CRADLE RESOURCES LIMITED

21 July 2015

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METALLURGICAL RESULTS CONFIRM PROCESS SELECTION

Highlights

- **75 tonne integrated pilot plant to commence mid July 2015**
- **Recoveries and grades from latest bench scale program confirms robustness of the PFS flowsheet**
- **Mini-pilot plant test completed with results being used to optimise the integrated pilot plant**
- **Leach test work optimisation on flotation concentrate in progress**

Cradle Resources Limited ("Cradle") is pleased to announce that the metallurgical variability program is being finalised and the preliminary results from the mini pilot plant are now available. These two programs of work are precursors to the integrated pilot plant that will be carried out on the 75 tonne bulk sample delivered to SGS, Lakefield in Canada.

Variability Program

The variability program included a total of 34 individual samples made up in most instances of continuous drill core runs that represent the major material types that will be treated in the current mine plan. The focus was on material contained within the first ten year pit shell and samples were collected in this area across numerous drill holes and represent the orebody both laterally and vertically.

The variability program consisted of three sets of work; mineralogy, comminution test work and open circuit batch flotation tests. The detailed results from the program are shown in Appendix A.

The mineralogy results (Qemscan) show that the variability samples are consistent with the composite samples tested previously with respect to composition, niobium deportment (i.e. pyrochlore or columbite distribution) and niobium mineral liberation. Based on these results it would be expected that the flotation performance of these samples will be in line with the composites and blends tested previously.

The comminution data again show the data is consistent with previous results and the mill sizing and power draw as defined in the Prefeasibility Study ("PFS") is not likely to change with these new results.

Both the fresh and moderately oxidised flotation tests were aligned with previous test work results. For the fresh carbonatite tests the average percentage niobium which reported to the niobium rougher float was 82.9%, after taking into account losses associated with desliming, magnetic separation and pyrite flotation. This compares well with the best results of the blend and composite tests previously done. Rougher concentrate grades (2.1% Nb_2O_5) on average were lower than in the previous tests, but were associated with higher overall recoveries. The final concentrate grades were on spec (average 43.4%) which as previously shown will easily be increased to approximately 50% after the concentrate leach stage.

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For the moderately oxidised materials the average niobium reporting to the flotation rougher feed (81%) was similar to the results from the PFS. On average lower rougher concentrate grades were achieved, but again higher recoveries were achieved.

The high grades achieved in the final concentrates (with the exception of one test where excess silica was present) indicates that the lower rougher concentrate grade did not impact on the final concentrate grade and confirms previous PFS test results.

Mini Pilot Plant

The mini-pilot plant campaign at SGS Lakefield in Canada has been completed. This piloting activity was undertaken to provide data to assist in both the set-up and operation of the 75 tonne integrated pilot plant that is planned to start in July 2015. The mini pilot plant program was designed to:

- Finalise the circuit design and configuration, including the equipment selection and sizing
- Understand the impact of continuously recycling streams on the flotation chemistry
- Confirm slurry densities for the cleaner circuit
- Confirm process control strategies and reagent addition points

The mini-pilot plant feed consisted of approximately 5 tonnes of RC chips that represent a blend of fresh and moderately oxidised carbonatites and magnetite carbonatites. The plant was operated in two phases; in the first phase the front end of the plant (milling and desliming through to rougher flotation) was operated for four days during which time the rougher concentrate was collected and stored. In the second phase the rougher concentrate was fed to the cleaner circuit which operated for approximately 10 hrs.

The key learnings from the campaign were:

- The importance of desliming on niobium flotation and the potential need for an additional stage of desliming in the rougher flotation circuit prior to the rougher-scavenger float. This concept was successfully tested in the laboratory
- Recirculating streams do not impact process chemistry
- There is a tendency for the recycle stream to build up gangue minerals and the cleaner circuit has been modified to more effectively reject the gangue minerals
- Rougher grades and recoveries were controlled with collector addition rates.
- Final concentrate grades were achieved
- The inclusion of a magnetic separation unit on the final concentrate will be useful for the high magnetite feeds

The key metallurgical results from the pilot runs are shown in Appendix B. The results indicate that losses to desliming, magnetic separation and pyrite concentrate were all on target with the percentage of niobium reporting to the rougher flotation averaging 78%, in line with previous work. The rougher concentrate recovery was improved to 69%. An additional desliming stage before the scavenger float was shown to be beneficial. The final cleaner concentrate averaged 42% with the associated cleaner circuit recoveries ranging between 73 and 81%. These results achieved were comparable with the previous locked cycle test work undertaken during the PFS, although with the short running time and split circuit the circuit was not fully optimised and stabilised.

The niobium concentrate produced from this campaign is being used for the concentrate leach development and optimisation program which is currently underway.

Cradle's Managing Director, Grant Davey, commented: *"These confirmatory met test results are important for the optimisation of the larger scale pilot test program which will be carried out over the next two month. This is another positive step in ensuring that Panda Hill is the next niobium producer in the world".*

Project Background

An update to the PFS results were announced on 14 July 2015, indicating that a staged approach to the Project allowed reduced upfront capital without significantly impacting the overall economics. The indicative Project capex was US$123M initial capital with US$32M working capital based upon mining scenario of 1.2Mtpa for the first few years ramping up to 2.4Mtpa in Year 5.

Subsequent to the PFS announcement, Cradle also announced a significant Mineral Resource upgrade for the Project in April 2015, with a total Mineral Resource of 178Mt @ 0.5% Nb_2O_5 for 891Kt of contained Nb_2O_5 (16Mt @ 0.63% Nb_2O_5 Measured, 53Mt @ 0.5% Nb_2O_5 Indicated and 108Mt at 0.48% Nb_2O_5 Inferred (see announcement of 30 April 2015). Additionally the Project has an Exploration Target of 200Mt to 400Mt at between 0.4% and 0.6% Nb_2O_5 for regions outside of the current Mineral Resource (see announcement 24 April 2015). The Exploration Target is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource under the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code" (JORC 2012). The Exploration Target is not being reported as part of any Mineral Resource or Ore Reserve. Work activities including mapping, chip sampling and drilling are expected to be undertaken in 2015 and 2016. The April 2015 updated Mineral Resource will be used for the final Feasibility Study targeted for completion in 2015.

The Panda Hill Niobium Project ("Project") (Figure 1) is located in the Mbeya region in south western Tanzania approximately 650km west of the capital Dar es Salaam. The industrial city of Mbeya (pop. 280,000) is situated only 26km from the project area and will be a significant service and logistics centre for the Project. The Panda Hill Niobium Project unique in that it is located close to highly developed surrounding infrastructure including the new Songwe international airport (8 km away), the TAZARA Rail line (2km away), the Dar es Salaam - Tunduma Highway (5km away) and major power infrastructure (26km away).

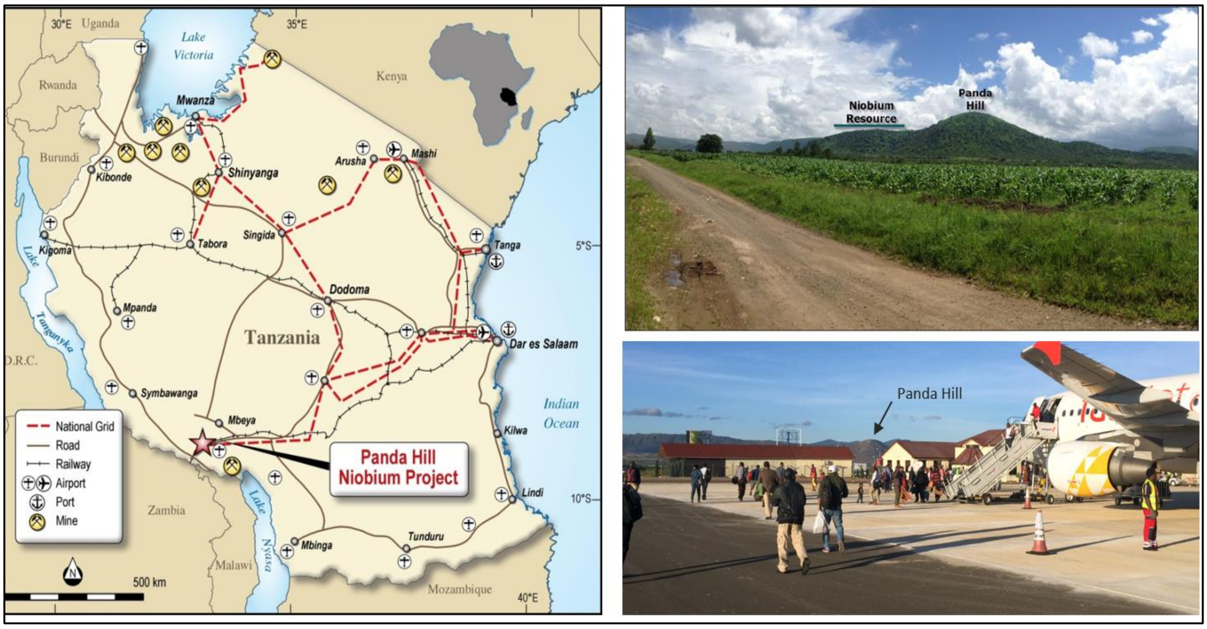

Figure 1: Showing location of Panda Hill and the nearby Songwe international airport.

The Panda Hill Niobium Project is located on three Mining Licences (ML237/2006, 238/2006 and 239/2006) granted to Panda Hill Mines Ltd on 16 November 2006 and covering a total area of approximately 22.1 km^2. Title of these licences was transferred to RECB Limited ("RECB") on 18 December 2012. Panda Hill Mining Pty Ltd ("PHM"), a wholly owned subsidiary of Cradle, currently has a 50% shareholding in RECB with an additional exclusive right to acquire the remaining 50% of RECB by June 2017.

In June 2014 Cradle reached an agreement with Tremont Investments Limited (backed by Denham Capital) ("Tremont") to fund the Project to DFS and beyond. Tremont will earn up to a 50% in the Project for a consideration of up to US$20M. To date Tremont has acquired a 37.5% stake in the Project through funding of US$15M.

By order of the Board

Competent Person's Statement

The information in this document that relates to the Exploration Target, Exploration Results and Resources is based on information compiled or reviewed by Mr Neil Inwood who is a Fellow of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Inwood is a full time employee of Verona Capital Pty Ltd. Mr Inwood has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr Inwood consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

The Company notes that JORC Table 1 has not been included in this announcement as the Table 1 from the previous announcements is valid and the sampling and assaying techniques have not changed materially from previous announcements.

The information relating to the Mineral Resource is extracted from the report entitled 'Significant Resource Upgrade for Panda Hill Niobium Project' created on 20th January 2015 and is available to view on www.cradleresources.com.au. The information relating to the Pre-Feasibility Study is extracted from the report entitled 'Positive Pre-Feasibility Study results For Panda Hill' created on 31st March 2015 and the update announcement on 14th July 2015 entitled 'Updated Panda Hill Site and Study Progress' and is available to view on www.cradleresources.com.au. The information referring to the Exploration Target is extracted from the report 'Panda Hill Progress Update and Exploration Target' created on 23rd April 2015 and is available to view on www.cradleresources.com.au. Other than as specified in this announcement and the mentioned announcements, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, Exploration Target or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

For further information, please visit www.cradleresources.com.au or contact:

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Appendix A – Variability Results

Drill hole locations for samples selected for the variability program:

The location of the diamond drill holes (19 in total) selected for the 34 variability samples are shown below in Figure 1 along with the pit shell outlines from the PFS for the 5 year (red), 10 year (blue) and LOM (green). Holes PHDH012 and PHDH037 are located where a second small starter pit may be developed after Year 10.

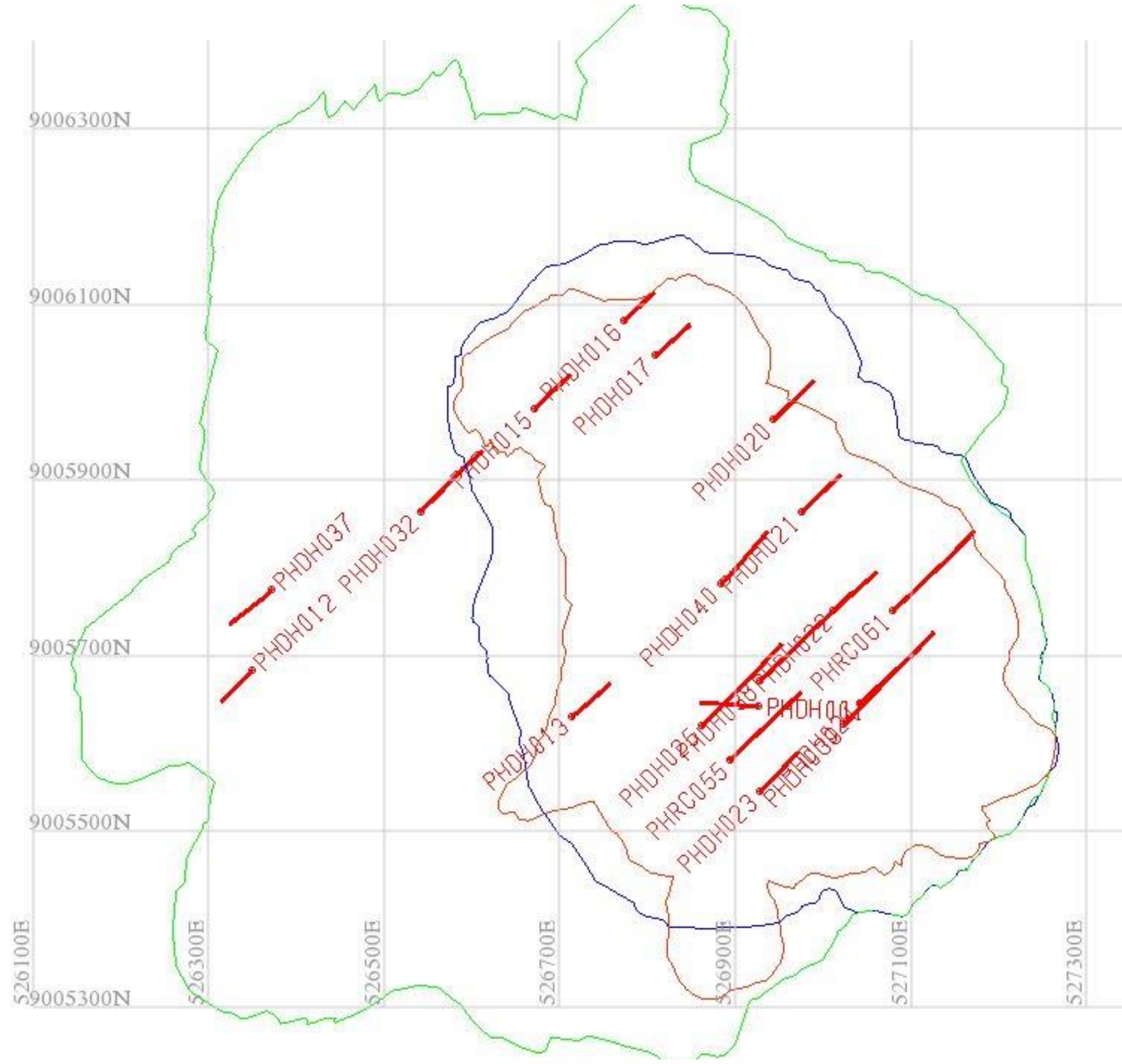

Figure 1: Drill Hole Location for Variability Samples.

Mineralogical Results:

The results from the mineralogical work on the 34 variability samples are presented below. The tables have been set out by mill feed type i.e. fresh carbonatite, moderately oxidised carbonatite and oxidised carbonatite. Within each of these the variability results (average and range) are shown along with the results from the PFS for the equivalent composite and/or blend.

Modal analysis shows the mineral abundance by type within each of the samples.

Table A1: Modal Analysis - Key Mineral Compositions in Test Samples

	Fresh Carbonatite					Mod Oxidised Carbonatite			Oxidised Carbonatite			
	Prefeasibility Samples			Variability Samples		PFS	Variability Sample		Prefeasibility Sample		Variability Sample	
	Comp E	Comp B	FC Blend	Ave	Range	MOC	Ave	Range	OC	Comp D	Ave	Range
Calcite	69%	60%	47%	60%	41-72%	35%	43%	35-51%	34%	24%	27%	9-58%
Dolomite	10%	10%	18%	11%	3-21%	17%	15%	12-20%	10%	3%	16%	2-52%
Apatite	9%	11%	10%	8%	6-9%	14%	10%	9-11%	15%	17%	10%	7-12%
Fe-oxides	2%	3%	5%	5%	2-11%	12%	6%	5-10%	9%	17%	17%	8-26%
Quartz	3%	3%	6%	5%	2-6%	7%	7%	4-10%	12%	10%	10%	6-15%
Feldspar	1%	2%	2%	1%	0-1%	1%	2%	0-5%	5%	3%	4%	0-11%

Niobium deportment is the distribution of niobium between the various niobium hosting minerals. Pyrochlore and columbite are the major niobium mineral with ilmenite, rutile and a modified pyrochlore as the minor minerals. Pyrochlore is the easier of the minerals to float with ilmenite and rutile the more challenging. The niobium mineral liberation data provides information of the exposure of the mineral at the specified grind. Free and liberated mineral will float well under the right conditions, while the locked minerals flotation depends on the associated minerals present in the composite particle.

Table A2: Niobium Deportment by Mineral and Niobium Mineral Liberation

	Fresh Carbonatite					Mod Oxidised Carbonatite			Oxidised Carbonatite			
	Prefeasibility Samples			Variability Samples		PFS	Variability Sample		Prefeasibility Sample		Variability Sample	
	Comp E	Comp B	FC Blend	Ave	Range	MOC	Ave	Range	OC	Comp D	Ave	Range
Niobium deportment by mineral												
Nb in pyrochlore	84%	67%	70%	69%	50-91%	67%	71%	60-91%	62%	51%	63%	43-75%
Nb in columbite	8%	25%	20%	21%	5-37%	21%	17%	5-23%	23%	22%	21%	17-30%
Nb in other	8%	8%	10%	10%	4-14%	7%	12%	4-21%	15%	27%	16%	8-26%
Niobium mineral liberation (@100% passing 106um)												
Free & liberated	69%	46%	79%	74%	60-89%	81%	70%	60-76%	73%	68%	67%	58-79%
Locked	9%	17%	6%	10%	3-17%	5%	11%	6-18%	8%	12%	11%	5-17%

Comminution Results:

The comminution data is presented in the same format as the mineralogy i.e. by material type with comparison to the PFS results where available. Standard Bond Work Indices (BWi) for both rod and ball mill are presented along JK parameters Axb and drop weight index (DWi) used for the design of the SAG mill.

Table A3: Comminution Data

	Fresh Carbonatite				Mod Oxidised Carbonatite		Oxidised Carbonatite		
	Prefeasibility Samples		Variability Samples		Variability Sample		Prefeasibility Sample	Variability Sample	
	Comp E	Comp B	Ave	Range	Ave	Range	Comp D	Ave	Range
Bond Work Index - Bwi (kWh/t)	9.7	10.4	10.7	9.4-13.8	10.6	10.3-11.0	10.6	13.4	12.0-15.4
Rod Work Index - RWi (kWh/t)	10.1	11.6	11.8	11.7-13.9	12.5	-	11.7	15.6	-
JK Parameter - AxB	60.6	58.3	60.0	43-74	56.9	45-72	51	55.7	46.5-61.6
JK Parameter - DWi	4.6	4.7	4.8	3.7-7.2	4.9	3.7-6.1	5.3	5.0	4.2-6.1

Flotation Results:

Flotation results for the fresh carbonatite and moderately oxidised carbonatite are shown below. The oxidised carbonatite tests are still in progress. Table format is same as previous with the comparison data from the PFS included again. As the variability tests were all open circuit tests only the recovery to the rougher concentrate is included (calculating final concentrate recovery is not possible when the impact of recycle streams is not determined).

Table A4: Flotation Data

	Fresh Carbonatite					Mod Oxidised Carbonatite		
	Prefeasibility Samples			Variability Samples		PFS	Variability Sample	
	Comp E	Comp B	FC Blend	Ave	Range	MOC	Ave	Range
Head Grade (%Nb_2O_5)	0.55%	0.51%	0.64%	0.47%	0.36-0.71%	0.76%	0.53%	0.38-0.67%
Nb Recovery to Rougher Feed (%)	85.0%	82.3%	79.4%	82.9%	78.3-86.9%	79.0%	81.1%	78.1-86.3%
Rougher Conc. Grade (%Nb_2O_5)	5.5%	6.9%	3.7%	2.1%	1.2-4.3%	4.1%	2.2%	1.6-3.3%
Nb Recovery to Rougher Conc. (%)	82.2%	72.1%	71.2%	77.3%	69.8-85.5%	66.0%	70.4%	50.7-82.4%
Final Conc. Grade (%Nb_2O_5)	54.2%	43.6%	47.5%	43.4%	36.4-46.9%	44.8%	40.0%	22.1-48.7%

Appendix B – Mini-Pilot Plant Results

The mini-pilot plant results are presented below. The data has been split into two sets; the front-end of the circuit up to rougher concentrate performance and the cleaner circuit performance. This split follows the actual plant operation where these two circuits were run independently due to equipment and sample mass constraints.

The sample tested based on head assay data (%SiO_2) is considered a moderately oxidised to oxidised sample. The table below therefore includes the results from the PFS moderately oxidised (MOC) oxidised (OC) tests as well as the variability results for comparison. Niobium recovery to rougher feed was high and in line with previous work. Efficient desliming was shown to be crucial and when low rougher recoveries were seen these could be improved with an addition desliming and scavenger float.

Table A5: Mini Pilot Plant Milling to Rougher Flotation Performance

	Mod Oxidised Carbonatite			Oxidised Carbonatite	Mini Pilot Plant Results
	PFS	Variability Sample		PFS	Pilot Campaign
	MOC	Ave	Range	OC	Range
Head Grade (%Nb_2O_5)	0.76%	0.53%	0.38-0.67%	0.59%	0.81-0.89%
Head Grade (%SiO_2)	9.6%	14.1%	6.8-23.8%	15.9%	11.2-11.5%
Nb Recovery to Rougher Feed (%)	79.0%	81.1%	78.1-86.3%	71.4%	74.0-80.1%
Rougher Conc. Grade (%Nb_2O_5)	4.1%	2.2%	1.6-3.3%	2.45%	1.8-4.8%*
Nb Recovery to Rougher Conc. (%)	66.0%	70.4%	50.7-82.4%	63.5%	53.1-68.7%*

*Note this is inclusive of the additional desliming and rougher scavenger flotation step

The cleaner circuit results are shown below. Again the MOC and OC results from the PFS are shown for comparison. Due to the short run time of this circuit (~10 hours) the circuit did not fully stabilise and the results below should be considered indicative. The important achievement was that an on spec concentrate was produced over the majority of the run period.

Table A6: Mini Pilot Plant Cleaner Flotation Performance

	Mod Oxidised Carbonatite			Oxidised Carbonatite	Mini Pilot Plant Results
	PFS	Variability Sample		PFS	Pilot Campaign
	MOC	Ave	Range	OC	Range
Cleaner Feed Grade (%Nb_2O_5)	4.1%	2.2%	1.6-3.3%	2.45%	2.77-2.82%
Nb losses to 1st Cleaner Scav Tail (%)	16.4%	-	-	14.9%	18.6-26.7%
Nb Recovery in Cleaner Circuit (%)	83.6%	-	-	83.9%	73.3-81.4%
Final Conc. Grade (%Nb_2O_5)	44.7%	40.0%	22.1-48.7%	44.6%	28.2-54.6%