

Memo

To	Fabian Goddard	Company	CZR Resources
From	Alastair Hoare / Basia Kozikowska	Job No.	385E
Date	09/10/24	Doc No.	038a
Subject	CZR Robe Mesa Project: Groundwater Level Monitoring		

Hi Fabian,

This memo describes the current groundwater monitoring network associated with CZR's Robe Mesa Project.

1. GROUNDWATER MONITORING BORES

There are currently 4 groundwater level monitoring bores in the area around CZR's Robe Mesa iron ore project and their locations are shown in Figure 1.1 in relation to the Robe Mesa Deposit. These comprise:

- MB13-3. This is a dedicated monitoring bore drilled and constructed in December 2010 as part of the Australian Premium Iron (API) railway project. The railway was never built. This monitoring bore is adjacent to production bore PB13-3, which CZR plan to use for water supply for the Robe Mesa project. Both bores are constructed in the fault Breccia within the Duck Creek Dolomite. Bore MB13-3 is approximately 8 km southeast of the Robe Mesa Deposit.
- TB4R: This is a purpose constructed monitoring bore that was drilled by CZR in January 2023 and cased to 95 mbgl within the Ashburton Formation. Bore TB4R is approximately 6 km south-southeast of the Robe Mesa Project.
- TA4: This monitoring bore was drilled by CZR in January 2023 in the Duck Creek Dolomite. It is cased to 100 mbgl and is approximately 3.2 km southeast of the Robe Mesa Deposit.
- YAR_RC_011: This monitoring bore was originally drilled in the southern part of the Robe Mesa Deposit as a mineral exploration bore, but has now been incorporated into the groundwater monitoring network.

2. GROUNDWATER DATALOGGER INSTALLATIONS

Groundwater level monitoring dataloggers were installed in each of the 4 bores on 15/08/23. Insitu Level Troll 400 groundwater level monitoring dataloggers were installed in bores MB13-3, TA4, TB4R and YAR_RC_011. In addition, a BaroTroll barometric pressure datalogger was also installed in bore MB13-3.

Datalogger installation details are listed in Table 2.1 below, together with measured groundwater levels at their installation on Tuesday 15/08/23. Each datalogger was set to record at 6 hourly intervals.

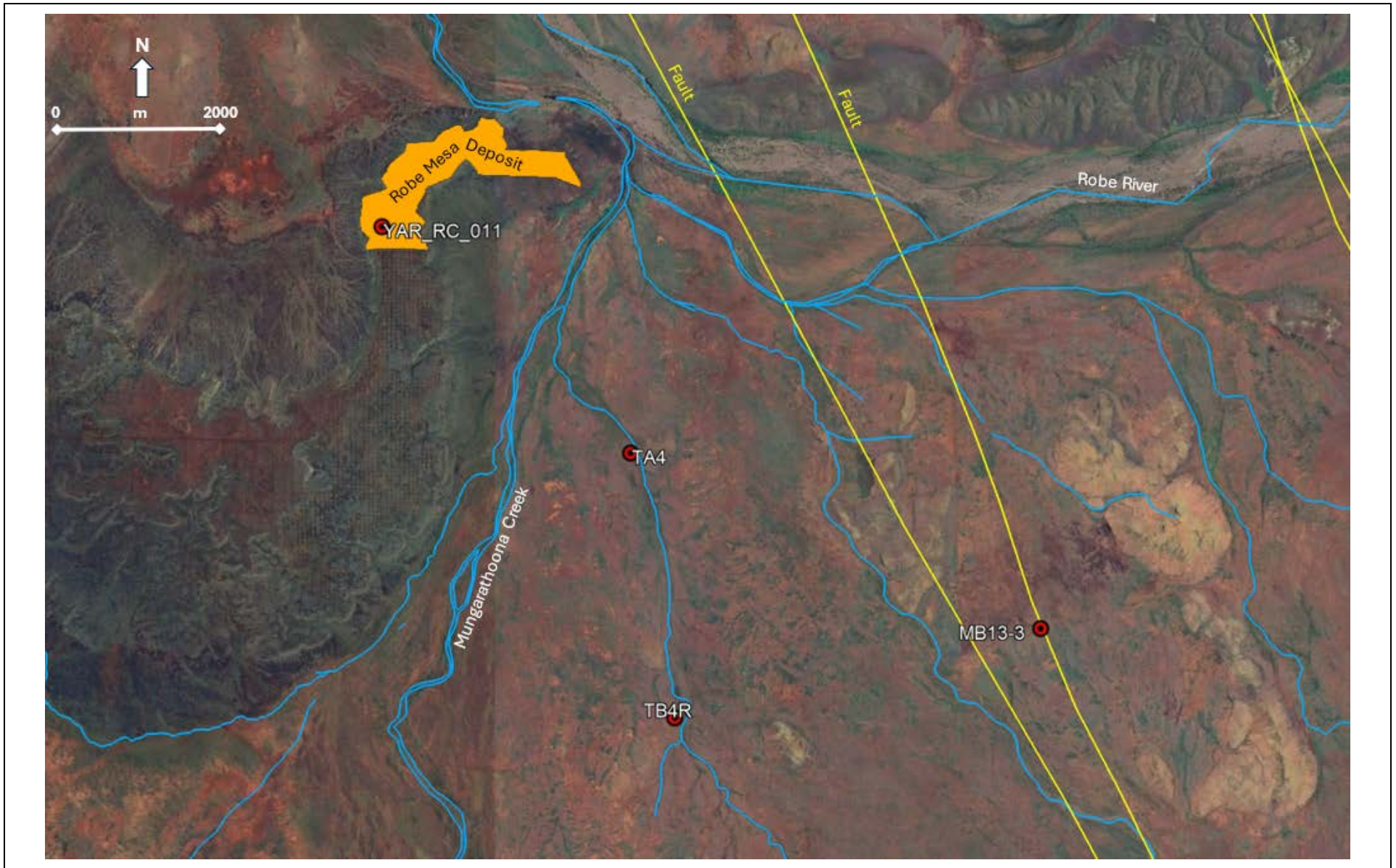


Figure 2.1 Robe Mesa Groundwater Monitoring Bores

Table 2.1 Datalogger Installation Details on 15/08/23

Bore / Logger Name	Easting	Northing	Casing Material & Internal Diameter	Logger Installation Depth (mbtoc)	Stick up (magl)	Ground Level (mAHD from CZR Lidar)	Datum Elevation (mAHD)	Static Water Level (mbTOC)	Groundwater Level 15/08/23 (mAHD)
MB13-3	4055074	7588576	PVC 50mm	20	0.9	113.08	113.98	14.50	99.48
MB13-13 BAROTROLL	4055074	7588576	PVC 50mm	0.9	N/A	113.08	N/A	N/A	N/A
TA4	400362	7590559	PVC 150mm	12	0.69	98.54	99.23	5.43	93.80
TB4R	400900	7587534	PVC 150mm	12	0.7	104.71	105.41	6.54	98.87
YAR_RC_011	397549	7593073	PVC 120mm	61	0.25	146.48	146.73	56.28	90.45

The dataloggers were last downloaded on the 23/08/24, so there is a complete water level dataset for the 4 monitoring bores and barometric data from the site for the 12 month period from 15/08/23 to 23/08/24.

3. RAINFALL

The Robe Mesa area is situated midway between three Bureau of Meteorology (BoM) rainfall stations, namely Red Hill (Station No. 5022), Yarraloola Homestead (Station No. 5032) and Pannawonica (Station No. 5069). Red Hill and Yarraloola Homestead, are both approximately 24 km from Robe Mesa and have an average rainfall of 365 mm and 300 mm respectively per year, whilst Pannawonica, 35 km from the site with twice the elevation, has an average rainfall of 405 mm per year (BoM, 2022). Production bore PB13-3 has an elevation of approximately 113 mAHD, which is midway between Red Hill and Yarraloola Homestead in elevation.

Monthly rainfall data for the period August 2023 to August 2024 for the BoM Stations Red Hill, Yarraloola Homestead and Pannawonica are shown in Figure 3.1. The same figure also plots long term monthly rainfall for all three stations. Apart from June 2024, monthly recorded rainfall is significantly lower than the long term average and represents a dry period in the Pilbara. Rainfall in June 2024 was at or above 40 mm at all 3 sites and slightly above average for that month only.

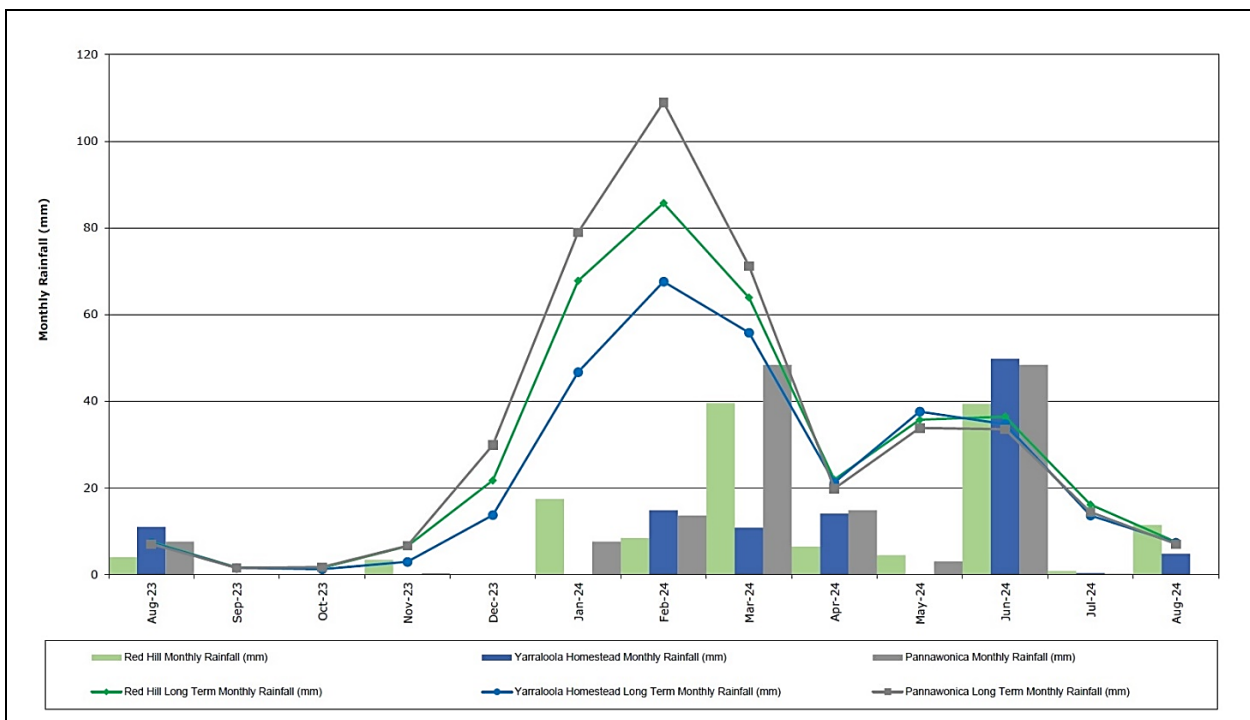


Figure 3.1 Monthly Recorded and Long Term Average Rainfall at Nearby BoM Stations

4. GROUNDWATER LEVEL MONITORING

Groundwater levels have been recorded at the 4 monitoring bores since August 2023 and the loggers were last downloaded on 23/08/24. The groundwater levels have been corrected for barometric pressure variation as the dataloggers are non-vented. The groundwater levels in the four monitoring bores are shown in Figure 4.1.

Over the monitoring period of August 2023 to August 2024, bores MB13-3, TB4R and TA4 show very similar declines in groundwater level, with a faster decline in levels prior to the beginning of March 2024 and a slower rate of decline afterwards. The faster rate of decline corresponds to a dry period from September 2023 to February 2024, with larger amounts of rainfall occurring in March 2024, although still being below the long term monthly average. The higher than average rainfall in June 2024 did lead to a small rise in groundwater levels in these 3 monitoring bores. However, this was then followed by no rainfall in July 2024 and the resumption of the decline in groundwater levels. Overall, between August 2023 and August 2024, groundwater levels have declined approximately 0.73 m in MB13-3, 1.06 m in TA4 and 0.70 m in TB4R. These groundwater level declines are natural as no groundwater abstraction is taking place anywhere in the area.

Over the same monitoring period bore YAR_RC_011 on the Mesa has maintained a fairly steady groundwater level with a tiny decline in groundwater levels of 0.03 m over the one year monitoring period.

Barometric pressure shows seasonal variation with lower pressure during the summer months.

Overall, groundwater levels drop towards the Robe River to the northwest and the groundwater gradient towards the river is unchanged during the monitoring period.

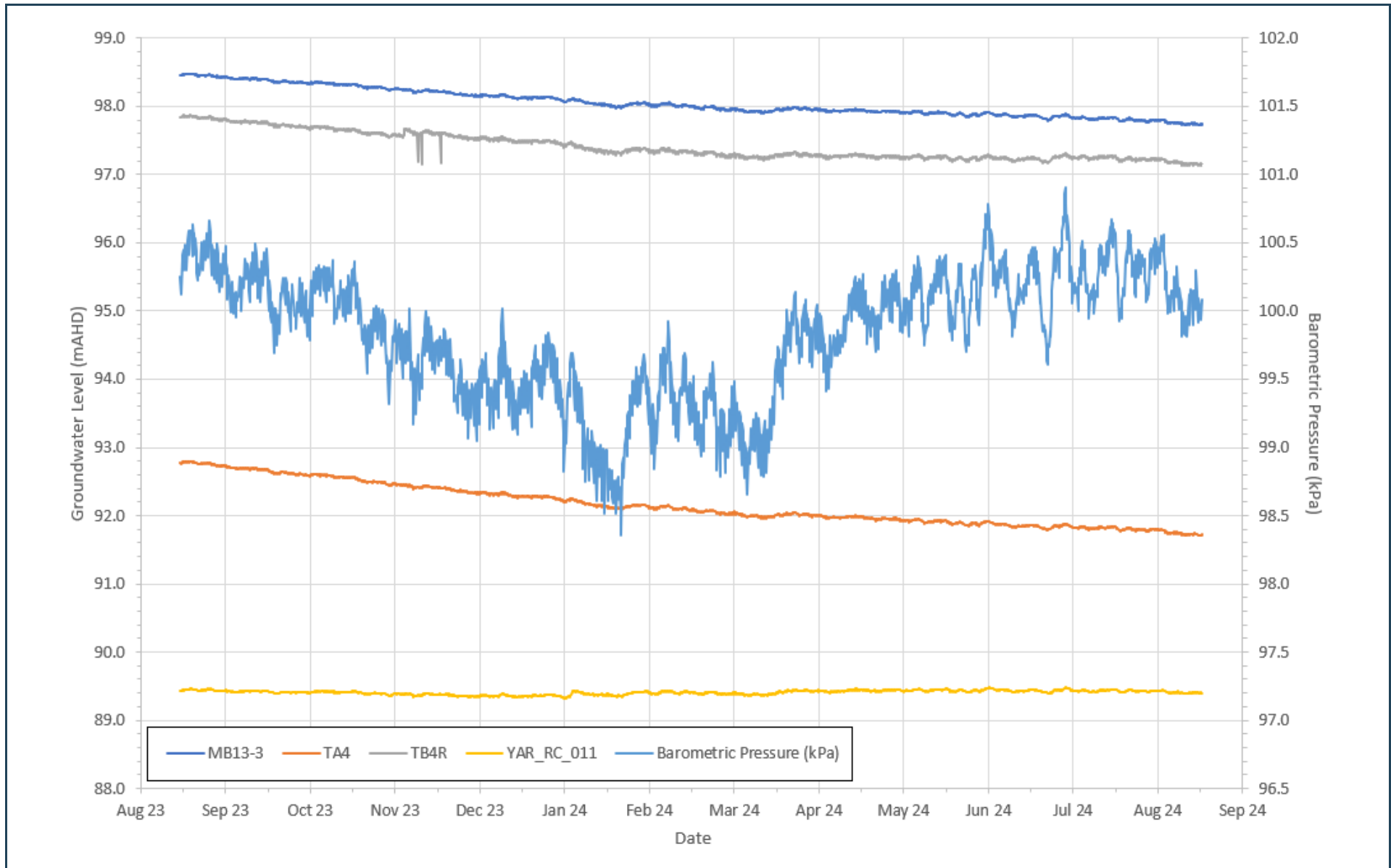


Figure 4.1 Robe Mesa Monitoring Bores Groundwater Levels

Please let us know if you need any further information.

Regards,

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