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## **EXPLORATION UPDATE**

- Watson's Well drilling intersects wide zones of magnetite all holes intersected the Vanadium-Titanium-Iron target.
- 10 holes completed for 1,492m of Reverse Circulation (RC) drilling.
- Targeting massive magnetite cumulate layers with previously reported high grade rock chip samples of up to 1.64% V2O5, 15% TiO2 and 52% Fe.
- Extensive soil sampling program successfully completed at the Mt Murray tenement package across multiple base metals targets.
- Assay results for both programs expected within 12 weeks.

Santa Fe Minerals Ltd ("Santa Fe", "SFM" or "the Company") is pleased to advise Reverse Circulation (RC) drilling has concluded on its Watsons Well Vanadium-Titanium-Iron target. SFM also reports the delayed ultrafine soil sampling program has now been completed on the Mt Murray base metal project.



Figure 1: Project locations.



#### Watsons Well Vanadium - Titanium-Iron Project (SFM 100%) - RC Drilling Program

A total of 10 Reverse Circulation holes were drilled for 1,492m to test the thicker central area of the 7km long Watsons Well high magnetic zone where previous rock chip samples returned 1.2% to 1.3% V2O5, 13% to 15% TiO2 and 50% to 52% Fe from massive magnetite layers. (*SFM Exploration Update 5<sup>th</sup> April 2022*). Two sections of drill-holes were completed 400m apart with all holes angled at -60 degrees to the east. Drill holes were spaced at a nominal 80m and completed to set depths of 149m or 150m.

All ten drillholes intersected broad zones of strong magnetite which is associated with the vanadium, titanium and iron mineralization (Table 1). Strong magnetite downhole intervals range from 1 to 2m through to 35m with multiple zones in each drillhole.

Hole ID	From (m)	To (m)	Interval (m)	
WWRC001	93	107	14	
WWRC002	97	110	13	
WWRC003	38	55	17	
WWRC003	139	149	10	End of Hole
WWRC004	85	109	24	
WWRC005	67	84	17	
WWRC005	110	136	26	
WWRC006	72	107	35	
WWRC007	124	142	18	
WWRC008	87	103	16	
WWRC009	131	138	7	
WWRC009	145	149	4	End of Hole
WWRC010	44	62	18	
WWRC010	120	146	26	

Table 1: Selected drill hole intervals of strong to semi massive magnetite\*.

\*Magnetite content was estimated visually and with the aid of a pencil magnet plus a magnetic susceptibility meter. Strong magnetite content is considered as 40%-70% and semi massive >70% of the rock. Maximum downhole widths are tabled for each drill hole.

All samples have been delivered to the Laboratory and analytical results are expected within 12 weeks.



Figure 2 – Watsons Well RC Drilling.





Figure 3 – Watsons Well airborne magnetics showing the middle of the magnetic high zone, the location and grades of rock chip samples and the location of the completed RC drill hole collars.



#### Watsons Well Background

The 7km long Watsons Well magnetic high zone was first identified in the 1960s and 1970s. It was interpreted as a possible feeder dyke to the Windimurra igneous complex and subsequently explored for nickel – copper - PGE mineralization by various companies, including WMC. Programs of broad spaced soil and lag sampling identified nickel, copper, and PGE values consistent with the interpreted underlying rock types. There were no standout targets, and no additional work was completed.

Mapping in 2015 identified magnetite cumulate layers in anorthosite associated with broad areas of anomalous Vanadium 3000ppm to 6870ppm, (Perring 2015) supporting an alternative interpretation that the Watsons Well magnetic high zone is a faulted offset of the Shepherds Discordant Zone that hosts the large Windimurra Vanadium deposit located 70km to the north of Watsons Well.

SFM complete addition close spaced lag sampling and rock chip sampling over the central part of the Watsons Well zone returning V2O5 grades up to 1.64% (SFM Exploration Update 14/11/2018). Subsequent mapping and rock chip sampling identified massive magnetite cumulate layers over 5km of the 7km strike with high grades of 1.18% to 1.33% V2O5, 9.97% to 15.2% TiO2 and 44.12% to 52.74% Fe. (*SFM Exploration Update 5<sup>th</sup> April 2022*). The massive magnetite layers range up to about 1m thick and appear in outcrop to be semi continuous along strike and similar in appearance to the mineralised zones at the Windimurra vanaduium deposit (Ivanic, 2019).

### Mt Murray Base Metal Project (SFM earning 80%)

The Mt Murray project covers a 9km north south trending zone of poly metallic copper-leadzinc-silver-gold mineralisation adjacent to a 4.2km x 1.2km magnetic high zone considered to represent a mafic-ultramafic intrusive package prospective for nickel-copper-PGE mineralisation similar to the recently discovered tier one Julimar Ni-Cu-PGE deposit (Chalice Mining Ltd).

SFM has now completed the Ultrafine soil sampling program originally planned for the June quarter (SFM ASX Exploration Update 4th April 2022). The sampling was delayed due to unseasonal wet weather and the availability of a field sampling team. A total of 1,221 samples were collected every 50m along 200m and 400m space lines. All samples will be processed by Labwest using their Ultrafine (UFF) fraction technique. An orientation sampling program comparing conventional -1mm soil sampling with the UFF method completed by SFM at Mt Murray early in 2022 concluded:

- 1. Analytical quality of the UFF -2 micron was significantly better than the -1mm results.
- 2. UFF samples returned higher absolute concentrations when compared with the -1mm samples.
- 3. Lithological and regolith controls are subtle in the UFF samples and better resolved than the -1mm samples.

The UFF sample results are expected to be reported within 12 weeks.





Figure 4: Mt Murray Project completed soil sample locations over magnetics.

### Doug Rose

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Herlithy, TE 2005, Combined Annual Report: C114/2004 For the period 1<sup>st</sup> April 2004 to 31<sup>st</sup> March 2005 Windimurra Project: WAMEX 070457.

Ivanic, TJ 2019, Mafic-ultramafic Intrusions of the Youanmi Terrain, Yilgarn Craton: Geological Survey of Western Australia, Report 192.

Perring, R 2015, Mapping Summary Report



#### **COMPLIANCE STATEMENT**

The information in this report that relates to Exploration Results is based on information compiled by Mr. Reginald Beaton who is a Member of the Australian Institute of Geoscientists. Mr. Beaton is an employee of Santa Fe Minerals Limited and has sufficient experience which is relevant to the style of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Beaton consents to the inclusion in the report of the matters based on the information compiled by him, in the form and context in which it appears. The Company is not aware of any new information or data that materially affects the information included in the above.



## JORC Code, 2012 Edition - Table 1

# Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	Watsons Well - Reverse Circulation (RC) drilling was undertaken to provide the samples. Samples were collected every 1m of drilling via a cyclone mounted on the drill rig. The 1m drill samples were laid out on the ground next to the rig. Each sample of about 3kg was stored in a pre-numbered calico bag. Mt Murray – soil samples were sieved in the field to -1mm for about 300g and stored in pre numbered paper sample bags.
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul> <li>The drilling method was industry standard Reverse Circulation. The drilling was completed by Challenge Drilling.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>A visual assessment of the sample recovery was completed by the Supervising Geologist. The sample recovery is considered adequate for this early stage of exploration.</li> <li>Standard RC drilling practice was used to ensure maximum sample recoveries.</li> <li>For this early stage of exploration there is no study of the sample bias relationships available.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically</li> </ul>	<ul> <li>RC drill chips were logged on site by a Geologist sufficiently experience in the</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>geological terrain being explored. An industry standard logging system was used recording sample recovery, weathering, lithology, mineralisation and alteration.</li> <li>The logging is qualitative in nature and each hole was logged to its completed depth.</li> <li>Representative drill rock chips were washed and stored in chip trays for reference.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Samples were collected in buckets for every 1m of drilling and laid out on the ground.</li> <li>For this early stage exploration, the sampling technique is considered appropriate to determine the presence of mineralization.</li> <li>A field duplicate sample was collected every 50 samples and a Certified standard sample was also inserted every 50 samples.</li> <li>The sample size is considered sufficient to determine the presence of mineralization.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Drill samples were submitted to Bureau Veritas Minerals Pty Ltd, 58 Sorbonne Crescent Canning Vale WA.</li> <li>Drill samples will be analyzed by an extended iron suite by Fused Bead XRF and Laser Ablation ICP-MS.</li> <li>Results pending.</li> <li>Soil samples submitted to Labwest, Malaga for the UFF suite.</li> <li>Results are pending.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Logging and samples were recorded on standard sample and logging sheets and then entered into the SFM digital database.</li> <li>No adjustment of assay data was done.</li> <li>Magnetitic susceptibility was recorded for every 1m sample – Magrock SN: MR001.</li> </ul>



Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Hand-held GPS was used to locate the drill holes collars.</li> <li>Downhole surveys were by an on rig Gyro system.</li> <li>The Grid system is GDA94 Z50.</li> <li>The terrain is flat and topographic control was provided by government topographic maps.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The RC drill hole spacing is nominal 80m x 400m and is considered appropriate for the early-stage nature of the drilling and large size of the target area.</li> <li>The drill spacing is not sufficient to establish either grade or continuity of mineralization.</li> <li>No data compositing has been applied.</li> <li>Soil sample spacing was 50m along 200m and 400m spaced lines.</li> <li>This spacing is considered sufficient to determine areas for follow-up exploration.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The RC drill holes were orientated at 60 degrees to the east.</li> <li>Insufficient data is available to determine if the orientation has resulted in a sample bias</li> <li>Soil sample lines were perpendicular to the general strike of the geology.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>SFM personnel supervised the drilling and sampling, and Sub-Contractors were engaged to transport the samples to the laboratory in Perth.</li> <li>The Soil samples were collected by XM Logistics and dispatched to Labwest via a Transport Company.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews completed.



# **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li><u>Challa South: E59/2257, (Challa Minerals Pty Ltd).</u></li> <li>No National Parks. No Native Title.</li> <li>Current Pastoral Lease Narndee. <u>Mt Murray: E08/3230, E08/2978, M08/139</u> <u>North West Stone Pty Ltd. ELA08/3461</u> <u>Challa Minerals Pty Ltd.</u></li> <li>Previous Pastoral Lease.</li> <li>The Cane River Conservation Park is immediately north.</li> <li>Mt Murray SFM option agreement to earn up to 80% of Mt Murray project (excluding marble on M08/139).</li> <li>Determination Decision Exists (WCD2008/003) Buurabalayji Thalanyji Aboriginal Corporation. Macedon ILUA (WI2010/023) Yamatji Marlpa Aboriginal Corporation.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Watsons Well - No previous drilling.</li> <li>Previous exploration -WMC Exploration, 2005, WAMEX A070457. Windimurra Resources, 1997, WAMEX A050538 Maximus Resources, 2008, WAMEX 81908,</li> <li>Mt Murray: Previous exploration by Contact Resources Ltd 2006-2008, WAMEX A073007, A077473, A078762. BRL Exp Pty Ltd 2010, A088615. Northern Gold NL 1988-1990, A028687.</li> </ul>
	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>Watsons Well – Vanadium-Titanium-Iron associated with magnetite in layered mafic intrusive complexes.</li> <li>Mt Murray – Magmatic Ni-Cu-PGE mineralization. Fault associated Cu-Pb- Zn-Ag-Au mineralization.</li> </ul>
Drill hole	• A summary of all information material to	Hole ID GDA E GDA N Incl Az Depth
nformation	the understanding of the exploration results including a tabulation of the	WWRC001 642743 6788650 -60 90 150
	following information for all Material drill	WWRC002 642663 6788650 -60 90 150
	noies: $_{\odot}$ easting and northing of the drill hole	WWRC003 642591 6788656 -60 90 149
	collar	WWRC004 642502 6788651 -60 90 149
	<ul> <li>elevation or RL (Reduced Level –</li> <li>elevation above sea level in metres) of</li> </ul>	WWRC005 643146 6788654 -60 90 149
	the drill hole collar	WWWRC007 642523 6785257 -60 90 149
	<ul> <li>o dip and azimuth of the hole</li> <li>o down hole length and interception</li> </ul>	WWRC008 642667 6788242 -60 90 149



Criteria	JORC Code explanation	Commentary
	<ul> <li>depth</li> <li>hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	WWRC009 642600 6788241 -60 90 149 WWRC010 642906 6788250 -60 90 149
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No results reported.</li> <li>Results pending.</li> </ul>
Relationship between mineralisati on widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. down hole length, true width not known').</li> </ul>	<ul> <li>Watsons Well -Mapping shows the mineralized zones dip steeply to the west and strike north.</li> <li>Mineralised zones are reported as downhole widths.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Appropriate diagrams summarizing key data interpretations included in the body of this announcement.</li> </ul>
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The interpretations expressed in the announcement are not considered to be overstated or misleading.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating</li> </ul>	<ul> <li>All relevant data has been included within the report.</li> </ul>



Criteria	JORC Code explanation	Commentary
	substances.	
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>A range of techniques will be considered to progress exploration including drilling.</li> <li>Refer to figures in the body of this announcement.</li> </ul>