



Field : Beetaloo Well design pressure 10000 psi  
 Well : Kyalla 117 N2-1 & N2-1H Reservoir pressure 2760 psi  
 Schematic : OE.D 5.5-a4 rev. 3 Prepared by : Kaycee Verghese  
 Date : 14-May-2020 Verified by : David MacDougal  
 Paul Groves

## Suspension

### Suspension - 5-1/2" Casing Installed

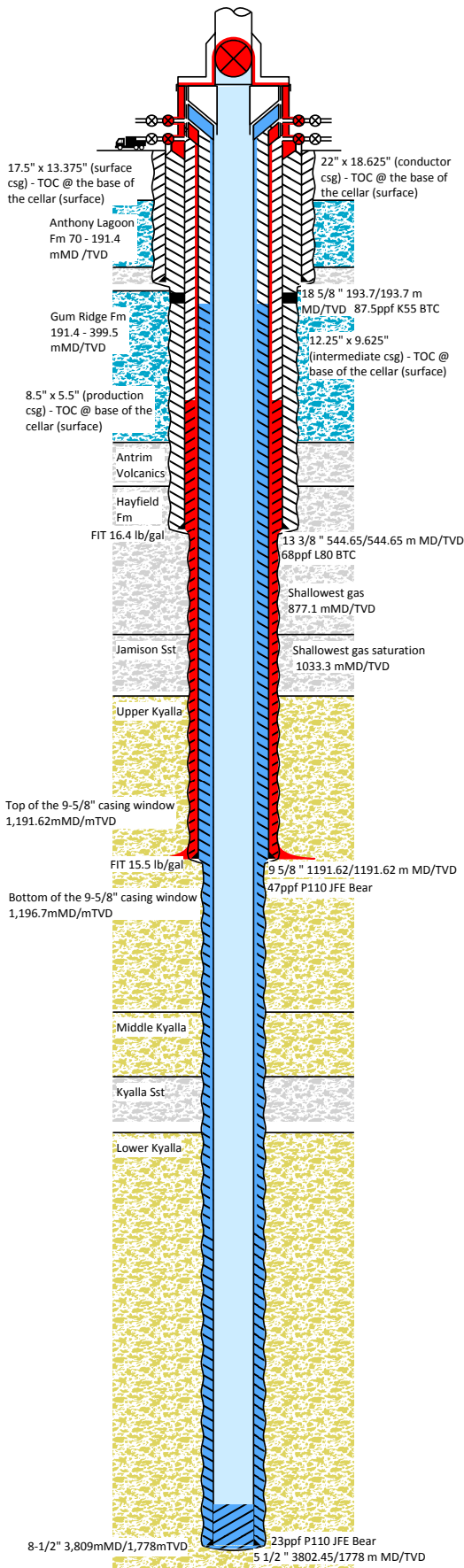
#### As built

#### Primary barrier elements

Element	Qualification	Monitoring
Casing hanger 5-1/2" (E)	Between 5-1/2" Pack off seals pressure tested to 10,060 Psi / 15mins. 20/02/2020	A-annulus pressure
Shoe Track 5-1/2" (I)	Successful cement job execution, plug bump, floats holding (vol bled back did not exceed expected vol) shoe track not over displaced, float exposed to differential pressure, Pressure tested after 500 Psi CS reached. shoe track length of ~60m. 20/02/2020	A-annulus pressure. Ongoing monitoring of WH pressure to identify any pressure build up
Production 5-1/2" casing (I)	Green cement casing pressure test conducted to 3,190 Psi / 10mins on 20/02/2020. Grey cement casing pressure test conducted to 9,926psi / 20mins on 28/02/2020.	A-annulus pressure
Production casing cement 5-1/2" (E)	Job executed as per program (returns to surface, densities, volumes, lifting pressures) on 20/02/2020. Cement quality verified by CBL_VDL_MAP logs on 26/02/2020.	B-annulus pressure
Overbalanced fluid column (I)	Cement displaced with 9.7 ppg brine which provides adequate overbalance on calculated formation pressure. Suspension brine displaced on 20/02/2020	Needle Valve with pressure gauge installed on Blind Flange. Ongoing monitoring of WH pressure to identify any pressure build up.

#### Secondary barrier elements

Element	Qualification	Monitoring
7-1/16" Master Valve / Tubing Head w/ 2-1/16" SOV (B-section) (I)	Blind Flange/MV pressure tested offline to 10,043 Psi / 15mins 11/12/2019. Retested to 10,003/15mins 02/03/2020. Flange connection between 7-1/16" MV and TH pressure tested offline to 10,000psi/ 15mins 08/12/2019. 2-1/16" SOV PT to 15000 psi 25/09/19	A-annulus pressure. Local visual observation
Wellhead annulus access valves (E)	C-annulus and B-annulus Side Outlet Valves (SOV) and WH/SOV connections pressure tested to 3,098 Psi / 20mins during surface casing pressure test. 26/10/2019.	External observation. Regular function test during wellhead inspection.
Tubing Head (B-Section) / Casing Head (A-Section) Wellhead (I)	Tubing Head pack-off seals pressure tested to 10,182 Psi / 15mins 21/02/2020. Flanged connection between Tubing Head & Casing Head pressure tested to 5,050psi / 15mins 21/02/2020.	External observation during regular wellhead inspection.
Casing hanger 9-5/8" (E)	Lower pack-off seals pressure tested to 5,105 Psi / 15mins. Upper pack-off seals pressure tested to 10,027psi / 15mins. 18/12/2019	C-annulus pressure



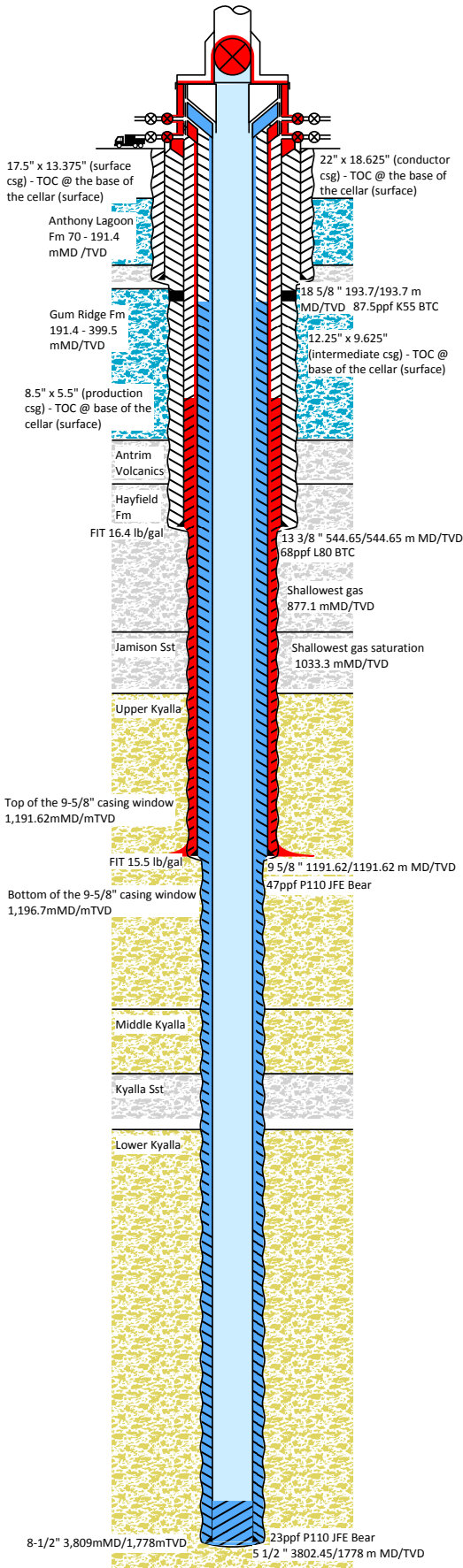
Prepared by Origin Energy

Depth reference: RKB ADR1500 E963, None



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Intermediate casing 9-5/8" (E)	Pressure tested to 4,725 Psi / 20 mins. 19/12/2020	C-annulus pressure
Intermediate 9-5/8" casing cement (E)	Successful cement job performed with cement returns to surface. Job executed as per program (densities, volumes, lifting pressures) 16/12/19. Cement quality verified by CBL_VDL_USIT logs. 18/12/19	C-annulus pressure
Formation integrity at 9-5/8" shoe (E)	FIT conducted at the top of the casing window (1,191.62mMD/TVD) to 15.5ppg EMW. 29/01/2020.	Not accessible

**Healthy well, no or minor issue**

Note:

- Poor cement above 120mMD in 13-3/8" x 18-5/8" annulus. Potential debonding / microannuli, or patchy cement with weighted spacer present.
- Top up cement job performed on 13-3/8" x 18-5/8" annulus. 5bbl of 15.8ppg top up cement (equal to 11m of height in annulus) injected. No slumping observed.
- Annulus Casing Packer set at 208.39-211.44mMD.
- FIT performed on 13-3/8" casing shoe to 16.4ppg EMW.
- 9-5/8" casing successfully cemented with 13.5ppg lead /15.8ppg tail cement, with 13.5ppg cement returned to surface.
- Poor cement above 320mMD in 9-5/8" x 13-3/8" annulus. Potential debonding / microannuli, or patchy cement with weighted spacer present.
- 5-1/2" casing successfully cemented with 14.0ppg lead /15.6ppg tail cement, with 25bbls of cement returned to surface. Poor cement above 195mMD in 9-5/8" x 5-1/2" annulus.
- Integrity of 5-1/2" production casing successfully verified by pressure test to 9,926psi / 20mins (grey cement pressure test).
- Shoe track verification carried out in accordance with Origin standards

(I) = Internal, (E) = External

A-annulus = 5.5", B-annulus = 9-5/8" x 5.5", C-annulus = 13-3/8" x 9-5/8"

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Depth reference: RKB ADR1500 E963, None