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ALS Coal Division
WALKER QUARRIES ANALYSIS AND TESTING REPORT

REPORT TO: Wayne Chapman
Lot 6 Great Western Highway, Wallerawang NSW 2845

REPORT ON: Groundwater Sample
Mar-23

REPORT NO: 2400-7303-01

SAMPLED BY: L. Pyne & L. Jenkins

REPORTED BY: T. MacPhee

REPORT DATE: 28/03/2023

These reported results only relate to the items sampled and tested

Sampling and Analysis performed by: ACIRL Lithgow NSW NATA Accreditation No. 15784, Site No. 11436 in accordance with **AS** Standards listed on Page 4.

Adriana Hernandez
Environmental Project/Quality Officer– Lithgow NSW



Accredited for compliance with ISO 17025 - Testing
Accreditation Number 15784

right solutions.
right partner.



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WALKER QUARRIES ANALYSIS AND TESTING REPORT

	Units			
Date of Sample		17/03/2023		
REPORT NO:		2400-7303-01		
ALS Sydney Report No.		ES2309242		
Site Reference		GW1	GW2	GW3
Sampled by		L.Pyne & C.Jenkins		
General Comments/ Observations		Clear	Clear	Clear
Standing Water Level	m	78.22	25.14	20
Total Volume Purged	L	3.0	3.0	3.0
pH	pH Unit	6.2	6.2	6.6
Electrical Conductivity	µS/cm	269	273	675
Alkalinity by PC Titrator				
Hydroxide Alkalinity as CaCO ₃	mg/L	<1	<1	<1
Carbonate Alkalinity as CaCO ₃	mg/L	<1	<1	<1
Bicarbonate Alkalinity as CaCO ₃	mg/L	108	110	303
Total Alkalinity as CaCO ₃	mg/L	108	110	303
Sulfate (Turbidimetric) as SO ₄				
Sulfate as SO ₄ - Turbidimetric	mg/L	12	12	39
Chloride by Discrete Analyser				
Chloride	mg/L	8	8	12
Dissolved Major Cations				
Calcium	mg/L	24	26	103
Magnesium	mg/L	6	6	8
Sodium	mg/L	18	19	31
Potassium	mg/L	3	3	4



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Sampled by		L.Pyne & C.Jenkins		
Dissolved Metals by ICP-MS				
Arsenic	mg/L	0.002	0.002	0.001
Cadmium	mg/L	<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001	0.01
Copper	mg/L	0.007	0.008	0.006
Lead	mg/L	<0.001	<0.001	<0.001
Nickel	mg/L	0.013	0.014	0.025
Zinc	mg/L	0.275	0.282	0.622
Dissolved Mercury by FIMS				
Mercury	mg/L	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance				
Total Anions	meq/L	2.63	2.67	7.2
Total Cations	meq/L	2.55	2.69	7.25
Ionic Balance	%	----	----	0.31



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METHODS OF ANALYSIS

Tests for results issued in this report have been carried out at the following NATA accredited laboratories in accordance with the methods as detailed below:-

TEST	METHOD	ACIRL Lithgow NATA Accreditation #11436	Measure of Uncertainty
Electrical Conductivity uS/cm	CBM-E006	APHA 2510 B	2.0%
pH value	CBM-E005	APHA 4500 H	0.10 pH Units

The remaining analysis performed at ALS Environmental, 277-289 Woodpark Rd, Smithfield, NSW 2164.

Low yielding bores have been purged to dryness, otherwise bores purged to constant Electrical Conductivity

REPORT NO: 2400-7303-01
ALS Sydney Report No. ES2309242

Samples were analysed in accordance with the following Australian Standards or equivalent:

Australian Standards	Description
AS/NZS 5667.1	Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples
ISO 5667-3	Part 3: Preservation and handling of water samples
AS/NZS 5667.11	Part 11: Guidance on sampling of ground waters