

# CARNAVALE RESOURCES LIMITED 20 May 2015

### **CARNAVALE RESOURCES**

#### A.C.N 119 450 243

Shares:	223.7M
Options:	166.5M
Perf Shares	42.0M
Cash:	<b>\$0.95M</b> Mar 2015
М.Сар	\$3.6M (@ \$0.016)

## Directors

Ron Gajewski (Chairman)

Andrew Beckwith (MD)

Klaus Eckhof (NED)

Rhett Brans (NED)

Andrew Chapman (NED)

Carnavale Resources Limited is an exploration and development company based in Perth, Western Australia.

two Carnavale has highly gold-silver-copper prospective projects in Arizona and Nevada. USA.

#### Office

Level 1, Suite 5 The Business Centre 55 Salvado Rd. Subiaco, WA 6008

# P<u>ost</u>

PO Box 131 Subiaco, WA 6008

#### **Contact Details**

+61 8 9380 9098 Ph +61 8 9380 6761 Fax admin@carnavaleresources.com

# High Grade (17.5g/t AuEq) mineralisation confirmed at Red Hills

Carnavale is pleased to report on encouraging mapping and adit sampling results from historic (circa 1910-20's) underground mine workings at the Red Hills project located in eastern Nevada, USA.

#### High Grade polymetallic Au-Ag-Cu-Pb-Zn mineralisation hosted in significant Cobra Thrust Fault

#### Cobra Thrust Fault potentially >9m true thickness and historic mined stopes over 85metres strike

**Breccia Zone Assav Results** 

			,					
Au g/t	Ag g/t	Cu %	Pb %	Zn %	AuEq g/t²			
0.68	265	0.6	4.4	13.1	14.96			
0.21	180	2.2	3.9	4.1	9.98			
1.42	379	2.7	3.0	1.3	12.43			
0.10	550	1.8	0.7	1.8	11.30			
1.79	850	1.5	4.8	4.0	19.77			
1.61	2130	1.0	7.1	4.4	36.91			
	Ave	rage Grade	of Breccia Z	Zone				
0.97	726	1.6	4.0	4.8	17.56			
	Average Grade of Cobra Thrust Fault							
0.67	494	1.1	3.6	3.4	12.46			

New sample results strongly support Cobra Exploration Target<sup>1</sup>

2.5Mt @ 4.5g/t to 14.7g/t AuEq<sup>2</sup> (360,000 to 1,180,000oz AuEqOz)<sup>1</sup>

9.6Mt @ 4.5g/t to 14.7g/t AuEq<sup>2</sup> (1,390,000 to 4,540,000oz AuEqOz)<sup>1</sup>

Rattler workings are larger and more extensive than at Cobra, however only limited access due to the collapse of the main stopes

Rattler sampling on margins of main stope/ore pass show strong Au-Ag-Cu-Pb-Zn mineralisation with peak values of 0.44g/t Au, 129g/t Ag, 0.7% Cu, 1.9% Pb and 1.5% Zn

#### Diamond drilling to test Cobra and Rattler Exploration Targets anticipated to commence late June, subject to BLM approval

<sup>1</sup> Exploration Targets referred to in this report are conceptual in nature. where there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource



# Introduction

Carnavale Resources Limited (ASX: CAV, "Company" or "Carnavale") is pleased to report on mapping and sampling results from historic underground mine workings, which were reportedly mined circa 1910-20's, at the Red Hills Project located in eastern Nevada, USA.

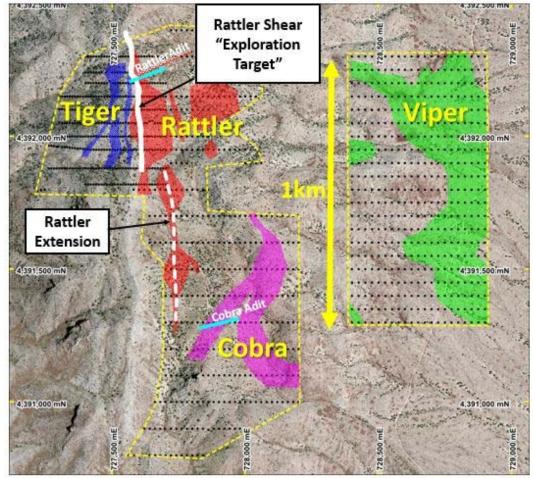
Carnavale recently acquired Tojo Minerals Pty Ltd, which has rights to earn up to 75% in the Red Hills Project, where the Company is exploring for large Carlin style gold-silver deposits and high grade copper-gold-silver-zinc-lead replacement mineralisation in two shear zones associated with numerous historic mine workings. The Company considers there is potential for the project to host more than one significant orebody.

Earlier surface sampling undertaken by the Company outlined anomalies extending over an area of approximately 2km x 3km. Strong polymetallic Cu-Au-Ag-Zn-Pb results and other indicator elements have been defined at the Cobra, Rattler, Tiger and Viper prospects.

Detailed mapping and rock chip sampling has outlined outcropping high grade Cu-Au-Ag-Zn-Pb mineralisation associated with two large thrust faults. These two well mineralised thrust faults at Cobra and Rattler are the current focus of exploration activities. The results of recent underground mapping and sampling in the historic workings are presented below.

#### Figure 1 Anomalies at the Red Hills Project.

(Note, the Rattler and Cobra adit locations are shown as blue lines)





# **Underground Mapping and Sampling**

The Company has recently completed a programme of geological mapping and sampling (201 samples) over two larger underground workings at Cobra and Rattler (refer to Figure 1) and two smaller workings at the Tiger prospect.

Mapping at each of the workings has significantly improved the geological understanding at each prospect. This new geological information supports the Company's new geological and structural model and the potential exploration targets at Cobra and Rattler. Diamond drilling is currently being planned to test the mineralisation at depth below these two larger workings.

# **Cobra Workings**

At Cobra, the mapping and sampling programme was highly successful in improving our 3D geological control on mineralisation and in defining high grade polymetallic Cu-Au-Ag-Zn-Pb mineralisation hosted in the prospective Cobra Thrust Fault.

Geological mapping along the 123m long adit and various north-west dipping stopes supports the Company's new structural model of a north-west dipping, well mineralised thrust fault which ramps through the shallow west dipping siltstones and dolomite units. This Cobra Thrust Fault is interpreted to represent an eastern splay off the larger north south orientated Rattler Thrust Fault and forms an excellent structural setting.

**Photo 1** Outcrop of Hanging Wall Altered Dolomite near adit opening, looking north (Note the extensive calcite veining throughout the highly altered unit.)



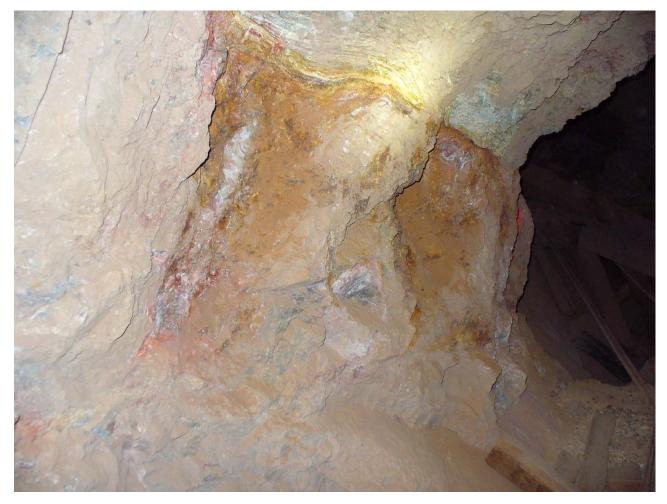
The adit and associated NW dipping stopes have been excavated along the sheared contact at the base of this hanging wall of highly altered and deformed dolomite. The mineralisation occurs in the Cobra Thrust Fault immediately below this dolomite contact. This altered dolomite unit is mapped on surface over a strike length of approximately 300m and forms a significant ridge with anomalous soil sampling results and alteration at its margins. In general, the thrust fault does not outcrop and is covered by a thin veneer of dolomite rich scree, as seen in the foreground of the altered dolomite in Photo 1.



In the workings, the thrust fault has been partially mined along approximately 85 metres of the adit, in a continuous series of 45-55 degree dipping stopes. Mining has also occurred on at least one lower level immediately beneath the mapped adit level.

Geologically, the Cobra Thrust Fault has a strongly sheared upper margin at the base of the altered dolomite, then quickly grades into a massive breccia in the main stope areas (Photo 2). The breccia and upper sheared margin have been mined over a maximum thickness of approximately 9m in the stopes inspected. The base of the breccia and the lower contact of the thrust has not been observed to date adding to a greater potential thickness. The hanging wall altered dolomite is not mineralised except at the margin with the shearing.

Photo 2 Cobra Thrust Fault – upper sheared margin (yellow stained rocks near top of photograph) and main breccia zone below (reddish rocks). Note the collapsed stope in right hand background.



The previously reported surface channel sampling on outcrop near the adit entrance corresponds to the upper sheared margin where results of **3.0m+** @ **1.5%** Cu, **0.6g/t** Au, **317g/t** Ag, **9.9%** Zn, **4.0%** Pb (14.7g/t AuEq<sup>2</sup>) is of similar high grade nature to the samples from the underground sampling (refer to Table 1 below).



The following Table 1 highlights 36 individual samples taken specifically within the Cobra Thrust Fault and subdivided into the sheared margin and the internal breccia. In total 124 samples were taken from the Cobra workings with the remaining samples taken within the altered dolomite which is not considered to host any significant mineralisation except right at the sheared margin.

Sample	Au g/t	Ag g/t	Cu %	Pb %	Zn %	AuEq g/
15RH005	0.65	217	0.2	4.3	0.6	6.25
15RH006	0.32	180	0.4	2.6	0.7	4.97
15RH007	0.22	38	0.2	0.5	1.1	1.83
15RH008	0.24	625	0.1	13.4	0.1	15.40
15RH009	0.09	104	0.0	2.5	0.1	2.79
15RH010	0.28	246	0.0	2.4	0.1	4.75
15RH011	0.21	1030	0.0	4.5	0.2	16.02
15RH012	0.07	18	0.1	1.5	0.7	1.58
15RH013	0.06	22	0.1	1.4	6.3	4.95
15RH015	0.51	183	1.0	3.0	1.4	6.68
15RH016	0.65	381	2.8	2.8	0.6	11.42
15RH017	0.37	89	0.4	1.0	0.2	2.68
15RH018	0.14	51	0.2	0.8	0.2	1.58
15RH019	0.33	184	0.8	3.6	1.0	6.31
15RH020	0.18	1040	2.4	2.1	6.4	21.94
15RH025	0.26	85	1.2	4.6	4.4	8.01
15RH026	0.13	371	1.1	3.5	6.4	12.01
15RH056	0.11	78	0.7	1.5	3.2	4.73
15RH068	0.34	334	0.0	4.8	1.2	7.92
15RH073	1.59	216	0.2	7.2	4.0	10.63
15RH074	0.28	31	0.0	1.4	1.9	2.59
15RH075	1.03	149	0.2	3.4	9.4	10.49
15RH083	0.53	197	0.0	2.6	3.7	6.66
15RH084	0.64	386	0.1	8.1	2.2	11.16
15RH115	0.92	423	1.5	1.1	2.7	10.58
15RH117	0.00	20	0.0	0.1	0.7	0.75
15RH118	0.18	116	0.6	0.7	0.5	3.19
15RH122	0.45	652	0.2	8.9	0.3	13.90
15RH123	0.25	265	1.5	1.5	0.5	6.86
15RH124	0.17	115	0.1	0.5	0.6	2.38
	0.37	262	0.5	3.2	2.0	7.37
	Au g/t	Ag g/t	Cu %	Pb %	Zn %	AuEq g/

## Table 1 Summary of Cobra Thrust Fault sample results

BRECCIA						
Sample	Au g/t	Ag g∕t	Cu %	Pb %	Zn %	AuEq g/t
15RH110	0.68	265	0.6	4.4	13.1	14.96
15RH111	0.21	180	2.2	3.9	4.1	9.98
15RH112	1.42	379	2.7	3.0	1.3	12.43
15RH113	0.10	550	1.8	0.7	1.8	11.30
15RH114	1.79	850	1.5	4.8	4.0	19.77
15RH116	1.61	2130	1.0	7.1	4.4	36.91
	0.97	726	1.6	4.0	4.8	17.56
	Au g/t	Ag g/t	Cu %	Pb %	Zn %	AuEq g/t

AVERAGE GRADE of Shear and Breccia Zones						
	0.67	494	1.1	3.6	3.4	12.46
	Au g/t	Ag g/t	Cu %	Pb %	Zn %	AuEq g/t

Assessment of the sampling results shows the sheared margin is generally clay altered, deformed and well mineralised, with copper oxide minerals occasionally noted along the contact. Photo 3 and 4 show examples of the sheared rocks at the upper sheared margin near the hanging wall altered dolomite. This sheared margin has a variable thickness but generally ranges in the 1-3m range then quickly grades into a relatively massive internal dolomite rich breccia where copper oxide minerals (malachite and azurite) are more common. This breccia zone (Photos 5 and 6) shows a maximum thickness of approximately 6m in the largest of the accessible stopes. The base of the breccia has not been observed however it is anticipated it will grade into another sheared lower margin with the underlying footwall rock units similar to the upper contact.

Importantly, the lower footwall contact of the overall Cobra Thrust Fault has not been observed in either surface outcrop or in the workings and therefore the potential maximum true thickness cannot yet be determined, however is expected to be greater than 9m based on the underground mapping.

Mapping in the vicinity of the adit also suggests additional layer parallel mineralisation occurs in the footwall sediments. The observed mineralisation occurs in a series of small historic workings and shows relatively narrow (<2m) zones of mineralisation however it provides added potential in the longer term.

The Cobra Exploration Target<sup>1</sup> has previously been stated as:

2.5Mt @ 4.5g/t to 14.7g/t AuEq<sup>2</sup> (360,000 to 1,180,000oz AuEqOz)<sup>1</sup>

9.6Mt @ 4.5g/t to 14.7g/t AuEq<sup>2</sup> (1,390,000 to 4,540,000oz AuEqOz)<sup>1</sup>

The original grade range was based on the surface rock chip sampling only and this recent detailed underground sampling now strongly supports the higher range level, with an average grade of 12.46g/t AuEq indicated in the stope sampling (Table 1) including an average grade of 17.56g/t AuEq in the internal breccia zone.

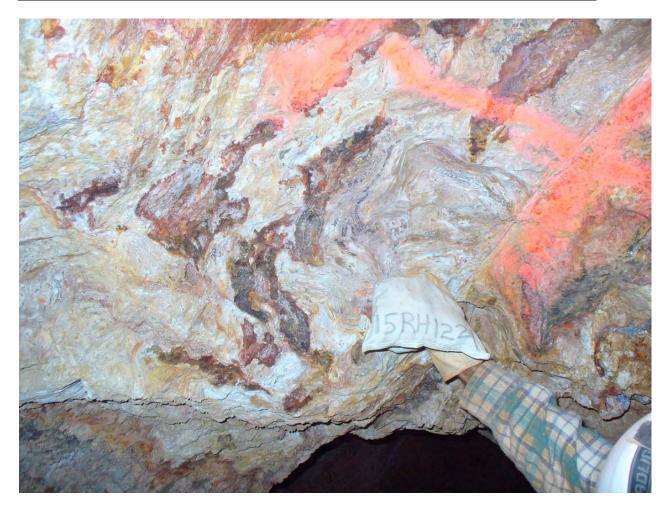
<sup>1</sup> <u>Please note</u> the Exploration Targets referred to in this report are conceptual in nature, where there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. (Refer to Appendix 1 for further information)



## Photo 3 Cobra Thrust Fault – Upper sheared and highly deformed margin

Sample taken over 0.5m length with limonite and goethite development interpreted to represent oxidised sulphides.

Sample	Au g/t	Ag g∕t	Cu %	Pb %	Zn %	AuEq g/t
15RH122	0.45	652	0.2	8.9	0.3	13.90





## Photo 4 Cobra Thrust Fault – Upper sheared margin into breccia at base of photo.

Sample taken over 1m length perpendicular to the sheared rocks, copper oxides noted in sample.

Sample	Au g/t	Ag g∕t	Cu %	Pb %	Zn %	AuEq g/t
15RH115	0.92	423	1.5	1.1	2.7	10.58





## Photo 5 Cobra Thrust Fault – High grade breccia mineralisation beneath sheared margin

Sample taken over 1m length, copper oxides noted in sample.

Sample	Au g/t	Ag g∕t	Cu %	Pb %	Zn %	AuEq g/t
15RH112	1.42	379	2.7	3.0	1.3	12.43





## Photo 6 Cobra Thrust Fault – High grade breccia mineralisation

Sample taken over 1.5m length, copper oxides noted in sample.

Sample	Au g/t	Ag g∕t	Cu %	Pb %	Zn %	AuEq g/t
15RH113	0.10	550	1.8	0.7	1.8	11.30





# **Rattler Workings**

At Rattler, the mapping and sampling programme (37 samples) was successful in greatly improving our 3D geological control on mineralisation and confirming the polymetallic nature (Cu-Au-Ag-Zn-Pb) of the mineralisation hosted in the prospective Rattler Thrust Fault.

Mapping of the workings shows a 158m long southwest orientated access drive perpendicular to the other main access drive. This initial access drive intersects 97m of shallow west dipping sediments and thin limestone beds before the beds are abruptly terminated against a massive 58m thick silica (quartz) unit, probably representing a large silicified fault. A small north-south drive occurs along this sheared fault contact between the quartz and sediments. Within the massive quartz unit is an unexpected oblique drive that has been developed along a highly fractured and ferruginous coated structure within the quartz unit. This drive is 32m long and has been mined on at least one higher level.

The other main access drive occurs at the end of the initial access drive and is orientated northwest where the quartz unit is in sharp contact with a sheared margin grading into a massive limestone rich breccia. The sharp and sheared margin of the breccia contact dips 50° to the west (Photo 7).

Photo 7 Rattler Thrust Fault – Sharp contact between quartz unit (LHS) and sheared margin of limestone breccia (RHS)





This main drive is approximately 60m long and has collapsed in the area of major stoping at the southern end. A large stope, apparently also used as an ore pass from the above workings, occurs towards the southern end of the current drive. This stope is approximately 10m wide and is the largest in any of the historic workings inspected to date. Unfortunately this stope was considered unsafe to sample however sampling on the margins of the stope in the drive is described below and importantly demonstrates the polymetallic nature of the mineralisation similar to the Cobra mineralisation and includes copper not previously considered a potential ore mineral based on surface sampling.

Sampling along the drive immediately adjacent the main stope shows anomalous to strong Cu-Au-Ag-Zn-Pb mineralisation as highlighted below. Peak results include 0.44g/t Au, 129g/t Ag, 0.7% Cu, 1.9% Pb and 1.5% Zn.

BRECCIA						
Sample	Au g/t	Ag g∕t	Cu %	Pb %	Zn %	AuEq g/t
15RH154	0.07	7.6	0.0	0.1	0.1	0.28
15RH155	0.05	19.8	0.0	0.0	0.1	0.45
15RH156	0.02	10	0.0	0.1	0.1	0.24
15RH157	0.12	22.2	0.1	0.2	1.5	1.55
15RH158	0.30	129	0.7	1.9	1.0	4.55
15RH159	0.07	17.1	0.2	0.2	1.5	1.48
15RH160	0.07	13.8	0.0	0.2	0.8	0.81
15RH161	0.44	28.3	0.1	1.7	1.2	2.49

Table 2	Summary	of mineralisation in breccia adjacent main Rattler stope

The Rattler Exploration Target<sup>1</sup> has been previously stated as

## 2.3Mt @ 4.5g/t to 9.2g/t AuEq<sup>2</sup> (330,000 to 680,000oz AuEqOz)<sup>1</sup>

## 9.6Mt @ 4.5g/t to 9.2g/t AuEq<sup>2</sup> (1,390,000 to 2,800,000oz AuEqOz)<sup>1</sup>

<sup>1</sup><u>Please note</u> the Exploration Targets referred to in this report are conceptual in nature, where there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

The original tonnage was based on minimum dimensions of 250m along strike x 7.8m width and 300m vertical depth to a maximum of 400m strike x 20m width x 300m vertical depth (Refer to ASX release dated 16 March 2015 and also Appendix 1 of this report).

The recent mapping shows the main historic workings had stopes to approximately 10m width where accessed, which is lower to midrange and consistent with the conceptual estimate. Mining has occurred over 50 vertical metres as fresh air was flowing from the above workings which also confirms the past mining estimate. Unfortunately the grade of the overall mineralisation has not been confirmed due to safety issues in accessing the main stope for sampling purposes. Of the samples taken on the margin of the stope within the access drive suggest additional copper mineralisation is associated with the highly anomalous to strong Au-Ag-Pb-Zn mineralisation hosted in the shear and breccia.

The grade range is based on detailed continuous surface channel sampling across the Rattler Shear Zone which has yielded continuous outcropping high grade polymetallic Au-Ag-Zn-Pb



mineralisation which was defined as 7.8m+ wide zone grading 0.52g/t Au, 105g/t Ag, 2.6% Zn, 2.8% Pb (4.5g/t AuEq<sup>2</sup>) including 3.5m+ @ 1.1g/t Au, 205g/t Ag, 5.2% Zn, 5.9% Pb (9.2g/t AuEq<sup>2</sup>). Importantly copper was not originally included in the possible ore minerals as it was only considered anomalous in the surface sampling whereas visible copper was noted and reported to a maximum of 0.7% Cu in the underground workings (Photo 8).

Photo 8 Rattler Thrust Fault – Visible copper mineralisation in breccia (malachite – green mineral in lower portion of photo)



# **Tiger Workings**

Two smaller workings were inspected, mapped and sampled (40 samples) at the Tiger prospect area. The geology of these workings consisted of massive limestone breccia with narrow sub-vertical structures controlling the orientation of the workings and mineralisation. The dominant structures are orientated north-south with secondary linking structures orientated at 256 to 274°.

The entire 40 samples set shows elevated silver results ranging from 1.3g/t to a maximum of 33.3g/t and an overall average of 6.5g/t Ag. Only one sample has elevated copper to 0.2% Cu, 5 samples with elevated Pb over 0.1% to a peak of 0.24% Pb and 9 samples above 0.1% Zn to a peak of 1.1% Zn.



Further assessment of this area is required to fully understand the potential of this area as a number of other workings not sampled in this programme show a different style of mineralisation in a "pyrite rich matrix supported breccia".

## For further information contact:

Andrew Beckwith	Peter Taylor
Managing Director	Investor Relations
Carnavale Resources Ltd	NWR Communications
P: 08 9380 9098	P: +61 (0)412 036 231

The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr Andrew Beckwith, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr Beckwith is a Director of Carnavale Resources Limited. Mr Beckwith has 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 Resource and Ore Reserves". Mr Beckwith consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.



#### **Background Information**

### Carnavale Resources (ASX: CAV)

Carnavale Resources Limited is an exploration and development company based in Perth Western Australia, with a focus on the discovery and development of gold and base metal deposits. Carnavale is listed on the Australian Securities Exchange (ASX), ticker symbol [CAV] and on the German Stock Exchange in Frankfurt under YBB.

#### Red Hills, Nevada USA Copper-Gold-Silver-Zinc-Lead Project

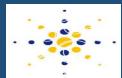
#### (Joint Venture right to earn up to 75%)

The Red Hills Gold-Silver Project, Nevada USA, is considered prospective for large Carlin style goldsilver and also base metals deposits. Nevada is currently the largest gold producing state in the USA, with approximately 80% of the US gold production coming from Nevada with the majority from Carlin style deposits.

Recent new discoveries of Carlin style mineralisation at Long Canyon (2.6<sup>+</sup>Moz and growing) and Kinsley, both occur in eastern Nevada and have the same rock formations as mapped at Red Hills. These major new discoveries are of particular importance as previously these host rocks were considered un-prospective for large scale Carlin style deposits. At Long Canyon, new owner Newmont, has stated they believe the deposit has the potential to grow in excessive of 10M ounces and have recently announced the intention to develop the oxide portion of the deposit. At Kinsley, located approximately 70km to the north of Red Hills, recent drilling has intersected encouraging high grade gold mineralisation (e.g. 36m @ 8.5g/t and 53m @ 7.5g/t) deeper in the same geological sequence.

In 2007, Joint Venture partners Columbus Gold, through Cordex Exploration recognised the potential for Long Canyon style gold mineralisation at Red Hills and staked the area. Recent soil and rock chip sampling by Carnavale has confirmed the presence of extensive areas of elevated to high grade copper, gold, silver, zinc and lead mineralisation and geophysical surveys provide additional support to buried intrusive bodies as potential sources of the mineralised fluids.

Under the Joint Venture, Carnavale has the right to earn up to 75% of the project. Previous exploration is considered to be limited to a number of small trenches on the flanks of the hills presumably for uranium prospecting and to date ten (10) old rotary drill hole locations have been found. No data is known on any of these historical exploration activities.



# Appendix 1

### Note 1 Exploration Targets

Red Hills has previously supported historic underground mining at a number of locations but the most substantial and majority occur at the Rattler, Cobra and Tiger prospect areas. Government reports (USGS) are very limited however the reported production from the Red Hills area is quoted as 229ounces of gold, 35,029ounces of silver, 550 pounds of copper and 789,782 pounds of lead, mined during the period 1908-1918. There is a report which suggests the grade of the lead rich ore was in excess of 20% Pb. However it is assumed this grade and the quoted mine production would have been Pb+Zn combined not just Pb. This high grade lead, (zinc), copper, silver and gold rich ore occurs as outcropping gossans and was mined via shafts and underground stoping and extracted through horizontal adits in the Red Hills area. No detailed mining records have been found to date.

The Rattler and Cobra exploration targets are based on the following:

Rattler Lower range	250m strike x 7.8m width x 300m depth x SG of 4 for massive sulphides = $2.3Mt$
Rattler Upper range	400m strike x 20m width x 300m depth x SG of 4 for massive sulphides = $9.6Mt$
Cobra Lower range	2 shears zones each 400m strike x 4m width x 200m depth x SG of 4 for massive sulphides = 2.5Mt
Cobra Upper range	2 shears zones each 600m strike x 10m width x 200m depth x SG of 4 for massive sulphides = 9.6Mt

Carnavale has undertaken detailed mapping, continuous channel sampling across a portion of the poorly outcropping mineralised shear zones

At Rattler the continuous channel sampling occurred near the entrance to one of the many vertical shafts at Rattler. A number of shafts occur along the Rattler shear zone for approximately 250m strike length and an historic adit is located approximately 50 vertically below the shafts. This horizontal adit was used to extract the ore from the sub-vertical shear zone via typical underground operations of that era (early 1900's).

The detailed channel sampling was undertaken on a nominal 0.5m basis perpendicular to the strike of mineralisation and therefore represents a good approximation of the true width of the ore zone at this point along the shear zone. This width remains open as the sampling stopped due to a lack of outcrop due to scree material on the steep slope. Mineralisation is evident approximately 12m to the east in siliceous rock which is interpreted to represent the eastern silicified margin of the shear. The west margin is not yet defined however another silicified rock outcrop occurs to the west (~10m), suggestive of the shear zone greater than 20m width. Geological mapping indicates the shear zone occurs over approximately 2km strike length however there is strongest development over approximately 500m strike at the Rattler prospect area and this is additionally supported by highly anomalous rock chip samples taken sporadically along the shear zone. The depth of the mineralised system is unknown however based on the elevations of the shafts and the lower extraction adit at least 50 vertical metres has been historically mined at the Rattler mine workings.

Geological and geophysical interpretations suggest a deep (>1.2km) intrusion at depth. This intrusion is considered the source of the mineralising fluids and the shear zones represent the fluid pathways. The estimation depth of 300 vertical metres is considered a realistic (and not overly optimistic) assumption based on the scale of the structures mapped and depth to the intrusion



# CARNAVALE RESOURCES LIMITED 20 May 2015

At Cobra, the mineralisation is hosted in an interpreted flatter west dipping shear zone that bifurcates around a massive highly altered and deformed dolomite unit. Where the shear zone separates into two zones extensive mining and adit development has occurred similar to the Rattler mining area. Channel sampling near the adit has provided a minimum width of 4m. The shear zone and related iron rich alteration is mapped over far wider zones up to 30m wide and 900m in strike length. Additional small workings and shafts occur on narrow high grade massive sulphide zone which are interpreted to represent smaller and narrower splays in the footwall to the major shear and parallel to bedding. This potential has not been included in the Exploration Target calculations.

The density (SG) assumed is equal to 4, based on massive sulphide mineralisation noted and other deposits of a similar nature.

#### Note 2 Gold Equivalence

The Gold Equivalence calculation represents total metal value for each metal, assuming 100% recovery, summed and expressed in equivalent gold grade or ounces. The metal prices used in the calculation being US\$1100/oz Au, US\$5000/t Cu, US\$15/oz Ag, US\$2100/t Zn and US\$1800/t Pb

The Gold Equivalent Formula is

AuEq(g/t) = Au(g/t) + 1.41Cu(%) + 0.013Ag(g/t) + 0.59Zn(%) + 0.51Pb(%)

(Rounding errors may occur.)

# Appendix 2

#### Location of Adits and sample ranges

Adit	Easting (m)	Northing (m)	Elevation(m)	Sample Range
Cobra	727967	4391316	2095	15RH001-124
Rattler	727687	4392249	2175	15RH125-161
Tiger 1	727506	4391923	2218	15RH162-183
Tiger 2	727433	4392173	2209	15RH184-201



#### Table 1 JORC Code, 2012 Edition – Surface sampling details

# 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 (eg cut channels, random chips, or specific special industry standard measurement tools appropriate to the minerals under investigat such as down hole gamma sounds, or handheld XRF instruments, etc). These examples should not be taken as limiting th broad meaning of sampling.</li> <li>Include reference to measures taken to ensisting the properties of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisati that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (et 'reverse circulation drilling was used to obta 1 m samples from which 3 kg was pulverise to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gol that has inherent sampling problems. Unuscommodities or mineralisation types (eg submarine nodules) may warrant disclosure detailed information.</li> </ul>	<ul> <li>1910-20's) underground workings. Sample size was approximately 1.5- 2.5kg.</li> <li>The channel samples were collected from the walls of the workings, measured length rangin from 1 - 1.5metres in either a horizontal or vertical orientation These samples are representative of the rocks at that location over approximately 1mr</li> <li>All Cobra samples are channel samples over 1 1.5m. Rattler and Tiger samples are dominantle composite samples at specific locations generall on a 2m or 5m basis along the working</li> <li>All analytic results have been completed at a industry acceptable commercial laboratory. So samples were dried and pulverized and the analysed for gold using a 30gram charge by fir assay and ICP-AES finish plus 33 multi-element suite by four acid digest and ICP-AES finish.</li> <li>Additional analyses for high grade silver an associated gold are by Fire Assay Fusion, fir assay and gravimetric finish</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, oper hole hammer, rotary air blast, auger, Bangk sonic, etc) and details (eg core diameter, tri or standard tube, depth of diamond tails, fa sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	a, ple
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 recover and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bid may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	ole
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Minera Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevintersections logged.</li> </ul>	<ul> <li>working.</li> <li>Geological description was taken at each sample site together with overall geological mapping.</li> </ul>
Sub-sampling techniques and	<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> </ul>	<ul> <li>No sub-sampling was undertaken</li> <li>Each sample site was marked up on the wall and length measured and located relative to the reference point</li> <li>Sampling was chipped from the walls using</li> </ul>



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Criteria	JORC Code explanation	Commentary
sample preparation	<ul> <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 or 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>	f S
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 of 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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>mineralisation targeted.</li> <li>Reputable independent industry commercial laboratory was utilized for all samples</li> <li>Quality control measures are considered satisfactory for this style of sampling.</li> <li>Laboratory standards and blanks have been</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>All samples are from underground face and wa of workings</li> <li>No drilling undertaken</li> <li>Field data was collected, checked and entered into a digital database in the Perth office</li> <li>Digital independent laboratory assay data was sent to the Perth office, checked and merged with the field data and stored in a digital database</li> <li>No adjustments have been made to the origina laboratory data.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locat 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>All reference points at the entrance are located by hand held GPS to an accuracy of +/- 3m.</li> <li>Locations are recorded in UTM (NAD 27 Zone 11)</li> <li>Distances of workings were measured using a handheld laser measuring device or tape.</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 geologica and grade continuity appropriate for the Mineral Resource and Ore Reserve estimatio procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	programmes.
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</li> </ul>	continuous sampling along the strike length of the



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Criteria	JORC Code explanation	Commentary
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	<ul> <li>sampling within the Cobra stopes is considered to provide a representative sampling of average grade within the stope.</li> <li>The composite sampling in the Rattler and Tiger provides a representative sample but should only be taken as a guide to mineralisation as the sample is not continuous but representative.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples were delivered direct to the independent laboratory by company personnel/consultants.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>Final field and assay data is checked and assessed by geologist in Perth office and on site in the field.</li> <li>Company geologist has reviewed and completed a tour of the laboratory and their systems in Reno, USA.</li> </ul>

# 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>The property is under a joint venture agreement whereby Carnavale has the right to earn an initial 51% via \$2M expenditure within a total of 3 years and may elect to earn an additional 24% (total 75%) via additional \$7M expenditure in a further 4 years. Vendors retain combined 4% net smelter royalty on production, with Carnavale having the right to purchase up to 2% NSR for \$1M per 1%</li> <li>The sample results occur within unpatented claims in Nevada, USA</li> <li>The area is managed by the Bureau of Land Management (BLM), a government body. Future drilling and any mining will require approval from the BLM and other regulatory bodies</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Carnavale and joint venture party Cordex Exploration (and related party Columbus Gold) has completed and reported prior surface soil, rock chip sampling and geophysical surveys.</li> <li>10 historical open hole drill holes have been discovered in the project area, however no record of this work has been discovered to date</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>The deposit style is currently unknown, however mineralization targeted is Carlin style (Au-Ag) and shear zone hosted Au-Ag and base metals.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	<ul> <li>No drilling undertaken</li> <li>All samples are from historic underground workings</li> <li>The location of the historic workings is listed in appendix 2</li> </ul>



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Criteria	JORC Code explanation	Commentary
	<ul> <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>	
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>All assay data is uncut channel or composite rock chip sample results.</li> <li>All results have been reported as individual samples and not listed as aggregate intercept lengths as the working orientation is biased along strike.</li> </ul>
Relationship between mineralisation 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 (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>All samples are from historic underground workings</li> <li>The report describes geological true widths were mapping indicates this is appropriate.</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>Plans of general anomalous regions are provided in report.</li> <li>Photographs of the selected geological rock types and relationships are described in the report where considered appropriate</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>The report provides geological context to the sampling and defines high grade zones, anomalous zones and or non mineralised rock types where geologic mapping is possible.</li> </ul>
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 substances.</li> </ul>	<ul> <li>Geological mapping of the workings has been undertaken and where possible material data is included in the report.</li> <li>Geological control is considered to be substantially improved due to the mapping during this programme.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg 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>Further work is defined in the report and includes proposed diamond drilling to test the mineralised zones / rocktypes further.</li> <li>The proposed drilling aims to test the grade and better define true widths of the known mineralisation.</li> <li>Additional drilling beyond the currently proposed drilling will be required to undertake a resource estimate.</li> </ul>