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J.C. STEPHEN EXPLORATIONS LTD.

WEEKLY CAMP REPORT

Mt O'Keefe.

PROJECT Newey CAMP NAME Bravo

NTS MAP SHEET 104 N/3 DATES Aug 5-12, 1982

AIR PHOTOS BC 5617 LAT. & LONG. _____
120,118,180

TALUS ~~SILT~~ SAMPLE SERIES 82 NX BT 109-112

SOIL SAMPLE SERIES 82 NX BT 70-71

ROCK SPECIMEN NUMBERS 41008C - 41017C
41115C - 41127C

Report on the Mt. Okeefe Prospecting Area

Introduction.

The centre of the Mt. Okeefe area is located approximately 43 kms South and 23 kms East of Atlin, BC. Old copper, asbestos, and magnesite showings were known in the area and it was the intent of the crew to evaluate the Au-Ag potential.

Work was carried out from two campsites. Camp 1 was located about 1.5 kms northwest of Mt. Okeefe East, which is east of Gold Bottom Creek. The camp was situated on a small lake at 4100' which was the site of an old prospecting camp.

The hill northwest of this camp was covered with old picket lines trending 60°. However, nothing of interest was found here. Another old campsite with fuel and oil was found at a lake in a northwest trending valley that cuts the hill. The picket lines appear to trend perpendicular to the northwest valley along which peridotite outcrop and talus was found.

Four claim posts were found at one locality North of the latter old campsite. (Refer to air photo BC 5617 180 and Appendix II).

Camp 2 was located about 2 kms northwest of Mt. Okeefe West which is west of Gold Bottom Creek. The camp was between two small lakes at about 4500' and was, again, the site of a former old prospecting camp.

A shallow bulldozed trench, (Trench 1), is located 500m N. of camp 2. (Refer to photo BC 5617 120 ~~and Appendix II~~).

A trench-like structure was also found less than one km. southwest of camp 2., (Trench 2). However, there was no evidence of previous work or mineralization at the location and it is possible ~~that~~ for the cut to be a natural occurrence.

Several rock cairns and claim posts dating ~~back~~ as far back as 1956 were found in the camp 2 area. All or some of the wooden posts appear to belong to Cominco from 1963. (Photo BC 5617 120, Appendix II).

The G.S.C. were in the vicinity of Mt. Okeefe West during our stay probably conducting a geodeotic survey.

Several sample flags from Camp Freddie in 1981 were found in the Mt. Okeefe West area. Their 1981 report ~~was~~ may have been useful in covering this area.

Geology

The rock units encountered in the Mt. O'Keefe area can be divided into felsic intrusions, intermediate to matic intrusions, the Laberge Group, the Atlin Intrusions, and the Cache Creek Group.

Felsic Intrusions:

(7)- Granophyre (OK-53); white to light brown, fine grained felsic intrusions (identified as granophyre by the G.S.C. on the Atlin Sheet) with a medium grained, white feldspar phenocrysts. These units form small, resistant weathering domes within the Atlin Intrusion ultramafics and on a regional scale appear to be intrusive into the ultramafics. This interpretation is supported by the lack of ~~matic~~ intermediate to matic dykes in the granophyre whereas they are fairly common in the ultramafics. Ultramafic dykes appear to cross-cut the margins of some of the granophyre outcrops on a local scale but these 'dykes' lack lateral extent and are probably the result of late faulting and/or remobilization of the ultramafics.

Intermediate To Mafic Intrussions:

6a - Medium Grained Hornblende Diorite (OK-54); Encountered only in the bulldozed trench north of Camp #2 this body carries small stringers of ~~f~~ disseminated pyrite, chalcopyrite, malachite along with possible pentlandite, nickelite, and bornite (rock sample # 41009 C). The economic minerals occur ~~in~~ mostly in zones of green, possibly chloritic, alteration within the hornblende diorite which contain minor quartz veining spatially but not necessarily directly associated with the mineralization.

6b - Fine Grained Diorite; Distinguished from unit 6a by the finer grain size and lack of visible hornblende crystals this unit tends to occur as small, sporadic bodies; especially in the area west of Camp #2. These intrusions also lack the greenish alteration and economic mineralization of unit 6a.

Mafic Dykes (OK-51); Mineralogically these appear ~~to~~ very similar to ~~unit~~ the fine grained diorites but are slightly finer grained being very fine to fine grained. However, identification generally depends on field relationships and in areas of poor exposure the two ~~un~~ rock types may be confused so

they have both been mapped as 6b. Both appear to have been emplaced in high-level (hypabyssal) environments (fine grain size, sharp contacts) and were observed only within the ultramafics.

6c - Feldspar Porphyry (OK-65); Observed only in the rocks of the Cache Creek Group to the east of Mt. O'Keefe West this unit consists of mafic dykes with medium to coarse grained, white feldspar phenocrysts.

~~Nahlin~~ ~~Intrusions~~

Laberge Group:

5a - Lapilli Tuff (OK-57); Mafic, lapilli tuff with black, elongate, rounded lapilli found just south of the Nahlin Fault.

5b - Laberge Greywacke (OK-58); Fine to medium grained greywacke with quartz, feldspar, mafic and jasper (?) clasts which are angular to rounded. This unit occurs south of the Nahlin Fault.

Atlin Intrussions :

4a - Serpentinized Ultramafics (OK-2, OK-52, ~~OK-59~~); Black to green (serpentinized), dark weathering, and occassionally carrying narrow (up to 4 mm) chrysotile veins.

4b - Ultramafic Breccia (OK-55); Oligomictic fault breccias increasing in grain size and roundness towards the centre of the fault zone such that the central material may appear as an ultramafic breccio-conglomerate.

4c - Orange weathering Ultramafics (OK-59); Similar to unit 4a but orange weathering. This unit probably represents an alteration stage between units 4a and ~~4d (and 4e)~~ units 4d and 4e and change between alteration stages are gradational. The orange weathering may be the result of Fe oxidation within the ultramafics.

4d - Silicified Ultramafics (OK-4, OK-60, OK-61, OK-62, OK-63); Orange weathering ultramafic unit with moderate to intense silicification which appears to represent further alteration of unit 4c. The most intensive alteration occurs arround replacement zones characterized by very drusy quartz veins up to 4 cm. wide, patchy

green alteration (chlorite - kaolinite ?), veinlets of a red mineral tentatively identified as cinnabar (rock samples 41010C, 41011C, and 41012C), a pervasive reddish-purple colouration possibly ~~due~~ related to H_2 addition or Fe oxidization, and a weak, overall magnetism due to the presence of fine grained magnetite. This unit along with 4c and 4e is most prevalent on the west facing slopes above the Sloko River and may be related to secondary faulting along the ~~Sloko River~~ Nahlin Fault.

4e - Quartz - Carbonate Ultramafics (41124C); This unit is characterized by quartz veining (mostly drusy quartz often growing inward from a layer of chalcedony (rock samples 41017C, and 41127C)), quartz-carbonate veining, ~~and~~ magnesite veining (OK-56), and orange weathering. This unit may satisfy the definition of listwanite and if this is so it enhances the Au potential of the area. The quartz-carbonate ultramafics ~~also~~ appear to be the result of ~~a~~ increased alteration of unit 4c by silica - carbonate rich fluids. Unit 4e may represent a final alteration stage resulting from the addition of carbonate to unit 4d; conversely unit 4d could be derived from 4e

by the removal of carbonate by weakly acidic solutions rich in silica and ~~Hg~~ mercury (Hg deposition is indicative of low temperature (epithermal) deposition. Finally, ~~The~~ the last two alteration stages could be contemporaneous.

Cache Creek Group:

3 - Limestone

2 - Greenstone

1 - Chert, Argillite, And Chert Pebble Conglomerate.

Structure:

The northwest trending Nahlin Fault is the major structure in the area and it extends along the southwest edge of the Mt. Okeefe area, separating the Atlin Intrusions from the Laberge Group. Several secondary faults are characterized by gullies on the west slopes above the Sloko River and as valleys on the flat areas northwest of both Mt Okeefe W. and E. In the Mt Okeefe W. area, these faults are generally characterized by fault breccias with more angular clasts towards the margins of the zones and rounded clasts in the centre.

Two general trends of the faults were observed. The gullies above the Sloko River trend northeasterly or perpendicular to the Nahlin Fault and the valley-faults trend northwesterly or parallel to the major fault.

Mineralization:

Only minor amounts of mineralization were observed in the area. Asbestos veins covered a fairly extensive area in the Mt. Okeefe West area but ranged only up to 4 mm in width. Trench 1 contained the only copper mineralization encountered. This consisted of stringers of malachite and disseminated chalcopyrite accompanied by pyrite and possible bornite and pentlandite or niccolite. Minor disseminated pyrite was found in some of the greenstones.

Conclusion

Since the mineralization in Trench 1 is hosted in and possibly related to the hornblende diorite unit, which is not found anywhere else in the area, and due to the disseminated nature of the mineralization, it appears there is little of economic ~~possibilities~~ interest related to it.

The greatest economic possibility appears to lie with the altered ultramafic unit which hosts possible listwonitic zones with both quartz and carbonate veins. (~~The~~ Some of the carbonate veins appear to be magnesite). The size of the veins themselves is not significant but the listwonitic (?) zones are extensive. If gold values are found associated with these zones, detailed talus sampling ~~along~~ ~~is~~ is recommended along them and ~~very~~ detailed mapping of the various alteration 'stages' would be advantageous.

Appendix I

Representative Rock Descriptions

OK-51 : Mafic dyke with fine grained ~~mafic~~ ~~dyke~~. feldspar phenocrysts.

OK-52 : Serpentinized ultramafic with narrow (up to 1 mm.) chrysotile veins.

OK-53 : white to light brown, fine grained felsic intrusion (identified as granophyre ~~in the~~ by the G.S.C. on the Atlin Sheet) with medium grained, white feldspar phenocrysts.

OK-54 : Hornblende diorite (medium grained) from shallow bulldozed trench north of Camp #2.

OK-55 : Ultramafic breccio-conglomerate.

OK-56 : Magnesite vein (some of which are up to 10 cm wide) in orange weathering ultramafic.

OK-57 : Mafic, lapilli tuff (black, elongate, rounded lapilli) in the Laberge Group south of the Nahlin Fault.

OK-58 : Fine to medium grained Laberge graywacke.

OK-59 : Orange-brown weathering, black ultramafic with fairly common chrysotile veins up to 2mm wide.

OK-60 : Reddish-purple felsic dyke (? or extremely altered ultramafic zone?) with very glassy quartz veins up to 3 cm wide; orange-brown weathering; spotty chloritic-kaolinitic (?) alteration; and weak magnetism.

OK-61 : ~~Very~~ Light grey, very silicified alteration product which has an orange-brown weathered surface and an irregular, very narrow, black foliation.

OK-62 : Orange weathering replacement zone in the ultramafics with extensive chlorite-kaolinite (?) alteration. The rock has a somewhat mottled, ~~purple~~ purple and green appearance.

OK-63 : Extremely altered material from along reddish-orange weathering replacement zone in the ultramafics.

OK-64 : Serpentinized ultramafic with rounded, flesh coloured magnesite.

OK-65 : Mafic dyke with medium to coarse grained white feldspar phenocrysts.

OK-1 silicious greenstone found along fault zone with possible addition of ultramafic material. Due to field relationship and weathering it is not to be mistaken for OK-4.

OK-2 unaltered ultramafic.

OK-3 silicified greenstone similar in appearance to OK-4 but considered to be greenstone due to lack of typical ultramafic weathering seen in OK-4.

OK-4 silified ultramafic unit with knobby weathering and often orange colored weathering

Appendix 2: Field Data Collected On Mineral Claims Previously Held In The Mt. O'Keefe Area (Refer ~~Area~~ To Overlays For Air Photos B.C. 517-180 And B.C. 517-120 For Locations Of Claim Posts And Rock Cairns).

A. Metal Tags On Wooden Claim Posts:

#328433 } Final Posts
#328434 }

#328435 } Initial Posts.
#328436 }

B. Rock Cairn:

#281701 - D2 Claim
#2 Post
1500' SE
1500' Left
D. R. Beckett
Aug. 18 ~~1956~~, 1956
F.M.C.# 86122 F

#A82462 - M.C. Bee #6
#2 Post
1500' To Initial Post
1500' Left
W. S. Husselbee
May 24, 1956
F.M.C. # 73441 F

C. Rock Cairn:

#377241 - Kim #1, Initial Post (#1)
C. G. McLennan
Mar 3, 1962
1500' SE To #2 Post
1500' Right of Location Line
F.M.C. # 18788

#377242 - Kim #2
1500' Left of Location Line

#81282m - FXE #4
Initial Post (#1)
O. Rottmann
Sept. 1, 1972
1500' SE To #2 Post
1500' Right

#81281m - FXE #3, Initial Post.
Left 1500'

#81279m - Final Post (#2), FXE #1
#81280m - " " ", FXE #2

#A82462 - M. C. Bee
Initial Post
1500' N.
1000' Left
W. S. Hasselbee
Aug. 27th, 1956
F.M.C. # 73441 F

#A82483 } Final Posts For M. C. Bee #4
#A82464 } and M. C. Bee #8

#B 77271 - Initial Post.

D. #Rock Cairn:

#81241m - Cn #1
Final Post
E. Mueller
July 9, 1971

#81243m - Cn #3
Initial Post
1500' SE To #2 Post
1500' Left.

#81244m - Cn #4
Initial Post
1500' SE
1500' Right.

#377244 Kin #5, Initial Post
#377245 C. A. McLennan
#377246 Mar 3, 1962
#377248 1500' SE To #2 Post
1500' Right
FMC. # 18788
Kin #3, Final Post
1500' NW
Kin #1, Initial Post
1500' SE
1500' Left.
Kin #4, Final Post
1500' NW

E. Metal Tag On Ground:

470406 - OK #1

Final Post

P. Sevensma

For: Cominco

Oct. 7, 1963

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GEOCHEMICAL DATA SHEET – SOIL SAMPLING

B.C. GOLD SYNDICATE

SAMPLER J. Pantler

DATE Aug 5-12/82

PROJECT Newex Mt. Otego

NTS 104N/3W

LINE

AIR PHOTO NO. BC 5617

SAMPLE NO.	LOCATION	Depth cm	Horiz	DESCRIPTION				SLOPE	VEG.	ADDITIONAL OBSERVATIONS OR REMARKS	ASSAYS			
				Colour	Part Size	% ORG.	Ph				Au	As		
82 NX B-70	same area	2	B	Or-Br	fine-med sandy	lots		flat.	moss scrub trees.	overlying very rusty carb, sil um.				
B-71		1	B	rusty Or-Br	med	mod		gentle	grass	below " " " " " "				
82 NX BT-109		1	C	rusty br	med	mod		~~mod. gentle~~	—	" " " " " " "				
BT-110	SW slope Mt. OK. W	0	C	orange	coarse	[redacted]		mod.	—	below orange weath um.				
BT-111	"	5	C	"	med	few		flat	moss	below listwanitic (?) ok.				
BT-112	"	0	C	buff-green	med	—		mod	—	below greenish crumbly buff col. altered um				

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GEOCHEMICAL DATA SHEET — ROCK GEOCHEM SAMPLING

B.C. GOLD SYNDICATE

SAMPLER Glen Prior

PROJECT Mt. O'Keefe (Newex)

NTS 104 N

LINE

DATE Aug 5-12, 1982

AIR PHOTO No. B.C. 517-118 B.C. 517-120

	SAMPLE NUMBER	LOCATION	ROCK TYPE	ALTERATION	MINERALIZATION	STRIKE / DIP	ADDITIONAL REMARKS	APPARENT WIDTH	TRUE WIDTH	ASSAYS Ag	As	Au	
								Auto					
(1)	41008C	Mt. O'Keefe East	Carbonatite	Chlorite?	Diss. Py.		Occ. Qtz veins up To 1cm wide	Aug.	7	0.2	4	<10	
ASSAY (2)	09C	Trench #1	Hbld. Diorite	Green (~~Chlorite~~) (Chlorite ?)	Diss Cpy Py Malachite		Possibly Bornite? Associate Hubnerite Pattandite	"	9	0.24		oz <.003	Cu 1.89%
(3)	41010C	W Carb #2	Silicified U.M.	Chloritic ?	Poss Hg S Vein Pyrite		Reddish-Purple Rock; Drusy Qtz Vein Up To 4cm	"	9	1.2		10	
(4)	11C	"	Ultramafic		"		Veinlets (Rust) Up To 1cm wide.	"	9	0.1		<10	
(5)	12C	"	Qtz-Carbonate.		Poss Hg S or CuO ?		Veinlets To 1cm with Rubble.	"	10	0.2		<10	20 Hg
(6)	13C	"	Silicified - Carbonatized Ultramafic		—		Qtz + Magnesite Veins; Possibly Listwanite	"	10	0.2		10	
(7)	14C	E Carb #2	Carbonate	Rusty Mn Stain	Diss Py.		Occ Qtz And Cal. Veins Up To 1cm Wide	"	11	0.1		10	
(8)	15C	"	Silicified U.M.	Orange Weathering	Light Green Alteration		Drusy Qtz Vein Up To 2cm Wide.	"	11	0.1		<10	
(9)	16C	"	Qtz-Carb. Ultramafic				Drusy Qtz Rounded Magnesite Masses	"	11	0.1		20	
(10)	17C	"	Qtz-Carb. Ultramafic				Drusy Qtz And Magnesite Veins Up To 2cm Wide	"	11	0.1		10	
(11)													
(12)													
(13)													
(14)													
(15)													
(16)													
(17)													
(18)													
(19)													
(20)													

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GEOCHEMICAL DATA SHEET — ROCK GEOCHEM SAMPLING

B.C. GOLD SYNDICATE

NTS 104 N/3

SAMPLER J Pautler

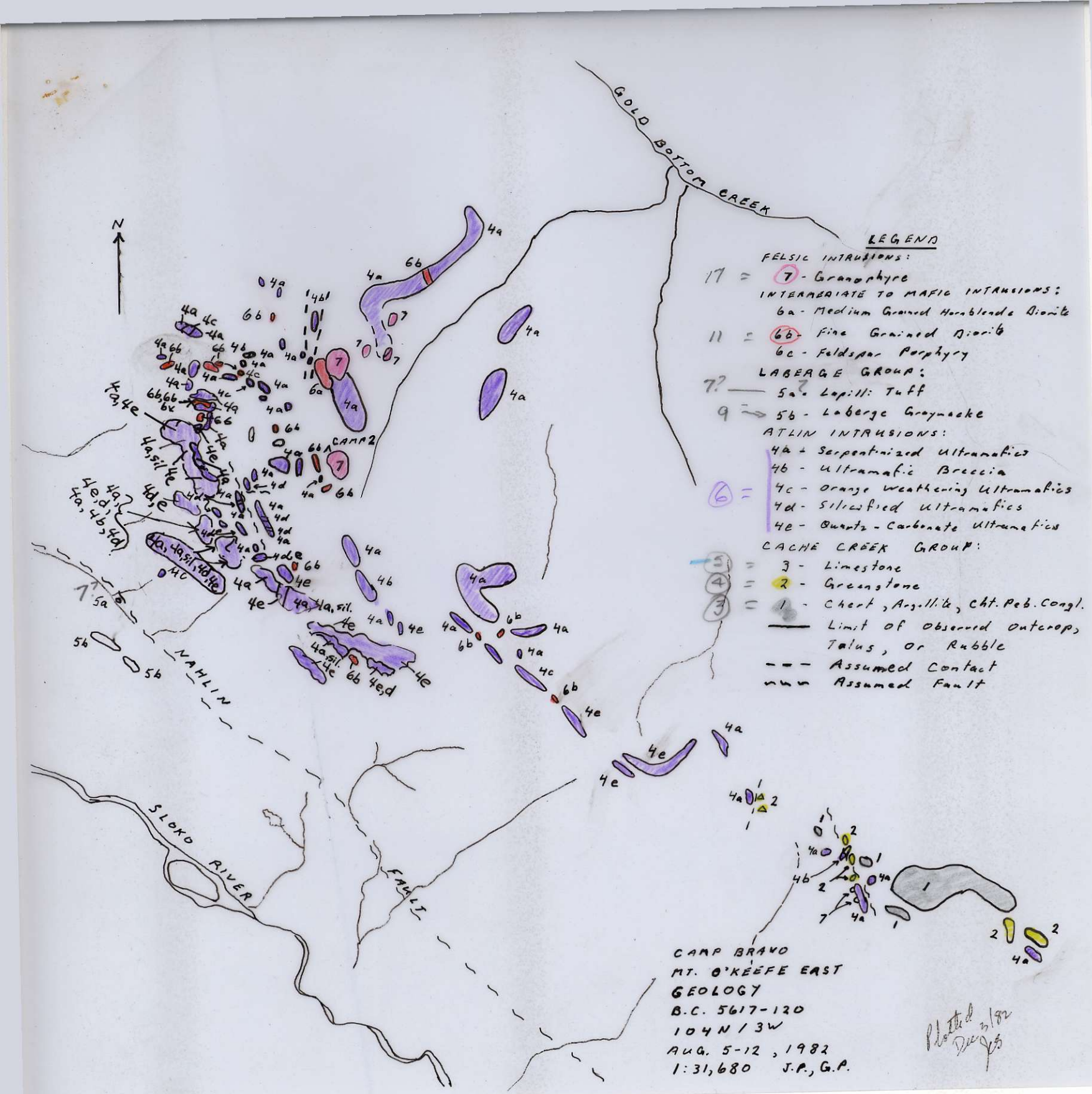
PROJECT Newex — Mt. Okeefe

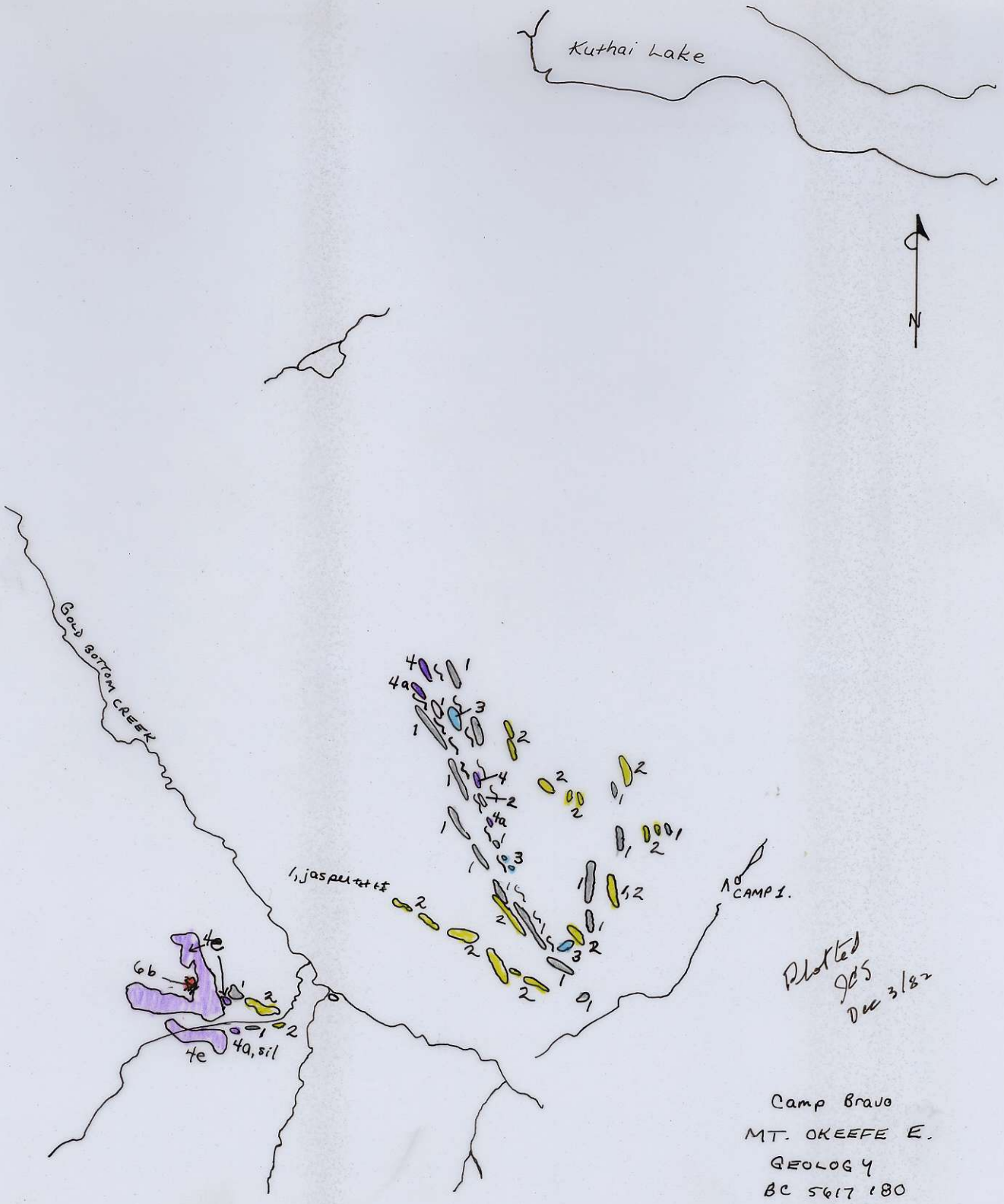
LINE 180,

DATE Aug 5-12/82

AIR PHOTO No. BC 5617 118,120

	SAMPLE NUMBER	LOCATION	ROCK TYPE	ALTERATION	MINERALIZATION	STRIKE / DIP	ADDITIONAL REMARKS	APPARENT WIDTH	TRUE WIDTH	ASSAYS Ag	As	Au	
(1)	41115C	Mt Okeefe E	drusy qtz vein	rusty spots		170°	arg. chert host	4-7	cm	0.2	2	410	
(2)	41116 C	"	qtz vein	rusty in places		NW.	in cherty seds	10	cm	0.1	3	410	
(3)	41117	Mt Okeefe W	rusty, alt. ultramafic	carbonitized silicified	sulp, black mineral					0.2	5	20	
(4)	41118	"	qtz, magnesite				carb, silicif. um host			0.7	83	20	
(5)	41119	"	chalcedony - drusy qtz				in ~~rusty~~ orange, carb, silicif um			0.3	36	10	
(6)	41120 C	"	qtz-carb bx				orange um frags. - float.			0.2	39	10	
(7)	41121	"	~~carbonitize~~ OR. um (?)	carbonitized silicified			listwanite?			0.1	395	20	
(8)	41122	"	um. with qtz veins	Silicified rusty on weath	py? black mineral?								
tg (9)	41123	"	very altered um.	siliceous orange weath	green mineral - sulp?		listwanite??						
(10)	41124	"	carb, sil um.	listwanite??			above Sloko R.						
(11)	41125	"	"	"			"						
tg (12)	41126	"	silic um	silicified (very)	red mineral? as veins throughout		and ~~thru~~ along fractures						
(13)	41127C.	"	chalcedony, drusy qtz.				S. of trench(?) 2	3	cm				
(14)													
(15)													
(16)													
(17)													
(18)													
(19)													
(20)													


GOLD BOTTOM CREEK
N
CAMP 2
NAHLIN
SLOKO RIVER
FAHLI
LEGEND
FELSIC INTRUSIONS:
7 - Granophyre
INTERMEDIATE TO MAFIC INTRUSIONS:
6a - Medium Grained Hornblende Diorite
6b - Fine Grained Diorite
6c - Feldspar Porphyry
LABERGE GROUP:
5a - Lapilli Tuff
5b - Laberge Greywacke
ATLIN INTRUSIONS:
4a - Serpentinized Ultramafics
4b - Ultramafic Breccia
4c - Orange Weathering Ultramafics
4d - Silicified Ultramafics
4e - Quartz - Carbonate Ultramafics
CACHE CREEK GROUP:
3 - Limestone
2 - Greenstone
1 - Chert, Argillite, Cht. Peb. Congl.
Limit of Observed Outcrop, Talus, or Rubble
Assumed Contact
Assumed Fault
CAMP BRAVO
MT. O'KEEFE EAST
GEOLOGY
B.C. 5617-120
104 N/3W
AUG. 5-12, 1982
1:31,680 J.P., G.P.
Plotted Dec 23/82



Plotted
gcs
Dec 3/82

Camp Bravo
MT. OKEEFE E.
GEOLOGY
BC 5617 180
104 N/3W
AUG. 5-12, 1982.

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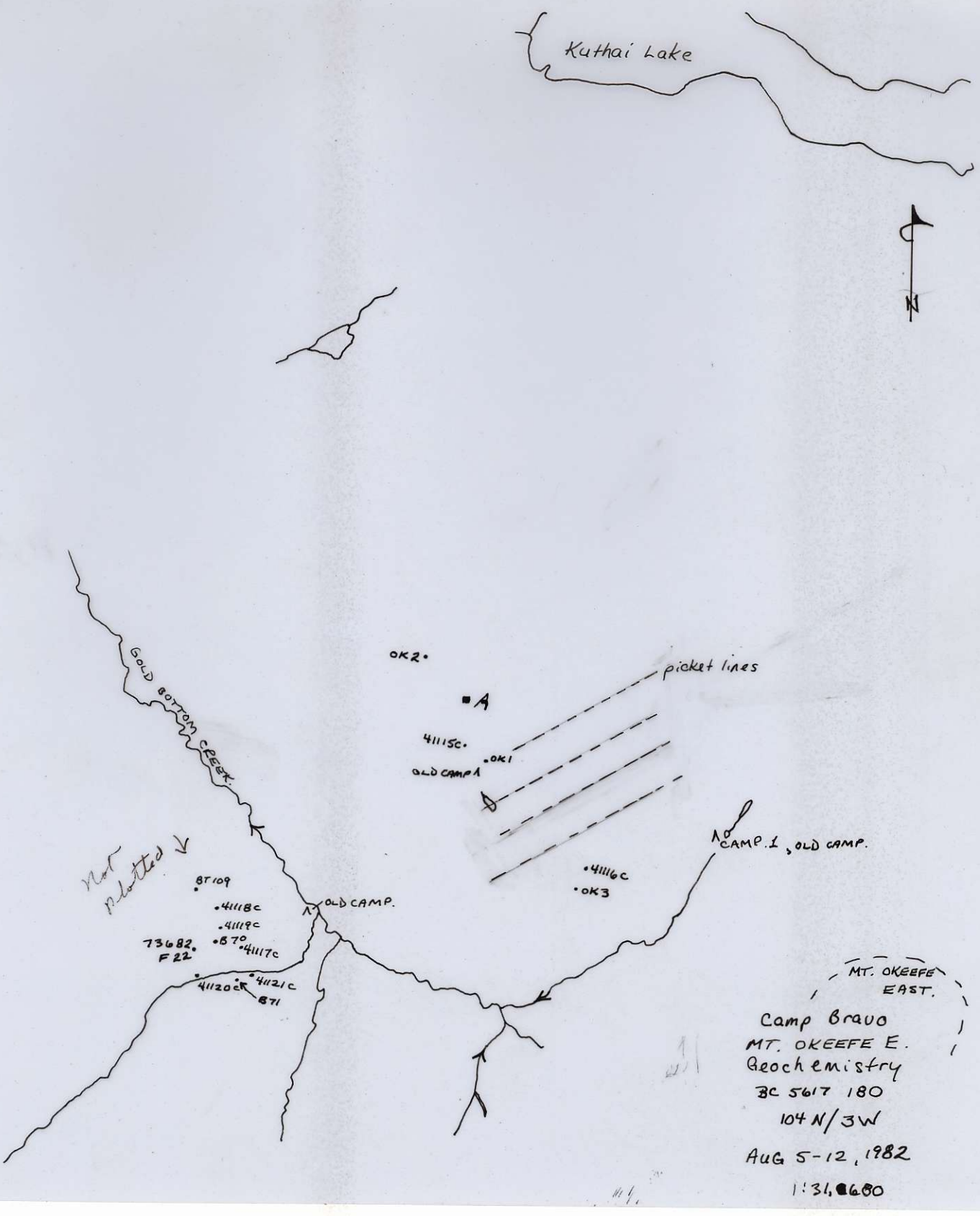
Kuthai Lake
N
GOLD BOTTOM CREEK
OK2
picket lines
A
41115C
OK1
OLD CAMP 1
CAMP. 1, OLD CAMP.
41116C
OK3
Not plotted
BT109
41118C
41119C
OLD CAMP.
73682
F22
B70
41117C
41120C
41121C
B71
MT. OKEEFE EAST.
Camp Bravo
MT. OKEEFE E.
Geochemistry
BC 5617 180
104 N/3W
AUG 5-12, 1982
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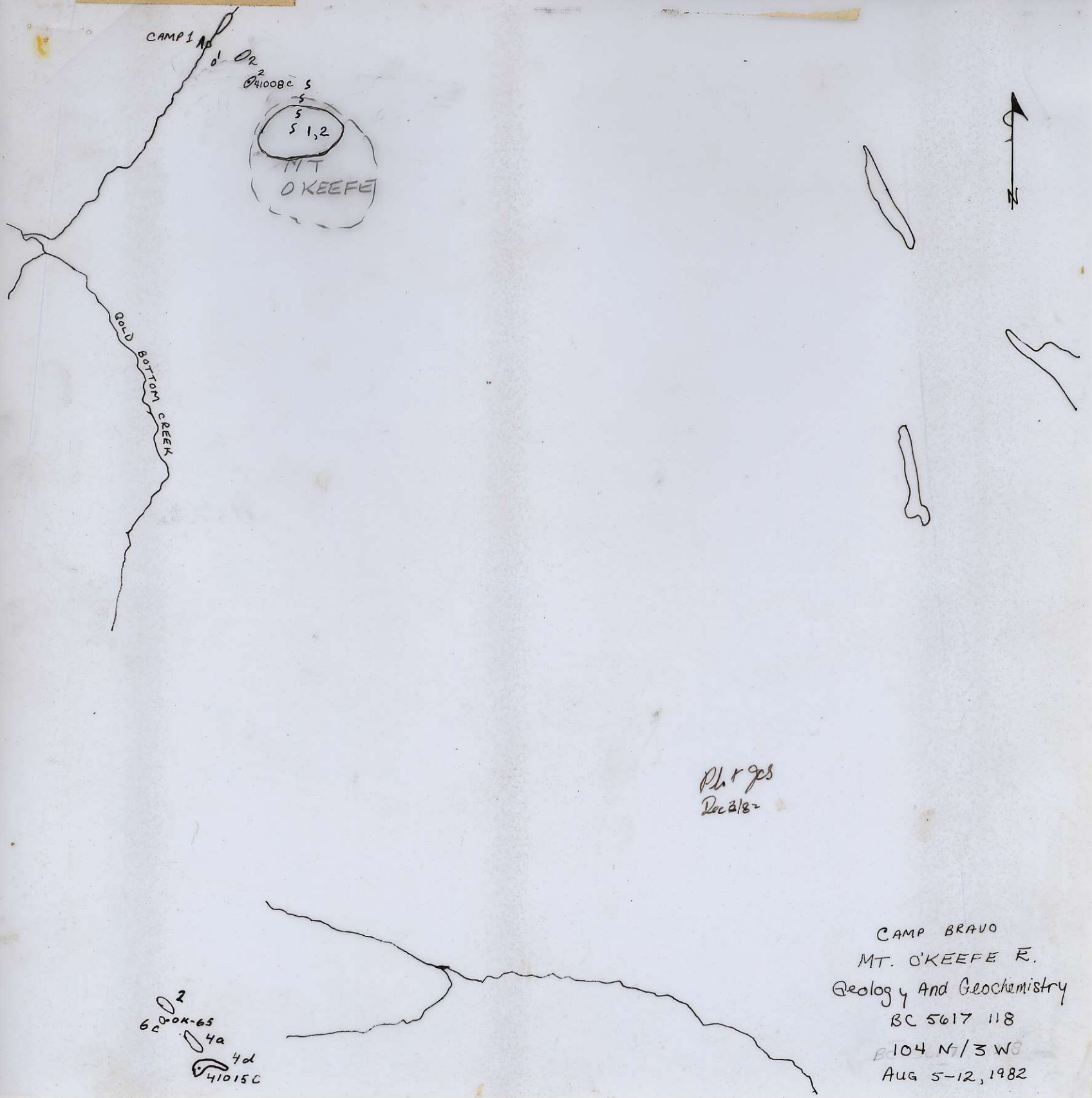

CAMP BRAVO
MT. O'KEEFE E.
Geology And Geochemistry
BC 5617 118
104 N/3 W
Aug 5-12, 1982