



**EXPLORATION LICENCE (EL) 25245**

**FINAL REPORT FOR PERIOD ENDING  
8 SEPTEMBER 2009**

Submitted by the Titleholder:

**TRI-STAR ENERGY COMPANY**

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Date:

7 December 2009

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## SUMMARY

Section 32 of the *Mining Act* requires the submission of a Final Report prepared by the titleholder for each surrendered exploration licence. This Final Report for Exploration Licence (EL) 25245 provides a summary of the activities carried out over the permit in the past year, including any results produced by these activities. EL 25245 is being completely relinquished by Tri-Star Energy Company because the company has determined the coal seam underlying this area is too deep to be economically mined.

This licence has been part of a group of licences that were assembled to create a large area that could feasibly be exploited as a coal producing area. The area covered by the group licences will be referred to as the Project Area. Tri-Star Energy Company continues to work on the remainders of the tenures and anticipates that it shall ultimately create a large economic project.

EL 25245 was granted on 13 November 2006 for a term of six (6) years. Tri-Star Energy Company is the sole titleholder and the operator of EL 25245. The work and expenditure program for EL 25245 during its third year required a geological and geophysical review of existing data and information towards determining the location of Permian coals within the Purni Formation and specifically, their depth, thickness, lateral extent and quality. It also required a seismic acquisition survey to be carried out over the Project Area. Tri-Star carried out an unconventional fourteen (14) point seismic acquisition survey over the Project Area however, none of those seismic points were located within EL 25245.

Office-based studies in relation to this tenure and over the Project Area, together with the seismic acquisition over the Project Area, have indicated that the coal was too deep to economically produce within EL 25245. Tri-Star Energy Company has met all work and expenditure commitments for EL 25245 for the term of the licence.

## INTRODUCTION

EL 25245 was granted to Tri-Star Energy Company on 13 November 2006, and covers an area of 61 sub-blocks. EL 25245 is located approximately 55 kilometres south east of Finke in the southern Northern Territory, and the tenure's southernmost boundary is located on the Northern Territory - South Australia border. The tenure is directly south south-east of Charlotte Waters.

EL 25245 is geologically located over the Pedirka and Eromanga Basins. The tenure is traversed by rail and access tracks and has the Coglin Creek travelling through the tenure north west to south east. Mt Wilyunpa's foothills cover the south east corner of the tenure area. There are a number of Perpetual Pastoral Leases covering the tenure area.

Tri-Star's exploration rationale and objectives for EL 25245 considered the evaluation of the coal potential of the Permian Purni Formation, which contains coal seams that are likely to be correlatives of Upper Permian coal measures found in Queensland's Bowen Basin. Investigations were intended to locate the subcrop edge of the Purni Formation and it has been determined using previous seismic data collected over the tenure area and Project Area, together with Tri-Star Energy Company's recently acquired seismic data, that the coal is too deep to be mined in relation to this tenure. Tri-Star Energy Company collected seismic survey data, analysed same and incorporated it into its mapping software for evaluation.

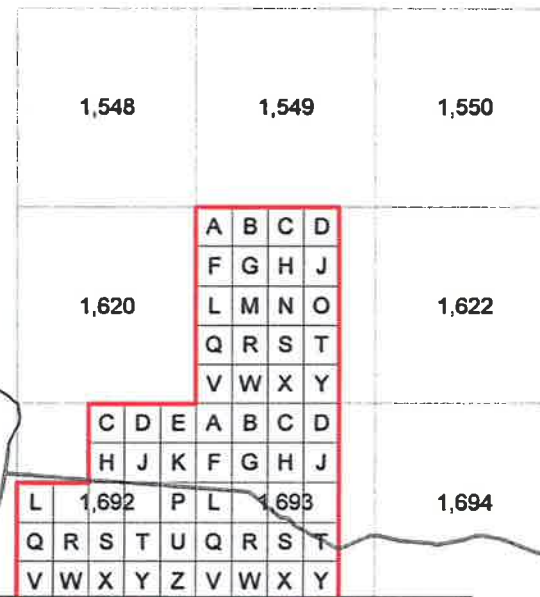
**TRI-STAR ENERGY COMPANY**

**EL25245  
LOCATION MAP**

**14 NOV 2009**



Finke



NORTHERN TERRITORY

SOUTH AUSTRALIA

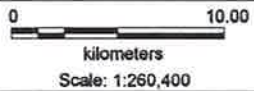


Figure 1

Tri-Star Energy Company incorporated previous wells and seismic survey data into its mapping software and created seismic structure maps. This seismic structure maps indicate that coal seams may be as deep as 650 to 850 meters however, the coal quality in the permit area and actual location and local lateral extent of the coals, if present, are still to be determined.

## HISTORY OF EL 25245

EL 25245 was granted to Tri-Star Energy Company for six (6) years commencing 13 November 2006, as the sole titleholder and operator. The permit is comprised of 61 sub-blocks located approximately 55 kilometres south east of Finke and directly south south east of Charlotte Waters in the southern Northern Territory. The tenure’s southernmost boundary is located on the Northern Territory - South Australian border, as shown in Figure 1.

The 61 sub-blocks are described as follows:

### 61 Sub-Blocks -Block Identification:

Block	Sub-Blocks
1621	A - D, F - J, L - O, Q - T, V - Y.
1692	C - E, H - K, L - Z.
1693	A - D, F - J, L - O, Q - T, V - Y.

Figure 2 shows the blocks and sub-blocks of the permit area. The permit area is located over surface lands that have not extinguished native title, which are comprised primarily of Perpetual Pastoral Leases.

EL 25245 is located on the Finke 1:250,000 map sheet (SG53-6), and its Finke 1:100,000 map sheet; and the McDills 1:250,000 map sheet (SG53-7), and its Mc Dills (5946) 1:100,000 map sheet.

## REGIONAL GEOLOGY

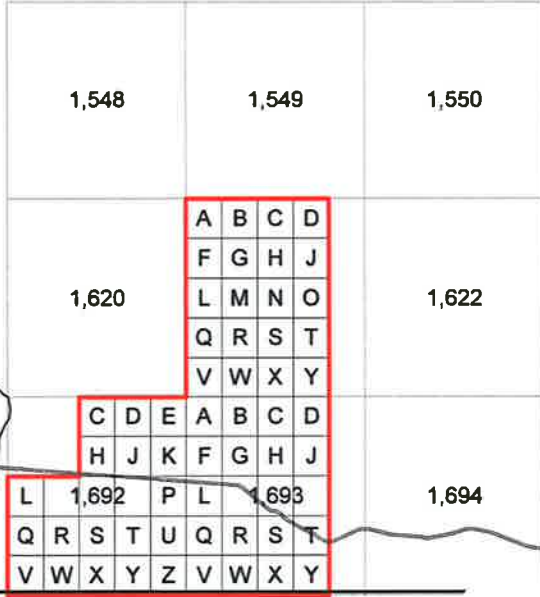
EL 25245 is geologically located over the Pedirka and Eromanga Basins, as shown in Figure 3. The Pedirka Basin is an intracratonic basin located across the border between the Northern Territory and South Australia in central Australia, with the majority of the basin area occurring in the Northern Territory. The geologic units it contains are Permo-Carboniferous in age and are correlative with sediments of the Cooper and Officer Basins. The surface geology of the tenure can be seen in Figure 4.

The eastern part of the Pedirka Basin is covered by a thin section of units of the Simpson Basin, which are Triassic in age. The sections of these two basins are then in turn overlain by a thicker succession of Eromanga Basin units, which are Jurassic-Cretaceous in age. Where the Simpson Basin section is absent, the Pedirka Basin is directly overlain by sediments of the Eromanga Basin.

**TRI-STAR ENERGY COMPANY**  
**EL25245**  
**LOCATION MAP**  
**14 NOV 2009**



Finke



NORTHERN TERRITORY

SOUTH AUSTRALIA

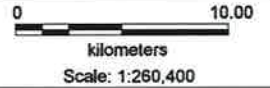


Figure 2

**TRI-STAR ENERGY COMPANY**

**EL25245  
GEOLOGICAL REGION MAP**

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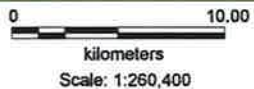


**PEDIRKA BASIN**

A	B	C	D					
F	G	H	J					
L	M	N	O					
Q	R	S	T					
V	W	X	Y					
C	D	E	A	B	C	D		
H	J	K	F	G	H	J		
L	M	N	O	P	L	M	N	O
Q	R	S	T	U	Q	R	S	T
V	W	X	Y	Z	V	W	X	Y

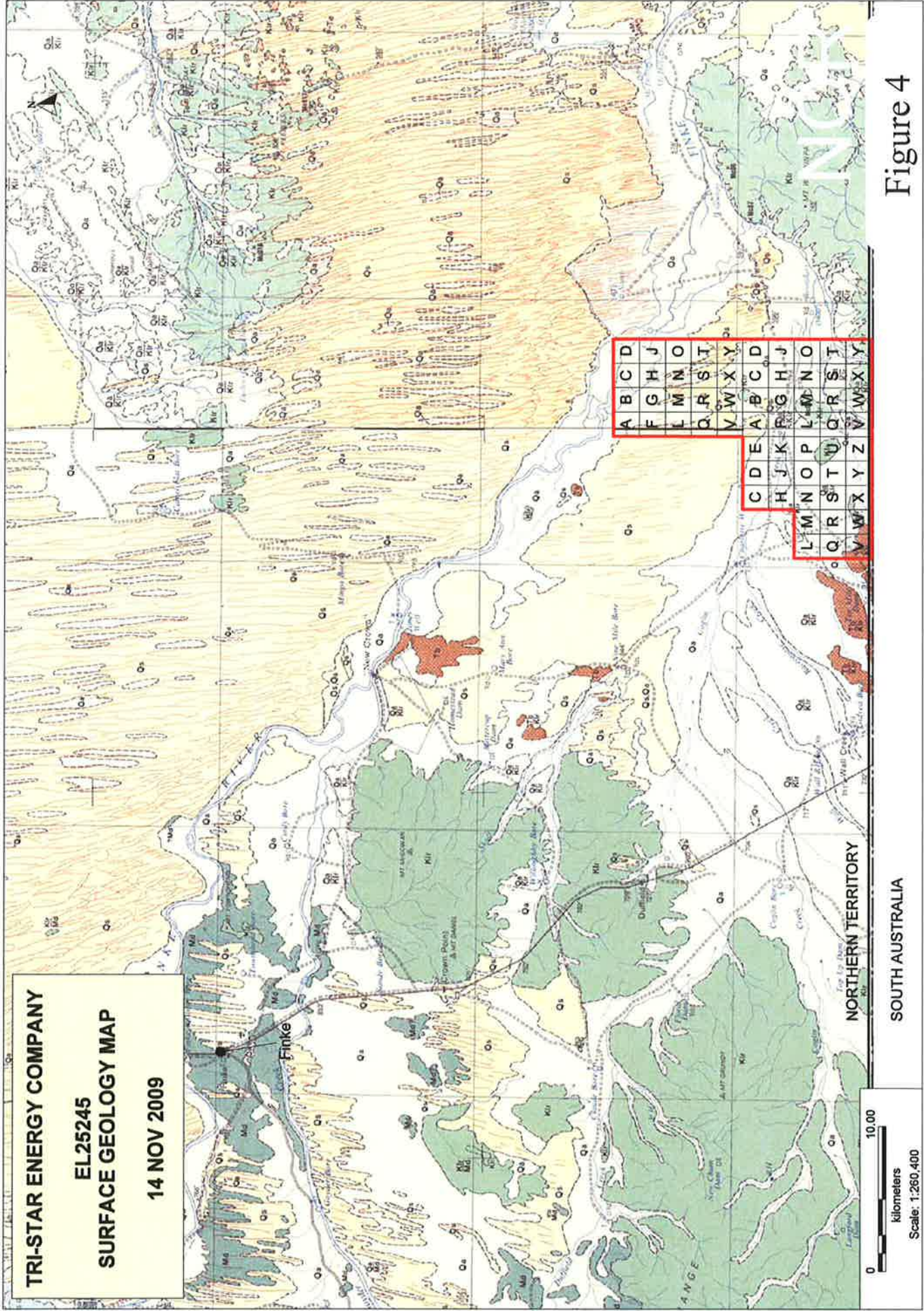
**NORTHERN TERRITORY**

**SOUTH AUSTRALIA**



**Figure 3**





**TRI-STAR ENERGY COMPANY**  
**EL25245**  
**SURFACE GEOLOGY MAP**  
**14 NOV 2009**

0 10.00  
 kilometers  
 Scale: 1:260,400

NORTHERN TERRITORY  
 SOUTH AUSTRALIA

A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P
Q	R	S	T
U	V	W	X
Y			

A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P
Q	R	S	T
U	V	W	X
Y	Z		

Figure 4



The primary structural features of the Pedirka Basin are the Eringa and Madigan Troughs, which are also the main depocentres that are separated by the McDills Anticline.

**Table 1**  
**STRATIGRAPHIC TABLE - EROMANGA / SIMPSON / PEDIRKA BASINS**

BASIN	AGE	STRATIGRAPHY
EYRE	TERTIARY	Recent sediments
		Eyre Formation
EROMANGA	CRETACEOUS	Winton Formation
		Allaru Mudstone
		Toolebuc Formation
		Cadna-owie Formation
	JURASSIC	Algebuckina Sandstone
		Poolowanna Sandstone
SIMPSON	TRIASSIC	Peera Peera Formation
		Walkandi Formation
PEDIRKA	PERMIAN	Purni Formation
	CARB	Crown Point Formation
	PRE-CARB	Undifferentiated

Modified after Middleton et al 2005

Table 1 above provides a stratigraphic table of the Pedirka Basin, and the overlying Simpson (where present) and Eromanga Basins. These basins are also overlain by a shallow section of fluvial and aeolian units of the Eyre Basin, which is found at the surface.

## PERMIT GEOLOGY

EL 25245 is geologically located over the central part of the Pedirka Basin. The section thins to the northwest. The tenure is located over the axis and flanks of the Eringa Trough. It is also located across the northern end of the McDills Anticlinal Trend and towards the southern limit of the Hallows Trend. The northern zero edge of the Pedirka Basin that runs in a general east-west direction is located approximately 75 kilometres north northeast of the northern boundary of the tenure.

Within the tenure area, units of the Pedirka Basin are overlain by a substantial section of Cretaceous-Jurassic units of the Eromanga Basin. It is believed that Simpson Basin units are absent from the stratigraphic section in this area, as EL 25245 is located west of that basin's western margin.

The topography of the tenure is varied and includes part of the foothills of Mt Wilyumpa and the north northwest trending sand dunes of the Simpson Desert that average less than 15 metres in height, as well as claypans and small dry lakes. Figure 5 illustrates the topography of the permit area. The elevation above sea level increases towards the southwest of EL 25245.

The tenure is traversed by a few tracks and has the Finke River travelling through the south with the north of the tenure located just south of the Mac Clark Conservation Reserve. There are a number of Perpetual Pastoral Leases covering the tenure area, as shown in Figure 6.

## **EXPLORATION OBJECTIVES AND RATIONALE**

Tri-Star's exploration rationale and objectives for EL 25245 and its adjoining tenures was to consider and evaluate the coal potential of the Permian Purni Formation, which contains coal seams that are likely to be correlatives of Upper Permian coal measures found in Queensland's Bowen Basin. Investigations were intended to locate the subcrop edge of the Purni Formation and to identify a deposit of Permian age coal from the Pedirka Basin that could be economically extracted and sold at a profit.

Tri-Star's exploration rationale included a literature search where access to all available literature from previous private and governmental basin studies, mineral and petroleum exploration to understand what is currently known about the coals of the Purni Formation in existing reports. Tri-Star conducted an extensive geological and geophysical data review to determine what data was available for further interpretation.

## **EXPLORATION ACTIVITIES DURING THE REPORTING PERIOD**

Tri-Star Energy Company collected various sets of previous exploration data including well and seismic acquisition data over the tenure and Project Area. It has been determined using previous seismic data collected, together with Tri-Star Energy Company's recently acquired seismic data, that the coal is too deep to be mined in relation to this tenure.

Tri-Star Energy Company collected various sets of previous exploration data including Simpson A and Simpson B seismic acquisition data. Figure 7 shows existing wells and seismic survey data collected, analysed and incorporated into Tri-Star Energy Company's database. There was no previous exploration within the tenure area however there were a number of existing wells and seismic surveys carried out over the Project Area.

Data collected was not in SEGY format (given the age of the data) however, Tri-Star Energy Company was able to incorporate the data into its mapping software, SMT, to create depth structure maps. Regardless of the age of the data, the data held by the Department has greatly assisted Tri-Star Energy Company in evaluating the coal potential of the tenure and Project Area.



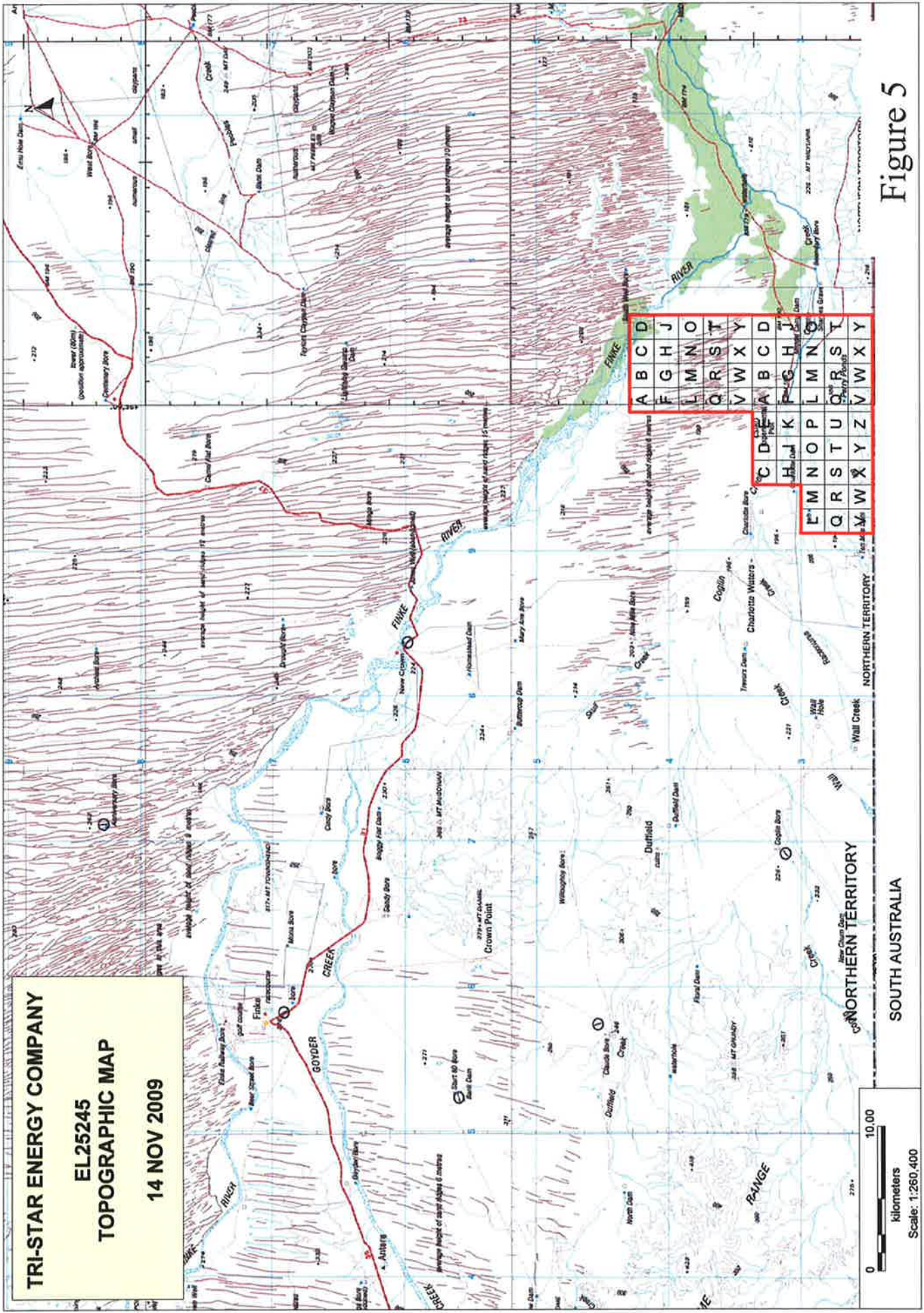


Figure 5

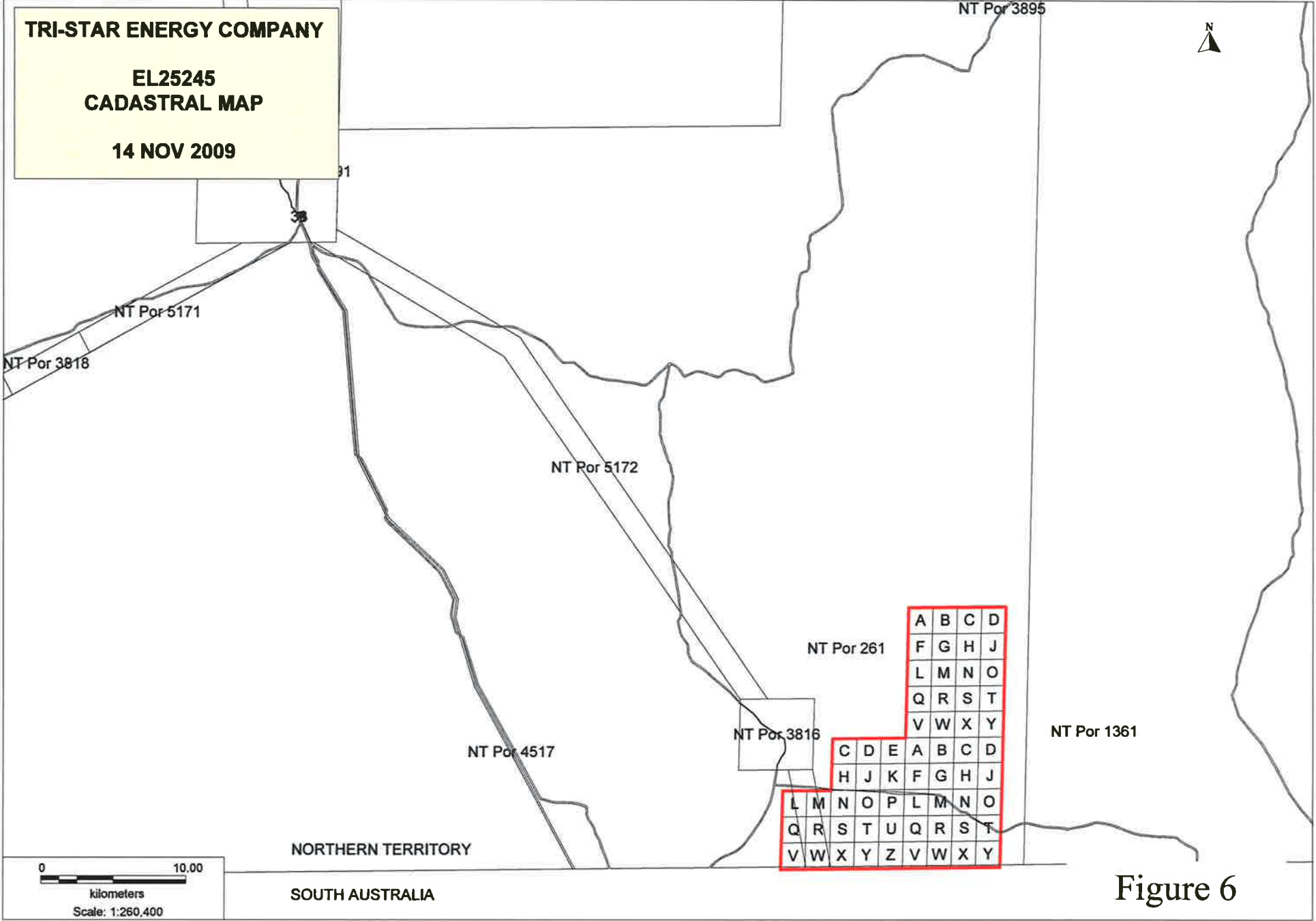
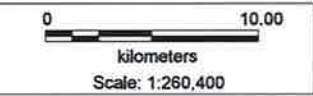
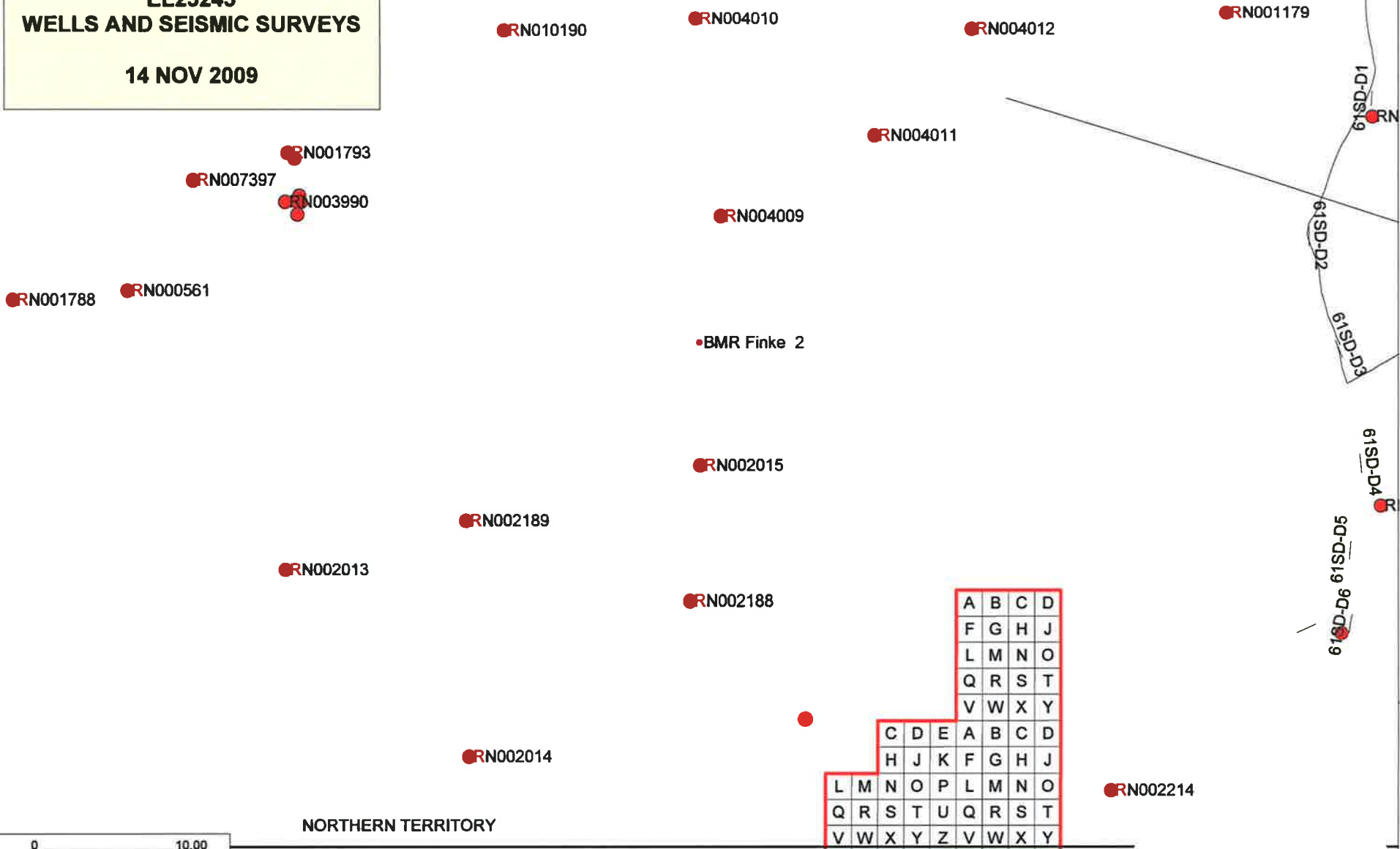


Figure 6



**TRI-STAR ENERGY COMPANY**  
**EL25245**  
**WELLS AND SEISMIC SURVEYS**  
**14 NOV 2009**



NORTHERN TERRITORY  
SOUTH AUSTRALIA

Figure 7



Tri-Star Energy Company has assembled all relevant geological and geophysical data and constructed the seismic depth map as shown in Figure 8. This Figure indicates that the Purni Coals are dipping at a uniform rate and are too deep to mine. The Figure indicates that the Purni Coals are at a depth of 650 to 850 meters below the surface.

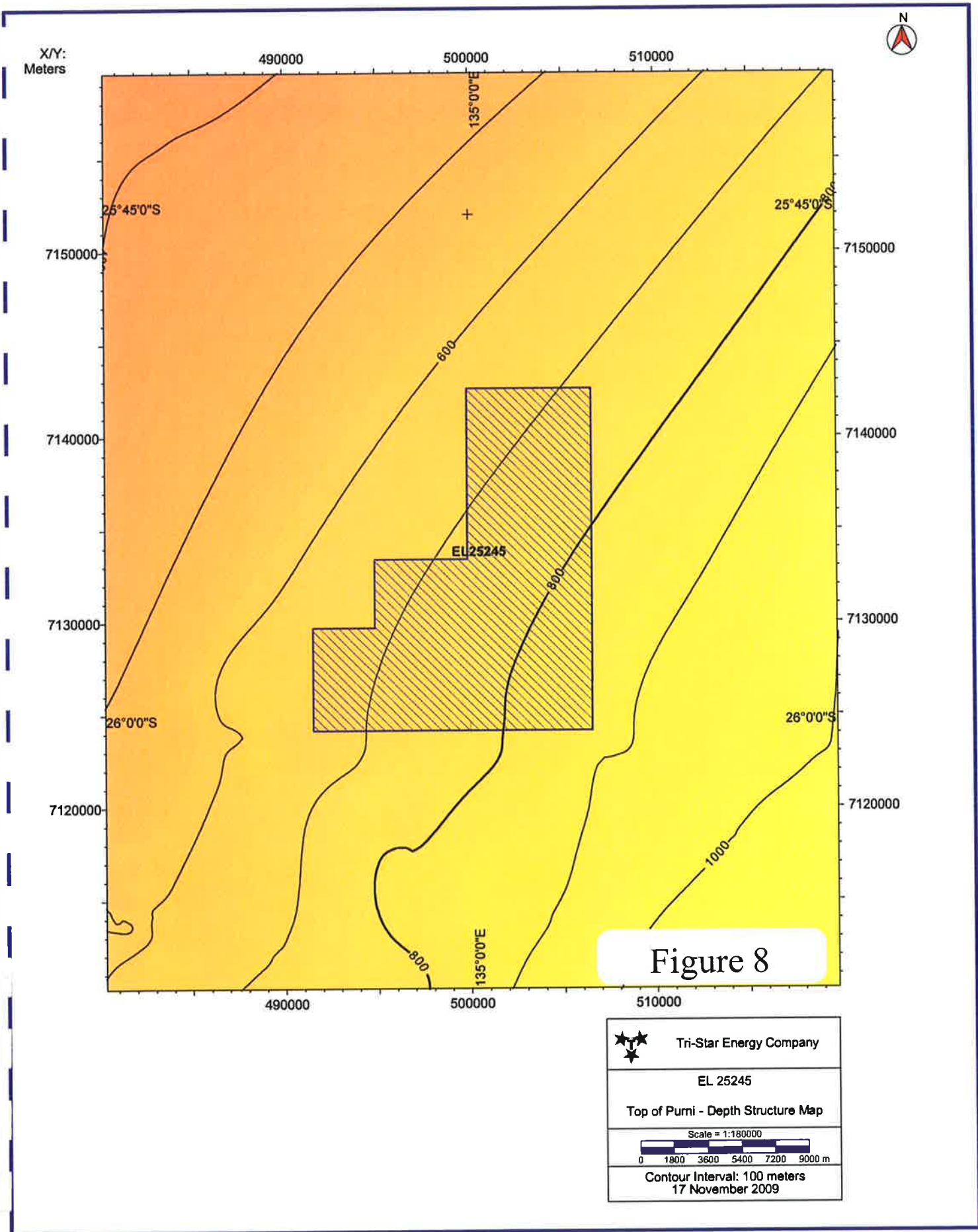
## **REPORTS LODGED FOR EL 25245 DURING THE REPORTING PERIOD**

On 9 August 2009, Tri-Star Energy Company lodged a Annual Group Report covering all tenures forming part of the Project Area, which included 25245. Tri-Star Energy Company also lodged an Annual Group Technical Report on 23 September, 2009. Tri-Star Energy Company believes that there were no other reports that were required to be lodged during that period.


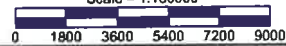
## **CONCLUSIONS**

Tri-Star Energy Company has succeeded in determining the presence and structure of the Purni coal within EL 25245. Tri-Star collected, analysed and incorporated all available data and newly acquired data into its mapping software to create a database of information which assisted in the creation of seismic depth structure maps. Tri-Star Energy Company has reach a decision, based on the seismic data, that no further work need be carried out on this exploration licence regarding the occurrence of the Purni coal.

We appreciate the co-operation and assistance of the Northern Territory government agencies and individuals during the course of our investigation and look forward to future work with them.



**Figure 8**

	Tri-Star Energy Company
EL 25245	
Top of Pumi - Depth Structure Map	
Scale = 1:180000	
	
Contour Interval: 100 meters	
17 November 2009	

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