

# ABN 63 111 306 533

# QUARTERLY REPORT TO SHAREHOLDERS

for the three months ended 30 June 2014

# **ASX Code - EME**

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This report and further information are available on Energy Metals' website at:

# www.energymetals.net



# **HIGHLIGHTS**

#### Lakeside Project (WA)

The historical Lakeside mineral resource was updated by CSA Global consultants based on results from EME drilling campaigns.

- Uranium Resource Estimate of 960 tonnes U<sub>3</sub>O<sub>8</sub> (at 200ppm cut-off grade) obtained for the Lakeside Deposit.
- Mineral Resource increase of 256% over previous estimation.

# **FINANCIAL**

Energy Metals had approximately \$24.45M in cash and 209.7M shares on issue at 30 June 2014.

河畔东

Weidong Xiang Managing Director 28 July 2014

# **INTRODUCTION**

Energy Metals is a dedicated uranium company with eight exploration projects located in the Northern Territory (NT) and Western Australia covering over 4,000 km<sup>2</sup>. Most of the projects contain uranium mineralisation discovered by major companies in the 1970's, including the advanced Bigrlyi Project (NT).



Figure 1 - Location of Energy Metals Projects

Energy Metals is well placed to take advantage of the favourable outlook for Uranium as nuclear power continues to play an increasing role in reducing global carbon emissions.

Importantly Energy Metals is one of only five companies that currently hold all the required permits and authorities to export Uranium Oxide Concentrates (UOC) from Australia. The Company recently completed its first shipment of UOC and is currently negotiating purchase agreements with Australian uranium producers to enable further shipments from Australia for resale, primarily to major Chinese utility China General Nuclear Power Group (CGN, formerly China Guangdong Nuclear Power Holding Company), ultimately Energy Metals' largest shareholder.

China Uranium Development Company Limited, Energy Metals' largest shareholder (with 66.45% of issued capital), is a wholly owned subsidiary of CGN. As of mid-year, CGN had 11 operating nuclear power units with a generation capacity of 11,620MWe and more than 15,500MWe of capacity under construction in 13 other nuclear power units across various locations around China. Additionally CGN is one of only two companies authorised by the Chinese government to import and export uranium.

This unique relationship with CGN gives Energy Metals direct market exposure as well as access to significant capital and places the Company in a very strong position going forward.

# **NORTHERN TERRITORY**

# **Bigrlyi** (EME 53.3%)

The Bigrlyi Project comprises 10 granted exploration licenses in retention and several applications within the Ngalia Basin, located approximately 350km northwest of Alice Springs. The project, which is a joint venture with Paladin Energy subsidiary Northern Territory Uranium Pty Ltd and Southern Cross Exploration, has been subject to significant exploration activity since discovery in 1973, including over 1,040 drill holes, metallurgical testwork and mining studies.

The Bigrlyi Project is characterised by relatively high uranium grades and excellent metallurgical recoveries. Historical base case acid leach tests recorded extraction rates of 98% uranium. For further information on metallurgical testwork, resource estimates and economic studies please refer to ASX announcements or the Company's website www.energymetals.net

#### **Activities (June 2014 Quarter)**

Due to current market conditions, the Company's Bigrlyi camp remained closed during the quarter with only visits for maintenance purposes and for the collection of radiation and environmental baseline data being undertaken. A final report for the warm weather baseline flora and fauna survey was received in May 2014. Technical reviews covering past exploration work at Bigrlyi were prepared during the quarter.

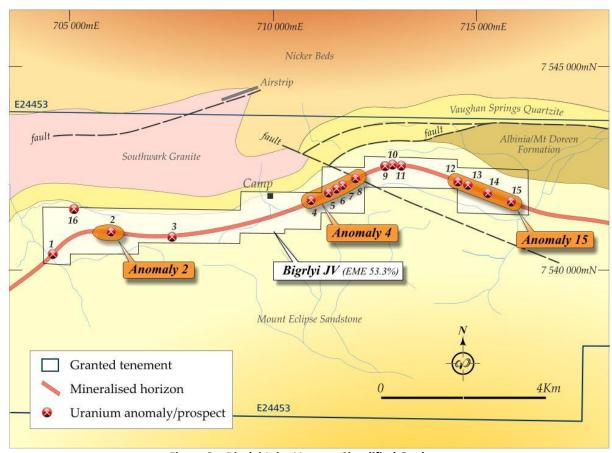


Figure 2 – Bigrlyi Joint Venture Simplified Geology

## **Ngalia Regional Project (EME 100%)**

The Ngalia Regional project comprises fourteen 100% owned exploration licenses (total area  $3,435~\rm km^2$ ) located in the Ngalia Basin, between 180km and 350km northwest of Alice Springs in the Northern Territory (Figure 3). Eleven of these tenements are contiguous and enclose the Bigrlyi project as well as containing a number of uranium occurrences including the historic Walbiri and Malawiri deposits and the Cappers deposit (Inferred Mineral Resource of 2,720 tonnes  $U_3O_8$  at a grade of 167ppm at 100ppm cut-off). The remaining three tenements are located southwest of the Bigrlyi deposits and cover discrete uranium anomalies with no evidence of previous exploration.

Ten of the fourteen Ngalia Regional Exploration Licences have been granted, the four remaining applications (EL's 24450, 24462, 24805 and 27169) are located on Aboriginal Freehold land and the consent of the Traditional Owners is required before the tenements can be granted. Energy Metals is negotiating with the Traditional Owners through the Central Land Council (CLC) and is confident that the Company will eventually gain access to these areas.

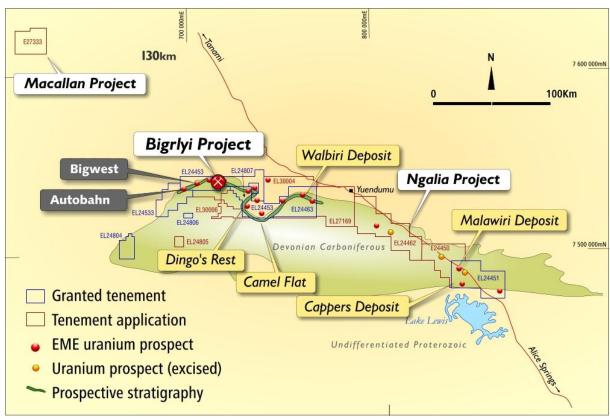


Figure 3 - Ngalia Regional Project showing uranium deposits, occurrences and exploration target areas. The Anomaly 15 East deposit (not shown) is located within the area identified by the Bigrlyi Project symbol.

A number of high priority targets have been identified in the 100% Energy Metals tenements (see Figure 3) including;

- Bigwest, the western extension of the Bigrlyi trend (mostly under sand cover)
- Anomaly-15 East, the eastern extension of the Bigrlyi trend adjacent to the Anomaly-15 deposit

- Anomaly-15 Far East, the far eastern extension of the Bigrlyi trend (mostly under sand cover)
- Autobahn, at the far western end of the Bigrlyi trend (mostly under sand cover)
- Camel Flat and associated eastern and western stratigraphic extensions
- The historic Walbiri prospect and stratigraphic repeats
- Dingo's Rest (North and South)
- Along strike extensions of the Minerva and Malawiri prospects
- The Crystal Creek prospect within ELA 30004
- Various small prospects along the prospective stratigraphic trend

Energy Metals is undertaking a systematic evaluation of these prospects, in many cases for the first time since the early 1980's. In February 2014, EME announced maiden resource estimates for the Bigwest, Anomaly-15 East and Camel Flat satellite deposits (Figure 3).

#### **Activities (June 2014 Quarter)**

A visit to EL24451 was undertaken in March to assess the state of previous company rehabilitation works. Planning for future geophysical programs, in particular surveys targeting areas under sand cover, and drill programs to test new targets was on-going during the quarter. Energy Metals continued with compilation and verification of historical data for the regional prospects.

#### Macallan (EME 100%)

The Macallan project comprises a single exploration licence application (ELA27333), located 460 km NW of Alice Springs and 140 km from Bigrlyi. The tenement covers a strong 3km-wide bullseye radiometric anomaly. A recent interpretation of palaeovalley systems within central Australia by Geoscience Australia indicates that the Macallan anomaly lies within the Wildcat Palaeovalley, an ancient valley system that drains into Lake Mackay to the southwest. Energy Metals considers that the Macallan anomaly most likely represents a surficial accumulation of uranium minerals associated with the Wildcat palaeodrainage system; though other explanations are possible.

ELA27333 lies on land under Aboriginal Freehold title and access is subject to negotiation with the Traditional Owners and the CLC. A meeting with CLC representatives to discuss access to this tenement and other matters has been planned for early next quarter

# **WESTERN AUSTRALIA**

## Manyingee (EME 100%)

The Manyingee exploration licence (E08/1480) is located 85 km south of the port of Onslow. The tenement (total area 86 km²) surrounds the mining leases containing Paladin Energy's Manyingee resource, a stacked series of palaeochannel-hosted roll front uranium deposits. Planning for a drill program, proposed for later this year, to test the uranium potential upstream along the main Manyingee palaeochannel began during the quarter.

#### Mopoke Well (EME 100%)

The Mopoke Well project comprises exploration licence E29/568 and retention licence application R29/1 located 55km west of Leonora. The tenement area contains two historic uranium prospects (Peninsula and Stakeyard Well) hosted by calcretised sediments associated with the Lake Raeside drainage system. Last year, an inferred category JORC (2004) resource estimate totalling 9.75Mt at 165ppm  $eU_3O_8$  for 1,613 tonnes or 3.56Mlb  $U_3O_8$  at a cut-off grade of 100ppm  $U_3O_8$  was obtained for the Peninsula deposit (see ASX release of March 12<sup>th</sup> 2013).

A small 510m aircore drilling program (51 holes of 10m depth) was undertaken at Peninsula late last year in order to better define the extent of mineralisation in the southern portion of the deposit. During the last quarter road access to the project area was disrupted by flooding resulting in gamma logging activities being postponed until May this year. Gamma log data were collected and submitted for processing to the Company's geophysical consultant with final results expected next quarter.

#### Lakeside (EME 100%)

The Lakeside project is located in the Murchison district 20km west of Cue and comprises exploration licence E21/120. This project was acquired to follow up previously discovered surficial uranium mineralisation associated with calcrete and saline drainages. Aircore drilling campaigns by Energy Metals were undertaken in 2007, 2008, 2010 and 2012.

Last quarter CSA Global were appointed as resource estimation consultants to update the resource. In June 2014 EME announced that a JORC-reported Mineral Resource estimate of 2.74Mt at an average grade of 350 ppm  $U_3O_8$  for 960 tonnes or 2.12Mlb  $U_3O_8$  (at a cut-off grade of 200ppm  $U_3O_8$ ) had been completed at the Lakeside deposit (see Table 1 and ASX release of 3<sup>rd</sup> June 2014). The Mineral Resource is based on JORC (2012) definitions and the reported resource is classified as Inferred.

An initial resource estimate of 270 tonnes  $U_3O_8$  at an average grade of 400 ppm  $U_3O_8$  at a cut-off grade of 200ppm  $U_3O_8$  was previously reported for the Lakeside deposit under the JORC (1996) code. The latest estimate represents a significant increase in contained uranium as a result of EME's exploration activities in the period 2007 to 2014.

Table 1: Lakeside Inferred Resource Estimate at 200ppm & 100ppm U<sub>3</sub>O<sub>8</sub> cut-off grades

Tonnes (Million)	Cut-off Grade U₃O <sub>8</sub> (ppm)	Average Grade U₃O <sub>8</sub> (ppm)	Contained U <sub>3</sub> O <sub>8</sub> (tonnes)	Contained U₃O <sub>8</sub> (Mlb)
2.74	200	350	960	2.12
5.02	100	257	1,289	2.84

Tonnes are metric (2204.62 pounds), figures may not total due to round-off errors. Significant figures do not imply precision.

As a result of the resource estimation process, uranium mineralisation at the Lakeside deposit was found to be distributed in three different domains which are interpreted to represent three separate palaeochannels (Figure 4).

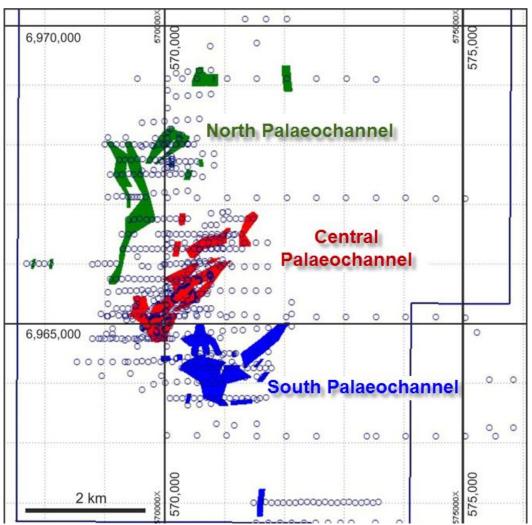


Figure 4. Plan of the Lakeside deposit showing the historical and EME drill hole collar distribution (circles) and the mineralised palaeochannel domains.

Part of the resource estimation study included an investigation of deposit mineralogy in relation to the distribution of uranium mineralisation. During the quarter the company received the results of a Hychips spectral mineralogy interpretative study on archived drill chip samples from EME's Lakeside drill holes (see Figure 5). The results show that uranium mineralisation is associated with the interface between upper saponitic clay and/or

dolomite-rich (dolocrete) units and an underlying kaolinitic clay rich unit. The best uranium grades correlate with areas where the kaolinitic clay rich unit is thickest, and in particular these correspond to the axis of the central palaeochannel (Figure 4), however, mineralisation appears to be weak or absent in areas where the saponitic clay rich unit is thickest, presumably corresponding to areas dominated by former evaporative clay pans. An abundance of gypsum, a potentially deleterious mineral in uranium recovery, was noted in the south palaeochannel, however, only 3% of the uranium resource is located in this channel. Also of interest is the occurrence of a thin calcrete cap developed over the saponite/dolomite-rich units in the northeast part of the deposit; the calcrete cap, which is partly outcropping, is not associated with significant mineralisation.

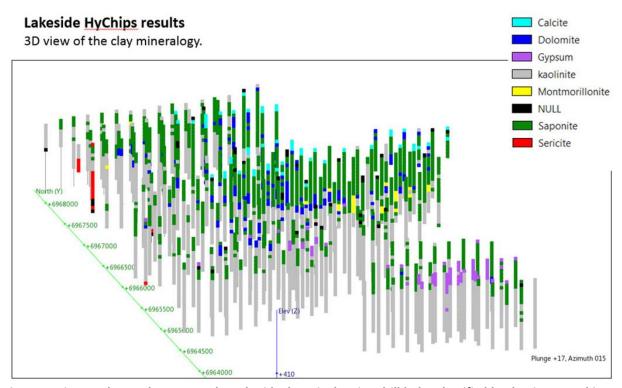


Figure 5. View to the northeast over the Lakeside deposit showing drill holes classified by dominant Hychips spectral mineralogical composition.

During the quarter, Energy Metals proceeded with an application to convert the existing Lakeside exploration licence to a retention licence to allow the Company to maintain tenure over the project area with minimal expenditure until such time as the economic viability of the project improves.

#### Anketell (EME 100%)

The Anketell project comprises two granted exploration licences (E's 58/289 & 58/292) together with an overlying Retention Licence application (R58/2). The tenements contain shallow calcrete hosted mineralisation discovered by Western Mining (WMC) in 1972. The mineralisation is similar in style to the Yeelirrie deposit, also discovered by WMC in the same year and located 150km to the northeast. Following completion of aircore drilling programs, the Company announced in July 2009 an initial JORC (2004) Inferred Mineral Resource of 2,720 tonnes (6Mlb)  $U_3O_8$  at a grade of 167ppm (100ppm cut-off).

A scoping level metallurgical testwork program was initiated in the June quarter of 2013 to determine whether a low cost beneficiation technique could be used to upgrade the mineralisation within the resource. Results of initial attrition scrubbing testwork on a representative Anketell ore sample, however, did not yield a size fraction where uranium was upgraded significantly.

No on-ground exploration activities were conducted during the quarter.

# Lake Mason (EME 100%)

This project comprises one granted exploration licence (E 57/590) together with an overlying Retention Licence application (R57/2) centred 25km NNE of Sandstone and 80km SW of the Yeelirrie deposit. Previous exploration by BP Minerals in the 1970's discovered shallow carnotite mineralisation in calcrete and calcareous sediments associated with the Lake Mason drainage system.

In December 2010 the Company announced a JORC (2004) resource at Lake Mason of 9.1Mt @ 185ppm  $U_3O_8$  (at 100ppm cut-off) for 1,689 tonnes (3.7Mlb) of uranium, with 62% of the resource reporting to the Indicated Category (refer to the ASX announcement of 17 December 2010 for further details).

A scoping level metallurgical testwork program was initiated in the June quarter of 2013 to determine whether a low cost beneficiation technique could be used to upgrade the mineralisation within the resource. Results of initial wet screening testwork on a representative Lake Mason ore sample, however, did not yield a size fraction where uranium was upgraded significantly.

No on-ground exploration activities were conducted during the quarter.

#### **CORPORATE**

The Company held its 2014 Annual General Meeting on 30 May 2014. All of the resolutions were carried on a show of hands.

Mr Xing, Jianhua and Mr Zhang, Zimin were appointed Non-executive directors on 30 June 2014 following the resignation of Ms Jin, Yunfei and Ms Cui, Zhenshu.

**Table 2:** Tenement Information as required by listing rule 5.3.3

				CHANGE IN
TENEMENT*	PROJECT	LOCATION	INTEREST	QUARTE
	Northern 1	erritory		
EL24451	Ngalia Regional	Napperby	100%	-
EL24453	Ngalia Regional	Mt Doreen	100%	-
EL24463	Ngalia Regional	Mt Doreen	100%	-
EL24533	Ngalia Regional	Mt Doreen	100%	-
EL24804	Ngalia Regional	Nyirripi	100%	-
EL24806	Ngalia Regional	Mt Doreen	100%	-
EL24807	Ngalia Regional	Mt Doreen	100%	-
ELR46	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR47	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR48	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR49	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR50	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR51	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR52	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR53	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR54	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELR55	Bigrlyi Joint Venture	Mt Doreen	53.30%	-
ELRA41	Ngalia Regional	Napperby	52.10%	-
ELRA45	Ngalia Regional	Mt Doreen	41.90%	-
EL30002	Ngalia Regional	Mt Doreen	100%	Granted
EL30004	Ngalia Regional	Mt Doreen	100%	Granted
EL30006	Ngalia Regional	Mt Doreen	100%	Granted
ELA27169	Ngalia Regional	Yuendumu	100%	-
ELA30144	Ngalia Regional	Mt Doreen	53.30%	-
ELA30145	Ngalia Regional	Mt Doreen	53.30%	-
ELA24462	Ngalia Regional	Yuendumu	100%	-
ELA24450	Ngalia Regional	Yuendumu	100%	-
ELA24805	Ngalia Regional	Nyirripi	100%	-
ELA27333	Macallan	Tanami	100%	-
MCSA318-328	Ngalia Regional	Yuendumu	53.30%	-
MLNA1952-1953	Ngalia Regional	Mt Doreen	53.30%	
	Western A	ustralia		
E08/1480	Manyingee	Yanrey	100%	-
E21/120	Lakeside	Cue	100%	-
E29/568	Mopoke Well	Leonora	100%	-
E57/590	Lake Mason	Sandstone	100%	-
E58/289	Anketell	Sandstone	100%	-
E58/292	Anketell	Sandstone	100%	

R21/1	Lakeside	Cue	100%	Application
R29/1	Mopoke Well	Leonora	100%	-
R57/2	Lake Mason	Sandstone	100%	-
R58/2	Anketell	Sandstone	100%	-

<sup>\*</sup> EL = Exploration Licence (NT); ELA = Exploration Licence Application (NT); ELR = Exploration Licence in Retention (NT); ELRA = Exploration Licence in Retention Application (NT); MCSA = Mineral Claim (Southern) Application (NT); MLNA = Mineral Lease (Northern) Application (NT); E = Exploration Licence (WA); R = Retention Licence (WA).

#### **Competent Persons Statement**

Information in this report relating to exploration results, data and cut-off grades is based on information compiled by Dr Wayne Taylor and Mr Lindsay Dudfield. Mr Dudfield is a member of the AusIMM and the AIG. Dr Taylor is a member of the AIG and is a full time employee of Energy Metals; Mr Dudfield is a consultant to Energy Metals. They both have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves — The JORC Code (2012)". Dr Taylor and Mr Dudfield both consent to the inclusion of the information in the report in the form and context in which it appears.

Information in this report relating to the determination of the gamma probe results and geophysical work is based on information compiled by Mr David Wilson. Mr Wilson is a member of the AusIMM and the AIG. Mr Wilson is a consultant to Energy Metals. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)". Mr Wilson consents to the inclusion of the information in the report in the form and context in which it appears.

In accordance with the 2012 JORC reporting guidelines, a summary of the information associated with the above mentioned exploration results is as follows:

The Lakeside Deposit is located on WA Exploration Licence E21/120. The licence is 100% owned and operated by Energy Metals Ltd.

Bigrlyi and associated satellite deposits and exploration targets are tabular, stratiform, sandstone-hosted uranium-vanadium deposits of Carboniferous age located on the northern margin of the Ngalia Basin (NT). The prospective stratigraphy lies within a geological unit known as the Mt Eclipse Sandstone. The mineralisation is controlled by physical and chemical characteristics of the host rock such as permeability and redox state and is influenced by primary depositional and sedimentological features. Manyingee and surrounding deposits are palaeochannel-hosted roll-front uranium deposits of Cretaceous age. Lakeside, Lake Mason, Anketell and Mopoke Well projects (WA) are surficial uranium deposits hosted in calcrete, dolocrete or calcretised sediments.

The Ngalia Regional satellite deposits were tested by reverse circulation (RC) drilling. Drill holes were angled at a nominal 60 degrees to the north to optimally intersect the mineralisation in steeply south-dipping beds. All intersections are down-hole widths with the true thickness estimated to be 75-80% of the down-hole thickness, based on the dip of the stratigraphy in outcrop to the north and south of the drilling area and from geological interpretation. The WA project target areas were tested by vertical aircore drilling, and in the case of the Lake Austin lakebed (Lakeside project) by hand auger drilling to 1m depth using a clay bit. Hole collar locations, except where otherwise stated, are based on DGPS measurements accurate to better than or equal to 0.03 m in the horizontal plane and better than or equal to 0.04 m in the vertical plane.

RC and aircore drill holes are routinely probed with a calibrated Auslog down-hole gamma tool to obtain a total gamma count reading with depth at 5cm intervals. Uranium mineralisation grades derived from the down-hole gamma ray logging results are annotated with a sub-prefix 'e' because they have been determined as uranium equivalent grades. The  $eU_3O_8$  results were calculated by David Wilson BSc, MSc, MAusIMM, from 3D Exploration Pty Ltd based in Perth, Western Australia using raw gamma probe data supplied by Energy Metals Ltd. Chemically assayed intersections are determined from ca.3-5 kg size sub-samples of drill spoils. Samples are measured for uranium using either the pressed-powder-pellet XRF method or the multi-acid digest/ICPMS method.

Significant intercepts are defined using a 100ppm  $U_3O_8$  or  $eU_3O_8$  cut-off grade with a minimum thickness of 1m and a maximum internal dilution of 3m and no external dilution. The "inc." intersections are determined using a 500ppm  $U_3O_8$  or  $eU_3O_8$  cut-off grade with a minimum thickness of 1m and a maximum internal dilution of 3m and no external dilution. Reported gamma log intersections are composites of 5cm deconvolved  $eU_3O_8$  data determined using a calibrated gamma probe.