

WELL ABANDONMENT REPORT

LACERTA 21

Rev 0

22/01/2014

Written by: Terry Greaney & Lorne Lindstrom

Endorsed by: Terry Greaney, Superintendent P&A Operations

Submitted by: Terry Greaney

LACERTA 21 – ATP767P

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DOCUMENT INFORMATION SHEET

TITLE: LACERTA 21 WELL ABANDONMENT REPORT

PURPOSE AND SCOPE:

PROVIDE DETAILS OF ABANDONMENT per SECTION 38 of the PETROLEUM AND GAS (Production and Safety) REGULATION 2004.

DOCUMENT VERIFICATION

Responsible/Accountable:

Signature:  **Position:** Plug & Abandon Engineer

Name: Lorne Lindstrom **Date:** January 22, 2014

Signature:  **Position:** Superintendent – Plug & Abandon Operations

Name: Terry Greaney **Date:** January 22, 2014

Endorsed:

Signature:  **Position:** Superintendent – Plug & Abandon Operations

Name: Terry Greaney **Date:** January 22, 2014

Revision Record

Issue	Date	Reason for Issue	Responsible	Endorsed
0	22/01/2014	GENERAL ISSUE	TMG / LL	TMG

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1.0 WELL DATA CARD

Location Information		
Well Name:	Lacerta 21	
Alias Name (QGC)	Pandora 2**	
ATP / PL:	ATP 767P	
Location (GDA-94):	Latitude	26° 21' 06.0577" S
	Longitude	148° 49' 04.7726" E
Grid (Zone 55):	Easting	681 413.867 m
	Northing	7 084 090.752 m
Elevation:	GL	366.21 m (AHD)
	RT	All references in this report are to GL
Type Structure:	Coal Seam Gas	

** See Well History

Drilling Information			
Drilling Contractor:	Mitchell Drilling		
Rig No.:	Rig 123 (UDR1000)		
Date Rig Move Commenced:	09/07/2007		
Date Spud:	10/07/2007		
Date TD Reached:	17/07/2007		
Date Rig Released:	19/07/2007		
Total Depth (mGL):	Driller	522.3 m	
	Logger	520.0 m	
Drilling Information			
Hole Sizes (mGL):	From	To	Diameter
Conductor	GL	6	7 ½"
Surface	6	163.8	5 ½"
Core Hole	163.8	522.3	3.78" (HQ)
Casing Sizes (mGL):	From	To	Diameter
Conductor	GL	6	6" PVC
Surface	Surface	162.5	4 ½"
Cement Plugs Installed (mGL):	None		
Under-reaming (mGL)	No under-reaming was performed		
Perforations (mGL)	None		
Date Well Completion Report Submitted	24 th November, 2011		

Abandonment Information			
Contractor:	Baker Hughes Incorporated		
Unit No. & Type:	Capillary Coiled Tubing Unit		
Date Commenced Move:	27/10/2012		
Date Commenced Well Operations:	30/10/2012		
Date Unit Released:	30/10/2012		
Date Wellhead Cut off:	18/12/2012		
Date Rehabilitated:	November 2013		
Cement Plugs Installed (mGL):			
inside 4 ½" casing / HQ hole	From	To	Interval
	Surface	522	522m
Logs taken during P&A (mGL):			
	None		
Other Hardware / Fish (mGL)			
	From	To	Interval
4-1/2" Casing (cemented in place)	Surface	162.5	162.5m
2-3/8" Tubing	No evidence was run		
Casing Cuts (mGL)			
	Depth	Comment	
N/A		None	
Perforations added during P&A			
	From	To	Interval
N/A			None

2.0 INTRODUCTION

2.1 Scope of Document

This report provides information on Well Abandonment per section 38 of the Queensland Petroleum and Gas (Production and Safety) Regulation 2004.

2.2 Well History

Lacerta 21 is a coal seam gas well now operated by QGC. It is located in the Surat Basin within ATP 767P, approximately 25 kilometres north of the town of Roma. The well was originally drilled and operated by Sunshine Gas Limited, a company that was acquired in late 2008 by QGC.

Note: Lacerta 21 is also known by QGC as Pandora 2 in, for example, the Wellview reporting system, however the Survey certificate refers to Lacerta 21 as Pandora 3. The opposite situation applies to Lacerta 38. For clarity only the Lacerta names should be used & the Lacerta well details are correct.

Mitchell Drilling Rig 123 (UDR1000) spudded Lacerta 21 at 0815 hrs July 10, 2007. A 6" PVC conductor was set at 6mGL and cemented to surface. The 5 ½" surface hole was drilled to 163.8mGL and 4 ½" casing was run to 162.5mGL and cemented to surface. The well was then cored (HQ) to a TD of 522.3m GL. Logs were run.

Mitchell Drilling Rig 123 was released at 1730 hrs on July 19, 2007.

In Q1 2008 there was a plan to install a 2-3/8" completion & run a gauge into the well. There is no evidence this occurred.



The well was completed for potential use as a monitoring well.

Details of the drilling are in the Well Completion Report.

2.3 Abandonment Summary

The decision was made to abandon the Lacerta 21 well as part of QGC's campaign to plug and abandon non-compliant or unutilised wells in accordance with QGC-BG Group standards and good oilfield practice.

On October 27, 2012 the well was found with 0 psi pressure. After monitoring a fitting was removed and a valve installed in vertical position.

On October 29, 2012 the Baker Capillary Coiled Tubing unit was mobilised to Lacerta 21`.

The 4" Sibra BOP was installed. On October 30 the P&A was performed. Lines were set up for single fluid returns. Surface lines were tested to 4000 psi. The BOP was tested to 550 psi and the 0.75" Stainless Steel coil was RIH and tagged PBTD at 519m. 34 bbl of 12.0 ppg cement slurry was pumped while the CTU was slowly retracted from the well maintaining 200m submergence.

Got 11.7 ppg returns after 28 bbls & 11.9ppg after 30 bbls

Once 12.0 ppg cement reached surface the coil was pulled out of hole. The unit was cleaned up, rigged down and released that day (October 30, 2012).

On December 18, 2012 the casing was cut 1.6m below surface and the wellhead removed. The annulus was topped up and signage installed.

The site was rehabilitated in November 2013. The site had been partially rehabilitated previously.

Detailed reports on the Abandonment are available in the body and the Appendix of the document.

2.4 Acronyms and Abbreviations

In this document, the following acronyms and abbreviations apply:

Acronym/Abbreviation	Meaning
aMSL	above Mean Sea Level
AHD	Australian Height Datum
ATP	Authority to Prospect
bbf	barrel
BHA	Bottom Hole Assembly
BOP	Blow Out Preventer
bpm	barrels per minute
CBL	Cement Bond Log
CHP	Casing Head Pressure
CSG	Coal Seam Gas
CTU	Coiled Tubing Unit
DST	Drillstem Test
GL	Ground Level
HUD	Hold Up Depth
IC	Intermediate Casing
KB	Kelly Bushing
LEL	Lower Explosive Limit
N/D	Nipple Down
N/U	Nipple Up
OH	Open Hole
PBTD	Plugged Back Total Depth
PC	Production Casing
PCAP	Production Casing Annulus Pressure
PL	Petroleum Lease
POH / POOH	Pull Out of Hole
ppg	pounds per US gallon
ppf	pounds per foot
psi	pounds per square inch
RDMO	Rig Down Move Out
RIH	Run In Hole
RL	Reduced Level

Acronym/Abbreviation	Meaning
RT	Rotary Table
SC	Surface Casing
spf	shots per foot
TD	Total Depth
THP	Tubing Head Pressure
TOC	Top of Cement
TOF	Top of Fish
WHP	Wellhead Pressure
WOC	Wait on Cement

3.0 LOCATION MAP

3.1 REGIONAL MAP

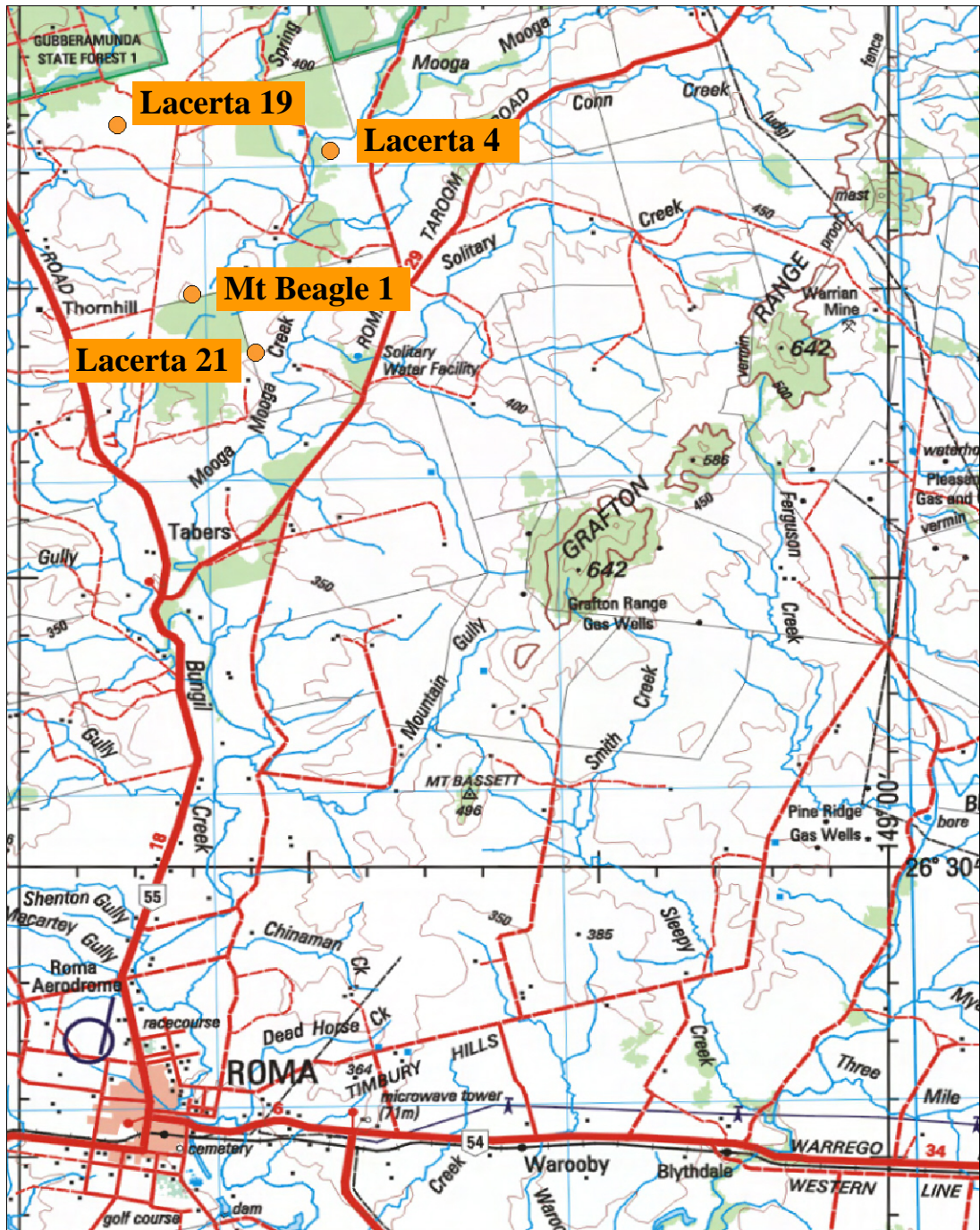
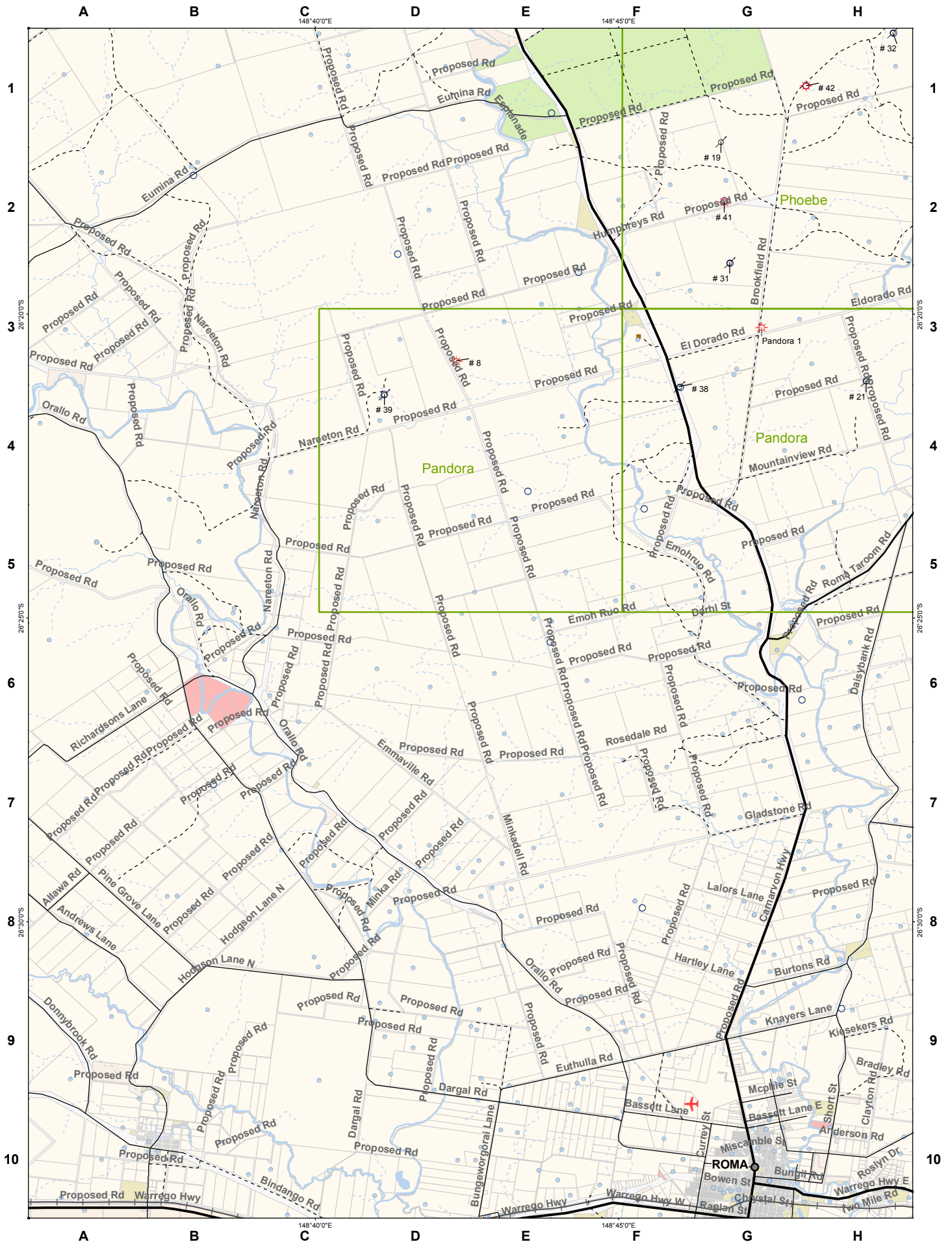


Figure 1 Location Map

Map 157



146	147	148
156	157	158
166	167	168

Revision 3.0512

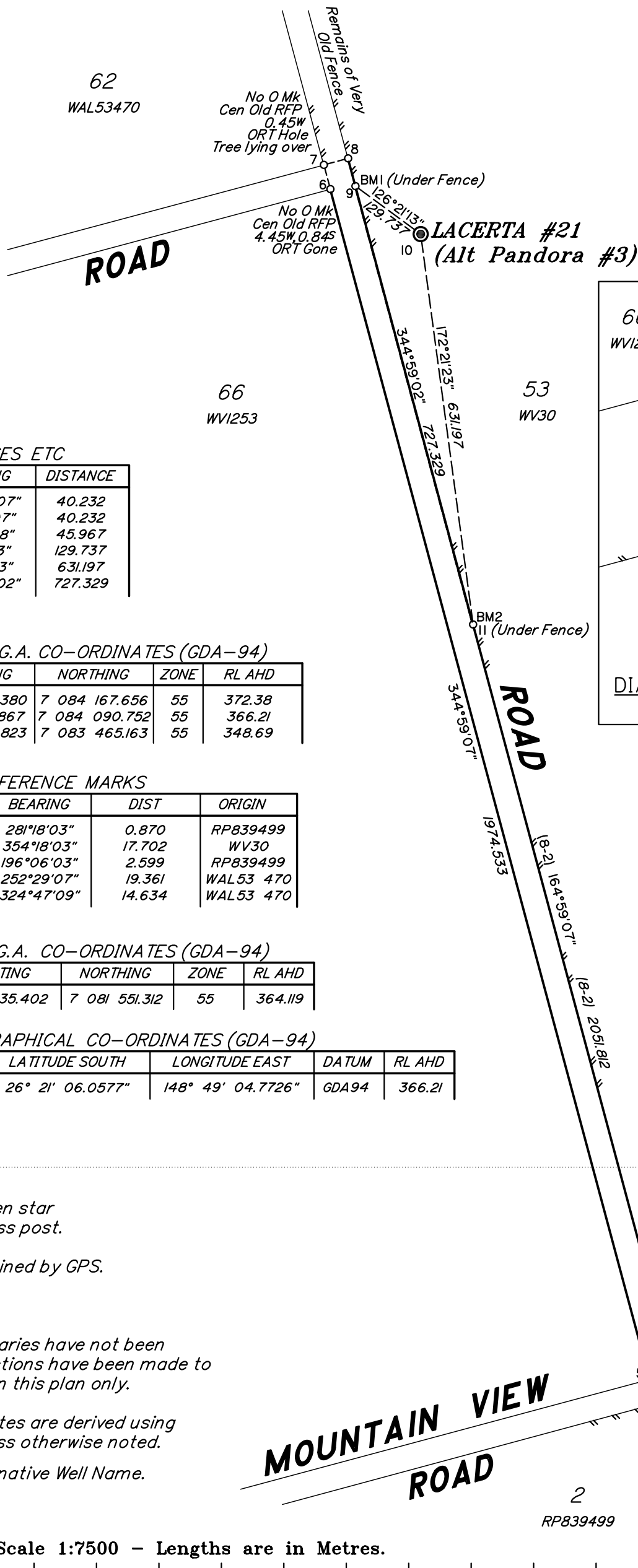
3.2 LOCATION SURVEY

MP39083

MP39083

MP39083

MP39083



TRAVERSES ETC

LINE	BEARING	DISTANCE
6-7	344°59'07"	40.232
7-8	74°59'07"	40.232
8-9	165°14'58"	45.967
9-10	126°21'13"	129.737
10-11	172°21'23"	631.197
11-9	344°59'02"	727.329

DERIVED M.G.A. CO-ORDINATES (GDA-94)

STATION	EASTING	NORTHING	ZONE	RL AHD
9	681 309.380	7 084 167.656	55	372.38
10	681 413.867	7 084 090.752	55	366.21
11	681 497.823	7 083 465.163	55	348.69

REFERENCE MARKS

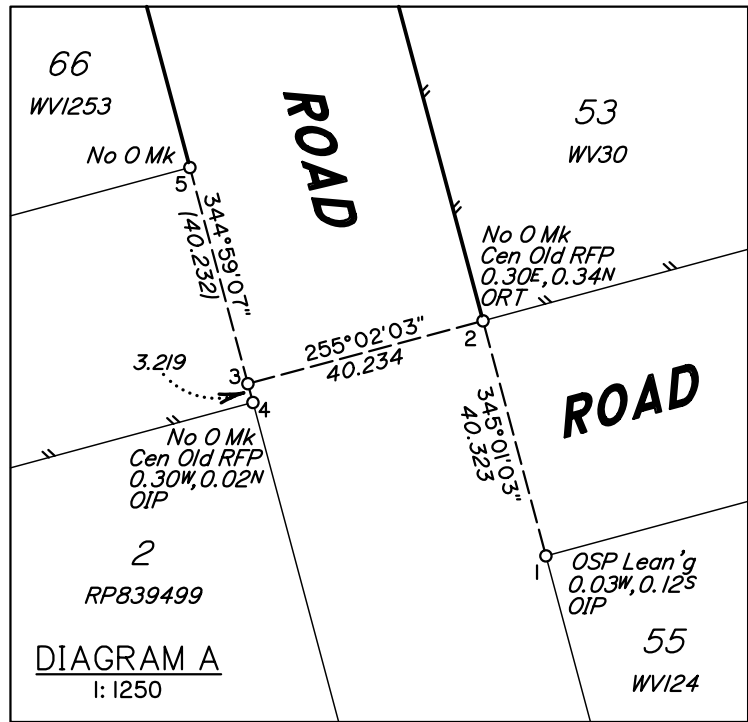
STN	TO	BEARING	DIST	ORIGIN
1	OIP	281°18'03"	0.870	RP839499
2	ORT	354°18'03"	17.702	WV30
4	OIP	196°06'03"	2.599	RP839499
6	ORT Gone	252°29'07"	19.361	WAL53 470
7	ORT Hole	324°47'09"	14.634	WAL53 470

ORIGIN of M.G.A. CO-ORDINATES (GDA-94)

STATION	EASTING	NORTHING	ZONE	RL AHD
PM 185001	679 335.402	7 081 551.312	55	364.119

GEOGRAPHICAL CO-ORDINATES (GDA-94)

WELL HEAD	LATITUDE SOUTH	LONGITUDE EAST	DATUM	RL AHD
LACERTA #21 (Alt. Pandora #3)	26° 21' 06.0577"	148° 49' 04.7726"	GDA94	366.21



BM's are deep driven star pickets with witness post.

Co-ordinates obtained by GPS.

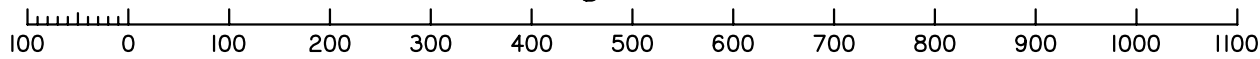
Distances are grid.

Corners and boundaries have not been reinstated. Connections have been made to the marks shown on this plan only.

Note: All coordinates are derived using GDA94 datum unless otherwise noted.

"Alt." denotes alternative Well Name.

Scale 1:7500 - Lengths are in Metres.



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I, Rodney Neil Burford hereby certify that the company has surveyed the location of the petroleum well as shown on this plan, that the survey was performed in accordance with the Petroleum and Gas (Production and Safety) Act 2004 and associated Regulations and Standards and achieves the accuracies of the Standards and the survey was completed on 10/3/2011

LOCALITY <i>Euthulla</i>	MINING RESOURCES Plan of PWL of Lacerta #21 (Alt. Pandora #3)
Approx. LAT. S. 26° 21' 06" LONG. E. 148° 49' 05"	PARISH MOOGA
FIELD NOTES LODGED	COUNTY Waldegrave
	MINING DISTRICT Dalby

Signature of Surveyor	Date 29/4/2011
CATALOGUED	APPROVED
REGISTERED	Chief Surveyor

DRAWN BY KK	MERIDIAN MGA Zone 55 by GPS	SCALE 1 : 7500	MP39083
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4.0 GEOLOGICAL INFORMATION

Age	Formation	Top Depth (mGL)	Elevation (mAHD)
Late Jurassic	Gubberamunda Sandstone	Surface	+366.2
Late Jurassic	Westbourne Formation	60.2	+306.0
Late Jurassic	Springbok Sandstone	166.7	+199.5
Middle Jurassic	Walloon Subgroup Juandah Coal Measures	236.5	+129.7
Middle Jurassic	Walloon Subgroup Tangalooma Sandstone	386.6	-20.4
Middle Jurassic	Walloon Subgroup Taroom Coal Measures	414.1	-47.9
Middle Jurassic	Walloon Subgroup Durabilla Formation	465.0	-98.8
Total Depth		522.3	-116.1

Refer Well Completion Report for further information.

5.0 WELL HISTORY

Date	Activity	Summary Points
09/10/07	Drill / Core	<ul style="list-style-type: none"> • Moved Mitchell Drilling Rig 123 (UDR1000) from Lacerta 37 to Lacerta 21. • Spud well at 0815 hrs July 10, 2007, drilled 7-1/2" hole to 6mGL, installed 6-1/4" PVC conductor & cemented to surface (Gypset). • Drilled 5 1/2" hole to 163.8mGL • Ran 4 1/2" casing to 162.5mGL & cemented to surface • WOC • Nippled up BOPs • RIH with core barrel. Test BOPs • Cored cement / shoe • Cored HQ hole from 163.8 – 522.3mGL (TD) • Made wiper trip. • Logged well (bridge at 360mGL) • Wiper trip. Completed logging. • Removed BOP & installed wellhead. • Mitchell Drilling Rig 123 was released at 1730 hrs, July 19, 2007.
Q1 2008	Proposed Completion	<ul style="list-style-type: none"> • There is no evidence a completion was run or a gauge installed.

Date	Activity	Summary Points
27/10/2012	Abandonment	<ul style="list-style-type: none"> • Washdown equipment • Check well (0 psi). Top up with ~4.5 bbl water & monitor for 4 hrs. • Change out fitting. Install valve in vertical orientation. • Wash down equipment / W.O. weather. • MIRU CTU equipment (October 29) • Install Sigra BOP • Installed working window & injector head. • Rigged up for single fluid return path. • Pressure tested surface lines to 4000 psi • Pressure tested BOP to 550 psi • RIH with 0.75" SS and tagged at 519m (October 30) • Pumped 34 bbl of 12.0 ppg cement slurry in batches maintaining 200m submergence. • Got 11.7 ppg returns after 28 bbls & 11.9 ppg after 30 bbls. Continued pumping until get 12 ppg returns. • Once cement reached surface confirmed 12.0ppg returns & displaced the cement from the coil as it was pulled out of hole to surface. • Flushed coil & cleaned up unit, rigged down CTU • Cut off fatigued 52m of coil. • Released CTU October 30, 2012.
18/12/2012	Cut wellhead / casing off	<ul style="list-style-type: none"> • The casing was cut 1.6m below surface and the wellhead removed. The 6-1/4" x 4-1/2" annulus was topped up as required and signage installed.
November 2013	Rehabilitation	<ul style="list-style-type: none"> • The site was rehabilitated. <p>NB: The site had been partially rehabilitated previously.</p>

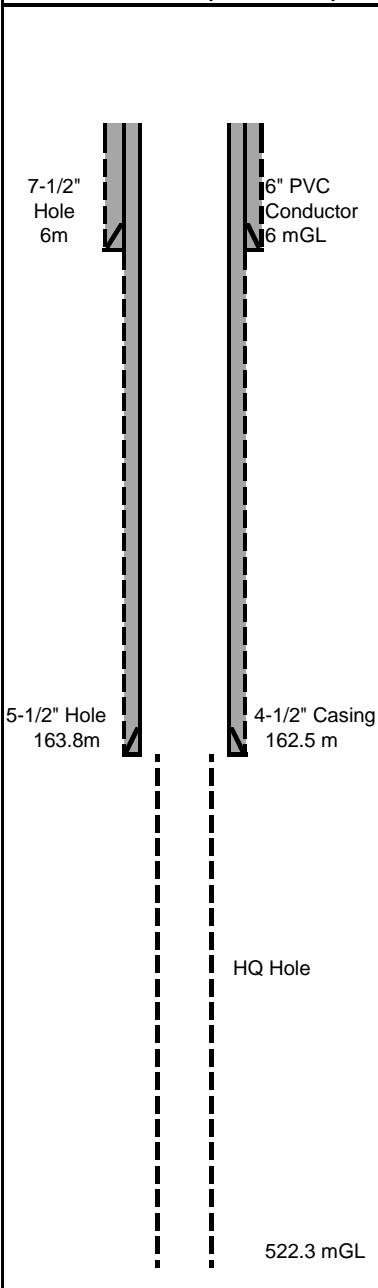
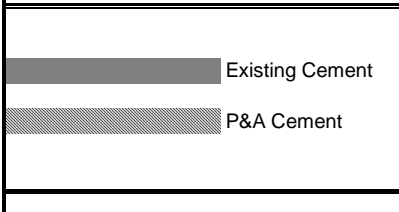
This well has not been fracture stimulated.

6.0 ABANDONMENT

6.1 FINAL DOWNHOLE STATUS

Well Lacerta #21 (Pandora 2)	Pre-Existing	P&A Cement Plug Calcs
	<p>Surface Casing Cementation</p> <p>Conductor ID 12.800 <i>in</i> Conductor Depth 0.0 <i>m</i> Open Hole Size 10.750 <i>in</i> Casing OD: 7 <i>in</i> Casing ID: 6.25 <i>in</i> Weight: PVC <i>lb/ft</i> Casing Type Shoe depth: 6 <i>m</i> Pumped volume N/R <i>bbl</i> Calculated volume 2.2 <i>bbl</i> Shoe Track (length) 2.0 <i>m</i> OH - Casing (excess) 50 <i>%</i> Shoe Track (volume) 0.2 <i>bbl</i> OH - Casing (with exce) 1.9 <i>bbl</i> Conductor - Casing 0.0 <i>bbl</i></p> <p>Note: Reported as cemented to surface</p> <p>Production Casing Cementation</p> <p>Open Hole Size: 5.500 <i>in</i> Casing OD: 4.500 <i>in</i> Casing ID: 4.052 <i>in</i> Weight: <i>lb/ft</i> Casing Type: Shoe depth: 162.5 <i>m</i> Pumped volume N/R <i>bbl</i> Calculated volume 7.5 <i>bbl</i> Shoe Track (length) 12.0 <i>m</i> OH - Casing (excess) 30.0 <i>%</i> Shoe Track (volume) 0.6 <i>bbl</i> OH - Casing (with exce) 6.5 <i>bbl</i> Surf casing - Prod Casing 0.4 <i>bbl</i></p> <p>Note: Reported as cemented to surface</p> <p>HQ Hole</p> <p>Open Hole ID 3.78 <i>in</i></p> <p>Tubing Size / OD 2.375 <i>in</i> Tubing ID 1.995 <i>in</i></p>	<p>Cement Details.</p> <p>1. Open Hole Section</p> <p>Top 162.5 <i>m</i> Bottom 522.3 <i>m</i> Volume 16.4 <i>bbl</i> Volume (with xs) 20.5 <i>bbl</i> Excess Vol = 25.00 <i>%</i></p> <p>2. Inside Casing</p> <p>Top 0 <i>m</i> Bottom 162.5 <i>m</i> Volume 8.5 <i>bbl</i></p> <p>Coiled Tubing Volume</p> <p>Length 1000 <i>m</i> ID 0.625 <i>in</i> Volume 1.2 <i>BBL</i></p> <p>Total Vol Required 30.2 <i>bbl</i></p>

6.2 DOWNHOLE PRIOR TO P&A

Well Lacerta #21 (Pandora 2)	Pre-Existing	
 <p>7-1/2" Hole 6m</p> <p>6" PVC Conductor 6 mGL</p> <p>5-1/2" Hole 163.8m</p> <p>4-1/2" Casing 162.5 m</p> <p>HQ Hole</p> <p>522.3 mGL</p>	<p>Surface Casing Cementation</p> <p>Conductor ID 12.800 <i>in</i> Conductor Depth 0.0 <i>m</i> Open Hole Size 10.750 <i>in</i> Casing OD: 7 <i>in</i> Casing ID: 6.25 <i>in</i> Weight: PVC <i>lb/ft</i></p> <p><i>Casing Type</i></p> <p>Shoe depth: 6 <i>m</i> Pumped volume N/R <i>bbl</i> Calculated volume 2.2 <i>bbl</i> Shoe Track (length) 2.0 <i>m</i> OH - Casing (excess) 50 % Shoe Track (volume) 0.2 <i>bbl</i> OH - Casing (with exce) 1.9 <i>bbl</i> Conductor - Casing 0.0 <i>bbl</i></p> <p>Note: Reported as cemented to surface</p> <p>Production Casing Cementation</p> <p>Open Hole Size: 5.500 <i>in</i> Casing OD: 4.500 <i>in</i> Casing ID: 4.052 <i>in</i> Weight: <i>lb/ft</i></p> <p><i>Casing Type:</i></p> <p>Shoe depth: 162.5 <i>m</i> Pumped volume N/R <i>bbl</i> Calculated volume 7.5 <i>bbl</i> Shoe Track (length) 12.0 <i>m</i> OH - Casing (excess) 30.0 % Shoe Track (volume) 0.6 <i>bbl</i> OH - Casing (with exce) 6.5 <i>bbl</i> Surf casing - Prod Casi 0.4 <i>bbl</i></p> <p>Note: Reported as cemented to surface</p> <p>Open Hole ID 3.78 <i>in</i></p> <p>Tubing Size / OD 2.375 <i>in</i> Tubing ID 1.995 <i>in</i></p>	 <p>Existing Cement</p> <p>P&A Cement</p>

6.3 CEMENT PLUG DETAILS

Cement Plug	Details	Comments
#1	Class A Fly Ash Blend Cement (see below for details) 523mGL – Surface	<ul style="list-style-type: none"> • Set up for single path returns • RIH 0.75" SS coil • Tagged PBTD at 519m • Pumped 34 bbl of 12.0 ppg cement slurry in batches maintaining 200m submergence. • Got 11.7 ppg returns from the Casing after 28 bbls & 11.9 ppg from the Casing after 30 bbls. Continued pumping until 12 ppg returns from Casing. • Once cement reached surface confirmed 12.0ppg returns POOH with CT while flushing remainder of cement from coil • Rigged down CTU, cleaned up, moved to laydown yard. CTU released

12.0 ppg for Capillary or CT applications

BJ SERVICES COMPANY (AUSTRALIA) PTY LTD

LABORATORY REPORT-REV 2.0

BJ SERVICES

Company	: QGC	Date	: 27 May 2011
Well Name	:	RefNo	: 1068
Job Type	: Capillary Cement	Test Ref	: TAP Water

WELL DATA

Depth (BRT)	: ≈600 m	Csg. Size:	3/4"	Mud Wt	: 8.34 ppg
BHST	: 42 deg. C	Hole Size	: 4 3/4"	Mud Type	: WATER
BHCT	: 42 deg. C	BHSqz	: deg. C	Temp. Gradient	:

SPACER DATA (Assuming Normal Pressures)

Type: Drill Water Volume: Pump 50 bbl water ahead Density: 8.34 ppg Rate: ~1 BPM

12.0 ppg –Fly Ash Blend + 1.0 gptb (0.0316 gps) FP-9L+ 22.50 gptb (0.7122 gps) FL-66L+ 1.50 gptb (0.0474 gps) R-21LS
 + 16.00 gptb (0.5065gps) A-300L+ Drill Water

SLURRY PROPERTIES

Slurry Weight	: ppg	12.0
Slurry Yield	: cu.ft/sx	2.30
Mixing Water	: gal/sx	12.00
Total Fluid	: gal/sx	13.29
Mixwater Type	:	DRILL WATER
Thickening Time:	hr:min	
	@ 30 Bc	5:00
	@ 100 Bc	5:45
Free Water	: ml @ 42 deg.C	TRACE
Fluid Loss	: cc/30 min @ 42 deg.C	112 cc
Compressive Strengths, psi	: at Temperature	42 °C
	24 hrs	200 psi
	36 hrs	435 psi
Rheologies	@ Temperature	42 °C
	300	34
	200	26
	100	16
	6	2
	3	1
	600	55
	Pv	27
	Yp	7
	Gel-10"	1
	Gel-10'	2

HEAT UP TIME : - min FINAL TESTED PRESSURE : 1140 psi TESTED BY : RAM
 COMMENTS : FP-9L = FOAM PREVENTER, A-300L = EXTENDER, FL-66L = FLUID LOSS ADDITIVE
 R-21LS = RETARDER

6.4 FISH / OTHER HARDWARE DETAILS

Fish / Hardware	Details	Comments
#1 4 ½" Casing (in 5 ½" hole)	Plain Casing 4 ½" (details not known)	Surface – 162.5m
#2 2-3/8" Tubing (in 4 ½" Casing / HQ Hole)	2-3/8" 4.7 ppg J55 EUE Tubing	No evidence of installation

Appendix A – LOGS DURING ABANDONMENT (WHEN RUN)

No logs run during P&A

APPENDIX B – RIG REPORTS ABANDONMENT



DAILY COMPLETION & WORKOVER REPORT

Lacerta_21

Report Start Date: 27/10/2012

Report #: 1

Days from Job Start: 0.25

WELL INFORMATION								
UWI 100000611697		Well PID PAN_WH002		Tenure ATP 767P		Field Name Lacerta		
Job Sub Category Abandonment		Well Configuration Type Vertical		Spud Date		Rig End Date		
Original KB/RT Elevation (m) 361.20	KB-Ground Distance (m) 1.20	KB-Casing Flange Distance (m)	KB-Tubing Head Distance (m)	Latitude (°) 26° 21' 5.2" S	Longitude (°) 148° 49' 5.01" E			
Daily Field Est Total (Cost)			Cum Field Est To Date (Cost)		AFE Number			
DAILY OPERATIONS								
Rig (Names) BJ Services Capillary Unit (0.75)		Rig Time (hr) 6.00	Job Start Date 27/10/2012	Job End Date	Camp Site Location			
Weather Overcast	Temperature (°C) 22.0	Tubing Pressure (psi) 0.0	Casing Pressure (psi)	Salinity (ppt)	Standardized AAWR (bbl/day)			
HSSE SUMMARY								
Days Since Last Time Incident (days)			Days Since Recordable Incident (days)					
HSSE INCIDENTS								
Date	Type	Sub Type	Severity	Comment	Synergi Number			
SAFETY CHECK SUMMARY								
Type		Last Date	Days Last Chk (days)	Next Date				
Post/Pre Shift Meeting		27/10/2012	0	28/10/2012				
Toolbox Talk								
JOB CONTACTS								
Contact Name		Title		Mobile				
Denis Anderson		OCR		0419 286998				
Kelly Wilson		WSS		0417 829 683				
POB								
Company			Job Title	Head Count				
DAILY OPERATIONS SUMMARY								
Objective P&A Well								
Last 24hr Op's Summary Wash down equipment for weed declaration. Drive from Roma. PJSM Gas Test and pressure test well 0 psi. Top up with fresh water (approx 700 litre) and monitor for 4 hours. No pressure increase and no fall in level. Call P&A Supt. for permission to change orientation of valve. Given ok. Change valve to vertical. Close in and secure well.								
Summary 00:00 - 06:00 12 hr ops								
Planned Op's Well kill, monitor and change valve orientation on Lacerta #4								
HOURLY OPERATIONS SUMMARY 00:00 TO 24:00								
Start Time	End Time	Dur (hr)	Phase	Op	Class	NPT (hr)	Desc	Act Desc
06:00	06:45	0.75						Wash down for weed declaration.
06:45	07:30	0.75						Drive from Roma
07:30	07:45	0.25		SM			Safety Meeting	PJSM Gas testing and pressurised systems
07:45	12:00	4.25		SWT			Shut-In For Build Up	Gas and pressure test well. 0 psi. top up well with approx 700 L of water. Monitor well for 4 hours. 0 psi and no drop in level. Gain approval and change valve to vertical. Shut in and secure well
HSE CHECKS								
Date	Type	Des		Com				
27/10/2012	Post/Pre Shift Meeting			PJSM Gas testing and pressurised systems				
Type						Number of Reports		
Plug Back Total Depths								
Date	Type				Depth (mKB)			
TOTAL CLEAN OUT TIME								
Phase Desc						Actual Duration (hr)		
LEASE FLUIDS								
Fluid Type	Volume to Lease (bbl)	Source	From Lease (bbl)	Destination				
NON - PRODUCTIVE TIME								
Problem Duration (hr)	RC Code	Description						
OTHER IN HOLE								
Des		Run Date	OD (in)	Top (mKB)	Btm (mKB)			



DAILY COMPLETION & WORKOVER REPORT

Lacerta_21

Report Start Date: 28/10/2012

Report #: 2

Days from Job Start: 0.75

WELL INFORMATION								
UWI 100000611697		Well PID PAN_WH002		Tenure ATP 767P		Field Name Lacerta		
Job Sub Category Abandonment		Well Configuration Type Vertical		Spud Date		Rig End Date		
Original KB/RT Elevation (m) 361.20	KB-Ground Distance (m) 1.20	KB-Casing Flange Distance (m)	KB-Tubing Head Distance (m)	Latitude (°) 26° 21' 5.2" S	Longitude (°) 148° 49' 5.01" E			
Daily Field Est Total (Cost)		Cum Field Est To Date (Cost)		AFE Number				
DAILY OPERATIONS								
Rig (Names) BJ Services Capillary Unit (0.75)		Rig Time (hr) 12.00	Job Start Date 27/10/2012	Job End Date	Camp Site Location			
Weather Consistent Rain	Temperature (°C) 20.0	Tubing Pressure (psi)	Casing Pressure (psi)	Salinity (ppt)	Standardized AAWR (bbl/day)			
HSSE SUMMARY								
Days Since Last Time Incident (days)			Days Since Recordable Incident (days)					
HSSE INCIDENTS								
Date	Type	Sub Type	Severity	Comment	Synergi Number			
SAFETY CHECK SUMMARY								
Type		Last Date	Days Last Chk (days)	Next Date				
Post/Pre Shift Meeting		27/10/2012	0	29/10/2012				
Toolbox Talk								
JOB CONTACTS								
Contact Name		Title		Mobile				
Denis Anderson		OCR		0419 286998				
Kelly Wilson		WSS		0417 829 683				
Cameron Dow		CT Field Supervisor		0488 945 865				
Jason Heron		CTU Supervisor		0400 281862				
POB								
Company			Job Title	Head Count				
DAILY OPERATIONS SUMMARY								
Objective P&A Well								
Last 24hr Op's Summary Baker wash down for weed declaration. Wait on weather.								
Summary 00:00 - 06:00 12 hr ops								
Planned Op's Weather permitting move equipment to Lacerta #21 to perform P&A								
HOURLY OPERATIONS SUMMARY 00:00 TO 24:00								
Start Time	End Time	Dur (hr)	Phase	Op	Class	NPT (hr)	Desc	Act Desc
06:00	12:00	6.00						Wash down for weed declaration
12:00	18:00	6.00		WOW			Wait On Weather	Wait on weather
HSE CHECKS								
Date	Type	Des	Com					
Type						Number of Reports		
Plug Back Total Depths								
Date	Type	Depth (mKB)						
TOTAL CLEAN OUT TIME								
Phase Desc					Actual Duration (hr)			
LEASE FLUIDS								
Fluid Type	Volume to Lease (bbl)	Source	From Lease (bbl)	Destination				
NON - PRODUCTIVE TIME								
Problem Duration (hr)	RC Code	Description						
OTHER IN HOLE								
Des	Run Date	OD (in)	Top (mKB)	Btm (mKB)				



DAILY COMPLETION & WORKOVER REPORT
Lacerta_21

Report Start Date: 29/10/2012

Report #: 3

Days from Job Start: 1.06

WELL INFORMATION								
UWI 100000611697	Well PID PAN_WH002	Tenure ATP 767P	Field Name Lacerta					
Job Sub Category Abandonment	Well Configuration Type Vertical	Spud Date	Rig End Date					
Original KB/RT Elevation (m) 361.20	KB-Ground Distance (m) 1.20	KB-Casing Flange Distance (m)	KB-Tubing Head Distance (m)	Latitude (°) 26° 21' 5.2" S	Longitude (°) 148° 49' 5.01" E			
Daily Field Est Total (Cost)		Cum Field Est To Date (Cost)		AFE Number				
DAILY OPERATIONS								
Rig (Names) BJ Services Capillary Unit (0.75)		Rig Time (hr) 12.00	Job Start Date 27/10/2012	Job End Date	Camp Site Location			
Weather Overcast / dry	Temperature (°C) 20.0	Tubing Pressure (psi)	Casing Pressure (psi)	Salinity (ppt)	Standardized AAWR (bbl/day)			
HSSE SUMMARY								
Days Since Lost Time Incident (days)			Days Since Recordable Incident (days)					
HSSE INCIDENTS								
Date	Type	Sub Type	Severity	Comment	Synergi Number			
SAFETY CHECK SUMMARY								
Type	Last Date		Days Last Chk (days)	Next Date				
Post/Pre Shift Meeting	27/10/2012		1	29/10/2012				
Toolbox Talk								
JOB CONTACTS								
Contact Name		Title		Mobile				
Denis Anderson		OCR		0419 286998				
Kelly Wilson		WSS		0417 829 683				
Cameron Dow		CT Field Supervisor		0488 945 865				
Jason Heron		CTU Supervisor		0400 281862				
POB								
Company			Job Title	Head Count				
DAILY OPERATIONS SUMMARY								
Objective P&A Well								
Last 24hr Op's Summary Baker moves equipment from yard to Lacerta #21. Equipment spotted. Recover other equipment from Lacerta #17 stranded because of weather (rain). Wash down for weed declaration and move to Lacerta #21								
Summary 00:00 - 06:00 12 hr ops								
Planned Op's Weather permitting perform P&A								
HOURLY OPERATIONS SUMMARY 00:00 TO 24:00								
Start Time	End Time	Dur (hr)	Phase	Op	Class	NPT (hr)	Desc	Act Desc
06:00	08:30	2.50						Baker move equipment to Lacerta #21
08:30	13:30	5.00						Recover equipment back to base from Lacerta #17, stranded because of rain. Wash down and move to Lacerta #21. SDFN
HSE CHECKS								
Date	Type	Des		Com				
Type								
						Number of Reports		
Plug Back Total Depths								
Date	Type					Depth (mKB)		
TOTAL CLEAN OUT TIME								
Phase Desc						Actual Duration (hr)		
LEASE FLUIDS								
Fluid Type	Volume to Lease (bbl)	Source	From Lease (bbl)	Destination				
NON - PRODUCTIVE TIME								
Problem Duration (hr)	RC Code	Description						
OTHER IN HOLE								
Des		Run Date	OD (in)	Top (mKB)	Btm (mKB)			



DAILY COMPLETION & WORKOVER REPORT

Lacerta_21

Report Start Date: 30/10/2012

Report #: 4

Days from Job Start: 1.52

WELL INFORMATION								
UWI 100000611697		Well PID PAN_WH002		Tenure ATP 767P		Field Name Lacerta		
Job Sub Category Abandonment		Well Configuration Type Vertical		Spud Date		Rig End Date		
Original KB/RT Elevation (m) 361.20	KB-Ground Distance (m) 1.20	KB-Casing Flange Distance (m)	KB-Tubing Head Distance (m)	Latitude (°) 26° 21' 5.2" S	Longitude (°) 148° 49' 5.01" E			
Daily Field Est Total (Cost)			Cum Field Est To Date (Cost)		AFE Number			
DAILY OPERATIONS								
Rig (Names) BJ Services Capillary Unit (0.75)		Rig Time (hr) 12.00	Job Start Date 27/10/2012	Job End Date	Camp Site Location			
Weather Overcast / dry	Temperature (°C) 20.0	Tubing Pressure (psi) 0.0	Casing Pressure (psi)	Salinity (ppt)	Standardized AAWR (bbl/day)			
HSSE SUMMARY								
Days Since Last Time Incident (days)			Days Since Recordable Incident (days)					
HSSE INCIDENTS								
Date	Type	Sub Type	Severity	Comment	Synergi Number			
SAFETY CHECK SUMMARY								
Type		Last Date		Days Last Chk (days)	Next Date			
Post/Pre Shift Meeting		30/10/2012		0	31/10/2012			
Toolbox Talk		30/10/2012		0	31/10/2012			
JOB CONTACTS								
Contact Name		Title			Mobile			
Denis Anderson		OCR			0419 286998			
Kelly Wilson		WSS			0417 829 683			
Cameron Dow		CT Field Supervisor			0488 945 865			
Jason Herman		CTU Supervisor			0488 945 005			
POB								
Company			Job Title			Head Count		
DAILY OPERATIONS SUMMARY								
Objective P&A Well								
Last 24hr Op's Summary BH drive from Roma. PJSM rig up, slips, trips and falls. Open well, gas test and record pressure. 0 psi. Rig up of equipment. PT Lines to 4000 psi and BOP to 550psi. RIH to 519 m, pick up and RIH to re tag to confirm PBDT. TBT cement ops. Perform P&A as per program with 12 ppg cement to surface. Water used Roma town water. Pumped total 34 bbl taking returns from tubing to displace to surface at 12ppg. Rig down and clean equipment. Move to Lacerta #37								
Summary 00:00 - 06:00 12 hr ops								
Planned Op's Complete move to Lacerta #37 and perform P&A								
HOURLY OPERATIONS SUMMARY 00:00 TO 24:00								
Start Time	End Time	Dur (hr)	Phase	Op	Class	NPT (hr)	Desc	Act Desc
06:00	06:45	0.75						BH drive from Roma
06:45	07:15	0.50		SM			Safety Meeting	PTW and PJSM Rig up, slips, trips and falls
07:15	08:15	1.00		RU			Rig Up	Rig up equipment
08:15	08:55	0.68		PT			Pressure Test	Circulate fluid to well, PT lines to 4000 psi and BOP to 550 psi.
08:55	10:10	1.25		TI			Trip-in	RIH performing Pull Tests. Problem getting in hole from 330 m, so pumped fluid to clean ahead. Gel / Mud deposits in returns. Tagged TD at 519 m
10:10	10:25	0.25		TBT			Tool Box Talk	BT Cement Ops
10:25	10:45	0.33		CMC			Cementing	Batch up 8 bbl 12 ppg cement. Test weight and take sample. Pump cement down hole.
10:45	11:20	0.58		CMC			Cementing	Batch up 7 bbl 12 ppg cement. Test weight. Pump cement down hole.
11:20	11:45	0.42		CMC			Cementing	Batch up 8 bbl 12 ppg cement. Test weight and take sample. Pump cement down hole.
11:45	12:05	0.33		CMC			Cementing	Batch up 8 bbl 12 ppg cement. Test weight. Pump cement down hole. Cement at surface CTU at 200m. 28 bbls 11.7ppg, 30bbls 11.9ppg.
12:05	12:15	0.16		CMC			Cementing	Batch up 3 bbl 12 ppg cement. Test weight. Pump cement down hole.32 bbls 12ppg. POOH displacing coil volume. 34 bbls pumped 12ppg
12:15	12:30	0.25		CMC			Cementing	CTU at surface. Shut in and secure well.
12:30	14:30	2.00		RD			Rig Down	Rig down equipment. Coiled Tubing damaged / fatigued. 52m removed. See Attached Files under Others
14:30	17:00	2.50						Move equipment to Lacerta #37
HSE CHECKS								
Date		Type		Des		Com		
30/10/2012		Post/Pre Shift Meeting				PTW and PJSM Rig up, slips, trips and falls		
30/10/2012		Toolbox Talk				TBT Cement Ops		



DAILY COMPLETION & WORKOVER REPORT

Lacerta_21

Report Start Date: 18/12/2012

Report #: 1

Days from Job Start: 0.13

WELL INFORMATION									
UWI 100000611697		Well PID PAN_WH002		Tenure ATP 767P		Field Name Lacerta		Total Depth (mGRD) 522.30	
Job Category Abandonment		Job Sub Category Abandonment		Well Configuration Type Vertical		Rig End Date		PBTD (All) (mGRD)	
Original KB/RT Elevation (m) 361.20		KB-Ground Distance (m) 1.20		KB-Casing Flange Distance (m)		KB-Tubing Head Distance (m)		Latitude (°) 26° 21' 5.2" S	
								Longitude (°) 148° 49' 5.01" E	
Daily Field Est Total (Cost)				Cum Field Est To Date (Cost)				AFE Number	
DAILY OPERATIONS									
Rig (Names)			Rig Time (hr) 12.00		Job Start Date 18/12/2012		Job End Date		Camp Site Location
Weather		Temperature (°C)		Tubing Pressure (psi)		Casing Pressure (psi)		Salinity (ppt)	Standardized AAWR (bbl/day)
HSSE SUMMARY									
Days Since Last Time Incident (days)					Days Since Recordable Incident (days)				
HSSE INCIDENTS									
Date		Type		Sub Type		Severity		Comment	
								Synergi Number	
SAFETY CHECK SUMMARY									
Type			Last Date			Days Last Chk (days)		Next Date	
JOB CONTACTS									
Contact Name				Title				Mobile	
Kelly Wilson				Sup				0417 829 683	
Kris Byrnes				OCR				0409 438 565	
POB									
Company					Job Title			Count	
DAILY OPERATIONS SUMMARY									
Objective dig cellar, Cut off casing, top casing w/ cement, weld cap on casin, install ID plates on casing & @ surface.									
Last 24hr Op's Summary									
Summary 00:00 - 06:00									
Planned Op's									
HOURLY OPERATIONS SUMMARY 00:00 TO 24:00									
Start Time	End Time	Dur (hr)	Phase	Op	Class	NPT (hr)	Desc	Act Desc	
06:30	09:30	3.00		CCS	P		Casing - Cut	TBM with welding crew & excavator crew talking about land access rules. Check well ID & pressures, Talked about job procedures & gas testing each well site before entry Also hot work permit in place. Unload excavator and start to dig cellar for welder. Cellar dug to 2.0m with benches to allow for easy access. Welder gas test work area once more to insure there is no gas in cellar. Marked casing @ 1.6m & cut off conductor casing/Surface casing/production casing and removing loading in truck for disposal. Mix cement & Top up casing. Weld cap over casing & install ID plate. Back fill cellar and install ID plate @ surface.	
HSE CHECKS									
Date		Type		Des		Com			
Type								Number of Reports	
Plug Back Total Depths									
Date				Type				Depth (mGRD)	
TOTAL CLEAN OUT TIME									
Phase Desc								Actual Duration (hr)	
LEASE FLUIDS									
Fluid Type		Volume to Lease (bbl)		Source		From Lease (bbl)		Destination	
NON - PRODUCTIVE TIME									
Problem Duration (hr)		RC Code				Description			
OTHER IN HOLE									
Des			Run Date			OD (in)		Top (mGRD)	Btm (mGRD)

APPENDIX C – CEMENTING REPORTS ABANDONMENT



TREATMENT REPORT

Exp. TD 1720 encounter

S38 open

Cross Reference Ticket Nos: _____

page 1 of 2

CUSTOMER: DGC CUSTOMER REP: D. Anderson SUPERVISOR: Sitterman DATE 30/oct/12

WELL Lacerta # 21 FIELD Lacerta

TYPE NEW WORKOVER OIL GAS GEOTHERMAL
WATER INJECTION GAS INJECTION

PERFORATIONS: _____ TYPE _____

COMPLETION: Tbg. Size _____ wt. _____ depth _____
Csg size _____ wt. _____ depth _____
Liner size _____ wt. _____ depth _____

PACKER DEPTH _____ AV.DEV _____ MAX.DEV _____ AT. _____

DATE RECORDER: ERAD DATA LOG MARTIN DECKER
COILED TUBING TOOL STRING _____

TREATMENT DESCRIPTION: _____

PEA

TREATING FLUID: 12 Ppb cement

ADDITIVES: _____

OPERATIONAL DETAILS

DATE/TIME	DESCRIPTION	COILED TUBING		PUMPRATE		VOLUME		PRESSURE	
		DEPTH	PULL	LIQUID	N2	STAGE	CUM.	CIRC	WHP
0600	Leave Roma								
0645	On site								
7:00	PTW and TBT								
7:20	Begin Rig In								
8:15	Rig in complete.	9							
8:20	Circulate fluid to tank.	9							
8:25	Pressure test surface lines 4000psi	9	0					4000	
8:40	Pressure test BOP 550psi	9	-40					550	
8:55	R1H Circulate	9	0	0.25				700	
9:00	Pull Test	325	750	0.25				700	
9:00	R1H	310	750	0.25				700	
9:05	Hold Test	725	150	0.25				700	
9:05	R1H continue circulating.	710	200	0.25				700	
9:10	Tagged up //	937	0	0.25				700	
9:10	Pull up circulate //	932	200	0.40				2000	
9:15	R1H cont. circulating.	732	350	0.40				2000	
9:20	Tagged up	* 1172	50	0.40				2000	
9:20	Pull up // hold to flush	1085	300	0.40				2000	
9:25	Tagged	1097	0	0.40				2000	
9:25	R1H	1095	300	0.40				2000	
9:30	TRIPED Pull up	1187	100	0.40				2000	
9:30	Hold Pull up Clean well	1187	200	0.45				2000	
9:35	R1H	937	250	0.45				2000	
9:40	TAGGED pull up - Clean well	1083	0	0.45				2000	
9:45	Pull up R1H	1143	300	0.45				2000	
9:50	TAGGED	1482	500						
9:50	R1H	1473	450						
9:55	P204	1495	550						
9:55	R1H	1460	500						
10:00	P204	1663	600						

820
1480
1548

1645 500



TREATMENT REPORT - CONTINUATION SHEET

Cross Reference Ticket Nos: _____

page 2 of 2

CUSTOMER: OC CUSTOMER REP: D. Anderson SUPERVISOR: J. Harman DATE 30-10-12

OPERATIONAL DETAILS		COILED TUBING		PUMPRATE		VOLUME		PRESSURE	
DATE/TIME	DESCRIPTION	DEPTH	PULL	LIQUID	N2	STAGE	CUM.	CIRC	WHP
10:00	LHM	1645	650	0.5				2000	
10:10	TAGGED TD	1700	200	0.5				2000	
10:10	Pull up Hold.	1700	300	0.5				2000	
10:15	CEMENT SAFETY MEETING	1700	200	0.5				2000	
10:25	Batch Cement to 12 ppg	1700	200	—				—	
10:35	Cement Down Hole	1700	200	0.4				2500	
10:45	3 BALS Pumped down hole -	1700	550	0.45				3200	
10:50	5 BALS Pumped stop to Batch up -	1700	550	—				—	
10:55	Pump down Hole	1700	650	0.45				3000	
11:05	stop to Batch up 10 BALS Pumped down	1700	700	0.45				3100	
11:20	15 BALS Pumped	1659	650	0.46				2600	
11:25	17 BALS PUMPED BATCH UP	1339	600	—				—	
11:30	Pump down HOLE.	1339	800	0.4				2600	
11:45	20 BALS Pumped	1159	800	0.4				2600	
11:45	23 BALS Pumped Hold @ depth Batch up	752	600	—				—	
11:45	Pump down Hole	757	600	0.				—	
12:00	28 BALS Pumped start to see cement returns at surface	656	600	0.3				2000	
12:05	Batch up. 2 BALS	568	000	—				—	
12:05	Pump down hole	568	600	0.3				2000	
12:10	12 PPG @ surface Pool	568	800	0.3				2000	
12:15	BHA TOOL AT SURFACE - SHUT IN CIRC.	0	450	—					