



PHONE 61 89 815911  
FAX 61 89 411364

# OPEN FILE

**eupene  
exploration  
enterprises  
pty. ltd.**

CONSULTING GEOLOGISTS  
A.C.N. 009 627 605

SUITE 4, 98 WOODS ST.,  
DARWIN N.T. 0800  
AUSTRALIA

## FIRST RELINQUISHMENT REPORT

EXPLORATION LICENCE 6973

FOG BAY AREA NT

11 OCTOBER 1990 TO 10 OCTOBER 1992

BY

J. GOULEVITCH B.Sc(Hons) F.AusIMM M.MICA

OF

EUPENE EXPLORATION ENTERPRISES PTY LTD

FOR

K.F. EUPENE & J.J. SULLIVAN

CR 93 / 074

2.00 pm  
S/1/93

FOG BAY SD52-3  
FOG BAY 4972

DARWIN NT  
January, 1993

---

## TABLE OF CONTENTS

SUMMARY

1.	INTRODUCTION.....	3
2.	TENURE.....	3
3.	PREVIOUS EXPLORATION.....	4
4.	GEOLOGY.....	5
5.	WORK CARRIED OUT AND RESULTS.....	5
5.1	Laterite Sampling.....	5

## LIST OF FIGURES

Figure 1	EL6973 Location Plan.....	1:1 000 000
Figure 2	EL6973 Geology and Sample Location Plan.....	1:25 000

## LIST OF APPENDICES

Appendix 1	Analytical Results - Laterite Samples
------------	---------------------------------------

## SUMMARY

Limited laterite gravel sampling and analysis was carried out but this did not produce any anomalous results.

### 1. INTRODUCTION

Exploration Licence 6973 is located 70 kilometres south-west of Darwin (Figure 1) on the Fog Bay (4972-11) 1:50 000 sheet. It is accessed via the Stuart Highway, Mandorah Road and Finnis River Road. It is situated immediately to the east of Coal Leases 3 and 4 held by Messrs K. Eupene & J. Sullivan.

The licence was taken out in order to evaluate extensions of high quality peat within peaty soils located in swampy country on the western boundary and to protect access into Coal Leases 3 and 4.

This report details the work conducted in the area relinquished at the end of Year 2.

### 2. TENURE

Exploration Licence 6973 comprised of 6 blocks (19 square kilometres) was granted to Messrs K.F. Eupene (50%) and J.J. Sullivan (50%) on the 11th of October, 1990 for a period of four years. Three blocks were relinquished at the end of the second year of the licence.

### 3. PREVIOUS EXPLORATION

There has been very little systematic exploration conducted within the vicinity of EL6973, mainly because the prospective Proterozoic bedrock is obscured by a well developed lateritic regolith and younger sediments.

Hickey (1985) reported that numerous geophysical surveys (magnetics, radiometric, IP, gravity) and reconnaissance geological mapping were undertaken by the BMR during the period from 1963 to 1982. Some of these surveys included the area covered by EL6973. Esso Exploration Australia Pty Ltd (1974) carried out grid based auger drilling and geochemical sampling over the northern half of the Fog Bay 1:100 000 sheet in an attempt to locate uranium in Early Proterozoic subcrop.

Idemitsu Uranium Exploration Australia Pty Ltd carried out an intensive exploration programme east of EL6973 searching primarily for uranium of the Alligator Rivers type (Eupene, 1980) during the period 1980 to 1984. Some stratigraphic drilling was conducted as part of this programme close to the northern boundary of EL6973.

Messrs. K.F. Eupene, J.J. Sullivan and R.J. Stone carried out exploration for gold, base metals, shell grit and peat on EL4733 immediately to the east of EL6973 from 1985 to 1991. No significant base metal or gold geochemical anomalies were defined and no deposits of shell grit were located. Areas of suitable high grade peat were recognised and these areas are now covered by coal leases (CL3 and CL4).

#### **4. GEOLOGY**

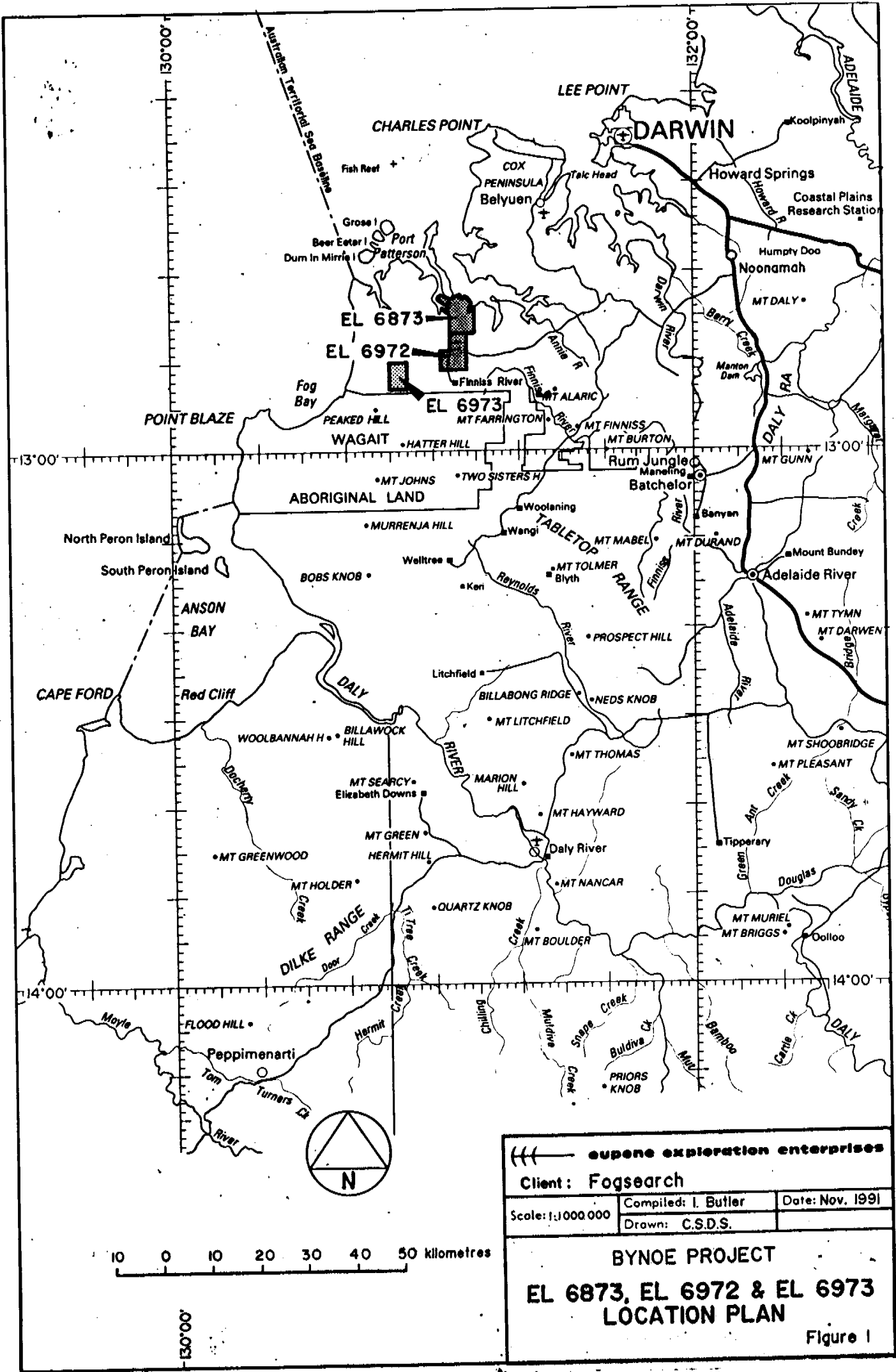
The Fog Bay 1:100 000 sheet covers the north western edge of the Litchfield Province which in turn marks the western margin of the Pine Creek Geosyncline. The oldest rocks are of Early Proterozoic age. Following deposition, the rocks were folded, metamorphosed and intruded by late tectonic and post tectonic Early Proterozoic granites. Shallow marine sediments of Permian and Cretaceous ages cover much of the area. Surficial Cainozoic sediments and a lateritic duricrust form a complex regolith which obscures virtually all of the area.

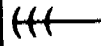
The surface geology of EL6973 is dominantly comprised of a Tertiary lateritic regolith which includes a cemented pisolithic/nodular duricrust with associated ferruginous clayey sand and soils. There are small areas of black soil plain on the western and southern boundaries of the licence. The regolith is developed on Early Cretaceous sediments comprising poorly sorted gritty sandy claystone, clayey sandstone and basal conglomerate of the Bathurst Island Formation.

#### **5. WORK CARRIED OUT AND RESULTS**

##### **5.1 laterite sampling**

A total of 7 laterite samples were taken by K Eupene from the surface at approximately 250 metre intervals on an east-west line (see Figure 2 for location). Approximately 300 - 500 grams of lateritic material generally comprising ferruginous pisolites/nodules, mottled gritty duricrust and strongly ferruginised lithic fragments were collected at each site and were analysed for Ag, As, Bi, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, P, Sb, V and Zn by ICP, and Au, Pt and Pd Fire Assay/Carbon Rod AAS (Figures 3-9). The analytical results (Appendix 1) for all of these elements showed little geochemical character and are interpreted to be background values only.



 — supene exploration enterprises  
 Client: Fogsearch  
 Scale: 1:1,000,000    Compiled: I. Butler    Date: Nov. 1991  
    Drawn: C.S.D.S.

**BYNOE PROJECT**  
**EL 6873, EL 6972 & EL 6973**  
**LOCATION PLAN**

Figure 1

8 580 000mN

# AREA RETAINED

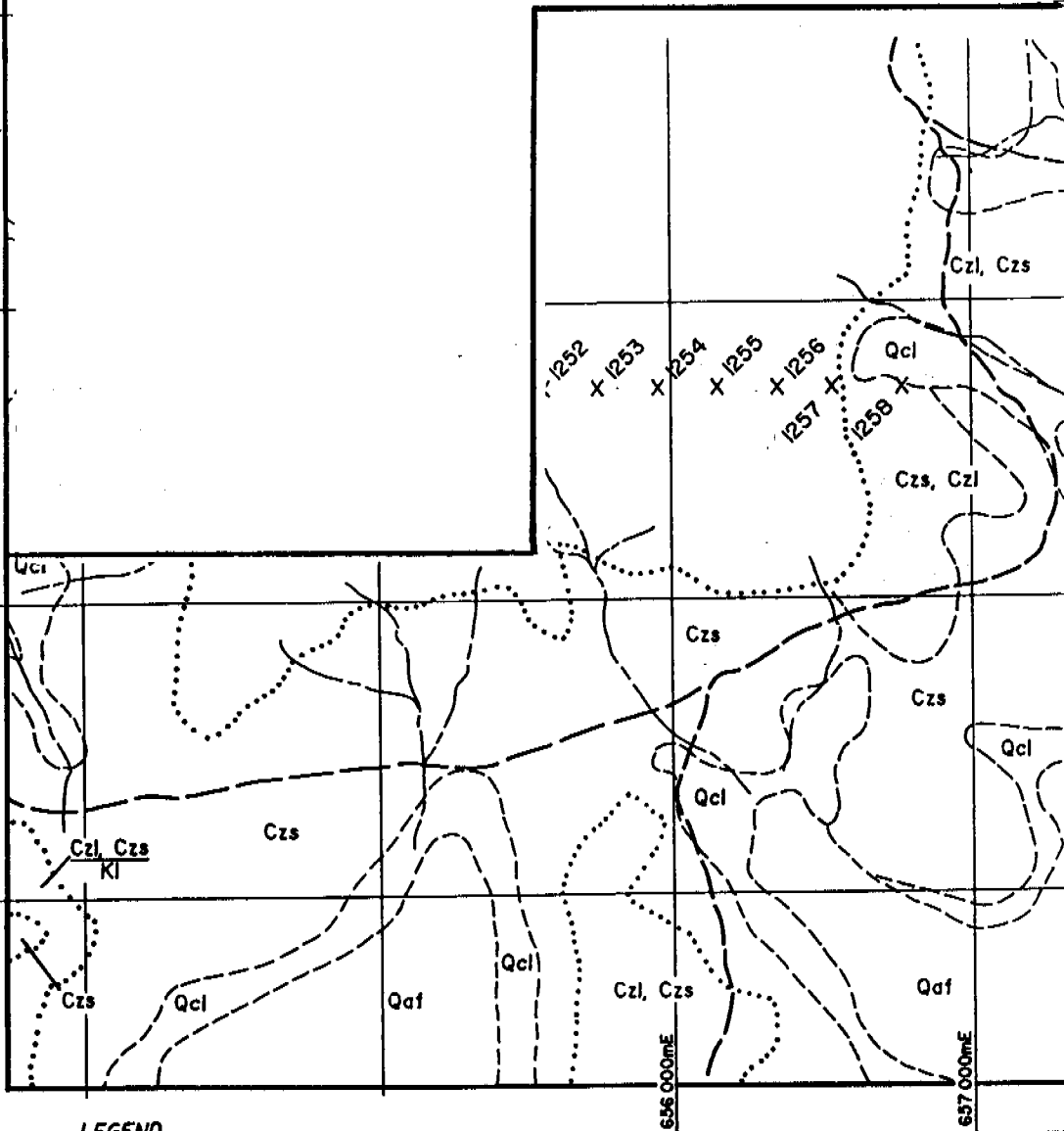
8 579 000mN

8 578 000mN

8 577 000mN

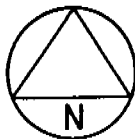
8 576 000mN

8 575 000mN



### LEGEND

- Qaf Clay, mud, silt, black soil plain
- Qcl Sand, silt, clay
- Qa Gravel, sand, silt
- Czs Sand, clayey sand
- Czl Laterite
- KI Bathurst Island Formation
- X Sample location site



After Dept. of Mines & Energy, Darwin N.T.

supene exploration enterprises

Client: Fogsearch

Scale: 1: 25 000

Compiled: I. Butler

Date: Nov. 1991

Drawn: C.S.D.S.

## EL 6973 BYNOE PROJECT. GEOLOGY & SAMPLE LOCATIONS

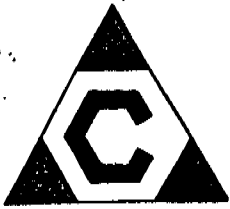
Figure 2

**APPENDIX I**

**ANALYTICAL RESULTS**

**LATERITE SAMPLES**





# CLASSIC LABORATORIES LTD

Incorporated in WA; a wholly owned subsidiary of Amdel Ltd

Postal Address: P.O. Box 58, Berrimah, Northern Territory 0828  
Marjorie Street., P.O. Box 58, Berrimah, Northern Territory 0828  
Telephone: (089) 32 2637 Facsimile: (089) 32 3531

*logsearch  
EL 6993*

EUPENE EXPLORATION ENTERPRISES  
4/98 WOODS STREET  
DARWIN

NT 0801

ANALYSIS REPORT :

Your Reference : D/S 11717

Our Reference : 1DN1288

Samples Received : 26/09/91

Results Reported : 30/09/91

Number of Samples : 8

Report Pages : 1 to 3

This report relates specifically to the samples tested in so far as the samples supplied are truly representative of the sample source.

If you have any enquiries please contact the undersigned quoting our reference as above.

Report Codes:

N.A. -Not Analysed

L.N.R. -Listed But Not Received

I.S. -Insufficient Sample

Approved Signature:

for

ALAN CIPLYS  
Manager - Darwin  
CLASSIC LABORATORIES LTD

\*\*\* RELIABLE ANALYSES AND SERVICE \*\*\*



# CLASSIC LABORATORIES LTD

Incorporated in WA; a wholly owned subsidiary of Amdel Ltd  
ACN 009-076-555  
Osman Place, Thebarton, South Australia 5031  
Telephone: (08) 43 5722 Facsimile: (08) 234 0321



This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

Please note our new Phone Number is (08) 416 5300

Mr Alan Ciplys  
Classic Laboratories Limited  
Marjorie Street  
BERRIMAH  
NT 0828

## FINAL ANALYSIS REPORT

Your Order No: 1DN1288

Our Job Number : 1AD2836

Samples received : 17-SEP-1991

Results reported : 24-SEP-1991

No. of samples : 8

Report comprises a cover sheet and pages 1 to 3

This report relates specifically to the samples tested in so far as that the samples as supplied are truly representative of the sample source.

**Note:**

If you have any enquiries please contact Miss Anne Reed quoting the above job number.

Approved Signatory:

John Waters  
Laboratory Manager - Adelaide

CC Mr Alan Ciplys NT

**Report Codes:**

N.A. - Not Analysed.  
L.N.R. - Listed But Not Received.  
I.S. - Insufficient Sample.

**Distribution Codes:**

CC - Carbon Copy  
EM - Electronic Media  
MM - Magnetic Media

**"RELIABLE ANALYSES AT COMPETITIVE COST"**

Job: 1AD2836  
O/N: 1DN1288

ANALYTICAL REPORT

Sample	Ag	As	Bi	Cd	Co	Cr	Cu
12551	<0.5	35	<3	<2	3	115	7
12552	<0.5	40	<3	<2	3	115	6
12553	<0.5	32	<3	<2	3	160	5
12554	<0.5	24	<3	<2	3	210	4
12555	<0.5	52	<3	<2	6	270	5
12556	<0.5	36	<3	<2	3	230	5
12557	<0.5	44	<3	<2	5	290	6
12558	<0.5	24	<3	<2	3	250	4
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DL	0.5	1	3	2	2	2	1
Scheme	IC2	IC2	IC2	IC2	IC2	IC2	IC2

# CLASSIC LABORATORIES LTD

Job: 1AD2836  
O/N: 1DN1288

## ANALYTICAL REPORT

Sample	Fe	Mn	Mo	Ni	Pb	P	Sb
12551	20.1	30	3	2	30	630	<5
12552	21.5	20	4	1	26	610	<5
12553	20.7	60	4	3	26	440	<5
12554	20.2	60	4	5	16	350	<5
12555	27.4	25	7	9	38	740	5
12556	20.0	80	4	6	28	690	<5
12557	22.5	30	4	10	34	660	5
12558	17.3	45	3	8	19	440	<5
Units	%	ppm	ppm	ppm	ppm	ppm	ppm
DL	0.01	5	1	1	3	10	5
Scheme	IC2	IC2	IC2	IC2	IC2	IC2	IC2
Upper Scheme	IC2						

ANALYTICAL REPORT

Sample	V	Zn	Au	Avg	Au	Au	Rp1	Au	SS1
12551	500	11		2	2		--		--
12552	500	9		2	2		--		--
12553	490	9		<2	<2		--		--
12554	430	5		<2	<2		--		--
12555	840	13		<2	<2		--		--
12556	490	12		<2	<2		--		--
12557	610	12		<2	<2		--		--
12558	450	8		<2	<2		--		--
Units	ppm	ppm		ppb	ppb		ppb		ppb
DL	1	1		2	2		2		2
Scheme	IC2	IC2		AAS9	AAS9		AAS9		AAS9