TRINITY METALS

FORM B: CAPITAL APPLICATION

PROJECT NAME:	Nyakabingo 5 tph Pilot Plant		
PROJECT LEADER:	Ronald Toledo	**CONS. ASS. NO.:**	
DATE:	April 14, 2025	**CA NO.:**	

A	**PROJECT DESCRIPTION**

This project is about the construction of a 5 tph pilot plant at Nyakabingo Mine. This plant will treat blended materials from the panning tailings and the surface ROM. This plant will produce around 700 kgs of WO3 concentrate at a grade of >60% WO3.

B	**MOTIVATION**

- Samples were taken from the BV 21 and 22 tailings after they were panned. The result showed that the tailings from the panning process still contains 3.5% WO3. This presents an opportunity to treat these materials through a pilot plant to recover the residual WO3. The testwork showed a total WO3 recovery of 61% with a grade of 65%WO3. The plant will have 2 concentrator circuits namely the jig to recover the coarse WO3 (-10+1mm) and spirals/shaking tables to recover the fine WO3 (-1mm). Due to the limited volume of the panning tailings, the feed will be a blend of the surface ROM and the panning tailings. The blended grade would be 1.8%WO3. The daily concentrate production is approximately 700 kgs with a grade of >60% WO3.
- Currently, panning tailings are being reprocessed by sluicing on the ground which are being done on unstable grounds and the discharge of the sluices are potentially causing acidic discharge due to its contact with the surface ROM that with pyrites and arsenopyrites. The sluicing method is known to be inefficient in recovering the fines. Estimated sluicing recovery is only around 20%.
- The pilot plant will ensure that the tailings discharge is managed by screening the oversize tailings and stockpile it while the fines tailings will be discharged directly to Dam 1 through a pipe.

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- Financial study (calculation is based on a 12-month operation only)
  - NPV = $3.9M
  - Payback period = 0.2month

C	SELECTED COSTING OPTION			
EQUIPMENT/MATERIALS LIST	QTY	UNIT	UNIT PRICE	PRICE (USD)
Double deck screen (ex Eastinco)	1	pc	$ 4,232.80	$ 3,902.26
Conveyors (ex Eastinco)	3	set	$ 1,582.87	$ 4,377.80
Jig (ex Eastinco)	1	pc	$ 3,054.16	$ 2,815.66
Shaking tables (ex Eastinco)	2	pc	$ 1,949.30	$ 2,260.48
Slurry pumps (3/2) (ex Eastinco)	2	set	$ 220.68	$ 406.89
Slurry pump (4/3) (ex Eastinco)	1	set	$ 514.91	$ 474.70
Roof sheeting (10')	20	pcs	$ 7.10	$ 142.00
Security Camera	3	pcs	$ 50.00	$ 150.00
Civils cost (Cement, gravel, river sand, rebars)	1	set	$ 14,767.70	$ 14,767.70
Structural (steels)	1	set	$ 6,105.15	$ 6,105.15
Pipings	1	set	$ 2,327.27	$ 2,327.27
Electrical materials	1	set	$ 17,040.00	$ 17,040.00
Labor (civil works)	1	set	$ 5,000.00	$ 5,000.00
Desliming cyclone (international purchase)	1	set	$ 2,543.80	$ 2,543.80
Dewatering cyclone (international purchase)	1	set	$ 2,543.80	$ 2,543.80
Import duties (Desliming and dewatering cyclones), 30%	1	set	$ 1,526.28	$ 1,526.28
Freight cost, estimate (for desliming and dewatering cyclone),	2	set	$ 100.00	$ 200.00
			Total	**$ 66,584**

D RISK ASSESSMENT

- Cost overruns
  - Utilize existing equipment and materials such as the Eastinco plant equipment.
  - Monitor and control expenditures during project execution.
- Inadequate data (testwork)
  - Conducted a metallurgical testwork on the panning tailings.

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E	PROJECT SCHEDULE
-	Project is scheduled to be completed in 42 working days. Project gantt chart is attached.

F	COMMENTS
HOD	Ronald Toledo – Group Metallurgist RAPToledo 15/7/2025
GENERAL MANAGER/GM	Justin Uwiringiyimana [signature]
GROUP FINANCE CONTROLLER	[signature] 24/07/2025 Ca JC, please add CA [illegible] LG from the [illegible] for it!
GROUP LEGAL COUNSEL & COMPLAINCE OFFICER	
GROUP SUPPLY CHAIN MANAGER	Jeome Sande Jeome Sande 28/7/2025
COO	Shane Ryan Shane Ryan 28/7/2025
CFO	

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G	APPROVAL
CEO	29/07/2025 PETER GELETA CEO of Trinity Metals Group +250791959034 info.rw@trinity-metals.com Enabling a better future
BOARD	

NOTE: attach additional quotes or supporting documents if necessary

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Memorandum

To: Justin Uwimbgiyimana – General Manager, Nyakabingo Mine, Trinity Metals Ltd.

From: Ronald Toledo – Group Metallurgist, Trinity Metals Ltd.

Subject: Propotal to build a 5 tph Pilot Plant at BV 22 level to process panning tails

Introduction

Sluicing methods is still being applied to recover wolfram from the tailings of the panning team. This method has been proven to be inefficient due to the nature of how it is being handled and its inability to recover the fine particle sizes. The existing sluicing areas are located below BV13C panning area and BV21. This also presents a safety issue due to the unstable ground conditions and potentially causing water acidity issues because its discharge is passing through the existing surface ROM, potentially leaching the pyrites and arsenopyrites which are present in the ore and produces acidic water (sulfuric acid). A testwork was done on the panning tailings materials to determine the viability of recovering the coarse and fine wolfram using a jig concentrator and shaking table respectively. The test result shows a total WO3 recovery of 61.2% with a combined concentrate grade of 65.7942%WO3

Objective

1. Test the viability of recovering coarse and fine wolfram minerals using Jig and shaking table from the panning tailings materials.

Scope of work

1. The testwork is focused on the panning tails. Another testwork will be done for the dump materials.

Procedure

1. 100 kgs of sample were taken separately from BV 21 and 22 levels to make up a total of 200 kgs for the testwork.
2. Samples were then dried and screened using the 10mm and 1mm screens.

3. The +10mm were then weighed, sampled and analyzed for %WO3 and %Fe using the portable XRF.
4. The -10+1mm were ran through a jig. The jig concentrates were collected and manually panned to upgrade it to a saleable product. The -2mm product from the jig was processed on a shaking table. Product samples (conc and tails) were collected then assayed for %WO3 and %Fe using the portable XRF.
5. The -1mm were ran through the shaking table and product samples (conc and tails) were collected and assayed for %WO3 and %Fe using the portable XRF.
6. Metal balance was done using the assays and weight results from the products. Recovery and mass pull calculations were done as well.

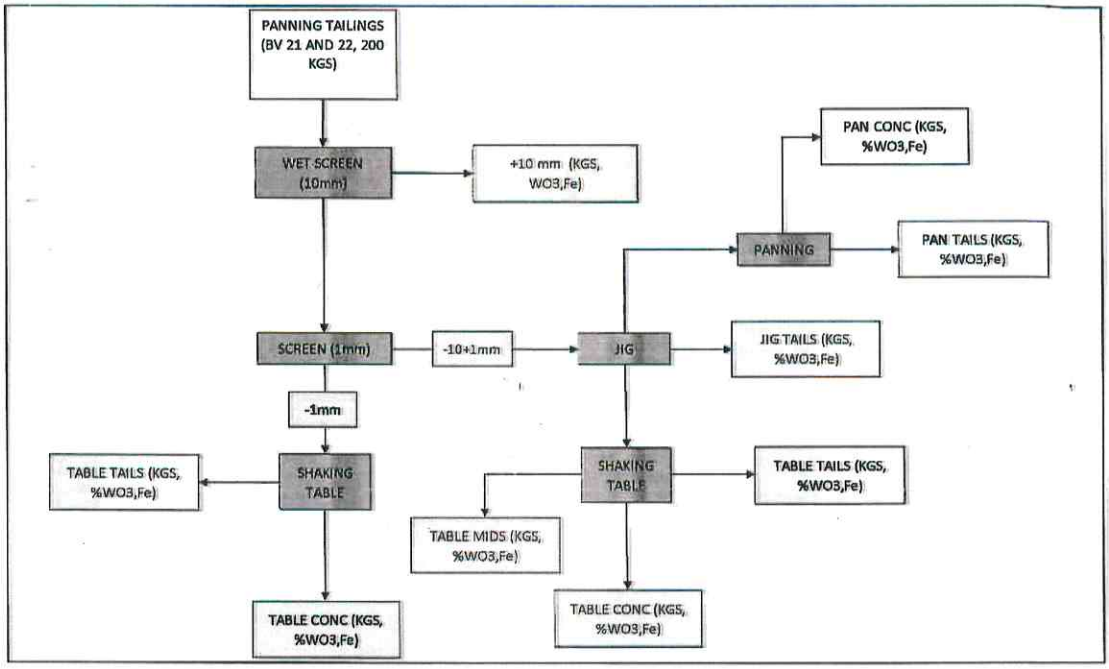

Figure 1: Testwork flow diagram

Results and discussions

1. The assayed head grade of the panning tails is 3.54% WO3 while the calculated feed grade is 5.13% WO3. A very high variance was observed which is potentially coming from sampling the coarse fractions specially the panning conc and panning tails.

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2. The testwork show a total WO3 recovery of 61.85%. Pan concentrate produced 65.72% WO3 which contributes 26.47% of the total WO3 recovery, shaking table concentrate from the -2mm of the Jig contributes 20.1% of the total WO3 recovery with a grade of 65.49%WO3 and the shaking table concentrate from the -1mm contributes 14.63% of the total WO3 recovery with a concentrate grade of 66.34%WO3. The concentrate mass pull in the coarse circuit (-10+1) and the fines (-1mm) are 3.68% and 1.14% respectively.

PROCESS	STREAM	WT	%WT	%WO3	WO3 UNITS	WO3 DISTRIBUTION
+10mm		3.81	1.90	0.946	0.04	**0.35**
JIG-PANNING	CONC	4.173	2.09	65.72	2.74	**26.75**
	TAILS	103.723	51.86	1.67	1.73	**16.89**
-2mm (SHAKING TABLE)	CONC	3.180	1.59	65.49	2.08	**20.31**
	TAILS	51.307	25.65	1.67	0.86	**8.37**
-1mm (SHAKING TABLE)	CONC	2.29	1.14	66.34	1.52	**14.79**
	MIDS	25.52	12.76	4.55	1.16	**11.33**
	TAILS	6.00	3.00	2.06	0.12	**1.20**
	TOTAL	**200**		**5.13**	**10.25**	

3. The oversize materials (+10mm) have a mass pull of 1.9% with a grade of 0.946%WO3, which contributes 0.35% only of the total WO3 content.

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Proposed processing plant

Using the results from the testwork, a proposal was done to build a 5 tph pilot plant using the available equipment in Nyakabingo. The figure below shows the proposed flowsheet of the plant. The plant will be built in front of the BV 22 tunnel entrance with an area of 10m x 20m.

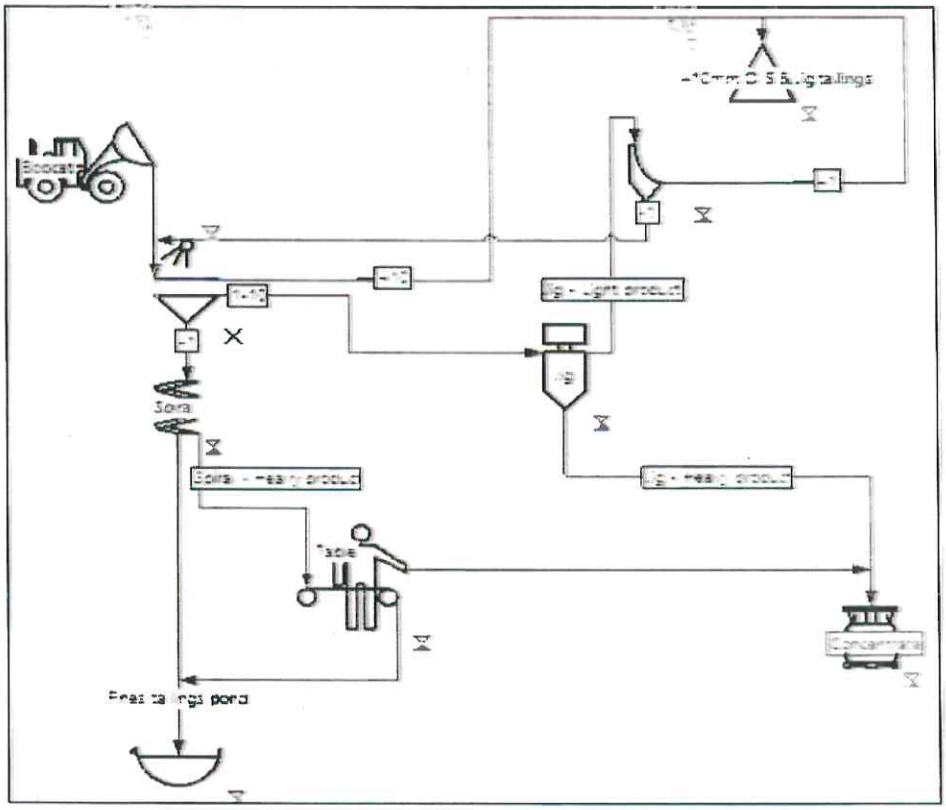

Figure 2: Proposed plant flowsheet

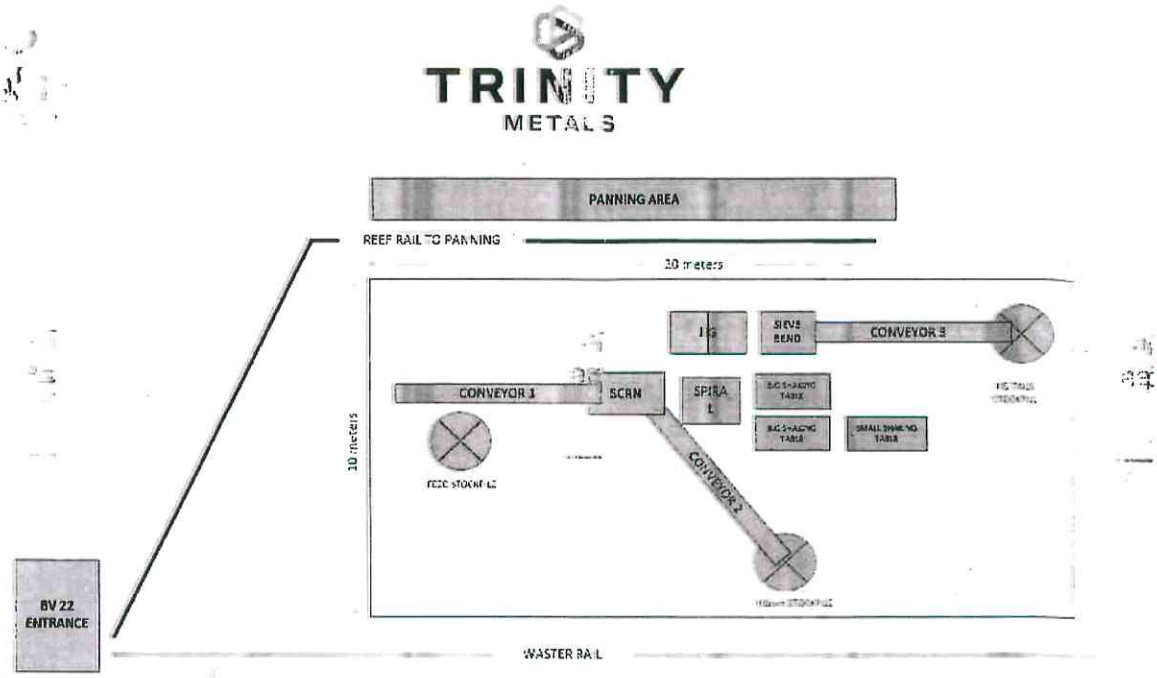

Figure 3: Plan view

The plant feed will be a mix of the panning tailings and the surface ROM materials. A blend ratio of 1.2:1 (surface ROM: panning tailings). That means the plant will process mix of 18 tons of panning tails and 22 tons from the surface ROM per day, a total of 40 tpd combined. The blended ore (panning tailings and surface ROM) will be fed into a feed bin using a skid steer. The feed bin product will then be conveyed to a double deck screen with 10 and 1mm screens. The +10mm oversize will be conveyed and stockpiled. The -10+1mm will be conveyed to a jig concentrator. The concentrate (nuggets) will then be collected after the end of the shift then panned to achieve >60%WO3 grade. The -2mm underflow from the jig will be fed to a shaking table. The jig tailings will be screened using a dewatering sieve bend with a 1mm screen. The +1mm oversize will be stockpiled using a conveyor. The -1mm sieve bend underflow which is mostly water will be pumped back to the plant as recycled water. The -1mm from the double deck screen will be pumped to the spiral concentrator, the spiral concentrate will be sent to the shaking table to upgrade the concentrate to >60% WO3 grade. The spiral and table tailings will be directed to a fines tails hopper and discharged directly to Dam 1 in a pipe by gravity.

The plant will be operated at a feed rate of 5 tph at night from 11PM to 7AM in the morning to avoid the peak hours where the electricity cost is high (6PM to 11PM) and also to avoid water usage competition between the drillers and the panners during the day (7AM to 3PM). It will be operated by 1 skid steer operator, 1 spiral and shaking table operator,1 jig operator, 1 sampler and 1 operator who is in charge of the water pumps and supply. 1

plant fitter will also be assigned to the plant to ensure quick response if there is a breakdown of equipment and 1 mechanic for the skid steer.

Based on the testwork, the total recovery of the proposed plant is expected to be 61.85%. The daily concentrate production is approximately 700 kgs per day with a concentrate grade of >60%WO3.

Plant performance monitoring

Once the plant is operating, samples will be regularly collected from the feed, products and tails streams. The samples will then be analyzed using the portable XRF. Grade by size analysis will also be done on the concentrate and tailings samples to understand the WO3 deportment per size fraction. This data can be used in the design of the future 50 tph processing plant.

Plant waste management

There are 3 sources of tailings from the plant and each will be managed separately. The +10mm oversize from the double deck screen and the jig tails (+1mm) will be stockpiled for future processing. The spirals and shaking table tailings will be discharged directly to Dam 1 in a pipe.

Operating cost estimate

The plant has an estimated total operating cost of $8.49 per ton of ore feed. The breakdown is shown below.

Operating cost, $/t	
Power cost	$3.96
Labor cost	$0.54
Fuel cost (Skid steer)	$1.99
Maintenance cost (equipment+ skid steer)	$2.00
Total opex	$8.49

Table 1: Operating cost

Capital cost estimate

The total capital required is approximately USD 66,584. This costing is broken down in the projects section (Table 3).

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Project implementation

Equipment and materials

Below table shows the equipment and materials required for this project which is available in Nyakabingo with their respective power rating.

#	Equipment Name	Qty	KW rating
1	Bobcat	1	
2	Feed bin	1	
3	Double deck screen	1	7
4	Conveyors	3	5
5	Jig	1	3
6	Shaking tables	2	1.1
7	Spirals	2	
8	Slurry pump (3/2)	2	5.5
9	Slurry pump (4/3)	1	7
10	Sieve bend	1	
		Total	**28.6**

Table 2: Major equipment

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The table below also shows the total costing for the construction of the plant

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Table 3: Construction and assembly materials

Project schedule

The project is scheduled to start on August 3, 2025 and plant production startup on December 3, 2025.

Financial analysis

The financial calculation below is based on a 1 year of plant operation with consistent feed of 1040 tons of panning tailings per month. The capital requirement used in the calculation is USD 66,584. It should be noted that the capital required does not include the main equipment which is available already, the main equipments were listed in the Equipment and materials section (Table 2) which is costed at $17,990. The NPV calculation includes the costs of these main equipment.

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		Mixed (Surface ROM+Panning tails)
Feed tons	t/d	40.00
	t/m	1040.00
Feed grade	%WO3	1.80
Recovery	%	60.43
Concentrate grade	%WO3	65.71
Concentrate weight	t/m	17.25
WO3 content	t WO3/m	11.34
Price/MTU	$/mtu	$ 320.00
MTU sold	mtu/m	1133.86
OPEX	$/t	$ 8.49
	$/m	$ 8,832.74
Revenue	$/m	$ 362,836.54
Profit	$/m	$ 354,003.80

- Payback period = 0.2 month
- NPV = USD 3.9M (based on 12 months operation)