6000 0085 (0760)

The persistent presence of "bedded" massive py w/o mention of normal skarn minerals is intriguing. However, some holes contain normal skarn assemblages. Also unexpected is the selenite + native sulfur - although I've seen selenite in the Sweetwater andesites in cleaner gouge zones.

Possible expl.

1. RJ vs lasting strat. sulfides
   ↓
   over-printed by
2. K-contact Fe-Cu
   ↓
   over-printed by
3. T hot springs alt.

Need Kennecott AK genesis info.

6000 0085 (0760)

COPPER HILL

4 page size mine maps of workings in the area.
Geologic report.
DH Delta 1, 2, & 3 narrative and graphic logs.
Drill hole assays.
Geochem on Intrusive outcrop with map.
Claim map showing I.P. plan lay-out.

WILD HORSE CANYON

Rho Claim and I.P. layout.
Geologic report.
DH R-1 tabulation geochem samples.

Delta 1

Walker-Martel Mining Company

Rotary - Vertical

Bottom: 110 feet

6000 0085

0 - 25	Granodiorite, fine-grained, with 15 - 20% quartz, 20 - 25% plagioclase, 10 - 15% orthoclase, 3 - 5% muscovite, 5 - 10% biotite, 2 - 3% hornblende; biotite altered; groundmass silicified and bleached.
25 - 45	Same as above, but stained redish by hematite
45 - 110	Same as above, bleached; slightly to moderately argillized.

Bottom: 110 feet

WALKER RIVER PAIUTE RESERVATION

Delta 2

Walker Martel Mining Company

6000 0085 (0760)

Bottom: 95 feet

Rotary - Vertical

0 - 20	Granodiorite, medium grained; 10 - 20% quartz, 25% plagioclase, 20 - 25% orthoclase, 5 - 10% biotite, 3 - 5% hornblende, 2 - 3% muscovite; slightly stained by hematite.
20 - 30	Same as above, but slightly harder due to small amount silicification.
30 - 35	Same as above, limonite replacing pyrite; traces green copper carbonate.
35 - 55	Grandiorite, with less staining by limonite and hematite.
55 - 70	Same as above, but redder in color, slightly more silicified.
70 - 90	Grandiorite, slightly silicified, lighter in color.
90 - 95	Same as above, but with 2 - 3% pyrite replaced by limonite.

Bottom

WALKER RIVER PAIUTE RESERVATION

Walker Martel Mining Company

Delta 3

Bottom: 105 feet

Rotary - Vertical

6000 0085 (076)

0 - 50 Grandiorite, fine to medium grained; reddish in color, stained by hematite, partially chloritized; with 10 - 15% quartz, 55% plagioclase and orthoclase, 2 - 3% muscovite, 3 - 5% biotite, with varying amounts epidote; slightly argillized and silicified . Trace green copper carbonate at 20 - 25 feet.

50 - 85 Same as above, with approximately 2% copper carbonate at 50 - 55; up to 15 - 20% epidote at 60 - 65, and ½% green copper carbonate at 70 - 85 feet.

85 - 105 Same as above, but gray in color, with trace green copper carbonate at 90 - 95 feet.

Cu Hill

6000 0085 (0760)

Southern Hill

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO 14A

Project COPPER HILL

Sheet 1 of 1

Contractor J. TATUM

Size Hole 2 3/4

Location N 11,430 E 9,750

Water Elev –

Total Depth 345'

Date Collared 7/12/74 Completed SAME

Elevation 5913 Bear – Dip 90° ± Date 7/12/74

Logged by W. CARITHERS

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	30	30	Mostly hornfels; little garnet, (Epidote) qtz. Some coarse xln. Calcite, little Cu staining	+	-	-	-	-	++	-	+++	
30	230	200	Mostly grey to cream, coarsly xln limestone; little skarn + qz (cave?) rare $CuCO_3$	+	-	-	-	-	+	-	++++	
230	260	30	Grey to tan-colored limestone with rare frags of qz + garnet	+	-	-	-	-	+	-	++++	
260	290	30	grey to tan ls as above with a little qtz + sulfide	+	-	-	-	-	+	+	++++	
290	310	20	V.lt grey sugar-textured marble	-	-	-	-	-	-	-	++++	
310	335	25	grey marble with little skarn qz, greenstone? and minor sulfide	+	-	-	-	-	+	+	++++	
335	345 TD	10	Mostly marble but with little more qz, + sulfide	+	-	-	-	-	+	+	++++	
			Drill not capable of drilling any farther									

ANALYSES

Analyst ~~R.M.G. Co~~ NOT ANALYZED

Method

From	To	Wth	Samp No		Cu	Mo
0	20	20	14A/2			
20	40	"	4			
40	60	"	6			
60	80	"	8			
80	100	"	10			
100	120	"	12			
120	140	"	14			
140	160	"	16			
160	180	"	18			
180	200	"	20			
200	220	"	22			
220	240	"	24			
240	260	"	26			
260	280	"	28			
280	300	"	30			
300	310	10	31			
310	320	"	32			
320	330	"	33			
330	340	"	34			
340	345	5	345			

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP
Project: COPPER HILL
HOLE NO. A-15
Sheet 1 of 1

Contractor: J. TATUM
Size Hole: 2 3/4
Location N 10,800 E 9527
Water Elev: --
Total Depth: 272

Date Collared: 7/13/74 Completed: SAME
Elevation: 5911 Bear: — Dip: ±90° Date: JULY 13, 1974
Logged by: W. Carithers

FOOTAGE From	To	With	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	40	40	Tan FeOx-STAIN, SURFACE-WEATHERED andesite with clay, little caleche, becoming less altered downward	-	++	-	-	-	-	-	+	
40	130	90	Mostly green-grey, fine grnd andesite with minor alteration	+	-	-	+	-	+	2-3	+	
130	170	40	Grey-green limey rock--part-ly dolomitized andesite and limestone with 10-20% PY	+	-	-	+	-	-	15	++	
170	272 TD.	102	Mostly fine-grained pyrite with 25-50% limestone or dolomite	-	-	-				25	++	
			Hole caved in at 272 (from about 265) stuck rods. Driller reccovered them, 2 hrs.									

ANALYSES — Analyst: NOT ANALYSED — Method: —

From	To	With	Samp No		Cu	Mo	Est. PY.	
0	20	20	D15/2				0	
20	40	"	9				0	
40	60	"	6				3	
60	80	"	8				3	
80	100	"	10				3	
100	120	"	12				3	
120	130	10	13				5	
130	140	"	14				5	
140	150	"	15				10	
150	160	"	16				5	
160	170	"	17				5	
170	180	"	18				50	65% Py
180	190	"	19				50	
190	200	"	20				60	
200	210	"	21				75	
210	220	"	22				75	
220	230	"	23				75	
230	240	"	24				85	85%
240	250	"	25				85	
250	260	"	26				85	
260	272	12	272				85	
170	272	102'					±73% Py.	

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

6000.0085 (0760)

HOLE NO A-15A

Project COPPER HILL

Sheet 1 of 1

Contractor E KLUND

Size Hole ROT. 5"t

Location N 10,843 E 9586

Water Elev

Total Depth 160

Date Collared

Completed 1972

Elevation 5901 Bear – Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	20	20	Sheared (?) gossany rock with yellow, limonite-stnd clay (yellow ochre) and gypsum.	-	++	-	-	-	-	-	+	
20	40	20	Gossan and lt. grey, sugary textured marble with minor py.	-	-	-	-	-	-	1±	+++	
40	110	70	Chiefly lt to med-grey sugary marble with little brown clay and 1 to 5% pyrite in the marble.	-	-	-	-	-	-	3	+++	
110	120	10	Dk grey, fine grnd Hbl diorite or andesite.	-	-	-	-	-	-	1±	+	
120	140	20	Mostly tan-colored sugary marble with few frags of Hbl di.	-	-	-	-	-	-	1±	++	
140	150	10	Grey, somewhat bleached Hbl di-or andesite - with carbonate and 20-30% pyrite as in A-13.	-	-	-	-	-	-	25	++	
150	160 TD	10	grey andesite (?), lt grey marble and grey clay — Prob fault zone.	-	++	-	-	-	-	1±	++	

ANALYSES

Analyst ROCKY MTN. GEOCHEM

Method

From	To	Wth	Samp No	Cu	Mo
0	10	10	15A-1	295	<1
10	20	"	2	110	"
20	30	"	3	75	"
30	40	"	4	105	"
40	50	"	5	70	"
50	60	"	6	60	"
60	70	"	7	75	<1
70	80	"	8	75	6
80	90	"	9	105	<1
90	100	"	10	85	<1
100	110	"	11	120	<1
110	120	"	12	40	<1
120	130	"	13	45	<1
130	140	"	14	60	<1
140	150	"	15	15	<1
150	160	"	16	15	<1
Summary					
0	20	20		202	<1
20	140	120		76	1
140	160	20		15	<1

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A15B
Sheet 1 of 1

Contractor E KLUND
Size Hole Rot 5"±
Location N 10,874 E 9552
Water Elev.
Total Depth 200'
Date Collared
Completed 1972
Elevation 5887 Bear — Dip 90° Date JUNE 7, 1973
Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$				Geol Col'mn 1" =
0	20	20	Heavily limonite-stained clay and gypsum	-	++	-	-	-	-	-	+				
20	70	50	30 to 60% Pyrite together with rusty brown clay and a few frags of calcite, andesite and gypsum.	-	++	-	-	-	-	50	+				
70	80	10	Rusty brown clay w/frags. of andesite, sugary-textured marble and 10%± pyrite.	-	++	-	-	-	-	10±	++				
80	130	50	Mostly Lt. grey sugary marble with 5-10% pyrite and a few frags (zones?) andesite - some as bx frags cemented by calcite. Rusty tan w/gypsum 110-120	-	+	-	-	-	-	7	++				
130	200	70	Lt. to med. grey, sugary marble with few brown to tan clayey zones and 1-2% pyrite. Little dk grey ls 195-200	-	+	-	-	-	-	2±	++				

ALTERATION/MINERALIZATION

ANALYSES

Analyst ROCKY MTN GEOCHEM
Method

From	To	Wth	Samp No	Cu	Mo
0	10	10	15B-1	310	1
10	20	"	2	320	-1
20	30	"	3	300	-1
30	40	"	4	80	-1
40	50	"	5	85	+1
50	60	"	6	55	-1
60	70	"	7	450	-1
70	80	"	8	200	-1
80	90	"	9	120	-1
90	100	"	10	95	1
100	110	"	11	190	-1
110	120	"	12	45	1
120	130	"	13	20	-1
130	140	"	14	35	-1
140	150	"	15	175	-1
150	160	"	16	155	3
160	170	"	17	100	2
170	180	"	18	65	21
180	190	"	19	325	10
190	200	"	20	340	12
Summary					
0	30	30		310	-1
30	180	150		125	2
180	200	20		332	11

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A 15C

Sheet 1 of 1

Contractor EKLUND

Size Hole ROT. 5"ϕ

Location N 10,910 E 9,517

Water Elev

Total Depth 100'

Date Collared

Completed 1972

Elevation 5876 Bear - Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	20	20	Brown, FeOx-stn'd clay with a little gossan and gypsum	-	++	-	-	-	-	-	-	
20	100 TD	80	FeOx-stn'd Hbl dio(or and-esite) together with brown clay and a little gypsum. 1-2% pyrite below 70 ft.	-	+	-	-	-	-	1%	-	

ALTERATION/MINERALIZATION

ANALYSES

Analyst Rocky Mtn Geochem

Method

From	To	Wth	Samp No	Cu	Mo
0	10	10	15C-1	235	-1
10	20	"	2	110	-1
20	30	"	3	75	-1
30	40	"	4	125	-1
40	50	"	5	70	3
50	60	"	6	50	-1
60	70	"	7	75	-1
70	80	"	8	90	3
80	90	"	9	95	1
90	100	"	10	85	1
Summary					
0	10	10		235	-1
10	100	90		86	1

6000 0085 (0760)

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO A-15D

Project COPPER HILL

Sheet 1 of 1

Contractor TATUM

Size Hole 2 3/4

Location N 10,930 E 9498

Water Elev 5837

Total Depth 80'

Date Collared 7/16/74 Completed SAME

Elevation 5868 Bear - Dip 90° Date 7/16/74

Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	ALTERATION/MINERALIZATION Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	31	31	Tan-colored, sugary-textured marble with a little gypsum. At 31, intersected 6" crack with 2-3 gpm water.	-	·	-	·	-	-	·	++++	
31	80 TD	49	Tan to grey marble as above, poor, wet samples; hole abandoned	-	·	-	·	-	·	-	++++	

ANALYSES

Analyst NOT ANALYSED

Method

From	To	Wth	Samp No
0	30	30	15D/3
30	60	20	" 6
60	80	20	" 8

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-16

Sheet 1 of 1

Contractor EKLUND

Size Hole Rot. 5"t

Location N 11,560 E 10,143

Water Elev

Total Depth 110

Date Collared

Completed 1972

Elevation 5981 Bear - Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	ALTERATION/MINERALIZATION Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	110 TD	110	Lt. grey to pinkish-tan, sugary textured XLINE marble with a few veins (or beds?) of chalcedonic (or opalescent) quartz.	+	-	-	-	-	-	-	++++	

ANALYSES

Analyst

Method

From	To	Wth	Samp No	Cu	Mo
0	10	10	15A-1	315	<1
10	20	"	2	45	"
20	30	"	3	175	"
30	40	"	4	35	"
40	50	"	5	40	"
50	60	"	6	55	"
60	70	"	7	55	"
70	80	"	8	85	"
80	90	"	9	65	"
90	100	"	10	125	"
100	110	"	11	25	<1
SUMMARY:					
0	110	110		93	<1

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-16B
Sheet 1 of 1

Contractor E KLUND
Size Hole ROT. 5'1
Location N 11,726 E 10,002
Water Elev
Total Depth 250'
Date Collared
Completed 1972
Elevation 5890 Bear - Dip 90° Date JUNE 8, 1973 Logged by W. Carither

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	20	20	Lt. Tan to greenish grey clay & surface-weathered ash flow Tuff (TV)	-	++	-	-	+	-	-	-	
20	40	20	grey ash-flow Tuff w/ biotite, qz, feldspar & very minor pyrite.	-	+	-	-	+	-	+	-	
40	50	10	Red-brn, hematite-stnd clay with a little grey ash-flow tuff.	-	+	-	-	-	-	-	-	
50	60	10	Lt brn, fine, clayey tuff with a little yellow-grey clay	-	+	-	-	-	-	-	-	
60	80	20	Lt. yellowish, slightly argillized dacite or rhy. tuff, grading downward into pink tuff.	-	+	-	-	-	-	-	-	
80	100	20	Pink to red dacitic or rhyolitic tuff.	-	+	-	-	-	-	-	-	
100	110	10	Reddish-brown tuff & clay with a few frags of qz monzonite; very minor pyrite - base of TV. or fault.	-	+	-	-	-	-	+	-	
110	220	110	Argillized quartz monzonite — prob. supergene alteration zone = (Tan to yellow colored clay together with quartz, biotite flakes and few fragments of qz monzonite and FeOx-stained aplite.) Little oxidized Pyrite here and there; also, few specks of Cu Ox.	-	++	-	-	-	-	+	-	
220	250 TD.	30	Grey, fresh to sl. argillized qz monzonite with minor qz and pyrite; little cpt in qz observed at 240.	+	+	-	-	-	-	+	-	

ANALYSES Analyst Rocky MTN Geochem. Method

From	To	Wth	Samp No		Cu			Mo			SKYLY Cu
0	10	10	168-1		55			<1			
10	20	"	2		15			"			
20	30	"	3		5			"			
30	40	"	4		5			"			
40	50	"	5		15			"			
50	60	"	6		25			"			
60	70	"	7		25			"			
70	80	"	8		30			"			
80	90	"	9		15			"			
90	100	"	10		5			<1			
100	110	"	11		600	(?)	(?)	49			15
110	120	"	12		480			8			
120	130	"	13		1100			6			
130	140	"	14		1100			30			
140	150	"	15		635			4			
150	160	"	16		455			<1			
160	170	"	17		395			<1			
170	180	"	18		540			<1			
180	190	"	19		465			<1			
190	200	"	20		415			1			
200	210	"	21		1100			28			
210	220	"	22		1100			79			
220	230	"	23		1200			169			1150
230	240	"	24		315			50			
240	250	"	25		300			55			
SUMMARY:											
0	110	110			20			<1			
110	230	120			750			27			
230	250	20			307			52			

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO Δ-17

Project COPPER HILL

Sheet 1 of 1

Contractor J. TATUM

Size Hole 2 3/4

Location N 11,335 E 11,615

Water Elev –

Total Depth 282

Date Collared 7/11/74 Completed SAME

Elevation 5838 Bear – Dip ±90° Date 7/11/74

Logged by W. CARITHERS

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	20	20	Qal and soft grey tuff	-	-							
20	65	45	Lt. and dk. grey ash and ash flow-tuff.									
65	90	25	Reddish-brown ash & clay at base of TV.									
90	110	20	Brown FeOx-stained clay and surface-weathered andesite	-	++	-	-	-	-	-	-	
110	190	80	Dk greenish grey andesite with veins or zones of Epi & K-spar or aplite & silica	+	-	-	+	-	++	3-5	·	
190	220	30	Tan zone - prob fault - with FeOx stained andesite clay; little py & gypsum (secondary?).	-	+++	-	-	-	+	2	-	
220	282 TD	62	Andesite. hard, fn grnd, little silic & spar w/ Epidote; little selenite prob from fault, but could be vnlts.	+	-	-	+	-	++	5-10	·	

ALTERATION/MINERALIZATION

ANALYSES

Analyst RKY, MTN, GEOCHEM

Method AA - Color.

From	To	Wth	Samp No	Cu ppm	Mo ppm
0	30	30	D17/3	20	4
30	60	"	6	10	1
60	90	"	9	90	2
90	120	"	12	200	5
120	150	"	15	130	6
150	180	"	18	230	17
180	210	"	21	165	5
210	240	"	24	325	6
240	270	"	27	280	2
270	282	12	282	365	3
0	90	90		66	2
90	282	192		230	6

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.
Project: COPPER HILL
HOLE NO: Δ-18
Sheet 1 of 1
Contractor: J. TATUM
Size Hole: 2 3/4
Location N 11,470 E 10,220
Water Elev: —
Total Depth: 305
Elevation: 5982 Bear: - Dip: 90° Date: 7/13/74
Logged by: W. CARITHERS
Date Collared: 7/12/74 Completed: SAME

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	40	40	Andesite, broken, surface weathered, with clay, caleche and consid. FeOx staining.	-	++	-	-	-	-	-	++	
40	60	20	Andesite as above, but progressively less alteration.	-	++	-	-	-	+	-	+	
60	90	30	Mostly brown clay with a few frags of andesite. Prob fault zone.	-	+++	-	-	-	-	-	+	
90	110	20	Grey-green andesite with a little clay, FeOx, selenite?, Epidote. Bottom of surface weathering	-	++	-	-	-	+	-	+	
110	140	30	Mostly andesite, but with zones or veins of aplitic material and with qz, Epidote + pyrite.	+	+	-	++	-	+	5	+	
140	150	10	Green-grey clay with frags of andesite, increased carbonate	-	++	-	-	-	+	3	++	
150	170	20	Grey-green carbonate rock, in part dolomitized andesite, other is grey limestone. Prob. Thrust	-	+	-	++	-	+	8	+++	
170	240	70	Carbonate rock with about 50-75% white and grey marble; little SiO_2, and calc silicate. Cpt + a grey sulfide 200-220	+	-	+?	+	-	+	5-10	+++	
240	305 TD	65	Mostly grey marble with a little silicification & calc-silicate devel.	+	-	+?	+	-	+	10	+++	

ALTERATION/MINERALIZATION

ANALYSES — Analyst: RKY MTN GEOCHEM — Method: AA - Color - AA

From	To	Wth	Samp No	Cu (PPM)	Mo (PPM)	Pb	Zn	Au (PPM)	Ag
0	20	20	D18/2	105	55				
	40	"	4	160	38				
	60	"	6	205	62	50	95	-.1	-.1
	80	"	8	270	93				
	100	"	10	210	55				
	120	"	12	165	30				
	140	"	14	150	25	60	90	-.1	-.1
	160	"	16	300	16				
160	170	10	17	1300	52				
170	180	"	18	635	19	90	140	-.1	1
180	190	"	19	315	28				
190	200	"	20	1600	11				
200	210	"	21	4600	62	100	325	-.1	3
210	220	"	22	505	20				
220	230	"	23	515	15				
230	240	"	24	365	32	50	140	-.1	-.1
240	250	"	25	475	19				
250	260	"	26	440	32				
260	270	"	27	360	36				
270	280	"	28	255	19				
280	290	"	29	260	35	30	105	-.1	-.1
290	300	"	30	205	29				
300	305	5	30.5	215	17				
0	160	160		195	47				
160	210	50		1690	34				
210	305	95		410	29				

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: D-19

Sheet 1 of 1

Contractor: J. TATUM

Size Hole: 2 3/4

Location N 11,595 E 9690

Water Elev: –

Total Depth: 270

Date Collared: 7/13/74 Completed: 7/13/74

Elevation: 5908 Bear: – Dip: 90° Date: 7/13/74

Logged by: W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	40	40	Grey to reddish brn volcanic clay & dacite - base of Tv	-	+++	-	.	.	-	-	.	
40	70	30	Mostly clay - surface-weathered andesite of Tv. - grading down into firm andesite	-	++	-	-	-	.	-	+	
70	110	40	Mostly green-grey, fine grnd andesite w/ consid clay, slightly limey	-	++	-	-	-	-	-	+	
110	125	15	Coarse grey to honey-colored marble together with frags of qtz monzonite.	-	-	-	-	-	-	.	++++	
125	200	75	Mostly grey coarse-grn. rock of quartz-feldspar with a little biot (gneiss) but with consid carbonate, prob contamination from above	-	+	-	-	+	-	-	+	
200	220	20	Fn-gr. cream-colored marble or clay zone	-	-	-	-	-	-	-	+++	
220	270 TD	50	QTZ MONZONITE AS ABOVE BUT WITH CONSIDERABLE LIMEY MATERIAL - INCLUSIONS OR CONTAMINATION	-	+	-	-	+	-	-	++	

ANALYSES — Analyst: RMGC. Method:

From	To	Wth	Samp No	Cu	Mo
0	40	40	D19/4	110	-1
40	70	30	7	120	5
70	110	40	11	185	13
110	130	20	13	330	15
130	160	30	16	490	22
160	190	30	19	510	11
190	220	30	22	435	16
220	250	30	25	450	38
250	270	20	27	410	76
0	40	40		110	<1
40	110	70		157	9
110	270	160		446	19

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.

Project: COPPER HILL

HOLE NO: A-20

Sheet 1 of 1

Contractor: TATUM

Size Hole: 2 3/4"

Location N 10,990 E 9608

Water Elev: -

Total Depth: 160

Date Collared: 7/16/74 Completed: Same

Elevation: 5879 Bear: - Dip: 90° Date: 7/16/74

Logged by: W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot.	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	10	10	Fragments of limestone or gossan. No sample									
10	35	25	Gossan and clay, little gyp.									
35	48	13	Soft, limey rock with masses of pyrite, few frags. andesite							80		
48	60	12	Lt. grey marble, little py							10	+++	
60	80	20	Limey rock with zones pyrite and fragments of andesite - prob. Gillis thrust.							50	+++	
80	160 TD		Tan and grey marble with clay, and thin zones of pyrite							1/10	+++	

ALTERATION/MINERALIZATION

ANALYSES

Analyst:

Method:

From	To	Wth	Samp No				EST PY
0	10	10	-	No SAMPLE			
10	30	20	A20/2				0
30	40	10	" 4				50
40	50	"	" 5				75
50	60	"	" 6				10
60	70	"	" 7				50
70	80	"	" 8				50
80	90	"	" 9				5
90	100	"	" 10				10
100	110	"	" 11				35
110	120	"	" 12				10
120	130	"	" 13				20
130	140	"	" 14				10
140	150	"	" 15				5
150	160	"	" 16				<5
30	80	50	-	About 50% Py - (Same as Hole 15 B.)			

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Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-21

Sheet 1 of 1

Contractor TATUM

Size Hole 2 3/4

Location N 10,965 E 9660

Water Elev

Total Depth 240'

Date Collared 7/14/74 Completed 7/16/74

Elevation 5895 Bear – Dip 90° Date 7/14 & 7/16/74 Logged by Carithers

FOOTAGE From	To	With	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	50	50	Soft, yellow limonite-stained clay & gypsum (sulfar?) with little py below 45'	-	+++	-	-	·	·	-	-	
50	80	30	Dark andesite and limestone with zones of pyrite	?	++	-	-	-	·	33	++	
80	100	20	Fragments of andesite and marble - fault zones.		+					10	++	
100	128	28	Grey-green andesite and marble with zones of coarse pyrite. Drill broke at 128; temporary.		+					35	++	
128	140	12	Mostly limestone, few grey-green fragments							15	+++	
140	185	45	Grey marble with bands of pyrite.							35	+++	
185	210	25	Cream-colored sugary tex. marble							+	++++	
210	240 TD	30	Tan to cream marble & clay.		++					+	++++	

ANALYSES

Analyst NOT ANALYZED

Method

From	To	With	Samp No	EST PY.
0	30	30	A21/3	–
30	50	20	" 5	–
50	60	10	" 6	50
60	70	10	" 7	30
70	80	"	" 8	20
80	90	"	" 9	10
90	100	"	" 10	10
100	110	"	" 11	25
110	120	"	" 12	50
120	130	"	" 13	75
130	140	"	" 14	10
140	150	"	" 15	15
150	160	"	" 16	35
160	170	"	" 17	40
170	180	"	" 18	85
180	190	"	" 19	35
190	200	"	" 20	5
200	210	"	" 21	<5
210	220	"	" 22	"
220	230	"	" 23	"
230	240	"	" 24	"
0	50			
50	190	140'		±35%

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Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.
Project: COPPER HILL
HOLE NO: A-22
Sheet: 1 of 1
Contractor: TATUM
Size Hole: 2 3/4
Location N: 12,960 E: 10,037
Water Elev: -
Total Depth: 220
Elevation: 5770 Bear: - Dip: 90 Date: 7/17/74
Logged by: Carithers
Date Collared: 7/17/74 Completed: same

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	60	60	Grey TUFF of Tertiary volcanics.	-	-	-	-	-	-	-	-	
60	110	50	Reddish brown tuff + clay with few fragments opal (or petrified wood) and with thin lenses or beds of Lt grey ash.	-	+	-	-	-	-	-	-	
110	130	20	Red clay with bands or zones of grey clay. Few fragments of qz, qz-mong. & TV. Probably old soil layer	-	++							
130	160	30	Mostly grey and brown clay with fragments qz monzonite, quartz. Very minor pyrite.	+	+++					+		
160	177	17	Brown, argillized quartz monzonite with quartz, minor sulfide, little black magnetite (ox py?)	+	++	-	?	+	-	+	-	
177	220 TD	43	grey qz monzonite with minor "green" alteration. Minor pyrite, qz, cpt? About 25% dilution due to caving TV at Top. propylitic?	+	+	+	+	+	?	+	-	

ANALYSES
Analyst: Rky Mtn. Geo-Rno
Method:

From	To	Wth	Samp No	Cu	Mo
0	60	60	A22/6	40	4
60	80	20	" 8	50	3
80	100	"	" 10	60	1
100	120	"	" 12	45	2
120	140	"	" 14	45	1
140	160	"	" 16	50	1
160	170	10	" 17	55	<1
170	180	"	" 18	85	1
180	190	"	" 19	320	3
190	200	"	" 20	390	23
200	210	"	" 21	500	13
210	220	"	" 22	180	11

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.
GRAND JUNCTION, CO.

DRILL HOLE LOG

HOLE NO Δ-30
Sheet 1 of 3

Project COPPER HILL

Contractor EKLUND
Size Hole ±5"
Location N APPROX. 10,050 E 11,100
Water Elev
Total Depth 860'
Date Collared AUG, 1980 Completed SEPT 15, 1980
Elevation 6080 Bear – Dip 90° Date SEPT. + DEC. 1980 Logged by W. CARITHERS

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	% Magt.	Geol Col'mn 1" =	ANALYSES From	To	Wth	Samp No	PPM Cu		PPM Mo
														Analyst HUNTER MINING LAB Method GEOCHEM.						
0	10	10	MOSTLY GREENISH-GRAY SOIL WITH FRAGMENTS OF WEATHERED ANDESITE											0	10	10	NONE		E	
10	250	240	DARK, GREENISH-GRAY, MED. TO FINE-GRAINED ANDESITIC ROCK WITH ABOUT 30-50% DARK MINERALS (HORNBLENDE, AMPHIBOLES, ETC.) AND 50-60% FELDSPARS. 1-2% MAGNETITE AND MINOR PYRITE (<1%) WHICH IS OXIDIZED DOWN TO 40± FT. THIN ZONES OF ALTERATION OCCUR IN THE ANDESITE HERE + THERE AND PROBABLY MAKE UP ABOUT 5-7% OF THE SECTION. THESE CONSIST OF EPIDOTIZATION WITH A LITTLE LIGHT GRAY FELDSPAR AND MINOR SILICA. SOFT GRAY TO BROWN CLAYEY FRACTURED ZONES AT 95' AND 135-145'.	+	+	-	-	·	+	<1	-	1-2		10	250	240	30-1	465		3
250	410	160	SAME ROCK WITH APPARENT INCREASE IN EPIDOTIZATION AND PYRITIZATION DOWNWARD FROM ABOUT 1% PY AT 250' TO 5-8% AT 410'. LESS MAGN? CLAYEY FRACTURE ZONE AT 270'.	+	+	-	-	·	+	1-7	-	<1		250	450	200	30-2	635		3

Ward Carithers
Mining Geologist

Company: LUANO MINING CORP.

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: [illegible]

Sheet 2 of 3

Contractor: _____ Size Hole: _____ Location N: _____ E: _____ Water Elev: _____ Total Depth: 860

Date Collared: _____ Completed: _____ Elevation: _____ Bear: _____ Dip: _____ Date: DEC, 1980 Logged by: W. CARITHERS

Analyst: HUNTER LAB.
Method: GEOCHEM

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Magnt.	Geol Col'mn 1" =	ANALYSES From	To	Wth	Samp No	PPM CU		PPM MO
410	450	40	MOSTLY GRAY, BLEACHED ANDESITE TOGETHER WITH CLAY, FEW LIMEY FRAGMENTS, EPIDOTE, TAN-COLORED GARNET AND 4-6% PYRITE. PROBABLE THRUST ZONE BETWEEN ANDESITIC ROCK ABOVE AND LIMESTONE BELOW.	-	++	-	-	-	+	5	+	-										
450	520	70	MOSTLY LIGHT-GRAY, BLEACHED LIMESTONE WITH CLAY, FEW FRAGS OF BLEACHED ANDESITE AND EPIDOTE-GARNET. 4-6% PYRITE. PROBABLY LOWER PART OF THRUST.	-	+	-	-	-	++	5	++	-			450	650	200	30-3	470		3
520	650	130	LIGHT GRAY, BLEACHED LIMESTONE WITH 10-20% CLAY, 5-10% EPIDOTE AND 5-15% PYRITE (AVERAGING ABOUT 10%).	-	++	-	-	-	++	10	++	-								
650	760	110	MOSTLY LT-GRAY (BLEACHED) LIMESTONE ALTERNATING WITH ZONES OF DARK-GRAY (UNBLEACHED) LIMESTONE. EPIDOTIZATION & PYRITE DECREASE DOWNWARD; ABOUT 7% PY AT TOP OF SECTION TO 2-3% AT BOTTOM.	-	+	-	-	-	+	4-5	++	-			650	860	210	3-4	170		4
760	800	40	CONSID. GRAY, LIMEY CLAY WITH GRAY LIMESTONE. PROBABLY A FAULT OR FRACTURE ZONE.	-	++	-	-	-	-	2-3	++	-								

(0760) 0085 0000

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP.

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: A-30

Sheet 3 of 3

Contractor: Size Hole: Location N: E: Water Elev: Total Depth: 860

Date Collared: Completed: Elevation: Bear: Dip: Date: DEC., 1980 Logged by: CARITHERS

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$				Geol Col'mn 1" =
800	860	60	MOSTLY DARK GRAY, UNALTERED LIMESTONE WITH ABOUT 1-2% PYRITE	-	-	-	-	-	-	2	++++	-			
	TD.														

ANALYSES — Analyst: Method:

From	To	Wth	Samp No

SUMMARY OF HOLE A-30:

HOLE A-30 WAS COLLARED IN ANDESITIC VOLCANIC ROCK OF THE SO-CALLED "EXCELSIOR" GROUP (CURRENTLY BEING REVISED) OF TRIASSIC AGE. IT PENETRATED THE GILLIS THRUST ZONE (ALSO TRIASSIC) FROM ABOUT 410 TO 520 FT, THEN CONTINUED IN AND BOTTOMED IN LIMESTONE, PROBABLY OF THE TRIASSIC LUNING FORMATION. THE ALTERATION, EPIDOTE AND PYRITE MINERALIZATION, MOSTLY ADJACENT TO THE THRUST, IS PROBABLY RELATED TO AN INTRUSIVE QUARTZ MONZONITE STOCK A HALF A MILE NORTHWEST. THE RELATIVELY HIGH PYRITE CONTENT BELOW 400 FT LIKELY CAUSES THE I.P. ANOMALY IN THE AREA OF THE HOLE. THE PYRITE IS APPARENTLY SLIGHTLY CUPIFEROUS AS INDICATED BY THE ANALYSES OF COMPOSITE SAMPLES. THE LOW CU-MO CONTENTS ARE ABOUT THE SAME AS VALUES FOUND ON THE SURFACE AND REFLECT AN APPROXIMATE BACKGROUND FOR THESE METALS IN THE ALTERED ENVIRONMENT.

WC.

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.
GRAND JUNCTION, CO.

DRILL HOLE LOG

HOLE NO Δ-30
Sheet 1 of 3

Project COPPER HILL

Contractor EKLUND
Size Hole ±5"
Location N APPROX. 10,050 E 11,100
Water Elev
Total Depth 860'
Date Collared AUG, 1980 Completed SEPT 15, 1980
Elevation 6080 Bear – Dip 90° Date SEPT. & DEC. 1980 Logged by W. CARITHERS

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	% Magt.	Geol Col'mn 1"=	ANALYSES From	To	Wth.	Samp No	PPM Cu		PPM Mo
0	10	10	MOSTLY GREENISH-GRAY SOIL WITH FRAGMENTS OF WEATHERED ANDESITE											0	10	10	NONE			
10	250	240	DARK, GREENISH-GRAY, MED. TO FINE-GRAINED ANDESITIC ROCK WITH ABOUT 30-50% DARK MINERALS (HORNBLENDE, AMPHIBOLES, ETC.) AND 50-60% FELDSPARS. 1-2% MAGNETITE AND MINOR PYRITE (<1%) WHICH IS OXIDIZED DOWN TO 40± FT. THIN ZONES OF ALTERATION OCCUR IN THE ANDESITE HERE & THERE AND PROBABLY MAKE UP ABOUT 5-7% OF THE SECTION. THESE CONSIST OF EPIDOTIZATION WITH A LITTLE LIGHT GRAY FELDSPAR AND MINOR SILICA. SOFT GRAY TO BROWN CLAYEY FRACTURED ZONES AT 95' AND 135-145'.	+	+	-	-	·	+	<1	-	1-2		10	250	240	30-1	465		3
250	410	160	SAME ROCK WITH APPARENT INCREASE IN EPIDOTIZATION AND PYRITIZATION DOWNWARD FROM ABOUT 1% PY AT 250' TO 5-8% AT 410'. LESS MAGN. CLAYEY FRACTURE ZONE AT 270'.	+	+	-	-	·	+	1-7	-	<1		250	450	200	30-2	635		3

Analyst HUNTER MINING LAB
Method GEOCHEM.

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP.

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: 4-80

Sheet 2 of 3

Contractor: _____ Size Hole: _____ Location N: _____ E: _____ Water Elev: _____ Total Depth: 860

Date Collared: _____ Completed: _____ Elevation: _____ Bear: _____ Dip: _____ Date: DEC, 1980 Logged by: W. CARITHER

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Magnt.	Geol Col'mn 1" =
410	450	40	MOSTLY GRAY, BLEACHED ANDESITE TOGETHER WITH CLAY, FEW LIMEY FRAGMENTS, EPIDOTE, TAN-COLORED GARNET AND 4-6% PYRITE. PROBABLE THRUST ZONE BETWEEN ANDESITIC ROCK ABOVE AND LIMESTONE BELOW.	-	++	-	-	-	+	5	+	-	
450	520	70	MOSTLY LIGHT-GRAY, BLEACHED LIMESTONE WITH CLAY, FEW FRAGS OF BLEACHED ANDESITE AND EPIDOTE-GARNET. 4-6% PYRITE. PROBABLY LOWER PART OF THRUST.	-	+	-	-	-	++	5	++	-	
520	650	130	LIGHT GRAY, BLEACHED LIMESTONE WITH 10-20% CLAY, 5-10% EPIDOTE AND 5-15% PYRITE (AVERAGING ABOUT 10%).	-	++	-	-	-	++	10	+++	-	
650	760	110	MOSTLY LT-GRAY (BLEACHED) LIMESTONE ALTERNATING WITH ZONES OF DARK-GRAY (UNBLEACHED) LIMESTONE. EPIDOTIZATION + PYRITE DECREASE DOWNWARD; ABOUT 7% PY AT TOP OF SECTION TO 2-3% AT BOTTOM.	-	+	-	-	-	+	4-5	++	-	
760	800	40	CONSID. GRAY, LIMEY CLAY WITH GRAY LIMESTONE. PROBABLY A FAULT OR FRACTURE ZONE.	-	++	-	-	-	-	2-3	++	-	

ANALYSES — Analyst: HUNTER LAB. Method: GEOCHEM

From	To	Wth	Samp No	PPM Cu		PPM Mo
450	650	200	30-3	470		3
650	860	210	3-4	170		4

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP.

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: Δ-30

Sheet 3 of 3

Contractor: _____ Size Hole: _____ Location N: _____ E: _____ Water Elev: _____ Total Depth: 860

Date Collared: _____ Completed: _____ Elevation: _____ Bear: _____ Dip: _____ Date: DEC., 1980 Logged by: CARITHERS

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$		Geol Col'mn 1" =
800	860	60	MOSTLY DARK GRAY,	–	–	–	–	–	–	2	++++	-	
	TD.		UNALTERED LIMESTONE										
			WITH ABOUT 1-2% PYRITE										

ANALYSES — Analyst: _____ Method: _____

From	To	Wth	Samp No

SUMMARY OF HOLE Δ-30:

HOLE Δ-30 WAS COLLARED IN ANDESITIC VOLCANIC ROCK OF THE SO-CALLED "EXCELSIOR" GROUP (CURRENTLY BEING REVISED) OF TRIASSIC AGE. IT PENETRATED THE GILLIS THRUST ZONE (ALSO TRIASSIC) FROM ABOUT 410 TO 520 FT, THEN CONTINUED IN AND BOTTOMED IN LIMESTONE, PROBABLY OF THE TRIASSIC LUNING FORMATION. THE ALTERATION, EPIDOTE AND PYRITE MINERALIZATION, MOSTLY ADJACENT TO THE THRUST, IS PROBABLY RELATED TO AN INTRUSIVE QUARTZ MONZONITE STOCK A HALF A MILE NORTHWEST. THE RELATIVELY HIGH PYRITE CONTENT BELOW 400 FT LIKELY CAUSES THE I.P. ANOMALY IN THE AREA OF THE HOLE. THE PYRITE IS APPARENTLY SLIGHTLY CUPIFEROUS AS INDICATED BY THE ANALYSES OF COMPOSITE SAMPLES. THE LOW CU-MO CONTENTS ARE ABOUT THE SAME AS VALUES FOUND ON THE SURFACE AND REFLECT AN APPROXIMATE BACKGROUND FOR THESE METALS IN THE ALTERED ENVIRONMENT.

WC.

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-9

Sheet 1 of 1

Contractor EKLUND

Size Hole Rot. 5"t

Location N 11,208 E 9625

Water Elev

Total Depth 225

Date Collared

Completed 1971

Elevation 5926 Bear - Dip 90° Date JUNE 5, 1973

Logged by W. Carither

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$
0	32	32	FeOx-stained, surface-weathered marble with a little qz. and gypsum with gossan frags.	+	+	·	·	·	·	·	+++
32	50	18	coarse marble and clay with about 50% pyrite	·	+	-	-	-	-	50	+++
50	105	55	Chiefly rich brown FeOx-stnd clay, marble, gossan and gypsum with 10-20% pyrite, partly leached	-	+	-	-	-	·	15	+++
105	125	20	white to cream marble, sugary to fine texture; little graphite(?) 1%; minor pyrite	-	-	·	·	·	·	1%	++++
125	180	55	Chiefly dk. grey limestone with thin zones of lt grey to tan	·	-	-	·	-	·	+	++++
180	225 TD.	45	Chiefly lt grey to tan, sugary textured marble with thin zones or veinlets of greenish quartz and green-yellow clay. Little turquoise observed 190-200'.	+	+	-	·	-	-	·	++++

Geol Col'mn 1" =

ANALYSES

Analyst Rky Mtn Geochem.

Method

From	To	Wth	Samp No	Cu	Pb	Zn	Mo	SKY Cu
0	10	10	D-321	687	10	150	13	
10	20	"	322	310	20	150	6	
20	30	"	323	165	130	760	2	
30	40	"	324	150	70	645	19	
40	50	"	325	310	20	820	17	
50	60	"	326	350	60	730	22	
60	70	"	327	170	40	340	19	
70	80	"	328	415	30	625	8	
80	90	"	329	680	170	230	300	550
90	100	"	330	525	10	555	20	
100	110	"	331	235	10	380	5	
110	120	"	332	220	10	630	5	
120	130	"	333	920	20	910	16	
130	140	"	334	75	10	165	<1	
140	150	"	335	35	10	90	<1	
150	160	"	336	255	10	420	25	
160	170	"	337	160	10	280	2	
170	180	"	338	115	20	1100	<1	
180	190	"	339	1000	10	2600	190	1300
190	200	"	340	285	10	485	149	
200	210	"	341	150	10	240	38	
210	220	"	342	270	10	265	39	
220	225	5	343	285	<10	245	62	
SUMMARY:								
0	130	130		395	46	533	35	
130	180	50		128	12	411	6	
180	225	45		410	10	825	100	

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: A-10

Sheet 1 of 1

Contractor: EKLUND

Size Hole: ROTARY 5"±

Location N 11,029 E 9,824

Water Elev:

Total Depth: 200'

Date Collared:

Completed: 1971

Elevation: 5917 Bear: – Dip: 90° Date: JUNE 6, 1973

Logged by: W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	5	5	Surface weathered diorite & gossan.	-	++	-	-	-	-	-	-	
5	25	20	Tan to yellow opal, frags of gossan & gypsum.	-	++	-	-	-	-	-	-	
25	45	20	Tan to brown opal, gossan with clay gouge and gypsum.	-	++	-	-	-	-	-	-	
45	50	5	Grey clay gouge with a little pyrite, opal sinter, gyp and bleached diorite (or andesite)	-	++	-	-	-	-	3	+	
50	65	15	Broken, partly bleached diorite (or andesite) together with grey + brn clay, gossan partly oxidized pyrite and gypsum.	-	+	-	-	-	-	5	++	
65	100	35	Nearly massive pyrite with grain size to 3 mm, with few frags coarse calcite & grey marble. Marble increases down section	-	-	-	-	-	-	80	+++	
100	120	20	Chiefly Hbl di or andesite partly bleached and mineralized by calcite, pyrite 5-15%, little epidote & magnetite.	-	-	-	-	-	-	10	++	
120	160	40	Hbl di or andesite as above partly replaced by carbonate — dolomitization (?) which increases down section.	-	-	-	-	-	-	6	++	
160	200 TD	40	Lt. to med grey, sugary textured marble (or dolomite).	-	-	-	-	-	-	10	+++	

ANALYSES — Analyst: SKYLINE LABS — Method:

From	To	Wth	Samp No		Cu	Pb	Zn	Mo	Au	Ag	%S
0	10	10	D-344		265	140	55	10	<.02	<.2	
10	20	10	345		105	55	25	4			
20	30	"	346		115	35	10	10	"	"	
30	40	"	347		200	20	20	2			
40	50	"	348		85	15	10	4	"	"	
50	60	"	349		130	25	65	6			
60	70	"	350		150	25	55	2	"	"	37.6
70	80	"	351		25	15	10	2			50.1
80	90	"	352		55	25	20	2	"	"	47.1
90	100	"	353		90	80	260	4			39.6
100	110	"	354		140	45	100	2	"	"	7.3
110	120	"	355		150	40	90	2			
120	130	"	356		130	45	70	8	"	"	
130	140	"	357		150	20	40	4			
140	150	"	358		150	30	70	2	"	"	
150	160	"	359		155	35	45	2			
160	170	"	360		185	40	50	14	"	"	
170	180	"	361		415	55	60	24			
180	190	"	362		95	70	60	20	"	"	
190	200	"	363		175	55	75	10			
SUMMARY:											
0	60	60			150	48	31	6	<.02	<.2	-
60	100	40			80	36	86	2	<.02	<.2	43.1
100	200	100			174	43	66	9	<.02	<.2	

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.
Project: COPPER HILL
HOLE NO: A-10A
Sheet 1 of 1

Contractor: EKLUND
Size Hole: ROTARY 5"ϕ
Location N 10,994 E 9855
Water Elev:
Total Depth: 120'

Date Collared:
Completed: 1972
Elevation 5926 Bear – Dip 90° Date JUNE 6, 1973
Logged by: W. Carither.

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	10	10	Surface weathered material (Qal)	-	-	-	-	-	-	-	-	
10	80	70	Highly FeOx-stnd clay, gossan, rgz with a few frags of bl'chd di (or andesite).	+	-	-	-	-	-	-	+	
80	100	20	Grey carbonate rock (dolomite?) with aplite or silica veining and 2-4% pyrite.	+	-	-	-	-	-	3	+++	
100	120 TD	20	Nearly massive pyrite, mostly in botryoidal beads up to 1" dia. probably a cavity-fill.	-	-	-	-	-	-	90	+	

ALTERATION/MINERALIZATION

ANALYSES — Analyst: ROCKY MTN GEOCHEM — Method:

From	To	Wth	Samp No	Cu	Mo
0	10	10	10A-1	215	<1
10	20	"	2	195	<1
20	30	"	3	295	1
30	40	"	4	185	<1
40	50	"	5	220	1
50	60	"	6	240	<1
60	70	"	7	310	<1
70	80	"	8	65	30
80	90	"	9	225	2
90	100	"	10	205	<1
100	110	"	11	115	<1
110	120	"	12	65	<1
SUMMARY					
0	100	100		215	3
100	120	20		90	<1

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO A10B

Project COPPER HILL

Sheet 1 of 1

Contractor EKLUND

Size Hole ROTARY 5"±

Location N 11,064 E 9,788

Water Elev

Total Depth 200'

Date Collared

Completed 1972

Elevation 5909 Bear – Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	10	10	Surface-weathered siliceous rock (opal?) and clay	+	++	-	-	-	-	-	-	
10	40	30	About 60-70% gypsum with clay and frags of gossan.	-	++	-	-	-	-	-	+	
40	60	20	Marble, gypsum and FeOx-stn'd clay with minor rusty pyrite	-	++	-	-	-	-	1±	++	
60	90	30	Tan to lt. grey sugary-textured marble with about 20-30% Py. and a little gypsum (contamination)	-	-	-	-	-	-	25	+++	
90	140	50	Lt. to med. grey marble (dolomite) with some frags. of dolomitized andesite (or dirty dolomite) ~~with~~ and sugary marble. 20-50% Py	-	-	-	-	-	+	35	+++	
140	150	10	Fault(?): Brown to red clay and tan, sugary marble with 10-15% Py — some oxidized to red ochre.	-	+++	-	-	-	-	13	+++	
150	170	20	Tan to grey ~~with~~ sugary marble with few frags (zones) of dolomitized andesite; 5-10% Pyrite, some oxidized little epidote	-	+	-	-	-	+	7	+++	
170	200 TD	30	Brown, FeOx-stn'd clay and sugary marble with a few gossan frags. and minor pyrite some oxidized.	-	++	-	-	-	+	2	+++	

ANALYSES

Analyst ROCKY MTN GEOCHEM

Method

From	To	Wth	Samp No	Cu	Mo
0	10	10	108-1	285	<1
70	20	"	2	50	<1
20	30	"	3	35	2
30	40	"	4	25	<1
40	50	"	5	60	2
50	60	"	6	130	<1
60	70	"	7	130	<1
70	80	"	8	70	<1
80	90	"	9	210	<1
90	100	"	10	385	<1
100	110	"	11	190	<1
110	120	"	12	210	<1
120	130	"	13	490	13
130	140	"	14	420	17
140	150	"	15	125	8
150	160	"	16	105	2
160	170	"	17	155	1
170	180	"	18	105	1
180	190	"	19	150	25
190	200	"	20	140	22
SUMMARY					
0	120	120		148	1
120	140	20		455	15
140	200	60		130	10

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-10C

Sheet 1 of 1

Contractor EKLUND

Size Hole ROT. 5"±

Location N 11,101 E 9,752

Water Elev

Total Depth 200'

Date Collared

Completed 1972

Elevation 5906 Bear – Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$				Geol Col'mn 1" =
0	10	10	Rusty, surface-weathered soil, clay & gypsum. Little bright red stain.	-	++	-	-	-	·	-	-				
10	45	35	Brown to tan clay (leached dolo. Py) w/frags of gossan and about 20 to 30% gypsum.	-	++	-	-	-	-	-	-				
45	110	65	About 60-80% pyrite together with brown to grey clay and a few fragments (zones?) of FeOx-stnd marble.	-	++	-	-	-	-	70	++				
110	160	50	Lt grey to tan, sugary-textured marble with 10-25% pyrite	-	-	–	-	-	-	17	+++				
160	180	20	Lt. to Med. grey marble together with grey and tan saponitic clay, minor pyrite; prob fault 165-175	-	++	-	-	-	-	+	+++				
180	190	10	Lt grey and tan (FeOx-stnd) marble with a little pyrite.	-	-	-	-	-	-	+	+++				
190	200 TD.	10	Dk. grey limestone with minor ltgrey & tan marble and a little pyrite.	-	-	-	·	-	·	+	+++				

ANALYSES

Analyst ROCKY MTN Geochem

Method

From	To	Wth	Samp No		Cu			Mo			
0	10	10	10C-1		210			<1			
10	20	"	2		375			49			
20	30	"	3		300			<1			
30	40	"	4		90			<1			
40	50	"	5		1400			4			
50	60	"	6		1200			1			
60	70	"	7		940			1			
70	80	"	8		420			<1			
80	90	"	9		680			<1			
90	100	"	10		475			4			
100	110	"	11		85			<1			
110	120	"	12		490			22			
120	130	"	13		400			6			
130	140	"	14		100			<1			
140	150	"	15		295			23			
150	160	"	16		350			4			
160	170	"	17		180			5			
170	180	"	18		125			38			
180	190	"	19		280			4			
190	200	"	20		60			<1			
SUMMARY:											
0	40	40			244			12			
40	60	20			1300			2			
60	130	70			500			5			
130	200	70			200			11			

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-10E

Sheet 1 of 1

Contractor EKLUND

Size Hole ROTARY 5"

Location N 10,990 E 9,850

Water Elev

Total Depth 130'

Date Collared

Completed 1972

Elevation 5926 Bear –

Dip 90°

Date JUNE 6 1973

Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	10	10	Surface-weathered rock & Gossan	-	+	-	-	-	-	-	·	
10	60	50	Brown, highly FeOx-stn'd clay, gossan and opal with few frags of bleached di (or andesite); prob contamination from surface (Qal). pyrite? chalcedony?	+	+	-	·	-	-	-	-	
60	80	20	Tan silic rock (opal?) and clay with 2-3% pyrite.	++	++	-	-	-	·	3±	+	
80	90	10	Carbonate-replaced (dolomitized) andesite (or diorite) together with silica and 10-15% pyrite.	++	+	-	·	-	·	15	++	
90	120	30	60 to 80% pyrite with carbonate rock as above. Py is coarse, but not botryoidal as in 10A.	+	-	-	-	-	-	70	++	
120	130	10	Carbonate rock with lt grey calcite & "dolomitized" di. (or andesite) with 20-25% pyrite.	-	-	-	-	-	·	25	+++	
	TD											

hornfels?

ANALYSES

Analyst ROCKY MTN. GEOCHEM

Method

From	To	Wth	Samp No	Cu	Mo
0	10	10	10E-1	215	<1
10	20	"	2	180	<1
20	30	"	3	275	2
30	40	"	4	195	<1
40	50	"	5	210	<1
50	60	"	6	230	<1
60	70	"	7	765	2
70	80	"	8	275	2
80	90	"	9	225	4
90	100	"	10	525	<1
100	110	"	11	55	<1
110	120	"	12	175	<1
120	130	"	13	105	<1
SUMMARY					
0	100	100		310	1
100	130	30		111	<1

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO A-11

Project COPPER HILL

Sheet 1 of 1

Contractor EKLUND

Size Hole Rot. 5"1

Location N 11,153 E 9490

Water Elev

Total Depth 200'

Date Collared

Completed 1971

Elevation 5923 Bear - Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	ALTERATION/MINERALIZATION Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	10	10	Surface-weathered limestone + gossan	-	-	-	-	-	-	-	++	
10	25	15	Mostly dk. gry limestone together with a few frags. of gossan	-	-	-	-	-	-	-	+++	
25	55	30	Tan to reddish-brown clay, calcite and gypsum; little Cu carbonate below 30; Oxidized Pyrite, little chalcocite below 50.	-	+	-	-	-	-	++	+++	
55	65	10	About 50-60% Pyrite, partly oxidized, with dark brown to black clay and a little calcite. Minor cpt and also cu carbonates.	-	-	-	-	-	-	60	++	
65	80	15	Lt. grey to tan calcite and clay with 10-5% pyrite decreasing with depth Minor Cu oxides, little cpt + garnet at 75'	+	+	-	-	-	+	10	+++	
80	145	65	Lt. grey, fine-grnd marble together with a little fine grnd, white to grn. gry qz. Minor Cu Carb - prob contamination from above.	+	-	-	-	-	+	1	+++	
145	200 TD	55	Grey and Lt. Tan (FeOx) limestone with minor SiO_2 and a little pyrite; rock grades to lt. grey (bleached?) below 185'.	+	-	-	-	-	+	<1	+++	

ANALYSES

Analyst Rocky Mtn Geochem

Method

From	To	Wth	Samp No	Cu	Pb	Zn	Mo	SKYLINE Cu
0	10	10	D364	525	20	160	2	
10	20	"	365	315	10	140	<1	
20	30	"	366	560	10	640	<1	
30	40	"	367	1500	10	890	<1	
40	50	"	368	2800	10	2400	<1	
50	60	"	369	9000	10	3700	109	5800
60	70	"	370	5300	<10	875	32	
70	80	"	371	4400	10	1800	30	
80	90	"	372	1200	10	860	13	
90	100	"	373	335	10	450	64	
100	110	"	374	375	10	795	2	
110	120	"	375	350	<10	780	16	
120	130	"	376	365	<10	830	<1	
130	140	"	377	315	<10	555	5	
140	150	"	378	340	<10	400	.8	
150	160	"	379	720	10	600	19	
160	170	"	380	395	<10	400	22	
170	180	"	381	410	<10	135	28	
180	190	"	382	410	<10	145	47	410
190	200	"	383	610	<10	90	38	
SUMMARY:								
0	30	30		467	13	313	1	
30	90	60		4033	10	1754	31	
90	200	110		420	<10	471	23	

60000085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.
Project: COPPER HILL
HOLE NO: A-13
Sheet 1 of 1

Contractor: EKLUND
Size Hole: ROT. 5"
Location N 11,048 E 10,092
Water Elev:
Total Depth: 250'
Date Collared:
Completed: 1971
Elevation 5966 Bear -
Dip 90°
Date JUNE 7, 1973
Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	20	20	Broken, surface-weathered Hbl diorite (or andesite) with a little caliche and gypsum	-	-	-	-	-	-	-	+	
20	90	70	Fe Ox-stn'd, somewhat bleached Hbl di (or andesite) together with carbonate, epidote, gypsum and a little oxidized pyrite.	-	-	-	-	-	+	1±	++	
90	250 TD.	160	Grey, slightly bleached diorite as above — but looks more like andesite here — with little carbonate, epidote and 2 to 8% disseminated pyrite. specimen 170' looks like sediment; at 230 looks like frag. volcanic.	-	-	-	-	-	+	5±	++	

ALTERATION/MINERALIZATION

ANALYSES — Analyst: ROCKY MTN. GEOCHEM — Method:

From	To	Wth	Samp No	Cu	Pb	Zn	Mo
0	10	10	D-384	90	10	285	<1
10	20	"	5	150	<10	170	5
20	30	"	6	160	<10	55	<1
30	40	"	7	250	<10	50	1
40	50	"	8	195	<10	40	<1
50	60	"	9	285	10	45	1
60	70	"	390	460	10	35	38
70	80	"	1	160	10	115	23
80	90	"	2	210	<10	100	5
90	100	"	3	155	"	80	8
100	110	"	4	235	"	60	<1
110	120	"	5	90	"	60	<1
120	130	"	6	195	"	115	<1
130	140	"	7	105	"	95	1
140	150	"	8	140	"	90	4
150	160	"	9	50	"	80	<1
160	170	"	400	115	"	35	<1
170	180	"	1	120	"	35	<1
180	190	"	2	255	"	35	<1
190	200	"	3	335	"	40	6
200	210	"	4	125	"	60	<1
210	220	"	5	130	"	50	4
220	230	"	6	130	"	55	<1
230	240	"	7	185	"	40	<1
240	250	"	408	170	<10	70	5
SUMMARY:							
0	110	110		214	10	94	9
110	250	140		153	<10	61	5

60000085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO Δ 14

Sheet 1 of 1

Contractor EKLUND

Size Hole ROT. 5"±

Location N 11,412 E 9754

Water Elev

Total Depth 105

Date Collared

Completed 1971

Elevation 5914 Bear - Dip 90° Date JUNE 7, 1973

Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	5	5	Broken, surf. weathered, grey, tan & pink ls, w/frags containing green, blue, & black Cu Ox.	-	.	-	.	-	-	.	++	
5	20	15	Tan, FeOx-stn'd ls w/frags & stains of Cu Ox.	+	-	-	-	-	-	-	++	
20	60	40	Lt grey, partly FeOx-stn'd limestone w few small frags of ox. Cu	+	-	-	-	-	-	-	++++	
60	95	35	Lt. grey limestone with few silic. frags & zones or veins w epidote; minor FeOx & Cu Ox, prob contamination from above.	+	-	-	-	-	+	+	++++	
95	105 TD	10	Lt grey Limestone as above and broken, dk grey altered diorite (or andesite); possibly from vertical dike.	+	-	-	-	-	+	+	++	

ALTERATION/MINERALIZATION

ANALYSES

Analyst ROCKY MTN GEOCHEM

Method

From	To	Wth	Samp No	Cu	Pb	Zn	Mo
0	10	10	D 409	2400	10	1200	33
10	20	"	410	2100	10	1200	64
20	30	"	1	1100	80	1000	25
30	40	"	2	1800	10	1400	16
40	50	"	3	2200	<10	760	13
50	60	"	4	860	<10	485	8
60	70	"	5	680	10	655	19
70	80	"	6	710	<10	620	2
80	90	"	7	545	<10	480	28
90	100	"	8	460	<10	445	33
100	105	5	419	295	<10	255	26
SUMMARY							
0	50	50		1900	24	1112	30
50	105	55		619	<10	511	19

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company Idaho Mining Corp

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-6

Sheet 1 of 1

Contractor AMBERSON-Johnson Size Hole ROTARY - 5"ϕ Location N 11,317 E 9,926 Water Elev Total Depth 200'

Date Collared Sept 16 Completed OCT. 16, 1969 Elevation 5944 Bear - Dip 90° Date JUNE 4, 1973 Logged by W. Carither

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$				Geol Col'mn 1" =
0	5	5	Rusty weathered soil and dirt.	-	+++	·	·	-	·	·	+				
5	30	25	Fine grained, gossany, lt tan to rusty red clay, altered marble + gypsum	-	+++	-	·	·	·	·	+				
30	50	20	gossany, leached marble, lt tan to rusty red; minor silic + pyrite	+	+	-	·	·	-	1±	++				
50	70	20	Lt. Tan to grey, sugary-textured marble with gypsum. Minor silic, pyrite and few grains Cu Ox	+	+	-	·	·	+	8±	+++				
70	100	30	Lt to dk grey, fine-grn marble with 20-30% py. Little cpt(?)	+					+	25	++++				35% py
100	120	20	gry to pinkish-tan, sugary marble + lt. grey qz; 15-20% py; little cpt.	+					+	15	++++				
120	160	40	Same with less pyrite	+					+	5	++++				
160	195	35	Lt grey to tan, sugary marble with minor FeOx staining. Little Epidote here + there w/ minor Silica or aplite. MoS_2 or graphite in Calcite at 185-190	+					+	5	++++				
195	200 TD.	5	Abt 1/3 marble as above and 2/3 dk gry, fine grn Hbl. di or andesite.	+					+	1	+				

ALTERATION/MINERALIZATION

ANALYSES Analyst Method

From	To	Wth	Samp No	Cu	Pb	Zn	As	Mo	Au	Ag	S%
				PPM							
0	10	10	D-101	635	30	30	85	295	-.1	1	
10	20	-	102	740	30	20	50	153	-.1	2	
20	30	"	103	1100	25	50	95	39	-.1	2	
30	40	"	104	860	25	75	60	46	-.1	1	
40	50	"	105	1300	30	110	50	55	-.1	2	
50	60	-	106	1300	20	95	30	49	-.1	1	
60	70	-	107	1900	25	65	50	44	-.1	1	
70	80	-	108	7300	50	315	160	41	-.1	3	18.5
80	90	-	109	5300	35	255	145	35	-.1	3	16.1
90	100	-	110	2900	50	155	70	32	-.1	2	
100	110	-	111	3300	200	240		26			
110	120	-	112	515	225	120		25			
120	130	-	113	450	450	205		22	-.1	6	
130	140	-	114	350	115	110		17			
140	150	-	115	80	145	100		4			
150	160	-	116	215	90	130		15	-.1	3	
160	170	-	117	100	75	145		33			
170	180	-	118	145	95	145		24			
180	190	-	119	100	50	90		18	-.1	2	
190	200	-	120	75	60	110		11			
SUMMARY											
0	70	70		1120	26	63	53	97	<.1	1	·
70	90	20		6300	42	285	152	38	<.1	3	17.3
90	110	20		3100	125	197	-	29	<.1	6	·
110	200	90		225	145	128	-	19	<.1	4	-

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.

Project: COPPER HILL

HOLE NO: A-6A

Sheet 1 of 1

Contractor: EKLUND

Size Hole: ROTARY 5"

Location N 11,273 E 9,959

Water Elev:

Total Depth: 200'

Date Collared:

Completed: 1972

Elevation: 5940 Bear: – Dip: 90° Date: JUNE 4, 1973

Logged by: W. Carither

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	10	10	Tan, FeOx-stained clay with a little gypsum.		++						–	
10	20	10	Tan to brn. clay w/frags of silic. material and gypsum	+	++						–	
20	30	10	Brown clay as above with gyp. silic. material, and a little bleached Hbl di (dike?) or andesite.	+	++						–	
30	50	20	Brn. clay as above with frags of aplitic material and bleached Hbl di	+	++						–	
50	140	90	Mostly dk-grey hbl. di. (or and.) w/few rusty frags of silic. material & clay; 2-3% py in clay and di. minor magnetite.	+	+				+	3+	–	
140	200	60	Chiefly lt to med grey, bleached and silic. diorite (or andesite) with about 50% qz & feldspar, 6-10% py; little Epi. Magn. & K-spar.	++	·	·	+	·	+	8±	–	

ANALYSES From	To	Wth	Samp No	Cu	Mo
0	10	10	6A-1	900	13
10	20	10	2	560	11
20	30	10	3	470	16
30	40	10	4	810	4
40	50	10	5	485	1
50	60	10	6	570	30
60	70	10	7	645	20
70	80	10	8	170	2
80	90	10	9	140	1
90	100	10	10	105	-1
100	110	10	11	60	-1
110	120	10	12	70	-1
120	130	10	13	110	-1
130	140	10	14	85	-1
140	150	10	15	80	-1
150	160	10	16	90	-1
160	170	10	17	190	-1
170	180	10	18	185	-1
180	190	10	19	195	-1
190	200	10	-20	225	-1
SUMMARY:					
0	70	70		634	14
70	160	90		101	<1
160	200	40		200	<1

Analyst: Rocky Mtn Geochem

Method:

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO: A-6B

Project: COPPER HILL

Sheet 1 of 1

Contractor: EKLUND

Size Hole: 5"± ROTARY

Location N: 11,352 E: 9,890

Water Elev:

Total Depth: 200'

Date Collared:

Completed: 1972

Elevation: 5937 Bear: – Dip: 90°

Date: JUNE 5, 1973

Logged by: W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	30	30	Lt. tan, FeOx-stained, sugary-textured Marble.	·	·	·	·	·	·	·	++++	
30	70	40	Lt tan to cream-colored sugary marble with a little clay (gouge) and few frags. fine-grn. diorite (from nearby dike)	·	+	·	·	·	·	·	+++	
70	100	30	Mostly fine-grnd, dk grey diorite with a little white marble	·	+	·	·	·	·	·	+	
100	140	40	White sugary marble with a little diorite and minor pyrite	·	+	·	·	·	·	>1	+++	
140	160	20	White marble as above with a little diorite and also dk grey zones containing 3-5% pyrite.	·	·	·	·	·	·	3	+++	
160	200	40	Lt. tan, cream and white sugary marble with a little pyrite	·	·	·	·	·	·	>1	+++	

ANALYSES

Analyst:

Method:

From	To	Wth	Samp No	Cu	Mo
0	10	10	6B-1	200	-1
10	20	10	2	840	13
20	30	10	3	445	6
30	40	10	4	220	4
40	50	10	5	130	-1
50	60	10	6	275	-1
60	70	10	7	365	50
70	80	10	8	140	22
80	90	10	9	235	39
90	100	10	10	230	2
100	110	10	11	70	2
110	120	10	12	430	17
120	130	10	13	400	29
130	140	10	14	375	85
140	150	10	15	290	32
150	160	10	16	260	79
160	170	10	17	260	42
170	180	10	18	285	69
180	190	10	19	590	83
190	200	10	20	110	2
SUMMARY:					
0	60	60		352	4
60	90	30		247	37
90	110	20		150	2
110	190	80		361	54
190	200	10		110	2

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company: IDAHO MINING CORP.

Project: COPPER HILL

HOLE NO: A-6-C

Sheet 1 of 1

Contractor: EKLUND

Size Hole: ROTARY 5"

Location N 11,393 E 9,855

Water Elev:

Total Depth: 200'

Date Collared:

Completed: 1972

Elevation: 5922 Bear: - Dip: 90° Date: JUNE 5, 1973

Logged by: W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	10	10	Brown, surf. weathered marble	-	·	-	-	·	·	·	++++	
10	70	60	Brn. to white, sugary to coarse textured marble with a few thin gossany qz. veins	+	·	·	·	·	-	-	++++	
70	100	30	Tan & brn FeOx-stnd sugary & coarse marble w/ 10-20% fine grn diorite (or andesite?); minor pyrite.	·	·	·	·	·	·	+	+++	
100	130	30	Tan, cream & white sugary marble w/few thin gossany FeOx-stnd zones. very minor pyrite.	·	·	·	-	·	·	+	++++	
130	150	20	Chiefly dk grey fine grnd limestone with few zones of tan & cream marble; little FeOx-staining & clay	·	+	-	·	·	·	·	++++	
150	200	50	white to cream-colored, sugary marble with thin FeOx-stnd clayey zones or cracks.	-	-	-	-	·	·	-	++++	

ANALYSES

Analyst: ROCKY MTN GEOCHEM

Method:

From	To	Wth	Samp No	Cu	Mo
0	10	10	66-1	470	50
10	20	"	2	305	93
20	30	"	3	250	62
30	40	"	4	315	55
40	50	"	5	350	49
50	60	"	6	285	44
60	70	"	7	390	39
70	80	"	8	275	36
80	90	"	9	450	62
90	100	"	10	610	93
100	110	"	11	305	17
110	120	"	12	465	8
120	130	"	13	940	35
130	140	"	14	860	280
140	150	"	15	1200	16
150	160	"	16	1100	162
160	170	"	17	210	30
170	180	"	18	155	11
180	190	"	19	90	15
190	200	"	20	125	4
SUMMARY:					
0	120	120		372	51
120	160	40		1025	123
160	200	40		145	15

6000 0085 (0700)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-7

Sheet 1 of 2

Contractor AMBERSON

Size Hole ROTARY 5"?

Location N 10,904 E 10,489

Water Elev

Total Depth 320

Date Collared OCT 17, '69 Completed OCT 18, '69

Elevation 6049 Bear ~ Dip 90° Date JUNE 5, 1973 Logged by W. Carither

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	magnt	Geol Col'mn 1" =
0	20	20	Broken, surface-weathered fine-grnd hbl. diorite	-	++	-	-	-	++	-	-	+	
20	40	20	Dk grey, fine grnd rock of about diorite composition - 40% ± femics (hornblende); 60% ± feldspar. Rock cut here & there by thin, grey-brn clay seams; minor zones of bleaching w/ epidote, aplite, silica, pyrite	+	+	-	-	-	+	1±	-	++	
40	45	5	Fault zone(?) with consid. FeOx and soapy clay.	-	+++	-	-	-	+	1±	-	+	
45	65	20	Fine grained diorite as above	+	+	-	-	-	+	1±	-	+	
65	130	65	Brown, highly broken rock, prob. fractured & bleached diorite — Prob. fault zone. with rusty and yellow clay, di frags, silica & aplite. Frags at 125-130 display slickensides on clay with smeared pyrite	-	+++	-	-	-	+	1±	-	+	
130	320	190	Dk grey, fine-grnd Hbl. diorite as above with 2-6% magnetite. Bleached zones (v&ins) here and there contain silica, aplite(?) pink feldspar & pyrite. These increase downward to 8-10% of rock. Much magnetite -- some fragments jump to magnet.	+	-	-	+	-	++	1±	-	++	

ALTERATION/MINERALIZATION

ANALYSES — Analyst ROCKY MTN GEOCHEM — Method

From	To	Wth	Samp No	Cu	Pb	Zn	Mo	Au	Ag
0	10	10	D-152	135	230	90	<1		
10	20	"	153	85	20	30	<1	-.1	3
20	30	"	154	30	40	40	<1		
30	40	"	155	25	15	30	<1		
40	50	"	156	30	100	55	5	-.1	2
50	60	"	157	45	15	30	4		
60	70	"	158	50	60	45	4		
70	80	"	159	80	15	25	9	-.1	3
80	90	"	160	125	60	40	11		
90	100	"	161	40	25	30	6		
100	110	"	162	35	40	25	4	-.1	2
110	120	"	163	80	45	35	1		
120	130	"	164	110	100	55	8		
130	140	"	165	20	35	30	<1	-.1	2
140	150	"	166	25	50	50	<1		
150	160	"	167	80	550	160	1		
160	170	"	168	50	270	105	3	-.1	2
170	180	"	169	50	240	60	<1		
180	190	"	170	60	535	135	1		
190	200	"	171	30	305	60	4	-.1	1
200	210	"	172	20	240	65	1		
210	220	"	173	20	165	55	1		
220	230	"	174	20	170	45	1	-.1	2
230	240	"	175	10	50	25	1		
240	250	"	176	20	60	30	2		
250	260	"	177	20	25	25	<1	-.1	2
			178						

6000 0085 (0760)

Ward Carithers
Mining Geologist

DRILL HOLE LOG

Company _____

Project Copper Hill

HOLE NO 4-7

Sheet 2 of 2

Contractor _____ Size Hole _____ Location N _____ E _____ Water Elev _____ Total Depth 320

Date Collared _____ Completed _____ Elevation _____ Bear _____ Dip _____ Date _____ Logged by W Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Mag.			Geol Col'mn 1" =
130	320		Hbl diorite — Continued	+	-	-	+	-	++	1	-	++			
	TD.														

ALTERATION/MINERALIZATION

ANALYSES

Analyst _____

Method _____

From	To	Wth	Samp No	Cu	Pb	Zn	Mo	Au	Ag
260	270	10	178	20	40	35	<1	-.1	2
270	280	"	179	10	40	20	<1		
280	290	"	180	5	25	25	<1	-.1	2
290	300	"	181	5	30	15	<1		
300	310	"	182	10	45	25	<1	-.1	1
310	320	"	183	30	20	15	<1		
SUMMARY:									
6	130	130		67	59	41	4	<.1	2.5
130	230	100		37	256	76	1	<.1	2
230	320	90		14	37	24	1	<.1	2-

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-8

Sheet 1 of 1

Contractor John AMBERSON

Size Hole Rot 5"±

Location N 11,392 E 10,037

Water Elev

Total Depth 210

Date Collared OCT 15, '69 Completed OCT 16, '69

Elevation 5937 Bear — Dip 90° Date JUNE 5, 1973 Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Mag			Geol Col'mn 1" =
0	85	85	Chiefly fine grnd, dk gry Hbl diorite (or andesite) with clay gouge and frags of marble - prob fault. Consid. Fe Ox staining, little magnetite, minor Py. below 50'. minor reining x silic.	+	+	-	?+	-	-	<1	+	+			
85	95	10	Chiefly white to cream-colored marble with minor Hbl di or andesite as above.	-	-	-	-	-	-	+	++++	-			
95	125	30	About even quantities of diorite, marble and brown clay gouge.	-	+	-	-	-	-	+	++	-			
125	175	50	Tan to white sugary-textured marble.	-	-	-	-	-	-	+	+++	-			
175	200	25	Dk grey Hbl diorite (or andesite) with a little clay as above.	-	+	-	-	-	-	+	+	-			
200	210 TD.	10	Very fine lt cream, chalky marble - possibly a fault zone or cavity.	-	-	-	-	-	-	-	++++	-			

ALTERATION/MINERALIZATION

ANALYSES Analyst Method

From	To	Wth	Samp No	Cu	Pb	Zn	Mo	Au	Ag		SKY Cu
0	10	10	D-131	550	20	95	18				
10	20	"	132	275	100	115	25	<.1	6		
20	30	"	133	245	110	175	30				
30	40	"	134	240	65	90	19				
40	50	"	135	345	90	100	33	<.1	3		315
50	60	"	136	185	50	105	23				
60	70	"	137	270	50	125	47				
70	80	"	138	365	55	85	31	<.1	2		
80	90	"	139	480	170	80	41				
90	100	"	140	90	510	35	67				
100	110	"	141	265	115	80	35	<.1	4		
110	120	"	142	300	45	75	29				
120	130	"	143	410	550	220	32				
130	140	"	144	135	90	65	2	<.1	3		
140	150	"	145	245	40	145	10				
150	160	"	146	205	95	80	5				
160	170	"	147	45	130	75	29	<.1	2		
170	180	"	148	270	45	215	29				
180	190	"	149	195	50	95	42				175
190	200	"	150	180	800	260	<1	<.1	2		
200	210	"	151	40	250	135	<1				
SUMMARY											
0	130	130'		309	148	106	33	<.1	4		
130	190	60'		182	75	112	19	<.1	2.5		
190	210	20		110	525	197	<1	<.1	2		

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP.

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: D-1
Sheet 1 of 1

Contractor: BOYLES BROS.
Size Hole: ROT. 5½
Location N 14,008 E 10,094
Water Elev.
Total Depth 110'
Date Collared
Completed
Elevation 5560 Bear – Dip 90° Date 29 JUNE 1973 Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	30	30	Quartz monzonite, somewhat fractured and altered, together with consid. silicification and few qz veins. Little secondary biot. No Pyrite, but moderate FeOx staining.	++	++	–	?	+	–	–	–	
30	40	10	Same, but with considerable red brown staining, particularly on argillized portion. (clay).	++	++	–	?	+	–	–	–	
40	110 TD	70	Same, but with only lt brn to tan coloration due to light FeOx coloration. few grains of oxidized pyrite. Cuttings quite fine in size, prob. due to dull bit.	++	++	–	?	+	–	+	–	

ALTERATION/MINERALIZATION

ANALYSES — Analyst: SKYLINE — Method:

From	To	Wth	Samp No	Cu	Mo	Au (ppm)	Ag (ppm)
0	20	20	DI-2	255	26		
20	40	20	DI-4	190	16		
40	60	20	DI-6	165	14	.03	<.2
80	80	20	DI-8	200	14		
80	100	20	DI-10	130	30		
100	110	10	DI-11	295	26		
SUMMARY							
0	110	110		198	20	.03	<.2

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO D-2

Sheet 1 of 1

Contractor BOYLES BROS.

Size Hole Rot 5"±

Location N 14,090 E 10,015

Water Elev.

Total Depth 95

Date Collared

Completed

Elevation 5545 Bear — Dip 90° Date 29 JUNE, 1973 Logged by W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	70	70	Quartz Monzonite, fractured and altered, with moderate silicification & argillization; Consid. red-brown FeOx stain, cheifly on cracks and in argil. fragments. Little 2'dary biot.	++	++	-	-	+	-	-	-	
70	95	25	Altered qz. monzonite as above but with moderate tan colored FeOx. staing. Poss. little K-spar devel; very minor oxidized py.	++	++	-	+?	-	+	-		

ALTERATION/MINERALIZATION

ANALYSES Analyst SKYLINE Method

From	To	Wth	Samp No	Cu	Mo	Au (ppm)	Ag (ppm)
0	20	20	D2-2	75	4		
20	40	20	4	330	10		
40	60	20	6	85	6	.04	.2
60	80	20	8	175	16		
80	95	15	10	225	14		
SUMMARY							
0	95	95		175	10	.04	.2

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

HOLE NO A-3
Sheet 1 of 1

Project

Contractor BOYLES
Size Hole 5"± Rotary
Location N 14,470 E 10,173
Water Elev
Total Depth 105
Elevation 5483 Bear — Dip 90° Date 29 JUNE, 1973 Logged by W. Carithers
Date Collared Completed

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Sericite	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1" =
0	20	20	Probably alluvial fragments of Tuff, marble, hornfels & qz monzonite strongly stained by hematite (ferric iron fixation by $CaCO_3$)	·	·	·	·			-	++	
20	80	60	Chiefly Carbonate rock - marble and hornfels, together with a little greenish quartzite. All strongly hematite stained.	+	+	-	-	·	+	-	+++	
80	105	25	Grey marble together with frags (beds?) of olive green hornfels, only slightly FeOx stained. Minor Epi, qz.+ qzt.	+	-	-	-	-	+	-	+++	

ALTERATION/MINERALIZATION

ANALYSES Analyst SKYLINE
Method

From	To	Wth	Samp No	Cu	Mo	Au (PPM)	Ag (PPM)
0	20	20	33-1	55	4		
20	40	20	-2	75	4		
40	60	20	-3	90	4	.02	<.2
60	80	20	-4	190	6		
80	105	25	-5	80	10	.04	.4
Summary:							
0	105	105	·	97	6	.03	.2

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company: IDAHO MINING CORP.

DRILL HOLE LOG

Project: COPPER HILL

HOLE NO: A-4

Sheet 1 of 1

Contractor: BOYLES BROS. Size Hole: ROT. 5"±

Location N 10,610 E 11,530 Water Elev: Total Depth: 80

Date Collared: Completed: Elevation 5900± Bear: - Dip: 90° Date: 29 JUNE, 1973 Logged by: W. Carithers

FOOTAGE From	FOOTAGE To	FOOTAGE Wth	ROCK TYPE Description / Appearance / Structure	ALTERATION/MINERALIZATION Silic	Argil	Seric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$	Geol Col'mn 1"=
0	10	10	Mostly alluvial material of rusty diorite ? Epidote	·	·	·	·	·	↑	·	·	
10	15	5	Broken, surface-weathered diorite with much brown FeOx staining; little oxidized pyrite	-	·	-	·	-	↑	1±	-	
15	80	65	Hbl. diorite – med. to fine grained, med. grey colored. with about 60-70% feldspar, 30-40% mafics. Little magn. but no pyrite. Epidote ranges from 2 to as much as 20% in some 5' samps. (30-35, 60-65).	·	·	·	·	·	↑↑	-	-	

ANALYSES — Analyst: SKYLINE — Method:

From	To	Wth	Samp No	Cu	Mo
0	20	20	D4-1	550	8
20	40	20	2	750	6
40	60	20	3	355	2
60	80	20	4	140	2
Summary.					
0	40	40	·	650	7
40	80	40		247	2

6000 0085 (0760)

6000 0085 (0760)

Ward Carithers
Mining Geologist

Company IDAHO MINING CORP.

DRILL HOLE LOG

Project COPPER HILL

HOLE NO A-5
Sheet 1 of 1

Contractor JOHNSON-CAMERON
Size Hole ROTARY - 4½"-5"
Location N 11,190 E 11,611
Water Elev
Total Depth 100' (?)
Date Collared Sept 12, 1969 Completed Sept 15, 1969
Elevation 5842 Bear — Dip 90°
Date 4 JUNE, 1973
Logged by W. Carithers

FOOTAGE From	To	Wth	ROCK TYPE Description / Appearance / Structure	Silic	Argil	Saric	K-spar	Biot	Epi-gar	Py %	$CaCO_3$				Geol Col'mn 1" =
0	5	5	O'b'N - NO sample	.	.	.	.	.	.	.	.				?
5	50	45	Mixture of hbl di. (or andesite) gr. mon, ls and reddish-brown clay; few frags volcanics (?) - Rock either Qal or Fault zone.	-	++	-	-	.	-	-	++				
50	70	20	Fine sand of the above rocks — prob. cavity; No Samp 55-60	-	++	.	-	-	-	-	++				
70	100 TD.	30	Chiefly dk grey, fine grnd Hbl. diorite, but with abundant frags of ls, clay + volcanic - prob contamination from above. Hbl. di has less alteration than in hole A7 to west.	-	++	-	-	-	-	-	+				
			NO CO. REPRESENTATIVE ON JOB BELOW 60'; SAMPLES FROM 70 TO 100' MIGHT HAVE BEEN ILLICITLY TAKEN FROM THE SURFACE												

ANALYSES
Analyst Rocky MTN. Geochem
Method

From	To	Wth	Samp No	PPM Cu	Pb	Zn	Mo
0	5	5	-	.	.	-	.
5	10	5	D-111	110	35	70	2
10	20	10	112	95	35	65	3
20	30	"	113	95	45	70	17
30	40	"	114	95	30	65	4
40	50	"	115	85	35	70	4
50	55	5	116	85	30	65	4
55	60	5	-	.	-	.	.
60	70	10	117	115	30	120	10
70	80	10	118	55	45	80	5
80	90	10	119	60	25	80	6
90	100	10	120	75	20	85	11
SUMMARY:							
0	100	100	.	87	33	77	7

6000 0085 (0760)

Place - Walker River Reservation, Shurz, Nevada

Area - Copper Hill Prospect, Sections 5, 6, 7, 8, 17, 18
T11N, R30E

For - Walker-Martel Mining Company, Reno, Nevada

By - Robert E. Holt December 11, 1965

Summary and Conclusions

The Copper Hill area is, in my opinion, a moderately interesting prospect. It is an area where structural activity is intimately associated with intrusive igneous activity and copper mineralization. The copper mineralization is not particularly widespread nor is it associated with any pervasive rock alteration. Nevertheless, it is an interesting occurrence and since there is overlapping volcanic cover, there is an excellent possibility that we are looking at the periphery of a more mineralized area.

The target possibilities in decreasing importance are:

1. The quartz monzonite in the vicinity of the area recently drilled and to the east under what is presumed to be a thin covering of volcanics. There is also the possibility that the entire block of ground which extends southward under the large ridge of intermediate volcanics and under the diorite adjacent to the shaft area could be included in this target.

2. Replacement deposits in the limestone and the limestone-diorite contact zone in the shaft area.

3. Fissure filling massive sulfides deposits or replacement deposits associated with the structure along which the prominent gosson outcrops in the shaft area.

4. The zone of disseminated copper mineralization in the quartz monzonite on the west edge of the map west of the drilled area. This particular area is of very low priority, however.

Recommendations

To check the potential of the targets enumerated above and to further prospect the Copper Hill area, the following steps are recommended:

1. Take a series of rock samples on 200-foot centers within the quartz monzonite and have them run for total copper and molybdenum. So as to keep costs at a minimum, every other sample can

be run and if significant data are forthcoming the remaining samples can be run. This will check the direction, if any, of a copper or molybdenum build-up in the quartz monzonite.

2. Take channel sample or at least take good representative chip samples in several areas along the prominent gossen outcropping in the shaft area. These should be run for total copper and at least one sample should be assayed for copper, lead, zinc, gold, and silver.

3. An I. P. survey should be run in the area on at least 500' dipole spacing. Several lines should be run normal to the structure and across the areas of interest. Probably one long line should be run through and between the two major areas of interest; i.e. the drilled area on the north and the shaft area on the south.

Several 100' dipole lines should be run over the mineralized limestones and the gossan zone of the shaft area. Should any of these I. P. lines prove to be anomalous then steps should be taken to outline the anomalous zone by additional I. P. It is possible that a 1000' dipole line over the volcanics east of the mineralized area would be justified particularly if an anomalous situation is found on the shorter spaced lines. This is suggested because of the dip of the sediments under the volcanics and the increased thickness of the volcanics in this direction.

4. Several ground magnetic profiles might be useful in the drilled area so as to more definitely tie down the outlines of the magnetic low found there.

Geology

The Copper Hill area which is located in the northen part of the Gillis Range is one of moderate relief with steep slopes from 20° to 30° and narrow canyon floors. Geologically, it is an erosional window in Tertiary volcanics which has exposed Triassic rocks, and Cretaceous quartz monzonite which has been intruded into them. It is the contact zone between the Triassic rocks and the quartz monzonite that, in general, carries most of the mineralization. Locally the quartz monzonite is moderately altered and mineralized.

The area has had a complex structural history. During the early Jurassic time the predominantly volcanic Excelsior formation was thrust easterly over the late Triassic Luning formation which is composed predominantly of limestones with some shales. During Cretaceous time after the thrust activity had subsided a quartz monzonite was intruded into the area. During the intrusive activity it assimilated some of the rocks into which it was intruded and domed others. Then during the Cenozoic time a great pile of volcanics, estimated in places to be thousands of feet thick, was extruded over the area. When looking North and Northeast from Copper Hill the dips of this great volcanic pile suggest that they were gently folded into a broad anticline whose axis strikes

Northwest-Southeast. The Copper Hill area is situated either directly along the axis or slightly west of it. Subsequent erosion of the volcanics has exposed the Triassic rocks in the Copper Hill area.

The Triassic units have been exposed in an arcuate pattern and appear to have been domed by the nose of the quartz-monzonite. The continuity of these Triassic units around the nose of quartz monzonite is broken in the central part of the area where they appear to project under a thin volcanic cover.

I have elected to place the massive limestones and shales which are found here in the Luning formation thereby accepting the probability of the existence of the Gillis thrust in the area. The Excelsior in this area is mostly intermediate to felsic volcanics. There are two diorite units which may or may not be part of the Excelsior. The two large blocks of diorite are dissimilar. The northern block is composed principally of plagioclase and biotite and is coarse-grained. The biotite has largely been altered to chlorite. The southern block is fine-grained, a more dense unit, and is composed of plagioclase, hornblend, and biotite. The mafics are chloritized but less completely than those of the Northern block. There is a possibility that these units are as suggested, a part of the Excelsior; however, because of the lack of any clear-cut evidence either way, I have not included them in it. Interestingly enough, particularly on the west and south edge of the southern block, the diorite-limestone contact is sharp and exhibits little or no contact effects. However, these limes which are within the main prospect area are marbelized. On the western edge of this marbelized zone, between it and the felsites, there is an outcropping gossan zone about 1800' long and from 5' to 20' wide. It is in this gossan that the early exploration efforts were expended. Several shafts have been sunk along it. Drifts driven off these shafts have encountered mostly skarn and altered limes; however, some granitic material was cut in one of them. Copper carbonates were found in all of them.

The quartz monzonite is generally fresh and composed of orthoclase, plagioclase and biotite. It is altered only locally and is most altered in the vicinity of the proposed fault intersection. The biotite has been either completely eliminated or chloritized. Some sericite is present, however, not in large amounts. Silica has been added but it has not been the flooding of silica that is commonly encountered near the large "porphyry" ore bodies. Moderate amounts of copper carbonate staining is present. There are minor amounts of chalcopyrite and pyrite disseminated locally in the quartz monzonite of this particular area.

There are many minor faults in the area, some of which are mineralized. It is entirely possible that the sediments which are adjacent to the quartz monzonite are situated along either one large arcuate-shaped fault or, what is more likely, along two faults which bound the quartz monzonite on the north and the south and which intersect in the east central part of the map in the vicinity of most of the known mineralization in the area.

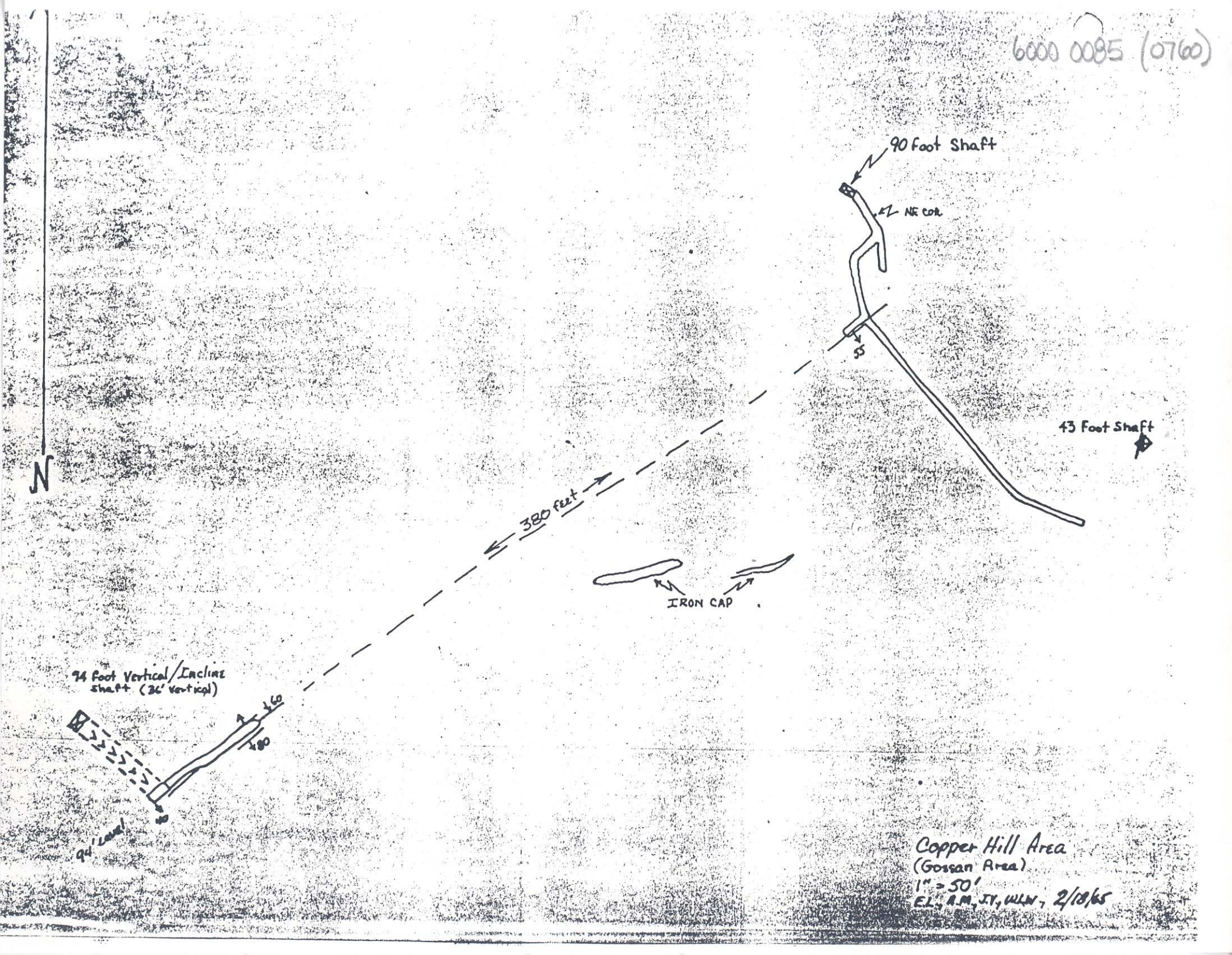
The only other areas of significant mineralization are the small patch of skarn which is well within the quartz monzonite west of the shaft area; and the quartz monzonite west of the drilled area which is in the vicinity of the proposed fault intersection.

When the magnetic map is overlaid on the geologic map there is a very interesting correlation between the altered mineralized quartz monzonite in the east central part of the map in the vicinity of the area recently drilled and a magnetic low. This low extends eastward into the volcanic cover. Oddly enough, the volcanics in this area are in a topographic low. There is a strong suggestion that the quartz monzonite projects under this basin and is covered only by a thin veneer of volcanics.

There is some evidence to suggest that the Gillis thrust zone in the vicinity of Copper Hill is mineralized. However, since some of the faults and shears in the quartz monzonite and within the Luning are mineralized, I suspect that mechanical preparation of the host rock will be a more important factor in localizing mineralization than proximity to the thrust. Obviously, any ore-bearing solutions that came in contact with the Carbonaceous sediments likely would have formed replacement deposits with only a limited amount of structural preparation necessary.

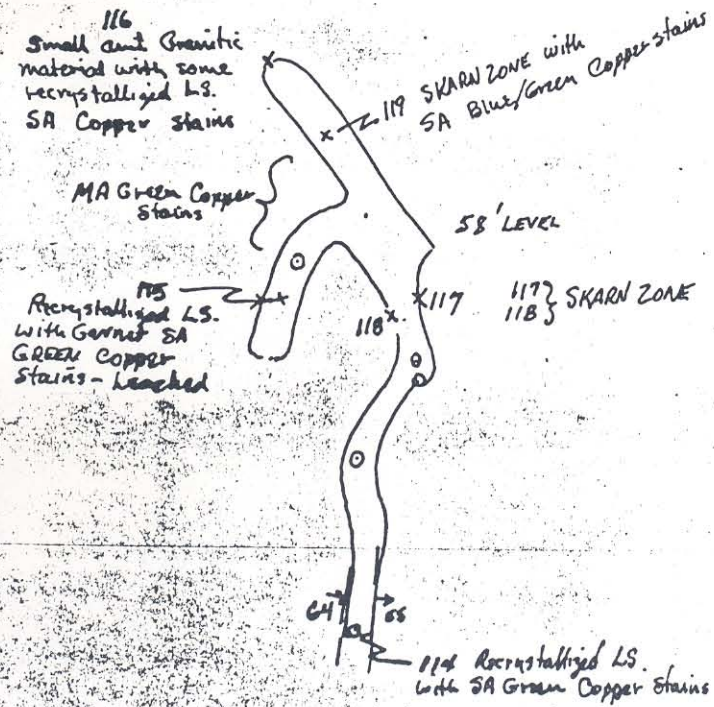
One note of pessimism must be injected here and that is the fact that practically all of the areas containing significant amounts of copper are either skarns where the Carbonaceous units were caught up in the quartz monzonite or in or immediately adjacent to contacts between the quartz monzonite and limestones. This suggests the possibility that the copper mineralization was in the limestones prior to their being intruded by the quartz monzonite. The fact that there is so little rock alteration in the quartz monzonite and that little or no other mineralization is known to occur in this unit in this particular area tends to substantiate this thought.

6000 0085 (0760)



Copper Hill Area
(Gossan Area)
1" = 50'
E.L., A.M., J.T., WLW, 2/18/65

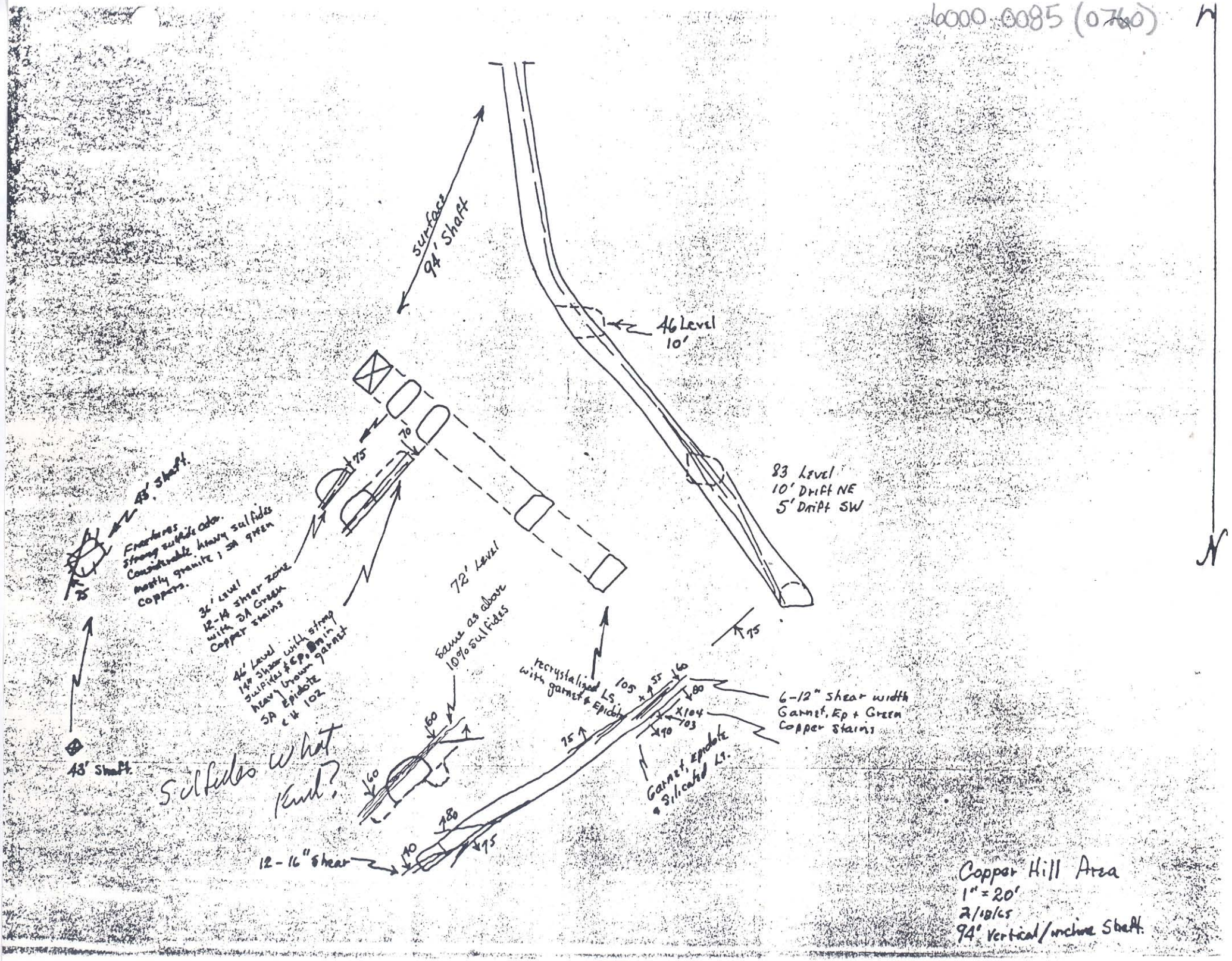
6000.0085 (0760)



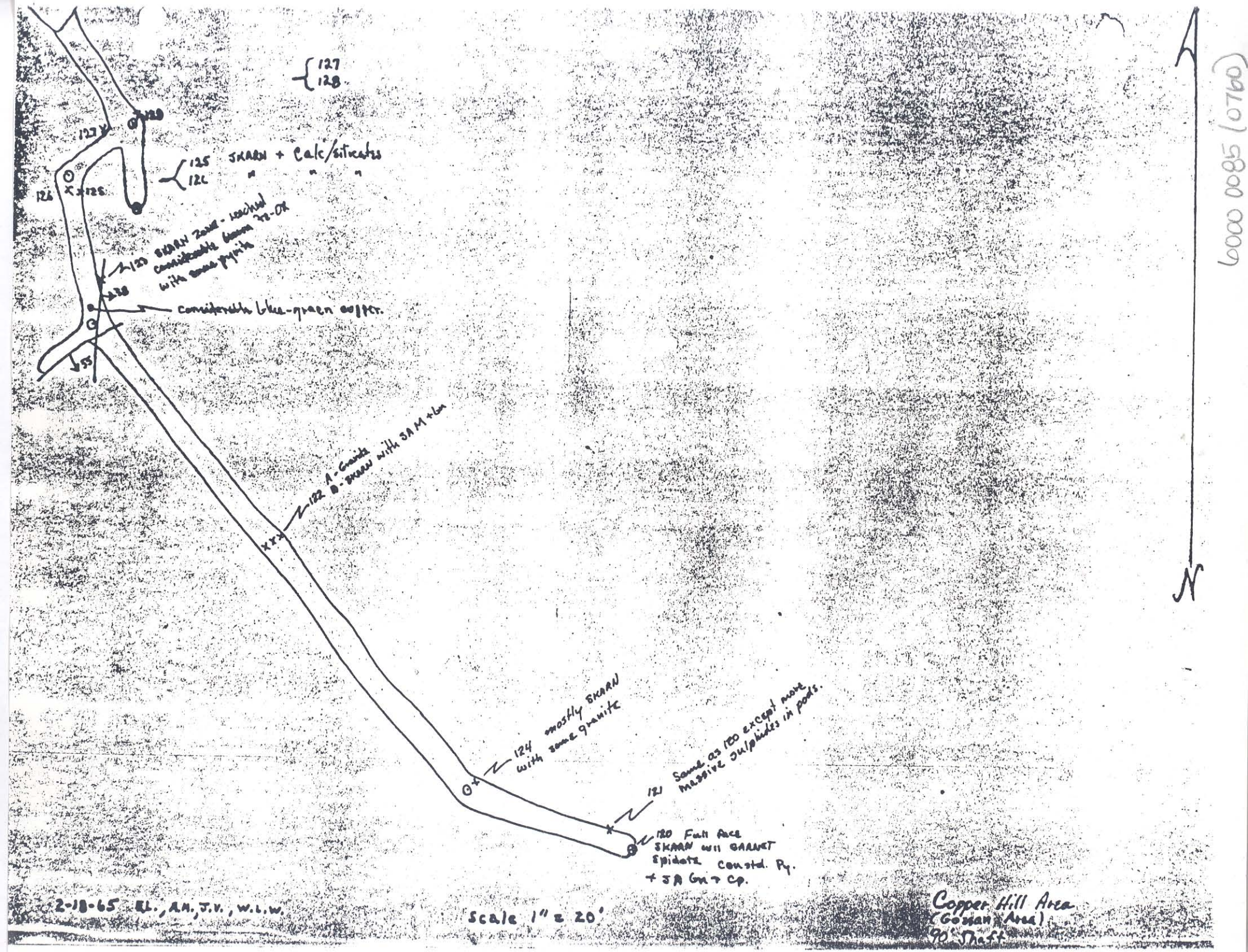
N

Copper Hill Area
91' Shaft.
1" = 20'
2/10/65

6000.0085 (0740)



Copper Hill Area
1" = 20'
2/18/65
94' Vertical/incline Shaft.



2-18-65 EL., A.H., J.V., W.L.W.

Scale 1" = 20'

Copper Hill Area
(Gossan Area)
90' Shaft

0000 0085 (0760)

6000 0085 (0760)

SPEED LETTER®

TO R. L. Redmond FROM W. L. Wilson

SUBJECT Geochemical samples of intrusive rocks--Copper Hill Area

FOLD

MESSAGE DATE August 15, 1966, 19

Bob: The attached map and geochemical sheet show the results of geochemical samples 2-1-66-1, which is from granitic rocks intruding the Luning limestone in the southern part of the Copper Hill Area, as shown on the attached map at scale 1" = 1000'.

RECOMMENDATIONS: The other granitic outcrops in this area should be sampled in line with our program to map the distribution of base metals and minor elements in the intrusive rocks.

FOLD

SIGNED WLW

6000 0085 (0760) WW

OCCIDENTAL AGRICULTURAL CHEMICALS CORPORATION

RESEARCH & DEVELOPMENT DIVISION

ANALYTICAL DEPARTMENT

DATE 2-6-66 PROJECT 1006 REQUESTED BY R.L. Redmond

Parts Per Million

RESEARCH NUMBER	ANALYTICAL NUMBER	TYPE OF MATERIAL	Cu	EST.	Pb	EST.	Zn	EST.	Mo	EST.	Ag	EST.		EST.
B-6-SE	15198		99.0		12.5		19.6		3.4		0.1			
B-8-SE	15199		24.9		17.0		16.8		3.4		0.2			
B-12-SE	15200		39.0		17.7		20.1		6.0		0.2			
B-10-SE	15201		24.3		13.3		15.2		3.4		0.2			
B-14-SE	15202		26.5		12.4		17.6		4.6		0.1			
B-16-SE	15203		71.9		27.8		18.8		4.2		0.2			
WILSON 2-15-E	15204		24.6		23.7		20.1		3.6		0.2			
2-1-66-1	15205		37.4		26.4		36.8		8.2		0.2			
12-20-65-2	15206		20.3		12.5		21.6		4.6		0.1			
12-15-66-1	15207		1,761	0.18%	349.4		377.0		11.8		0.6			

STRICTLY COMPANY CONFIDENTIAL

APPROVED BY [illegible]

6000 0085 (0760)

DRILL LOG

COMPANY NAME Martel Mining Company

MINE Copper Hill

COORDINATES OF COLLAR:

SHEET 1 OF 1

SCALE 2" = 10'

LOCATION 12 miles southeast of Schurz, Nevada

N

BY EFL

AU. @

HOLE NO. Delta 1

E

DATE 8/31/65

BEARING

LENGTH OF HOLE 110 feet

CASING No

DIP Vertical

HOLE SIZE Rotary - 4½"

Boyles Bros. Drilling Co.

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
							LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS							
0										Granodiorite									
10																			
20																			
30																			
40																			
50																			

60

70

80

90

100

110

Bottom: 110 feet

6000 0085 (0760)

DRILL LOG

COMPANY NAME: Martel Mining Company

MINE: Copper Hill

COORDINATES OF COLLAR:

SHEET 1 OF 1

SCALE: 1" = 10'

LOCATION: 12 miles southeast of Schurz, Nevada

N

BY: EFL

AU. @

HOLE NO.: Delta 2

E

DATE: 8/65

BEARING

LENGTH OF HOLE: 95 feet

CASING: No

DIP: Vertical

HOLE SIZE: Rotary - 4½"

Boyles Bros. Drilling Co.

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

	ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
								LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS		Py		Cu			
0											Granodiorite									
10																				
20																				
30																				
40																				
50																				

60

70

80

90

Bottom: 95 feet

6000 0085 (0760)

DRILL LOG

COMPANY NAME Martel Mining Company

MINE Copper Hill

COORDINATES OF COLLAR:

SHEET 1 OF 1

SCALE 1" = 10'

LOCATION 12 miles southeast of Schurz, Nevada

N

BY EFL

AU. @

HOLE NO. Delta 3

E

DATE 9/65

BEARING

LENGTH OF HOLE 105 feet

CASING No.

DIP Vertical

HOLE SIZE Rotary - 4½"

Boyles Bros. Drilling Co.

ACCOMPANIED BY NARRATIVE LOG YES [X] NO

	ALTERATION							LOG AND ROCK TYPE						MINERALIZATION						
								LOG	DIP	LOG	ROCK DESCRIPTION	% CORE	REMARKS				Cu			
0											Granodiorite									
10																				
20																				
30																				
40																				
50																				

60

70

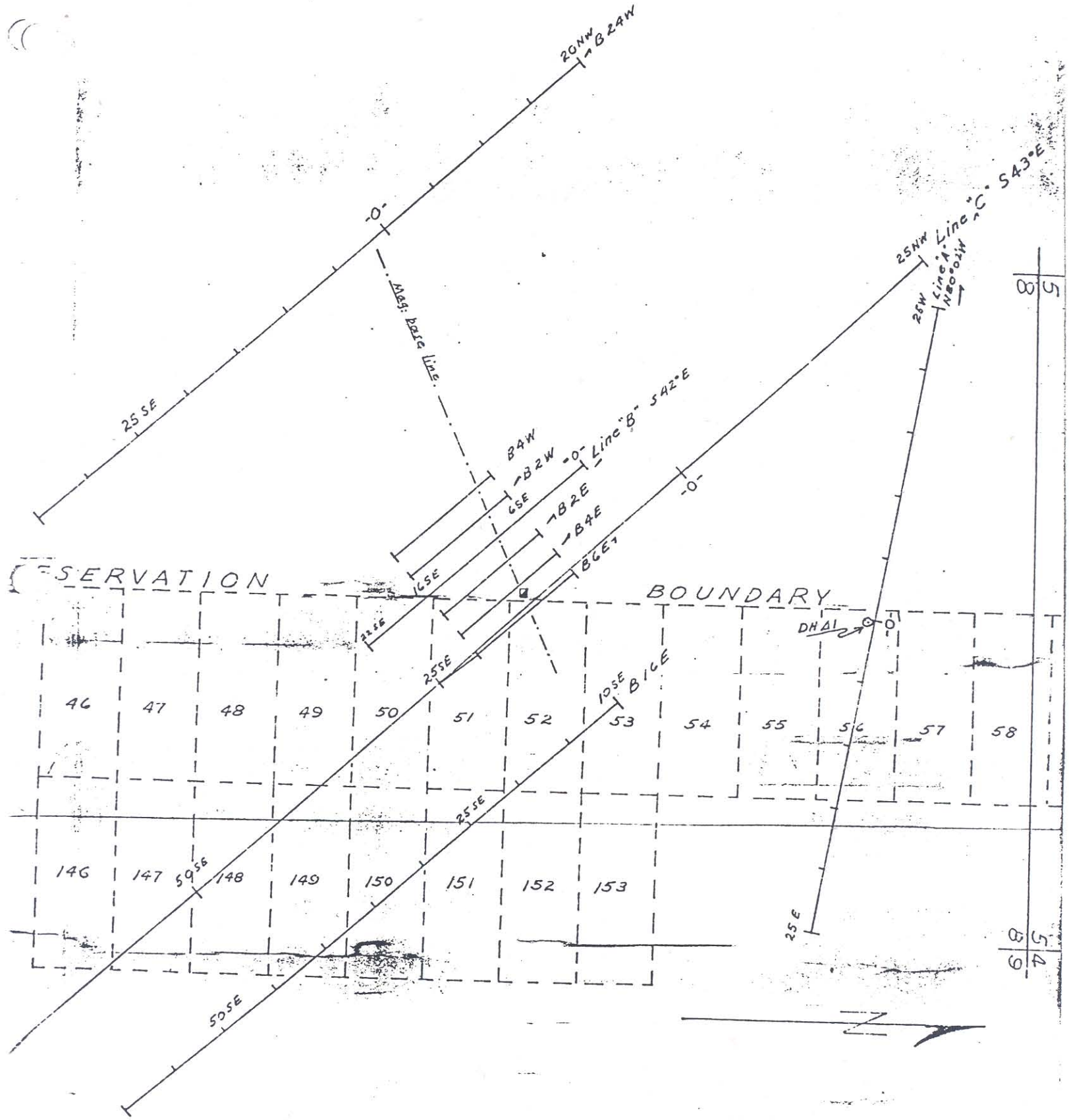
80

90

100

Bottom: 105 feet

Copper Hill
6000 0085 (07160)



COPPER HILL

OVERLAY ON 1:12000 BASE MAP

I.P. SURVEY LINES & DELTA CLAIMS

T.11N., R30E.

Scale: 1" = 1,000'

6000 0085 (0760)

COPPER HILL REASSESSED

Area: Copper Hill prospect, Sections 5, 6, 7, 8, 17, 18,
T11MR30E Sec. 12, 13 T11N, R29E,
Walker River Reservation, Schurz, Nevada

By: Robert E. Holt May 31, 1966

General Geology

The Copper Hill prospect is areally part of a block of Triassic Excelsior (?) formation which has been overthrust from the west to east onto the Triassic Luning (?) formation, both of which were intruded and domed during Cretaceous time by a quartz monzonite of at least stock proportions. During the Cenozoic these units were covered by a great pile of felsic ~~and~~ volcanics which have since been eroded in such a manner as to expose an arcuate pattern of Triassic rocks on the north, east, and ~~west~~ south sides of the quartz monzonite. It is only along the southern contact between the quartz monzonite and Triassic sediments that metallic mineralization of any consequence is encountered. There is a small zone of tungsten mineralization in one area and copper in another on the east flank; however, neither are significant.

The Luning (?), if indeed it is the Luning, is quite variable. North of Gillis Canyon, which is the northern segment of the arc, it is a medium to dark gray massive limestone, whereas on the south, in the vicinity of Copper Hill and west to the range front, there are three distinct units which are mappable. These units, in what appears to be a top and bottom sequence, are as follows: 1. medium gray, massive limestone locally marbellized; 2. black, somewhat arenaceous limestone which has an interbedded tuff, and 3. black, locally calcareous, arenaceous shale. In the black limestone unit, there are linear lense like bodies or beds (?) of light gray limestone. Rather than beds, they appear to be bleached portions of the black limestone.

On the west nose of the range, which is the westernmost exposure of this black limestone unit, except for one small outcrop in the eluvium, the lime has been altered. There is some silicification, minor silication as evidenced by the development of garnets locally and some calc-silicate minerals, and bleaching. The rock is hard, rough-surfaced, and a subdued yellowish-orange color. Considerable prospecting has been done here. There are three or four short tunnels, as many shafts, and eight or ten prospect pits. Copper carbonates are present in the dumps of all of these developments.

This southern block of the Luning is highly fractured, actually shattered in places, has divergent strikes and dips, is probably folded, faulted, and is somewhat altered adjacent to small apophyses of quartz monzonite that are exposed. The presence of these small apophyses of quartz monzonite well within the outcrop area of the Luning (?) suggest that the Luning (?) probably is underlain at shallow depths by the quartz monzonite.

The moderate amount of metamorphism within these sedimentary units, even when

close to the contact with the quartz monzonite, is disturbing when you are looking for a major mine. The area around most large mines (porphyry type) which are in this type of geological setting are characterized by abundant alteration in both the sediments and the intruding igneous unit. This is not to say that there is not a block of mineralized ground to be found here, but rather to point out the lack of one major characteristic that is more often than not present in such an environment.

It is possible that the target is either a replacement deposit in the limestones or a contact metamorphic deposit which do not necessarily have such a large alteration halo. These, of course, are much smaller in areal extent than the "porphyry" type deposit and require different techniques for their detection.

Geophysics

For the detailed geophysical data, you are referred to the several reports in the Walker-Martel files which deal with a magnetic survey and an I.P. survey. I intend to deal only with generalities of the I.P. anomalies.

McPhar, in their little squib on the I.P. method for their reports, make a statement that I suspect a little, which is: "...there is no I.P. effect from any conductor unless it is metallic....." It is a well-known fact that graphite will give you I.P. effects. In addition, I.P. effects can be derived through membrane polarization, electromagnetic coupling, electro-osmotic coupling, and thermoelectric coupling. Moreover, I.P. measurements are influenced by such other things as the mineralogical characteristics of the unit, such as the mineral specie present, such as the absence or presence of good electronic conductors, crystal form, volume per cent of the electronically conductive material, and also grain size. The geometrical characteristics of the measured body, such as the total volume of conductive material, its geometry, depth of burial, whether it is a true dissemination or is veined, are also influencing factors, as are current density and the resistivity of the matrix. Therefore, it is never a simple matter of just looking at resistivities and frequency effects and calculating metal factors when interpreting I.P. anomalies.

McPhar, in their report on Copper Hill, warned of the possibility of graphite and recommended correlating the geophysical data with the geology as well as some additional I.P. I had discussed the possibility of I.P. effects from black shales and limestones and recommended that these be tested. It is foolhardy to extrapolate results from testing at Wildhorse Canyon to the Copper Hill area. In fact, it is my opinion that you have at least two separate I.P. situations at Copper Hill and possibly a third.

The anomaly near the shaft area which shows up on lines B2W, B, B2E, B4E, C, and B6E is one and is in all probability a legitimate sulfide anomaly. It resembles a veined type situation rather than widespread dissemination.

The anomaly on the SE end of line 24W which coincides with the black carbonaceous-looking sediments of the Luning formation (?) should certainly be regarded as possibly being caused by graphite. This possibility should be thoroughly checked before much additional work is done here.

The anomaly on the SE end of line C which is well over the diorite and reportedly is at a depth of 500 feet just might be reflecting a buried segment of the black Luning (?) sediments. Obviously, this could be a different and independent source. Wilson points out in his assessment of the situation that the two anomalies (Line 24W and the SE end of line C) differ in their resistivity pattern with that on 24W having very low resistivities of 1.5 ohm feet and on line C averaging 40 ohm feet. This can be misleading, since the response of all geologic units in the vicinity is received simultaneously and additively at the observation point and the distribution of any element diminishes with distance, and therefore we are provided with a smoothed-over or averaged type of response, since we are no longer directly in contact with the affecting source but are approximately (according to McPhar data) 500 feet above it in a higher resistivity unit.

All I intended to do with the above discussion was to point out that we have an unusual situation at Copper Hill and should proceed with that in mind. In my opinion, our first step, at least as far as the anomaly on the SE end of Lines 24W and C are concerned, should be toward determining what is giving us the I.P. effects. This should be done as cheaply as possible, and a good start would be a diamond drill hole just SE of 15SE on line 24W after checking a suite of rock samples in the laboratory for I.P. characteristics.

The minimal I.P. effects reported by McPhar on the east end of Line A should be investigated, probably with additional I.P. With the geological situation as it is in this area, anomalies under cover adjacent to known mineralization take on added significance and should be thoroughly checked out before being written off. It is a well-known fact that the ore body at Yerington averages between 3% and 5% total sulfides which, if buried to only a moderate depth, would give at least only minimal I.P. effects.

Recommendations

1. Run additional I.P. lines as shown on the accompanying map.

2. Check in the laboratory the I. P. characteristics of a suite of rocks between stations 15SE and 25SE on line 24W and several samples of the diorite in the vicinity of station 30SE on line C.

3. Review all of the data pertinent to the Copper Hill area in preparation for either dropping the prospect from further consideration or commencing drilling to check the validity of the I.P. anomalies.

I'll wait until I see the new I.P. Data

Robert E. Hall

Mine
Prospects
Prospects
Kgr
Kgr
Kgr
Kgr
Kgr
Ri
Ri
Ri
Ri
Ri
Ri
Rev
Rev
Rev
Tvf
Tvf
Tvf
Tvf
Tvf
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Tvf
Tvf
Tvf
Tvf
Qal
Qal
Qal
18
18
17
17
5900
5700
5900
5700
55
58
40
Mt.

6000 0085 (0760)

CALCITE GROUP OF CLAIMS

COPPER HILL DISTRICT

MINERAL COUNTY, NEVADA 1969

Summary and Conclusions

A contiguous group of four mining claims called the Calcite Nos. 1, 2, 3 and 4 cover part of a mineralized zone in Sec. 8, T. 11 N., R. 30 E.; a portion of this ground is within the Walker River Indian Reservation.

Significant showings of copper are exposed in old shafts and cuts on the Calcite 1, 2 and 4 claims, and a deposit of gypsum and sulfur as well as iron gossan is on the Calcite 3. Zinc and minor amounts of silver, tungsten and molybdenum also exist at places within the claims. These showings are - and were at the time of withdrawal of the lands on which the claims are situate ~~the claims were located~~ - quite sufficient to justify further exploration and development by a man of ordinary prudence. Consequently, each of the claims, in my opinion, had a valid discovery of mineral in place at the time of withdrawal. ~~location.~~

Introduction

The Calcite group of claims were examined by the writer at the request of William L. Wilson of Idaho Mining Corporation. The purpose was to determine whether or not the amended Calcite Nos. 1, 2, 3 and 4 claims had ~~were~~ valid discoveries of minerals at the time of their original locations in 1917-1925 ~~1925~~ as the Leap Year 1, 2, 5 and 6, or in any event, prior to the withdrawal of the lands in 1936. ~~3 and 3,~~ ~~and during subsequent amendments and relocations~~. Two days, November 16 and 18, 1969, were spent on the property. A. K. Wilson, Jr. provided guide service on the 16th.

Location and Accessibility

The group of four amended Calcite claims is almost entirely within the south half of Sec. 8, T. 11 N., R. 3 E., M.D.B. & M., about 13 miles southeast of the town of Schurz, Mineral County, Nevada (see Figure 1). As shown on Plate 1, about two-thirds of the property is within the Walker River Indian Reservation; the other third is on public land.

Access from Schurz is by way of a road that leads southeastward along the Southern Pacific railroad on the eastern side of the Gillis Range. At a point 11 miles from Schurz a branch road trends eastward and southward to the head of Gillis Canyon, and then leads a half a mile westward to the property.

The claims are in the central part of the Gillis Range. Altitudes in the area range from 5,800 to about 6,300 feet, and relief is moderate to steep.

Property

The four claims of the Calcite group and their relation to the Walker River Indian Reservation boundary are shown on Plate 1 and Photo 1. All claim monuments that could be identified are indicated. Those that are near the boundary line are plotted from a map by Sprout Engineers; those to the southwest were tied by Brunton to a base line already on the ground at the time of my examination.

Nearly all of the monuments are round poles or timbers with a can nailed to the top; some have a note inside the can designating the corner of the claim, but these are in varying states of deterioration. The common NW corner of the Calcite 1 and the NE corner of Calcite 4 is a rock monument with a can con-

taining a note marked "NW corner of Leap Year 1"; the Leap Year 1 was, I understand, the name of the claim now occupied by the Calcite 1.

Geology and Mineralization

Most of the rock underlying the Calcite claim group consists of light- to medium-grey limestone which is locally considerably recrystallized. In the southwestern part of the claim area the limestone is in fault contact with a gritty, well-bedded rock, probably a felsic pyroclastic of the Excelsior formation. Both of these early rocks are intruded by a mass of quartz monzonite which crops out for several miles toward the northwest. A medium-grained, dark igneous rock of about diorite composition also crops out extensively in the area, mostly toward the east. The rock itself looks like an intrusive, but contacts with the limestone do not; further study may be required to resolve its origin. These older rocks are overlain in the area by a cover of mid-Tertiary volcanic rocks, chiefly tuffs of latite to rhyolite composition. These overlay the northeast part of the claim group.

Mineralization exposed within the Calcite claim group consists of (1) skarn zones and pods containing copper and zinc sulfides and oxides together with minor tungsten and molybdenum minerals; (2) zones of strongly disseminated sulfide, chiefly pyrite together with chalcopyrite and sphalerite; and (3) a body of gypsum together with elemental sulfur.

Skarn zones are best developed on the Calcite No. 1 claim. An open cut near the location monument exposes a 5-foot zone of this rock. It is stained green and black by carbonates and oxides of copper, and a small stope nearby

(Photo 6) indicates that part of the zone was mined at one time. It trends southwest and stands nearly vertically. A shaft has been sunk to a depth of about 90 ft. at a point 325 ft. southwest of the location monument. As shown in Photos 5 and 7, the skarn there is mineralized by copper, and Sample No. 1 taken along the zone assayed as follows:

1.612%	copper	0.2 oz.	silver per ton
1.80 %	zinc	nil	gold

Small amounts of the tungsten mineral, scheelite, and the molybdenum mineral, powellite, were observed in the rock with the aid of an ultra-violet lamp.

On the Calcite No. 2 claim, a shaft has been sunk to a depth of 45 ft. at a point about 230 ft. northeast of the NW corner of the claim (see Photos 1 and 2). The shaft is lagged tight and the walls cannot be observed. However, even though the dump is considerably leached, it indicates that the shaft penetrated a clayey matrix containing strongly disseminated sulfide, mostly pyrite but with some copper. Sample No. 2, a grab from the dump, assayed as follows:

0.302%	copper	nil	silver
nil	zinc	nil	gold

As suggested by gossan, this sulfide zone probably extends southwestward onto the Calcite 3 and 4 claims.

An area about 400 ft. long by 200 ft. wide in the south part of Calcite 2 and the north part of the Calcite 3 claim is underlain by gypsum (calcium sulfate) containing at places as much as 10 to 20 per cent elemental sulfur. It is at least 7 ft. deep as indicated by a pit dug near the south end (Photo 3), so several thousand tons is indicated. This material of gypsum-sulfur would likely

be a good conditioner for alkaline soils, and hence it ought to have a local market. Also, as the source of the sulfate and the sulfur is a nearby oxidizing body of sulfides of some size, additional work is warranted on the claim to find this source.

In the Calcite No. 4 claim, a 90 ft. shaft was sunk at one time to explore the gossan zones that trend southwest from the Calcite 1 and 2 claims. The dump from the shaft - like the one on the No. 2 claim - is considerably leached but contains sulfides, mostly pyrite, that comprise nearly 30% of the rock in some specimens. Sample No. 4, a grab from the dump, assayed as follows:

0.655%	copper	0.1 oz.	silver per ton
1.70 %	zinc	nil	gold

As indicated by the mineralization on the Calcite group, each claim has a mineral showing which would certainly justify further work. And as these showings were doubtless as evident in the 1920's and 1930's as they are today, the ~~original~~ discoveries of mineral on the claims were unquestionably valid, at the time of withdrawal.

Ward Carithers
Consulting Mining Geologist

Pre drilling

Report

CARITHERS
ER HAMILTON DRIVE
89502

12/3/89

Preliminary draft
[illegible] report.
[illegible] it, please
[illegible] and the map
comments and
I'll have the
bound. I'm
running on ---- copies for you-OK?

Kay is also getting a copy of
this, but I don't have all the
pictures mounted to accompany that
report.

Please send to PO Box 1088,
Winnemucca 89445 until Dec 11; to
Reno afterwards.

Regards,
[illegible]

cc - Kay Wilson

SPEED MESSAGE

TO: Mr. Ward Carthers
P. O. Box 1088
Winnemucca, Nevada 89445

FROM: W. L. Wilson
213 Petroleum Building
Grand Junction, Colo. 81501

SUBJECT: return of draft of report--Calcite Claims.

DATE: Dec. 10 19 69

Ward: I return herewith the draft of your report on the Calcite Claims, with suggested corrections in ink. These changes deal mostly with terminology regarding the withdrawal of the lands for the use of the Indians.

I have noted one correction in the caption for photo 5, which indicates that the sample was taken on the Calcite #7 claim, when in reality it was taken on the #1 claim.

I think that you have done an excellent job on this project, and commend you for this.

I am sending this to Reno instead of Winnemucca, because of the time element.

Kindest regards,

Ward: Please send one copy of the finished report to George Abbott, First National Bank Building, Minden, Nev., and the other copy to me at the above address.

SIGNED: WLW

Gray Line "SNAP-A-WAY" FORM 44-900 2-PARTS
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6000 0085 (0760)

MEMORANDUM

April 11, 1975

To: W. L. Wilson

From: Ward Carithers

Subject: Copper Hill project
Mineral County, Nevada

During July, 1974 nine hammer-drill holes totalling 2,174 feet were drilled on this project as follows:

Alpers claim area

Hole	Depth	Hole	Depth
D-14A	345	D-19	270
D-15	272	D-20	160
D-15D	80	D-21	240

Delta claims area

Hole	Depth
D-17	282
D-18	305
D-22	220

These holes are plotted on the accompanying up-dated maps and sections which are from my memorandum of August 1, 1973.

Holes D-15, 15D, 20 and 21 were all drilled to further prospect the pyrite mineralization in the Gillis thrust. D-15 contained an estimated 75 percent pyrite between 170 and 272 feet where the hole caved in and could not be continued (see section B-130W). This is a significant thickness and further suggests that a considerable tonnage of this type mineralization might exist at depth. Holes D-20 and 21, between the D-15 and D-10 fences of holes, also found the pyrite indicating its continuity on strike as well as down dip. D-21, which apparently drilled completely through the zone, intersected 140 feet averaging an estimated 35 percent pyrite. Hole D-15D was drilled on the west side of a displacing fault and consequently was in the footwall of the Gillis thrust. Re drill

Holes D-19 and 14A were put down to prospect the area around the old Alpers shaft at depth (see section B-450E). After penetrating a scab of Tertiary tuff and a segment of the upper plate of the Gillis thrust, Hole D-19 went through Luning limestone of the lower plate and bottomed in intrusive quartz monzonite. Anomalous amounts of Cu and Mo were found, but none is of economic grade. D-14A was drilled entirely in Luning limestone and marble; a little quartz and silicification near the bottom suggests it is near the quartz monzonite intrusive. A minor amount of copper mineralization was also observed in this hole, but not as much as in hole D-14, 20 feet northeast.

Hole D-18, drilled just north of the Alpers prospects, was collared in andesite; it penetrated the Gillis thrust at a depth of about 150 feet then continued in Luning limestone of the lower plate (see section B-770E). Only 5 to 10 percent pyrite was found, but anomalous copper and molybdenum exist throughout. The section from 160 to 210 feet contains as much as 4,600 ppm Cu, and it averages 1,690 Cu, 34 Mo, 100 Pb, 325 Zn and 2 ppm Ag.

Hole D-17, in the east part of the Delta claims, was drilled to check an I.P. anomaly. After penetrating 110 feet of Tertiary volcanics and an old soil layer, it continued in somewhat siliceous andesite containing a little epidote and K-spar alteration. Anomalous copper exists along with 2 to 10 percent pyrite.

Hole 22 was drilled on the Delta 54 claim, about 1,800 feet notth of the old Alpers mine. It penetrated about 150 feet of Tertiary volcanics and soil, then bottomed in quartz monzonite. Again, anomalous Cu-Mo values exist in the quartz monzonite.

In my memorandum of August 1, 1973 the existance of a viable porphyry or contact type mineral deposit in the Copper Hill area was regarded as a distinct possibility. None of the data developed during 1974 discourages this; in fact I think the results in hole D-18 are quite encouraging, and there seems to be so much anomalous copper-moly in the general area that a major deposit ought to occur if the right structural environment exists.

The best mineralization found so far at Copper Hill appears related to the Gillis thrust and possibly also to a group of faults which trend north to northeast in the Alpers mine area. These structures probably intersect the quartz monzonite in that direction, but as the area is obscured by Tertiary volcanics, test drilling will have to be through these post-mineral rocks. However, as essentially all of our present geochemical information suggests this quartz monzonite and also adjacent intruded rocks to be mineralized, I think a few holes should be drilled through the volcanics to see what lies beneath.

Accordingly, for physical assessment work at Copper Hill during 1975, I suggest putting at least a couple of holes down at sites H, I or J in the north part of the claim area, and also another near the east end of the Delta 55 claim. Roads were flagged to these sites last year.

Ward Carithers

WC:c
cc:Kay
Enclosures: Drill hole logs of nine holes
500-scale map of Copper Hill prospects
100-scale map of Alpers claim sector
50-scale sections (two sheets)

6000 0085 (0760)

MEMORANDUM

July 3, 1973

To: Idaho Mining Corporation
Grand Junction, Colorado

From: Ward Carithers, Consultant
Reno, Nevada

Subject: Report of activities,
Month of June, 1973

Copper Hill project

The rotary cuttings from the drilling on the Alpers claims were logged by panning and hand-lens study. As is known, most of the mineralization in these holes consists of pyrite zones in marble; but considerable pyrite was also observed in weakly dolomitized andesite (or diorite). Five cross sections on 50-scale are being prepared to show the drilling and correlating data.

Eight samples of rotary cuttings, previously analyzed by Rocky Mountain Geochemical Corp. were split out and submitted to Skyline Labs for check analyses of copper and molybdenum. As shown on the accompanying analytical report, all but one sample checked within reason. The single sample appears to be a mix-up in a sample or sample number rather than an analytical bust.

Holes D-4 and 5, east of the Alpers prospect, were also logged; Hole 4 is in diorite and hole 5 is in a fault zone cutting diorite. A little quartz monzonite was also observed in hole 5 as well as on the surface nearby. This might account for the slight copper-moly anomaly; it might also be signalling a shallow depth to an underlying quartz monzonite intrusive.

The rotary cuttings from holes D-1, 2 and 3, drilled a half a mile north of Alpers, were brought to Reno from the Schurz warehouse and also logged and sampled for Cu-Mo analyses. Holes D-1 and 2 are in weakly mineralized quartz monzonite; D-3 penetrated marble and hornfels, not granodiorite as previously reported. A fault of some magnitude slices through this drilling area and appears to have down-dropped the Tertiary rocks on the east side. Also, a probable intrusive body of black glassy porphyry exists just south of the drilling area and east of or on the fault. This might account for the magnetic "low" there. Almost identical geologic and magnetic features occur at another copper-moly prospect being explored by Inspiration Copper several miles southeast of Copper Hill.

The contact zone about 2,000 ft south of the Alpers claims was again briefly examined. There, a northwest-trending fault zone seperates highly altered and recrystalized limestone and diorite on the northeast from dark grey, arenaceous limestone and shale on the southwest. The rocks on each side of the fault appear to be similar compositionwise and in structure, but the difference in alteration is striking. As this alteration is likely related to the intrusive activity and mineralization of the local area, further study and delineation of the fault zone is warrented.

July 3, 1973

Plans

A map of the general Copper Hill area on 500-scale and a map of the Alpers prospect sector on 100-scale are being prepared. Geology, geochemical and geophysical data from previous work will be posted, partly on over-lays, and some additional geology from my observations will be added. Hopefully possible mineralized targets can thus be better pinpointed.

Field work chiefly around the Copper Hill area will be continued.

Ward Carithers

WC:c

Cu Hill 6000 0085 (0760) (2)

MEMORANDUM

July 18, 1975

TO: Bill and Kay Wilson
Idaho Mining Corpration

From: Ward Carithers
Consulting geologist

Subject: Drill logs, holes H-100, D-10F, D-23

Herewith are a set of logs for holes [redacted] D-10F on the Alpers claim and D-23 at Copper Hill.

MAIN HOTTENTOT

I think we have already discussed the significance of H-100; the pre-Tertiary rock types are identical as those at the main Hottentot, and I imagine that the mineralization in this hole considerably increases the iron potential for the general Hottentot area.

Hole D-10F, the most easterly hole in the D-10 fence, penetrated the upper plate andesitic rock and after going through the Gillis thrust zone, continued in lower plate limestone to the bottom. However, the pyrite content in the thrust section is disappointingly low--less than 25 percent--and the hole might therefore be near the periphyry of this mineralization. No evidence of copper was observed in this hole.

Copper Hill

After penetrating the Tertiary volcanics, hole D-23 ran through the andesite of the Gillis thrust upper plate down to 245 feet. A fault zone--probably the north-dipping one which crops out in the saddle--was then intersected, and the hole continued on down in limestone of the lower plate to the bottom. The limestone is increasingly silicified downward, probably reflecting its proximity to the quartz monzonite intrusive. Small amounts of copper minerals and molybdenite were observed in the siliceous zones.

Ward Carithers

Ward Carithers

WC:c
attach

6000 0085 (0760)

MEMORANDUM

August 6, 1974

TO: W. L. Wilson, President
Idaho Mining Corporation

FROM: Ward Carithers, Consultant
Reno, Nevada

SUBJECT: Report of activities during period July 1 thru August 3, 1974.

Leadville project

This property was visited in late July and a program was laid out for opening the Swingle and No. 2 adits, draining the main tunnel, sweeping out roads and preparing three drill sites with a back hoe. The work was completed by month's end by Earnie Jackson under the supervision of Dennis Conly, who also took a suite of geochemical samples and about 150 lbs. of tailings samples. These can be analyzed later so as to apply on next year's assessment work.

If requested, the Nevada Bureau of Mines and Geology will do $100 worth of work on the mill tailings for assessment work. It would include mineral identification and probably a few bench tests to see whether a zinc-silver concentration is feasible.

Bounder project

A total of 728 feet was drilled in four holes on this property. Holes 28-3 and 28-4 were to offset the molybdenite showing of hole 28-2. Slightly anomalous amounts of Mo were found, but not sufficient to be encouraging. Holes 126-1 and 126-2 were put down through Tertiary volcanics to test another surface Mo anomaly in the south part of the property. They, also, found no encouragement.

128-1

Copper Hill project

A total of 2,174 feet was drilled in nine holes on the Delta and Alpers claims. Anomalous amounts of Cu and Mo in holes 17 and 18 are believed associated with a pyrite halo around the eastward projection of the Copper Hill intrusive under Tertiary volcanics. Holes 19 and 27 were both drilled through a cover of Tertiary volcanic rock and into the intrusive. Holes 14A, 15, 15D, 20 and 21 are in the area near the old Alpers shaft; 15, 20 and 21 found significant amounts of pyrite.

Northumberland

This area was revisited to inspect the magnetic and geochemical Mo anomalies in Mill Canyon, a mile or so east of Northumberland. I found that about two or three square miles, including the magnetic anomaly has been located by Dresser Industries for barite. A half a dozen men or so were busily realigning and

and surveying claims preparatory to an aerial survey, and also a drill was working south of the anomaly on barite. I considered it best not to be seen taking samples at this time. I did observe, however, that there is no intrusive exposed at the magnetic anomaly. Also, I think the low grade Mo anomaly is related to black shale.

Quartz Hills project

This prospect was visited again in early August to look over the anomalous gold area to the northwest of the drilled sector. There, the Vinini overlies the Devils Gate limestone in a shallow syncline or graben block, and it is locally silicified and shattered adjacent to the Roberts Mountain thrust. A group of 22 samples were taken.

Recent flagging indicates someone has been looking at the area since our drilling in June, and a corner of a new claim, Bat No. 1, was found to the north. I relocated four claims, Quartz 20 through 23 which were apparently still open, and marked their corners with aluminum tags.

Miscellaneous

The Wildhorse group of claims were visited for a half a day in mid-July, and six samples were taken. Anomalous amounts of Cu, Au and Ag were found with quartz veining near a rhyolite intrusive, and Pb, Zn and Ag are, as you know, associated with an alteration zone. I think the area deserves some detailed geologic mapping and geochemical prospecting which, when coupled with your I. P. work, should delineate some targets.

The Benmark group of claims owned by Julian Simpson was inspected on August 1. A small area of mineralization in Vinini on the Roberts Mountain thrust has been drilled and shows a potential of a few tens of thousand tons grading, say, 1 ppm Au. Other areas are underlain by Vinini, but none appear to have as much mineralization as at the drilled place, and I doubt that the prospect warrants acquisition. Twenty-six samples were taken.

WC:hm Ward Carithers

cc: A. K. Wilson, Jr.

6000 0085 (0760)

SKYLINE LABS. INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL. (303) 424-7718

REPORT OF ANALYSIS

Job No. 49179
June 27, 1973

Ward Carithers
1750 Alexander Hamilton Drive
Reno, Nevada 89502

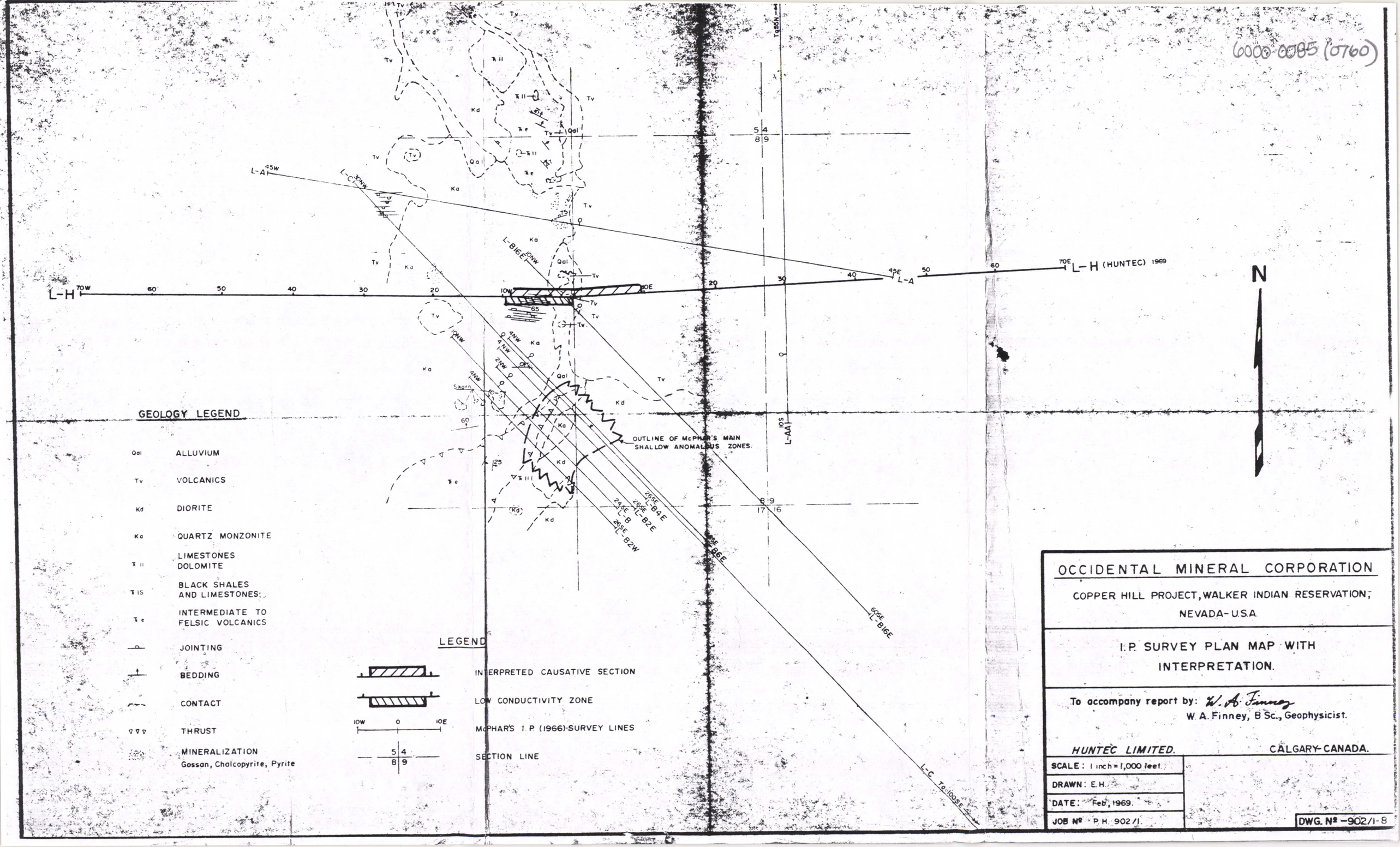
8 Drill Cutting Samples

Item	Hole #	Sample No.	Cu (ppm)	RMG Cu	Mo (ppm)	RMG Mo
1.	168	#16B-11	15	600	2	49
2.	"	#16B-23	1,150	1200	190	169
3.	8	#135	315	345	34	33
4.	8	#149	175	195	26	42
5.	9	#329	550	680	350	300
6.	9	#339	1,200	1000	370	190
7.	11	#369	5,800	9000	140	109
8.	11	#382	410	410	55	47

Charles E. Thompson
Chief Chemist

Rocky Mtn. analyses added by WC

6000-0085 (0760)



GEOLOGY LEGEND

Qal	ALLUVIUM
Tv	VOLCANICS
Kd	DIORITE
Ka	QUARTZ MONZONITE
Ti11	LIMESTONES DOLOMITE
Ti1S	BLACK SHALES AND LIMESTONES.
Te	INTERMEDIATE TO FELSIC VOLCANICS
	JOINTING
	BEDDING
	CONTACT
	THRUST
	MINERALIZATION Gossan, Chalcopyrite, Pyrite

LEGEND

	INTERPRETED CAUSATIVE SECTION
	LOW CONDUCTIVITY ZONE
10W 0 10E	McPHAR'S I.P. (1966) SURVEY LINES
5 4 / 8 9	SECTION LINE

OCCIDENTAL MINERAL CORPORATION

COPPER HILL PROJECT, WALKER INDIAN RESERVATION; NEVADA-U.S.A.

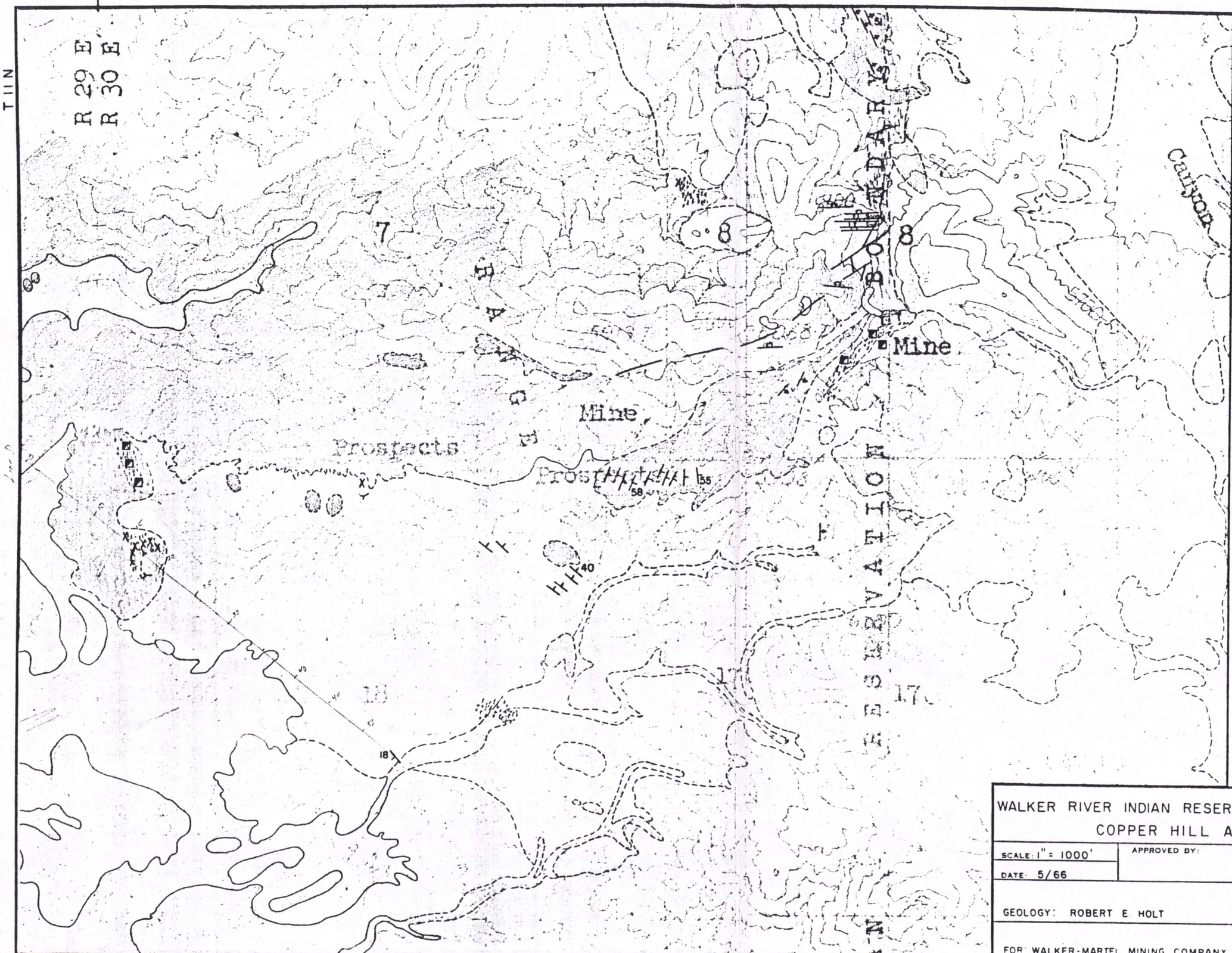
I.P. SURVEY PLAN MAP WITH INTERPRETATION.

To accompany report by: W. A. Finney
W. A. Finney, B Sc., Geophysicist.

HUNTEC LIMITED. CALGARY-CANADA.

SCALE: 1 inch = 1,000 feet.	
DRAWN: E.H.	
DATE: Feb, 1969.	
JOB Nº P.H. 902/1.	DWG. Nº -902/1-8

6000 0085 (0760)



Qal ALLUVIUM

Tvf FELSIC VOLCANICS

Tvi INTERMEDIATE VOLCANICS

Tvb BASIC VOLCANICS & INTRUSIVES

Pl LUNING LIMESTONE – WEST OF COPPER HILL THE UNIT IS VARIED AND NOT THE SAME GRAY LIMESTONE THAT IS FOUND NORTH OF GILLIS CANYON. WEST OF COPPER HILL IT IS COMPOSED OF A DARK GRAY TO BLACK LIMESTONE ON THE NORTH WITH AN INTERBEDDED LIGHT GRAY TUFF AND A BLACK FISSLE SHALE ON THE SOUTH

EXCELSIOR

Rev VOLCANICS

Rel LIMESTONE

Red DIORITE

Kgr GRANODIORITE — QUARTZ MONZONITE

MINERALIZATION

SILICATED AND SILICIFIED LIMESTONE

JOINTING OR FRACTURE

50° STRIKE AND DIP OF BEDS

SHAFT

TUNNEL

X PROSPECT

FAULT

WALKER RIVER INDIAN RESERVATION — SCHURZ, NEVADA
COPPER HILL AND VICINITY

SCALE: 1" = 1000'	APPROVED BY:	DRAWN BY JM
DATE: 5/66		REVISED
GEOLOGY: ROBERT E. HOLT		
FOR WALKER-MARTEL MINING COMPANY		DRAWING NUMBER

12X18 PRINTED ON NO. 1000H CLEARPRINT