

# **Annual Environmental Performance Report 2021**

## **Dukas-1 – Conventional Gas Well**

<b>Date</b>	<b>Rev</b>	<b>Reason for Issue</b>	<b>Author</b>	<b>Checked</b>	<b>Approved</b>
19/11/2021	1	For Submission	MB	SM	AM

<b>Document title</b>	Annual Environmental Performance Report 2021 Dukas-1 – Conventional Gas Well
<b>EMP(s) Covered</b>	Dukas-1 – Conventional Gas Well
<b>Permit</b>	EPs 112 and 125
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<b>Date approved</b>	7 May 2021

## Signature and Certification

I/We hereby declare that the information provided in this annual environment performance report and accompanying documents is to the best of my/our knowledge, true and correct.

Asset/Project Approval

Signature	
Name (print)	Angus McIntyre
Position	Manager – Onshore New Ventures
Date	7 May 2021

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## Abbreviations and Units

Acronym / Abbreviation	Description
AEPR	Annual Environmental Performance Report
ALARP	As low as reasonably practicable
Code	Code of Practice
DENR	Department of Environment and Natural Resources
DPIR	Department of Primary Industry and Resources
EMP	Environmental Management Plan
EP	Exploration Permit
NT	Northern Territory
NT EPA	Northern Territory Environmental Protection Authority
SMS	Santos Management System
SSCC	Sacred Site Clearance Certificate

## 1.0 Introduction

The Petroleum (Environment) Regulations 2016 (NT) include a requirement for the interest holder to provide an annual report to the Minister outlining the environmental performance of the interest holder (the Annual Environmental Performance Report). The report must include sufficient information to allow the Minister to assess whether the interest holder has met the environmental outcomes and environmental performance standards included in the approved Environment Management Plan (EMP). The report is to consider information required to be recorded, monitored or reported under the Petroleum (Environment) Regulations 2016 (NT) and any other law in force in the Northern Territory related to conduct of the regulated activity.

This Annual Environmental Performance Report applies to the Dukas-1 – Conventional Gas Well EMP, EP 112 and 125 that was approved on 15 February 2019. The period covered by this AEPR is from 15 February 2020 to 14 February 2021. No regulated activities were undertaken during the reporting period.

### 1.1 Background

NT Exploration Permits 112 and 125 are located in the Amadeus Basin in the south of the Northern Territory (refer to Figure 1). Santos is the operator of EP 112 and drilled the Dukas-1 exploration well in EP 112. The access track and supporting infrastructure such as borrow pits required for this activity occurred within both EP 112 and 125 as shown in Figure 2.

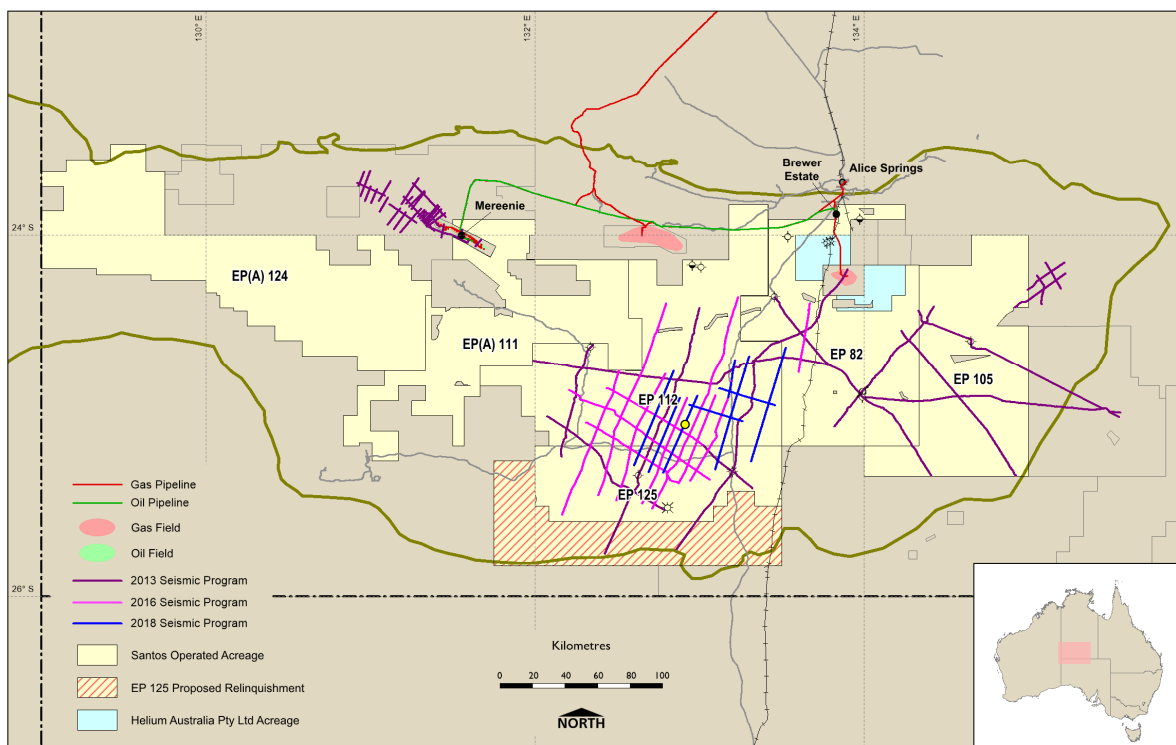


Figure 1: Santos acreage, Amadeus Basin, NT

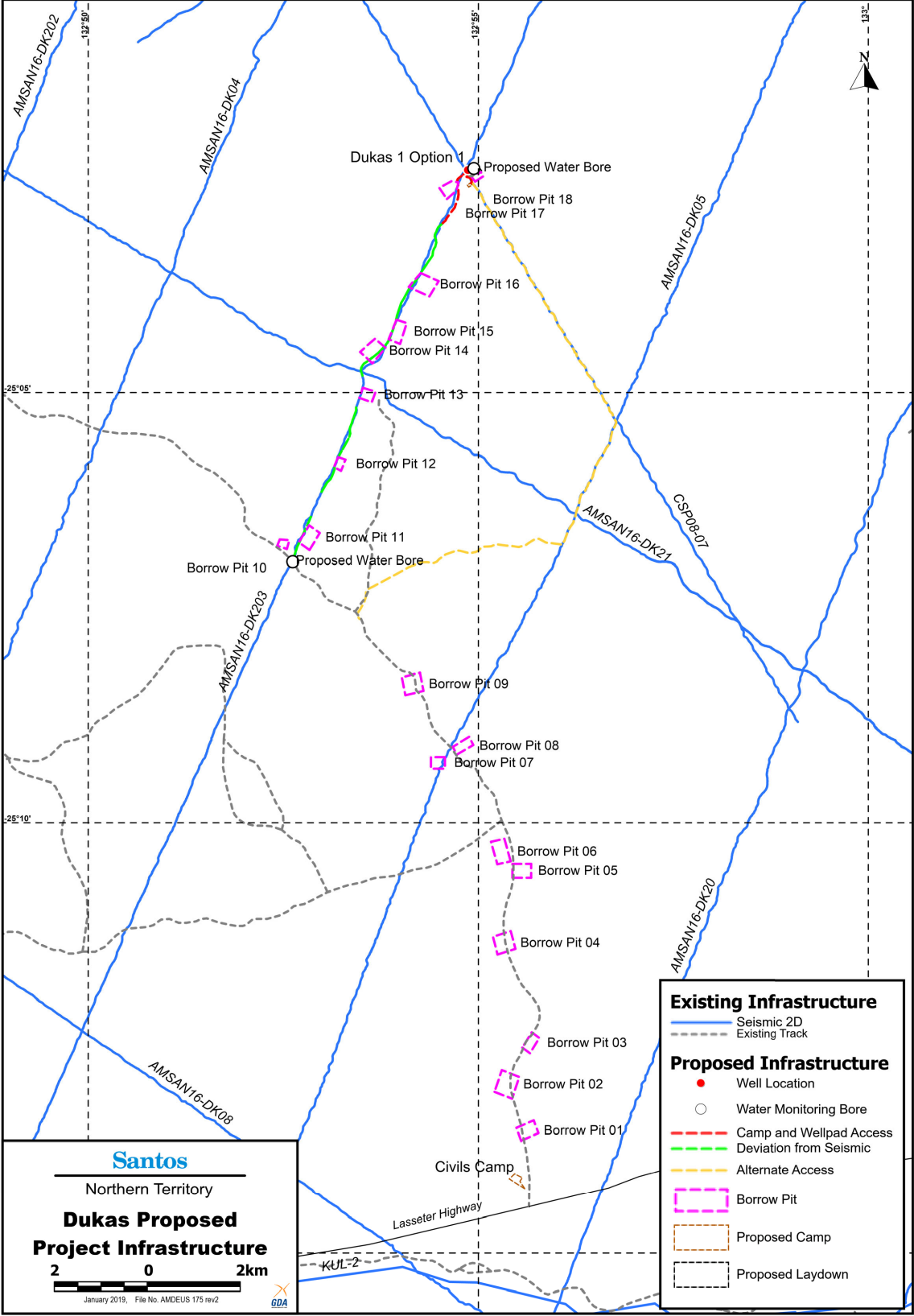


Figure 2: Location of Regulated Activities

## 1.2 Contents of Performance Report

This AEPR describes the environmental performance of Santos by evaluation of the following:

1. compliance with Ministerial approval conditions, for this EMP
2. compliance with each environmental outcome and environmental performance standard within the approved EMP
3. compliance with reporting requirements in accordance with the Code and Regulations
4. all recordable and reportable incidents, including root cause analysis and related corrective actions to prevent re-occurrence
5. findings of all regulatory inspections and audits and related actions to address any findings.

## 1.3 Assessment of Compliance

Table 1 shows the compliance status indicators used in this AEPR.

**Table 1 Compliance Descriptors**

Indicator	Description
Compliant	Compliant with requirement for entire 12 month reporting period
Partially Compliant	Compliant with requirement for most of year, short periods of non-compliance
Not Compliant	Interest holder did not comply with the requirement during the reporting period
Not Applicable	Requirement not applicable during the reporting period

## 1.4 Evidence of Compliance

The following sources of evidence are used to demonstrate compliance:

1. internal tracking of compliance by Santos through for example: stakeholder engagement logs
2. outcomes from regulatory inspection conducted by the Department of Environment, Parks and Water Security (DEPWS Petroleum Operations)
3. recordable and reportable incident reports submitted to DEPWS Petroleum Operations
4. reports provided to DEPWS, the Department of Industry, Tourism and Trade (DITT) and other government agencies.

## 2.0 Demonstration of Compliance

Table 2 demonstrates Santos' compliance with Ministerial EMP approval conditions

**Table 2 Compliance with Ministerial EMP Approval Conditions**

No	Ministerial Condition	Compliance Status	Evidence
1	The approval is subject to the following conditions: a. Activities under this approval must commence within 12 months of the date of this approval.	Not Applicable	Commencement of activities conducted under this EMP were not within the current reporting period. Activities commenced within 12 months of the date of this approval as reported in the previous AEPR.



Table 3 provides a systematic overview of Santos' compliance with the environmental outcomes and environmental performance standards within the approved EMP.

**Table 3 Compliance with Environmental Outcomes and Environmental Performance Standards Dukas-1 – Conventional Gas Well EMP**

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
1	Minimise emissions to air Minimise disturbance to native fauna Minimise disturbance to native vegetation Minimise the impact on human health Minimise emissions to air Minimise disturbance to native fauna Minimise disturbance to livestock, pastoral infrastructure and landholders	Blade work is banned on naturally smooth surfaces or flat easy terrain. Minimal blade work is permitted elsewhere for access	Not Applicable	No regulated activities were undertaken during the reporting period.
2		Where possible, existing tracks, roads or seismic lines will be used for access.	Not Applicable	No regulated activities were undertaken during the reporting period.
3		No driving off designated access roads	Not Applicable	No regulated activities were undertaken during the reporting period.
4		Speeds on unsealed roads will be limited – maximum 60 km/hr for light vehicles, 40 km/hr for trucks and heavy vehicles.	Not Applicable	No regulated activities were undertaken during the reporting period.
5		Water trucks will be used for dust suppression as required.	Not Applicable	No regulated activities were undertaken during the reporting period.
6		All vehicles, plant and the drill rig will be in good working order. Engines and machinery are maintained in accordance with the maintenance schedule	Not Applicable	No regulated activities were undertaken during the reporting period.
7		All boundary lighting will be positioned to face inwards to provide adequate lighting for safe operations, without excessive overspill.	Not Applicable	No regulated activities were undertaken during the reporting period.
8		Ensure site environmental inductions for all site personnel and contractors include the issue of noise, vibration and light and	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
9		protective measures to prevent disturbance.	Not Applicable	No regulated activities were undertaken during the reporting period.
		Lighting used on drill site to minimise offsite disturbance, while maintaining safety standards.		
10	Minimise disturbance to native fauna	Existing noise attenuation devices fitted to drill rig and other machinery used on site will be maintained in good working order.	Not Applicable	No regulated activities were undertaken during the reporting period.
11	Minimise disturbance to landholders Minimise disturbance to livestock	Engines and machinery are maintained in accordance with the maintenance schedule.	Not Applicable	No regulated activities were undertaken during the reporting period.
12	Minimise disturbance to landholders	Maintain communications during operations with relevant landholders.	Not Applicable	No regulated activities were undertaken during the reporting period.
13	Minimise loss of vegetation Minimise disturbance to native fauna and loss of habitat	All personnel are given environmental and cultural heritage inductions prior to commencing work. Inductions for all employees and contractors cover pastoral, conservation, legislation and infrastructure issues	Not Applicable	No regulated activities were undertaken during the reporting period.
14	Minimise damage to soil through compaction and exposure Minimise disturbance or damage to culturally sensitive site	Activities to be planned to minimise new land disturbance by utilising previous disturbed areas or existing tracks (where possible), and through operational practices including weaving.	Not Applicable	No regulated activities were undertaken during the reporting period.
15		Staying within designated work areas and on approved roads.	Not Applicable	No regulated activities were undertaken during the reporting period.
16		Preference to use previously disturbed areas. Where possible, existing tracks,	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		roads or seismic lines will be used for access.		
17	Minimise loss of vegetation	Mature trees selected for preservation are to be flagged to ensure their protection	Not Applicable	No regulated activities were undertaken during the reporting period.
18		Cleared vegetation will be respread during rehabilitation	Not Applicable	No regulated activities were undertaken during the reporting period.
19		Branches will be pruned in preference to total tree removal	Not Applicable	No regulated activities were undertaken during the reporting period.
20	Minimise disturbance to native fauna and loss of habitat	Hollow timber/trees that may be nesting/roosting sites for fauna will not be cleared.	Not Applicable	No regulated activities were undertaken during the reporting period.
21	Minimise damage to soil through compaction and exposure	Grading will be minimised where possible. If light grading is necessary, flora rootstock will be left intact to promote regeneration.	Not Applicable	No regulated activities were undertaken during the reporting period.
22		The Erosion and Sediment Control Plan developed by a Certified Professional in Erosion and Sediment Control (CPESC) plan will be implemented.	Not Applicable	No regulated activities were undertaken during the reporting period.
23		Inversion of the soil profile will be minimised where possible	Not Applicable	No regulated activities were undertaken during the reporting period.
24		Disturbance is restricted to areas which have CLC clearance	Not Applicable	No regulated activities were undertaken during the reporting period.
25	No disturbance or damage to culturally sensitive site	Ensure a sacred site clearance certification will be obtained prior to any activity.	Not Applicable	No regulated activities were undertaken during the reporting period.
26		Known sites of sacred or cultural significance are identified and avoided.	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
27		Any new sites identified during the activity will be reported to the Santos Cultural Heritage Team and avoided.	Not Applicable	No regulated activities were undertaken during the reporting period.
28		Maintain GIS database of project footprint and cultural heritage sites including details of any Restricted Work Areas.	Not Applicable	No regulated activities were undertaken during the reporting period.
29		Groundwater impact risk assessment for the proposed extraction rates and durations will be undertaken and will determine if monitoring is required	Not Applicable	No regulated activities were undertaken during the reporting period.
30	No groundwater extraction impacting existing groundwater users/environment	Ensure groundwater take is limited to the small volumes required by the project.	Not Applicable	No regulated activities were undertaken during the reporting period.
31		Ensure appropriate licences are obtained prior to drilling program and that planned extraction is sustainable.	Not Applicable	On 20 February 2019, a phone call with DENR Water Resources hydrogeologist confirmed that as the project is not located within a Water Control District, and will not extract more than 15 L/s, no licence is required for groundwater extraction. Volumes sustainable.
32		If local water resources are used, bore numbers and estimated extraction volumes will be provided to DPIR.	Not Applicable	No regulated activities were undertaken during the reporting period.
33		Drivers will be appropriately qualified and will be trained in emergency response	Not Applicable	No regulated activities were undertaken during the reporting period.
34	Minimise disturbance to groundwater	Vehicles will have appropriate spill kits and staff trained in emergency response	Not Applicable	No regulated activities were undertaken during the reporting period.
35	Minimise reduction in soil quality	Travel Management Procedures are in place	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
36		Well bore integrity assessed prior to commencing drilling test.	Not Applicable	No regulated activities were undertaken during the reporting period.
37		Blow-out preventer in well	Not Applicable	No regulated activities were undertaken during the reporting period.
38		Cement bond logging completed	Not Applicable	No regulated activities were undertaken during the reporting period.
39		Well control procedures are in place including The Santos Drilling And Completions Technical Standards 7 - Well Control Onshore	Not Applicable	No regulated activities were undertaken during the reporting period.
40		Well design and weighted mud system in place and are known.	Not Applicable	No regulated activities were undertaken during the reporting period.
41		Real time monitoring of conditions during drilling including drilling monitoring & gas detection monitoring	Not Applicable	No regulated activities were undertaken during the reporting period.
42		Riser & diverter will be used to prevent mud spills	Not Applicable	No regulated activities were undertaken during the reporting period.
43		Pre-spud checks / Pre-job checks when transferring mud	Not Applicable	No regulated activities were undertaken during the reporting period.
44		Appropriate bunding in use for storage of chemicals and where required adherence to standards (e.g. Storage and Handling of Workplace Dangerous Goods National Standard [NOHSC:1015(2001)])	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
45		Real time monitoring of conditions during drilling.	Not Applicable	No regulated activities were undertaken during the reporting period.
46		Drilling Muds will be mixed in tanks.	Not Applicable	No regulated activities were undertaken during the reporting period.
47		Spill kits available to treat spills in-situ	Not Applicable	No regulated activities were undertaken during the reporting period.
48		Minimise fuel transfer where possible.	Not Applicable	No regulated activities were undertaken during the reporting period.
49		Use of drip trays for transfers.	Not Applicable	No regulated activities were undertaken during the reporting period.
50		Any spills contained and remediated.	Not Applicable	No regulated activities were undertaken during the reporting period.
51		Any spills will be remediated to the satisfaction of the landholder, fenced, soil removed to appropriate facility and signed off by land holder in accordance with the access.	Not Applicable	No regulated activities were undertaken during the reporting period.
52		Fuel and other lubricants will be appropriately stored and managed, in accordance with AS1940.	Not Applicable	No regulated activities were undertaken during the reporting period.
53		Relevant landowners and occupiers are notified prior to civil and drilling activities.	Not Applicable	No regulated activities were undertaken during the reporting period.
54		Unplanned interaction with or disturbance to other land users	Inductions for all employees and contractors cover pastoral, conservation, legislation and infrastructure issues.	Not Applicable

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
55		All litter is to be managed and disposed of correctly.	Not Applicable	No regulated activities were undertaken during the reporting period.
56		System is in place for logging landholder complaints to ensure that issues are addressed as appropriate.	Compliant	System is in place for logging landholder complaints. All complaints are logged using the Stakeholder Management section of the Santos EHS Toolbox The relevant Santos procedures and guides are: <ul style="list-style-type: none"> <li>SMS-GXA-OS01-PD02 External Complaints Procedure</li> <li>SMS-EXA-OS04-PD01 Access Management Procedure</li> <li>EHS Toolbox – Stakeholder Module</li> </ul>
57		Damage to station tracks is avoided and reported if does occur.	Not Applicable	No regulated activities were undertaken during the reporting period.
58		All gates are left in the condition in which they were found	Not Applicable	No regulated activities were undertaken during the reporting period.
59		Speeds on unsealed roads will be limited – maximum 60 km/hr for light vehicles, 40 km/hr for trucks and heavy vehicles and 20 km/hr around stock yards	Not Applicable	No regulated activities were undertaken during the reporting period.
60		When necessary, all fences are restored to satisfaction of landowner / managers.	Not Applicable	No regulated activities were undertaken during the reporting period.
61	Minimise disturbance to native fauna	No driving off designated access roads	Not Applicable	No regulated activities were undertaken during the reporting period.
62	Minimise disturbance to livestock, pastoral infrastructure and landholders	Speeds on unsealed roads will be limited – maximum 60 km/hr for light vehicles, 40 km/hr for trucks and heavy vehicles and 20 km/hr around stockyards.	Not Applicable	No regulated activities were undertaken during the reporting period.



No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
63	Minimise disturbance to native fauna	Pits and water bore ponds will be fenced	Not Applicable	No regulated activities were undertaken during the reporting period.
64		Routine checks of pits during construction and throughout the drilling program	Not Applicable	No regulated activities were undertaken during the reporting period.
65	Minimise disturbance to livestock, pastoral infrastructure and landholders	Relevant landowners and occupiers are notified prior to civil and drilling activities.	Not Applicable	No regulated activities were undertaken during the reporting period.
66		All gates are left in the condition in which they were found	Not Applicable	No regulated activities were undertaken during the reporting period.
67		When necessary, all fences are restored to satisfaction of landowner / managers.	Not Applicable	No regulated activities were undertaken during the reporting period.
68	Minimise disturbance to native fauna	Well site fire management protocol will be in place with monitoring	Not Applicable	No regulated activities were undertaken during the reporting period.
69		Fire-fighting equipment and competent fire-fighting personnel will be used	Not Applicable	No regulated activities were undertaken during the reporting period.
70		Include fire season education as part of the induction.	Not Applicable	No regulated activities were undertaken during the reporting period.
71		Appropriate fire prevention procedures in place.	Not Applicable	No regulated activities were undertaken during the reporting period.
72	Minimise disturbance to livestock	Appropriate firefighting gear available to the crew.	Not Applicable	No regulated activities were undertaken during the reporting period.
73	Minimise disturbance to landowners	All vehicles will be equipped with portable fire extinguishers.	Not Applicable	No regulated activities were undertaken during the reporting period.
74		Machinery and vehicles should be parked in areas of low fire risk and be low fire risk and be free of any combustible material	Not Applicable	No regulated activities were undertaken during the reporting period.



No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
75		Any petrol motor vehicles or petrol-powered pumps will be fitted with spark arresters.	Not Applicable	No regulated activities were undertaken during the reporting period.
76		All vehicles will be equipped with operational VHF and / or UHF radio transceivers.	Not Applicable	No regulated activities were undertaken during the reporting period.
77		Smoking will only be permitted in areas clear of vegetation, and there will be no disposal of butts.	Not Applicable	No regulated activities were undertaken during the reporting period.
78		All personnel will receive information prior to the commencement of the activity relating to: <ul style="list-style-type: none"> <li>Provisions of the Emergency Response Plan including procedures during a fire emergency</li> <li>The operation of firefighting equipment and communications</li> <li>Restricted smoking requirements</li> </ul>	Not Applicable	No regulated activities were undertaken during the reporting period.
79		Toolbox meetings will be conducted to: <ul style="list-style-type: none"> <li>Alert the workforce of the fire risk level for the day</li> <li>Discuss any fire risk management breaches and remedial actions</li> </ul>	Not Applicable	No regulated activities were undertaken during the reporting period.
80		The flare pit will be monitored during flaring	Not Applicable	No regulated activities were undertaken during the reporting period.
81	Minimise disturbance to native fauna	Weed wash-down certification for vehicle and machinery from interstate.	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
82	Minimise disturbance to native flora Minimise negative impacts to soil quality	Ensure site environmental inductions for all site personnel and contractors include vehicle weed hygiene requirements and information on exotic invasive ants.	Not Applicable	No regulated activities were undertaken during the reporting period.
83	Minimise disturbance to livestock	All vehicle and equipment movements to stay on formed access tracks, well leases and camp areas.	Not Applicable	No regulated activities were undertaken during the reporting period.
84		Ensure vehicles, machinery and equipment entering the permit areas have been cleaned and are free of soil and vegetative matter, or have a valid weed hygiene certificate.	Not Applicable	No regulated activities were undertaken during the reporting period.
85		A baseline weed assessment has been completed prior the commencement of works covered in this EMP. This baseline assessment will be used to provide benchmarks for post-project monitoring.	Not Applicable	No regulated activities were undertaken during the reporting period.
86		To minimise spread of buffel grass from the south to the north of the project area, road works will be completed in the northern areas first and transporting soil material from the south to the north will be minimised.	Not Applicable	No regulated activities were undertaken during the reporting period.
87		Baseline data will be collected in consultation with the Department of Environment and Natural Resources (DENR) and data will be provided to DENR in a format to be specified by them.	Not Applicable	Baseline Weed Assessment was included in the Weed Management Plan. This was provided in the previous reporting period.
88		Areas of priority weeds identified will be marked.	Not Applicable	No regulated activities were undertaken during the reporting period.
89		If infestations of priority weed species are identified during baseline assessment they	Not Applicable	No regulated activities were undertaken during the reporting period.

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
		will be avoided via a detour around the infestation if within line tolerance.		
90		If infestations are unavoidable, infestations will be crossed at the narrowest point and wash downs will be conducted once exiting the infestation.	Not Applicable	No regulated activities were undertaken during the reporting period.
91		To minimise pest fauna interactions, municipal wastes and putrescible food wastes will be stored in sealed containers that limit access from Rock Doves and Sparrows	Not Applicable	No regulated activities were undertaken during the reporting period.
92		All water storages will be fenced to exclude large herbivorous fauna (Camels and Donkeys)	Not Applicable	No regulated activities were undertaken during the reporting period.
93		Pits will have sufficient storage capacity to ensure there is an adequate freeboard, ensuring the highest recorded monthly rainfall can be accommodated.	Not Applicable	No regulated activities were undertaken during the reporting period.
94		Sump and flare pit levels will be monitored for overflow during and after high rainfall at all times while drilling	Not Applicable	No regulated activities were undertaken during the reporting period.
95	Minimise disturbance to surface water Minimise reduction in soil quality	Soil sampling will include a baseline sample to drilling, sampling sump fluid post drill and sampling cuttings when dried out	Not Applicable	No regulated activities were undertaken during the reporting period.
96		Cuttings burial or removal subject to sampling results	Not applicable	Dukas 1ST1 did not reach the primary reservoir target and was plugged and suspended for future re-entry and deepening. As a result the lined cuttings pit remains in place for future activity. The cuttings pit has been fenced off with temporary fencing with a second fence barrier around the well lease to prevent animal ingress. Liquid in the cuttings pit is expected to entirely evaporate and the cuttings to dry out. Laboratory certificates of analysis show that cuttings

No	Environmental Outcome	Environmental Performance Standard	Compliance Status	Evidence
				sampling occurred on 3 October 2019. Additional analysis is required prior to cuttings disposal. Re sampling of these pits occurred on 6 May 2021. Cuttings disposal will be completed either prior to or following future activity at the project site.
97	Minimise disturbance to groundwater	Cuttings pit will be constructed with a liner	Not Applicable	No regulated activities were undertaken during the reporting period.
98		Cuttings pit will be inspected to check the integrity of the liner	Not Applicable	No regulated activities were undertaken during the reporting period.
99		Cuttings pit liner will be removed at the completion of project activities during demobilisation and rehabilitation activities prior to being backfilled.	Not Applicable	Dukas 1ST1 did not reach the primary reservoir target and was plugged and suspended for future re-entry and deepening. As a result, the lined cuttings pit remains in place for future activity. The cuttings pit has been fenced off with temporary fencing with a second fence barrier around the well lease to prevent animal ingress. Liquid in the cuttings pit is expected to have entirely evaporate.
100		Groundwater monitoring will be undertaken to ensure leaching is not occurring.	Compliant	Groundwater monitoring at site has been undertaken and will recommence at least one month prior to any operations occurring.
101	Minimise disturbance to native fauna	Waste will be segregated on site and all putrescible waste material will be held in fauna proof containers.	Not Applicable	No regulated activities were undertaken during the reporting period.

Table 4 demonstrates Santos compliance with reporting requirements in the Code of Practice: Onshore Petroleum Activities in the Northern Territory (Code of Practice) and interest holder's compliance with reporting requirements under the Petroleum (Environment) Regulations 2016 (NT) schedule 1, item 11(2), which requires all information required to be recorded, monitored or reported has been provided. Where relevant, Santos has also

confirmed that all records, monitoring or required reporting under the Petroleum (Environment) Regulations 2016 (NT)<sup>1</sup> has been provided to DENR or the relevant NTG agency.

**Table 4 Compliance with Mandatory Reporting Requirements**

No	Reference	Requirement	Compliance Status	Evidence
1	Code cl A.3.5	Geospatial information depicting areas cleared is to be provided to the Minister.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
2	Code cl A.3.6 (b)	Weed management plan developed as part of the EMP must provide for ongoing weed monitoring.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
3	Code cl A.3.7(a)vi	The fire management plan developed as part of the EMP must provide for annual fire mapping to monitor changes to fire frequency in the relevant areas.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
4	Code cl A.3.9(c) Code cl A.3.9(e)	The rehabilitation plan developed as part of the EMP requires progressive rehabilitation of significantly disturbed land which is required to commence no longer than 12 months following the cessation of activities on the land. It also requires regular maintenance and annual monitoring of rehabilitated areas.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
5	Code cl B.4.13.2(c)	As a minimum, the following must be recorded and reported for each stage (where a stage in this context means all fluids pumped at a particular depth interval):	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations

<sup>1</sup> Petroleum (Environment) Regulations 2016 (NT) sch 1, item 11(2).

No	Reference	Requirement	Compliance Status	Evidence
		<ul style="list-style-type: none"> <li>a) total volume of hydraulic fracturing fluid pumped,</li> <li>b) quality of water used (tested for analytes in section C.8 of this Code. Analyses do not need to be repeated if the same water source is used for multiple stages) and</li> <li>c) typical and maximum concentrations of chemicals or other substances used.</li> </ul>		
6	Code cl B.4.13.2(k)iv	Where venting is the only technically feasible option for managing produced gas, the technical considerations preventing the use of the recovered gas must be recorded and included in the operator's annual report.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
7	Code cl B.4.14.2(c)	All new barriers or new well operating envelopes must be verified and clearly documented and reported by submission of an updated well barrier integrity validation (WBIV) report to DPIR.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
8	Code cl B.4.15.2(j)	Complete and accurate records of the entire decommissioning procedure must be kept, with these records submitted as part of the legislative reporting requirements for the decommissioning of petroleum wells.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
9	Code cl B.4.17.2(d)	Any guidelines published by the Northern Territory Government from time to time relating to reporting and data submission, and groundwater monitoring data standards must be followed.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
10	Code cl C.3(e)	The components of the wastewater management framework, include: Monitor,	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations

No	Reference	Requirement	Compliance Status	Evidence
		manage and report in accordance with the Wastewater Management Plan and Spill Management Plan.		
11	Code cl C.6.1(d)	Wastewater tracking documentation must be reported to the Minister at least annually in accordance with the framework (Spill Management Plan and Wastewater Management Plan) outlined in the EMP	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
12	Code cl C.7.1(d)ii	Wastewater Management Plan must include a program for monitoring and reporting against the effectiveness of the measures for the mitigation of interaction with wildlife, stock and human receptors with wastewater.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
13	Code cl D.4.3.2(f)	A written report detailing the levels of methane measured, the duration of the unusual readings and the results of the investigation (including remedial actions) must be submitted within one month of the significantly higher-level methane event being detected.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
14	Code cl D.5.9.2(c)	Emissions from exploration, well construction (including during flowback) and workovers must be measured and reports submitted.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
15	Code cl D.5.9.3(a)	Where natural gas is vented or flared at a gas processing or other downstream facility, emissions must be estimated and reported.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations

No	Reference	Requirement	Compliance Status	Evidence
16	Code cl D.6.1	All mandated government reporting is complied with; and all detectable leaks and emissions are reported on an annual basis.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
17	Code cl D.6.2(a)	Reports of baseline assessments must be submitted at the conclusion of each field campaign.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
18	Code cl D.6.2(b)	Emissions reporting must be in accordance with Section D.5.6. Emissions associated with venting and flaring as described in Section D.5.9 must be provided separately to the Northern Territory Government in accordance with this Code.	Not Applicable	Not applicable, approved prior to Code being incorporated into Regulations
19	Reg 14	A current EMP remains in force until the interest holder notifies the Minister the activity is no longer being carried out and all of the environmental outcomes and obligations under the plan have been met, and the Minister advises the interest holder the notice is accepted and the plan ceases to be in force.	Compliant	The EMP remains in force.
20	EMP s 9.4 Ongoing Consultation Schedule 1, item 9(2)	Interest holders are required to conduct future engagement with stakeholders, in accordance with the description in the EMP.	Compliant	Stakeholder engagement logs indicate that engagement with stakeholders has been undertaken and this engagement continues.
21	EMP s 7.6 Reporting Reg 33	DENR is notified of reportable incidents within 2 hours of the interest holder becoming aware of the incident, or within 2 hours of the incident occurring.  A written report must be provided within 24 hours if the initial report was made orally.	Not Applicable	There were no reportable incidents during this period.



No	Reference	Requirement	Compliance Status	Evidence
22	EMP s 7.6 Reporting Reg 34	Reports on reportable incidents are to be provided to DENR as soon as practicable and within 72 hours of the event occurring.  A final report must be provided to DENR within 30 days after remediation/cleanup of the affected area.	Not Applicable	There were no reportable incidents during this period.
23	EMP s 7.6 Reporting Reg 35	A written report of all recordable incidents must be provided to DENR not later than 15 days after the 90 day reporting period (unless otherwise agreed).	Partially Compliant	Reports on all recordable incidents were provided: <ul style="list-style-type: none"> <li>• 1<sup>st</sup> report provided 29/05/2020, 1 day late.</li> <li>• 2<sup>nd</sup> report provided 24/08/2020, met timeframe.</li> <li>• 3<sup>rd</sup> report provided 19/11/2020, met timeframe.</li> <li>• 4<sup>th</sup> report provided 23/02/2021, met timeframe.</li> </ul>
24	Reg 37A	A report about flowback fluid from hydraulic fracturing must be provided to the Minister within 6 months of the flowback occurring.	Not Applicable	The regulated activity did not include hydraulic fracturing.
25	Reg 37B	A report about produced water from hydraulic fracturing must be provided to the Minister within 6 months of the produced water being extracted.	Not Applicable	The regulated activity did not include hydraulic fracturing.
26	Schedule 1, item 12	Interest holder must notify the Minister, occupier of the land and owner of the land on which the activity is to be carried out <b>before</b> commencement of activity.	Not Applicable	Regulated activity did not occur during the reporting period. The regulated activity commenced on 26 February 2019. The Minister, landholder and land occupier were notified prior to the regulated activity commencing.
27	EMP Section 7.2	EMP Performance Report to be provided to DPIR within three months of completion of the activity and full de-mobilisation of Plant and Equipment.	Not Applicable	Activities on site are yet to be completed. The well is currently plugged and suspended for possible future re-entry and deepening.

## 3.0 Summary of Compliance

### 3.1 Overview of Compliance

Table 5 provides a summary of the results of the compliance assessment against the 129 total compliance items.

**Table 5: Compliance Summary**

Compliance Indicator	Number	Percentage
Compliant	4	3.1
Partially Compliant	1	0.8
Not Compliant	0	0
Not Applicable	125	96.1

### 3.2 Overview of Items Found Not Compliant or Partially Compliant

The following sections describe:

- the specific compliance requirements not met for the reporting period
- an analysis of the possible potential environmental harm or impact to environmental values resulting from non-compliance or partial compliance, using multiple lines of evidence
- a summary of the corrective actions already implemented, and further actions still required, as applicable, to ensure compliance is fully achieved in the future.

#### 3.2.1 Regulatory Reporting

##### 3.2.1.1 Description

Recordable Incidents Summary Reports were not lodged within 15 days of the reporting period. One of the four reports was 1 day late.

##### 3.2.1.2 Analysis of Potential Environmental Harm or Impact

There was no potential for environmental harm or impact.

##### 3.2.1.3 Corrective Actions

Santos will submit recordable incident reports for this EMP as required. The requirement to submit recordable incident reports for this EMP has been added to Santos' compliance tracking system.

### **3.3 Application of Lessons Learned Across Santos' Onshore Interests**

Santos will submit recordable incident reports for this EMP as required. The requirement to submit recordable incident reports for this EMP has been added to Santos' compliance tracking system. In addition, the dates for reporting on Santos' EMPs has been streamlined and there is now only one date each quarter for all EMPs.