

vision commitment results



14 May 2015

ASX: PAN

Positive results from Mt Henry Feasibility Study

Key Outcomes (100% Project Basis)

- Maiden Reserve 922,900oz Au (20.2Mt @ 1.42g/t)
- Initial Project life 7.3 years, aggregate production of 865,000oz
- Average annual production ~120,000oz pa
- Average C1 cash cost A\$1,024/oz
- Pre-production capital cost A\$161M
- Robust Project economics cumulative pre-tax free cash flow of **A\$179M** at A\$1,500/oz
- Project NPVs A\$39.6M at A\$1,500/oz, A\$80.2M at A\$1,600/oz and A\$120.7M at A\$1,700/oz

Details

Panoramic Resources Limited ("Panoramic") is pleased to report the results of the recently completed Mt Henry Gold Project Feasibility Study ("MHFS"). Since acquiring a 70% interest in the Project from Matsa Resources Limited ("Matsa") in July 2012, Panoramic has:

- o completed and released a positive Scoping Study (refer to ASX announcement of 18 December 2012);
- o undertaken a significant Resource infill drilling campaign in 2013, which increased the confidence in the Resources; and
- over the last two years, determined and evaluated a development path to maximise the economics of the Project via the delivery of the MHFS.

The MHFS is based on a **Mining Inventory of 21.1Mt @1.41g/t Au containing 961,000oz Au**, with ore sourced from three open pit Resources, Mt Henry, Selene and North Scotia. Approximately 96% of the Mining Inventory is based on the **Probable Ore Reserve estimate of 20.2Mt @1.42g/t Au containing 922,900oz Au**, with mining to be undertaken by conventional open pit mining methods. Ore will be processed on site through a centrally located 3Mtpa conventional Carbon in Leach ("CIL") process plant achieving an average **gold recovery of 90%**. Ore processing will use a three stage crushing circuit, followed by two stage ball milling to achieve a target grind size of P₈₀ 38µm. Key Feasibility Study outcomes of the Mt Henry Gold Project ("MHGP") are detailed in Table 1.





Table 1- Ke	v Outcomes	of the	MHFS	Base	Case	(100%	Basis)
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Item	Base Case (A\$1,500/oz)
Mineral Resources	1.7Moz contained gold at a 0.4g/t cut-off
Mining inventory	21.1Mt @ 1.41g/t Au for 0.96Moz contained gold
Mine life (processing)	7.3 years (at 3Mtpa)
LOM* production	865,000oz Au (average ~120,000ozpa)
Total capital costs	A\$186M (A\$161M pre-production)
Average LOM cash costs (C1)	A\$1,024/oz Au
Average LOM "all-in sustaining costs"	A\$1,106/oz Au
LOM processing recovery	90%
LOM strip ratio	4.2:1
Revenue	A\$1,297M over LOM
EBITDA	A\$366M over LOM
Post-tax cash flow	A\$120M over LOM
Post-tax NPV (8%, real)	A\$39.6M
Payback period	4.6 years from first production
Construction period	16 months; first gold production in Month 17

*LOM – Life of Mine

The financial evaluation of the MHGP open pit Resources is based on generating a mining and processing schedule from detailed pit designs which are based on assumptions of cut-off grade, the application of suitable modifying factors, including commodity, exchange rate and revenue assumptions; estimation of capital and operating (mining, processing and administration) unit costs; metallurgical recovery and geotechnical considerations. Figure 1 shows the Cumulative Net Free Cash Flow (Base Case) of the MHFS over the 103 months of construction and production, followed by a further 12 month closure period.



Figure 1 – MHFS Base Case Cumulative (Real) Net Free Cash Flow





Table 2 shows the MHFS NPV sensitivity to changes in the A\$ gold price.

Table 2 – MHFS NPV Sensitivity to different A\$ Gold Prices

	A\$/oz Gold Price					
	1,500	1,600	1,700	1,800		
NPV (A\$M)	39.6	80.2	120.7	161.3		

Key Assumptions of the MHFS

Financial

- Base Case gold price of A\$1,500/oz (US\$1,200/oz and A\$:\$US0.80).
- No annual escalation applied to revenue or costs.
- Net Present Value estimation is on a post-tax basis using a post-tax real discount rate of 8%.
- Construction time of 16 months, first gold production in Month 17.

Costs

- Pre-production capital cost of A\$161M, including the construction of the Process Plant and associated infrastructure (i.e. access roads, offices, workshop, water supply, accommodation village, tailings storage facility) and pre-production mining costs (i.e. contractor mobilisation and establishment, clearing and top soil conservation, pre-strip).
- Mine operating cost estimates were supplied by a large, well established WA mining contractor, experienced in this type of open pit mining. Excavating, loading, haul, drill and blasting makes up ~93% of the total mining cost base. Mining costs average A\$3.10/tonne of material moved over the life of the Project. The diesel price has been estimated at A\$1.00/litre (after the diesel fuel rebate).
- Processing and administration costs are built up from first principles (labour, reagents and grinding media usage, power cost and consumption, maintenance costs), and average A\$25.68/tonne of ore treated.
- The MHGP will access gas from the Kambalda to Esperance Gas Pipeline ("KEGP"). A take-off valve is located 2.5km from the main processing plant area. It is assumed that power would be supplied by a contract provider under a build own operate transfer ("BOOT") arrangement. The unit cost of power is estimated to be 15.3 cents/kWhr.

Physicals

- Ore is hauled to the process plant ROM pad on a continuous basis using two truck fleets operating in both the Selene and Mt Henry open pits. The feed to the process plant is blended in accordance with the delivery schedule of ore from each open pit. Ore is blended to optimise mill performance and throughput.
- A conventional CIL process plant with 3Mtpa capacity at 94% availability.
- Metallurgical testwork on the three MHGP Resources resulted in a range of gold recoveries from 90-93%. An average gold recovery of 90% has been used in the MHFS.
- The Mining Inventory of 21.1Mt was derived using a combination of *Whittle 4X* analysis and open pit design. Approximately 96% of the mining inventory is sourced from material in the Indicated Resource category. The Mining Inventory includes a small portion of material currently classified in the Inferred Resource category. In the mining schedule, this material only represents ~4% of ore delivered to the processing plant. The mining schedule assumes that ongoing Resource and grade control drilling will increase the confidence on the Inferred material prior to mining. As required by Listing Rule 5.16, it is noted that there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target will be realised.
- While there is currently no infrastructure at the site, the Project is only 20km from Norseman and ~190km from Kalgoorlie. This region has significant resources of skilled labour, infrastructure and mining services.
- A paleo-channel borefield has been identified immediately west of the proposed process plant. It is of sufficient size and quality to satisfy the water requirements of the process plant over the estimated life of the Project. A potable water supply is available in the town of Norseman.





Other Relevant Information

Location and Tenure

The MHGP is located 700km east of Perth and 20km south of Norseman in Western Australia (*Figure 2*). The Project area straddles the sealed Goldfields to Esperance Highway, linking the Goldfields town of Kalgoorlie to the port town of Esperance on the south coast of Western Australia. The Project is located entirely on vacant crown land, within the Shire of Dundas. The MHGP Resources are located immediately to the west of the northern arm of Lake Dundas. Lake Dundas is a large salt lake typical of the WA Eastern Goldfields region.



Figure 2 – MHGP Location

The entire MHGP, including exploration areas, covers an area of approximately 53 km². The MHGP open pits are on granted Mining Leases, M63/515 and M63/516. The land designated for the process plant and some other infrastructure is subject to the granting of a General Purpose Lease and Miscellaneous Licences. A tenement swap with a local mining company is in progress in order to increase the area for the placement of waste west of Mt Henry open pit. Once this transaction has been completed, the area will also be the subject of a General Purpose Lease Application.





Figure 3 – MHGP Tenements







The MHGP falls within an area in respect of which the Federal Court has made a formal Determination of native title held by the Ngadju People. A Mining Agreement between Matsa, the Ngadju People and Goldfields Land and Sea Council Aboriginal Corporation was signed in June 2010 and covers the MHGP Mining Leases.

Geology and Mineralisation

The MHGP is located at the southern end of the Wiluna-Norseman Greenstone belt of the WA Eastern Goldfields. Whilst the greenstone rocks from the Norseman region can be broadly correlated with those of the Kalgoorlie-Kambalda region, they form a distinct lithology which is bounded on all sides by major regional shears.

The Mt Henry lode is an elongated ore body that is 1.9km long, 6-10 metres wide and dips 65-75 degrees towards the west (*Figure 4*). The host rock is predominantly a banded iron formation ("BIF") with minor meta-basalts and dolerites. Sulphide minerals range from trace to 10%. The predominant sulphide is pyrrhotite with minor pyrite, arsenopyrite, chalcopyrite and marcasite.

The host rock of the Selene Resource is also a BIF which is intruded by numerous dolerite sills. The footwall contact is characterised by metamorphic sedimentary schist and the hanging wall by the overlying dolerites of the Woolyeener Formation. The Selene deposit extends for 1.3km along strike and extends 550 metres down-dip at a shallow angle of around 20 degrees. The lode thickens in the central part of the deposit up to a true thickness of 35 to 40 metres (*Figure 5*).

The North Scotia Resource covers a strike length of 600 metres within Achaean mafic rocks of the Woolyeenyer Formation. The Woolyeenyer Formation is host to the auriferous quartz veins that have been mined in the Norseman district for 80 years. Gold mineralisation is hosted by laminated quartz veins that dip at around 70° towards the west. Sulphides present include pyrite and galena (*Figure 6*).



Figure 4 - Mt Henry Cross-Section @ 9350N







Figure 5 – Selene Cross-Section @ 5000N



Figure 6 – North Scotia Cross-Section @ 3200N





Resources

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The MHGP Mineral Resources have previously been reported in compliance with the 2012 JORC Code (*refer to ASX announcement of 30 September 2014*). On a 100% project basis, the MHGP Mineral Resources total 43.2Mt @ 1.19g/t Au for 1.66Moz contained gold, at a 0.40g/t Au cut-off grade (*Table 3*). Table 4 details the Mt Henry and Selene Resources reported at a cut-off grade of 0.6g/t and 1.0g/t respectively. The Mt Henry, Selene and North Scotia Resources remain open at depth.

	Indicated		Inferred		Total		
Deposit	Tonnes ('000)	Au (g/t)	Tonnes ('000)	Au (g/t)	Tonnes ('000)	Au (g/t)	Ounces ('000)
Mt Henry	14,982	1.27	6,335	1.14	21,317	1.23	843
Selene	16,415	1.17	4,952	0.93	21,367	1.11	769
North Scotia	358	3.11	138	1.95	495	2.79	44
Total	31,755	1.24	11,425	1.06	43,180	1.19	1,656

Table 3 – MHGP Mineral Resource Summary on 100% Basis (0.40g/t Au cut-off grade)

Table A - MHCP Mineral Pesource Summar	v on 100% Rasis	(0.60a/t Au and 1.0	alt Au cut-off	vrada)
Table 4 – WITGP WIIIeral Resource Sullillar	y 011 100% Dasis	(0.00g/LAU and 1.0	g/i Au cui-on g	jraue)

Cut-off		Indicated		Inferred		Total		
Grade (g/t Au)	Deposit	Tonnes ('000)	Au (g/t)	Tonnes ('000)	Au (g/t)	Tonnes ('000)	Au (g/t)	Ounces ('000)
0.6	Mt Henry	12,545	1.39	5,128	1.23	17,673	1.34	761
	Selene	12,282	1.36	3,190	1.10	15,473	1.31	652
	Total	24,827	1.38	8,318	1.18	33,146	1.33	1,413
1.0	Mt Henry	6,269	1.81	3,164	1.65	9,434	1.76	533
	Selene	8,592	1.61	2,358	1.31	10,950	1.55	546
	Total	14,861	1.69	5,522	1.50	20,384	1.65	1,079

Mining and Reserves

The mine designs and mining schedules in the MHFS are based on 2012 JORC compliant Indicated and Inferred Mineral Resources for the Mt Henry, Selene and North Scotia ore bodies (*refer Appendix 1 and Appendix 2*). The Mt Henry and Selene modelling optimisations were based on Resources reported at a 0.6g/t Au cut-off grade. Mining is based on production from the three open pits, using contract mining. The pit designs will be staged to optimise the delivery of ore to the process plant run-of-mine ore pad.

A Probable Reserve of 922,900oz of contained gold is reported for the project in Table 5, on a 100% project basis. Further relevant disclosures are detailed in Appendix 1 and Appendix 3. It is noted that Panoramic's equity share of the Ore Reserves is 70%.

Table 5 – M	HGP Probable	Reserve Su	ımmary (100%	Basis)
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	Pro	Proven Probable		Total		Motal	
Reserve	Tonnes	Au (g/t)	Tonnes ('000)	Au (g/t)	Tonnes ('000)	Au (g/t)	(Au oz)
Selene	-	-	11,545	1.37	11,545	1.37	508,500
Mt Henry	-	-	8,496	1.45	8,496	1.45	395,500
North Scotia	-	-	179	3.30	179	3.30	18,900
Total	-	-	20,220	1.42	20,220	1.42	922,900

The average life of mine stripping ratio across all the open pits is 4.2 to 1 (waste to ore ratio). Conceptual pit shells were optimised at a gold price of A\$1,470/oz (Mt Henry and Selene) and A\$1,400/oz (North Scotia) using the *Whittle* software. A breakdown of the open pit Mining Inventory is shown in Table 6. Figures 7, 8 and 9 illustrate the design and waste dump layouts for the three open pits.





Waste Management

The footwall of both the Mt Henry and Selene deposits is non-mineralised BIF, which is classified as potentially acid forming ("PAF"). The North Scotia deposit has no PAF material. The mining schedules are designed to ensure that all PAF waste is progressively encapsulated as it is mined. Figure 7 shows the Mt Henry open pit and waste dumps and Figure 8 shows the Selene open pit, waste dumps and the process plant tailings dam as an integrated waste landform combining encapsulation of the PAF waste with thickened tailings surrounded by NAF waste rock. Figure 9 shows the North Scotia open pit.

Resource	Tonnes ('000)	Mined Grade (g/t Au)	Contained Metal (Au oz)
Selene	11,997	1.37	528,000
Mt Henry	8,965	1.44	415,000
North Scotia	179	3.29	18,000
Total	21,141	1.41	961,000

Table 6 – MHGP Mining Inventory Summary (100% Basis)



Figure 7 - Mt Henry Open Pit





Figure 8 – Selene Open Pit



Figure 9 – North Scotia Open Pit



Mining commences in Month 10 in the Selene open pit and a stockpile is built to allow the plant to be commissioned in Month 17 at 25% of its designed production rate (3Mtpa) and ramping up to 100% by Month 20. Total ore and waste mined increases to a maximum of ~600K BCM per month as shown in Figures 10 and 11.





Figure 10 – MHGP Ore Production and Grade



Figure 11 – MHGP BCM movement



Processing

An extensive metallurgical testwork program based on a range of core samples obtained from the 2013 drilling program was undertaken for the MHFS. Previous work by GR Engineering Services Ltd ("GR") and others had indicated that the BIF ore was very competent. MHGP test work indicated ore would have Bond Ball Mill Work Indices in the range of 13.7-19.4kWhr/t and unconfined compressive strength ("UCS") measurements in the range of 112-412Mpa for both Mt Henry and Selene ore. Recovery is related to grind size with recovery improving as grind size is reduced.





CPC Engineering and Project Design ("CPC") estimated the capital and operating costs for a conventional 3Mtpa whole ore grind CIL flowsheet consisting of:

- Three stage crushing of coarse run of mine ore to P₈₀ 10mm.
- Grinding circuit consisting of two large ball mills in series (each with installed power of 6300kW) with target primary grind size of P₈₀ 38μm.
- Dual Knelson gravity gold concentrators to ensure the maximum amount of gravity gold is recovered prior to the leaching circuit.
- Leaching and adsorption tanks providing pre-oxidation and a leaching time of 48 hours to maximise recovery.
- Thickening via a high rate above ground thickener to ensure maximum process water recovery ahead of the tailings storage facility ("TSF") and hence minimise additional reagents required for make-up raw water from the borefield
- Tailings disposal to TSF.
- Gold recovery to dore via Zadra style stripping circuit combined with atmospheric electrowinning.
- Reagent mixing.

Extractive testwork results confirmed that at a 38µm grind, recoveries would be in the range of 90-93%. An average recovery of 90% has been used in the MHFS.

Capital Costs

Pre-development capital is estimated at A\$161M out of a total capital cost of A\$187M. Sustaining and closure capital costs over the mine life are estimated at A\$26M. Infrastructure includes roads, fuel farm, administration buildings, water storage, laboratory, workshop, borefield, accommodation village and mobile equipment. A summary of the MHFS capital cost estimates are shown in Table 7.

Item	Pre-production Capital (A\$M)	Sustaining Closure (A\$M)	Total (A\$M)
Mining	16	1	17
Processing plant	105	-	105
Processing infrastructure	20	-	20
Tailings facility	3	-	3
Mobile equipment	1	1	2
Accommodation Village	10	-	10
Owners Costs (during construction)	6	-	6
Sustaining	-	6	6
Closure	-	18	18
Total	161	26	187

1 apre 1 – Willes Capital Cost Sullillary (10070 Dasis)	Table 7 – MHFS Ca	pital Cost Summarv	(100% Basis)
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Panoramic believes that, due to the current market conditions within the WA resources sector, significant capital cost reductions may be possible, especially under competitive tender. No contingency has been applied to the capital costs, however the estimates are viewed as conservative.

Operating Costs

Open pit mining costs were based on estimates provided by a large established WA based mining contractor, after reviewing the proposed production schedules and rock property information (specific gravity, hardness and abrasion). Mining is based on conventional drill and blast on 5m and 10m benches with a combination of 200t and 100t excavators loading 100t capacity dump trucks. Ore is directly trucked to the ROM pad. Under a competitive bid situation, Panoramic would expect final mining rates to be lower.





Process plant operating costs (reagents, grinding media, labour and power) were estimated by CPC. The Project is adjacent to the Kambalda to Esperance Gas Pipeline and discussions with the pipeline operator and investigation of the WA gas market indicate that sufficient gas will be available to generate power for the site. Processing costs are impacted by the work indices (hardness) of the ore and the quality of the bore field water for processing. A summary of the MHFS operating cost estimates is shown in Table 8.

Item	Total Cost (A\$M)	A\$/t ore
Total Mining (Contractor, MHGM salaries and Grade Control)	343	16
Processing	510	24
General and Administrative	33	2
Total	886	42

Table 8 – MHFS Operating Cost Summary

The MHFS achieves a C1 operating cost of A\$1,024/oz Au and an "all in sustaining cost" ("AISC") of A\$1,106/oz Au. Both measures are similar as all waste mined once processing commences is treated as an operating expense and minimal sustaining capital is required.

Panoramic believes that, due to the current market conditions within the WA resources sector, significant operating cost reductions may be possible. No contingency has been applied to the operating costs, however the estimates are conservative.

Environmental Studies and Permitting

News Release

A broad range of baseline studies has been undertaken to ensure that any potential impacts of the MHGP on the environment are minimised and can be effectively managed through good planning. Studies undertaken include (but are not limited to) flora and vegetation mapping, fauna (terrestrial, invertebrate and aquatic), waste characterisation of waste rock and tailings, groundwater studies (hydrogeology setting of the open pits, pit lake formation), design of a TSF and assessment of impacts of developing a groundwater supply. Additional studies included European and Aboriginal Heritage. Based on these studies, no material environmental issues have been identified.

A range of stakeholder consultation has been undertaken including the Department of Mines and Petroleum (DMP), Department of Environmental Regulation (DER), Department of Water (DoW) and the Shire of Dundas. The objective of site planning and scheduling is to ensure that all landforms are stable and non-polluting in the long term and that the risks of acid rock drainage are minimised.

A Mining Proposal is being prepared for submission to the DMP. Following a decision to mine, additional approvals will be required including, but not limited to, Works Approval from the DER, a license to take water and a licence to construct water bores.

Key Risks Cautionary Statements

A number of key risks have been identified that may impact (either positively or negatively) on the economics of the MHGP. These risks include, but are not limited to:

- US\$ Gold price and A\$:US\$ FX rate.
- Capital and operating costs.
- Processing optimisation and recoveries.
- Project financing.
- Regulatory approvals.

<u>Next Steps</u>

Panoramic is pleased and that the MHFS Base Case demonstrates a robust Project. The Company has already received indicative terms sheets from two Australian banks for debt financing of the project. These indicative term sheets indicate that a significant portion of the Project's development cost could be debt funded.

While the Joint Venture could proceed to financing and development of Mt Henry, the Company is exploring alternatives to maximise value for shareholders which could involve an IPO or trade sale and is making preparations in this regard.





MHGP Resource and Reserve Material Information Summary

In accordance with the ASX Listing Rules, a fair and balanced representation of the information provided in Appendix 1 must also be presented in the body of the ASX announcement. That representation follows. This information applies only to the MHGP where a material change has occurred with the release of the maiden MHGP Ore Reserve. For completeness, a summary of each of the supporting Resource and Reserve disclosures is included in Appendix 2 and Appendix 3.

Sampling and Assaying

The deposits have been extensively sampled using Reverse Circulation (RC) and Diamond drilling (DD) techniques, and the drill grid spacing over the extent of the mineralisation is approximately 25m x 25m for Mt Henry, 40m x 40m for Selene and 20m x 20m for North Scotia. RC holes were sampled by collecting 1m samples and splitting then down using either on-board rig or manual riffle splitters to produce an assay sample of ~3kg size. Diamond holes are typically NQ2 (NQ for some historical holes) & occasionally HQ size and were sampled by cutting the core in half or quarter for the HQ core over geologically logged intervals between 20cm and 1m in length. Samples assayed by Panoramic have utilised the Fire Assay technique.

Geology and Geological Interpretation

There is a strong geological control to the mineralisation and interpretation at Mt Henry and Selene. The deposits are essentially strata hosted within a sheared Banded Iron Formation (BIF). The shear is essentially contiguous along the upper contact of the BIF and an overlying mafic unit. There is some interpreted supergene mineralisation in the northern extents of the deposit that is controlled by weathering horizons and typically cross cuts stratigraphy at shallow levels. The geological and grade continuity is strata controlled, there are series of late pegmatites that cross cut mineralisation and lithology. These pegmatites are generally unmineralised and have been modelled into the resource with a background grade of 0.1g/t Au.

Database

Logging was completed in logging code protected *MS Excel* templates and loaded into Panoramic's *SQL Server database* for validation and storage. Geological and assay information was printed on hard copy plans and visually validated against original logs and assay results to ensure the digital copy agrees with the original format. Data validation was completed internally in SQL Server by setting allowable and expected values. For Resource estimation a subset of the *SQL Server database*, restricting the data to the Mt Henry Resource area was exported into an *MS Access* database.

Estimation methodology

Grade estimation was completed using Ordinary Kriging (OK) in *Surpac™* software. Variogram analysis and modelling was completed using *Supervisor* software. Two metre composites were generated from the drill hole database and then tagged according to mineralised wireframes generated at a 0.4g/t Au lower grade. The wireframe modelling conditions included a minimum downhole mineralisation width of 2m; internal dilution of up to 3m could be included if the entire intercept graded above 0.4 g/t Au. If dilution was greater than 3m then separate lodes were generated if geological/grade continuity was supported by nearby holes. Variogram models generated confirmed geological stratigraphy as the key controlling factor on mineralisation.

Cut-off Grade

The mineralisation wireframes for Resources were modelled on a gold lower grade cut-off of 0.4g/t Au. This value was determined by visual assessment of grade continuity in $Surpac^{TM}$. Models were also generated at 0.6 g/t and 1.0g/t Au cut-off grades for comparison. Cut-off grades applied to the Ore Reserves reflect the marginal breakeven cost of ore production based on the planned throughput rate and processing cost and recovery parameters determined by the Feasibility Study. A value of 0.7g/t was used for Mt Henry and Selene. A value of 0.4g/t was used for North Scotia.

Mining Assumptions

The deposits all outcrop and will be mined as open pits. Open pits have been optimised using *Whittle 4X* software and all inputs were based on detailed studies. Excavation is by conventional dump truck and hydraulic excavator. Bench heights will vary from 5 to 10m. Overall pit slopes vary from 45 -55 degrees. Most of the pit wall exposures are in fresh, competent rock. At Selene and Mt Henry, mining dilution of 5% at a diluent grade of 0.5g/t has been included. No mining loss has been assumed. At North Scotia, 10% dilution at zero grade has been applied with no ore loss. Inferred Mineral Resource was included in pit optimisation and is reported in the Mining Inventory (4.4% of total) but is excluded from the Ore Reserve estimate.





Metallurgical Assumptions

A standard Carbon in Leach ("CIL") flowsheet for gold extraction is proposed to treat the ores of the Project. The flowsheet is designed to treated 3Mtpa and will consist of three stage crushing followed by whole ore grind to a target size of p80=38 µm. The process is well tested and extensively used throughout the industry. Metallurgical testwork was completed on representative samples from the three deposits. Samples were from a range of locations across the deposits. Metallurgical testwork consisted of determining a range of standard comminution factors such as UCS, abrasion index, Bond Rod and Ball Mill Work Indexes. Recovery (gravity plus leaching) varies slightly across the three deposits ranging from 90-93%. An average recovery of 90% has been used as the majority of the ore to be treated is primary in nature.

Revenue factors

Head grade is determined by the mining sequence and reflects the spatial variation within and between the three deposits. Costs are based on current quotations, designs and proposals and have been assumed to be constant for the life of mine (LOM). A gold price of A\$1,500/oz has been used to report Reserves and economic outcomes of the MHFS. The price has been derived by reviewing a range of bank and broker forecasts for the US\$ gold price and A\$:US\$ exchange rate.

Classification

The MHGP Probable Ore Reserve is based entirely on the MHGP Indicated Mineral Resource lying within the pit designs with appropriate modifying factors applied.

Disclaimer and Cautionary Statement

All statements other than those of historical facts included in this announcement are "forward-looking statements". Where the Company expresses or implies an expectation or belief as to the future events or results, such expectation or belief is expressed in good faith and believed to have reasonable basis. However, forward-looking statements are subject to risk, uncertainties and other factors, which could cause actual results to differ materially from future results express, projected or implied by such forward-looking statements. Such risks include, but are not limited to Resource risk, gold and other metals price volatility, currency fluctuations, increased production costs and variance to ore grade or recovery rates from those assumed mining plans, as well as political and operational risk and governmental regulation and judicial outcomes. Readers should not place undue reliance on forward looking information. The Company does not undertake to update forward looking information, except in accordance with applicable securities laws.

About the Company

Panoramic Resources Limited (ASX code: PAN) is a Western Australian mining company formed in 2001 for the purpose of developing the Savannah Nickel Project in the East Kimberley. Panoramic successfully commissioned the \$65 million Savannah Project in late 2004 and then in 2005 purchased and restarted the Lanfranchi Nickel Project, near Kambalda. In FY2014, the Company produced a record 22,256t contained nickel and is forecasting to produce approximately 19,500t contained nickel in FY2015.

Following the successful development of the nickel projects, the Company diversified its resource base to include gold and platinum group metals (PGM). The Gold Division consists of the Gidgee Project located near Wiluna and the Mt Henry Project (70% interest), near Norseman. Both projects are currently under feasibility study. The PGM Division consists of the Panton Project, located 60km south of the Savannah Project and the Thunder Bay North Project in Northern Ontario, Canada.

Panoramic has been a consistent dividend payer and has paid out a total of \$111 million in fully franked dividends since 2008. At 31 March 2015, Panoramic had \$61 million in cash, no bank debt and employed approximately 400 people.

The Company's vision is to broaden its exploration and production base, with the aim of becoming a major, diversified mining company in the S&P/ASX 100 Index. The growth path will include developing existing resources, discovering new ore bodies, acquiring additional projects and is being led by an experienced exploration-to-production team with a proven track record.

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Appendix 1 – MHGP Resource, Reserve Tables and Competent Persons Statement

It is noted that the following Resource and Reserve tables are reported on a 70% equity basis, which reflects Panoramic's underlying ownership.

	Fauity		Data of	IOPC	Measured		Indicated		Inferred		Total		Metal
Resource	(%)	Metal	Resource	Compliance	Tonnes	Au (g/t)	Tonnes	Au (g/t)	Tonnes	Au (g/t)	Tonnes	Au (g/t)	(Au oz)
Mt Henry Project	70	Gold											
Selene			Jul-13	2012	-	-	11,491,000	1.17	3,466,000	0.93	14,957,000	1.11	535,900
Mt Henry			Jul-13	2012	-	-	10,487,000	1.27	4,435,000	1.14	14,922,000	1.23	590,800
North Scotia			Jul-13	2012	-	-	250,000	3.11	97,000	1.95	347,000	2.79	31,100
Total (Equity)		Gold			-	-	37,461,000	1.67	10,683,000	1.37	48,144,000	1.60	2,483,100

The Mt Henry Gold Project ("MHGP") Resources are reported on a 0.4g/t Au cut-off grade

The information in this report that relates to the MHGP Mineral Resources is based on information compiled by or reviewed by Andrew Bewsher (MAusIMM). Andrew Bewsher is a full time employee of BM Geological Services and has sufficient experience that 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 JORC Code. Mr Bewsher consents to the inclusion in the report of the matters based on this information in the form and context in which it appears

	Fauity		Date of	IORC	Proven		Probable		Total		Metal
Reserve	(%)	Metal	Reserve	Compliance	Tonnes	Au (g/t)	Tonnes	Au (g/t)	Tonnes	Au (g/t)	(Au oz)
Mt Henry Project	70	Gold									
Selene			May 2015	2012	-	-	8,081,500	1.37	8,081,500	1.37	355,950
Mt Henry			May 2015	2012	-	-	5,947,200	1.45	5,947,200	1.45	276,850
North Scotia			May 2015	2012	-	-	125,300	3.30	125,300	3.30	13,230
Total (Equity)		Gold			-	•	14,154,000	1.42	14,154,000	1.42	646,030

A cut-off grade value of 0.7g/t Au was used for Mt Henry and Selene and 0.6g/t Au for North Scotia.

Information in this release relating to MHGP Ore Reserves has been completed by or reviewed by Christopher Williams (MAusIMM). Mr Williams is a full-time employee of Panoramic Resources Limited and is an indirect shareholder of Panoramic and Matsa Resources. Mr Williams also holds performance rights in relation to Panoramic Resources Limited. Mr Williams has sufficient experience that 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 JORC Code. Mr Williams consents to the inclusion in the release of the matters based on his information in the form and context in which it appears

Appendix 2 – 2012 JORC Resource Disclosures

Mt Henry Resource

Mt Henry Resource - Table 1, Section 1 - Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	 The deposit has been extensively sampled using Reverse Circulation (RC) and Diamond drilling (DD) techniques. The Mt Henry (MH) resource database subset contains 688 RC & DD holes for a total of 55,428m. Of this total 44 RC & DD holes totalling 6,522m were drill in 2013 by Panoramic as part of a Project feasibility study. In addition the database contains 221 RAB & Aircore holes (totalling 2,607m) which have not been used for resource estimation. The grid drill spacing is typically 25m * 25m over the







Criteria		JORC Code explanation		Commentary
	•	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	•	extent of the mineralisation. RC holes were sampled by collecting 1m samples and splitting then down using either on-board rig or manual riffle splitters to produce an assay sample of ~3kg size. Diamond holes are typically NQ2 (NQ for some historical holes) & occasionally HQ size and were sampled by cutting the core in half or quarter for the HQ core over geologically logged intervals between 20cm and 1m in length. All (2,793) recent Panoramic resource assay samples were submitted to SGS Laboratories in Perth for gold analysis by FA50 (Fire Assay) technique. Of the 36,028 historical RC & DD gold assays in the database, 841 (2.3%) have an unrecorded technique or are by a technique other than Fire Assay. In addition results for 2,744 (7.1%) QAQC samples are recorded in the database.
Drilling techniques	•	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	•	The drilling methods used on this deposit are predominantly RC and DD drilling. The RC drilling was typically completed using 5 ¼ inch hammers and recently 5 ¼ inch face sampling hammers. The DD drilling was typically NQ (47.6mm), and more recently NQ2 (50mm) and HQ (63.5mm) diameter core HQ size core was typically drilled as geotechnical holes from surface by Panoramic.
Drill sample recovery	•	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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.	•	RC sample recoveries were monitored by Panoramic by recording visual estimates of the sample bags prior to sampling. Typical recoveries for RC were greater than 90%. Core recovery is noted during drilling and geological logging processes as a percentage recovered vs. expected drill length. Core was reconstructed into continuous runs on a length of angle iron to enable accurate geological logging and estimation of core recovery. Core recovery is typically 100 percent. No apparent relationships were noted in relation to sample recovery and grade.
Logging	•	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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	•	All drill holes in the MH resource database subset have been geologically logged. Both chip and core samples in recent Panoramic drill holes have been logged using geological legends at detail to support geological confidence in Mineral Resource estimates. Logging details lithology, weathering, oxidation, veining, mineralisation and structural features where noted in drill core. All mineralised drill intersections and associated samples have been logged in full.
Sub-sampling techniques and sample preparation	•	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	•	Both historical NQ and recent NQ2 core was typically sawn in half and half core sampled. Recent HQ geotechnical core was quarter core sampled where mineralised. Core sample lengths typically varied between 0.2 and 1.0 metre. The standard RC sample length is 1 metre with samples collected directly from the rig cyclone system. The individual 1m RC samples are then reduced to a 3-5kg assay sample by either automated on-board rig splitters
	•	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	•	or manually by riffle splitting. The sample preparation process for all samples submitted for analysis follow accepted industry standards, including oven drying sample for a minimum of 8 hours, crushing and pulverising to 85% passing 75 microns.





Criteria		JORC Code explanation		Commentary
	•	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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.	•	Quality control procedures have included the insertion of standards, blanks and duplicates to monitor the sampling and analytical process.
	•	Whether sample sizes are appropriate to the grain size of the material being sampled.	•	The sample sizes used are accepted industry standard sizes used extensively throughout the goldfields and are appropriate for the style of deposit.
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.	•	The standard analytical technique used is Fire Assay, mostly by AAS finished. Of the 38,821 RC & DD Au assays in the MH resource database subset, 841 historical assays (2.2%) do not have a recorded technique or are by technique other than Fire Assay. Where non gold analyses exist they are either by AAS or ICP OES determination.
	•	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.	•	No other geophysical or analytical tools have been used to estimate grade.
	•	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.	•	QAQC has been completed routinely during all sampling throughout the life of the Project; though less so historically than more recently. The QAQC results indicate that the RC and DD assays being used for resource estimation are a fair representation of the material that has been sampled.
Verification of sampling and assaying	•	The verification of significant intersections by either independent or alternative company personnel.	•	The deposit is very continuous in terms of mineralisation and grade intercepts. The continuity and consistency of the grade intercepts in section and along strike provides strong confidence in the verification of the grade and style of deposit. The similarity and consistency of intersections reported by past Project owners over many years is further verification of the reliability of the data.
	•	The use of twinned holes.	•	No recent twin holes were completed. Historical twin holes verified mineralisation continuity. In-fill verification holes were completed by Panoramic to test both geological and mineralisation continuity on selected sections. In each instance the expected geological and mineralogical interpretation was confirmed and no major discrepancies were identified.
	•	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	•	Logging was completed in logging code protected MS Excel templates on laptops and then imported into the Project SQL database for validation. Sections were then generated and visual validation completed to ensure integrity of the data.
l anotion of date	•	Discuss any adjustment to assay data.	•	INO adjustments were made to assay data.
points	•	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	•	All recent drill collars and where possible historical drill collars have been accurately located by differential GPS. A range of down-hole survey instruments, including single shot, electronic multi-shot and gyroscopic tools have been used. Gyroscopic surveys undertaken by Panoramic and previous companies demonstrate that holes do not deviate significantly from design.
	•	Specification of the grid system used.	•	The MH drill hole database contains local, AMG and MGA coordinates. The resource has been estimated in local grid which is rotated +1.079 degrees from MGA GDA94 zone 51. Conversion from local grid to AMG AGD84 zone 51 is based on a two point transformation: 5000E, 14000N = 385844.34E, 6421899.31N 5000E, 6400N = 385701.32E, 6414302.52N
	•	Quality and adequacy of topographic control.	•	Fugro 2.5m topographic contour data was the primary topographical control. In places this was modified by





Criteria	JORC Code explanation	Commentary
		differential GPS height data.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. 	 The drilling density is on a nominal 25m by 25m spacing through the majority of the deposit. This spacing is sufficient to provide strong geological and mineralogical confidence in the style of deposit being estimated.
	Whether sample compositing has been applied.	 As a general rule sample compositing has not be used. Sample compositing of RC precollars outside the main mineralised zone was undertaken at times.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 Virtually all drilling has been completed perpendicular to the main strike of the deposit geometry and angled to best intercept the west dipping mineralisation. No sampling bias is apparent from the direction of drilling.
Sample security	The measures taken to ensure sample security.	 Little is known about the sample security practices adopted by previous companies. Panoramic samples were freighted in sealed bulka-bags direct from site to the SGS Laboratory in Perth.
Audits or reviews	 The results of any audits or reviews of sampling techniques and data. 	 No audits or review of the Panoramic sampling procedures and protocols has been completed.

Mt Henry Resource – Table 1, Section 3 - Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. 	 Logging was completed in logging code protected MS Excel templates and loaded into Panoramic's SQL Server database, with a "Datashed" software frontend, for validation and storage. Geological and assay information was printed on hard copy plans and visually validated against original logs and assay results to ensure the digital copy agrees with the original format.
	Data validation procedures used.	 Data validation was completed internally in SQL Server by setting allowable and expected values. Automated queries are run as the data is imported to ensure it meets specified criteria. For resource estimation a subset of the SQL database, restricting the data to the Mt Henry Resource area was exported into an MS Access database. Additional data checks were run to ensure appropriate data robustness for the Resource Estimation.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	 No site visits were completed by BMGS. Panoramic staff managed the 2013 drilling program and were integral in the development of the geological and mineralisation models.
	 If no site visits have been undertaken indicate why this is the case. 	 Site visits were not required as the documented procedures on the recent drilling were deemed appropriate for the style of deposit and the historical drilling had been previously covered in a report released under JORC 2004 guidelines.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	• There is high confidence in the geological understanding of the deposit. There is a strong relationship between grade and a particular stratigraphical unit. The gold mineralisation is of a consistent grade and 2m composites generated of the mineralised zone showed a very good coefficient of variation (<1.5 using a 0.4g/t grade shell envelope)
	 Nature of the data used and of any assumptions made. 	 The data used for the resource estimate was from RC and diamond drilling. Raw assays, typically representing a 1m sample length, were composited to 2m to provide equal sample weights and reduce grade variance.
	The effect, if any, of alternative interpretations on Mineral	 Three separate mineralised envelopes were considered;





Criteria	JORC Code explanation	Commentary
	 Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. 	 grade shells at 0.4, 0.6 and 1.0g/t Au were developed and respective estimates run for each grade shell. It was established through validation of the models that the 0.4g/t Au model was the most representative of grade expected in the mining environment There is a strong geological control to the mineralisation interpretation. The deposit is essentially strata hosted within a sheared Banded Iron Formation (BIF). The shear is essentially contiguous along the upper contact of the BIF and an overlying mafic unit. There is some interpreted supergene mineralisation in the northern extents of the deposit that is controlled by weathering horizons and typically cross cuts stratigraphy at shallow levels.
	 The factors affecting continuity both of grade and geology. 	 The geological and grade continuity is strata controlled, there are series of late pegmatites that cross cut mineralisation and lithology. These pegmatites are generally unmineralised and have been modelled into the resource as background 0.1g/t gold grade.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	 The Mt Henry mineralised domain is approximately 2km long and has a down dip extent of 280m and is open at depth. The deposit consists of a main lode that varies between 3m and 40m thick with numerous parallel lodes at various stages along the length of the deposit.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	 Grade estimation of Mt Henry deposit was completed using Ordinary kriging (OK) in Surpac software. Variogram analysis and modelling was completed using Supervisor software. Two metre composites were generated from the drill hole database and then tagged according to mineralised wireframes generated at a 0.4g/t lower gold grade. The wireframe modelling conditions included a minimum downhole mineralisation width of 2m; internal dilution of up to 3m could be included if the entire intercept graded above 0.4 g/t. If dilution was greater than 3m then separate lodes were generated if geological/grade continuity was supported by nearby holes. The coded composites were reviewed in Supervisor; top cut analysis was completed using disintegration analysis and the impacts the cuts made to the coefficient of variation. One outlying grade at 1810g/t was cut to 100g/t. The cut dataset was then normal scores transformed to generate confirmed geological stratigraphy as the key controlling factor on mineralisation. The variogram models had moderate to low nuggets with a range of maximum continuity along main axis of 73m.
	 The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). 	 A previous estimate of the Mt Henry deposit was completed in 2009. This was used as a guide and comparative tools for validation purposes with the current estimate. No assumptions have been made about gold grade recovery or the recovery of related by products. A review of deleterious elements or other non-grade variables was undertaken. It was decided that there was insufficient data on other elements to reliably estimate their distribution. Regression analysis conducted between Au and Fe. Cu. S and As found no correlation
	 In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. 	 The block model was constructed with a parent cell size of 20m Y, 10m X, and 10m Z with subcelling to 10m Y, 2.5m X, and 2.5m Z. All estimations completed at the parent cell resolution. Data spacing is typically on 25m sections for the southern section of the deposit with the northern extents stepping down to 20m sections. Drill spacing across sections is typically 20m. The size of the initial search ellipse was based on the variography with a





Criteria	JORC Code explanation	Commentary
	Any convertices behind modelling of coloritys mining	cascading four pass estimation used to populate cells. The first estimation pass used a minimum of 12 and maximum of 32 samples with no octants constraints of the ellipse preventing estimation. The search criteria were then changed for the remaining estimation passes.
	 Any assumptions bening modelling of selective mining units. 	 The composites were generated at 2m downhole and the ore wireframes were maintained at a minimum width of 2m downhole in order to represent a likely minimum mining width, assuming open pit mining operations using 120 tonne excavators.
	Any assumptions about correlation between variables.	 No correlations between grade variables have been assumed.
	Description of how the geological interpretation was used to control the resource estimates.	The geology of the deposit is similar in many respects to the nearby Selene Deposit. Mineralisation is confined to a series of shears within the silicate facies, Banded Iron Formation (Noganyer Formation). The footwall to the BIF is a metamorphic sedimentary schist unit and the hanging wall is defined by mafic flows and dykes of the Woolyeener Formation. The vast majority of the mineralisation is confined to a single shear running contiguously along the upper contact of the BIF Noganyer Formation and the overlying Woolyeener Formation. The mineralisation interpretation is consistent with the shape and continuity of this BIF unit contact zone.
	Discussion of basis for using or not using grade cutting or consist	
	 The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 	 Validation of the resource estimate was completed by onscreen visual validation of block grades vs. drill hole assays in sectional view. Line graphs were also generated to show comparison between composite input grades and output block grades over 50m intervals on Northing spacings and 10m bench heights in elevation, through the entire deposit to ensure the composite data was being accurately reflected in the model. The model was also compared with historical estimate to ensure report figures were sensible.
Moisture	 Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	The tonnages are reported as dry tonnes. Sample preparation process involved drying the samples for 8hrs prior to analysis.
Cut-off parameters	 The basis of the adopted cut-off grade(s) or quality parameters applied. 	 The mineralisation wireframes were modelled on a gold lower grade cut-off of 0.4g/t Au. This value was determined by visual assessment of grade continuity in Surpac[™]. Models were also generated at 0.6 g/t and 1.0g/t Au cut-off grades for comparison.
Mining factors or assumptions	 Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	• The Mt Henry deposit has been modelled under the assumption that it will be mined by conventional open pit mining methods, using excavators and trucks. This would typically entail 5m bench heights with 2.5m flitches and use of 120 tonne excavators with a bucket of approximately 2m width. Mineralisation wireframes were constructed based on minimum thickness of 2m downhole in order to replicate the smallest possible mining selectivity.
Metallurgical factors or assumptions	 The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported 	 No metallurgical assumptions have been made in respect to the generation of the estimate however recent metallurgical test work had been performed as part of a feasibility study of the greater Mt Henry gold project being undertaken by Panoramic. This work has shown that recoveries greater than 90% Au can be achieved using conventional CIL extraction methods.





Environmental rectors or assumptions • Assumptions made, regarding possible waste and process rockud elsosod points, It is always necessary assumptions • The outrant data available doesn't suggest there are an processing operation. While the priority operation while the stage there into considered this stage there intring and processing operation. While this stage the determination of potential environmental impacts, particularly for a greenified synthesis should be erported. Where these aspects have not been considered this should be exported with an explanation of the environmental assumptions made. • A total of 2,501 builk density (BD) determinations are recorded in the Mt Henry resource database subset. • The builk density for builk material must have been measured or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • A total of 2,501 builk density (BD) determinations are recorded in the Mt Henry resource database subset. • The builk density for builk material must have been measured environmental measurements. • The builk density for builk material must have been measured by emptods that adequalely account forvid spaces (vgs, porosity, ed), moisture and differences between cok and alterizon cances within the depart beckers not, and alterizon cances within the depart the availability of roulk datersity estimates used in the availability of roulk datersity estimates used in the availability of roulk datersity estimates used in the availability of roulk date, confidence a lange optical and differences between cok and alterizon cances within the depart the availability of roulk date, confidence andegatore the availability of roulk date, con	Criteria	JORC Code explanation	Commentary
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 Bulk density Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. A total of 2.501 bulk kensity (BD) determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), mosture and differences between rock and alteration zones within the deposit. Discuss assumptions of bulk density the routies and differences into varying confidence categories. The basis for the classification of the different materials. Classification The basis for the classification of the database estimate varit, lee appropriate account has been taken of all relevant factors (lee relative confidence in tromage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the deposit. The basis for the classification of the Mineral Resource estimates. Whether the results of any audits or reviews of Mineral Resource estimates. Whether the results of any audits or reviews of Mineral Resource estimates. Whether the results of any audits or reviews of Mineral Resource estimates. The resource classification is heady continuous over a 2.0km strike length and is strata bound). The resource dasification is based on standard practices and guidelines as prescribed in the 2012 JOR Confidence Whether the resource watins taded confidence they beaccuracy and confidence of the eastimate using an		environmental assumptions made.	
 Classification The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. Audits or reviews The results of any audits or reviews of Mineral Resource estimates. The results of any audits or reviews of Mineral Resource estimate as tatement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should snerific we have beer in the deposit. 	Bulk density	 Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 A total of 2,501 bulk density (BD) determinations are recorded in the Mt Henry resource database subset. Panoramic completed most of these with measurements on 2,104 whole core samples by Archimedes water immersion method. There are a small number of historical measurements by pycnometer (7HENC115 & 7HENC116 for 54 samples) and down hole geophysical tool (NHC127, NHD120 and NHD121 for 343 one metre intervals). This data was used to generate a default SG for all lithological types. The default was then assigned to unmeasured intervals, and the density was estimated. The host rock type for mineralisation and surrounding mafic material is non-porous and void space porosity is not considered to be of relevance to the measurements. BD estimation for the resource was generated by grouping the 2501 recorded measurements by rock type to provide an average SG for each of the main lithological rock types. The assay table in the database was tagged with the actual BD or an average value based on rock type grouped average. The BD value was then extracted with the Au grade in the 2m composite file. The densities were estimated using the Variogram models and search parameters for the various domains.
Audits or reviews • The results of any audits or reviews of Mineral Resource estimates. • Apart from BMGS's own internal audit process no audit or reviews of the Mineral Resource estimate have been completed. Discussion of relative accuracy/ and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The resource classification is based on standard practices and guidelines as prescribed in the 2012 JOR Code.	Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 The classification of the resource has been based on the Competent Person's strong confidence in the geological model; weighted by the strong geological confidence with 25*25m spaced RC and diamond drilling and 20m*20m spaced drilling through northern extents of deposit and the demonstrable consistency and continuity of the mineralisation (gold mineralisation is highly continuous over a 2.0km strike length and is strata bound). The mineral resource reflects the competent person's view of the deposit.
 Discussion of relative accuracy/ and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global 	Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	 Apart from BMGS's own internal audit process no audits or reviews of the Mineral Resource estimate have been completed
• The resource estimate relates to a global estimate of tonnages, which should be relevant to technical and tonnes and grade.	Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and 	 The resource classification is based on standard practices and guidelines as prescribed in the 2012 JORC Code. The resource estimate relates to a global estimate of tonnes and grade.





Criteria JORC Code explanation

Commentary

- These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.
- No reliable production data exists for the small open pit operated within the confines of the Mt Henry resource by Australis Mining in the 1980s to compare with this resource estimate.

North Scotia Resource

North Scotia Resource - Table 1, Section 1 - Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 The deposit has been extensively sampled using Reverse Circulation (RC) and Diamond drilling (DD) techniques. The North Scotia (NS) database resource subset contains 193 RC & DD holes for a total of 13,573m. Of this total 16 RC & DD holes totalling 933.5m were drill in 2013 by Panoramic as part of a Mt Henry Project feasibility study. In addition the database contains 155 Aircore (totalling 2,915m) which have not been used for resource estimation. The drill spacing is typically 20m *20m grid spacing over the extent of the mineralisation. RC holes were sampled by collecting 1m samples and splitting these down using either on-board rig or manual riffle splitters to produce an assay sample of~3kg. Diamond holes were typically NQ2 & occasionally HQ in size and were sampled by cutting the core in half or quarter for the HQ core over geologically logged intervals between 20cm and 1m in length. All (579) recent Panoramic resource assay samples were submitted to SGS Laboratories in Perth for gold analysis by FA50 (Fire Assay) technique. Of the 11,753 historical RC & DD gold assays in the database, 1,430 (12.2%) have an unrecorded technique or are by a technique other than Fire Assay. In addition results for 1,353 (11.0%) QAQC samples are recorded in the database.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 The drilling methods used on this deposit are predominantly RC and DD drilling. The RC drilling was typically completed using a 5 ¼ inch hammer and recently 5 ¼ inch face sampling hammers. The DD drilling was typically NQ (47.6mm), and more recently NQ2 (50mm) and HQ (63.5mm) diameter core HQ size core was typically drilled as geotechnical holes from surface by Panoramic.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 RC sample recoveries were monitored by Panoramic by recording visual estimates of the sample bags prior to sampling. Typical recoveries for RC were greater than 90%. Core recovery is noted during drilling and geological logging processes as a percentage recovered vs. expected drill length. Core was reconstructed into continuous runs on a length of angle iron to enable accurate geological logging and estimation of core recovery. Core recovery is typically 100 percent. No apparent relationships were noted in relation to sample recovery and grade.
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. 	 All drill holes in the NS resource database have been geologically logged. Both chip and core samples in recent Panoramic drill holes have been logged using geological legends at detail to support geological confidence in Mineral Resource estimates. Logging details lithology, weathering, oxidation, veining,





Criteria		JORC Code explanation		Commentary
				mineralisation and structural features where noted in drill
	•	The total length and percentage of the relevant intersections logged.	٠	All mineralised drill intersections and associated samples have been logged in full.
Sub-sampling techniques and sample preparation	•	If core, whether cut or sawn and whether quarter, half or all core taken.	•	Both historical NQ and recent NQ2 core was typically sawn and half core sampled. Recent HQ geotechnical core was quarter core sampled where mineralized. Core sample lengths typically varied between 0.2 and 1.0 metre.
	•	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	•	The standard RC sample length is 1 metre with samples collected directly from the rig cyclone system. The individual 1m RC samples are then reduced to a 3-5kg assay sample by either automated on-board rig splitters or manually by riffle splitting.
	•	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	•	The sample preparation process for all samples submitted for analysis follow accepted industry standards, including oven drying sample for a minimum of 8 hours, crushing and pulverising to 85% passing 75 microns.
	•	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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.	•	Quality control procedures have included the insertion of standards, blanks and duplicates to monitor the sampling and analytical process.
	•	Whether sample sizes are appropriate to the grain size of the material being sampled.	•	The sample sizes used are industry standard sizes used extensively throughout the goldfields and are appropriate for the style of deposit.
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.	•	The standard analytical technique used is Fire Assay, mostly by AAS finish. Of the 12,332 RC & DD Au assays in the NS resource database 1,430 historical assays (11.6%) do not have a recorded technique or are by technique other than Fire Assay. Where non gold analyses exist they are either by AAS or ICP OES determination.
	•	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.	•	No other geophysical or analytical tools have been used to estimate grade.
	•	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.	•	QAQC has been completed routinely during all sampling throughout the life of the Project; though less so historically than more recently. The QAQC results indicate that the RC and DD assays being used for resource estimation are a fair representation of the material that has been sampled.
Verification of sampling and assaying	•	The verification of significant intersections by either independent or alternative company personnel.	•	The North Scotia deposit is a classic "Norseman style quartz vein" type. Gold mineralisation is nuggetty within the veins with coarse visible gold not uncommon.
	•	The use of twinned holes.	•	No recent twin holes were completed. In-fill verification holes were completed by Panoramic to test both geological and mineralisation continuity on selected sections. In most instances the expected geological and mineralogical interpretation was confirmed and no major discrepancies were identified.
	•	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	•	Logging was completed in logging code protected MS Excel templates on laptops and then imported into the Project SQL database for validation. Sections were then generated and visual validation completed to ensure integrity of the data.
Location of data	•	Accuracy and quality of surveys used to locate drill holes	•	All recent drill collars and where possible historical drill
points		(collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.		collars have been accurately located by differential GPS. A range of down-hole survey instruments, including single shot, electronic multi-shot and gyroscopic tools





Criteria		JORC Code explanation		Commentary
	•	Specification of the grid system used.	•	have been used. Gyroscopic surveys undertaken by Panoramic and previous companies demonstrate that holes do not deviate significantly from design. The NS drill hole database subset contains local, AMG and MGA coordinates. The resource has been estimated in local grid which is rotated +1.079 degrees from MGA_GDA94 zone 51.
	•	Quality and adequacy of topographic control.	•	Conversion from local grid to AMG AGD84 zone 51 is based on a two point transformation: 5000E, 14000N = 385844.34E, 6421899.31N 5000E, 6400N = 385701.32E, 6414302.52N Fugro 2.5m topographic contour data was the primary topographical control. In places this was modified by differential GPS height data.
Data spacing and distribution	•	Data spacing for reporting of Exploration Results. 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.	•	The drilling density is on a nominal 20m by 20m spacing through the majority of the deposit. This spacing is sufficient to provide strong geological and mineralogical confidence in the style of deposit being estimated.
	•	whether sample compositing has been applied.	•	Sample compositing of RC precollars outside the main mineralized zone was undertaken at times.
Orientation of data in relation to geological structure	•	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	•	Virtually all drilling has been completed perpendicular to the main strike of the deposit geometry and angled to best intercept the west dipping mineralized vein system. No sampling bias is apparent from the direction of drilling.
Sample security	•	The measures taken to ensure sample security.	•	Little is known about the sample security practices adopted by previous companies. Panoramic samples were freighted in sealed bulka-bags direct from site to the SGS Laboratory in Perth.
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	٠	No audits or review of the Panoramic sampling procedures and protocols has been completed.

North Scotia Resource – Table 1, Section 3 - Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors between its initial collection and its use for Mineral Resource estimation purposes. 	 Logging was completed in logging code protected MS Excel templates and loaded into Panoramic's SQL Server database, with a "Datashed" software frontend, for validation and storage. All geological and assay information was printed on hard copy plans and visually validated against original logs and assay results to ensure the digital copy agrees with the original format.
	Data validation procedures used.	 Data validation was completed internally in SQL Server by setting allowable and expected values. Automated queries are run as the data is imported to ensure it meets specified criteria. For resource estimation a subset of the SQL database, restricting the data to the North Scotia Resource area was exported into MS Access database. Additional data checks were run to ensure appropriate data robustness for the Resource Estimation.
Site visits	 Comment on any site visits undertaken by the Competer Person and the outcome of those visits. 	 No site visits were completed by BMGS. Panoramic staff managed the 2013 drilling program. The new interpretation was constructed by using the original Cube 2009 wireframes and adjusting the shapes based on the new drill results.
	If no site visits have been undertaken indicate why this the case.	 Site visits were not required as the documented procedures on the recent drilling were deemed appropriate for the style of deposit and the historical





Criteria	JORC Code explanation	Commentary
		drilling had been previously covered in a report released under JORC 2004 guidelines.
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. 	 There is moderate confidence in the deposit. The deposit is a structurally controlled auriferous quartz vein system. The deposit has a high grade nuggetty nature; the nuggetty gold mineralisation is disseminated throughout one to five metre wide laminated quartz veins that dip around 70° towards the west. Minor pyrite and galena is also present in the veins.
	Nature of the data used and of any assumptions made.	 The data used for the resource estimate was from RC and diamond drilling. Raw assays were composited to 2m to provide equal sample weights and reduce grade variance.
	 The effect, if any, of alternative interpretations on Minera Resource estimation. 	No alternative interpretations were considered.
	 The use of geology in guiding and controlling Mineral Resource estimation. 	 The geological logging was used to generate the interpretation. Vein/mineralisation wireframes were allowed to pass through sub-mineralised drill hole zones where the Quartz veining was logged but returned little to barren grades. It is believed this method is acceptable, as long as the block data is reflective of the raw data on a localised scale.
	 The factors affecting continuity both of grade and geology. 	 The mineralisation is vein hosted, typically around 2 to 5metre wide zones, continuity along strike appears to be reasonable and there appears to be some slight dilational jogs, which is observed within the geology of the historical Scotia pit (commentary provided by Panoramic Geologist).
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	 The North Scotia mineralized domain is approximately 450m long and has a down dip of extent of 110m and is open at depth. The deposit consists of multiple NNE trending quartz lodes that vary between 1m and 5m in true thickness with numerous thinner parallel lodes at various stages along the length of the deposit.
Estimation and modelling techniques	 The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. 	 Grade estimation of North Scotia deposit was completed using Ordinary Kriging (OK) in Surpac™ software. Variogram analysis and modelling was completed using supervisor software. Two meter composites were generated from the drill hole database and then tagged according to mineralized wireframes generated at a 0.8g/t gold grade. The wireframe modelling conditions included, a minimum downhole width of 2 meters of mineralisation, internal dilution of up to 2m downhole could be included if the entire intercept graded above 0.8 g/t. If dilution was greater than 2m then separate lodes were generated. The coded composites were reviewed in Supervisor; top-cut analysis was completed using disintegration analysis and the use of coefficient of variation statistics. Top-cuts were applied on a domain basis with a maximum top-cut of 30g/t on FW1 lode and 7g/t & 4g/t on the HW1 and HW2 lodes respectively (remaining lodes were left un-cut). The cut dataset was then transformed by normal scores to review variograms and generate variogram models. The variogram models had high to low nuggets and varied for each domain, with a range of maximum continuity along the main axis varying for each domain between 20 to 40m.
	The availability of check estimates, previous estimates and/or mine production records and whether the Minera Resource estimate takes appropriate account of such data. The assumption of the second	• A previous estimate of the North Scotia deposit was completed in 2009. This was used as a guide and comparative tools for validation purposes with the current estimate.
	 The assumptions made regarding recovery of by- products. Estimation of deleterious elements or other non-grade 	 No assumptions have been made about gold grade recovery or the recovery of related by products. Only gold was estimated; no other elements were





Criteria		JORC Code explanation		Commentary
		variables of economic significance (eg sulphur for acid mine drainage characterisation).		estimated. Insufficient multi-element data was available and was deemed to be of no relevance and to have a spatial distribution too sparse for adquiste estimation
	•	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	•	The block model was constructed with a parent cell size of 10m Y, 5m X, and 10m Z with subcelling to 2.5m Y, 1.25m X, and 1.25m Z. All estimations were completed at the parent cell resolution. Data spacing is typically on 20 x 20m spacings for the majority of the deposit. The size of the search ellipse was based on the variography with two estimation passes used to populate all cells. The first estimation pass used a minimum of 3, and maximum of 15 samples, with an ellipsoid based approach. Two separate estimation methods were employed, an Ordinary Kriged and Inverse Distance ^2 (ID2) was also performed on the top-cut dataset.
	•	Any assumptions behind modelling of selective mining units.	•	The composites were generated at 2m downhole and the ore wireframes were maintained at a minimum width of 2m downhole to try and represent a minimum selectable size assuming open pit mining operations using 120 tonne excavators.
	•	Any assumptions about correlation between variables.	•	No correlations between grade variables have been assumed.
	•	Description of how the geological interpretation was used to control the resource estimates.	•	The geology of the deposit consists of Archaean marics of the Woolyeenyer formation (predominately Maric Basalt/Dolerite), with late stage cross-cutting pegmatite dykes and a very shallow weathering profile of Quaternary saprolite clays. There is no evidence of supergene mineralisation at North Scotia. All mineralisation is associated with the primary quartz vein system.
	•	Discussion of basis for using or not using grade cutting or capping.	•	Top-cut analysis was completed using disintegration analysis and use of coefficient of variation statistics. Fourteen outlying grades were cut which differed on a domain basis (FW1- number of samples top-cut 3, top- cut applied 30g/t; HW1- number of samples top-cut and top-cut applied was 7; HW2- number of samples top-cut and top-cut applied was 4). Only cut estimates were provided.
	•	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	•	Validation of the resource estimate was completed by visual validation of block grades vs. drill hole assays in sectional view on computer. Given the thin nature of the deposit a volume check was performed to ensure the block volume was reflective of the 3dm volume. With a volume variance less that 1%, the coding in the model was deemed acceptable. Validation comparisons were made by comparing the mean composite grades to the block estimate grades on a domain basis. This was to ensure the estimate was reflective of the data used to generate it.
Moisture	٠	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	٠	The tonnages are reported as dry tonnes. Sample preparation process involved drying the samples for 8hrs prior to analysis.
Cut-off parameters	•	The basis of the adopted cut-off grade(s) or quality parameters applied.	•	The mineralisation wireframes were modelled on a gold grade cut-off of 0.8g/t. The cut-off selection was left unchanged from that used in the 2009 resource.
Mining factors or assumptions	•	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining	•	The North Scotia deposit has been modelled under the assumption that it will be mined by conventional open pit mining methods, using excavators and trucks. This would typically entail 5m bench heights with 2.5m flitches and use of 120 tonne excavators with a bucket width of approximately 2m. Mineralisation wireframes were constructed based on minimum downhole intercept thickness of 2m in order to replicate the smallest possible mining selectivity.





Criteria	JORC Code explanation	Commentary
	assumptions made.	
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	 No metallurgical assumptions have been made in respect to the generation of the estimate. The understanding is that the anticipated recovery from metallurgical test work completed by Panoramic as part of a broader Mt Henry Gold Project feasibility study is in the order of 95% recovery using a conventional CIL process.
Environmental factors or assumptions	 Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	If mining were to commence appropriate measures would be implemented to ensure correct containment of waste by-products.
Bulk density	 Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 Bulk density (BD) determinations have been completed on 279 core samples by Archimedes water immersion method to determine BD of insitu material. The measurements were performed on whole core samples by Panoramic from recently drilled diamond holes (SCO* series holes). A small number of historical pycnometer measurements (7SSC* series for 58 samples) also exist. Both the waste and host rock type for mineralisation is typically non-porous and void space porosity is not considered to be of relevance to the measurements. Default densities were assigned to the model based on the specific gravities used in the previous models. The default values were verified by the recent BD work. The densities applied were Alluvium 1.8 g/cm³, Qtz Reef 2.65 g/cm³ Doxido Mafic 1.8 g/cm³
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 Transitional Mafic 2.1 g/cm³ and Fresh Mafic 3 g/cm³. The classification of the resource has been based on strong geological confidence with 20*20m spaced RC and diamond drilling. The gold mineralisation is moderately continuous over a 450m strike length and is laminated vein hosted. The classification was applied to the model using the estimation pass and a string constraint applied to limit the potential overcall in classification down dip. The mineral resource reflects the competent person's view of the deposit
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	 Apart from BMGS's own internal audit process no audits or reviews of the Mineral Resource estimate have been completed.
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and if local state the relevant 	 The resource classification is based on standard practices and guidelines as prescribed in the 2012 JORC Code. The resource estimate relates to a global estimate of







Criteria	JORC Code explanation	Commentary
	 tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of 	tonnes and grade.
	the estimate should be compared with production data, where available.	• No mining data is available for comparison.

Selene Resource

Selene Resource – Table 1, Section 1 - Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 The deposit has been extensively sampled using Reverse Circulation (RC) and Diamond drilling (DD) techniques. The Selene (Mt Henry Project) resource database subset contains 284 RC & DD holes for a total of 25,830m. Of this total 14 RC & DD holes totalling 2,005m were drill in 2013 by Panoramic as part of a Project feasibility study. In addition the database contains 10 RAB & Aircore holes (totalling 133m) which have not been used for resource estimation. The drill grid spacing is typically 40m * 40m over the extent of the mineralisation. RC holes were sampled by collecting 1m samples and splitting these down using either on-board rig or manual riffle splitters to produce an assay sample of ~3kg size. Diamond holes were typically NQ2 (NQ for some historical holes) & occasionally HQ size and were sampled by cutting the core in half or quarter for the HQ core over geologically logged intervals between 20cm and 1m in length. All (847) recent Panoramic resource assay samples were submitted to SGS Laboratories in Perth for gold analysis by FA50 (Fire Assay) technique. Of the 15,528 historical RC & DD gold assays in the database, 457 (2.9%) have an un-recorded technique or are by a technique other than Fire Assay. In addition data on 1,059 (6.5%) QAQC samples are recorded in the database.
Drilling • techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	 The drilling methods used on this deposit are predominantly RC and DD drilling. The RC drilling was typically completed using 5 ¼ inch hammers and recently 5 ¼ inch face sampling hammers. The DD drilling was typically NQ (47.6mm), and more recently NQ2 (50mm) and HQ (63.5mm) diameter core HQ size core was typically drilled as geotechnical holes from surface by Panoramic.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 RC sample recoveries were monitored by Panoramic by recording visual estimates of the sample bags prior to sampling. Typical recoveries for RC were greater than 90%. Core recovery is noted during drilling process and geological logging process as a percentage recovered vs. expected drill length. Core was reconstructed into continuous runs on a length of angle iron to enable accurate geological logging and estimation of core recovery. Core recovery is typically 100 percent. No apparent relationships were noted in relation to sample recovery and grade.
Logging	 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. Whether logging is qualitative or quantitative in nature. 	 All drill holes in the Selene resource database have been geologically logged. Both chip and core samples in recent Panoramic drill holes have been logged using geological legends at detail to support geological confidence in Mineral of 40.





Criteria		JORC Code explanation		Commentary
Cintonia		Core (or costean, channel, etc) photography.		Resource estimates.
			•	Logging details lithology, weathering, oxidation, veining, mineralisation and structural features where noted in drill core
	•	The total length and percentage of the relevant intersections logged.	•	All mineralised drill intersections and associated samples have been logged in full.
Sub-sampling	٠	If core, whether cut or sawn and whether quarter, half or	٠	Both historical NQ and recent NQ2 core was typically
techniques and sample preparation		all core taken.		sawn in half and half core sampled. Recent HQ geotechnical core was quarter core sampled where mineralised. Core sample lengths typically varied between 0.2 and 1.0 metre.
	•	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	•	The standard RC sample length is 1 metre with samples collected directly from the rig cyclone system. The individual 1m RC samples are then reduced to a 3-5kg assay sample by either automated on-board rig splitters or manually by riffle splitting.
	•	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	•	The sample preparation process for all samples submitted for analysis follow accepted industry standards, including oven drying sample for a minimum of 8 hours, crushing and pulverising to 85% passing 75 microns.
	•	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	•	Quality control procedures have included the insertion of standards, blanks and duplicates to monitor the sampling
	•	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.		and analytical process.
	•	Whether sample sizes are appropriate to the grain size of the material being sampled.	•	The sample sizes used are accepted industry standard sizes used extensively throughout the goldfields and are appropriate for the style of deposit.
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.	•	The standard analytical technique used is Fire Assay, mostly by AAS finished. Of the 16,886 RC & DD Au assays in the Selene resource database, 457 historical assays (2.7%) do not have a recorded technique or are by technique other than Fire Assay. Where non gold analyses exist they are either by AAS or ICP OES determination.
	•	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.	•	No other geophysical or analytical tools have been used to estimate grade.
	•	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.	•	QAQC has been completed routinely during the life of the Project; though less so historically than more recently. The QAQC results indicate that the RC and DD assays being used for resource estimation are an accurate representation of the sampled material.
Verification of sampling and assaying	•	The verification of significant intersections by either independent or alternative company personnel.	•	The deposit is very continuous in terms of mineralisation and grade intercepts. The continuity and consistency of the grade intercepts in section and along strike provides strong confidence in the verification of the grade and style of deposit. The similarity and consistency of intersections reported by past Project owners over many years is further verification of the reliability of the data.
	•	The use of twinned holes.	•	No recent twin holes were completed. Historical twin holes verified mineralisation continuity. In-fill verification holes were completed by Panoramic to test both geological and mineralisation continuity on selected sections. In each instance the expected geological and mineralogical interpretation was confirmed and no major discrepancies were identified.
	•	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	•	Logging was completed in logging code protected excel templates on laptops and then imported into the Project SQL database for validation. Sections were then generated and visual validation completed to ensure





Criteria		JORC Code explanation		Commentary
				integrity of the data.
	٠	Discuss any adjustment to assay data.	٠	No adjustments were made to assay data.
Location of data points	•	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	•	All recent drill collars and where possible historical drill collars have been accurately located by differential GPS. A range of down-hole survey instruments, including single shot, electronic multi-shot and gyroscopic tools have been used. Gyroscopic surveys undertaken by Panoramic and previous companies demonstrate that holes do not deviate significantly from design.
	•	Specification of the grid system used. Quality and adequacy of topographic control.	•	The Selene drill hole database contains local, ANG and MGA coordinates. The resource has been estimated in local grid which is rotated +1.25 degrees from MGA GDA94 zone 51. Conversion from local grid to AMG AGD84 zone 51 is based on a two point transformation: 4400E, 6000N = 385096.84E, 6413919.03N 4400E, 2000N = 385099.80E, 6409920.95N Fugro 2.5m topographic contour data was the primary
				differential GPS height data.
Data spacing and distribution	•	Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied.	•	The drilling density is on a nominal 40m by 40m spacing through the majority of the deposit. This spacing is sufficient to provide strong geological and mineralogical confidence in the style of deposit being estimated. As a general rule sample compositing has not be used. Sample compositing of RC precollars outside the main mineralised zone was undertaken at times.
Orientation of data in relation to geological structure	•	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	•	Virtually all drilling has been completed perpendicular to the main strike of the deposit geometry and angled to best intercept the west dipping mineralisation. No sampling bias is apparent from the direction of drilling.
Sample security	•	The measures taken to ensure sample security.	•	Little is known about the sample security practices adopted by previous companies. Panoramic samples were freighted in sealed bulka-bags direct from site to the SGS Laboratory in Perth.
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	•	No audits or review of the Panoramic sampling procedures and protocols has been completed.

Selene Resource – Table 1, Section 3 - Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying er between its initial collection and its use for Mineral Resource estimation purposes. 	 Logging was completed in logging code protected MS Excel templates and loaded into Panoramic's SQL Server database, with a "Datashed" software frontend, for validation and storage. Geological and assay information was printed on hard copy plans and visually validated against original logs and assay results to ensure the digital copy agrees with the original format.
	Data validation procedures used.	 Data validation was completed internally in SQL Server by setting allowable and expected values. Automated queries are run as the data is imported to ensure it meets specified criteria. For resource estimation a subset of the SQL database, restricting the data to the Selene Resource area was exported into an MS Access database. Additional data checks were run to ensure appropriate data robustness for the Resource Estimation





Criteria	JORC Code explanation	Commentary
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	 No site visits were completed by BMGS. Panoramic staff managed the 2013 drilling program and were integral in the development of the geological and mineralisation models. Site visits were not required as the documented procedures on the recent drilling were deemed appropriate for the style of deposit and the historical drilling had been previously covered in a report released under 1000 2004 middlese
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	 There is high confidence in the geological understanding of the deposit. There is a strong relationship between grade and a particular stratigraphical unit. The gold mineralisation is of a consistent grade and 2m composites generated of the mineralised zone showed an extremely good coefficient of variation (< 1.1), such coefficients are rarely encountered with gold deposits.
	 Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. 	 The data used for the resource estimate was from RC and diamond drilling. Raw assays, typically representing a 1m sample length, were composited to 2m to provide equal sample weights and reduce grade variance. Three separate mineralised envelopes were considered; grade shells at 0.4, 0.6 and 1.0g/t Au were developed
		and respective estimates run for each grade shell. It was established through validation of the models that the 0.4g/t Au model was the most representative of grade expected in the mining environment.
	 The use of geology in guiding and controlling Mineral Resource estimation. 	 There is a strong geological control to the mineralisation interpretation. The deposit is essentially strata hosted within a sheared Banded Iron Formation. There is some interpreted supergene mineralisation in the northern extents of the deposit that is controlled by weathering horizons and typically cross cuts stratigraphy at shallow levels.
	 The factors affecting continuity both of grade and geology. 	 The geological and grade continuity is strata controlled, with a series of late pegmatites that cross cut mineralisation and lithology. These pegmatites are generally unmineralised and have been modelled into the resource as background 0.1g/t gold grade.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	 The Selene mineralised domain is approximately 1.3km long, has a down dip of extent of up to 440m and is open at depth. The deposit consists of a main lode that varies between 3m and 25m thick with numerous parallel lodes at various stages along the length of the deposit.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	Grade estimation of Selene deposit was completed using Ordinary Kriging (OK) in Surpac [™] software. Variogram analysis and modelling was completed using Supervisor software. Two metre composites were generated from the drill hole database and then tagged according to mineralised wireframes generated at a 0.4g/t lower Au grade. The wireframe modelling conditions included a minimum downhole mineralisation width of 2m; an internal dilution of up to 3m could be included if the entire intercept graded above 0.4 g/t. If dilution was greater than 3m then separate lodes were generated if geological/grade continuity was supported by nearby drilling. The coded composites were reviewed in Supervisor, top cut analysis was completed using disintegration analysis and the impact cuts made to the coefficient of variation. Seven outlying grades ranging from 11.79 to 21.56g/t were cut to 11g/t. The cut dataset was then transformed by normal scores to review variograms and generate variomodels. Variomodels generated confirmed geological stratigraphy as the key controlling factor on mineralisation. The variomedels had mederate to low pursents with on the variomedels had mederate to low pursents with a target of mediane to have pursents with a target pursent of target pursents.

Criteria





JORC Code explanation

- The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.
- The assumptions made regarding recovery of byproducts.
- Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).
- In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.

- Any assumptions behind modelling of selective mining units.
- Any assumptions about correlation between variables.
- Description of how the geological interpretation was used to control the resource estimates.
- Discussion of basis for using or not using grade cutting or capping.
- The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.

Commentary

continuity along the main axis of 70m.

- A previous estimate of the Selene deposit was completed in 2008. This was used as a guide and comparative tools for validation purposes with the current estimate.
- No assumptions have been made about gold grade recovery or the recovery of related by products.
- It was established that there was insufficient multiple element data to enable adequate estimation of deleterious elements or other non-grading variables.
- The block model was constructed with a parent cell size of 20m Y, 10m X, and 10m Z, with subcelling to 5m Y, 2.5m X, and 2.5m Z. All estimations were completed at the parent cell resolution. A very regular pattern of holes cover the Selene Deposit. Drill data is typically on sections 40m apart on northings, with holes as little as 10m apart on eastings. The size of the search ellipse was based on the variography with five estimation passes used to populate cells. The first estimation pass used a minimum of 12, and maximum of 32 samples, with no octant constraints of the ellipse requiring data to allow estimation.
- The composites were generated at 2m downhole and the ore wireframes were maintained at a minimum width of 2m downhole in order to represent a likely minimum mining width, assuming an open pit mining operations using 120 tonne excavators.
- No correlations between grade variables have been assumed.
- The Selene Deposit is similar in many respects to the nearby Mt Henry Deposit. Mineralisation is confined to a series of shears within the silicate facies, Banded Iron Formation (Noganyer Formation). The footwall to the BIF is a metamorphic sedimentary schist unit and the hanging wall is defined by mafic flows and dykes of the Woolyeener Formation. The mineralisation interpretation is consistent with the shape and continuity of the BIF unit.
- Validation of the resource estimate was completed by visual validation of block grades vs. drill hole assays in sectional view on computer. Line graphs were also generated to show comparison between composite input grades and block output grades over 80m intervals – Northings, and 40m internals –Eastings, throughout the entire deposit to ensure the composite data was being accurately reflected in the model. The model was also compared with historical estimate to ensure report figures were sensible.
- Whether the tonnages are estimated on a dry basis or Moisture The tonnages are reported as dry tonnes. Sample with natural moisture, and the method of determination of preparation process involved drying the samples for 8hrs the moisture content. prior to analysis. Cut-off The basis of the adopted cut-off grade(s) or quality The mineralisation wireframes were modelled on a gold parameters lower grade cut-off of 0.4g/t. This value was determined parameters applied. by visual assessment of grade continuity in Surpac[™]. Models were also generated at 0.6 g/t and 1.0g/t Au cutoff grades for comparison. Mining factors or Assumptions made regarding possible mining methods, The Selene deposit has been modelled under the assumptions minimum mining dimensions and internal (or, if assumption that it will be mined by conventional open pit applicable, external) mining dilution. It is always mining methods, utilising excavators and trucks. This would typically entail 5m bench heights with 2.5m flitches necessary as part of the process of determining reasonable prospects for eventual economic extraction to and use of 120 tonne excavators with a bucket width of approximately 2m. Mineralisation wireframes were consider potential mining methods, but the assumptions





Criteria	JORC Code explanation	Commentary
	made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	constructed based on minimum thickness of 2m downhole in order to replicate the smallest possible mining selectivity.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	 No metallurgical assumptions have been made in respect to the generation of the estimate however recent metallurgical test work had been performed as part of a feasibility study of the greater Mt Henry gold project being undertaken by Panoramic. This work has shown that recoveries greater than 90% Au can be achieved using conventional CIL extraction methods.
Environmental factors or assumptions	 Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	 The current data available doesn't suggest there are any high-level environmental risks with mined waste by- products. If mining were to commence all statutory requirements would be implemented to comply with waste by-product management.
Bulk density	 Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. 	 A total of 1087 bulk density (BD) determinations are recorded in the Selene resource database subset. Panoramic completed most of these with measurements on 727 core samples by Archimedes water immersion method. There are a number of historical measurements by pycnometer (7SEL* series for 181 samples) and down hole geophysical tool (NLC151D & NLC158 for 179 one metre intervals).
	 The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. 	 The host rock type for mineralisation and surrounding mafic material is non-porous and void space porosity is not considered to be of relevance to the measurements.
	 Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 The estimate of BD through the resource was generated by grouping the 1087recorded measurements by rock type to provide an average SG for each of the main lithological rock types. The assay table in the database was tagged with the actual BD or an average value based on rock type grouped averages. The density value was then extracted with the gold grade in the 2m composite file. The BD was then estimated using the same Variogram models and search parameters for the various domains.
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent 	 The classification of the resource has been based on the Competent Person's strong confidence in the geological model; derived largely from the high density of drilling (40*10m spaced RC and selective diamond drilling in the central extent of the deposit); and the demonstrable consistency and continuity of the mineralisation (gold mineralisation is highly continuous over a 1.3km strike length and is strata bound). A large weighting of the classification related to the estimation pass, string constraints were also used to override the estimation pass allocation and reflect the competent person's view where necessary.
	Person's view of the deposit.	view of the deposit.





Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	 Apart from BMGS's own internal audit process, no audits or reviews of the Mineral Resource estimate have been completed.
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global 	 The resource classification is based on standard practices and guidelines as prescribed in the 2012 JORC Code.
	 or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, 	 The resource estimate relates to a global estimate of tonnes and grade. No mining currently exists at Selene therefore there is no





Appendix 3 - 2012 JORC Reserve Disclosures

The following Reserve disclosures for the Mt Henry Gold Project are provided.

Section 4 Estimation and Reporting of Ore Reserves (Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary		
Mineral Resource estimate for conversion to Ore Reserves	 Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	Mineral Resources are inclusive of Ore reserves. The Mineral Resources are;		
		Deposit Name	Geological model name	Model type
		Mt Henry	mh_06_ok_20130 625.mdl (BMGS 2013)	Surpac/Ordinary kriged
		Selene	selene_06gt_cut_2 0130619.mdl (BMGS 2013)	Surpac/Ordinary kriged
		North Scotia	north_scotia1306. mdl (BMGS 2013)	Surpac/Ordinary kriged
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	The Mt Henry provisited the site on determine site lay impacts of the prostakeholders.	ject is a greenfields site six occasions to inspe out, inspect drill core, o ject being developed,	e. Mr Williams has ct topography, consider environmental consultation with local
Study status	 The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre- Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered. 	 A feasibility level study has been completed on the three deposits demonstrating that the project is technically viable. The level of studies has considered detailed designs and schedules, estimation of capital and operating costs based on quotes and schedules of service supply. Modifying factors (described below) have been applied. Discounted cash flow analysis has been used to demonstrate that the project is financially viable at an assumed gold price of A\$1.500/oz 		eted on the three s technically viable. iiled designs and rating costs based on e been applied. used to demonstrate assumed gold price of
Cut-off parameters	 The basis of the cut-off grade(s) or quality parameters applied. 	 Cut-off grades ap breakeven cost of throughput rate a determined by the for Mt Henry and 	plied to the Ore Reserv f ore production based nd processing cost and Peasibility Study. A va Selene and 0.6g/t for N	ves reflect the marginal on the planned I recovery parameters alue of 0.7g/t was used lorth Scotia.
Mining factors or assumptions	 The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. 	 The deposits all outcrop and will be mined as open pits. Open pits have been optimized using Whittle 4X software. All cost inputs, metallurgical and mining parameters were based on detailed studies. The mining method is conventional and reflects the large scale, shallow nature of the deposits. Excavation by conventional dump truck and hydraulic excavator is planned. Bench heights will vary from 5 to 10m with mining by 2.5m flitches. Detailed pit and dump designs were generated with geotechnical parameters determined by independent consultants and based on analysis of an extensive local data set. Overall pit slopes vary from 45 -55 degrees. Ramps are 12-22m wide, berms are mainly 8m wide with some larger 15m wide berms, batter angles are mostly 75 degrees but have been flattened to 65 degrees in the upper parts of Mt Henry east wall. Most of the pit wall exposures are in fresh, competent rock. An allowance has been made to install rock catch fences and install mesh drapes over batters if required. Grade control drilling will be required and has been included as an operational cost. 		





Criteria	JORC Code explanation	Commentary
	The infrastructure requirements of the selected mining methods.	 At Selene and Mt Henry mining dilution of 5% at a diluent grade of 0.5g/t has been included. No mining loss has been assumed. At North Scotia 10% dilution at zero grade has been applied with no ore loss. Inferred Mineral Resource was included in pit optimization and is reported in the Mining Inventory (4.4% of total) but is excluded from the Ore Reserve estimate. A significant portion of the inferred inventory at Selene is mined late in the mining schedule and therefore has very little financial impact. The base of all the pit designs are in indicated resource. The open pits will be developed from natural surface and no infrastructure is required other than easily developed haulage roads. The site is readily accessible from existing roads.
Metallurgical factors or assumptions	 The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications? 	 A standard Carbon in Leach ("CIL") flowsheet for gold extraction is proposed to treat the ores from the three deposits. The flowsheet will consist of three stage crushing followed by whole ore grind to a target size of p80=38 µm. The circuit will also contain a gravity circuit. The process is well tested and extensively used throughout the industry. Metallurgical testwork was completed on representative samples from the three deposits. The samples came from the 2013 drilling programme and consisted mainly of drill core. The samples were from a range of locations across the deposits (upper, lower, north, south, transitional and primary). Metallurgical testwork consisted of determining a range of standard comminution factors such as UCS, abrasion index, Bond Rod mill work index and Bond Ball mill work index. A variety of tests was undertaken to examine gold recovery and reagent consumption at various grind sizes. This included extractive testwork in a representative sample of site water. Mineralogy studies and diagnostic leach tests also supported the overall work to determine the optimum conditions for gold extraction. Recovery (gravity plus leaching) varies slightly across the three deposits ranging from 90-93%. An average recovery of 90% has been adopted as the majority of the ore is primary from Mt Henry and Selene. The ran on deleterious minerals. No bulk samples have been tested.
Environmental	 The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. 	 A range of baseline studies have been conducted to ascertain the potential impacts of the project to flora and fauna (terrestrial, invertebrate and aquatic) A program of waste rock characterisation has been carried out to investigate the potential impacts of the PAF rocks that form the footwall of the Mt Henry and the Selene deposits in terms of acid rock drainage. Waste dump and TSF design has been carried out to ensure that all PAF material is fully encapsulated and all landforms remain stable and non-polluting. The effect on groundwater by excavation of the open pits has also been assessed and shown to have no detrimental effects. Conceptual closure planning for the TSF is well advanced. A study of materials balance demonstrates that the TSF facility can be closed with a NAF waste rock cover and growth medium.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	 The project is located 2.5km from a sealed highway between the regional towns of Norseman and Esperance in Western Australia and readily accessible to skilled labour and various mining service companies. There is adequate flat land on which to construct the processing plant and other infrastructure that is required.







Criteria	JORC Code explanation	Commentary
		 The Kambalda to Esperance Gas pipeline is located adjacent to the highway with an existing take-off point on the pipeline from which it is proposed to build a high pressure pipeline to supply gas to a power station. The power station will supply all of the power for the project. Consultation with the pipeline manager has confirmed that sufficient gas will be available to meet the needs of the project. A large paleo-channel has been defined which will be the basis for the project water supply for ore processing and dust suppression. Consultation with the Water Authority has confirmed access to a potable water supply in the town of Norseman (20km's away) sufficient to supply the project for accommodation and use in the process plant.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study	The majority of the Capital costs for the project (57%) are associated with construction of the processing plant. These costs have been estimated by an engineering and project design company experienced with construction of similar plants. Other costs regarding project infrastructure (19%) have been estimated by Panoramic Resources staff based on quotes, first principle cost buildup and detailed break-down of tasks & quantities. Closure and sustaining costs (12%) are based on a detailed task breakdown of closure activities with industry average unit rates. Sustaining costs (establishment & excavation until processing commences) (7%) are based on a quote from a mining contractor and the associated schedule developed from the mine plan. Owner's costs (5%) are costs incurred by the company whilst the process plant and infrastructure is constructed.
	The methodology used to estimate operating costs. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	 Operating costs consist of a manning schedule by functional area (mining, process, administration) with a budgeted number of employees at various salary allocations. This includes salary on-costs. The cost of power is derived from an analysis of the gas market in Western Australia and a quote from a power station operator. Process plant reagent consumption and maintenance cost have been estimated by the engineering design company. A detailed quote from an experienced WA based mining contractor has been used to estimate unit costs by bench level within each deposit. Other operating costs such as flights, potable water, and grade control are based on quotes and experience of the Panoramic
	 Allowances made for the content of deleterious elements. Derivation of transportation charges. 	 No deleterious elements are anticipated. All cost assumptions are presented in Australian dollars. Transportation charges are not considered as gold is not a bulk commodity.
	The allowances made for royalties payable, both Government and private.	 Allowance has been made to pay the WA State Government royalty on gold at 2.5%. There also exists a private royalty to the Ngadju People who are Traditional Owners of the area where the project is located. This royalty has been allowed for at the agreed rate.
Revenue factors	 The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products. 	 Head grade is determined by the mining sequence and reflects the spatial variation within and between the three deposits. Costs are based on current quotations, designs and proposals and have been assumed to be constant for the life of mine. The gold price of A\$1,500/oz reflects the prevailing US\$ gold price and A\$:US\$ FX rate and has been assumed to remain constant for the life of mine.
Market assessment	 The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. 	 Demand for gold remains strong as a hedge against inflation and a safe haven investment. Gold markets are de-regulated.







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	 Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract. 	 US\$ Gold price forecasts and A\$:US exchange rates have been derived by reference to a pool of banker and broker forecasts. Gold is not an industrial mineral.
Economic	 The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs. 	 An 8% discount rate (real) is applied to cash flow forecasts to generate a Net Present Value (NPV) of the project. A range of parameters have been analysed for NPV sensitivity. The project is most sensitive to gold price, head grade mill recovery and operating costs.
Social	 The status of agreements with key stakeholders and matters leading to social licence to operate. 	 The Mt Henry project has not yet commenced and requires various approvals from the Western Australian Government including Mining Proposal (Department of Mines and Petroleum), Works approval (Department of Environmental Regulation) and Groundwater abstraction license (5c) from Department of Water. An adjacent tenement is being obtained to allow for waste dumping. The process is nearing completion. Various miscellaneous license and general purpose leases to support project infrastructure have been applied for but they are not yet granted. A native title agreement has been negotiated with the Traditional Owners (Nadju People) which includes provision for a mining operation at the Mt Henry project.
Other	 To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government ad statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent. 	 There are no naturally occurring material risks identified. There are no known legal matters which constitute a material risk. The Resources are all on granted mining leases. The leases are due for renewal in 2028. All the other associated tenements are in good standing. It is reasonable to assume that based on consultation to date with various government departments that approval to commence mining will be granted within standard timeframes.
Classification	 The basis for the classification of the Ore Reserves into varying confidence categories. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 The Probable Ore Reserve is based entirely on the Indicated Mineral Resource lying within the pit designs with appropriate modifying factors applied. A small amount of Inferred Mineral Resource (4.4%) is included in the Mining Inventory No Measured Mineral resource has been defined at the project. The result appropriately reflects the Competent Person's view of the deposits.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	 Much of the input data to the Ore Reserves is prepared by independent consultants which use internal review and audit processes. In addition, the Panoramic project team reviews all work and results on a routine basis. There is no regular external review process in place.
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the 	 The accuracy of the Ore Reserve is largely governed by the confidence in the underlying Indicated Mineral Resource. By definition, this has a degree of uncertainty at both local and global scale due to assumptions about grade and geological continuity which are documented in the Mineral Resource reports. Modifying factors are considered to have a high degree of confidence due to the simple mining procedure planned at







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	 factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	each deposit.