



Tim Callaghan – Resource and Exploration Geology



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DOLPHIN MINE
MINERAL RESOURCE ESTIMATE
KING ISLAND

Prepared for: King Island Scheelite Project.

Tim Callaghan, April 2010



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MAP CONVENTIONS

Coordinates in this report and in digital data associated with this report are recorded as ISG Zone 55/3.

RL's in this report are MSL.

Cross sections are drawn looking east.



EXECUTIVE SUMMARY

The Dolphin Mine is hosted in calcareous volcanoclastic sediments near the base of the Grassy Group. Scheelite mineralisation is associated with calcareous skarn developed adjacent to the contact of the Lower Grassy Group and the Grassy Granodiorite. Mineralisation is localized in and around two main carbonate horizons termed B lens and C lens as well as occurring in calcareous sediments known as the Banded Footwall Beds. Mineralisation is best developed in the C-horizon where it is in proximity to faults. The C-horizon has three principal mineralized horizons, the most significant of which is the high grade Upper C-Lens garnet hornfels. The Lower C-Lens consists of lower grade patchy mineralization in banded pyroxene-garnet hornfels. An upper pyroxene-garnet hornfels (PGH) contains spotty inconsistent mineralization.

The host sequence deeps shallowly south east, steepening in proximity to the Decline Fault. The deposit is bound to the south by the Grassy Granodiorite, the north by the northern boundary fault and the east by the Grassy River Fault. The decline Fault is a brittle-ductile shear which has attenuated and down warped the Grassy Group on its eastern margin. Near mine resource extension is limited in the southern area but may have significant potential between the Decline Fault and Grassy Fault to the south where the faults diverge.

This resource estimation is based on historic drilling data, geological sections and mine infrastructure plans. The drillhole data has been provided in Digital format by KIS and was used for the previous 2005 estimate with minor modifications.

This estimation has sub-domained the separate mineralogical and grade layers and reduced internal dilution included in the previous estimation, resulting in a reduction in tonnes but an increase in grade for only a minor loss in contained metal.

Blockmodelled remnant resources reconcile well with historic resource statements, particularly the WO_3 grade with historic production records.

Table 1. Dolphin Mineral Resource

Classification	0.25% WO_3 Cut Off			0.70% WO_3 Cut Off		
	KTonnes	$WO_3\%$	Tonnes WO_3	KTonnes	$WO_3\%$	Tonnes WO_3
Indicated	8,419	0.95	7,980	4,752	1.29	61,300
Inferred	524	0.50	2,620	7	0.73	50
Total	8,943	0.92	82,600	4,759	1.29	61,350

A significant proportion (approximately 60%) of the remnant resource is contained in pillars or sterilized by previous operations and therefore will not be amenable to underground extraction but may be available for open pit operations.

It would be reasonable to assume that the historic reserve statements would reflect the potential for recoverable reserves from modern underground operations. Remnant resources remaining above unfinished flat back stopes on mine closure, resources left at the east end of the mine may support modest tonnage underground operations. Room and rib pillars are unlikely to be recoverable from underground operations.



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Recommendations for follow up work include:

- Estimate an underground Mining Reserve and Schedule.
- Review the open cut option at a high level to determine the impacts of the decreased tonnage but increased grade.
- Continue database revision and validation.
- QA/QC analysis.
- Continued validation of the digital mine model.
- Resource extension drilling in the Southern area and exploration drilling targeting the Grassy Group volcanoclastics between the divergent Decline and Grassy River Faults.



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1 INTRODUCTION

The Dolphin Mine is located in the southeastern corner of King Island, Tasmania. The Mine was originally operated by Geopeko Ltd. along with the satellite Bold Head Mine located several kilometers to the north.

The Dolphin Mine was closed in 1990 due to declining market conditions. The deposit had been developed as a trackless LHD decline accessed mine with ore extracted mainly from room and pillar stopes. On closure the remaining resources from the upper and lower C-lens only were estimated to be 1.93Mt @ 1.29% WO₃.

The King Island Scheelite Project is a joint Venture between King Island Scheelite (KIS) and Hunan Nonferrous Metals Corporation Ltd. The JV commenced investigating the potential of re-opening the Grassy Open Cut. The initial 10 year project involved expansion of the open cut to 180m depth necessitating the construction of a seawall. A remnant mineral resource estimate for the open cut project was completed in 2006 by Australian Mining Consultants (AMC). Recently a scoping study of the underground potential of the Dolphin orebody was requested from the Joint Venture partners. An initial scoping study was completed by AMC using the 2005 Resource Model and have demonstrated that under certain physical and financial conditions an underground option may be viable, (English, 2009).

Mining Engineering consultant and former Underground Manager Alan Fudge (Polberro Consulting) and Tim Callaghan (Resource and Exploration Geology) were engaged to review the underground potential and resource extension potential of the Dolphin orebody.

A preliminary review of the open pit resource estimate indicated that it is inadequate for underground studies as it was based on a simplified geological model of the whole B and C lens. No provision for minimum grades, geological complexity, high grade mineralized domains or internal dilution was included in the 2005 estimation. As a result the 2005 estimate has smeared grade boundaries resulting in an over estimation of tonnes and underestimation of the grade. Previous mining operations split the resource into the high grade upper C-lens, lower grade lower C-lens, erratic and metallurgically poor pyroxene-garnet-hornfels and minor B-lens mineralization.

The author was requested to remodel historic geological data and develop a digital block model representing the major mineralogical and grade domains contained in the Dolphin Orebody. The resulting block model will be used to estimate a Mining Reserve and Mining Inventory for a modern underground operation. Proposed mining methods include predominantly room and pillar with minor open stoping.

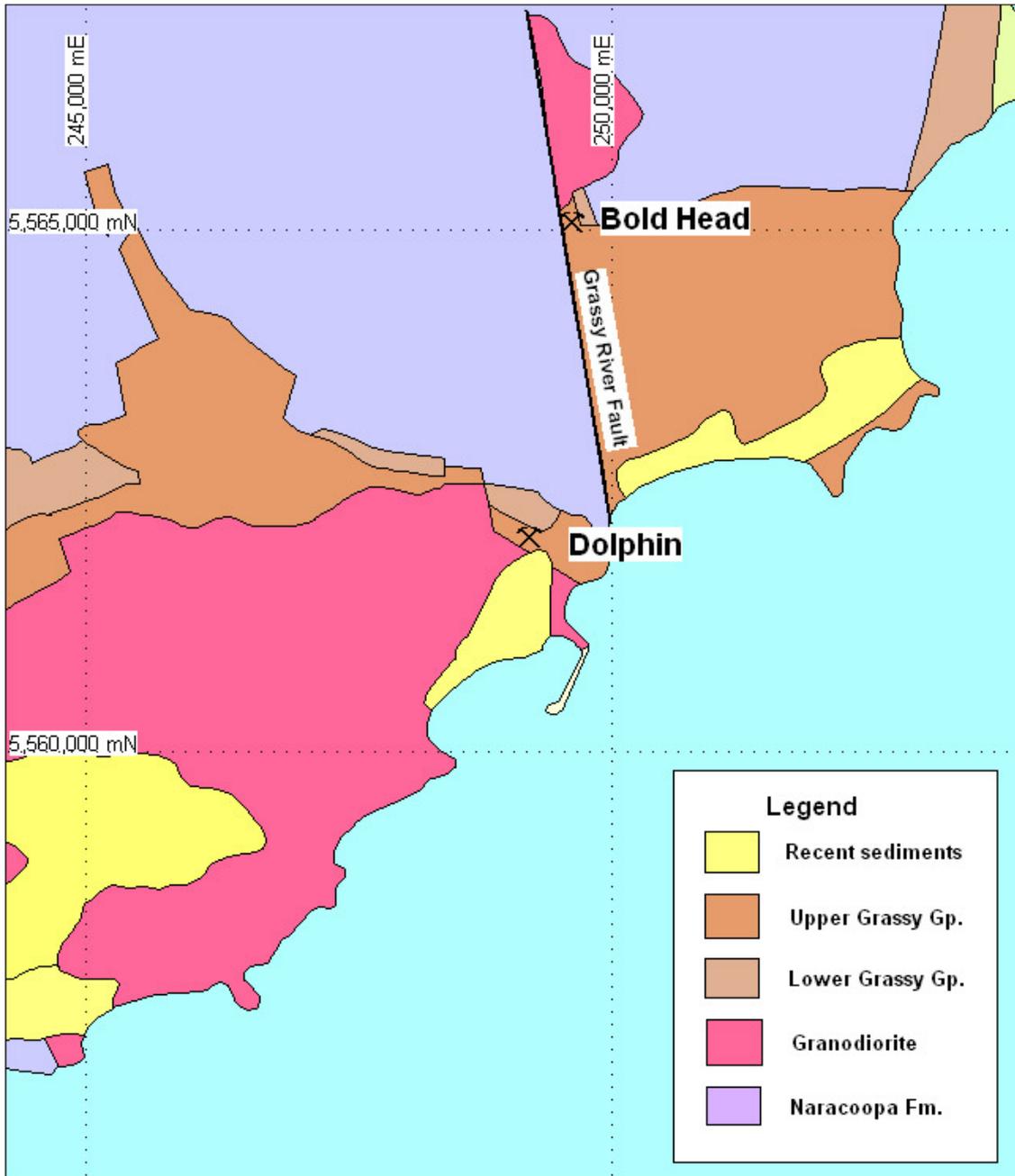


Figure 1. Dolphin and Bold Head Location Plan and Simplified Geology (Coordinates GDA94).



2 GEOLOGY

2.1 REGIONAL GEOLOGY

The regional geology of King Island is best described in Tasmanian Geological Record 2007/02, *Some Notes on the Geology of King Island* (Calver, 2007). Much of the geology described in this section is summarized from this publication (Figure 2).

The geology of King Island consists primarily of Proterozoic rocks with lesser Devonian Granites and extensive wind blown Pleistocene to Recent sand cover. The Proterozoic Geology of the eastern half of the island (hosting the Bold Head and Dolphin WO₃ deposits) is distinctly different from the geology of the western half. The relationship between the western and eastern halves remains problematic.

The western half is dominated by the Mesoproterozoic (1300Ma) Surprise Bay Formation. The Surprise Bay Formation is dominantly a N-S striking regionally metamorphosed amphibolite grade meta-sedimentary unit with minor mafic intrusives. The western margin of the Surprise Bay Group was intruded by a 790Ma granite body (Calver, 2007) post dating the 760Ma Wickham Orogeny (Cox, 1989, Turner *et. al.* 1998).

The Eastern half of the Island is dominated by the (1000-750Ma) Naracoopa Formation which appears to be a correlate of the Cowrie Siltstone in NW Tasmania (Calver, 2007). The Naracoopa Formation consists of a thick succession of relatively unmetamorphosed shale, siltstone and fine grained muscovite-quartz sandstone. Along the Southeast Coast the siltstone is conformably overlain by the 580Ma Grassy Group and is considered a correlate of the Togari Group in NW Tasmania, (Calver, 2007).

The Grassy Group in the City of Melbourne Bay area is well described by Calver (2007) and Meffre *et. al.* (2004). A summary of the Grassy group stratigraphic sequence is described below:

Cottons Breccia - A basal unit of polymict cobble to boulder diamictite.

Cumberland Creek Dolostone - Calcareous sediments, shale with limestone/dolomite inter-beds. (Host Horizon for the King Island Scheelite Mineralisation).

Yarra Creek Shale - Planar laminated shale with rare volcanoclastic interbeds.

Grimes Intrusive Suite - Gabbroic intrusive sills of andesitic composition.

City of Melbourne Volcanics - Tholeiitic pillow lava, peperite and volcanoclastic sandstone.

Shower Drop Volcanics – Picritic, high MgO pillow lava and hyaloclastite.

Bold Head Volcanics – Tholeiitic basalt, volcanoclastic sandstone and conglomerate.

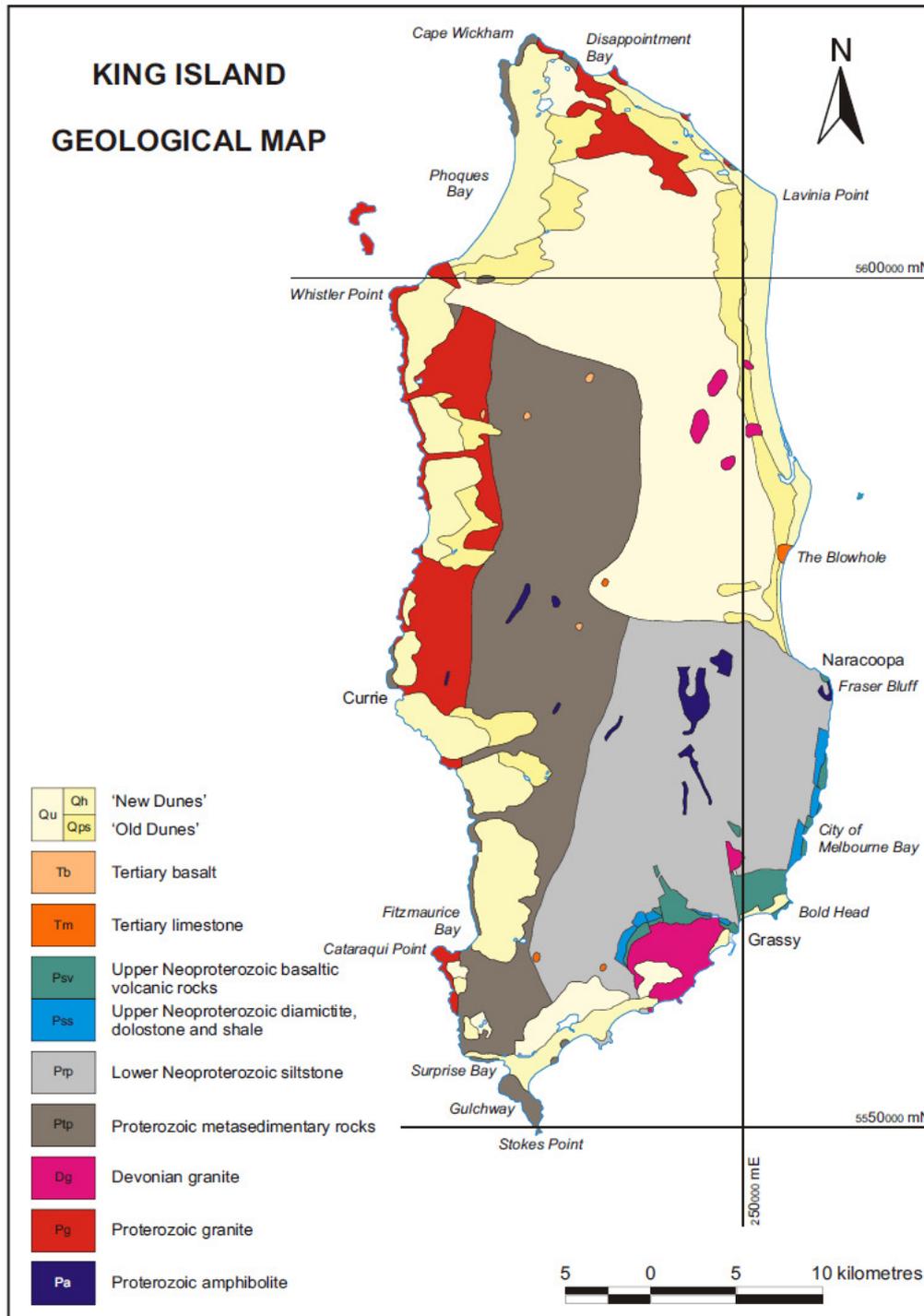


Figure 2. Regional Geology of King Island, (Calver 2007). Coordinates GDA94.



Three granite bodies, the Grassy, Bold Head and Sea Elephant plutons intrude the Proterozoic sediments on the southeast coastline of King Island. The intrusions are classified as I-type monzogranite-granodiorite (Calver, 2007). The Bold Head Granite may be a sliver of the larger Grassy granite, separated by the N-S trending Grassy River Fault (Figures 1 and 2).

The Bold Head Granodiorite is porphyritic with large pink k-feldspar phenocrysts. The mineralogy consists of quartz, k-feldspar, plagioclase, biotite and amphibole with minor apatite, allanite, sphene, magnetite and zircon.

2.2 MINE GEOLOGY.

Scheelite skarn mineralisation has formed within the metamorphic aureole of the Bold Grassy Granodiorite plutons where it has come into contact with the calcareous sediments and carbonates of the Lower Grassy Group Cumberland Creek Dolostone. Both the Bold Head and Grassy mineralisation is hosted in a similar stratigraphic sequence, although the carbonate units appear to be thicker in the Grassy area (Danielson, 1975, Figure 2). Mineralisation has formed by selective metasomatism, mainly within and immediately adjacent to carbonate horizons. The deposits formed over a 100-200m sequence of complex skarn mineralogy located in the lower part of the Grassy Group, with two main host horizons known as B and C lens hosted in carbonates of 10-30m thickness separated by a similar thickness of skarn altered volcanic sediments. Mineralisation appears to have occurred where carbonates come into direct contact with the intrusion, or adjacent to brittle faults tapping into the nearby intrusion. Mineralisation grades increase towards major structures such as the Northern Boundary, Central, Swan, Wedge and Decline Faults. Mineralisation grades intensify to the south east where B and C lens come into contact with the Decline Fault.

Mine sequence rocks have been intensely contact metamorphosed and metasomatised and are described in Geopeko drill logs and maps by the resultant skarn mineralogy and not the stratigraphic protolith described in the regional geology. Geopeko logging codes include:

Table 2. DDH logging codes

Code	Geology
um	Upper metavolcanics
bh	Biotite-actinolite hornfels
pbh	Pyroxene-biotite hornfels
pgh	Pyroxene-garnet hornfels banded pyroxene andradite skarn (+/- Scheelite)
gh	Garnet hornfels, andradite skarn (+/- Scheelite)
ch	Marble
bfb	Banded footwall beds, interbedded marble and biotite-pyroxene grossularite skarn (+/- garnet, Scheelite)
lv	Lower metavolcanics

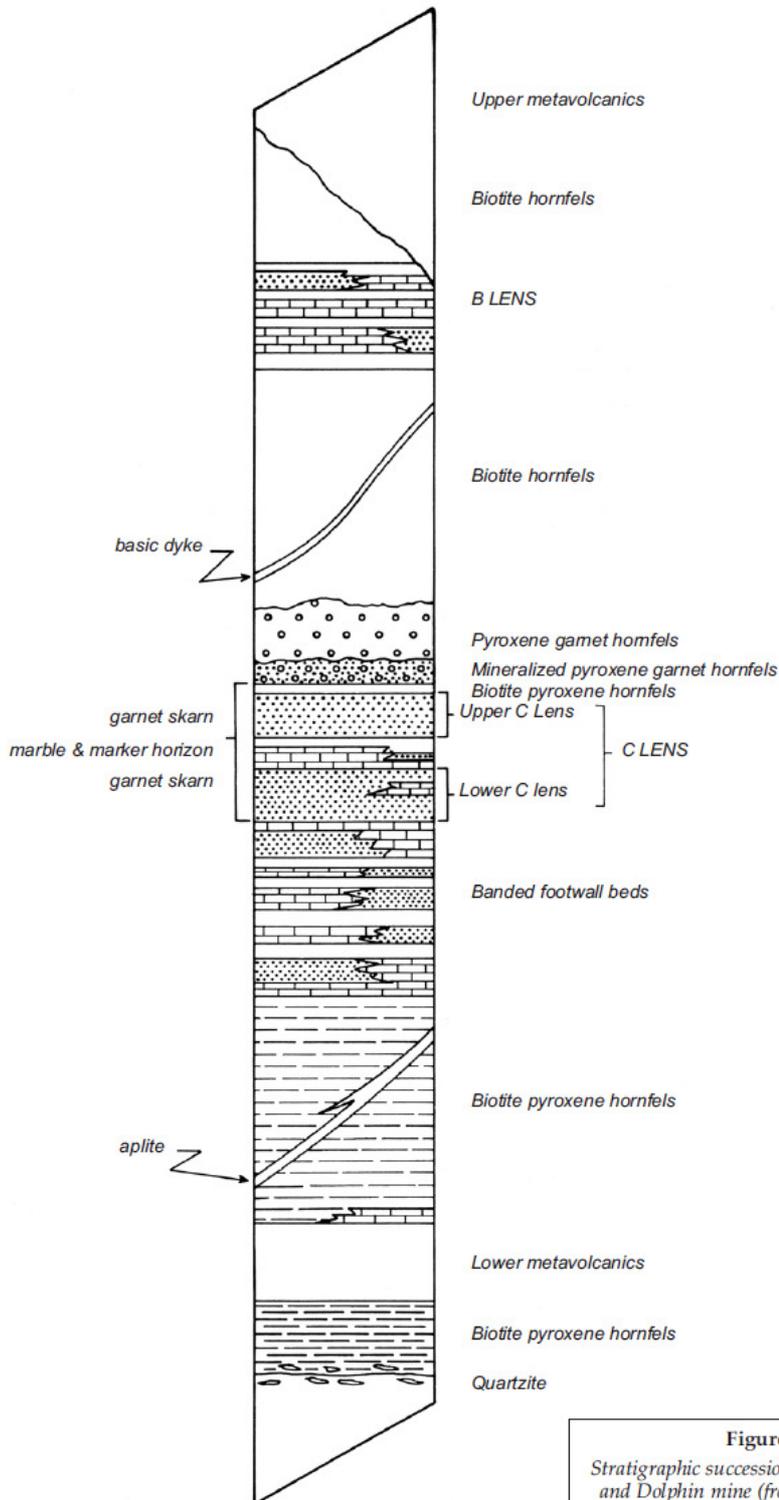


Figure 4
Stratigraphic succession, No. 1 Open Cut and Dolphin mine (from Brown, 1990).

Figure 3. Stratigraphic column of the Grassy Group host sequence in the Grassy open cut (from Brown, 1990).



Mineralisation in the Dolphin Deposit is best developed within the C lens which has several distinct mineralogical components including a well mineralized high grade garnet hornfels (gh) known as Upper C Lens. An unmineralised or sporadically mineralized marble marker horizon separates the Upper C Lens from the Lower C-lens which contains banded garnet-pyroxene hornfels and is generally lower grade with less consistent mineralization. Mineralisation is also patchily developed in the banded footwall beds immediately below the Lower C-lens and has been included in the Lower C Lens horizon where mineralised. Overlying C-lens is a distinct pyroxene-garnet hornfels (pgh) which is sporadically mineralized and is generally lower grade and discontinuous.

B-lens is an upper dolomite horizon which has been variably hornfelsed and metasomatised with patchy sporadic mineralization. Mineralisation within B-lens tends to be located in proximity to major faults with limited lateral continuity.

The host sequence dips south east at approximately 30° but steepens to 50° proximity of the Decline Fault on the eastern margin of the deposit. Several major southeast and east trending normal faults cut the orebody into discreet horst and graben structural zones. Major fault bounded production areas include the Wedge, Central, Pit and Southern Areas, with many subsidiary fault bound blocks and splays (Figure 4).

The northern boundary fault truncates the mine sequence to north juxtaposing Lower Grassy Group against the Naracoopa Formation quartzite. The southern boundary is truncated by the granite batholith, the surface of which dips and plunges shallowly north and east. The granite surface is irregular with many associated dykes.

The Decline Fault is a major north-south trending, east dipping brittle-ductile shear down-warping the eastern margin of the orebody. Limited drilling suggests the Decline Fault truncates the major north northwest trending, steep west dipping Grassy River Fault. The Decline and Grassy River faults diverge to the south and there is some untested potential for mine sequence rocks to extend to the south if they have not been stoped out by the granite batholith.



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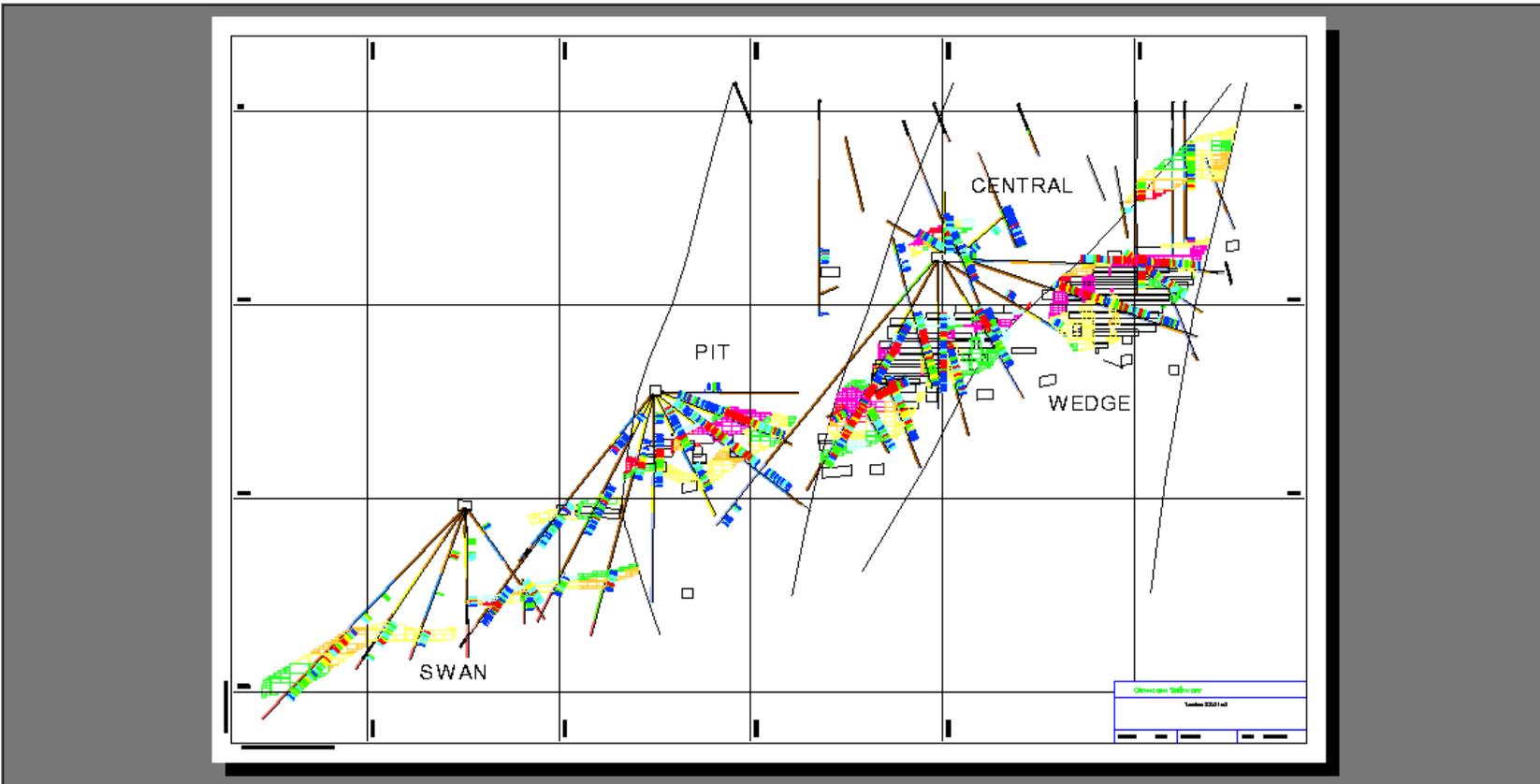


Figure 4. Blockmodel Section 220160E with Major Fault blocks units.



3 DATA PROVIDED

Data provided for the estimate includes:

- Drilling database (Access)
- Digital mine infrastructure (Datamine, dxf and Vulcan)
- Scanned geological cross sections (Geopeko Ltd).

A digital database was provided by KIS. No documentation of QA/QC or data validation was provided or cited. The data is essentially the same as used in the 2005 estimate. Several errors were identified in the data and corrected before geological modeling commenced.

Errors corrected include

- Assay interval overlaps
- Inconsistent assay values between database and drafted sections
- Incorrect down hole surveys

A digital mine model created by AMC in 2005 was provided. Two files decall and stopeall were imported into Surpac. Validation attempts were unsuccessful with numerous errors reported. Several alternative files were provided and these were opened in both Surpac and Datamine but were still corrupt and unable to be used.

Consequently the models were rebuilt from the point data. The new model was validated visually against the originals and was considered to be satisfactory for this estimate. There are likely to be minor differences between the digital model and reality. However these are unlikely to have a material impact on the Resource Estimate or preliminary technical investigations into re-accessing the Mine. However they may well be significant on a local scale when mining commences. ***It is recommended that a procedure be developed for all areas being re-accessed near old workings to involve some exploratory drilling including some diamond drilling to test the resource and probe holes to test for voids.***

The Dolphin Digital Mine model is located in the disc attached in the appendices. Several views of the historic workings are shown in Figures 5-8. The model was used to assess remnant resources in this estimate.

Data provided with this report includes:

- Access database
- Solid Models of Historic Mine Workings (Surpac)
- Solid Models of major Geological Elements (Surpac)
- Solid Models of Mineralisation Domains (Surpac)
- Block modeled Resource Estimate (Surpac)
- Mineral Resource Estimate Report (pdf)

All Diamond Drill Hole (DDH) logs for the Dolphin Mine were created prior to the widespread use of digital databases and mining software by the mining industry. All



logging was completed by Geopeko geologists on site. The bulk of the logging appears to have been systematic and to a high standard with logs hand typed onto standard log sheets. The data has been drafted onto standard sections and level plans which are well presented. The technical standards set by Geopeko appear to be of a high industry standard, particularly after mining commenced.

DDH logs were available as scanned paper logs only and had to be manually entered into a digital format by database consultant OMI Pty Ltd. A small number of DDH logs were incomplete or missing. The missing data is unlikely to have a material impact on the interpretation and estimation of the resource on a global level. Input data was validated using Surpac[™] software and by comparing plotted cross sections with the historic drafted sections. Minor discrepancies are evident on some sections, mainly due to survey differences between hand plotted and digitally plotted data. These discrepancies are unlikely to have a material impact on the resource estimate.

An updated and validated version of the Drill Database is located in digital format in the attached appendices. Recent geotechnical drilling from holes G44-G58, M1-M9P and WB9 and WBH4 –WBH6 require conversion to ISG and inclusion in database. These holes do not have associated assay data and will not materially effect the resource estimation.

Table 3. Summary of Bold Head DDH Sampling Techniques and Data

Criteria	Status
Drilling Techniques	<ul style="list-style-type: none"> • NQ diamond core for surface DDH • BQ diamond core or equivalent for underground DDH. • 681 diamond holes for 62,326m
Sample recovery	<ul style="list-style-type: none"> • Excellent. Generally 100%, with minor losses in broken ground, although not systematically reviewed in this report.
Logging	<ul style="list-style-type: none"> • Geological and geotechnical logs on scanned hand typed logging sheets • Only limited drill core available in MRT core shed. • Core photographs and logs stored in MRT library
Sub-Sample preparation	<ul style="list-style-type: none"> • Half core split on 1m samples while respecting geological contacts for DDH post 1970. Prior to 1970 half core split to either 2ft (0.6m) or 6ft (2.5m). 70% of samples are split on 1m intervals. • Historic sub-sample preparation technique not documented.
Sample preparation	<ul style="list-style-type: none"> • Not documented, samples assayed in on site mine laboratories.



Criteria	Status
Assay QA/QC	<ul style="list-style-type: none">• Submission of pulp duplicates with every batch of samples.• Random independent laboratory analysis by Amdel Laboratories. QA/QC data not captured and reviewed in this report. KIS were responsible for QA/QC of assay data in the previous estimates.• <i>It is recommended that a review of QAQC data be completed.</i>
Location of Data	<ul style="list-style-type: none">• All hole collar surveys by licensed mine surveyor.• All coordinates in ISG Zone 55/3.• Down hole surveys completed with Eastman Single Shot or Multi Shot cameras.• There is no interference from local magnetic fields.
Data Spacing and distribution	<ul style="list-style-type: none">• Drill spacing approximately 20 x 20 or better.• The majority of DDH have been drilled north-south or vertical, perpendicular to ore body strike.
Database Integrity	<ul style="list-style-type: none">• All data captured and stored in customised access database by OMI Pty Ltd and validated and updated by AMC 2005 and REG 2010.• All historic drill logs entered into excel spreadsheets prior to being downloaded into database. Early logs used imperial measurements converted to metric using excel spreadsheets.• Data integrity validated with Surpac Software for EOH depth and sample overlaps.• Manual check by reviewing cross sections with the historic drafted sections and plans.



4 MINERAL RESOURCE ESTIMATION

The Dolphin Mineral Resource has been derived from a kriged block model created with Surpac[™] software licensed to Tim Callaghan. The block model extends between 5633600 to 564500N, 219250 to 220560E and -400 to 100m RL.

4.1 GEOLOGICAL DOMAINING

Wire-framed solid models of geological and mineralisation domains were created from 20m spaced north-south cross sections utilizing drill hole data and historic Geopeko geological sections.

Mineralized WO₃ domains are delineated using a minimum mining width of 3m @0.5% WO₃ with some allowances for geological continuity. Internal dilution was restricted to a maximum of 3m where possible. Solid models have been 'snapped' to drill holes where possible to accurately capture and model data and eliminate sectional projection inaccuracies.

Mineralised domain models are listed in Table 4. Geology solid models created during the interpretation of the geological data include the B and C horizons, the granite surface and major faults.

Table 4. Mineralised Domains

Domain	Code	Database flag
Central lower C lens	central_c_l	1
Pit lower C lens	pit_c_l	2
Wedge lower C lens	wedge_c_l	3
Central C lens pyroxene-garnet-hornfels	central_c_pgh	4
Pit C lens pyroxene-garnet-hornfels	pit_c_pgh	5
Wedge C lens pyroxene-garnet-hornfels	wedge_c_pgh	6
Swan C lens pyroxene-garnet-hornfels	swan_c_pgh	7
Central upper C lens	central_c_u	8
Pit upper C lens	pit_c_u	9
Swan upper C lens	swan_c_u	10
Wedge upper C lens	wedge_c_u	11
Central B lens	central_b	12
Pit B lens	pit_b	13
Wedge B lens	wedge_b	14
Swan B lens	swan_b	15
West Pit lower C lens	west_pit_c_l	16
North Pit lower C lens	north_pit_c_l	17

4.2 COMPOSITING OF DATA

Data used for this estimation has been derived solely from diamond drill holes.

DDH intercepts of solid models have been flagged with Surpac Software and relevant intervals stored in the access database. DDH data has been composited on 1m lengths.



Composites of less than 0.25m were not included in statistical studies or in the resource estimate.

Composited data is located as .csv files on the attached data disc in the appendices.

4.3 SAMPLE STATISTICAL STUDIES

Descriptive statistics and histograms of composited data for each domain are located in Appendix 2. All the data demonstrate a mildly positively skewed sample distribution typical of low grade base-metal deposits. Mean values for Upper C Lens domains demonstrate consistently higher mean and median values with generally low coefficient of variation (with the exception of pit_c_upper). Conversely the pgh and B Lens domains are generally lower grade and have a higher coefficient of variation. All domains with a coefficient of variation greater than 1.2 and have been top cut to the 97.5th percentile values outlined in Table 5.

Table 5. 1m composite basic statistics

Code	No spls	Max	Min	Mean	Median	Var	Std dev	Cv	Top Cut
central_c_l	517	6.4	0.005	0.75	0.52	0.74	0.86	1.13	-
pit_c_l	1180	9.1	0.005	0.53	0.42	0.40	0.62	1.17	-
wedge_c_l	283	31.9	0.005	0.93	0.28	1.61	2.60	2.79	4.5%
central_c_pgh	142	21.3	0.005	0.79	0.23	5.37	2.32	2.90	6%
pit_c_pgh	283	32.0	0.005	0.93	0.28	6.74	2.60	2.79	5.5%
wedge_c_pgh	566	20	0.005	1.15	0.56	3.32	1.82	1.58	6.3%
swan_c_pgh	50	1.48	0.005	0.36	0.25	0.11	0.33	0.93	-
central_c_u	499	18.1	0.005	1.58	1.22	2.54	1.59	1.09	-
pit_c_u	527	29.7	0.005	1.42	1.08	4.6	2.15	1.51	5.4%
swan_c_u	411	8.1	0.005	0.98	0.76	0.83	0.91	0.94	-
wedge_c_u	1100	15.8	0.005	1.75	1.42	1.74	1.32	0.75	-
central_b	263	19	0.005	0.89	0.38	3.12	1.76	1.98	5.4%
pit_b	128	12.1	0.005	0.76	0.40	1.56	1.25	1.65	3.2%
wedge_b	1178	17.9	0.005	0.84	0.54	1.37	1.17	1.40	3.9%
swan_b	156	10.1	0.005	0.76	0.49	1.14	1.07	1.40	3.3%

4.4 VARIOGRAM MODELING

Variography of 1m composited data was modeled using Surpac Software and variogram models are located in Appendix 3. Variogram models were constructed from 1m composited data for the four distinct mineralogical and grade domains, Upper C-Lens, Lower C Lens, pgh, and B Lens.

Variograms typically displayed low to moderate nugget effect with short ranges of about 2-5m to the first structure and approximately 10-15 to the second with the exception of B Lens and Upper C Lens which have longer ranges of up to 40m.



Table 6. WO₃ Variogram Parameters (spherical and nested spherical models).

Domain	Nugget	Sill	Range	Major:semi	Major:minor
C Upper Down hole	0.30	0.99 0.60	2.4 16.1	1 1	1 1
C Upper	0.30	0.82 0.58	5.2 30.5	1 1	1 1
PGH Down hole	0.50	2.1	14.5	1	1
PGH	0.50	0.65 0.61	1.6 9.6	1	1
C Lower Down hole	0.25	0.27 0.30	4.2 17.6	1 1	1 1
C Lower	0.25	0.50 0.62	2.3 10.6		
B Lens Down hole	0.25	0.23 0.45	2.4 8.5		
B Lens	0.25	0.22 0.47	6.8 46		

4.5 RESOURCE ESTIMATION PROCEDURE.

The Dolphin Resource WO₃ grades have been interpolated into a blockmodel using an ordinary kriging algorithm. Block sizes were set at 10m x 10m x 5m with sub-celling to 1.25m in the x, y and z.

Spherical variogram model parameters used for each domain are outlined in Table 6. Domains with smaller sample sets have been interpolated using parameters modeled for larger, similar domains.

Table 7. Search Neighborhood

Ellipse plunge	-30
Ellipse bearing	110
Ellipse dip	0
Search Radius	100m
Major:semi major ratio	1
Major:minor ratio	2
Discretisation points	3:3:3
Minimum No of samples	5
Maximum No of samples	25



4.6 SPECIFIC GRAVITY

No specific gravity measurements were made for this estimate nor were any reports specifically detailing SG estimation cited. The Specific Gravity values used for the B and C lens were the same as those used for the 2005 estimate which have been derived from Geopeko reports (Balind, 1988).

Due to the variable nature of skarn formation it is likely there will be considerable variance in the bulk density of the ore.

Specific Gravity factors applied for this estimate are:

B - Lens	SG = 3.1
C - Lens	SG = 3.4
Waste	SG = 2.9



6 RESULTS

The total estimated remnant Mineral Resource for the Dolphin Mine at a 0.25% and 0.7% WO₃ cutoff, classified as Inferred and Indicated in accordance with the 2004 JORC Code is located in Table 8.

Table 8. Dolphin Mineral Resource

Classification	0.25% WO ₃ Cut Off			0.70% WO ₃ Cut Off		
	KTonnes	WO ₃ %	Tonnes WO ₃	KTonnes	WO ₃ %	Tonnes WO ₃
Indicated	8,419	0.95	7,980	4,752	1.29	61,300
Inferred	524	0.50	2,620	7	0.73	50
Total	8,943	0.92	82,600	4,759	1.29	61,350

The Mineral Resource includes remnant mineralisation in active stopes and adjacent to active stopes at the time of closure which may be amenable to underground mining activities. The estimate also includes all rib pillars, room pillars, regional pillars and remnant resource sterilized by underground mining. These remnants have been included in the estimate as they may be recoverable in a proposed open cut operation. Actual minable resources available to an underground operation will be significantly less than the total remnant mineral resource. A Mining Reserve and production schedule should be calculated from the blockmodel by a competent mining engineer.



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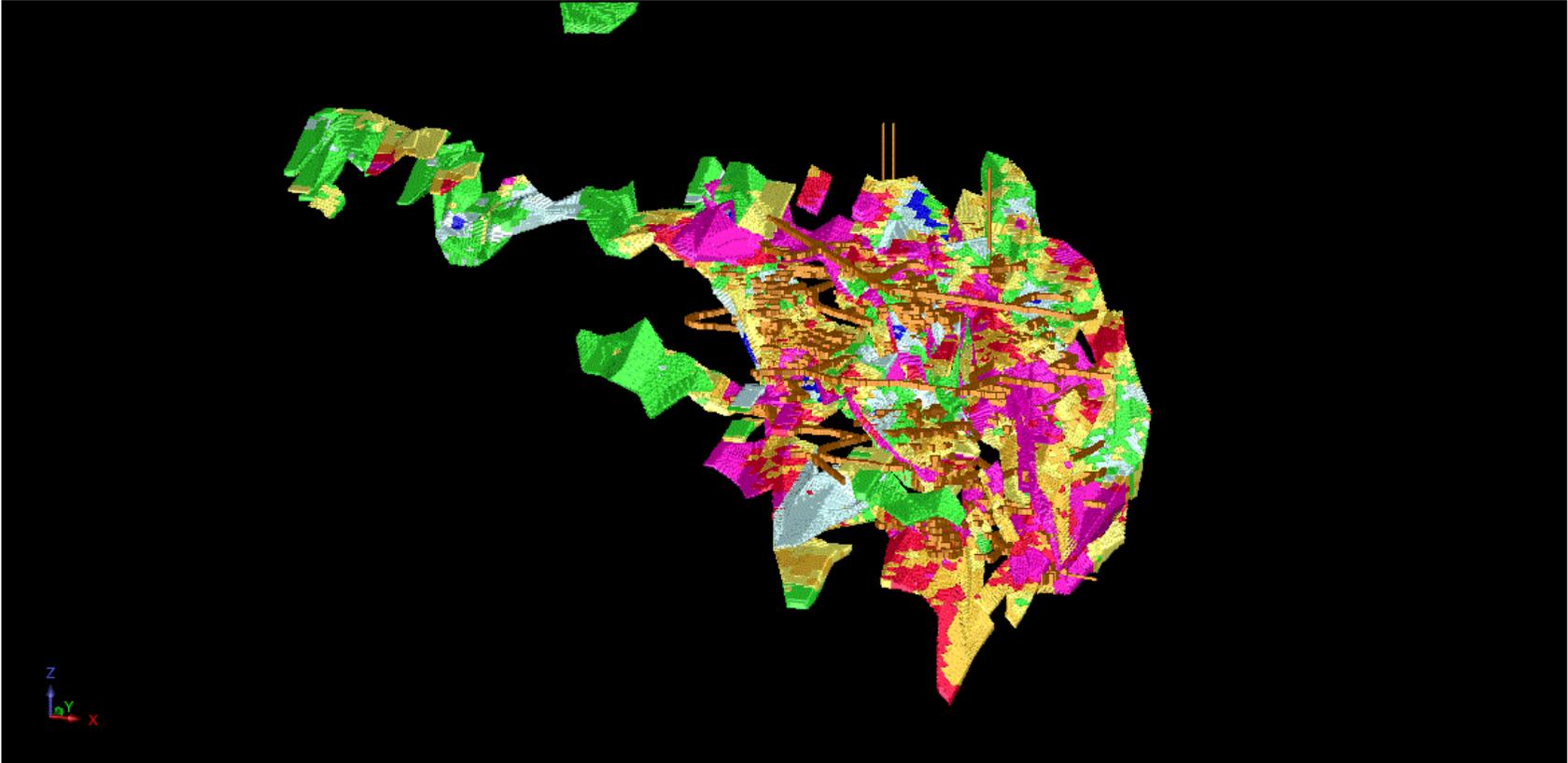


Figure 5. Dolphin Remnant Mineral Resource, looking NW. Remnant Indicated and Inferred Resource of 4.75Mt @ 1.29 WO₃.

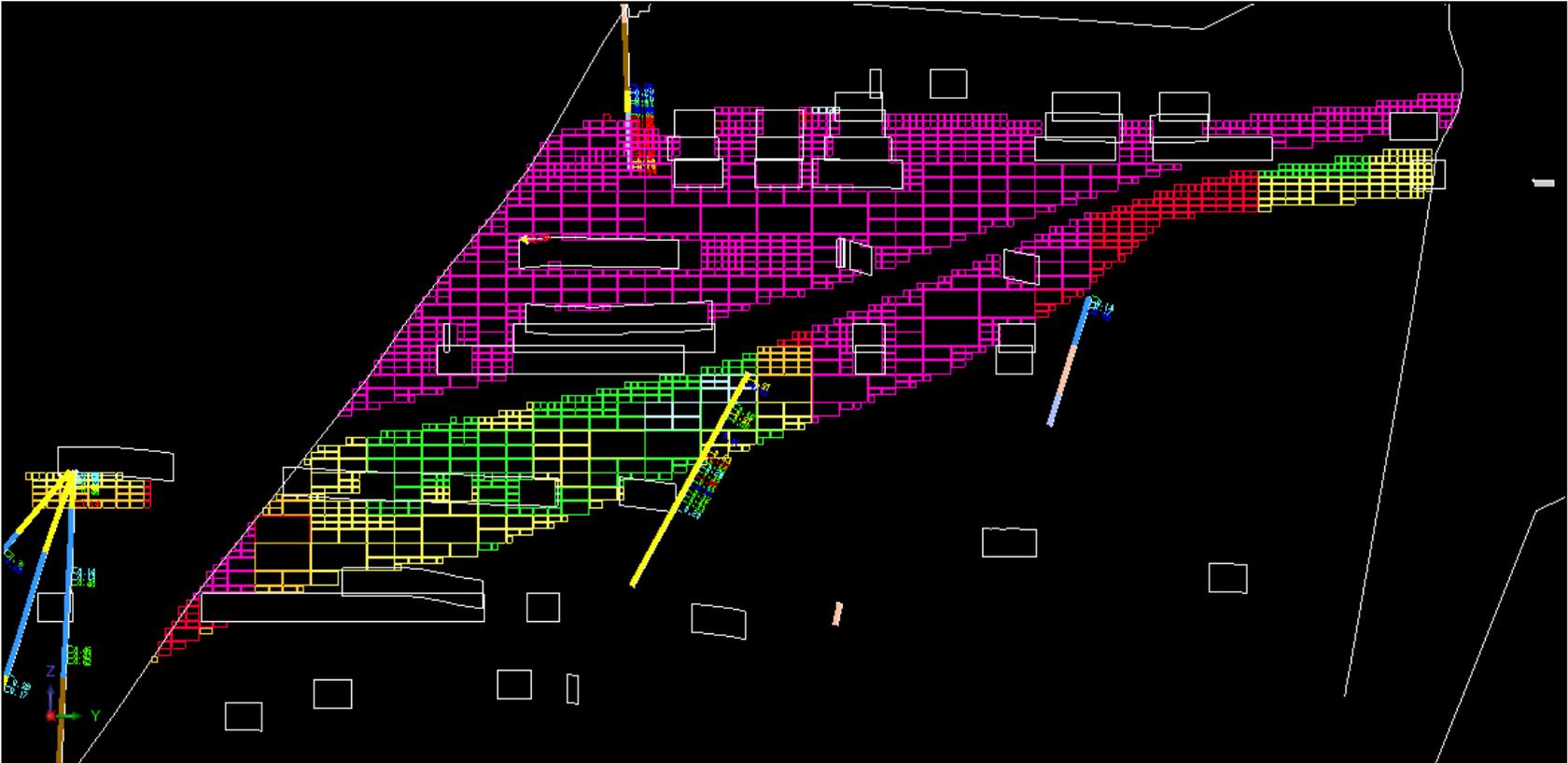


Figure 6. Section 220300, wedge with high grade Upper C lens and Lower C Lens separated by barren Marble Marker horizon.

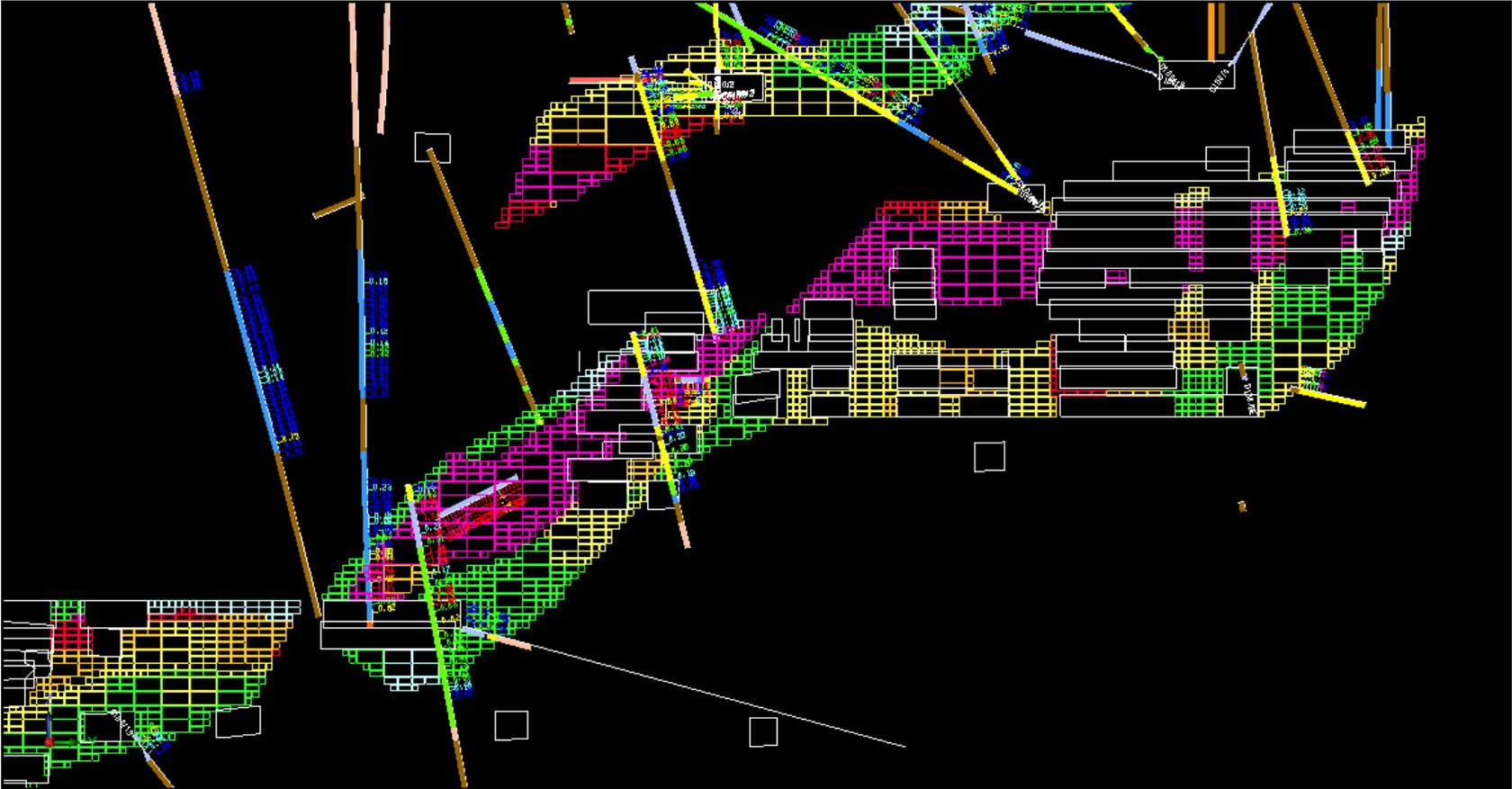


Figure 7. Cross section 220180E demonstrating remnant high grade resource in layered C Lens. Highest grades (purple) are contained in the Upper C Lens garnet hornfels with lower grade resource contained in the Lower C Lens and overlying PGH pyroxene-garnet hornfels.

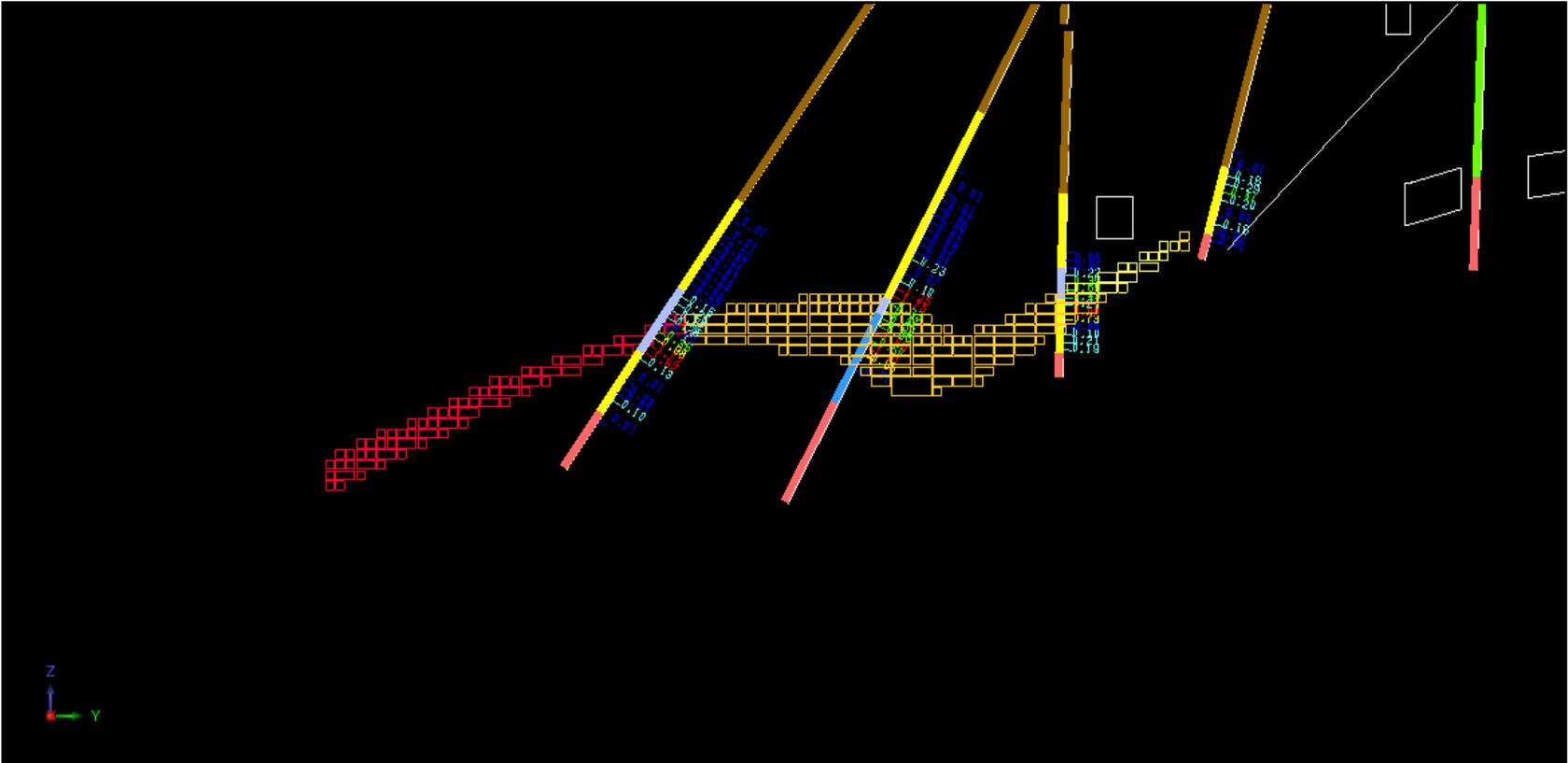


Figure 8. Section 220280E Swan Resource. C Lens is notably thinner in the Southern areas limiting potential resource additions through exploration of this area.



7 VALIDATION AND CLASSIFICATION

The blockmodel and digital mine model were validated by comparing the sliced models with the drafted Geopeko cross sections. No significant discrepancies were observed.

The estimated grade compares reasonably well with historic resource estimates.

Table 9. Comparison of resource estimate with previous estimates at 0.7% WO₃ cutoff.

Estimate	MTonnes	% WO ₃
Geopeko	1.93	1.29
REG 2010	4.76	1.29
AMC 2006	4.47	1.07

The grade of the remnant resource reconciles well with the final Nth Broken Hill Peko Ltd estimate (Stevenson 1989) on mine closure although the tonnage is significantly higher. Although not stated, the historic report is probably a minable resource and does not include pillars or resource sterilized by underground mining activities, whereas the REG and AMC estimates include all remnant resources irrespective of whether they can be extracted by room and pillar methods or not.

The total remnant tonnage above 0.7% in this estimate reconciles well with the AMC total remnant tonnage but the grade is 20% higher.

A blockmodel report of the underground mine production reconciles very well with historic production (Table 10). Both the AMC and REG models are undiluted, suggesting a 5-10% drop in grade and corresponding increase in produced tonnage is likely.

Table 10. Comparison of historic production with REG and AMC blockmodels

Estimate	MTonnes	% WO ₃
Historic production	2.6	1.0
REG blockmodel production report	2.5	1.11
AMC blockmodel production report	2.9	0.81

The subdomaining of the high grade Upper C Lens in this estimate has produced a more realistic estimation of mineral resources that reconcile very well with historic production and figures. The 2006 AMC model appears to have underestimated the grade and over estimated the tonnes mainly through the inclusion of excessive internal dilution and the smearing of grade interpolation across mineralogical domains.

The majority of the resource has been classified as an Indicated Resource. None of the resource has been classified as measured due to the uncertainty of the historic mine workings, the lack of industry standard bulk specific gravity measurements, and the need for QA/QC analysis.

The western end of the resource and the northwestern remnant on the pit wall has been classified as Inferred Resource due to lower density of drill intercepts.



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Classification codes built into the block model are as follows:

Code	Status
1	Previously Mined
2	Inferred resource
3	Indicated Resource



8 RECOMMENDATIONS

Reconciliation tables and visual examination of previous estimates suggests the REG blockmodel is a better estimation of the Dolphin Resource than the AMC estimation and therefore should provide a better basis for reserve estimation and financial analysis of the Dolphin Project, particularly for the underground production option. It may however be prudent to gain an independent review or complete an internal review of both models to determine which is the most appropriate.

There are significant remnant resources remaining in the Dolphin Mine. Much of the high grade lower mine resources remain accessible while the remnant resource contained in the upper mine is contained mainly in pillars and areas sterilized by mining activities. Modern mining methods and ground support regimes have improved significantly since the closure of the Dolphin Mine and many areas considered sterilized may now be accessible. It is recommended a mining Reserve and mining inventory be calculated using the REG estimate.

The lower tonnage but increased grade of the global remnant resource at the 0.25% WO₃ cutoff (8.9Mt @ 0.92% WO₃) will impact on both the mining inventory, strip ratio and mill performance for the open cut development option. This project should be reviewed initially at a high level to determine any positive or negative impacts.

There is limited opportunity for significant resource extensions at the eastern and south end of the Dolphin Resource. The mineralized horizons are thinner between the Swan Fault and the Granite contact, limiting the tonnage available in the southern area. However it remains unknown if the mine sequence extends south between the diverging Decline Fault and Grassy River Fault. If the mine sequence does extend south between these two faults the project will have significant potential for extended mine life. A limited drilling program is recommended to test these two areas for resource extension.

Continued validation of the drill database, mine digital model and QA/QC reporting is recommended.



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ADDITIONAL NOTES

LIMITATIONS AND CONSENT

The report is provided to the King Island Scheelite Project in the context of an independent review and compilation of geological information, Mine Infrastructure and Mineral Resource Estimates and should not be used or relied upon for any other purpose.

This report has been prepared using information available to the Author at the time of writing. The opinions stated herein are given in good faith and with the belief that the basic assumptions are factual and correct and the interpretations reasonable.

This report is not intended for the use as a public document nor, in whole or in part, in a public document without written consent to the form and context in which it appears.

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COMPETENT PERSON AND JORC CODE

This report was prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Tim Callaghan, who is a Member of The Australian Institute of Mining and Metallurgy ("AusIMM"), has a minimum of five years experience in the estimation and assessment and evaluation of Mineral Resources of this style and is the competent Person as defined in the JORC Code. This announcement accurately summarises and fairly reports his estimations and he has consented to the resource report in the form and context it appears.

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STATEMENT OF INDEPENDENCE

Tim Callaghan has no material interest or entitlement in the securities or assets of the King Island Scheelite project or any associated companies.



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Appendix 1

Dolphin Scheelite Domain intercepts



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hole_id	depth_from	depth_to	Code
103	92.81	105.86	16
106	104.07	104.08	2
107	114.45	139.17	16
108	103.77	104.3	16
108	115.73	128.29	16
110	55.47	58.18	2
110	58.18	60.54	8
110	60.54	66.45	2
126	189.31	194.31	10
128	45.72	54.5	13
128	123.29	133.17	2
130	73.79	77.27	13
130	142.53	164.89	2
143	7.92	21.34	17
144	1.65	28.96	17
147	72.54	77.11	13
148	105.77	111.86	2
151	1.52	24.38	17
162	58.92	70.23	5
162	71.36	79.68	9
162	80.16	90.86	2
165	31.39	36.33	12
165	45.61	47.85	12
166	61.57	62.4	2
166	62.4	63.76	2
166	63.76	77.66	2
167	95.55	98.85	2
168	32.33	37.93	12
169	78.42	86.76	12
169	124.66	125.95	4
169	125.95	126.06	8
169	126.06	132.03	8
169	132.32	148.99	1
170	71.63	78.64	4
170	78.64	86.26	8
170	86.26	88.71	2
170	88.71	92.93	2
172	96.93	103.02	5
172	103.02	109.12	9
172	112.17	124.36	2
173	54.19	61.89	12
173	64.62	71.63	12
173	80.71	81.77	4
173	83.6	89.46	8
173	91.11	96.97	1
175	81.38	86.26	2
176	53.75	54.86	12
178	21.56	41.75	14
178	45.11	46.11	14



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hole_id	depth_from	depth_to	Code
179	43.7	61.57	14
179	99.36	103.63	6
179	103.63	109.29	11
179	109.29	109.87	11
179	109.87	120.7	3
182	62.48	68.58	4
182	68.58	71.63	8
182	71.63	88.39	2
183	126.71	127.71	4
183	127.71	128.3	8
183	128.3	136.86	8
183	138.38	158.1	1
184	151.13	153.83	4
184	153.83	154.75	8
184	154.75	162.43	8
184	164.82	195.62	1
189	107.9	114.76	6
189	114.76	115.37	11
189	115.37	128.02	11
189	131.22	142.86	3
191	116.7	122.53	9
191	122.53	131.67	2
192	51.97	77.36	14
192	108.51	113.08	6
192	113.08	126.8	11
192	129.84	148.53	3
193	118.26	120.09	5
193	120.09	123.34	9
193	123.34	124.36	2
193	124.36	130.93	2
194	62.75	75.59	12
194	100.05	108.72	4
194	108.72	111.64	8
194	111.64	112.7	8
194	113.67	121.24	1
195	135.59	137.84	5
195	139.6	144.21	9
195	144.21	156.36	2
196	179.7	185.59	5
196	185.59	191.34	9
196	192.65	197.8	2
197	84.06	91.02	12
197	117.04	124.05	4
197	124.05	132.89	8
197	133.35	160.55	1
198	92.69	103.78	12
198	148.89	152.1	1
198	152.1	154.53	3



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hole_id	depth_from	depth_to	Code
199	126.13	134.92	13
199	154.99	158.19	8
199	158.19	177.55	8
199	176.25	177.55	8
199	177.55	158.94	1
199	178.34	192.02	1
200	105.77	110.34	14
200	123.81	130.21	6
200	131.69	141.5	11
200	142.19	165.82	3
201	67.98	75.16	14
201	82.91	90.53	14
201	123.14	130	6
201	130	135.33	11
201	135.33	156.67	3
202	68.28	79.25	14
202	145.05	151.2	11
202	151.4	160.33	3
203A	139.6	149.35	6
203A	149.35	166.12	11
203A	168.55	188.37	3
206	43.88	53.06	2
207	74.83	84.47	2
208	84.12	99.67	12
208	129.08	134.6	4
208	134.72	137.62	8
208	141.95	157.51	1
209	152.7	159.24	11
209	166.42	179.26	3
210	154.84	161.68	6
210	165.2	179.53	11
210	200.25	205.74	3
211	67.99	76.56	12
211	116.43	118.26	4
211	118.26	123.14	8
211	124.36	130.91	1
213	59.8	69.95	2
219	72.54	88.47	2
271	37.03	43.74	2
271	43.74	56.69	2
276	26.52	32	13
297	52.12	60.05	16
297	81.69	85.34	16
297	88.39	92.66	16
298	78.94	86.87	16
299	157.58	160.02	10
400	176	186	14
400	202	219.53	6
400	220.91	224	11



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400	224	254.44	3
401	174.28	181.23	6
401	181.23	203.4	11
401	217.09	231.8	3
402	163	194.66	14
402	224.17	231	6
402	231	243.9	11
402	243.99	260.1	3
403	132.5	154.91	14
403	201.5	213.5	11
403	219	223.5	3
404	189.5	191.5	5
404	191.5	205.74	9
404	216.41	235	2
405	34.46	39.43	12
405	48	51.94	12
405	89.5	95.51	4
405	95.51	104	8
405	105.5	120	1
406	222.16	227.34	10
407	225.77	232.2	15
407	264.05	265.16	7
407	265.33	270.55	10
408	217.06	217.96	15
408	270.35	272.61	8
408	277.87	293	1
409	253	275.37	14
409	260.6	263.08	14
409	263.08	263.1	14
409	263.1	273.91	14
409	273.91	292	14
409	275.37	286.43	14
409	286.43	260.6	14
466	23.14	27.94	2
467	24.89	31	2
468	183	192	10
471	165	171	10
472	53	73	2
473	42.44	77.32	2
475	51	58	2
476	44.06	59.56	2
477	172	178	10
478	28.14	31	13
478	102	114	2
94	66.11	73.38	5
94	73.38	73.49	9
94	73.49	78.3	9
94	78.34	92.07	2
96	103.54	119.48	2



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hole_id	depth_from	depth_to	Code
97	68.46	70.94	2
97	72.36	74.71	2
D/CSIRO/1	0	6.5	12
D/CSIRO/2	0	8.25	12
D/CSIRO/3	0	6.9	12
D/CSIRO/5	2.95	4.74	14
D/CSIRO/5	5.45	8.6	14
D/CSIRO/6	4.67	8.6	14
D000/1	0	6	8
D000/10	0	15.3	10
D000/11	0	0.77	10
D000/12	2.56	7.04	10
D000/2	1	6	8
D000/2	38.78	38.98	2
D000/3	3.08	18	8
D000/3	45.5	51.39	9
D000/3	51.39	60.74	2
D000/3	60.74	64	2
D000/3	64	54	2
D000/5	57	62	5
D000/5	62	67	9
D000/5	73.06	86.83	2
D000/6	0	0.22	10
D000/7	0	0.97	10
D000/8	0	2.58	10
D000/9	0	0.31	10
D020/1	14	17	13
D020/10	19	33	15
D020/11	8	10	10
D020/12	3	7.56	2
D020/13	2	20	2
D020/2	11	13	13
D020/2	33.91	35	5
D020/2	35	36	9
D020/2	36	40	2
D020/3	37	38	5
D020/3	38	43	9
D020/3	43	56	2
D020/4	77	79	5
D020/4	79	90	9
D020/4	90	102	2
D020/5	3	10.1	2
D020/6	13	22.24	10
D020/7	7.01	17.29	15
D020/8	14	18	15
D020/8	84	93	10
D020/9	10	21	10
D040/1	5	8	13
D040/1	8	16	8



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hole_id	depth_from	depth_to	Code
D040/10	76	79	10
D040/12	0	3.57	2
D040/12	3.57	23	2
D040/12	23	24	10
D040/13	0	13	2
D040/2	60.45	65	5
D040/2	65	68	9
D040/2	68	73	2
D040/3	75	80	5
D040/3	80	90	9
D040/3	90	100	2
D040/4	5.09	6.93	13
D040/4	12	19	8
D040/5	82	96	5
D040/5	96	109.51	9
D040/5	109.51	109.6	2
D040/5	109.6	121	2
D040/5	121	132.95	2
D040/5	132.95	137.4	2
D040/6	0	4	9
D040/6	4	9	2
D040/7	0	1	5
D040/7	1	12	9
D040/8	72	78	2
D050/1	0	15.82	9
D050/2	0	7	2
D050/2	7	11	2
D050/3	0	11.35	2
D050/3	11.35	12	10
D050/4	0	10.7	2
D060/1	15.19	16.01	2
D060/2	8	18	2
D060/3	8	14	2
D060/4	3.21	20	2
D060/5	3.18	18	2
D060/6	3.2	21.3	2
D065/2	6.94	20.5	15
D070/1	6.55	8.5	15
D070/1	8.5	10.71	15
D070/1	10.71	18.02	2
D070/2	5	15	15
D070/3	5.06	15.09	15
D075/1	4.9	14.87	15
D075/1	18.18	21.1	2
D080/1	29	35	4
D080/1	35	41.36	8
D080/1	44	54.66	1
D080/10	23.02	31.27	2
D080/10	31.27	40.23	15



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hole_id	depth_from	depth_to	Code
D080/10	40.23	44	2
D080/11	23.6	31.14	2
D080/12	37.86	50.42	15
D080/12	61	66	10
D080/13	52.94	53.34	15
D080/13	76	87	10
D080/15	38	43	8
D080/15	45	50	1
D080/16	33.84	39	4
D080/16	39	44	8
D080/16	50	53.9	1
D080/17	20	35	2
D080/18	47	53.49	2
D080/3	45	49	4
D080/3	49	54	8
D080/3	57.09	57.3	1
D080/4	71	75	5
D080/4	75	78	9
D080/4	81	84.61	2
D080/5	63	68	8
D080/7	76	78	5
D080/7	78	85	9
D080/7	85	103	2
D080/9	1	6	5
D080/9	6	11	9
D080/9	11	22.81	2
D100/1	0	17	1
D100/1	17.8	31	8
D100/1	31	34.23	4
D120/1	38	43	4
D120/10	74	81	5
D120/11	9.88	13.56	12
D120/12	16.56	28.45	12
D120/16	106.62	117	7
D120/16	117	119	10
D120/17	152	158	7
D120/17	158	162	10
D120/18	13	15.48	5
D120/18	15.48	18.08	9
D120/18	18.08	30	5
D120/18	49	55	2
D120/19	33.29	41.3	5
D120/2	68.9	73	5
D120/2	73	75	9
D120/2	77	86.1	2
D120/20	21.54	28.05	5
D120/20	28.05	33.95	9
D120/20	33.95	36.95	5
D120/21	67.67	74	5



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hole_id	depth_from	depth_to	Code
D160/1	65.43	79.37	3
D160/11	0	2.05	6
D160/11	2.92	18	11
D160/11	18	38	3
D160/12	26	27	5
D160/12	27	33	9
D160/12	33.31	39	2
D160/13	23	24	5
D160/13	24	31	9
D160/13	48	54.71	2
D160/14	25	28	5
D160/14	28	42	9
D160/14	47	59	2
D160/16	29.67	33	5
D160/16	33	48.35	9
D160/16	48.35	66	2
D160/17	30	31	5
D160/17	31	38	9
D160/17	38	41	2
D160/17	95.51	99	7
D160/17	99	102	10
D160/18	58	71	15
D160/18	106.19	107.98	7
D160/18	107.98	113	10
D160/19	73.44	81	15
D160/2	32.65	34	4
D160/2	34	41	8
D160/2	41	61	1
D160/21	0	1.51	15
D160/21	51.21	54	7
D160/21	54	59	10
D160/22	86	131	10
D160/23	70	82	10
D160/24	66	72	10
D160/25	46	46.56	7
D160/25	46.56	46.81	10
D160/25	46.81	48	10
D160/26	47.73	49	7
D160/26	49	56	10
D160/28	93.29	93.5	10
D160/3	26	36	4
D160/3	36	41	8
D160/3	46	59.61	1
D160/4	38	42.26	4
D160/4	46	54	8
D160/4	54	62	1
D160/4	66.15	71	4
D160/4	71	81	8
D160/4	82.01	120	1



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hole_id	depth_from	depth_to	Code
D120/21	74	89	9
D120/21	89	91.79	2
D120/22	15	18	7
D120/22	18	20.21	10
D120/22	20.21	23	10
D120/3	43.04	48	4
D120/3	48	54.25	8
D120/4	12.53	22	4
D120/4	22	28.27	8
D120/4	32	44	1
D120/5	19.23	32	4
D120/5	32	40	8
D120/5	46	77	1
D120/7	61	61.91	1
D120/7	61.91	65.5	1
D120/7	65.5	75	1
D120/8	68.56	75	5
D120/8	75	91	9
D120/8	91	93	2
D120/9	13.71	21	4
D120/9	21	32	8
D120/9	32	49	1
D140/1	8.13	17	12
D140/4	0.41	11.33	5
D140/4	19	24	9
D140/4	24	41.3	2
D140/6	0.3	10.83	5
D140/6	42	71	5
D140/6	71	81	9
D140/6	95	115	1
D140/7	17	21	9
D140/7	21	31	2
D140/8	22	38	9
D140/8	56	72	9
D140/8	78	95	2
D140/9	5	13.07	5
D140/9	18	21	9
D140/9	25	28	2
D150/1	0	6	1
D150/1	6	35.13	8
D150/1	50.08	59	5
D150/2	0	29.67	1
D150/2	31.76	52	8
D150/3	0	19	1
D150/4	0	27.92	1
D150/4	27.92	28.08	1
D150/4	28.08	31.23	1
D160/1	43.42	46.64	4
D160/1	46.67	47.68	8



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hole_id	depth_from	depth_to	Code
D160/6	64.58	73.38	6
D160/6	74	104	11
D160/6	105.16	118.54	3
D160/7	44.63	49	6
D160/7	49	49.15	11
D160/7	49.15	66	11
D160/7	66	96	3
D160/8	8	15.6	12
D160/9	7	15	12
D180/1	0	5	12
D180/10	0	1	15
D180/10	44	46	10
D180/11	0	0.5	15
D180/11	26.22	28	7
D180/11	29	41.5	10
D180/12	12	26.77	14
D180/13	0	2.4	2
D180/2	0	18.3	12
D180/3	0	4.2	12
D180/4	26	49.9	14
D180/5	27	49.04	12
D180/6	27	53	12
D180/7	22.45	37	12
D180/9E	0	4.3	3
D190/1	0	8.68	11
D200/1	5	8	12
D200/1	30	33	13
D200/1	62	70.15	4
D200/1	71.82	92	8
D200/1	92	96.62	1
D200/1	97.11	98.31	1
D200/10	32	34	6
D200/10	34	45	11
D200/10	56.92	65.84	3
D200/11	5.3	7.79	12
D200/11	29	44	13
D200/11	96.32	99.94	5
D200/11	99.94	101.07	9
D200/11	101.07	108.26	9
D200/11	109.49	131	2
D200/12	0	30.16	14
D200/13	7	19	14
D200/14	3	46	14
D200/15	0	18	3
D200/16	0	9.94	11
D200/16	20.72	26.34	8
D200/16	32.87	33.7	1
D200/17	34	38	5
D200/17	38	47	9



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hole id	depth from	depth to	Code
D200/17	52	70	2
D200/18	33	34	5
D200/18	34	47	9
D200/18	56.52	74.76	2
D200/19	40.02	41	5
D200/19	41	60	9
D200/19	60	78	2
D200/2	2	6	12
D200/2	56.52	72	3
D200/20	48.11	49	5
D200/20	49	73	9
D200/20	100.44	104	7
D200/20	105.7	122.35	10
D200/22	0	2.08	6
D200/22	12	20	12
D200/23	0	6	3
D200/23	69	72	13
D200/24	64	70.23	5
D200/24	70.4	70.76	9
D200/24	74.65	75.89	8
D200/24	80.22	84	1
D200/25	0	7.37	6
D200/25	46	63	12
D200/27	79	94	8
D200/27	100.68	103.79	1
D200/28	55.12	57.86	5
D200/28	57.86	65.23	9
D200/3	1	8	12
D200/3	44	47	11
D200/3	47	60.86	3
D200/31	39.8	45.5	10
D200/32	28.96	30	7
D200/32	30	43	10
D200/4	25	34	6
D200/4	39	51	11
D200/4	51	60	3
D200/5	22.41	29.7	6
D200/5	37.47	48.37	11
D200/5A	22	29	6
D200/5A	37	48	11
D200/5A	60	73	3
D200/6	35	40.7	6
D200/6	45	54.35	11
D200/6	65.92	93	3
D200/7	29	34	6
D200/7	34	42	11
D200/7	42	45.9	3
D200/7	46.99	48.74	3
D200/8	25.55	35	6



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hole_id	depth_from	depth_to	Code
D220/8	0	1.73	6
D220/8	23.6	30	14
D220/9	0	5	6
D240/1	12	16	14
D240/1	28	33	6
D240/1	33	45	11
D240/1	51	72	3
D240/10	3	9	13
D240/10	51	55	5
D240/10	55	62	9
D240/10	87.44	87.5	8
D240/10	92.13	93.73	8
D240/10	94.45	95.79	1
D240/11	1.62	6.95	13
D240/11	45	47	5
D240/11	47	67	9
D240/11	71	83	2
D240/12	1.55	6.69	13
D240/12	67	76	9
D240/12	81	91	7
D240/12	97	108	10
D240/13	1.49	7	13
D240/13	126	137	10
D240/14	1.27	7.16	13
D240/14	149.04	165	10
D240/15	1.95	7.59	13
D240/15	42	48	5
D240/15	48	62	9
D240/15	69	77	2
D240/15E	1.96	7.61	13
D240/15E	42.64	48.61	5
D240/15E	48.61	61.47	9
D240/15E	68.95	76.93	2
D240/15E	83	95.27	8
D240/15E	95.27	95.82	8
D240/15E	95.82	102.21	1
D240/17	49	62	3
D240/18	3.83	20	8
D240/18	20	20.98	8
D240/18	20.98	29	1
D240/19	8.49	10.4	8
D240/2	25.03	29	6
D240/2	29	45	11
D240/2	49	73	3
D240/21E	3.86	15	2
D240/22E	7.59	15	9
D240/3	25.63	34	6
D240/3	34	49	11
D240/3	49	81	3



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hole_id	depth_from	depth_to	Code
D240/4	13	19	14
D240/4	44.33	49.75	6
D240/4	52	75	11
D240/4	75	92	3
D240/5	33.52	46	6
D240/5	46	73	11
D240/5	80	117	3
D240/5	135.51	143.14	8
D240/5	143.14	143.42	8
D240/5	143.42	149.31	1
D240/6	10	12	14
D240/6	38	39.79	6
D240/6	40	53	11
D240/6	53	65	3
D240/7	11	14.02	14
D240/7	46.52	51	6
D240/7	52	59	11
D240/7	62	74.44	3
D240/8	2	31.11	14
D240/9	0	3	14
D260/1	49.08	53.85	5
D260/1	53.85	54.79	9
D260/1	92.41	108.48	8
D260/1	110.04	115.61	1
D260/3	74.7	77.5	3
D260/5	16.95	38	8
D260/5	46	77	1
D260/7	7	29	8
D260/7	36	41	1
D260/8	13	15.74	8
D280/1	2.8	4.73	14
D280/1	16.83	20.91	14
D280/1	62	68	11
D280/1	73	85.29	3
D280/10	56	57	6
D280/10	57	79.79	11
D280/11	71	76	15
D280/11	140.61	142.89	8
D280/12	73	78	15
D280/12	160.82	170	10
D280/13	180	183	10
D280/15	43.71	45.65	14
D280/16	32	52.86	14
D280/2	3	5	14
D280/2	70	78	11
D280/2	78	85	3
D280/3	3	5	14
D280/3	18	23	14
D280/3	51	76	11



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hole_id	depth_from	depth_to	Code
D200/8	35	43	11
D200/8	43	52	3
D200/9	26.78	33	6
D200/9	33	41	11
D200/9	47	71.37	3
D220/10	12	23.58	14
D220/11	3	6	14
D220/12	0	2.11	14
D220/13	0	2.88	13
D220/13	62	64	5
D220/13	64	68	9
D220/13	70.8	73	2
D220/14	0	1.9	13
D220/14	50	51	5
D220/14	51	56	9
D220/14	62.8	73	2
D220/15	0	5.4	13
D220/15A	0	8.51	13
D220/15A	80.94	100	3
D220/16	0	6	13
D220/16	52	56	5
D220/16	56	62	9
D220/16	67.45	69.71	4
D220/16	69.71	70.8	8
D220/16	70.8	76.76	8
D220/16	75.95	76.76	8
D220/16	76.76	72.43	1
D220/17	0	4.02	13
D220/17	47.72	50	5
D220/17	50	63.47	9
D220/17	63.47	64	9
D220/17	64	77	2
D220/18	0	4	13
D220/18	37	43.17	5
D220/18	43.24	56	9
D220/18	62	74	2
D220/19E	0	1.87	9
D220/2	9.58	25	14
D220/20	33	49.75	3
D220/21	0	0.22	8
D220/21	0.22	6	8
D220/21	6	25	3
D220/21	30.21	34.97	11
D220/3	2.52	8.52	14
D220/4	10.62	15.95	14
D220/5	0	0.04	14
D220/6	0.32	14.18	14
D220/6	18	24.06	14
D220/7	2.18	14.22	14



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hole_id	depth_from	depth_to	Code
D280/3	76	91	3
D280/4	3.27	4.02	14
D280/4	26	33	14
D280/4	65	84	11
D280/4	94.44	113.89	3
D280/5	61	86.8	11
D280/5	109	126	3
D280/6	73	83	6
D280/6	83	123	11
D280/7	66	75	15
D280/8	74	85	3
D280/9	59.28	91.5	3
D300/1	0	4.47	3
D300/1	32.31	42.96	8
D300/2	0	4.49	3
D300/2	24.15	30.11	8
D300/2	37.68	40.37	1
D300/3	0	6	15
D300/4	0	3.08	15
D300/4	41	54	10
D300/5	0.4	10.91	15
D300/5	123	129	10
D300/6	0.04	7.63	15
D300/7	0	4.15	15
D300/7	56	62	10
D320/1	43	52	6
D320/1	52	62	11
D320/1	67	86	3
D320/10	0	21	11
D320/10	21	44	3
D320/11	2	30	11
D320/11	30	59	6
D320/12	6	44	11
D320/12	44	67	6
D320/14	4	33	11
D320/14	33	38.4	6
D320/15	17	34	3
D320/16	24	29	15
D320/16	49	57	15
D320/17	-0	33.46	3
D320/18	0	10	11
D320/18	13	37	3
D320/19	38	44	3
D320/2	50.42	52.79	6
D320/20	22	50	3
D320/21	64	70	15
D320/22	0	1.16	6
D320/23	0	9.01	6
D320/23	19.57	22.47	14



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hole_id	depth_from	depth_to	Code
D320/23	22.68	26.24	14
D320/24	0	0.15	6
D320/24	17.05	26.36	14
D320/25	0	0.61	11
D320/25	0.61	16.62	6
D320/25	20.54	25.99	14
D320/25	26.19	26.92	14
D320/26	0	6.33	6
D320/26	22.94	39.42	14
D320/27	0	2.38	6
D320/27	28.93	45.15	14
D320/28	0	0.97	11
D320/28	0.97	1.71	11
D320/28	1.71	17.53	6
D320/29	0	10.54	6
D320/3	61.85	85.3	11
D320/30	0	0.4	11
D320/30	0.4	1.23	11
D320/30	1.23	15	6
D320/4	44	57	6
D320/4	57	59.86	11
D320/4	61.14	88.96	3
D320/5	44	56.2	6
D320/5	56.2	75.41	11
D320/5	83.77	109	3
D320/6	24.31	33.15	3
D320/6	33.15	34.09	11
D320/6	34.09	45.06	11
D320/7	0	15.54	3
D320/8	-0	30	3
D320/9A	0.08	42.48	3
D320/9A	42.48	51.02	14
D320/9A	51.02	53	3
D340/1	15	25	6
D340/1	25	31	11
D340/1	31	36	3
D340/10	28	39	6
D340/10	39	82	11
D340/10	82	95.7	3
D340/11	0	7	11
D340/11	7	29	6
D340/12	0	25.23	11
D340/12	25.23	32	6
D340/13	0	17	11
D340/13	17	35	6
D340/14	32	40	6
D340/14	40	45	11
D340/14	45	50	3
D340/15	33	57	3



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hole_id	depth_from	depth_to	Code
D340/16	30	59	3
D340/17	17	53.4	11
D340/18	37	47	15
D340/19	71	78	15
D340/2	27	34	6
D340/2	34	36	11
D340/2	36	50	3
D340/20	25.07	25.26	14
D340/21	35.11	39.23	14
D340/21	39.23	43	14
D340/21	43	43.31	14
D340/22	34	71.74	14
D340/24	2.15	33.11	14
D340/25	0	0.24	11
D340/25	0.37	9.76	6
D340/25	22.4	46.2	14
D340/26	0	2.35	11
D340/26	2.35	2.51	11
D340/26	2.51	7.63	6
D340/26	16.59	48	14
D340/27	0	2.18	6
D340/27	21.38	33.1	14
D340/28	0	10.79	3
D340/28	10.79	10.87	11
D340/28	17.03	18.06	11
D340/28	18.06	22.28	6
D340/28	31.69	37.01	14
D340/29	0	9.81	11
D340/29	9.81	9.9	11
D340/29	9.9	13.02	6
D340/29	13.02	16.01	14
D340/29	16.01	18.1	14
D340/3	0	3.45	14
D340/3	3.45	4.5	14
D340/3	4.25	4.5	14
D340/3	4.5	7.15	14
D340/30	0	12.12	11
D340/30	12.18	18.18	6
D340/31	0	6.3	11
D340/31	6.3	6.62	11
D340/31	6.62	7.3	6
D340/31	7.3	7.34	14
D340/31	7.34	14.2	14
D340/32	0	10.47	6
D340/32	10.47	10.51	14
D340/32	10.51	17.34	14
D340/33	0	6.4	3
D340/33	8.36	9.79	14
D340/33	9.79	13	14



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hole_id	depth_from	depth_to	Code
D340/34	0	6.32	6
D340/34	7.15	9.59	14
D340/35	0	7.52	6
D340/36	0	2.64	6
D340/36	3.82	33	14
D340/37	0	2.11	11
D340/37	2.11	2.29	11
D340/37	2.29	8.41	6
D340/37	26.91	30.13	14
D340/38	0	3.81	11
D340/38	3.81	3.82	11
D340/38	3.82	5.66	6
D340/39	0	6.12	11
D340/4	16	27	6
D340/4	27	36	11
D340/4	36	55	3
D340/40	0	16.33	3
D340/41	0	7.55	3
D340/41	9.84	11.61	11
D340/41	11.61	11.74	14
D340/41	12.79	17.3	14
D340/41	17.3	11.61	14
D340/42	0	41	14
D340/42	5.09	41	14
D340/42	5.63	41	14
D340/42	28.74	41	14
D340/42	41	25.85	3
D340/43	0	4.58	3
D340/43	5.16	5.21	11
D340/43	5.36	5.67	14
D340/43	5.67	15.1	14
D340/44	0	2.46	14
D340/44	2.46	11.14	14
D340/44	10.33	11.14	14
D340/45	0	8.48	14
D340/45	8.48	13.48	14
D340/45	13.46	13.48	14
D340/45	13.48	15.3	14
D340/46	2.44	13.98	3
D340/46	13.98	15.09	14
D340/46	15.09	17.2	3
D340/5	15	27	6
D340/5	27	36	11
D340/5	36	60	3
D340/50	0	2.22	11
D340/51	0	16	3
D340/52	2.16	19.83	3
D340/53	0	1.72	11
D340/53	2.26	14.87	3



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hole_id	depth_from	depth_to	Code
D340/54	0	3.23	11
D340/54	6.09	25.87	3
D340/55	0	5.45	3
D340/55	5.86	6.5	11
D340/56	0	10.96	3
D340/56	13.42	14.56	14
D340/57	0	9	3
D340/58	0	36.77	3
D340/58	65.33	84.5	15
D340/6	0	13	11
D340/6	13	29	3
D340/7	0	20	11
D340/7	20	40	3
D340/8	0	27	11
D340/8	27	56.36	3
D340/9	0	50	11
D360/1	0	26	14
D360/1	59.23	63.65	3
D360/10	2.93	16.43	14
D360/11	1.22	19.03	14
D360/12	0.07	17.21	14
D360/13	0.35	13.5	14
D360/2	0	12.7	14
D360/2	28.02	32.62	6
D360/2	32.62	33.01	11
D360/2	33.01	41	11
D360/2	41	54.2	3
D360/3	0	20.33	14
D360/4	0	6.45	14
D360/5	0	36	14
D360/6	0	30	14
D360/7	0	11	14
D360/8	0	57.98	14
D360/9	0	15.1	14
D411	3.99	22	4
D411	22	31	8
D412	14.53	24.18	14
D412	57.44	62.88	6
D412	86	88	3
D414	110.37	116.86	6
D414	121.98	136	11
D414	136	148	3
D415	63	72.97	6
D415	73.96	77.06	11
D416	0	12.45	2
D416	13.31	25.06	8
D416	25.06	36.91	4
D419	33.37	56.91	14
D420	33	56	14



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hole_id	depth_from	depth_to	Code
D426	2.5	12	16
D427	41.48	46.02	16
D430	13.27	28.5	16
D431	18.5	20.5	16
D433	20	32.48	2
D435	31	38	2
D436	9	14.2	2
D440	45.82	50.29	16
D441	26	29	16
D442	5	9	2
D446	23	36.54	16
D447	8	25	2
D448	14.55	21	16
D448	45	50	16
D448	55.45	59	16
D450	1	12.19	16
D452	41.93	56.25	2
D457	44	66.54	2
D462A	47	51	2
D463	60	87	2
D464	74	86	2
D465	18.86	33.01	2
D920/1	8	17	2
D920/1	17.63	18.2	9
D920/2	9	17	2
D920/2	17.23	23	9
D920/2	23	25.35	5
D960/2	43	49	10
D960/4	36	53	10
D960/5	22.7	31	2
D960/5	31	36	9
D960/6	0	1	9
D960/6	1	13.09	2
D960/7	0	2.21	9
D960/7	2.21	15.4	2
D960/8	0	2.36	9
D960/8	2.36	2.55	9
D960/8	2.55	15	5
G002	24	27	12
G003	54.35	61.51	12
G004	21	45.6	14
G005	30.5	45	14
G006	71.54	76	14
G007	99.18	99.46	14
G007	99.54	104.56	14
G008	94	108	14
G009	97	115.2	14
G011	46.76	55.21	12
G012	61.4	69.3	12
G012	69.95	77.45	12



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hole_id	depth_from	depth_to	Code
G012	84	90.1	8
G012	94.7	96.7	1
G016	53.3	57.3	12
G017	27.8	44.15	14
G017	72.15	74.75	6
G017	74.75	78.8	11
G018	23.77	49.64	14
G018	84.4	87.5	6
G019	23.55	49.94	14
G019	84.08	88.07	6
G019	89.17	90.6	11
G020	161.87	171.96	5
G020	171.96	175.8	9
G022	106.6	109.4	13
G023	100.2	106.04	8
G026	8	11.7	13
G026	81.8	84.8	2
G027	13.3	15.3	13
G027	90.7	110.57	2
G029	184.5	188.5	10
G033	127.19	128.5	5
G036	37	39	13
G038B	161.5	163.5	4
G038B	163.5	171.46	8
G038B	171.46	173	8
G038B	173	173.33	8
G038B	173.33	175.7	1
G039	40.7	51	14
G039	77.24	79	6
G039	79	92	11
G039	92	99.5	3
RS18	13.83	20.09	2
RS18	20.09	26.25	9
RS18	26.25	27.83	9
RS18	27.83	29.95	5
RS19	10.28	20.46	2
RS19	20.46	26.18	9
RS19	26.18	27.86	5



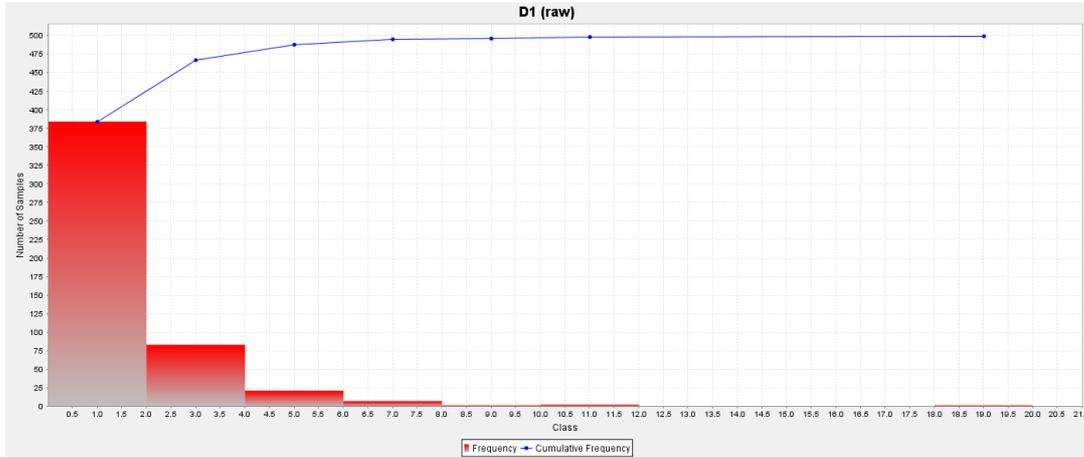
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Appendix 2

1m Composite statistics



Central_C_Upper



Output Filename: central_c_upper
Statistics Report

Apr 06, 2010

File ../cenral C Upper0.str

String range All
Variable D1

Number of samples 499
Minimum value 0.005000
Maximum value 18.137600

	Ungrouped Data	Grouped Data
Mean	1.577969	1.682355
Median	1.217000	1.304479
Geometric Mean	0.985478	1.352358
Variance	2.537435	2.563235
Standard Deviation	1.592933	1.601011
Coefficient of variation	1.009483	0.951649
Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	2.537435	2.563235
Moment 3 About Arithmetic Mean	16.426441	18.256117
Moment 4 About Arithmetic Mean	206.375339	233.546362
Skewness	4.063976	4.448626
Kurtosis	32.052946	2.778636
Natural Log Mean	-0.014629	0.301850



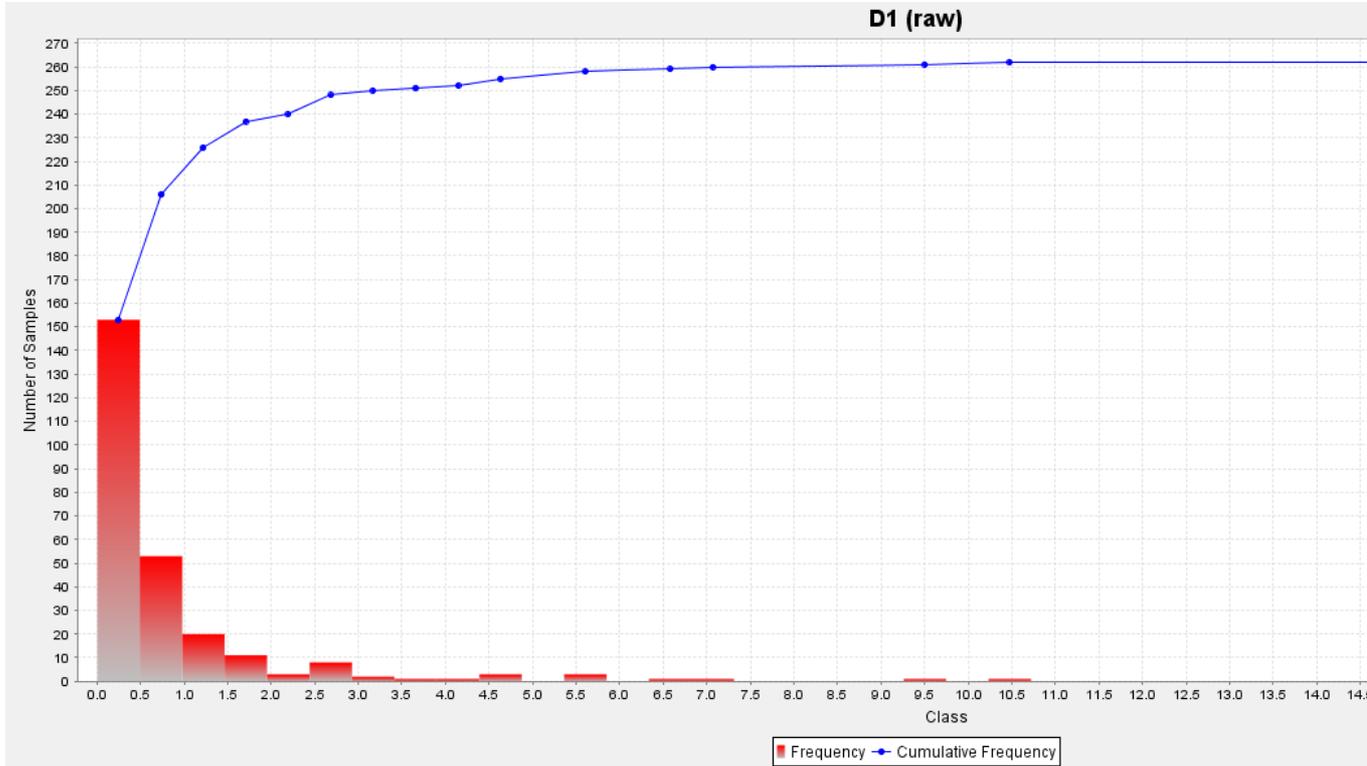
Log Variance	1.502441	0.322684
10.0 Percentile	0.261100	
20.0 Percentile	0.548250	
30.0 Percentile	0.818700	
40.0 Percentile	1.030000	
50.0 Percentile (median)	1.217000	
60.0 Percentile	1.470000	
70.0 Percentile	1.740000	
80.0 Percentile	2.120000	
90.0 Percentile	3.017450	
95.0 Percentile	4.605000	
97.5 Percentile	5.609500	
Trimean	1.267675	
Biweight	1.207811	
MAD	0.610250	
Alpha	0.820831	
Sichel-t	2.083328	

Normal Histogram Tabulation
D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq	%				
0.005000	2.005000	384	0.979215	0.770	384	0.979215	76.9539
1.577969	100.0000						499
2.005000	4.005000	83	2.598772	0.166	467	1.267059	93.5872
3.577288	23.0461						115
4.005000	6.005000	21	4.793410	0.042	488	1.418808	97.7956
6.115312	6.4128						32
6.005000	8.005000	7	6.584400	0.014	495	1.491857	99.1984
8.638945	2.2044						11
8.005000	10.005000	1	8.100000	0.002	496	1.505180	99.3988
12.234400	0.8016						4
10.005000	12.005000	2	11.350000	0.004	498	1.544717	99.7996
13.612533	0.6012						3
18.005000	20.005000	1	18.137600	0.002	499	1.577969	100.0000
18.137600	0.2004						1



Central_B



Output Filename: central_b
Statistics Report

Apr 06, 2010

File ../central B0.str

String range All
Variable D1

Number of samples 263
Minimum value 0.005000
Maximum value 19.000000

	Ungrouped Data	Grouped Data
Mean	0.893584	0.935583
Median	0.384500	0.423609
Geometric Mean	0.307632	0.498834
Variance	3.124109	3.098864
Standard Deviation	1.767515	1.760359
Coefficient of variation	1.978006	1.881564



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	3.124109	3.098864
Moment 3 About Arithmetic Mean	31.873791	32.627906
Moment 4 About Arithmetic Mean	478.445682	497.212925

Skewness	5.772242	5.981159
Kurtosis	49.020795	3.397692

Natural Log Mean	-1.178850	-0.695481
Log Variance	2.700306	0.901157

10.0 Percentile	0.036500
20.0 Percentile	0.089350
30.0 Percentile	0.167950
40.0 Percentile	0.287700
50.0 Percentile (median)	0.384500
60.0 Percentile	0.533250
70.0 Percentile	0.735000
80.0 Percentile	1.012900
90.0 Percentile	1.973500
95.0 Percentile	3.585600
97.5 Percentile	5.400000

Trimean	0.428338
Biweight	0.402730
MAD	0.319180
Alpha	0.061086
Sichel-t	1.172816

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.005000	0.492051	153	0.193121	0.582	153	0.193121	58.1749	263
0.893584	100.0000							
0.492051	0.979103	53	0.708734	0.202	206	0.325779	78.3270	110
1.867865	41.8251							
0.979103	1.466154	20	1.146190	0.076	226	0.398381	85.9316	57
2.945653	21.6730							
1.466154	1.953205	11	1.714964	0.042	237	0.459489	90.1141	37
3.918335	14.0684							

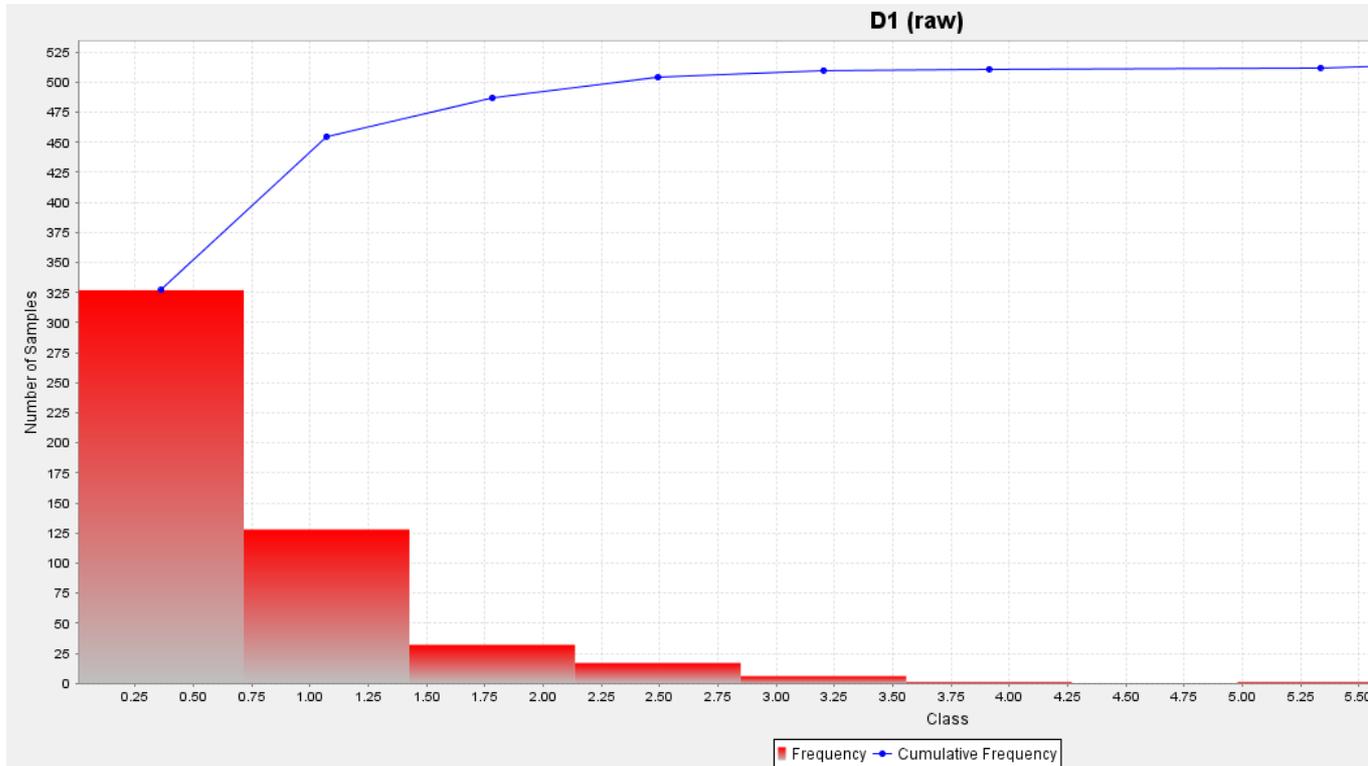


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1.953205	2.440256	3	2.182600	0.011	240	0.481028	91.2548	26
4.850531	9.8859							
2.440256	2.927308	8	2.766338	0.030	248	0.554747	94.2966	23
5.198522	8.7452							
2.927308	3.414359	2	3.210550	0.008	250	0.575994	95.0570	15
6.495687	5.7034							
3.414359	3.901410	1	3.900000	0.004	251	0.589237	95.4373	13
7.001092	4.9430							
3.901410	4.388462	1	4.010000	0.004	252	0.602811	95.8175	12
7.259517	4.5627							
4.388462	4.875513	3	4.743800	0.011	255	0.651529	96.9582	11
7.554927	4.1825							
5.362564	5.849615	3	5.466667	0.011	258	0.707519	98.0989	8
8.609100	3.0418							
6.336667	6.823718	1	6.700000	0.004	259	0.730656	98.4791	5
10.494560	1.9011							
6.823718	7.310769	1	7.000000	0.004	260	0.754768	98.8593	4
11.443200	1.5209							
9.258974	9.746026	1	9.272800	0.004	261	0.787405	99.2395	3
12.924267	1.1407							
10.233077	10.720128	1	10.500000	0.004	262	0.824476	99.6198	2
14.750000	0.7605							
18.512949	19.000000	0	0.000000	0.000	262	0.824476	99.6198	1
19.000000	0.3802							
19.000000	19.487051	1	19.000000	0.004	263	0.893584	100.0000	1
19.000000	0.3802							



Central_c_lower



Output Filename: central_c_lower
Statistics Report

Apr 06, 2010

File ../central C L0.str

String range All
Variable D1

Number of samples 517
Minimum value 0.005000
Maximum value 6.400000

	Ungrouped Data	Grouped Data
Mean	0.759049	0.800080
Median	0.520000	0.566708
Geometric Mean	0.415861	0.590966
Variance	0.739991	0.701117
Standard Deviation	0.860228	0.837327
Coefficient of variation	1.133296	1.046554



Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	0.739991	0.701117
Moment 3 About Arithmetic Mean	2.085850	2.093041
Moment 4 About Arithmetic Mean	9.935522	10.023969

Skewness	3.276749	3.565271
Kurtosis	18.144180	4.257919

Natural Log Mean	-0.877403	-0.525996
Log Variance	1.780881	0.488567

10.0 Percentile	0.073050
20.0 Percentile	0.210300
30.0 Percentile	0.310000
40.0 Percentile	0.410000
50.0 Percentile (median)	0.520000
60.0 Percentile	0.676000
70.0 Percentile	0.835900
80.0 Percentile	1.090000
90.0 Percentile	1.627250
95.0 Percentile	2.277500
97.5 Percentile	2.899400

Trimean	0.559050
Biweight	0.544364
MAD	0.315636
Alpha	0.229486
Sichel-t	1.009845

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq	%				

0.005000	0.715556	327	0.327286	0.632	327	0.327286	63.2495
0.759049	100.0000						517
0.715556	1.426111	128	1.002092	0.248	455	0.517122	88.0077
1.502136	36.7505						190
1.426111	2.136667	32	1.725397	0.062	487	0.596516	94.1973
2.534485	11.9923						62
2.136667	2.847222	17	2.518035	0.033	504	0.661329	97.4855
3.397513	5.8027						30



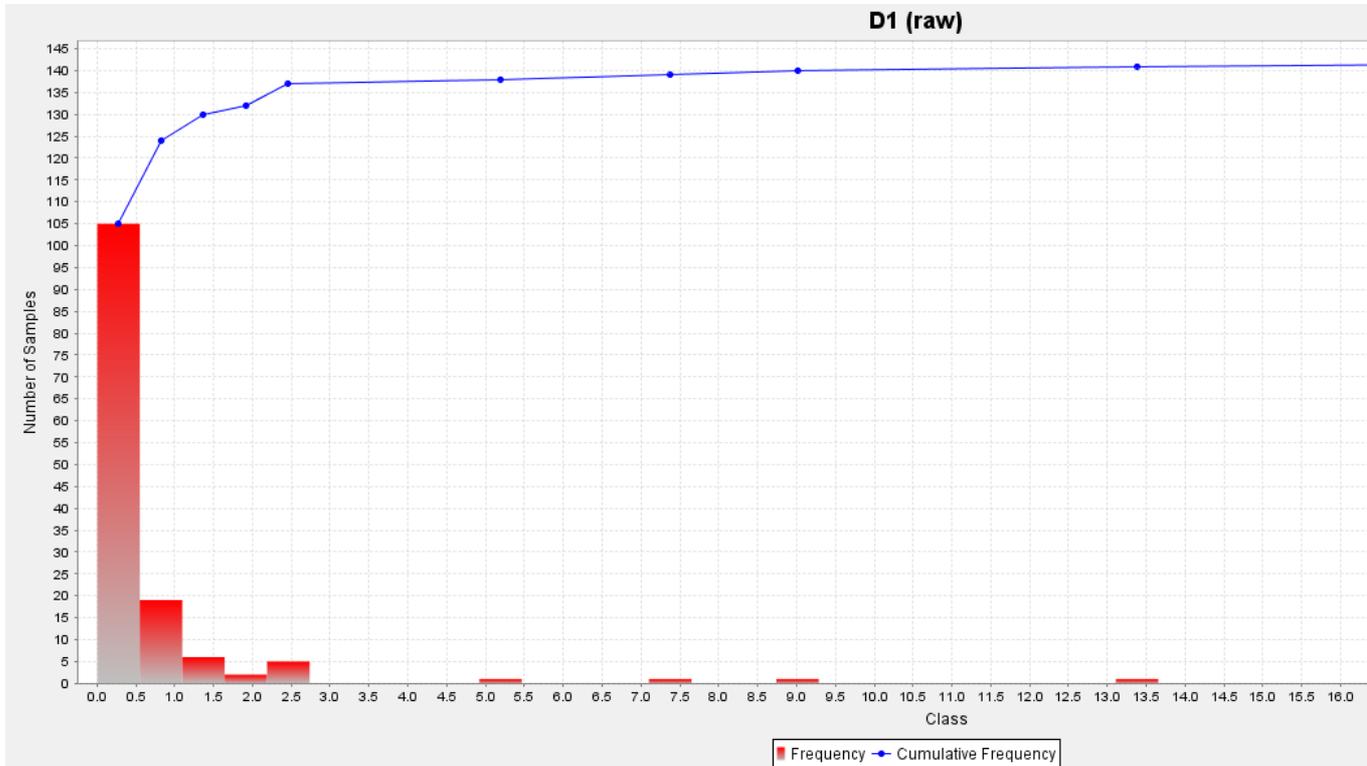
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2.847222	3.557778	6	3.228133	0.012	510	0.691526	98.6460	13
4.547600	2.5145							
3.557778	4.268333	1	3.800000	0.002	511	0.697610	98.8395	7
5.678571	1.3540							
4.978889	5.689444	1	5.500000	0.002	512	0.706989	99.0329	6
5.991667	1.1605							
5.689444	6.400000	4	6.012500	0.008	516	0.748117	99.8066	5
6.090000	0.9671							
6.400000	7.110556	1	6.400000	0.002	517	0.759049	100.0000	1
6.400000	0.1934							

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Central_c_pgh



Output Filename: central_c_pgh
Statistics Report

Apr 06, 2010

File ../central C Pgh0.str

String range All
Variable D1

Number of samples 142
Minimum value 0.005000
Maximum value 21.300000

	Ungrouped Data	Grouped Data
Mean	0.798612	0.885562
Median	0.230900	0.374217
Geometric Mean	0.201423	0.432922
Variance	5.379064	5.392201
Standard Deviation	2.319281	2.322111
Coefficient of variation	2.904140	2.622188



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	5.379064	5.392201
Moment 3 About Arithmetic Mean	80.881694	82.357476
Moment 4 About Arithmetic Mean	1466.195377	1507.627361

Skewness	6.483211	6.577394
Kurtosis	50.673207	2.832506

Natural Log Mean	-1.602347	-0.837197
Log Variance	2.815029	0.749598

10.0 Percentile	0.020000
20.0 Percentile	0.045000
30.0 Percentile	0.100000
40.0 Percentile	0.170000
50.0 Percentile (median)	0.230900
60.0 Percentile	0.358500
70.0 Percentile	0.460000
80.0 Percentile	0.797500
90.0 Percentile	1.282000
95.0 Percentile	2.415000
97.5 Percentile	6.265600

Trimean	0.285176
Biweight	0.272657
MAD	0.217057
Alpha	0.032938
Sichel-t	0.804073

Normal Histogram Tabulation
D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.005000	0.551026	105	0.180088	0.739	105	0.180088	73.9437	142
0.798612	100.0000							
0.551026	1.097051	19	0.815416	0.134	124	0.277436	87.3239	37
2.553884	26.0563							
1.097051	1.643077	6	1.273450	0.042	130	0.323406	91.5493	18
4.388933	12.6761							
1.643077	2.189103	2	1.709550	0.014	132	0.344408	92.9577	12
5.946675	8.4507							



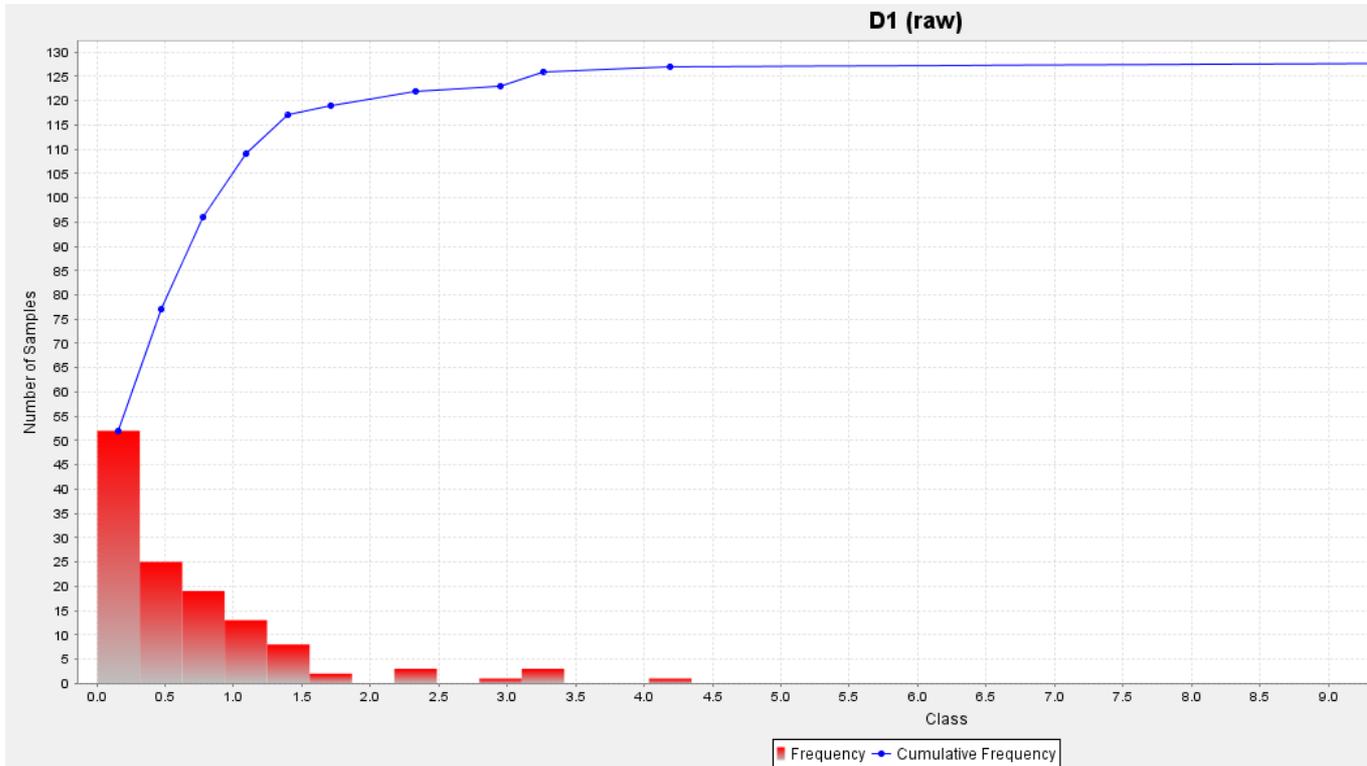
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2.189103	2.735128	5	2.381960	0.035	137	0.418772	96.4789	10
6.794100	7.0423							
4.919231	5.465256	1	5.231200	0.007	138	0.453644	97.1831	5
11.206240	3.5211							
7.103333	7.649359	1	7.300000	0.007	139	0.502899	97.8873	4
12.700000	2.8169							
8.741410	9.287436	1	8.800000	0.007	140	0.562164	98.5915	3
14.500000	2.1127							
13.109615	13.655641	1	13.400000	0.007	141	0.653212	99.2958	2
17.350000	1.4085							
21.300000	21.846026	1	21.300000	0.007	142	0.798612	100.0000	1
21.300000	0.7042							

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Pit_b



Output Filename: pit_b
Statistics Report

Apr 06, 2010

File ../pit B0.str

String range All
Variable D1

Number of samples 128
Minimum value 0.005000
Maximum value 12.100000

	Ungrouped Data	Grouped Data
Mean	0.756966	0.780321
Median	0.399150	0.463990
Geometric Mean	0.335143	0.447750
Variance	1.563196	1.579448
Standard Deviation	1.250278	1.256761
Coefficient of variation	1.651697	1.610570



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	1.563196	1.579448
Moment 3 About Arithmetic Mean	12.145347	12.566899
Moment 4 About Arithmetic Mean	131.636274	137.783694

Skewness	6.214267	6.330970
Kurtosis	53.870242	5.037529

Natural Log Mean	-1.093197	-0.803521
Log Variance	2.239952	0.974596

10.0 Percentile	0.039000
20.0 Percentile	0.160900
30.0 Percentile	0.215000
40.0 Percentile	0.309500
50.0 Percentile (median)	0.399150
60.0 Percentile	0.615750
70.0 Percentile	0.795350
80.0 Percentile	1.090000
90.0 Percentile	1.500000
95.0 Percentile	2.695000
97.5 Percentile	3.200000

Trimean	0.483325
Biweight	0.475219
MAD	0.321100
Alpha	0.136115
Sichel-t	1.008705

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

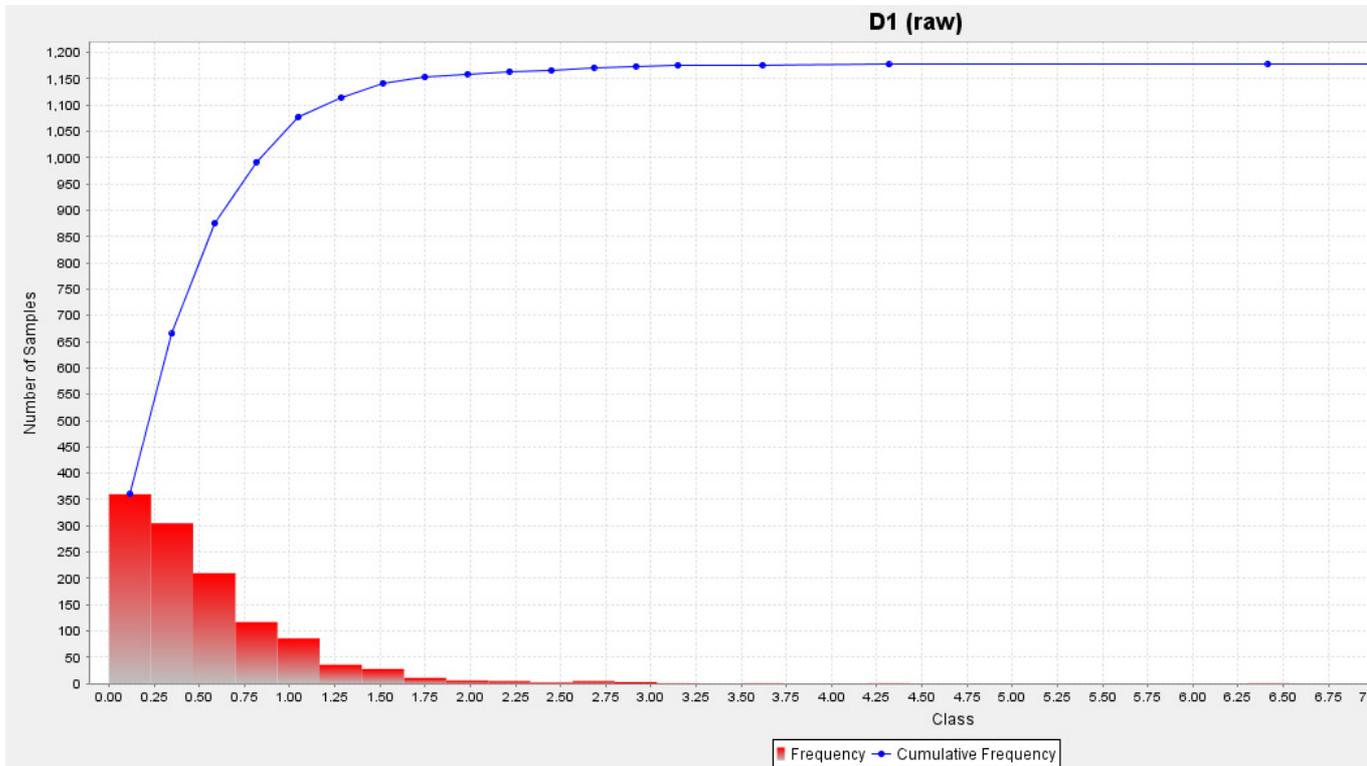
0.005000	0.315128	52	0.140129	0.406	52	0.140129	40.6250	128
0.756966	100.0000							
0.315128	0.625256	25	0.428036	0.195	77	0.233605	60.1563	76
1.179012	59.3750							
0.625256	0.935385	19	0.753458	0.148	96	0.336493	75.0000	51
1.547137	39.8438							
0.935385	1.245513	13	1.097915	0.102	109	0.427305	85.1563	32
2.018384	25.0000							



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1.245513	1.555641	8	1.407288	0.063	117	0.494312	91.4063	19
2.648179	14.8438							
1.555641	1.865769	2	1.725000	0.016	119	0.514996	92.9688	11
3.550645	8.5938							
2.175897	2.486026	3	2.246667	0.023	122	0.557578	95.3125	9
3.956344	7.0313							
2.796154	3.106282	1	3.050000	0.008	123	0.577841	96.0938	6
4.811183	4.6875							
3.106282	3.416410	3	3.182367	0.023	126	0.639854	98.4375	5
5.163420	3.9063							
4.036667	4.346795	1	4.170000	0.008	127	0.667650	99.2188	2
8.135000	1.5625							
12.100000	12.410128	1	12.100000	0.008	128	0.756966	100.0000	1
12.100000	0.7813							

1/1



Output Filename: pit_c_1

Apr 06, 2010

Statistics Report

File ../pit C L0.str

String range All
Variable D1

Number of samples 1180
Minimum value 0.000000
Maximum value 9.100000

	Ungrouped Data	Grouped Data
Mean	0.537702	0.551497
Median	0.415600	0.409290
Geometric Mean	Not Calculated	0.370594
Variance	0.395866	0.385773
Standard Deviation	0.629179	0.621106
Coefficient of variation	1.170125	1.126218

Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	0.395866	0.385773



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Moment 3 About Arithmetic Mean	1.441447	1.468703
Moment 4 About Arithmetic Mean	10.331641	10.655926

Skewness	5.787302	6.129663
Kurtosis	65.928436	9.868948

Natural Log Mean	Not Calculated	-0.992647
Log Variance	Not Calculated	0.801595

10.0 Percentile	0.014000
20.0 Percentile	0.120000
30.0 Percentile	0.230000
40.0 Percentile	0.326600
50.0 Percentile (median)	0.415600
60.0 Percentile	0.500000
70.0 Percentile	0.620600
80.0 Percentile	0.820000
90.0 Percentile	1.140000
95.0 Percentile	1.423350
97.5 Percentile	1.797300

Trimean	0.428788
Biweight	0.423142
MAD	0.263142
Alpha	0.485636
Sichel-t	0.000000

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.000000	0.233333	360	0.081551	0.305	360	0.081551	30.5085	1180
0.537702	100.0000							
0.233333	0.466667	305	0.354667	0.258	665	0.206815	56.3559	820
0.737964	69.4915							
0.466667	0.700000	210	0.567100	0.178	875	0.293283	74.1525	515
0.964965	43.6441							
0.700000	0.933333	117	0.801703	0.099	992	0.353248	84.0678	305
1.238904	25.8475							
0.933333	1.166667	86	1.067497	0.073	1078	0.410229	91.3559	188
1.510992	15.9322							



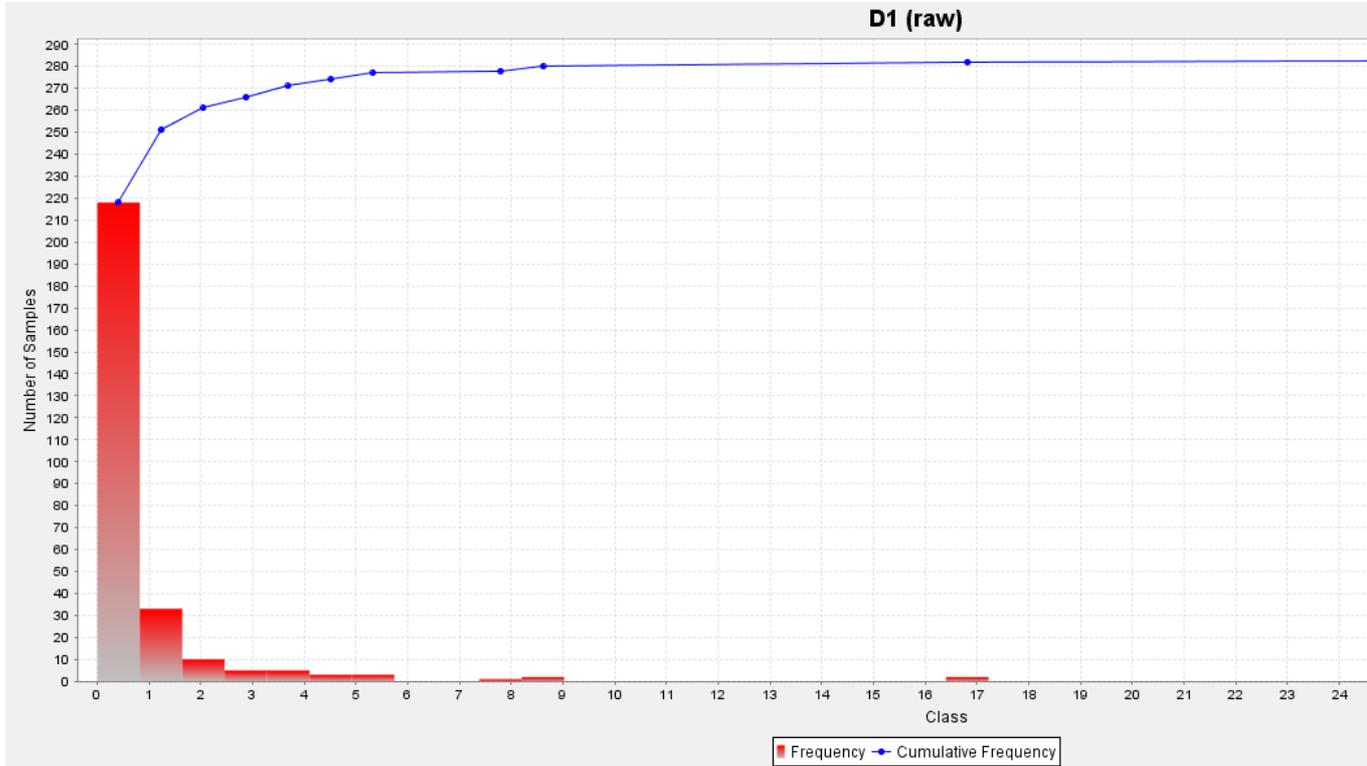
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1.166667	1.400000	36	1.267261	0.031	1114	0.437925	94.4068	102
1.884920	8.6441							
1.400000	1.633333	28	1.505718	0.024	1142	0.464105	96.7797	66
2.221824	5.5932							
1.633333	1.866667	11	1.728127	0.009	1153	0.476165	97.7119	38
2.749482	3.2203							
1.866667	2.100000	6	1.921667	0.005	1159	0.483648	98.2203	27
3.165589	2.2881							
2.100000	2.333333	5	2.218000	0.004	1164	0.491098	98.6441	21
3.520995	1.7797							
2.333333	2.566667	2	2.395000	0.002	1166	0.494363	98.8136	16
3.928181	1.3559							
2.566667	2.800000	5	2.762180	0.004	1171	0.504047	99.2373	14
4.147207	1.1864							
2.800000	3.033333	3	2.906667	0.003	1174	0.510186	99.4915	9
4.916667	0.7627							
3.033333	3.266667	1	3.120000	0.001	1175	0.512407	99.5763	6
5.921667	0.5085							
3.500000	3.733333	1	3.610000	0.001	1176	0.515041	99.6610	5
6.482000	0.4237							
4.200000	4.433333	1	4.400000	0.001	1177	0.518342	99.7458	4
7.200000	0.3390							
6.300000	6.533333	1	6.400000	0.001	1178	0.523335	99.8305	3
8.133333	0.2542							
8.866667	9.100000	1	8.900000	0.001	1179	0.530440	99.9153	2
9.000000	0.1695							
9.100000	9.333333	1	9.100000	0.001	1180	0.537702	100.0000	1
9.100000	0.0847							

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Pit_c_pgh



Output Filename: pit_c_pgh
Statistics Report

Apr 06, 2010

File ../pit C Pgh0.str

String range All
Variable D1

Number of samples 283
Minimum value 0.005000
Maximum value 31.980000

	Ungrouped Data	Grouped Data
Mean	0.932258	1.078366
Median	0.280000	0.537164
Geometric Mean	0.254436	0.608122
Variance	6.747584	6.645168
Standard Deviation	2.597611	2.577822
Coefficient of variation	2.786364	2.390490



Tim Callaghan – Resource and Exploration Geology

Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	6.747584	6.645168
Moment 3 About Arithmetic Mean	139.996257	141.569835
Moment 4 About Arithmetic Mean	3777.440525	3865.741700

Skewness	7.987190	8.264408
Kurtosis	82.966173	3.205965

Natural Log Mean	-1.368705	-0.497379
Log Variance	2.782181	0.622517

10.0 Percentile	0.030000
20.0 Percentile	0.070150
30.0 Percentile	0.127700
40.0 Percentile	0.174700
50.0 Percentile (median)	0.280000
60.0 Percentile	0.420000
70.0 Percentile	0.620551
80.0 Percentile	0.885000
90.0 Percentile	1.928601
95.0 Percentile	3.800000
97.5 Percentile	5.501250

Trimean	0.350000
Biweight	0.322765
MAD	0.254615
Alpha	0.014688
Sichel-t	1.010848

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.005000	0.824872	218	0.244627	0.770	218	0.244627	77.0318	283
0.932258	100.0000							
0.824872	1.644744	33	1.148376	0.117	251	0.363447	88.6926	65
3.238468	22.9682							
1.644744	2.464615	10	2.047730	0.035	261	0.427979	92.2261	32
5.393875	11.3074							
2.464615	3.284487	5	2.796140	0.018	266	0.472493	93.9929	22
6.914850	7.7739							



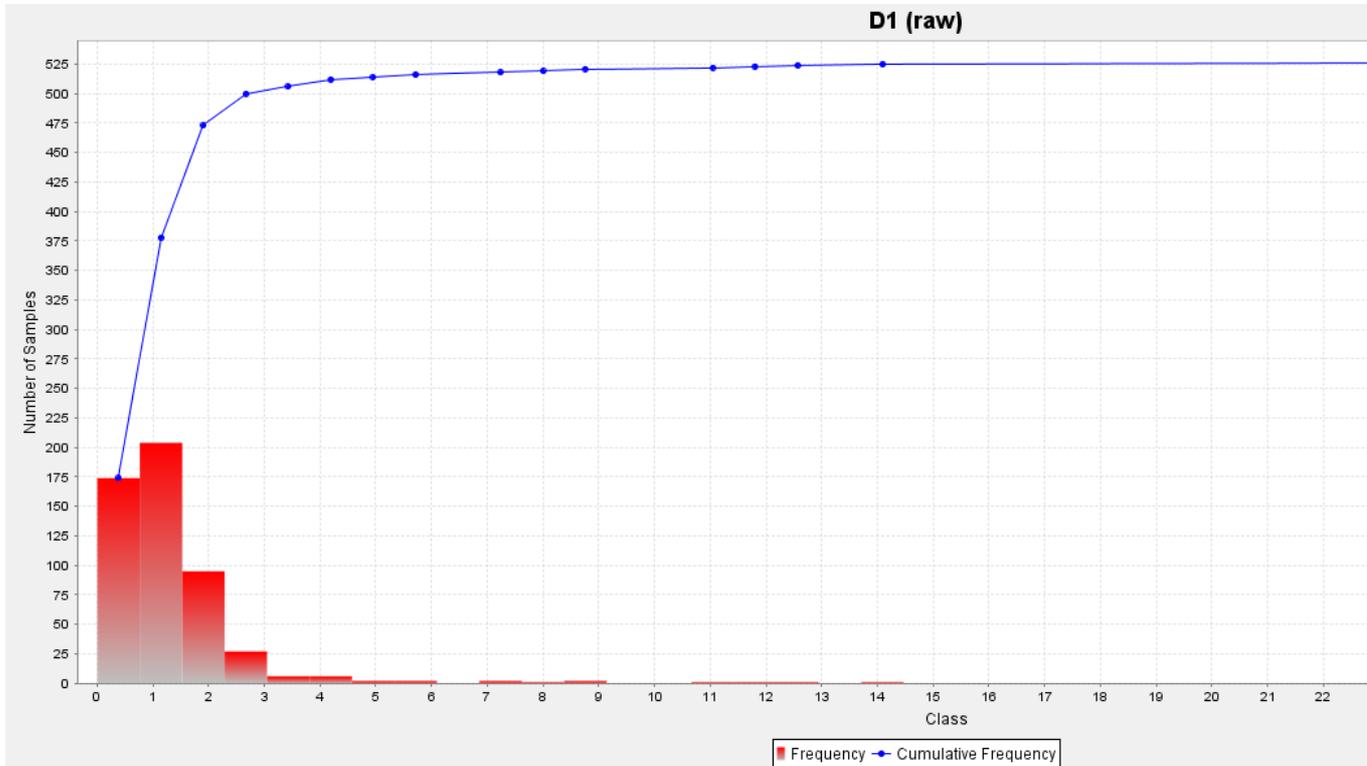
Tim Callaghan – Resource and Exploration Geology

3.284487	4.104359	5	3.751200	0.018	271	0.532986	95.7597	17
8.126235	6.0071							
4.104359	4.924231	3	4.490667	0.011	274	0.576318	96.8198	12
9.949167	4.2403							
4.924231	5.744103	3	5.367500	0.011	277	0.628208	97.8799	9
11.768667	3.1802							
7.383846	8.203718	1	7.513000	0.004	278	0.652973	98.2332	6
14.969250	2.1201							
8.203718	9.023590	2	8.265000	0.007	280	0.707345	98.9399	5
16.460500	1.7668							
16.402436	17.222308	2	16.896250	0.007	282	0.822160	99.6466	3
21.924167	1.0601							
31.980000	32.799872	1	31.980000	0.004	283	0.932258	100.0000	1
31.980000	0.3534							

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Pit_c_upper



Output Filename: pit_c_upper
Statistics Report

Apr 06, 2010

File ../pitl C Upper0.str

String range All
Variable D1

Number of samples 527
Minimum value 0.005000
Maximum value 29.700000

	Ungrouped Data	Grouped Data
Mean	1.424507	1.451968
Median	1.080000	1.100460
Geometric Mean	0.879936	0.999700
Variance	4.609594	4.616535
Standard Deviation	2.146996	2.148612
Coefficient of variation	1.507186	1.479793



Tim Callaghan – Resource and Exploration Geology

Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	4.609594	4.616535
Moment 3 About Arithmetic Mean	78.981505	79.694726
Moment 4 About Arithmetic Mean	1868.302788	1901.289753

Skewness	7.980524	8.034436
Kurtosis	87.926934	3.739361

Natural Log Mean	-0.127907	-0.000300
Log Variance	1.173193	0.623667

10.0 Percentile	0.225000
20.0 Percentile	0.500000
30.0 Percentile	0.700000
40.0 Percentile	0.887500
50.0 Percentile (median)	1.080000
60.0 Percentile	1.270000
70.0 Percentile	1.465001
80.0 Percentile	1.740000
90.0 Percentile	2.300000
95.0 Percentile	3.165000
97.5 Percentile	5.350000

Trimean	1.088800
Biweight	1.057765
MAD	0.495000
Alpha	1.777808
Sichel-t	1.579218

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.005000	0.766410	174	0.394499	0.330	174	0.394499	33.0171	527
1.424507	100.0000							
0.766410	1.527821	204	1.129999	0.387	378	0.791435	71.7268	353
1.932216	66.9829							
1.527821	2.289231	95	1.797453	0.180	473	0.993490	89.7533	149
3.030553	28.2732							
2.289231	3.050641	27	2.629363	0.051	500	1.081827	94.8767	54
5.199896	10.2467							

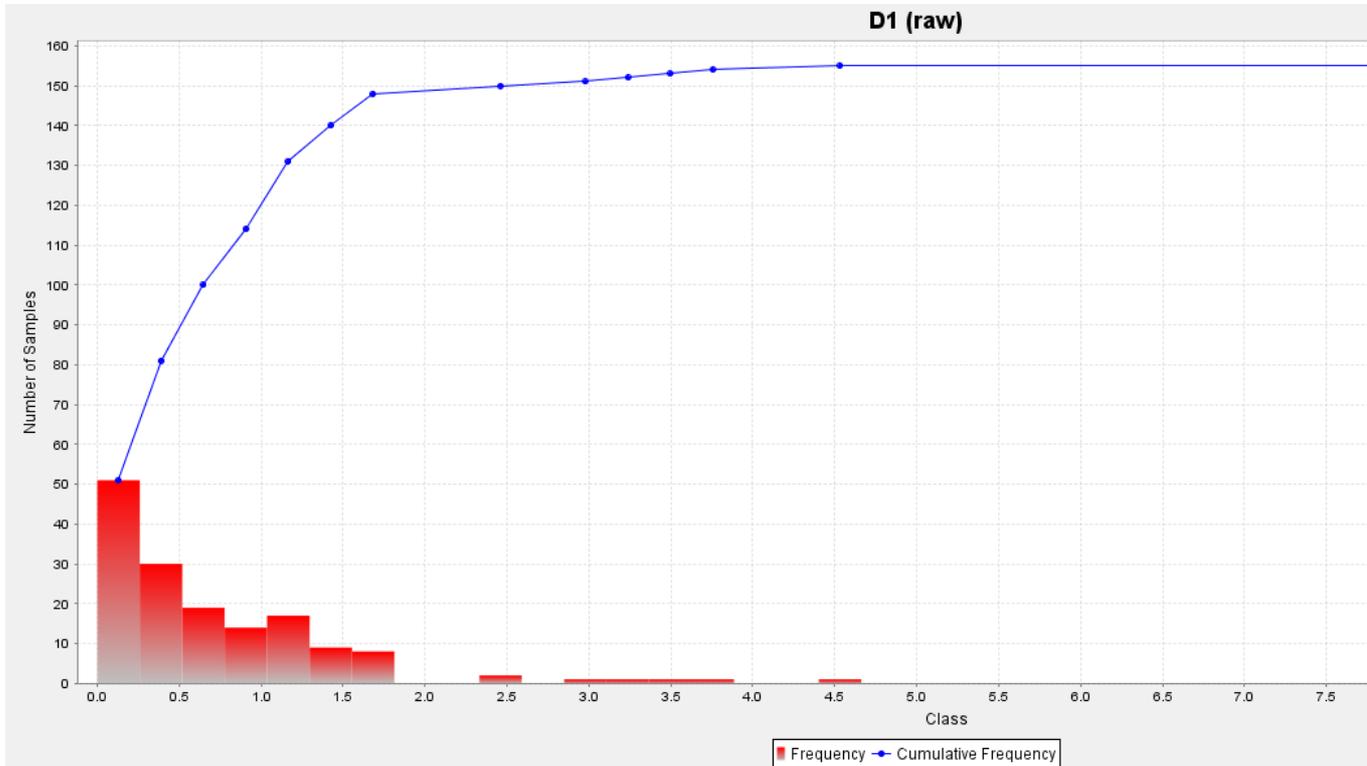


Tim Callaghan – Resource and Exploration Geology

3.050641	3.812051	6	3.360000	0.011	506	1.108841	96.0152	27
7.770430	5.1233							
3.812051	4.573462	6	4.173601	0.011	512	1.144756	97.1537	21
9.030552	3.9848							
4.573462	5.334872	2	5.230000	0.004	514	1.160652	97.5332	15
10.973333	2.8463							
5.334872	6.096282	2	5.495000	0.004	516	1.177452	97.9127	13
11.856923	2.4668							
6.857692	7.619103	2	6.900000	0.004	518	1.199546	98.2922	11
13.013636	2.0873							
7.619103	8.380513	1	8.100000	0.002	519	1.212842	98.4820	9
14.372222	1.7078							
8.380513	9.141923	2	9.075000	0.004	521	1.243023	98.8615	8
15.156250	1.5180							
10.664744	11.426154	1	10.900000	0.002	522	1.261523	99.0512	6
17.183333	1.1385							
11.426154	12.187564	1	11.800000	0.002	523	1.281673	99.2410	5
18.440000	0.9488							
12.187564	12.948974	1	12.400000	0.002	524	1.302891	99.4307	4
20.100000	0.7590							
13.710385	14.471795	1	14.000000	0.002	525	1.327076	99.6205	3
22.666667	0.5693							
23.608718	24.370128	1	24.300000	0.002	526	1.370751	99.8102	2
27.000000	0.3795							
28.938590	29.700000	0	0.000000	0.000	526	1.370751	99.8102	1
29.700000	0.1898							
29.700000	30.461410	1	29.700000	0.002	527	1.424507	100.0000	1
29.700000	0.1898							



Swan_b



Output Filename: swan_b
Statistics Report

Apr 06, 2010

File ../swan B0.str

String range All
Variable D1

Number of samples 156
Minimum value 0.000000
Maximum value 10.100000

	Ungrouped Data	Grouped Data
Mean	0.764028	0.785224
Median	0.490000	0.492051
Geometric Mean	Not Calculated	0.457977
Variance	1.138270	1.125895
Standard Deviation	1.066897	1.061082
Coefficient of variation	1.396412	1.351312



Tim Callaghan – Resource and Exploration Geology

Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	1.138270	1.125895
Moment 3 About Arithmetic Mean	6.025302	6.208845
Moment 4 About Arithmetic Mean	51.457745	53.697091

Skewness	4.961476	5.197135
Kurtosis	39.715518	4.897958

Natural Log Mean	Not Calculated	-0.780936
Log Variance	Not Calculated	1.073173

10.0 Percentile	0.005000
20.0 Percentile	0.065000
30.0 Percentile	0.210000
40.0 Percentile	0.350000
50.0 Percentile (median)	0.490000
60.0 Percentile	0.704900
70.0 Percentile	0.922000
80.0 Percentile	1.175000
90.0 Percentile	1.551901
95.0 Percentile	2.078650
97.5 Percentile	3.350000

Trimean	0.548250
Biweight	0.550815
MAD	0.445000
Alpha	0.402740
Sichel-t	0.000000

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.000000	0.258974	51	0.073392	0.327	51	0.073392	32.6923	156
0.764028	100.0000							
0.258974	0.517949	30	0.383773	0.192	81	0.188348	51.9231	105
1.099479	67.3077							
0.517949	0.776923	19	0.667084	0.122	100	0.279308	64.1026	75
1.385761	48.0769							
0.776923	1.035897	14	0.884643	0.090	114	0.353647	73.0769	56
1.629598	35.8974							

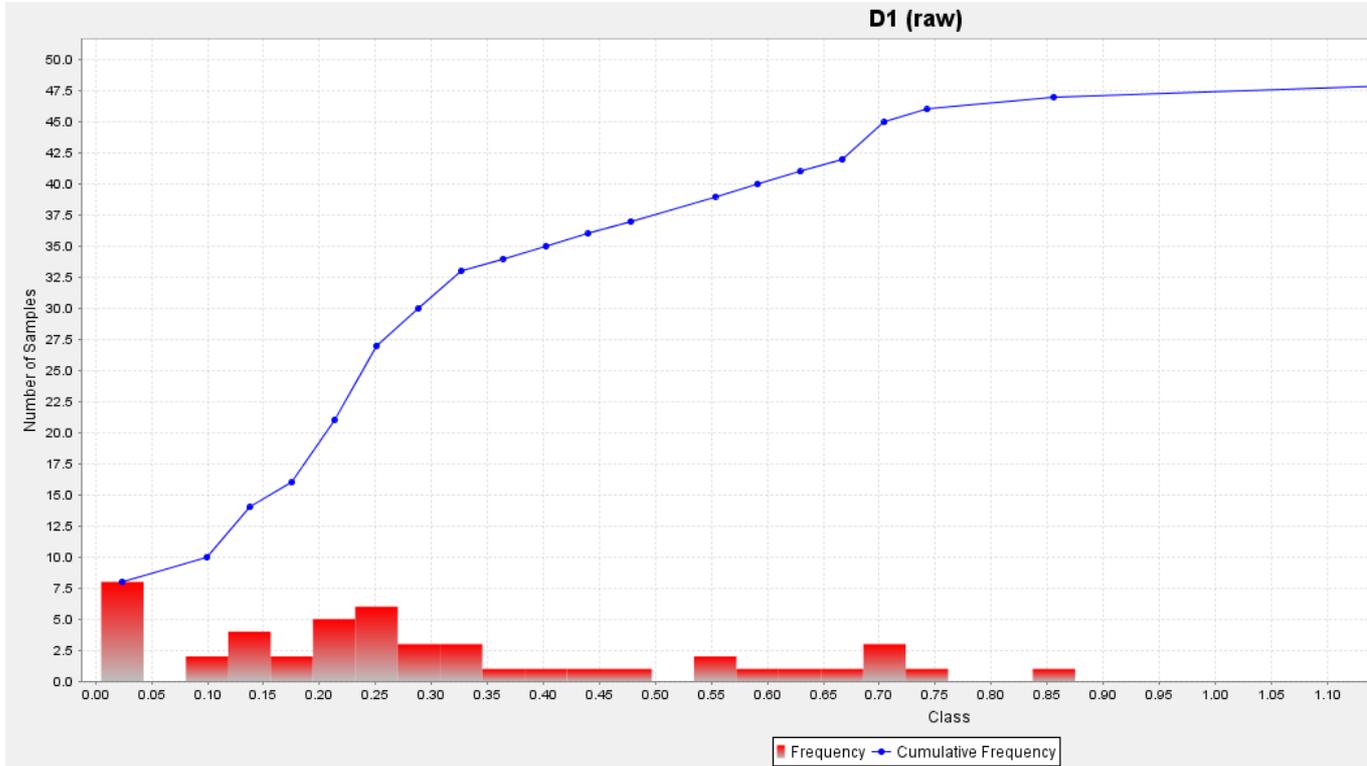


Tim Callaghan – Resource and Exploration Geology

1.035897	1.294872	17	1.142506	0.109	131	0.456018	83.9744	42
1.877917	26.9231							
1.294872	1.553846	9	1.462267	0.058	140	0.520706	89.7436	25
2.377996	16.0256							
1.553846	1.812821	8	1.661750	0.051	148	0.582384	94.8718	16
2.893094	10.2564							
2.330769	2.589744	2	2.432750	0.013	150	0.607055	96.1538	8
4.124437	5.1282							
2.848718	3.107692	1	3.000000	0.006	151	0.622903	96.7949	6
4.688333	3.8462							
3.107692	3.366667	1	3.300000	0.006	152	0.640515	97.4359	5
5.026000	3.2051							
3.366667	3.625641	1	3.400000	0.006	153	0.658551	98.0769	4
5.457500	2.5641							
3.625641	3.884615	1	3.880000	0.006	154	0.679469	98.7179	3
6.143333	1.9231							
4.402564	4.661538	1	4.450000	0.006	155	0.703795	99.3590	2
7.275000	1.2821							
9.841026	10.100000	0	0.000000	0.000	155	0.703795	99.3590	1
10.100000	0.6410							
10.100000	10.358974	1	10.100000	0.006	156	0.764028	100.0000	1
10.100000	0.6410							



Swan_c_pgh



Output Filename: swan_c_pgh
Statistics Report

Apr 06, 2010

File ../swan C Pgh0.str

String range All
Variable D1

Number of samples 50
Minimum value 0.005000
Maximum value 1.480000

	Ungrouped Data	Grouped Data
Mean	0.355932	0.362026
Median	0.255000	0.257137
Geometric Mean	0.180251	0.219900
Variance	0.109553	0.109363
Standard Deviation	0.330988	0.330700
Coefficient of variation	0.929918	0.913472



Tim Callaghan – Resource and Exploration Geology

Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	0.109553	0.109363
Moment 3 About Arithmetic Mean	0.055061	0.056869
Moment 4 About Arithmetic Mean	0.062760	0.064668

Skewness	1.518467	1.572439
Kurtosis	5.229240	4.754879

Natural Log Mean	-1.713404	-1.514580
Log Variance	2.381000	1.325682

10.0 Percentile	0.007500
20.0 Percentile	0.109600
30.0 Percentile	0.174200
40.0 Percentile	0.209700
50.0 Percentile (median)	0.255000
60.0 Percentile	0.307300
70.0 Percentile	0.413900
80.0 Percentile	0.620000
90.0 Percentile	0.730000
95.0 Percentile	1.180000
97.5 Percentile	1.390000

Trimean	0.295875
Biweight	0.283180
MAD	0.166820
Alpha	0.261758
Sichel-t	0.564423

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq	%				

0.005001	0.042821	8	0.009825	0.160	8	0.009825	16.0000	50
0.355932	100.0000							
0.080641	0.118462	2	0.087300	0.040	10	0.025320	20.0000	42
0.421857	84.0000							
0.118462	0.156282	4	0.135825	0.080	14	0.056893	28.0000	40
0.438585	80.0000							
0.156282	0.194103	2	0.174200	0.040	16	0.071556	32.0000	36
0.472225	72.0000							

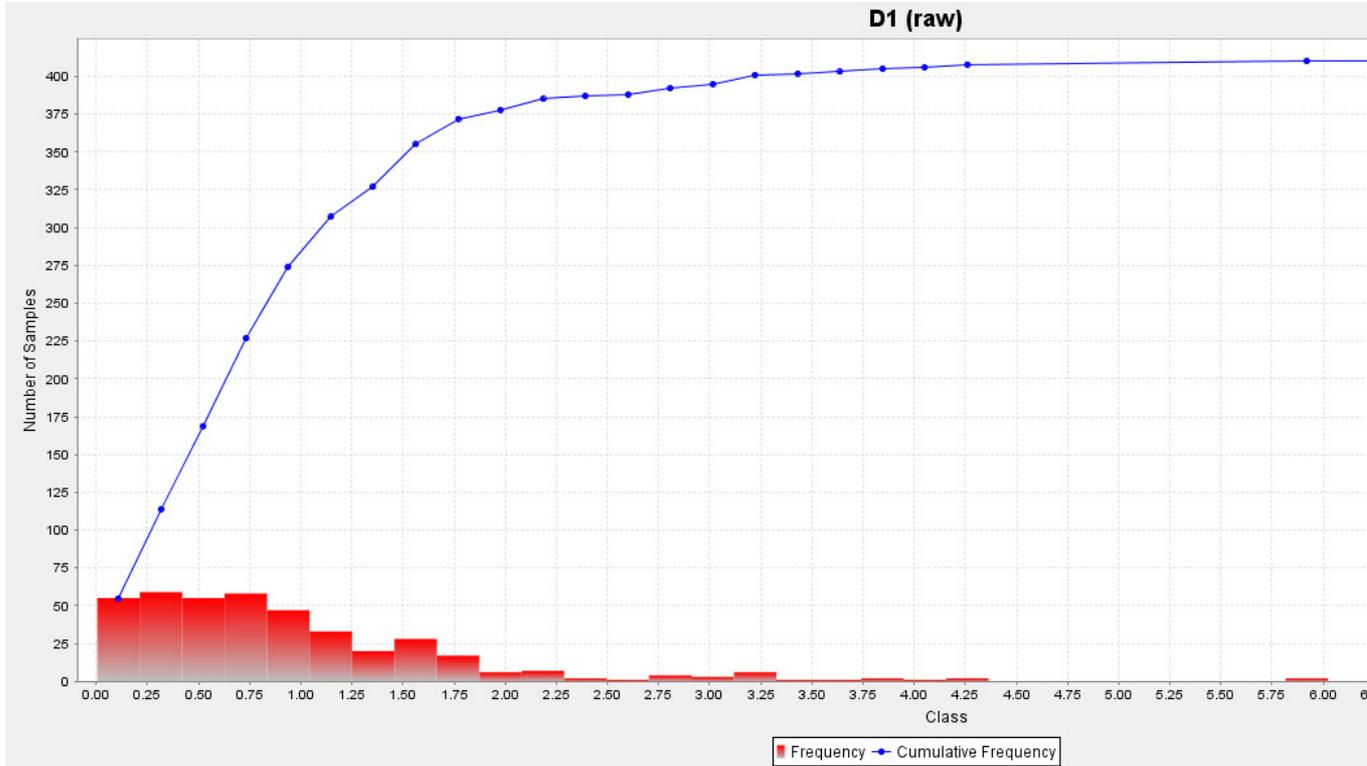


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0.194103	0.231923	5	0.204540	0.100	21	0.103219	42.0000	34
0.489756	68.0000							
0.231923	0.269744	6	0.248401	0.120	27	0.135481	54.0000	29
0.538931	58.0000							
0.269744	0.307564	3	0.292967	0.060	30	0.151230	60.0000	23
0.614722	46.0000							
0.307564	0.345385	3	0.317300	0.060	33	0.166327	66.0000	20
0.662985	40.0000							
0.345385	0.383205	1	0.366000	0.020	34	0.172200	68.0000	17
0.723988	34.0000							
0.383205	0.421026	1	0.387800	0.020	35	0.178360	70.0000	16
0.746362	32.0000							
0.421026	0.458846	1	0.440000	0.020	36	0.185628	72.0000	15
0.770267	30.0000							
0.458846	0.496667	1	0.460000	0.020	37	0.193043	74.0000	14
0.793857	28.0000							
0.534487	0.572308	2	0.542000	0.040	39	0.210938	78.0000	13
0.819538	26.0000							
0.572308	0.610128	1	0.600000	0.020	40	0.220665	80.0000	11
0.870001	22.0000							
0.610128	0.647949	1	0.640000	0.020	41	0.230893	82.0000	10
0.897000	20.0000							
0.647949	0.685769	1	0.660000	0.020	42	0.241110	84.0000	9
0.925556	18.0000							
0.685769	0.723590	3	0.710000	0.060	45	0.272369	90.0000	8
0.958750	16.0000							
0.723590	0.761410	1	0.740000	0.020	46	0.282535	92.0000	5
1.108000	10.0000							
0.837051	0.874872	1	0.840000	0.020	47	0.294396	94.0000	4
1.200000	8.0000							
1.177436	1.215256	1	1.180000	0.020	48	0.312846	96.0000	3
1.320000	6.0000							
1.290897	1.328718	1	1.300000	0.020	49	0.332992	98.0000	2
1.390000	4.0000							
1.442179	1.480000	0	0.000000	0.000	49	0.332992	98.0000	1
1.480000	2.0000							
1.480000	1.517821	1	1.480000	0.020	50	0.355932	100.0000	1
1.480000	2.0000							



Swan_c_upper



Output Filename: swan_c_upper
Statistics Report

Apr 06, 2010

File ../swan C Upper0.str

String range All
Variable D1

Number of samples 411
Minimum value 0.005000
Maximum value 8.100000

	Ungrouped Data	Grouped Data
Mean	0.975759	0.973885
Median	0.760000	0.758315
Geometric Mean	0.618813	0.658186
Variance	0.833111	0.843566
Standard Deviation	0.912749	0.918459
Coefficient of variation	0.935424	0.943087



Tim Callaghan – Resource and Exploration Geology

Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	0.833111	0.843566
Moment 3 About Arithmetic Mean	2.134722	2.202672
Moment 4 About Arithmetic Mean	11.233170	11.720454

Skewness	2.807288	2.842962
Kurtosis	16.184402	3.095363

Natural Log Mean	-0.479952	-0.418268
Log Variance	1.374467	0.897003

10.0 Percentile	0.170000
20.0 Percentile	0.334800
30.0 Percentile	0.447400
40.0 Percentile	0.607200
50.0 Percentile (median)	0.760000
60.0 Percentile	0.925000
70.0 Percentile	1.130000
80.0 Percentile	1.470000
90.0 Percentile	1.803500
95.0 Percentile	2.772750
97.5 Percentile	3.394000

Trimean	0.796550
Biweight	0.779255
MAD	0.419255
Alpha	0.597585
Sichel-t	1.226879

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq	%				

0.005000	0.212564	55	0.105775	0.134	55	0.105775	13.3820	411
0.975759	100.0000							
0.212564	0.420128	59	0.340329	0.144	114	0.227167	27.7372	356
1.110167	86.6180							
0.420128	0.627692	55	0.519675	0.134	169	0.322362	41.1192	297
1.263098	72.2628							
0.627692	0.835256	58	0.735760	0.141	227	0.427988	55.2311	242
1.432058	58.8808							

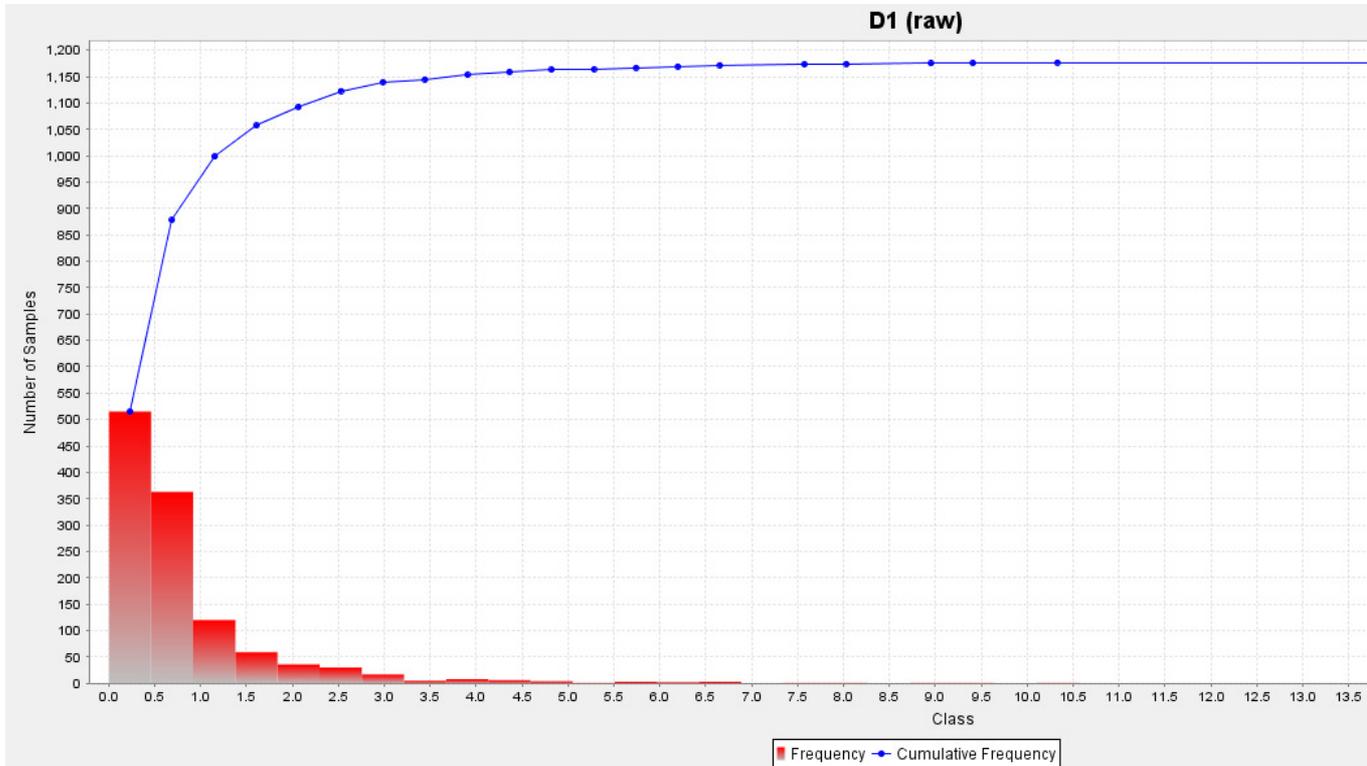


Tim Callaghan – Resource and Exploration Geology

0.835256	1.042821	47	0.942589	0.114	274	0.516259	66.6667	184
1.651543	44.7689							
1.042821	1.250385	33	1.145424	0.080	307	0.583889	74.6959	137
1.894761	33.3333							
1.250385	1.457949	20	1.364101	0.049	327	0.631608	79.5620	104
2.132531	25.3041							
1.457949	1.665513	28	1.570539	0.068	355	0.705665	86.3747	84
2.315490	20.4380							
1.665513	1.873077	17	1.739353	0.041	372	0.752903	90.5109	56
2.687966	13.6253							
1.873077	2.080641	6	2.011667	0.015	378	0.772884	91.9708	39
3.101464	9.4891							
2.080641	2.288205	7	2.164286	0.017	385	0.798182	93.6740	33
3.299609	8.0292							
2.288205	2.495769	2	2.369200	0.005	387	0.806301	94.1606	26
3.605273	6.3260							
2.495769	2.703333	1	2.560800	0.002	388	0.810823	94.4039	24
3.708279	5.8394							
2.703333	2.910897	4	2.791375	0.010	392	0.831032	95.3771	23
3.758170	5.5961							
2.910897	3.118462	3	2.994000	0.007	395	0.847460	96.1071	19
3.961705	4.6229							
3.118462	3.326026	6	3.183483	0.015	401	0.882413	97.5669	16
4.143150	3.8929							
3.326026	3.533590	1	3.528000	0.002	402	0.888994	97.8102	10
4.718950	2.4331							
3.533590	3.741154	1	3.600000	0.002	403	0.895721	98.0535	9
4.851278	2.1898							
3.741154	3.948718	2	3.810750	0.005	405	0.910116	98.5401	8
5.007687	1.9465							
3.948718	4.156282	1	4.070000	0.002	406	0.917899	98.7835	6
5.406667	1.4599							
4.156282	4.363846	2	4.235000	0.005	408	0.934160	99.2701	5
5.674000	1.2165							
5.816795	6.024359	2	5.900000	0.005	410	0.958383	99.7567	3
6.633333	0.7299							
7.892436	8.100000	0	0.000000	0.000	410	0.958383	99.7567	1
8.100000	0.2433							
8.100000	8.307564	1	8.100000	0.002	411	0.975759	100.0000	1
8.100000	0.2433							



Wedge_b



Output Filename: wedge_b
Statistics Report

Apr 06, 2010

File ../wedge B0.str

String range All
Variable D1

Number of samples 1178
Minimum value 0.003600
Maximum value 17.900000

	Ungrouped Data	Grouped Data
Mean	0.835577	0.862933
Median	0.540000	0.556028
Geometric Mean	0.387407	0.550094
Variance	1.365149	1.345199
Standard Deviation	1.168396	1.159827
Coefficient of variation	1.398310	1.344053



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	1.365149	1.345199
Moment 3 About Arithmetic Mean	8.519423	8.675744
Moment 4 About Arithmetic Mean	99.895169	103.418328

Skewness	5.341215	5.560669
Kurtosis	53.602408	4.794395

Natural Log Mean	-0.948279	-0.597666
Log Variance	2.334430	0.771494

10.0 Percentile	0.040000
20.0 Percentile	0.160000
30.0 Percentile	0.310000
40.0 Percentile	0.431600
50.0 Percentile (median)	0.540000
60.0 Percentile	0.670000
70.0 Percentile	0.810000
80.0 Percentile	1.130500
90.0 Percentile	1.929001
95.0 Percentile	2.672000
97.5 Percentile	3.945800

Trimean	0.562150
Biweight	0.529596
MAD	0.339596
Alpha	0.241215
Sichel-t	1.242089

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.003600	0.462482	515	0.202540	0.437	515	0.202540	43.7182	1178
0.835577	100.0000							
0.462482	0.921364	363	0.664993	0.308	878	0.393736	74.5331	663
1.327303	56.2818							
0.921364	1.380246	120	1.123575	0.102	998	0.481492	84.7199	300
2.128699	25.4669							
1.380246	1.839128	59	1.578078	0.050	1057	0.542702	89.7284	180
2.798782	15.2801							

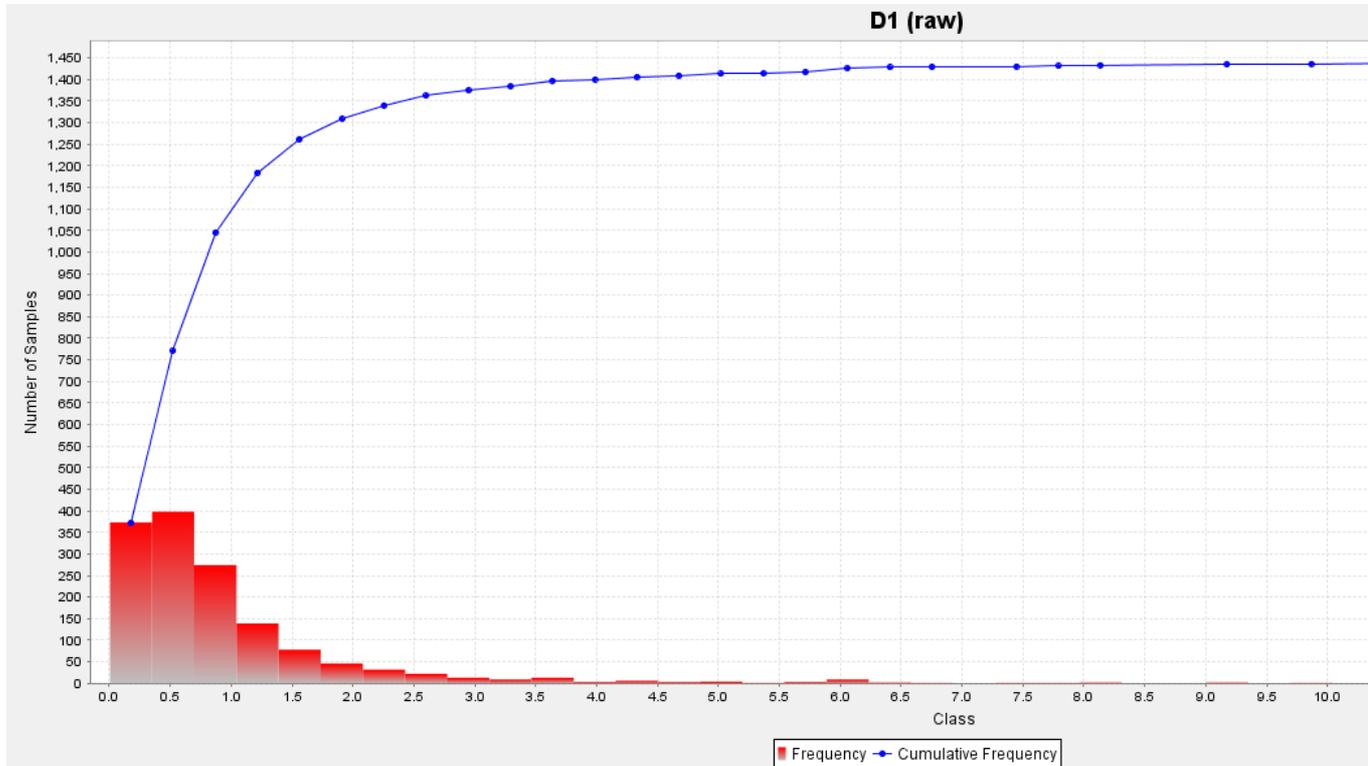


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1.839128	2.298010	36	2.074689	0.031	1093	0.593161	92.7844	121
3.394001	10.2716							
2.298010	2.756892	30	2.482877	0.025	1123	0.643643	95.3311	85
3.952768	7.2156							
2.756892	3.215774	17	2.994571	0.014	1140	0.678701	96.7742	55
4.754527	4.6689							
3.215774	3.674656	5	3.431200	0.004	1145	0.690720	97.1986	38
5.541876	3.2258							
3.674656	4.133538	8	3.955701	0.007	1153	0.713374	97.8778	33
5.861676	2.8014							
4.133538	4.592421	6	4.345183	0.005	1159	0.732175	98.3871	25
6.471588	2.1222							
4.592421	5.051303	4	4.834325	0.003	1163	0.746284	98.7267	19
7.143084	1.6129							
5.051303	5.510185	1	5.400000	0.001	1164	0.750282	98.8115	15
7.758753	1.2733							
5.510185	5.969067	3	5.570667	0.003	1167	0.762674	99.0662	14
7.927236	1.1885							
5.969067	6.427949	2	6.105650	0.002	1169	0.771815	99.2360	11
8.569936	0.9338							
6.427949	6.886831	3	6.694667	0.003	1172	0.786976	99.4907	9
9.117556	0.7640							
7.345713	7.804595	1	7.380000	0.001	1173	0.792597	99.5756	6
10.329000	0.5093							
7.804595	8.263477	1	8.150000	0.001	1174	0.798864	99.6604	5
10.918800	0.4244							
8.722359	9.181241	1	8.844000	0.001	1175	0.805711	99.7453	4
11.611000	0.3396							
9.181241	9.640123	1	9.600000	0.001	1176	0.813189	99.8302	3
12.533333	0.2547							
10.099005	10.557887	1	10.100000	0.001	1177	0.821079	99.9151	2
14.000000	0.1698							
17.441118	17.900000	0	0.000000	0.000	1177	0.821079	99.9151	1
17.900000	0.0849							
17.900000	18.358882	1	17.900000	0.001	1178	0.835577	100.0000	1
17.900000	0.0849							



Wedge_c_lower



Output Filename: wedge_c_1
Statistics Report

Apr 06, 2010

File ../wedge C L0.str

String range All
Variable D1

Number of samples 1441
Minimum value 0.005000
Maximum value 13.500000

	Ungrouped Data	Grouped Data
Mean	0.974251	0.988448
Median	0.650000	0.653146
Geometric Mean	0.530342	0.624392
Variance	1.614621	1.605341
Standard Deviation	1.270678	1.267020
Coefficient of variation	1.304261	1.281829



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	1.614621	1.605341
Moment 3 About Arithmetic Mean	8.906682	8.978856
Moment 4 About Arithmetic Mean	77.004654	78.277831

Skewness	4.341201	4.414385
Kurtosis	29.537626	3.484068

Natural Log Mean	-0.634233	-0.470976
Log Variance	1.697686	0.863553

10.0 Percentile	0.119200
20.0 Percentile	0.261000
30.0 Percentile	0.390000
40.0 Percentile	0.498500
50.0 Percentile (median)	0.650000
60.0 Percentile	0.800000
70.0 Percentile	0.980000
80.0 Percentile	1.304400
90.0 Percentile	1.945001
95.0 Percentile	2.970000
97.5 Percentile	4.500000

Trimean	0.688913
Biweight	0.648788
MAD	0.367388
Alpha	0.249484
Sichel-t	1.238031

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.005000	0.351026	373	0.165537	0.259	373	0.165537	25.8848	1441
0.974251	100.0000							
0.351026	0.697051	398	0.509624	0.276	771	0.343159	53.5045	1068
1.256695	74.1152							
0.697051	1.043077	274	0.852880	0.190	1045	0.476808	72.5191	670
1.700478	46.4955							
1.043077	1.389103	139	1.198488	0.096	1184	0.561533	82.1652	396
2.286946	27.4809							



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1.389103	1.735128	78	1.552697	0.054	1262	0.622793	87.5781	257
2.875646	17.8348							
1.735128	2.081154	46	1.867252	0.032	1308	0.666559	90.7703	179
3.452126	12.4219							
2.081154	2.427179	32	2.251862	0.022	1340	0.704417	92.9910	133
4.000277	9.2297							
2.427179	2.773205	22	2.610045	0.015	1362	0.735198	94.5177	101
4.554231	7.0090							
2.773205	3.119231	13	2.962846	0.009	1375	0.756259	95.4198	79
5.095649	5.4823							
3.119231	3.465256	9	3.258244	0.006	1384	0.772529	96.0444	66
5.515747	4.5802							
3.465256	3.811282	13	3.643846	0.009	1397	0.799249	96.9466	57
5.872195	3.9556							
3.811282	4.157308	3	3.970933	0.002	1400	0.806045	97.1548	44
6.530570	3.0534							
4.157308	4.503333	6	4.383333	0.004	1406	0.821311	97.5711	41
6.717861	2.8452							
4.503333	4.849359	3	4.683333	0.002	1409	0.829534	97.7793	35
7.118066	2.4289							
4.849359	5.195385	4	5.012500	0.003	1413	0.841375	98.0569	32
7.346322	2.2207							
5.195385	5.541410	1	5.200000	0.001	1414	0.844458	98.1263	28
7.679725	1.9431							
5.541410	5.887436	3	5.698967	0.002	1417	0.854735	98.3345	27
7.771567	1.8737							
5.887436	6.233462	9	6.070378	0.006	1426	0.887653	98.9591	24
8.030642	1.6655							
6.233462	6.579487	2	6.385000	0.001	1428	0.895353	99.0978	15
9.206800	1.0409							
6.579487	6.925513	1	6.600000	0.001	1429	0.899345	99.1672	13
9.640923	0.9022							
7.271538	7.617564	1	7.600000	0.001	1430	0.904030	99.2366	12
9.894333	0.8328							
7.617564	7.963590	1	7.900000	0.001	1431	0.908919	99.3060	11
10.102909	0.7634							
7.963590	8.309615	2	8.116000	0.001	1433	0.918978	99.4448	10
10.323200	0.6940							
9.001667	9.347692	2	9.150001	0.001	1435	0.930450	99.5836	8
10.875000	0.5552							
9.693718	10.039744	1	9.700000	0.001	1436	0.936557	99.6530	6
11.450000	0.4164							
10.731795	11.077821	1	10.800000	0.001	1437	0.943421	99.7224	5
11.800000	0.3470							



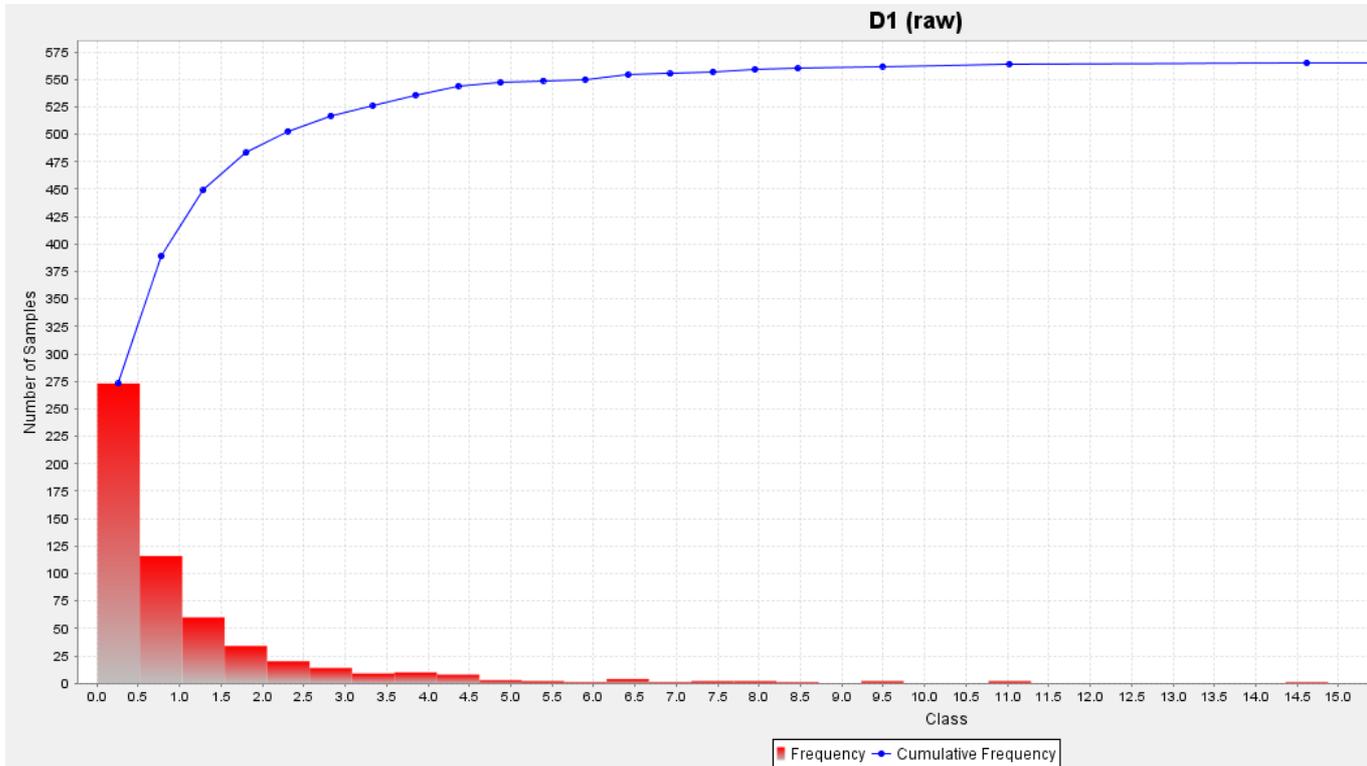
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11.077821	11.423846	1	11.200000	0.001	1438	0.950553	99.7918	4
12.050000	0.2776							
11.423846	11.769872	1	11.600000	0.001	1439	0.957954	99.8612	3
12.333333	0.2082							
11.769872	12.115897	1	11.900000	0.001	1440	0.965552	99.9306	2
12.700000	0.1388							
13.500000	13.846026	1	13.500000	0.001	1441	0.974251	100.0000	1
13.500000	0.0694							

1/1



Wedge_c_pgh



Output Filename: basic_stats\wedge_c_pgh
Statistics Report

Apr 06, 2010

File Wedge C Pgh0.str

String range All
Variable D1

Number of samples 566
Minimum value 0.005000
Maximum value 20.000000

	Ungrouped Data	Grouped Data
Mean	1.154109	1.179844
Median	0.559600	0.561890
Geometric Mean	0.477383	0.644100
Variance	3.318371	3.289568
Standard Deviation	1.821640	1.813717
Coefficient of variation	1.578395	1.537251



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	3.318371	3.289568
Moment 3 About Arithmetic Mean	26.726637	27.406725
Moment 4 About Arithmetic Mean	357.553525	372.985760

Skewness	4.421370	4.593554
Kurtosis	32.470663	2.532674

Natural Log Mean	-0.739437	-0.439902
Log Variance	2.295435	1.017677

10.0 Percentile	0.080000
20.0 Percentile	0.160000
30.0 Percentile	0.270000
40.0 Percentile	0.388850
50.0 Percentile (median)	0.559600
60.0 Percentile	0.763000
70.0 Percentile	1.081250
80.0 Percentile	1.605000
90.0 Percentile	2.825000
95.0 Percentile	4.206100
97.5 Percentile	6.300000

Trimean	0.660475
Biweight	0.616500
MAD	0.456500
Alpha	0.048803
Sichel-t	1.497728

Normal Histogram Tabulation

D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					

0.005000	0.517692	273	0.220417	0.482	273	0.220417	48.2332	566
1.154109	100.0000							
0.517692	1.030385	116	0.746629	0.205	389	0.377334	68.7279	293
2.024068	51.7668							
1.030385	1.543077	60	1.266268	0.106	449	0.496122	79.3286	177
2.861260	31.2721							
1.543077	2.055769	34	1.805971	0.060	483	0.588327	85.3357	117
3.679204	20.6714							

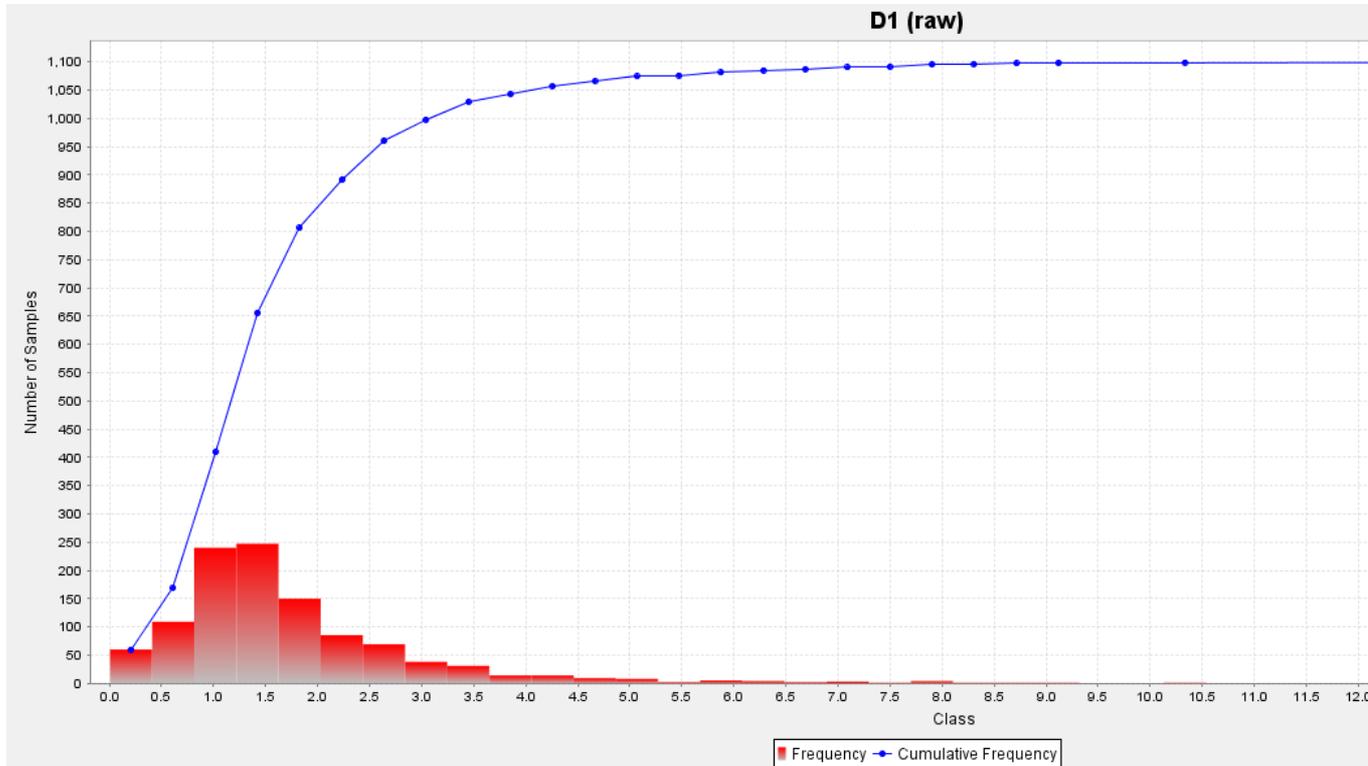


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2.055769	2.568462	20	2.376365	0.035	503	0.659422	88.8693	83
4.446553	14.6643							
2.568462	3.081154	14	2.851050	0.025	517	0.718770	91.3428	63
5.103756	11.1307							
3.081154	3.593846	9	3.350189	0.016	526	0.763794	92.9329	49
5.747386	8.6572							
3.593846	4.106538	10	3.879690	0.018	536	0.821926	94.6996	40
6.286755	7.0671							
4.106538	4.619231	8	4.331925	0.014	544	0.873544	96.1131	30
7.089110	5.3004							
4.619231	5.131923	3	4.759533	0.005	547	0.894856	96.6431	22
8.091723	3.8869							
5.131923	5.644615	2	5.554500	0.004	549	0.911832	96.9965	19
8.617858	3.3569							
5.644615	6.157308	1	5.830000	0.002	550	0.920774	97.1731	17
8.978253	3.0035							
6.157308	6.670000	4	6.315800	0.007	554	0.959727	97.8799	16
9.175019	2.8269							
6.670000	7.182692	1	6.900000	0.002	555	0.970430	98.0565	12
10.128092	2.1201							
7.182692	7.695385	2	7.508500	0.004	557	0.993906	98.4099	11
10.421555	1.9435							
7.695385	8.208077	2	8.028000	0.004	559	1.019073	98.7633	9
11.068900	1.5901							
8.208077	8.720769	1	8.600000	0.002	560	1.032610	98.9399	7
11.937729	1.2367							
9.233462	9.746154	2	9.475000	0.004	562	1.062654	99.2933	6
12.494017	1.0601							
10.771538	11.284231	2	10.807100	0.004	564	1.097209	99.6466	4
14.003525	0.7067							
14.360385	14.873077	1	14.399900	0.002	565	1.120754	99.8233	2
17.199950	0.3534							
19.487308	20.000000	0	0.000000	0.000	565	1.120754	99.8233	1
20.000000	0.1767							
20.000000	20.512692	1	20.000000	0.002	566	1.154109	100.0000	1
20.000000	0.1767							



Wedge_c_upper



Output Filename: wedge_c_upper
Statistics Report

Apr 06, 2010

File ../wedge C Upper0.str

String range All
Variable D1

Number of samples 1100
Minimum value 0.005000
Maximum value 15.800000

	Ungrouped Data	Grouped Data
Mean	1.757475	1.755336
Median	1.420000	1.451194
Geometric Mean	1.383337	1.395864
Variance	1.740223	1.743299
Standard Deviation	1.319175	1.320340
Coefficient of variation	0.750608	0.752187



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Moment 1 About Arithmetic Mean	0.000000	0.000000
Moment 2 About Arithmetic Mean	1.740223	1.743299
Moment 3 About Arithmetic Mean	7.039066	7.123703
Moment 4 About Arithmetic Mean	62.625326	64.631004

Skewness	3.066251	3.094910
Kurtosis	20.679511	2.344024

Natural Log Mean	0.324499	0.333514
Log Variance	0.586995	0.500971

10.0 Percentile	0.660000
20.0 Percentile	0.925000
30.0 Percentile	1.120000
40.0 Percentile	1.260000
50.0 Percentile (median)	1.420000
60.0 Percentile	1.635000
70.0 Percentile	1.915000
80.0 Percentile	2.361001
90.0 Percentile	3.180001
95.0 Percentile	4.100000
97.5 Percentile	5.100000

Trimean	1.497950
Biweight	1.449122
MAD	0.490878
Alpha	-0.004950
Sichel-t	1.854567

Normal Histogram Tabulation
D1

Class From	Class To	Count	Mean	Freq %	Cum Count	Cum Mean	Cum Freq %
Dec Count	Dec Mean	Dec Freq %					
0.005000	0.410000	60	0.225682	0.055	60	0.225682	5.4545
1.757475	100.0000						
0.410001	0.815000	109	0.647794	0.099	169	0.497931	15.3636
1.845848	94.5455						
0.815000	1.220000	240	1.038948	0.218	409	0.815398	37.1818
1.986114	84.6364						
1.220000	1.625000	247	1.401463	0.225	656	1.036066	59.6364
2.315086	62.8182						



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1.625000	2.030000	150	1.802933	0.136	806	1.178783	73.2727	444
2.823341	40.3636							
2.030000	2.435000	85	2.229359	0.077	891	1.279006	81.0000	294
3.343957	26.7273							
2.435000	2.840001	69	2.639354	0.063	960	1.376781	87.2727	209
3.797263	19.0000							
2.840001	3.245001	38	3.065368	0.035	998	1.441076	90.7273	140
4.367946	12.7273							
3.245001	3.650000	31	3.484661	0.028	1029	1.502642	93.5455	102
4.853221	9.2727							
3.650000	4.055000	14	3.845536	0.013	1043	1.534090	94.8182	71
5.450761	6.4545							
4.055000	4.460000	14	4.222400	0.013	1057	1.569697	96.0909	57
5.845026	5.1818							
4.460000	4.865000	9	4.696811	0.008	1066	1.596098	96.9091	43
6.373323	3.9091							
4.865000	5.270000	8	5.045750	0.007	1074	1.621794	97.6364	34
6.817106	3.0909							
5.270000	5.675000	2	5.450000	0.002	1076	1.628910	97.8182	26
7.362138	2.3636							
5.675000	6.080000	5	5.836600	0.005	1081	1.648372	98.2727	24
7.521483	2.1818							
6.080000	6.485000	4	6.249800	0.004	1085	1.665336	98.6364	19
7.964874	1.7273							
6.485000	6.890000	2	6.740000	0.002	1087	1.674673	98.8182	15
8.422227	1.3636							
6.890000	7.295000	3	7.140000	0.003	1090	1.689715	99.0909	13
8.681031	1.1818							
7.295000	7.700000	1	7.300000	0.001	1091	1.694857	99.1818	10
9.143340	0.9091							
7.700000	8.105000	4	7.940851	0.004	1095	1.717674	99.5455	9
9.348156	0.8182							
8.105000	8.510000	1	8.200000	0.001	1096	1.723588	99.6364	5
10.474000	0.4545							
8.510000	8.915000	1	8.900000	0.001	1097	1.730130	99.7273	4
11.042500	0.3636							
8.915000	9.320001	1	9.300000	0.001	1098	1.737024	99.8182	3
11.756667	0.2727							
10.130000	10.535000	1	10.170000	0.001	1099	1.744697	99.9091	2
12.985000	0.1818							
15.800000	16.205000	1	15.800000	0.001	1100	1.757475	100.0000	1
15.800000	0.0909							



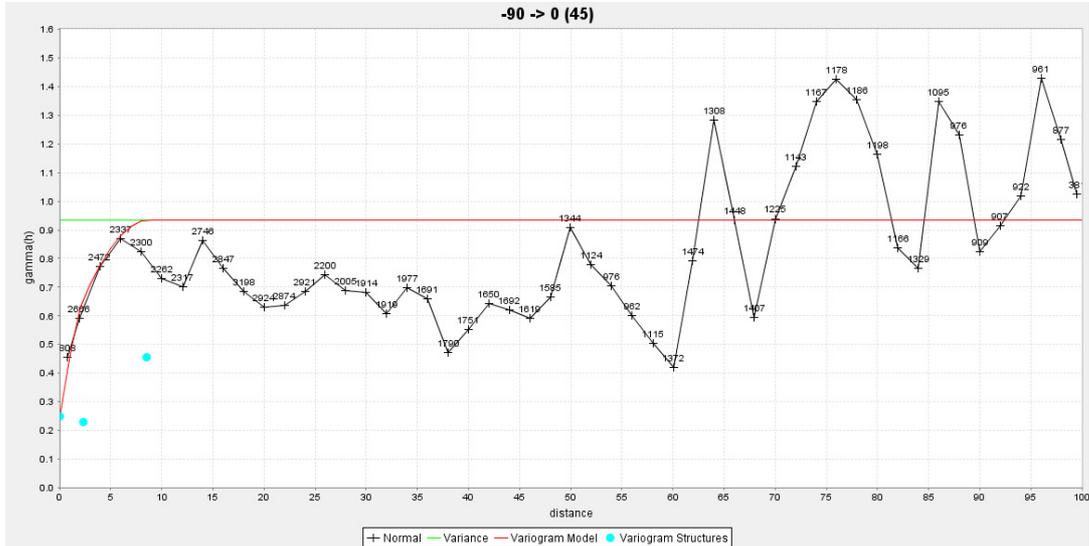
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Appendix 3

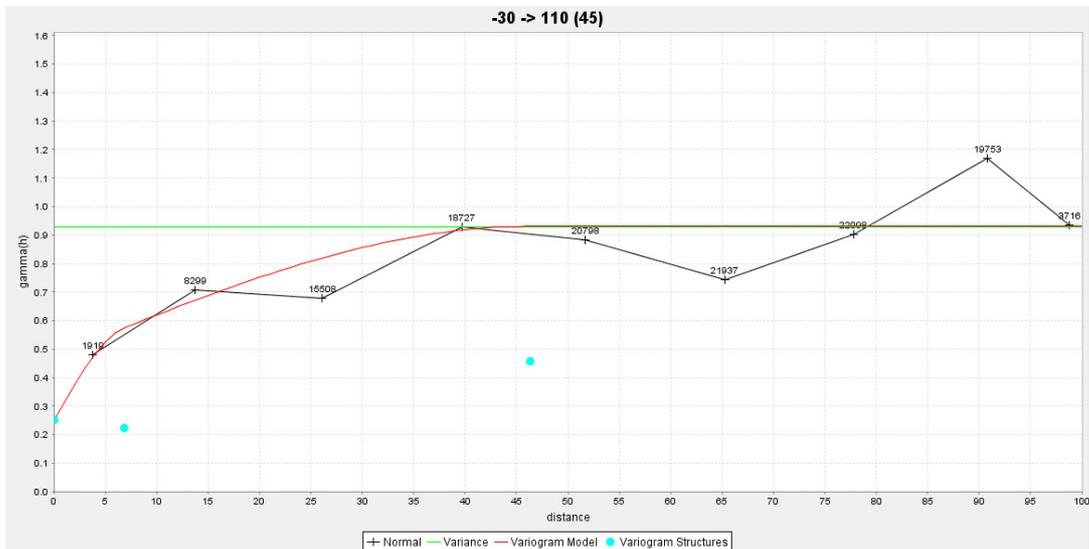
Variography



B-Lens



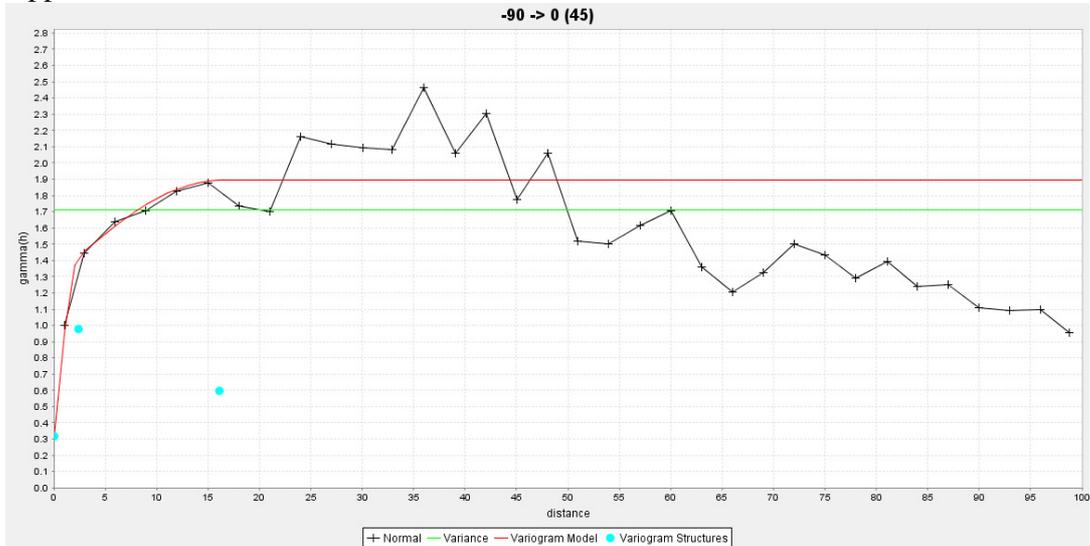
B Lens Downhole Variogram



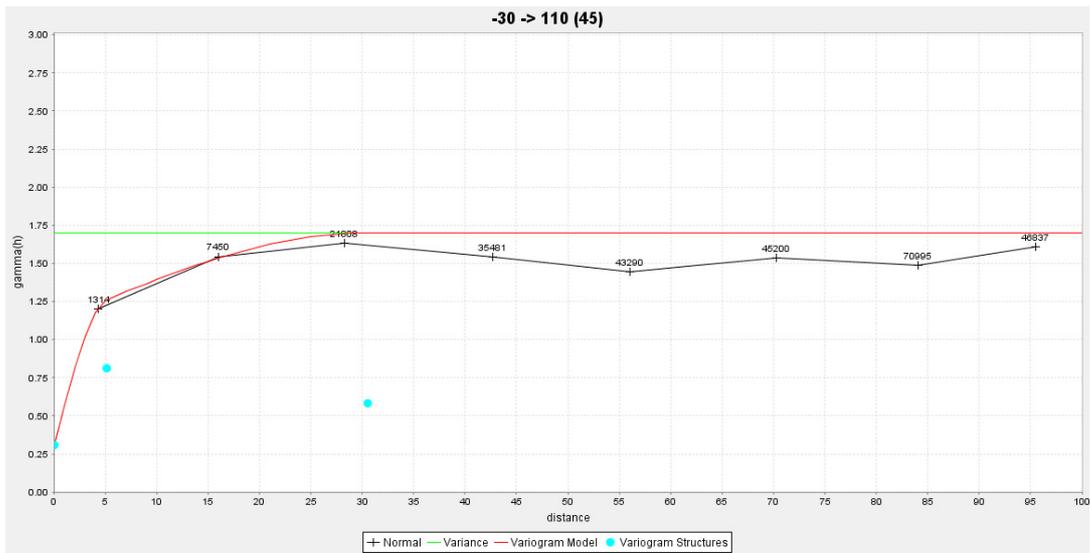
B Lens Primary Variogram



Upper C Lens



Upper C Lens down hole variogram

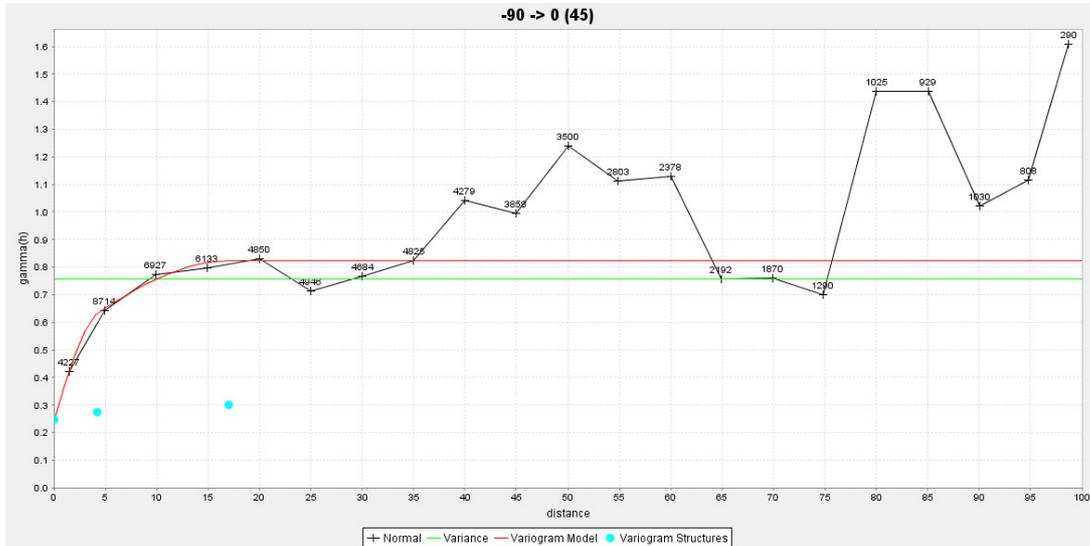


Upper C Lens Primary Variogram

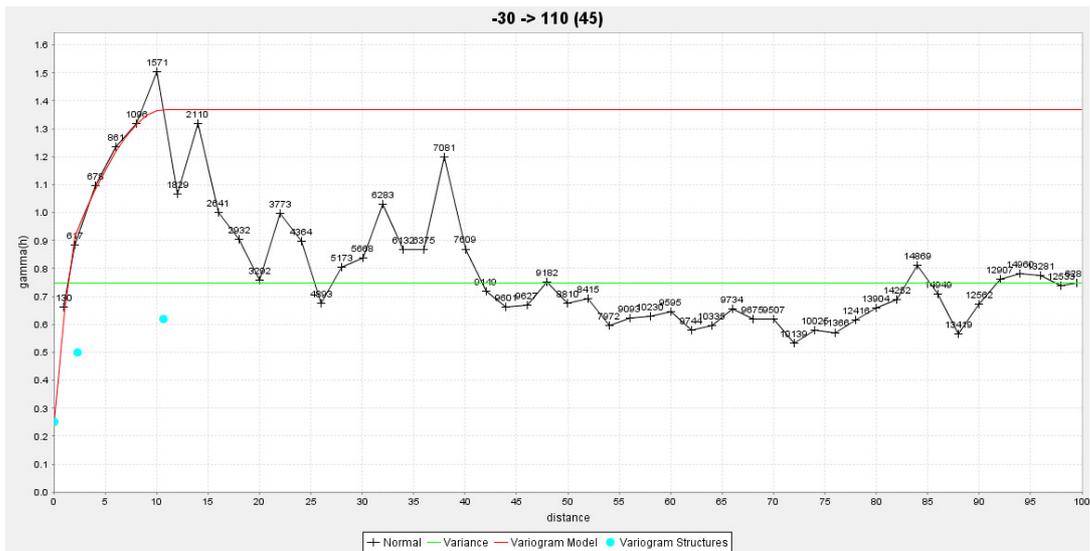


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Lower C Lens



Lower C Lens Downhole variogram

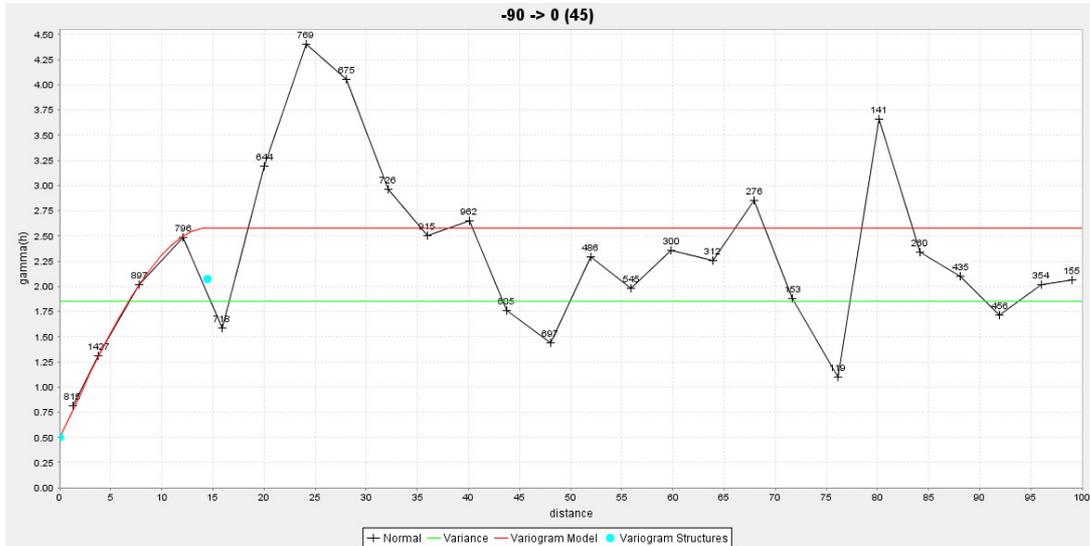


Lower C lens primary variogram.

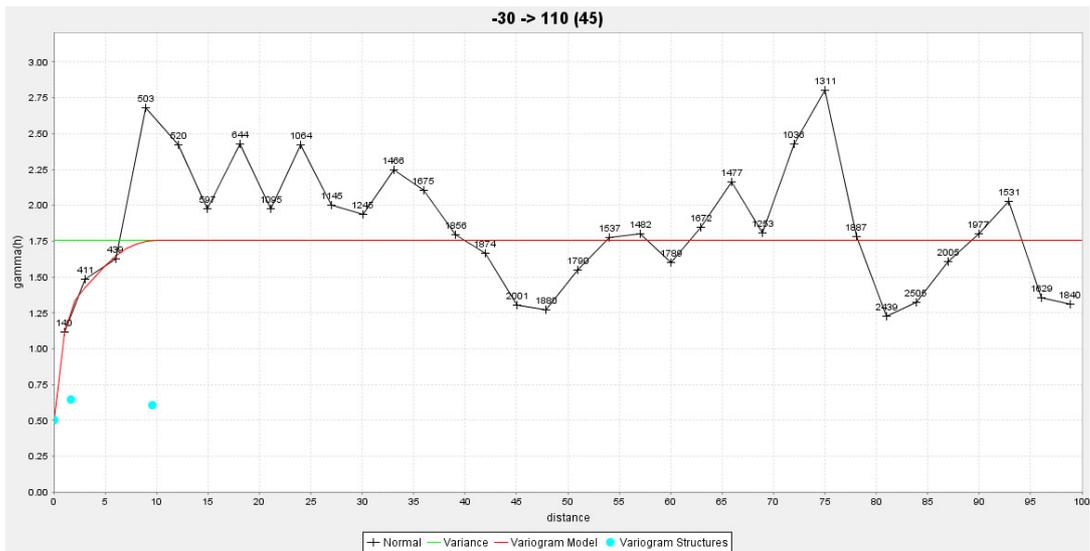


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PGH

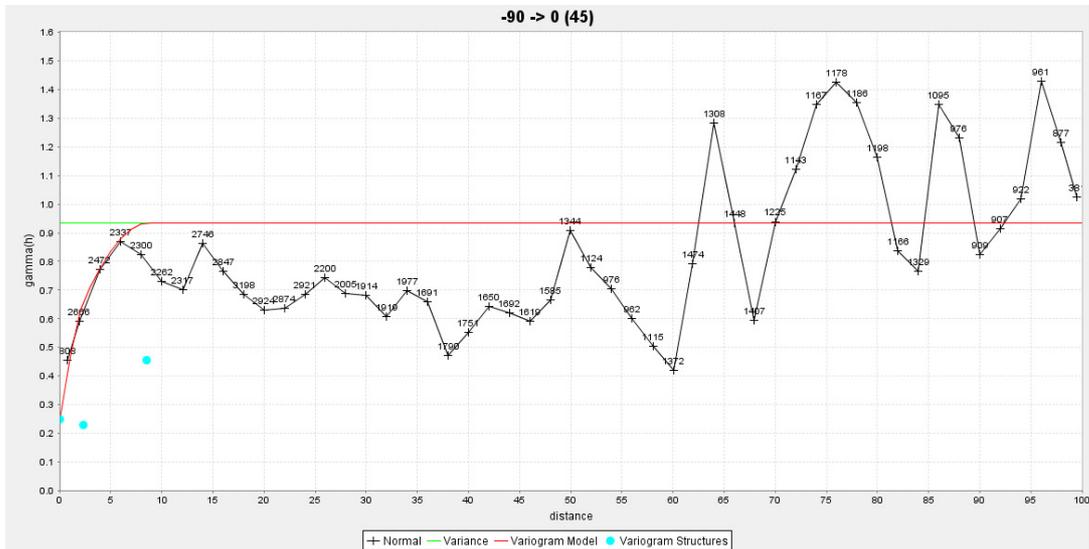


PGH Downhole Variogram





B-Lens



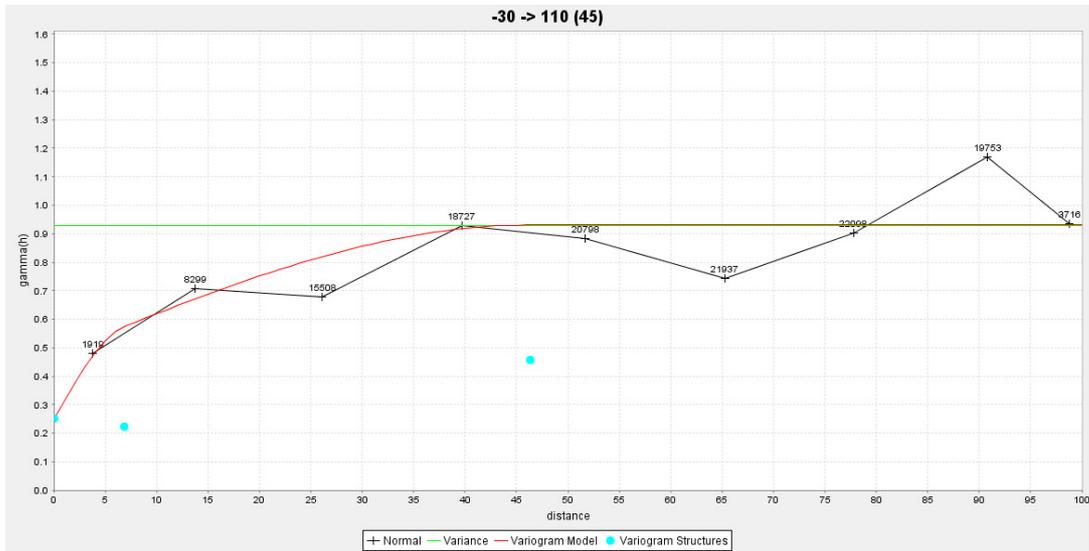
B Lens Downhole Variogram

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

Model Type : Spherical
Nugget : 0.249786

Structure	Sill	Range
1	0.229092	2.359
2	0.454157	8.512



B Lens Primary Variogram

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

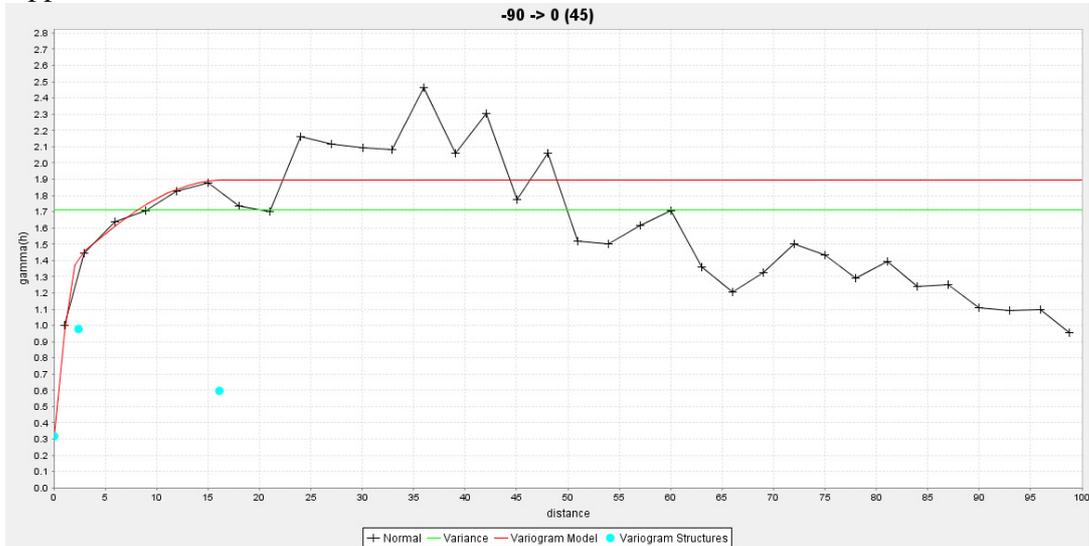
Model Type : Spherical
Nugget : 0.251056

Structure	Sill	Range
1	0.223562	6.834
2	0.456185	46.359



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Upper C Lens



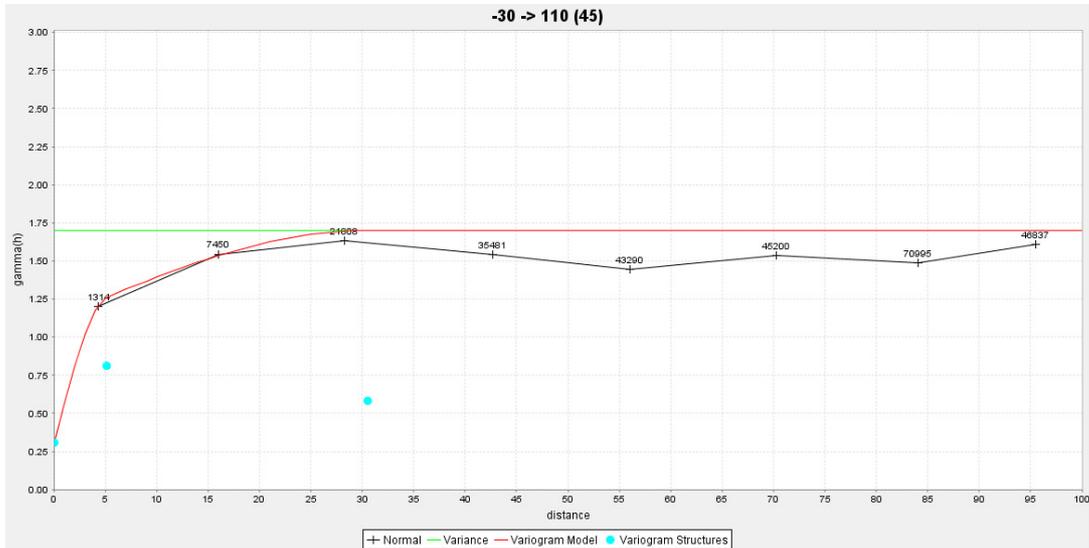
Upper C Lens down hole variogram

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

Model Type : Spherical
Nugget : 0.317011

Structure	Sill	Range
1	0.977041	2.359
2	0.598241	16.063



Upper C Lens Primary Variogram

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

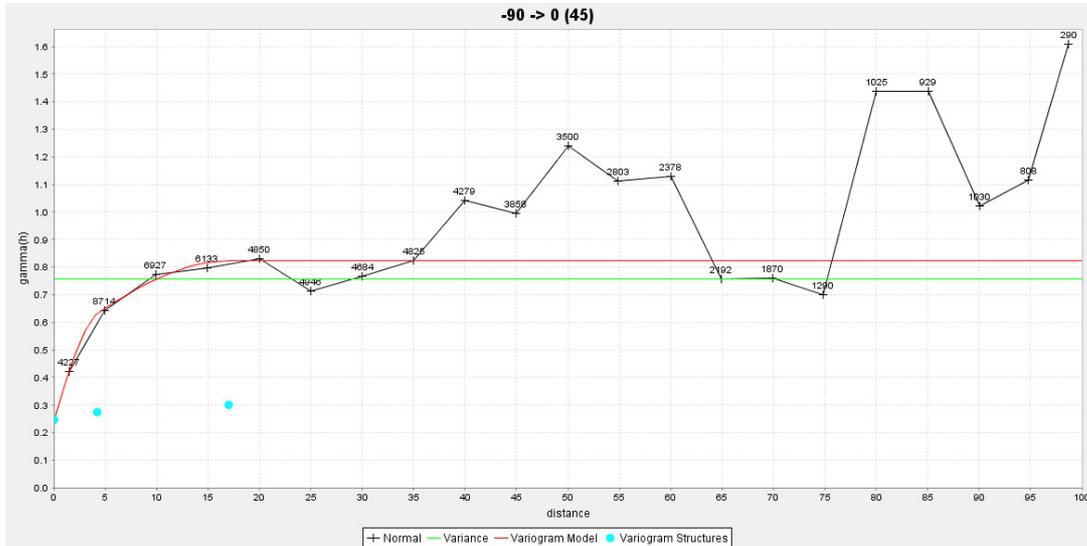
Model Type : Spherical
Nugget : 0.307954

Structure	Sill	Range
1	0.810182	5.156
2	0.583488	30.512



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Lower C Lens



Lower C Lens Downhole variogram

VARIOGRAM MODELLING 10-Apr-2010

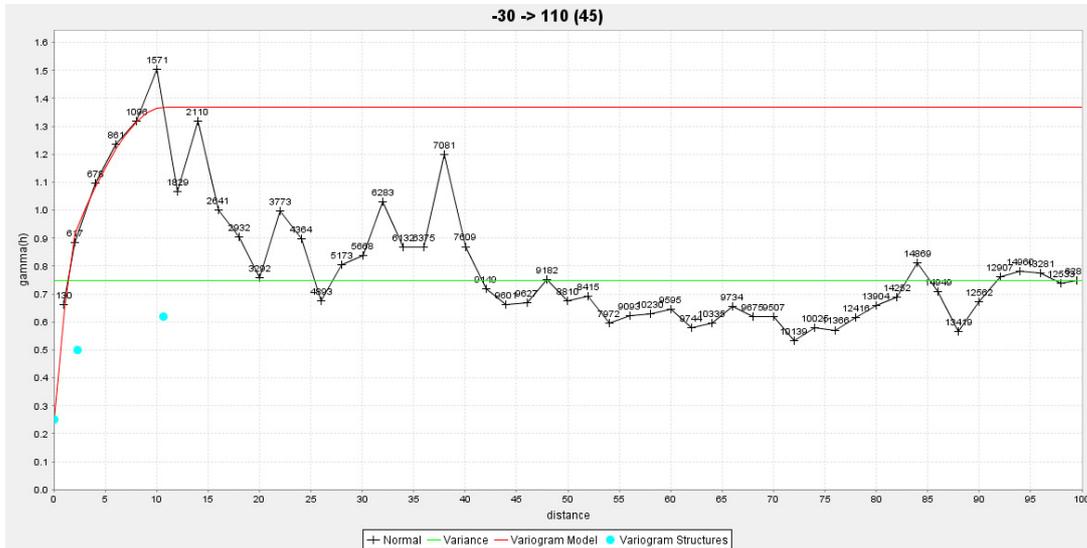
Current variogram model parameters

Model Type : Spherical
Nugget : 0.247528

Structure	Sill	Range
1	0.274567	4.224
2	0.301607	16.995



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Lower C lens primary variogram.

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

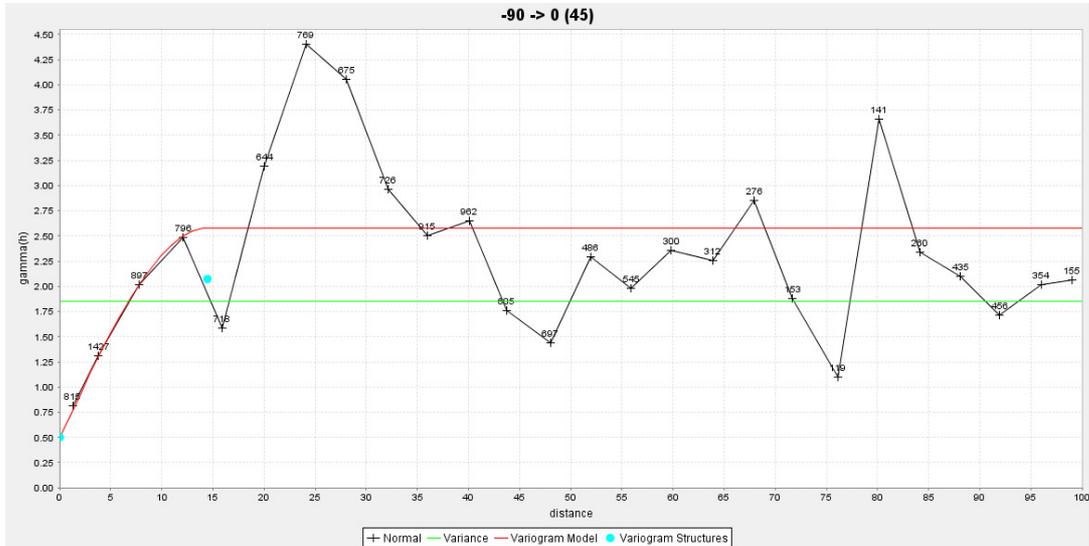
 Model Type : Spherical
 Nugget : 0.251448

Structure	Sill	Range
1	0.498770	2.266
2	0.619089	10.656



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PGH



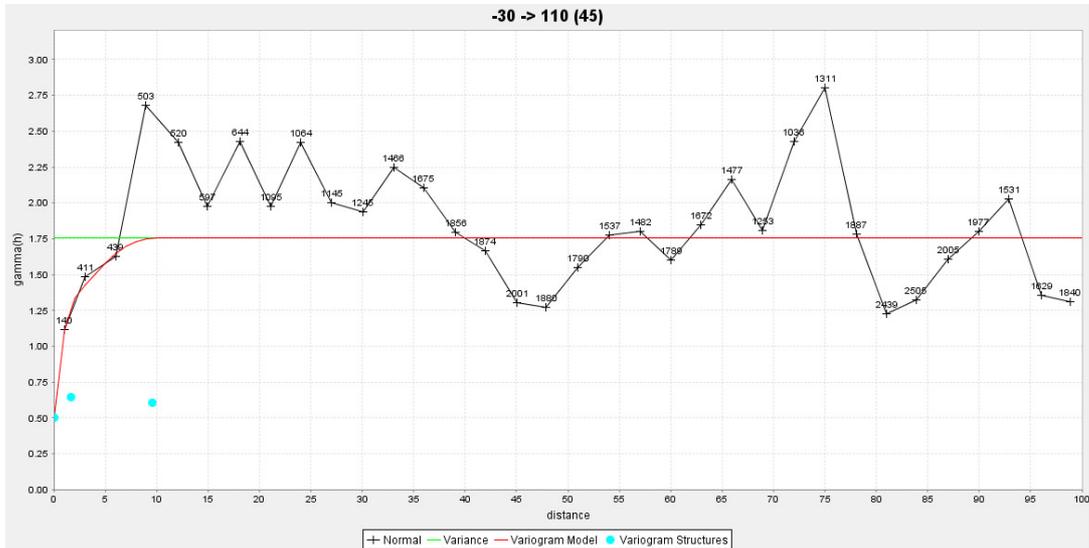
PGH Downhole Variogram

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

Model Type : Spherical
Nugget : 0.501821

Structure Sill Range
1 2.074802 14.493



PGH Primary Variogram.

VARIOGRAM MODELLING 10-Apr-2010

Current variogram model parameters

 Model Type : Spherical
 Nugget : 0.502256

Structure	Sill	Range
1	0.646456	1.625
2	0.607369	9.609



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Appendix 4
JORC Consent Form



Tim Callaghan – Resource and Exploration Geology

Tim Callaghan – Resource and Exploration Geology

3 Main Rd Penguin 7318 ph. 0428 888 896 email: timcallaghan@netspace.net.au

Competent Person's Consent Statement
Pursuant to the requirements of ASX listing rule 5.6 and clause 8 of 2004
JORC code
("Consent statement")

Report name: DOLPHIN MINE MINERAL RESOURCE ESTIMATE
Dated: 26th April 2010

I, Timothy John Callaghan confirm that:

- I have read and understood the requirements of the 2004 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves ("2004 JORC Code").
- I am a competent person as defined by the 2004 JORC Code, having five years experience which is relevant to the style of mineralization and type of deposit described in the report, and to the activity for which I am accepting responsibility.
- I am a member or fellow of the *Australasian Institute of Mining and Metallurgy* or the *Australian Institute of Geoscientists* or a 'Recognised Overseas Professional Organisation' ('ROPO') included in a list promulgated by the ASX from time to time.
- I have reviewed the report to which this consent statement applies.
- I am a full time employee of OR I am a consultant working for **Tim Callaghan – Resource and Exploration Geology** and have been engaged by **King Island Scheelite JVP** to prepare the report for **King Island Scheelite Dolphin Orebody** for the period ended **April 2010**.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears the information in my supporting documentation relating to Ore Resources.

I consent to the release of the report and this consent statement by the directors of:
King Island Scheelite.

Signature of Competent Person:

Date: 26th April 2010:

Professional Membership: **Australian Institute of Mining and Metallurgy**

Membership Number: **222210**

Signature of Witness: