



## EMPIRE OIL & GAS NL

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29 March 2012

The Manager  
The Australian Securities Exchange  
The Company Announcements Office  
Level 4/20 Bridge Street  
SYDNEY NSW 2000

Dear Sir

**RE: PRESENTATION ON EMPIRE OIL & GAS N.L. PERTH BASIN AND THE RED GULLY GAS AND CONDENSATE PLANT DEVELOPMENT**

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Please find a presentation on Empire Oil & Gas N.L. and its Perth Basin Permits and the Red Gully Development.

Please note that Empire and the EP 389 Joint Venture have settled all agreements with Alcoa and Access to the Dampier to Bunbury Pipeline regarding the Red Gully Gas and Condensate Plant as previously released and not accurately reflected in this presentation.

Yours faithfully

**JL CRAIG MARSHALL**  
Managing Director  
EMPIRE OIL & GAS NL

### Competent Person's Statement

Information in this ASX Release relates to exploration results that are based on information compiled by Mr JL Craig Marshall who is a full time employee of Empire Oil & Gas NL. JL Craig Marshall is a Fellow of the Australian Institute of Mining and Metallurgy and is a Certified Practising Geologist BSc (Hons), F.Aus.IMM, CPGEO, and has more than 30 years experience relevant to oil and gas exploration and production.

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EMPIRE  
OIL & GAS NL

ABN 55 063 613 730

## Disclaimer and Competent Person's statement

### Disclaimer

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## Corporate

### MANAGEMENT

<b>JL Craig Marshall</b> BSc [Hons], F.Aus.IMM, CPGEO	Managing Director
<b>Dr Bevan Warris</b> BSc [Hons] PhD, AAPG, Certified Petroleum Geologist 4723	Executive Director
<b>Jeff McDonald</b> BSc Eng, Petroleum Geologist	Director
<b>Neil Joyce</b> BBus, FCS	Non Executive Director
<b>Kim Hogg</b> BCom	Company Secretary

### EQUITIES

#### GINGIN WEST AND RED GULLY GAS FIELD DISCOVERIES EP 389 PERTH BASIN

#### Permit Interest

Empire [Operator]	68.75%
ERM Gas Pty Ltd	21.25%
Wharf Resources Plc	10.00%

#### Market Details

Ordinary Shares	4,745,658,296
Market Capitalisation @ 2.0c =	\$95 million
@ 2.8c =	\$130 million [26 August 2011]
Funds	\$8 million
Debt	Nil

Forward Gas Supply Agreement and condensate sales will provide funds for gas plant, seismic and drilling in EP 389

<b>ASX Code</b>	EGO
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**Target:**

**INCREASE MARKET CAPITALISATION IN 2012-2013 TO \$200 MILLION+**

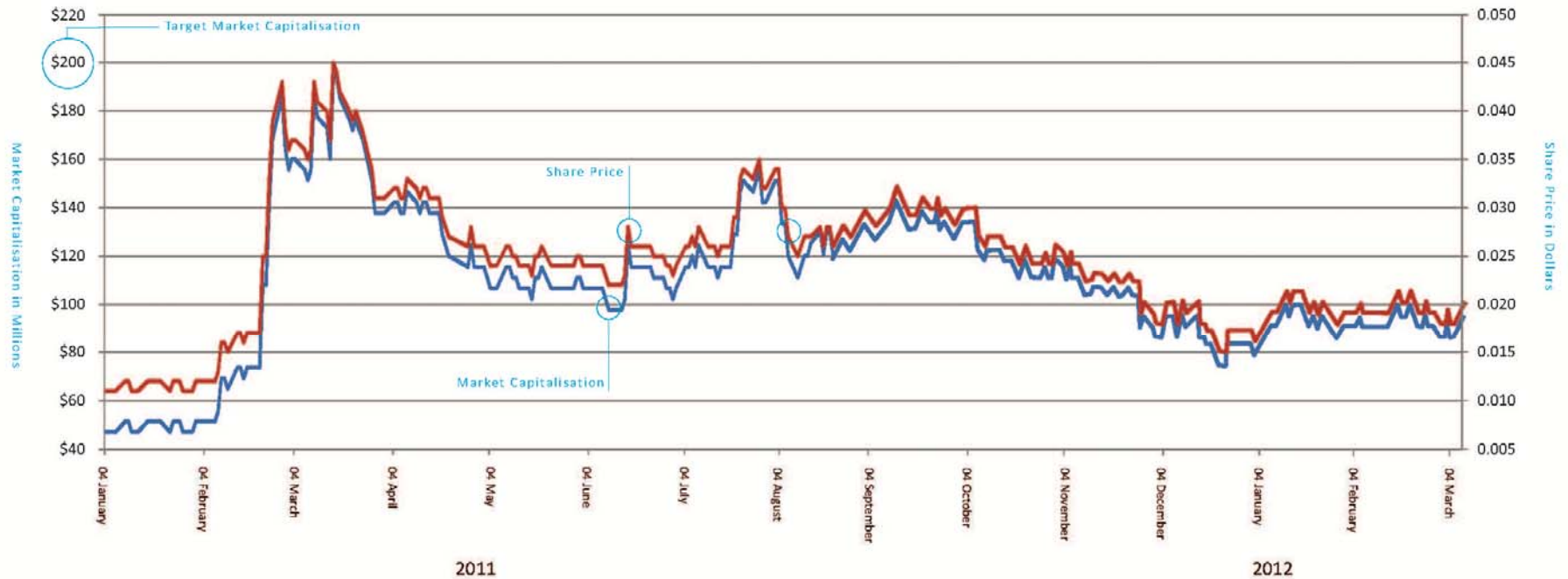
**Current:**

Market Capitalisation is A\$95 Million [March 2012]  
[A\$130 Million 26 August 2011]

**How:**

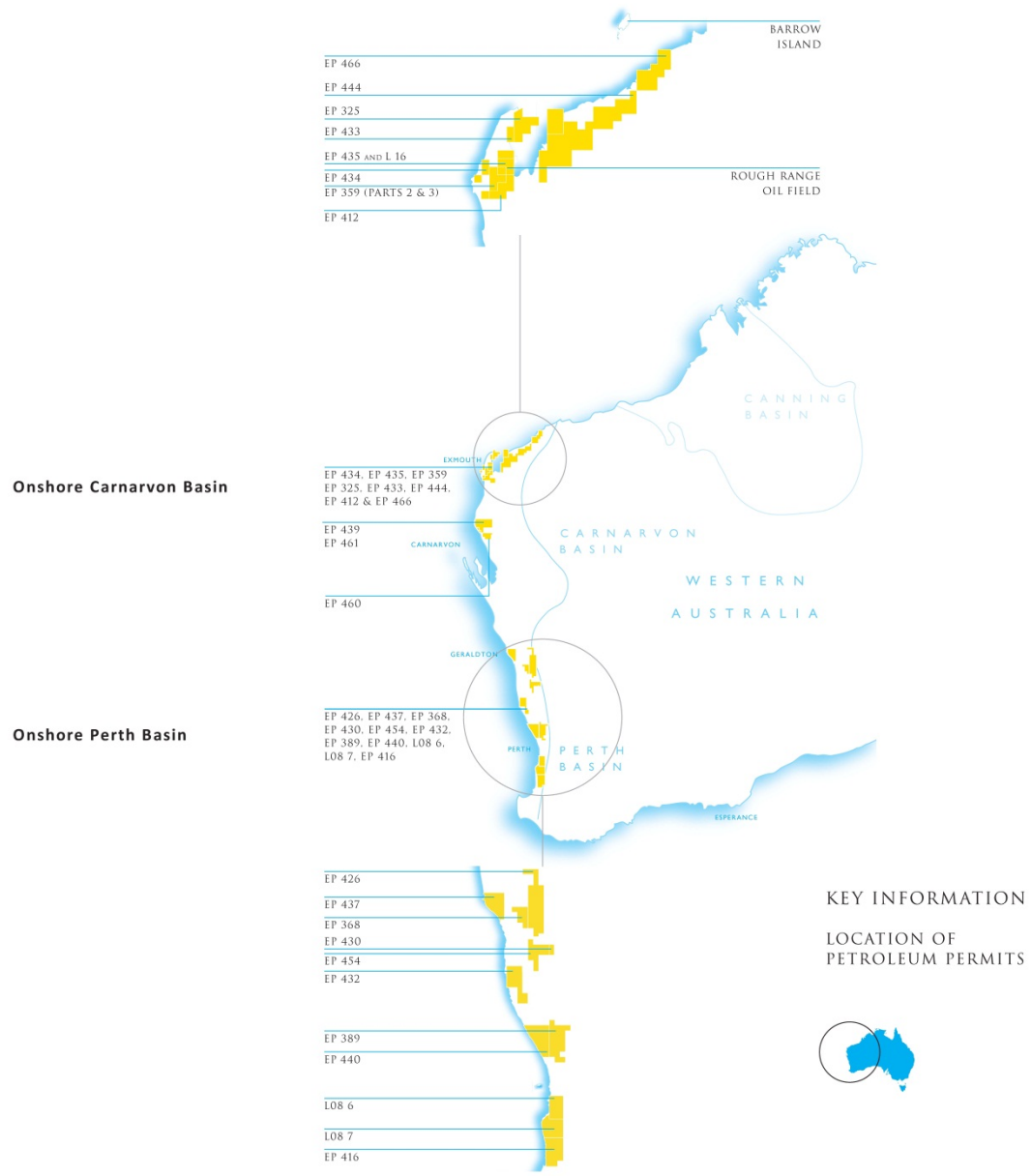
- Drill additional reserves in the Gingin area to have recoverable reserves of up to 100 BCF and associated condensate.
- Drill further wells in the North Perth Basin.

Empire Oil and Gas NL Market Capitalisation and Share Price 04 January - 04 March 2012



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# EMPIRE OIL & GAS NL



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**Onshore Carnarvon Basin**

DRILL UP TO A FURTHER 5 WELLS IN 2012-2013

SHALLOW HORIZONTAL WELL MARDIE OIL FIELD

DRILL TOPAZ SOUTH-1

FEASIBILITY STUDY FOR A RIVOLI GAS FIELD DEVELOPMENT WITH DEPARTMENT OF DEFENCE NEW PROSPECT

DRILL BIG HORN-1

DRILL AMETHYST-1 OR OPAL-1

WOGATTI OIL & SHALE GAS PROSPECT  
ROUGH RANGE OIL FIELD

DRILL RAINBOW-1

DRILL PATERSON TROUGH SHALE GAS WELL TO 2500 METRES. OPTION TO DRILL ADDITIONAL WELL

DRILL BEE-EATER-1

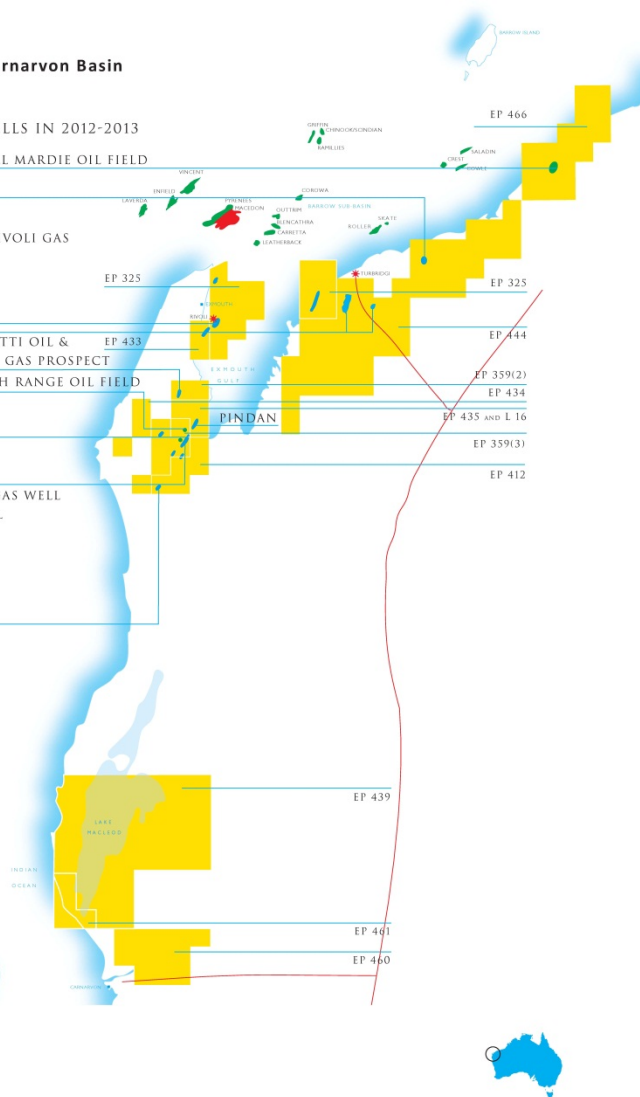
SANDALWOOD-1

**Carnarvon Basin**

13 Petroleum

Exploration Permits

1 Production Licence



**PLANNED DRILLING PROSPECTS**

PROSPECT	ESTIMATED POTENTIAL RECOVERABLE RESERVES
EP 359 DRILL A 2500 METRE WELL WITHIN PATERSON TROUGH TO EVALUATE SHALE OIL/GAS POTENTIAL OF THE MIDDLE JURASSIC AGED DINGO CLAYSTONE. THERE IS ALSO A TRADITIONAL OIL PLAY OF THE CRETACEOUS BIRDROG AND OR WOGATTI SANDSTONES AS A 'PINCH OUT' ON THE EASTERN FLANK OF THE CAPE RANGE ANTICLINE. DRILL BEE-EATER-1	5 MILLION BARRELS OF OIL
EP 435 OPTION TO DRILL SHALE GAS WELL WITH OPTION TO DRILL RAINBOW-1 UPON BEE-EATER DISCOVERY AND RECOMMENCE ROUGH RANGE 1B OIL PRODUCTION	5 MILLION BARRELS OF OIL
EP 412 DRILL SANDALWOOD-1	2 - 5 MILLION BARRELS OF OIL
EP 444 DRILL TWO WELLS TOPAZ SOUTH-1 AMETHYST-1 OPAL	5 MILLION BARRELS OF OIL 17 MILLION BARRELS OF OIL 12 MILLION BARRELS OF OIL
EP 466 DRILL MARDIE OIL FIELD A SHALLOW AND HORIZONTAL WELL TO ENHANCE OIL RECOVERY	1 - 5 MILLION BARRELS OF OIL
EP 325 RIVOLI GAS FIELD DEVELOPMENT DRILL BIG HORN OIL PROSPECT NEW PROSPECT PERMIAN OIL PLAY	SUBJECT OF A GAS FIELD DEVELOPMENT WITH THE DEPARTMENT OF DEFENCE

EMPIRE OIL & GAS NL

**Onshore Perth Basin**

11 Petroleum  
Exploration Permits

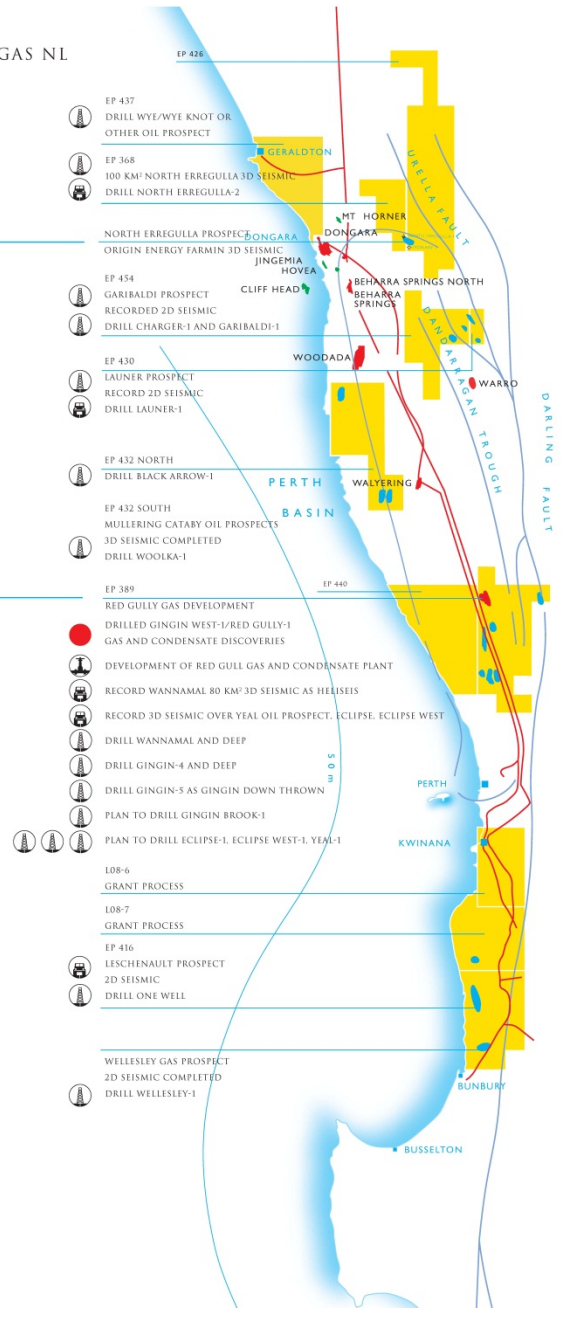
EP 368 / 462  
North Erregulla Prospect





















Origin Energy Farmin  
3D Seismic

**EP 389  
Red Gully Gas  
Development**

ONSHORE PERTH BASIN

- DISCOVERY
-  DRILL 1 WELL
-  GAS AND CONDENSATE PLANT
-  SEISMIC SURVEY
- PROSPECT



-  EP 437  
DRILL WYE/WYE KNOT OR  
OTHER OIL PROSPECT
-  EP 368  
100 KM<sup>2</sup> NORTH ERREGULLA 3D SEISMIC  
DRILL NORTH ERREGULLA-2
-  NORTH ERREGULLA PROSPECT  
ORIGIN ENERGY FARMIN 3D SEISMIC  
JINGEMIA HOVEA
-  EP 454  
GARIBALDI PROSPECT  
RECORDED 2D SEISMIC  
DRILL CHARGER-1 AND GARIBALDI-1
-  EP 430  
LAUNER PROSPECT  
RECORD 2D SEISMIC  
DRILL LAUNER-1
-  EP 432 NORTH  
DRILL BLACK ARROW-1
-  EP 432 SOUTH  
MULLERING GATBY OIL PROSPECTS  
3D SEISMIC COMPLETED  
DRILL WOOLKA-1
-  EP 389  
RED GULLY GAS DEVELOPMENT  
DRILLED GINGIN WEST-1/RED GULLY-1  
GAS AND CONDENSATE DISCOVERIES
-  DEVELOPMENT OF RED GULLY GAS AND CONDENSATE PLANT
-  RECORD WANNAMAL 80 KM<sup>2</sup> 3D SEISMIC AS HELISEIS
-  RECORD 3D SEISMIC OVER YEAL OIL PROSPECT, ECLIPSE, ECLIPSE WEST
-  DRILL WANNAMAL AND DEEP
-  DRILL GINGIN-4 AND DEEP
-  DRILL GINGIN-5 AS GINGIN DOWN THROWN
-  PLAN TO DRILL GINGIN BROOK-1
-  PLAN TO DRILL ECLIPSE-1, ECLIPSE WEST-1, YEAL-1
-  L08-6  
GRANT PROCESS
-  L08-7  
GRANT PROCESS
-  EP 416  
LESCHENAULT PROSPECT  
2D SEISMIC  
DRILL ONE WELL
-  WELLESLEY GAS PROSPECT  
2D SEISMIC COMPLETED  
DRILL WELLESLEY-1



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## GINGIN WEST-1 AND RED GULLY-1 GAS AND CONDENSATE DISCOVERIES

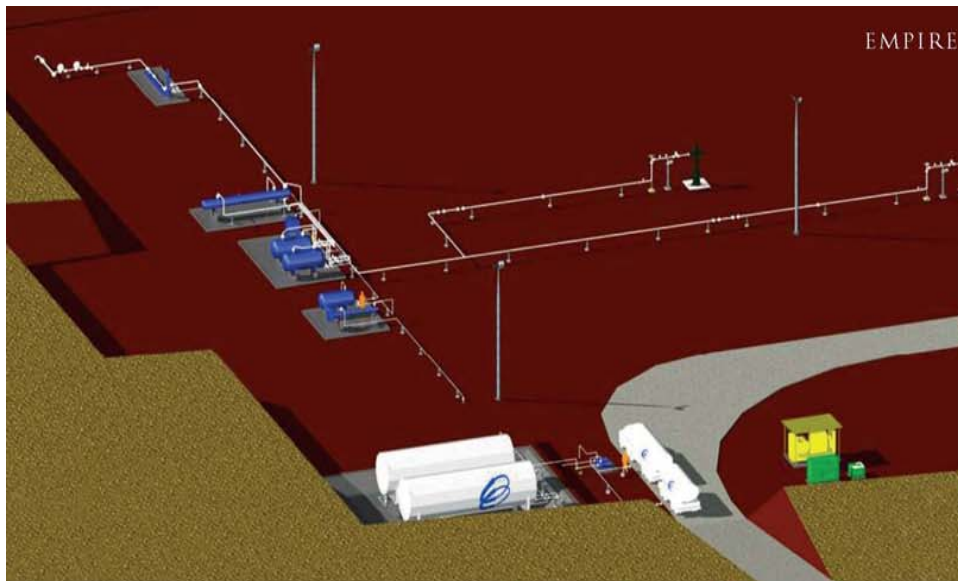
Onshore Perth Basin, Western Australia

- Gas Sales Agreement with Alcoa [under negotiation]
- Condensate Sales to BP Kwinana
- Production 2012
- Drilling for additional reserves
- Wannamal and Wannamal Deep
- New 3D Seismic
- Drill Gingin-4 and 5 wells
- 3D seismic
- Drill Gingin Brook, Eclipse Deepening and Yeal
- Drilling in other Perth Basin Permits

Red Gully-1 FARO 12 MMCFD and 832 BCPD  
March 2011





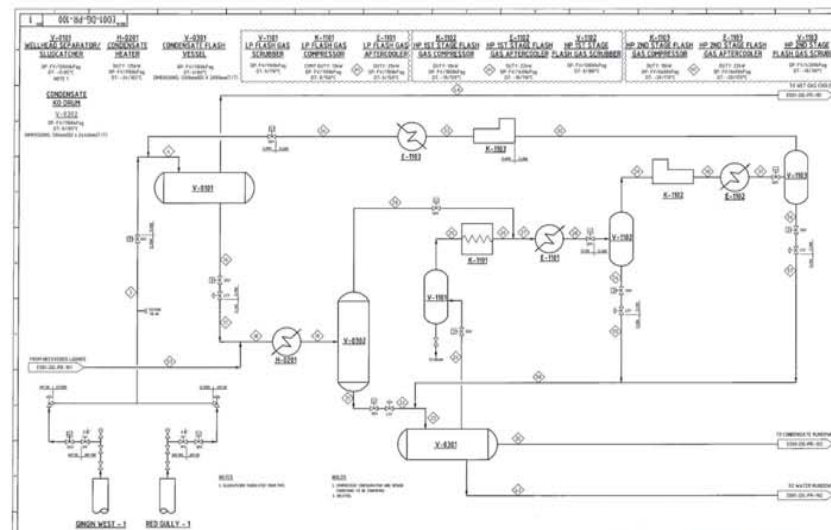


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Red Gully Gas and Condensate Plant Development

### Red Gully-1 Development

- Forward Gas Supply and Additional Gas Supply Agreement, the subject of exclusive negotiations with Alcoa of Australia Limited;
- Forward Gas Sales Contract will fund the Red Gully Gas and Condensate Plant together with Condensate Sales will fund 3D Seismic and drilling of Wannamal-1;
- Red Gully-1 Gas and Condensate Plant designed by Momentum Engineering - a Western Australian Firm;
- Production profiles for gas production rates to maximise gas and condensate recoveries are near complete;
- **Gas production in 2012 is planned with Condensate sales to BP Refinery, Kwinana, Western Australia;**
- Natural gas pipeline access 2500 metres from the Red Gully Gas and Condensate Plant;
- The Dampier to Bunbury Pipeline is favoured by Empire.



Export to DBNGP Pipeline

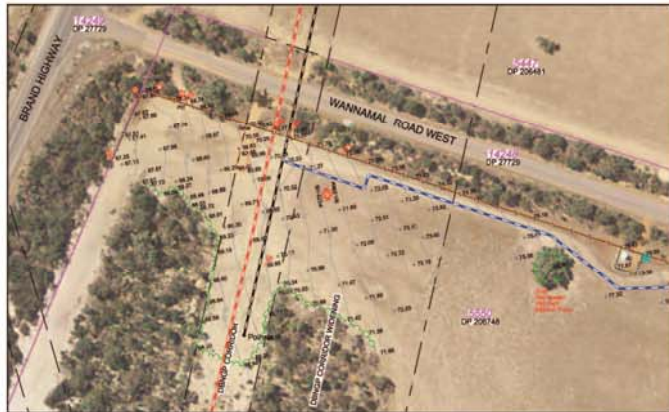
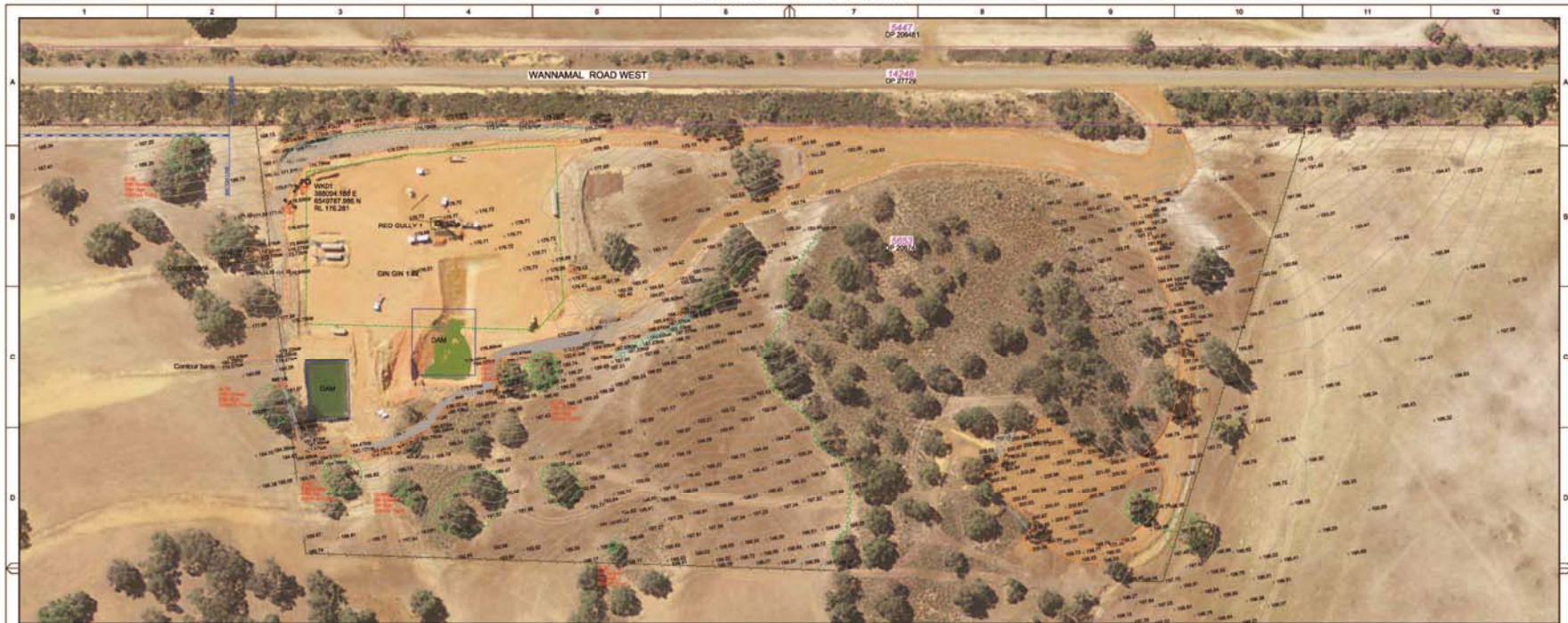
### Red Gully Gas and Condensate Plant

Additional recoverable gas prospects to be drilled where new gas and condensate discoveries will be processed and transported through the Red Gully Plant. These are:

- Wannamal and Wannamal Deep located adjacent to Gingin West-1 is mature for drilling and is defined by 3D Seismic. Potential recoverable reserves are:  
Wannamal and Wannamal Deep 66 BCF and 2.3 MMBC
- Gingin Gas Field is the subject of additional 3D seismic to provide:
  - Gingin-4 well 50 BCF and 2.5 MMBC and Gingin-2 Deep 32 BCF and 1.6 MMBC being in total 82 BCF and 4.1 MMBC [at 50 BC per 1 MMCFG].
  - Gingin-5 [Gingin-3 side track] 37 BCF and 1.8 MMBC [at 50 BC per 1 MMCFG].
  - **Total defined additional potential recoverable gas to be processed through Red Gully Gas Plant at 185 BCF and 8.2 MMBC.**
  - The Gingin Gas Field area may require an additional well [Gingin-6] and the 3D seismic may delineate additional tilted fault block structures in the lower Cattamarra for additional gas reserves.
- By deepening Gingin West-1 to the Bootine Deep Tilted Fault Block there is potential recoverable oil reserves of 3 MMBO. This would increase the potential recoverable condensate and oil reserves to 11.1 million barrels. It is more likely to be 20 BCF of recoverable gas.
- **Future potential recoverable gas to be processed through Red Gully Gas Plant:**
  - Wannamal and Deep, Gingin-4 and Deep, Gingin-5 [Gingin-3 sidetrack] and the Bootine Deep is 205 BCF and 9.2 MMBC.

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CENTRELINE TO BE CONFIRMED AND SHOULD BE NOTED AS PRELIMINARY

DINGP LOCATION BY SUPPLIED DATA - ACCURACY UNKNOWN STAGE 4 LOOPING BY AS SULT DATA



**LEGEND**

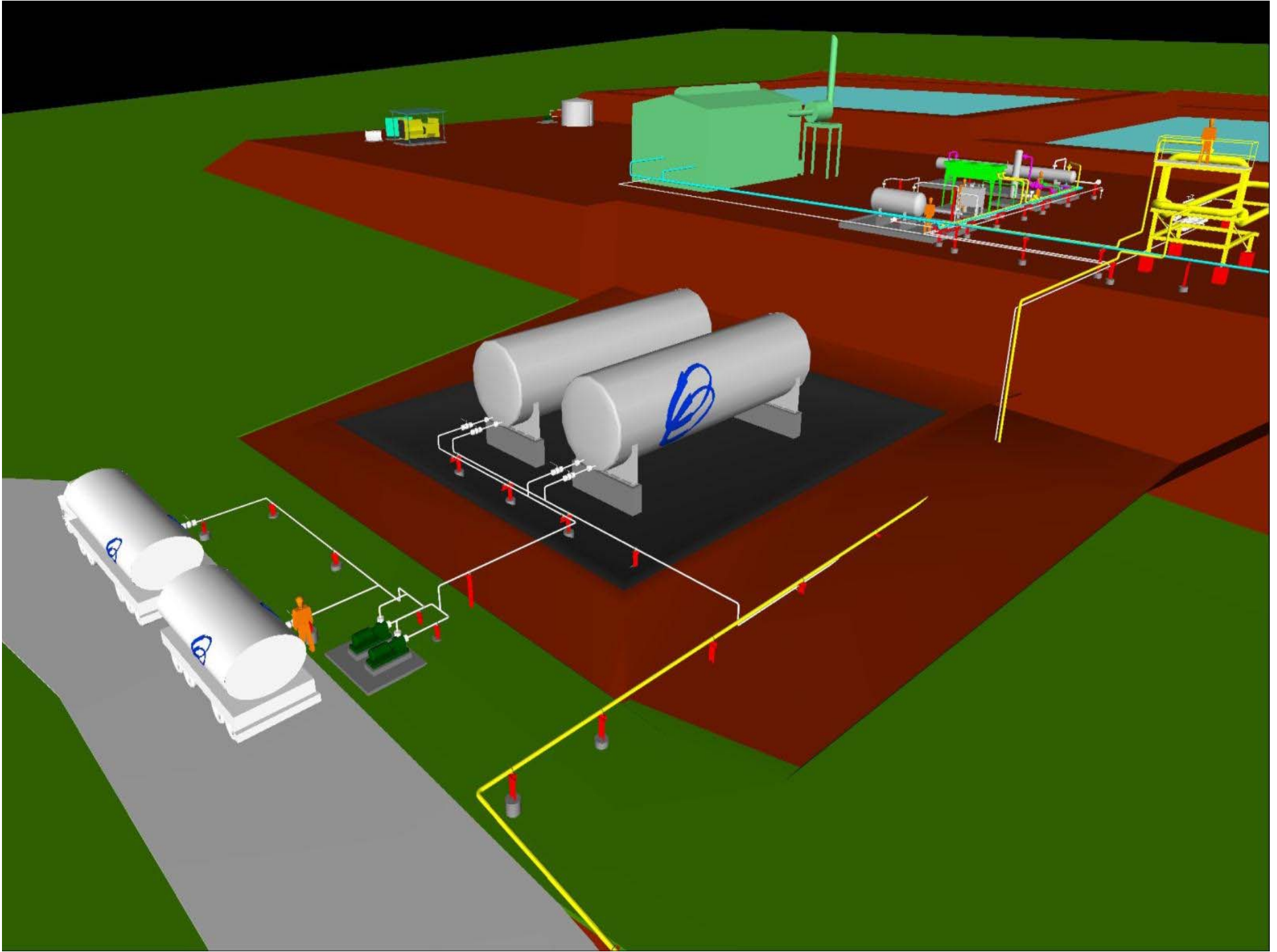
	CADASTRAL BOUNDARY		SURVEY CONTROL
	CONTOUR (INTERNAL 0.5m)		CATHODE TEST POINT
	CONTOUR BANKING		CONCRETE PIT
	DINGP CORRIDOR BOUNDARY		CONCRETE SLAB
	EDGE OF GRAVEL ROAD		GAS WARNING SIGN
	FENCE		GATE
	LEASE BOUNDARY - APPROX		GROUND LEVEL
	PROPOSED CENTRELINE		OPTIC FIBRE WARNING SIGN
	CENTRELINE DINGP (POT HOLES)		POWER POLE WITH METER
	CENTRELINE STAGE 4 LOOPING (AS BUILT)		TREE
	TELSTRA MAIN		VALVE
	TOE OF BANK		PHOTO LOCATION
	TOP OF BANK		COMM CABLE MARKER
	TOE OF DRAIN		
	TOP OF DRAIN		
	TREELINE		
	DAM		

Horizontal Datum: GDA84 Projection: MGA Zone: 50 Vertical Datum: AHD Datum Source: GDM PTH 107 Dimensions / Units: 30 Metres SCRS Retrieval Date: 13/01/2012 Field Book: Level Book: Data File: 11259-NQ01		This drawing should be used in accordance with the terms and conditions of the contract for the survey. It is not to be used for any other purpose without the written consent of the surveyor.	<b>WARREN KING &amp; Co</b> PROFESSIONAL ENGINEERS & SURVEYORS EMPIRE OIL & GAS NL	HORIZONTAL SCALE (m) 1:1000 DRAWN: MFA 18/01/2012 SURVEYOR: N.GOWERALL 11/01/2012 CHECKED: N.GOWERALL 18/01/2012 APPROVED: D.BROWN	<b>EMPIRE OIL COMPANY (WA) LTD</b> <b>RED GULLY PIPELINE PROJECT</b> CONTOUR AND FEATURE SURVEY ON PART LOTS 5653 AND 5503 OF 206748 WANNAMAL ROAD WEST	CLIENT No: C1157 DRAWING NUMBER: 11259-P001 REV: 0 SIZE: A1
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Rev	Date	Revision Description	Drawn	Surveyor/Approved	Design	Eng Chk	Client	Ref Drawing Code	Ref Drawing No	Ref Drawing Title
S	28/01/12	APPROVED AND ISSUED TO CLIENT	MFA	NG	DB					
A	18/07/12	ISSUED FOR REVIEW	MFA	NG	DB					



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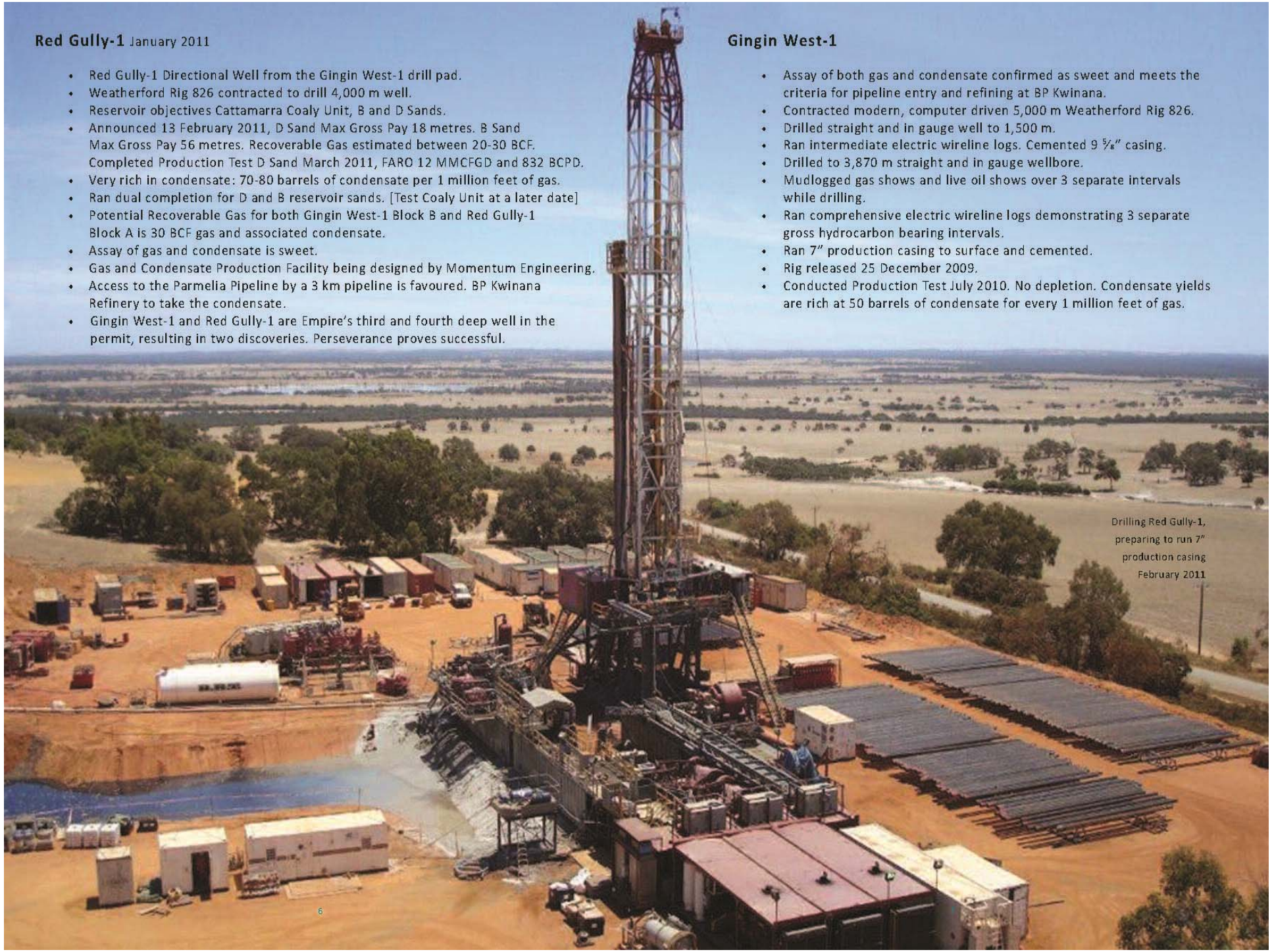


### Red Gully-1 January 2011

- Red Gully-1 Directional Well from the Gingin West-1 drill pad.
- Weatherford Rig 826 contracted to drill 4,000 m well.
- Reservoir objectives Cattamarra Coaly Unit, B and D Sands.
- Announced 13 February 2011, D Sand Max Gross Pay 18 metres. B Sand Max Gross Pay 56 metres. Recoverable Gas estimated between 20-30 BCF. Completed Production Test D Sand March 2011, FARO 12 MMCFGD and 832 BCPD.
- Very rich in condensate: 70-80 barrels of condensate per 1 million feet of gas.
- Ran dual completion for D and B reservoir sands. [Test Coaly Unit at a later date]
- Potential Recoverable Gas for both Gingin West-1 Block B and Red Gully-1 Block A is 30 BCF gas and associated condensate.
- Assay of gas and condensate is sweet.
- Gas and Condensate Production Facility being designed by Momentum Engineering.
- Access to the Parmelia Pipeline by a 3 km pipeline is favoured. BP Kwinana Refinery to take the condensate.
- Gingin West-1 and Red Gully-1 are Empire's third and fourth deep well in the permit, resulting in two discoveries. Perseverance proves successful.

### Gingin West-1

- Assay of both gas and condensate confirmed as sweet and meets the criteria for pipeline entry and refining at BP Kwinana.
- Contracted modern, computer driven 5,000 m Weatherford Rig 826.
- Drilled straight and in gauge well to 1,500 m.
- Ran intermediate electric wireline logs. Cemented 9 5/8" casing.
- Drilled to 3,870 m straight and in gauge wellbore.
- Mudlogged gas shows and live oil shows over 3 separate intervals while drilling.
- Ran comprehensive electric wireline logs demonstrating 3 separate gross hydrocarbon bearing intervals.
- Ran 7" production casing to surface and cemented.
- Rig released 25 December 2009.
- Conducted Production Test July 2010. No depletion. Condensate yields are rich at 50 barrels of condensate for every 1 million feet of gas.



Drilling Red Gully-1, preparing to run 7" production casing February 2011

## Gingin West-1

### COMPLETED DISCOVERY WELL

- Cattamarra D Sand tested.
- The Top D Sand interval 3,571.5 - 3,586.8 m [15.3 m] perforated with through tubing - perforating guns, on electric wireline. [Discovery FARO 7.66 MMCFGD 301 BCPD].
- Gingin West-1 will be deepened to the Bootine Deep [Tilted Fault Block] to access potential additional 20 BCF and 1 MMBC.
- Strong gas shows in the Coaly Unit of the Cattamarra Coal Measures over the Interval 3,287.5 - 3,375 m [87.5 m] are interpreted to be gas bearing and are to be tested upon depletion of the Top D Sand reservoir and the Bootine Deep in the future.

### TESTING

- Release Rig 826 off location.
- Slickline operations and crane with lubricator.
- Halliburton pump unit.
- Test under balanced with diesel cushion.
- 10,000 psi wellhead and Xmas Tree.
- Perforate discovery interval with electric wireline.
- Farley Riggs test package of choke manifold and gas/condensate separator, flowed at a stabilised rate of 7.5 MMCFGD/375 BCPD.

10,000 psi wellhead, Xmas Tree and Halliburton pump unit.

Perforating Gingin West-1 with new electric logging company, Crocker Trucker Energy Services Pty Ltd, with wireline through tubing guns.



## Red Gully-1

### COMPLETED DISCOVERY WELL

- 3 Hydrocarbon intervals. The D, B and Coaly Unity of the Cattamarra Formation;
- A dual completion was run in the well for the D and B sands;
- Perforated D Sand with tubing conveyed perforating guns and flowed on production test at a stabilised rate of 12 million cubic feet of gas per day [12 MMCFGD] and 832 barrels of condensate per day [832 BCPD];
- A Completion was also run to perforate the B Sand with through tubing perforation guns at a later date;
- Pay: D Sand 18 metres
- B Sand 56 metres. The B sand is full to its spill point;
- Recoverable gas and condensate estimated 20 to 33 BCF and 1.6 to 2.65 MMBC.

Red Gully-1 Slickline operations on the Red Gully-1 well with a 10,000 PSI wellhead and Xmas Tree. Preparing to perforate the D sand. There are two completions run in the D and B sands of the Cattamarra Coal Measures.

- The Cattamarra Coaly Unit Gas Sands will be tested at a later date.
- This Unit and the C Shale are Gas Objectives within EP 389 Permit.

### TESTING

- Released Rig 826 off location after the dual completion was run with tubing conveyed perforating guns.
- Slickline operating and crane and lubricator.
- Test underbalanced with diesel cushion.
- 10,000psi wellhead and Xmas Tree.
- Perforated D sand with tubing conveyed perforating guns.
- Flow rate: 12 MMCFGD and 832 barrels of condensate per day.

Red Gully-1 Lubricator on crane ready to perforate with tubing conveyed perforating guns. Rig 826 laid down in the background.



### Red Gully-1

Drilling Engineer Hugh Edwards and Craig Marshall with Red Gully condensate samples.

Note the clear condensate which is high in gasoline and kerosene fractions.

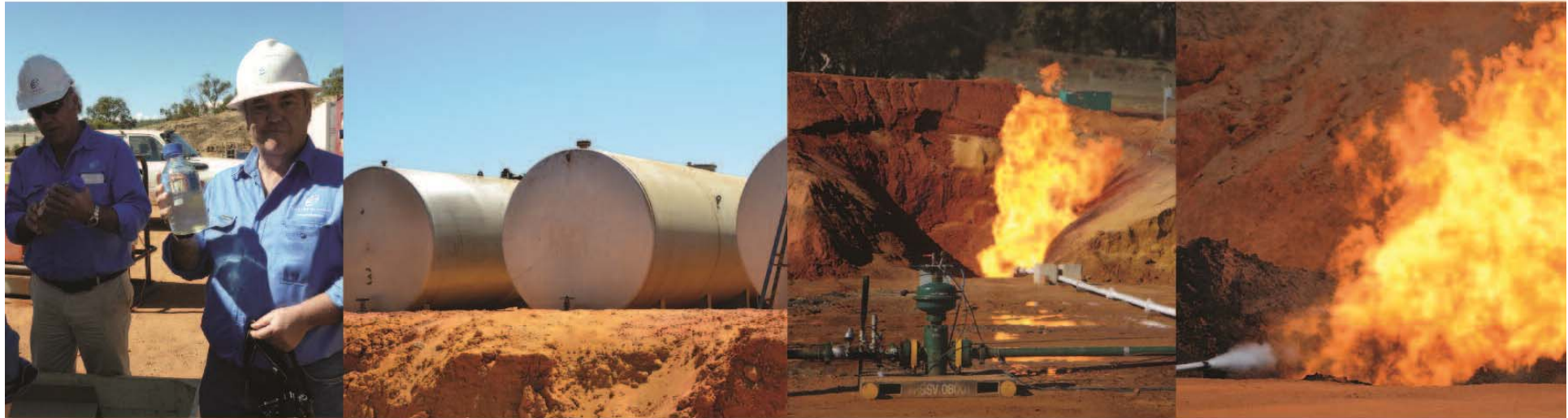
Three Test Tanks were quickly filled on Production Test with very high condensate levels of 70 to 80 barrels of condensate per 1 million cubic feet of gas. Stabilised flow rate of 12MMCFGD and 832 BCPD.

The Condensate will be sold to the BP Oil Refinery under a Crude Oil Sales Agreement.

Condensate attracts a premium price to crude oil.

Gingin West-1 Gas and Condensate Discovery FARG of 7.5 MMCFGD and approximately 375 BCPD. Production Test, 13 July 2010, Flare line frozen white due to gas expansion and cooling while flaring

Red Gully-1 FARG 12MMCFGD and 832 BCPD on Production Test, 13-17 March 2011





## Gingin West-1

### TEST IS A DISCOVERY WELL

- Perforated 1254 hours, 12 April with wireline through tubing 3,572 - 3,575 m.
- Gross Interval 3,571.5 - 3,586.8 m [15.3 m].
- Underbalanced with diesel cushion.
- Gas to surface 1915 hours, 12 April 2010.
- 13 April 2010 FARO 7.66 MMCFGD and 301 BCPD  $\frac{3}{8}$ " choke [Condensate equates to 40 barrels per 1 MMCFG].
- Shut in after flowing 15½ hours. Instant build up at wellhead of 3,423 psi at 0600 hours, 14 April 2010.
- Production test 12 - 16 July 2010 flowed at a stabilised rate of 7.5 MMCFGD and 375 BCPD.

## Red Gully-1

- A similar Underbalanced Test Programme to Gingin West-1 was conducted for the Red Gully-1 discovery well.
- Demonstrated instant build upon production test.

### Red Gully-1 Discovery Well

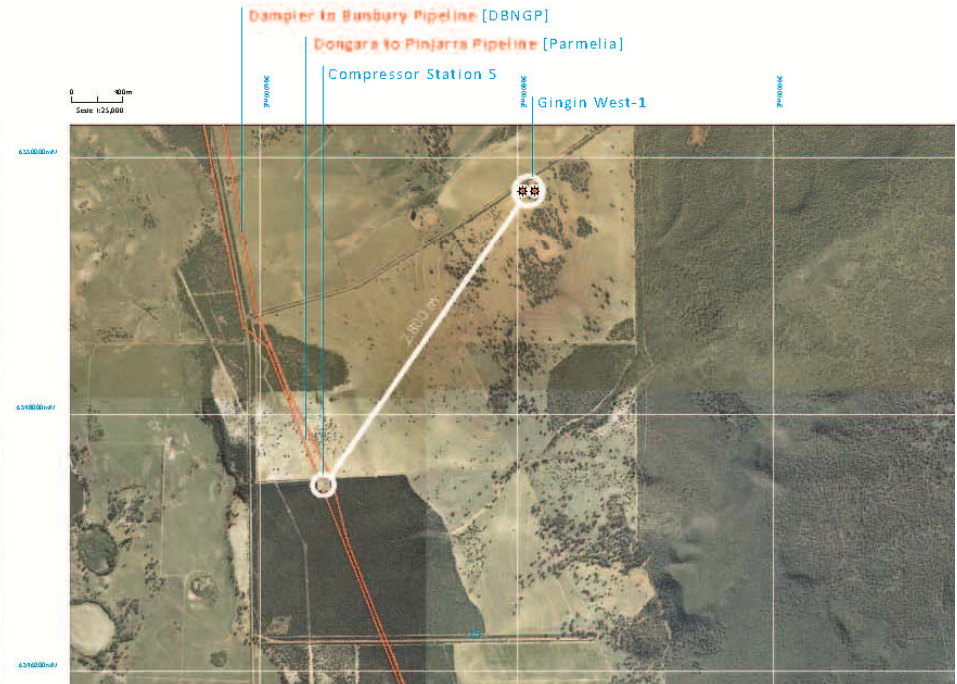
Production Test March 2011, through gas separator at 12 million cubic feet of gas per day and 832 barrels of condensate



## Gingin West-1 and Red Gully-1

### PIPELINE INFRASTRUCTURE

- Immediately adjacent to two natural gas pipelines.
- Production testing supplied comprehensive assays confirmed natural gas entry into either Pipeline and the condensate is suitable for refining at BP Kwinana. Crude oil sales, including Red Gully condensate, being settled with BP.
- Dongara to Pinjarra Pipeline [Parmelia] Pipeline has Compression Station No. 5 located 2.8 kms from Gingin West-1 and is the preferred pipeline.
- Sell condensate to BP Kwinana 150 kms by road tankers. Condensate attracts a premium price to crude oil.
- Empire has settled terms of a Gas Sales Agreement and is negotiating a Gas Supply Agreement with Alcoa of Australia Limited.
- Negotiating freehold land purchase.
- There is market demand for both domestic gas and gas for power generation. The market is seeking a diversity of gas supply from NW Shelf gas.
- Gas pricing in Western Australia is very robust.



## Production and Drilling Programmes

Production into pipeline for forward sales gas and additional gas sales being negotiated with Alcoa of Australia. Condensate to BP Kwinana Refinery to include the Red Gully, Gingin West condensate and future discovered condensate.

Construction of the Gas Plant, flowlines and condensate tanks are funded by a Forward Gas Sales Agreement. Plant design by Momentum Engineering. Gingin West-1 Block B and Red Gully-1 Block A have recoverable gas estimated at 3CF with associated condensate.

### Applied for Production Licence for 21 years over the location.

Well Wannamal and Wannamal Deep already defined by 3D Seismic. Record 3D seismic to define well locations and closures. Additional potential gas and condensate for the Wannamal and the Gingin Gas Field structures totals 5 BCF and 8.2 MMBC to be processed through the Red Gully Gas Plant. Other structures located along the Gingin to Bullsbrook 60 km Trend, include the Gingin Brook, Eclipse, Eclipse West and Yeal prospects. The Gingin Gas Field Area and the Gingin Brook Anticlinal Structure are both scheduled for 3D Seismic in 2011/12.

New seismic will also define: the deeper Fault Block Structure Gingin-2 Deep, to be drilled as Gingin-4 and Gingin-4 Deep.

Gingin-5 can be drilled as a side-track from the Gingin-3, a suspended well drilled in Empire in 1998.

Well Gingin Brook-1 well on confirmed 3D Anticlinal Closure.

The Gingin Brook Anticlinal Structure has the potential for up to 100 BCF of recoverable gas in the D Sand. The larger Gingin Brook fault dependent structure is a much larger play.

Test of Red Gully-1. The Gingin West-1 Discovery well is to the right of the picture fenced off.



## History

### DISCOVERIES

#### GINGIN GAS FIELD AREA

- Gingin-1, [WAPET] 1964 - flowed 5 MMCFGD. Cumulative production 1.72 BCF.
- Gingin-2 [WAPET] 1965 - tested at rate 3.9 MMCFGD.
- Bootine-1 [MESA] 1981 - tested 2.25 MMCFGD.
- Gingin West-1 [Empire] 2010, FARO 7.5 MMCFGD, 375 BCPD
- Red Gully-1 [Empire] 2011, FARO 12 MMCFGD, 832 BCPD

#### THE EMPIRE GINGIN - BULLSBROOK TREND

- 60 km Trend defined by Empire's existing recording of 444 kms 3D seismic and all the 333 kms of reprocessed seismic.
- Potential unrisks reserves 1238 BCF [1.2 TCF] and 48.5 Million barrels oil.
- New 3D seismic is the pre-requisite for drilling success.

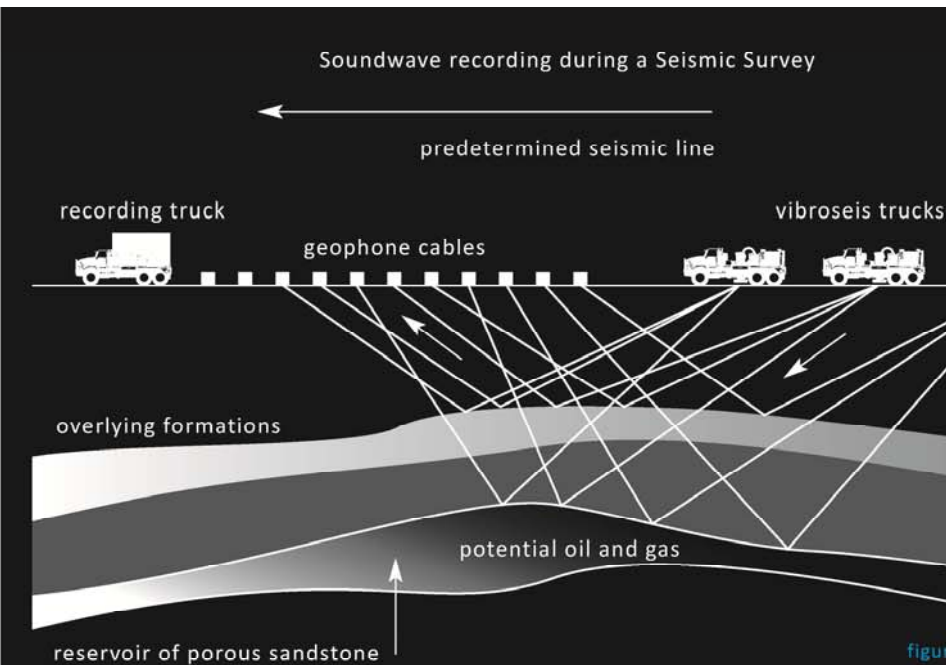
#### PIPELINE AND OTHER INFRASTRUCTURE

- 2 Pipelines - located 2.8 kms from Gingin West.
- 2 Highways - Brand Highway and Great Northern Highway.
- Access roads - all bitumen or quality graded gravel roads.

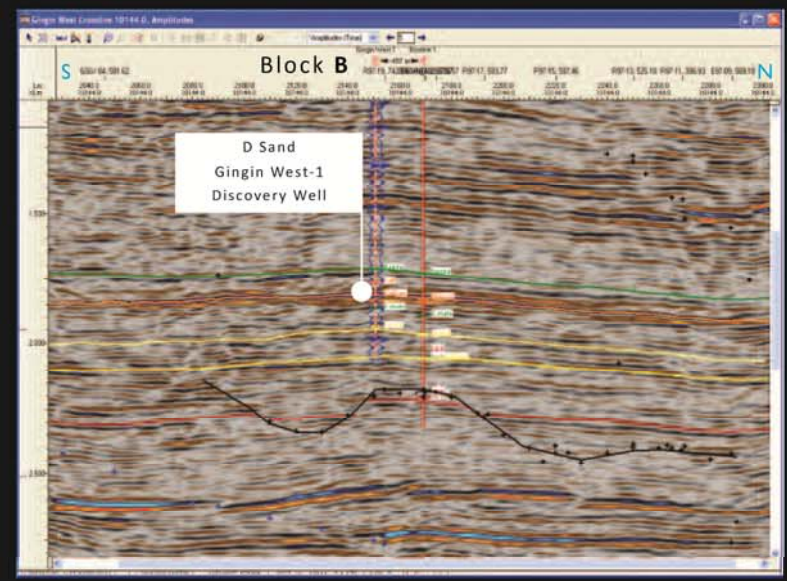
### Seismic Method

Seismic Method inputs sound waves or vibrations, deep into the earth where they reflect back to the surface from various rock layers [Figure 1] to be digitally recorded. The recorded information is analysed and manipulated to create a picture - known as a seismic section, a cross-section of the earth's subsurface - that is used to identify zones of likely oil or gas deposits. An example seismic section can be seen in Figure 2. This cross-section was taken across the Gingin West structure in EP-389 where the successful Gingin West-1 well was drilled, and is approximately 125 kms north of Perth.

Gingin West 3D seismic in EP 389 Perth Basin



The process of recording seismic to map the subsurface in search of trapped accumulations of oil and gas



## Gingin West-1 and Red Gully-1 Gas/Condensate Discoveries

How it was achieved

### 2D SEISMIC

- Recorded 444 kms of Modern 160 fold 2D Vibroseis seismic over EP 389.
- Reprocessed 333 kms of existing seismic.
- Delineated Gingin West Prospect and the 60 km Gingin to Bullsbrook Trend of prospects and leads.

Recording 2D seismic over Gingin West-1 with buggy Vibroseis.



Recording 3D seismic over Gingin West structure.

### 3D SEISMIC

- Recorded detailed 45 km<sup>2</sup> 3D seismic over Gingin West Prospects.
- Mapped Gingin West 3D seismic and 2D seismic to provide:
  - Gingin West Block B [4 way dip anticline] discovery Gingin West-1 well.
  - Gingin West Block A [fault dependent anticline] drilled 2011 as Red Gully-1.

Gas and Condensate Discoveries

80 kms to Perth

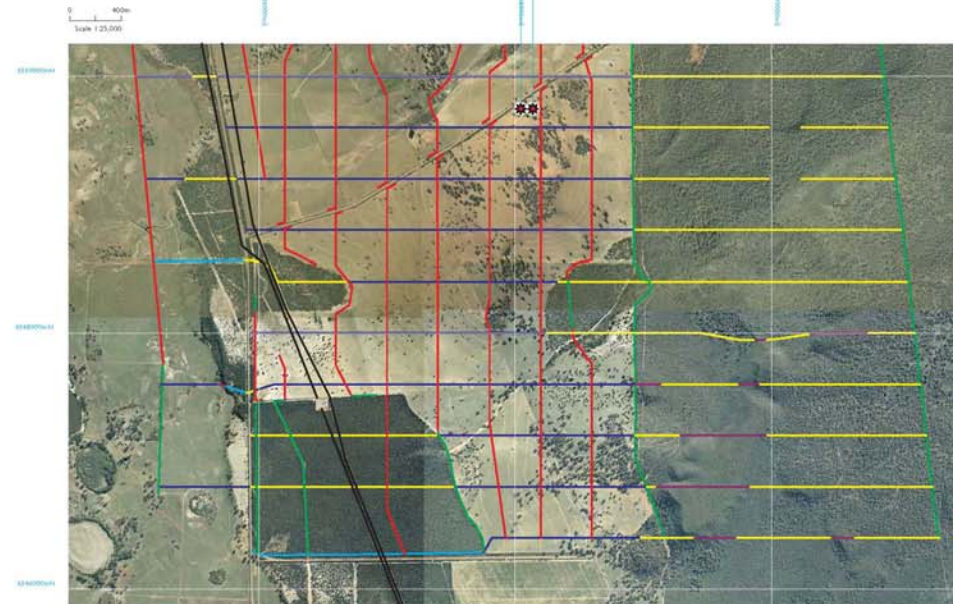
150 kms to BP Oil Refinery

2.8 kms to both Gas Pipelines

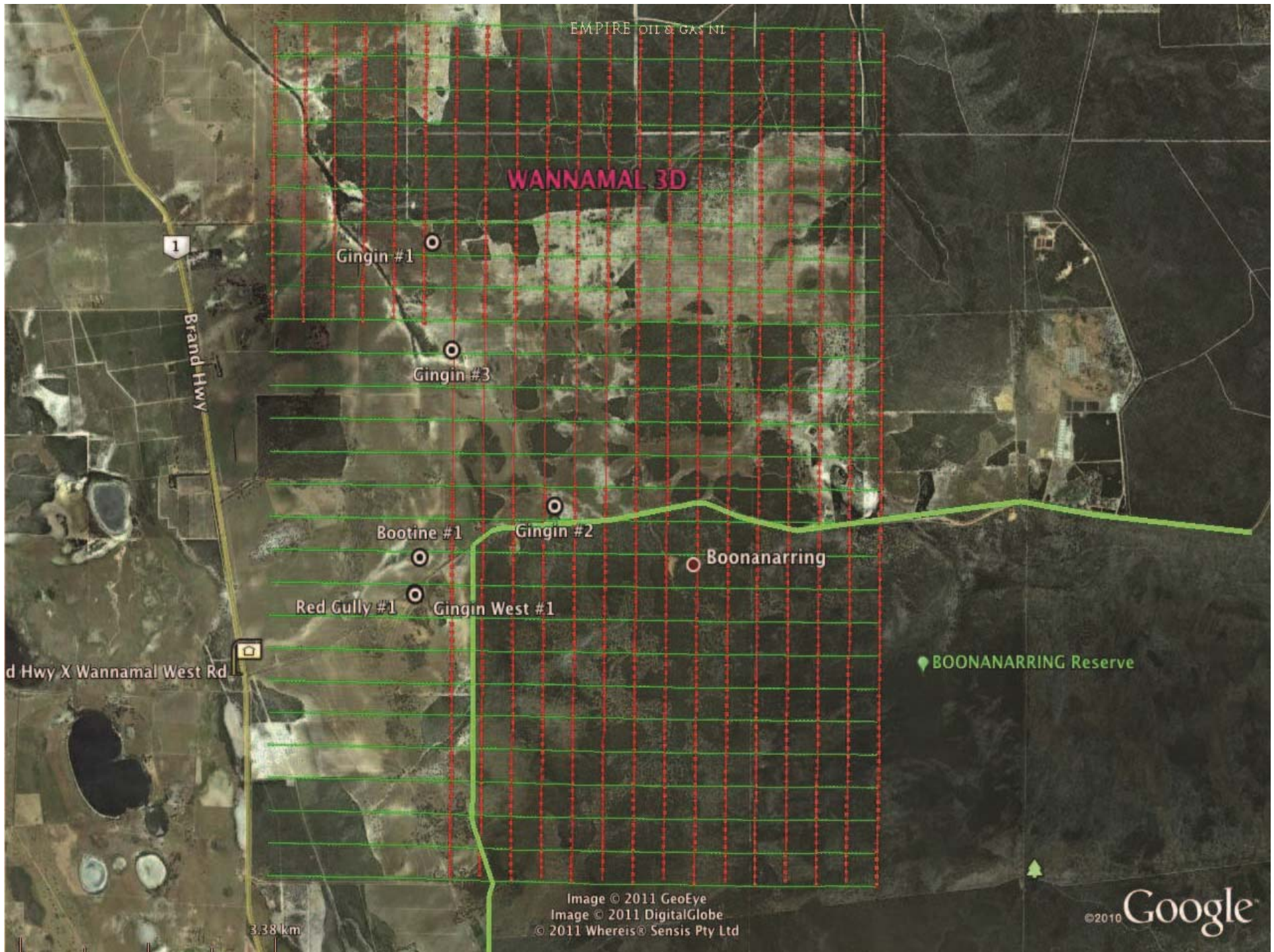


3D seismic over  
Gingin West and Red Gully  
Discoveries

Red Gully-1 Gingin West-1



- Seismic Source Line
- Seismic Source Line on Existing Track
- Seismic Receiver Line [To be rolled]
- Seismic Receiver Line [Hand Carry]
- Seismic Receiver Line [No Clearing or brush cutting]
- Seismic Receiver Line on Existing Track



EMPIRE OIL & GAS NL



### Heliportable Seismic Exploration

- Minimal equipment footprint
- No motor vehicle wheel tracks
- Minimal environmental impact and rehabilitation
- Fast and efficient airborne transport

### Heliportable Seismic Exploration

Drilling equipment transported by road to a central staging base

The HeliBellyHook is used to lift up to 2.7 tonne loads

Drilling equipment and water lifted into location. One helicopter leap frogs drills in a continuous operation, landing only for fuel and pilot change

Shothole loader prepares charge and loads hole. Typically, two or more 0.5 kg cartridges screw together, are primed with two electronic detonators and 'poled' carefully to confirm actual depth of charge



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### portable Seismic Exploration

Layers of graded gravel are used for the charge to prevent detonator wires are

Geophones are connected to a recording truck

Recording equipment and field activity is controlled from the 'dog box', located for VHF communications

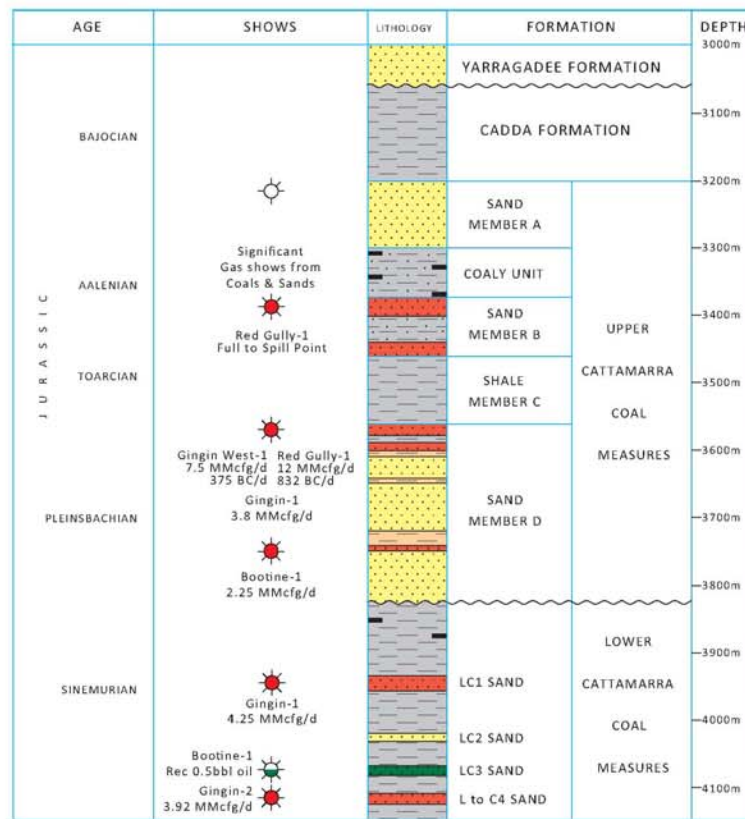
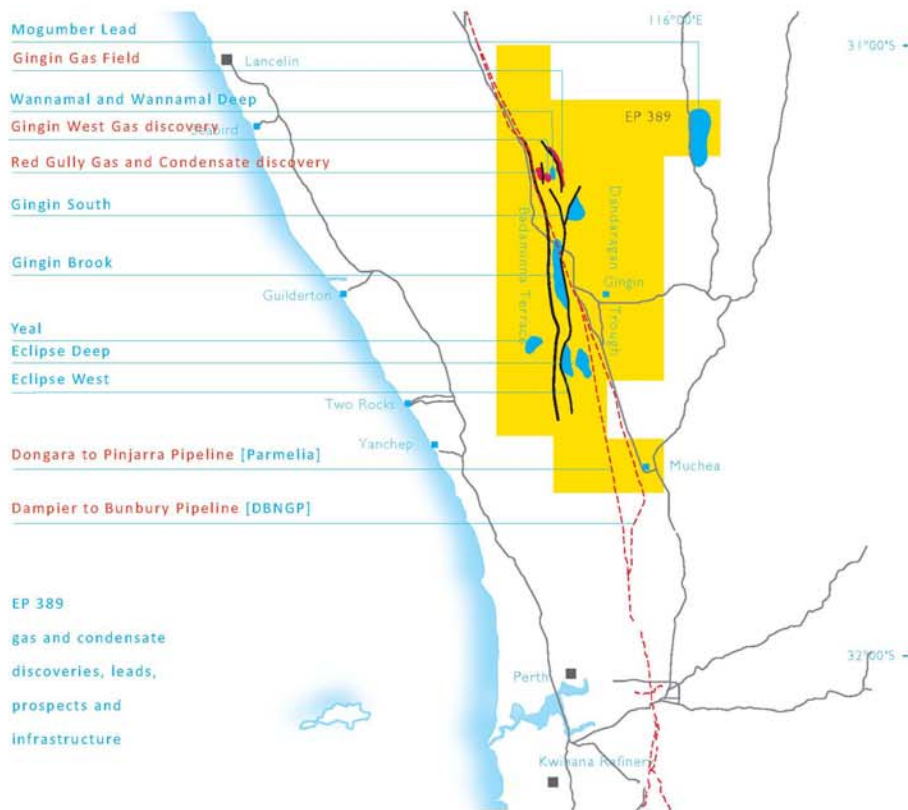
Several thousand active receiver groups [geophones] are connected to the recorder.





POTENTIAL RECOVERABLE GAS EP 389 PROSPECTS

PROSPECT	GAS	OIL + CONDENSATE	STATUS
Gingin-1 Closure	87 BCF	4.3 million bbls	Needs 3D Seismic
Gingin-2 Deep	32 BCF	1.6 million bbls	Needs 3D Seismic
Bootine Deep	20 BCF or	3.0 million bbls	Ready to drill
Wannamal	52 BCF	1.6 million bbls	Ready to drill
Wannamal Deep	14 BCF	0.7 million bbls	Ready to drill
Gingin South	100 BCF	1.2 million bbls	Needs 3D Seismic
Gingin Brook	600 BCF	7.2 million bbls	Needs 3D Seismic
Yéal	0 BCF	25.0 million bbls	Needs 3D Seismic
Eclipse	100 BCF	1.2 million bbls	Needs 3D Seismic
Eclipse West	225 BCF	2.7 million bbls	Needs 3D Seismic
<b>TOTAL</b>	<b>1238 BCF</b>	<b>48.5 million bbls</b>	



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**GINGIN WEST-1 GAS DISCOVERY BLOCK B**  
**FLOWED AT A RATE OF 7.5 MMCFGD AND 375 BCPD**

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st-1 Gas Discovery  
 I Play

st 3D  
 rvey

eviated well

losure potential  
 ) Sand

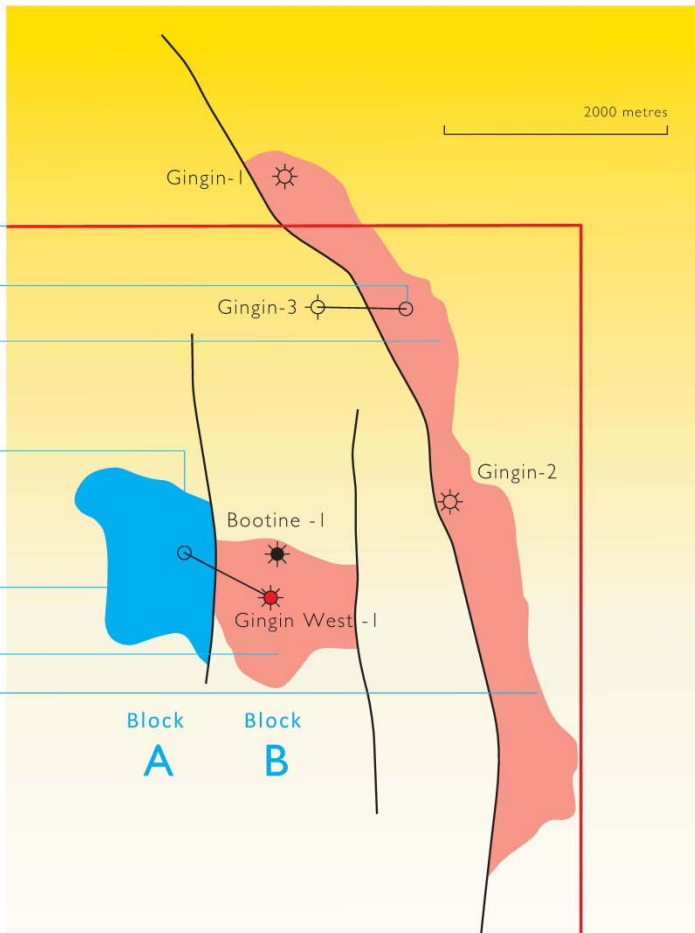
1  
 well

ubject to 2011 drilling

o be established  
 :d Production Test

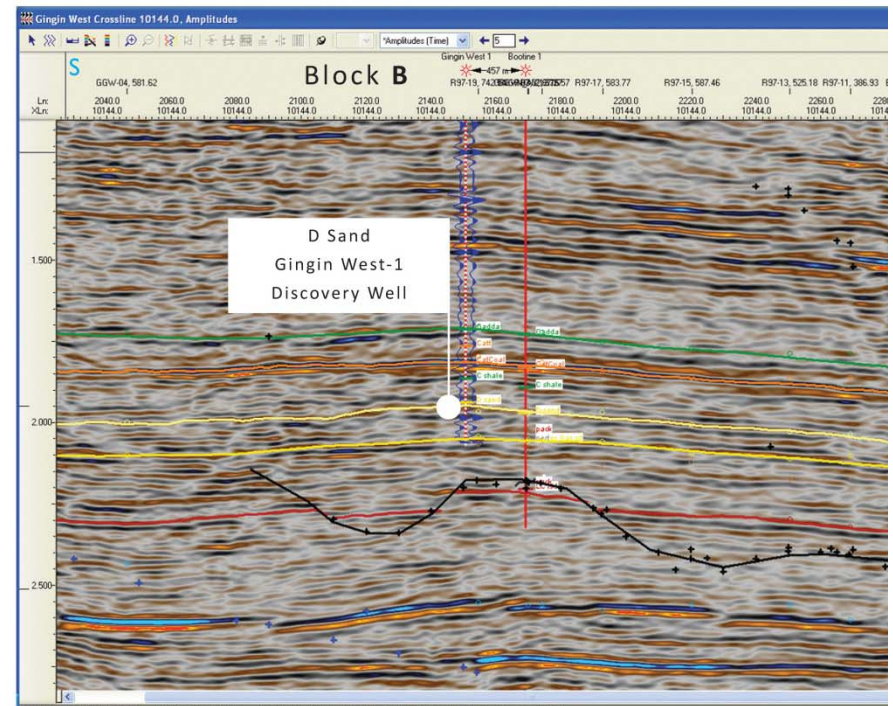
: to define

ield



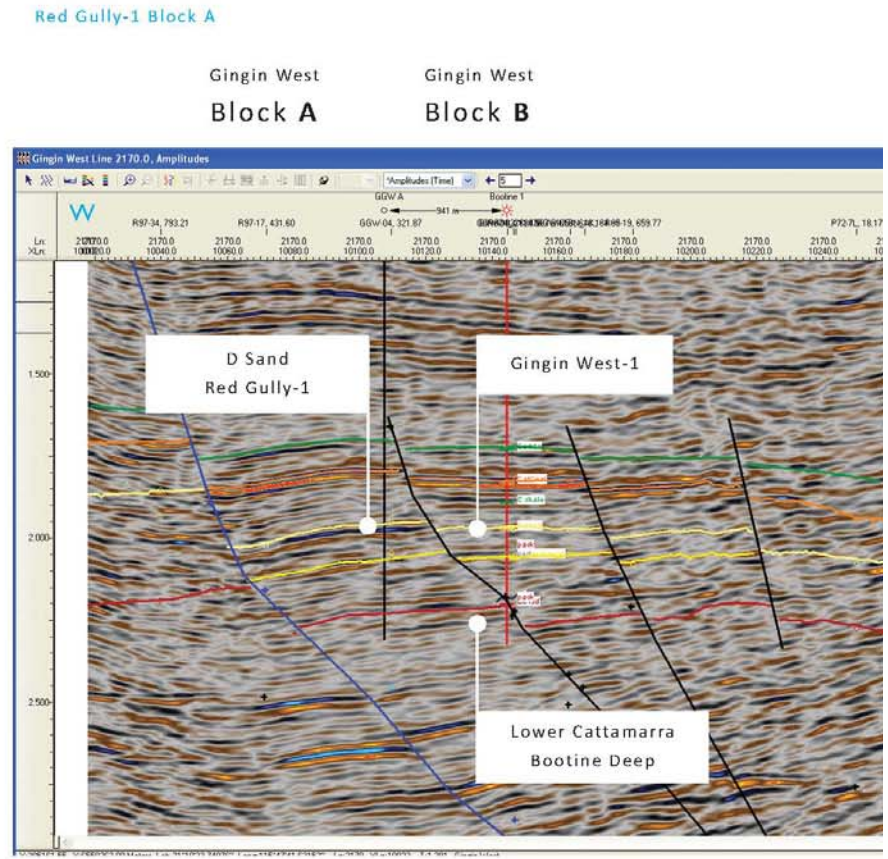
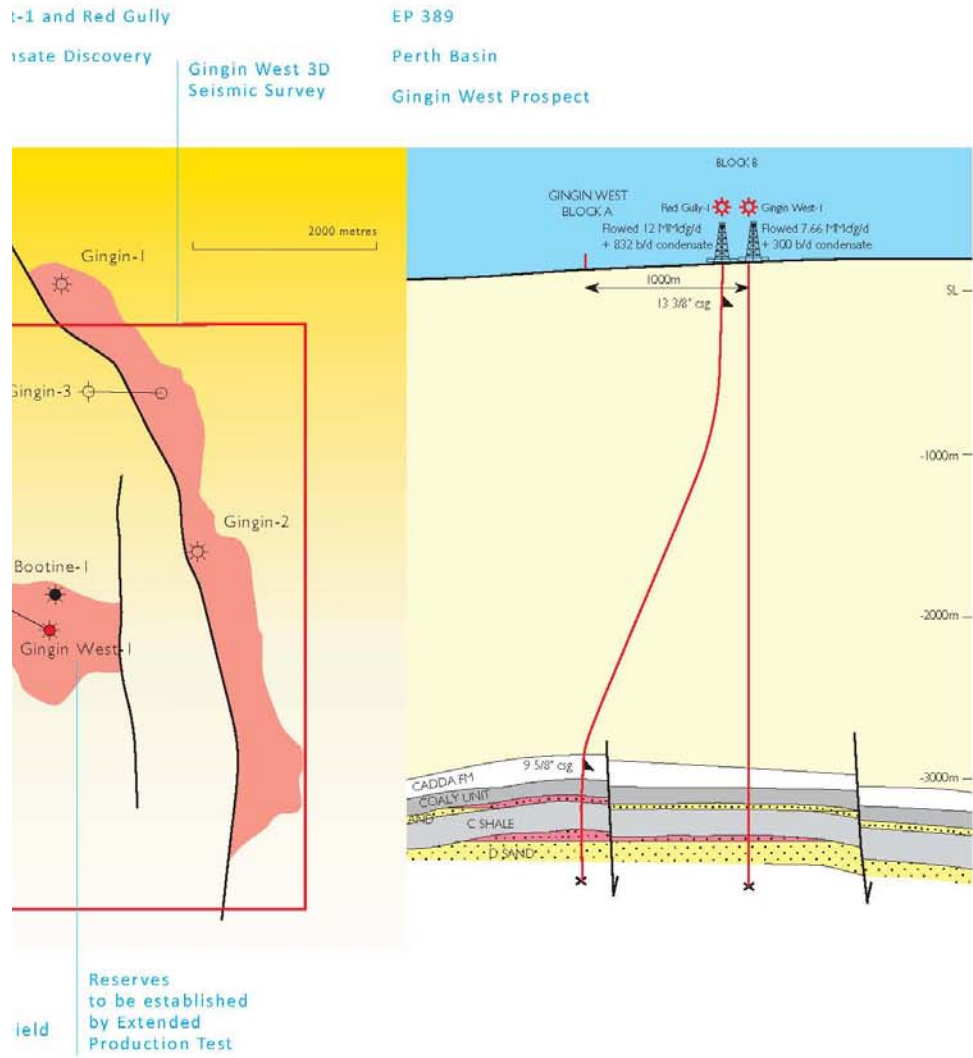
Gingin West Block B

D Sand Play



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**RED GULLY-1 BLOCK A DISCOVERY**  
**FLOWED AT STABILISED RATE 12 MMCFGD AND 832 BCPD**  
**POTENTIAL RESERVES 30 BCF AND ASSOCIATED CONDENSATE**  
**UP TO 80 BARRELS PER 1 MMCFG**

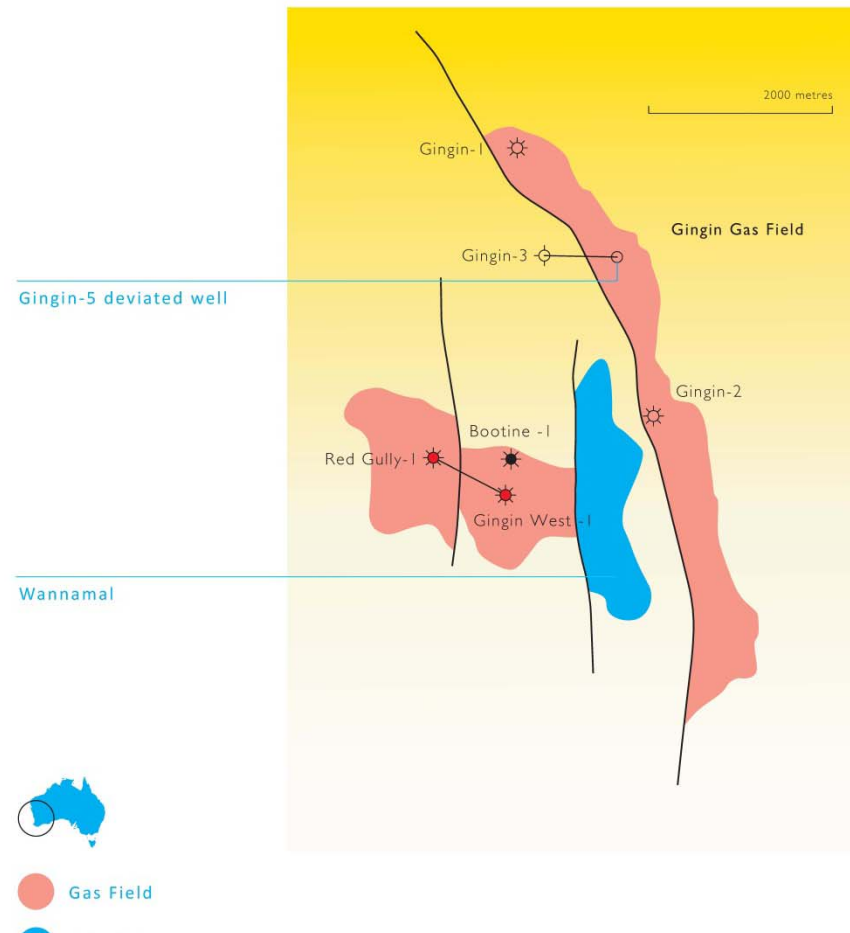


## Planned drilling Wannamal and Wannamal Deep

- Wannamal-1 is located immediately adjacent to the Gingin West-1 and Red Gully-1 gas and condensate discoveries.
- Mature for drilling, defined by 3D seismic with same reservoir objectives as Gingin West-1 and Red Gully-1 discovery wells in the Upper Cattamarra Coal Measures.
- Wannamal Deep is a tilted fault block at the Lower Cattamarra
- Lower Cattamarra flowed gas in the Gingin-1 [4.25 MMCFGD] and Gingin-2 [3.92 MMCFGD] and 0.5 barrels of oil in Bootine-1.
- Potential Recoverable Gas in Wannamal from the Upper Cattamarra is 52 BCF and associated condensate.
- Potential Recoverable Gas in Wannamal Deep is 14 BCF and 0.7 MMBC.
- Potential Recoverable Gas and Condensate for Wannamal and Wannamal Deep is 66 BCF and 2.3 MMBC.
- Further gas discoveries can be processed through the Red Gully Gas and Condensate Plant.
- Drilling planned for 1st Quarter 2012 on Rig availability.

## POTENTIAL RECOVERABLE GAS AND CONDENSATE

<b>GINGIN WEST/RED GULLY</b>	<b>30 BCF AND 2 MMBC</b>
<b>GINGIN GAS FIELD</b>	<b>87 BCF AND 4.3 MMBC</b>
<b>[GINGIN DEEP]</b>	<b>32 BCF AND 1.6 MMBC</b>
<b>WANNAMAL PROSPECT</b>	<b>52 BCF AND 1.6 MMBC</b>
<b>[WANNAMAL DEEP]</b>	<b>14 BCF AND 0.7 MMBC</b>



**NEW TILTED FAULT BLOCK PLAYS NOW MAPPED FROM NEW GINGIN WEST 3D SEISMIC SURVEY**

**POTENTIAL RECOVERABLE GAS AND CONDENSATE**

<b>GINGIN DEEP</b>	<b>32 BCF AND 1.6 MMBC</b>
<b>WANNAMAL DEEP</b>	<b>14 BCF AND 0.7 MMBC</b>
<b>BOOTINE DEEP OIL PLAY</b>	<b>3 MMBO</b>
	<b>OR 20 BCF GAS/CONDENSATE</b>

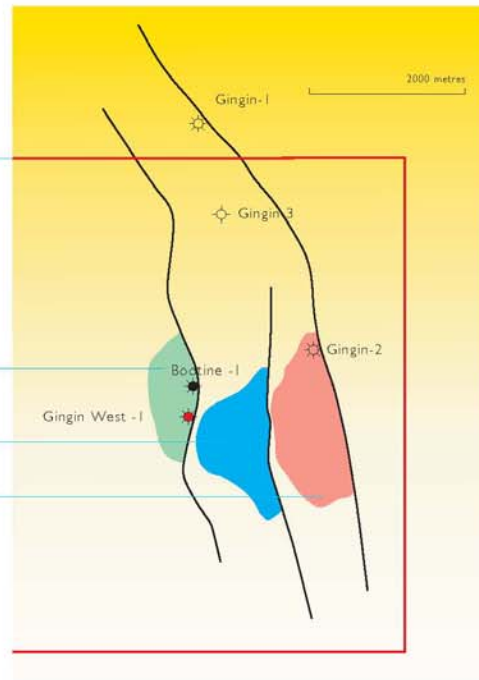
Gingin Gas Discoveries  
 Tilted Fault Blocks  
 Lower Cattamarra Coal Measures

Gingin West 3D Seismic Survey

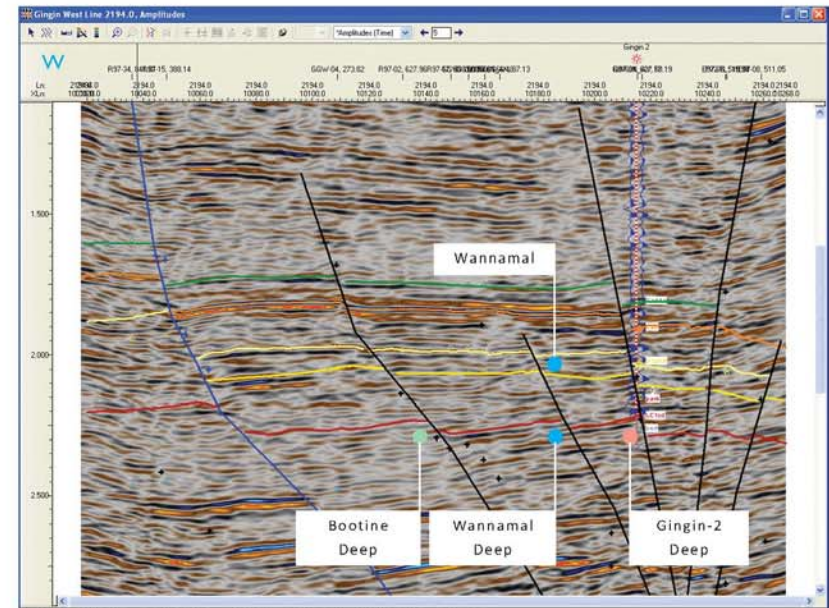
Bootine Deep  
 Potential 3 Million bbls Oil. Likely to be 20 BCF of gas and associated condensate.

Wannamal Deep  
 Potential 14 BCF. Needs 3D Seismic

Gingin-2 Deep  
 Potential 32 BCF. Needs 3D Seismic



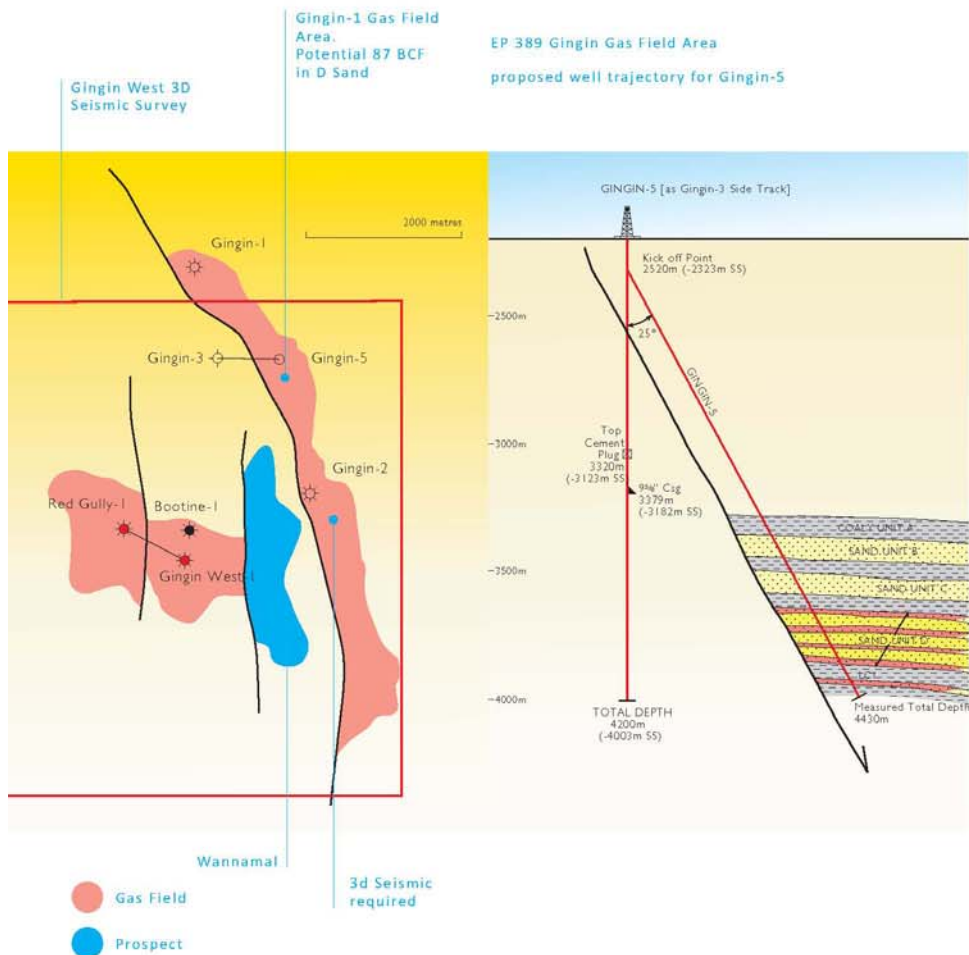
Lower Cattamarra Tilted Fault Block Play



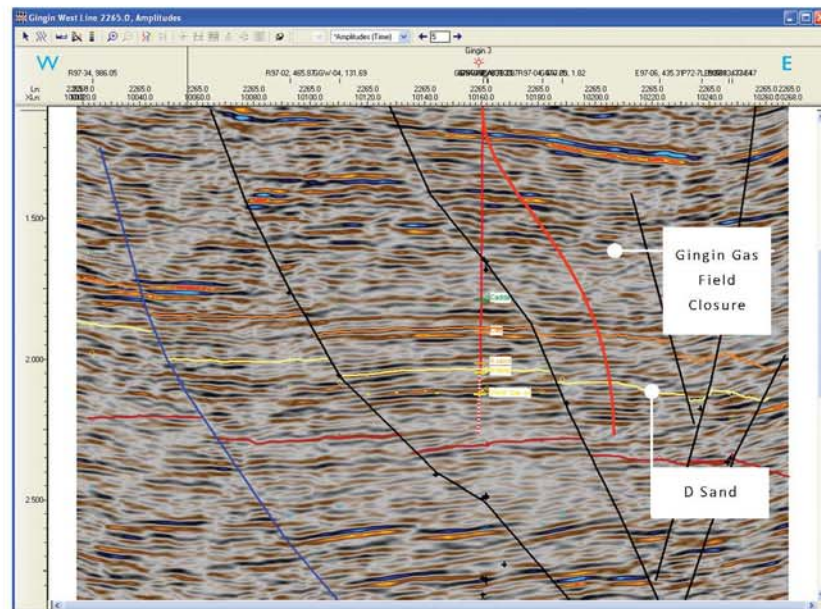
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**GINGIN GAS FIELD AREA**  
**GINGIN-4 AND DEEP AS GINGIN-2 AND DEEP**  
**GINGIN-5 AS A GINGIN-3 SIDE TRACK WELL**  
**POTENTIAL RESERVES 87 BCF AND**  
**4.3 MILLION BARRELS OF CONDENSATE**

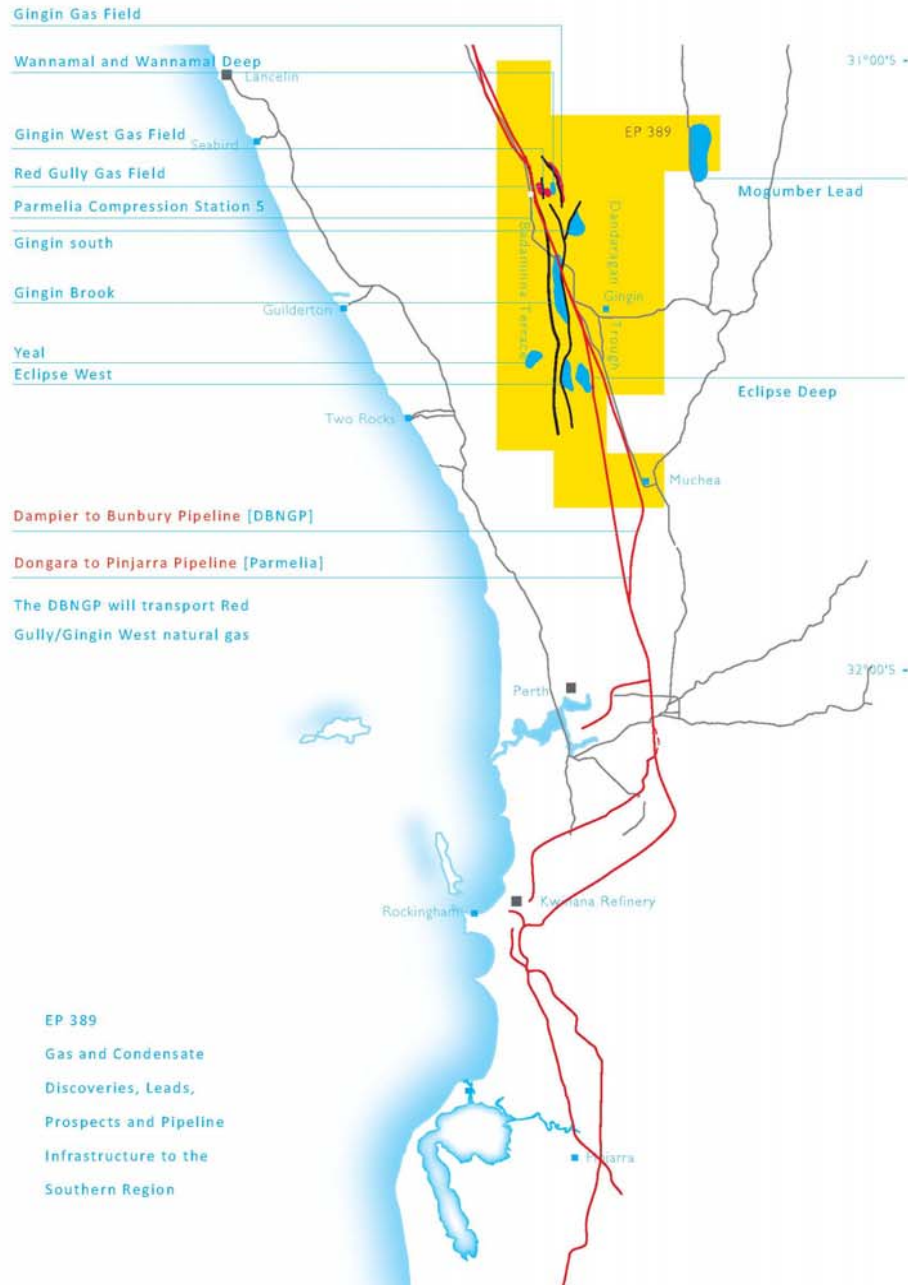
**TOTAL POTENTIAL GAS IN THE GINGIN AREA THAT CAN**  
**BE TREATED AT THE REG GULLY GAS AND CONDENSATE**  
**PLANT IN ADDITION TO GINGIN-1 AND RED GULLY-1 IS**  
**CIRCA 205 BCF AND 9.2 MMBC**



D Sand play  
 Gingin-5 is a side track well from Gingin-3



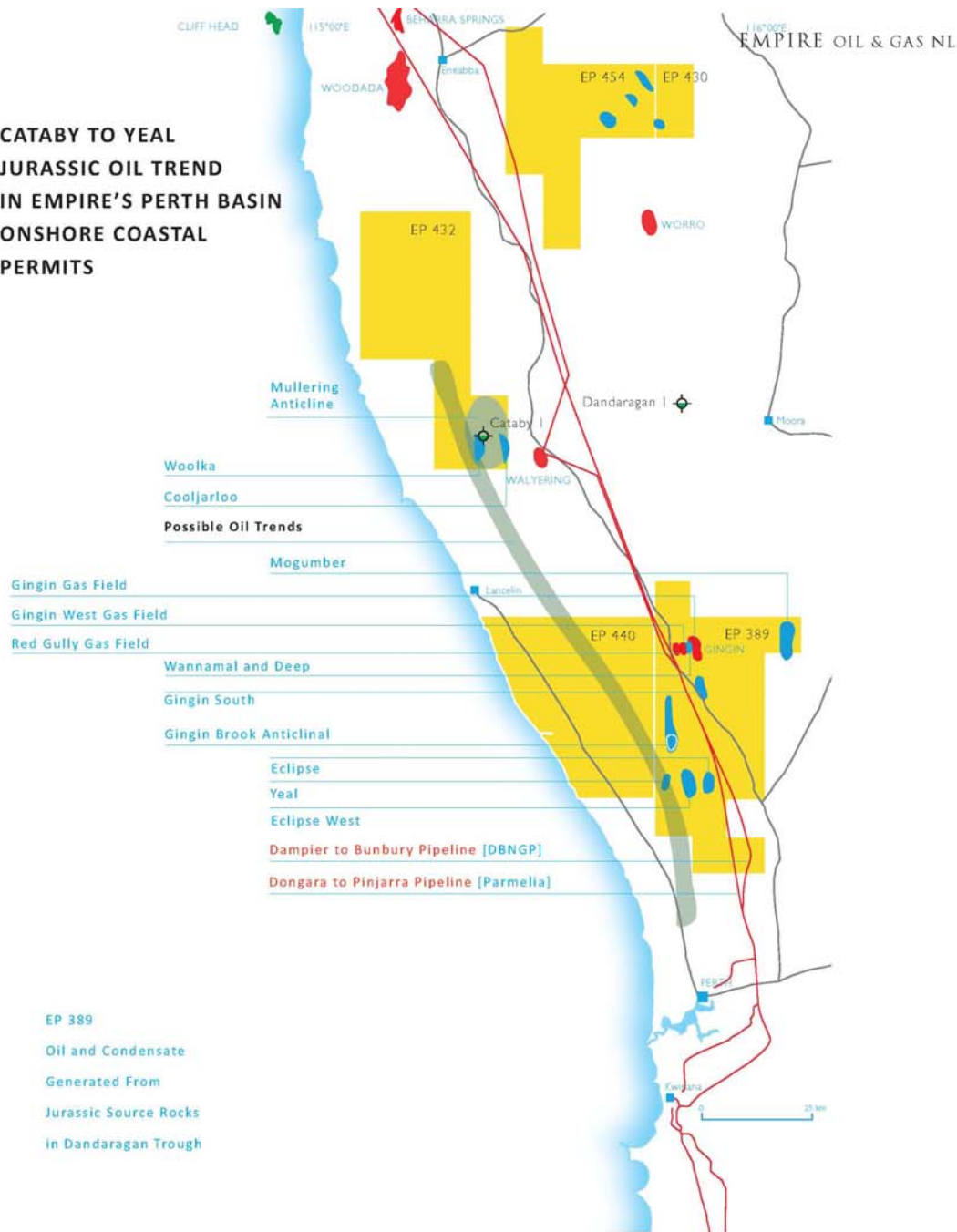
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### Conclusion

- Red Gully-1 in Block A is a deviated discovery well from the same Gingin West-1 wellsite and substantially increased gas and condensate reserves. Red Gully-1 and Gingin West-1 have recoverable gas of 30 BCF and associated condensate. Gingin West-1 has 50 barrels of condensate per 1 MMCFG, Red Gully-1 70 - 80 barrels of condensate per 1 MMCFG.
- A Gas and Condensate Production Facility is being designed as an optimal plant to access the DBNGP for both discovery wells and truck condensate to BP Kwinana Refinery.
- The Red Gully Gas Plant and pipeline to the DBNGP funded by a Forward Sales Contract being negotiated with Alcoa and Negotiations include an additional Gas Supply Agreement with Alcoa.
- Gingin West-1 in Block B FARO 7.5 MMCFGD and 375 BCPD is a significant gas and condensate discovery. Followed by Red Gully, FARO 12 MMCFGD and 832 BCPD - the largest gas flow in the Perth Basin from the Jurassic.
- Plan production into adjacent pipeline infrastructure and sell gas and truck condensate to BP Kwinana.

**CATABY TO YEAL  
JURASSIC OIL TREND  
IN EMPIRE'S PERTH BASIN  
ONSHORE COASTAL  
PERMITS**



**Conclusion [continued]**

- Gas Sales Contract to be settled with Alcoa.
- Next well Wannamal potential recoverable gas 52 BCF and associated condensate. Wannamal Deep potential recoverable gas 14 BCF. Total 66 BCF and 2.3 million barrels of condensate.
- Planning further 3D seismic to drill Gingin Gas Field Wells, Gingin 4 and Deep and Gingin-5 as a Gingin-3 sidetrack well.
- Potential new discovered gas and condensate reserves of 205 BCF and 9.2 MMBC will be treated through the Red Gully Gas and Condensate Plant.
- Additional 3D seismic for Gingin Brook and also other well locations for Eclipse, Eclipse West, Yeal and others along the Gingin to Bullsbrook 60 km Trend.
- Funding of 3D seismic and drilling programme is by Gas Sales together with condensate sales to BP.
- Empire's 2D seismic of 444 kms and the reprocessed existing 333 km seismic demonstrates further prospects and leads over this 60 km Trend where potential unrisks gas reserves are circa 1.2 Trillion Cubic Feet of Gas and 48 Million barrels of crude oil and condensate.
- Empire has high equity of 68.75% in EP 389 and discoveries.



## NORTH ERREGULLA NORTH PERTH BASIN

- Farmout to Origin Energy Pty Ltd to record 100km<sup>2</sup> 3D Seismic.
- Empire to operate the drilling programmes until a decision to undertake an appraisal and development programme has been made. Origin will then assume operatorship.
- North Erregulla-1 drilled in 1967 by WAPET on poor quality survey acquired in the 1960's is considered did not drill on the crest of the structure. Drill stem tests confirmed a live oil system. DST over one sand of the Arranoo Member of the Lower Triassic Kockatea Shale recovered 72.5 litres of 38° API oil and a DST of the Permian aged Dongara Sandstone located directly beneath known

source rock, the Hovea Member of the Kockatea Shale recovered 30 litres of 38° API oil.

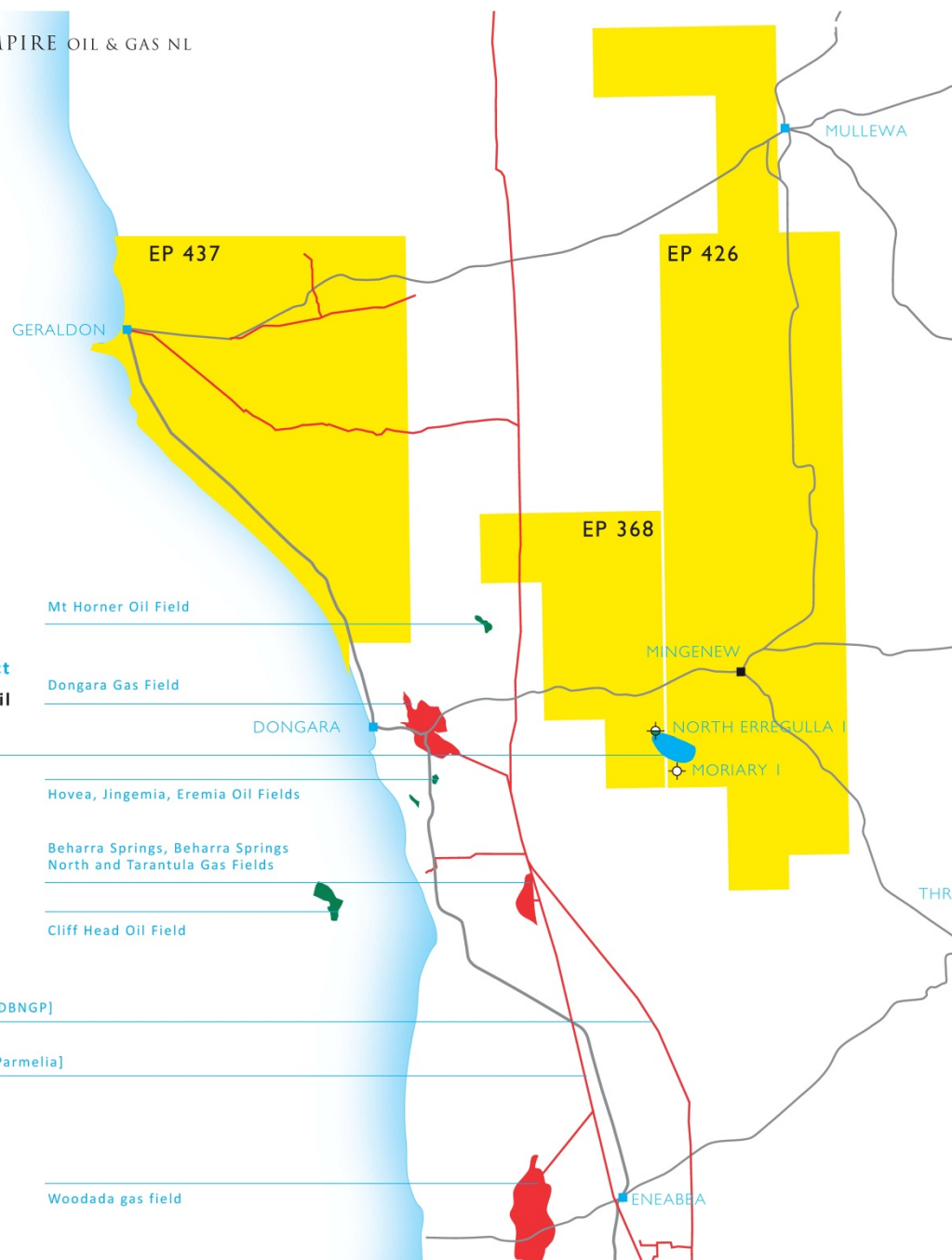
- The Kockatea Shale is 260 metres thick in North Erregulla-1 supplying excellent vertical and lateral seal for the Arranoo, Dongara and Wagina reservoirs.

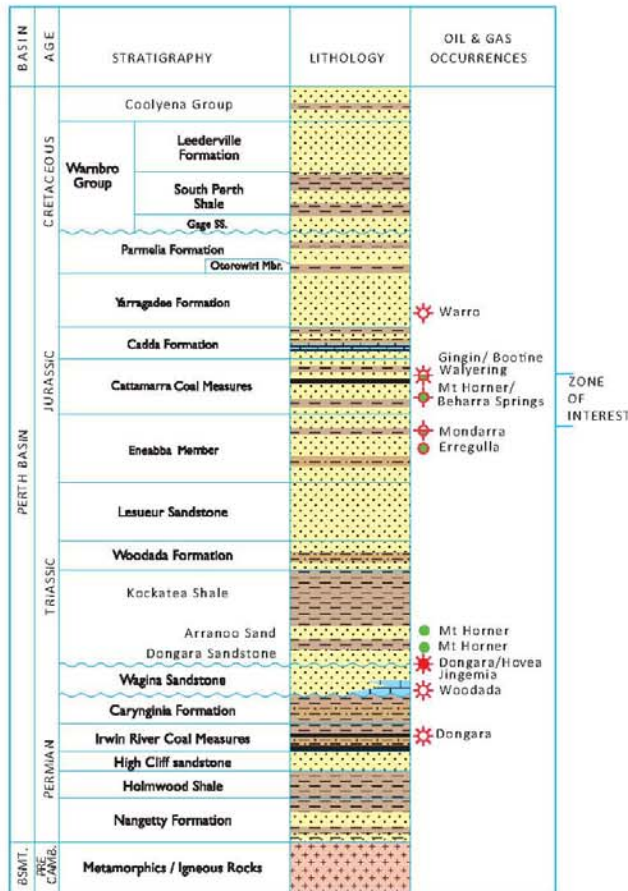
**North Erregulla Prospect**  
potential recoverable oil  
**25 MMBO/100 BCF Gas**



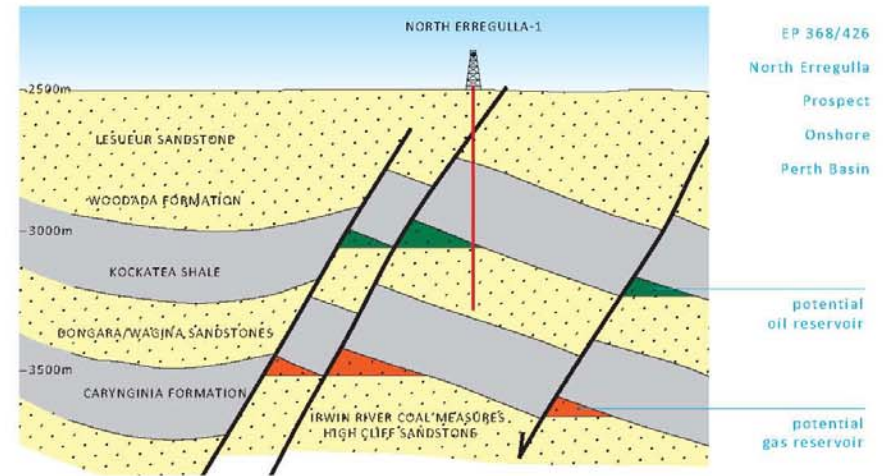
EP 426 and 368  
Location of North  
Erregulla Prospect

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Generalised  
Stratigraphy



- Interpretation of existing seismic data sets and the 400 line km airborne gravity survey has provided Empire's interpretation. The majority of the North Erregulla Structure is located in EP 368 where Empire has a 40% interest after farmout.
- Based on current mapping and reservoir parameters in the North Erregulla-1 well and the volume of the current mapped structure, Empire has calculated that the entire North Erregulla tilted fault block has the potential to have estimated recoverable oil in the order of 22 million barrels in the Dongara/Wagina Sandstones and

- 3 million barrels of oil in the Arranoo Member. There is also the potential to trap a further 100 billion cubic feet of gas in the Deeper Irwin River Coal Measures and the High Cliff Sandstones.
- Shale gas potential exists in the Hovea and Carynginia Formations. In the down thrown side of the North Erregulla fault block, the Hovea Member is in the gas window. Four wells in the northern part of EP 368 intersected the Permian section where gas shows were encountered in the Early Permian Carynginia Formation and Early Permian aged Irwin River Coal Measures.

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One of six Schlumberger's Western Geco Seismic Vibroseis units, mobilised from the Middle East, to record the 100 km<sup>2</sup> North Erregulla 3D Seismic Survey in EP 426 and EP 368, North Perth Basin, Western Australia

February 2012



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Empire's Seismic Manager,  
Terry Grocke, in one of  
seven units containing  
battery charges for up to  
500 km<sup>2</sup> of computer  
geophones

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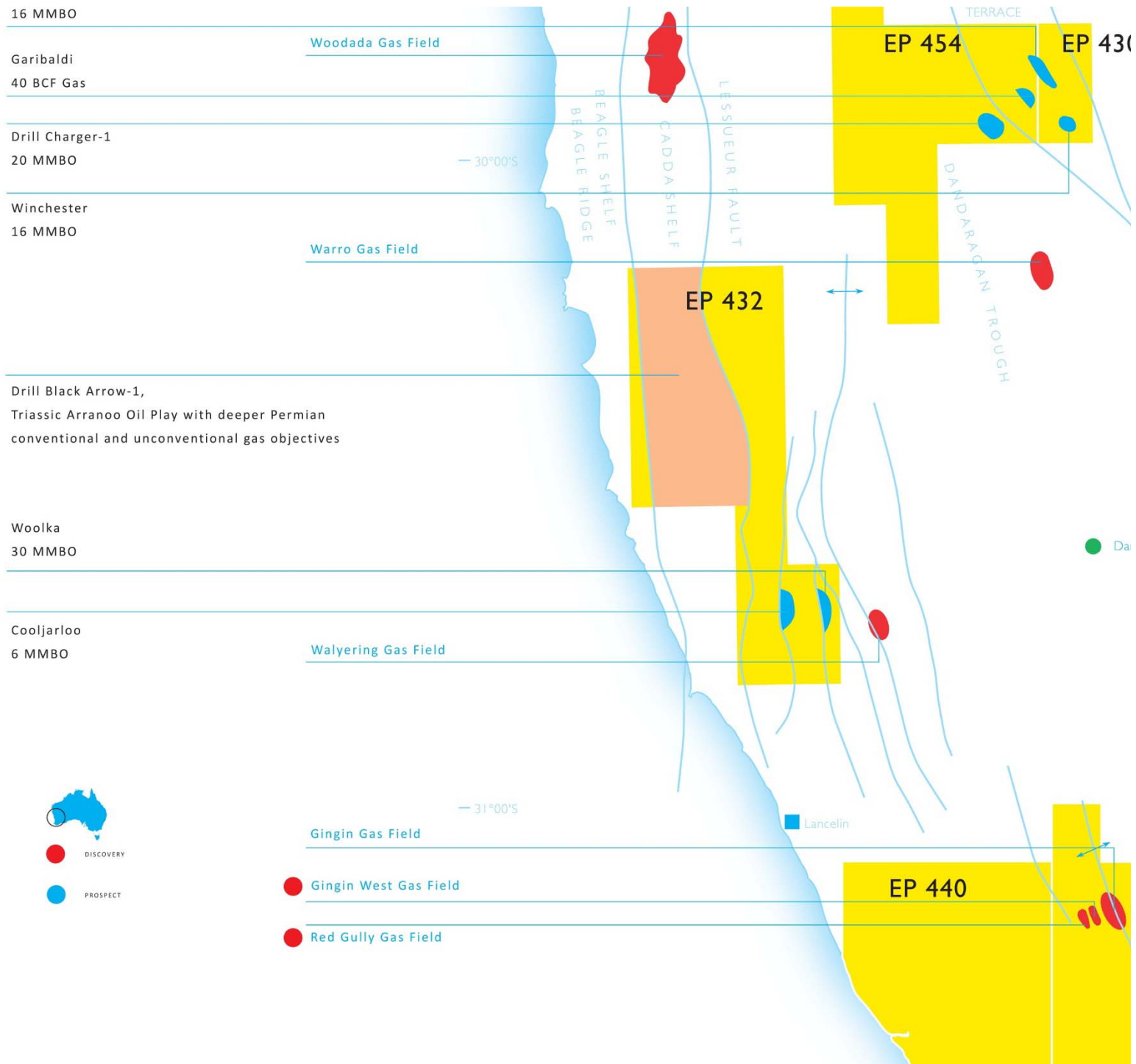


Western Geco  
computer Geophones  
and cables

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Western Geco Recording  
Unit - dog box



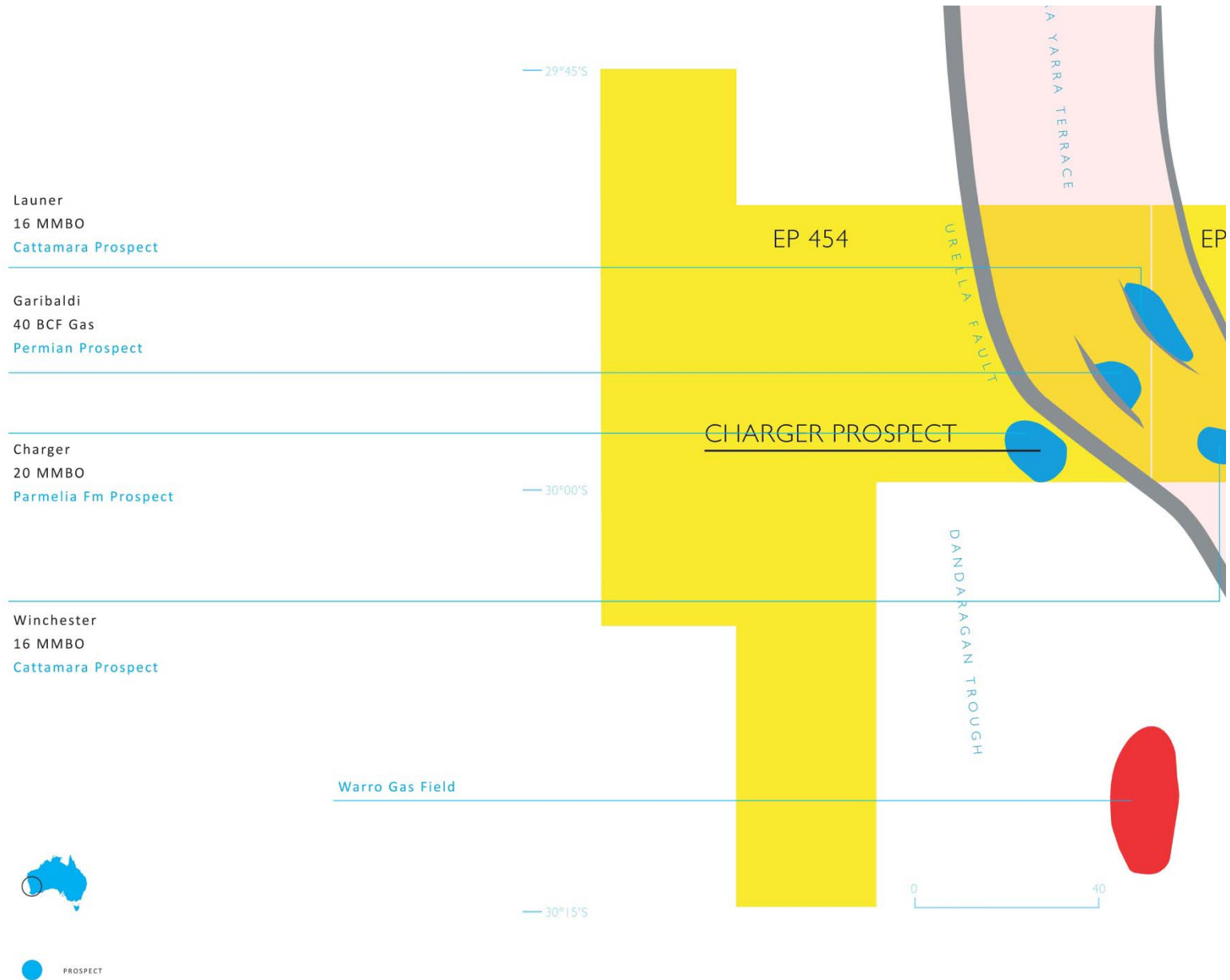


EP 432, 454 and 430  
Location of Prospects  
and Plays



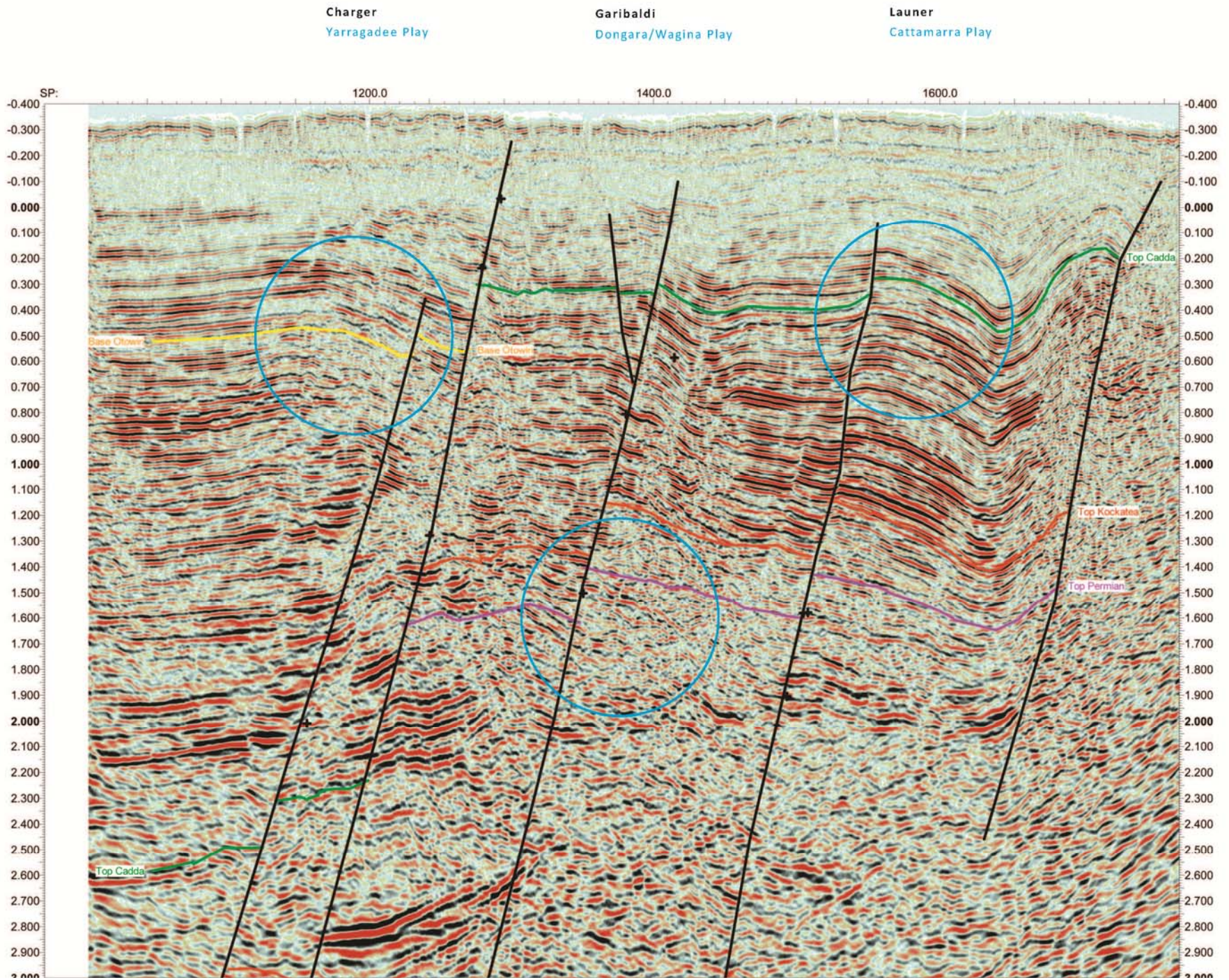
- DISCOVERY
- PROSPECT
- Gingin West Gas Field
- Red Gully Gas Field

EP 454 and 430  
Location of Prospects  
and Plays





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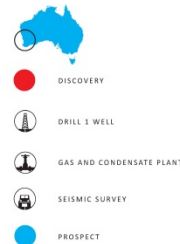
Perth Basin Planned Exploration and Production Summary 2011 - 2012

PROGRAMMES ALREADY FUNDED

- Develop Gas and Condensate Plant for Gingin West and Red Gully and 3 km pipeline to pipeline infrastructure. Financing options for Plant construction, includes the current Alcoa of Australia negotiation of a Gas Supply Agreement. Condensate trucked to BP Kwinana Refinery.
- Record 3D Seismic over North Erregulla. Plan drill North Erregulla-2 Oil Prospect.
- Recorded 2D Seismic over Garibaldi with Farmin with ERM Gas. Drillable prospects: Plan drilling Charger-1 and Garibaldi-1.
- Plan 3D Seismic over Gingin Gas Field.
- Plan 3D Seismic over Gingin Brook.
- Plan 2D Seismic over Yeal.
- Plan 2D Seismic over Leschenault.

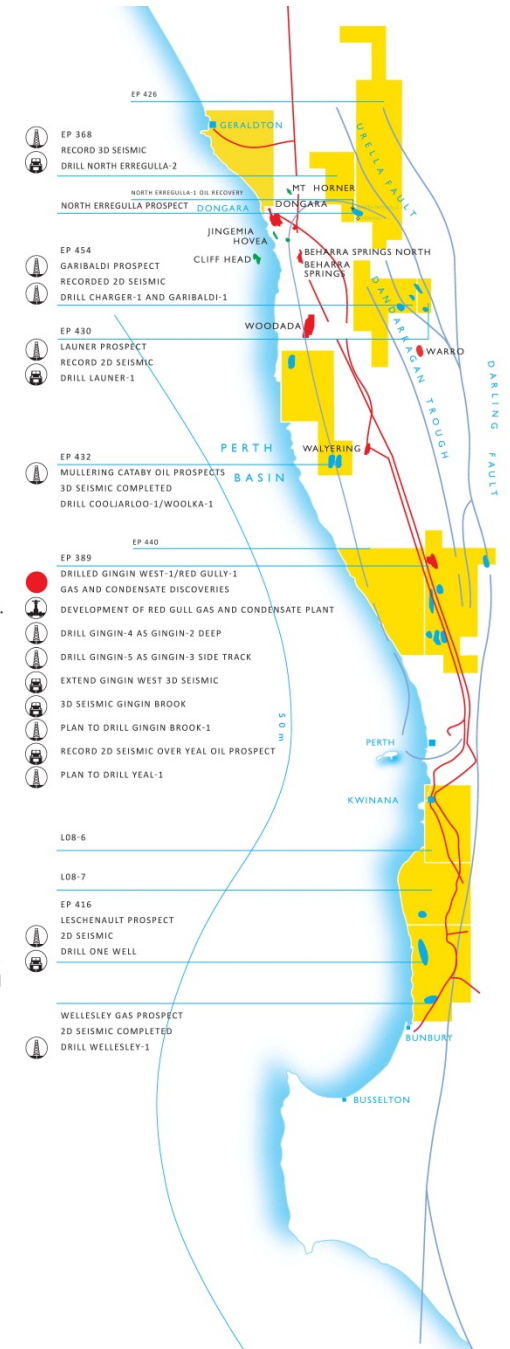
PROGRAMMES THE SUBJECT OF INTRODUCING ADDITIONAL FARMIN PARTNERS AND/OR GAS AND CONDENSATE SALES

- Drill Wannamal and Wannamal Deep first Quarter 2012.
- Record 3D Seismic over Gingin Gas Field
- Record 3D Seismic over Gingin Brook Prospect. Drill Gingin Brook-1.
- Record 2D Seismic over Yeal. Drill Yeal-1.
- Extend 3D Seismic over Gingin Gas Field. Drill Gingin-4 and Deep and drill Gingin-5 as a sidetrack of Gingin-3.
- Record 3D Seismic over Eclipse and Eclipse West.
- Drill North Erregulla-2 Oil Prospect. Farmout to be announced
- Drill Woolka or Cooljarloo Oil Prospect. Defined by 3D Seismic already recorded.
- Record 2D Seismic over Leschenault. Drill Leschenault-1.
- Drill Wellesley-1.
- Drill Garibaldi-1.
- Plan Seismic over Launer. Drill Launer-1.



Onshore Perth Basin

- Develop Red Gully Gas and Condensate Plant for both Gingin West and Red Gully discoveries
- Drill Wannamal and Wannamal Deep potential recoverable reserves 66 BCF and 2.3 MMBC.
- Plan to extend Gingin West 3D Seismic over Gingin Gas Field.
- Plan to drill Gingin-4 [Gingin-2 Deep] and Plan to drill Gingin-5 [Gingin-3 Sidetrack] to access gas closure with up to 4.3 MMBC and 87 BCF potential recoverable gas between Gingin-1 and Gingin-2 discovery wells.
- **Total potential recoverable gas and condensate Gingin area is 205 BCF and 9.2 MMBC.**
- Plan 3D Seismic over the Gingin Brook Anticline. Plan to drill Gingin Brook-1 potential recoverable reserves up to 100 BCF.
- Plan 2D Seismic over the Yeal Prospect. Plan to drill Yeal-1 potential recoverable reserves 25 MMBO.
- Plan 3D Seismic over Eclipse, Eclipse West.
- Record 100 km<sup>2</sup> 3D Seismic with Origin Energy and plan to drill North Erregulla-2 potential recoverable reserves 66 MMBO and 100 BCF gas.
- Recorded 2D Seismic over Garibaldi. Prospects Charger and Garibaldi.
- Plan to drill Charger-1 potential recoverable reserves 20 MMBO.
- Plan to drill Garibaldi-1 potential recoverable reserves 100 BCF and 20 MMBO.
- Plan to drill Cooljarloo Oil Prospect potential recoverable reserves 6 MMBO or Woolka potential recoverable reserves 30 MMBO.
- Plan to drill Wellesley potential recoverable reserves 150 BCF.
- Plan 2D Seismic. Plan to drill Leschenault-1 potential recoverable reserves 60 BCF.
- Plan 2D Seismic. Plan to drill Launer-1 if Prospect closes.



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