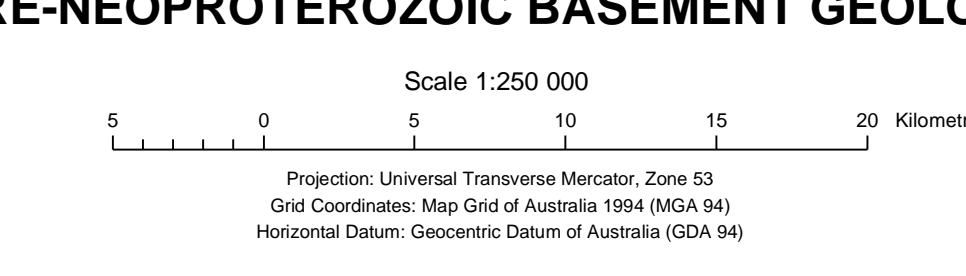
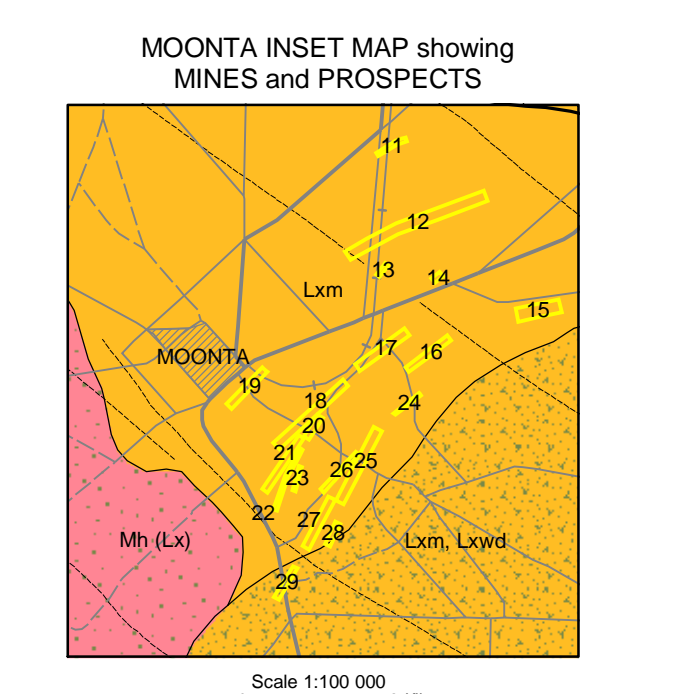
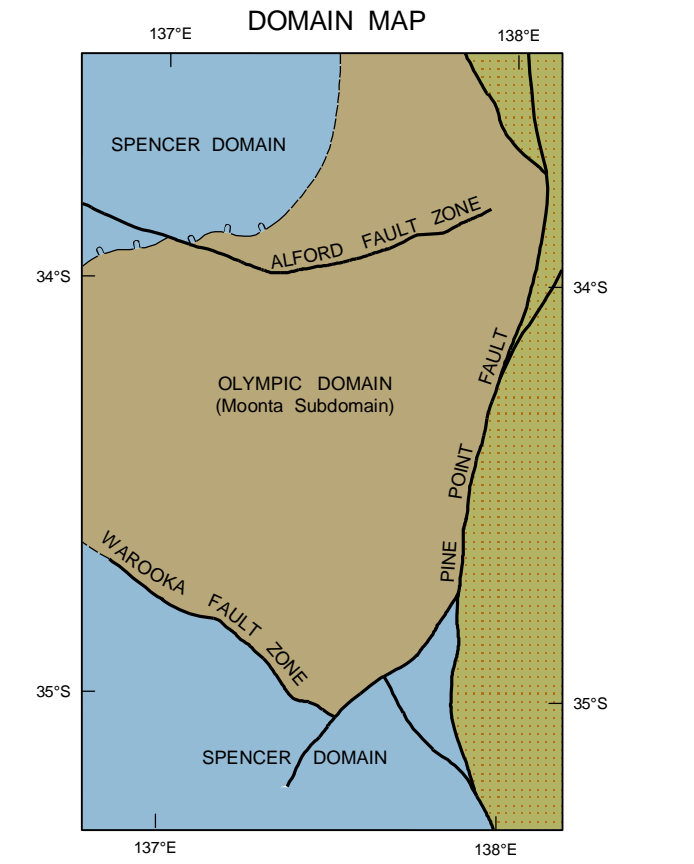


YORKE PENINSULA (MOONTA SUBDOMAIN) PRE-NEOPROTEROZOIC BASEMENT GEOLOGY

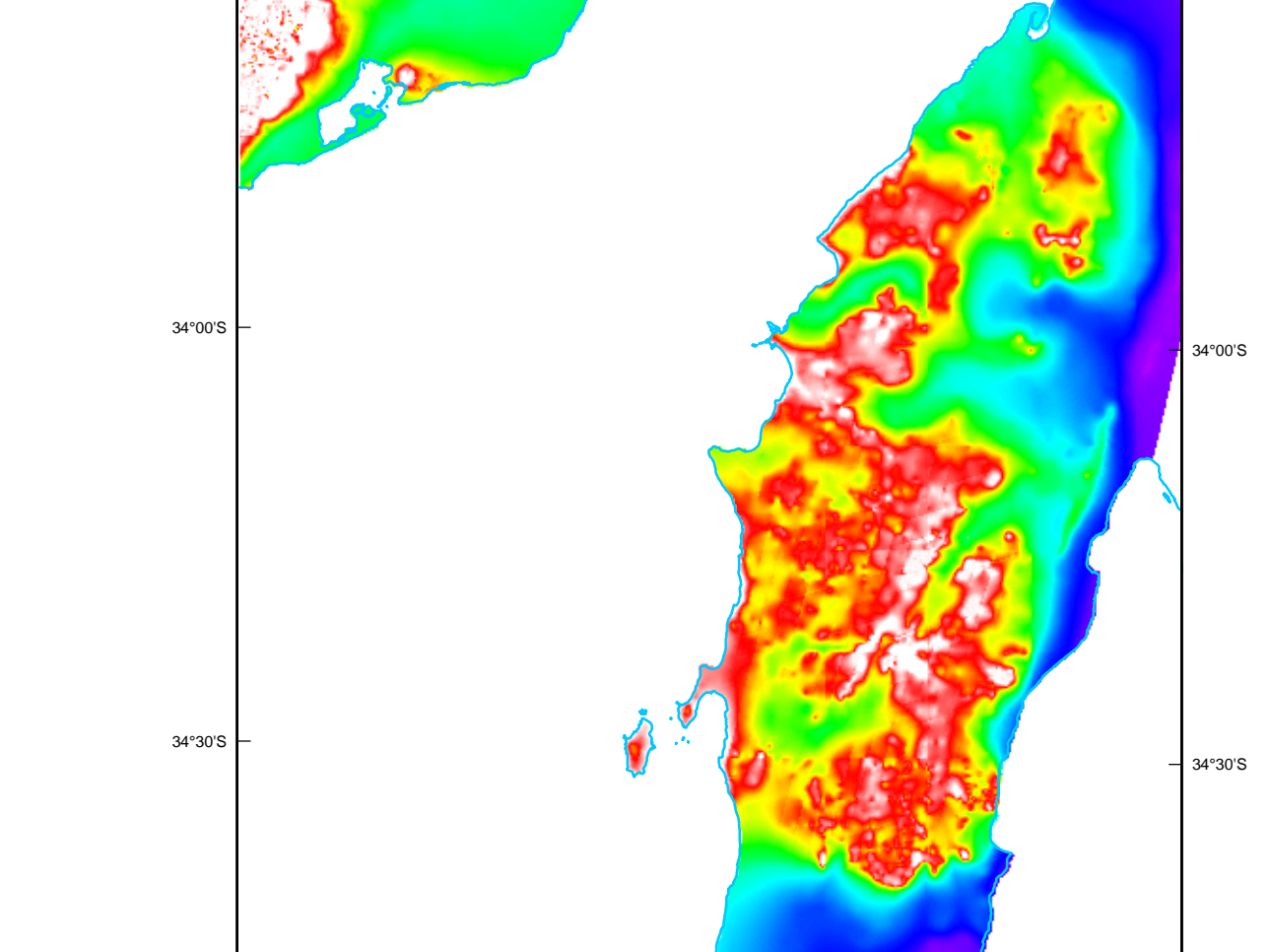
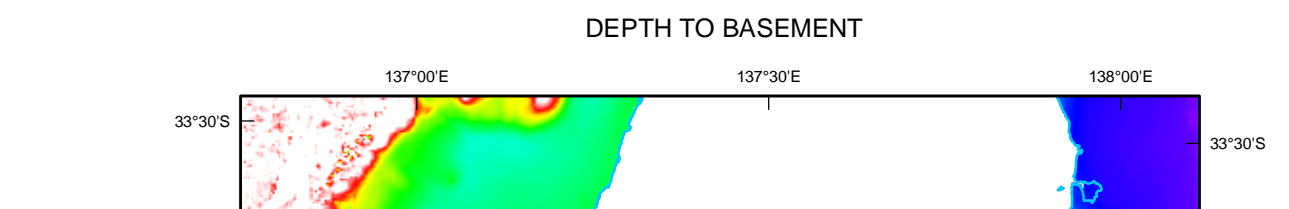


- Ms** Spilsby Suite: Generally weakly magnetic granite
- Olympic Domain**
 - Ol**: Late orogenic zone; very weakly magnetic, magnetite-destructive alteration
 - Ol-m**: Alkal feldspar + magnetite + biotite + actinolite mesosomitic alteration bodies
 - Ol-rc**: Carbonate-rich mesosomitic and breccia zones; very weakly magnetic
- Hiltaba Suite**
 - Mh1**: Moderately to strongly magnetic granitoids
 - Mh1, Lxw**: Predominantly strongly magnetic granites
 - Mh2**: Widespread formation intruded by Tickera Granite at shallow depth; strong magnetic signature of granite evident through mesosomitic cover
 - Mh3**: Moderately to weakly magnetic granitoids
 - Mh (Lx)**: Weakly magnetic to non-magnetic granitoids
 - Mh (Lx)**: Strongly magnetic granitoids (including Curramulka Gabbro); with some Wallaroo Group metasediments and metacarbonate
 - Mh (Lx)**: Predominantly moderately to strongly magnetic granitoids, with some Wallaroo Group metasediments and metacarbonate
- Wallaroo Group**
 - Lw**: Wanderaah Formation: Predominantly weakly magnetic, albite, quartzite and calcalkaline metasediments with minor non-magnetic horizons; minor intercalated metacarbonate, possible minor Hiltaba Suite granitoid intrusions
 - LwM**: Aagot Member: Predominantly very weakly magnetic metasediments, minor sporadic calcalkaline
 - LwD**: Doors Member: Variably weak to moderately magnetic metasediments and intercalated metacarbonate; some rare, minor, strongly magnetic anomalies probably representing magnetite-bearing metasediments along shear zones
 - Lw (Lx)**: Weakly magnetic metasediments, often calcareous; carbonate-rich breccia and stam; some discontinuous strongly magnetic anomalies, probably mesosomitic
 - Lw (Lx)**: Predominantly weakly magnetic metasediments with scattered small, strong magnetic anomalies, probably mesosomitic bodies
 - Lw (Lx)**: Moderately to weakly magnetic; felsic and minor mafic metacarbonate with intercalated metasediments
 - Lw (Lx)**: Moderately to weakly magnetic; felsic and minor mafic metacarbonate and intercalated metasediments
 - Lx**: Moonta Porphyry: Undifferentiated metacarbonate and metasediments, variably weakly to moderately magnetic, with minor Hiltaba Suite granitoid intrusions
 - Lx (Mh)**: Undifferentiated Wallaroo Group and Hiltaba Suite granitoids, containing strong magnetic anomalies, probably mesosomitic bodies
 - Lx, Mh, Mm**: Broad areas of moderately to very strongly magnetic Wallaroo Group probably reflecting widespread magnetite + biotite + albite alteration and some intrusion by Hiltaba Suite granitoids
 - Lx (M)**: Undifferentiated Olympic Domain Basement: Wallaroo Group intruded by predominantly magnetic Hiltaba Suite granitoids; typically buried by thick Neoproterozoic and/or Cambrian sedimentary cover
- Spencer Domain**
 - Ls**: Hutchinson Group and Minnie Gneiss: Predominantly weakly magnetic gneissic metasediments with some narrow strongly magnetic horizons
- Lincoln Complex (predominantly Donington Suite)**
 - Ll**: Weakly magnetic gneisses (including Dorry Point Paragneiss), with weakly to moderately magnetic Donington Suite granitoids and gneissic gneisses
 - Llg**: Moderately to strongly magnetic gneiss (predominantly Donington Suite granitoid gneisses) with abundant minor magnetic anomalies reflecting shearing and foliation
 - Llf**: Moderately to strongly magnetic granitoid and gneissic gneiss
 - Llz**: Weakly magnetic granitoid and gneissic gneiss

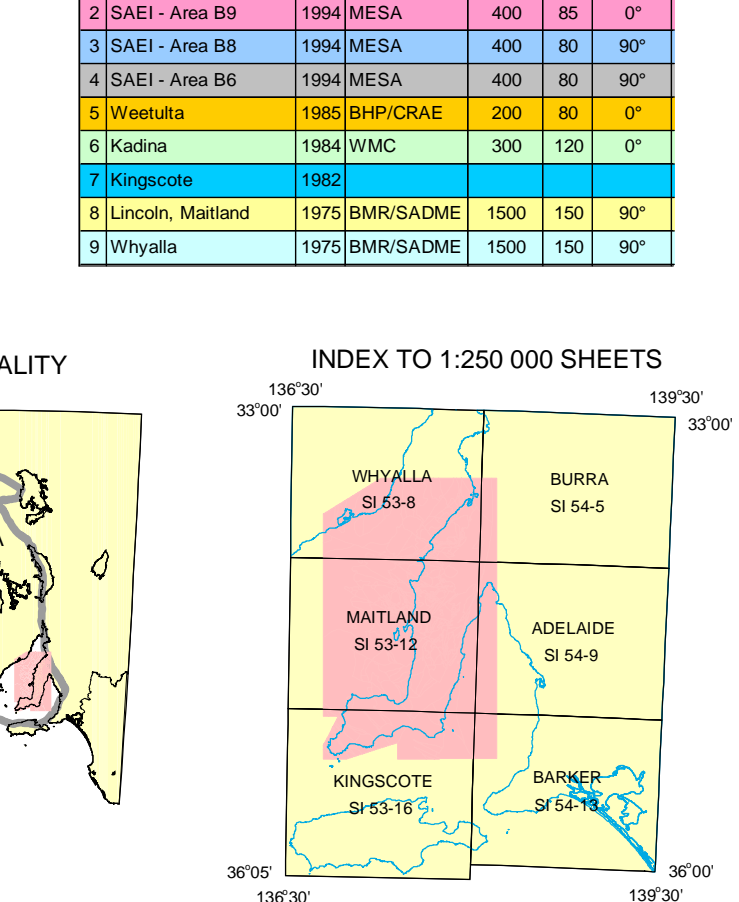


Mines and lodges (abandoned)	Commodities	Mineral Field
1	Wollan iron mine	Cu, Au, Wollan
2	Stirling, Mulla lodges	Cu, Au, Wollan
3	Dunbar lodge	Cu, Au, Wollan
4	Kurtulla mine (Moppana, Hiltaba lodges)	Cu, Au, Wollan
5	Dunbar lodge	Cu, Au, Wollan
6	Stirling lodge	Cu, Au, Wollan
7	Donington lodge	Cu, Au, Wollan
8	Donington, New Cornwall lodges	Cu, Au, Wollan
9	Unnamed	Cu, Au, Wollan
10	Donna lodge	Cu, Au, Wollan
11	Pinnac lodge	Cu, Au, Wollan
12	Pinnac lodge	Cu, Au, Wollan
13	Whelan Hughes	Cu, Au, Wollan
14	Moonta Moonta lodge	Cu, Au, Wollan
15	North Yella, Eulo lodges	Cu, Au, Wollan
16	Yellaroo (Tully) lodge	Cu, Au, Wollan
17	Yella lodge	Cu, Au, Wollan
18	Macdonnell, Ferguson, Dominic, Hilda and Butcher lodges	Cu, Au, Wollan
19	Hill, Albin, and Hancock lodges	Cu, Au, Wollan
20	Haven, Young lodges	Cu, Au, Wollan
21	Green lodge	Cu, Au, Wollan
22	Redstone lodge	Cu, Au, Wollan
23	Maugrove lodge	Cu, Au, Wollan
24	Moonta Extended, Wild Dog lodges	Cu, Au, Wollan
25	Lincoln (Tully) lodge	Cu, Au, Wollan
26	Elder West, Bennett lodges	Cu, Au, Wollan
27	Kalkbrenner, Flower lodges	Cu, Au, Wollan
28	York lodge	Cu, Au, Wollan
29	Unnamed	Cu, Au, Wollan
30	Pinnac	Pb, Cu, U, Wollan
31	Pinnac	Cu, Au, U, Wollan
32	Hiltaba	Cu, Au, U, Wollan

- Geological boundary, probable**: Solid line
- Geological boundary, inferred**: Dashed line
- Major fault, inferred**: Dashed line with ticks
- Major fault, probable**: Dashed line with ticks and dots
- Minor fault, probable**: Dashed line with ticks and dots
- Fluorescent**: Dotted line
- Anticline**: Solid line with 'A'
- Syncline**: Solid line with 'S'
- Trend line, highly magnetic, concealed**: Dashed line with 'M'
- Trend line, linear feature of unknown origin**: Dashed line
- Biding trend, concealed**: Dashed line with 'B'
- Compositional layering, inferred**: Dashed line with 'C'
- Depth to basement contours (m)**: Solid line with 'D'
- Abandoned mine or prospect (see table)**: Yellow square
- Coastline**: Solid line with 'Co'
- Highway, built-up area**: Solid line with 'H'
- Secondary road, town**: Solid line with 'R'
- Minor reef**: Solid line with 'Rf'



ID	Survey	Year	From to	Line No.	ACC	Scale
1	MESA - Area A2	1984	MESA	400	80	87
2	SAE - Area B5	1984	MESA	400	80	87
3	SAE - Area B6	1984	MESA	400	80	87
4	SAE - Area B7	1984	MESA	400	80	87
5	SAE - Area B8	1984	MESA	400	80	87
6	SAE - Area B9	1984	MESA	400	80	87
7	SAE - Area B10	1984	MESA	400	80	87
8	Lincoln, Moonta	1975	MESA/CAME	1000	150	87
9	Whelan	1975	MESA/CAME	1000	150	87



CREDITS
Compiled by G. Raymond, Geoscience Australia, 2001-02
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Gravity data compiled and gridded by N. G. Dreen, Geoscience Australia
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BIBLIOGRAPHY
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http://www.ga.gov.au

EXPLANATORY COMMENTS
The geology dataset was compiled primarily from interpretation of airborne magnetic data and drill hole logging, along with gravity and minor AEM data. The magnetic data used for this interpretation was compiled by G. Raymond and private company surveys. The TESA magnetic dataset (from 1989, 400 metre spacing) from the Geoscience Australia database and more detailed private company surveys. The TESA magnetic dataset (from 1989, 400 metre spacing) from the Geoscience Australia database and more detailed private company surveys. The TESA magnetic dataset (from 1989, 400 metre spacing) from the Geoscience Australia database and more detailed private company surveys. The TESA magnetic dataset (from 1989, 400 metre spacing) from the Geoscience Australia database and more detailed private company surveys.

EXPLANATORY COMMENTS
The model of depth-to-basement was calculated using the ANUDEM algorithm and was based primarily on drill hole data and the magnetic intensity of basement material. Depth-to-basement in the area of the Stansbury Basin (SE of the survey area) was based on previous modelling by GSA. Contouring (available from IRIS), Depth-to-basement data was gridded at 100m intervals and used to calculate a depth-to-basement map. The spatial extent of the map is 100m intervals and used to calculate a depth-to-basement map. The spatial extent of the map is 100m intervals and used to calculate a depth-to-basement map.

EXPLANATORY COMMENTS
The vector data was digitized and compiled using ArcView 8.0.2. The map was constructed using ArcGIS 8.2.

DIGITAL DATA
The digital data are also presented as an online GIS at <http://www.ga.gov.au> and certain datasets are available for download in ArcView and MapInfo formats. Complete metadata is also available, refer to Geocod 3.0605.

GEOPHYSICAL DATA
Geophysical data are obtained from:
Office of Minerals and Energy Resources, SA
79, Sturt St, Adelaide, SA 5001
Ph: 08 8463 4154, Fax: 08 8463 4155
<http://www.minerals.gov.au>

WARNING: Colours will fade with prolonged exposure to light

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