WALKER MINING COMPANY

DIAMOND DRILL REPORT

April 1 - 16, 1941

830 Stope			900 Pillars					
Hole No.		Length	Hole No.		Length	Hole No.	Length	Hole No.	Length
7A	51	14 *	976A	25	16 *	997A	31	909B	25
10A		31	987A		33	998A	33	931B	19
Total		45	947A		36	904B	45	932B	19
			989A		26	999A	34	933B	20
			948A		36	905B	45	910B	49
			949A		37	906B	48	934B	18
			990A		28	995A	23	928B	13
			950A		40	996A	27	959B	20
			951A		46	900B	36	926B	21
			991A		45	907B	42	924B	33
			988A		35	994A	23	923B	4 **
			952A		51	903B-2	45	925B	7 **
			981A		23	901B	25	960B	17 **
			993A		18	929B	20	982A	16 **
			992A		18	908B	47	902B	25
GRAND TOTAL		1430 ft.	903B-1		45	930B	22	Total	1385

1,430 feet at $1.47 per foot $2,102.10

Total length of hole (includes footage already paid for)
Hole not finished at end of period

PROSPECT HOLES

Piute Orebody 1077BxcE Hole No. 83 0 - 70 ft. = 70 ft. @ $1.25 per ft. = $ 87.50

MISCELLANEOUS

5 hours on Walker Accounts at $1.439 per hour $ 7.20

RECAPITULATION

Prospect Holes	Piute Orebody	70 ft. @ $1.25 per foot	= $ 87.50
Blast Holes	Main Orebody	1,430 ft. @ $1.47 per foot	2,102.10
Miscellaneous	Main Orebody	5 hours (1 hr. pipe work, 4 hr. mucking) on Walker accounts @ $1.439 per hour	7.20
		Total	$2,196.80

approved
[illegible]

WALKER MINING COMPANY

DIAMOND DRILL REPORT

A

830 Stope		900 Level Pillars							
Hole No.	Length	Hole No.		Length	Hole No.	Length	Hole		
11A	49	* 925B	24	17	957B	21	980B		
12A	34	* 923B	34	30	956B	27	985B		
9A	52	927B		33	955B	33	986B		
8A	41	968B		20	935B	20	987B		16
16A	20	967B		24	954B	21	988B		12
15A	25	966B		34	953B	20	988B-1		13
14A	33	968B-2		28	962B	12	984B		16
13A	27	965B		25	946B	16	941B		16
18A	40	964B		21	963B	8	940B		24
17A	13	973B-2		21	936B	25	982B		20
18A-1	40	971B		34	937B	23	983B		20
17A-1	39	970B		26	938B	24	989B		13
21A	34	972B		30	976B	16	990B		18
20A	38	973B		26	977B	18	945B		21
19A	34	* 960B	22	5	978B	24	969B		14
Total	519	961B		19	979B	16	944B		20
		958B		21	939B	25	942B		13
							943B		19
	Grand Total			1,577 feet			Total		1058

1,577 feet of blast holes at $1.47 per foot = $2,318.19

* Total length of hole (includes footage already paid for)

PROSPECT HOLES

Piute Orebody 1077BxcE Hole No. 83 70 - 100 = 30 ft. @ $1.25 per ft. = 37.50

MISCELLANEOUS

Main Orebody 15 hours on Walker Accounts (10 hrs. mucking, 4 hrs. blasting 1 hr. no water) at $1.439 per hour = 21.59

Piute Orebody 5 hours on Walker Accounts (drill hole water off) @ $1.439 per hr 7.20

$ 28.79

PERIOD RECAPITULATION

Prospect Holes	Piute Orebody	30 ft. @ $1.25 per foot =	$ 37.50
Blast Holes	Main Orebody	1,577 ft. of holes @ $1.47 per ft.	2,318.19
Miscellaneous	Main Orebody	15 hours on Walker Accounts @ $1.439 per hr.	21.59
	Piute Orebody	5 hours on Walker Accounts @ $1.439 per hr.	7.20
		Total	$2,384.48

MONTHLY RECAPITULATION

Prospect Holes	Piute Orebody	100 feet @ $1.25 per foot =	$ 125.00
Blast Holes	Main Orebody	3,007 ft. of holes @ $1.47 per foot	4,420.29
Miscellaneous	Main Orebody	20 hours on Walker Accounts at $1.439 per hr.	28.79
	Piute Orebody	5 hours on Walker Accounts at $1.439 per hr.	7.20
		Total	$4,581.28

approved.

H. M. Hartman

WALKER MINING COMPANY

DEVELOPMENT PROGRESS - APRIL, 1941

Orebody	Heading	Size	Ft. Adv.	Total Advance	Feet Ore	% Cu	Oz. Ag	Oz. Au	Feet Waste
712	(M) 324CRs	8x5	5	34					5
	(D) 325CRs	18x7	46	52	46	1.79	1.12	0.031	
	(D) 406DDS	7x6	73	352					73
	(D) 407DxcE	7x5	12	12					12
	(D) 407DxcW	7x6	20	20	4	0.84	0.39	0.020	16
	(D) 593BRs	18x7	37	152	37	0.94	0.22	0.020	
	(M) 678EsDN	7x5½	16	16					16
	(D) 722ERs	8x12½	36	36					36
	Total		245		87	1.38	0.70	0.026	158
Piute	(D) 903BDS	7x9	62	1153	62	1.27	0.43	0.054	
	(M) 928CRs	7x16½	47	210	47	1.86	1.72	0.018	
	(M) 929CRs	7x13½	39	218	39	1.13	1.12	0.031	
	(M) 941CRs	7x11½	19	67					19
	(D) 943CxcE	7x5	13	13	6	2.14	1.33	0.080	7
	(D) 943CxcW	7x5	14	14					14
	(D) 1017DN	10x8	108	5443					108
	(D) 1077BxcE	9x7	29	127					29
	(D) 1078BDN	7x6½	18	18					18
	(D) 1078EDS	7x6½	14	14					14
	Total		363		154	1.45	1.03	0.038	209
Red	(D) 939CDN	9x6	9	9					9
	(M) 942CRs	13x18	22	22	22	1.35	0.25	0.015	
	Total		31		22	1.35	0.25	0.015	9
	GRAND TOTAL		639		263	1.42	0.86	0.032	376
				RECAPITULATION					
	MINING		148		108	1.49	1.20	0.022	40
	DEVELOPMENT		491		155	1.37	0.62	0.039	336

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MONTHLY ANALYSIS

WALKER MINING COMPANY

APRIL 1 to 30, 1941

PLACE	ASSAY AVERAGE WIDTH	ASSAY AVERAGE CU.%	MINING AVERAGE WIDTH	MINING AVERAGE CU.%	FT. WASTE	FT. OVER-BREAK	WASTE BROKEN	WASTE SORTED	TONS EXC.	MIN. or DEV.	REMARKS
							DRIFTS				
* 406 DDS			5.8	0.25	5.8		236		236	D	
678 EDN			5.6	0.18	5.6		47		47	M	
903 BDS	7.1	1.33	7.5	1.28	0.4				399	D	
939 CDN			7.0	0.18	7.0				37	D	
1017 DN			11.2	0.22	11.2		738		738	D	
1017 DN SS			13.0	0.38	13.0		170		170	D	
1078 BDN			5.8	0.43	5.8		65		65	D	
1078 BDS			5.0	0.35	5.0		50		50	D	
TOTAL:	1.81	1.33	8.35	0.49	6.54		1306		1742		
							CROSSCUTS				
* 407 DxcW	1.5	1.20	21.4	0.33	19.9		51		65	D	Crosscuts structure
407 DxcE			12.0	0.17	12.0		56		56	D	" "
943 CxcW	1.5	1.10	10.0	0.40	8.5				38	D	" "
943 CxcE	5.0	2.28	13.0	0.70	8.0				35	D	" "
992 AxcE SS	14.3	1.50	14.3	1.50					23	M	" "
1077 BxcE			29.0	0.15	29.0		141		141	D	" "
TOTAL:	2.26	1.65	17.34	0.35	15.08		248		358		
							RAISES				
324 CR			5.0	0.16	5.0		17		17	M	Broken for waste fill
* 325 CR	6.2	1.91	6.8	1.82	0.6	0.2			446	D	HW Overbreak
* 325 CR SS	13.8	3.09	20.0	2.24	6.2	4.2			155	D	" " ; crosscuts vein
593 BR	3.3	1.78	6.6	0.94	3.3				378	D	
722 ER			9.1	0.20	9.1		420		420	D	
722 ER SS			6.0	0.18	6.0		27		27	D	
928 CR	6.6	1.92	6.9	1.87	0.3				412	M	Included waste
928 CR SS	6.5	1.79	6.8	1.72	0.3				244	M	" "
929 CR	4.1	1.48	7.3	1.10	3.2				313	M	" "
929 CR SS	5.8	1.55	7.6	1.30	1.8				370	M	" "
930 CR SS	3.6	1.28	7.7	0.89	3.1				213	M	" "
931 CR SS	6.2	2.03	7.3	1.79	1.1				470	M	" "
941 CR			9.8	0.16	9.8		121		121	M	Waste raise for slusherway
942 CR	12.0	1.35	12.0	1.35					360	M	
TOTAL:	5.23	1.79	7.79	1.31	2.56	0.09	585		3946		

MONTHLY ANALYSIS

WALKER MINING COMPANY

APRIL 1 to 30, 1941

PLACE	ASSAY AVERAGE WIDTH	ASSAY AVERAGE CU.%	MINING AVERAGE WIDTH	MINING AVERAGE CU.%	FT. WASTE	FT. OVER-BREAK	WASTE BROKEN	WASTE SORTED	TONS EXC.	MIN. or DEV.	REMARKS
							STOPES				
405 E	11.8	2.24	17.9	1.71	6.1	5.6			319		
420 B	14.6	1.56	25.5	1.17	10.9	6.5			2443		
617 C	3.7	1.15	9.7	0.63	6.0	2.4			1631		
617 D	14.9	1.67	19.0	1.51	4.1	1.4			1538		
705 E	10.1	2.56	14.7	1.83	4.6	4.2			2180		
750 A	3.5	3.48	5.4	2.40	1.9	1.9			328		
840 C	5.7	1.22	7.7	1.00	2.0	1.5			1557		
845-845 A	6.6	1.52	7.5	1.43	0.9				1671		
845 C	2.0	1.95	7.0	0.96	5.0				140		
855 C	24.0	0.82	24.0	0.82					3511		
865	4.1	1.70	7.5	1.14	3.4	1.5			818		
880 B	20.0	2.19	20.0	2.19					3481		
915 C	4.4	1.86	10.0	1.12	5.6	1.8			1416		
946 A	4.2	3.39	6.4	2.79	2.2	1.1			55		
955 C	5.8	2.55	13.8	1.33	8.0				317		
1080 C	5.8	2.40	6.8	2.17	1.0	0.9			1117		
TOTAL:	9.52	1.59	12.63	1.31	3.11	1.68			22522		
							MINE TOTAL				
	7.93	1.61	11.32	1.25	3.39	1.20	2139		28568		

* Note: Overbreak is not charged against development work except in raises where the walls are well defined and of sufficient width to provide ample mining room.

FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

April 8, 1941

H. M. HARTMANN, MANAGER

Mr. Tom Lyon, Chief Geologist
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Tom:

Please find enclosed, geological sketches and classification table for development during the month of March, prints showing in yellow, mining operations with respect to orebodies, and a report on Diamond Drilling for the Month. The following is a resume of the classification table and of prospect Diamond Drilling.

South, Central & North Orebodies. None.

712 Orebody. 315CDN was driven from 487CRs to connect with 325CRs, which completed the 300 Level from the top of 401DRs, to the tope of 403DRs.

324CRs was driven into the hanging wall from 401DRs, to furnish waste for 405E Stope.

325CRs is a chute and manway raise being extended above the 300 Level, to determine the extent and condition of the footwall vein. It will later service the 317C Block for stoping.

406DDS is being extended to develop the ore above the south end of 517BDS, along which 593BRs is being extended. 406D will connect with the top of 593B, but as yet, has not encountered the vein.

711E is the haulage level to produce the 517 footwall ore. It has now been extended far enough to be able to produce all of this vein through 713ERs, 720ERs, and a new 722ERs, that has just been started.

Piute Orebody. 903BDS is the main level heading being driven to determine the southerly limits of the ore. It was turned from the narrow hanging wall streak that nearly pinched, to the footwall zone and is being driven south along the ore.

928C, 929C, 930C, and 931C, are flat, untimbered raises with herringbone connections driven to the 800 Level. They will later be enlarged as stopes. The waste zone that 930C passed through, will be left as a pillar.

940C is a three compartment, square-set raise, being driven up the North Piute Orebody, to determine the extent of the vein. The first three floors were opened up to allow for chute ore storage room, but the raise will now be continued as a smaller exploratory heading.

941C is a finger raise from the 900 Level skip pocket to tap 915-965 Block, for producing ore directly to the shaft.

1017DN is being extended to connect the 706E Winze with the Piute Orebody. 1077B is a crosscut east to explore for the ore, as indicated by Diamond Drill Holes No. 74 and 75, and to act as a car siding. The Piute footwall has been located and 1017 will be turned due North toward the vein zone, when it crosses the footwall. The geology, as exposed in the headings, has not checked out as we interpreted it from the Drill holes, and we have no vein material in the proper position t o drift North along at present. Apparently the footwall mineralization is the streak that was cut with the Drill holes, and localized structural conditions caused us to miss-locate the heavy clay fissure. This is rather odd, because there was no core recovery between 224 feet to 231 feet in the hole and practically 99.0% core recovery beyond this zone.

The footwall mineralization seems to line up fairly well with the mineralized zone that exists at the Piute shaft stations on the 900-1000 Levels. Diamond Drill Hole No. 31 into the 900 Level Piute footwall, indicates the zone extends considerably further south than the shaft. If so, this would be a good streak along which to extend a lateral to allow for possible cheaper production of the ore under the 900 Level.

Prospect Diamond Drilling. Surface Hole No. 57 was finally completed to 1028 feet and our surface program was discontinued. This Hole is about 1250 feet ahead of our present underground development and is the only hole out of four attempts, to be completed North of our underground workings. Up to the contact at 844 feet, the formation was layers of grey basalt, ash, and aglomerate, and very difficult to drill. From 844 feet to 965 feet, the formation is a greenish-grey sericitized schist, with a few zones that show slight mineralization and one fairly good streak from 924 feet to 929 feet; as described in last Month's report. From 965 feet to 1028 feet, the formation is very crystalline, with zones of intense epidote, and in places it seems to be entirely solid, barren, quartz.

Hole No. 82 was extended 74 feet into the footwall, from the near end of 711EDN, to be sure that the 500 and 600 Level mineralization did not extend to the 700 Level. A new raise, 722E, is to be driven to the 600 Level, from 711E, and we wanted to be sure it was not needlessly driven in waste. It was barren

Respectfully submitted,

S. K. Droubay

S. K. Droubay

SKD:DM

cc - Mr. Dugan
Mr. Sales

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WALKER MINING COMPANY

DEVELOPMENT PROGRESS - MARCH, 1941

Orebody	Heading	Size	Ft. Adv.	Total Advance	Feet Ore	% Cu	Oz. Ag	Oz. Au	Feet Waste
712	(D) 315CDN	5x7	8	82					8
	(M) 324CRs	5x5	24	29					24
	(D) 325CRs	16x6½	41	41	41	2.80	1.92	0.040	
	(D) 406DDS	6x8	80	279					80
	(D) 593BRs	18x7	48	115	48	2.15	0.36	0.049	
	(D) 711EDN	9x9	59	724					59
	Total		260		89	2.45	1.08	0.045	171
Piute	(D) 903EDS	7x9	58	1091	32	1.36	0.23	0.023	26
	(M) 928CRs	7x18	34	163	34	2.00	1.26	0.026	
	(M) 929CRs	7x17	35	179	35	1.44	0.84	0.018	
	(M) 930CRs	7x18	71	254					71
	(M) 931CRs	7x8	74	258	74	1.85	1.32	0.023	
	(D) 940CRs	19x20	19	30	19	1.89	0.08	0.002	
	(M) 941CRs	9x7	48	48					48
	(D) 1017DN	10x7½	62	5335					62
	(D) 1077BxcE	10x8	98	98					98
	Total		499		194	1.73	0.92	0.021	305
	GRAND TOTAL		759		283	1.95	0.97	0.028	476

RECAPITULATION

MINING	286	143	1.79	1.19	0.022	143
DEVELOPMENT	473	140	2.12	0.75	0.034	333

WALKER MINING COMPANY

DIAMOND DRILL REPORT

March 1 - 15, 1941.

630 Stope Hole No.	Length	920B Stope Hole No.	Length	Hole No.	Length
8693	47	942A	27	960A	72
8703	41	943A	28	961A	8 **
8713	35	944A	31	962A	15 **
8723	42	945A	32	963A	48
Total	165	946A	38	964A	28
		953A	27	965A	34
		954A	25	966A	51
		955A	28	967A	34
		956A	30	968A	41
		957A	35	969A	43
		958A	45		
		959A	60	Total	780

Grand Total 945

945 feet at $1.47 per foot = $1,389.15

* Total length of hole (includes footage already paid for)
** Hole not finished at end of period

PROSPECT HOLES

Piute Surface Hole No. 51	21 - 329	=	308 ft. casing at $0.865 per ft.	= $ 266.42
57	881 - 900	=	19 ft. at $2.10 per ft.	39.90
	900 - 1000	=	100 ft. at $2.20 per ft.	220.00
	1000 - 1028	=	28 ft. at $2.30 per ft.	64.40
	629 - 700	=	71 ft. casing at $0.975 per ft.	69.23
	700 - 714	=	14 ft. casing at $1.00 per ft.	14.00
	500 - 600	=	100 ft. casing at $0.06 per ft.	6.00
	600 - 629	=	29 ft. casing at $0.11 per ft. (Correction due to increase in price after 500 feet)	3.19
	0 - 629	=	629 ft. casing at $0.865 per ft., or $544.09 credit to lost hole No. 26A	
			Total	$ 683.14

MISCELLANEOUS

16 hours on Walker Accounts at $1.439 per hour $ 23.02

RECAPITULATION

Prospect Holes	Piute Surface	19 ft. at $2.10 per ft.	$ 39.90
		100 ft. at $2.20 per ft.	220.00
		28 ft. at $2.30 per ft.	64.40
		308 ft. casing at $0.865 per ft.	266.42
		71 ft. casing at $0.975 per ft.	69.23
		14 ft. casing at $1.00 per ft.	14.00
		100 ft. casing at $0.06 per ft.	6.00
		29 ft. casing at $0.11 per ft.	3.19
		629 ft. casing at $0.865 per ft., or $544.09, credited to lost Hole No. 26A	
Blast Holes		945 ft. at $1.47 per ft.	1,389.15
Miscellaneous	Main Orebody (mucking) Blast	16 hrs. on Walker Accts. at $1.439	23.02
		Total	$2,095.31

Approved H. W. Hartmann

WALKER MINING COMPANY

DIAMOND DRILL REPORT

March 16 - 31, 1941, Incl.

630 Stope		830 Stope		920B Stope			900 Pillars	
Hole No.	Length	Hole No.	Length	Hole No.		Length	Hole No.	Length
873S	47	1A	50	* 961A	72	64	** 976A	9
874S	47	2A	50	* 962A	69	54	977A	29
875S	55	3A	35	970A		55	978A	32
876S	38	4A	51	971A		60	979A	29
877S	40	5A	60	972A		60	980A	20
Total	227	6A	53	973A		60	983A	15
		7A	37	974A		17	984A	15
		Total	336	975A		60	985A	20
				Total		430	986A	18
							Total	187

Total 1,180

1,180 ft. at $1.47 per ft. = $1,734.60

* Total length of hole (includes footage already paid for)
**Hole Not finished at end of period.

PROSPECT HOLES

712 Orebody 711EDN Hole No. 82 0 - 74 ft. = 74 ft. at $1.25 per ft. = $ 92.50

MISCELLANEOUS

40 hours on Walker accounts at $1.439 per hour = $ 57.56

RECAPITULATION (Period)

Prospect Holes	712 Orebody	74 ft. at $1.25 per ft.	= $ 92.50
Blast Holes	Main Orebody	1,180 ft. at $1.47 per ft.	1,734.60
Miscellaneous	Main Orebody	(cementing holes & mucking) (Blast) 40 hours on Walker accounts at $1.439 per hour	57.56
		Total	$1,884.66

RECAPITULATION (Month)

Prospect Holes	Piute Surface	19 ft. at $2.10 per ft.	= $ 39.90
		100 ft. at $2.20 per ft.	220.00
		28 ft. at $2.30 per ft.	64.40
		308 ft. casing at $0.865 per ft.	266.42
		71 ft. casing at $0.975 per ft.	69.23
		14 ft. casing at $1.00 per ft.	14.00
		100 ft. casing at $0.06 per ft.	6.00
		29 ft. casing at $0.11 per ft.	3.19
	(100 ft. at $0.06 and 29 ft. at $0.11 due to increase in casing price after 500 ft.)		
	(629 ft. casing at $0.865 per ft., or $544.09 credited to lost hole No. 26A)		
	712 Orebody	74 ft. at $1.25 per ft.	92.50
[illegible]st Holes	Main Orebody	2125 ft. at $1.47 per ft.	3,123.75
Miscellaneous	Main Orebody	(cementing holes & mucking) (Blast) 56 hours on Walker accounts at $1.439 per hr.	80.58
		Total	$3,979.97

Approved. H. M. Hartmann

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FORM 396 2-1-41-2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

April 1, 1941

H. M. HARTMANN, MANAGER

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Hennessy Building
Butte, Montana

Dear Mr. Sales:

Mr. Dugan requested that I send you a set of sketches up to date, concerning the proposed mining development discussed in my letters to him, dated February 1, 1941, and again February 12, 1941. Copies of his first letter with sketches, were sent to you, Mr. Weed and Mr. Lyon, but the second was a verbal request, that I send a couple of sections through this country to him, so he and you could check over a point or two you had in mind. It is my understanding that you were in Salt Lake at the time, and just the one copy of sections were sent in.

I have brought the original sketch up to date and it shows a slight change from the proposed lay-out. By turning into the footwall as the sketch indicates, 45 feet of drifting was saved and the operation speeded up, even though the vein was not prospected. Mr. Hartmann felt that this was an operating problem and figured it worth while to make the change and prospect the vein later, by connecting the raise with the Sub-level. We extended a short drill hole, No. 82, into the footwall from 711 as indicated, to test whether or not the mineralization extended this far down, and the raise needlessly driven in waste. The hole was barren.

If the proposed raise from 711E be connected with the 600 Sub-level, then an easy dump will be available for any further prospecting along sub-level mineralization.

Very truly yours,

S. K. Droubay

S. K. Droubay

SKD:DM

cc - Mr. Weed
Mr. Dugan
Mr. Lyon

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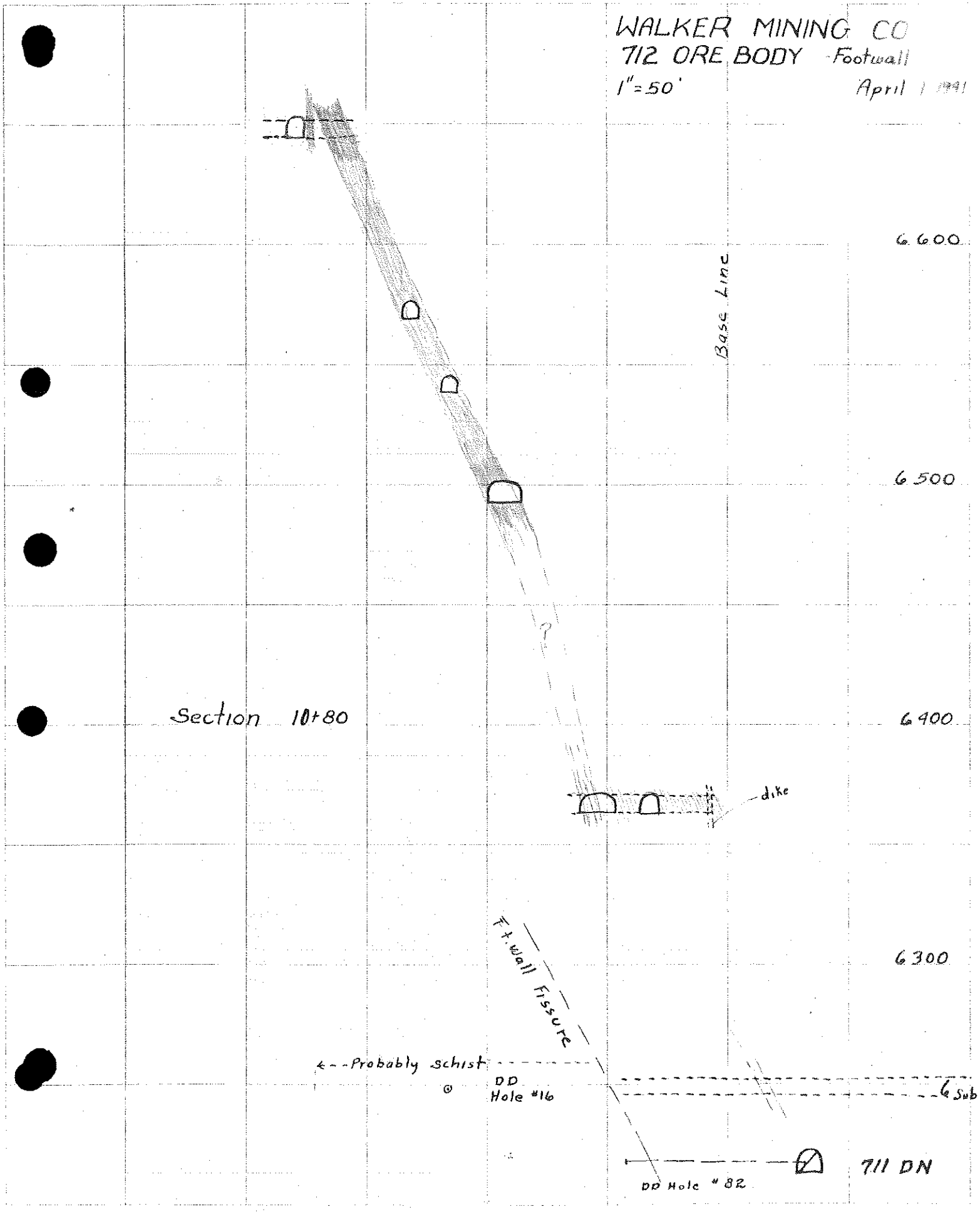
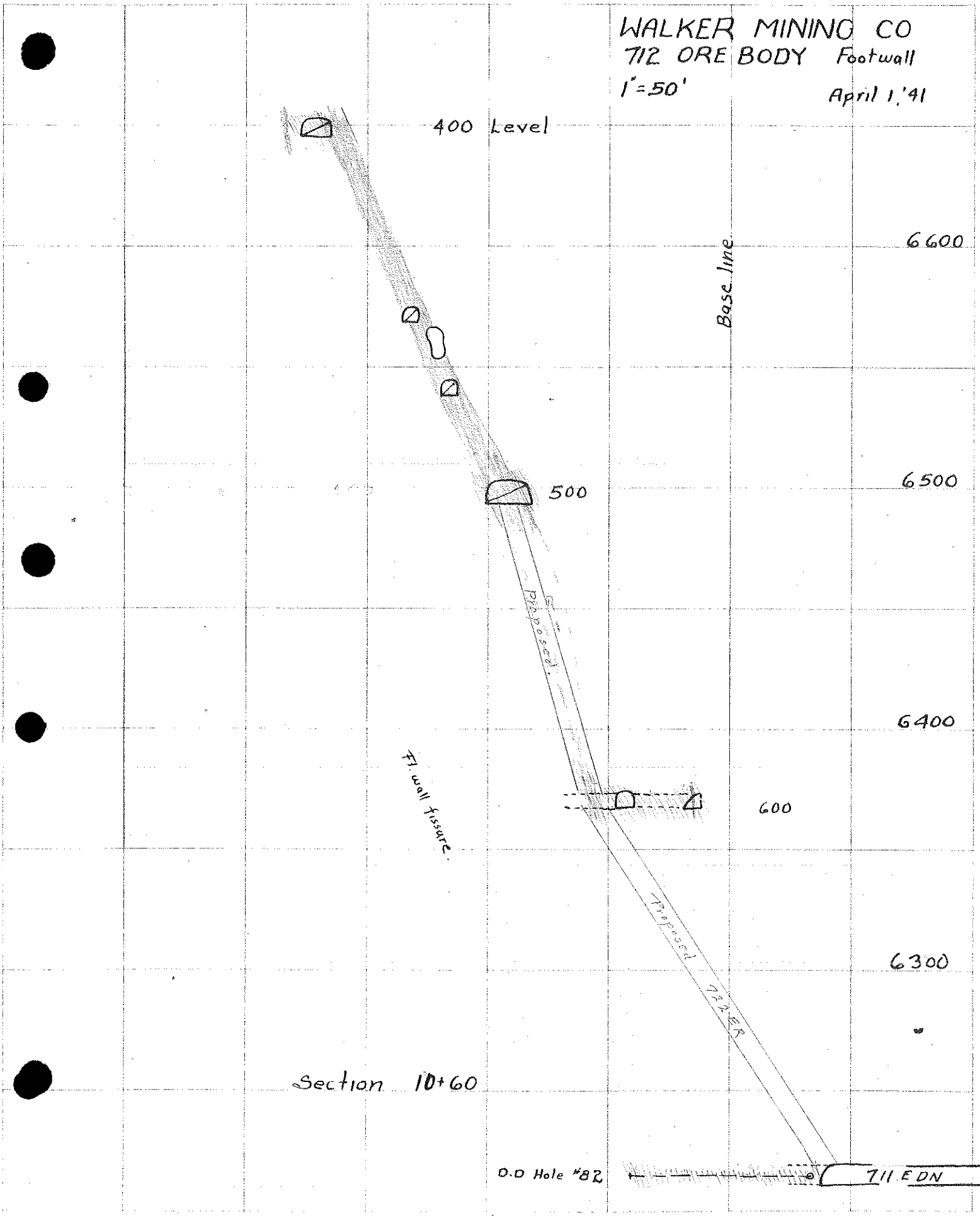
I. S. & R. FORM 16-G


WALKER MINING CO
712 ORE BODY Footwall
1"=50'
April 1 1941
6600
Base Line
6500
Section 10+80
6400
dike
Ft. wall Fissure
6300
← Probably schist
DD Hole #16
6 Sub
711 DN
DD Hole #82



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FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

April 9, 1941

H. M. HARTMANN, MANAGER

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Dugan:

The enclosed sketch represents the progress of 1017DN toward the Piute Orebody, and the proposed lay-out for continuing the Drift North, that was decided on by you, Mr. Hartman, Mr. Warren, and myself.

The geology of the headings did not check with the geology as we interpreted it from Diamond Drill Holes No. 74 and 75, mainly because Hole No. 75 indicated a 13 foot vein of 2.65% Cu., forty feet beyond a heavy clay fault. The heading exposed a streak of fair mineralization about 30 feet under a heavy clay fissure, but has cut nothing beyond. The clay fault in the heading is 60 feet beyond the point where it was indicated by the Drill Hole. It appears that the Hole either deflected considerably upward to cut the flat fissure at such a point, or, it deflected downward, encountering a local condition that indicated a fissure zone, and did not reach the main fissure. This latter case could account for the position of the mineralization, and the 99.0% core recovery beyond the broken zone with no indication of the clay fissure.

In any event, the main objective is to get North into Piute Ore zone, and the logical place is to advance along the hanging wall side of the fissure.

The planning and estimated cost as indicated by the sketch, does not include the additional work that will be required to reach the shaft.

Very truly yours,

S. K. Droubay

S. K. Droubay

SKD:DM
Encl. 1

cc - Mr. Weed
Mr. Sales
Mr. Lyon

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FORM 396 2-1-41-2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

April 9, 1941

H. M. HARTMANN, MANAGER

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Hennessy Building
Butte, Montana

Dear Mr. Sales:

Your sketch of 1017DN with respect to the Piute workings, was taken to Salt Lake by Mr. Dugan, and will be given to you there.

Very truly yours,

S. K. Droubay

S. K. Droubay

SKD:DM
Encl. 1

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FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

April 17, 1941

H. M. HARTMANN, MANAGER

Mr. M. H. Gidel, Assistant Geologist
Anaconda Copper Mining Company
Hennessy Building
Butte, Montana

Dear Mr. Gidel: Re: Geology of Walker Mine.

I have given considerable thought to the questions you asked in your letter of March 17, 1941, and will give you my interpretation of conditions as I have found them. There is still considerable doubt in my mind, and for this reason I have tried not to form any definite opinions that may later be proved to be entirely wrong.

1. Do we consider the No. 1 Main hanging wall Fissure to be pre-mineral or post-mineral? (We are now almost certain this ties in with the footwall clay of the Piute Orebody.)

The relation between our Main Orebody mineralization and this fissure, has been one of the important geological problems since the opening of the lower levels, and it has not yet been fully determined. Development work along the North Orebody 900 and 1000 Levels, shows that the fissure weaves in and out of the vein, without any apparent displacement of quartz which suggests little, if any, post-mineral movement. From this, we should not consider the Orebody strike faulted, and should not expect a displaced portion on the East side of the fissure lower down. The gradual diminishment in size and grade of the vein with depth, before coming in contact with the fissure also supports this line of thought. We could explain the presence of brecciated quartz along the fissure on the 900 and 1000 Levels, as due to the slight post-mineral adjustments that resulted from the cooling of the granite and the surrounding rocks. This brecciated quartz is found only in places where the vein is right against the fissure. The present clay and breccia zone of the fissure, (including broken vein quartz), would in this case, be the result of the same adjustment. In other words, the pre-mineral fissure zone has been roughly transversed by a post-mineral adjustment. This passed from the fissure zone into the wall rock at points of weakness where the vein flattened and where it changed direction in strike. Thus, our No. 1 hanging wall fault would be a post-mineral adjustment which followed the original channel of the advancing ore fluids, until a change of dip was encountered at the approximate 1000 Level, and a change of strike was encountered North of the 712 Orebody. The fracture took the line of least resistance, which carried it into the hanging wall of the main orebodies and along the footwall of Piute.

There is quartz and mineralization in association with this fissure on the 1200 Level under the Central and North Orebodies, also on the 900 Level at Piute, which suggests bottle necks through which ore fluids passed.

On the other hand, there is evidence in favor of considering the possibilities of ore at lower levels under the present orebodies, but in my estimation, these are not too sound. The fact that we have vein segments on the hanging wall side of the No. 1

Mr. M. H. Gidel, Assistant Geologist
Anaconda Copper Mining Company

Sheet 2.

fissure along the North Orebody 900 and 1000 Levels, suggests a possible fault throw, however 1200 Level developments directly under this area are not very promising. There exists some streaks of footwall mineralization, that may get better at depth, also there is the possibility of favorable conditions having existed along the fissure at lower depths, that have caused ore depositions of a different type than we have developed and mined above. Perhaps some Diamond Drilling to cut the fissure at lower depths should be done from the 1200 Level. I think Mr. Sales and Mr. Lyon have given considerable thought to such a plan.

Since development work along the 900 Level of Piute and especially North of Piute, has indicated a zoning condition that may give us a better grade ore in the Northern regions along our vein zone at greater depth, it is my belief that it is in this country that rests the future of Walker Mine.

2. Is there anything significant about the probable zoning of schist and vein minerals?

There is a marked decrease in the relative amount of pyrrhotite in association with chalcopyrite, progressively North from the granite contact at the South end.

From my observation, there seems to be considerably more garnet progressively North with the exception of the North Piute Orebody, which is considerably different from Piute. At least, the garnet is much more conspicuous in lower Piute, where it occurs as veinlets cutting through the vein quartz as well as a dissemination throughout the schist and the vein. The dissemination of garnet is rather common throughout the Mine, especially in the wall rock where there are zones that are more highly concentrated than usual. I have generally believed that the garnet as well as the magnetite, are your so-called schist minerals, and are residual within the vein. However, the coarse garnet as it occurs in the veinlets of the lower Piute ore, seems to have been introduced during a later surge of mineralization in association with Barite, Magnetite, Chalcopyrite, also some Zeolites and Calcite.

Magnetite is abundant in all orebodies, both in the vein and in the wall rock. Some is coarse and some is fine grained, and local concentrations may be found in any orebody. I imagine a microscopic study would reveal a number of generations of magnetite.

I would not say that the relative amounts of garnet or magnetite has any bearing on the grade of ore.

With the exception of the North Piute Ore, where chalcopyrite is deposited along the structure of chloritic schist, I would say that the deposition of copper minerals is usually accompanied by silicification. It appears that veins were formed by more than one stage of mineralization, starting with the typical glassy quartz vein, containing some sulphides, that was later fractured and enriched by chalcopyrite being deposited along the fractures. It is not uncommon to see lighter colored quartz veinlets of a later stage, cutting through the glassy quartz vein, and these veins as a rule, carry coarse chalcopyrite, chlorite, micas and possibly, other minerals.

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Mr. M. H. Gidel, Assistant Geologist
Anaconda Copper Mining Company

Sheet 3.

Primary chalcocite is very rare, and what I have seen, comes from areas that carry bornite. Bornite is quite common and occurs principaly as localized disseminations along shoots in the 712, Piute, and North Piute Orebodies. These minerals do not seem to be associated with the extreme silicification that accompanies most of our ore, but is accompanied by a chloritic alterations of the host rock that leaves it distinctly green in color. Very often the bornite occurs intergrown with approximately an equal amount of chalcopyrite, and the combined minerals form small isolated masses disseminated in the vein. Bornite and chalcocite are not associated with the barite, garnet and magnetite, as they occur in lower Piute, although there is some bornite in this country. I think the bornite is earlier than these minerals.

3. Does the strike of our vein conform generally with the banding of the schist?

From my observations, the strike and dip of the Walker Vein to the 712 Orebody, conforms very closely with the banding of the schist, which averages about North 25 degrees West. North of the point where the footwall vein of the 712 Orebody intersects the Main vein; the Piute and North Piute Orebodies are off-set to the East, and their strike changes to practically due North. However, the banding of the schist still remains roughly North 25 degrees West, and carries normal dip, (plus - minus 55 degrees), even though the orebodies flatten to 40 degrees or less.

The hanging wall of the South, Central, and North Orebodies is very often banded with parallel quartz veinlets for a few feet into the massive wall rock, which suggests a direction of shear before mineralizing fluids were introduced. This banded structure is often apparent throughout the full width of the vein, presenting parallel layers of quartz and schist that make up the vein. This is generally referred to as "horses" of waste within the vein. On the other hand, in Piute especially, this parallel banding of quartz and schist angles to the strike of the orebody and usually dips steeper than its footwall. This banding has the normal North 25 degrees West, strike and roughly the normal 60 degrees to the East dip, but the footwall of the orebodies, (Piute and North Piute), are approximately North and South.

These conditions suggest that the original schist was banded with a North 25 degrees West shear, but the ore fluids came in along a later fissure that followed the banding to the 712 Orebody, but cut across it where Piute and North Piute was formed. The quartz banding and schist structure of these two orebodies, are very pronounced and definitely make an angle with the footwall (strike) of the orebodies.

These conditions suggest that the banding of the schist was developed at an earlier date than the vein was deposited.

In conclusion, I might say that it is very possible that a favorable zoning condition exists in conjunction with Walker Mine Ore, and that lower temperature orebodies of better than average grade may be found at intervals along the strike to the North.

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Mr. M. H. Cidel, Assistant Geologist
Anaconda Copper Mining Company

Sheet 4.

I trust that these opinions are not too far from right, and that future developments at Walker Mine will disclose something worth while.

Very truly yours,

S. K. Droubay

S. K. Droubay

SKD:DM

cc - Mr. Weed
Mr. Sales
Mr. Lyon
Mr. Perry

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INTERNATIONAL SMELTING AND REFINING COMPANY

Kearns Building, Salt Lake City, Utah

TOM LYON
GEOLOGICAL DEPARTMENT

April 22, 1941

Mr. Reno H. Sales
P. O. Box 457
Butte, Montana

Dear Reno:

Jim Lillie is going to use Droubay as a mine foreman at Battle Mountain. Droubay was in the office yesterday and discussed with me the Walker situation. He is under the impression that Chamberlain can carry on the work without any difficulty. That would be all right except Droubay also told me that Chamberlain had been deferred by the Draft Board at Quincy until May 1. Droubay said that Hartmann was in correspondence with the Draft Board regarding the further deferment of Chamberlain but had to date received no promise as to what they would do.

I heard what Mr. Kelley said regarding the policy of the Company concerning deferment of various men. I believe in the case of Chamberlain we are justified in asking that he be deferred. If the deferment is refused we shall have to have someone at the Walker for that job. What do you suggest?

Very truly yours,

Tom Lyon

TL:P

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INTERNATIONAL SMELTING AND REFINING COMPANY

Kearns Building, Salt Lake City, Utah

TOM LYON
GEOLOGICAL DEPARTMENT

April 24, 1941

Walker

Mr. Reno H. Sales
P. O. Box 457
Butte, Montana

Dear Reno:

I have your letter of April 23 regarding Droubay.

I was very much surprised to receive your letter as I was under the impression that you knew all about the situation as it was apparently decided during the time you and Mr. Weed were here. I did not know about the matter for several days and I have been waiting to hear from you about the situation, because I felt that you knew about the matter and had some plan in mind. I was somewhat perturbed about the matter as I felt that you authorized the change and had said nothing to me about it.

Very truly yours,

Tom Lyon

Tom Lyon

TL:P
cc: C.F.K.
J.R.H.
D.M.K.
C.E.W.
J.O.E.

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FA395 9=WALKERMINE CALIF 1 440P

1941 MAY 1 PM 5 12

RENO H SALES=

HOLD ELCORTEZ HOTEL RENO NEV=

CAR WILL MEET YOU HOTEL EIGHT AM TOMORROW MORNING=

H M HARTMAN.

) AM.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

ANACONDA COPPER MINING CO.

COPY

May 2, 1941.

Walker

Mr. S. K. Droubay,
c/o Copper Canyon Mining Co.,
Battle Mountain, Nevada.

Dear Mr. Droubay:

I received your letter of April 17th, stating your interpretation of the structural and mineralogical relationships of the ore occurrences in the Walker Mine, and note that you have given the subject serious study, particularly in regard to the matter of recommending adequate prospecting work, to test the possible downward extensions of the more promising Piute and North Piute orezones below present bottom levels.

Do you think the appearance of chloritic alteration at the north end of the mine has any significance? We have noted in many ore deposits that the associated greenish alteration minerals such as fuchsite, mariposite, chlorite, serpentine, cummingtonite, etc., appear to have some relation or indicate an increased gold ratio to other metals occurring in the orebody. Is there an increase in the gold ratio in the North Piute orebody in respect to the other oreshoots?

The implication is, the ferrous iron constituents in the greenish gangue minerals indicate that certain chemical conditions had existed in the mineral bearing solution which deposited relatively more gold (if present) and also reacted to form the associated, greenish alteration gangue minerals. For

ANACONDA COPPER MINING CO.

COPY

example we know that gold is somewhat soluble in ferric salt solutions and that it is precipitated from solution by ferrous salts.

Thanking you for your continued interest in the above matters, I remain

Sincerely yours,

M. H. GIDEL

MHG/aw

cc: C.E.W.
R.H.S.
T.L
V.D.P.

May 7, 1941

Mr. H. M. Hartmann, Manager
Walker Mine
Walkermine, California

Dear Henry:

I forgot to ask you about Chamberlain's status since Droubay left. Did anyone advise him whether he was advanced to the position Droubay left, or has he merely taken over Droubay's work without being officially designated as geologist for the mine?

It is important from the point of view of giving him his job back should he be drafted. It is my recommendation for the present that he be not designated as chief engineer and chief geologist. Of course, if he has been officially given that position, there is nothing to be done about it.

Please advise me at Butte.

Best regards,

Sincerely yours,

RHS:P

Reno H. Sales

Chamberlain
Box # 175

Salt Lake City, Utah
May 8, 1941

Mr. C. E. Weed, General Manager of Mines
Anaconda Copper Mining Company
Room 1726, 25 Broadway
New York City, N. Y.

WALKER MINE

Dear Clyde:

I visited the Walker mine last week. The 1017 drift beneath the Piute doesn't look as well as I had hoped. It looks as if the various bands of ore developed on the 900 Piute south might, because of steeper dips, hit a clay footwall before reaching the 1000 level, in which case the 1000 might be a blank or at least show much less mineral than the 900.

In discussing ore developments with the mine management there, it appears that a critical period will be reached in about 60 days. The old pillars are pretty well cleaned up which may mean a marked falling off in ore production. You will readily understand the importance of finding something on the 1000.

I have urged that a drift be turned to the south on the 1000 to cut the ore disclosed in Drill Hole No. 74. The sludge assay from this section showed an exceptionally good gold content.

The North Piute ore body is holding up in width and grade. A second raise started in the curving part of the ore body to the north showed a rapid decrease in width of ore at 20 feet up. It looks as if a little diamond drilling below the 900 to show the behavior of the North Piute ore, would be advisable, and I shall suggest something along that line in a later letter.

Very truly yours,

Reno H. Sales

RHS:P
CC: Mr. C. F. Kelley
Mr. J. R. Hobbins

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FORM 3-8 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

May 8, 1941

H. M. HARTMANN, MANAGER

Mr. Tom Lyon, Chief Geologist
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Lyon:

Please find enclosed, geological sketches and classification table for development during the month of April, prints showing in yellow, mining operations with respect to orebodies. The report on Diamond Drilling for the month of April was sent in several days ago. The following is a resume of the classification table and of Prospect Diamond Drilling.

South, Central, & North Orebodies. None.

712 Orebody. 324CRs was driven into the hanging wall from 401DRs, to furnish waste fill for 405E Stope.

325CRs is a chute and manway raise being extended above the 300 Level, to determine the extent and condition of the footwall vein. It will later service the 317C Block for stoping. Vein is narrowing on South side.

406DDS is being extended to develop the ore above the South end of 517BDS, along which 593BRs was extended. 406D has connected with the top of 593BRs.

407DxcE&W are crosscuts driven from 406DDS to prospect for the vein. A slight mineralization shown in first 4 feet of west crosscut.

678EsDN is a service and ventilation drift being driven from 722ERs to connect with the 712 Sub-level crosscut 692Ds.

722ERs is a transfer raise being driven from 711EDN to the 600 Level, to produce the ore from the 517 fissure zone.

Piute Orebody. 903BDS is the main level heading being driven to determine the southerly limits of the ore. 2.0% ore showing in full width of face.

928C and 929C, are flat, untimbered raises with herringbone connections, driven to the 800 Level. They will later be enlarged as stopes.

941CRs is a finger raise from the 900 Level skip pocket for the purpose of producing ore directly from the 915-965 Block, directly to the shaft.

Piute Orebody (Cont'd.) 943CxcS&W were driven from 903BDS to determine the mining widith of the vein. A six foot vein of 2.0% ore showing in East crosscut.

1017DN is being extended to connect 706E Winze with the Piute Orebody. As yet, no ore has been encountered, although the face is projected almost vertically underneath 903BDS. The face shows a heavy zone of epidote.

1077BxcE is a crosscut driven from 1017DN to explore the ore indicated by Diamond Drill Holes Nos. 74 and 75, and also to serve as a car siding. Strong solutions of copper water encountered 40 feet beyond the fault.

1078BDN&S are short drifts driven to prospect the mineralized zone encountered in 1017DN.

Red Orebody. 939CDN is the main level heading being driven to connect with the mineralization exposed in the Surface Diamond Drill Hole No. 57. The drift is approximately 1250 feet from this objective.

942CRs is a development raise at the North end of the Red Orebody, to determine the upward extension of the ore.

Prospect Diamond Drilling. Hole No. 83 was drilled to a depth of 100 feet from the end of 1077BxcE, to determine any possible mineralization in the hanging wall. Core recovery nearly 100% with a few specks of sulfide exposed in the first 52 feet and the rest of the hole blank.

Very truly yours,

E. J. Lomnes

E. J. Lomnes
Chief Engineer

EJL:DM

cc - Mr. Dugan
Mr. Sales

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MONTHLY ANALYSIS

WALKER MINING COMPANY

MAY 1 to 31, 1941

PLACE	ASSAY AVERAGE WIDTH	ASSAY AVERAGE CU.%	MINING AVERAGE WIDTH	MINING AVERAGE CU.%	FT. WASTE	FT. OVER-BREAK	WASTE BKG	WASTE SORT	TONS EXC.	MIN. or DEV.		REMARKS
									DRIFTS			
406 DDS	1.4	1.15	6.0	0.70			18		65	D	*	47 tons produced.
406 DDSss	1.3	2.17	6.0	0.60			23		47	D	*	24 " "
678 EDN	2.0	2.07	5.2	1.10	3.2	3.2	126		200	M		74 " "
735 CDN	3.3	3.40	8.0	1.62	4.7	4.7			118	M		
903 EDS	4.3	2.42	7.2	1.70	2.9	2.9			410	D		
939 CDN			7.0	0.28					680	D	*	Produced as ore.
946 CDN	7.0	1.21	7.0	1.21					32	M		
946 CDS	8.0	1.20	8.0	1.20					64	M		
1017 DN	Waste						895		895	D	*	Hauled as waste.
TOTAL:	4.24	2.23	7.11	1.56	2.87	2.87	1062		2511			
									CROSSCUTS *			
329 CxcE	4.0	1.15	9.0	0.75			37		37	D		Hauled as waste.
407 DxcE	Waste						22		22	D		
408 DxcE	Waste						27		27	D		
944 CxcE	11.0	1.83	18.0	1.24					74	D		
944 CxcW	2.0	1.00	5.0	0.52					43	D		Produced.
1079 BxcE	Waste						57		57	D		
1079 BxcW	Waste						72		72	D		
1080 ExcW	2.5	1.28	9.0	0.50			49		49	D		
TOTAL:	4.64	1.49	10.11	0.85			264		381			
									RAISES			
324 CR	Waste						88		88	M	*	Broken for fill in 405 E stope.
325 CR	7.0	1.55	7.0	1.55					48	D		
928 CR	6.8	1.40	6.8	1.40					87	M		
928 CRss	6.6	2.16	6.9	2.08	0.3	0.2			443	M		FW Ovbk.
929 CR	3.3	2.27	7.7	1.21	4.4				234	M		Incl. waste
929 CRss	7.4	1.58	7.4	1.58					389	M		
940 CR	7.7	1.70	8.5	1.57	0.8				530	D		Incl. waste
940 CRss	3.3	2.65	7.3	1.47	4.0				130	D		" "
941 CR	12.0	1.55	15.0	1.30	3.0	3.0	70		145	M		FW ovbk. Raise x-cuts vein, enters at footwall.
TOTAL:	6.37	1.83	7.48	1.62	1.11	0.13	158		2094			

Note: Drifts and raises marked with an asterik and all crosscuts are excluded from averages and report totals.

MONTHLY ANALYSIS

WALKER MINING COMPANY

MAY 1 to 31, 1941

PLACE	ASSAY AVERAGE WIDTH	ASSAY AVERAGE CU.%	MINING AVERAGE WIDTH	MINING AVERAGE CU.%	FT. WASTE	FT. OVER-BREAK	WASTE BKG	WASTE SORT	TONS EXC,	MIN. or DEV.	REMARKS
									STOPES		
405 E	12.3	1.92	16.5	1.62	4.2	4.2			250		Hangingwall overbreak
420 B	9.4	1.63	21.1	1.12	11.7	5.6			3045		Footwall overbreak
605 E	18.0	1.99	20.2	1.82	2.2	1.0			615		Hangingwall overbreak
617 C	4.2	1.57	11.7	0.93	7.5	3.8			3492		Foot and hangingwall overbreak
617 D	8.7	1.77	10.6	1.52	1.9	1.9			1344		" " " "
705 E	8.4	1.59	9.3	1.48	0.9	0.9			2649		Hangingwall overbreak. North end of stope
740-760	10.7	1.25	10.7	1.25					154		
840 C	5.0	1.33	11.0	0.72	6.0	3.0			1180		Footwall overbreak
845 A	5.4	1.41	6.5	1.29	1.1				335		Incl. waste
845 C	1.4	1.56	7.8	0.84	6.4	6.4			1322		Footwall overbreak. South end of stope.
855 C	Inaccessible										
865	5.4	1.67	7.7	1.32	2.3	1.4			533		Footwall overbreak
880 B	11.6	1.95	12.0	1.91	0.4	0.4			2466		" "
915 C	5.1	1.99	8.6	1.35	3.5	1.5			1799		Footwall overbreak. North end of stope.
945	4.5	1.71	4.5	1.71					90		
945 A			11.0	0.48					310		Slot driven toward HW, crosscuts vein.
946 A	3.4	3.48	8.0	1.70	4.6	3.2			128		Hangingwall overbreak, some FW overbreak.
955 C	6.4	1.71	10.7	1.35	4.3	3.0			1728		Hangingwall overbreak.
1080 C	6.3	2.75	8.0	2.28	1.7	1.7			1390		Hanging and footwall overbreak
TOTAL:	6.73	1.81	10.79	1.34	4.06	2.45			22830		
									MINE TOTAL		
	6.59	1.82	10.28	1.37	3.69	2.22	1220		27435		

WALKER MINING COMPANY

DEVELOPMENT PROGRESS - MAY, 1941

Orebody	Heading		Size	Ft. Adv.	Total Advance	Feet Ore	% Cu	Oz. Ag	Oz. Au	Feet Waste
712	(M)	324CRs	5x7	19	53					19
	(D)	325CRs	18x7	5	92	5	1.55	0.83	0.026	
	(D)	329CxcE	5x7	9	9					9
	(D)	406DDS	5x7	62	414	24	0.70	0.11	0.003	38
	(D)	407DxcE	4½x7	4	16					4
	(D)	408DxcE	5x7	10	10					10
	(M)	678EsDN	5x7	70	70	25	1.61	0.62	0.007	45
	(M)	735CDN	9x10	17	312	17	1.62	0.76	0.001	
		Total		196		71	1.30	0.50	0.006	125
Piute	(D)	903BDS	9x7	82	1235	82	1.69	0.51	0.029	
	(M)	928CRs	6½x8½	24	234	24	1.06	2.61	0.168	
	(M)	929CRs	7x13½	34	252½	34	1.21	1.23	0.021	
	(M)	941CRs	7x12	22	89	22	0.86	0.02	0.002	
	(D)	944CxcE	5x7	27	27	27	0.95	0.22	0.012	
	(D)	944CxcW	5x7	16	16					16
	(M)	946CDN	7x7	8	8	8	1.21	0.19	0.003	
	(M)	946CDS	7x14	8	8	8	1.20	0.33	0.003	
	(D)	1017DN	9½x8½	152	5595					152
	(D)	1079BxcE	6½x6	19	19					19
	(D)	1079BxcW	6½x5	31	31					31
	(D)	1080BxcW	7x5	13	13	3	1.27	0.13	0.005	10
		Total		436		208	1.31	0.76	0.036	228
Red	(D)	939CDN	9x7	140	245					140
	(D)	940CRs	18x8	53	83	53	1.57	0.02	0.003	
		Total		193		53	1.57	0.02	0.003	140
		GRAND TOTAL		825		332	1.35	0.58	0.024	493
					RECAPITULATION					
		MINING		202		138	1.25	1.00	0.036	64
		DEVELOPMENT		623		194	1.42	0.29	0.016	429

WALKER MINING COMPANY

DIAMOND DRILL REPORT

May 1 - 15, 1941, Inclusive

900 Level Pillars		600 Level Pillars					
Hole No.	Length	Hole No.	Length	Hole No.	Length	Hole No.	Length
917B-2	18*	628A	15	673A	10	643A	47
926C	10*	627A	16*	674A	16	603A	14
933C	23	615A	10	657A	18	604A	21
901C	28	629A	12	649A-1	55	607A	23
902C	19	619A	22	662A	21		
934C	18	618A	16	658A	13		
922B	41	616A	10	648A-1	61		
921B	28	617A	10	656A-1	23		
900C	33	617A-1	10	659A	13		
936C	16	665A	42	661A	12		
935C	15	664A	40	608A	29		
999B	31	668A	18	660A	11		
937C	16	669A	11	647A	59		
938C	16	648A	62	606A	35		
[illegible]0B	31	656A	26	609B	16		
[illegible]0C	17	667A	36	646A	59		
998C	28	666A	28	611A	5		
919B	40	653A	23	610A	8		
918B	20	663A	22	612A	8		
917B-3	18	655A	22	613A	12		
952B	17	654A	25	614A	12		
946B	23	670A	7	645A	49		
951B	18	652A	24	644A	47		
[illegible]	32	672A	8	600A	16		
947B	22	671A	7	601A	11		
948B	22	650A	59	605A	24		
950B	23	651A	40	602A	10	Total	1379
Total	623						

Grand Total 2,002 feet

2,002 ft. of blast holes at $1.47 per foot = $2,942.94

*Holes not finished at end of period.

MISCELLANEOUS

14 Hours (4 hrs. mucking, 1 hr. blasting delay, 9 hr. loading holes) on Walker Accounts at $1.439 per hour = 20.15

$2,963.09

RECAPITULATION

Blast Holes Main Orebody 2,002 ft. holes at $1.47 per foot = $2,942.94

Miscellaneous 14 Hours on Walker Accounts at $1.439 per hour 20.15

$2,963.09

approved.

H. T. Hartmann

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WALKER MINING COMPANY

DIAMOND DRILL REPORT — May 16 - 31, 1941, Inclusive

900 Level Pillars

Hole No.		Length	Hole No.	Length	Hole No.	Length	Hole No.	Length
x 926C	10	39	991B-1	28	956C	41	924C	30
x 917B-2	18	1	931C-1	40	988C	39	925C	12
903C		19	972C	40	958C	40	904D	29
917B-1		35	913B	37	921C	15	951C	14
904C		20	931C	53	966C	17	955C	40
917B		36	991B-3	27	957C	35	906C-1	17
905C		30	975C	47	945C	25	907C	23
926C-1		47	952C	27	987C	36	981C	21
916B		40	974C	49	946C	18	982C	15
927C		43	992B-1	23	989C	39	948C	16
997B		27	940C	18	920C	21	903D	33
996B		22	993B-1	21	990C	41	980C	17
995B		21	912B	46	959C	40	949C	25
928C		47	942C	40	960C	25	902D	36
994B		26	943C	20	919C	14	950C	15
915B		44	994B-1	31	922C	16	979C	28
993B		23	975C	38	991C	31	978C	30
968C		29	976C	21	923C	28	952C	15
929C		47	911B	44	961C	24	953C	21
914B		51	947C	15	992C	26	901D	42
969C		30	977C	17	962C	25	954C	40
[illegible]B		21	965C	18	911B-1	48	942C	33
950C		44	964C	18	963C	23	xx 908C	20
991B		19	911B-2	43	906D	20	xx 941D	11
970C		32	944C	19	924C	47	xx 900D	14
971C		35	991B-2	30	986C	33	925C	32
					985C	28	905D	27
							Total	3065

600 Level Pillars

Hole No.		Length
621A		35
620A		39
622A		29
625A		9
624A		13
623A		14
x 627A	16	2
626A		17
Total		158

Grand Total 3223

3,223 feet of blast holes at $1.47 per foot = $4,737.81

x Total length of hole (includes footage already paid for)

xx Hole not finished at end of period.

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Sheet 2

WALKER MINING COMPANY
DIAMOND DRILL REPORT

May 16 - 31, 1941, Inclusive

PROSPECT HOLES

Piute Orebody	1078SDS	Hole No. 84	62 ft. @ $1.25 per ft.	=	$ 77.50
	1079ExcW	Hole No. 85	115 ft. @ $1.25 per ft.		143.75
	1079ExcW	Hole No. 86	30 ft. @ $1.25 per ft.		37.50
	1079ExcW	Hole No. 87	25 ft. @ $1.25 per ft.		31.25
			232 ft. @ $1.25 per ft.	=	$ 290.00

MISCELLANEOUS

Main Orebody	43 Hours on Walker Accounts (35 hrs. no water, 2 hrs. hoisting delay between shifts, 6 hrs. mucking & timbering), at $1.439 per hour	=	$ 61.87

PERIOD RECAPITULATION

Prospect Holes	Piute Orebody	232 ft. @ $1.25 per ft.	=	$ 290.00
Blast Holes	Main Orebody	3323 ft. @ $1.47 per ft.		4,737.81
Miscellaneous	Main Orebody	43 Hours on Walker Accounts @ $1.439 per hr.		61.87
		Total		$5,089.68

MONTHLY RECAPITULATION

Prospect Holes	Piute Orebody	232 ft. @ $1.25 per ft.	=	$ 290.00
Blast Holes	Main Orebody	5225 ft. @ $1.47 per ft.		7,680.75
Miscellaneous	Main Orebody	57 Hours on Walker Accounts @ $1.439 per hr.		82.02
		Total		$8,052.77

Approved.
H. A. Hartmann

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May 20, 1941.

Mr. John F. Dugan, Gen. Supt. of Mines,
International Smelting & Refining Co.,
820 Kearns Bldg.,
Salt Lake City, Utah.

Re: Walker Mine,
Plumas Co., Calif.

Dear Jack:

I thank you for your letter of May 17th, giving results of recent development work in the Walker.

Yours very truly,

RHS:KM

RENO H. SALES

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May 20, 1941

Mr. Tom Lyon,
818 Kearns Bldg.,
Salt Lake City, Utah.

Dear Tom:

I have your letter of May 17th, also copy of Dugan's letter to you of same date, advising of certain salary raises at the Walker Mine, suggested by Mr. Hartmann.

I am not familiar with the work of the Chief Engineer at the Walker. I have no doubt he is entitled to the salary raise suggested by Hartmann. I approve Hartmann's recommendation that Chamberlain's salary be increased to $190.00 per month.

I will be in Salt Lake Thursday morning.

Yours very truly,

RHS:KM

RENO H. SALES

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INTERNATIONAL SMELTING AND REFINING COMPANY

Kearns Building, Salt Lake City, Utah

ANACONDA
from mine to consumer

TOM LYON
GEOLOGICAL DEPARTMENT

May 17, 1941

Mr. Reno H. Sales
P. O. Box 457
Butte, Montana

WALKER MINING COMPANY

Dear Reno:

Enclosed you will find letter from Jack Dugan dated May 17 regarding salaries in the engineering and geological department at the Walker mine.

Will you please let me know what you think about this matter.

Very truly yours,

Tom Lyon

TL:P

1- Incl.

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F. 423 3-13-40 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

STOCK AND EQUIPMENT CONTROL DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

May 17,1941.

SUBJECT: WALKER MINING COMPANY

Mr. Tom Lyon, Chief Geologist,

O f f i c e s

Dear Sir:

I received a letter from Mr.Hartmann in which he states that on account of Mr.Droubay's transfer to Copper Canyon, it will be necessary to make some changes in the Engineering and Geological staff.

He plans to put Eldon Lomnes in charge of the Engineering Office and states that Virgil Chamberlain will do the Geological mapping, getting out Geological reports etc.

Mr.Hartmann states that the Chief Engineer's job formerly paid $225.00 base salary and added that he planned to start Lomnes off with a $200.00 base, with the thought that this could be increased to $225.00 later on.

Mr.Chamberlain is at present receiving $175.00 base salary. Mr.Hartmann thinks that with his added responsibilities, that his base should be increased to $190.00, or an increase of $15.00. Mr.Hartmann recommends these raises to be effective as of May 1st,1941.

Due to the fact that both the Engineering and Geological Departments are under your jurisdiction, I feel that these recommendations should have your approval before submitting them to Mr.Elton for final authorization.

Yours very truly,

John F. Dugan

JFD:fgc

John F. Dugan

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

May 17, 1941

Mr. Reno H. Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Reno:

Hartmann called me Thursday, and said that they broke into some ore in the first crosscut west from 1017 Drift. There was about one foot showing on the bottom which assayed 1.71% copper. Hartmann did not have the gold and silver assays.

If you remember, this crosscut was the one you suggested drilling two diamond drill holes south 45 W. and north 45 W. respectively to prospect the footwall mineralization underneath the fault.

We will now drive the crosscut through the ore until we reach the fault, and then put a hole out due west to prospect the footwall mineralization. If the ore found amounts to anything we will start drifting north on it.

Hartmann also says that 903B drift south shows seven feet of ore, which is 105' south of coordinate 18750. The breast assays as follows:

3'	Footwall	1.35% cu	.333 Ag	.03 Au
3'	Center	2.70% cu	.80 Ag	.02 Au
1'	Hang.wall	5.25% cu	1.78 Ag	.05 Au
7'		2.48% cu	.74 Ag	.03 Au

Chamberlain has probably sent you the notes on this, but if he has not I thought you would like to have the information.

With kindest regards.

Yours very truly,

John F. Dugan

JFD:H

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FORM 396 2-1-41-2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

May 10, 1941

H. M. HARTMANN, MANAGER

Walker

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Hennessy Building
Butte, Montana

Dear Reno:

I have your letter of the 7th, asking about Mr. Chamberlain's status since Mr. Droubay left. Mr. Chamberlain is not replacing in any sense, Mr. Droubay and is not taking over Mr. Droubay's work except he is assuming more responsibility for the Geology end.

Mr. Droubay was Chief Engineer and Chief Geologist. For the time being, no one is really taking his place. Mr. Lomnes, who has been with the Company for a number of years and is very competent, will have charge of the engineering and will be called Chief Engineer. He will be responsible for the engineering, sampling, and geology work. In every department except the geology end, he is perfectly competent to handle this. While Mr. Chamberlain will be theoretically under Mr. Lomnes, he will for the time being at least, take care of the geology end.

As you know, Mr. Droubay left very suddenly and this seemed to be the best arrangement to take over. I think that unless Mr. Chamberlain is drafted, it will work out allright. If he is drafted, I have one other man here, Mr. Lohse, who is now Chief Sampler, who may be able to do Mr. Chamberlain's work. If not, I will have to get someone in from the outside.

Very truly yours,

H. M. Hartmann

H. M. Hartmann

HMH:DM

June 6, 1941.

Mr. John F. Dugan,
General Superintendent of Mines,
International Smelting & Refining Co.,
818 Kearns Bldg.,
Salt Lake City, Utah.

Re: Walker Mine,
Plumas Co., Calif.

Dear Jack:

Replying to your letter of May 31st, concerning possible further developments on the 1200 level of the Walker Mine, I will discuss this matter with Nood in New York next week, and advise you of our decision.

Yours very truly,

RHS:KM
cc: J.O.M.
T.L.
H.M.H.

RENO H. SALES

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F. 192 8-30-39 2M

INTERNATIONAL SMELTING AND REFINING CO.

ANACONDA
from mine to consumer
TRADE MARK

J. F. DUGAN
GENERAL SUPT. OF MINES

SALT LAKE CITY, UTAH.

May 31, 1941

Walker

Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Hennessy Building
Butte, Montana

Dear Reno:

I wish you would please let me know if you contemplate any further development on the 1200 level at the Walker Mine; either by drifting, crosscutting or diamond drilling.

If not, we will start salvaging the pipe, rails, etc., as they can be used elsewhere in the mine.

Yours very truly,

John F. Dugan

J. F. Dugan
Gen. Supt. of Mines

JFD:E
CC- J. Elton
Tom Lyon
C. E. Weed
H. M. Hartmann

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Min Loc 485 R.

FORM 396 2-1-41-2M

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

May 29, 1941

H. M. HARTMANN, MANAGER

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Mr. M. H. Gidel, Asst. Chief Geologist
Anaconda Copper Mining Company
Butte, Montana

Dear Sir:

Mr. Dugan and Mr. Hartmann have raised objections to our method of compiling the monthly analysis sheet on the grounds that it gives a distorted set of figures in regards to the assay and mining widths, and I agree with them. There are several points which need clarification, and I should like to have your opinion on the matter as to how they are handled in Butte.

In cases where a drift angles through the structure,a crosscut is driven across the vein, or a lateral finger driven from a raise at an angle to the structure, we have used the length for the width and the width for the length. Thus from our sheet it appears as if the mining width in many cases, is exceptionally high with regards to the assay width. This is especially true in the crosscuts. How should these situations be handled correctly?

I have been looking through a copy of the analysis sheet from the Belmont mine for the month of September 1940. In going over the drifts and crosscuts in this report, nowhere does it seem that you have used the same procedure as we have in obtaining the mining and assay widths, with the exception of the one heading. That is 3633ECNE where a mining width of 10' is reported against an assay width of 1'.

I am enclosing a sketch of 903BDS in the Piute Orebody, which will illustrate two of the three points I have mentioned. I have marked the mining and assays widths for 903BDS and 943CxcE & W as they would be reported on our sheet. Obviously, this gives the wrong impression as to what is actually the case.

So far we have used a cut off point of 1.00% copper for all of our stopes. However, we are now going to use different points for various sections of the mine in order to cut down the feet of waste being charged as broken in some of our stopes.

I shall greatly appreciate your advice on the matter I have mentioned, and any other suggestions you have to make will be most welcome.

Sincerely yours,

Eldon Lomnes

Eldon Lomnes
Chief Engineer

EL:E
CC: Mr. Dugan
" Lyon

ANACONDA COPPER MINING CO.

COPY

June 9, 1941.

Mr. M. H. Gidel,
Assistant Chief Geologist,
Anaconda Copper Mining Company,
Building.

Dear Sir:

This letter should answer the questions which Mr. Eldon Lommes, Chief Engineer of the Walker mine, wrote to you about on May 29, 1941.

As a general rule vein structure in crosscuts is crossed at an angle of from 60°-90°. Our rules for calculating assay averages on each side of the crosscut are the same as for face samples in drifts. The two sides are averaged together the same as two ends of a raise or two successive rounds in a drift. In order to calculate a mining width average, the sampler must know the amount of waste that was broken with the ore, eliminating all the waste that was broken and removed before and after the vein was being crossed. In other words, suppose the average round is five feet. When a two foot vein is crossed with one round, three feet of waste is added to make a mining width. If the vein cuts across at an angle so that it required two rounds to cross the vein on both sides of the crosscut, the mining width becomes ten feet.

When the crosscut cuts the vein at an acute angle so that the vein appears in several successive breasts, the averages are calculated the same as in drifts.

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C O P Y

To calculate the volume of ore in the regular crosscut averages, the width of the crosscut becomes the "length" in ore.

Many averages are reported in the "Monthly Stope and Development Analysis" that are not included in the final average. Only those veins that are "ore" according to our curves are included.

Our rules for calculating assay averages in stopes, drifts and raises may not be practical at the Walker mine or any other mine where the geology and the mining methods are not the same as in Butte. The mining width averages are bound to be the same anywhere in stopes, drifts and raises. In crosscuts the width will be determined by the depth of the rounds and the dividing line between ore and waste. This latter figure is 1.0% copper at the Walker mine and 1.2% in Butte.

Our assay averages are calculated as follows:

1. Waste occuring between bands of ore:

   (a) Under 1.0' in width is included in assay average
   (b) 1.0'-2.9' " " half is " " " "
   (c) Over 3.0' " " none " " " " "

2. All waste (under 1.2%) on the outside of the ore is excluded from the assay average.

Trusting that the above information will be of use to Mr. Lommes, I am

Yours very truly,

GEORGE F. VIVIAN

GFV/aw

cc: 4 Extras

ANACONDA COPPER MINING CO.

C O P Y

June 11, 1941

AIR MAIL

Mr. Elden Lommes,
Chief Engineer,
Walker Mining Company,
Walkermine, California.

Dear Mr. Lommes:

I received your letter of May 29th, in which you ask certain questions regarding the compilation of assay and mining width grades of ore and the proper summarizing of same on the monthly analysis sheets that are used by the Mine Superintendent and Foreman.

I have reviewed the subject with Mr. George F. Vivian, our Chief Sampler, who has given the desired information in a letter addressed to me, a copy of which is enclosed.

We are unable to reconcile why anyone should figure a so-called mining width for the entire length (50') of 903-B crosscut, as shown on your sketch map. The first 35 feet of this crosscut, apparently is poorly mineralized, none of which would be broken in the stoping operation that will follow on the "ore" as exposed in the drift plus a few feet in either wall in that portion of 903-B which is on a due north course. Possibly it would have been better to have used a different number for the crosscut portion of 903-B, which would have eliminated any reason for using the 35 feet of barren waste in a mining width average. Judging from the geology, as noted on your map, stoping over the last 80 feet of 903-B drift will be confined to the bracketed assay limits as shown. In that case, the mining width of ore in the

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COPY

future stope will be only slightly greater than the assay width, assuming that minimum waste will be broken in the footwall and hanging-wall of the ore-bearing portion of the vein.

Trusting that our comments will help clarify the items you ask about, I remain

Yours very truly,

M. H. GIDEL

MHG/aw

Encl.

cc: CEW) and Encl.
RHS)

GFV "
TL "
JFD "

ANACONDA COPPER MINING CO.

COPY

June 11, 1941

Walker

AIR MAIL

Mr. Eldon Lomnes,
Chief Engineer,
Walker Mining Company,
Walkermine, California.

Dear Mr. Lomnes:

I received your letter of May 29th, in which you ask certain questions regarding the compilation of assay and mining width grades of ore and the proper summarizing of same on the monthly analysis sheets that are used by the Mine Superintendent and Foreman.

I have reviewed the subject with Mr. George F. Vivian, our Chief Sampler, who has given the desired information in a letter addressed to me, a copy of which is enclosed.

We are unable to reconcile why anyone should figure a so-called mining width for the entire length (50') of 903-B crosscut, as shown on your sketch map. The first 35 feet of this crosscut, apparently is poorly mineralized, none of which would be broken in the stoping operation that will follow on the "ore" as exposed in the drift plus a few feet in either wall in that portion of 903-B which is on a due north course. Possibly it would have been better to have used a different number for the crosscut portion of 903-B, which would have eliminated any reason for using the 35 feet of barren waste in a mining width average. Judging from the geology, as noted on your map, stoping over the last 80 feet of 903-B drift will be confined to the bracketed assay limits as shown. In that case, the mining width of ore in the

ANACONDA COPPER MINING CO.

COPY

future stope will be only slightly greater than the assay width, assuming that minimum waste will be broken in the footwall and hanging-wall of the ore-bearing portion of the vein.

Trusting that our comments will help clarify the items you ask about, I remain

Yours very truly,

M. H. GIDEL

MHG/aw

Encl.

cc: CEW) and Encl. ✓
RHS)

GFV "
TL "
JFD "

FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

June 11, 1941

H. M. HARTMANN, MANAGER

Mr. Tom Lyon, Chief Geologist
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Lyon:

Please find enclosed, geological sketches and classification table for development during the Month of May, prints showing in yellow, mining operations with respect to orebodies, and a report on Diamond Drilling for the Month. The following is a resume of the classification table and of Prospect Diamond Drilling.

South, Central & North Orebodies. None.

712 Orebody. 324CRs was driven into the hanging wall from 401DRs, to furnish waste fill for 405E Stope.

325CRs is a chute and manway raise, being extended above the 300 Level, to determine the extent and condition of the footwall vein. It will later service the 317C Block for stoping. This raise has been temporarily stopped, because of an excess of ground water coming through from the surface.

329CxcE is an exploratory crosscut driven from 319CDS to cut the vein. Advance is in waste and was used to gob 405E Stope.

406DDS is being extended to develop the ore above the South end of 517BDS, along which 593BRs was extended. Ore appears to be pinching out.

407DxcE was driven from 406DDS to prospect for the vein. No mineralization showing in last four feet.

408DxcE was driven from 406DDS to prospect the vein. No mineralization exposed.

678EsDN is a service and ventilation drift, being driven from 722ERs to connect with the 712 Sub-level crosscut 692Ds. This crosscut holed to the level and will be continued as a development heading to prospect the footwall fissure zone.

735CDN is being extended in order to prepare one or more small stopes on a narrow hanging wall streak which is exposed on the Sub-level immediately above. This streak will run approximately 2.0% Cu and average three to four feet in width.

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Piute Orebody. 903BDS is the main level heading being driven to determine the southerly limits of the ore. The ore seems to lie in a series of small, irregular lenses and these lenses appear to be diminishing with size towards the South.

928C and 929C, are flat, untimbered raises, with herringbone connections, driven to the 800 Level. Both have holed the Level and will later be enlarged as 945 and 945A Stopes.

941CRs is a finger raise from the 900 Level skip pocket, for the purpose of producing ore directly from the 915-965 Block to the shaft.

944CxcE&W were driven from 903BDS to determine the width of the vein. The first three feet of the last crosscut, will average around 2.5% Cu and from ten to sixteen feet, will average close to 1.50% Cu. Very little mineralization showing in the West crosscut.

946CDN is being driven from the top of 941CRs, to serve as a slusherway for 915 Block.

946CDS is being driven from the top of 941CRs and will provide room for a slusher station.

1017DN is being extended to connect 706AW with the Piute Orebody. The drift is in a crystalline schist, with occasional sulfide specks. The two drill holes just completed from 1080BxcW, proved a blank. As a result, 1017 is being continued straight ahead on the original lines, instead of a turnout being driven from a point midway between 1079B and 1080B.

1079BxcE&W were driven from 1017DN to prospect for the vein. A few specks of bornite were found in a six inch quartz vein and in joint seams.

1080BxcW was driven from 1017DN to prospect for the vein. A two to three foot zone of quartz and disseminated sulfides was encountered.

North Piute Development. 939CDN is the main level heading being driven to connect with the mineralization exposed in Surface Diamond Drill Hole No. 57. The footwall fault was encountered and the drift is being turned away from this zone.

940CRs is being driven from 934CDN to determine the upward extension of the Orebody. Above the fourth floor it is being carried as a stull raise.

Prospect Diamond Drilling. Hole No. 84 was drilled up at 45 degrees for 62 feet, from 1078BDS, to peg the mineralization encountered in Hole No. 75. The footwall fault was cut at 12 to 20 feet. The Hole showed mineralization occurring in scattered zones up to 50 feet, with the best zone between 42 and 47 feet, the core assaying 1.60% Cu.

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Prospect Diamond Drilling (Cont'd.).

Holes No. 85, 86, and 87, were drilled from the end of 1079BxcW. Hole No. 85 was drilled practically due West into the footwall, and Nos. 86 and 87 were fanned 30 degrees from No. 85, to the North and South, respectively. Hole No. 85 was drilled for 115 feet and the fault was cut at 20 to 25 feet. The first seven feet of this Hole, showed scattered mineralization, and from 7 to 15 feet, the core assayed 1.65% Cu. The ground was badly broken from 100 to 110 feet. The fault showed at 28 feet in Hole No. 86 and cut 23 feet in Hole No. 87 and the two holes were stopped at the fault. The best mineralization showed in Hole No. 86, at 14 to 19 feet, with the core assaying 3.95% Cu.

Very truly yours,

E. J. Lomnes

E. J. Lomnes
Chief Engineer

EJL:DM

cc - Mr. Dugan
Mr. Sales

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New York, N. Y.
June 16, 1941.

Mr. J. F. Dugan, Gen. Supt. of Mines,
International Smelting & Refining Co.,
Kearns Building,
Salt Lake City, Utah.

Dear Jack:

I have read your letter to Weed dated June 14th, and I have also examined the 200-scale map of the Walker Mine.

I note nothing has been done toward drifting southerly from 1017 to cut the ore disclosed in drill hole #74. We should either extend 1078-S southerly, or put in additional drill holes to check the showing in hole 74.

I recommend also that a drift be started south from crosscut 932-C to develop the ore showing in drill hole #49.

During my last visit to the Walker Mine, I urged that these two pieces of work be carried out.

Yours very truly,

RENO H. SALES

RHS:F
Air Mail
CC: Mr. C. E. Weed.
Mr. J. O. Elton.
Mr. Tom Lyon.
Mr. H. M. Hartmann.

INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer
REG U.S. PAT. OFF.

J. F. DUGAN
General Supt. of Mines

June 17, 1941

Walker

Mr. Reno H. Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Reno:

This will acknowledge your letter of June 16, 1941, with reference to the drift south from 1017 to cut the ore disclosed in Diamond Drill Hole #74; also the one from 932-C to develop the ore showing in Drill Hole #49.

The reason we have not started drifting southerly from 1017 is that we have been concentrating all our efforts on pushing 1017 north as rapidly as possible to reach the downward extension of the ore developed in the 900 South Piute.

On the map you will note diamond drill hole #84. This was drilled at a 45° angle upward and cut the ore found in hole #75. We plan, as soon as convenient, to run a small raise from 1077B Crosscut to cut this ore, and if it amounts to anything will drift south on it for a short distance. If it shows indications of amounting to anything we can then drift south from 1078B.

A drift south was started last week from Crosscut 932-C to develop the ore showing in drill hole #49. Hartmann says they are following the best streak which assays 1% copper and .03 oz. gold, but that it does not look any too favorable.

Yours very truly,

John F. Dugan

John F. Dugan.

JFD:H
cc:Messrs. Weed
Elton
Lyon
Hartmann

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June 19, 1941.

Mr. J. F. Dugan,
Gen. Supt. of Mines,
International Smelting & Refining Co.,
818 Kearns Bldg.,
Salt Lake City , Utah.

Dear Jack:

In connection with your letter of May 31st, I neglected to discuss with Weed the subject of further work on the Walker 1200 level. I will take it up with him when he arrives here Saturday, and advise you.

Possibly you have already made a decision inthe matter, as to salvaging the rails, etc. At any rate, I will let you know as early as possible.

I have received also your letter of June 17th, advising me of the more recent developments at the Walker.

Yours very truly,

RHS:KM

RENO H. SALES

F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

June 21, 1941

SUBJECT:

Mr. H. M. Hartmann, Manager,
Walker Mine,
Walkermine, Calif.

Dear Henry:

With reference to our telephone conversation Friday, at which time you said no ore was found in 1017, but that it was far enough north to do further diamond drilling, and that you intended driving a short crosscut to the west 100 feet north of 1080B crosscut for such purpose.

I talked with Tom Lyon, and we both think that the first hole should be drilled north 45° west, parallel to #90 hole from 1080B crosscut. Information obtained from this hole will determine the course of the other holes if we decide to drill them.

I think a hole drilled in the hanging normal to the dip would be a good bet, and also give us quick information as to whether or not the ore might be to the east of us. We do not think, however, a hole due north will give us enough information, for we will have to drive 1017 north again as we are just reaching interesting territory.

Mr. Weed and Mr. Sales are in Butte, and I am sending them a copy of this letter, so if they have any suggestions as to further drilling they can make them.

Yours very truly,

John F. Dugan

John F. Dugan.

JFD:H
cc:RHS
TL
CEW

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FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

June 21, 1941

H. M. HARTMANN, MANAGER

Mr. Tom Lyon, Chief Geologist
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Lyon:

I am sending you a Geological Composite of the 900-1000 Levels of the Piute Orebody, as well as a sketch through Diamond Drill Holes No. 84 and 88A, and a sketch of 9470DS.

The Composite shows all workings and Diamond Drill Holes todate, as well as five proposed Diamond Drill Holes. A discussion of the work done and being done, appears below.

On the 900 Level: Work on 903BDS has temporarily been suspended, in order to drive 9490DS to prepare block for stoping. This drift is to follow the footwall under Diamond Drill Holes No. 55, 58, and 63 and will hole back into 903BDS. Whenever it is convenient, a slab round is taken in 903BDS, to get and prospect ore shown on the hanging wall side of the drift.

On the 1000 Level: The main heading, 1017, is being driven ahead with crosscuts and Diamond Drill Holes every 80 or 100 feet. Outside of a few sulfide specks, there has been no mineralization in the 1017. There were, however, some 6"-2' veins of quartz, plus disseminated chalcopyrite, found in 1079B and 1080BxcW, and Diamond Drill Holes from 1079, showed a small mineralized zone in that area.

Diamond Drill Holes Completed: Hole No. 84 and 88A were up holes, driven to check mineralization found in Holes No. 74 and 75. A five foot vein was found, which carried plus-minus 1.75% Cu and high gold. The assays of these holes can be found on accompanying sketch.

Hole No. 85 was driven from 1079BxcW, to peg the fault and to find if the mineralization from 1078BDN came any further North. A good mineralized zone was found to extend from the collar to the fault, with the rest of the hole a blank.

Holes No. 86 and 87 were then driven to the fault, to check the vein as to assay value and width. The results were favorable, but Hole No. 89, driven from 1080BxcW, showed a complete blank.

Hole No. 90, from 1080BxcW at an angle of plus-minus 45 degrees, to Hole No. 89, also showed no ore.

Mr. Tom Lyon, Chief Geologist
Sheet 2.

Core assays of the ore in the above holes, appear below.

Hole No.	Footage	% Cu	Oz.Ag.	Oz.Au.
85	0-7	0.65	Tr.	Nil
	7-15	1.65	0.30	0.04
86	0-5	0.15	Tr.	Nil
	5-10	0.75	Tr.	Nil
	10-14	0.55	Tr.	Nil
	14-19	3.95	0.50	0.24
	19-24	1.70	0.36	0.17
	24-28	1.25	0.26	0.05
87	0-7	0.60	Tr.	Nil
	7-11	1.55	0.22	0.05
	11-15	1.70	0.30	0.11
	15-20	0.60	0.15	0.03
	20-23	1.70	0.33	0.10

Proposed Diamond Drilling: The ore so far encountered on the 1000 Level, seems to be in isolated lenses, that angle to the fault and rake toward the South. A somewhat similar pattern appears on the South end of 903BDS. More Diamond Drill holes than usual are necessary to prospect this type of deposit. The following holes are the tenative holes, layed out after a discussion with the Operating Department.

Hole 91, to be driven from 1081BxcW, to check the decided swing in the footwall shown in Hole No. 90 and to prospect for possible mineralization.

Hole No. 92 will be an up hole (plus-minus 58 degrees), approximately normal to the footwall fault. As we have done no prospecting in the hanging wall, I believe this Hole necessary to check any possibility of the ore raking over the top of the drift. This Hole should be driven at least 50 to 60 feet.

Hole No. 93 will angle plus-minus 45 degrees, to Hole No. 91 and its length will be governed largely by information obtained in that Hole. This Hole might give us some indication as to mineralized zones lying ahead and missed by Hole No. 91. I realize that perhaps Hole No. 91, if angled slightly, could possibly suffice for both Holes No. 91 and 93, but we could miss mineralized zones.

Hole No. 94 is a hole to be driven parallel to 1017DN. This Hole has been discussed by Mr. Hartmann and Mr. Dugan, and while it is still tenative and both realize its duplication of information obtained in 1017, they believe it would facilitate the driving of 1017, if they knew in advance what they might encounter.

Hole No. 95 is a proposed hole to be driven from 1077B, to check information obtained from Holes No. 74, 75, 84, and 88A, in line with Mr. Sales' letter of June 16th. At the present time, there is no way of drifting South without discontinuing work on the main heading, due to operating difficulties.

Mr. Tom Lyon, Chief Geologist
Sheet 3.

In the North Piute (Red) Orebody, 9470DS has been started South from 932xcE, to develop ore shown in Drill Hole No. 49, as Mr. Sales recommended. This drift will swing and be driven approximately due South. Crosscuts will be driven at intervals, to check for mineralization. The present face, shows one foot of good vein, with sheared chloritized schist, plus some mineralization throughout the face.

Very truly yours,

VRC:DM

Virgil R. Chamberlain
Chief Geologist

cc - Mr. Sales
Mr. Dugan

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ANACONDA COPPER MINING COMPANY

25 Broadway

New York

OFFICE OF THE
GENERAL MANAGER OF MINES

June 24, 1941.

Mr. Tom Lyon, Chief Geologist,
International Smelting & Refining Co.,
Kearns Building,
Salt Lake City, Utah.

Dear Sir:

In connection with your letter of May 12th, transmitting to this office Walker mine notes for the period October, 1940, through March, 1941, for posting on Mr. Sales' maps:

Mr. Heil, who does the posting of these maps, called my attention to the fact that we do not have a map of the 1200 level. Further, that there is a note attached to the last map of this set which states that the 1200 level map will be sent as soon as it is made up. I have looked through the map case and can find no such map.

Will you please let me know if such a map has been sent to New York. If it has not, there is no great need of it until the fall.

Yours respectfully,

Wm Fausak

Sec'y to C. E. WEED

F.
CC: Mr. Sales.

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

June 26, 1941

Mr. Reno H. Sales, Chief Geologist
Anaconda Copper Mining Company
Butte, Montana

Dear Reno:

Attached is a copy of a letter from Hartmann regarding future diamond drilling at Walker.

If you have any work contemplated, we should like to have it as soon as possible for the blast hole drilling is about cleaned up and, at the present time, we hardly have enough work to keep one machine going.

Yours very truly,

John F. Dugan

JFD:MH
Enc.
cc CEW

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WALKER MINING COMPANY

June 24, 1941

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Jack: SUBJECT: Drilling in 1017

With reference to your letter of the 21st, in connection with the drilling in 1017, we will do as you suggested. I am wondering whether it is possible for you to give me soon, a general idea of just what drilling might be contemplated in the near future. When we were doing a large amount of drilling of blast holes, we could always pull a crew off from one of these machines and do prospect work. However, as I have written you, the blast hole drilling is about a thing of the past, at least for the immediate future and if I could line up the prospect hole drilling that might be contemplated in the near future, it would help both McClintock and ourselves very much.

Very truly yours,

H. M. Hartmann

HMH:DM

F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

June 28, 1941

SUBJECT: WALKER MINING COMPANY
DIAMOND DRILLING

Mr. H. M. Hartmann, Manager,
Walker Mining Company,
Walkermine, California.

Dear Sir:

This morning, Mr. Sales, Mr. Lyon and myself discussed the future Diamond Drilling at Walker. Attached is copy of Mr. Sales' letter which is self-explanatory.

One reason for the down holes at minus 65° from 1079B and 1081C crosscuts, is that Reno thinks there is a possibility of some other faulting which has complicated matters.

You will note that Reno recommends that we drive 932C crosscut on a course N.55° E. for 150 feet into the hangingwall. We will then cut a Diamond Drill Station and drill to prospect for the downward extension of the orebody developed by 934C Drift. You can arrange your work so you can drive this crosscut in connection with 949C Drift South.

Yours very truly,

John F. Dugan

John F. Dugan

CC: C.E.Weed
Tom Lyon
Wm.Warren
Reno Sales

Enc.

JFD:fgc

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Salt Lake City, Utah
June 28, 1941

Mr. J. F. Dugan, Gen. Supt. of Mines
International Smelting and Refining Company
O f f i c e s

WALKER MINE

Dear Jack:

Confirming our conference this morning with Tom Lyon on the Walker.

We agreed on the following work to be prosecuted at the mine, named in order of preference:

(1) After completing Hole 93, drill No. 95 horizontal from near the south face of 1077 E crosscut, as shown on the sketch accompanying Chamberlain's letter dated June 21.

(2) Drill down hole at -65°, course due East, from east face crosscut 1079 E. If hole finds no ore above the fault, continue to 25-50 feet below the footwall of fault.

(3) Drill down hole -65°, course due East, from drill station 1081 C.

(4) It was agreed that we should prospect the downward continuation of the ore body developed by 934 C drift. To do this it will be necessary to extend 932 C crosscut N 55° E for 150 feet. At 150 feet a station should be prepared to allow drilling downward to cut the dip of the ore body. The layout of these holes will be given when the station is ready for drilling.

RHS:P
cc: Mr. C. E. Weed
Mr. Tom Lyon
Mr. H.M. Hartmann

Very truly yours,

Reno H. Sales

C
O
P
Y

WALKER MINING COMPANY

June 30, 1941

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Jack: RE: 1200 Level

I am wondering if you have heard any more in reply to your letter of May 31st to Reno Sales, regarding the possible further development work on the 1200 Level. As you realize, we are tying up a good deal of equipment on this Level, which could be used elsewhere in the Mine and if this were available, it would save us in some instances, purchasing new material.

It would be very nice and helpful, and save us money, if Mr. Weed and Mr. Sales could decide shortly whether there was any use of keeping this Level open or not.

Very truly yours,

H. M. Hartmann

HMH:DM

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

July 12, 1941

Mr. Reno H. Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Walker

Dear Reno:

This will acknowledge receipt of your letter of the 9th inst., relative to the abandonment of the 1200 level at the Walker Mine.

I have written Mr.Hartmann instructing him to discontinue all work on this level and to salvage all materials and equipment.

Yours very truly,

John F. Dugan

John F. Dugan

CC:C.E.W.

JFD:fgc

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

July 10, 1941

Mr. Reno Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Reno:

Attached is a copy of letter from Mr.Hartmann and a sketch of the 900 North Piute.

According to Henry, it will be easier to cross-cut Northeast from 947 instead of trying to drive 932 ahead. As an alternative,he proposed a drift Southeast from the end of 934C. This would reach the same objective for the Diamond Drill set-up to prospect below the 900 level, and I think this drift can be driven much cheaper. It is better from an operating standpoint, as there is more room for cars. If this meets with your approval, we will drive it in preference to the one from 947C.

Mr.Hartmann told me yesterday that the breast of 947C was in ore again.

Yours very truly,

John F. Dugan

John F. Dugan

CC:C.E.W.
Tom Lyon

JFD:fgc

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F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

July 9, 1941

SUBJECT: WALKER MINING COMPANY DEVELOPMENT

Mr. H. M. Hartmann, Manager,
Walker Mining Company,
Walkermine, California.

Dear Henry:

I talked with Mr. Weed yesterday relative to further development in 1017 Drift. He says to drive 1017 Drift 150 feet north of the last crosscut from which Diamond Drill Hole #95 was drilled. The Breast will then be at coordinate 19,020 North, or approximately in line with 926 C crosscut on the 900 level. We will then Diamond Drill the footwall again, provided no ore is found in the meantime.

In regard to the raise in the footwall from 1017 to the 900 level for an ore pass, we will defer this for the present until we have more information regarding the downward extension of the ore.

Continue 1079 B crosscut West to develop the ore found in Diamond Drill Holes #86 and #87. If the mineralization amounts to anything, we can raise through to the 900 level.

Yours very truly,

John F. Dugan

CC: C.E.W.
R.Sales
T.Lyon

JFD:fgc

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Walker

July 9, 1941.

Mr. John F. Dugan,
Gen. Supt. of Mines,
International Smelting & Refining Co.,
818 Kearns Bldg.,
Salt Lake City, Utah.

Dear Jack:

I have talked with Weed about the 1200 Walker. We concur in the opinion of yourself and Hartmann, that this level should be temporarily abandoned. This means that you may pull out such tracks, pipes, etc., as is deemed advisable, and also stop pumping from that level.

Yours very truly,

RHS:KM

cc: CEW
JOE
TL
HMH

RENO H. SALES

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer
REG. U.S. PAT. OFF.

J. F. DUGAN
General Supt. of Mines

July 3, 1941

Mr. R. H. Sales, Chief Geologist
Anaconda Copper Mining Company
Butte, Montana

Dear Reno:

Attached is a copy of a letter which I have just received from Mr. Hartmann regarding further development on the 1200 level at Walker.

If you remember, I wrote you about this while you were in New York, and on your arrival in Salt Lake you told me you had not had an opportunity to talk it over with Mr. Weed.

I would appreciate your early decision as to development work, for if no further work is contemplated on the 1200, we will salvage the equipment and use it elsewhere.

Yours very truly,

John F. Dugan

JFD:MH
Enc.
cc CEW

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F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

July 3, 1941

SUBJECT:

Mr. H. M. Hartmann, Manager
Walker Mining Company
Walkermine, California

Dear Henry:

This letter is in reply to your letter regarding the 1200 level.

I talked to Mr. Sales while on our Copper Canyon trip and he said he was going to discuss it further with Mr. Weed before arriving at a decision.

Yours very truly,

John F. Dugan

John F. Dugan

JFD:MH
cc RHS
cc CEW

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Form 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

July 2, 1941

H. M. HARTMANN, MANAGER

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Jack: RE: Walker Mine Diamond Drilling

I have your letters of June 28th and 29th, regarding the Diamond Drilling.

Enclosed is a sketch of the North End of 1017. This shows the location of the proposed Holes, as outlined in Mr. Sales' letter of the 28th.

Hole No. 93	Now drilling.
Hole No. 95	Next to be drilled.
Hole No. 98	From 1079B.
Hole No. 99	From Drill Station 1081.
Hole No. 102	From 1076B. (Your letter of June 29th.)

The numbers will be the numbers of the Holes as they are drilled, so this map will act as a key. I appreciate this line-up in advance, as it certainly helps push the work and saves money when we have an outline for work ahead.

I am also enclosing three sketches of 9320 Crosscut and surrounding area. It is practically impossible to push 9320 ahead. When we started 9470, the ground at the intersection of 9320 and 9340, got very heavy and we had to stop and timber the whole area. Our vent pipe, water pipes, and power line cable all come through here. Also the back switch into 9470. Driving the crosscut ahead, would shut the North End down for a week. This was about the time lost here in starting 9470. However, by continuing 9470 ahead, which we will do in any event, we can install a back switch and reach the same objective, as shown on the sketch, without interferring with work in the North End.

A drift could be extended without any difficulty from the end of 9340.

Unless I hear from you, we will continue ahead with 9470 and plan driving into the hanging wall, as shown on the sketch.

Regarding 9470. We re-sampled 9320 Crosscut and started 9470 on the best streak. Two feet of 1.3% Cu. This streak showed more or less mineralization until the 28th of June, when the face was pure waste. We therefore started to swing the drift to the West and will drive it as shown by the dotted lines, to where the ore is indicated in Drill Hole No. 49.

In reference to your letter of June 25th, it would appear that Holes No. 95 and 102 are, at least for the present, taking the place of attempting to get out in this area from 1077B.

Mr. John F. Dugan, Gen. Supt. of Mines

RE: Walker Mine Diamond Drilling

Sheet 2.

Do you still wish to drill a hole in the hanging wall normal to the dip, as mentioned in your letter of June 21st.

Very truly yours,

H. M. Hartmann

H. M. Hartmann

HMH:DM

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FORM 396 6-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

July 15, 1941

H. M. HARTMANN, MANAGER

Walker

Mr. Tom Lyon, Chief Geologist
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Lyon:

Please find enclosed, geological sketches and classification table for development during the Month of June, prints showing in yellow, mining operations with respect to orebodies, and a report on Diamond Drilling for the Month. The following is a resume of the classification table and of Prospect Diamond Drilling.

South, Central & North Orebodies: None.

712 Orebody:

406DDS is being extended to develop the ore above the South end of 517BDS, along which 593BRs was extended. This heading has been stopped for the present.

408DxcE&W were driven from 406DDS to prospect the vein. No mineralization exposed.

595BRs is a finger raise being driven in preparation for mining 517C Stope.

596HDN&S were driven to serve as a grizzly bypass for 517C Stope.

624VRs is a stope raise driven in 517C Stope to serve as an ore pass for 517C St.

678EsDN is a development heading driven to prospect the sub-level of the 517 footwall fissure zone.

679EsxcE is being driven from 678EsDN to prospect the hanging wall of the vein. Specks of sulfides, with low grade white quartz exposed.

735CHN was driven to prepare a small hanging wall stope, averaging about 3 feet in width, in the 705B Block of ground. This heading has been stopped since the vein pinched to 1 ft. in width.

Piute Orebody:

903BDS is the main level heading being driven to determine the southerly limits of the ore. This heading has been stopped for the time being.

Piute Orebody (Cont'd.)

946CDN is being driven from the top of 941CRs, to serve as a slusherway for 915 Block and has holed into 915A Stope.

946CDS is being driven from the top of 941CRs and will provide room for a slusher station.

949CDS is being driven from 903BDS to prospect and open up the footwall of the vein for stoping. It will be continued South until it holes into 903BDS.

1017DN is being extended to connect 706AW with the Piute Orebody. As yet, no mineralization has been encountered. 1079BxcW is now being extended to prospect the mineralization exposed in D. D. Holes No. 85, 86, and 87.

1082BxcE&W were driven from 1017DN to provide room for a drill station.

North Piute Development:

939CDN is the main level heading being driven to connect with the mineralization exposed in Surface Diamond Drill Hole No. 57. This heading has been stopped for the time being.

942CRs is a development raise at the North end of the Orebody, to determine the upward extension of the ore.

947CDS is the main level heading being driven from 934CDN to determine the Southward extension of the Orebody. The face shows good disseminated Cu Fe S2 in black, schisty quartz.

948CxcE&W are being driven from 940CRs to determine the mining width of the vein. The East crosscut shows streaks of good ore, separated by 6 or 7 feet of waste. The streaks of ore become better and are closer together upon approaching the hanging wall. Some specks of native copper were encountered in the West crosscut.

Prospect Diamond Drilling:

Hole No. 88 was drilled up at 45 degrees from 1078BDS and was lost at 34 feet. Hole No. 88A was drilled up at 48 degrees to take its place. 0-3 feet assayed 1.30% Cu. The shear zone was encountered from approximately 12 to 19 feet. Mineralized zone up to 47 feet. From 47 to 51 feet, core assayed 1.90% Cu. Hole completed at 61 feet.

Hole No. 89 was drilled due West from 1080CxcW, for a distance of 58 feet. Fault encountered from 54 to 57 feet. Entire hole was barren of mineral.

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Mr. Tom Lyon, Chief Geologist
Sheet 3.

Prospect Diamond Drilling (Cont'd.)

Hole No. 90 was drilled N 51 degrees W from 1080CxcW for a distance of 115 feet. Fault encountered from 75 to 90 feet. Entire hole was barren of mineral.

Hole No. 93 was drilled Northwest from 1082BxcW to 77 feet and has since been completed at 159 feet. Fault encountered from 83 to 89 feet. Very little mineralization exposed for length of hole.

Hole No. 96 was drilled up at 44 degrees, S. 81 degrees E. from 939CDN for a distance of 60 feet. From 41 to 45 feet the core assayed 1.85% Cu, from 45 to 50 feet, 2.00% Cu, and from 50 to 53 feet, core assayed 4.20% Cu.

Hole No. 97 was drilled up at 44 degrees, S. 42 degrees E. from 939CDN, for a distance of 50 feet and has since been completed at 72 feet. From 44 to 50 feet, the core assayed 1.60% Cu, and from 50 to 53 feet, core assayed 2.65% Cu. Holes No. 96 and 97 were drilled to determine the upward extension of the ore on the North end of the North Piute Orebody.

Very truly yours,

E. J. Lomnes

E. J. Lomnes
Chief Engineer

EJL:DM

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WALKER MINING COMPANY

DIAMOND DRILL REPORT June 1 - 15, 1941, Incl.

855B Stope

Hole No.	Length
808A-1	21
808A-2	16
815A	25
816A	35
800A	65
801A	46
821A	28
820A	26
818A	37
[illegible]7A	27
[illegible]3A	27
822A	19
824A	19
825A	19
826A	27
808A	30
812A	28
813A	24
[illegible]8A-3	20
[illegible]A-4	20
810A	60
809A	65
808A-5	24
807A	50
805A	16
804A	45
[illegible]2A	20
[illegible]3A-1	22
Total	861

900 Level Pillars

Hole No.	Length	Hole No.	Length	Hole No.	Length
956D	14	912D	19	996C	40
924D	17	915C	34	946D	59
925D	11	910D	35	912C	37
957D	18	909D	35	945D	50
958D	21	942D	33	997C	48
923D	38	944D-1	42	944D	43
922D	45	907D	22	911C	33
950D-1	20	943D-1	37	943D	37
921D	23	993C	58	952D	10
949D-1	45	939D-1	30	998C	42
908D	29	940D-1	31	937D	20
948D-1	23	916C	22	999C	37
917D	22	941D-1	32	910C	28
915D	14	957C	38	909C	43
946D-1	50	994C	53	938D	21
947D-1	33	917C	19	x 900D 46	32
918D	20	918C	22	940D	31
914D	21	914C	40	939D	20
916D	26	950D	21	x 941D 31	20
913D	32	913C	42	x 908C 30	10
919D	23	995C	42	951D	10
920D	17	948D	22	953D	16
945D-1	50	949D	27	xx 955D	10
911D	36	947D	38	Total	2139

GRAND TOTAL FOOTAGE 3,000

3,000 ft. of blast holes at $1.47 per foot = $4,410.00

x Includes footage already paid for
xx Hole not finished at end of period

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WALKER MINING COMPANY

Sheet 2. DIAMOND DRILL REPORT June 1 - 15, 1941, Incl.

PROSPECT HOLES

Piute Orebody:	Hole No. 90	0-115 ft @ $1.25 per ft (1080BxcW)		= $ 143.75
	Hole No. 89	0- 59 ft @ $1.25 per ft (1080BxcW)		73.75
1078BDS	Hole No. 88A	0- 23 ft @ one half price, or 12 ft. @ $1.25 per ft	= $15.00	
		23- 34 ft @ no cost	------	
		34- 61 ft @ $1.25 per ft	33.75	
		Total - 39 ft @ $1.25 per ft	$48.75	48.75
	Hole No. 88	0- 34 ft @ 1.25 per ft		42.50
		Total - 247 ft @ $1.25 per ft		$ 308.75

MISCELLANEOUS

Piute Orebody:	Blast Holes	30 hours on Walker Accounts (16 hrs. help load holes, 2 hrs. blast delay, 2 hrs. water delay, 10 hrs. mucking), @ $1.439 per hour	= $ 43.17
Main Orebody:		89 hours on Walker Accounts (16 hrs. blasting delay, 30 hrs. help load holes, 16 hrs. lay pipe, 20 hrs. timbering & mucking, 7 hrs. water delay) @ $1.439 per hour	128.07
		Total - 119 hours on Walker Accounts @ $1.439	$ 171.24

RECAPITULATION

Blast Holes:	Piute Orebody:	861 ft @ $1.47 per ft.	= $1,265.67
	Main Orebody:	2139 ft @ $1.47 per ft.	3,144.33
Prospect Holes:	Piute Orebody:	247 ft @ $1.25 per ft.	308.75
Miscellaneous:	Piute Orebody:	30 hrs. on Walker Accounts at $1.439 per hr.	43.17
	Main Orebody:	89 hrs. on Walker Accounts at $1.439 per hr.	128.07
		TOTAL	$4,889.99

Approved.
H. B. Hartmann

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WALKER MINING COMPANY

DIAMOND DRILL REPORT

June 16 - 30, 1941, Inclusive

Main OB 820A-920A St. Pillar		Main OB ¢00L (S) Pillars		699ERs(712 OB)		845A St. (POB)	
Hole No.	Length	Hole No.	Length	Hole No.	Length	Hole No.	Length
132A	25	934D	24	600A	71	804A	13
104A	23	xx969D	3	601A	66	803A	17
131A	15	968D	36	602A	48	802A	25
106A	18	933D	31	603A	31	801A	32
105A	20	926D	25	604A	25	800A	40
114A	17	932D	17	605A	14	805A	9
107A	21	964D	5	606A	10	810A	13
143A	12	965D	5	607A	10	809A	15
130A	16	966D	8	608A	9	808A	18
134A	28	970D	39	Total	284	807A	29
115A	47	927D	34			814A	17
[illegible]A	36	954D	23			813A	26
135A	41	928D	31			812A	32
117A	35	930D	23			Total	286
136A	31	929D	37				
118A	33	x955D 16	6				
120A	23	931D	19				
119A	20	xx967D	17				
141A	17	Total	383				
142A	24						
[illegible]A	29						
[illegible]2A	28						
123A	18						
139A	20						
138A	13						
137A	18						
140A	12						
Total	640						

Grand Total 1,593 feet

1,593 ft. of blast holes at $1.47 per foot = $2,341.71

x Total length of hole (includes footage already paid for

xx Hole not finished at end of period

PROSPECT HOLES

Red Orebody	939BDN	Hole No. 96	0 - 60 ft. @ $1.25 per foot	= $ 75.00
		Hole No. 97	0 - 50 ft. @ $1.25 per foot	62.50
Piute Orebody	1082BxcW	Hole No. 93	0 - 77 ft. @ $1.25 per foot	96.25
		Total	187 ft. @ $1.25 per foot	$ 233.75

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WALKER MINING COMPANY
DIAMOND DRILL REPORT
June 16 - 30, 1941
Sheet 2.

MISCELLANEOUS

Piute Orebody	9 hours on Walker Accounts, (8 hrs. loading holes, 1 hr. no water), at $1.439 per hour	= $ 12.95
Main Orebody	40 hours on Walker Accounts, (20 hrs. mucking after blast, 20 hrs. tearing down in middle of shift as a result of caving ground), at $1.439 per hour	57.56
	Total - 49 hrs. on Walker Accounts at $1.439 per hour	$ 70.51

RECAPITULATION (PERIOD)

Blast Holes	Main Orebody	1023 ft. at $1.47 per foot	= $1,503.81
	712 Orebody	284 ft. @ $1.47 per foot	417.48
	Piute Orebody	286 ft. at $1.47 per foot	420.42
Prospect Holes	Red Orebody	110 ft. at $1.25 per foot	137.50
	Piute Orebody	77 ft. at $1.25 per foot	96.25
Miscellaneous	Piute Orebody	9 hours on Walker Accounts at $1.439 per hr.	12.95
	Main Orebody	40 hours on Walker Accounts at $1.439 per hr.	57.56
		Total	$2,645.97

RECAPITULATION (MONTH)

Blast Holes	Main Orebody	3162 ft. at $1.47 per ft.	= $4,648.14
	Piute Orebody	1147 ft. at $1.47 per ft.	1,686.09
	712 Orebody	284 ft. at $1.47 per ft.	417.48
Prospect Holes	Piute Orebody	324 ft at $1.25 per ft.	405.00
	Red Orebody	110 ft. at $1.25 per ft.	137.50
Miscellaneous	Main Orebody	129 hrs. on Walker Accounts at $1.439 per hr.	185.63
	Piute Orebody	39 hrs. on Walker Accounts at $1.439 per hr.	56.12
		TOTAL	$7,535.96

approved.
H. W. Hartman

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WALKER MINING COMPANY

DEVELOPMENT PROGRESS - JUNE, 1941

Orebody	Heading	Size	Ft. Adv.	Total Advance	Feet Ore	% Cu	Oz. Ag	Oz. Au	Feet Waste
712	(D) 406DDS	7x5	9	42					9
	(D) 408DxcE	7x5	9	19					9
	(D) 408DxcW	7x5	15	15					15
	(M) 595BRs	7x5	32	32	32	0.62	0.53	0.004	
	(M) 596BDN	7x4½	34	34	3	1.30	0.45	0.005	31
	(M) 596BDS	7x4	19	19					19
	(M) 624FRs	12x7	38	38	38	0.71	0.17	Tr.	
	(D) 678EsDN	7x5½	42	128	42	1.12	0.23	0.025	
	(D) 679EsxcE	7x4	4	4					4
	(M) 735CDN	9½x8½	71	313	71	0.78	0.39	0.016	
	Total		273		186	0.82	0.33	0.013	87
Piute	(D) 903EDS	9x7	17	1252	17	0.66	0.82	0.030	
	(M) 946CDN	12x7	33	41	33	0.80	0.10	0.004	
	(M) 946CDS	10x7	5	5	5	0.60	Tr.	Nil	
	(M) 949CDS	9x7	103	103	103	1.41	0.39	0.024	
	(D) 1017DN	9½x9	117	5712					117
	(D) 1082BxcE	7x5	7	7					7
	(D) 1082BxcW	7x5	20	20					20
	Total		302		158	1.18	0.36	0.020	144
Red	(D) 939CDN	9x7	23	245					23
	(M) 942CRs	15x7	19	41	19	0.97	0.12	0.014	
	(D) 947CDS	9x6	50	50	6	1.39	0.06	0.003	44
	(D) 948CxcE	7x5	37	37	37	1.00	0.04	0.005	
	(D) 948CxcW	7x5	30	30	5	0.92	0.02	0.002	25
	Total		159		67	1.02	0.06	0.007	92

RECAPITULATION

MINING	354	304	0.98	0.32	0.013	50
DEVELOPMENT	380	107	1.01	0.15	0.017	273
GRAND TOTAL	734	411	0.99	0.30	0.015	323

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MONTHLY ANALYSIS

WALKER MINING COMPANY

JUNE 1 to 30, 1941

PLACE	ASSAY AVERAGE WIDTH	ASSAY AVERAGE CU.%	MINING AVERAGE WIDTH	MINING AVERAGE CU.%	FT. WASTE	FT. OVER-BREAK	TONS WASTE BKG.	TONS WASTE SORT.	TONS EXC.	MIN. or DEV.		REMARKS
									DRIFTS			
406 DDS			5.0	0.33					24	D	*	24 tons produced as ore.
596 BDN			4.9	0.53					66	M	*	66 tons produced as ore.
596 BDS			4.7	0.59					41	M	*	41 tons produced as ore.
678 EDN	3.6	1.36	5.7	1.12	2.1	2.1			130	M		
735 CDN	1.9	2.19	9.0	0.92					441	M	*	230 tons @ 1.00% broken 1st period. 441 prod. as ore.
903 BDS	3.8	2.69	9.8	1.20	6.0	6.0			123	D		
939 CDN			7.0	0.20					109	D	*	109 tons produced as ore.
946 CDN	1.5	2.20	16.8	0.75					326	M	*	326 tons produced as ore.
946 CDS			10.0	0.60					24	M	*	24 tons produced.
947 CDS	1.2	1.60	6.9	0.85					281	D	*	281 tons produced as ore.
949 CDS	4.8	2.63	8.7	1.67	3.9	3.9			253	M		Also x-cuts structure. See below under 'CROSSCUTS'.
1017 DN	Waste						887		887	D	*	Hauled as waste.
TOTAL:	4.18	2.24	7.85	1.41	3.67	3.67	887		2705			
									CROSSCUTS *			
408 DxcE	Waste						24		24	D		Hauled as waste.
408 DxcW	Waste						40		40	D		Hauled as waste.
517 BDSss			9.0	0.50					49	M		Produced as ore; x-cuts 9' of structure.
679 BxcE			3.0	0.45					9	M		Produced as ore.
948 CxcE	7.8	2.82	26.0	1.06					119	D		19 tons bkg. & prod. @ 0.20 1st.period. X-cuts 26' of struct. Several narrow higrade stringers in assay wd.
948 CxcW	2.0	2.01	5.3	0.92					91	D		12.3' struct. x-cut. 16 T @ 0.24% bkg. & prod. 1st.per
949 CDS	51.5	1.76	69.0	1.52					400	M		Crosscuts 69' of structure.
1082 BxcE	Waste						35		35	D		Hauled as waste.
1082 BxcW	Waste						123		123	D		Hauled as waste.
TOTAL:	15.10	1.86	24.27	1.36			222		890			
									RAISES			
595 BR	1.0	1.10	7.8	0.43					177	M	*	Produced as ore.
624 FR	1.7	1.28	8.2	0.71					142	M	*	Produced as ore.
942 CR	1.3	2.20	7.0	0.97					153	M	*	Produced as ore.
TOTAL:	1.30	1.20	7.62	0.69					472			

NOTE: Drifts and raises marked with an asterisk and all crosscuts are excluded from averages and report totals.

MONTHLY ANALYSIS

WALKER MINING COMPANY

JUNE 1 to 30, 1941

PLACE	ASSAY AVERAGE WIDTH	ASSAY AVERAGE CU.%	MINING AVERAGE WIDTH	MINING AVERAGE CU.%	FT. WASTE	FT. OVER-BREAK	TONS WASTE BKG.	TONS WASTE SORT.	TONS EXC.	MIN. or DEV.	REMARKS
									STOPES		
405 E							298		298	*	Waste fill. Excluded from average.
420 B	9.3	1.72	14.6	1.31	5.3	2.2			4632		Slice mined through center of 30'(?) vein. FW Ovbk.
517 C	1.5	1.22	6.6	0.62	5.1	5.1			247		South end of stope is all waste.
605 E	21.9	1.62	28.2	1.39	6.3	1.8			3416		FW & HW Ovbk. FW overbreak on north end of stope.
617 C	3.8	1.17	16.3	0.64	12.5	10.0			602		FW Ovbk. Narrow streak of ore. Stope finished.
617 D	17.0	2.04	28.0	1.86	11.0	6.0			1380		FW Ovbk.
705 E	8.5	1.49	8.5	1.49					1366		Slab mined from hangingwall. Stope finished.
740-760	13.9	1.73	13.9	1.73					829		Neither FW nor HW exposed.
845 C	4.4	1.69	8.1	1.31	3.7	3.7			1384		FW Ovbk. South end of stope is all waste.
855 C	19.0	1.01	19.0	1.01					1293		This width is average of back slab and adv. up vein.
865	5.1	1.49	7.6	1.07	2.5	1.6			1255		FW Ovbk.
915 C	2.7	1.87	8.3	1.13	5.6	5.6			1177		HW and FW Ovbk. on north end of stope.
945	15.8	2.16	41.0	1.01	25.2				635		Slot x-cuts vein. Waste is included.
945 A	28.5	1.49	39.0	1.45	10.5				434		Slot x-cuts 39' of vein. Waste is included.
946 A	3.6	1.97	7.7	1.27	4.1	3.6			424		Waste on FW & HW is included.
955 C	1.2	2.60	6.8	0.71	5.6	5.6			865		HW Ovbk. Slab mined from hangingwall.
1080 C	6.7	2.07	7.3	1.97	0.6	0.6			1342		HW Ovbk.
TOTAL:	8.39	1.66	12.44	1.33	4.05	2.61	298		21579		
									MINE TOTAL		
	8.23	1.67	12.27	1.33	4.04	2.64			24284		

July 12, 1941.

Mr. John F. Dugan,
Gen. Supt. of Mines,
International S. & R. Co.
818 Kearns Bldg.,
Salt Lake City, Utah.

Re: Walker Mine,
Plumas Co., Calif.

Dear Jack:

I have your letter of July 10th, also copy of Hartmann's letter of July 2nd, which concerns the extension of Crosscut 932, North Piute.

I took the matter up with Weed. We approve Hartmann's suggestion of the crosscut from 947C.

Yours very truly,

RHS:KM
cc: CEW
TL
HMH

RENO H. SALES

WALKER MINING COMPANY

DIAMOND DRILL BLAST HOLES

TONNAGE & COST REPORT, SIX MONTHS ENDING JUNE 30, 1941

MONTH	TONS BROKEN BY ESTIMATE	TONS PRODUCED ACTUAL	BREAKING COST	PRODUCTION COST	BREAKAGE COST/TON	PRODUCTION COST/TON
			630 STOPE PILLARS			
January	1,020	1,689	$1,176.41	$ 700.91	$1.15	$0.42
February	1,885	441	2,892.33	103.32	1.54	0.23
March	4,080	5,278	1,915.33	1,999.41	0.47	0.38
April	2,250	4,387	1,558.30	1,033.44	0.69	0.24
May	2,670	3,212	3,529.29	1,107.73	1.32	0.34
June	3,150	3,338	None	1,400.89	0.00	0.42
Total	15,055	18,345				
Average breaking cost per ton			$ 0.60			
Average production cost per ton			0.35			
Total cost per ton			0.95			
			830 STOPE			
March	1,258	1,164	$ 684.31	$ 666.23	$0.54	$0.57
April	150	974	125.37	753.56	0.84	0.77
May	1,350	1,205	709.18	820.57	0.53	0.68
June	1,225	735	598.34	419.76	0.49	0.57
Total	3,983	4,078				
Average breaking cost per ton			$ 0.53			
Average production cost per ton			0.66			
Total cost per ton			1.19			
			900 LEVEL PILLARS			
May	9,000	3,319	$6,751.02	$1,800.62	$0.75	$0.54
June	6,321	2,769	5,601.38	1,346.33	0.89	0.49
Total	15,321	6,088				
Average breaking cost per ton			$ 0.81			
Average production cost per ton			0.52			
Total cost per ton			1.33			
			640-740 STOPE PILLARS			
January	4,810	3,261	$4,758.37	$1,425.11	$0.99	$0.44
February	3,190	5,756	1,882.09	1,419.47	0.59	0.25
March		1,422		661.37		0.47
April		904		273.37		0.30
May		1,522		687.66		0.27
June		39		36.40		0.93
Total	8,000	9,032				
Average breaking cost per ton			$ 0.83			
Average production cost per ton			0.47			
Total cost per ton			1.30			
			920-920A STOPE PILLARS			
March	1,720	1,500	$2,508.20	$1,113.33	$1.46	$0.74
April	3,300	1,452	2,085.56	978.85	0.63	0.67
Total	5,020	2,952				
Average breaking cost per ton			$ 0.91			
Average production cost per ton			0.71			
Total cost per ton			1.62			

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WALKER MINING COMPANY

DIAMOND DRILL BLAST HOLES

TONNAGE & COST REPORT, SIX MONTHS ENDING JUNE 30, 1941

SHEET 2

EXPLANATORY NOTES

630 STOPE PILLARS

Diamond Drilling finished in this Stope. All muck but about 200 tons has been pulled. May breakage was underestimated.

830 STOPE

Diamond Drilling finished in this Stope, which is still producing. Breakage was apparently underestimated.

900 LEVEL PILLARS

Breakage cost in May due to cutting slot. Blasts in June probably are last that can be made, because of caving condition in stope above. Breakage underestimated, as Stope is still producing in August.

920 & 920A STOPE PILLARS

All rows and holes were not loaded, because Diamond Drill croes were sampled and grade of ore was too low to take in some places.

Total breaking cost per ton	$0.73
Total production cost per ton	0.46
Total cost per ton	1.19

NOTE: All total production costs in this report include Secondary Breakage Costs, which dome to fromm55% to 60% of the total production costs.

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WALKER MINING COMPANY

DIAMOND DRILL REPORT

July 1 - 15, 1941, Inclusive

845A Stope P.O.Bl		699ERs - 712 O.B.	
Hole No.	Length	Hole No.	Length
819A	19	617A	80
818A	21	609A	72
817A	20	610A	60
816A	16	611A	50
820A	15	612A	20
829A	27	613A	15
821A	16	614A	11
822A	16	615A	8
832A	15	x617A-1	55
833A	35	Total	371
834A	25		
835A	21		
832A-2	15		
831A	21		
x830A	4		
Total	286		

Grand Total - 657 feet

657 feet of blast holes at $1.47 per foot $ 965.79

x Hole not finished at end of Period.

PROSPECT HOLES

Piute Orebody	1082BxcW	Hole No. 93	77 - 159 ft. = 82 ft. @ $1.47 per ft.	$ 120.54
	1077BxcE	Hole No. 95	0 - 56 ft. = 56 ft. @ $1.47 per ft.	82.32
North Piute Orebody:				
	939CDN	Hole No. 97	50 - 72 ft. = 22 ft. @ $1.47 per ft.	32.34
	948CxcW	Hole No. 100	0 - 60 ft. = 60 ft. @ $1.47 per ft.	88.20
	948CxcW	Hole No. 101	0 - 66 ft. = 66 ft. @ $1.47 per ft.	97.02
				$ 420.42

MISCELLANEOUS

North Piute Orebody: Prospect Holes 948CxcW - Hole No. 100 - 10 hrs. on Walker Accounts @ $1.439 per hr. (2 hrs. blasting, 8 hrs. timber)	$ 14.39
Piute Orebody: Prospect Holes 1082BxcW - Hole No. 93 - 1 hr. on Walker Accounts @ $1.439 per hr. (1 hr. blasting)	1.44
Blast Holes 845A Stope - 1 hr. on Walker Accounts @ $1.439 per hr. (1 hr. mucking)	1.44
	$ 17.27

PERIOD RECAPITULATION

Blast Holes:	Piute Orebody 286 ft. holes @ $1.47 per foot	$ 420.42
	712 Orebody 371 ft. holes @ $1.47 per foot	545.37
Prospect Holes:	Piute Orebody 138 ft. holes @ $1.47 per foot	202.86
	North Piute Orebody 148 ft. holes @ $1.47 per foot	217.56
Miscellaneous:	North Piute Orebody - Prospect Holes - 10 hr. on Walker Accounts at $1.439 per hr.	14.39
	Piute Orebody - Prospect Holes - 1 hr. on Walker Accts. @ $1.439	1.44
	Piute Orebody - Blast Holes - 1 hr. on Walker Accts. @ $1.439	1.44
	TOTAL	$ 1,403.48

Approved E. J. Lomnes

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WALKER MINING COMPANY

DIAMOND DRILL REPORT — July 16 - 31, 1941, Inclusive

845A Stope Hole No.	P.O.B.	Length	699ERs Hole No.	712 O.B.	Length
xx 830A	4	16	xx 617A-1	55	25
835A-1		31	618A		66
836A		28	619A		52
837A		22	620A		28
838A		20	621A		28
700A		25	622A		16
701A		30	623A		12
702A		25	624A		11
703A		39	625A		11
704A		40	Total		249
705A		40			
x 706A		14			
Total		330			

Grand Total - 579 feet

579 feet of blast holes at $1.47 per foot — $ 851.13

xx Includes footage already paid for.
x Hole not finished at end of period.

PROSPECT HOLES

Piute Orebody:	1077BxcE	Hole #95	56 - 94 ft. = 38 ft. @ $1.47 per ft.		$ 55.86
	1079BxcE	Hole #98	0 - 103 ft. = 103 ft. @ $1.47 per ft.		151.41
	1017DN	Hole #104	0 - 137 ft. = 137 ft. @ $1.47 per ft.		201.39
		Hole #105	0 - 80 ft. = 80 ft. @ $1.47 per ft.		117.60
North Piute Orebody:	948CxcW	Hole #101	66 - 99 ft. = 33 ft. @ $1.47 per ft.		48.51
	939CDN	Hole #103	0 - 90 ft. = 90 ft. @ $1.47 per ft.		132.30
					$ 707.07

MISCELLANEOUS

North Piute Orebody:	Prospect Holes: 948CxcW Hole #101 - 9 hours on Walker Accounts (moving delay) at $1.439 per hr.	$ 12.95
Piute Orebody	Prospect Holes: 1079BxcE Hole #98 - 2 hours on Walker Accounts (no water) at $1.439 per hr.	2.88
Piute Orebody	Blast Holes: 845A Stope - 4 hours on Walker Accounts (3 hrs. timber, 1 hr. pipe) at $1.439 per hr.	5.76
712 Orebody	Blast Holes: 699ERs - 1 hour on Walker Accounts (blast delay) at $1.439 per hr.	1.44
		$ 23.03

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Sheet 2.

WALKER MINING COMPANY

DIAMOND DRILL REPORT

July 16 - 31, 1941, Incl.

RECAPITULATION (PERIOD)

Blast Holes:		
Piute Orebody	- 330 ft. @ $1.47 per foot	$ 485.10
712 Orebody	- 249 ft. @ $1.47 per foot	366.03
Prospect Holes:		
Piute Orebody	- 358 ft. @ $1.47 per foot	526.26
North Piute Orebody	- 123 ft. @ $1.47 per foot	180.81
Miscellaneous:		
Piute Orebody	- 6 hours on Walker Accounts @ $1.439 per hr.	8.63
North Piute Orebody	- 9 hours on Walker Accounts @ $1.439 per hr.	12.95
712 Orebody	- 1 hour on Walker Accounts @ $1.439 per hr.	1.44
	TOTAL	$1,581.22

RECAPITULATION (MONTH)

Blast Holes:		
Piute Orebody	- 616 ft. of holes at $1.47 per foot	$ 905.52
712 Orebody	- 620 ft. of holes at $1.47 per foot	911.40
Prospect Holes:		
Piute Orebody	- 496 ft. of holes @ $1.47 per foot	729.12
North Piute Orebody	- 271 ft. of holes @ $1.47 per foot	398.37
Miscellaneous:		
North Piute Orebody	- Prospect Holes - 19 hours on Walker Accounts, (2 hrs. blasting, 8 hrs. timber, 9 hrs. moving) at $1.439 per hr.	27.34
Piute Orebody	- Prospect Holes - 3 hours on Walker Accounts, (1 hr. blasting, 2 hrs. no water) @ $1.439 per hr.	4.32
	Blast Holes - 5 hours on Walker Accounts, (1 hr. mucking, 3 hr. timber, 1 hr. pipe) @ $1.439 per hr.	7.19
712 Orebody	- Blast Holes - 1 hour on Walker Accounts, (1 hr. blasting) @ $1.439 per hr.	1.44
	TOTAL	$2,984.70

NOTE: R. S. McClintock representative not at hand to check footage and miscellaneous time to be paid for.

Approved E. J. Lemmer

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WALKER MINING COMPANY

DEVELOPMENT PROGRESS - JULY, 1941

Orebody	Heading	Size	Ft. Adv.	Total Advance	Feet Ore	% Cu	Oz. Ag.	Oz. Au.	Feet Waste
712	(D) 325CRs	22x7	20	112	20	0.95	1.25	0.011	
	(D) 330CDN	6x4	6	6	6	2.31	0.73	0.015	
	(D) 330CDS	5x4	5	5	5	0.91	0.66	0.043	
	(M) 597BRs	6x5	13	13	6	1.03	0.54	0.019	7
	(M) 598BRs	5x5	14	14	14	1.35	0.51	0.015	
	(D) 678EsDN	7x5	58	186	58	0.81	0.23	0.008	
	(D) 679EsxcE	7x5	10	14					10
	(D) 679EsxcW	7x5	9	9					9
	(D) 723EDN	9½x8	43	43	43	0.72	0.10	0.005	
	Total		178		152	0.92	0.40	0.010	26
PIUTE	(M) 946CDN	11x10	10	51	10	0.66	0.32	0.012	
	(M) 949CDS	8½x7½	106	209	106	1.33	0.59	0.040	
	(D) 1017DN	9½x9	110	5822					110
	(D) 1079BxcW	7½x8	20	51	11	1.24	0.35	0.025	9
	(D) 1083BDS	7½x6½	23	23	23	1.45	0.61	0.038	
	(D) 1084BxcW	7x7	7	7					7
	Total		276		150	1.30	0.56	0.037	126
NORTH PIUTE (RED)	(M) 942CRs	18x7	24	65	24	0.89	0.18	0.007	
	(D) 947CDS	9x7	47	97	47	1.27	0.10	0.013	
	(D) 948CxcE	6½x5	21	58	18	1.18	0.20	0.031	3
	(D) 950CxcE	7x5	20	20	4	1.25	0.23	0.009	16
	(D) 950CxcW	7x5	5	5	5	1.93	0.35	0.025	
	(D) 951CxcE	7x5	33	33	33	1.70	0.38	0.090	
	(D) 952CxcE	9x7	41	41					41
	(D) 953CDS	7x6	21	21					21
	Total		212		131	1.32	0.21	0.034	81
	GRAND TOTAL		666		433	1.17	0.40	0.027	233

RECAPITULATION

MINING	167	160	1.21	0.50	0.030	7
DEVELOPMENT	499	273	1.15	0.34	0.024	226

MONTHLY SAMPLE ANALYSIS

WALKER MINING COMPANY

JULY 1 to 31, 1941

Place	Average Assay Width	Average Assay %Cu	Average Mining Width	Average Mining %Cu	Feet Waste	Feet Over-Break	Tons Waste Bkg.- Sort.	Tons Exc.	Min. or Dev.	Remarks
							DRIFTS			
330CDN	4.0	2.31	4.0	2.31				11	D	
330CDS	2.0	1.32	4.0	0.91	2.0	2.0		9	D	*9tons produced as ore.
678E$_s$DN	1.6	1.29	5.4	0.85	3.8	0.5		159	M	* 159 tons produced as ore.
723EDN			7.5	0.72			171	257	D	* 86 tons produced as ore.
946CDN	5.0	1.15	11.0	0.66				85	M	* 85 tons produced asore.
947CDS	4.2	2.49	7.1	1.31	2.9	4.4		288	D	68 tons produced 2nd period @0.34% Cu.
949CDS	3.7	1.92	7.0	1.33	3.3	3.3		498	M	
953CDS			6.8	0.18	6.8	6.8		68	D	* 68 tons produced as ore.
1017DN		Waste					781	781	D	*
1083BDS	3.1	2.28	5.6	1.45	2.5	2.5		86	D	
Total	3.5	2.12	6.8	1.35	3.3	3.3	952	2242		
							Crosscuts *			
678E$_s$DN	3.5	1.10	6,0	0.67				18	D	18 tons produced as ore.
679E$_s$xcE			10.0	0.22				27	D	27 tons produced as ore.
679E$_s$xcW			9.0	0.20				24	D	24 tons produced as ore.
903BDSss	7.0	2.59	7.0	2.59				97	D	Drift crosscuts 7' of structure.
948CxcE	14.0	1.84	15.0	1.67				53	D	
950CxcE	4.0	1.25	4.0	1.25				11	D	43 Tons broke & produced 2nd period@0.38% Cu.
950CxcW	3.5	3.00	5.0	1.93				13	D	
951CxcE	30.0	1.79	33.0	1.70				81	D	
952CxcE	1.5	3.00	7.0	1.19				199	D	
1077BxcE		Waste					26	26	D	Hauled for waste.
1079BxcW	12.5	1.60	18.6	1.24			85	115	D	85 tons broke and produced as waste— 1st period.
1084BxcW		Waste					27	27	D	
Total	5.1	2.19	8.3	1.58			138	691		
							Raises			
325CRs	2.0	2.61	7.6	0.95	5.6	5.6		237	D	* Produced as ore; HW & left rib overbreak.
597BRs			7.0	0.49				338	M	* Produced as ore.
598BRs	2.6	2.25	5.0	1.35	2.4			65	M	Included waste.
601FRs	4.3	1.41	9.0	0.90	4.7			620	M	* Produced asore;Sideswipe N rib;Inc. waste.
940CRs	8.2	2.22	8.2	2,22				60	D	Breakage on 3rd floor, HW side.
942CRs	1.5	2.53	7.8	0.89	5.3	5.3		233	M	*Produced as ore; 233 tons 2nd period @0.89% Cu.
949CDS ss	7.0	2.00	7.0	2.00				79	M	Raise round holing 946A Stope.
Total	5.5	2.12	6.5	1.86	1.0			1632		

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MONTHLY ANALYSIS

WALKER MINING COMPANY

JULY 1 to 31, 1941

Place	Average Assay Width	Average Assay %Cu	Average Mining Width	Average Mining %Cu	Feet Waste	Feet Over-Break	Tons Waste Bkg.-Sort.	Tons Exc.	Remarks
							STOPES		
420B	10.6	1.55	18.8	1.20	8.2	1.4		3863	FW and HW overbreak.
517C	3.4	1.57	10.1	0.84	6.7	6.1		646	FW and HW overbreak.
605E	26.5	2.00	27.2	1.94	0.7	0.7		1568	HW overbreak.
617D	9.5	1.90	10.2	1.80	0.7	0.8		1469	FW overbreak; 7' slab mined fromHW.
705A	2.3	3.16	2.7	2.53	0.4	0.7		424	FW and HW overbreak.
740-760Pill.	8.6	1.65	12.3	1.40				1840	Included waste.
845G	3.2	2.29	6.6	1.36	3.4	3.4		1109	FW overbreak.
865	5.4	2.58	6.6	2.22	1.2			1335	Included waste; ½ tonnage is 7' slab from back.
915A	3.8	1.18	9.9	0.71	6.1	7.4		379	FW overbreak.
915C	6.2	1.56	8.0	1.34	1.8	0.5		1786	FW overbreak; Included waste;
945	10.0	1.49	18.0	0.79	8.0	13.1		746	Mined an 18' slab from old back; FW overbreak.
945A	12.0	1.60	13.3	1.39	1.3	1.3		876	Mined a 12' slab from old back; HW overbreak.
946A	3.1	1.36	7.6	0.91	4.5			190	Included waste.
955C			28.0	0.67	28.0	28.0		2022	28' slab from old back.
1080C	6.1	2.41	6.5	2.30	0.4	0.3		1115	FW and HW overbreak.
Total	6.9	1.90	11.1	1.44	4.2	2.6		19368	
							MINE TOTALS		
	6.7	1.91	10.4	1.50	3.7	2.6	1090	23933	

FORM 396 6-40 2M M.F.C.

WALKER MINING COMPANY

WALKERMINE
PLUMAS COUNTY, CALIFORNIA

July 28, 1941

H. M. HARTMANN, MANAGER

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Jack:

SUBJECT: MINING WIDTHS,
WALKER MINING COMPANY

I have a copy of Mr. Sales' letter to you of July 23rd. The paragraph that Mr. Sales objects to is included in the Summary sent to Mr. Lyon of July 15th, of which you have a copy. However, for clarification, I quote the paragraph in question.

> " 9480xe&W are being driven from 9400Rs to determine the mining width of the vein. The East crosscut shows streaks of good ore, separated by 6 or 7 feet of waste. The streaks of ore become better and are closer together upon approaching the hanging wall. Some specks of native copper were encountered in the West crosscut."

This crosscut was certainly driven to develop the width of the ore that could be mined. Very possibly, in order to avoid confusion, "mining width" should have been, "mineable width". I have talked this over with Mr. Lommes, and in the future "mining Width" will not be used, except in referring to mining widths as given in the Analysis Sheet.

I think Mr. Sales is in error, that the term "mining width" is not used in connection with crosscuts. I quote a paragraph taken from Mr. Geo. F. Vivian's letter to Mr. Gidel, of June 9, 1941. This paragraph particularly refers to the method of determining mining widths in crosscuts.

> " As a general rule vein structure in crosscuts is crossed at an angle of from 60 - 90 degrees. Our rules for calculating assay averages on each side of the crosscut are the same as for face samples in drifts. The two sides are averaged together the same as two ends of a raise or two successive rounds in a drift. In order to calculate a mining width average, the sampler must know the amount of waste that was broken with the ore, eliminating all the waste that was broken and removed before and after the vein was crossed. In other words, suppose the average round is five feet. When a two foot vein is crossed with one round, three feet of waste is added to make a mining width. If the vein cuts across at an angle so that it required two rounds to cross the vein on both sides of the crosscut, the mining width becomes ten feet."

Our Analysis Sheet from July 1 - 15th of this month, will show that 948xcE was eleven feet and was all in ore. Therefore the mining width and the assay width coincide. According to my understanding, if this crosscut had had six feet of ore in the middle, and the first round was a six foot round, this round would then penetrate two and a half feet of waste and three and a half feet of ore. The assay width would be three and a half feet and the mining width six feet. The second round, a five foot round, penetrated two and a half feet of ore and two and a half feet of waste. Therefore, the second round would show an assay width of two and a half feet and a mining width of five feet. The two rounds together would show a assay width of six feet and a mining width of eleven feet.

The above is only included to show that the term "mining width" is used in connection with crosscuts. However, I do not think that after talking it over with Mr. Lommes, there will be any more missusage of the "mining width" terminology.

Very truly yours,

H. M. Hartmann

HMH:DM

H. M. Hartmann

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

July 31, 1941

Walker

Mr. R. H. Sales,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Reno:

Attached is copy of a letter which I have just received from Hartmann referring to your letter of July 23rd.

Henry's letter is self-explanatory, and I think covers everything pretty well.

Yours very truly,

John F. Dugan

John F. Dugan.

JFD:H
Enc.

cc:CEW

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FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

July 25, 1941

H. M. HARTMANN, MANAGER

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Jack:

I told you yesterday that we thought we could get started in 1017 with the drilling Friday, it will probably be Saturday. In the meantime, the drill crew decided they could drill through the fault in the down hole No. 98 and are down some 80 feet, which brought them through the fault at 69 feet. We will continue this for some 30 feet more and then move to the hole from the end of 1017.

During the time we are drilling there, we will work in 1079B. So far, we have not exposed anything startling there. However, there is some ore. I have had Lohse and Chamberlain make you a large scale sketch of this, which will show samples and geology. It will be out in Monday's mail at the latest.

One objection that I see to a raise from 1079B, is that the 900 above is a long way from being solid ore. While we encountered good streaks of ore in this area, they do not seem to go anywhere and it is doubtful if this area is mineable. If you will refer to the Map, "Piute Orebody 900-1000 Levels", you will see what I mean. In order to give you a better picture of this, I am having a sketch prepared of this area which will show samples as well as geology. In order to find out more about what we have here, as opportunity offers, we are slabbing on the best streaks. From present information, it is my opinion that after the area is opened, we will obtain a very limited tonnage of good grade ore, but I very much doubt that taken as a whole, including development work, it will be very profitable.

We had some conversation about a diagonal hole from the end of 1017, in addition to the one approximately due West to the fault. The geology of the 900, shows the tendency for the ore to have a Northwest strike, hence such a hole should have a direction at a considerable angle from this strike, in order to cut this formation and avoid the possibility of following its entire length in one of the wasty streaks. If we drill a hole approximately North 10 degrees West from the end of 1017, it would fullfill these requirements. It does seem to me, that if the 900 ore is on the 1000 in any worthwhile size, one of these two holes is bound to give us an indication. The North 10 degrees West hole, would be about 200 feet to the projected position of the fault. I would appreciate your reaction to this.

Very truly yours,

H. M. Hartmann

H. M. Hartmann

HMH:DM

F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

SUBJECT:

July 31, 1941

Mr. C. E. Weed, General Manager of Mines,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Sir:

Enclosed is copy of a letter from Hartmann, also sketch of 1079B Crosscut West showing the geology and assays.

You will note Hartmann says they are drifting south along the fault at samples 14, 15 and 16, and that at 12 feet south the breast looks good.

Diamond drill hole #98 from the end of 1079B Crosscut East was drilled at a minus 62°-30' for 103 feet and was a blank. As Henry says, if the ore had a south rake, this hole would be underneath it.

What would be your reaction to drilling a down hole due north from 1077B Crosscut at right angles to hole #83? This hole should cut any south raking structure.

Will you please show this sketch to Mr. Sales, as this is the only one I have.

Yours very truly,

John F. Dugan

John F. Dugan.

JFD:H
Enc.

cc:RHS

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C
o
p
y

Walker Mining Company,

Walkermine, Calif.

July 30, 1941

Mr. John F. Dugan, Gen. Supt. of Mines,
International Smelt. & Ref. Co.,
Salt Lake City, Utah.

Dear Jack:

Enclosed are sketches showing the geology and assays on 1079B. These were referred to in my letter of July 25th. At present, we are drifting South along the fault at samples 14, 15 and 16. We are now about 12 feet south and the breast looks good. We are also sideswiping at samples 1, 2 and 3 to see what happens going north. It would appear that diamond drill hole 98 which encountered the fault at 55 feet below the 1000 level and was a blank, stops the downward extension of this ore, though of course it could go by if it had a south rake.

YOURS VERY TRULY,

(s) H. M. Hartmann.

Enc.

8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

July 24, 1941

H. M. HARTMANN, MANAGER

Mr. John F. Dugan, Gen. Supt. of Mines
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Dugan:

The following is a list of the development headings going at the present time:

HEADING	OREBODY	STARTS FROM	DATE STARTED
678EsDN	712	692DsxcW	6- 1-41
723EDN	712	711EDN	7- 7-41
947CDS	North Piute	932CxcE	5-29-41
951CxcE	North Piute	940CRs	7-14-41
952CxcE	North Piute	947CDS	7-19-41
1017DN	Piute	1016xcW	3-16-29
1079BxcW	Piute	1017DN	6- 9-41

In compliance with your suggestion, we are reviving the practice of sending in Development Recommendation Sheets for new work. I am enclosing several sheets for development work recently started, which includes 678EsDN, 723EDN, 951CxcE, and 952CxcE.

Very truly yours,

E. J. Lomnes

E. J. Lomnes
Chief Engineer

EJL:DM
Encl.

cc - Mr. Lyon
Mr. Sales

July 25, 1941.

Mr. John F. Dugan, Gen. Supt. of Mines,
International Smelting & Refining Company,
818 Kearns Bldg.,
Salt Lake City, Utah.

Re: Walker Mining Co.

Dear Jack:

It seems to me that there is still some confusion at Walker with reference to the use of the expression "mining width".

Apparently, Lomnes is trying to use the term in connection with crosscuts. I quote from his report of July 15th, "9480 crosscuts east and west are being driven from 9400 Rs to determine the mining width of the vein". By mining width we mean the face width of actual opening made on a vein in drifts and stopes. More particularly, I think it is used in connection with stoping. We do not attempt to pre-determine mining widths in crosscuts, because, as I have just said, we use the term only for openings made in mining or stoping operations.

I am merely suggesting the above, because I do not wish to have "mining width" mean different things at our various properties.

Yours very truly,

RHS:EM

cc: HMH (2)
TL
MHG

RENO H. SALES

F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

SUBJECT: July 31, 1941

Mr. C. E. Weed, General Manager of Mines,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Sir:

Attached is copy of a letter which I have received from Mr. Hartmann with reference to the Piute development from 1017 Drift.

In the last paragraph of the letter, Hartmann said he wishes to drill a hole approximately North 10° West from the end of 1017. I could not see any object in drilling this hole, as driving 1017 ahead will accomplish the same purpose, so told Hartmann not to drill it.

I also told Henry to keep driving 1017 ahead, as it is possible the ore may be between the present breast of 1017 and 1031A Crosscut from 1030A Drift.

Yours very truly,

John F. Dugan

John F. Dugan.

JFD:H
Enc.

cc:RHS

Aug. 2, 1941.

Mr. C. E. Weed, Gen. Mgr. of Mines,
Anaconda Copper Mining Co.,
Building.

Re: Walker Mining Company

Dear Clyde:

Relative to the enclosed recommendation sheets, I think it advisable to have these sheets changed to - "Recommendation for Development Work, Geological Department, Walker Mining Company". It is also unusual to have recommendations made under the Geological Department sheet or heading by the Mine Superintendent.

All this is incidental and probably unimportant, but I think the recommendations on these sheets should come from the Geological Department and then be approved by Warren and Hartmann, that is, if they are to require the approval of any department of International.

Unless we get favorable developments soon, or a higher price for copper, there will be but little to worry about anyhow.

RHS:KM
Encl.

Yours very truly,

RENO H. SALES

Aug. 2, 1941.

Mr. C. E. Weed, Gen. Mgr. of Mines,
Anaconda Copper Mining Co.,
Building.

Re: Walker Mining Co.

Dear Clyde:

I have a copy of Dugan's letter of July 31st, relative to certain developments in connection with 1017 Drift in the Walker Mine.

I note that no effort has been made to drift southerly from 1017 to develop the ore indicated in Drill Hole No. 74. Referring to your white print map, which shows the development on the Piute south orebody on the 900 and 1000 levels, please note the assays:

10 ft.	copper 1.85%,	silver 1.66 Oz,	and	gold .19 Oz.,	and
10 "	" 2.45%	" 1.41 Oz,	"	" .20 Oz.	

With the results so discouraging toward the north, I simply cannot understand why we can't get a drift started southerly to develop the disclosure in Drill Hole No. 74. I have urged this for the past three months.

It is immaterial to me whether they extend 1078B south, or start a new drift inside between 1078B south drift and the fault.

I hope you will take this matter up and get immediate action.

Yours very truly,

RHS:KM

RENO H. SALES

FORM 396 8-40 2M M.P.C.

WALKER MINING COMPANY

WALKERMINE

PLUMAS COUNTY, CALIFORNIA

H. M. HARTMANN, MANAGER

August 10, 1941

Mr. Tom Lyon, Chief Geologist
International Smelting & Refining Company
818 Kearns Building
Salt Lake City, Utah

Dear Mr. Lyon:

Please find enclosed geological sketches and classification table for development during the month of July, prints showing in yellow mining operations with respect to orebodies, monthly analysis sheet, and a report on Diamond Drilling for the month. The following is a resume of the classification table and of Prospect Diamond Drilling.

South, Central and North Orebodies None

712 Orebody

325CR is a chute and manway raise, being extended above the 300 level to determine the extent and condition of the footwall vein. It will later service the 317C Block for stoping. The ore appears to be pinching out and this raise is now 160' from the surface, up the dip.

330CDN&S are being driven from 325CR to prospect the extent of the vein.

597BR & 598BR are finger raises being driven preparatory to mining 517C Stope.

678E.DN is a development heading being driven from 692D$_s$scW to prospect the sub-level of the 517 footwall fissure zone.

679EsscE&W were driven from 678EsDN to determine the mineable width of the ore. 4' of low grade quartz exposed in east crosscut.

723EDN is being driven from 711EDN to prospect the downward extension of ore developed in 678EsDN. Later on a raise will be driven from this heading through to the 600 Level in the heart of the ore.

Piute Orebody

946CDN is being driven from 941CR, to serve as a slusherway for 915 Block. This drift has holed 915A Stope and is being continued on through to 915B Stope.

949CDS was driven from 903BDS to prospect and open up the footwall of the vein for stoping. This drift has now been holed into 903BDS. A short raise slot to provide room for a chute has been holed from this drift into 946A Stope, immediately above.

1017DN is being driven to connect 706AW with the Piute Orebody. This heading is now within 270' of holing through.

1079BxcW was extended to the footwall fault to prospect the ore exposed in DD Holes

Nos. 85, 86 and 87. The last 12½' of crosscut adjacent to the fault averages 1.60% Cu.

1083BDS is being driven from 1079BxcW to determine the southward extension of the ore.

1084BxcW was driven from 1017DN to provide room for a diamond drill station.

North Piute Development

942CR is a development raise from 934CDN at the north end of the orebody to determine the upward extension of the ore.

947CDS is the main level heading being driven from 932CxcE to determine the southward extension of the orebody. The ore has pinched out just beyong DD Hole No. 49.

948CxcE was driven from 940CR to determine the width of the vein. The last 16' of crosscut next to the hanging wall averaged 1.75% Cu.

950CxcE&W were driven from 947CDS to explore the mineralization encountered in DD Hole No. 49. The east crosscut showed 4' of ore assaying 1.25% Cu.

951CxcE is being driven from the 3rd floor of 940CR to prospect the hanging wall. The first 25' of crosscut averaged 1.86% Cu and very good in gold, being 0.10 oz. The next 3' were waste and the last 5' averaged 1.50% Cu.

952CxcE is being driven from 947CDS to provide a drill station from which the downward extension of the orebody can be explored.

953CDS is being driven from 942CR to prospect the vein on the 5th floor above the sill and will be driven to connect with 940CR. It will later serve as a slusher drift.

Prospect Diamond Drilling

Hole No. 93, drilled N 51°18'W from 1082BxcW, was completed from 77-159'. Fault encountered from 83 to 89'. Very little mineralization exposed for length of hole.

Hole No. 95 was drilled S 39°07'W from the end of 1077BxcE, at co-ordinate 10974E, to further peg the mineralization showing in Holes Nos. 74 and 75. The hole at present has been drilled to a depth of 94' and requires casing before drilling can be resumed. The fault was encountered at 89'. The following are split core assays on this hole:

	Cu.	Ag.	Au.
44½-47'	0.80	0.20	0.03
47-50'	0.45	0.50	0.05
50-55'	1.15	0.30	0.01

Hole No. 97, drilled up from 939CDN at 43°30', S 41°51'E from co-ordinate 21082N to determine the upward extension of the ore on the north end of the North Piute Orebody, was completed from 50' to 72'. The following are split core assays on this hole.

	Cu.	Ag.	Au.
44'-50'	1.60	0.12	0.01
50'-53'	2.65	0.30	0.04

Scattered specks of sulfide from 0' to 44'.

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Hole No. 98 was drilled at -62°30', N 85°22'E from 1079BxcE for 103' to determine the downward extension of the ore. Very little mineralization showing for length of hole. The fault showed at 66'.

Hole No. 100 was drilled S 76°25'W from the face of 948CxcW for a distance of 60' to prospect the footwall of the North Piute Orebody. Specks of native copper showing up to 12'. Very poor core recovery. Fault encountered at 33'.

Hole No. 101 was drilled up at 45°34', N 73°54'E from 948CxcW for a distance of 99' to determine the upward extension of the orebody. The following are split core assays on this hole.

	Cu.	Ag.	Au.
19½'-27'	1.80	0.30	0.01
27' -31'	2.05	0.10	0.01
33' -37'	1.35	0.10	0.01
37' -41'	1.70	0.10	nil
44½-47'	2.85	0.25	0.03
47 - 52'	3.90	0.29	0.02
52 - 56'	2.35	0.50	0.05

The hole was barren from 56' to 99'.

Hole No. 103 was drilled N 23°15'E from 939CDN at co-ordinate 21269N for a distance of 90'. Occasional specks of sulfide from 0'-30'. Vein material showed from 60' to 65' with good disseminated sulfide, from 61' to 62½'. Remainder of hole is practically barren.

Hole No. 104 was drilled N 88°40'W from 1084BxcW for a distance of 137' to prospect for the vein. Fault was encountered at 90'. Scattered specks of sulfide from 49' to 80'. ±6" of quartz and bornite at ±101'. Remainder of hole barren.

Hole No. 105 was drilled N10°27'W from the face of 1017DN at co-ordinate 19020N for 80' to prospect for the vein ahead of 1017 heading. It has since been completed at a depth of 226'. Fault encountered at 189', about 6" of good sulfide at ±77', good sulfide from 97½' to 99½', and 1' of sulfide at ±108'. Vein begins at 110½' and ends at 116½'. Core assay from 110 to 117 ran 1.40% Cu, 0.52 oz. Ag, and 0.02 oz. Au. Occasional specks of sulfide from 129 to 201'. Remainder of hole barren shhist.

Very truly yours,

E. J. Lomnes

E. J. Lomnes
Chief Engineer

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F. 423 1-22-41 2M

INTER-DEPARTMENTAL CORRESPONDENCE

INTERNATIONAL SMELTING AND REFINING COMPANY

MINING DEPARTMENT

818 KEARNS BUILDING SALT LAKE CITY, UTAH

August 16, 1941

SUBJECT:

Mr. C. E. Weed, General Manager of Mines,
Anaconda Copper Mining Company,
521 Hennessy Building,
Butte, Montana.

Dear Sir:

Reference is made to your letter of the 6th inst., attaching letter from Mr.Sales concerning drifting South to develop the disclosures in Diamond Drill Hole #74.

This is to advise that this work has been started and will be pushed all possible. A new drift has been started South from 1077B crosscut East at a point approximately 50 feet South of 1078B Drift. This new Drift will be East of and beyond the Piute footwall fault and should find any ore between 1077B crosscut and Diamond Drill Hole #74. Operating difficulties prevented starting this Drift sooner.

1017 Drift North is also being driven ahead.

Diamond Drill Hole #105 cut 5 feet of mineralization at coordinate 19,120 N, 10,900 E. The core assay of the 5 feet of mineralization ran 1.40 Cu., .50 Ag and .02 Au. What they think is the footwall fault was intersected at coordinates 19,200N and 10,880E.

We have also started another Diamond Drill Hole Southeast from 1076B crosscut to intersect the mineralization at a point 100 feet South of where it was encountered in Diamond Drill Hole #74.

Yours very truly,

John F. Dugan

John F. Dugan

CC:R.Sales

JFD:fgc

August 19, 1941

Mr. C. E. Weed, Gen. Manager of Mines
Anaconda Copper Mining Company,
Building.

Dear Clyde:

Relative to Dugan's letter of August 16 on the Walker.

If anything is to be done toward getting the Government to allow a better copper price, it should be done as early as possible in order that there would be a substantial tonnage of the better grade ore left ready to mine. You can readily see that, even with a 16¢ price, the daily tonnage would have to be increased a great deal and unless there was something of the better grade to work with it, the 16¢ price would not keep any mine out of the red.

Regarding propositions 1 and 2 set forth in Dugan's letter, I cannot quite see any advantage in continuing the operation with the net losses per month there indicated. I do not see any immediate hope of developing enough ore within the next few months to help the situation. Nothing but a long range development of more important ore bodies will do any good for that property, and long range developments for such a purpose look extremely speculative.

The Walker is in a position where there is no chance of it getting on its feet within a reasonably short period. A high price

for copper might help for a time during which period it might be possible to undertake additional chances of finding better ore through drilling at greater depths or the extension of the North Piute workings into unexplored territory.

Yours very truly,

RENO H. SALES.

RHS/aw

ANACONDA COPPER MINING COMPANY

25 Broadway

New York

OFFICE OF THE
GENERAL MANAGER OF MINES

Butte, Montana
August 21, 1941

Walker mine

Mr. J. R. Hobbins, President,
Anaconda Copper Mining Company,
25 Broadway,
New York, New York

Dear Sir:

As you know the Walker Mining Company has lost money steadily for the last year and a half. This loss was carried as we were doing certain exploration work which we were in hopes would develop additional orebodies or extensions of the present orebodies. The main development consisted of the 1017 drift, which was to explore the orebody under the 900 level showing of the Piute section. This showing on the 900 level was exceptionally good for the Walker mine. 1017 drift has now reached under at least one-third of the orebody shown on the 900 level, and to date has not opened up any ore of importance; in other words the 900 orebody does not extend to the 1000 in appreciable quantities.

We have known for a long time that the ore in the North and Central orebodies would be exhausted about this time, but has hoped that the 1017 would come into ore to replace this production. On account of the failure of this drift the production at Walker Mine will drop very rapidly in the next few weeks. The production has dropped from approximately 1500 tons of ore per day to 900 tons, and after October will drop still lower. Copper production has been 700,000 to 800,000 pounds per month. This has now dropped to 600,000, and the months of September and October will not exceed 500,000.

On July first we had 459,000 tons of ore developed averaging 1.41% copper. We could mine this for the period of a year at some figure around 500 tons of ore per day at a cost in excess of 15¢ per pound. This small production would have to carry all the overhead of the Walker Mining Company.

Under present conditions existing in the United States it is doubtful that they would wish to lose this much copper. While the amount is small nevertheless every little bit helps, and it would seem advisable to place the Walker situation before the proper authorities in Washington before closing down the mine.

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ANACONDA COPPER MINING CO.

COPY

There is certain development work in the Walker mine which could be carried on, but judging from results we have obtained from our rather extensive campaign to develop additional orebodies it is my judgment, which is concurred in by Messrs. Sales and Lyon, that we could not anticipate any discoveries of ore which would help the situation in the near future. Any long range development is extremely speculative and even if an orebody is found there is no reason to believe it would be of better grade than the ore which we have found to date. This is not commercial at 12¢ copper.

Taking all of the information and advice which we have at the present time into consideration I would recommend that the Government be approached with a view to determine whether they wish to continue the operation at Walker merely as a clean up operation at considerable additional cost for the copper or whether they would prefer to see the property close down. If they are not interested in keeping the property operating I recommend that it be closed. This matter is of extreme importance to the Walker Mining Company and some definite action should be taken on it as soon as possible.

If this property was entirely owned by the Anaconda Copper Mining Company we would have a different situation than we have to face at present. However, as we own only 51% of the stock of the Company we have minority stockholders to consider.

Yours very truly,

C. F. Weed

CEW/gf

cc: C. F. Kelley
J. G. Elton
R. H. Sales
Frederick Laist

International Smelting & Refining Co.
818 Kearns Building
Salt Lake City, Utah

(COPY)

August 23, 1941

Mr. C. E. Weed, General Manager of Mines,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Sir:

The attached memorandum regarding Walker Mine has been prepared by Mr. Hartmann and me. It gives the estimated production, expenditures and income at the Walker mine for one year, starting September 1, 1941. No development work, except stope preparation considered.

Sheet No. 1 is a condensed summary of Sheet No. 2, which gives a break down of labor, supplies and expenses.

The estimated production is 475 dry tons of ore per day of 1.32% copper, .55 oz. silver and .035 oz. gold, which will produce 599 tons of concentrates containing 291,940 pounds of recoverable copper.

The estimated income is $36,539.00, at 12¢ copper, and the expenditures, $60,890.54, leaving a net operating loss of $24,351.54 per month.

The estimated cost per pound of recoverable copper is 20.0448¢ before depreciation.

There is a possibility that there may be a slight increase in tonnage and grade, especially in the gold. After operations are stabilized some reduction in operating expenses can be made, however, it now appears that a reduction of 1¢ per pound of recoverable copper is all that can be hoped for.

The following is the anticipated production schedule:

Place	Tons Per Day	Total
North Orebody	65	20,280
712 "	205	63,960
Piute 900	205	63,960
Total:	475	148,200 -1.32% Cu

At the end of the year the tonnage would drop to 300 plus tons per day, owing to the exhaustion of the production of the North Orebody, and 605E, 617D, and 705A Stopes in 712 which will amount to a total of 190 tons per day.

There are still available some 10,000 tons in pillars above 830 Stopes on the tunnel level which will be removed. This production has not been taken into consideration as it will be used as make up tonnage in case the tonnage from some of the stopes should be less than anticipated.

At the end of the year, there will be some 300,000 tons left according to the Ore Reserve sheets. Part of this is locked up in pillars and not mineable; the remainder could be mined at a lower daily tonnage and increased costs.

Present wage scale of $5.25 per day for miners was considered in figuring the estimate. An increase of 50¢ per day would increase the expenses $3,380.00 per month, or 1¢ plus per pound of copper.

No pumping or hoisting through 706 Shaft was considered. This meant a reduction of approximately $4,000.00 per month.

The estimated cost of 20.0448¢ per pound is very high and seems out of line until one considers that Walker, with its present production of low-grade copper (1/3 normal tonnage) cannot be considered a profitable producer.

The only hope for Walker is to develop a large ore body of higher grade north of the present Plute.

Yours very truly,

John F. Dugan

(Copy)

Memo. Re. Walker Mine

Estimated Monthly Production, Expenditures,
Income & Cost Per Pound of Recoverable Copper
For Year, Beginning September 1, 1941

PRODUCTION:

599	Tons Concts.	25.50% Cu.	52Ag	.52 Au
302,000	Lbs. Copper			
291,940	Lbs. Recoverable.			

INCOME:

599	Tons Concts. $61/Ton F.O.B.Spring Garden	$36,539.00

ESTIMATED EXPENDITURES PER MONTH:

Labor	$44,154.04	
Supplies & Expenses	14,736.50	
General:		
Salt Lake Office, Taxes, Ins.,Etc.	2,000.00	$60,890.54
Operating Loss Per Month:		$24,351.54

Estimated cost per lb. recoverable copper	20.0448¢
Depreciation	1.3390¢
Total Cost:	21.3838¢

8-23-41

(Copy)

Walker Mining Company

Estimated Monthly Production And Expenses
For One Year, Beginning September 1, 1941.
No Development Work Except Stope Preparation
Considered.

PRODUCTION:

475	Dry Tons Per Day	1.32% Cu	.55Ag	.035 Au
12,450	" " " Month (26 day month)			
599	Tons Concts.	25.50% Cu	.52Ag	.52 Au
302,900	Lbs. Copper (291,940 Lbs.Recoverable)			

INCOME:

599 Tons Concts. @ $61/Ton F.O.B. Spring Garden $36,539.00

EXPENSES:

Labor	Men		
Mine	157	$25,601.07	
Mill,Surface & Tram	25	3,654.67	
Shops, Compressor & Hoistmen	23	3,555.30	
Office-Management,Engr.,Hospital,Etc	34	6,789.00	
Total:	239	$39,600.04	
Soc.Sec. & Other Taxes		4,554.00	$44,154.04

SUPPLIES & EXPENSES:

Mill Supplies & Heating	$ 3,610.50	
Electric Power	4,500.00	
Mine	5,478.00	
Incidental	498.00	
Tram	650.00	$14,736.50

GENERAL:

Salt Lake Taxes, Insurance, Etc. 2,000.00

TOTAL EXPENSES:	$60,890.54
INCOME - 12¢ Copper	36,539.00
Operating Loss Per Month:	$24,351.54

Cost Per Lb. of Copper	20.0448¢	per	lb.
Depreciation	1.34	"	"
Cost Per Pound:	21.38¢	"	"

8-23-41

ANACONDA COPPER MINING COMPANY

25 BROADWAY

NEW YORK

OFFICE OF THE
GENERAL MANAGER OF MINES

Butte, Montana
August 25, 1941

Mr. J. R. Hobbins, President,
Anaconda Copper Mining Company
25 Broadway
New York, New York

Walker Mine

Dear Mr. Hobbins:

Supplementing my letter of August 21st in regard to Walker Mining Company, I have today received an estimate prepared by Messrs. Dugan and Hartmann of the expected production of the Walker mine for one year. They are more pessimistic about the situation than I am, but I would not care to enlarge on their estimate. They estimate that the Walker Mining Company will produce 300,000 pounds of copper per month at a cost of 20 cents per pound, without any exploration work. Attached you will find a copy of Mr. Dugan and Mr. Hartmann's estimate.

Yours very truly,

CEW/gf
enc.

cc: C.F. Kelley
J.D. Elton
F. Laist
R.H. Seles

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ANACONDA COPPER MINING CO.

COPY

File Copy

August 27, 1941.

Mr. J. F. Dugan,
General Superintendent of Mines,
818 Kearns Building,
Salt Lake City, Utah.

Dear Jack:

I have your letter of August 25, also the map which relates to the proposed diamond drilling in the North Piute orebody.

The course of N 50° W for the proposed drill hole given in your letter does not correspond to the direction of the hole as you laid it out on the plan map. I prefer the plan map course for the hole, which is N 67° W at a minus 50°, better than N 50° W, so if the hole is not started, please make the course N 67° W.

Because of the curving strike of the vein in the north part of 934-C drift, it is difficult to accurately project the vein downward, that is if this curved portion keeps its flatter dip the vein may be cut in the proposed hole at around 130 feet or less. So, in laying out additional holes for deeper drilling, I think we had better wait for results on the first one. However, if there happens to be a rush I would put the next one at S 65° W from this same drill station with a minus dip of 50°.

If the results in these two holes give encouragement we should plan to cut the vein with a couple of holes at about 300 feet below the level.

Yours very truly,

RENO H. SALES

cc: CEW
M. H. Hartmann-Air mail
Tom Lyon

RHS/aw

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

INTERNATIONAL SMELTING & REFINING CO.

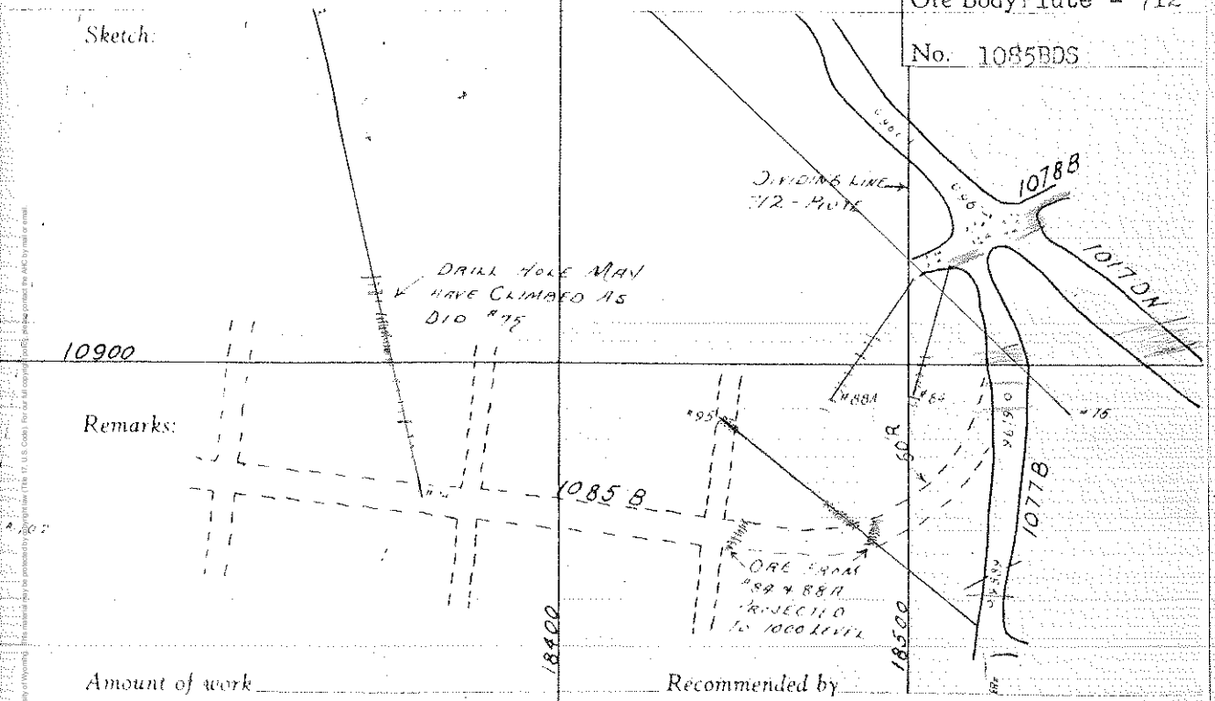
Mine Walker

Level 1000

Ore Body Piute - 712

No. 1085BDS

Sketch:



Remarks:

Amount of work

Recommended by

Date of recommendation

Date started 8 - 15 - 41

Approved by

Date completed

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

INTERNATIONAL SMELTING & REFINING CO.

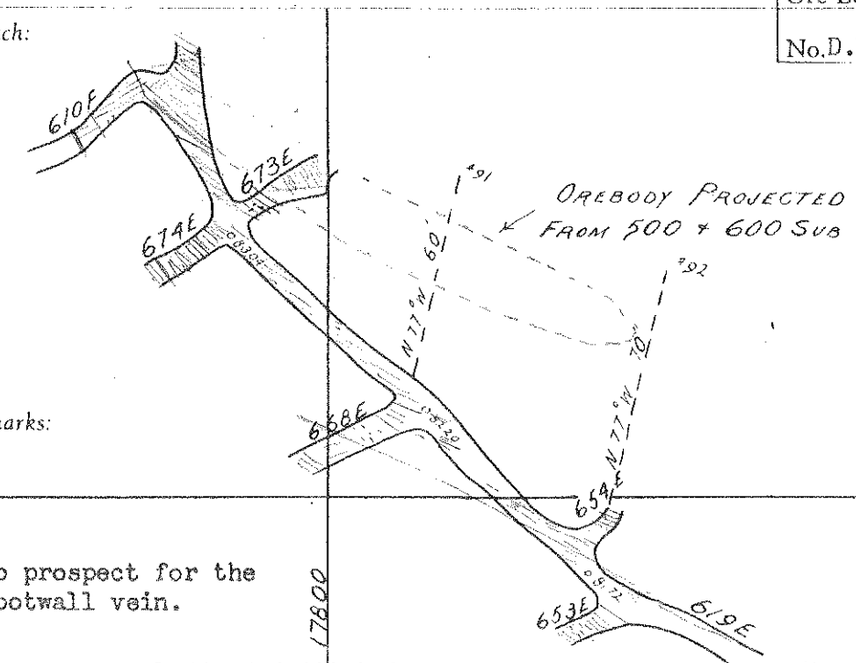
Mine Walker

Level 600

Ore Body 712

No.D.D.Holes #91 &92

Sketch:



Remarks:

To prospect for the footwall vein.

Amount of work 130' of drill hole

Recommended by Mr. Dugan Mr. Sales

Date of recommendation

Date started 8 - 20 - 41

Approved by Mr. Hartmann

Date completed

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

[redacted]

WALKER MINING COMPANY

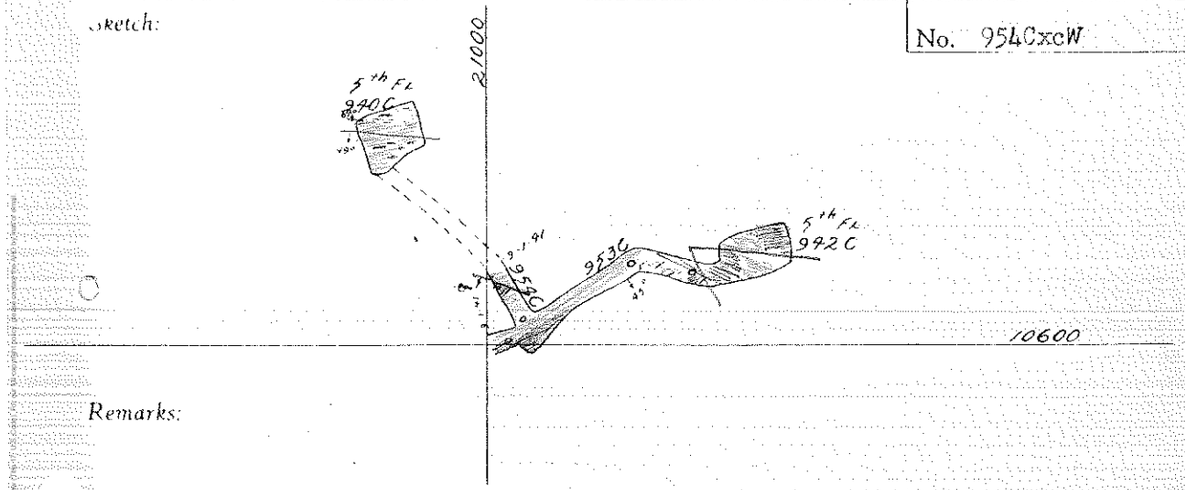
Mine Walker

Level 900

Ore Body North Piute

No. 954CxcW

Sketch:



Remarks:

Amount of work 60' of crosscut Recommended by Mr. Chamberlain

Date of recommendation

Date started 8 - 25 - 41 Approved by Mr. Warren

Date completed

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

INTERNATIONAL SMELTING & REFINING CO.

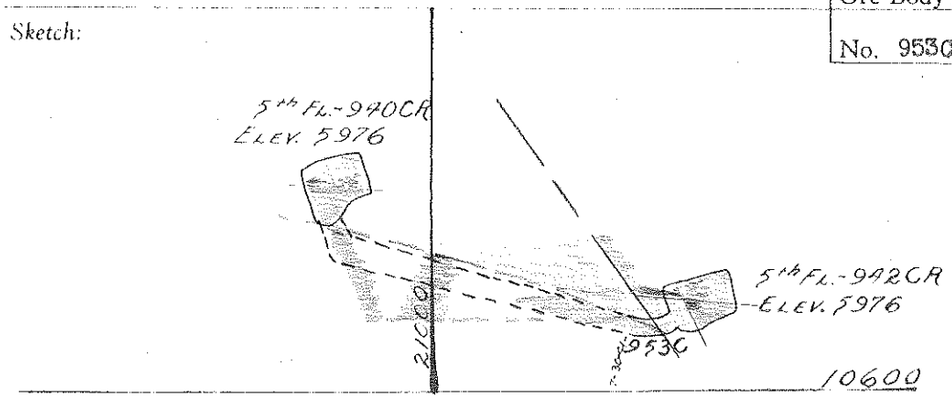
Mine Walker

Level 900

Ore Body North Piute

No. 953CDS

Sketch:



Remarks:

To prospect the vein on the 5th floor above the sill and to be used later as a slusherway in producing this block of ground.

SCALE 1" = 50'

Amount of work 100' of drift Recommended by Mr. Warren

Date of recommendation

Date started 7 - 24 - 41 Approved by Mr. Hartmann

Date completed

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

INTERNATIONAL SMELTING & REFINING CO.

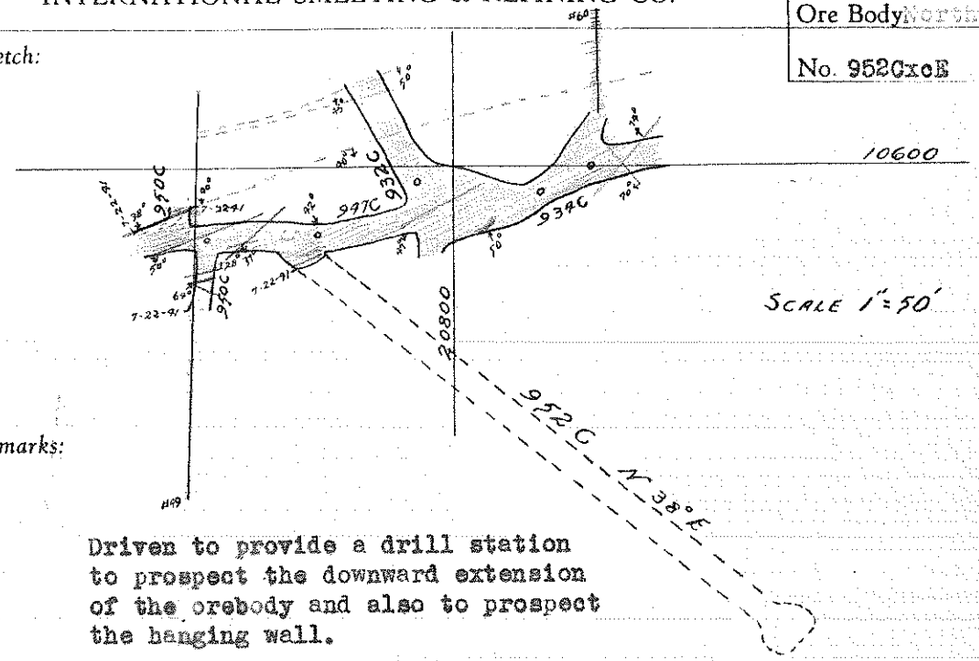
Mine Walker

Level 900

Ore Body North Flute

No. 952CxcE

Sketch:



Remarks:

Driven to provide a drill station to prospect the downward extension of the orebody and also to prospect the hanging wall.

Amount of work 180' of crosscut *Recommended by* Mr. Sales

Date of recommendation

Date started 7 - 19 - 41 *Approved by*

Date completed

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

INTERNATIONAL SMELTING & REFINING CO.

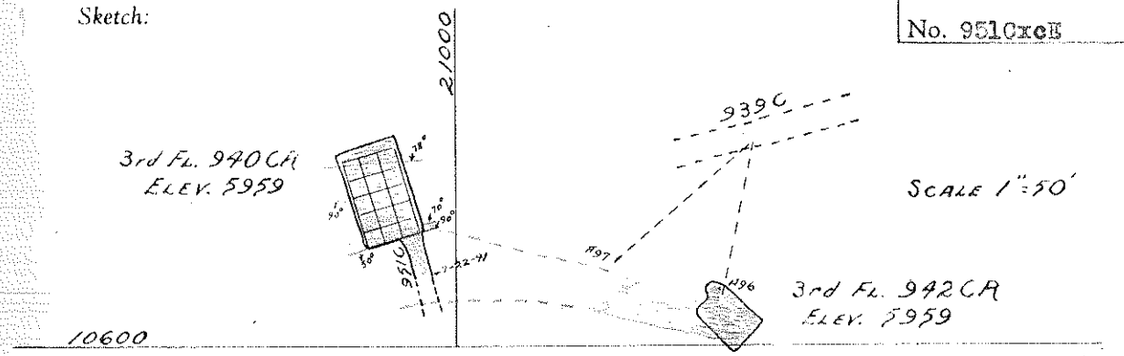
Mine Walker

Level 900

Ore Body North Flute

No. 951CxcE

Sketch:



Remarks:

Driven to prospect the hanging wall of the vein.

Amount of work *Recommended by* Mr. Warren & Mr. Chamberla

Date of recommendation

Date started 7 - 14 - 41 *Approved by* Mr. Hartmann

Date completed

Clyde:

I think it not good practice to have Recommendation sheets headed "International Smelting Co" It should be "Wacker Mining Co"

RHS

Return to RHS. file

RECOMMENDATION FOR DEVELOPMENT WORK

GEOLOGICAL DEPARTMENT

INTERNATIONAL SMELTING & REFINING CO.

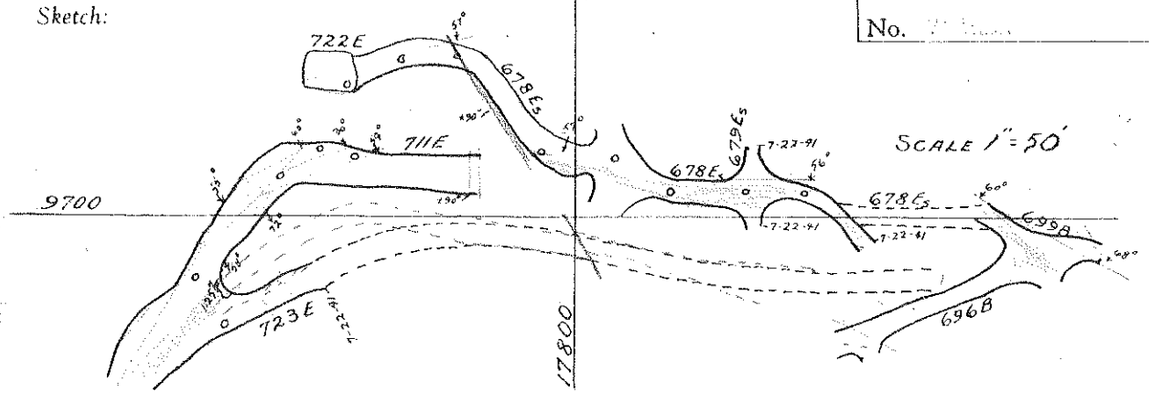
Mine

Level

Ore Body

No.

Sketch:



Remarks:

To be driven to avoid bad ground conditions in 711EDN and to prospect the downward extension of ore developed in 678EsDN preparatory to raising.

Amount of work 180' of drift Recommended by Mr. Warren

Date of recommendation

Date started 7 - 7 - 41 Approved by Mr. Hartmann

Date completed

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August 25, 1941

Mr. Tom Lyon,
818 Kearns Building,
Salt Lake City, Utah.

Dear Tom:

I do not suppose it makes much difference at the moment but I would suggest that recommendation sheets for development work should be from the Geological Department of the Walker Mining Company rather than the International Smelting and Refining Company. Weed agrees with me, so will you please take it up with Mr. Elton?

Yours very truly,

RENO H. SALES

RHS/aw

INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

August 25, 1941

Mr. Reno H. Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Sir:

Please refer to the fourth paragraph of your letter of June 28, 1941, regarding the diamond drilling to prospect for the downward extension of the ore in 934C Drift North Piute.

The hanging wall crosscut Northeast is now 180 feet from 947C Drift South, and they are ready to drill the holes, provided you want them drilled.

Hartmann and I talked with Lyon this afternoon on a tentative location for the first hole. Lyon thought the first hole should be drilled from the end of the crosscut on a North 50° West strike with a minus 50° dip. This will cut the mineralization at approximately 150 feet below 934C Drift.

Under separate cover I am sending you a map showing the location of the crosscut, and the strike and dip of the first hole. This map also has sections of 940C and 942C raises.

I would appreciate an early decision from you as to the lay-out of any future holes, as McClintock has the diamond drilling about finished and we wish to keep one machine on the job for any future work.

Yours very truly,

John F. Dugan

John F. Dugan.

JFD:H
cc; CEW
TL
HMH

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

J. F. DUGAN
General Supt. of Mines

August 28, 1941

Mr. Reno H. Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Reno:

Attached is a sketch showing the proposed development south of 1077B Crosscut East.

The diamond drill hole from 1076B Crosscut was drilled to 260 feet. A fault was cut at 223 feet, then they went through 2 feet of fair ore from 251 to 253 feet.

1085B Drift South was in 65 feet from 1077B Crosscut August 27th. The position of the breast is now 45 feet due south from 1077B Crosscut East. They are averaging 7 feet per day in this drift.

They are now drilling hole #94 from 1081C Crosscut West. The strike of this hole is due East, and up $58\frac{1}{2}^{\circ}$, and the length approximately 50 feet. This hole was drilled up normal to the dip to see if there was a possible chance of anything being above the level.

After hole #94 is finished, another one will be drilled from the same position. The course will be due East but it will be drilled down minus 65° to and through the footwall fault which should be cut at about 75 feet below the level. The hole will be extended 25 feet through and beyond the fault.

Yours very truly,

John F. Dugan

JFD:H
cc:CEW

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INTERNATIONAL SMELTING AND REFINING COMPANY

Salt Lake City, Utah

ANACONDA
from mine to consumer

J. F. DUGAN
General Supt. of Mines

August 30, 1941

Mr. Reno H. Sales, Chief Geologist,
Anaconda Copper Mining Company,
Butte, Montana.

Dear Reno:

Attached is a sketch which I have just received from Walker concerning the diamond drill hole from 952C Crosscut Northeast.

As you were previously informed, the hole was planned to be drilled north 50 west at a minus 50° dip. It will now be drilled north 67° west with a minus 50° dip as you recommended. We will start drilling this hole about September 1st.

From results obtained from this hole we can plan the future holes.

Yours very truly,

John F. Dugan

JFD:H
Enc.

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August 30, 1941.

Mr. S. K. Droubay, Supt.,
Defense Chrome Operations,
Columbus, Montana.

Dear Mr. Droubay:

I wish to thank you for the information given in your recent letter regarding the occurrence of green chloritic material and its possible relationship to higher gold values in certain portions of the North Piute orebody in the Walker Mine. We also note your comment that the hangingwall greenish quartz seams assayed 0.10 oz. gold, which is probably .05 to .07 oz. higher than that in the balance of the vein. I believe the association of green (ferrous (?) iron minerals) usually is indicative of a relatively higher gold content in a gold bearing vein or orebody. At least, such occurrences are too common in many deposits to be merely coincidental.

Chamberlain stopped in Butte for a few hours last week upon his return trip from Great Falls to the Walker Mine. I was surprised to find out that, to date, no prospecting has been done to test the possibilities of the footwall zone of 712 orebody beneath the outcrop of the silicified iron-stained reef extending S50° W from the Piute outcrop. Chamberlain will map this surface area immediately and probably outline, at least, a couple of drill holes to test the zone. You will recall our previous discussions regarding this rather prominent topographic feature and the possibility of a vein lying along the north

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margin of same. The outcrop of such a vein could be concealed by the alpine bog and vegetation which has developed from the accumulation of deep snowbanks. The abrupt drop in the surface contour at the north edge of the mineralized reef may be the result of more rapid erosion of softer limonitic vein material lying above a possible orebody. The occurrence of bornite as disclosed in the 712 ore zone also makes this prospect an attractive gamble for drilling two or more holes into the footwall area from conveniently located points, say on the 400, 600 or deeper levels.

This prospect came to my attention in July, 1938, after spending a day in scouting the main vein outcrops on the Walker property. At the time I discussed the matter with Messrs, Weed, Dugan, Beyer and Kildale. The latter planned to map same, but apparently he was detoured on other work.

I will appreciate any comment or suggestions you may have about exploring the footwall area of 712 ore zone.

With kindest regards, I am

Yours very truly,

M. H. GIDEL

MHG/aw

cc: CEW
RHS
T.L
JFD
VDP
VC