

Progress Report #1

This progress report provides the preliminary results of the metallurgical scoping program on a gold ore sample from Hanstone Gold based on communications with Danny Kwok on September 12, 2022. The sample originates from Northern British Columbia.

On November 24, 2022, a total 55 kg of gold ore sample was received for the testwork. The sample list is presented in **Table 1**.

Table 1: Sample List

Sample Label	Weight (kg)
220922B -7 DOC-PIT-2 #7	4.97
220922B -8 DOC-PIT-2 #8	3.60
220922B -9 DOC-PIT-2 #9	5.15
220922B -10 DOC-PIT-2 #10	4.78
220922B -11 DOC-PIT-Trench 2/3-#1	4.64
220922B -12 DOC-PIT-Trench 2/3-#2	3.71
220922B -13 DOC-PIT-Trench 2/3-#3	4.65
220922B -14 DOC-PIT-Trench 2/3-#4	4.80
220922B -15 DOC-PIT3-#1	4.87
220922B -16 DOC-PIT3-#2	4.58
220922B -17 DOC-PIT3-#3	4.90
220922B -18 DOC-PIT3-#4	3.87

The objectives of this test program were to determine the amenability of the sample to gravity concentration, flotation, and cyanide leaching for the recovery of gold. Further testing recommendations will be made based on these initial results. The overall testwork program is presented in **Figure 1**.

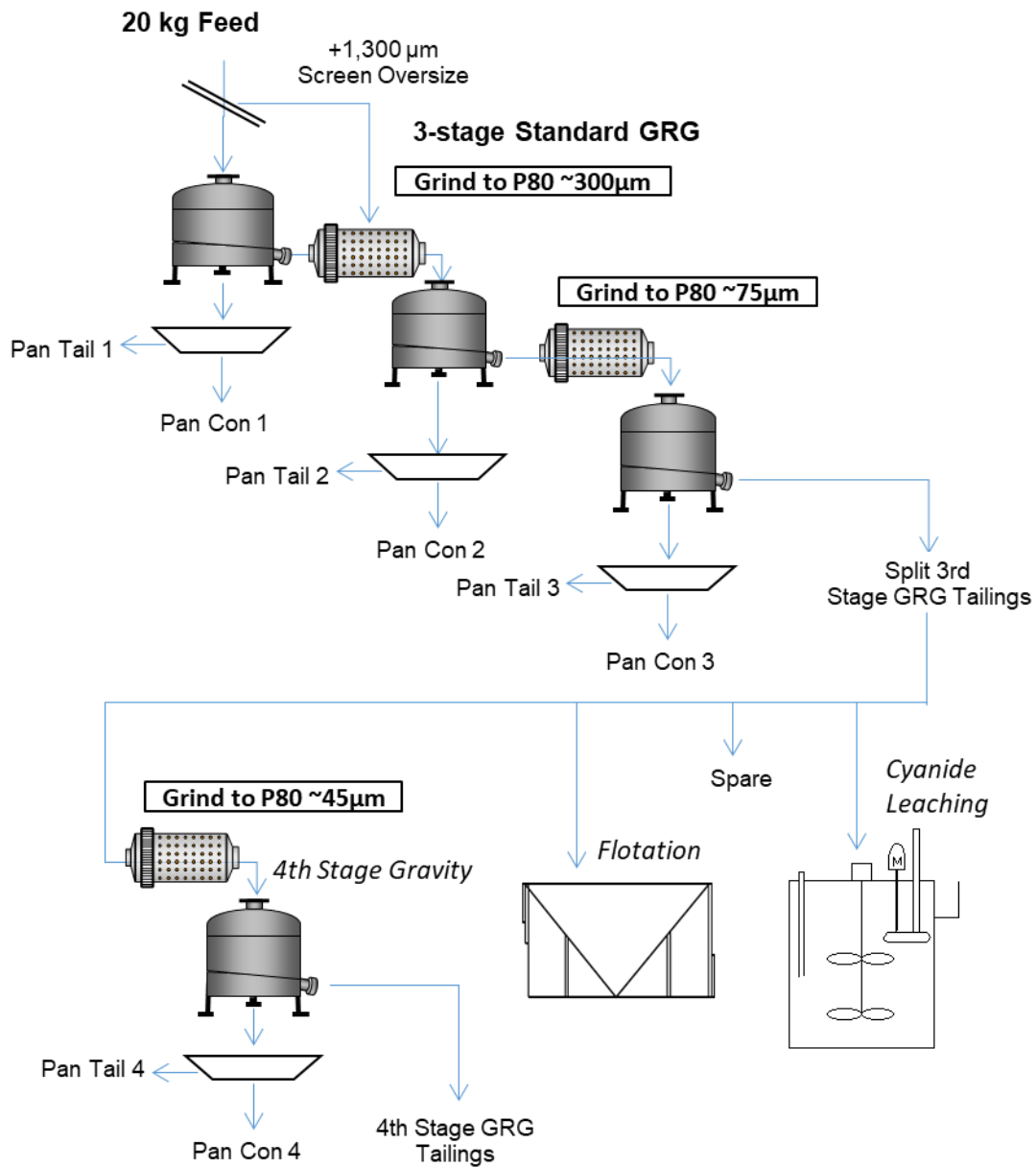


Figure 1: Overall Testwork Program

1- Head Sample Characterization

1.1. Head Assays

A representative split sample of the head material was submitted for gold (Au) and multi-element ICP analysis. A summary of the Au head grade results is presented in **Table 2**.

Table 2: Head Grade Summary

Testwork Description	Method	Head Grade
		Au (g/t)
Direct Head Assay	Assayed Grade	33.6
Fine Gravity (4-stage)	Calculated Grade	34.8
Gravity-Flotation	Calculated Grade	33.3
Gravity-Leach	Calculated Grade	31.5

The calculated head grades ranged from 31.5 to 34.8 g/t Au with a calculated average calculated grade of 32.2 g/t Au and a direct head assay grade of 33.6 g/t Au. There was good overall agreement between the calculated head grades and the direct head assay. Sepro Labs prefers to use the calculated head grade from test work since it incorporates assaying from many products which minimizes the “nugget” effect exhibited by gold ores.

Other notable elements detected in the direct head assay include 220 g/t Ag (silver), 1.93% Fe (iron), 7.05% lead (Pb), and 0.6% sulfur (S). The Pb-S ratio in the sample suggests the Pb is present as both sulfide and oxide minerals.

2- Gravity Concentration

A 20 kg subsample was subjected to a 3-stage gravity concentration test with intermediate grinding. The Falcon L40 concentrates were panned to determine upgradability. The stage 3 Falcon tailings was split into multiple subsamples for the following teswork:

- Additional gravity concentration at a finer grind size (P80 of 45 microns).
- Flotation using a stardard gold-sulfide procedure
- Cyanide leaching under standard leach conditions

The gravity concentration test results are presented in **Table 3**.

Table 3: Gravity Concentration Results (Test JR101)

Products	Weight		Assay (g/t)	Distribution (%)
	(g)	(%)	Au	Au
Pan Concentrate 1	13.7	0.07	3,258.30	6.4
Pan Tail 1	115.7	0.57	334.80	5.5
Falcon Concentrate 1	129.4	0.64	644.84	11.9
Pan Concentrate 2	11.2	0.06	1,324.90	2.1
Pan Tail 2	96.3	0.48	90.30	1.2
Falcon Concentrate 2	107.5	0.53	218.93	3.4
Pan Concentrate 3	14.7	0.07	2,853.80	6.0
Pan Tail 3	130.2	0.64	193.10	3.6
Falcon Concentrate 3	144.9	0.72	463.61	9.6
<i>Falcon Concentrates 1-3</i>	<i>381.8</i>	<i>1.89</i>	<i>456.13</i>	<i>24.8</i>
<i>Stage 3 GRG Tailings</i>	<i>19,813.3</i>	<i>98.11</i>	<i>26.65</i>	<i>75.2</i>
Pan Concentrate 4	18.0	0.09	795.00	2.0
Pan Tail 4	255.7	1.27	106.20	3.9
Falcon Concentrate 4	273.7	1.36	151.49	5.9
Falcon Concentrates 1-4	655.5	3.25	328.91	30.7
L40 Tails	19,539.5	96.75	24.90	69.3
Calculated Head	20,195.0	100.00	34.77	100.0
Assayed Head			33.60	

The standard GRG to a P₈₀ of 78 microns achieved a gold recovery of 24.8%. The concentrates were high grade and amenable to further upgrading by panning. Additional grinding down to a P₈₀ of 45 microns increased overall gold recovery to 30.7%.

3- Flotation

A scoping flotation test was conducted on the stage 3 Falcon tailings using a standard gold-sulfide procedure. The flotation results are presented in **Table 4**.

Table 4: Flotation Results (Test JR102)

Product	Weight		Assays, g/t ¹ , %				Distribution, %			
	g	%	Au ¹	Ag ¹	Fe	S	Au	Ag	Fe	S
Rougher Concentrate 1	27.5	1.6	369.80	2738.0	5.00	8.16	23.6	21.1	3.9	27.1
Rougher Concentrate 2	57.1	3.3	188.90	1401.0	5.69	2.99	24.9	22.4	9.2	20.5
Rougher Concentrate 1-2	84.6	4.9	247.80	1836.3	5.47	4.67	48.5	43.5	13.0	47.6
Rougher Concentrate 3	65.9	3.8	95.18	820.0	5.50	1.89	14.5	15.1	10.2	15.0
Rougher Concentrate 1-3	150.5	8.8	180.98	1391.4	5.48	3.45	63.0	58.6	23.3	62.6
Rougher Concentrate 4	17.2	1.0	186.70	1070.0	8.49	1.65	7.4	5.2	4.1	0.0
Rougher Concentrate 1-4	167.7	9.8	181.57	1358.4	5.8	310.2	70.5	63.7	27.4	62.6
Rougher Tails	1,551.4	90.2	8.22	83.5	1.66	0.20	29.5	36.3	72.6	37.4
Calculated Head	1,719.1	100.0	25.13	207.8	2.06	0.48	200.0	100.0	100.0	100.0

The flotation test achieved a gold recovery of 70.5% and a silver recovery of 63.7% with a combined concentrate grade of 181.57 g/t Au and 1358.4 g/t Ag and a mass yield of 9.8% from the 3-pass gravity tailings. The recovery of the gold and silver content are very similar to the S recovery. The results would indicate the remaining gold and silver are potentially locked with the silicate gangue.

Flotation of the stage 3 gravity tailings increased overall gold recovery to 78.0%.

Detailed flotation results for Pb are not available due to 3 of the flotation products being over the 20% Pb limit for the chosen analysis. The flotation tailings contained 3.41% Pb which equates to a total Pb recovery of approximately 57% by gravity and flotation.

4- Cyanide Leaching

The results from the cyanide leaching are presented in **Table 5**.

Table 5: Cyanide Leach Results (Test JR104)

Products / Time	Sol. Wt. (g)	Assay (ppm)	Distribution (%)
		Au	Au
1 hour	1524.2	2.34	15.2
3 hours	1515.9	5.48	35.6
6 hours	1506.9	9.78	63.4
24 hours	1503.0	14.32	92.8
48 hours	1507.8	14.32	93.7
Residue	986.5	1.50	6.3
Calculated Head	992.0	23.61	100.0

Cyanide leaching achieved a gold recovery of 93.7% in 48 hours. Leaching appears to have completed by 24 hours. The relatively high dissolution of the gold content, as compared with the flotation recovery results, indicates while the valuable constituents are likely locked with the silicate gangue, there is high surface area availability for cyanide leaching.

Cyanide leaching on the stage 3 gravity tailings increased overall gold recovery to 95.3%.

5- Summary

The overall flowsheet test results are summarized in **Table 6**.

Table 6: Test Results Summary

Flowsheet Description	P ₈₀ microns	Au Recovery (%)	Tailings Grade Au (g/t)
Standard Gravity (3-stage)	78	24.8	26.65
Fine Gravity (4-stage)	45	30.7	24.90
Gravity-Flotation	78	78.0	8.22
Gravity-Leach	78	95.3	1.50

The test results indicate that gravity concentration with cyanide leaching of the gravity tailings provided the highest gold recovery from the process flowsheet options. As the flotation test performed is a scoping test, further optimization of the flotation parameters may improve on the results achieved from the current test.

Recommendations:

- Determine which process options are permissible at the mine location (flotation and cyanide leaching).
- Additional flotation optimization testing on gravity tailings with high grade Pb assays included.
- If the flotation process is preferable, establish a buyer for the Au-Ag-Pb flotation concentrate.
- Additional cyanide leach optimization testwork with gold and silver analysis is recommended if cyanide leaching is permissible at the mine location.