

**PHONE** +61 (8) 9486 4036 **ABN** 96 095 684 389 **EMAIL**pmcneil@frontierresources.com.au **WEBSITE**<u>www.frontierresources.com.au</u>

**ASX: FNT** 

Market Announcements Platform

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# Rights Issue Prospectus Issued to Raise Capital for Exploration at the Gazelle ELA (Former Sinivit Gold Mine)

Frontier Resources Limited (**Frontier or the Company**) announces that it lodged a Rights Issue Prospectus with the ASX today. Shareholders wishing to subscribe for Shares in excess of their Entitlements are invited to subscribe for any Shortfall on a 'first in - first served basis'.

The Company lodged an application for EL 2515 in December 2016 and it is now with the Minister for Mining awaiting his decision on being granted; the area includes the former Sinivit gold Mine, plus much of our former East New Britain EL that was previously Joint Ventured with Ok Tedi Mining Ltd. The ELA is located on the Gazelle Peninsula, East New Britain Province, Papua New Guinea, it contains significant Indicated and Inferred Gold Resources and has excellent access.

Capital raised will also enable Frontier to undertake the first ever drill assessment on the Tinga Propsect at the Muller porphyry copper –gold project (EL 2356), further exploration of the Bulago high-grade gold and porphyry copper –gold project (EL 1595) and cover Working Capital, New Projects, Administration Costs and Expenses of the Offer.

The Gazelle ELA is contained within the Melanesian Arc that also contains the Lihir gold Mine, Panguna (Bougainville) porphyry copper-gold Mine and the Simberi gold Mine. The terrane is highly prospective for giant gold and copper deposits. The quartz vein system is present for a 10-km strike length within the ELA at Sinivit and the exploration potential is excellent. The area also covers two large aeromagnetic porphyry copper-gold signatures and other copper and gold prospects that have never been really explored.

Frontier is undertaking this Rights Issue capital raising to show financial viability and give the Papua New Guinea Minister for Mining confidence to grant the application forthwith and to fund the proposed exploration program. A positive and productive Wardens Court Hearing was completed in early March 2017. The landowners are supportive of exploration and mining and wish to see continued development in their region after the lull that has occurred over the last 4 years.

Frontier revised its suggested work program and expenditure commitment in early March and offered the PNG Mineral Resource Authority (MRA) a much more significant expenditure commitment to assist getting the application viewed positively and then granted (K1,500,000 or approx. A\$530,0000 per year for the first 2-year Term). The revised program offered a much more substantial exploration commitment, including drilling and a Feasibility study.

The Company's intent is to undertake a Pre-Feasibility Study in Term 1 to determine all required parameters and to be in a position to complete and submit a Definitive Feasibility Study in Year 1 of Term 2, then obtain a Mining Lease and commence mining operations as soon as realistic and possible.

The work program submitted to the PNG Mineral Resource Authority is summarised below.

- 1. Ship drill rigs and bulldozer to site from our Kimbe workshop base.
- 2. Undertake extensive awareness with Sinivit landowners in the Riat Village region.
- 3. Bulldoze landslides from access track and repair track drainage.
- 4. Move existing containers and exploration gear from Kokopo to Sinivit.
- 5. Build a camp and rebuild the core shed.
- 6. Evaluate what can be done to stabilise the vats and attempt to accomplish that.

- 7. Hire consultant Resource Geologist, Mining Engineer and Metallurgists for Pre-Feasibility Study.
- 8. Immediately undertake a Resource estimation that complies with the JORC code
- 9. Evaluate the remaining oxide gold ore resources available for future extraction/ processing in the former ML area.
- 10. Plan and implement a drilling program to evaluate the sulphide gold resource potential at depth beneath the mined pits, so that it can ultimately be estimated as a resource and evaluated systematically for mining.
- 11. Plan and implement a drilling program to further evaluate the oxide and sulphide gold resource potential at Kavursuki Prospect, located north of the mined pits, so that it can be estimated as a resource and evaluated systematically for future mining.
- 12. Evaluate various possible future mining, extraction and disposal methods and options as a prelude to a full Feasibility Study including:
  - Undertake a study for the possible recovery of gold and tellurium from the 280,000 tonnes in the existing vats via alkali leach and acid leach plants. The previous vat leaching was inefficient and about 33% of the gold remains in the vats and can probably be economically re-treated via a dedicated alkali leach plant. Limited testwork showed the grade of a composite sample to be about 2.36 g/t gold.
  - Determine possible locations for a tailings dam(s).
- 13. General exploration in the EL area will consist of the first ever ground evaluation of the aeromagnetic porphyry copper targets previously defined by Frontier in their EL 1592 (that was relinquished) with creek mapping and sampling.

The former Sinivit Mine area contains a total of approximately 217,000 ounces of Indicated and Inferred resources of gold, grading 3.93 g/t, that is hosted in 1.7 million tonnes of ore.

- The estimates are foreign estimates and are not reported in accordance with the JORC code.
- A competent person has not done sufficient work to classify the foreign estimates as mineral resources in accordance with the JORC code
- It is uncertain that following evaluation and/or further exploration work that the foreign estimates will be able to be reported as mineral resources in accordance with the JORC code.
- No physical exploration is required to be able to report these resources in accordance with the JORC code.
   Mining Associates could readily modify

Sinivit Gold Resources								
Zone	Tonnes	Gold Grade (g/t)	Contained Gold (ounces)					
*Southern Oxide (3/10/2011 estimate)	103,000	4.40	14,600					
*Central Oxide (3/10/2011 estimate)	184,000	3.80	22,700 6,500					
*Northern Oxide (3/10/2011 estimate)	67,000	3.10						
** Kavursuki (11/4/2013 estimate)	283,000	3,000 3.70						
Total Indicated Resources (1.5g/t cut off)	637,000	3.78	76,800					
Total Inferred Resources - All Areas (1.5g/t cut off)	1,084,000	4.02	140,200					
Fotal Indicated + Inferred Resources	1,721,000 3.93		217,000					

- their 43-101 report to become JORC compliant for a fee. Otherwise the digital data utilised must be obtained and remodelled in Surpac and reported to the ASX.
- The timeframe to accomplish this task requires that first the EL must granted. As no physical exploration is required, there are no major issues with funding such an exercise and it would be done from existing funds or a capital raising would be undertaken to accomplish such.
- Additional information relating to the resource estimations is provided in Section 3 of Frontier's guarterly activities report released to ASX on 31 January 2017.
- The information provided in this market announcement provided under rules 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for
  the Sinivit Mine Project and is based on information compiled by Peter A. McNeil Managing Director of Frontier Resources, who consults to the Company via
  Exploration & Management Consultants Pty Ltd and is a Member of the Aust. Inst. of Geoscientists.

Significant gold and tellurium remains in the vats at the former Sinivit Gold Mine in ELA 2515 and testwork by the former operator has indicated that there is potential to extract it from the existing vat material. In addition, testwork indicated that future sulphide ore processing should incorporate tellurium extraction through an appropriate circuit.

None of the known Sinivit sulphide Inferred Resource has been mined and it is open along strike in both directions and down dip at depth. The potential to substantially increase the sulphide resource is excellent

and if/once granted, there will be a major emphasis on accomplishing this to potentially allow a bigger and more robust mining operation.

Thirty-eight historic diamond core drill holes have assays for tellurium associated with the potentially economic oxide and sulphide gold intercepts. Significant downhole intercepts associated with sulphide resources (unmined) include hole 87WDD040A with 4.2m grading 12.50 g/t gold + 725 ppm tellurium + 12.5 g/t silver (148.6m to 152.8m), PLUS 13.5m grading 8.56 g/t gold + 505 ppm tellurium + 9.9 g/t silver (164.55m to 178.05m) and 86WDD017 with 1.45m grading 21.7 g/t gold + 1,550 ppm tellurium + 25 g/t silver (82.75m to 84.2m). Oxide resources (mined and now in the vats) included 86WDD021 with 14.7m grading 11.10 g/t gold + 1156 ppm tellurium + 14.1 g/t silver (7.15m to 21.85m).

Forty-three RC drill hole composite samples from inside the Northern and Central Oxide pits were re-assayed by the former operator for tellurium. The Northern Oxide pit had highlights of 6.0m of 27.68 g/t gold + 1,980 ppm tellurium, 12.0m of 4.01 g/t gold + 590 ppm tellurium and 8.0m of 16.43 g/t gold + 610 ppm tellurium. The Central Oxide Pit had highlights of 4.0m of 57.3 g/t gold + 1,640 ppm tellurium, 6.0m of 10.05 g/t gold + 980 ppm tellurium and 2m of 15.85 g/t gold + 1,430 ppm tellurium.

Testwork on a Banka drilled composite sample from the vats returned a size fraction screened weighted average grade of 2.36 g/t gold + 132ppm tellurium. This is a preliminary estimate of what remains in the vats. Approximately 54 % of the remaining gold was noted in the fraction greater than 2 mm. The weighted average of all in pit RC drill holes analysed for tellurium is 264m grading 355 ppm, or more than double the average estimated to remain in the vats (by limited analyses from Banka drilling).

The testing indicated tellurium would require an acid leach and subsequent gold leaching would require a basic leach. There has been little metallurgical testing to determine the process required for optimum treatment of the primary sulphide resource, however, it will likely require a specific primary ore floatation circuit. Initially the feed for the new sulphide circuit could be obtained from the ore remaining in the vats, with the vats then utilised as tailings dams. New tailings storage facilities would be required if/when the sulphide resource comes into production.

The Kankberg underground Mine in Sweden contains a reserve of 2,880,000 tonnes grading 4.1g/t gold (380,000 ounces) + 186 ppm tellurium and this seems comparable to Sinivit. The US Geological Survey lists Kankberg as one of the only mines in the world with tellurium as a <u>direct</u> product.

For additional information relating to Sinivit, please visit the website at www.frontierresources.com.au

**FRONTIER RESOURCES LTD** 

P.A. McNeil, M.Sc., MAIG

Chairman and Managing Director

# **Competent Person Statement:**

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The information in this report that relates to Exploration Results is based on information compiled by Peter A. McNeil - Member of the Aust. Inst. of Geoscientists. Peter McNeil is the Chairman/Managing Director of Frontier Resources, who consults to the Company. Peter McNeil has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter McNeil consents to the Inclusion in the report of the matters based on the information in the form and context in which it appears.

# JORC CODE 2012 SECTION 1 -- SAMPLING TECHNIQUES AND DATA

### SAMPLING TECHNIQUES

Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.

 $Historic\ information\ is\ quoted\ but\ all\ normal\ exploration\ procedures\ are\ known\ to\ have\ been\ followed.$ 

# DRILLING TECHNIQUES

Core was drilled PQTT, HQTT and NQTT (triple tube) by various drill rigs over a long period of time and was removed from the inner tube into 1m long core trays, being broken to fit as appropriate. RC drilling was also undertaken and if RC results are presented it is re [ported as such.

# MEASURES TAKEN TO MAXIMISE SAMPLE RECOVERY AND ENSURE REPRESENTATIVE NATURE OF THE SAMPLES

Downhole sample recovery was maximised by the drillers utilising appropriate downhole drilling consumables at the appropriate times to 'consolidate' or hold the rock together.

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.

Recovery is normally excellent at >95% overall.

# Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies

The core was geologically and geotechnically logged in sufficient detail to support appropriate Mineral Resource estimation, mining and metallurgical studies

# Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.

The core was preliminarily logged and marked up for sampling (normally on a lithologic or 1m or 2m basis, depending on the intervals' mineralisation potential), measured for recovery and photographed. After being cut and sampled the remaining 1/2 core was geologically and geotechnically logged in detail.

# The total length and percentage of the relevant intersections logged

100% of the core was logged.

### SUB-SAMPLING TECHNIQUES AND SAMPLE PREPARATION

#### If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.

Core samples were obtained from the drilling and utilised. RC samples were riffle split.

### For all sample types, the nature, quality and appropriateness of the sample preparation technique.

The whole core was appropriately diamond saw cut to quarter core to ensure representativeness relative to any structural /mineralisation orientations. The half core was then put into consecutively numbered calico bags for analysis.

# 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.

Half core was cut to ensure representativeness relative to any structural /mineralisation orientations.

#### Whether sample sizes are appropriate to the grain size of the material being sampled.

The sample size is appropriate for the exploratory phase of work and allows residual samples to be available for use for comparative assaying and later metallurgical testing.

#### **QUALITY OF ASSAY DATA AND LABORATORY TESTS**

### The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.

All analyses were appropriately requested relative to the target type and expected assay ranges. Gold was historically done by 50gram fire assay at a variety of well credentialed laboratories

# 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.

Acceptable levels of accuracy and precision were established. Industry standard reference samples were generally introduced into the sample sequence.

# 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.

These machines were not utilised and the laboratory is accredited and has its own internal procedures and parameters to ensure representative readings are made and reported.

### **VERIFICATION OF SAMPLING AND ASSAYING**

### $The \ verification \ of \ significant \ intersections \ by \ either \ independent \ or \ alternative \ company \ personnel.$

Historical information.

### The use of twinned holes

No twinned holes are reported.

# Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.

Historical information.

### Any adjustments to assay data.

No adjustments were made to any assay data, however, where available the assay results were averaged and the average result was reported.

# ACCURACY + QUALITY OF SURVEYS USED TO LOCATE DRILL HOLES (COLLAR + DOWN-HOLE SURVEYS), TRENCHES, MINE WORKINGS AND OTHER LOCATIONS USED IN MINERAL RESOURCE ESTIMATION

Good accuracy from theodolite surveying.

# Specification of the grid system used.

Map datum is AGD 066 and PNG is covered by 1:100,000 topographic plans that have 40m contour intervals. DTM plans from SRTM or aeromagnetics have 10m contour intervals.

# Quality and adequacy of topographic control

Topographic control is determined by theodolite then handheld GPS and/or tape and compass surveying and is adequate.

# DATA SPACING AND DISTRIBUTION

# 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.

Data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation.

# Whether sample compositing has been applied.

No sample compositing was undertaken as noted.

# ORIENTATION OF DATA IN RELATION TO GEOLOGICAL STRUCTURE

### Whether the orientation of sampling achieves unbiased sampling of possible structures to the extent this is known, considering the deposit type.

The sampling conducted achieved unbiased sampling of possible structures to the extent this is known and /or possible relative to physical constraints on the location of the drill rig and / or the orientation of the outcrop sampled relative to its strike and dip.

# 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.

The orientation of the holes is noted above and the orientation of the outcrops are noted as possible in the body of the text. Where possible the true widths have been estimated, and indicated in the text. There is no attempt to introduce sampling bias, but in very steep and difficult areas it is often difficult/impossible to be able to drill in the best location and therefore you must drill from where you can. All reasonable attempts are made to drill in the best location possible, however, drilling from one pad is much more economical than drilling for separate pads and as such it is routinely undertaken in that manner producing vertical and /or horizontal fans of drill holes.

# SAMPLE SECURITY

#### The measures taken to ensure sample security

Samples were retained in the custody of company staff onsite until despatched by helicopter for freighting via an accredited fright handler or they were in some cases hand carried (checked airline bagged) by the Managing Director to Australia. Samples were collected from the freight agent by the laboratory and taken to their facility for analysis or delivered to the laboratory by the Managing Director.

#### **AUDITS OR REVIEWS**

Industry standard practices are used.

#### **SECTION 2 -- REPORTING OF EXPLORATION RESULTS**

#### **TENURE**

### 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.

Exploration Licences are subject to the Papua New Guinea Mining Act of 1992. Tenure is secure if the EL holder complies with the agreed work and expenditure programs, but can be insecure if the region is deemed 'in the National Interest' for some reason. Terms are 'infinitely' renewable 2 year periods and are subject to a Wardens Court Hearing to ascertain the landowners attitude toward the exploration.

Frontier Resources Ltd Exploration Licence Information									
	Licence No.	Date From	Date To	Ownership	Area (SQ KM)	Lat. Sub Blocks			
Bulago River*	EL 1595	7/07/2014	6/7/2016	100% Frontier Gold PNG Ltd	100	30			
Muller Range	EL 2356	31/12/2015	30/12/2017	100% Frontier Copper PNG Ltd	330	99			
Sewatupwa River	ELA 2476	Application only		90% Frontier Copper PNG Ltd	436	131			
Lake Lavu	ELA 2477	Application only		90% Frontier Copper PNG Ltd	839	252			
Gazelle	ELA ?	Application only		90% Frontier Copper PNG Ltd	722	217			
* Under renewal - Hearing completed					2,427	SQ KM			

NB: The Papua New Guinea Mining Act of 1992 stipulates that ELs are granted for renewable 2 year Terms (subject to Work and Financial Commitments) and the PNG Government maintains the right to purchase up to 30% project equity at "Sunk Cost" if/when a Mining Lease is granted.

ELA 2515 is currently under application. The Wardens Court Hearing was positive and there is no reason known to suggest that it will not be granted.

#### **EXPLORATION DONE BY OTHERS**

Exploration completed by previous explorers has been systematically and comprehensively documented in previous releases and Quarterly Reports to the ASX. Any historic exploration quoted herein is noted to be such.

#### GEOLOGY

# Deposit type, geological setting and style of mineralisation.

Targets on all properties are epithermal related gold, plus porphyry copper-gold - molybdenum.

# DRILL HOLE INFORMATION

A summary of all information material to the understanding of the exploration results

### **DATA AGGREGATION METHODS**

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

Historical assays are tabulated herein.

The assumptions used for any reporting of metal equivalent values should be clearly stated.

No metal equivalent values reported.

### RELATIONSHIP BETWEEN MINERALISATION WIDTHS and INTERCEPT LENGTHS

If the geometry of the mineralisation with respect to drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect.

The diagrams and plans contained herein show relatively what the angle of incidence is to the structure being drilled. Intercepts are noted as downhole intercept but where possible the true widths have been estimated, and also indicated.

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.

 $\label{lem:assay} Assay\ results\ are\ comprehensively\ reported\ as\ indicated.$ 

# OTHER SUBSTANTIVE EXPLORATION DATA

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 substances

Historical Exploration work has been relatively comprehensively reported.

### FURTHER WORK

# The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).

Future work is discussed in the text, as it has been planned to date. Future work is potentially subject to modification if interpretations are modified or exploration objectives change.

Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.

Plans and sections are included as possible, that highlight the areas of possible extensions to mineralisation and show the main geological interpretations. Future drilling areas are not shown.