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# BREAKAWAY MINING RESEARCH

## *DAILY REPORT*

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Wednesday 6<sup>th</sup> September 2017\*

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*\*prepared based on announcements made by ASX Listed  
Resource Companies on the preceding day*

### OVERNIGHT COMMENTARY

#### Markets

U.S. stocks slipped while Treasuries rallied the most in 10 months as tensions with North Korea mounted and another Atlantic hurricane threatened to make landfall, reports Bloomberg.

The Dow Jones Industrial Average fell as much as 278 points at the start of a week packed with central-bank decisions, Federal Reserve speakers and economic data that will help illuminate the path of the global economy. The S&P 500 Index dropped the most since Aug. 17, ending a six-day rally. Ten-year Treasuries climbed amid lingering unease over North Korean plans for a ballistic missile launch, while Hurricane Irma threatened a region already dealing with the devastation from Harvey.

#### Commodities

Base metals fell overnight while the gold and oil prices increased. Oil was most noticeable with 3.4% increase.

Recently the copper price has continued to rise. The environmental crackdown in China may have precipitated the price run but ongoing infrastructure and other growth in China along with the further electrification of urban sites for electric vehicles is likely to continue to ramp up demand, notes SP Angel.

Elsewhere, the Bitcoin price tumbled the most since July after China's central bank said initial coin offerings are illegal and asked all related fundraising activity to be halted immediately, issuing the strongest regulatory challenge so far to the burgeoning market for digital token sales.

Commodity Prices	Price	Daily Change	Market Movements	Price/Level	Daily Change
<b>Base Metal Prices (US\$/lb)</b>			<b>Broad Market Indices</b>		
Copper	3.12	-0.2%	DJIA	21,753.31	-1.1%
Lead	1.05	-2.6%	FTSE-100	7,372.92	-0.5%
Zinc	1.42	-2.1%	Nikkei 225	19,385.81	-0.6%
Nickel	5.45	-1.4%	HK Hang Seng	27,741.35	0.0%
Aluminium	0.94	-1.2%	Shanghai Composite	3,384.32	0.1%
Tin	9.48	-0.5%			
Cobalt	27.56	0.0%	<b>S&amp;P/ASX 200</b>	<b>5,706.20</b>	<b>0.1%</b>
<b>Precious Metal Prices (US\$/oz)</b>			<b>Mining and Energy Indices</b>		
Gold	1336	0.2%	S&P/ASX 200 Resources	3,662.40	0.4%
Silver	17.88	3.1%	S&P/ASX 300 Metals & Mining	3,284.40	0.6%
Platinum	1008	0.2%	S&P/ASX 200 Energy	9,157.40	-0.4%
Palladium	987	1.0%	S&P/ASX All-Ordinaries Gold	4,869.20	0.7%
<b>Energy</b>			<b>Global Mining</b>		
Oil WTI (US\$/bbl)	48.80	3.4%	S&P/TSX Global Mining	70.37	-0.1%
Thermal coal (US\$/t)	79.50	2.1%	FTSE 350 Mining	17,876.74	-0.8%
Uranium (US\$/lb)	20.25	0.0%	AIM Basic Resources	2,590.30	0.3%
<b>Steel making</b>			<b>Commodity Indices</b>		
Iron ore (US\$/t)	76.50	0.0%	CRB Index	184.55	0.8%
Metallurgical coal (US\$/t)	210.00	0.1%	LME Index	3242.80	0.8%
Molybdenum (US\$/lb)	7.09	0.0%	S&P GSCI	2253.93	0.0%
Tungsten ATP (US\$/t)	285.00	0.0%	Baltic Dry	1215.00	2.4%
<b>Exchange Rates</b>			<i>Sources include:</i>		
AUD/USD	0.800	0.6%	<i>Bloomberg, Reuters, TradingEconomics, S&amp;P, yahoo finance</i>		
EUR/USD	1.192	0.0%	<i>Commsec, Xe.com, marketindex.com, Macquarie, Breakaway Research</i>		
USD/ZAR	12.93	-0.4%			
USD/CNY	6.55	0.5%			

## MARKET REVIEW

### New Deals (Including In Progress, Completed Or Terminated) & New Tenure.

ASX Code	Company Name	Details
OVR	OVERLAND RESOURCES	Have entered into an option to acquire 75% of the 327 sq km Yandal East Au Project located 70kms NE of Wiluna WA. The tenure covers under – explored greenstones. Historic drilling included 5 intersections noted by OVR including 12m @ 9.7g/t Au from 28mdh.
MOX	MONAX MINING	Have entered into a binding Term Sheet to earn 60% interest in the Western Queen Au Project WA from ASX-RMS. The Project covers 5kms of strike of the Warra Warra Greenstone belt and includes previously mined Western Queen and Western Queen South Pits. MOX hope to outline a resource during Q4 17.
SXY	SENEX ENERGY	Have been awarded 58 sq km of the Surat Basin Coal Seam Gas Acreage near Miles by the Qld Govt under a domestic gas acreage tender, with first gas targeted for 2019. Estimated P50 recoverable gas volumes are 201PJ with around 100 wells proposed.
HCH	HOT CHILI	Have executed a non-binding LOI over a second satellite project to the Company's Productora Cu Project in Chili. The LOI covers a 70% interest in the Lulu Project covering the extensions to historic underground mines, where vein widths to 7m were mined at grades averaging 2% Cu 5g/t Au. Little modern exploration has occurred in the area.
CLY	CLANCY EXPLORATION	Have been awarded exploration tenure covering 80 sq km covering the Leoganag Co Ni Cu Project in Austria. Cadence Minerals Plc has acquired a 10% interest in the Project from CLY.
CCZ	CASTILLO COPPER	Have completed the acquisition of 5 new prospects, including the Jackaderry Southwest Co Project adjoining the Company's Jackaderry Project near Grafton NSW; the Alpha Co Project SW of the Company's Big Oxide North and Hill of grace tenures in NW Qld; the Marlborough Ni Co Qld;

### New Listing

ASX Code	Company Name	Details
G1A	GALENA MINING	Has been admitted to the Official List of the ASX with 32.2M shares on issue. The IPO Prospectus offered 30M shares at 20 cents per share. Joint Lead Managers were Hartleys and Peloton Capital. The Company has acquired the Mulgul and Jillawarra Base Metal Projects located in the mid-west region of WA. The Mulgul Project includes the Abra Deposit. Drilling is planned.

**Production Or Emergent Production News (From Completed DFS/BFS Onwards)**

ASX Code	Company Name	Details
OGX	ORINOCO GOLD	Processing operations have recommenced at the Cascaval Au Mine Brazil. Underground mine development for July was 105m and 130m for August. 4 priority development fronts are currently being advanced for access the Mestre and Cascaval Lodes.
ERL	EMPIRE RESOURCES	Have commenced trucking ore to the Lakewood Mill NE of Kalgoorlie from the Penny Find Au Mine. The Company has also been trucking ore to the Burbank Mill at Coolgardie owned by ASX-MXR. To date more than 20kt of ore have been produced from the pit and the Company will compare the performance of the two mills and try to take advantage of higher gold prices.
IRC	INTERMIN RESOURCES	Ore mined to date from the Teal Open Pit near Kalgoorlie WA totals 98.9kt @ 3.2g/t Au for 10.1koz. The ore is toll treated at the Paddington Mill. Repayment of the capital investment of \$2.1M is complete and the Company expects to generate a net cash flow of \$7-8M @ \$1600/oz Au. Then AISC is \$1030-1090/oz. Total production expected is 15-16koz Au. The Contained resource is 355koz Au.

**Evaluation Studies (DFS, PFS, Scoping, Pilot, Appraisal & Metallurgical Testing)**

ASX Code	Company Name	Details
PWN	PARKWAY MINERALS	As part of the PFS, the Company has carried out test work that has simplified the flowsheet for the Dinner Hill Deposit (Dandaragan Phosphate Project WA). The improvements include size reduction to enhance liberation, further cleaning and scavenger flotation stages
VML	VITAL METALS	As part of an update of the 2014 DFS, metallurgical test work has been undertaken that has resulted in improvements in recovery for the Watershed Tungsten Project in Nth Qld. The work has focused on optimization of the feed size to the Dense Media Separation section of the proposed plant, improving recoveries from 74% to 77%.
KLL	KALIUM LAKES	The first salts have commenced precipitation into the pilot ponds at the Beyondie SOP Potash Project WA. The PFS into the development is due for completion this month. The evaporation data from the ponds will be important in the next stage, which is a BFS.
GME	GME RESOURCES	Have completed the third phase of the metallurgical test work on samples from the NiWest Ni Co Project WA. The results will be included in the PFS which commenced in August. (Due March 2018). The latest testing has involved solvent extraction of nickel and cobalt. GME reports it is on track to produce battery grade Ni and Co sulphates from a pilot scale test, during the current quarter.
RNU	RENASCOR	The PFS for the Siviour Graphite Project Eyre Peninsula SA, is due for completion Q4 17. Recently completed activity includes flowsheet design, product testing and environmental studies. In addition a scoping study has commenced into the viability of producing spherical graphite for use in batteries.
FYI	FYI RESOURCES	First stage metallurgical tests for the production of High Purity Alumina (HPA) from the Cadoux Kaolin Project in WA have achieve aluminium leach recoveries > 82%.

### Reserves and Resources Updates

ASX Code	Company Name	Details
AQX	ALICE QUEEN	The resource for the Pioneer Lode at the Horn Island Au Project Nth Qld is 5.8mt @ 2g/t Au for 375koz Au contained. Extension drilling to expand the resource is to commence shortly. Engineering studies on an open pit operation is underway,
AVL	AUSTRALIAN VANADIUM	The upgraded resource at the Gabanintha Vanadium Project WA is 180Mt @ 0.75% V2O5 of which 80% is still Inferred. There is a high grade magnetite zone of 93Mt @ 0.96%V2O5. The next steps are detailed metallurgical test work, mining optimization and PFS into the processing plant.
TER	TERRACOM	Have upgraded the Blair Athol Bowen Basin Qld Thermal Coal Reserves to 15.6Mt and the Resource to 21.9Mt. The LOM is now 8 years.
NTL	NEW TALISMAN	The Maiden Resource at the Bonanza Zone at the Talisman Au Project NZ is 683kt @ 17.6g/t Au Eq for 427koz Au Eq. The total for the project is now 882kt @ 15g/t Au Eq for 470koz Au Eq. The Bonanza Zone and Talisman Zones have been mined in the past and form part of the Maria Vein. The mineralization occurs as epithermal quartz veins hosted mainly in andesites.

### New Drilling Intersections As Confirmed By Assays

ASX Code	Company Name	Details
GLF	GULF INDUSTRIALS	Assays from 58RC and 10DD holes at the Gbane Au Project Ghana has returned 5 intersections noted by GLF including 5m @ 4.8g/t Au from 14mdh. The drilling has outlined a mineralized and altered shear zone with a strike length of 1.5kms
PDI	PREDICTIVE DISCOVERY	Assays from RC drilling over 2 gold-in-soils anomalies located away from the Nyangboue Deposit (Boundiali Au JV Project Cote D'Ivoire (JV partner - Toro Gold (UK)) have returned 3 intervals noted by PDI including 1m @ 22g/t Au from 51mdh. Further RC drilling and an aeromagnetic survey are being considered.
QUR	QUANTUM RESOURCES	The first 6 holes drilled at the Thompson Bros Lithium Project Manitoba Canada have returned 3 intervals noted by QUR including 21m @ 1.74% Li2O from 160mdh. 5 of the holes intersected spodumene mineralization. The Company is planning further drilling.
SVY	STAVELY MINERALS	Final results from recently completed DD tails to shallow RC holes drilled at the Thursday Gossan Prospect (Stavely Cu Au Project Vic) has returned 2 intervals noted by SVY including 5m @ 1.9% Cu 0.24g/t Au, within a broader band of 48m @ 0.47% Cu 0.15g/t Au. Follow up deeper drilling is planned.
MGV	MUSGRAVE MINERALS	Assays from the Break of Day Au Prospect (Cue Au Project WA) have returned 11m @ 54g/t Au from 217mdh, which is the best intersection to date from the project. The intersections are 70m SW to the closest hole and MGV are of the view that it may reflect a new high grade shoot. The Break of Day mineralization is still open to the south and down plunge. Further assays pending.
XAM	XANADU MINES	Extension drilling at the Copper Hill Deposit (Kharmagtai Cu Au Project Mongolia) has returned 190m @ 0.95% Cu 1.8g/t Au from surface,

**Drilling Pending, Underway OR Completed with Assays Pending**

ASX Code	Company Name	Details
BCN	BEACON MINERALS	11 holes (605m) have been drilled at Lost Dog Prospect and a 15-hole (1025m) program at the Black Cat Prospect (Jaurdi Au Project WA). Assays pending. The Company has completed a heli –VTEM survey and has identified a number of drill targets regionally. A ground gravity survey is planned. BCN has acquired 2 Mining Leases within 4kms of the Jaurdi, designed to enhance the scope of the Project.
AUR	AURIS MINERALS	Have commenced a 2500m RC and DD Program at Wodger Prospect (Forrest Cu Project Bryah Basin WA). The program is designed to follow up earlier drilling that intersected 31m @ 2.39% Cu. The program will include a deep hole co-funded by the WA Govt.
WBE	WHITEBARK ENERGY	WBE has an interest in the Xanadu 1 Well being drilled by the operator ASX-NEW that spudded in the Northern Perth Basin 4th September and expected to take 23 days. In addition the first of 2 wells will be spudded at Thorsby Prospect shortly at the Point Lomo JV, located west of Edmonton Alberta Canada (WBE has a 20% interest). Activity has also commenced at the Paddle River Prospect to undertake well re-entry, well activations and a second well designed to double production from the Project.
NWE	NORWEST ENERGY	The Xanadu -1 well has spudded and is targeted to TD of 1863m. The well is being drilled from onshore using deviations to test the target offshore. (approx. 1.3kms from the coast). The well is targeting the Permian Dongara Sandstone, plus the Irwin River Coal Measures and the High Cliff Sandstone. The structure is considered by NWE to be one of the largest untested oil prospects in the Perth Basin WA.
EYM	ELYSIUM RESOURCES	Has commenced further drilling at the Historic Lloyd's Prospect (Burruga Cu Pb Zn Project NSW). The program will involve 2 holes (600m) of RC. It will follow up a previous intersection of 9m @ 2.3%Cu 12.4g/t Au.
ZMI	ZINC OF IRELAND	A second drill rig has commenced operations at the Kildare Zn Project Ireland, where it will follow up the discovery hole at the Celtic Tiger Prospect, which returned 2.8m @ 20.2% Zn 0.88% Pb from 194mdh. The first rig is undertaking a Phase 3 program over the MacGregor Prospect.
SEG	SEGUE RESOURCES	6 holes out of a planned 17-hole (2,500m) RC drill program have been completed at the Reid Well LCT Prospect (Gascoyne Lithium Project WA). The drilling is testing pegmatite swarms within altered metasedimentary schist host. Assays pending.
WCN	WHITE CLIFFS MINERALS	Have completed 12 RC (1400m) at the Aucu Au Deposit Kyrgyz Republic, with 5 holes drilled at the Quartz Zone, 5 in the Eastern Gold Zone and 2 in the Lower Gold Zone. Assays pending.
KTA	KRAKATOA RESOURCES	The Company believes it can commence a 12-hole RC drill program at the Dalgaranga Au Cu Project WA after local aboriginals have confirmed that there are no heritage sites in the area.

**Drill Targeting & Exploration News (Geological, Geochemical & Geophysical)**

ASX Code	Company Name	Details
BGS	BIRIMIAN	The Phase 2 auger geochemical program has been completed and has outlined 3 new pegmatite zones at the Goulamina Lithium Project Mali. Rock chips up to 2% Li <sub>2</sub> O have returned. An initial RC program is planned for October.
CHK	COHIBA MINERALS	The Company is reviewing historic information ahead of drill planning for the Wee MacGregor Cu Ci Au Project Nth Qld.
KAI	KAIROS MINERALS	Have commenced a review of its 1158 sq km of tenure in the Pilbara Region WA, in light of the recent identification of gold nuggets in conglomerates associated with the Fortescue Group of rocks.
KLR	KAILI RESOURCES	Have completed a program of geochemical sampling at the Jungle Hill, Canegrass and Holey Dam Au Projects located NE of Kalgoorlie WA. Anomalous results were returned at Jungle Hill.

**Corporate News which may affect Projects & Operations**

ASX Code	Company Name	Details
ORN	ORION MINERALS	Has applied to dual list on the JSE.

**Investor Presentations (Does Not Include AGM Presentations)**

ASX Code	Company Name	Details
AJM	ALTURA MINING	AJM are developing the Pilgangoora Lithium Project WA, where bulk earthworks commenced in Q1 17 and construction is currently 50% complete. The Commissioning is targeted for Q1 18 and first spodumene concentrate sales for Q2 18. The reserves are 30Mt @ 1.04%Li <sub>2</sub> O for 313kt Li <sub>2</sub> O contained and the Contained Resources 403kt Li <sub>2</sub> O. The LOM is 20 years. The Company expects to process 1.54Mt ore pa for 220kt pa spodumene concentrate at 6% Li <sub>2</sub> O at a cost of \$316/t FOB. A scoping Study is underway based on expanding the operation to 450ktpa concentrate. The project is 120kms from port facilities in Port Hedland. Offtake of the full targeted production has been arranged with Chinese Companies J & R Optimum Energy and Lionergy. The Company is divesting its non-core assets in Indonesia.

NTM	NTM GOLD	<p>NTM holds the 170 sq km Redcliffe Au Project, covering nearly 40 kms of strike along the Mertondale Shear Zone, near Leonora. The Current Contained Resource is 278koz Au grading 1.57g/t Au. The project includes the Nambi Au Deposit which has been previously open pitted to 60m depth, with a steeply dipping ore shoot, plunging to the south. It also includes the GTS/Kelly Group of Prospects associated the Great Western Fault, where past intersections include 12m @ 3.4g/t Au from 97mdh. 21,000m of AC drilling has been completed, outlining the Kelly Group to over 4kms strike. The AC drilling has outlined priority RC targets, which will be tested over the next 6 months. An updated resource estimate will follow.</p>
VRC	VOLT RESOURCES	<p>VRC hold the Namangale Graphite Project in SE Tanzania, where a PFS was completed in Dec 16. The available resources are 461Mt @ 4.9%TGC &amp; the Reserves 127 Mt @ 4.36%TGC for 5.6Mt contained graphite. A DFS into Stage 1 is underway and will include 1500m of infill RC drilling and further metallurgical test work to complete the flow sheet design. The Company proposes the Stage 1 operation will produce 20ktpa concentrates from an open pit extending to depths up to 100m. A flotation plant is to be constructed to produce a high grade concentrate. The estimated capex is \$US30M. First cash flow expected in Q4 18. Stage 2 will see the project expanded to that recommenced in the PFS, namely 170ktpa of graphite concentrate at a grade of 95%TGC. Graphene testing has shown that a 99.95%TGC product can be developed</p>



## BREAKAWAY RESEARCH

### Breakaway Research Pty Ltd

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Austex Mining Principal Rob Murdoch is an Australian geologist who has specialised in the management of junior resource companies for 30 years. His experience enables Rob to provide a quick and valid assessment on the potential of impact of many announcements, for example those involving new discoveries, drill results or resource upgrades and tracks the progress of companies on their various exploration or development projects.

Austex maintains an extensive database on all ASX listed resource companies, their corporate situations and the status of their various projects. This database helps to identify industry and investment trends which may not be apparent otherwise. Breakaway Research is extremely pleased to be able to utilise Rob's extensive experience in both corporate and technical capacity to assist in identifying resource investments that will directly benefit our subscribers.



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