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Report

RioTinto

Assessment of Brine & Water Resources

Rev0 – 2nd September 2025

The Assessment of Brine & Water Resources Report, prepared for the mining activities planned for the Rincon Project (hereinafter, the Project) of Rincon Mining Pty Limited (hereinafter, RMPL), was developed to provide a summary of the assessments completed to-date and the ongoing/future planned work programs with respect to the brine and water resources of the Rincon Basin.

It is assumed that the reader of this document has read the April 2024 ESIA prepared for the Rincon Project (which is disclosed on the IFC website), submitted to Salta's Mining Authority on 14th April 2024 and approved on 26th August 2025 under DIA Resolution No. 101/2025.

The Project consists of the construction and subsequent operation of a plant with a production capacity of 50,000 tonnes per annum (tpa) of lithium carbonate (Li₂CO₃), battery grade, organized in two production trains of 25,000 tpa each. The production of this plant will be added to that of the 3,000 tpa commercial demonstration plant in operation since May 2025 (approved under resolution 009/2023), resulting in a total production of 53,000 tpa of battery grade lithium carbonate, once both projects are in full operation (estimated to be by 2029/2030).

Where this document references documents disclosed on the IFC website, only a very summarized version of the results are provided herein. Deliverables prepared to align with IFC Performance Standards that are not disclosed on the IFC website are described in more detail throughout this document.

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Assessment of Brine & Water Resources Report

Draft– August 2025

1 Executive Summary

Rio Tinto are currently in the process of developing the Rincón Project which will exploit the lithium hosting brines of the Salar del Rincón to produce battery-grade lithium carbonate. The Measured Resources are estimated at 4.9 million tonnes (Mt) of lithium carbonate equivalent (LCE) and the Indicated Mineral Resources are estimated at 0.9 (Mt) LCE. The Inferred Mineral Resource is estimated at about 6 Mt of LCE. The Proven plus Probable Mineral Reserve is estimated at 2 Mt LCE (over a life of mine (LOM) of 40 years).

The Rincon Project is located in the province of Salta, in the Puna Region of Argentina, approximately 270 km west of its capital, the city of Salta. The nearest town to the Rincon Project is San Antonio de los Cobres, which is located approximately 110 km away. The Rincon Project is at approximately 3,725 meters above sea level.

The Project area is characterized by a cold and arid climate, where precipitation is highly seasonal, occurring predominantly between December and March. Evaporation rates significantly exceed precipitation, resulting in a negative water balance typical of endorheic basins in Puna environments. Climate projections suggest a potential decrease in mean monthly precipitation in the coming decades, although the frequency and intensity of extreme rainfall events may increase.

The Rincon Project area is a highly complex hydrogeological setting, characterized by a salar nucleus situated at the centre of the basin, surrounded by extensive alluvial fans, colluvial deposits and low-permeability bedrock.

The Rincon Basin functions as a closed hydrological system, with groundwater recharge approximately balanced by evaporation losses and no surface outflows. Under these conditions, the water resources of the basin are highly sensitive to both climatic variability and anthropogenic extraction.

Brine and water resources are critical aspects for the Project. The processing of the lithium-rich brine which exists within the central salar, will require a raw (industrial) water supply which is currently proposed to be sourced from the Catua Alluvial Fan. The Catua Alluvial Fan is contiguous with the salar, which hosts the lithium brine deposit, and the interrelationship of these systems is a key aspect of the Project.

It is proposed that extensive wellfields will be installed in the salar and Catua Alluvial Fan to abstract the lithium brine and raw water, respectively. Spent brine will be managed utilizing a Spent Brine Disposal Facility (SBDF) which will be located in the northwestern interzone, where the spent brine will either naturally evaporate or infiltrate into the underlying sediments.

Within the salar, groundwater is characterized by lithium-rich brines hosted in a series of hydrogeological units, including fractured halite, black sands and interbedded clays of variable permeability. At multiple locations along the western salar margin, shallow clay layers have been identified beneath wetlands (vegas) and shallow lagoons. These low-permeability strata may act as hydraulic barriers, partially isolating some surface water features from the deeper lithium hosting brine system.

The underlying bedrock, composed of Paleozoic and Tertiary formations, exhibits very low permeability and storage capacity. Groundwater flow within this unit is generally restricted to localized fault zones or weathered sectors, where secondary porosity and permeability are enhanced.

This Catua Fan comprises interbedded clays, silts, sands and gravels, with the sand and gravel horizons generally exhibiting high porosity and good hydraulic conductivity. Recharge to Catua Fan occurs through the infiltration of precipitation, rainfall runoff and stream flows, and lateral inflows of groundwater originating from the adjacent bedrock. Groundwater within the fan typically flows southwards towards the salar. Hydrogeological investigations have delineated a lower salinity water lens, which exists above the higher salinity brines, with thicknesses of up to 35 meters within the proposed raw water wellfield area.

Various brine and water related assessments have been completed across the Rincon Basin in order to:

- Advance the understanding of the climate, hydrology, geology and hydrogeology of the Rincon Basin.
- Evaluate the lithium resources and reserves of the Rincon Basin and develop a brine wellfield suitable of meeting the Project's lithium requirements.
- Evaluate the raw (industrial) water resources across the Project area, focused on the Catua Alluvial Fan aquifer but also considering alternate raw water supply options.
- Define a sustainable raw (industrial) water supply from the Catua Alluvial Fan and develop a raw (industrial) water wellfield suitable of meeting the Project's raw (industrial) water requirements.
- Assess the hydraulic interrelationship between the Rincon Salar and the surrounding alluvial fans (i.e. interaction between the salar brines and lower salinity water within the surrounding colluvial/alluvial sediments).
- Assess the potential impact of combined abstraction of both the brine resource and raw water on the surrounding water environment.

Data acquisition, site investigations, assessments and modelling have been undertaken as part of an initial Pre-Feasibility Study, followed by a Feasibility Study and subsequent Environmental & Social Impact Assessment.

A conceptual hydrogeological model and subsequent numerical groundwater model has been developed for the Rincon Basin, based on a robust dataset consisting of more than 150 wells, pumping tests, and long-term monitoring programs. The numerical groundwater model and the resource/reserve estimations have been developed following international best practice guidelines and standards. This integrated approach provides a sound technical foundation to characterize the dynamics of both lithium resources and raw (industrial) water within the Rincon Basin, enabling their responsible and sustainable management over the life of the project.

2 Introduction

Rio Tinto are currently developing the Rincón Lithium Project (the Project) located in the Salar del Rincón, Los Andes Department - Province of Salta, Argentina. The Project will exploit the lithium hosting brines of the Salar del Rincón to produce battery-grade lithium carbonate.

2.1 Topography, Physiography, Elevation, and Vegetation

The Altiplano-Puna region is the second largest high-altitude plateau in the world and is the location of numerous brine resources containing elevated concentrations of lithium among several other specific elements of economic interest (Houston et al., 2011a). The Puna is a depression in altitude with a general elevation of approximately 3,800 meters above sea level (mASL), surrounded by high mountains. The region is characterized by a series of mountain ranges that are fault blocks which rise from 1,000 meters to 2,000 meters above the average elevation of the Puna. Drainage areas separate these ranges, most of which have a salt flat (salar) located within the depressions between the mountain peaks.

To the south of Salar del Rincón there are mountains of andesitic volcanic origin exceeding 5,000 mASL (i.e. Cerros Tul-Tul, Del Medio, and Pocitos). The northern and western boundaries of the Rincon basin are characterized by ash flow tuffs and andesitic lavas associated with the volcanic activity of Cerro Rincón (elevation of 5,600 meters mASL). The Sierra de Guayaos range bounds the eastern margin of the salar, comprising rudaceous sedimentary rocks tilted eastwards.

Salar del Rincón landscape is typical of the Puna region, with a dry climate and scarce vegetation. There is generally an absence of green vegetation, with only isolated patches in small watering places or mudflats. There are few vulnerable, rare, or endemic fauna and flora species.

2.2 Climate

The climate at Salar del Rincón is arid and cold, high-altitude climate (BWk, cold desert; or EB, high-mountain tundra according to the Koppen-Geiger classification) with scarce vegetation. Solar radiation and evaporation rates are high, especially during spring and summer months (October through March). Precipitation occurs irregularly during the austral summer months (December to March) and at times can result in flooding conditions.

In December 2006, Rincon established a weather station at the salar, 15 km northwest of the mine camp, which was in operation until 2009. In June 2009, the weather station was relocated to the vicinity of the camp (Planta Piloto station), and in June 2012, a new weather station was installed 4 km south of the current camp (Piletas station). The locations of these stations are shown on Figure 1. These stations record data including air temperature, relative humidity, solar radiation, wind velocity and direction, atmospheric pressure, and rainfall.

Bianchi et al. (2005) published a database including approximately 30 years of historic monthly precipitation and temperature data from weather stations operated by the General Belgrano Railroad (FCGB), including weather stations at Unquillal, Salar de Pocitos, Olacapato, Mina Concordia, and San Antonio de los Cobres (illustrated in Figure 2). This data record extends through to 1990. Other weather stations with publicly available data are also presented on Figure 2.1 are Fénix Camp (Conhidro, 2019) and Tincalayu (Houston and Jaacks, 2010).

Monthly average temperatures at the Rincon Project site generally range between 1°C in the winter and 13°C in the summer, with minimum and maximum temperatures ranging from -6°C to 22°C, respectively.

Precipitation at the Rincon Project site is irregular and predominantly occurs between December and March. Precipitation typically occurs in intense, but often very localised, storms that may only affect parts of the basin at any one time. Available precipitation data from the on-site meteorological stations for the period 2011 to 2022 is summarised in Table 1 and presented in Figure 2.

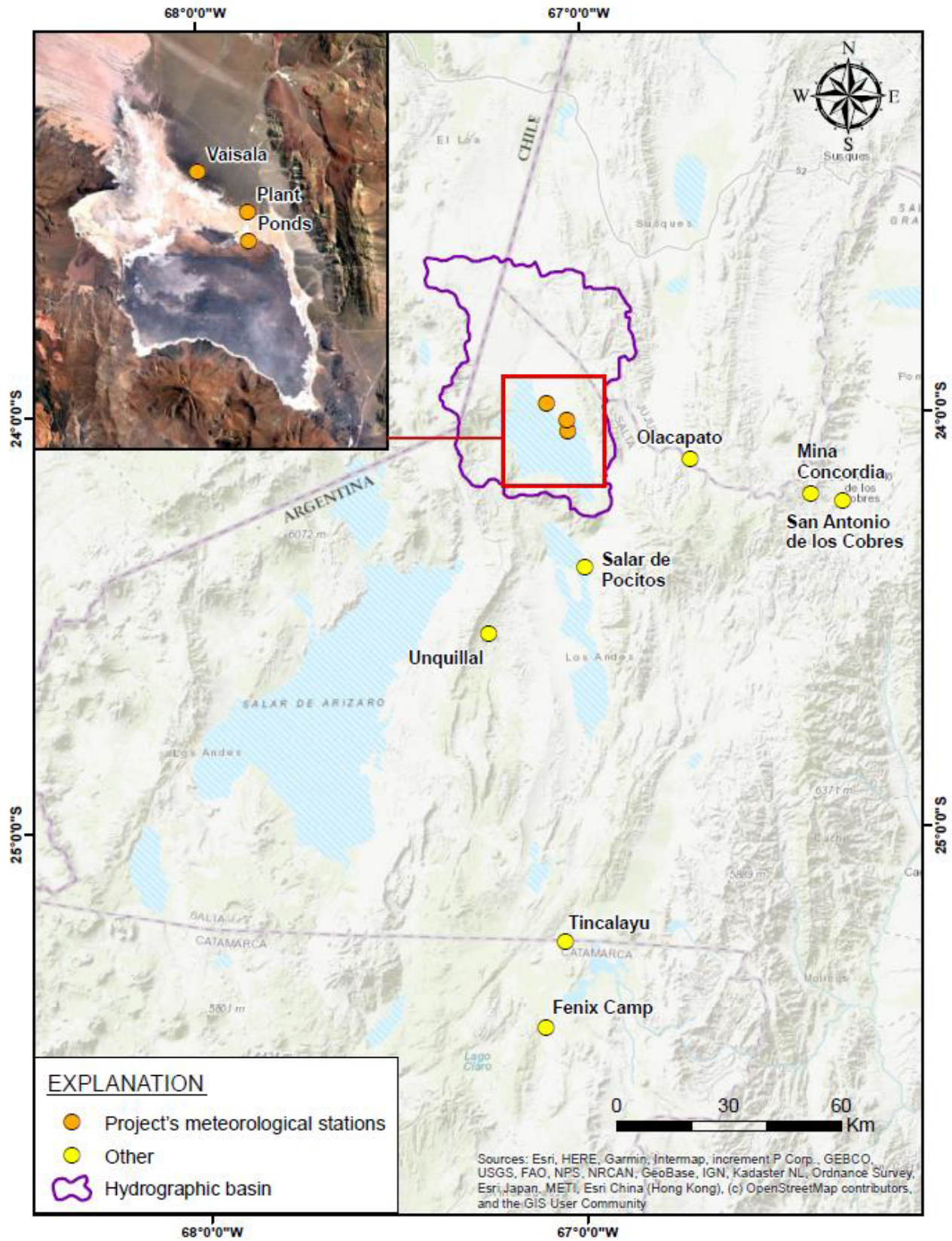


Figure 1: Regional and Local Meteorological Stations (Mongomery, 2021)

Table 1: Annual & Monthly Precipitation (On-Site Meteorological Stations 2011-2022)

Precipitation (mm)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2011	36.2	52.8	13.2	0.6	0	0	6.2	0	0	0.2	0	11.6	120.8
2012	41.4	78.4	7.6	4.2	0	0	0	0	0	0	0	1	132.6
2013	62.38	36.55	0	0	5.57	0.5	0	0	0	0	0	1.26	106.26
2014	51.86	7.08	0	0.75	0	0	0	0	0	0	0	0	59.69
2015	17.48	35.99	25.86	0	0.25	0	0	4.06	0	0	0	0	83.64
2016	1.52	23.76	12.87	20.72	18.3	0	0	0	0	0	0	0	77.17
2017	43.09	56.69	7.35	0.5	2.28	0.25	0	0	0	0	0	0	110.16
2018	29.88	41.24	1.51	0	0	0	0	0	0	0	0	0	72.63
2019	38.2	79.57	0	1	0	0	0	0	0	0	0	0	118.77
2020	40.8	27.66	23.06	0	0	1.02	0	0	0	0	0	0	92.54
2021	13.68	6.09	2.01	0	6.83	0	0.75	0	0	0	0	69.23	98.59
2022	54.02	0.25	-	-	-	-	-	-	-	-	-	-	54.27
Ave	35.88	37.17	8.50	2.52	3.02	0.16	0.63	0.41	0.00	0.02	0.00	7.55	93.93

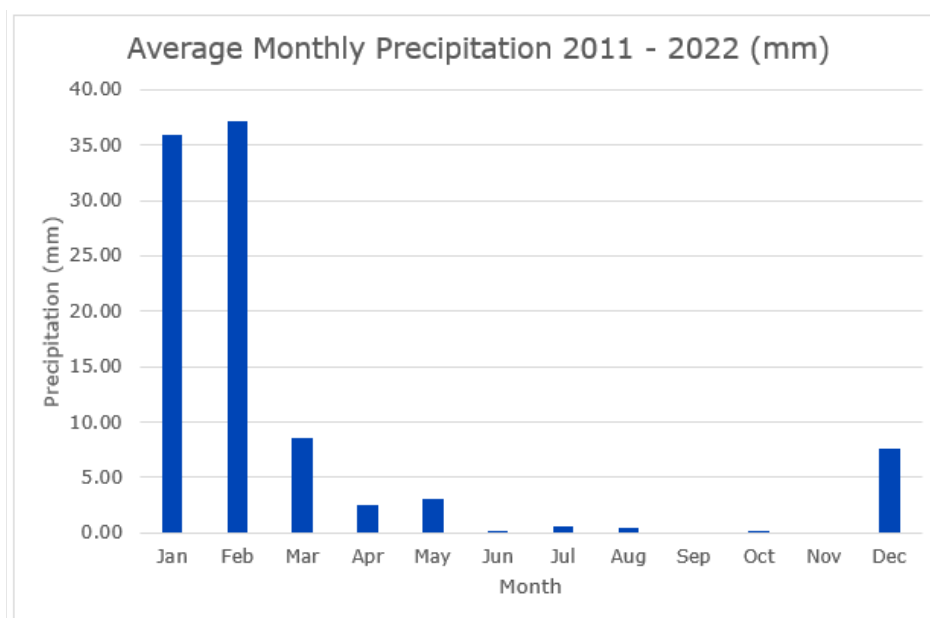


Figure 2: Average Monthly Precipitation (On-Site Meteorological Stations 2011-2022)

Inter-annual precipitation variability is large in the Puna; while the average annual rainfall over the 10 driest years recorded in Unquillal, which has a 40-year record, was 12 millimeters per year (mm/yr), the average rainfall in Salar del Rincón during the 2011-2022 period was 94 mm/yr. The average of the merged precipitation record for the Rincón meteorological stations (“Vaisala” station, “Plant” station, and “Ponds” station), spanning from 2007 to 2021, is 81 mm/yr.

Average snow precipitation (snow water equivalent), snowmelt, and sublimation rates were estimated using the Snow Water Equivalent reconstruction method (Raleigh and Lundquist, 2012) in Salar del Rincón Water Balance (Appendix 5A; Montgomery, 2021). Snow precipitation events occur mostly in the west and northwest areas of the basin, specifically near the international border in the area of Cerro Rincón, Quebrada Lari, Pampa Sico, and the upper Huatiquina River basin. The following table shows the estimated

rainfall for Salar Rincón. The total precipitation across the Rincon Basin including both snowmelt and rainfall for the 2007-2021 period was estimated to be approximately 87.4 mm/yr.

Potential evaporation rates, estimated using the Penmans Equation (Penman, 1948) from available meteorological data, range from 4.0 mm/day in June to 9.5 mm/day in December, with an average annual evaporation of 6.7 mm/day (2,445 mm/yr).

Predictions of future climate change across the Rincon Basin have been completed through to 2090 (CLIMsystems, 2022). The predictions suggest that the monthly mean precipitation will decrease over the time period 2005 to 2090, however, the amount of precipitation during extreme precipitation events will increase over the same time period. A linear relationship of the mean values provided was developed and the data from 2020 to 2062 suggested an approximate 8% reduction in monthly mean precipitation.

Four new weather stations (Pompon, Airstrip, Camp and Central Salar) were installed across the Rincon Project area in 2025. The location of the new weather stations is illustrated in Figure 3 and the meteorological parameters being monitored are detailed in Table 2. The on-going meteorological data from these new weather stations will be assessed to advance understanding of the various relevant climatic parameters and the variability of these parameters across the Rincon Basin both spatially and seasonally.



Figure 3: Locations of New Weather Stations – Rincon Basin

Table 2: Meteorological Parameters Monitored at New Weather Stations

Description	Unit
Wind Speed	meter_per_second
Wind Direction	degree
Wind Speed 10 Min AVERAGE	meter_per_second
Wind Direction 10 Min AVERAGE	degree
Wind Speed 1 Min GUST	meter_per_second
Wind Direction 1 Min GUST	degree
Atmospheric Temperature	celsius
Relative Humidity	percentage
Dew Point	celsius
Barometric Pressure	hectopascal
Accumulated Precipitation last 5 Min	millimeter
Total Precipitation	millimeter
Average Precipitation Intensity last 5Min	millimeter_per_hour
Average Global Horizontal Irradiance last 5Min	watt_per_square_meter
Accumulated Global Horizontal Irradiance last 5Min	watt_hour_per_square_meter
Average Horizontal UV Irradiance last 5Min	watt_per_square_meter
Average UV Index last 5Min	none
Snow Height	centimeter
Average Black Globe Temperature last 5Min	celsius
Average Wet Bulb Temperature last 5Min	celsius
Average Natural Wet Bulb Temperature last 5Min	celsius
Average Wet Bulb Globe Temperature last 5Min	celsius
ET0 5Min	millimeter
Wind Sensor Compass Heading	degree
Bucket RT	millimeter
Accumulated Precipitation last 60 Min	millimeter
Average Precipitation Intensity last 60Min	millimeter_per_hour
Average UV Index last 60Min	none
Average Black Globe Temperature last 60Min	celsius
Average Wet Bulb Temperature last 60Min	celsius
Average Natural Wet Bulb Temperature last 60Min	celsius
Average Wet Bulb Globe Temperature last 60Min	celsius
ET0 60Min	millimeter

2.3 Hydrological Setting

The Rincon Basin comprises a closed drainage basin that is drained by eight different sub-catchments (Figure 4). There are three main streams, the Huaytiquina, Pompon and Catua streams in the northern part of the basin, which flow either across or adjacent to the Catua Alluvial Fan as illustrated in Figure 5. Water in these three streams infiltrates into the underlying Catua Alluvial Fan and flows are typically highest in the streams immediately after large rainfall events. During the dry season it is likely that the upper reaches of these streams receive water via groundwater baseflow contributions and residual snowmelt.

During the wet season flooding can occur within the salar; Figure 6 illustrates the flooding observed in the Project area in February 2018 (with flooding indicated by the dark blue areas on the satellite imagery).

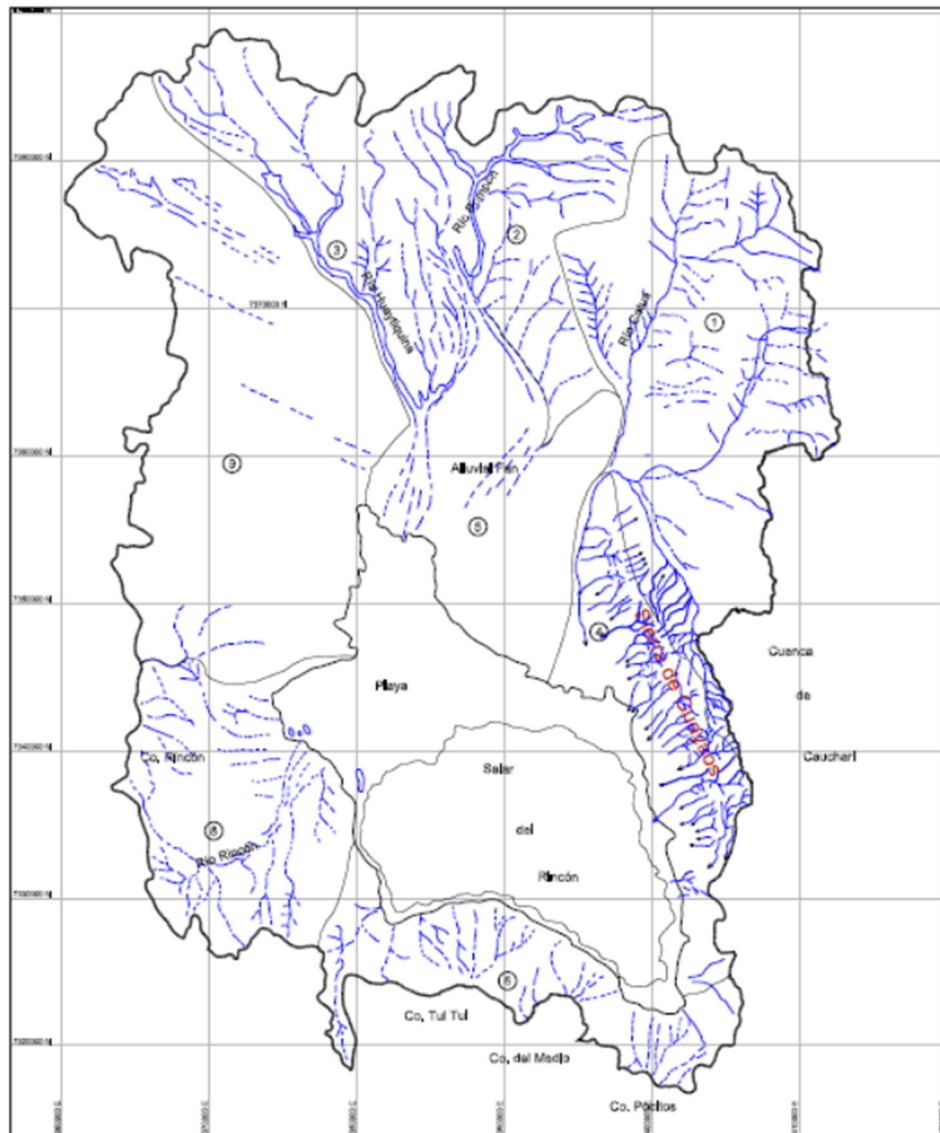


Figure 4: Sub-Catchments and Surface Water Features in the Project Area (SRK, 2015)

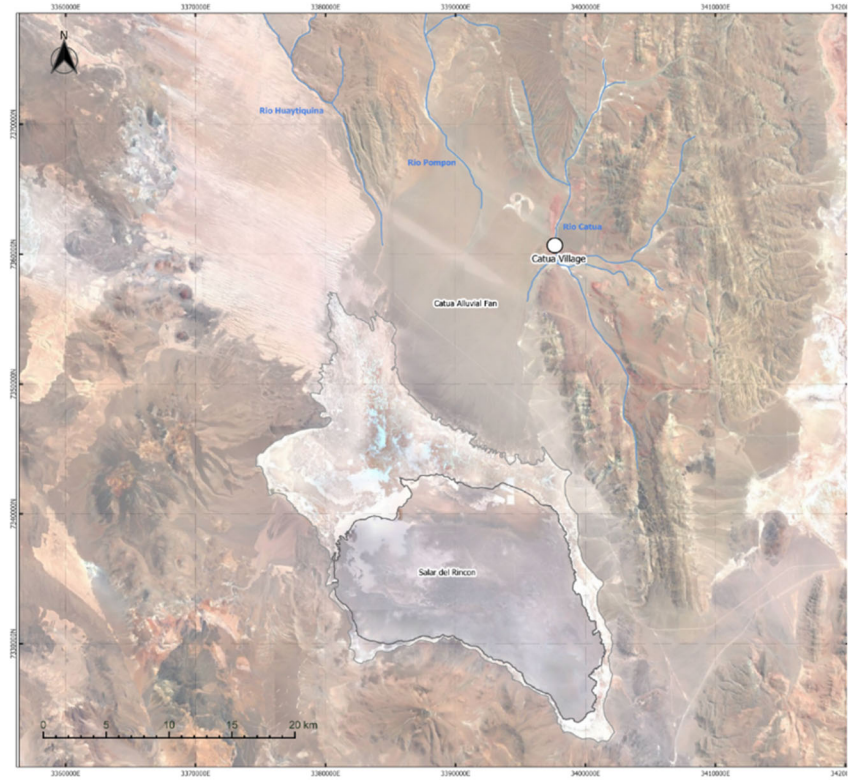


Figure 5: Three Main Streams draining to Catua Alluvial Fan

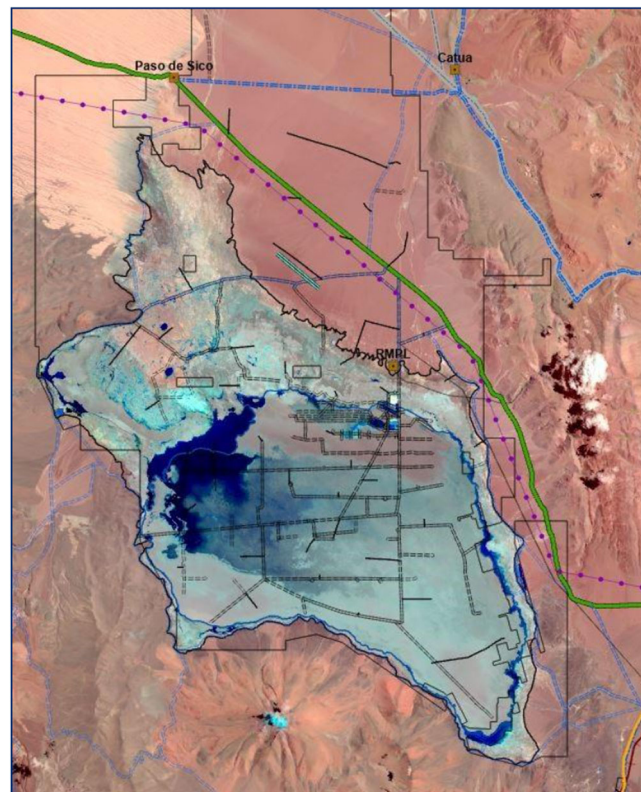


Figure 6: Extent of Flooded Areas (February 2018)

2.4 Surface Water Features

Different types of surface water related features occur within the Rincon Basin. The three main rivers which exists in the northern part of the catchment (the Huaytiquina, Pompon and Catua Rivers) are discussed in Section 2.3. In addition, to these three rivers there are various springs, lagoon and wetlands (meadows) within the Rincon Basin. In the eastern mountains there are various mountain springs and associated vegas (including Pena Guayaos, Vega Faldeo Cienago and Vega Amarilla) which are situated in the upper mountain valleys and are perched water bodies isolated from the salar brines. Along the western margin of the salar nucleus, where the colluvial/alluvial sediments meet the salar, there are a number of vegas including Vega Rincon, Vega Unquillar and Vega Saladillo. Vega Rincon is fed by a spring, with high quality water, which emerges from the slopes to the west of the vega and has an associated ephemeral lake (Laguna Negra) which often forms on the Salar sediments. The Rincon Lagoon is a perennial water body that exists along the western margin of the salar nucleus and is of high ecological value. Extremophile bacteria were identified in the vicinity of many of these surface water features, which is discussed in detail in the Critical Habitat Assessment (ERM 2025b).

Two Ojos de Agua (water eyes) were identified on the western margin of the proposed SBDF. Extremophile bacteria exist within these Ojos de Agua and as such they are considered critical biodiversity features. The Ojos de Agua are currently located a minimum of 250m from the western boundary of Cell B of the proposed SBDF. The SBDF was specifically designed with a 250m buffer zone between the perimeter of the SBDF and the Ojos de Agua. However, the recently received DIA stipulates that this buffer zone needs to be increased to 700m. In accordance with this DIA requirement, the SBDF will be redesigned and the numerical groundwater model updated accordingly.

There is no carbonate platform (travertine) confining layer at the two Ojo de Agua locations, as such unconfined groundwater conditions exist (compared to confined conditions elsewhere in SBDF area) and the brine in the Ojos de Agua is at ground level. The Ojos de Agua are vertical shafts of brine, one is currently estimated as approximately 30m deep and the other is 15 m deep. There is ongoing brine and biodiversity monitoring, field investigation and pilot laboratory studies associated with the Ojos de Agua to advance understand of their origin, any season variability and their resilience to the changing conditions which may occur due to the Rincon Operation.

The locations of the key vegas, lagoons and Ojos de Agua are illustrated in Figure 7. The origin and conceptual hydrogeology of the key vegas, lagoons and Ojos de Agua is discussed in detail in Section 5.

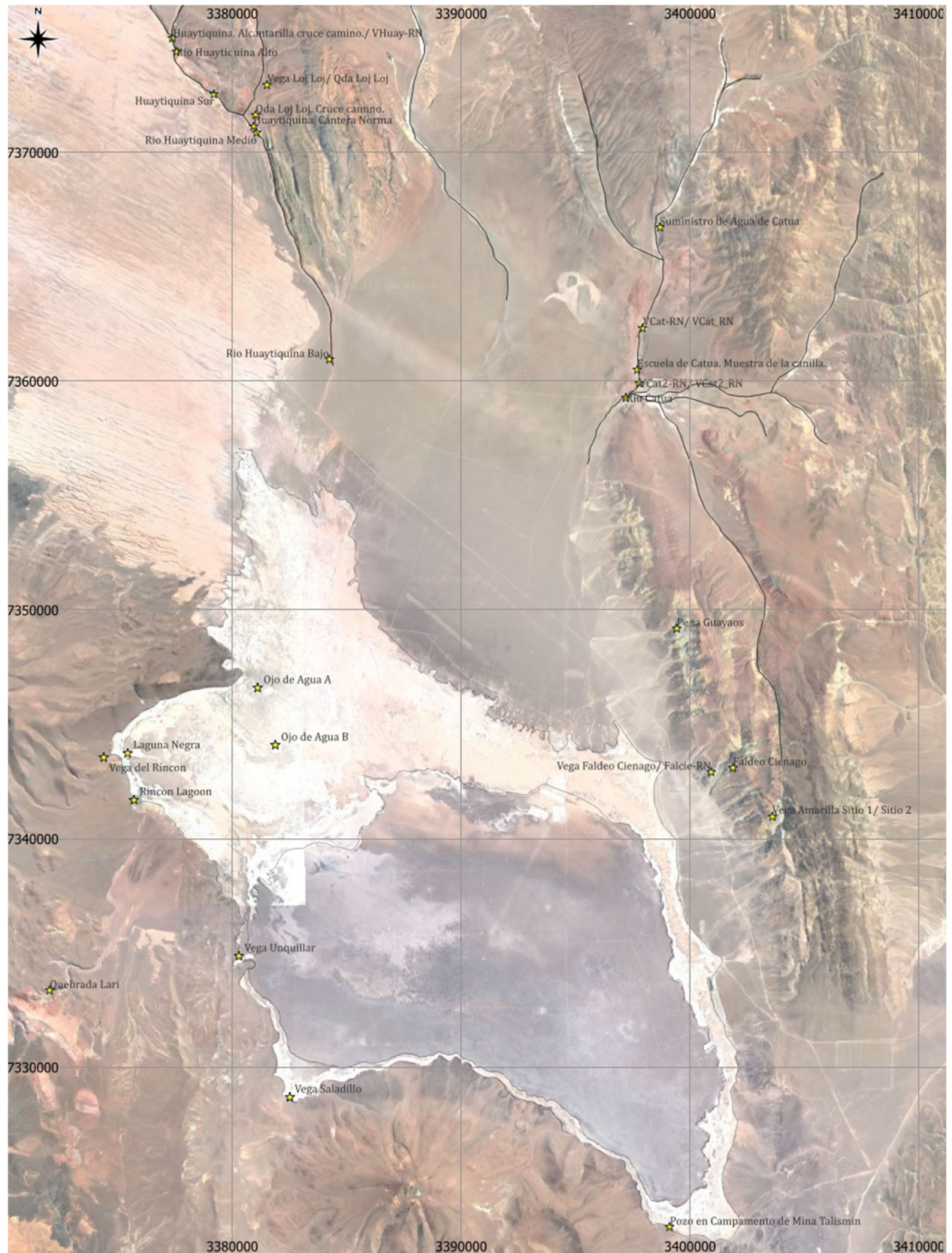


Figure 7: Vegas, Lagoons & Ojos de Agua

2.5 Hydrogeological Setting

The Project area comprises three primary hydrogeological domains, Alluvium-Colluvium, Salar Deposit and Bedrock (as indicated in Figure 8).

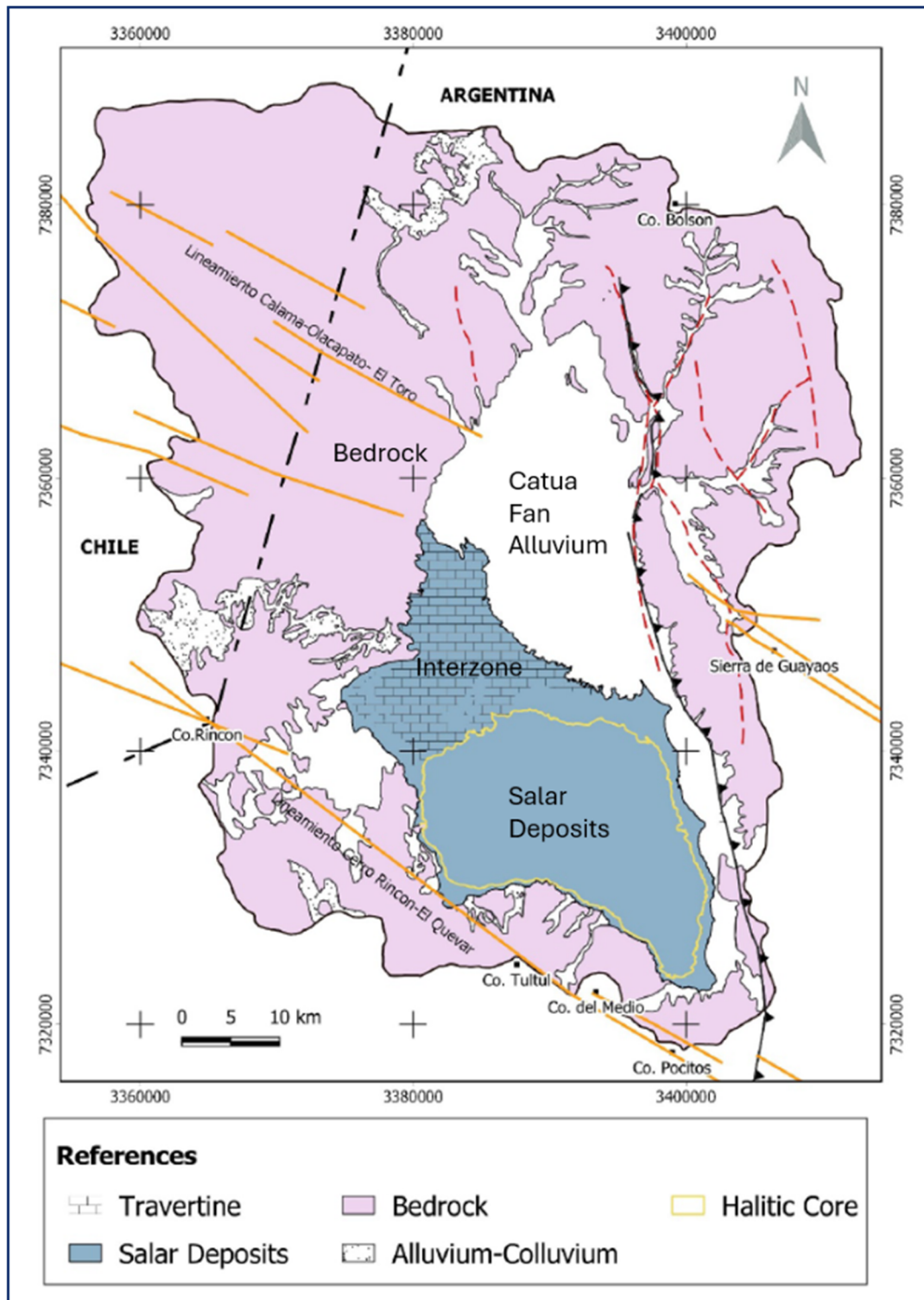


Figure 8: Hydrogeological Domains within the Project Area (SLR, 2022)

The salar deposits host the lithium-rich brine aquifers. The salar deposits consist mainly of salt pan or halitic core, saline mudflat or playa, fine-grained clastic sediments, and travertine. The salar deposits are over 300m in some locations (greater than 311 meters thick in exploration well B3, in the centre of the salar nucleus). Exploration drilling throughout the Rincon basin has identified the following major sub-units, although generally interbedded and often occurring at different positions throughout the stratigraphic column:

- Travertine
- Gypsum clay, gypsum arenite, and gypsum
- Fractured halite
- Competent or massive halite
- Clay
- Silty sand and sand
- Black sand (non-cemented to well cemented)
- Mirabilite and ulexite

Layers of clay are found throughout the salar, but are more prevalent towards the northern salar margin, around the margins of the salar nucleus and at the distal zones of the surrounding alluvial fans (which is consistent with standard sediment transport and deposition dynamics associated with alluvial fans, with sediment size reducing towards the toe of the fan). Drilling campaigns have identified the presence of clay layers beneath wetlands and lagoons along the western margin of the salar, suggesting potential hydraulic isolation between the shallow surface water linked features (vegas and lagoons) and the deeper brine systems.

An extensive carbonate (travertine) platform exists along the northern and northwestern margin of the salar nucleus.

The Bedrock consists of low-permeability Cenozoic (Tertiary) and Paleozoic (Ordovician) rocks that form the hydrogeological basement. The bedrock underlies the marginal colluvium/alluvium and salar deposits and also surrounds them forming the topographical highs of the Rincon basin. The bedrock is considered to have low storage and low hydraulic conductivity. Groundwater flow within the bedrock is typically small, although localized zones of enhanced groundwater flow are associated with faulting and fractures that permit flow along discrete pathways or in shallow weathered zones where changes in mineralization can result in enhanced porosity and permeability.

The Colluvium-Alluvium deposits are situated on the margins of the salar, particularly in the areas to the north, east and west of the salar. The Catua Alluvial Fan is currently the key hydrogeological unit with respect to raw (industrial) water supply for the Project. The Catua Alluvial Fan is located to the north of the salar.

The general geological sequence across the Catua Alluvial Fan comprises a thick sequence (up to 160m) of unconsolidated sand and gravel units with interbedded silts and clays. The alluvial sand and gravel component of the Catua Alluvial Fan forms the primary aquifer units. These alluvial sand and gravel aquifer units are believed to be thickest in the central and southern area of the fan and generally thin to the north, east, and west towards the edges of the fan.

Hydraulic properties for the Catua Alluvial Fan aquifer units have been obtained from historical pumping tests. The hydraulic conductivity of the alluvial deposits is highly variable depending upon the composition.

The clean alluvial sand and gravel units have moderately high hydraulic conductivity values and relatively large storage. Because the units are generally unconsolidated, groundwater flow will generally occur primarily through pore spaces between grains.

Groundwater levels have been monitored in wells located across the Catua Alluvial Fan since 2012. Recorded water levels from wells located within the alluvial sand and gravel component of the Catua Alluvial Fan generally range from approximately 50 metres below ground level (mbgl) in the southern portion of the fan to approximately 150 mbgl in the northern portion of the fan and have remained relatively constant over the monitoring period.

The Catua Alluvial Fan is recharged by the direct infiltration of rainfall, surface water runoff and streamflow that infiltrates into the alluvial deposits as it flows across the fan and lateral groundwater inflows. Discharge from the Catua Alluvial Fan occurs as evaporation, spring flows/seepages around the margins of the salar and groundwater inflows to the salar. The groundwater flow direction is generally north to south mirroring the surface topography.

Lower salinity groundwater resources exist in the form of fresh to brackish water lenses, overlying brine within the alluvial aquifer of the Catua Fan. Currently available data suggests that the fresh/brackish water lenses present within the sand and gravels deposits varies in thickness up to approximately 35m in the proposed raw water wellfield area of the Catua Alluvial Fan.

2.6 Water Balance

The Rincon Basin is considered to be an endorheic (closed) drainage basin with no outflow to external water bodies. The current water balance for the Rincon Basin is based on the underlying conceptualisation that the system within the basin is at equilibrium, with total recharge equal to evaporation, with groundwater storage approximately constant (Montgomery, 2025).

A water balance is a fundamental and conceptual understanding of the underlying hydrological processes in the basin. Montgomery prepared a conceptual, pre-development water balance in 2021 for Rincón Mining Pty Ltd and revised it in 2025. The objectives of this study were to (1) develop ranges of potential precipitation recharge, (2) develop ranges of potential evaporative discharge from the salar area, (3) provide a preliminary range of groundwater recharge for basin-fill sediments and (4) compute a conceptual water balance for the system. For endorheic basins in the Puna, such as Rincon Basin, the drainage network converges to an internal terminal zone – the salar. The salar is a critical feature for any water balance assessment because it is the principal form for water to naturally leave the system via evaporative discharge. The principal feature of a water balance is that the inflows are equal to the outflows and changes in storage, and thus, water recharge is in dynamic equilibrium to the evaporation. For this reason, the water balance study focused on characterizing the salar area to understand the overall water balance of the watershed.

Inflows (or recharge) were estimated using the following components:

- Average rainfall in the basin using 3 meteorological stations located at Salar del Rincon and publicly available stations outside of the basin
- Total precipitation for the basin by using the average rainfall and snowmelt estimate
- Potential evaporation, or open water evaporation, from meteorological stations
- Recharge sub-basins delineations to distinguish zones where precipitation directly infiltrates the ground or where precipitation can flow laterally on top of the surface to recharge another area.

Figure 9 illustrate the delineated sub-basins for precipitation recharge. Only direct recharge zones that were superficially connected with basin-fill sediments were considered.

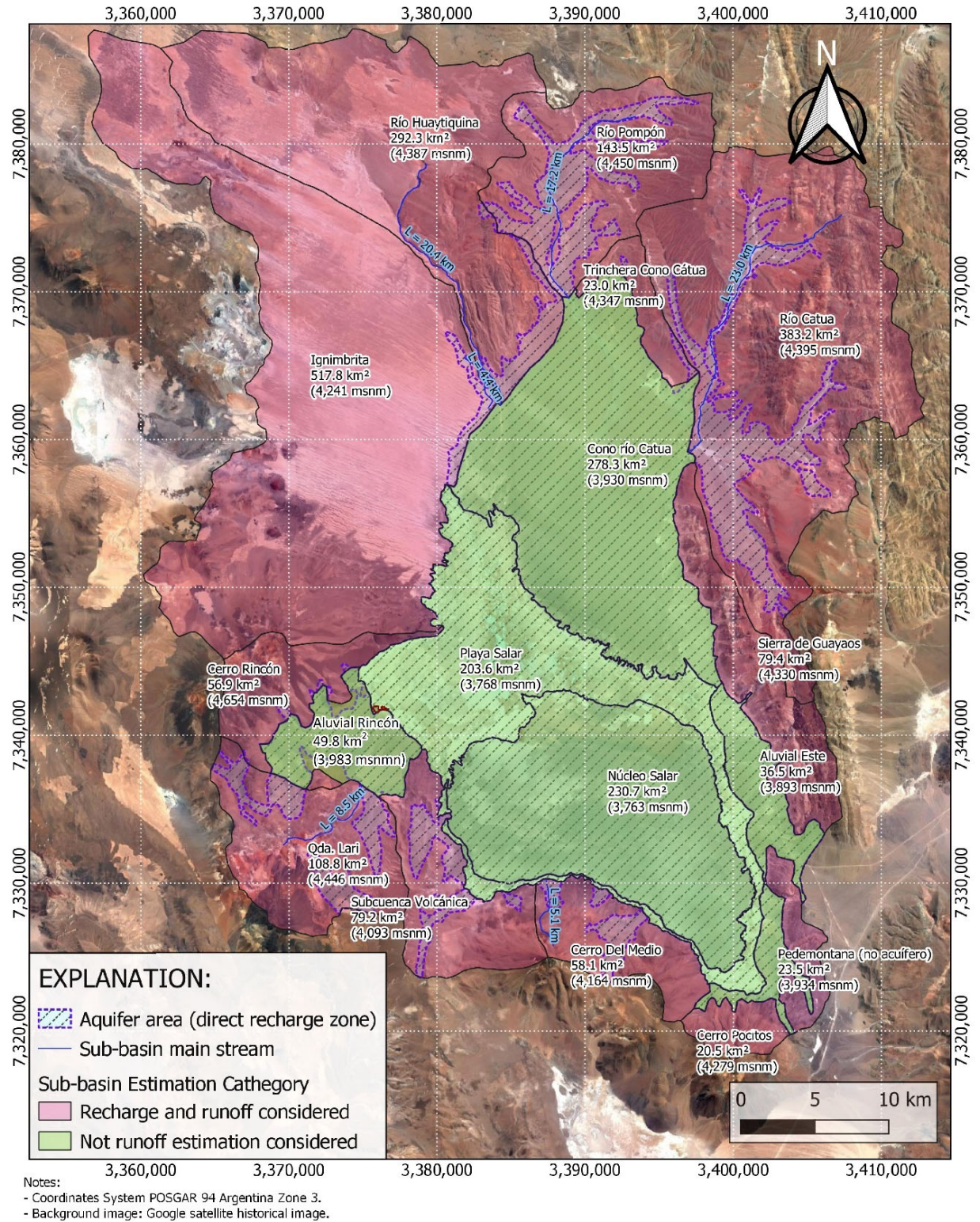


Figure 9: Delimited Sub-Basins for Precipitation Recharge Estimation

Outflow (or discharge) was estimated for the salar as the principal evaporative element from the aquifer using the following components:

- Define the terminal area where evaporation from the aquifer concentrates.
- Remote sensing analysis of seasonal images from 1984 to 2024 to determine and delineate where evaporation and evapotranspiration occurs in the salar by distinguishing between open water, vegetation, and high moisture soil to low moisture soil.
- Estimate the rate at which evaporation discharge occurs for the different remote sensing analysis classifications using 3 sensitivity scenarios: low, medium, and high evaporation rates.
- Compute a volumetric evaporation discharge.

The inflows and outflows were assessed with the different sensitivities of evaporation. The total volumetric precipitation was estimated as 7,220 L/s. Recharge to the salar is primarily from lateral groundwater movement to the evaporative surface and direct precipitation. The estimated annualized conceptualized water budget for the salar area is provided in Table 3.

Table 3: Annualized Conceptual Water Budget for the Salar Area

Component for Groundwater	Liters per Second	Million Cubic Meters per Year
Inflows		
Recharge to the Salar Nucleus and Margin	1,020 – 1,370	32.2 – 43.2
Outflows		
Evapotranspiration from the Salar Nucleus and Margin	1,020 – 1,370	32.2 – 43.2
Difference		
Difference between Inflow – Outflow	0	

Based on the total volumetric precipitation of 7,220 L/s and outflow from the salar area of 1,370 L/s, the watershed conceptually has 6,200 L/s of additional input, which could be some combination of either (1) evaporated or sublimated water from land surface or vadose zone before deep infiltration (i.e. it does not become an inflow to the aquifer) or (2) infiltrates and is evaporated from the aquifer elsewhere in the basin. The additional 6,200 L/s input was not evaluated to distinguish between these 2 conditions.

On-going climate and water monitoring (including isotope studies) will greatly assist with furthering the understanding of the flow mechanisms operating across the Rincon Basin, will increase confidence in recharge estimates and will facilitate subsequent updates of the water balance for the Rincon Basin.

3 Water Studies

A significant number of investigations and studies have been completed to develop an in-depth understanding of the water environment within the Rincon project area. In addition, there are ongoing and future work programs focussed on advancing the hydrogeological understanding of the Rincon Basin, with a particular focus on furthering the understanding of the brine and water resources of the Rincon Basin, reducing the risk of impact associated with the Project's influence on the water environment and increasing the certainty of model predictions. A water management strategy and road map and an adaptive water management plan have been developed for the project. Details of previously completed, ongoing and proposed future water related studies are detailed in this section of the report.

The key water related activities associated with the Project include:

- the abstraction of lithium bearing brines from the Salar,
- the abstraction of raw water from the Catua Alluvial Fan, and
- the infiltration of spent brine from the SBDF.

These activities may influence brine and water flows, levels and quality within the Rincón Basin. These changes in the groundwater environment have the potential to impact surface water features (e.g., streams, springs, lagoons, etc.), vegas (e.g., wetlands) *puesteros' aljibes* (e.g., hand dug wells) and the Ojos de Agua which exist within the Rincón Basin, which in turn has the potential to impact the biodiversity and local communities that interact with these features.

3.1 Hydrogeological Drilling & Testing Programs

Numerous hydrogeological investigations have been undertaken across the Rincon Basin, focussed on the lithium brine resource, freshwater resources and various surface water related features. A summary of the hydrogeological investigations completed across the Rincon Basin prior to Rio Tinto acquisition in early 2022 and post Rio Tinto acquisition is provided within this section of the report.

3.1.1 Drilling & Testing Programs – Pre Rio Tinto Acquisition

The first known formal inspection of the Rincón Salar was performed by the German scholar Fritz Reichert (Reichert 1907). Subsequently, it was studied by Luciano Catalano between 1923 and 1927 (Catalano, 1927).

In 1977 the National University of Salta and its Institute of Mineral Beneficiation (INBEMI) assessed several salars in the Argentinean Puna, including the Rincón Salar. The first recorded surface brine samples were extracted from the Rincon Salar in 1977 (Poppi et al., 1977).

Hydrogeological drilling and testing programs completed in the Rincon Basin include:

1988: 16 diamond drill holes and a total of 682 meters (m) of drilling (Igarzábal, 1989).

2006/2007:

- 7 large rotary drilled WR-series and 14 diamond drilled PR-series holes in an east-west orientation across the centre of the Rincon Salar.
- Well WW-1 was drilled within the Catua Alluvial Fan area, to approximately 60 metres below ground level (mbgl); backfilled to approximately 35mbgl and casing/screen installed to a depth of approximately 32mbgl.

2010 and 2012:

- Multiple drilling and exploration campaigns across the Rincon Salar, comprising 112 holes, total of 8,293m of drilling, and individual hole depths ranging from 18 to 311m.
- Geophysical survey in 2011 along the Provincial Route 37 and the National Route 51.

- Drilling, installation and hydraulic testing of the W-series wells (W1-W5) in the south-eastern portion of the Catua Alluvial Fan. W2 is currently used as a production well.

2013: Drilling and exploration campaigns in the central area of Rincon Salar, consisting of 27 holes, a total of 1,265.5m of drilling and individual hole depths ranging from 30 to 126.5m.

2014/2015: A 30-day pumping test at PW-1 and a black sands exploration drilling campaign.

2015: An exploration program including:

- Drilling and installation of two monitoring wells (PzW2 and PzW5) in the vicinity of existing pumping wells W2 and W5, to be used as observation wells.
- Drilling and installation of seven wells (WS-3 to WS-9).
- Drilling and installation of two shallow monitoring wells (SMW-H1 and SMW-H2).
- Down-hole geophysical wireline logs of each hole.
- Single well constant rate pumping tests: WS-4, WS-6, WS-7, WS-8, WS-9 and SMW-H2.
- Airlift tests: WS-3 and WS-5.
- Pumping tests with observation wells: W2 (PzW2) and W5 (PzW5).

2016: Additional pumping tests were completed on three of the W-series wells:

- Single well pumping tests were completed on wells W3 and W4.
- Single well pumping test completed on W5, with monitoring also in PzW5.

2020/2021: Drilling campaign focused on the northwest Carbonate Platform playa area of the Rincon Salar and western sectors of the salar nucleus. A total of 8 exploration diamond drillholes of HQ diameter were drilled, ranging in depth from 64.5 to 151m. Forty core samples for porosity testing (RBRC), grain size, and density measurements were collected and 34 depth-specific intervals were sampled for brine using an inflatable packer. AquaTroll surveys for temperature and electrical conductivity were conducted at several of the sites.

2013-2021: Operational pumping tests:

- Step rate tests were completed on W2 annually or twice annually to assess performance.

A summary of the historical hydrogeological drilling and hydraulic testing programs completed prior to Rio Tinto acquisition is provided in Table 4.

Table 4: Drilling and Testing Summary – 1988 to 2021

Year	Hole Series	Drilling Method	Number of Holes	Drilling (metres)	Max Depth (metres)	Hydraulic Testing	Geophysical Survey	Completed By
1988	P	BQ (36.5 mm) Core	16	682	62	-	-	Salta University
2007	WR, PR, WW	BQ Core and Rotary	22	1,009	60	-	x	Rincón Lithium
2010-2011	A, B, C, E, EE,	HQ (63.5 mm) Core and Rotary	114	8,384	311	-	-	Rincón Lithium
	Ex, F, G, H,					-	-	
	Pz, PD10, W					x	x	
2012	W	Rotary	2	190	109	x	-	Enirgi
2013	J	HQ Core and Rotary	27	1,265	127	x	-	Enirgi
2014	PW	HQ Core and Rotary	6	208	48.5	x	-	Enirgi
2015	WS, BS	HQ Core and Rotary	17	2,354	281	x	x	Enirgi
	W, PzW, SMW	Rotary	11	-	-	x	x	
2020-2021	K	HQ Core	8	1,038	151	-	x	Rincon Mining Pty Ltd

3.1.2 Drilling & Testing Programs – Post Rio Tinto Acquisition

An extensive hydrogeological exploration drilling, well installation, downhole geophysical survey, water/brine sampling, electrical conductivity profiling and hydraulic testing program was initiated across the Rincón Basin in mid-2022, with drilling of the first hole commencing in August 2022. This hydrogeological exploration program focussed on the salar nucleus, interzone, Catua Alluvial Fan, Ignimbrites, environmentally sensitive areas and the periphery of the salar (where land access has allowed). This hydrogeological exploration program has provided critical insights on lithologies, hydraulic properties, hydraulic interconnection, water/brine quality, surface water/groundwater interaction and the entire water environment across the Rincón Basin. The hydrogeological exploration program was completed in September 2024, in line with completion of the Feasibility Study and comprised the following:

Geological and hydrogeological investigations across the Rincon Salar, Intermediate zone and Catua Alluvial Fan areas:

- 80 diamond drillholes of HQ diameter, ranging in depth from 49m to 882.5m. A total of 14,682m of drilling. Representative holes were completed as monitoring wells.
- 311 core samples collected for porosity testing, grain size, and density measurements and 260 samples for vertical hydraulic conductivity. Duplicates of 6 porosity samples, were sent to Australia for tomography analysis.
- Collection and analysis of 234 depth-specific interval brine samples.
- Drilling and construction of 54 rotary wells, for test pumping and completion as monitor wells.
- 28 pumping tests in the black sand and alluvial fan aquifers.
- 41 downhole geophysical logs, which typically included a Borehole Magnetic Resonance (BMR) survey (total porosity, specific yield), caliper, resistivity, fluid temperature, electrical conductivity, brine conductivity, and natural gamma-ray logging.

Geotechnical field investigations conducted in the SBDF area:

- 18 exploration diamond drillholes of HQ diameter, ranging in depth from 15m to 80m. A total of 454m of drilling. Holes were completed with 2-inch diameter PVC casing to allow for subsequent water monitoring.

Environmental field investigations conducted in vicinity of surface water features (discussed in more detail in Section 3.2):

- 9 shallow exploration diamond drillholes of HQ diameter. Holes were completed with 2-inch diameter PVC casing to allow for subsequent water level monitoring.
- Hand augering of 18 shallow exploration drillholes ranging in depth from 0.5 to 3 m. Holes were completed with 1 or 2-inch PVC casing to allow for subsequent water level and water quality monitoring.

The holes drilled across the Rincon Basin post Rio Tinto acquisition, from August 2022 to June 2024, as part of the Hydrogeological Exploration program are illustrated in Figure 10.

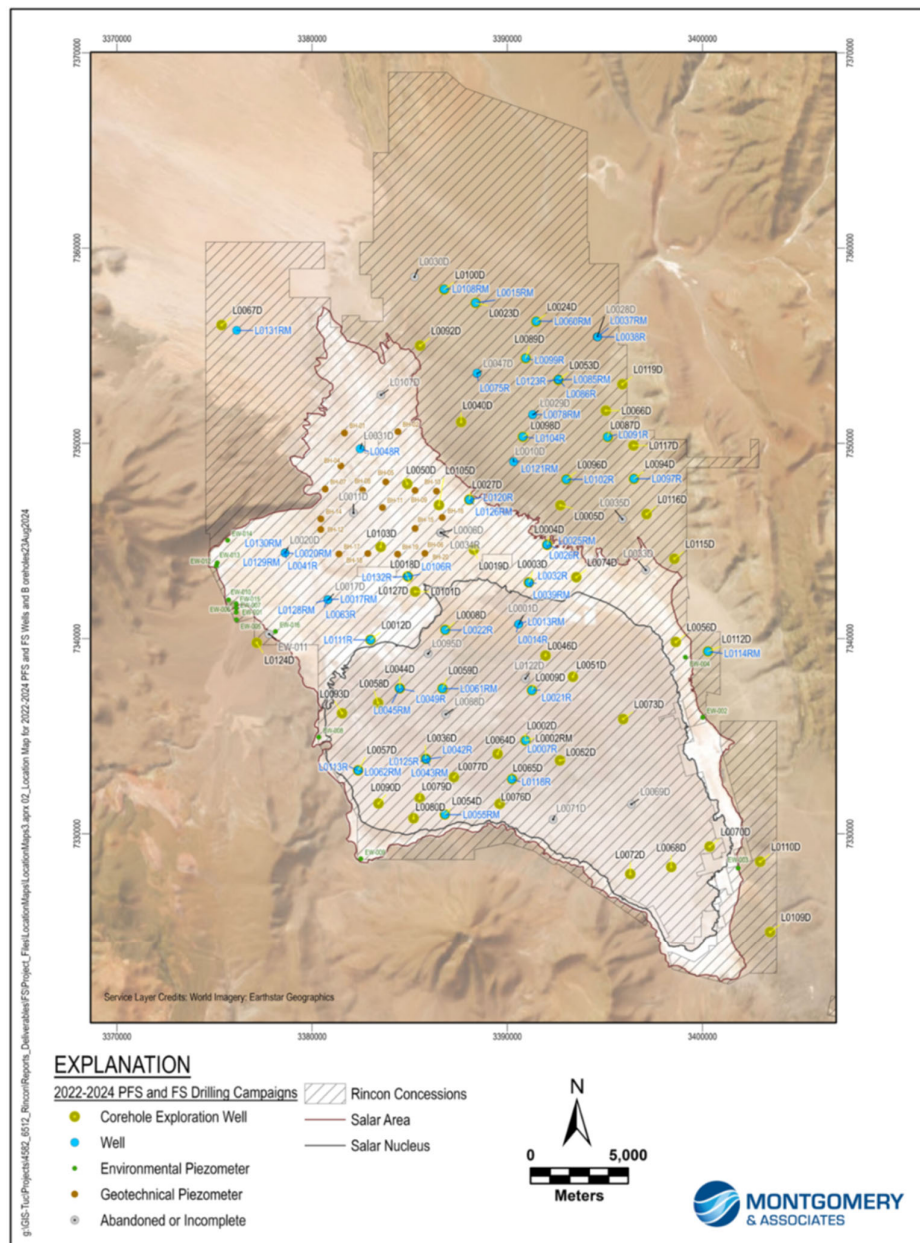


Figure 10: Hydrogeological Exploration Wells - Aug 2022 to Jun 2024

3.1.3 On-Going & Future Drilling & Testing Programs

Following on from the initial hydrogeological exploration program, the drilling rigs and test pumping crews immediately commenced work on the raw water wellfield as part of Rincon Project execution program. The ongoing production well program includes the drilling, installing and test pumping of new raw water production and associated observation wells in the southern and eastern part of the Catua Alluvial Fan. The drilling and test pumping associated with the ongoing production well program continues to provide additional hydrogeological insights, as well as actively installing the raw water wellfield required for the proposed life of operations. In addition, once the 50ktpa DIA is received, the drilling program will be expanded to the salar for the installation of 12 wells across the Fractured Halite formation.

3.2 Shallow Piezometer Program

Shallow piezometers were installed adjacent to various *vegas*, lagoons and *puesteros* aljibe around the margins of the salar, with the objective of furthering our understanding of the hydrogeological setting and hydraulic mechanisms at these key locations. The investigations completed focussed on assessing the hydraulic connection between the shallow surface water (*vegas* and lagoons)/shallow groundwater (*aljibe*) and the deeper lithium-hosting brines. Two field programs have been completed to date; Phase 1 September to November 2023 and Phase 2 April 2024. The Phase 2 program also had the additional objective of installing shallow monitoring wells to facilitate infiltration/re-injection tests (discussed in Section 3.3 below).

These shallow piezometer programs have been augmented with soil profile analyses to further evaluate the hydraulic conditions for the shallow freshwater system in the Rincon lagoon area.

3.2.1 Phase 1 Shallow Piezometer Program

A summary of the Phase 1 shallow piezometer program is presented in Table 5 and the shallow monitoring well locations are illustrated in Figure 11.

Table 5: Summary of Phase 1 Shallow Monitoring Wells (Sept - Nov 2023)

Hole ID	Easting	Northing	Hole Depth (m)	Base of PVC (m)	Screen interval (m)
Diamond Drill Hole					
EW - 001	3376116	7341349	11.5	10.4	2 - 10.32
EW - 002	3400027	7335981	12.5	12	5.92 - 11.92
EW - 003	3401858	7328203	6	6	2.92 - 5.92
EW - 004	3399134	7338998	8.5	7.5	4.42 - 7.42
EW - 005	3376131	7340978	10.5	10.5	4.42 - 10.42
EW - 006	3376113	7341575	10	10	4 - 9.92
EW - 007	3376110	7341573	7	4.5	1.5 - 4.42
EW - 008	3380342	7334949	6.5	4.5	1.42 - 4.42
EW - 009	3382495	7328717	7	6	2.98 - 5.98
Hand Augered Hole					
EW - 010	3375718	7341989	3	3	1.9 - 2.93
EW - 011	3377793	7340226	0.51	Hole Abandoned	
EW - 012	3375772	7342040	2	0.77	0 - 0.71
EW - 013	3375141	7343877	0.91	0.91	0 - 0.86
EW - 014	3375676	7345036	1.1	1.1	0 - 1.05
EW - 015	3376111	7341790	1.85	1.85	0 - 1.81
EW - 016	3378124	7340364	2	1.99	0 - 1.99

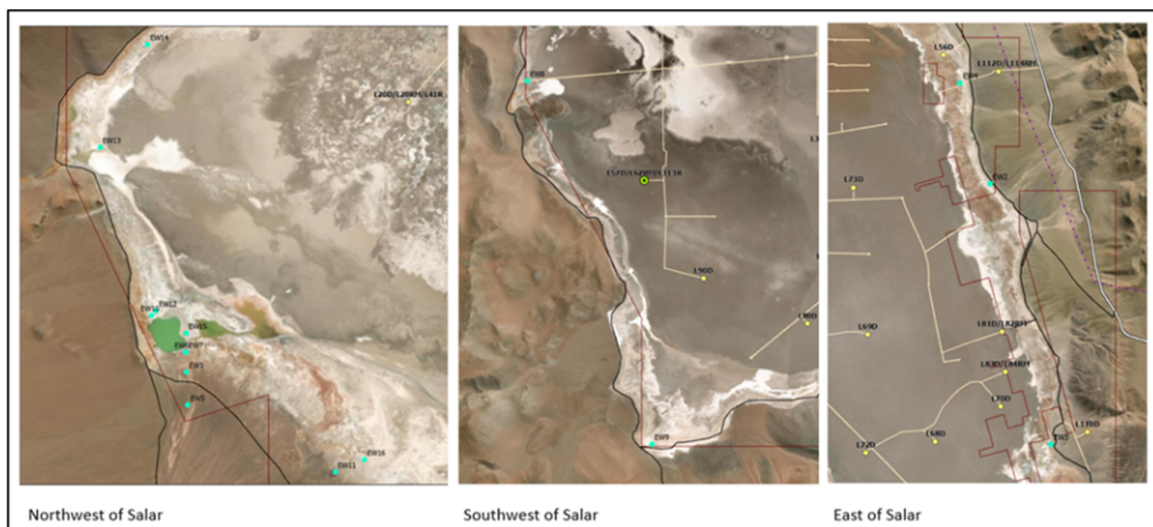


Figure 11: Location of Phase 1 Shallow Monitoring Wells (Sept - Nov 2023)

3.2.2 Phase 2 Shallow Piezometer Program

A summary of the Phase 2 shallow piezometer program is presented in in Table 6 and the shallow monitoring well locations are illustrated Figure 12.

Table 6: Summary of Phase 2 Shallow Monitoring Wells (April 2024)

Hole ID	Easting	Northing	Hole Depth (m)	Base of PVC (m)	Screen interval (m)
EW 008-LV	3380331	7334689	1.16	1.16	0.50 – 1.10
EW 008-M01	3380354	7334948	1.70	1.70	1.44 – 1.64
EW 008-M02	3380351	7334946	1.80	1.80	1.28 – 1.74
EW 008-MH	3380353	7334947	1.30	1.20	0.50 – 1.14
EW 010-M01	3375722	7341986	1.22	1.22	0.38 – 1.20
EW 011	3377808	7340169	1.56	1.56	1.24 – 1.32
EW 013-ML	3374901	7343703	2.20	2.20	1.98 – 2.14
EW 015	3376111	7341793	2.04	2.04	0.90 – 1.85
EW 015-M01	3376109	7341791	2.00	2.00	0.92 – 1.60
EW 015-M02	3376112	7341790	2.68	2.68	1.10 – 1.52 2.50 – 2.60
EW 015-M04	3376109	7341792	2.2	2.2	0.90 – 1.65

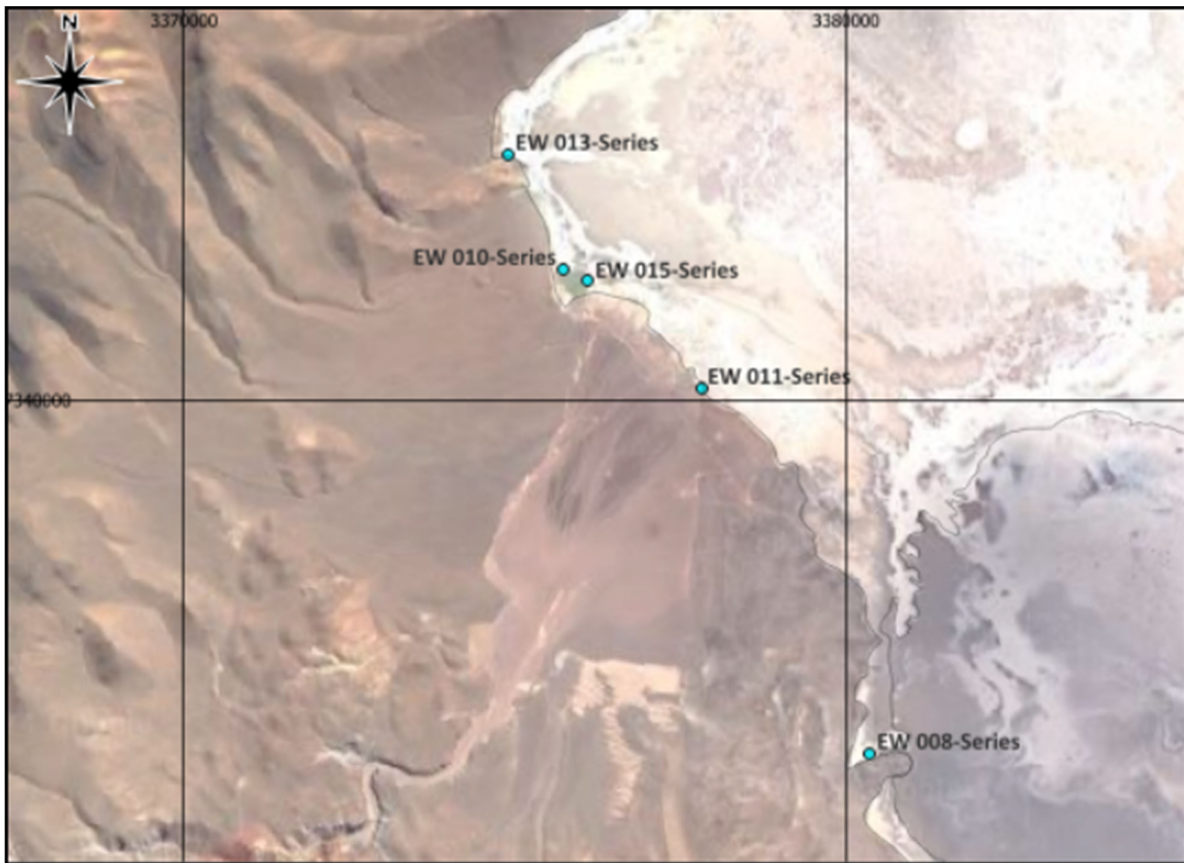


Figure 12: Location of Phase 2 Shallow Monitoring Wells (April 2024)

Lithological logging of the drill core and drilling returns from each hole indicates the presence of an underlying clay layer(s) at each of the surface water features investigated. In addition, water level and water quality monitoring results suggest different water levels and different water quality exists both above and below the clay layer(s) observed. Further investigations are proposed to evaluate the influence of these clay layers on the interaction between the shallow groundwater system and the ecosystems.

A schematic cross-section illustrating the hydrogeological findings from EW05 to EW15 (wells adjacent to the Rincon Lagoon) illustrates the interception of clay horizons and the different groundwater quality/levels observed in adjacent shallow and deep wells (Figure 13).

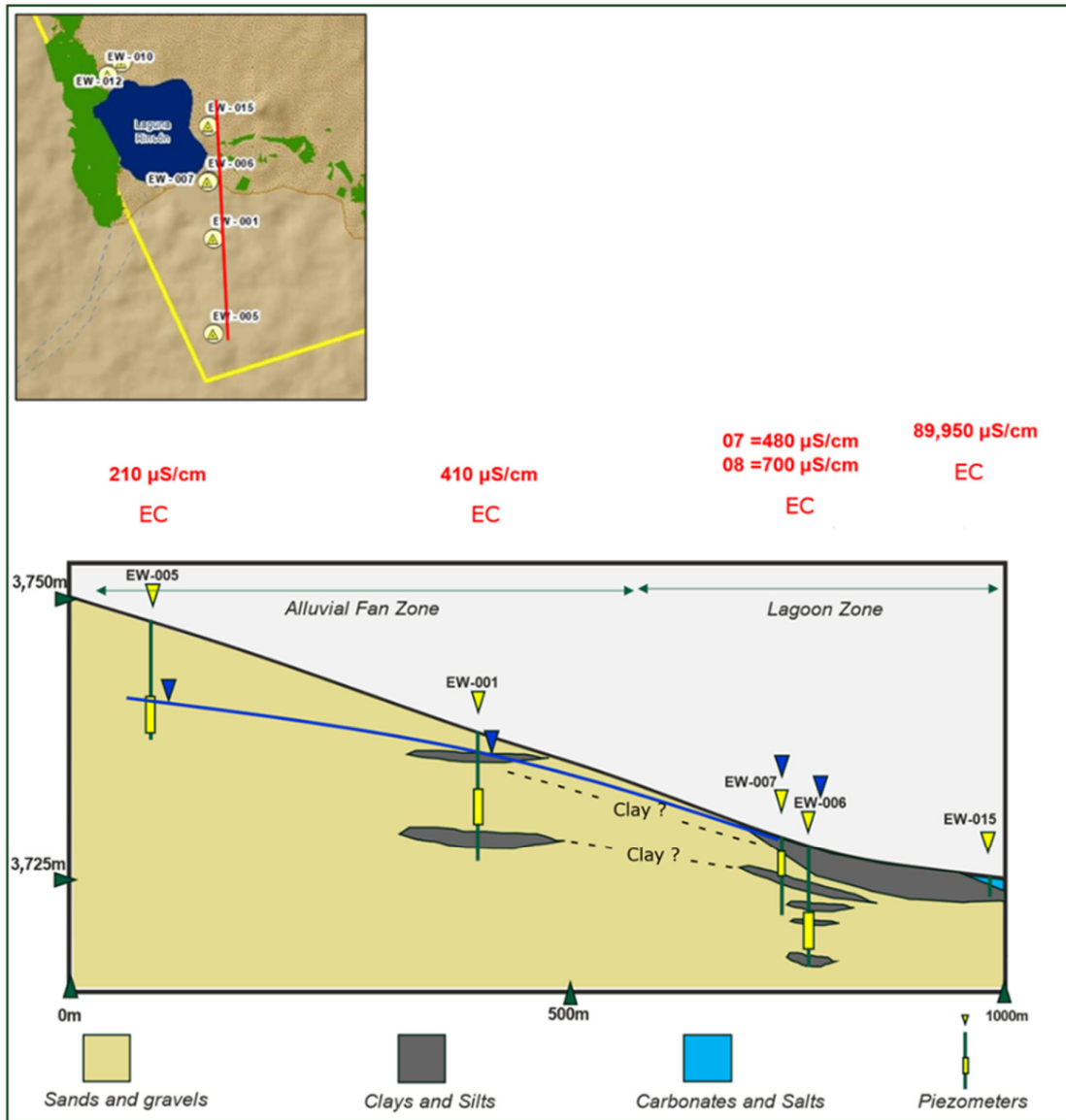


Figure 13: Schematic North to South Cross Section Adjacent to Rincon Lagoon

The initial findings suggest that clay horizons present at these locations could be hydraulically isolating the shallow surface water linked features from the underlying lithium bearing brines (the target of the lithium abstraction) present within the salar. This is a critical aspect for the Rincon Project, as if these surface water features are truly hydraulically isolated from the underlying brines, then this may also mean that any reduction in water/brine levels in these areas (due to lithium abstraction) may have no impact on the lagoons, vegas and *puesteros aljibe* around the margin of the salar.

3.2.3 On-Going & Future Shallow Piezometer Program

The ongoing water monitoring of these shallow piezometers will provide additional groundwater level and quality data from these locations, which will further our understanding of the hydrogeological setting and hydraulic mechanisms at these locations and particularly the degree of hydraulic connection between the shallow surface water linked features and the underlying lithium bearing brines.

There is an ongoing field program which links the biodiversity and water aspects of the Project and additional shallow piezometers are being installed at specific locations where extensive biodiversity parameters have been measured and at locations where additional hydrogeological information is required. This ongoing work is focussed on the Rincon Lagoon area and the northwest corner of the salar near Laguna Negra.

Based on the findings of the ongoing water monitoring and the ongoing shallow piezometer installation program it may be necessary to install, test and monitored new shallow piezometer to:

- Further our understanding of the hydrogeological setting at key vegas, lagoons and *puesteros' aljibes* locations.
- Continue to increase the certainty regarding the hydraulic isolation (e.g., by underlying low permeability clay horizons) of the surface water related features from the underlying brines; and/or identify any areas where surface water related features are purely density driven features (e.g., lower density/lower salinity water “floating” on higher density/higher salinity water).

3.3 Re-Injection Trials

The re-injection of spent brine represents one of the key opportunities for the Rincon Project. Re-injection of spent brine provides potential opportunities to:

1. optimise spent brine management throughout the life of operations,
2. reduce the SBDF footprint and
3. mitigate groundwater level drawdowns at key environmental receptors, caused by the proposed raw water and lithium brine abstractions.

Re-injection trials have been completed, and further re-injection trials are planned to explore the potential three opportunities detailed above, as well as to advance our understanding of the hydrogeological environment and the degree of hydraulic connectivity between different units within the Project area.

Re-injection trials are being undertaken in a phased approach. The Phase 1 initial shallow re-injection/infiltration trials have already been completed. Phase 2 is no longer required based on the findings of Phase 1. A series of deeper Phase 3 and Phase 4 re-injection trials are currently being planned, involving the injection of brine into the black sand units within the salar nucleus. A summary of the re-injection trials already completed (Phase 1), and the addition re-injection trials proposed (Phase 3 and 4) is provided below.

3.3.1 Phase 1 - Shallow Infiltration / RE-Injection Trials – Low Volumes

The Phase 1 shallow re-injection trials were completed in February and March 2024 using the shallow piezometers installed in the vicinity of Vega Unquillar, the Rincon Lagoon and one of the *puesteros' aljibe* in the northeastern margin of the salar nucleus. The objective of the initial re-injection trials was to investigate the hydraulic parameters in the vicinity of these key features and as a preliminary means of evaluating the potential viability of re-injection to mitigate any groundwater level drawdown which might occur in these environmentally sensitive areas.

Shallow re-injection/infiltration trials were completed at three of the shallow piezometer locations. An initial re-injection/infiltration trial was completed at EW-004 on the northeastern margin of the salar in March 2024. Subsequent re-injection/infiltration trials were completed at EW-008 (adjacent to Vega Unquillar) and EW-15 (adjacent to Rincon Lagoon) in April 2024.

The Phase 1 re-injection/infiltration trial set-up and an example of the observed groundwater level response at both the injection piezometer and three surrounding monitoring piezometers during one of the re-injection/infiltration trials completed is illustrated in Figure 14.

The preliminary Phase 1 shallow re-injection/infiltration trials indicated that a continuous rate of water injection was feasible at these locations (at rates of approximately 4 to 8 litres/min) and that the water introduced increased water levels in monitoring piezometers located within a 2m radius of the injection piezometers. The preliminary shallow re-injection/infiltration trials suggest that re-injection in these key environmentally sensitive areas may be a viable option to mitigate any groundwater level drawdown which could occur in these specific areas in the future due to the abstraction of lithium brine from the underlying salar sediments.

3.3.2 Phase 2 - Shallow Infiltration/Re-Injection Trials – High Volumes

The proposed Phase 2 trials were planned to adopt the same approach as Phase 1 but using higher infiltration volumes. However, the findings from the Phase 1 trial indicated that the volume of water was not a limiting factor for the infiltration/injection trial. The Phase 1 trial indicated that the limiting factors were the small diameter of the PVC casing, the well design and the properties of the receiving sediments, which meant that only a relatively low rate of water (less than 10 litres/minute) could be added to the shallow piezometers. Therefore, it was concluded that the Phase 2 trials were not required.

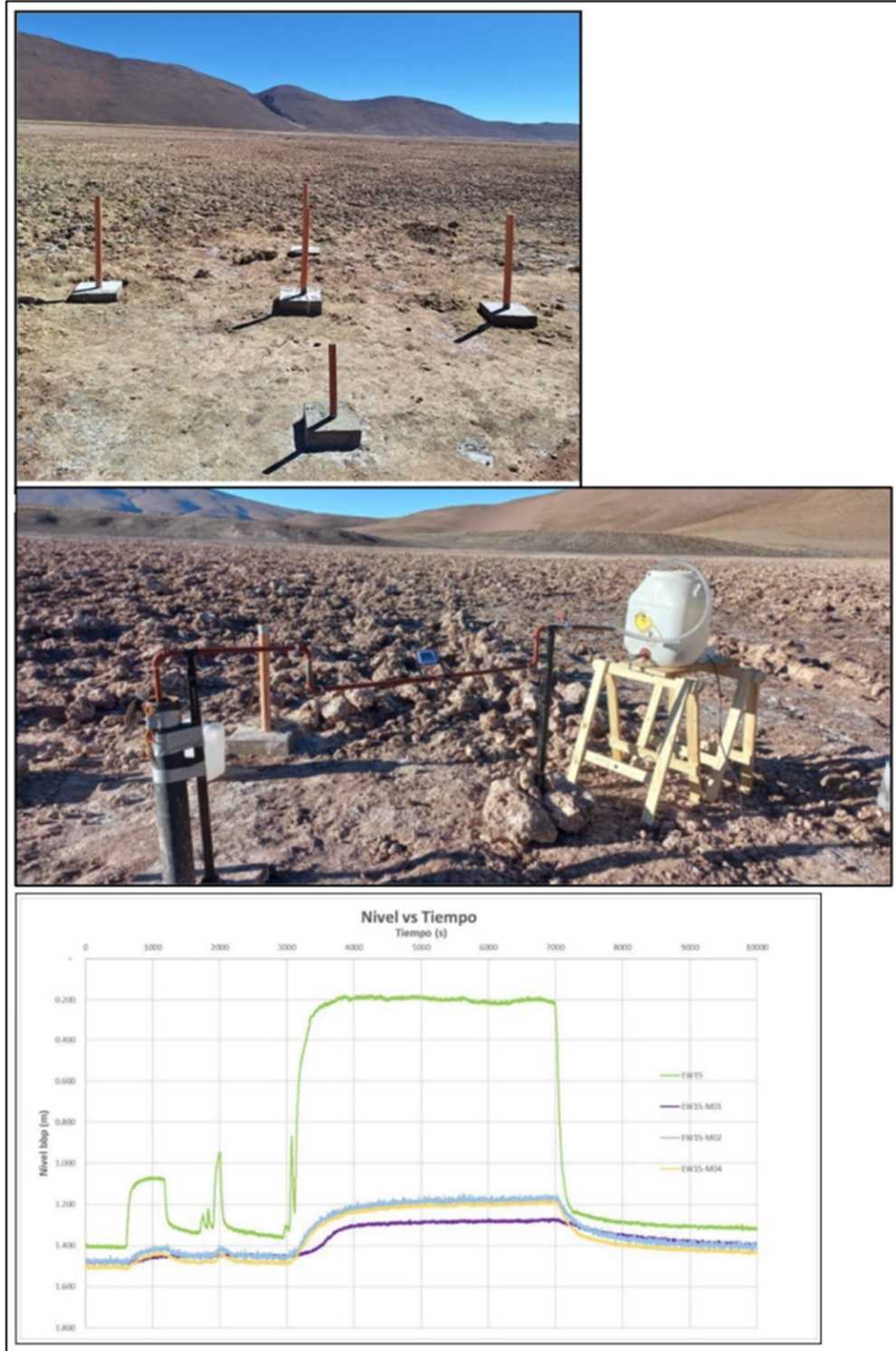


Figure 14: Phase 1 Re-Injection/Infiltration Trial Set-up & Groundwater Responses

3.3.3 Phase 3 – Black Sand Re-Injection Trial (Existing Infrastructure)

The objective of the proposed Phase 3 trial is to further investigate the feasibility of reinjection and to assess whether the deeper black sand unit might be a suitable receptor of re-injected spent brine. It is proposed that no new wells will be drilled for the purpose of the Phase 3 trial. Although a number of observation wells were drilled and installed during the previous exploration drilling program with the purpose of acting as observation wells for the proposed Phase 3 trial. It is proposed that one of the existing wells (L63R drilled in January 2024) will be used as the production well (i.e. the source of the brine) for the Phase 3 trial and another existing well (L41R drilled in March 2023) will be used as the injection well (i.e. the brine will be injected into this well).

The distance between the production and injection wells is approximately 3 kilometres. The wells are located in the same general area as the Rincon Lagoon but are located far enough away that there will be no hydraulic interaction between the production/injection wells and the Rincon Lagoon environmental setting. As such, it is hoped that the Phase 3 trial will provide results which would be representative of future re-injection in this area should it be required to mitigate any potential impacts on lagoons or vegas in this area.

These two wells are both completed with 8-inch diameter PVC casing and are screened within the black sand unit. In both wells the black sand is overlain by a low permeable formation (carbonate/travertine platform) and underlain by a low permeable formation (competent halite or clay), thus hydraulically isolating the black sand unit and limiting the potential for vertical movement of the injected brine (i.e. preventing migration upwards or downwards).

Based on water quality samples collected during the pumping tests completed on L63R and L41R, following installation, the chemistry of the brine within the black sands units is very similar in both of these wells. As such, there should be minimum difference in the chemical composition of the brine to be injected and the brine in the receiving unit.

It is proposed that a submersible pump (with a tested capacity of approximately 15L/s) will be installed in L63R. Brine will be pumped from the L63R well into two water trucks (each with a capacity of 10,000 liters). The water trucks will transport the brine to the L41R site and will discharge the brine into a metal 40,000 litre storage tank. A centrifugal pump will be installed in the tank and will be used to pump the brine from the tank into the L41R well. The L41R well will be fitted with inflatable packers to ensure the brine is injected into the target black sand unit. Brine flow rates and pressure will be monitored at all times during the trial.

It is proposed to initiate brine injection rates at approximately 0.5m³/hr (0.14L/s) and then gradually increase the rates up to 45m³/h (12.5L/s), with pressures being monitored throughout the test to ensure pressures do not reach levels which might exceed the pressure rating of the casing installed in the well. If the initial Phase 3 trial results suggest that additional brine could potentially be injected into L41R, then a pipeline will be installed so that brine can be pumped directly from L63R to L41R to facilitate the injection of great volumes of brine. Water level and pressure responses to the brine injection will be measured in the injection well (L41R) as well as various other wells in the immediate area, to evaluate the impact of the injection on the groundwater environment and the ultimate objective of further assessing the viability of re-injection.

Rio Tinto has recently received a permit (*Despacho de 04 de julio de 2025, expediente #302-74686/2024*) for the execution of the proposed Phase 3 re-injection trial and the work is currently being scheduling. The Phase 3 trial will commence Q3/Q4 2025. If successful, then the Phase 4 re-injection trial is likely to be completed.

3.3.4 Phase 4 – Black Sand Re-Injection Trials (New Infrastructure)

The objective of the proposed Phase 4 trial is to undertake a more detailed investigation of the feasibility of reinjection using purpose drilled production, injection and monitoring wells. Based on the results of Phase 3, Rio Tinto will seek the necessary permits to execute Phase 4. The target horizon would again be the deeper black sand unit. The focus of the Phase 4 trial is to create a drawdown cone within the black sand and then reinjecting brine into that same area of drawdown. The Phase 4 re-injection site would comprise a dedicated site with a production well (brine supply well), two discrete injection wells, plus several shallow and deep monitoring wells around each injection well. Groundwater modelling would be used to select appropriate well distances and water tracers would be used to trace re-injection water pathways and travel times during the re-injection trial. The Phase 4 trial would require additional drilling. The Phase 4 trial would require detailed planning, and the exact details of the trial would be informed by the Phase 3 results.

3.4 Isotope Monitoring

A comprehensive isotope sampling and analysis program has been completed to advance the hydrogeological understanding of the Rincon Basin, particularly with respect to water origins, recharge mechanisms, groundwater flow paths, groundwater flow mechanisms, groundwater travel times and the inter-relationship between surface water and groundwater across the Rincon Basin.

3.4.1 Field Campaigns

Phase 1 - January 2023

The Phase 1 work program included the collection of water samples from 13 locations across the Catua Alluvial Fan and the Interzone areas in January 2023. The water samples were subsequently analysed for deuterium (^2H), tritium (^3H), carbon (^{13}C and ^{14}C) and oxygen (^{18}O) isotopes. The 2023 sample locations are illustrated in Figure 15.

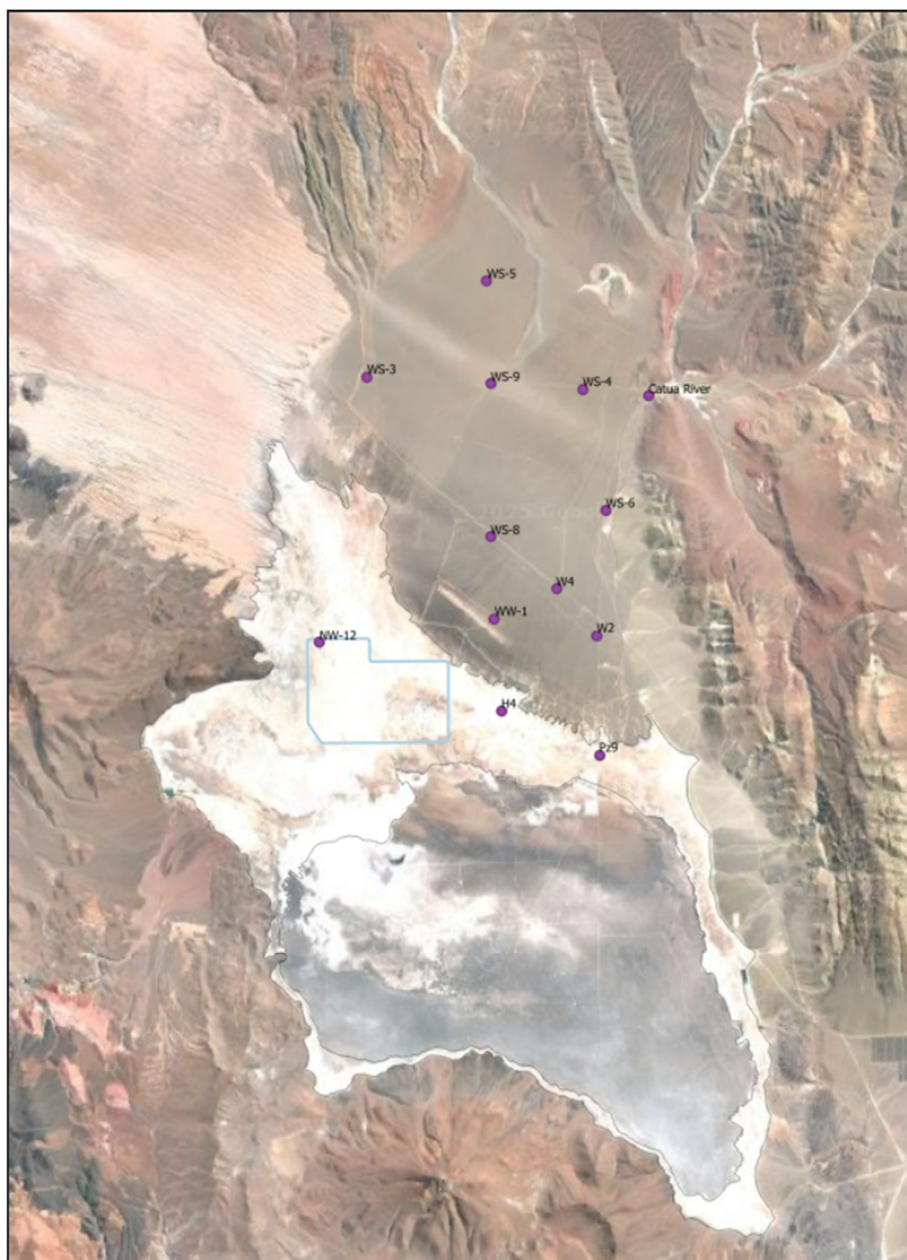


Figure 15: 2023 Isotope Sample Locations

Phase 2 – July 2024

A second, more extensive, phase of isotope sampling and analysis was completed in July 2024. The July 2024 isotope sampling programme included collection of an additional 29 water samples from across the Rincon Project area, including 9 surface water samples and 20 groundwater samples. The water samples were collected in July 2024 and were transferred to the Waterloo Laboratory in Ontario, Canada for analysis of deuterium (^2H), tritium (^3H), carbon (^{13}C and ^{14}C) and oxygen (^{18}O) isotopes. The July 2024 sample locations are illustrated in Figure 16.



Figure 16: 2024 Isotope Sample Locations

Phase 3 – December 2024

A third phase of isotope sampling and analysis was completed in December 2024. The December 2024 isotope sampling programme included collection of samples from the same 29 water samples as the July 2024 program, including nine surface water samples and 20 groundwater samples. The samples were again sent to the Waterloo Laboratory in Ontario, Canada for analysis of deuterium (^2H), tritium (^3H), carbon (^{13}C and ^{14}C) and oxygen (^{18}O) isotopes.

Future Isotope Sampling & Analysis

The scope and extent of future isotope sampling and analysis is currently being reviewed, with future sampling campaigns possibly targeting Q4 2025 (summer) and winter 2026 (Q2/Q3).

3.4.2 Isotope Data Interpretation

Detailed interpretation of the isotope data currently available suggests the following key findings:

- The ^{14}C results suggest old water (generally >1,000 years old) throughout the Rincon basin, however, it seems that the ^{14}C results are being influenced by the existence of very old carbon derived from the dissolution of carbonate bedrock. The ^3H (tritium) results are not affected by the bedrock geology and suggest relatively recent water (<70 years old) in many of the samples collected. The ^3H younger water conclusion is supported by the analysis of the broader surface water and groundwater chemistry data available.
- Modern recharge (<70 years old) is entering the Catua Fan from the catchments to the north (i.e. the Huaytiquina, Pompon and Catua drainage catchments). There are various distinct groupings of similar water types across the fan, there is evidence of mixing of these distinct water types and evidence of increased evaporation toward the south and southeast of the Catua Fan and into the Interzone.
- The Rincon Lagoon is receiving modern water inflows (10-70 years old) from the alluvial sediments and shallow groundwater system directly to the west of the lagoon.
- The spring feeding the Vega Rincon is characterised by much older water (>70 years old), than that feeding the Rincon Lagoon (10-70 years old), suggesting a longer flow path, although the water is not very mineralised (with TDS generally less than 200mg/l) suggesting a localised source.
- The deep groundwater in the vicinity of the Rincon Lagoon (L0024D) appears to be significantly older (60-70 years old) than the water both feeding and within the Rincon Lagoon (10-70 years), but still relatively recent.
- The salar is receiving modern recharge, based on the isotope results from Pz9 (<10 years old) in the northern salar nucleus and L062RM (10-70 years old) in the southwest of the salar nucleus. The source of this modern water is uncertain, and further assessment is required to confirm the origin, but it may be linked to shallow groundwater inflows from the margin of the salar once these modern inflows extend beyond the clay horizons which exist around the margins of the salar.

3.5 Vegas & Lagoons

Significant studies have been completed with a view to developing a robust eco-hydrological model of the vegas and lagoons, with a focus on understanding the water environment associated with these features, and in particular the interaction between these shallow surface water environments and both the shallow fresh groundwater system and the deeper underlying brine system.

The vega and lagoon ecosystems rely on a delicate balance of groundwater inflows, which are critical for maintaining soil moisture and supporting specialized vegetation communities. These vega/lagoon environments develop at the interface between colluvial/alluvial sediments and the edge of the salar, where shallow subsurface flow concentrates and discharges to the surface, often in contact with low-permeability barriers such as clay layers.

A robust eco-hydrological model is essential for predicting the potential impacts of brine/water abstraction on these wetland ecosystems, defining thresholds and supporting adaptive management strategies. It also aligns with international standards (IFC Performance Standard 6) by providing a science-based approach to understanding the environmental dependencies of sensitive ecosystems. The model defines eco-hydrogeological zones based on the degree of vegetation dependence on groundwater: (i) phreatophytic zones, where plants access the water table directly; (ii) zones saturated by capillary rise or ponding; and (iii) zones influenced by seasonal surface runoff. This zoning is supported by the installation of shallow piezometers, soil moisture content studies, and floristic monitoring.

A more detailed description of the origin and hydrogeology of the vegas and lagoons is provided in Section 5.

Field studies completed to develop the eco-hydrological model include the following:

Characterization of Vegetation:

- Detailed identification and classification of plant species in the study areas, emphasizing their dependency on groundwater and their ecological roles.
- Measurement of root depth for each species to understand access to groundwater, critical for assessing resilience under changing moisture conditions.

Soil Profile Analysis:

- Comprehensive assessment of soil properties, including texture, organic content, porosity, and moisture retention capacity.
- Determination of soil moisture retention curves using laboratory tests to define the critical thresholds of water availability for plants, including the Permanent Wilting Point (1.5 MPa).
- Soil profiles have been integrated with shallow piezometer data to further evaluate the hydraulic conditions associated with the shallow freshwater system in the Rincon lagoon area. The field data available indicate the presence of artesian conditions and confining layers that separate deeper saline waters from shallower freshwater systems in the Rincon Lagoon area, suggesting a potential hydraulic disconnection that would reduce the risk of indirect impacts on these ecosystems. This hypothesis is supported by physicochemical differences, distinct piezometric levels, and localized discharge points adjacent to the Rincon Lagoon.

Groundwater Dynamics and Modelling:

- Groundwater level monitoring through a network of shallow piezometers, coupled with numerical modelling.
- The model simulates groundwater behaviour under various extraction scenarios, assessing potential impacts on soil moisture and plant viability.

Capillary Water Movement:

- Evaluation of capillary rise from groundwater to the root zone, quantifying its contribution to soil moisture.
- Laboratory tests and field measurements provide insights into capillary dynamics under different soil textures.

The relationship between groundwater and plant ecology is a key component of understanding the environmental conditions in these important wetland environments. In this high-altitude arid region, surface water is scarce and often seasonal, making groundwater a critical driver of ecosystem structure and function. Some plant species rely directly on access to groundwater, while others are adapted to more variable or superficial sources of moisture. Recognising these differences is essential for assessing how ecosystems may respond to environmental change or human activities such as water/brine abstraction.

To support this understanding, the study area has been divided into three eco-hydrogeological zones based on the dominant water source available to plants: the *Phreatophytic Zone*, where vegetation taps directly into groundwater through deep roots; the *Saturated Zone*, where shallow groundwater and capillary rise create waterlogged conditions; and *Surface Run-off* areas, where plant life is influenced by seasonal water inputs and condensation, but is not directly sustained by groundwater. This zonation provides a practical framework to explore species-level dependencies and guide future ecological monitoring and water management efforts.

Vegetation mapping completed to date has identified the main vegetation units in the Salar Rincon basin supported by a flora survey completed in March 2025. On-going studies are being completed to enhance the understanding of the relationship between the vegetation and groundwater. The main vegetation units identified in the basin are illustrated in Figure 17.

Phreatophytic Zone

This zone is characterised by vegetation that accesses groundwater directly through deep root systems. Phreatophytes are typically well adapted to arid environments, where surface water is limited and fluctuations in precipitation are common. These plants maintain access to stable moisture sources by reaching the water table, often surviving in otherwise inhospitable conditions such as saline flats or dry steppes.

A study was conducted in March 2025 that focused on evaluating the richness, distribution, and population status of endemic plant species in the Salar Rincon basin (ERM, 2025a). The survey sampled various vegetation units such as steppes, hillside shrublands, ignimbrite ramps, and salar edges. The endemic flora survey across the Salar Rincon basin recorded several species with wide distributions and traits consistent with phreatophytic behaviour, though detailed root studies were beyond the scope of this phase. Notably, species such as *Fabiana punensis*, *Artemisia copa*, and *Cumulopuntia boliviiana* were observed across various vegetation units, including hillside shrublands and steppes, and are known for their tolerance to high salinity, extreme temperatures, and low water availability. The association between these species and groundwater access is not yet fully characterized. However, their ecological importance and spatial patterns suggest a possible dependence on stable subsurface moisture. Ongoing research will help clarify the extent of this dependence and its implications for conservation and land-use planning.

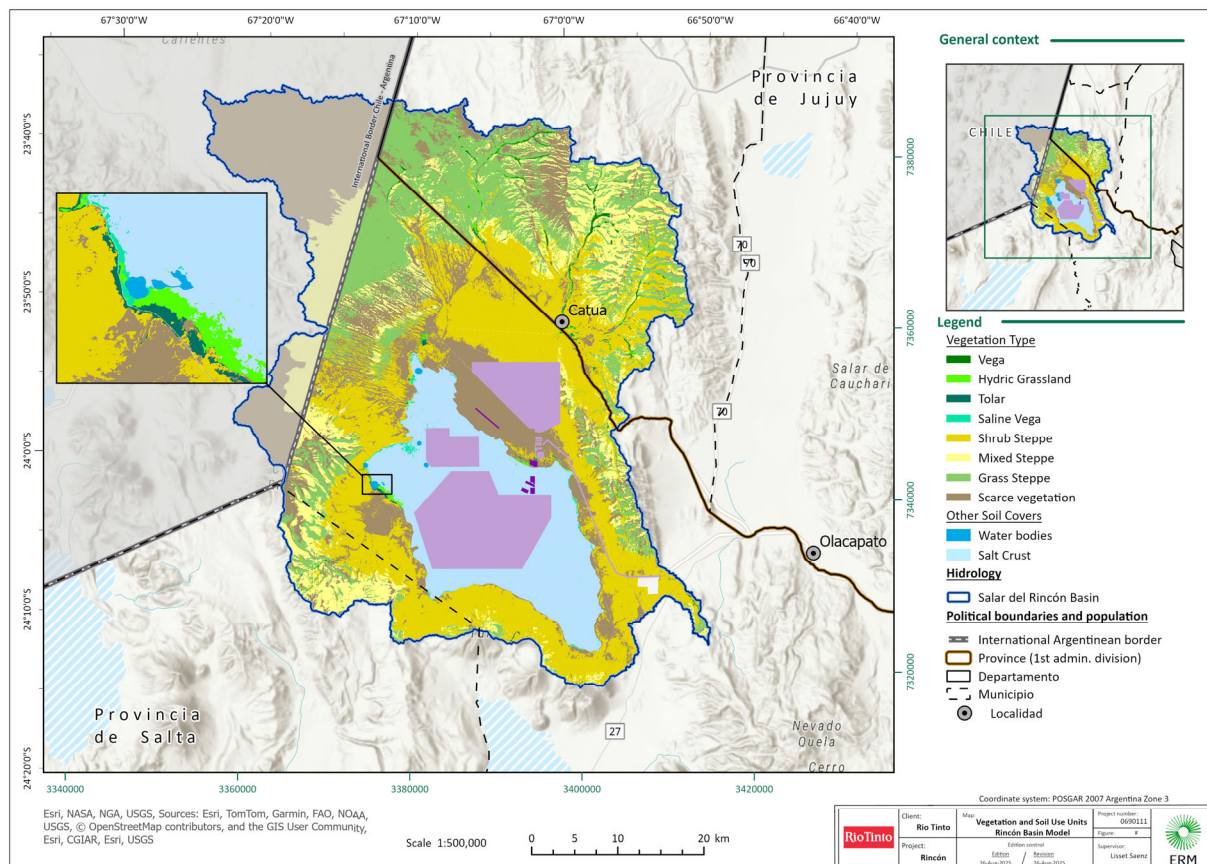


Figure 17: Main Vegetation Units in Rincon Basin

Capillary-Fringe Zone

This zone includes areas where plant roots access moisture retained above the water table through capillary rise. Although these areas are not fully saturated in a hydrogeological sense, they can support vegetation adapted to persistently moist, often saline soils. In the (Cuello & Carilla, 2025) study, species such as *Frankenia triandra* and *Lycium humile* were observed in environments with shallow groundwater influence, including salar edges and vegas. Their presence in these habitats suggests a reliance on subsurface moisture availability rather than direct access to the water table. Maintaining the ecological integrity of these zones is important, especially where vulnerable or spatially restricted plant populations occur, as they contribute to the broader resilience and biodiversity of the basin's ecosystems.

A study is planned by the consultancy company “Geobiota” to better understand how vegetation in the basin interacts with moisture held just above the water table. This study is on-going and preliminary results are expected by mid-2025. This work will help determine how far the water table can drop before it limits the availability of moisture to plant roots. The study includes mapping root depth, characterising soil texture, and modelling how water moves upward through the soil by capillarity. Field and laboratory data will be used to simulate changes in moisture availability under different groundwater scenarios. The aim is to assess which vegetation types may be sensitive to changes in shallow groundwater conditions, and to define threshold depths below which plant survival may be affected. Results are expected to support future decision-making around water use and ecosystem protection, particularly in areas such as vegas and salar margins where vegetation relies on shallow subsurface moisture.

Surface Runoff Areas

These are areas where vegetation depends primarily on seasonal surface water inputs such as rainfall and moisture condensation, rather than from groundwater. From an eco-hydrogeological perspective, surface run-off zones are important because they host species adapted to intermittent moisture availability and can act as transitional areas between drier uplands and wetter groundwater-fed systems like vegas. In the endemic flora survey (ERM, 2025a), plant species were identified in hillside shrublands, ignimbrite ramps, and other upland environments where surface water availability likely plays a more dominant role. Species such as *Artemisia copa* and *Fabiana punensis* were frequently recorded in these zones. These examples reflect species observed in vegetation units typical of surface run-off zones, however, further ecological analysis is needed to confirm water source dependencies and provide more detailed guidance for conservation or land-use planning.

3.6 Ojos De Agua (Extremophile Microbial Ecosystems)

The Ojos de Agua are natural depressions (where brine reaches the surface) which exit within the carbonate platform to the northwest of the main salar nucleus. They exhibit specific physicochemical conditions (pH, temperature, salinity, etc.) that support biodiversity adapted to extreme environments. The Ojos de Agua host extremophile microbial communities and are priority conservation targets.

A dedicated monitoring approach has been established for these sites, including microbiological analyses and seasonal sampling campaigns in collaboration *Instituto de Investigaciones Para La Industria Química, Universidad Nacional de Salta and Consejo Nacional de Investigaciones Científicas y Técnicas*. The Ojos de Agua identified with the Project area are illustrated in Figure 18.

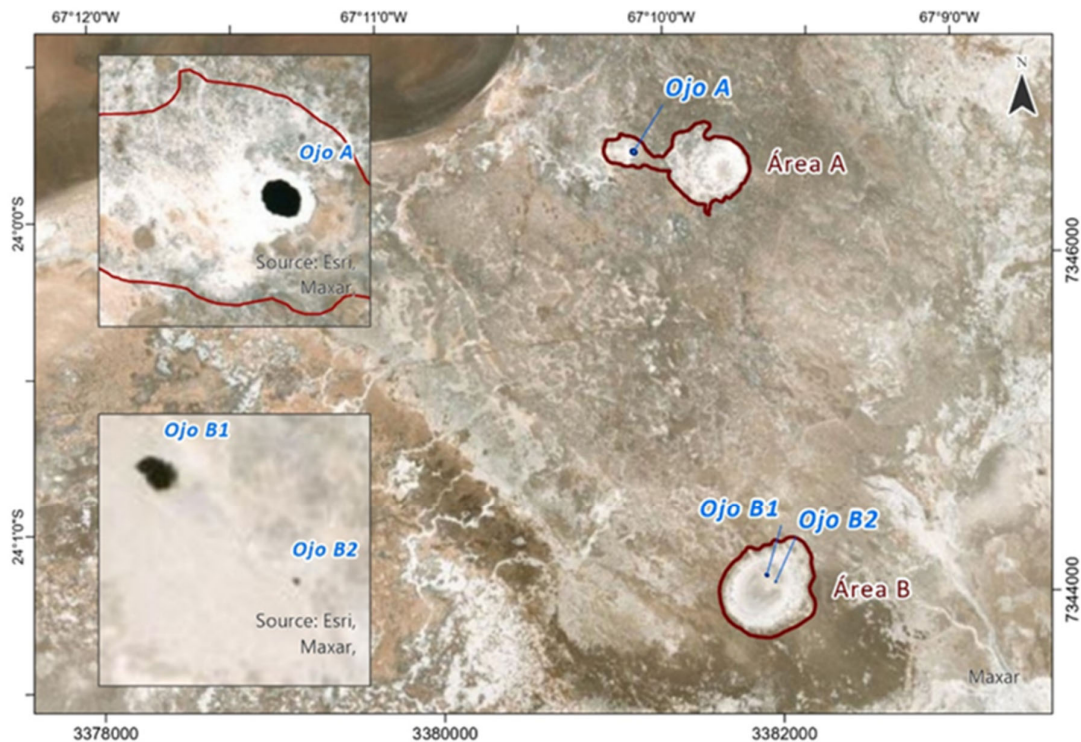


Figure 18: Locations of Ojos de Agua

Significant site investigations have been completed on Ojos de Agua A. Hydrochemical data from Ojos de Agua A has been collected on three consecutive monitoring campaigns (December 2024, March 2025, and April 2025). The Total Dissolved Solids (TDS) profiles from Ojos de Agua A from the three monitoring campaigns results are illustrated in Figure 19.

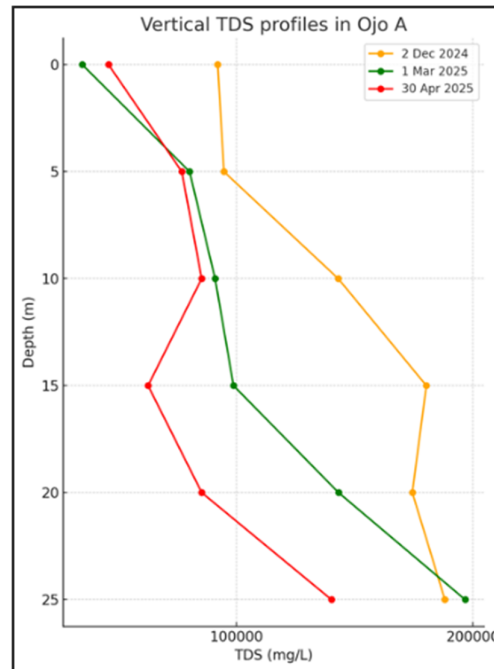


Figure 19: Total Dissolved Solids (TDS) Profiles Ojo de Agua A

A study was developed to assess the resilience of the extremophiles and to develop measures to protect these ecosystems. The study includes the setup of an on-site laboratory. The purpose is to evaluate the magnitude of potential mining-related impacts on the biological communities inhabiting the Ojos de Agua, as well as their environmental resilience.

The study is on-going and microcosms are being used as study units. These units contain brine samples and microbial mats, which are being subjected to different disturbance scenarios such as the addition of effluents, physical effects like turbidity, drying, flooding, etc.

The disturbed samples will ultimately be sent to the Water and Soil Laboratory (LAgS), INIQUI – CONICET-UNSa in the city of Salta. The results will be analyzed to propose appropriate mitigation measures and a monitoring plan tailored to the responses of the in-situ microbial community.

The Ojos de Agua are currently located a minimum of 250m from the western boundary of Cell B of the proposed SBDF. The SBDF was initially designed with a 250m buffer zone between the perimeter of the SBDF and the Ojos de Agua. However, the recently received DIA stipulates that this buffer zone needs to be increased to 700m and in accordance with this DIA requirement, the SBDF will be redesigned such that it is a minimum of 700m from the Ojos de Agua.

A more detailed description of the characteristics and hydrogeology of the Ojos de Agua is provided in Section 5.

3.7 Bathymetric Surveys

A comprehensive topographic and bathymetric survey was conducted in the vicinity of Laguna Rincon and Laguna Negra between the 16th and 19th January 2025 (see Figure 20). As part of this study, three ground control points were established; two positioned adjacent to Laguna Rincon and Laguna Negra, respectively, and a third one located in the intermediate zone between the two lagoons. These control points are intended to support accurate georeferencing and facilitate high precision topographic surveys in subsequent phases of the Project.

In addition, staff gauges were installed in both Laguna Rincon and Laguna Negra. The gauges were placed at sufficient depth to ensure continuous measurement throughout the hydrological year, accommodating seasonal variations in water levels. Each gauge was topographically levelled to establish a reference relative to mean sea level.

A detailed topographic survey was also conducted along the perimeters of both lagoons, complemented by bathymetric surveys within the water bodies themselves. These surveys were successfully completed and produced detailed contour maps, which will enhance the accuracy of future analyses concerning the hydrodynamic behaviour of the lagoon systems.



Figure 20: Bathymetric Studies in the Lagoons

3.8 On-Going and Future Updates to the Eco-Hydrological Conceptual Model

It is proposed that the eco-hydrological model will be enhanced through the following additional activities:

- Isotope studies to better define groundwater flow paths.
- Additional geophysical surveys around key environmental receptors.
- Expansion of the shallow monitoring network, including installation of automated instrumentation.
- Analysis and identification of ecohydrological thresholds for sensitive species (establishment of critical soil moisture levels required for the survival of key vegetation species, ensuring ecosystem stability).
- Definition of groundwater thresholds and development of warning and action strategies.
- Detailed specifically focussed numerical groundwater modelling of key environmental receptors, coupled with ecological variables.
- Scenario analysis of climate change impacts on high Andean wetlands.

These activities will help to advance understanding of interaction between flora-soil-water, soil suction curves and water levels required for existing flora and support more precise, preventive, and adaptive water resource management linked to the Project's ecosystems.

4 Water Monitoring & Data Management

Water monitoring has been undertaken across the Rincón project area for over 10 years. The key objectives of the water monitoring program were to:

- Advance the understanding of the hydrological and hydrogeological regime of the Rincon Project Area.
- Build a comprehensive and robust water data set for the Project.
- Initiate environmental baseline water monitoring.
- Advance the understanding of the raw water resources available to the Rincon Project (specifically focused on the Catua Alluvial Fan).
- Generate an up to date and comprehensive water quality data set for the proposed water supply, to be provided to the process team, to inform water treatment plant design.

A regularly monthly baseline water monitoring campaign was initiated in November 2022 and the locations of the monitoring points at that stage are illustrated in Figure 21.

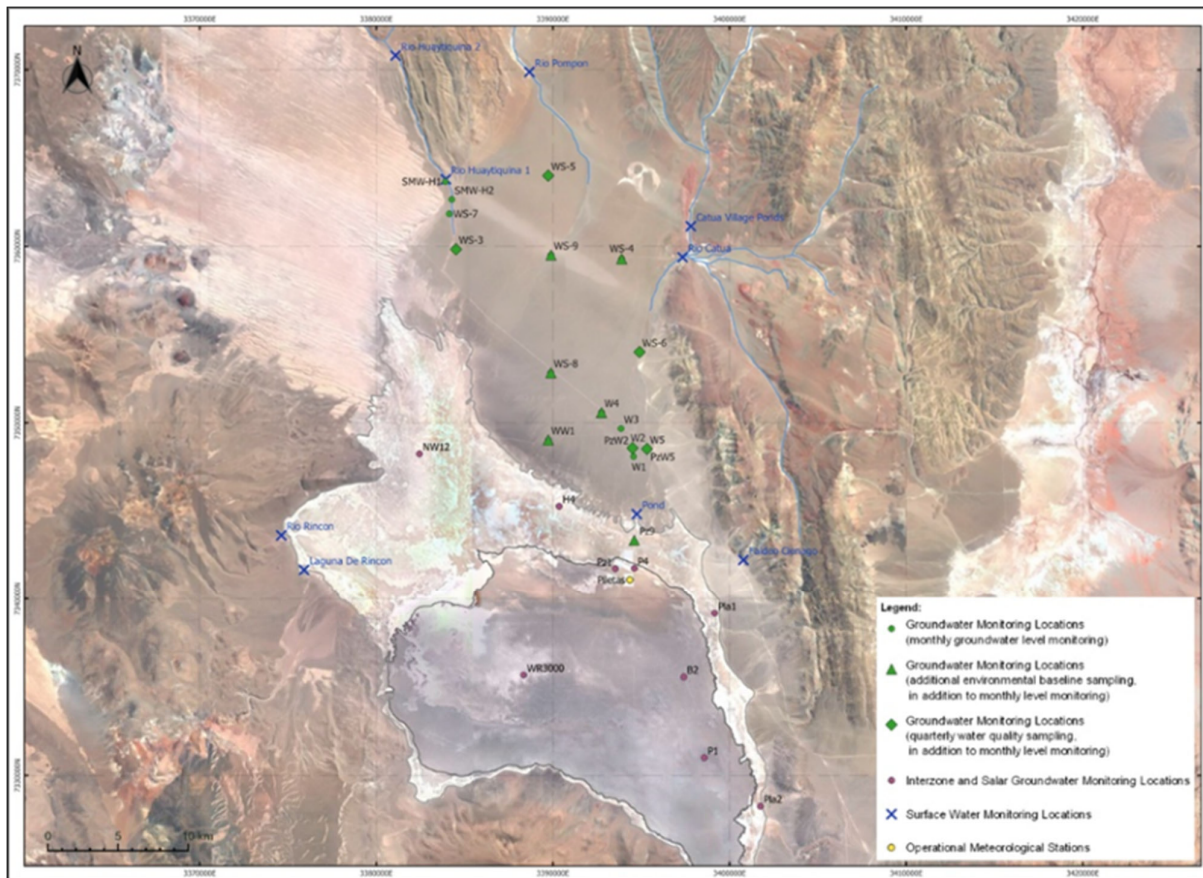


Figure 21: Baseline Water Monitoring Network (Initiated November 2022)

4.1 Surface Water Monitoring

4.1.1 Historical Surface Water Monitoring (Pre Rio Tinto Acquisition)

Historical surface water monitoring completed includes surface water flow monitoring undertaken on one occasion in 2010 and surface water quality monitoring undertaken at a number of locations between 2007 to 2012. The historical surface water monitoring locations are illustrated in Figure 22.

Rincon developed a surface water monitoring plan for the Rincon lagoon, Rincon valley, Unquillar, Saladillo, Campamento well and Faldeo Cienago valley, with surface water monitoring continuing at Unquillar, Saladillo and Faldeo Cienago until 2017/18.

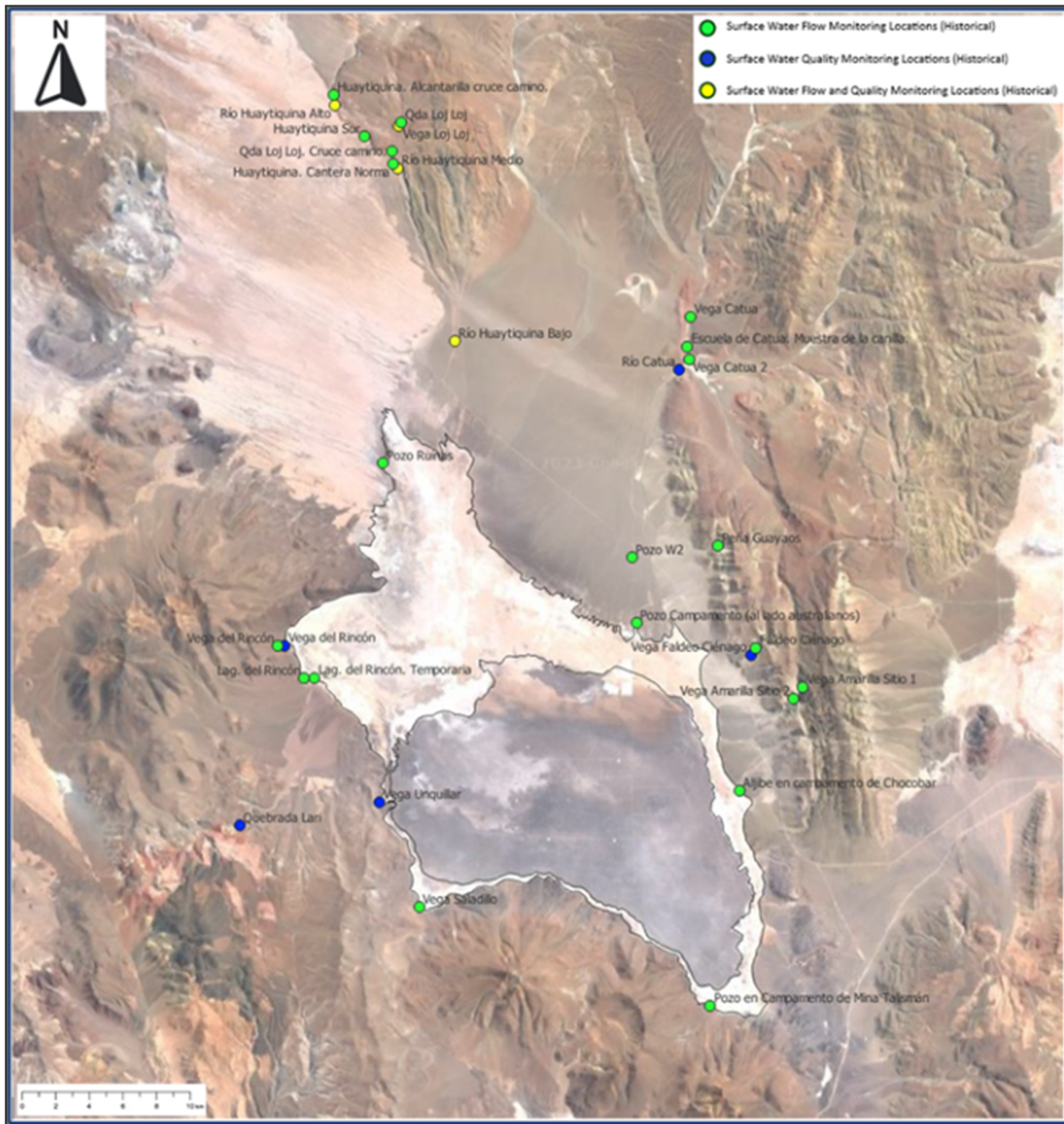


Figure 22: Historical Surface Water Monitoring Locations

4.1.2 Recent Surface Water Monitoring (Post Rio Tinto Acquisition)

Rio Tinto expanded and initiated an extensive regular monthly water monitoring program in November 2022. The monthly water monitoring program initiated in November 2022 included monitoring surface water levels, flows and water quality at representative locations across the Rincon Basin. The surface water monitoring program was further expanded in June 2024, with a key focus being the inclusion of additional surface water features around the margin of the salar. In June 2024 the following additional surface water locations were added to the water monitoring network: Rincon Lagoon (outer lagoon), Catua River (upstream of Catua village intake), Pena Guaynos, Vega Amarilla, Vega Saladillo, Vega Unquillar, Quebrada Lari and Vega del Rincon. The current surface water monitoring program is illustrated in Figure 23.

4.1.3 Surface Water Levels & Quality

Surface water level monitoring indicates that surface water flows in the streams and rivers in the Rincon basin typically fully infiltrate into the alluvial fans around the salar edges. However, surface water in shallow lagoons and vegas occurring on the edges of the salar appears to remain throughout the year.

The streams and rivers around the salar are typically fresh to brackish with electrical conductivity (EC) below 3000 μ S/cm, while the shallow lagoons and vegas around the edge of the salar are typically brackish to saline.

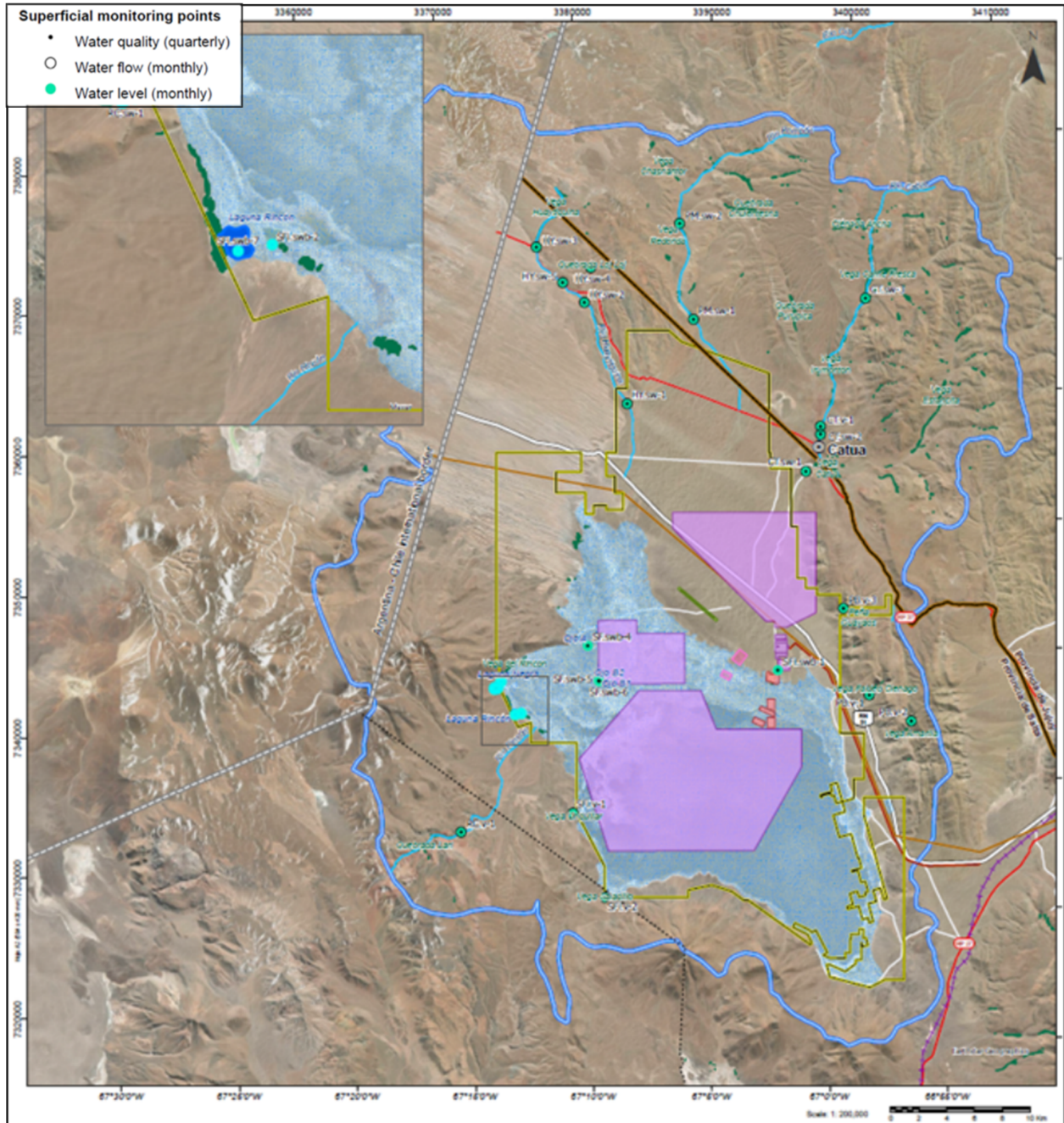


Figure 23: Current Surface Water Monitoring Locations

4.2 Groundwater Monitoring

4.2.1 Historical Groundwater Monitoring (Pre Rio Tinto Acquisition)

Groundwater levels were historically monitored approximately monthly in seven wells located across the Catua Alluvial Fan and nine wells situated within the interzone and salar between 2012 and early 2022.

Groundwater samples were collected bi-annually or annually at production well W2 from 2013 to early 2022. Isolated groundwater samples were also collected from various wells in 2015 and 2016.

4.2.2 Recent Groundwater Monitoring (Post Rio Tinto Acquisition)

Groundwater Levels and Quality

The monthly water monitoring program initiated in November 2022 included monitoring groundwater levels monthly and groundwater quality quarterly at representative locations across the Rincon Basin. The program initially captured representative existing groundwater wells across the Rincon Project area. However, the groundwater monitoring network was expanded as new wells were installed across the Catua Alluvial Fan.

The groundwater monitoring program was expanded in June 2024, with a key focus being expansion/inclusion of the following:

- Additional groundwater monitoring within the specific footprint of the proposed raw water wellfield, with a particular focus on gathering more water quality data across and at different depths within the proposed raw water wellfield area.
- Groundwater monitoring of the newly installed monitoring wells around the periphery of the salar and Catua Fan.
- Groundwater monitoring of the newly installed shallow monitoring wells (piezometers) adjacent to surface water features (lagoons and vegas) and *puesteros* shallow wells around the margins of the salar.

Electrical Conductivity (EC) Monitoring

Electrical Conductivity (EC) profiles have been completed on over fifty representative wells across the Catua Alluvial Fan and on a number of additional wells located within the salar and in the other smaller alluvial fans around the margins of the salar. Multiple EC profiles were completed on many of the wells to ensure that the data derived was truly representative of the water quality profile within the surrounding sediments at each location.

The purpose of completing the EC profiling was to assess the change in water quality with depth and to evaluate the thickness of lower EC water across the Catua Alluvial Fan. The process plant raw water supply ideally requires water with an EC of less than 4,000µS/cm. The EC profile data (along with water quality data collected during pumping tests or specific monitoring) provides insight into the water quality across Catua Alluvial Fan and was vital input data for the groundwater model. The EC profiles provide insight on the geometry of potential raw water resources and is critical for optimal positioning of raw water supply wells. The approach was to position raw water wells in the areas with the greatest thickness of less than 4,000 µS/cm water.

Issues associated with remnant drilling mud remaining in some wells and an inability to adequately develop wells meant that at many locations (specifically at diamond holes) that there was significant uncertainty regarding the EC profiles (with the EC profiles likely being influenced by residual drilling mud and water/brine used during drilling). The uncertainty associated with the EC profile data leads to significant uncertainty associated with the raw water wellfield quality predictions derived from the groundwater model.

Shallow Well Monitoring

As mentioned in Section 3.2, shallow monitoring wells were installed in the vicinity of various surface water features (vegas and lagoons) and shallow hand dug wells (*puesteros aljibe*) around the margin of the salar. The June 2024 expanded water monitoring program focussed on collecting significant additional water level and quality data from these locations. However, initial groundwater level and quality monitoring completed at

these locations shortly after installation (in combination with detailed lithological logging while drilling) has provided critical insights into the surface water vs groundwater interactions at the locations investigated.

Lithological logging of the drill core and drilling returns from each hole suggests the presence of an underlying clay layer(s) at each of surface water features investigated. In addition, water level and water quality monitoring results suggest different water levels and different water quality exists both above and below the clay layer(s) observed.

Additional field investigations and monitoring is required to confirm but the initial findings suggest that clay horizons present at these locations could be hydraulically isolating the shallow surface water linked features from the underlying brines (the target of the lithium abstraction) present within the salar. This is a critical aspect for the Rincon Project, as if these surface water features are truly hydraulically isolated from the underlying brines, then this may also mean that any reduction in water/brine levels in these areas (due to lithium abstraction) may have no impact on the lagoons and vegas around the margin of the salar.

Current Groundwater Monitoring Program

The groundwater monitoring program is illustrated in Figure 24.

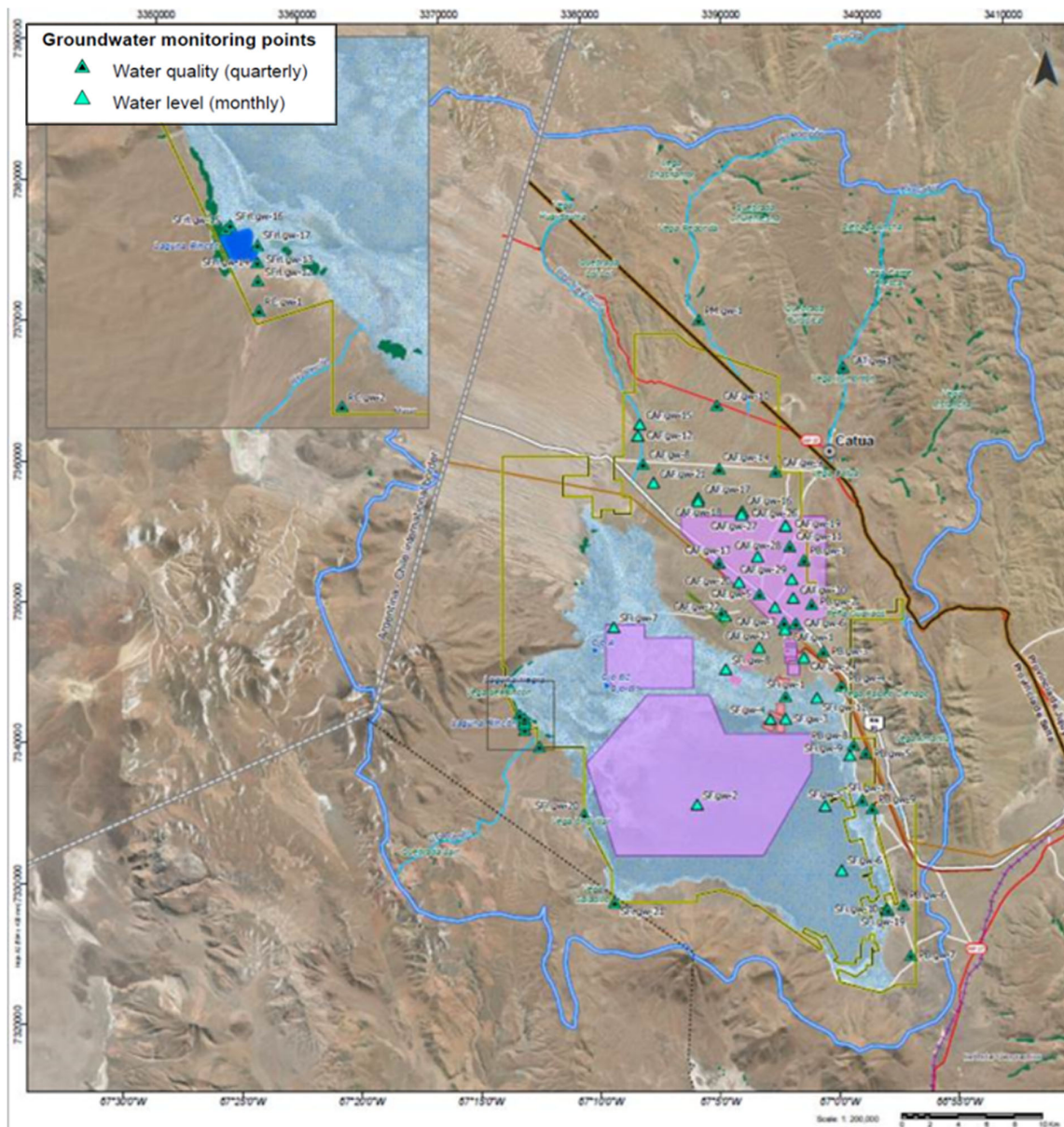


Figure 24: Current Groundwater Monitoring Locations

4.2.3 Groundwater Levels & Quality

The groundwater levels within the wells drilled into the interzone and salar are very close to ground level ranging from artesian to approximately 1.5 metres below ground level (mbgl).

Groundwater levels in the Catua Alluvial Fan range from approximately 35 to 145 mbgl and they remain relatively constant over the monitoring period. In terms of their relative elevation, these groundwater levels range between approximately 3,964 and 3770 metres above sea level (mASL). Groundwater level data for wells located within the Catua Alluvial Fan are graphically illustrated in Figure 25.

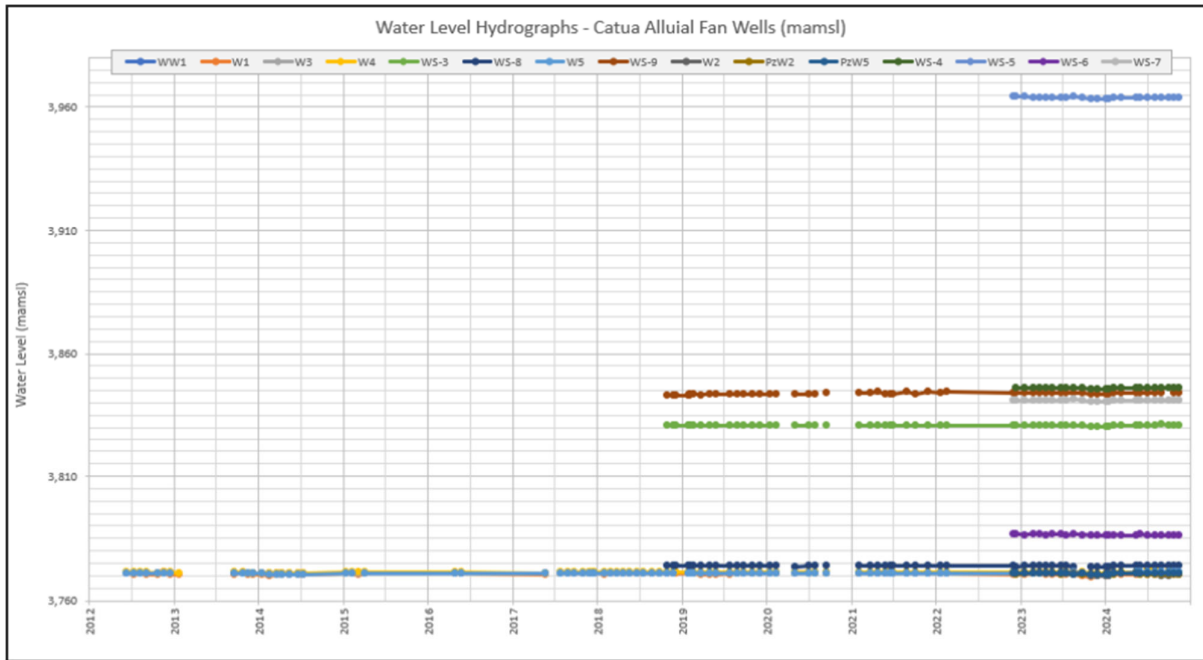


Figure 25: Catua Alluvial Fan Well Hydrographs

Groundwater within the Catua Alluvial Fan generally flows in a southerly direction towards the salar. An indicative groundwater contour map based on data from March 2024 data is presented in Figure 26. A schematic north-south cross section illustrating the water table at a representative location across the Catua Alluvial Fan is illustrated in Figure 27.

Groundwater monitoring indicates that groundwater in the Catua Fan is generally fresh to brackish near the water table, but that it becomes saline at depth. The fresh to brackish layer gets thicker towards the north and towards the east, it has been measured at thicknesses up to approximately 35 meters.

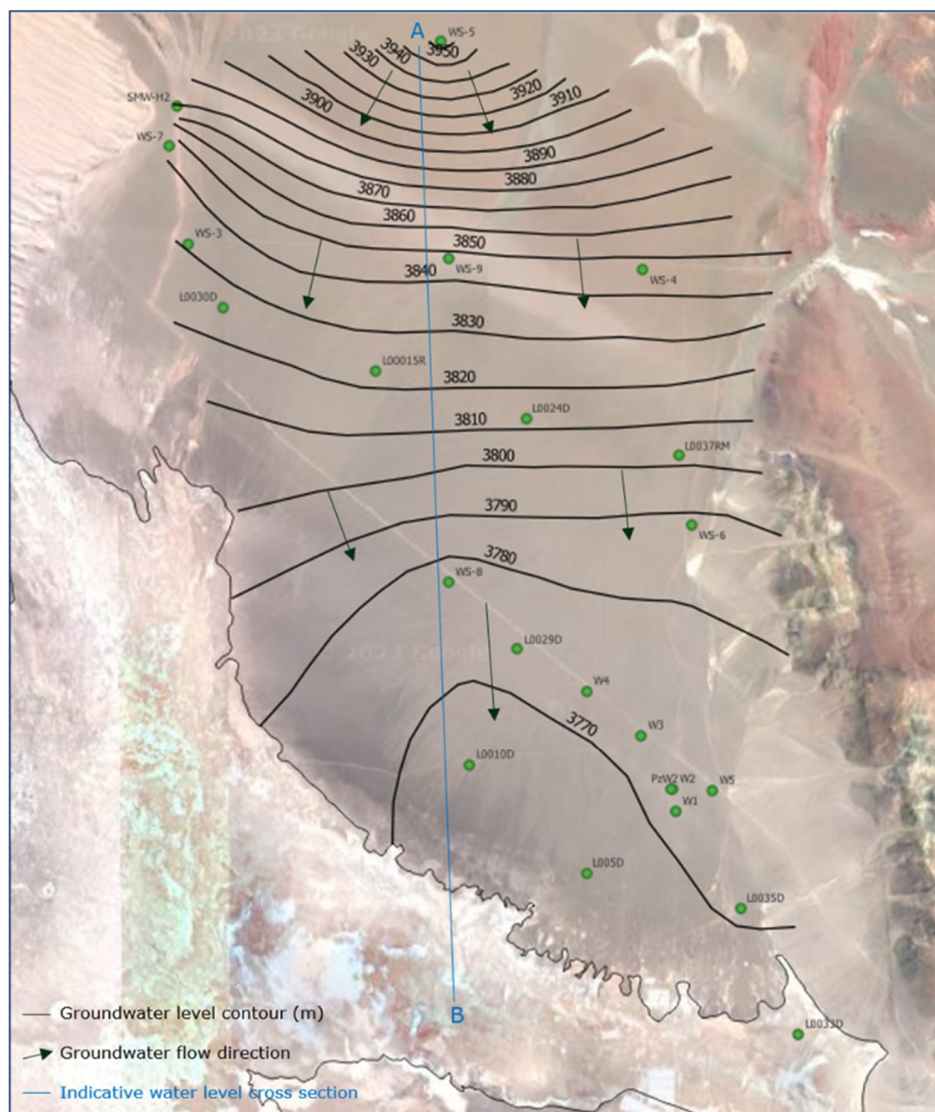


Figure 26: Catua Alluvial Fan Groundwater Contours (March 2024 Data)

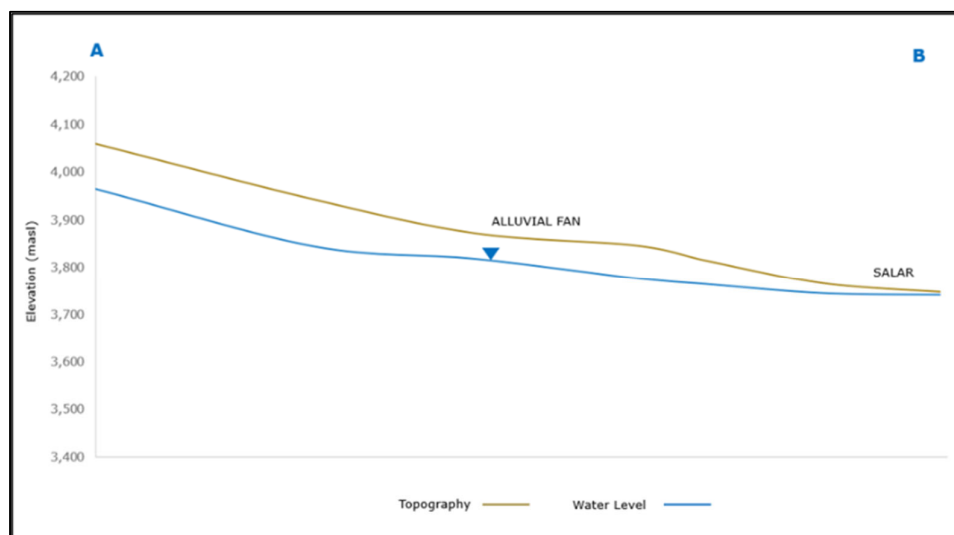


Figure 27: Schematic N-S cross section of water table across Catua Fan (March 2024 Data)

4.3 Meteorological Monitoring

Historical meteorological data is sourced from various weather stations located around the Project site, including a weather station 15 km northwest of the mine camp (2006-2009), the Planta Piloto weather station in the vicinity of the camp (2009 onwards) and the Piletas weather station 4 km south of the current camp. The locations of these stations are illustrated in Figure 1. These stations recorded air temperature, relative humidity, solar radiation, wind velocity and direction, atmospheric pressure, and rainfall.

Four new weather stations (Pompon, Airstrip, Camp and Central Salar) were installed across the Rincon Project area in 2025. The location of the new weather stations is illustrated in Figure 3 and the wide range of meteorological parameters being monitored is detailed in Table 2.

A site-specific evaporation (dome) field survey is ongoing (commenced in 2024) with a view to providing greater certainty with regards to evaporation from different land surfaces across the Rincon Basin. The survey includes quarterly field evaporation measurements from eight different locations/settings across the Rincon Basin.

4.4 On-Going and Future Water Monitoring

The water monitoring program is currently being reviewed to:

- ensure that the monitoring programme is still appropriate for the current mine design and proposed operation,
- identify any gaps/overlaps, and
- ensure that all of the water/biodiversity aspects are covered.

On-going surface water and groundwater monitoring is being completed across the Rincon Basin to advance the understanding of the hydrology, hydrogeology and interaction between the brine, freshwater and surface water features. Additional groundwater monitoring is being completed within the specific footprint of the proposed raw water wellfield to provide greater confidence in the raw water supply for the mine.

Regular review of the water monitoring results will be completed to update the conceptual hydrogeological model and provide input to the various on-going studies being completed.

The water monitoring network and programme will be reviewed and updated in light of the results and findings of the various assessments to ensure that it is appropriate to identify and evaluate water related risks, and to assess and ultimately manage the potential water related impacts on water resources, the environment, biodiversity, and local communities within the Rincon Project area.

Meteorological monitoring will be on-going at the weather station located at the ponds just south of the current pilot plant site and the four new weather stations installed across the Rincon Project area. The on-going meteorological data will be assessed to advance our understanding of the various relevant climatic parameters and the variability of these parameters across the Rincon Basin both spatially and seasonally.

4.5 Data Management

Initially all water monitoring data was compiled in various Microsoft excel spreadsheets. However, Rio Tinto recently implemented the environmental database EnviroSys and now all water and climate data is captured within the Rincon Projects EnviroSys database.

5 Origin & Hydrogeological Conceptualisation

The Rincón Basin is a high-altitude, closed (or endorheic) hydrological system located in the Argentine Puna, a vast plateau known for its arid climate and extreme environmental conditions. In this unique setting, water follows a slow and complex path. Rainfall and snowmelt from surrounding highlands infiltrate into the ground, moving through subsurface layers until eventually reaching lower elevation areas such as springs, wetlands (locally known as vegas), shallow lagoons, and the salar (salt flat) itself. As the basin has no natural outlet to rivers or oceans, the only way water leaves the system is through evaporation.

To understand how water behaves in such a delicate and isolated system, the Rincón Project developed a conceptual hydrogeological model. This model explains the movement and storage of groundwater and how it interacts with different types of rocks, sediments, and ecosystems. It is based on extensive technical work, including over 150 drilled boreholes, pumping and hydraulic tests, geophysical surveys, and long-term groundwater level monitoring.

5.1 Hydrogeological Domains

The basin has been divided into three principal hydrogeological domains, each with distinct properties and functions:

5.1.1 Unconsolidated Sediments – Alluvial/Colluvial Sediments

These are areas with loose deposits of sand, gravel, and finer sediments that have been transported by water or gravity from the surrounding mountains. The most important of these is the Catua Alluvial Fan, located to the north of the salt flat. The Catua Alluvial Fan is the main proposed source of raw (industrial) water for the Project.

Water enters this area through the direct infiltration of rainfall, the infiltration of surface water from both rainfall runoff and small streams, and groundwater throughflow from the surrounding bedrock. The water then predominantly flows through sand and gravel sediments with high porosity and permeability, which means they can store and transmit water efficiently.

In the Catua Fan, lower density low salinity water exists above higher density more saline water. This lens of lower salinity water is the proposed raw (industrial) water supply for the Rincon Project. The depth to water ranges from approximately 50 metres below ground level (mbgl) in the southern portion of the fan to approximately 150 mbgl in the northern portion of the fan. The thickness of the lower salinity water varies across the fan, reaching up to approximately 35 metres in the planned wellfield area.

5.1.2 The Salar – Lithium-rich Brine System

At the centre of the basin lies the salar, a large salt flat where lithium-rich brine is stored underground. The sediments comprise layers of halite (salt), black sands and interbedded clays. The brine within the salar is highly saline and moves at a very slow rate due to the compact nature of the surrounding materials. The nature of these materials affects how water moves through the sequence, slow moving brine can transit through the fractured or porous zones, while clay layers can act as hydraulic barriers.

Lenses of clay are found throughout the salar sediments but are more prevalent toward the northern salar margin. Drilling campaigns have identified the presence of clay layers beneath wetlands and lagoons along the western margin of the salar, suggesting potential hydraulic isolation between the shallow surface water linked features (vegas and lagoons) and the deeper brine systems.

An extensive carbonate (travertine) platform exists along the northern and northwestern margin of the salar nucleus.

5.1.3 The Bedrock – Low Permeability Basement

Beneath and around the basin lies the bedrock, which is composed of ancient geological formations from the Palaeozoic and Tertiary periods. These rocks have very low permeability and low water storage capacity, meaning that they do not easily transmit groundwater. Groundwater flow in this domain is minimal and occurs mainly through fractures or weathered zones where cracks in the rock have created small pathways.

The bedrock forms the hydrogeological “basement” of the entire basin and acts as a natural boundary, limiting how far and how fast groundwater can move. Faults and changes in rock composition in some places may

locally enhance water movement, but overall, this domain plays a limited role in the active water system of the basin.

5.2 Eco-Hydrological Conceptual Model

This section focusses on the following key surface water related features:

- Rincon Lagoon
- Vegas – Rincon, Unquillar & Saladillo
- Ojos de Agua

A detailed description of the studies and water monitoring completed and/or ongoing in relation to these key surface water related features is provided in Sections 3 and 4.

The objective of the studies and monitoring completed has been to build a robust conceptual understanding of these features origins and hydrogeological setting.

5.2.1 Rincon Lagoon

Studies & Monitoring

A key focus of the studies and monitoring completed to date at the Rincon Lagoon has been to build a robust conceptual understanding of the origin and hydrogeological setting of the lagoon and the surrounding wetland environment. A particular focus has been on evaluating the potential hydraulic connectivity between the lagoon and the underlying lithium bearing brine aquifers, and on evaluating the ecological sensitivity of the setting.

It is key to note that the Rincon property boundary exists just to the west of the Rincon Lagoon which restricts the extent to which site investigations can be completed to the west of the lagoon.

A chronological summary of the field investigations, monitoring programs and hydrogeological modelling undertaken at the Rincon Lagoon, to illustrate the progressive development of knowledge which has been completed to assess the potential impact that the Rincon Project could potentially have on the lagoon and if required design appropriate mitigation strategies (in line with IFC Performance Standards), is as follows:

- **Surface water monitoring (initiated pre-2017, expanded in 2022 and 2024).** Historical monitoring of surface water at Rincon Lagoon and surrounding vegas was conducted intermittently until 2017/18. A formal monthly surface water monitoring program was launched in November 2022 and expanded in June 2024 to include Rincon Lagoon (inner and outer lagoon) and other nearby water related features.
- **Hydrogeological drilling and hydraulic testing (2022–2024).** Several boreholes were drilled near Rincon Lagoon to investigate lithological units, water quality, and groundwater–surface water interactions. These included rotary and diamond drillholes equipped with PVC casing for long-term monitoring.
- **Isotope sampling campaign – Phase 1 (January 2023).** Water samples were collected from locations across the Catua Alluvial Fan and Salar Interzone to provide insights on recharge mechanisms and water origin across the Rincon Basin.
- **Installation of shallow piezometers – Phase 1 (September to November 2023).** The first shallow monitoring campaign installed piezometers around Rincon Lagoon, including EW-005, EW-006, EW-007 and EW-015. These wells were designed to monitor shallow groundwater levels and salinity near the lagoon perimeter and provided key insights on the vertical stratification of the sediments in this area.
- **Installation of shallow piezometers – Phase 2 (April 2024).** A second campaign installed additional piezometers near EW-015, including EW 015-M01, EW 015-M02, and EW 015-M04. These wells allowed further investigation of shallow groundwater gradients and improved understanding of the hydrogeological layering.

- **Phase 1 re-injection/infiltration trials (April 2024).** A low-volume re-injection test was conducted at EW-015 to assess the viability of shallow infiltration as a mitigation measure. Groundwater level responses were recorded in nearby piezometers, confirming that injection can temporarily elevate water levels in the shallow aquifer.
- **Isotope sampling campaign – Phase 2 (July 2024).** A broader sampling effort collected 29 water samples across the Rincon project area, including surface water and groundwater sources in the Rincon Lagoon area. A key objective was to evaluate the origin of the water in the Rincon Lagoon, groundwater flow paths and the relationship between surface water and groundwater in this area.
- **Isotope sampling campaign – Phase 3 (December 2024).** A second round of samples was taken from the same 29 locations used in the July 2024 campaign to validate seasonal consistency and improve resolution on travel times and mixing processes.
- **Bathymetric and topographic surveys (January 2025).** A detailed bathymetric and topographic survey of Rincon Lagoon was conducted. Staff gauges were installed and levelled to a geodetic benchmark to support long-term hydrological monitoring and future bathymetric updates.
- **Installation of new shallow piezometers – Phase 3 (March 2025).** Six new piezometers were installed near Rincon Lagoon, including SFrl.gw-30, SFrl.gw-33-A, SFrl.gw-33-B, SFrl.gw-34, VG052_A bis and VG052_B bis. These installations improve the spatial resolution of the monitoring network and link hydrogeological and ecological indicators under a single adaptive monitoring framework.
- **Integration of hydrogeology and biodiversity monitoring (2025).** This task linked shallow groundwater monitoring with ecological fieldwork focused on vegetation, soil moisture, and floristic composition. The objective was to understand how hydrological changes could affect the lagoon's ecological integrity.
- **Conceptual and numerical groundwater modelling (up to mid-2025).** The ongoing advancement of the hydrogeological understanding of the Rincon Lagoon has facilitated a similar progression in the conceptual hydrogeological model of the lagoon. There have been numerous iterations of numerical groundwater modelling completed for the Rincon Project, in which the Rincon lagoon has always been incorporated as a sensitive receptor. Simulations of long-term groundwater level drawdown and recovery have been used to assess potential risks, potential mitigation options and a more refined local model centred on the lagoon is currently under development.

Water Balance

The water balance for the Rincon Lagoon was assessed over a 24-month period from December 2022 to November 2024. The analysis integrates direct measurements of lagoon level changes, meteorological data, and hydrological inputs and outputs. The main objective was to understand the relative contribution of precipitation, evaporation, and groundwater exchange to the lagoon's hydrodynamics.

The lagoon level was monitored monthly using staff gauges referenced to a common datum. Monthly variations were compared to the estimated potential change based on climate inputs alone, which allowed the indirect estimation of net groundwater contribution.

The main components of the water balance are as follows:

- **Precipitation (input):** The total rainfall over the lagoon surface during the 24-month assessment period was 128 mm. This represents a minor input in comparison to other components, consistent with the arid climate of the region.
- **Evaporation (output):** Estimated using the Penman-Monteith method and corrected with site-specific field measurements, the total evaporation from the lagoon surface was 4,685.4 mm. This is the dominant loss mechanism in the water balance.
- **Observed water level variations:** While fluctuations occurred month to month, direct precipitation and evaporation alone could not explain the net changes in lagoon level, especially during dry months.

- Groundwater exchange (net input):** By comparing observed and theoretical lagoon level changes, a cumulative net groundwater input of 4,944.3 mm was estimated for the period. This inflow is interpreted as discharge from the surrounding shallow aquifer system, recharging the lagoon from lateral and potentially upward flow paths.

Overall, the water balance suggests that Rincon Lagoon is sustained primarily by groundwater inflow, which offsets the significant evaporative losses, with precipitation playing a very much secondary role. These findings confirm the lagoon's hydrogeological dependency and support its classification as predominantly a groundwater-fed lagoon. A graphical illustration of the Rincon Lagoon water balance is presented in Figure 28.

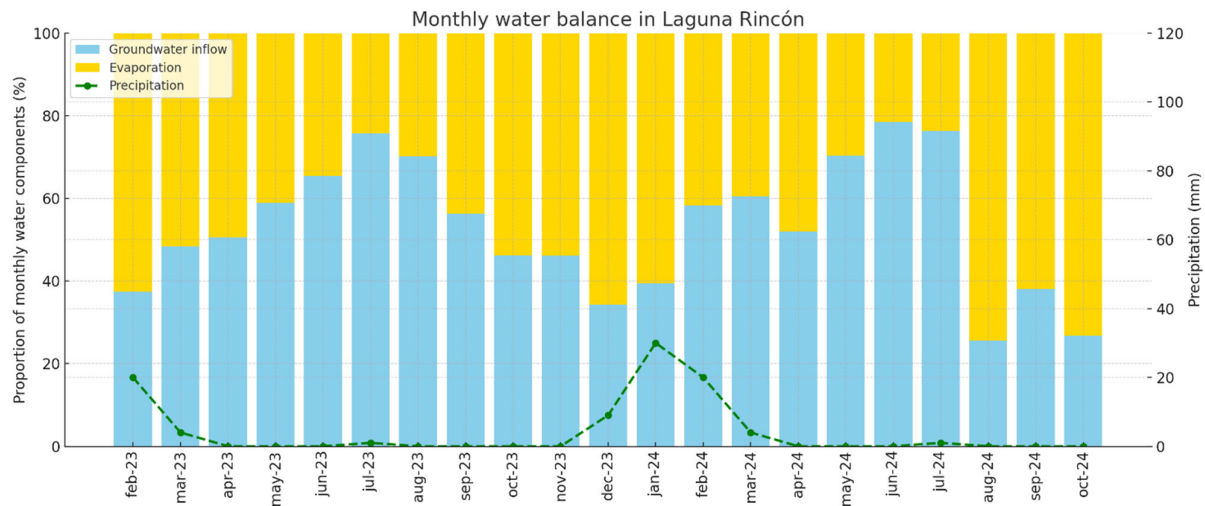


Figure 28: Monthly Water Balance Components of Rincon Lagoon (Feb 2023 – Oct 2024)

The monthly water balance of the Rincon Lagoon from February 2023 to October 2024 is illustrated in Figure 28. The stacked bars represent the proportional contribution of groundwater inflow and evaporation to the total monthly water flux. Precipitation, shown as a green line with markers on a secondary axis, remains a minor and highly seasonal component.

The analysis reveals that evaporation is consistently the dominant outflow, while groundwater inflow compensates for this loss and sustains lagoon levels. During the dry season (typically April to November), groundwater accounts for nearly 100% of the water input, while precipitation contributes significantly only in a few months (e.g. January and February).

This seasonal pattern highlights the lagoon's strong dependence on shallow groundwater inflows, reinforcing its classification as primarily a groundwater-dependent lagoon.

Conceptual Eco-Hydrological Model

The conceptual hydrogeological model of the Rincon Lagoon is based on a combination of all available stratigraphic, hydrochemical, hydrometric and isotopic data. The Rincon Lagoon is situated at the base of an extensive alluvial fan located directly west of the salar nucleus and represents the terminal point of a local groundwater discharge system. Figure 29 illustrated the position of the Rincon Lagoon with respect to the salar nucleus and large western alluvial fan.



Figure 29: Rincon Lagoon Location at toe of Large Alluvial Fan

Water balance data indicates that the lagoon received limited direct precipitation (~128 mm) and experienced high evaporation losses (~4,685 mm) in the two-year period between December 2022 to November 2024. The significant evaporation losses are offset by net groundwater inflow (~4,944 mm), confirming that the lagoon is sustained by subsurface groundwater inflows. During periods when the water column exceeds approximately 0.5 meters (on the stage board installed in January 2025), the lagoon begins to overflow and contributes surface flow to the chain of lagoons downstream (to the east).

Monthly electrical conductivity values measured from one of the main water sources feeding the Rincon Lagoon (Tributary), the inner Rincon Lagoon and outer Rincon Lagoon from July to November 2024 are illustrated in Figure 30. The data show a progressive increase in surface water salinity due to evaporation as the water progresses from the initial tributary source to the inner lagoon and on to the outer lagoon, with the outer lagoon exceeding 100,000 $\mu\text{S}/\text{cm}$ by November 2024. The inner lagoon remains slightly fresher (than the outer lagoon) but still elevated salinity, and shows a monthly variation during this period of between approximately 20,000 and 40,000 $\mu\text{S}/\text{cm}$.

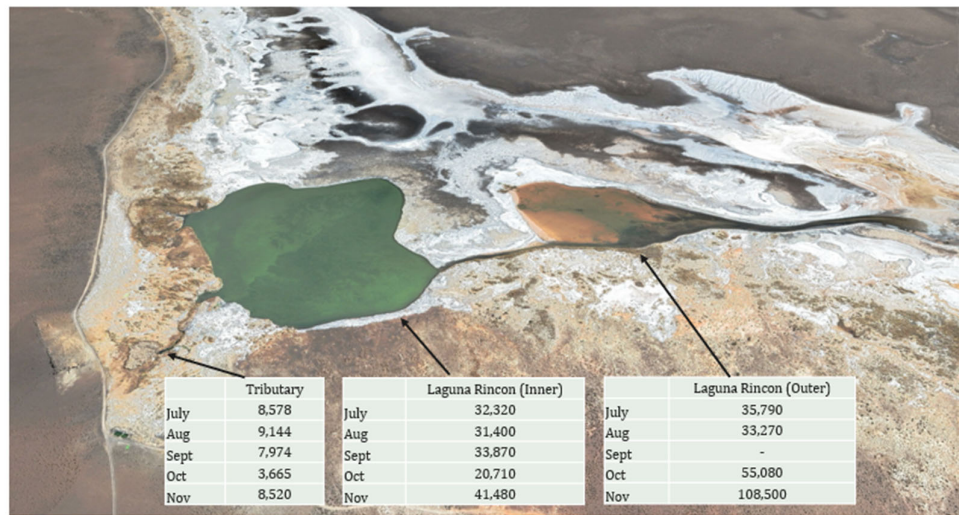


Figure 30: Electrical Conductivity (µS/cm) Trends in Rincon Lagoon Surface Water (2024)

The three phases of shallow hole drilling were undertaken in the Rincon Lagoon area and included the installation of 17 shallow monitoring wells as illustrated in Figure 31. The drilling of these holes provided detailed insights into the lithological profiles in the shallow sediments surrounding the Rincon Lagoon, while water monitoring provided insights into the piezometric and water quality differences between different stratigraphic units.

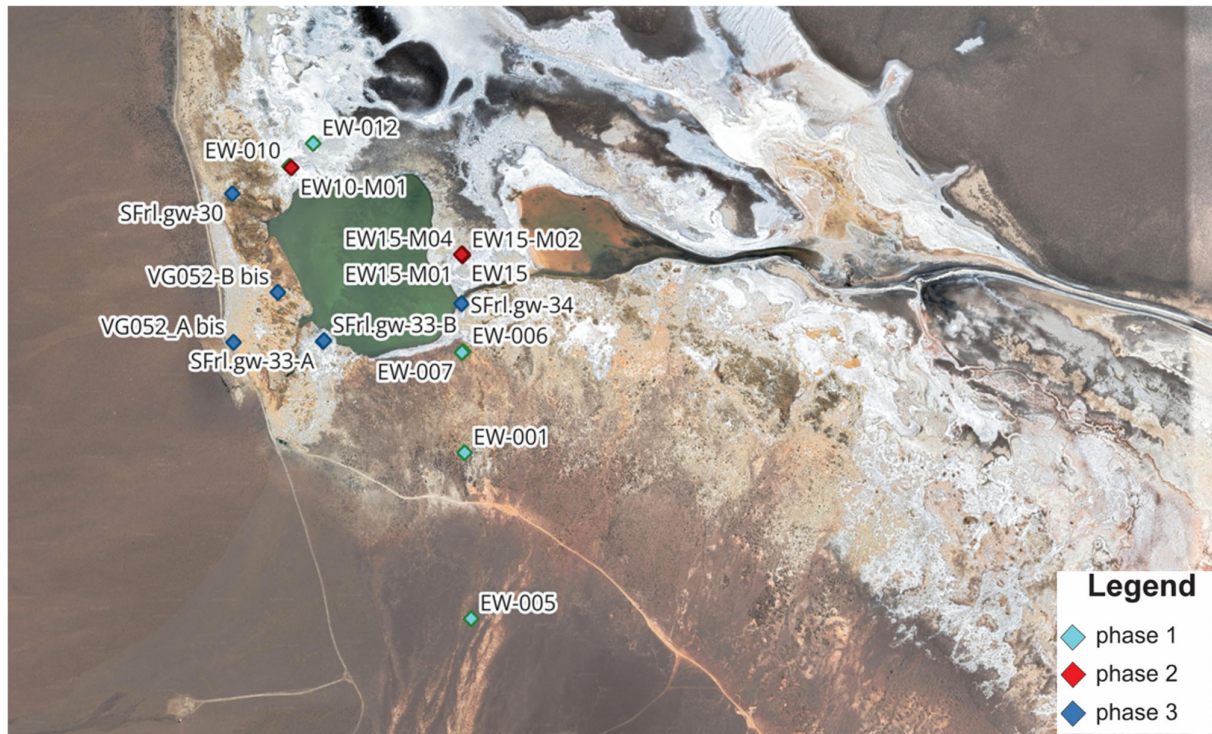


Figure 31: Shallow Monitoring Wells installed in vicinity of Rincon Lagoon

Graphical representation of the lithologies, piezometric levels and water quality progression from the alluvial fan (EW-005) to the lagoon (EW-015) is illustrated in Figure 32. This graphic illustrates the presence of a clay layer near the salar (but absent in the fan area), groundwater salinity increasingly towards the salar and semi-confined water levels (at depth near the lagoon).

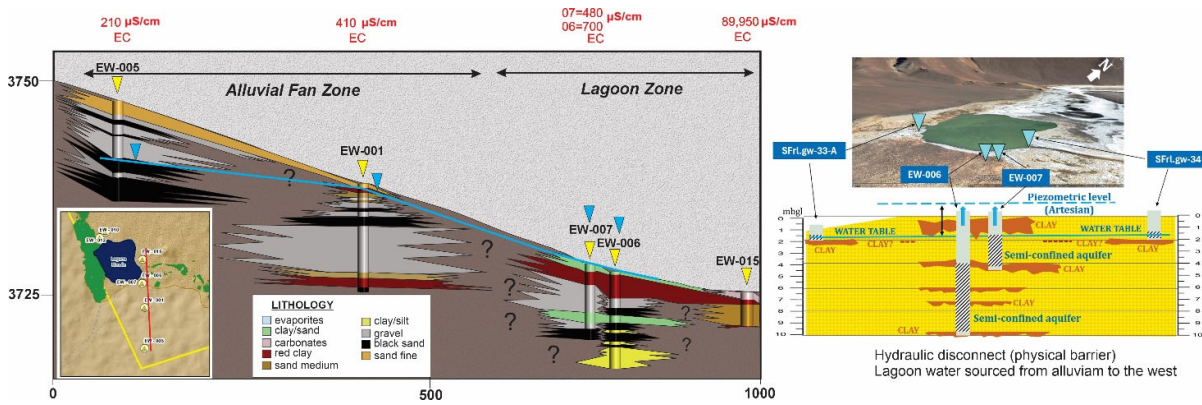


Figure 32: Spatial Distribution of Water Levels, Salinity & Clay in Rincon Lagoon Area

Some of the key findings from the drilling and monitoring of these shallow wells, in the immediate vicinity of the Rincon Lagoon, are as follows:

- A shallow low permeable layer (or layers) was encountered in every hole drilled, except for EW-005 which is the hole furthest from the salar margin and furthest into the alluvial fan.
- The salinity of the shallow groundwater increases as you move from the alluvial fan towards the Rincon Lagoon.
- The water quality between lithological units at different depths (separated by low permeability layers) is quite different, suggesting hydraulic disconnection between units at different depths.
- Artesian groundwater conditions were encountered beneath the shallow clay layer at two locations adjacent to the Rincon Lagoon, suggesting vertically upward hydraulic gradients, groundwater confinement and hydraulic disconnection at these locations.
- In summary, the drilling and monitoring results to date suggest that the Rincon Lagoon may be hydraulically disconnected from the deeper brine units by a series of low-permeability clay layers.

The seasonal fluctuations in lagoon level and salinity are critical for understanding its ecological function and for defining thresholds for future mitigation. Overall, the conceptual model identifies the key inputs to the lagoon as:

- Subsurface groundwater inflow from the alluvial fan (main source).
- Direct rainfall (minor).
- Occasional surface water flows from extreme rainfall events (very limited).

And the main outputs as:

- Evaporation (dominant).
- Overflow to downstream lagoons (when January 2025 stage board water level exceeds ~0.5 m).

This conceptualization supports the classification of Rincon Lagoon as a shallow, groundwater-fed lagoon and associated wetland (vega) system hydraulically isolated from the salar's deep brine aquifer. A three-dimensional conceptual diagram for the Rincon Lagoon area showing groundwater flow from the alluvial fan to the lagoon and surrounding vegas, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is illustrated in Figure 33.

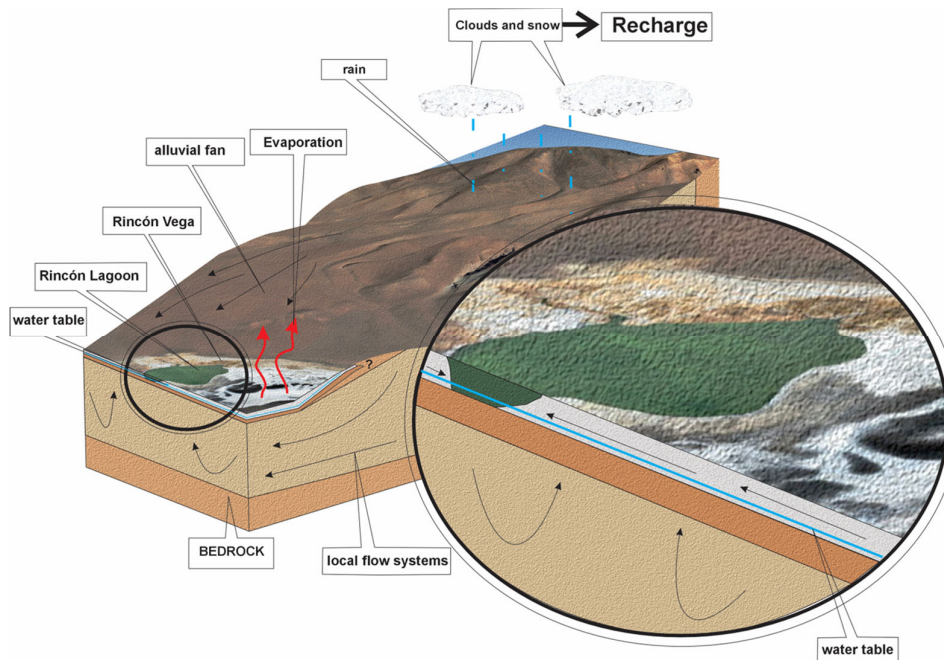


Figure 33: Conceptual Hydrogeological Model of Rincon Lagoon Area

5.2.2 Vega Rincon

Studies & Monitoring

A key focus of the studies and monitoring completed to date at the Vega Rincon has been to build a robust conceptual understanding of the origin and hydrogeological setting of the Vega Rincon area, including both the perennial spring which feeds the vega, the surrounding wetland (vega) environment and the ephemeral lagoon (Laguna Negra) which forms on the margin of the salar.

It is key to note that the Rincon property boundary exists just to the east of the Vega Rincon which restricts the extent to which site investigations can be completed in the immediate vicinity of the vega.

A particular focus has been on evaluating the potential hydraulic connectivity between the wetland area and the underlying lithium bearing brine aquifers, and on evaluating the ecological sensitivity of the setting. A chronological summary of the field investigations, monitoring programs and hydrogeological modelling undertaken in the Vega Rincon area, to illustrate the progressive development of knowledge which has been completed to assess the potential impact that the Rincon Project could potentially have on the wetland environment and if required design appropriate mitigation strategies (in line with IFC Performance Standards), is as follows:

- **Surface water monitoring (initiated pre-2017; expanded in 2022 and 2024).** Historical surface water monitoring in the Vega Rincon area was conducted intermittently until 2017/2018, with isolated campaigns focused on hydrochemical characterization and flow measurements. In November 2022, a systematic monthly monitoring program was launched, enabling the development of more robust time series datasets. This program was expanded in June 2024 to include monitoring stations in the wetland area, aiming to enhance the understanding of surface–groundwater interactions and ecologically sensitive in these areas.
- **Installation of Shallow Piezometers – Phase 1 (September to November 2023).** The first shallow monitoring campaign installed piezometers in the Vega Rincon area, including EW-013 and EW-014. These wells were designed to monitor shallow groundwater levels and salinity near the vega and provided key insights on the vertical stratification of the sediments in this area.
- **Installation of Shallow Piezometers – Phase 2 (April 2024).** During the second campaign, an additional shallow piezometer was installed EW-13-ML (screened in a slightly deeper layer than EW-013 and at a location closer to the vega). The aim was to provide additional insights on the shallow hydrogeological conditions in the area.

- **Isotope sampling campaign – Phase 2 (July 2024).** A broader sampling effort collected 29 water samples across the Rincon project area, including surface water from the spring feeding Vega Rincon. A key objective was to evaluate the origin of the water feeding Vega Rincon and the relationship between surface water and groundwater in this area.
- **Isotope sampling campaign – Phase 3 (December 2024).** A second round of samples was taken from the same 29 locations used in the July 2024 campaign to validate seasonal consistency and improve resolution on travel times and mixing processes.
- **Installation of Shallow Piezometers – Phase 3 (March 2025).** Three new shallow piezometers were installed in the Vega Rincon area, including VG053_Abs, VG053_Abd, and VG053_C bis. These installations improve the spatial resolution of the monitoring network and link hydrogeological and ecological indicators under a single adaptive monitoring framework.
- **Integration of hydrogeology and biodiversity monitoring (2025).** This task linked shallow groundwater monitoring with ecological fieldwork focused on vegetation, soil moisture, and floristic composition. The objective was to understand how hydrological changes could affect the vegas ecological integrity.
- **Conceptual and numerical groundwater modelling (up to mid-2025).** The ongoing advancement of the hydrogeological understanding of the Vega Rincon area has facilitated a similar progression in the conceptual hydrogeological model of the wetland area. There have been numerous iterations of numerical groundwater modelling completed for the Rincon Project, in which the Vega Rincon has always been incorporated as a sensitive receptor. Simulations of long-term groundwater level drawdown and recovery have been used to assess potential risks, potential mitigation options and a more refined local model centred on the Vega Rincon is currently under development.

Water Balance

The conceptual water balance for the Vega Rincon area was estimated considering a contributing drainage catchment area of 12 km² and a net vega surface area of approximately 0.26 km², corresponding exclusively to the active vegetated area. According to the project's baseline hydrogeological study (Montgomery, 2025), the total recharge available in this sub-basin is estimated at 45 liters per second, including direct recharge, lateral inflow and surface water runoff. Assuming that only 33 percent of this flow effectively reaches the vegas, the available inflow is reduced to 14.85 liters per second, equivalent to an annual volume of 0.4686 Mm³ (or 468,600 m³/year).

Water losses were estimated using an annual evapotranspiration value of 1,754 mm, corresponding to the actual evapotranspiration of high-altitude vegas, calculated using the Penman-Monteith method (Montgomery 2025). This evaporation was applied over the above identified surface area of 0.26 km² (260,000 m²) and resulted in an annual water loss of 0.456 Mm³ (456,000 m³/year).

The difference between the water inflows and outflows yields a net positive water balance of 0.0126 Mm³ per year, equivalent to 12,600 m³/year, 34.5 m³/day or approximately 0.40 liters per second. This result suggests that, under current conditions and excluding direct evaporation or other additional losses, the Vega Rincon area could be hydrologically sustained if at least one third of the runoff generated in the catchment area effectively reaches the active vega zone.

Conceptual Eco-Hydrological Model

The conceptual hydrogeological model of the Vega Rincon is based on a combination of all available stratigraphic, hydrochemical, hydrometric and isotopic data. The Vega Rincon is situated at the base of localised colluvial sediments and is fed by a perennial spring that emerges midway up the colluvial sediment slope. The spring may coincide with a geological structure in this area. Figure 34 illustrated the position of Vega Rincon with respect to the salar nucleus and colluvial sediments.

The three phases of shallow hole drilling were undertaken in the Vega Rincon area and included the installation of 6 shallow monitoring wells as illustrated in Figure 35. The drilling of these holes provided detailed insights into the lithological profiles in the shallow sediments in the Vega Rincon area, while water monitoring provided insights into the piezometric and water quality differences between different stratigraphic units.

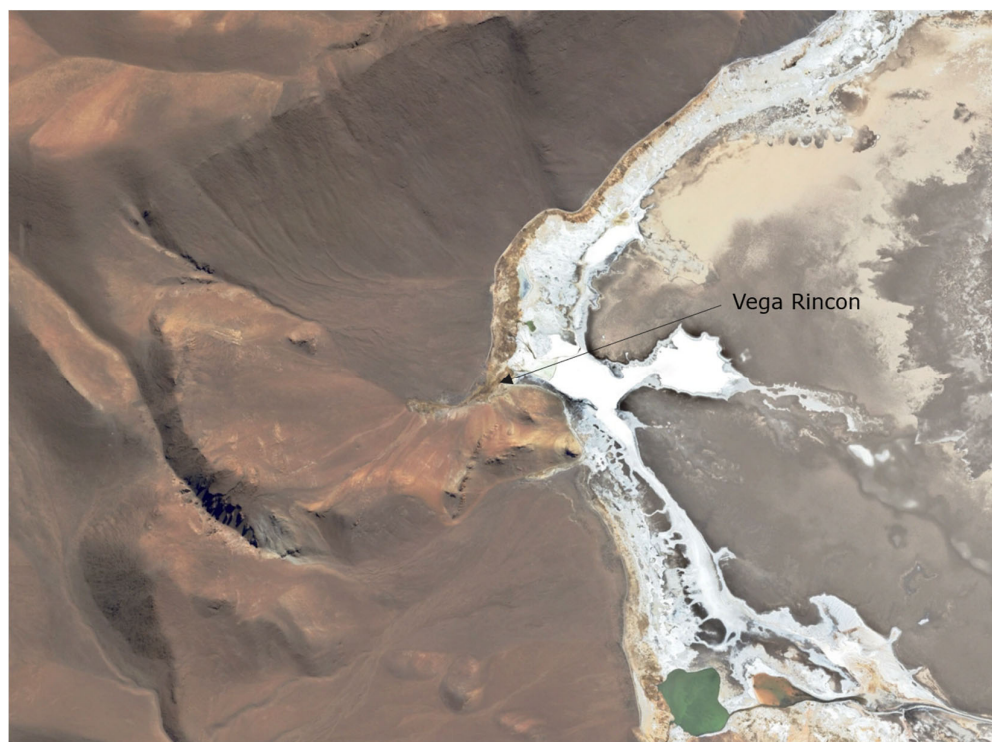


Figure 34: Vega Rincon Location

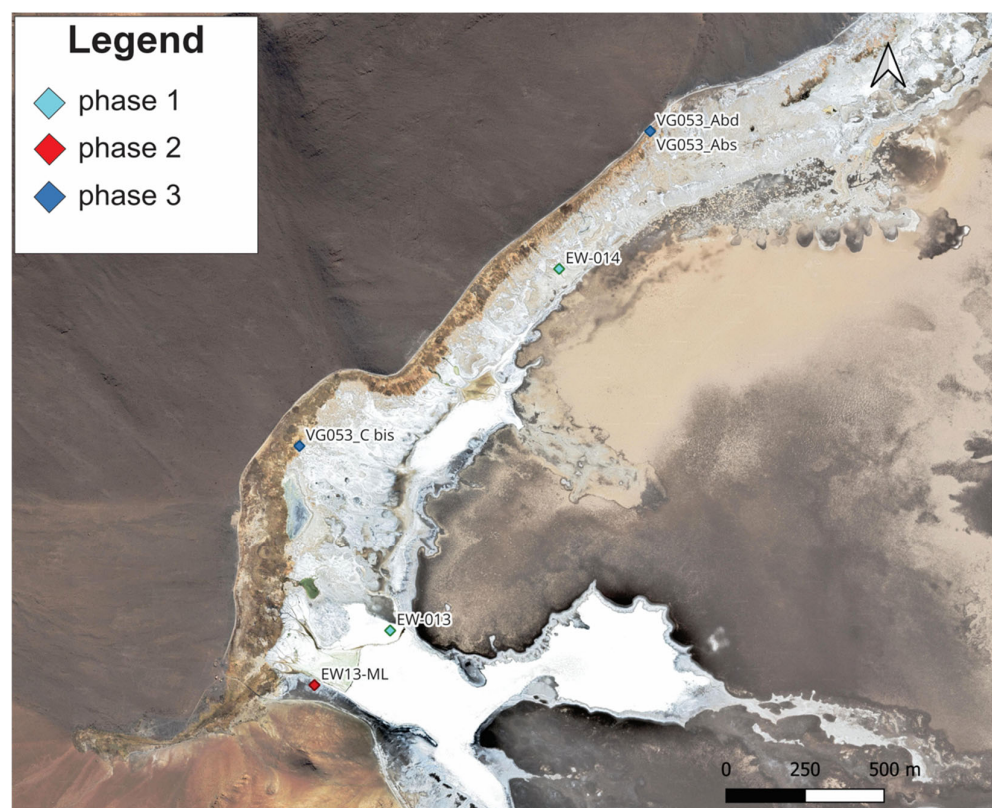


Figure 35: Shallow Monitoring Wells installed in vicinity of Vega Rincon

A shallow clay layer was encountered in all six shallow wells drilled, lithological profiles from the six wells drilled is illustrated in Figure 36. This shallow clay layer may act as a barrier that promotes near-surface water accumulation (sustaining vega conditions by limiting vertical infiltration) and isolates the shallow water system from the deeper lithium hosting brines. The spring which feeds the Vega Rincon has a low salinity (fresh water), generally in the 80 -230 ppm TDS range and as mentioned previously may be linked to the local structural geology of the area. An ephemeral lagoon (Laguna Negra) forms on the margin of the salar.

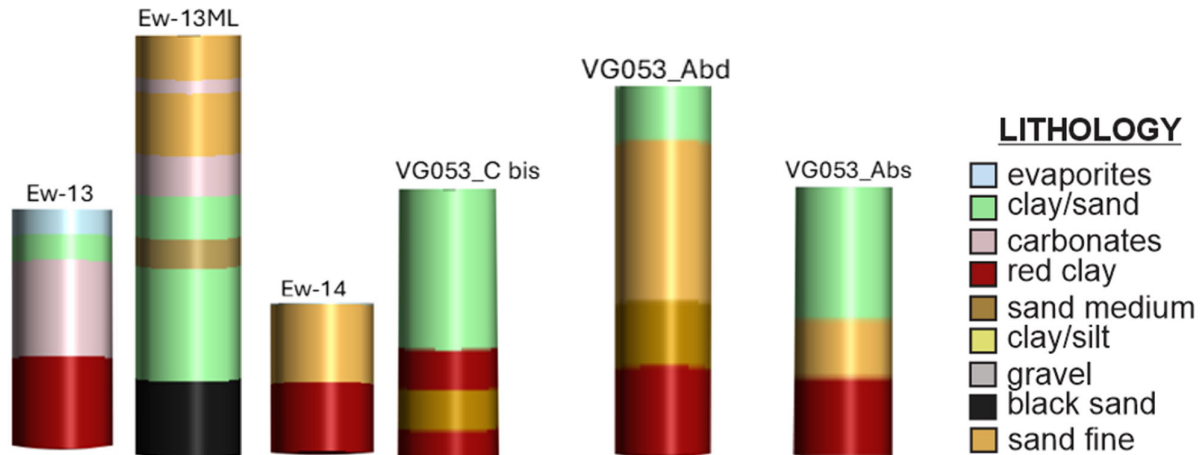


Figure 36: Lithological Profiles in vicinity of Vega Rincon

Some of the key findings from the drilling and monitoring of the shallow wells and spring in the immediate vicinity of the Vega Rincon, are as follows:

- A shallow low permeable layer (or layers) was encountered in every hole drilled.
- Fresh water drains to the vega from a spring located midway up the slope immediately to the west of the wetland area.
- In summary, the drilling and monitoring results to date suggest that the Vega Rincon may be hydraulically disconnected from the deeper brine units by a series of low-permeability clay layers.

Overall, the conceptual model identifies the key inputs to the lagoon as:

- Spring flows.
- Subsurface groundwater inflow from the colluvial fan.
- Direct rainfall (minor).
- Occasional surface water flows from extreme rainfall events (very limited).

And the main outputs as:

- Evaporation (dominant).

This conceptualization supports the classification of Vega Rincon as a shallow, groundwater-fed spring and associated wetland (vega) system hydraulically isolated from the salar's deep brine aquifer. A three-dimensional conceptual diagram for the Vega Rincon area showing groundwater flow from the colluvial sediments to the vega, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is illustrated in Figure 37.

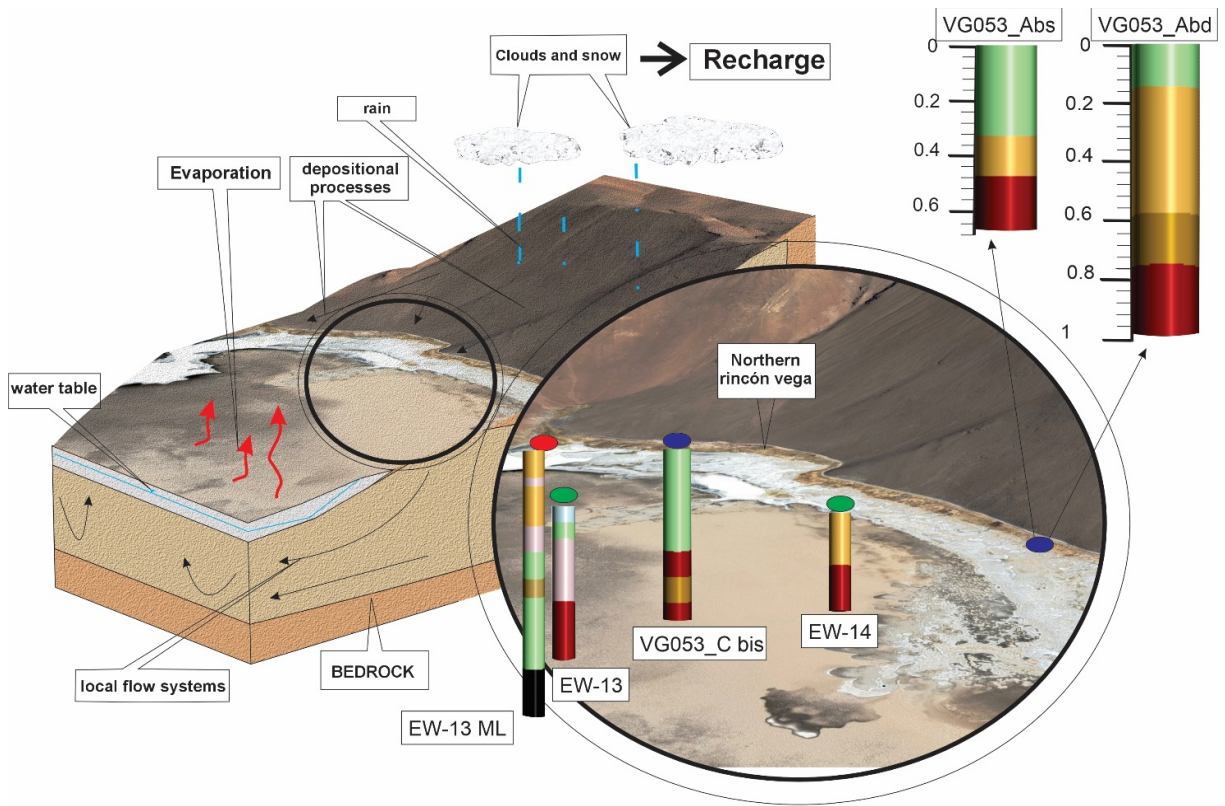


Figure 37: Conceptual Hydrogeological Model of Vega Rincon Area

5.2.3 Vega Unquillar

Studies & Monitoring

A key focus of the studies and monitoring completed to date at the Vega Unquillar has been to build a robust conceptual understanding of the origin and hydrogeological setting of the Vega Unquillar area, including both the discrete water seepage and the more diffuse water fed surrounding wetland (vega) environment at the margin of the salar. A temporary lagoon also forms on the edge of the salar at this location.

It is key to note that the Rincon property boundary exists to the east of the Vega Unquillar which restricts the extent to which site investigations can be completed in the immediate vicinity of the vega.

A particular focus has been on evaluating the potential hydraulic connectivity between the wetland area and the underlying lithium bearing brine aquifers, and on evaluating the ecological sensitivity of the setting. A chronological summary of the field investigations, monitoring programs and hydrogeological modelling undertaken in the Vega Unquillar area, to illustrate the progressive development of knowledge which has been completed to assess the potential impact that the Rincon Project could potentially have on the wetland environment and if required design appropriate mitigation strategies (in line with IFC Performance Standards), is as follows.

- **Surface water monitoring (June 2024 onwards).** There is no record of any historical surface water monitoring in the Vega Unquillar area. Vega Unquillar was included in the water monitoring program when it was expanded in June 2024, with the objective of enhancing the understanding of surface-groundwater interactions and ecologically sensitive in this area.
- **Installation of Shallow Piezometers – Phase 1 (September to November 2023).** The first shallow monitoring campaign included the installation of one piezometer in the Vega Unquillar area (EW-008). The well was designed to monitor shallow groundwater levels and salinity near the vega and provided key insights on the vertical stratification of the sediments in this area.

- **Installation of Shallow Piezometers – Phase 2 (April 2024).** During the second campaign, an additional four shallow piezometers were installed EW-08-LV (installed at a location closer to the vega), plus EW-08-M01, EW-08-M02 and EW-08-MH. The aim was to provide additional insights on the shallow hydrogeological conditions in the area and also provide a close network of wells which could be used to complete initial re-injection/infiltration trials.
- **Integration of hydrogeology and biodiversity monitoring (2025).** This task linked shallow groundwater monitoring with ecological fieldwork focused on vegetation, soil moisture, and floristic composition. The objective was to understand how hydrological changes could affect the lagoon's ecological integrity.
- **Conceptual and numerical groundwater modelling (up to mid-2025).** The ongoing advancement of the hydrogeological understanding of the Vega Unquillar area has facilitated a similar progression in the conceptual hydrogeological model of this wetland area. There has been numerous iterations of numerical groundwater modelling completed for the Rincon Project, in which the Vega Unquillar has always been incorporated as a sensitive receptor. Simulations of long-term groundwater level drawdown and recovery have been used to assess potential risks, potential mitigation options and a more refined local model centred on the Vega Unquillar is currently under development.

Water Balance

The conceptual water balance for the Vega Unquillar was estimated based on a contributing catchment area of 13.45 km² and a net vega surface of approximately 2.81 hectares (28,100 m²), corresponding exclusively to the actively vegetated area. The specific recharge rate was estimated at 0.352 litres per second per square kilometre, as derived from the hydrological characterisation of the Volcanic Sub-basin (Montgomery, 2025). This recharge rate was applied to the 13.45 km² catchment and yielded a total recharge of 4.74 litres per second (149,263 m³ per year). Assuming that only 33 percent of this flow effectively reaches the vega, the usable inflow is reduced to 49,287 m³ per year.

Evapotranspiration losses were calculated using an annual rate of 1,754 mm, corresponding to the actual evapotranspiration of high-altitude vegas, based on the Penman-Monteith method (Montgomery, 2025). This evaporation was applied over the above identified surface area of 28,100 m² and resulted in an annual loss/outflow of 49,287 m³.

The resulting water balance is neutral, indicating that under current conditions (excluding direct evaporation or additional losses) that Vega Unquillar could be hydrologically sustained, provided that at least one third of the water generated in its 13.45 km² catchment reaches the active vega zone.

Conceptual Eco-Hydrological Model

The location of Vega Unquillar, along with two topographic transects are presented in Figure 38. Figure 38 also illustrates the vegetation extent of Vega Unquillar, the temporary lagoon, the shallow monitoring wells installed in the area and the topography within the immediate vicinity of the vega (with the break in slope in Section C-D being where local groundwater flow discharges to this low-lying area where the vega exists).

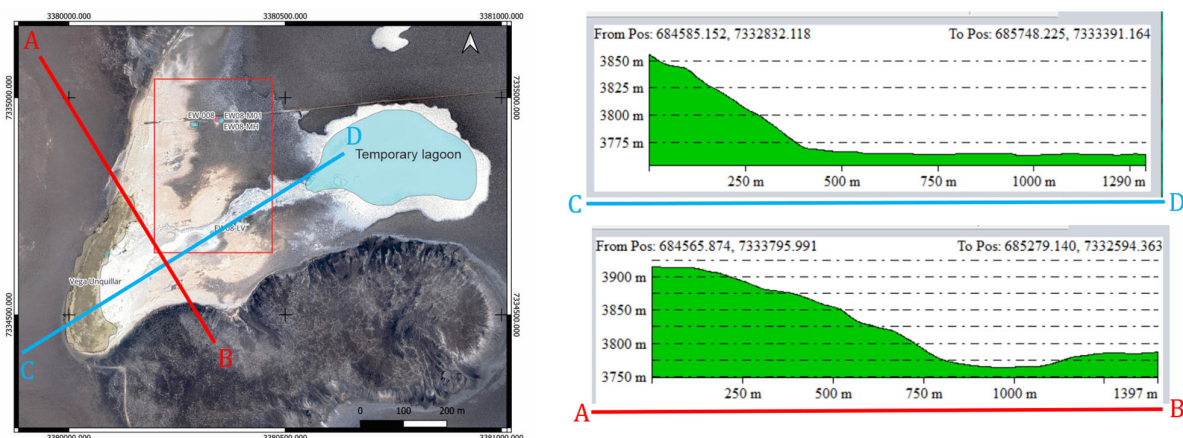


Figure 38: Vega Unquillar Location & Topographic Transects

Two phases of shallow hole drilling were undertaken in the Vega Unquillar area and included the installation of five shallow monitoring wells as illustrated in Figure 39 above. The drilling of these holes provided detailed insights into the lithological profiles in the shallow sediments in the Vega Unquillar, while water monitoring provided insights into the piezometric and water quality differences between different stratigraphic units.

The location of the Vega Unquillar, the Rincon Project Boundary and the nearest shallow well (EW-08-LV) are illustrated in Figure 39. A shallow clay layer we encountered in EW-08-LV, the well was screened below the clay layer and electrical conductivity measurements exceeding 200,000 $\mu\text{S}/\text{cm}$, indicating the presence of highly saline groundwater below the clay zone in this well.



Figure 39: Vega Unquillar Location & Rincon Project Boundary

The shallow clay layer, if it extends to the immediate area of the Vega Unquillar, may act as a barrier that promotes near-surface water accumulation (sustaining vega conditions by limiting vertical infiltration) and isolates the shallow water system from the deeper lithium hosting brines. The discrete water seepage at the Vega Unquillar has a TDS of generally 1,000 to 2,000 ppm (fresh to brackish). An ephemeral lagoon forms on the margin of the salar.

This conceptualization supports the classification of Vega Unquillar as a shallow, groundwater-fed wetland (vega) system hydraulically isolated from the salar's deep brine aquifer. A three-dimensional conceptual diagram for the Vega Unquillar area showing groundwater flow from the colluvial sediments to the vega, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is illustrated in Figure 40. A detailed inset on the right shows the lithological profiles of the five shallow wells (EW-08-LV, EW-08-M01, EW-08-M02, EW-08-MH and EW-08).

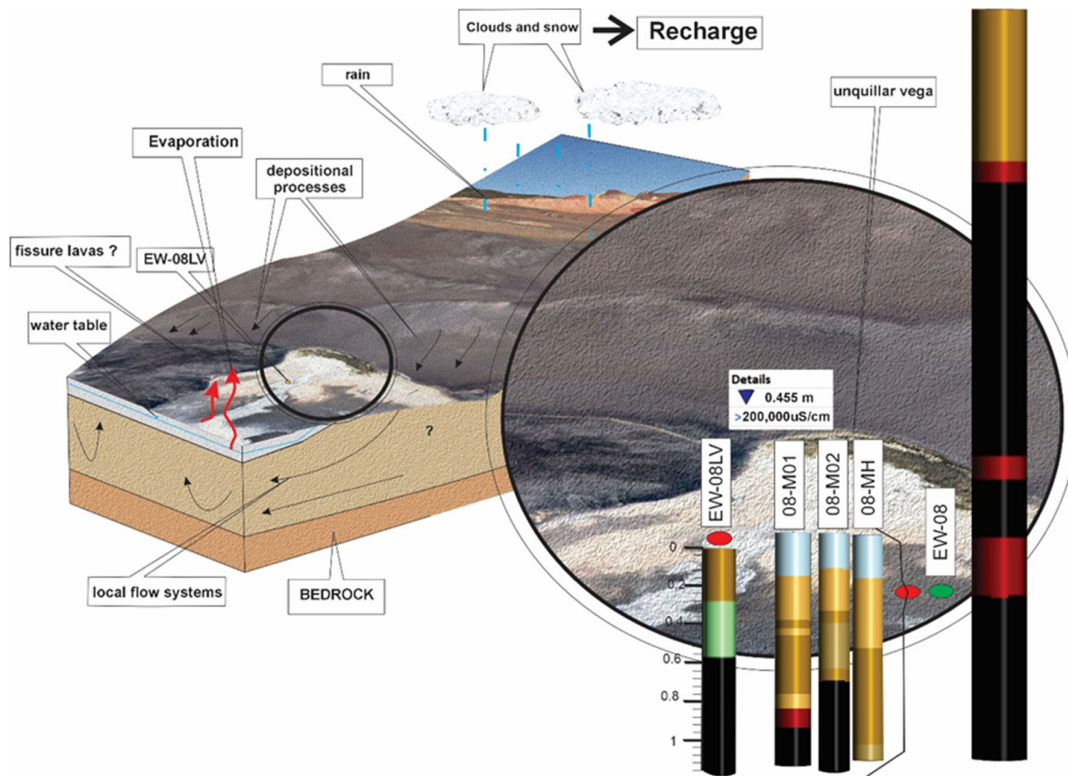


Figure 40: Conceptual Hydrogeological Model of Vega Unquillar Area

5.2.4 Vega Saladillo

Studies & Monitoring

Relatively few studies or little water monitoring has been completed to date at the Vega Saladillo, although the work completed to date has focussed on building a conceptual understanding of the origin and hydrogeological setting of the Vega Saladillo area, including both the discrete water seepage and the more diffuse water fed surrounding wetland (vega) environment at the margin of the salar.

It is key to note that the Rincon property boundary exists to the northeast of Vega Saladillo which restricts the extent to which site investigations can be completed in the immediate vicinity of the vega.

The field investigations, monitoring programs and hydrogeological modelling undertaken in the Vega Saladillo area, includes the following:

- **Surface water monitoring (June 2024 onwards).** There is no record of any historical surface water monitoring in the Vega Saladillo area. Vega Saladillo was included in the water monitoring program when it was expanded in June 2024, with the objective of enhancing the understanding of surface-groundwater interactions and ecologically sensitive in this area.
- **Installation of Shallow Piezometers – Phase 1 (September to November 2023).** The first shallow monitoring campaign included the installation of one piezometer in the Vega Saladillo area (EW-009). The well was designed to monitor shallow groundwater levels and salinity near the vega and provided key insights on the vertical stratification of the sediments in this area.
- **Conceptual and numerical groundwater modelling (up to mid-2025).** The ongoing advancement of the hydrogeological understanding of the Vega Saladillo area has facilitated a similar progression in the conceptual hydrogeological model of this wetland area. There have been numerous iterations of numerical groundwater modelling completed for the Rincon Project, in which the Vega Saladillo has always been

incorporated as a sensitive receptor. Simulations of long-term groundwater level drawdown and recovery have been used to assess potential risks, potential mitigation options and a more refined local model centred on the Vega Saladillo is currently under development.

Water Balance

The conceptual water balance for the Vega Saladillo was estimated based on a contributing catchment area of 0.16 km² and a net vega surface of approximately 300 m², corresponding exclusively to the active vegetated zone. The specific recharge rate was estimated at 0.352 litres per second per square kilometre, based on the hydrological analysis of the Volcanic Sub-basin (Montgomery, 2025). This recharge rate was applied to the 0.16 km² catchment and yielded a total recharge of 0.056 litres per second (1,775.5 m³ per year). Assuming that only 33 percent of this volume effectively reaches the vega, the usable inflow is reduced to 585.9 m³ per year.

Evapotranspiration losses were calculated using an annual rate of 1,754 mm, corresponding to the actual evapotranspiration typical of high-altitude vegas, as determined using the Penman-Monteith method (Montgomery 2025). This evaporation was applied over the above identified surface area of 300 m² surface and resulted in an annual loss/outflow of 526.2 m³.

The difference between the inflow and outflow yields is a slightly positive water balance of 59.7 m³ per year (0.163 m³ per day or approximately 0.0019 litres per second).

This result suggests that, under current conditions (excluding direct evaporation or additional losses) that Vega Saladillo could be marginally sustained hydrologically if at least one third of the recharge generated in its small catchment reaches the active vega zone.

Conceptual Eco-Hydrological Model

The location of Vega Saladillo, along with two topographic transects are presented in Figure 41. Figure 41 also illustrates the vegetation extent of Vega Saladillo, the shallow monitoring well installed in the area and the topography within the immediate vicinity of the vega (with the break in slope in Section C-D being where local groundwater flow discharges to this low-lying area where the vega exists).

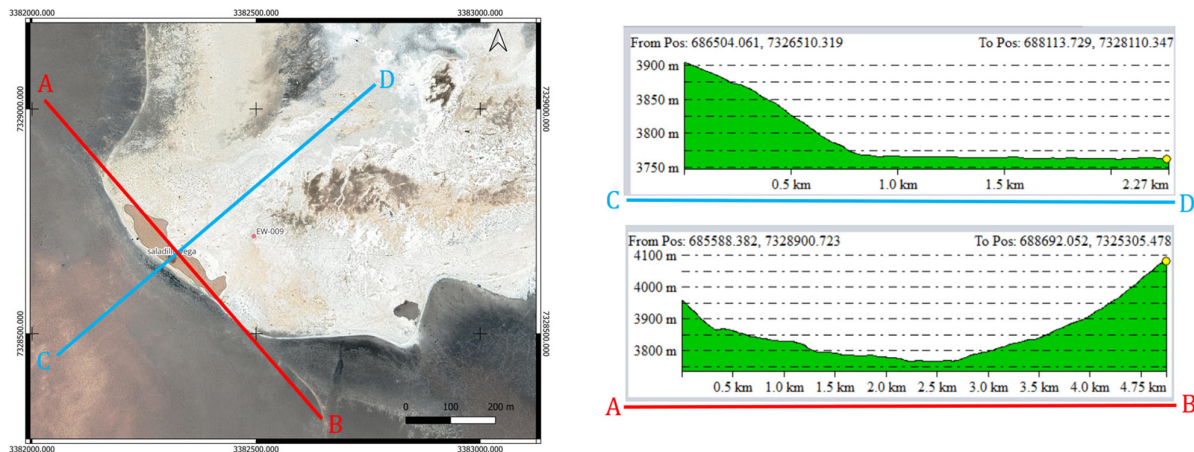


Figure 41: Vega Saladillo Location & Topographic Transects

Unlike the other vegas described in the previous sections (which have developed along the transition between the salt flat and alluvial-colluvial deposits, Vega Saladillo is not associated with an alluvial-colluvial system but rather originates from shallow groundwater flows which appear at the break of slope and appear to be derived from the bedrock.

One phase of shallow hole drilling was undertaken in the Vega Saladillo area and included the installation of one shallow monitoring well as illustrated in Figure 42 above. The drilling of this hole provided insights into the lithological profile in the shallow sediments and water levels/quality in the Vega Saladillo area.

The location of the Vega Saladillo, the Rincon Project Boundary and the one shallow well installed in the area (EW-009) are illustrated in Figure 42. The EW-009 shallow well is approximately 150m from the Vega Saladillo but is within the Rincon Project boundary. Shallow clay layers were encountered in EW-009, the well was screened above the clay layers encountered in the hole.



Figure 42: Vega Saladillo Location & Rincon Project Boundary

If the shallow clay layers extend to the immediate area of the Vega Saladillo, then they may act as a barrier that promotes near-surface water accumulation (sustaining vega conditions by limiting vertical infiltration) and isolates the shallow water system from the deeper lithium hosting brines. The discrete water seepage at the Vega Saladillo has a TDS of generally 3,000 to 6,000 ppm (brackish).

This conceptualization supports the classification of Vega Saladillo as a shallow, bedrock sourced groundwater-fed wetland (vega) system hydraulically isolated from the salar's deep brine aquifer. A three-dimensional conceptual diagram for the Vega Saladillo area showing groundwater flow to the vega, recharge originating from precipitation and snowmelt in the highlands (with water moving through local flow systems) and clay layers acting as confining units separating shallow water system from the deeper underlying brines is illustrated in Figure 43. A detailed inset on the right shows the lithological profile intersected in EW-009.

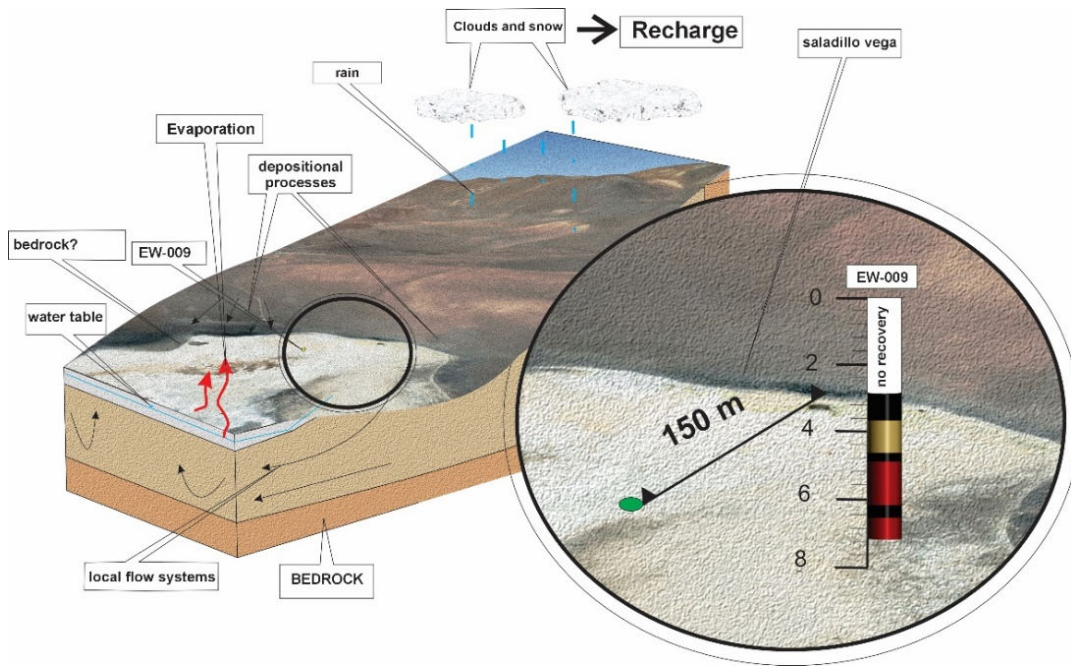


Figure 43: Conceptual Hydrogeological Model of Vega Saladillo Area

5.2.5 Ojos de Agua (Water Eyes)

Overview

The Ojos de Agua were discovered during a survey campaign carried out in March 2024. The Ojos de Agua are natural depressions (where brine reaches the surface) which exist within the carbonate platform to the northwest of the main salar nucleus. The Ojos de Agua exhibit specific physicochemical conditions (pH, radiation, conductivity, temperature) that support biodiversity adapted to extreme environments. The Ojos de Agua host Extremophile Microbial Ecosystems (EMEs) which are priority conservation targets. The Ojos de Agua (water eyes) are located at the following coordinates:

- **Ojo de Agua A:** 23° 59' 47.04" S, 67° 10' 05.96" W
- **Ojo de Agua B:** 24° 01' 08.59" S, 67° 09' 38.87" W.

The locations and overall appearance of the Ojos de Agua is illustrated in Figures 44 and 45.

Extremophile Microbial Ecosystems (EMEs) found in Salar del Rincon, including microbial mats, microbialites and biofilms, are shaped by the region's hypersaline conditions, high UV radiation, extreme aridity, large temperature variations and low atmospheric pressure. These systems interact with water chemistry and sediments, playing a key role in nutrient cycles and ecosystem structure. Understanding their distribution helps assess how changes in groundwater, evaporation or brine levels could affect the ecosystem.

This section focuses on the *Ojos de Agua* as physical environments, examining their hydraulic behaviour and water chemistry relevant to EME development. For further details on biodiversity and extremophile organisms, refer to the Critical Habitat Assessment for the Rincon Project (ERM, 2025b).

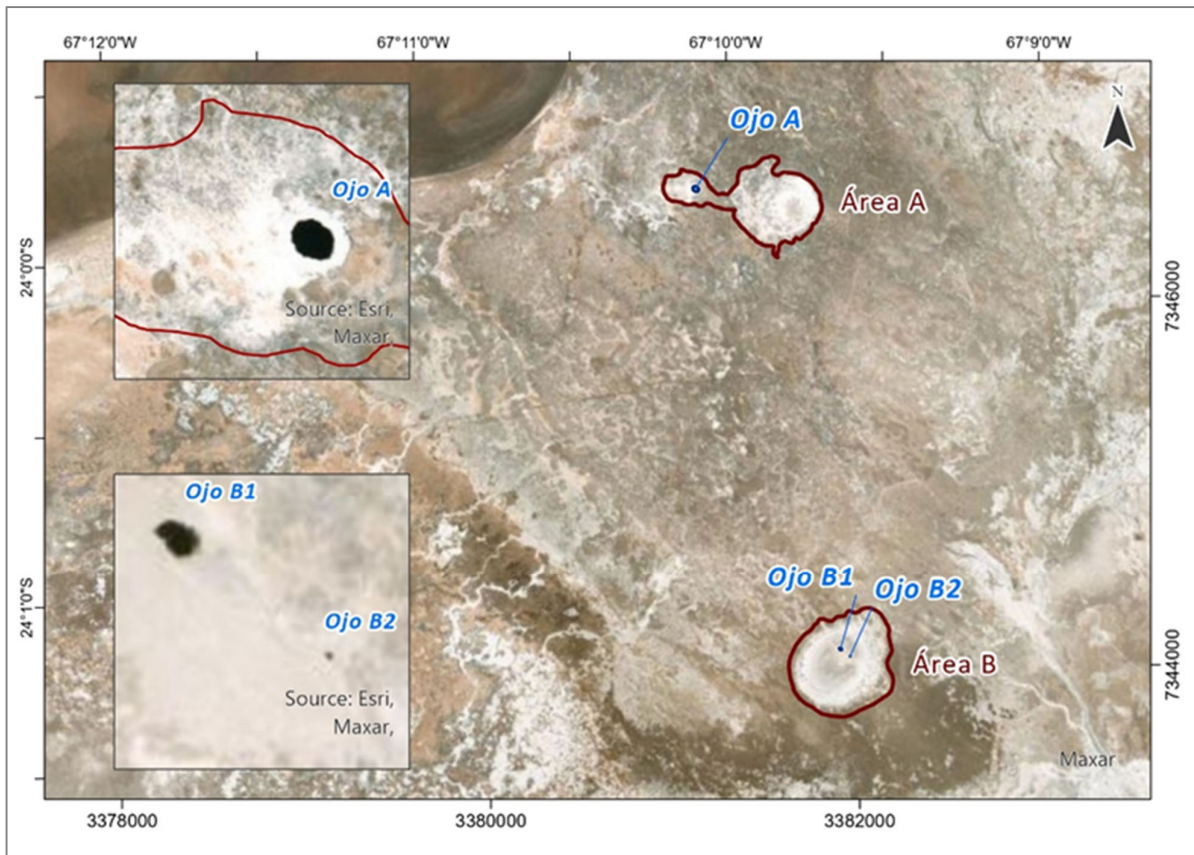


Figure 44: Location of Ojos de Agua



Figure 45: Images of Ojo de Agua A (left) & Ojo de Agua B (right)

Studies & Monitoring

A key focus of the studies and monitoring completed to date at the Ojos de Agua has been to build a robust conceptual understanding of the ecological setting of the Ojos de Agua. A particular focus has been on ecological sensitivity of the setting. To date there have been no specific hydrogeological campaigns carried out for the Ojos de Agua.

The field investigations and monitoring programs undertaken in the Ojos de Agua area, include the following:

- **Annual monitoring – DIA-PMA R3000 (March 2024).** The Ojos de Agua A, B1 and B2 were discovered, and the sites were subsequently included in monitoring rounds. The monitoring indicates that there is a

great diversity of EMEs in the salar with structures such as biofilms, microbial mats and microbialites. In-situ field parameters were measured, and water samples were collected for subsequent testing by INIQUI laboratory.

- **Biodiversity massive sequencing (March 2024).** This study indicated that the salar hosts a complex and high richness and diversity of species.
- **Autumn seasonal monitoring (late April 2024).** Surface water and depth-profile samples were collected at 5 m intervals using Van Dorn bottles. In situ field measurements included key physico-chemical parameters such as temperature, pH, electrical conductivity, dissolved oxygen, and redox potential, obtained using calibrated multiparameter probes. Additionally, samples were sent to the laboratory for analysis of total dissolved solids, lithium, sulphate, nutrients, and geochemical tracers. Results revealed seasonal stratification, particularly during summer months, with increased concentrations of conservative ions at depth and thermal gradients indicative of potential geothermal influence in the lower layers.
- **Geophysical Surveys (October 2024).** Geophysical surveys were completed by GeoAr Estudios Geofísicos.
- **Spring seasonal monitoring (December 2024).** This was the first monitoring campaign completed under the IFC framework. The monitoring focused on the three Ojos de Agua and on effluents from the Project's pilot plant.
- **Summer seasonal monitoring (March 2025).** A summer seasonal monitoring campaign was completed.
- **Annual monitoring – DIA-PMA R3000 (April 2025).** Autumn seasonal monitoring completed.
- **EME Resilience evaluation (May 2025).** A study was developed to assess the resilience of the extremophiles and to develop measures to protect these ecosystems. The study included the setup of an on-site laboratory. The purpose of the study is to evaluate the magnitude of potential mining-related impacts on the biological communities inhabiting the Ojos de Agua, as well as their environmental resilience. The study is on-going and microcosms are being used as study units. These units contain brine samples and microbial mats, which are being subjected to different disturbance scenarios such as the addition of effluents, physical effects like turbidity, drying, flooding, etc.

Conceptual Eco-Hydrological Model

The current understanding of the geometry of the Ojos de Agua, based on field measurements, is illustrated in Figure 46. Both the Ojos de Agua comprise steep-sided, cylindrical depressions in the carbonate platform with substantial depths. Ojo de Agua A has a surface diameter of approximately 35 m and is approximately 25 m in depth. Ojo de Agua B has a surface diameter of approximately 15 m and is approximately 15m in depth. These geomorphological characteristics promote the vertical stratification of physico-chemical properties within the water column, a phenomenon that was assessed through depth-profile sampling across three monitoring campaigns. The deep, enclosed profile of these features enables the accumulation of geochemically distinct water masses at depth.

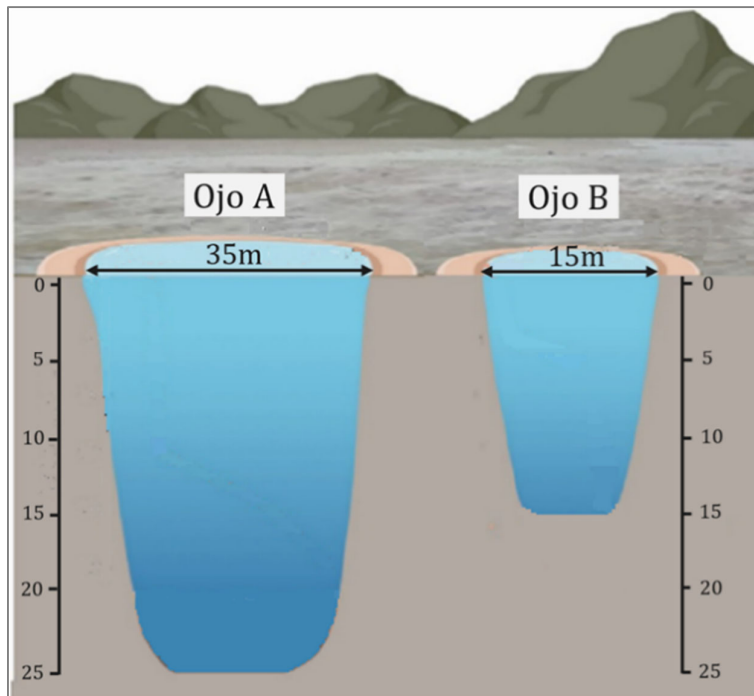


Figure 46: Schematic Geometry of Ojo de Agua A (left) & Ojo de Agua B (right)

A plan view of the Ojos de Agua based on satellite imagery from 23rd December 2023 (with a scale bar and north arrow included for reference) is presented in Figure 47.

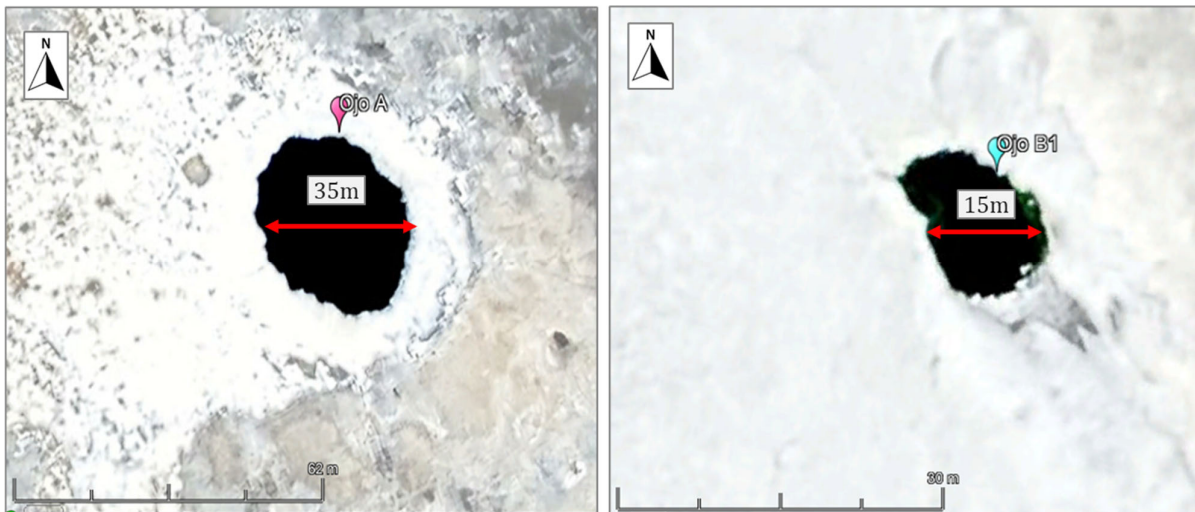


Figure 47: Satellite Imagery of Ojo de Agua A (left) & Ojo de Agua B (right)

The data set currently remains relatively limited in terms of time of monitoring, however, the combination of water chemistry profiles and supporting seismic tomography offers valuable insights into the behaviour of this unique aquatic system.

Vertical profiles of temperature (Figure 48) and Total Dissolved Solids (TDS) (Figure 49) for Ojo de Agua A show variation of these properties with depth. It is evident that in the shallower water column values vary significantly, likely reflecting the influence of climate, surface recharge, and/or solar radiation. In contrast, values measured from 20 to 25 m vary less significantly, particularly for temperature, suggesting less influence from surface conditions.

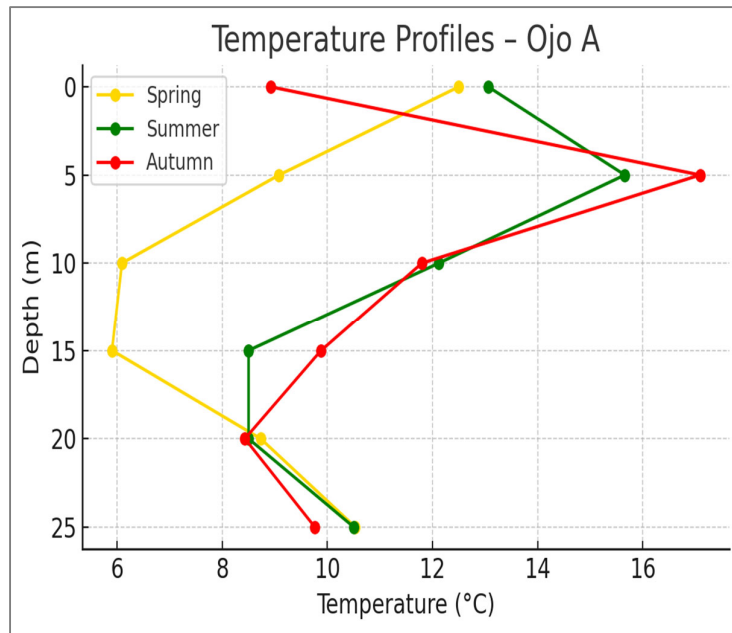


Figure 48: Temperature Profile at Ojo de Agua A (Dec 2024, Mar 2025 & Apr 2025)

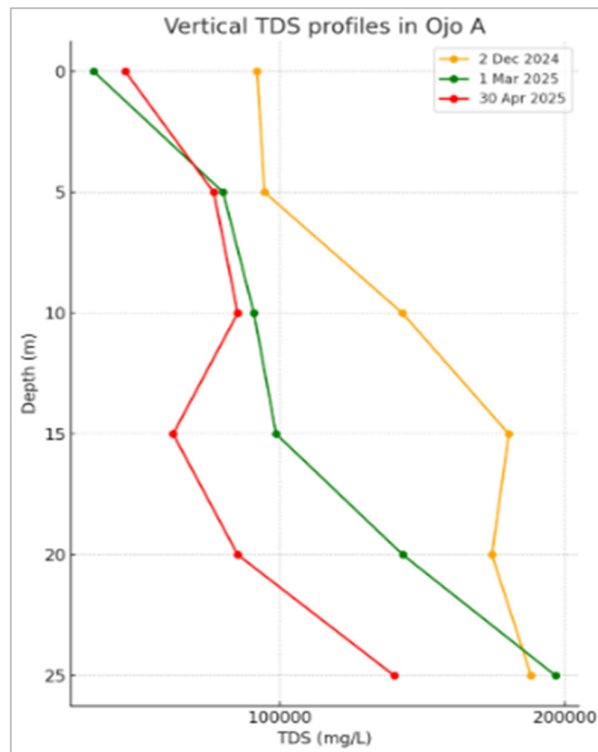


Figure 49: TDS Profile at Ojo de Agua A (Dec 2024, Mar 2025 & Apr 2025)

Some of the other chemical indicators also show this water quality stability at depth in Ojo de Agua A. Alkalinity increases progressively with depth, from values below 500 mg/L at the surface to the highest concentrations at 25 m. Total hardness is elevated across the entire profile but becomes more stable below 10 m, suggesting a persistent presence of calcium and magnesium ions in deeper layers. The relationship between chloride and sulphate (Figure 50) also follows a consistent vertical gradient, with both increasing in concentration at greater depths. Redox-sensitive elements such as iron and manganese are nearly absent in surface waters but rise significantly below 10 m, reaching values between 10 and 100 mg/L at 25 m. This behaviour is consistent with an oxygen-depleted, chemically reducing environment at depth.

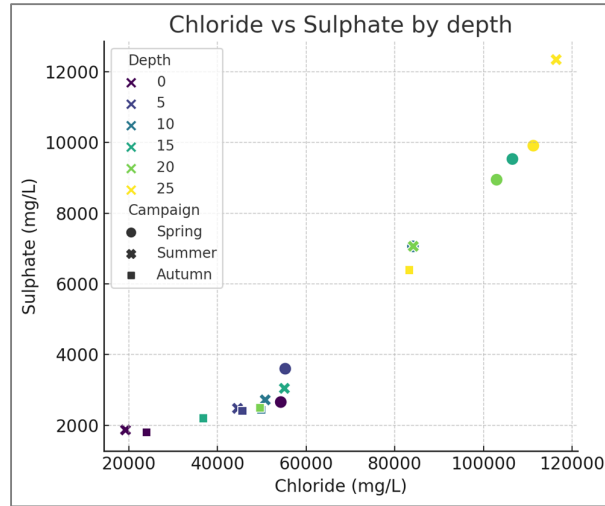


Figure 50: Chloride vs Sulphate Relationship at Ojo de Agua A

Multivariate statistical tools were also used to explore patterns in the data. Principal Component Analysis (PCA) shows that the first principal component, largely driven by salinity and related parameters, clearly separates surface samples from deep ones. A similarity matrix, based on Pearson correlation, confirms that samples from the same depth tend to remain chemically similar across different seasons, particularly in the deep zone (left image in Figure 51). A hierarchical dendrogram, which groups samples based on chemical similarity, also reflects this pattern: deep samples cluster together independently of the campaign, surface samples form a separate group, and mid-depth samples appear in between, suggesting a potential transition zone (right image in Figure 52).

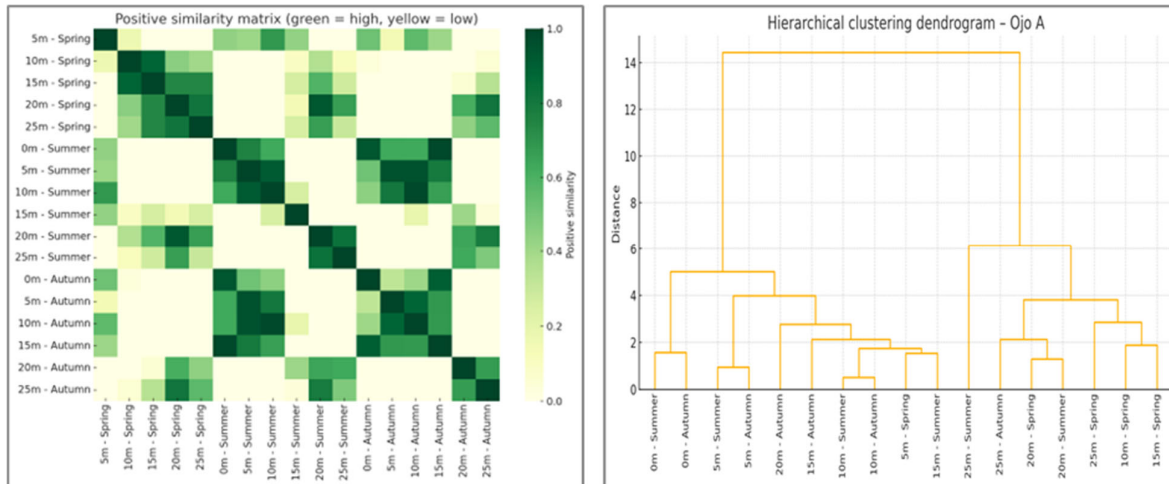


Figure 51: Ojo de Agua A – Multivariate Analysis (Left) & Hierarchical Dendrogram (Right)

To explore whether these visual trends are statistically significant, a Kruskal–Wallis test was applied (Figure 5.25). This is a non-parametric method used to test whether different groups of data come from the same population, without assuming a normal distribution. The test compared three depth zones within Ojo de Agua A: surface (0–5 m), intermediate (10–15 m), and deep (20–25 m). It shows statistically significant differences ($p < 0.05$) in parameters such as TDS, pH, lithium, chloride, and sulphate. Temperature did not reach this threshold ($p = 0.079$), although its behaviour aligned with the expected trend: more variation at the top and greater stability at depth. Given the small sample size, these results should be interpreted with caution, but they are consistent with the hypothesis of some degree of stratification.

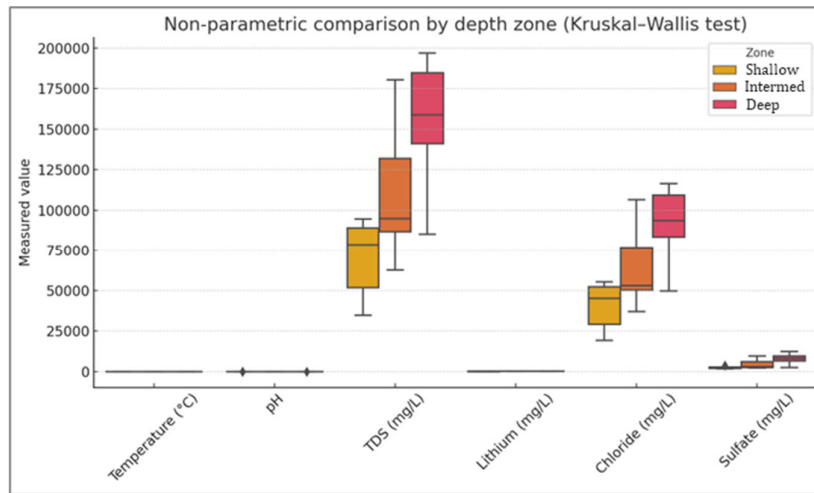


Figure 52: Ojo de Agua A – Kruskal-Wallis Test Comparing Hydrochemical Variation with Depth

There are limitations associated with geophysical surveys completed to date, however, it appears that P-wave velocities greater than 2,700 m/s were recorded around the Ojo de Agua A at depth, suggesting the possible presence of a dense, clay-rich unit extending down to approximately 55 m as seen in Figure 53. This compact layer could act as a natural hydraulic barrier, reducing vertical flow and helping to preserve the chemical isolation of the deep-water body.

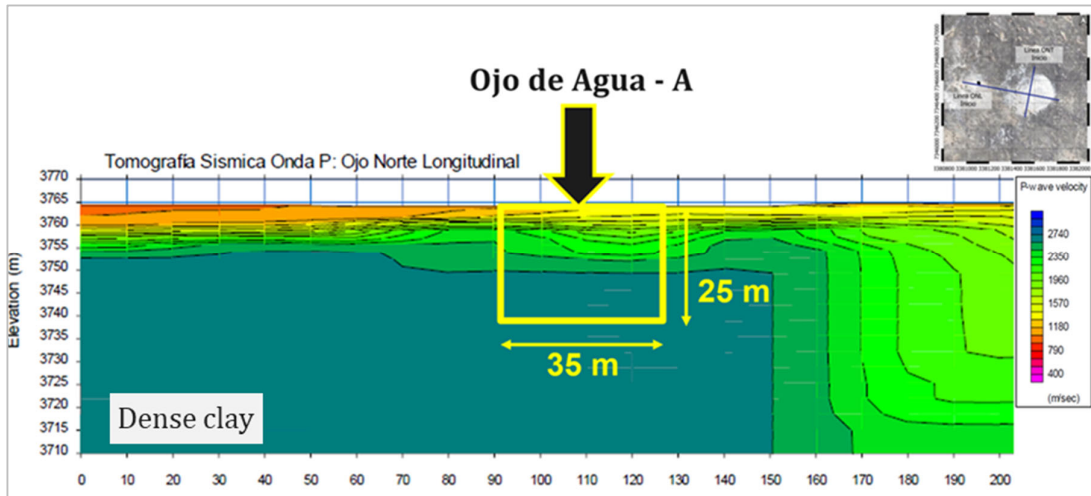


Figure 53: Seismic Tomography Survey Ojo de Agua A (NW to SE Profile)

The data current available and the assessments completed (including the vertical chemical profiles, variability metrics, statistical results, multivariate clustering and geophysical survey data) suggests that the upper portion of the water column in the Ojos de Agua varies the most seasonally (influenced by surface conditions) and that the lower portion of the water column shows significantly less variation, suggesting a degree of stratification within the water column and a potential degree of hydraulic disconnection between the deep water within the Ojos de Agua and the surrounding brines.

The upper 10 m of water within the Ojos de Agua is most responsive to environmental fluctuations and is already subject to significant variation in a range of different parameters. This upper water zone is the area where the EME are most abundant. The fact that water characteristics of this zone already vary significantly suggests that the EME have a degree of resilience to changing water temperature and quality. This upper zone is potentially the zone most likely to be influence by potential water level variations which may be caused by the Rincon Project activities. The ongoing EME resilience testing will confirm the degree of variability in the water characteristics that the EME can tolerate but it is a positive outcome that the EME can tolerate that natural water variability.

6 Groundwater Modelling

6.1 Groundwater Model Set-up

Two numerical groundwater models were developed for the Rincon basin, comprising:

- The “Rincon Basin Model” used for lithium resource and reserve estimation and production planning and also to assess cumulative groundwater level drawdown across the Rincon Basin, and
- The “Catua Alluvial Fan Model” (sub-model) focussed on the raw (industrial) water supply and used to assess salinity variations, pumping rates and optimal wellfield designs.

The two numerical groundwater models were developed in parallel. The models were developed based on the latest meteorological, hydrological and hydrogeological understanding of the Rincon Basin. All available hydrogeological field data up to June 2024 was incorporated into the groundwater models.

The numerical groundwater models were developed using MODFLOW-USG. The active model domain encompasses the entire Rincon Basin and covers an area of 3,230 km². The western boundary is located in Chile, close to Cerro Overo, and follows the high ground to Cerro Rincon on the Chilean/Argentinian border. In the south, the model boundary runs along the ridge of mountains separating Salar del Rincón and Salar de Pocitos. In the east, the model boundary is along the mountains between Catua village and Salar de Cauchari. The northern boundary is located between Cerro Catua and Cerro Toronao.

The model mesh was refined with smaller grid sizes adopted to enhance resolution at key points of interest, such as the Catua Alluvial Fan, the potential raw (industrial) water wellfield zone, the main drainage channels and around key surface water features. In the Salar, the grid is rectangular with a cell size of 250m. Outside the salar, the grid is unstructured, with grid refinement within the Catua Alluvial Fan and along the primary drainage channels with cell size ranging from 50m up to a maximum of 250m. Outside of the salar and the refined area, there is a maximum cell size of 1,500m.

The models include 23 layers and over 425,000 active cells, with hydraulic properties derived from more than 40 pumping tests and vertical electrical conductivity profiles. A transient recharge model was implemented using local meteorological data and CMIP6 climate projections. The groundwater model domain and mesh design is illustrated in Figure 54.

The model layering in the Salar was designed specifically for optimal lithium resource and reserve modelling. Outside the Salar, the model layers were refined to be thinnest around the expected level of the groundwater table fluctuation, based on the groundwater level information available. Both the lithium resource and raw water models have the same layer elevations in all areas.

The numerical groundwater models are both dual density models, with the water quality distribution adopted in the model informed by all available water quality data, including site-specific electrical conductivity profiles from individual wells, field water quality measurements and laboratory water quality results.

No flow boundary conditions were specified at the edges of the numerical groundwater model, marking the edge of the topographic catchment (and hence a natural groundwater divide).

The hydrogeologic units and spatial distribution of hydraulic properties for each Meta Hydrogeological Units (HGU) was determined and assigned to each corresponding model layer based on all data derived from the extensive hydrogeological drilling and hydraulic testing program.

The regional “Rincon Basin” groundwater model facilitated both lithium resource/reserve estimation and planning, and also the evaluation of cumulative regional patterns of groundwater flow, drawdown and recovery to be simulated. The regional “Rincon Basin” groundwater model was used to make predictions relating to the lithium concentrations/volumes, optimal lithium wellfield layout/design and to evaluate brine/water drawdowns and recovers throughout the Rincon Basin.

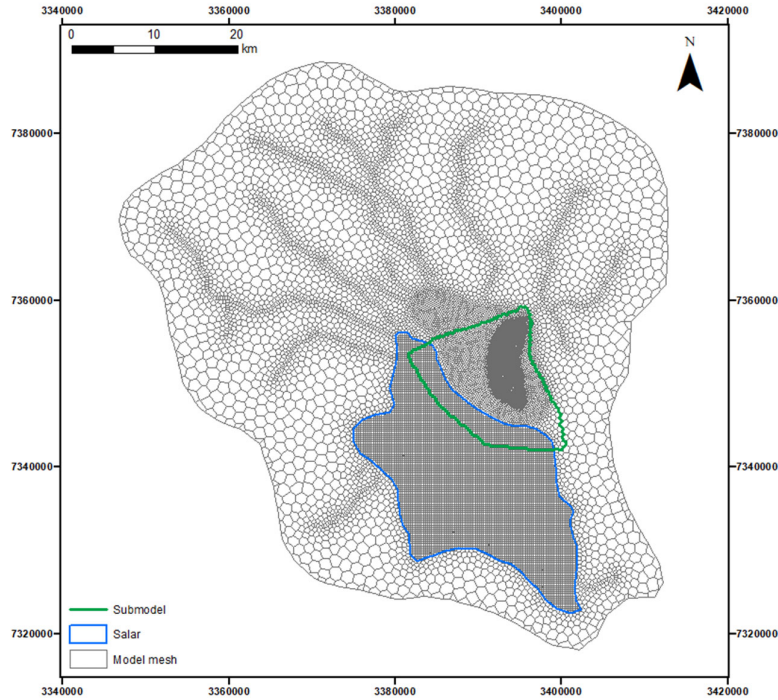


Figure 54: Groundwater Model Domain and Mesh Design

The “Catua Alluvial Fan” groundwater model was developed for detailed modelling of the proposed raw (industrial) water wellfield abstraction and in particular to accurately model the interface/gradation between fresh and saline water at depth within the Catua Alluvial Fan where a more refined/detailed mesh was required. Observed salinity profiles from numerous wells installed across the Catua Alluvial Fan indicate a sharp saline front at depth, which can only be represented numerically using thin model layers which allows a less dispersed saline front to be simulated, without causing numerical model instability. The areal extent of each sub-model cell is identical to those of the regional model, although an additional 9 layers were included (32 model layers in total) corresponding to the depth interval of the saline front, as indicated by electrical conductivity profiles and laboratory water quality data. The sub-model was used to make predictions relating to the raw water wellfield abstraction and to generate a raw water wellfield layout/design in the Catua Fan area, with the sub-model boundary conditions being informed by head values generated in the regional model throughout the life of mine.

6.2 Groundwater Model Simulations

Numerical groundwater model simulations were undertaken for a 40-year Life of Mine (LoM) operation. The operational scenario assessed includes the following attributes:

- **Lithium Brine:** A 53ktpa lithium operation simulated using lithium brine wellfield provided August 2024, ramping up from an initial 3ktpa, up to 28ktpa, up to a final 53ktpa.
- **Raw Water:** Raw water abstraction associated with base case of an annual average 120L/s abstraction (max. 140L/s instantaneous abstraction) and upper sensitivity case an annual average 178L/s abstraction (max. 210L/s instantaneous abstraction) from the Catua Alluvial Fan.
- **SDDF:** Infiltration of spent brine into the Carbonate Platform, with spent brine being pumped to the Spent Brine Disposal Facility (SBDF) at a rate ranging between 4,800 and 5,700m³/hr.
- **Puna Mining (Argosy):** A 12ktpa lithium operation in the southeastern part of the Rincon Basin at an assumed 55% Lithium recovery rate, exact locations of the abstraction wells are uncertain.

The groundwater modelling includes climate change projections within the base case simulation. The inclusion of climate change leads to small reductions in the average annual recharge to the basin during both the operational and closure periods.

The modelling completed was used to establish a lithium brine wellfield and a raw (industrial) water wellfield that met the Projects current lithium and raw water requirements. The lithium brine and raw water wells (along with the currently proposed location of the SBDF and notionally assumed lithium abstraction wells associated with the neighbouring Puna Mining operations) are illustrated in Figures 55 and 56.

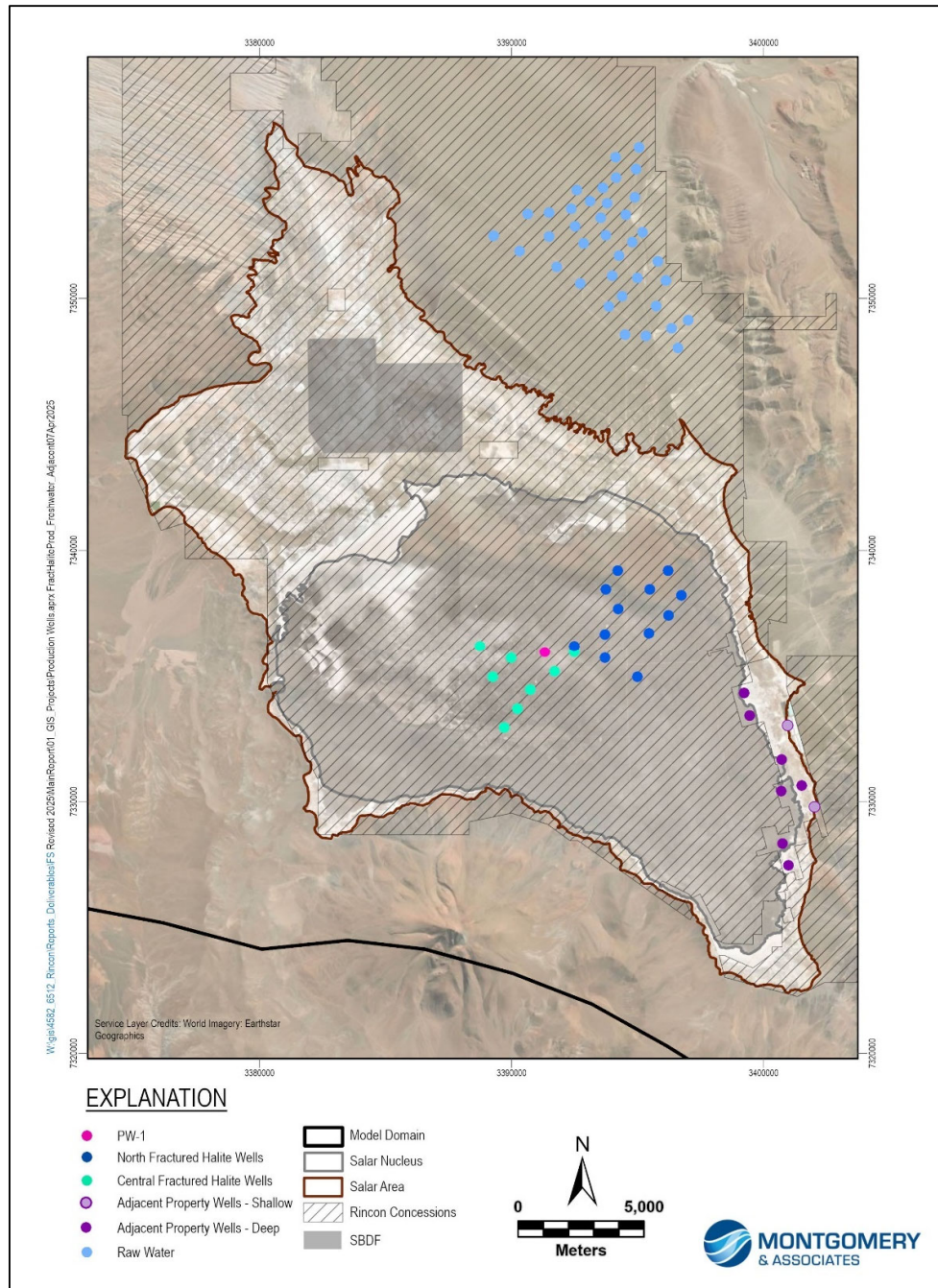


Figure 55: Location of Simulated Fractured Halite & Raw Water Production Wells

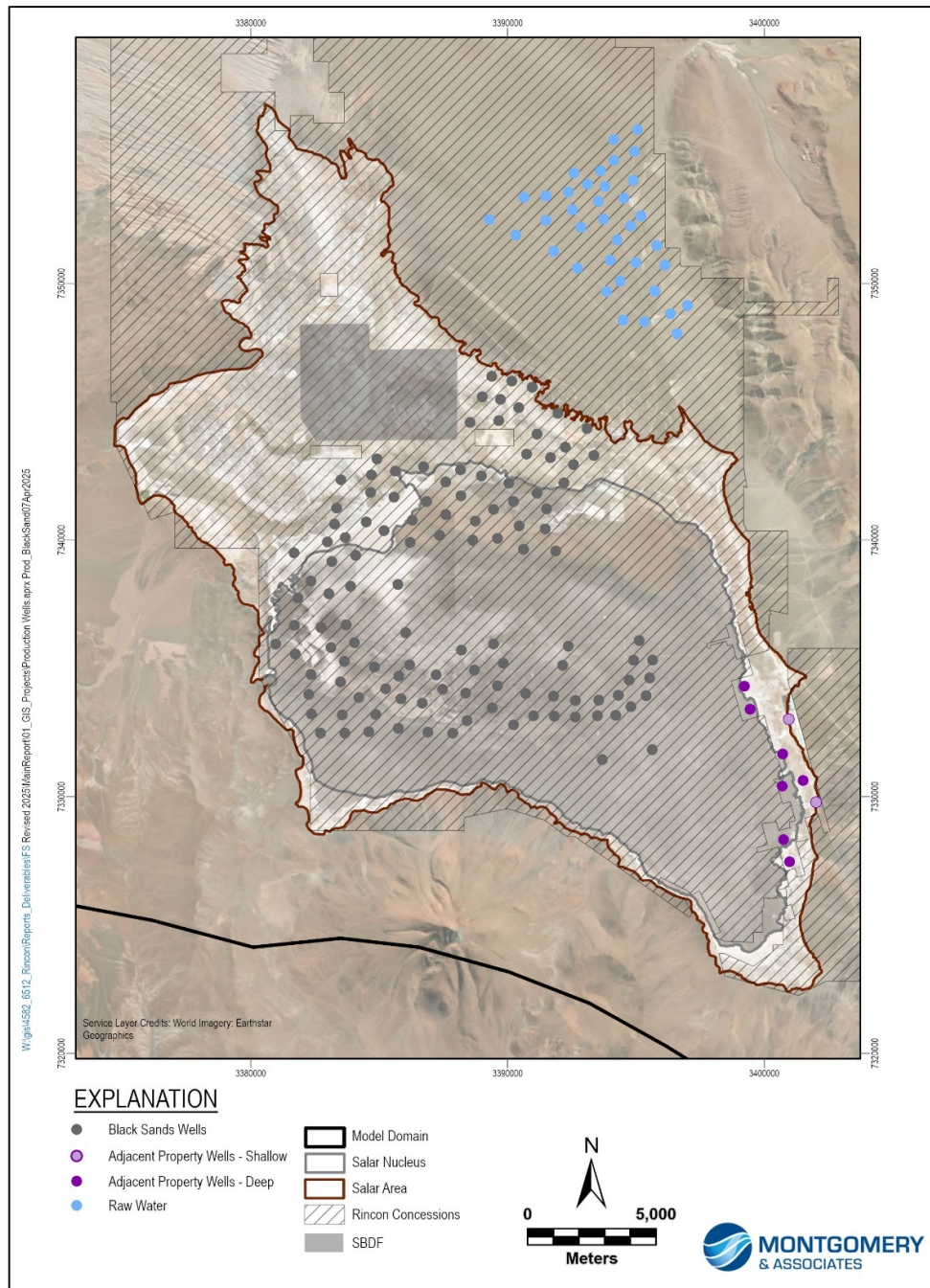


Figure 56: Locations of Simulated Black Sand & Raw Water Production Wells

6.3 Groundwater Model Calibration

The numerical groundwater models were calibrated using water level monitoring data from across the basin from 2022 to 2025 (particularly in the Salar and Catua Fan areas), over 40 pumping tests and an extensive data base of electrical conductivity and laboratory water quality data.

7 Predicted Water Related Impacts

Numerical groundwater modelling was used to evaluate the potential impacts of brine abstraction, raw (industrial) water abstraction and SBDF infiltration over the life of the Rincón Project (capturing both the operational phase and closure) on the brine/water environment across the Rincon Basin. The model simulates how brine/water levels and flows may change in response to the proposed operations, considering both baseline conditions and future development scenarios.

It is important to note that the wellfield presented in this report is an updated early 2025 version, which is not the same as the wellfield presented in the 2024 ESIA. This new wellfield considers different locations for the wells that are being built from the 10th operation year on. Nonetheless, the Project has committed to present, yearly, the updated groundwater model to the authorities, and the continuous assessment of the potential impacts is part of the water adaptative management plan.

7.1 Groundwater Level Drawdown

7.1.1 Salar

The “Regional Basin Model” was used to assess water level drawdown at 10-year time increments throughout the proposed 40-year Life of Mine, to simulate the predicted evolution of water level change with time (which is illustrated in Figures 57 to 60). Incorporating the effect of climate change in the base case influences both recharge and evapotranspiration which translates to increases in the predicted water level drawdown. Significant uncertainty remains with regards to the predicted drawdown at the edge of the salar nucleus, as there is limited hydraulic conductivity data in these areas and these areas in particular require further field investigations.

10 years of Operation - The maximum drawdown after 10 years of simulation (Figure 57) is approximately 26 meters located on the adjacent property (Argosy). The maximum drawdown in the northern fractured halite wells is approximately 8.8 meters.

20 years of Operation - By Year 20 of simulation (Figure 58), the fractured halite wells have already passed their maximum flow rates, there is evidence of lithium concentration dilution, and pumping rates are being reduced. The model shows a maximum drawdown of 47 meters located in adjacent property (Argosy), and a maximum drawdown of 18 meters in the fractured halite, but this is after some recovery of more diluted water and equilibrating from the maximum usage in Year 15. The black sand wells are now active in the northwest part of the salar and show a maximum drawdown of 22 meters south of the SBDF.

30 years of Operation - After 30 years of simulation (Figure 59), the maximum water level drawdown is 45 meters and occurs in the western edge of the salar at the black sand wells. The drawdown contours correspond with the progression of black sand wells being added from the northwest salar area to the southwest salar area, as is illustrated by the areas with the largest drawdown. The asymmetrical drawdown is attributed to different flow rates being applied to the wells and differences in hydraulic parameters which shape the drawdown cone. The influence of the SBDF and its mounding is apparent by the reduced drawdown in the adjacent area despite pumping.

40 years of Operation – After 40 years of simulation (Figure 60), the maximum water level drawdown is approximately 67.3 meters located in the western salar. The progression of drawdown to the salar nucleus follows the addition of black sand wells over time and the SBDF mounding persists.

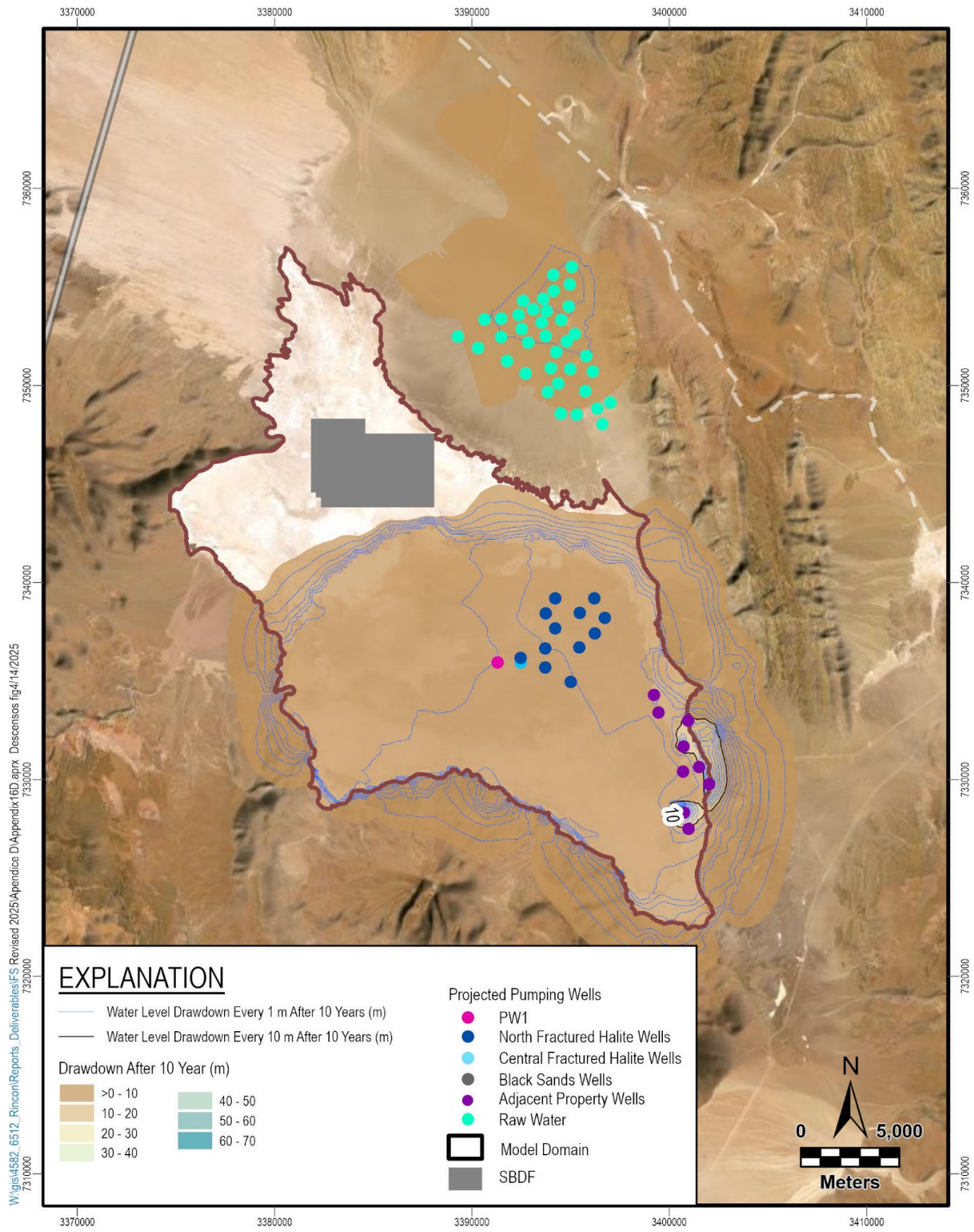


Figure 57: Simulated Water Level Drawdown after 10 Years

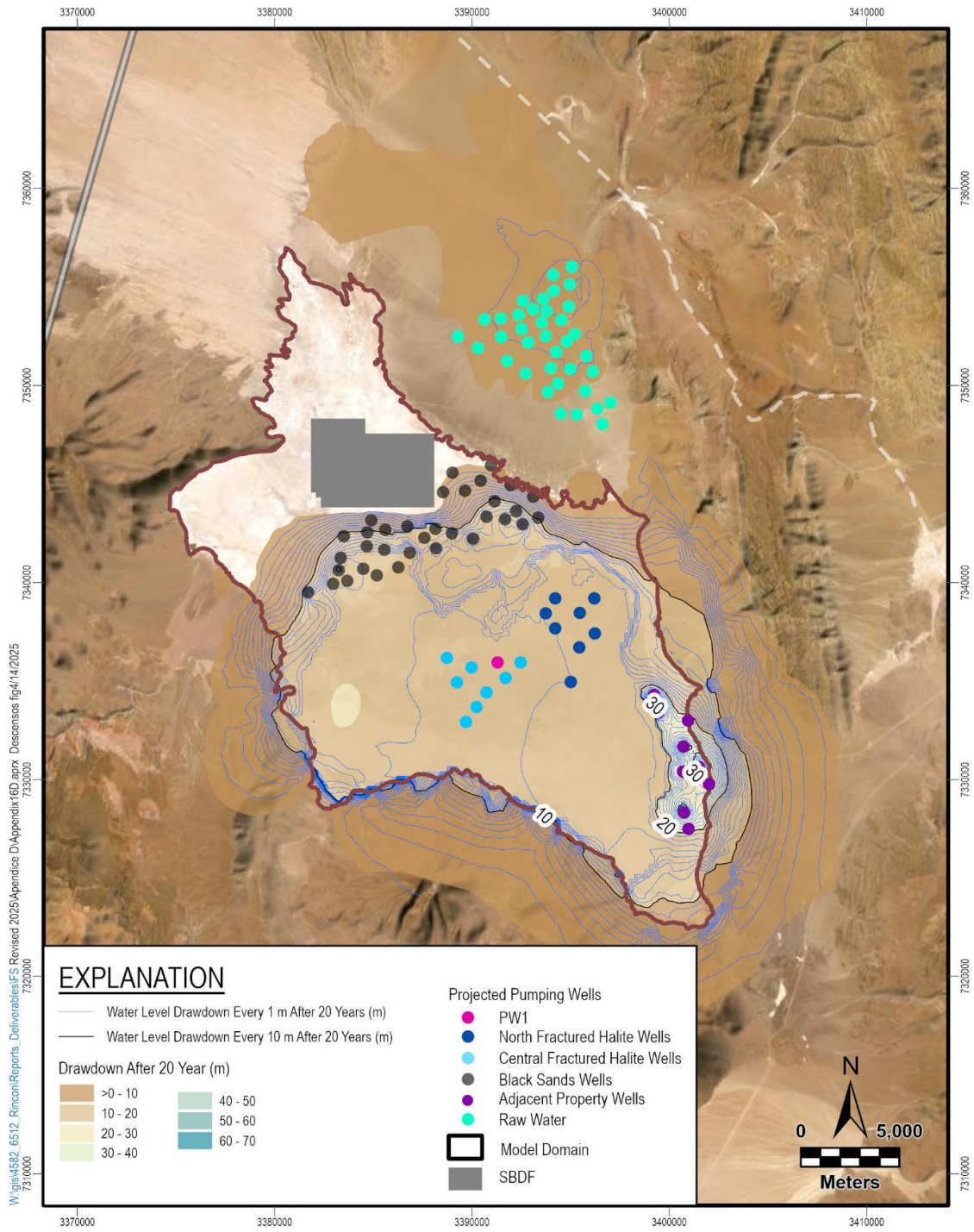


Figure 58: Simulated Water Level Drawdown after 20 Years

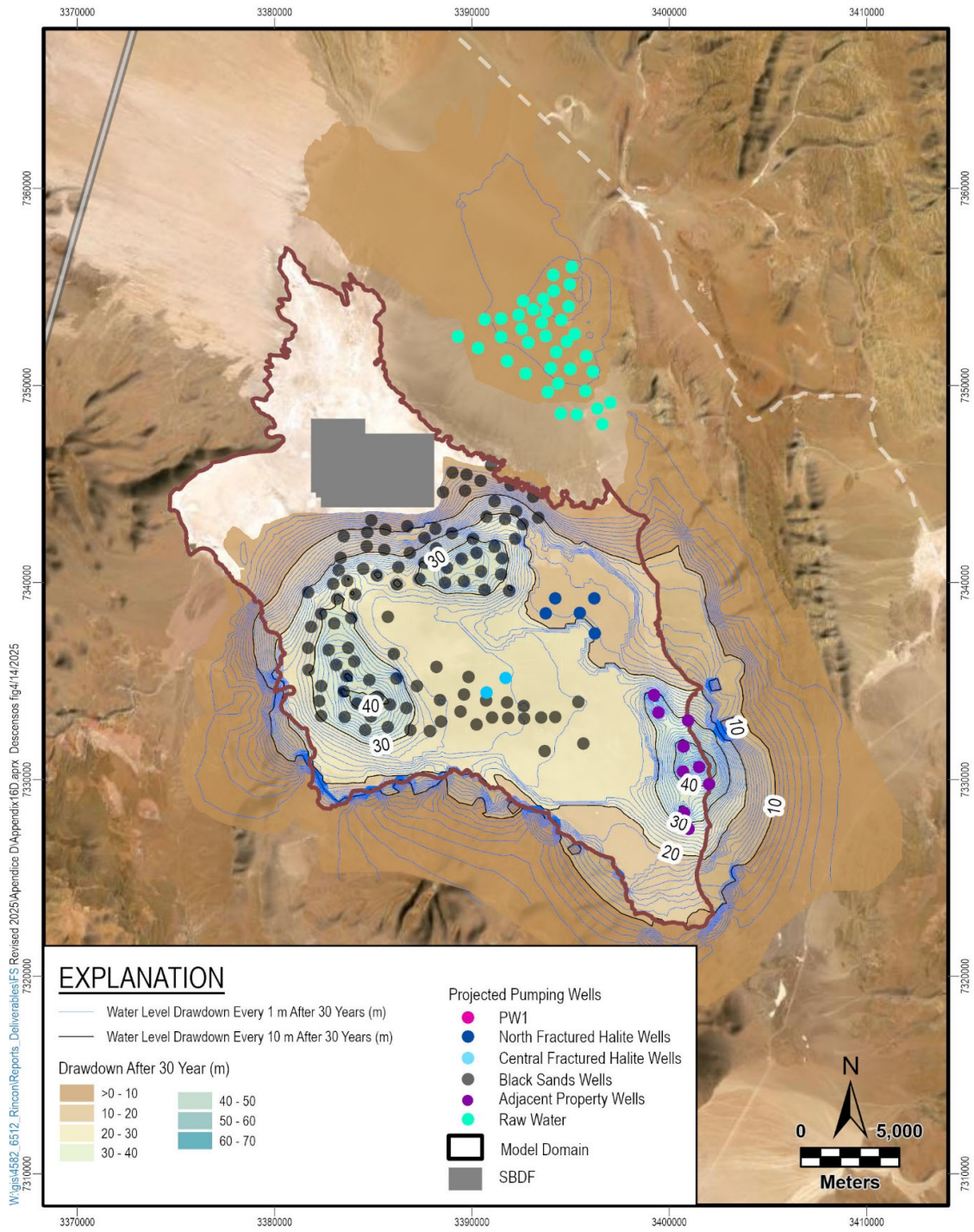


Figure 59: Simulated Water Level Drawdown after 30 Years

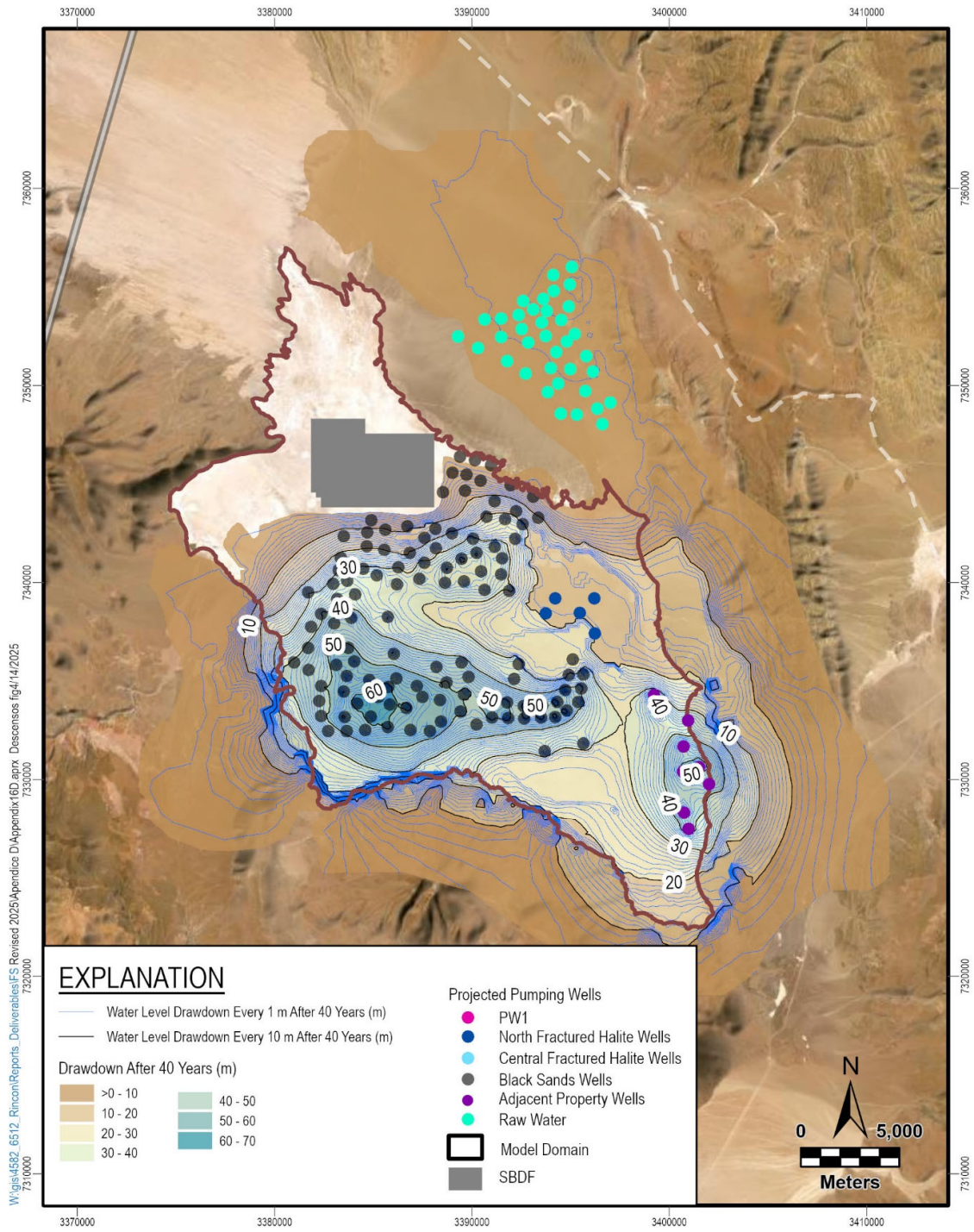


Figure 60: Simulated Water Level Drawdown after 40 years

7.1.2 Key Surface Water Related Features

The model was used to predict groundwater level drawdowns at key surface water and groundwater related locations across the Rincon Basin (additional reference points were also evaluated to provide insight at locations between the key water features). The location of the key environmental receptors is illustrated in Figure 61, this figure also distinguishes between “Environmental Receptors” and “Environmental Receptors Potentially at Risk”. Groundwater level drawdown predictions at all these key locations, in 5-yearly increments (including the influence of climate change projections), are presented in Table 7.

Groundwater drawdowns are representative of drawdown from current groundwater levels, including the potential impact of climate change which was included as the base case in the model predictions. Climate change is predicted to induce a degree of drawdown in groundwater levels at these locations regardless of the proposed Rincon operation. At locations where the Rincon operation is predicted to result in a decline in groundwater levels, the inclusion of climate change projections typically increases drawdown predictions by 1m to 2m after 40 years of operation. However, at Faldeo Cienago and Vega Amarilla the inclusion of climate change leads to an approximately 5m increase in predicted drawdown, with the model predicting only approximately 1m of groundwater level drawdown at these two locations when climate change projections are not included in the model. This may be the result of model limitations, with both of these locations existing on or very near to bedrock, shallow groundwater in these areas is likely to be forced to the surface by low conductivity bedrock and these features are unlikely to be connected to the regional groundwater system.

The inclusion of climate change also results in a northwesterly extension of predicted groundwater level drawdown associated with the Catua Fan raw water wellfield. This northwesterly drawdown extension is not observed when climate change projections are not included in the model.

Groundwater level drawdown at most of the locations evaluated is predicted to be 1m or less for the 40-year life of mine. However, groundwater level drawdowns in excess of 10m, after 40 years of operation, are predicted to occur at four locations; the notional additional reference point Adicional9 (35m) - located approximately midway between Vega Unquillar (Figure 62) and Vega Saladilla, Vega Unquillar (26m), Aljibe en campamento de Chocobar (20m) and Pozo en Campamento de Mina Talismain (13m).

The drawdowns in groundwater level at Aljibe en campamento de Chocobar (20m) and Pozo en Campamento de Mina Talismain (13m) are primarily as a result of the Puna Mining (Argosy) operation.

Groundwater level drawdown is predicted to be approximately 2m at the notional additional reference point Adicional4, located approximately midway between Vega Unquillar and the Rincon Lagoon. Groundwater level drawdown is predicted to be less than 1m at the Rincon Lagoon.

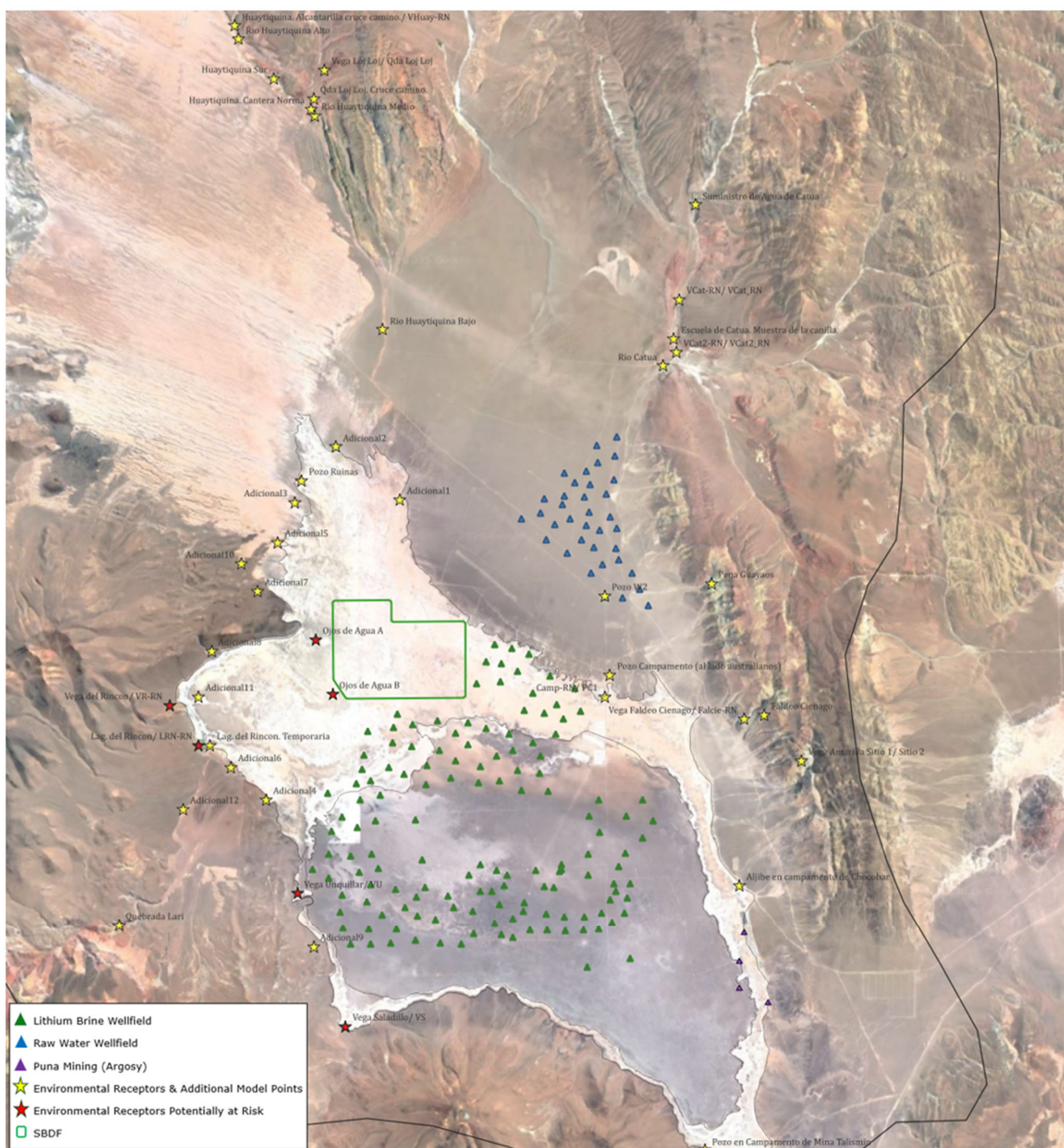


Figure 61: Location of Key Environmental Receptors & Additional Observation Points

Table 7: Predicted Drawdown at all Environmental Points of Interest

Observation ID	Easting (Posgar 94)	Northing (Posgar 94)	Drawdown (m) / Years							
			5	10	15	20	25	30	35	40
Adicional9	3,381,018	7,332,341	2	5	8	12	15	20	28	35
Vega Unquillar/ VU	3,380,273	7,334,860	2	5	10	11	12	15	21	26
Aljibe en campamento de Chocobar	3,400,720	7,335,190	2	5	9	12	15	17	19	20
Pozo en Campamento de Mina Talismin	3,399,109	7,323,036	<1	4	7	8	9	10	11	13
Vega Amarilla Sitio 1/ Sitio 2	3,403,589	7,340,975	<1	<1	1	2	3	4	5	6
Faldeo Cienago	3,401,865	7,343,090	<1	<1	1	2	3	4	5	6
Rio Huaytiquina Bajo	3,384,219	7,360,931	<1	<1	<1	1	2	2	2	3
Vega Faldeo Cienago/ Falcie-RN	3,400,905	7,342,903	<1	<1	<1	<1	1	2	2	2
Adicional4	3,378,822	7,339,171	<1	<1	<1	<1	<1	1	2	2
Pena Guayaos	3,399,412	7,349,178	<1	<1	<1	<1	<1	1	1	2
Rio Catua	3,397,196	7,359,259	<1	<1	<1	<1	<1	<1	1	1
VCat2-RN/ VCat2_RN	3,397,787	7,359,909	<1	<1	<1	<1	<1	<1	1	1
Adicional12	3,374,990	7,338,729	<1	<1	<1	<1	<1	<1	<1	1
Escuela de Catua. Muestra de la canilla.	3,397,669	7,360,500	<1	<1	<1	<1	<1	<1	<1	1
VCat-RN/ VCat_RN	3,397,935	7,362,331	<1	<1	<1	<1	<1	<1	<1	1
Adicional6	3,377,197	7,340,678	<1	<1	<1	<1	<1	<1	<1	1
Pozo W2	3,394,474	7,348,603	<1	<1	<1	<1	<1	1	1	1
Pozo Campamento (al lado australianos)	3,394,720	7,344,940	<1	<1	<1	<1	<1	<1	<1	<1
Vega del Rincon/ VR-RN	3,374,372	7,343,544	---	---	<1	<1	<1	<1	<1	<1
Camp-RN/ PC1	3,394,470	7,343,940	<1	<1	<1	<1	<1	<1	<1	<1
Adicional2	3,382,071	7,355,507	<1	<1	<1	<1	<1	<1	<1	<1
Lag. del Rincon. Temporaria	3,376,220	7,341,690	---	<1	<1	<1	<1	<1	<1	<1
Lag. del Rincon/ LRN-RN	3,375,720	7,341,690	---	<1	<1	<1	<1	<1	<1	<1
Adicional5	3,379,366	7,351,081	<1	<1	<1	<1	<1	<1	<1	<1
Adicional3	3,380,151	7,352,937	<1	<1	<1	<1	<1	<1	<1	<1
Adicional10	3,377,694	7,350,117	<1	<1	<1	<1	<1	<1	<1	<1
Adicional8	3,376,299	7,346,050	---	<1	<1	<1	<1	<1	<1	<1
Vega Saladillo/ VS	3,382,496	7,328,682	---	<1	<1	<1	<1	<1	<1	<1
Suministro de Agua de Catua	3,398,670	7,366,707	---	<1	<1	<1	<1	<1	<1	<1
Pozo Ruinas	3,380,470	7,353,940	<1	<1	<1	<1	<1	<1	<1	<1
Adicional11	3,375,720	7,343,940	---	---	---	---	<1	<1	<1	<1
Adicional1	3,385,025	7,353,056	---	<1	<1	<1	<1	<1	<1	<1
Rio Huaytiquina Medio	3,381,067	7,370,839	---	---	---	---	---	---	---	---
Huaytiquina. Cantera Norma	3,380,919	7,371,134	---	---	---	---	---	---	---	---
Qda Loj Loj. Cruce camino.*	3,381,021	7,371,622	---	---	---	---	---	---	---	---
Huaytiquina Sur*	3,379,206	7,372,552	---	---	---	---	---	---	---	---
Huaytiquina. Alc.cruce camino./ VHuay-RN*	3,377,374	7,375,004	---	---	---	---	---	---	---	---
Vega Loj Loj/ Qda Loj Loj*	3,381,525	7,372,954	---	---	---	---	---	---	---	---
Rio Huaytiquina Alto*	3,377,552	7,374,384	---	---	---	---	---	---	---	---
Quebrada Lari	3,372,027	7,333,352	---	---	---	---	---	---	---	---
Adicional7	3,378,454	7,348,818	---	---	---	---	---	---	---	---
Ojos de Agua B	3,381,899	7,344,080	---	---	---	---	---	---	---	---
Ojos de Agua A	3,381,112	7,346,583	---	---	---	---	---	---	---	---

*: These points have drawdown caused exclusively by the Climate Change effect of reduction of recharge, thus they were set to zero drawdown. Note: This Table shows the total drawdown, including the effect of climate change incorporated in the Recharge and Evapotranspiration conditions



Figure 62: Vega Unquillar

7.1.3 Ojos de Agua

The two Ojos de Agua (water eyes) located on the western margin of the proposed SBDF are key potential environmental receptors. During the operational phase of the Rincon Project, groundwater levels are predicted to rise at both these locations due to the influence of seepage from the SBDF. The maximum rise in the groundwater table is predicted to be approximately 0.6m and approximately 1.2m at Ojos de Agua A and Ojos de Agua B, respectively, as illustrated in Figure 63.

It is critical to note that there are some current limitations associated with the modelling completed to date at the Ojos de Agua locations, including the following:

Model limitations:

- The model cells are 250m x 250m in this area, while the Ojos de Agua are only approximately 30m wide.
- The model has a starting depth to water of 1-2mbgl at the Ojos de Agua locations, as the model is calibrated to wells in the area with water levels ranging from 0.86-3.02mbgl, but the water level in the Ojos de Agua is at ground level.
- The model assumes a constant rate of seepage from SBDF throughout the entire 40-year operation.
- Evaporations rates did not consider an exposed water body, therefore evaporation at the Ojos de Agua is likely higher than that applied in the model.

Ground conditions:

- Brine in the Ojos de Agua is at ground level.
- There is no travertine cap (carbonate platform) at these two locations so there is unconfined groundwater conditions, compared to confined conditions elsewhere in SBDF area.
- The Ojos de Agua are vertical shafts of water may traverse many different sedimentary units.
- The Ojos de Agua may be linked to the upwelling of deep geothermal water.

As such, it should be noted that the groundwater model predicted rise in water levels during the operational phase is suggesting a slight mounding of the water table in the carbonate platform area surrounding the SBDF and not “flooding” outside the SBDF. However, modelling completed to date suggests that there may be

impacts on the water levels in the vicinity of the Ojos de Agua during the operational phase, with a potential to impact both water levels and water quality at these sensitive receptors.

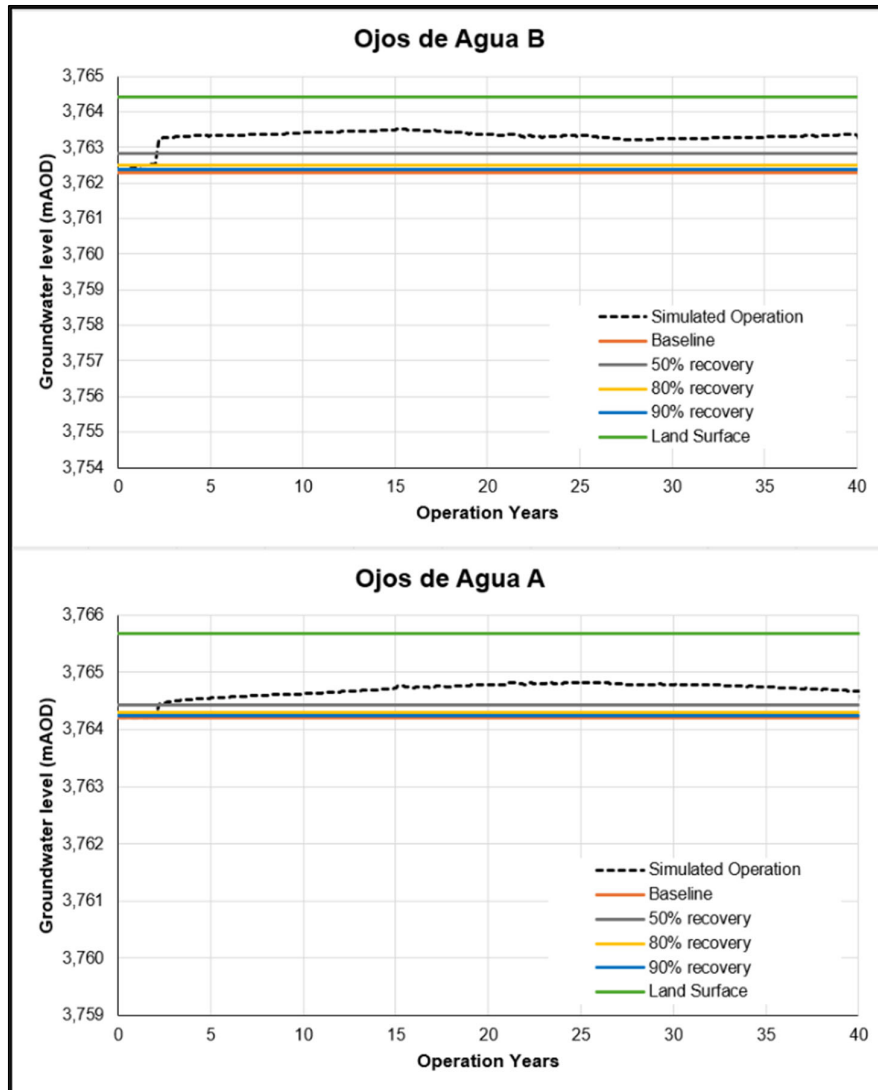


Figure 63: Predicted Groundwater Level Rise at Ojos de Agua A & B

7.2 Groundwater Level Recovery (Post Operation)

7.2.1 Key Surface Water Related Features

The regional Rincon Basin Model groundwater model was used to predict the rate of recovery at each of the key surface water and groundwater related locations across the Rincon Basin (and the additional reference points included to provide insight at locations between the water features). The predicted final drawdown after 40 years of operation, along with the model predicted time to reach 50%, 80% and 90% recovery following cessation of 40 years operation, at each of Environmental Points of Interest with Potential Risk, is presented in Table 8, with the location of these sites illustrated in Figure 61.

The predicted rates of recovery at the key surface water and groundwater related locations are provided without the impact of climate change (as climate change leads to the natural reduction of the groundwater levels at these locations and as such when climate change projections are included none of the locations recover to pre-operational conditions), thus the recovery results solely reflect the influence of the proposed Rincon Project.

Rates of recovery are noted to vary depending on geological setting. In most instances, the drawdown after 40 years of operation is minimal and, as such, even one significant rainfall event is likely to lead to recovery to pre-operation levels. Where groundwater level drawdown is predicted to occur, groundwater levels are predicted to recover to within 50% of initial starting water levels within 40 years at all locations, except at the Rincon Lagoon (although less than 1m of drawdown is predicted at this location after 40 year of operation).

Model predicted groundwater level recovery at Vega Unquillar (situated on the western margin of the salar) and Rincon Lagoon (situated on the northwestern margin of the salar) are presented in Figure 64. It is predicted that groundwater levels at Vega Unquillar will reach 50% recovery within 11 years of cessation of operations, but recovery is predicted to take more than 40 years to reach 80% recovery. It is predicted that groundwater levels at Rincon Lagoon will take more than 40 years to reach 50% recovery, but as noted above less than 1m of drawdown is predicted at this location.

These rates of recovery will be evaluated further in the future as more site-specific data becomes available.

Table 8: Predicted Drawdown & Recovery after 40 years of Operation at Potential Points at Risk

Observation ID	Easting (Posgar 94)	Northing (Posgar 94)	Drawdown After 40 Years (m)	Recovery (years)		
				50%	80%	90%
Vega Unquillar/ VU	3,380,273	7,334,860	24	11	>40	>40
Lag. del Rincon/ LRN-RN	3,375,720	7,341,690	<1	>40	>40	>40
Vega Saladillo/ VS	3,382,496	7,328,682	<1	24	>40	>40
Vega del Rincon/ VR-RN	3,374,372	7,343,544	---	N/A	N/A	N/A
Ojos de Agua B	3,381,899	7,344,080	---	N/A	N/A	N/A
Ojos de Agua A	3,381,112	7,346,583	---	N/A	N/A	N/A

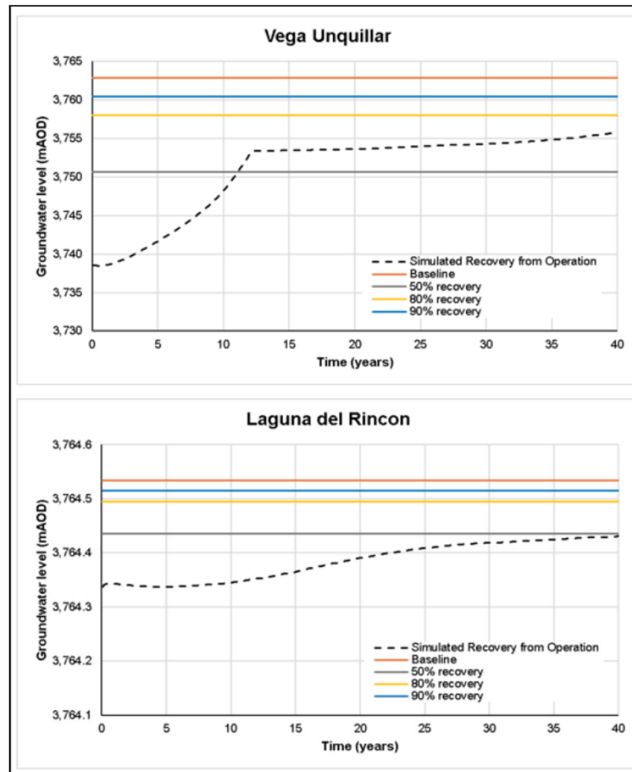


Figure 64: Predicted Groundwater Level Recovery at Representative Locations

7.2.2 Ojos de Agua

During the post operational phase of the Rincon Project, following the groundwater (brine) level rises predicted during the operational phase at Ojos de Agua A and B, groundwater levels are predicted to subsequently decline. The maximum drop in the groundwater table is predicted to occur approximately 7 to 10 years after brine pumping ceases and to be approximately 5m and approximately 8m at Ojos de Agua A and B, respectively, as illustrated in Figure 65.

The predicted water table decreases are due to the fact that there is no more seepage from the SBDF into the underlying sediments (i.e. the SBDF is no longer recharging the underlying sediments) post operation and so the drawdown in the salar (caused by the previous brine pumping during the operational phase) migrates northwards into the SBDF area as illustrated in Figure 66.

It is critical to consider the model limitations described previously in Section 7.1.3 (in the operational phase discussions) when evaluating the potential impact of the proposed Rincon operation on the Ojos de Agua. However, the model results suggest that some mitigation measures may be required through the later operational stages to mitigate against the currently predicted decline in water table following cessation of brine abstraction.

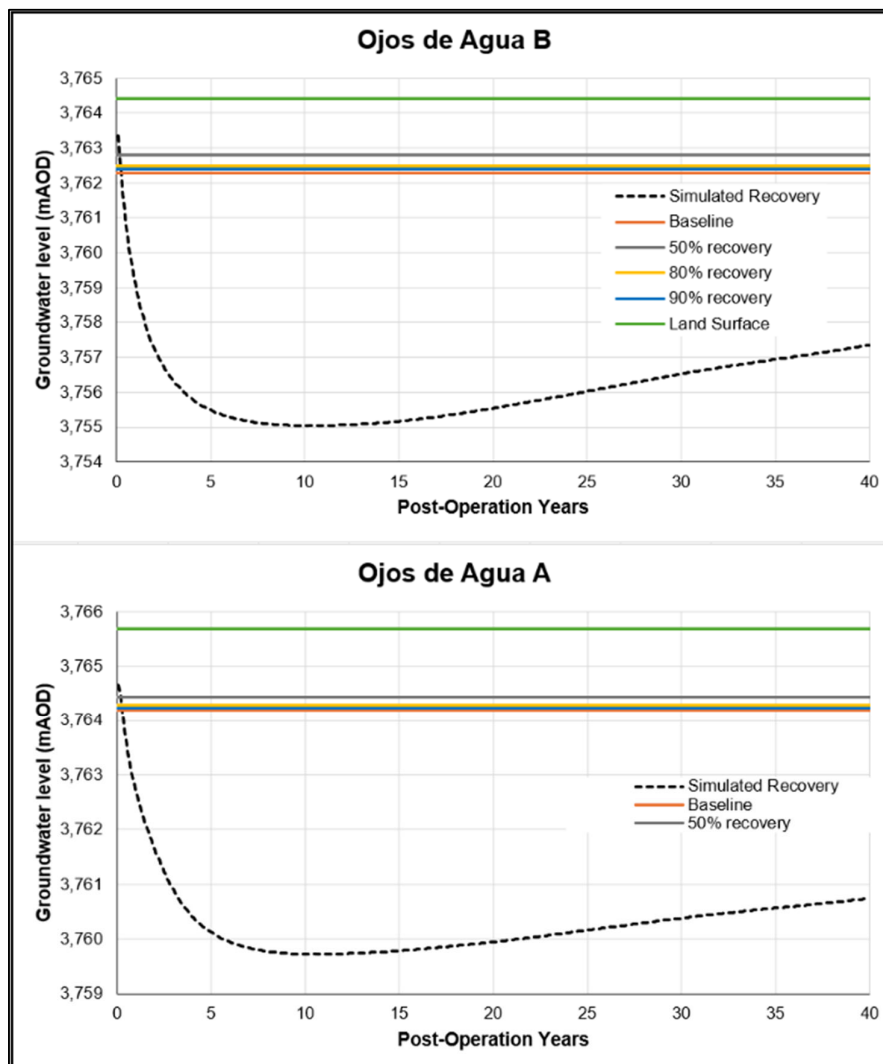


Figure 65: Predicted Groundwater Level Decline at Ojos de Agua A & B

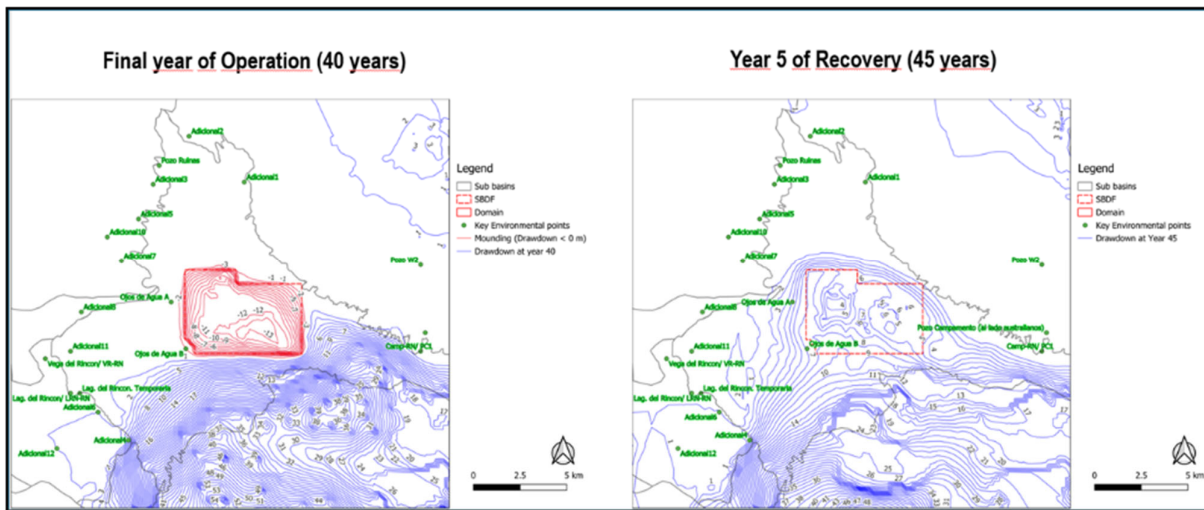


Figure 66: Predicted Groundwater Levels Ojos de Agua A & B

7.3 Future Groundwater Modelling Work & Knowledge Management

The regional “Rincon Basin Model” and local “Catua Alluvial Fan Model” have been set-up based on the current hydrological/hydrogeological understanding of the basin. The model set-ups are based on all currently available data, including climatic data, water level measurements, water quality data, pumping test results, geophysical surveys and geological logs.

On-going production and associated observation well drilling and hydraulic testing, field investigations and water monitoring activities will continue to generate large amounts of new data, which will greatly advance the hydrogeological understanding of the Project. This new data and new hydrogeological insights will be used to update the conceptual hydrogeological model and subsequently update the groundwater model.

Additional groundwater modelling is proposed to be undertaken moving forward, at appropriate key milestones dates and in line with the acquisition of new data (including data from the newly installed weather stations), to confirm the previous modelling results and in particular confirm raw water supply sustainability, the potential impacts of the operation on the water environment, reinjection predictions and wellfield optimisation. At minimum a yearly model update is likely to be undertaken to meet the Mining Secretariat and other Project related requirements.

8 Mitigation Options

The Rincón Project adopts a preventive approach based on the IFC's mitigation hierarchy, prioritizing the avoidance of impacts, followed by minimization, restoration, and, ultimately (if necessary) offsetting. A range of specific measures has been implemented to mitigate potential impacts on water systems and sensitive ecosystems.

A number of actions have already been implemented in terms of addressing avoidance of impact at the SBDF, including the location and design of the SBDF being modified to avoid direct interference with Ojos de Agua that host extremophile microbial communities. In addition, buffer zones were defined and categorized into three restriction levels, based on textural, morphological, and geophysical analyses, to preserve the ecological integrity of these sensitive environments. In addition, the design and environmental management plan for the SBDF incorporates several measures to manage evaporation from the spent brine pond and infiltration of the spent brine into the underlying aquifer including:

- Site preparation and ground conditioning: Each SBDF cell is projected to be levelled and compacted, limiting percolation and favouring surface evaporation. The natural low permeability of the salar's surface crust is maintained and enhanced to act as a barrier to infiltration.
- Perimeter drainage and surface water control: Perimeter channels are constructed to divert stormwater runoff away from the disposal areas, preventing water accumulation that could lead to increased infiltration.
- Progressive, modular brine disposal: The SBDF is implemented in sequential modules, allowing control over volumes and surface exposure. This facilitates containment and monitoring of potential seepage events.
- Groundwater monitoring: A dedicated groundwater monitoring network is in place around the SBDF to detect any changes in water quality or hydraulic gradients. This allows early detection and corrective action in case of suspected infiltration through the embankment.
- Contingency and adaptive management: The environmental management plan includes corrective measures should any adverse impact be detected, including containment, recovery, or redesign of the affected disposal cell. The facility is subject to continuous evaluation and regulatory oversight.

As such, the Project is adopting a conservative, adaptive and modular approach to the spent brine management, backed by a monitoring system designed to prevent and respond to any potential risk of aquifer contamination.

A specific environmental monitoring subprogram for extremophile microbial ecosystems (EMEs) was also developed, including physicochemical and microbiological analyses and seasonal sampling campaigns, in collaboration with national scientific institutions (INIQUI-CONICET). Furthermore, an in-situ experiment using microcosms has been launched to assess the resilience of these microbial communities to potential water quality changes related to project activities, such as spent brine infiltration.

The alternatives analysis was updated to incorporate specific ecological criteria, such as the presence and proximity of extremophile habitats, within the multicriteria assessment for the siting of key infrastructure.

These actions aim to ensure the Project's compatibility with the conservation objectives of the Los Andes Wildlife Reserve and to guarantee that any residual impacts are appropriately managed.

Various mitigation options are currently being evaluated should it be predicted that the Project would impact some of the key environmentally sensitive water related receptors. Appropriate mitigation measures will be different for different sites and will depend on the site-specific characteristics, existing hydraulic mechanisms, sensitivity/resilience and other factors. Ongoing studies are focussed on advancing our understanding of these sensitive receptors and it is with this understanding that appropriate mitigation measures will be derived. Potential mitigation measures for the lagoons, vegas and extremophile ecosystems may include the following:

Rincon Lagoon Area & Vegas:

- Cessation or reduction of abstraction from brine wells in the immediate vicinity (to the East) of the Rincon lagoon area and/or vegas.

- Injection of brine or spent brine into the sediments within the immediate vicinity of the Rincon Lagoon and/or vegas, which will act as a hydraulic barrier and prevent the risk of dropping groundwater/brine levels. Pilot injection field trials have been completed in the vicinity of the Rincon Lagoon and various vegas and have proved successful in rising the groundwater table. In addition, numerical groundwater modelling has proved that injection is also a potentially effective method for reducing groundwater levels drawdowns in the Rincon Lagoon area and in the vicinity of the vegas along the western margin of the salar.
- Construction of a physical low permeability barrier to act as a hydraulic barrier to reduce the risk of dropping groundwater levels (if reinjection fails).
- Irrigation and/or surface water flow augmentation to maintain saturated conditions at the ground surface, particularly applicable to portion of the Vegas that could be more subjected to groundwater level dependency rather than the vega spring water flow.

Ojos de Agua:

- Cessation or reduction of abstraction from brine wells in the immediate vicinity of the Ojos de Agua (to reduce potential drawdown in the Ojos de Agua post operational phase).
- Increase the width of the SBDF drainage in the foot of the embankment to further promote evaporation and reduce the risk of water level rise in the Ojos de Agua.
- Injection of brine or spent brine into sediments in the immediate vicinity of the Ojos de Agua, which will act as a hydraulic barrier and reduce the risk of dropping groundwater levels.
- Injection of spent brine during operations (between year 20 and 30 of operations) to reduce the localized drawdown post closure and therefore reduce the time required to mitigate the drawdown in the Ojos de Agua upon closure.
- Pumping diluted brine directly into the Ojos de Agua and reduce the risk of spike changes in the quality of the brine seeping under the SBDF. This requirement will be confirmed once the resilience test work is completed and we better understand the how resilient / sensitive those microorganisms are to changes in concentration of chemical parameters, with special focus on lithium, TDS, pH, temperature. The full list of chemical parameters included in this testing are provided in Table 9.

Table 9: Parameters included in Bacteria Resilience Testing

Parameters	Total Phosphorus, Sulfate, Total Dissolved Solids (TDS) at 180 °C, Lithium, Total Kjeldahl Nitrogen (TKN), Nitrate, Manganese, Iron, Chloride, Calcium, Potassium, Orthophosphate (as PO_4^{3-}), Nickel, Trivalent Chromium (Cr III), Hexavalent Chromium (Cr VI), Zinc, Total Hardness (as CaCO_3), Total Alkalinity (as CaCO_3), Total Organic Carbon (TOC), Ammonium (as NH_4^+), pH, Salinity, Electrical Conductivity at 25 °C, Sodium, Magnesium, Nitrite (as NO_2^-), Bicarbonate Alkalinity (as HCO_3^-), Arsenic
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Due to the criticality of the environment and the potential risk of impact to the water dependent ecosystems within the Rincon Basin, Rio Tinto is also committed to investigating potential offset alternatives within the region, should there be no other option and if they are required to offset impact.

Rio Tinto is also in discussion with the LAGS Laboratory of INQUI-CONICET (*Instituto de Investigaciones Para La Industria Quimica - Consejo Nacional de Investigaciones Cientificas y Técnicas*) for the installation of high-end equipment for DNA testing since the legislation of Salta does not allow that extremophiles bacteria are sent outside of Salta for DNA testing. The LAGS Laboratory of INQUI-CONICET is currently developing a comprehensive budget proposal aimed at acquiring not only specialized equipment but also the necessary software for data processing, dedicated personnel, and supporting infrastructure. This initiative is not limited to the mere purchase of laboratory instruments; it is conceived as a strategic investment in scientific and technological capacity-building.

The proposed development will significantly enhance the laboratory's ability to provide efficient and timely DNA analysis services for the Rincón Project. Beyond its direct benefits to project implementation, this initiative represents a long-term institutional strengthening effort, reinforcing the capacities of the National University, CONICET, and the Province of Salta. By equipping the region with cutting-edge tools for molecular and environmental analysis, it contributes to the advancement of local scientific research and sustainable development.

Additionally, a special permit was granted by the Secretariat of Environment, specifically through its Biodiversity and Protected Areas Divisions. This authorization enables the development of baseline and resilience studies focused on Extremophile Microbial Ecosystems (EMEs) within the Rincón area. This regulatory milestone provides a solid framework for advancing in-depth environmental assessments under scientifically and legally supported conditions.

9 Ongoing & Future Work Programs

There are a significant number of water related studies that are either on-going currently or are proposed in the near future with the objective of advancing the hydrogeological understanding of the Rincón Basin, addressing existing data gaps and ultimately reduce the risk of the potential impact of the Rincon operation on the brine and water resources throughout the Rincon Basin.

Details of the ongoing and future proposed water related work programs are summarised in Table 10.

Table 10: Ongoing & Future Water Related Work Programs

Work Programs	Scope of Work	Objective	Date
Drilling & Testing Program – Salar & Catua Alluvial Fan	Installation of raw water wellfield (initially in southern and eastern part of Catua Alluvial Fan). Installation of 12 wells within Fractured Halite formation (once DIA received).	Provide additional hydrogeological insights on Catua Alluvial Fan and Fractured Halite. Install raw water wellfield for the proposed life of mine operations.	On-going (raw water wells) & TBC based on receipt of DIA (12 Fracted Halite wells)
Drilling & Testing Program – SBDF	Installation of water monitoring network in SBDF area. Subsequently initiate regular water monitoring.	Initiate water monitoring in SBDF area and monitor spent brine seepage. Provide seepage data which can be used to evaluate current SBDF design and evaluate if design updates are required.	TBC
Water Monitoring	Review water monitoring program. On-going monitoring at surface water and groundwater monitoring locations across the Project area. On-going monitoring at new weather stations installed across the Rincon Project area.	Review water monitoring program to: - Ensure that the monitoring program is appropriate for the current mine design and proposed operation. - Identify any gaps/overlaps in the data being collected. - Ensure that all of the water/biodiversity aspects are appropriately captured. Ongoing water and climate monitoring to: - Advance understanding of the hydrology, hydrogeology and interaction between the brine, freshwater and surface water features throughout the Project area. - Provide greater confidence in the lithium brine and raw water resources in the Project area. - Advance understanding of potential water related risks associated with the proposed Rincon operation.	On-going

		- Provide input data to facilitate effective management of the potential water related impacts on water resources, the environment, biodiversity, and local communities within the Rincon Project area. - Advance understanding of the various relevant climatic parameters and the variability of these parameters across the Rincon Basin both spatially and seasonally.	
Shallow Piezometer Program	Expansion of shallow monitoring well program in sensitive ecological areas and installation of automated instrumentation.	Advance understanding of the hydrogeological setting, hydraulic mechanisms (particularly the degree of hydraulic connection between the shallow surface water linked features and the underlying lithium bearing brines) and freshwater-flora interrelationship at sensitive ecological locations.	On-going
Re-injection Trials	Phase 3 Black Sand Re-injection trials using existing exploration and observation wells in the Black Sand unit. Expansion of the re-injection trials (Phase 4) using new specifically installed wells will be evaluated based on the findings of the Phase 3 trials.	Evaluate the potential viability of re-injection to: 1. Optimise spent brine management throughout the life of operations. 2. Reduce the SBDF footprint. 3. Mitigate potential groundwater level drawdowns at key environmental receptors resulting from proposed raw water and lithium brine abstractions.	TBC - awaiting approval by Secretary of Mining.
Isotope Studies	Consideration of the collection and laboratory analysis of additional water/brine samples from across the Project area for isotope analysis, depending on findings of ongoing review of all 2024/2025 results.	Advance understanding of water origins, flow paths, travel times and interrelationships between surface water and groundwater/brine.	If required, possibly Q4/2025 & Q2-Q3/2026.
Ecohydrological Conceptual Model Updates	Additional geophysical surveys around key environmental receptors. Analysis and identification of ecohydrological thresholds for sensitive species (establishment of critical soil moisture levels required for the survival of key vegetation species, ensuring	Advance understanding of interaction between flora-soil-water, soil suction curves and water levels required for existing flora. Support development of a robust Adaptive Water Management Plan.	On-going

	ecosystem stability (part of Adaptive Water Management Plan). Detailed specifically focussed numerical groundwater modelling of key environmental receptors, coupled with ecological variables. Scenario analysis of climate change impacts on high Andean wetlands.		
Update to Hydrogeological Conceptual Model	Regular review of newly available water/climate data and update conceptual hydrogeological model accordingly.	Advance hydrogeological understanding of Rincon Basin and facilitate the subsequent update of previously completed hydrogeological assessments/modelling and in particular re-evaluate the potential impact of the Project on the key sensitive environmental receptors.	Annually
Update to Numerical Groundwater Model	Regular numerical groundwater modelling updates based on updated conceptual hydrogeological model and any proposed operational modifications. Additional modelling likely to include: - Updated SBDF design, extending buffer zone to Ojos de Agua to minimum of 700m. - Alternative brine production scenario optimisation. - Predictive uncertainty analysis focussed on lithium extraction. - Modifications of brine and raw water wellfield layouts, specifications and pumping regimes (including evaluation of options to reduce drawdown in key environmentally sensitive areas). - Generating data to assist with updates to groundwater trigger/threshold values. - Update model recalibration/ simulations based on operational data.	Confirm previous modelling results, confirm lithium brine resources/reserves, raw water supply sustainability and the potential impacts of the operation on the water environment.	Annually

	- Evaluation of re-injection scenarios. - Finer model grids in SBDF and key environmentally sensitive areas.		
DNA Testing	Discussion with the LAGS Laboratory of INIQUI-CONICET regarding the installation of high-end equipment for DNA testing, plus the necessary software for data processing, dedicated personnel, and supporting infrastructure.	Enhance the laboratory's ability to provide efficient/timely DNA analysis services, equip the region with cutting-edge tools for molecular and environmental analysis and contribute to the advancement of local scientific research and sustainable development.	On-going

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