



**LODESTONE
ENERGY.**

THE TAMBO COAL AND GAS PROSPECT

Presentation to ABN-AMRO Morgans 29th July 2009

By

Lance Grimstone, Director

Our Presenter Today

LANCE GRIMSTONE – DIRECTOR

Began his career as a cadet civil engineer with the Main Roads Department in 1966. That was interrupted by National Service in 1969. Upon return from Vietnam in 1971, switched his studies to geology. Entered the coal industry in 1975 as a Mine Geologist at South Blackwater and has rarely left the industry since. Commonly first out of the blocks to investigate areas not considered by others, and because of that, has a well-earned reputation for exploding some geological myths and generating new prospective territory:

- *Three decades ago he totally re-mapped the Callide Basin for Thiess Bros. Pty Ltd.*
- *Two decades ago it was the Blackwater district for Curragh Qld Mining Ltd.*
- *A decade ago he overhauled the eastern edge of the Bowen Basin for Macarthur Coal Ltd.*
- *Earlier this decade he turned his attention to the south-western Bowen Basin, again for Macarthur Coal Ltd.*

Not surprisingly, he has numerous new economic coal discoveries to his credit, for instance:

- **Boundary Hill** (mining commenced 1982),
- **Boundary Hill Extended** (now at EIS stage)
- *Kilburnie Homestead (in the project pipeline),*
- **Moorvale** (mining commenced 2002),
- **Olive Downs** (ML granted, soon to be mined),
- *Codrilla (in the project pipeline),*
- *Vermont East-Wilunga, and*
- *West Rolleston*

And the rate of conversion of these discoveries into mines is excellent



Leichhardt Award Winner 2009 - Bowen Basin Geology Group



Now focused on the very real opportunity that re-mapping the under-explored Upper Surat Basin will result in the discovery of significant new energy resources for Lodestone Energy Ltd, of which he became a Director a year ago.

New Direction

Lodestone Energy Limited is a Queensland exploration company listed on the ASX whose focus has been shifted from minerals to energy.

During the past 12 months, the Board has re-positioned the company to be able to respond to the inevitable surge in world energy requirements over the next two decades, particularly from Asia. The company has achieved this by securing a substantial foothold in the Upper Surat Basin, formerly regarded as rather un-prospective Eromanga Basin, that was not explored for coal.

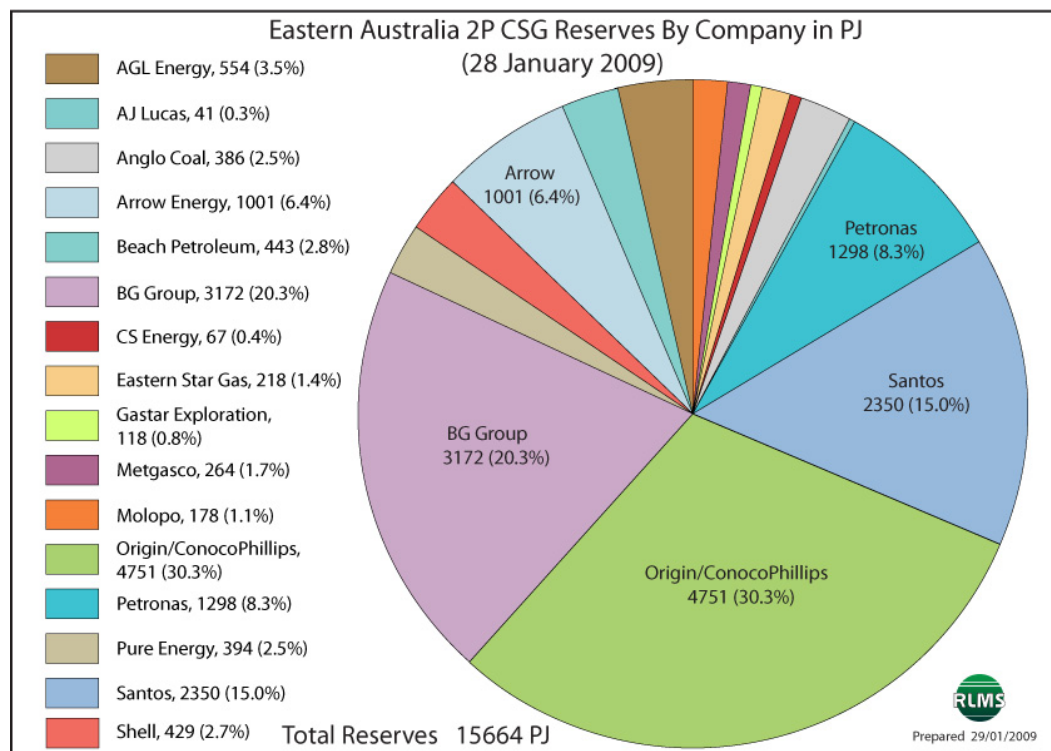


The company intends to confirm that this tenement area represents a genuine extension of the Surat Energy Province, both for thermal coal and coal seam gas.

We recognise the challenge, but also the rewards of participating in that future energy supply, either by way of coal seam gas to a third party LNG plant, or by thermal coal from large scale open cut mines.

Lodestone's Objective

To build an energy business over the next 10-15 years supplying coal seam gas and lower carbon dioxide emitting coals from its Walloon Coal projects to export and domestic markets.



Key Milestones

The first milestones have been met:

- **The company is now restructured and renamed.**
- **It is positioned to secure a foothold in the rapidly developing coal seam gas sector which has altered the economic landscape in Queensland.**
- **It has partnered in the exploration and development of a new energy coal province in the Upper Surat.**
- **Funding for the initial phase of the exploration program has been secured.**



The next milestones for Lodestone are:

- **Confirmation that the full sequence of Walloon Coal Measures extends west of Bymont, Lacerta and Don Juan**
- **Confirmation that the coal intercepts in waterbores translate into typical Walloon-style coal deposits**
- **Confirmation of the likelihood of coal and coal seam gas resources**
- **To attract a strategic partnership to share in Lodestone's new future, perhaps a customer**



New Board and Management

To initiate the company's shift in focus, the Lodestone Board and Management have been restructured to include people with a greater strength in coal, coal seam gas, exploration and development.

Chairman ***Martin Ackland***

Directors ***Greg Baynton***

John McCawley

Bill Stubbs *

Lance Grimstone *

Grahame Baker *

CEO ***Jeff Jamieson ****

Tambo Manager ***Bruce Patrick ****



Energy Credentials of the Board and Management

Martin Ackland – also Chairman of Mineral Deposits Ltd and former advisory board member of Conoco Australia and former CEO of Southern Cross Resources Inc

Greg Baynton – founded Arrow Energy and targeted both Moreton Energy and Tambo areas

Bill Stubbs - former Chairman of Arrow Energy and well known mining industry legal identity

Lance Grimstone - senior coal industry consultant formerly retained by the Board of Macarthur Coal Limited

Grahame Baker - senior consultant to the chemical, process, CSG and energy industries for technical, market and strategic advice

Jeff Jamieson - coal mining consultant of 28 years coal experience

Bruce Patrick – ex Anglo Coal, with 32 years experience in management of exploration, mine development and production

Our Coal Resource Specialists

Lodestone has appointed the very best people to assist in its quest

MBA PETROLEUM CONSULTANTS

Who are the arguably the recognised experts in the coal seam gas exploration of the Surat Basin

JB MINING SERVICES

*Who are perhaps the most senior coal resource estimators in Queensland. And in particular, **GREG JONES**, who along with our own **BRUCE PATRICK**, first established the true coal seam stratigraphy of the Surat Basin in 1981.*

Who better to assist in our quest to extend the Walloon Coal Measures into the Upper Surat? They are pictured during a recent field inspection tracing those same rock sequences westward into the Lodestone tenements.

These two gents provide us with that 'X Factor' that every exploration outfit needs.



World Energy Growth

Martin Ferguson

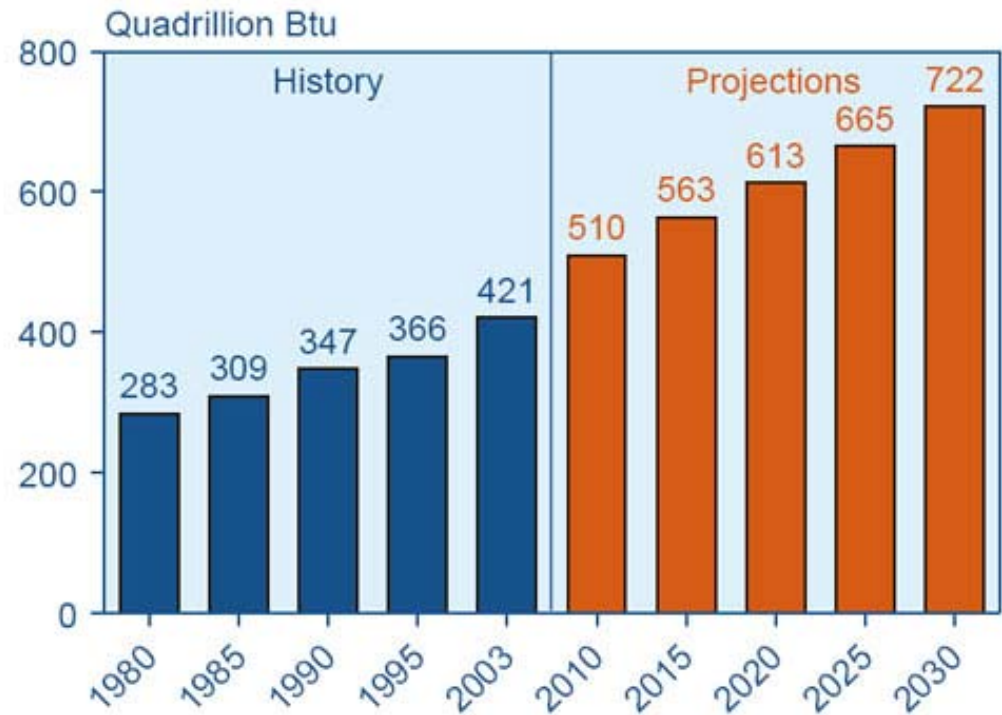
The Australian, 24th July, 2009

'...There are 1.6 billion people in the world with no access to electricity. They are the poorest people on the planet. As the developing world continues to modernise and OECD economies continue to grow, global energy consumption is set to nearly double in the next 20 years.'

'China is the obvious case study. It already has 11 nuclear power stations in operation and a further 29 under construction or announced. China's LNG imports are set to double this year and increase a further 50 per cent next year. It already has more renewable energy capacity than any other nation and renewable energy's share of domestic capacity in China will grow to 15 per cent in 2020.'

'And every four months, from now until 2020, China will build new coal-fired power stations possessing the same capacity as Australia's entire coal-fired power sector.....'

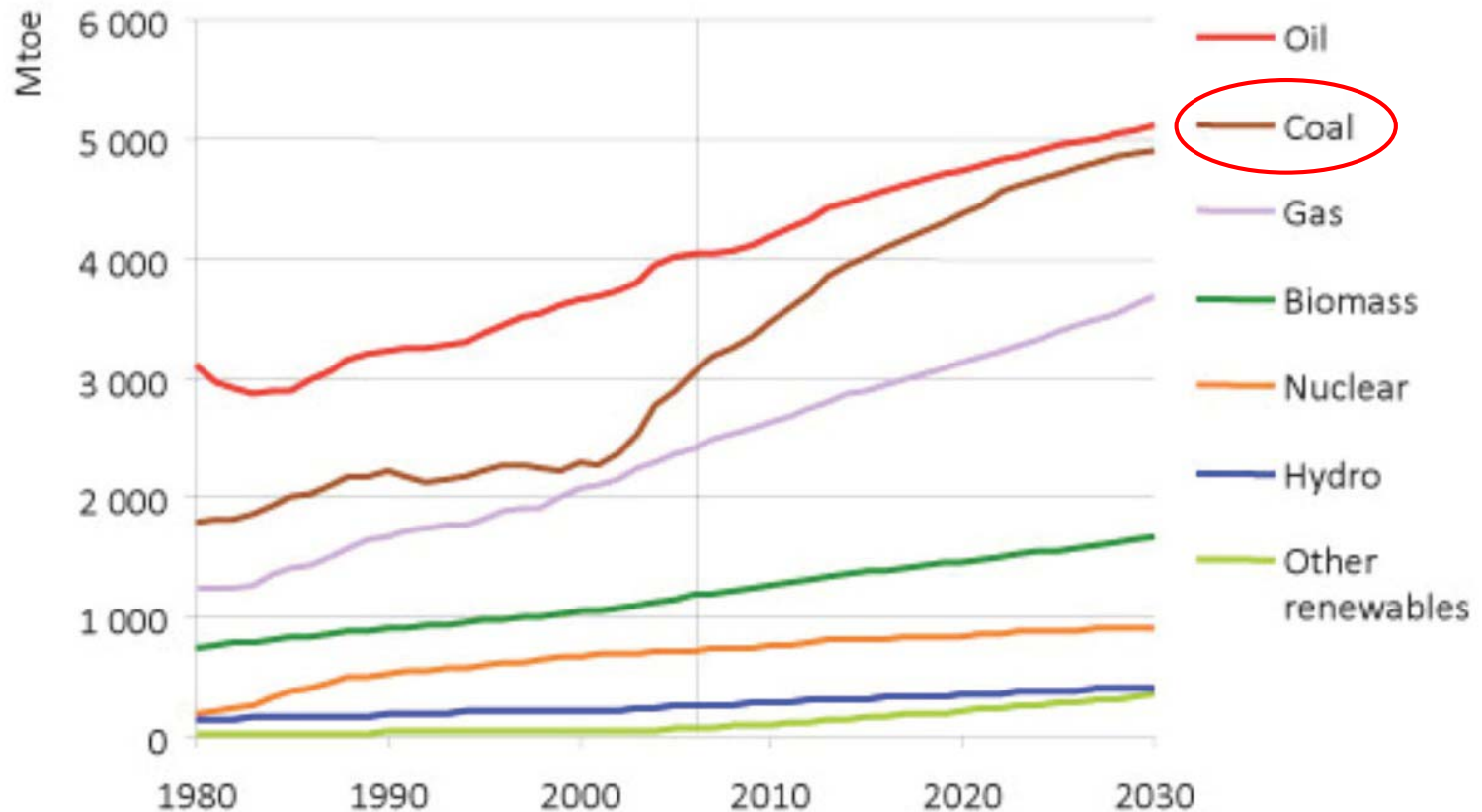
Figure 7. World Marketed Energy Consumption, 1980-2030



Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2003* (May-July 2005), web site www.eia.doe.gov/iea/. **Projections:** EIA, *System for the Analysis of Global Energy Markets* (2006).

World Energy Demand by Fuel

Note the steeper uptake of coal, principally from Asia



World energy demand expands by 45% between now and 2030 –an average rate of increase of 1.6% per year – with coal accounting for more than a third of the overall rise (World Energy Outlook - OECD/IEA 2008).

Tambo Energy Prospect

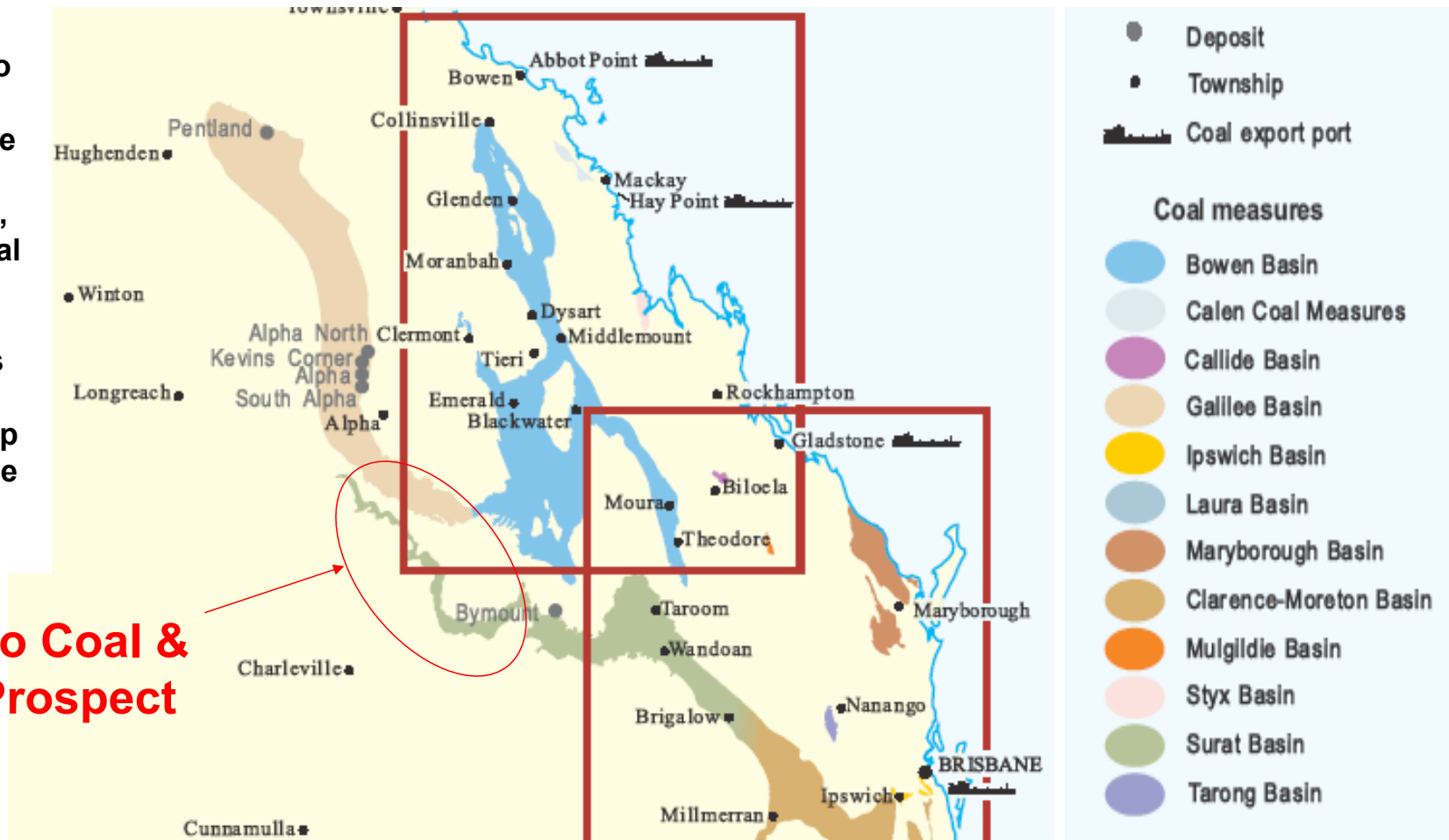
A Unique, Integrated Tenure - Coal and Gas Prospect

Located in the Upper Surat Basin near Tambo with access to the rail, port and gas pipeline infrastructure for both LNG and thermal coal markets, in addition to potential domestic users.

Lodestone envisages that early coal seam gas revenues will help fund an eventual large scale open cut coal mining operations.

Tambo Coal & Gas Prospect

Major Queensland Coal Basins



Tambo Coal & Gas Farm-in

Tambo Coal & Gas Pty Ltd is a company controlled by Lodestone Director, Greg Baynton

- **Greg had the foresight to peg the initial tenements**
- **Shareholder approval was recently obtained for the farm-in arrangement between Lodestone and Tambo Coal & Gas**
- **Lodestone will earn 50% by farming-in to the 7 EPCs and 1 ATP held by Tambo Coal & Gas**
- **As a result of Lodestone work, both parties have jointly pegged an additional 19 EPCs throughout the district**
- **ATP1020 is granted and granting of the EPCs has begun**
- **The preliminaries for field work have commenced**





Tambo Tenement Schedule



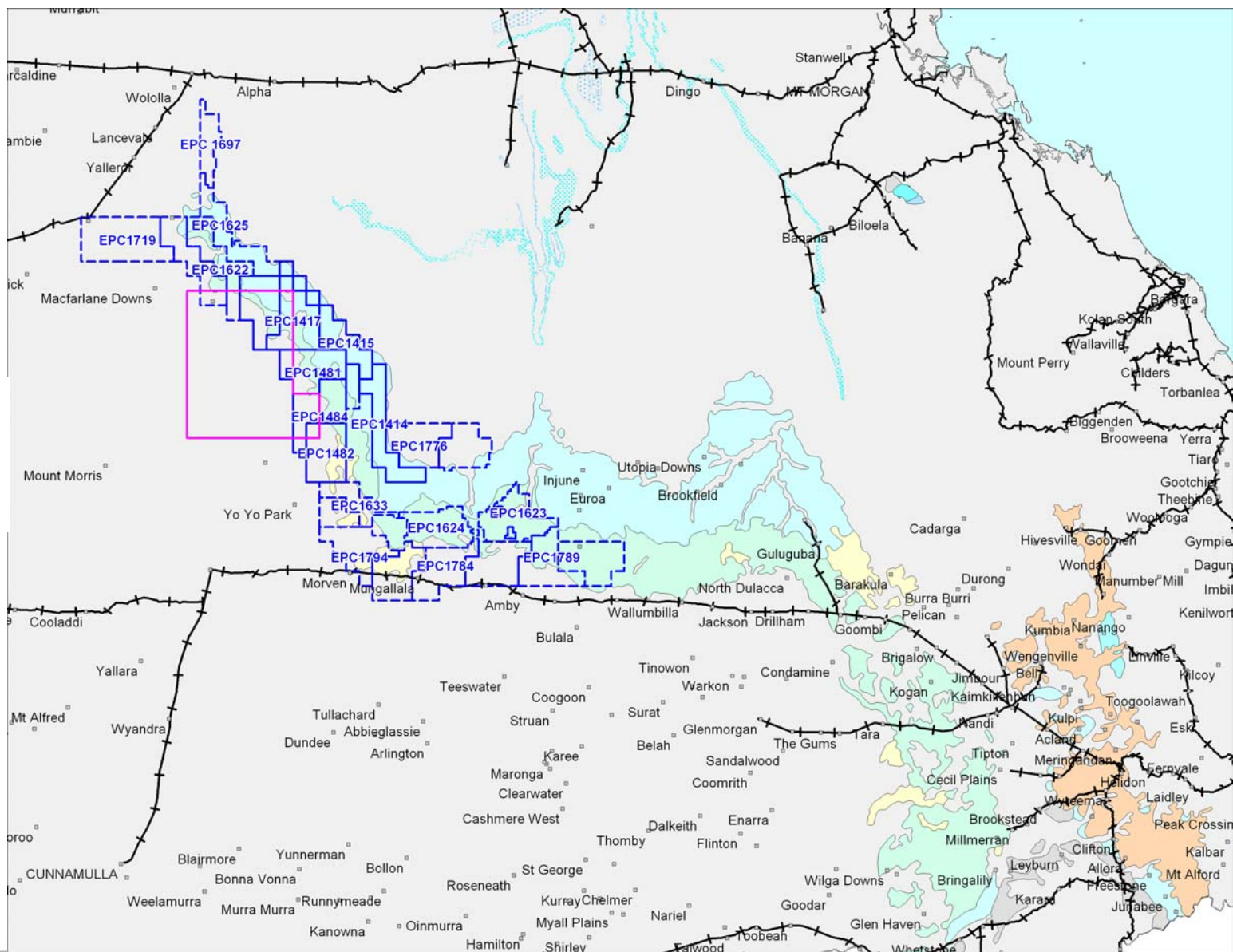
A Lodestone Energy Ltd subsidiary has farmed-in to earn 50% of EPCs 1414-15, 1417-18, 1481-2, 1484 held by Tambo Coal & Gas Pty Ltd



EPCs 1621-7, 1632-3, 1644, 1697, 1719, 1776-7, 1784, 1786, 1788-9, 1794-5 held jointly by Tambo Coal & Gas Pty Ltd and Lodestone Energy Ltd



A Lodestone Energy Ltd subsidiary has farmed-in to earn 50% of EPP 1020 held by Tambo Coal & Gas Pty Ltd



Why Tambo Region ?

The Tambo Prospect is a logical extension of the known Surat Energy Province

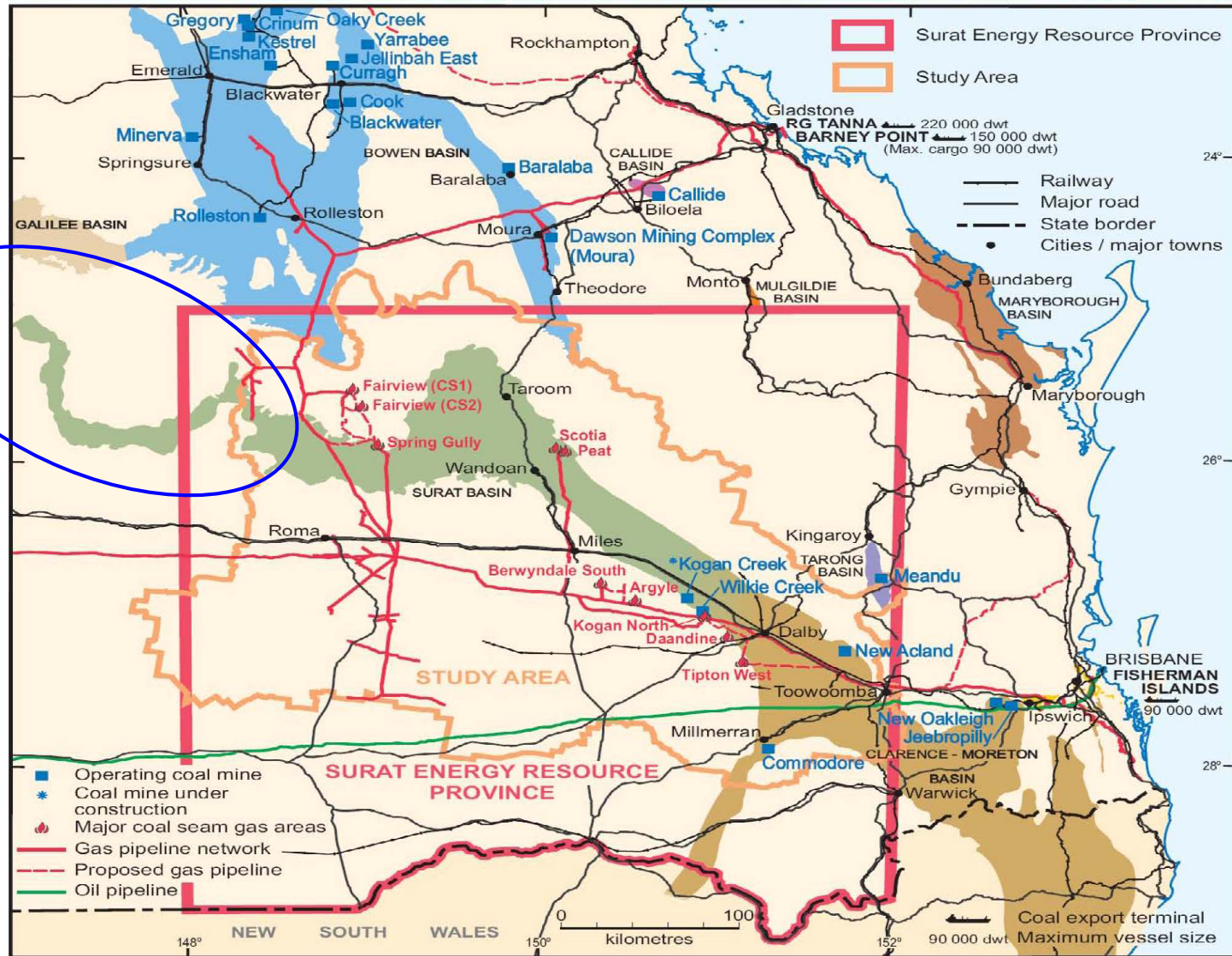
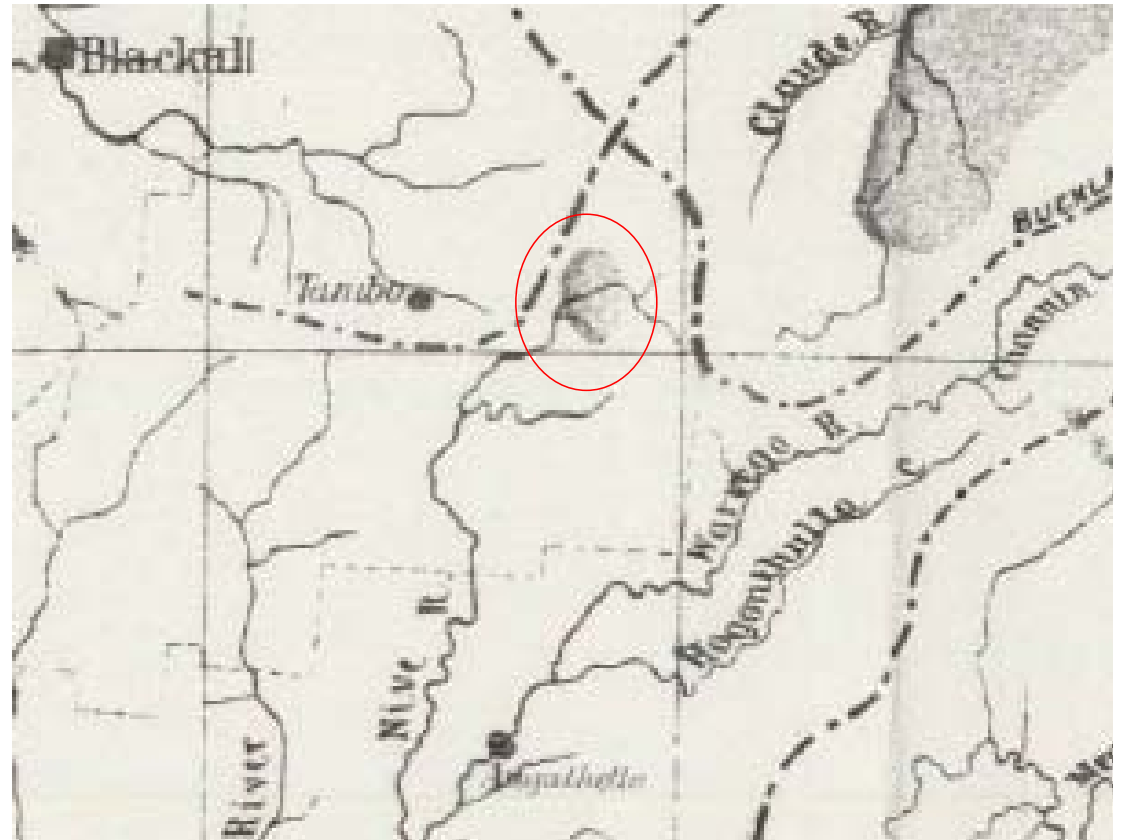


Figure courtesy of Department of Regional Development and Industry 2008

Coal at Tambo is Not New

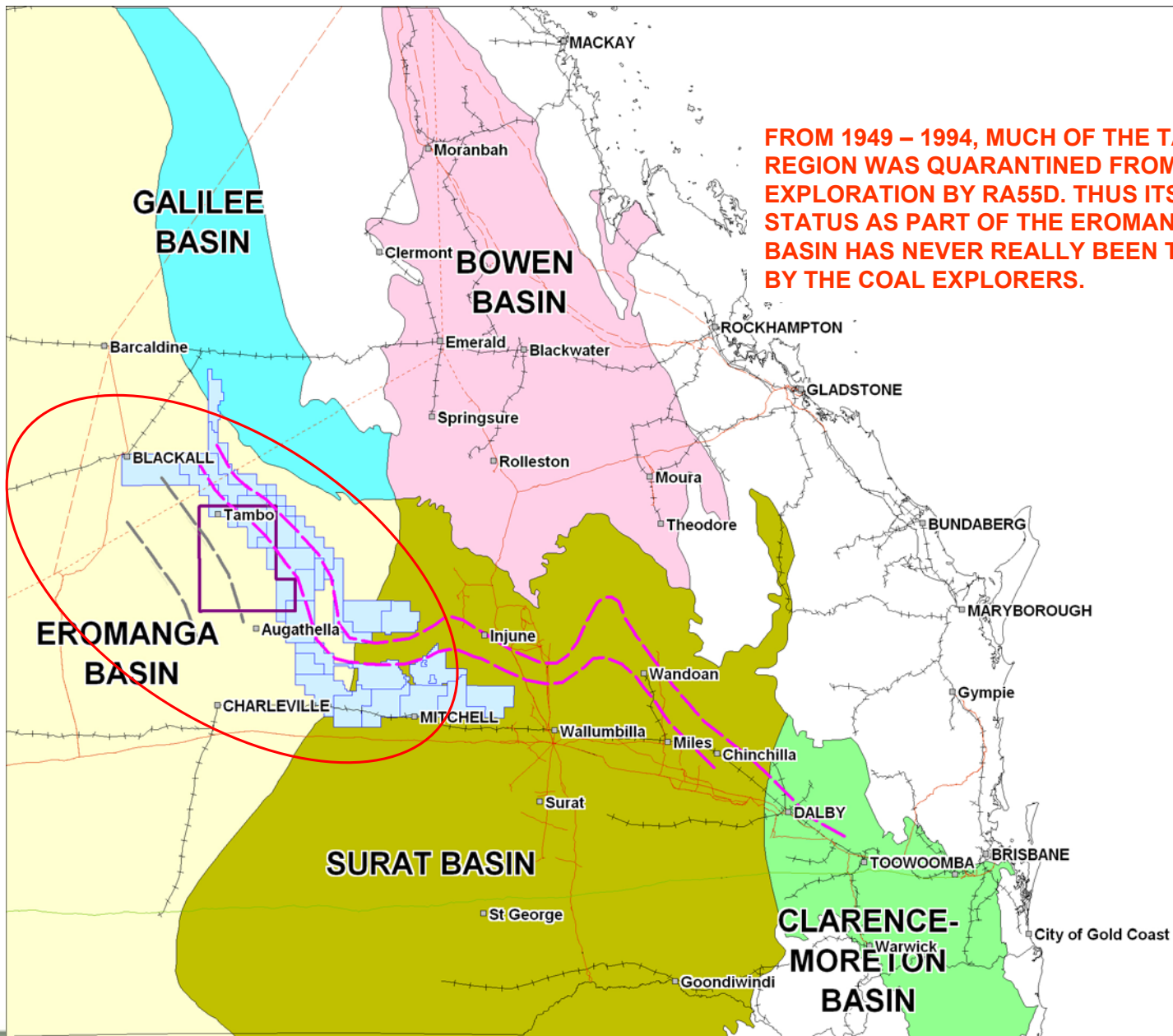
Shown here is a portion of the 'Map of Queensland Showing Positions of Mineral Fields', which was compiled by Robert Jack in 1888



COALFIELDS (Areas where Coal is actually worked are indicated by the dark shading)

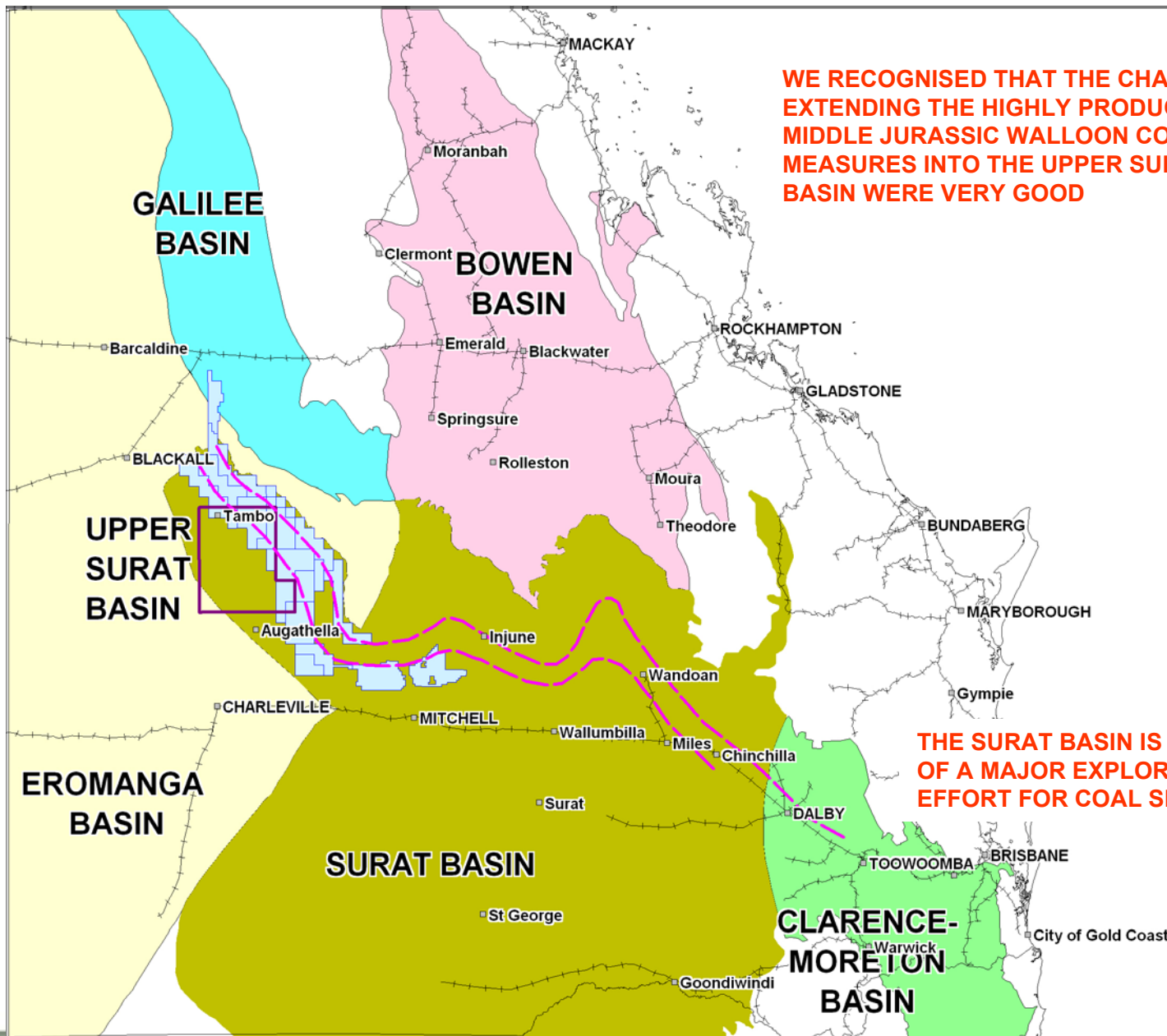
Source: R. Jack, Government Geologist, 'The Mineral Wealth of Queensland', 1888 and accompanying Map of Queensland Showing Positions of Mineral Fields.

Why Was Tambo Available?



FROM 1949 - 1994, MUCH OF THE TAMBO REGION WAS QUARANTINED FROM COAL EXPLORATION BY RA55D. THUS ITS STATUS AS PART OF THE EROMANGA BASIN HAS NEVER REALLY BEEN TESTED BY THE COAL EXPLORERS.

A New Coal and CSG Frontier?



WE RECOGNISED THAT THE CHANCES OF EXTENDING THE HIGHLY PRODUCTIVE MIDDLE JURASSIC WALLOON COAL MEASURES INTO THE UPPER SURAT BASIN WERE VERY GOOD

AS A RESULT, A NEW FRONTIER COAL AND GAS BASIN COULD EMERGE.

THE SURAT BASIN IS THE FOCUS OF A MAJOR EXPLORATION EFFORT FOR COAL SEAM GAS

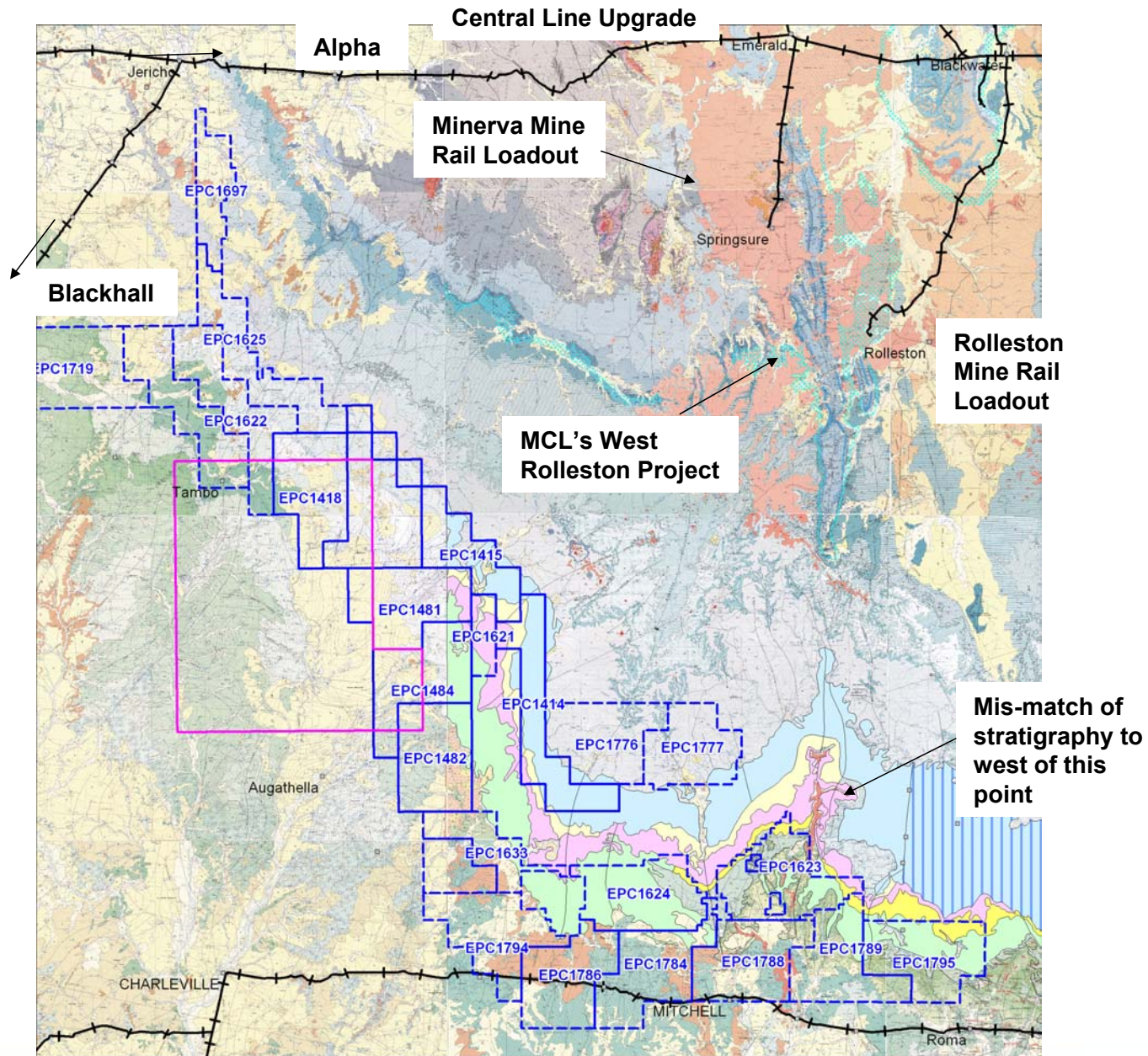
Why Was it Ignored?

We believe that an enormous opportunity coal and gas potential has been missed because the stratigraphy of the region was unresolved until now.

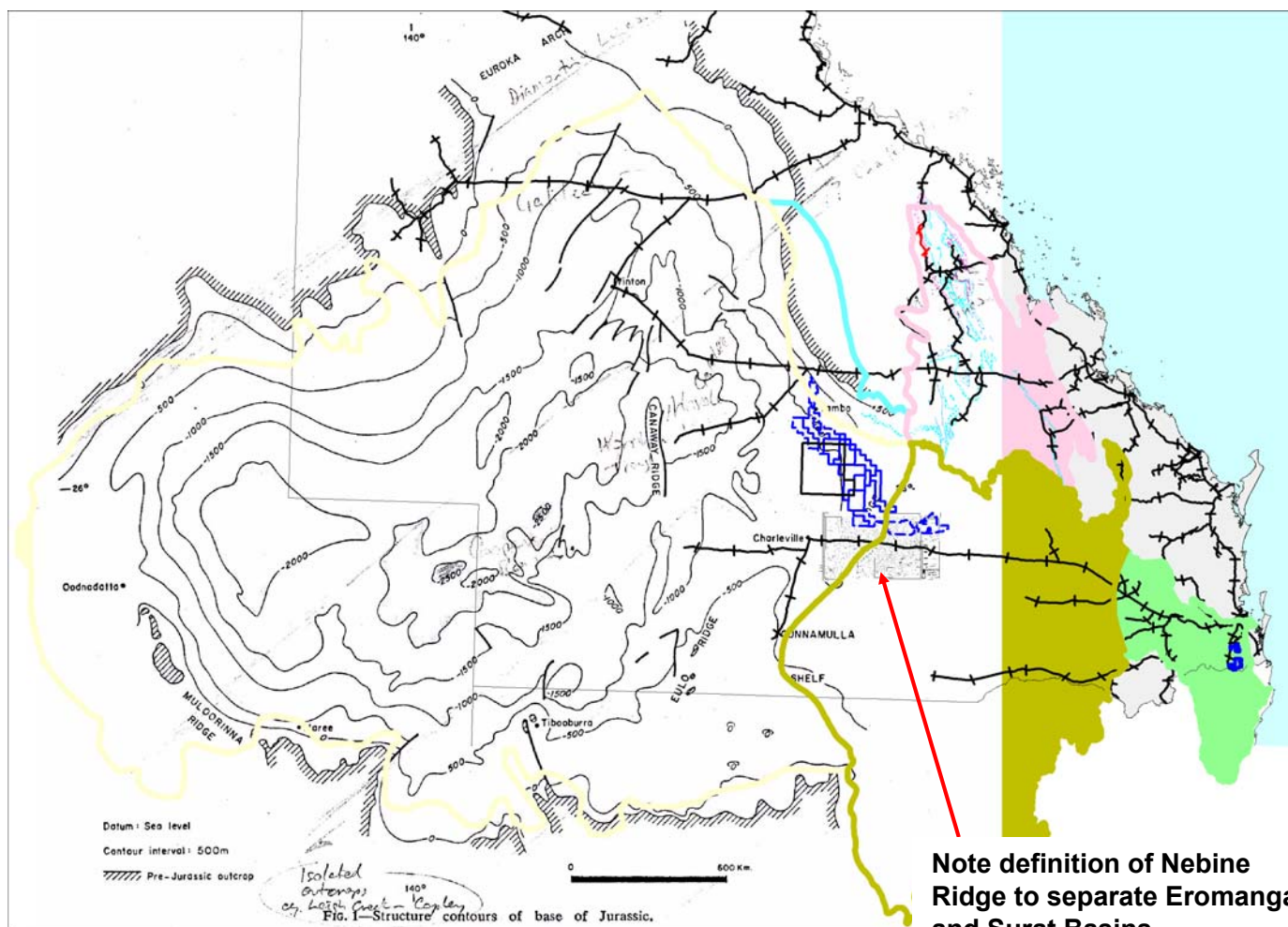
Limitations of the original assignment by BMR field mapping crews in the 1960s is noted on the 1:250,000 sheets.

With no coal exploration to help stimulate its revision this mapping has remained in place for the past 40 years.

Since conventional oil and gas explorers targeted the Permian below, the Jurassic sediments were rarely examined.

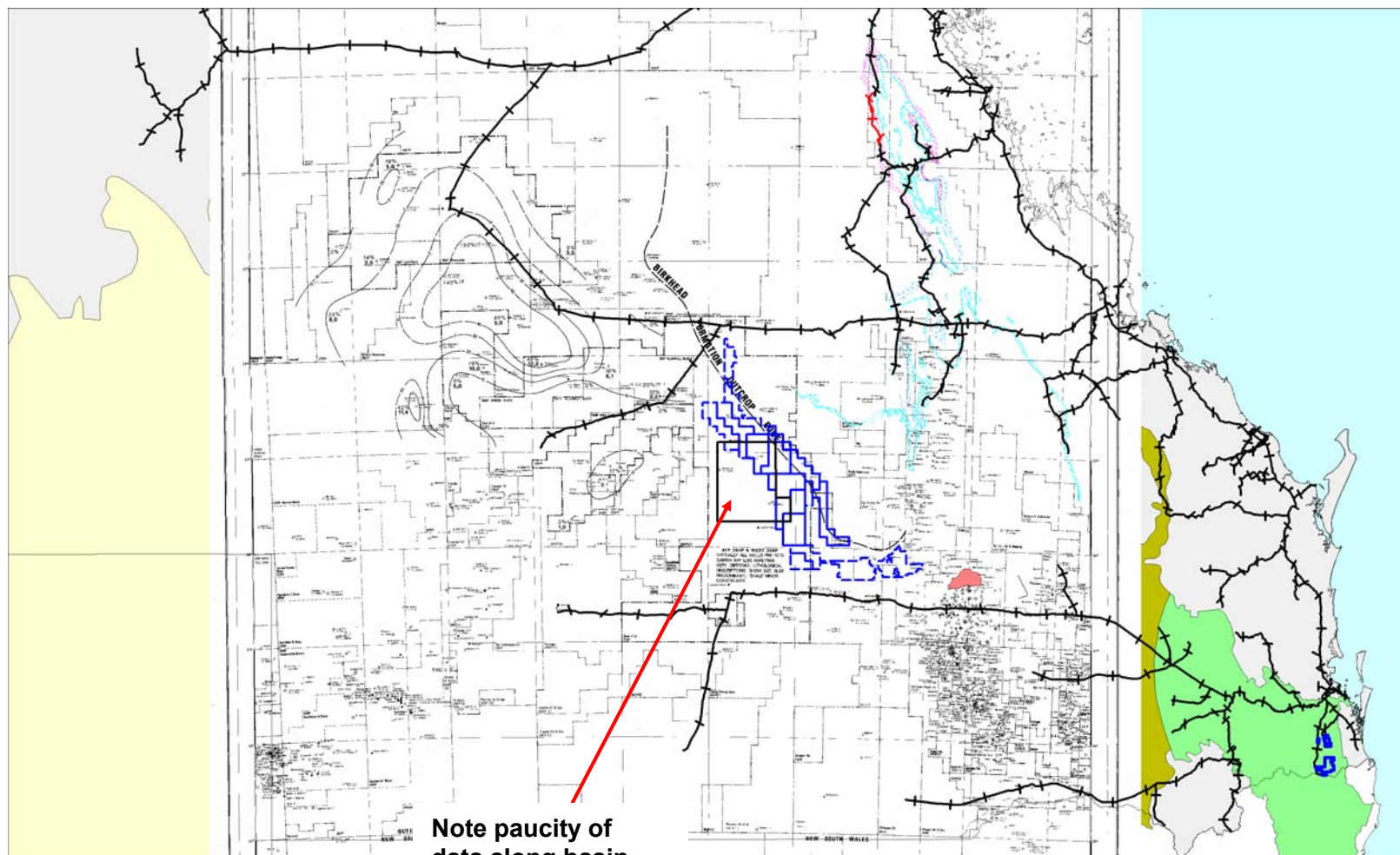


30 Years Ago



State of knowledge 30 years ago – Structure contours of base of Jurassic.

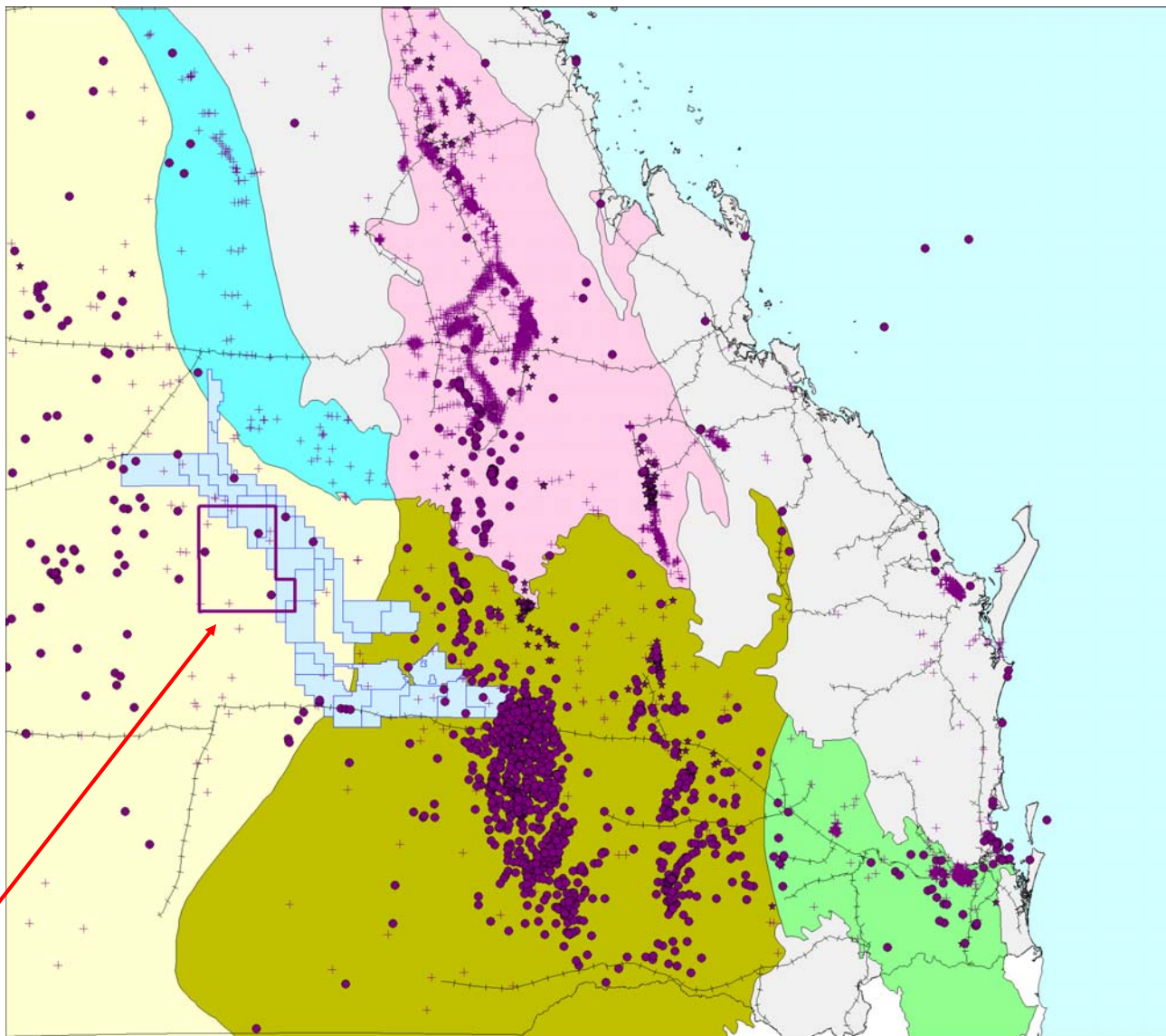
Same Horizon 20 Years Ago



**Note paucity of
data along basin
margins between
Tambo and Mitchell**

State of knowledge of Birkhead Formation 20 years ago

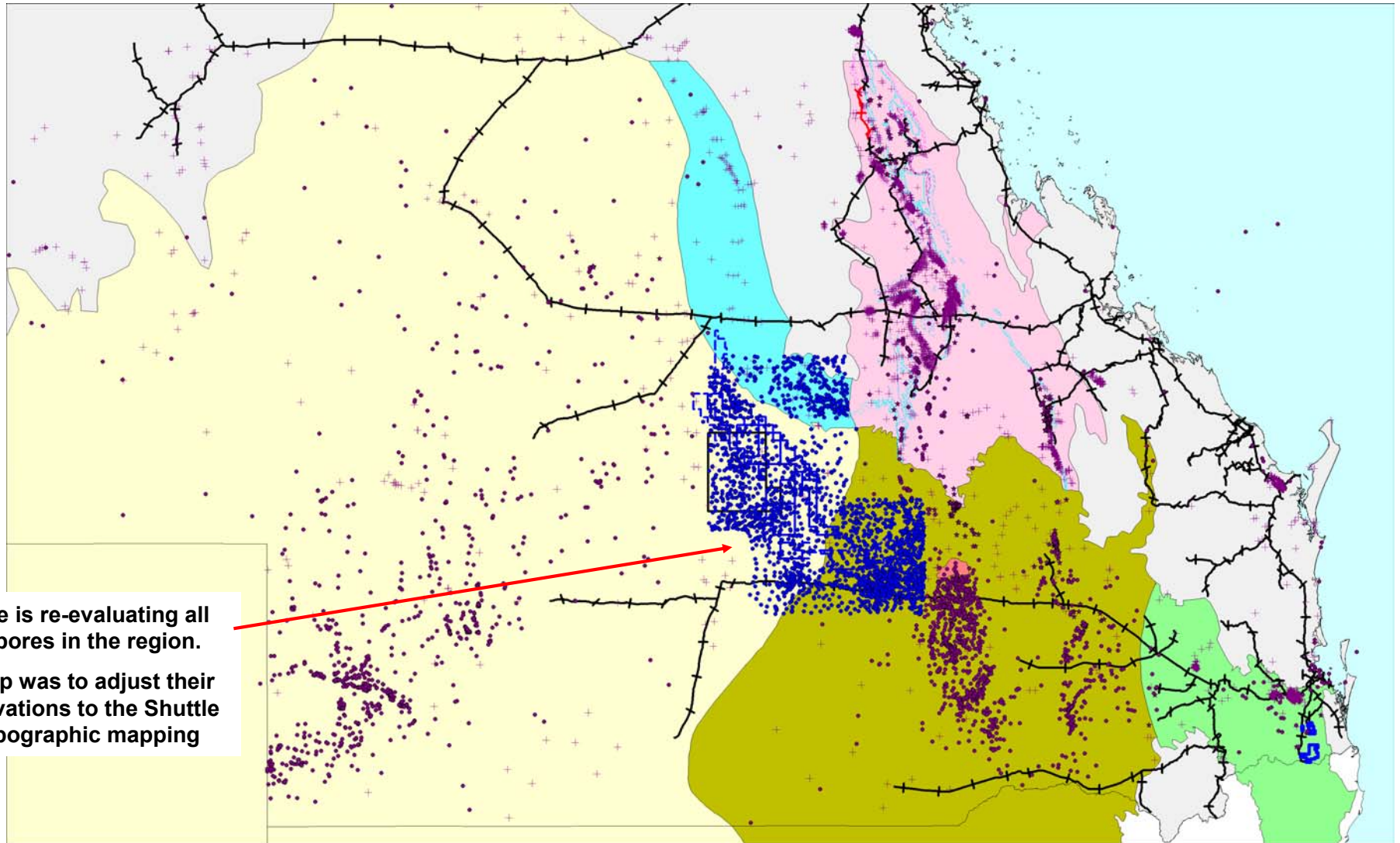
Public Domain Drillholes Today



Note paucity of data
still remains along
basin margins between
Tambo and Mitchell

Public domain state of knowledge of Birkhead Formation today

Lodestone Applied Its New Thinking



Lodestone is re-evaluating all the waterbores in the region.

A first step was to adjust their collar elevations to the Shuttle Radar Topographic mapping

Lodestone - the state of knowledge today – All waterbores

Typical Coal-Rich Interval

**Hole 5638 Driller's Log
Depth in metres**

BORE #	TOP (m)	BOTTOM (m)	THK (m)	DESCRIPTION
5638	0	2.74	2.74	RED SAND 4FT RED GRAVEL 5FT
5638	2.74	17.07	14.33	WHITE SANDSTONE
5638	17.06	21.94	4.88	WHITE PUG CLAY
5638	21.94	29.26	7.32	GREY SHALE WITH BLACK SEAMS
5638	29.26	29.56	0.3	SEAM COAL 1FT
5638	29.56	31.39	1.83	BROWN SHALE WITH OILY SUBSTANCE
5638	31.39	42.67	11.28	GREY SHALE
5638	42.67	43.28	0.61	GREY ROCK
5638	43.28	52.42	9.14	BROWN SHALE WITH OILY SUBSTANCE & COAL
5638	52.42	61.57	9.15	COAL
5638	61.57	80.16	18.59	GREY SHALE
5638	80.16	92.66	12.5	GREY SHALE
5638	92.66	143.86	51.2	GREY & BROWN SHALE
5638	143.86	147.52	3.66	SANDSTONE
5638	147.52	164.28	16.76	GREY SHALE CLAY & SANDSTONE
5638	164.28	168.25	3.97	SANDSTONE
5638	168.25	190.8	22.55	SANDSTONE
5638	190.8	193.85	3.05	DRIFT SAND & GRAVEL
5638	193.85	195.07	1.22	HARD ROCK
5638	195.07	199.64	4.57	BLUE STICKY SHALE
5638	199.64	202.69	3.05	BLUE SHALE & WHITE CLAY 4FT SANDSTONE
5638	202.69	221.89	19.2	SANDSTONE 48FT BROWN SHALE 15FT

Stratigraphic Assignment

RN	TOP	BOTTOM	THICK	ORIGINAL FORM DESC	NEW FORM DESC
5638	0.00	52.40	52.4	HOORAY SANDSTONE	JUANDAH COAL MEASURES
5638	52.40	147.50	95.1	WESTBOURNE FORMATION	JUANDAH COAL MEASURES
5638	147.50	164.28	16.78	ADORI SANDSTONE	JUANDAH COAL MEASURES
5638	164.28	193.85	29.57	ADORI SANDSTONE	TANGALOOMA SANDSTONE
5638	193.85	217.30	23.45	ADORI SANDSTONE	TAROOM COAL MEASURES
5638	217.30	221.90	4.6	BIRKHEAD FORMATION	TAROOM COAL MEASURES

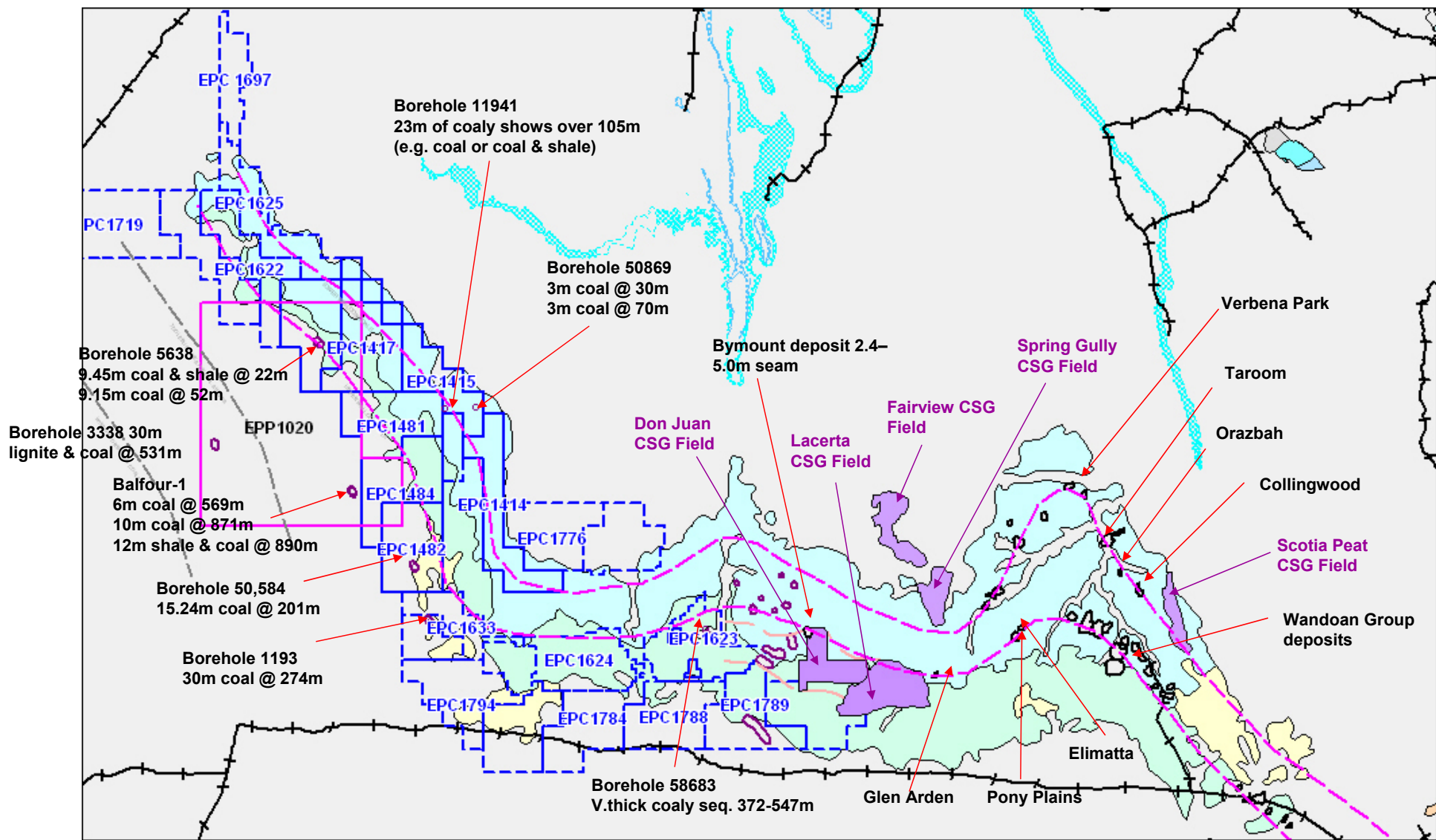
Downloads of 2300 such holes from Tambo to Mitchell from the Department. Our first task was to reformat this information into a modern borehole database so we could interrogate and utilise the data contained. Naturally, this is a work in progress.

The bores were drilled from the early 1900s to the present day, using a variety of equipment from cable tool rigs to modern rotary table rigs.

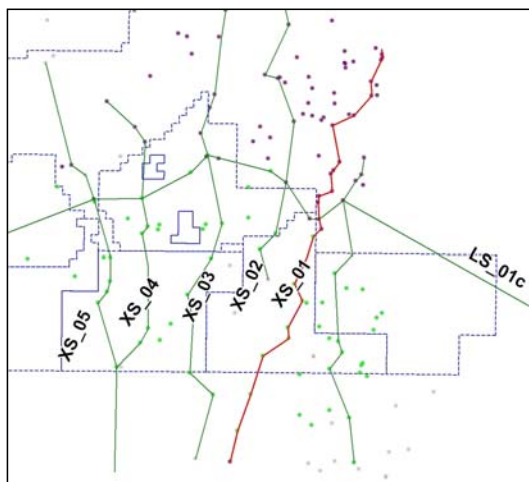
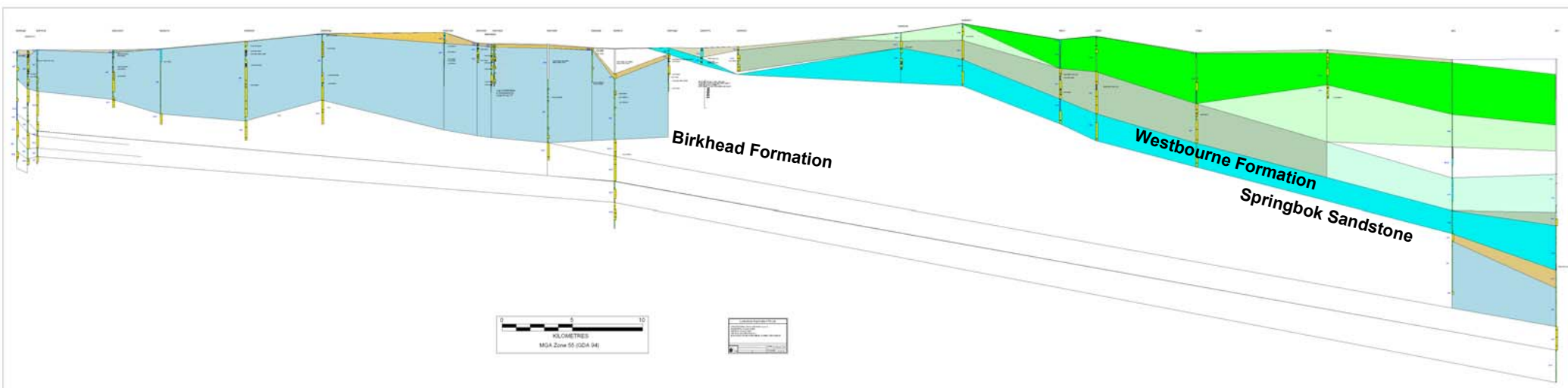
The similarity of detection of coal across generations of drillers is remarkable.

The match between the frequency of the word 'coal' in the lithological descriptions and the projected crop zone of the Juandah Coal Measures is extraordinary.

Plenty of Evidence Exists

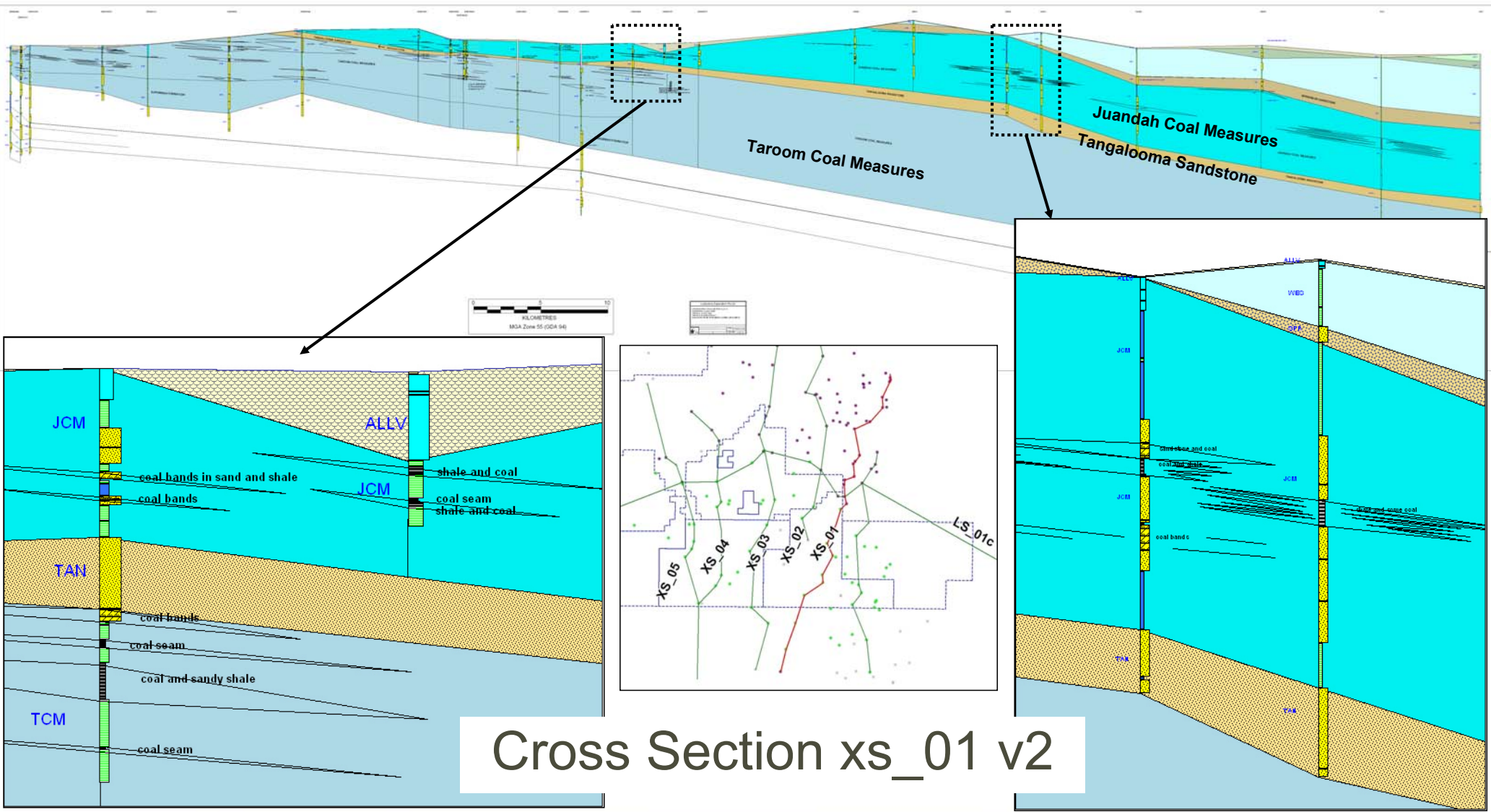


XS_01 Traditional Interpretation



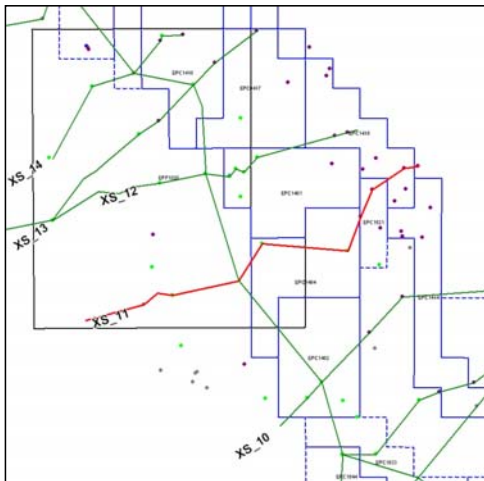
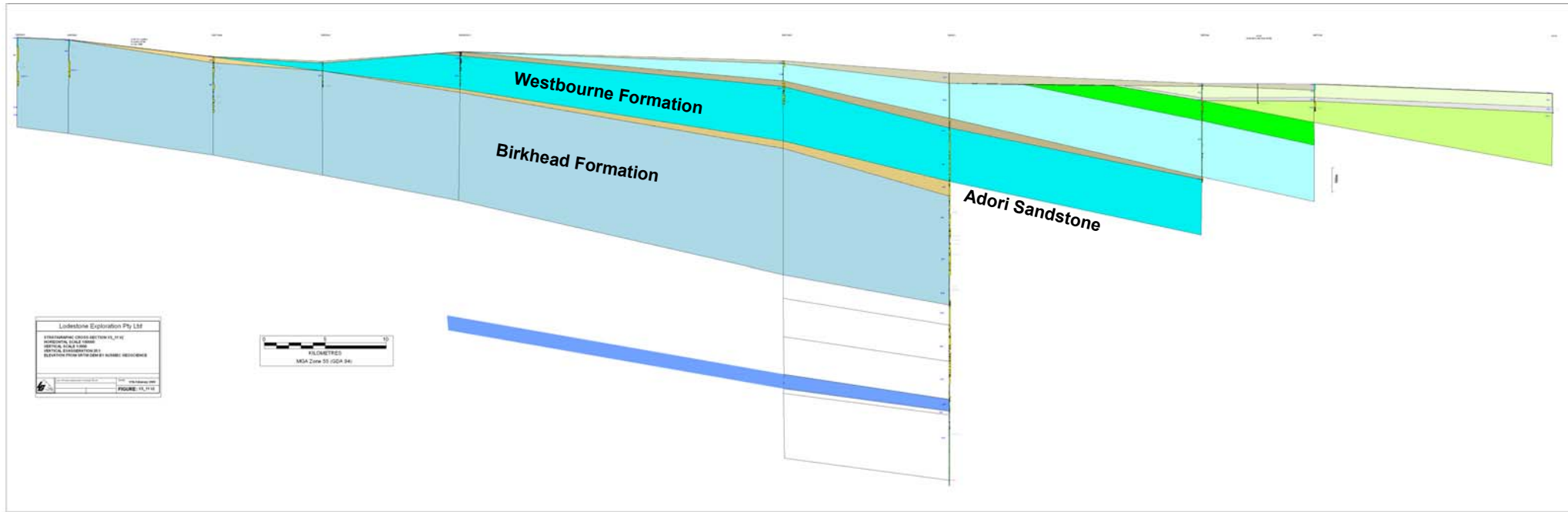
Cross Section xs_01 v1

XS_01 Lodestone Interpretation



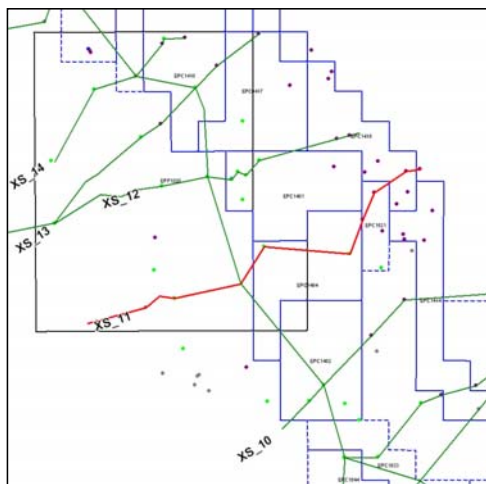
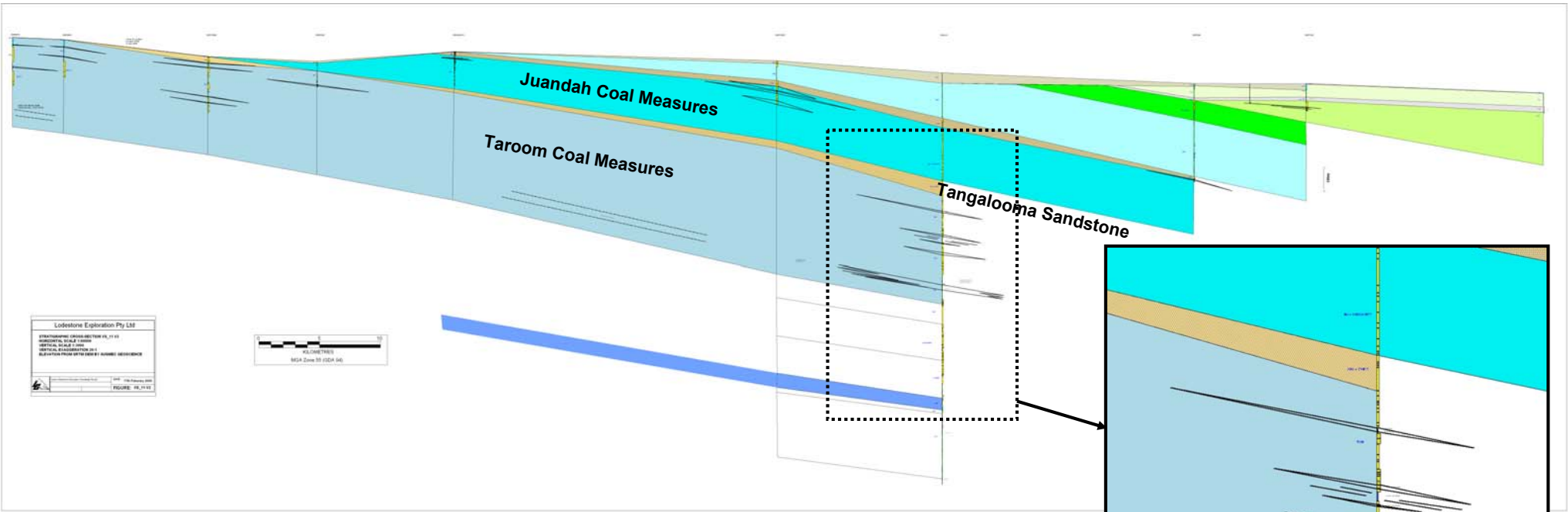
Cross Section xs_01 v2

XS_11 Traditional Interpretation

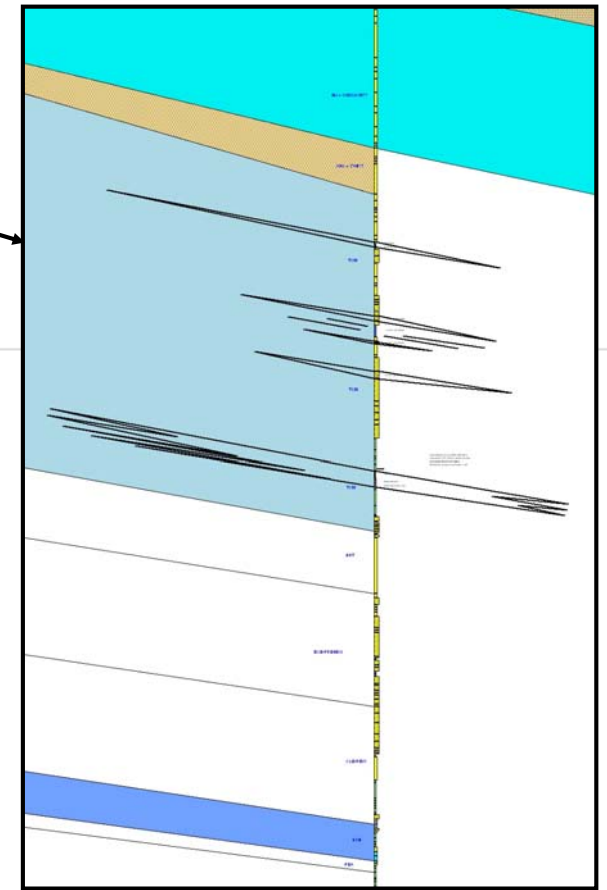


Cross Section xs_11 v1

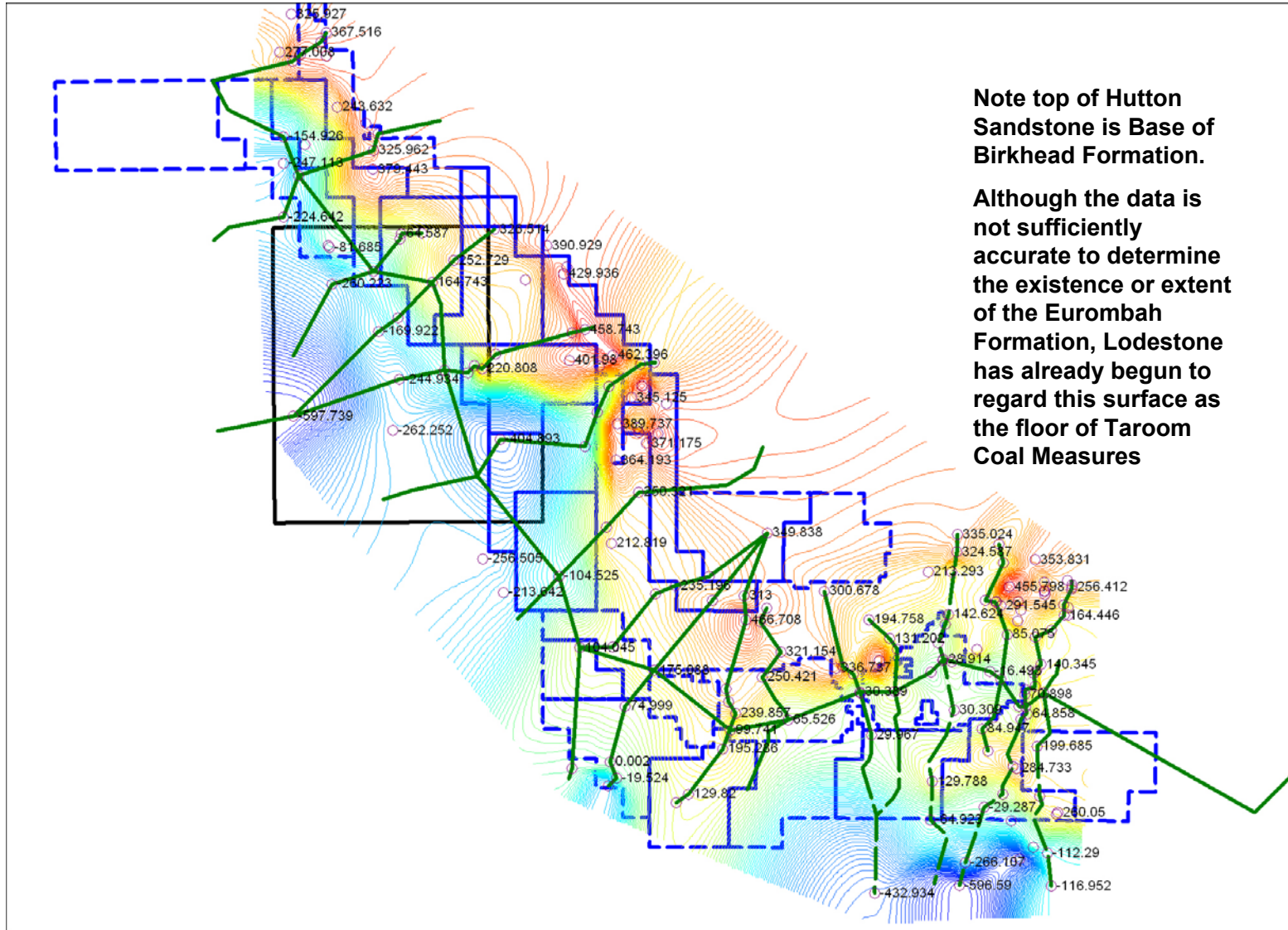
XS_11 Lodestone Interpretation



Cross Section xs_11 v2



Structure Contours Floor of Taroom Coal Measures

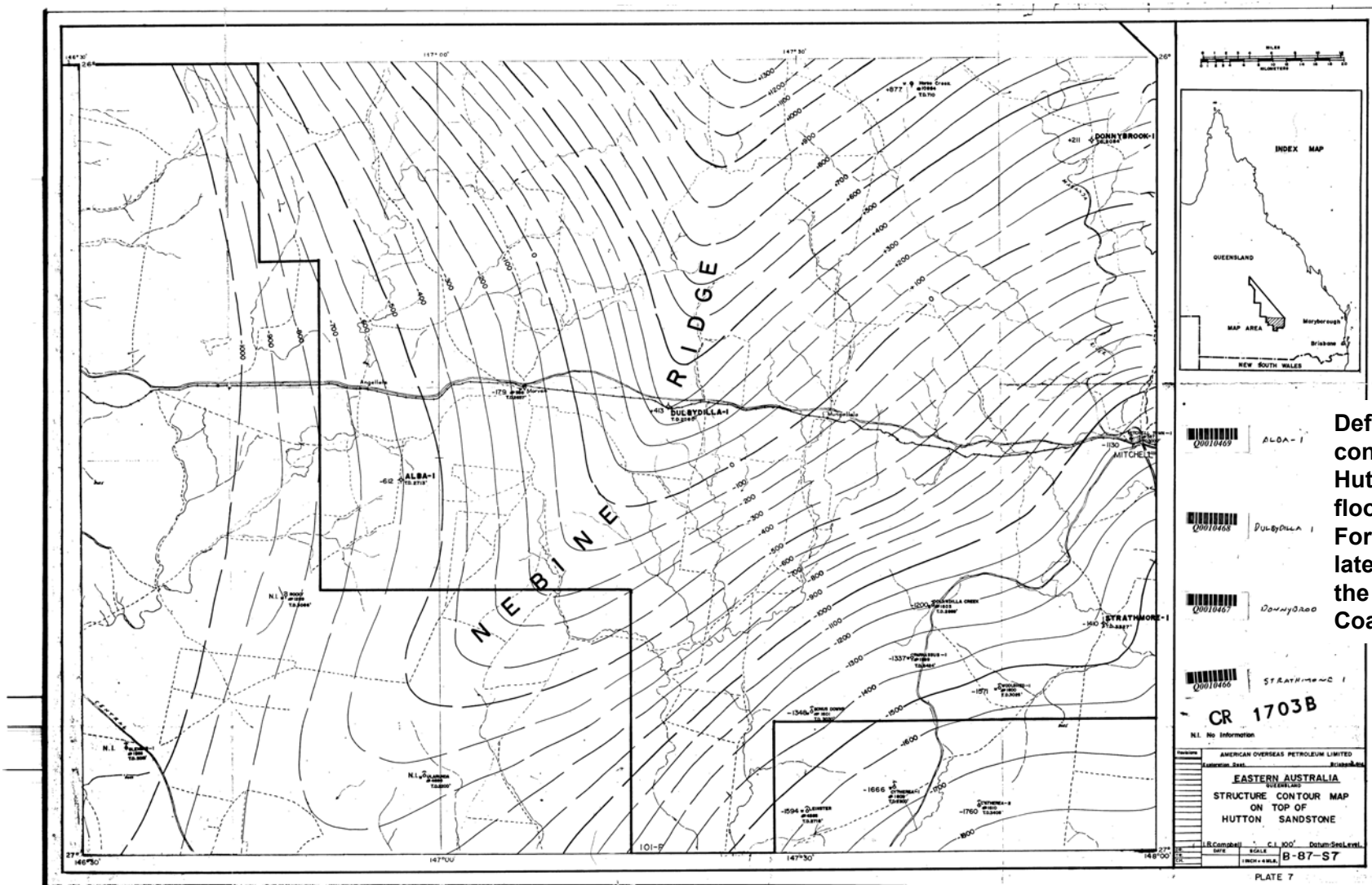


Note top of Hutton Sandstone is Base of Birkhead Formation.

Although the data is not sufficiently accurate to determine the existence or extent of the Eurombah Formation, Lodestone has already begun to regard this surface as the floor of Taroom Coal Measures

scfl_tcm_allco

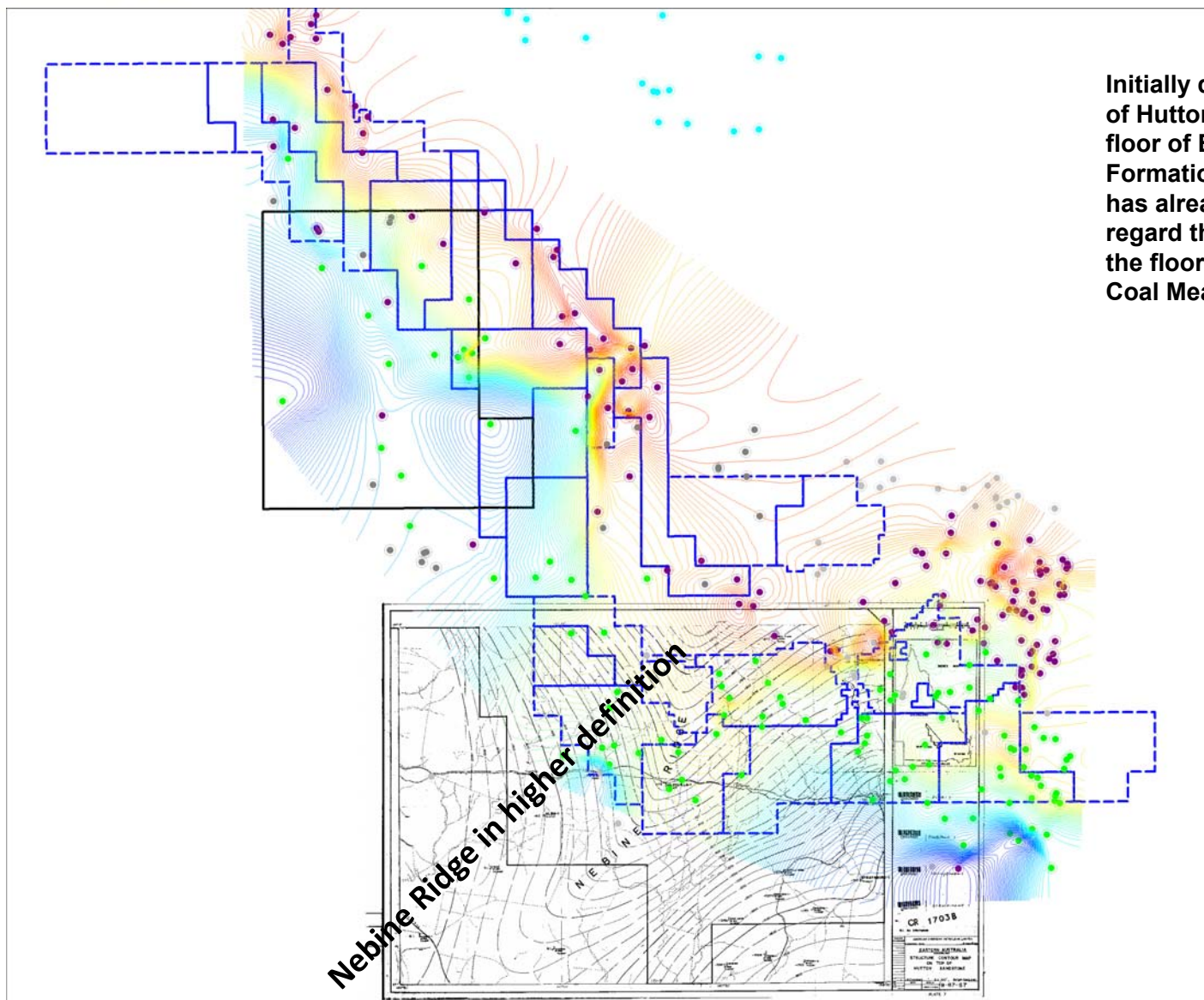
The Nebine Ridge Then



Defined by structure contours on top of Hutton Sandstone ie floor of Birkhead Formation and laterally equivalent to the floor of Taroom Coal Measures

Courtesy of Enclosure from CR1703, Gerrard, MJ, 1966: Well Completion Report , Balfour No 1, AT101P, American Overseas Petroleum Ltd

The Nebine Ridge Today



Initially defined as top of Hutton Sandstone ie floor of Birkhead Formation, Lodestone has already begun to regard this surface as the floor of Taroom Coal Measures

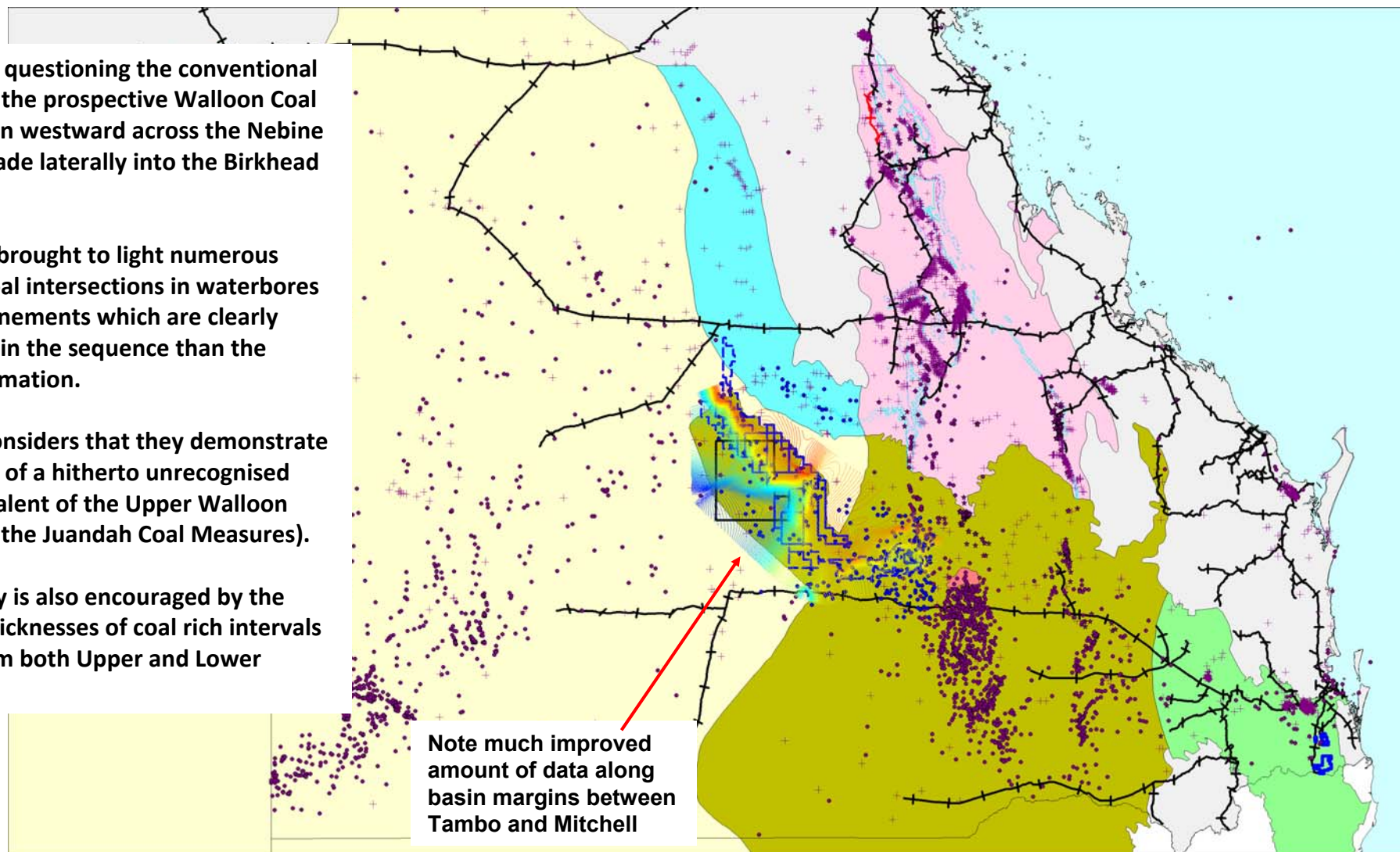
The Upper Surat Basin?

Lodestone is questioning the conventional wisdom that the prospective Walloon Coal Measures thin westward across the Nebine Ridge and grade laterally into the Birkhead Formation.

Its work has brought to light numerous significant coal intersections in waterbores across the tenements which are clearly much higher in the sequence than the Birkhead Formation.

Lodestone considers that they demonstrate the presence of a hitherto unrecognised lateral equivalent of the Upper Walloon sequence (ie the Juandah Coal Measures).

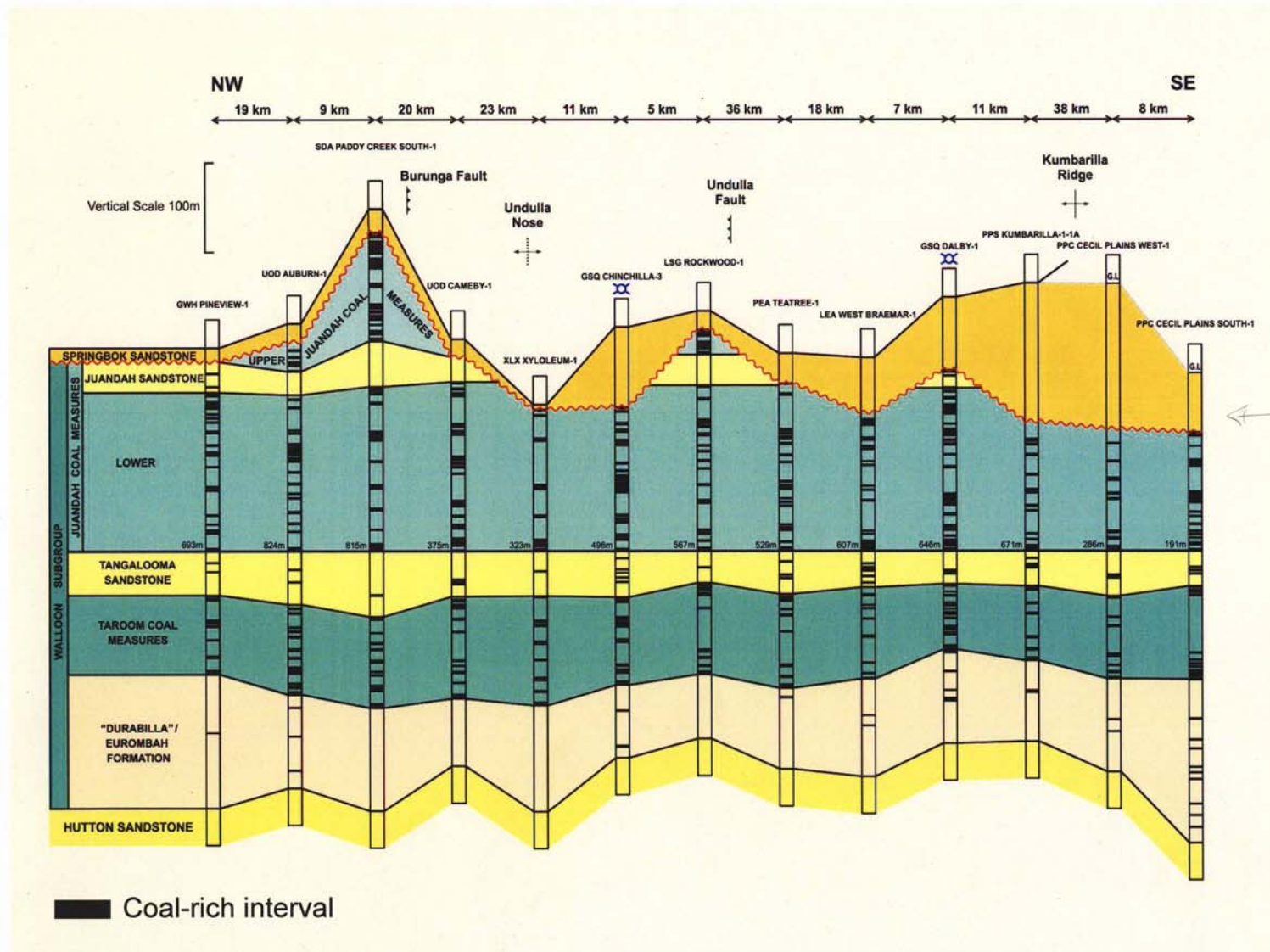
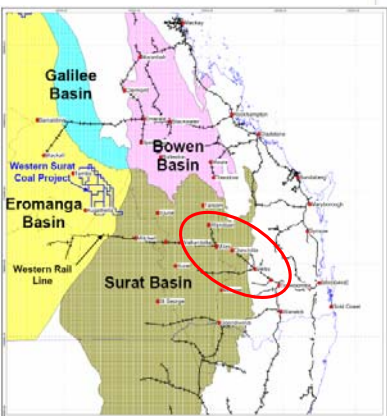
The Company is also encouraged by the significant thicknesses of coal rich intervals reported from both Upper and Lower Walloons.



Note much improved amount of data along basin margins between Tambo and Mitchell

Lodestone state of knowledge today – holes with coal-rich intervals only

Our Job Going Forward



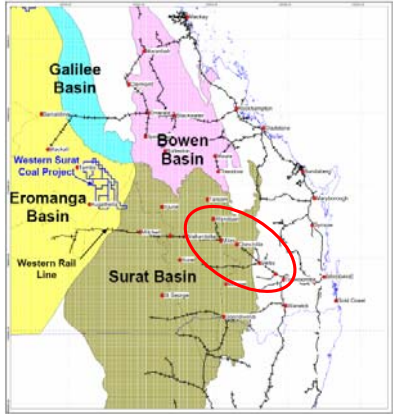
EXTEND THIS STRATIGRAPHY WESTWARD



WALLOON COAL MEASURE STRATIGRAPHY

After Hamilton (Sept 2007)

Target Seam Geometry



DEPOSIT STYLE MEANS THAT NETT COAL THICKNESS CAN VARY RAPIDLY ALONG STRIKE

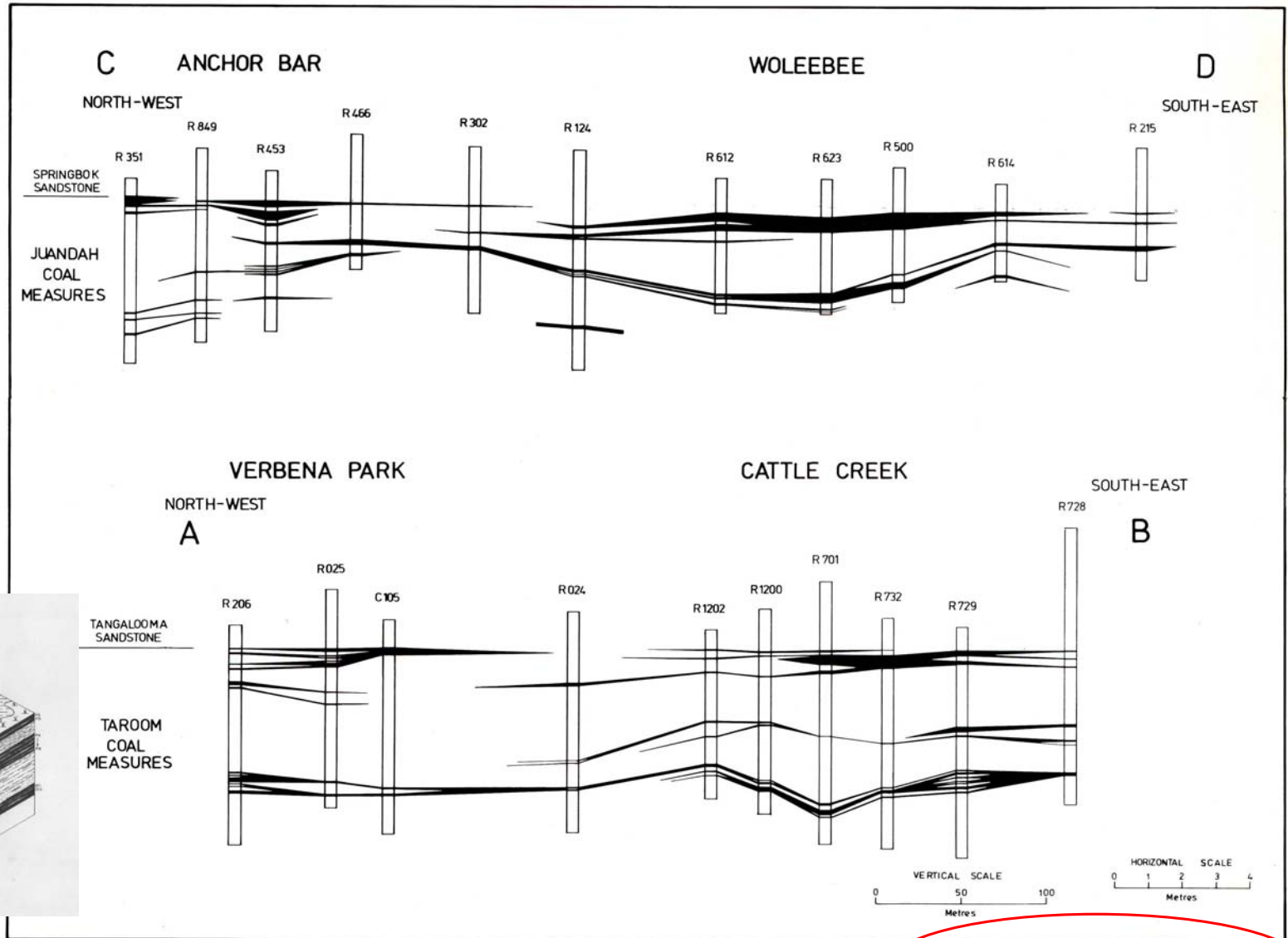


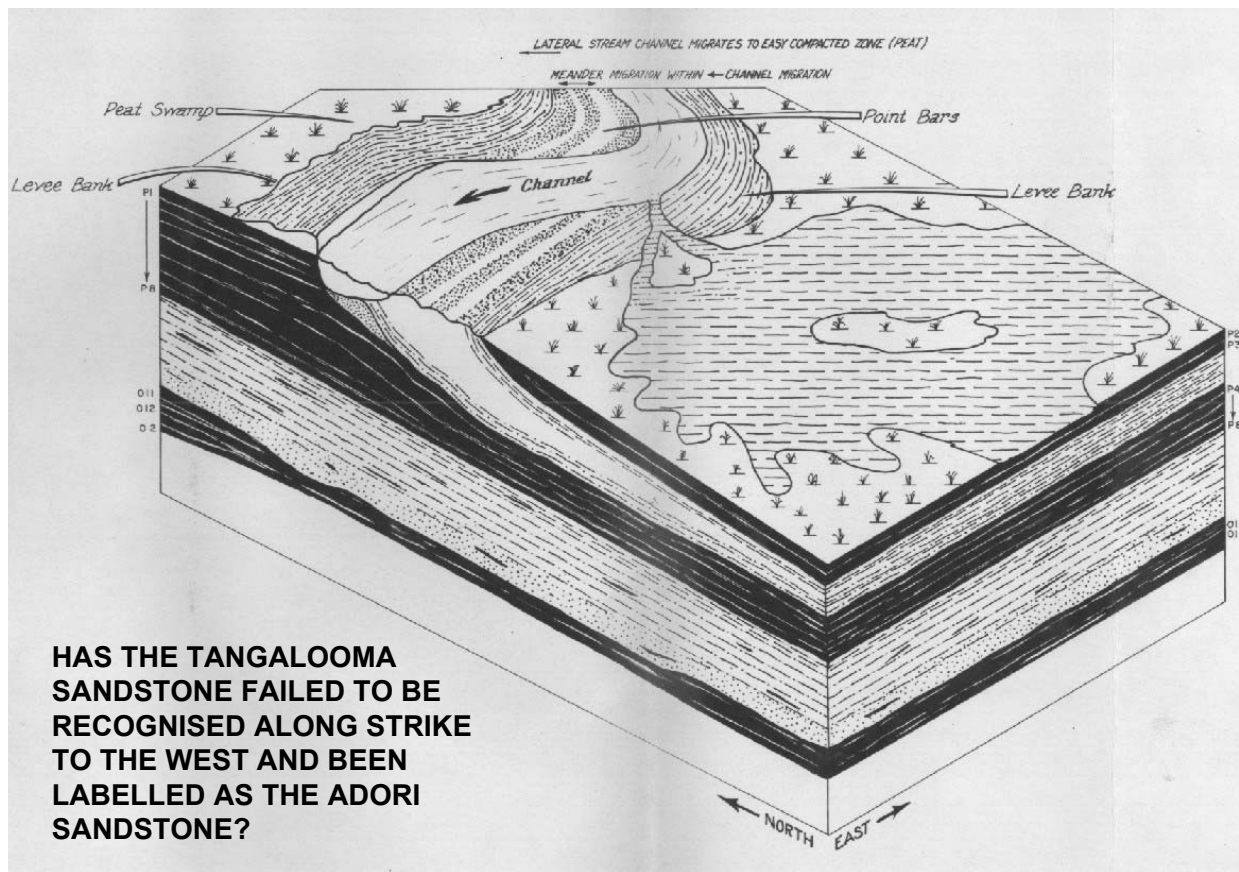
Fig. 3. Lateral seam development **WALLOON COAL MEASURE SEAM GEOMETRY**

After Jones & Patrick (1981)

Stratigraphy and Coal Seam Geometry

Previous Nomenclature	Lithostratigraphic Intervals After Swarbrick (1973)	Lithology	New Nomenclature
GUBBERAMUNDA SANDSTONE			GUBBERAMUNDA SANDSTONE
WESTBOURNE FORMATION	11	[Lithology Column]	WESTBOURNE FORMATION (Swarbrick, Gray & Exon, 1973)
	10		
SPRINGBOK SANDSTONE	9		SPRINGBOK SANDSTONE
WALLOON COAL MEASURES	7 & 8	[Lithology Column]	JUANDAH COAL MEASURES
	6		TANGALOOMA SANDSTONE
	5		TAROOM COAL MEASURES
	3 & 4		
EUROMBAH FORMATION	2		EUROMBAH FORMATION
	1		
HUTTON SANDSTONE			HUTTON SANDSTONE

after Swarbrick (1973)



HAS THE TANGALOOMA SANDSTONE FAILED TO BE RECOGNISED ALONG STRIKE TO THE WEST AND BEEN LABELLED AS THE ADORI SANDSTONE?

Fig. 2. Stratigraphy of the Northeastern Surat Basin.

