EPC788
TAROOM EAST, QUEENSLAND

RELINQUISHMENT REPORT
FOR PERIOD ENDING 24TH FEBRUARY 2006

for

XSTRATA COAL QUEENSLAND PTY LTD

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24th February 2006

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1.0 Summary

This report summarises the work undertaken in the areas relinquished from Exploration Permit for Coal (EPC) 788 to 24th February 2006. Evaluation of the available data suggests that the areas relinquished are in barren sections of the Juandah or Taroom coal measures, in the Tangalooma Sandstone, or contain seams that are too thin and/or deep to be considered prospective for mineable coal deposits.

Exploration drilling was conducted during 2004 and 2005 and nine of these boreholes are located in the relinquished area. Most boreholes were geophysically logged, but all sites were rehabilitated and new lithological and geophysical data was incorporated into the existing databases. Geophysics from boreholes underwent extensive validation. In early 2005 a SPOT5 Satellite image was obtained over the project area. This was utilised to create a DEM to provide or validate the collar RL's of old boreholes.

2.0 Introduction

EPC788 (Taroom East) extends to the north-west and south of the town of Taroom on the Leichhardt Highway. Taroom is 130km north of Miles which is 340km west of Brisbane. The regional location of the Wandoan coalfields are shown on Figure 1 which also describes the 41 sub-blocks which were relinquished, leaving 164 sub-blocks comprising the EPC. The relinquished sub-blocks are also presented as Table 1.

This EPC's western boundary is along longitude 149° 40' and extends east to 149° 55'. Latitudinally it runs from 25°30' to 25°55'.

EPC788 was granted to Mount Isa Mines Coal Pty Ltd (MIMC) from 25th February 2003 for a period of 3 years. In June 2003 MIM Holdings Ltd (MIM) was acquired by Xstrata PLC (Xstrata) and MIMC was renamed to Xstrata Coal Queensland (XCQ). In November 2004 XCQ sold 12.5% of its interest in this project to ICRA RPW PL and 12.5% to Sumisho Coal Australia PL. Mineral Development Licences (MDL)'s 221, 222, 223, 224 are also held by XCQ (75%), ICRA RPW PL (12.5%), and Sumisho Coal Australia PL (12.5%).

The coal resources of the Taroom East area occur in the Jurassic Walloon Coal Measures of the central-north part of the Surat Basin in South East Queensland.

This report describes the known geology of the area and the work undertaken in the areas relinquished from the EPC to 24th February 2006.

Table 1: EPC788 Sub-blocks Relinquished

BLOCK IDENTIFICATION MAP	BLOCK	SUB-BLOCKS	TOTAL
Charleville	1365	k	1
Charleville	1437	n, q, r, s, t, v	6
Charleville	1438	u, w, x	3
Charleville	1439	t, y	2
Charleville	1509	l, p, q	3
Charleville	1511	u, z	2
Charleville	1581	q, r, v, w, x, y	6
Charleville	1582	a, f, l, r, w	5
Charleville	1583	e	1
Charleville	1653	b, c, d, e, j, k	6
Charleville	1654	f, n, s, x, y	5
Charleville	1655	w	1
TOTAL			**41**

3.0 Regional Geology

3.1. Location

The Surat Basin lies west of the Clarence-Moreton Basin and extends from southern Queensland into northern New South Wales. The interpretative regional geology of the Basin is shown in Figure 2. It extends over an area of 270,000km2 with a length of 800km and a width of 450km. It forms an eastern lobe of the Mesozoic Great Artesian Basin, containing up to 2,500m of Jurassic clastic continental sediments and Early Cretaceous marine beds. The Wandoan coalfields are located within the North-eastern portion of the Surat Basin, south-eastern Queensland, approximately 400km west-north-west of Brisbane.

These sediments accumulated in the slowly subsiding Taroom Trough, a basement half-graben, bounded on the east by the north-south trending Leichhardt-Burunga Fault zone (a line of thrust faults initiated by uplift of the eastern block associated with Permo-Triassic plutonism) and on the west by the Comet Platform (Figure 3). They are relatively undisturbed and conformable throughout the basin with regional dips of no more than two degrees WSW. The Taroom Trough extends over some 50,000km^2 and contains up to 9,000m of sediments.

The basin is bounded in the north by the Auburn Arch, whilst in the south the western edges of the New England fold belt limit its extent. Surat Basin sediments extend eastward into the Moreton Basin across the Kumbarilla Ridge and in the west interfinger with those of the Eromanga Basin over the Nebine Ridge. These two basement ridges mark the outer limits of the Surat Basin. The basin has been eroded in its northern reaches.

3.2. Structure

The Surat Basin has not been subjected to compressional folding and faulting.

The major structural element in the Wandoan coalfields is the north-south trending, southwardly plunging Mimosa Syncline, the axis of which passes 15km west of Taroom and 22km west of Wandoan (Figure 2). It formed over an actively subsiding basement trough (Taroom Trough) which initiated as a result of Permian sediment infill in the depression formed between the Burunga Fault and the Nebine Ridge to the west (Figure 3). It is a relatively simple structure with its western and eastern flanks dipping gently SSE and SSW respectively. The eastern limb of the syncline proper coincides with a line of meridional faulting downthrown some 70m on the western side. Sediments here exhibit a steeper south-westerly dip. Various stratigraphic units crop out in a broad arcuate belt around the synclinal axis.

The Burunga Fault is a north-south trending basement thrust passing between Miles and Taroom and having a displacement of 1000-2000m. It is the most important tectonic structure within the area.

A complimentary NE-SW trending, SSE plunging anticline, corresponding to the southerly extension of the Comet Ridge exists, passing midway between the Mimosa Syncline axis and the town of Injune. This alters the strike pattern of strata in the area.

A small anticline striking ENE-WSW and plunging WSW possibly exists south of the Taroom airport suggested by the change in strike direction of the Hutton Sandstone and the Walloon Coal Measures. This may well be due to small structural anomalies in the eastern flank of the Mimosa Syncline.

Folding, for the most part, is absent with the exception of large drape folding over basement ridges and large scale synclinal downwarping. Thicker accumulation of sediments on the downthrown side was controlled by basinal downwarping with compaction and movement along basement faults. Sedimentation is thickest in the central Mimosa Syncline. To the west of the Mimosa Syncline is the Arcadia Anticline.

Complex subsurface block faulting south of Giligulgul defines the eastern boundary of the Taroom Trough.

3.3. Stratigraphy and Sedimentation

Descriptions of the main stratigraphic units in the North-eastern Surat Basin are given in Table 2 and shown in Figure 2. Additional detail regarding the lithological characteristics and depositional environment of these units are provided in previous 12 month reports (Green & Chestnutt, 2004).

The evolution of the Surat Basin as well as the Eromanga and Moreton Basins, followed the Late Triassic (Norian) orogeny. Uplift at the end of the orogeny exposed the newly stabilised craton to erosion resulting in the deposition of sediments in relatively small, nucleated intermontane depressions. By the beginning of the early Jurassic, sedimentation was well established with deposition of fluvial sands and silts. Cyclic fluvial and lacustrine conditions prevailed throughout the Middle Jurassic, probably in response to eustatic changes in sea level or epeirogenic movements varying the gradient of the major drainage systems. Volcanic debris, common in the middle Jurassic sediments, indicates penecontemporaneous volcanism not far from the source. However no intrusives (plugs, sills or dykes) have been mapped within the Walloon Coal Measures. Non-marine sedimentation continued throughout the Late Jurassic with the formation of thin lenticular coal seams in the Westbourne Formation.

The stratigraphic record of the Surat Basin reveals at least six cyclothems where conditions were favourable to coal formation (Exon, 1976). In each case, the coal horizon occurs at the top of an upward-fining non-marine sequence representing a progression from a low energy fluvial to a paludal, and in places paralic environment. These Jurassic–Cretaceous fluvial cycles were generally transgressive, each comprising a range of environments, interrupted by changes in base level, probably due to minor basement movements or eustatic changes.

The sequence of economic interest in the North-eastern Surat Basin lies within the Mid-Jurassic sediments, of the Walloon Coal Measures in the Injune Creek Group. The coal seams of the Walloon Coal Measures developed towards the end of Exon's second cycle and are typically interbedded with mudstone and siltstone and occasional thin bands of laminated shale. Two sub-cycles within the Walloon Coal Measures were recognised by Jones & Patrick (1981) who renamed this unit the Walloon Sub-Group. These were the Taroom Coal Measures (lower) and the Juandah Coal Measures (upper) separated by the Tangalooma Sandstone. Earlier work by Swarbrick (1973) based on stratigraphic drilling carried out between 1967 and 1972 by the Geological Survey of Queensland identified 11 intervals in the Injune Creek Group and also recognised the division of the upper and lower coal measures within the Walloon Sub-Group (Table 3) .

Two major coal horizons occur in the Walloon Sub-Group, at the top of the Taroom Coal Measures (lower) and the top of the Juandah Coal Measures (upper). The coals occur within a belt of sub-contiguous deposits which subcrops in an arc from the south of the Wandoan

Township to north-west of Taroom then to the south-west towards Roma. Initial coal exploration in the Wandoan - Taroom area utilised the early work of Swarbrick (1973) and Exon (1976, 1980) in conjunction with photogeological interpretation and resistivity surveys to locate large, shallow coal deposits in both the upper and lower coal measures. As work progressed on defining these deposits the relationship between them was ignored and they were considered as independent isolated deposits. More recent work in the Surat Basin by seam gas explorers (Scott et al, 2004) determined that the sequences (and the coal seams they contain) identified by Swarbrick and Exon can be recognised over large distances, and potentially over the whole Basin. Nomenclature defined for these sequences and their seam groups are shown in Table 3.

Further work by Mackie (2005) utilised data collected throughout the basin for coal exploration as well as photogeological interpretations (Snodin, 2004) in order to assess the continuity of seam groups in the Wandoan - Taroom area. Nomenclature for seam groups following Scott et al (2004) was adopted and is referred to as the Surat Basin Seam Groups (SBSG). The result of the work was the definition of subcrop zones for each of the SBSG which are shown on Figure 4. Supporting photogeological interpretation is shown on Figure 5. Estimation of thicknesses and coal content of each unit have also been determined and are shown in Table 4. This work has also enabled the relationship between each deposit in the basin to be determined and is being utilised for ongoing exploration work.

Table 2: Stratigraphy of the North-eastern Surat Basin
(after Jones & Patrick, 1981)

AGE			FORMATION	DESCRIPTION
Late Jurassic			Gubberamunda Sandstone	Fine to coarse and pebbly, poorly sorted, friable, cross-bedded, quartzose to sub-labile sandstone. Minor interbedded siltstone and mudstone. Upper fluvial depositional environment
Middle to Late Jurassic	Injune Creek Group		Westbourne Formation	Finely interbedded lithic sandstone, mudstone and coal in lower part. Interbedded siltstone and lithic sandstone in upper part. Lacustrine deposition grading to point bar at the top
			Springbok Sandstone	Litho-feldspathic sandstone, medium to coarse, porous and friable, some calcareous and cemented beds, minor siltstone, mudstone and coal seams. Lower part trough cross-stratified with authigenic matrix, upper part poorly cemented, exhibiting point bar depositional features
Middle Jurassic		Walloon Sub-Group	Juandah Coal Measures	Lithic, labile sandstone, interbedded with siltstone, mudstone and coal, with coal deposition more frequent towards top. Argillaceous component of sandstone is mainly authigenic
			Tangalooma Sandstone	Lithic, labile sandstone, medium grained with argillaceous matrix. Numerous intraformational conglomerate beds. Sedimentary structures suggest channel deposition grading to point bar deposition
			Taroom Coal Measures	Sub-labile, medium grained sandstone grading upwards to interbedded sandstone, siltstone, mudstone and coal
			Eurombah Formation	Lithic to sub-labile, poorly sorted, medium grained sandstone with argillaceous matrix. Minor siltstone and mudstone in basal section, more argillaceous towards top
Early Jurassic			Hutton Sandstone	Interbedded labile to quartzose sandstone, siltstone and mudstone and intraformational conglomerate

Table 3: Stratigraphy of the Walloon Subgroup (after Scott et al, 2004)

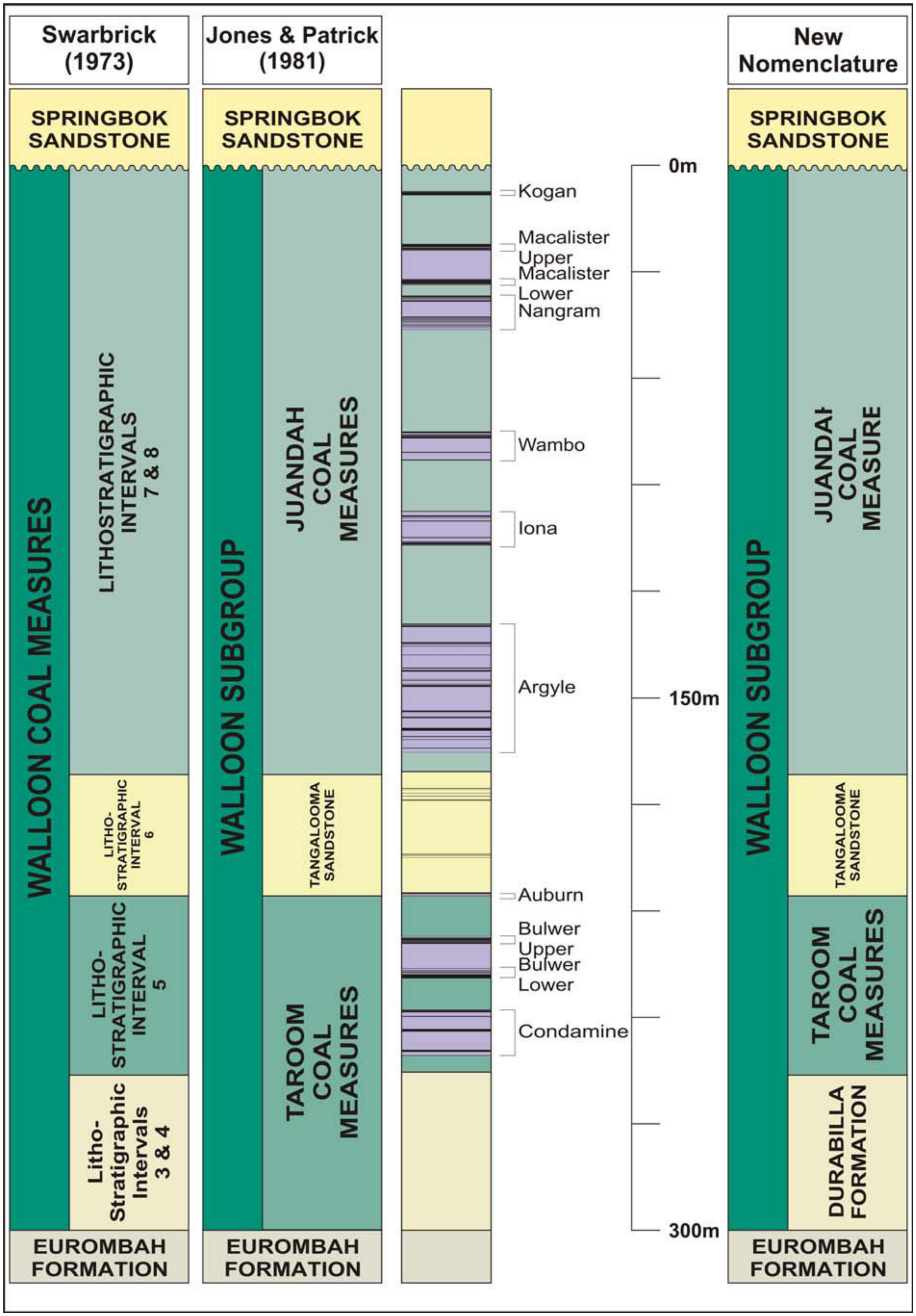

Table 4: Summary of Variation within SBSG

Unit/Seam Group	Thickness Range	Coal Content	Type Holes
Macalister Upper	2-5m (Average 4m)	Coal plies up to 2m usually 0.5-1m thick, <70% total coal	R1745
Macalister Lower	2-10m (Average 7m)	Coal plies usually 0.2-1m thick, <60% total coal	R1745
Wambo	5-20m (Average 10m)	Coal plies up to 1m usually <0.5m thick, <40% total coal	R1763
Iona	2-10m (Average 5m)	Minor poorly developed coal plies <0.2m thick, <20% total coal	TM007
Argyle	10-25m (Average 15m)	Coal plies <1m thick, <50% total coal	R6058
Tangalooma Sandstone	30-90m (Average 50m)	Rare coal plies, <5% total coal	R6068, R6056
Auburn	5-15m (Average 12m)	Minor coal plies <0.5m thick, <20% total coal	R2513
Bulwer Upper	10-20m (Average 15m)	Coal plies <1m thick, <40% total coal	R2055
Bulwer Lower			
Condamine	20-40m (Average 30m)	Frequent thin plies <0.2m thick, <30% total coal	N/A

4.0 Previous Work

4.1. Previous Tenure Holders

Brigalow Mines Pty Ltd and a number of other companies did a large amount of work in the Wandoan – Taroom area in the 1970's and '80's. A comprehensive understanding of the geology of the area was gained from various studies including photogeological mapping, resistivity surveys, and numerous boreholes. Large deposits of shallow, thick, high volatile, sub-bituminous thermal coal were defined. The total resource of these deposits was determined to be approximately 2,000 million tonnes. The coal was also considered suitable for liquefaction and gasification due to high hydrogen content.

EPC788 partially or fully covers the following former Authorities:

- AP149C (Taroom)
- AP152C (Dawson)
- AP157C (Wandoan)
- AP229C (Kerwongah)
- AP256C (Taroom East)
- AP267C (Kerwongah)
- AP305C (Taroom)
- AP309C (Bungaban)
- AP419C (Crossmont)
- AP422C (Juandah Creek)
- AP432C (Taroom Extended)
- EPC450 (Surat)
- EPC563 (Wandoan)
- EPC624 (Taroom)

The progression of previous tenures was described more thoroughly in a twelve month progress reports (Green & Chestnutt, 2004, 2005).

5.0 Work in Relinquished Areas

EPC788 was granted to MIMC in February 2003 and later transferred to XCQ. Work undertaken during the three years to 24th February 2006 included:

- Retrieval of digital borehole data from previous work and extraction of borehole data from company reports obtained from the Department of Natural Resources and Mines (DNRM)
- Review of the Regional Geology
- A desktop study of the Native Title status of properties in the area
- Data Compilation
- Photogeological study
- Mini-sosie Trial
- Seismic Data Review
- Exploration Drilling 2004 (1 borehole in relinquished area)
- Review of 2004 Drilling Program
- Regional Stratigraphic Correlation
- Exploration Drilling 2005 - (8 boreholes in relinquished area)
- Evaluation of Geophysical Log Data
- Evaluation of Historic Correlations
- Acquisition of Satellite Data

The locations of all historic borehole data in the areas relinquished are shown in Figure 6.

5.1. 2004/2005 Drilling Programs

A drilling program was conducted in the Wandoan project area from July to September 2004 and from May to October 2005. This was preceded by planning and preparation which included identifying sites, contacting landholders, and determining access. An evaluation of the potential for disturbance of cultural heritage was undertaken under duty of care guidelines. As all sites were located on or adjacent to existing tracks or in previously disturbed ground (most of the area has been cleared and ploughed in the past) it was not considered necessary to undertake a cultural heritage survey.

As the EPC is within the Taroom Shire which is in the parthenium buffer zone a management plan was put in place. This included undertaking a certified washdown on all vehicles used on the program to reduce the likelihood of transporting parthenium weed seed or other weeds into the buffer zone. Properties with known infestations were not entered.

Nine chip boreholes were drilled in the relinquished area of which the locations are provided in Table 5 and are shown in Figure 6. A summary of the total amount of coal intersected in each borehole is also given in Table 5. These boreholes were all geophysically logged, surveyed and rehabilitated.

Rehabilitation consisted of:

- digging approximately 1.5m around borehole collar
- cutting PVC collar off approximately 1.5m from surface with hacksaw
- cementing borehole to approx 50m below surface where coal seam at >100m depth
- backfilling drilled chips down borehole until approximately 1.6m from surface
- plugging cut off section of borehole collar with Si foam plug and back filling remaining cavity
- removing all remaining drill material from site by truck.

Lithological logs of all boreholes are provided in Appendix A, stratigraphic columns and geophysical log plots are provided in Appendix B, whilst LAS files of all geophysical logs are available as Appendix C.

Table 5: 2004 / 2005 Drilling – Summary

Hole Name	Easting MGA	Northing MGA	Collar (m)	Total Depth (m)	Fresh Coal Total (m)	Date Completed	Geophys
R6060	776075.56	7174250.45	221.72	102.00	3.16	16/08/2004	Y
R6175	789952.53	7160720.49	233.07	123.00	0.40	25/07/2005	Y
R6177	789538.86	7158420.28	219.89	123.00	1.65	25/07/2005	Y
R6187	773990.60	7137806.49	256.96	123.00	8.80	1/08/2005	Y
R6204	781136.15	7132108.47	230.96	231.00	12.24	25/08/2005	Y
R6219	786719.44	7131738.93	212.01	123.00	4.31	20/09/2005	Y
R6223	777179.48	7145886.60	249.01	303.00	26.15	24/09/2005	Y
R6233	791356.17	7152052.62	252.71	123.00	4.21	13/10/2005	Y
R6234	791634.81	7149216.32	242.59	123.00	2.22	13/10/2005	Y
Total	**9 Holes**			**1374.00**			

5.2. Evaluation of Geophysical Data

The principal method of exploration in the Wandoan Project area is by drilling of boreholes and recording of lithology and downhole physical characteristics. These physical parameters are determined by wireline geophysical logs. The quality of geophysical logs can vary significantly due to a number of reasons including inconsistent calibration and variations in both data acquisition procedures and logging environment. Such a lapse in data quality must be recognised in order for geophysical logs to be acceptable in routine quantitative interpretation and used as an alternative to coring. Consistent high quality data is a pre-requisite to further analysis.

Geophysical wireline log data from the Wandoan 2005 drilling program were examined by Chestnutt and Green (2006) using Quality Assurance software (LogQA) to identify erroneous logs and classify data on the grounds of acceptable, questionable, or unacceptable. The project placed emphasis on the variables: density, natural gamma, sonic velocity, neutron and resistivity logs supplied by Precision Energy Services (formerly Reeves Wireline Logging Services). In boreholes with a significant quantity of unacceptable data it was hoped to utilise some information by determining depths where the data may actually be reasonably accurate.

Evaluation of the geophysical logs involved establishing acceptable global ranges for each measured variable and determining whether the data for that variable in a particular borehole fell outside the designated range. While this test immediately highlights boreholes with highly questionable data it was found to be far more meaningful when depths were restricted to a “normal” open-hole environment i.e. below the water level. The depth ranges selected were defined manually, for the most part being 2m below the water level as recorded on the log header. In some boreholes where the data still fell outside global ranges depths were lowered further to remove erroneous data from the top sections particularly where there was a lot of gas or where the tool gave anomalous readings. A comparison of variables evaluated at different restricted depths is shown in Table 6.

Additional evaluation of geophysical variables included calculation of general statistics, cross-plots, and comparisons of histograms between boreholes to highlight any questionable data for further investigation. The final results of the Quality Assurance for the 2005 boreholes in the relinquished area are shown in Table 7, which list the boreholes and whether or not they were deemed acceptable. Questionable boreholes highlighted in grey. The final depths used to evaluate the ‘acceptability’ of data are also provided in Table 7. The results highlight that while the quality of borehole logs is generally good, a small amount of sub-standard data does occur which should be investigated or removed prior to undertaking interpretations and evaluation.

Table 6: Comparison of variables with increasing depth restrictions

LOG	UOM	GLOBAL RANGE		ALL HOLE 0M - 122.5M		WATER LEVEL + 2M 15M - 122.5M		ADJUSTED DEPTH 80M - 122.5M	
		MIN	MAX	LOG RANGE	DATA OK	LOG RANGE	DATA OK	LOG RANGE	DATA OK
GRDE	GAPI	0	160	5.8 - 148.42	✓	5.8 - 148	✓	25 - 126	✓
CODE	G/C3	1	3.2	1.24 - 2.6	✓	1.24 - 2.6	✓	1.45 - 2.6	✓
LSDU	SDU	200	12000	626 - 16686	✗	626 - 11865	✓	623 - 8473	✓
BRDU	SDU	5000	40000	12973 - 42950	✗	12973 - 36252	✓	15128 - 36099	✓
CADE	MM	100	200	107 - 147	✓	107 - 139	✓	107 - 121	✓
DENL	G/C3	1	3.2	1.1 - 2.62	✓	1.23 - 2.62	✓	1.4 - 2.6	✓
DENB	G/C3	1	3.2	.28 - 2.94	✗	1.08 - 2.94	✓	1.1 - 2.7	✓
DEPO	PERC	0	100	6.47 - 86.1	✓	6.47 - 86.1	✓	6.5 - 73.45	✓
ADEN	G/C3	1	3.2	.94 - 2.84	✗	1.21 - 2.84	✓	1.27 - 2.65	✓
MC2F	US/F	30	180	32.59 - 200	✗	32.59 - 200	✗	47 - 153	✓
MC4F	US/F	30	180	35 - 200	✗	35 - 200	✗	47 - 180	✓
MC6F	US/F	30	180	35 - 189	✗	35 - 189	✗	58 - 169	✓
MC2A	US/F	30	180	30 - 193	✗	30 - 193	✗	39 - 136	✓
SPOR	PERC	0	100	-17 - 82	✗	-17 - 82	✗	4.73 - 73.45	✓
MC2U	US/F	30	180	-736 - 1044	✗	-736 - 1044	✗	-178 - 315	✗
LSN	SNU	0	500	69 - 1845	✗	69 - 535	✗	80.96 - 535	✗
SSN	SNU	1000	4000	1529 - 6180	✗	1529 -3823	✓	1593 - 3824	✓
RPOR	PERC	0	100	-4 - 99	✗	16.7 - 99	✓	17 - 89	✓
FE1	OHMM	1	1000	3 - 269432	✗	3 - 1544	✗	3.45 - 145	✓
FE2	OHMM	1	1000	3 - 239232	✗	3 - 30495	✗	2.91 - 130.21	✓

Table 7: Results of Log QA Evaluation (highlighting unacceptable logs)

Hole ID	Las file	Data Depth Limit	TD Logger	Parameters within range GRDE	CODE	DENL	DENB	MC2F	LSN	SSN	FE1	FE2
R6175	GN_R6175.las	17.00	122.20	✓	✓	✓	✗	✗	✓	✓	✗	✗
R6177	GN_R6177.las	14.00	122.50	✓	✓	✓	✗	✓	✓	✓	✓	✗
R6187	GN_R6187.las	16.00	122.50	✓	✓	✓	✓	✗	✗	✓	✗	✗
R6204	GN_R6204.las	7.00	232.30	✓	✓	✓	✓	✗	✗	✓	✗	✗
R6219	GN_6219.las	7.00	122.60	✓	✓	✓	✓	✓	✗	✗	✗	✗
R6223	GN_6223.las	12.00	290.10	✓	✗	✗	✗	✗	✗	✗	✗	✗
R6233	GN_6233.las	17.00	123.00	✓	✗	✗	✗	✗	✓	✓	✗	✗
R6234	GN_6234.las	26.00	123.00	✓	✗	✓	✗	✗	✓	✓	✓	✓

5.3. Satellite Data

A large number of boreholes compiled from old records did not have accurate collar relative levels (RLs) which required survey or determination by remote methods to make the data useful. The cost of obtaining aerial photography over the whole project area was considered prohibitive. In 2004 an attempt was made to utilise 9 second Digital Elevation Model (DEM) from satellite data (ASTER) already held by XCQ to generate a useable DEM over the area of interest. By comparison with a DEM from aerial photography over one of the MDL areas held by XCQ it was determined that this satellite image DEM was not sufficiently accurate (i.e. errors were >20m). It was determined that imagery from SPOT 5 satellites should provide a DEM with an accuracy of approx 5m.

In early 2005 a SPOT 5 satellite image was obtained over the project area by Geoimage Pty Ltd for XCQ. Four stereo pairs were captured and processed to cover the majority of the area held under tenure by XCQ. Survey ground control points were collected for each image to enable DEM generation and orthorectification of the SPOT pan. Some initial difficulty was experienced in achieving good correlation of the stereo pairs resulting in significant noise in the 5m DEM produced. Various methods were used including the use of the 40m DEM to provide the best solution. This resulted in an orthorectified image (Figure 8) and a 5m DEM (presented as a coloured drape image in Figure 9) of the Wandoan project area.

A trial of different grid sizes of the DEM data was undertaken to check the accuracy of the data and the most appropriate representation of the data for use in generating topography grids and for checking borehole collar RLs. It was determined that spot heights at 20m spacing were appropriate and files of data over 10kmx10km areas were generated for the project area. This were imported to Vulcan and triangulated to create topography grids. Comparisons between these grids and borehole collar RLs were determined for every borehole. Corrections were then applied to all boreholes with an estimated value or where the difference was greater than 10m. These differences were examined and the satellite DEM value used and entered to the borehole database. Exceptions to this were where the borehole was in the vicinity of rapid topographic changes where a value was determined by utilising all available data including 1:250,000 topography plans.

The satellite image has been used to plan borehole sites and their relationship to vegetation and watercourses, help determine site access, and examine the location of cadastral features.

6.0 Conclusions

Work undertaken in the last three years has included compilation of old borehole data, a photogeological study, a study of the regional stratigraphy, exploration drilling and evaluation of geophysical data. This has provided a better understanding of the regional geology of the Wandoan – Taroom area. The 41 sub-blocks relinquished from EPC788 are not currently considered prospective for mineable coal deposits as they are:

- In barren sections of the Juandah or Taroom coal measures
- In the Tangalooma Sandstone
- Contain seams that are too thin and/or deep (>150m)

7.0 References

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