BREATHING NEW LIFE INTO AN OLD COAL MINING AREA, MIDLANDS, TASMANIA

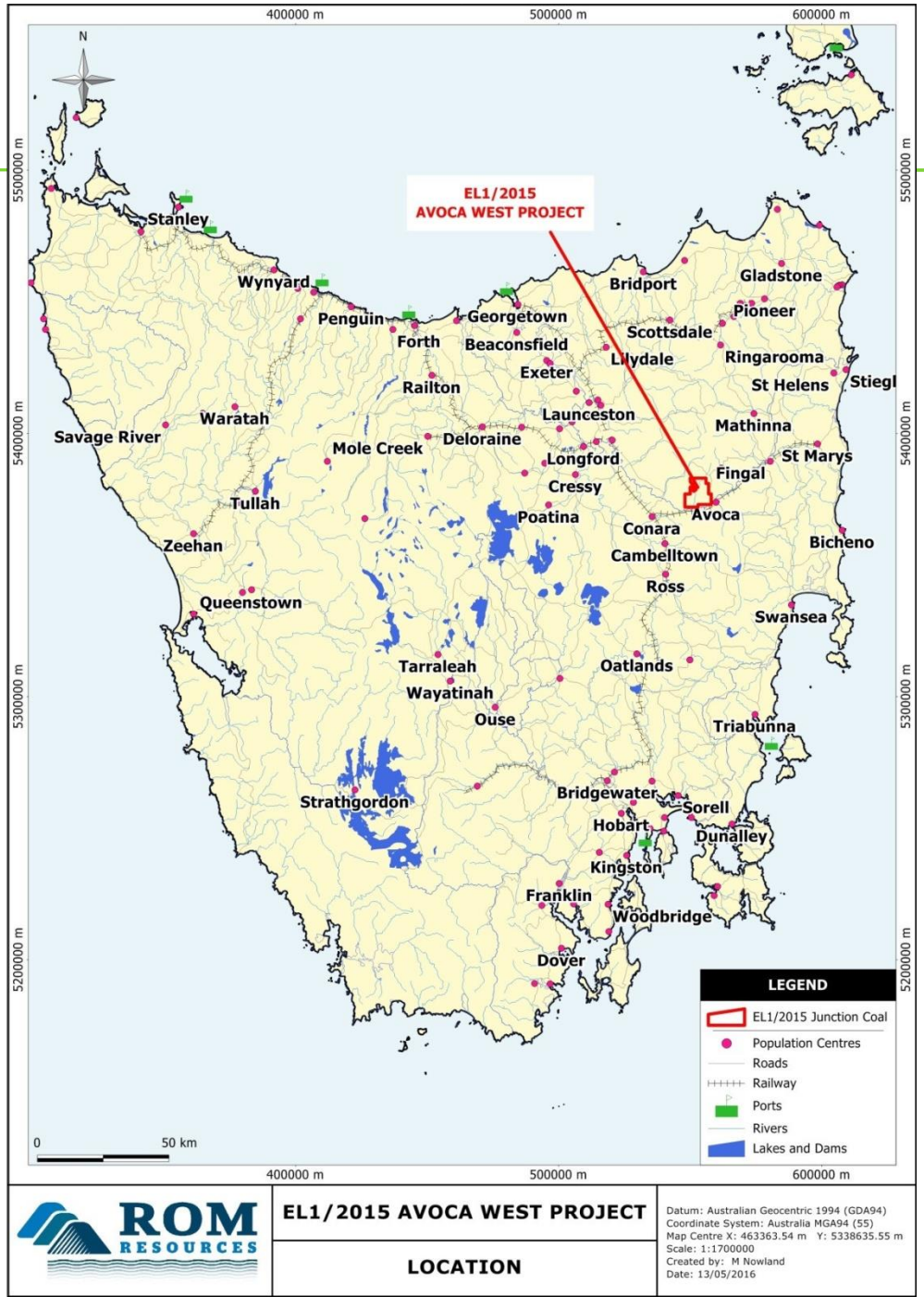
Presentation to Tasmania Geoscience Forum

Tall Timbers Resort, Smithton

December 2018

LOCATION MAP

Figure 1: Location of EL1/2015



OWNERSHIP

- Junction Coal owns the tenure 100%, some $150,000 already spent in application fees, environmental bond, rent, desktop studies, statutory reporting, and production of a geological model;
- Geological consultancy ROM Resources provides exploration, reporting, database and modelling services to Junction Coal;

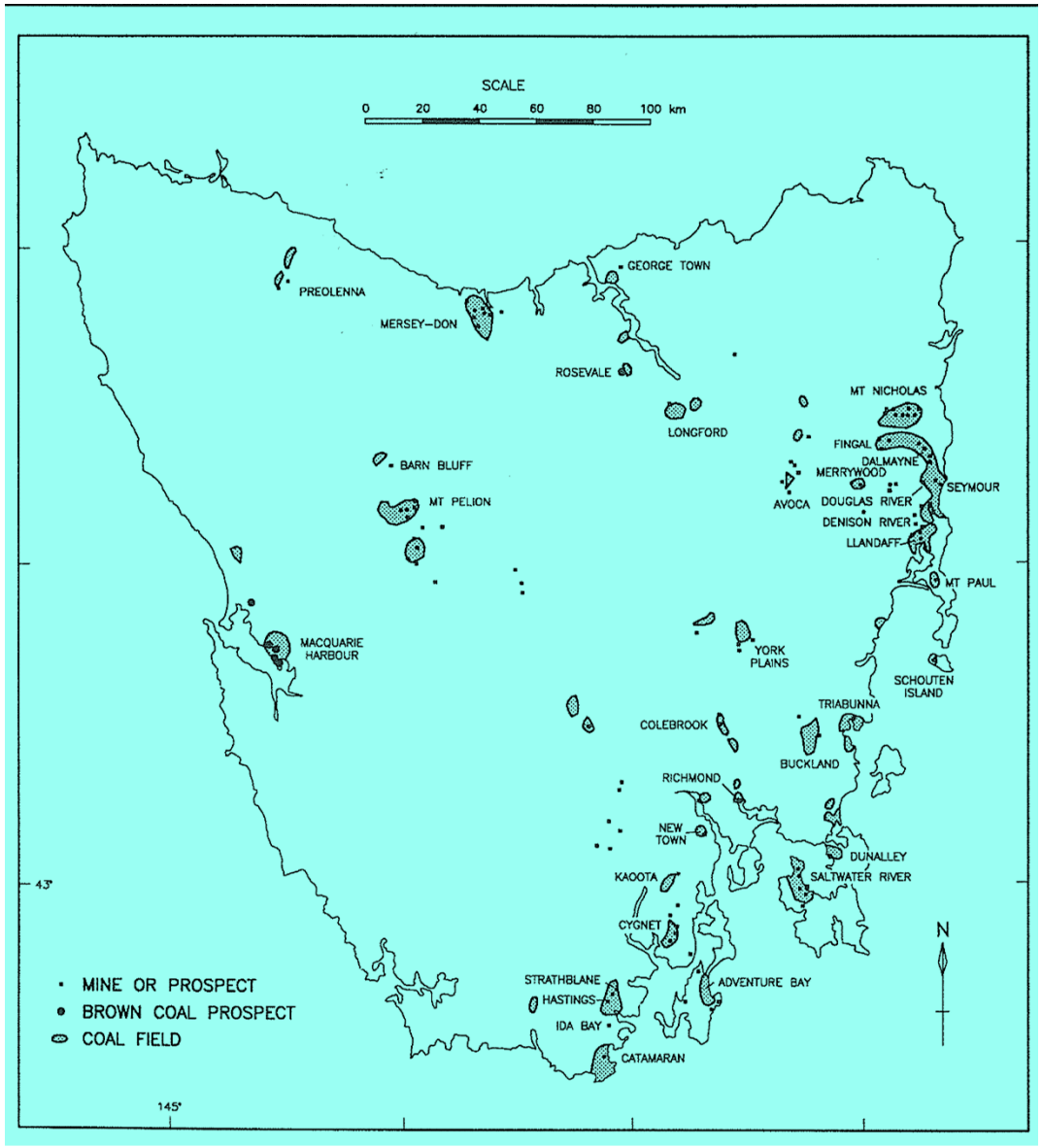
Tenure	Status	Principal Holder	Grant Date	Expiry Date	Size (km^2)	Category
EL1/2015	Granted	Junction Coal Pty Ltd	23-APR-2015	22-APR-2020	82	2. Fuel Minerals

BACKGROUND AND SCOPE

- Coal Exploration tenure EL1_2015 is located in the northern Midlands of Tasmania in an historical coal mining area;
- Granted 23rd April 2015 for 5 years;
- 3rd Year of tenure - fieldwork including drilling program is now to be partly funded by the MRT EDGI program;
- The area is prospective for resumption of coal mining as in-situ resources remain and been estimated to the 2012 JORC Code;

REGIONAL SETTING

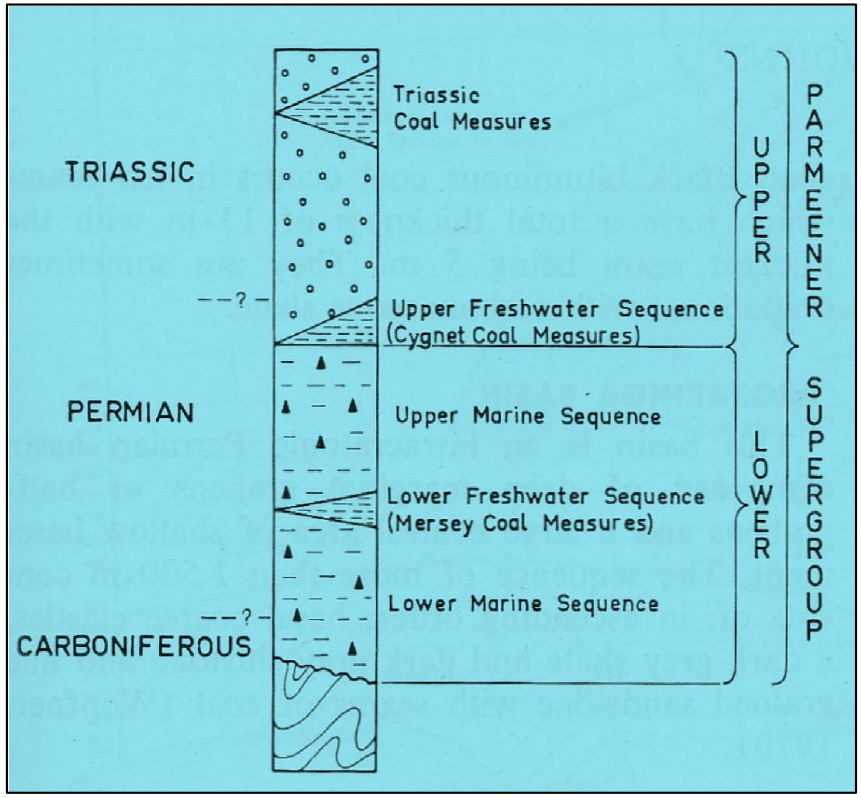
LOCATION OF TASMANIAN COALFIELDS



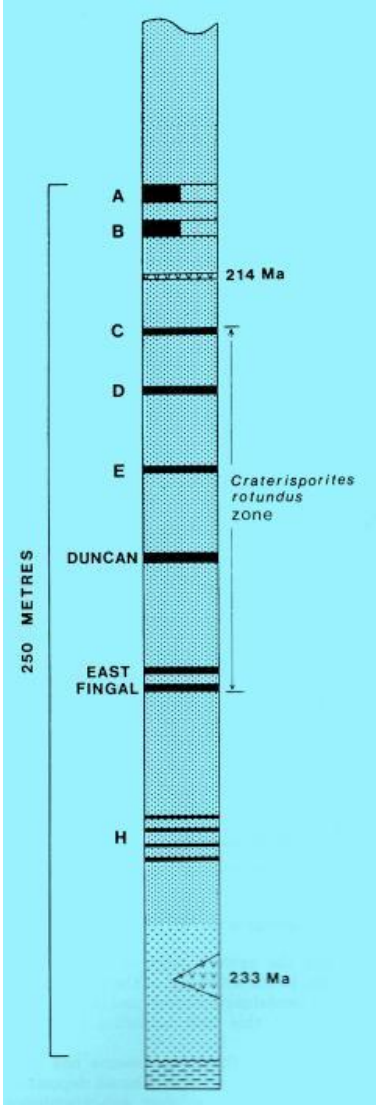
Source: MRT Bulletin 64

REGIONAL GEOLOGY

The exploration licence is located on the north-eastern margin of the Permo-Triassic Tasmania Basin. The basin basement consists of the Lower Palaeozoic Mathinna Beds and the Devonian Age Ben Lomond Granite. A generalised stratigraphic column is shown

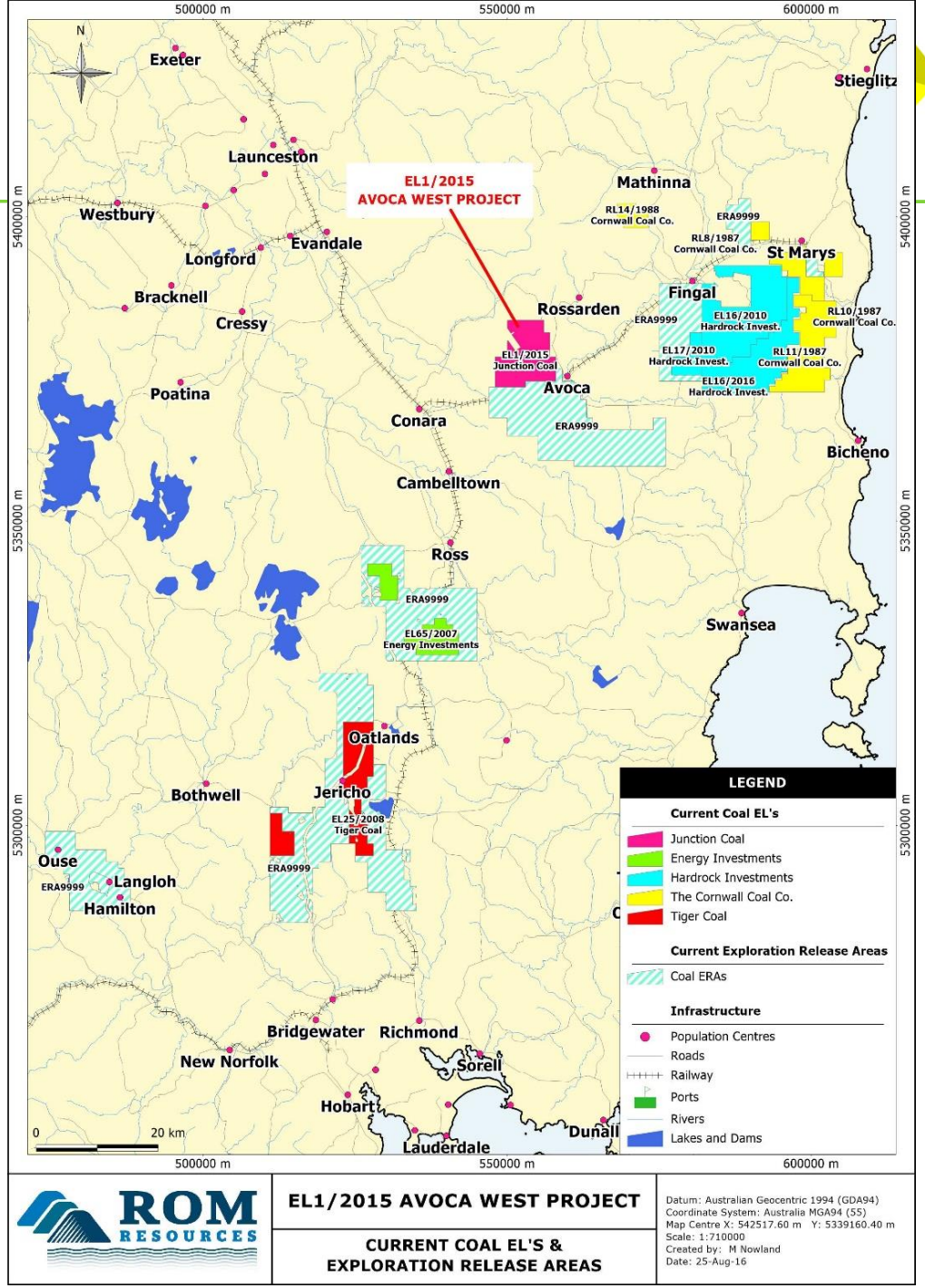


REGIONAL STRATIGRAPHY



Coal Seams Fingal	Avoca West	Comments
A	Alpha	
B	Beta/Stanhope	Blue seam at Fingal
C	Gamma/Fenhope	
D	Delta	Semi-soft coking at Mt Christie and Bonney's Plains
E	Eta	
F/Duncan	Theta	

SURROUNDING TENURE



ROM RESOURCES

EL1/2015 AVOCA WEST PROJECT

CURRENT COAL EL'S & EXPLORATION RELEASE AREAS

Datum: Australian Geocentric 1994 (GDA94)
Coordinate System: Australia MGA94 (55)
Map Centre X: 542517.60 m Y: 5339160.40 m
Scale: 1:710000
Created by: M Nowland
Date: 25-Aug-16

MT NICHOLAS-FINGAL COALFIELD

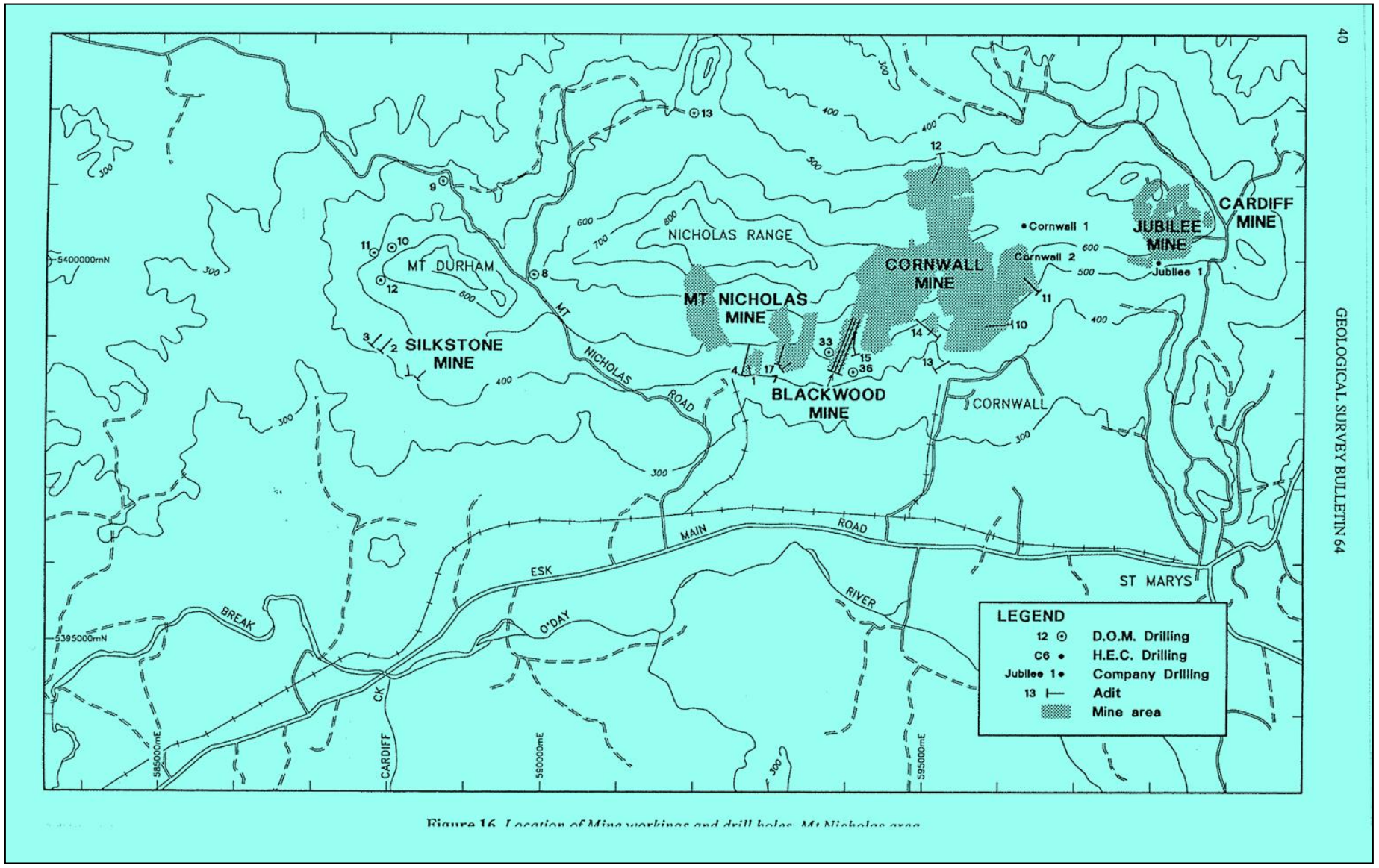
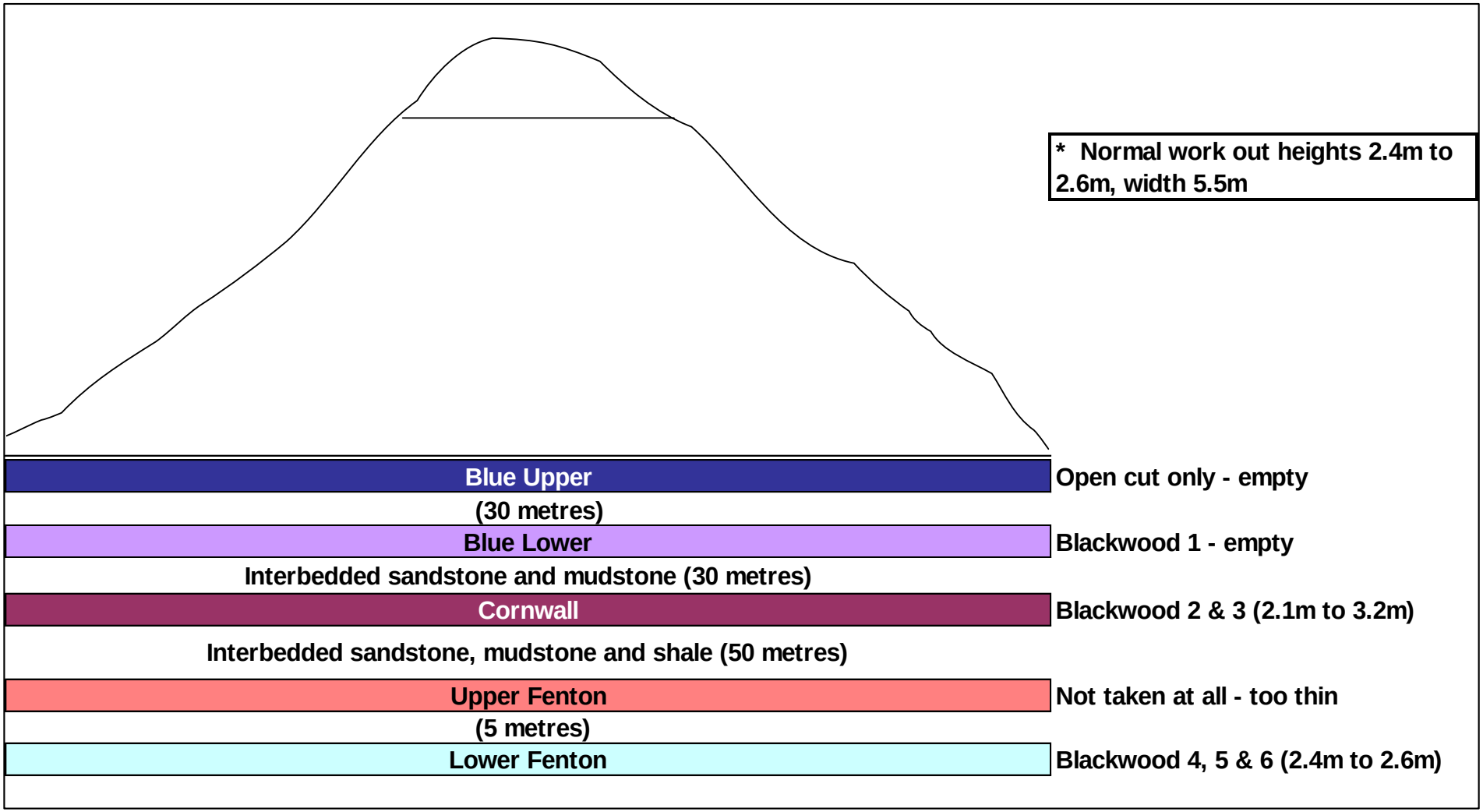


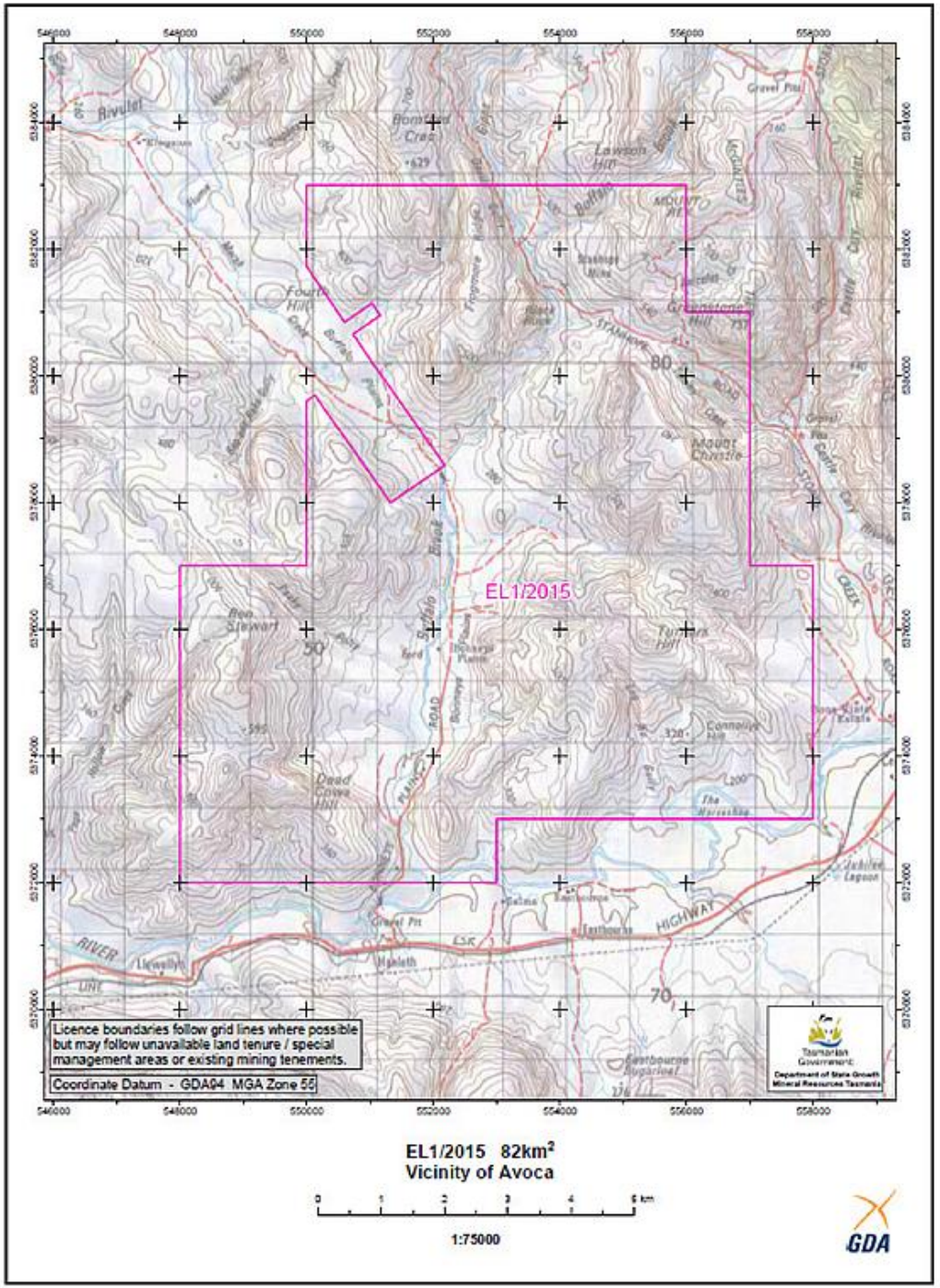
Figure 16. Location of Mine workings and drill holes, Mt Nicholas area

MT NICHOLAS-FINGAL STRATIGRAPHY

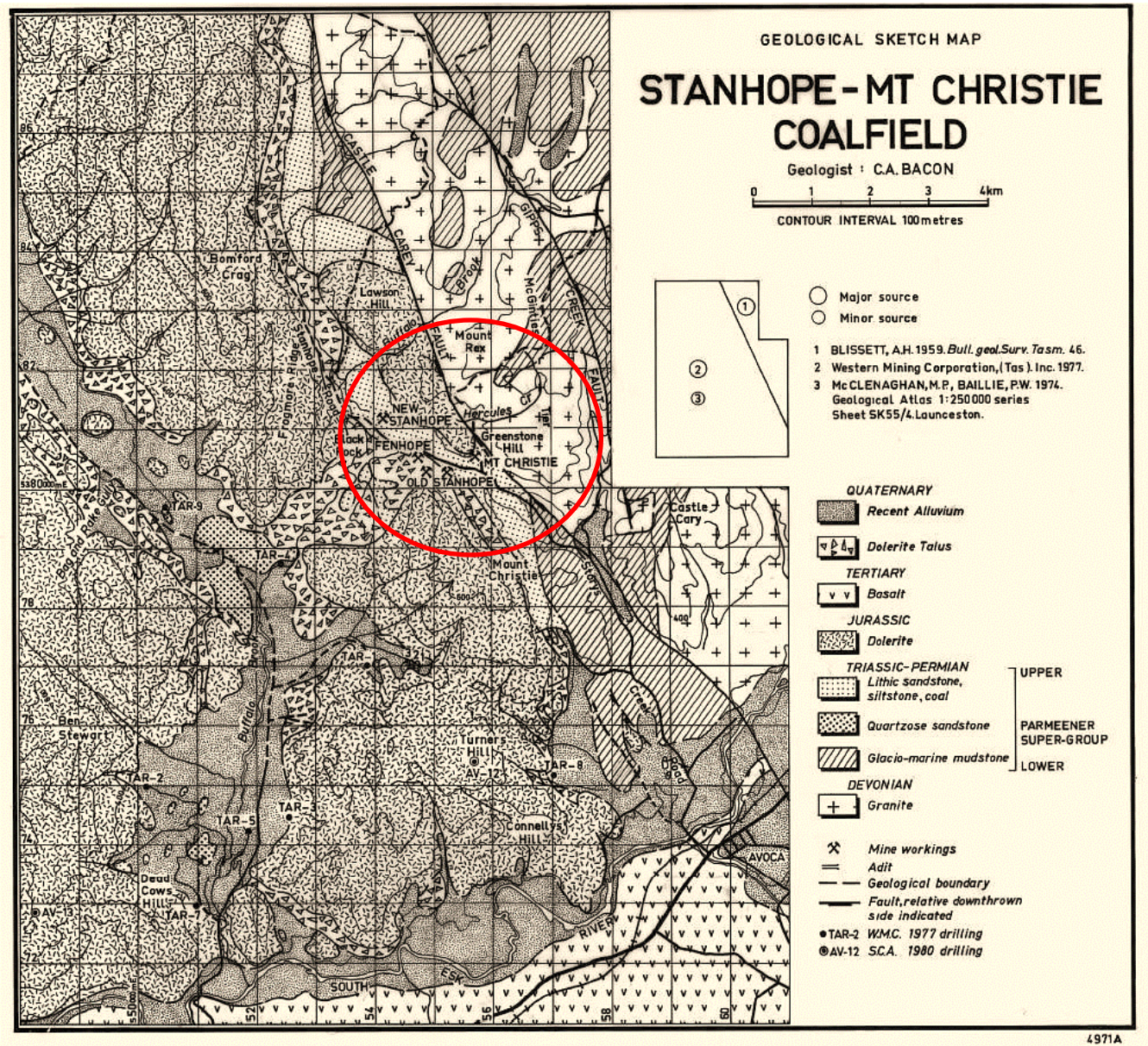


PAST MINING

TOPOGRAPHY


EL1/2015
Licence boundaries follow grid lines where possible but may follow unavailable land tenure / special management areas or existing mining tenements.
Coordinate Datum - GDA94 MGA Zone 55
EL1/2015 82km²
Vicinity of Avoca
1:75000
GDA

HISTORICAL WORKINGS



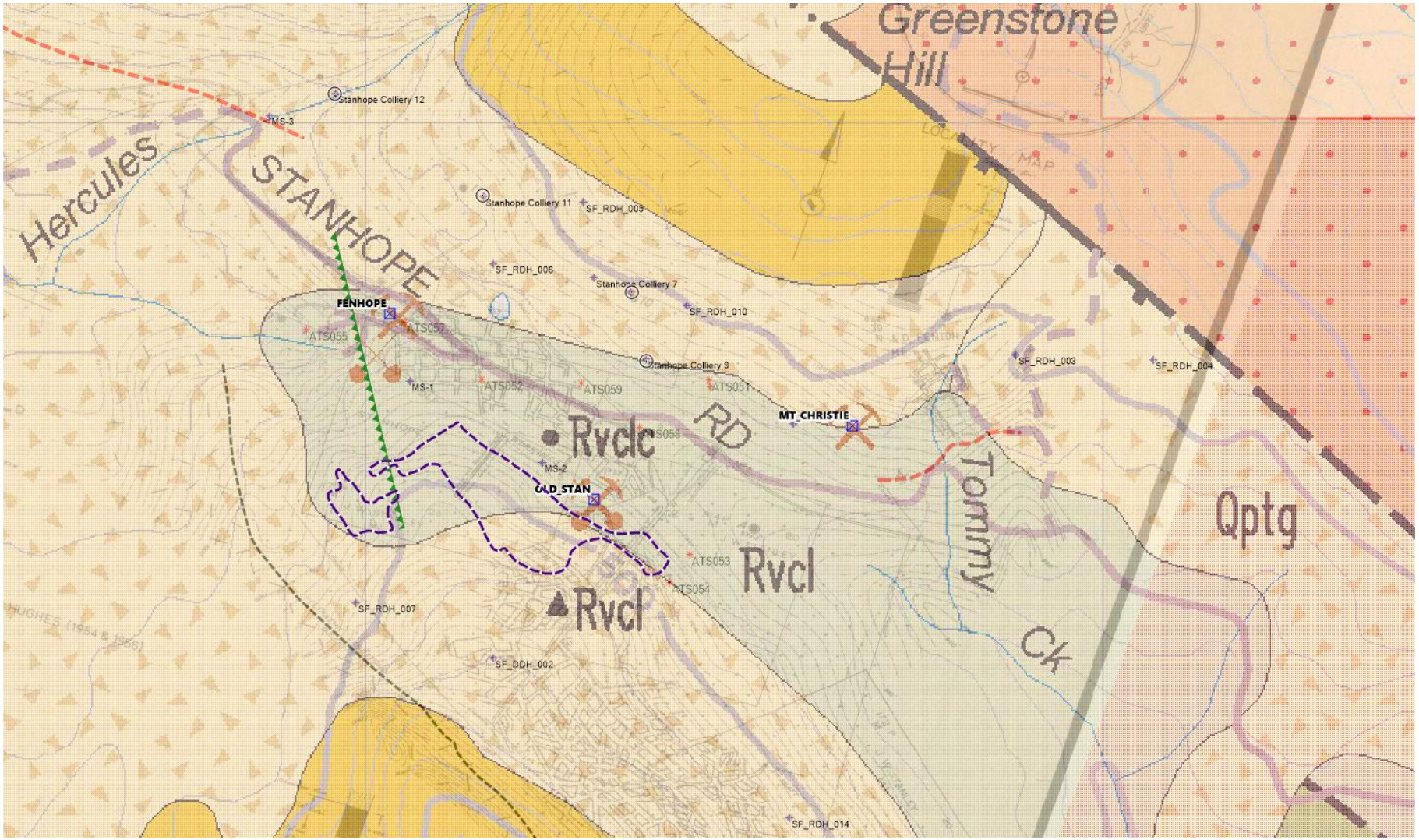
PAST MINING HISTORY

- Coal discovered in 1904 by J. Stevenson;
- Coal mining from 1905-1998 in the Mt Christie, Bonney's Plain, Old Stanhope, New Stanhope, Fenhope Collieries, and Stanhope Open-Cut;

Mine	Tonnes
Old Stanhope	175 000
New Stanhope	220 000
Mt Christie	13 000
Fenhope	1000
Stanhope Open Cut	175 524
Total	584 524

FENHOPE COLLIERY WORKINGS

OPEN CUT MINING



45 YEARS OF EXPLORATION

RECENT EXPLORERS SINCE 1976

- Western Mining;
- Shell Co of Australia;
- Avoca Transport Company;
- Merrywood Coal;
- Spitfire Resources (ASX: SPI);
- Indicoal Australia

LOCAL STRATIGRAPHY

Upper Parmeener Super Group

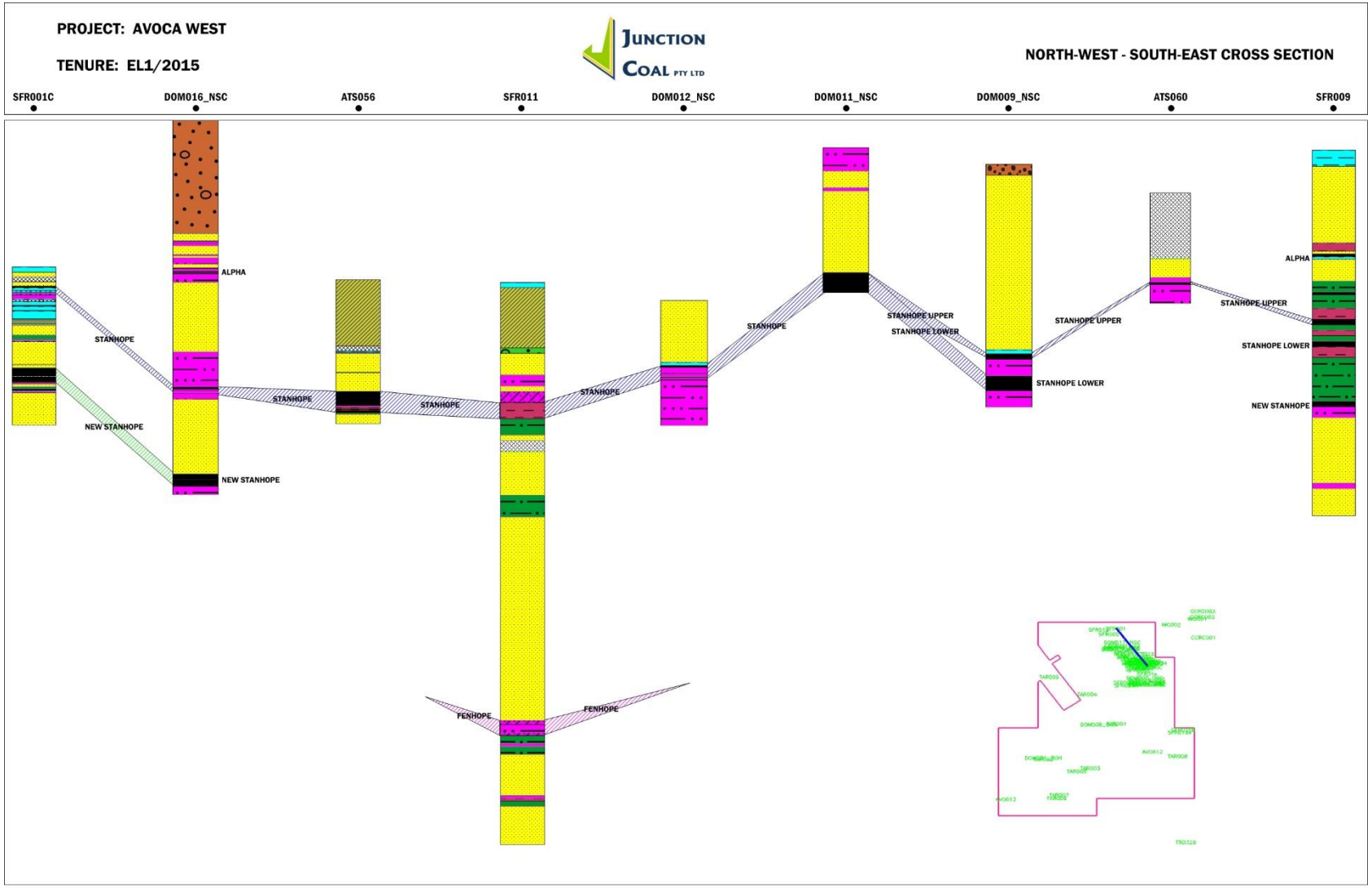
Various sub-divisions of the Triassic sequence have been proposed since Hills et al, (1922) but are now considered obsolete (Bacon, 1991). Thus, the Triassic is now referred to as the Upper Parmeener Super Group with no further sub-division. Locally the coal measure sequence within the EL has been informally named the Avoca Coal Measures (Morrison, 1998), but no formal stratigraphic definition has been published.

Outcrop of the coal measures in the valley floors and upper valley slopes is generally poor, due to alluvium and dolerite scree. However, good exposures of the coal measures and coal seams commonly occur within the various creek beds.

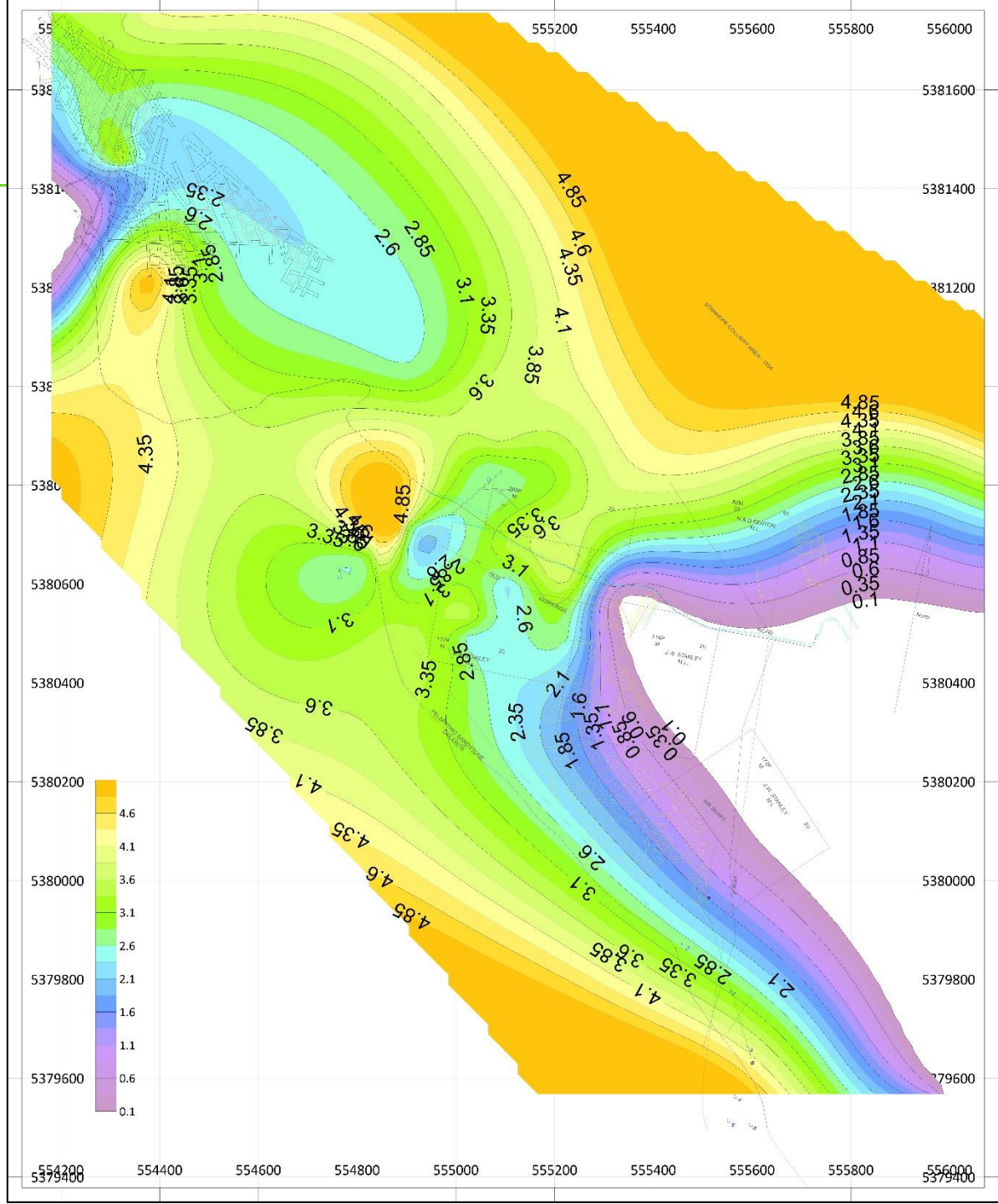
The Triassic coal measure sequence consists of quartz sandstone with interbedded mudstone, siltstone and rare coal in the lower section, the feldspathic lithic sandstone with interbedded mudstone, siltstone, carbonaceous mudstone and coal in the upper section.

Surface mapping by previous explorers and logging information from Mines Department boreholes within the tenure area indicate that the thickest coal seams occur within the upper 200 metres of the coal measures, and that the lower 100-metre-thick quartz sandstone (locally the Ross Sandstone) section is usually barren of coal. The quartz sandstone and interbeds in the lower section of the coal measures appear too thin to the east. In some parts of the area a thin pebble conglomerate/granular conglomerate occurs at the base of the Triassic.

GEOLOGICAL CROSS-SECTION



STANHOPE THICKNESS



COAL QUALITY

Coal from all economic seams in the area could be regarded as a high volatile bituminous steaming coal with medium to high inherent ash and low sulphur (Bacon, 1983) and (Patterson & Ward, 1982)

Parameter	Raw Coal	Clean Coal *
Proximate Analysis		
Inherent Moisture (% adb)	3.1	3.8
Ash (% adb)	29.4	15.2
Volatile Matter (% adb)	24.7	28.6
Fixed carbon (% adb)	42.80	52.40
Total Sulphur (% adb)	0.40	0.39
Calorific Value (kcal/kg, adb)	5,397	6,538
Ultimate Analysis (dry ash free)		
Carbon (%)	54.78	67.22
Hydrogen (%)	3.56	4.17
Nitrogen (%)	1.03	1.23
Sulphur (%)	0.53	0.27
Ash Fusion Temperature (reducing atmosphere)		
Deformation (^{o}C)	1200	1310
Spherical (^{o}C)	1490	1470
Hemispherical (^{o}C)	>1500	1500
Flow (^{o}C)	>1500	>1500
Coal Maceral Analysis		
Vitrinite (%)	28.4	-
Exinite (%)	5.1	-
Inertinite (%)	55.9	-
Mineral Matter (%)	10.5	-

* CF1.7 fraction, 71.1% apparent yield

JUNCTION COAL PTY LTD

CURRENT WORK

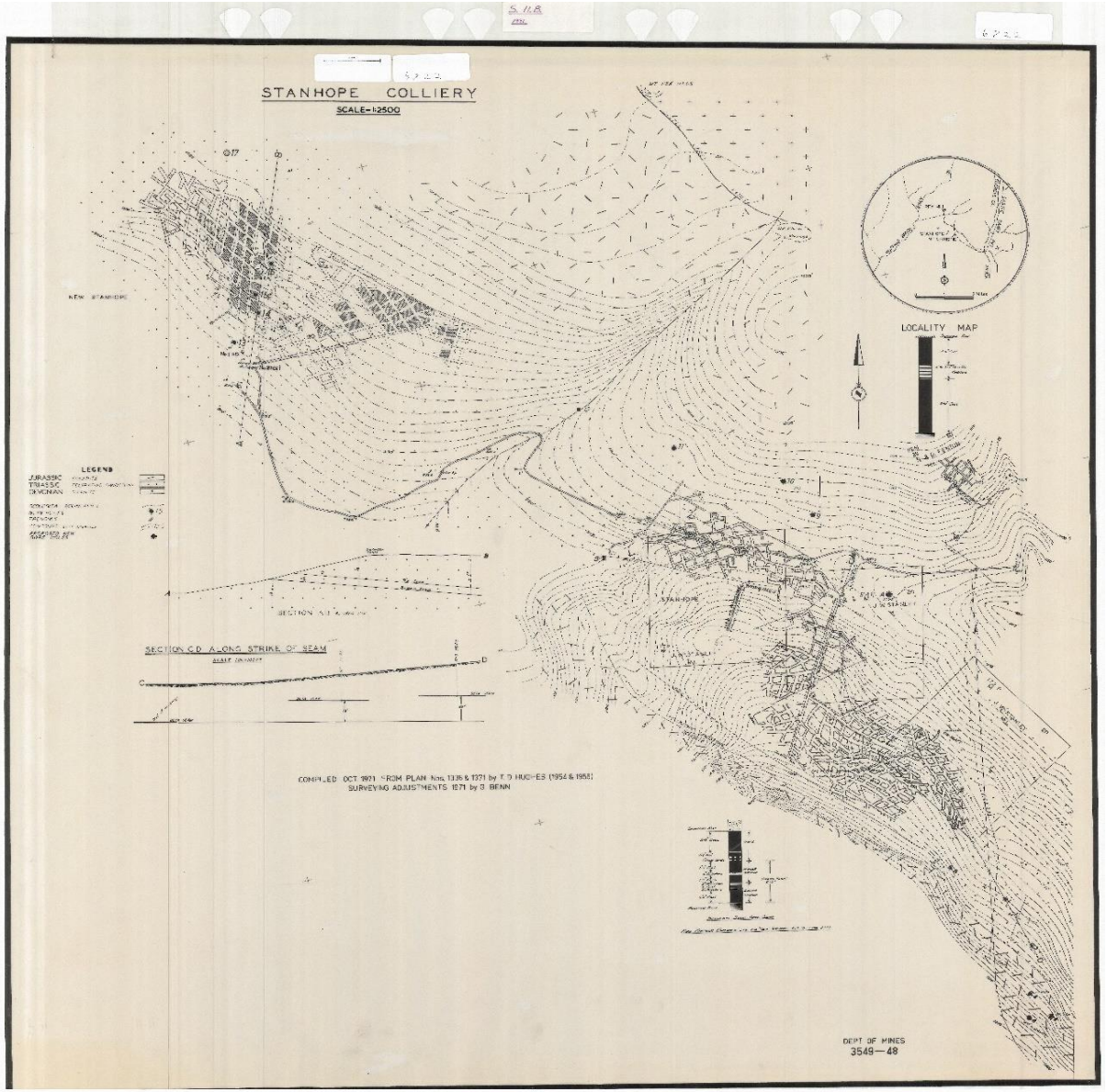
EXPENDITURE COMMITMENT

Exploration Year	Year No.	Expenditure A$	Actual Expenditure A$	Main Tasks
2015 -16	1	$55,000	$56,800	Construct database, field mapping, Modelling, determine drilling sites
2016-17	2	$110,000	$82,854	Acquire and digitize then geo-register mine and lease plans, faults, mine geology, and roof measurements
2017 -18	3	$276,000	n/a	Conduct exploration drilling program, Coal quality testing, modelling, resource reporting to the 2012 JORC Code
Total Expenditure:		$431,000		

CURRENT ACTIVITIES

- No field activity was undertaken during Years 1&2 reporting periods however the following was completed: Recent activities within the tenure have been directed toward:
- The re-logging and photography of the coal-bearing intervals missing from DOM Bonney's Plains No. 1 core data which is housed in the MRT Core Shed at Mornington, Hobart.
- Compilation and encoding of all available coal quality data;
- Digitising and registering to MGA zone 55 of all historical mine plans for the Old and New Stanhope Collieries, Fenhope Colliery, Undergrounds and the Stanhope Open-cut;
- Digitising and registering adits and shafts associated with the Mt Christie Mine and Bonney's Plains Prospect
- Digitising and registering all underground mine faults;
- Seam Correlation, modelling, and resource estimation to the 2012 JORC Code standard;

DIGITISNG OLD PLANS



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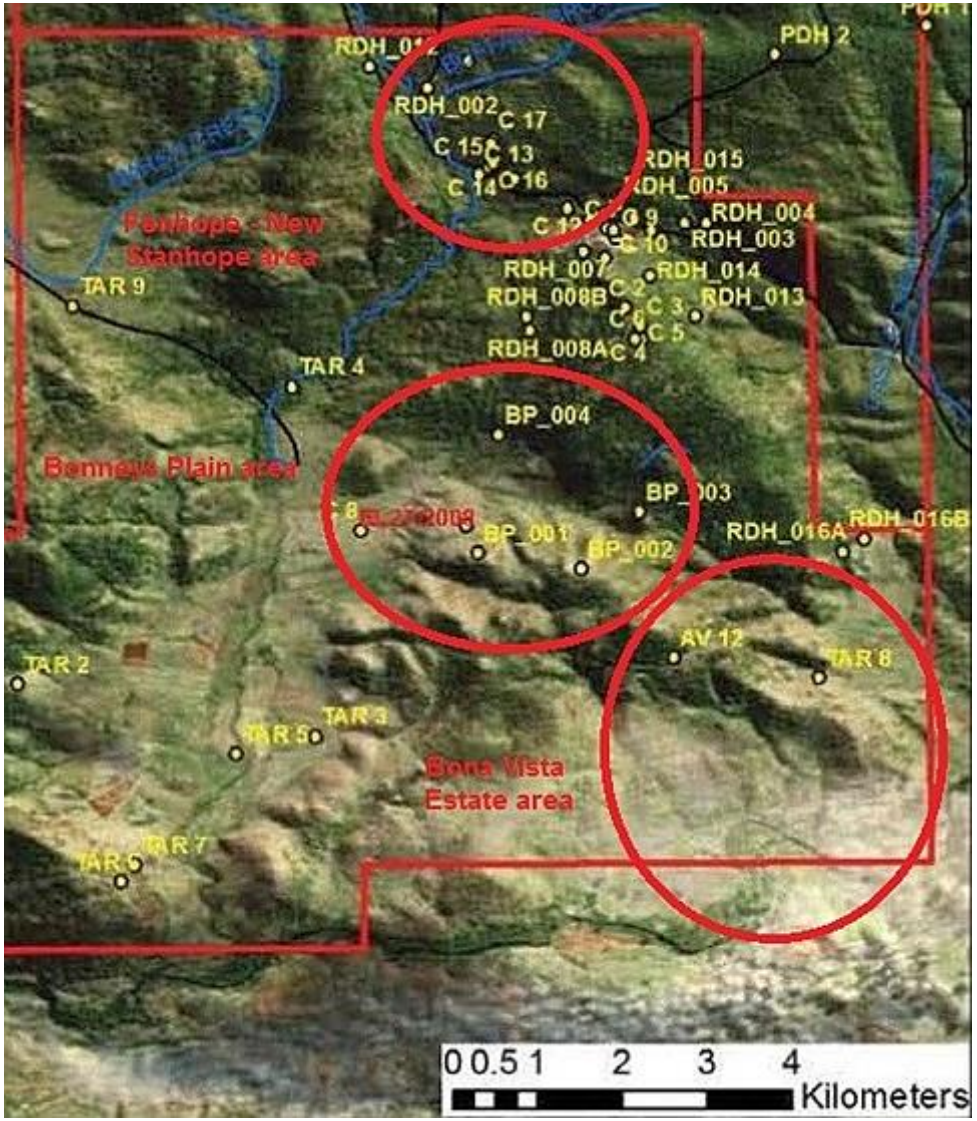
RECOMMENDATIONS

Four (4) areas have been identified as being under-explored at Stanhope and Bonney's Plain:

- The area from the Fenhope Mine to the New Stanhope Mine is prospective with both Avoca Transport and Indicoal reporting seam intersections. Indicoal DDH002 was drilled on the slopes of Greenstone Hill to the west of the Stanhope open cut and intersected 1.9m and 2.9m of high ash stony coal. Avoca Transport reported an intersection of 2.61m and 1.06m separated by 0.25m of mudstone in ATS 56;
- The area to the north and west of the New Stanhope is also prospective with Drill hole DOM17 having a 2.1m seam intersection. Indicoal DDH001 was drilled to the north of the New Stanhope mine and intersected 2.4m of good quality coal;
- The Bonney Plains area around the old workings and WMC hole TAR 1 remains under-explored. This was recognised by Golder (2012) who designed a four (4) hole program with drill sites designed to hopefully intercept the full thickness of the coal measures;
- The Bona Vista Estate area to the east of Bonney's Plains has outcrops of the coal measures on the Snow Hill sheet and Shell hole AV12 had coal measures and WMC TAR 8 had coal intersections.

PROSPECTIVE AND UNDER-EXPLORED AREAS

- North and West of New Stanhope;
- Bonney's Plain east of TAR1;
- Vicinity of TAR8;



2019 AND BEYOND

CURRENT VALUATION

- Resource Generation Limited (ASX: RES) divested its Tasmanian coal tenements through the sale of all its shares in Energy Investments Pty Limited and Tiger Coal Pty Limited for $1.5 million in 2011;
- This tenure sold for $1.5M in 2011 in a sale from Spitfire Resources (ASX:SPI) to Indicoal Australia at the height of the mining boom;
- Current valuations are about ½ the boom prices;

Resource Classification	Type	Tonnage (Mt)	Mined (Mt)	Remaining (Mt)	Coal Type	Value (c/t)	Value (A$M)	Comments
Measured	N/A	n/a	n/a	-				
Indicated	Non-JORC	0.50	0.30	0.20	Thermal	0.25	0.05	If semi-soft coking coal can be proven then values 2-3x more.
Inferred	Non-JORC	10.0	0.28	9.72	Thermal	0.07	0.680	

Tonnages from Noldart (1975)

CONCLUSIONS

Within EL1_2015, the Avoca West Coal Project covers outcrop and subcrop of coal measures mined since 1905 on the western margin of the Fingal-Mt Nicholas Coalfield in the Midlands Region of Tasmania.

Although no mining is currently taking place, the area has a ninety-three (93) year history of intermittent coal mining for largely thermal and industrial purposes, at small annual tonnages for a total just under 600,000t mined. Historical mining exploited three (3) of the eight (8) seam groups present within the tenure.

An initial literature review of the previous mining and exploration found some obscure references to some of the seams having raw crucible swell numbers (CSN) as high as 6, whereas most focus was on the mined Fenhope and Stanhope seams which are only suitable for thermal products (CSN <1).

This work is largely complete.

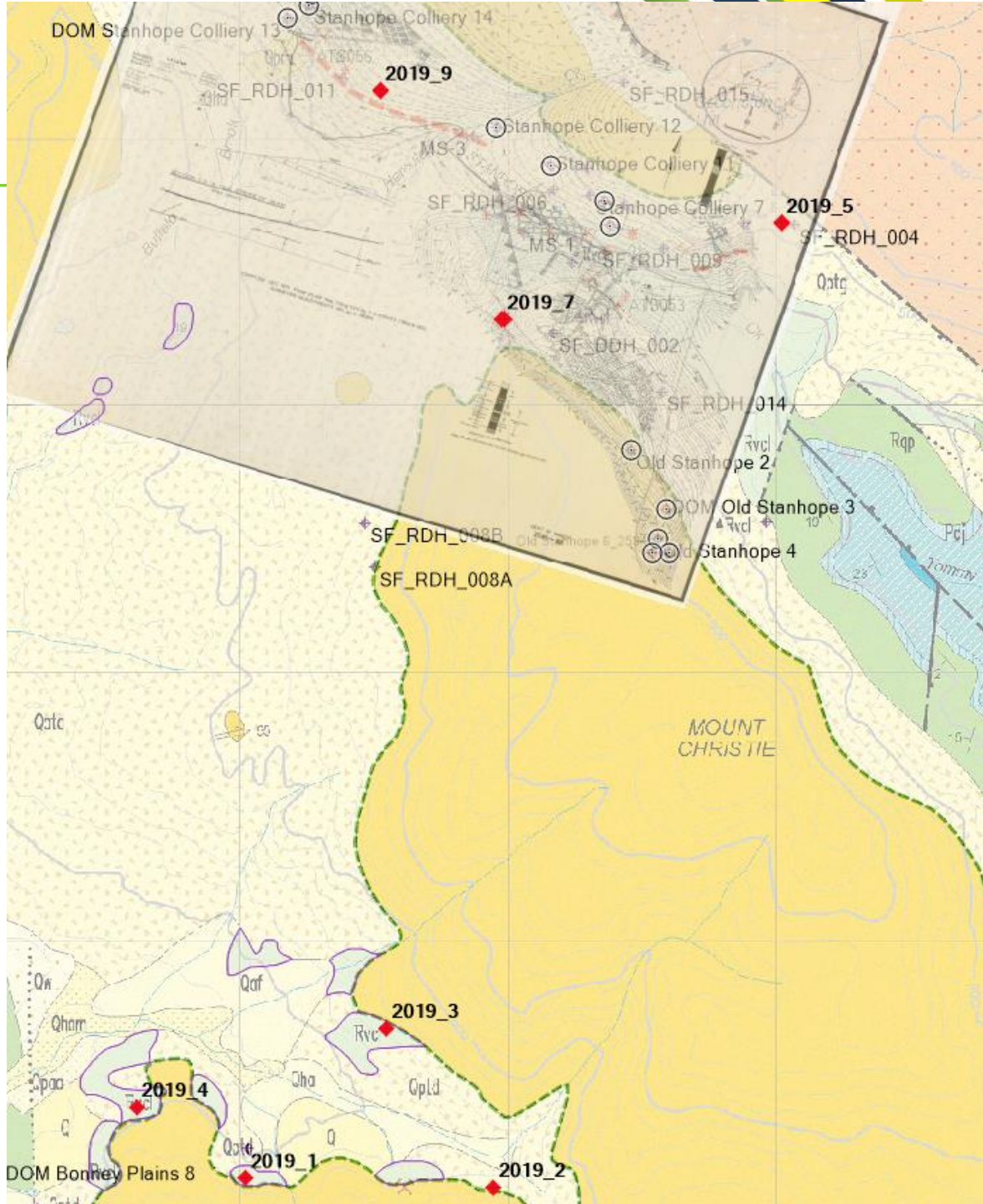
2019 EXPLORATION

One of the recommendations from the CP Report is that future work will also include a modest large diameter core program to test float/sink washability and coking properties of the main target seams (Stanhope or Beta, and Delta) at the Mt Christie and Bonney's Plains localities.

Potential investors have requested that detailed coring, sampling and laboratory testing be undertaken in these seams, before a scoping study can be completed.

EDGI grant monies will be directed towards partially assisting this large diameter drilling program as confirmation or not that the coking properties of the Delta and Gamma seams are proved (to enable a semi-soft coking product), will be a major revelation for coal exploration and mining in Tasmania. A small operation of 1-2Mt per annum could be sustained from the current resource base (18.3 Mt of Inferred and a range of 2-10Mt of Exploration Target to the 2012 JORC Code). It should be noted that the previously mined Merrywood Coalfield, whilst untenured, is <20km distant and could provide a satellite pit to maintain production.

2019 DRILLING



PROSPECTS FOR SUCCESS

- ROM Resources has identified 18Mt of JORC 2012 Code resources remaining;
- Area is in the known Tasmanian coalfields/coal mining area;
- Tasmanian Government looking for projects to create local jobs;
- MRT has indicated granting of a mining lease possible;
- Australian Bauxite Limited (ASX: ABX) are mining bauxite nearby at Campbelltown so some infrastructure and equipment available;
- Proving a semi-soft coking coal resource in the unmined D seam would increase the valuation two-threefold;

REFERENCES

- Biggs M.S., and Nowland M., (2016). Annual Report for EL1/2015 Avoca West Coal Project for the period ending 23rd April 2016, ROM Resources for Junction Coal, May 2016, 32pp.
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