M.I. Callan | 2.9.89.

WEIGHT TO BE SHIPPED TO LAKEFIELD.

TRACHYTE PORPHYRY BULK SAMPLE.

BARRELS.

		TONS
TOTAL WT. ALL TYPES IN BARRELS		= 7.32
HELD BACK:		
BARREL #3	22.8'	
#12	19.6'	
#24	22.6'	
#25	13.2'	
	78.2' @ 31lb/ft = 2424 lb.	= 1.21
Net shipped.		6.11

BOXES.

TOTAL WT ALL TYPES		= 14.03
HELD BACK:		
40 to 48	= 19.1'	
89, 90, 91, 93, 94	= 12.5'	
115, 116	= 4.2'	
129, 130	= 4.7'	
185, 186	= 4.1'	
295, 297, 298, 300, 301, 303	= 15.1'	
304, 306, 308, 309, 310, 312	= 14.3'	
313, 316.	= 5.2'	
	79.2' @ 31lb/ft = 2455 lb	= 1.23
		12.80

TOTAL WT. TRACHYTE PORPHYRY BULK SAMPLE 18.91 TONS.

			TONS.
2) TRACHYTE PORPHYRY VARIABILITY SAMPLE 815#			= 0.41
3) COMPOSITES			
#1		648#	0.32
#4		654#	0.33
#5		381#	0.19
#7	Barrel 418# Boxes 236. 654#	654#.	0.33.
#6	(Proposed)	600#	0.30.
			1.88 TONS
		+ Previous Page.	18.91
			20.79 TONS.

2/9/89

Variability Sample

Rock Type (code)	Drill Hole #/Interval (footage)	Box #		
Trachyte Porphyry (60)	D88-65 / 232-234.5 (2.5')	171	V1	X
" " "	D88-67 / 158.4-161.4 (3.0')	88	V3	X
" " "	" " / 240-242.7 (2.7')	79	V4	X
" " "	" " / 463.3-465.9 (2.6')	3	V5	X
" " "	D88-69 / 584.3-586.8 (2.5')	205	V6	X
" " "	" " / 737.2-739.7 (2.5')	265	V7	X
" " "	" " / 887.5-890 (2.5')	292	V8	X
" " "	D88-70 / 160.4-162.5 (2.1')	225	V9	X
" " "	D88-66 / 153.6-155.9 (2.3')	114	V2	X
" " "	D89-72 / 1032.3-1035.9 (3.6')	356	V10	X
	(26.3') [815#]			

Composites

Composite #	Rock Type	Drill Hole / Interval (footage)		Box #
1	Trachyte Porphyry	D88-65 / 211-214'	(3.0)	174 ✓
		D88-66 / 185.6-188.4	(2.8')	108 ✓
NEED 1 MORE		D88-67 / 305.8-309.2	(3.4')	68 ✓
		D88-68 / 582.7-585.5	(2.8')	34 ✓
		D88-69 / 733.4-736.3	(2.9')	264 ✓
		D88-70 / 156.5-159.2	(2.7)	224 ✓
	NEW →	D89-72 / 1008.7-1012	(3.3) 20.9 648#	353 ✓
4	Ꞓdh ~~Ꞓdg~~	D88-71 / 42-44.8	(2.8')	296 ✓
		" / 56.5-59	(2.5')	299 ✓
		" / 90-92.3	(2.3')	305 ✓
NEED 2 MORE 1 - sh 1 - gtzite		" / 109.5-111.6	(2.1')	302 ✓
		" / 161.2-163.9	(2.7')	311 ✓
	Ꞓdg	" / 183.5-186.3	(2.8')	315 ✓
	NEW → Ꞓdg	" / 180-182.8	(2.8')	314 ✓
	→ Ꞓtp	" / 100.4-103.5	(3.1') 21.1' 654.1#	307 ✓
5	pꞒ	D88-66 / 157.4-160.2	(2.8')	113 ✓
		D88-68 / 668.2-670.8	(2.6')	49 ✓
		" / 672.9-675.2	(2.3')	50 ✓
		" / 680.7-683.3	(2.6')	51 ✓
		" / 685-687	(2.0') 12.3 381.3#	52 ✓
6	Trachyte Porphyry	—	600#	
7	Tgtp		580#	

Composite #	Rock Type	DH# / Interval	Box (BBL)
7	Tqtp	D88-68 / 782 - 834 (Broken) (13.5') (418#)	BBL-7 ✓
	Quartz Trachyte	D88-68 / 802.2 - 804.8 (2.6')	92 ✗
		D88-69 / 644.5 - 647 (2.5')	248 ✗
		D88-69 / 648 - 650.5 (2.5')	249 ✗
		21 / 654.1#	

Barrels

To Lakefield

C-7

1, 2, 4, 5, 6, 7
8, 9, 10, 11, 12,
13, 14, 15, 16, 17,
18, 19, 20, 21, 22,
23, 26, 27, 28, 29

+1

27

Stay/Deadwood

3, 12, 24, 25

Box

Stay in Deadwood

40, 41, 42, 43, 44, 45, 46, 47, 48,
89, 90, 91, 93, 94
115, 116
129, 130
185, 186
295, ~~296~~, 297, 298, 300, 301, 303, 304, 306
308, 309, 310, 312, 313, 316,

3A

M.I. Callan | 2.9.89.

WEIGHT TO BE SHIPPED TO LAKEFIELD.

TRACHYTE PORPHYRY BULK SAMPLE.

BARRELS.

		TONS
TOTAL WT. ALL TYPES IN BARRELS		= 7.32
HELD BACK:		
BARREL #3	22.8'	
#12	19.6'	
#24	22.6'	
#25	15.2'	
	78.2' @ 31lb/ft = 2424 lb.	= 1.21
Net shipped.		6.11

BOXES.

TOTAL WT ALL TYPES		= 14.03
HELD BACK:		
40 to 48	= 19.1'	
89, 90, 91, 93, 94	= 12.5'	
115, 116	= 4.2'	
129, 130	= 4.7'	
185, 186	= 4.1'	
295, 297, 298, 300, 301, 303	= 15.1'	
304, 306, 308, 309, 310, 312	= 14.3'	
313, 316.	= 5.2'	
	79.2' @ 31lb/ft = 2455 lb	= 1.23
		12.80

TOTAL WT. TRACHYTE PORPHYRY BULK SAMPLE 18.91 TONS

			TONS.
2) TRACHYTE PORPHYRY VARIABILITY SAMPLE		815#	= 0.41
3) COMPOSITES			
#1		648#	0.32
#4		654#	0.33
#5		381#	0.19
#7	Barrel 418# Boxes 236. 654#	654#.	0.33.
#6	(Proposed)	600#	0.30.
			1.88 TONS
		+ Previous Page.	18.91
			20.79 TONS.

BARRON

0510 (11-74)

CALCULATION SHEET

DATE

DESIGN BY M.I. CALLOW DATE 2.1.89 CHECKED BY SHEET NO. 1 of 3

PROJECT BROHM GILT EDGE SULFIDE PROJECT JOB NO. 20060

SUBJECT TRACHYTE PORPHYRY - VARIABILITY TEST CALCULATION NO. FILE NO.

SELECTED FOOTAGE OF 6" CORE FOR VARIABILITY TESTS.

BASIS OF SELECTION:

- Select two widely spaced deep holes and select footage to represent three equally spaced intervals (6 samples)
- Select four holes and select footage from the mid-point. (4 samples)

SAMPLE QUANTITY.

Each of the ten samples is approx. 80 lbs.
6" core weighs ~ 64'/ton $\equiv$ $\frac{80}{2000} \times 64 = 2.5$ ft per 80 lb sample.

FOOTAGE SELECTION

The footage designations are taken from the Brohm document "Six Inch Core 1988 Sample Inventory"

	TOP	MIDDLE	BOTTOM
D88-65	-	232 to 234^5 [2.5']	-
D88-66	-	157^4 to 160^2 [2.8']	-
D88-67	Barrel 6 166^2 to 169 [2.8']	240 to 242^7 Box 79 [2.7']	463^3 Box 3 to 465^9 [2.6']
D88-68	-	-	802^2 to 804^8 [2.6']
D88-69	584^3 Box 205 to 586^8 [2.5']	737^2 Box 265 to 739^7 [2.5']	887^5 to 890 [2.5']
D88-70	-	152^6 to 155^3 [2.7'] Barrel 18	-

Box 171
Box 113
Box 92
Box 292

0510 (11-74)

CALCULATION SHEET

DATE

DESIGN BY DATE CHECKED BY SHEET NO. 2 of 3

PROJECT JOB NO.

SUBJECT DIFFERENT ORE TYPES - VARIABILITY TESTS CALCULATION NO. FILE NO.

FOOTAGE SELECTION

BASIS FOR SELECTION

- COMPOSITE #1 - 580 lb sample composed of six 3 ft sections of drillcore taken at the midpoint of each of the six holes drilled in the trachyte porphyry.
- COMPOSITES #4 & 5 - 580 lb samples of each, taken at selected intervals
- COMPOSITE #6 - Large chips taken from the sulfide ore exposed in the open pit. Chips shall be larger than 1.25 in. which is the feed size of the 18" Autogenous Mill Test. (580 lbs)

COMPOSITE No.	ROCK TYPE	DRILL HOLE	FOOTAGE
1	TRACHYTE PORPHYRY	D88-65	211' to 214' [3.0'] Box 174
		" -66	182 to 184.7 [2.7'] Barrel 9
		" -67	305.8 to 309.2 [3.4'] Box 68
		" -68	582.7 to 585.5 [2.8'] Box 34
		" -69	733.4 to 736.3 [2.9'] Box 264
		" -70	156.5 to 159.2 [2.7'] Box 224
4	CAMBRIAN DEADWOOD HORNFELS	D88-71	42' to 44.8 [2.7'] Box 296
		"	60' to 63.3 [3.3'] Barrel 24
		"	93.4 to 96.3 [2.9'] Barrel 24
		"	109.5 to 111.6 [2.1'] Box 302
			161.2 to 163.9 [2.7'] Box 311
			175.8 to 179.4 [3.6'] Barrel 25

0510 (11-74)

CALCULATION SHEET

DATE

DESIGN BY DATE CHECKED BY SHEET NO. 3 of 3.

PROJECT JOB NO.

SUBJECT DIFFERENT ORE TYPES (cont). CALCULATION NO. FILE NO.

COMPOSITE No.	ROCK TYPE	DRILL HOLE	FOOTAGE
5	PRECAMBRIAN SCHIST	D88-68	ALL CORE FROM 657 TO 687
6	OPEN PIT SULFIDE	-	+1¼" CHIP SAMPLES

Box 47, 48, 49
50, 51, 52
Barrel 3.

0510 (11-74)

CALCULATION SHEET

DATE

DESIGN BY M.I. CALLOW DATE 2.1.89 CHECKED BY SHEET NO. 1 of 3

PROJECT BROHM GILT EDGE SULFIDE PROJECT JOB NO. 20060

SUBJECT TRACHYTE PORPHYRY - VARIABILITY TEST CALCULATION NO. FILE NO.

SELECTED FOOTAGE OF 6" CORE FOR VARIABILITY TESTS.

BASIS OF SELECTION:

- Select two widely spaced deep holes and select footage to represent three equally spaced intervals (6 samples)
- Select four holes and select footage from the mid-point. (4 samples)

SAMPLE QUANTITY.

Each of the ten samples is approx. 80 lbs.
6" core weighs ~ 64'/ton = $\frac{80}{2000} \times 64 = 2.5$ ft per 80 lb sample.

FOOTAGE SELECTION

The footage designations are taken from the Brohm document "Six Inch Core 1988 Sample Inventory"

	TOP	MIDDLE	BOTTOM
D88-65	-	232^{1} to 234^{5} [2.5']	-
D88-66	-	157^{4} to 160^{2} [2.8']	-
D88-67	166^{2} to 169 [2.8']	240 to 242^{7} [2.7']	463^{3} to 465^{9} [2.6']
D88-68	-	-	802^{2} to 804^{8} [2.6']
D88-69	584^{3} to 586^{8} [2.5']	737^{2} to 739^{7} [2.5']	887^{5} to 890 [2.5']
D88-70	-	152^{6} to 155^{3} [2.7']	-

0510 (11-74)

CALCULATION SHEET

DATE

DESIGN BY DATE CHECKED BY SHEET NO. 2 of 3

PROJECT JOB NO.

SUBJECT DIFFERENT ORE TYPES - VARIABILITY TESTS CALCULATION NO. FILE NO.

FOOTAGE SELECTION

BASIS FOR SELECTION

- COMPOSITE #1 - 580 lb sample composed of six 3 ft sections of drillcore taken at the mid-point of each of the six holes drilled in the trachyte porphyry.
- COMPOSITES #4 & 5 - 580 lb samples of each, taken at selected intervals
- COMPOSITE #6 - Large chips taken from the sulfide ore exposed in the open pit. Chips shall be larger than 1.25 in. which is the feed size of the 18" Autogenous Mill Test. (580 lbs)

COMPOSITE No.	ROCK TYPE	DRILL HOLE	FOOTAGE
1	TRACHYTE PORPHYRY	D88-65	211' to 214' [3.0']
		" -66	182 to 184^7 [2.7']
		" -67	305^8 to 309^2 [3.4']
		" -68	582^7 to 585^5 [2.8']
		" -69	733^4 to 736^3 [2.9']
		" -70	156^5 to 159^2 [2.7']
4	CAMBRIAN DEADWOOD HORN-FELS	D88-71	42' to 44^8 [2.7']
		"	60' to 63^3 [3.3']
		"	93^4 to 96^3 [2.9']
		"	109^5 to 111^6 [2.1']
			161^2 to 163^9 [2.7']
			175^8 to 179^4 [3.6']

0510 (11-74)

CALCULATION SHEET

DATE

DESIGN BY DATE CHECKED BY SHEET NO. 3 of 3

PROJECT JOB NO.

SUBJECT DIFFERENT ORE TYPES (cont) CALCULATION NO. FILE NO.

COMPOSITE No.	ROCK TYPE	DRILL HOLE	FOOTAGE
5	PRECAMBRIAN SCHIST	D88-68	ALL CORE FROM 657 TO 687 + 1¼" CHIP SAMPLES
6	OPEN PIT SULFIDE	-	

BECHTEL, INC.
Mining & Metals Operations
P. O. BOX 3965
SAN FRANCISCO, CA 94119

FACSIMILE: (415) 768-3398

CONFIRMATION:

DATE: JANUARY 10, 1989

TO : MR. DOUGLAS E. STEWART _ FAX NO. (605) 578-1709

FROM: F. J. TOMERSON, BECHTEL, S.F.

SUBJECT: GRINDING TESTWORK PROGRAM - DRAFT REPORT
GILT EDGE SULFIDE PROJECT - BROHM MINING CORP.

NUMBER OF PAGES FOLLOWING TRANSMITTAL: 5

Bechtel, Inc.
Engineers — Constructors

Fifty Beale Street
San Francisco, California
Mail Address: P. O. Box 3965, San Francisco, CA 94119

BY FAX -(605) 578-1709

January 10, 1989

Mr. Douglas E. Stewart
Project Manager
Brohm Mining Corporation
P. O. Box 485
Deadwood, South Dakota 57732

Subject: Gilt Edge Sulfide Project
Grinding Testwork Program
Job No. 20060

Dear Mr. Stewart:

We transmit the draft of Grinding Testwork Program for your comments. Other parts of the testwork program will follow later this week and will include:

- Ore Variability with Depth (Characterization Tests)
- Batch Tests on Composites
- Other Tests

Very truly yours,

F. J. Tomerson

F. J. Tomerson

FJT:dnl
Attachment

cc: K. R. Coyne
M. I. Callow
J. D. McLain

DRAFT
January 10, 1989

BECHTEL, INC.

GILT EDGE SULFIDE GOLD PROJECT
JOB NO. 20060

GRINDING TESTWORK PROGRAM

OBJECTIVE

To determine parameters for the grinding circuit by testwork on the 6" drill core samples.

BACKGROUND DATA

Recent drilling at the site has produced about 28 tons of 6" drill core of which 18 tons are currently available for testwork. Recent leach testwork by McClelland in Reno suggests a primary grind in the range 80% - 100 mesh to 80% - 200 mesh. Bechtel concurs with the conclusion of previous investigators that SAG milling is likely to be the preferred grinding method; now to be followed by second stage ball milling to meet the new finer grind requirement.

A preliminary MacPherson autogenous grindability test at Hazen indicated the ore was suitable for SAG milling. Bond Work Index tests by Hazen gave the following:

Rod Mill - 14 mesh - 13.2
Ball Mill - 100 mesh - 13.4

It is understood that accessible sulfide ore is also available from the oxide pit.

OVERALL TEST PROGRAM

The 6" drill core should be composited and crushed as necessary to provide samples for:

1. Gravity, Leaching and Gold Recovery Tests (to be described in a later program)
2. Bond Rod Mill and Ball Mill Work Index Tests
3. MacPherson 18" Autogenous Grinding Tests
4. 6' x 2' SAG Mill Grinding Tests.

The grinding tests are described in more detail later in this report.

SAMPLES

6" drill core logs will be provided by Brohm Mining at a later date. However, for the purposes of this testwork program we assume, and expect, that the same four ore types previously tested and listed below will be available in suitable proportions to meet the needs of the program.

1. Composite #1 - Trachyte Porphyry Run-of-Mine
2. Composite #2 - Trachyte porphyry High Grade
3. Composite #3 - 4 - Deadwood Formation
4. Composite #5 - Precambrian Schist

We propose that a fifth sample (Composite #6 - Open Pit Sulfide) be prepared for 18" autogenous grinding tests described later in this report.

DESCRIPTION OF TEST PROGRAM

In general we concur with the overall program previously proposed by others. The approach will be to test the Composite #1 - Porphyry Run-of-Mine Ore in the 6' x 2' SAG mill to provide as much baseline data as can be generated from the relatively small sample available. An 18" autogenous mill test will also be performed on each of the five composite samples (which includes the open pit sulfide sample) to determine ore variability from the base case Composite #1 ore. The purpose of testing the open pit sulfide ore in the 18" autogenous mill is to provide comparative data in the event that insufficient Composite #1 sample is available to fully define the SAG mill grinding characteristics in the 6'x2' mill test. Should this be the case then it is proposed that an open pit sulfide bulk sample be tested to provide supplemental information.

Rod and ball mill Bond work indeces will be determined to provide:

1. Data on the variability of the ore at different depths within the same ore type

2. Assist in maximizing the efficiency of the grinding circuit design.

COMPOSITE SAMPLES - SIZE AND QUANTITY

Sample Available: 18 tons of 6" drill core from sources to be described by Brohm Mining.

SAMPLE NEEDED

	Size	Comp.#1 TP-ROM	Comp #2 TP-HB	Comp #3-4 DF	Comp #5 PS	Comp #6 O'pit S
Bond Wi RM & BM	-6#	120 lbs	120 lbs	120 lbs	120 lbs	120 lbs
18" Autogenous Test	-1.25"	1000 lbs	1000 lbs	1000 lbs	1000 lbs	1000 lbs
6'x2' SAG Test	-6"(2)	(3)	-	-	-	(1)
Other Testing	(4)	(4)	(4)	(4)	(4)	(4)

(1) To be determined after initial work on Composite #1.

(2) Portion to be crushed to simulate -6" crusher product.

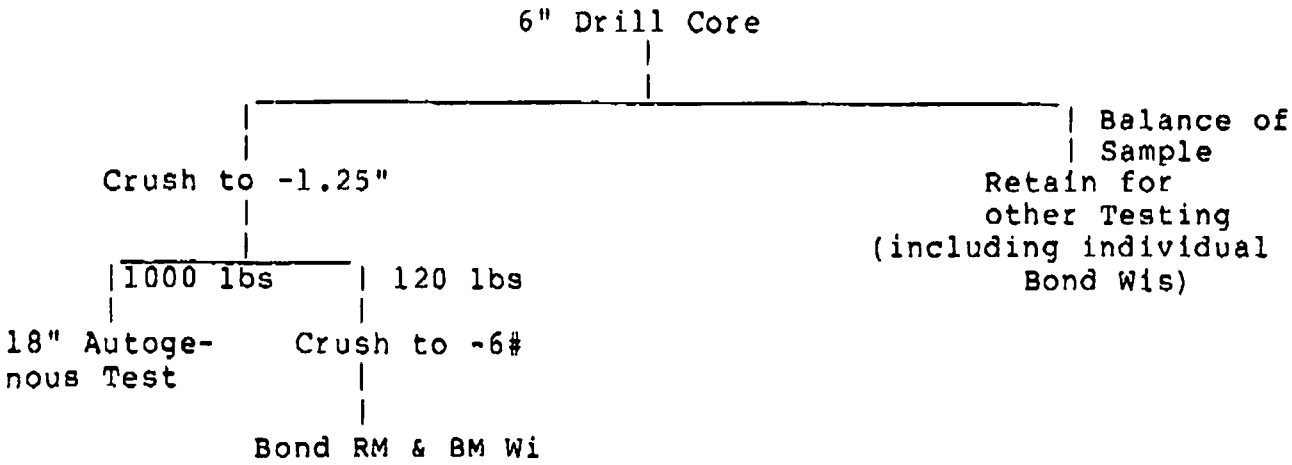
(3) Balance of material available.

(4) To be determined.

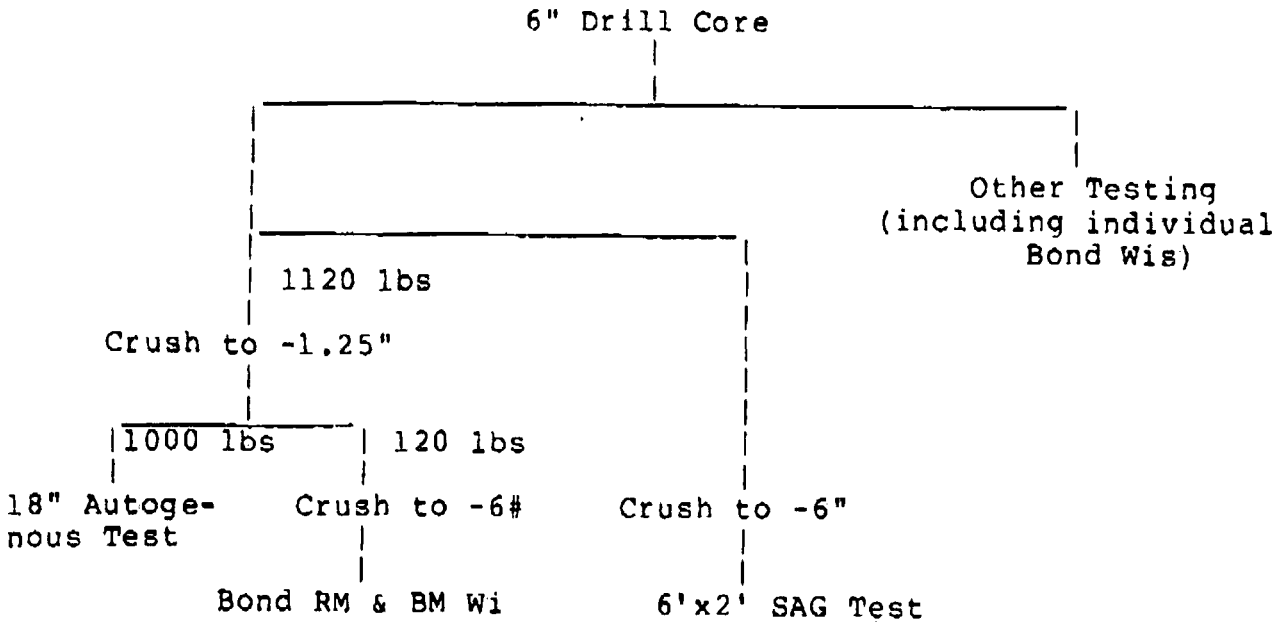
COMPOSITE SAMPLE PREPARATION

The 6" drill core shall be shipped to the laboratory selected for the 6'x2' SAG mill testing. This laboratory shall be responsible under Bechtel's direction, for compositing, crushing, sample preparation and shipment of samples to other laboratories. Bechtel shall determine the final sample preparation program after receipt of the drill logs, but it will generally be in accordance with the following:

For Each of Composites #2, 3 & 4, 5, 6:



For Composite #1:



ORE VARIABILITY WITH DEPTH (Characterization Tests)

In addition to testing composites #1 to 6 as described in the previous sections of this report, it is also proposed to check on ore variability with depth as a separate program. Bechtel's program for leach testing proposes to select two widely separated holes in the Trachyte Porphyry Run-of-Mine Ore and cut samples from the mid-point of each one third section of the total core by depth. On the remaining four 6" holes it is proposed to cut a sample at the mid-point of each hole. In addition to leaching tests it is intended to perform Bond rod mill and ball mill tests on each sample to determine if the ore varies with depth. Each of the ten tests will require 120 lbs of minus 6 mesh sample.

PRELIMINARY LABORATORY SELECTION

6'x2' SAG Mill Testing	:	Lakefield or Ortech International (Ontario Research)
18" Autogenous Testing	:	Hazen Research
Bond Work Indeces	:	Hazen Research
[Gravity Testwork	:	Hazen Research]

$$\begin{array}{r} 53\tfrac{1}{3} \\ 366 \\ \hline 7 \end{array}$$

BROHM MINING CORP.

DATE: JANUARY 6, 1989

TO: FRANK TOMERSON - BECHTEL, INC.

FROM: JAMES N. BARRON - BROHM MINING CORP.

SUBJECT: SIX-INCH CORE INVENTORY BY ROCK TYPE

Attached please find a listing of 6-inch core holes along with collar elevations and overall core intervals by elevation. Also attached is a core inventory showing rock type, depth and thickness of 6-inch core intervals presently packaged in boxes or in 55-gallon drums. The Rock Code corresponds to that used in our computer block model, i.e. 60 = Trachyte Porphyry, 10 = Precambrian Schist, 30 = Cambrian Deadwood Hornfels, 40 = Cambrian Deadwood Quartzite, 70 = Tbxa or breccia and FZ = fault zone or fracture zone which drilled as rubble with very little rehealing. Also shown on this inventory is the visual estimate of pyrite percentage.

If you have any questions relating to this material, please call me at (605) 578-2107. Thank you.

James N. Barron

JNB/dvl

enc:

cc: Doug Stewart

South Dakota Office: P.O. Box 485, Deadwood, South Dakota 57732
Telephone: (605) 578-2107 Telecopier: (605) 578-1709

Brohm Mining Corp. is a wholly owned affiliate of Minven Gold Corporation

DATE: FEBRUARY 10, 1989

TO: DAN BLAKEMAN

FROM: JIM BARRON

SUBJECT: VARIABILITY TEST SAMPLE

The following is a finalized listing of 6" core samples compiled during Ian Callow's visit. These samples will be prepared for shipment and should be ready to load by 2/15/89.

Ten TRACHYTE PORPHYRY VARIABILITY SAMPLES (Approximately 815 lbs).

Variability Sample No.	Box No.	Rock Code	Drill Hole No./Depth Interval (footage)
V1	171	60	D88-65 / 232 - 234.5 (2.5')
V2	114	60	D88-66 / 153.6 - 155.9 (2.3')
V3	88	60	D88-67 / 158.4 - 161.4 (3.0')
V4	79	60	D88-67 / 240 - 242.7 (2.7')
V5	3	60	D88-67 / 463.3 - 465.9 (2.6')
V6	205	60	D88-69 / 584.3 - 586.8 (2.5')
V7	265	60	D88-69 / 737.2 - 739.7 (2.5')
V8	292	60	D88-69 / 887.5 - 890 (2.5')
V9	225	60	D88-70 / 160.4 - 162.5 (2.1')
V10	356	60	D89-72 / 1032.3 - 1035.9 (3.6')

COMPOSITE SAMPLES

Composite No.	Box No.	Rock Type	Drill Hole No./Depth Interval (footage)
Trachyte Porphyry			
C-1	174	60	D88-65 / 211 - 214 (3.0')
C-1	108	60	D88-66 / 185.6 - 188.4 (2.8')
C-1	68	60	D88-67 / 305.8 - 309.2 (3.4')
C-1	34	60	D88-68 / 582.7 - 585.5 (2.8')
C-1	264	60	D88-69 / 733.4 - 736.3 (2.9')
C-1	224	60	D88-70 / 156.5 - 159.2 (2.7')
C-1	353	60	D89-72 / 1008.7 - 1012 (3.3')
			Approximately 648 lbs.
Deadwood Formation			
C-4	296	30	D88-71 / 42 - 44.8 (2.8')
C-4	299	30	D88-71 / 56.5 - 59 (2.5')
C-4	305	30	D88-71 / 90 - 92.3 (2.3')
C-4	302	30	D88-71 / 109.5 - 111.6 (2.1')
C-4	311	30	D88-71 / 161.2 - 163.9 (2.7')
C-4	314	40	D88-71 / 180 - 182.8 (2.8')
C-4	315	40	D88-71 / 183.5 - 186.3 (2.8')
C-4	307	50	D88-71 / 100.4 - 103.5 (3.1')
			Approximately 654 lbs.

COMPOSITE SAMPLES (continued)

Composite No.	Box No.	Rock Type	Drill Hole No./Depth Interval (footage)
Precambrian			
C-5	49	10	D88-68 / 668.2 - 670.8 (2.6')
C-5	50	10	D88-68 / 672.9 - 675.2 (2.3')
C-5	51	10	D88-68 / 680.7 - 683.3 (2.6')
C-5	52	10	D88-68 / 685 - 687 (2.0')
C-5	113	10	D88-66 / 157.4 - 160.2 (2.8')
			Approximately 381 lbs.
Trachyte Porphyry from Pit			
C-6	Barrel #C-6 (1 of 1)	60	Approximately 580 lbs.
Quartz Trachyte Porphyry			
C-7	92	80	D88-68 / 802.2 - 804.8 (2.6')
C-7	248	80	D88-69 / 644.5 - 647 (2.5')
C-7	249	80	D88-69 / 648 - 650.5 (2.5')
C-7	Barrel #C-7 (1 of 1)	80	D88-68 / 782 - 834 (13.5') (Broken)
			Approximately 654 lbs.
	TOTAL WEIGHT OF ALL COMPOSITES (1-7) = 2,917 LBS.		

In addition to the above listed variability samples and composites we will be shipping the following:

A) 26 Barrels containing Trachyte Porphyry and Breccia (composed mostly of Trachyte Porphyry) having a total weight of approximately 12,220 lbs.

B) 291 Core boxes containing Trachyte Porphyry and Breccia (composed mostly of Trachyte Porphyry) having a total weight of approximately 25,600 lbs.

Therefore, the total weight of this shipment will be approximately 41,552 lbs plus the weight of 27 barrels and 324 wooden core boxes which may amount to an additional 3000 lbs for a total of 44,552 lbs (22.3 tons). This of course does not include the shipment of the large bulk sample from the pit.

Jim

Jim Barron

JB/dvl

cc: Doug Stewart
Ian Callow - Bechtel

Jim

3/20/89

Expansion Project Met Testing

Trachyte Porphery Variability Samples

Sample	S.G.	Bulk Density	Ball Mill Work Index	Total Sulfur %	Au oz/ton
V_1	2.91	12.97 ft³/ton	13.3 KWH/ton	3.09	.011
V_2	2.81	12.56 ↓	11.9 ↓	6.80	.025
V_3	2.65	12.66	15.3	1.84	.033
V_4	2.74	12.66	13.3	4.77	.173
V_5	2.71	12.51	15.5	4.55	.017
V_6	2.61	12.46	16.1	1.30	.047
V_7	2.62	12.41	17.8	0.03	.016
V_8	2.66	12.76	15.3	2.09	.139
V_9	2.65	13.02	17.9	2.26	.013
V_{10}	2.63	12.51	17.9	1.11	.007
AVE	2.70	12.61	15.4	2.78	.048
C_1	2.71	12.13	16.7	3.88	.092
Deadwood					
C_4	2.91	11.12	18.1	4.21	.029
Precambrian					
C_5		10.78 Repeat 11.16	13.4	0.98	.029
Trach. Porph Pit					
C_{6A}	2.67	12.61	14.7	2.36	.006
C_{6B}		14.05		3.07	.068 (1 of 60 drums skipped)
Quartz Trach Porph					
C_7	2.64	11.44	18.5	1.84	.051
SAG Feed Comp					
DC1				5.16	.060 (Composite of C1, C4, C5, C7)

FAX to: Dan Blakeman (605) 578-1709
Broken Mining Corp.

Re: In Situ Densities

Sample	Densities t/m³		
V1 - 1	2.64		
2	2.33	2.47	
3	2.43		
V2 - 1	2.65		
2	2.54	2.55	
3	2.47		
V3 - 1	2.57		
2	2.65	2.53	
3	2.47		
V4 - 1	2.55		
2	2.54	2.53	
3	2.51		
V5 - 1	2.56		
2	2.55	2.56	
3	2.57		2.54 ± 0.12
V6 - 1	2.51		
2	2.56	2.57	
3	2.65		
V7 - 1	2.68		
2	2.38	2.58	
3	2.68		
V8 - 1	2.47		
2	2.44	2.51	
3	2.61		
V9 - 1	2.38		
2	2.61	2.46	
3	2.40		
V10 - 1	2.41		
2	2.40	2.56	
3	2.88		

Project No. 3687 Company Brown Mining Date: Feb. 28/89

Sample No.		% S
HD V-1	1	3.09
V-2	2	6.80
V-3	3	1.84
V-4	4	1.77
V-5	5	4.55
V-6	6	1.30
V-7	7	0.03
V-8	8	2.09
V-9	9	2.36
V-10	10	1.11

FORM LR 12

Project No. 3687 Company BROWN MINING Date: 7 March 1987

Sample No.	% Sr						
C-1	3.88						
C-4	4.21						
C-6	2.56						
C-7	1.84						

MH

FORM LR 12

LAKEFIELD RESEARCH

Analytical Services

FIRE ASSAY REPORT

Project No: 3687 Client: Brohm Mining Date: Feb 28, 1989

Sample No.	Sample	Au g/t	Ag g/t	Pulp Weight (g)
1	HD Y-1	0.38 = .011		
2	Y-2	0.85 : .025		
3	Y-3	1.13 .033		
4	Y-4	5.92 .173		
5	Y-5	0.57 .017		
6	Y-6	1.67 .049		
7	Y-7	0.55 .016		
8	Y-8	4.78 .140		
9	Y-9	0.45 .013		
10	Y-10	0.25 .007		
		.048		

Load 5384

N.B.: Assays >9.99 g/t should be rounded up to 1 decimal place and assays >99.9 g/t should not have decimal places.

Assayer: D.P.

Assays reported as 0.00 or 0.0 g/t are trace.
Trace indicates Au < 0.02 g/t & Ag < 2.0 g/t.

LAKEFIELD RESEARCH

Analytical Services

FIRE ASSAY REPORT

Project No: 3687 Client: Brohm Mining Date: Mar 1, 1989

Sample No.	Sample	Au g/t	Ag g/t	Pulp Weight (g)
1	C-1	3.16 = .092		
2	C-4	0.99 .029		
3	C-6	0.22 .006		
4	C-7	1.76 .051		

Load 5390

Assayer: J.M

N.B.: Assays >9.99 g/t should be rounded up to 1 decimal place and assays >99.9 g/t should not have decimal places.

Assays reported as 0.00 or 0.0 g/t are trace.
Trace indicates Au < 0.02 g/t & Ag < 2.0 g/t.

3687

MAR 1 89

SAMPLE		SPECIFIC GRAVITY
H.D.	V 1	2.91
	V 2	2.81
	V 3	2.65
	V 4	2.74
	V 5	2.71
	V 6	2.61
	V 7	2.62
	V 8	2.66
	V 9	2.65
	V 10	2.63
	C-1	2.71
	C-4	2.91
	C-6	2.67
	C-7	2.64

LAKEFIELD RESEARCH
A DIVISION OF FALCONBRIDGE LIMITED

PHONE (705) 652-3341
TELEX NO. 06962842
FACSIMILE NO. (705) 652-6365

June 6/90

Dear Sir/Madam:

Enclosed is an invoice covering storage of samples at Lakefield Research for 1990.

If you do not wish to continue storage, or have further instructions regarding these samples, please contact me.

A copy of our current sample storage schedule of fees is also enclosed for your information.

Sincerely,
LAKEFIELD RESEARCH

Tanya M Glassford

(Mrs.) Tanya Glassford
Accounting

S:encl.

INNA Dymov—
57 bbls—
$15/ Drum disposal charge
OR
Send prepaid + loading EXPENSE

185 CONCESSION STREET, POSTAL BAG 4300, LAKEFIELD, ONTARIO, CANADA K0L 2H0

LAKEFIELD RESEARCH

SAMPLE STORAGE - SCHEDULE OF FEES

Responding to requests from exploration geologists and metallurgical consultants, Lakefield Research has expanded the existing storage facilities and introduced a system of indexing and cross-referencing of samples.

The following classes of storage are available:

	COST
(1) Inside Storage, Ambient Temperature	
1.1. Samples will be stored in unitized containers of corrugated cardboard, 45L content (1.5 cu ft), indexed and cross-referenced. This is for test products, assay rejects, test charges, custom samples, etc.	$ 24/box/year
1.2. Larger samples will be stored in fibre drums or steel drums up to 200L (45 Imp. gallons). This is for crushed drill core, hole composites or trench samples up to several tons	$ 50/drum/year
1.3. Core boxes or irregular containers	$ 30/100L/year
(2) Outside Storage, Ambient Temperature	
2.1. Bulk ore, not covered	$ 25/ton/year
(3) Inside Storage, Controlled Low Temperature (Freezer)	
3.1. Cardboard containers or steel drums up to 200 L. Mostly for test charges or composite samples of massive sulphides to retard oxidation.	$ 30/200L/month
3.2. Irregular containers	$ 15/100L/month

(4) Termination

On termination of the storage, Lakefield Research can arrange for the disposal of samples at a cost of $25/ton for bulk samples, $15/drum and $10/box. A $25 administration charge will be levied. Sample disposal is not provided for uranium samples which remain the responsibility of the client.

Samples can be returned to the client on direction. A man-hour charge and all shipping costs may be applied.

NOTE: On active projects, only Freezer Storage is charged on a monthly basis. All other sample storage is not charged until six months after completion of the project. This will be billed yearly, and is payable in advance.

RECEIVED
JUN 1 3
BROHM