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DAWSON
METALLURGICAL
LABORATORIES, INC.

P.O. Box 7685
5217 Major Street
Murray, Utah 84107-0685
Phone: 801-262-0922

February 2, 1989

A. F. Budge Mining Ltd.
4301 North 75th Street
Suite 101
Scottsdale, Arizona 85251

Attention: Mr. Dale Allen
Ms. Carole O'Brien

Subject: Results of Continued Laboratory Testing on a High Grade Gold-Silver UVX Sample. Our Project No. P-1583C.

Gentlemen:

In accordance with discussions between Mr. Frank Millsaps and ourselves, laboratory test work was continued on a high grade gold-silver sample from the UVX Property identified as P-1583C Composite No. 1. A series of gravity concentration tests followed by bulk sulfide flotation of the gravity tailings and subsequent cyanidation of the flotation tailings was performed to determine gold and silver extraction. Specific test work performed included:

- Gravity concentration (hand-pan) of a ball mill ground sample followed by flotation of the gravity tailings.
- Gravity concentration (tabling) of a -35 mesh sample followed by flotation of the reground gravity tailings.
- Cyanidation of flotation tailings.
- Amalgamation of gravity and flotation concentrates.

Results of direct cyanidation tests on ball mill ground Composite No. 1, originally reported December 29, 1988, are also included in this report.

I. Sample Description And Head Analysis

A UVX sample, received at our laboratory December 15, 1988, and assigned our Lot No. P-1583C Composite No. 1 was used in this test work. This sample was described in our December 29, 1988, report to Mr. Allen and Ms. O'Brien.

Head assay results and back-calculated head assays from test work are presented below:

P-1583C: A. F. Budge Mining, Ltd.
Head Assay Results: Composite No. 1

	Head Assay, oz/Ton	
	Au	Ag
Assayed Head	0.617	13.36
Avg. Back-Calc. Head*	0.656	13.82

*Avg of 3 tests

The sample was a salmon pink color indicating the presence of iron oxides.

II. Test Results

Results presented in this section are also included in individual test data sheets attached to the end of this report.

A. Summary

Results indicate that slightly higher gold and silver extractions were obtained from this sample by a combination of gravity concentration, flotation, tailings regrind and cyanidation than by direct cyanidation. These results are summarized below:

P-1583C: A. F. Budge Mining Ltd.
Test Results Summary

Test No.	Description	Gold Assay, oz/Ton		Gold Extracted, %
		Residue	Head	
3	Direct Cyanidation	0.285	0.672	57.6
7, 8	Gravity, Flotation, Tails Cyanidation	0.298*	0.632	52.7
9, 9A	Gravity, Flotation, Reground Tails Cyanidation	0.208*	0.665	72.2

		Silver Assay, oz/Ton		Silver Extracted,
		Residue	Head	%
3	Direct Cyanidation	6.84	13.51	49.4
7, 8	Gravity, Flotation, Tails Cyanidation	7.38*	13.47	46.3
9, 9A	Gravity, Flotation, Reground Tails Cyanidation	5.54*	14.48	67.0

*Flotation Tailings Leach Residue

The increased gold and silver extraction obtained in the gravity-flotation concentration, reground tailings cyanidation flowscheme may not be economically justified due to the increased treatment cost. In addition, concentrate treatment will incur additional loss of precious metal.

B. Direct Ore Cyanidation

Cyanidation of whole ore samples ball mill ground to 92 percent minus 200 mesh extracted approximately 58 percent of the gold and 50 percent of the silver in 72 hours. Results are presented below:

P-1583C: A. F. Budge Mining, Ltd.
Whole Ore Cyanidation
- Test 3 -

Product	Assay, oz/Ton		Distribution, %	
	Au	Ag	Au	Ag
Solution	0.379	6.54	57.56	49.37
Residue	0.285	6.84	42.44	50.63
Total (Calc)	0.672	13.51	100.00	100.00
NaCN Consumed:	4.14 lb/ton ore			
Lime Consumed:	4.1 lb/ton ore			

These results were included in our December 29, 1988, report to Mr. Allen and Ms. O'Brien.

C. Gravity - Flotation Concentration

Approximately 40 - 45 percent of the gold and silver in the sample was recovered by gravity concentration followed by flotation. Less than ten (10) percent of the gold was recovered into gravity concentrates. These results are summarized below:

P-1583C: A. F. Budge Mining Ltd.
Gravity - Flotation Concentration

Test No.	Product	Weight %	Assay, oz/Ton Au	Assay, oz/Ton Ag	Distribution, % Au	Distribution, % Ag
7	Gravity Conc.	0.73	3.692	223.91	4.3	12.2
	Sulfide Ro. Conc.	0.87	23.008	410.56	31.6	26.5
	Oxide Ro. Conc.	0.64	2.446	22.42	2.5	1.1
	Oxide Ro. Tails	97.76	0.399	8.31	61.6	60.2
	Total	100.00	0.632	13.47	100.0	100.0
9	Gravity Conc.	2.93	1.909	165.27	8.4	33.4
	Sulfide Ro. Conc.	1.10	19.241	169.56	31.9	12.9
	Oxide Ro. Conc.	0.51	1.562	11.45	1.2	0.4
	Oxide Ro. Tails	95.47	0.408	8.08	58.5	53.3
	Total	100.00	0.665	14.48	100.0	100.0

Tests 7 and 9 were similar except that a gravity concentrate was produced in Test No. 7 by hand panning a ball mill ground sample, while the gravity concentrate in Test No. 9 was produced by tabling a sample crushed to 35 mesh. The table tailings were then reground prior to flotation.

Free gold, ranging in size from 35 to 400 mesh, was observed in the gravity concentrates, with only minor amounts of pyrite detected. Sulfide flotation concentrates contained much finer gold (200 mesh top size) with minor amounts of sulfides and semi-oxidized iron (Limonite). Malachite and azurite oxide copper minerals were detected in the oxide rougher concentrates.

D. Flotation Tailings Cyanidation

Cyanidation of flotation tailings indicated that gold and silver extraction increased significantly when the tailings were reground from 83 percent minus 200 mesh to 88 percent minus 400 mesh. Unfortunately the cyanide consumption increased drastically in the reground tails test. Results are summarized as follows:

P-1583C: A. F. Budge Mining Ltd.
Flotation Tailings Cyanidation

Test No.	Grind	Gold Assay, oz/Ton		Gold Extracted, %	Reagents Consumed lb/Ton Tails	
		Residue	Calc. Head*		NaCN	Lime
8	83.1% -200 M.	0.298	0.388	23.3	1.84	1.9
9A	87.9% -400 M.	0.208	0.438	52.5	20.5	2.5

		Silver Assay, oz/Ton		Silver Extracted, %
		Residue	Calc. Head*	
8	83.1% -200 M.	7.38	8.28	11.0
9A	87.9% -400 M.	5.54	8.95	38.1

*Flotation Tails

The leach solution from Regrind Test No. 9A contained 1180 ppm Fe and 136 ppm Cu. Based on these assays, approximately 13.4 lb NaCN per ton of tails was complexed as ferro-cyanide, while 0.5 lb NaCN per ton of tails was complexed as copper cyanide.

The use of cement instead of lime for pH control may reduce the cyanide consumption during cyanidation of reground flotation tailings.

E. Concentrate Amalgamation

The gravity and flotation concentrates from Test No. 9 were amalgamated to determine the amount of free gold and silver present. Results, summarized on the following page, indicate that almost 70 percent of the gold and 50 percent of the silver in the gravity (table) concentrate was amalgamated. Less than ten (10) percent of the gold and silver in the flotation concentrates was amalgamated.

P-1583C: A. F. Budge Mining Ltd.
Flotation Concentrate Amalgamation
- Test 9 -

Product	Gold Assay, oz/Ton		Gold Recovered By Amalgamation, %
	Amalgam Feed	Amalgam Tails	
Table Conc.	1.909	0.609	68.1
Sulfide Flot. Conc.	19.241	17.494	9.1
Oxide Flot. Conc.	1.562	1.539	1.5

	Silver Assay, oz/Ton		Silver Recovered By Amalgamation, %
	Amalgam Feed	Amalgam Tails	
Table Conc.	165.27	85.83	48.1
Sulfide Flot. Conc.	169.56	165.73	2.3
Oxide Flot. Conc.	11.45	11.41	0.4

III. Test Procedures

Procedures summarized in this section are also described in individual test data sheets attached to the end of this report.

A. Direct Ore Cyanidation

Test procedure was described in our report of December 29, 1988 (re: P-1583C).

B. Gravity - Flotation Concentration

The hand-pan gravity concentration test (No. 7) was performed as follows: 1000 grams of minus 20 mesh sample was ball mill ground to 83 percent minus 200 mesh and hand-panned using a small gold pan followed by a vanning plaque. The gravity tailings were transferred to a 1000 gram "Agitair" flotation machine and conditioned for five minutes with 0.10 lb/ton A-208 promoter and 0.03 lb/ton A-350 (potassium Amyl Xanthate). A rougher concentrate was subsequently floated for three minutes. Rougher tailings were conditioned five minutes with 0.5 lb/ton $CuSO_4$ and 0.05 lb/ton A-350 and a second rougher floated for one minute. These rougher concentrates were combined prior to filtering and drying.

The sulfide flotation tails were conditioned for eight minutes with 0.35 lb/ton NaHS (sulfidizing reagent) and 0.10 lb/ton A-350 prior to four minutes flotation. An MIBC-F65 frother mixture was used as required to maintain a stable froth. Flotation reagents used in these tests are manufactured by Cyanamid Corporation.

The table gravity concentration test (No. 9) was performed by tabling four kilograms of minus 35 mesh sample on an eighth deck Deister concentrating table. The table tailings were settled, clear water decanted, and the table tails were reground to 75 percent minus 200 mesh and floated as described earlier.

C. Flotation Tailings Cyanidation

Four hundred grams of dried flotation tailings from Test No. 7 was mixed with an equal weight of water and the pH adjusted to 11.5 with hydrated lime. Sodium cyanide was added to provide an initial solution concentration of ten lb/ton, and the slurry was bottle roll leached for 72 hours.

A second tailings cyanidation test was performed as follows: one kilogram of dried flotation tailings from Test No. 9 was reground in a ball mill to 88 percent minus 400 mesh. The slurry was adjusted to pH 12 with hydrated lime and cyanide was added to provide an initial solution concentration of 20 lb/ton. The slurry was subsequently bottle roll leached at 50 percent solids for 72 hours. The cyanide concentration was reconstituted to 20 lb/ton of solution after 24 hours of leaching.

D. Concentrate Amalgamation

Table, sulfide rougher, and oxide rougher concentrates from Test No. 9 were amalgamated separately as follows: each concentrate was diluted to approximately 10 - 15 percent solids and 25 grams of clean mercury added. A small amount (1.0 - 0.5 grams) of NaOH was added and the slurry was bottle rolled for four hours. The loaded amalgam was then separated from the sample by careful hand panning.

If you have any questions or we can be of further service, please call.

Sincerely,

DAWSON METALLURGICAL LABORATORIES, INC.

Philip Thompson
Vice President

PT/fg

cc: Mr. Frank Millsaps
Millsaps Mineral Service

DAWSON METALLURGICAL LABORATORIES, INC.

P. O. BOX 7685
5217 Major Street
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Phone: 801-262-0922

PROJECT NO. P-1583C
DATE 01/05/89
BY GSN

TEST NO. 7 NAME A. F. Budge Comp No. 1

20 min BM grind @ 50% solids followed by gravity concentration & bulk sulfide flotation

Product	Weight	% Wt.	Assay		Units		Distribution		V1G
			Au	Ag	Au	Ag	Au	Ag	
Gravity Conc.	14.6	0.73	3.692	223.91	0.0270	1.640	4.28	12.17	
Sulfide Ro.Conc.	17.3	0.87	23.008	410.56	0.1997	3.563	31.57	26.45	
Oxide Ro. Conc.	12.7	0.64	2.446	22.42	0.0156	0.143	2.46	1.06	
Rougher Tail	1949.0	97.76	0.399	8.31	0.3901	8.124	61.69	60.31	
Head Calculated	1993.6	100.00	0.632	13.47	0.6324	13.469	100.00	100.00	
Head Assay			0.617	13.36					
Gravity and Sulfide		1.60	14.167	325.13	0.2267	5.203	35.85	38.62	
Grav. & Flotation		2.24	10.830	238.94	0.2423	5.345	38.31	39.69	

OPERATION		BM	Grav.	Cond	Sulfide Ro	Cond	Ro #2	Oxide Ro
TIME		20	Conc	5	3	5	1	8/4
REAGENTS - LBS PER TON								
-20m Ore	gm	2000						
H2O	gm	2000						
A-208				.10				
A-350				.03		0.05		.10
$CuSO_4$						0.50		
MIBC-F65 3:1				0.032				0.016
NaHS @ 35%								0.35
MACHINE				2000	2000	2000	2000	2000
R.P.M.				800	800	800	800	800
pH				8.1				
% SOLIDS		50						
TEMPERATURE								

GRINDING PRODUCT: RoTail

MESH	%
+10	
+14	
+20	
+28	
+35	
+48	0.0
+65	0.0
+100	0.8
+150	5.1
+200	11.0
+325	27.0
-325	56.1
% -200	83.1

REMARKS: Pan Conc - minor heavy mineral fraction to grav. conc.; 2 grains of -200m free gold observed, mainly iron oxides, minor pyrite, Cu oxides.

Sulfide Ro No 1 - free gold +60m to -400m, dirty brown iron oxide, some pyrite & Cu oxide, trace native Cu.

Oxide Ro No 1 - mainly Cu oxide (azurite, malacite, chrysocolla)

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PROJECT NO. P-1583C
DATE 01/13/89
BY GSN

TEST NO. 8 NAME A. F. Budge

Test No. 7 RoTail

72 hour leach @ 50% solids with 10 lbs NaCN/ton soln

PRODUCT	Weight	PERCENT WEIGHT	ASSAY Au	ASSAY Ag	UNITS Au	UNITS Ag	DISTRIBUTION Au	DISTRIBUTION Ag
RoTail leach soln	457.6		0.079	0.80	0.3615	3.6608	23.3	11.0
leach res	399.4		0.298	7.38	1.1902	29.4757	76.7	89.0
Total (Calc)	400		0.388	8.28	1.5517	33.1365	100.0	100.0
Total (Assay)			0.399	8.31				

OPERATION		NaCN Leach		NaCN Leach
TIME		On	72 Hrs.	Off
REAGENTS - LBS PER TON		300 1/13		
Flotation Tail	gm	400.0		
H2O	gm	400.0		
$Ca(OH)_2$	gm	.5		
NaCN	gm	2.2		
NaCN Titration, lb/ton soln				8.01
$Ca(OH)_2$ Titration, lb/ton soln				0.5
NaCN Consumed, lb/ton ore				1.84
$Ca(OH)_2$ Consumed, lb/ton ore				1.93
MACHINE				
R.P.M.				
pH		8.2/11.4		11.7
% SOLIDS				
TEMPERATURE				

GRINDING PRODUCT

MESH	Leach Residue %
+10	
+14	
+20	
+28	
+35	
+48	0.0
+65	0.0
+100	0.8
+150	5.1
+200	11.0
+325	27.0
-325	56.1

REMARKS:

DAWSON METALLURGICAL LABORATORIES, INC.

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Phone: 801-262-0922

PROJECT NO. P-1583C
DATE 01/12/89
BY GSN

TEST NO. 9 (Page 1 of 2) NAME A. F. Budge

Comp. 1

4 kg gravity concentration followed by sulfide & oxide flotation followed by Ro Tail NaCN leach

Product	Weight	% Wt.	Assay		Units		Distribution		V1G
			Au	Ag	Au	Ag	Au	Ag	
Gravity Conc.	117.1	2.93	1.909	165.27	0.0559	4.838	8.40	33.42	
Sulfide Flot Conc.	44.1	1.10	19.241	169.56	0.2121	1.869	31.88	12.91	
Oxide Flot. Conc.	20.2	0.51	1.562	11.45	0.0079	0.058	1.19	0.40	
Oxide Flot. Tails.	3818.6	95.47	0.408	8.08	0.3895	7.714	58.54	53.27	
Head Calculated	4000.0	100.00	0.665	14.48	0.6654	14.479	100.00	100.00	
Head Assay			0.617	13.36					
Comb. Flot. Conc.		1.61	13.687	119.89	0.2200	1.927	33.07	13.31	
Grav.+Sulf Flot Con		4.03	6.651	166.44	0.2680	6.708	40.28	46.33	
Grav.+Comb. Flot Con		4.54	6.084	149.18	0.2759	6.766	41.46	46.73	

OPERATION	Table	Grav Conc	BM	Sulfide Ro #2	Sulfide Ro #2	Oxide Ro #1		Sulfide Ro Conc		Oxide Ro Conc			GRINDING PRODUCT	
TIME		Amal	½ X 10	5/4	5/2	4/4		Amal		Amal			Float	Leac
REAGENTS - LBS PER TON								4 Hrs.		4 Hrs.			Tail	Res.
Ore gm	4000.0		3900									MESH	%	
H2O (as required)												+10		
A-208			0.1									+14		
A-350				0.03	0.05	0.10						+20		
$CuSO_4$					0.50							+28		
MIBC - F65 3:1				0.048		0.016						+35		
NaHS @ 35%						0.22						+48	0.0	0.0
												+65	0.6	0.0
NaOH gm		.56						1.0		0.5		+100	3.2	0.0
Hg gm		25.38						25.04		25.11		+150	8.0	0.0
MACHINE		(25.70)	2 X	2000	2000	2000		(25.11)		(25.13)		+200	13.6	0.2
R.P.M.				800	800	800						+325	26.6	6.8
pH				8.8								-325	48.0	
% SOLIDS												+400		4.9
TEMPERATURE												-400		88.1

REMARKS: Gravity Conc. - free gold +32 to -400m (200m predominant) iron oxide, lead carbonate, minor sulfide (pyrite)
Sulfide Conc. - free gold 200 to -400m some Au corners locked with quartz or iron oxide, minor sulfides
Oxide Conc - no free gold observed
Grav. Conc. Amalgam - (lead carbonate) also amalgamating

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PROJECT NO. P-1583C
DATE 01/12/89
BY GSN & LA

Comp 1

TEST NO. 9 (page 2 of 2) **NAME** A. F. Budge

Gravity Tail - Flotation tail reground prior to 72 hour leach @ 50% solids with 10 lbs NaCN/ton soln

PRODUCT	Weight	PERCENT WEIGHT	ASSAY Total mg Au	ASSAY Total mg Ag	ASSAY oz/ton Au	ASSAY oz/ton Ag	UNITS	DISTRIBUTION Au	DISTRIBUTION Ag
Sulfide Conc Amal Conc	25.11		2.641	5.709				9.1	2.3
Sulfide Conc Amal Tail	44.1		26.451	250.58	17.494	165.73		90.9	97.7
Total	(44.1)		29.092	256.37	19.241	169.56			
Oxide Conc Amal Conc	25.13		0.016	0.03				1.5	0.4
Oxide Conc Amal Tail	20.2		1.066	7.90	1.539	11.41		98.5	99.6
Total	(20.2)		1.082	7.93	1.562	11.45			
Table Conc Amal Conc	25.70		5.221	318.93				68.1	48.1
Table Conc Amal Tail	117.1		2.445	344.59	0.609	85.83		31.9	51.9
Total	(117.1)		7.666	663.52	1.909	165.27			

OPERATION	GRINDING PRODUCT
TIME	
REAGENTS - LBS PER TON	
	MESH / %
	+10
	+14
	+20
	+28
	+35
	+48
	+65
	+100
	+150
MACHINE	+200
R.P.M.	+325
pH	-325
% SOLIDS	
TEMPERATURE	

REMARKS:

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METALLURGICAL
LABORATORIES, INC.

P. O. Box 7685
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Murray, Utah 84107
Phone: 801-262-0922

PROJECT NO. P-1583C
DATE 01/19/89
BY LA

TEST NO. 9A NAME A. F. Budge

Comp 1

Grav. Tail - Flotation tail reground prior to 72 hour leach with 20 lbs NaCN/ton soln

PRODUCT	Weight	PERCENT WEIGHT	ASSAY oz/ton Au	ASSAY oz/ton Ag	ASSAY ppm Cu	ASSAY ppm Fe	UNITS Au	UNITS Ag	DISTRIBUTION Au	DISTRIBUTION Ag
Leach Soln	1081.3		0.212	3.15	136	1180	2.2924	34.0610	52.5	38.1
Leach Residue	997.7		0.208	5.54			2.0752	55.2726	47.6	61.9
Total Ro Tail	997.7		0.438	8.95			4.3676	89.3336	100.0	100.0
Ro. Tail			0.408	8.08						

OPERATION		BM	NaCN Leach			NaCN Leach
TIME		60	On			Off
REAGENTS - LBS PER TON			2:35	9:00 1/20	4:00 1/20	
Float Tail	gm	1000.0				
H2O	gm	1000.0				
$Ca(OH)_2$	gm		3.0			
NaCN	gm		10.0	10.58		
NaCN Titration, lb/ton soln				.57	19.00	19.13
CaO Titration, lb/ton soln				3.8		3.2
NaCN Consumed, lb/ton Tail						20.5
$Ca(OH)_2$ Consumed lb/ton Tail						2.5
MACHINE						
R.P.M.						
pH		7.8		12.5		12.0
% SOLIDS						
TEMPERATURE						

GRINDING PRODUCT Leach Residue	
MESH	%
+10	
+14	
+20	
+28	
+35	
+48	0.0
+65	0.0
+100	0.0
+150	0.0
+200	0.2
+325	7.1
-325	
+400	5.1
-400	87.9

REMARKS:

ASSAY REPORT SHEET

ASSAY LAB, INC.
1376 W. 8040 So. Unit #4
West Jordan, Utah 84084

Date Received _____ **Date Reported** 1-10-89

Client Dawson Metallurgical Labs

Sample Identification	Oz / Ton Au	Oz / Ton Ag	Remarks
			* Ounces per ton of 2000 lbs.
P-1583 C A.F. Budge			
T-7 Comp #1			
Oxide Ro Conc	1.065mg	9.76mg	
Sulfide Ro Conc	13.647mg	243.52mg	
Pan Conc	1.848mg	112.08mg	
Ro Tail	.397 .400	8.31 8.31	

Ronald Bianchi

ASSAY REPORT SHEET

ASSAY LAB, INC.
1376 W. 8040 So. Unit #4
West Jordan, Utah 84084

Date Received _____ **Date Reported** 1-19-89

Client Dawson Metallurgical Labs

Sample Identification	Oz / Ton Au	Oz / Ton Ag	Remarks
			* Ounces per ton of 2000 lbs.
P-1583C A.F. Budge Leach Solns.			
T-8 Tno 7 Ro tail	.079	.80	
	.079	.80	
T-9 Comp 1 ro tail	.037	.05	
	.038	.05	
p_1583C Leach Residues			
T-8 T-no7 Ro Tail	.297	7.38	
	.298	7.38	
T-9 Comp 1 Ro tail	.390	8.74	
	.390	8.74	

Ronald Bianchi

ASSAY REPORT SHEET

ASSAY LAB, INC.
1376 W. 8040 So. Unit #4
West Jordan, Utah 84084

Date Received _____ **Date Reported** 1-19-89

Client Dawson Metallurgical Labs

Sample Identification	Oz / Ton Au	Oz / Ton Ag	Remarks
			* Ounces per ton of 2000 lbs.
P-1583C A.F. Budge			
T-9 Products C-1			
Sulfide conc Amal. tail	17.488	165.73	
	17.500	165.72	
Float ro Tail	.405	8.08	
	.410	8.08	
Table Conc Amal. Tail	.611	85.80	
	.607	85.86	
Oxide Conc Amalg. Tail	1.066mg	7.90mg	19.9 grams
Sulfide Conc Amal. Conc	2.641mg	5.79mg	
Oxide Conc Amal, Conc	.016mg	.03mg	

Ronald Branch

ASSAY REPORT SHEET

ASSAY LAB, INC.
1376 W. 8040 So. Unit #4
West Jordan, Utah 84084

Date Received _____ **Date Reported** 1-17-89

Client Dawson Metallurgical Labs

Sample Identification	Oz / Ton Au	Oz / Ton Ag	Remarks
			* Ounces per ton of 2000 lbs.
P-1583C A.F. Budge T-9 Comp 1 TableConc Am.	5.221mg	318.93mg	

Ronald Barnes

ASSAY REPORT SHEET

ASSAY LAB, INC.
1376 W. 8040 So. Unit #4
West Jordan, Utah 84084

Date Received _____ **Date Reported** 1-25-89

Client Dawson Metallurgical Labs

Sample Identification	Oz / Ton Au	Oz / Ton Ag	Remarks
			* Ounces per ton of 2000 lbs.
P-1583C A.F. Budge			
Leach Residue Comp #1			
T-9A	.209	5.54	
	.207	5.54	
Leach Soln Comp #1 T-9A	.212	3.15	
	.212	3.15	

Ronald Beauchamp

WESTERN ANALYTICAL, INC.
2417 South 2700 West
Salt Lake City, Utah 84119
(801) 973-9238

CERTIFICATE OF ANALYSIS

Feb. 6, 1989
P89-042 E
Your P-1583 C A. F. Budge

DAWONS METALLURGICAL SERVICES
MR. HARMEL DAWSON
PO BOX 7685
MURRAY, UTAH 84107

Dear Mr. Dawson:

Transmitted herewith are the analytical data for the sample delivered to our laboratory for Cu and Fe analysis.

SAMPLE IDENTIFICATION	Cu ppm	Fe ppm
#9 A Leach Soln	136.	1180.

E. H. PHILLIPS
Laboratory Director

Charges: $10.00

EHP/cp

DAWSON
METALLURGICAL
LABORATORIES, INC.

P.O. Box 7685
5217 Major Street
Murray, Utah 84107-0685
Phone: 801-262-0922

February 2, 1989

A. F. Budge Mining Ltd.
4301 North 75th Street
Suite 101
Scottsdale, Arizona 85251

Attention: Mr. Dale Allen
Ms. Carole O'Brien

Subject: Results of Continued Laboratory Testing on a High Grade Gold-Silver UVX Sample. Our Project No. P-1583C.

Gentlemen:

In accordance with discussions between Mr. Frank Millsaps and ourselves, laboratory test work was continued on a high grade gold-silver sample from the UVX Property identified as P-1583C Composite No. 1. A series of gravity concentration tests followed by bulk sulfide flotation of the gravity tailings and subsequent cyanidation of the flotation tailings was performed to determine gold and silver extraction. Specific test work performed included:

- Gravity concentration (hand-pan) of a ball mill ground sample followed by flotation of the gravity tailings.
- Gravity concentration (tabling) of a -35 mesh sample followed by flotation of the reground gravity tailings.
- Cyanidation of flotation tailings.
- Amalgamation of gravity and flotation concentrates.

Results of direct cyanidation tests on ball mill ground Composite No. 1, originally reported December 29, 1988, are also included in this report.

I. Sample Description And Head Analysis

A UVX sample, received at our laboratory December 15, 1988, and assigned our Lot No. P-1583C Composite No. 1 was used in this test work. This sample was described in our December 29, 1988, report to Mr. Allen and Ms. O'Brien.

Head assay results and back-calculated head assays from test work are presented below:

P-1583C: A. F. Budge Mining, Ltd.
Head Assay Results: Composite No. 1

	Head Assay, oz/Ton	
	Au	Ag
Assayed Head	0.617	13.36
Avg. Back-Calc. Head*	0.656	13.82

*Avg of 3 tests

The sample was a salmon pink color indicating the presence of iron oxides.

II. Test Results

Results presented in this section are also included in individual test data sheets attached to the end of this report.

A. Summary

Results indicate that slightly higher gold and silver extractions were obtained from this sample by a combination of gravity concentration, flotation, tailings regrind and cyanidation than by direct cyanidation. These results are summarized below:

P-1583C: A. F. Budge Mining Ltd.
Test Results Summary

Test No.	Description	Gold Assay, oz/Ton		Gold Extracted, %
		Residue	Head	
3	Direct Cyanidation	0.285	0.672	57.6
7, 8	Gravity, Flotation, Tails Cyanidation	0.298*	0.632	52.7
9, 9A	Gravity, Flotation, Reground Tails Cyanidation	0.208*	0.665	72.2

		Silver Assay, oz/Ton		Silver Extracted,
		Residue	Head	%
3	Direct Cyanidation	6.84	13.51	49.4
7, 8	Gravity, Flotation, Tails Cyanidation	7.38*	13.47	46.3
9, 9A	Gravity, Flotation, Reground Tails Cyanidation	5.54*	14.48	67.0

*Flotation Tailings Leach Residue

The increased gold and silver extraction obtained in the gravity-flotation concentration, reground tailings cyanidation flowscheme may not be economically justified due to the increased treatment cost. In addition, concentrate treatment will incur additional loss of precious metal.

B. Direct Ore Cyanidation

Cyanidation of whole ore samples ball mill ground to 92 percent minus 200 mesh extracted approximately 58 percent of the gold and 50 percent of the silver in 72 hours. Results are presented below:

P-1583C: A. F. Budge Mining, Ltd.
Whole Ore Cyanidation
- Test 3 -

Product	Assay, oz/Ton		Distribution, %	
	Au	Ag	Au	Ag
Solution	0.379	6.54	57.56	49.37
Residue	0.285	6.84	42.44	50.63
Total (Calc)	0.672	13.51	100.00	100.00
NaCN Consumed:	4.14 lb/ton ore			
Lime Consumed:	4.1 lb/ton ore			

These results were included in our December 29, 1988, report to Mr. Allen and Ms. O'Brien.

C. Gravity - Flotation Concentration

Approximately 40 - 45 percent of the gold and silver in the sample was recovered by gravity concentration followed by flotation. Less than ten (10) percent of the gold was recovered into gravity concentrates. These results are summarized below:

P-1583C: A. F. Budge Mining Ltd.
Gravity - Flotation Concentration

Test No.	Product	Weight %	Assay, oz/Ton Au	Assay, oz/Ton Ag	Distribution, % Au	Distribution, % Ag
7	Gravity Conc.	0.73	3.692	223.91	4.3	12.2
	Sulfide Ro. Conc.	0.87	23.008	410.56	31.6	26.5
	Oxide Ro. Conc.	0.64	2.446	22.42	2.5	1.1
	Oxide Ro. Tails	97.76	0.399	8.31	61.6	60.2
	Total	100.00	0.632	13.47	100.0	100.0
9	Gravity Conc.	2.93	1.909	165.27	8.4	33.4
	Sulfide Ro. Conc.	1.10	19.241	169.56	31.9	12.9
	Oxide Ro. Conc.	0.51	1.562	11.45	1.2	0.4
	Oxide Ro. Tails	95.47	0.408	8.08	58.5	53.3
	Total	100.00	0.665	14.48	100.0	100.0

Tests 7 and 9 were similar except that a gravity concentrate was produced in Test No. 7 by hand panning a ball mill ground sample, while the gravity concentrate in Test No. 9 was produced by tabling a sample crushed to 35 mesh. The table tailings were then reground prior to flotation.

Free gold, ranging in size from 35 to 400 mesh, was observed in the gravity concentrates, with only minor amounts of pyrite detected. Sulfide flotation concentrates contained much finer gold (200 mesh top size) with minor amounts of sulfides and semi-oxidized iron (Limonite). Malachite and azurite oxide copper minerals were detected in the oxide rougher concentrates.

D. Flotation Tailings Cyanidation

Cyanidation of flotation tailings indicated that gold and silver extraction increased significantly when the tailings were reground from 83 percent minus 200 mesh to 88 percent minus 400 mesh. Unfortunately the cyanide consumption increased drastically in the reground tails test. Results are summarized as follows:

P-1583C: A. F. Budge Mining Ltd.
Flotation Tailings Cyanidation

Test No.	Grind	Gold Assay, oz/Ton Residue	Gold Assay, oz/Ton Calc. Head*	Gold Extracted, %	Reagents Consumed lb/Ton Tails NaCN	Reagents Consumed lb/Ton Tails Lime
8	83.1% -200 M.	0.298	0.388	23.3	1.84	1.9
9A	87.9% -400 M.	0.208	0.438	52.5	20.5	2.5

Test No.	Grind	Silver Assay, oz/Ton Residue	Silver Assay, oz/Ton Calc. Head*	Silver Extracted, %
8	83.1% -200 M.	7.38	8.28	11.0
9A	87.9% -400 M.	5.54	8.95	38.1

*Flotation Tails

The leach solution from Regrind Test No. 9A contained 1180 ppm Fe and 136 ppm Cu. Based on these assays, approximately 13.4 lb NaCN per ton of tails was complexed as ferro-cyanide, while 0.5 lb NaCN per ton of tails was complexed as copper cyanide.

The use of cement instead of lime for pH control may reduce the cyanide consumption during cyanidation of reground flotation tailings.

E. Concentrate Amalgamation

The gravity and flotation concentrates from Test No. 9 were amalgamated to determine the amount of free gold and silver present. Results, summarized on the following page, indicate that almost 70 percent of the gold and 50 percent of the silver in the gravity (table) concentrate was amalgamated. Less than ten (10) percent of the gold and silver in the flotation concentrates was amalgamated.

P-1583C: A. F. Budge Mining Ltd.
Flotation Concentrate Amalgamation
- Test 9 -

Product	Gold Assay, oz/Ton		Gold Recovered By Amalgamation, %
	Amalgam Feed	Amalgam Tails	
Table Conc.	1.909	0.609	68.1
Sulfide Flot. Conc.	19.241	17.494	9.1
Oxide Flot. Conc.	1.562	1.539	1.5

	Silver Assay, oz/Ton		Silver Recovered By Amalgamation, %
	Amalgam Feed	Amalgam Tails	
Table Conc.	165.27	85.83	48.1
Sulfide Flot. Conc.	169.56	165.73	2.3
Oxide Flot. Conc.	11.45	11.41	0.4

III. Test Procedures

Procedures summarized in this section are also described in individual test data sheets attached to the end of this report.

A. Direct Ore Cyanidation

Test procedure was described in our report of December 29, 1988 (re: P-1583C).

B. Gravity - Flotation Concentration

The hand-pan gravity concentration test (No. 7) was performed as follows: 1000 grams of minus 20 mesh sample was ball mill ground to 83 percent minus 200 mesh and hand-panned using a small gold pan followed by a vanning plaque. The gravity tailings were transferred to a 1000 gram "Agitair" flotation machine and conditioned for five minutes with 0.10 lb/ton A-208 promoter and 0.03 lb/ton A-350 (potassium Amyl Xanthate). A rougher concentrate was subsequently floated for three minutes. Rougher tailings were conditioned five minutes with 0.5 lb/ton $CuSO_4$ and 0.05 lb/ton A-350 and a second rougher floated for one minute. These rougher concentrates were combined prior to filtering and drying.

The sulfide flotation tails were conditioned for eight minutes with 0.35 lb/ton NaHS (sulfidizing reagent) and 0.10 lb/ton A-350 prior to four minutes flotation. An MIBC-F65 frother mixture was used as required to maintain a stable froth. Flotation reagents used in these tests are manufactured by Cyanamid Corporation.

The table gravity concentration test (No. 9) was performed by tabling four kilograms of minus 35 mesh sample on an eighth deck Deister concentrating table. The table tailings were settled, clear water decanted, and the table tails were reground to 75 percent minus 200 mesh and floated as described earlier.

C. Flotation Tailings Cyanidation

Four hundred grams of dried flotation tailings from Test No. 7 was mixed with an equal weight of water and the pH adjusted to 11.5 with hydrated lime. Sodium cyanide was added to provide an initial solution concentration of ten lb/ton, and the slurry was bottle roll leached for 72 hours.

A second tailings cyanidation test was performed as follows: one kilogram of dried flotation tailings from Test No. 9 was reground in a ball mill to 88 percent minus 400 mesh. The slurry was adjusted to pH 12 with hydrated lime and cyanide was added to provide an initial solution concentration of 20 lb/ton. The slurry was subsequently bottle roll leached at 50 percent solids for 72 hours. The cyanide concentration was reconstituted to 20 lb/ton of solution after 24 hours of leaching.

D. Concentrate Amalgamation

Table, sulfide rougher, and oxide rougher concentrates from Test No. 9 were amalgamated separately as follows: each concentrate was diluted to approximately 10 - 15 percent solids and 25 grams of clean mercury added. A small amount (1.0 - 0.5 grams) of NaOH was added and the slurry was bottle rolled for four hours. The loaded amalgam was then separated from the sample by careful hand panning.

If you have any questions or we can be of further service, please call.

Sincerely,

DAWSON METALLURGICAL LABORATORIES, INC.

Philip Thompson
Vice President

PT/fg

cc: Mr. Frank Millsaps
Millsaps Mineral Service

DAWSON METALLURGICAL LABORATORIES, INC.

P. O. BOX 7685
5217 Major Street
Murray, Utah 84107-0685
Phone: 801-262-0922

PROJECT NO. P-1583C
DATE 01/05/89
BY GSN

TEST NO. 7 NAME A. F. Budge Comp No. 1

20 min BM grind @ 50% solids followed by gravity concentration & bulk sulfide flotation

Product	Weight	% Wt.	Assay		Units		Distribution		V1G
			Au	Ag	Au	Ag	Au	Ag	
Gravity Conc.	14.6	0.73	3.692	223.91	0.0270	1.640	4.28	12.17	
Sulfide Ro.Conc.	17.3	0.87	23.008	410.56	0.1997	3.563	31.57	26.45	
Oxide Ro. Conc.	12.7	0.64	2.446	22.42	0.0156	0.143	2.46	1.06	
Rougher Tail	1949.0	97.76	0.399	8.31	0.3901	8.124	61.69	60.31	
Head Calculated	1993.6	100.00	0.632	13.47	0.6324	13.469	100.00	100.00	
Head Assay			0.617	13.36					
Gravity and Sulfide		1.60	14.167	325.13	0.2267	5.203	35.85	38.62	
Grav. & Flotation		2.24	10.830	238.94	0.2423	5.345	38.31	39.69	

OPERATION		BM	Grav.	Cond	Sulfide Ro	Cond	Ro #2	Oxide Ro
TIME		20	Conc	5	3	5	1	8/4
REAGENTS - LBS PER TON								
-20m Ore	gm	2000						
H2O	gm	2000						
A-208				.10				
A-350				.03		0.05		.10
$CuSO_4$						0.50		
MIBC-F65 3:1				0.032				0.016
NaHS @ 35%								0.35
MACHINE				2000	2000	2000	2000	2000
R.P.M.				800	800	800	800	800
pH				8.1				
% SOLIDS		50						
TEMPERATURE								

GRINDING PRODUCT	
RoTail	
MESH	%
+10	
+14	
+20	
+28	
+35	
+48	0.0
+65	0.0
+100	0.8
+150	5.1
+200	11.0
+325	27.0
-325	56.1
% -200	83.1

REMARKS: Pan Conc - minor heavy mineral fraction to grav. conc.; 2 grains of -200m free gold observed, mainly iron oxides, minor pyrite, Cu oxides.
Sulfide Ro No 1 - free gold +60m to -400m, dirty brown iron oxide, some pyrite & Cu oxide, trace native Cu.
Oxide Ro No 1 - mainly Cu oxide (azurite, malacite, chrysocolla)

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PROJECT NO. P-1583C
DATE 01/13/89
BY GSN

TEST NO. 8 NAME A. F. Budge

Test No. 7 RoTail

72 hour leach @ 50% solids with 10 lbs NaCN/ton soln

PRODUCT	Weight	PERCENT WEIGHT	ASSAY Au	ASSAY Ag	UNITS Au	UNITS Ag	DISTRIBUTION Au	DISTRIBUTION Ag
RoTail leach soln	457.6		0.079	0.80	0.3615	3.6608	23.3	11.0
leach res	399.4		0.298	7.38	1.1902	29.4757	76.7	89.0
Total (Calc)	400		0.388	8.28	1.5517	33.1365	100.0	100.0
Total (Assay)			0.399	8.31				

OPERATION		NaCN Leach		NaCN Leach
TIME		On	72 Hrs.	Off
REAGENTS - LBS PER TON		300 1/13		
Flotation Tail	gm	400.0		
H2O	gm	400.0		
$Ca(OH)_2$	gm	.5		
NaCN	gm	2.2		
NaCN Titration, lb/ton soln				8.01
$Ca(OH)_2$ Titration, lb/ton		soln		0.5
NaCN Consumed, lb/ton ore				1.84
$Ca(OH)_2$ Consumed, lb/ton ore				1.93
MACHINE				
R.P.M.				
pH		8.2/11.4		11.7
% SOLIDS				
TEMPERATURE				

GRINDING PRODUCT	Leach Residue
MESH	%
+10	
+14	
+20	
+28	
+35	
+48	0.0
+65	0.0
+100	0.8
+150	5.1
+200	11.0
+325	27.0
-325	56.1

REMARKS:

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PROJECT NO. P-1583C
DATE 01/12/89
BY GSN

TEST NO. 9 (Page 1 of 2) NAME A. F. Budge

Comp. 1

4 kg gravity concentration followed by sulfide & oxide flotation followed by Ro Tail NaCN leach

Product	Weight	% Wt.	Assay		Units		Distribution		V1G
			Au	Ag	Au	Ag	Au	Ag	
Gravity Conc.	117.1	2.93	1.909	165.27	0.0559	4.838	8.40	33.42	
Sulfide Flot Conc.	44.1	1.10	19.241	169.56	0.2121	1.869	31.88	12.91	
Oxide Flot. Conc.	20.2	0.51	1.562	11.45	0.0079	0.058	1.19	0.40	
Oxide Flot. Tails.	3818.6	95.47	0.408	8.08	0.3895	7.714	58.54	53.27	
Head Calculated	4000.0	100.00	0.665	14.48	0.6654	14.479	100.00	100.00	
Head Assay			0.617	13.36					
Comb. Flot. Conc.		1.61	13.687	119.89	0.2200	1.927	33.07	13.31	
Grav.+Sulf Flot Con		4.03	6.651	166.44	0.2680	6.708	40.28	46.33	
Grav.+Comb. Flot Con		4.54	6.084	149.18	0.2759	6.766	41.46	46.73	

OPERATION	Table	Grav Conc	BM	Sulfide Ro #2	Sulfide Ro #2	Oxide Ro #1		Sulfide Ro Conc		Oxide Ro Conc			GRINDING PRODUCT	
TIME		Amal	½ X 10	5/4	5/2	4/4		Amal		Amal			Float	Leac
REAGENTS - LBS PER TON								4 Hrs.		4 Hrs.			Tail	Res.
Ore gm	4000.0		3900									MESH	%	
H2O (as required)												+10		
A-208			0.1									+14		
A-350				0.03	0.05	0.10						+20		
$CuSO_4$					0.50							+28		
MIBC - F65 3:1				0.048		0.016						+35		
NaHS @ 35%						0.22						+48	0.0	0.0
												+65	0.6	0.0
NaOH gm		.56						1.0		0.5		+100	3.2	0.0
Hg gm		25.38						25.04		25.11		+150	8.0	0.0
MACHINE		(25.70)	2 X	2000	2000	2000		(25.11)		(25.13)		+200	13.6	0.2
R.P.M.				800	800	800						+325	26.6	6.8
pH				8.8								-325	48.0	
% SOLIDS												+400		4.9
TEMPERATURE												-400		88.1

REMARKS: Gravity Conc. - free gold +32 to -400m (200m predominant) iron oxide, lead carbonate, minor sulfide (pyrite)
Sulfide Conc. - free gold 200 to -400m some Au corners locked with quartz or iron oxide, minor sulfides
Oxide Conc - no free gold observed
Grav. Conc. Amalgam - (lead carbonate) also amalgamating

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Phone: 801-262-0922

PROJECT NO. P-1583C
DATE 01/12/89
BY GSN & LA

Comp 1

TEST NO. 9 (page 2 of 2) NAME A. F. Budge

Gravity Tail - Flotation tail reground prior to 72 hour leach @ 50% solids with 10 lbs NaCN/ton soln

PRODUCT	Weight	PERCENT WEIGHT	ASSAY Total mg Au	ASSAY Total mg Ag	ASSAY oz/ton Au	ASSAY oz/ton Ag	UNITS	DISTRIBUTION Au	DISTRIBUTION Ag
Sulfide Conc Amal Conc	25.11		2.641	5.709				9.1	2.3
Sulfide Conc Amal Tail	44.1		26.451	250.58	17.494	165.73		90.9	97.7
Total	(44.1)		29.092	256.37	19.241	169.56			
Oxide Conc Amal Conc	25.13		0.016	0.03				1.5	0.4
Oxide Conc Amal Tail	20.2		1.066	7.90	1.539	11.41		98.5	99.6
Total	(20.2)		1.082	7.93	1.562	11.45			
Table Conc Amal Conc	25.70		5.221	318.93				68.1	48.1
Table Conc Amal Tail	117.1		2.445	344.59	0.609	85.83		31.9	51.9
Total	(117.1)		7.666	663.52	1.909	165.27			

OPERATION	
TIME	
REAGENTS - LBS PER TON	
MACHINE	
R.P.M.	
pH	
% SOLIDS	
TEMPERATURE	

GRINDING PRODUCT	
MESH	%
+10	
+14	
+20	
+28	
+35	
+48	
+65	
+100	
+150	
+200	
+325	
-325	

REMARKS:

DAWSON
METALLURGICAL
LABORATORIES, INC.

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5217 Major Street
Murray, Utah 84107
Phone: 801-262-0922

PROJECT NO. P-1583C
DATE 01/19/89
BY LA

TEST NO. 9A NAME A. F. Budge

Comp 1

Grav. Tail - Flotation tail reground prior to 72 hour leach with 20 lbs NaCN/ton soln

PRODUCT	Weight	PERCENT WEIGHT	oz/ton ASSAY ppm				UNITS		DISTRIBUTION		
			Au	Ag	Cu	Fe	Au	Ag	Au	Ag	
Leach Soln	1081.3		0.212	3.15	136	1180	2.2924	34.0610	52.5	38.1	
Leach Residue	997.7		0.208	5.54			2.0752	55.2726	47.6	61.9	
Total Ro Tail	997.7		0.438	8.95			4.3676	89.3336	100.0	100.0	
Ro. Tail			0.408	8.08							

OPERATION		BM	NaCN Leach			NaCN Leach
TIME		60	On			Off
REAGENTS - LBS PER TON			2:35	9:00 1/20	4:00 1/20	
Float Tail	gm	1000.0				
H2O	gm	1000.0				
$Ca(OH)_2$	gm		3.0			
NaCN	gm		10.0	10.58		
NaCN Titration, lb/ton soln				.57	19.00	19.13
CaO Titration, lb/ton soln				3.8		3.2
NaCN Consumed, lb/ton Tail						20.5
$Ca(OH)_2$ Consumed lb/ton Tail						2.5
MACHINE						
R.P.M.						
pH		7.8		12.5		12.0
% SOLIDS						
TEMPERATURE						

GRINDING PRODUCT	
	Leach Residue
MESH	%
+10	
+14	
+20	
+28	
+35	
+48	0.0
+65	0.0
+100	0.0
+150	0.0
+200	0.2
+325	7.1
-325	
+400	5.1
-400	87.9

REMARKS: