Tuesday, 13 August 2024

Clarification and Retraction Announcement

American West Metals Limited ("**American West**" or the "**Company**") (ASX: AW1) refers to the announcement on 12 August 2024 entitled "Storm Copper DSO Potential Confirmed" (the **"Announcement"**). In discussions with the Company subsequent to the release of the Announcement, the Australian Securities Exchange (**"ASX"**) have expressed concerns that:

- Certain statements made in the Announcement referring to the Production modelling (specifically the references to the 1.5 million tonnes per annum production scenario and related CAPEX information) have not been made in accordance with ASX Listing Rules 5.16 and 5.17.

As a result, the Company retracts all references to the 1.5 million tonnes per annum production scenario and related CAPEX information included in the Announcement.

To avoid any potential confusion, the Company attaches a revised Announcement.

Approved for release by the Board of American West Metals Limited.

Sarah Shipway
Company Secretary
American West Metals Limited

Tuesday, 13th August 2024

Direct Shipping Ore (DSO) potential confirmed at the Storm Copper Project, Canada

Industry-leading ore sorting and beneficiation results highlight simple, low-footprint development potential

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- Metallurgical study and test work program on representative Cyclone and Chinook Deposit mineralisation has successfully generated commercial grade Direct Shipping Ore (**DSO**) products
- The two-circuit, ore sorting and Inline Pressure Jig (**IPJ**) stream is capable of a range of DSO concentrate grades with excellent yields of copper
- The DSO processing test work has delivered:
  - Cyclone Deposit at 1.2% Cu to 1.5% Cu feed grades,
    - **16-22% Cu concentrate, 58-62% of copper metal to DSO**
  - Chinook Deposit at 1.2% Cu to 1.5% Cu feed grade,
    - **16-22% Cu concentrate, 64-71% of copper metal to DSO**
- DSO process can be easily optimised to suit increased processing rates and selective concentrate grades
- Ongoing test work has shown further upside potential and includes continuing variability, comminution and optimisation studies on the Cyclone, Chinook, and Thunder Deposits
- The development opportunity has excellent ESG outcomes with a very small environmental footprint and zero deleterious elements
- Resource infill and expansion drilling continues toward delivering an upgraded Mineral Resource Estimation – significantly building on the current JORC Code 2012 MRE of **17.5Mt @ 1.2% Cu, 3.4g/t Ag (205Kt Cu, 1.9Moz Ag)**[1]

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[1] Refer to ASX:AW1 – 'Maiden JORC MRE for the Storm Project' (30 January 2024).

Dave O'Neill, Managing Director of American West Metals commented:

"We are extremely pleased to announce a major milestone for the Storm Copper Project with spectacular results from the DSO processing study. The program has produced commercial grade DSO products from typical copper ores through an uncomplicated process. This is game changing for the Storm project and world leading in terms of copper processing innovation and performance.

"The process of generating DSO at Storm is amazingly simple and highlights our Company's focus on generating ESG sensitive and low capital development solutions. Storm Copper now stands out as one of the very few, and highest-grade DSO copper opportunities globally.

"This proof-of-concept processing option for Storm significantly derisks the project from a development, funding and permitting perspective. Whilst the drilling rapidly advances the resource and exploration program, our shareholders will be encouraged to see that we are also progressing these other high value initiatives."

Figure 1: Storm copper mineralisation being processed by a full scale Steinert ore-sorter in Perth, Australia.

American West Metals Limited (**American West Metals** or **the Company**) (ASX: AW1) is pleased to report the results of the recent scoping level test work completed on mineralisation from the Storm Copper Project (**Storm** or **the Project**) on Somerset Island, Nunavut, Canada.

HIGH-GRADE OPEN PIT COPPER OPPORTUNITY

The maiden JORC compliant Indicated and Inferred Mineral Resource Estimation (**MRE**) for Storm was published in early 2024. The MRE defined **17.5Mt @ 1.2% Cu, 3.4g/t Ag** (205Kt copper and 1.9Moz silver), with circa. 20,000m of resource upgrade and expansion drilling currently underway.

The dominant copper mineral within the Storm deposits is chalcocite. The copper mineralisation is hosted within coarse veins and breccias, and there is a direct correlation between the volume and thickness of the mineralised veins with overall copper grade.

Chalcocite is a dark-grey copper sulphide mineral that contains 79.8% Cu, with a specific gravity (**SG**) of 5.5-5.8. The dolomite host rocks to the mineralisation are light grey/brown and have an SG of 2.8-2.85. The large difference in physical properties of the copper mineralisation and host rocks suggests amenability to upgrading through simple beneficiation processing techniques.

Ore sorting was identified as one technique that could have potential to upgrade the mineralisation to be suitable as a Direct Shipping Ore (**DSO**). Ore sorting is a pre-concentration technology that uses advanced sensors and algorithms to separate economically viable ore from waste rock in real-time. This processing technique is widely used in the mining and mineral processing industry on a range of commodity types, including lithium, iron ore and nickel.

The use of ore sorting and beneficiation processing technology eliminates the necessity for a conventional flotation plant and its accompanying tailings facility. Consequently, it would reduce the operational footprint and provide substantially lower capital requirements.

DSO CONCEPT DESIGN AND RESULTS

ALS Metallurgy in conjunction with Sacre-Davey (North Vancouver, Canada) and Nexus Bonum (Perth, Australia), international consulting firms with highly respected credentials in mineral processing and beneficiation, were engaged to complete detailed studies on the ore sorting performance of typical copper mineralisation at Storm using metallurgical samples from the Cyclone and Chinook Deposits. The Nexus study was subsequently broadened to include a range of other beneficiation techniques in addition to ore-sorting to assess the DSO potential further.

The test work studied the upgrade performance of a range of sensor based and gravity technologies using the metallurgical samples provided. The mineralisation was tested over a wide range of copper grades and size fractions to determine the DSO potential across the mineral resource.

The test results confirmed that the Cyclone and Chinook copper mineralisation is extremely amenable to upgrading and that high recoveries can be obtained in very low mass yields.

Of all of the tests completed, ore-sorting and wet jigging (a gravity separation technique) using the Inline Pressure Jig (IPJ) produced the most favourable upgrade results, and the combination of the two circuits allowed both the coarse (>11.2mm) and fine fractions (<11.2mm) to be processed effectively.

The highly favourable results were used to generate a design process flow diagram (**PFD**) incorporating particle ore sorters (**XRT**) and Inline Pressure Jigs (**IPJ**) to produce a selected DSO product grade.

A simplified description of the PFDs for the Cyclone and Chinook Deposits are presented below.

See Appendix: A of this report for a more detailed description.

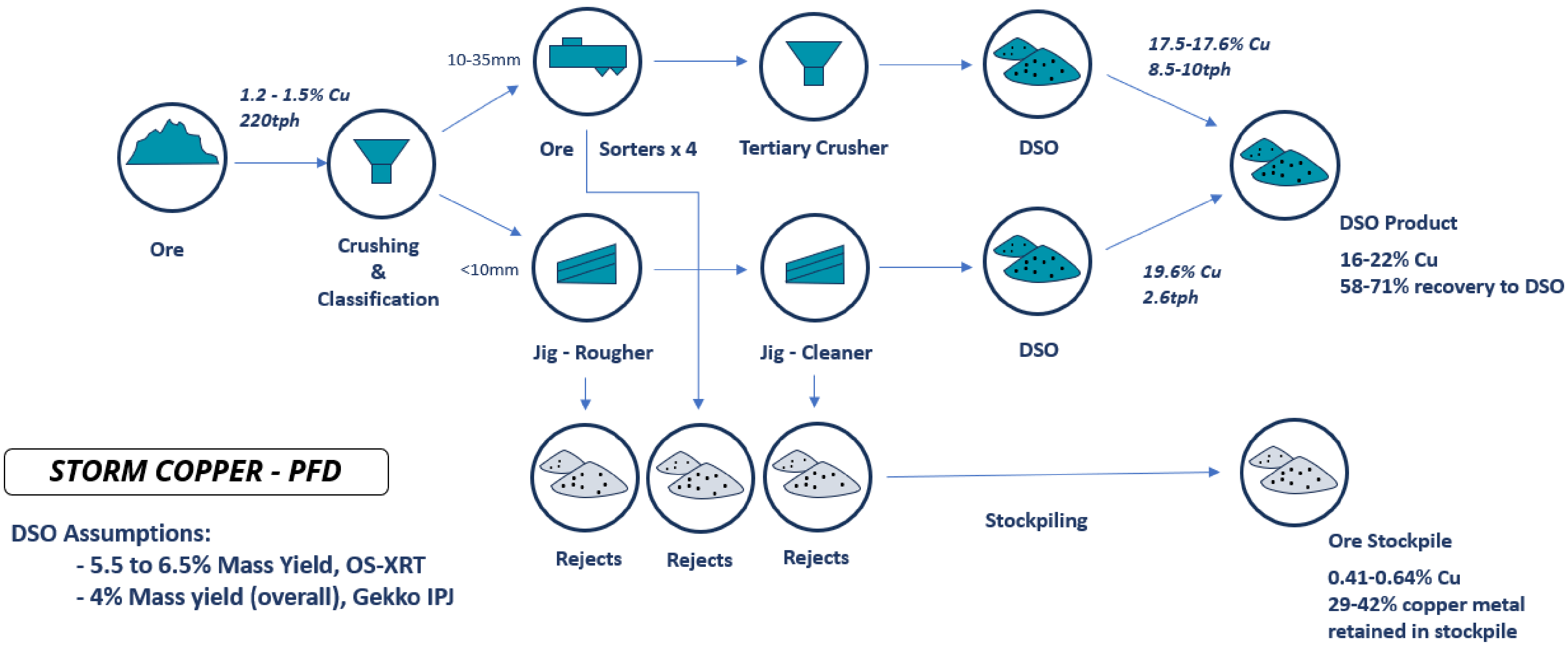

Figure 2: Typical PFD for the Storm copper mineralisation using ore sorting and gravity upgrading based on test work results.

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Competent Person's Statement – JORC MRE

The information in this announcement that relates to the estimate of Mineral Resources for the Storm Project is based upon, and fairly represents, information and supporting documentation compiled and reviewed by Mr. Kevin Hon, P.Geo., Senior Geologist, Mr. Christopher Livingstone, P.Geo, Senior Geologist, Mr. Warren Black, P.Geo., Senior Geologist and Geostatistician, and Mr. Steve Nicholls, MAIG, Senior Resource Geologist, all employees of APEX Geoscience Ltd. and Competent Persons. Mr. Hon and Mr. Black are members of the Association of Professional Engineers and Geoscientists of Alberta (APEGA), Mr. Livingstone is a member of the Association of Professional Engineers and Geoscientist of British Columbia (EGBC), and Mr. Nicholls is a Member of the Australian Institute of Geologists (AIG).

Mr. Hon, Mr. Livingstone, Mr. Black, and Mr. Nicolls (the "APEX CPs") are Senior Consultants at APEX Geoscience Ltd., an independent consultancy engaged by American West Metals Limited for the Mineral Resource Estimate. The APEX CPs have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". The APEX CPs consent to the inclusion in this announcement of matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the results included in the original market announcements referred to in this Announcement and that no material change in the results has occurred. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

The ASX announcement contains information extracted from the following reports which are available on the Company's website at https://www.americanwestmetals.com/site/content/:

- 30 January 2024 Maiden JORC MRE for Storm

Forward looking statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified using forward-looking words such as "may," "will," "expect," "intend," "plan," "estimate," "anticipate," "continue," and "guidance," or other similar words and may include, without limitation, statements regarding plans, strategies, and objectives of management.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance, and achievements to differ materially from any future results, performance, or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events, or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements, or events not to be as anticipated, estimated, or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in this announcement speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

AMERICAN WEST METALS LIMITED

ABOUT AMERICAN WEST METALS

AMERICAN WEST METALS LIMITED (ASX: AW1) is an Australian clean energy mining company focused on growth through the discovery and development of major base metal mineral deposits in Tier 1 jurisdictions of North America. Our strategy is focused on developing mines that have a low-footprint and support the global energy transformation.

Our portfolio of copper and zinc projects in Utah and Canada include significant existing resource inventories and high-grade mineralisation that can generate robust mining proposals. Core to our approach is our commitment to the ethical extraction and processing of minerals and making a meaningful contribution to the communities where our projects are located.

Led by a highly experienced leadership team, our strategic initiatives lay the foundation for a sustainable business which aims to deliver high-multiplier returns on shareholder investment and economic benefits to all stakeholders.

Storm Direct Shipping Ore (DSO) Study – Supporting Information

INTRODUCTION

The Storm Copper Project is located on Somerset Island, Nunavut, in the Canadian Arctic Archipelago, within the Cornwallis Fold and Thrust Belt. The Project is part of the Aston Bay Property, which includes Storm Copper, the Seal Zinc Project, and numerous regional prospects and targets.

On March 9, 2021, Aston Bay entered into an option agreement with American West Metals Limited (American West), and its wholly owned Canadian subsidiary Tornado Metals Ltd., pursuant to which American West was granted an option to earn an 80% undivided interest in the Project by spending a minimum of CAD$10 million on qualifying exploration expenditures. The parties amended and restated the Option Agreement as of February 27, 2023 to facilitate American West directly earning an interest in the Project alongside its Canadian subsidiary without any change to the overall commercial agreement between the parties. The expenditures were completed during 2023 and American West exercised the option. American West and Aston Bay have formed an 80/20 unincorporated joint venture.

GEOLOGY AND MINERALISATION

The Aston Bay Property, including the Storm Copper Project, lies within the Cornwallis Lead-Zinc District, which hosts the past producing Polaris Zn-Pb mine on Little Cornwallis Island. The Property covers a portion of the Cornwallis Fold and Thrust Belt, which affected sediments of the Arctic Platform deposited on a stable, passive continental margin that existed from Late Proterozoic to Late Silurian. Southward compression during the Ellesmerian Orogeny (Late Devonian to Early Carboniferous) produced a fold and thrust belt north and west of the former continental margin, effectively ending carbonate sedimentation throughout the region. This tectonic event is believed to have generated the ore-bearing fluids responsible for Zn-Pb deposits in the region.

Storm Copper is interpreted to be a sediment-hosted stratiform copper sulphide deposit, broadly comparable to Kupferschiefer and Kipushi type deposits. The Project comprises a collection of copper deposits (Cyclone, Chinook, Corona, and Cirrus) and other prospects and showings (including the Thunder and Lightning Ridge Zones, Cyclone North and Gap Prospects), surrounding a Central Graben. The Central Graben locally juxtaposes the conformable Late Ordovician to Early Silurian Allen Bay Formation, the Silurian Cape Storm Formation, and the Silurian Douro Formation, and was likely a principal control on migration of mineralising fluids. The Storm Copper deposits are hosted within the upper 80 meters of the Allen Bay Formation and to a lesser extent in the basal Cape Storm Formation.

The Storm Copper sulphide mineralisation is most commonly hosted within structurally prepared ground, infilling fractures, and a variety of breccias including crackle breccias, and lesser in-situ replacement and dissolution breccias, with a relatively impermeable “cap” of dolomicrite of the Silurian Cape Storm Formation.

Mineralisation at Storm Copper is dominated by chalcocite, with lesser chalcopyrite and bornite, and accessory cuprite, covellite, azurite, malachite, and native copper. Sulphides are hosted within porous, fossiliferous units and are typically disseminated, void-filling and net-textured as replacement of the host rock. Crackle, solution and fault breccias on the decametric to metric scale represent ground preparation at sites of copper deposition.

The maiden JORC compliant Mineral Resource Estimation (MRE) for the Storm Copper Project was published during January, 2024 (see ASX announcement dated 24 January 2024: *Maiden JORC MRE for the Storm Project*), and defined 17.5Mt @ 1.2% cu, 3.4g/t for 205.000 tonnes of copper and 1.9 million ounces of silver.

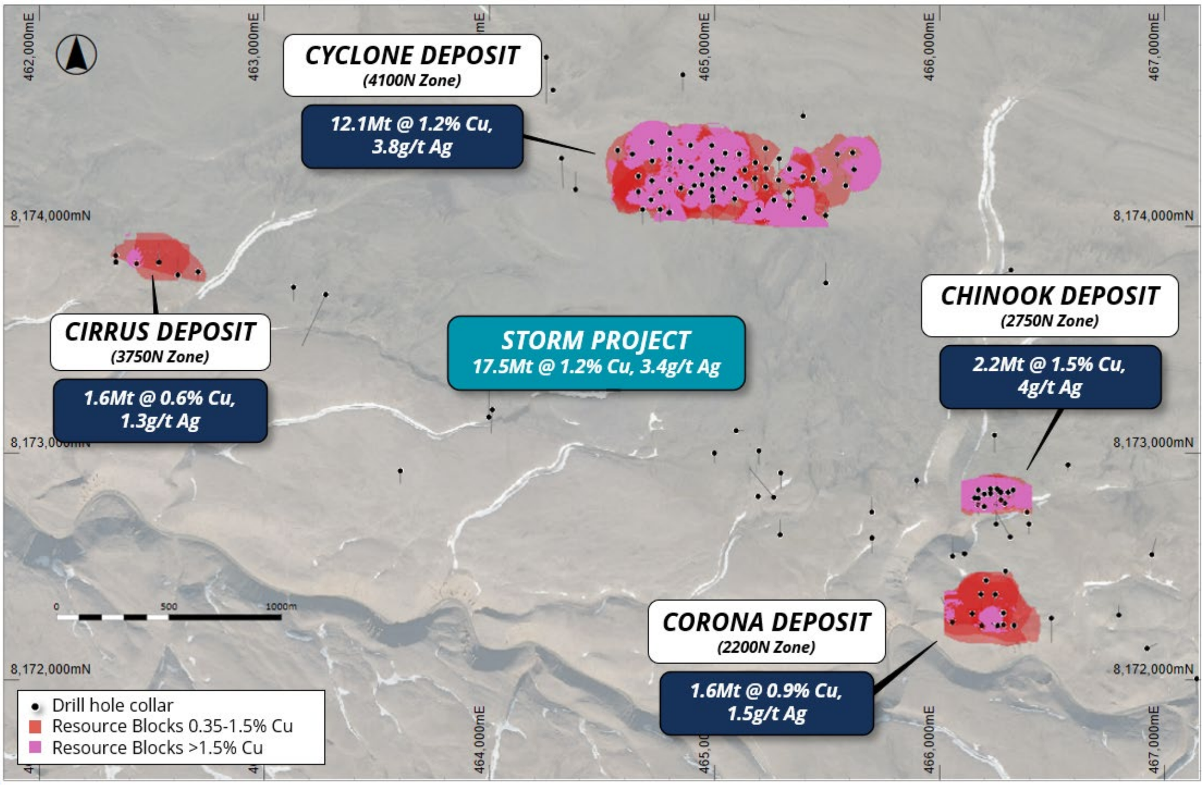

Figure 1: Plan view of the total MRE blocks (Indicated + Inferred) for the Storm Project overlaying aerial photography. Resource blocks are coloured with a 0.35% and 1.5% Cu cut-off.

DSO BACKGROUND - EARLY TEST WORK CONFIRMS UPGRADE POTENTIAL

Two small-scale ore sorting tests were completed during 2022 and 2023 on drill core samples of high-grade copper mineralisation from the Cyclone and Chinook Deposits (see ASX announcement dated 11 April 2022: *Over 53% Cu Direct Shipping Ore Generated at Storm Copper*) to determine whether the mineralisation was amenable to ore sorting. The tests were completed using a full-scale ore-sorter and confirmed the excellent ability to upgrade the Storm mineralisation by successfully producing a commercial grade direct shipping ore (**DSO**) product.

Whilst the initial studies were highly successful using high-grade copper mineralisation, further tests were required to determine the upgrade potential of more representative, ore-grade mineralisation.

METALLURGICAL SAMPLE SELECTION AND COMPOSITING

Diamond drilling was used to produce metallurgical samples for the ore sorting and beneficiation/DMS test work from each of the Cyclone and Chinook Deposits. Three diamond drill holes were completed to provide the material for compositing (Figure 2). The composite samples are considered representative of typical copper mineralisation within the Storm MRE. The location of the recent and previous metallurgical drill holes is shown in Figure 2.

The drill holes were completed within key locations of the Cyclone and Chinook Deposits, with NQ ¾ core (i.e. ½ core + ¼ core) retained in the core trays after extracting ¼ core samples for assay.

The sample compositing and assaying were completed by ALS Metallurgy in Kamloops, BC, Canada.

Intervals were selected by the Company's geologists based on the drill core assays to generate representative grade-targeted composites. For each grade category:

- The +26.5mm sample was generated from breaking up (not crushing) the ½ core.
- The 26.5mm – 11.2mm sample was generated from lab crushing and screening ¼ core from the same sections and screening out the <11.2mm fines.

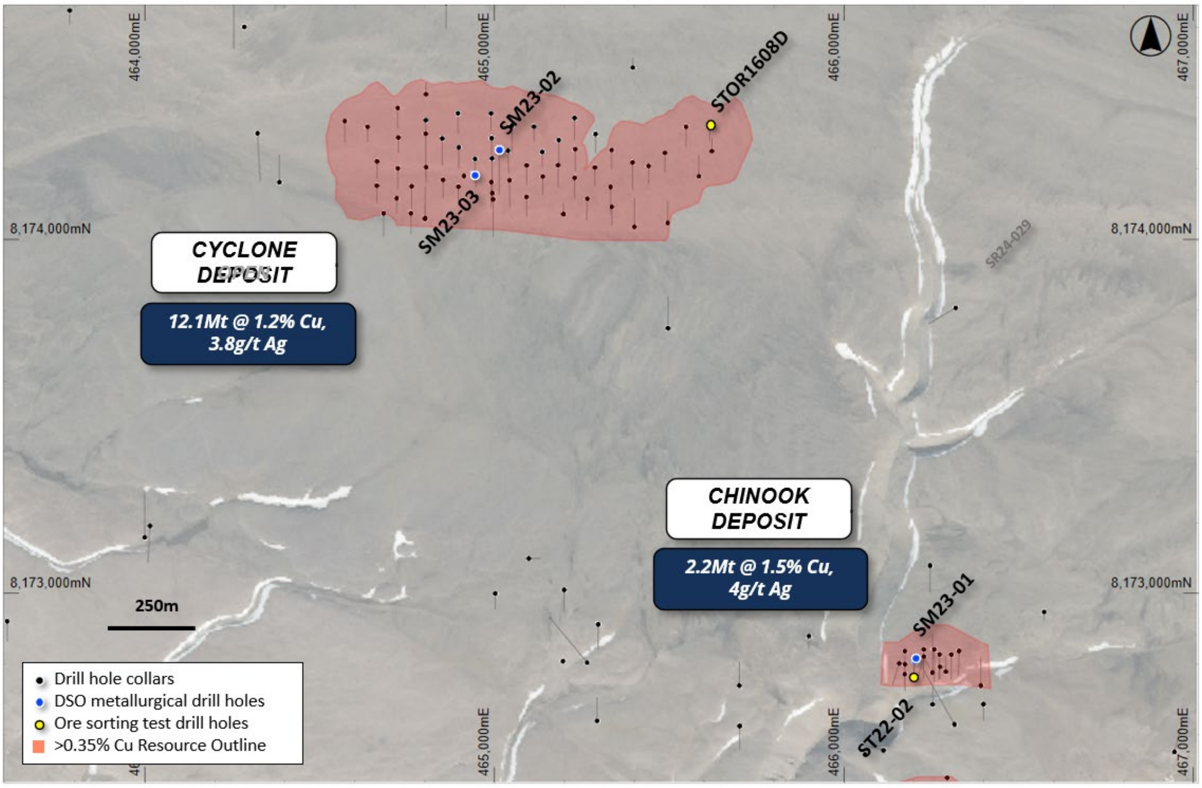

Figure 2: Metallurgical drill hole locations within the Cyclone and Chinook Deposits.

Four composites were constructed for the ALS/Sacre-Davey ore sorting test work, three with differing copper grades, and the fourth classified as waste and put aside for future tests. A description and designation of these composites is in Table 1.

The composite samples for testing were designated HG (High-grade at 3.17% Cu), MG (Medium-grade at 1.15% Cu), and LG (Low-grade at 0.68% Cu). The waste material also contained minor amounts of copper with a grade of 0.16% Cu.

TOTAL SAMPLE INVENTORY EX ALS KAMLOOPS (Approx kg)				
ALS Sample ID	**Approx Kg**	**Approx Cu %**	**Drill core form**	**Nagrom Sample Designation**
Ore Sorting HG -26.5mm/+11.2mm	35	3.17	Crushed / Screened	4100N - HG 11.2mm - 26.5mm
Ore Sorting HG - 11.2mm	28	3.7	Crushed / Screened	4100 -HG <11.2mm
Ore Sorting MG -26.5mm/+11.2mm	64	1.15	Crushed / Screened	4100 - MG 11.2mm - 26.5mm
Ore Sorting MG -11.2mm	17	1.15	Crushed / Screened	4100N - MG <11.2mm
2750N (SM23-01)	103	0.68	Uncrushed	2750N - LG
4100N (SM23-03)	75	0.69	Uncrushed	4100N - LG
4100N (SM23-02)	145	0.16	Uncrushed	4100N - Waste
Total	**467**	**0.94**		

Table 1: Summary of the sample composites for the Sacre-Davey ore sorting test work.

For the next phase of the concept study and DSO test work, the original ALS / Sacre-Davey HG, MG, and LG composite samples were recombined to generate new bulk samples to test the upgrade potential of the mineralisation with more targeted resource grades. This was completed at the Nagrom laboratory in Perth, Australia.

The two new master composites were designated OG (Ore-grade at 1.19% Cu) and LG (Low-grade at 0.68% Cu). The left-over material was put aside for further test work and had an average grade of 0.74% Cu.

SAMPLE COMPOSITING AT NAGROM						
	LG gravity test work sample		**Ore Grade (OG) gravity test work sample**		**Set aside samples**	
Nagrom Sample Designation	**Kg**	**Cu %**	**Kg**	**Cu %**	**Kg**	**Cu %**
4100N - HG 11.2mm - 26.5mm			25	3.17	10	3.17
4100 -HG <11.2mm			28	3.17	0	3.17
4100 - MG 11.2mm - 26.5mm			54	1.15	10	1.15
4100N - MG <11.2mm			17	1.15	0	1.15
2750N - LG	83	0.68			20	
4100N - LG	55	0.69			20	
4100N - Waste			100	0.16	45	
Total	**138**	**0.68**	**224**	**1.19**	**105**	**0.74**
	LG MASTER SAMPLE COMPOSITE		**OG MASTERSAMPLE COMPOSITE**		**SET ASIDE SAMPLES DISCREET**	

Table 2: Summary of the sample composites for the Nexus-Bonum ore sorting and beneficiation test work.

ORE SORTING OPTIMISATION TEST WORK – ALS/SACRE-DAVEY

The objective of the ALS Metallurgy/Sacre-Davey Engineering (ALS/SD) study was to evaluate the feasibility of using ore sorting at a range of copper grades and to determine the most effective sensor(s) and particle size fractions that provide the most promising pre-concentration results.

The study was carried out using 250 rock samples obtained from the Cyclone and Chinook Deposit sample composites (Figure 3). The samples, obtained from ALS Metallurgy - Kamloops, BC, were provided in size fractions of +26.5 mm and -26.5/+11.2 mm (described in the previous section).

The major test program components included ore sorting technology sensor testing of rock samples to assess the amenability of the technology through particle sorting, followed by the assaying of each rock sample. Lab-scale sensor testing evaluated XRT (X-ray transmission), XRF (X-ray fluorescence), and EM (Electromagnetic) sensors across nine sorting scenarios for both high-grade and lower grade sample composites. The re-assayed head grades of the high-grade and lower grade samples were 1.726% Cu and 0.942% Cu, respectively.

An additional sorting scenario was explored for a low-grade composite sample with a head grade of 0.65% Cu. This low-grade composite was created by randomly selecting 65 low-grade rocks from the high-grade and low-grade composites with the intent of making a low-grade sample of ~0.65% Cu.

With the goal of producing DSO with a grade of approximately 20% Cu, the study focused on determining if this targeted product grade could be achieved.

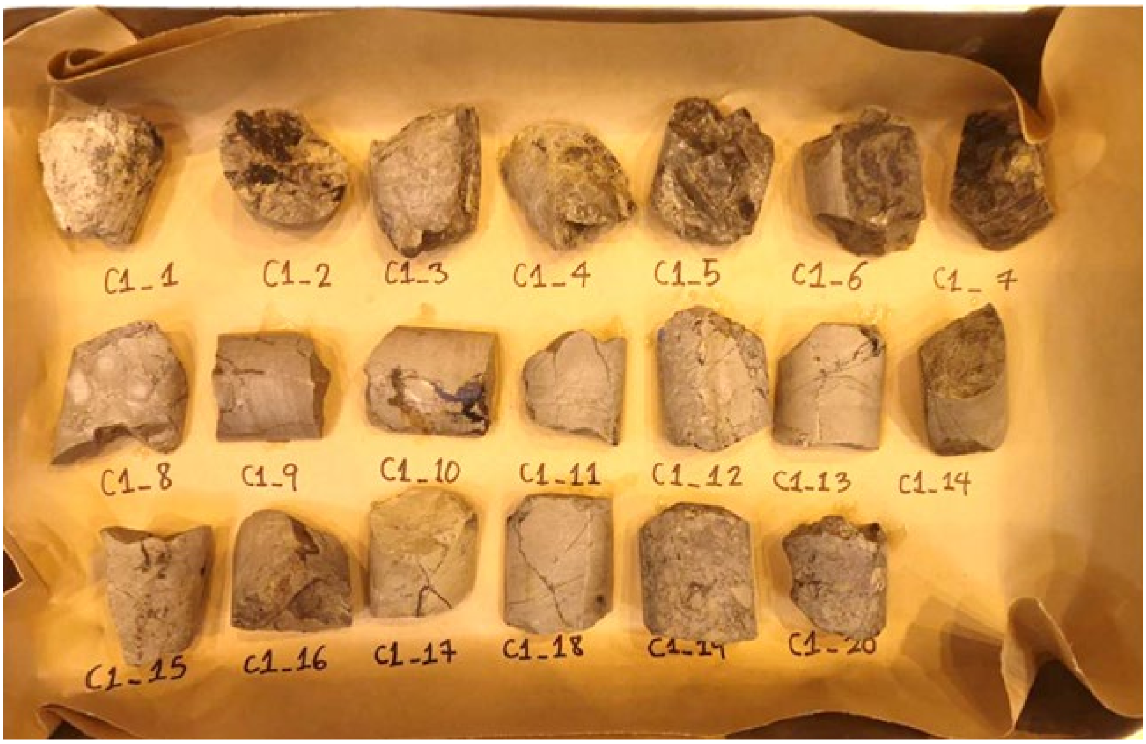

Figure 3: Example of copper mineralisation from the Cyclone and Chinook Deposits that was tested by ALS/Sacre-Davey.

Results indicated that XRT and XRF can produce sorter concentrate meeting the target grade with promising recoveries and mass pull rates when sorting the -26.5+11.2 mm size fraction of the Storm copper ore. However, the coarse size fraction (+26.5mm) proved less amenable to sorting and requires further comminution processing.

The study also found that head grade influences sorting potential, with higher-grade composites showing greater potential of meeting the targeted product grade, and that the XRT sensors performed better than the XRF due to its penetrative nature, requiring less feed preparation prior to sorting.

The results from the ALS/SD study were used to guide the next phase of study work which included assessing a detailed process and beneficiation study. The results from the ALS/SD work were not included in the final concept study calculations, and show the potential for significant upside in recovery (Figure 5).

Sorting scenarios	Composite	Size	Best results
1	Composite 1 - High grade	All sizes	XRT: 75.8% recovery, 21.7% mass pull, 6% Cu concentrate grade XRF: 77% recovery, 18.4% mass pull, 7.2% Cu concentrate grade
2		+26.5 mm	XRT: 67.9% recovery, 19.8% mass pull, 4.8% Cu concentrate grade XRF: 72% recovery, 18% mass pull, 5.6% Cu concentrate grade
3*		-26.5+11.2 mm	XRT: 94.3% recovery, 17.7% mass pull, 24.9% Cu concentrate grade XRF: 94.9% recovery, 19.7% mass pull, 22.4% Cu concentrate grade
4	Composite 2 - Medium grade	All sizes	XRF: 77% recovery, 13.4% mass pull, 5.4% Cu concentrate grade
5		+26.5 mm	XRT: 84.5% recovery, 18.2% mass pull, 4.1% Cu concentrate grade XRF: 82% recovery, 16.3% mass pull, 4.4% Cu concentrate grade
6		-26.5+11.2 mm	XRT: 75.8% recovery, 2.1% mass pull, 54.2% Cu concentrate grade XRF: 82.8% recovery, 4.1% mass pull, 30.1% Cu concentrate grade
7	All composites (Composite 1 + Composite 2 + Waste)	All sizes	XRT: 66.4% recovery, 13.1% mass pull, 6% Cu concentrate grade XRF: 64.9% recovery, 11.4% mass pull, 7.2% Cu concentrate grade
8		+26.5 mm	XRT: 63.3% recovery, 15.6% mass pull, 4.8% Cu concentrate grade XRF: 65.8% recovery, 13.7% mass pull, 5.6% Cu concentrate grade
9*		-26.5+11.2 mm	XRT: 90.9% recovery, 9.9% mass pull, 26% Cu concentrate grade XRF: 87.2% recovery, 7.2% mass pull, 34.4% Cu concentrate grade
10	Composite 3 - Low grade	-26.5+11.2 mm	XRT at 0.5% Cu sorting cut-off: 80.6% recovery, 12.4% mass pull, 4.2% Cu concentrate grade XRT at 1.2% Cu sorting cut-off: 76.4% recovery, 9.7% mass pull, 5.1% Cu concentrate grade

* Best-achieved results.

Table 3: ALS/Sacre-Davey ore sorting test results.

DSO METALLURGY SAMPLE TEST WORK

Nexus Bonum was assigned to supervise further test work and to complete a concept study based on the findings to produce a commercially viable DSO copper product.

Pre-concentration Technology Test work

The initial test work carried out by Sacre-Davy confirmed that the copper mineralisation was amenable to x-ray sensor (XRT) particle sorting and could effectively upgrade the ore.

A subsequent detailed program by Nexus Bonum, in liaison with American West, tested the sample composites using a range of technologies which included:

- Particle sorting by Steinert at their Perth based facility using a KSS1000, XRT unit;
- Fines Jigging (to complement particle sorting) at Nagrom, Perth;
- Dry jigging test (Alljig test unit);
- Wet jigging test (Alljig); and,
- Wet jigging by OEM Gekko Inline Pressure Jig (IPJ)

The results of the test work indicated that all of the tested processing techniques could upgrade the Storm mineralisation, and that there is a direct correlation between copper grade and upgrade performance. The higher the copper grade, the coarser the sulphide veining, and therefore the easier it is to liberate the sulphide particles from the host rocks (dolomite) within a specified particle size distribution.

The Bond Ball Mill Work Index tests were used to determine the hardness and grindability of the two composite samples. Both composites are described as 'soft,' with the ore-grade sample returning an index of **8.65**, and the lower grade sample returned an index of **9.59**.

Of all of the tests completed, ore sorting by XRT and wet jigging using the IPJ produced the most favourable results, and the combination of the two circuits allowed both the coarse (>11.2mm) and fine fractions (<11.2mm) to be processed effectively reaching the goal of a DSO product of approximately 20% Cu concentrate grade.

Ore sorting

The concept study ore sorting tests used a full scale Steinert KSS KLI XT machine located in Perth, Australia. The tests were conducted on the -26.5/+11.2mm size fraction of the OG (1.07% Cu) and LG (0.83% Cu) composite samples (Re-assaying of the OG and LG composite samples for this work returned grades of **1.07% Cu** and **0.83% Cu** respectively).

The bulk testing comprised four steps:

- Steinert hand-selected ore (indicated by dark sulphide particles) and waste (indicated by veinless light grey material).
- Steinert scanned the hand selected samples through the combination sensor sorter, taking measurements from all four sensors to develop and refine the sorting algorithm.
- The hand-selected and bulk materials were recombined into their respective composites, and tested with three 'cut' points to produce three concentrates and one tailings fraction.
- All four sort fractions from both composites were dispatched for assay analysis.

The results confirmed that all of the Storm copper mineralisation is extremely amenable to ore sorting using the Steinert KSS technology, and that high recoveries can be obtained in very low mass yields (Figure 5).

Figure 4: Photo of a high-density cut using XRT ore sorting of -26.5/+11.2mm low-grade composite material. This sample returned a grade of 15.2% Cu from a feed head grade of 0.78% Cu. Note the dark grey/black particles which are chalcocite (copper sulphide), veinlets of chalcocite within most of light grey host rocks (dolomite).

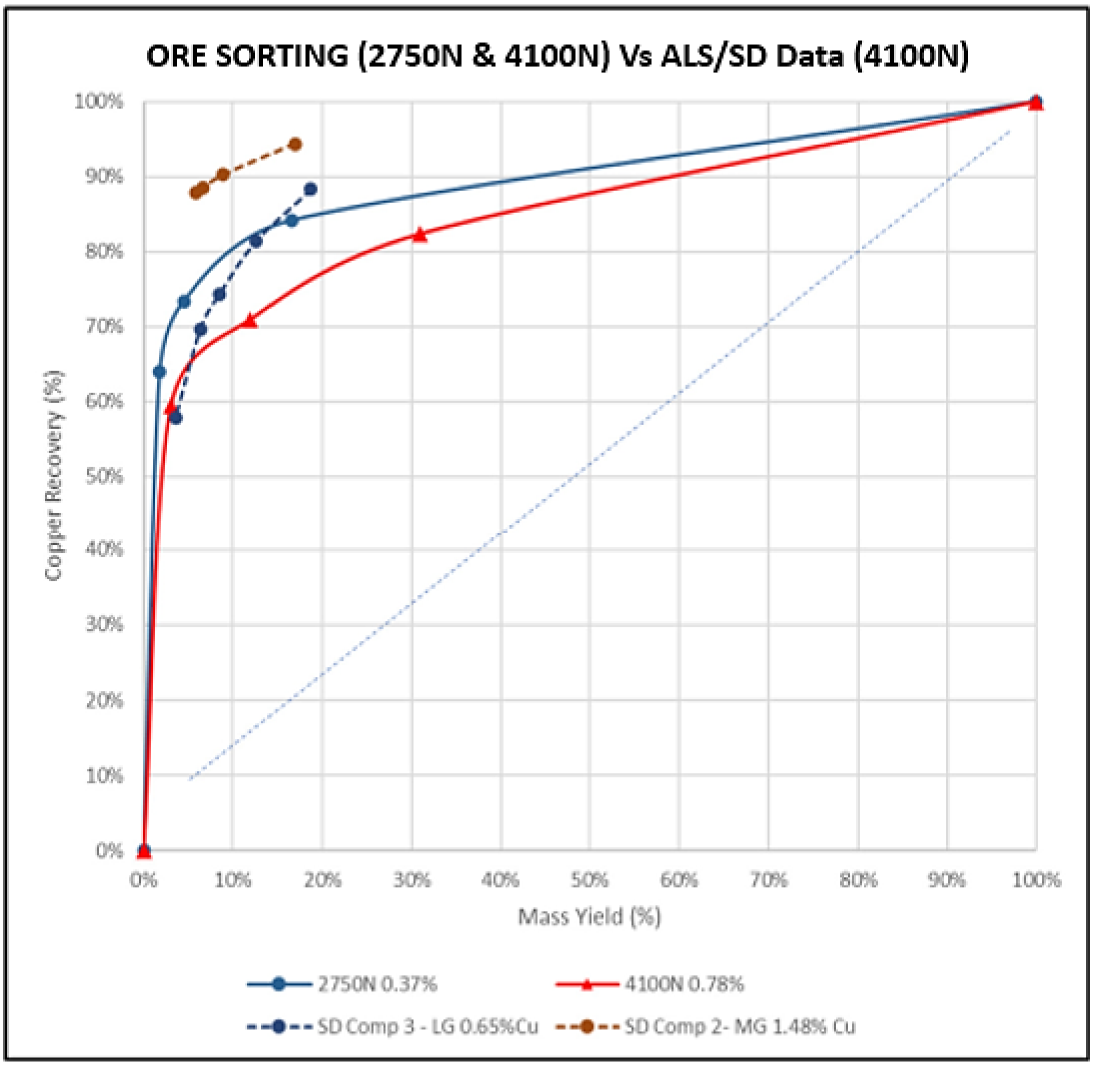

Figure 5: Ore sorting mass flow vs recovery curves for the Cyclone (4100N) and Chinook (2750N) Deposits.

Inline Pressure Jig (IPJ)

The wet jigging tests were completed by Gekko Systems using a Dense Media Separation (**DMS**) Viking on the -11.2/+2.46mm size fraction of the OG (1.07% Cu) and LG (0.83% Cu) composites, with DMS testing using a Wilfley table on the <2.46mm material. The technology uses gravity recovery to liberate dense material (copper sulphide) from less dense host rocks (dolomite) due to specific gravity (SG) differences The DMS Viking is used for the test work as the performance and recoveries are comparable to the plant scale Gekko Inline Pressure Jig (IPJ).

The IPJ is an effective and efficient gravity device that is used for processing a wide variety of minerals. The pressurized design and advanced control systems give it many advantages including high recovery, high throughput, low water use (closed circuit with <5% water loss), and close control under operating conditions.

The tests were run at specific gravities (**SG**) of 2.9, 2.85, 2.8, 2.75 and 2.7, to determine the ideal mass pull vs concentrate grade, and to generate yield vs recovery curves.

The results confirmed that both the OG and LG composites are extremely amenable to processing using gravity-based technology (Figures 7, 8 & 9). However, due to the fine grain size of the very low-grade copper sulphide mineralisation, the process can be sensitive to slight changes in SG at lower copper grades.

Figure 6: Dense Media Separation (DMS) Viking Cone at the Gekko laboratory.

Sample	SG by Gas Pycno.	Cumul. Mass (%)	Cu Cumulative	
			Recovery (%)	Grade (ppm)
Sinks @ 2.90	3.91	0.75	39.92	513,374
Sinks @ ~2.85	3.22	1.16	53.99	446,232
Sinks @ 2.80	2.85	42.65	77.60	17,463
Sinks @ ~2.75	2.85	71.48	91.11	12,234
Floats @ 2.7	2.85	100.0	100.0	9,597

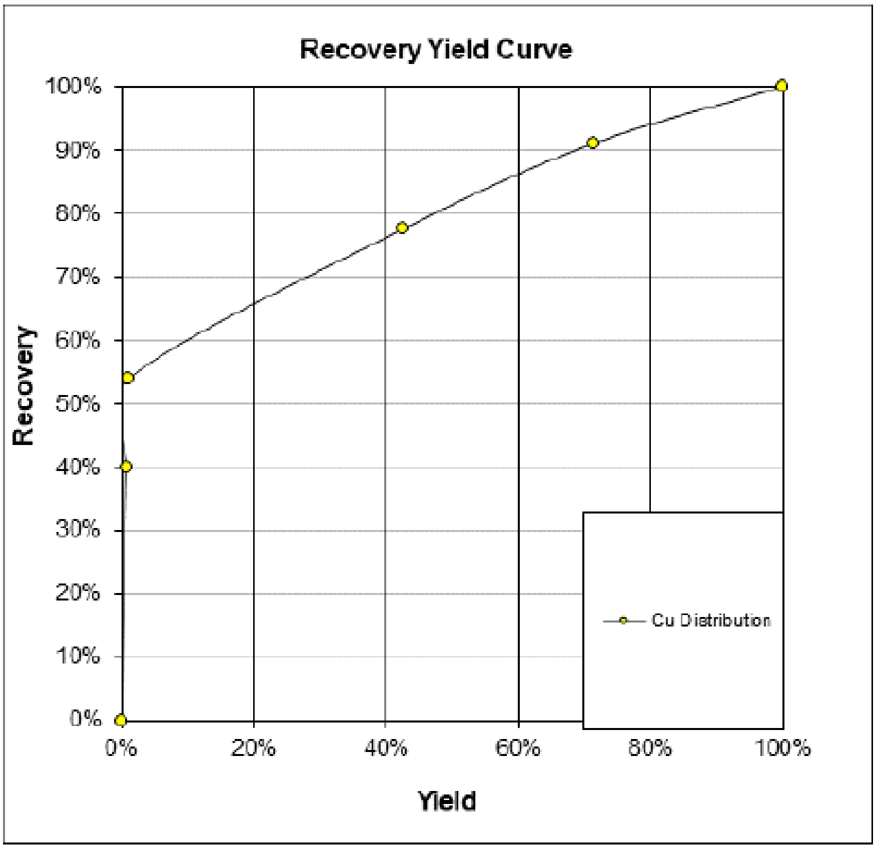

Figure 7: DMS Viking (Inline Pressure Jig) yield vs recovery curves for the Ore Grade (OG) sample.

Sample	SG by Gas Pycno.	Cumul. Mass (%)	Cu Cumulative	
			Recovery (%)	Grade (ppm)
Sinks @ 2.90	3.68	0.64	20.92	250,937
Sinks @ ~2.85	3.13	1.32	32.43	187,374
Sinks @ 2.80	2.87	47.00	81.47	13,208
Sinks @ ~2.75	2.87	66.79	86.54	9,873
Floats @ 2.7	2.86	100.0	100.0	7,620

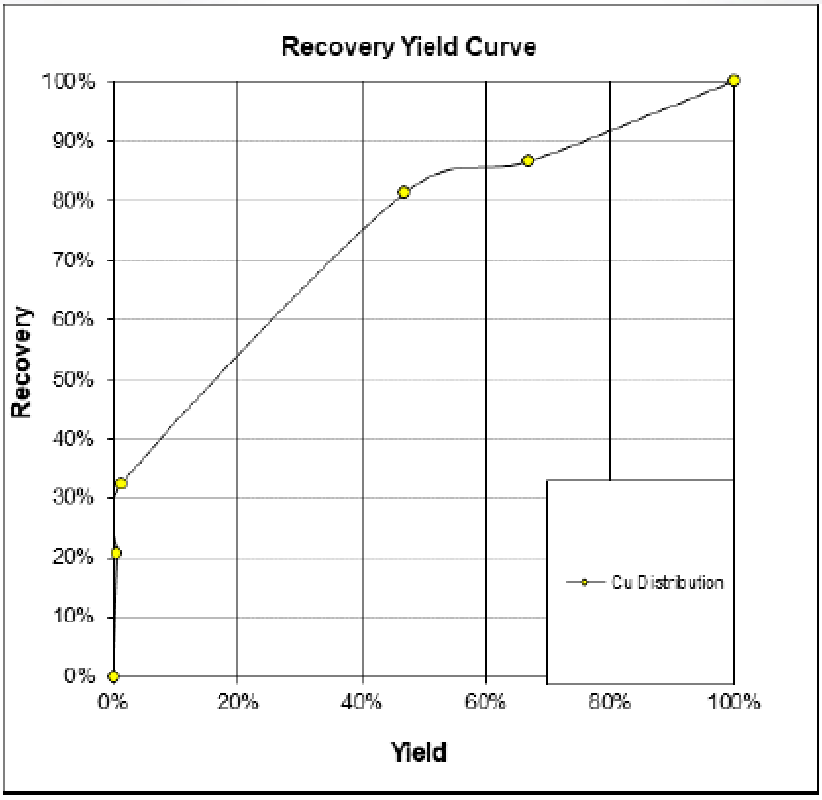

Figure 8: DMS Viking (Inline Pressure Jig) yield vs recovery curves for the Low Grade (LG) sample.

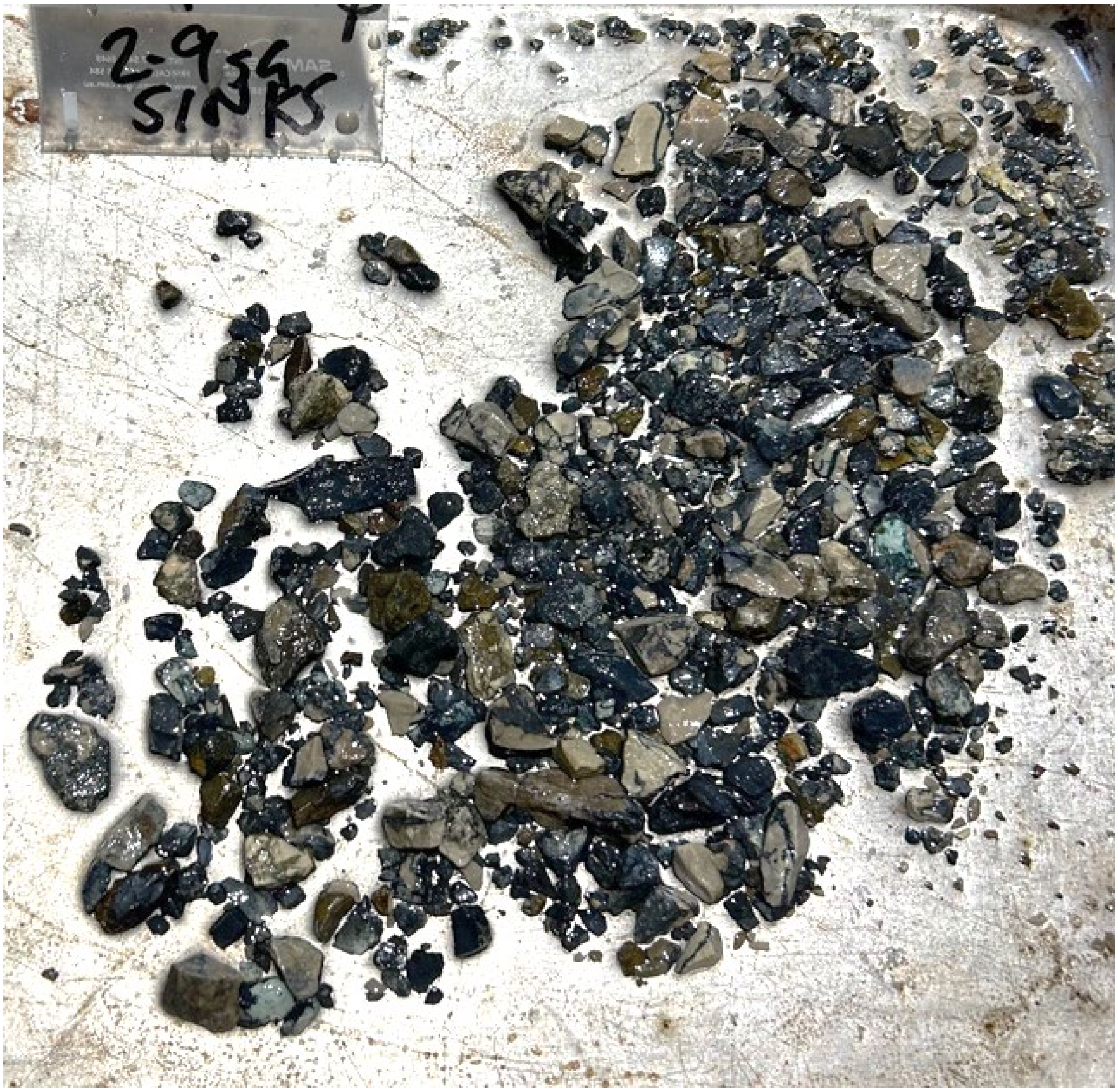

Figure 9: Photo of a DMS Viking product on -11.2/+2.46mm ore-grade (OG) composite material. The density cut is at a 2.9 SG and returned a grade of 51.3% Cu. Note the dark grey/black particles which are chalcocite (copper sulphide), and light grey host rocks (dolomite).

DSO CONCEPT STUDY AND PROCESS DESIGN

The concept study test work data was used to create base case block flows and sensitivity analyses to identify potential DSO grades and the required operating parameters.

The extremely favourable results were used to generate a design process flow diagram (**PFD**) incorporating particle ore sorters (**XRT**) and Inline Pressure Jigs (**IPJ**) to produce a DSO product. The process design incorporates redundancy to ensure optimal availability of the circuit operations and process flow configuration adjustment to facilitate the configuration of the plant to process a range of head grade variability, whilst producing a specified DSO grade product.

Process Design Development

The Process Design and Flow Diagram Development initially included:

- Particle sorting, with IPJ upgrade of fines;
- Particle Sorting (excluding jigging);
- Ore sorter DSO, tertiary crush, and feed to in series IPJ circuit;
- IPJ pre-concentration without particle sorters; and,
- Dry Alljig pre-concentration without particle sorters

These options were then refined/reduced to three options for more detailed assessment. The options assessed included:

- Ore Sorter with integrated IPJ (wet) jigging;
- Ore Sorter with integrated wet jigging circuit including in series DSO ore from sorter (two sorter PSD feed range); and,
- **Ore Sorter with integrated wet jigging circuit (for fines) including in-series DSO ore from sorter.**

The conclusion of the assessment (American West / Nexus) was to pursue the third listed concept. The block flows refined for the purposes of the concept study included:

- Block-flow throughput specific to process 1.5mpta as a base case.
- Block-flow with throughput adjusted to "nameplate" capacity to determine the adjusted utilisation, risk profile and operating concepts.

The Process Flow Diagrams (Figure 10) was provided for the selected, third option.

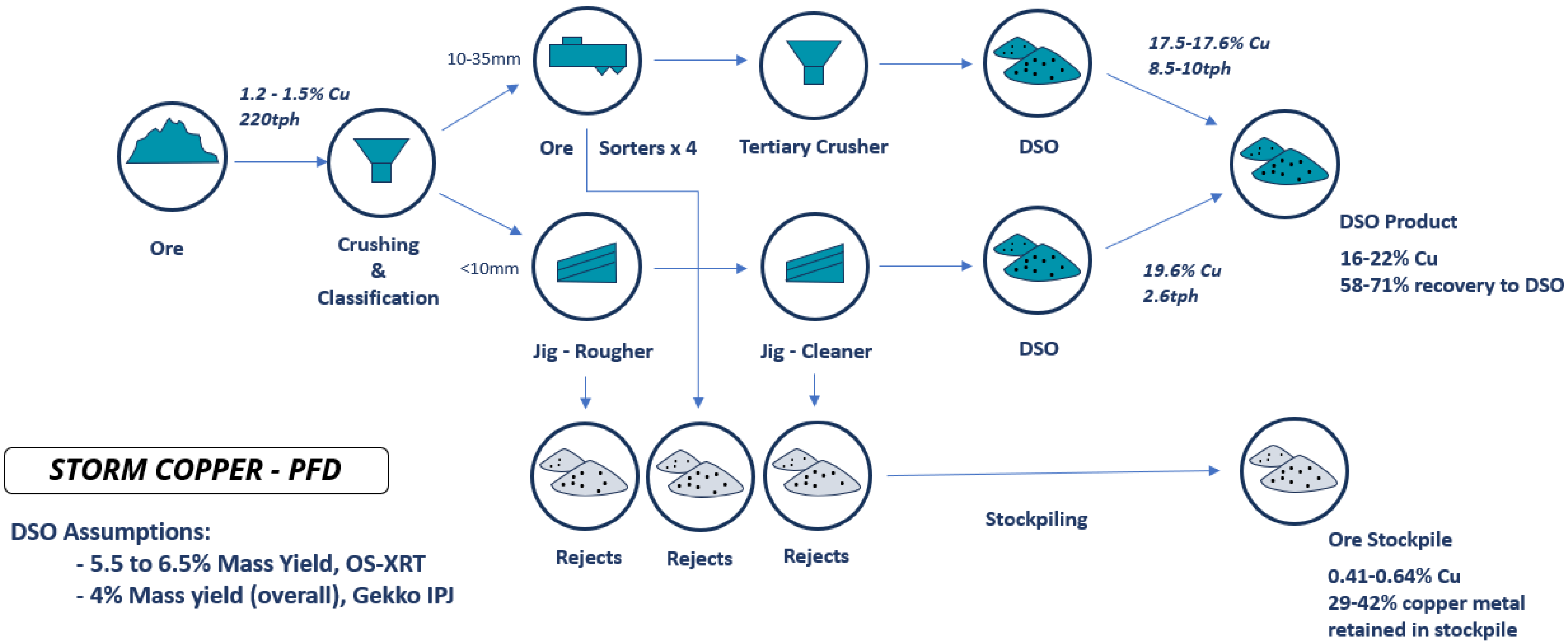

Figure 10: PFD for the Storm copper mineralisation using a two circuit, ore sorting and IPJ targeting a DSO product. The process can be optimised to achieve a targeted DSO grade, metal recovery or metal output.

DSO PROCESS DESCRIPTION

The DSO process was broken down into 6 discreet process areas for the concept study.

Crushing and Classification Screening

The design feed rate for the circuit is a nominal 300tph excluding design allowance. This allows the circuit to feed the ore sorter station at full "name plate" capacity which mitigates the risk of high utilisation requirements. The operating philosophy below titled "Primary Ore Sorting" details the operational advantages.

The ROM ore is received at the bin, and is then fed the jaw crusher by a variable speed drive (**VSD**) controlled grizzly vibe feeder. The grizzly allows a nominal < 50mm to bypass the crusher. The crusher and grizzly outputs report to a two-deck classification screen. The three outputs of the classification screen are:

- Oversize: > 35mm recycled back to secondary crusher station;
- Middlings: ore sorter circuit feed. (154 tph, and 198tph at name plate); and,
- Fines: <10mm to Gekko fines upgrade. (66tph, and 85tph at name plate)

Primary Ore Sorting

The ore sorter circuit configuration is based on 4 ore sorters on a N+1 redundancy basis. However, the option to run all 4 sorters at name plate capacity provides significant additional production capacity. Should a unit require down time for service or repair, it can be taken offline whilst the remaining three continue to operate to maintain the nominal throughput.

The ore is delivered to a primary hopper which has two outputs, and delivers the feed to two secondary hoppers. The outputs are VSD, or variable frequency drive (**VFD**) controlled to provide an optimum feed to the sorters. Stock "Nexus" samplers are located at the transfer points from the hopper outputs / sorter feed conveyors, and at the post sorter outputs for the ejected DSO ore, and the reject ore.

Ore Sorter Outputs

The sorter circuit has two outputs which are consolidated into collection conveyors that pass under the four sorter units. As the DSO product yield is significantly lower than the rejects, the DSO ore is ejected, with the reject material passing as a "gravity" reject.

The ejected DSO ore feeds into a feed surge bin.

Figure 12: Photo of a Steinert KSS KLI XT ore sorter and feed bin. Source – Steinert.

Feed to Fines (in-series IPJ) or Direct to Product loading

If the sorter output grade meets the DSO product specification, the option to bypass the in-series jigging is facilitated by a diversion chute. The bypass product output conveyor is the "battery" limit of the concept study.

The fines are fed to the in-series IPJ and are pumped from the hopper by injecting 40 to 60 m^3 of hutch water at 2 to 3 bars.

Gekko Fines Upgrade

The classification screen <10mm fines that are pumped from the hopper, report to a rougher IPJ. The Gekko IPJ 2400 rougher outputs are DSO feed particles that directly load in-series to a Gekko IPJ1000 cleaner, with the rejects reporting to a collection hopper via a cyclone to be pumped to a dewatering screen. The cyclone is used to create back pressure to maintain the throughput control.

The cleaner IPJ DSO material reports to a collection hopper via a cyclone, and is then pumped to a dewatering screen, with the rejects added to the feed for the hopper.

(*Layout recommendation: It is recommended that the option to locate the IPJs output feed directly to the dewatering screens to potentially eliminate the hoppers / pumping whilst retaining the cyclones).*

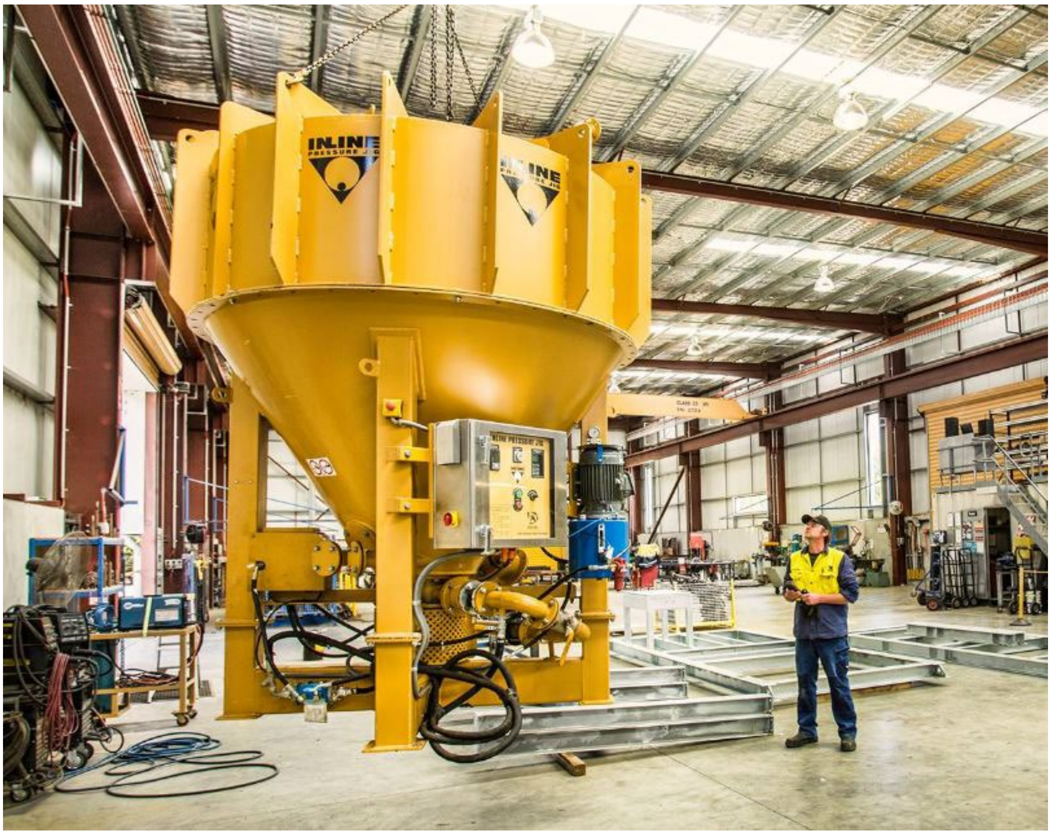

Figure 13: Photo of a Gekko Inline Pressure Jig (IPJ). Source – Gekko.

Dewatering Screens

Two dewatering screens are assigned for the rejects and DSO ore respectively. Poly decks are nominally sized at a 1.2mm passing, which can be reduced to 500μ (0.5mm) if needed to limit the potential losses of product to slimes. The dewatering screen oversize material is conveyed to the DSO product out-loading (battery limited) circuit, and via a dewatering screen to the ejects handling conveyor.

Desilters

Floc blocks are positioned at the inputs to increase settling performance if required. The desilters skids include peristatic pumps for auto-discharge of the sub-1.2mm “sludge” on a timer and fed to collection hoppers for downstream addition to loadout pending grade or eject to tailing / discharge stockpile. The volumes are low and a “blend” feed to stockpiles should be considered. The water is recycled back to a makeup water tank which then feeds to the hutch inputs at the feed hoppers (for pumping and make up at the IPJs).

Fines Upgrade, Ore Sorter Select

The circuit is a duplicate of the fines upgrade circuit described above; however, the feed is the DSO ore from the ore sorters via the tertiary crusher (which delivers a <10mm (P80 passing) suitable for jig processing). The feed rates are similar at 61 at 220tph ROM feed and 80tph at name plate feed. The outputs reporting as do the fines upgrade jigging (IPJ) circuit.

Air Services

The compressor station is relatively stock, with the air supply criteria consistent with the ore sorter OEM specified requirements which are of instrument air standard. The pressure (design) is 10bar and the requirement summarised as follows:

- Particle content Class 3
- Vapour content Class 4
- Oil Content Class 2

The compressor station redundancy is 2 + 1, with fridge drier bypass facilities for maintenance periods. The latter is less critical as a function of primary and secondary air receivers. The output manifold includes a plant air supply for the operations of the auto-sampler stations (x 7) and an optional knife feed (x 4) located at each sorter input to mitigate any dust carried into the sorter.

Samplers

The circuit includes seven samplers located to take samples at upgrade stations (particle and fines) input and outputs. The sampler stations are PLC controlled with preset (commissioning) size and frequencies. The latter can be set to local, manual sample tricker pending operational preferences.