

# New ways to present old data

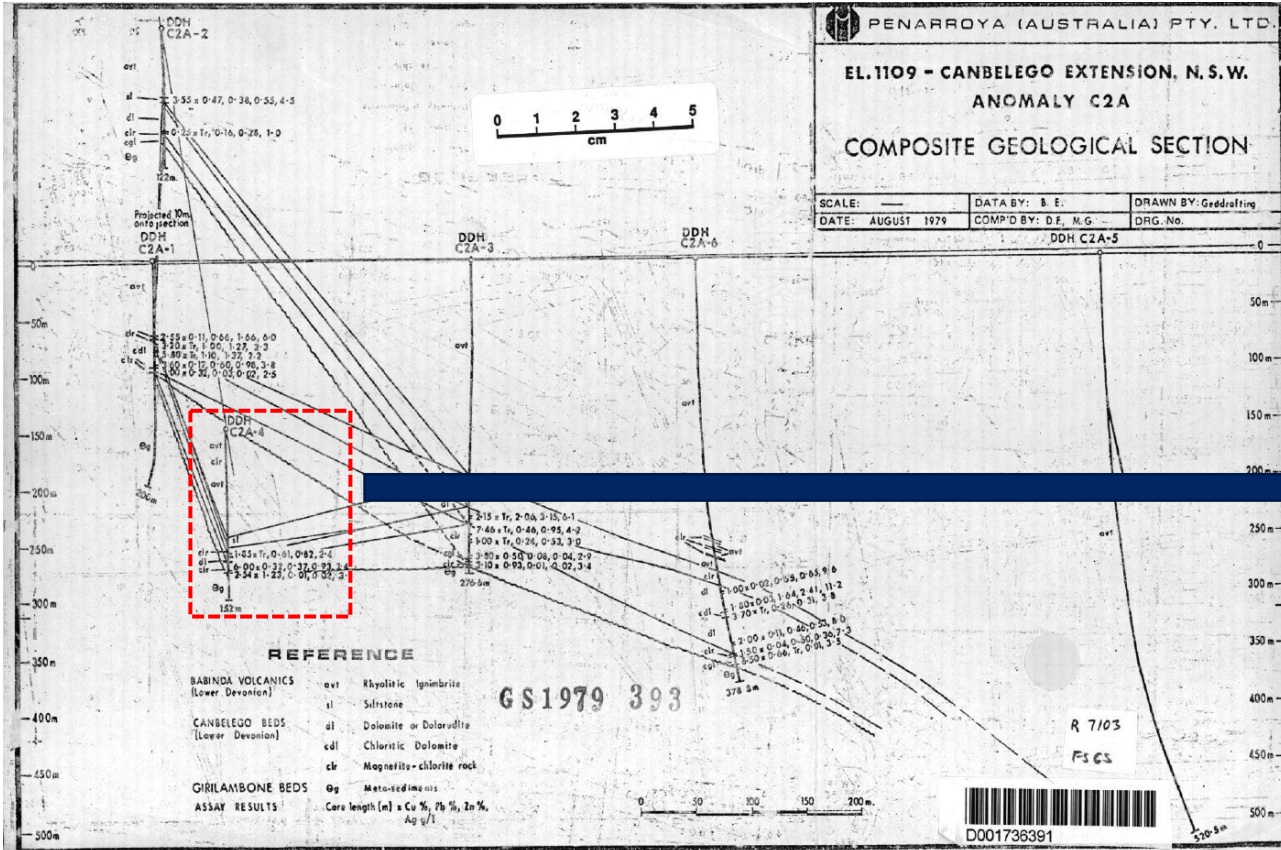
## The Cobar drillhole and atlas compilation project

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Senior Geoscientist, Projects & Acquisition

10 May 2024

Depth From	Depth To	Mag Sus	Sample No	Lithology		DESCRIPTION		Qtz	H <sub>2</sub> O	
				Wthmg	Colour	Lithology	Struct			Alteration/ Min./ Comments
0	2	low		Stray	lr bn	clay SAPPHIRE	NA	Inc. waste rock road fill.		-
2	4				Argy/rd bn	clay FeO <sub>2</sub>				
4	6		180 839		pk	-		Mottled zone		
6	8				rd bn	-				
8	10				-	- hem/lim				
10	12			Medium	-	clay Q hem low SST		ln on vein Q		✓
12	14			"	-	"				
14	16		840	S	y bn	clay lim				
16	18			M	-	sericitic lim		f.g. sericitic sandstone		
18	20			"	-	"				
20	22			S	brn bn	clay		minor lim		
22	24			"	lt gr bn	clay Q hem		vein, sst has hem matrix		✓
24	26		841	M	rd bn	Q clay hem		mod. low f.g. sst		
26	28				"	Q ser hem				
28	30				"	"				
30	32				rd y bn	Q ser lim				
32	34			S	lt gr bn	clay hem	?			
34	36		842		y bn gn	ser lim	?			
36	38				y bn	Q ser lim	SST	vein Q		✓
38	40				"	"				✓
40	42				"	"				
42	44			M	"	"				
44	46		843		gy y bn	"				
46	48				"	" hem				
48	50				"	"				
50	52				"	"				
52	54				gy bn/rd bn	Q lim ser hem				
54	56		844		gy y bn	Q lim ser				
56	58				rd bn	" hem				
58	60				gy y bn	"				
60	62				"	" hem				
62	64				gy rd bn	"				
64	66		845		"	"				
66	68			Weak	gy rd	Q ser hem				
68	70				"	"				
70	72				"	" lim				
72	74				gy y bn	Q ser				
74	76		846		"	"				
76	78			M	rd y bn	" hem lim				
78	80			W	gy gn	" hem		strongly sericitized.		



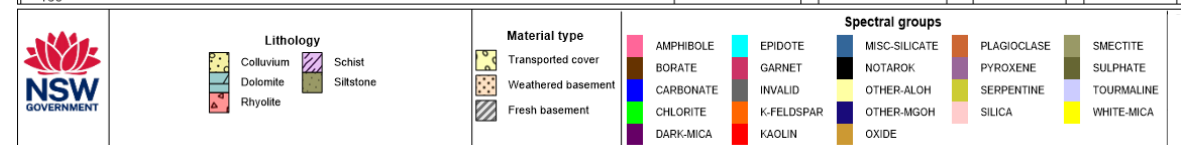
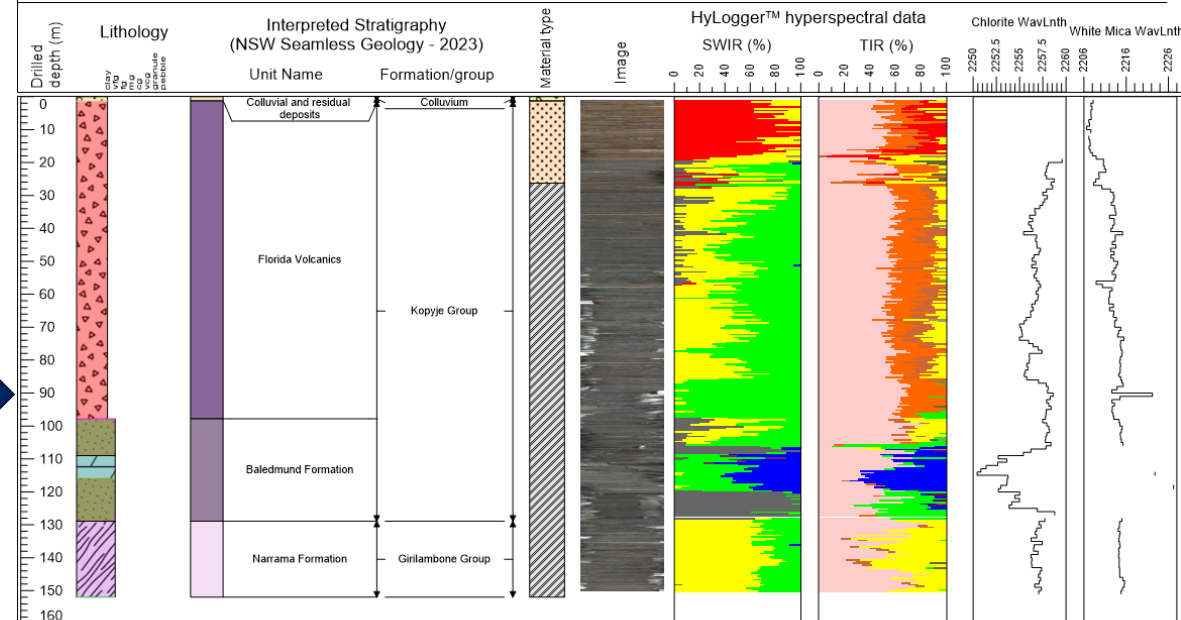


### Drillhole Name: C2A-4

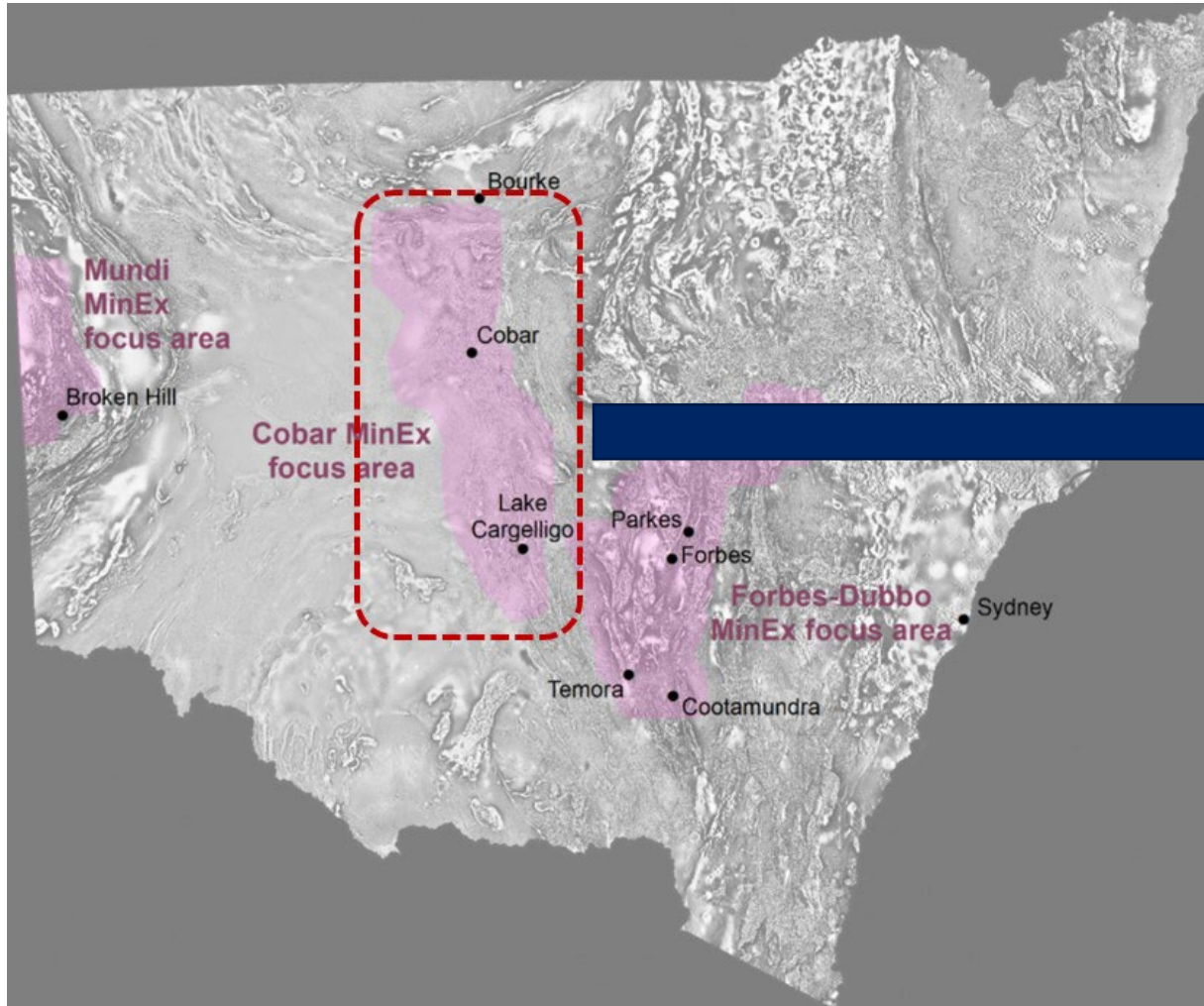
Program: Canbelego C2A  
Drillhole ID: MIN\_039636

Core library: Londonderry  
Year drilled: 1975  
Drill type: Diamond  
Total depth (m): 152

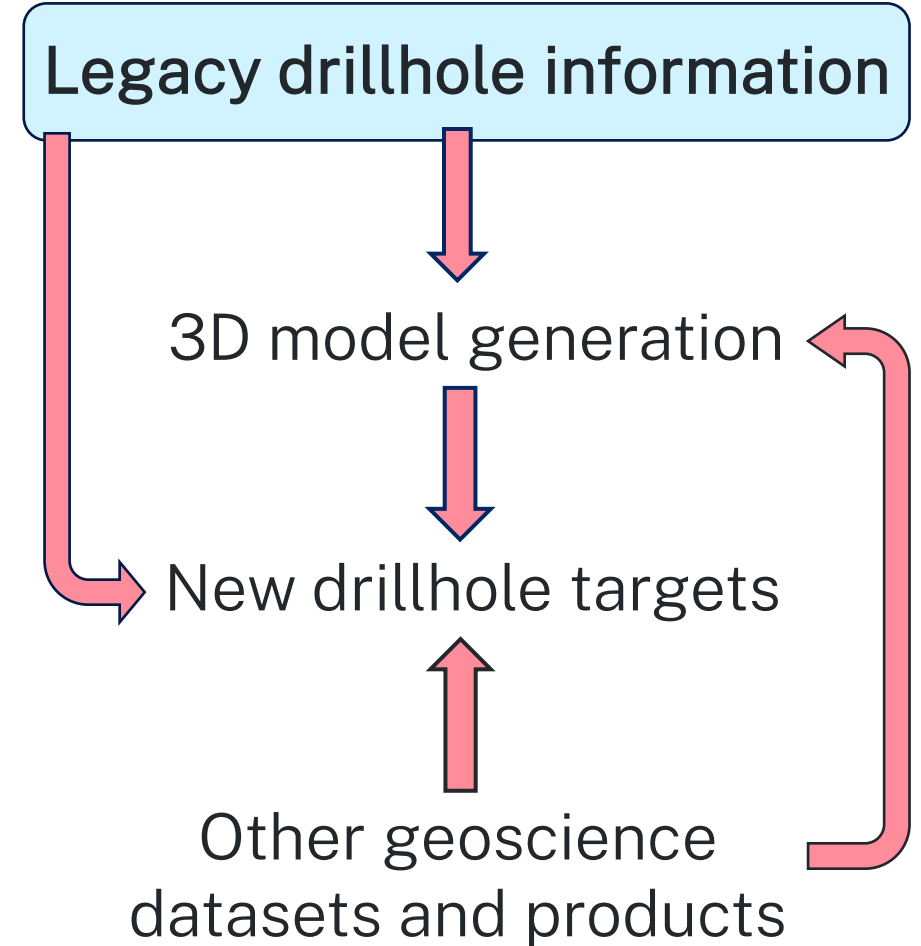
Longitude (GDA94): 146.3524  
Latitude (GDA94): -31.5941  
Azimuth at collar: 0  
Inclination at collar (°): -90  
Elevation (m): 283.17



# Mineral Exploration (MinEx) CRC

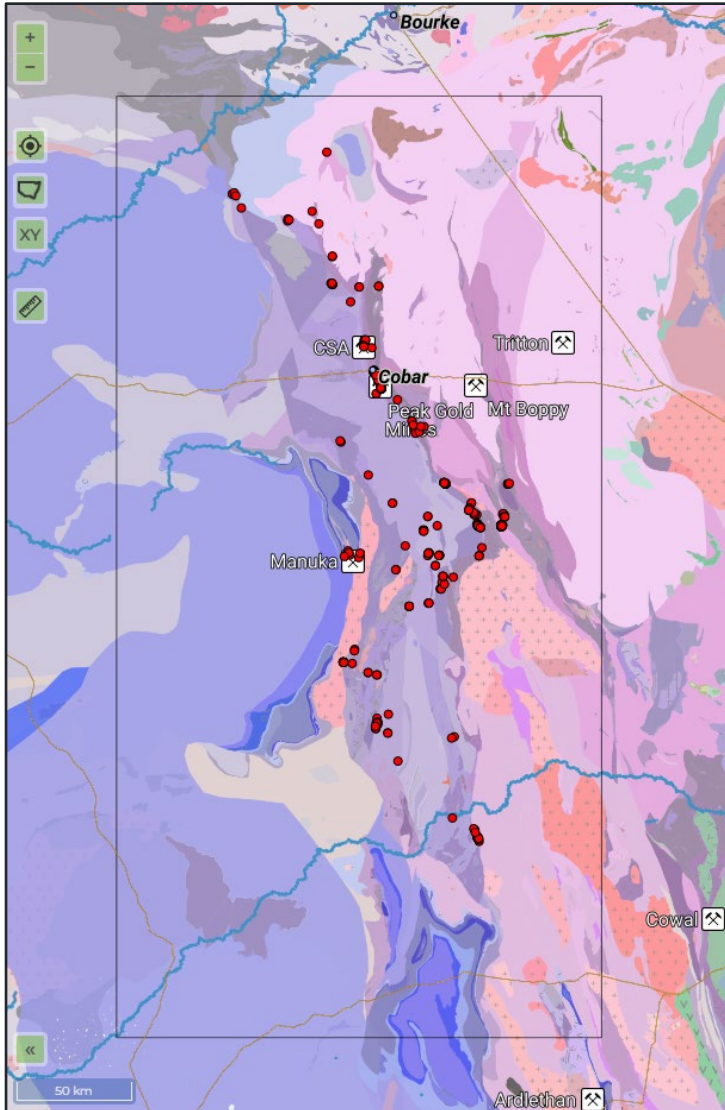


MinEx CRC National drilling initiative (NDI) focus areas in NSW












# Starting dataset – 2020



- October 2020 – release of downhole data compiled by GSNSW for the Cobar airborne electromagnetic (AEM) survey area:
  - Collar and downhole survey information
  - Lithology information – includes cover and weathering data, interpreted stratigraphy (from NSW Seamless Geology)
  - Downhole spectral data (where available) – from HyLogger™
- Involved various QA-QC / data validation
- Helped to interpret the AEM dataset and constrain associated 3D datasets
- Downhole data for 351 open file drillholes available in MinView ('Cobar mineral drillholes' layer)

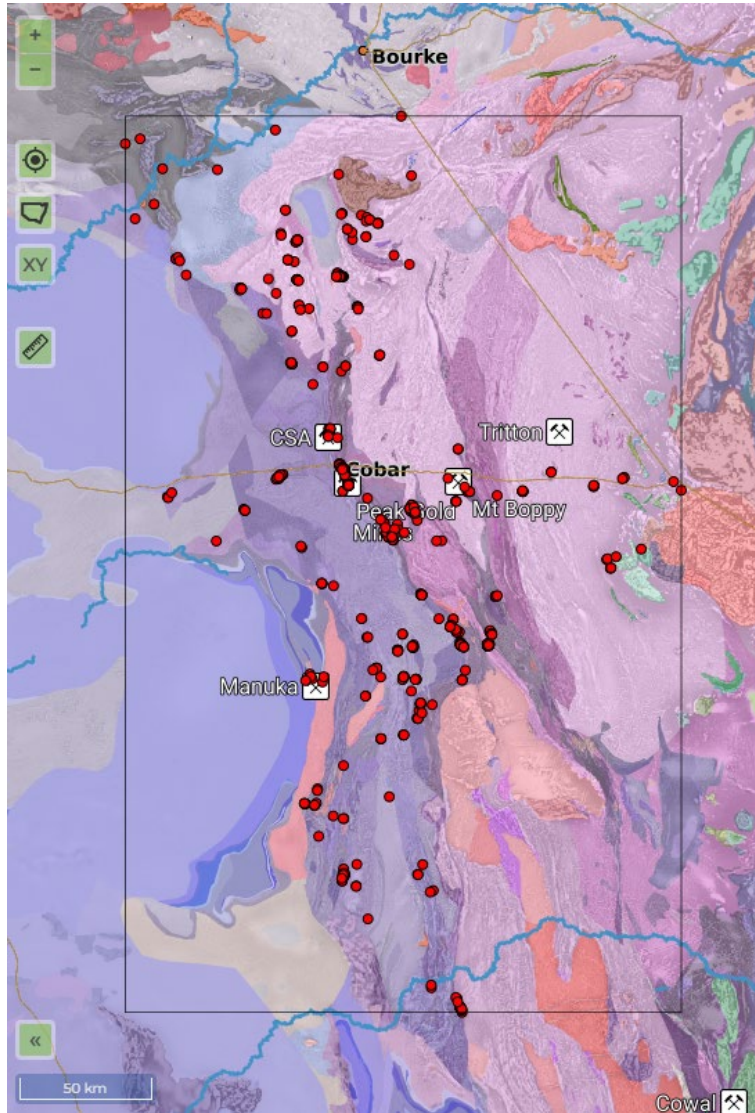
Name	Type	Size
 Cobar_COLLARS_07Aug20.csv	Microsoft Excel C...	43 KB
 Cobar_dhLITH_19Aug20.csv	Microsoft Excel C...	2,316 KB
 Cobar_dhSURV_07Aug20.csv	Microsoft Excel C...	141 KB
 Cobar_dhSWIR_07Aug20.csv	Microsoft Excel C...	3,627 KB
 Cobar_dhTIR_07Aug20.csv	Microsoft Excel C...	5,188 KB
 Cobar_dhVNIR_07Aug20.csv	Microsoft Excel C...	1,511 KB
 schema.ini	Configuration sett...	1 KB

# Rationale for updating the 2020 dataset

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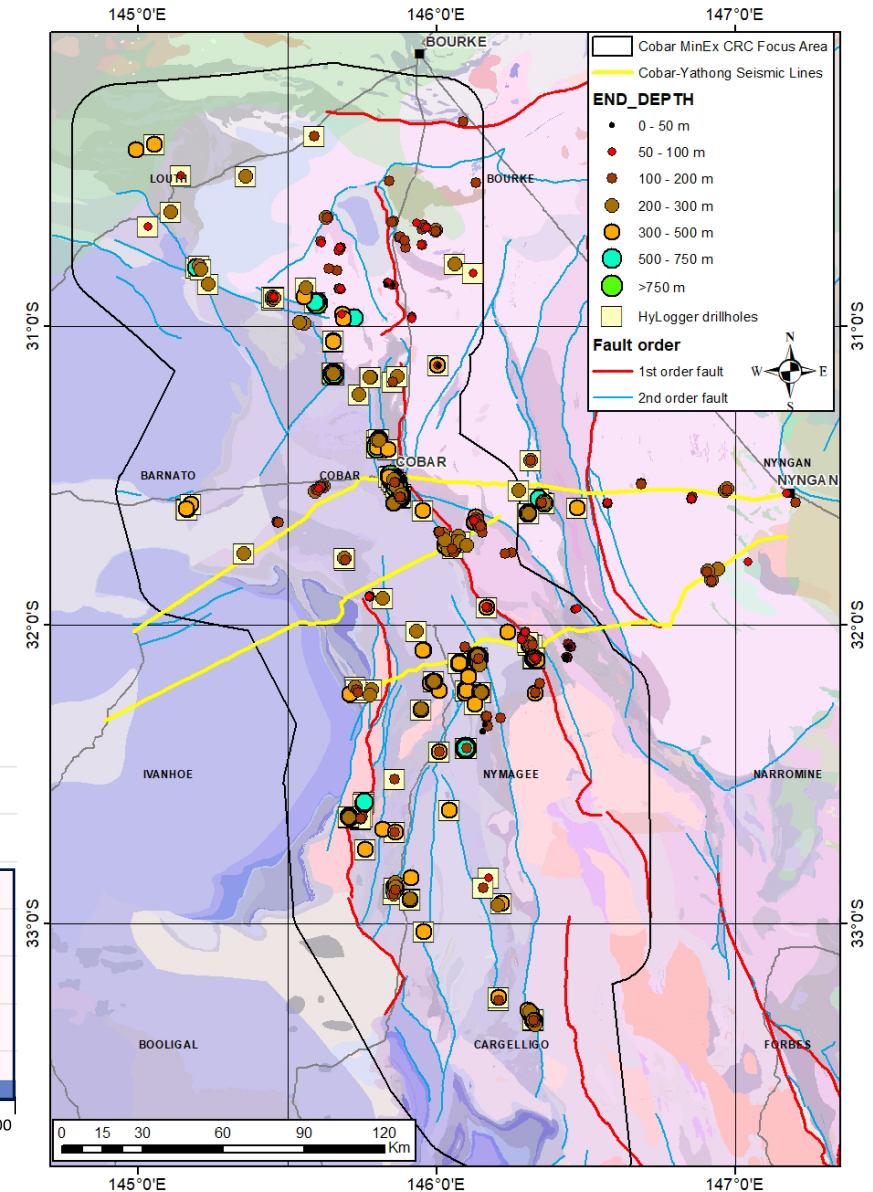
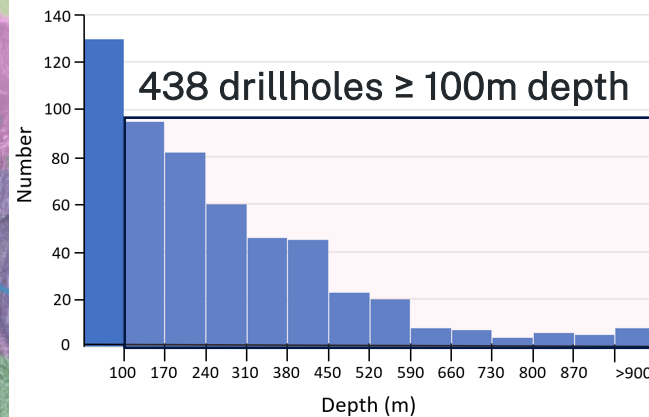
- Expanded focus area – original smaller MinEx Cobar NDI areas now merged and expanded
- Also – extended Cobar–Yathong seismic survey
- New (open file) drillholes – new data has become available since 2020
- Recent new HyLogger™ information – more legacy drillholes now have spectral information
- Missing or incorrect depth intervals for lithologies and weathering
- More information needed for new Cobar 3D model and datasets – for example, fully populated elevation/height and downhole survey data
- No existing written report – no detailed methods provided for the 2020 dataset

# New dataset – 2023



539 drillholes (188 added since 2020 dataset)

Drillholes prioritised: >100 m depth and with HyLogger™ data





# New dataset – 2023



## Collar data

42 separate attributes for each drillhole including:

- Location information (i.e. latitude, longitude)
- Drillhole identifiers
- Supplementary information – year drilled, depth, drilling type, company report(s)
- Location of drillhole material and tests – core library, HyLogger™
- Most information from GSNSW databases
- Height/elevation data validated and fully populated using 5 m digital elevation model (DEM)

	B	C	D	E	H	I	K	L	P	S	U
1	DRILL_ID	HOLE_NAME	PROSPECT	RIN	END_DEPTH	PROGRAM	TITLE_TYPE	TITLE_NO	DRILL_TYPE	YEAR_DRILLED	CORELIB
2	MIN_048999	137751	Malonys Tank	R00001931	30	Malonys Tank - Iris Vale (Placer Exploration)	EL	3510	Rotary air blast hole	1991	N/A
3	MIN_049032	137784	Malonys Tank	R00001931	30	Malonys Tank - Iris Vale (Placer Exploration)	EL	3510	Rotary air blast hole	1991	N/A
4	MIN_049057	137812	Malonys Tank	R00001931	30	Malonys Tank - Iris Vale (Placer Exploration)	EL	3510	Rotary air blast hole	1991	N/A
5	MIN_049058	137813	Malonys Tank	R00001931	30	Malonys Tank - Iris Vale (Placer Exploration)	EL	3510	Rotary air blast hole	1991	N/A
6	MIN_049059	137814	Malonys Tank	R00001931	30	Malonys Tank - Iris Vale (Placer Exploration)	EL	3510	Rotary air blast hole	1991	N/A
7	MIN_039891	37S-1D	South Shuttleton	R00022272	331.4	South Shuttleton	EL	152	Diamond	1973	Londonderry
8	MIN_039892	37S-1DWEDGE	South Shuttleton	R00022272	420.23	South Shuttleton	EL	710	Diamond	1975	Londonderry
9	MIN_039893	37S-2D	South Shuttleton	R00022272	337.1	South Shuttleton	EL	152	Diamond	1973	Londonderry
10	MIN_039894	37S-3D	South Shuttleton	R00022272	461	South Shuttleton	EL	152	Diamond	1974	Londonderry
11	MIN_039896	37S-4D	South Shuttleton	R00022272	361	South Shuttleton	EL	152	Diamond	1974	Londonderry
12	MIN_039897	37S-5D	South Shuttleton	R00022272	666.3	South Shuttleton	EL	152	Diamond	1974	Londonderry
13	MIN_005386	77-TD1	Tara Mine	R00013244	242.3	Tara Mine	EL	817	Diamond	1977	Londonderry
14	MIN_005314	78ODD1	Osterley Downs	R00013244	224.29	Osterley Downs	EL	776	Diamond	1978	Londonderry
15	MIN_005387	78-TD2	Tara Mine	R00013244	200.18	Tara Mine	EL	817	Diamond	1978	Londonderry
16	MIN_006462	78-WD-D1	Mount Dijo	R00016136	298.4	Mount Dijo	EL	1138	Precollared Diamond	1978	Londonderry
17	MIN_023760	96DD001	Darling Downs Anomaly	R00002888	511.8	Darling Downs Anomaly - Cobar	EL	5053	Precollared Diamond	1996	N/A
18	MIN_012426	APH1	Abminco	R00001797	150	Abminco	EL	3673	Open hole percussion	1991	N/A
19	MIN_006326	BDH4	Beanbah	R00016206	31	Beanbah	EL	1087	Diamond	1981	Londonderry
20	MIN_010048	BG1	Balgammon Grid	R00014674	150	Balgammon Grid	EL	2005	Open hole percussion	1984	N/A
21	MIN_006615	BH5	Mag Anomaly BH5 - Lake	RE0003054	351.55	Mag Anomaly BH5 - Lakemere	EL	7532	Diamond	2011	Londonderry
22	MIN_006616	BH6	Mag Anomaly BH6 - Lake	RE0003054	411.6	Mag Anomaly BH6 - Lakemere	EL	7532	Precollared Diamond	2011	Londonderry
23	MIN_040883	BMD001	Blue Mountain	R00009001	672.6	Blue Mountain - Gilgunnia	EL	3527	Diamond	1991	Londonderry
24	MIN_040884	BMD002	Blue Mountain	R00009001	703	Blue Mountain - Gilgunnia	EL	3527	Diamond	1992	Londonderry
25	MIN_040850	BMD1	Blue Mountain	R00000602	208.5	Blue Mountain - Wonawinta	EL	3255	Diamond	1991	Londonderry
26	MIN_040854	BMD5	Blue Mountain	R00003632	212.8	Blue Mountain - Wonawinta	EL	3255	RC Percussion	1992	Londonderry
27	MIN_006330	BPH4	Beanbah	R00016205	90	Beanbah	EL	1087	Open hole percussion	1981	N/A
28	MIN_163790	BPRC001	Browns - Muriel Tank Gc	RE0007123	80	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
29	MIN_163791	BPRC002	Browns - Muriel Tank Gc	RE0007123	80	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
30	MIN_163792	BPRC003	Browns - Muriel Tank Gc	RE0007123	100	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
31	MIN_163793	BPRC004	Browns - Muriel Tank Gc	RE0007123	80	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
32	MIN_163794	BPRC005	Browns - Muriel Tank Gc	RE0007123	80	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
33	MIN_163795	BPRC006	Browns - Muriel Tank Gc	RE0007123	80	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
34	MIN_163796	BPRC007	Browns - Muriel Tank Gc	RE0007123	120	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
35	MIN_163797	BPRC008	Browns - Muriel Tank Gc	RE0007123	80	Browns - Muriel Tank Goldfield	EL	6739	RC Percussion	2015	N/A
36	MIN_004944	BR008	Browns Reef	R00041951	459.3	Browns Reef - Lake Cargelligo	EL	6321	Diamond	2007	Londonderry
37	MIN_004945	BR009	Browns Reef	R00041951	549.3	Browns Reef - Lake Cargelligo	EL	6321	Diamond	2007	Londonderry
38	MIN_004948	BR011	Browns Reef	R00041951	261.2	Browns Reef - Lake Cargelligo	EL	6321	Precollared Diamond	2007	Londonderry
39	MIN_004951	BR014	Browns Reef	R00041951	434.9	Browns Reef - Lake Cargelligo	EL	6321	Precollared Diamond	2007	Londonderry
40	MIN_004953	BR016	Browns Reef	R00041951	391	Browns Reef - Lake Cargelligo	EL	6321	Precollared Diamond	2007	Londonderry
41	MIN_004954	BR017	Browns Reef	R00041951	432.2	Browns Reef - Lake Cargelligo	EL	6321	Precollared Diamond	2007	Londonderry
42	MIN_004955	BR018	Browns Reef	R00030988	390.2	Browns Reef - Lake Cargelligo	EL	6321	Diamond	2007	Londonderry
43	MIN_004956	BR019	Browns Reef	R00030988	312.1	Browns Reef - Lake Cargelligo	EL	6321	Diamond	2007	Londonderry
44	MIN_004935	BR1	Browns Reef	R00007318	239.7	Browns Reef - Lake Cargelligo	EL	632	Diamond	1976	Londonderry

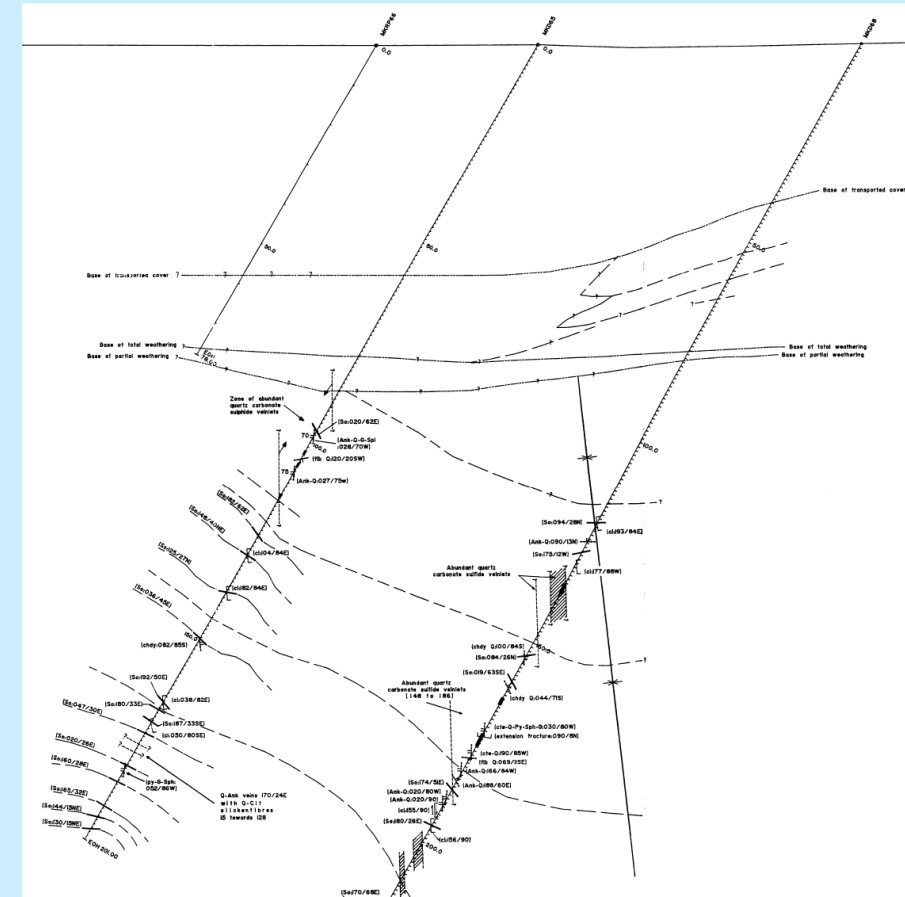


# New dataset – 2023

## Downhole survey data

- Full downhole survey information for all drillholes in the dataset
- Required to plot drillholes in 3D space (dip and azimuth data at different depths)
- Most information from GSNSW databases (augmented with recent Annual Report Release Policy data)
- Some database gaps filled from data in company reports

	B	C	D	E	I	J	K
1	DRILL_ID	HOLE_NAME	PROSPECT	RIN	DEPTH	DIP	AZIMUTH_MAG
2	MIN_040883	BMD001	Blue Mountain	R00009001	0	-60	290
3	MIN_040883	BMD001	Blue Mountain	R00009001	50	-60	292.5
4	MIN_040883	BMD001	Blue Mountain	R00009001	92	-59.5	293
5	MIN_040883	BMD001	Blue Mountain	R00009001	140	-59.5	292
6	MIN_040883	BMD001	Blue Mountain	R00009001	193	-60	294
7	MIN_040883	BMD001	Blue Mountain	R00009001	250	-58.5	295
8	MIN_040883	BMD001	Blue Mountain	R00009001	300	-58.5	294
9	MIN_040883	BMD001	Blue Mountain	R00009001	377	-54	296
10	MIN_040883	BMD001	Blue Mountain	R00009001	431	-50.5	296
11	MIN_040883	BMD001	Blue Mountain	R00009001	494	-46	298
12	MIN_040883	BMD001	Blue Mountain	R00009001	503	-44.8	299
13	MIN_040883	BMD001	Blue Mountain	R00009001	517.7	-44	299
14	MIN_040883	BMD001	Blue Mountain	R00009001	533.9	-42.5	299.5
15	MIN_040883	BMD001	Blue Mountain	R00009001	572.5	-40	301
16	MIN_040883	BMD001	Blue Mountain	R00009001	617.2	-35	301
17	MIN_040883	BMD001	Blue Mountain	R00009001	644.7	-33	303
18	MIN_040883	BMD001	Blue Mountain	R00009001	657	-33	302
19	MIN_040883	BMD001	Blue Mountain	R00009001	672.6	-32	301.5
20	MIN_040884	BMD002	Blue Mountain	R00009001	0	-60	290
21	MIN_040884	BMD002	Blue Mountain	R00009001	50.5	-59	290.5
22	MIN_040884	BMD002	Blue Mountain	R00009001	100.5	-55.5	291
23	MIN_040884	BMD002	Blue Mountain	R00009001	152.4	-50.5	293
24	MIN_040884	BMD002	Blue Mountain	R00009001	158.5	-50.5	293
25	MIN_040884	BMD002	Blue Mountain	R00009001	200.5	-50	293.5
26	MIN_040884	BMD002	Blue Mountain	R00009001	250.7	-49.5	294
27	MIN_040884	BMD002	Blue Mountain	R00009001	314	-49	294.5
28	MIN_040884	BMD002	Blue Mountain	R00009001	350	-48.7	294.5
29	MIN_040884	BMD002	Blue Mountain	R00009001	404	-48.3	294
30	MIN_040884	BMD002	Blue Mountain	R00009001	449	-41.7	294
31	MIN_040884	BMD002	Blue Mountain	R00009001	500	-39.3	294
32	MIN_040884	BMD002	Blue Mountain	R00009001	551	-35	294
33	MIN_040884	BMD002	Blue Mountain	R00009001	602	-31.7	293
34	MIN_040884	BMD002	Blue Mountain	R00009001	650	-29.5	292.5
35	MIN_040850	BMD1	Blue Mountain	R00000602	0	-60	278
36	MIN_040850	BMD1	Blue Mountain	R00000602	31.5	-60	280
37	MIN_040850	BMD1	Blue Mountain	R00000602	69	-60	280
38	MIN_040850	BMD1	Blue Mountain	R00000602	109	-60	279.5
39	MIN_040850	BMD1	Blue Mountain	R00000602	140	-60	276
40	MIN_040850	BMD1	Blue Mountain	R00000602	166	-60	278.5
41	MIN_040850	BMD1	Blue Mountain	R00000602	198	-61	277.5
42	MIN_040854	BMD5	Blue Mountain	R00003632	0	-50	96
43	MIN_040854	BMD5	Blue Mountain	R00003632	25	-50	100
44	MIN_040854	BMD5	Blue Mountain	R00003632	50	-49.5	100
45	MIN_040854	BMD5	Blue Mountain	R00003632	99	-45	98
46	MIN_040854	BMD5	Blue Mountain	R00003632	135	-45	100
47	MIN_040854	BMD5	Blue Mountain	R00003632	170	-45	100
48	MIN_040854	BMD5	Blue Mountain	R00003632	212	-45	100



# New dataset – 2023



## Spectral data

Downhole HyLogger™ hyperspectral data collated:

- 177 (out of 539) drillholes
- Data exported from The Spectral Geologist (TSG™)
- Data files split into:
  - SWIR (short-wave infrared)
  - TIR (thermal infrared)
  - VNIR (visible-to-near infrared)
- Original spectral data and scalars can be obtained from the full NVCL datasets

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	DRILL_ID	Drillhole Name	From_Depth (m)	To_Depth (m)	MISC-SILICATE	SILICA	K-FELDSPAR	PLAGIOCLASE	GARNET	PYROXENE	OLIVINE	ZEOLITE	KAOLIN	WHITE-MICA	SMECTITE	OTHER-AL	CHLORITE
156	MIN_039893	375-2D	67	68	0	87.50436	0	0	0	0	0	0	0	12.495639	0	0	0
157	MIN_039893	375-2D	68	69	0	60.4387	0	0	0	0	0	0	0	26.369057	0	0	0
158	MIN_039893	375-2D	69	70	0	62.44093	0	0	0	0	0	0	0	37.559074	0	0	0
159	MIN_039893	375-2D	70	71	0	62.02694	0	0	0	0	0	0	0	37.973057	0	0	0
160	MIN_039893	375-2D	71	72	0	48.7572	10.415884	8.704369	0	0	0	0	0	25.914402	0	0	0
161	MIN_039893	375-2D	72	73	0	36.62614	0	8.812331	0	0	0	0	0	47.563686	0	0	6.997846
162	MIN_039893	375-2D	73	74	0	12.37317	0	20.476772	0	0	0	0	0	59.223991	0	0	7.926064
163	MIN_039893	375-2D	74	75	0	30.70376	0	8.702201	0	0	0	0	0	60.594044	0	0	0
164	MIN_039893	375-2D	75	76	0	28.76663	0	18.358471	0	0	0	0	0	52.874897	0	0	0
165	MIN_039893	375-2D	76	77	0	33.79572	7.859254	14.317423	0	0	0	0	0	44.027603	0	0	0
166	MIN_039893	375-2D	77	78	0	7.322004	0	30.536383	0	0	0	0	0	62.141621	0	0	0
167	MIN_039893	375-2D	78	79	0	21.21494	0	13.906683	0	0	0	0	0	52.700695	0	0	12.177686
168	MIN_039893	375-2D	79	80	0	20.84127	0	17.37509	0	0	0	0	0	55.010464	0	0	6.773175
169	MIN_039893	375-2D	80	81	0	18.06347	0	17.480106	0	0	0	0	0	53.611652	0	0	10.844773
170	MIN_039893	375-2D	81	82	0	13.23077	0	13.059134	0	0	0	0	0	65.038811	0	0	8.671282
171	MIN_039893	375-2D	82	83	0	6.495576	0	21.13048	0	0	0	0	0	62.028141	0	0	10.3458
172	MIN_039893	375-2D	83	84	0	13.48826	0	23.822206	0	0	0	0	0	53.077251	0	0	9.612278
173	MIN_039893	375-2D	84	85	0	22.91831	0	12.224978	0	0	0	0	0	59.382919	0	0	5.473792
174	MIN_039893	375-2D	85	86	0	56.99518	0	0	0	0	0	0	0	36.218754	0	0	0
175	MIN_039893	375-2D	86	87	0	56.97242	0	0	0	0	0	0	0	34.150417	0	0	0
176	MIN_039893	375-2D	87	88	0	27.88803	0	15.267098	0	0	0	0	0	56.844872	0	0	0
177	MIN_039893	375-2D	88	89	0	12.49376	0	23.273211	0	0	0	0	0	54.472488	0	0	9.760539
178	MIN_039893	375-2D	89	90	0	9.439347	0	27.263018	0	0	0	0	0	63.29763	0	0	0
179	MIN_039893	375-2D	90	91	0	10.68315	0	23.709131	0	0	0	0	0	58.0751	0	0	7.532616
180	MIN_039893	375-2D	91	92	0	21.00944	0	10.412576	0	0	0	0	0	51.549213	0	0	17.028763
181	MIN_039893	375-2D	92	93	0	17.49245	0	0	0	0	0	0	0	30.301195	0	0	52.20636
182	MIN_039893	375-2D	93	94	0	18.32328	0	9.494982	0	0	0	0	0	63.368237	0	0	8.813498
183	MIN_039893	375-2D	94	95	0	85.94135	0	0	0	0	0	0	0	14.058653	0	0	0
184	MIN_039893	375-2D	95	96	0	90.07369	0	0	0	0	0	0	0	9.926304	0	0	0
185	MIN_039893	375-2D	96	97	0	87.45169	0	0	0	0	0	0	0	12.548308	0	0	0
186	MIN_039893	375-2D	97	98	0	79.14284	0	0	0	0	0	0	0	20.857164	0	0	0
187	MIN_039893	375-2D	98	99	0	83.48655	0	0	0	0	0	0	0	16.513454	0	0	0
188	MIN_039893	375-2D	99	100	0	72.22862	0	0	0	0	0	0	0	21.395355	0	0	6.376024
189	MIN_039893	375-2D	100	101	0	84.18763	0	0	0	0	0	0	0	15.812367	0	0	0
190	MIN_039893	375-2D	101	102	0	100	0	0	0	0	0	0	0	0	0	0	0
191	MIN_039893	375-2D	102	103	0	82.25877	0	0	0	0	0	0	0	7.797411	0	0	9.943812
192	MIN_039893	375-2D	103	104	0	100	0	0	0	0	0	0	0	0	0	0	0
193	MIN_039893	375-2D	104	105	0	87.26126	0	0	0	0	0	0	0	12.738742	0	0	0
194	MIN_039893	375-2D	105	106	0	90.10702	0	0	0	0	0	0	0	9.892978	0	0	0
195	MIN_039893	375-2D	106	107	0	79.70861	0	0	0	0	0	0	0	20.291389	0	0	0
196	MIN_039893	375-2D	107	108	0	90.99911	9.000889	0	0	0	0	0	0	0	0	0	0

# New dataset – 2023



## Lithology (and stratigraphy) data

18 separate attributes for each drillhole including downhole interval data:

- Lithology contained in original company reporting (drill logs)
- Lithology mapped to GSNSW lithology library
- Transported cover, weathered basement, fresh basement
- Interpreted stratigraphy using the latest NSW Seamless Geology dataset (unit name and code, group, supergroup)

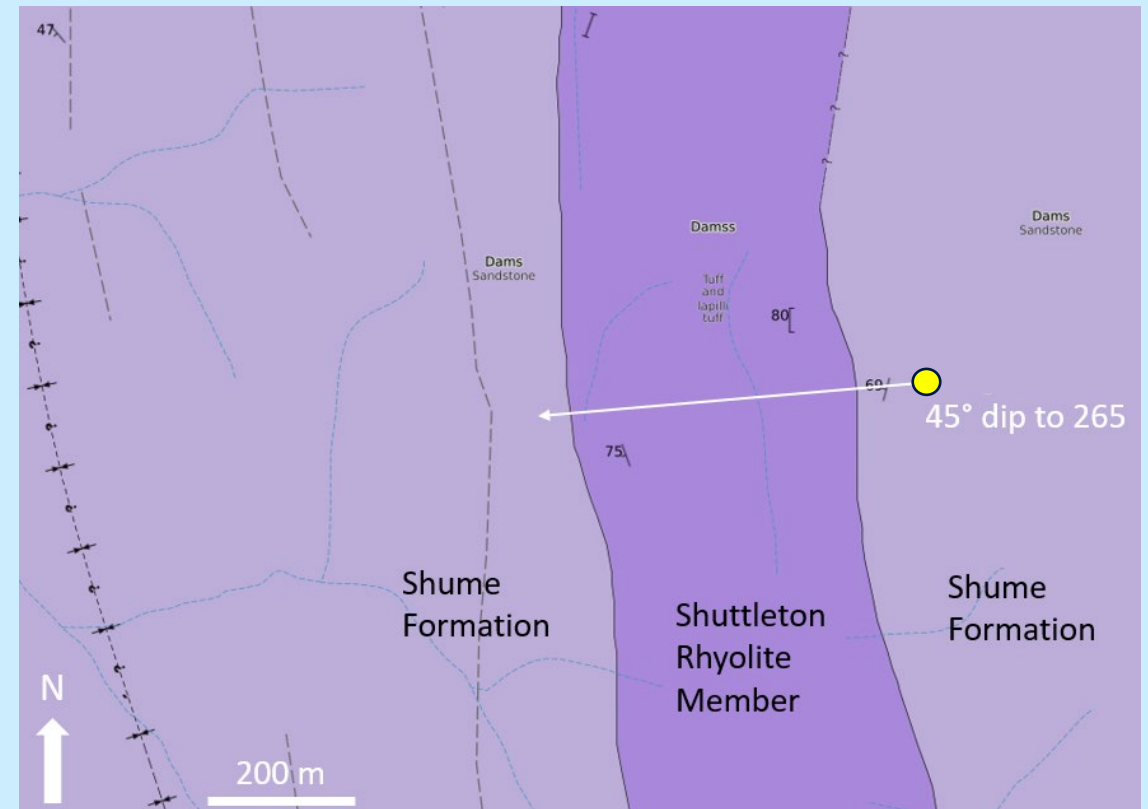
	B	C	D	E	F	G	H	J	K	L	M
	DRILL_ID	HOLE_NAME	FROM	TO	LITH1	GSNSW_LITH1	WEATHERING	UNIT_NAME	NSW_CODE	GROUP	SUPERGROUP
1	MIN_048999	137751	0	6	Brown clay	Clay	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
2	MIN_048999	137751	6	8	Sand-quartz	Sand	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
3	MIN_048999	137751	8	30	Weathered yellow fine-Sandstone	Sandstone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
4	MIN_049032	137784	0	2	Soil/sand	Soil	Transported cover	Residual deposits - soil	Q_rs	Residual deposits	Cenozoic Sedimentary Province
5	MIN_049032	137784	2	8	White claystone	Claystone	Weathered basement	Burthong Formation	Dmmb	Mouramba Group	Cobar Supergroup
6	MIN_049033	137784	8	16	Brown/yellow claystone	Claystone	Weathered basement	Burthong Formation	Dmmb	Mouramba Group	Cobar Supergroup
7	MIN_049034	137784	16	18	Yellow soft claystone	Claystone	Weathered basement	Burthong Formation	Dmmb	Mouramba Group	Cobar Supergroup
8	MIN_049035	137784	18	28	White-grey claystone	Claystone	Weathered basement	Burthong Formation	Dmmb	Mouramba Group	Cobar Supergroup
9	MIN_049036	137784	28	30	Yellow claystone	Claystone	Weathered basement	Burthong Formation	Dmmb	Mouramba Group	Cobar Supergroup
10	MIN_049057	137812	0	4	Clay soil	Soil	Transported cover	Residual deposits - soil	Q_rs	Residual deposits	Cenozoic Sedimentary Province
11	MIN_049057	137812	4	6	Orange sand	Sand	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
12	MIN_049057	137812	6	8	White clay	Clay	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
13	MIN_049057	137812	8	10	River sand	Sand	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
14	MIN_049057	137812	10	24	White brown yellow fine Sandstone	Sandstone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
15	MIN_049057	137812	24	30	Yellow claystone	Sandstone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
16	MIN_049058	137813	0	8	Clay	Clay	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
17	MIN_049058	137813	8	10	Orange sand	Sand	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
18	MIN_049058	137813	10	14	River sand	Sand	Transported cover	Colluvial and residual deposits	Q_cr	Colluvium	Cenozoic Sedimentary Province
19	MIN_049058	137813	14	24	White-yellow	Claystone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
20	MIN_049058	137813	24	30	Yellow claystone	Claystone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
21	MIN_049059	137814	0	6	Soil sand clay	Soil	Transported cover	Residual deposits - soil	Q_rs	Residual deposits	Cenozoic Sedimentary Province
22	MIN_049059	137814	6	28	White yellow claystone	Claystone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
23	MIN_049059	137814	28	30	Yellow fine Sandstone	Sandstone	Weathered basement	Amphitheatre Group, lower	Dam1	Amphitheatre Group	Cobar Supergroup
24	MIN_039891	375-1D	0	24	argillaceous Quartz Arenite	Quartz arenite	Weathered basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
25	MIN_039891	375-1D	24	34.45	Sandstone and Siltstone	Sandstone	Weathered basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
26	MIN_039891	375-1D	34.45	59	Argillaceous Siltstone with occasional cm fli	Siltstone and sandstone	Weathered basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
27	MIN_039891	375-1D	59	63.2	Argillaceous Siltstone with occasional cm fli	Siltstone and sandstone	Weathered basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
28	MIN_039891	375-1D	63.2	67.2	Indurated shale Slate	Shale	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
29	MIN_039891	375-1D	67.2	113.6	massive Quartz Arenite	Quartz arenite	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
30	MIN_039891	375-1D	113.6	119.6	Indurated shale Slate and Quartz Arenite w	Shale	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
31	MIN_039891	375-1D	119.6	147.4	Indurated chlorite shale Slate	Shale	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
32	MIN_039891	375-1D	147.4	197	Quartz Arenite zones of breccia, trace py g	Quartz arenite	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
33	MIN_039891	375-1D	197	241.5	Indurated shale chloritic	Shale	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
34	MIN_039891	375-1D	241.5	247.8	Quartz Arenite	Quartz arenite	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
35	MIN_039891	375-1D	247.8	251	Quartz Arenite in alternance with chloritiz	Quartz arenite	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
36	MIN_039891	375-1D	251	260.5	Alterance of quartz Crystal tuff and chlorit	Crystal tuff	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
37	MIN_039891	375-1D	260.5	281	Sandstone py po massive in places	Sandstone	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
38	MIN_039891	375-1D	281	293.8	Gritty Sandstone q Crystal tuff with Tuff ag	Sandstone	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
39	MIN_039891	375-1D	293.8	294.7	sheared pp acid pyroclastic porphyry with c	Fault rock	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
40	MIN_039891	375-1D	294.7	300.2	Quartz Arenite	Quartz arenite	Fresh basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
41	MIN_039891	375-1D	300.2	331.4	Q Crystal tuff agglomerate in parts. 5cm fra	Crystal tuff	Fresh basement	Shuttleton Rhyolite Member	Damss	Amphitheatre Group	Cobar Supergroup
42	MIN_039892	375-1DWEDGE	332.3	352.47	Crystal tuff	Crystal tuff	Fresh basement	Shuttleton Rhyolite Member	Damss	Amphitheatre Group	Cobar Supergroup
43	MIN_039892	375-1DWEDGE	352.47	365.82	Sandstone	Sandstone	Fresh basement	Shuttleton Rhyolite Member	Damss	Amphitheatre Group	Cobar Supergroup
44	MIN_039892	375-1DWEDGE	365.82	399.55	Sandstone	Volcaniclastic rock	Fresh basement	Shuttleton Rhyolite Member	Damss	Amphitheatre Group	Cobar Supergroup
45	MIN_039892	375-1DWEDGE	399.55	403.28	Sandstone	Sandstone	Fresh basement	Amphitheatre Group, upper	Damu	Amphitheatre Group	Cobar Supergroup
46	MIN_039892	375-1DWEDGE	403.28	420.23	Sandstone	Sandstone	Fresh basement	Amphitheatre Group, upper	Damu	Amphitheatre Group	Cobar Supergroup
47	MIN_039893	375-2D	0	12.5	quartz arenite	Quartz arenite	Weathered basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
48	MIN_039893	375-2D	12.5	27.75	massive reddish pink mineral not classifc	Quartz arenite	Weathered basement	Shume Formation	Dams	Amphitheatre Group	Cobar Supergroup
49	MIN_039893	375-2D	27.75								



# Lithology and stratigraphy data

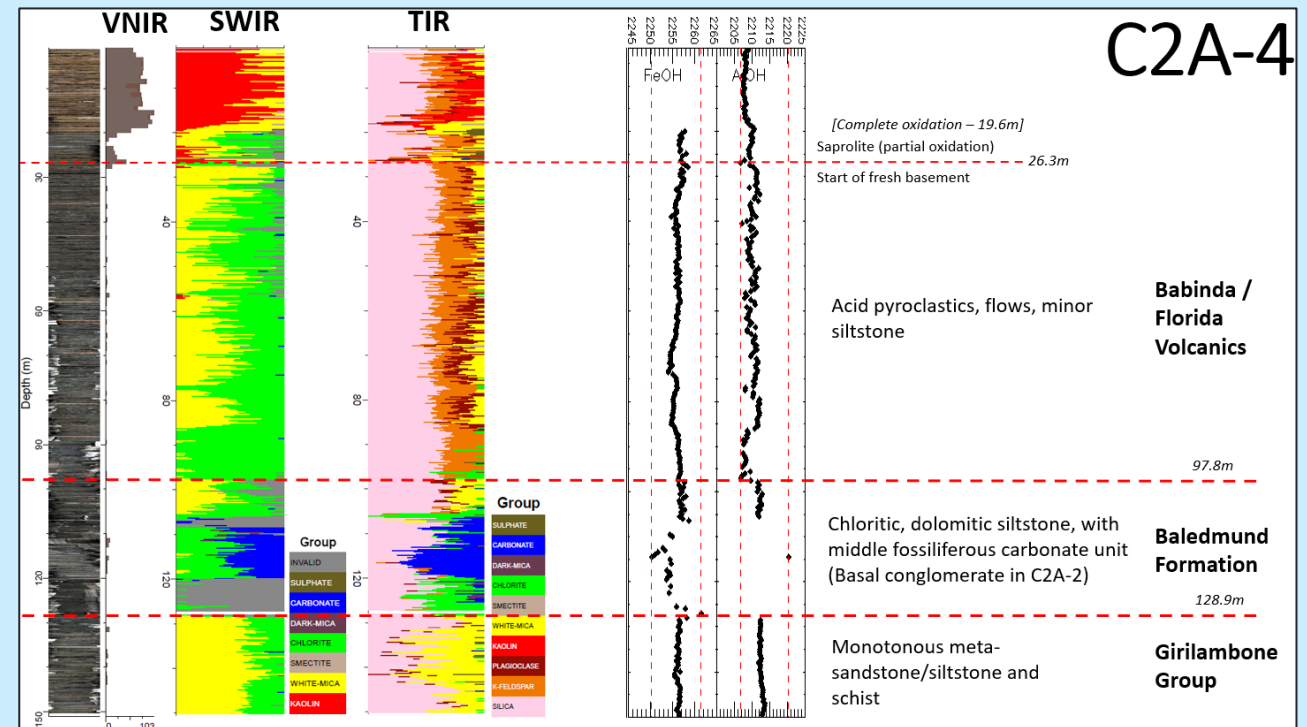
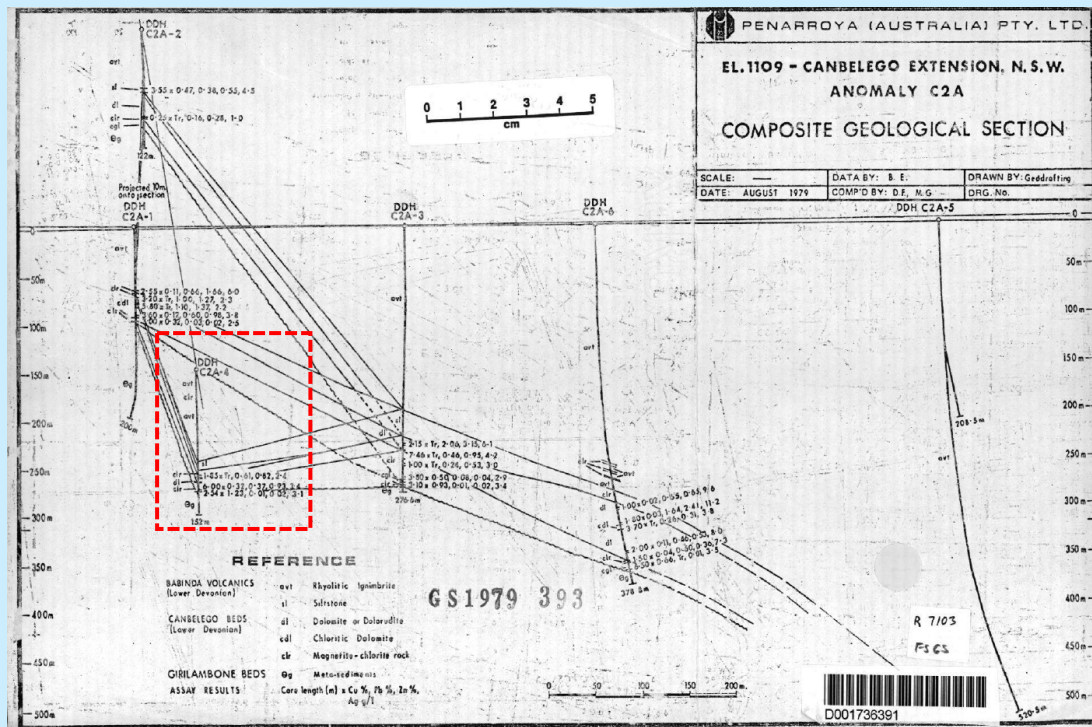
## Using the NSW Seamless Geology dataset

- Collar locations compared to surface and undercover rock unit information in NSW Seamless Geology dataset (version 2.3)
- Further rock unit (stratigraphic) information interpreted using:
  - drillhole downhole survey information (azimuth and dip)
  - rock unit structural information (bedding dip and strike, folds and faults)
- Mapping (and interpreted stratigraphy) subject to change with future releases of NSW Seamless Geology dataset



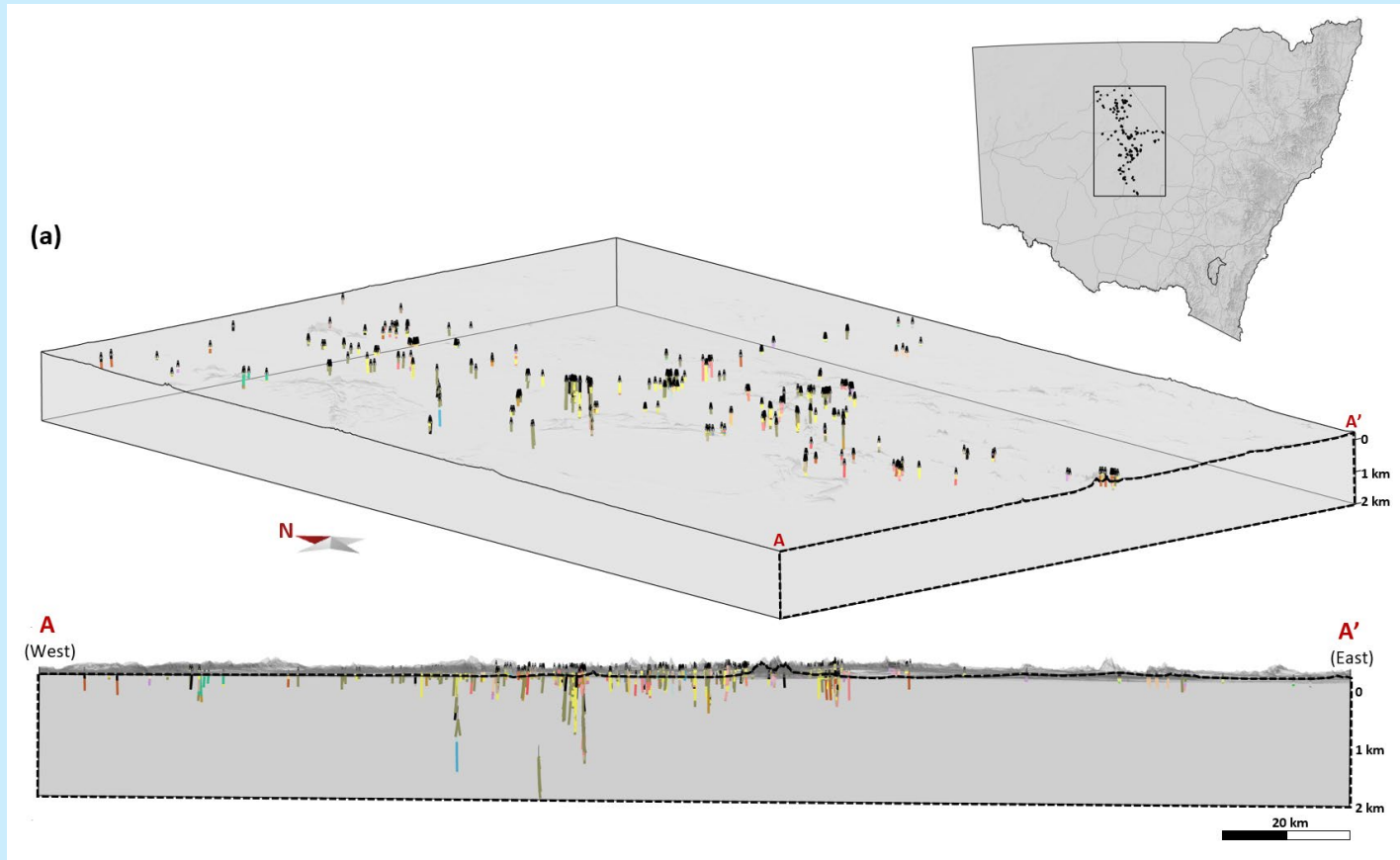
# Lithology and stratigraphy data

## Using drillhole material and HyLogger™ hyperspectral data

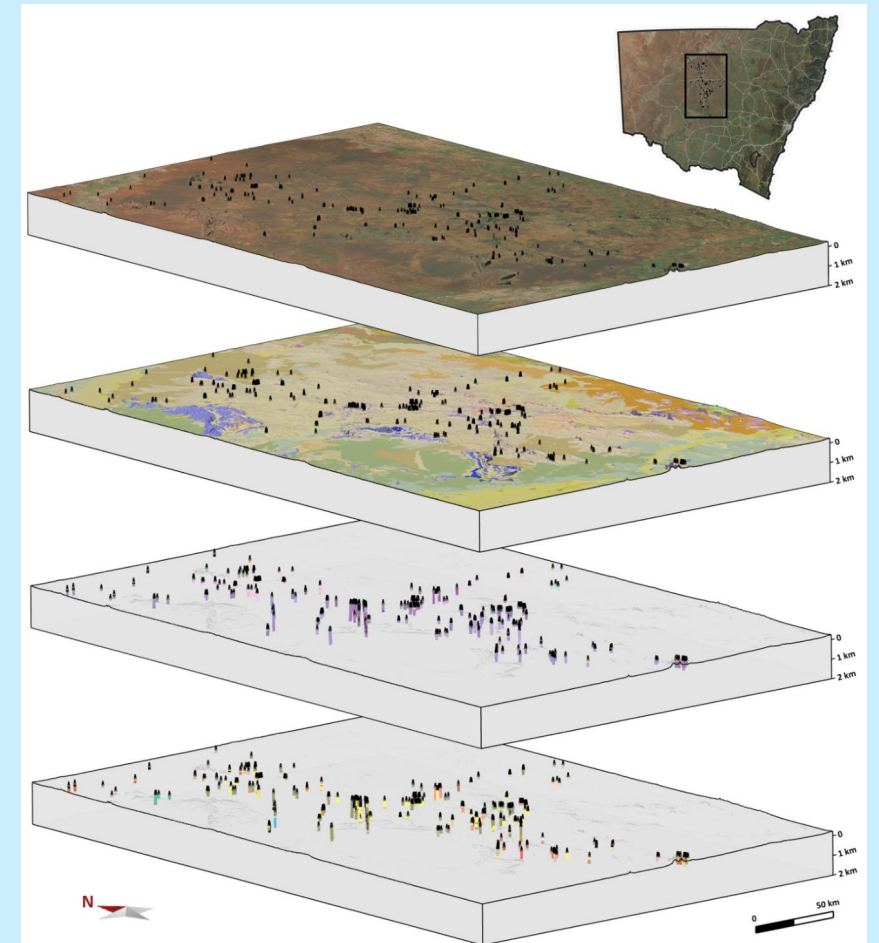


→ almost 50% of drillholes in this dataset are stored at Londonderry core library for examination

# Cobar drillhole 3D projects



Source: Luke Mahoney (GSNSW)



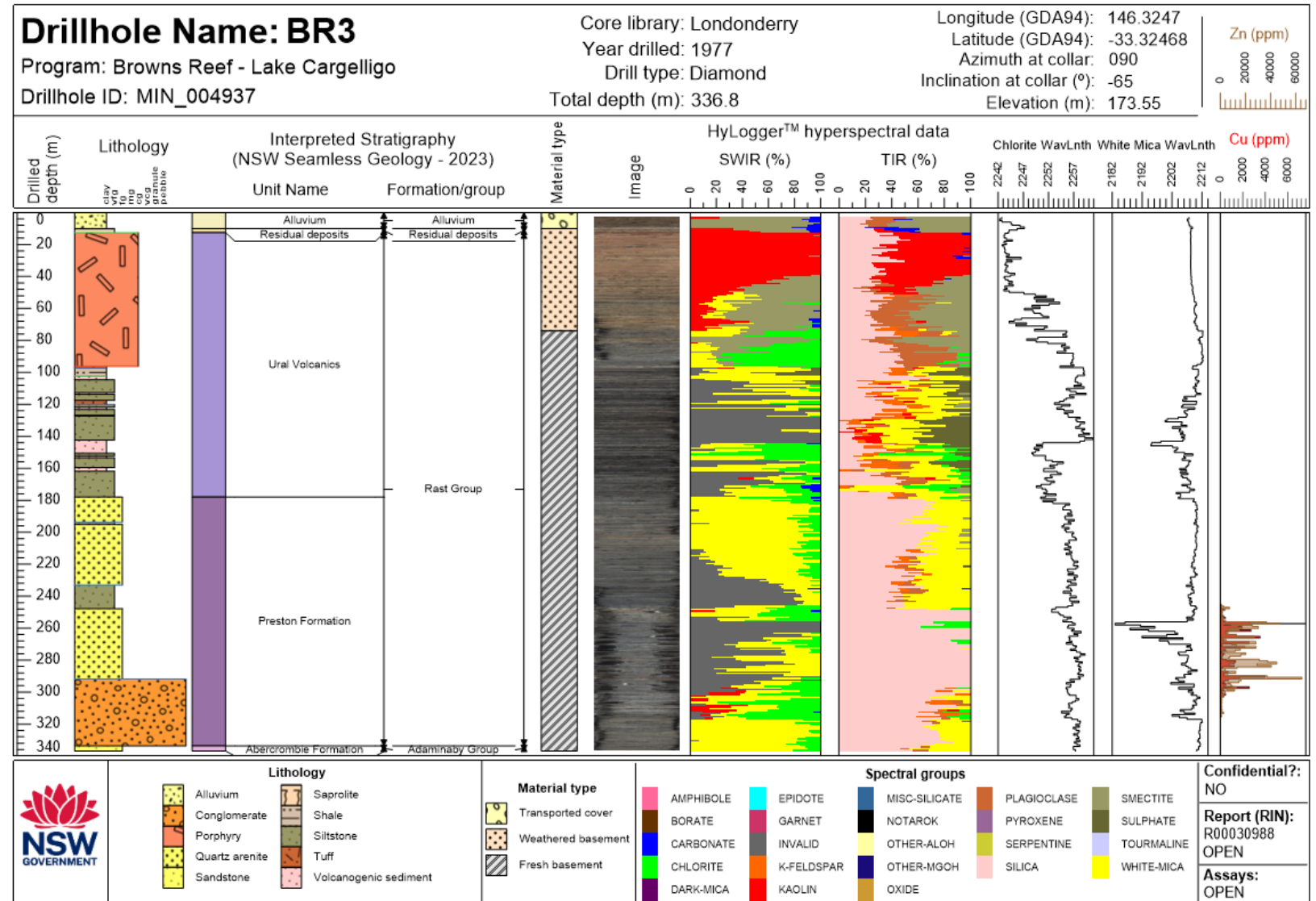


# Cobar drillhole atlas

# Cobar drillhole atlas

## Strater™ software

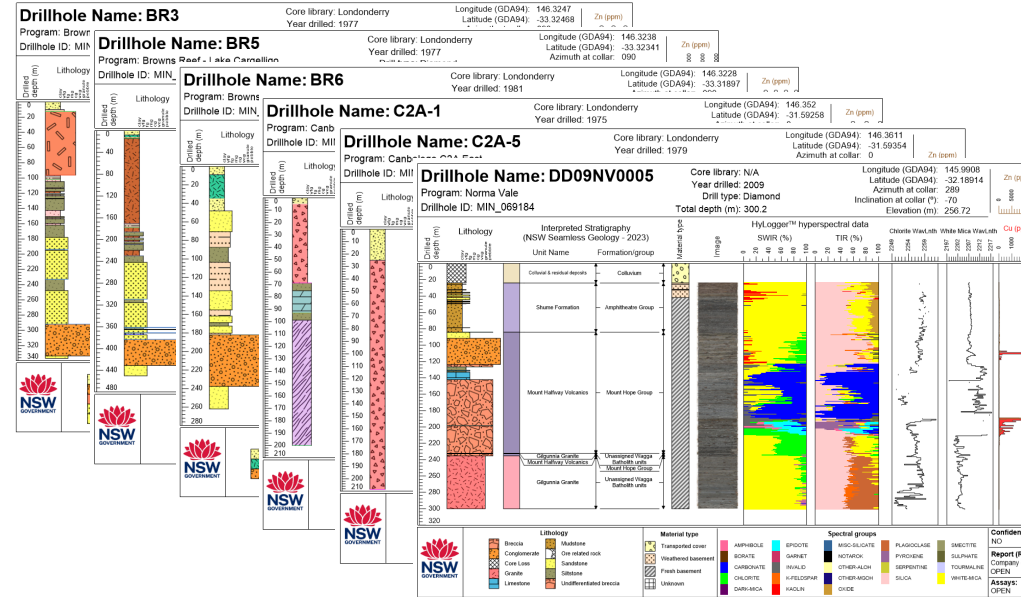
- New drillhole data integrated using Strater™ software
- PDF output files
- Template set up – can replicate outputs for any drillholes
- Other downhole information can be added – for example, different spectral scalars, geochemical data, petrophysics/rock properties



# Cobar drillhole atlas

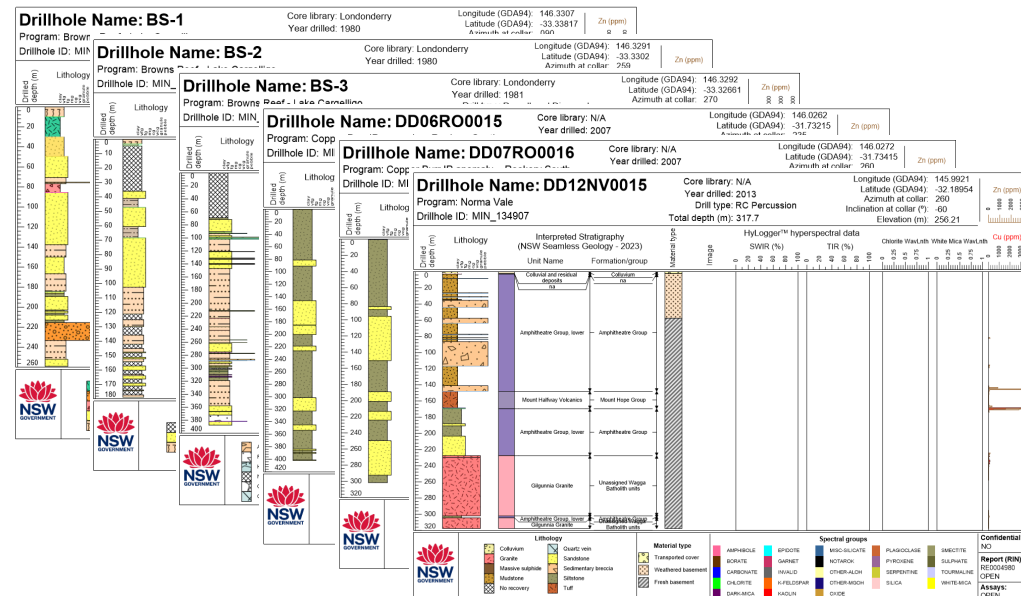


## Drillholes with Hylogger™ data



x 177

## Drillholes without Hylogger™ data



x 362



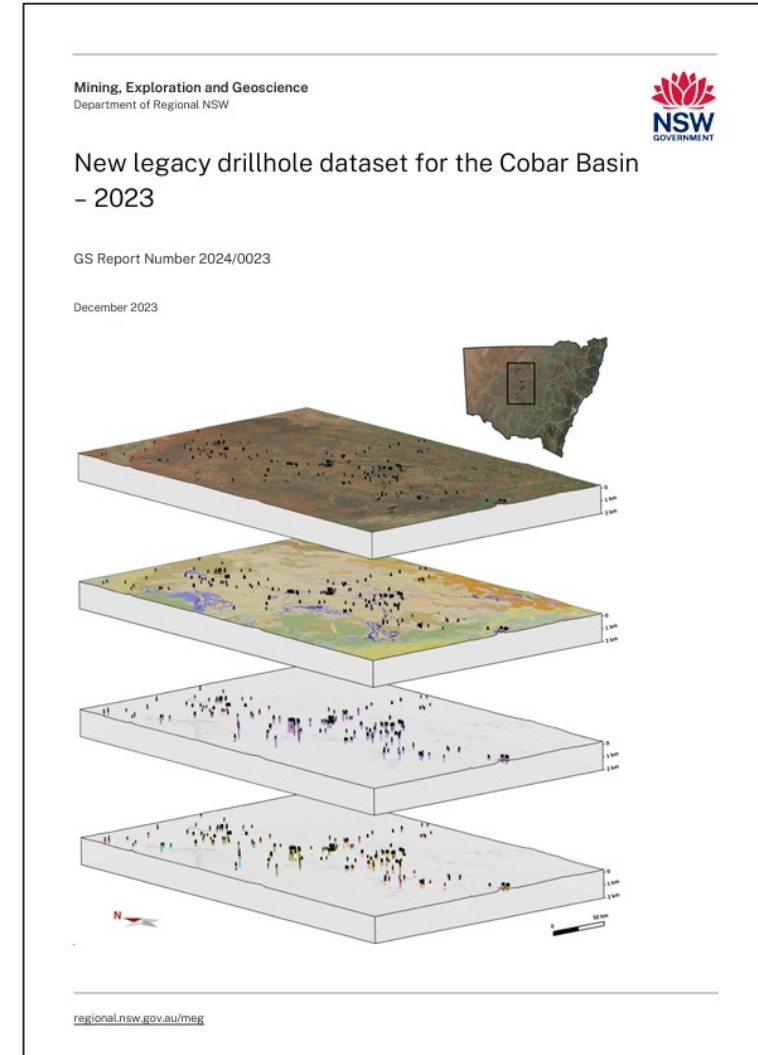
# Accessing the data and products

# How to find and access the data and products

[MinView link](#)

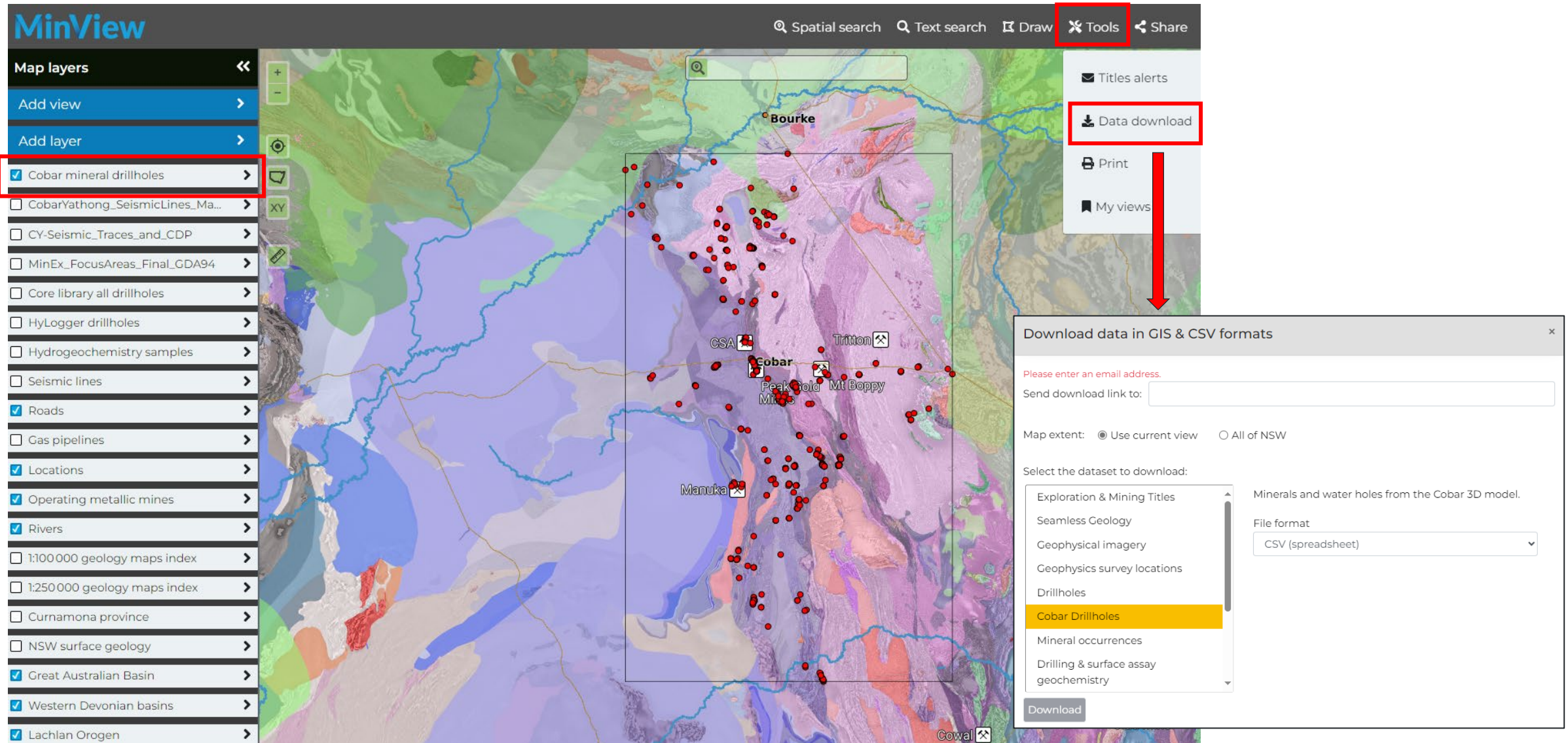
[DIGS link](#)

GS2024/0023



Back-up slides follow if web  
links on previous slide don't work

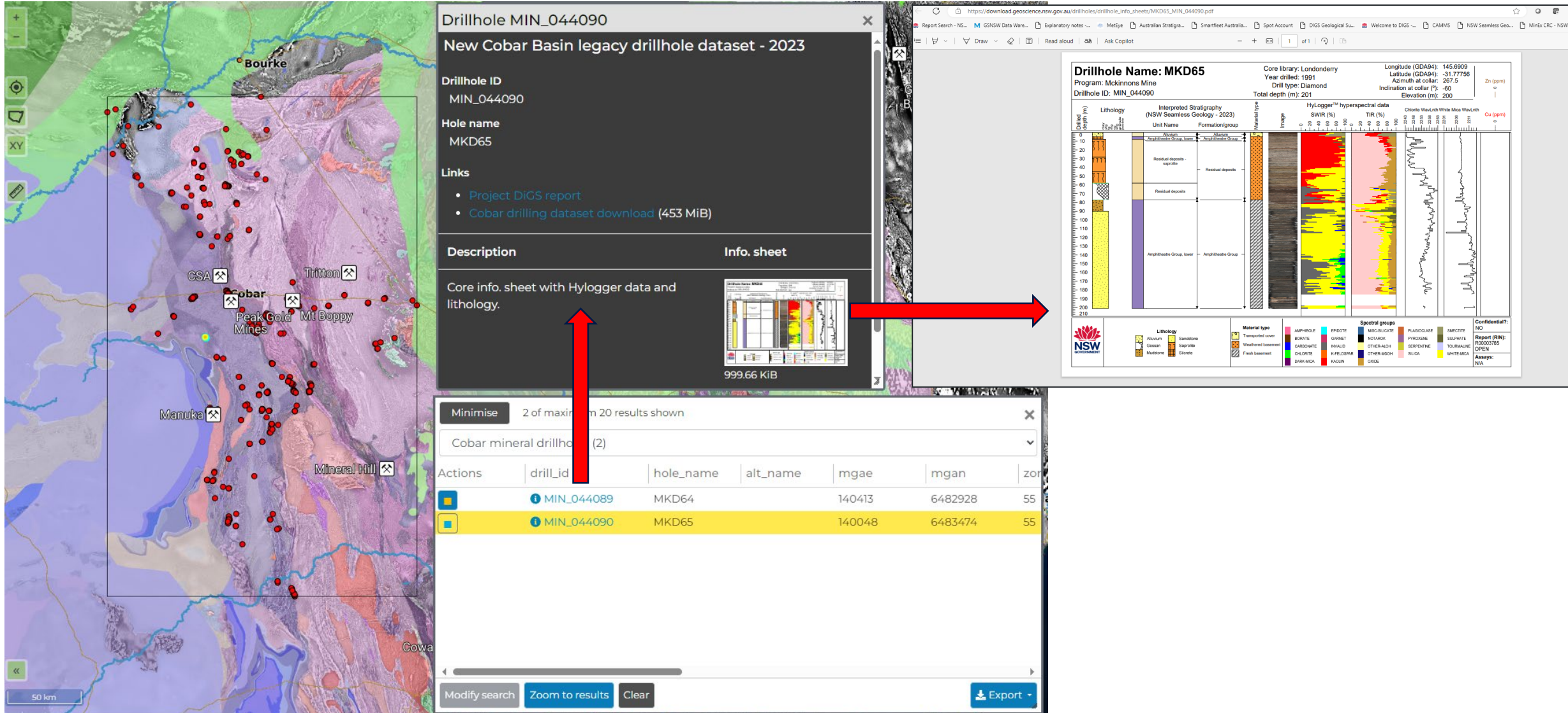
# How to find and access the data and products



The screenshot displays the MinView web application interface. On the left, the 'Map layers' panel is visible, with 'Cobar mineral drillholes' selected and highlighted by a red box. The main map area shows a geological map of the Cobar region with numerous red dots representing drillholes. A red box highlights the 'Tools' menu in the top right, which includes 'Data download', 'Print', and 'My views'. A red arrow points from the 'Data download' option to a dialog box titled 'Download data in GIS & CSV formats'. This dialog box contains a form for entering an email address, a 'Send download link to:' field, and radio buttons for 'Use current view' (selected) and 'All of NSW'. A list of datasets is shown, with 'Cobar Drillholes' selected and highlighted in yellow. The 'File format' dropdown is set to 'CSV (spreadsheet)'. A 'Download' button is at the bottom of the dialog.



# How to find and access the data and products



The image shows a workflow for finding and accessing drillhole data. It starts with a map of the Cobar Basin showing numerous drillhole locations. A search for 'Cobar mineral drillhole' yields two results: MIN\_044089 (MKD64) and MIN\_044090 (MKD65). The details for MKD65 are shown in a panel, including its ID, name, and links to reports and datasets. A red arrow points from the search results table to the details panel, and another red arrow points from the details panel to a full drillhole report for MKD65. The report includes core library information, coordinates, and a detailed lithology and hyperspectral data log.

**Drillhole MIN\_044090**  
**New Cobar Basin legacy drillhole dataset - 2023**

**Drillhole ID**  
MIN\_044090

**Hole name**  
MKD65

**Links**

- Project DIGS report
- Cobar drilling dataset download (453 MiB)

**Description** **Info. sheet**

Core info. sheet with Hylogger data and lithology.

999.66 KIB

**Drillhole Name: MKD65**  
 Core library: Londonderry  
 Program: Mckinnons Mine  
 Drillhole ID: MIN\_044090  
 Longitude (GDA84): 145.6909  
 Latitude (GDA84): -31.7756  
 Azimuth at collar: 267.5  
 Inclination at collar (°): -60  
 Elevation (m): 200  
 Total depth (m): 201

**Lithology**  
 Interpreted Stratigraphy (NSW Seamless Geology - 2023)  
 Unit Name: Residual deposits - saprolite, Residual deposits, Amphibolite Group, lower  
 Formation/group: Amphibolite Group

**HyLogger™ hyperspectral data**  
 SWIR (%)  
 TIR (%)  
 Cu (ppm)  
 Zn (ppm)

**Lithology**  
 Alluvium, Gossan, Muscovite, Sandstone, Saprolite, Shale

**Material type**  
 Transported cover, Weathered basement, Fresh basement


**Spectral groups**  
 AMPHIBOLE, EPIDOTE, GARNET, KALIN, BORATE, INVALD, OTHER ALOH, OTHER MSHOH, CARBONATE, CHLORITE, DARK MICA, MISC-SILICATE, NOTAROK, OTHER ALOH, SERPENTINE, SLUGA, PLAGIOCLASE, PYROXENE, SMCITTE, TOURMALINE, SULPHATE, WHITE MICA

**Confidential?:** NO  
**Report (RIN):** PROSODITE, OPEN  
**Assays:** N/A

Actions	drill_id	hole_name	alt_name	mgae	mgan	zoi
	MIN_044089	MKD64		140413	6482928	55
	MIN_044090	MKD65		140048	6483474	55

# How to find and access the data and products






**New Cobar Basin legacy drillhole dataset - 2023**

R00035414 (GS2024/0023)

Cobar Basin

Chris Folkes

2024



[Collapse All](#)
[Deselect All](#)
[Download](#)

## New Cobar Basin legacy drillhole dataset - 2023

TENEMENT NAME / NUMBER
NA
LOCATIONS
Cobar Basin
MAP SHEETS
Louth #250=SH5509 Bourke #250=SH5510 Cobar #250=SH5514 Nymagee #250=SI5502 Cargelligo #250=SI5506
ABSTRACT
<p>This report outlines a new dataset for legacy drillholes in the Cobar Basin region of New South Wales (NSW). This release updates and expands on an earlier dataset compiled in 2020 and includes the following information for 539 open file drillholes (compiled up to the 1st of August 2023): - Collar information ' spatial details and various drillhole information - Downhole lithology and stratigraphy data ' the original lithology logs (depth intervals), lithology terms converted to the GSNSW lithology schema, depth to the base of transported cover and weathered basement, and interpreted stratigraphic intervals (based on the NSW Seamless Geology dataset) - Downhole survey data ' where available, full downhole azimuth and inclination (dip) data - Downhole hyperspectral data (available for 177 drillholes):-- SWIR ' short-wave Infrared spectra -- TIR ' thermal infrared spectra -- VNIR ' visible-to-near infrared spectra The new Cobar drillhole dataset has been used as input data to view various downhole information for the Cobar region. The StraterTM software program was used to create a standardised template that presents these multiple downhole datasets on one page. The combined information page for each drillhole can be exported/printed to produce a reference atlas for a suite of drillholes over an area of interest. Additionally, the Cobar drillhole dataset has been loaded into 3D projects in the GOCAD' Mining Suite and Geoscience ANALYST software packages. The drillhole datasets, reference atlas and 3D project files are available for download via MinView and DIGS (Digital Imaging Geological System).</p>

Preview	Document Name	Size	Type	Pages	OCR	Select
	New Cobar drillholes dataset report (D006218365)	4.0 MB	PDF	23	OCR	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	699.9 KB	H5	1	N/A	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	2.7 MB	DB	1	N/A	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	275.0 B	TXT	1	OCR	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	697.5 KB	H5	1	N/A	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	408.0 KB	DB	1	N/A	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	1.1 MB	H5	1	N/A	<input checked="" type="checkbox"/>
	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	124.0 B	PROJECT	1	OCR	<input checked="" type="checkbox"/>
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	Cobar_Drillholes_GOCAD_GDA94_55 (D006218367)	9.1 MB	DATA	1	N/A	<input checked="" type="checkbox"/>
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	Cobar dhTIR 2023 (D110044214)	5.1 MB	TXT	1	OCR	<input checked="" type="checkbox"/>
	Cobar dhVNIR 2023 (D110044215)	3.5 MB	TXT	1	OCR	<input checked="" type="checkbox"/>
	Cobar Drillholes Geoscience ANALYST GDA94 55 August 2023 (D110044216)	3.8 MB	GEOH5	1	OCR	<input checked="" type="checkbox"/>
	Drillhole Atlas -HyLogged drillholes_combined (D110044217)	23.9 MB	PDF	201	N/A	<input checked="" type="checkbox"/>
	Drillhole Atlas -Non-HyLogged drillholes -combined	23.4 MB	PDF	366	N/A	<input checked="" type="checkbox"/>