Verdant Minerals Ltd

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Titleholders:	**Territory Phosphate Pty Ltd**
	(a wholly-owned subsidiary of Verdant Minerals Ltd)
Operator:	**Verdant Minerals Ltd**
Titles Agent:	**Complete Tenement Management**
Tenement:	**EL 30672**
Project Name:	**Weedens Phosphate**
Report Title:	**Annual and final surrender report on EL 30672, Weedens Phosphate to 14/08/2018**
Author:	**John Dunster**
Corporate Author:	**Verdant Minerals Ltd**
Target Commodity:	**Rock phosphate**
Date of Report:	**16/08/2018**
Datum/Zone:	**GDA94 / Zone 53**
250K map sheets:	**Bonney Well SF53-02, Frew River SF53-03**
100K map sheets:	**Ooradidgee 5857, Epenarra 5957**
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SUMMARY

EL 30672, Weedens, was held to explore for Cambrian rock phosphate. Fourteen percussion holes drilled in the 1990s for under-cover Tennant Creek IOCG penetrated potentially prospective Cambrian sedimentary rocks. None of these were tested for phosphate. The Cambrian section was at least 60 m thick. These holes, in conjunction with extrapolation from outcrop, and a waterbore study, confirm that suitable Cambrian host rocks are present under all of the exploration area. The ground had only been held once previously for phosphate exploration, by Vale from 2010 to 2012. They drilled only three holes to 59 m max, 5 km apart, within the greater embayment, but all south of this EL. These holes spudded into mapped Gum Ridge Formation but intersected atypical lithologies including 25-35 m of sandstone, gravel and conglomerate overlying granite basement. This suggests that these holes were too close to the edge of the target formation or that the potentially phosphatic facies had been eroded. The area held as EL 30672 was considered more prospective. An AAPA Register Search and desktop studies, including the review of waterbore information, were undertaken in Year 1 prior to beginning negotiations for land access with the two pastoralists involved. Only desktop studies were undertaken in Year 2 and Year 3. During 2017 and 2018, the company's funds and resources were solely focused on the Feasibility Study and EIS for Ammaroo Phosphate Project further south in NT. An attempt to sell or JV EL 30672 was unsuccessful. Consequently, it was decided to surrender EL 30672 in full. The ground remains untested for phosphate.

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HISTORY, PHYSIOGRAPHY, CLIMATE, ACCESS AND LOGISTICS

Location, Physiography, Land Use

EL 30672, 90 km southeast of Tennant Creek, is located on the Frew River and Bonney Well 250K sheets. The EL is on flat to gently undulating country east of the Murchison Range which runs northwest-southeast. Creeks flowing east from the range in the vicinity of the EL converge in soakages and flood-outs. The west of the EL is lightly vegetated with low scrub; the east is open grassland.

Access and Logistics

The EL is 60 km from the Central Australian Railway and the Stuart Highway.

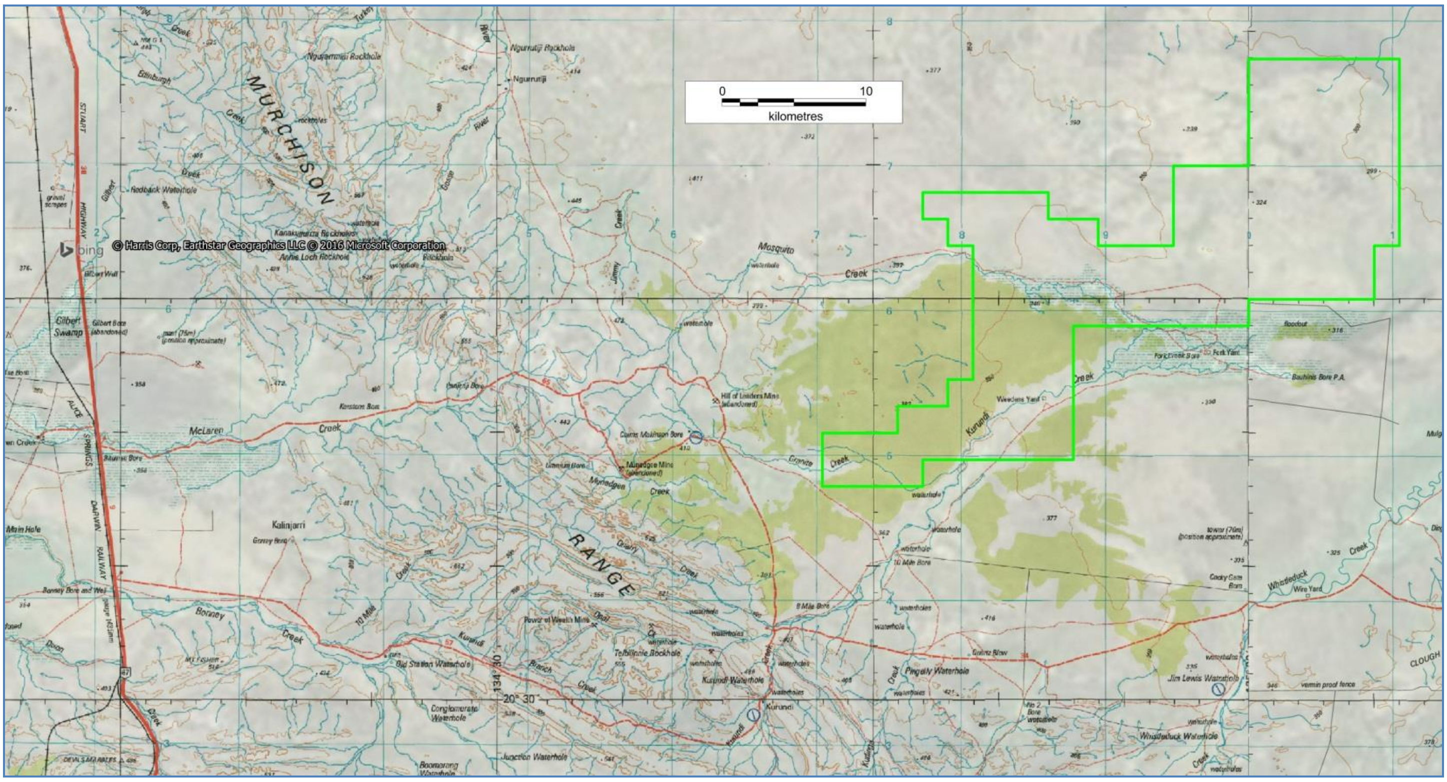

Figure 1. Location of and access to EL 30672 from the Stuart Highway and Central Australian Railway in the west.

Station tracks follow Mosquito and Kurundi Creeks into the EL. These provide existing east-west access across the centre and another track in from the south. There are no existing tracks into the northeast of the EL, but it should be possible to drive cross-country except for fences.

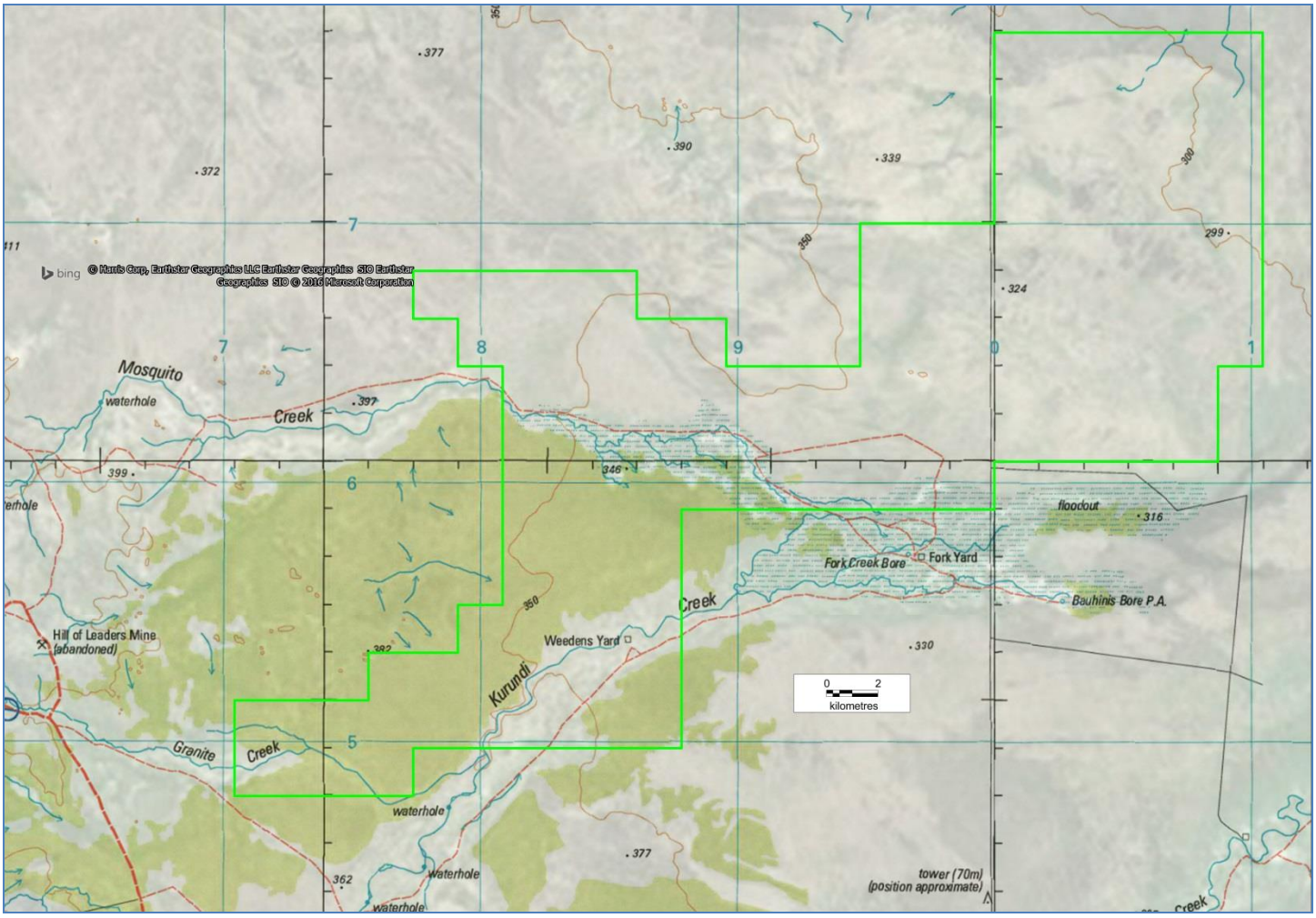

Figure 2. Local access within EL 30672.

EL 30672 is on Kurundi and Epenarra Perpetual Pastoral Leases which are used for cattle grazing. The former station incorporates a feed lot and is owned by Peter and Brenda Saint. A Filipino business man, Romeo Roxas, bought Epenarra Station (and the adjacent Murray Downs) in late 2015. There is vacant Crown Land north of EL 30672.

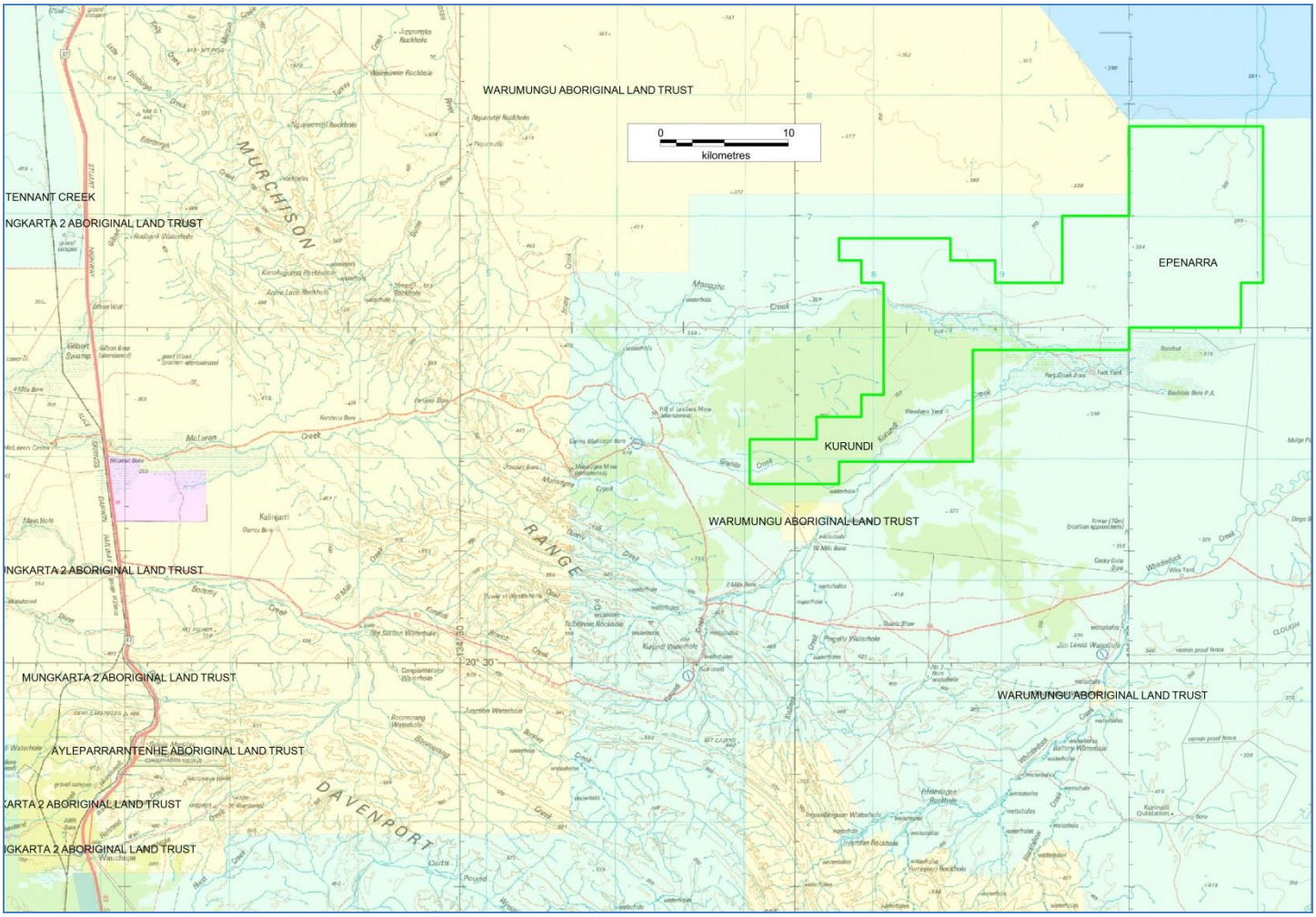

Figure 3. Cadastre showing pastoral leases as pale turquoise, Aboriginal Land in yellow and Crown Land in blue.

Climate

The climate data is summarised below.

Rainfall

Epenarra

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	29.0	327.2	43.2	73.4	0	0	0	0	0	31.4	87.2	274.4	865.8
2001	42.2	141.0	116.2	0	0	0	0	0	0	52.8	59.4	54.0	465.6
2002	91.0	249.2	0	0	0	0	0	0	0	0	0	5.2	345.4
2003	93.6	177.4	66.3	0	0	0	0	19.0	0	0	0	183.6	539.9
2004	82.2	133.4	50.8	0	0	0	0	0	0	0	0	46.0	312.4
2005	0	52.4	12.2	0	0	34.2	0	0	21.6	93.9	40.6	51.4	306.3
2006	162.6	68.2	94.0	79.8	5.0	0	6.4	0	0	0	0	52.8	468.8
2007	343.2	10.0	33.6	0	0	29.9	0	0	0	0	32.4	4.2	453.3
2008	5.1	29.0	0	0	0	12.6	0	0	15.2	0	53.2	42.8	157.9
2009	175.2	47.2	0	0	0	0	0	0	0	0	26.0	28.8	277.2
2010	122.7	177.9	26.6	4.2	38.1	0	0	3.0	35.4	37.7	11.4	89.7	546.7
2011	74.8	181.7	362.1	5.4	0	6.0	4.6	0	0	9.6	121.6	42.6	808.4
2012	0	39.4	122.3	21.6	0	0	0	0	0	0	41.8	97.1	322.2
2013	27.2	33.4	7.0	13.0	0	0	0	0	0.8	0	3.7	18.5	103.6
2014	94.0	111.9	4.8	0	0	0	0	0	0	0	15.4	151.4	377.5
2015	250.2	11.0	0	0	0	0	0	8.4	0	0	0	274.3	543.9

Table 1. Monthly rainfall data for Epenarra.

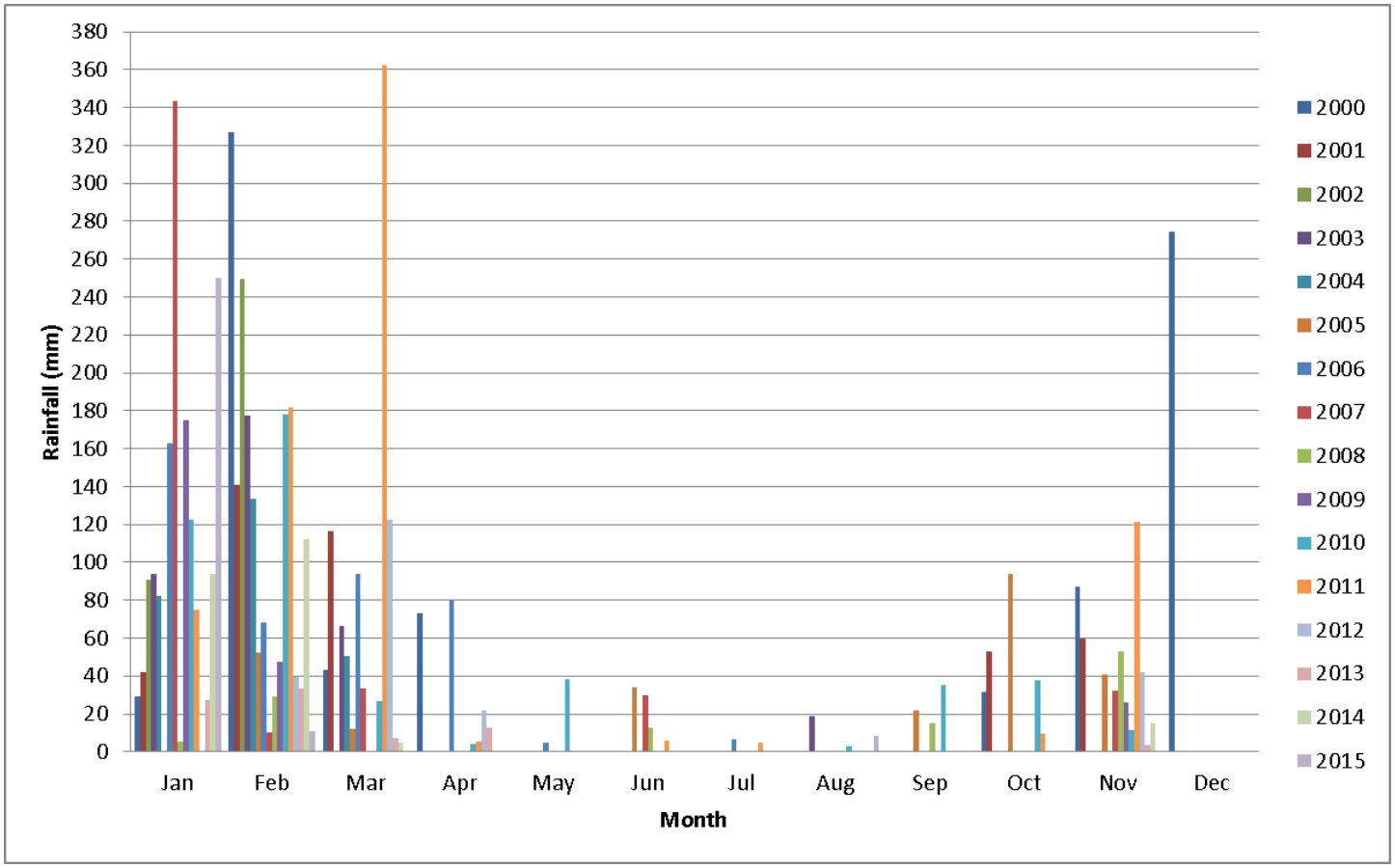

Figure 4. Graph of Epenarra rainfall data.

Kurundi

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	21.2	383.7	60.9	35.8	0	0	0	0	0	73.6	113.1	399.0	1087.3
2001	62.4	159.6	181.4	0	0	0	6	0	0	81.9	59.8	70.9	622.0
2002	69.0	223.6	0	0	0	0	0	0	0	0	51.3	0	343.9
2003	33.4	190.5	0	0	0	0	0	0	0	0	22.0	0	245.9
2004	56.4	114.8	88.0	0	22.2	0	0	0	0	0	0	44.6	326.0
2005	46.0	23.4	0	0	0	35.5	0	0	0	74.4	6.4	28.7	214.4
2006	247.0	48.0	36.6	71.0	8.4	0	0	0	0	0	0	81.0	492.0
2007	370.0	0	31.2	0	0	0	0	0	0	0	22.8	32.8	456.8
2008	18.0	26.0	6.0	0	0	34.6	0	0	36.6	8.5	41.4	13.0	184.1
2009	137.2	44.0	5.2	0	0	0	0	0	0	0	0	50.4	236.8
2010	45.8	221.4	43.2	25.0	57.2	0	38.8	2.0	38.8	24.2	4.0	97.6	598.0
2011	202.2	214.0	488.1	5.0	0	5.8	0	0	0	15.6	109.2	52.6	1092.5
2012	12.6	50.0	108.8	20.3	0	0	0	0	0	0	65.0	86.0	342.7
2013	65.0	65.6	0	46.6	40.4	0	0	0	0	0	5.8	17.7	241.1
2014	126.6	137.6		4.4	0	0	0	0	0	0	24.6	90.1	383.3
2015	233.8	18.8	4.6	0	0	0	0	16.6	0	0	0	178.4	452.2

Table 2. Monthly rainfall data for Kurundi.

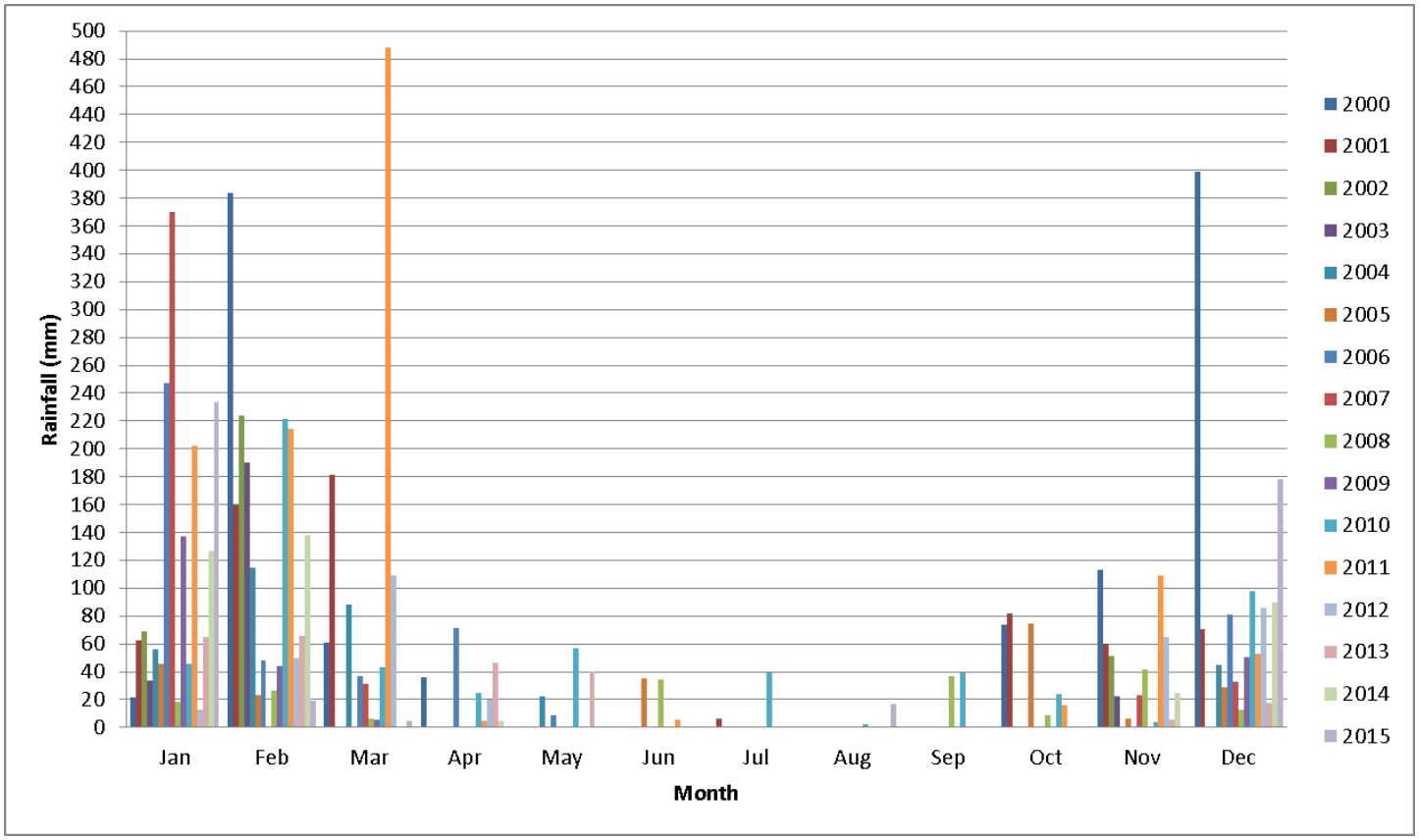

Figure 5. Graph of Kurundi rainfall data.

As can be seen from the above data, most rain falls between November and March. Overall, July and August are the driest months. 2000 and 2011 were particularly wet years. 2008 was one of the driest on record.

Temperature – Tennant Creek

The nearest station with continuous records is Tennant Creek. Average monthly temperatures are shown below.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	37.5	33.5	32.3	29.4	24.4	22.3	26.0	28.5	33.0	31.3	34.8	32.3	30.4
2001	35.0	33.0	31.2	30.5	26.5	25.1	23.9	26.5	31.3	32.7	35.2	36.7	30.6
2002	35.8	35.5	34.9	34.5	29.1	24.6	24.6	26.7	32.6	36.5	37.6	39.1	32.6
2003	34.1	34.8	33.3	33.1	28.8	25.5	25.2	27.1	33.1	34.8	36.7	35.5	31.8
2004	36.9	32.9	35.3	32.7	27.4	25.2	25.1	27.3	30.1	36.8	36.6	38.2	32.0
2005	37.4	38.3	36.9	35.3	29.0	25.2	25.2	26.9	33.6	35.2	36.3	37.6	33.1
2006	34.3	35.5	33.6	30.3	25.3	23.0	23.6	27.6	31.7	36.1	38.7	36.5	31.4
2007	34.9	37.0	34.3	33.0	29.8	19.9	24.1	26.8	33.0	36.8	36.4	38.0	32.0
2008	40.4	37.9	36.0	32.7	28.3	24.9	25.2	25.7	32.0	36.5	37.0	37.5	32.8
2009	33.3	34.5	36.2	32.8	26.9	26.0	25.6	31.3	33.6	34.3	37.4	36.2	32.3
2010	35.8	35.6	33.2	31.2	26.2	23.4	24.0	26.1	30.1	32.7	34.6	34.9	30.6
2011	35.7	33.1	30.3	28.7	25.1	22.6	24.4	27.5	30.9	34.9	34.1	35.4	30.2
2012	37.5	36.7	31.9	30.2	26.3	23.4	23.5	27.9	32.8	35.2	38.1	37.2	31.7
2013	39.5	37.3	37.2	33	28.3	25.6	26.4	30.2	35.2	36.7	37.2	37.9	33.7
2014	36.0	32.1	34.3	33.5	30.3	25	25.5	25.1	33.2	36.9	38.5	35.3	32.1
2015	33.7	37.1	36.8	31.1	27.9	25.7	24.7	26.7	30.4	36.4	39.2	35.0	32.1

Table 3. Temperature data from Tennant Creek.

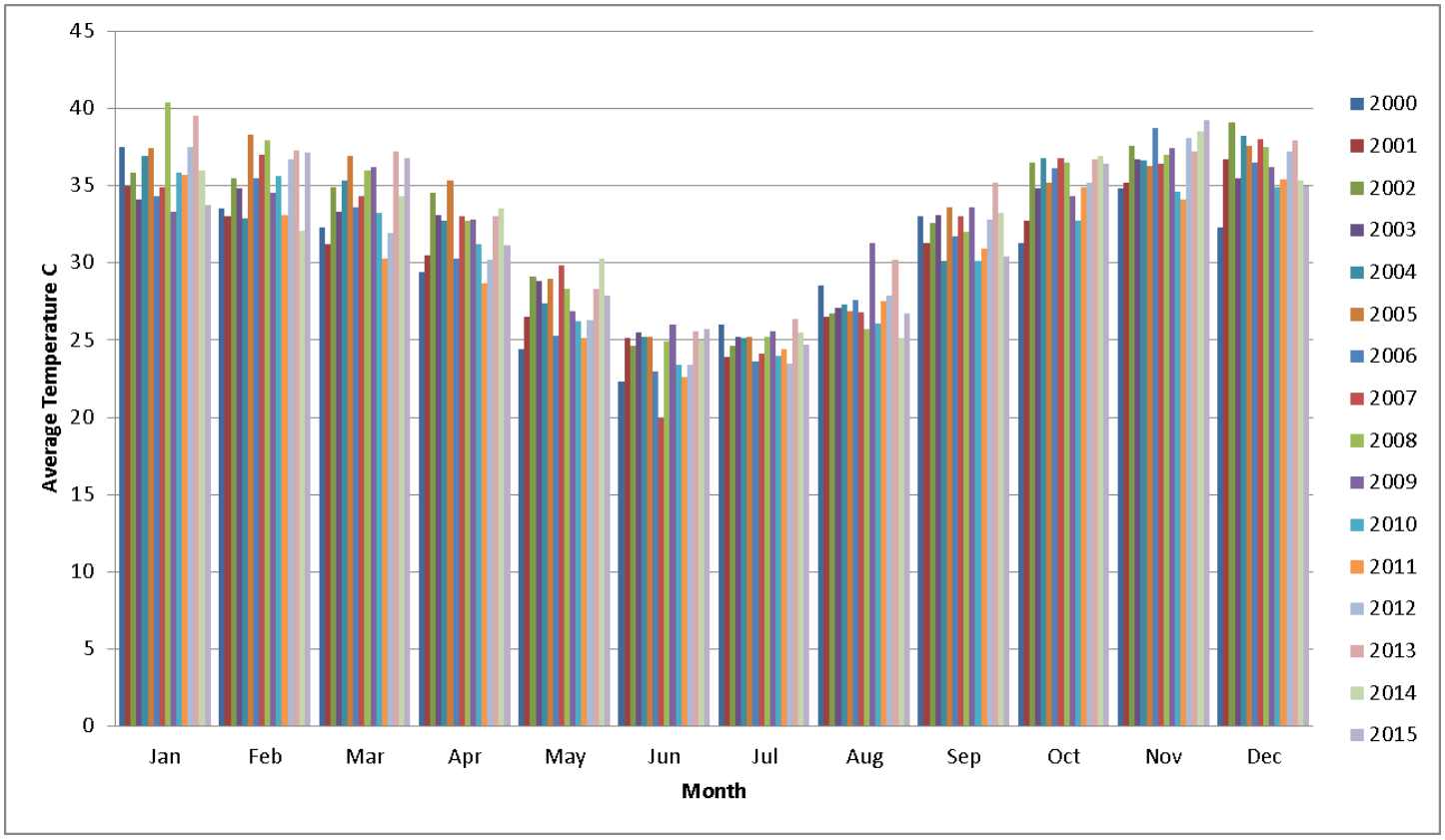

Figure 6. Graph of average temperature data from Tennant Creek.

HISTORY OF TENURE

EL 30672 was applied for on 20/11/2014 and granted for the usual six years on 31/07/2015. It covered 139 blocks or 447.96 km^2. It was held by Territory Phosphate Pty Ltd which is a wholly-owned subsidiary of Verdant Minerals Ltd.

CORPORATE PHILOSOPHY, EXPLORATION AND PROJECT RATIONALE

Verdant Minerals' strategic intent is to find, develop and operate fertiliser minerals projects, located in close proximity to existing infrastructure. Verdant Minerals has established itself as a successful fertiliser mineral explorer and is one of only a few companies in Australia to have discovered and proved-up significant JORC resources of both rock phosphate and potash brine. All the company's funds and resources are currently focused on the Ammaroo Phosphate Project in NT.

GEOLOGICAL SETTING

EL 30672 was targeting phosphate in the basin-edge facies of Wonarah Formation / Gum Ridge Formation (Cmg) which hosts the Wonarah phosphate resource. There is patchy outcrop of the target formation, but exploration would have been under cover and reconnaissance RC or air core drilling was proposed.

Granite basement (Pg, Pgh) is known under part of the EL, whereas the target formation is underlain by volcanics as at Wonarah. Elsewhere adjacent to the EL, the Cambrian is underlain by Proterozoic (meta)sedimentary rocks (Pw).

Floodouts and modern creek channels contain metres of Cenozoic alluvium which are only patchy shallow aquifers.

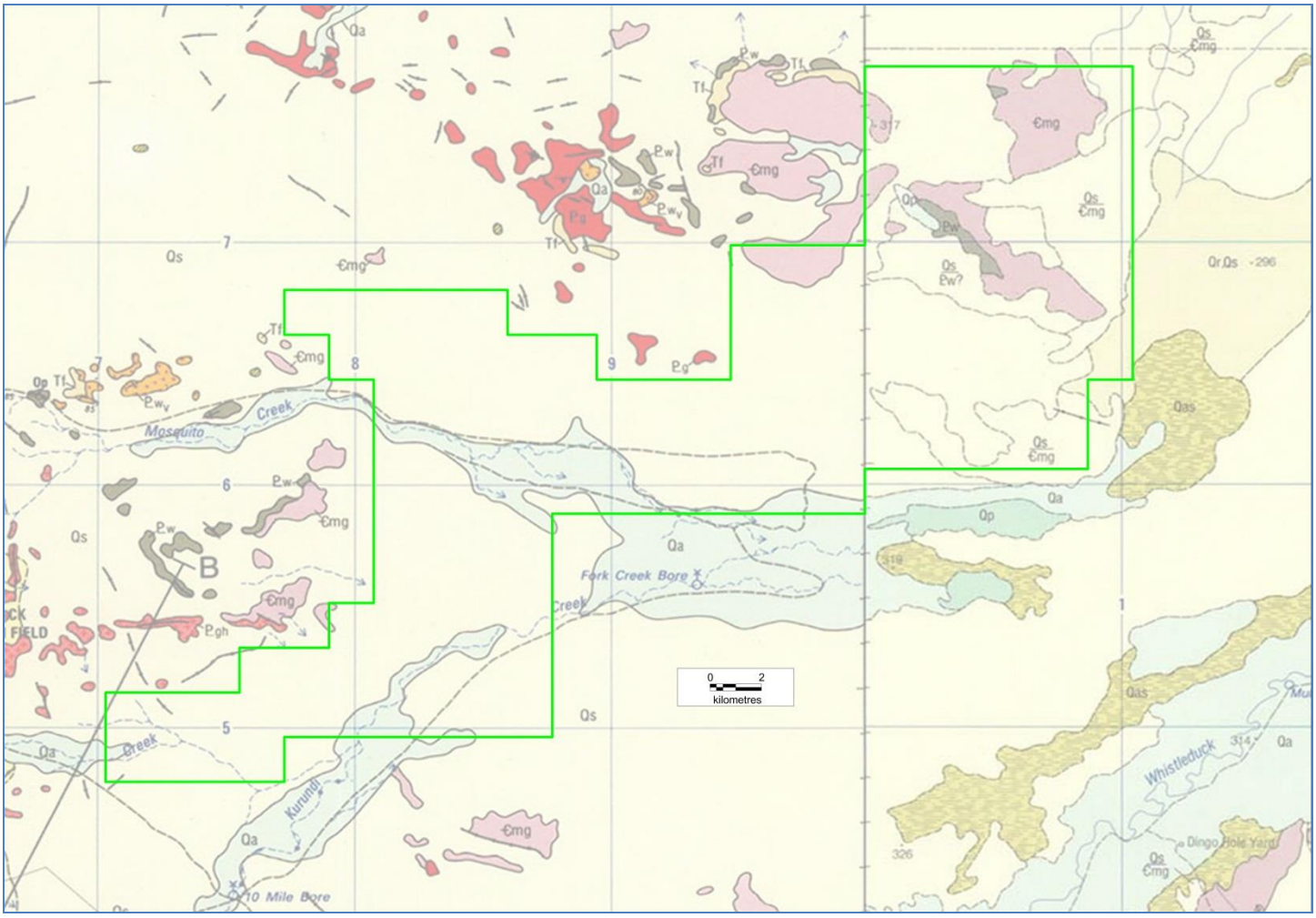

Figure 7. Mapped surface geology of the project area.

PREVIOUS EXPLORATION BY OTHERS

Previous exploration in the mid 1990s for under-cover Tennant Creek IOCG resulted in fourteen percussion drillholes in the deeper Cambrian basin part of the application area. None of these IOCG exploration holes were tested for phosphate, but intersected likely host rocks described as siltstone with chert. The Cambrian section was at least 60 m thick. These holes, in conjunction with extrapolation from outcrop, confirm that suitable Cambrian host rocks are present under all of the application area.

The ground has only been held once previously for phosphate exploration, by Vale from 2010 to 2012. They drilled only three holes to 59 m max, 5 km apart, within the greater embayment, but all south of this application. These holes spudded into mapped Gum Ridge Formation but intersected atypical lithologies such as 25-35 m of sandstone, gravel and conglomerate overlying granite basement. This suggests that either the outcrop isn't Gum Ridge Formation or that these holes were too close to the edge of the target formation or that the potentially phosphatic facies had been eroded. Vale took three rock chips south and west of the application. Vale was side-tracked by iron in the south of their former tenement package and suddenly withdrew NT-wide without testing the area held as EL 30672. Indeed, their program was curtailed after the fourth hole (VGRC115) in this area was collared but the hole was terminated prematurely with no recorded depth.

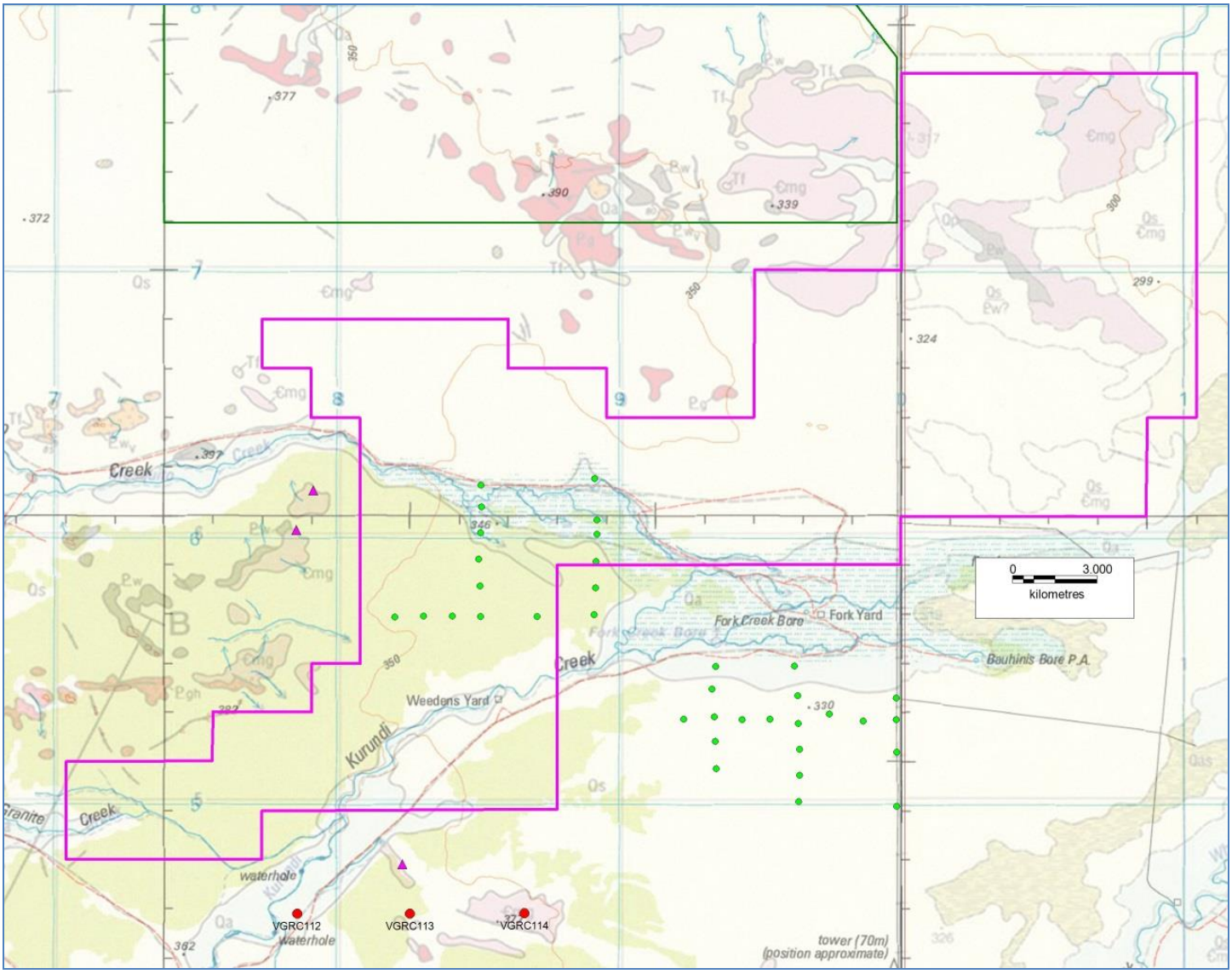

Figure 8. Previous work in the area of application. Green dots are percussion holes targeted on basement IOCG. The northwestern cluster intersected prospective Cambrian stratigraphy. Red dots are Vale holes, 5 km apart. Pink triangles are Vale rock chip samples. The pink outcrops labelled Cmg are the target formation superimposed on the topographic map. Pg is granite basement.

YEAR 1 – WORK BY RUM JUNGLE RESOURCES

Year 1

AAPA Register Search

An AAPA Register Search identified one site of significance on Kurundi Creek right on the southern boundary of the EL. This site is surrounded by a restricted work area.

Desktop Studies

Only desk-top studies were possible in Year 1 because of the lack of Landholder Agreements. Waterbore logs, previous exploration and the existing published geological mapping were evaluated.

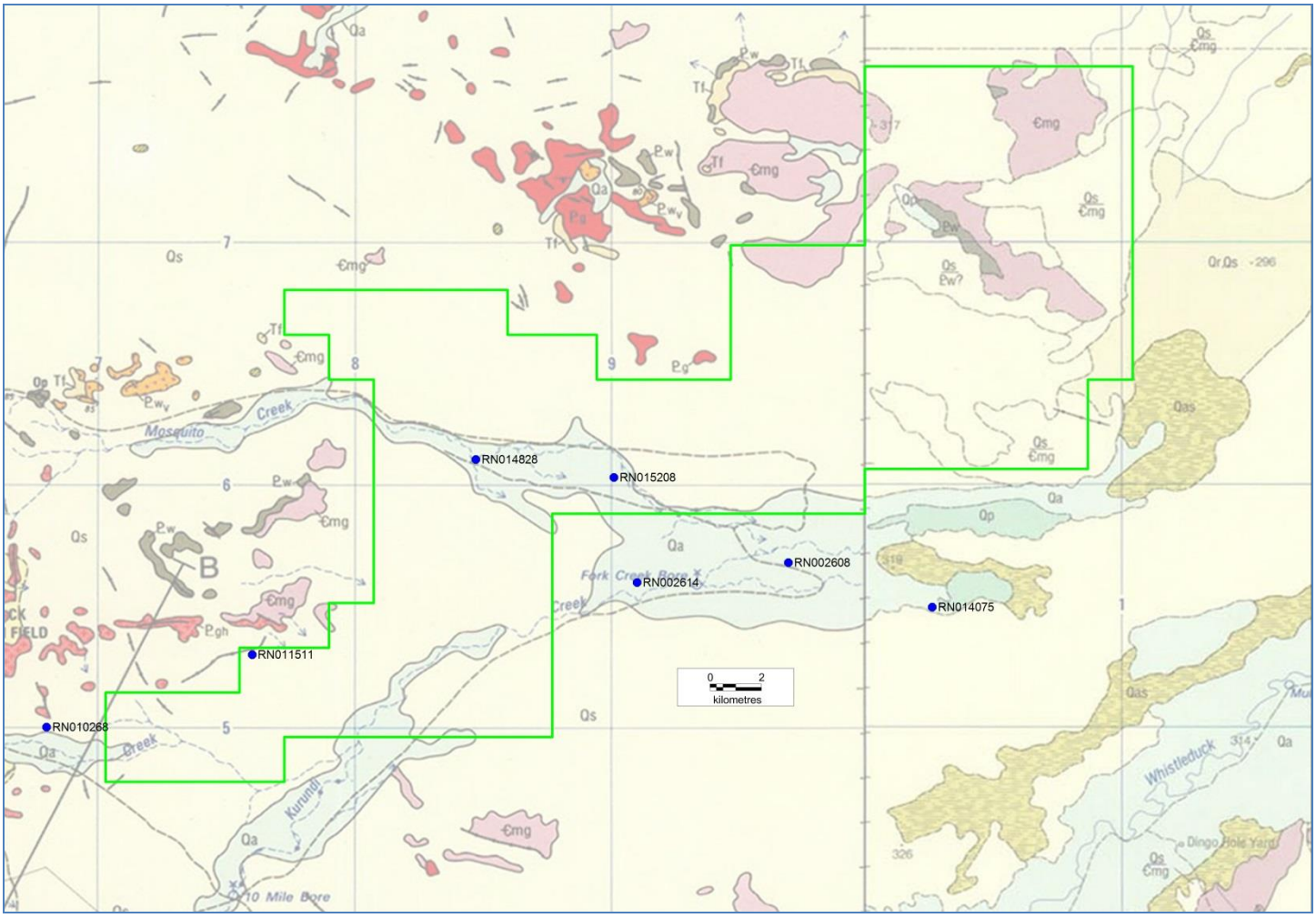

Figure 9. Waterbores used in the in-house study.

The waterbore study and interpretation were described in detail in the first annual report and not repeated here. Suffice to say that the study justified keeping the EL.

YEAR 2 – WORK BY VERDANT MINERALS

Only desktop studies were undertaken in Year 2 of EL 30672 because Verdant Minerals directed most of its funds to the Ammaroo Phosphate BFS and EIS. Limited discretionary funds for greenfields drilling for phosphate were directed to Rockhole (part of the greater Ammaroo Phosphate Project) in preference to Weedens.

YEAR 3 – WORK BY VERDANT MINERALS

Only desktop studies were undertaken in Year 3 of EL 30672 because Verdant Minerals directed almost all its funds to the Ammaroo Phosphate BFS and EIS. An unsuccessful attempt was made to sell or JV EL 30672.

EXPENDITURE IN YEAR 3

The admissible expenditure for the reporting period was $4,231.66.

CONCLUSIONS AND RECOMMENDATIONS

EL 30672 remains prospective for phosphate after an in-house review of the geology and standing water levels based on existing waterbores and previous exploration. Since no funds are available and attempts at a sale or JV were unsuccessful, it was decided to surrender EL 30672 in full.