

Appendix J - Validation Tests

1.	ABOUT VALIDATION AND TESTING	3
2.	VALIDATION TESTS	4
2.1	GEODATA and Working Database (1:250 000 & 1:100 000 scale)	4
2.1.1	Attribute Accuracy	4
2.1.2	Logical Consistency	6
2.1.3	Completeness	10
2.2	NATMAP	10
2.2.1	Reproduction Material	10
2.2.2	Marginalia	11
2.2.3	Internal Type Selection and Placement	12
2.2.4	Black Detail Internal	14
2.2.5	General Cultural Detail	16
2.2.6	Red Detail Internal	17
2.2.7	Blue Detail Internal	18
2.2.8	Brown Detail Internal	19
2.2.9	Green Detail Internal	20
2.2.10	Composite Screens / Patterns	20
3.	FORMS FOR VAT SUBMISSION	21
4.	VAT TEST TO REPORT NUMBER CROSS-REFERENCE	30
5.	VAT REPORT TO TEST NUMBER CROSS-REFERENCE	32

1. About Validation and Testing

The Validation and Testing cell (VAT) tests the GEODATA, Working Database and NATMAP for compliance to the Technical Specifications. The standard tests are outlined in this Appendix. Other tests may be carried out to ensure compliance to the Specification from time to time.

Testing is carried out using a mixture of UNIX scripts, ARC/INFO AMLs and on-screen checks. Many of the tests are automated, using customised ARC/INFO AMLs. These are supported by on screen graphical checks and visual inspection of the map.

Where feature populations are small or the tests are particularly important, the full population will be tested. Where feature populations are large, or a less stringent tolerance applies, a sample area or statistical subset may be tested. Statistical subsets are a random selection of features from the whole population, while a sample area tests all the relevant features within a selected geographical area.

Statistically acceptable procedures are adopted for tests that require sampling. The sampling procedures adopted are based on the Australian Standard AS1199-1988: Sampling procedures and tables for inspection by attribute.

The Acceptable Quality Level (AQL) is in the range of 0% to 5%. Generally, the AQL is applied to each relevant coverage in the database.

The following tables give the appropriate sample size for particular population sizes, and acceptance and rejection numbers for particular sample sizes and Acceptable Quality Levels (AQL's).

	AQL	0.50%	1%	2%	5%	10%
Population size	Sample Size	Ac, Re	Ac, Re	Ac, Re	Ac, Re	Ac, Re
2 to 8	2				0,1	
9 to 15	3			↓	↑	↓
16 to 25	5			0,1	↓	1,2
26 to 50	8		↓	↑	2,3	3,4
51 to 90	13	↓	0,1	↓	2,3	3,4
91 to 150	20	0,1	↑	1,2	3,4	5,6
151 to 280	32	↑	↓	2,3	4,5	7,8
281 to 500	50	↓	1,2	3,4	5,6	10,11
501 to 1200	80	1,2	2,3	4,5	8,9	14,15
1201 to 3200	125	2,3	3,4	6,7	12,13	21,22
3201 to 10000	200	3,4	5,6	8,9	17,18	↑
10001 to 35000	315	4,5	7,8	12,13	21,22	
35001 to 150000	500	6,7	10,11	17,18	↑	
150001 to 500000	800	8,9	14,15	21,22		
500001 and over	1200	12,13	21,22	↑		

- ↓ Use the first sampling plan below the arrow. If the sample size equals, or exceeds the population size, carry out 100% inspection.
- ↑ Use the first sampling plan above the arrow.
- Ac Accept Number
- Re Reject Number

For some tests, no errors are allowed and the entire population is tested. For other tests, samples are tested to ensure that an error rate of between 0.5% and 5% is possible in the data.

Where records indicate that a particular test is passed every time for Work Units from a contractor, those tests will be classified into a 'spot' class. Spot tests are carried out on a random sample of work units. This procedure continues until the data begins to fail the test. When this happens the test will again be carried out on all Work Units until it can again be classified in the spot class. Where tests are automated or are critical, they are performed for each Work Unit, regardless of the past record.

This testing methodology ensures a 99% confidence that the error rate is less than the AQL.

Where errors are detected but the number of errors detected is less than the rejection number, the test is passed but noted in the 'other test errors' section of the VAT report. If the tile fails another test the tile should be examined for errors of this type and the errors must be fixed before the tile is submitted again. If the tile passes these errors are recorded and corrected when future revision takes place.

2. Validation tests

The following tables describe the tests carried out in VAT, the sample size and the AQL. Tests are numbered with gaps left in case additional tests need to be added later. The table at Appendix J chapter 4. VAT TEST TO REPORT NUMBER CROSS-REFERENCE cross-references the test numbers to the numbers found in VAT reports. The table at Appendix J chapter 5. VAT REPORT TO TEST NUMBER CROSS-REFERENCE cross references from the report numbers back to the test numbers.

2.1 GEODATA and Working Database (1:1250 000 & 1:100 000 scale)

2.1.1 Attribute Accuracy

Attribute accuracy is a measure of the degree to which the features and their attributes agree with the information on the source material. For this product, attribute accuracy is a measure of the degree to which the attribute values of a feature agree with the information on the source material.

TEST NO	ATTRIBUTES TESTED	TEST SAMPLE SIZE	AQL
1	Unique feature identifiers (UFIs) are valid and within the allocated range (1:250 000 only – UFIs are not assigned at 1:100 000 scale)	Full population	No errors
2	All features have a valid data quality pointer	Full population	2%

TEST NO	ATTRIBUTES TESTED	TEST SAMPLE SIZE	AQL
3	Attribute values other than for UFI and Data Quality Pointer are within the valid ranges as specified in the Data Dictionary	Full population	2%
4	Features have the correct feature code	Statistical subset	1%
5	The 'state' attribute of mainland and islands is correct	Full population	No errors
6	The sea has the correct name	Full population	No errors
7	Islands have the correct name	Statistical subset	5%
8	The entire neatline of the tile is coded as tile edge	Full population	1%
9	Watercourses have the correct name	Statistical subset	5%
10	Roads have the correct name	Statistical subset	5%
11	The perenniality of lakes is correct	Statistical subset	5%
12	The perenniality of watercourses is correct	Statistical subset	5%
13	Aircraft facility type is correct	Full population	5%
14	Aircraft facility name is correct	Full population	5%
15	Railway track status is correct	Statistical subset	5%
16	Railway track number is correct	Statistical subset	5%
17	Railway track gauge is correct	Statistical subset	5%
18	Railway names are correct	Statistical subset	5%
19	Road classification is correct	Statistical subset	5%
20	Road formation is correct	Statistical subset	5%
21	National route numbers on roads are correct and complete	Statistical subset	5%
22	State route numbers on roads are correct and complete	Statistical subset	5%
23	Localities have the correct name	Statistical subset	2%
24	Names of watercourses are carried the entire length where intended	Statistical subset	2%
25	Names of roads are carried the entire length where intended	Statistical subset	2%

TEST NO	ATTRIBUTES TESTED	TEST SAMPLE SIZE	AQL
26	National route numbers of roads are carried the entire length where intended	Statistical subset	2%
27	State route numbers of roads are carried the entire length where intended	Statistical subset	2%
28	Status of railways is carried the entire length of the feature where intended	Full population	2%
29	Name of Railways are carried for the entire length of the feature where intended.	Full population	2%
30	Gauge of railways is carried the entire length of the feature where intended	Full population	2%
31	Product of pipelines is carried the entire length of the feature where intended	Full population	2%
32	Relationship of pipelines is carried the entire length of the feature where intended	Full population	2%
33	All channels in a braided stream with primary banks carry the name of the watercourse	Statistical subset	5%
34	Built-up area names are correct	Statistical subset	5%
35	Reserve or prohibited areas are correct	Statistical subset	5%
36	Hierarchy of watercourses are correct	Statistical subset	5%
37	Waterbody names are correct	Statistical subset	5%

2.1.2 Logical Consistency

Logical consistency is a measure of the degree to which the data are internally consistent and comply with the technical specification in the way they are structured.

TEST NO	LOGICAL CONSISTENCY CHECK	TEST SAMPLE SIZE	AQL
40	Names of export files and data quality table are correct	Full population	No errors
41	Table names are valid	Full population	No errors
42	Item names in coverages are valid	Full population	No errors
43	Item names are present in coverage attribute files	Full population	No errors
44	Linear features have more than one coordinate pair	Full population	No errors
45	Label points and entity point features have only one coordinate pair	Full population	No errors

TEST NO	LOGICAL CONSISTENCY CHECK	TEST SAMPLE SIZE	AQL
47	Line segments are greater than 0.00022 degrees in length (250K) / 0.00010 degrees (100K)	Full population	5%
48	Line segments are less than 0.25368 degrees in length (250K) / 0.147 degrees (100K)	Full population	0.5%
49	The tile edge is correctly densified.	Full population	1%
50	The ArcInfo coverages can be generated, have attributes attached and be 'built'	Full population	No errors
51	There are no coincident line segments within a single coverage or intersecting arcs without a node or double digitised points	Full population	0.5%
52	In polygon coverages there are no label errors ie. every polygon has one and only one polygon label point	Full population	No errors
53	There are no pseudo nodes present, ie. nodes separating arcs with the same attributes excepting the cases outlined in Section 1 chapter 3.1	Full population	2%
54	There are no overshoots, ie. arc overhangs at intersections	Statistical subset	1%
55	There are no undershoots, ie. arcs failing to meet at intersections	Statistical subset	0.5%
56	There are no new polygons smaller than the minimum specified area	Full population	5%
57	In line coverages there are no small polygons	Statistical subset	5%
58	There are no new linear features shorter than the minimum length	Full population	5%
59	No arcs separate polygons with identical attributes, except for the UFI, ie. abutting polygons do not have the same attributes	Full population	1%
60	There are no artefacts such as spikes or deviations visible at 1:125 000 (250K)/1:50 000 (100K)	Statistical subset	5%
61	Homesteads are cloned to buildings coverage	Full population	5%
62	Separate covers have exactly coincident lines where intended.	Statistical subset	5%
63	The separation of the digital data linework from the source material due to filtering is not greater than 50 metres (250K) / 20 metres (100K)	Statistical subset	5%

TEST NO	LOGICAL CONSISTENCY CHECK	TEST SAMPLE SIZE	AQL
64	Road point bridges and tunnels, grids and gates are coincident with nodes in the road network	Full population	1%
65	Rail point bridges and tunnels and rail stations are coincident with nodes in the rail network	Full population	1%
66	On stream waterholes, waterfalls and locks are coincident with nodes in the stream network	Full population	1%
67	Well-defined point features are located within 100 metres (250K) / 40 metres (100K) of their position on the source material.	Full population	1%
68	There are no spot elevations or survey marks in the sea	Full population	1%
69	There are no spot elevations or survey marks in waterbodies	Full population	1%
70	Features coded as tile edge appear only on the tile edges.	Full population	1%
71	Features labelled as junction features occur only between waterbodies, waterbodies and the sea, double-sided streams and waterbodies or another double-sided stream.	Statistical subset	1%
72	Connector features occur only within a mainland waterbody	Full population	1%
73	Features labelled as island or reef are completely surrounded by sea	Full population	1%
74	Datum shifting has occurred and is correct within 3 metres	Full population	No errors
75	Tile quality and frequency tables are valid	Full population	No errors
76	Features labelled as waterbodies ie. lake, swamp etc., except sea, occur only within the mainland	Full population	1%
77	Features labelled as ferry routes occur only within waterbodies or the sea	Full population	0.5%
78	Mangroves are a clone of Mangrove Flat	Full population	1%
79	Spot heights and Horizontal control points agree with the contours	Full population	1%
80	Spot heights labelled as 'depression' and 'sand ridge' spot heights are valid ie. occur in a depression or on a sand ridge	Full population	5%
81	Features labelled as wrecks, offshore rock or	Full population	1%

TEST NO	LOGICAL CONSISTENCY CHECK	TEST SAMPLE SIZE	AQL
	localities (marine) do not fall on land		
82	Sand ridges, roads and railways do not fall within waterbodies	Full population	1%
83	Buildings, localities, caves or pinnacles do not fall within the sea	Full population	1%
84	Buildings and localities do not fall within waterbodies	Full population	1%
85	Polygons in the vegetation coverage do not exist incorrectly within other polygon features.	Full population	1%
86	In the data quality table the data quality pointer values are unique	Full population	No errors
87	All linear features that should meet the tile edge do	Full population	1%
88	There are nodes on polygon features where they cross the tile edge	Full population	1%
89	Linear features that cross the tile edge have the same attributes on both map sheets, where appropriate, excluding the UFI and data quality pointer	Statistical subset	5%
90	Polygon features that cross the tile edge have the same attributes on both map sheets, where appropriate, excluding the UFI and data quality pointer	Full population	1%
91	Features that cross the tile edge, join their corresponding feature correctly, ie. at the same point on the tile edge	Full population	1%
92	Data format, projection and data type are correct	Full population	No errors
93	GEODATA and Working Database resolution is correct	Full population	No errors
94	Features are matched between GEODATA and Working Database coverages	Full population	No errors
95	Tile extents for GEODATA and Working Database are correct	Full population	No errors
96	Road junctions, passes or populated places are coincident with roads where specified	Full population	5%
97	Coastline is cloned as zero height contour	Full population	1%
98	State border is consistent with the border information in COAST-100K data where	Full population	No errors

TEST NO	LOGICAL CONSISTENCY CHECK	TEST SAMPLE SIZE	AQL
	specified.		
99	Features are consistent with Appendix C Fences and Water Facilities Guide	Full population	1%
100	Ferry routes are connected to road or rail network	Full population	5%

2.1.3 Completeness

Completeness is the measure of the degree to which all features listed in the technical specifications have been captured, in accordance with the selection criteria, definitions and other rules specified.

	COMPLETENESS CHECK	TEST SAMPLE SIZE	AQL
106	All features on the source materials have been captured where they meet selection criteria	Statistical subset	2%
107	Revision has been applied correctly	Sample area	2%
108	Data falls within the tile edge.	Full population	1%
109	Spatial position or attributes of features in overlap areas are identical to adjoining tiles where specified	Full population	5%

2.2 NATMAP

2.2.1 Reproduction Material

Reproduction Material is the plate making film negatives that will be used to print the map. All tests on the reproduction material are mandatory.

Test No	CHECK	AQL
120	Chemical proof is produced from film negatives supplied	No errors
121	Proof registration is correct and registration control marks exist	No errors
122	Colour control exists and is correct	No errors
123	Masking of features on film negatives is correct	1%
124	Film negatives are correctly labelled	No errors

2.2.2 Marginalia

The marginalia is all the information contained in the map surrounds, the area of the map to the left and below the neatline. All tests on the marginalia are mandatory and errors are not acceptable.

TEST NO	DIAGRAMS/ NOTES etc.	CHECK	AQL
130	Printing Date	Commonwealth of Australia Copyright date appears	No errors
131	Map Reliability	Date of information appears	No errors
132	Commonwealth Coat of Arms	Appears and is in the correct position. Correct Coat of Arms used and the colour is correct	No errors
133	Bar Code	Is unique to Map and able to be read by scanner	No errors
134	Map Scale	Appears and is correct	No errors
135	GEOCAT Number	Appears and is in the correct position. The GEOCAT (project) number is correct as per the Project File.	No errors
136	Map Name	Spelling is correct Appears twice, panel 1 and bottom right hand corner	No errors
137	Map Number	Number relates to sheet name Appears twice, panel 1 and bottom right hand corner	No errors
138	Map Edition	Edition number is correct, Appears twice, panel 1 and bottom right hand corner	No errors
139	State Names	State names are correct Appears twice, panel 1 and bottom right hand corner	No errors
140	Map of Australia Location Box	Location box is placed into correct position & correct colour used.	No errors
141	Index to Adjoining Maps box	250k map names and numbers appear and are correct 100K map names and numbers appear and are correct Extended sheet lines have been adjusted in diagram Text is not cluttered.	No errors
142	Text Panels	No textual or typographical errors in marginalia	No errors
143	Datum Information	Horizontal accuracy figures are correct Vertical accuracy figures are correct Contour interval in metres is correct	No errors
144	North Point Diagram	True north is vertical Diagram reflects assigned values Assigned values are correct	No errors
145	Grid Reference Point	The grid reference point agrees with the sample given Spelling of the sheet name and reference point is correct	No errors

TEST NO	DIAGRAMS/ NOTES etc.	CHECK	AQL
146	100 000 square metre identification panel	Letters are as per information supplied Location of Grid Reference letters (not on neatline)	No errors
147	Climate Graph	Is present and Correct for stated locality/s	No errors
148	Legend	Symbology is the same as appears on the map	No errors
149	Geographical Values	Values are correct for this map Interval is correct (10')	No errors
150	Grid Values	Offset from geographical values where necessary	No errors
151	Road Destinations Arrows and Text	The angle to and spelling of destinations are correct Do not clash with grid values Road Destination Arrows & Distances appear only on the west and south edges (250K only)	No errors
152	Scale Bar	Represented in kilometres only	No errors

2.2.3 Internal Type Selection and Placement

TEST NO	CHECK	TEST TYPE	AQL
	Cultural		
160	Feature names are positioned unambiguously	Sample Area	5%
161	Feature names are clear of other map detail	Sample Area	2%
162	All registered Aerodromes have been shown with correct symbology and name (Military airfields excepted). See Enroute Supplement Australia for registered airfields	Full Population	1%
163	Where a name has been abbreviated it complies with the approved abbreviations Section 2 chapter 7 and features have been abbreviated as required (eg. MOUNTAIN to MT (prefix) or MTN (suffix) for topo features	Sample Area	2%
164	All internal type is in the correct alignment	Full Population	1%
165	Reserve Area names are spelt correctly and avoid other detail Boundary descriptions are present where symbology is absent	Full Population	2%
166	Descriptive Notes are wholly in lower case	Sample	5%
167	Linear feature names do not extend into bleeds	Full Population	1%

TEST NO	CHECK	TEST TYPE	AQL
168	Linear feature names in bleeds are not broken	Full Population	1%
169	Labelled and named features have the correct font and point size	Sample Area	5%
170	Road names are correct for continuity and point size	Sample	5%
171	Railway names are correct for continuity and point size	Sample	5%
172	Distances between pins on roads are correct (note pins are not to be on separate sheets)	Sample	2%
173	Pins are clearly visible and in the correct position	Sample	2%
174	National and state route markers have the correct value and are centred over the road	Sample	2%
175	Horizontal control point identification is correct (ie. either height, topo feature name or alphanumeric identifier shown as per criteria)	Sample	2%
176	Spelling (and name order) of major and well known features , such as roads, rivers and localities is correct	Full Population	0%
177	Correct case used on named features, such as homesteads etc	Sample	2%
178	No extraneous type (not associated with a feature or incomplete) has been shown	Full Population	0%
179	Positioning of type conforms to the type placement principles	Sample	5%
	Hydrographic		
180	Names of rivers and creeks are correct for spelling, continuity and type size, both internally and to adjoining sheets	Sample	5%
181	Names of Lakes and other area features are correct for spelling, type size and position	Sample	5%
182	Ocean and Sea names are correct	Full Population	0%
	Grid		
185	Full grid values are shown at the south west corner of the sheet	Full Population	0%
186	Internal laddered grid values are correct and shown	Full Population	0%
187	100 000 metre square identification Letters are correctly positioned around the "0" value grid lines both inside and or outside the neatline	Full Population	0%

TEST NO	CHECK	TEST TYPE	AQL
188	100 000m UTM grid zone designation note (aligned along grid) UTM zone values are correct	Full Population	0%
	Relief		
190	Spot elevations and trig values agree with contours and depression contours	Sample	2%
191	Contour values are correct, of sufficient density and read uphill	Sample Area	1%
192	The highest elevation (including the bleed area) has been shown (1:250K only)		0%

2.2.4 Black Detail Internal

Internal Black Detail includes all map features that are to be depicted with black symbology.

TEST NO	CHECK	TEST TYPE	AQL
	General		
195	Features meet the neatline on the Western and Southern edges where appropriate	Sample	1%
196	The final text is not cluttered or ambiguous of content	Sample Area	5%
197	Features that appear on previous edition appear on map as specified	Sample Area	2%
198	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
199	Symbology is correct for all features and appears only where appropriate	Sample	1%
200	Symbols do not clash with type or other symbols	Sample Area	5%
201	Annotations missing symbols or symbols missing annotations	Sample Area	5%
	Rail		
205	Railways are correct	Full Population	1%

TEST NO	CHECK	TEST TYPE	AQL
206	Railway stations are correct	Full Population	5%
207	Stations and bridges are coincident with railway line	Full Population	5%
208	Correct gauge is shown	Full Population	5%
209	Symbology is correct for all railway line and point features	Full Population	1%
210	Railways are displaced for hydrographic features	Sample Area	5%
	Landing Grounds		
215	All registered Airports and Aerodromes are correctly shown and labelled (Enroute supplement Australia)	Full Population	1%
216	Direction of runways for Aircraft facilities is correct	Sample	5%
217	Symbology is correct for line weight, pattern and colour	Sample	1%
	Relief		
220	Trig symbols are correctly orientated	Sample	2%
221	Trig symbols and spot elevations are positioned accurately between contours	Sample	2%
222	Only permanently marked and monumented horizontal control points are shown	Sample	2%
223	Coastline is broken (symbolised to '0') on map where coincident with cliffs	Sample	5%
224	Contours are broken (symbolised to '0') on map where coincident with cliffs	Sample	5%
225	Cuttings and Embankments are correctly aligned to roads/railways	Full Population	5%
	Graticule		
228	Symbology for Graticule correct	Full Population	0%

2.2.5 General Cultural Detail

TEST NO	CHECK	TEST TYPE	AQL
230	Buildings and homesteads don't fall on roads or railways or within waterbodies, sea or watercourse areas	Sample Area	5%
231	Bridges are coincident with roads or rails and traverse streams	Sample	5%
232	Fences don't run through vehicle tracks	Sample	5%
233	Fences, bores, tanks, windpumps, and wells only appear within specified areas, see Appendix C	Full Population	0%
234	Fences are labelled where appropriate eg. dog proof fence	Sample Area	5%
235	Gates and grids are correctly aligned to fences and centred on roads	Sample Area	5%
236	Fences do not continue through symbolised yards	Sample Area	5%
237	Locks are aligned correctly and centred on streams	Full Population	5%
238	Powerline Pylon symbol orientation is correct (250K only – 100K symbol does not include Pylons) Powerlines are not shown within built up areas	Sample	5%
239	Windpumps and mines have correct orientation	Sample	1%
240	Wharves are parallel to the coast	Full Population	5%
241	Orientation of tunnels and linear features disappearing underground	Full Population	5%
242	Features that appear on previous edition appear on map as specified	Sample Area	2%
243	Ferry routes are shown and labelled	Full Population	2%
244	Large buildings are shown to scale	Full Population	5%
245	Homestead names are correct	Sample Area	5%
246	Buildings or other cultural features do not fall in built-up areas	Sample Area	5%

2.2.6 Red Detail Internal

Internal Red Detail includes all map features that are to be depicted with red symbology.

TEST NO	CHECK	TEST TYPE	AQL
	Roads		
250	Road classification is correct	Sample Area	5%
252	Intersections between different road classifications are clear of artefacts and undershoots, particularly road_principle to vehicle_track	Sample Area	5%
253	Major roads continue through built-up areas. Minor roads totally contained in built-up areas have not been shown.	Sample Area	5%
254	Roads are abutting reserve area boundaries where applicable	Sample Area	5%
255	Roads are abutting built up area boundaries where applicable	Sample Area	5%
256	Distance markers appear at end of the value	Sample	1%
257	Roads are displaced for railways, rivers etc.	Sample	5%
258	National and State route markers are cleared of all detail	Sample	1%
259	Features that appear on previous edition appear on map as specified	Sample Area	2%
260	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
261	Symbology is correct for all road line and point features	Sample	1%
	Built Up Area		
265	Boundaries don't overlap into other polygons, including - waterbodies, vegetation areas, relief areas, offshore etc.	Full Population	1%
266	Polygon boundary is coincident with roads where necessary	Sample Area	5%
267	Features that appear on previous edition appear on map as specified	Sample Area	2%

TEST NO	CHECK	TEST TYPE	AQL
268	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
269	Symbology is correct for all Built up areas and populated places	Full Population	1%

2.2.7 Blue Detail Internal

Internal Blue Detail includes all map features that are to be depicted with blue symbology.

TEST NO	CHECK	TEST TYPE	AQL
276	The grid meets the neatline and fits the graticule	Full Population	0%
277	Waterbodies do not overlap other area features eg. built up areas	Sample	5%
278	Orientation of flow arrow heads is correct	Sample	5%
279	Orientation of rapids symbols are correct	Sample	5%
280	Minor streams and channels fit the road pattern Streams don't flow down roads, Confluences don't occur on roads	Sample Area	5%
281	Features that appear on previous edition appear on map as specified	Sample Area	2%
282	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
283	Symbology is correct for all features and appears only where appropriate	Sample	1%
284	Symbology of waterbodies is correct with relation to perenniality	Sample Area	5%
	Offshore		
290	Reef polygons are contained completely within the sea	Full Population	1%
291	Reefs are named where appropriate	Sample	2%
292	Features that appear on previous edition appear on map as specified	Sample Area	2%
293	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
294	Symbology of offshore area and point features is correct	Sample	1%

TEST NO	CHECK	TEST TYPE	AQL
	Grid		
297	Correct symbology for grid lines (10 000m and 100 000m)	Full population	0%

2.2.8 Brown Detail Internal

Internal Brown Detail includes all map features that are to be depicted with brown symbology.

TEST NO	CHECK	TEST TYPE	AQL
300	Sand does not appear in vegetated areas, waterbodies and braided watercourses	Full Population	5%
301	Sand ridges are identified by descriptive notes and average heights where available	Sample	5%
302	Sand ridges do not cross streams	Sample	1%
303	Sand ridges do not enter lakes	Sample	1%
304	Features that appear on previous edition appear on map as specified	Sample Area	2%
305	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
306	Symbology for sand, foreshore flats and sand ridges is correct	Sample	1%
	Contours		
310	Index contours exist and are drawn with the correct symbology	Sample Area	1%
311	Depression contours and depression ticks are orientated correctly	Sample	5%
312	Contours are broken for double line perennial watercourses, open-cut mines and cliffs	Sample	5%
313	Features that appear on previous edition appear on map as specified	Sample Area	2%
314	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
315	Check symbology for contours is correct	Sample	1%

2.2.9 Green Detail Internal

Internal Green Detail includes all map features that are to be depicted with green symbology.

TEST NO	CHECK	TEST TYPE	AQL
	Vegetation		
320	Vegetation does not overlap into perennial waterbodies, built-up areas, relief areas etc.	Full Population	5%
321	Windbreaks do not cross roads or perennial waterbodies	Full Population	1%
322	Vegetation has been updated and captured in sufficient detail	Sample Area	5%
323	Features that appear on previous edition appear on map as specified	Sample Area	2%
324	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
325	Symbology for all vegetation features is correct	Sample	1%
	Boundaries		
330	Boundaries are abutting roads and other boundaries where appropriate	Sample	5%
331	State Border is labelled both sides	Full Population	1%
332	The verge falls on the inside of Reserve Area boundaries	Sample	2%
333	Features that appear on previous edition appear on map as specified	Sample Area	2%
334	All source materials have been used to ensure revision has been carried out and accuracy requirements met	Sample	1%
335	Symbology for all reserve area boundaries are correct	Sample	1%
336	Reserve area lines are not symbolised where coincident with coastline	Sample	5%
337	Reserve area line symbology is correctly offset	Sample	2%

2.2.10 Composite Screens / Patterns

A number of area features are made up of composite screens and/or different colour or

patterns. Checks will be carried out against the appropriate specification.

TEST NO	CHECK	TEST TYPE	AQL
340	Area features made up of composite screens/patterns or different colours are correct. eg. Forests, Rainforest, Parks, Mangroves, Orchards & Pine Plantations etc.	Sample	0%

3. FORMS FOR VAT SUBMISSION

On the following pages are the VAT submission form and attachments J1, J2 and J3 for the 1:250 000 and 1:100 000 scale products. These forms will be completed by producers and submitted to VAT with all the specified material.

250K VAT SUBMISSION FORM

TILE NO:..... TILE NAME:..... DATE:.....PHONE.....

COMPANY:..... CONTACT NAME:.....

PREVIOUS MAP **NTMS / JOG**

Has this map/tile been previously submitted? Date:

Elevation range for spot heights and survey marks: Min..... to Max..... metres

Has Imagery been used ? [Yes]

Dates of Imagery: Spot / Landsat
 /
 /

Version and Amendment number of Technical Specifications used for this map/tile

Include with your submission:

1. Repromat for map production
2. One hard copy chemical proof of the map
3. The Working Database
4. TOPO-250K GEODATA
5. All source materials supplied including remote sensed imagery, revision information (ie. maps, plans, listings etc), repromat and project files
6. Listing of Working Database coverages
7. Listing of GEODATA coverages
8. Printout of TQI (tile quality information) table for each coverage
9. Printout of FRQ (frequency) table for each coverage
10. Printout of UFI range for each theme
11. Printout of the DQT (Data Quality Table)
12. Listing of sources used for attribute information and their reliability date - 'Attachment J1'
13. Listing of sources used for feature positioning and their reliability date - 'Attachment J2'
14. Listing of comments about production or revision - 'Attachment J3'
15. Scanning transformation RMS error report(s) for all newly scanned data
16. Digital listing of Production Notes to be supplied

Signed:

100K VAT SUBMISSION FORM

TILE NO:..... TILE NAME:..... DATE:.....PHONE.....

COMPANY:..... CONTACT NAME:.....

PREVIOUS MAP **NTMS / RASC**

Has this map/tile been previously submitted? Date:

Elevation range for spot heights and survey marks: Min..... to Max..... metres

Has Imagery been used ? [Yes]

Dates of Imagery: Spot / Landsat
 /
 /

Version and Amendment number of Technical Specifications used for this map/tile

Include with your submission:

1. Repromat for map production
2. One hard copy chemical proof of the map
3. The Working Database
4. TOPO-100K GEODATA
5. All source materials supplied including remote sensed imagery, revision information (ie. maps, plans, listings etc), repromat and project files
6. Listing of Working Database coverages
7. Listing of GEODATA coverages
8. Printout of TQI (tile quality information) table for each coverage
9. Printout of FRQ (frequency) table for each coverage
10. Printout of the DQT (Data Quality Table)
11. Listing of sources used for attribute information and their reliability date - 'Attachment J1'
12. Listing of sources used for feature positioning and their reliability date - 'Attachment J2'
13. Listing of comments about production or revision - 'Attachment J3'
14. Scanning transformation RMS error report(s) for all newly scanned data
15. Digital listing of Production Notes to be supplied

Signed:

ATTACHMENT J1 (250K)

Indicate below the **source materials** used

Tick appropriate boxes where applicable

SOURCES USED FOR FEATURE POSITIONING				
COVERAGE	IMAGERY	250K REPROMAT	OTHER SOURCES AAA etc.	DATE
Aeronautical Point	<input type="checkbox"/>	<input type="checkbox"/>
Buildings Area	<input type="checkbox"/>	<input type="checkbox"/>
Buildings Point	<input type="checkbox"/>	<input type="checkbox"/>
Builtup Areas	<input type="checkbox"/>	<input type="checkbox"/>
Carto Features	<input type="checkbox"/>	<input type="checkbox"/>
Contours	<input type="checkbox"/>	<input type="checkbox"/>
Drainage	<input type="checkbox"/>	<input type="checkbox"/>
Framework	<input type="checkbox"/>	<input type="checkbox"/>
Localities	<input type="checkbox"/>	<input type="checkbox"/>
Marine Facilities	<input type="checkbox"/>	<input type="checkbox"/>
Morphology	<input type="checkbox"/>	<input type="checkbox"/>
Navigation	<input type="checkbox"/>	<input type="checkbox"/>
Offshore	<input type="checkbox"/>	<input type="checkbox"/>
Pipelines	<input type="checkbox"/>	<input type="checkbox"/>
Powerlines	<input type="checkbox"/>	<input type="checkbox"/>
Rail Transport	<input type="checkbox"/>	<input type="checkbox"/>
Relief Area	<input type="checkbox"/>	<input type="checkbox"/>
Reserved Areas	<input type="checkbox"/>	<input type="checkbox"/>
Road Transport	<input type="checkbox"/>	<input type="checkbox"/>
Sand Ridges	<input type="checkbox"/>	<input type="checkbox"/>
Security Areas	<input type="checkbox"/>	<input type="checkbox"/>
Seismic Lines	<input type="checkbox"/>	<input type="checkbox"/>
Spot Heights	<input type="checkbox"/>	<input type="checkbox"/>
Survey Marks	<input type="checkbox"/>	<input type="checkbox"/>
Utilities	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation Misc	<input type="checkbox"/>	<input type="checkbox"/>
Waterbodies	<input type="checkbox"/>	<input type="checkbox"/>
Waterpoints	<input type="checkbox"/>	<input type="checkbox"/>

ATTACHMENT J2 (250K)

Indicate below the **source materials** used

Tick appropriate boxes where applicable

SOURCES USED FOR ATTRIBUTE INFORMATION			
COVERAGE	250K REPROMAT	OTHER SOURCES AAA ERS etc.	DATE
Aeronautical Point	<input type="checkbox"/>
Buildings Area	<input type="checkbox"/>
Buildings Point	<input type="checkbox"/>
Builtup Areas	<input type="checkbox"/>
Carto Features	<input type="checkbox"/>
Contours	<input type="checkbox"/>
Drainage	<input type="checkbox"/>
Framework	<input type="checkbox"/>
Localities	<input type="checkbox"/>
Marine Facilities	<input type="checkbox"/>
Morphology	<input type="checkbox"/>
Navigation	<input type="checkbox"/>
Offshore	<input type="checkbox"/>
Pipelines	<input type="checkbox"/>
Powerlines	<input type="checkbox"/>
Rail Transport	<input type="checkbox"/>
Relief Area	<input type="checkbox"/>
Reserved Areas	<input type="checkbox"/>
Road Transport	<input type="checkbox"/>
Sand Ridges	<input type="checkbox"/>
Security Areas	<input type="checkbox"/>
Seismic Lines	<input type="checkbox"/>
Spot Heights	<input type="checkbox"/>
Survey Marks	<input type="checkbox"/>
Utilities	<input type="checkbox"/>
Vegetation	<input type="checkbox"/>
Vegetation Misc	<input type="checkbox"/>
Waterbodies	<input type="checkbox"/>
Waterpoints	<input type="checkbox"/>

ATTACHMENT J1 (100K)Indicate below the **source materials** used

Tick appropriate boxes where applicable

SOURCES USED FOR FEATURE POSITIONING				
COVERAGE	IMAGERY	100K REPROMAT	OTHER SOURCES AAA etc.	DATE
Aeronautical Point	<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary Contours	<input type="checkbox"/>	<input type="checkbox"/>
Buildings Area	<input type="checkbox"/>	<input type="checkbox"/>
Buildings Point	<input type="checkbox"/>	<input type="checkbox"/>
Builtup Areas	<input type="checkbox"/>	<input type="checkbox"/>
Carto Features	<input type="checkbox"/>	<input type="checkbox"/>
Contours	<input type="checkbox"/>	<input type="checkbox"/>
Drainage	<input type="checkbox"/>	<input type="checkbox"/>
Framework	<input type="checkbox"/>	<input type="checkbox"/>
Localities	<input type="checkbox"/>	<input type="checkbox"/>
Marine Facilities	<input type="checkbox"/>	<input type="checkbox"/>
Morphology	<input type="checkbox"/>	<input type="checkbox"/>
Navigation	<input type="checkbox"/>	<input type="checkbox"/>
Offshore	<input type="checkbox"/>	<input type="checkbox"/>
Pipelines	<input type="checkbox"/>	<input type="checkbox"/>
Powerlines	<input type="checkbox"/>	<input type="checkbox"/>
Rail Transport	<input type="checkbox"/>	<input type="checkbox"/>
Relief Area	<input type="checkbox"/>	<input type="checkbox"/>
Reserved Areas	<input type="checkbox"/>	<input type="checkbox"/>
Road Transport	<input type="checkbox"/>	<input type="checkbox"/>
Sand Ridges	<input type="checkbox"/>	<input type="checkbox"/>
Security Areas	<input type="checkbox"/>	<input type="checkbox"/>
Seismic Lines	<input type="checkbox"/>	<input type="checkbox"/>
Spot Heights	<input type="checkbox"/>	<input type="checkbox"/>
Survey Marks	<input type="checkbox"/>	<input type="checkbox"/>
Utilities	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation Misc	<input type="checkbox"/>	<input type="checkbox"/>
Waterbodies	<input type="checkbox"/>	<input type="checkbox"/>
Waterpoints	<input type="checkbox"/>	<input type="checkbox"/>

ATTACHMENT J2 (100K)

Indicate below the **source materials** used

Tick appropriate boxes where applicable

SOURCES USED FOR ATTRIBUTE INFORMATION			
COVERAGE	100K REPROMAT	OTHER SOURCES AAA ERS etc.	DATE
Aeronautical Point	<input type="checkbox"/>
Auxiliary Contours	<input type="checkbox"/>
Buildings Area	<input type="checkbox"/>
Buildings Point	<input type="checkbox"/>
Builtup Areas	<input type="checkbox"/>
Carto Features	<input type="checkbox"/>
Contours	<input type="checkbox"/>
Drainage	<input type="checkbox"/>
Framework	<input type="checkbox"/>
Localities	<input type="checkbox"/>
Marine Facilities	<input type="checkbox"/>
Morphology	<input type="checkbox"/>
Navigation	<input type="checkbox"/>
Offshore	<input type="checkbox"/>
Pipelines	<input type="checkbox"/>
Powerlines	<input type="checkbox"/>
Rail Transport	<input type="checkbox"/>
Relief Area	<input type="checkbox"/>
Reserved Areas	<input type="checkbox"/>
Road Transport	<input type="checkbox"/>
Sand Ridges	<input type="checkbox"/>
Security Areas	<input type="checkbox"/>
Seismic Lines	<input type="checkbox"/>
Spot Heights	<input type="checkbox"/>
Survey Marks	<input type="checkbox"/>
Utilities	<input type="checkbox"/>
Vegetation	<input type="checkbox"/>
Vegetation Misc	<input type="checkbox"/>
Waterbodies	<input type="checkbox"/>

Waterpoints	<input type="checkbox"/>
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4. VAT TEST TO REPORT NUMBER CROSS-REFERENCE

Test numbers that do not have a matching report number are unused.

Test No	Report No	Test No	Report No	Test No	Report No	Test No	Report No
1	70	51	17	101	-	151	171
2	71/72	52	18	102	-	152	172
3	52/53	53	19	103	-	153	-
4	73	54	24	104	-	154	-
5	90	55	20	105	-	155	-
6	91	56	21	106	62	156	-
7	92	57	22	107	63	157	-
8	75	58	23	108	12	158	-
9	99	59	26	109	123	159	-
10	79	60	30	110	-	160	300
11	101	61	36	111	-	161	301
12	97	62	29	112	-	162	216
13	93	63	31	113	-	163	303
14	95	64	33	114	-	164	304
15	83	65	34	115	-	165	289
16	85	66	35	116	-	166	305
17	84	67	58	117	-	167	306
18	86	68	39	118	-	168	307
19	77	69	43	119	-	169	308
20	78	70	74/76	120	140	170	192
21	81	71	46	121	141	171	205
22	82	72	47	122	142	172	193
23	89	73	42	123	144	173	194
24	105	74	10	124	145	174	190
25	107	75	61	125	-	175	251
26	108	76	40	126	-	176	310
27	109	77	48	127	-	177	309
28	110	78	38	128	-	178	312
29	113	79	49	129	-	179	302
30	111	80	104	130	151	180	238
31	114	81	50	131	152	181	237
32	115	82	44	132	153	182	236
33	103	83	41	133	154	183	-
34	88	84	45	134	155	184	-
35	96	85	51	135	156	185	170
36	98	86	60	136	157	186	177
37	102	87	25	137	158	187	178
38	-	88	27	138	159	188	179
39	-	89	121	139	160	189	-
40	4/5	90	122	140	161	190	49
41	4/5	91	120	141	162	191	259
42	6/7	92	1	142	173	192	253
43	6/7	93	2	143	163	193	-
44	9	94	3	144	164	194	-
45	17	95	28	145	165	195	315
46	-	96	32	146	166	196	302
47	14	97	37	147	167	197	234/316
48	15	98	55	148	168	198	317
49	54	99	56	149	169	199	235/318
50	16	100	57	150	170	200	320

Test No	Report No	Test No	Report No	Test No	Report No
201	321	251	-	301	262
202	-	252	20/22	302	263
203	-	253	187	303	44
204	-	254	286	304	266
205	200	255	188	305	317
206	202	256	195	306	269
207	34	257	189	307	-
208	201	258	191	308	-
209	206	259	196	309	-
210	203	260	317	310	254
211	-	261	197	311	255
212	-	262	-	312	256
213	-	263	-	313	266
214	-	264	-	314	317
215	215	265	210	315	268
216	217	266	211	316	-
217	218	267	212	317	-
218	-	268	317	318	-
219	-	269	213	319	-
220	267	270	-	320	276
221	250	271	-	321	277
222	252	272	-	322	278
223	245	273	-	323	279
224	257	274	-	324	317
225	260	275	-	325	280
226	-	276	175	326	-
227	-	277	239	327	-
228	180	278	243	328	-
229	-	279	224	329	-
230	227	280	241	330	286
231	230	281	246	331	285
232	224	282	317	332	291
233	223	283	247	333	290
234	225	284	101	334	317
235	226	285	-	335	291
236	224	286	-	336	287
237	233	287	-	337	288
238	220	288	-	338	-
239	231	289	-	339	-
240	29	290	42	340	319
241	221	291	296	341	-
242	234	292	297	342	-
243	222	293	317	343	-
244	229	294	298	344	-
245	228	295	-	345	-
246	232	296	-	346	-
247	-	297	176	347	-
248	-	298	-	348	-
249	-	299	-	349	-
250	185	300	261	350	-

5. VAT REPORT TO TEST NUMBER CROSS-REFERENCE

Report numbers that do not have a matching test number are unused.

Report No	Test No	Report No	Test No	Report No	Test No	Report No	Test No
1	92	51	85	101	11/284	151	130
2	93	52	3	102	37	152	131
3	94	53	3	103	33	153	132
4	40/41	54	49	104	80	154	133
5	40/41	55	98	105	24	155	134
6	42/43	56	99	106	-	156	135
7	42/43	57	100	107	25	157	136
8	-	58	67	108	26	158	137
9	44	59	-	109	27	159	138
10	74	60	86	110	28	160	139
11	-	61	75	111	30	161	140
12	108	62	106	112	-	162	141
13	-	63	107	113	29	163	143
14	47	64	-	114	31	164	144
15	48	65	-	115	32	165	145
16	50	66	-	116	-	166	146
17	45/51	67	-	117	-	167	147
18	52	68	-	118	-	168	148
19	53	69	-	119	-	169	149
20	55/252	70	1	120	91	170	150/185
21	56	71	2	121	89	171	151
22	57/252	72	2	122	90	172	152
23	58	73	4	123	109	173	142
24	54	74	70	124	-	174	-
25	87	75	8	125	-	175	276
26	59	76	70	126	-	176	297
27	88	77	19	127	-	177	186
28	95	78	20	128	-	178	187
29	62/240	79	10	129	-	179	188
30	60	80	-	130	-	180	228
31	63	81	21	131	-	181	-
32	96	82	22	132	-	182	-
33	64	83	15	133	-	183	-
34	65/207	84	17	134	-	184	-
35	66	85	16	135	-	185	250
36	61	86	18	136	-	186	-
37	97	87	-	137	-	187	253
38	78	88	34	138	-	188	255
39	68	89	23	139	-	189	257
40	76	90	5	140	120	190	174
41	83	91	6	141	121	191	258
42	73/290	92	7	142	122	192	170
43	69	93	13	143	-	193	172
44	82/303	94	-	144	123	194	173
45	84	95	14	145	124	195	256
46	71	96	35	146	-	196	259
47	72	97	12	147	-	197	261
48	77	98	36	148	-	198	-
49	79/190	99	9	149	-	199	-
50	81	100	-	150	-	200	205

Report No	Test No	Report No	Test No	Report No	Test No
201	208	251	175	301	161
202	206	252	222	302	179/196
203	210	253	192	303	163
204	-	254	310	304	164
205	171	255	310	305	166
206	209	256	312	306	167
207	-	257	224	307	168
208	-	258	-	308	169
209	-	259	191	309	177
210	265	260	225	310	176
211	266	261	300	311	-
212	267	262	301	312	178
213	269	263	302	313	-
214	-	264	-	314	-
215	215	265	-	315	195
216	162	266	304/313	316	197
217	216	267	220	317	198
218	217	268	315	318	199
219	-	269	306	319	340
220	238	270	-	320	200
221	241	271	-	321	201
222	243	272	-	322	-
223	233	273	-	323	-
224	232/236/279	274	-	324	-
225	234	275	-	325	-
226	235	276	320	326	-
227	230	277	321	327	-
228	245	278	322	328	-
229	244	279	323	329	-
230	231	280	325	330	-
231	239	281	-	331	-
232	246	282	-	332	-
233	237	283	-	333	-
234	197/242	284	-	334	-
235	199	285	331	335	-
236	182	286	254/330	336	-
237	181	287	336	337	-
238	180	288	337	338	-
239	277	289	165	339	-
240	-	290	333	340	-
241	280	291	332/335	341	-
242	-	292	-	342	-
243	278	293	-	343	-
244	-	294	-	344	-
245	223	295	-	345	-
246	281	296	291	346	-
247	283	297	292	347	-
248	-	298	294	348	-
249	-	299	-	349	-
250	221	300	160	350	-