



Australia's National  
Science Agency

**GISERA** | Gas Industry Social and Environmental Research Alliance

# Progress report

Environmental baseline characterisation of the springs in Hot Springs Valley, NT



# Progress against project milestones

Progress against milestones/tasks are approved by the GISERA Director, acting with authority in accordance with the GISERA Alliance Agreement.

Progress against project milestones/tasks is indicated by two methods: Traffic light reports and descriptive Project schedule reports.

1. Traffic light reports in the Project Schedule Table below show progress using a simple colour code:

- **Green:**

- Milestone fully met according to schedule.
- Project is expected to continue to deliver according to plan.
- Milestone payment is approved.

- **Amber:**

- Milestone largely met according to schedule.
- Project has experienced delays or difficulties that will be overcome by next milestone, enabling project to return to delivery according to plan by next milestone.
- Milestone payment is withheld.
- Milestone payment withheld for second of two successive amber lights; project review initiated and undertaken by GISERA Director.

- **Red:**

- Milestone not met according to schedule.
- Problems in meeting milestone are likely to impact subsequent project delivery, such that revisions to project timing, scope or budget must be considered.
- Milestone payment is withheld.
- Project review initiated by GISERA Director.

2. Progress Schedule Reports outline task objectives and outputs and describe, in the 'progress report' section, the means and extent to which progress towards tasks has been made.

## Project schedule table

TASK NUMBER	TASK DESCRIPTION	SCHEDULED START	SCHEDULED FINISH	COMMENT
1	Stakeholder consultation, access and permission (landowners & TO)	01 Sept 2023	31 Jan 2025	
2	Hydrogeological architecture/fluid flow path models	01 Sept 2023	06 June 2024	Completed
3	Field geology mapping & sampling	01 Jul 2024	31 May 2025	
4	GHG survey, analysis & interpretation	01 May 2024	31 Mar 2025	
5	Water Sampling, laboratory analysis and interpretation	01 May 2024	31 Mar 2025	
6	Terrestrial ecology survey, analysis & interpretation	01 May 2024	31 Mar 2025	
7	Data integration and conceptual model development	01 Sept 2024	31 Mar 2025	
8	Project reporting	01 Sept 2023	31 May 2025	
9	Communicate findings to stakeholders	01 Sept 2023	30 Jun 2025	

## Project schedule report

### **TASK 1: Stakeholder consultation, access, and permission (landowners & TO)**

This task is due for completion 31 January 2025.

### **TASK 2: Hydrogeological architecture/conceptual fluid flow paths model**

#### **BACKGROUND**

The Hot Spring Valley is located along the northern part of the major fault systems of the OT Downs fault zone that is bounding the northern part of the eastern Beetaloo Sub-basin. These regional fault systems are likely to have accommodated episodes of fluid flow as old as 1645-1640 My and are targeted for mineral exploration as potential fluid pathways for ascending metalliferous brines.

They are likely to have been reactivated through the more recent tectonic history of the region with current hot springs such as Lagoon Creek springs and Beauty Creek springs (Frery et al., 2022). There are existing geological, geophysical and hydrogeological data that can be compiled and interpreted in a desktop study to develop conceptual models that allow for targeted field data collection. There is existing knowledge with Northern Territory Government about the Hot Springs Valley.

**TASK OBJECTIVES**

Conduct a desktop study to develop more comprehensive hydrogeological architecture/fluid flow path models integrating existing geological, geophysical, satellite remote sensing & other associated relevant data as to define the field work zones of interest. This task will also involve compilation of all existing Hot Springs Valley data (e.g., hydrogeology and hydrochemistry) and engagement with Northern Territory Government staff to capture as much existing information as possible.

**TASK OUTPUTS AND SPECIFIC DELIVERABLES**

- Compiled dataset and hydrogeological architecture/fluid flow path conceptual model for the springs of the Hot Spring Valley.
- Field work plan for additional data collection.

**PROGRESS REPORT**

This milestone is complete, the compilation of the datasets has been completed and the field work plan for additional data collection has been made, with fieldwork scheduled to start on 10 August 2024 for 7-10 days.

## Variations to Project Order

Changes to research Project Orders are approved by the GISERA Director, acting with authority, in accordance with the GISERA Alliance Agreement. Any variations above the GISERA Director’s delegation require the approval of the relevant GISERA Research Advisory Committee.

The table below details variations to research Project Order.

Register of changes to Research Project Order

DATE	ISSUE	ACTION	AUTHORISATION

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GISERA is a collaboration between CSIRO, Commonwealth and state governments and industry established to undertake publicly-reported independent research. The purpose of GISERA is to provide quality assured scientific research and information to communities living in gas development regions focusing on social and environmental topics including: groundwater and surface water, greenhouse gas emissions, biodiversity, land management, the marine environment, and socio-economic impacts. The governance structure for GISERA is designed to provide for and protect research independence and transparency of research.