27 November 2013

ALLIANCE RESOURCES LTD

ASX: AGS

ABN: 38 063 293 336

Market Cap: A$39.2M ($0.115)

Shares on issue: 341,172,309

Cash: $24.4 M (30 Sep 2013)

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Projects:

Four Mile (25%): uranium

Cabeza de Vaca, Chile:

copper-gold

East Frome: copper, base-metals

FOUR MILE MINERAL RESOURCE

Compliance with JORC Code 2012

The mineral resource estimate for the Four Mile Uranium Project is presented in accordance with the JORC Code (2012 Edition). Refer pages 2 to 15 (attached).

There has been no material change to the Four Mile uranium Project mineral resource estimate since the ASX announcement dated 27 January 2010.

Steve Johnston
Managing Director

Four Mile Uranium Project - Mineral Resource Estimate

The Four Mile Uranium Project area is located 550 kilometres north of Adelaide in South Australia. Alliance's 100% owned subsidiary, Alliance Craton Explorer Pty Ltd (ACE) is the registered holder of 25% of ML6402 and EL5017 (**Project**). Quasar Resources Pty Ltd (Quasar) is the registered holder of 75% and acts as manager of the Project.

The mineral resource estimate for the Four Mile Uranium Project at November 2013 is as follows:

Deposit	GT Cut-off %	Ore Mass tonnes	U_3O_8 %	U_3O_8 Tonnes	U_3O_8 Mlb	JORC Classification
Four Mile West	0.10	4,100,000	0.34	14,000	32	Indicated
Four Mile West	0.10	1,500,000	0.31	4,700	9	Inferred
Four Mile West	**0.10**	**5,700,000**	**0.34**	**19,000**	**42**	
Four Mile East	**0.10**	**4,100,000**	**0.31**	**13,000**	**29**	Inferred
TOTAL	**0.10**	**9,800,000**	**0.33**	**32,000**	**71**	

*Minor apparent multiplication mismatches are due to post-computational rounding of all entries to 2 significant figures.

Resource estimates were made at a number of grade x thickness (GT) cut-offs, applied to drill intercepts of 0.5 m minimum thickness and 0.05% minimum U_3O_8 grade, with up to 1 m of internal dilution allowed. The intercept parameters are similar to those used at Beverley, but varied slightly to match the individual geometry of these deposits. A dry bulk density of 1.85t/m^3 was used for the conversion of volume to tonnes.

All mineral resource estimates to-date at Four Mile have been addressed as amenable to In Situ Recovery (ISR) as the only mining method. However, at Four Mile West (FMW), additional mineralization has been identified above or within about 20m of the water table in the western area, which has the potential to add to the FMW mineral resources, if this mineralisation is proved recoverable by ISR or mineable by other means.

The mineral resources estimates for Four Mile West and Four Mile East are separately reported against Table 1 of the JORC Code on an 'if not, why not' basis in the following tables.

JORC Code, 2012 Edition – Table 1 report - Four Mile West

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	The principal sampling method was by downhole geophysical probes in rotary mud drill holes for both grade and lithological logging, with sample intervals varying in the range 1-10cm. Both natural gamma and prompt fission neutron (PFN) grade tools were calibrated at the SA government (DWLBC) 'Adelaide Model' pits at Frewville and later (PFN only) in a purpose-built facility at Beverley. Control assaying was carried out on 535 core samples of 0.02-.45m length from mineralised sections of 7 holes approximating an E-W line across the deposit. Agreement was generally very good except that at the highest values, assays consistently exceed PFN by a proportionally higher amount. This is at least in part due to: - smaller sample lengths for the highest assay, below resolution of the greater interrogation

Criteria	Commentary
	volume of PFN tools – i.e. thin bed effect and, - probable disproportionally greater loss of more friable, low grade material from core – mineralization may 'cement' sands at high grade. Any calibration component is thought to be small as independently calibrated gamma is highly supportive of the PFN. Even if there is a real shortfall of instrument grades at very high levels, it would not be significant to resource estimation where such values are cut. The majority PFN grade logging (92% of intercepts) directly measures in-situ uranium grade, thus avoiding the issue of variable radiometric disequilibrium that can affect results from gamma, which measures daughter products. Corresponding PFN & gamma intercept grade comparison suggests that disequilibrium is minor in this deposit. Closed-can laboratory gamma analyses on the core samples could provide local disequilibrium data but have not been performed.
Drilling techniques	400 successful vertical rotary mud holes, 130-143mm in diameter have been drilled to 234m maximum depth, with shovel sampling of cuttings at 2m intervals and HQ3/PQ3 coring in 40 (10% of) holes.
Drill sample recovery	The soft-sediment drilling technique imparts least disturbance to the formation and mud-cake holds the hole open for wireline logging but, the intrinsic gentleness that gives hole stability is at the expense of sample precision/selectivity/representivity, with severe lag & mixing. Core recovery is sporadic but mostly adequate for its truthing role.
Logging	Rotary cuttings were visually logged but are only qualitative at best. Cored material was geologically logged at the centimetre scale, providing quantitative control. It is kept frozen to preserve texture and chemistry, with assay rejects used for metallurgical testing. All cuttings and core were radiometrically logged & photographed.
Sub-sampling techniques and sample preparation	The otherwise soft core was halved by diamond saw while frozen. Non-core materials are not assayed but small sub-samples were preserved as a physical record in chip trays. Interrogation radius for the gamma probes is approximately 40cm and 25cm for the dominant PFN tools, with the volume referenced more than 100 times that of HQ core. With no sub-sampling involved, technique and potential nugget/grain size factors are avoided.
Quality of assay data and laboratory tests	Core assaying was by the complete XRF method at ANSTO. Ten GeoInstruments PFN tools were used in frequency order (PFN19 (40%), 2, 18, 3, 15, 20, 14, 10, 9, 13). Average logging speed was 0.9m/min against target of 0.5 with 0.1% readings above the 1.5 limit. Gamma/lith tools included 4xGRSPN, 3xGeovista and 2xWeatherford Basic calibrations include grade and hole-size components for both gamma & PFN. For gamma, a 1.16x *density* correction is built into Heathgate's database. This is contested, with the traditional *formation moisture* correction (here 1.09x) proposed as a more appropriate factor. However, with gamma contributing <10% of intercepts, net overall difference would be less than 0.5%.

Criteria	Commentary
	Grade tools were recalibrated/changed out when weekly monitoring in a cased test hole at adjacent FME indicated greater than +/-10% drift.
Verification of sampling and assaying	Auditing of caliper and grade calibration worksheets (both PFN sites) by the independent competent person, found them computationally robust, with high correlation coefficients for the fitted curves. A 20 hole twinning programme in 2007 resulted in assigned grades for PFN2 being reduced by 1/3, and this still applies but now only constitutes 23% of (PFN) data as opposed to 70% at the time. Downhole data were digitally acquired and transferred without manual transcription, although filename mis-match risk remains.
Location of data points	Collar coordinates were determined by differential GPS. Maximum bottom-hole deviation was 25m but mostly <5m at an average 2.5° off vertical and tendency to more common southern sector drift, as determined by probe in the latter 50% of holes. Survey data are GDA 94, MGA zone 54 with AHD elevation. Elevation was determined from 2007 Fugro 2m grid LIDAR data.
Data spacing and distribution	Base rotary mud drill coverage is 100m square – on MGA alignment in the more easterly resource area but oriented NW-SE in the current non-resource westerly extension. Within the resource area, there are also 3 lines of in-fill core holes approximately 350 m apart with spacing along the lines increasing from circa 50 m in the SE to 100 m in the NW – and rotary mud holes at 25 m intervals along 4 similarly oriented lines approximately 70 m apart, detail part of the nose at the eastern extremity of the deposit. Frequency plots of spatial distribution of data demonstrate steadily increasing coverage from the newly defined westerly extensions to the nose area with the most infill drilling and then an abrupt drop off in barren ground to the east. By contrast, there is a relatively even distribution of data North-South, about a broad central peak. All sample data were composited to 10cm intervals, the native acquisition interval for PFN data.
Orientation of data in relation to geological structure	Exclusively vertical drilling appropriately intersects the sub-horizontal host sediments (2° overall dip) and mineralisation, at close to right angles.
Sample security	Cuttings and (frozen) core are stored at the Beverley Mine, which is a remote, controlled access, fly-in fly-out site.
Audits or reviews	The Competent Person who is independent of both ACE and Quasar reviewed these aspects in preparing the resource estimate.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	Mineral Lease 6402 is held 25% by Alliance Craton Explorer Pty Ltd (a wholly owned subsidiary of Alliance Resources Limited) and 75% by Quasar Resources Pty Ltd, an affiliate of Heathgate Resources Pty Ltd, both wholly owned subsidiaries of private US corporation, General Atomics. Quasar as manager for the project, utilizes staff, facilities and equipment at Heathgate's adjacent Beverley Mine site. A Native Title Mining Agreement is in effect with traditional owners. The 12,206ha mining lease was granted for a period of 10 years from 26/04/2012 & production planning is progressing for the FME deposit.
Exploration done by other parties	The Oilmin-Transoil-Petromin Group discovered Beverley in 1969 and ISL development was proposed by South Australian Uranium Corp in 1982 but did not proceed until after Heathgate acquired it in 1990 and commenced production in 2000. In 2005 Quasar resumed exploration drilling at 4,000m x 2,000m spacing on the 'Arkaroola' licence to the west (then held by Alliance).This led to the discovery of Four Mile East in hole AK010 which returned 1m @ 0.16% eU_3O_8 from 181m depth.
Geology	The deposit is of the sandstone uranium type, associated with redox interfaces. Unlike other examples in the region it displays macro roll-front morphology. The most recent drilling doubled mineralised area to 2km^2 oriented WNW-ESE. It occurs within medium to fine sands in the upper half of a diamictite unit. Two superposed levels thicken and converge from sub 0.5m thickness and 24m vertical separation in the far west, to coalesce in a single arcuate 'nose' in the SE. The Upper Level commences just below an approximately 8m thick bioturbated shale/clay unit that is commonly capped by silcrete. The Lower Level occurs above a change to a more clay rich interval in the diamictite. Mineralisation is hosted in Mesozoic sediments of the Frome Embayment and underlain by crystalline Meso/Palaeoproterozoic basement, with Mesoproterozoic granites considered source rocks. Other deposits occur in Tertiary sands of the overlying Callabonna Sub Basin of the Lake Eyre Basin, extending over an approximately 25,000km^2 area between the Mount Painter Inlier in the north west, Olary Block to the south and Broken Hill Block to the east.
Drill hole Information	Further criteria in this section refer specifically to Exploration Results and are thus not directly addressed in this Mineral Resource report.
Data aggregation methods	
Relationship between mineralisation widths and intercept lengths	
Diagrams	
Balanced reporting	

Criteria	Commentary
Other substantive exploration	

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	Commentary
Database integrity	Drill hole data was provided as an ~0.5GB MS ACCESS database. Using SURPAC V6.1.3 software, this was audited for completeness, consistency of hole identifiers and lithology codes, inappropriate azimuth/dip entries, negative depths, overlapping or zero-length sample intervals and data beyond maximum hole depth. Following resolution of those instances, some issues remained, relating to inclusion of spurious null values and use of single precision numbers, particularly for depths, with other software applications detecting underlying minute overlaps/shortfalls not always evident in ACCESS. While a source of inconvenience, each of these was worked around with relatively minor consequences.
Site visits	The Competent Person made a site inspection of Four Mile for the purposes of this report on February 5-6, 2009 including viewing of selected FMW drill core and the Beverley PFN calibration pits.
Geological interpretation	Four sub-parallel bounding stratigraphic surfaces, provided as .dxf line files to define corresponding units are not satisfactory as they remained fixed, when hole locations/geometry were refined/corrected between database versions. Also, back-interpolated intervals for non-logged holes are software package dependent and do not match boundaries in the two database lithology tables. Such differences are significant relative to 0.5m minimum intercept thickness. Thus coding to the database was requested and agreed to but not implemented. Despite this precision issue, fairly regular drill spacing has affirmed mappability of stratigraphy and mineralized trends within it. Continuity of mineralization between drill holes is mostly very good, displaying a high level of consistency in both thickness and grade, although varying much more rapidly in the vicinity of the nose. Corrections were made to the initially presented surfaces, addressing some anomalous 'point lows/highs' and 'steps' between sections but more such refinement is needed. Heathgate interpret two areas of steep, 40m relief as late, north to NNE trending reverse faults defining a graben through all levels but have not modelled this in detail. There is significant uplift of mineralised levels across the western structure but intercepts do not extend east of the east structure. Displacement of both stratigraphy and mineralisation on the west structure decline northward, possibly resulting from monoclinal flex rather than fault offset. Mineralisation upsweep/downturn on either side is compatible with but not proof of this. With a third 'Top' level of mineralisation occurring to the west it could also possibly include a major roll feature.
Dimensions	Potentially economic mineralization occurs as two virtually continuous sheets from 85-160m below surface, each averaging 1.5m thick, over a 1.6x1.25km area, with overall NW-SE orientation. Average nose thickness is 3m.

Criteria	Commentary
	Notwithstanding the north easterly trend of much of the nose, this orientation is less pronounced elsewhere, particularly in the Lower Level where a strong central E-W 'channel' is apparent and E-W sections provide good overall representation. Mineralisation west of the western structure is not currently included in resources because it is near or above the 95-100m water table and thus not apparently addressable by the proposed ISR mining method. This reduces resource dimensions to two levels, 118-160m below surface, averaging 2.3m thick each, over an approximately triangular area, 1.5km on each side.
Estimation and modelling techniques	The estimation method was seam modelling, with intercept grade interpolation to triangular prisms bordered by vertical drill hole intercepts, using SURPAC's 'DTM Volumes' function. It is effectively a 2.5 dimensional method, improving on the traditional polygonal method for this style of deposit, by multiple referencing of grades with IDS weighting and search radii linked to drill spacing/variography. Models are further areally constrained by a secondary GT cut-off (contour) that can be varied for sensitivity to cost/revenue scenarios. Primary intercept cut-off was 0.5m @ 0.05% U_3O_8 with 1m maximum internal dilution and base case secondary GT cut-off, 0.10 m%U_3O_8. In view of a break in the histogram of intercept grades at 1% U_3O_8, this value was applied as an intercept grade top cut and ten grades in the range 1-1.6% were capped at 1%, prior to grade interpolation. Each of four stratigraphically defined zones was individually modelled with grade interpolation search radii varying between 67 and 130m. This is the second estimate for FMW following approximate doubling of drilling. It uses similar methods and parameters as previously and as for estimates for the adjacent FME deposit and nearby Beverley Mine for which the method historically yielded results compatible with assumed extraction efficiency. The original estimate which was *Inferred* only has been expanded nearly 50% in tonnage, at slightly lower grade, for approximately 30% increase in contained uranium. No by-product recovery is anticipated. Soluble iron and base metals need to be controlled by solution bleed.
Moisture	Tonnage is estimated on a dry basis - volume x dry bulk density. Wet tonnage is not relevant to ISL mining where no material is excavated.
Cut-off parameters	The 0.05% cut-off grade (U_3O_8, or eU_3O_8 where PFN is not available) was adopted on the basis of: - production experience at Beverley; - compatibility with FME and the prior estimate for this deposit; - a generally rapid rise from negligible to high grades – i.e. there is little *real* material in the 0.03-0.05% range and, for digital grade cut-off (rather than traditional graphical half-amplitude) intercept 'picks', it thus eliminates false 'tails' in this range. Selection of 0.10 m%U_3O_8 as the base case GT cut-off corresponds to that used recently for FME in contrast to 0.15 for FMW in 2007. However, difference between the two is minimal at only 2% contained U_3O_8.

Criteria	Commentary
Mining factors or assumptions	The majority of mineralization (including all reported as resources) occurs within sub-horizontal sandy materials, below water table and beneath a seal layer. Based on core from hole AKC002, the hydro-silicate coffinite is the dominant uraniferous mineral & mineralisation is visually similar to that at Beverley and FME, where ISL/R mining is currently in progress/under development respectively. Nevertheless, FMW host materials are mostly finer grained with greater clay (kaolinite) content than for the neighbouring deposits. In-place environmental approvals and Native Title agreements only cover this method, Quasar affiliate, Heathgate has proven capability in it and has applicable available infrastructure in the vicinity.
Metallurgical factors or assumptions	ANSTO carried out acid agitation leach tests on 11 x 1 kg composites from the seven XRF assay holes. Very high recoveries averaging 97% were obtained within 2hr at pH2 on material ground to 425microns.
Environmental factors or assumptions	Federal Government environmental approval for ISR uranium mining at Four Mile was received in July 2009. The Four Mile Uranium Mine Monitoring, Mine Closure and Community Engagement Plans as required under the Commonwealth Environment Protection and Biodiversity Conservation Act conditions were approved on 2 September 2013. This is the final federal regulatory approval for the Four Mile Uranium Mine. The final state government operating consent known as a Program for Environmental Protection and Rehabilitation was approved on 16 August 2013 for the adjacent FME deposit within the same lease. Present planning envisages uranium capture at Heathgate's adjacent Pannikan satellite ion exchange facility with on-site development limited to wellfields similar to those currently used on the contiguous Beverley and Beverley North mining leases. The satellite facility extracts uranium from leach liquor, producing uranium bearing resin, which is trucked to the Beverley plant site for elution, precipitation, drying and packing, with the small quantity of liquid waste arising disposed of there. Stripped resin is returned to the satellite facility.
Bulk density	As there are no measurements available for FMW, the uniform FME dry bulk density of 1.85 t/m^3 was adopted, based on average downhole wet density logging of 2.17 t/m^3 for FME, notwithstanding that they are now known to be different stratigraphic units. This is equivalent to quartz sand with 30% porosity – viz: 2.65 (SG of quartz) x 70% = 1.85 dry + 1 (SG of water) x 30% = 2.16 wet. It is 0.05 t/m^3 higher than the 1.8 t/m^3 used in the prior (2007) estimate – adopted from Beverley based on *assumed* 32% porosity.
Classification	Heathgate has nominated 1.5 m as the screen length at/above which satisfactory flow rate can be obtained for ISL extraction to be 'moderately feasible' for the main area of FMW. On the basis of this, together with tonnage/grade corroboration by infill drilling since the initial resource estimate and favourable leach testwork, material within the 1.5 m thickness contour for each of the Upper and Lower Levels was upgraded to the *Indicated Mineral Resource* classification. Lower grade, thinner and shallower mineralization to the west of this but still east of the western fault is classified as *Inferred* partly due to wider drill spacing but also uncertainty as to permeability variation and thus minimum thickness addressable by ISL in the submergence regime. No material less than 20m below water table was included.
Audits or reviews	Prior work was reviewed by the same Competent Person in preparing this commentary for JORC Code (2012) compliance. As at November 2013 and in the absence of new available information other than such as tenement details and approvals, he remains satisfied with the

Criteria	Commentary
	estimates.
Discussion of relative accuracy/ confidence	Classification of the Mineral Resource under the Code, *is* a statement of the relative accuracy and confidence level, recognising the many and varied inherent imprecisions in the estimation process. Further quantification is not deemed appropriate by the Competent Person. Mineralized outlines were also used to generate 'scoping' tonnage/ grade estimates by the cross-sectional method. The outlines tapered to pinch out at each extremity and were not constrained by GT. Thus, agreeance within 15% contained U_3O_8 with the 0.05m% GT cut-off DTM model result is considered excellent corroboration. Mineral Resources do not have demonstrated economic viability and, despite suitable mineralogy and excellent agitation leach results, initial pump tests have demonstrated lower permeability than for FME and Beverley. Thus, field leach trials would be anticipated to verify amenability to ISR. Above water table and shallow submergence mineralisation has been excluded from reported resources, which could increase by up to 30% on a contained U_3O_8 basis if more of this material proved recoverable by ISR or mineable by other means.

JORC Code, 2012 Edition – Table 1 report - Four Mile East

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	The principal sampling method was by downhole geophysical probes in rotary mud drill holes for both grade and lithological logging, with sample intervals varying in the range 1-10cm. Both natural gamma and prompt fission neutron (PFN) grade probes were calibrated at the SA government (DWLBC) 'Adelaide Model' pits at Frewville and later (PFN only) in a purpose-built facility at Beverley. Control core assaying was carried out on 0.04-0.75m intervals from mineralised sections of 8 holes in the central First Stage Mining Area (FSMA) yielding excellent correlation between PFN & assay grades. The majority PFN grade logging (79% of intercepts) directly measures in-situ uranium grade, thus avoiding the issue of variable radiometric disequilibrium that can affect results from gamma, which measures daughter products. Closed-can laboratory gamma analyses on core samples could provide local disequilibrium data but have not been performed.
Drilling techniques	745 successful vertical rotary mud holes, 130-143mm in diameter have been drilled to 294m maximum depth, with shovel sampling of cuttings at 2m intervals and HQ3/PQ3 coring in 109 (15% of) holes.
Drill sample recovery	The soft-sediment drilling technique imparts least disturbance to the formation and mud-cake holds the hole open for wireline logging but, the intrinsic gentleness that gives hole stability is at the expense of sample precision/selectivity/representivity, with severe lag & mixing. Core recovery is sporadic but mostly adequate for truthing.
Logging	Rotary cuttings were visually logged but are only qualitative at best. Cored material was geologically logged at the centimetre scale, providing quantitative

Criteria	Commentary
	control. It is kept frozen to preserve texture and chemistry, with assay rejects used for metallurgical testing. All cuttings and core were radiometrically logged & photographed.
Sub-sampling techniques and sample preparation	The otherwise soft core was halved by diamond saw while frozen. Non-core materials were not assayed but small sub-samples were preserved as a physical record in chip trays. Interrogation radius for the gamma probes is approximately 40cm and 25cm for the dominant PFN tools, with the volume referenced more than 100 times that of HQ core. With no sub-sampling involved, technique and potential nugget/grain size factors are avoided.
Quality of assay data and laboratory tests	Core assaying was by X-ray fluorescence (XRF– a complete method for uranium) at Australian Laboratory Services (ALS) or the Australian Nuclear Science and Technology Organisation (ANSTO). Eight GeoInstruments PFN tools (PFN3 (44%), 2, 19, 18, 9, 15, 14, 20) were used in that order of frequency. Average logging speed was 0.8m/min against target of 0.5 but well below the 1.5 upper limit. Gamma/lith tools included 4xGRSPN, 3xGeovista and 2xWeatherford Basic calibrations include grade and hole-size components for both gamma & PFN. For gamma, a 1.16x correction was applied due to greater dry density of the concrete AM pits compared to site strata. Grade tools were recalibrated/changed out when weekly monitoring in a cased site test hole indicated greater than +/-10% drift.
Verification of sampling and assaying	Checking of sample caliper and grade calibration derivations (both sites for PFN) by the independent competent person, demonstrated them to be computationally robust, with high correlation coefficients for the fitted curves. Downhole data were digitally acquired and transferred without manual transcription, although filename mis-match risk remains.
Location of data points	Collar coordinates were determined by differential GPS. Maximum bottom-hole drift of 15-20m (commonly around 5m) with no discernible trend was determined by probe in the latter 30% of holes. Survey data are GDA 94, MGA zone 54 with AHD elevation. Elevation was determined from 2007 Fugro 2m grid LIDAR data.
Data spacing and distribution	Drill spacing was progressively closed from a nominal 400 m square MGA pattern to 100 m, then 50 m in selected areas and a small central area at 25m spacing. There are 3 east-west 'fences' of cored holes at 50 m intervals plus scattered others at 100-200m spacing, replacing rather than twinning mud-only holes in the grid pattern. Frequency plots of the spatial distribution of data illustrate uniform distribution round the central N-S axis but clear bias in favour of the northern zone which includes the FSMA. All sample data were composited to 10cm intervals, the native acquisition interval for the

Criteria	Commentary
	majority of PFN data.
Orientation of data in relation to geological structure	Exclusively vertical drilling appropriately intersects the sub-horizontal host sediments and mineralisation (except at roll fronts), at close to right angles.
Sample security	Cuttings and (frozen) core are stored at the Beverley Mine, which is a remote, controlled access, fly-in fly-out site.
Audits or reviews	The Competent Person who is independent of both ACE and Quasar reviewed these aspects in preparing the resource estimate.

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	Mineral Lease 6402 is held 25% by Alliance Craton Explorer Pty Ltd (a wholly owned subsidiary of Alliance Resources Limited) and 75% by Quasar Resources Pty Ltd, an affiliate of Heathgate Resources Pty Ltd, both wholly owned subsidiaries of private US corporation, General Atomics. Quasar as manager for the project, utilizes staff, facilities and equipment at Heathate's adjacent Beverley Mine site. A Native Title Mining Agreement is in effect with traditional owners. The 12,206ha mining lease was granted for a period of 10 years from 26/04/2012 and is proceeding toward production – see Section 3.
Exploration done by other parties	The Oilmin-Transoil-Petromin Group discovered Beverley in 1969 and ISL development was proposed by South Australian Uranium Corp in 1982 but did not proceed until after Heathgate acquired it in 1990 and commenced production in 2000. In 2005 Quasar resumed exploration drilling at 4,000m x 2,000 m spacing on the 'Arkaroola' licence to the west (then held by Alliance).This led to the discovery of Four Mile East in hole AK010 which returned 1m @ 0.16% eU_3O_8 from 181m depth.
Geology	Mineralization is of the sandstone uranium type, associated with redox interfaces. Multiple thin intercepts occur in sub-horizontal, sandy, materials below water table and beneath a seal layer of predominantly clay/siltstone and bounded below by a consolidated diamictite aquitard, comprising clay-cemented cobbles. Tertiary sediments of the Callabonna Sub-basin of the Lake Eyre Basin host the mineralisation. These almost flat-lying sequences cover an area of approximately 25,000 km^2 between the Mount Painter Inlier in the north west, Olary Block to the south and Broken Hill Block to the east. Blanket sands characterise this northern area, as opposed to basement-incised palaeovalley fill in the south. In the north, Tertiary is mostly underlain by Mesozoic sediments of the Frome Embayment before basement of Palaeo/Neoproterozoic sediments or crystalline Meso/Palaeoproterozoic. Underlying or fringing Mesoproterozoic granites are considered the U source rocks.
Drill hole Information	Further criteria in this section refer specifically to Exploration Results and are thus not directly addressed in this Mineral Resource report.

Criteria	Commentary
Data aggregation methods	
Relationship between mineralisation widths and intercept lengths	
Diagrams	
Balanced reporting	
Other substantive exploration	

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	Commentary
Database integrity	Drill hole data was provided as an ~1GB MS ACCESS database. Using SURPAC V6.1.2 software, this was audited for completeness, consistency of hole identifiers and lithology codes, inappropriate azimuth/dip entries, negative depths, overlapping or zero-length sample intervals and data beyond maximum hole depth. Following resolution of those issues, further checking techniques such as examining data 'surfaces' for discordant holes/spikes & regression plots for outliers, resulted in numerous other adjustments: - rectification of missing/mis-matched location, lithology & grade data - correction of some calibration table entry errors and refinement of DWLBC to Beverley PFN calibration 'normalizations' - adjustments relating to some incorrect GVS caliper hole sizes (affecting corresponding PFN grades), - recalculation of most GVS gamma grades with correctly matched tools and calibrations - numerous PFN depth fixes.
Site visits	The Competent Person made a site inspection of Four Mile for the purposes of this report on February 5-6, 2009 including viewing of selected drill core and the Beverley PFN calibration pits.
Geological interpretation	Mineralization occurs within a 70m thick sandy sequence, which is subdivided on the basis of silica-cemented sand horizons that typically overly mineralized zones. Five sub-units were defined by six, fixed, digital, basal surfaces rather than coded to the database. Thus they neither correlated with database lithology tables, nor adjusted when collar/drift data were

Criteria	Commentary
	added or corrected. Against minimum intercept thicknesses of 0.5m, this resulted in uncertainty assigning intercepts to specific zones and thus ultimately, the resource model.
Dimensions	Potentially economic mineralization is contained within a 5km^2 (2.5x2 km) plan view envelope, elongate N-S but not laterally continuous. It occurs in up to 4 partially superposed levels averaging 2m thick, 3 of which appear to be areally mutually exclusive, at 140-210m depth.
Estimation and modelling techniques	The estimation method was seam modelling with intercept grade interpolation to triangular prisms bordered by vertical drill hole intercepts, using SURPAC's 'DTM Volumes' function. It is effectively a 2.5 dimensional method, improving on the traditional polygonal method for this style of deposit, by multiple referencing of grades with IDS weighting and search radii linked to drill spacing/variography. Models are further areally constrained by a secondary GT cut-off (contour) that can be varied for sensitivity to cost/revenue scenarios. Primary intercept cut-off was 0.5m @ 0.05% U_3O_8 with 1m maximum internal dilution and base case secondary GT cut-off, 0.10m%. To counter excessive effects from some very high grades and in view of a dip in the cumulative frequency curve of intercept grades at 1% U_3O_8, this value was applied as an intercept grade top cut. Thus a total of 17 grades in the range 1-1.8% were capped at 1%, prior to grade interpolation. The effect of this was to reduce overall grade by about 0.015% and contained U_3O_8 by 1M lb compared to uncut data. Each of four stratigraphically defined zones was individually modelled with grade interpolation search radii varying between 67 and 130m. This is a maiden estimate for FM East but uses similar method and parameters to prior estimates for the adjacent FM West deposit and nearby Beverley Mine for which it historically gave results compatible with assumed extraction efficiency. No by-product recovery is anticipated. Soluble iron and base metals need to be controlled by solution bleed.
Moisture	Tonnage is estimated on a dry basis - volume x dry bulk density. Wet tonnage is not relevant to ISL mining where no material is excavated.
Cut-off parameters	FME intercepts have been routinely reported at 0.05% U_3O_8, cut-off (eU_3O_8 where PFN is unavailable). There has been comment that this grade may be high, relative to levels of 0.03% reported by others for such deposits. The 0.05% level is appropriate here in the light of: - production experience at Beverley; - very rapid rise from negligible to high values in these unusually high grade deposits with relatively little *real* material in the 0.03-5% range; - for digital grade cut-off (rather than traditional graphical half-amplitude) intercept 'picks', it eliminates false 'tails' in this range; - where using gamma grades, inclusion of disequilibrium-sourced saddles that occur in the swept zone between limbs, is reduced. The base-case secondary GT cut-off of 0.10 m%U_3O_8 is lower than used at Beverley but applied individually to each of up to four superposed levels as opposed to only two.

Criteria	Commentary
Mining factors or assumptions	Only In Situ Leach/Recovery (ISL/R) mining has been considered as: - the deposit appears to have the applicable physical characteristics - it is the lowest impact method available - relatively great depth of burial, thinness and lack of rock strength make open cut and underground mining much less likely possibilities - it is accepted technology by the regulators and local stakeholders - majority owner and manager, Quasar has formally given Alliance notice of its decision to mine at Four Mile, using ISR methods - Quasar affiliate, Heathgate has demonstrated capability in the method and applicable available infrastructure in the vicinity.
Metallurgical factors or assumptions	Scanning Electron Microscopy has shown the principle uraniferous mineral to be the leachable silicate, coffinite, as at Beverley. Overall recovery for sixteen ANSTO laboratory acid leach tests was 65-70%, similar to that achieved at Beverley and reported expected reagent consumptions were similar.
Environmental factors or assumptions	Federal Government environmental approval for ISR uranium mining at Four Mile was received in July 2009. The Four Mile Uranium Mine Monitoring, Mine Closure and Community Engagement Plans as required under the Commonwealth Environment Protection and Biodiversity Conservation Act conditions were approved on 2 September 2013. This is the final federal regulatory approval for the Four Mile Uranium Mine. The final state government operating consent known as a Program for Environmental Protection and Rehabilitation was approved on 16 August 2013. Present planning envisages uranium capture at Heathgate's adjacent Pannikan satellite ion exchange facility. On-site construction would be limited to in-situ recovery wellfields of similar design as currently used on the contiguous Beverley and Beverley North mining leases. The satellite plant extracts uranium from the ISR liquor, producing uranium bearing resin, which is trucked to their Beverley processing site for elution, precipitation, drying and packing. The stripped resin is then trucked back to the satellite facility. It is not envisaged that there would be any net increase in uranium processing capacity at Beverley and the small quantity of liquid waste arising would be disposed of at Beverley. No change is proposed to existing Beverley camps, airstrip and supply bores.
Bulk density	Five holes in the FSMA were density logged in 2007. Average value in mineralized zones was 2.17 t/m^3 in the range 2.07 to 2.28 t/m^3 with no correlation between density and grade. These are in-situ wet densities and, on the basis that water-saturated 30% porosity quartz sand has a bulk density of (0.7*2.65+0.3*1 =) 2.16 t/m^3, equivalent average dry bulk density of 1.85 t/m^3 was uniformly adopted – c.f. 1.8 t/m^3 used at FMW based on assumed 32% average porosity.
Classification	It was initially anticipated that a level of *Indicated* resource might be appropriate for that part defined at a drill hole spacing of 50 m or less. However, the following factors collectively dictated that the whole initially be restricted to the *Inferred* classification: - PFN tool calibration/stability had improved markedly since the FMW estimate but there appeared to still be some inaccuracy in mud holes, related to non-calipered hole size and associated factoring of legacy DWLBC calibrations, which constitute the majority of FME

Criteria	Commentary
	data; - the database received was a set of reports exported from a central proprietary database and thus lacked transparency with respect to aspects such as the grade assignment processes. This is not to say that the utmost co-operation was not received in elucidating such matters. It is simply that categorical corroboration was not possible; - the existing geological interpretation was felt to be weak and poorly executed. Parts of the GT plots are suggestive of vermiform palaeo-drainage channels that are common in these types of deposits, whereas the extant model was of pervasive sheets. Much apparent 'poddiness' of mineralization might disappear with improved zone assignment, leading to potentially greater (but narrower & more tortuous) continuity; - the largest tonnage pods are generally in areas of lowest drilling density and there are some significant gaps in high grade areas of the 50m drilling, notably along a NW-SE oriented creek bed where drill access had not been sanctioned by native title holders; - much supportive information was verbal only.
Audits or reviews	Prior work was reviewed by the same Competent Person in preparing this commentary for JORC Code (2012) compliance. As at November 2013 and in the absence of new available information other than such as tenement details, approvals, etc, he remains satisfied with the estimates.
Discussion of relative accuracy/ confidence	Classification of the Mineral Resource under the Code, *is* the statement of the relative accuracy and confidence level in the estimate, recognising the inherent imprecision of the process. Further quantification is not deemed appropriate by the Competent Person. Notwithstanding that, the tonnage component of the estimate is likely to be relatively less accurate than the grade, due to the geological factors discussed above and wide drill spacing outside of the FSMA.

Competent Person's Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Ken Bampton, a Competent Person who is a Member of both the Australian Institute of Geoscientists and The Australasian Institute of Mining and Metallurgy. Mr Bampton trades as Ore Reserve Evaluation Services. Mr Bampton has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Bampton consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.