

# **Geological & Geophysical Studies Annual Report**

Licence Year 10

1 July 2014 – 30 June 2015

## **Authority to Prospect (ATP) 767**

Document Number  
ATP767-CORP-TM-REP-001

Revision 0

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## CONTENTS

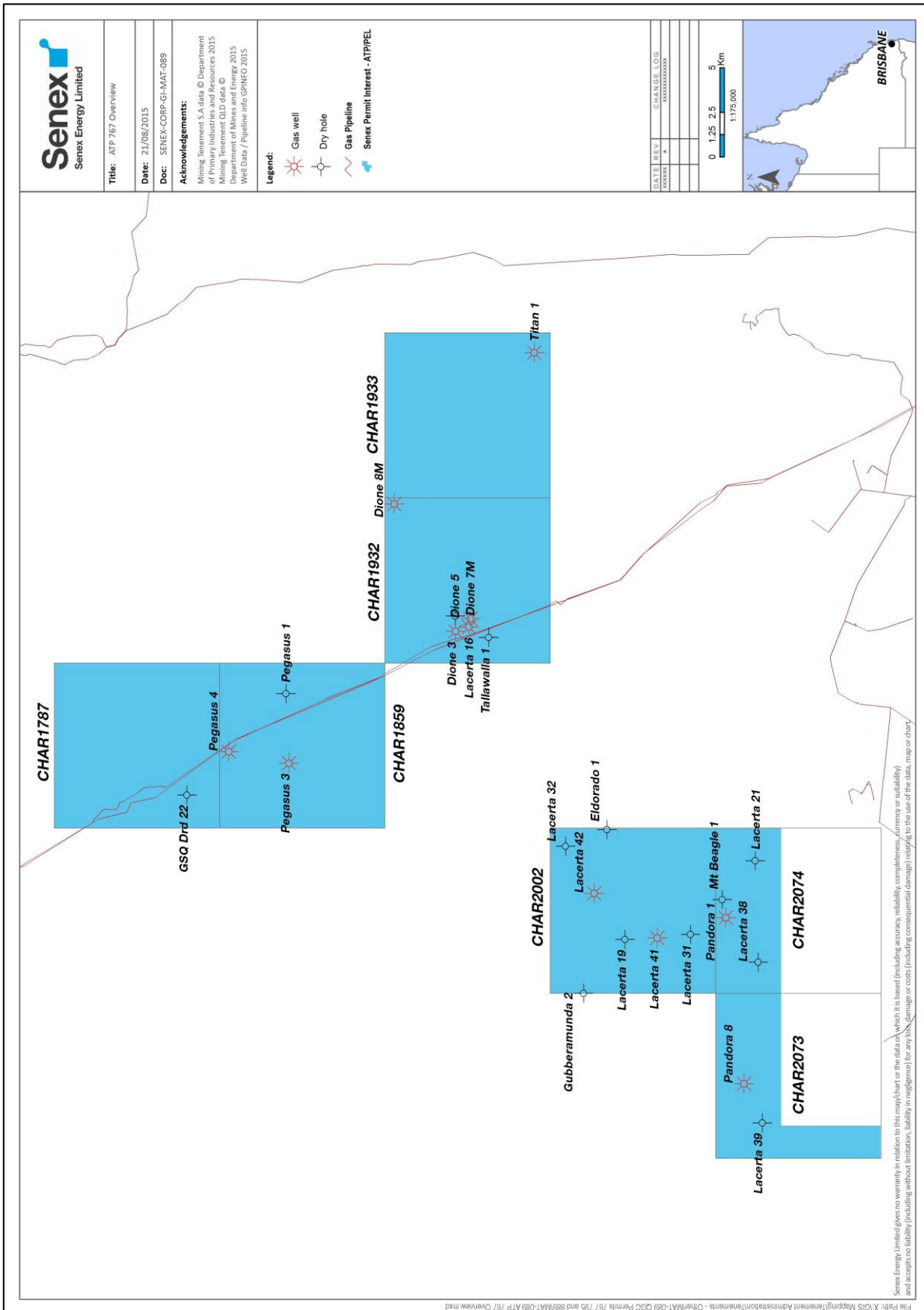
Revision History .....	3
1 Location Map .....	4
2 Introduction .....	6
3 Permit Summary .....	6
4 General Information .....	7
4.1 Description of Study Area .....	7
4.2 Block Areas .....	7
5 Geological Summary .....	9
6 Study Purpose .....	11
7 Descriptions .....	11
8 Seismic Acquisition .....	11
9 Results & Interpretations .....	12
10 Expenditure statement .....	17
11 Appendix .....	19

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## REVISION HISTORY

Revision	Revision Date	Document Status	Revision Comments	Author	Approved by
0	28/08/2015	Issued for Use	-	Taylor Down	Cory MacNeill

# 1 LOCATION MAP





## 2 INTRODUCTION

Authority to Prospect (ATP) 767 was initially granted to BNG (Surat) Pty Ltd (BNG) (100%), a wholly owned subsidiary of QGC Pty Limited for a four year term commencing 1 July 2004. The tenure was granted for a four year term and as of 29 November 2012 the Department of Natural Resources and Mines renewed ATP767 for eight years from 1 July 2008 to 30 June 2016 and again for another two years to extend the permit to 30 June 2018.

The transfer of (5%) interest in ATP 767 from BNG (Surat) Pty Ltd to CNOOC Coal Seam Gas Company Pty Ltd occurred on 17 February 2012. Followed by the transfer of (1.25%) interest in ATP 767 from BNG (Surat) Pty Ltd to Tokyo Gas QCLNG Pty Ltd on 12 March 2013.

As of 5 March 2015 the permit was transferred to Stuart Petroleum Cooper Basin Gas Pty Ltd (100% holdings) a subsidiary of Senex Energy Pty Ltd.

This report details the geological and geophysical work conducted during Licence Year 10 (1 July 2014 to 30 June 2015), in accordance with Section 553 of the Petroleum and Gas (Production and Safety) Act 2004.

## 3 PERMIT SUMMARY

Holders of ATP 767 prior to 5 March 2015:

BNG (Surat) Pty Ltd	93.75%	*Principal Holder
CNOOC Coal Seam Gas Company Pty Ltd	5.00%	
Tokyo Gas QCLNG Pty Ltd	1.25%	

On 5 March 2015, Senex Energy Pty Ltd was approved for an assessable transfer of ATP 767 from BNG (Surat) Pty Ltd, CNOOC Coal Seam Gas Company Pty Ltd and Tokyo Gas QCLNG Pty Ltd:

Stuart Petroleum Cooper Basin Gas Pty Ltd	100%
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An application for a special amendment to the work program for ATP 767, pursuant to section 107D(2) of the Act, was approved by the Department of Natural Resources & Mines on 5 December 2014.

The commitments associated with the approved application for a special amendment for ATP 767 can be found in Table 1.

**Table 1. Approved Special Amendment Work Program**

Period 3	Minimum Authorised Activities	Estimated Expenditure
One (1) year commencing 1 July 2014	Geological and geophysical studies; Field development planning.	\$500,000
	Total:	\$500,000

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## 4 GENERAL INFORMATION

### 4.1 Description of Study Area

ATP 767 is located in southern Queensland and overlies the north western edge of the Mesozoic Surat Basin and the south western margin of the underlying Permo-Triassic Bowen Basin. ATP 767 is located immediately south of the Denison Trough – a proven petroleum system containing mature and generative Permian aged marine source rocks. The area overlies the Roma Shelf oil and gas fields and seismic data shows that the northwest striking Wallumbilla Thrust Fault influences the depth of deep sediments (Permian).

A number of CSG wells have been drilled in and around the ATP 767 permit area. A large amount of technical data has been obtained, including well logs, core samples, proximate analyses, gas contents, gas saturations, gas composition and permeability. The permit has identified CSG reserves and resources in the Walloon Subgroup of the Surat Basin.

### 4.2 Block Areas

ATP 767 is made up of the following blocks:

- CHAR1787 (all sub-blocks)
- CHAR1859 (all sub-blocks)
- CHAR1932 (all sub-blocks)
- CHAR1933 (all sub-blocks)
- CHAR2002 (all sub-blocks)
- CHAR2073 (only sub-blocks a, b, c, d, e, f, g, h, j, k, l, q, v)
- CHAR2074 (only sub-blocks a, b, c, d, e, f, g, h, j, k)

#### 4.2.1 CHAR1787

The northern most block of the ATP 767 permit area contains the GSQ Drd-22 well and no other wells associated with petroleum activities. The distance from the centre of this block to the nearest town Injune is approximately 37km. Remnant vegetation mapping suggests that the majority of the area has been cleared, largely for grazing purposes with some areas of cropping lands in the south-western section. Some intact patches of vegetation identified as ‘of concern’ Regional Ecosystems (REs) under the Vegetation Management Act 1999 (VMAct), most commonly *Eucalyptus populnea* woodland, are identified on the alluvial plains surrounding the higher stream order watercourses found within the block. Some isolated stands of ‘endangered’ REs of *Eucalyptus populnea*, *Acacia harpophylla* and/or *Casuarina cristata* open forests are also identified. No ecological surveys have been conducted to confirm the identified REs or the associated vegetation.

#### 4.2.2 CHAR1859

Directly south of the CHAR1787 block, CHAR1859 contains Pegasus-1, 3 and 4 wells, all of which are located in the northern half of the block. The centroid of the block is found ~44km south-east of the nearest town of Injune. Remnant vegetation mapping suggests that the majority of the area has been cleared largely for grazing with some areas of cropping lands in the south-western section. There are small isolated areas classified as ‘endangered’ or ‘of concern’ REs under the VMAct, located within the block. The majority of the potential ‘endangered’ RE areas are classified as semi-evergreen vine thicket or *Acacia harpophylla* with a semi-evergreen vine thicket understorey whilst the more commonly occurring ‘of concern’ REs are identified as *Eucalyptus populnea*, *Eremophila mitchellii* shrubby woodland. No ecological surveys have been conducted to confirm the identified REs or the associated vegetation.

#### 4.2.3 CHAR1932

South-west of the CHAR1859 block, CHAR1932 contains 6 wells, the most recently drilled, Dione-3, 5, 7M and 8M were found on the western side of the block. The centroid of the block is found ~43km north-east of the nearest town of Roma. Remnant vegetation mapping suggests that the majority of the block area has been cleared, largely for grazing with some areas of cropping lands in central section. Much of the limited remnant vegetation has been identified as 'endangered' REs under the VMAct, comprising of *Acacia harpophylla* and/or *Casuarina cristata* open forest. A number of 'of concern' RE also occur, most commonly as semi-evergreen vine thicket and *Eucalyptus populnea* and *Eremophila mitchellii* shrubby woodland. No ecological surveys have been conducted to confirm the identified REs or the associated vegetation.

#### 4.2.4 CHAR1933

Directly east of CHAR1932 block, CHAR1933 contains one well, Titan-1 in its south-east corner. The centroid of the block is found ~44km north-west of the nearest town of Wallumbilla. Remnant vegetation mapping suggests that the majority of the block area has been cleared for pastoral land use. In the centre of the block an *Acacia harpophylla* and/or *Casuarina cristata* open forest is mapped as an 'of concern' RE under the VMAct and is suggested to be present in addition to narrow tracts of *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing the two stream order 3 watercourses found within the block. No ecological surveys have been conducted to confirm the identified REs or the associated vegetation.

#### 4.2.5 CHAR2002

Lying at the centre of the ATP 767 permit, CHAR2002 contains Eldorado-1 and Lacerta-19, 31, 32, 41 and 42 wells. The centroid of the block is found ~33km north of the nearest town of Roma. Approximately 11km<sup>2</sup> of the Gubberamunda State Forest lies within the north-western portion of the block. Whilst the majority of the block is vegetated, >10% has been identified as remnant vegetation, as a result of the large areas of cropping land found within the block. There are some isolated stands of vegetation which have identified as 'endangered' REs under the VMAct, which consist of *Acacia harpophylla* and/or *Casuarina cristata* open forest. No ecological surveys have been conducted to confirm the identified REs or the associated vegetation.

#### 4.2.6 CHAR2073

Directly west of CHAR2074, 39.9km<sup>2</sup> of the northern and western sides of CHAR2073 lies within the ATP 767 permit area and contains Lacerta-39 and Pandora-8 wells. The centroid of the block is ~23km north-west of the nearest town of Roma. Most remnant vegetation has been cleared for pastoral land use. Some tracts of 'of concern' REs under the VMAct, of *Eucalyptus tereticornis*, *E. camaldulensis* or *Eucalyptus populnea* woodlands fringe the stream order 5 watercourse which flows north to south through the eastern end of the block. No ecological surveys have been conducted to confirm the identified REs.

#### 4.2.7 CHAR2074

A measured 30.7km<sup>2</sup> of the northern section of CHAR2074 lies within the ATP 767 permit. Mt Beagle-1, Pandora-1 and Lacerta-21 and 38 wells lie within this section. The centroid of the CHAR2074 block is ~ 20km north of the nearest town of Roma. Approximately 50% of the block area which is within the permit is vegetated with an open forest, however only a small percentage of this has been identified as 'of concern' REs under the VMAct, and are believed to consists of semi-



evergreen vine thicket within a *Eucalyptus populnea*, *E. melanophloia* and possibly *Callitris glaucophylla* woodland. No ecological surveys have been conducted to confirm the identified REs.

## 5 GEOLOGICAL SUMMARY

Basement underlying ATP 767 comprises Paleozoic metasediment of the Timbury Hills Formation, intruded by Carboniferous adamellites of the Roma Granite, which occur within linear belts of Kuttung Volcanics. Within the permit area basement is entirely concealed beneath late Mesozoic and Cainozoic cover. This metasediment and intrusive complex had by the Permian been uplifted and eroded into a low rolling dissected landscape falling away to the east, termed the Roma Shelf.

The Roma Shelf is bounded on the east by the Permian-Triassic Taroom Trough, part of the Bowen Basin sequence. This is a half graben, fault bounded on the eastern flank, and lapping out onto the Roma Shelf to the west. To the north lies the Denison Trough, flanked on the east by the Comet Ridge.

Late Permian sedimentation consisted of swampy sediments of the Blackwater Formation which deposited along the valleys at the edge of the range of low hills forming the Roma Shelf, and northwards into the Denison Trough. The coals and carbonaceous sediments deposited in these beds have generated hydrocarbons, and are likely to represent the source of oil and gas in the area.

Sedimentation continued into the mid Triassic, with deposition of the braided stream deposits of the Showgrounds Sandstone lapping onto the Roma Shelf. The Showgrounds outcrops on the Comet Ridge, where it is known as the Clematis Sandstone. It is in turn overlapped by a lacustrine sediment, the Snake Creek Member, which forms an excellent seal where preserved at depth.

Tectonism in the late Triassic caused a dominantly northwest pattern of faulting reflecting an extensional regime with formation of grabens and half grabens. During the Jurassic reactivation of faults led to folding of the Surat Basin sediments, so that Triassic faults often do not extend into the Jurassic sediment but are represented by tight folds superimposed on the fault trace.

The Evergreen Shale laps out onto the Roma Shelf in much the same way as the Showgrounds Sandstone. A basal sandy unit is sometimes present, and the Boxvale Sandstone reservoir, which hosts hydrocarbons in the Alton Field, also laps out further to the west. This unit appears to extend over all of ATP 767.

The Hutton Sandstone lies conformably above the Evergreen and was deposited by meandering streams on a broad floodplain setting. The Hutton Sandstone is mainly fine to medium grained sandstone with interbedded siltstone and shale. It is the most widespread Jurassic unit in the Great Artesian Basin and is continuously deposited throughout the Surat Basin.

The mid Jurassic Walloon Subgroup is known to be deposited across the ATP 767 permit area. Based on several petroleum exploration wells in the area, the "Proud sandstone" is expected to be present, and sit with possibly an erosional base on the sediments of the Juandah Coal Measures, either above the Kogan Seam, or within the seam interval. Inter-seam sediments should comprise grey-brown mudstone, light coloured tuffaceous claystone, medium grey siltstone and fine to medium grained, feldspathic-labile and lithic-labile sandstones, as well as occasional limestone and sideritic layers and thin uncorrelated coals.

The presence of the Kogan Seam can be difficult to prognose in the region, due to the erosional nature of the base of the Springbok Sandstone. From the results of drilling in the immediate area, the seam is not expected to be preserved.

The Macalister Seam regionally is comprised of two intervals, the upper and lower. The Macalister Upper is expected to comprise one significant occurrence of coal, underlain by thinner plies of coal.

The Macalister Lower Seam is expected to represent a significant occurrence of coal, similar to the Macalister Upper, while being more banded and with a thicker overall interval.

The Nangram Seam, and all the stratigraphically lower coals of the Juandah Coal Measures, are expected to be of a more banded character than the Macalister coals, containing significant net coal thicknesses, however as smaller plies of coal spread over relatively wider seam intervals. The Nangram Seam is expected to occur as a number of separate banded groups of coal plies.

The Wambo Seam is also expected to be banded in nature. The Senex Energy informally named "Wambo Sandstone" a fairly laterally consistent sandstone unit above the Wambo Seam and is expected to be well developed, and although not expected, results of wireline logging should be inspected for signs of significant porosity/permeability development.

The Iona Seam is expected to be banded in nature. A potentially laterally consistent sandstone unit above the Iona Seam should be inspected for signs of significant porosity/permeability development.

The Argyle Seam is not expected to be well separated from the base of the Iona Seam. This interburden in the region however is prone to development of cleaner sands, possibly prone to water filled porosity with permeability.

The Tangalooma Sandstone unit has been described in nearby wells as a light grey, fine to medium grained sandstone, with coal bands.

The intervals between the coal seams of the Taroom Coal Measures are expected to comprise grey-brown mudstone, medium grey siltstone and fine to medium grained, feldspathic-labile and lithic-labile sandstone.

The Auburn Seam is poorly developed and discontinuous in surrounding areas, with the interval often absent. It is expected to comprise a number of thin plies.

The Bulwer Seam is prognosed to consist of two separate coal developments with the majority of the coal developed in the lower section.

Coal occurrence is expected concentrated toward the top of the Condamine seam interval, due to thicker and closer spaced plies of coal.

The Springbok Sandstone comprises fine to medium grained, medium grey to light, whitish grey, quartzose and quartz lithic sandstone with grey brown siltstone and mudstone interbeds. Coal bands become common towards the base of the formation, up to the basal sandy unit of the formation, (referred to as the "Proud sandstone", equivalent to a unit defined by work in the north west of the Basin). The "Proud sandstone" generally comprises a well-developed fining upward sandstone unit, potentially porous/permeable, and eroding downwards into the top of the Walloon Subgroup, often with a coarse lag deposit in contact with a coal seam, either Kogan (if present) or Macalister Upper.

The Westbourne Formation comprises dark grey mudstone interbedded with fine to medium grained, quartzose to quartz-lithic sandstone. Towards the base of the formation the Norwood Mudstone Member, is characterised by increased coal and shale content.

## 6 STUDY PURPOSE

Geological and geophysical studies across ATP 767 relating to the current special amendment work program have been focused on developing the coal seam gas (CSG) resource of the Walloon Subgroup. Analysis and evaluation of existing well data including geophysical well logs, core analysis data and drill stem test results has been completed to further characterise the identified CSG reservoir. Ultimately, the geological and geophysical studies have formed an initial development plan for future CSG production in the permit area.

Technical mapping of the Walloon Subgroup was completed across the ATP 767 permit area. The Juandah and Taroom Coal Measures subcrop towards the north of the ATP 767 permit area; therefore there is reduced net coal present towards the north. There is likely high meteoric recharge occurring along the subcrop edge of the Juandah Coal Measures which could make it operationally challenging to dewater the coals in a production scenario. Another potential risk is that the coal seams adjacent to this subcrop edge have become flushed due to a relatively high rate of water flow through the reservoir yielding low gas contents. However, a possible benefit of this flushing could be an increase in biogenic gas generation within these coals. Work to identify variabilities in coal gas content and saturation is ongoing.

All available subsurface reservoir data was loaded into the Petrel mapping software package. Updated structure and net coal maps were produced for the Juandah and Taroom Coal Measures. In addition, reservoir pressure data, saturation data and gas content vs. depth trends were investigated for both the Juandah and Taroom Coal Measures to better define the CSG reservoir quality.

Note: All technical mapping results include data from offset wells in surrounding permits.

## 7 DESCRIPTIONS

Geological and geophysical activities undertaken during licence year ten of ATP 767 are listed in Table 2.

**Table 2. Current Special Amendment Work Program and work completed (as of end of current reporting period) by licence year.**

Work Program Year	Study Activities Performed	Blocks
Ten 1 July 2014 – 30 June 2015	<ul style="list-style-type: none"> <li>- Geological and geophysical studies</li> <li style="padding-left: 20px;">- Evaluate CSG reservoir data</li> <li style="padding-left: 20px;">- Perform technical mapping of CSG reservoir data</li> <li style="padding-left: 20px;">- Perform updated reserve and resource bookings</li> <li>- Field development planning</li> </ul>	CHAR1787 CHAR1859 CHAR1932 CHAR1933 CHAR2002 CHAR2073 CHAR2074

## 8 SEISMIC ACQUISITION

No seismic data has been acquired or reprocessed in ATP 767 during the current reporting period.

## 9 RESULTS & INTERPRETATIONS

### Structure

Within ATP 767, the Walloon Subgroup dips approximately south and outcrops in the north (Figure 1). The north-northwest to south-southeast trending Comet Ridge flanks the eastern side of ATP 767. This structure is controlled at depth by the Hutton-Wallumbilla thrust fault and seismic data illustrates strata offset.

### Net Coal

Coal thickness in ATP 767 reaches a maximum of 16.70 metres, with an average of 9.66 metres (median of 10.67 meters). The upper Juandah Coal Measures are not present in the northern blocks of ATP 767, which is apparent in interpreted Pegasus well data. Pegasus-1, Pegasus-3 and Pegasus-4 spudded within the lower Juandah Coal Measures and Tangalooma Sandstone respectively. These wells subsequently show lower net coal ranging from nil metres of coal in Pegasus-1 and 3.05 metres of coal in Pegasus-3.

### Gas Content

Gas content in ATP 767 and adjacent areas (ATP 795 and ATP 889) ranges from 0.1 metres<sup>3</sup>/tonne to approximately 4.89 metres<sup>3</sup>/tonne, averaging 2.11 metres<sup>3</sup>/tonne in the Walloon Subgroup (gas content measured DAF). Shallower wells such as Pegasus-3 and Pegasus-4 return total gas readings of 2.22 – 2.52 m<sup>3</sup>/tonne and 1.73 m<sup>3</sup>/tonne.

### Permeability

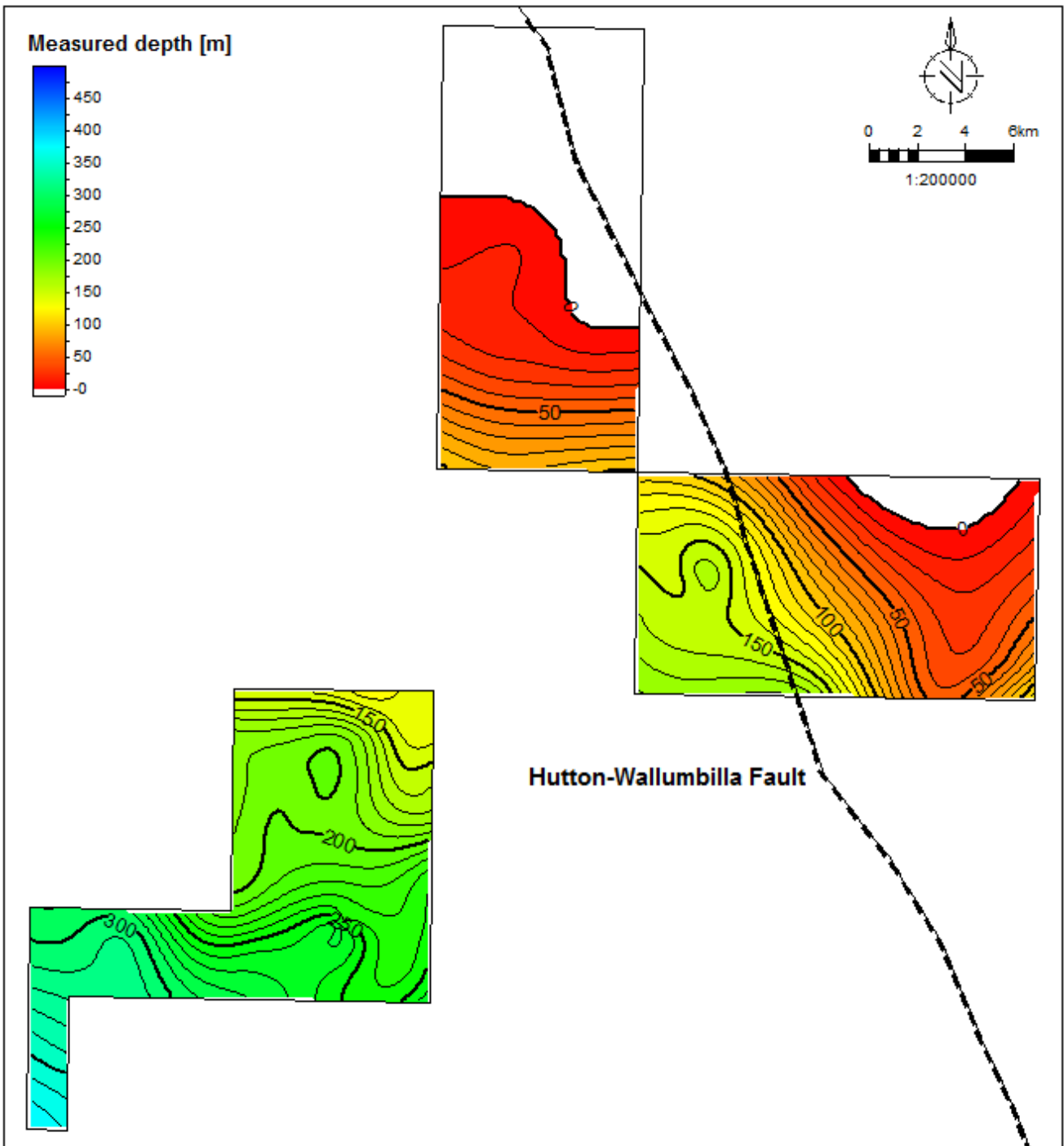
Average permeability in ATP 767 and adjacent areas ranges from 501.4 - 2094.0 mD. The increased permeability values found within this permit area and the greater western Surat Basin is higher than the Surat Basin average due to its relative shallowness and structural location. Generally deeper coals exhibit lower permeabilities than shallow buried coals; the modelled average permeabilities per zone follows:

**Table 3. Modelled Average Permeability ATP 767**

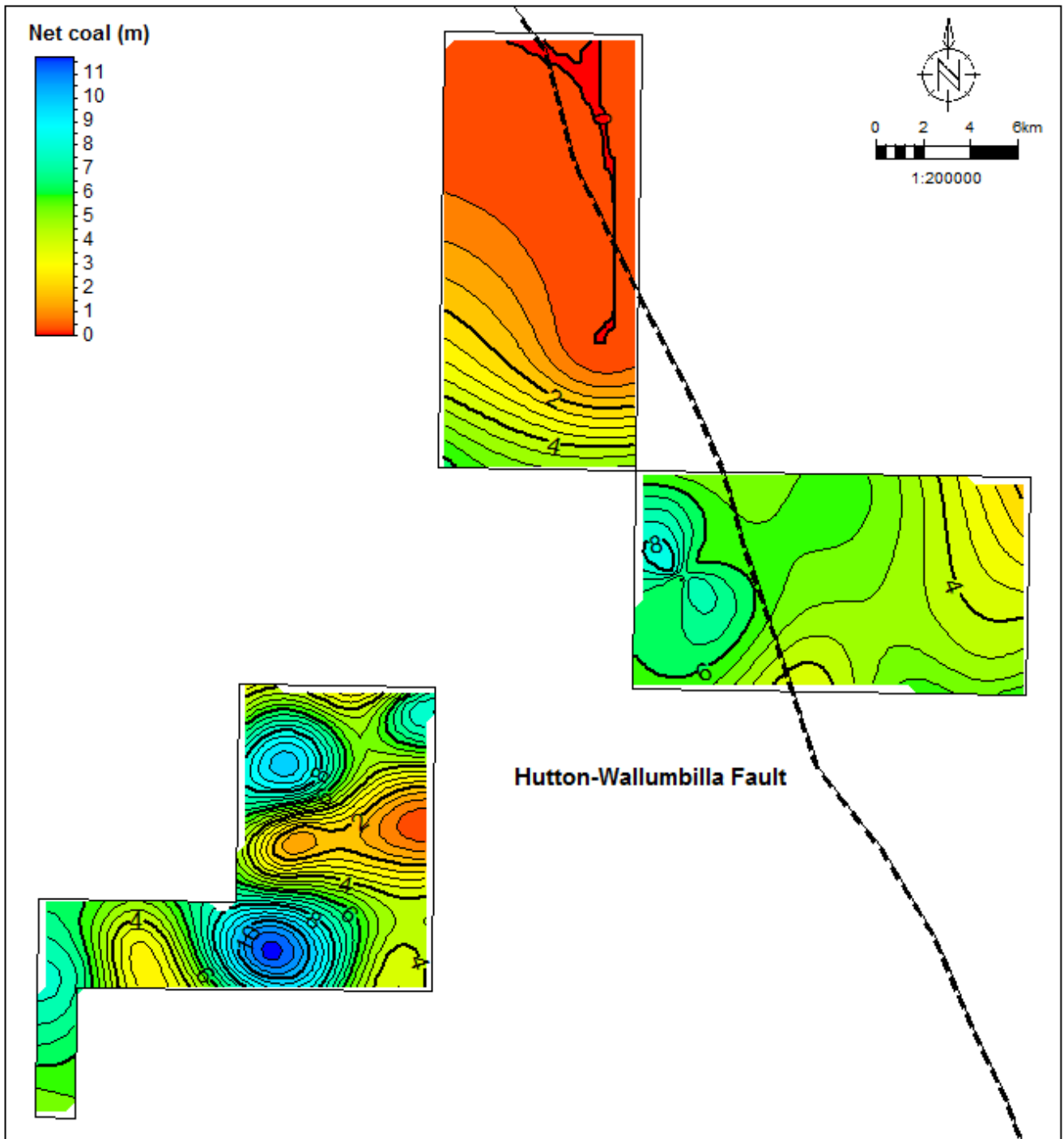
Stratigraphic interval	Modelled average permeability (mD)
Walloon Subgroup	830.1
Upper Juandah Coal Measures	947.6
Lower Juandah Coal Measures	501.4
Tangalooma Coal Measures	2094.0
Taroom Coal Measures	1065.1

### Gas Composition

Gas composition in ATP 767 predominately consists of methane with each zone typically ranging from 97.8 – 99.9%. Analysis of coals found within the shallower Springbok Sandstone units show greater variability in gas composition and higher nitrogen composition.

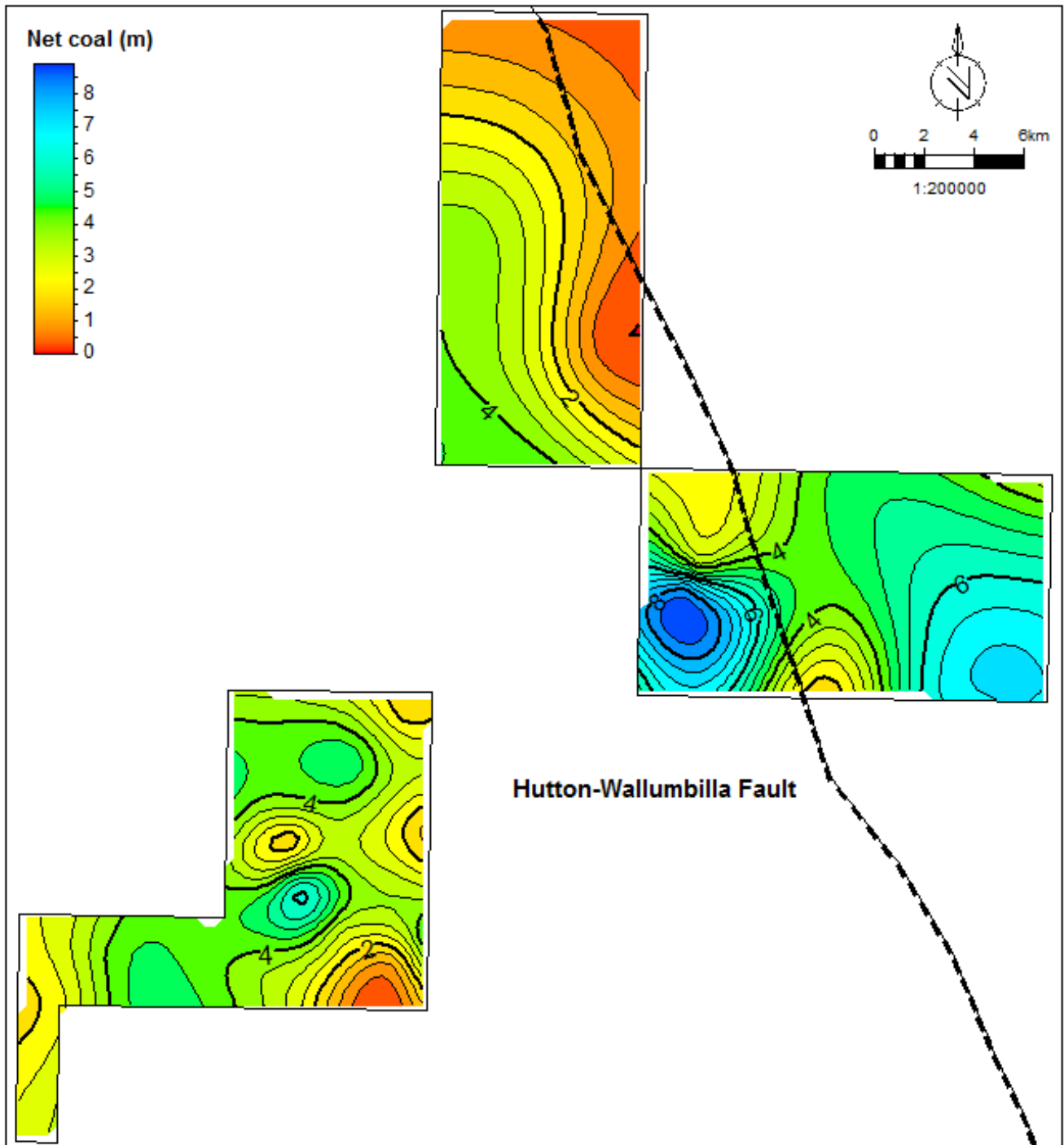


**Figure 1. Top Walloon Structure Map**



**Figure 2. Juandah Net Coal Map**





**Figure 3. Taroom Net Coal Map**



## Reserve and Resource Bookings

Updated reserve and resource bookings were completed around 6 August 2014. Netherland, Sewell & Associates, Inc. (NSAI) Petroleum Consultants were engaged to provide an independent audit of reserves and resources for the ATP 767 permit area. The estimates of reserves were prepared in accordance with the definitions and guidelines set forth in the 2007 Petroleum Resources Management System (PRMS) approved by the Society of Petroleum Engineers. The energy conversion factor used was 1.0339 TJ per MMCF. Contingent Resources implies a 2C and 3C scenario.

**Table 4. ATP 767 Reserve and Resource Volumes**

<b>ATP 767 – Net Values</b>	<b>2P Reserves (PJ)</b>	<b>3P Reserves (PJ)</b>	<b>Contingent Resources (PJ)</b>
ATP 767 Total Permit Area	47.8	99.1	18.8
PCA 5 (CHAR 1932 - Dione Block & CHAR 1933 - Titan Block)	10.2	21.5	8.2
PCA 6 (CHAR 2002 - Phoebe Block & CHAR 2073/2074 – Pandora Block)	36.6	75.5	10.6
PCA 7 (CHAR 1787 – Pegasus North Block & CHAR 1859 Pegasus Block)	-	-	-

## Field Development Planning

Initial field development planning work for the greater Western Surat Gas Project (WSGP) (including ATP 767) was completed on 08 September 2014. This Pre Appraisal Field Development Plan (version 6) is the base case development document and was submitted to the Department of Natural Resources & Mines upon completion. There is ongoing work to refine and update this base case development plan as work program milestones across all permits (ATP 767, 795 and 889) in the WSGP are achieved.

## 10 EXPENDITURE STATEMENT

Geological and Geophysical study expenditures incurred during licence year 10 of ATP 767 are listed in Table 5.

**Table 5. ATP 767 Expenditure Activity Summary**

<b>Activity/Item</b>	<b>Description</b>	<b>Expenditure</b>
Technical Staff Time	Geological and Geophysical Desktop Work	\$374,099.90
External Consulting	Senior Field Development Engineer	\$80,092.68
External Consulting	NSAI Petroleum Consultants	\$24,757.45
	<b>Total:</b>	<b>\$478,950.04</b>



## 11 APPENDIX

### ATP 767 Well Location & Status Information

Well Name	Eastings	Northings	Longitude	Latitude	Elevation (GL)	KB/RT height	Spud Date	Rig Release	Well type	Result	Status	Previous Operator
Dione 3	693225.551	7100650.290	148° 56' 1.782" E	26° 12' 2.495" S	405.16	409.15	29/02/2012	4/03/2012	Development	Gas Producer	Comp.as Prod.	QGC P/L
Dione 5	693855.280	7099810.130	148° 56' 24.913" E	26° 12' 29.484" S	421.94	425.74	19/02/2012	23/02/2012	Development	Gas Producer	Comp.as Prod.	QGC P/L
Dione 7M	693993.145	7100662.363	148° 56' 29.419" E	26° 12' 1.730" S	402.66	403.41	15/03/2012	27/03/2012	Core	Monitoring Well	P&A	QGC P/L
Dione 8M	699696.460	7103979.819	148° 59' 52.967" E	26° 10' 11.143" S	382.38	386.18	30/09/2012	4/10/2012	Appraisal	Gas Well	Suspended	QGC P/L
Eldorado 1	683099.000	7092350.000	148° 50' 1.314" E	26° 16' 36.945" S	385.80	389.80	19/05/1990	23/05/1990	Exploration	Dry Hole	P&A	AGL Petroleum Ltd
GSQ Drd 22	685172.000	7115792.000	148° 51' 3.977" E	26° 3' 54.373" S	-	-	22/11/1967	6/12/1967	Exploration	Dry Hole	P&A	Geological Survey of QLD
Gubberamunda 2	674869.000	7093774.000	148° 45' 4.010" E	26° 15' 54.375" S	383.40	-	30/11/1928	31/03/1931	Exploration	Dry Hole	P&A	Aust Roma Oil Ltd
Lacerta 16	693429.700	7099906.158	148° 56' 9.534" E	26° 12' 26.571" S	420.64	421.84	6/05/2007	11/05/2007	Appraisal	Gas Well	Suspended	BNG (Surat) P/L
Lacerta 19	677540.749	7091417.456	148° 46' 41.462" E	26° 17' 9.765" S	377.08	378.28	31/05/2007	11/06/2007	Service	Monitoring Well	Suspended	Sunshine Gas Ltd
Lacerta 21	681413.867	7084090.752	148° 49' 4.773" E	26° 21' 6.058" S	366.21	367.41	10/07/2007	19/07/2007	Appraisal	Dry Hole	P&A	BNG (Surat) P/L
Lacerta 31	677751.914	7087750.703	148° 46' 50.893" E	26° 19' 8.804" S	364.90	366.10	28/07/2007	8/08/2007	Appraisal	Dry Hole	P&A	BNG (Surat) P/L
Lacerta 32	682294.245	7094665.745	148° 49' 31.135" E	26° 15' 22.077" S	378.75	379.95	8/08/2007	15/08/2007	Service	Monitoring Well	Suspended	BNG (Surat) P/L
Lacerta 38	676297.991	7083998.166	148° 46' 0.327" E	26° 21' 11.375" S	359.59	360.79	30/10/2007	13/11/2007	Appraisal	Dry Hole	P&A	BNG (Surat) P/L
Lacerta 39	668202.828	7083869.616	148° 41'	26° 21'	366.87	368.07	15/10/2007	27/10/2007	Appraisal	Dry Hole	P&A	BNG (Surat) P/L

			8.441" E	19.070" S								
<b>Lacerta 41</b>	677605.889	7089605.890	148° 46' 44.708" E	26° 18' 8.594" S	377.67	378.87	22/11/2007	3/12/2007	Appraisal	Gas Well	Suspended	BNG (Surat) P/L
<b>Lacerta 42</b>	679900.033	7093098.620	148° 48' 5.652" E	26° 16' 14.083" S	404.39	405.59	3/12/2007	7/12/2007	Appraisal	Gas Well	Suspended	BNG (Surat) P/L
<b>Pandora 1</b>	678579.000	7085763.000	148° 47' 21.705" E	26° 20' 13.014" S	383.39	387.54	30/07/2011	5/08/2011	Appraisal	Gas Well	Suspended	QGC P/L
<b>Pandora 8</b>	670197.961	7084864.752	148° 42' 19.922" E	26° 20' 45.885" S	380.88	381.88	12/09/2011	18/09/2011	Exploration	Gas Well	Suspended	QGC P/L
<b>Pegasus 1</b>	690212.494	7110183.880	148° 54' 8.245" E	26° 6' 54.208" S	333.35	334.55	7/05/2007	22/05/2007	Exploration	Dry Hole	P&A	QGC P/L
<b>Pegasus 3</b>	686704.638	7110051.423	148° 52' 2.074" E	26° 7' 0.162" S	366.70	367.45	10/07/2012	17/07/2012	Appraisal	Gas Well	Suspended	QGC P/L
<b>Pegasus 4</b>	687345.528	7113406.415	148° 52' 23.401" E	26° 5' 10.861" S	365.43	366.18	22/07/2012	26/07/2012	Appraisal	Gas Well	Suspended	QGC P/L
<b>Tallawalla 1</b>	692879.000	7098810.000	148° 55' 50.285" E	26° 13' 2.450" S	432.85	436.25	20/01/1991	27/01/1991	Exploration	Dry Hole	P&A	AGL Petroleum Ltd
<b>Titan 1</b>	707207.000	7096036.000	149° 4' 27.926" E	26° 14' 25.370" S	345.81	349.81	01/09/2010	8/09/2010	Appraisal	Gas Well	Suspended	QGC P/L