



SUDAN PROJECT
TENEMENT EL27196
ANNUAL EXPLORATION REPORT
FOR THE PERIOD ENDING 26TH OCTOBER 2010

NORTHERN TERRITORY

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Executive Summary

Works completed at the Soudan Project during the first year of tenure included an open file literature review, compilation and review of publicly available geological maps and geophysical data, XRF analysis of 39 water bore cuttings from 1 hole, an AAPA register search, collection and analysis of 4 rock chips, acquisition of NRETAS environmental data and the compilation of a Mining Management Plan for the project.

On 7th May 2010 Vale applied for an AAPA Authority certificate over EL27196. At the time of reporting the AAPA certificate was pending. Vale does not intend to commence on-ground works until any restricted works areas have been identified.

In the next year an AAPA Authority Certificate will be granted to Vale, thereby allowing field work to commence.

On site works proposed for 2011 include geological mapping, rock chip sampling and RC drilling.

1 Introduction

1.1 Location and Access

The Soudan Project is comprised of a single tenement located approximately 260 km ESE of Tennant Creek on the Avon Downs (SF53-04) and Ranken (SE53-16) 1:250,000 and the Barry Caves 6257 and Ranken 6258 1:100,000 map sheets. The project straddles parts of West Ranken (NT Portion 2, PPL914) and Soudan (NT Por 4, PPL916) stations and also covers a small area of freehold land (NT Portion 614, held by the NT Land Corporation). The nearest homestead, Soudan, is approximately 2km east of the project area. The Wunara community is located approximately 2 km west of the northwest corner of the tenement.

Access to the Soudan Project is via the sealed Barkly Highway which transects the lease in an east-west direction.

1.2 Tenement Details

The Soudan Project is comprised of a single tenement, EL27196 held by Vale Australia EA Pty Ltd and Operated by Vale Exploration Pty Ltd under Authorization 0556-01.

Table 1: Soudan Project Tenement Details

<i>Tenement Number</i>	<i>Holder</i>	<i>Area (Blocks)</i>	<i>Area (km²)</i>	<i>Date of Grant</i>	<i>Date of Expiry</i>	<i>Expenditure (Year 1)</i>
EL27196	Vale Australia EA Pty Ltd	242	734.92	26/10/2009	25/10/2015	88,000.00

Total Expenditure Commitment:

\$88,000.00

A security of \$1000 is being held (under the *Mining Act*), by NT DoR to cover Crown Lease in Perpetuity 746 – NT Por 614.

1.3 Native Title

There are two registered Native title claims over the Soudan Project:

- Burrumurra DC02/15 is registered (overlaps the southeastern quarter of EL27196);
- Dalmore Downs DC01/30 (overlaps the remaining three quarters of the tenement).

Vale is required to consult Native Title Parties in accordance with Section 24A of the *Mining Act* which requires that (in the absence of a separate agreement) prior to the commencement of exploration activities (other than reconnaissance), Vale convene a meeting on the Project area (or the nearest convenient locality) with registered native title claimants or holders to explain the exploration activities. Vale will have regard to representations made at the meeting regarding any aspect of the exploration activities which raises concerns.

1.4 Historical, Aboriginal, Heritage Sites

No sites of historical significance are listed on the Australian Heritage database.

An inspection of the Aboriginal Areas Protection Authority (AAPA) Register was conducted on 9th September 2009 (see Appendix 2). This inspection identified up to eight sacred sites within the project.

The AAPA gave no indication of the nature of the sites indicated.

An application for an AAPA certificate was lodged on 7th May 2010. The AAPA responded that it was a non-standard request and provided a quote for this work which was accepted by VALE on 3rd June 2010. At time of writing of this report the AAPA certificate was still pending.

On behalf of Vale the NLC held a consultation meeting with traditional owners of the Soudan area on 24th August 2010.

1.5 Climate and Hydrology

The Soudan region is semi-arid with annual rainfall of 415.4mm². The climate is characterized by distinct wet and dry seasons with the majority of rain falling between November and March. The predominant wind direction is from the east.

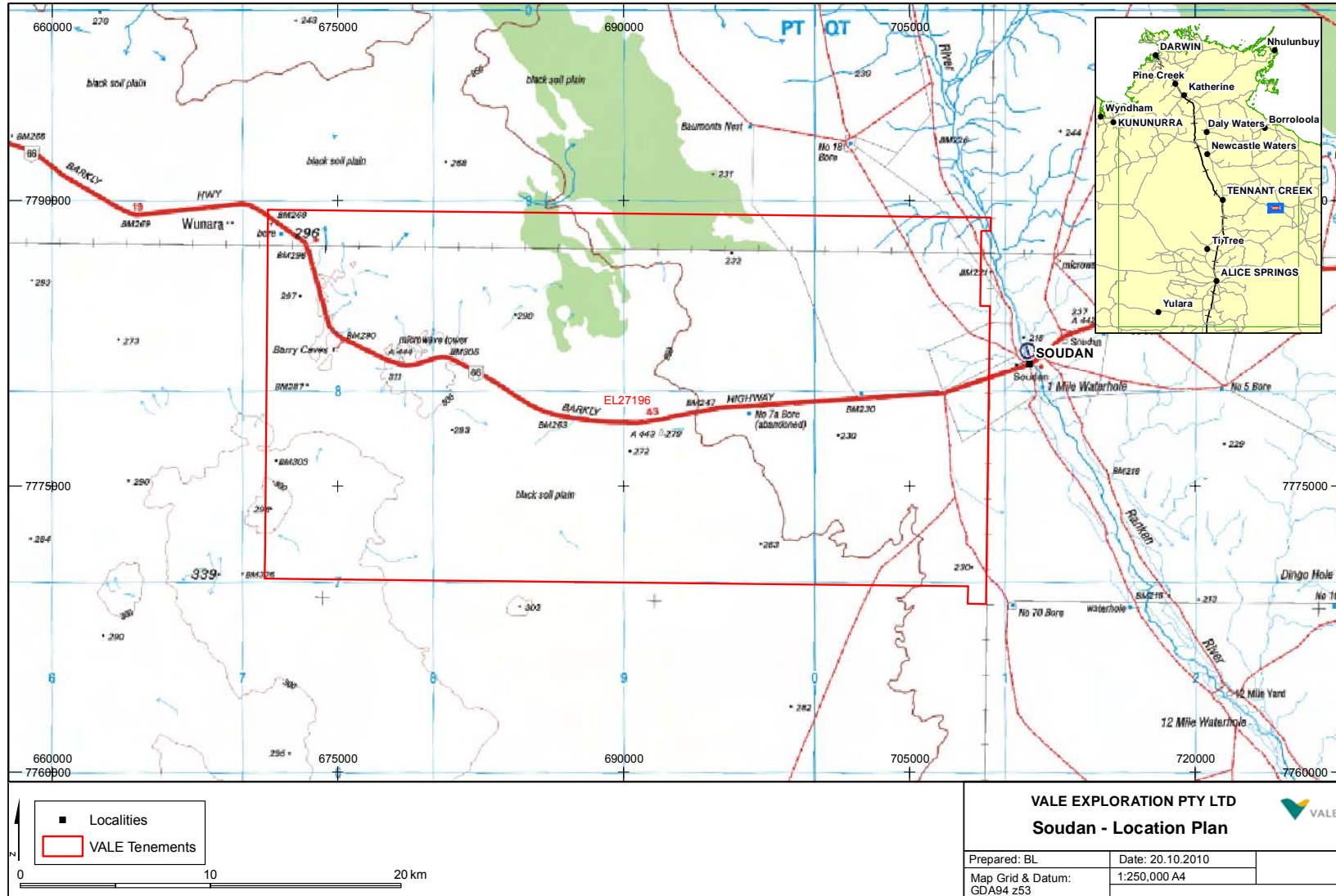
Table 3: Climate Statistics – Brunette Downs (BOM 2010)

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Mean Maximum Temperature °C	37.0	36.3	35.2	33.6	29.9	26.8	26.7	29.6	33.4	36.7	38.0	38.5
Highest Temperature °C	44.3	45.5	42.5	39.1	38.1	34.7	36.0	37.4	40.3	44.2	44.3	45.5
Mean days ≥ 40 °C	6.8	4.5	1.0	0.0	0.0	0.0	0.0	0.0	0.1	3.5	8.7	10.6
Mean Minimum Temperature °C	24.5	24.2	22.3	19.2	15.1	11.4	10.6	12.5	16.6	20.6	23.0	24.4
Lowest Temperature °C	16.5	16.1	11.4	8.7	4.0	1.7	1.4	1.7	5.0	7.5	13.2	15.0
Mean Rainfall (mm)	106.2	100.1	54.2	14.8	8.1	7.1	4.5	1.4	6.0	15.3	28.8	67.1
Mean number of days of rain	8.2	8.2	4.8	1.6	1.0	0.7	0.6	0.3	0.8	2.0	3.7	6.1

¹ Sites identified in AAPA Register Inspection

² Rainfall measurements from 1891 - 2010 (i.e. 120 years data)

Figure 1: Soudan Tenement Location Plan



1.6 Land Area Type

The Soudan project covers Cambrian sediments of the Georgina Basin. The project straddles the Davenport Murchison Ranges (DMR) bioregion, the Mitchell Grass Downs (MGD) bioregion and the Tanami (TAN) bioregion. These bioregions are further described below.

DMR: Comprises low but rugged rocky hills formed from folded volcanics, sandstone, siltstone and conglomerates. Soils are generally shallow lithosols, but fine grained alluvial soils occur in the valleys and surrounding plains. Vegetation includes hummock grasslands and low open woodlands dominated by eucalypt and Acacia species. (Baker *et al.*, 2005).

MGD: Lies over the Georgina and Dunmurra basins containing sedimentary rocks of Cretaceous, Tertiary and Cambrian ages and soils are predominantly cracking clays. The vegetation is predominantly *Eucalyptus microtheca* low open-woodland with Bluebush (*Chenopodium auricomum*) sparse-shrubland understory, and Mitchell Grass (*Astrebla*) grassland on the Barkly tableland.

TAN: Red Quaternary sandplains supporting mixed shrub steppes of *Hakea suberea*, desert bloodwoods, acacias and grevilleas over *Triodia pungens* hummock grasslands.

Physiography

The Soudan Project comprises of one physiographic unit.

'Downs country, with swamps and lakes' occurs on the Soudan Project. The downs country is lower than nearby areas of sand plain and the ranges, and generally slopes to the east away from the Ashburton Ranges. It is largely covered by black soils supporting Mitchell and Flinders grass.

1.6.1 Flora

The dominant vegetation community within the project area is Corymbia low open woodland. Small areas of Acacia tall open shrubland, *Astrebla* (Mitchell grass) low tussock grassland and *Triodia* low open hummock grassland also occur within the project, with (see Figure 2).³

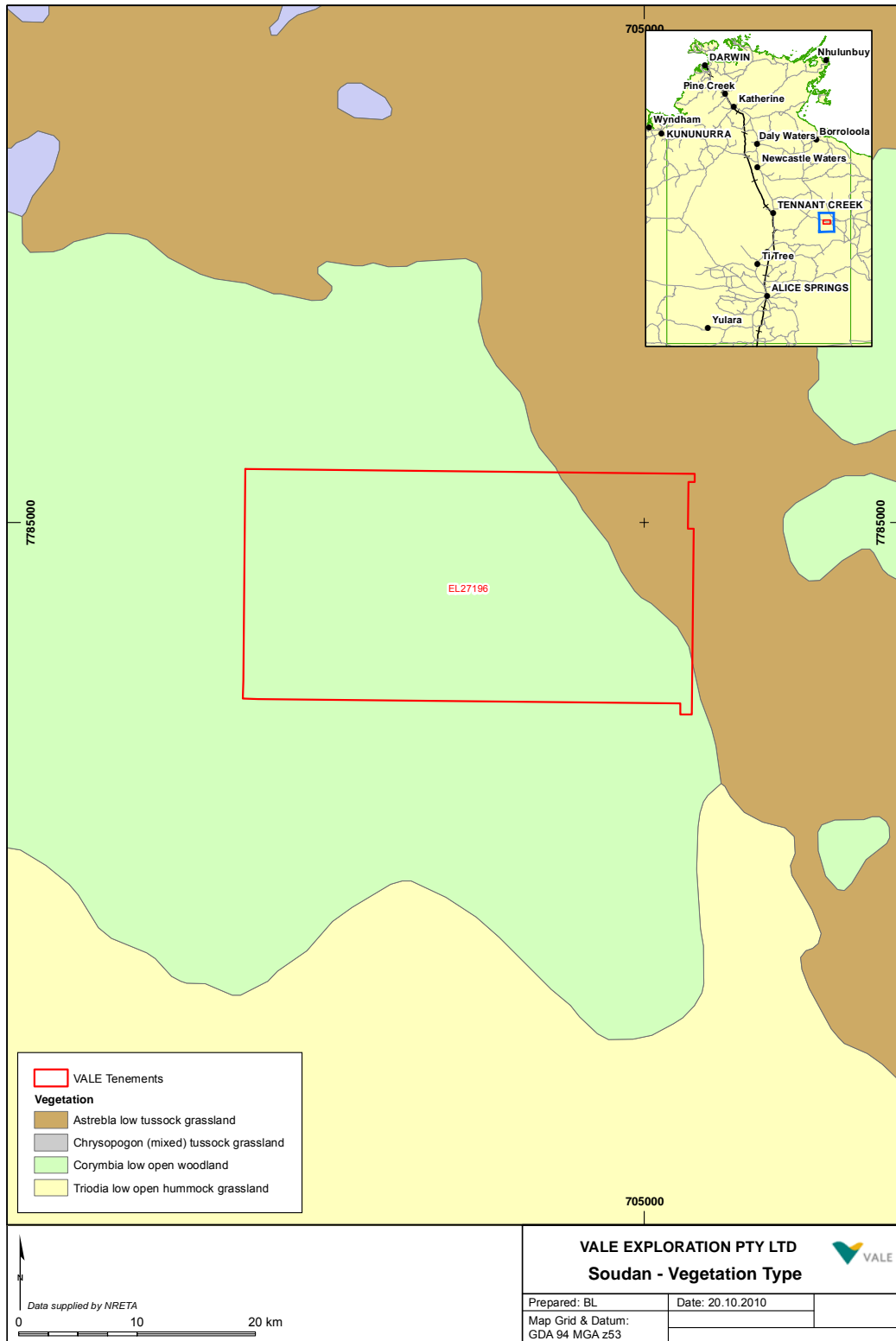
Introduced flora (weed) species that may occur in the Barkly region, possibly within the Soudan project area include:

Table 4: Introduced Flora (Weeds) that may occur within Soudan Project

<i>Species Name</i>	<i>Generic Name</i>	<i>Where</i>	<i>Type of Presence</i>
<i>Acacia nilotica</i>	Prickly acacia	Barkly Highway	Occurrences
<i>Parkinsonia aculeata</i>	Parkinsonia	Lake Sylvester (further north)	Infestation
<i>Prosopis sp</i>	Mesquite		Possible

³ Figure 2 Produced with Digital Vegetation Mapping data purchased from NRETAS October 2009.

Figure 2: Soudan Project – Vegetation Plan



1.6.2 Fauna

A search of NRETAS⁴ data found that no fauna species covered by the *EPBC Act 1999*⁵ have been documented within the Soudan Project.

The Australia Bustard (*Ardeotis Australis*) has been recorded, outside, to the east and west of Soudan Project tenement EL27196 (see Figure 3). This species is not considered to be vulnerable, endangered or critically endangered under the *EPBC Act*, however it is considered vulnerable by the NT Government and is protected by the *Territory Parks and Wildlife Conservation Act 2009*.

A search of the Australian Government Department of the environment, water, heritage and the arts website, 'protected Matters Search tool' identified 1 threatened species and 7 migratory bird species (one of which is threatened) within a rectangular search area encompassing the tenements. These species may also occur within the tenements, however birds listed as migratory or marine are most likely to be located the vicinity of the Ranken River, which crosses through the northeastern corner of EL27196.

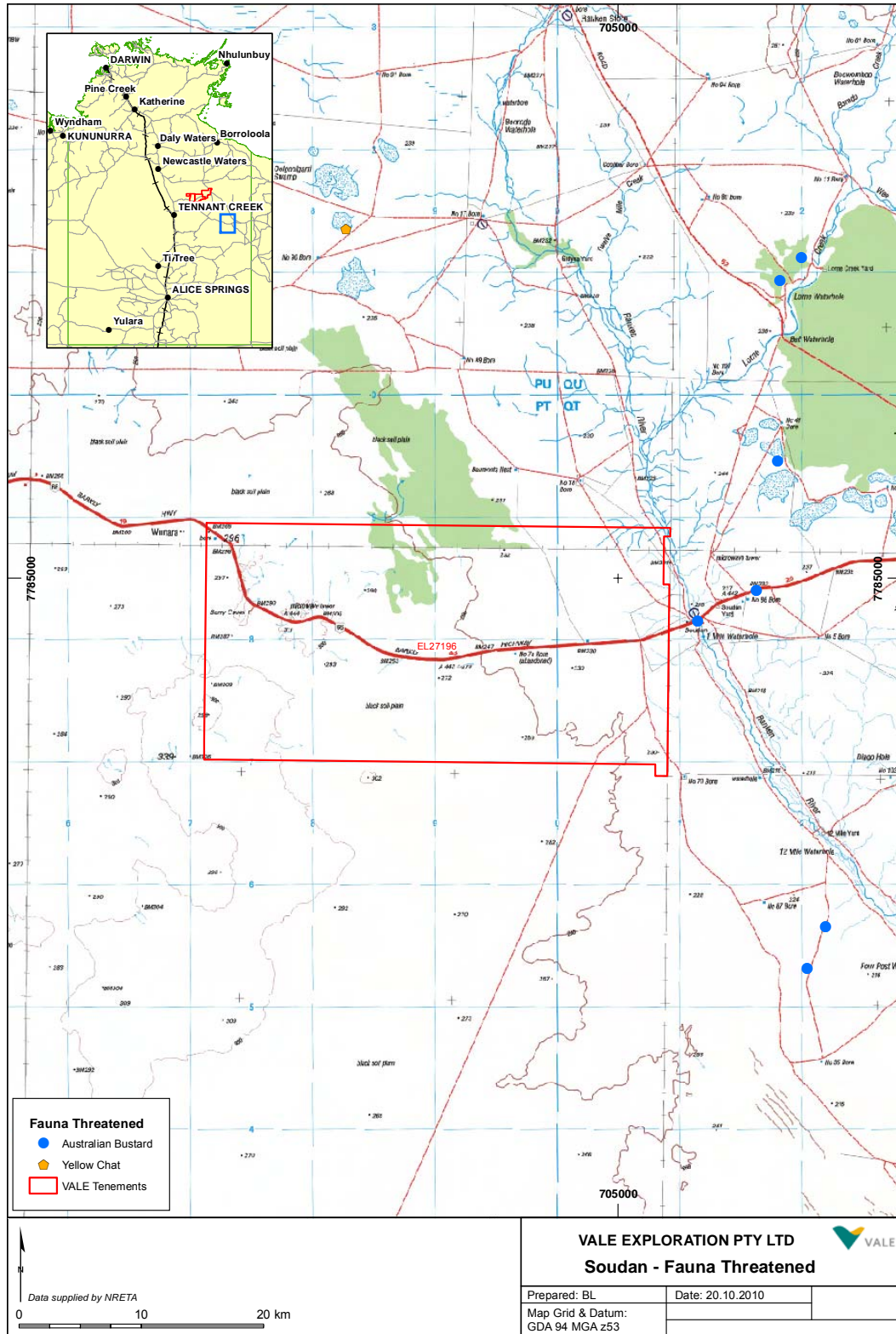
Table 5: Threatened Species (Protected Matters Search tool, 2009)

	<i>Species Name</i>	<i>Generic Name</i>	<i>Status</i>	<i>Type of Presence</i>
Birds	<i>Rostratula australis</i>	Australian Painted Snipe	Vulnerable	Species or species habitat may occur within the area

⁴ NRETAS - NT Department of Natural Resources, Environment, the Arts and Sport

⁵ Environmental Protection and Biodiversity Conservation Act 1999

Figure 3: Soudan Project – Fauna Plan



2 Regional Geology

The Soudan Project covers Cambrian sediments of the Georgina Basin. The sediments of the Georgina Basin range in age from late Proterozoic to early Palaeozoic. To the north they overlie mid-Proterozoic sediments of the South Nicholson and McArthur Basins, to the east they unconformably overlie mid-Proterozoic rocks of the Cloncurry-Mt Isa Block. On the southern margin of the basin, basin sediments overly sediments of the Arunta Block, whilst to the west they unconformably overly basement composed of rocks of the early Proterozoic Hatches Creek and Warramunga Groups and their equivalents (Cook, P, 1986).

The Georgina Basin sediments show complex facies relationships and no single stratigraphic column can be provided for the Georgina Basin (Smith, 1972; Cook 1986). The following simple schematic section can be used as a broad guide to stratigraphic units containing known phosphorite. It should be noted that although Rio Tinto geologists who worked on the Wonarah project considered that the Wonarah deposit occurred within the Gum Ridge Formation (Lilley, 2002) the Wonarah deposit is identified here as occurring in the Wonarah Formation, as others consider that the phosphorite interval on the Alexandria-Wonarah basement high is more likely to be the basal Wonarah Formation (Kruse *et al.*, 2010)

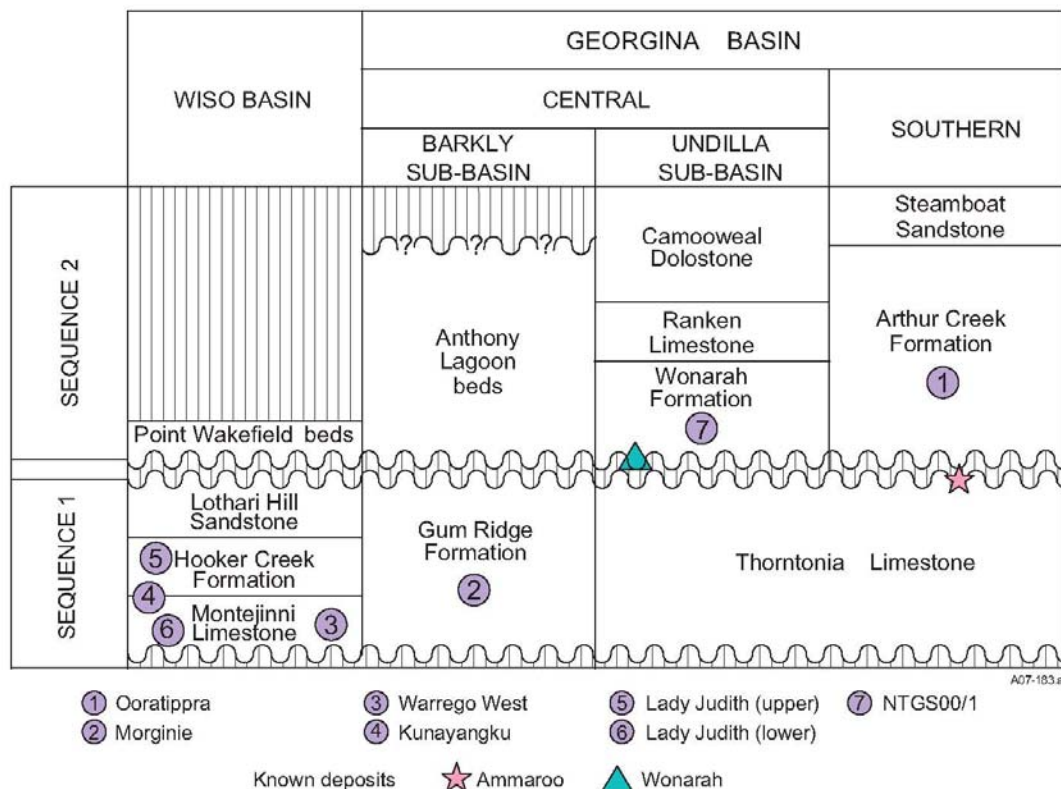


Figure 4: Schematic west to east stratigraphic transect across Wiso and Georgina basins showing stratigraphic location of phosphate occurrences identified (Khan *et al.*, 2007). Undilla sub basin after Kruse and Radke 2007, southern Georgina Basin after Dunster *et al.*, 2007.

Major phosphate deposition occurred in the Middle Cambrian (Templetonian), an interval which corresponds to a large scale rise in sea level and represents the time of maximum phosphate deposition with up to 100m of siltstones fine sandstones, cherts and phosphorites being deposited around the eastern margins of the basin and adjacent to the Alexandria-Wonarah high (Cook, 1986).

3 Local Geology

The Soudan Project occurs on the Avon Downs (SF53-04) and Ranken (SE53-16) 1:250,000 and the Barry Caves 6257 and Ranken 6258 1:100,000 map sheets.

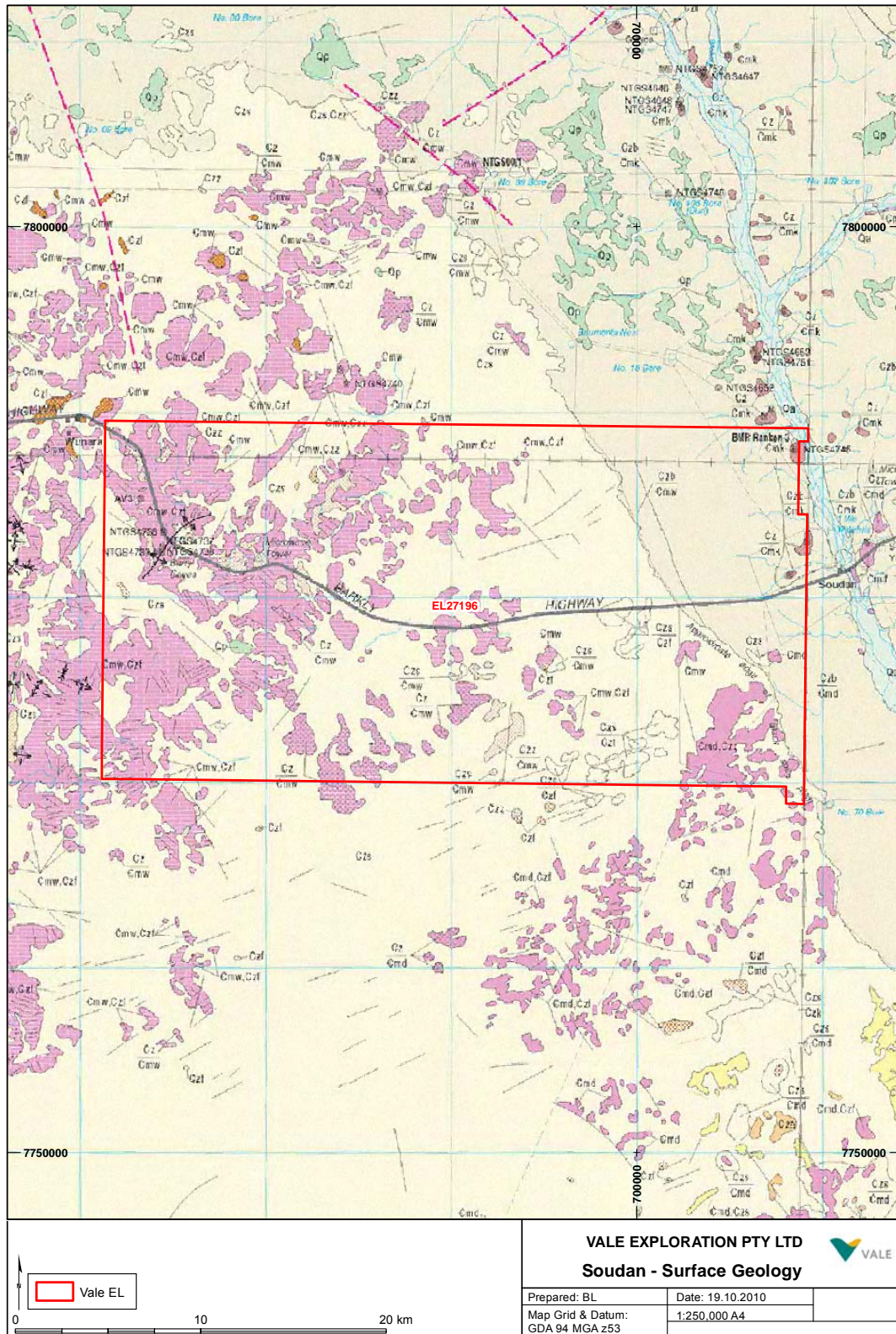
The following is a summary of observations based on the 1:250,000 Alroy map sheet:

Wonarah Formation outcrops on the western half of EL27196. Camooweal Dolostone has been mapped outcropping in the south-eastern corner of the tenement. The middle section of the tenement between these two outcrops is concealed beneath Cainozoic sediments.

The geology of the north eastern quarter of the tenement is also concealed beneath Cenozoic sediments, namely grey-black clay rich soil plains.

In addition to geological mapping, there is one existing diamond drill hole within the Soudan project (RNN0001). The geological log indicates that the hole intersected fossiliferous limestone (interpreted by this author to be Wonarah Formation).

Figure 5: Soudan Project – Geology



4 Previous Exploration

The Soudan area has been explored by six previous companies; for phosphate and base metals in the 1960's and more recently for diamonds in the 1980's, 1990's and 2000's.

Eight exploration drillholes are known to occur within the tenement. These include one diamond drill hole (RNN001), two aircore holes (RNN002, RNN006) and five drill holes that are unspecified (W1, W38, S-1-70, S-2-70, S-3-70).

W1, drilled to a depth of 115 feet (~38m) returned no significant P₂O₅ assays. W38 near the NW corner of the tenement intersected 2.5m @ 2.2% P₂O₅ from 23.3m.

Holes RNN001, RNN002 and RNN003 targeted magnetic anomalies (diamond exploration) and were not assayed, however RNN001, which intersected Wonarah Formation limestone is available for sampling in the NT Department of Resources core yard in Winnellie.

A summary of historic tenements and open file reports covering the Soudan Project is listed in Table 6, below. A summary of previous exploration works on the Soudan Project is included as Table 7, below. This table collates historic exploration as outlined in open file mineral exploration reports.

Table 6: Historic Tenements and Reports Covering Soudan Applications

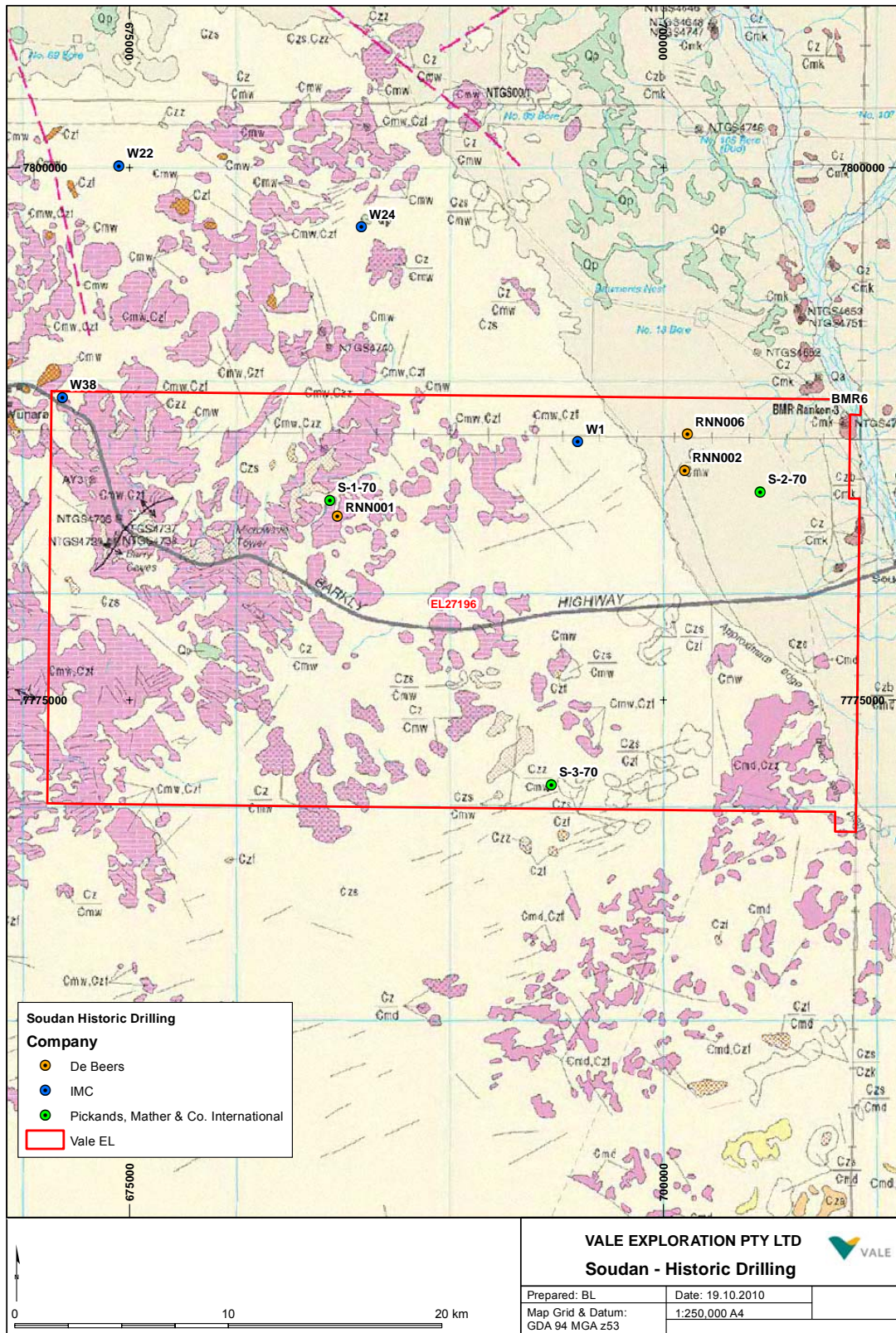
Tenement	Granted	Ceased	Company	Number of Reports	Open File Report Numbers
AP1802	19670814	19680813	IMC Development Corporation	1	CR1968-0030
AP1875	19671229	19701228	Pickands Mather & Co. International	1	CR1970-0080
AP2161	19681212		IMC Development Corporation	5	CR1970-0038, CR1968-0032, CR1970-0036, CR1970-0040, CR1969-0022
EL4591	19840903	19900902	CRA Exploration Pty Ltd	2	(immediate east) CR1985-0275, CR1986-0256
EL7147	19920421	19921218	CRA Exploration Pty Ltd	1	CR1993-0218
EL22596	20010830	20021030	Rio Tinto Exploration Pty Ltd	1	CR2002-0243
EL22980	20020918	20040223	De Beers Australia Exploration Ltd	2	CR2003-0424, CR2004-0188
EL23269	20030428	20040204	Elkedra Diamonds NL	1	CR2004-0195

Table 7: Previous Exploration on Soudan

Dates	Company	Commodity	Tenement Numbers	Item Number	Work Completed	Comments
14/08/1967 – 13/08/1968	IMC Development Corporation	Phosphate	AP1802	CR1968-0030	Photo Interp, Mapping, Radiometry, Gravity Interp, Geophysics, Sections, Drilling, Beneficiation	Mapping indicates Wonarah beds within AP1802 extend into the northern part of the Soudan application, however this map ends at the boundary of AP1802 (& doesn't show geology further south within the Soudan application). 28 holes for 3374 feet. Hole W1 within Soudan application.
July 1970	Pickands Mather & Co. International	Phosphate	AP1875	CR1970-0080	Drilling, Shapiro testing	3 holes for 330 feet [S-1-70 to S-3-70] to follow up IMC's reported P2O5 intersection in IMC No. 1. NSA's returned from drilling. Samples Shapiro tested. Best result approx 1% P2O5.
14/08/1967-11/12/1968	IMC Development Corporation	Phosphate	AP2161	CR1968-0032	Drilling	Contains drill logs and assay data for holes W1-W38.
12/12/1968-11/12/1969	IMC Development Corporation	Phosphate	AP2161	CR1970-0040	Drilling	139 holes drilled on AP2161 [W39-W138A]. Several have significant P2O5 assays. Drill logs with assays are in the report.
12/12/1969-11/12/1970	IMC Development Corporation	Base Metals	AP2161	CR1970-0036	Assays only	Library cuttings from 51 holes drilled @ Wonarah were assayed for Cu, Co, Ni, Pb, Zn. This report contains base metal assays.
April 1969 - March 1970	IMC Development Corporation	Phosphate	AP2161, also AP	CR1969-0022, CR1970-0038	Drilling, Assays	Reports summarise drilling conducted by IMC since 1967. It includes columnar and standard drilling from all drilling undertaken by IMC. P2O5 assays graphed alongside drill traces.
- 26/07/1986	CRA Exploration Pty Ltd	Diamonds	EL4591	CR1986-0256	Geophysics, Recon Airborne Survey, Heli Mags, Ground Mags, Mag Interp, Drilling, Geochemistry, Drainage sampling, Loam sampling, Soil sampling, Diamond drilling.	Detailed low level aeromag survey was flown over EL4591 & the Sthn half of EL4592. Anomalous areas Helimag'd and anomalies were traversed with ground mags. 28 features were loam sampled. Photointerp: 35 anomalous geomorph features; 21 of these were ground truthed and 10 were loam sampled. Four vertical DDH to test magnetic anomalies AVD2, 5, & 20 on Avon Downs EL4592 and one [DD86LN4] 40m hole was drilled to test anomaly Sou16 on Soudan EL4591 (to the east of the current application area). All holes had cased, auger precollars. Magnetic anomalies caused by detrital sands and grits. The magnetic anomaly at drill hole DD86LN4, to the East of the current Soudan application area, results from ferruginous fine sandy clays. Petrography of sample 1311523 of this material calcite-veined breccia exhibiting regolithic sedimentary breccia characteristics. Microcrystalline maghaemite occurred as selvages in fracture partings.
3 rd September 1984 – 2 nd August 1985	CRA Exploration Pty Ltd	Diamonds	EL4591, EL4592, EL4596, EL4597, EL4598, EL4599	CR1985-0275	Geophysics, Recon Airborne Survey, Heli Mags, Ground Mags, Mag Interp, Radiometrics, Geochemistry, Soil sampling,	Detailed low level aeromag survey was flown. Anomalous areas Helimag'd and anomalies were traversed with ground mags. 122 features were loam sampled – 24 within EL4591. 35 x -2mm loam samples and -80 mesh soil samples were collected from the EL areas. -80 mesh samples were submitted for multi element assays. Highest U assay 4ppm. 3 samples 1311058R, 1311070R and 1311079R assayed for P2O5 with assays between 0.04 and 0.06%.
21 st April 1992 - 18 th December	CRA Exploration Pty Ltd	Diamonds (Note cites	EL7147	CR1993-0218	Geophysics, Recon Airborne Survey,	Five rotary percussion holes for 202m [PD92JD1-PD92JD5] were drilled to test mag anomalies. These drill holes all occur to the west of the

Dates	Company	Commodity	Tenement Numbers	Item Number	Work Completed	Comments
1993.		P2O5 whole rock analysis)			Heli Mags, Ground Mags, Mag Interp, Radiometrics, Geochemistry, Soil sampling,	Soudan application. Whole rock analysis of thin (<3m) claystone unit intersected in drillhole PD92JD5 submitted for P2O5 analysis – 57-60M - 6.85%. Possibly related to extension of the Wonarah phosphate resource on the adjacent Alroy 1:250K sheet. Contains AAPA certificate.
30 TH August 2001 – 30 th Oct 2002	Rio Tinto Exploration Pty Ltd	Phosphate	EL22596 Also EL22594, EL22597, EL22811	CR2002-0243	Petrology Geochemistry Rock Chips Soil Samples	Reconnaissance, considered favourable for Wonarah style deposits, but downgraded with Wonarah.
18 th Sept 2002 – 18 th Feb 2004.	De Beers Australia Exploration Ltd	Diamonds	EL22980	CR2004-0188, CR2003-0424	Aero magnetic interp. Geophysical surveys, Aeromag surveys, Diamond Drilling.	Three mag anomalies were drill tested using a multipurpose aircore/diamond rig. Two anomalies were explained by a magnetic sub-surface alluvial gravel layer. The third was unexplained. 3 holes drilled for 189m. No record of any assays having been done. Logs indicate all three holes ended in Cambrian sediments. RNN001, the deepest hole, which was drilled to a depth of 116m is available for sampling at NTGS's Darwin facility.
28/04/2003 -	Elkedra Diamonds NL	Diamonds	EL23269	CR2004-0195	Aeromagnetic interpretation, Aeromagnetic data processing.	Reprocessing and interp of NTGS Barkly Area 2 aeromag survey. No anomalies identified and the area was surrendered.

Figure 6: Soudan Project – Historic Drill Holes



5 Current Exploration

Works completed at the Soudan Project during the first year of tenure included an open file literature review, compilation and review of publicly available geological maps and geophysical data, portable XRF analysis of 39 water bore cuttings from 1 hole, collection and analysis of 4 rock chips, an AAPA register search, acquisition of NRETAS environmental data and the compilation of a Mining Management Plan for the project.

5.1 Water Bore Analyses

Vale commissioned the CSIRO to undertake XRF analyses of a number of water bore cuttings from several of its Georgina Phosphate projects (Appendix 3).

Small composite samples of drill cuttings obtained from historic Northern Territory water bore drilling are housed in the NTGS Farrell Crescent core yard in Winnellie, Darwin. Samples are stored in small plastic vials and each sample generally represents a 3 metre interval. The small sample size and NRETAS requirement that samples could only be analysed by 'non-destructive means' meant they could not be assayed by conventional methods hence the use of a portable XRF instrument.

XRF analysis of 39 water bore chip samples from 1 historic water bore hole located in the northwest corner of the Soudan project area was completed as part of this commission (Figure 7, Appendix 4).

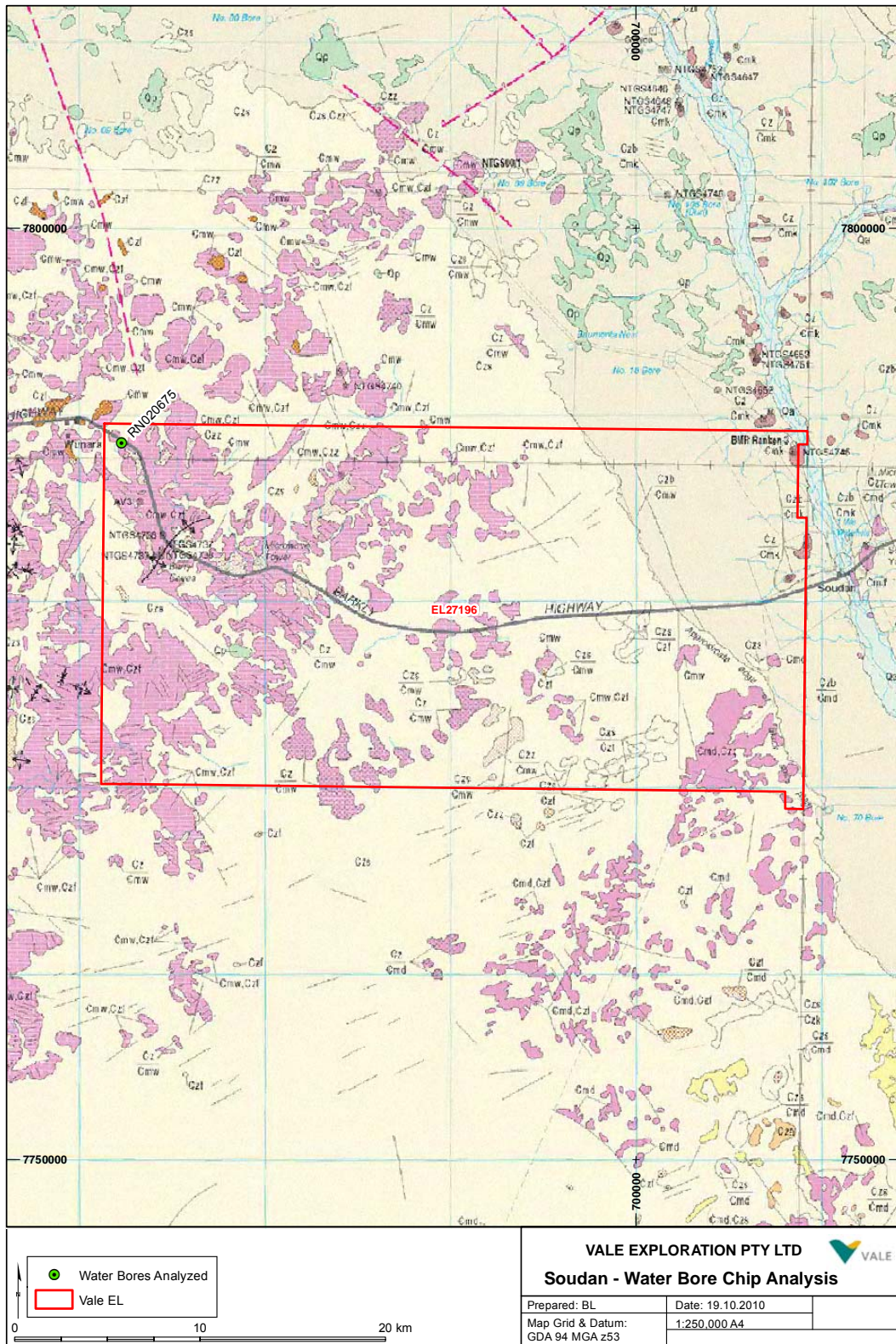
Samples were prepared for analysis by pouring enough material to half-fill a plastic measuring vial with a kapton-film viewing window and gently tapping the vial on the bench to settle and compact the material. After analysis, samples were transferred back to their original vial, and the measuring vial cleaned with ethanol. Samples were analysed for P, K, U, Th, S, Cl, Ca, Ti, V, Cr, Mn and Fe using the Innov-X Systems™ X-50™ portable XRF (Wells *et al.*, 2009).

When initial XRF analyses were complete, an extrapolation involving the XRF analyses of known P standards was used to correct the XRF P analyses of water bore samples. (Wells *et al.*, 2009).

A copy of the CSIRO report, which contains confidential results pertaining to several of Vale's authorized projects in the NT, was submitted to NT DoR along with raw data on 11th December 2009. Raw XRF analytical data was also submitted at this time.

Several high P portable XRF analyses were returned from the water bore located in the northwest corner of the Soudan EL. The significance of these results is uncertain due to possible contamination from the open hole method, small sample size, potentially unrepresentative nature of the sample and the precision of the portable XRF instrument.

Figure 7: Soudan Project – Portable XRF Analysis of Water Bores



5.2 Literature Review

Open file reports covering the Soudan Project were obtained from NT DoR and a review of historic exploration conducted within these projects was undertaken in 2009. This is included as Appendix 1.

5.3 Consultation with Traditional Owners

An inspection of the Aboriginal Areas Protection Authority (AAPA) Register was conducted on 9th September 2009 (see Appendix 2). This inspection identified several sacred sites within the tenements (see Section 1.4).

The NLC was contacted about works proposed for Soudan and a copy of the 2010 Soudan MMP was supplied to the NLC during the year. A consultation meeting with traditional owners of the Soudan area was held on 24th August 2010.

An application for an AAPA certificate was lodged on 7th May 2010. The AAPA responded that it was a non-standard request and provided a quote for this work which was accepted by VALE on 3rd June 2010. At the time of reporting, the AAPA certificate was pending.

5.4 Rock Chip Sampling

Four rock grab samples were collected on the side of the Barkly Highway within the Soudan project. Samples were submitted to ALS (Mount Isa) for sample preparation then forwarded to ALS (Townsville) for analysis. The sample preparation procedure is shown in Figure 8.

All samples were analysed for a suite of analytes:

- Four acid digestion (HF-HNO₃-HClO₄ digestion, HCl leach);
- Samples analysed by ICP-MS and ICP-AES;
- Samples analysed for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.

Analytical results returned no significant results (Appendix 5).

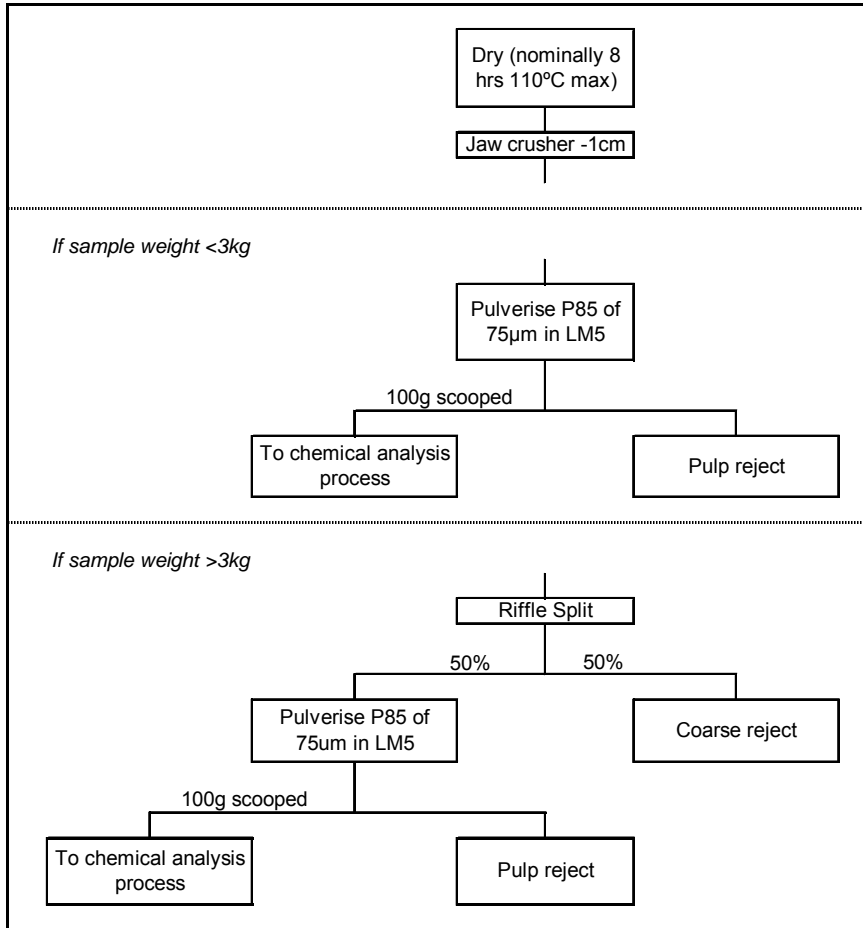
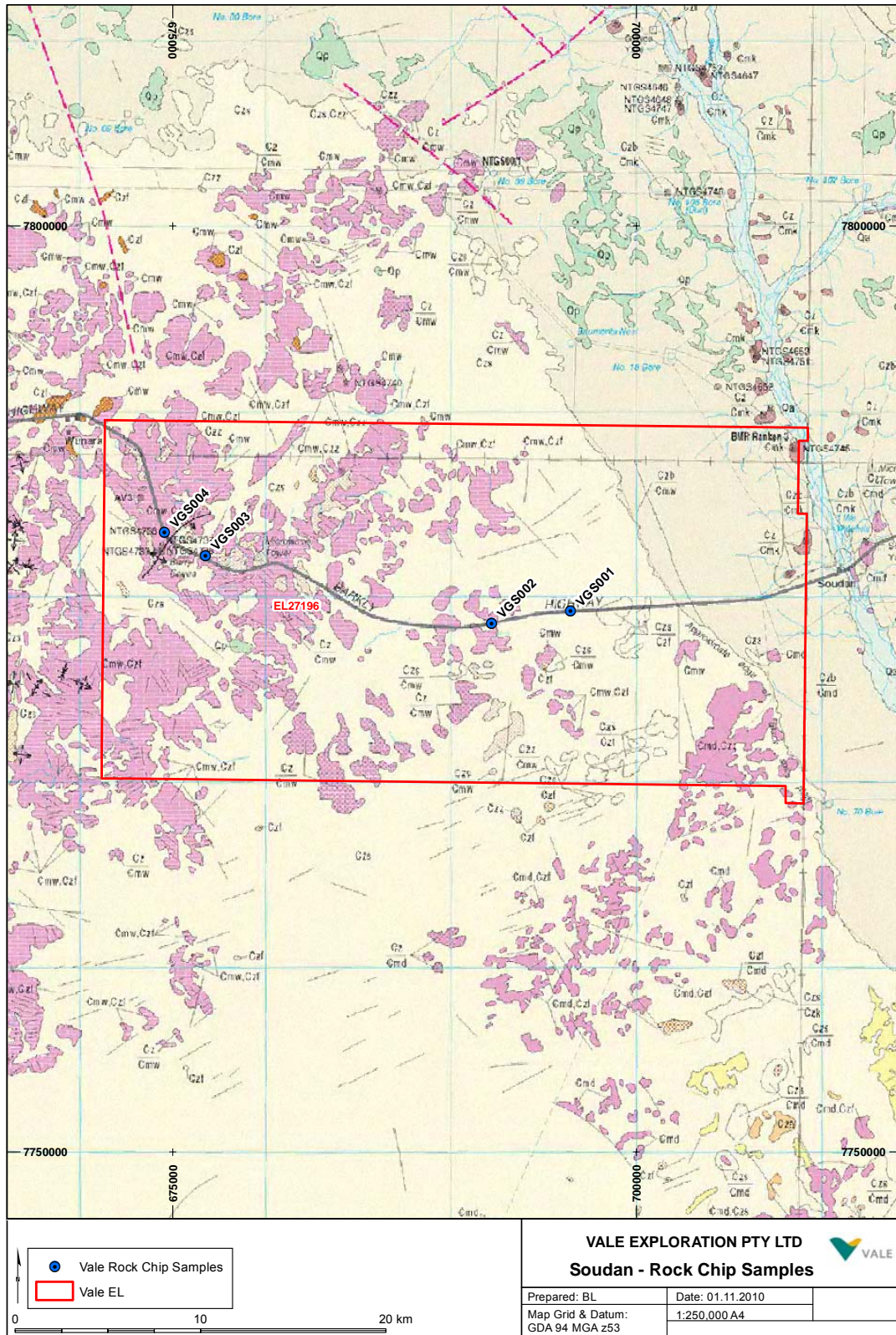
Figure 8: Sample Preparation Flow Sheet

Figure 9: Soudan Project – Rock Chip Sample Locations



5.5 Conclusions

Vale has not undertaken any ground disturbing exploration during the first year of tenure. Works completed at the Soudan Project during the first year of tenure included an open file literature review, compilation and review of publicly available geological maps and geophysical data, XRF analysis of water bore cuttings, the collection of 4 rock chip samples, AAPA register search, acquisition of NRETAS environmental data and the compilation of a Mining Management Plan for the project.

On 7th May 2010 Vale applied for an AAPA Authority certificate over EL27196, however at the time of reporting the AAPA had held no meetings with traditional owners with respect to this application and a certificate was pending. Vale does not intend to commence on-ground works until any restricted works areas have been identified.

In the next year it is hoped that an AAPA Authority Certificate will be granted to Vale, thereby allowing works to commence.

On site works proposed for 2011 include reconnaissance, geological mapping, rock chip sampling, diamond drill hole sampling (RNN001/01) and RC drilling.

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APPENDIX 1

LITERATURE REVIEW

APPENDIX 2

AAPA REGISTER SEARCH

APPENDIX 3

PHOSPHOROUS ANALYSIS OF WATER BORE CHIPS USING PORTABLE XRF ANALYSIS – CSIRO REPORT

APPENDIX 4

PORTABLE XRF DATA – WATER BORE CHIP ANALYSIS

APPENDIX 5

ROCK CHIP DATA