Freeman Announces Robust Maiden Preliminary Economic Assessment For Lemhi: After Tax Npv Of Us$ 212 Million

16.10.2023 | CNW

TSX Venture Exchange: FMAN

VANCOUVER, Oct. 16, 2023 - Freeman Gold Corp. (TSXV: FMAN) (OTCQX: FMANF) (FSE: 3WU) ("Freeman" or the is pleased to announce results for the maiden Preliminary Economic Assessment ("PEA") on the Company's 100% owr Gold project ("Lemhi"), located in Idaho, USA. The PEA outlines a high-grade, low-cost, open pit operation with an aver production of 80,100 ounces of gold ("Au") in the first eight years. The production strategy outlined in the PEA consists development with an increase in throughput during the fifth year of operation, with a flowsheet utilizing a carbon-in-leac processing facility. The objective of the study has been to maximize the value of Lemhi, while minimizing the footprint a environmental impact of the facility.

Lemhi PEA Highlights:

- After-tax NPV(5%) of US$212.4 million and IRR of 22.8% using a base case gold price of US$1,750/oz.
- After-tax NPV (5%) of US$ 295.6 million and IRR of 28.6% using spot gold price of 1,932.50 US$/oz.
- Average annual gold production of 75,900 oz Au for a total life-of-mine ("LOM") 11.2 years payable output of 851,
- LOM cash costs of US$809/oz Au and all-in sustaining cash costs ("AISC") of US$957/oz Au.
- Initial CAPEX of US$190 million.
- Average gold recovery of 96.7%.
- High average mill head grade of 0.88 g/t Au.
- Average annual gold production of 80,100 oz Au in the first 8 years of production.
- Average mill throughput of 2.5 Mt/a (6.8 kt/d), increasing to 3.0 Mt/a (8.2 kt/d) after four years of operation.

To view an interactive 3D walkthrough of the Lemhi Gold Project, please use the following link or visit the Company's w

https://vrify.com/decks/14336

Paul Matysek, Executive Chairman of the Company, stated, "I am very pleased with the robust economics obtained for grade, high recovery, open pit oxide deposit. Lemhi represents a unique opportunity for the investment community to pa a deeply discounted gold project that remains open on strike and trades at 6% of after tax NPV at US$1,750 gold and l at spot price. This will certainly be attractive to gold mining developers and producers who see value in having an opera entirely on patented ground, a sub US$1,000/oz AISC, a life of mine production over 850,000 ounces, that is highly leve gold price in a leading mining jurisdiction."

Table 1: Project Economics & Upside

Gold price	Post-Tax $NPV_{5\%}$	Post-Tax IRR
(US$/oz Au)	(US$M)	
$1,600	$144	17.6 %
$1,750?	$212	22.8 %
$1,900	$281	27.6 %
$2,050		

$349

32.1 %

? base case scenario
Production Profile & Economic Analysis

The results of the PEA demonstrate Lemhi has the potential to become a profitable, low-cost gold producer. With an average annual gold production of 75,900 oz Au over the 11.2-year LOM, Lemhi has a life of mine payable output of 851,900 oz Au and average annual gold production of 80,100 oz Au in the first 8 years of production.

With an average operating cost of US$21.53/t milled over the LOM, the operation has cash costs of US$809/oz Au and AISC of US$957/oz Au. The project has an initial capital cost of US$190 million.

The economic analysis was performed assuming a 5% discount rate. Cash flows have been discounted to the start of construction, assuming that the project execution decision will be taken, and major project financing will be carried out at this time.

The preliminary economic assessment is preliminary in nature, that it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

On a post-tax basis, the NPV discounted at 5% is US$212.4 million; the IRR is 22.8%; and payback period is 3.6 years. A summary of the post-tax project economics is shown graphically in Figure 2 and listed in Table 2.

Table 2: Economic Analysis Summary

General	Unit	LOM Total/Avg.
Gold Price	US$/oz	1,750
Mine Life	years	11.2
Total Waste Tonnes Mined	kt	121,903
Total Mill Feed Tonnes	kt	31,128
Strip Ratio	waste: mineralized rock	3.9
Production	Unit	LOM Total/Avg.
Mill Head Grade	g/t	0.88
Mill Recovery Rate	%	96.7
Total Payable Mill Ounces Recovered	koz	851.9
Total Average Annual Payable Production	koz	75.9
Operating Costs	Unit	LOM Total/Avg.
Mining Cost (incl. rehandle)	US$/t mined	2.51
Mining Cost (incl. rehandle)	US$/t milled	11.43
Processing Cost	US$/t milled	9.03
General & Administrative Cost	US$/t milled	1.07
Total Operating Costs		

US$/t milled

21.53

Treatment & Refining Cost	US$/oz	4.30
Net Smelter Royalty	%	1.0
Cash Costs[1]	US$/oz Au	809
All-In Sustaining Costs[2]	US$/oz Au	957
Capital Costs	Unit	LOM Total/Avg.
Initial Capital	US$M	190
Expansion Capital	US$M	8
Sustaining Capital	US$M	101
Closure Costs	US$M	30
Salvage Value	US$M	12
Financials - Pre-Tax	Unit	LOM Total/Avg.
Net Present Value (5%)	US$M	297
Internal Rate of Return	%	26.9
Payback	years	3.3
Financials - Post-Tax	Unit	LOM Total/Avg.
Net Present Value (5%)	US$M	212.4
Internal Rate of Return	%	22.8
Payback	years	3.6

Notes:

1. Cash costs consist of mining costs, processing costs, mine-level G&A and treatment and refining charges, and royalties.

2. All-in sustaining costs include cash costs plus expansion capital, sustaining capital, closure costs and salvage value.

Mining and Metallurgy

Source: Ausenco, 2023.

The deposit is amenable to open pit mining practices. Mine production planning is based on conventional drill/blast/load/haul open pit mining methods suited for the project location and local site requirements. The open pit activities are designed for approximately two years of construction followed by 12 years of operations. The PEA mine production plan estimates a total LOM mill feed of 31,128 kt of mineralized rock at an average feed grade of 0.88 g/t Au. Based on the current mineralized rock extents, the pit design results in a 3.9 waste to mineralize rock ratio.

Pit designs are configured on 5 m bench heights, with minimum 8 m wide berms placed every four benches, or quadruple benching. Slopes of 25 degree are applied in the thin overburden layer above the deposit bedrock. Since there has been no geotechnical test work or analysis completed on the bedrock, the applied bench face and inter-ramp angles, 70-75 degrees and 50-55 degrees respectively, are scoping level assumptions based only on the rock type and overall depth of the open pit.

Resource from the open pit will report to a ROM pad and primary crusher directly northeast of the pit rim. The mill will be fed with material from the pits at an average rate of 2.5 Mt/a (6.8 kt/d), increasing to 3.0 Mt/a (8.2 kt/d) after four years of operation. Resources mined in excess of mill feed targets will be stored in a low grade stockpile directly south of the ROM pad, and east of the open pit. This stockpile is planned to be completely reclaimed to the mill at the end of the mine life. Waste rock will be placed in one of two facilities, each planned as a comingled facility with the processed tailings.

The mine production schedule is summarized in Figure 3 below. The overall site layout is shown in Figure 4.

A number of metallurgical test programs have been completed on the Lemhi Gold Project since 1994. A summary of the test programs is presented in Table 3.

Table 3- Summary of Metallurgical Test Programs

Year	Laboratory	Description
1994	Kappes Cassiday, Reno	Phase 1 - column leach, bottle roll tests on 7 composites
1995	Kappes Cassiday, Reno	Phase 2 - column leach, bottle roll tests on 1 composite
1995	Kappes Cassiday, Reno	Phase 3 - column leach, bottle roll tests on 2 composites
2021	SGS, Vancouver	11 samples tested in 2 phases; included gravity, bottle roll, flotation, comminution. Additional phase of variability testing - 26 samples Solid/Liquid separation
2023	Base Met, Kamloops	comminution on 5 samples
		gravity and leach testing on 2 master composites CN detox and dewatering testing

The process flowsheet for the Lemhi Gold project was selected based on the metallurgical test work results and flowsheet trade off study and was tailored to support the ramp-up of the plant throughput in Year 5 and a production profile over the life of mine. The unit operations selected are standard technologies used in gold processing plants. The proposed flowsheet uses conventional equipment for the following circuits which include crushing/grinding, leaching/carbon adsorption, carbon desorption/electrowinning/refining and cyanide destruction/wet tailings deposition.

The process design is comprised of the following circuits: primary crushing of run-of-mine (ROM) material; semi-autogenous grinding (SAG) mill followed by ball mill with cyclone classification; leach and carbon-in-leach adsorption; acid washing and elution of loaded carbon; electrowinning and smelting to produce doré; carbon regeneration; and cyanide destruction and wet tailings disposal.

Capital & Operating Costs

The capital cost estimate conforms to Class 5 guidelines for a PEA-level estimate accuracy according to the Association for the Advancement of Cost Engineering International (AACE International). The capital cost estimate was developed in Q2 2023 United States dollars based on Ausenco's in-house database of projects and studies, budget pricing for equipment, as well as experience from similar operations.

The estimate includes open pit mining, processing, on-site infrastructure, tailings and waste rock facilities, off-site infrastructure, project indirect costs, project delivery, Owner's costs, and contingency. The capital cost summary is presented in Table 4. The total initial capital cost for the Lemhi Project is US$190.2 M; and life-of-mine sustaining costs are US$101.2 M. The cost of expansion in fifth year is estimated at US$7.6 M. Closure costs are estimated at US$29.9 M, with salvage credits of US$12.0 M.

Table 4: Summary of Capital Cost

WBS	WBS Description	Initial Capital Cost (US$M)	Sustaining Capital Cost LOM (US$M)	Expansion Cost (US$M)	Total Capital Cost LOM (US$M)
1000	Mine	41.3	60.4	2.1	103.8
3000	Process Plant	67.0	1.7	3.5	72.2
4000	Tailings	10.2	37.9	-	48.1
5000	On-Site Infrastructure	18.5	0.2	-	18.7
6000	Off-Site Infrastructure	2.3	-	-	2.3
	Total Directs	139.2	100.2	5.6	245.1
7100	Field Indirects	6.4	-	0.3	6.6
7200	Project Delivery	11.8	-	0.4	12.2
7500	Spares + First Fills	2.9	1.0	0.2	4.1
8000	Owner's Cost	3.7	-	-	3.7
	Total Indirects	24.7	1.0	0.9	26.6
9000	Contingency	26.2	-	1.1	27.3
	Project Total	190.2	101.2	7.6	298.9

Note: Totals may not sum due to rounding

The operating cost estimates was developed from first principles and applied to the mine production schedule. Productivity and cost inputs are derived from historical reference data. and includes mining, processing, maintenance, power, and general and administration (G&A) costs. Table 5 provides a summary of the project operating costs.

The overall life-of-mine operating cost is US$670.3 M over 11.2 years, or an average of US$21.53/t of material milled in a typical year.

Table 5: Operating Cost Summary

Area	Life-of-Mine Cost (US$M)	LOM Annual Cost (US$M)	LOM Unit Cost (US$/t milled)
Mining	355.8	31.7	11.43
Process	281.2	25.0	9.03
G&A	33.2	3.0	1.07
Total	670.3	59.7	21.53

Note: Totals may not sum due to rounding

Sensitivity Analysis

A sensitivity analysis was conducted on the base case post-tax NPV and IRR of the project using the following variables: gold price, operating costs, and initial capital costs. Table 6 summarizes the post-tax sensitivity analysis results.

Table 6: Post-Tax Sensitivity Analysis

Post-Tax NPV Sensitivity To Opex

Opex		Gold Price (US$/oz)				
		$1,450	$1,600	$1,750	$1,900	$2,050
	(20.0 %)	148	217	285	353	422
	(10.0 %)	111	180	249	317	385
	--	74	144	212	281	349
	10.0 %	37	107	176	244	313
	20.0 %	(1)	70	139	208	276

Post-Tax IRR Sensitivity To Opex

Opex		Gold Price (US$/oz)				
		$1,450	$1,600	$1,750	$1,900	$2,050
	(20.0 %)	18.0	23.2	27.9	32.5	36.8
	(10.0 %)	15.0	20.4	25.4	30.1	34.5
	--	11.9	17.6	22.8	27.6	32.1
	10.0 %	8.5	14.6	20.1	25.1	29.7
	20.0 %	4.9	11.4	17.2	22.4	27.2

Post-Tax NPV Sensitivity To Initial Capex

Initial Capex		Gold Price (US$/oz)				
		$1,450	$1,600	$1,750	$1,900	$2,050
	(20.0 %)	113	182	251	319	388
	(10.0 %)	94	163	232	300	368
	--	74	144	212	281	349
	10.0 %	55	124	193	262	330
	20.0 %	36	105	174	242	311

Post-Tax IRR Sensitivity To Initial Capex

Initial Capex		Gold Price (US$/oz)				
		$1,450	$1,600	$1,750	$1,900	$2,050
	(20.0 %)	17.1	23.8	29.8	35.4	40.7
	(10.0 %)	14.3	20.4	26.0	31.1	36.0
	--	11.9	17.6	22.8	27.6	32.1
	10.0 %	9.8	15.2	20.1	24.6	28.9
	20.0 %	7.9	13.1	17.8	22.1	26.1

Recommendations & Opportunities

Recommendations for upcoming work programs include a follow-up exploration and drilling program to expand the resource base at Lemhi, geotechnical studies in the project area, additional test work to confirm recoveries, evaluation of a heap leach option, and further environmental and socio-economic baseline studies.

Qualified Persons

A team of Independent Qualified Persons (as such term is defined under NI 43-101) at Ausenco, MMTS and APEX has led the PEA and has reviewed and verified the technical disclosure in this press release, including:

Kevin Murray, P.Eng., of Ausenco is an independent QP for process and infrastructure capital and operating cost estimation, and project financials.

Peter Mehrfert, P.Eng., of Ausenco is an independent QP for the metallurgical test work and recovery model.

Scott Elfen, P.E., of Ausenco is an independent QP for the tailings and waste rock management facility.

James Millard, P.Geo., of Ausenco is an independent QP for the environmental and permitting studies.

Michael Dufresne P.Eng., of APEX is an independent QP for the geology and mineral resource estimate.

Marc Schulte, P.Eng., of MMTS is an independent QP for the mine planning and cost estimation.

The scientific and technical information in this news release has been reviewed and verified by Dean Besserer, P.Geo., the Vice-President of Exploration for the company and Qualified Person as defined in NI 43-101.

About the Company and Project

Freeman Gold Corp. is a mineral exploration company focused on the development of its 100% owned Lemhi Gold property (the "Project"). The Project comprises 30 square kilometres of highly prospective land, hosting a near-surface oxide gold resource. The pit constrained mineral resource prepared in accordance with National Instrument 43-101 ("NI 43- 101"), comprises 988,100 oz gold ("Au") at 1.0 grams per tonne ("g/t") in 30.02 million tonnes (Measured & Indicated) and 256,000 oz Au at 1.04 g/t Au in 7.63 million tonnes (Inferred). The Company is focused on growing and advancing the Project towards a production decision.

Ausenco is a global diversified engineering, construction and project management company providing consulting, project delivery and asset management solutions to the resources, energy, and infrastructure sectors. Ausenco's experience in gold projects ranges from conceptual, pre-feasibility and feasibility studies for new project developments to project execution with EPCM and EPC delivery. Ausenco is currently engaged on a number of global projects with similar characteristics and opportunities to the Lemhi Gold Project.

On Behalf of the Company
William Randall
President and Chief Executive Officer

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