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Positive stand-alone re-optimisation on Sandstone gold project, WA

Middle Island Resources Limited (MDI) is pleased to report that an independent Whittle re-optimisation for MDI's 100%-owned Sandstone gold project in Western Australia demonstrates that the Sandstone gold plant can be profitably refurbished utilising feed from MDI's existing Mineral Resources (Appendix A).

HIGHLIGHTS:

- Mining Focus Consultants' Whittle re-optimisation utilised current gold prices and revised pit slope parameters, with ~90% of the optimised JORC 2012 Mineral Resources classified in the higher confidence Indicated category. In all other respects the inputs to the Pre-Feasibility Study (PFS) (refer ASX release of 16 Dec 2016) were applied.
- The re-optimisation study utilised a range of contemporary gold prices of **A\$2,000/oz and A\$2,500/oz**, consistent with the current gold price of A\$2,180/oz and considerably higher than the base-case gold price of **A\$1,600/oz** utilised in the PFS.
- The pit slope parameters adopted in the re-optimisation emulate the existing pit walls that are still standing more than 15 years after the cessation of mining.
- The PFS is now being updated (scheduled for completion in the current quarter) with a view to recommissioning MDI's Sandstone gold processing plant on a stand-alone basis.
- Highly respected consultants, GR Engineering Services, have confirmed the processing plant can be refurbished in **16 weeks** from commencement of site works at a cost of **A\$10.3 million** (refer ASX release 13 Sept 2019).
- Discussions have commenced on financing of the plant refurbishment and recommissioning.
- All permits are in place to commence mining if the plant is recommissioned.
- **Alto shareholders** can still participate in this opportunity via MDI's takeover offer.

Cautionary Note

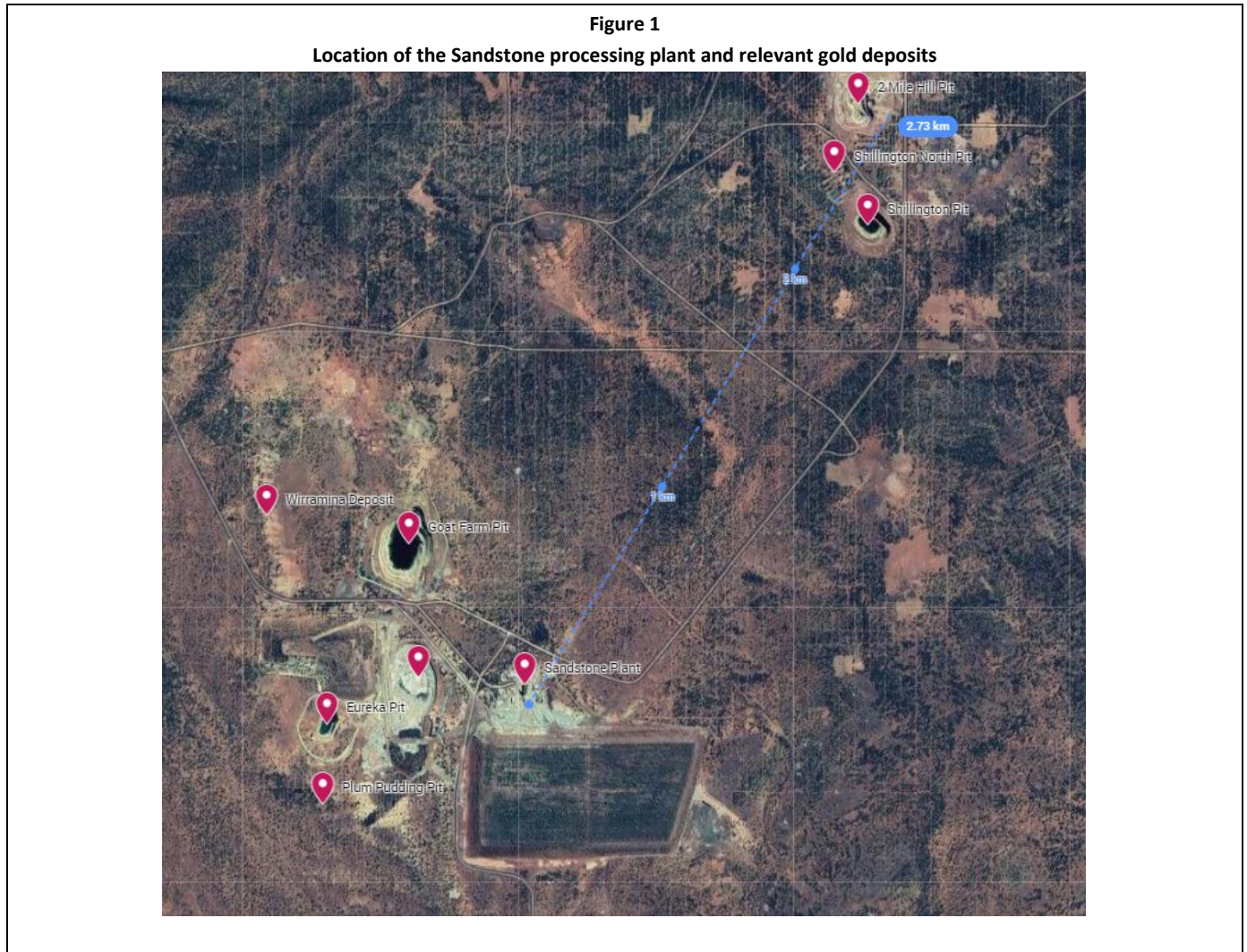
The open pit optimisations referred to in this announcement have been undertaken to determine the potential viability of open pit mining at MDI's Sandstone project. It is based on low level technical and economic assessment and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the open pit optimisations will be realised. Approximately 10% of the Resources included in the Whittle optimisations are inferred Mineral Resources, for which there is low geological confidence, and there is no certainty that further exploration work will result in these Inferred Mineral Resources being upgraded to, higher confidence, Indicated or Measured Mineral Resources. The optimisation outputs do not constitute Ore Reserves. Further evaluation work and appropriate studies are required to establish the technical and economic viability of any open pit mining operation.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the pit optimisations.

Whittle Optimisations

MDI engaged Mining Focus Consultants (**MFC**) to undertake a series of Whittle Optimisations based on two input parameters being updated from those applied in the PFS.

The Two Mile Hill, Shillington and Wirraminna open pit deposits were included in the re-optimisation. However, the JORC 2004 Mineral Resources comprising the Plum Pudding, Eureka and Goat Farm deposits have not yet been re-assessed (Figure 1).



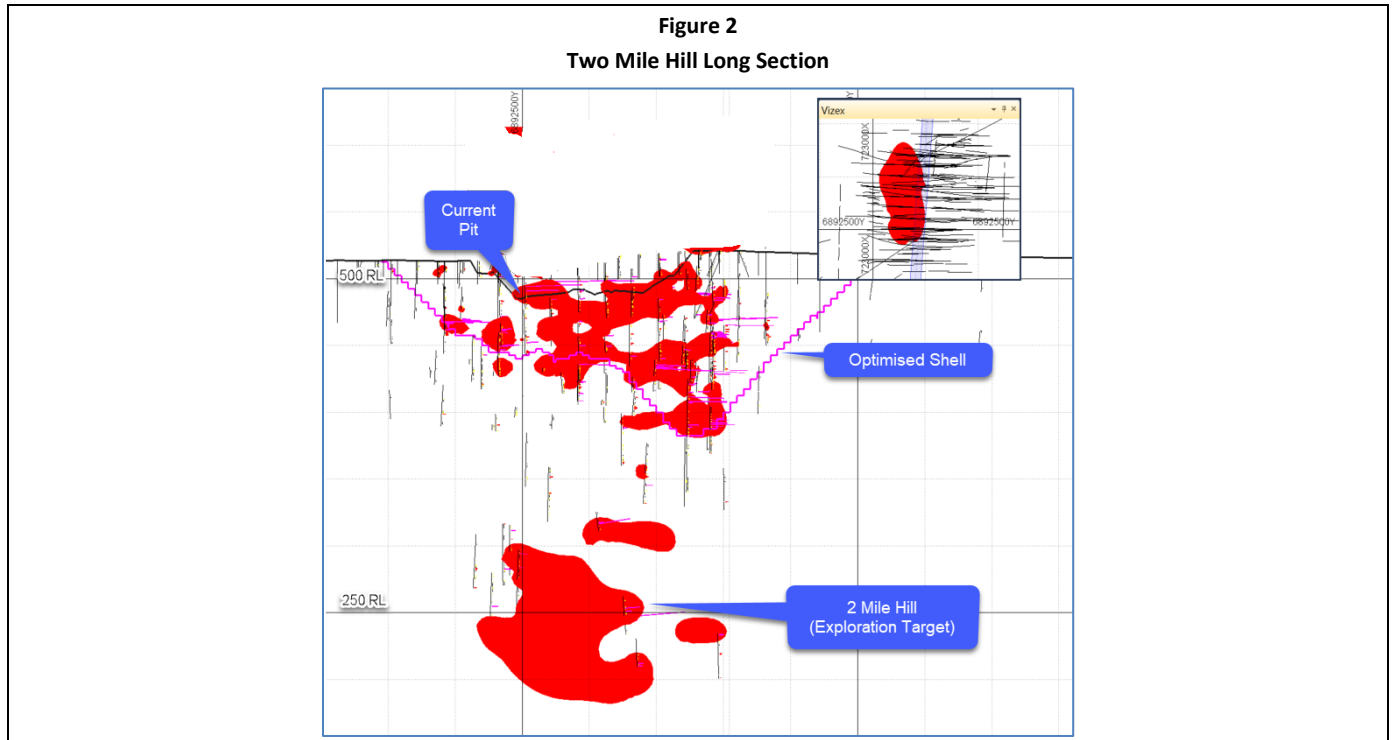
The re-optimisation study utilised a range of contemporary gold prices from A\$2,000/oz to A\$2,500/oz, consistent with the current gold price of A\$2,180/oz¹ and considerably higher than the base-case gold price of **A\$1,600/oz** utilised in the PFS. In addition to a contemporary gold price, geotechnical parameters applied in the recent study were adjusted to emulate the existing pit slope angles. These pits are still standing, more than 15 years since mining ceased. All other applied parameters are consistent with the PFS and are set out in Appendix B.

Materially, the positive optimisation study captures approximately **90% Indicated** (higher level of confidence) and only 10% Inferred Mineral Resources.

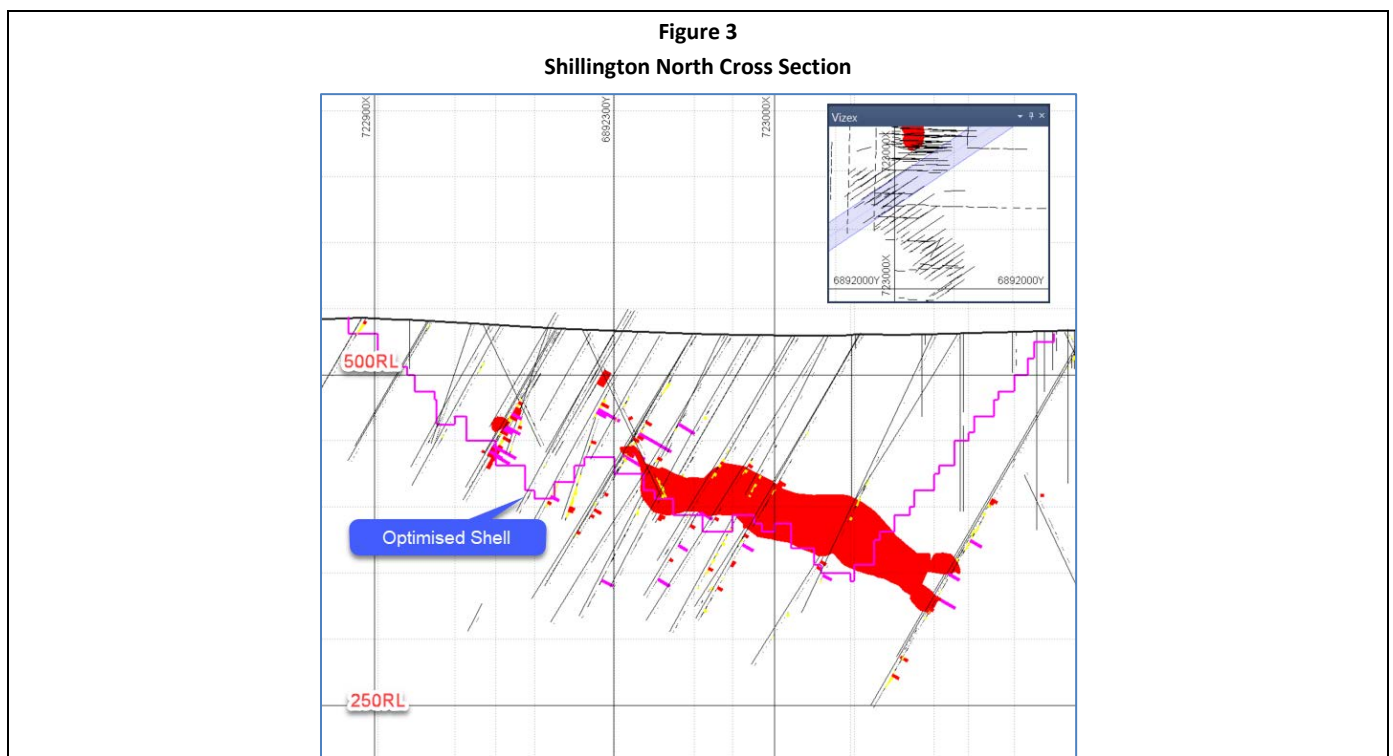
1. Kitco – 24/10/2019

A long-section view of the re-optimised Two-Mile Hill pit shell is shown in Figure 2 below. The shell demonstrates a pit down to approximately 100m vertical depth.

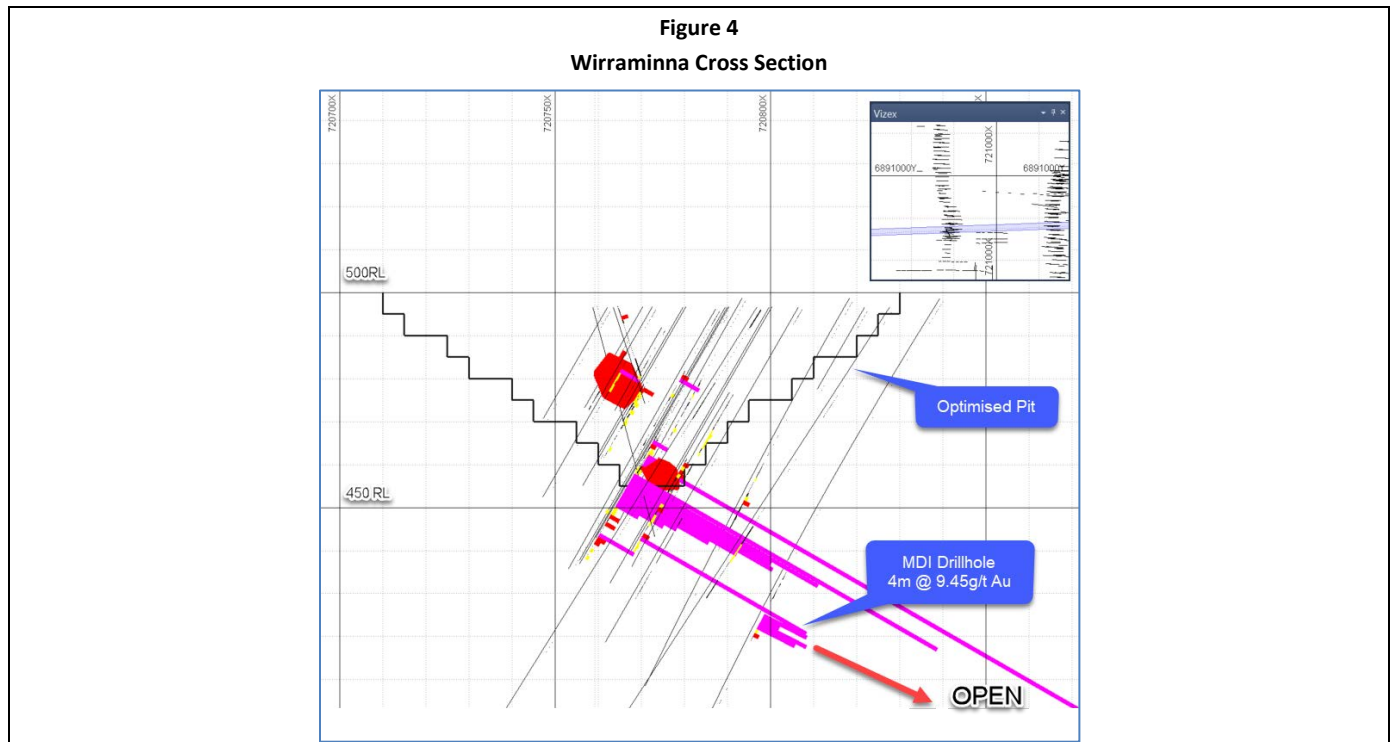
The Two-Mile Hill tonalite and BIF deeps deposits will form a part of a separate underground study.



The Shillington North optimised pit shell is shown in cross section in Figure 3 below.



The Wirraminna deposit, a cross-section of which is shown in Figure 4 below, has been re-optimised to approximately 50m depth. However, in places, the optimum pit shell bottoms on the resource model, suggesting potential to extend economic mineralisation, and hence an optimised pit shell, deeper.



Based on the positive result of this re-optimisation study, MDI has commenced an update of the PFS. The update will revisit several key inputs, and expected to be of particular significance, re-evaluation of the geotechnical parameters. No additional resource definition drilling is planned at this stage, as over 90% of the Mineral Resource is classified in the Indicated category.

There are over 265,000m of historic and contemporary drilling in the MDI database, representing approximately 7,163 drill holes located within MDI's tenure. This represents an average depth of **only 37m per drill hole**. All gold discoveries to date are based on outcropping mineralisation. Drill holes deeper than 50m have been focussed mainly on the Two-Mile Hill tonalite deeps deposit, much of this completed by MDI. MDI considers the Sandstone project to have excellent exploration potential, combined with the potential stand-alone gold production operation defined by the recent study.

As part of the Sandstone acquisition, MDI has proprietary rights to the original Sandstone database including over 1.07 million meters of drilling in over 25,000 drillholes. This includes the physical drillcore and metadata covering the entire Sandstone greenstone belt, inclusive of all historical drilling completed within the Alto Metals permits.

Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Middle Island, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.



Competent Persons' Statement

Information in this report relating to studies is based on, and fairly represents, information and supporting documentation prepared by Mr Beau Nicholls (a Member of the Australian Institute of Geoscientists). Mr Nicholls is a Principal Consultant for Sahara Natural Resources and a Non-Executive Director to Middle Island Resources, and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration, and to the activities undertaken, to qualify as Competent Persons as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Nicholls consents to the inclusion in the release of the statements based on their information in the form and context in which they appear.

Appendix A

Sandstone Gold Project - Resources Statement

Mineral Resources applicable to the Sandstone Gold Project are provided in Table 1 below.

Table 1 Sandstone Gold Project Mineral Resource Statement						
Deposit	COG (g/t Au)	Tonnes	Grade (g/t Au)	Contained Gold (oz.)	JORC Classification	JORC Classification
Two Mile Hill – Open Pit	0.7	1,012,000	1.36	44,000	Indicated	2012
Two Mile Hill – Open Pit	0.7	114,000	1.10	4,000	Inferred	2012
Shillington – Open Pit	0.7	1,015,000	1.33	43,000	Indicated	2012
Shillington – Open Pit	0.7	272,000	1.17	10,000	Inferred	2012
Wirraminna – Open Pit	0.5	307,000	1.50	14,600	Indicated	2012
Wirraminna – Open Pit	0.5	243,000	1.10	8,400	Inferred	2012
Total Indicated		2,334,000	1.37	102,500	Indicated	2012
Total Inferred		629,000	1.13	22,900	Inferred	2012
Total Resource		2,963,000	1.32	125,300	Indicated & Inferred	2012

Table 1 excludes reference to Mineral Resources reported by previous owners of the project under the 2004 Edition of the JORC Code, representing a further 412,000oz.

In addition to the Mineral Resources reported above, an Exploration Target of 24Mt to 34Mt at 1.1g/t to 1.4g/t Au, comprising between 0.9Moz and 1.5Moz of gold has been estimated between 140m vertical depth (base of quantified open pit Mineral Resources) and 700m vertical depth for the Two Mile Hill tonalite deeps deposit (refer ASX Release of 29 November 2017). This Exploration Target remains open at depth.

The potential quantity and grade of an Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

This report includes information that relates to Mineral Resources and Exploration Targets which were prepared and first disclosed under JORC Code 2012. The information was extracted from the Company's previous ASX announcements as follows:

- Mineral Resources: ASX releases 14 December 2016 and 8 December 2017;
- Exploration Target: ASX release 29 November 2017,

and are available to view on the Company's website. The Company confirms it is not aware of any new information or data that materially affects the information included in the original market announcements and that, in the case of reporting of Ore Reserves and Mineral Resources, all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcement.



Appendix B

Re-optimisation parameters utilised by Mining Focus Consultants.

Table A – Summary Whittle Four-X Input Parameters			
Item		Unit	Value
Mill throughput		Ktpa	500
Au price (3 scenarios)		\$/oz	1,600/2,000/2,500
Royalty	Two Mile Hill & Shillington Wirraminna	%	4.5 2.5
Doré transport, insurance and refining costs		\$/oz	1.00
Processing recovery	Two Mile Hill Shillington Wirraminna	%	92.9 93.5 92.2
Processing cost	Two Mile Hill Shillington Wirraminna	\$/t milled	25.80 28.80 25.80
General and administration	Two Mile Hill & Shillington Wirraminna	\$/t milled	9.50 11.93
Owner's fixed mining costs	Two Mile Hill & Shillington Wirraminna	\$/t milled	4.52 0.82
Grade control (All deposits)		\$/t milled	0.50
Pit-dewatering (All deposits)		\$/t milled	0.05
Rehabilitation (All deposits)		\$/T waste	0.03
Average Mining Costs	Two Mile Hill Shillington Wirraminna	\$/t mined	~3.45 ~3.60 ~3.40/t
Dilution	Two Mile Hill Shillington Wirraminna	%	(inherent in resource estimation technique) (inherent in resource estimation technique) 5%
Mining recovery	Two Mile Hill Shillington Wirraminna	%	97 97 95
Overall pit wall slope angle (incl. ramp system)		Degree	<u>2016</u>
Two Mile Hill	Oxide		34
	Transition		34
	Fresh		38
Shillington	Oxide		34
	Transition		34
	Fresh		38
Wirraminna			
			<u>2019</u>
			45
			45
			50
			50
			50
			50
			Ranging from FW – Oxide: 35° to HW – Fresh: 49°