Malcolm Castle

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3 October 2007

The Directors
Altera Capital Ltd
813 Wellington Street
West Perth WA 6005

Dear Sirs,

Re:

INDEPENDENT GEOLOGIST'S REPORT ON THE

MINERAL PROJECTS in WESTERN AUSTRALIA

I have been commissioned by Altera Capital Limited (ACN 082 541 437) (proposed to be renamed Altera Resources Limited) ("Altera Resources") to provide an independent technical report on the company's projects in Western Australia. This report is to be included in a Notice of Meeting to be lodged by Altera Resources with the Australian Securities and Investments Commissions ("ASIC").

This is not an independent evaluation report, and as such, serves only to comment on the geological setting and proposed exploration programs on the properties, I have not been asked to comment on the potential economic value or financial considerations pertaining to the value of Shares or assets held by Altera Resources in relation to these properties.

Altera Resources is focusing on the search for Broken Hill type silver-lead-zinc mineralisation within E09/1074 in the Gascoyne Province of northwest Western Australia. The proposed exploration and development programs are consistent with

good industry and technical practice for the evaluation of the mineral potential of the areas.

Details in respect to the legal status and tenure of the tenements comprising the Projects have not been considered in this report.

DECLARATIONS

Relevant codes and guidelines

This report has been prepared in accordance with the rules and guidelines issued by such bodies as the ASIC and ASX Limited ("ASX"), which pertain to Independent Expert Reports. Where mineral resources have been referred to in this Report, the classifications are consistent with the *Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"),* prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia, effective December 2004. The report complies with section 716(2) of the *Corporations Act 2001* where consent is required if unpublished statements have been attributed to third parties.

Under the definition provided by the ASX and in the JORC Code, these properties are classified as 'exploration projects', which are inherently speculative in nature. The properties are considered to be sufficiently prospective, subject to varying degrees of risk, to warrant further exploration and development of their economic potential, consistent with the programs proposed by Altera Resources.

Sources of Information

The statements and opinion contained in this report are given in good faith and this review is based on information provided by the title holders, along with technical reports by consultants, previous tenements holders and other relevant published and unpublished data for the area. I have endeavoured, by making all reasonable enquiries, to confirm the authenticity, accuracy and completeness of the technical data upon which this report is based. A final draft of this report was provided to Altera Resources, along with a written request to identify any material errors or omissions prior to lodgement.

The independent technical report has been compiled based on information available up to and including the date of this report. Consent has been given for the distribution of this report in the form and context in which it appears. I have no reason to doubt the authenticity or substance of the information provided.

Qualifications and Experience

The person responsible for the preparation of this report is:

Malcolm Castle, B.Sc.(Hons), GCertAppFin (Sec Inst), MAusIMM, MSME

> **Malcolm Castle** has over 40 years experience in exploration geology and property evaluation, working for major companies for 20 years as an exploration geologist. He established a consulting company 20 years ago and specializes in exploration management, technical audit, due diligence and property valuation at all stages of development. He has wide experience in a number of commodities including gold, base metals, iron ore and mineral sands. He has been responsible for project discovery through to feasibility study in Australia, Fiji, Southern Africa and Indonesia and technical Audits in many countries.
>
> Mr Castle completed studies in Applied Geology with the University of New South Wales in 1965 and has been awarded a B.Sc.(Hons) degree. He has completed postgraduate studies with the Securities Institute of Australia in 2001 and has been awarded a Graduate Certificate in Applied Finance and Investment in 2004.
>
> Mr Castle is a Member of the Australasian Institute of Mining and Metallurgy ("AusIMM") and has the appropriate relevant qualifications, experience, competence and independence to be considered as an "Expert" and "Competent Person" under the Australian Valmin and JORC Codes respectively.

Independence

I am not, nor intend to be a director, officer or other direct employee of Altera Resources and have no material interest in the Projects or Altera Resources. The relationship with Altera Resources is solely one of professional association between client and independent consultant. The review work and this report are prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this Report.

Yours faithfully

Malcolm Castle

B.Sc.(Hons) MAusIMM, MSME
GCertAppFin (Sec Inst)

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GASCOYNE PROJECT

Earlier exploration by previous explorers had assessed the Gascoyne Province to be prospective for Broken Hill Type Ag-Pb-Zn (BHT) mineralisation. This work was generally focussed on the eastern and southern portions of the Province.

A study of Zn-bearing spinels (gahnites) in the late 1990s highlighted the potential of the Gascoyne Province for this style of mineralisation. The presence of gahnites are interpreted to be related to Proterozoic BHT mineralisation, although the provenance of the minerals was not clear.

As a result of the gahnite study by BHP Billiton ("BHP"), a review of the BHT Ag-Pb-Zn potential of the Gascoyne Province was undertaken, which highlighted the prospectivity of the Proterozoic Morrissey Metamorphic Suite in the northwest of the Province.

A detailed airborne magnetometric survey by ABM Resources NL (ABM) indicated the structure of the area was followed by a west northwest striking domal feature and the lithologies are probably siliceous, clastic sediments. The southern margin of the antiform has been transected by a west northwest striking shear, whilst the western part of the dome has undergone a later stage folding regime and the intrusion of a granitoid. BHT mineralisation is predominantly hosted at a major stratigraphic break, and remobilised or offset into both the hangingwall and footwall.

BROKEN HILL TYPE MINERALISATION

GEOLOGY

The Broken Hill ore body in far western New South Wales is hosted within the gneisses of the Willyama Supergroup, a mesoproterozoic sequence of quartz-rich feldspathic gneisses of interpreted sandstone protolith, and micaceous gneisses of siltstone protolith. The Broken Hill ore deposit is considered to be roughly 1,800 million years old.

The simplified geology of the Broken Hill ore body is a series of boomerang-shaped, highly sheared and disrupted ribbon-like and poddy massive sulfide lenses which outcropped in the central section (the old "Broken Hills" gossan hills) and plunge steeply north and moderately south.

The ore consists of massive, recrystallised sphalerite-rich, galena-sphalerite and galena-rich sulfide lenses often consisting of up to 100% lead-zinc sulfides, with little or no

pyrite, chalcopyrite or gangue sulfides. The ore is hosted within a unit of gneiss known as the Potosi Gneiss.

The footwall to the mineralization is a psammopelite gneiss, consisting of feldspar, quartz, garnet, biotite and amphibole, with a pelite gneiss on the hanging wall. The footwall gneiss contains anomalous mineral chemistries including a rare lead-rich feldspar and manganese-rich garnet chemistries.

Ore is predominantly hosted at this stratigraphic break, but much of the ore body is structurally remobilised or offset into both the hangingwall and footwall, and the geometry of the ore deposit is particularly complex on the local scale.

SEDEX MINERALISATION

Broken Hill is widely considered to be a sedimentary exhalative (SEDEX) deposit which has been extensively reworked and modified by metamorphism and shearing. Key evidence for this over-arching theory includes the association of silver, lead and zinc, which is found in many other SEDEX deposits worldwide and the position of the bulk of mineralization at a key stratigraphic contact between psammite and psammopelite gneisses.

The Potosi Gneiss, and the manganiferous garnet horizon, are considered key indicators of original bedding orientation (S0) and are thus key exploration targets, as there is a proven association of anomalous lead and zinc within the gneissic stratigraphy with these horizons on a regional basis.

METAMORPHIC OVERPRINTS

The Broken Hill ore deposit is hosted within the Proterozoic gneisses of the Broken Hill Block, adjacent to the Curnamona Craton in South Australia. The terrane in which Broken Hill is hosted has undergone a series of several metamorphic deformations at amphibolite facies. This has resulted in the 'squeezing of the lead and zinc sulfides into the current basic boomerang shape, and resulted in the separation of the ore body into zinc-rich and lead-rich lodes and domains.

The lodes themselves show various structural facies, and show variable responses to shearing, though mostly in a ductile fashion. Many lodes, particularly the lead lodes, have sharp contacts with gneissic host rocks, indicating they have become structurally relocated during peak metamorphism. Similarly, it is conjectured that the current

position of the zinc and lead lodes at Broken Hill may not necessarily be related to their original position along the bedding planes, or vertically within the stratigraphic section.

METASOMATISM

The lower part of the Willyama Supergroup has undergone intense sodium alteration, particularly the Broken Hill Block and subdomain. This has resulted in pervasive albite alteration particularly in the Olary domain adjacent to Broken Hill.

The influence of high-temperature metamorphic fluids on the ore deposit cannot be discounted, although it is considered less central to genetic factors than previous theories of hydrothermal origins for the deposits. The current consensus view is that metasomatic overprints are present as a result of the focusing of flow through the zones of weakness around the massive sulfides, which are ductile failure loci in themselves.

Metasomatic effects include re-equilibrating isotopic systematics of the lead-zinc sulfides and wall-rocks, and introduction of rare elements into the sulfide bodies to form one of the most diverse mineralogical assemblages in the Earth's crust, with 1500 or more mineral species recognized at Broken Hill, including several dozen not reported elsewhere.

The association of the Broken Hill line of lode with a horizon of manganiferous garnets is considered to be partly a function of a potential protolith of exhalative manganiferous chert, metamorphically upgraded to a garnetiferous gneiss, and perhaps some reconsititution of that protolith by metasomatism associated with the nearby massive sulfides.

LOCATION AND TENURE

The Gascoyne project is located approximately 100km north of the township of Gascoyne Junction and 250 km to the east Carnarvon, Western Australia. It comprises of tenements Exploration Licence 09/1074, Exploration Licence 09/1266 and Mining Licence 09/62 (Figure 1). The project covers an area of approximately 371 km^2 in the region west of the Lockyer Range.

Figure 1 – Location of Tenements

REGIONAL SETTING

The Gascoyne Project lies within the Gascoyne Province which is the deformed and high-grade metamorphic core zone of the early Proterozioc Capricorn Orogen. The province comprises of voluminous

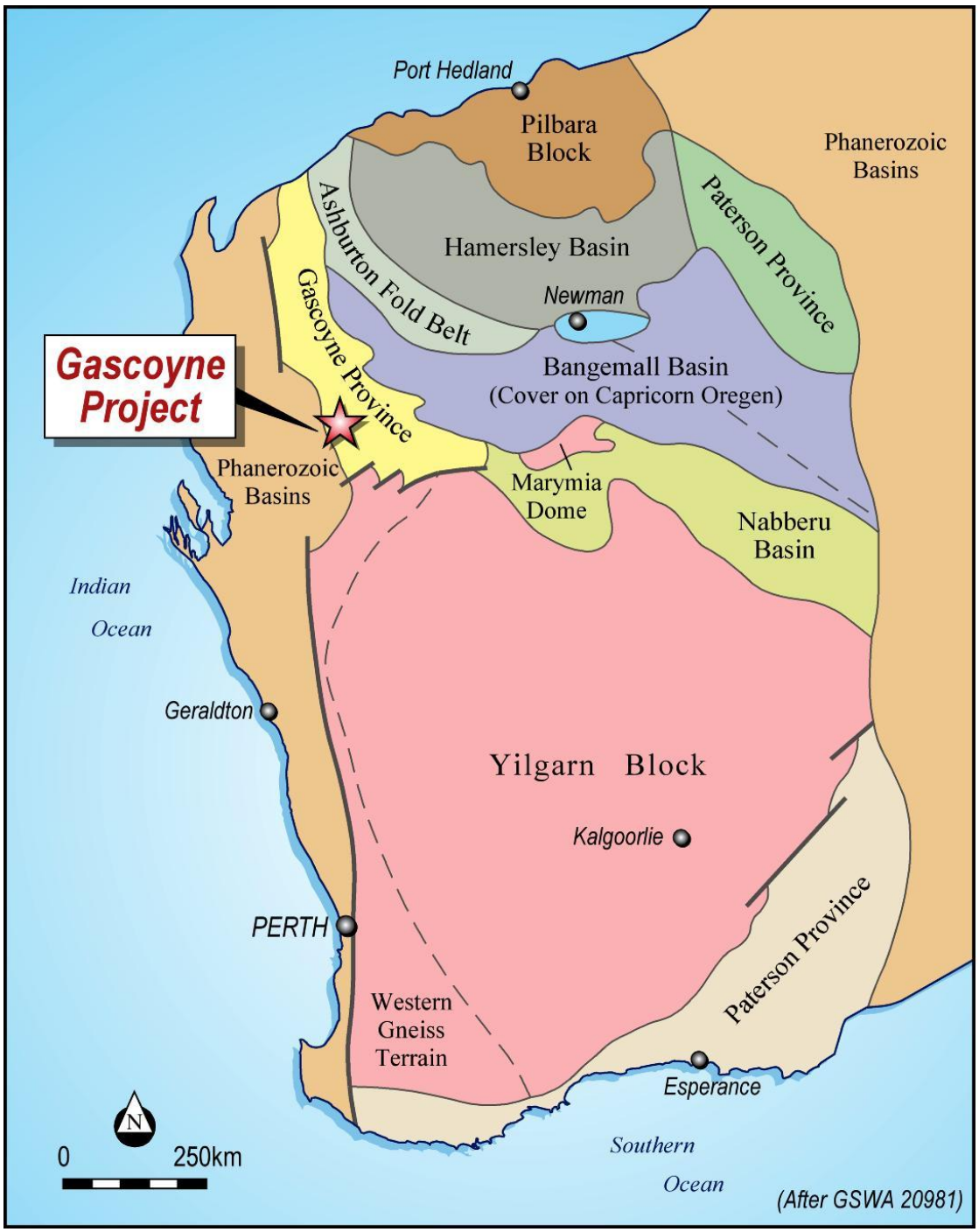

Figure 2 – Geological Framework and Project Location

granitoid intrusions, mantled-gneiss domes, metamorphosed and partly melted sedimentary rocks, and remobilized Archaean basement gneiss. It lies between the Pilbara Craton and Yilgarn Block and tectonic trends within the Gascoyne Province wrap around the margins of these relatively stable cratons (Figure 2)

A group of ensialic, geosynclinal shelf and trough sedimentary rocks named the Morrissey Metamorphic Suite extends throughout the Province and was probably deposited on Archaean continental crust. The Archean basement is extensively remobilized and this, together with repeated deformation and amphibolite-facies metamorphism of the Morrissey Metamorphic Suite, is largely attributed to the emplacement of mantled-gneiss domes and granitoid batholiths (Figure 3).

The key aspects of the geology of the Gascoyne Province include the following aspects.

- There are 3 main zones of supracrustal rocks defined within the Gascoyne Province referred to as the Northern, Central and Southern zones.
- There are complex fold patterns with variable plunges; however there is a dominant west northwest grain to the country and widespread granite gneisses formed before or during the first episode of deformation
- The Morrissey Metamorphic Suite comprises a range of lithologies, including pelitic gneisses and schists, quartzo-feldspathic gneisses-schists, quartzite, meta-arkoses with lesser calc-silicate gneiss-granofels, marble, amphibolite, and minor BIF.
- Amphibolites occur mostly as narrow units concordant to gneissic banding. Overall they form a minor component of the Morrissey Metamorphic Suite. The only area with large bodies of amphibolite occurs between the Nardoo and Injinu Belts, where the amphibolite is intercalated with pelitic schist.
- Possible Broken Hill Type mineralisation source rocks such as meta-arkoses are widespread in the northern zone and the Gascoyne Province contains numerous epigenetic Ag-Pb-Zn occurrences.

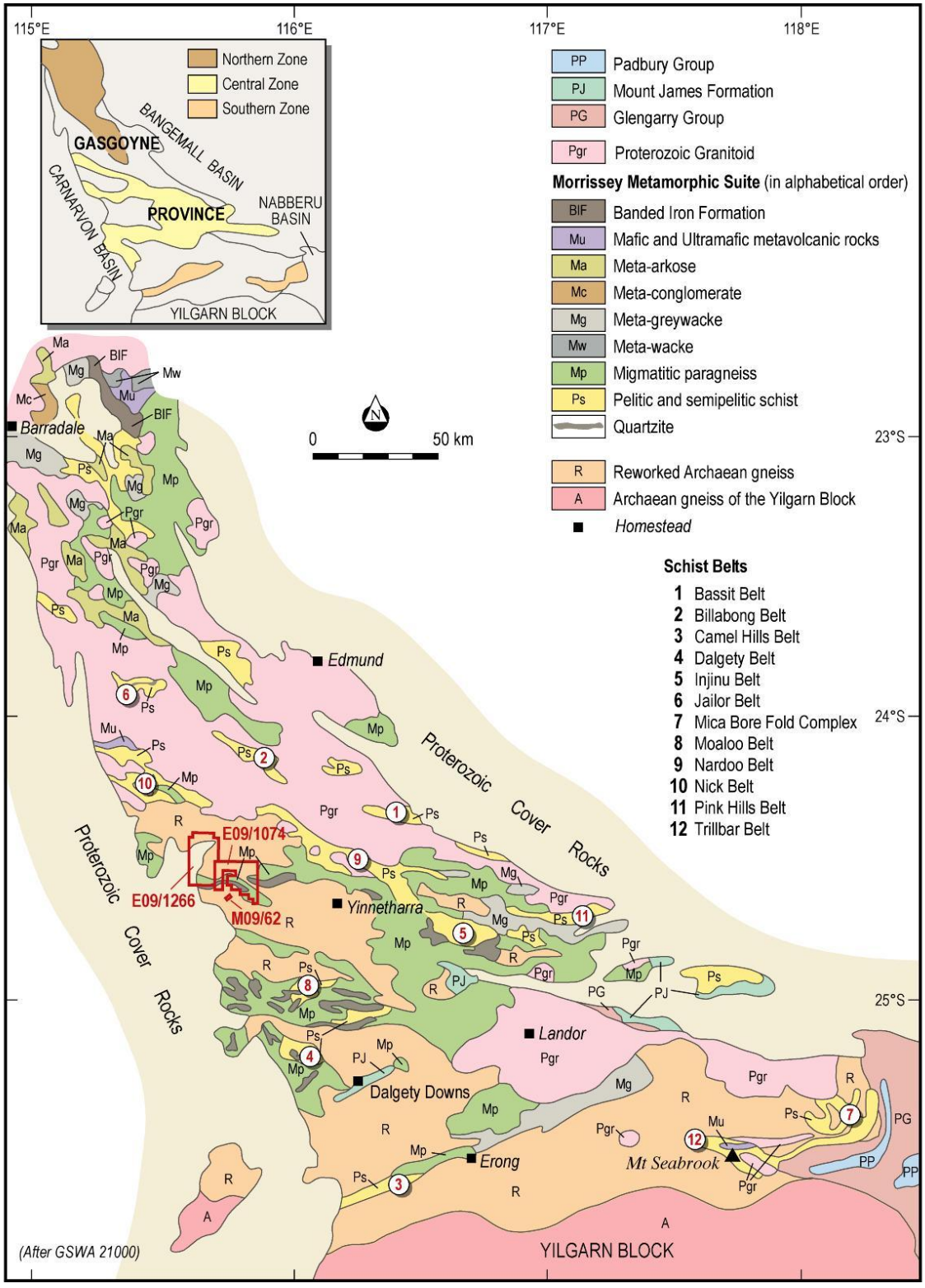

Figure 3 – Regional Geology of the Gascoyne Province

LOCAL GEOLOGY OF THE PROJECT AREA

The Morrissey Metamorphic Suite within the Project area consists of four main units. The dominant unit is a quartz-microcline-oligoclase-biotite-muscovite paragneiss and schist (interpreted protolith is an arkose). This unit is widespread within the Mt Phillips 1:250,000 sheet area. Forming a subordinate unit is a quartz-biotite-muscovite-feldspar-garnet paragneiss-schist with intercalated quartzite and micaceous quartzite. A large oval body of migmatite and gneissic granodiorite occurs within the eastern portion of the Project area, which coincides with a distinctive magnetic ovoid.

A large area of Permian sediments (glacigene sandstone, siltstone and tillite) runs north-south across the western portions of the Project area. The thicknesses of these units are unknown.

Pegmatite veins in this region tend to be quartz rich and are intimately associated with the northwest trending shears. Quartz veins or lenses occur as sinuous outcrops parallel to the regional strike or as *en echelon* sets almost orthogonal to the shear. The veins at Nardoo Hill Well are of the second type and are less than 100m in length and 1-8m in thickness.

There are no known base or precious metal occurrences within the project area.

PREVIOUS EXPLORATION

TANTALUM/NIOBIUM

The project area hosts numerous pegmatite occurrences of varying sizes. Arthur River mining lease 09/62 has been targeted for the exploration and extraction of columbite/tanatalite from alluvial/eluvial and primary sources for the last 40 years. It appears that some high grade columbite samples and production has been won from this area by prospecting syndicates and junior companies using a small plant with trommel and jig apparatus type setup. The high grade columbite concentrate produced from Arthur River contained 67% Nb_2O_5 and has favourable smelting characteristics for the production of ferro-niobium. It is difficult to establish the total material mined for the extraction of tantalite and columbite from Arthur River however the majority of open file reports contain proposals to undertake exploration programs and bulk sampling programs to establish sizeable resources that could then be mined to produce columbite and tantalite. Heightened interest in this area has usually coincided with rise in the price of tantalum and niobium prices.

Between 1996 and 1998 all open-file data (streams, soils, drilling) within the Gascoyne Province was captured to a database by BHP. These data demonstrated that previous exploration within the Project area has been limited to a small number of stream sediment samples. No previous geophysics or drilling is documented.

GAHNITE SAMPLING

A study of heavy mineral samples collected from earlier diamond exploration was undertaken to identify anomalous gahnite-bearing samples possibly related to BHT mineralisation by BHP. Gahnites are not widespread across the Gascoyne Province, despite quite detailed heavy minerals sampling.

Gahnite (zinc aluminium oxide) is one of the rarer members of the spinel group of minerals, an important group of oxides. Gahnite forms in some granitic pegmatites, zinc deposits and in skarns, a type of contact metamorphic rock

The gahnites identified in the northwest of the Province are interpreted to be shedding from the Proterozoic Morrissey Metamorphic Suite, which is considered prospective for BHT mineralisation.

RECONNAISSANCE GEOCHEMISTRY

Much of the Gascoyne Province is covered by semi-regional stream sediment sampling collected by the Geological Survey of Western Australia (GSWA). The GSWA sampling covers both the Mount Phillips and Robinson Range sheets. Sample density averaged 1 sample per 16 km^2 and at each site 1.5 kg was sieved to between 0.45mm and 2.0mm and analysed.

Within the Gascoyne Project area, the GSWA sampling highlights a cluster of samples with elevated silver, lead and palladium which are coincident with the prospective gahnite samples.

Initial field reconnaissance in the NW corner of the Gascoyne Province was completed in 2003 by BHP. The field work consisted of soil sampling, rock sampling and geological traversing, including the collection of 17 soil and 15 rock samples within the project area.

This reconnaissance work defined a 6 km long Pb-Zn-Cu soil anomaly coincident with gahnite-bearing and Pb-anomalous drainages. The soil anomalies are coincident with weathered manganiferous and garnetiferous schists/gneisses that have returned up to 990 ppm Pb, as well as gossanous float with up to 0.14% Zn. In order to adequately test

the soil and rock anomalism, a ground geophysical survey was planned to delineate targets for further exploration.

In the course of its regional diamond-search program in 2003 numerous alluvial/colluvial bulk samples were collected by BHP in a locality in the western part of the area. Numerous granite grains were recovered in the heavy mineral fraction. This mineral, together with fundamental geology (age and lithology) were reminiscent of the Broken Hill SEDEX massive sulphide mineralizing environment and reconnaissance exploration for that model was initiated. Fifteen rock chip samples taken from the licence were assayed for a suite of elements including Cu, Pb, Zn, Co, Ag, Au, Mn and Ni. Of theses, two samples 8km apart, returned anomalous levels of Co, Cu and Zn whilst the former, in the centre of the licence area had a concentration of 953ppm lead.

Follow-up exploration included the collection of 17 soil samples along station tracks in the vicinity of the anomalous samples, which were re-assayed for. Of the follow up samples, three showed elevated Pb-Zn values and one contained 408ppm Pb and 156ppm Zn.

GRAVITY SURVEY

Approximately 2500 gravity stations were collected in 2004 by BHP over prospective Morrissey Metamorphic Suite stratigraphy. In the west of the survey area, the contact of Proterozoic granitic and gneissic rocks with Lyons Formation (sandstones and siltstones) to the west is clearly defined. A northwest-trending band of Proterozoic biotitic and granodioritic gneisses transects the survey area. This broad gravity high is associated with strongly magnetic stratigraphy.

Although the gravity survey did not define any clearly anomalous features, six smaller, low priority anomalies were identified that were interpreted as possible deep BHT targets. Two of these six targets are within E09/1074.The gravity targets were modelled with densities of 3.4 g/cc (to approximate BHT mineralisation) against a background of 2.67 g/cc.

The first target in the project area is a 0.25 mGal feature on the edge of the main granodiorite belt. While the mass could be ascribed to a near-outcropping mass of granodiorite, the magnetics suggests a different composition to the main belt of material.

The second target was selected because of its unusual relationship to the topography. While the gravity high/low of this target is probably an uncorrected topographic effect,

the feature may also be indicative of localised alteration and was considered worthy of ground follow-up.

This survey, whilst covering the area of the soil geochemical anomalism in the west of the project, did not cover the rock chip anomalism in the centre of the tenement.

Field work indicated that both of the anomalies had extensive outcrop. At the first anomaly weathered laterite, silicified in places, contained weathered fragments of metasedimentary rock and pods of amphibolite. At the second location partially weathered granitic gneiss outcrops with amphibolite pods. The presence of amphibolite rocks was considered sufficient to explain the gravity feature at that time. The analytical results received from the rock chips collected at the areas were not considered to indicate any geochemical anomalism by previous explorers.

RECENT EXPLORATION

A detailed (50m line spacing) airborne magnetometric survey was carried out in 2007 by ABM Resources NL (ABM) over the northern half of the E09/1074. A reinterpretation of the geology indicated the structure of the area was followed by a west northwest striking (290°) domal feature and the lithologies are probably siliceous, clastic sediments. The southern margin of the antiform has been transected by a west northwest striking shear, whilst the western part of the dome has undergone a later stage folding regime and the intrusion of a granitoid (Figure 4).

Magnetic imagery shows the dome to be cut by several north-north east trending faults and mafic dykes whilst the north western area (the region of possible intrusion and complex folding) is separated by northwest striking faults. On the northern flank of the dome, in the area of magnetic quiescence, subtle parallel (stratigraphic) linear anomalies can be discerned. Periodically, along some of these linear features are weak but definite magnetic anomalies. The earlier geochemical sampling was carried out in zones of relative magnetic quiescence to the north and northwest of the dome.

The derivation of the geochemical anomalies in the northwest of the licence area has not been clarified.

Figure 4 – Geological Interpretation from aeromagnetics

EXPLORATION POTENTIAL

The Gascoyne Province is considered prospective for BHT mineralisation similar to Cannington and Broken Hill. At this stage stratiform-stratabound Ag-Pb-Zn occurrences have not been discovered, which is typical of other BHT terranes.

The key criteria for BHT ore deposits are;

- Association with major sedimentary packages of sandstone protoliths underlying siltstone protolith sequences in highly disturbed metamorphic terranes
- A Proterozoic age is considered important, as no other major SEDEX lead-zinc deposits of this style are known from the Phanerozoic or Archaean
- Association with manganiferous garnets.

Reconnaissance sampling has identified an area of anomalous geochemistry associated with poorly exposed Morrissey Metamorphic Suite stratigraphy considered to be prospective for BHT mineralisation. A ground gravity survey identified 2 low priority targets within the project area, which were followed up with a ground inspection and further geochemistry.

The important features of the Gascoyne Project indicated by earlier work and interpretation are:

- A sequence of folded Proterozoic, silicieous, clastic sediments; probable late-stage granitoid intrusions.
- A series of, apparent stratigraphic, magnetic anomalies.
- Granite in heavy mineral concentrations from this region; source not determined.
- Anomalous PB-Zn-Cu-(Mn) values in rock chip and soil samples, some of which appear to be at the same stratigraphic level as magnetic anomalies.

- The presence of manganiferous and garnetiferous schists/gneisses.
- Zinc spinel (gahnite) minerals interpreted to be shedding from the Proterozoic Morrissey Metamorphic Suite

The gravity survey needs to be reassessed and compared, spatially, with the detailed magnetometric and geochemistry.

EXPLORATION BUDGET

Exploration proposed by Altera will include detailed regolith and geological mapping and systematic surface geochemistry. A review of the aeromagnetic and gravity data and additional geophysical surveys comprising of ground magnetics and EM will be undertaken. This exploration work will define a programme of early drill testing using RC and diamond drilling. Altera proposes to expend, over a period of two years, a total of $1,300,000.

	Year 1	Year 2	Total
Regolith/Geological mapping	10,000		10,000
Soil/rock chip geochemistry	30,000		30,000
Geophysics	100,000	50,000	150,000
RC drilling	160,000	120,000	280,000
Diamond drilling	220,000	250,000	470,000
Geological personnel and technical support	140,000	140,000	280,000
Administration and overheads	40,000	40,000	80,000
Total	$700,000	600,000	1,300,000

Altera's proposed expenditure for the Gascoyne Project is warranted and realistic in the context of the equity being raised by the company. The proposed exploration programs may change from that currently stated depending on the results from the Year 1 program. However, it should be possible to fully evaluate the base metal potential of the main target areas within the 2 year period.

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GLOSSARY OF TECHNICAL TERMS

aeolian	Formed or deposited by wind.
aerial photography	Photographs of the earths surface taken from an aircraft.
aeromagnetic	A survey undertaken by helicopter or fixed-wing aircraft for the purpose of recording magnetic characteristics of rocks by measuring deviations of the earths magnetic field.
airborne geophysical data	Data pertaining to the physical properties of the earths crust at or near surface and collected from an aircraft.
aircore	Drilling method employing a drill bit that yields sample material which is delivered to the surface inside the rod string by compressed air.
alluvial	Pertaining to silt, sand and gravel material, transported and deposited by a river.
alluvium	Clay silt, sand, gravel, or other rock materials transported by flowing water and deposited in comparatively recent geologic time as sorted or semi-sorted sediments in riverbeds, estuaries, and flood plains, on lakes, shores and in fans at the base of mountain slopes and estuaries.
alteration	The change in the mineral composition of a rock, commonly due to hydrothermal activity.
amphibolite facies	An assemblage of minerals formed at moderate to high temperatures (450□C to 700□C) during regional metamorphism.
andesite	An intermediate volcanic rock composed of andesine and one or more mafic minerals.
anomalies	An area where exploration has revealed results higher than the local background level.
anticline	A fold in the rocks in which strata dip in opposite directions away from the central axis.
antiformal	An anticline-like structure.
Archaean	The oldest rocks of the Precambrian era, older than about 2,500 million years.
assayed	The testing and quantification metals of interest within a sample.
Au	Chemical symbol for gold.
auger sampling	A drill sampling method using an auger to penetrate upper horizons and obtain a sample from lower in the hole.
axial plane	The plane that intersects the crest or trough of a fold, about which the limbs are more or less symmetrically arranged.
basalts	A volcanic rock of low silica (<55%) and high iron and magnesium composition, composed primarily of plagioclase and pyroxene.
polymetallics	A non-precious metal, usually referring to copper, lead and zinc.
bedrock	Any solid rock underlying unconsolidated material.
BIF	A rock consisting essentially of iron oxides and cherty silica, and possessing a marked banded appearance.

BLEG sampling	Bulk leach extractable gold analysis; an analytical method for accurately determining low levels of gold.
brittle	Rock deformation characterised by brittle fracturing and brecciation.
Cainozoic	An era of geological time spanning the period from 65 million years ago to the present.
carbonate	Rock of sedimentary or hydrothermal origin, composed primarily of calcium, magnesium or iron and CO_3. Essential component of limestones and marbles.
chert	Fine grained sedimentary rock composed of cryptocrystalline silica.
chlorite	A green coloured hydrated aluminium-iron-magnesium silicate mineral (mica) common in metamorphic rocks.
clastic	Pertaining to a rock made up of fragments or pebbles (clasts).
clays	A fine-grained, natural, earthy material composed primarily of hydrous aluminium silicates.
colluvium	A loose, heterogeneous and incoherent mass of soil material deposited by slope processes.
conduits	The main pathways that facilitate the movement of hydrothermal fluids.
conglomerate	A rock type composed predominantly of rounded pebbles, cobbles or boulders deposited by the action of water.
copper	A reddish metallic element, used as an electrical conductor an the basis of brass and bronze.
dacite	An extrusive rock composed mainly of plagioclase, quartz and pyroxene or hornblende or both.
depletion	The lack of gold in the near-surface environment due to leaching processes during weathering.
diamond drill hole	Mineral exploration hole completed using a diamond set or diamond impregnated bit for retrieving a cylindrical core of rock.
dilational	Open space within a rock mass commonly produced in response to folding or faulting.
dolerite	A medium grained mafic intrusive rock composed mostly of pyroxenes and sodium-calcium feldspar.
DoIR	Department of Industry and Resources, WA.
ductile	Deformation of rocks or rock structures involving stretching or bending in a plastic manner without breaking.
dykes	A tabular body of intrusive igneous rock, crosscutting the host strata at a high angle.
en-echelon	Repeating parallel, but offset, occurrences of lenticular bodies such as ore veins.
erosional	The group of physical and chemical processes by which earth or rock material is loosened or dissolved and removed from any part of the earths surface.
fault zone	A wide zone of structural dislocation and faulting.
feldspar	A group of rock forming minerals.
felsic	An adjective indicating that a rock contains abundant feldspar and silica.
folding	A term applied to the bending of strata or a planar feature about an axis.

foliated	Banded rocks, usually due to crystal differentiation as a result of metamorphic processes.
follow-up	A term used to describe more detailed exploration work over targets generated by regional exploration.
g/t	Grams per tonne, a standard volumetric unit for demonstrating the concentration of precious metals in a rock.
gabbro	A fine to coarse grained, dark coloured, igneous rock composed mainly of calcic plagioclase, clinopyroxene and sometimes olivine.
geochemical	Pertains to the concentration of an element.
geophysical	Pertains to the physical properties of a rock mass.
GIS database	A system devised to present partial data in a series of compatible and interactive layers.
gneissic	Coarse grained metamorphic rocks characterised by mineral banding of the light and dark coloured constituent minerals.
granite	A coarse-grained igneous rock containing mainly quartz and feldspar minerals and subordinate micas.
granoblastic	A term describing the texture of a metamorphic rock in which the crystals are of equal size.
granodiorite	A coarse grained igneous rock composed of quartz, feldspar and hornblende and/or biotite.
greenschist	A metamorphosed basic igneous rock which owes its colour and schistosity to abundant chlorite.
greenstone belt	A broad term used to describe an elongate belt of rocks that have undergone regional metamorphism to greenschist facies.
greywackes	A sandstone like rock, with grains derived from a dominantly volcanic origin.
GSWA	Geological Survey of Western Australia.
gypsum	Mineral of hydrated, or water-containing, calcium sulphate.
halite	Impure salt deposit formed by evaporation.
hangingwall	The mass of rock above a fault, vein or zone of mineralization.
hematite	Iron oxide mineral, Fe_2O_3.
hinge zone	A zone along a fold where the curvature is at a maximum.
hydrothermal fluids	Pertaining to hot aqueous solutions, usually of magmatic origin, which may transport metals and minerals in solution.
igneous	Rocks that have solidified from a magma.
infill	Refers to sampling or drilling undertaken between pre-existing sample points.
insitu	In the natural or original position.
interflow	Refers to the occurrence of other rock types between individual lava flows within a stratigraphic sequence.
intermediate	A rock unit which contains a mix of felsic and mafic minerals.
intrusions	A body of igneous rock which has forced itself into pre-existing rocks.
intrusive contact	The zone around the margins of an intrusive rock.
ironstone	A rock formed by cemented iron oxides.
isoclinal	A series of folds that dip in the same direction at the same angle.
joint venture	A business agreement between two or more commercial entities.
komatiitic	Magnesium-rich mafic to ultramafic extrusive rock.

laterite	A cemented residuum of weathering, generally leached in silica with a high alumina and/or iron content.
lead	A metallic element, the heaviest and softest of the common metals.
lineament	A significant linear feature of the earth's crust, usually equating a major fault or shear structure.
lithological contacts	The contacts between different rock types.
lithotypes	Rock types.
magnetite	A mineral comprising iron and oxygen which commonly exhibits magnetic properties.
metamorphic	A rock that has been altered by physical and chemical processes involving heat, pressure and derived fluids.
metasedimentary	A rock formed by metamorphism of sedimentary rocks.
MMI	The collection of soil samples and their analysis, using weak extractive reagents, to determine the relative abundance of loosely attached trace elemental ions, which frequently define the position of primary mineralization.
monzogranite	A granular plutonic rock containing approximately equal amounts of orthoclase and plagioclase feldspar, but usually with a low quartz content.
Moz	Millions of ounces.
Mt	Million Tonnes.
mylonite	A hard compact rock with a streaky or banded structure produced by extreme granulation of the original rock mass in a fault or thrust zone.
nickel	Silvery-white metal used in alloys.
nickel laterite	Nickel ore hosted within the laterite profile, usually derived from the weathering of olivine-rich ultramafic rocks.
open pit	A mine working or excavation open to the surface.
Orthoimage	A geographically located composite plan using aerial photography as a base.
outcrops	Surface expression of underlying rocks.
palaeochannels	An ancient preserved stream or river.
pegmatite	A very coarse grained intrusive igneous rock which commonly occurs in dyke-like bodies containing lithium-boron-fluorine-rare earth bearing minerals.
pisolitic	Describes the prevalence of rounded manganese, iron or alumina-rich chemical concretions, frequently comprising the upper portions of a laterite profile.
playa lake	Broad shallow lakes that quickly fill with water and quickly evaporate, characteristic of deserts.
polymictic	Referring to coarse sedimentary rocks, typically conglomerate, containing clasts of many different rock types.
porphyries	Felsic intrusive or sub-volcanic rock with larger crystals set in a fine groundmass.
ppb	Parts per billion; a measure of low level concentration.
Proterozoic	An era of geological time spanning the period from 2,500 million years to 570 million years before present.
pyroxenite	A coarse grained igneous intrusive rock dominated by the mineral pyroxene.

quartz reefs	Old mining term used to describe large quartz veins.
quartzofeldspathic	Compositional term relating to rocks containing abundant quartz and feldspar, commonly applied to metamorphic and sedimentary rocks.
quartzose	Quartz-rich, usually relating to clastic sedimentary rocks.
RAB drilling	A relatively inexpensive and less accurate drilling technique involving the collection of sample returned by compressed air from outside the drill rods.
rafts	A relatively large block of foreign rock incorporated into an intrusive magma.
RC drilling	A drilling method in which the fragmented sample is brought to the surface inside the drill rods, thereby reducing contamination.
regolith	The layer of unconsolidated material which overlies or covers insitu basement rock.
residual	Soil and regolith which has not been transported from its point or origin.
resources	Insitu mineral occurrence from which valuable or useful minerals may be recovered.
rhyolite	Fine-grained felsic igneous rock containing high proportion of silica and felspar.
rock chip sampling	The collection of rock specimens for mineral analysis.
saline	Salty
saprock	Zone of weathered rock preserved within the weathered profile.
saprolite	Disintegrated, in-situ rock, partially decomposed by the chemical and physical processes of oxidation and weathering.
satellite imagery	The images produced by photography of the earth's surface from satellites.
schist	A crystalline metamorphic rock having a foliated or parallel structure due to the recrystallisation of the constituent minerals.
scree	The rubble composed of rocks that have formed down the slope of a hill or mountain by physical erosion.
sedimentary	A term describing a rock formed from sediment.
sericite	A white or pale apple green potassium mica, very common as an alteration product in metamorphic and hydrothermally altered rocks.
shale	A fine grained, laminated sedimentary rock formed from clay, mud and silt.
sheared	A zone in which rocks have been deformed primarily in a ductile manner in response to applied stress.
sheet wash	Referring to sediment, usually sand size, deposited over broad areas characterised by sheet flood during storm or rain events. Superficial deposit formed by low temperature chemical processes associated with ground waters, and composed of fine grained, water-bearing minerals of silica.
silcrete	Superficial deposit formed by low temperature chemical processes associated with ground waters, and composed of fine grained, water-bearing minerals of silica.
silica	Dioxide of silicon, SiO_2, usually found as the various forms of quartz.
sills	Sheets of igneous rock which is flat lying or has intruded parallel to stratigraphy.

silts	Fine-grained sediments, with a grain size between those of sand and clay.
soil sampling	The collection of soil specimens for mineral analysis.
stocks	A small intrusive mass of igneous rock, usually possessing a circular or elliptical shape in plan view.
strata	Sedimentary rock layers.
stratigraphic	Composition, sequence and correlation of stratified rocks.
stream sediment sampling	The collection of samples of stream sediment with the intention of analysing them for trace elements.
strike	Horizontal direction or trend of a geological structure.
subcrop	Poorly exposed bedrock.
sulphide	A general term to cover minerals containing sulphur and commonly associated with mineralization.
supergene	Process of mineral enrichment produced by the chemical remobilisation of metals in an oxidised or transitional environment.
syenite	An intrusive igneous rock composed essentially of alkali feldspar and little or no quartz and ferromagnesian minerals.
syncline	A fold in rocks in which the strata dip inward from both sides towards the axis.
talc	A hydrous magnesium silicate, usually formed due to weathering of magnesium silicate rocks.
tectonic	Pertaining to the forces involved in or the resulting structures of movement in the earth's crust.
tholeiitic	A descriptive term for a basalt with little or no olivine.
thrust fault	A reverse fault or shear that has a low angle inclination to the horizontal.
tremolite	A grey or white metamorphic mica of the amphibole group, usually occurring as bladed crystals or fibrous aggregates.
ultramafic	Igneous rocks consisting essentially of ferromagnesian minerals with trace quartz and feldspar.
veins	A thin infill of a fissure or crack, commonly bearing quartz.
volcaniclastics	Pertaining to clastic rock containing volcanic material.
volcanics	Formed or derived from a volcano.
zinc	A lustrous, blueish-white metallic element used in many alloys including brass and bronze.