

1992



TAYLOR METALLURGICAL LABORATORY

2275 Nursery Street, Moscow, Idaho 83843

REPORT ON FIRE ASSAY AND AMALGAMATION RESULTS

SUBMITTED TO:

Mr. Pat Smith
Strata Mining and Exploration, Inc.
PO Box 2049, McCall, Idaho 83638

DATE SUBMITTED: June 30, 1992

SAMPLE DESCRIPTION	GOLD (opt)	Comments
Grab Bag Sample	0.085	
Bucket Sample	6.41	free gold recovered by amalgamation
Bucket Sample	1.99	fire assay of amalgamation tails
Bucket Sample	8.40	Calculated head assay based on amalgamated + tails

PROCEDURES:

The bucket sample was dried, crushed to -1/8" and riffle split into 1,000 gram samples. One 1,000 gram sample was ground with 1 liter of water in a laboratory ball mill for 35 minutes. The pulp was then bottle rolled with 10 grams of mercury and 5 grams of NaOH for two hours. The pulp was panned to recover the amalgam. The mercury and silver were separated from the amalgam using nitric acid. The resultant gold was weighed and found to be 219.7 mg. The amalgam tails were filtered, dried, riffle split and pulverized and subjected to fire assay. The screen size of the ground ore was:

Screen Size Mesh	Weight % Retained
+60#	1.9%
-60+100#	3.2%
-100+200#	23.7%
-200#	71.2%

SUBMITTED BY;

PATRICK R. TAYLOR, Ph. D., P.E.
PRESIDENT (208) 882-4382



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METALLURGICAL LABORATORY**

2275 Nursery Street, Moscow, Idaho 83843

REPORT ON TABLE TEST RESULTS

SUBMITTED TO:

Mr. Pat Smith
Strata Mining and Exploration, Inc.
PO Box 2049, McCall, Idaho 83638

DATE SUBMITTED: July 7, 1992

PROCEDURES:

The bucket sample was dried, crushed to $-1/8$ " and riffle split into 1,000 gram samples. Two of the 1,000 gram samples were ground with 1 liter of water in a laboratory ball mill for 30 and 40 minutes respectively. Each of the pulps were then screened to remove the +20# sizes and fed across a laboratory size Whilfley table. The concentrates, middlings and tailings were collected. The samples were filtered, dried, weighed and subjected to fire assay for gold and silver content. All of the concentrate and +20# samples were fire assayed. The remaining samples (middlings and tailings) were rolled and quartered to obtain one assay ton samples for assay.

The Gold and silver recoveries are reported in terms of the -20# sample only. This assumes that a closed circuit mill would return this size for more grinding. The calculated head assays include the +20# samples to give a better indication of the head grade.

RESULTS:

The results are presented in tabular and graphical form as follows:

TABLE TEST #1 - (30 minute grind - 68.9% -200#)

SAMPLE	Weight (g)	Weight (%)	Au (opt)	Au (mg)	%Au REC.	Ag (opt)	Ag (mg)	%Ag REC
CON1	80.46	8.05	34.51	95.2	90.84	39.16	108.04	28.61
MID1	263.00	26.30	0.32	2.89	2.76	4.79	43.19	11.44
TAIL1	615.06	61.50	0.32	6.71	6.40	10.76	226.43	59.95
+20#1	41.48	4.15	8.30	11.8		12.16	17.3	
Total			3.40	116.6		11.52	394.96	

28.0

87.8% 32

TABLE TEST #2 - (40 minute grind - 78.6% -200#)

SAMPLE	Weight (g)	Weight (%)	Au (opt)	Au (mg)	%Au REC.	Ag (opt)	Ag (mg)	%Ag REC
CON2	60.88	6.05	75.31	157.2	92.68	66.06	137.88	30.22
MID2	220.00	21.86	0.54	4.07	2.40	7.90	59.62	13.06
TAIL2	702.00	69.76	0.35	8.35	4.92	10.75	258.80	56.72
+20#2	23.38	2.33	94.06	75.4		nil	nil	
Total			7.15	245.02		13.3	456.3	

The table tests grades and recoveries were: For Test #1 - 90.84% of the gold was recovered in the concentrate at a grade of 34.51 ounces per ton and 28.61% of the silver was recovered in the concentrate at a grade of 39.16 ounces per ton. For Test #2 - 92.68% of the gold was recovered in the concentrate at a grade of 75.31 ounces per ton and 30.22% of the silver was recovered in the concentrate at a grade of 66.06 ounces per ton.

DISCUSSION AND SUGGESTIONS FOR FURTHER TESTING:

The highly variable gold assays are due to the nugget effect. The three 1,000 gram samples treated to date assayed: 8.4, 3.4 and 7.15 opt. This would give an average assay of 6.32 ounces per ton gold. As more tests are performed, a more accurate assay of the bucket sample will be obtained. This effect is most noticeable in the +20#2 sample which contained 94.06 ounces per ton in 2.33% of the weight. It likely that this coarse sample contained a nugget of nearly pure gold.

The highly variable silver content indicates that the silver is present as a separate mineral. Table recoveries of silver were not very good and indicate that flotation may be required to obtain acceptable silver recoveries. It is recommended that a series of flotation tests be performed to evaluate silver and gold recovery by this method.

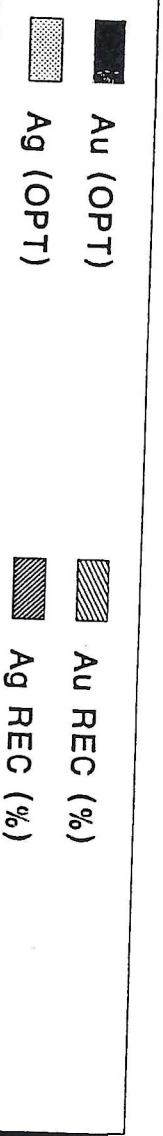
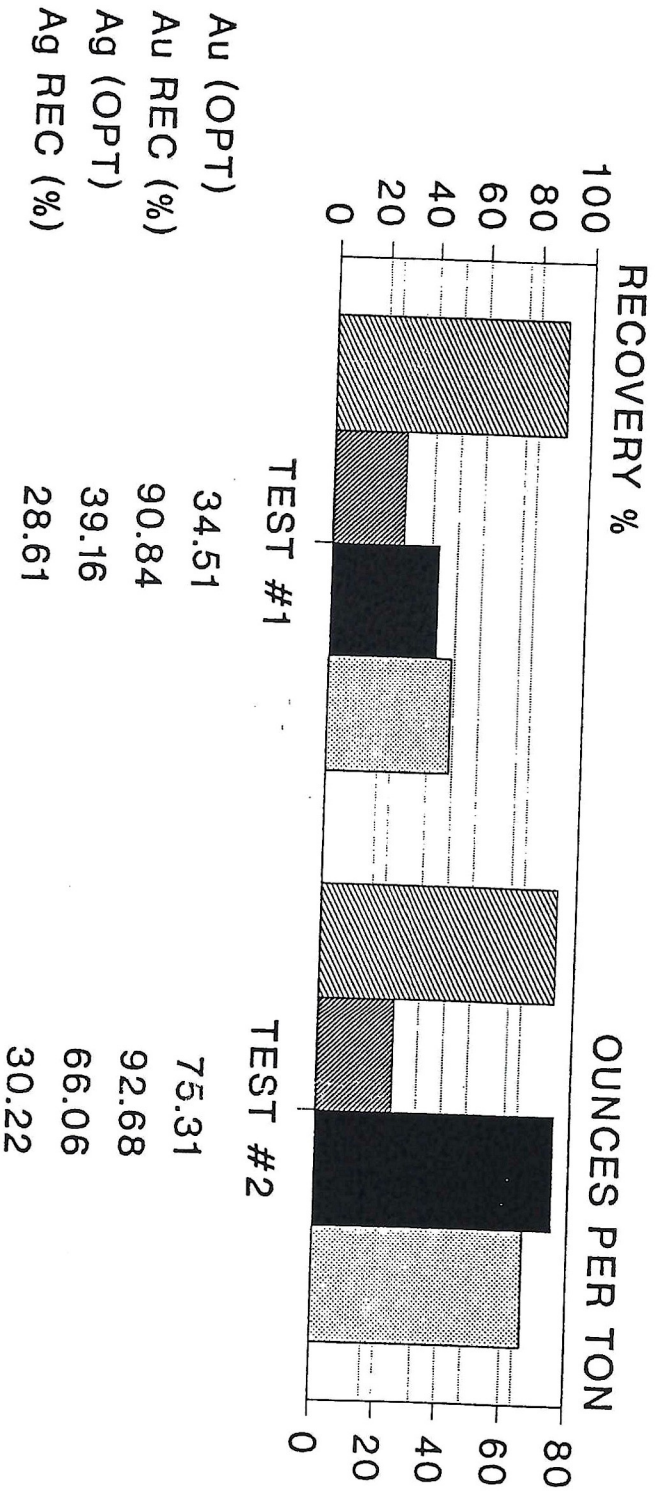
The tailings and middlings both contained appreciable gold. It may be possible to improve gold recoveries by flotation. A method that combines gravity concentration with flotation should lead to improved gold and silver recoveries.

SUBMITTED BY;

*Patrick R. Taylor*PATRICK R. TAYLOR, Ph. D., P.E.
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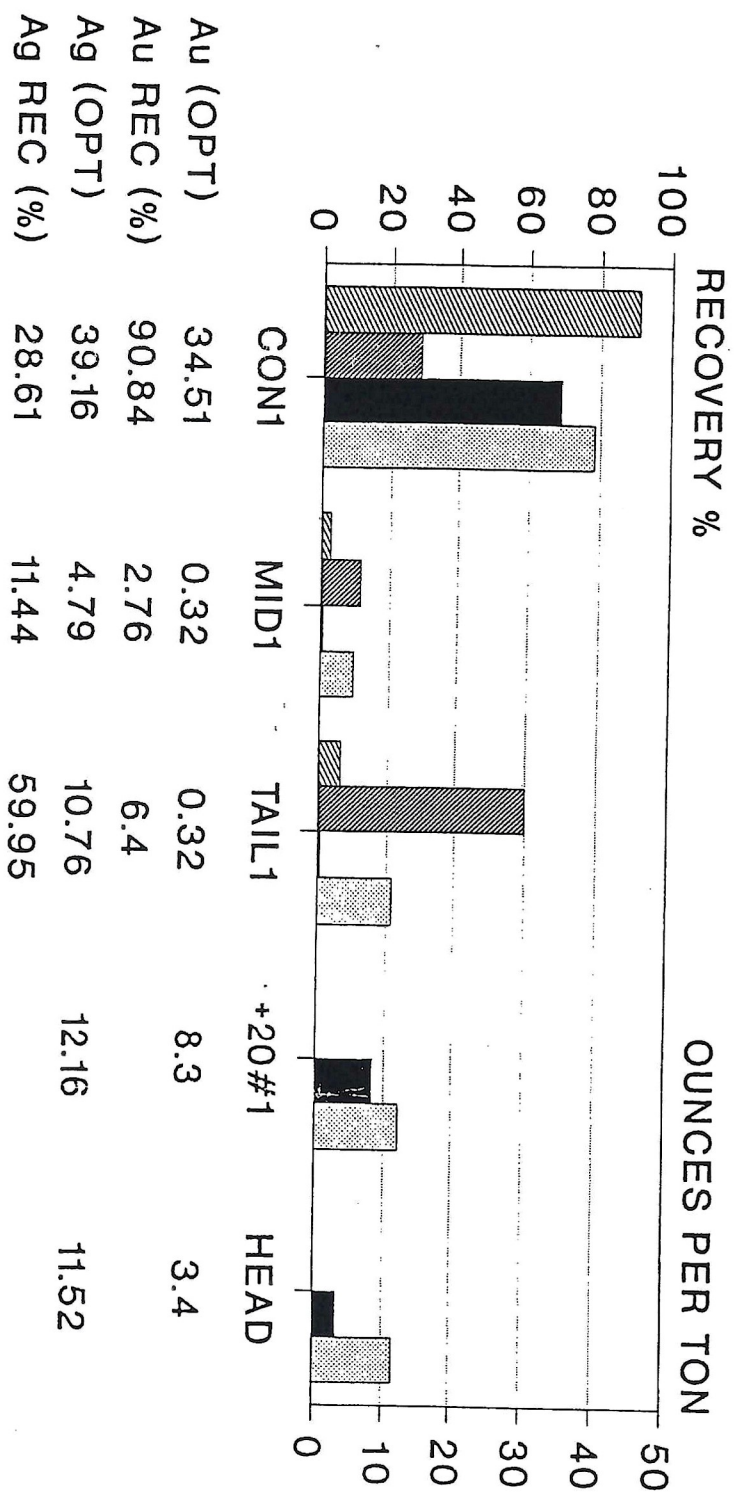
STRATA TABLE TESTS





GRADES AND RECOVERIES



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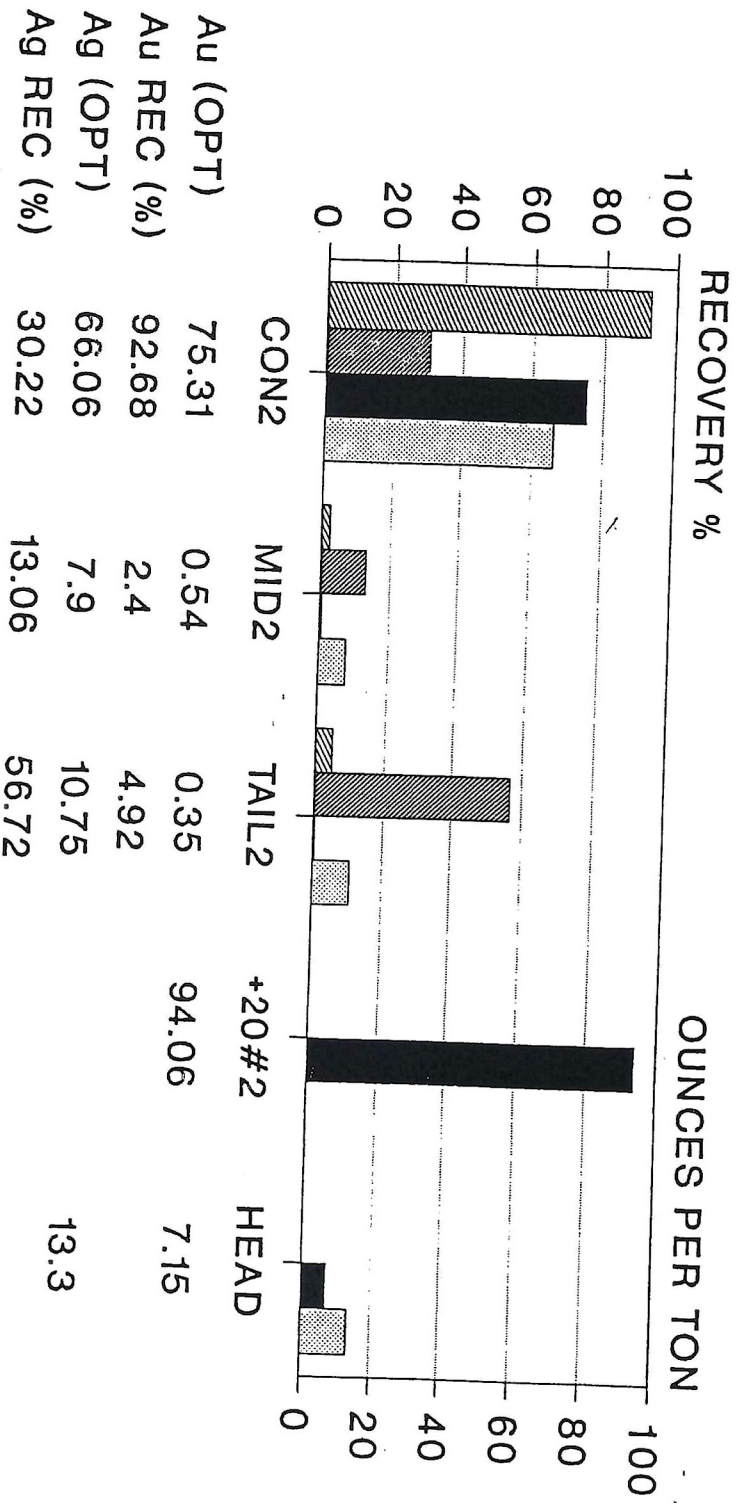
STRATA TABLE TEST #1



	Au (OPT)		Au REC (%)
	Ag (OPT)		Ag REC (%)

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STRATA TABLE TEST #2



	Au (OPT)		Au REC (%)
	Ag (OPT)		Ag REC (%)

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