



**Mineral Development Lease for Coal 403  
Washpool Project**

Annual Report for the Period  
01<sup>st</sup> September 2010 to 31<sup>st</sup> August 2011

**Tenement Holders: Argos (Qld) Ltd**

**Submitted by: Argos (Qld) Ltd**

Prepared by L Wordsworth  
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## **1.0 Summary**

Originally part of EPC 958 Washpool, MDL 403 Washpool was granted to Argos (QLD) Pty Ltd, with fourteen sub-blocks relinquished in 2010 and converted into a mineral lease. These fourteen sub-blocks were dropped from the EPC specifically for the purposes of inclusion into Washpool MDL 403. MDL 403 covers 11,051.52 hectares.

The lease is explored in conjunction with nearby EPC 958 Washpool, EPC 966 Mt Crocker and to a lesser extent EPC 1032 Speculation Creek, to provide a better understanding of seam continuity and quality in the area. The “Washpool Project” resource straddles the southern tenement boundary of EPC958, and the area where MDL 403 and EPC 966 overlap.

Thirty-four holes were completed on MDL 403 during the 2010 – 2011 drilling period.

## **2.0 Introduction**

### **2.1 Tenure**

MDL 403 is explored in conjunction with nearby EPC 958 Washpool, EPC 966 Mt Crocker and to a lesser extent EPC 1032 Speculation Creek, to provide a better understanding of seam continuity and quality in the area. The “Washpool Project” resource straddles the southern tenement boundary of EPC958, and the area where MDL 403 and EPC 966 overlap and covers 11,051.52 hectares (see Figure 1). The development of the Washpool Project resource will require the construction of infrastructure to traverse EPC 958 and EPC966.

### **2.2 Location**

The MDL is located in Central Queensland approximately 200 kilometers west of Rockhampton and 20km north of Blackwater, as shown in Figure 1. The Central Queensland railway passes approximately 20km to the south and provides access to the coal port at Gladstone.

The lease overlies lower-Permian sediments west of Wesfarmers’ Curragh Coal Mine and East of the Ensham mine, both of which mine the Rangal Coal Measures. The lease has been prospected for coal seams within the Burngrove Formation and smaller occurrences of the Rangal Coal Measures.

### **2.3 Access**

The Capricorn Highway from Rockhampton to Emerald provides the main access to the lease. Access within the lease is by service roads and station tracks.

## **2.4 Regional Geology**

MDL 403 Washpool overlays the eastern flank of a regional-scale antiform mapped as the Comet Ridge. The Comet Ridge and equivalent Collinsville Shelf in the Northern Bowen Basin form part of a north- to northwest-trending morpho-tectonic “platform” which separates the Denison Trough in the west and the Taroom trough in the east (Mallet et al 1995).

The regional gravity imagery shows the Comet/Collinsville Platform as a series of basement highs which suggests that the platform is likely to comprise both Mesozoic and Permian sediments and older metamorphic-igneous basement rocks (Fielding et al 2000). The imagery also shows a series of northeast-trending lineaments interpreted to be structures that partition the morpho-tectonic terranes that comprise the Bowen Basin (Mallett et al 1995, Fielding et al 2000).

These northeast structures are the ‘transfer’ extension structures described by Hammond (1987) and are clearly long-lived reactivated structures, as indicated by intrusions of dykes and leakages of Tertiary basalts along the structural corridor. Within the permit areas, these northeast trending structures are represented by an apparent offset to the Comet Ridge Antiform axis, small occurrences of basalt and intrusive rocks along fractures, and an interpreted embayment or synform in the vicinity of the Mackenzie River between outcrops of the Comet Ridge Permian stratigraphy.

The Comet Ridge occurs as a series of generally north trending antiforms which plunge south in the southward extents near Comet and possibly north in the northward extents near Mt Stuart. These antiforms are hypothesised to be from Triassic deformation associated with the Dawson/Gogango Fold Zone propagated from the east.

Permian stratigraphy dips gently ( $<5^{\circ}$ ) to the west in the western Permit area and east in the eastern Permit area.

## **3.0 Exploration Rationale**

The MDL 403 has been explored in conjunction with the EPC 966 Mt Crocker and EPC 1032 Speculation Creek, in order to provide insight into seam continuity and coal quality in the area. The Scorpio and Centaur seams of the Burngrove Formation are the most commonly intersected coal horizons and supplement resource estimations at Washpool.

The Scorpio seam sub-crops in the south of the Washpool Project area, and dips to the north in a basin structure. Two Tuff bands, known as T1 and T2, have been mapped throughout the area and provide recognizable marker bands across the tenements.

The Scorpio seam itself is highly banded with claystone, mudstone and coal intervals and has been divided into five plies, named “A to E”, with ‘F’ occurring as part of the Centaur seam. This sub-division of the seam produces more accurate modeling of the coal and interburden

quantities, to assist with mine scheduling. A brief description of the characteristics of each ply is listed below.

#### **A Ply Interval**

The A ply is the uppermost ply and is typically 0.6 to 0.8m thick, consisting of coal with inter-bedded inferior carbonaceous material. It is further subdivided into **A1** and **A2** sub-plies on the basis of coal quality. The A1 ply is inferior coal and suffers from significant splitting. A2 ply is more consistent throughout the area.

#### **B Ply Interval**

The B ply occurs beneath the first gamma peak (**T1**) and is typically 0.8 to 1.0m thick. It can be divided into 3 sub-plies (**B1**, **B2** & **B3**) on the basis of inferior carbonaceous inter-beds and grey mudstone bands.

#### **C Ply Interval**

The C ply is located on top of the second gamma peak (**T2**) and is typically 0.5 to 0.7m thick, consisting of coal with a gradationally inferior carbonaceous base. On this basis it can be split into two sub-plies; **C1** and **C2**.

#### **D Ply Interval**

The D ply is typically 0.9 to 1.2m thick, and consists of coal with a banded inferior carbonaceous base. It occurs beneath the second gamma peak (**T2**) and is split into two sub-plies; **D1** and **D2**.

#### **E Ply Interval**

The E ply is the basal ply of the Scorpio seam and is typically 0.5 to 0.8m thick. It consists of coal with an inferior and occasionally stony middle, and is separated into **E1** and **E2** plies.

#### **F Ply Interval**

The F ply occurs as the Centaur Seam. The naming codes have been extended into this seam for the sake of continuity. The ply is typically 1.0 to 2.0m thick and comprised of **F1** and **F2** sub-plies of highly-banded inferior coal, with inter-bedded carbonaceous mudstones and claystones. These plies are very dirty averaging about 70% ash raw, however coal quality results indicate the coal is of similar coking coal quality to the A-E plies of the Scorpio seam. On average the Centaur is about 5m lower than the base of the E ply and as such is not likely to be mined. Full seam nomenclature is listed in Table 2, with a pictorial example provided in Figure 3.

**Table 1. MDL 403 Washpool Coal Seam Nomenclature**

<b>SEAM</b>	<b>PLY</b>	<b>Sub-plies</b>
Scorpio	A	A1
		A2
		Tuff band
Scorpio	B	T1
		B1
		B2
Scorpio	C	B3
		C1
		C2
Scorpio	D	Tuff band
		T2
		D1
Scorpio	E	D2
		E1
		E2
Centaur	F	F1
		F2

### **3.1 1993 - 2000 Arco Coal Australia Inc (CR 25897, 31298, 32242, 33280)**

EPC 525 held by Arco Coal Australia Inc (Arco) then Wesfarmers Curragh Pty Ltd (Wesfarmers) was located in the eastern area of the Washpool and Mt Crocker permits adjoining the western boundary of the Curragh Mining Development Lease and Mining Lease. The permit overlaid extensive outcrop of Upper Permian stratigraphy.

Arco explored the Curragh West project for seven years before selling the Curragh mine and surrounding permits to Wesfarmers in 2000. The target at Curragh West was thrust fault repetitions of Rangel Coal Measures which outcrop in the Curragh mine area, and structurally thickened coal seams hosted by the Burngrove and Fairhill Formations. Arco carried out a photogeological lineament study, geological mapping, petrography and drilling. Arco completed 53 open drill holes between 1993 and 1999. Wesfarmers did not undertake any exploration on EPC 525.

Arco concluded from the initial mapping and drill programs that there was no outcrop or occurrence of Rangel Coal Measures on the permit and that the area was underlain by Upper Permian Burngrove, Fairhill, Macmillan and Crocker Formations. The drilling intersected multiple coal seams at shallow depths from wide-spaced drill holes throughout the permit. Two thick coal seams were identified and targeted with follow up drilling. The principle target was the Scorpio seam in the Burngrove Formation that is between 2m and 7m thick over large areas of the permit. In the southern retained area of EPC 525, Arco identified a mineable resource over which Wesfarmers subsequently were granted an MDL. Drilling on the remaining permit area (which is now overlain by the Washpool and Mt Crocker permits),

intersected oxidised Scorpio coal seams up to 6m thick in the north east corner of Mt Crocker. In 1994, Arco reported that “economic constraints precluded detailed exploration” and relinquished half of the permit.

A secondary target was the Phoenix seam which occurs at the boundary between the Burngrove Formation and underlying Fairhill Formation. The Phoenix seam is between 4m and 6m thick where intersected but contained numerous stone bands and high ash content. Arco concluded that the Phoenix coal seam had limited economic potential.

Arco reported limited coal quality data for the exploration drill holes outside of the retained MDL. This analysis indicated high ash contents in both the Scorpio and Phoenix coal seams (18-40%). No coal analysis on the Scorpio seam coal resource was reported.

### **3.2 1996 - 2003 Wesfarmers Curragh Pty Ltd (CR 32608, 35152)**

EPC 603 Carnagarra was explored by Arco from 1996 to 2000 when ownership passed to Wesfarmers. The Arco statutory reports are referenced in the Wesfarmers final relinquishment report of 2003 but are not available on the QDEX information system.

EPC 603 is located west and north of EPC 525 described above and covers the central area of both Washpool EPC 958 and Mt Crocker EPC 966. Arco’s primary target was domestic steaming coal with medium ash coking coal a secondary target. Arco considered that the discovery of low ratio steaming coals is supported by low bedding dip and shallow weathering of low ash plies within coal seams below the Rangel coal measures. In conjunction with exploration on EPC 525 adjoining the eastern boundary of EPC 603, Arco conducted a photogeological lineament study, geological mapping, petrography and drilling. Arco completed 37 exploration drill holes, of which 23 are located within the Washpool and Mt Crocker permits including one core hole. Wesfarmers completed seven drill holes north of Washpool to locate road aggregate and for stratigraphic reference.

The Arco drilling intersected numerous coal seams within both the Burngrove and the Fairhill formations. The results of this drilling indicated that the Scorpio seam within the Burngrove formation contained the better quality plies and that core drilling (CN004C) intersected a 6.4m thick seam containing plies with apparent densities down to 1.5g/cm<sup>3</sup>, ash contents of between 20% to 25%, and CSN’s of 8 to 8.5. Three percussion drill holes approximately 3km south east of core hole CN004C intersected thick (5m to 6m) Scorpio coal seams from between 24m and 36m depth.

Wesfarmers subsequently relinquished the EPC concluding that exploration within the permit area had not defined coal of a quality suitable for export or domestic power application.

### **3.3 1996 - 1997 Ingwe Australia Pty Ltd (CR 29745, 29873)**

Ingwe Australia Pty Ltd (Ingwe) explored EPC 596 (Comet Ridge) and EPC 622 (Yamala) for two years between 1996 and 1997. EPC 596 is entirely overlain by the southern area of Mt Crocker EPC 966 and the far northern area of EPC 622 is overlain by the western area of Mt Crocker EPC 966.

Ingwe's exploration rationale was to target equivalent stratigraphy to the German Creek formation in an area up dip from coal seams intersected in drilling at Togara South, south of EPC 596. The Togara South drilling and interpretation of seismic data indicated that German Creek equivalent rocks occurred at depth south of EPC 596.

Ingwe completed a total of 19 open and core drill holes over both the permits. The first drill program of seven holes (CR001-CR007) tested up dip of the Togara South drilling on EPC 596. The results of this drilling indicated that the coal seams intersected in the Togara South drilling are best correlated with the Fairhill formation and that the Fairhill formation coals intersected in CR001-CR007 are of poor quality (high ash) and unlikely to produce a commercial product. The second drill program (YAM001-YAM012) of predominantly core drill holes tested the central and northern area of EPC 622 for coal seams hosted in the Crocker formation, a stratigraphic equivalent of the German Creek Formation. The results of the drilling in the northern area of EPC 622 intersected narrow (< 1m) coal seams correlated with the Tieri-Corvus-German Creek coal seams in the German Creek formation. Coal property analysis of a 0.47m coal seam in YAM008 indicated similar coal quality and coking properties to the German Creek Formation seam.

Ingwe concluded that only narrow thin German Creek formation equivalent coal seams occurred in the northern 5km of EPC 622, and that the environment of deposition (semi-marine) within this formation is unlikely to host a world class coal deposit within EPC 596 or EPC 622. Ingwe also noted a "trend of improving depositional environment can be seen in a northward direction" which suggests the western area of Mt Crocker EPC 966 may be prospective for thicker and potentially economic German Creek Formation equivalent coal seams.

### **3.4 2002 - 2004 Xstrata Coal Queensland Pty Ltd (CR 37437)**

Xstrata Coal Queensland Pty Ltd (Xstrata) has held EPC 713 (Redrock) from 2000 to the present. In 2004, Xstrata partially surrendered the south eastern 65 sub-blocks. The western and central extents of Washpool EPC 958 and the northern extent of Mt Crocker EPC 966 overlay this surrendered area.

Xstrata targeted shallow coking coal of the German Creek Formation and low ratio thermal coal plies within thick seams of the Burngrove, Fairhill or German Creek Formation. Xstrata conducted a literature review, data review, geological mapping, petrology, drilling, and geophysical logging. Xstrata drilled seven percussion holes from 91m to 267m deep in the



centre east of the “Macmillan” (relinquished) area. German Creek Formation coal seams were intersected in four drill holes near the eastern permit boundary where coal seams were generally less than 1m thick with the best being the Corvus seam (1.04m). Geophysical logging indicated that the Corvus seam had a bulk density of 1.4g/cm<sup>3</sup>.

One drill hole intersected coal seams of the Fairhill Formation and one drill hole intersected five coal seams of the Burngrove Formation, although subsequent petrology on four intervals throughout the latter hole indicated Fairhill Formation.

Xstrata concluded that no “world class” deposits are likely in the area and that “the current potential of the area lies in the possibility of high quality thin seams occurring at low ratios”. Xstrata considered that the identification of a small resource of Corvus seam is possible and that there was potential to discover low ratio plies in coal seams of Fairhill and Burngrove formation.

### **3.5 2005 - 2008 Aquila Exploration**

There are three target areas in the Washpool permit area. In the southern permit area, the target is low strip ratio coal within thick medium-ash coal seams of the Burngrove Formation. In the north-western area of the permit, the target is coking coals associated with German Creek coal seam equivalents within the Crocker Formation. In an area adjacent to the Mackenzie River in the north east of the permit, the target is a faulted repetition of the Rangal Coal Measures.

In 2005-2006, Aquila completed exploration on the Burngrove Formation in the southern target area. A review of previous exploration in the eastern Comet Ridge area indicated that, Arco (Wesfarmers) has identified a resource exploiting the Scorpio seam of the Burngrove Formation on an adjacent mining development lease to the west of Curragh mine. Within the Washpool and neighbouring Mt Crocker permits, previous drilling has intersected thick (5m to 7m) Scorpio coal seams from wide-spaced drilling. Limited published coal seam thickness and quality data from sparse drilling in the area indicates thick coal seams, potentially good quality (low bulk densities), and potential coking properties (high CSN).

Exploration by Aquila to June 2006 comprised of a review of previous exploration data, interpretation of regional geological datasets and target generation, and drilling of the Scorpio target with percussion and core drill hole.

#### **3.5.1 2006 Exploration Results**

The primary objective of the drilling was to obtain coal quality information for the Scorpio seam. A review of the results of previous exploration data and a geological interpretation of the Washpool area indicated that the Upper Burngrove formation and Scorpio seam may be

preserved in a synform west of previous geological interpretations and that the Scorpio seam includes high-swell potential coking coals.

Four exploration drill traverses at approximately 3.5km spacing were completed of which Traverse A is located on Washpool EPC 958. The drill program was partially completed due to technical drilling difficulties caused by overlying unconsolidated river conglomerates and sands. On Traverse A, a 6m Scorpio Seam was located at shallow depths (30m - 60m) dipping shallowly north northeast to flat within the interpreted synform. LOX testing was carried out on the chip samples to determine the freshness of the coal. This testing indicated that the base of oxidation can vary in isolated pockets but generally was around 30m. The LOX testing also confirmed that the Scorpio seam contained high-swell coals with consecutive 0.25m and 0.5m samples with field CSN estimates of 7 to 7.5 on raw coal.

The chip percussion drilling indicated that the Burngrove Formation is overlain by between 10 and 50m of unconsolidated non water bearing river sands and gravels. The Burngrove Formation sediments overlying the Scorpio seam are predominantly clays and weathered to transitional siltstones and fine sandstones. There appears to be a limited amount of fresh sediments overlying the coal due to the apparent flat dip of the formation into the synform.

The core was geologically logged in detail and over sampled with 25 samples collected. In general, coal intervals and stone bands in excess of 10cm were sampled. Drilling indicated that the Scorpio seam is banded with discrete intervals of ash, stone bands and carbonaceous shales separating plies of coal. The coal was found to be generally bright with high vitrinite and hard in places, with intervals ranging from 0.1m to 1.1m thick.

Two distinct tuff bands were identified within the seam approximately 1m from the top and 2m from the bottom of the seam respectively. The roof and floor comprised dominantly of competent fine-grained sandstones, with regular and abrupt contacts with the coal.

### **3.5.2 2007 Exploration Results**

The primary objective of the drilling for 2007 was to define seam extents and identify the sub-crops of the resource. A detailed coal quality program was conducted to apply selective sampling techniques to the seam to improve washed coal yields. The average core hole spacing was decreased from 2km down to 1km.

A traverse was drilled from the central part of the resource area, running out to the north and towards the river. The last two holes on the line were found to be outside the sub crop limit. It was established that the coal occurs within a restricted basin-setting and is not bound by fault blocks at depth.

The presence of a northern second sub-crop was also established, with the deposit closer to the surface in this area than previously thought. This improved the economic potential of the deposit by allowing for a more favourable strip-ratio for mining.

A line of holes drilled on the central axis of the basin confirmed the presence of sub-crops at both the eastern and western ends. All the holes intersected the seam, with the deepest intercept at 60m of cover material above the Scorpio seam. The holes drilled to the south confirmed that the seam sub-crop extended 1000m further to the south than was initially thought.

### **3.6 2008 - 2009 Aquila Exploration**

During the 2008 – 2009 period thirty-seven holes were completed on EPC 958, including 2223.9m of open holes and 71.1m of core (100mm and 200mm diameter), totaling 2295m. These holes were drilled as part of the development of the Washpool Project, with the Scorpio and Centaur seams primarily targeted.

The seams were found to sub-crop in the south of the Washpool EPC 958, and dip to the north in a basin structure. Two Tuff bands were mapped throughout the deposit and provide distinctive makers.

The low yield for low ash products confirmed previous results for the Scorpio seam. The coking properties were found to be excellent and the resources deemed to be possibly suited for blending with a low ash coking coal of lesser coking quality.

### **3.7 2009 - 2010 Aquila Exploration**

During the 2009 – 2010 period, sixty-six holes were completed on EPC 958, including 2915.34m of open holes and 267.66m of 100mm diameter core totaling 3183m. The holes drilled were part of the development of the Washpool Project that overlaps EPCs 958 and 966, primarily targeting the Scorpio Seam.

On 1<sup>st</sup> September 2010, fourteen sub-blocks were relinquished from the EPC, with 100 sub-blocks retained. These fourteen sub-blocks were dropped from the EPC specifically for the purposes of inclusion into Washpool MDLa 403. Further drilling has since taken place during the 2010 – 2011 period on these relinquished sub-blocks, as part of the Washpool Resource Project.

### **3.8 2010 - 2011 Aquila Exploration**

On 1<sup>st</sup> September 2010, fourteen sub-blocks were relinquished from EPC958, specifically for the purpose of forming Washpool MDL 403.

No drilling took place on EPC 958 for the 2010 to 2011 period, however thirty-four holes were completed on MDL 403 immediately to the south of the EPC.

**AQ176** – The first of the open holes drilled for the exploration campaign targeting the Scorpio seams of the Burngrove formation. The hole was cased at 29m using 5' PVC casing. The hole was drilled down to the depth of 72m and successfully intersected the all Scorpio seams (A, B, C, D, E & F) at 57m. All seams were fresh. The hole was geophysically logged.

**AQ177** - The hole was drilled down to the depth of 54m and successfully intersected the all Scorpio seams (A, B, C, D, E & F) at 28.5m. All seams were fresh. The hole was geophysically logged.

**AQ178** - The hole was drilled down to the depth of 60m and successfully intersected the all Scorpio seams (A, B, C, D, E & F) at 42m. All seams were fresh. The hole was geophysically logged.

**AQ179** - The hole was drilled down to the depth of 64m and successfully intersected the all Scorpio seams (A, B, C, D, E & F) at 36.5m. All seams were fresh. The hole was geophysically logged.

**AQ180** - The hole was drilled down to the depth of 72m and successfully intersected the all Scorpio seams (A, B, C, D, E & F) at 47m. All seams were fresh. The hole was geophysically logged.

**AQ181** - The hole was drilled down to the depth of 160m and only intersected the E and F plies at 36m. E ply was weathered and the F ply was fresh. The hole was geophysically logged.

**AQ182** – This was the pilot hole for the 8' core hole. The hole was drilled down to the depth of 60m and successfully intersected all the Scorpio seams (A, B, C, D, E & F) at 47m. All seams were fresh. The hole has been geophysically logged.

**AQ183** –The hole was drilled down to the depth of 78m and successfully intersected the all Scorpio seams (A, B, C, D, E & F) at 51m. All seams were fresh. The hole was geophysically logged.

**AQ184** – The hole was drilled down to the depth of 54m and successfully intersected all Scorpio seams (A, B, C, D, E & F) at 33m. The A seam was weathered, but the remaining seams were fresh. Samples were taken for LOX analysis. The hole was geophysically logged.

**AQ185** – The hole was drilled down to the depth of 40m and only D, E and F plies were intersected at 19m. D ply was a weathered seam however E and F ply were fresh. LOX samples were taken for analysis. The hole was geophysically logged.

**AQ186C** – The first of the large diameter holes (200mm) to be cored at Washpool. The hole was previously cased off at a depth of 42m and then chipped down to 47m. The large

diameter hole was used to collect a bulk sample for washability testing, targeting the Scorpio seams of the Burngrove formation. The hole was drilled down to a final depth of 55.96m (during early Feb) and successfully intersected the A, B, C, D & E of Scorpio seams. All seams were fresh and 25 samples were taken. The hole was geophysically logged during February.

**AQ187** - LOX11-03 – This is the first LOX hole drilled at LOX line 11. This is going to be a series of 3-5 holes drilled along this line, at 50m spacing. The hole was cased to 30m using 5' PVC casing. This hole was drilled to the south of the fence line at the TD of 42m, and did not intersect any coal. The next series of holes will be taken 50 and 100m north of this hole until only fresh coal is intersected. This hole was geophysically logged.

**AQ188** - LOX12-03 - This is the second drilled LOX hole and is the first LOX hole drilled at LOX line 12. This hole was drilled to a TD of 46m. Coal seams were intersected at 29m, waiting on geophysics to identify which seams were intersected. Samples were taken every 0.5m intervals and sent to the laboratory for testing. This hole was not geophysically logged.

**AQ187C** – This was the first geotech hole to be drilled in the campaign. It was cased at 41.5m. The hole was drilled down to a total depth of 69.30m and successfully intersected the all Scorpio plies (A, B, C, D, E & F). Some 27 samples were collected for testing. The hole was completed and geophysically logged during early February.

**AQ188C** – This was a geotech hole that was cased at 34m. The hole was drilled down to the depth of 50.45m and encountered loss of circulation to a nearby hole AQ183. The hole was abandoned and did not intersect any of the Scorpio seams. Five geotech samples were taken. The hole was not geophysically logged.

**AQ188CR** – This was a re-drilled geotech hole for AQ188C. The hole was cased at 38.9m. It was chipped down to 49.3m and cored to the total depth of 68m and successfully intersected all the Scorpio seams (A, B, C, D, E & F). All seams were fresh, 34 coal quality samples and 4 geotech samples were taken. The hole has been geophysically logged.

**AQ189C** – This was a cored pilot hole for a large diameter cored hole. The hole was drilled down to the depth of 40.85m and cased. The hole opened into the top coal. It intersected only a partial amount of the Scorpio seams (C, D and E1). A and B seams were not present in the core (potentially weathered out). 12 samples were taken. The hole was geophysically logged and showed that the A and B plies were missing. The hole was not successfully completed due to a structural failure to the rig. Due to the weathering of the upper plies a new site was selected for the second LD hole.

**AQ190C** – This was a coal quality hole, cased at 36m. The hole was drilled down to the depth of 65m and successfully intersected the all Scorpio seams (A, B, C, D, E & F). All seams were fresh and 46 samples were taken. The hole has been geophysically logged.

**AQ191C** – In error the hole was open-holed down to the depth of 36.8m at which it intersected coal. This hole was meant to be a geotech hole. The hole has not been geophysically logged at this stage.

**AQ192C** – This is a Geotech hole, cased at 11.45m. The hole was drilled down to the depth of 59.96m and successfully intersected the all Scorpio seams (A, B, C, D, E & F). The hole has been geophysically logged.

**AQ193** – This hole is the pilot open hole for AQ194C, cased at 30m. The hole was drilled down to the depth of 66m and successfully intersected the all Scorpio seams (A, B, C, D, E & F). All seams were fresh. The hole has been geophysically logged.

**AQ194C** – This is a coal quality hole, cased at 30m. The hole was drilled down to the depth of 60m and successfully intersected the all Scorpio seams (A, B, C, D, E & F). Core samples were taken. The hole has been geophysically logged.

**AQ195C** – This is a Geotech hole, cased at 11.4m. The hole was drilled down to the depth of 59.96m and successfully intersected the all Scorpio seams (A, B, C, D, E & F). The hole has been geophysically logged. Some 37 geotech samples were taken and 9 coal quality samples were taken.

**AQ196** – This hole is the pilot open hole for AQ197C, cased at 30m. The hole was drilled down to the depth of 60m and intersected the Scorpio seams. The hole has been geophysically logged.

**AQ197C** – This is a coal quality hole, cased at 34.3m. The hole was drilled down to the depth of 38.6m and when cored it was realized that only the lower portion of the Scorpio plies were present (D2, E & F). From the core it was clear that the upper seams were weathered away completely. The seams that were recovered appeared weathered also; awaiting lab results for confirmation. The hole has been geophysically logged.

**AQ198** – This hole is the pilot open hole for AQ199C, cased at 41m. The hole was drilled down to the depth of 84m and successfully intersected the all Scorpio plies (A, B, C, D, E & F). The hole has been geophysically logged.

**AQ199C** – This is a coal quality hole, cased at 41m. The hole was drilled down to the depth of 84m and successfully intersected all the Scorpio seams (A, B, C, D & E). Some 31 samples were taken for analyses. The hole has been geophysically logged.

**AQ200** – This hole is the pilot open hole for AQ201C, cased at 30m. The hole was drilled down to the depth of 60m and successfully intersected all the Scorpio seams (A, B, C, D, E & F). The hole has been geophysically logged.

**AQ201C** – This is a coal quality hole, cased at 30m. The hole was drilled down to the depth of 60m and successfully intersected the all Scorpio seams (A, B, C, D & E). Some 37 samples were taken for analyses. The hole has been geophysically logged.

**AQ202** – This hole is the pilot open hole for AQ203C, cased at 36m. The hole was drilled down to the depth of 60m and successfully intersected all the Scorpio seams (A, B, C, D, E & F). The hole has not been geophysically logged.

**AQ203C** – This is the second 8” hole at a previously drilled hole, AQ065. It is the replacement hole for AQ189C. The hole was cased at 36m using 14” casing. However the casing cracked. The hole was then reamed down to 47m and 7” casing was set inside the larger casing. The hole was converted to a 100mm coal quality hole. The hole was drilled down to the depth of 66m and successfully intersected the all Scorpio seams (A, B, C, D & E). 32 samples were taken of the core. The hole has been geophysically logged.

**AQ204** – This hole was a 2nd attempt at an 8” hole on the same site. However at 30m the 14” casing came undone and the hole was abandoned.

**AQ205C** – Is a Geotech hole cased of at 15m. The hole was drilled to a total depth of 42.03m and successfully intersected the all Scorpio seams (A, B, C, D, E & F). All seams were fresh, 21 geotech samples and 32 coal quality samples were taken. The hole has been geophysically logged.

**AQ206C** – This was the third attempt at the second 8” washability site at a previously drilled hole, AQ065. The hole was cased at 30m using 14” casing. The hole was drilled down to the depth of 60.72m and successfully intersected the all Scorpio seams (A, B, C, D & E). 49 samples were taken of the core. The hole has been geophysically logged.

All drilling targeted the Scorpio and Centaur seams of the Burngrove Formation, in an effort to explore seam and coal quality continuity in the region.

Twenty holes are tentatively planned for the north-eastern section of EPC 958 for the next drilling period, however exact placement cannot be confirmed until results from other tenements have been analysed.

## **4.0 Conclusions**

The exploration of the southern part of the Washpool EPC 958 has converted the discovery of coal into Measured and Indicated Resources within the Washpool Project. The coal has a high raw-ash content, but excellent coking properties. This area has been incorporated into MDL 403 as part of the Washpool Project, targeting shallow, basin-like incidences of the Scorpio and Centaur seams of the Burngrove Formation.

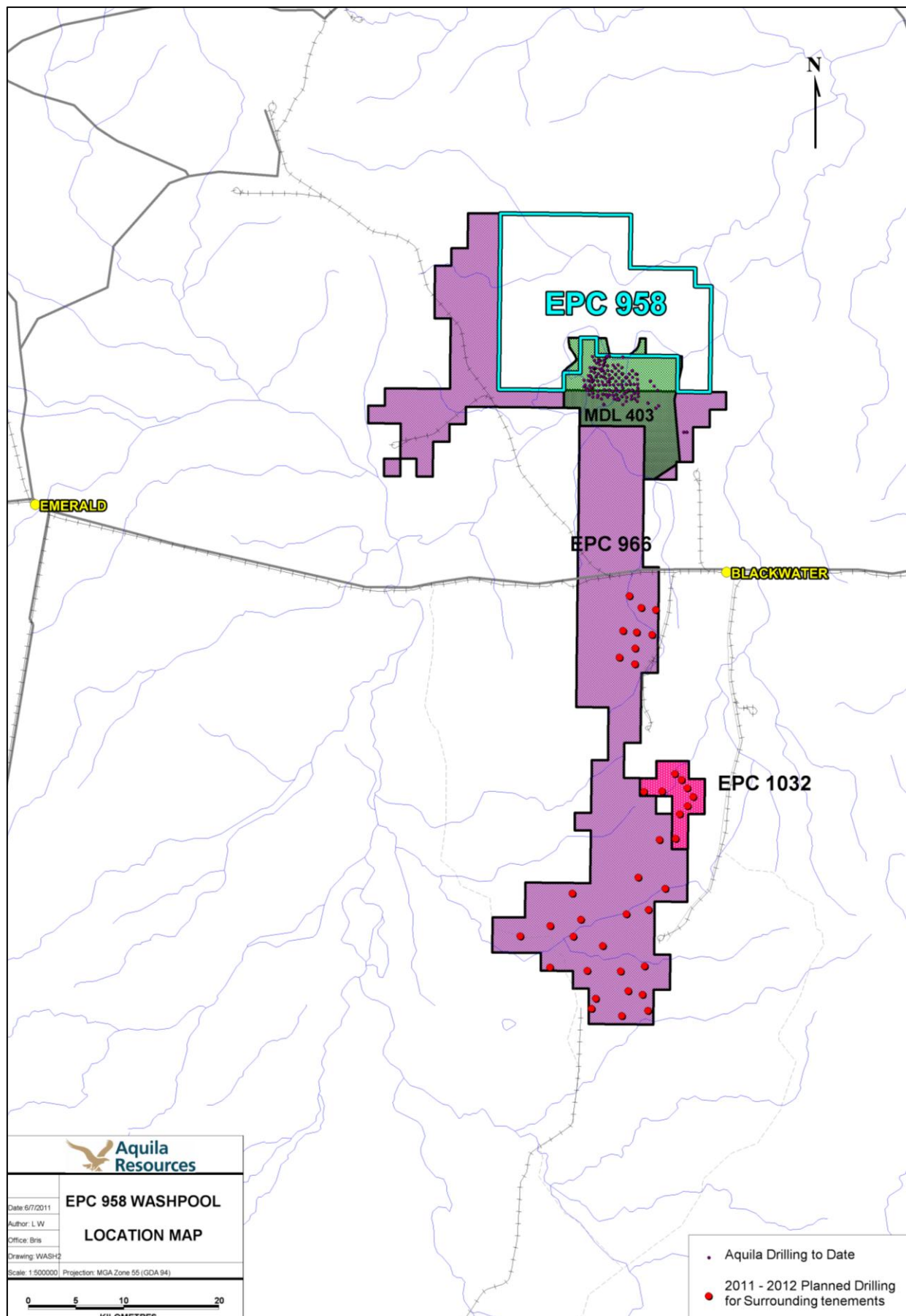
By exploring the MDL in conjunction with nearby EPCs, we are able to further our understanding of seam and coal quality continuity in the region, allowing for the development of a more specialized drilling program and well-defined targets.



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**Figure 1. Washpool Location Map**



**Figure 2      The Nature of the Scorpio seam in Bore AQ170C (Washpool)**

