

19 February 2019

Mr Louis Gomas
Senior Director, Petroleum Operations
Department of Primary Industry and Resources
Level 4, Centrepoint Building
48-50 Smith Street Mall
DARWIN NORTHERN TERRITORY

Attention: Matthew Bird

Dear Louis Gomas

Revision of a part of an Environmental Management Plan: Beetaloo Basin Groundwater Monitoring Bore Installation Program Kyalla 117 N2 Approved 10 December 2018.

I refer to the correspondence from Matthew Bird dated on 15 February 2019 regarding the revisions of a part of the Kyalla 117 N2 Groundwater monitoring bore installation project Environmental Management Plan (referred to herein as the "EMP").

Origin is proposing to amend a part of the EMP to include the installation of the impact groundwater monitoring bores and associated additional disturbance. These impact groundwater monitoring bores are a requirement of the Draft Code of Practice for Petroleum Activities in the Northern Territory and Preliminary Guideline: Groundwater Monitoring Bores for Exploration Petroleum Wells in the Beetaloo Sub-basin.

The variation seeks to include minor additional scope covering the following construction activities:

- a 50x50m ground water monitoring bore lease area
- 400m x 4m of access track.
- drilling of a total of 2 groundwater monitoring bores

The activities are located adjacent to the existing groundwater monitoring bores and are consistent with the activities covered under the approved Beetaloo Basin Groundwater Monitoring Bore Installation Program Kyalla 117 N2 EMP (approved 10 December 2018). Please note that the subject land areas currently approved by custodians, the NLC and AAPA Certificate C2018/103 remains unchanged, and the clearing is within this approved area.

The following aspects are relevant to the minor scope variation request

- **Environment**
 - The additional scope of work and associated risk profile are identical to that covered by the current and approved Groundwater Monitoring Bore Installation Program- Kyalla 117 N2 EMP. The scope variation will not result in an increase in environmental risk.

- The level of clearing is small (totalling 0.41 hectares) and will occur within 100m of the existing groundwater monitoring bore lease in an area that has obtained field ecological and cultural heritage clearance, sacred site avoidance clearance and AAPA certification.
 - The subject land area was assessed in the Land Condition Assessment submitted as a part of the EMP.
 - The additional groundwater monitoring bore lease pad and access track is located within the same vegetation community which is regionally extensive and not threatened.
 - The risk mitigation controls outlined in the existing EMP are identical and will not require any amendment to accommodate the additional scope. Origin will manage all aspects of the proposed activities in accordance with the approved Kyalla 117 N2 EMP.
 - Each groundwater monitoring bore will be drilled by a licenced driller in accordance with the Minimum Construction Requirements for Water Bores in Australia.
 - The activities are covered by and will be managed in accordance with the existing Erosion and Sediment Control Plan, Weed Management Plan and Emergency Response Plan included in the approved Groundwater Monitoring Bore Installation Program- Kyalla 117 N2 EMP.
 - The additional minor scope is covered under the existing security titled Agreement: *Groundwater Monitoring Program Rehabilitation Provisions- Eight Groundwater monitoring bores located across EP 76, 98 and 117 as outlined in NT-2050-15-MP-0014, NT-2050-15-MP-0017 and NT-2050-15-MP-0018*
- **Cultural Heritage:**
 - All activities (including the drilling of 2 additional groundwater monitoring bores) associated with installing groundwater monitoring bores are covered by Origin's current AAPA Certificate C2018/103. This approval allows for up to 10 Groundwater monitoring bores at this location; with the number of groundwater monitoring bores totalling 4 at the cleared site with the scope variation.
 - **Stakeholder engagement:**
 - The installation of the impact groundwater monitoring bores is covered under the existing land access agreement and stakeholder engagement.

A map of the proposed additional minor scope is provided in Attachment 1 for your consideration.

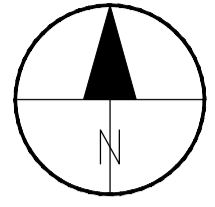
If you require any further information, please do not hesitate to call Matt Kernke on 0467700565.

Kind Regards



Tracey Boyes
General Manager, Beetaloo and Growth Assets

Attachment 1- Map of proposed minor scope variation

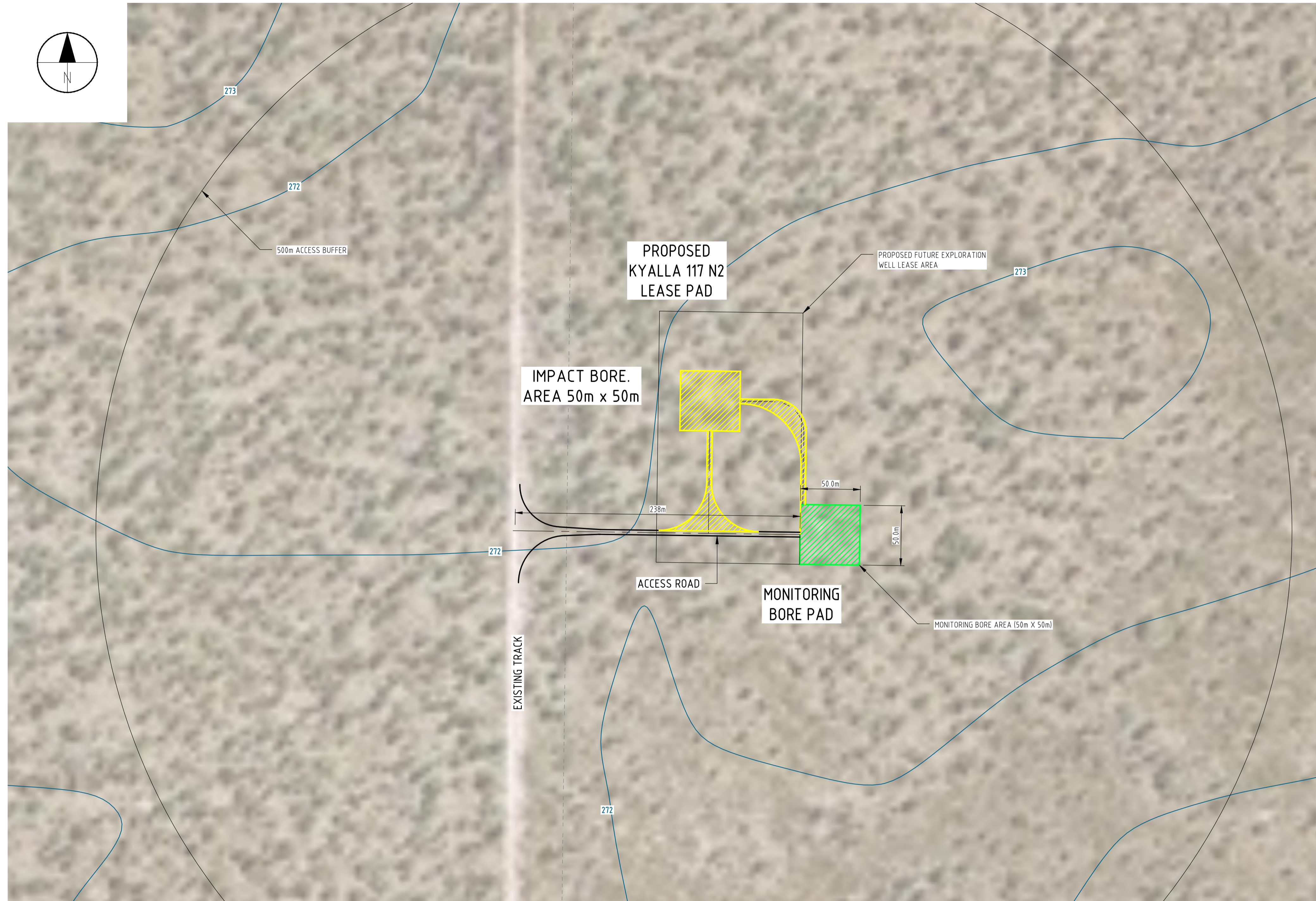


LEGEND

EXISTING ——— 259 ——— CONTOURS

NOTES:

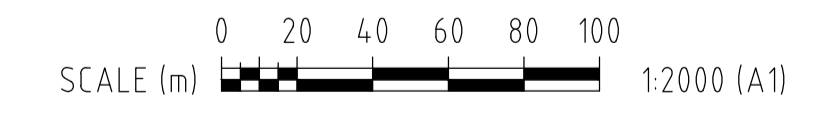
1. CONTOUR DATA PROVIDED BY NASA (2000). CONTOUR DATA IS ESTIMATED WITHIN 1.0 METER ACCURACY. NO GUARANTEE IS MADE.
2. ACCESS ROAD "CROSS SECTION TYPE C - RURAL UNSEALED ROADS" AS PER DIPL STANDARD DRAWING CS3003_0.
3. IMAGE SOURCE: ESRI, DIGITAL GLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY.
4. BORES TO BE POSITIONED AS CLOSE TOGETHER AS POSSIBLE.
5. DRILL RIG TO DEFINE FINAL MONITORING BORE LOCATION.



GENERAL ARRANGEMENT PLAN

PRELIMINARY

NOT FOR CONSTRUCTION



Wed, 20 Feb 2019 - 2:09pm - P:\60480548\5 CAD\25-SKETCHES\60480548-SKE-C-0002.DWG - Dudley, Calvin

DRAWING NO. 60480548-SKE-C-0002 REFERENCE DRAWING TITLE MONITORING BORE ACCESS PLAN				REVISION B 05.02.2019 IMPACT BORE LOCATION ADDED A 03.12.2018 ISSUED FOR PRELIMINARY CONCEPT				DRAWN: PCM DWG CHECK: CD DESIGN: - ENG DES CHECK: - DE DRAFT DE PROJECT SUPER APPROVALS: -				PREPARED FOR ORIGIN BY: AECOM AECOM Australia Pty Ltd A.B.N 20 093 846 925 www.aecom.com				PROJECT: 60480548 BEETALOO EXPLORATION DRAWING OFFICE: DARWIN				Origin Energy Ltd ABN 30 000 051 696 GPO Box 148 Brisbane Qld. 4001 Ph: (07) 3858 0600 Fax: (07) 3369 7840				DRAWN: PCM DWG CHECK: CD DESIGN: - ENG DES CHECK: - DRAFT SUPER: BC PROJECT APPROVAL: JR				BY: PCM DATE: 26.09.18 27.09.18				TITLE: BEETALOO EXPLORATION DRILL CAMPAIGN KYALLA 117 N2-1 DRILL PAD, ACCOMMODATION CAMP AND WATER TANK MONITORING BORE ACCESS PLAN				PROJECT NO: 60480548-SKE-C-0002 DRAWING NO: 60480548-SKE-C-0002 MOD NO: - SCALE: 1:1000 @ A1 CADFILE: 60480548-SKE-C-0002.dwg				REVISION: B A1			
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