

## **Appendix 5**

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**Proposed Work Program Application –  
Oceana Deposit**

**December 2004. Unpublished.**

# **ZZ EXPLORATION** Pty Ltd

ABN 45 092 488 214

30 November 2004

Environmental Field Officer  
Mineral Resources Tasmania  
PO Box 56  
Rosny Park 7018

Attn: David Gatehouse

**Re: Proposed exploration program on EL20/2002 - Oceana Deposit**

Dear David,

Further to our discussion on the 29 November 2004, please find the attached work program to be completed between 6 December 2004 to February 2005.

ZZ Exploration is able to obtain an excavator for a few weeks from 6 December until Christmas. This is proposed to be used for road repair and costeaning. The drilling program is anticipated to be carried out in late Janurary 2005.

Therefore is it possible to arrange a site inspection early next week with either yourself or Shorty Halfacre. Should you require any further information in relation to this matter, please contact me on 62319339.

Yours faithfully,



Paul Heath  
**Exploration Geologist**

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# **ZZ EXPLORATION** Pty Ltd

**PO Box 1603  
Hobart, Tasmania**

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**Zeehan Mineral Field**

**Exploration Licence 20-2002**

**Proposed work program (Oceana Deposit)  
during December 2004 to February 2005**

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Prepared by  
Paul Heath  
Senior Geologist

November 2004



# MINERAL RESOURCES TASMANIA

A Division of the DEPARTMENT of INFRASTRUCTURE, ENERGY and RESOURCES

## ENVIRONMENTAL IMPACT INFORMATION TO ACCOMPANY EXPLORATION LICENCE WORK PROGRAMS

Requests for approval of work programs may be made using this form, or by letter addressing all the points listed below.

EL No.:	20/2002	Location:	2 km south of Zeehan (Oceanic Mine)		
Company:	ZZ EXPLORATION				
Project Supervisor:	DAVID TANNER	Position:	DIRECTOR		
Address:	PO BOX 1603				
	HOBART 7000				
Telephone:	6231 9339	Facsimile:	6231 9338		
E-mail:	gslm@gslm.com.au				

<b>1. Land status of area of proposed works:</b>
CROWN LAND
<b>2. Present land use of area of proposed works:</b>
OLD WORKINGS
<b>3. Description of proposed works:</b> (Attach a legible map) Location of works should be related to AMG not arbitrary datum. Preferably use plans of 1:25 000 scale.
See Figures 1 & 2
<b>4. Soils:</b> Describe type (eg, organic, mineral, sandy, clayey), of soils to be disturbed by any proposed earthmoving operations (such as tracks, pits, costeans drill-sites, etc.)
Clay & gravel will be removed to expose bedrock (limestone) - costeans
<b>5. Flora:</b> Describe vegetation which will be affected by proposed operation (Rainforest / Wet Eucalypt / Dry Eucalypt / Light Scrub / Coastal Heath / Coastal Scrub / Wetlands / Buttongrass Plains / Alpine Vegetation)
Light Scrub
<b>6. Fauna:</b> Any known rare or threatened species or significant populations or wildlife within area of proposed works.
No
<b>7. Historical:</b> Any sites of historic or archaeological significance in area of proposed works.
Oceanic workings

<b>8. Equipment:</b> List of all mechanical equipment / vehicles, to be taken on site, and their proposed use.	
- 30t CAT EXCAVATOR (COMBAT ENTRENCHERS PTY LTD) - TRAILER REPAIR TO SITE / COSTRANS	
- 4WD TOYOTA HILUX - ACCESS TO SITE	
- DRILL RIG (STILL AWAITING FOR TYPE OF RIG) - DRILLING	

<b>9. Accommodation and Staff Numbers etc.:</b>	
• Number in team:	4-6
• Period of project:	DECEMBER 2004 to FEBRUARY 2005
• Accommodation type: hotel / hut / tents:	HOTEL (ZEEHAN)

<b>10. Hazardous Materials:</b> Quantities on site	
• Flammable Liquids	NIL
• Explosives	NIL
• Noxious Chemicals	NIL

<b>11. Environmental Impacts:</b> Program features likely to affect the environment and precautions taken to limit the impact (noise, erosion, waste disposal, water pollution, fire etc.)	
• Significant visual impacts	NIL
• Pollution of watercourse from tracks, earthworks, drilling etc.	Will use existing tracks
• Disposal of waste, litter, toilet refuse, etc.	All WASTE WILL BE REMOVED AFTER USE

<b>12. Rehabilitation:</b> Proposed methods and extent of land rehabilitation to be completed.	
• Progressively	Costeans will be fully rehabilitated after use (approx 1-3 days)
• Prior to abandonment	Area will be rehabilitated to a condition similar prior to workings.

All correspondence should be addressed to: Mineral Resources Tasmania  
P O Box 56  
ROSNY PARK TASMANIA 7018

**Enquiries:**

**Environmental Management Section:**  
Managing Geologist: (03) 6233 8326  
Senior Geologist (03) 6233 8371  
Field Officer: (03) 6233 8367

**Registry Section:**  
Registrar of Mines: (03) 6233 8341

For further information in relation to on ground exploration activities refer to the Mineral Exploration Code of Practice.

**If space provided is insufficient please attach a separate sheet.**

Proposed work program (Oceana Deposit)

ZZ Exploration Pty Ltd (ZZ Exploration) has reviewed relevant data with respect to the open-cut potential of the Pb-Zn-Ag Oceana deposit, located 2 km south of the Zeehan Township. The Oceana Pre Resource Mineralisation in Cordery (1998) has been estimated at 83,000 t (25m open-cut) and 135,000t for (50m open-cut). However, these estimations have been based on limited information, specifically, sulphide zones projected over large distances along strike and down dip. Recommended work in Cordery (1998) states ‘The Oceana resource will require further drilling and costeaning’, specifically designed to confirm the current interpretation to depths of 25m and 50m.

ZZ Exploration request to carry out specific activities during 6 December 2004 to March 2005 as part of a pre-feasibility described in Cordery (1998). These are to:

- 1) Track repair & drill site preparation (6 December 2004 –17 December 2004)
- 2) Limited costeaning (6 December 2004 –17 December 2004)
- 3) Trial Drilling (250m) for resource potential to 50m and metallurgical samples (5 January to March 2005 – depending on availability on drill rig).

**1) Track repair and drill site preparation**

Figures 1 & 2 show the proposed track access into the old Oceana workings. Minor works will be needed to upgrade the eroded track acceptable for safe 4WD access.

**2) Limited Costeaning**

Five costeans have been proposed (Table 1) to define the Pb-Zn-Ag sulphide trend at surface for resource definition. Costeans have been chosen based on areas of limited surface information in Table 2. Refer to Figure 2 for locations of proposed costeans and drill holes.

Table 1 – Proposed costeans and drillholes showing local and AMG Eastings & Northings

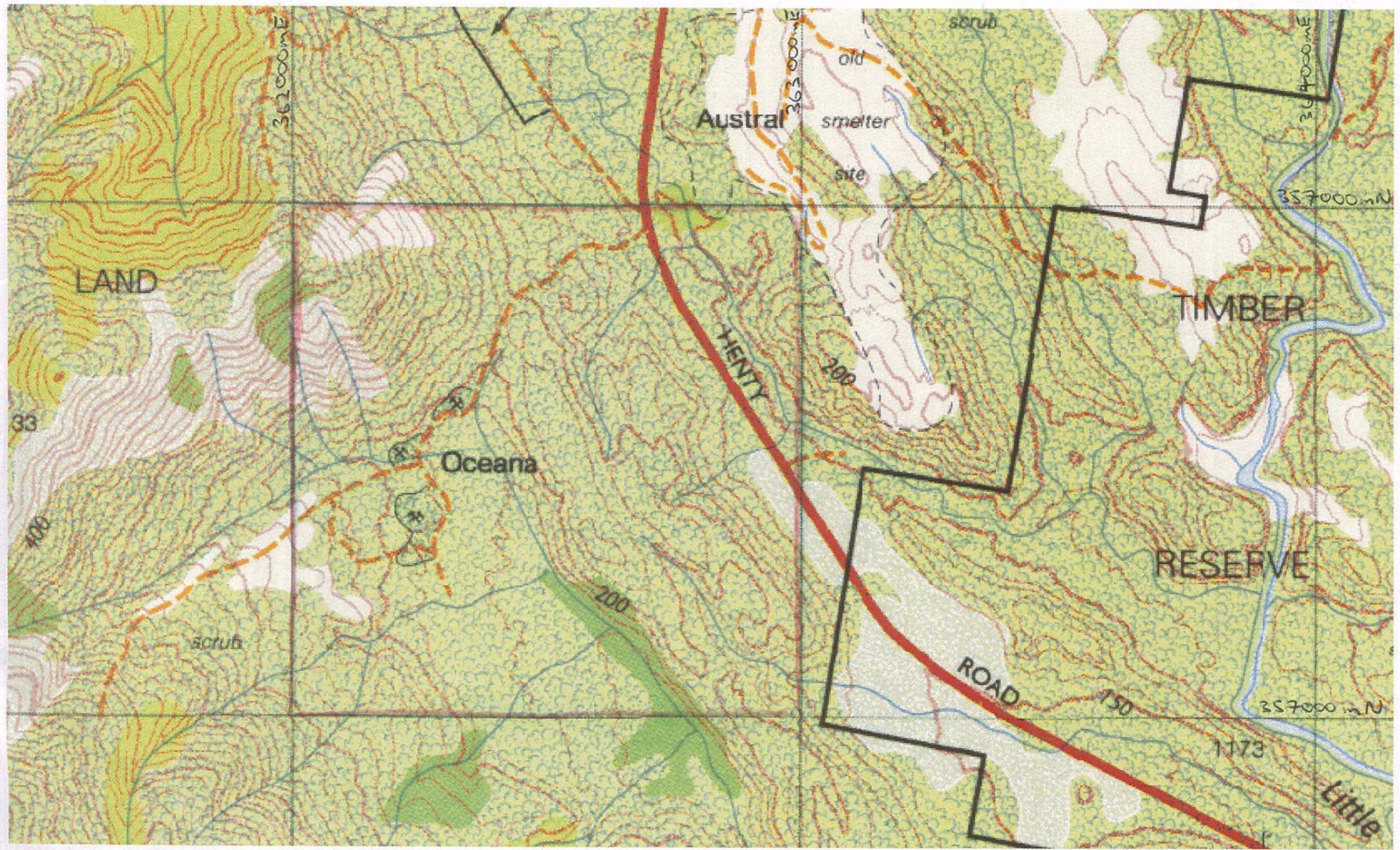
Costean No.	Drill hole		Local		AMG		Length (m)	Depth
			Easting	Northing	Easting	Northing		
1	N/A	A	1350	3425	362295	357230	50	2.5
		B	1400	3425	362330	357265		
2	N/A	A	1350	3475	362260	357270	50	2.5
		B	1400	3475	362295	357305		
3	N/A	A	1350	3525	362225	357305	40	2.5
		B	1390	3525	362225	357333		
4	N/A	A	1360	3575	362200	357350	70	2.5
		B	1430	3575	362225	357395		
5	N/A	A	1400	3675	362165	357452	70	2.5
		B	1470	3675	362215	357500		
N/A	1		1420	3525	362280	357350	80	
N/A	2		1455	3575	362270	357415	80	
N/A	3		1500	3675	362250	357530	80	

Table 2 – Previous data used in Cordery (1998) pre resource calculation to 50m

Section	Hole ID	Zone	From	To	Int dh	Pb	Zn	Ag	Depth	
3.425	No intersections > 2m @ > 10% Pb - Zn									
3.450	28	E	14.0	14.6	0.6	23.0	3.7	8.2	10	
3.450	28	W	32.0	36.2	4.2	15.7	0.9	5.7	27	
3.450	60	W	24.0	27.3	3.5	12.2	2.3	3.7	21	
3.450	Costean	E	1382	1386	4	16.4	0.3	4.8	2	
3.450	Costean	W	Mined							
3.475	27	E	26.0	42.8	16.8	5.8	0.5	1.9	24	
3.475	32	E	76	86	10	10.3	0.7	3.8	68	
3.500	26	E	49.0	50.3	1.5	16.4	0.4	6.3	34	
3.500	26	W	55.0	58.8	3.8	11.4	0.5	6.4	40	
3.500	Costean	E	1379	1383	4	24.6	1.12	11.6	2	
3.500	Costean	W	1366	1370	4	21.3	0.8	4.2	3	
3.525	No drilling or costean data									
3.550	No intersections > 2m @ > 10% Pb - Zn									
3.575	No drilling or costean data									
3.600	ZT-82-11	W	57	59.5	2.5	13.0	1.3	1.6	38	
3.600	ZT-W2	E	8	14	6.0	16.2	3.0	1.0	10	
3.625	Costean	E	1414	1420	6	12.4	1.9	2.2	2	
3.625	Costean	W	1402	1406	4	12.1	0.9	1.9	4	
3.650	Costean	E	1456	1458	2	4.6	6.7	1.7	4	
3.675	No drilling or costean data									
3.700	Costean	W	1462	1472	10	11.4	3.6	1.0	4	

### 3) Trial Drilling

Three diamond drill holes have been proposed to target sulphides 50m below the surface. Each hole will be approximately 80m long drilled on a 60° angle.



1:10000

ENLARGED FROM 'TASMANIA 1:25000 SERIES'  
OCEANA 3635

FIG 1

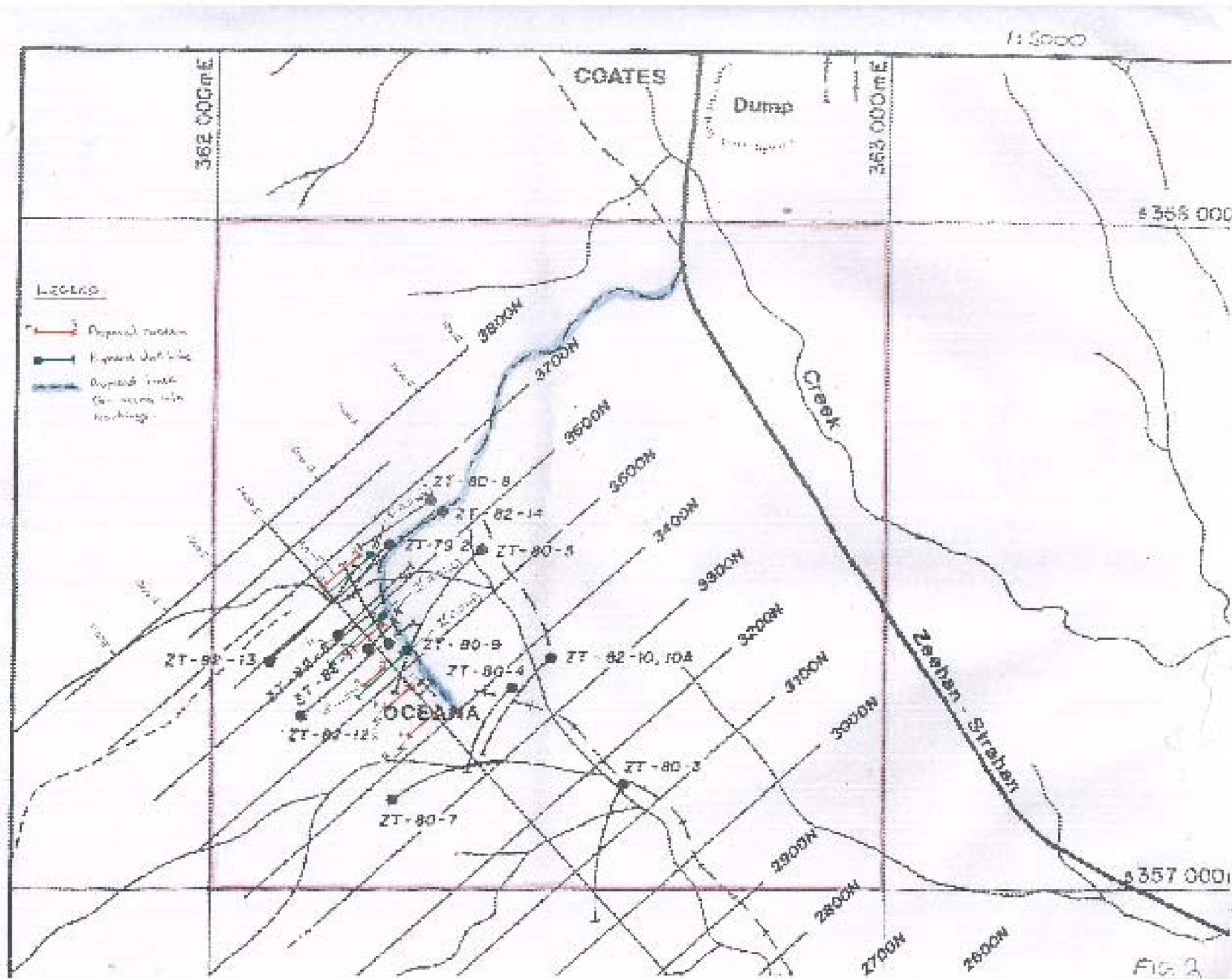


FIG. 2



Tasmania

DEPARTMENT of  
INFRASTRUCTURE,  
ENERGY and RESOURCES

MINERAL RESOURCES TASMANIA

Enquiries: David Gatehouse  
Phone: (03) 6233 8367  
Your Ref:  
Our File: 4DJG097:MN EL20/2002

23 December 2004



Mr P Heath  
Exploration Geologist  
ZZ Exploration Pty Limited  
PO Box 1603  
HOBART TAS 7000

Dear Mr Heath

**PROPOSED EXPLORTION PROGRAM  
OCEANA MINE SITE  
EL 20/2002**

Thank you for your time on-site on 14 December 2004 and for the additional visit to the Comstock area in the afternoon. Approval is granted to conduct the work at Oceana as requested, conditional upon the following;

- that you, as the person involved in the site inspection, oversee all earthworks and movement of machinery on site;
- any deviation from the original proposal and/or that, which has been agreed to during the site inspection, is to be discussed with Mineral Resources Tasmania prior to being undertaken; and
- to prevent the carriage of gorse seed to non-infested areas, the excavator is to be clean and free from vegetation material and weed seed impregnated soil, before being transported from this site to its next destination.

Your efforts to plan the costean/pit and drill pad locations on existing disturbances, away from the remaining cultural heritage features is greatly appreciated. As a result, there is no requirement for an archaeological survey to be undertaken at this point in time.

Currently there are no concerns with the three drill sites. The northern hole was to be drilled from the access road, while the remaining two, likewise, required little if any earthworks for site preparation. A two metre buffer zone was to be established between the adjacent concrete structures at the latter two drill sites. You are to inform Mineral Resources Tasmania when the type of rig to be used has been confirmed.

Proposed costeans from northwest to southeast;

Site 1. It was agreed that if required a full trench could be excavated from the track to the creek, provided a sufficient buffer was established between the end of the trench and the creek. It was also agreed that a test pit could be excavated on the top side of the creek from the existing track adjacent to it. This was initially to be from a more recent 'pit' and the work would not interfere with the older feature (small pit and mullock - supporting a dead tree) adjacent to it.

Site 2. This was in a degraded open area and was basically void of any vegetation. There were no restrictions on this site.

Site 3. This was amongst native vegetation a dense patch of gorse. Further investigation was required prior to any earthworks here and it was agreed that this was to be omitted for now.

Site 4. Access to this site was via an existing track on the western side of the above mentioned vegetation "clump". It was agreed a sample could be taken from the section of former open costean here and then sample to the west on the existing open areas. There was also some discussion on clearing the gorse from the former access track and excavating a sample on this track without disturbing in-tact native vegetation.

Site 5. At the most easterly point on this traverse, it was agreed that a sample pit could be excavated between (as pegged), the two older shafts. Although this would provide a sufficient buffer you are to flag off these 'historic' features and ensure they are not encroached upon. It was agreed that sampling could continue west utilising the existing open areas that are currently supporting sparse re-growth.

Small quantities of hand samples of material from around the mill site where also approved.

- No features or loose relics, still remaining from the earlier mining activities are to be either removed or disturbed.
- Ensure there is good communication with all contractors and staff engaged in any aspect of this work and that they are familiar, in general, with the process involved in obtaining approval to undertake this work and any relevant directives.

You were also to arrange for the remaining discarded gorse along the access route into the site to be removed to the municipal refuse site. Disposal of any discarded gorse at the mine site, i.e. by burning, will first need to be discussed and approved by Chris Arthur, Senior Ranger, Western District Parks and Wildlife Service. He can be contacted at Strahan on (03)6471740.

In the meantime, please contact either myself, on (03) 6233 8367, or Senior Geologist, John Pemberton on (03) 6233 8371, if you have any concerns regarding any of the above.

Yours sincerely



David Gatehouse  
**ENVIRONMENTAL FIELD OFFICER**