

Santos Ltd  
ABN 80 007 550 923  
60 Flinders Street  
Adelaide, South Australia 5000  
Telephone: 61 8 8116 5000  
Facsimile: 61 8 8116 5050  
[www.santos.com](http://www.santos.com)

**Santos**

18 April 2019

Steve Conner  
Executive Director – Development Assessment  
Department of State Development, Manufacturing, Infrastructure and Planning  
Level 13, 1 William Street  
BRISBANE QLD 4001

Dear Steve,

I refer to the assessment application for petroleum activities for the Cherokee and Piute Project (RPI19-001 – Cherokee and Piute) and your request for further information dated 9 April 2019. A response to the matters raised in the requirement notice are addressed in this document and attachments as outlined in Table 1 (see over page).

Please do not hesitate to contact Jodie Spencer on (07) 3838 3182 or [jodie.spencer@santos.com](mailto:jodie.spencer@santos.com) should you have any queries.

Yours sincerely,



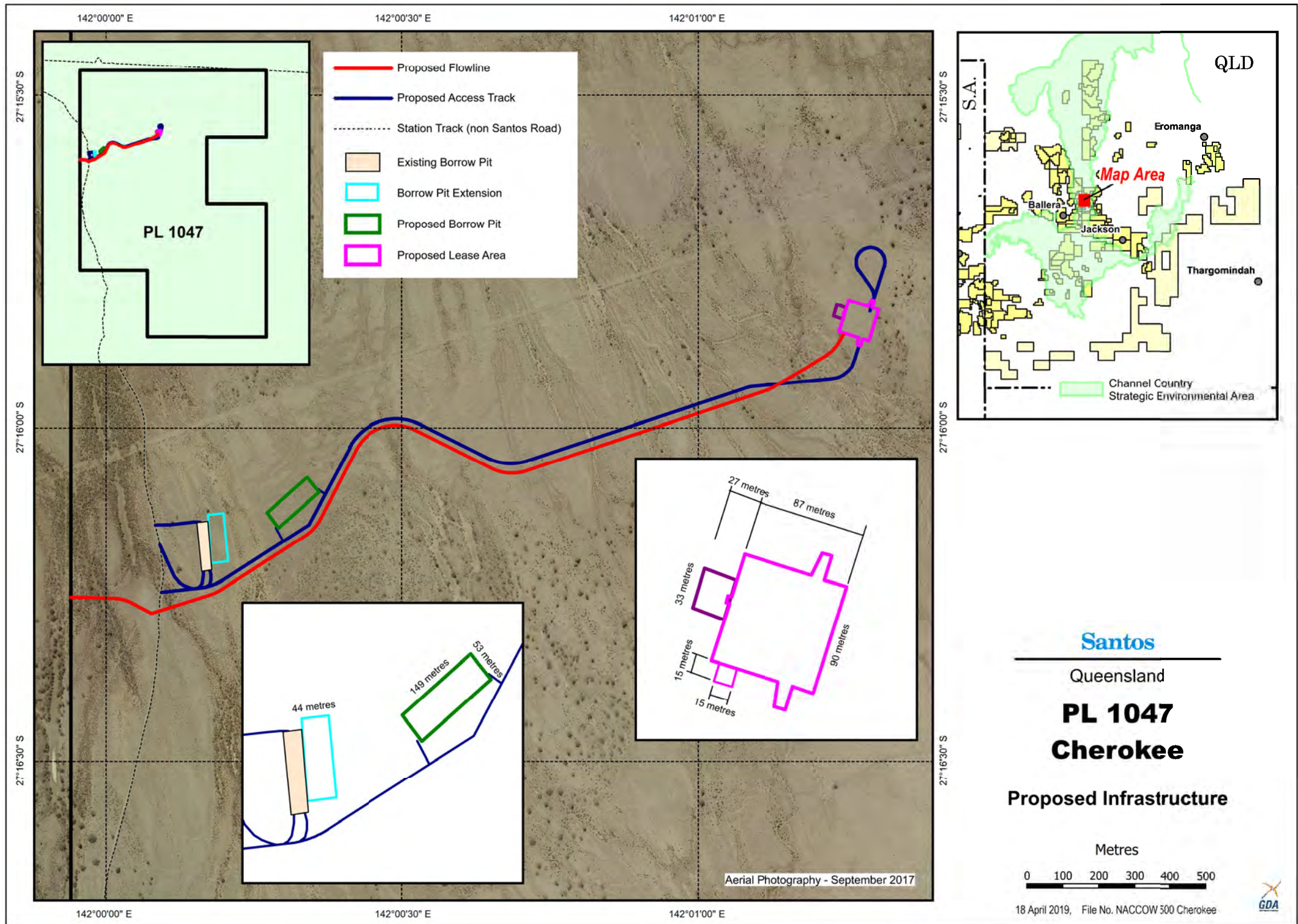
Liz Dunlop  
**Principal Environmental Advisor**

**Table 1: Response to Requirement Notice Dated 9 April 2019**

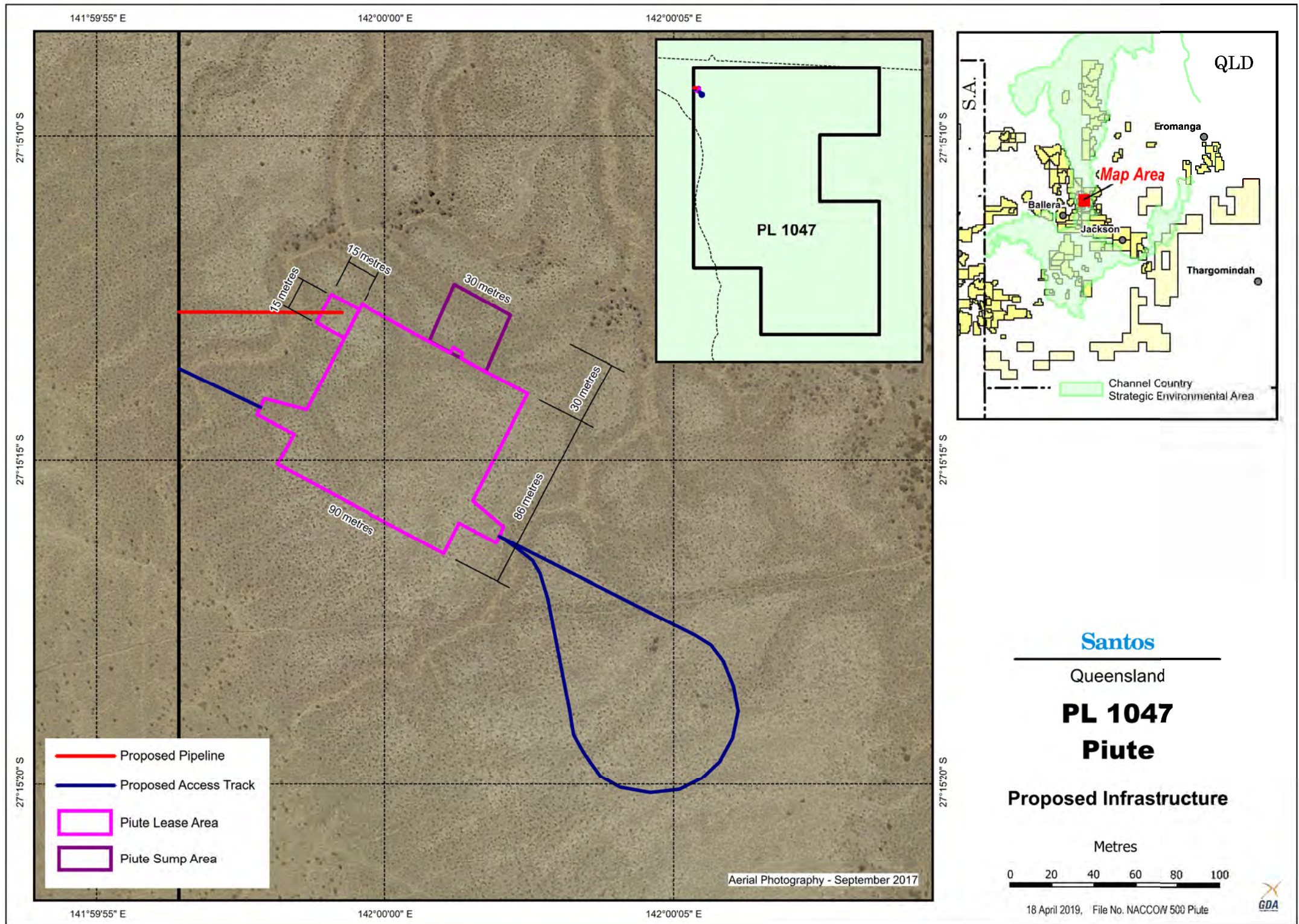
Request	Santos Response
<p><b>Item 1</b></p> <p>The proposal plans contained within the supporting application material do not sufficiently identify the extent of the proposed activities. Please provide dimensions of the overall footprints for each of the proposed wells and the borrow pits on legible proposal plans. Overall X and Y axis is sufficient for each.</p> <p>In addition, provide the footprint of the Channel Country SEA – designated precinct on the plan or plans.</p>	<p>Table 1 within Section 2.0 of the Assessment Report (lodged in support of the application) details the total maximum proposed surface disturbance. This was provided given that the final locations of infrastructure may change slightly post ground-truthing (as discussed within the Assessment Report). The environmental attributes and potential impacts to environmental attributes detailed in the Assessment Report has been established based on the total maximum proposed surface disturbance.</p> <p>The anticipated extent of the proposed activities is provided in Attachment 1. This outlines the anticipated footprint, including dimensions, for each of the proposed wells (Cherokee 1 and Piute 1) and borrow pits (Cherokee 1 Borrow Pit – New, Cherokee 1 Borrow Pit – Extension). Attachment 1 also shows the anticipated footprint of the proposed project in relation to the Channel Country SEA footprint (shown in both of the insets).</p>
<p><b>Item 2</b></p> <p>Section 2.3 of the Assessment Report (lodged in support of the application) addressed access tracks, noting one 'of these access tracks follows a pre-existing seismic line route'. Please identify the access track referred to and explain how the other access track route was arrived at. (Note: applicants typically provide a plan to identify the route options that were explored).</p>	<p>A section of the Cherokee 1 access track follows 3D seismic line 00-CS5336. A section of the Cherokee 1 pipeline also follows a pre-existing seismic line, 00-CR1576. These seismic lines were part of the 2000 Central Fields 3D Survey Program. Attachment 2 shows the sections of the Cherokee 1 access track and pipeline that follow existing seismic line routes.</p> <p>The location of all infrastructure for the Cherokee 1 and Piute 1 project was planned on desktop and continually refined to ensure minimal overall potential environment impact. The drilling locations (Cherokee 1 and Piute 1) were limited based on downhole requirements and needed to remain within a restricted zone in order to maintain economic feasibility. Refinements of the drilling locations were made to move the wells back further from waterways and to orientate the drilling lease to minimise the amount of clearing required / avoid removing mature trees as much as possible.</p> <p>The access track routes (Cherokee 1 access track and Piute 1 access track) underwent a similar planning and refinement process, in conjunction with the drilling locations. Refinements to the access track routes focused on minimising potential environmental impacts and disturbance to visible vegetation and drainage lines.</p> <p>Attachment 3 shows the proposed access track route alternatives that have been considered and the refinement of these routes. Below is a summary of the planning and refinement that took place.</p> <p><b>Cherokee 1 access track</b> – the initial route [Aqua] was originally selected as it provided the most direct access from the existing Station Track to the drilling location. The first route refinement [Yellow] co-located the Cherokee 1 access track route with the Cherokee 1 pipeline route as much as practicable, minimising the amount of disturbance. The second route refinement [Orange]</p>

Request	Santos Response
	<p>also co-located the linear infrastructure and will avoid more dense vegetation in comparison to the previous proposed routes as it follows a section of pre-existing seismic line. The final alignment selected [Blue] is similar to the second route refinement, though it has been optimised slightly to avoid more dense vegetation resulting in less environmental disturbance. The final alignment may be modified further during the pre-clearing should it be determined that areas (once ground-truthed) require additional management. Note: existing disturbance north and running parallel to the Cherokee 1 linear infrastructure is the Carpentaria Gas Pipeline (PPL 41) and not an existing access track that could have been utilised (as it appears in Attachment 3).</p> <p><b>Piute 1 access track</b> – the initial route [Aqua] was originally selected as it provided the most direct access from the existing Station Track to the drilling location (note existing Station Track is located on an adjacent tenure to PL 1047). The first route refinement [Yellow] co-located the Piute access track route with the Piute 1 pipeline route where possible, and allowed for loop road to be slightly set back from the nearby Cooper Creek. The final alignment selected [Blue] is similar to the first route refinement, though it allows for both the drilling pad and loop road to be adequately set back from the nearby Cooper Creek resulting in less potential for environmental disturbance. All route options considered for the Piute 1 access track avoid areas of dense vegetation as far as practicable. Existing disturbance was also considered, however there are no existing roads, and it wasn't feasible to utilise pre-existing seismic lines for this site (would have required more surface disturbance than the alignment selected).</p>

**ATTACHMENT 1 – OVERALL EXTENT OF PROPOSED ACTIVITIES**

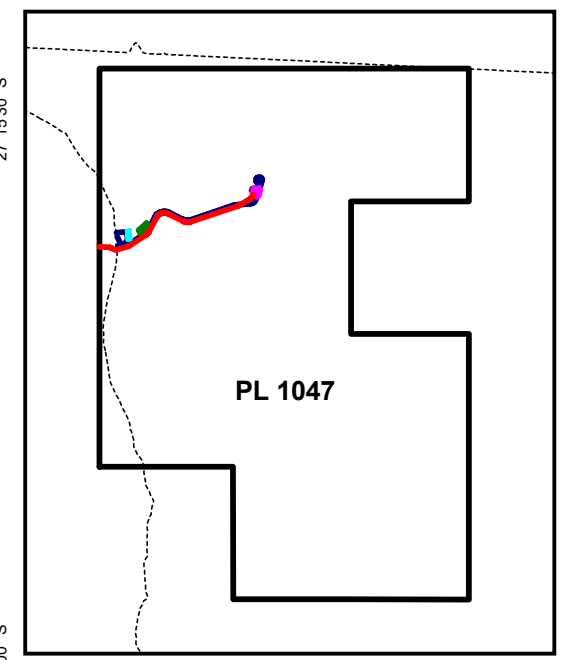
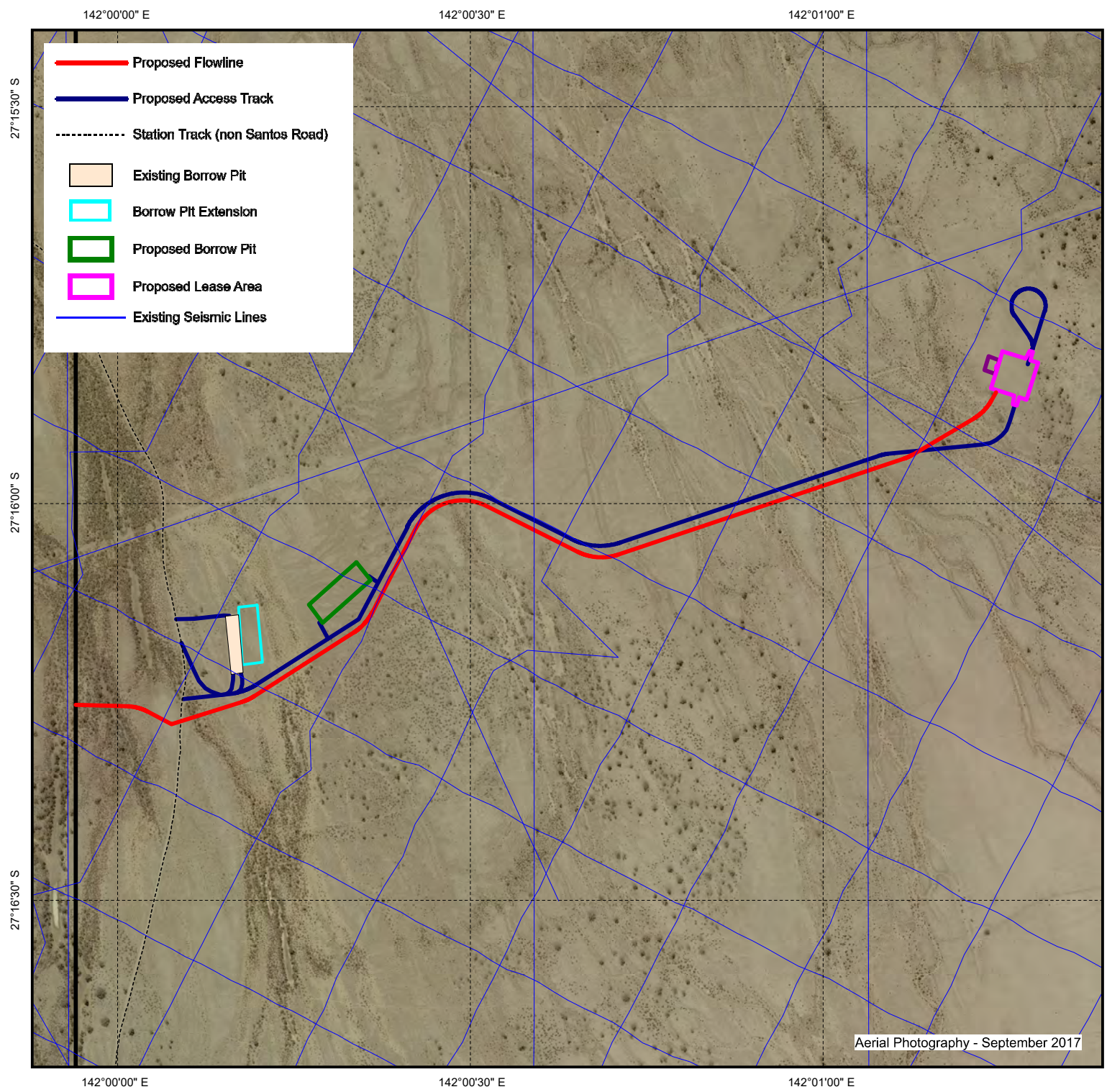




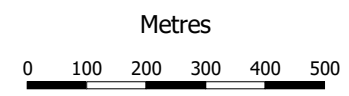


**ATTACHMENT 2 – EXISTING SEISMIC LINE ROUTES AND PROPOSED CHEROKEE 1 ACCESS TRACK AND PIPELINE**



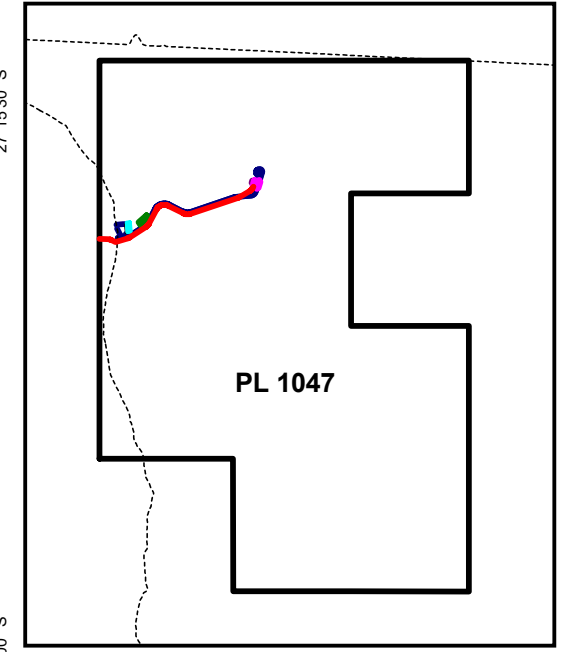
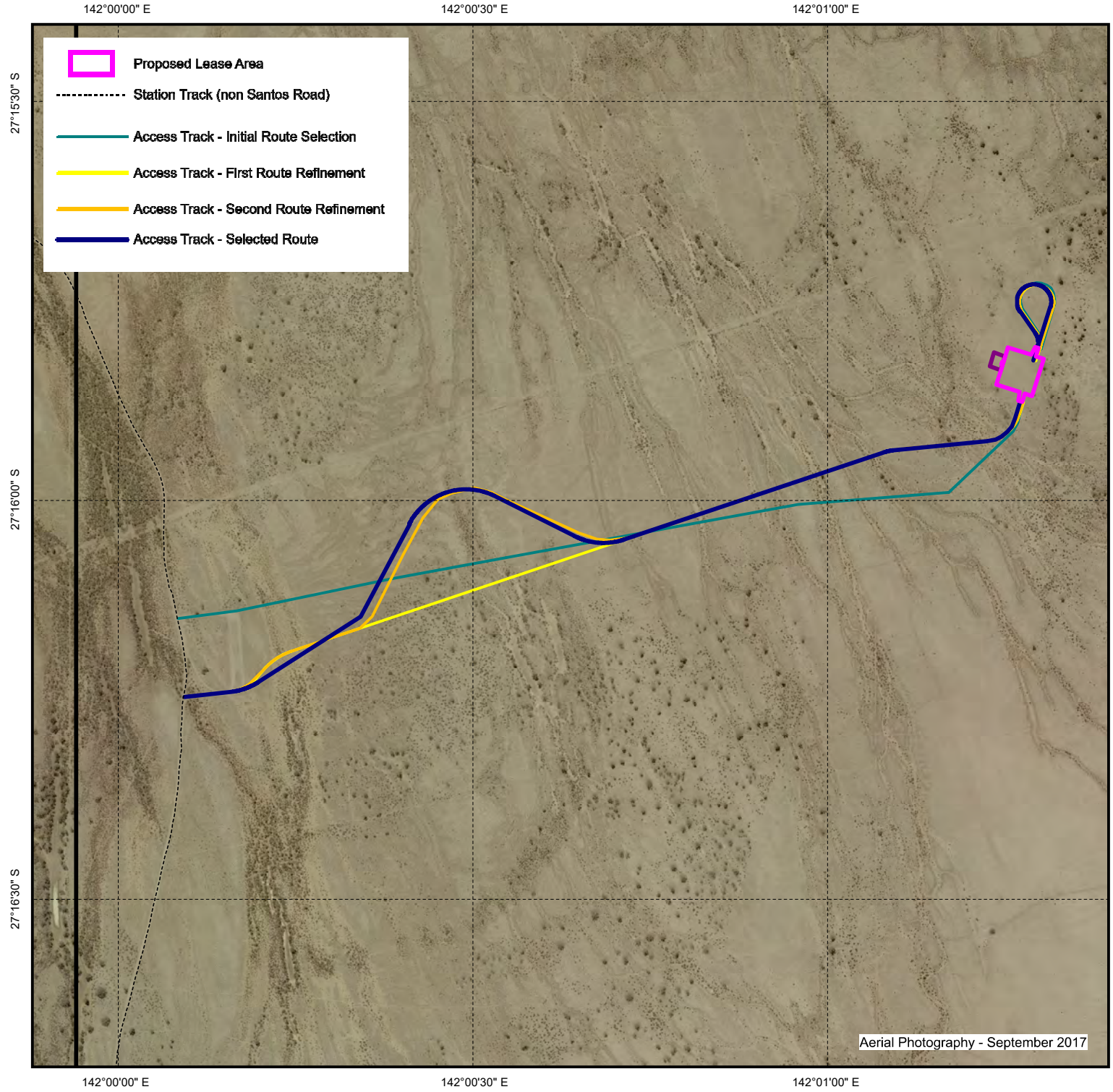


**Santos**  
Queensland  
**PL 1047**  
**Cherokee**  
**Proposed Infrastructure**

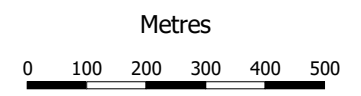




**ATTACHMENT 3 – ACCESS TRACK ROUTE OPTIONS**



**Santos**  
Queensland  
**PL 1047**  
**Cherokee**  
**Proposed Access Track**





141°59'55" E

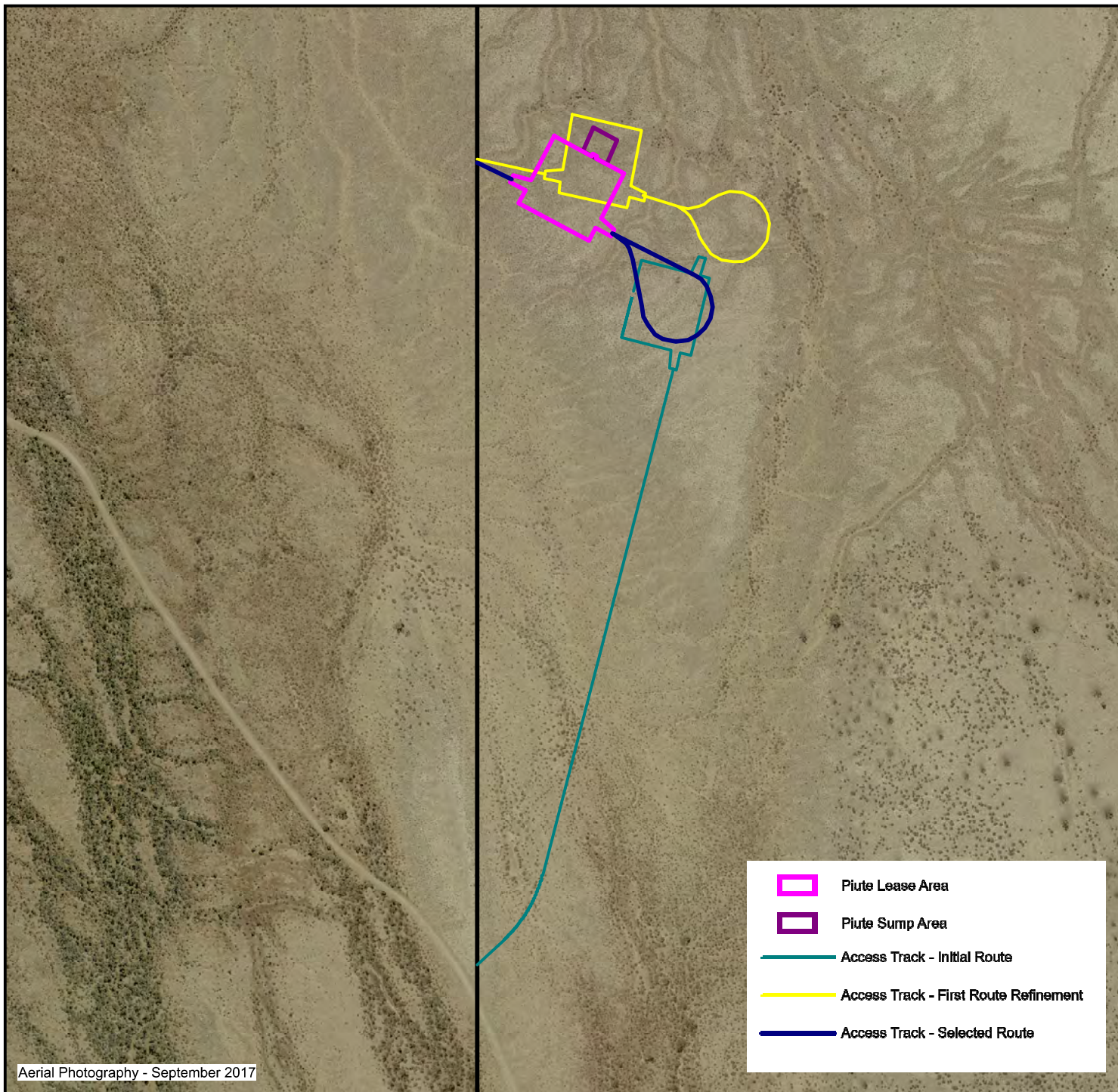
142°00'00" E

142°00'05" E

27°15'10" S

27°15'15" S

27°15'20" S



Aerial Photography - September 2017

141°59'55" E

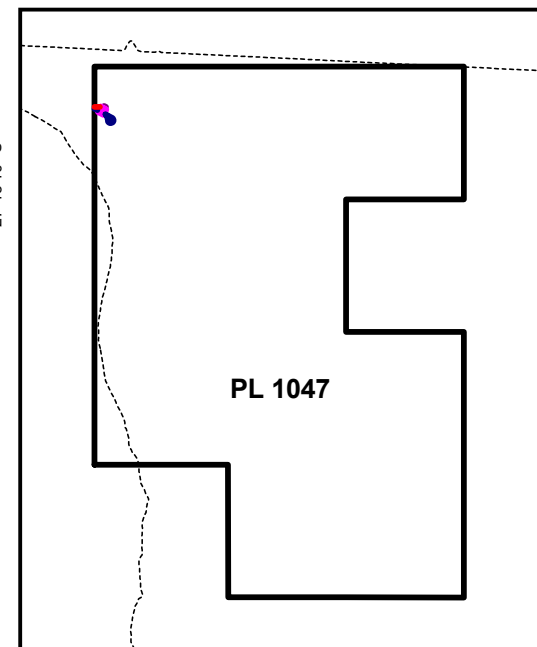
142°00'00" E

142°00'05" E

27°15'10" S

27°15'15" S

27°15'20" S



PL 1047

**Santos**

Queensland

**PL 1047**

**Piute**

**Proposed Access Track**

Metres

0 20 40 60 80 100

18 April 2019, File No. NACCOW 500 Piute A

