Australian Hydrological Geospatial Fabric – Groundwater Cartography
Geodatabase Product Schema

Australian Government
Bureau of Meteorology

Australian Government Bureau of Meteorology AHGF for ESRI ArcGIS Desktop 9.3 – Version 2.1, November 2012.

Copyright © 2012 Australian Government Bureau of Meteorology. All rights reserved.

Please direct all enquiries to the Bureau of Meteorology Climate & Water Division (HO), 700 Collins Street, Docklands, Melbourne VIC 3008.
Tel +61 3 9669 4000; Fax +61 3 9669 4699; Email ahgf@bom.gov.au.

Comments
The Precision and Scale field properties are only applicable to ArcSDE geodatabases (i.e. not supported by personal or file geodatabases). Where attributes are shown with Precision and Scale set to zero, these fields will assume the default values for the specified data type in the target DBMS.

Simple feature class
AHGFSurficialHydrogeologicUnit
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Surface unit expression of the water table aquifer, whether saturated or unsaturated, sharing similar hydrogeological characteristics.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	70	AHGFSurficialHydrogeologicUnitType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
DLithology	String	No					100	Dominant Lithology (e.g. Basalt).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
LitholDesc	String	Yes					254	Description of lithology (e.g. Basalt lava and tuff).
GeoUnits	String	Yes					50	Geological unit from Geoscience Australia's Stratigraphic Units Database (e.g. Cgba).
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class
AHGFWaterTableAquifer
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Upper unconfined saturated aquifer unit. Derived as an interpretation of AHGFSurficialHydrolgeologicUnit features.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	71	AHGFWaterTableAquiferType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
GWProvince	String	Yes					70	Groundwater province (e.g. Amadeus).
GWFlowSysP	String	Yes					80	Primary scale of groundwater flow system (e.g. Local flow systems in Precambrian rocks).
GWFlowSysS	String	Yes					80	Secondary scale of groundwater flow system (e.g. Local flow systems in Cainozoic sediments).
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class
AHGFAquiferOutcrop
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Outcrop area of a related AHGFAquiferBoundary feature. These features align with a subset of the AHGFWaterTableAquifer features.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	67	AHGFAquiferOutcropType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
AqifrBndID	Long integer	Yes			0			Unique identifier for related AHGFAquiferBoundary feature.
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class
IGWAquiferSalinity
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Area of an AHGFAquiferBoundary feature sharing similar properties for salinity.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
AqifrBndID	Long integer	No			0			Unique identifier for related AHGFAquiferBoundary feature.
SalinValue	String	Yes		SalinityValue			5	Salinity range in mg/L (milligrams per litre) e.g. <500 mg/L.
SalinClass	String	Yes		SalinityClass			25	Category for salinity (i.e. saline/non-saline)
SalinMin	Long integer	Yes		SalinityRange	0			Minimum value for salinity in mg/L (milligrams per litre) e.g. 500.
SalinMax	Long integer	Yes		SalinityRange	0			Maximum value for salinity in mg/L (milligrams per litre) e.g. 1000.
SalinMed	Long integer	Yes		SalinityRange	0			Median value for salinity in mg/L (milligrams per litre) e.g. 750.
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Relationship class
AquiferHasSalinity
Type *Simple*
Cardinality *One to many*
Notification *None*
Forward label *has property of*
Backward label *defines salinity area for*

Origin feature class	Destination feature class
Name *AHGFAquiferBoundary* Primary key *HydroID* Foreign key *AqifrBndID*	Name *IGWAquiferSalinity*

No relationship rules defined.

Relationship class
AquiferHasOutcrop
Type *Simple*
Cardinality *One to many*
Notification *None*
Forward label *has outcropping defined by*
Backward label *defines outcrop area for*

Origin feature class	Destination feature class
Name *AHGFAquiferBoundary* Primary key *HydroID* Foreign key *AqifrBndID*	Name *AHGFAquiferOutcrop*

No relationship rules defined.

Simple feature class
IGWWaterTableHydraulicConductivity
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Area of the water table sharing similar properties for aquifer hydraulic conductivity (k).

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
HydKValue	Double	Yes		HydraulicConductivityRange	0	0		Value for hydraulic conductivity (K) in m/d (metres/day) e.g. 1.5.
SpecYield	Double	Yes		SpecificYieldRange	0	0		Value for specific yield (unitless) e.g. 0.05 (ratio).
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class
AHGFAquiferBoundary
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

The extent of a significant underlying or outcropping/subcropping aquifer.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	66	AHGFAquiferBoundaryType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
DLithology	String	No					100	Dominant Lithology (e.g. Basalt).
LitholDesc	String	Yes					254	Description of lithology (e.g. Basalt lava and tuff).
GeoUnits	String	Yes					50	Geological unit from Geoscience Australia's Stratigraphic Units Database (e.g. Cgba).
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Relationship class
AquiferHasContour
Type *Simple*
Cardinality *One to many*
Notification *None*
Forward label *has surface defined by*
Backward label *defines surface for*

Origin feature class	Destination feature class
Name *AHGFAquiferBoundary* Primary key *HydroID* Foreign key *AqifrBndID*	Name *AHGFAquiferContour*

No relationship rules defined.

Simple feature class
IGWWaterTableSalinity
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Area of the water table sharing similar properties for salinity.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
SalinValue	String	Yes		SalinityValue			5	Salinity range in mg/L (milligrams per litre) e.g. <500 mg/L.
SalinClass	String	Yes		SalinityClass			25	Category for salinity (i.e. saline/non-saline)
SalinMin	Long integer	Yes		SalinityRange	0			Minimum value for salinity in mg/L (milligrams per litre) e.g. 500.
SalinMax	Long integer	Yes		SalinityRange	0			Maximum value for salinity in mg/L (milligrams per litre) e.g. 1000.
SalinMed	Long integer	Yes		SalinityRange	0			Median value for salinity in mg/L (milligrams per litre) e.g. 750.
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Relationship class
AquiferHasYield
Type *Simple*
Cardinality *One to many*
Notification *None*
Forward label *has property of*
Backward label *defines bore yield area for*

Origin feature class	Destination feature class
Name *AHGFAquiferBoundary* Primary key *HydroID* Foreign key *AqifrBndID*	Name *IGWAquiferYield*

No relationship rules defined.

Simple feature class
AHGFAquiferContour
Geometry *Polyline*
Contains M values *No*
Contains Z values *No*

Line representing a contour on a top or bottom surface of a related AHGFAquiferBoundary feature or of the underlying bedrock surface.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	68	AHGFAquiferContourType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
AqifrBndID	Long integer	Yes			0			Unique identifier for related AHGFAquiferBoundary feature.
ContValue	Double	Yes		AHGFContourDepthRange	0	0		Elevation value for contour feature in meters Australian Height Datum (mAHD).
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
Shape_Length	Double	Yes			0	0		

Subtypes of AHGFAquiferContour
Subtype field *AHGFFType*
Default subtype *68*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
69	AquiferContourBottom	AHGFFType	69	AHGFAquiferContourType
		IAF_ID		AHGF_InterimAquiferFramework
		ContValue		AHGFContourDepthRange
		SrcDesc		AHGFGroundwaterSourceDescription
68	AquiferContourTop	AHGFFType	68	AHGFAquiferContourType
		IAF_ID		AHGF_InterimAquiferFramework
		ContValue		AHGFContourDepthRange
		SrcDesc		AHGFGroundwaterSourceDescription
73	BedrockContourTop	AHGFFType	73	AHGFAquiferContourType
		IAF_ID		AHGF_InterimAquiferFramework
		ContValue		AHGFContourDepthRange
		SrcDesc		AHGFGroundwaterSourceDescription

Simple feature class
IGWAquiferYield
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Area of an AHGFAquiferBoundary feature sharing similar properties for bore yield.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
IAF_ID	Long integer	Yes		AHGF_InterimAquiferFramework	0			Aquifer classification based on the Interim Aquifer Framework (e.g. Tertiary Sediments (fractured rock)).
NameSynonm	String	Yes					254	Other names used for the aquifer unit (e.g. Adori Formation).
AqifrBndID	Long integer	No			0			Unique identifier for related AHGFAquiferBoundary feature.
YieldValue	String	Yes		YieldValue			5	Bore yield range in L/s (litres per second) e.g. <0.5 L/s.
YieldClass	String	Yes		YieldClass			10	Category for bore yield e.g. <5L/s.
YieldMin	Double	Yes		YieldRange	0	0		Minimum value for bore yield in L/s (litres per second) e.g. 0.5.
YieldMax	Double	Yes		YieldRange	0	0		Maximum value for bore yield in L/s (litres per second) e.g. 5.
YieldMed	Double	Yes		YieldRange	0	0		Median value for bore yield in L/s (litres per second) e.g. 3.
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class
IGWWaterTableYield
Geometry *Polygon*
Contains M values *No*
Contains Z values *No*

Area of the water table sharing similar properties for bore yield.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
YieldValue	String	Yes		YieldValue			5	Bore yield range in L/s (litres per second) e.g. <0.5 L/s.
YieldClass	String	Yes		YieldClass			10	Category for bore yield e.g. <5L/s.
YieldMin	Double	Yes		YieldRange	0	0		Minimum value for bore yield in L/s (litres per second) e.g. 0.5.
YieldMax	Double	Yes		YieldRange	0	0		Maximum value for bore yield in L/s (litres per second) e.g. 5.
YieldMed	Double	Yes		YieldRange	0	0		Median value for bore yield in L/s (litres per second) e.g. 3.
ReliabCode	String	Yes					160	Code indicating the level of reliability or confidence in the data.
GWNote	String	Yes					254	Other relevant groudwater related comments concerning feature.
Scale	String	Yes					20	Scale at which feature was captured (e.g. 1:250,000).
SrcDesc	Long integer	Yes		AHGFGroundwaterSourceDescription	0			Detailed source description for feature.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Format of input source data: (1-ArcInfo Coverage; 2-ArcInfo GRID; 3-ESRI Geodatabase; 4-Shapefile).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m^2) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

GW Cartography

Coded value domain
AHGFGroundwaterSourceDescription
Description *Detailed source descriptions for groundwater data.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
1	Bain, J.H.C., Haipola, D., 1997, North Queensland Geology 1:1,000,000, Australian Geological Survey Organisation & Geological Survey of Queensland.
2	Blake, D.H., 1987, Mt Isa Inlier and Environs 1:500,000, Bureau of Mineral Resources.
3	Brown, C.M. and Stephenson, A.E., 1991, Geology of the Murray Basin, south-eastern Australia, 1:1,000,000 scale map, Bureau of Mineral Resources.
4	Bultitude R.J., Garrod P.D., and Roberts C.W., 1997, Hodgkinson Province Geology 2nd Ed. 1:500,000, Geological Survey of Queensland.
5	Bureau of Rural Science
6	Burra 1:250,000 sheet area compiled from PIRSA 1:250,000 scale digital data, 2006.
7	Compiled from PIRSA 1:250,000 scale digital coverage of South Australia, 2005, with Mesoproterozoic and Palaeoproterozoic rock associations updated from more recent unpublished PIRSA information.
8	Compiled from PIRSA 1:250,000 scale digital coverage of South Australia, 2005.
9	Cronfield, L.C., 1992, Maryborough Geology 1:250,000, Geological Survey of Queensland.
10	Department of Environment and Heritage, South Australia
11	Department of Environment and Resource Management, Queensland
12	Department of Natural Resources, Environment and the Arts, Northern Territory
13	Department of Natural Resoures, New South Wales
14	Department of Primary Industry, Parks, Water and Environment, Tasmania
15	Department of Sustainability and Environment, Victoria
16	Department of Water, Western Australia
17	Exon, N.F., 1976, Geology of the Northern Part of the Surat Basin 1:1,000,000, Bureau of Mineral Resources.
18	Not Used (Geodata coastline 1:250,000 version 2, Geoscience Australia.)
19	Geological Survey of New South Wales 1:100,000 scale maps, 2000-2004. Simplified, edge matched and modified for representation at 1:1 million scale.
20	Geological Survey of New South Wales, Cobar Geoscience Database, 1:100,000 scale mapping, 2000. Simplified, edge matched and modified for representation at 1:1 million scale.
21	Geological Survey of New South Wales, Statewide geodatabase, 1:250,000 scale or better, 2003. Simplified, edge matched and modified for representation at 1:1 million scale.
22	Geological Survey of New South Wales, Statewide geodatabase, 1:250,000 scale or better, 2005 updated data (unpublished). Simplified, edge matched and modified for representation at 1:1 million scale.
23	Geological Survey of New South Wales, Statewide geodatabase, 1:250,000 scale or better, 2007. Data relocated or amended based on recent satellite and radiometric imagery.
24	Geological Survey of New South Wales, Statewide geodatabase, 1:250,000 scale or better, 2007. Simplified, edge matched and modified for representation at 1:1 million scale.
25	Geological Survey of New South Wales, Statewide geodatabase, 2003. Outcrop extents considerably modified by new radiometric and Landsat interpretation.
26	Geological Survey of Queensland, 1:100,000 scale geological maps, 2001. Simplified, edge matched and modified for representation at 1:1 million scale.
27	Geological Survey of Queensland, 1:100,000 scale geological maps, July 2004. Simplified, edge matched and modified for representation at 1:1 million scale.
28	Geological Survey of Queensland, Australian Geological Survey Organisation 1:250,000 scale geological maps, 2nd Edition, 1995-1996. Simplified, edge matched and modified for representation at 1:1 million scale.
29	Geological Survey of Queensland, Bundaberg 1:250,000 compilation in progress, 2003-2004.
30	Geological Survey of Victoria state geological map, 1:1,000,000 scale, 1999. Modified and edge matched to New South Wales and South Australia; granitoid names added from more detailed GSV maps.
31	Geoscience Australia
32	Geoscience Victoria 1:100,000 scale geological maps. Simplified, edge matched and modified for representation at 1:1 million scale.
33	Geoscience Victoria 1:50,000 scale geological maps. Simplified, edge matched and modified for representation at 1:1 million scale.
34	Glikson et al. 1996 Geology of the Western Musgrave Block, central Australia with particular reference to the mafic-ultramafic Giles Complex. Australian Geological Survey Bulletin 239 Plate 1.
35	Grimes, K.G., Fraser Island Special Geology 1:250,000, Geological Survey of Queensland.
36	Maitland 1:250,000 sheet area compiled from PIRSA 1:250,000 scale digital data, 2006.
37	Malone E.J., Olgers F., Mollan R.G., Jensen A.R., 1967, Bowen Basin Geology 1:1,000,000, Bureau of Mineral Resources.
38	Mond, A., Senior, B.R., Matueev, G., Swoboda, R., 1977, Geology of North Western Eromanga Basin 1:1,000,000, Bureau of Mineral Resources.
39	Murray-Darling Basin Authority
40	Office of Water, New South Wales
41	Pain, A.G.L., Cameron R.L. and Sweet I.P., 1980, Burdekin River Region 1:500,000, Geological Survey of Queensland & Bureau of Mineral Resources.
42	Palaeozoic from Geological Survey of New South Wales 1:100,000 scale maps, 2000-2004. Simplified and modified for representation at 1:1 million scale. Cainozoic simplified from GSNSW State-wide geodatabase, 1:250,000 scale, 2003.
43	Palaeozoic-Proterozoic: Laing,W.P., Preiss,W.V. and Stevens,B.P.J., 1996. Outcrop geology of the Curnamona Province and surrounding Neoproterozoic and Palaeozoic belts, 1:500,000 scale map. Cainozoic from GSNSW State-wide geodatabase, 1:250,000 scale.
44	Primarily from Geology of Tasmania, 1:500,000 scale map, Tasmanian Geological Survey, 1999. Granite nomenclature and minor boundaries updated from Tasmanian Granites and Associated Mineralisation, 1:500,000 scale map, Mineral Resources Tasmania, 2005.
45	Published 1:100,000 scale geological maps (Geological Survey of WA, 2008).
46	Published 1:250,000 and 1:100,000 scale geological maps (Geological Survey of WA, and Geoscience Australia), supplemented in parts by more recent GA Solid Geology interpretation of the Patterson area (2008).
47	Published 1:250,000 and 1:100,000 scale geological maps (Geological Survey of WA, and Geoscience Australia), supplemented in parts by more recent stratigraphic classification in GSWA Record 2006/15.
48	Published 1:250,000 scale geological maps (Geological Survey of WA, and Geoscience Australia), supplemented in parts by GSWA Bulletin 134 (1988).
49	Published 1:250,000 scale geological maps (Geological Survey of WA, and Geoscience Australia), supplemented in parts by more recent stratigraphic classification in GSWA 1:500,000 scale Solid Geology dataset (2008).
50	Raymond, O.L., 1993, Wagga Wagga - Kyeamba Region, 1:100,000 scale geological map, Australian Geological Survey Organisation.
51	Senior, B.R., Johnston, I.D., 1974, Geology of the Central Eromanga Basin 1:1,000,000, Bureau of Mineral Resources.
52	Senior, B.R., Swoboda, R., Mond, A., 1977, Geology of Northern Eromanga Basin 1:1,000,000, Bureau of Mineral Resources.
53	Simplified from 1:100,000 scale maps published by Geoscience Australia and Northern Territory Geological Survey
54	Simplified from 1:250,000 (and some 1:500,000) scale maps published by Geoscience Australia (previously BMR) and Northern Territory Geological Survey. Some unit descriptions, ages and associations updated from recent mapping by NTGS (2003-6)
55	Sinclair Knight Merz
56	Smout, J., Grimes, K.G., Poutch, H.F., Swoboda, R.A., Russell, E.A., 1980, Carpentaria and Karumba Basins 1:1,000,000, Geological Survey of Queensland & Bureau of Mineral Resources.
57	Southern Rural Water
58	Sweet, I.P., 2006, 1:100,000 scale geological maps. Simplified, edge matched and modified for representation at 1:1 million scale, Geoscience Australia.
59	Unknown
60	Willmot, F.W. and Chertok, I., 1972, Cape York Peninsula & Torres Strait 1:500,000, Bureau of Mineral Resources.
61	Withnal I.W., Blake P.R., Crouch S.B.S. and Rapkins P.I., 1995, Anakie Inlier 1:100,000 special, Geological Survey of Queensland.
62	Withnal, I., 2004, Port Clinton Geology 1:100,000, Geological Survey of Queensland.

Coded value domain
SalinityValue
Description *Broad classification of salinity (Non-saline/Saline).*
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
0	Unknown
1	< 250
2	< 500
3	250 - 500
4	< 1000
5	500 - 1000
6	< 1500
7	500 - 1500
8	1000 - 1500
9	< 3000
10	1000 - 3000
11	> 3000
12	1000 - 3500
13	1500 - 3000
14	3000 - 5000
15	> 5000
16	3000 - 6000
17	3000 - 7000
18	3500 - 7000
19	> 7000
20	3500 - 13000
21	6000 - 12000
22	> 12000
23	7000 - 13000
24	> 13000
25	7000 - 14000
26	> 14000
27	13000 - 35000
28	14000 - 35000
29	> 35000
30	> 100000
31	No Data

Coded value domain
AHGF_InterimAquiferFramework
Description *Classification of similar aquifer characteristics.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
1	Surficial Sediment Aquifer (porous media - unconsolidated)
2	Upper Tertiary/Quaternary Aquifer (porous media - unconsolidated)
3	Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated)
4	Upper Tertiary Aquifer (porous media - unconsolidated)
5	Upper Tertiary Aquitard (porous media - unconsolidated)
6	Upper Mid-Tertiary Aquifer (porous media - unconsolidated)
7	Upper Mid-Tertiary Aquitard (porous media - unconsolidated)
8	Lower Mid-Tertiary Aquifer (porous media - unconsolidated)
9	Lower Mid-Tertiary Aquitard (porous media - unconsolidated)
10	Lower Tertiary Aquifer (porous media - unconsolidated)
11	Tertiary Basalt Aquifer (fractured rock)
12	Tertiary Sediments (fractured rock)
13	Mesozoic Sediment Aquifer (porous media - consolidated)
14	Mesozoic Fractured Rock Aquifer
15	Jurassic (GAB intake beds) (porous media - consolidated)
16	Mesozoic (GAB) (porous media - consolidated)
17	Fractured and Karstic Rocks, Local Aquifers
18	Fractured and Karstic Rocks, Regional Scale Aquifers
19	Palaeozoic and Pre-Cambrian Fractured Rock Aquifers (low permeability)
20	Palaeozoic and Pre-Cambrian Fractured Rock Aquifers (consolidated and partly porous)
21	Late Permian/Triassic intrusives and volcanics fractured rock
22	Late Permian/Triassic sediments (porous media - consolidated)
23	Palaeozoic and Pre-Cambrian Fractured Rock Aquifers (low fracture density and very low permeability)
24	Undifferentiated non-outcropping sediments including palaeo-channels, glacial sediments and coal measures (porous media - unconsolidated)
25	Water Body
29	Cainozoic Aquifer (porous media - consolidated)
30	Unassigned due to lack of codes
-99	Unknown

Coded value domain
AHGFAquiferOutcropType
Description *Outcrop areas of aquifers.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
67	AquiferOutcrop

Coded value domain
AHGFAquiferBoundaryType
Description *Boundaries of underlying, outcropping & subcropping aquifers.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
66	AquiferBoundary

Range domain
AHGFContourDepthRange
Description *Range of valid aquifer contour depth values.*
Field type *Double*
Split policy *Default value*
Merge policy *Default value*

Minimum value	Maximum value
-5000	9999

Coded value domain
AHGFAquiferContourType
Description *Subtypes of aquifer surface contours.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
68	AquiferContourTop
69	AquiferContourBottom
73	BedrockContourTop

Coded value domain
YieldClass
Description *Broad classification of yield (<5L/s or >=5L/s).*
Field type *String*
Split policy
Merge policy

Code	Description
<5L/s	<5L/s
>5L/s	>5L/s
Unknown	Unknown
No Data	No Data

Range domain
SpecificYieldRange
Description *Range of valid Specific Yield values.*
Field type *Double*
Split policy *Default value*
Merge policy *Default value*

Minimum value	Maximum value
0.0001	0.2

Coded value domain
AHGFWaterTableAquiferType
Description *Water table units of similar hydrogeologic properties.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
71	WaterTableAquifer

Coded value domain
AHGFSurficialHydrogeologicUnitType
Description *Surficial units of similar hydrogeologic properties.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Code	Description
70	SurficialHydrogeologicUnit

Range domain
SalinityRange
Description *Range of valid salinity values.*
Field type *Long integer*
Split policy *Default value*
Merge policy *Default value*

Minimum value	Maximum value
0	200000

Coded value domain
SalinityClass
Description *Broad classification of salinity (Non-saline/Saline).*
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
Non-Saline (<3000mg/L)	Non-Saline (<3000mg/L)
Saline (>3000mg/L)	Saline (>3000mg/L)
Unknown	Unknown
No Data	No Data

Coded value domain
YieldValue
Description *Source yield values.*
Field type *String*
Split policy *Default value*
Merge policy *Default value*

Code	Description
0	No Data
1	<0.5
2	<1
3	<1.5
4	<5
5	0.5 to 5
6	5 to 10
7	5 to 50
8	10 to 50
9	>1.5
10	>2.5
11	>5
12	>50

Range domain
YieldRange
Description *Range of valid aquifer yield values.*
Field type *Double*
Split policy *Default value*
Merge policy *Default value*

Minimum value	Maximum value
0	500

Range domain
HydraulicConductivityRange
Description *Range of valid Hydraulic Conductivity values.*
Field type *Double*
Split policy *Default value*
Merge policy *Default value*

Minimum value	Maximum value
0.00001	1000