

GEOSTATS PTY LTD

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Certificate of Participation

This is to certify that

Zarazma Minerals Studies Company

has participated in the April 2017
Geostats Survey of International Laboratories

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Operations Manager

P.J. Hayes
Managing Director

Geostats Laboratory Survey
April 2017

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 - April 2017

Western Australia	ALS Minerals - Kalgoorlie	Malaysia	ITS PENJOM	Intertek Service - Penjom
ALSM KAL	Ammtec Laboratory	SGMM	SGMM	SGMM Assay Laboratory
ALSM METALLURGY	ALS Minerals - Perth	Mali		
ALSM PERTH	Amdeh Laboratory - Kalgoorlie	ALSM TABAKOTO		ALS Tabakoto
BV KAL	Ultra Trace Pty Ltd	DARLEA HALL		Sadiia Mine Site Laboratory
BV ULTRA TRACE	Darlot Gold Mine Assay Lab	SGS BAMAKO		SGS Minerals Services (Bamako)
DARLOT MINE	Gekko Assay Laboratory	SGS LOULO		SGS Loulo
GEKKO VICTORIA	MMG Golden Grove	SGS SYAMA		SGS Minerals Syama Laboratory
GOLDEN GROVE	Granny Smith Gold Mine Laboratory	Mauritania		
GRANNYS	Genalysis Laboratory Services Pty Ltd	ALSM TASIAST		ALS Minerals - Tasiast
INT GEN PER	Kalassav Group (Perth Assay Laboratory)	MCM SA		Mauritania Copper Mines SA
KAL PER	LabWest	OMRG		Office Mauritanien des Recherches Géologiques
LABWEST	MinAnalytical	Mexico		
MINANALYTICAL	Newcrest Mining Limited - Telfer Gold Mine Lab	ACTLABS MEXICO		Actlabs Mexico SA de CV
NEWCREST TELFER	Nifty Minesite Laboratory	BV MINERALS MEX		Inspectorate de México S.A. de C.V.
NIFTY CU OP	Standard & Reference Laboratories	CUZCATLAN MEXICO		Compañía Minera Cuzcatlán S.A. de C.V.
SAR LAB	SGS Jundee	MCEWEN MEXICO		McEwen Mining Mexico
SGS JUNDEE	SGS Kalgoorlie	MULATOS SONORA		Alamos Gold - Mulatos Mine
SGS KALG	Simulus Laboratories	SANTA RITA		AuRico Gold - Minera Santa Rita
SIMULUS		SGM CHIHUAHUA		Centro Experimental Chihuahua
New South Wales		SGM OXACCA		Centro Experimental Oaxaca
ALSM ORANGE	ALS Minerals - Orange	Monrovia		
NEWCREST ORANGE	Newcrest Laboratory Services Orange	ALSM MONGOLIA		ALS Group LLC
SGS WYALONG	SGS Wyalong	SGS ULAAN		SGS Mongolia LLC
Northern Territory		Namibia		
GRANITES	Granites Gold Mine	DUNDEE PMT		Dundee Precious Metals Tsumeb
INT DARWIN	Northern Territory Environmental Laboratories	New Zealand		
Queensland		SGS NZ MACRAES		SGS New Zealand, Macraes Laboratory
ALSM BRIS	ALS Minerals - Brisbane	SGS NZ WAIHI		SGS New Zealand, Minerals Laboratory
ALSM MT ISA	ALS Minerals - Mt Isa	Papua New Guinea		
ALSM TVL	ALS Minerals - Townsville	INTERTEK HV		Intertek Hidden Valley
CHEM LAB MIM	Mount Isa Mines Analytical Laboratory	ITS K92 PNG		ITS (PNG) Limited K92 Laboratory
FREEPORT IND	Freeport Indonesia	ITS MOROBE		ITS (PNG) Limited
GEN TOWNSVILLE	Genalysis Testing Services, Townsville	LIHIR		Lihir Gold - Minesite Laboratory
PORGERA	Porgera Gold Mine Laboratory	OK TEDI		Ok Tedi
SGS TOWNSVILLE	SGS Townsville	Peru		
South Australia		ACT SKYLINE PERU		Actlabs Skyline Peru SAC
BHP OLYMPIC	BHP Billiton	ALSM LIMA		ALS Peru SA
BV ADL	Bureau Veritas Minerals - Thebarton	CERTIMIN		Certimin S.A.
INT GEN ADEL	Genalysis Laboratory Services - Adelaide	CERTIMIN LA ARENA		Certimin S.A. - La Arena
Tasmania		CMH PERU		Consortio Minero Horizonte S.A.
ALSM BURNIE	Burnie Research Laboratory	INSPECTORATE PERU		Inspectorate Services Peru SAC
Argentina		LAGUNAS MINE		Minera Barrick Misquichilca - Unidad Lagunas Norte
ASA MENDOZA	Alex Stewart Assayers Argentina SA - Mendoza	NEW PERU		Minera Yanacocha SRL - Newmont Lab (Peru)
ASA PERITO MORENO	Alex Stewart Assayers Argentina SA - Perito Moreno	PIERINA MINE		Minera Barrick Misquichilca - Unidad Pierna
VELADERO MINE	Veladero Project Assay Lab	SGS LIMA		SGS del Peru SAC
Brazil		Philippines		
PARACATU MINE	Kinross Brasil Mineração SA	ITS MCPHAR		Intertek Testing Services Philippines
SGS LF BELO HOR	SGS Geosol Laboratórios Ltda	OSTREA MANILA		Ostrea Mineral Laboratories
Bulgaria		Romania		
CHELOPECH MINE	Chelopech Mine Laboratory	ALSM ROMANIA		ALS Romania
Burkina Faso		Russia		
ALSM OUAGADOUGOU	ALS Burkina SARL	ALSM CHITA		ALS Minerals - Chita
IAMGOLD BF	IAMGOLD Essakane SA	ALSM MOSCOW		Stewart Geochemical and Assay Ltd
SEMFAO	Semfao Burkina Faso	IRGIREDMET RUSSIA		IRGIREDMET JSC
SGS OUAGADOUGOU	SGS Burkina SA	KUPOL MINE		Kupol Mine
Canada		SGS CHITA		SGS Chita
ACME VAN	Bureau Veritas Commodities Canada Ltd - Vancouver	TOMS RUSSIA		TOMS-Irkutsk
ACTLABS CAN	Activation Laboratories Ltd (Canada)	VSEGEI RUSSIA		VSEGEI All-Russia Geological research Institute
ACTLABS TB	Activation Laboratories Ltd - Thunder Bay	Saudi Arabia		
AGAT ONTARIO	AGAT Laboratories	ALSM JEDDAH		ALS Minerals - Arabia
ALSM QUEBEC	ALS Minerals (Val d'Or)	MAADEN SAUDI		Maaden Gold and Base Metals Co
ALSM VAN	ALS Minerals - Vancouver	MBC JABAL SAYID		MBC Jabal Sayid Mine
AUTTEC VAN	Auttec Innovative Extractive Solutions Ltd	Senegal		
BVCC TIMM	Bureau Veritas Commodities Canada Ltd - Timmins	SGS SABODALA		SGS Sabodala
FLIN FLON MINE	Flin Flon Mine Laboratory	Serbia		
HEMLO MINE	Williams Operating Corporation	SGS BOR		SGS Bor
MAXXAM ONTARIO	Maxxam Analytics International Corporation	South Africa		
MET-SOLVE	Met-Solve Analytical Services	AA TS		Anglo Research, Crown Mines - BMP
SGS COCHRANE	SGS Cochrane	ALSM JOBURG		ALS Minerals - Johannesburg
SGS LAKEFIELD	SGS Lakefield (Ontario)	MINTEK SA		Minetek Analytical Services Division
SGS VANCOUVER	SGS Vancouver	RAPPA RESEARCH		Rappa Research Laboratory
TSL SASKATCHEWAN	TSL Laboratories	SCI SER		Scientific Services Pty Ltd
YOUNG-DAVIDSON	AuRico Gold - Young-Davidson	SGS BARBERTON		Performance Laboratories Barberton
Chile		SGS PLW		Performance Laboratories (PLW)
ACTLABS CHILE	Activation Laboratories Ltd (Chile)	SGS RANDFONTEIN		Performance Laboratories (PLR)
BV ACME CHILE	Acme Analytical Laboratories Chile SA	SIBANYE BEATRIX		Sibanyegold Beatrix Division
BV ANTOFAGASTA	Bureau Veritas Mineral Chemical Analysis - Geoanaltica	SIBANYE CHARL		Sibanyegold Analytical Laboratory Driefontein
BV CALAMA	Bureau Veritas S.G. Calama	Suriname		
BV COQUIMBO	Bureau Veritas Chemical Analysis - Geoanaltica Coquimbo	FLAB SURINAME		Flab Suriname
BV IQUIQUE	Bureau Veritas Iquique	Tanzania		
BV SALVADOR	Bureau Veritas Salvador	BULYANHULU TANZ		Bulyanhulu Mine Assay Lab
BV SANTIAGO	Bureau Veritas Mining & Chemical Division - Csmec	BUZWAGI		Pangea Minerals Ltd
BV SIERRA GORDA	Bureau Veritas Sierra Gorda	GEITA TANZ		Geita Gold Mine Laboratory
BV VENTANAS	Bureau Veritas Ventanas	NORTH MARA		North Mara Minesite Laboratory
ITS CHILE	Intertek Minerals Chile	SGS MWANZA		African Assay Laboratories (Tanzania) Ltd
MARICUNGA MINE	Marcungua Mine	Turkey		
ZALDIVAR MINE	Zaldivar Mine Assay Lab	ACME TURKEY		Acme Analytical Laboratories Ltd - Turkey
China		ALSM TURKEY		ALS Minerals - Turkey
ALSM CHINA	ALS Minerals - Guangzhou (China)	ANAGOLD TURK		Anaold Madencilik San Ve Tic.A.S.
ZJIN CHINA	Fujian Zijin Mining and Metallurgy Testina Technology Co., Ltd	CAYELI BAKIR TURKEY		Cayeli Bakir Isletmeleri A.S.
Colombia		DEMIR ANKARA		Demir Export Ankara
SGS COLOMBIA	SGS Colombia	DEMIR SIVAS		Demir Export Sivas
Cote d'Ivoire		GUMUSTAS TURKEY		Gumustas Mining and Trading Inc
BV COTE	Bureau Veritas Mineral Laboratories Cote d'Ivoire	KOZAGOLD KAYMAZ		Koza Gold Mine Kaymaz Laboratory
NEWCREST BONIKRO	Newcrest Bonkro Mine	KOZAGOLD TURKEY		Koza Gold Mine Laboratory
Democratic Republic of Congo		MNG ORKO TURKEY		MNG Orko Madencilik
FRONTIER DRC	Frontier Mine	SGS TURKEY		SGS Turkey
SGS KIBALI	SGS Kibali	United States of America		
SGS KINSEVERE	AMCK Mining SPRL	AALLABS		American Assay Laboratories
SGS KIPOI	SGS Laboratory - Kipoi	ACZ COLORADO		ACZ Laboratories Inc
SGS LUBUMBASHI	SGS Lubumbashi	ALSM RENO		ALS Minerals - Reno
Dominican Republic		BALD MOUNT		Bald Mountain Mine Assay Lab
PUEBLO VIEJO	Pueblo Viejo Laboratorio	GORTEZ MINE		Cortez JV Mine Assay Lab
England		FLORIN RENO		Florin Analytical Services
WHEAL JANE ENGLAND	Wheal Jane Laboratory	FLSMIDTH USA		FLSmidth Analytical Lab
Eritrea		FORT KNOX		Fort Knox Assay Lab
SGS BISHA	SGS Bisha	GOLD SUNLIGHT MINE		Golden Sunlight Mine Assay Lab
Finland		GOLDSTRIKE		Barrick Analytical Laboratory
LABTIUM FIN	Labtium Laboratories	INSPECTORATE NEV		Inspectorate America Corporation - Sparks
Ghana		INTER-MOUNTAIN USA		Inter-Mountain Laboratories
ALSM GHANA	ALS Minerals - Ghana	KML KERSHAW		Kershaw Mineral Lab
GOLD FIELDS GHANA	Gold Fields Ghana Ltd	MCCLELLAND NEV		McClelland Laboratories, Inc.
ITS GHANA	Intertek Minerals Ltd (Ghana)	NEW GC		Newmont Mining Corporation - Carlin Assay Lab
NEW AHAFO GHANA	Ahafo Mine Site Laboratory	NEW LONE		Newmont - Lone Tree Mine
SGS TARKWA	SGS Laboratories (Tarkwa)	NEW MET SER		Newmont Metallurgical Services
Greece		NEW TWIN CM		Newmont - Twin Creek Mine
HELLAS GREECE	Hellas Gold	ROUND MOUNT MINE		Round Mountain Gold Assay Lab
Guinea		RTKC UTAH		Rio Tinto Kennecott Copper
SGS SIGUIRI	SGS Mineral Services (Guinee) SARL	SKYLINE ARIZONA		Skyline Assayers & Laboratories - Arizona
India		TURO RIDGE MINE		Turquoise Ridge JV Mine Assay Lab
SHIVA INDIA	Shiva Analyticals (India) Ltd	Uruguay		
Indonesia		OMI URUGUAY		Loryser S.A.
GEOSERVICES IND	PT Geoservices Ltd	Zambia		
ITS BAKAN	Intertek Testing Services - Bakan Project	AHK KITWE		Alfred H Knight Zambia Ltd
ITS GOSOWONG	Gosowong Gold Project Lab	ALSM KANSANSHI		ALS Minerals - Kansanshi
ITS INDO	Intertek Testing Services, Jakarta	KANSANSHI ZAMBIA		Kansanshi Mining PLC
ITS UTAMA	Intertek Utama Services Manado	LUMWANA MINE		Lumwana Mine Site Lab
MIRAH KBK INDO	KBK Mirah Site Laboratory	SGS KALLULUSHI		SGS Inspection Services Zambia
SUCOFINDO TIMIKA	Sucofindo Timika Laboratory	Zimbabwe		
TEMBANG	PT Geoservices Ltd - Tembang	ANTECH		Antech Laboratories
WAY LINGGO	PT Geoservices Ltd - Way Linggo	FREDA ZIM		Freda Rebecca Gold Mine
WETAR	PT Geoservices Ltd - Wetar	SGS ZIMBABWE		Performance Laboratories Zimbabwe
Iran		Commercial Laboratory		Laboratory that reported some results after the database was closed.
NOVIN SHIMYAR	Khadamate Shimyayee Novin Shimyar Co.	Minesite Laboratory		
ZARAZMA TEHRAN	Zarazma Minerals Studies Company	Government Laboratory		
Ireland				
ALSM IRELAND	Omac Laboratories - Ireland			
BOLIDEN TARA	Bolden Tara Mines			
Kyrgyz Republic				
ALSM KYRGYZSTAN	Stewart Assay and Environmental Laboratories LLC			
Lao PDR				
ALSM LAOS	ALS Minerals Vientiane (Laos)			
PHONESACK LAO	Phonesack Group Co., Ltd			
PHU BIA BH	Ban Houayxai Laboratory			
PHU BIA LAOS	Phu Bia Mining Limited			
SEPON LAOS	Lane Xang Minerals			

REPORT ON LABORATORY SURVEY – April 2017

A round robin to measure the accuracy of gold, silver, sulphur and base metal analyses from 213 laboratories was conducted during April 2017. 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 samples submitted to the laboratories consisted of:

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

April 2017 has seen the introduction of a new sample numbering system. All laboratories received a quantity of new products for analysis along with a random set of pre-selected current Certified Reference Materials. For example, Fire Assay included five new products that all laboratories received. Each laboratory was assigned a group from "A" to "E". Each group contained a set of five existing products. This change was introduced to further reduce the prospect of assay comparisons between laboratories within the same corporate 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. Maxxam Ontario can be contacted through Salima Haniff at SHaniff@maxxam.ca

GOLD AND SILVER ON CARBON SAMPLES

Six gold and silver on carbon samples 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/or 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 samples were prepared for the survey. These ten new samples are a good mix of values with sulphur values up to 24.4% and carbon values up to 8.5%.

All of the certified reference materials 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. Existing products are standardised using the certified values.

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

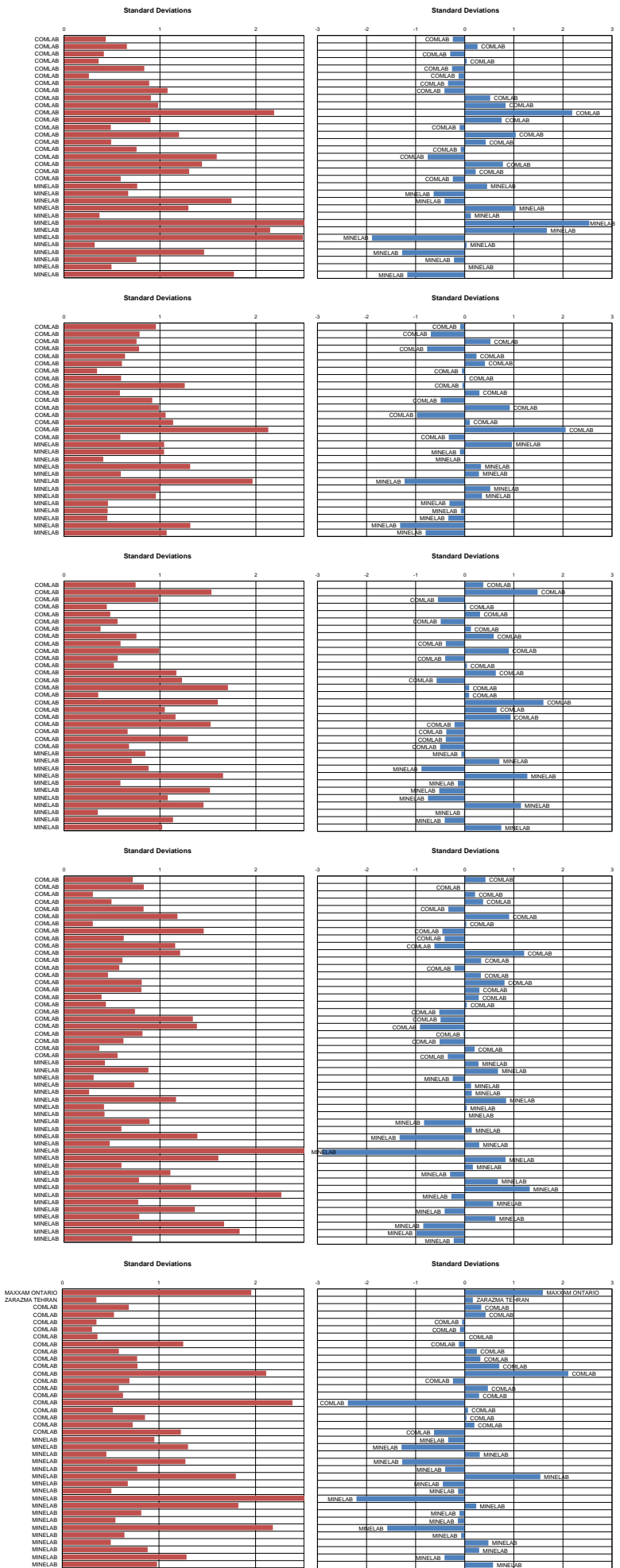
READINGS

1A	1 Acid Digest	AAS	Atomic Absorption Spectroscopy
2A	2 Acid Digest	DIBK	DIBK Extraction
3A	3 Acid Digest	ES	ICP - Emission Spectroscopy
4A	4 Acid Digest	GRAV	Gravimetric
AD	Acid Digest	ICP	Inductively Coupled Plasma - Unspecified
AR	Aqua Regia	IR	Infrared
CSA	Carbon and Sulphur Analyser	MS	ICP - Mass Spectroscopy
FA	Fire Assay	TITR	Titration
FUS	Fusion	XRF	X-Ray Fluorescence
GF	Graphite Furnace		
GRAV	Gravimetric		
IH	In House Method		
LW	Leach well		
MAD	Multi-Acid Digest		
MICR	Microwave		
NAA	Neutron Activation Analysis		
PP	Pressed Powder		
PR	Pre-Roast		
TITR	Titration		
VOL	Volumetric		

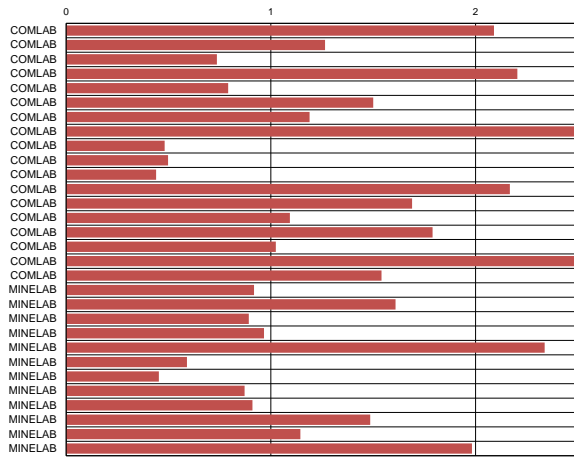
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RESULTS OF ANALYSES PRESENTED AS TABLES AND PLOTS

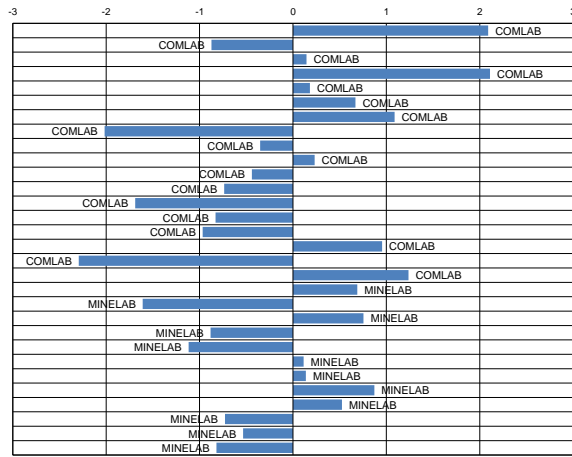
GOLD SAMPLES	Pages
Fire Assay Gold	1 & 2
Aqua Regia Digest Gold	3 & 4
Low Grade Gold	5 & 6
Au & Ag IN CARBON SAMPLES	
Gold On Carbon	7 & 8
Silver On Carbon	9 & 10
BASE METAL SAMPLES	
Silver (Total Digest)	11 & 12
Silver (Partial Digest)	13 & 14
Copper (Total Digest)	15 & 16
Copper (Partial Digest)	17 & 18
Lead (Total Digest)	19 & 20
Lead (Partial Digest)	21 & 22
Zinc (Total Digest)	23 & 24
Zinc (Partial Digest)	25 & 26
Nickel (Total Digest)	27 & 28
Nickel (Partial Digest)	29 & 30
Arsenic (Total Digest)	31 & 32
Arsenic (Partial Digest)	33 & 34
Cobalt (Total Digest)	35 & 36
Cobalt (Partial Digest)	37 & 38
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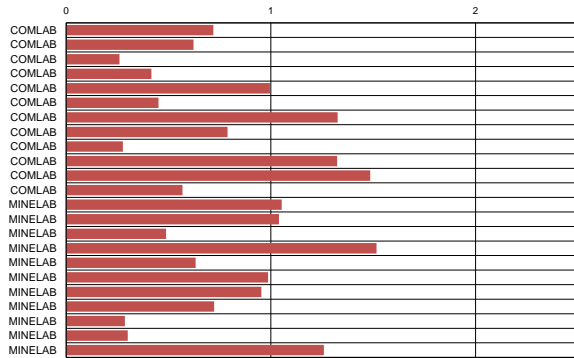
Standard Deviations



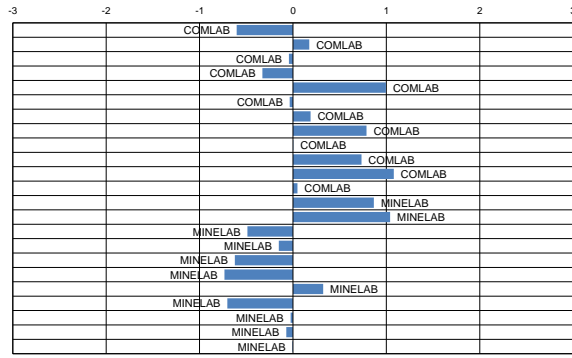
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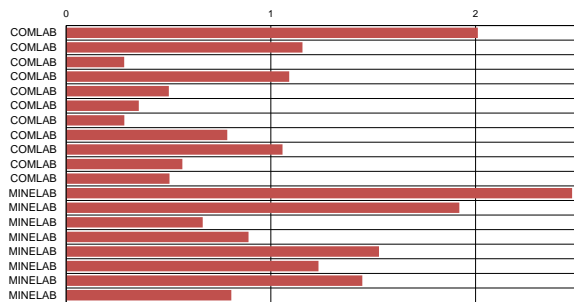
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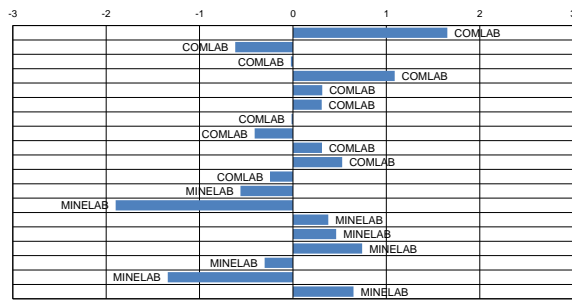
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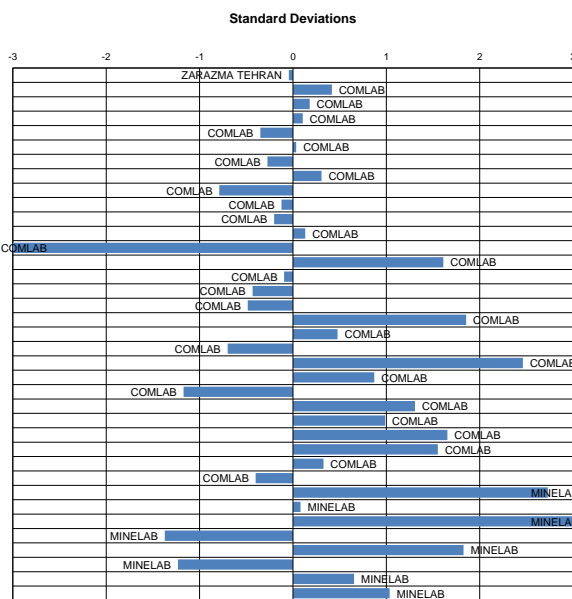
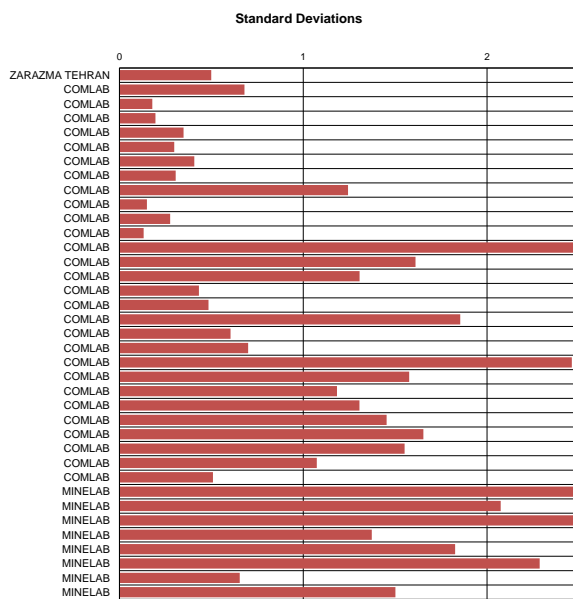
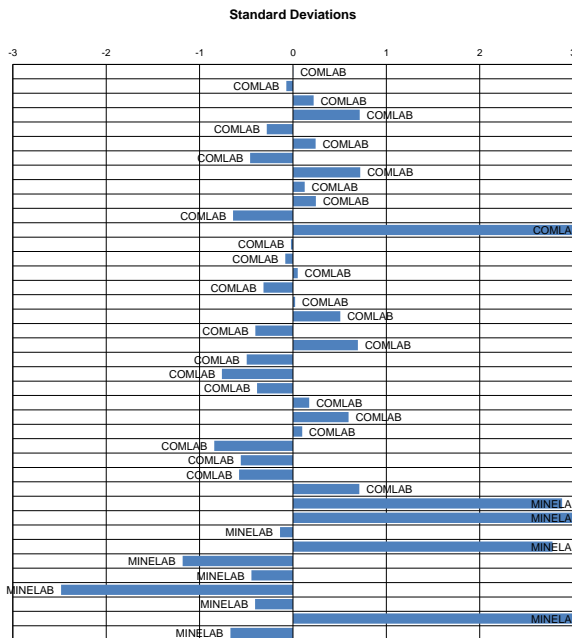
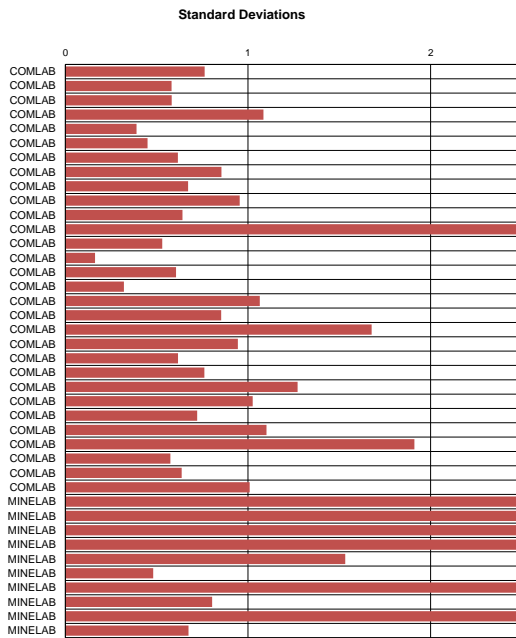
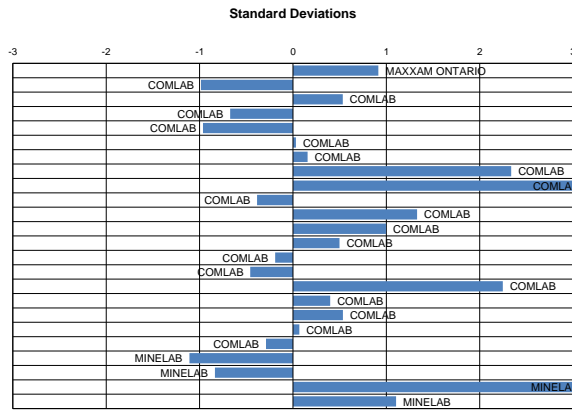
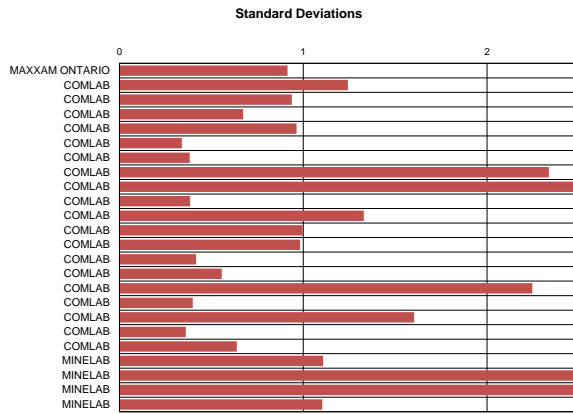


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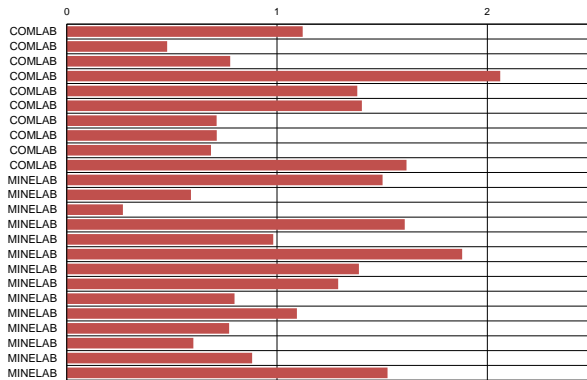


Standard Deviations

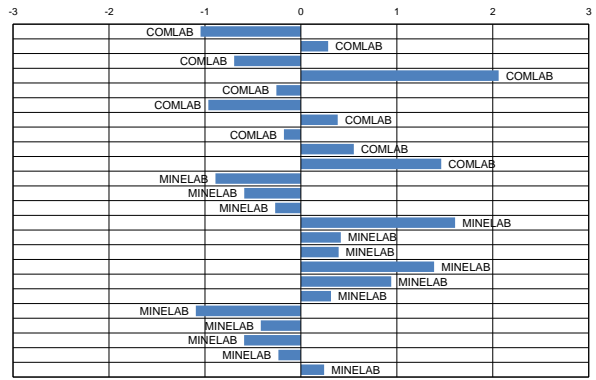




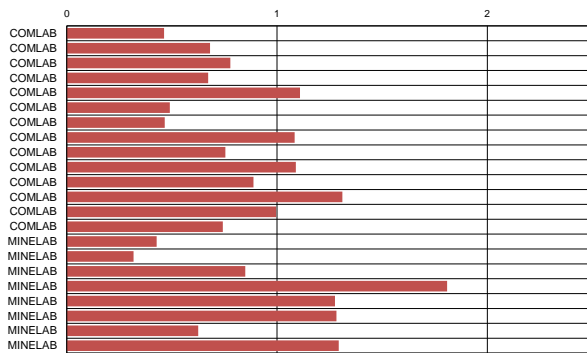
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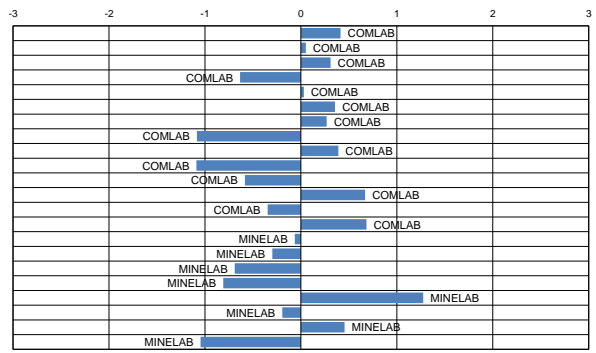
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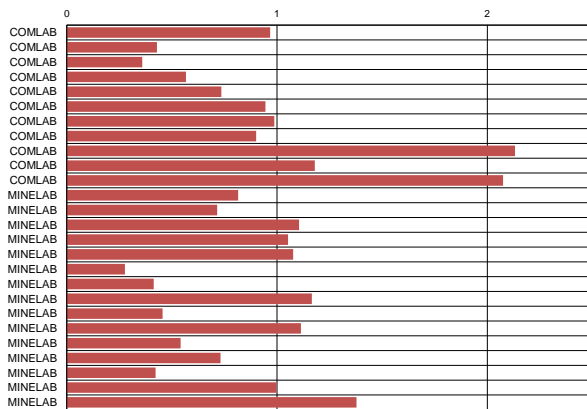
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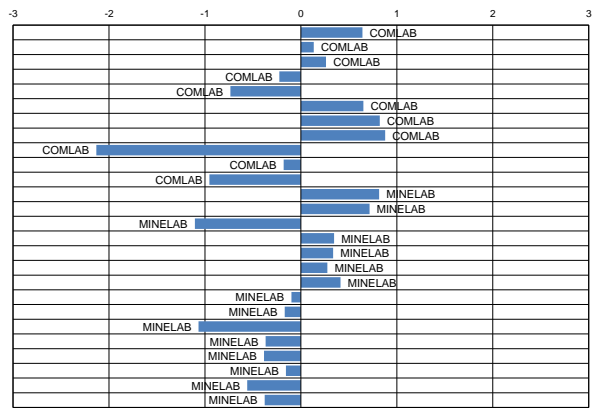
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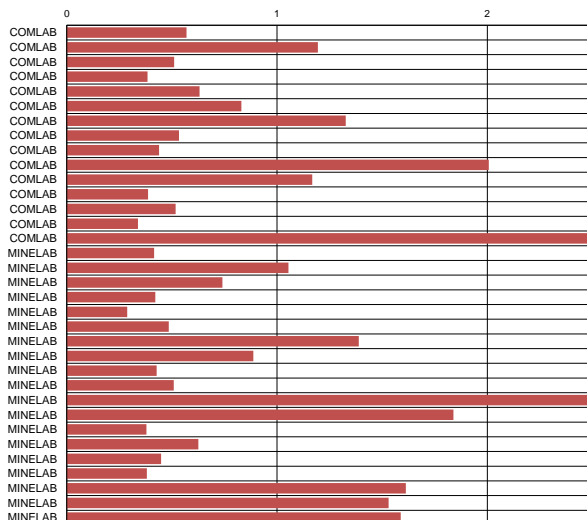
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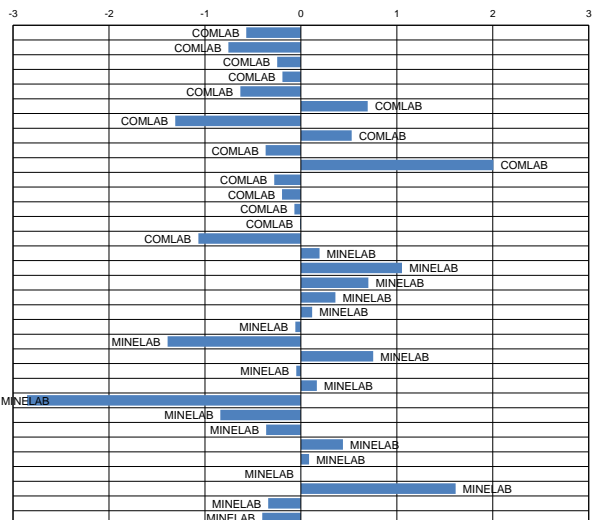
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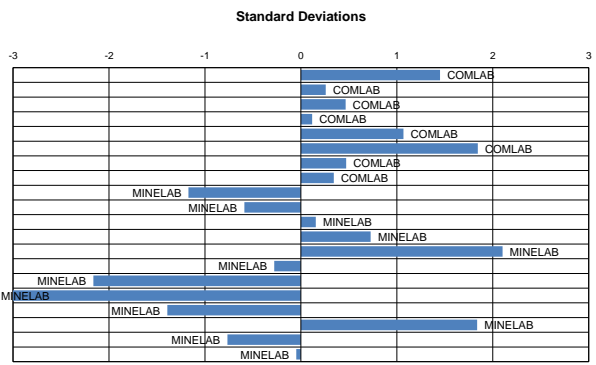
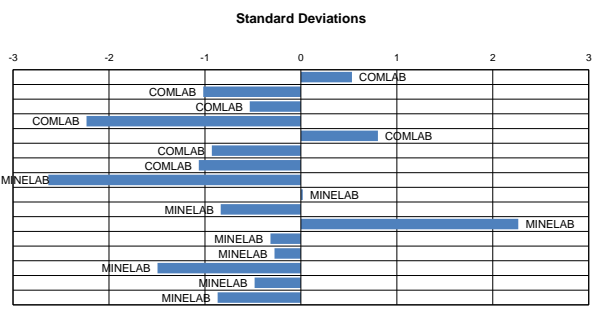
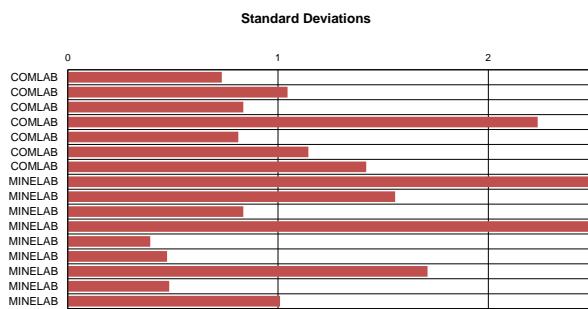
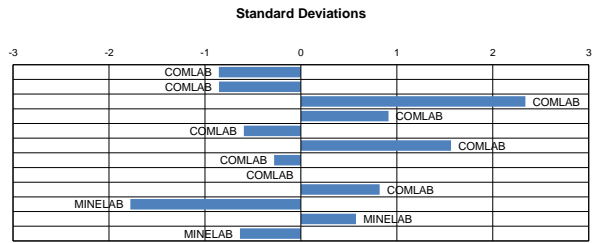
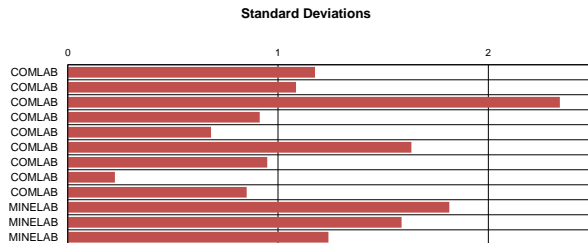
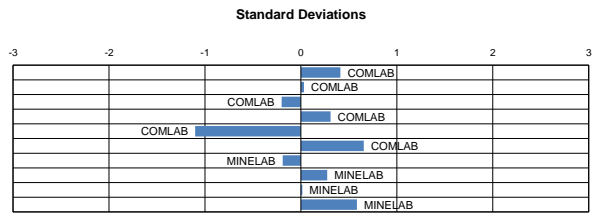
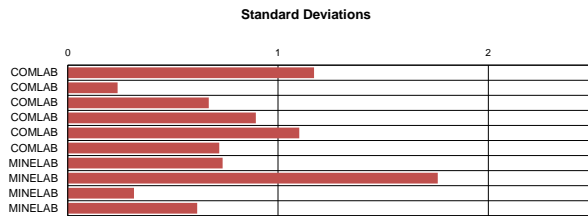


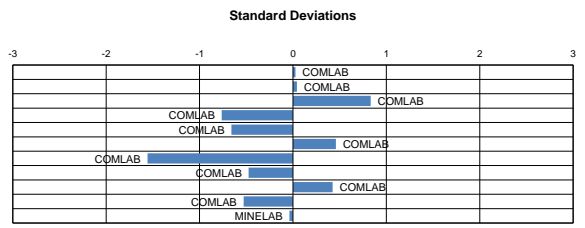
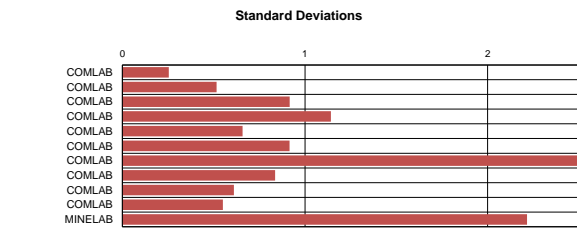
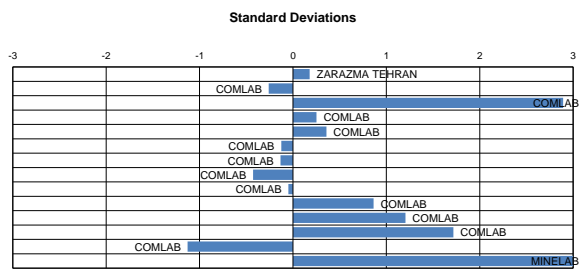
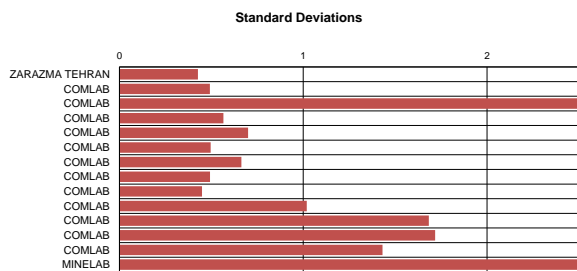
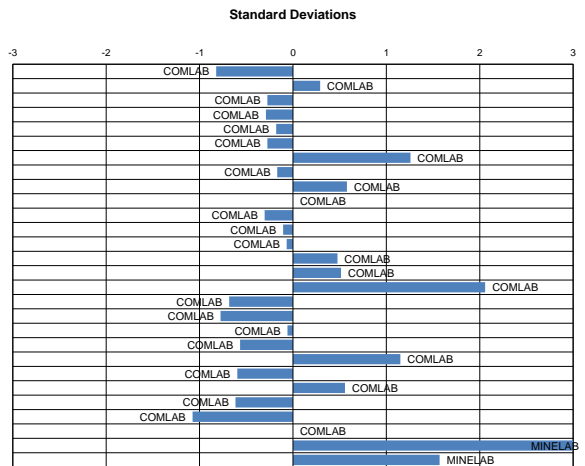
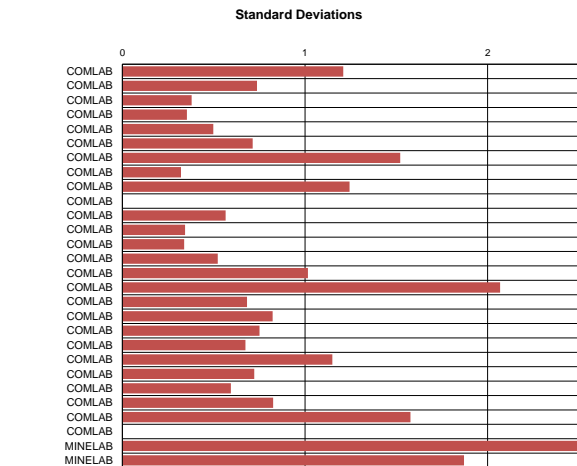
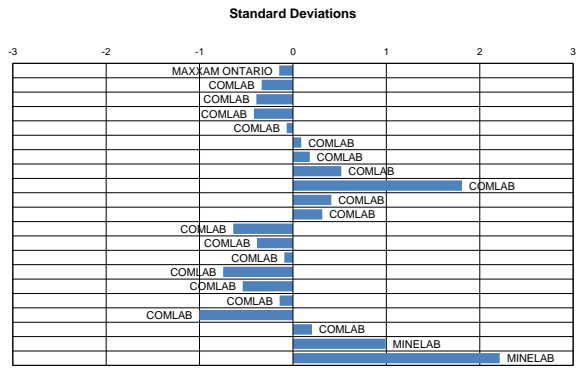
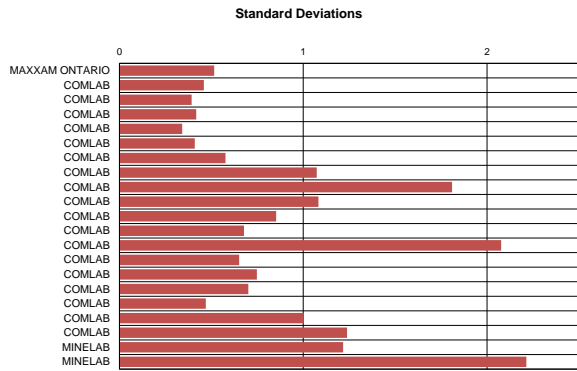
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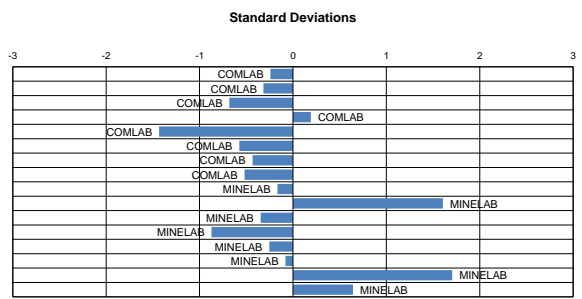
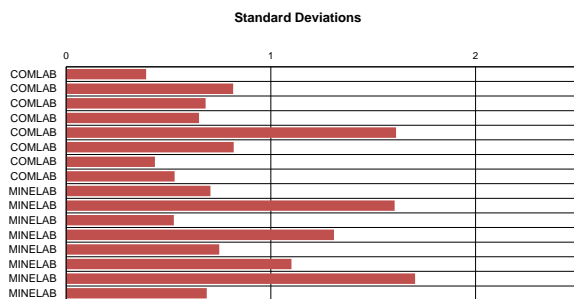
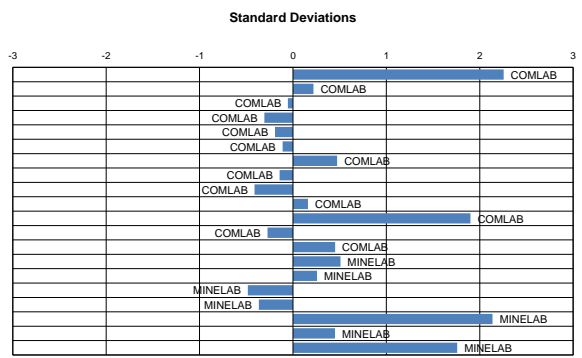
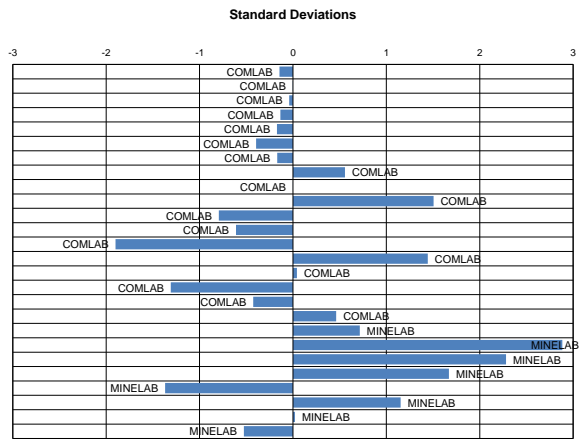
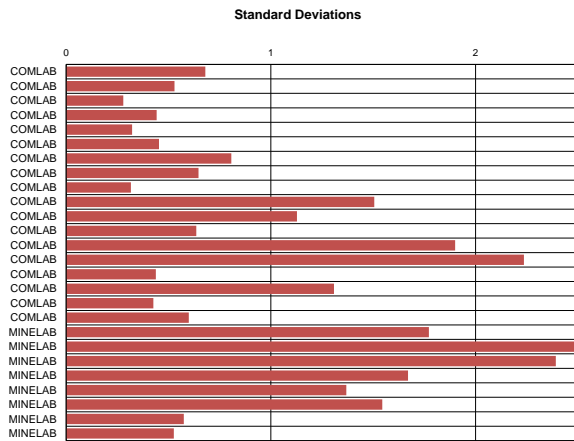
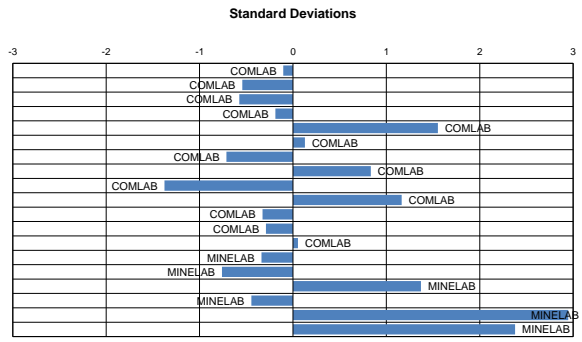
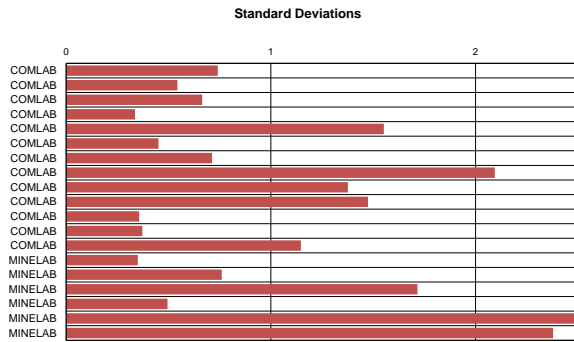


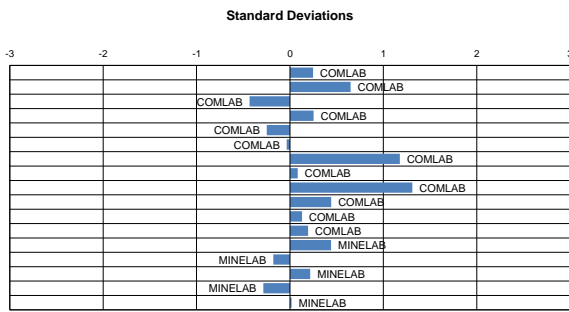
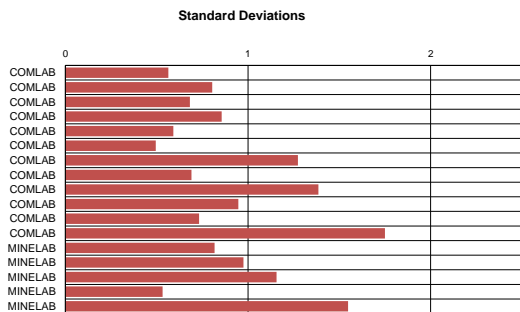
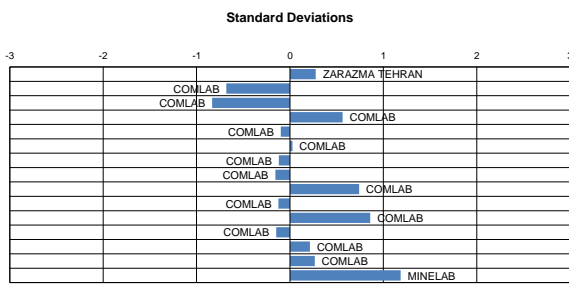
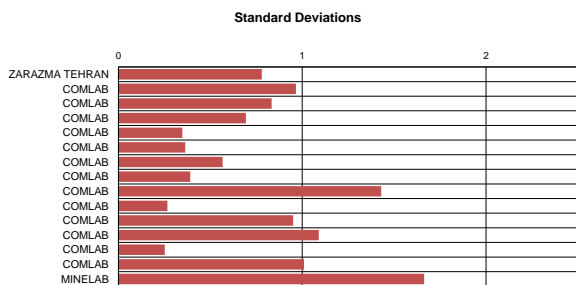
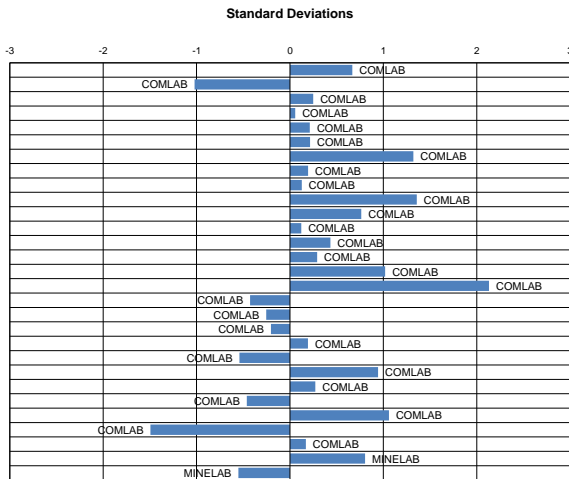
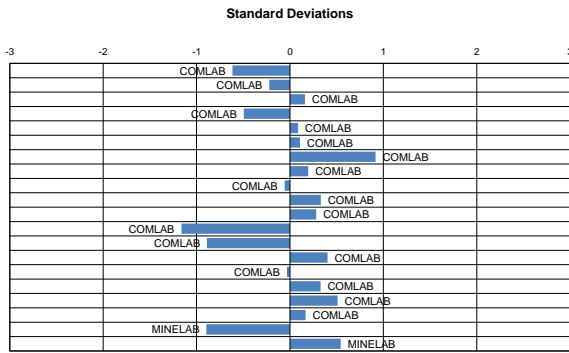
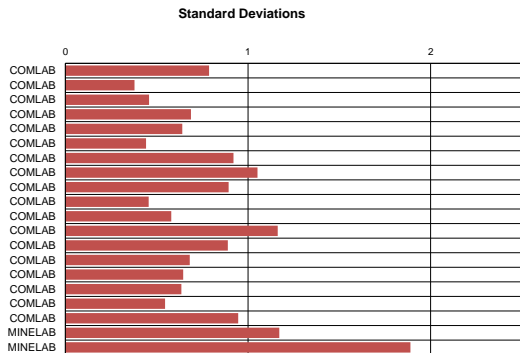
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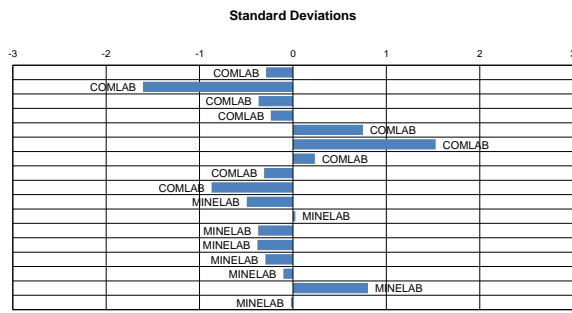
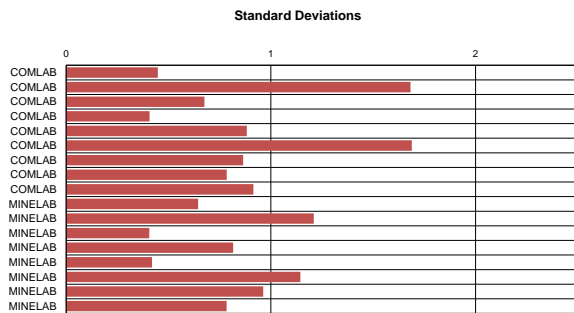
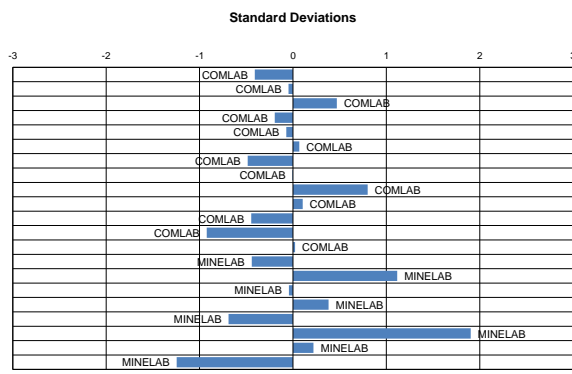
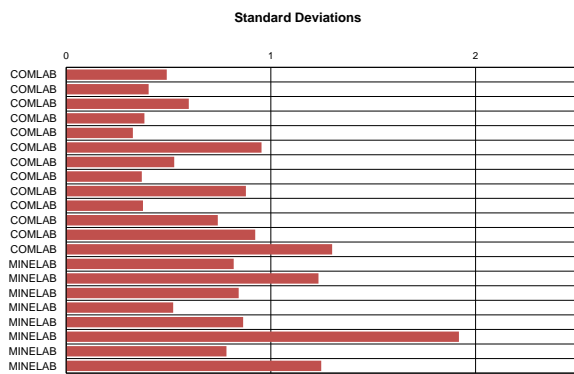
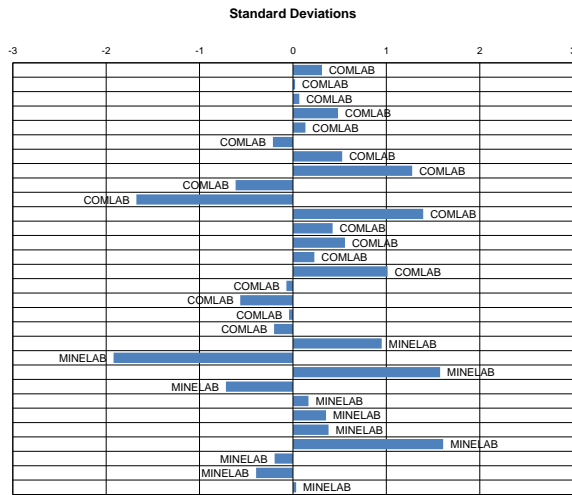
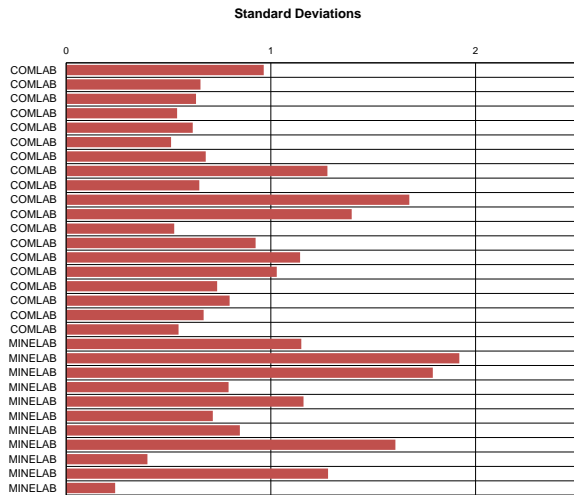
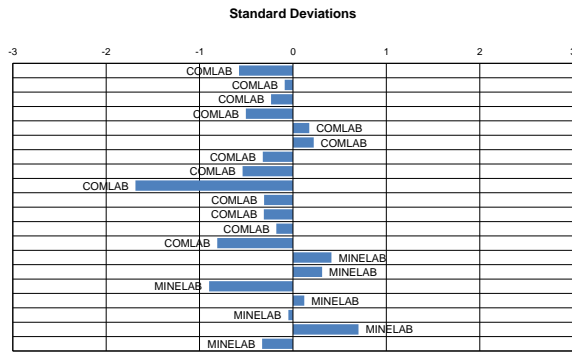
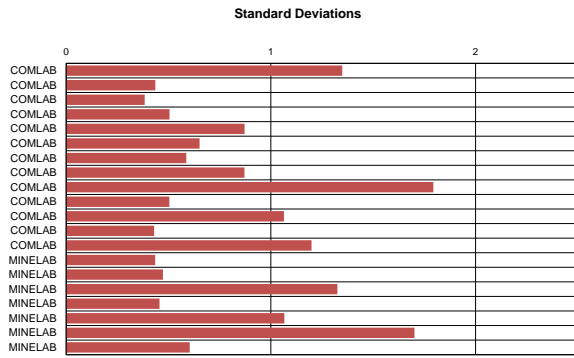




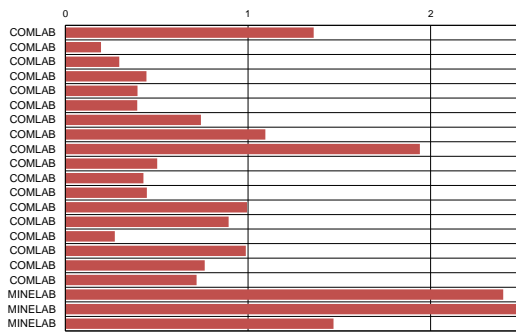




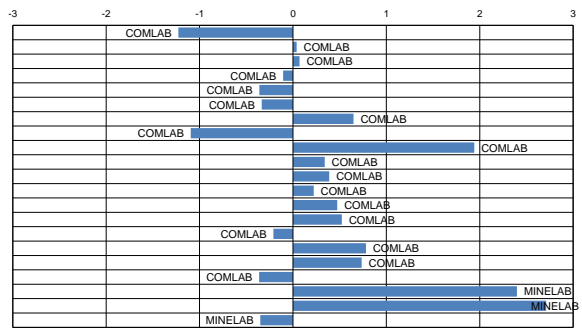




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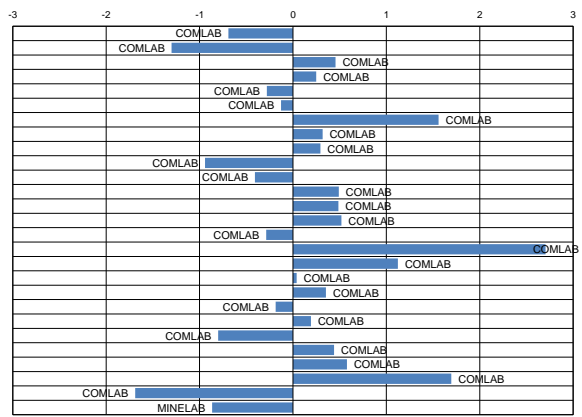
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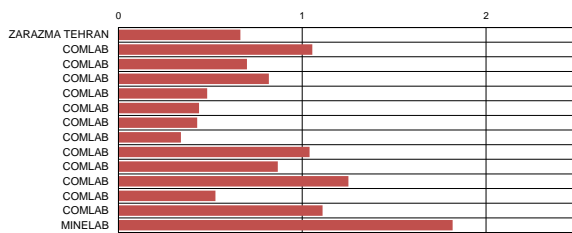
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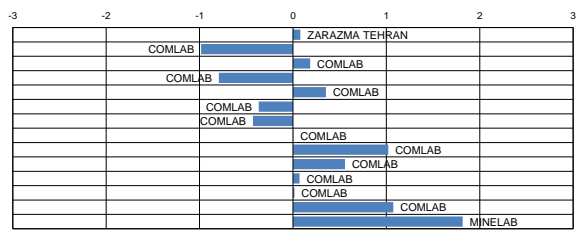
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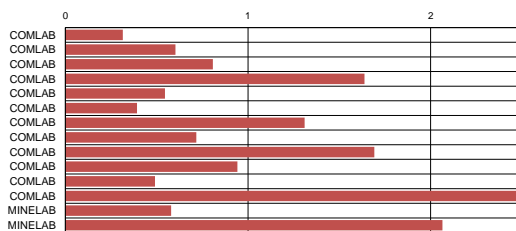
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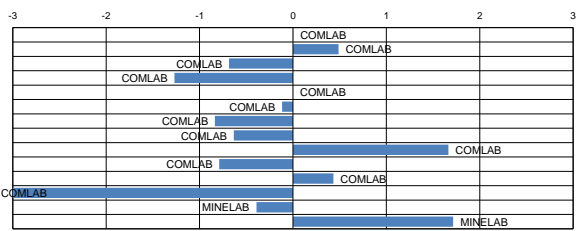
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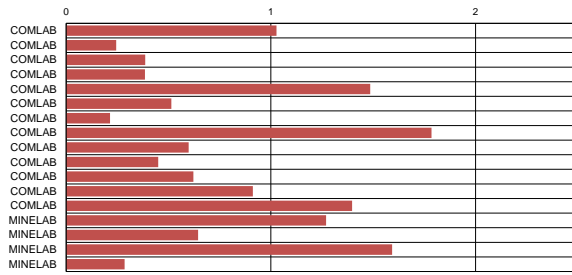
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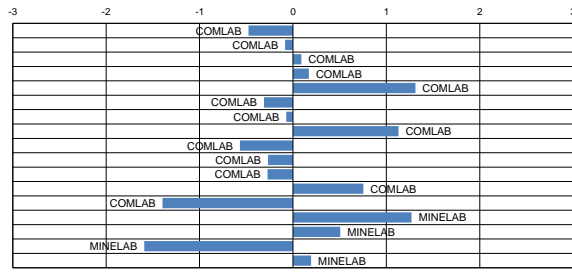
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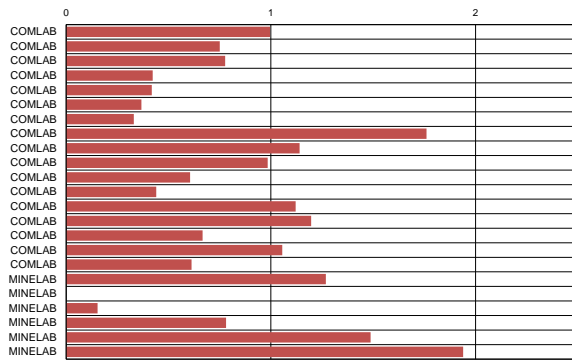
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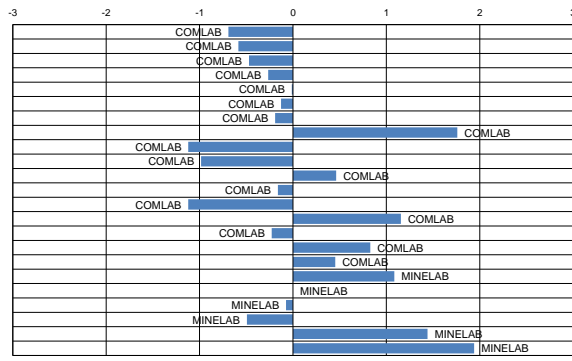
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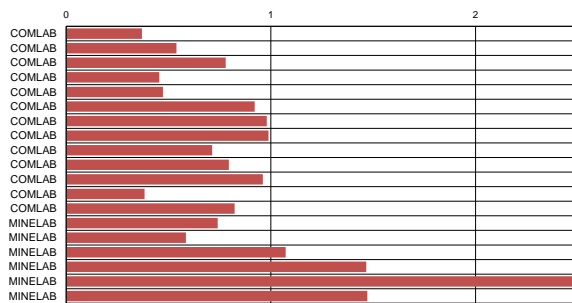
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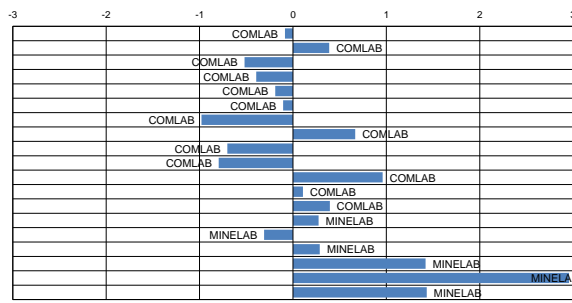
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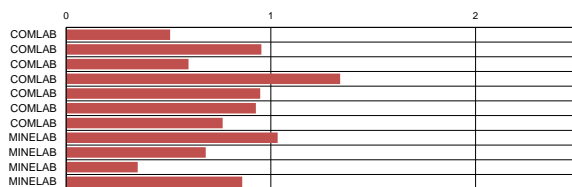
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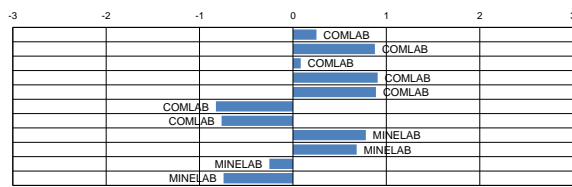
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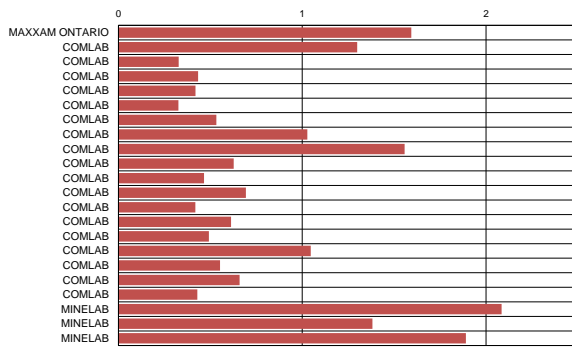
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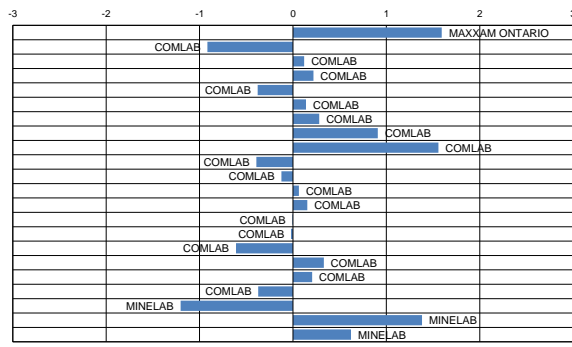
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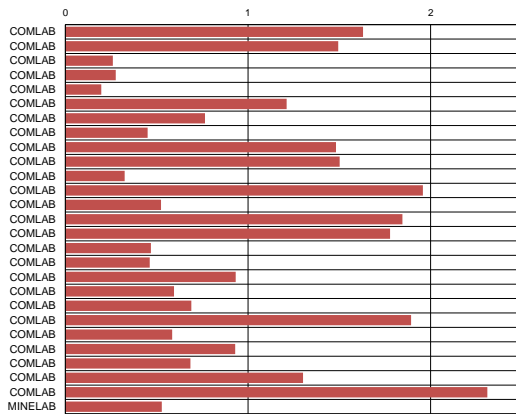
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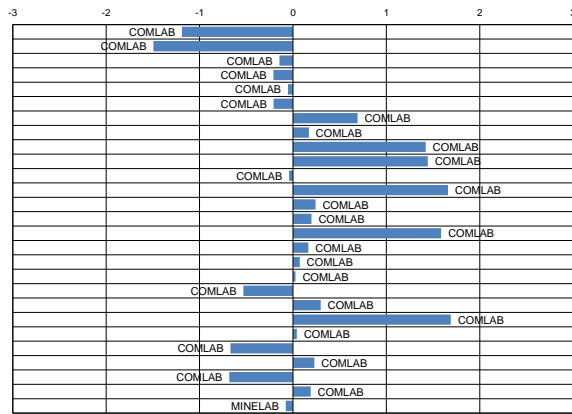
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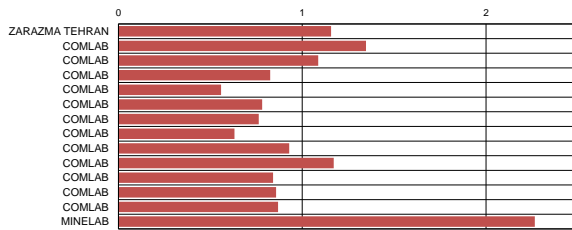
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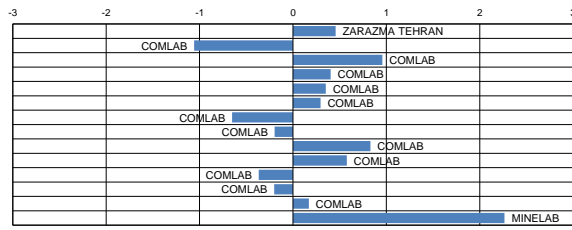
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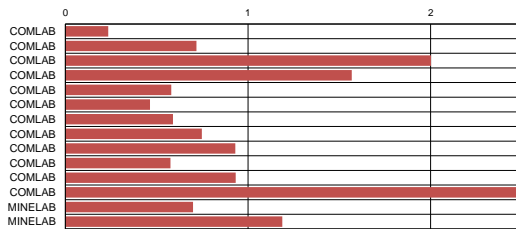
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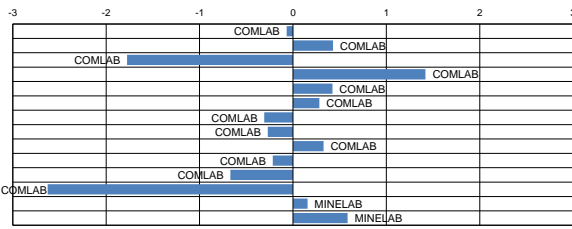
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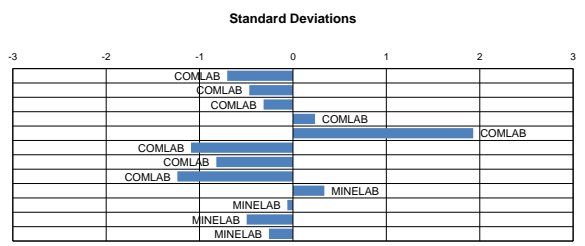
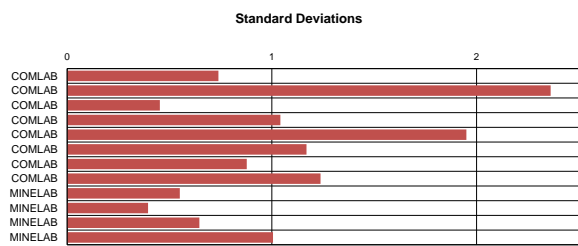
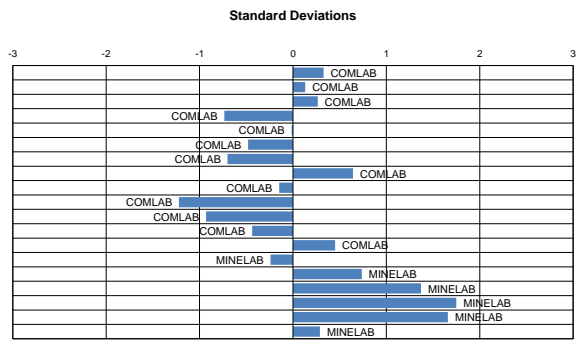
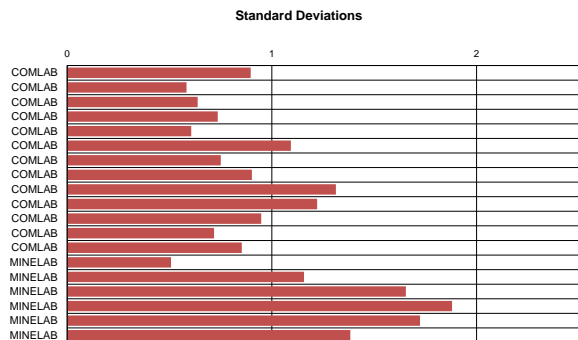
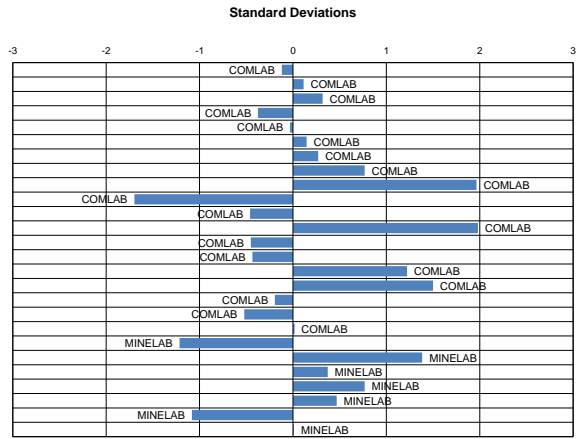
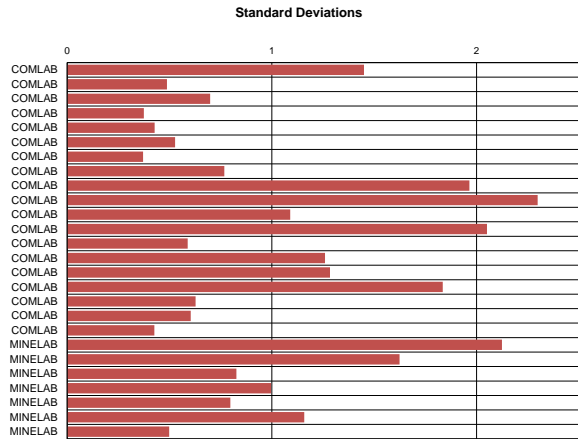
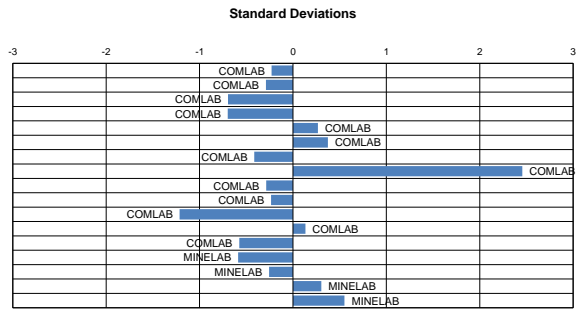
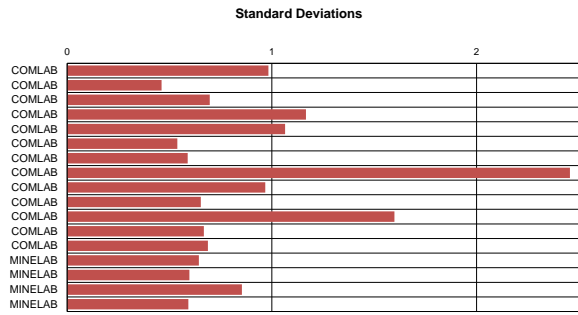


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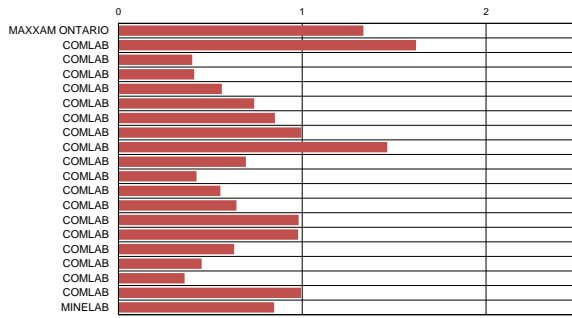


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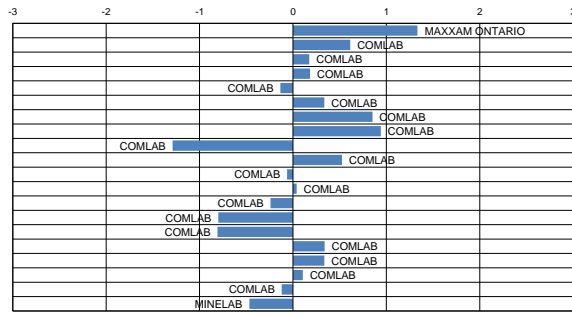




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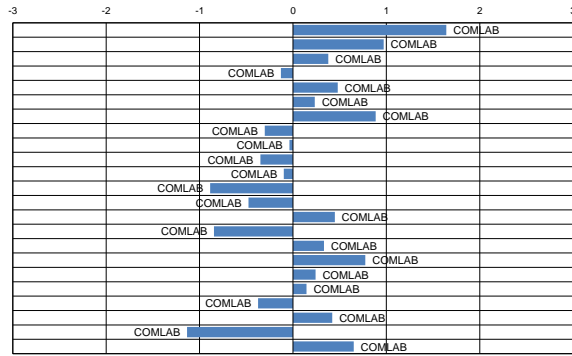
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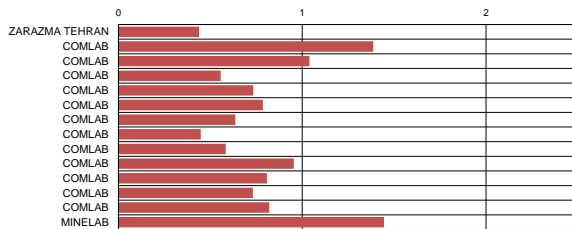
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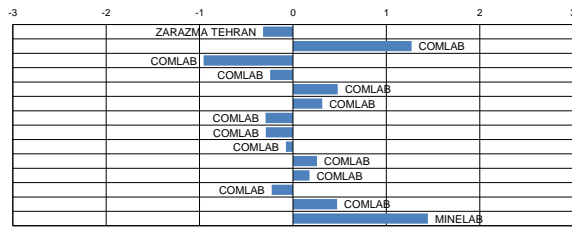
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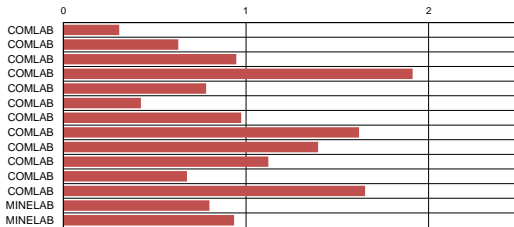
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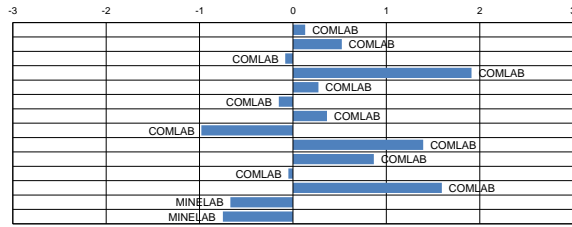
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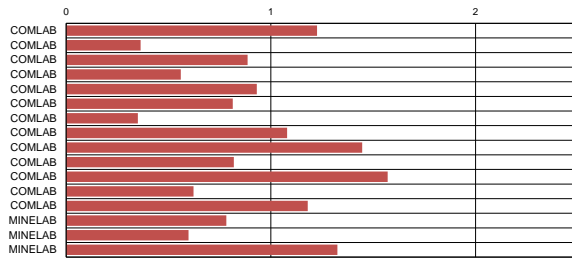
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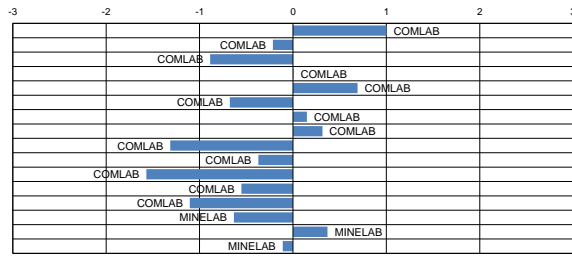
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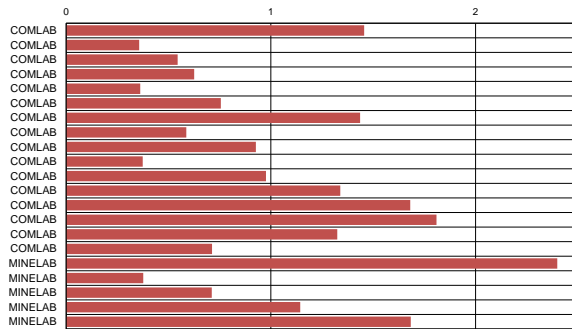
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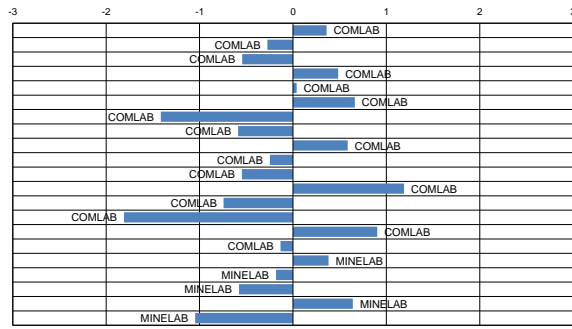
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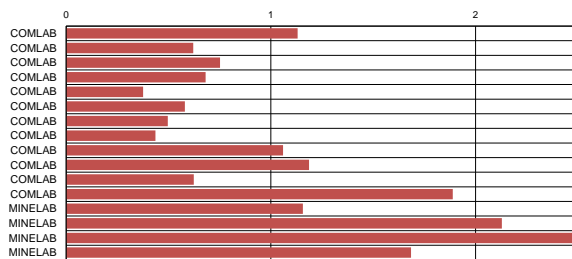
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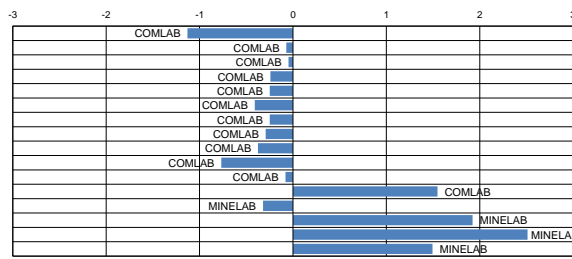
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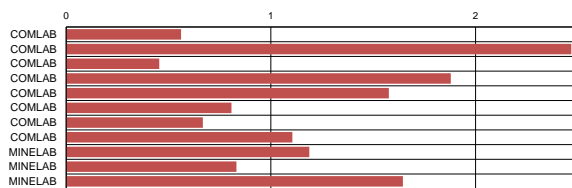
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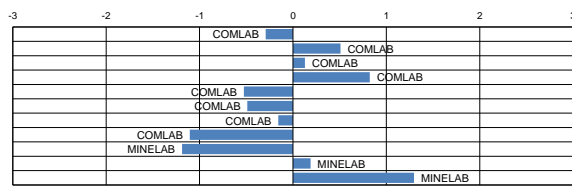
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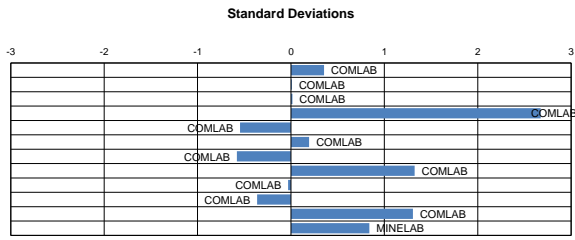
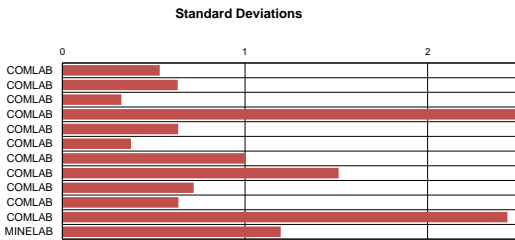
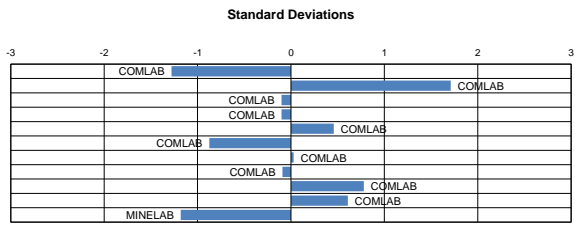
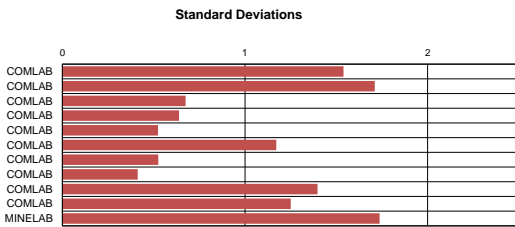
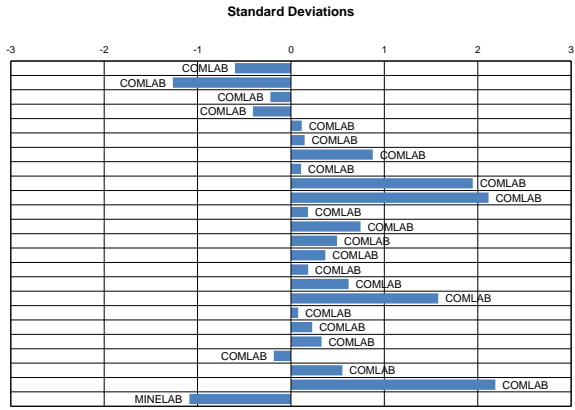
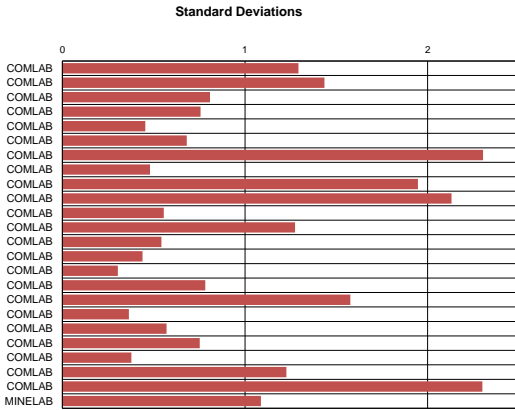
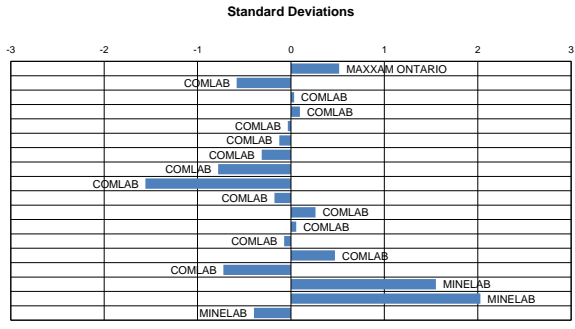
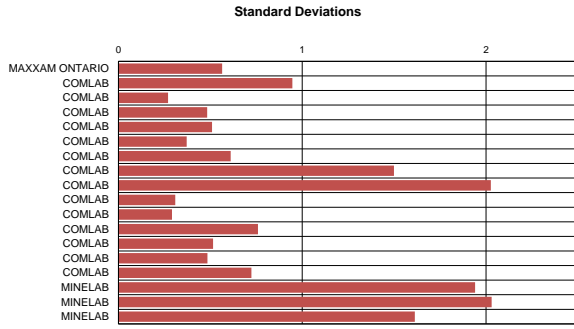


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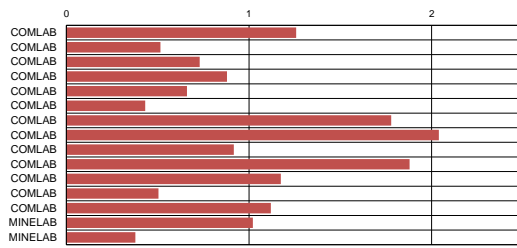


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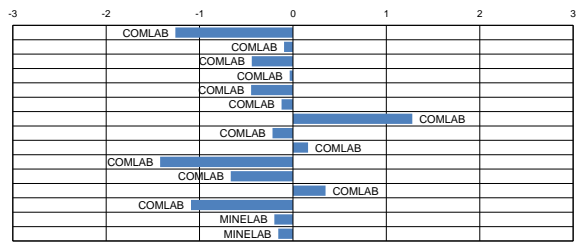




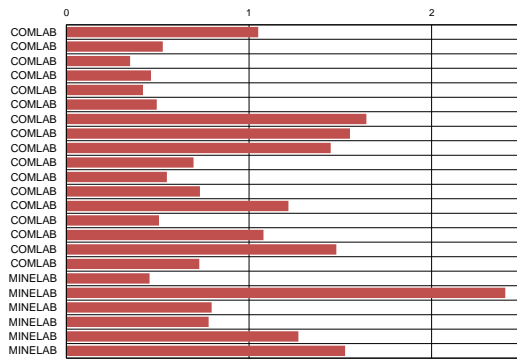
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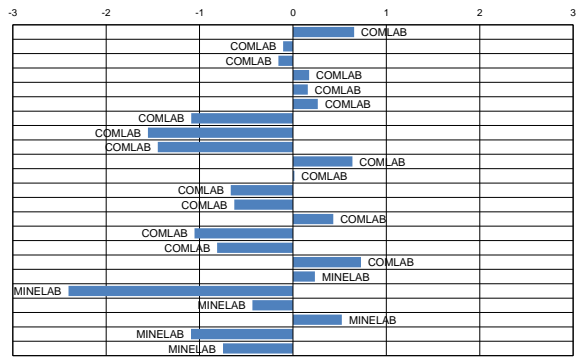
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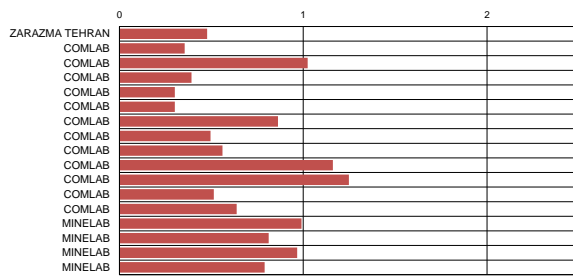
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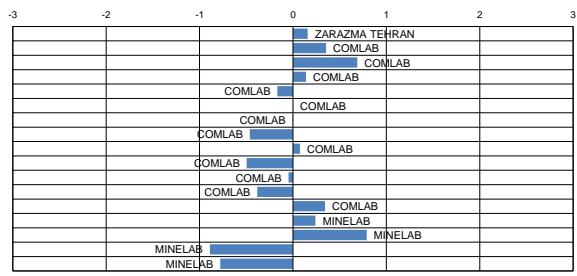
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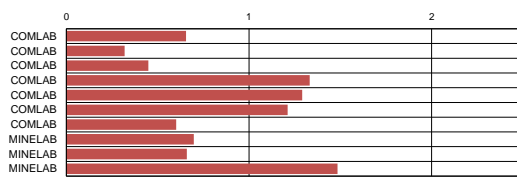
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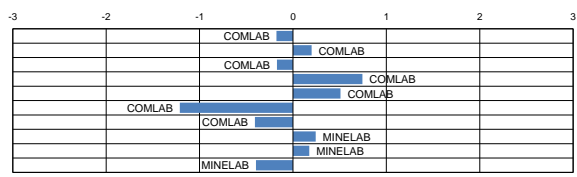
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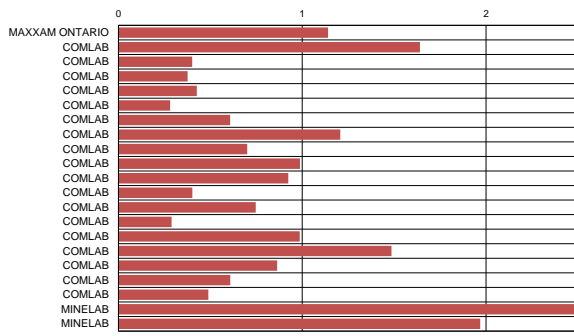
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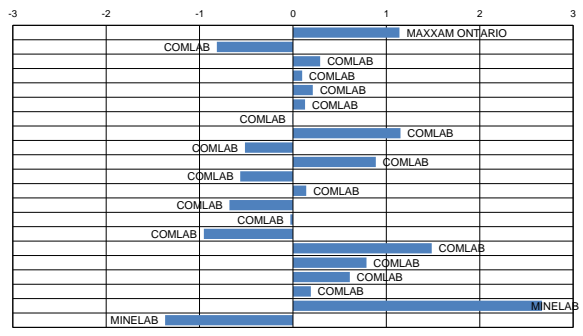
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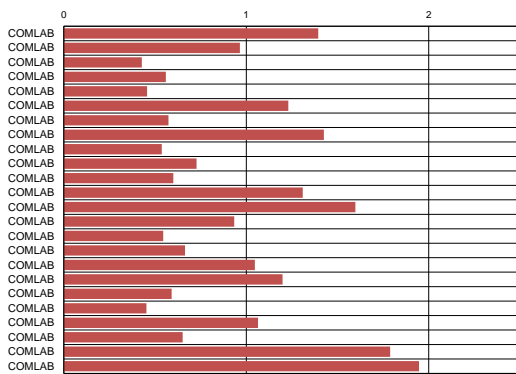
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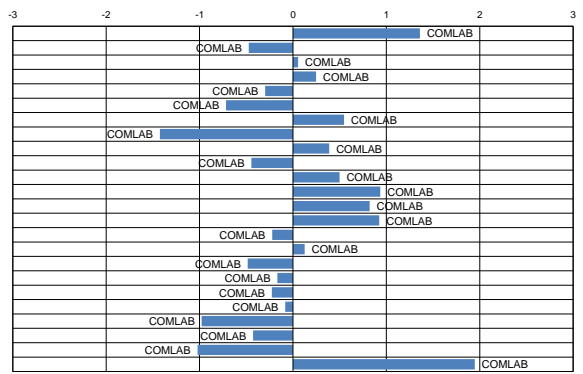
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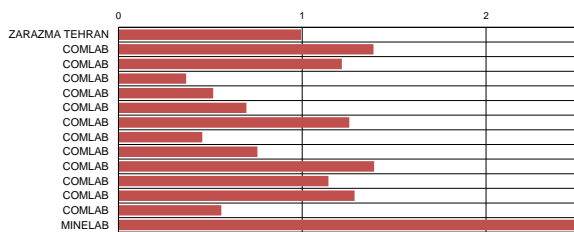
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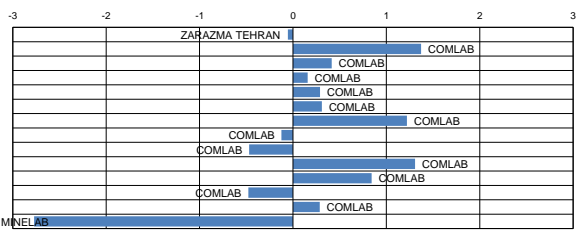
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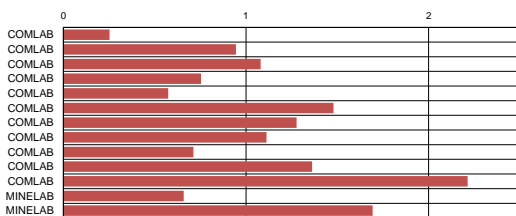
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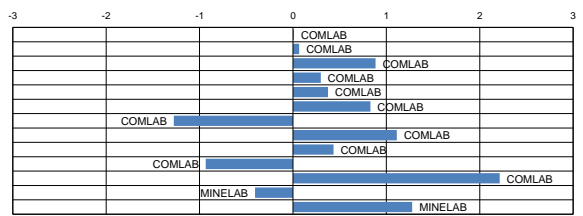
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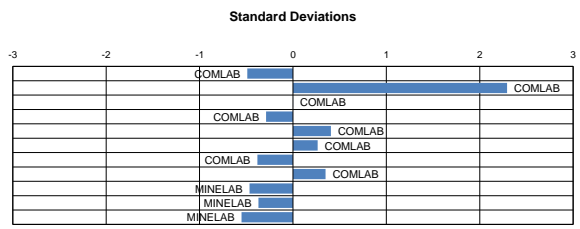
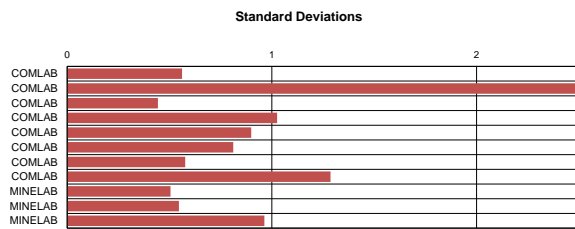
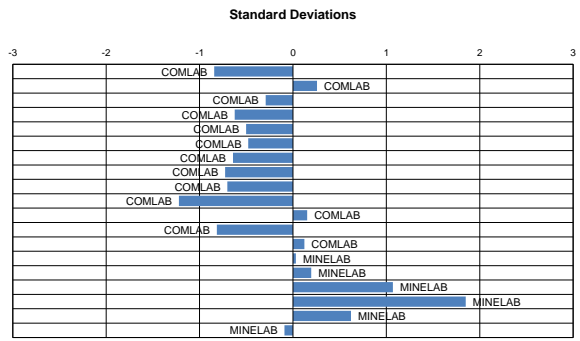
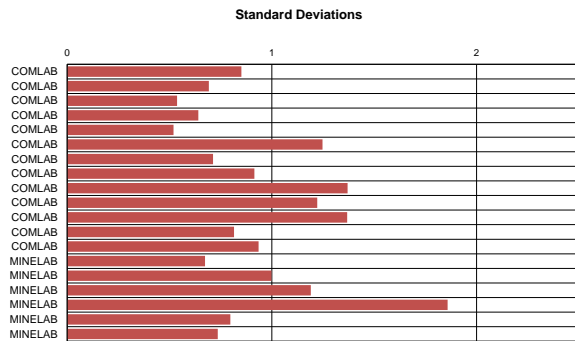
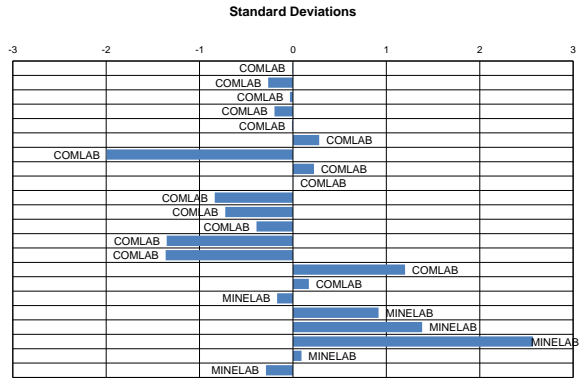
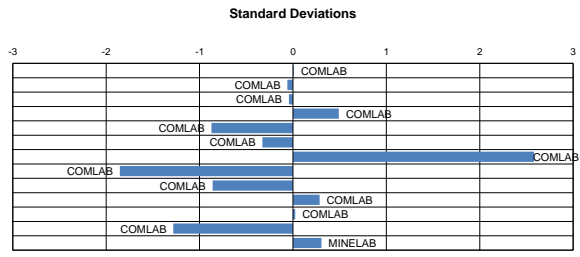
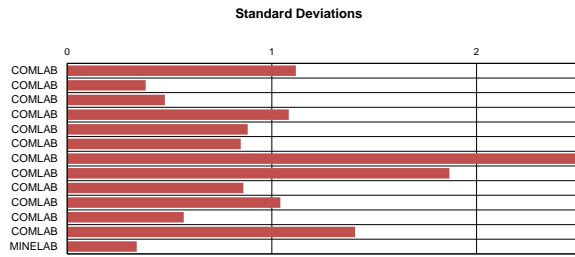


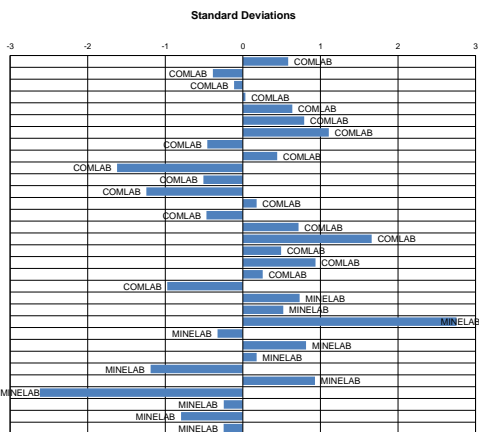
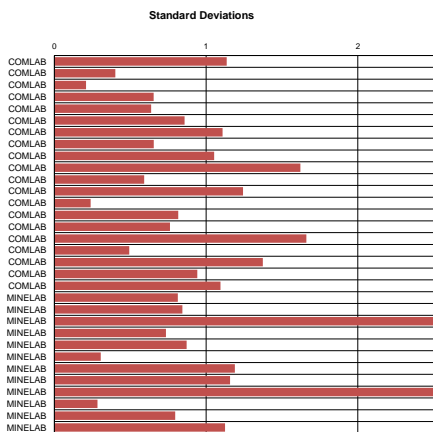
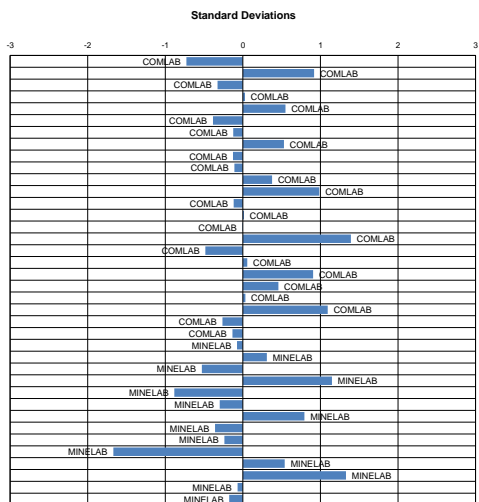
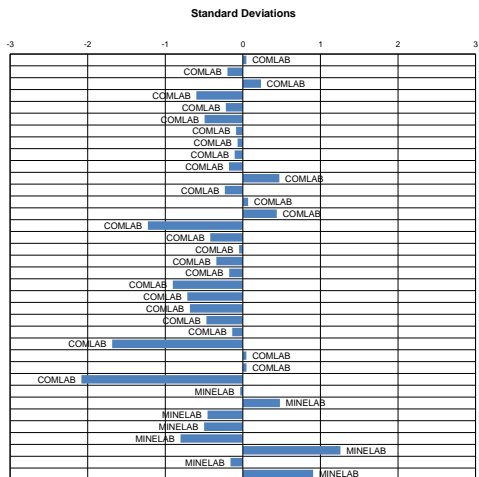
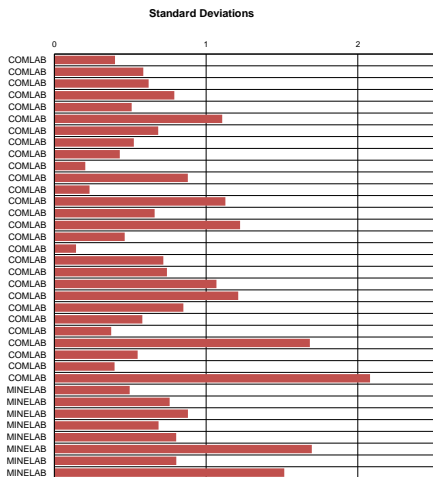
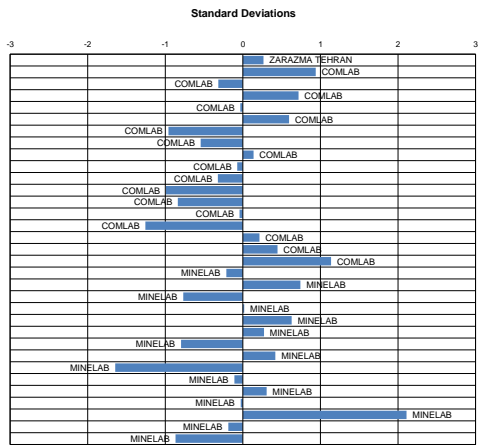
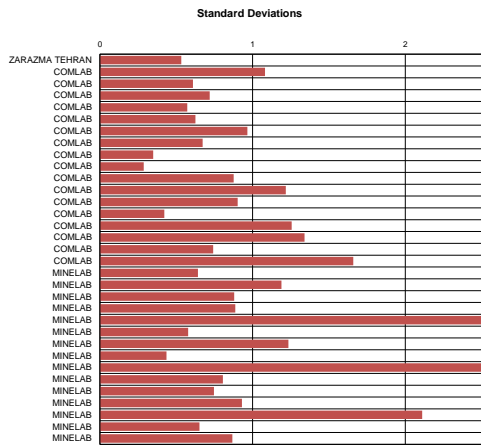
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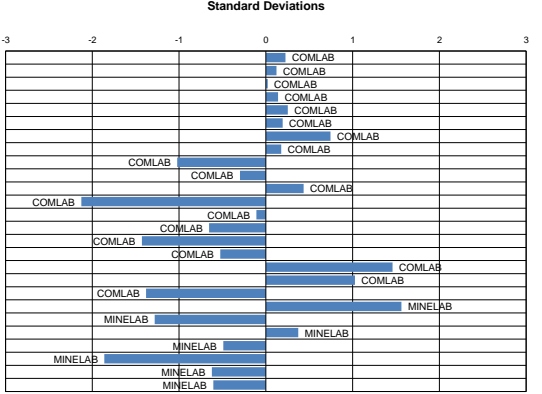
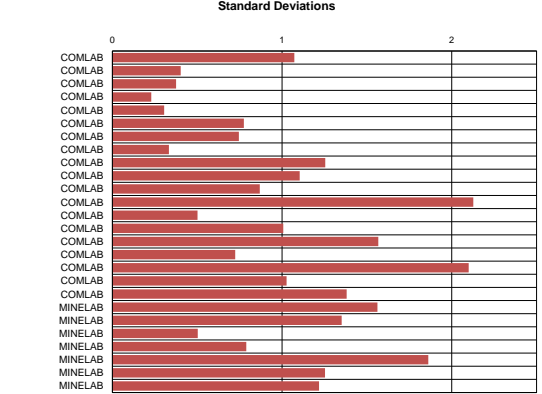
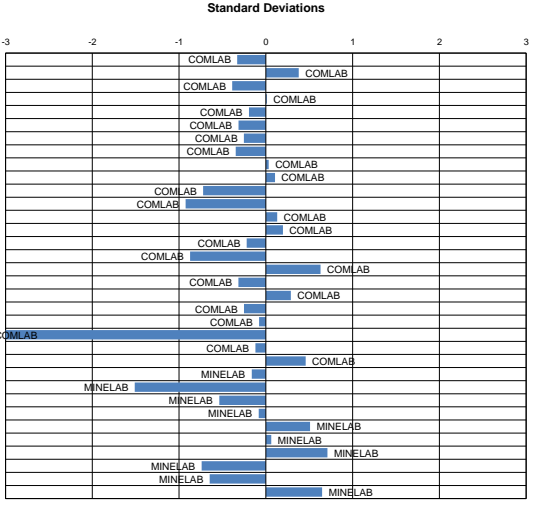
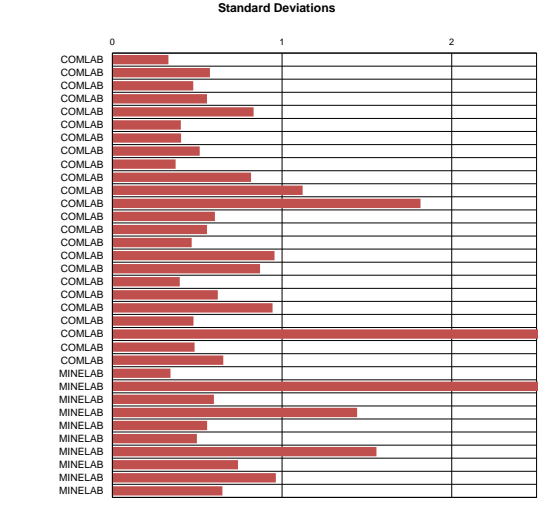
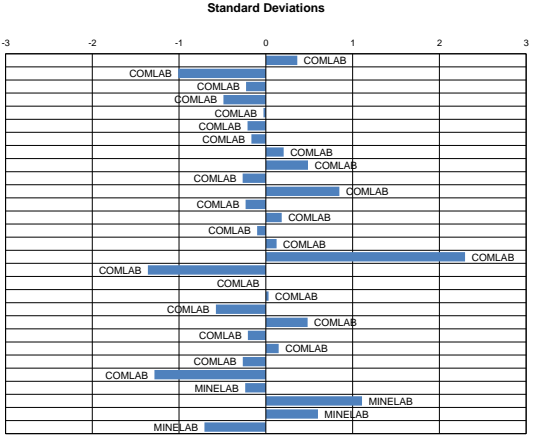
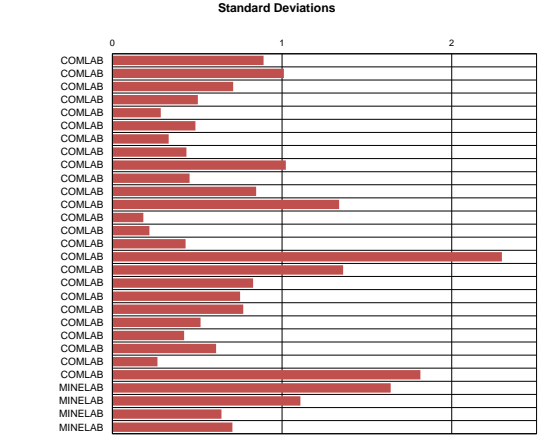
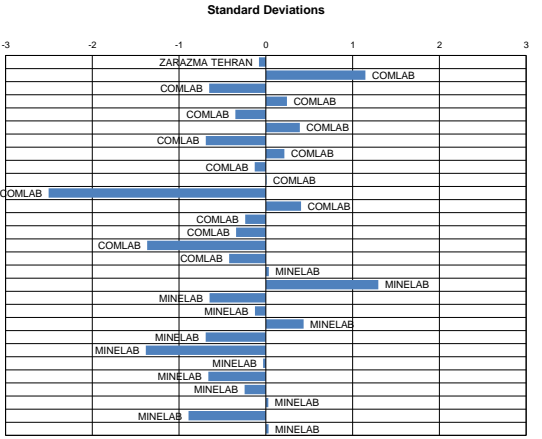
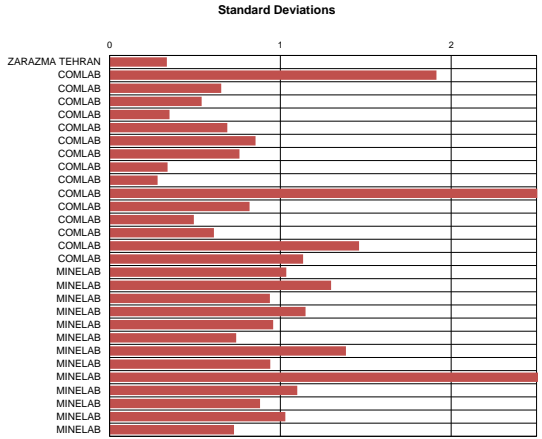


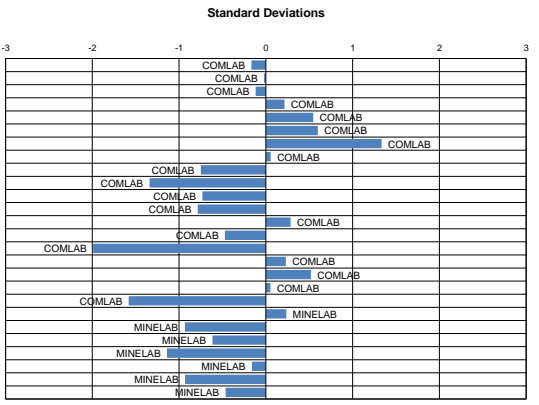
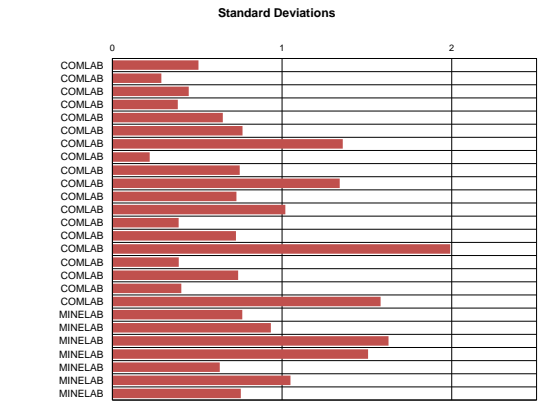
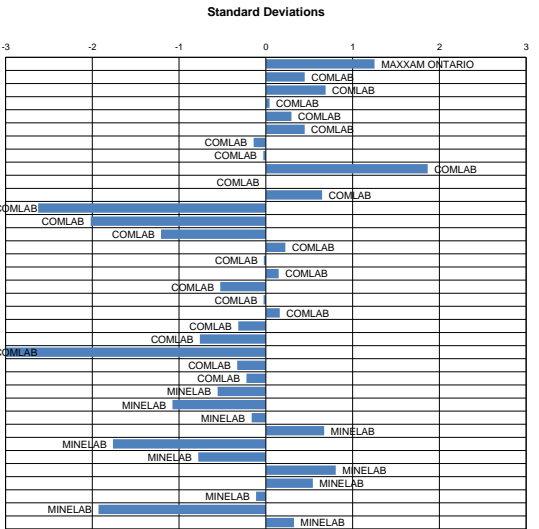
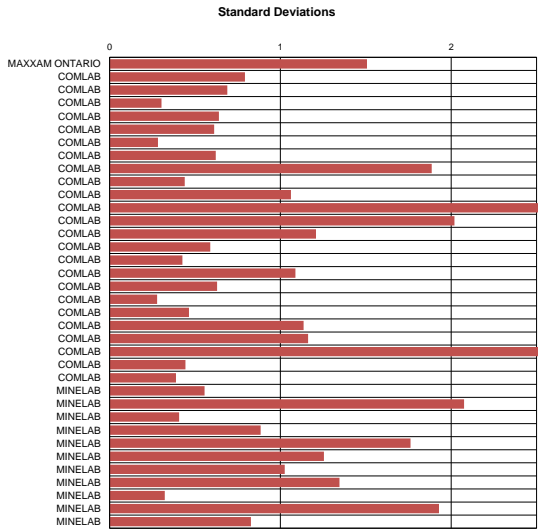
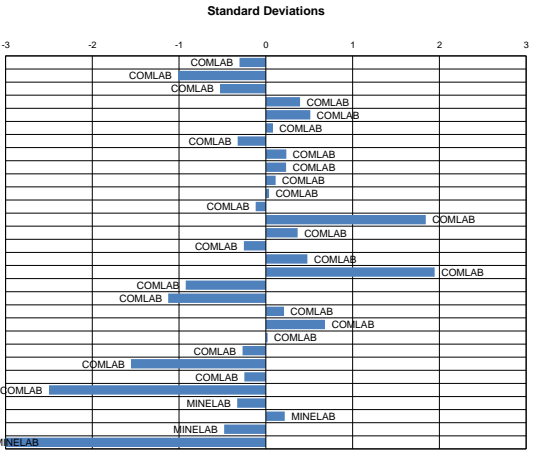
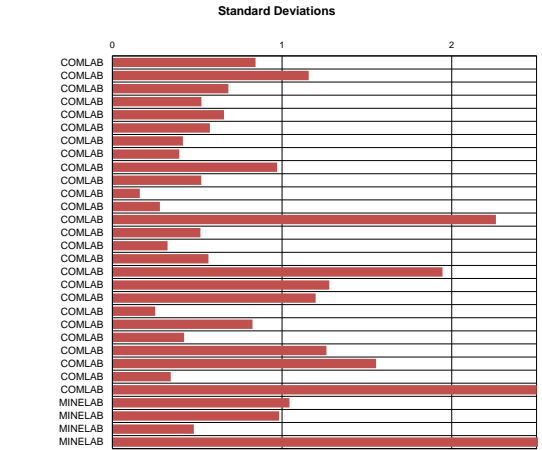
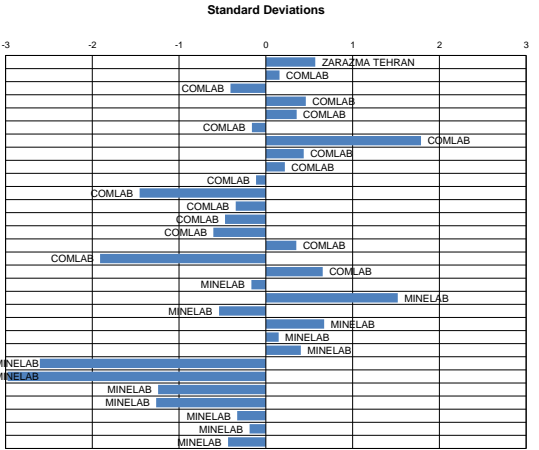
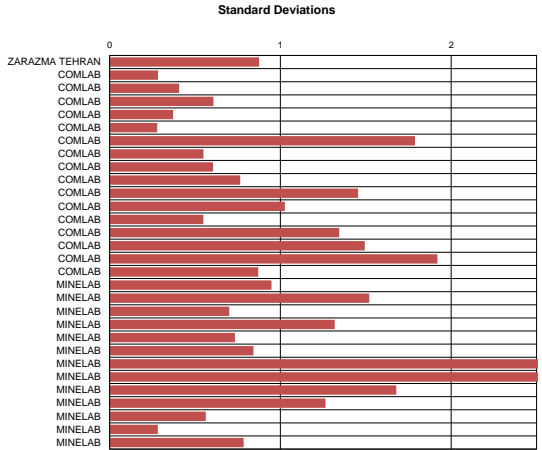
Standard Deviations



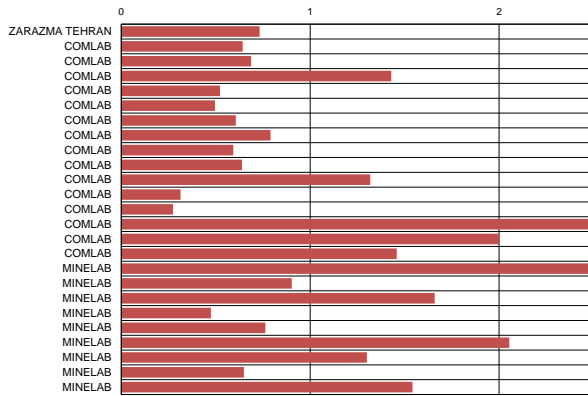




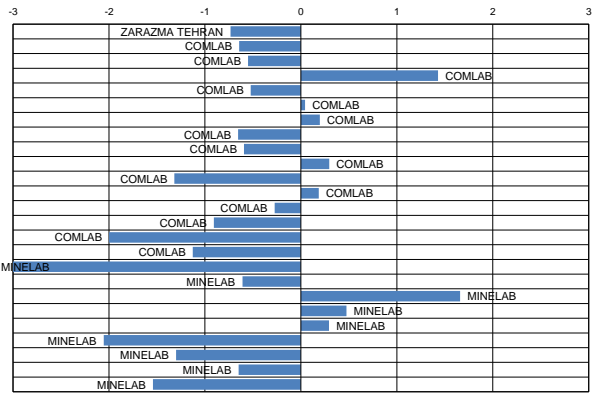




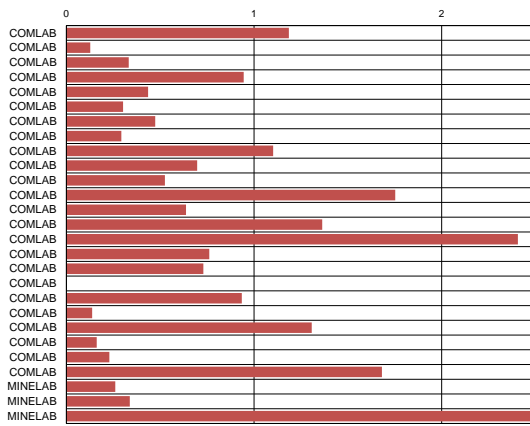
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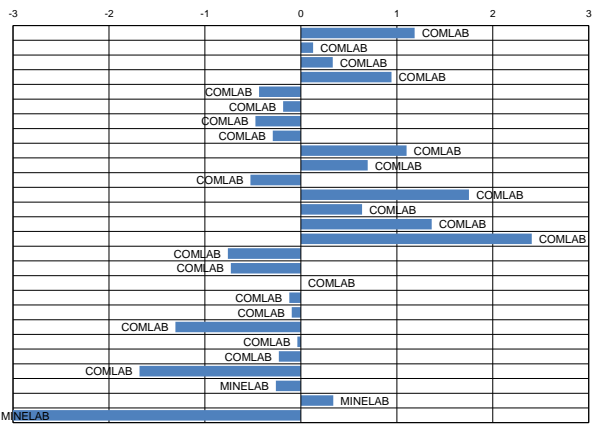
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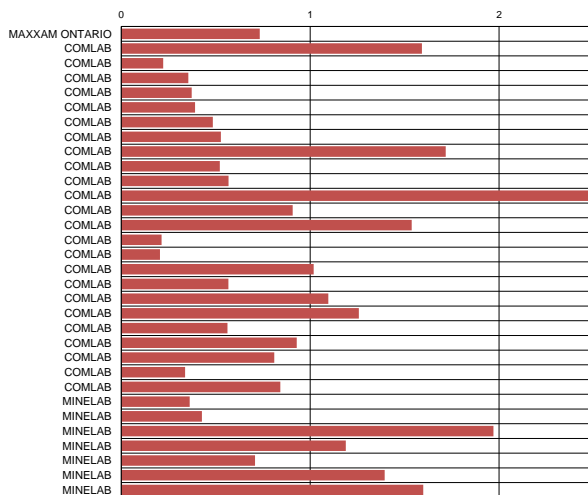
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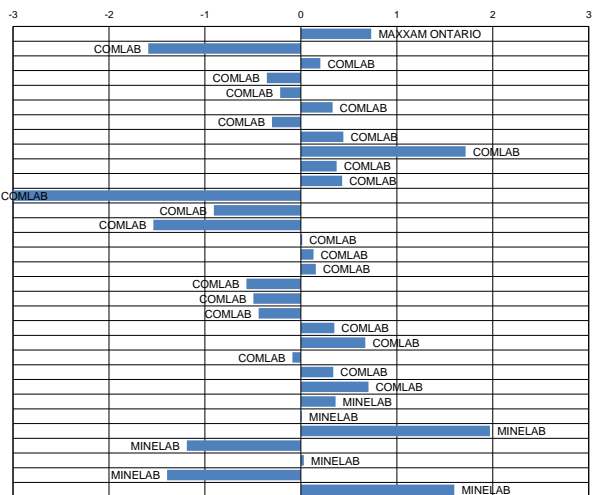
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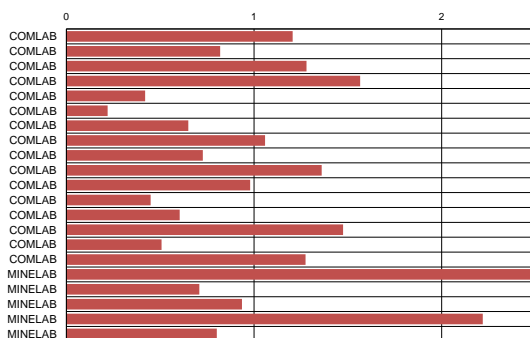
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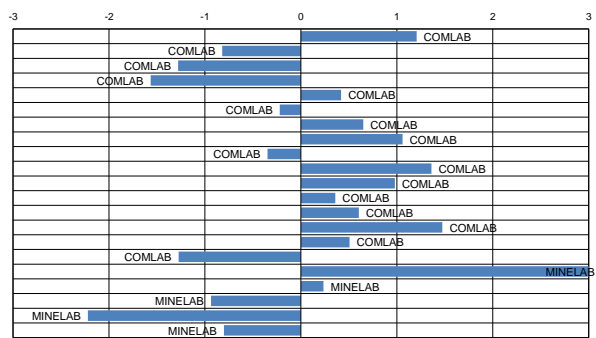
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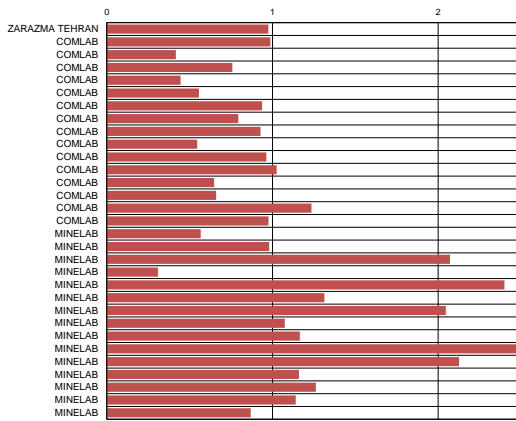
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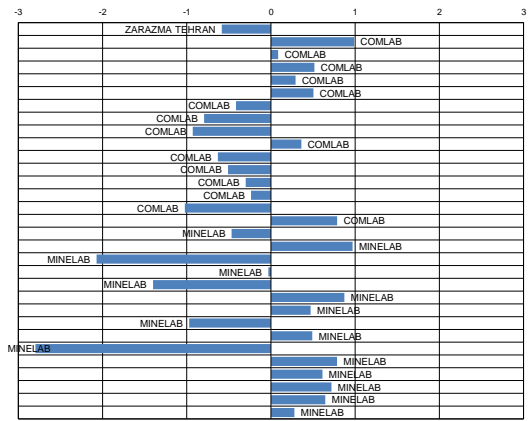
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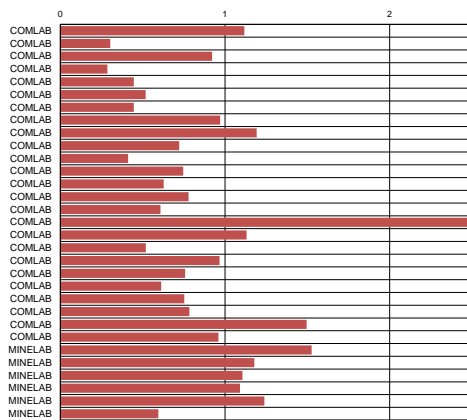
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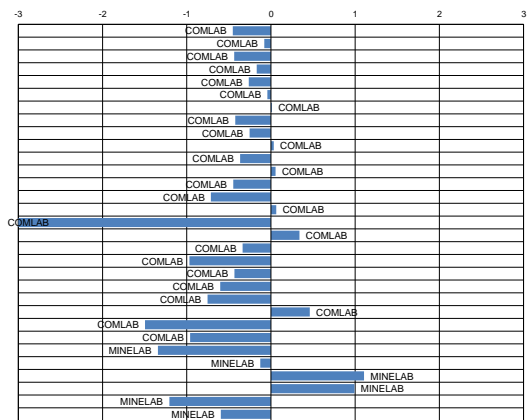
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Standard Deviations



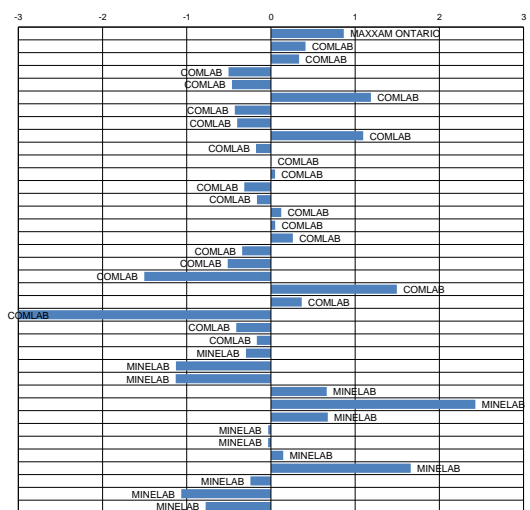
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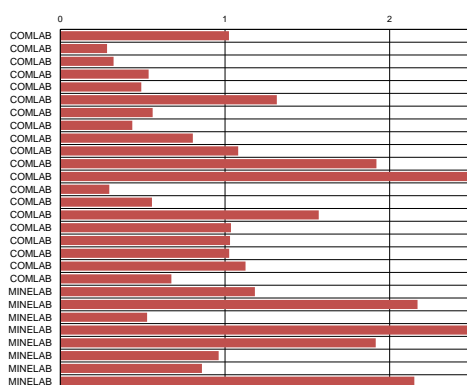
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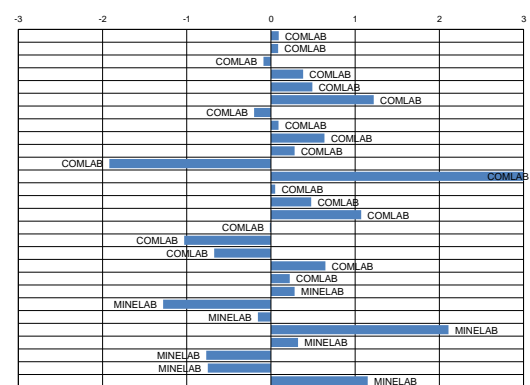
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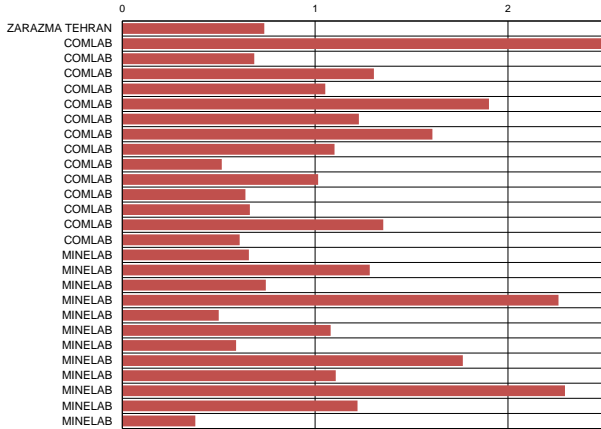
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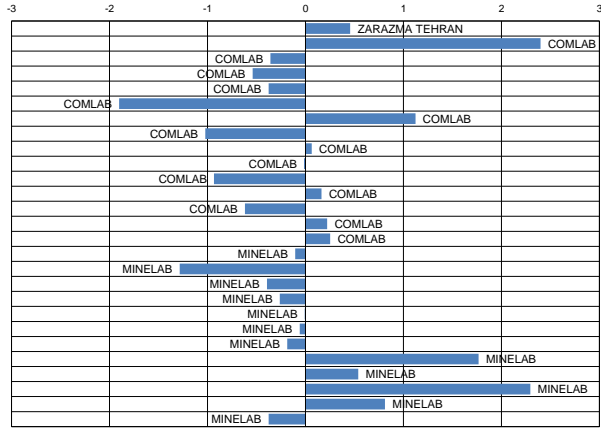
Standard Deviations



Standard Deviations



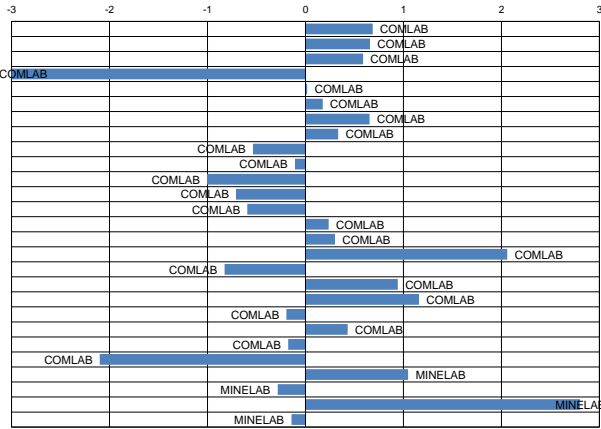
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Standard Deviations



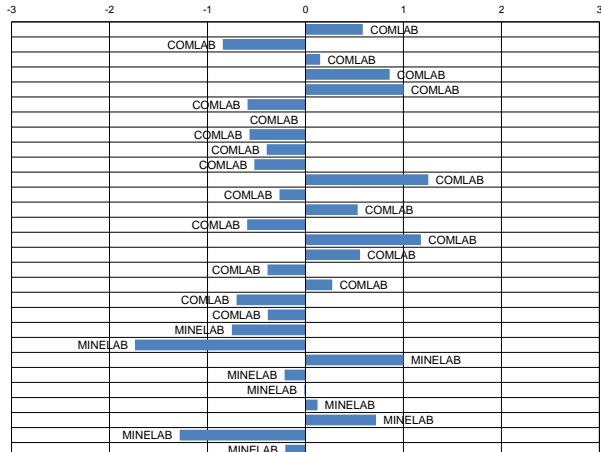
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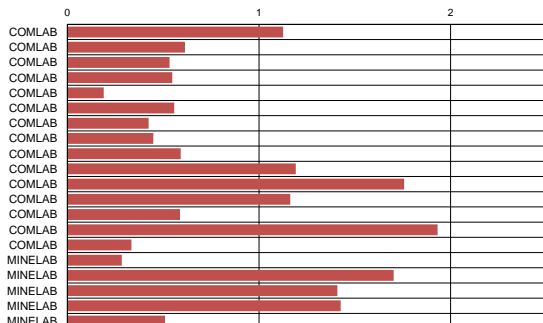
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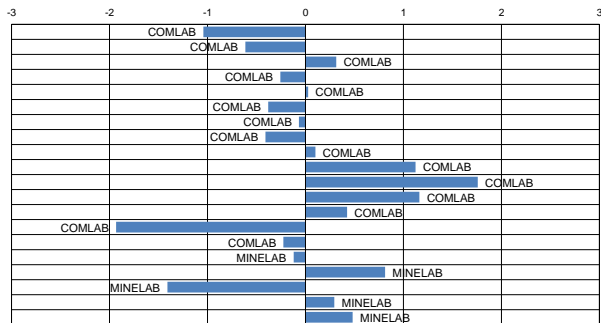
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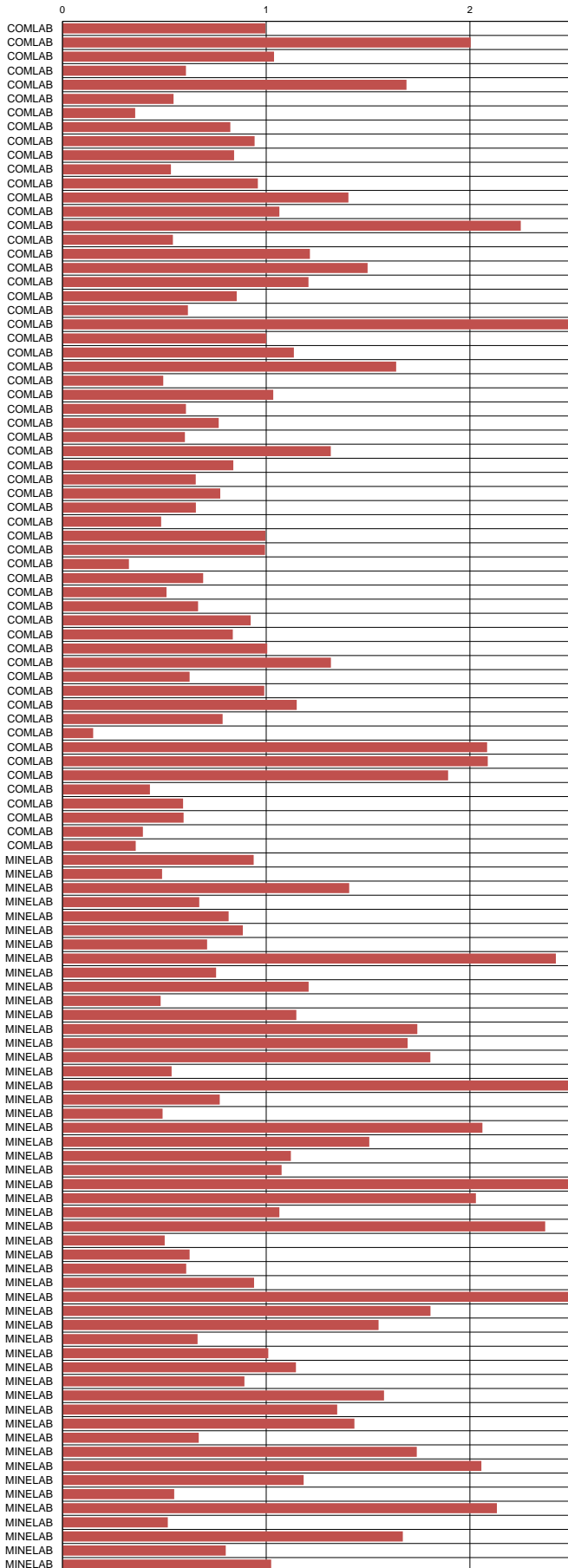
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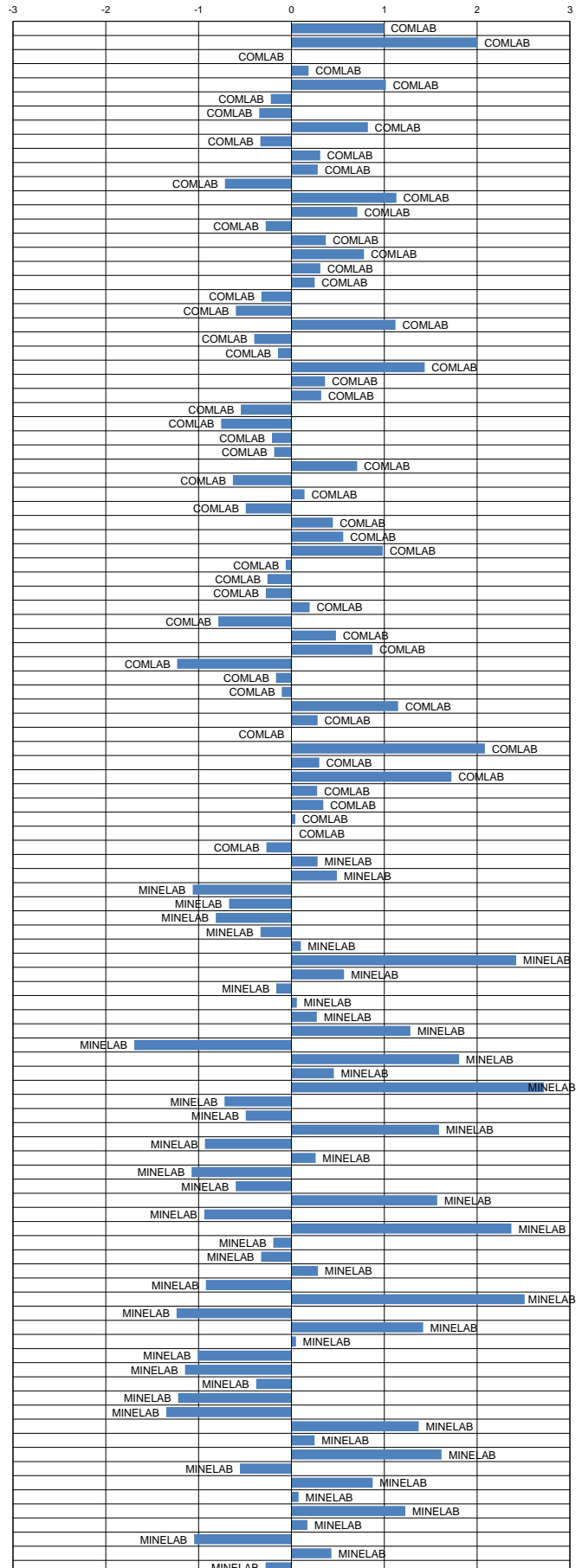
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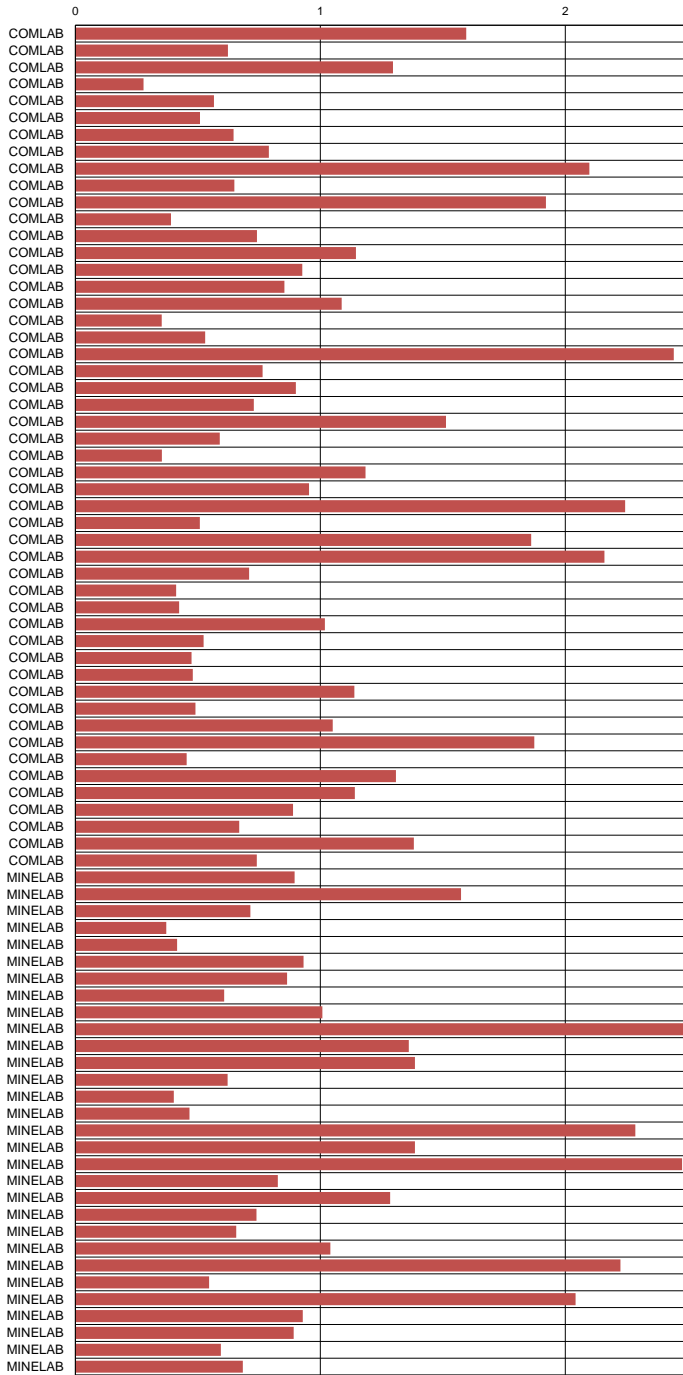
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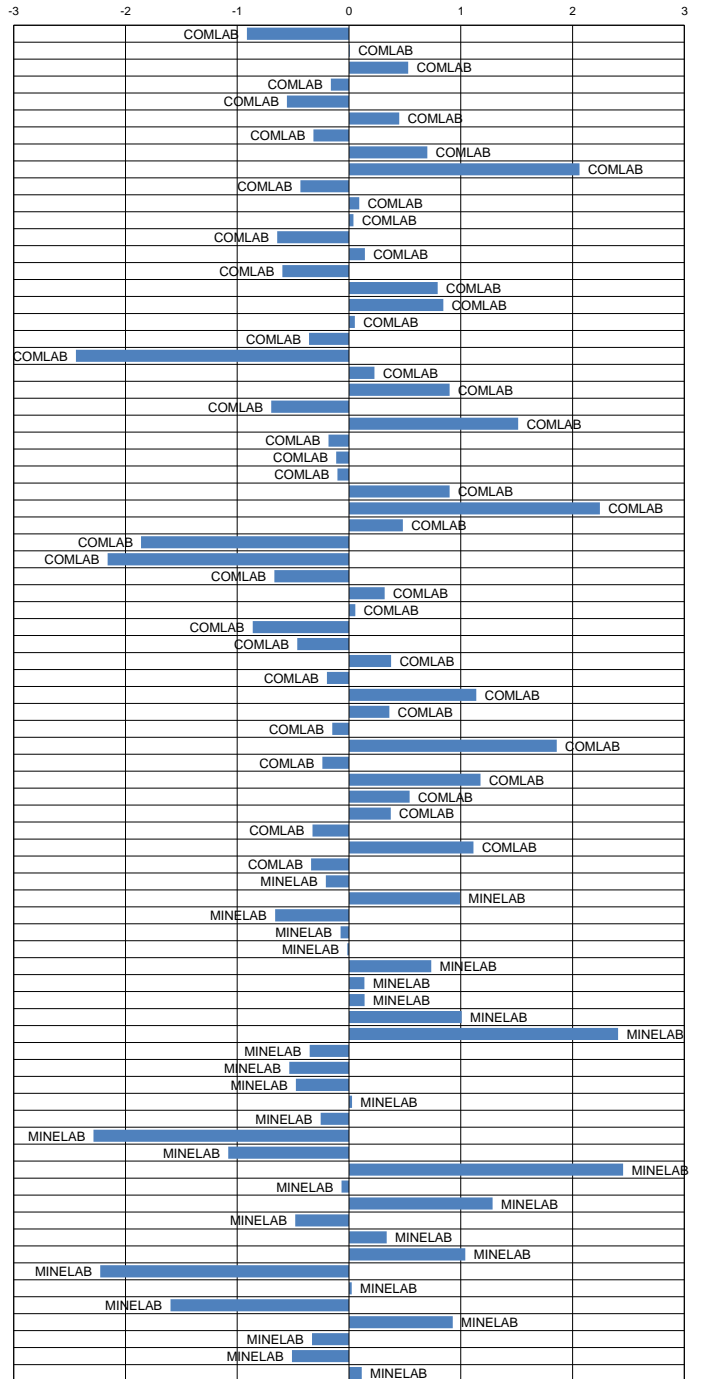
Standard Deviations



Standard Deviations



Standard Deviations



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	Yes	0	No	-
Copper	Yes	0	No	-
Lead	Yes	0	No	-
Zinc	Yes	1	No	-
Nickel	Yes	0	No	-
Arsenic	No	-	Yes	0
Cobalt	Yes	1	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	0

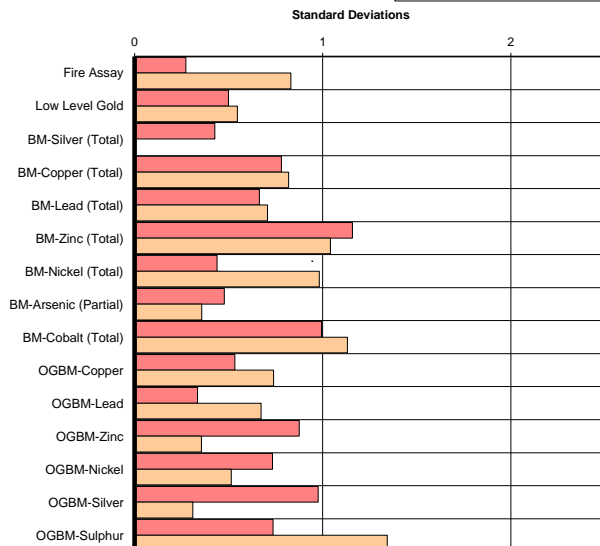
SULPHUR SAMPLES

The laboratory were not sent any Sulphur samples for analysis.

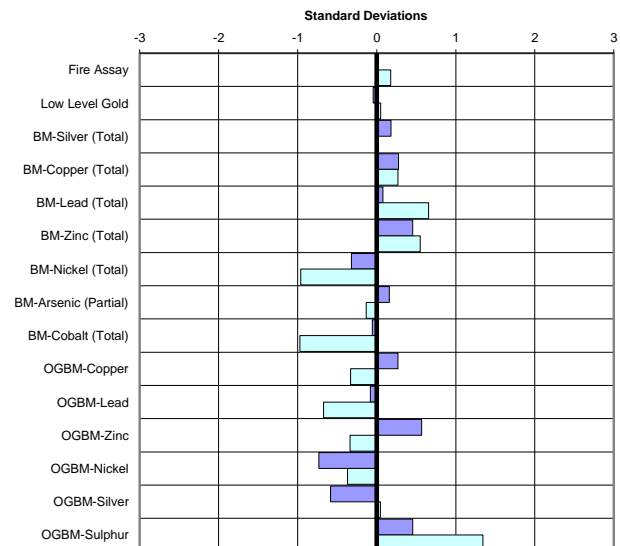
Analysis	Reported	Number of Outliers
Sulphur	-	-
Carbon	-	-

ERROR GRAPHS

Mean of Absolute Standardized Values ■ April 2017 ■ October 2016



Mean of Standardized Values ■ April 2017 ■ October 2016



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