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Certificate of Participation

This is to certify that

Zarazma Minerals Studies Company

has participated in the October 2014
Geostats Survey of International Laboratories

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Geostats Laboratory Survey
October 2014

Prepared for
Zarazma Minerals Studies Company

Confidential

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THIS DOCUMENT SHOULD NOT BE CIRCULATED OUTSIDE THE COMPANY WHOSE NAME APPEARS ON THE COVER.**

To the reader,

This survey of laboratories undertaken by Geostats is performed as a service to both the Mining Industry and the Analytical Industry. It is envisaged that it can be used as a tool for the maintenance of high standards in both industries.

The report to the Mining Houses identifies most commercial laboratories and should be treated as confidential information. Some commercial facilities prefer to pay for the inclusion of their sites and these are not identified to the Mining Houses. This report should not be circulated outside of the Client Company or reproduced for the benefit of other mining groups.

It is not the intent of this survey to provide marketing tools for the analytical industry. A laboratory report is available which identifies only the laboratory or group requesting the report. This allows the laboratory to assess their performance in relation to the rest of the analytical industry. All the laboratories identified have taken advantage of this report and included it as part of their ongoing quality control procedures. Participation in these surveys is an indication of the laboratory's interest in quality and should be regarded as a positive sign regardless of the outcome.

Many thanks to both the laboratories and the Mining Houses for their ongoing support of this survey.

Kind regards,

Stuart Romero BSc, BEng

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Geostats Pty Ltd, O'Connor, Western Australia.
Listing of Participating Laboratories for Round Robin - October 2014

Western Australia	ALS Minerals - Kalgoorlie	Kyrgyz Republic	ALS KYRGYZSTAN	Stewart Assay and Environmental Laboratories LLC
ALSM KAL	Amntec Laboratory	Laos PDR	ALS LAOS	ALS Minerals Vientiane (Laos)
ALSM METALLURGY	ALS Minerals - Perth	PHU BIA LAOS	PHU BIA LAOS	Phu Bia Mining Limited
ALSM PERTH	Amndel Laboratory - Kalgoorlie	SEPON LAOS	SEPON LAOS	Lane Xang Minerals
BV KAL	Ultra Trace Pty Ltd	Malaysia	PENJOM MALAYSIA	Penjom Gold Mine
BV ULTRA TRACE	Gekko Assay Laboratory	SGMM	SGMM	SGMM Assay Laboratory
GEKKO VICTORIA	Genalysis Laboratory Services Pty Ltd	Mali	ALSM MALI	Groupe de Laboratoire ALS Mali SARL
GEN PER	MMG Golden Grove	SADIOLA MALI	SADIOLA MALI	Sadiola Mine Site Laboratory
GOLDEN GROVE	Granny Smith Gold Mine Laboratory	SGS BAMAKO	SGS BAMAKO	SGS Minerals Services (Bamako)
GRANNYS	Kalassay Group (Perth Assay Laboratory)	SGS LOULO	SGS LOULO	SGS Loulo
KAL PER	Kalassay Group (Kalgoorlie Assay Laboratory)	SGS MALI GCX	SGS MALI GCX	Analabs Morila Laboratory
KALGOORLIE AL	LabWest	SGS SYAMA	SGS SYAMA	SGS Minerals Syama Laboratory
LABWEST	MinAnalytical	Mauritania	ALSM TASIAST	ALS Minerals - Tasiast
MINANALYTICAL	Newcrest Mining Limited - Telfer Gold Mine Lab	MCM SA	MCM SA	Mauritania Copper Mines SA
NEWCREST TELFER	SGS Jundee	Mexico	ACTLABS MEXICO	Actlabs Mexico SA de CV
SGS JUNDEE	SGS Kalgoorlie	AURICO SANTA RITA	AURICO SANTA RITA	AuRico Gold - Minera Santa Rita
SGS KALG	SGS Newburn	MCEWEN MEXICO	MCEWEN MEXICO	McEwen Mining Mexico
SGS NEWBURN	ALS Minerals - Orange	SGM CHIHUAHUA	SGM CHIHUAHUA	Centro Experimental Chihuahua
New South Wales	Newcrest Laboratory Services Orange	SGM OAXACA	SGM OAXACA	Centro Experimental Oaxaca
ALSM ORANGE	Northern Territory	Mongolia	ACTLABS MONGOLIA	Actlabs Asia LLC
NEWCREST ORANGE	Granites Gold Mine	ALSM MONGOLIA	ALSM MONGOLIA	SGS Mongolia LLC - IMME
Northern Territory	Northern Territory Environmental Laboratories	SGS OYU TOLGOI	SGS OYU TOLGOI	SGS Mongolia LLC
GRANITES	Queensland	SGS ULAAN	SGS ULAAN	
ITS DARWIN	ALS Minerals - Brisbane	Namibia	BV NAMIBIA	Bureau Veritas Mineral Laboratories - Namibia
Queensland	ALS Minerals - Mt Isa	DUNDEE PMT	DUNDEE PMT	Namibia Custom Smelters
ALSM BRIS	ALS Minerals - Townsville	New Zealand	SGS NZ MACRAES	SGS New Zealand, Macraes Laboratory
ALSM MT ISA	Xstrata Chemical Laboratory	SGS NZ REEFTON	SGS NZ REEFTON	SGS New Zealand, Reefton Laboratory
ALSM TIVL	Genalysis Testing Services, Townsville	SGS NZ WAIHI	SGS NZ WAIHI	SGS New Zealand, Minerals Laboratory
BV MT ISA	HRL Testing	Papua New Guinea	INTERTEK HV	Intertek Hidden Valley
CHEM LAB MIM	Porgera Gold Mine Laboratory	ITS MOROBE	ITS MOROBE	ITS (PNG) Limited
GEN TOWNSVILLE	SGS Townsville	LIHIR	LIHIR	Lihr Gold - Minesite Laboratory
HRL TESTING		Peru	ACT SKYLINE PERU	Skyline Peru SAC
PORGERA		AGO PERU	AGO PERU	AGO Peru SAC
SGS TOWNSVILLE		ALSM LIMA	ALSM LIMA	ALS Peru SA
South Australia		CERTIMIN	CERTIMIN	Certimin S.A.
BHP OLYMPIC	BHP Billiton	CERTIMIN LA ARENA	CERTIMIN LA ARENA	Certimin S.A. - La Arena
BV ADL	Amndel Laboratory - Adelaide	INSPECTORATE PERU	INSPECTORATE PERU	Inspectorate Services Peru SAC
GEN ADEL	Genalysis Laboratory Services - Adelaide	LAGUNAS MINE	LAGUNAS MINE	Minera Barrick Misquichilca - Unidad Lagunas Norte
Tasmania	Burnie Research Laboratory	NEW PERU	NEW PERU	Minera Yanacocha SRL - Newmont Lab (Peru)
ALSM BURNIE		PIERINA MINE	PIERINA MINE	Minera Barrick Misquichilca - Unidad Pierina
Argentina		SGS LIMA	SGS LIMA	SGS del Peru SAC
ASA MENDOZA	Alex Stewart Assayers Argentina SA - Mendoz	Philippines	ITS McPHAR	Intertek Testing Services Philippines
ASA PERITO MORENO	Alex Stewart Assayers Argentina SA - Perito Moreno	Portugal	SOMINCOR	Somincor, S.A.
SEGEMAR ARGENTINA	Veladero Project Assay Lab	Romania	ALSM ROMANIA	ALS Romania
VELADERO MINE		Russia	ALSM CHITA	ALS Minerals - Chita
Armenia	Deno Gold Mining Company	ALSM MOSCOW	ALSM MOSCOW	Stewart Geochemical and Assay Ltd
DUNDEE ARMENIA		IRGIREDMET RUSSIA	IRGIREDMET RUSSIA	IRGIREDMET JSC
Botswana	Mupane Gold Project Lab	SGS CHITA	SGS CHITA	SGS Chita
MUPANE BOTS	Tati Nickel Mining Company	TOMS RUSSIA	TOMS RUSSIA	TOMS-Irkutsk
TATI NI BOTS		VSEGEI RUSSIA	VSEGEI RUSSIA	VSEGEI All-Russia Geological research Institute
Brazil	Centro Tec Ref SulAmericano	Saudi Arabia	ALSMRI JEDDAH	Al Amri Laboratory
CENTRO TEC	SGS Geosol Laboratórios Ltda	ALSM JEDDAH	ALSM JEDDAH	ALS Minerals - Arabia
SGS LF BELO HOR		Serbia	SGS BOR	SGS Bor
Bulgaria	Chelovech Mine Laboratory	South Africa	ALSM JOBURG	ALS Minerals - Johannesburg
CHELOPECH MINE		AR BMP	AR BMP	Anglo Research, Crown Mines - BMP
Burkina Faso	Abilab Burkina SARL	AR JOBURG	AR JOBURG	Anglo Research, Crown Mines - AS
ALSM OUAGADOUGOU	Semafco Burkina Faso	GEN JOBURG	GEN JOBURG	Genalysis Laboratory Services - Joburg
SEMAFO	SGS Burkina SA	INSPECTORATE RSA	INSPECTORATE RSA	Inspectorate Services Rustenburg
SGS OUAGADOUGOU		MINTEK SA	MINTEK SA	Minetek Analytical Services Division
Canada	Acme Analytical Laboratories Ltd - Vancouver	RAPPA RESEARCH	RAPPA RESEARCH	Rappa Research Laboratory
ACTLABS CAN	Activation Laboratories Ltd (Canada)	SCI SER	SCI SER	Scientific Services Pty Ltd
ACTLABS TB	Activation Laboratories Ltd - Thunder Bay	SET POINT SA	SET POINT SA	Set Point Laboratories
AGAT ONTARIO	AGAT Laboratories	SGS JOBURG	SGS JOBURG	SGS South Africa Booyens
ALSM QUEBEC	ALS Minerals (Val d'Or)	SGS PLR	SGS PLR	Performance Laboratories (PLR)
ALSM VAN	ALS Minerals - Vancouver	SGS PLW	SGS PLW	Performance Laboratories (PLW)
AURICO YOUNG	AuRico Gold - Young-Davidson	SIBANYE CHARL	SIBANYE CHARL	Sibanyegold Analytical Laboratory Driefontein Operations
BARRICK VAN	Barrick Technology Centre	Suriname	FLAB SURINAME	Filab Suriname
BECQUEREL NNA	Becquerel Laboratories Inc	Tanzania	BULYANHULU TANZ	Bulyanhulu Mine Assay Lab
FLIN FLON MINE	Flin Flon Mine Laboratory	BUZWAGI	BUZWAGI	Pangea Minerals Ltd
HEMLO MINE	Williams Operating Corporation	GEITA TANZ	GEITA TANZ	Geita Gold Mine Laboratory
MET-SOLVE	Met-Solve Analytical Services	NORTH MARA	NORTH MARA	North Mara Minesite Laboratory
MUSSELWHITE	Musselwhite Mine Laboratory	SGS MWANZA	SGS MWANZA	African Assay Laboratories (Tanzania) Ltd
SGS COCHRANE	SGS Cochrane	TMAA TANZANIA	TMAA TANZANIA	Tanzania Minerals Audit Agency (TMAA)
SGS LAKEFIELD	SGS Lakefield (Ontario)	Thailand	CHATREE THAI	Chatree Gold Mine Laboratory
SGS VANCOUVER	SGS Vancouver	Turkey	ACME TURKEY	Acme Analytical Laboratories Ltd - Turkey
TSL SASKATCHEWAN	TSL Laboratories	ALSM TURKEY	ALSM TURKEY	ALS Minerals - Turkey
Chile	Acme Analytical Laboratories Chile SA	ANAGOLD TURK	ANAGOLD TURK	Anagold Madencilik San Ve Tic.A.S.
ACME CHILE	Activation Laboratories Ltd (Chile)	IAR TURKEY	IAR TURKEY	Istanbul Gold Refinery Inc.
ACTLABS CHILE	ALS Minerals - Chile	KOZAGOLD KAYMAZ	KOZAGOLD KAYMAZ	Koza Gold Mine Kaymaz Laboratory
ALSM SANTIAGO	Andes Analytical Assay Ltda.	KOZAGOLD TURKEY	KOZAGOLD TURKEY	Koza Gold Mine Laboratory
ANDES ANALYTICAL	Bureau Veritas S.G. Calama	ONSA TURKEY	ONSA TURKEY	Onsa Refinery
BV CALAMA	Bureau Veritas Mining & Chemical Division - Csmec	SGS TURKEY	SGS TURKEY	SGS Turkey
BV CESMEC	Bureau Veritas Mineral Chemical Analysis - Geonaltica	TUPRAG TURK	TUPRAG TURK	Tuprag Kisladag Gold Mine
BV GEO ANTO	Bureau Veritas Mineral Chemical Analysis - Geonaltica Coquimbo	United States of America	AALLABS	American Assay Laboratories
BV GEO COQ	Intertek Minerals Chile	ALSM RENO	ALSM RENO	ALS Minerals - Reno
ITS CHILE	Zaldivar Mine Assay Lab	BALD MOUNT	BALD MOUNT	Bald Mountain Mine Assay Lab
ZALDIVAR MINE		CORTEZ MINE	CORTEZ MINE	Cortez JV Mine Assay Lab
China	ALS Minerals - Guangzhou (China)	CSAL USA	CSAL USA	Copper State Analytical Laboratory
ALSM CHINA	Intertek Testing Services, Ltd, Shanghai - Beijing Branch	FLORIN RENO	FLORIN RENO	Florin Analytical Services
ITS BEIJING	Qinghai Dachaidan Mining Limited	FLSMIDTH USA	FLSMIDTH USA	FLSmidth Analytical Lab
QINGHAI CHINA		GOLD SUNLIGHT MINE	GOLD SUNLIGHT MINE	Golden Sunlight Mine Assay Lab
Colombia	SGS Colombia	GOLDSTRIKE	GOLDSTRIKE	Barrick Analytical Laboratory
SGS COLOMBIA		INSPECTORATE NEV	INSPECTORATE NEV	Inspectorate Services Sparks
Congo	SGS Twangiza	MCCLELLAND NEV	MCCLELLAND NEV	McClelland Laboratories, Inc.
SGS TWANGIZA		NEW GC	NEW GC	Newmont Mining Corporation - Carlin Assay Lab
Cote d'Ivoire	Bureau Veritas Mineral Laboratories Cote d'Ivoire	NEW LONE	NEW LONE	Newmont - Lone Tree Mine
BV COTE		NEW MET SER	NEW MET SER	Newmont Metallurgical Services
Democratic Republic of Congo	Mawson West - Anvil Mining Congo	NEW TWIN CM	NEW TWIN CM	Newmont - Twin Creek Mine
SGS DIRKULUSHI	AMCK Mining SPRL	ROUND MOUNT MINE	ROUND MOUNT MINE	Round Mountain Gold Assay Lab
SGS KINSEVERE	SGS Laboratory - Kpqi	RTKC UTAH	RTKC UTAH	Rio Tinto Kennecott Copper
SGS KIPQI		SKYLINE ARIZONA	SKYLINE ARIZONA	Skyline Assayers & Laboratories - Arizona
Dominican Republic	Pueblo Viejo Laboratorio	SKYLINE NEVADA	SKYLINE NEVADA	Skyline Assayers & Laboratories - Nevada
PUEBLO VIEJO		TURO RIDGE MINE	TURO RIDGE MINE	Turquoise Ridge JV Mine Assay Lab
England	Wardell Armstrong	Uruguay	OMI URUGUAY	Triselco SA Laboratory
WARDELL ENGLAND	Wheal Jane Laboratory	Zambia	AHK KITWE	Alfred H Knight Zambia Ltd
WHEAL JANE ENGLAND		LUMWANA MINE	LUMWANA MINE	Lumwana Mine Site Lab
Eritrea	SGS Bisha	SGS KALULUSHI	SGS KALULUSHI	SGS Inspection Services Zambia
SGS BISHA		Zimbabwe	ANTTECH	Antech Laboratories
Finland	Labtium Laboratories	BINDURA ZIM	BINDURA ZIM	Bindura Nickel Corporation Limited
LABTIUM FIN		SGS ZIMBABWE	SGS ZIMBABWE	Performance Laboratories Zimbabwe
Ghana	AngloGold Ashanti - Chemical Lab	Commercial Laboratory		
AG GHANA CHEM	ALS Minerals - Ghana	Minesite Laboratory		
ALSM GHANA	Gold Fields Ghana Ltd	Government Laboratory		
GOLD FIELDS GHANA	Intertek Minerals Ltd (Ghana)			
ITS GHANA	Ahafo Mine Site Laboratory			
NEW AHAFI GHANA	AngloGold Ashanti - Assay Lab			
SGS OBUASI	SGS Laboratories (Tarkwa)			
SGS TARKWA				
Greece	Hellas Gold			
HELLAS GREECE				
Guinea	SGS Sigiuri			
SGS SIGUIRI				
Guyana	Actlabs Guyana Inc			
ACTLABS GUYANA				
India	Shiva Analyticals (India) Ltd			
SHIVA INDIA				
Indonesia	PT Geoservices Ltd			
GEOSERVICES IND	Gosowong Gold Project Lab			
ITS GOSOWONG	Intertek Testing Services, Jakarta			
ITS INDO	ITS Lab - PT Newmont Nusa Tenggara			
ITS MATARAM	Intertek Utama Services Manado			
ITS UTAMA	PT. Resources Boling Mongondow - Lanut Project			
JRESOURCES IND	Sucofindo Timika Laboratory			
SUCOFINDO INDO	PT Geoservices Ltd - Way Linggo			
WAY LINGGO				
Iran	Iran Mineral Processing Research Center (IMPRC)			
IMPRC IRAN	Zarazma Minerals Studies Company			
ZARAZMA				
Ireland	Omac Laboratories - Ireland			
ALSM IRELAND				

REPORT ON LABORATORY SURVEY – October 2014

A round robin to measure the accuracy of gold, silver, sulphur and base metal analyses from 222 laboratories was conducted during October 2014. The results of this survey are a measure of the ability of a laboratory to accurately analyse a pre-prepared pulp.

The ability of a laboratory to crush, split and prepare the sample without contamination is not measured by this survey. Knowledge of sampling machinery and the ability to design efficient flow systems with in-built homogeneity checks is required in order to develop confidence in the sample preparation.

The reference samples submitted to the laboratories consisted of:

- 10 gold standards
- 5 low level gold standards
- 6 gold and silver on carbon standards
- 10 geochemical base metal standards
- 6 ore-grade base metal standards
- 10 sulphur standards

Companies operating more than one laboratory have received extra filler samples, which are not used in the calculations. The Geostats numbering system makes it extremely difficult for any cross collation of results from one laboratory to the next. This provides a level playing field for all laboratories, whether they are sole operators or members of a large laboratory group.

We use a double entry system to build an accurate database. Two individuals enter all the data and when complete these two files are cross-checked and the source data is consulted to rectify any errors. The mean values used for calculations in this study are checked visually by preparing histograms. Outliers are removed and the remaining population distributions are tested for normality. All outliers are checked back to the original assay report for a third and final time.

GOLD SAMPLES

Three lots of gold samples were submitted to the laboratories, one lot for fire assay, one for aqua regia digest (or similar) and one for low-level gold. Becquerel Canada performed Neutron Activation Analysis on all samples, reporting a gold + 33 element analysis which has been included at the end of this report. Becquerel Canada can be contacted through Salima Haniff at SHaniff@maxxam.ca

GOLD AND SILVER ON CARBON SAMPLES

Six gold and silver on carbon standards were included in this survey, both loaded and barren. The method of analysis for these samples was left up to the individual laboratories.

GEOCHEM BASE METAL SAMPLES

The base metal samples were analysed for copper, lead, zinc, nickel, arsenic, silver and cobalt. The method of analysis for base metal samples was left to the discretion of the laboratory manager. However, the report groups them into Total (typically 4 acid digest or fusion) and Partial (all others, mainly aqua regia) methods. Becquerel Canada performed Neutron Activation Analysis and these have been included in the Total digest group. Methods are listed in the results page for the respective analyte.

ORE GRADE BASE METAL SAMPLES

Six ore-grade and concentrate samples are included in the survey. These are assayed primarily for copper, lead, zinc, nickel, silver and sulphur. Other elements are reported but not in sufficient numbers for inclusion in the report. These high-grade materials are analysed at the chemist's discretion but almost always using ore-grade techniques. Some use classical analyses while others use XRF or other methods. However, some of these products have, for example, high lead but low copper and the method for copper analysis may be inappropriate for low levels. Owing to this characteristic, only higher grade analyses are plotted in the related charts.

SULPHUR SAMPLES

Ten sulphur and carbon standards were prepared for the survey. These ten new standards are a good mix of values with sulphur values up to 30% and carbon values up to 1.4%.

All the standards used in this survey are available for purchase.

RESULTS

The results of the analyses are presented in three forms:

1. A table showing values as reported from the laboratories. These are presented in columns according to their respective sample identifiers, with each result's standardised Z value also displayed. Outliers are highlighted and assigned a Z value of 3.00 or -3.00. General statistics are listed at the top of each table.
2. Bar chart for each element showing the sum of absolute standardised values divided by the count of absolute standardised values.
3. Bar chart for the mean of standardised values.

EXAMINATION OF RESULTS - METHODOLOGY

1. Double entry of all data and validation by cross-checking. Confirm any anomalous values.
2. Produce basic statistics on results, including:
 - a. count
 - b. mean
 - c. median
 - d. standard deviation
 - e. minimum
 - f. maximum
 - g. error (95% Confidence Interval)
 - h. percentage error of mean (error as a percentage of the calculated mean).
3. Produce summary statistics and assay sheet.
4. Run outlier macro to find obvious outlier values.
5. Generate 'Z' intervals for remaining data (from calculated mean).
6. Check that median and mean are similar to verify a normal distribution.
7. Standardise remaining values i.e. subtract the mean and divide by the standard deviation.

8. Add results from each laboratory in 'standardised values' calculations (positive and negative) and divide by count.
9. Produce 'Mean of Standardised Values' Bar Charts.
10. Add absolute values from each laboratory in 'standardised values' calculations.
11. Divide result by count of results to calculate average absolute standard value for laboratory performance on each element.
12. Produce 'Mean of Absolute Standardised Values' Bar Charts.

CHARTS

The 'Mean of Standardised Values' charts (blue in reports) indicate any bias shown by laboratories on a particular element, but do not show any general error which might be plus and minus the mean. The 'Mean of Absolute Standardised Values' charts (red in reports) indicate the general error but no bias.

INTERPRETATION OF RESULTS

SUMMARY STATISTICS AND ASSAY TABLES

These tables are self-explanatory. The row titled 'error' refers to the margin of error expected at 95% confidence. That is, the standard normal probability or 'Z' statistic representing 95% (1.96) is multiplied by the standard deviation and the result is divided by the square root of the population. We can be 95% confident that the true mean lies between mean minus error and mean plus error. The row titled '% error in mean' is simply this margin of error expressed as a percentage of the calculated mean. Outliers are highlighted and not used for calculations at the top of the tables.

STANDARDISED VALUES

These numbers are generated using the following formula. Reported value minus the mean, result of this divided by the standard deviation. This creates a new distribution with mean '0' and standard deviation '1'. Positive and negative numbers result from this calculation depending on whether the reported value is above or below the mean. Laboratories reporting outliers are manually assigned 3.00 or -3.00 as these results have been removed from automatic calculation. The higher the absolute number reported, the further the reported assay is from the calculated mean.

MEAN OF ABSOLUTE STANDARDISED VALUES (RED CHARTS)

The bar representing each laboratory is the mean of the sum of the absolute standardised values reported on all assays of the element in question. That is, the absolute sum of the rows in the Standardised Values Table divided by the number of assays. These charts give a visual representation to the general error shown by the particular laboratories. These charts do not show bias.

MEAN OF STANDARDISED VALUES (BLUE CHARTS)

These charts show the mean of standardised values with negative values included. A direction of error or bias can be interpreted from laboratories showing high values, negative or positive.

BRIEFLY

General error is indicated in absolute column charts (red charts).

Bias is indicated in negative/positive column charts (blue charts).

The column charts show indications of error or direction of error - check the real data in the tables before coming to any decision as to the significance of this error. Also pay attention to the grade of the standard materials with regard to the laboratory level of detection. Some laboratories may report outliers due to the limitations of their methodology.

LEGEND FOR METHODS & READINGS

METHODS

READINGS

1A	1 Acid Digest	AAS	Atomic Absorption Spectroscopy
3A	3 Acid Digest	DIBK	DIBK Extraction
4A	4 Acid Digest	ES	ICP - Emission Spectroscopy
AD	Acid Digest	GRAV	Gravimetric
AR	Aqua Regia	ICP	Inductively Coupled Plasma - Unspecified
CSA	Carbon and Sulphur Analyser	IR	Infrared
FA	Fire Assay	MIBK	MIBK Extraction
FUS	Fusion	MS	ICP - Mass Spectroscopy
GF	Graphite Furnace	TITR	Titration
GRAV	Gravimetric	XRF	X-Ray Fluorescence
IH	In House Method		
MAD	Multi-Acid Digest		
MICR	Microwave		
NAA	Neutron Activation Analysis		
PP	Pressed Powder		
PR	Pre-Roast		
TITR	Titration		
VOL	Volumetric		

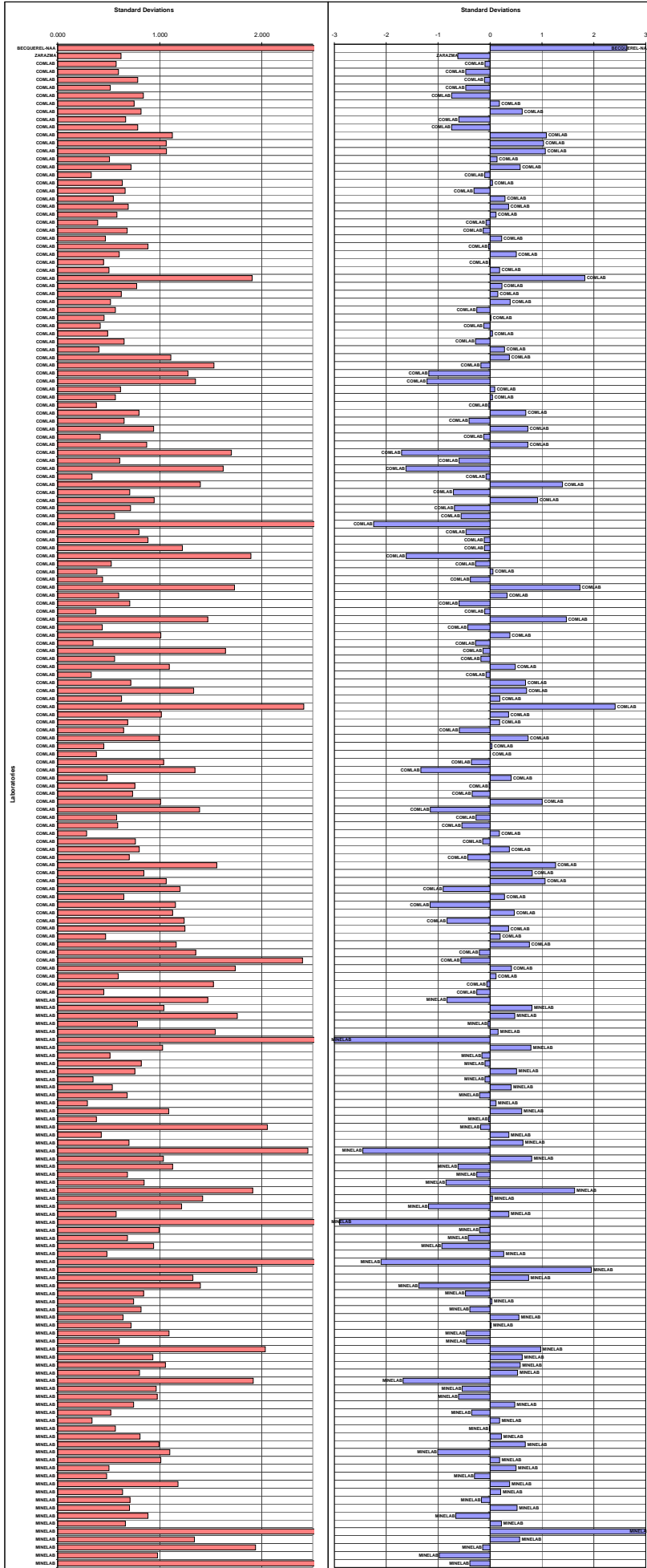
ADDITIONAL COMMENTS

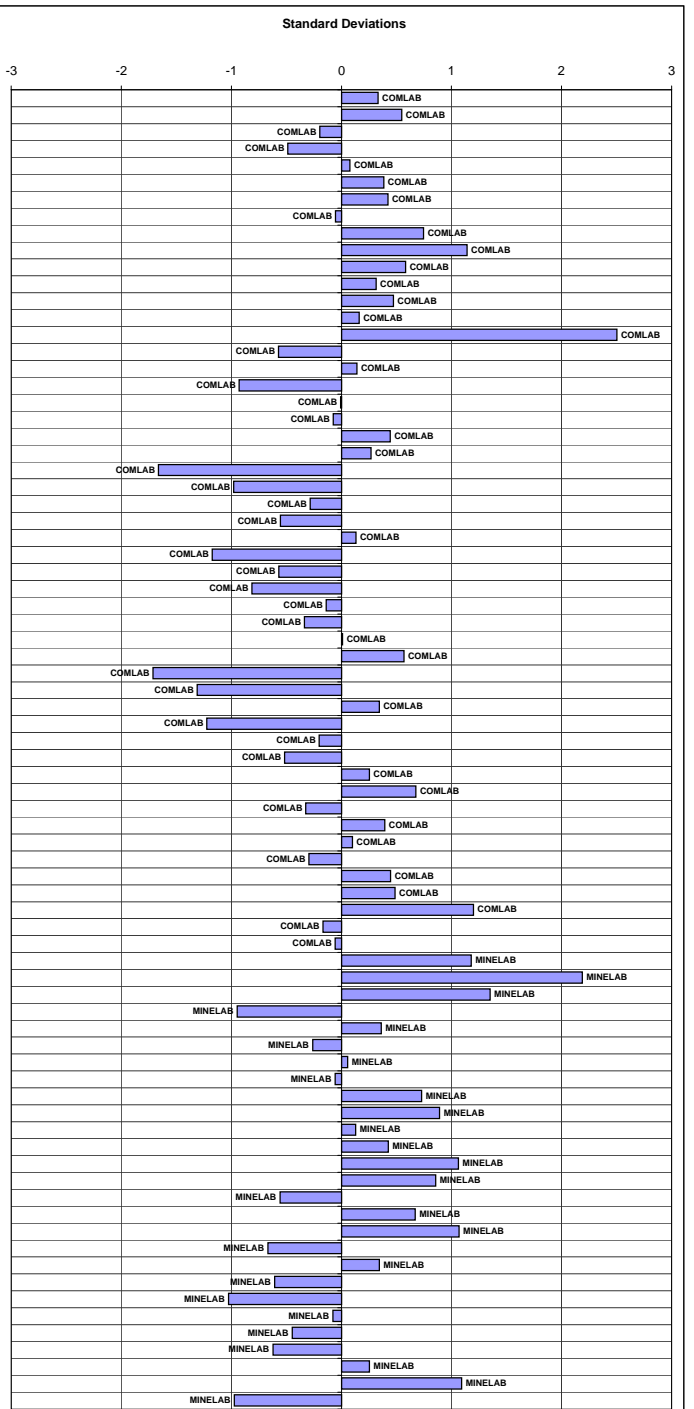
The ore grade base metal material GBM914-14 was found to perform poorly, particularly for lead. The results on this material do not contribute towards the error charts.

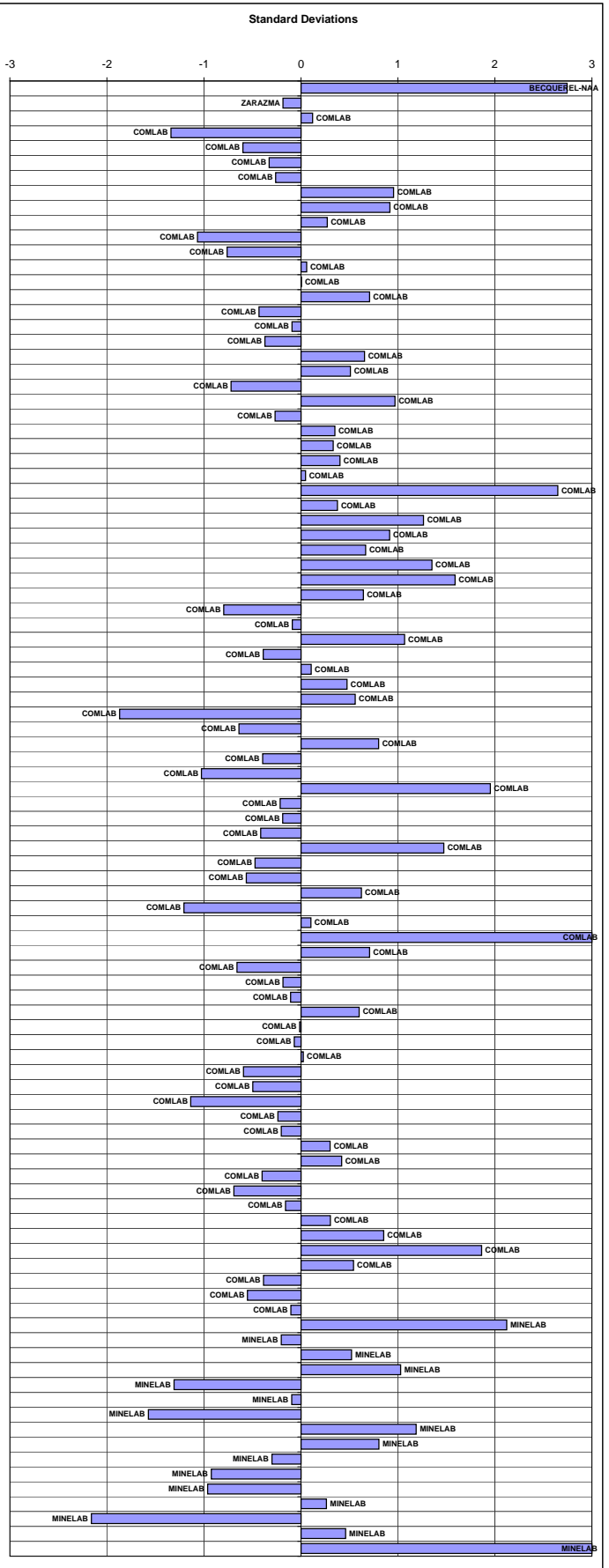
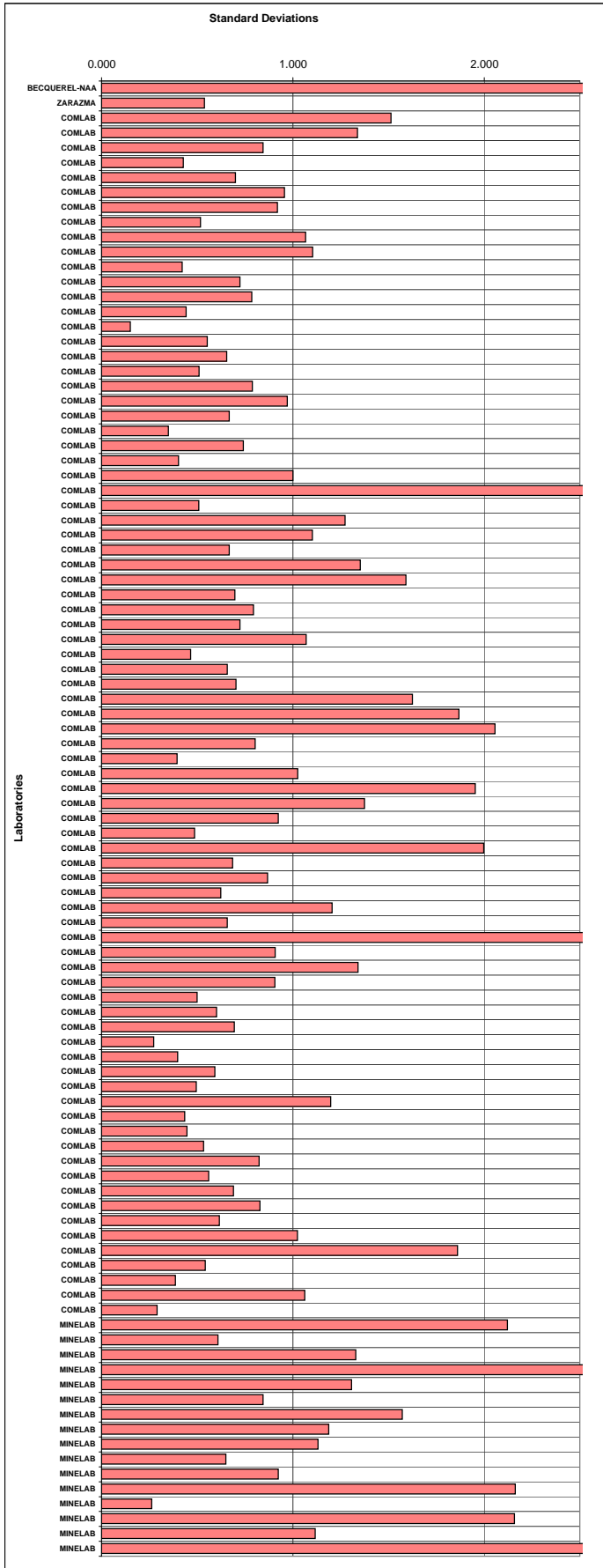
CONTENTS

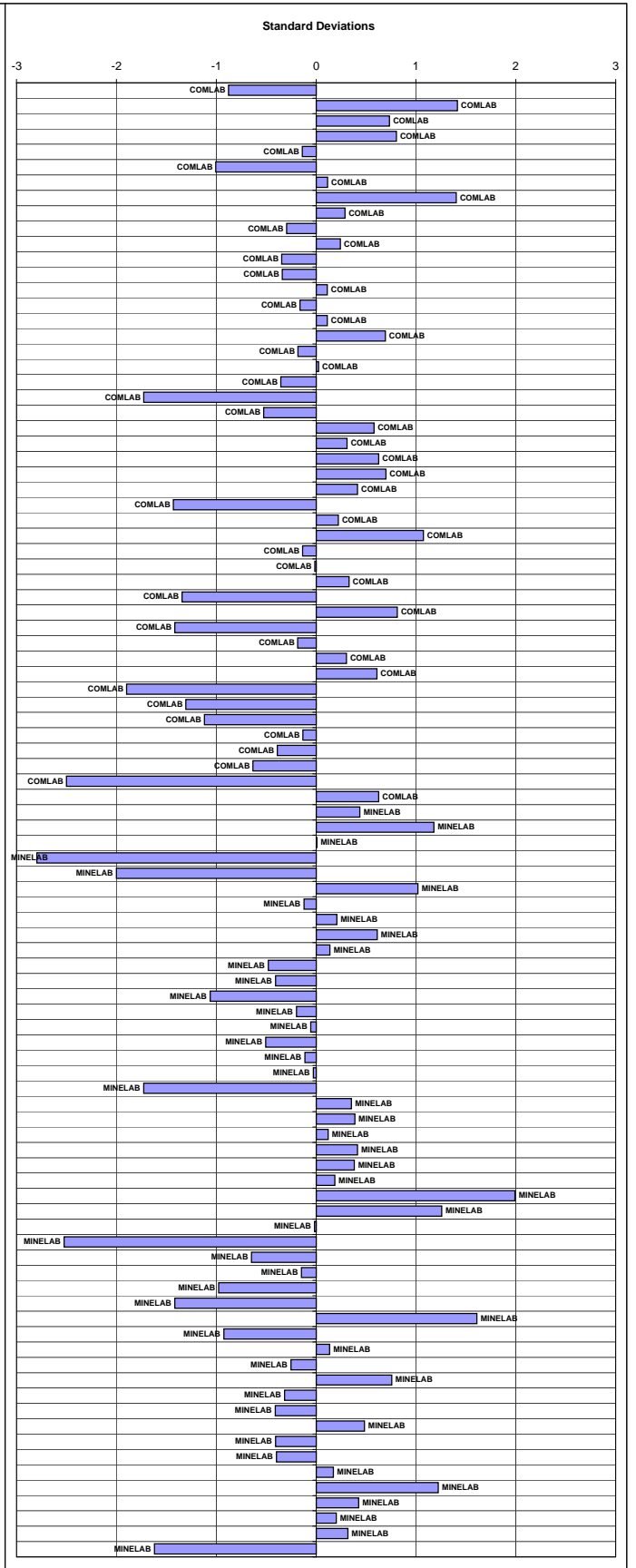
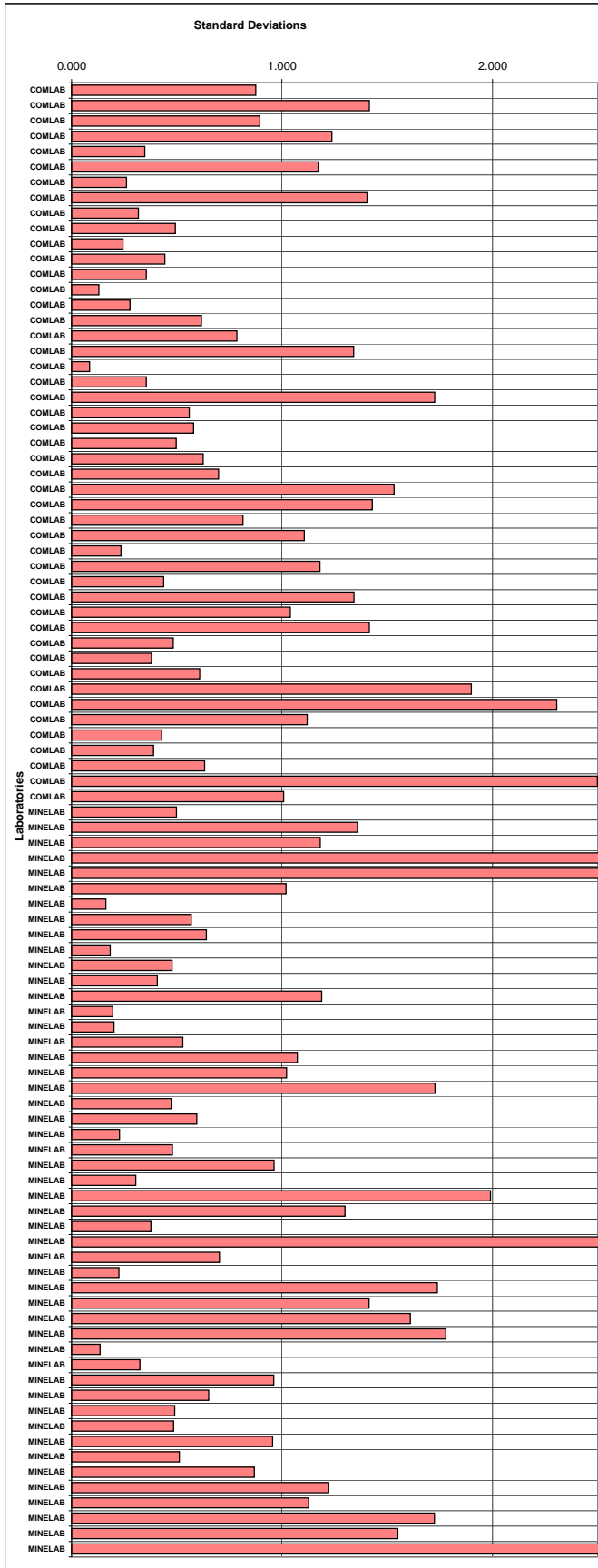
RESULTS OF ANALYSES PRESENTED AS TABLES AND PLOTS

ANALYSIS	PAGES	DESCRIPTION
GOLD SAMPLES		
Fire Assay Gold	1 & 2	Summary statistics, Assays, Standardised Values and Charts
Aqua Regia Digest Gold	3 & 4	Summary statistics, Assays, Standardised Values and Charts
Low Grade Gold Analysis	5 & 6	Summary statistics, Assays, Standardised Values and Charts
Au & Ag IN CARBON SAMPLES		
Gold On Carbon Analysis	7 & 8	Summary statistics, Assays, Standardised Values and Charts
Silver On Carbon Analysis	9 & 10	Summary statistics, Assays, Standardised Values and Charts
BASE METAL SAMPLES		
Silver (Total Digest) Analysis	11 & 12	Summary statistics, Assays, Standardised Values and Charts
Silver (Partial Digest) Analysis	13 & 14	Summary statistics, Assays, Standardised Values and Charts
Copper (Total Digest) Analysis	15 & 16	Summary statistics, Assays, Standardised Values and Charts
Copper (Partial Digest) Analysis	17 & 18	Summary statistics, Assays, Standardised Values and Charts
Lead (Total Digest) Analysis	19 & 20	Summary statistics, Assays, Standardised Values and Charts
Lead (Partial Digest) Analysis	21 & 22	Summary statistics, Assays, Standardised Values and Charts
Zinc (Total Digest) Analysis	23 & 24	Summary statistics, Assays, Standardised Values and Charts
Zinc (Partial Digest) Analysis	25 & 26	Summary statistics, Assays, Standardised Values and Charts
Nickel (Total Digest) Analysis	27 & 28	Summary statistics, Assays, Standardised Values and Charts
Nickel (Partial Digest) Analysis	29 & 30	Summary statistics, Assays, Standardised Values and Charts
Arsenic (Total Digest) Analysis	31 & 32	Summary statistics, Assays, Standardised Values and Charts
Arsenic (Partial Digest) Analysis	33 & 34	Summary statistics, Assays, Standardised Values and Charts
Cobalt (Total Digest) Analysis	35 & 36	Summary statistics, Assays, Standardised Values and Charts
Cobalt (Partial Digest) Analysis	37 & 38	Summary statistics, Assays, Standardised Values and Charts
ORE GRADE BASE METAL SAMPLES		
Copper Analysis	39 & 40	Summary statistics, Assays, Standardised Values and Charts
Lead Analysis	41 & 42	Summary statistics, Assays, Standardised Values and Charts
Zinc Analysis	43 & 44	Summary statistics, Assays, Standardised Values and Charts
Nickel Analysis	45 & 46	Summary statistics, Assays, Standardised Values and Charts
Silver Analysis	47 & 48	Summary statistics, Assays, Standardised Values and Charts
Sulphur Analysis	49 & 50	Summary statistics, Assays, Standardised Values and Charts
SULPHUR SAMPLES		
Sulphur Analysis	51 & 52	Summary statistics, Assays, Standardised Values and Charts
Carbon Analysis	53 & 54	Summary statistics, Assays, Standardised Values and Charts
OTHER		
Becquerel Analysis	55	Becquerel Gold + 33 element analysis (Gold, Base Metals)
Laboratory Summary Report	56	Laboratory summary report for current and previous surveys







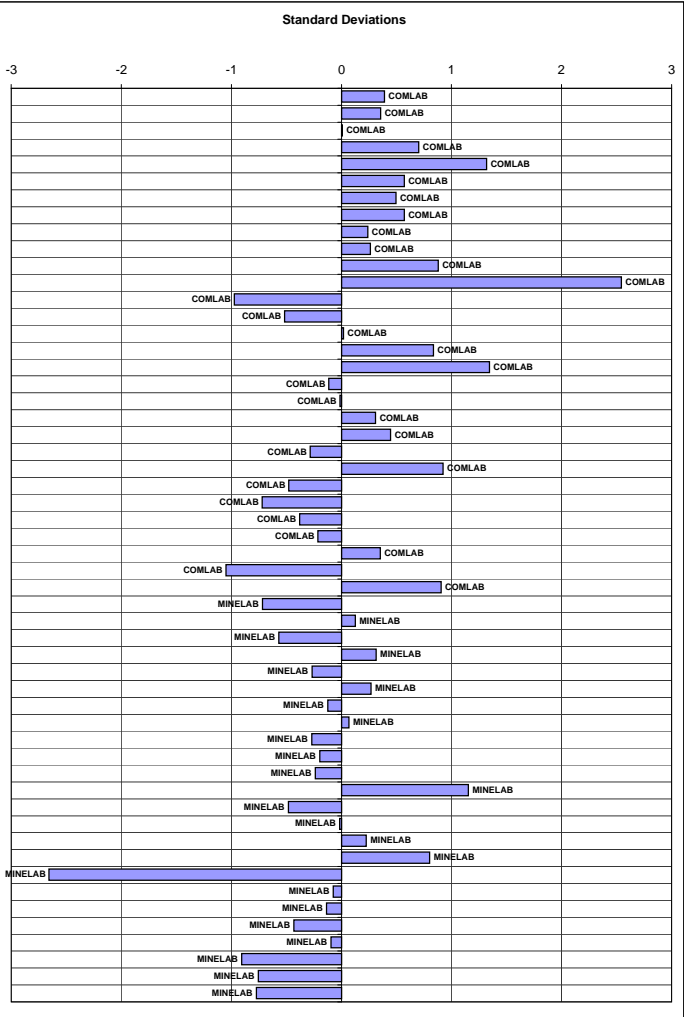
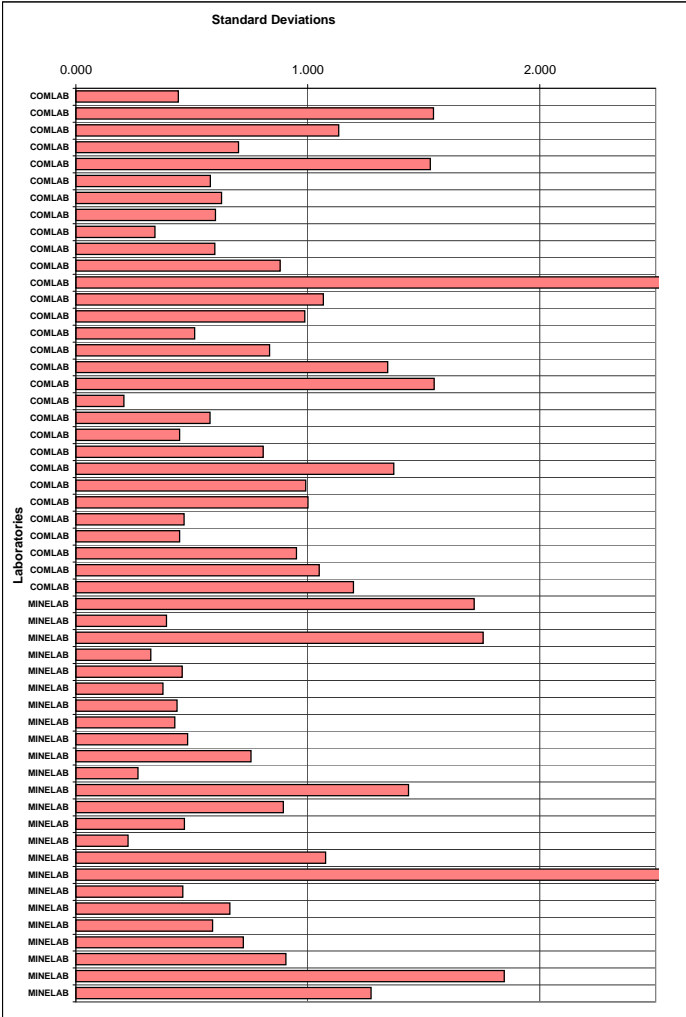


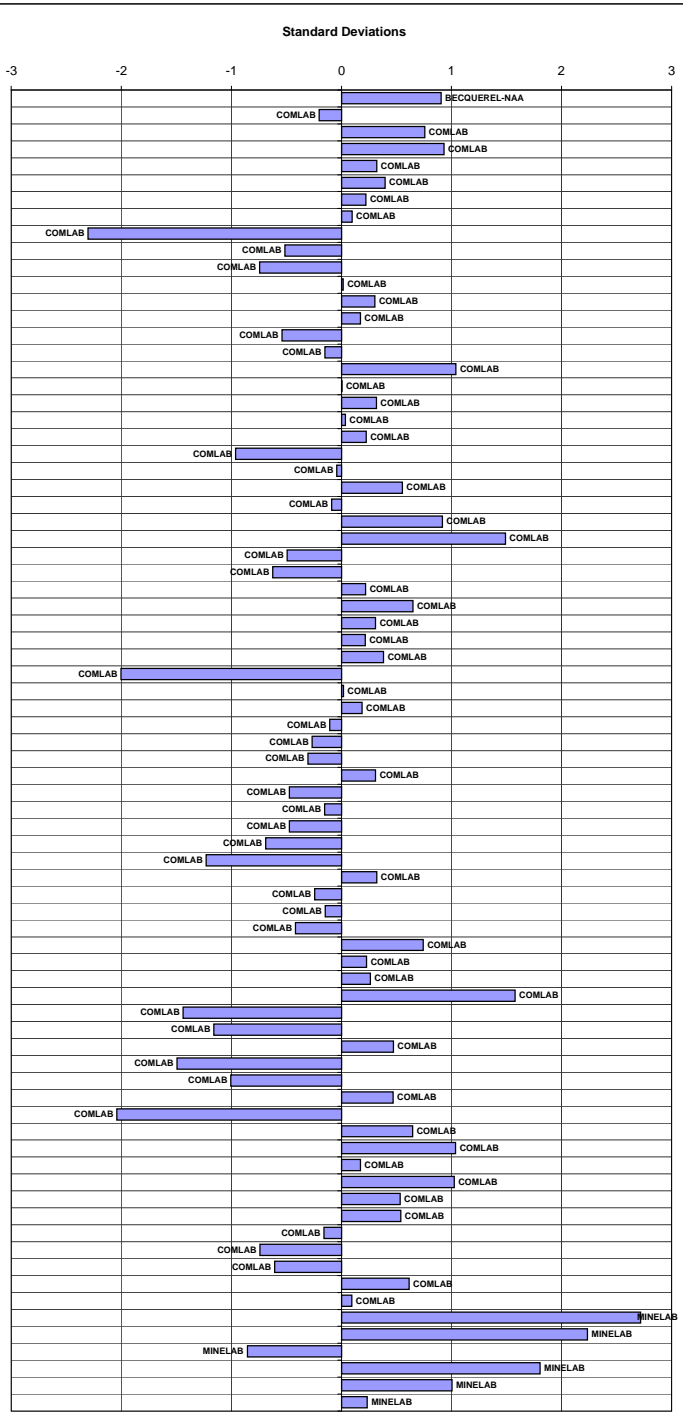
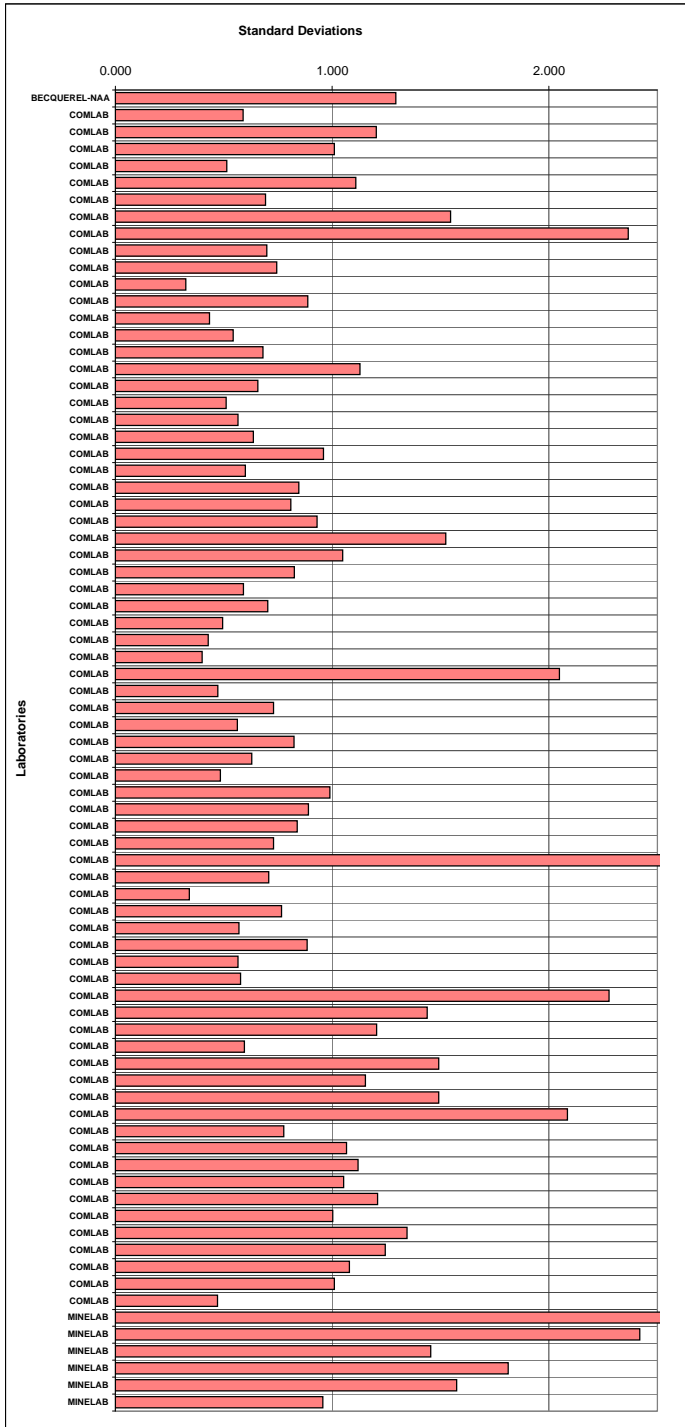
Silver on Carbon Round Robin - Summary Statistics, Assays, Standardised Values and Graphs - October 2014

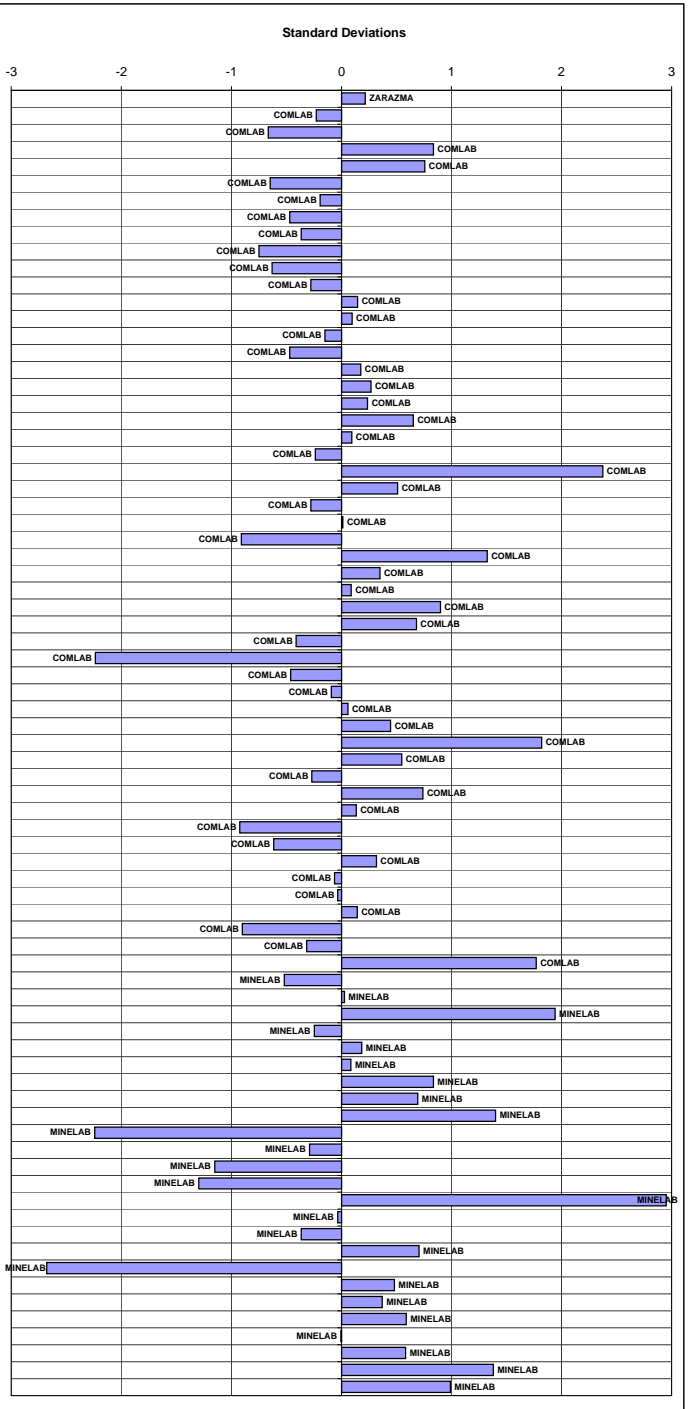
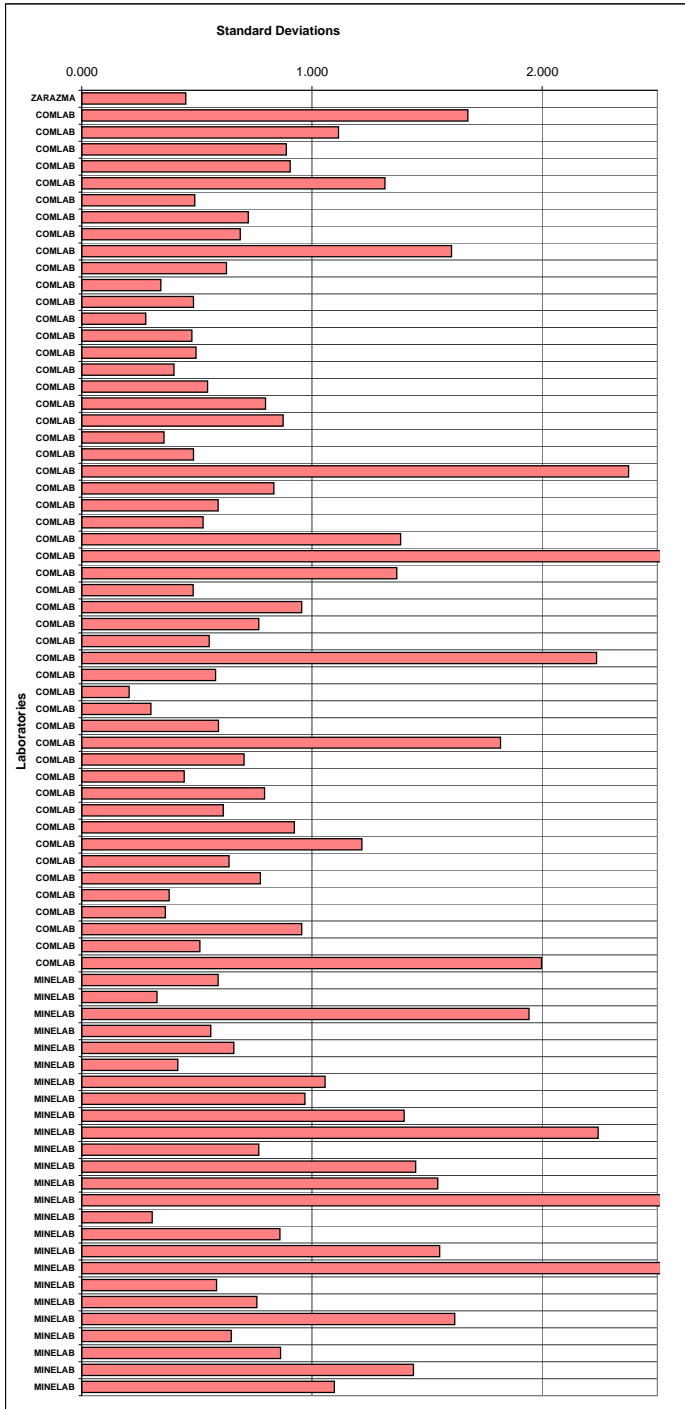
Standard Reference	GBC914-1	GBC914-2	GBC914-3	GBC914-4	GLC914-1	GLC914-2
MEAN (ppm)	128	472	42	141	1114	941
STDEV (ppm)	33	43	10	40	96	74
95% CI (ppm)	9	12	3	11	27	21
95% CI (%)	7.32%	2.56%	7.30%	7.76%	2.43%	2.19%
MIN (ppm)	67	366	20	47	878	758
MEDIAN (ppm)	127	476	41	142	1127	939
MAX (ppm)	199	586	64	240	1320	1140
IQR (ppm)	51	44	10	44	95	69
COUNT	50	50	43	53	50	50

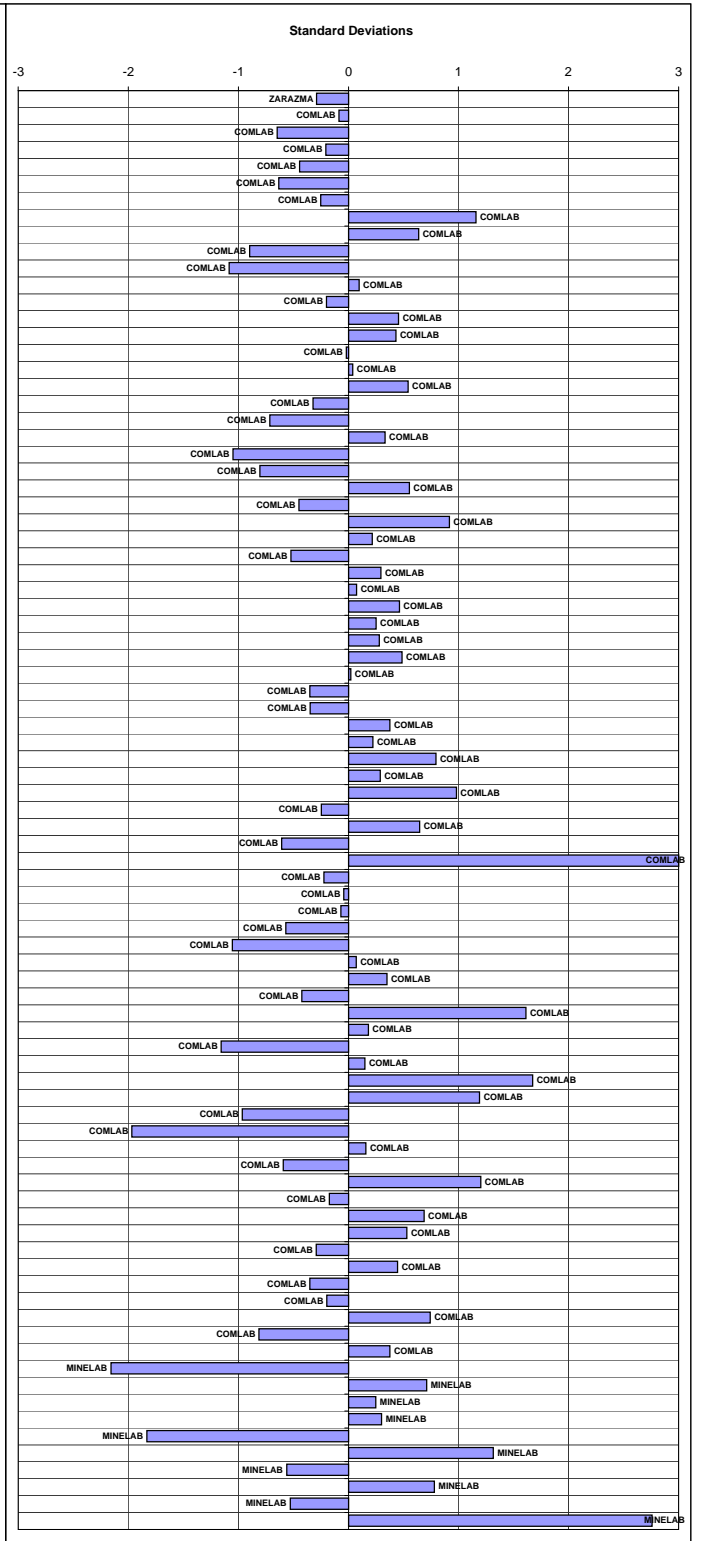
Standard Reference Lab Reference	GBC914-1		GBC914-2		GBC914-3		GBC914-4		GLC914-1		GLC914-2		Method	Reading
	assay	z-score	assay	z-score	assay	z-score	assay	z-score	assay	z-score	assay	z-score		
COMLAB	123	-0.15	508	0.84	43	0.10	174	0.82	1140	0.27	976	0.47	FA	GRAV
COMLAB	261	3.00	366	-2.45	64	2.12	151	0.25	1146	0.33	860	-1.10	FA	GRAV
COMLAB	80	-1.43	483	0.26	308	3.00	106	-0.87	1130	0.17	862	-1.08	FA	GRAV
COMLAB	180	1.55	476	0.09	52	0.99	173	0.80	1154	0.42	968	0.36	FA	GRAV
COMLAB	199	2.12	513	0.96	159	3.00	240	2.47	1054	-0.62	941	0.00	FA	GRAV
COMLAB	161	0.98	505	0.77	42	0.00	163	0.55	1225	1.15	939	-0.03	PR,AR	AAS
COMLAB	163	1.04	512	0.93	41	-0.10	175	0.85	1085	-0.30	982	0.55	FA	AAS
COMLAB	174	1.37	490	0.42	54	1.19	152	0.27	1105	-0.09	961	0.27	FA	GRAV
COMLAB	156	0.83	471	-0.02	39	-0.27	161	0.49	1143	0.30	951	0.13	FA	GRAV
COMLAB	159	0.92	445	-0.63	41	-0.10	208	1.67	1091	-0.24	938	-0.04	FA	GRAV
COMLAB	155	0.80	516	1.02	45	0.29	164	0.56	1211	1.01	1060	1.61	FA	GRAV
COMLAB	162	1.01	631	3.00	211	3.00	231	2.24	1640	3.00	1410	3.00	PR,AR	MS
COMLAB	135	0.21	418	-1.25	<60	bld	142	0.03	890	-2.32	829	-1.52	FA	GRAV
COMLAB	155	0.81	453	-0.44	<60	bld	156	0.37	878	-2.45	877	-0.87	FA	GRAV
COMLAB	126	-0.06	429	-1.00	42	-0.03	125	-0.40	1248	1.39	956	0.20	PR,AR	DIBK
COMLAB	157	0.87	512	0.93	<50	bld	163	0.55	1163	0.51	1039	1.33	AR	AAS
COMLAB	146	0.54	538	1.53	60	1.78	196	1.37	1260	1.51	1040	1.34	FA	GRAV
COMLAB	120	-0.24	190	-3.00	36	-0.59	95	-1.14	1320	2.14	1100	2.16	AR	AAS
COMLAB	124	-0.12	472	0.00	38	-0.39	135	-0.15	1153	0.40	954	0.17	AR	AAS
COMLAB	140	0.35	451	-0.49	39	-0.31	156	0.38	1200	0.89	1018	1.04	AR	ES
COMLAB	153	0.75	473	0.02	48	0.56	160	0.47	1162	0.50	969	0.38	FA,PR	AAS
COMLAB	113	-0.45	480	0.19	56	1.38	111	-0.74	1030	-0.87	852	-1.21	AR	AAS
COMLAB	130	0.06	431	-0.95	38	-0.39	186	1.12	1420	3.00	1140	2.70	PR,AR	AAS
COMLAB	67	-1.82	487	0.35	54	1.19	88	-1.32	1090	-0.25	866	-1.02	AR	AAS
COMLAB	130	0.06	412	-1.39	50	0.75	142	0.03	905	-2.16	822	-1.62	PR,AR	AAS
COMLAB	72	-1.67	470	-0.05	39	-0.29	120	-0.52	1124	0.10	953	0.16	PR,AR	ES
COMLAB	128	0.00	488	0.37	31	-1.08	154	0.32	1060	-0.56	916	-0.34	FA	GRAV
COMLAB	183	1.64	477	0.12	61	1.88	152	0.27	1060	-0.56	850	-1.24	FA	GRAV
COMLAB	111	-0.51	381	-2.11	32	-0.95	130	-0.27	940	-1.80	893	-0.65	PR,FUS	MS,ES
COMLAB	117	-0.33	616	3.00	45	0.30	119	-0.55	1225	1.15	1078	1.86	PR,AR	AAS
MINELAB	80	-1.43	385	-2.02	20	-2.17	97	-1.09	1057	-0.59	1650	3.00	PR,AR	AAS
MINELAB	109	-0.57	498	0.60	41	-0.10	136	-0.12	1160	0.48	976	0.47	PR,AR	AAS
MINELAB	102	-0.78	496	0.56	114	3.00	133	-0.20	696	-3.00	568	-3.00	PR,AR	AAS
MINELAB	153	0.75	471	-0.02	45	0.30	163	0.55	1121	0.07	960	0.25	AR	AAS
MINELAB	123	-0.16	497	0.58	33	-0.90	119	-0.55	1083	-0.32	922	-0.25	FA	GRAV
MINELAB	173	1.34	481	0.20	41	-0.06	157	0.39	1104	-0.10	930	-0.16	FA	GRAV
MINELAB	134	0.18	493	0.48	35	-0.67	152	0.28	1037	-0.80	925	-0.22	FA	GRAV
MINELAB	149	0.63	468	-0.09	35	-0.69	163	0.55	1144	0.31	920	-0.29	FA	GRAV
MINELAB	141	0.39	436	-0.83	39	-0.29	151	0.25	1075	-0.40	888	-0.72	FA	GRAV
MINELAB	81	-1.40	475	0.07	46	0.40	90	-1.27	1231	1.21	928	-0.18	4A	AAS
MINELAB	94	-1.02	476	0.09	41	-0.10	138	-0.07	1106	-0.08	923	-0.25	AR	AAS
MINELAB	100	-0.84	586	2.64	98	3.00	142	0.03	1188	0.76	1040	1.34	AR	AAS
MINELAB	78	-1.51	462	-0.24	54	1.15	64	-1.90	1122	0.09	906	-0.47	PR,AR	AAS
MINELAB	<100	bld	480	0.19	<100	bld	102	-0.97	1156	0.44	962	0.28	AR	AAS
MINELAB	<200	bld	486	0.33	<200	bld	<200	bld	1136	0.23	950	0.12	AR	AAS
MINELAB	126	-0.06	578	2.46	84	3.00	120	-0.52	1130	0.17	923	-0.25	PR,AR	AAS
MINELAB	27	-3.00	229	-3.00	26	-1.60	47	-2.34	554	-3.00	35	-3.00	FA	GRAV
MINELAB	111	-0.51	429	-1.00	41	-0.10	142	0.03	1153	0.40	995	0.73	FA	GRAV
MINELAB	90	-1.14	473	0.02	57	1.48	110	-0.77	1122	0.08	905	-0.49	PR,AR	AAS
MINELAB	83	-1.35	456	-0.37	43	0.10	101	-0.99	1150	0.37	915	-0.36	AR	AAS
MINELAB	91	-1.11	476	0.09	42	0.00	105	-0.89	1286	1.78	908	-0.45	AR	AAS
MINELAB	123	-0.15	420	-1.21	27	-1.48	139	-0.05	993	-1.25	846	-1.29	PP	XRF
MINELAB	171	1.28	413	-1.37	20	-2.17	221	1.99	942	-1.78	758	-2.49	FA	GRAV
MINELAB	72	-1.67	507	0.81	31	-1.12	50	-2.26	1010	-1.08	992	0.69	PR,AR	AAS

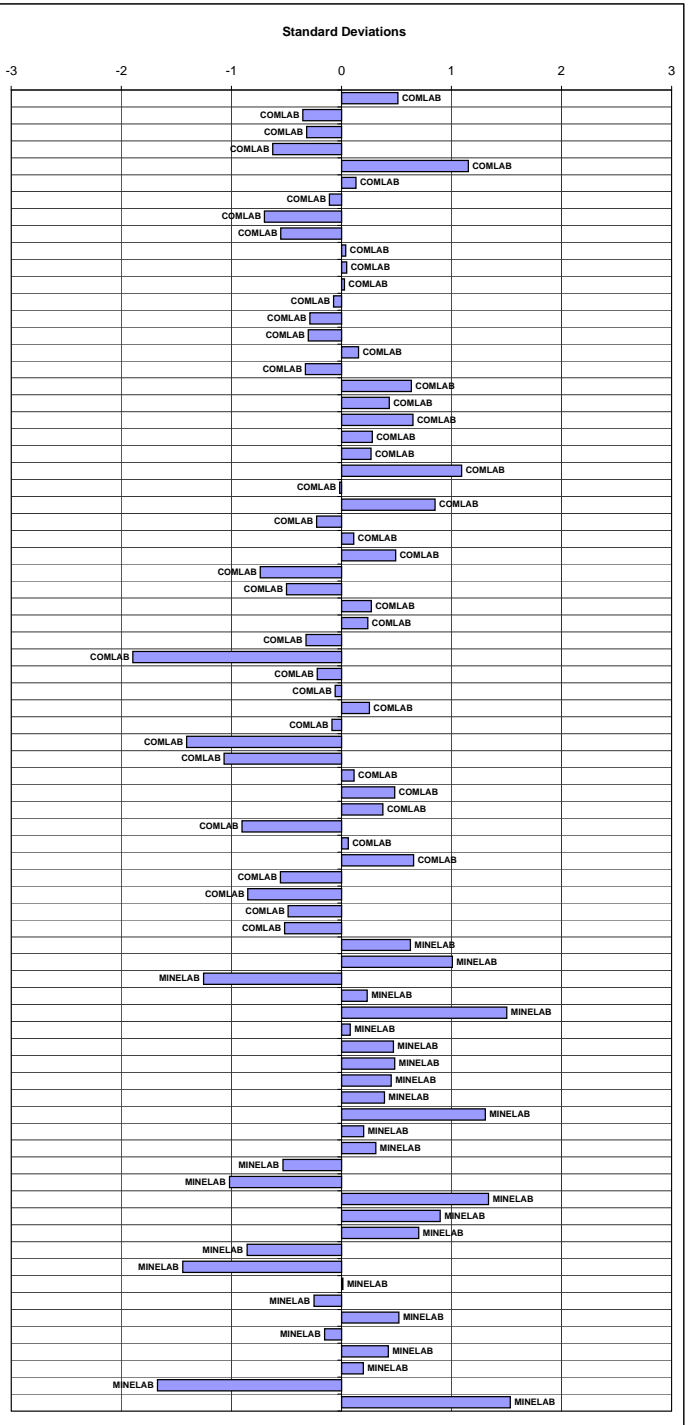
Highlighted values are outliers which are assigned a z-score of -3.00 or 3.00 in the standardised values.

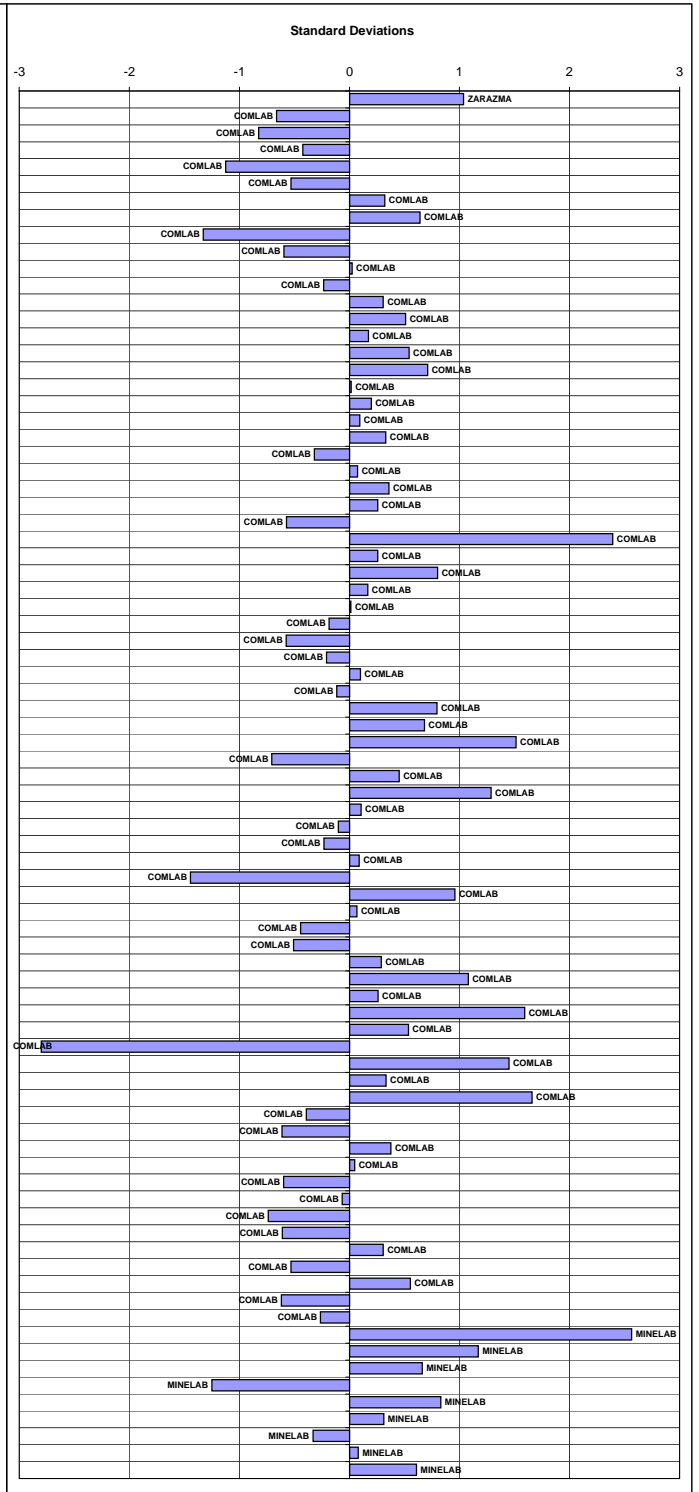


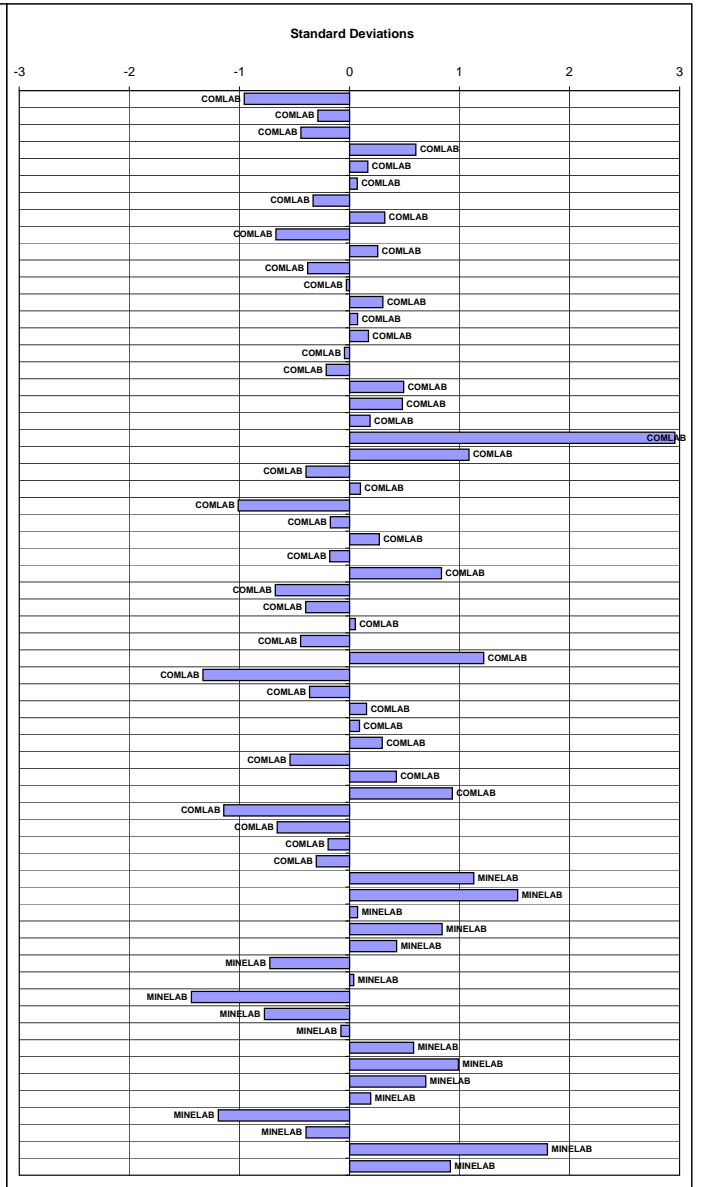


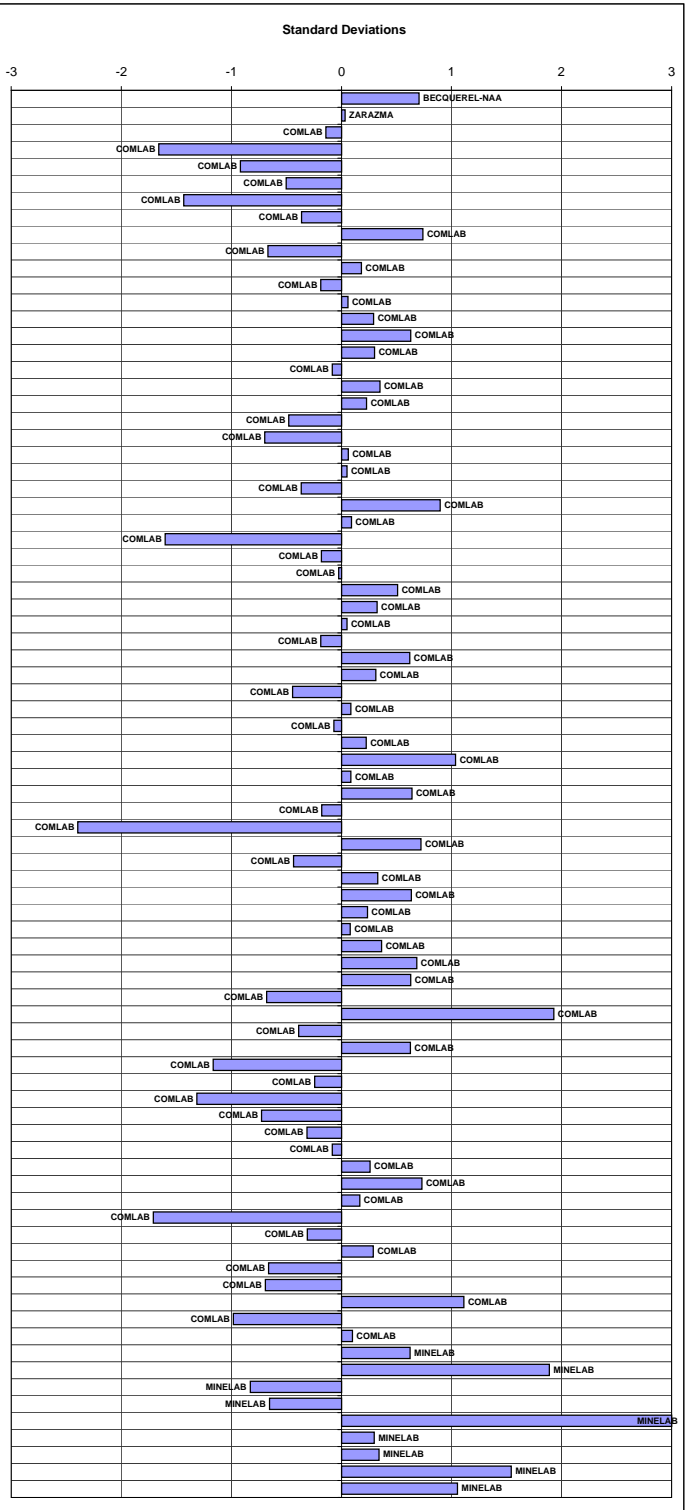
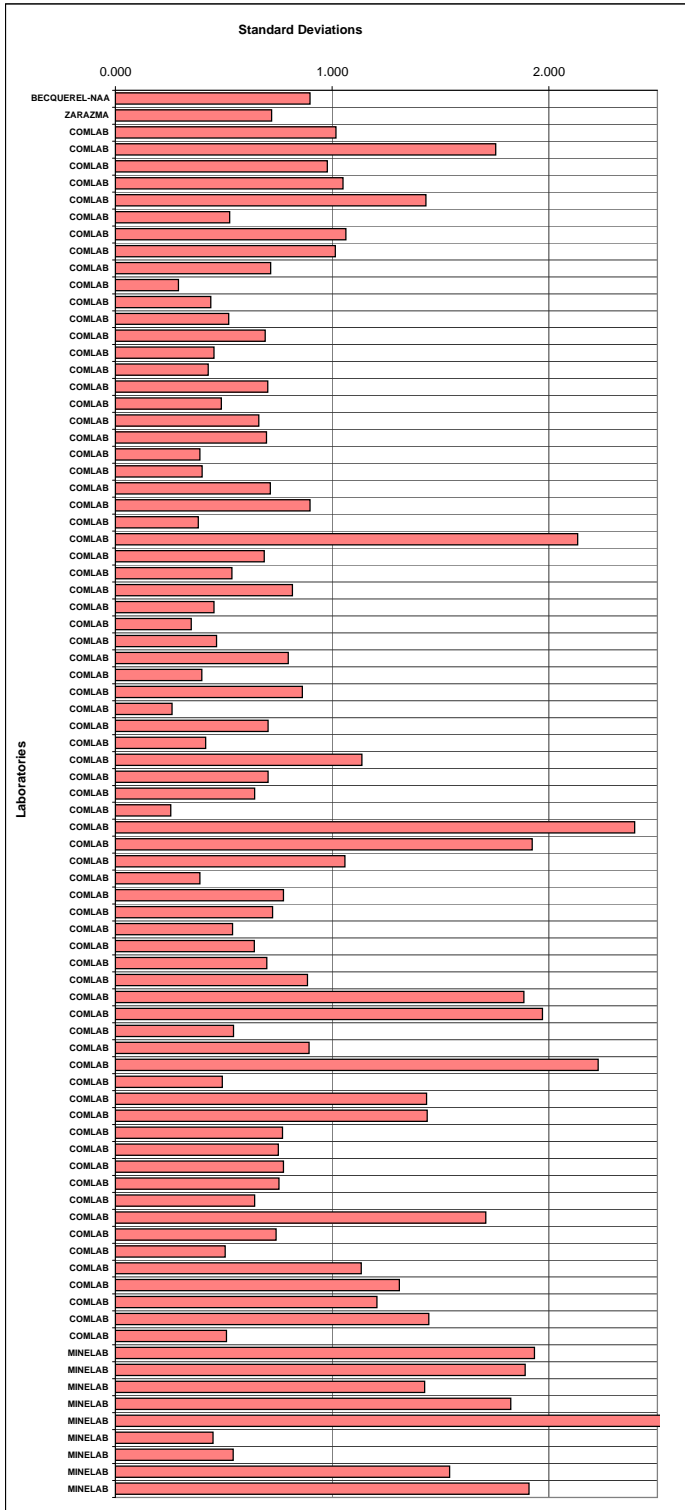


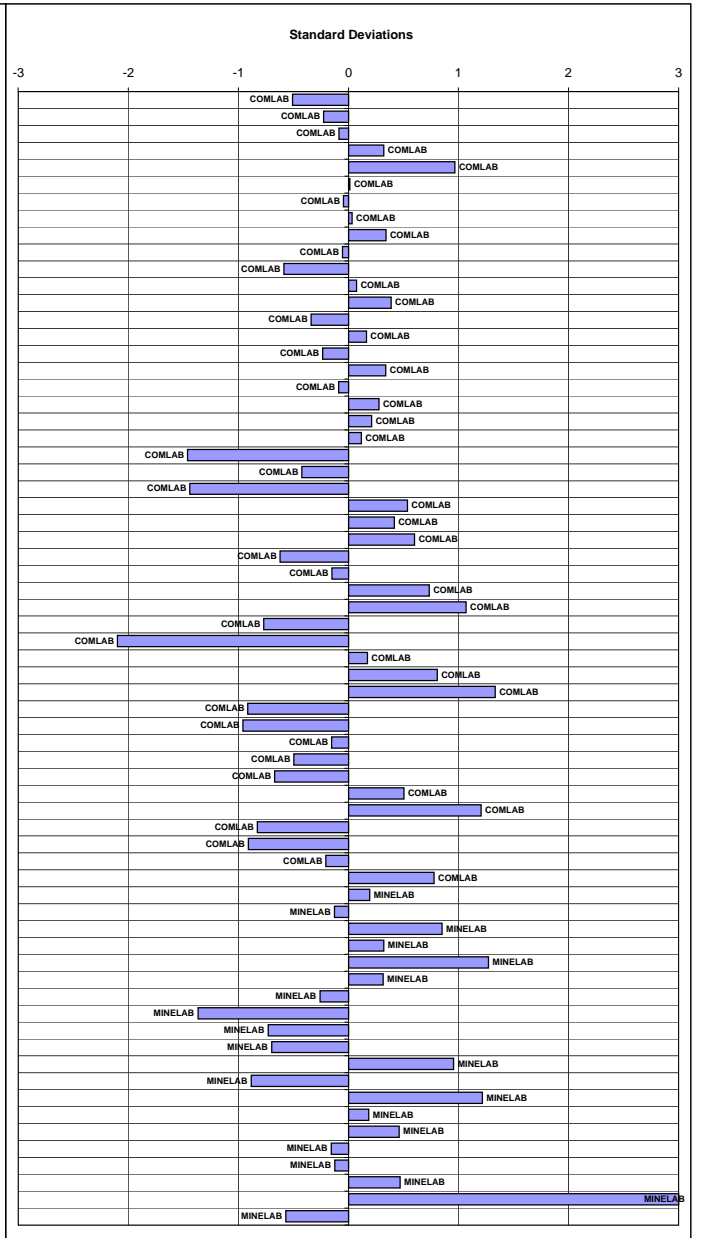


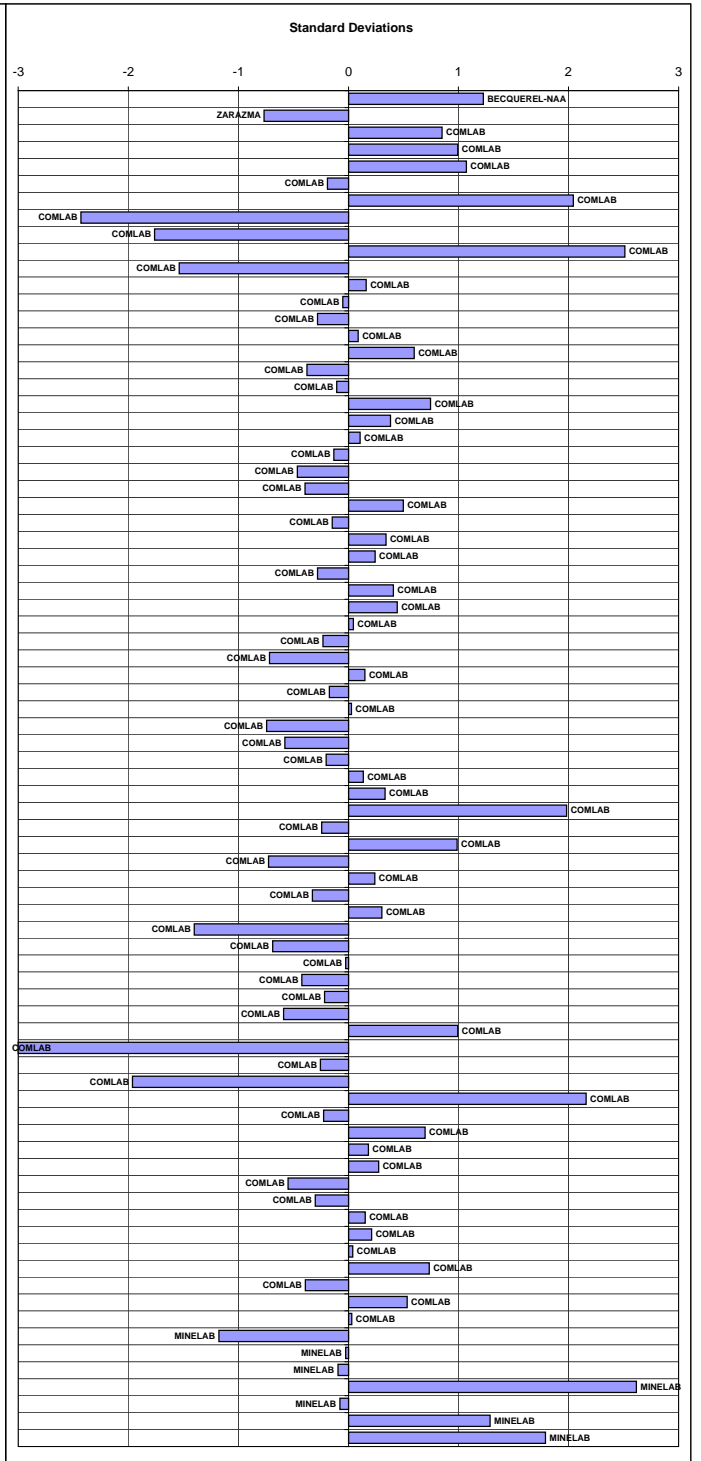
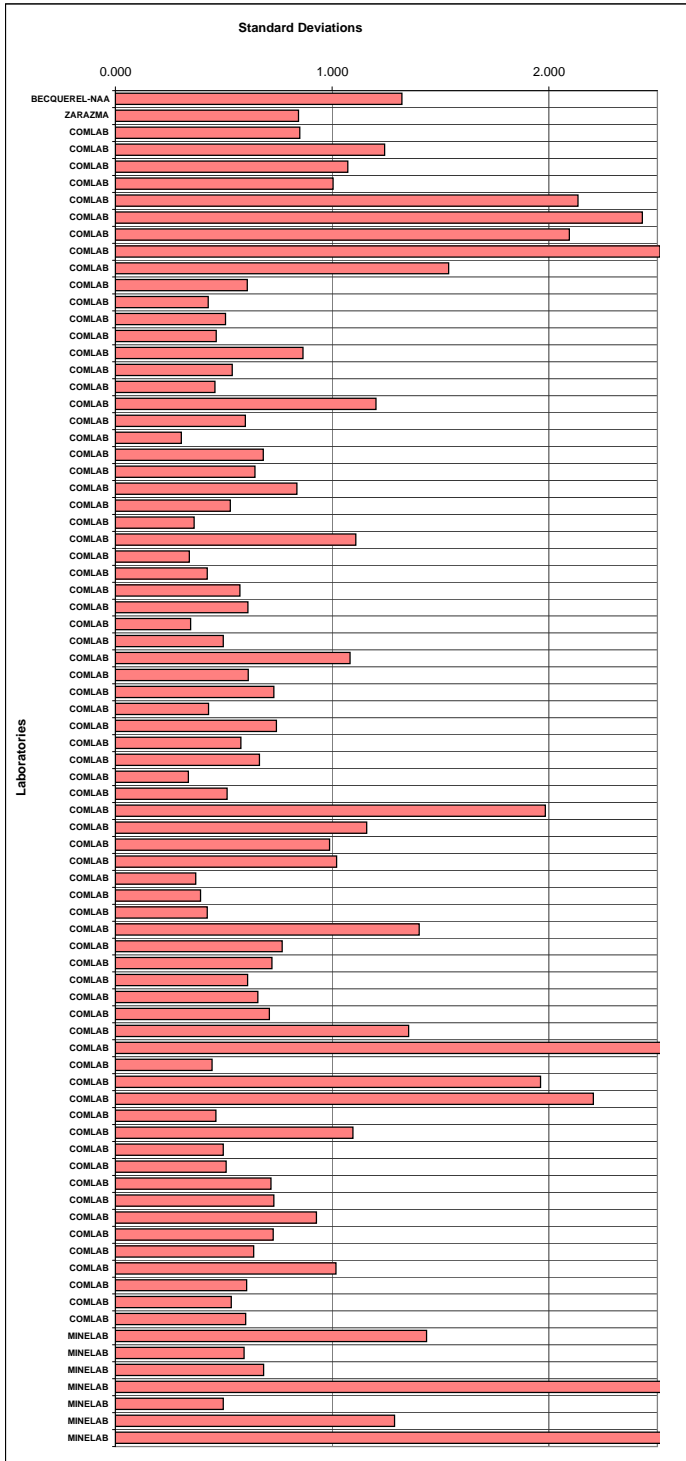


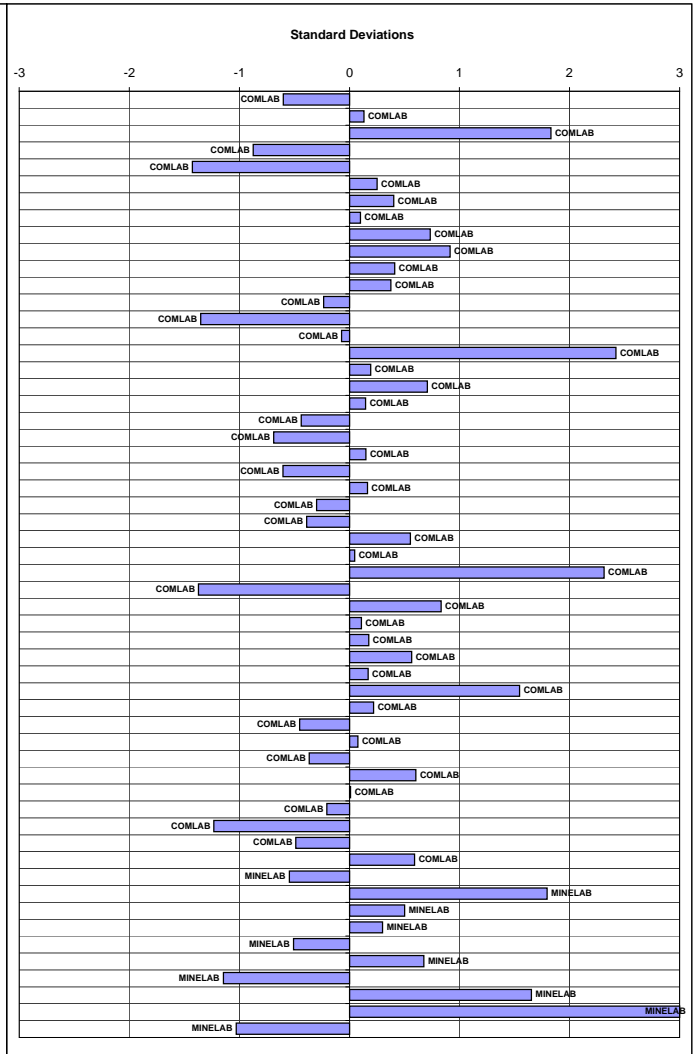


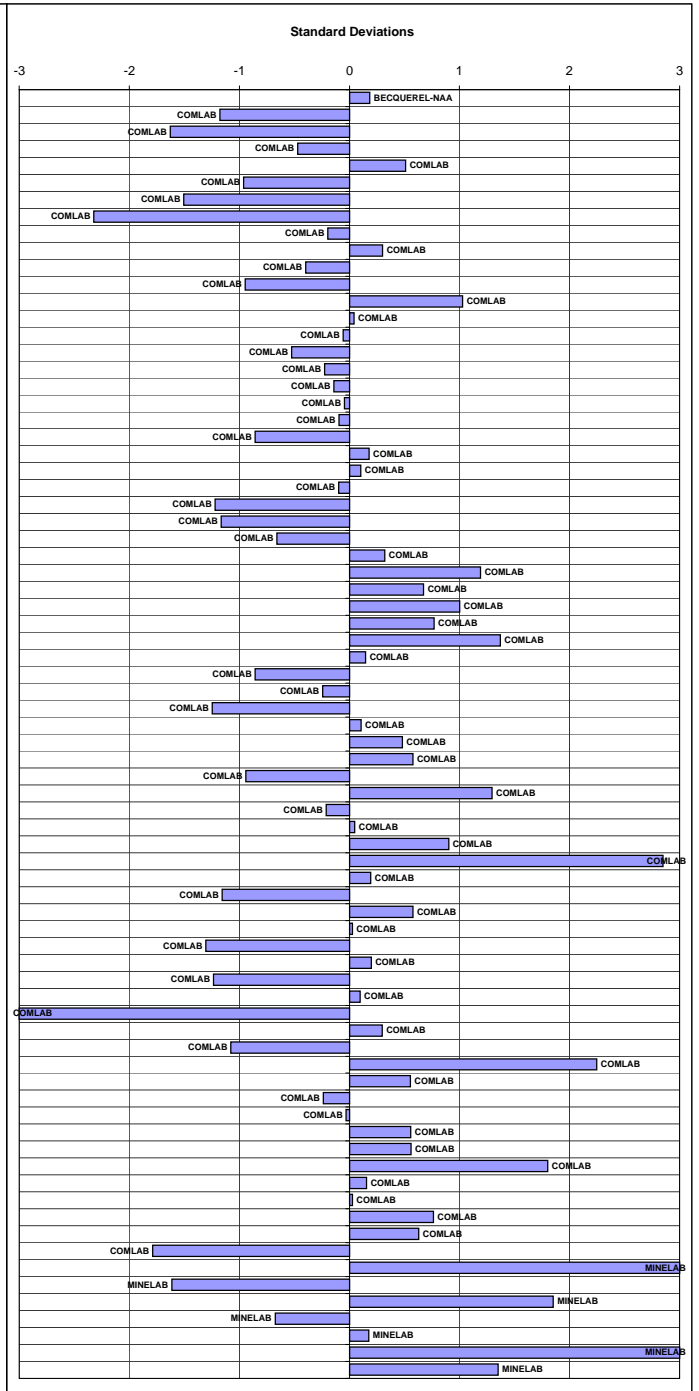
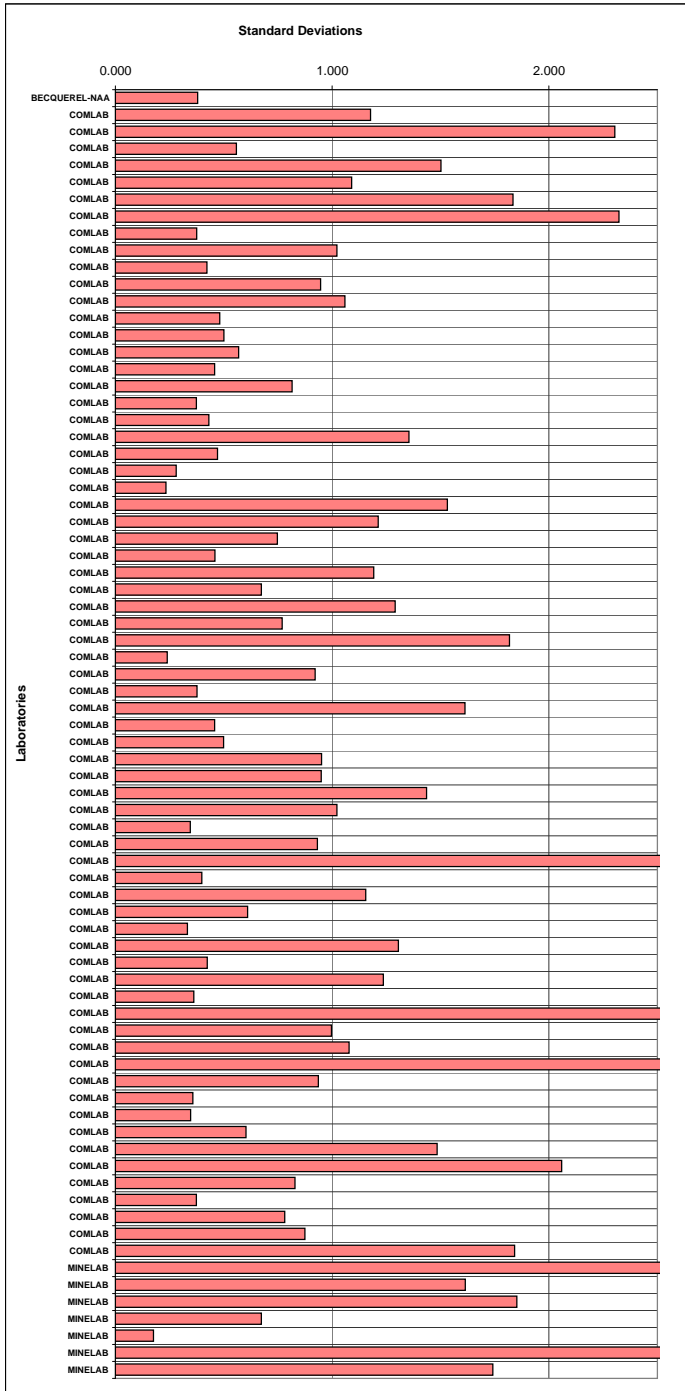


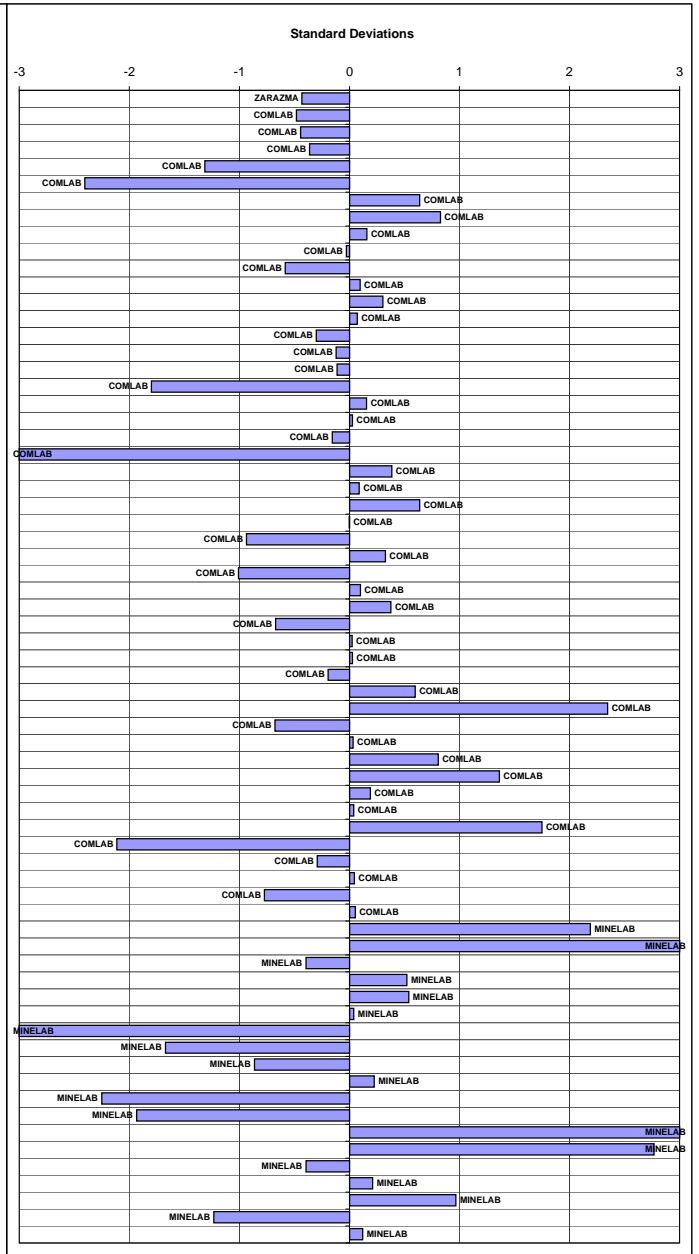
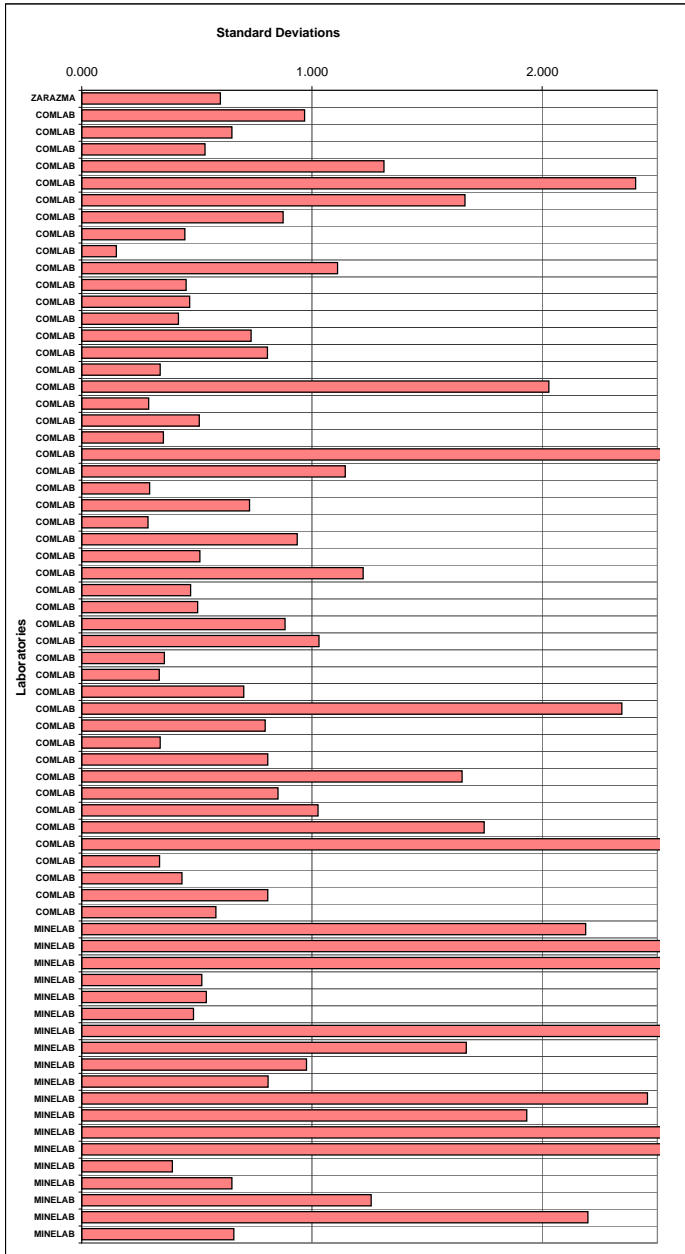


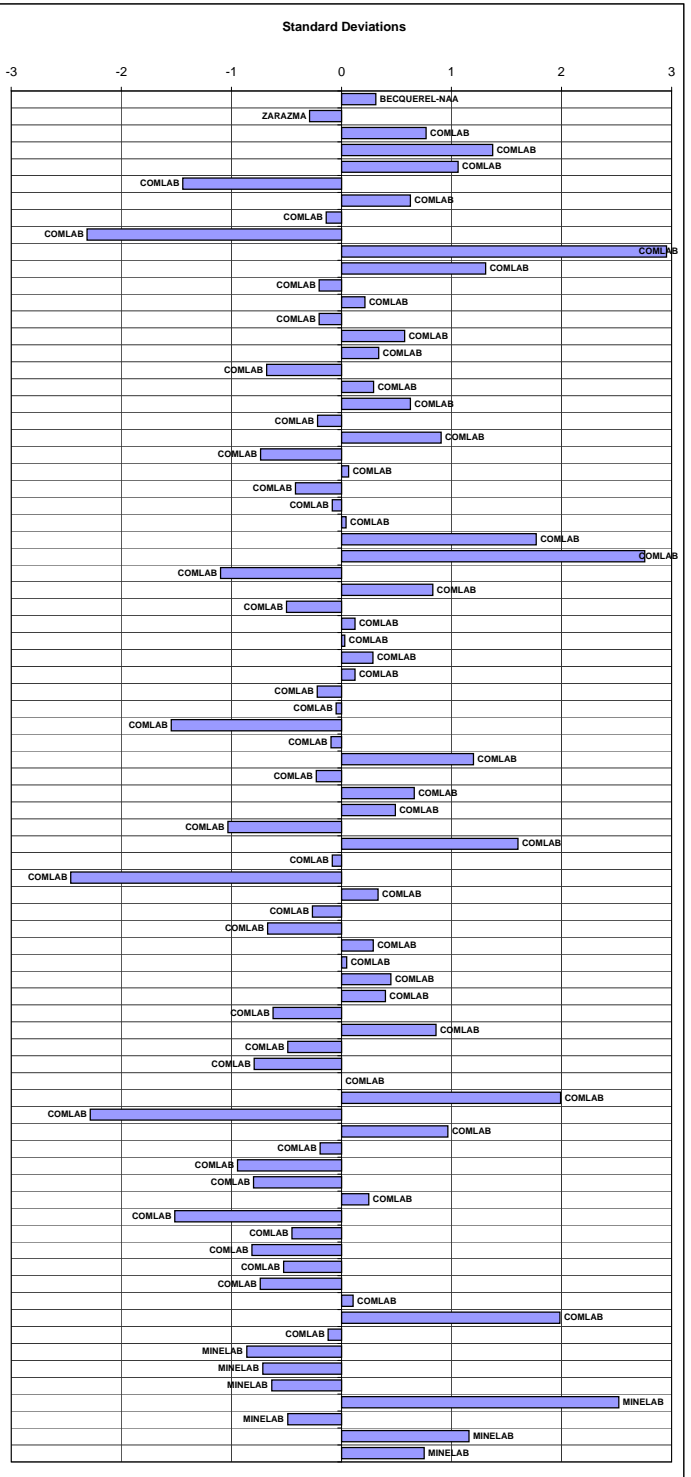


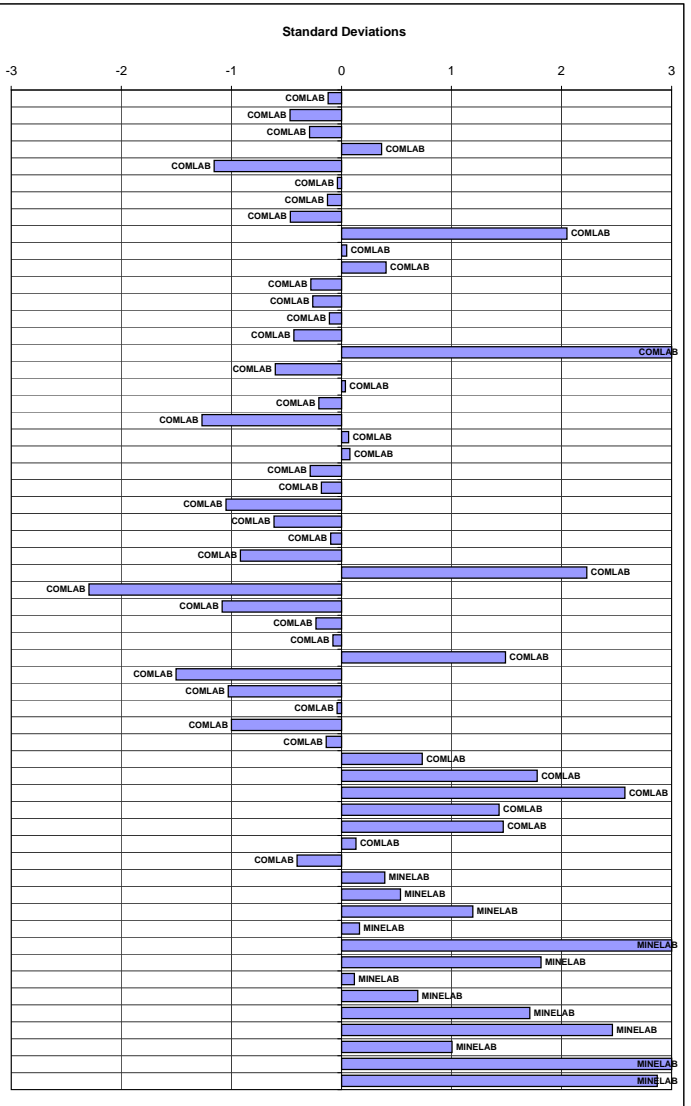


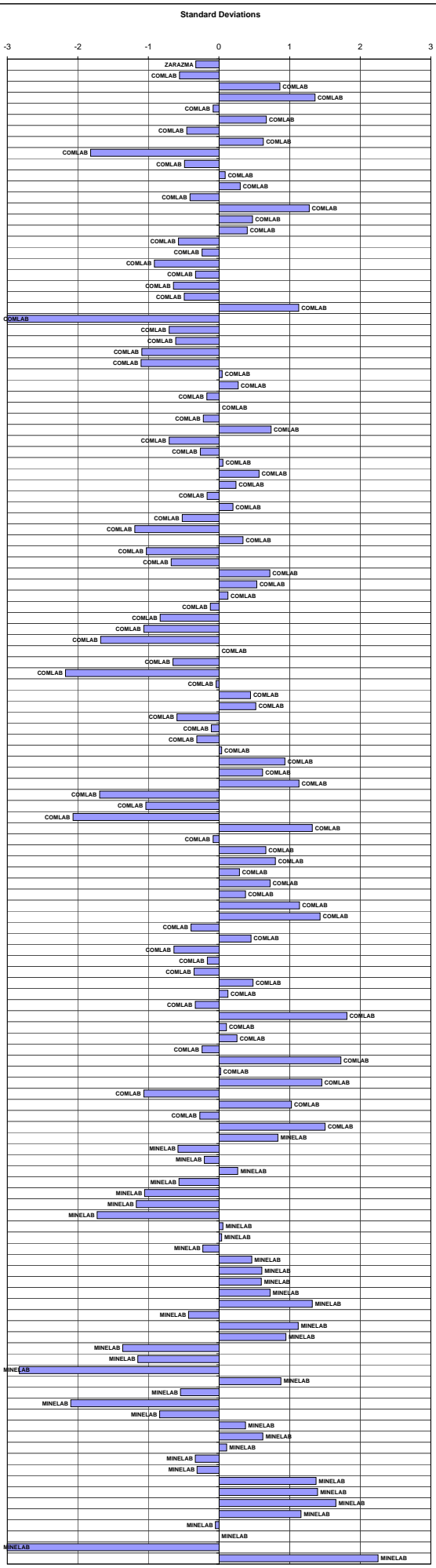
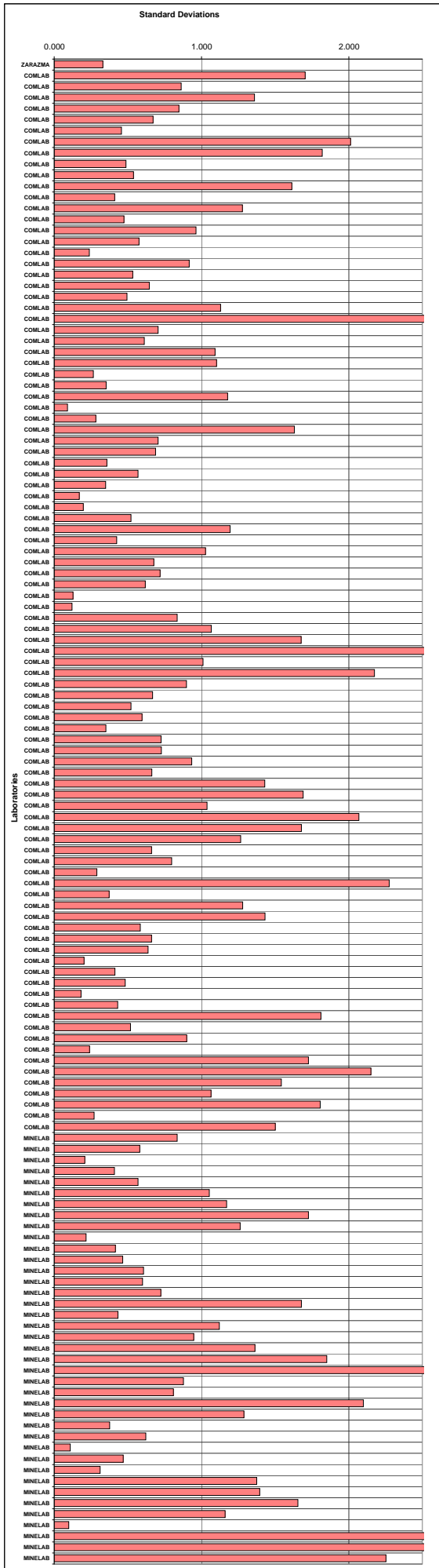


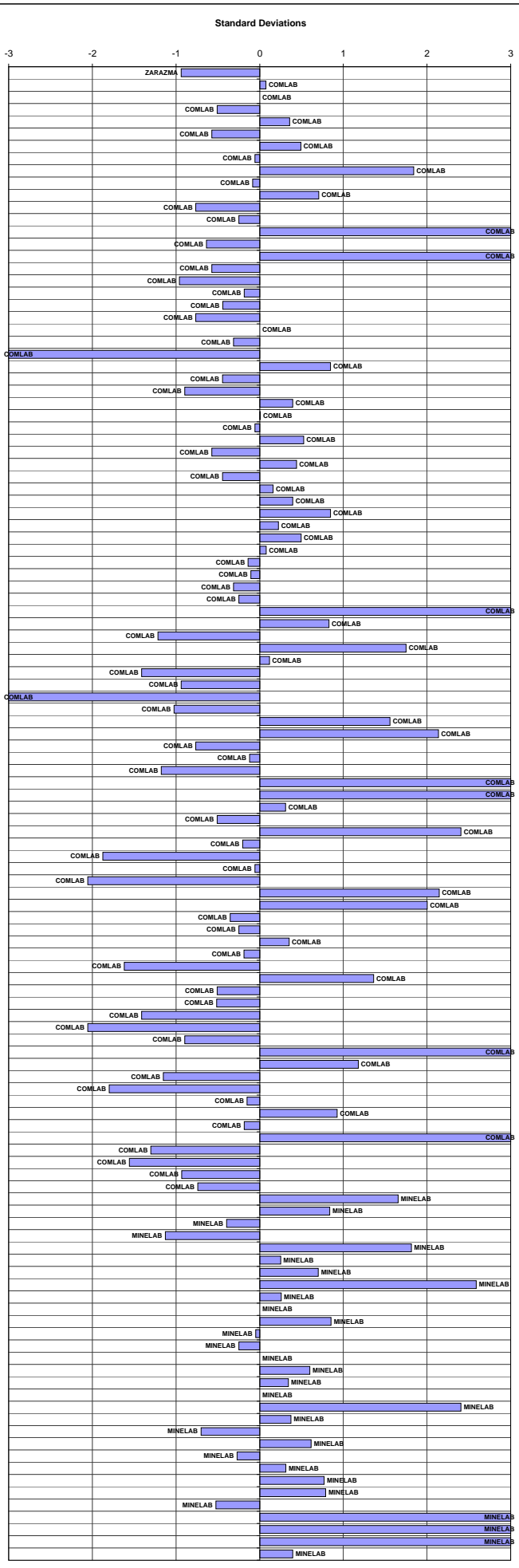


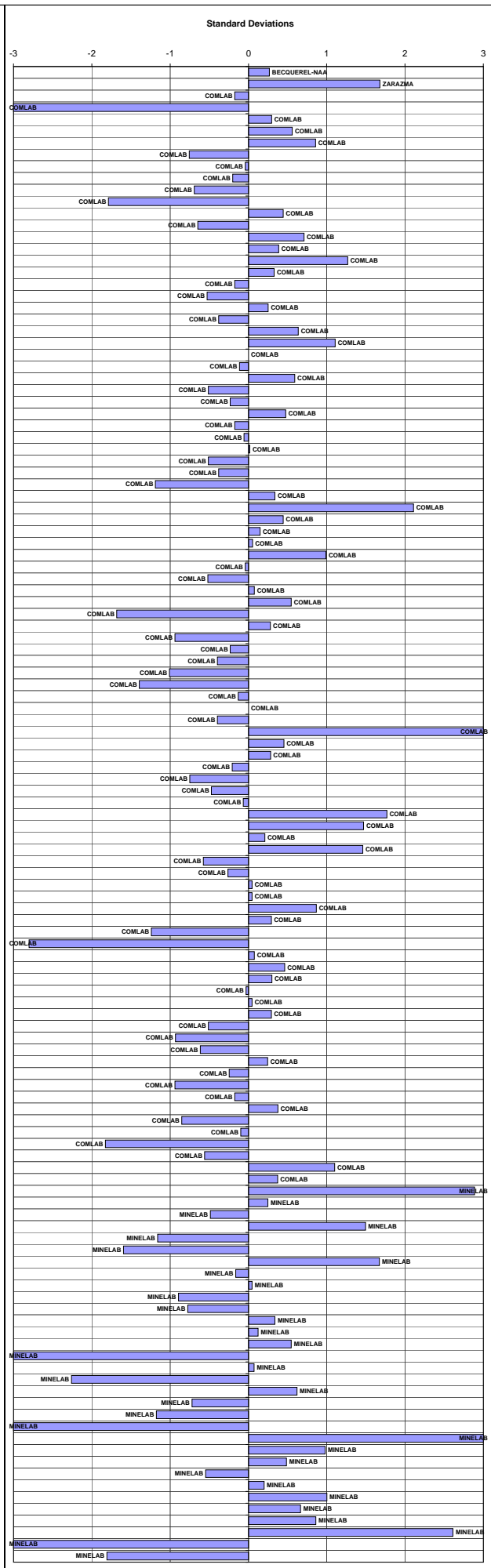


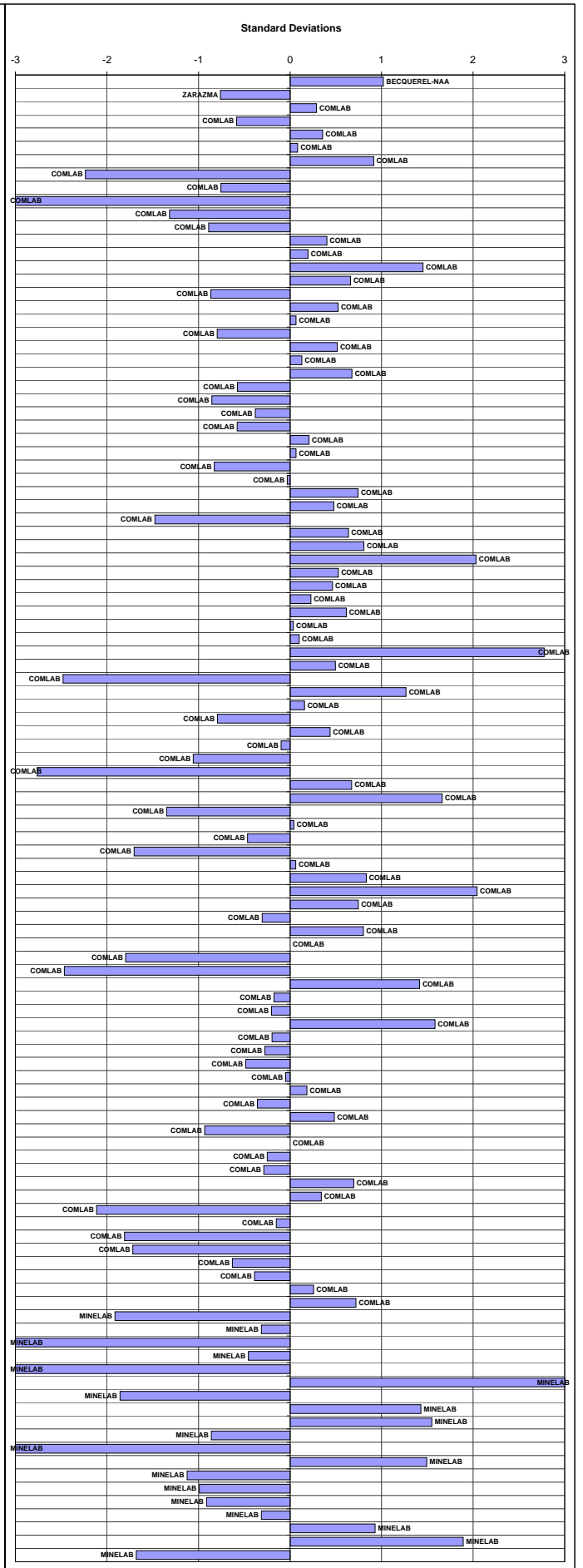
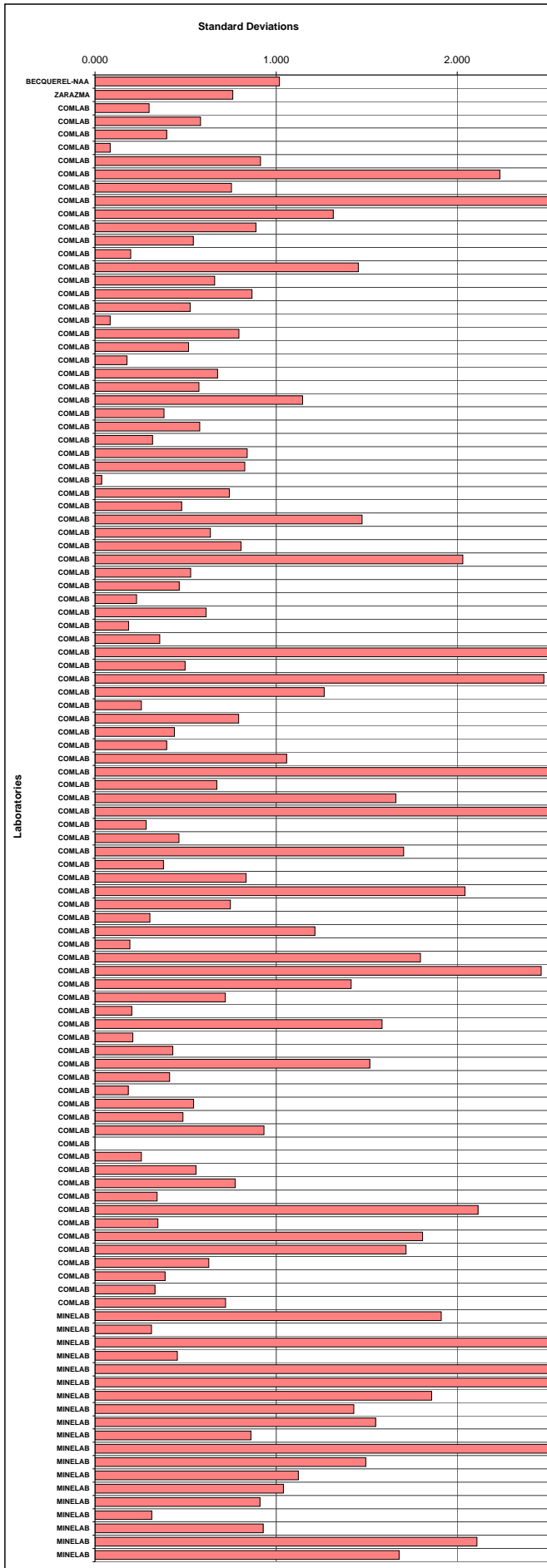




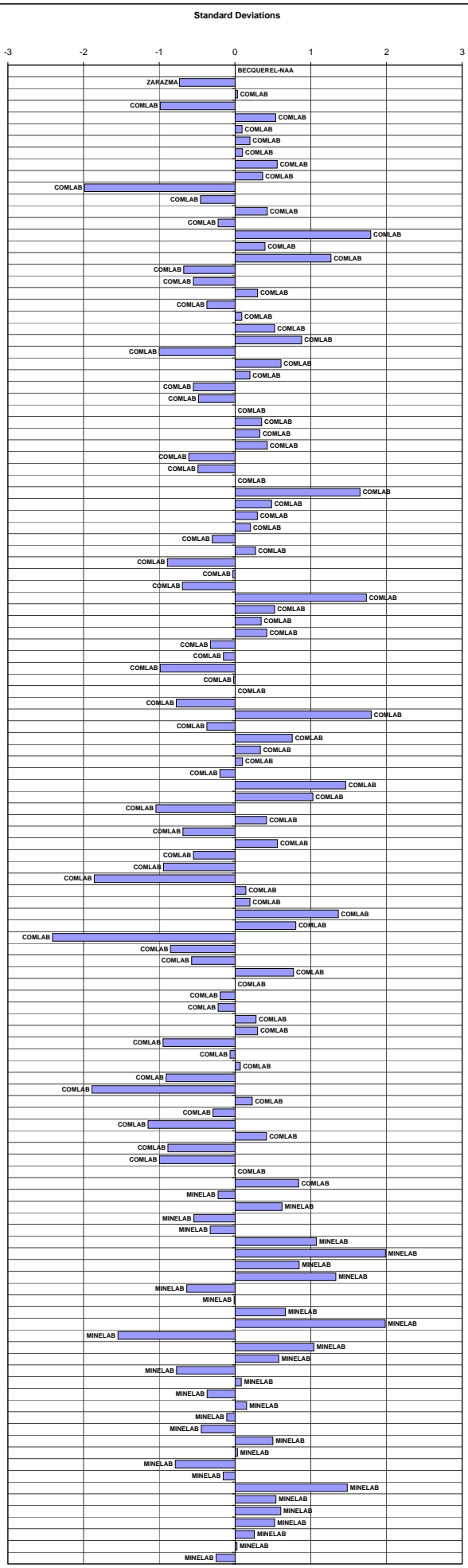
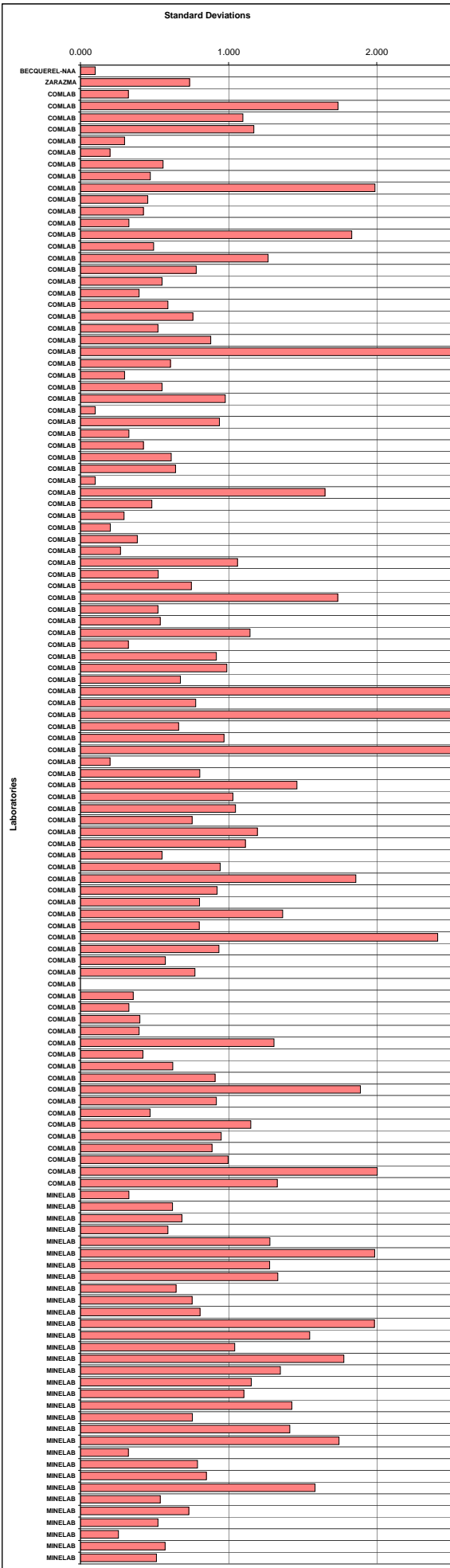




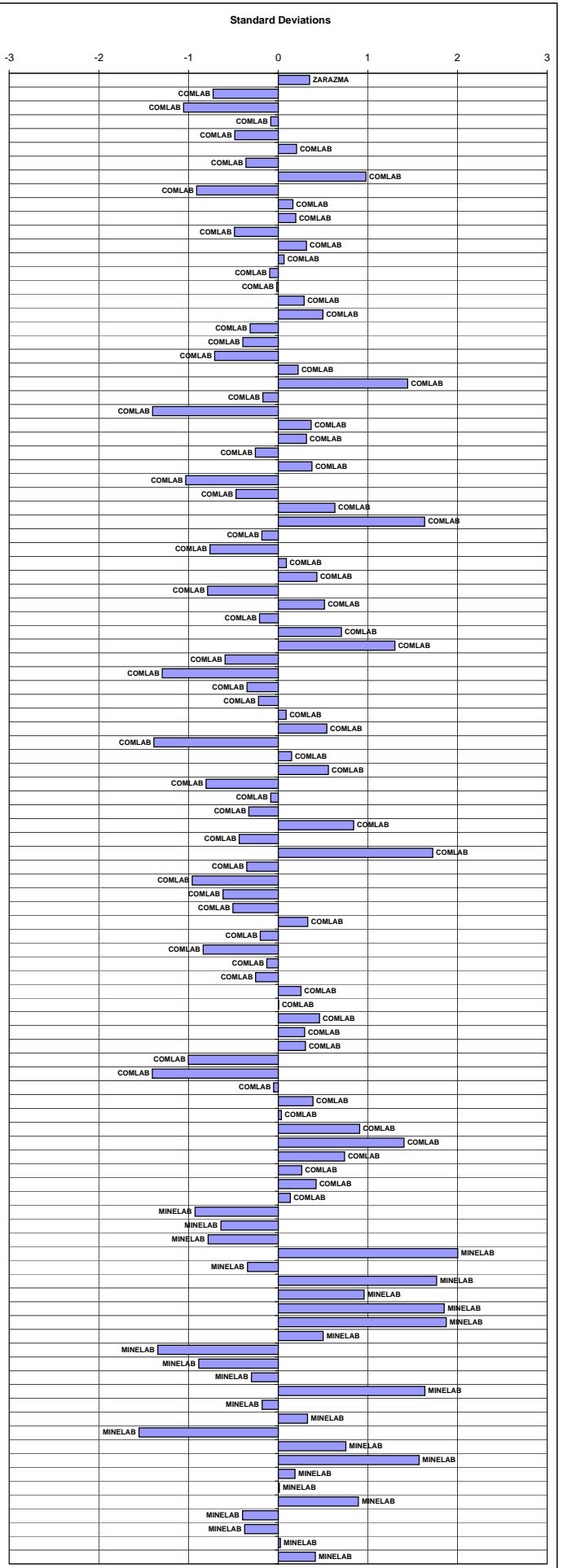


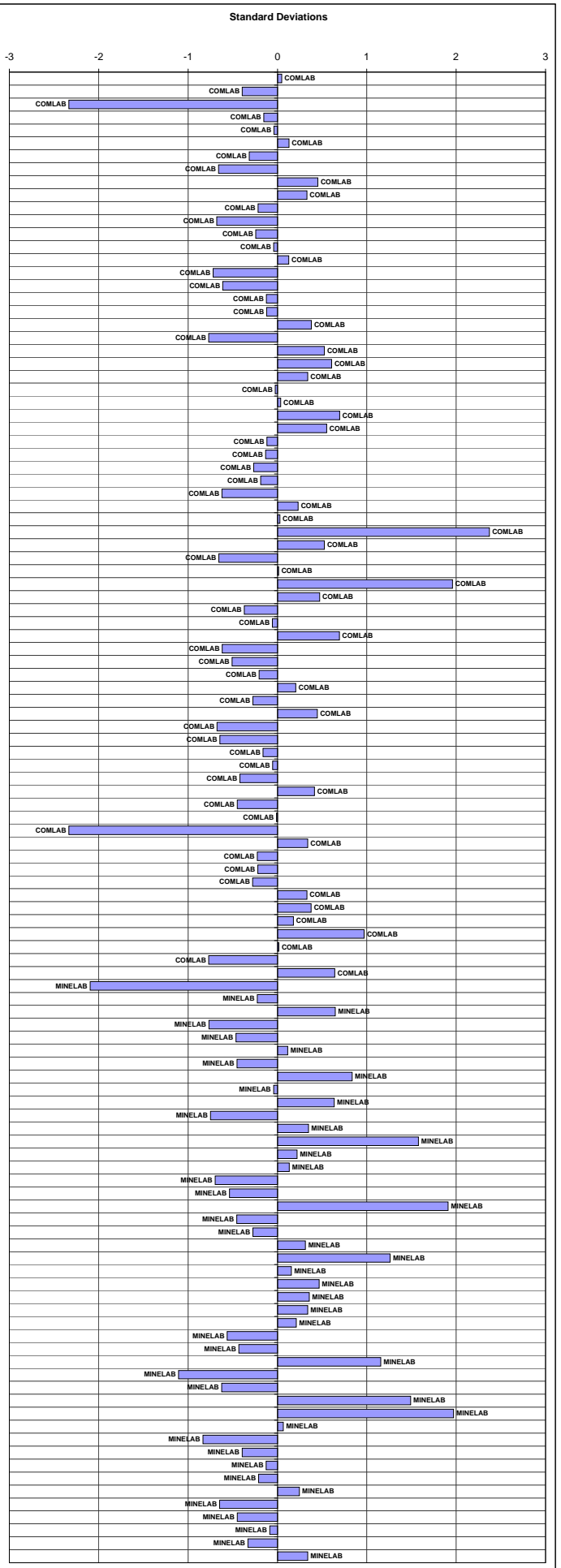


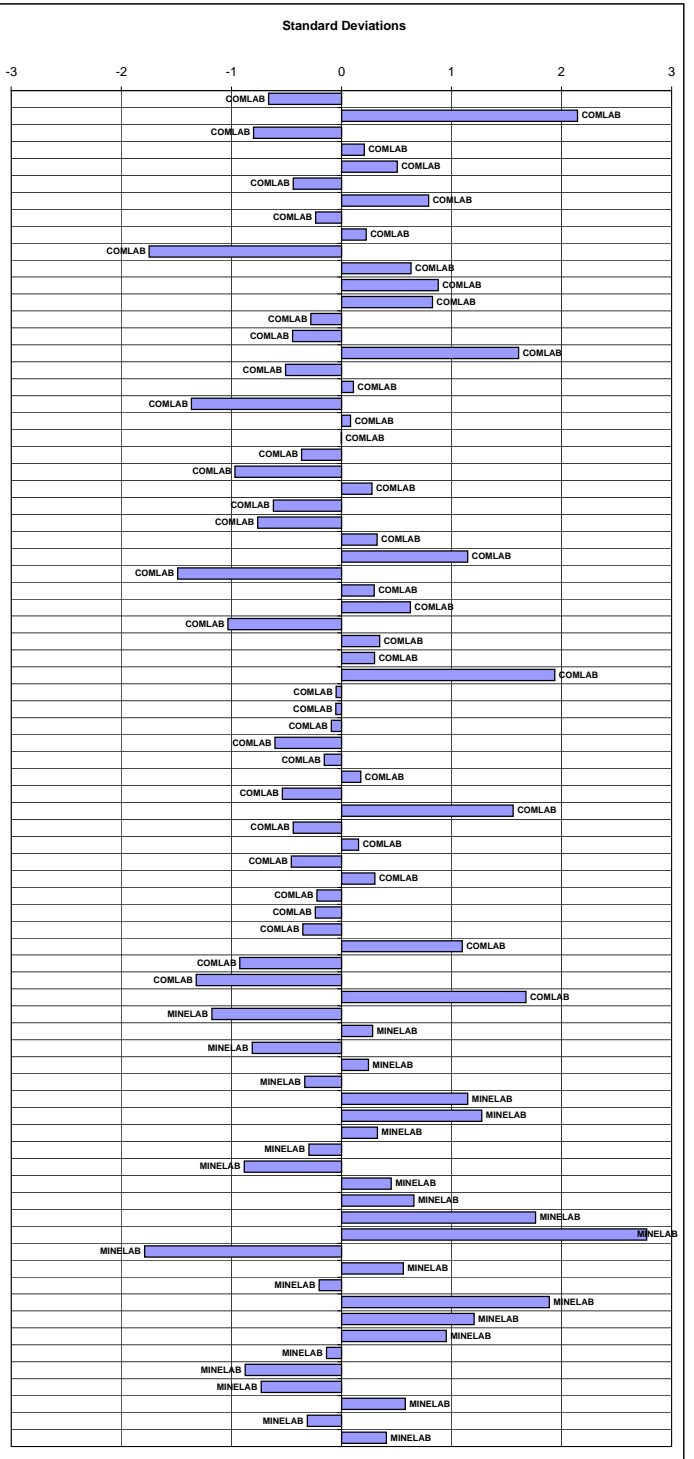
Laboratories



Laboratories







SUMMARY REPORT OF INDIVIDUAL LABORATORY PERFORMANCE
Zarazma Minerals Studies Company

GOLD SAMPLES

Analysis	Samples Sent	Reported	Number of Outliers
Fire Assay	Yes (10)	Yes	0
Aqua Regia	Yes (10)	No	-
Low Level	Yes (5)	Yes	0

Au & Ag IN CARBON SAMPLES

The laboratory were not sent any samples for Au & Ag in carbon analysis.

Analysis	Reported	Number of Outliers
Gold	-	-
Silver	-	-

BASE METAL SAMPLES

10 Base Metal samples were sent to the laboratory for analysis by Total and / or Partial methods.

Analysis	Total Digest		Partial Digest	
	Reported	Number of Outliers	Reported	Number of Outliers
Silver	No	-	Yes	0
Copper	Yes	0	No	-
Lead	Yes	3	No	-
Zinc	Yes	0	No	-
Nickel	Yes	0	No	-
Arsenic	No	-	Yes	0
Cobalt	Yes	0	No	-

ORE GRADE BASE METAL SAMPLES

6 Ore Grade Base Metal samples were sent to the laboratory for analysis.

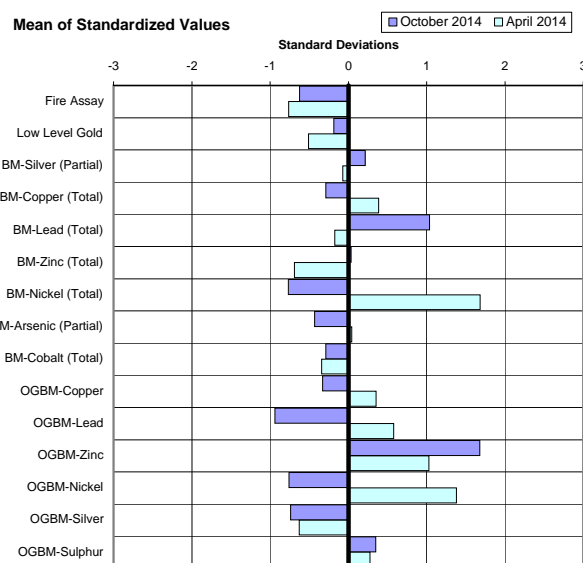
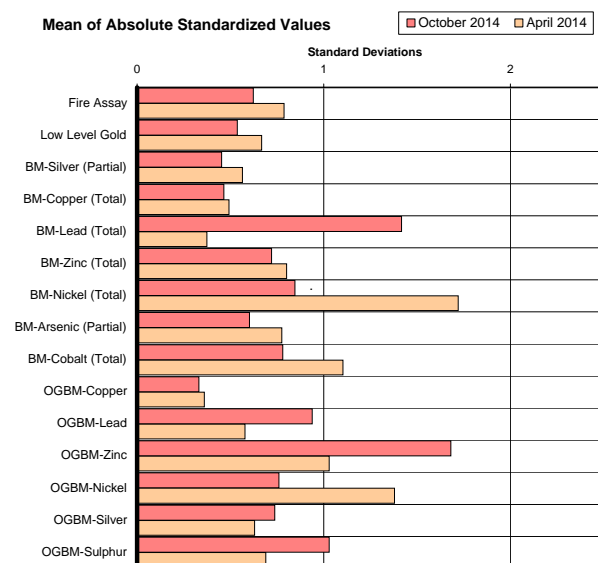
Analysis	Reported	Number of Outliers
Copper	Yes	0
Lead	Yes	0
Zinc	Yes	0
Nickel	Yes	0
Silver	Yes	0
Sulphur	Yes	1

SULPHUR SAMPLES

The laboratory were not sent any Sulphur samples for analysis.

Analysis	Reported	Number of Outliers
Sulphur	-	-
Carbon	-	-

ERROR GRAPHS



FURTHER INFORMATION

The samples analysed in this survey are available for purchase. Please contact us or visit www.geostats.com.au for a complete listing of available materials.

To discuss this report, please contact us on +618 9314 2566, or srr@geostats.com.au