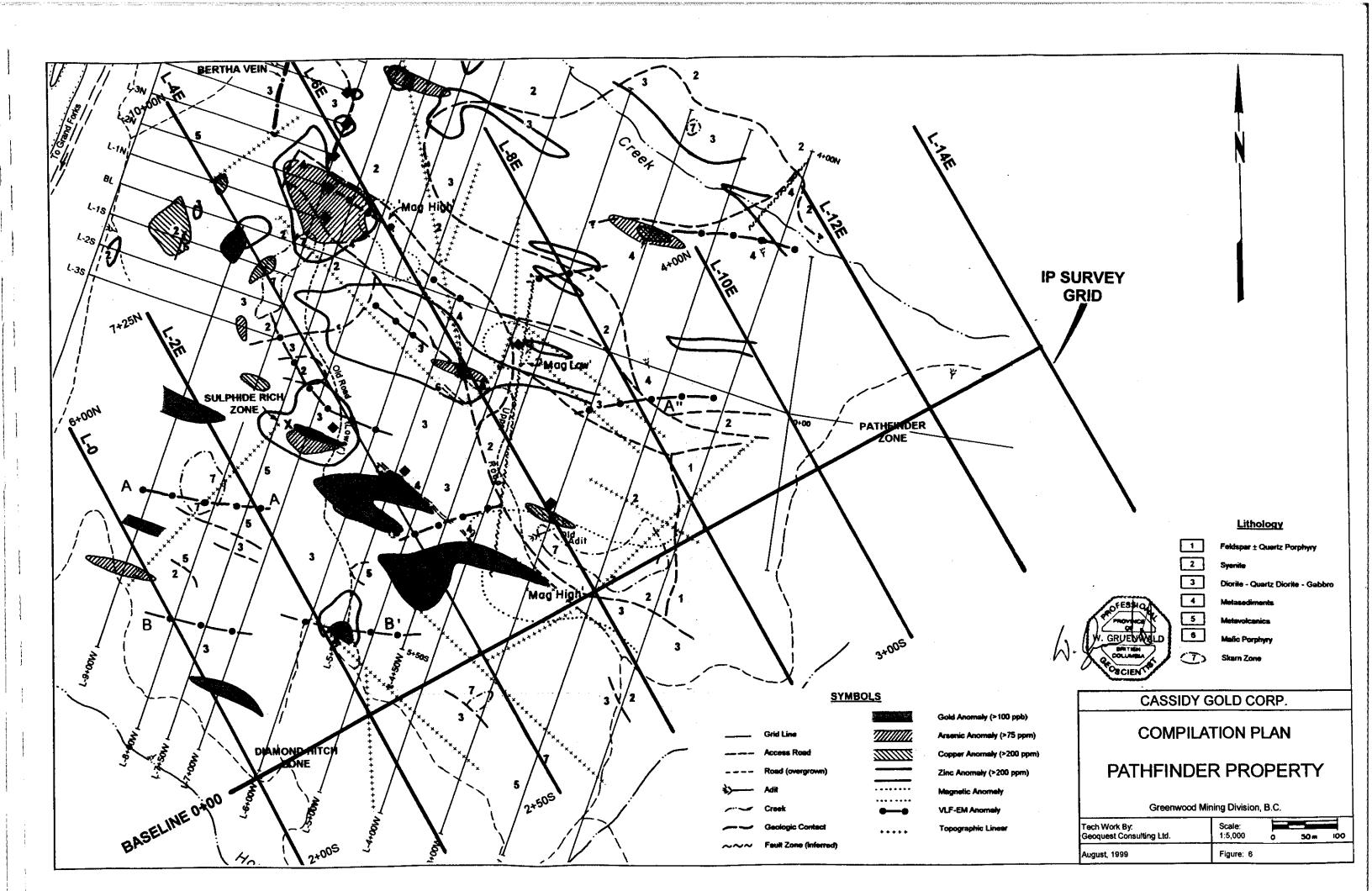
In the central and northeastern portions of the grid are areas underlain by metasedimentary rocks. These rocks are typically quite limonitic as a result of the weathering of very fine grained pyrite and/or pyrrhotite. The presence of these rusty rocks led early prospectors to dig numerous hand trenches and drive small adits and shafts. Previous sampling of these old workings yielded very low gold and base metal values. An exception to the above is a band of metasediments south of the baseline in between L-6+00W and L-4+00W. This west-northwest trending band of siliceous, limonitic rock contains finely disseminated pyrite and pyrrhotite. Rock samples returned gold values up to 500 ppb. This area corresponds to the largest gold anomaly delineated during the 1996 program and is detailed in a previous assessment report by the writer.

Located along an old road (lower) is a zone of sulphide mineralization. Judging by the vegetation cover, this area appears to have been excavated many years ago. Mineralization consists of semi-massive to massive pyrrhotite and pyrite in a gabbroic host rock. A sample of this material returned 135 ppb Au, 2.6 ppm Ag, 2,596 ppm Cu and 295 ppm Ni. Little is known of the geological setting or extent of this zone. The mineralization bears similarities with the Pathfinder and Diamond Hitch zones.

Another area of interest is located approximately 200 metres west-southwest of the sulphide zone. In this area a north-northeast trending, easterly dipping "cpithermal" type vein and stockwork zone occurs within hornfelsed and skarn type rocks. Sampling did not return any anomalous gold values, however, a sample of skarn rock approximately 25 metres southwest of the vein returned a highly anomalous 480 ppm tungsten. Several other areas of skarn have been delineated and are more extensive than previously thought. Some of these contain disseminated to semi-massive magnetite and have yielded occasional sporadic gold values. A sample analyzed by Echo Bay in 1997 returned a value of 0.305 oz/t Au.

During a property examination in May, 1997 with Mr. M. Rasmussen (Echo Bay), an overgrown, decline adit ("Old Adit") was encountered (Figure 6, 7). It appeared to have been driven on a low angle "boudin" of quartz mineralized with pyrite and sphalerite. A grab sample analyzed by Echo Bay returned values of 2.584 oz/t Au, 16.20 oz/t Ag, 13.61% Zn and 0.15% Cu. A cut specimen of mineralized quartz from this occurrence contained fine grained visible gold.

In the area south of Hornet Creek explored during 1998, mineralization observed consisted primarily of disseminations of pyrrhotite and/or pyrite most often with metasedimentary rocks. Outcroppings in several areas of the eastern portion of the grid revealed metavolcanic and microdioritic rocks containing substantial amounts (3-4%) of disseminated magnetite



EXPLORATION PROGRAM – 1999

The primary objective of the 1999 program was to determine the geophysical (IP) signatures over and between two sulphide zones known as the Pathfinder and Diamond Hitch zones. These two zones are situated approximately one kilometre apart and there has long been the question of whether there is a relationship between them. The IP survey was constructed such that a number of other exploration targets could also be tested concurrently (Figure 6).

Physical Work:

Prior to the IP survey, a grid was established utilizing a baseline oriented at 064° azimuth starting at the Diamond Hitch zone and extending past the Pathfinder zone. The grid work was contracted to Sabre Exploration Services of Penticton, B.C. The total length of the baseline was 1.4 km. Crosslines were cut at 200 metre intervals with lengths ranging from 700 to 1,250 metres. Stations were marked at 25 metre intervals with painted and tagged pickets. In all, 8.8 km of IP grid were established.

During the period of July 15 to 20, 1999 an Induced Polarization survey (IP) was completed over the grid by SJ Geophysics of Delta, B.C. A description of the survey method is described in Appendix A.

PROGRAM RESULTS

The mineralized zones in the survey area, specifically the sulphide zones, produced good IP responses. The IP survey (Chargeability Contour Map – Appendix F) does not however indicate that the sulphide zones are connected.

Also noted were elevated chargeability readings over a substantial area at the northern ends of L-600E to L-1400E. This area corresponds to fine grained metasediments that have been intruded by one or more plutonic bodies. The metasediments are often limonitic and contain fine disseminations of pyrite and pyrrhotite. Previous geochemical surveys did not indicate the presence of any significant metal concentrations associated with this area with the exception of a strong arsenic-zinc soil anomaly near the northern portion of L-600E. This anomaly has not been explained nor followed up in previous programs.

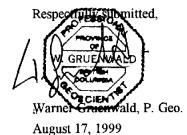
In general, the observed high chargeability anomalies are coincident with strong "low" resistivity anomalies. The previously documented skarn zones and the Bertha Vein did not yield any significant IP responses.

CONCLUSIONS AND RECOMMENDATIONS

Exploration programs by Cassidy Gold Corp. from 1996 to 1998 revealed a number of areas of exploration potential. Previously unrecognized skarn environments have been delineated, some of which are proximal to areas of known mineralization such as the Little Bertha Vein and the Old Adit zone. Some skarns have yielded erratic gold and tungsten values. Exploration also led to the discovery of a zone of gold mineralization associated with metasediments. With the exception of two massive sulphide zones, namely the Pathfinder and Diamond Hitch, little exploration drilling has been conducted on the Pathfinder property.

The recently completed IP survey yielded strong responses over the sulphide rich zones on the property. However, it is apparent that these zones are isolated pods that do not appear to be connected. The metasediments in the north and easterly portion of the grid also yielded a good IP response however this likely reflects the disseminated iron sulphides present in these rocks. The IP response at the north end of L-600E coincides with a strong arsenic-zinc anomaly that may reflect mineralization associated with a metasedimentary intrusive contact zone.

Given that the IP survey did not yield responses over a substantial extent, the discontinuous nature of the mineralized zones and the current investment climate, it is not recommended that Cassidy Gold Corp. conduct any further exploration on the Pathfinder property.



APPENDIX A

IP SURVEY METHODOLOGY

GEOPHYSICAL TECHNIQUES

The following is a description of the Induced Polarization Survey utilized by SJ Geophysics of Delta, B.C.

5.1 IP Method

The time domain IP technique energizes the ground surface with an alternating square wave pulse via a pair of current electrodes. On most surveys, such as this one, the IP/Resistivity measurements are made on a regular grid of stations along survey lines.

After the transmitter (Tx) pulse has been transmitted into the ground via the current electrodes, the IP effect is measured as a time diminishing voltage at the receiver electrodes. The IP effect is a measure of the amount of IP polarizable materials in the subsurface rock. Under ideal circumstances, IP chargeability responses are a measure of the amount of disseminated metallic sulfides in the subsurface rocks.

Unfortunately, there are other rock materials that give rise to IP effects, including some graphitic rocks, clays and some metamorphic rocks (serpentinite for example) so, that from a geological point of view, IP responses are almost never uniquely interpretable. Because of the non-uniqueness of geophysical measurements it is always prudent to incorporate other data sets to assist in interpretation.

Also, from the IP measurements the apparent (bulk) resistivity of the ground is calculated from the input current and the measured primary voltage.

With regard to precision, IP/Resistivity measurements are generally considered to be repeatable within about five percent. However, they will exceed that if field conditions change due to variable water content or variable electrode contact.

IP/Resistivity measurements are influenced, to a large degree, by the rock materials nearest the surface (or, more precisely, nearest the measuring electrodes), and the interpretation of the traditional pseudosection presentation of IP data in the past have often been uncertain. This is because stronger responses that are located near surface could mask a weaker one that is located at depth.

5.2 Inversion Programs

"Inversion" programs have recently become available that allow a more definitive interpretation, although the process remains subjective.

The purpose of the inversion process is to convert surface IP/Resistivity measurements into a realistic "Interpreted Depth Section." However, note that the term is left in quotation marks. The use of the inversion routine is a

subjective one because the input into the inversion routine calls for a number of user selectable variables whose adjustment can greatly influence the output. The output from the inversion routines do assist in providing a more reliable interpretation of IP/Resistivity data, however, they are relatively new to the exploration industry and are, to some degree, still in the experimental stage.

The inversion programs are generally applied iteratively to, 1) evaluate the output with regard to what is geologically known, 2) to estimate the depth of detection, and 3) to determine the viability of specific measurements.

The Inversion Program (DCINV2D) used by the SJ Geophysical Group was developed by a consortium of major mining companies under the auspices of the UBC-Geophysical Inversion Facility. It solves two inverse problems. The DC potentials are first inverted to recover the spatial distribution of electrical resistivities, and, secondly, the chargeability data (IP) are inverted to recover the spatial distribution of IP polarizable particles in the rocks.

The Interpreted Depth Section maps represent the cross sectional distribution of polarizable materials, in the case of IP effect, and the cross sectional distribution of the apparent resistivities, in the case of the resistivity parameter.

APPENDIX B

PERSONNEL

FIELD:

W. Grucnwald, P. Geo.	
July 3, 15-17, 1999	3½ days
Sabre Exploration Services Ltd. (2 person crew) July 3-11, 1999	9 days
SJ Geophysics Ltd. (5 person crew) July 15-20, 1999	6 days
OFFICE:	
W. Gruenwald, P. Geo. July 1, 2, 12, 13, 23, 1999 Aug 16, 17, 1999	4 days

APPENDIX C

PROGRAM EXPENDITURES

1)	Geological Consulting (Supervision) – Geoquest Consulting Ltd., Vernor W. Gruenwald, P. Geo.	ı, B.C.	\$2,808 .76
2)	Contractors:		
-,	Linecutting - Sabre Exploration Services Ltd., Penticton, B.C.	4,815.00	
	IP Survey, SJ Geophysics, Delta, B.C.	11,235.00	16,050.00
3)	Travel Costs:		
	Geoquest Consulting Ltd.	355.78	
	Sabre Exploration Services Ltd.	651.87	
	SJ Geophysics Ltd.	<u>947.83</u>	1,955.48
4)	Room and Board: Geoquest Consulting Ltd. (covering portion of Sabre and SJ costs) Sabre Exploration Services Ltd.	1,812.02 257.42	
	SJ Geophysics Ltd.	878.93	2,948,37
5)	Equipment Rental: Sabre Exploration Services Ltd.(Chainsaw)		214.00
6)	Supplies and Materials:		588.50
7)	Miscellaneous: Secretarial, miscellaneous		
	ΤΟΤΑ	L:	<u>\$24,765.11</u>

APPENDIX D

REFERENCES

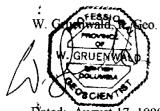
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APPENDIX E

CERTIFICATE

I, WERNER GRUENWALD OF THE CITY OF VERNON, BRITISH COLUMBIA HEREBY CERTIFY THAT:

- 1. I am a graduate of the University of British Columbia with a B. Sc. degree in Geology (1972).
- 2. I am a registered member of the Professional Engineers and Geoscientists of British Columbia (#23202).
- 3. 1 am a fellow of the Geological Association of Canada (F2958)
- 4. I am employed as consulting geologist and president of Geoquest Consulting Ltd., Vernon, B.C.
- 5. I have practiced continuously as a Geologist for the past 27 years in western Canada and the US.
- 6. I personally supervised the work on the Pathfinder property.



Dated: August 17, 1999

