



**WHITE SPUR LAKE EL 41/2006**  
**ANNUAL REPORT**  
**FOR THE PERIOD ENDING 7<sup>th</sup> MAY 2009**

**Author:** D.J. Hicks

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## **1. SUMMARY**

This report details work undertaken on exploration licence 41/2006 White Spur Lake between 7<sup>th</sup> May 2008 and 7<sup>th</sup> May 2009, the second year of the licence. The principal exploration targets sought within the licence area are Hellyer or Rosebery-type VHMS Pb-Zn-Cu-Ag-Au massive sulphide deposits.

There was no field work completed during the reporting period.

Receipt of the final geophysical data occurred at the end of year one and a preliminary assessment of the exploration potential of the licence occurred at the start of the current year of tenure.

Little work, beyond data reviews and desktop assessment of VTEM images occurred in year two of tenure due to unexpected corporate and financial conditions that affected OZ Minerals throughout 2008 and 2009. Ground follow-up and a drilling program are proposed for EL 41/2006 in 2009/2010.

## **2. INTRODUCTION**

This report details work undertaken on exploration licence 41/2006 White Spur Lake (Figure 1), between 7<sup>th</sup> May 200 and 7<sup>th</sup> May 2009, the second year of the licence.

The White Spur licence covers a portion of the Cambrian Mount Read Volcanics to the south of the Rosebery and Hercules Mines and to the west of the Henty Mine in Western Tasmania (Figure 2). The principal exploration targets sought within the licence area are Hellyer or Rosebery-type VHMS Pb-Zn-Cu-Ag-Au massive sulphide deposits. A 5 km strike length of the contact between the White Spur Formation (WSF) and the Central Volcanic Complex (CVC), a stratigraphic position that is a direct correlate of the Rosebery and Hercules ore positions; although not recognised as such until the mid-1990's, runs through the centre of the tenement and has been the main target of recent exploration. A second and less well understood target is the Jones Creek package, in the NE part of the tenement. This sequence of shales and fine volcanogenic sediments associated with rhyolitic intrusives is thought to correlate with the Rosebery host position, but correlations are not as clear as for the base of the White Spur Formation due to structural complications.

Access into the tenement is via Howards Rd. (off the Anthony Rd) or on 4WD tracks (in particular the Moores Pimple track) heading south from Mt Read and the Hercules Mine. Within the EL access is via a series of old logging tracks and a new HEC road, which follows a major canal.

### **Attribution**

The following personnel were responsible for the work carried out within the White Spur licence area during the reporting period:

Senior Exploration Geologist:	Darren Hicks – OZ Minerals
Contract Geophysicist:	Dr Jovan Silic – Flagstaff GeoConsultants

### **3. LAND TENURE**

White Spur Lake EL 41/2006 (20 sq km) was granted to Zinifex Australia Ltd on 7 May, 2007 after a successful bid on ERA 679 (resulting from the expiry of EL 5/1996 by Pasminco - on 5<sup>th</sup> April 2004, a refloat of some assets, including the Rosebery Mine and Exploration Licences, of the failed Pasminco was completed and the assets are now owned by Zinifex Australia Limited).

Land covered by EL 41/2006 comprises land vested in the HEC (105 ha) with the remainder being Crown Land designated as Deferred Forests. The EL is almost entirely within the Mt Dundas Regional Reserve (exploration allowed, but, programs must be approved by the MEWG).

#### 4. GEOLOGY

The regional geology of EL 41/2006 White Spur is described on MRVP Map 3 (Corbett, 1986) and in Vicary (1997, 1998). Some areas have been mapped in more detail as Honours (Dugdale, 1992; Nunn, 1995) and M Econ. Geol. (Poltock, 1992) theses.

The regional geological framework of the Mt Read Belt (MRB) is subdivided, from an exploration perspective, into three elements. The central MRB covering the area of outcrop from south of Queenstown to north of Hellyer, the northern MRB covering the area from Black Bluff eastwards through Gowrie Park and Mole Creek, and the Southern MRB comprising areas west and south of Macquarie Harbour. EL 41/2006 is in the central part of the central MRB.

Basement in the Central and Northern MRB is of Precambrian age, comprising predominantly greenschist facies meta-sediments with minor basalts and dolerites. Higher-grade amphibolite and eclogite facies are also present within the Precambrian. This Precambrian basement termed the Tyennan Block, lies to the east of the White Spur licence.

Cambrian volcanism and sedimentation developed on the Precambrian continental crust and, in the Central MRB, is subdivided into the Eo-Cambrian Tholeiitic Crimson Creek Formation (CCF), the mid to late Cambrian Dundas Group and the predominantly calc-alkaline, Mt Read Volcanics (MRV).

The CCF was deposited in shallow but rapidly subsiding basins comprising basaltic lavas and volcanoclastics, turbidites, carbonates, chert and minor evaporites. Ultramafic cumulates and volcanic equivalents were thrust onto the CCF in the mid Cambrian. They are absent from the licence area.

The MRV in the area of EL 41/2006 can be subdivided into three main units; the WSF, CVC and Henty Fault Wedge Sequence. Of these only the first two are part of the VHMS prospective sequence.

The White Spur Formation was formally defined by Corbett and Lees (1987) as a west facing sequence of felsic tuff, siltstone, greywacke and slate that unconformably overlies the Central Volcanic Complex between the North Henty Fault and Williamsford. It is conformably overlain by Dundas Group type conglomerates, quartzwacke, mudstone and lithicwacke on the western end of Howards Road. The abundance of quartz-pyritic detritus in the White Spur Formation may suggest derivation from Tyndall Group rocks located to the east of the Henty Fault Zone.

The WSF can be divided into eight mappable sedimentary lithofacies in the White Spur area (Vicary 1997, 1998). These are:

- A Black pyritic siltstones
- B Micaceous volcanoclastic sediments
- C Ashy volcanoclastic siltstones

- D Medium – fine grained volcanoclastic sandstones
- E Crystal-rich volcanoclastic sandstones
- F Coarse lithic rich volcanoclastic conglomerate

The internal stratigraphy of the WSF is complex, but, in general, in the northern part of EL 41/2006 the CVC are directly overlain by coarse mass flow deposits (Facies F), whereas to the south finer grained lithologies (particularly Facies A and B) predominate. In addition there are intrusive feldspar-quartz-phyric rhyolite and quartz-feldspar porphyry bodies at different levels in the sequence. Clasts of sulphide have been identified in the basal mass flow deposits of the WSF to the north of 5362200mN. These clasts are considered to have been derived from the erosion of the sulphide deposits by down-slope mass flow movements.

The CVC comprises largely feldspar-phyric dacitic pumiceous sandstone and breccia, with lesser intrusive Quartz-feldspar porphyry and minor feldspar-phyric rhyodacitic lava. In addition to these typical CVC lithologies, feldspar-pyroxene-hornblende-phyric pumice breccia and rhyolitic sills are present in some drill holes (e.g., WSP7; Allen, 1998).

In the Jones Creek area, typical CVC-“type” pumice breccia and lava hosts a package of up to 400m of shale, sandstones and crystal-rich (feldspar>quartz) volcanoclastic sandstones (Corbett, 1986; Corbett in Vicary and Dauth, 1999). It is possible that this “Jones Creek Shale Sequence” is a correlate of the Rosebery-Hercules hangingwall shale sequence. Parts of the Jones Creek Sequence are strongly sericite altered (but, without the pyrite typical of VHMS alteration) and mineralisation comprises disseminated and vein pyrite-pyrrhotite-sphalerite-galena, generally best developed in shale/sandstone units. The best overall intersection was 32m @ 0.22% Zn, 0.09% Pb in DDH JCP211 (drilled to the north of the current EL 41/2006).

Base-metal poor massive pyrite lenses are hosted in intensely sericite altered CVC close to the WSF contact, and the North Henty Fault, in the south of the licence (the Annaliese Prospect). This mineralisation has a possible Cambrian age, based on Pb isotopes (Vicary, 1997), but has extremely light S isotopes (-10 to -17‰), dissimilar to any known Cambrian mineralisation from western Tasmania. No other significant mineralisation or alteration has been located in the CVC on the licence area.

Thin mafic dykes/sills (generally <5m, but up to 80m wide) are common within the Central Volcanic Complex in the eastern part of the EL and are correlated with the tholeiitic Henty Dyke swarm.

In the South eastern corner of the tenement the CVC is separated from the Henty Fault Wedge Sequence by the North Henty Fault (Figure 2). The Henty Fault Wedge Sequence (or Henty Valley Sequence; Poltock, 1992) comprises a west facing sequence of quartz sandstone, chert, hematitic greywacke/sandstone and minor tholeiitic basaltic andesite. These lithologies are considered to correlate with units in age from the Eo-Cambrian Crimson Creek Formation to the mid-Cambrian Mount Read Volcanics (Poltock, 1992). This sequence is not considered to be VHMS prospective.

Pleistocene glacial deposits, consisting predominantly of Cambrian volcanic, Cambro-Ordovician Owen Conglomerate and Jurassic dolerite (on the eastern slopes of Mt Dundas) derived clasts, are common throughout the tenement.

## 5. PREVIOUS EXPLORATION

The area of EL 41/2006 White Spur has a long history of ‘modern’ exploration, commencing in the 1950’s, that has been reviewed in detail by several authors (Purvis et al., 1983; Poltock and Fitzgerald, 1991; Fitzgerald, 1987; Vicary, 1997 and Corbett, in Vicary and Dauth, 1999). All previous exploration is summarised on Tables 1 and 2.

In the period 1957-1962 the area was explored by Rio Tinto Australia Exploration as part of SPL320 and ELs 4/1959 and 6/1959. From 1962 onwards the area has a complicated tenement history, dominated by ELs 9/66 (RGC), to the south, and 1/62 (EZ Co.) to the north.

EL 1/62 was initially granted to the EZ Company, but after 1978 was subject to a joint venture with the Getty Oil Development Company (GODC). EZ managed the JV from 1978-1983 at which point GODC assumed management (thus permitting exploration in conjunction with that on EL 9/66 to the south). However, in 1985 GODC’s share of the JV was sold to Little River Goldfields NL and in October 1985 a new agreement was entered into between Shell Company of Australia, Little River Resources and the EZ Company, with Shell managing and operating the tenement. In January 1988 EL 1/62 was relinquished, with the northern part of the tenement being incorporated into the “Rosebery Extension leases” (MLs 10M/88, 11M/88 and 15M/88) and the remainder being incorporated into EL 11/85 (see below).

EL 9/66 was granted in August 1966 and in the period to 1980 was gradually amalgamated with other tenements to reach a maximum area of 637 sq. km. The tenement area was then progressively reduced through voluntary (in 1983 and 1984) and statutory (in 1985) reductions with complete relinquishment, apart from that area retained as the Henty Mine leases, in 1987. The tenement was explored by Renison Goldfields Consolidated Ltd. until 1976 when a Joint venture agreement was signed with GODC, who maintained an interest in the area until 1985 at which time their interest was sold to Little River Goldfields, later Little River Resources.

Following the statutory partial relinquishment of EL 9/66 in 1985 the vacant areas were picked up by Amoco Minerals Australia as EL 11/85. Title was then transferred to Cyprus Minerals (1985), Cyprus Gold (1988), Hudspeth and Company (1990) and finally to Arimco (1991). In this period the tenement was subject to two joint ventures, the second of which between Hudspeth and Co., Norgold and Pasminco commenced on 4 December 1990 and continued until relinquishment in 1995, with Pasminco as operators and managers of the JV.

**Table 1: Exploration on the area of EL 41/2006 prior to 1996**

<b>Reporting Period</b>	<b>Work Completed</b>
1957-60 (King, 1960; McCarthy et al., 1960)	Helicopter borne EM in 1957 failed to locate any conductors. In 1960 the area was grided, geologically mapped and a TURAM survey completed; the 3 significant anomalies located by this survey were followed-up by Vertical EM, gravity, SP and magnetics; costeaning and drilling was recommended.
1961? (Campana, 1962)	Drilling of DDH WSP103.
1969-70 (Newnham, 1970)	Grid cut in upper part of White Spur Creek.
1971-72 (McKibben, 1972)	White Spur Area: Re-open RTAE grids, mapping and limited rock-chip sampling.
1971-72 (Reinhardt, 1972)	Turair survey, line cutting mapping and soil sampling (Dalwitz and White Spur Grids).
1973-74 (Williams, 1974)	Geological mapping, grid extensions and soil sampling on the White Spur and Dalwitz grids.
1974-75 (Stevens-Hoare, 1975)	Re-clear and extend grid, Re-log DDH WSP103, C horizon soil and rock-chip sampling and detailed mapping.
1974-75 (Williams, 1975)	Mapping and soil geochemistry on the White Spur and Dalwitz grids.
1975-76 (Stevens-Hoare, 1976)	Limited track cutting, further soil sampling (incomplete at the time of reporting) and mapping, which located a massive pyrite boulder (low base and precious metal assays).
1976-77 (Walter and Brophy, 1977)	Extended existing grid, gradient array IP and ground magnetics completed; defined 13 main IP anomalies. Soil sampling indicated black shale units have high base metals (to 1500 ppm Pb) and correspond to IP anomalies.
1977-78 (Walter, 1978)	White Spur Area: Infill gridding and EIP to follow-up anomalies; costeaning and soil sampling. Jones Creek Area: gridding, gradient array and dipole-dipole IP, ground magnetics, costeaning and associated rock-chip sampling, C horizon soil sampling and geological mapping; recommended that 2 x DDH test EIP anomalies.
1978-79 (Reid et al., 1979)	White Spur Area: Additional mapping, soil and rock-chip sampling, ground magnetics and EIP. Jones Creek Area: DDH WSP1 completed (hole drilled outside area of current EL); hole intersected weakly mineralised and altered volcanics. IP explained by zones of up to 2% pyrite.
1979-80 (Meares et al., 1980)	White Spur Area (EL 9/66): IP, Rock-chip and soil sampling to evaluate drill target on line 37.5N; DDH WSP2 tested this anomaly intersecting weak mineralisation in a black shale.
1979-80 (Mill et al., 1980)	Dobsons Creek Area (EL 1/62): Re-peg and infill previous EZ grid, gradient array IP, C Horizon soil sampling of new lines and over IP anomalies, limited geological mapping.
1980-81 (McDonald, 1981)	Dobsons Creek Area (EL 1/62): Mapping of grid and access tracks. Recommend drill testing combined IP/soil geochem target.

**Table 1: Exploration on the area of EL 41/2006 prior to 1996 cont....**

<b>Reporting Period</b>	<b>Work Completed</b>
1981-1982 (Mathison and McDonald, 1982a; McDonald and Mathison, 1982; Mathison and McDonald, 1982b)	Dobsons Creek Area (EL 1/62): Access track completed and DDH DCP235 (161.6m) drilled to test IP/geochem. target; downhole IP survey failed due to blocked hole. Best assay 0.7m @ 1.45% Pb, 2.2% Zn, 11 g/t Ag from a fault. Concluded that there was insufficient alteration to warrant further work.
1983 (Purvis et al., 1983)	Review of prospectivity of EL 9/66; reviewed previous work and did not recommend any further follow-up on the White Spur area.
1983-1984 (Fitzgerald et al., 1984)	Jones Creek Area: Jones and Dobsons Creek cut open for mapping and sampling, roads and creeks mapped and rock-chip sampled
1983-84 (Roberts and Cartwright, 1984; Fitzgerald and Pease, 1984)	White Spur Area: Exploration managed by Getty; reviewed previous exploration; concluded that further work warranted. Completed geological mapping, rock-chip sampling and a single loop UTEM survey. Some coverage by DIGHEM survey flown in December 1983.
1984 (Fitzgerald and McNaught, 1985)	Jones Creek Area: geological mapping, re-opening of the EZ imperial grid, UTEM survey and VLF-EM; a low amplitude EM response located in Jones Creek.
1985 (Purvis, 1985)	Jones Creek Area: Drilling of DDH JC1, which failed to intersect any significant mineralisation.
1985 (Corbett, 1985)	Tasmania Department of Mines drilled a 108.7m DDH (MR1) to determine the nature and attitude of the WSF/CVC contact.
1989 (Wyatt, 1990)	Helimag survey flown over EL 9/66 and vacant ground west of EL 9/66 by RGC; several anomalies and lineaments identified in the area of EL 5/1996.
1990-1991 (Poltock and Fitzgerald, 1991)	Reconnaissance geological mapping, rock geochemistry and a review of previous exploration. Mapping located additional sulphide clasts in the WSF.
1991-92 (Poltock, 1992)	Regional geological mapping (located a significant zone of Se-Fd-py alteration), lithochemical sampling, interpretation of gravity and magnetic data.
1992 (Dugdale, 1992)	Honours study on "Lithostratigraphy of the White Spur area, western Tasmania".
1992-93 (Quayle, 1993)	Geological mapping, collection of mag. Susc. data from outcrops, lithochemical sampling, interpretation of airmagnetic and radiometric data and a review of old geochemistry and IP surveys.
1993-94 (Quayle, 1994)	The WSF/CVC contact was tested by a single 430.5m DDH (YWS1); no significant mineralisation was intersected. S.G. and Mag. Susc. data collected from drill core, further lithochemical assaying of rock-chips and core.
1994-95 (Quayle, 1995)	Surface rock chip sampling of CVC/WSF contact in the area of DDH MR1; high AI values were recorded in some samples, however, it is unclear whether this indicates alteration or is a function of weathering.
1995 (Nunn, 1995)	Honours study on "The sedimentology, volcanology and structure of the lower Dundas Group, Hall Rivulet Canal, western Tasmania".

**Table 2: Exploration on EL 41/2006 from 1996 to present**

Reporting Period	Work Completed
1996-1997 (Vicary, 1997)	Relogging of old drill core; Location of a pyrite occurrence at the top of the CVC (Annaliese prospect) followed up by gridding (7.1 line km), soil and rock chip sampling, mapping, S and Pb Isotope analysis, ground magnetics, IP, VLF-EM and a 306.6m DDH (ANNE001) with DHEM; no significant anomalies worthy of follow-up. Roads and tracks on remainder of tenement mapped at 1:5,000 scale.
1997-98 (Vicary 1998)	20.7 line km of gridding (400m spaced lines covering the tenement) followed by mapping, rock-chip sampling, CSAMT, ground mag. and VLF-EM surveys. Historical IP data digitally compiled. 3759.3m of diamond drilling (9 holes) completed with DHEM in two holes; best result 17m @ 0.77% Zn and 0.4% Pb in WSP5. S, O and Pb isotopes on surface and drill samples; reviews of stratigraphy and alteration completed.
1998-99 (Vicary and Dauth, 1999)	DHEM results for 4 holes presented; Review of Jones Creek area completed; core from Jones Creek area relogged.
1999-2000 (Vicary, 2000)	No field work completed – a review of exploration by Goldfields was presented.
2000-2002 McNeill (2002)	Partial leach soil sampling (881 samples collected) and surveying (with DGPS) of the existing 400m spaced Goldfields grid over the CVC/White Spur Formation contact located 2 anomalous zones worthy of follow-up. Minor extensions (2.6 line km) to the existing grid were cut preparatory to partial leach soil sampling.
2002-2003 McNeill (2003)	Partial leach soil sampling (559 samples) and geological mapping of infill grid (9.5 line km cut) and extensions to the Goldfields grid over the CVC/White Spur Formation contact. This work was designed to follow-up the Central [Anomaly 2] and Northern [Anomaly 1] soil anomalies. Re-assaying of soils, from areas with anomalous partial leach results, by total digest methods (145 samples analysed). Completion of DHEM surveys in DDH YWS1, WSP6 and WSP10/10A.
2003-2004 McNeill (2004)	A two loop (2.275 line km) ground EM survey was completed to follow-up the DHEM responses in YWS1 and WSP6. As a result of problems with data quality no final interpretation could be made. Some geological mapping was completed in the north of the tenement. No significant changes to the structural or stratigraphic interpretation were made and no significant alteration or mineralisation was located. The 1997 RGC CSAMT survey of the tenement was re-processed and was being re-interpreted at the time the report was compiled.
2004-2005 McNeill (2005)	The YWS1/WSP6 DHEM anomaly was interpreted to result from an unusual, in Tasmania, IP effect. Additional geological mapping in the north of the tenement. DDH WSP13 (547.0m) was completed. A program of whole-rock analysis of drill core commenced. Review of the 1997 RGC CSAMT survey was completed.

**Table 2: Exploration on EL 41/2006 from 1996 to present cont...**

<b>Reporting Period</b>	<b>Work Completed</b>
<p>2005-2006 McNeill &amp; Skirka (2006)</p>	<p>Work completed during the reporting period included:</p> <ul style="list-style-type: none"> <li>• Drilling of DDH WSP14 (494.6m) and DDH WSP15 (401.2m).</li> <li>• DHEM surveys in DDH WSP12, WSP13, WSP14 and WSP15.</li> <li>• Surface Fixed Loop TEM survey in the northern part of the license.</li> <li>• Further geological mapping in the central part of the tenement.</li> <li>• Completion of an Honours project to assess the volcanic stratigraphy of the tenement.</li> </ul> <p>This work did not lead to the location of any significant VHMS mineralisation or alteration and the target CVC/WSF contact is considered to have been effectively tested to a depth of 250-400m throughout most of the licence.</p>
<p>2007-2008 Hicks and Purvis (2008)</p>	<p>Work completed during the reporting period included:</p> <ul style="list-style-type: none"> <li>• Relogging of 16 drillholes and collection of 230 samples for major, minor and trace element assay.</li> <li>• VTEM survey - 100 line kilometres of 200m spaced E-W coverage across the entire licence</li> </ul> <p>This work did not lead to the location of any significant VHMS mineralisation or alteration vectors, and the target CVC/WSF contact is considered to have been effectively tested to a depth of 250-400m throughout most of the licence. The VTEM survey failed to indicate significant responses outside of cultural features. One anomaly remained unexplained.</p>

## **6. WORK COMPLETED 2008 - 2009 REPORTING PERIOD**

The entire White Spur EL 41/2006 was flown with the VTEM system in late April, 2008. The survey consisted of 200m spaced E-W flight lines at a nominal 80 metre helicopter height and 30m EM sensor/loop height above ground level. Flight speed was a nominal 80 km/hr, but this varied in areas of rugged terrain.

Full details of the specifications of the survey are contained in Appendix 5 of last years annual report (Hicks and Purvis, 2008), alternatively available at the contractors website ([www.geotechairborne.com](http://www.geotechairborne.com)) and Appendix 1 of this report.

Due to the timing of the survey, final data had not been received at the time of compiling the previous years report. This data has since been received and reviewed, with no change in interpretation – i.e., there were approximately 5 intermediate ranked anomalies detected in the late time data (see Figure 2). The most highly ranked anomaly (see Figure 2 and Appendix 1) lies approximately 280 metres north of drillholes WSP-4 and WSP-103 at approx 5,361,950mN – 376,500mE. Some additional modelling of this feature has been done, and is included in Appendix 1. Due to a corporate freeze on expenditure, no follow-up work has been done on this anomaly.

## **7. CONCLUSIONS & RECOMMENDATIONS**

Work completed during the first year of EL 41/2006 White Spur Lake has included:

- Re-logging and selective sampling of approximately 2700m of core in 16 holes, testing the CVC/WSF contact, throughout the northern and central part of the licence.
- A 100.0 line km VTEM completed over the tenement. The survey was flown at the end of the reporting period.

The lithogeochemical work was finally completed at the time of writing last years report. Further analysis of the data (ie scope for further in-depth analysis and modelling of the results of this study to see if more-subtle alteration patterns are present) is recommended if budgets allow, and will influence future work programs.

The VTEM survey produced at least one anomaly of intermediate ranking that currently remains untested.

Due to budget constraints, OZ Minerals was unable to perform an exploration program on this tenement during the past year of tenure but has prepared an exploration program for the upcoming third year of tenure.

## **8. ENVIRONMENT AND REHABILITATION**

There were no surface disturbance or rehabilitation activities undertaken during the reporting period.

## **9. EXPENDITURE**

Total expenditure for all work undertaken by Zinifex Rosebery Mine within White Spur EL 41/2006, for the period 07/05/08 to 07/05/08 was \$0. A detailed expenditure statement is therefore not required

## 10. KEYWORDS & LOCALITY

### Keywords

WHITE SPUR, GEOPHYSICS – VTEM, GEOLOGY, LITHOGEOCHEMISTRY, ALTERATION INDICES, WHITE SPUR FORMATION, CENTRAL VOLCANIC COMPLEX, MOUNT READ VOLCANICS

### Locality

1:250,000	QUEENSTOWN SK55-5
1:100,000	SOPHIA 8014, PIEMAN 7914
1:25,000	OCEANA 3635, DUNDAS 3636

## 11. REFERENCES

- Allen, R.L., 1998. Review of White Spur and South Henty Exploration Projects, Western Tasmania. Unpub Volcanic resources Ltd. Report to RGC Exploration.
- Campana, B., 1962. Summary report on exploration activity in western Tasmania from Jan. 1957 to July 1962. Unpub. RTAE report.
- Corbett, K.D., 1985. The Mt Read drill hole (MR1) through the Central Volcanic Sequence- White Spur Formation contact near Howards Road, western Tasmania. *Unpubl. Rep. Dept. Mines. Tasm. 1985/55.*
- Corbett, K.D., 1986. Geology of the Henty River - Mt Read area: Tasmania Dept. Mines, Mt Read Volcanics Proj. Map 3.
- Corbett, K.D., and Lees, T.C., 1987. Stratigraphic and structural relationships and evidence for Cambrian deformation at the western margin of the Mount Read Volcanics, Tasmania. *Aust. J. Earth Sci.*, 34:45 - 67.
- Dugdale, J.S., 1992. Lithostratigraphy of the White Spur area, western Tasmania. BSc(hons) thesis, Univ. of Tas. (unpubl.).
- Fitzgerald, F.G., 1987. EL 9/66 Tyndall Area, Tasmania. Relinquishment Report June, 1987. Unpub Rep Goldfields Exploration Pty Ltd. (**TCR87-2675**).
- Fitzgerald, F.G., and McNaught, I., 1984. Appendix 7. Report on Halls Rivulet, White Spur and Read East. In Roberts and Cartwright, 1984 (**TCR84-2137**).
- Fitzgerald, F.G., and McNaught, I.S., 1985. EL 1/62 Mt Black Rosebery east Exploration progress Report, July 1984 – December 1984. Unpub Getty Oil Development Co. Report (**TCR85-2516A**).
- Fitzgerald, F., McNaught, I., and Goodall, D., 1984. Mt Black Rosebery east Exploration progress Report, August 1983 – June 1984. Unpub Getty Oil Development Co. Report (**TCR85-2313A**).
- Fitzgerald, F., and Pease, C.F.D., 1985. EL 9/66, Tyndall Area, Annual Report 1984-85. Unpub. Goldfields Exploration Pty. Ltd. Report (**TCR85-2459**)
- Hicks, D.J. and Purvis, J.G., 2008. White Spur Lake EL 41/2006: First Annual Report for the period ending 7 May, 2008. Unpub. Zinifex Rosebery Mine Report WS21
- King, D., 1960. Geological report on the White Spur area, west Tasmania. Unpub. Rio Tinto Southern Pty Ltd. Report No. 36/1960.
- Mathison, I.J., and McDonald, I.R., 1982a. Mt Black Exploration Licence 1/62, Report on work undertaken 16<sup>th</sup> December 1981 – 4<sup>th</sup> May 1982. Unpub. EZ. Co. Report No. 148 (**TCR82-1841**).

- Mathison, I.J., and McDonald, I.R., 1982b. Mt Black Exploration Licence 1/62, Report on work undertaken 4<sup>th</sup> May 1982 – 20<sup>th</sup> November 1982. Unpub. EZ. Co. Report No. 158 (**TCR83-1841**).
- McCarthy, E., Maddocks, N., and Pinney, R., 1960. Geophysical investigations White Spur area. Unpub. Rio Tinto Southern Pty Ltd. Report No. 36/1960.
- McDonald, I.R., 1981. Mt Black Exploration Licence 1/62, Report on work undertaken July 1980 – June 1981. Unpub. EZ. Co. Report No. 142 (**TCR82-1738**).
- McDonald, I.R., and Mathison, I.J., 1982. Mt Black Exploration Licence 1/62, Report on work undertaken 1<sup>st</sup> July 1981– 15<sup>th</sup> December 1981. Unpub. EZ. Co. Report No. 144 (**TCR82-1840**).
- McKibben, J.P., 1972. Annual Report Mt Tyndall EL 9/66 1971-72. Unpub Rep Consolidated Syndicate / Mt Lyell Mining and Railway Co Ltd. (**TCR72-882**).
- McNeill, A.W., 2002. White Spur EL 5/1996 Progress Report for the period ending 5 March 2002. Unpub. Pasminco Rosebery Mine Report WS6.
- McNeill, A.W., 2003. White Spur EL 5/1996 Progress Report for the period ending 5 March 2003. Unpub. Pasminco Rosebery Mine Report WS9.
- McNeill, A.W., 2004. White Spur EL 5/1996 Progress Report for the period ending 5 March 2004. Unpub. Pasminco Rosebery Mine Report WS15.
- McNeill, A.W., 2005. White Spur EL 5/1996 Progress Report for the period ending 5 March 2005. Unpub. Zinifex Rosebery Mine Report WS17.
- McNeill, A.W. and Skirka, M., 2006. White Spur EL 5/1996 Final Report for the period ending 5 April 2006. Unpub. Zinifex Rosebery Mine Report WS19
- Meares, R.M.D., Walter, A.C., and Hutton, M.J., 1980. EL 9/66 Annual Report 1979-80. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Getty Oil Development Co Ltd / Consolidated Goldfields Aust Ltd. (**TCR81-1519**).
- Mill, J.H.A., McDonald, I.R., and Weeden, R.J., 1980. Mt Black Exploration Licence 1/62, Report on work undertaken 30<sup>th</sup> June 1979 – 30<sup>th</sup> June 1980. Unpub. EZ. Co. Report No. 134 (**TCR80-1468**).
- Newnham, L.A., 1970. Annual Report on Mt Tyndall area - EL 9/66 1969-70. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Renison Ltd. (**TCR70-654**).
- Nunn, T., 1995. The sedimentology, volcanology, and structure of the Lower Dundas Group, Halls Rivulet Canal, western Tasmania. BSc(hons) thesis, Univ. of Tas. (unpubl.).
- Poltock, R.A., 1992. Geology of the Henty Fault Wedge, Western Tasmania. M. Econ. Geol. Thesis, Univ. of Tas. (unpubl.)

- Poltock, R.A., 1992. Yolande EL 11/85 and Yolande River EL 25/91 Annual Report. June 1991 - June 1992. Unpub Rep Pasmaenco Exploration Pty Ltd. (**TCR92-3376**).
- Poltock, R.A., and Fitzgerald, F.G., 1991. EL 11/85 Yolande JV. Annual report to twelve months to July 1991. Unpub Rep Pasmaenco Exploration Pty Ltd. (**TCR91-3278**).
- Purvis J.G., 1985. EL 1/62 Mt Black, Rosebery east Exploration Progress Report, January – August 1985.. Unpub report to G.O.D.C (**TCR85-2516E**).
- Purvis, J.G., Jones, M.T., Fitzgerald, F.G., and Poltock, R., 1983. A Geological Review of the Tyndall Exploration Licence 9/66, Western Tasmania. Unpub Rep Goldfields Exploration Pty Ltd / Getty Oil Development Co Ltd / Mt Lyell Mining and Railway Co Ltd. (**TCR83-1995**).
- Quayle, P.M., 1993. Annual Report Yolande EL 11/85 and Yolande River EL 25/91. Unpub Rep Pasmaenco Exploration Pty Ltd. (**TCR93-3477**).
- Quayle, P.M., 1994. Annual Report for the year ending June 1994. Yolande JV EL 11/85 and Yolande River JV EL 25/91. Unpub Rep Pasmaenco Exploration Pty Ltd. (**TCR94-3590**).
- Quayle, P.M., 1995. Yolande EL 11/85 Joint Venture Annual and Final Report August 1985 - August 1995. Unpub Rep Pasmaenco Exploration Pty Ltd. (**TCR95-3754**).
- Reid, K.O., Meares, R.M.D., Walter, A.C., Hutton, M.J., and Drake, G. 1979. EL 9/66 Annual Report 1978-79. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Getty Oil Development Co Ltd. (**TCR79-1384**).
- Reinhardt, D., 1972. Report on Exploration in EL 1/62 Mt Black during 1971-1972. Unpub. EZ Co. Report 108 (**TCR72-0864**).
- Roberts, P.A., and Cartwright, A.J., 1984. EL 9/66 Tyndall Area Annual report 1983/84. Unpub Rep Goldfields Exploration Pty Ltd / Getty Oil Development Co Ltd / Mt Lyell Mining and Railway Co Ltd. (**TCR84-2137**).
- Stevens-Hoare, N.P., 1975. Annual Report EL 9/66 (Mt Tyndall) 1974-75. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Renison Ltd / Consolidated Goldfields Aust Ltd / Consolidated Syndicate. (**TCR75-1149**).
- Stevens-Hoare, N.P., 1976. Annual Report EL 9/66 1975-76. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Consolidated Goldfields Aust Ltd / Renison Ltd. (**TCR76-1171**).
- Vicary, M.J., 1997 Annual Report March 1996 - March 1997. EL 5/1996 White Spur. Unpub. RGC Exploration Report (**TCR97-4007**).
- Vicary, M.J., 1998 Annual Report March 1997 - March 1998. EL 5/1996 White Spur. Unpub. RGC Exploration Report (**TCR98-4128**).
- Vicary, M.J. and Dauth, C., 1999 Annual Report March 1998 - March 1999. EL 5/1996 White Spur. Unpub. RGC Exploration Report (**TCR99-4263**).

- Vicary, M.J., 2000 Annual Report March 1999 - March 2000 EL 5/1996 White Spur. Unpub. RGC Exploration Report.
- Walter, A.C., and Brophy, P., 1977. Annual Report EL 9/66 1976-77. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Getty Oil Development Co Ltd. (**TCR77-1224**).
- Walter, A.C., 1978. EL 9/66 Mt Tyndall Annual Report 1977-78. Unpub Rep Mt Lyell Mining and Railway Co Ltd / Getty Oil Development Co Ltd. (**TCR78-1286**).
- Williams, R.E., 1974. Progress Report on Exploration of EL 1/62 (Mt Black) during 1973/74. Unpub. EZ. Co. Report No. 114 (**TCR74-1034**).
- Williams, R.E., 1975. Progress Report on Exploration of EL 1/62 (Mt Black) during 1974/75. Unpub. EZ. Co. Report No. 124 (**TCR75-1126**).
- Wyatt, B., 1990. Interpretation of aeromagnetic data from EL's 42/82 (Zeehan), 9/66 (Henty), 101/87 (Dundas), 13/88 (Moores Pimple) and Renison Mines Lease. Report for RGC Exploration Pty Ltd.