

*Monashee Geological Consultants*

LOG NO: 0125

RD.

ACTION:

FILE NO:

DRILLING REPORT

ON THE

MISSION GROUP

NTS: 92H/8E

OSOYOOS MINING DIVISION

LATITUDE: 49° 20' N

LONGITUDE: 120° 07' W

for

Agio Resource Corporation

505 - 700 West Pender St.

Vancouver, B.C.

V6C 1G8

by

R.D. Kregosky, B.Sc., F.G.A.C.

November 30, 1987

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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 89.01.18

ASSESSMENT REPORT 16916

MINING DIVISION: Osoyoos

PROPERTY: Mission  
LOCATION: LAT 49 20 00 LONG 120 07 00  
UTM 10 5468292 709476  
NTS 092H08E

CLAIM(S): Flint, Mission

OPERATOR(S): Agio Res.

AUTHOR(S): Kregosky, R.

REPORT YEAR: 1987, 26 Pages

COMMODITIES

SEARCHED FOR: Gold, Silver

GEOLOGICAL

SUMMARY: Argillites, siltstones, limestones and tuffs of the Jurassic/  
Triassic Hedley Formation have been intruded by sills, dykes and  
stocks of diorite. Pyrite, arsenopyrite and sphalerite with  
associated precious metals occur in shear zones within the diorites.

WORK

DONE: Drilling  
DIAD 224.3 m 3 hole(s);NQ

MINFILE: 092HSE052

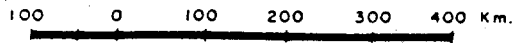
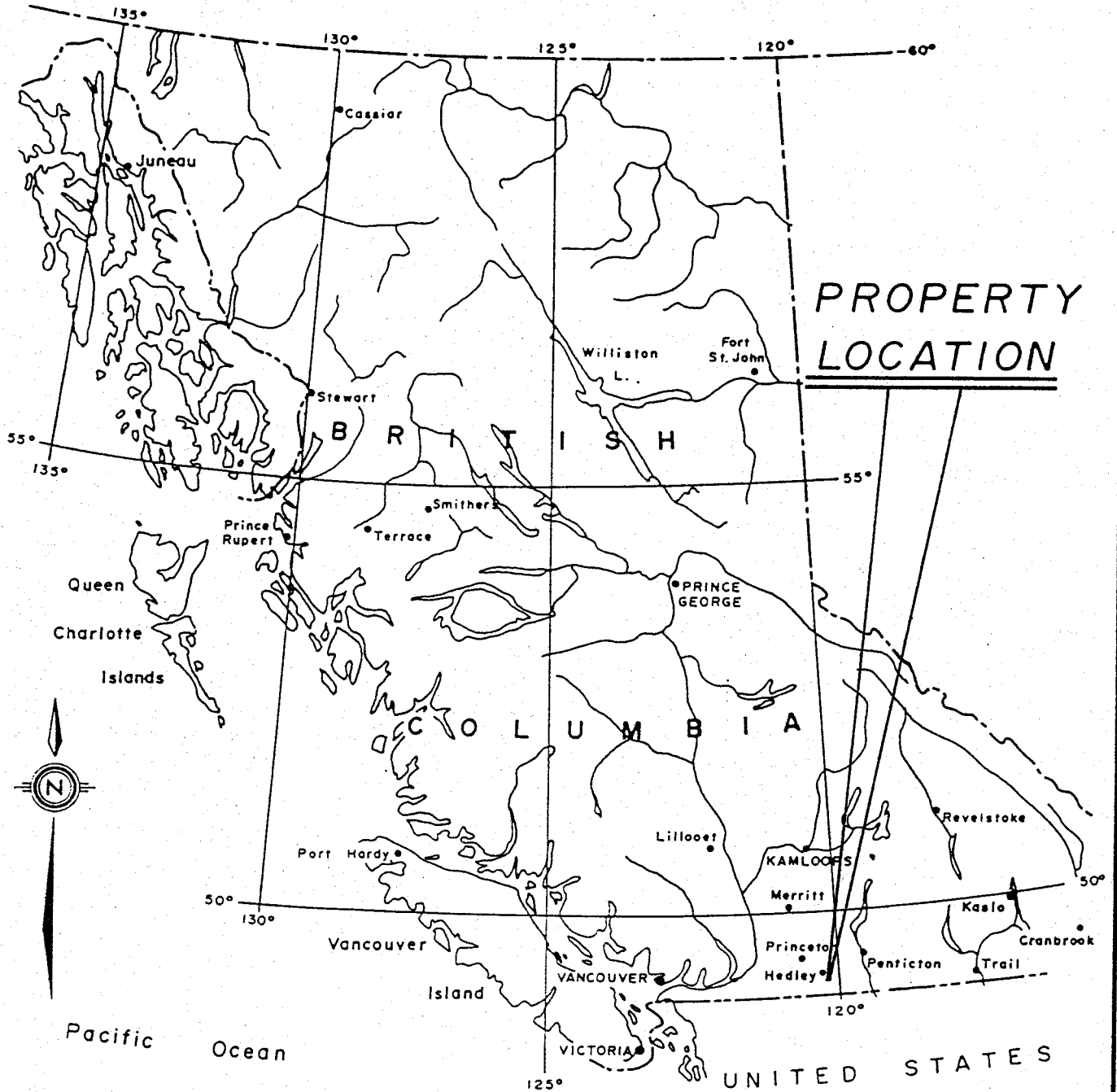
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AGIO RESOURCE CORPORATION		
MISSION GROUP		
Hedley, B.C. - Osoyoos M.D.		
PROPERTY LOCATION MAP		
MONASHEE GEOLOGICAL CONSULTANTS	nts: 92H/8E Dec, 5/87	FIG. 1

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## INTRODUCTION

This report, prepared at the request of Mr. H. Plank, President, Agio Resource Corporation of Vancouver, B.C., describes the results obtained from a drill program that was conducted on the Mission Group of claims near Hedley, B.C. (fig. 1).

The drill program was carried out by Interior Diamond Drilling of Summerland, B.C. during the fall of 1987. A total of 736 feet (224.3 meters) of NQ core were drilled.

The author visited the property October 27, during the drill program, and on November 21, 1987 after the program was completed.

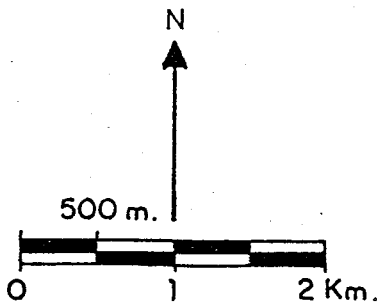
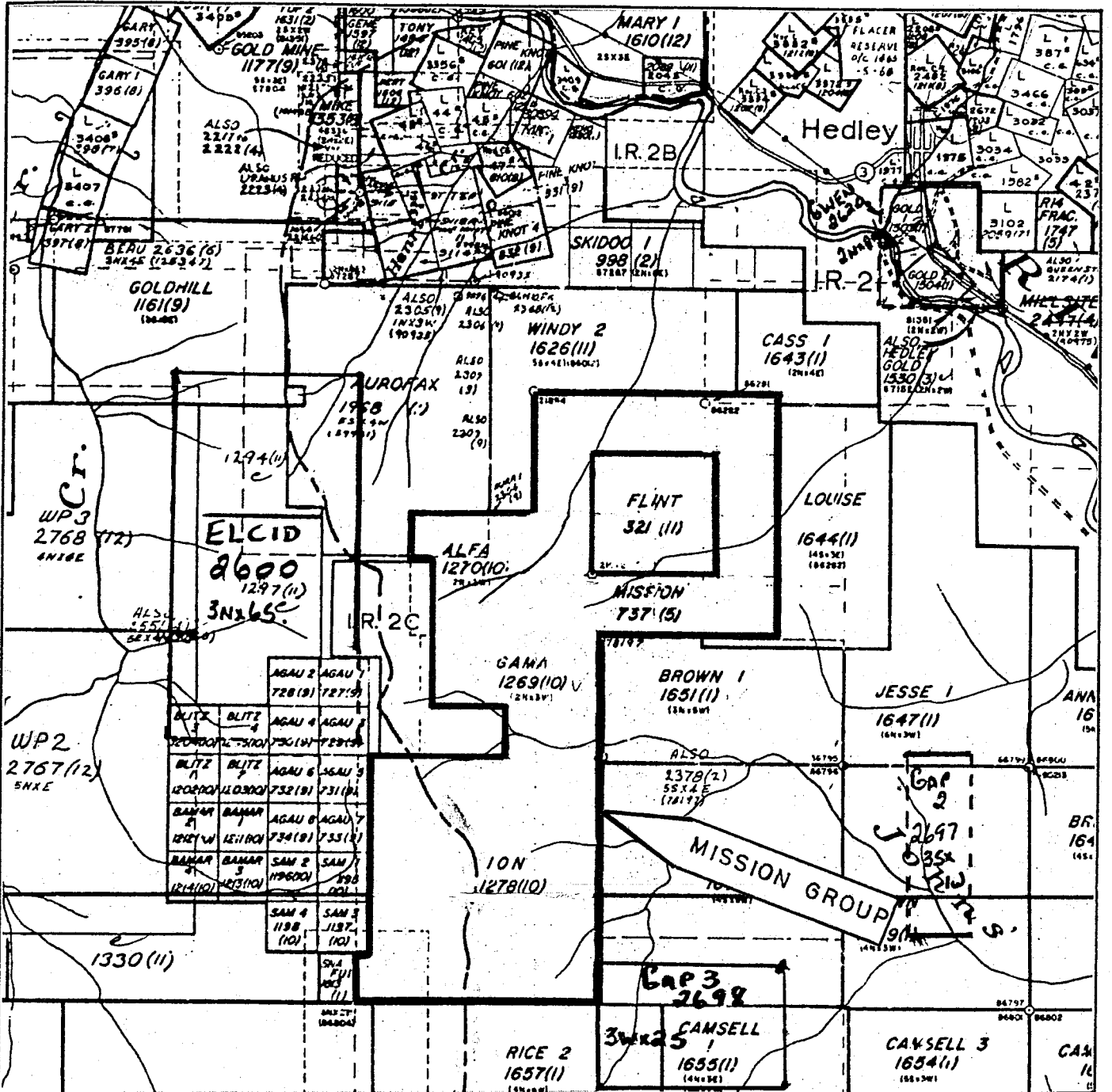
This report is based on field observations made on the property during the two visits as well as on the research of various published and unpublished accounts of the property.

## PROPERTY DESCRIPTION

The Mission Group (fig. 2) consists of 5 contiguous claims located in the Osoyoos Mining Division. This group contains 46 units as outlined below:

<u>Claim</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date</u>	<u>Units</u>
Flint	321	Nov. 14/77	Nov. 14/90	4
Mission	737	May 22/79	May 22/89	16
Gama	1269	Oct. 17/80	Oct. 17/89	6
Alfa	1270	Oct. 17/80	Oct. 17/89	4
Ion	1278	Oct. 24/80	Oct. 24/88	<u>16</u>
			TOTAL	46

The claims are currently in good standing and registered to Agio Resource Corporation of Vancouver, B.C.



AGIO RESOURCE CORPORATION		
MISSION GROUP - Hedley, B.C.		
CLAIM LOCATION		
MONASHEE GEOLOGICAL CONSULTANTS	nts: 92H/8E Dec, 5/87	Fig. no. 2

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### LOCATION AND ACCESS

The Mission Property is situated approximately 4 km. southwest of Hedley, B.C. The claims are accessed off B.C. Highway #3, 7 km. west of Hedley at the Sterling Creek Forestry Road. After an additional 3.7 km. the Johns Creek Road is taken eastward. The diamond drill sites are situated at distances of 17.1 km. and 20.2 km. along this road.

### TOPOGRAPHY

The Mission claims are staked over relatively moderate mountainous terrain which have, in general, northward exposures. The property is frequently incised by major northeasterly trending drainage features. Elevations vary from 1000 meters in the north portions of the Missions claim to more than 1700 meters in the southern sectors of the Ion claim.

The claims are forested by secondary growths of Douglas Fir, Lodgepole Pine, with patches of willow, alder and poplar in low lying drainage areas.

### REGIONAL GEOLOGY

The geology of the Hedley area has most recently been mapped by G.E. Ray, G.L. Dawson and R. Simpson (1986/89). The area is underlain by thick sequences of metasedimentary and metavolcanic rocks belonging to the Hedley and Whistle Creek Formations of Jurassic/Triassic age.

The Hedley Sequence consists predominantly of siltstone, argillite and limestone/marble with lesser amounts of volcanic tuffs and pebble conglomerates.

The Whistle Creek Sequence consists mainly of andesitic ash tuffs with lesser amounts of interbedded argillite, siltstone and thin limestone beds.

These rock sequences have been intruded by dykes, sills and stocks of diorite, gabbro and granodiorite belonging to the Hedley and Similkameen Intrusions of Middle Jurassic age.

Mineralization in the Hedley area is principally associated with calc-silicate skarn development next to Hedley Formation limestone/diorite

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contacts (Mascot Gold Mines). Mineralization consists of arsenopyrite, chalcopyrite, pyrite and pyrrhotite, with associated precious metals. Gold mineralization also occurs in quartz/shear zones located within the Whistle Creek Formation (Banbury Gold Mines).

The Mission Property, itself, is underlain by rocks belonging to the Hedley Sequence. These consist predominantly of argillite, siltstone with thin limestone/marble beds and lesser amounts of tuffs. This sequence has been intruded in the north, east and south by diorites belonging to the Similkameen Intrusions.

### HISTORY

A portion of the claim group is staked over a zone of mineralization known as the Mission Showings. The principal showing consists of several shear zones associated with a major fault located entirely within intrusive rocks. Development originally consisted of a series of shallow shafts and trenches which exposed bands and masses of pyrite, arsenopyrite, sphalerite and minor tetrahedrite and chalcopyrite (B.C.M.M., 1936).

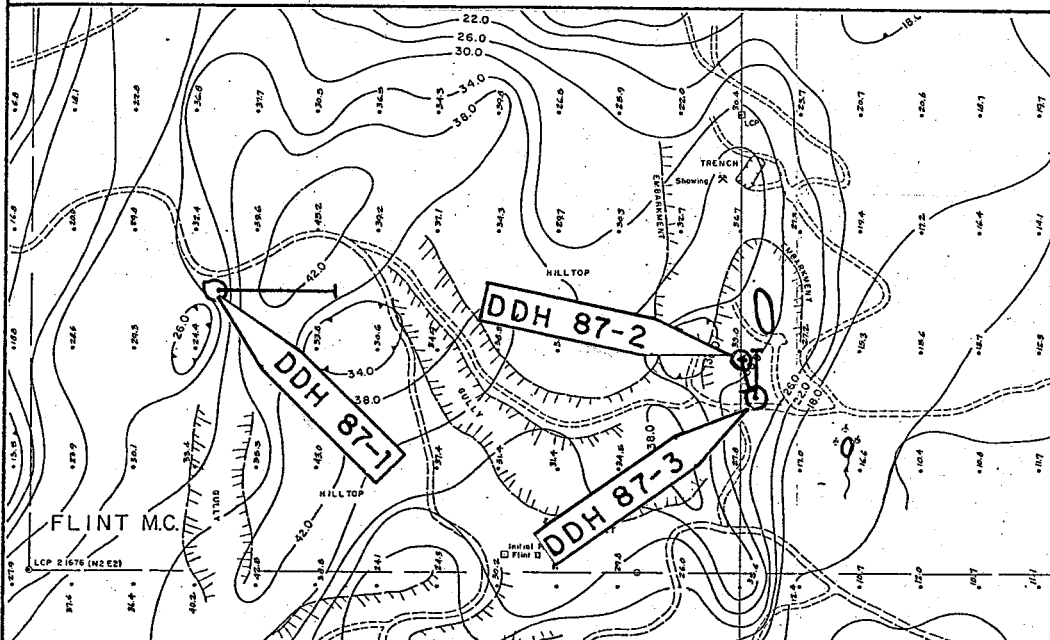
More recent developments by Agio Resource Corp. includes geological (1986), geochemical (1972, 1986) and geophysical (1972, 1980, 1986) surveys as well as a diamond drilling program in the vicinity of the Mission workings in 1981.

### DIAMOND DRILL PROGRAM

Diamond drilling was carried out in the fall of 1987. A total of 736 feet (224.3 meters) of NQ core was drilled. The core is currently being stored at the Mascot Gold Mines mill site on Nickel Plate Mountain.

One Drill site (87-1, fig. 3) was located according to I.P. anomalies located during a geophysical survey conducted in the fall of 1980 by Glen White Geophysics.

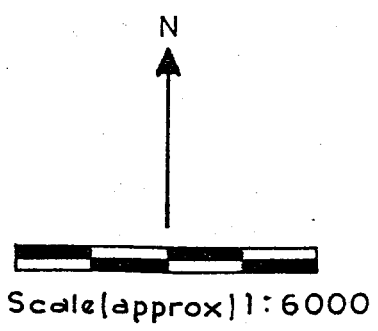




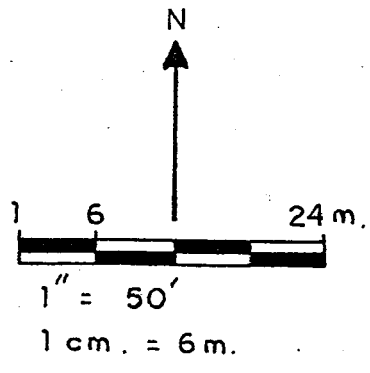
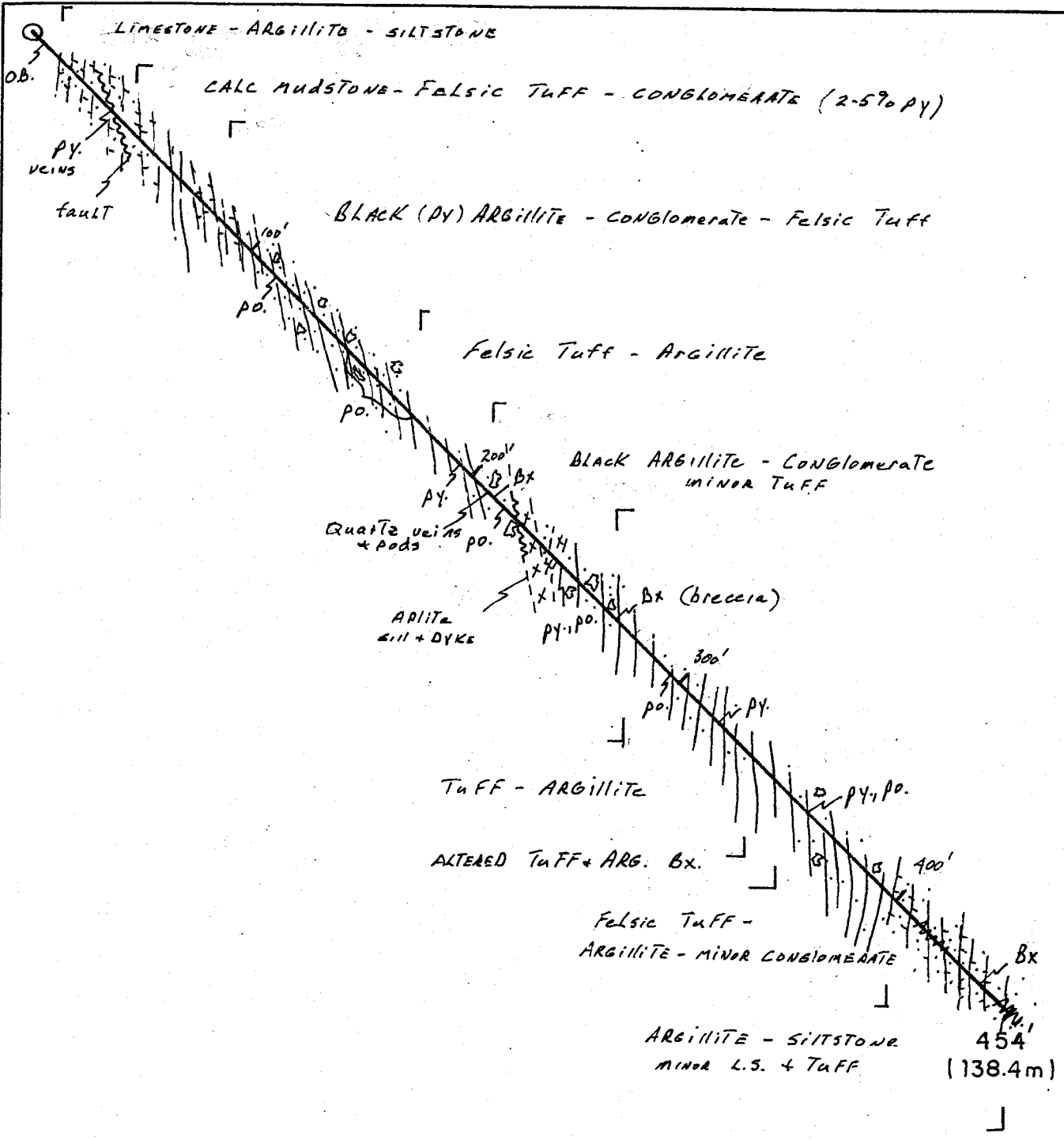
- L0+00
- L1+00S
- L2+00S
- L3+00S
- L4+00S

5W    4W    3W    2W    1W    0+00    1E    2E

I.P. CHARGEABILITY MAP - WHITE '80



AGIO RESOURCE CORPORATION <hr/> MISSION GROUP - OSOYOOS M.D.		
D.D.H. LOCATION MAP		
MONASHEE GEOLOGICAL CONSULTANTS	nts: 92H/8E Dec. 5/87	Fig. no. 3



AGIO RESOURCE CORPORATION <hr/> MISSION GROUP - HEDLEY B.C.		
PROFILE DDH. 87-1 (090°, -45°)		
MONASHEE GEOLOGICAL CONSULTANTS	nts: 92H/8E Dec. 5/87	Fig. no. 4

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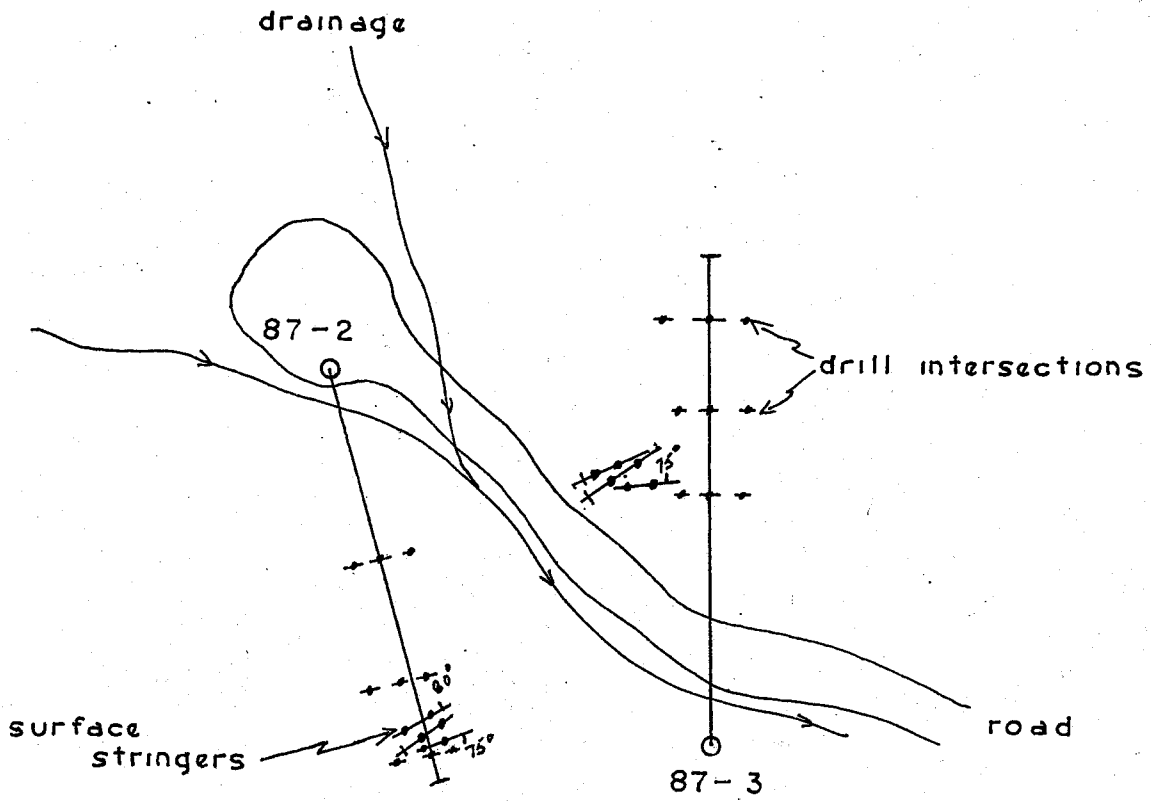
The other two drill sites (87-2 and 87-3, fig. 3) were collared in an attempt to trace the dip extensions of pyrite, arsenopyrite and sphalerite stringers located in a highly altered diorite. This mode of mineralization is the same as and in close proximity to the Mission showings.

Diamond drill hole 87-1 (fig. 4) was logged by J. Bellamy, Senior Geologist, Mascot Gold Mines Ltd. This hole is located entirely with metasedimentary and metavolcanic rocks belonging to the Hedley Formation. These consist primarily of thinly bedded black argillites, siltstones and limestones with lesser amounts of felsic tuffs and conglomerates. Aplitic dyke and sill intrusions were noted to occur at the 230 foot (70.0 m.) interval.

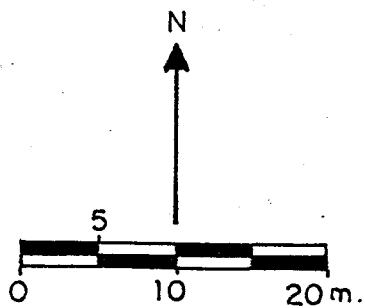
The bedding/core axis intersections were usually moderate to steep ( $40^{\circ}$  -  $70^{\circ}$ ) indicating steep to vertical easterly or westerly dips of the strata. Mr. Bellamy indicates that the rocks, in general, have undergone varying degrees of alteration consisting mainly of silica, chlorite and epidote and to a lesser degree argillic. As well, certain rock horizons have undergone biotite hornfelsing.

Mineralization encountered in the drill hole consists mainly of pyrite and pyrrhotite. The pyrite occurs as syngenetic disseminations in the black argillites and as stringers and coatings on fracture surfaces. The pyrrhotite is less pervasive but also occurs as disseminations in a number of the rock units.

Two sections in D.D.H. 87-1 are considered to be of interest. These sections are located approximately at intervals 10-45 feet (3-14m.) and 200-248 feet (61-76m.) The first interval consists of weak pyroxene skarned crystalline limestone and argillite which has up to 5% pyrite veinlets. At 40 feet (12.2m.), a strong mylonitic fault has been observed which cross-cuts the bedding at a low angle.



— L 3 S 025 E —



AGIO RESOURCE CORPORATION <hr/> MISSION GROUP - HEDLEY, B.C.		
PLAN of DDH. 87-2 + 87-3		
MONASHEE GEOLOGICAL CONSULTANTS	nts: 92H/8E Dec. 5/87	Fig. no. 5

ELV. 1305 m.  
165° (-45°) 87-2

Stringers - PY, ASPY, SI

ELV. 1305 m.  
87-3  
0° (-45°)

overburden

fresh  
Diorite

Shear

Alteration Zones

151' (46m.)

131 (39.9m)



1" - 20'  
1cm. - 2.4m.

AGIO RESOURCE CORPORATION		
MISSION GROUP - HEDLEY, B.C.		
PROFILE of DDH. 87-2 + 87-3		
MONASHEE GEOLOGICAL CONSULTANTS	nts 92H/8E Dec. 5/87	Fig. no. 6

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The second interval is centered around a faulted tuff horizon which has undergone argillic alteration with iron oxide staining. Adjacent to this fault zone are two aplitic intrusions. The associated wall rocks consist of argillite and tuff which are frequently cut by quartz/calcite veinlets and pods. As well, pyrite and pyrrhotite have been estimated to range from 1-3%.

Diamond drill holes 87-2 and 87-3 (fig. 5), which were logged by the author, are located approximately 175 meters south of the main Mission showing. The plan map indicates the spacial relationship between the two drill holes and a series of mineralized stringer/shear zones as exposed in two surface trenches.

The profiles (fig. 6) of D.D.H. 87-2 and 87-3 indicate that the drill intersections correspond with the measured attitudes of the surface showings and as a result, the zones have been traced for approximately 90 feet (27m.) below surface.

These mineralized zones consist of thin stringers and disseminations of pyrite, arsenopyrite and sphalerite located in altered diorites. Alteration consists predominantly of silicification and propylitisation and often extends for considerable distances from the mineralized stringers. The alteration is often intense and masking the original character and texture of the intrusive rocks. The structures at depth are strong and it is reasonable to assume a continuation of such.

### CONCLUSIONS AND RECOMMENDATIONS

The diamond drill program on the Mission Group was successful in that it:

1. Outlined the considerable extent of disseminated syngenetic pyrite and pyrrhotite within the Hedley Formation rocks (which probably explains the 1980 I,P. anomaly) in hole 87-1;
2. Outlined two areas of interest in hole 87-1;
3. Extended to depth the mineralized shear zones as intersected by

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hole 87-2 and 87-3.

As such it is recommended that:

1. D.D.H. 87-1 be lithogeochemically sampled over intervals 10-45 feet and 200-248 feet. Samples should be split off over 3 foot sections and analyzed for gold, silver and arsenic.
2. D.D.H. 87-2 should be sampled for assay over intervals 58-63, 97-102, 113-115, and 121-125 feet;
3. D.D.H. 87-3 should be sampled for assay over intervals 50-54, 77-108, and 130-132 feet.

Additional sampling or follow-up programs could best be determined by the results of the above samples.

## ITEMIZED COST STATEMENT

1. Diamond Drill Program (all inclusive):	
736 feet (224.3m.) NQ core .....	\$21,469.00
2. Program Supervision:	
H. Plank, 12 days @ \$150.00/day.....	\$ 1,800.00
Food and accommodation.....	\$ 650.00
4X4 rental and gas.....	\$ 300.00
R. Kregosky, 1 day @ \$200.00/day.....	\$ 200.00
3. Report preparation:	
4 days @ \$200.00/day.....	\$ 800.00
	TOTAL
	\$25,219.00

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## AUTHOR'S QUALIFICATIONS

I, Roy D. Kregosky, do hereby certify that I am a professional Geologist in the province of British Columbia. I received a B.Sc. in Geology from the University of Calgary in 1970. I have practiced my profession for the past 17 years and I am a Fellow of the Geological Association of Canada.

December 5, 1987



A handwritten signature in cursive script that reads "Roy D. Kregosky". The signature is written over a horizontal line.

R.D. Kregosky  
B.Sc., F.G.A.C.



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### REFERENCES

B.C.M.M.: Annual Report - 1936

Phendler, R.W.: Diamond Drilling Report - Mission Property, 1981

Ray, G.E. et al: Geology of the Hedley Gold Camp. Open file map 1987-10a

White, G.E.: Geophysical Report on the Flint and Mission Claims - 1980

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## APPENDIX

Diamond Drill Logs

MONASHEE GEOLOGICAL CONSULTANTS CLIENT *Agio Resource Corporation* DDH No *87-1* Sheet *1* of *5*

LOCATION: *Mission Group* NTS *92 H/BE* DATE COLLARED *Oct. 4* COMPLETED: *Oct. 25*

BEARING: *090° (-45°)* ELEVATION: *1350 M.* LAT. LONG. CORE SIZE: *NQ*

GEOPHYSICAL LOG BY: DATE:

DATE CORE LOGGED *Nov. 20, 1987* LOGGED BY: *JOHN R. BELLAMY* SCALE:

FT. depth	core % rec.	description	miner.	sample no	assay results
0					
10'		<i>Overburden</i>			
	75%	<i>Drill hole collared in thin bedded to massive (1"-8") beds of grey x tabular to weakly pyroxene skinned l.s. interbedded with black f.g. to m.g. silty</i>			
	33%	<i>clasts. 10-35' - heavily oxidized + shattered pyr. veined grey-gn massive l.s. w/ lenses of blk. arg. Heavy pyr. veining (5%)</i>	<i>py.</i>		
	25%	<i>@ 34-35' in x-cutting veinlets</i>			
35'					
40'	80%	<i>Calc. grey mylonitic fault. upper cont. @ 25° to core axis (C.A.) 1-9" graphitic mylonite @ 30° to C.A.</i>	<i>graphitic</i>		
45'	95%	<i>40% grey-gn rextabular l.s. in blk. pyr. clastic arg. beds. up to 5% pyr. beds @ 50°-C.A.</i>	<i>py.</i>		
		<i>massive grey-blk. s1st. - calc. w/ some m.g.-c.g. clasts</i>			
56'		<i>pyrite v. f.g. banded s1st 1-4% .py. cubes</i>	<i>py.</i>		
		<i>biotite lamphed massive calc. s1st. minor pyr.</i>			
62'					
67'		<i>v. f.g. grey-brn. silicified s1st. minor pyr. fract. @ 45° to C.A. + FeO on fract.</i>	<i>2-5% py.</i>		
		<i>@ 67.5' altered tuff horizon</i>			
		<i>m.g. felsic tuff @ 45° to C.A. upper contact - silicified epidote. f.g. to m.g. biotized silty clastics w/ lensoid biotite + s1st. lenses, 1/4" th/calc. veins</i>	<i>py.</i>		
78.9			<i>2-5% py.</i>		
79.7		<i>epide + chl. altered felsic conglomerate</i>			

m	core depth %	description	miner.	sample no.	assay results	Page 2
85.2		massive v.f.g. weakly fract. & banded pyr. silt. silt'd @ 89' + calc. sealed fract. @ 20' C.A.				
89.4		c.g. oriented chert, arg. conglom. graded, arg. felsic frag. lower cont. @ 29' to C.A.				
105		v.f.g. black massive pyr. argillite, calc. sealed fract. with some arg. / silt. / l.s. conglomerate - chl. + epid. minor pyr. @ 96-99.5'	pyrobo. pyr.			
		pyr. matd. arg. 99.5-105				
115		interbedded arg. / conglomerate conglomerate - chert, arg. frag., silt. in pyr. arg. matrix. < 10% l.s. frag. @ 113 frag. supported no arg. matrix 4% pyro m.g. foliated, chl. altered felsic tuff horizon beds @ 30' to C.A.	pyrobo.			
128		argillite - beds @ 30' to C.A. minor pyr. in fine x cutting fract., arg. - f.g. - m.g. clastic. minor biotite low foliation				
132		conglomerate - arg. / chert / felsic - m.g. foliated, biot. low				
138		interbedded blk. arg. - conglomerate to 177.5 m.g. pyr. banded arg.				
148		chert-arg. frag. in arg. matrix 4" l.s. frag. @ 144. 2% pyro @ 146-147 in frag. of l.s. / silt. / chert-pyr.	pyrobo. pyr.			
		black massive argillite finely shaltered w/ calc, limonite on fract. pyro flooded	pyrobo.			
		subtle, chl alteration next to fract.				
177.5						
178		tuff f.g. m.g. epid. altered @ 60' to C.A.				



m	core depth rec	description	miner.	sample no	assay results	Page 9
		argillite w/ minor tuff				
	287.5	} Intubedded tuff / Argillite 4" Conglomerate @ 290.2				
	290		continuing intubeds of Tuff + argillite - irreg. banded w/ some lenses calc. tension gashes. also with pyx.	pyx		
		- beds @ 55° to C.A.	pyx.			
		@ 317' 1-3/8 pyx. Argillite @ 65° to C.A.	pyx.			
	330'					
		Altered Tuff / Argillite beds. - mottled brn grn greenish alt. cherty section w/ strong chl., epid. - biotized and silicified				
	344	- 40° to C.A.				
		Pyritic Argillite - blk. massive w/ minor biotite hornfelsed silty argillite (348-349)				
	357					
		tuff / Argillite interbeds banding, F.g. - m.g. @ 60° to C.A.				
	363.2					
	364.5	Arg. - 1% stratiform pyx-pyr.	pyx			
	365.9	Felsic tuff 40° to C.A.	pyx.			
		Mixed Argillite / tuff / conglomerate				
		- altered felsic tuff / chert / argillite Conglomerate - pyx. fracture - calc. + chl.				
	379.5					



MONASHEE CLIENT DDH No. 87-2  
 GEOLOGICAL CONSULTANTS AGIO RESOURCE CORPORATION Sheet 1 of 2  
 LOCATION MISSION GROUP NTS 92H/BE DATE COLLARED Oct. 26 COMPLETED: Oct. 29  
 BEARING 165° (-45°) ELEVATION 1305 M. LAT. LONG. CORE SIZE: NQ  
 GEOPHYSICAL LOG BY: DATE:

DATE CORE LOGGED NOV. 27 / 87 LOGGED BY: Roy KREGOSKI SCALE:

FL	core depth % rec.	description	miner.	sample no	assay results			
0		overburden						
45		hole located entirely in intrusive Diorite, fracture sets @ 20°, 40°, 60° + 91° to C.A.						
55.5	100%	focus - Chl., ep. + py. one zone of fractures - 10% py.						
58		core silicified @ 40°	CPY					
59.5		3" stringers Qtz/py/s/aspY	MC					
61.2		5" "						
63		bottom contact fractured + propylitized						
	100%	fresh Diorite main fractures (@ 40° to C.A.) usually py.						
97		3" zone of silicification + ground	py					
99.5	90%	subside - fracture @ 60° to C.A.	aspY					
102		shear zone (med) in silicified Dio. 2 thin (1/4") stringers of mineralization @ 101° bottom contact fractured and broken.	py aspY					
114		fresh Diorite stringer of alteration (S.I.) @ 50° to C.A. 1/4" of	py aspY					





MONASHEE CLIENT DDH No. 87-3  
 GEOLOGICAL CONSULTANTS AGIO RESOURCE CORPORATION Sheet 1 of 2  
 LOCATION: MISSION GROUP NTS 92H/BE DATE COLLARED: Oct. 29 COMPLETED: Oct. 31  
 BEARING: N (-45°) ELEVATION: 1305 m. LAT. LONG. CORE SIZE: NQ  
 GEOPHYSICAL LOG BY: DATE:

DATE CORE LOGGED: Nov. 27/87 LOGGED BY: ROY KREGOSKY SCALE:

core m depth	% rec.	description	miner.	sample no	assay results			
		overburden						
31								
37		hole located entirely in intrusive diorite. 6' weathered / limonites broken						
46	100%							
50		core heavily fractured @ 18 T.C.A.						
54		silicified, no apparent mineral. contact gradational						
		fresh diorite						
	100%							
77.5								
79		silicified Dio. upper contact 60° to C.A. sheared @ 78'						
		Dio. continues strongly silicified						
88		qtz - ugly						
94.5		disseminations						
	100%	silicified						

