

DOE  
FR

**BHP Minerals Limited**  
131 Reichardt Road  
Winnellie, Northern Territory 5789  
PO Box 39096, Winnellie  
Northern Territory, Australia 5789  
Telephone 089 844788  
Telex AA85092  
Facsimile 089 84 4020

18th November, 1985



**BHP  
Minerals**  
Exploration

The Director,  
Department of Mines and Energy,  
P.O. Box 2901,  
DARWIN. N.T. 5794

Attention: Miss C. Smith

Dear Miss Smith,

RE: YOUR LETTER CS/RT:305:TECH 6/a

Please find attached a summary of work carried out on drill hole BJ1, and analytical results for the samples taken.

Yours faithfully,

**OPEN FILE**

D. P. CARVILLE

**NORTHERN TERRITORY  
GEOLOGICAL SURVEY**

CR85/054

BHP Minerals Limited  
Incorporated in Western Australia  
A Member of the BHP Group

## DIAMOND DRILL HOLE BJI

Diamond Drill Hole BJI was drilled by Shell Minerals at the Berjaya Prospect within EL 1203. The hole is located at AMG grid reference 000835 on the Batten 1:100,000 sheet (135° 56' 12"E; 16° 25' 42"S).

The hole was drilled to 101 metres and Shell's stratigraphic interpretation was as follows:

0-6m	non-core drilling
6-27m	Lynott Formation
27-28m	Reward Dolomite
28-51m	Barney Creek Formation
51-101m	Teena Dolomite

After examining the core at the Department of Mines and Energy Core Library, I suggest that the entire hole is in Lynott Formation, probably the Caranbirini Member. Pyritic black shale dominates the core to 27m with dolomitic siltstone, minor dolomite and shale in the interval to 51m, which is underlain by laminated dolomite to the bottom of the hole.

The pyritic shale section of the hole is reflected by anomalous lead and zinc geochemistry. One metre split core analysis returned up to 1400 ppm Pb and 1.77% Zn. Ten centimetre selected samples returned up to 4600 ppm Pb and 2.66% Zn.

The samples taken for analysis consist of 20cm of quarter core taken over the following intervals:

<u>Sample Number</u>	<u>Interval</u>
ACE 1785	17.32 to 17.52m
ACE 1786	18.05 to 18.25m
ACE 1787	20.68 to 20.88m
ACE 1788	21.77 to 21.97m
ACE 1789	22.48 to 22.68m

Two problems which may affect the analytical work are:

1. The core has been stored in galvanised trays exposed to the weather, and contamination of the core may have occurred where oxidising pyrite has reacted with the metal tray.
2. Thin beds of massive pyrite have oxidised to the extent that they are washed out by the water used in core cutting.

Analytical results are attached.

ANALABS ANALYTICAL DATA

SAMPLE NO.	Cu	Cu	Zn	Zn	As	As%	Ba	Ba	Pb
ACE 1785	25	-	6400	-	200	-	65	-	1850
ACE 1786	10	-	2600	-	70	-	160	-	215
ACE 1787	25	-	2.35%	2.25%	460	-	-	150	2200
ACE 1788	15	-	1.10%	1.07%	240	-	-	70	2000
ACE 1789	20	-	1.50%	1.50%	330	-	-	130	1400