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REPORT

ON

Preliminary Report
MMI SOIL SURVEY
FIRST NATIONS CONSULTATION

(January 2018)

Reed Robinson Property

Eby Otto Township
Larder Lake Mining Division
North-eastern Ontario

NTS
42A1

UTM
Grid Zone 17
Nad 83
0563565mE, 5326834mN

For

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&
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Co MMI Profile Data Line 2700E with Normalization
Cr MMI Profile Data Line 2700E with Normalization
Cs MMI Profile Data Line 2700E with Normalization
Cu MMI Profile Data Line 2700E with Normalization
Fe MMI Profile Data Line 2700E with Normalization
Hg MMI Profile Data Line 2700E with Normalization
K MMI Profile Data Line 2700E with Normalization
Li MMI Profile Data Line 2700E with Normalization
Mg MMI Profile Data Line 2700E with Normalization
Mn MMI Profile Data Line 2700E with Normalization
Mo MMI Profile Data Line 2700E with Normalization
Nb MMI Profile Data Line 2700E with Normalization
Ni MMI Profile Data Line 2700E with Normalization
Pb MMI Profile Data Line 2700E with Normalization
Rb MMI Profile Data Line 2700E with Normalization
Sr MMI Profile Data Line 2700E with Normalization
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Field Notes and Sample Log (12 pages)

SGS MMI Certificate VC163738_0000020265 (22 pages)

SGS Invoice 11022080 Dated December 20, 2016
Purolator Invoice Dated November 19, 2016

MAAP Mining Act Awareness Program Certification

Maps

1 cm = 50 m MMI Map Showing Individual Sample Locations and Sample Responses.
1 cm = 50 m MMI Map Showing Individual Sample Locations and Sample Responses with Geological Mapping Overlay
1 cm = 20 m Excerpt From MMI Map Showing Individual Sample Locations and Sample Responses.
1 cm = 20 m Excerpt From MMI Map Showing Individual Sample Locations and Sample Responses with Geological Mapping Overlay

1.0 SUMMARY

The “Eby Otto Property” is located in Eby and Otto Townships 10 km southwest of Kirkland Lake, Ontario. The property is at the south part of the Larder Lake Deformation zone.

Mobile Metal Ions (MMI) was selected as the exploration tool of choice for this exploration project. Explorationists tend to swear by MMI or swear at MMI. Initially MMI was heralded as a simple exploration tool, freed from traditional nuances of geochemistry. The practice was (and remains) to consistently sample the soil 10-25 cm below the top mineral soil interface to generate statistically valid results freed from sample noise to produce more valid anomalies.

Some Explorationists now recognize that MMI surveys suffer from its own set of nuances that result in false anomalies and attenuated responses. This report identifies and deals with these nuances.

SGS Labs; the engineer and provider of MMI services and analysis, categorically states, no normalizing factor is justified and is not required to deal with mixed oxidizing and reducing soil environments. According to SGS the raw data is valid without normalization. In either case the true/usable MMI equivalent appears to be within the envelope between the raw data and normalized data plotted on the MMI profiles.

In a 2012 study and in this 2016 study this author worked outside of accepted and established MMI procedures to deal with the various MMI nuances this author is trying to resolve.

In 2012 this author performed an orientation survey of selected grid lines on this property. In that survey it was recognized the target mineralization and associated alteration occurred in linear swamps. It was also recognized the intermediate hills were dominated by unaltered and unmineralized Archean volcanics and an ultramafic intrusive.

In that 2012 study; it was also recognized that MMI samples from dry oxidizing environment (on unaltered, unmineralized hills) had a statistical signature very different than the reduced samples from swamps.

It was and remains difficult to render assured conclusions of the relative impact of the oxidation/réduction environment relative to the impact of the different mineralization and alteration rock sources.

Much effort and thought went into devising a statistical normalization procedure to render equivalent results to neutralize a skewed data shift between these two environments. In both the 2012 and 2016 studies it was recognized if attention was focused on recognizing the distinction between anomalous and normal parts of the analytical data, the non-anomalous data impact would be eliminated. By picking the appropriate normalization percentile as close to the anomalous threshold, all non-anomalous data would remain non-anomalous and all anomalous data would remain anomalous.

By recognizing and focusing on the upper 20^{th} percentile of both populations; it was reasonable to determine/estimate the point probably separating of the background from anomalous populations. In traditional geochemistry it is normal to expect threshold values near 97^{th} percentile.

In these studies; the normalization percentile was subjective on observation of individual cumulative frequency plots included in the appendices. The various metals were deemed to have had critical thresholds values generally between 85^{th} and 97^{th} with the normalization factor bringing the oxidation and reduction curves to an equivalent positions at that percentile

If the cumulative frequency plots have different curvatures and the critical threshold percentile used for normalization is relatively accurate; all values near the threshold value will be reliable and only the extreme anomalous values will deviate significantly from the ideal, Non-anomalous samples can then be reliably ignored and anomalous and extremely anomalous and dealt with appropriately in exploration decisions.

In the 2012 study, the oxidized samples were normalized to the equivalent reduced cumulative frequency curves to reflect the association with the mineralization expected in the swamps. This procedure was initially preserved in the 20016 study: but was reversed when it was realized the majority of the samples were from oxidized environments.

It is recognized that more research is required to confirm the findings of these two reports. Statistical skewing the oxidation and reduction cumulative frequency plots in both studies appears to be real: However it remain unknown:

- how much if any the data shifts can be attributed to: real environmental circumstances and
- how much if any the data shifts can be attributed to differences in the rocks, mineralization and alteration that occurs preferentially below the swamps.

This exploration program was designed and implemented to:

- Establish a more detailed Mobile Metal Ion orientation cross section of the Reed-Robinson property to further determine the potential effectiveness of future MMI surveys to this project.
- Further refine the optimal MMI procedure and analytical suite special nuances determined in the January 4, 2013 report dealing with MMI phase one orientation study on this project.
- Test six mineral exploration targets at
    - 2700E-359N 25 cm surface quartz vein grading 1.358 gAu//tonne.
    - 2700E-108N Deep 200m cable MaxMin EM conductor (IP=OP).
    - 2700E-090N Projection of East trending the North Ca-Fe-Carbonate fault
    - 2700E-011S Projection of East trending the South Ca-Fe-Carbonate fault
    - 2700E-090S Ca-Fe-Carbonate talus zone.
    - 2700E-170S East-south-east trending Riedel Alteration zone in strong lineament.

2.0 LOCATION AND ACCESS

The property locations referenced in this report and appendices are identified using Nad 83 UTM coordinates. The centre of the property is located at UTM coordinates 0563565mE, 5326832mN. This location is the grid origin; 4000E-000N. Topographic sheet 42A/1 (Kirkland Lake) applies to the property.

All the claims are located in Otto and Eby Townships of the Larder Lake Mining Division. The property is located:

- 10 kilometres southwest of the town of Kirkland Lake,
- 5½ kilometers southwest of the Macassa Mine workings,
- 2 kilometers west of the Gateford Mine (also known as Golden Gate Mine) at Swastika and
- 400 meters south of Highway 66.

The west end of the property is best accessed from Highway 66 at a point 2.3 km east of the intersection of Highway 11 and Highway 66. At this location; park at the access road leading north from Highway 66 and walk 400 meters south to the #1 post of claim 1186975.

The east end of the claim group is best accessed from Highway 66 at a point 3.7 km east of the intersection of Highway 11 and Highway 66 (0563554mE,

5327894mN). At this location park on the shoulder of the highway and walk the township line south for 550 meters to the #4 post of claim 475258.

3.0 THE PROPERTY

The property is 11 claims consisting of 15 claim units (8 leased 7 staked) in Eby and Otto Townships.

Claim	Units	Location
532929	1	NE1/4, S1/2 Lot 3, Conc. VI, Eby Tp. Lease 106013. MNDM#: G8000813
532930	1	NW1/4, S1/2 Lot 3, Conc. VI, Eby Tp. Lease 106013. MNDM#: G8000813
1242292	1	SE1/4 , S1/2 Lot 2, Conc. VI, Eby Tp.
1186975	2	W1/2, S1/2 Lot 2, Conc. VI, Eby Tp.
1187002	4	S1/2 Lot 1, Conc. VI, Eby Tp. Bank W9980.00451 **$10,847** Bank W9680.00457 $ **1,013**
532924	1	NW1/4, N1/2 lot 1, Conc. VI, Eby Tp. Lease 106011. MNDM#: G8000814
532925	1	NW1/4, N1/2 lot 1, Conc. VI, Eby Tp. Lease 106011. MNDM#: G8000814
475258	1	NW1/4, S1/2 lot 12, Conc. VI, Otto Tp. Lease 106732. MNDM#: G8000296
475259	1	NE1/4, S1/2 lot 12, Conc. VI, Otto Tp. Lease 106732. MNDM#: G8000296
475260	1	SE1/4, S1/2 lot 12, Conc. VI, Otto Tp. Lease 106732. MNDM#: G8000296
475261	1	SW1/4, S1/2 lot 12, Conc. VI, Otto Tp. Lease 106732. MNDM#: G8000296
	15 units	

4.0 PHYSIOGRAPHY AND VEGETATION

The property has moderate topography comprised of rocky knolls covered with glacial till, water worked glacial sediments and clays. The area is covered by stands of boreal forest consisting of poplar, balsam fir, black spruce, white cedar, and alders. Significant recent clear cuts have exposed the southeastern corner of the claims located in Otto Township.

5.0 REGIONAL AND PROPERTY GEOLOGY

The property is located 5½ km southwest of the Macassa Mine workings within the southern portion of the Larder Lake - Cadillac Deformation Zone.

The Larder Lake Cadillac Deformation Zone consists of a series of east-west trending deformation/fault/alteration zones and cross faults. The Kirkland Lake Break, within the northern part of this deformation package produced 23,292,472 Troy Ounces of gold from nine mines as tabulated below:

Tons	Grade	Troy Oz Au	Mines (on the Kirkland Lake Break)
6,496	0.07	483	Hudson Rand
3,140,283	0.37	1,172,955	Kirkland Lake
4,230	0.45	1,921	Kirkland Townsite
17,117,923	0.50	8,573,246	Lakeshore
6,305,835	**0.44**	**2,768,097**	**Macassa**
5,049,536	0.33	1,674,808	Sylvanite
9,565,302	0.38	3,709,007	Teck Hughes
1,186,316	0.48	570,659	Toburn
9,934,327	0.49	4,821,296	Wright Hargreaves
52,310,248	0.45	23,292,472	Troy Oz Au

The property is also located 2 kilometres east-southeast of the Gateford (Golden Gate) Mine at Swastika.

Tons	Grade	Troy Oz Au	Mines (on the Kirkland Lake Break)
103,684	**0.29**	**30,068**	**Gateford (Swastika)** Also known as Golden Gate Mine

An initial grab sample of the main Reed showing assayed 19.7 gm Au/tonne.

It was resampled by Doug Robinson and assayed 14.0375 g Au/tonne over 0.40m. See individual assay tabulation below:

Sample 46707	0.10m	13.28gAu/tonne
Sample 46708	0.20m	18.82 gAu/tonne
Sample 46709	0.10m	5.23 gAu/tonne
Average	0.40m	**14.0375 gAu/tonne**

MNDM sampled the outcrop returning an assay of 0.234 ozAu/ton across 0.61m (8.02 gAu/mT/tonne).

A good correlation of the equivalent calculated grade over a meter indicates the gold is probably fine grained reducing the nugget effect in assaying the Reed Zone (5.62AuGramMeters by Robinson and 4.89 AuGramMeters by MNDM).



Photo 01 Above: Reed gold showing in Eby-Otto Tps. Photo facing south-west. Grade 0.40 m @ 14.04 gAu/Tonne.



Photo 02: Above: Bedrock sample 46708 from Reed gold showing in Eby-Otto Tps. Bedrock sample grading ***18.82 gAu/Tonne****, 36.97% SiO_2 10.35% Al_2O_3 and 5.39% Na_2O* ***over 0.20m****. The SiO_2 value is low indicating a low quartz content in the gold rich zone.*

It appears the ***rock is dominated by albite and pyrite*** *(and some carbonate?). An 11.99% LOI is consistent with a high pyrite content.*

6.0 EXPLORATION HISTORY

In excess of 40km of grid lines were cut in 1994-1995 by the property owners. Total magnetic field strength surveys and multi frequency MaxMin surveys and detailed geological mapping were performed by the author and his family during 1994-1995. The 1995 work was in part funded by OPAP grants to James Reed and the author. The 1995 work was funded by Nastek Exploration Ltd. and reported by James Tilsley.

The Nastek option, including a planned drill program, was terminated within ten days of MRR's (leaked) announced proposal that recommended the placement of a Lands for Life provincial park on the property. Proposed parks on leased lands, including this property were systematically abandoned approximately 18 month later.

In 1994-95 the claim was in a recent spruce budworm kill rejuvenated by small balsam fir seedlings. At that time, much of the balsam fir had matured to a dense intergrowth of one half to two centimeter trees. James E. Tilsley in his report stated:

> "*parts of the north group have dense cover of young second growth balsam fir which has developed after severe spruce bud worm damage about ten years ago. This area has both standing 'widowmaker" and fallen 'kneebreaker' decaying tree trunks which make traversing and working in this section of the property both difficult and hazardous*".

The dense intergrowth of the trees has since matured, making traversing more difficult and has obliterated most evidence of previous work. During 2012 grid rehabilitation work, the old lines were identified by the bungees and stumps from the 1994-1995 work.

7.0 EXPLORATION RATIONAL

This exploration program was designed to determine MMI criteria to:

- Further determine the potential effectiveness of MMI to the Eby-Otto project.
- Further optimize MMI procedure

- Further determine the optimum analytical suite
- Determine any additional limitations and special requirements of MMI on the project
- Test six priority mineral exploration targets.

The lines tested falls within the impact area of the Larder Lake - Cadillac Break. It is also recognized that the Larder Lake Cadillac Break is a series of braided structures with associated alteration and mineralization; some of which were developed as mines reported in the "Property" section above. See the mine section included in the appendices of this report.

It is recognized that this and the 2012 MMI surveys may have not tested true background sites free from the impact of the Larder Lake–Cadillac Break. Based on previous mapping by the author, it is assumed that approximately 30-40% of the sample sites represent weakly impacted rocks.

Regionally, the main east-west trending breaks have steep dips of 60-90 degrees and the ESE and WNW trending of Riedel cross structures may have moderately shallow dips. Shallow dips can cause mineralization and alteration to dip under unaltered to weakly altered geology. Down dip alteration/mineralization can cause anomalies over surface rocks that are not significantly altered or mineralized.

The SGS case studies and literature reviewed by the author indicates Mobile Metal Ions are transported vertically to the surface anomalies directly above the (down dip) mineralization. It has recently been recognized that oxidized and reduced environments cause apparent shifts of MMI analytical populations. Based on the author's experience; it appears MMI responses are also partly controlled by bedrock breaks/structures, depth to bedrock, proximity to bedrock exposures, soil type and groundwater discharge/recharge flows.

Based on the author's experience; it appears, MMI responses do not consistently occur as a one-to-one response to the mineralization/geology believed to cause the response. One or more of the pathfinder Mobile Metal Ions may fail to respond in an apparently logical configuration. Geological mapping and MMI field notes are important to validate the interpretation of MMI responses.

7.1 Pathfinder Element - Analytical Selection

A full spectrum MMI analytical suite. The following potential pathfinder suite: Ag, Au, Ce, Co, Cr, Cu, Mo, Nb, Nd, Ni, Pd, Rb, Ti and W were compiled from SGS MMI case studies and technical bulletins and other sources.

Many of the pathfinder metals are common to the various potential mineralized geological environments of the property. Gold veins are the primary exploration target.

Syenite porphyry is commonly associated with golds deposits along the Cadillac – Larder Lake Deformation zone. Syenite porphyry is common north and south of the property. A mega porphyry boulder with 1-2cm feldspar phenocrysts was identified on the south claim line (see photo 3 below). Photo 4 shows a similar porphyry that hosts a quartz-visible gold vein recently found at the Granada Gold Mine at south of Rouyn Noranda. Many of the pathfinder elements, including the REE are indicators of porphyry that may be host of and/or associated with gold deposits

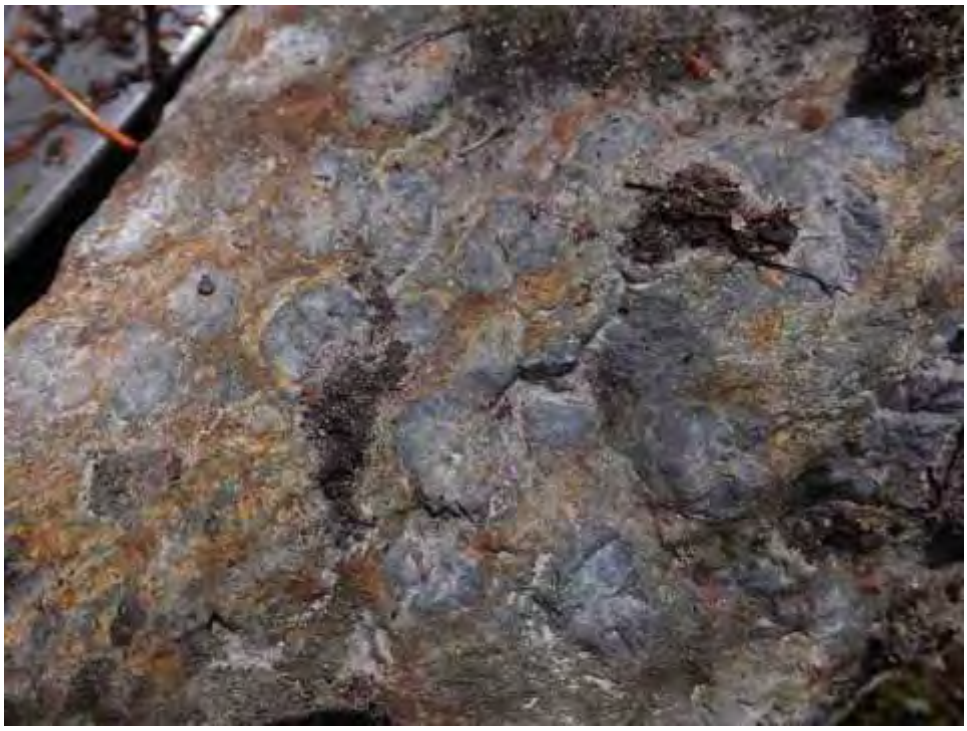


Photo 3 Above: Mega Porphyry float identified at the south claim line Eby Otto Tp Claims.



Photo 4 Above: Mega Porphyry from bedrock at Granada Gold Mine Granada (Rouyn Noranda). The new gold vein at that location occurs on north contact of this porphyry outcrop.

The dominant lithology of the property is an ultramafic-mafic intrusive suite consisting of gabbro, anorthositic gabbro and diorite. The presence of numerous conductors indicates the potential of Ni, Pt Pd deposits. The presence of the numerous conductors indicates this mafic suite had access to thermo erosion and assimilation of mineralized rocks (including sediments) beneficial for Ni, Pt Pd accumulations. It was assumed the presence of Ce and Nd and other incompatible indicator metals assimilated into high temperature, ultramafic-mafic rocks associated with Ni, Pt Pd depletion in late differentiates is compatible with Ni, Pt Pd deposits in early cumulate phases of the intrusive.

7.2 Analytical Suite Selection

The table below listing the selected MMI suite constructed as a tool to balance the expected benefit among the various potential geological environments. The wide spectrum, Mobile Metal Ion analysis package "**MMI M** Multi Element Package" was performed on the recommendation of SGS. The significant documents researched are tabulated in the table below.

MMI Metal Suites

Metal	Atom No.	SGS^{TB18} SGB^{TB19} Vein Gold	SGB^{TB19} Porphyry System	SGB^{TB17} SGS^{TB18} SGB^{TB19} Ni-Pt-Pd Deposits	SGB^{TB19} SGS^{TB18} SGS^{CS39} Kimberlite	$Robinson^{Int}$ A4 Kimberlite	SGS^{CS39} C14 Kimberlite	SGB^{TB19} I O C G
Ag	47	Ag	Ag					Ag

Au	**79**	**Au**	**Au**					**Au**
Ce	**58**	**Ce**	**Ce**	**Ce**	**Ce**		**Ce**	**Ce**
Co	**27**	**Co**	**Co**	**Co**	**Co**	**Co**	**Co**	**Co**
Castle Resources Inc.	24	Cr		Cr	Castle Resources Inc.		**Cr**	
Cu	29		Cu					Cu
Mo	42	Mo	Mo					
Nb	41				Nb	Nb		
Nd	**60**	**Nd**	**Nd**	**Nd**	**Nd**		**Nd**	**Nd**
Ni	27	Ni		Ni	Ni			
Pd	46			Pd	Pd			
Rb	**37**	**Rb**	**Rb**	**Rb**	**Rb A4**	**Rb**		
Ti	**22**			**Ti**	**Ti**			
W	74	W	W					

SGS[908] SGS "**MMI Sampling Guide**": Emphasized a consistent sample depth 10-25cm below the organic mineral soil interface.

SGS[TB17] SGS "**Technical Bulletin MMI TB17: MMI Geochemistry for Nickel Exploration"**:

Identifies Ce (Nd) as metals associated with felsics, black shales and plumes of felsic rock (and sediments) incorporated into the base of the Ni sulphides during the of thermo erosion process.

Identifies MMI criteria for nickel deposits as moderate to high Ni and Ce, high values of Co and Pd [and low values of Cr (i.e. high Ni/Cr ratios)].

SGS[TB18] SGS "**Technical Bulletin MMI-TB18: Rare Earths and MMI Geochemistry. Ni Deposits**":

Identifies Ce, Nd, La and Yb as pathfinders for vein type gold deposits.
Identifies Cs, Rb, U, K, Ti, Li and Be as incompatible metals which do not readily enter into the early rock building minerals.
Identifies **Ce anomalies expected peripheral to Ni deposits.**
Identifies that the Rare Earth elements including Ce and Nd have excellent vertical mobility and special discrimination.

Identifies that the Rare Earth elements, including Ce and Nd discriminate rock types (felsic) and certain alterations including porphyry alteration zones.

SGS[TB19] SGS "**Technical Bulletin MMI-TB19: MMI Orientation in temperate to Tropical (Non-Boreal) Environments**" identified the following metal associations:

Gold: Au, Ag, Ni, Co, Cr, Ce (Nd).
Nickel: Au, Ag, Ni, Co, Cr, Ce (Nd).
Porphyry systems: Cu, Mo, Zn, Cd, Au, Ag, Pb, Co, As, Ce Nd, Rb, La, Se, W, Fe, Mg.

Porphyry system Core: Cu/Mo/Zn ratios
Porphyry system outer halo: Ag, Pb, As Co
Porphyry system Core distal zones: Au, Ag

Kimberlite : Cr, Ni, Pd, Mg, Co, Nb, Y, La, Ce, Nd.
IOCG : Cu, Au, Ag, U, Th, Co, Ce, La, Mg, Fe.
This bulletin emphasizes that mineral deposits tend to be **zoned**. The appraisal of the report infers metal zoning can occur on the property creating complex anomalies with metal responses offset from the other associated pathfinder metals. It is recognized that some metals that respond in a non-boreal environment may not respond in northern Ontario.

SGS[TB20] SGS "**Technical Bulletin MMI-TB20: Inferred Geology Using MMI Ni and Ce**":
Identifies Ni, Cr, Mg, Co, V, Fe, Mn, Ca, Sr, P, Ba and Eu as compatible metals that enter early rock forming minerals (in a melt) such as olivine, pyroxene and titanomagnetite.
Identifies Cs, Rb, Ce (Nd) as incompatible metals that remain in the liquid (fractionated) and end up in increased concentrations in felsics, granites, syenites, pegmatites etc and also in sediments.
Identifies Ce/Ni ratios as pathfinders to differentiate lithologies.

SGS[CS39] SGS **"Case Study 39: C14 Kimberlite, Clifford Township, Kirkland Lake, Ontario, Canada"**: This document appears to have significant problems in accurately connect the text to the figures. This case study was abandoned as a source document, except to identify pathfinders Y, La, Ce, Pr, Nd, Sm, Gd, Tb, Er, and Y.

Robinson: Internal document MMI Orientation study over A4 pipe.

Other bulletins and case studies were examined and considered less significant to the project and are omitted from the above list.

An MMI orientation study (by the author) over the large A4 kimberlite pipe showed the kimberlite pathfinder metals responded over some parts of the A4 kimberlite pipe but not others. This inconsistent response illustrates the importance of collecting multiple samples directly over the targeted mineralization/alteration.

A paced 6¼ .meter ample spacing was selected as the default sample interval over high priority target areas. . Outside of the expected responses area the sample spacing was opened up to 7½ meter to give background values and to test areas of uncertain potential.

The author recommends future sampling of the property should be performed at a 6¼ meter spacing. A 12½ meter sample density will probably be noisy and miss significant number of potentially significant responses. If future economic situations require a compromise between reducing sample density or reducing the area sampled, the preservation of the default 12.5m sample density is essential, and a 6¼ meter density may outweigh the benefits of a 12 ½ meter density. The compromise should be dealt with by reducing line density or selecting highest priority target areas.

8.0 EXPLORATION PROGRAM

The author made logistical and equipment preparations prior to field work. The field work was performed by Doug Robinson Consulting staff: Douglas Robinson and Betty Robinson.

Commercial 2x2 and 1x2 pickets were purchased and carried to the grid. Base Line 000N and Line 2700 were rehabilitated supplementing rooted pickets with new pickets and rechaining and replacing lost pickets. Grid rehabilitation included brushing out approximately 600meters of base line OOON and lines 2500E and Line 2700.



Photo 5 Above: Intersection Base Line 000N and Line 2700E.

A 1.2 meter soil-sampling and a 2.4 meter hand auger were used to collect the soil samples. The 2.4 meter auger was a 1.2 meter auger with a 1.2meter insert was welded into the auger stem. One auger was then used to sample to 1.0 meter and the second auger to 2.4 meters.



Photo 6 Above: Field equipment including 1.2 and 2.4 meter augers and tree planters shovel. Note three generation of pickets from two grid rehabilitations.

A 12½ meter default sample interval was used between the primary orientation sites and a 6¼ interval was used proximal and over the primary ordination sites

At each site; the soil was augured as close as practical to the default location. Obstructions including boulders and outcrops necessitated some sample location offsets, generally less than 3 meters and preferentially perpendicular to the line.

Field notes included the depth to mineral soil and the depth of sample collection, the soil type, (sand, clay, etc.), soil colour, and other pertinent details.

The samples were collected from hand augered holes. The hole was deepened in increments until mineral soil was encountered. The top 10 cm of mineral soil was discarded. The mineral soil from 10-25 cm below the top on the mineral soil was then removed directly from the auger and placed in the sample bag. Any significant pebbles were hand picked from the sample. The soil was logged and the air expelled from the sample bag as the bag was sealed. The sample bag was rolled and placed in a second sample bag from which the air was also expelled. A commercial, water proof sample tag was placed between the inner and the outer bag, with the numbers clearly visible from the outside.

The commercial sample tags come with their sample number printed twice on them. To ensure further accuracy, the last three digits of the sample number were also hand printed on the sample tags, with bold, permanent felt pen numerals (prior to field work). Both the inside and outside sample bags were hand inscribed in bold, permanent felt pen numerals (last three numerals). All sample tag and bag inscriptions were placed with the numbers clearly visible from the outside.



Photo 7 Above: MMI soil sample Z046805



: Soil Sample Z046845Photo 8 Above

The top 10 cm of the mineral soil and overlying organic soils were discarded. Occasionally, debris from the overlying soils would fall down the hole and come up with the sample. The sample was visibly distinct from the overlying material. The samples was hard packed and the overlying material was loosely packed. The overlying material was often mixed with organic soils. This made cross-contamination easily avoidable.

Many holes were re-augered after the mineral soil depth was determined. Soil from the first hole was then discarded. This rendered greater assurance of a true 10-25 cm depth below the upper limit of the mineral soil. Some samples were deemed insufficient from the sampled hole. These holes were repeated and additional mineral soil from the repeated hole was added to the sample to complete the sample aliquot.

The samples were stored in new, white plastic dishpans pending re-logging and sample shipment.

The sampling process results in mud coating everything in the field. To ensure accuracy, the samples were cleaned as follows. The sample bags were dipped in clean water and wiped to remove the mud from their outer bag. The outer and inner bags were then opened and the sample was re-logged, and the field notes were verified and/or augmented. The verified and/or augmented field notes were typed and are included in this report. The mud was wiped from the inner bag, then it was returned to the outer bag with its sample tag facing out so that their numbers could be read. The air was expelled from inner and outer bags to ensure that they did not pop during transport. The sample was weighed (tared to two empty bags) and the samples were systematically returned to the dish pans for temporary storage.

The samples were boxed in two shipping boxes and shipped by Purolator to

SGS Canada Inc.
3260 Production Way
Suite E
Burnaby, BC
V5A 4W4

The author and Betty Robinson commenced sampling Nov 3, 2016 and completed the sampling Nov 5, 2016. We performed grid rehabilitation November 1 and 2, 2016.

Chart: Normalization Ratios (Oxidizing to Reducing Soil Equivalents)

Element	X^r to X^o	Element	X^r to X^o	Element	X^r to X^o
Ag	1.00	Li	1.21	U	0.20
Au	0.25	Mg	0.30	W	0.76
Ba	0.40	Mn	0.36	Zn	8.31
Ca	0.17	Mo	0.19	REE Y	0.56
Co	1.00	Nb	6.49	LREE Ce	0.56
Cr	3.00	Ni	0.90	LREE Gd	0.56
Cs	2.53	Pb	0.68	HREE Dy	0.64
Cu	0.14	Pt	------	HREE Er	0.66
Fe	2.46	Rb	2.59	HREE Yb	0.42

Hg	>1.50		Sr	0.13
K	1.53		Ti	40.00

In this report, oxidized and reduced samples have been treated as two independent populations with an emphasis on the percentile within the applicable populations. The profiles presented in this report plot both raw data and data normalized to equivalent oxidized filtered values on the same chart profiles. The author considers the normalization process a mathematical filter. Once removed from the measurement.

The author also considers unfiltered data more reliable than filtered data if it is practical. The fact that raw data can be verified directly from analytical certificates was also key in the author's decision to give preference to raw data over filtered (normalized) data.

In the 2012 survey; the decision to normalize oxidized to reduced populations was somewhat arbitrary that was based on the apparent smoother data of reduced populations. That survey determined future surveys can be normalized to either the oxidized or reduced equivalent.

The metals W, Mo, Cu and Ti have extreme normalization ratios used to normalize analysis of reduced samples to the equivalent oxidized value These extreme ratios make identification of environment critical to statistical rendering.

The edge between oxidizing and reducing environments was frequently problematic and determinations can be unreliable. Several samples were relogged based on illogical profiles.

Oxidized soils tended to have a distinctive brown to red color in contrast with gray to greenish gray of reduced soils. These difficult to classify soils tended to be yellowish to yellowish gray.

Samples from the edge between oxidizing and reducing environments may have been subjected to varying degrees of oxidation and reduction. It is difficult to know how the samples will respond to statistical normalization.

The various metals may also respond to different threshold values near this oxidation reduction interface at the edges of swamps. For this reason a sample may respond as oxidized for some metals and reduced for others due to different thresholds at the oxidation/reduction interface.

Monitoring Ti, Cr and Mo are an excellent first approximation of the validity of sample differentiation of reduced soils and oxidized soils. Ti and Cr are very low in reduced soils and Mo is very low in oxidized soils. Of these three metals, the Ti appears to be the most reliable indicator of the environment. The 2012 study also established Ti may be represented by at least three environmental populations: oxidised, reduced and clay populations independent of bedrock chemistry.

Future work should deal with the possibility that a significant portion of the Ti response may be to the dominance of clay in the reduced soil samples (see Line 3800E all clay).

Monitoring Ti, Mo and Cr in relation to field notes is a good quality assurance process to verify the location of sample sites. See samples at Line 3800E-62N.

The 2016 sample logs of samples 46723 at 81mS and 46733 at 25mS are problematic and it is uncertain if they the samples are from reduced or oxidized environments.. On some profiles they are represented by blue triangles with the note to this effect. It would be beneficial; to examine this problem more carefully.

8.1 UTM Measurements

In 1994 the Reed Robinson Grid was initiated from an arbitrary origin along the surveyed Eby - Otto Township line a few meters north of a high voltage hydro electric power line right of way cut out. The power line crosses the property in an ENE direction. The origin was assigned an arbitrary coordinate of 000N-40000E. The baseline was cut in an astronomic east west direction. The township line was established as grid line 4000E.

All UTM locations measured to date on the property were measured as Nad 83 Zone 17 measurements. All grid coordinates greater than 4000E are in Otto Tp and all grids coordinates less than 4000E are in Eby Tp. Douglas Robinson and his associates have cut a number of grids in Eby and Otto townships using the Eby Otto Township line as a 4000E reference. These grids includes a large (non contiguous) grid cut in the west part of Eby Township circa 1995-1997.

The Grid location 4000E-000N; was located and measured in 2008 as Nad 83 zone 17, UTM coordinates 0563565mE, 5326834mN.

The grid locations measured in 2012 include:

2500E-300N	0562063mE	5327096mN	Elevation 342m
3800E-000N	0563364mE	5326830mN	Elevation 322m
4000E-000N	0563565mE	5326832mN	Elevation 321m

4200E-465N	0563755mE	5327299mN	Elevation 316m
4350E-425N	0563907mE	5327266mN	(at Line XL 088E)
XL-148E	0563952mE	5327304mN	(Line XL at 148E)
4450E-000S	0564004mE	5326641mN	Elevation 326m
4650E-200S	0564206mE	5326646mN	Elevation 320m

The UTM measurements were performed with a Garmin Rino 530HCx. The WAAS was enabled and the measurements were averaged over a minimum of 200 seconds, but generally a much longer time interval. The measured coordinates (Eastings and Northings) are considered accurate within 5 m; however, the elevations are considered less accurate. Two of the above readings reported illogical elevations. These elevations were omitted from the above chart.

The following UTM locations were reported in 2016

2016-11-01	Eby 25E 300N	**0562056**	E	**5327102**	N	Eby Line 2500E 300N picket found
2016-11-04	Eby 25E 000N	**0562058**	E	**5326801**	N	Eby Line 25E 000N Picket found
2016-11-04	Eby 25E 0N	**0562060**	E	**5326840**	N	Eby Line 25E 0N Picket Found
2016-11-01	Eby 27E 000N	**0562065**	E	**5327823**	N	Eby 27E 000N Base Line Centre of Work
2016-11-01	Eby 27E 0N EST	**0562065**	E	**5326732**	N	Estimated location based on line 4000E 0N
2016-11-01	Eby Trail TE	**0562154**	E	**5327310**	N	Eby Trail TE Turn East towards grid.
2016-11-01	Eby Old Hwy	**0562159**	E	**5327536**	N	Eby Old Hwy 11 Park Truck here. Walk E on old way 66
2016-11-01	2650E 000N	**0562209**	E	**5326808**	N	Eby Base Line 0N 650E
2016-11-01	Eby Trail 27E 500N	**0562242**	E	**5327302**	N	Eby Trail 27E 500N Turn South and follow flagging
2016-11-01	Eby 27E 375N SR	**0562256**	E	**5327175**	N	Eby 27E 375N Point on Line
2016-11-01	Eby 27E 359N QV	**0562256**	E	**5327156**	N	Eby 27E 359N QUARTZ VEIN on Line
2016-11-01	Eby 27E 375N LR	**0562258**	E	**5327175**	N	Eby 27E 375N Point on Line
2016-11-01	27E 000N	**0562261**	E	**5326805**	N	Eby Base Line 0N 2700E Picket not found
2016-11-03	Eby 27EE 275s	**0562261**	E	**5326531**	N	Eby Line 27E Very short Reading
2016-11-01	Eby Trail	**0562302**	E	**5327501**	N	Eby Trail Head Turn South

	Head					onto trail
2016-11-04	Eby 29E 000N	**0562456**	E	**5326805**	N	Eby Base Line 0N 2900E Picket found

9.0 OBSERVATIONS

Anomaly One: Gold

Anomaly One is located at 356-394mN (samples Z04679793-97) and is bounded on the south edge by an auriferous quartz vein at 359mN. It appears this quartz vein may have incorporated gold from the wall rock to the north.

Coincident alkali Metal anomalies (Li-K-Rb-Cs) at 356mN and 375-383mN (Z046792 and Z046795-96) indicate Alkali alteration favorable for gold mineralization may be associated with this anomaly.

Coincident rare earth elements anomalies (Y-Ce-Gd-Dy-Er-Yb) at 369mN (Z046794) indicates a felsic (feldspar porphyry) dike may sub-crop at this location. These REEs could also indicate mineralization and/or alteration.

The high Au value, the moderate to strong Cu-W- Pb-Nb-Hg association and possible felsic dike and possible alkali alteration are positive attributes of this anomaly. Pb-Au-Ag tellurides are a common and economically significant accessory mineral in gold veins of the Kirkland Lake mining camp.

356mN	Z046792	Hg (significant?)
362mN	Z046793	Cu (moderate)
369mN	Z046794	Au (strongest on property), Cu (moderate), U (weak)
375mN	Z046795	W (moderate), Zn (weak)
383mN	Z046796	Mo (weak), Nb (strong), Ti, W (moderate), Zn (weak)
394mN	Z046797	Mn, Pb (strong), Zn (weak)

Shallow overburden stripping along the vein and a North trending, cross trench in the shallow overburden immediately west of line 2700E is recommended.



Photo Above: Betty Robinson examining auriferous quarts vein at 2700E-359N

Anomaly Two: Gold

Anomaly One at located at 331-337mN (sample Z046788-89). This is exactly coincident with gold style alteration encountered in previous mapping.

Coincident rare earth elements anomalies (Y-Ce-Gd-Dy-Er-Yb) at 331mN (Z046788) indicates a felsic (feldspar porphyry) dike may sub-crop at this location. These REEs could also indicate mineralization and/or alteration.

331mN	Z046788	Hg (significant?)
337mN	Z046789	Au (second highest Au value of the property).

A north trending trench is recommended to identify the source of this anomaly.

Anomaly Three For Gold

Anomaly Three is located at 225-281mN (sample Z046771-80) and appears to be focused at 244-262mN.

Coincident rare earth element anomalies (Y-Ce-Gd-Dy-Er-Yb) at 225 and 237-244mN (Z046771 and Z046773-74) indicates that possible felsic (feldspar porphyry) dikes may sub-crop at these locations. These REE could also indicate mineralization and/or alteration. Either case represents gold potential.

Somewhat coincident alkali Metal anomalies (Li-K-Rb-Cs) at 225-387mN (Z046771-81) indicate Alkali alteration may be associated with this anomaly. This alkali anomaly appears to be focused at 237-262mN.

Li	244-262mN	Z046774-77
K	269mN	Z046778
Rb	225-287mN	Z046771-81
Cs	225-262mN	Z046771-77

Base Metal Association

The base metal association appears to be focused at 237-262mN (Z04673-77

Ag	231-243mN	Z046772-74
Au	256mN	Z046776
Cu	256mN	Z046776 Weak
Hg	275mN	Z046779
Mn	262mN	Z046777
Nb	244-262mN	Z046774-77

Anomaly Four: Ni-Co-Cr for PGM's

A Ni-Cr-Co nickel anomaly appears to overlap Base Metal Anomaly. This is being treated as a possible primary source of PGMs independent of expected gold mineralization.

The main anomaly is tabulated below.

Location		Sample #	Co ppb	Cr ppb	Ni ppb
219	mN	Z046770	102	400	
225	mN	Z046771	325	500	711
231	mN	Z046772		500	539
238	mN	Z046773		400	872
244	mN	Z046774	177	700	546
250	mN	Z046775	125		
256	mN	Z046776		400	406
263	mN	Z046777	207	700	
269	mN	Z046778	157		582
275	mN	Z046779		400	490
281	mN	Z046780			502

288	mN	Z046781		
294	mN	Z046782	181	378
300	mN	Z046783	149	

Lessor anomalies:

Location	Include	Sample #Ni	Cr ppb	Ni ppb
188	mN	Z046765	392	400 464

And

Location		Sample #Ni
150	mN	Z046759 623
156	mN	Z046760 491
163	mN	Z046761 484

MNDM is considering PGM research to determine the economic potential for PGM deposits ultramafic intrusives in northeastern Ontario. The presence of many valid bedrock source MaxMin conductors and locally known sulphide zones in direct contact with this intrusive gives an excellent thermal erosion source for Sulphur to scavenge PGM's from the melt. This would logically render an intrusive depleted in PGM's which would be concentrated in dedicated cumulate horizons.

The Ni-Co-Cr Anomaly Four overlaps the base metal suite of Anomaly Three. It is plausible base metals were thermally eroded and incorporated into the ultramafic melt and concentrated in PGM cumulates rendering the intrusive PGM depleted.

Anomaly Five: For Gold and Base metals and PGM's

Line 2700E was specifically targeted to test the best and deepest, multi-frequency, MaxMin EM conductor. This conductor; located at 2700mE-090mN appears to be associated with or along within the North Fault which is exposed at 2540mE-048mN.

The fault is Ca-Mg-Fe carbonate altered and is also associated with and parallel to a series of similar striking Ca-MG-Fe carbonate alteration zones. The signature of the Max Min conductor indicates it is caused by a deep bedrock source, not by the swamp. It appears the swamp is caused by a coincident bedrock erosional feature that is also associated with the cause of the source of the anomaly and the North Fault.

This anomaly extends from 87mN to 187mN. It appears to have two focus points:

- The northern focus located at 2700mE-150mN appears to be coincident with a contact between two lithologies.
- The southern focus is at 088-106mN, at the apparent subcrop trace of the MaxMin Conductor and possibly a short distance north of the North Fault.

This is a drill target due to the recessive weathering of the sub-crop. Two scissored holes crossing in the middle are recommended to prevent drilling over the top of shallow dipping Riedel ore zones similar to the South Mine Complex at Macassa mine.

Parts of this anomaly may be impacted by the reducing chemical environment associated with a swamp. A normalizing factor plotted on the MMI profiles indicates the probable limits of this reduction affect and the anomaly survives.

SGS Labs; the engineer and provider of MMI services and analysis, categorically states, no normalizing factor is justified and is not required to deal with mixed oxidizing and reducing soil environments. According to SGS; the MMI raw data is valid without normalization. In either case the true MMI equivalent to oxidized environments appears to be within the envelope between the raw data and normalized data as plotted on the MMI profiles.

Anomaly Six: Zn-Ag for Gold

Anomaly Six; located between 069mS-44mN, is dominated by Ag and Zn responses.

The strong Ag anomaly peak at 6mS (sample Z046736 at) is distinct and is coincident with the South Fault. This is associated with sample Z046737 at 000mN which is anomalous in Zn, Ag, Co, W, Yb, Rb and K. This is shallow soil that is amenable for overburden stripping.

The strong Ag anomaly peak at 25mN (sample Z046741) is coincident with the 080o trending alteration zone located between the north Fault and the South Fault. This is also shallow soil that is amenable for overburden stripping.

A very strong Zn peak at (sample Z046737 at 37mS) is coincident with the strongest Ag peak encountered in the survey. No apparent source is known for this strong coincident Zn-Ag peak and this should be tested by overburden stripping.

A very weak Au peak was also encountered in sample Z046733 at 25mS.

Anomaly Seven: For Gold

Anomaly seven is anomalous for Au, Pb, Cu, Co, Rb, all REE including Y and Yb. This anomaly is centered at 175mS on a highly altered zone within a swampy Riedel lineament (115o azimuth) that splays ESE from the South Fault at 2480mE-070s.

It appears the high grade South Mine Complex found circa 2003 at the Macassa Mine consists of Riedel ore zones trending SE from the historic near vertical vein deposit mined prior to 2003.

Anomalous Au, Pb, Co, Cu (Weak), Mn, Mo (weak), W (weak), all REE, K (weak),Nb U (suspect were encountered.

Line 2700E was specifically targeted to test this known zone which sub-crops in the Riedel lineament. Parts of this anomaly may be impacted by the reducing chemical environment. Assuming a normalizing factor is justified, it indicates the probable limits of this reduction affect and the anomaly survives.

SGS Labs; the engineer and provider of MMI services and analysis, categorically states, no normalizing factor is justified and is not required to deal with mixed oxidizing and reducing soil environments. According to SGS the raw data is valid without normalization. In either case the true MMI equivalent to oxidized environments appears to be within the envelope between the raw data and normalized data plotted on the MMI profiles.

The high water table makes this a drill target.

10.0 RECOMMENDATIONS

It is recommended the grid be re-cut and a property wide MMI sample program be performed. This should include a few atypical lines cut to test apparent diagonal structures that would not be effectively tested by the north-south grid.

An alternative is to sampling the entire property is to prioritize approximately half of the property for re-cutting lines and MMI sampling. The following chart is recommended as a half property sampling program. The entire property was examined in light of all data collected during the 1994-1995 period. Particular emphasis was placed on sampling those lines that have the best economic potential and the best soil environment for reliable samples.

Chart: Recommended Half Property Sampling Program

Recommendation justified to historic 1994-1995 data.

Line	From	To	Meters	Samples	All NS lines to test the 2 main EW shear zones
1900E	-25	425	450	37	Transect of property and to test chlorite alteration and EM conductor.
2450E	**-400**	**400**	**800**	**65**	Augment line 2500E anomalies, test projected intersection of South Break & Riedel Zone
2550E	**-325**	**400**	**725**	**59**	Augment Line 2500E anomalies & test Riedel Zone S of base line
2650E	**-200**	**150**	**350**	**29**	Test South Break and Riedel Zone. Complete line if financing available.
2800E	-425	400	825	67	Property transect and to test shallow EM anomaly in oxidized environment and test Riedel structure south of base line.
3000E	-450	25	475	39	Transect of property selected for dominance of favorable oxidized soil environment. Also to test Riedel structure south of base line.
3525E					Natural transect location. Much swamp reduces the viability of this line S of the base line. Note at 300S is the convergence of a major EW trending swamp and a major NW-SE trending swamps. Survey if funding is available. See line 4500E below.
3650E					10S-138N is favorable oxidized soil environment over the prime target area. Test if financing available
3700E	-862	400	1262	102	Transect of property and to test at or near the projected intersection of Riedel structure and main EW structures
3750E	-275	400	675	55	Augment line 3800E anomalies and test at or near the projected intersection of Riedel structure and main EW structures
3800E	-862	400	1262	102	Transect of property, line 3800E verification test Riedel structure S of base line.

3850E	-450	400	850	69	Transect of property and augment line 3800E anomalies and test Riedel structure S of base line
3900E	-862	400	1262	102	Augment of lines 3800E and 4000E anomalies and test Riedel structure S of base line
3950E	**-250**	**400**	**650**	**53**	Augment line 4000E anomalies and test Riedel structure S of base line
4000E	-450	400	850	69	Transect of property. Verify Line 4000E anomalies and test Riedel structure S of Base Line
4050E					If finances permit, test 4050E to augment line 4000E anomalies and Test Riedel structures N and S of base line
4100E	-450	465	915	74	Transect of property and test Riedel structures (N & S of base line)
4200E	-450	465	915	74	Transect of property. Test Riedel structures N & S of base line. Tests a large oxidizing soil environment with two minor swamps.
4300E	**-438**	**465**	**903**	**73**	Transect of property west of gold showing and test favorable (flat) magnetic anomaly, the projected intersection of the main EW trending North Break and South Break and Riedel structure (trend NW). Much of the proposed transect is an oxidized soil environment.
4350E	**-438**	**465**	**903**	**73**	Transect of property and test Riedel structure E of Au showing, a favorable (flat) magnetic anomaly N of base line and a large oxidized soil environment with little outcrop
4400E	**-75**	**465**	**540**	**44**	Transect of priority area and test a Riedel structure SE of Au showing
4450E	-438	465	903	73	Transect of property and test the Riedel structure SE of Au showing.
4500E	-425	465	890	72	Transect of priority area and test the Riedel structure SE of Au showing. **This is an**

					important Orientation Test of 600m+ reducing environment to better determine MMI statistical processes on the property
4550E	-425	465	890	72	Transect of property and test the Riedel structure SE of Au showing.
000S	**4300**	**4700**	**400**	**33**	Augment target from line 200S (NS Zone).
250S	**4350**	**4750**	**400**	**33**	Augment target from line 200S (NS Zone).
380S	**4300**	**4700**	**400**	**33**	Augment N-S target from line 200S and test potential source of Au float found at 4446E-421S .

Cost Estimate

The estimated cost of the above program is
$60,000 Analytical cost by SGS
$15,000 Contract line cutting
$12,000 Contract sampling
$87,000 Total
These costs exclude technical support, supervision and report writing

11.0 REFERENCES

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REPORT

ON

FIRST NATIONS CONSULTATION

(January 2018)

Robinson Property

Eby Otto Township
Larder Lake Mining Division
North-eastern Ontario

NTS
42A1

UTM
Grid Zone 17
Nad 83
0563565mE, 5326834mN

For

Douglas Robinson & Betty Robinson

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Common Social Conscience and First Nations Issues

For a society to thrive, all of its members, including first nations, must have an equal opportunity for economic success. This requires cooperation and communication from all parties. Prospectors, junior exploration companies and mine developers; in addition to the rest of Canadian society, must work to this end.

At a national level, all sectors of Canadian society benefit from the use of lands historically ceded by first nations people, and as a result, must bear the responsibility of ensuring that all first nations communities are treated fairly, with equal access to the economic benefits of said lands ceded to Canadian governments. This compensation should not be borne by only selected sectors of society.

The local context of this report is rural northern Ontario in which all local communities are dependent on mining and other primary resource extraction. Previous collapses of the mining industry have had devastating economic and social repercussions for all. The industry's health is directly connected to the wellbeing of all northern peoples. When this industry is selected, to the exclusion of many other industries, to bear the weight of correcting historical injustices, it disproportionately affects already economically disadvantaged regions of rural Canada, including its native communities.

The purpose of this report is twofold. First, it is a call to **national, society-wide support** to correct historical injustices to first nations peoples, thereby bringing fairness and peace into Canadian and first nations relationships. Second, it calls for the **abolition of two-tiered native compensation** and **disproportionate responsibility of primary industry to correct historical injustices of society as a whole.**

The 2012-2013 revisions to the Mining Act pertaining to first nations peoples are a positive step in correcting historical injustices, but they are inadequate in their scope, and should be legislated at national and provincial levels, resulting in fair compensation from **all** sectors of the Canadian economy.

Mining Act Awareness Program

Douglas Robinson successfully completed the Ministry of Northern Development and Mines "Mining Act Awareness Program" November 12, 2012 with verification number 8DFC-9763-C228-7110 as a requirement to use his Prospector's License.

Douglas Robinson successfully completed the Ministry of Northern Development and Mines "Mining Act Awareness Program" November 12, 2012 with verification number 5497-0BF8-DB94-0205 as a requirement to operate as qualified supervisor.

The Mining Act Awareness Program was again completed twice on December 30, 2017 with verification numbers #1314-1074-7097-6678 and #66DA-EC9D-20CC-79D8, as a requirement to use his Prospector's License. and to as a requirement to operate as qualified supervisor.

Betty Robinson successfully completed the Ministry of Northern Development and Mines "Mining Act Awareness Program" December 27, 2012 with verification number ICOA-FF1D-6792-A747 as a requirement to use her Prospector's License.

Mining Act Sets Legal Precedence Through Discrimination

The 2012/2013 Mining Act amendments are setting legal precedence for first nations' entitlement relating to:

- all lands in Ontario and Canada
- financial expectations of first nations communities from economic activity
- equal occupational training and employment opportunities for first nations peoples.

This entitlement:

- is based on most private lands, corporate lands and Crown lands originally being first nations' lands
- is based on the Canadian mining industry operating on, and benefiting from, said lands

The logical extension of this precedence applies to all Canadians and companies operating in Canada as we all similarly benefit from activities carried out on said lands. This includes not only rural agricultural land, but also the urban industrial heartlands and the financial centres of our country.

The preamble to the first nations section of the report suggests that this is generally progressive legislation in its intent, but that it is **flawed in its ability to address the fair compensation of <u>all</u> native groups** and even in its **limited scope of industrial/commercial compensation** to native groups.

The Mining Act revisions being enacted in 2012 and 2013 discriminate against first nations not proximal to commercial/industrial developments and is also discriminatory to new exploration and mining developments proximal to first nations communities.

For example, the few first nations that are close to new mining operations will have a much greater benefit than the many groups that are not. Groups that are close to historical active mines or manufacturing and service operations would not receive nearly the same reward.

Just as the Act discriminates against the majority of first nations far from new mining activity, it also creates an uneven playing field for new exploration and mining developments. There is a moral obligation for all Canadians and commercial ventures to equally bear the burden of compensating first nations to honour our historic treaty obligations. **This is creating a two-tiered system for first nations as well as industry, and it counterproductive to crating the just society we strive for as a nation.**

All first nations should benefit equally from all commercial activities in this country, from individual access to employment to communal remuneration for activities on their historical land ceded to the governments of Canada. This means that all first nations should receive benefit not only from mining and similar primary industries, **but also** infrastructure projects, service industries, all levels of manufacturing, finance, and government agencies. As a result, the spirit of these well-intentioned amendments belongs in province and nation-wide legislation.

Secrecy and separated bargaining: a recipe for disaster and discrimination

When this province/nationwide legislation is enacted, it is important that negotiations between the mining industry and first nations communities be done in a professional manner.

It is the experience of the author that first nations groups in his situation have asked to bargain **separately** and **secretly**. This is a formula for inefficiency and uncertainty.

It is detrimental to industry as the practice of **secrecy** is in contravention of Security Commission legislation that prospectors and mining companies are required to obey. All publicly traded Canadian companies must disclose material changes including contracts with other parties. Entering into these secret agreements is illegal under securities law. Further, this type of contract can be construed as a bribe by the regulatory agencies, with serious consequences for all parties.

This lack of transparency is also detrimental to first nations communities and their leaders. Secret agreements undermine the image of integrity that Canadians expect of all leaders in our nation. It also creates questions of fairness to all in the affected communities.

Separate bargaining creates a strong disincentive for investing in many sectors, including the mining industry. For example, mining properties with many names on title (estates) tend to be difficult to negotiate successfully. Similarly, properties with multiple native claimants demanding individual bargaining have caused mining companies to walk away from otherwise promising ventures in Ontario. The failure of these ventures affects all sectors of the local community.

The author suggests that all first nation parties bargain collectively when they claim an interest in land development situations. In the absence of participation by some first nations, the negotiations default to the first nation or nations most impacted and the negotiations represent the total of all first nations' interests.

Mining Act Information Meeting April 3, 2012

April 3, 2012 the author attended an information meeting concerning the proposed amendments to the Mining Act to be enacted in 2012 an 2013 as proposed by the MNDMF Environmental Registries "011-5733", "011-5785" and "011-5786.

Environmental Registry "011-5785" and "011-5786"* Posting

The Environmental Registry "011-5785" and "011-5786"* postings are included in the appendices to this report.

Environmental Registry "011-5733", "011-5785" and "011-5786"* Submissions

Below is the author's submission to Environmental Registries numbered "011-5733", "011-5785" and "011-5786". Only responses to Environmental Registries numbered "011-5785" and "011-5786" are relevant to first nations issues and the Mining Act amendments. The issues of these two registaries were deemed to be overlapping, thus a common response was made to both registries. The responses were electronic files in Microsoft Word 2003 format to facilitate inclusion on the environmental registry. The links on this site lead to the following registry specific sites listing the comments:

File 011-5785: http://www.ebr.gov.on.ca/ERS-WEB-External/searchCommentList.do?ebrNum=011-5785&noticeId=MTE1OTQy&statusId=MTc2NTM1&noticeHeaderIdString=MTE1OTQy

and

File 11-5768: http://www.ebr.gov.on.ca/ERS-WEB-External/searchCommentList.do?ebrNum=011-5786&noticeId=MTE1OTQz&statusId=MTc2NTM0&noticeHeaderIdString=MTE1OTQz.

The MNDMF staff processing the comments have gave assurance the electronic format file comments would be preserved in the permanent publicly accessible files relating to these two registries.
The authors submissions to Environmental Registry "011-5785" and "011-5786" are included in the appendices to this report.

Offer to Matachewan First Nation April-May 2012

MNDMF sent the author a list of the six first nation and Métis groups that claim rights in the lands the author and his family traditionally explore in Eby and Otto townships.

This list is the (contact information amended to verbal confirmation from the individual groups):

Abitibiwinni, Conseil de la Premierre Nation : Attention **Bruno Kistabish** Chief
Phone: 819 732-6591 Email: bruno@pikogan.com

Beaverhouse First Nation: Attention: **Gloria McKenzie** Chief
Phone: 819 732-6591 Email: bruno@pikogan.com

Matachewan First Nation: Attention: Chief **Alex (Sonny) Batisse**
Phone: 705 565-2230 extension 222 Email : micheline.dube@xplornet.ca
Micheline Dube : micheline.dube@xplornet.ca

Timiskaming First Nation: Attention: **Terence McBride**,
Phone : 819 723-2370 Email: tfnchirf@parolink.net

Wahgoshig First Nation (Abitibi #70): Attention: **David Babin**
Phone: 705 273-2055 Email: wahgoshi@ntl.sympatico.ca

Métis Nation of Ontario: Attention: **Gary Lipinski** President
Phone: 613 798-1488 Email: garyl@metisnation.org
or Consultations@metisnation.org

The author practices transparent communication by sending identical emails of all communication and negotiations with all the groups collectively so all are informed. The author practices disclosure to satisfy Securities regulations if and when the regulations should apply to the property.

The Matachewan First Nation has consistently responded to communications and appears to be acting in good faith on behalf of all six groups listed below.

From Matachewan First Nation Counter Offer – May 17, 2012

The Matachewan First nation has responded with the counter offer of May 17, 2012. This counter offer is included in the appendices of this report.

To Matachewan First Nation Counter Offer – June 2, 2012

The author responded to the above first nations' counter offer of May 17, 2012 with a counter offer of June 2, 2012. The author's counter offer of June 2, 2012 was extended collectively to all six groups including the **Abitibiwinni, Conseil de la Premierre Nation,** the **Beaverhouse First Nation,** the **Matachewan First Nation,** the **Timiskaming First Nation,** the **Wahgoshig First Nation, and** the **Métis Nation of Ontario**

No first nation has responded to the June 2, 2012 offer. As such, that offer has no effect. However, the author is honoring the terms of the offer without the obligation of the offer. The author continues to communicate with the six first nations– Métis groups as requird and the Matachewan First Nation continues to communicate with the author.

To Matachewan First Nation Notice of Continuance October 26, 2012

October 26, 2012 the author updated the **Abitibiwinni, Conseil de la Premierre Nation,** the **Beaverhouse First Nation,** the **Matachewan First Nation,** the **Timiskaming First Nation,** the **Wahgoshig First Nation, and** the **Métis Nation of Ontario** concerning the continuance exploration of the property. That communication is included in the appendices of this report.

From Matachewan First Nation November 30, 2012 Response to October 26, 2012 Notice of Continuance

In an emailed letter dated November 30, 2012 the Matachewan First Nation acknowledged October 26, 2012 notice of continuance of exploration on the property. That communication is included in the appendices of this report.

MNDMF Information Presentation November 1, 2012

November 1, 2012 the author and Betty Robinson attended and participated in the MNDMF presentation "MAM Phase 2 Industry Presentation" held in the Sunny Room at Hockey Heritage North, Kirkland Lake Ontario.

The presentation dealt with amendments to the Mining Act enacted in 2012 and 2013, MAM Phase 2, provincial-standards-for-early-exploration and **aboriginal exploration consultation**.

The contact persons were:

Joyce Delost
Email: joyce.delost@ontario.ca .
and
Dawn-Ann Metsaranta, P.Geo.
Mineral Exploration and Development Consultant
Ministry of Northern Development and Mines
Ontario Government Complex
5520 Highway 101 East, P.O. Bag 3060
South Porcupine, Ontario P0N 1H0
Email: Dawn-Ann.Metsaranta@ontario.ca

Letter to Matachewan First Nation December 07, 2012

December 7, 2012 the author acknowledged the Matachewan First Nation's November 30, 2012 Response to the October 26, 2012 Notice of Continuance

That communication is included in the appendices of this report.

CERTIFICATE OF QUALIFICATIONS

I, Douglas Robinson, of 24 Victoria Avenue, Swastika, Ontario hereby certify that:

1. I am a registered professional Engineer of the province of Ontario, No. 39322011.

2. I am a graduate of Queen's University in Kingston Ontario with an Honours Bachelor of Science, Geological Engineering 1975, and
Northern College, School of Mines in Haileybury, Ontario, 1970.

3. I have been practicing my profession since graduation.

4. The information contained in this report is the result of work done by myself and the references cited.

5. December 30, 2017 I completed two MAAP tests numbered:
#1314-1074-7097-6678 and #66DA-EC9D-20CC-79D8,
one to renew my Prospector's Licence and one to act as certified as qualified to perform other functions as deemed necessary and appropriate by MNDM.

6. During the preparation of this report I required shoulder surgery that rendered both arms ineffectual during November, December \of 2017 and part of 2018.

Respectfully submitted

Douglas Robinson, P. Eng.
January 08, 2018

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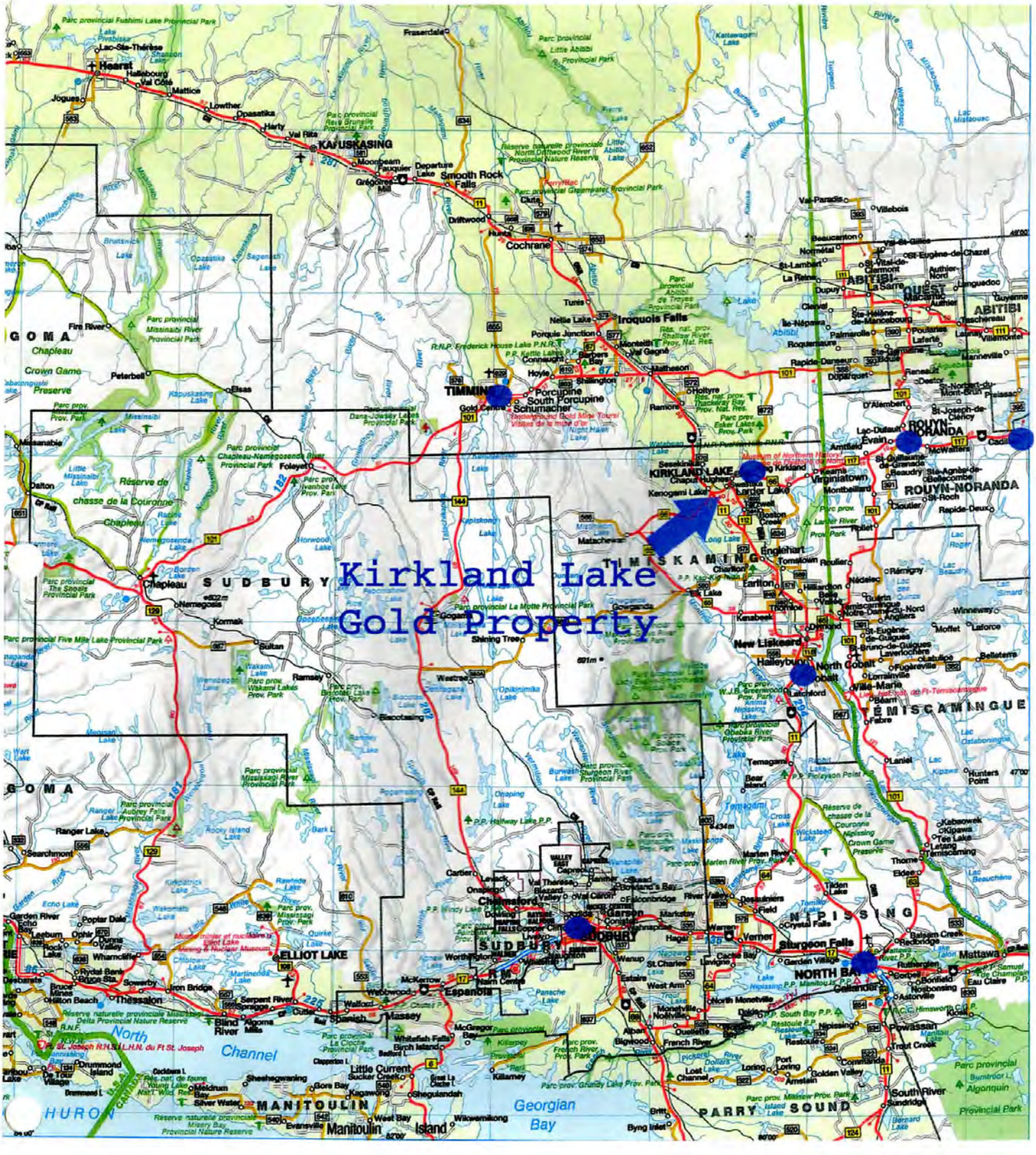
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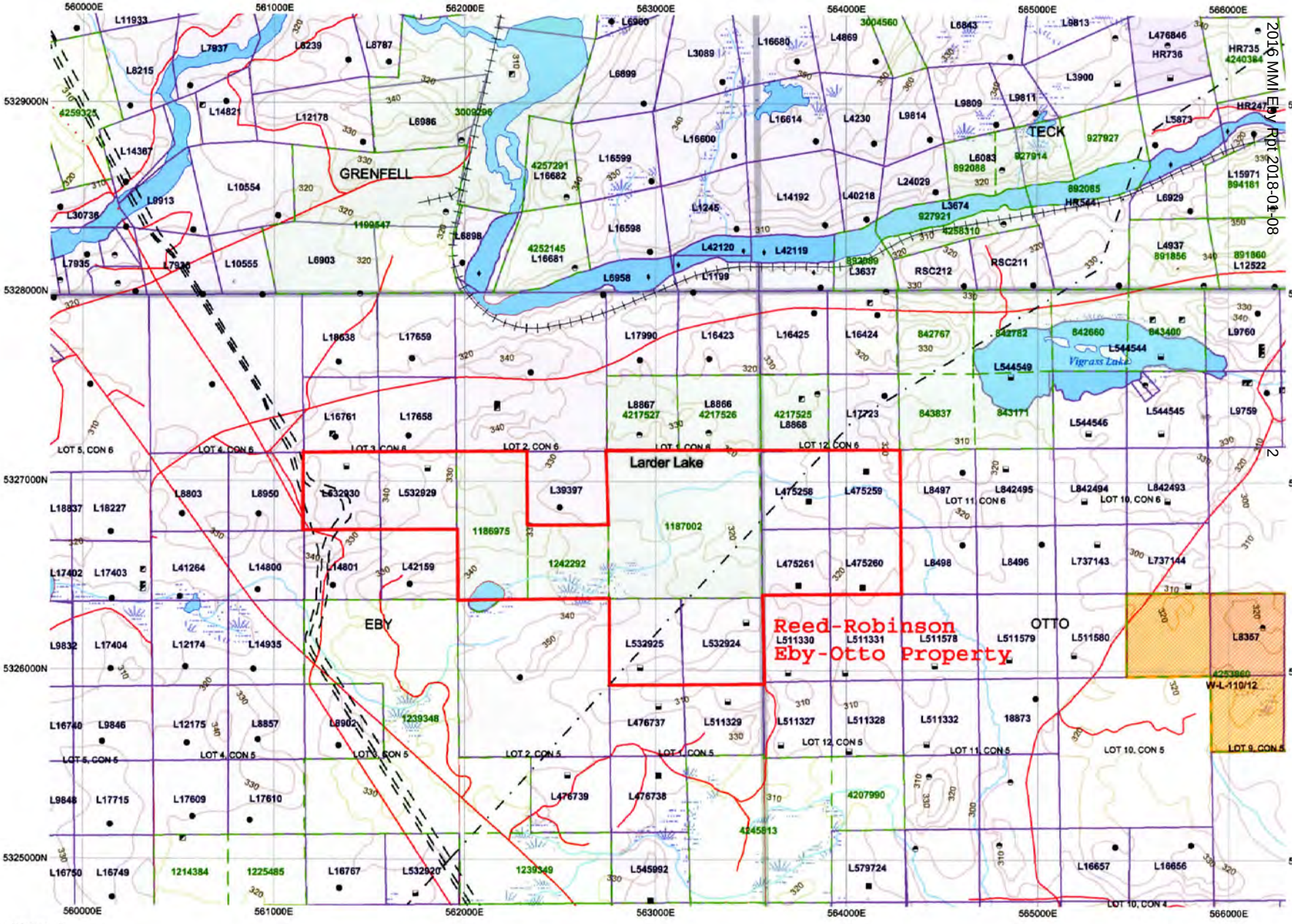
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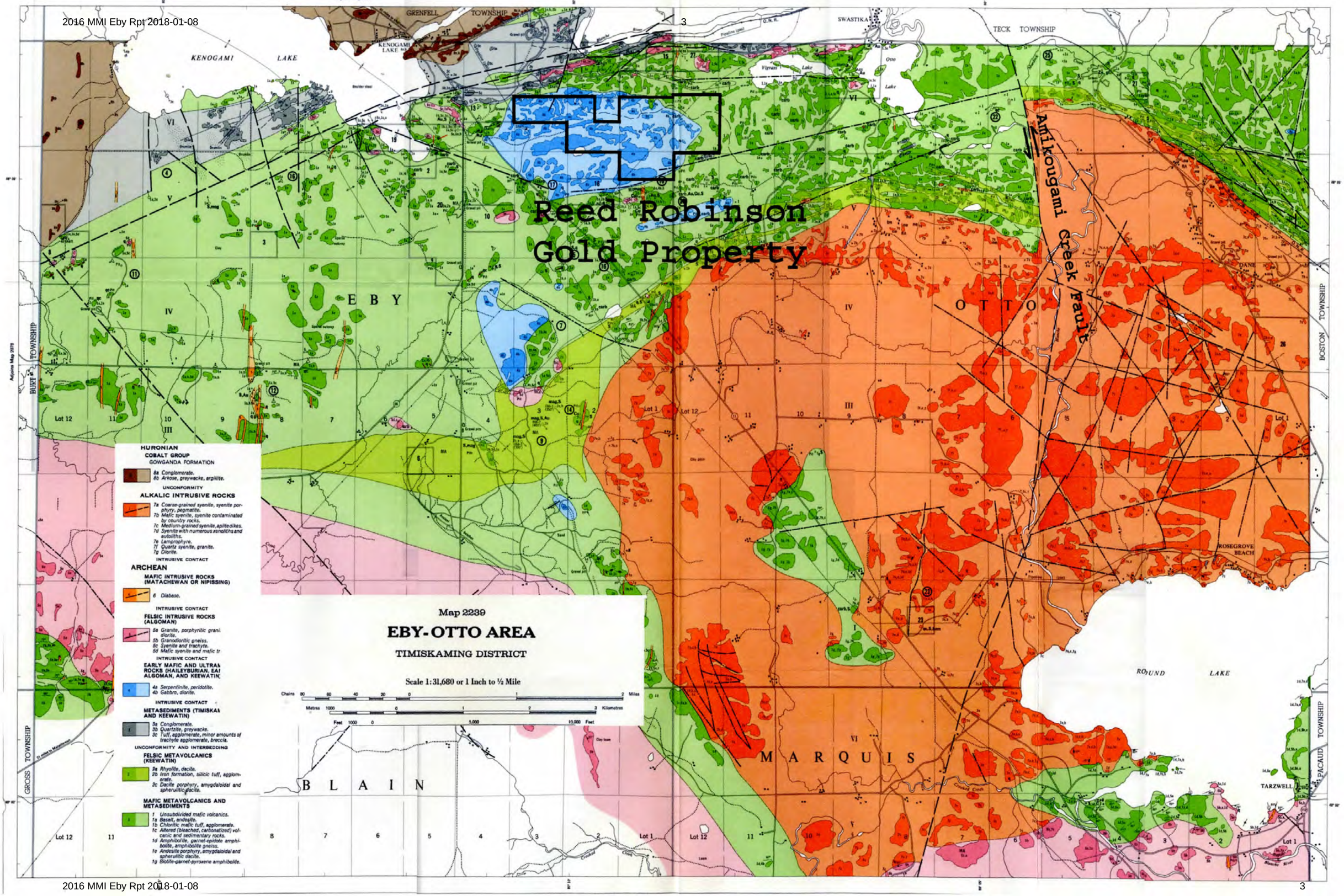
Respectfully submitted

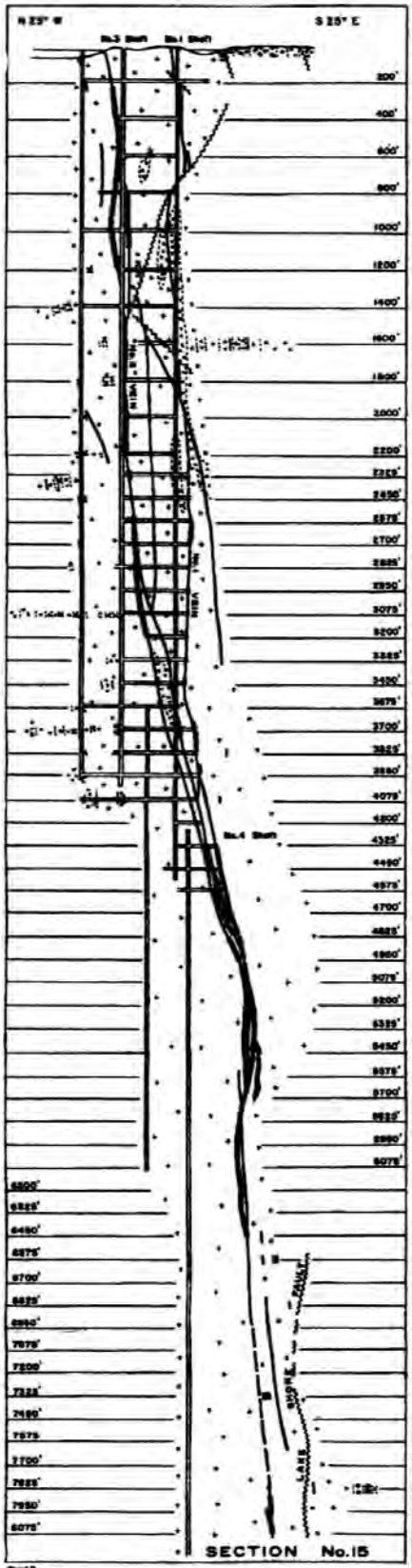
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January 08, 2018

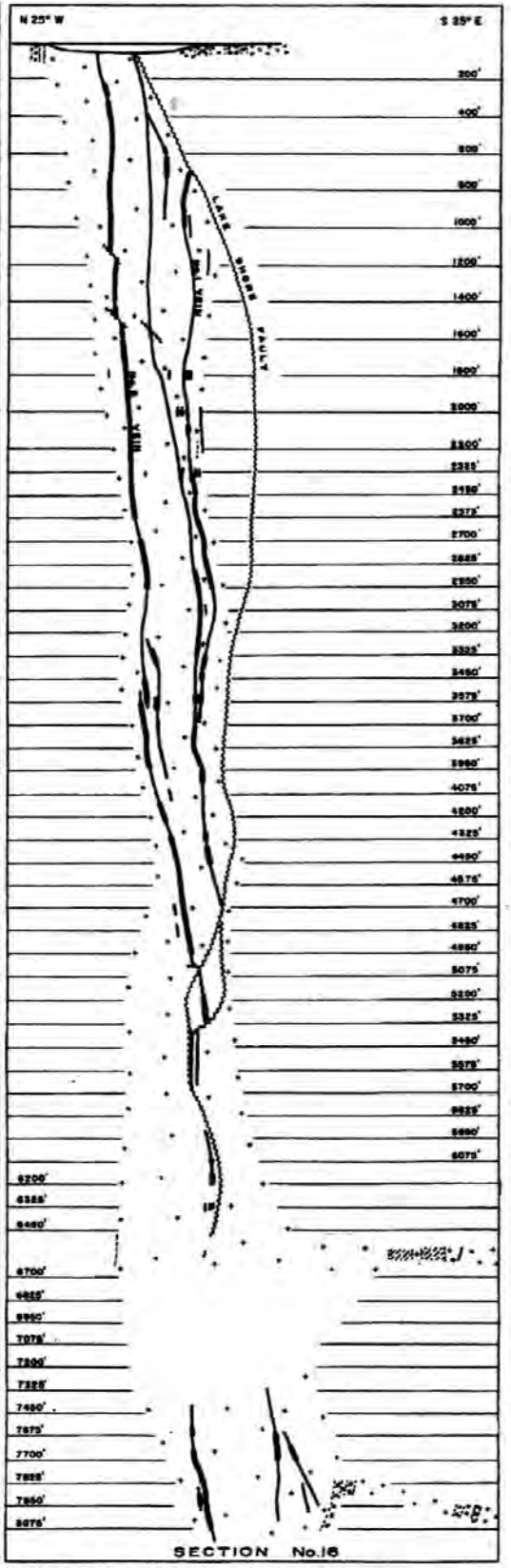

Kirkland Lake
Gold Property
TIMMINS
KIRKLAND LAKE
KAPUSKASING
Iroquois Falls
Cochrane
Hearst
Chapleau
SUDBURY
ELLIOT LAKE
TIMISKAMING
NIPISSING
TÉMISCAMINGUE
ROUYN-NORANDA
MANITOULIN
PARRY SOUND
Georgian Bay
North Channel
HURON



2016 MMI Eby Rpt 2018-01-08


Reed Robinson
Gold Property
Amikougami Creek Fault
E B Y
O T T O
M A R Q U I S
B L A I N
KENOGAMI LAKE
GRENFELL TOWNSHIP
TECK TOWNSHIP
SWASTIKA
BUJET TOWNSHIP
GROSS TOWNSHIP
BOSTON TOWNSHIP
PACAUD TOWNSHIP
ROSEGROVE BEACH
TARZWELL
ROUND LAKE
HURONIAN
COBALT GROUP
GOWGANDA FORMATION
8a Conglomerate.
8b Arkose, greywacke, argillite.
UNCONFORMITY
ALKALIC INTRUSIVE ROCKS
7a Coarse-grained syenite, syenite porphyry, pegmatite.
7b Mafic syenite, syenite contaminated by country rocks.
7c Medium-grained syenite, aplite dikes.
7d Syenite with numerous xenoliths and autoliths.
7e Lamprophyre.
7f Quartz syenite, granite.
7g Diorite.
INTRUSIVE CONTACT
ARCHEAN
MAFIC INTRUSIVE ROCKS (MATACHEWAN OR NIPISSING)
6 Diabase.
INTRUSIVE CONTACT
FELSIC INTRUSIVE ROCKS (ALGOMAN)
5a Granite, porphyritic granodiorite.
5b Granodioritic gneiss.
5c Syenite and trachyte.
5d Mafic syenite and mafic tr
INTRUSIVE CONTACT
EARLY MAFIC AND ULTRA ROCKS (HAILEYBURIAN, EA ALGOMAN, AND KEEWATIN
4a Serpentinite, peridotite.
4b Gabbro, diorite.
INTRUSIVE CONTACT
METASEDIMENTS (TIMISKA AND KEEWATIN)
3a Conglomerate.
3b Quartzite, greywacke.
3c Tuff, agglomerate, minor amounts of trachyte agglomerate, breccia.
UNCONFORMITY AND INTERBEDDING
FELSIC METAVOLCANICS (KEEWATIN)
2a Rhyolite, decite.
2b Iron formation, silicic tuff, agglomerate.
2c Dacite porphyry, amygdaloidal and spherulitic dacite.
MAFIC METAVOLCANICS AND METASEDIMENTS
1 Undubdivided mafic volcanics.
1a Basalt, andesite.
1b Chloritic mafic tuff, agglomerate.
1c Altered (bleached, carbonatized) volcanic and sedimentary rocks.
1d Amphibolite, garnet-epidote amphibolite, amphibolite gneiss.
1e Andesite porphyry, amygdaloidal and spherulitic dacite.
1g Biotite-garnet-pyroxene amphibolite.
Map 2239
EBY-OTTO AREA
TIMISKAMING DISTRICT
Scale 1:31,680 or 1 Inch to ½ Mile
Chains 80 60 40 20 0 1 2 Miles
Metres 1000 0 1 2 3 Kilometres
Feet 1000 0 5,000 10,000 Feet



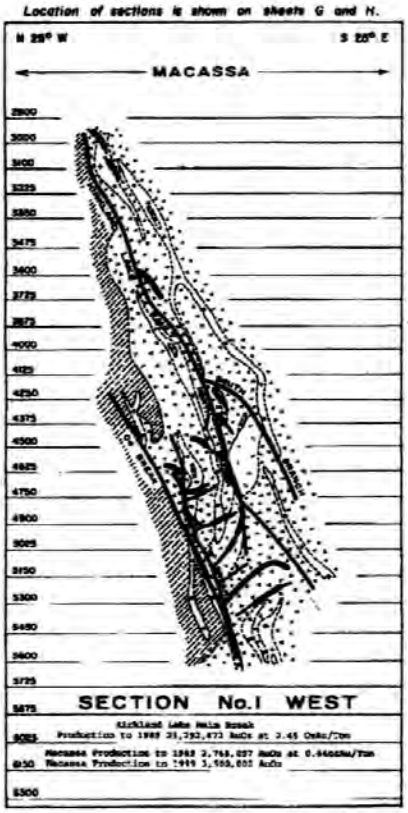


SOURCE OF INFORMATION

Macassa Mine plans, 1963.

NOTE

Location of sections is shown on sheets G and H.



Ont Dept Mines Geological Circular No. 11 (1964)
Geology of the Deep Developments on the Main Ore Zone at Kirkland Lake

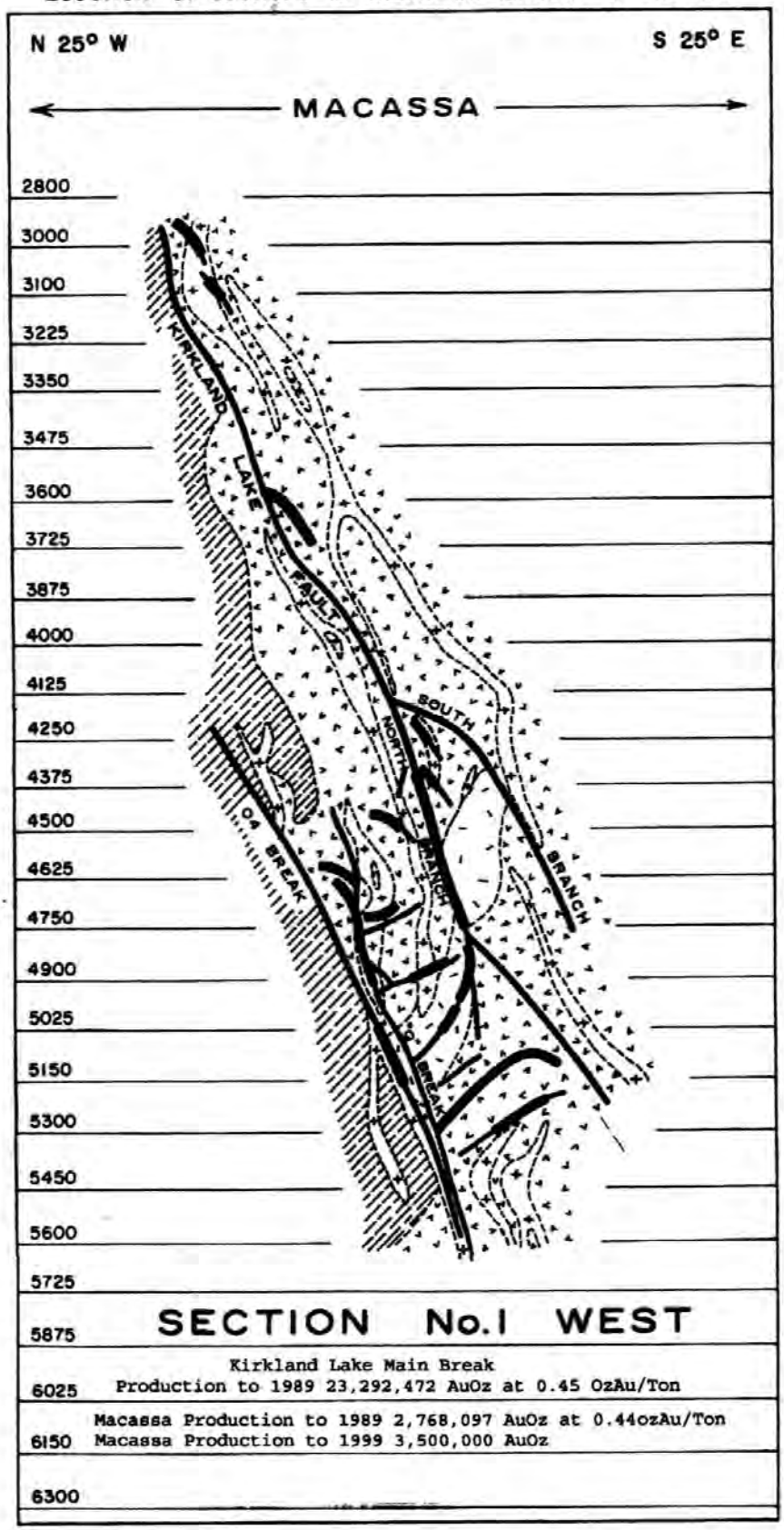
SOURCE OF INFORMATION

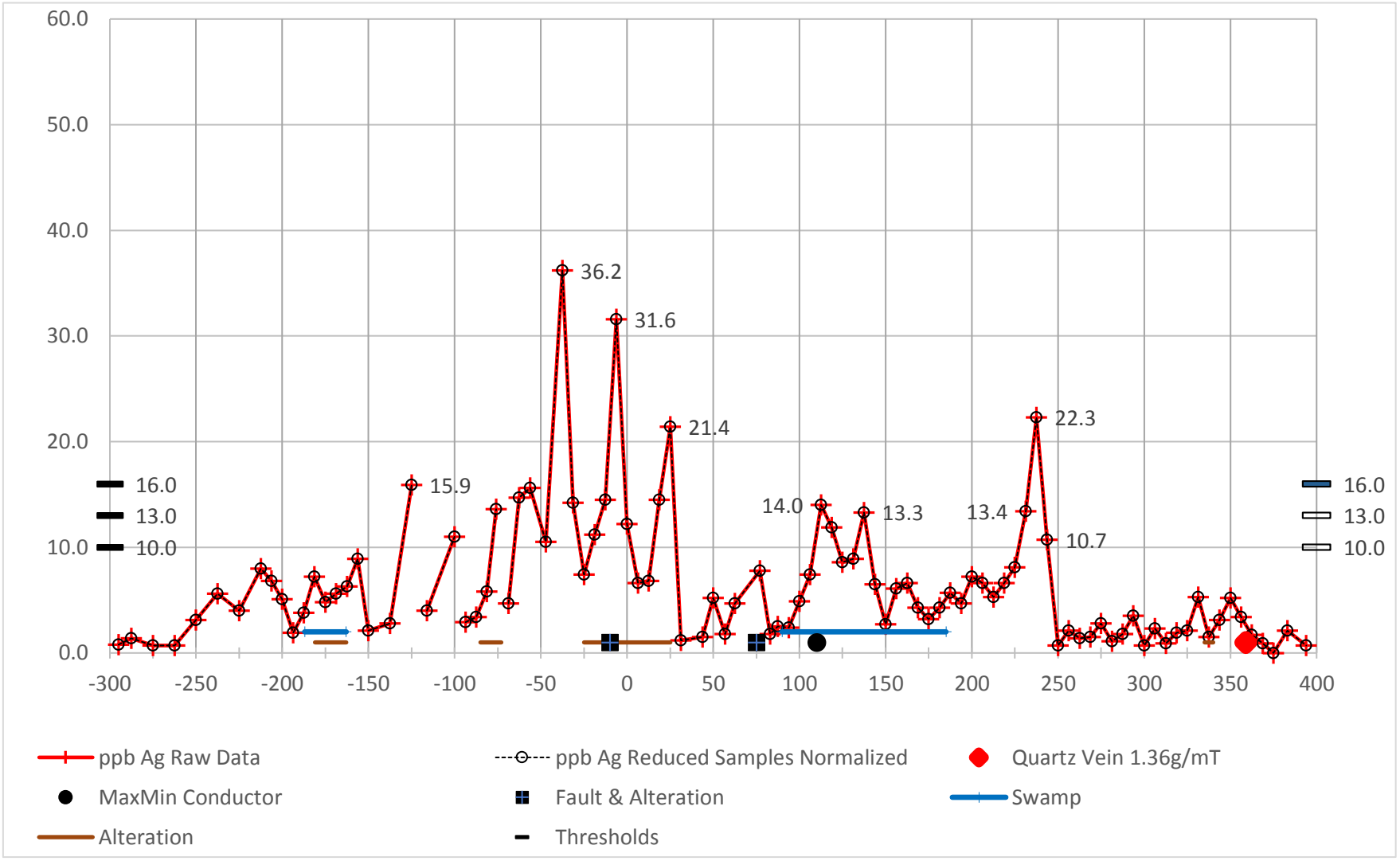
Sheet A
Sections 1W to 4W
Macassa Mine

Macassa Mine plans, 1963.

NOTE

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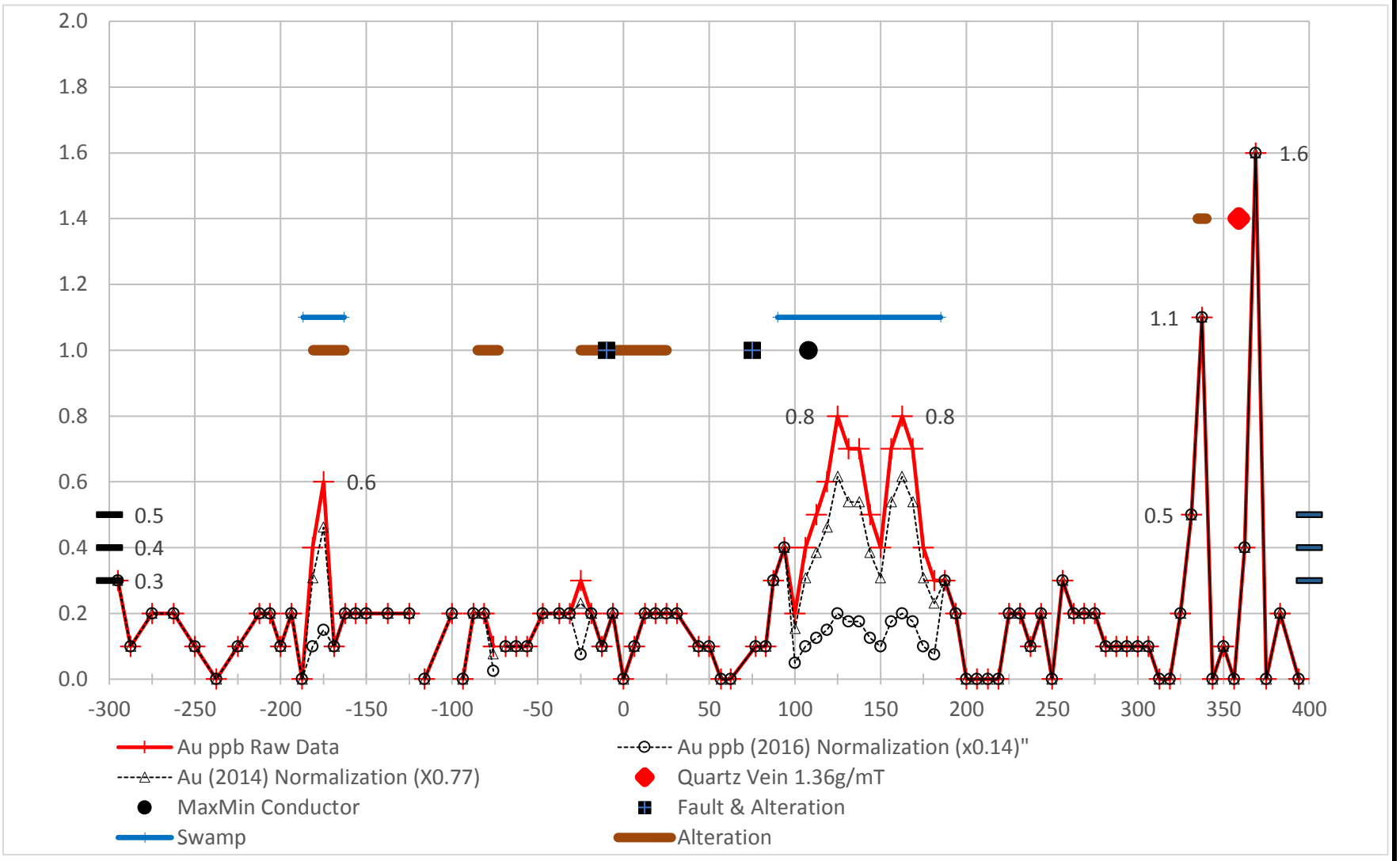


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>10 Possibly anomalous, >13 Probably Anomalous, >16 Anomalous (Mineralogical Cause?)

Ag^{R}x1.00 is equivalent to Ag^{O}

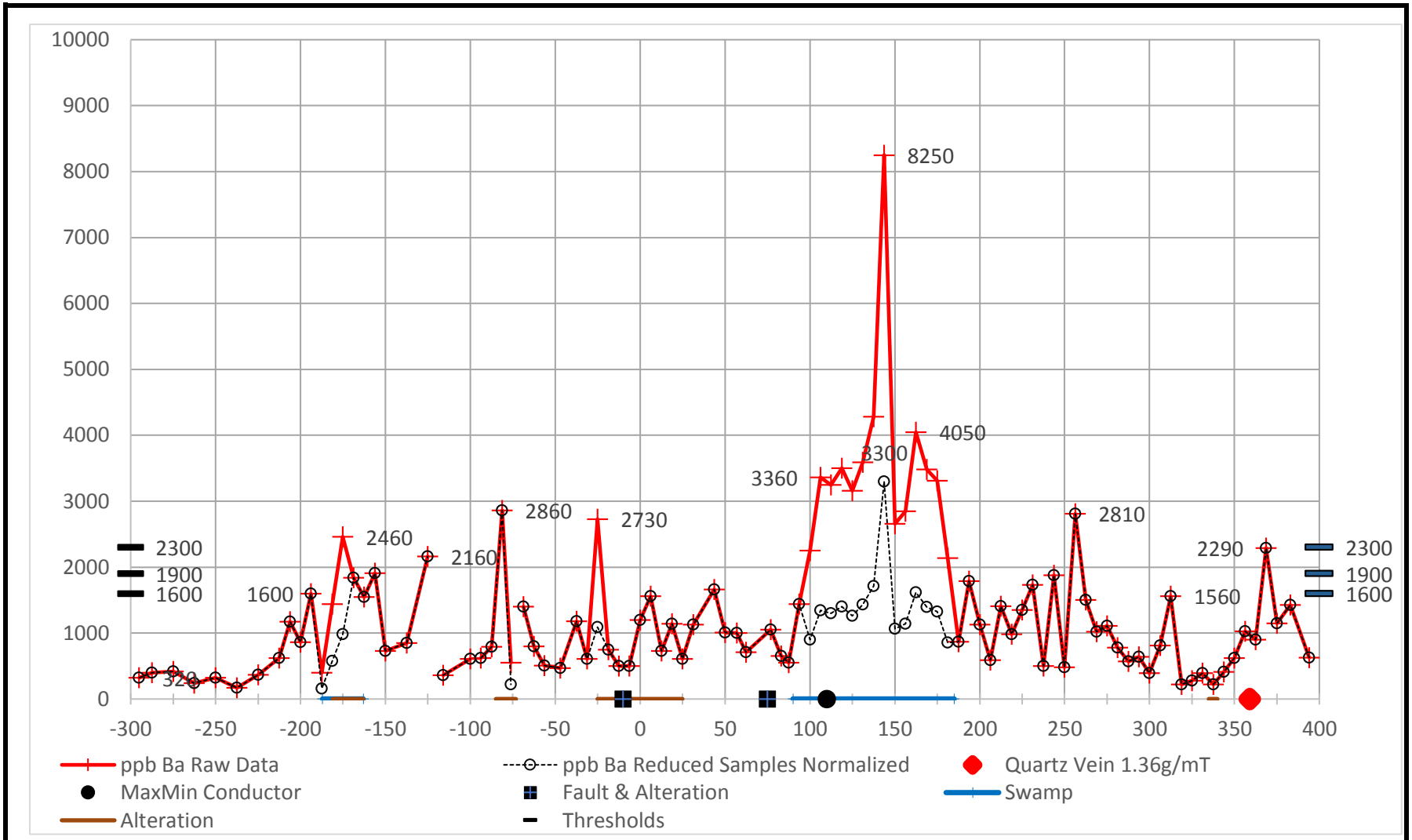
Ag



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>0.3 Possibly anomalous, >0.4 Probably Anomalous, >0.5 Anomalous *(Mineralization?)*

Aux0.25 is equivalent to Au^{O} (*X0.77 2014*)

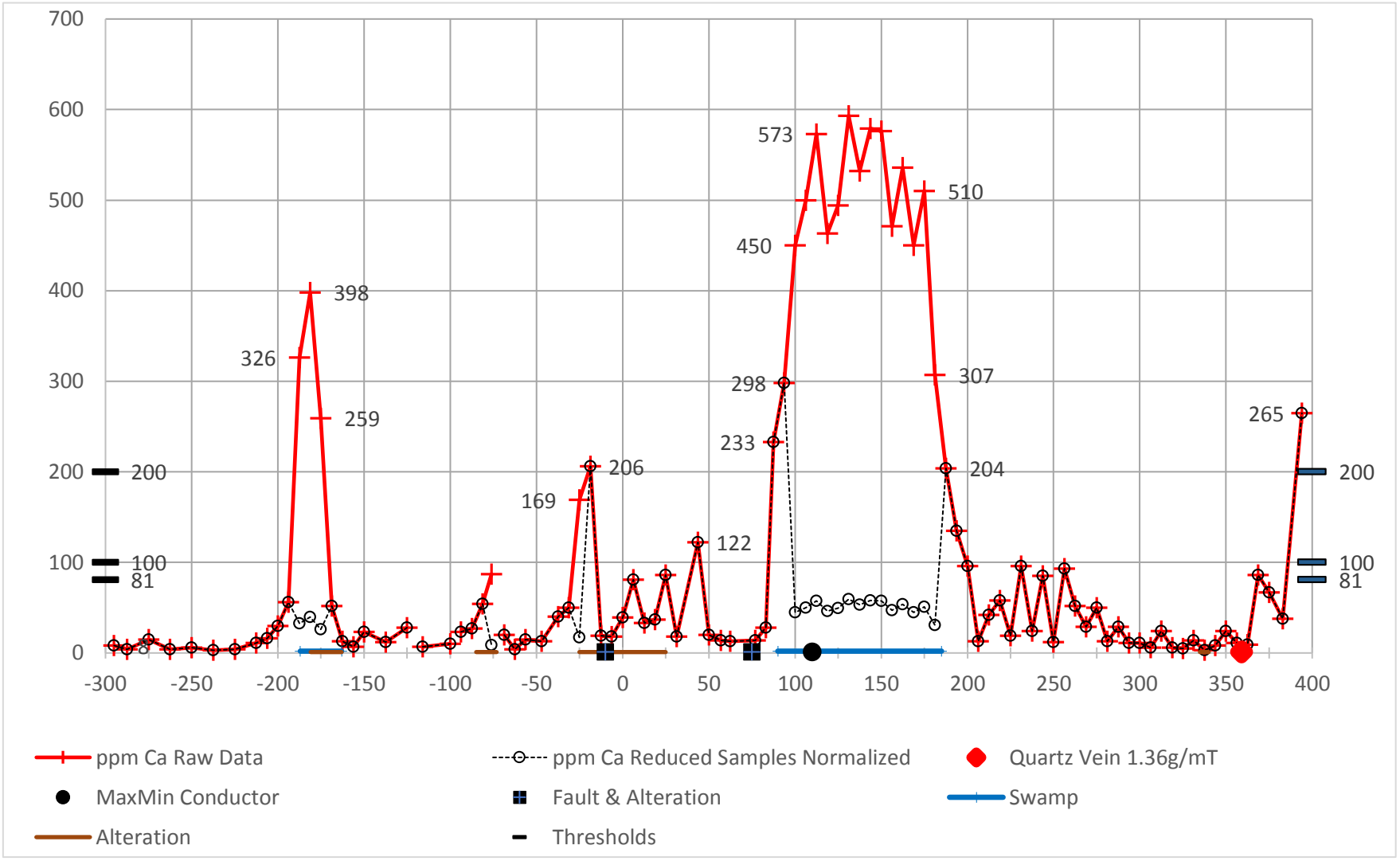


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>1600 Possibly anomalous, >1900 Probably Anomalous, >2300 Anomalous (Lithological Cause?)

Ba^{R}x0.40 is equivalent to Ba^{O}

Ba

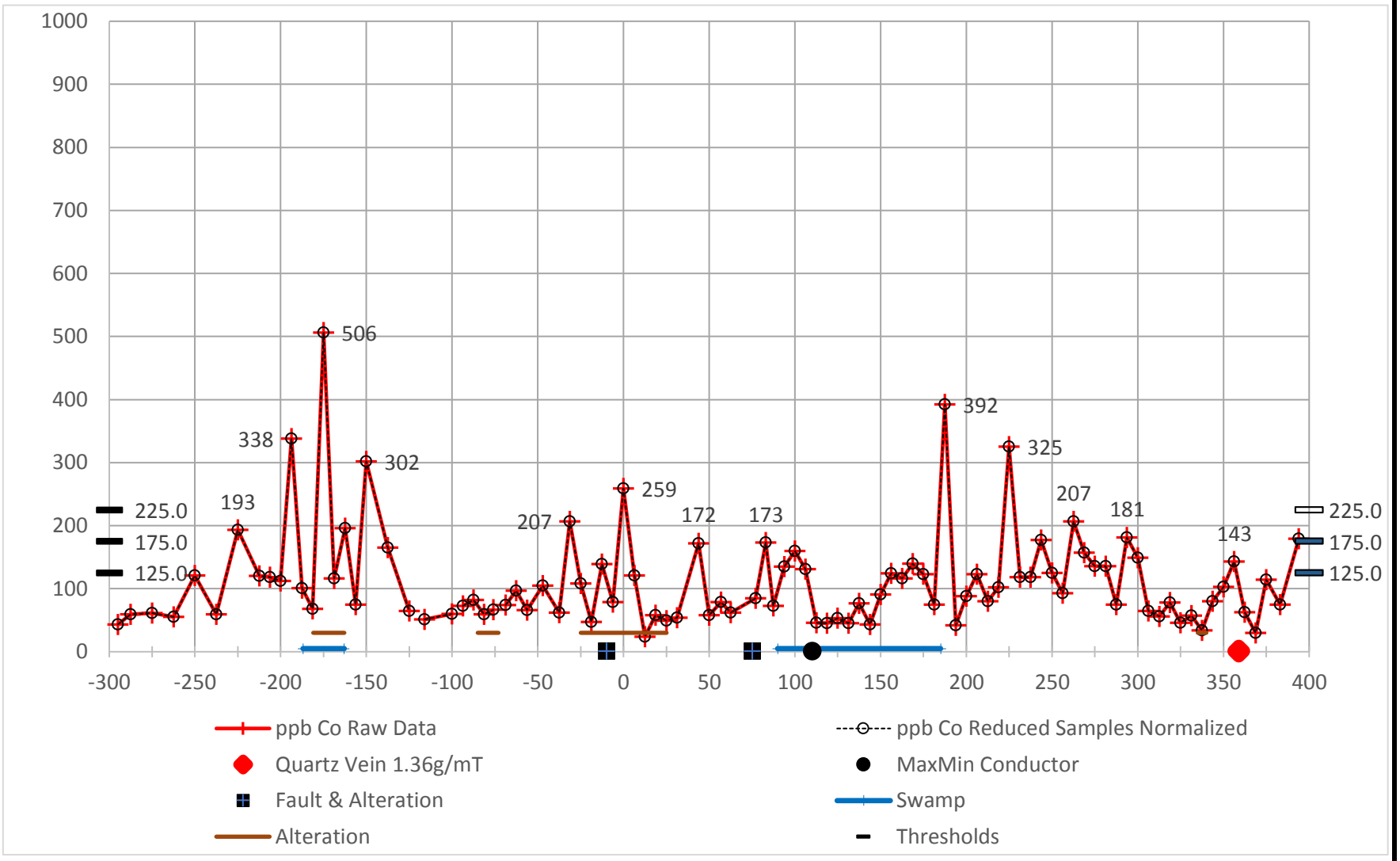


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Alteration Cause?) Raw data appears to be more reliable.*

Ca^{R}x0.167 is equivalent to Ca^{O}

Ca

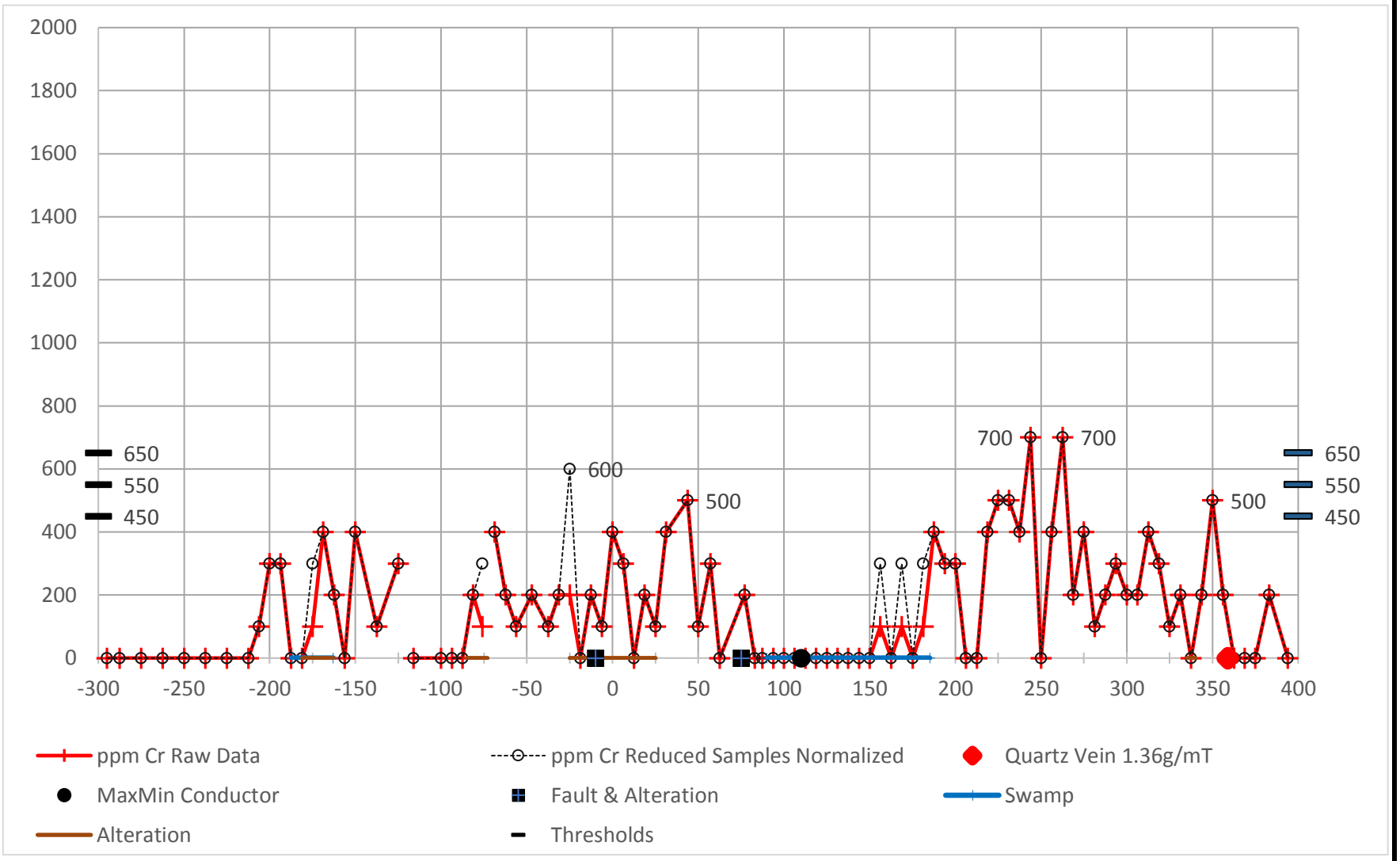


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>125 Possibly anomalous, >175 Probably Anomalous, >225 Anomalous (Lithological Cause)

Co^{R}x1.00 is equivalent to Co^{O}

Co

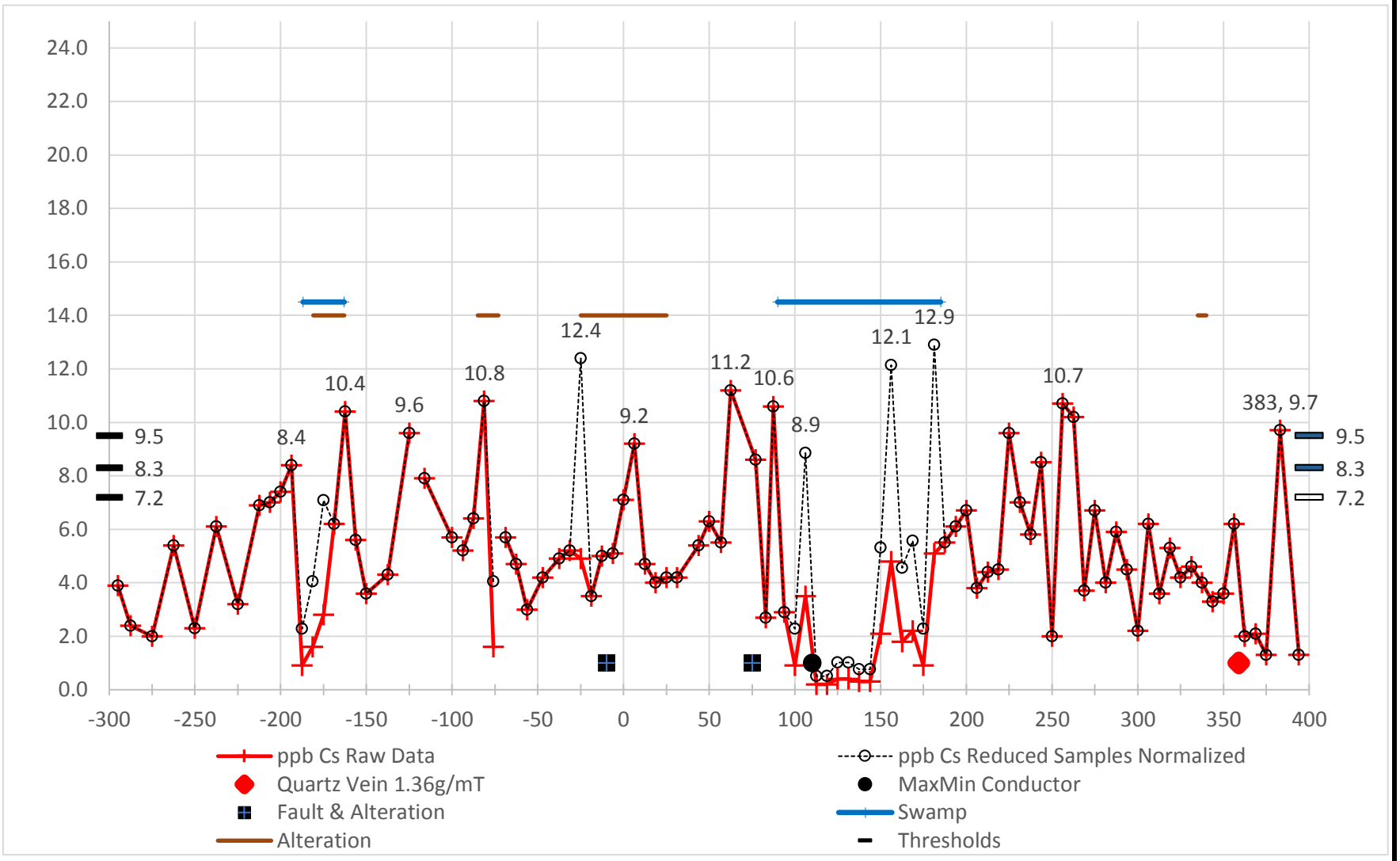


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>450 Possibly anomalous, >550 Probably Anomalous, >650 Anomalous (Mineralogical Cause?)

Cr^{R}x3.00 is equivalent to Cr^{O}

Cr

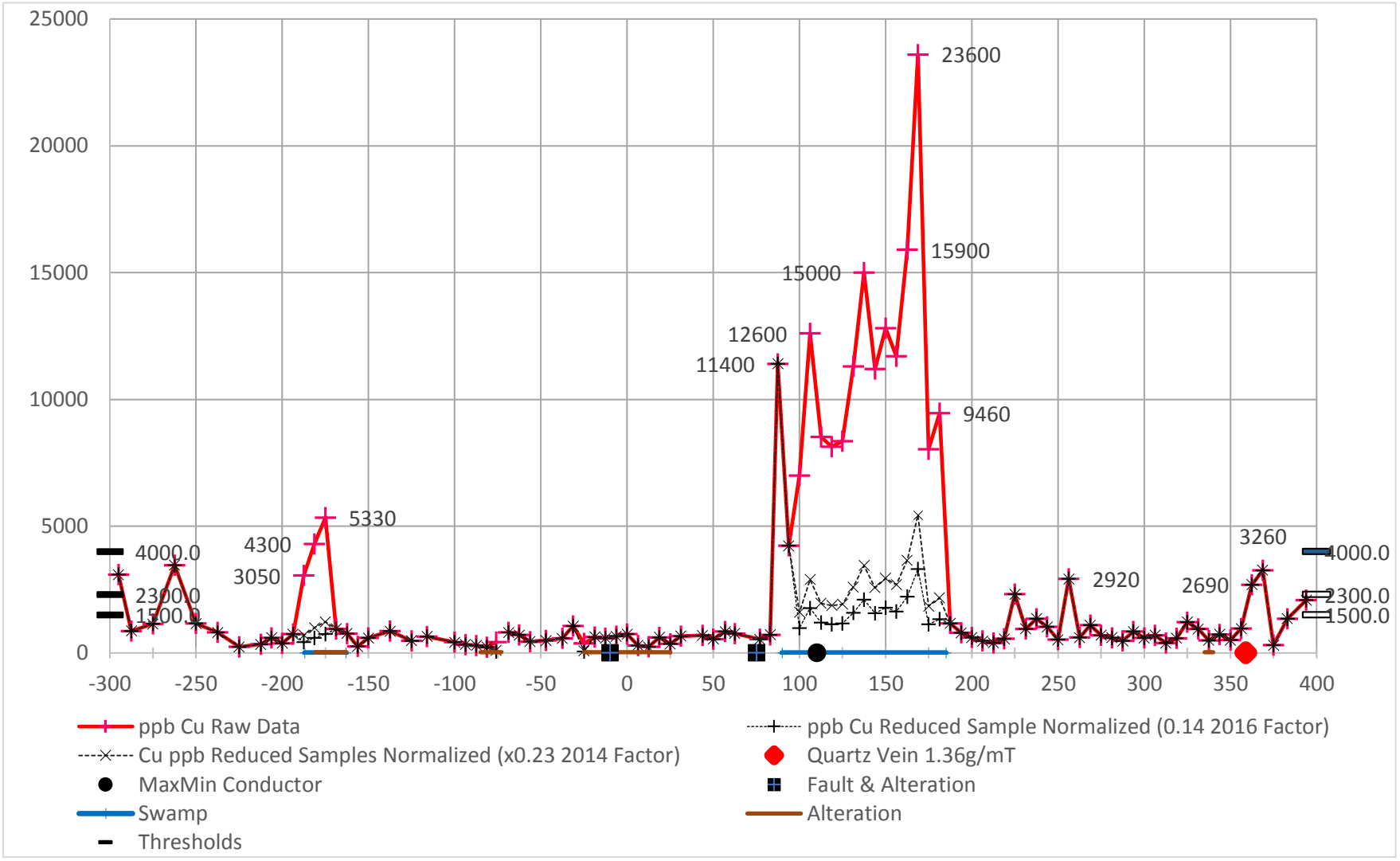


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>7.2 Possibly anomalous, >8.3 Probably Anomalous, >9.5 Anomalous (Lithological Cause)

Cs^{R}x2.53 is equivalent to Cs^{O}

Cs

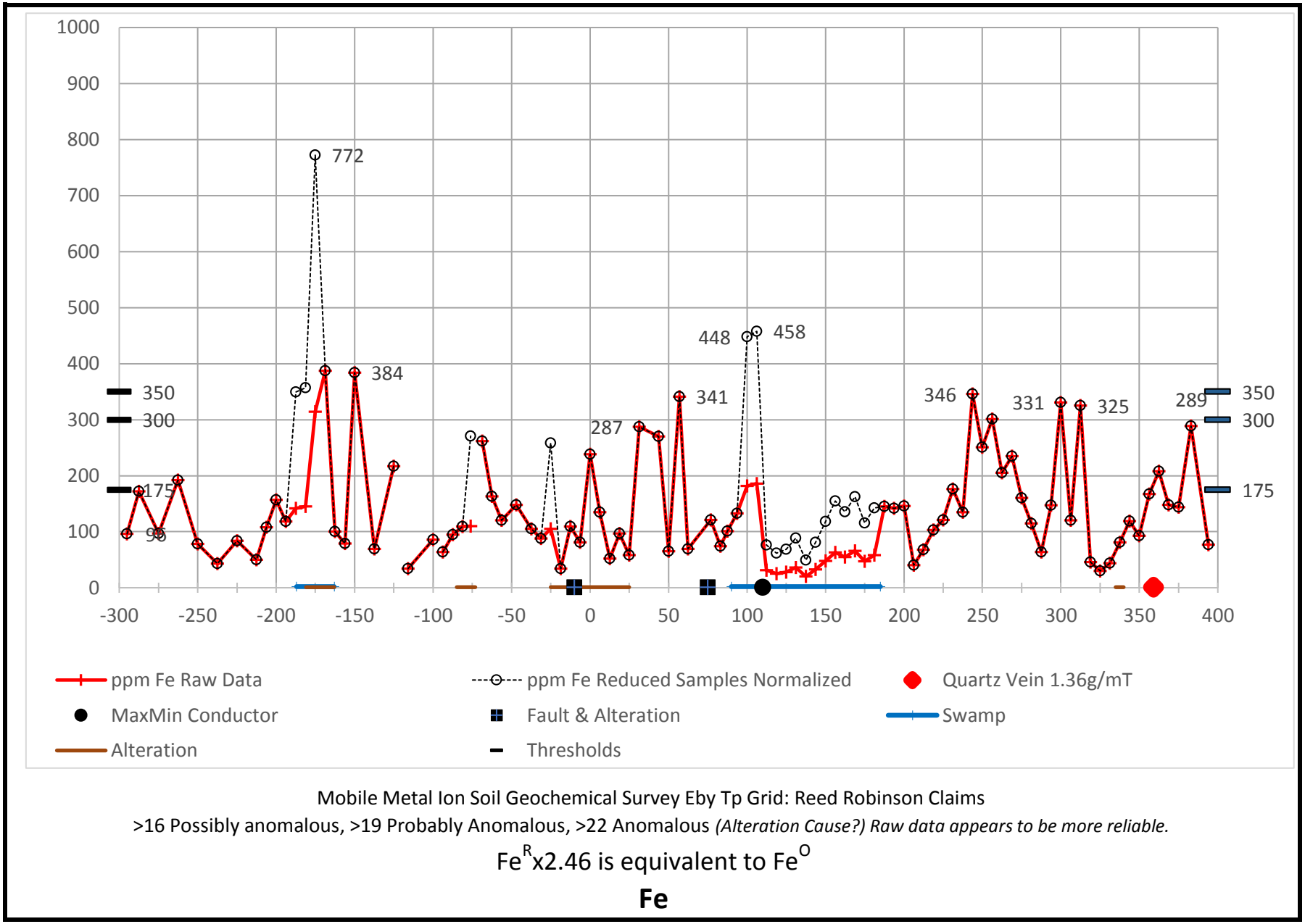


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>1500 Possibly anomalous, >2300 Probably Anomalous, >4000 Anomalous (Cause?)

$Cu^{R}x0.14$ is equivalent to Cu^{O}

Cu

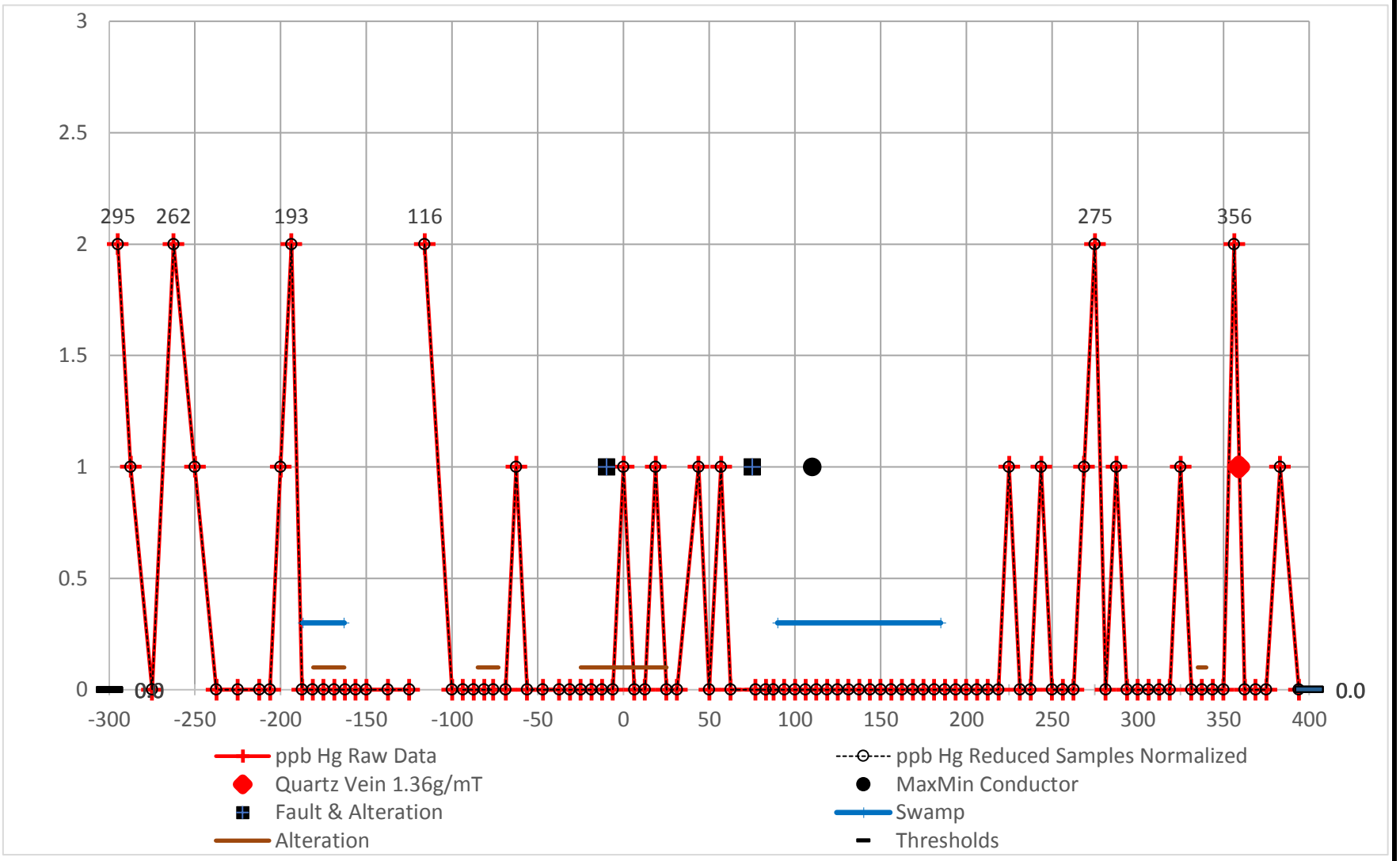


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Alteration Cause?) Raw data appears to be more reliable.*

Fe^{R}x2.46 is equivalent to Fe^{O}

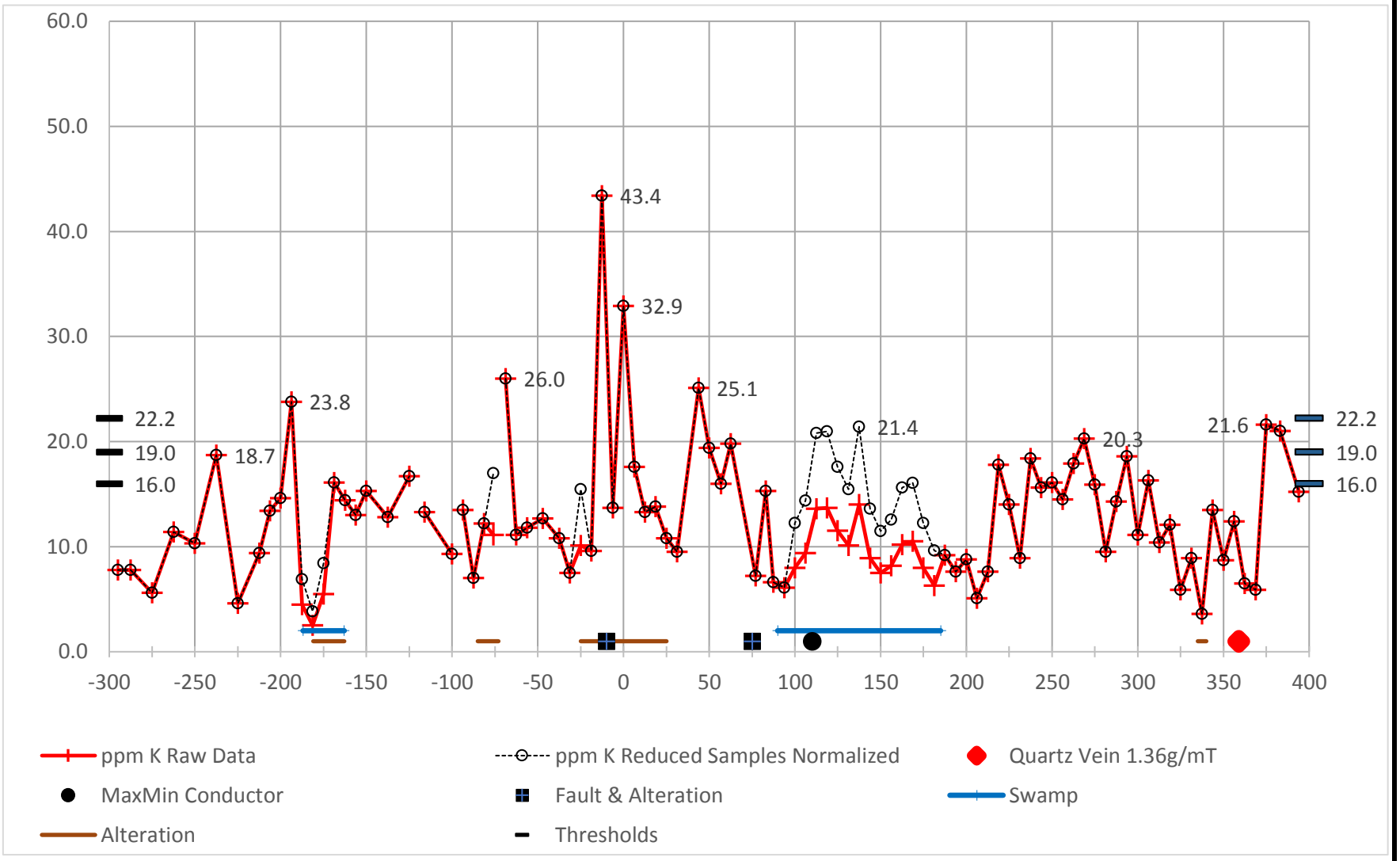
Fe



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Thresholds not Determined >1.5 appears to be anomalous (Mineralization Cause?)

Hg

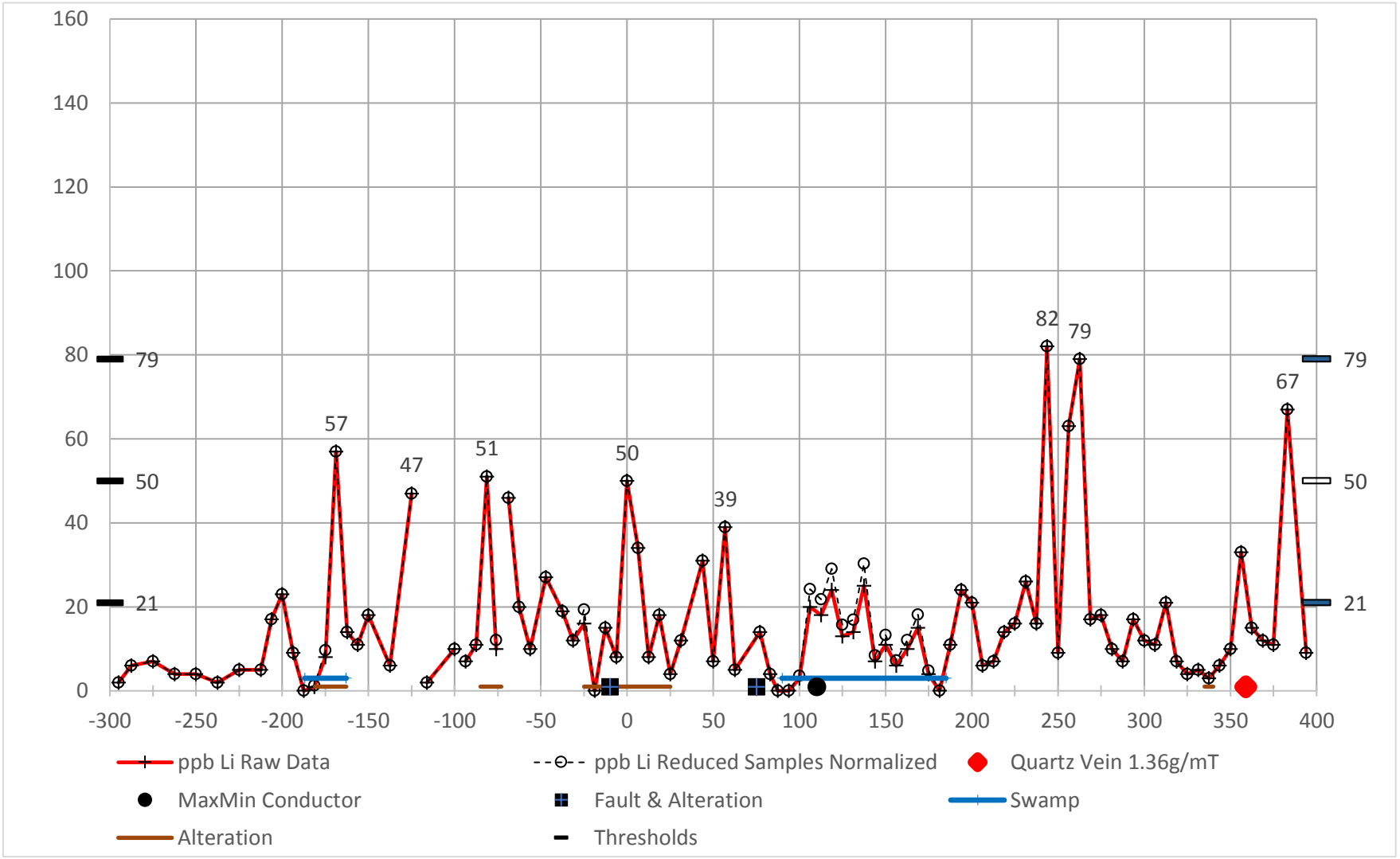


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Alteration Cause?) Raw data appears to be more reliable.*

$K^R x 1.53$ is equivalent to K^O

K

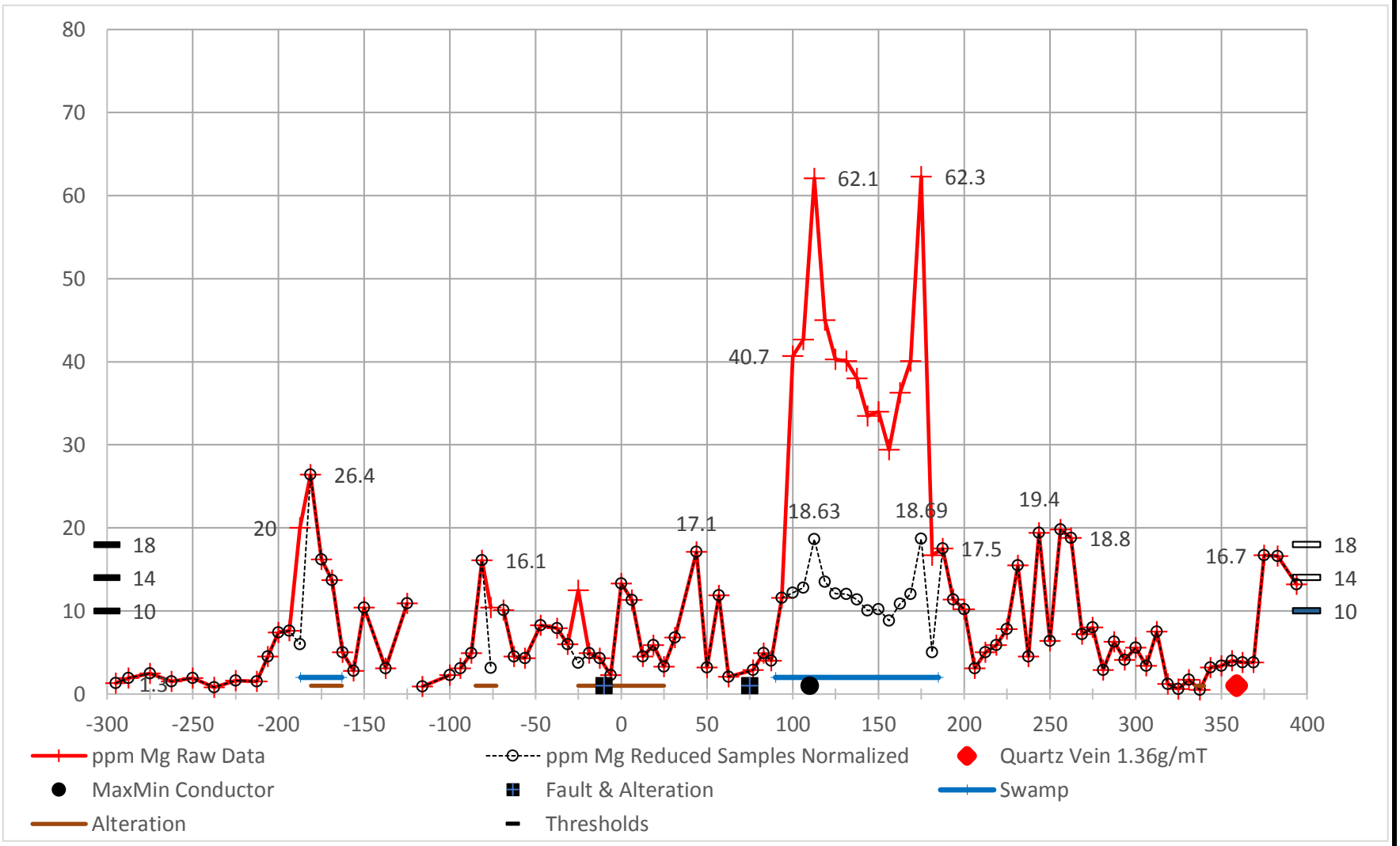


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>21 Possibly anomalous, >50 Probably Anomalous, >79 Anomalous (Appears to be Random?)

Li^{R}x1.21 is equivalent to Li^{O}

Li

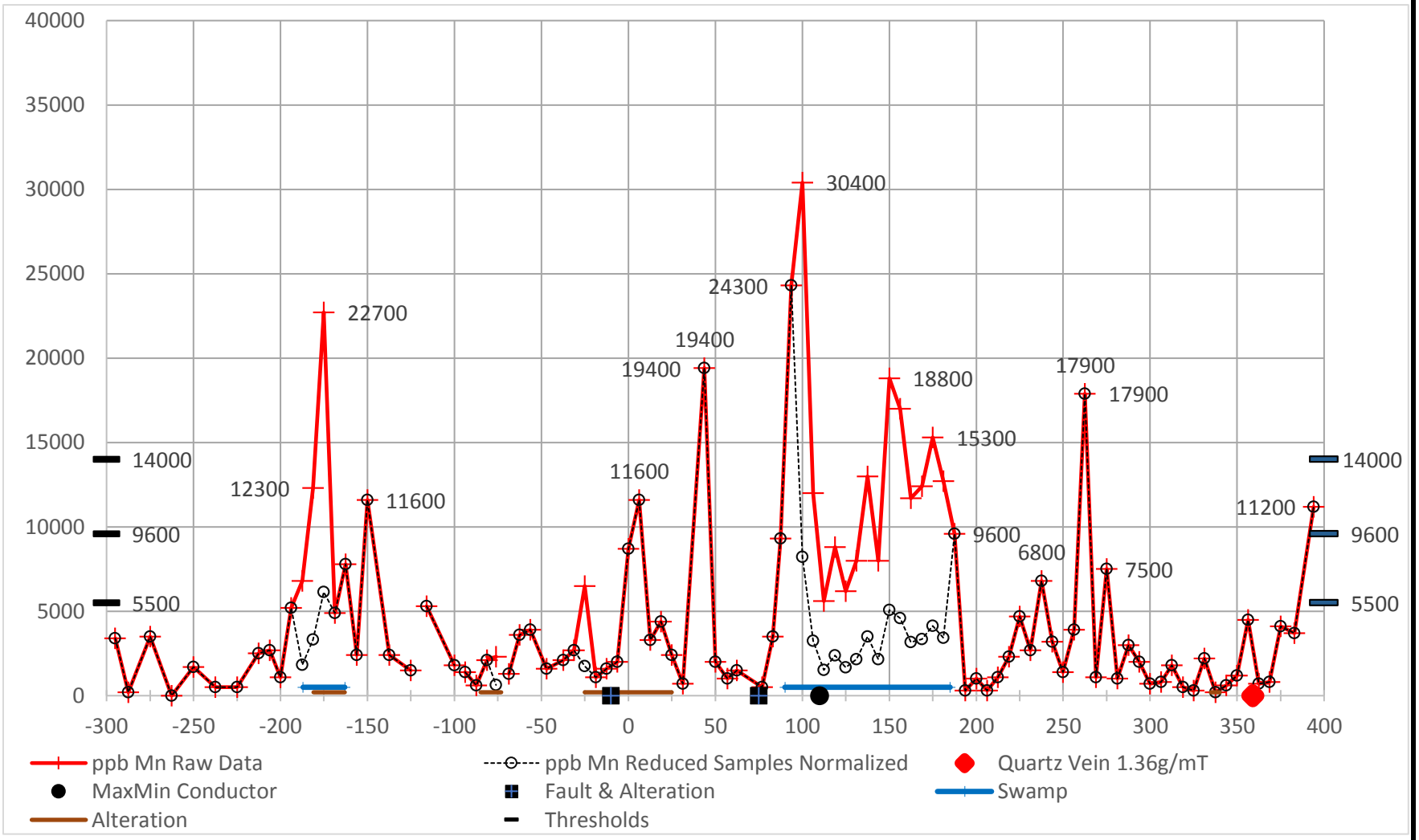


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>10 Possibly anomalous, >14 Probably Anomalous, >18 Anomalous (Alteration Cause?)

$Mg^{R}x0.30$ is equivalent to Mg^{O}

Mg

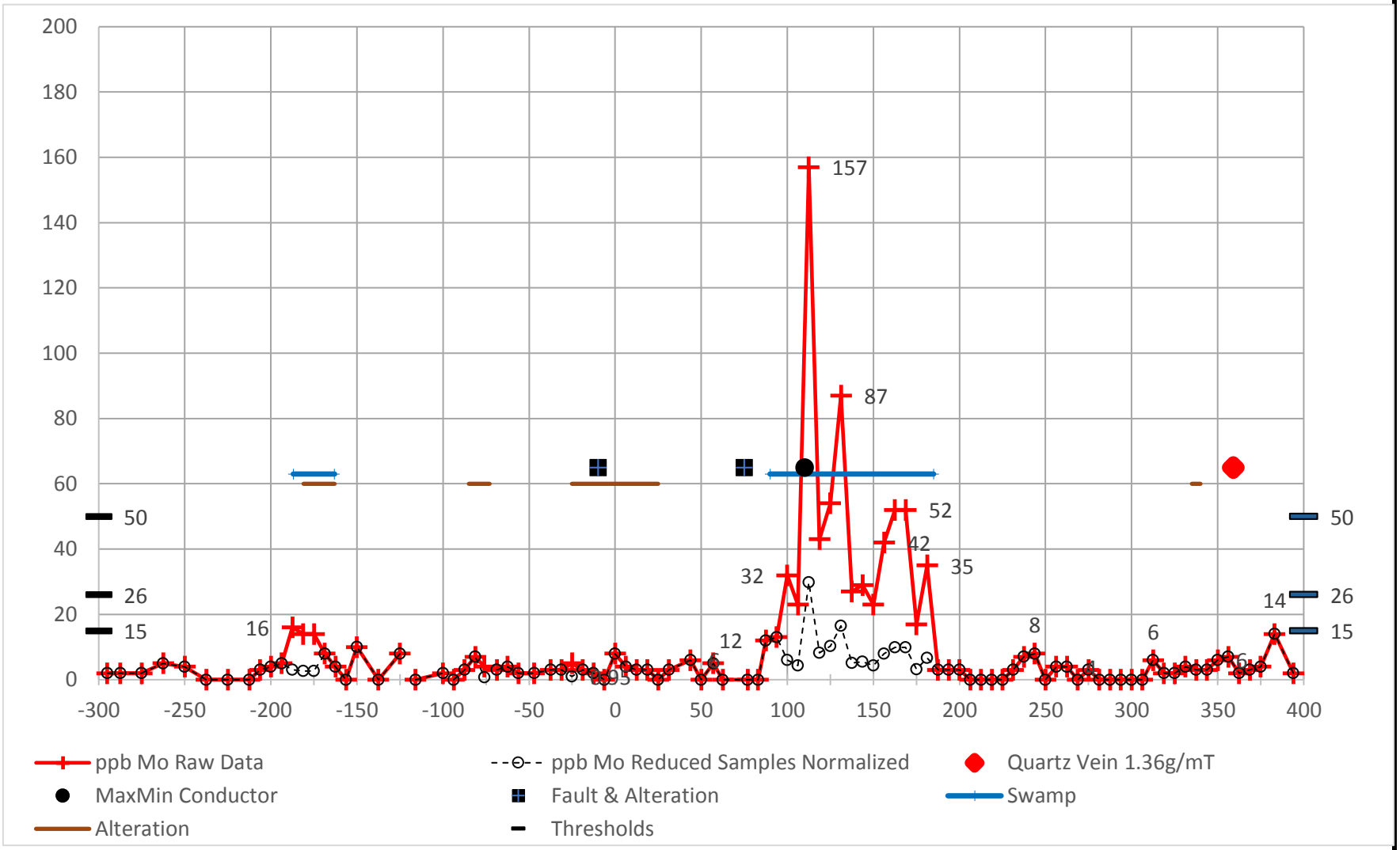


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>5500 Possibly anomalous, >9600 Probably Anomalous, >14000 Anomalous (Cause?)

$Mn^{R}x0.27$ is equivalent to Mn^{O}

Mn

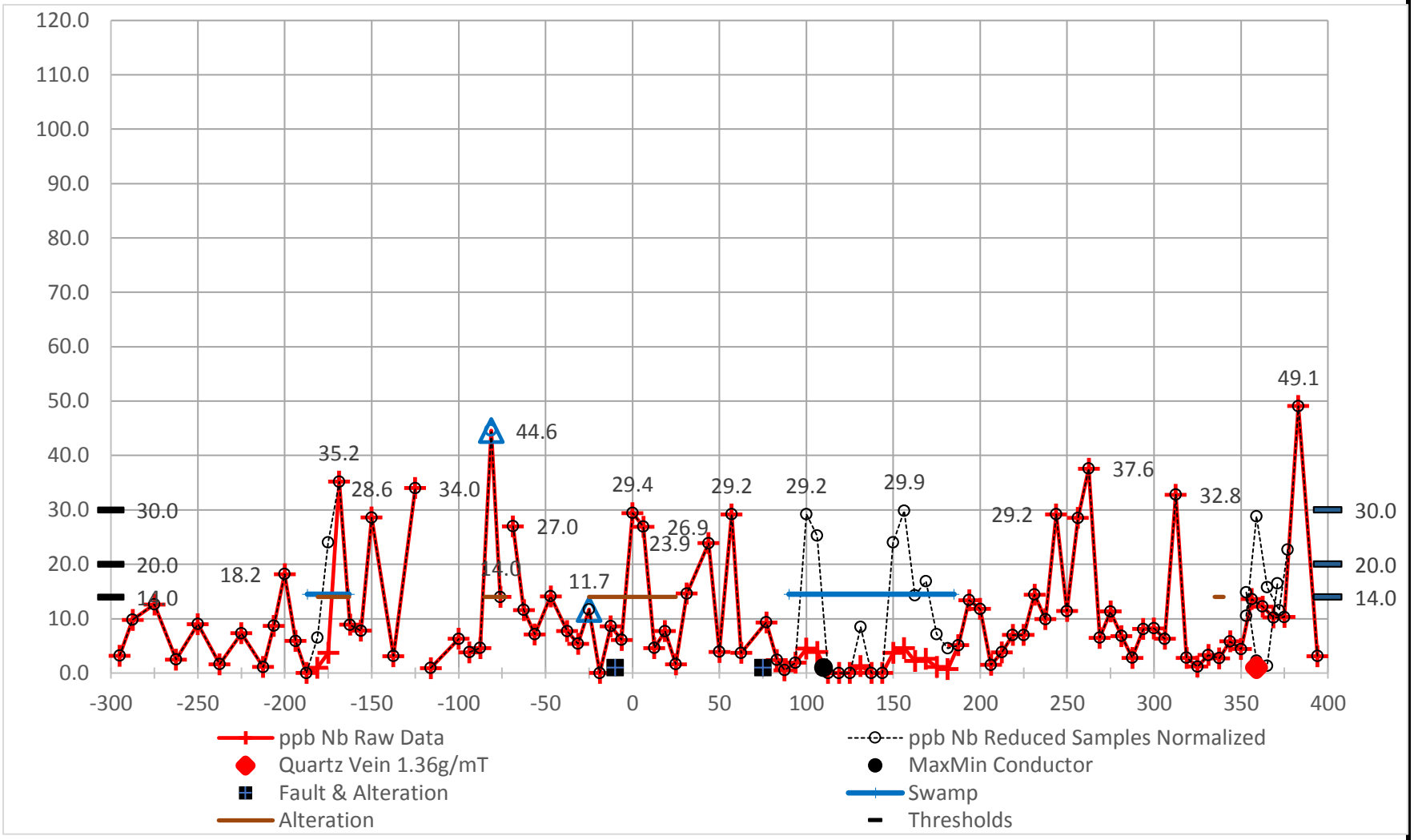


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>15 Possibly anomalous, >26 Probably Anomalous, >50 Anomalous (Cause?)

$Mo^{R}x0.19$ is equivalent to Mo^{O}

Mo



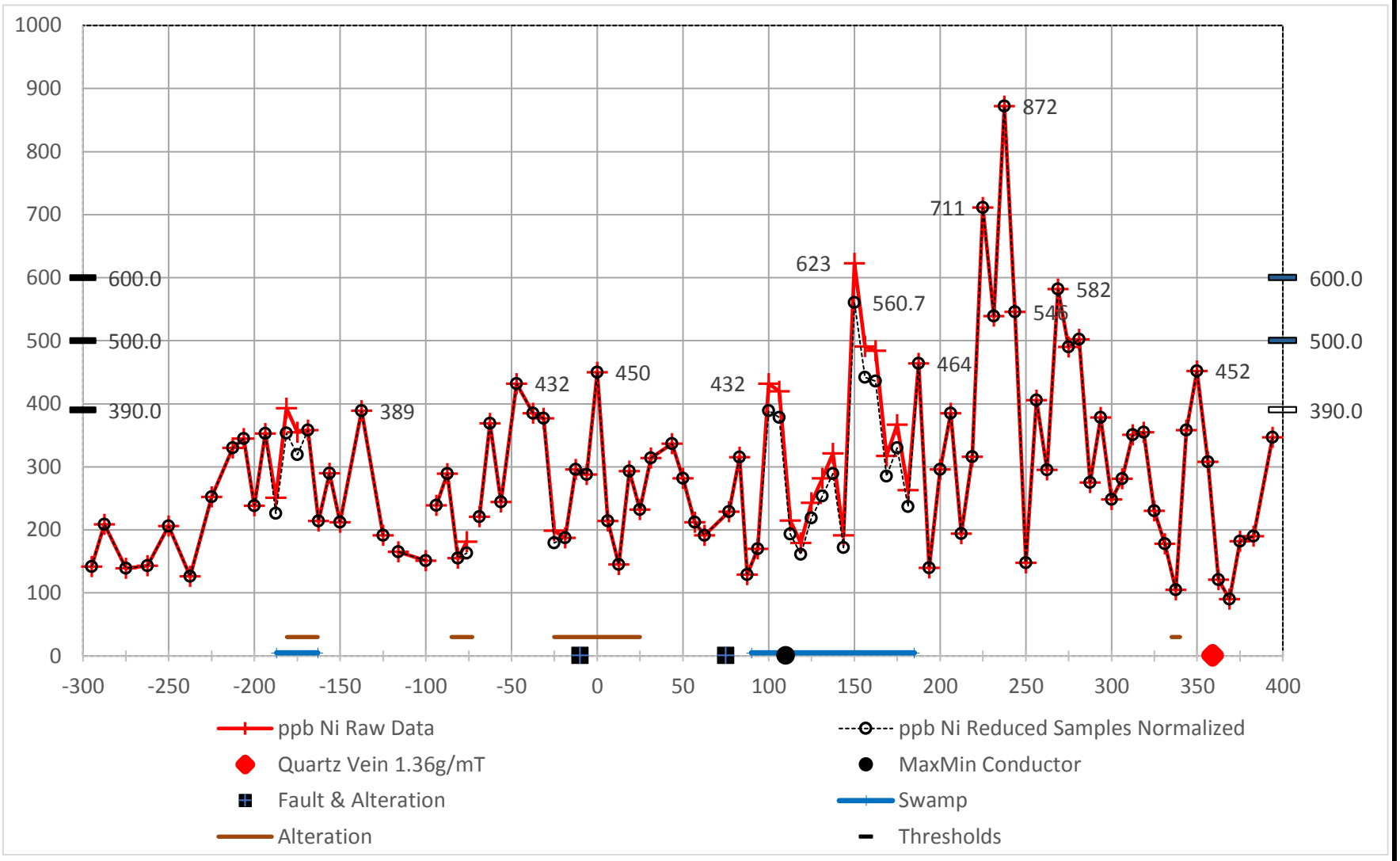
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

Nb^{R}x6.49 is equivalent to Nb^{O}

Nb

Blue Trianges O/R?

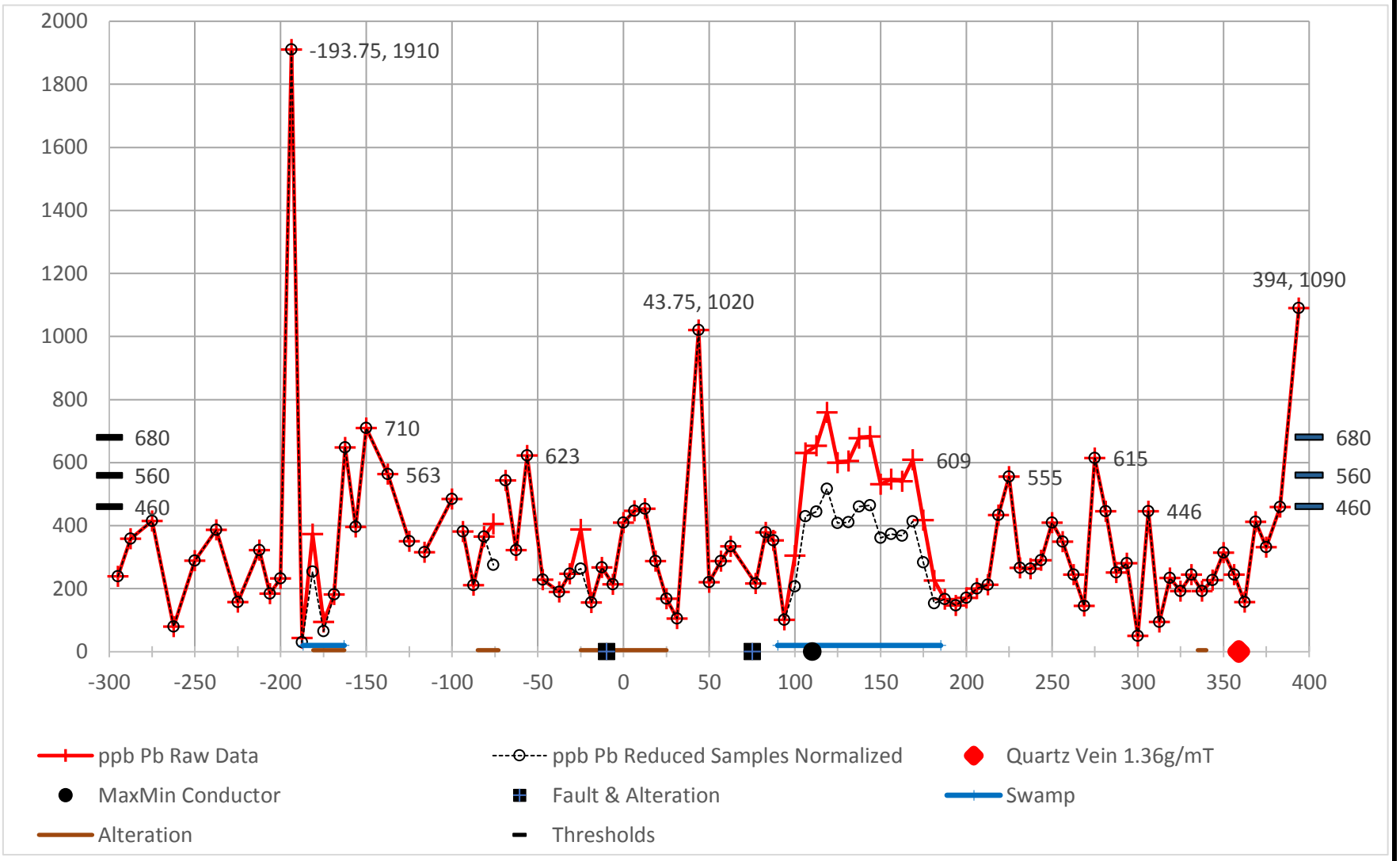


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>390 Possibly anomalous, >500 Probably Anomalous, >600 Anomalous (Lithological Cause)

Ni^{R}x0.90 is equivalent to Ni^{O}

Ni

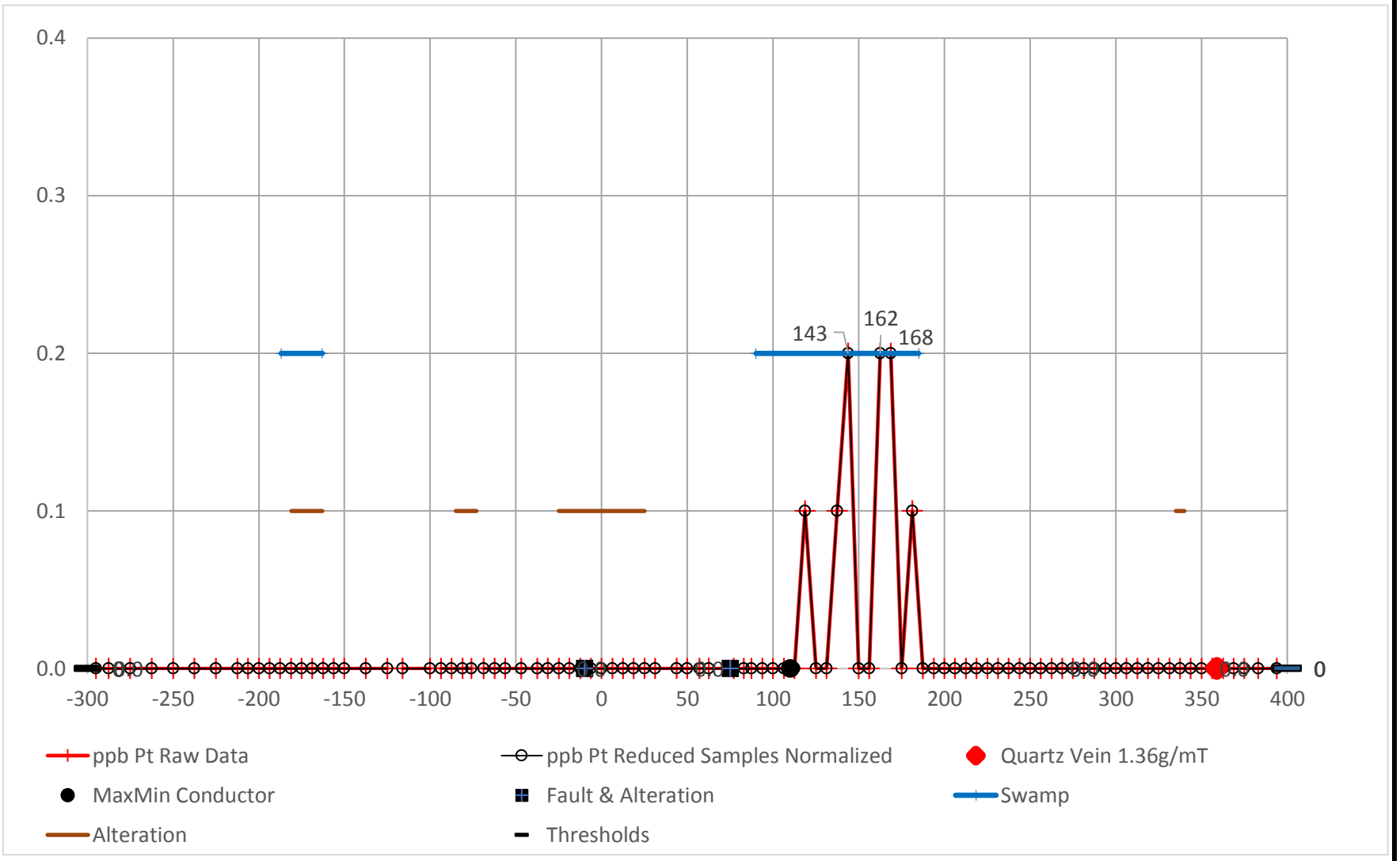


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Alteration Cause?)*

Pb^{R}x0.68 is equivalent toPb^{O}

Pb

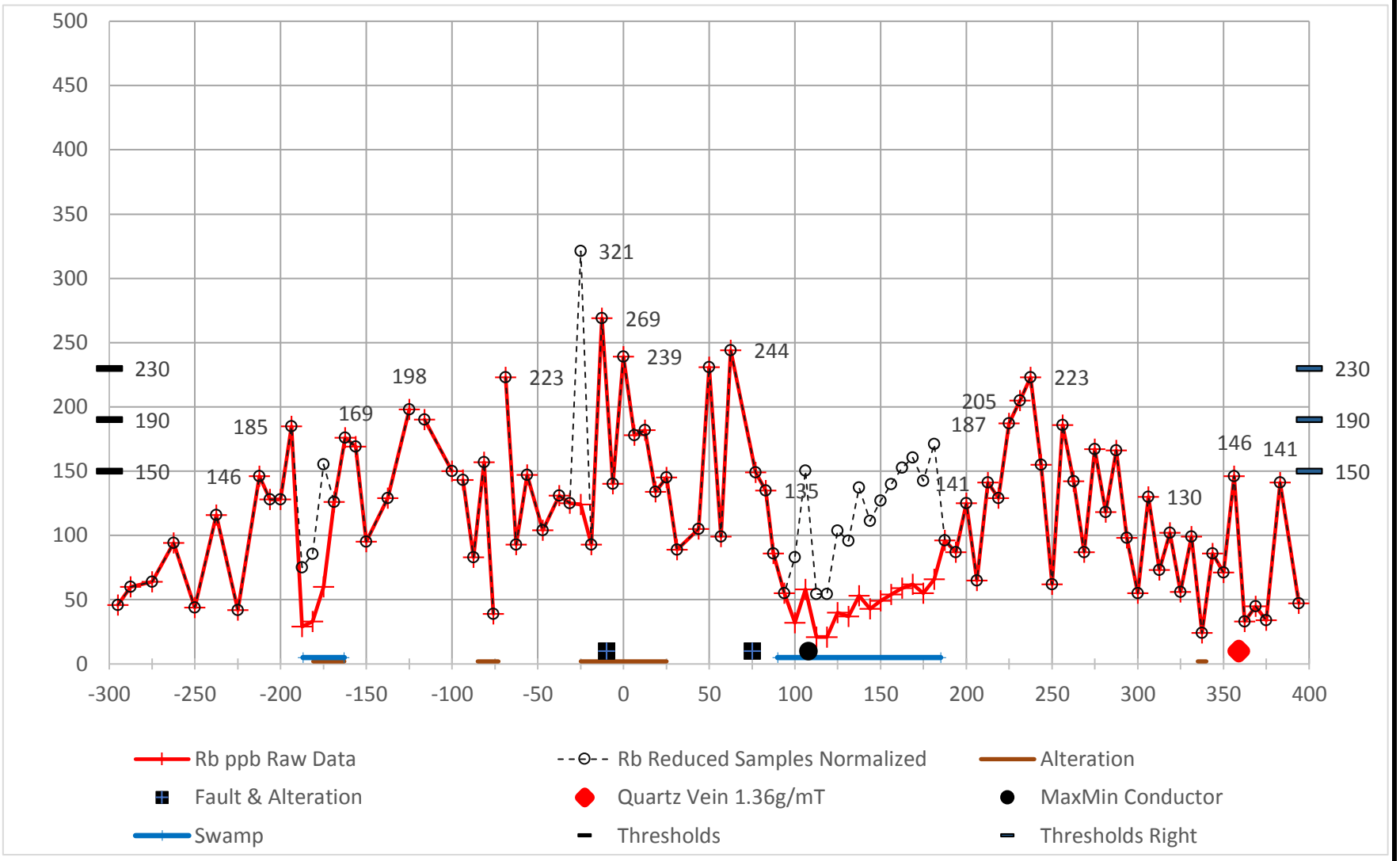


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

No Anomalous values Determined because only Reduced samples had detectably Pt

Pt^{R} to Pt^{O} Not Valid Because all Pt^{O} Analysis were Below the Detection Limit

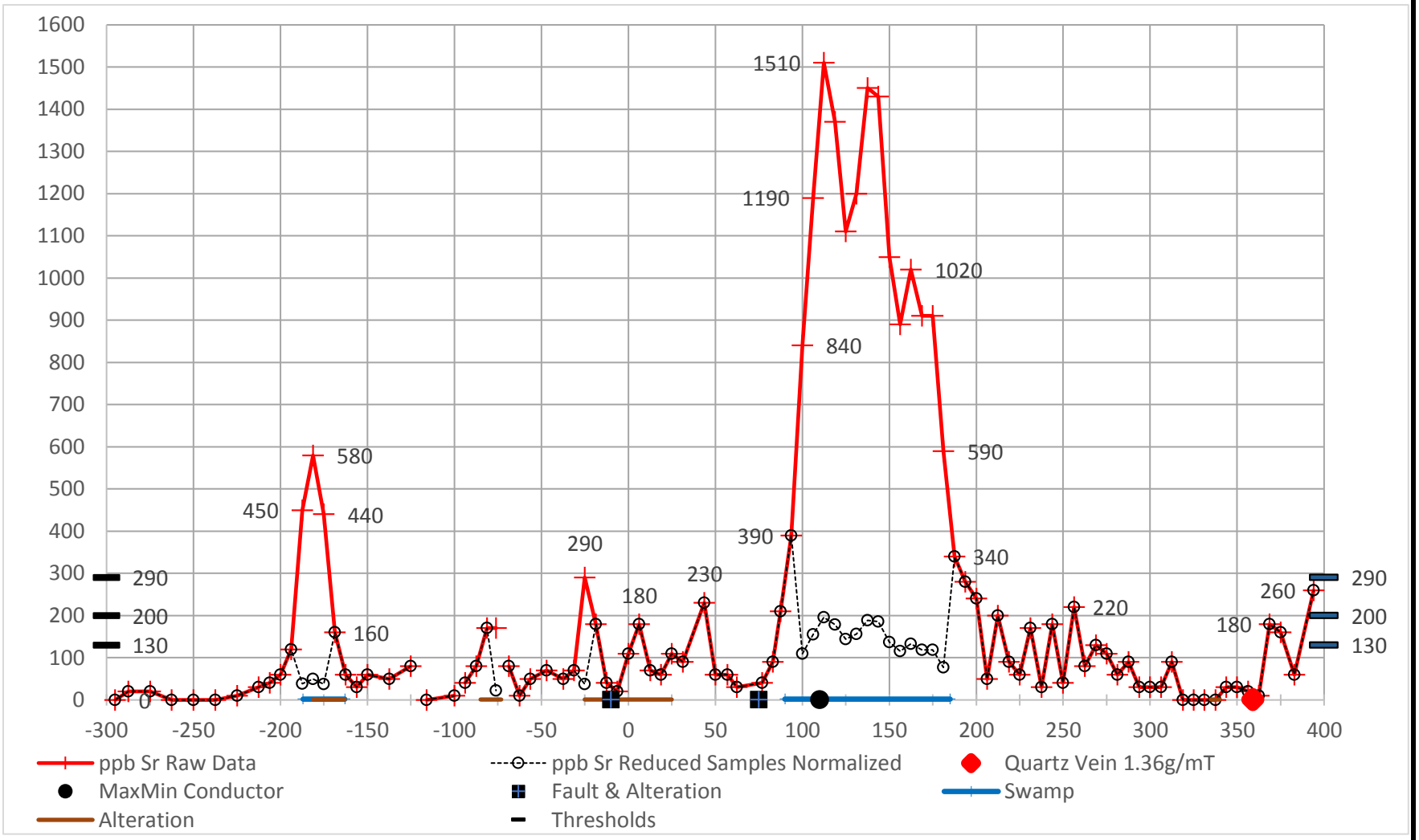
Pt



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>150 Possibly anomalous, >190 Probably Anomalous, >230 Anomalous *(Alteration Cause?)*

Rb^{R}x2.59 is equivalent to Rb^{O}

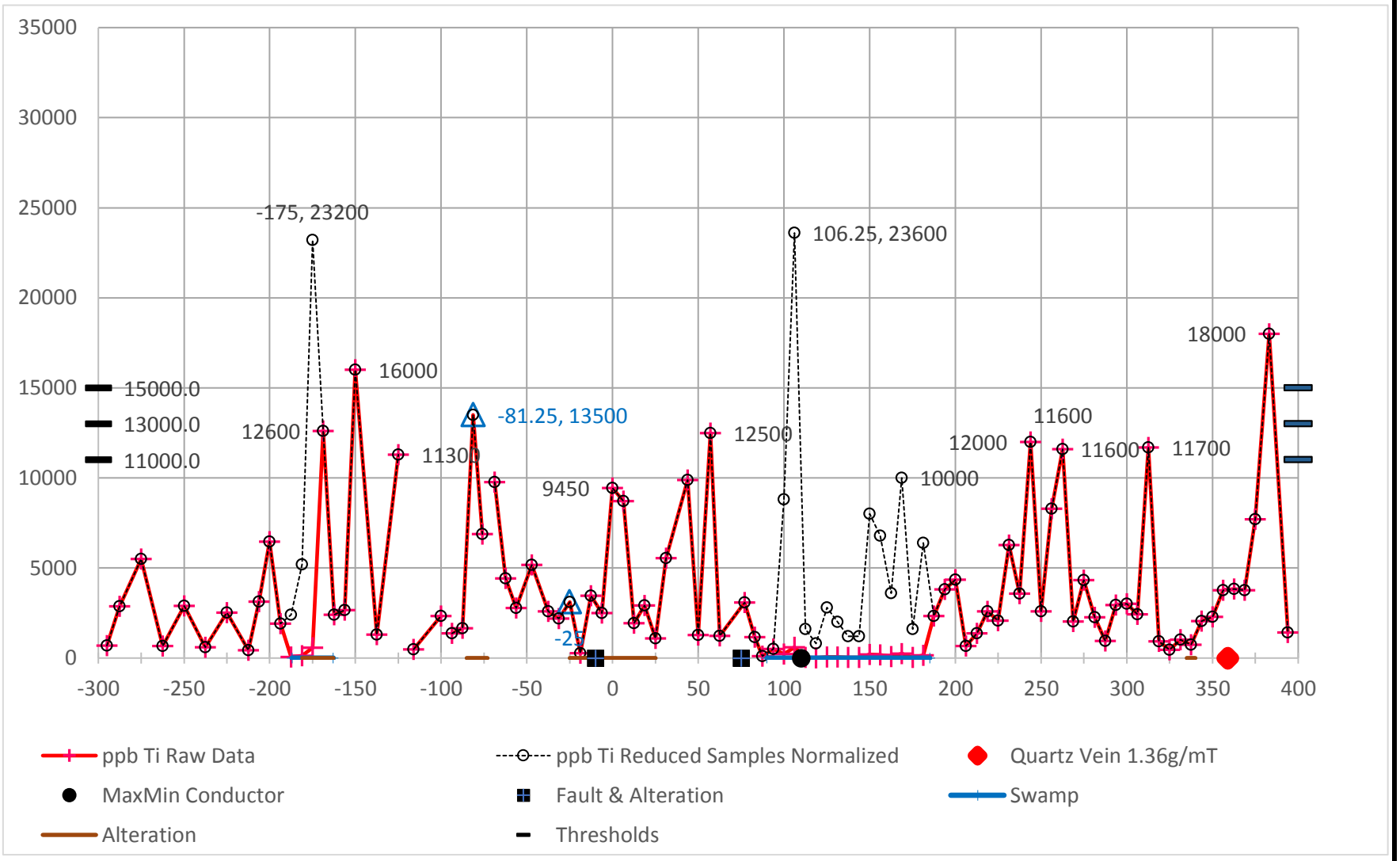


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>110 Possibly anomalous, >150 Probably Anomalous, >200 Anomalous (Lithological Cause?)

$Sr^{R}x0.13$ is equivalent to Sr^{O}

Sr



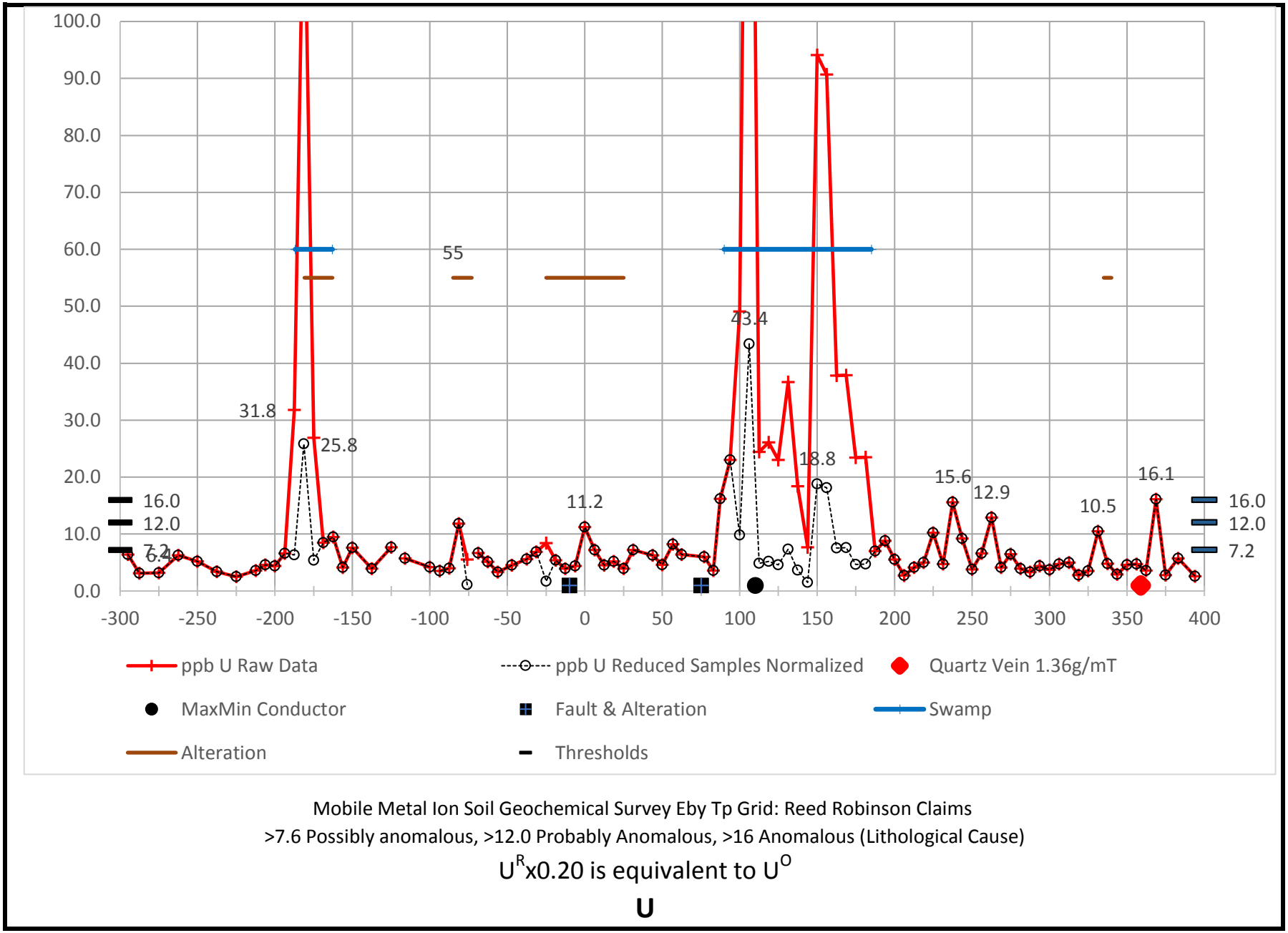
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>11000 Possibly anomalous, >13000 Probably Anomalous, >15000 Anomalous (Mineralogical Cause?)

Ti^{R}x40.00 is equivalent to Ti^{O}

Ti

Blue Triangle O or R?



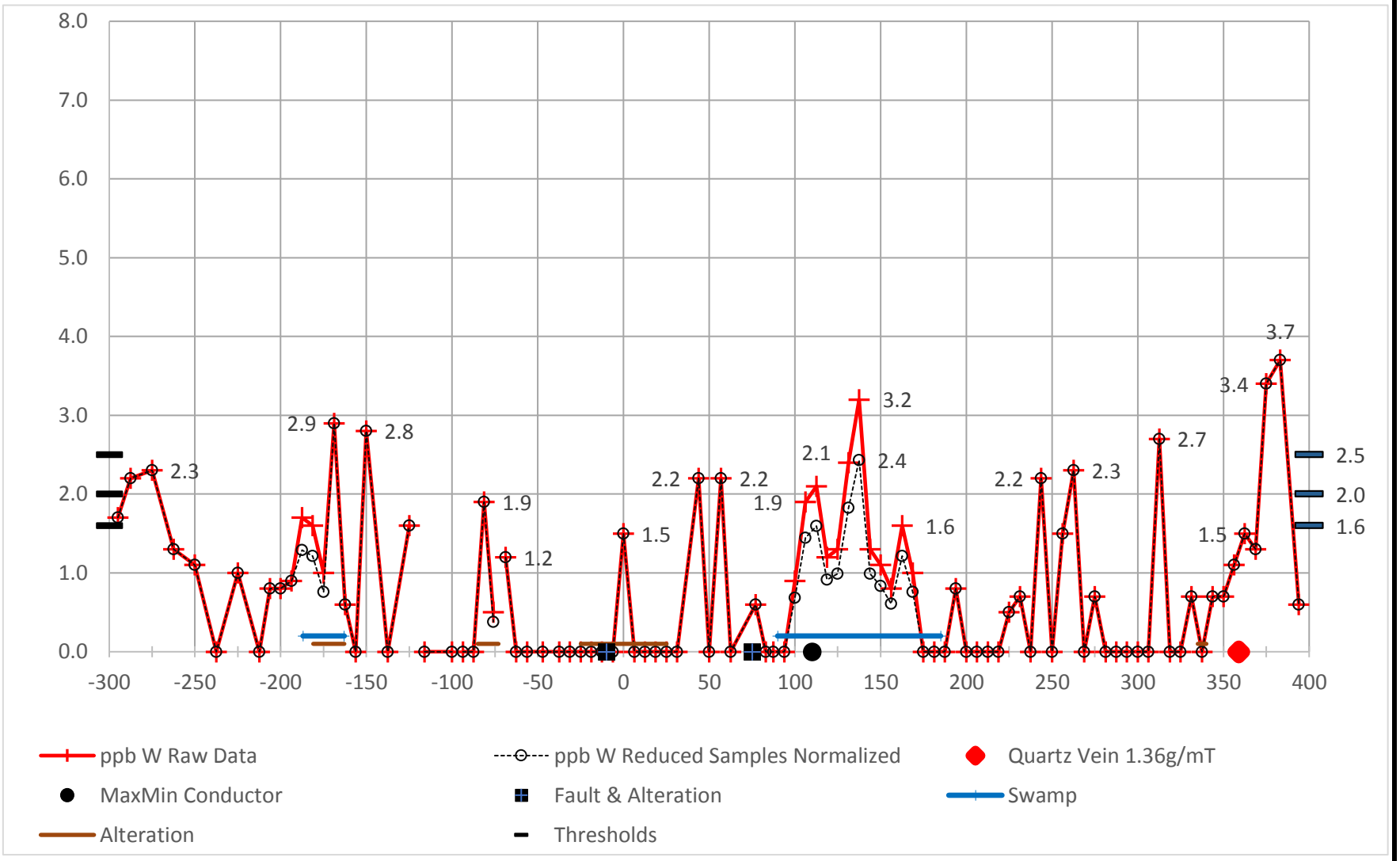
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>7.6 Possibly anomalous, >12.0 Probably Anomalous, >16 Anomalous (Lithological Cause)

$U^{R}x0.20$ is equivalent to U^{O}

U

181s 129 ppb U, 106N 217 ppb U

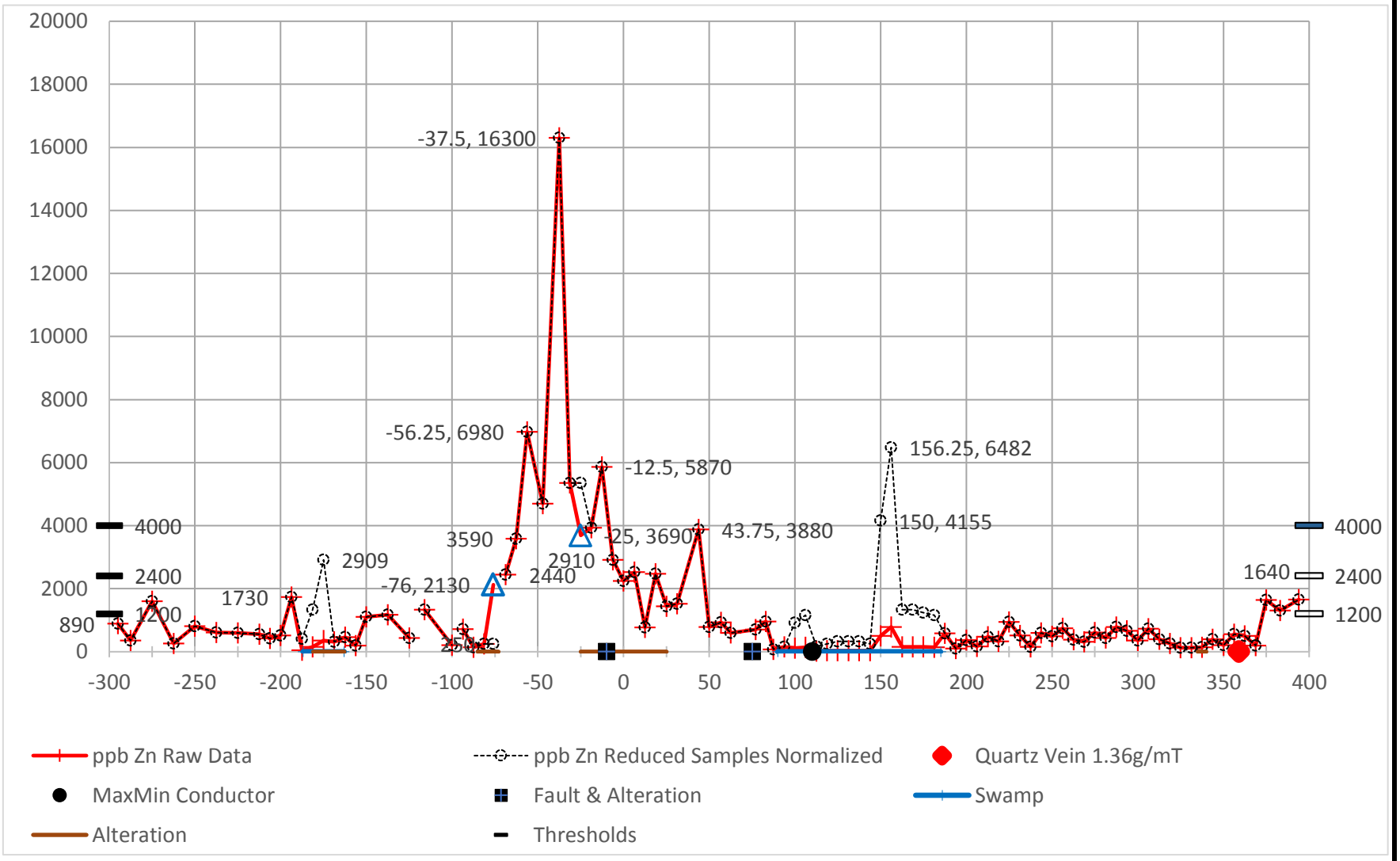


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>1.6 Possibly anomalous, >2.0 Probably Anomalous, >2.5 Anomalous *(Mineralogical Cause?)*

W^{R}x0.76 is equivalent to W^{O}

W



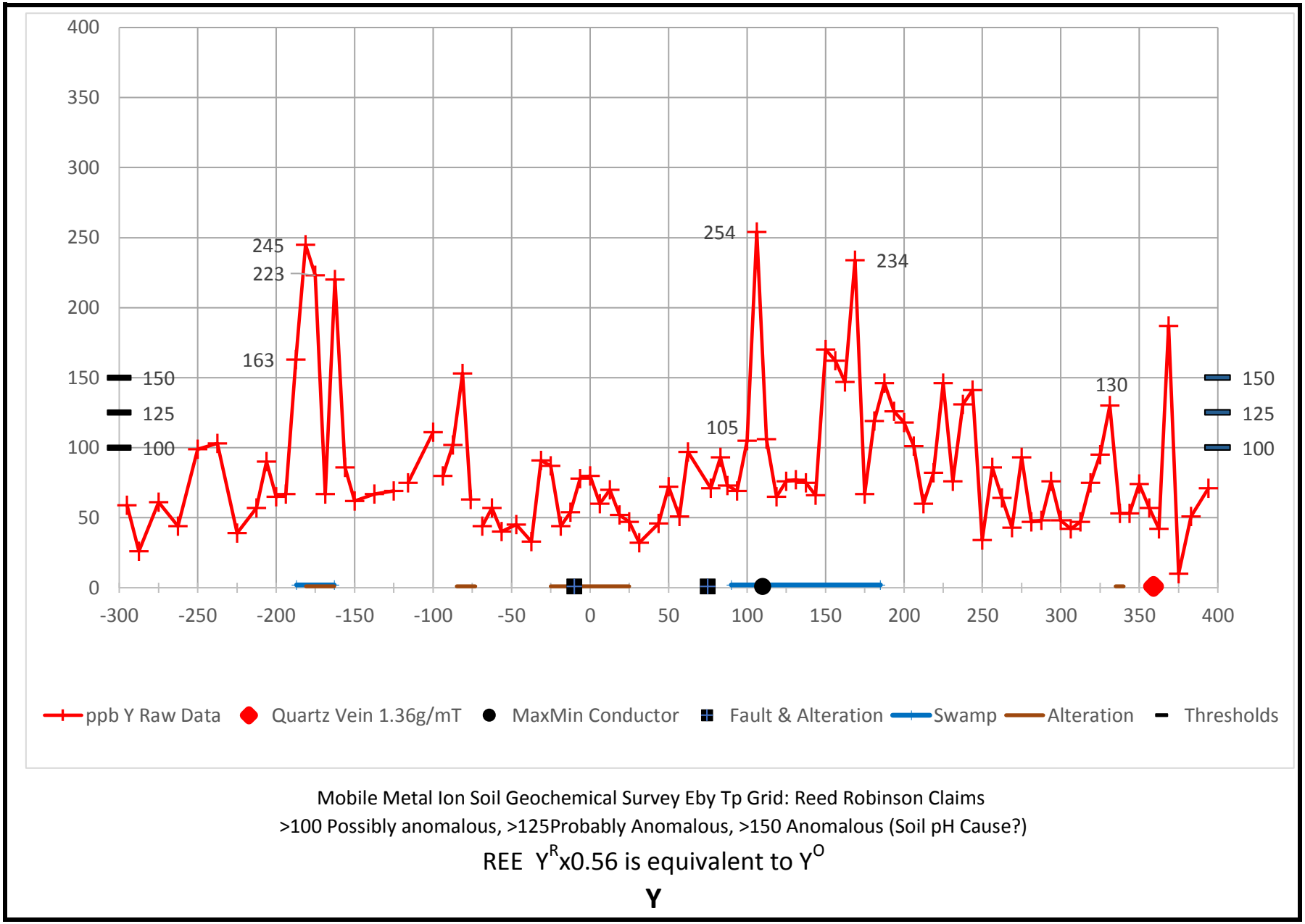
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Alteration Cause?) Raw data appears to be more reliable.*

Zn^{R}x8.31 is equivalent toZn^{O}

Zn

Blue Triangle O/R?

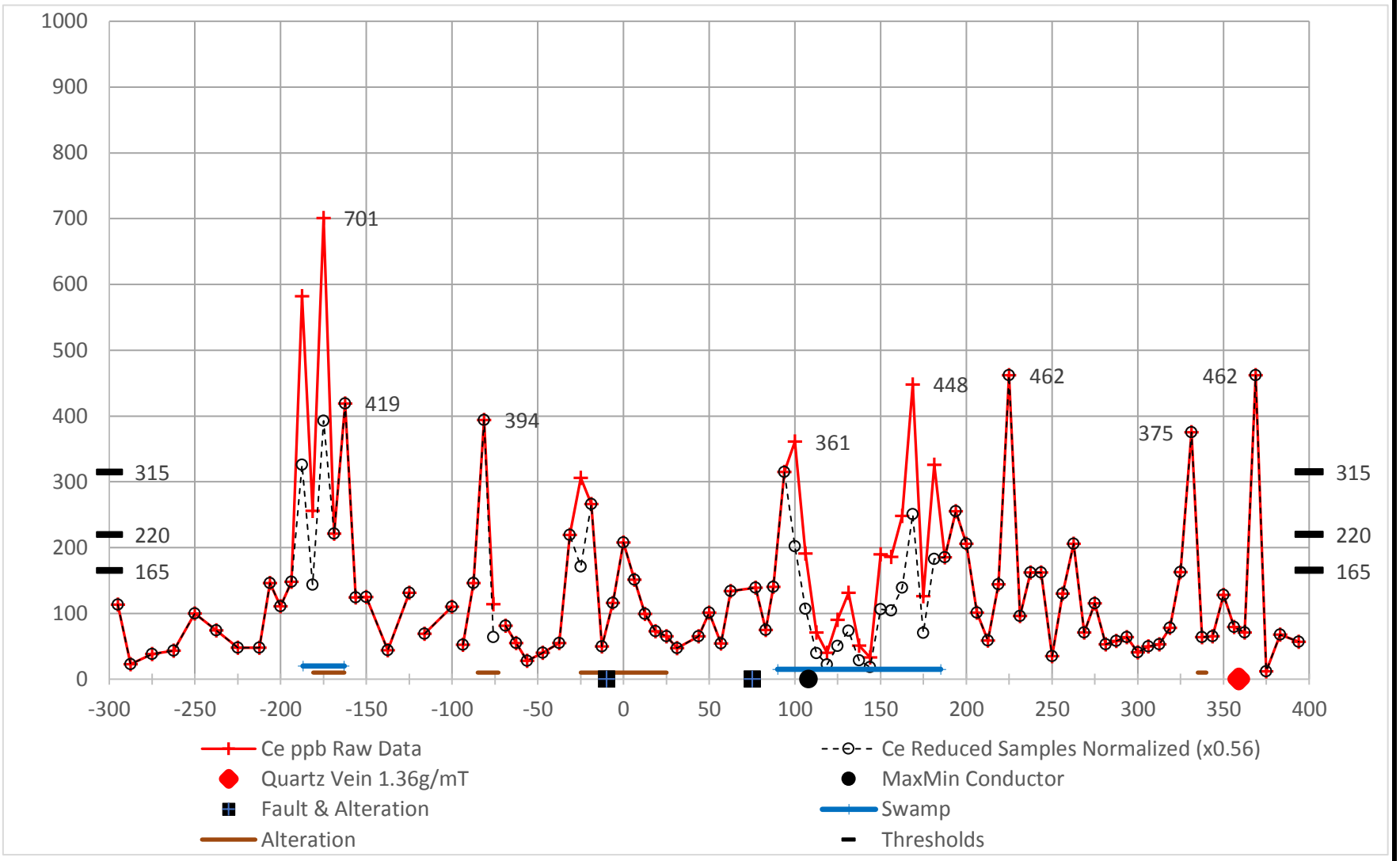


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>100 Possibly anomalous, >125Probably Anomalous, >150 Anomalous (Soil pH Cause?)

REE Y^{R}x0.56 is equivalent to Y^{O}

Y

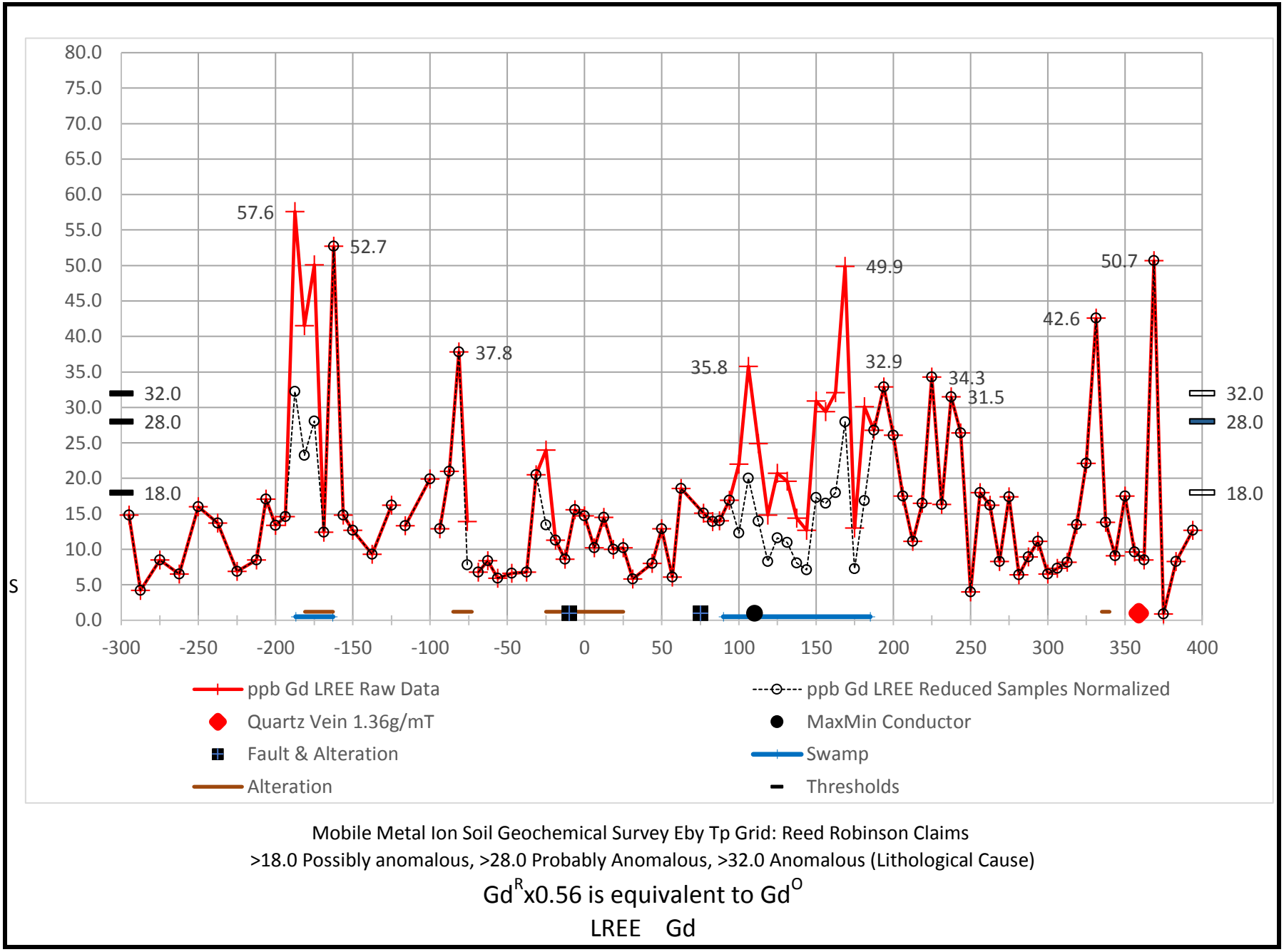


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>165 Possibly anomalous, >220 Probably Anomalous, >315 Anomalous

LREE Ce^{R}x0.56 is equivalent to Ce^{O}

LREE Ce

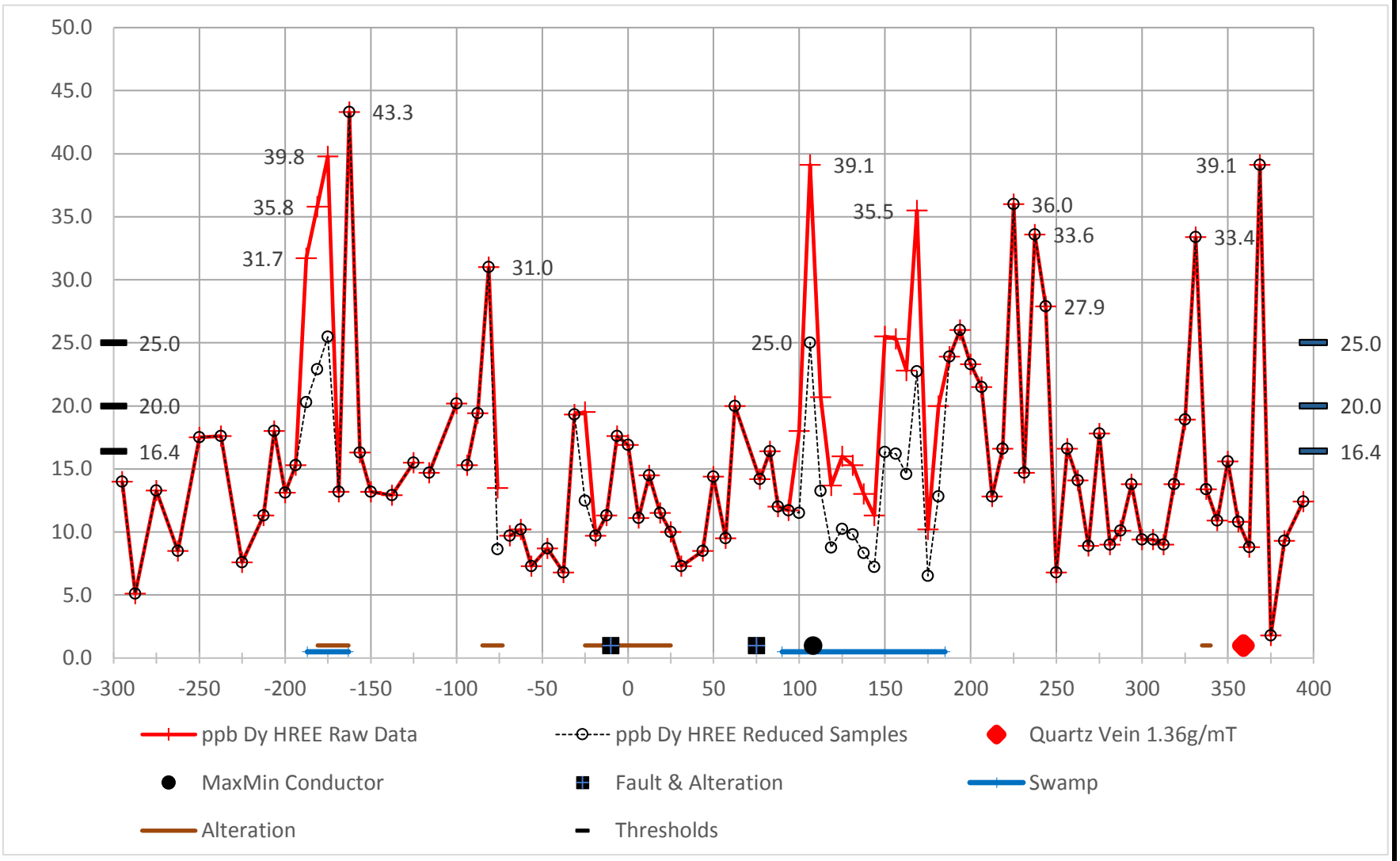


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>18.0 Possibly anomalous, >28.0 Probably Anomalous, >32.0 Anomalous (Lithological Cause)

$Gd^{R}x0.56$ is equivalent to Gd^{O}

LREE Gd

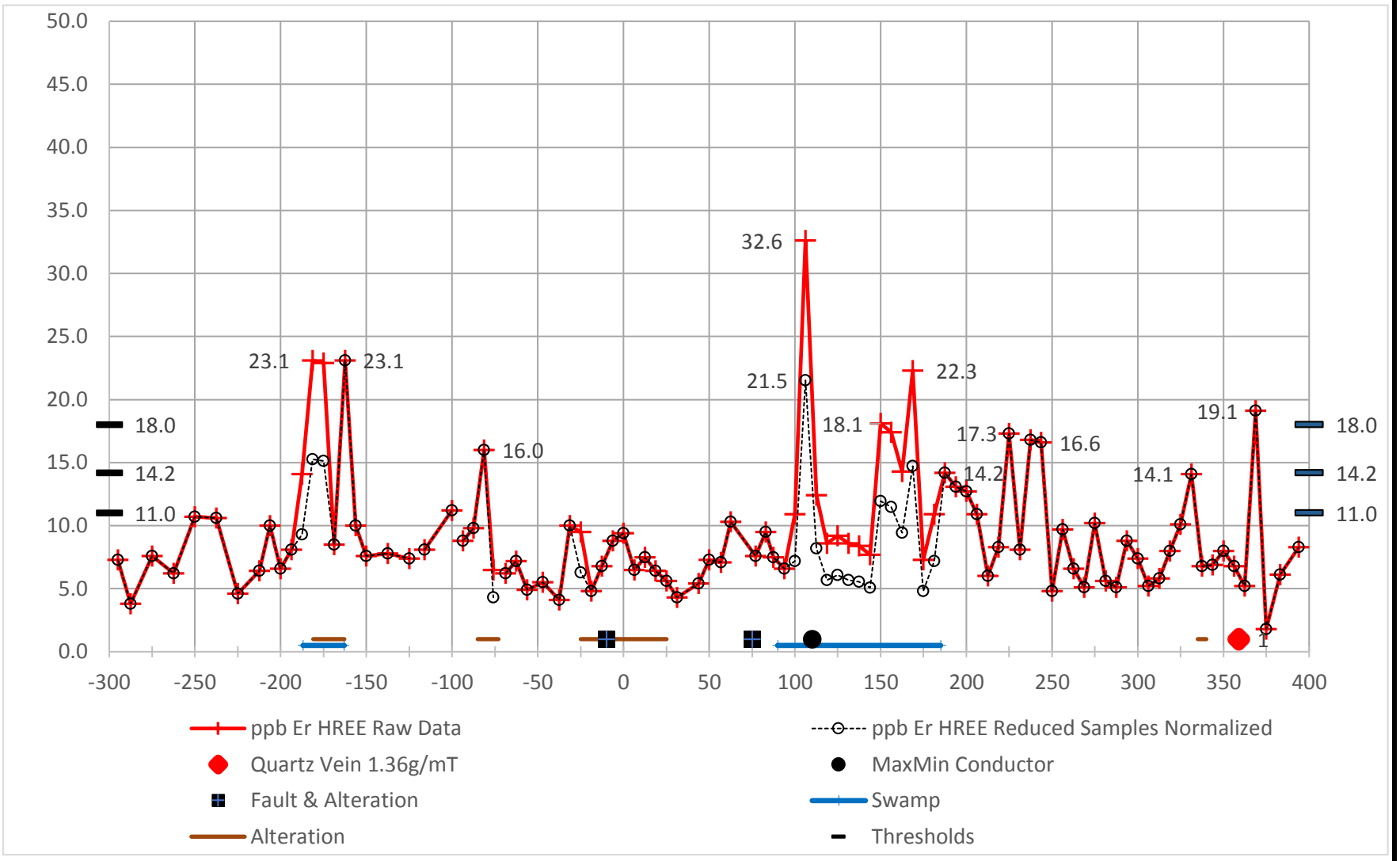


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>16.4 Possibly anomalous, >20 Probably Anomalous, >25 Anomalous (Lithological Cause)

Dy^{R}x0.64 is equivalent to Dy^{O}

HREE Dy

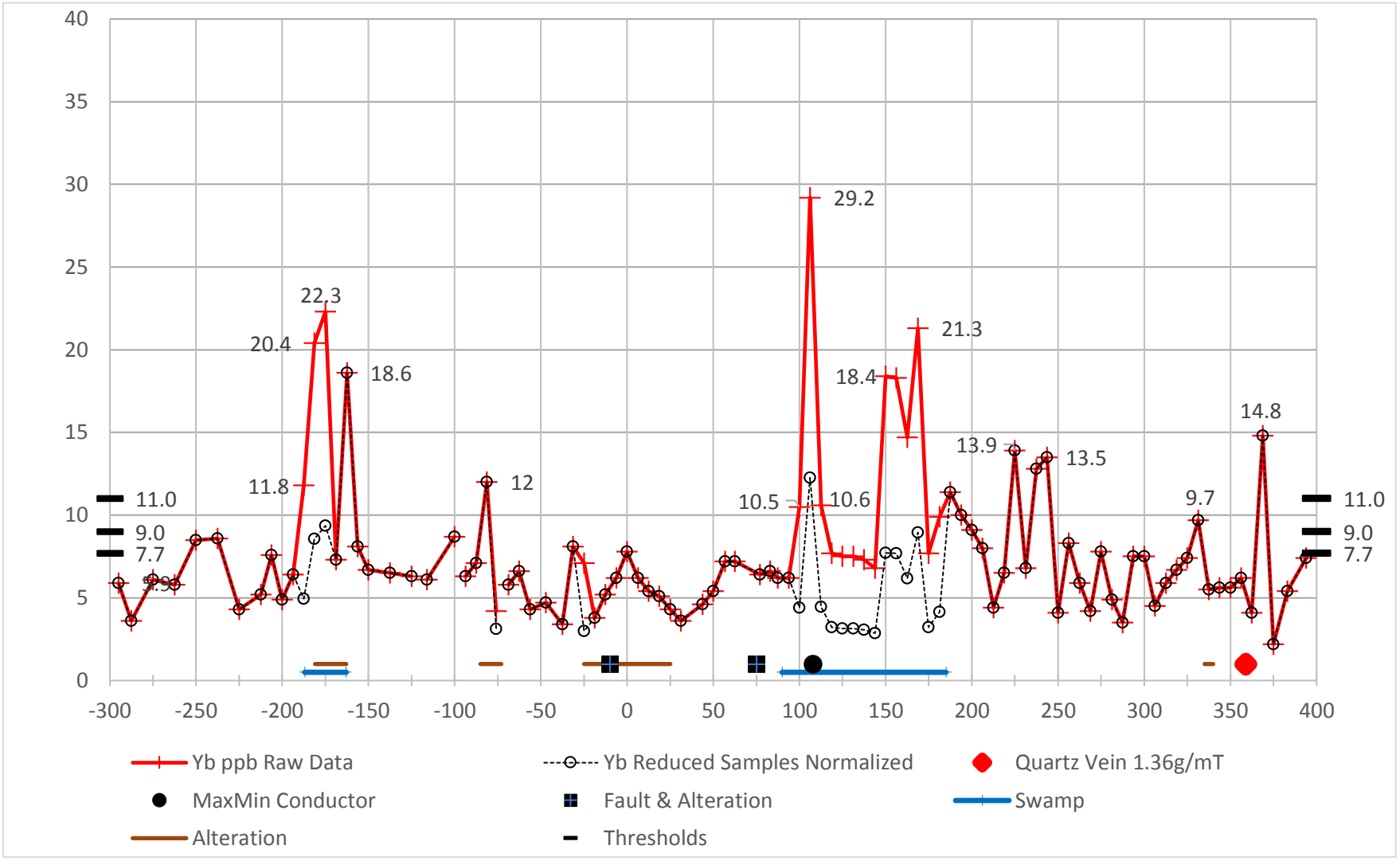


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>11.0 Possibly anomalous, >14.2 Probably Anomalous, >18.0 Anomalous (Lithological Cause)

Er^{R}x0.66 is equivalent to Er^{O}

HREE Er

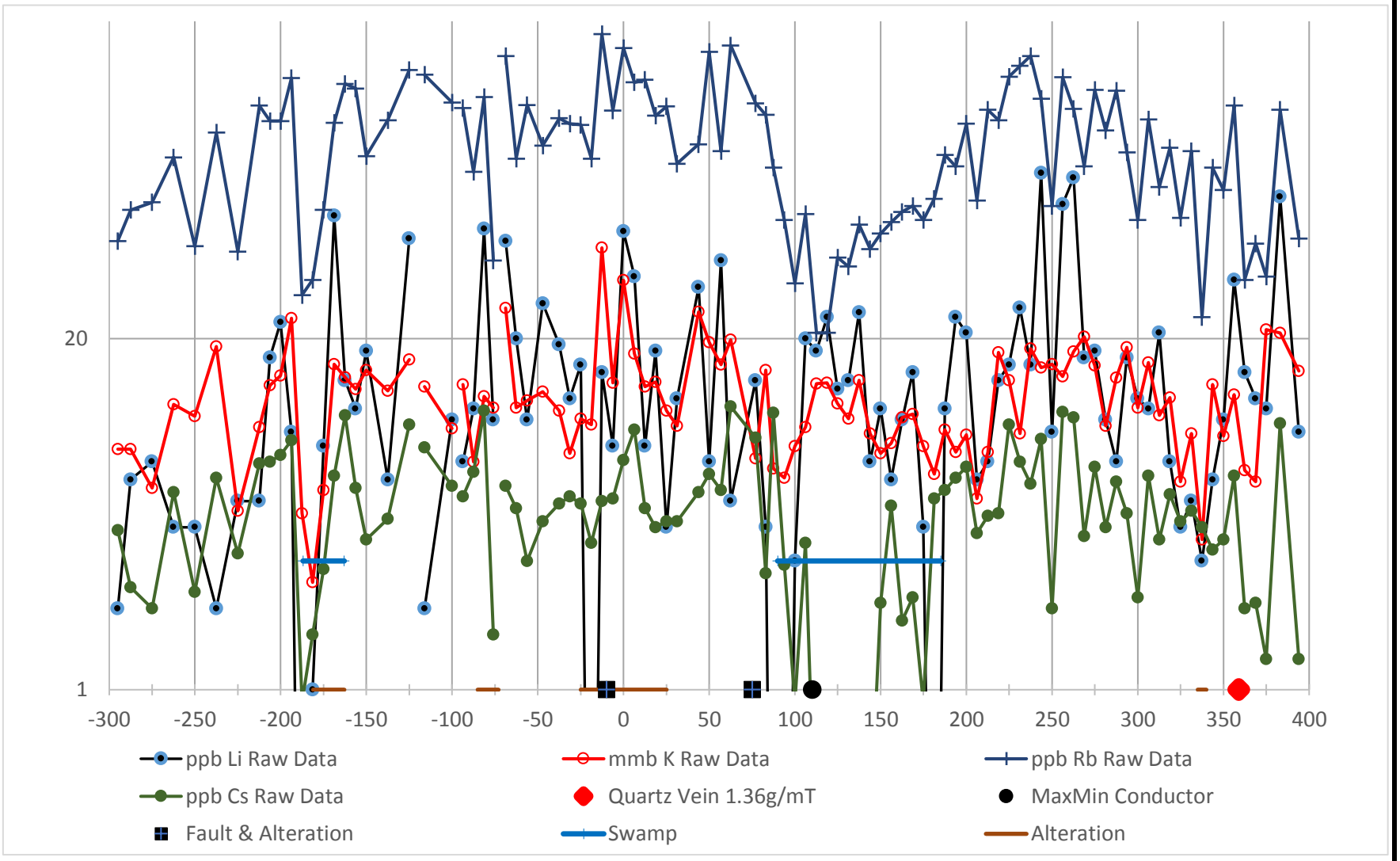


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

>7.7 Possibly anomalous, >9.0 Probably Anomalous, >11.0 Anomalous *(Lithological Cause)*

HREE Yb^{R}x0.42 is equivalent toY^{O}

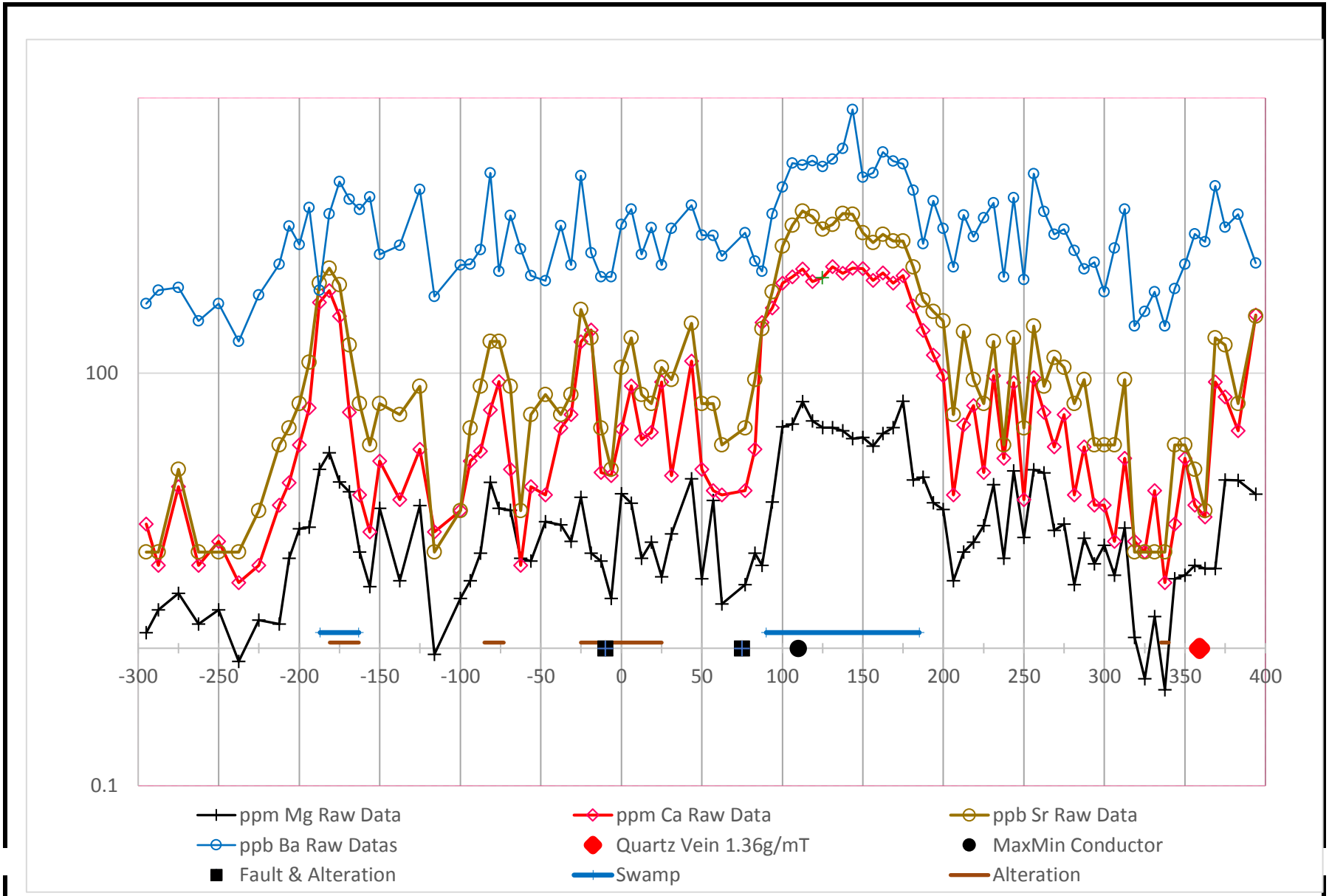
HREE **Yb**



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

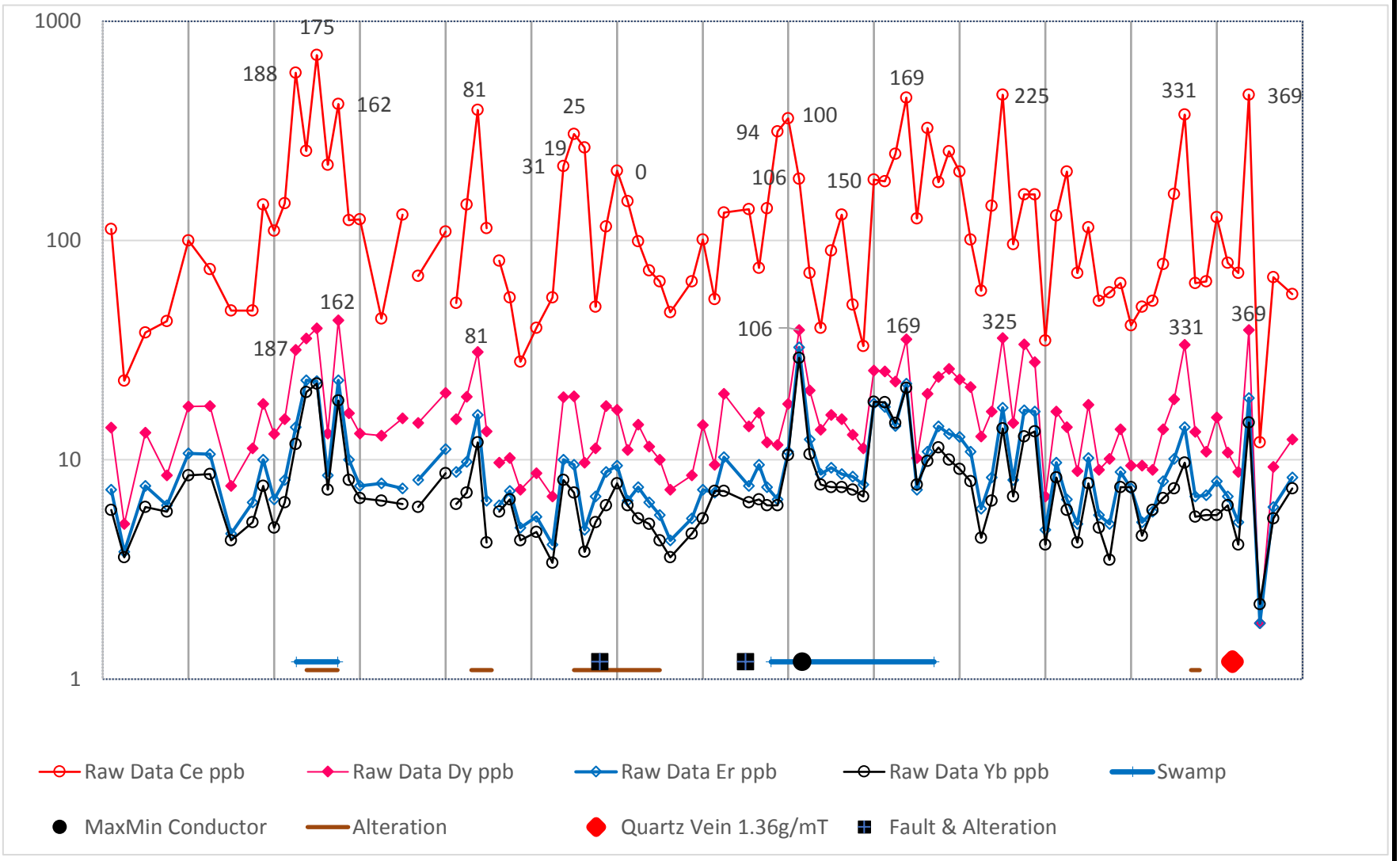
Li^{R}x1.21 is equivalent to Li^{O}

Alkali Metals Li K Rb Cs



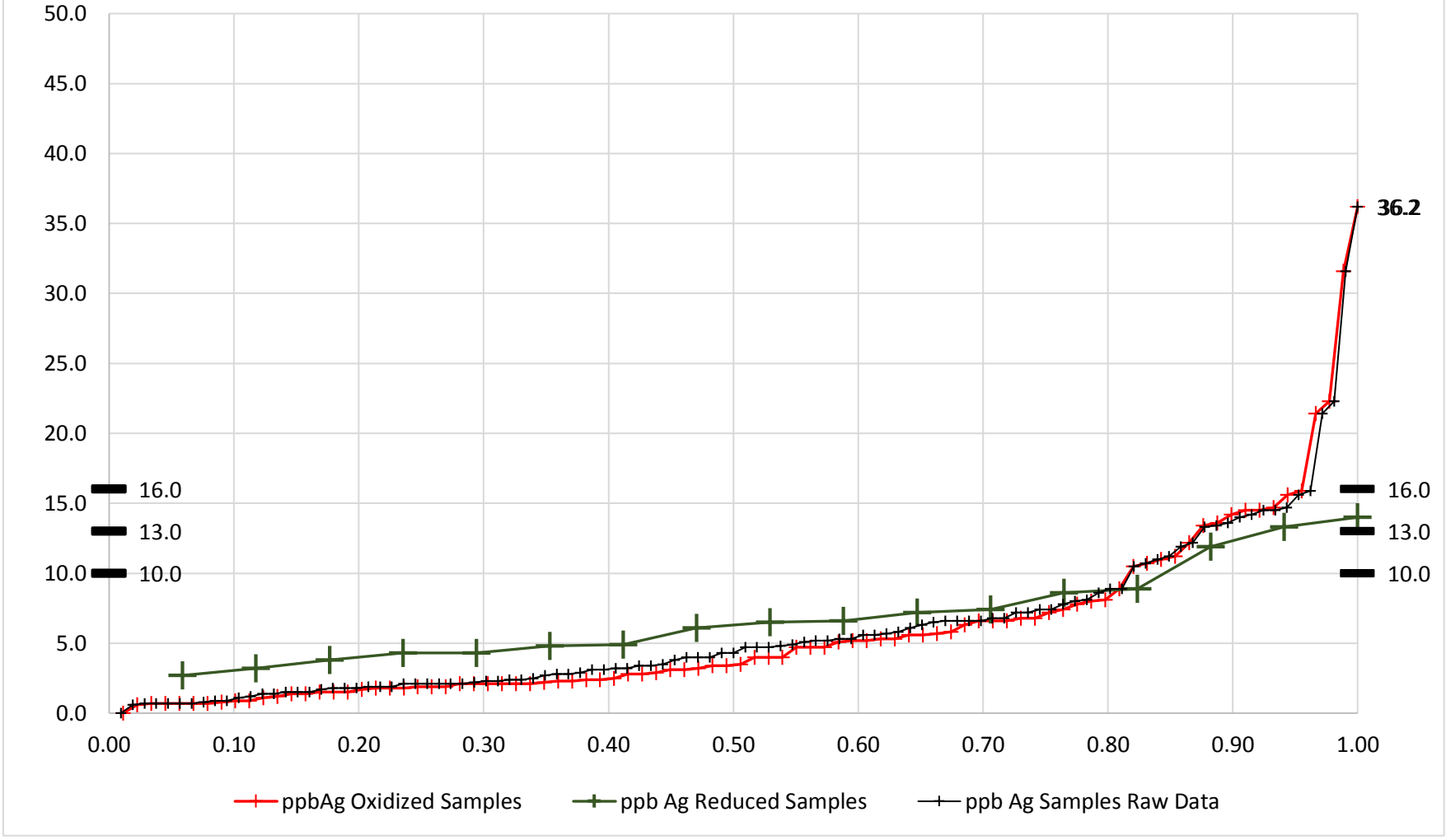
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Mg Ca Sr Br



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims
Statistical Rank by Metal Content and Oxidation/Reduction State
>165 Possibly anomalous, >220 Probably Anomalous, >315 Anomalous

Raw Data LREEs **Ce**, HREEs **Dy, Er Yb**

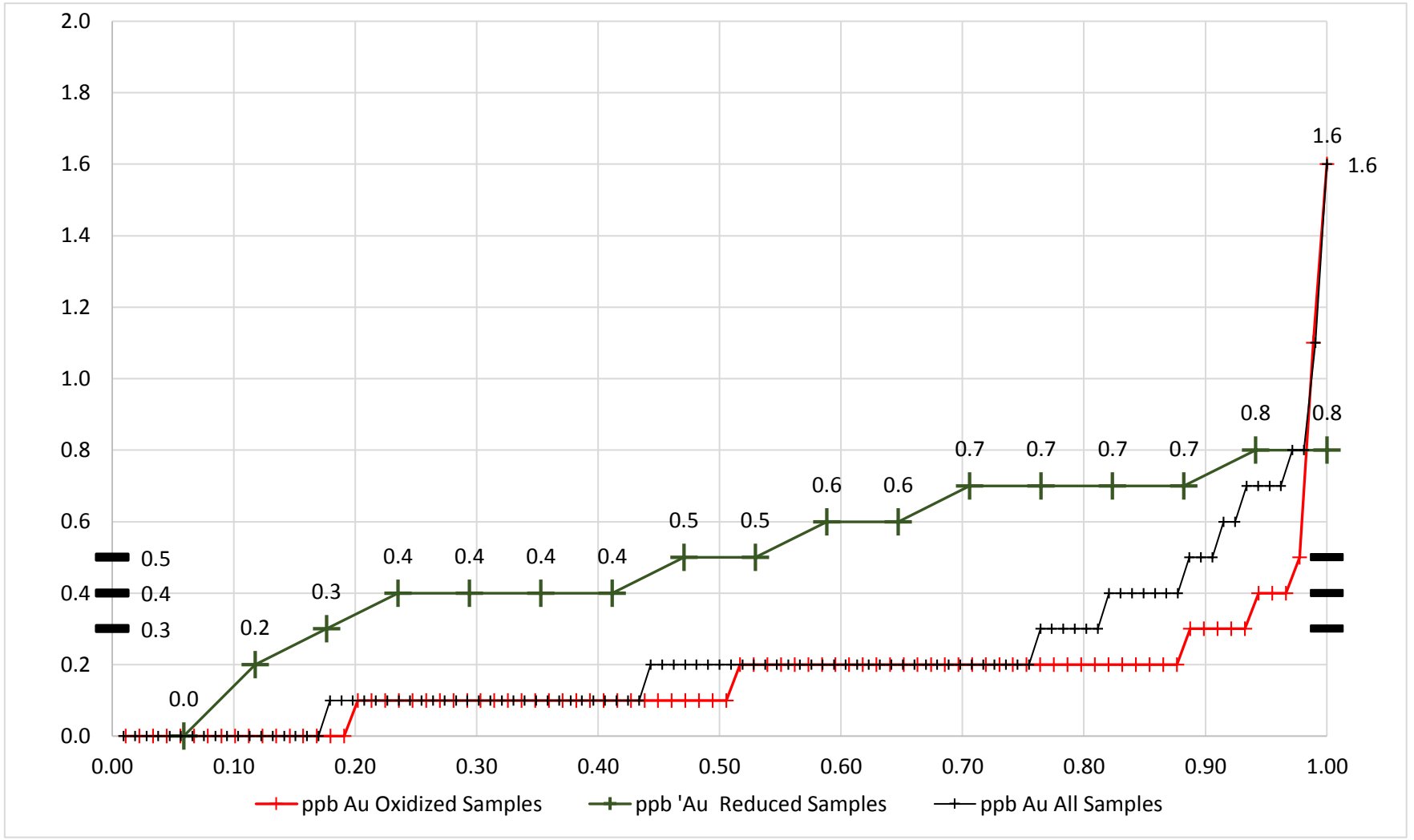


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>10 Possibly anomalous, >13 Probably Anomalous, >16 Anomalous *(Mineralogical Cause?)*

Ag^{R}x1.00 is equivalent to Ag^{O}



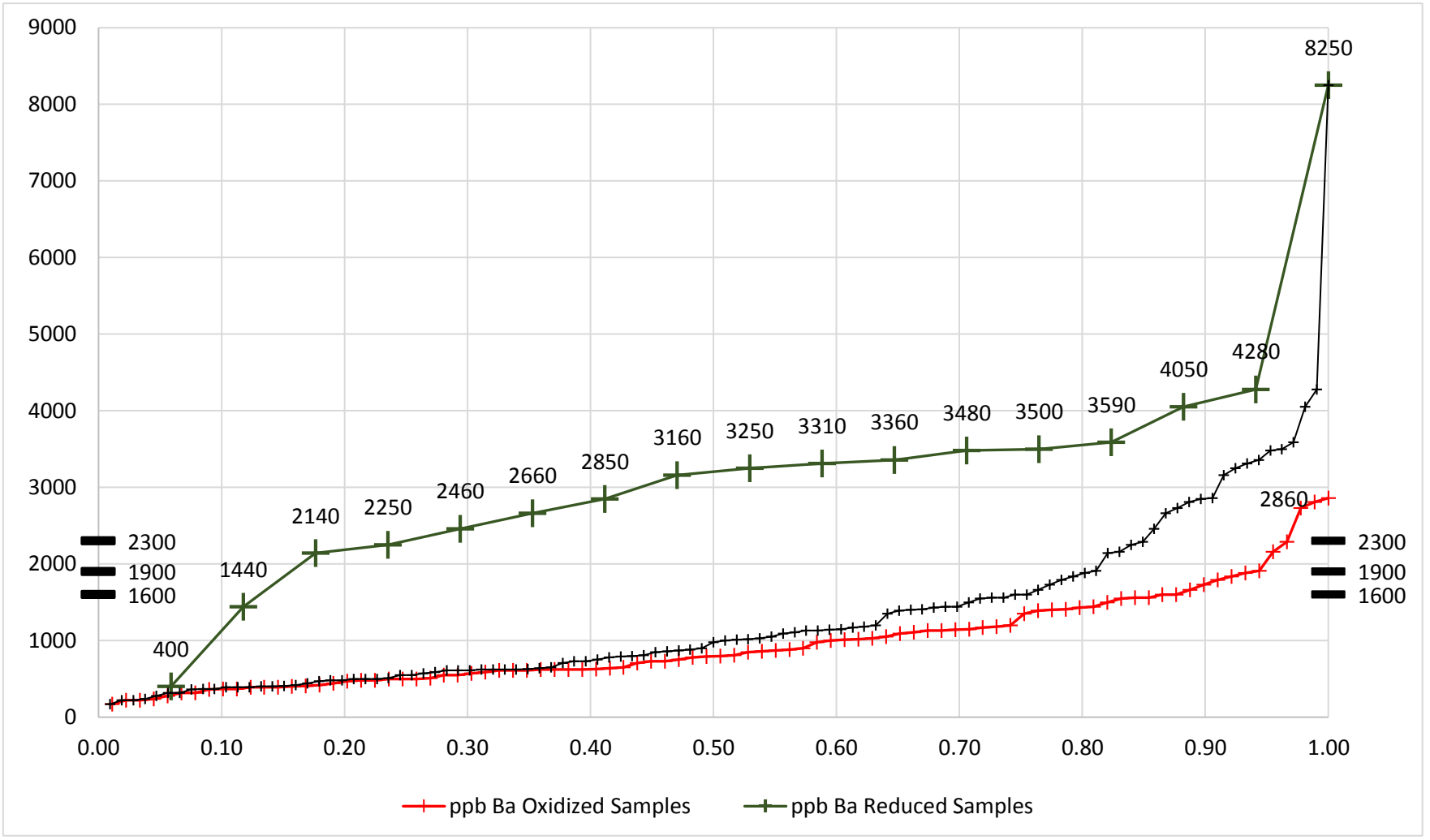
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>0.3 Possibly anomalous, >0.4 Probably Anomalous, >0.5 Anomalous *(Mineralization?)*

Au^{R}x0.25 is equivalent to Au^{O} (*X0.77 2014*)

2016 MMI Eby Rpt 2018-01-08 40

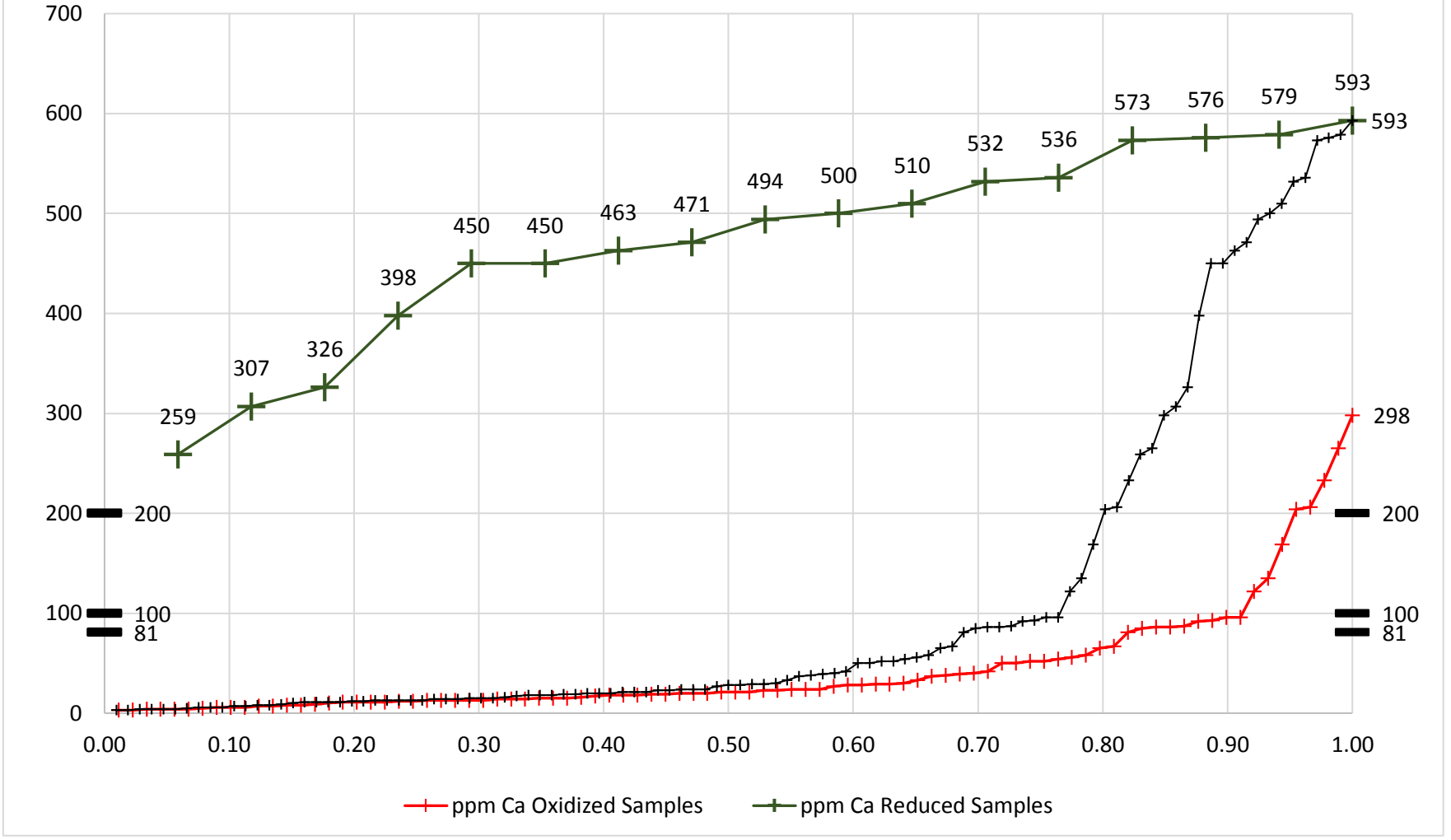


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>1600 Possibly anomalous, >1900 Probably Anomalous, >2300 Anomalous *(Lithological Cause?)*

$Ba^{R}x0.40$ is equivalent to Ba^{O}

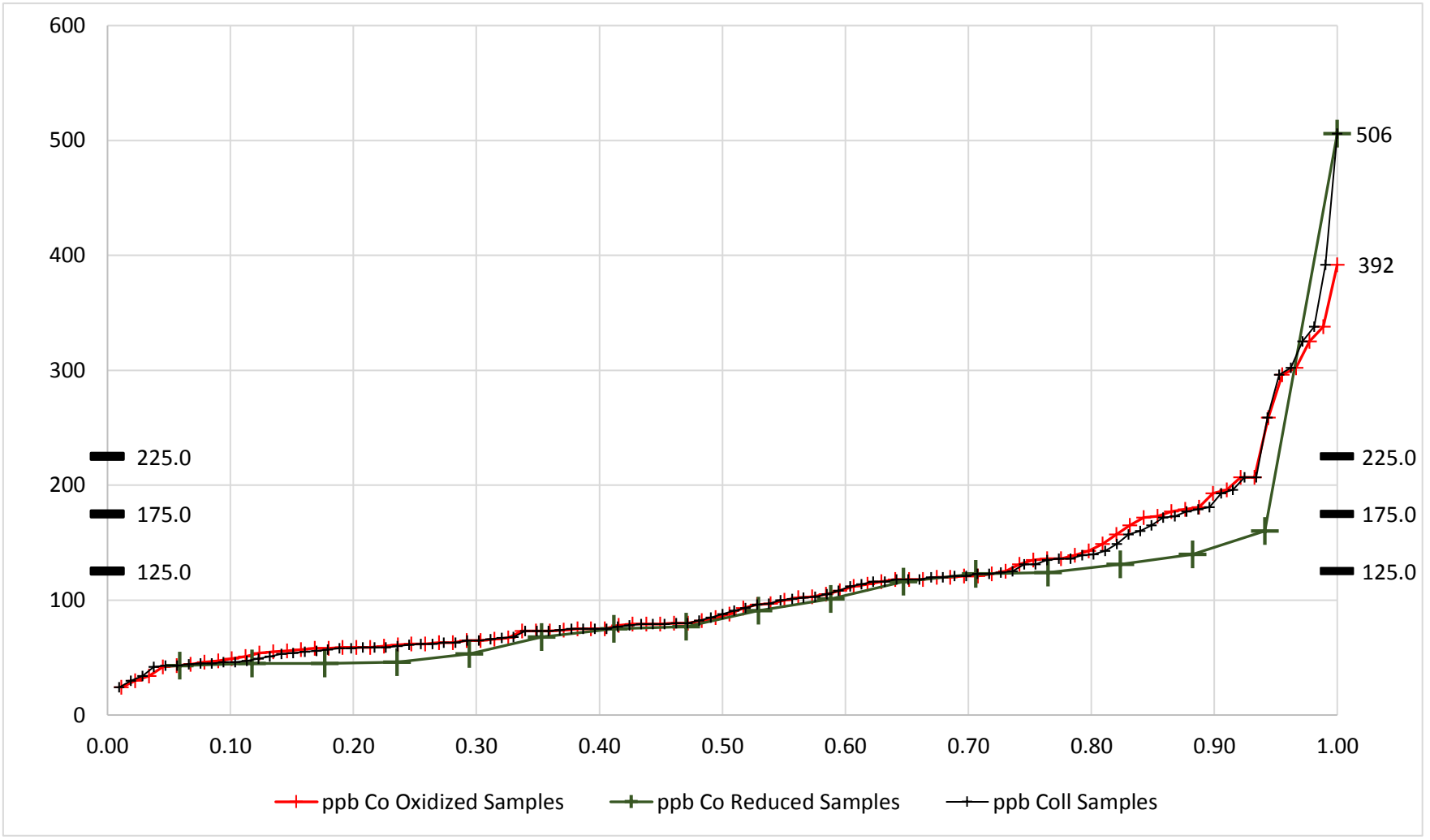


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>81 Possibly anomalous, >100Probably Anomalous, >200 Anomalous *(Lithological Cause)*

Ca^{R}x9.93 is equivalent to Ca^{O}

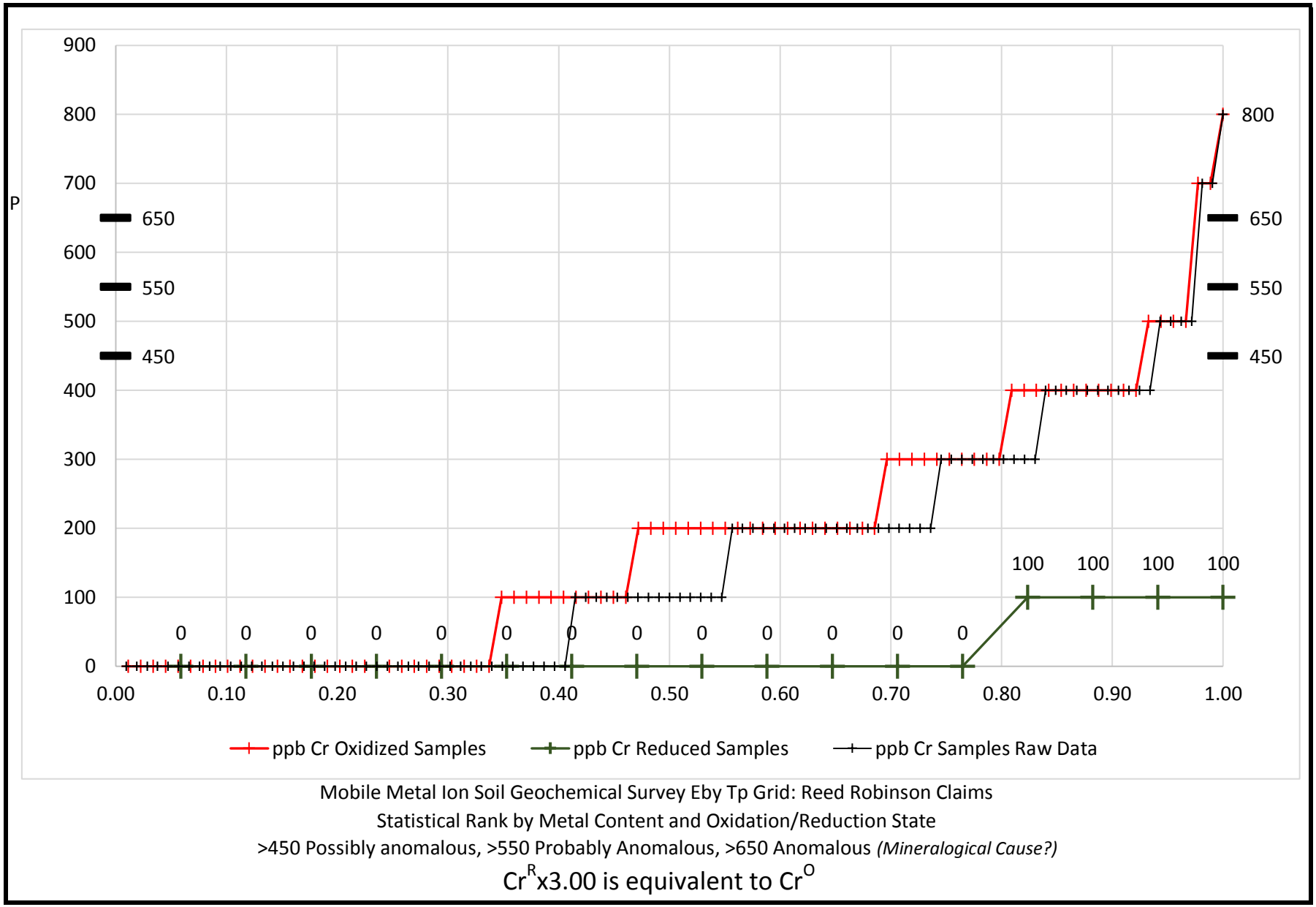


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>125 Possibly anomalous, >175 Probably Anomalous, >225 Anomalous *(Lithological Cause)*

Co^{R}x1.00 is equivalent to Co^{O}

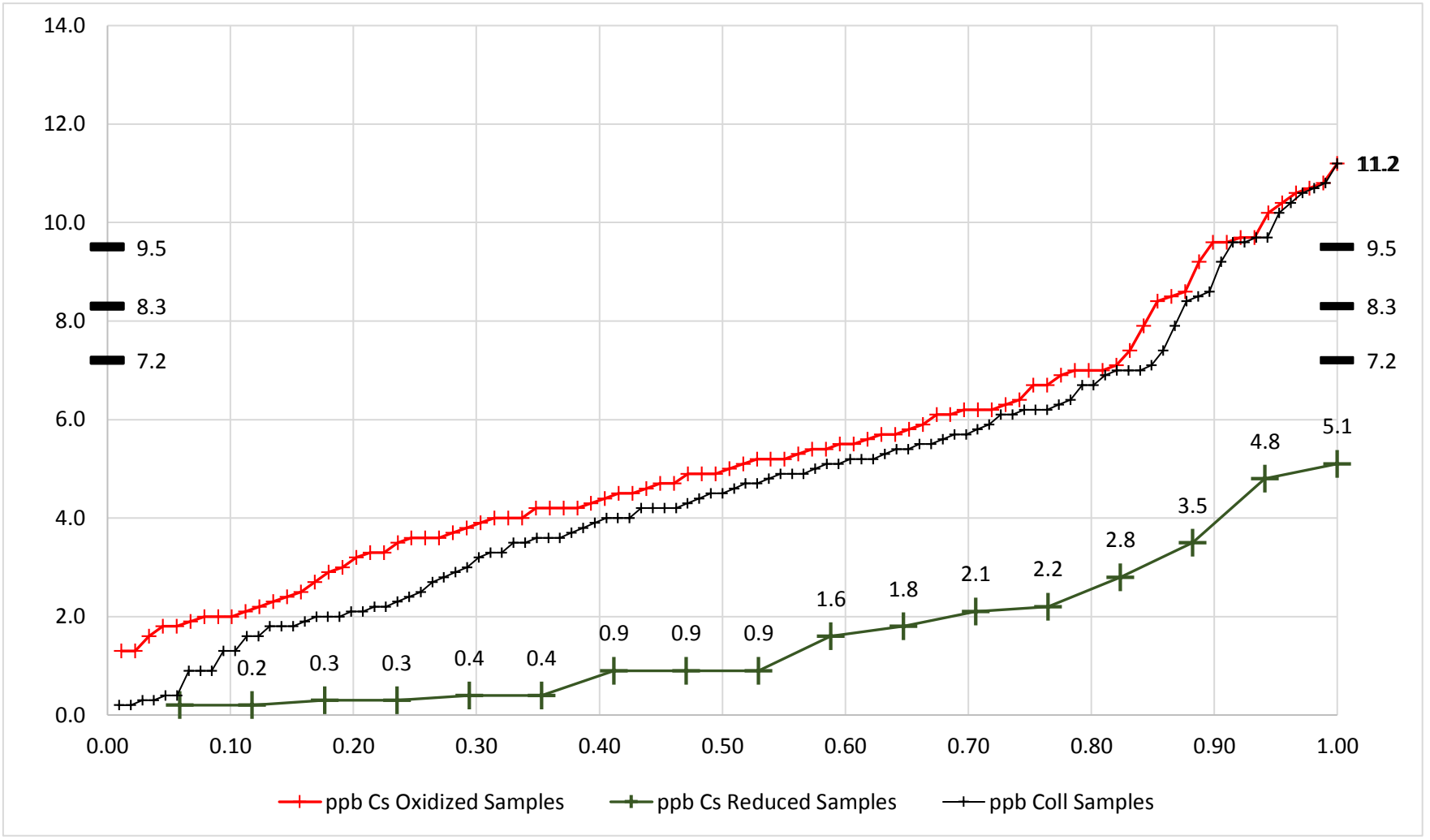


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>450 Possibly anomalous, >550 Probably Anomalous, >650 Anomalous *(Mineralogical Cause?)*

$Cr^{R}x3.00$ is equivalent to Cr^{O}

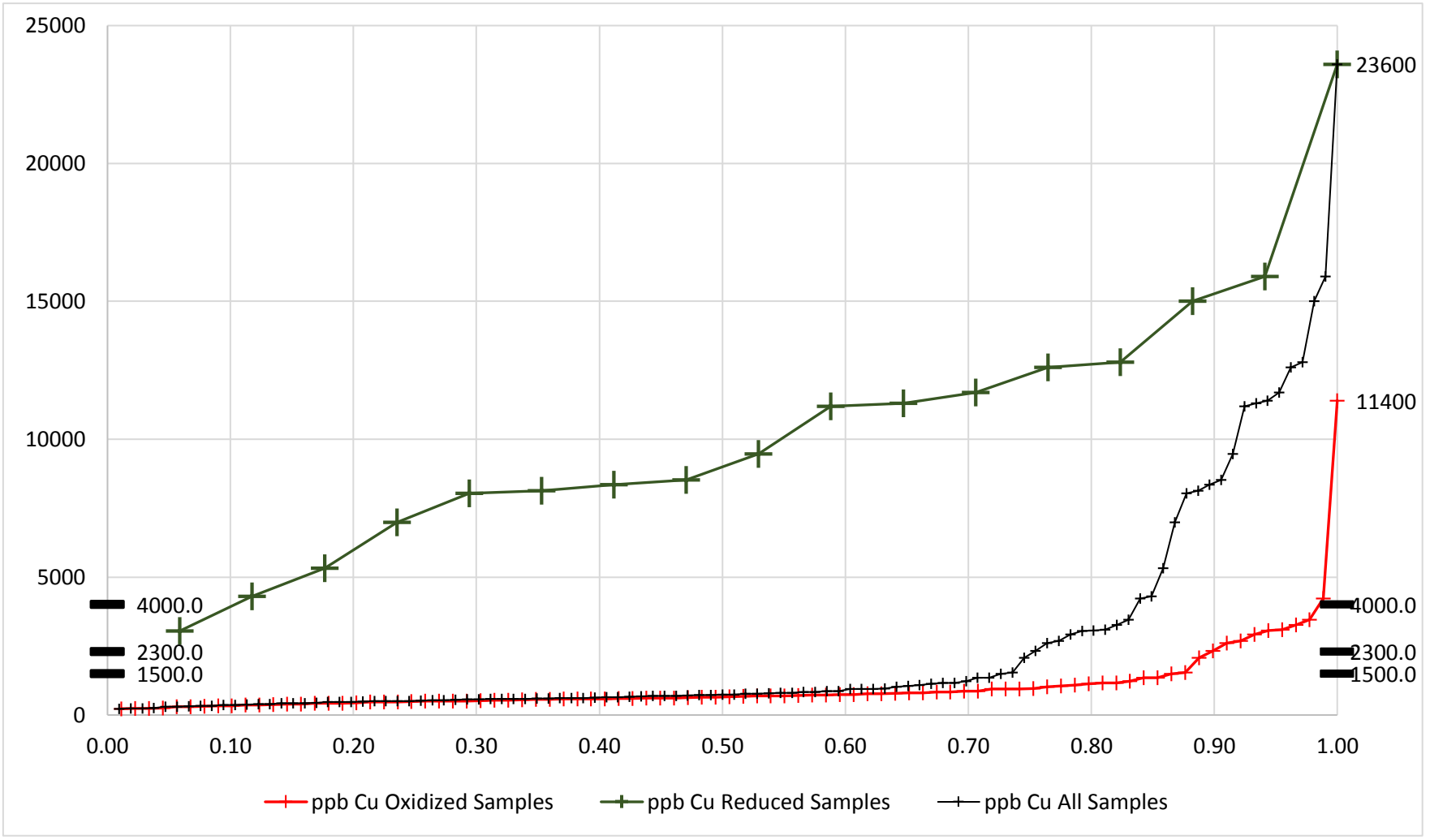


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>7.2 Possibly anomalous, >8.3 Probably Anomalous, >9.5 Anomalous *(Lithological Cause)*

Cs^{R}x2.53 is equivalent to Cs^{O}

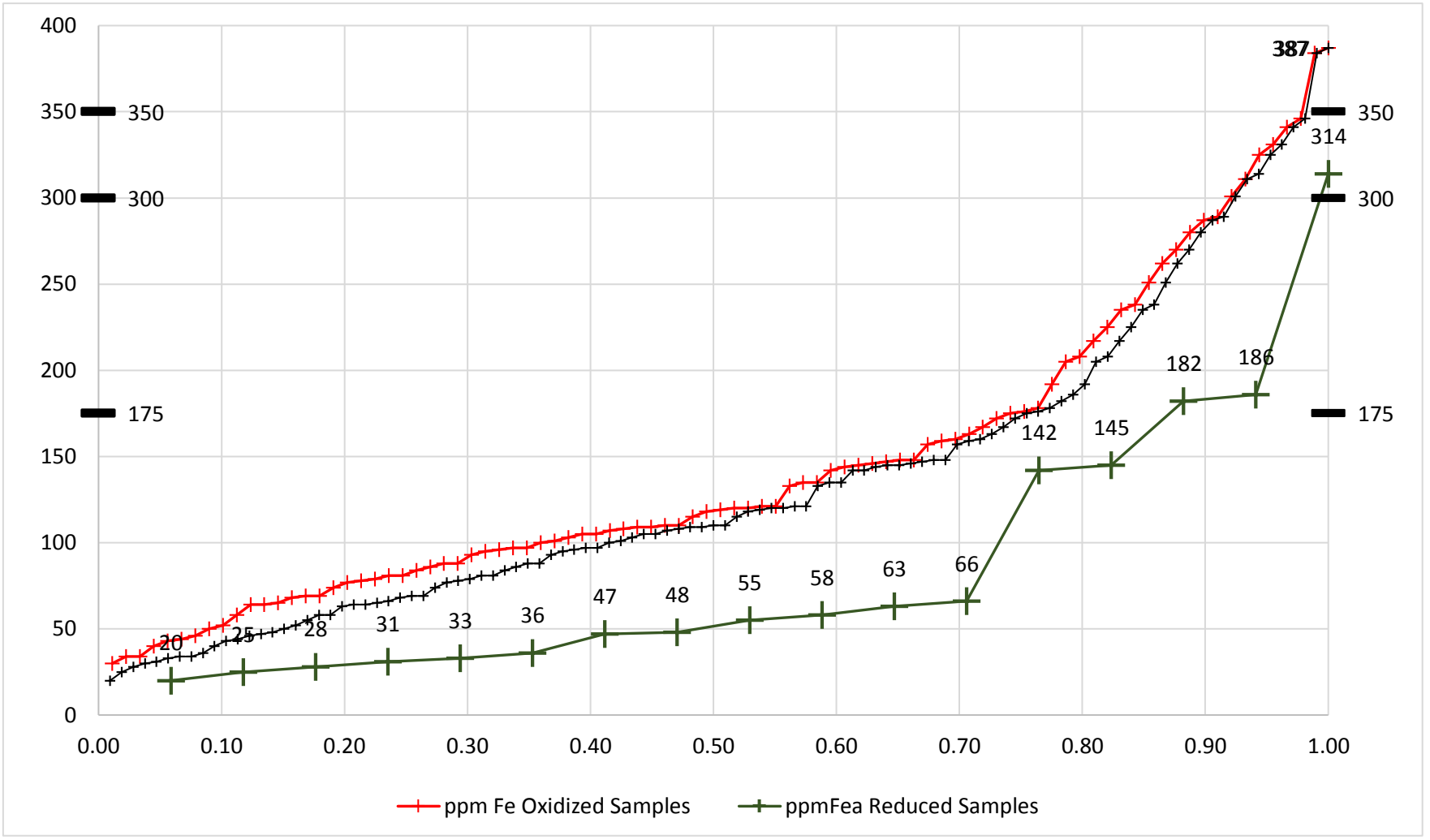


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>1500 Possibly anomalous, >2300 Probably Anomalous, >4000 Anomalous *(Cause?)*

$Cu^{R}x0.14$ is equivalent to Cu^{O}

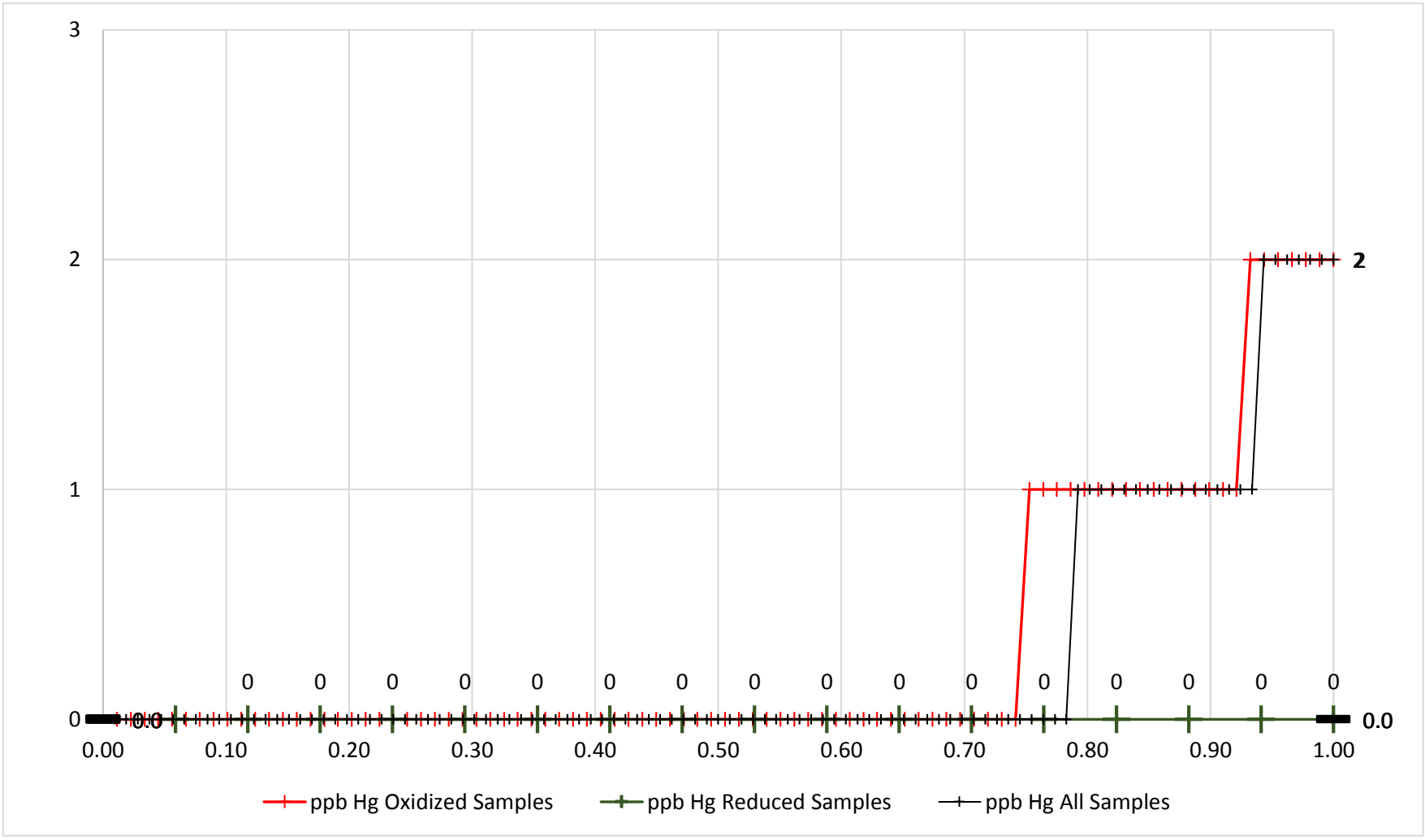


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>175 Possibly anomalous, >300Probably Anomalous, >350 Anomalous *(Soil PH Cause?)*

Fe^{R}x2.46 is equivalent to Fe^{O}

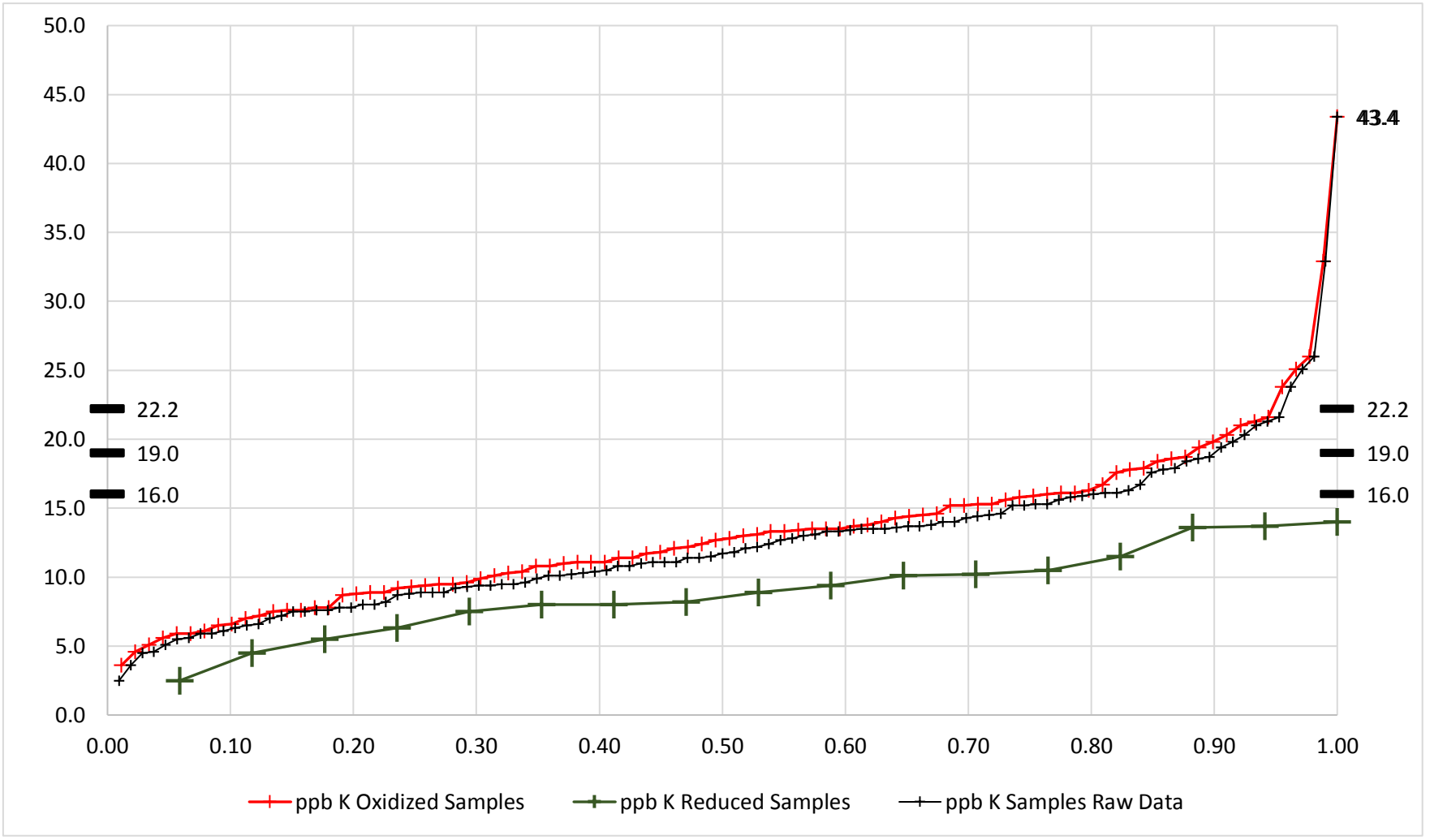


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

Thresholds not Determined >1.5 appears to be anomalous (Mineralization *Cause?)*

Hg^{R}xundetermined Factor (>1.5 is equivalent to Hg^{O}

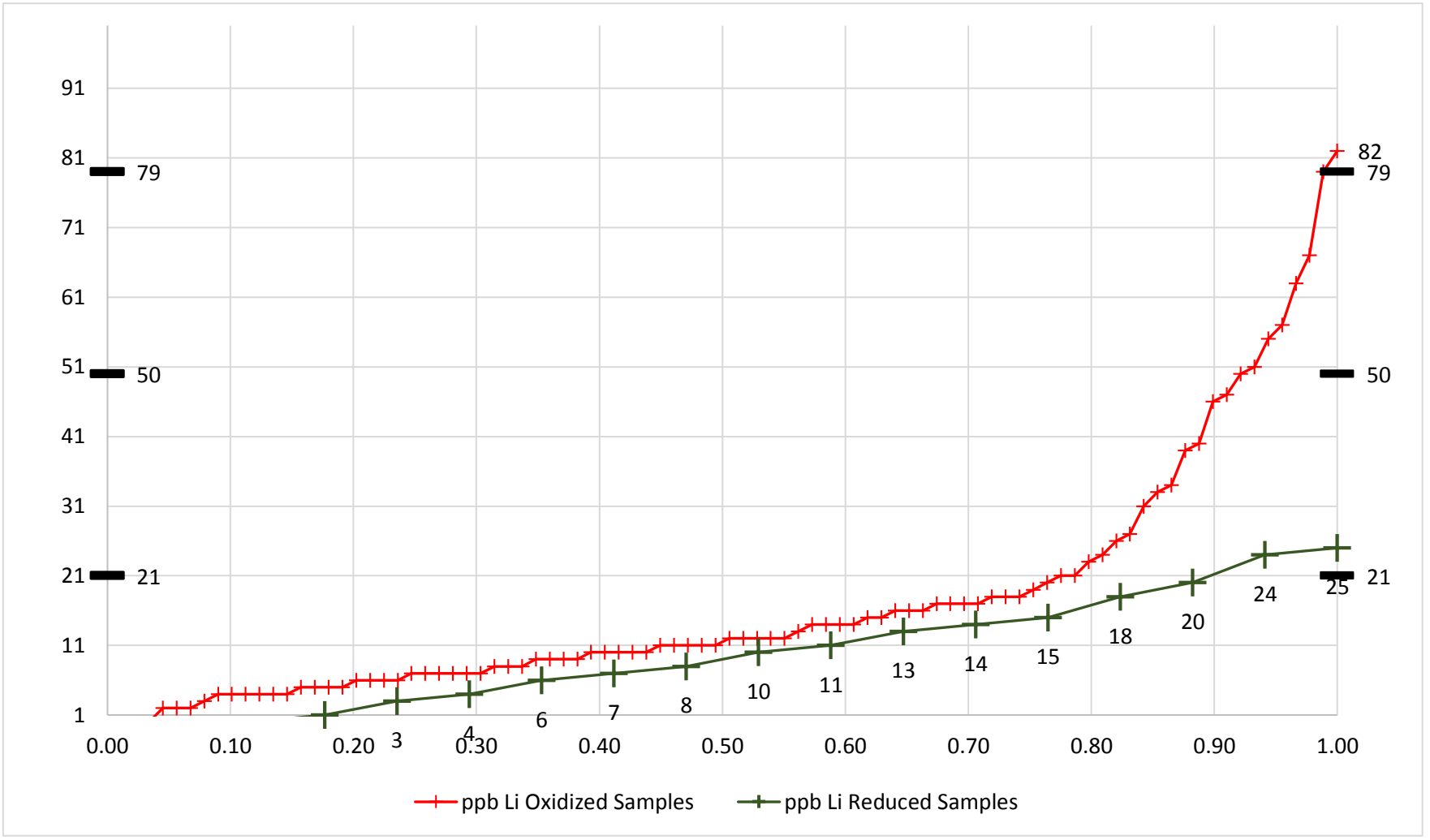


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Lithological Cause)*

$K^R x1.53$ is equivalent to K^O

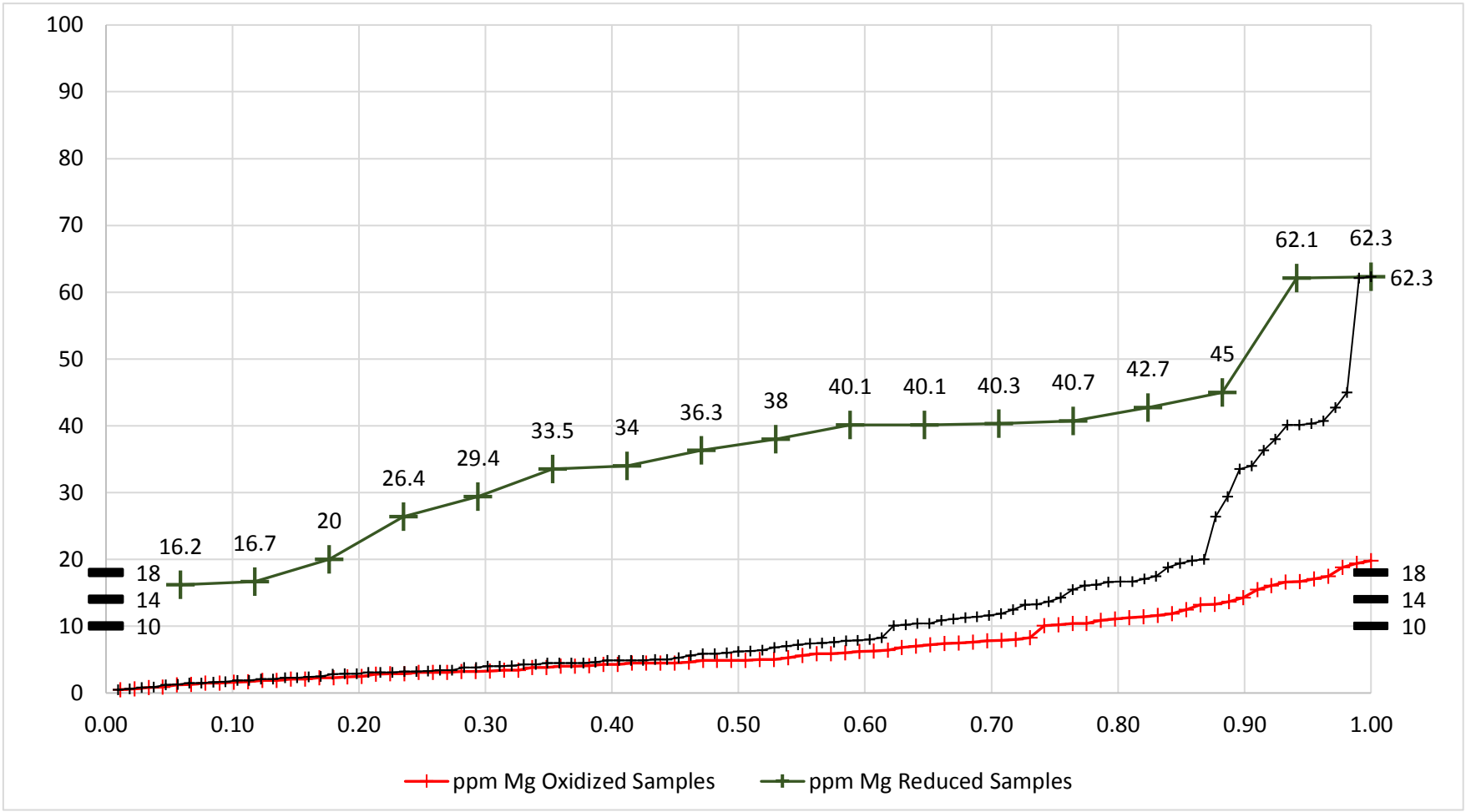


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>21 Possibly anomalous, >50 Probably Anomalous, >79 Anomalous *(Appears to be Random?)*

Li^{R}x1.21 is equivalent to Li^{O}



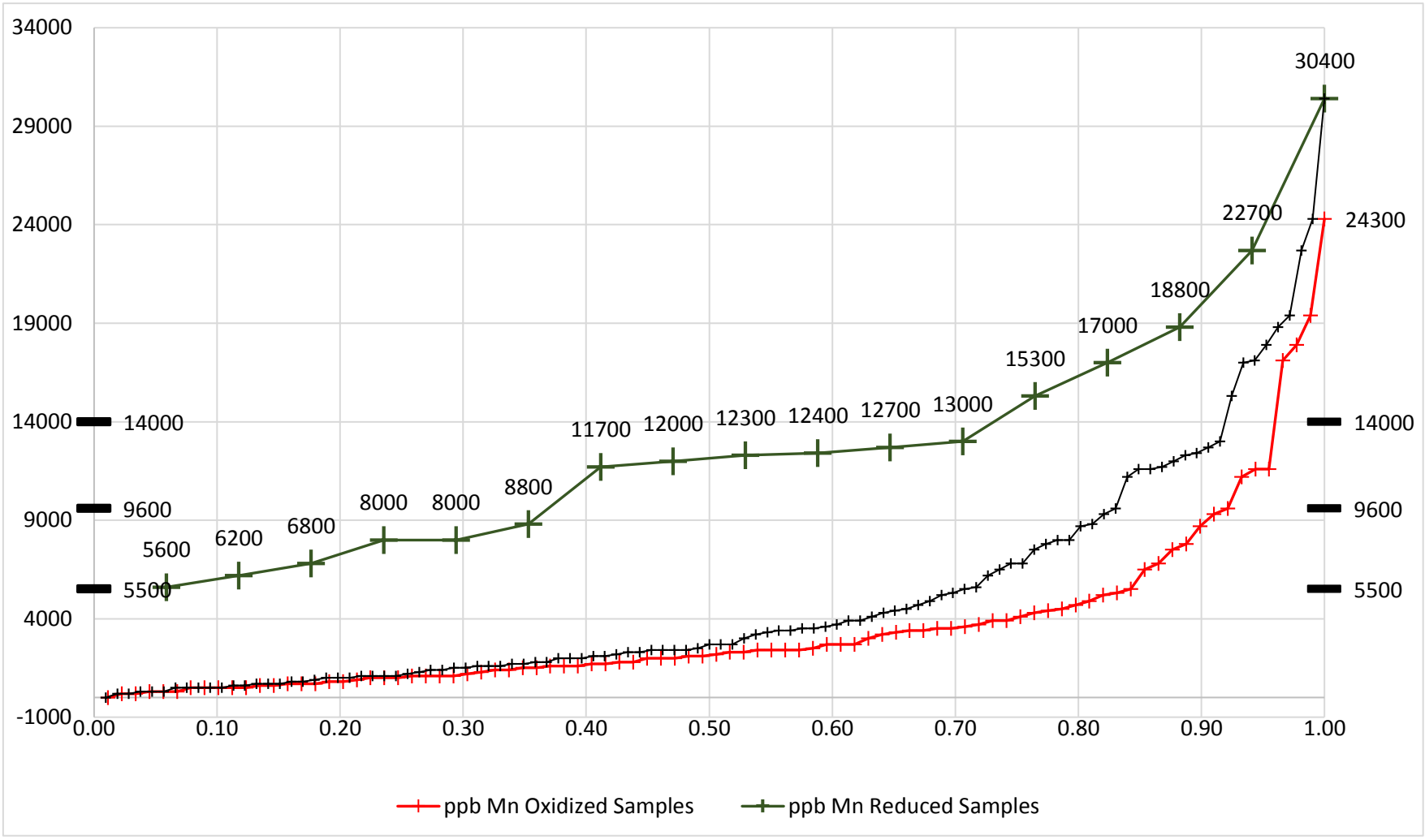
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>10 Possibly anomalous, >14 Probably Anomalous, >18 Anomalous *(Alteration Cause?)*

$Mg^{R}x0.30$ is equivalent to Mg^{O}

Mg

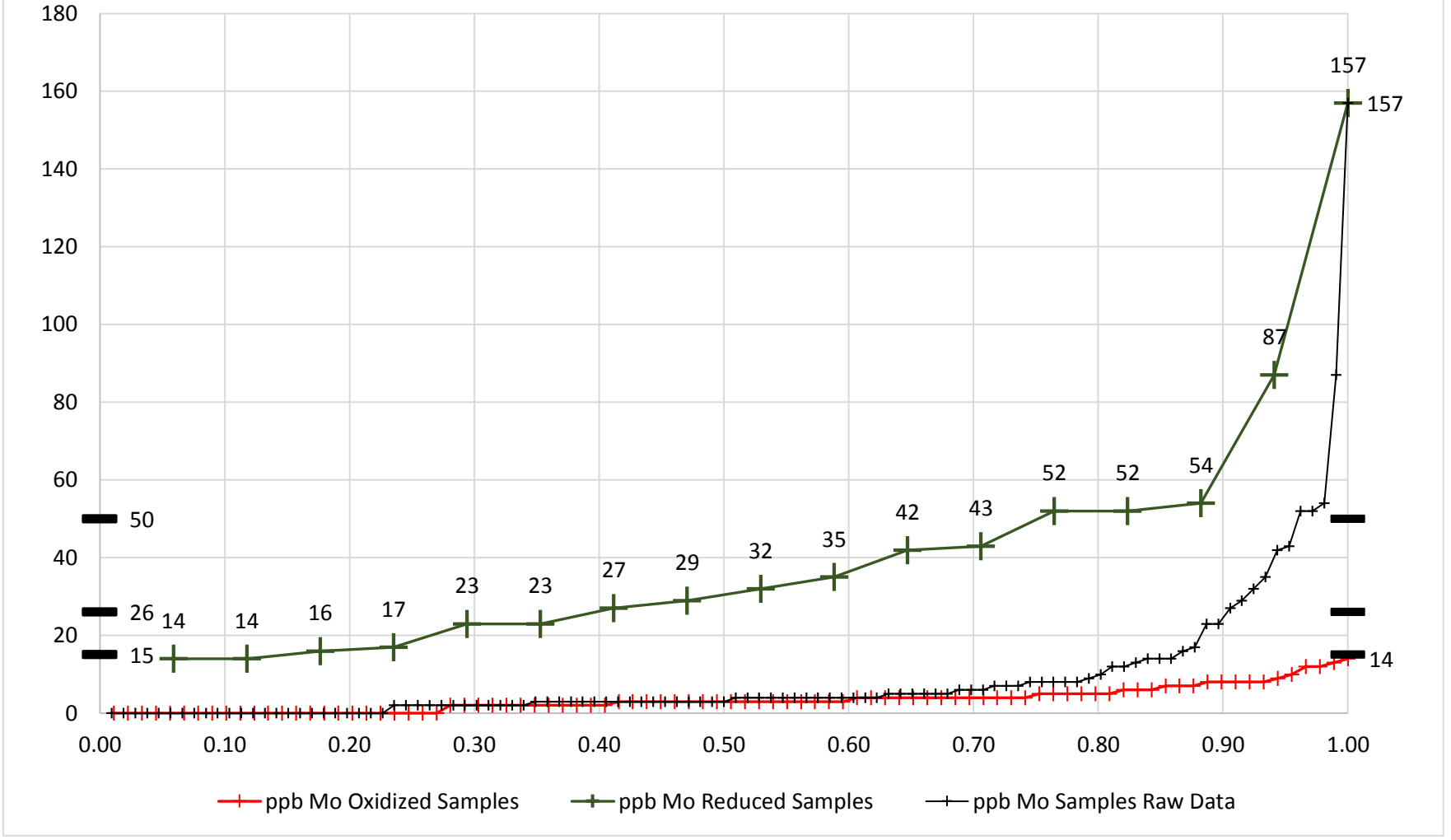


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>5500 Possibly anomalous, >9600 Probably Anomalous, >14000 Anomalous *(Cause?)*

$Mn^{R}x0.36$ is equivalent to Mn^{O}

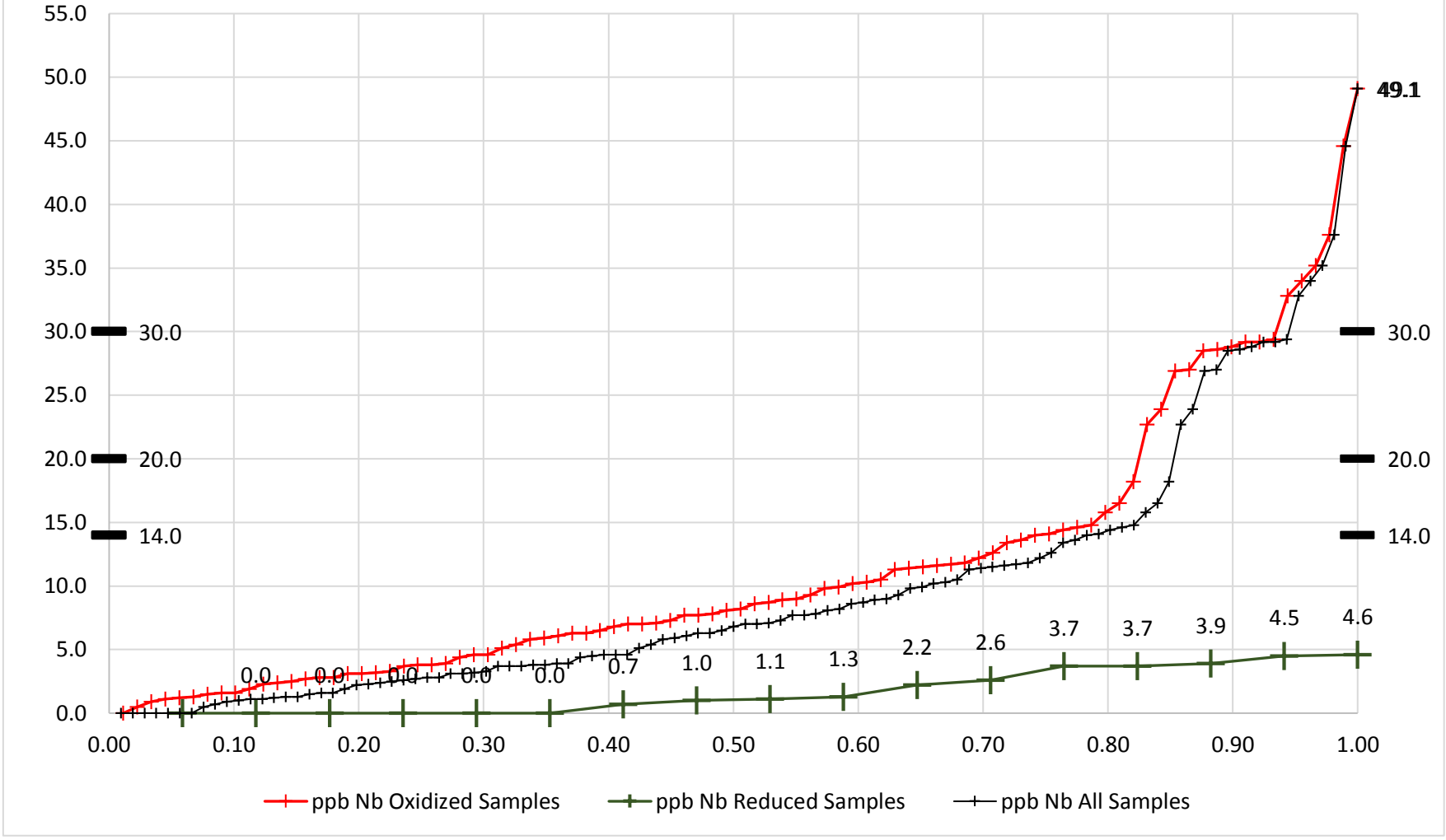


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>15 Possibly anomalous, >26 Probably Anomalous, >50 Anomalous *(Cause?)*

$Mo^{R}x0.l9$ is equivalent to Mo^{O}

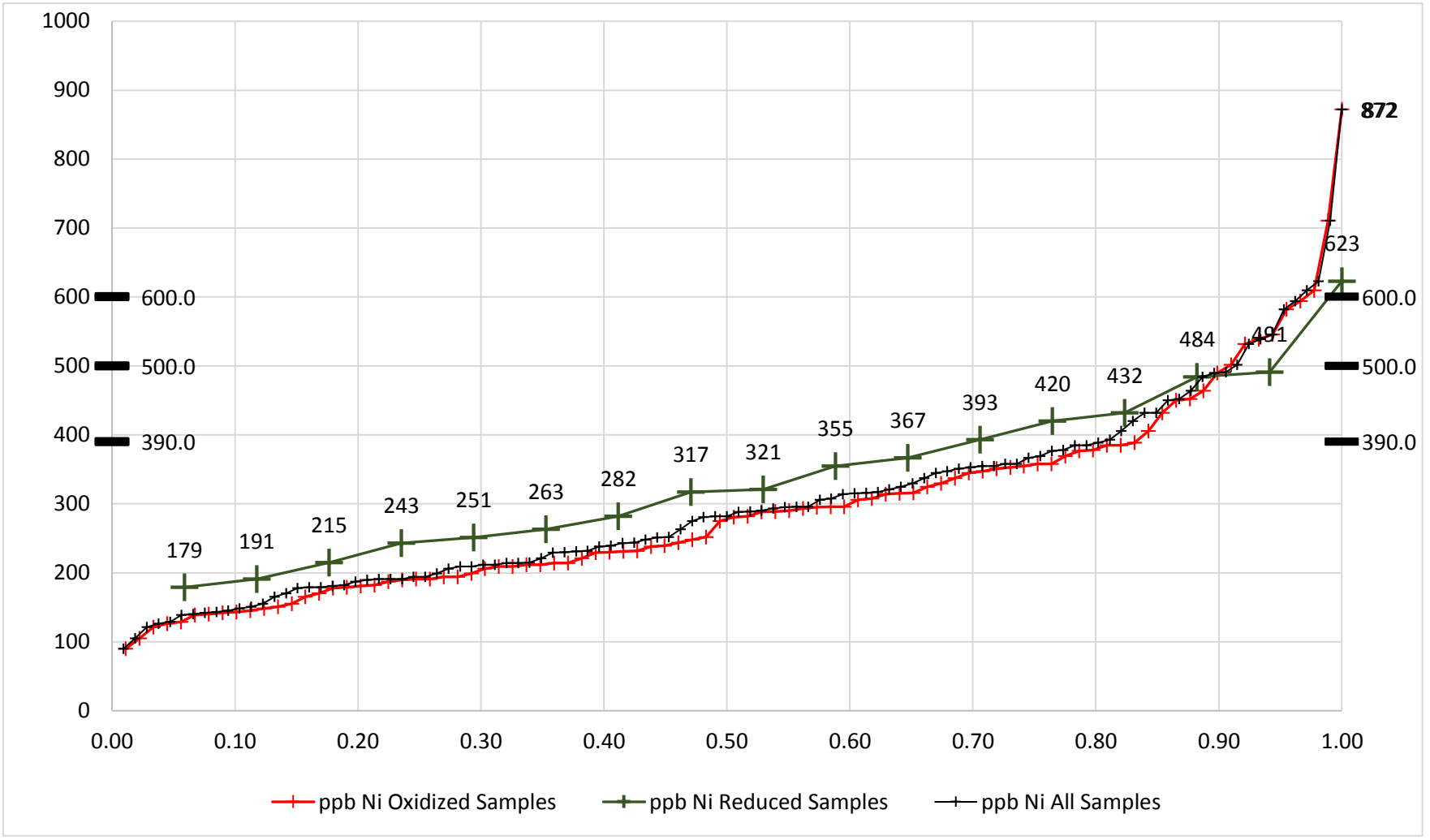


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>14 High Background - Possibly anomalous, >20 Probably Anomalous, >30 Anomalous *(2 lithological or Alteration Causes?)*

$Nb^{R}x6.49$ is equivalent to Nb^{O}

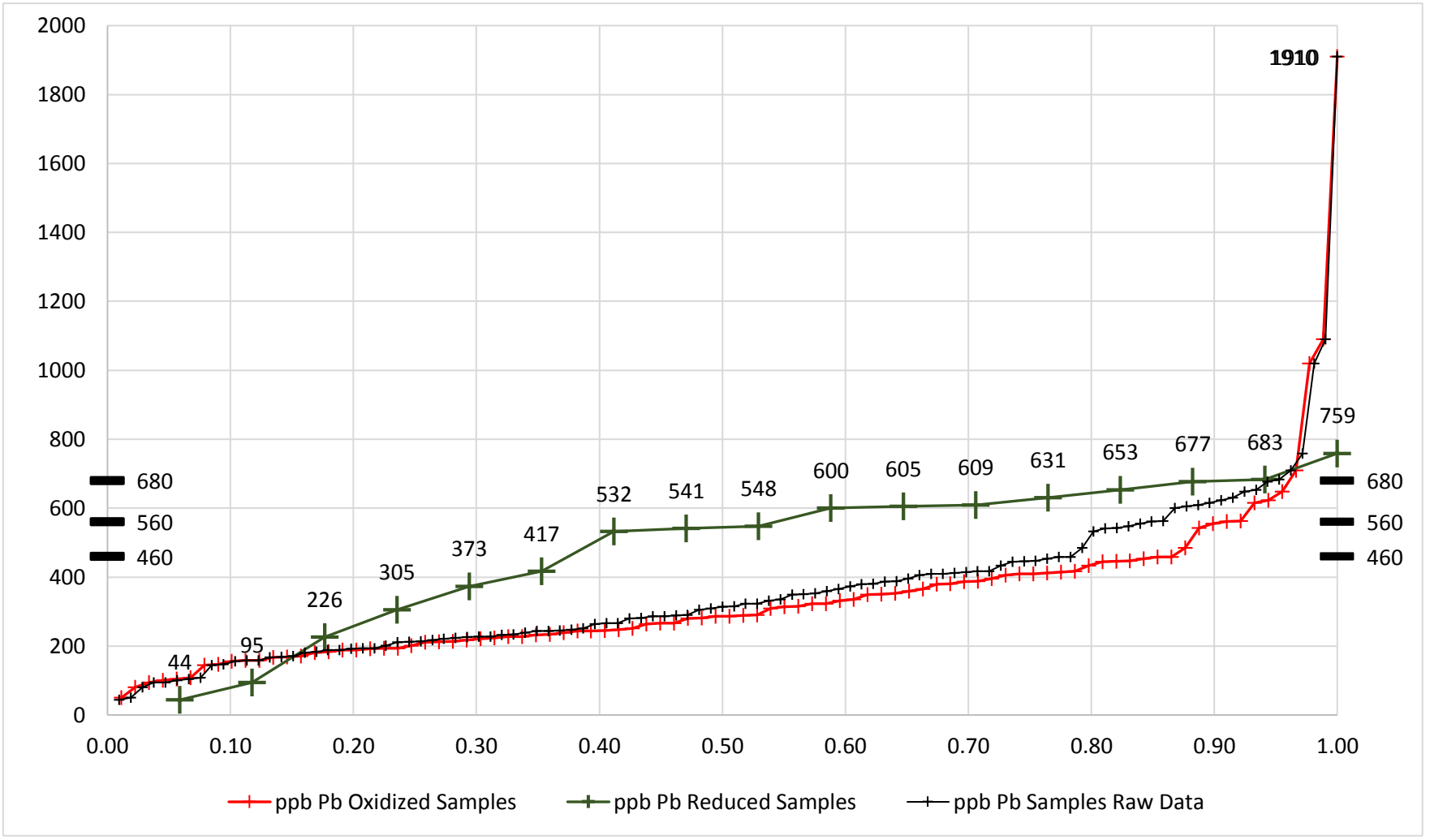


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>390 Possibly anomalous, >500 Probably Anomalous, >600 Anomalous *(Lithological Cause)*

$Ni^{R}x0.90$ is equivalent to Ni^{O}

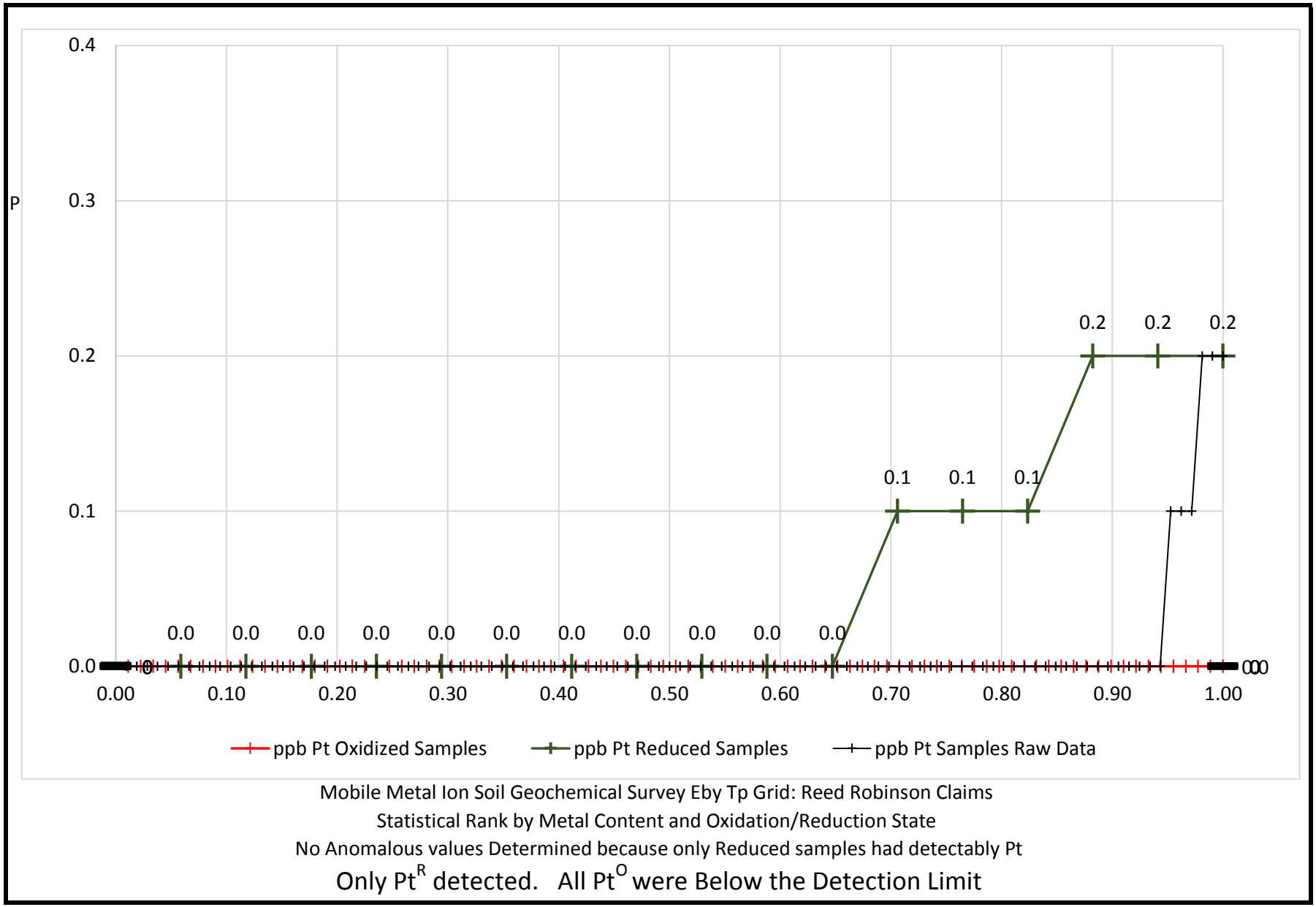


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>460 Possibly anomalous, >560 Probably Anomalous, >680 Anomalous *(Lithological Cause)*

$Pb^{R}x0.68$ is equivalent to Pb^{O}

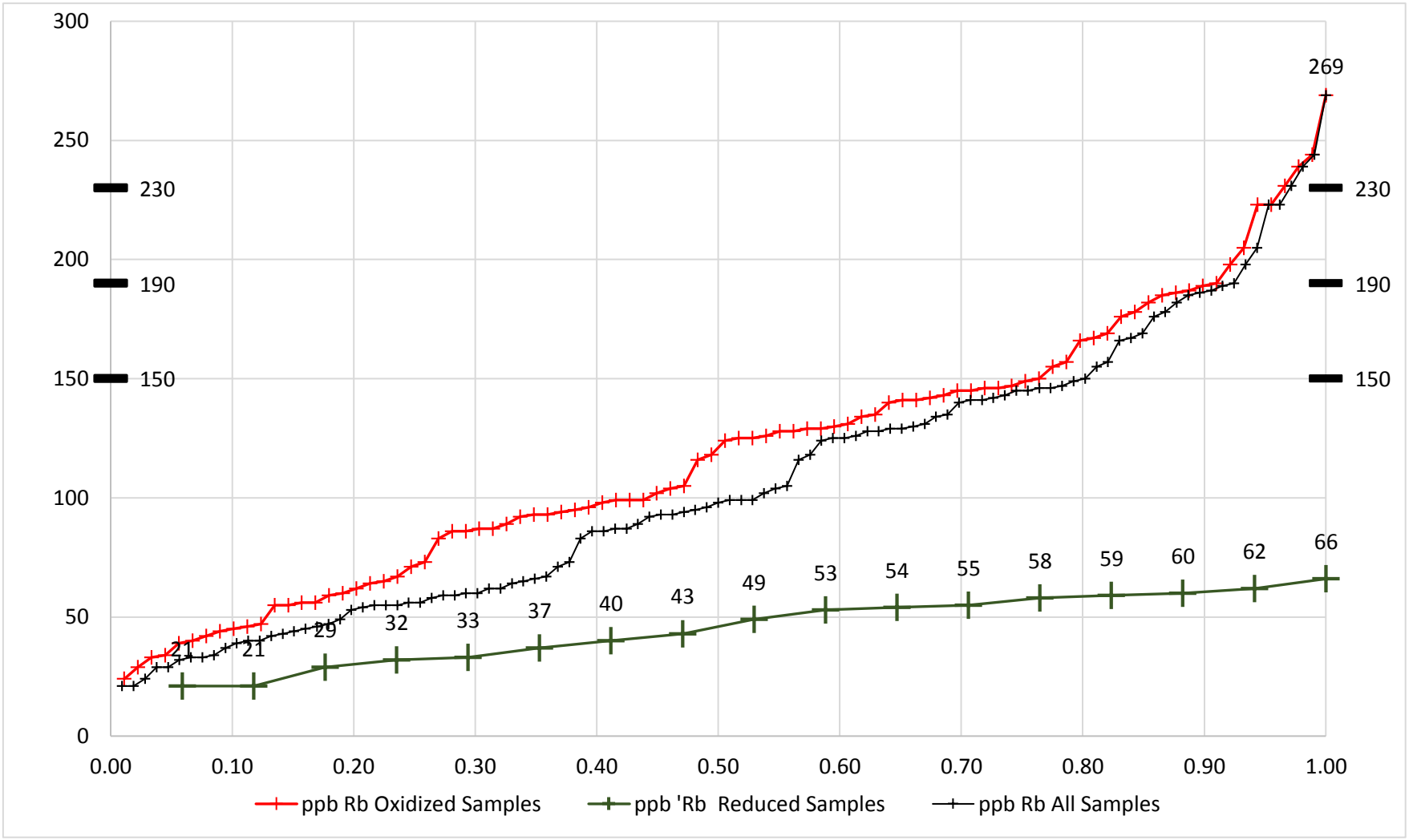


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

No Anomalous values Determined because only Reduced samples had detectably Pt

Only Pt^R detected. All Pt^O were Below the Detection Limit

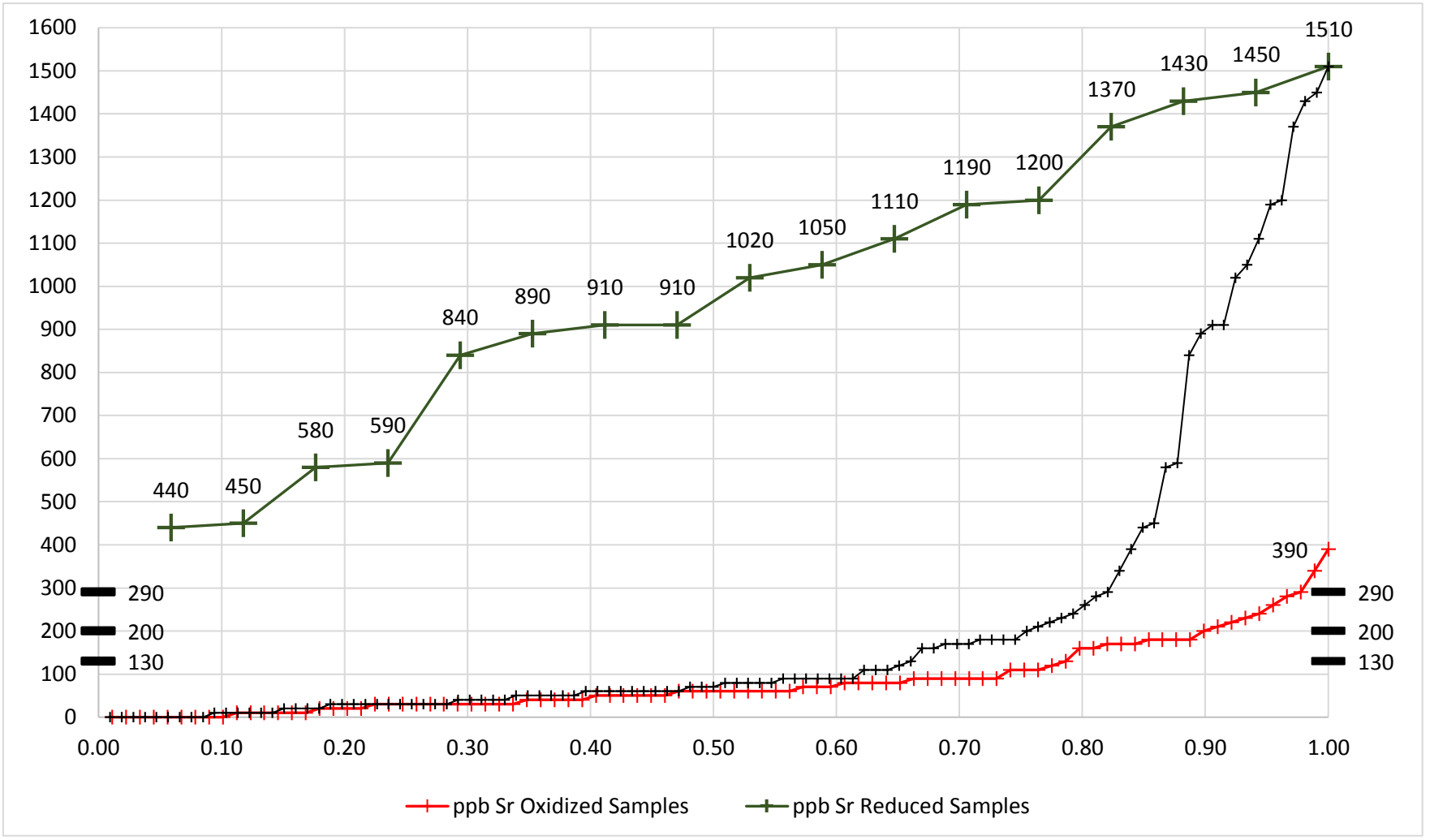


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>150 Possibly anomalous, >190 Probably Anomalous, >230 Anomalous *(Alteration Cause?)*

Rb^{R}x2.59 is equivalent to Rb^{O}

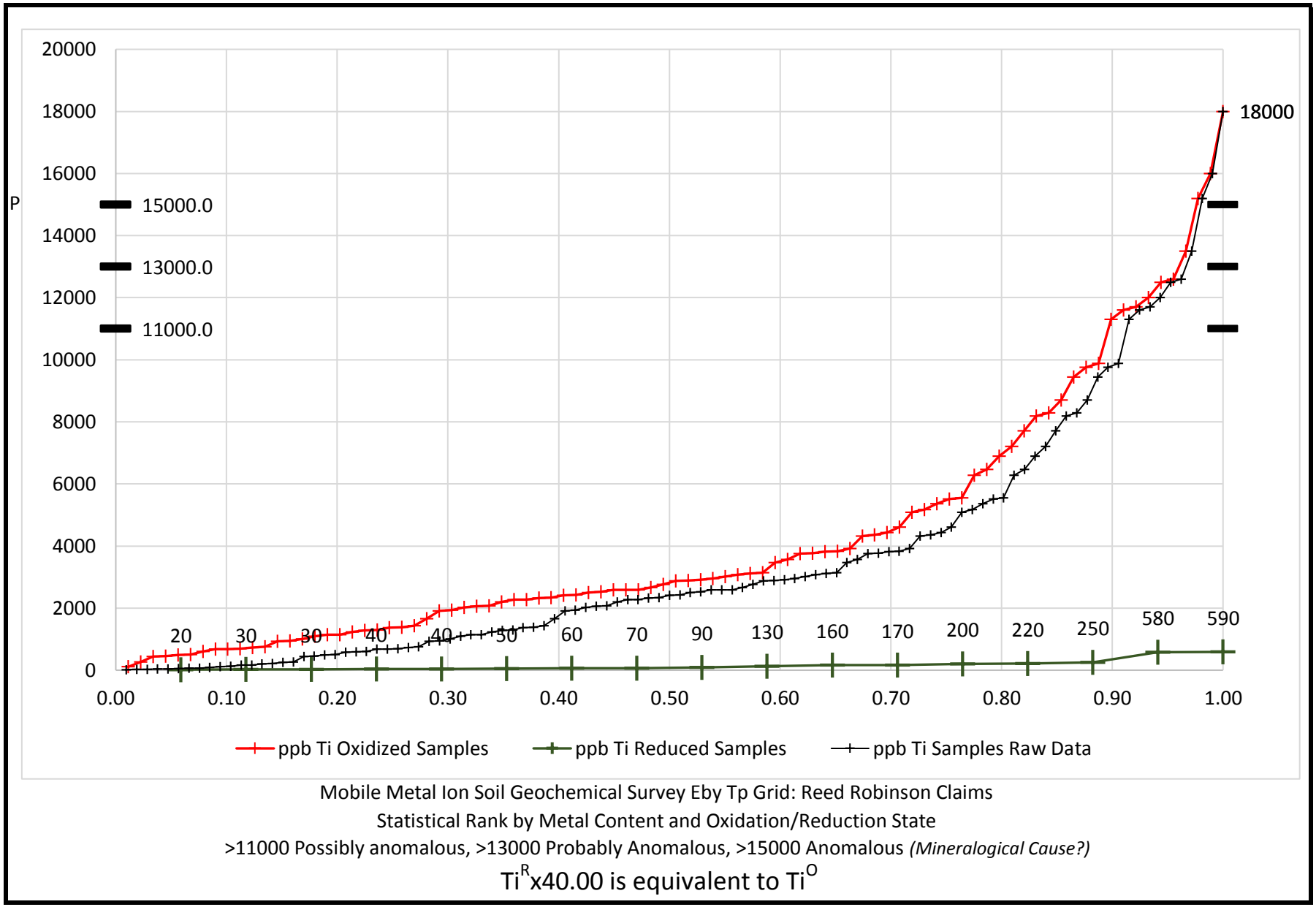


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>110 Possibly anomalous, >150 Probably Anomalous, >200 Anomalous *(Lithological Cause?)*

$Sr^{R}x0.086$ is equivalent to Sr^{O}

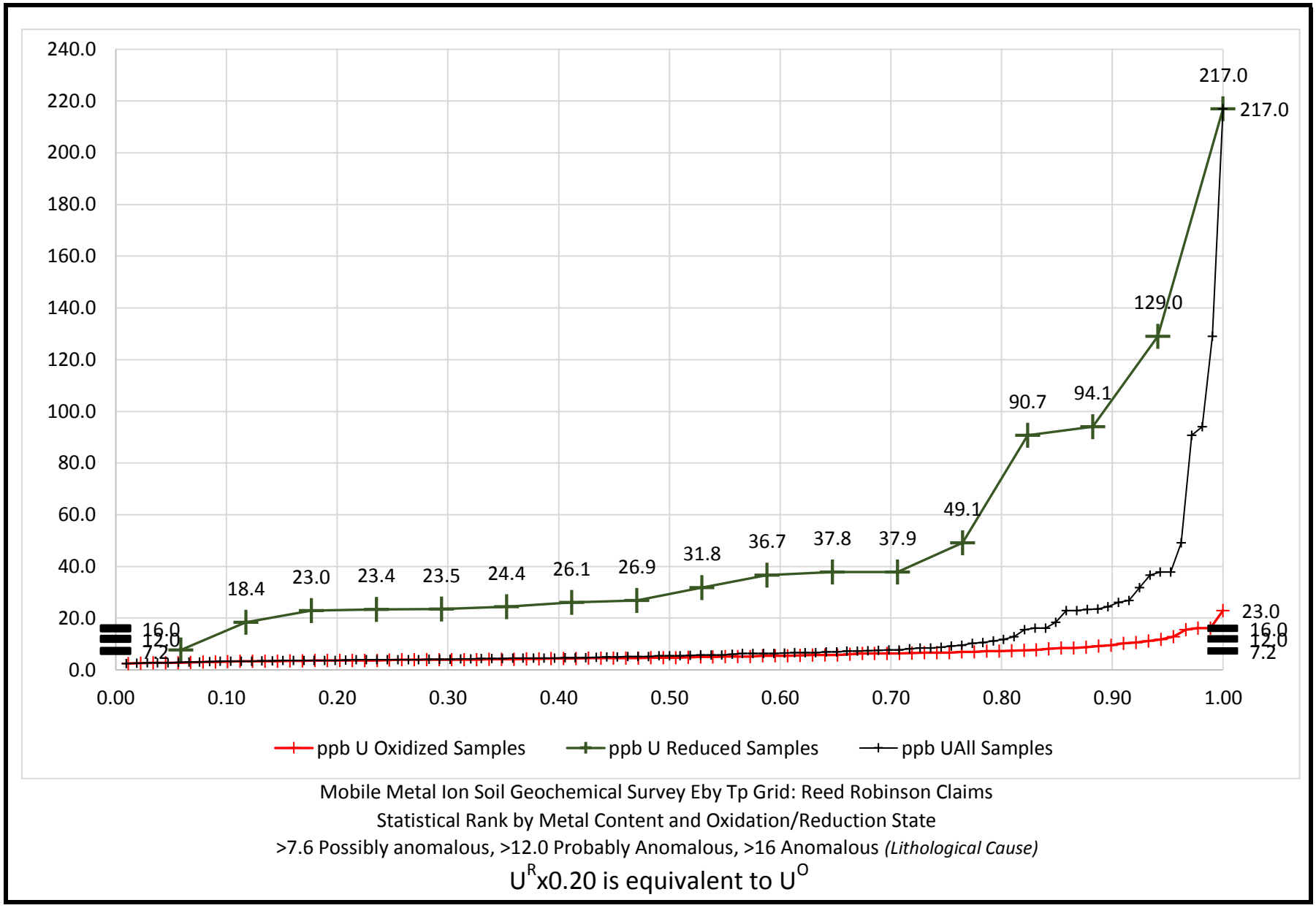


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>11000 Possibly anomalous, >13000 Probably Anomalous, >15000 Anomalous *(Mineralogical Cause?)*

Ti^{R}x40.00 is equivalent to Ti^{O}

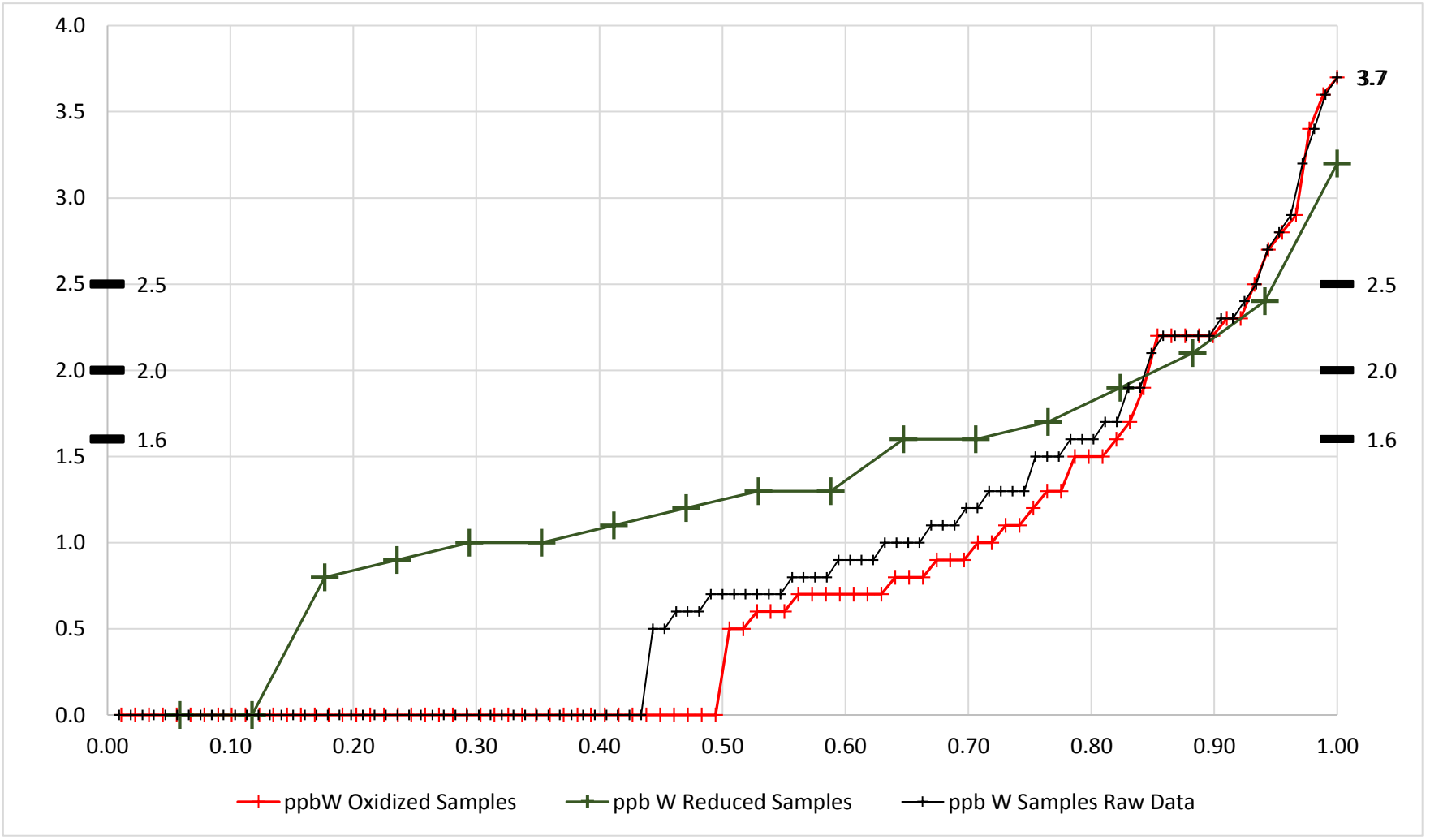


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>7.6 Possibly anomalous, >12.0 Probably Anomalous, >16 Anomalous *(Lithological Cause)*

U^{R}x0.20 is equivalent to U^{O}



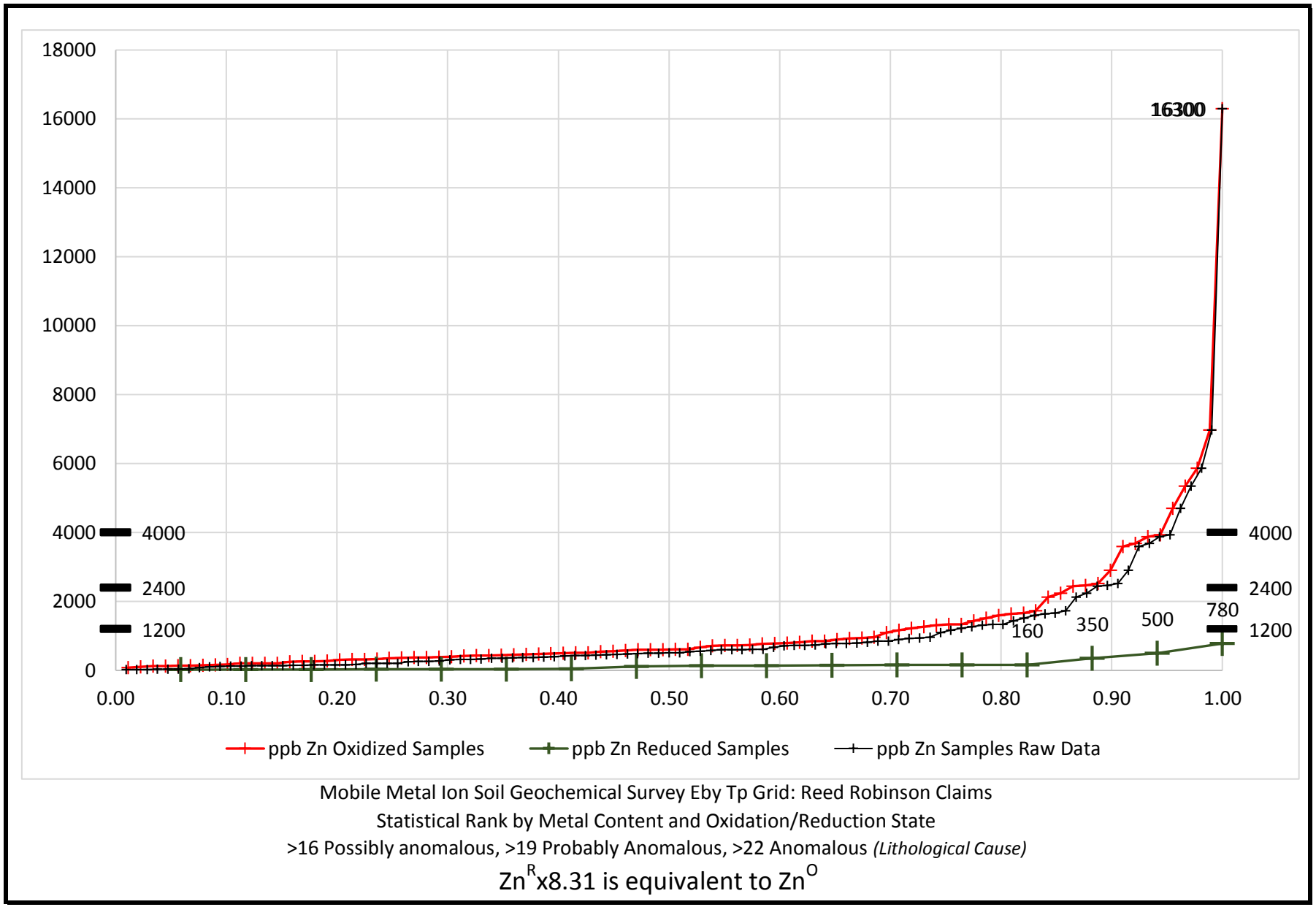
Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>1.6 Possibly anomalous, >2.0 Probably Anomalous, >2.5 Anomalous *(Mineralogical Cause?)*

$W^R x0.76$ is equivalent to W^O

Chart XY Scatter with Straight Lines and Markers Oxidized Line 1.25 pt, Marker Built In 7+symble

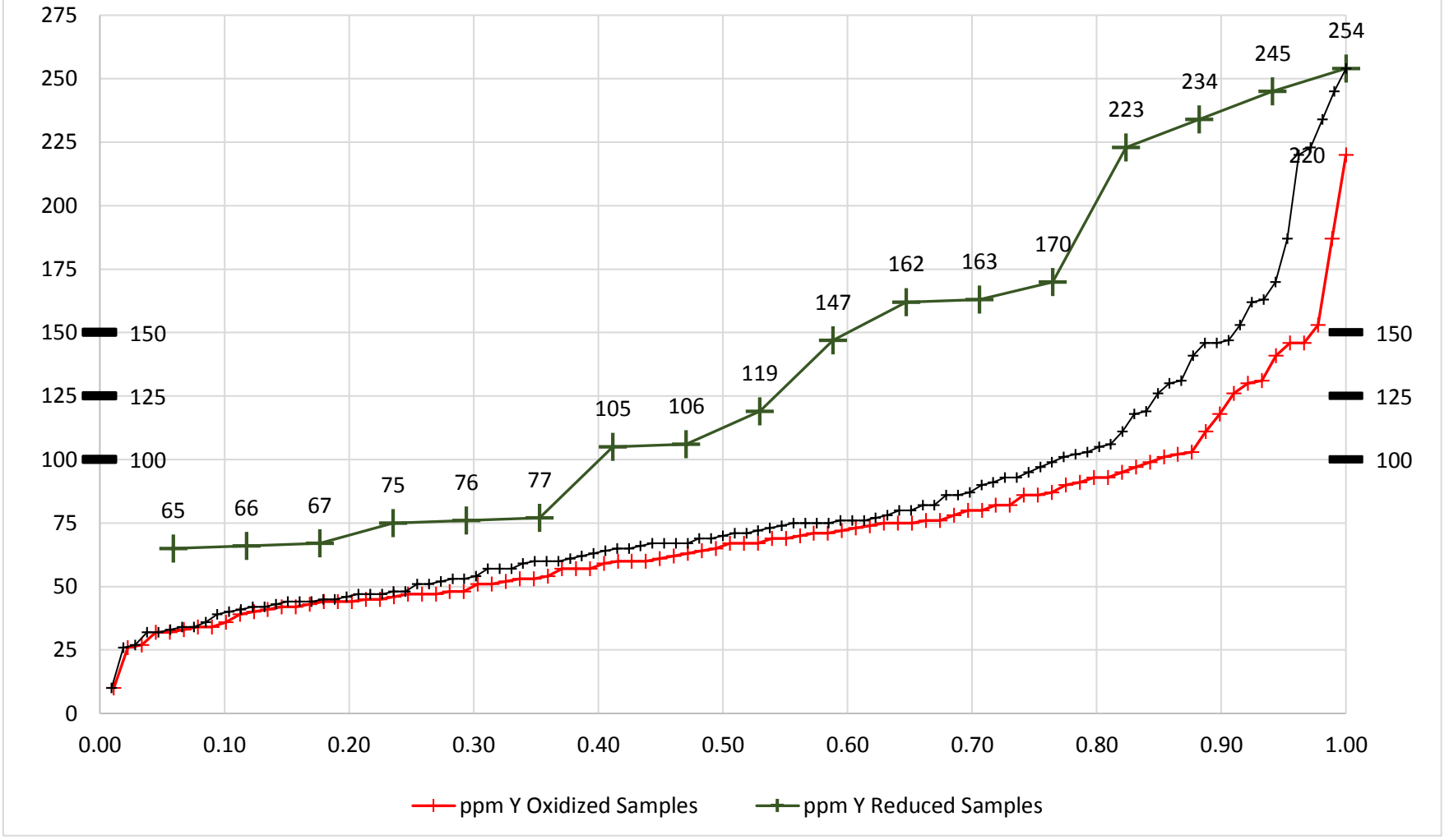


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>16 Possibly anomalous, >19 Probably Anomalous, >22 Anomalous *(Lithological Cause)*

Zn^{R}x8.31 is equivalent to Zn^{O}

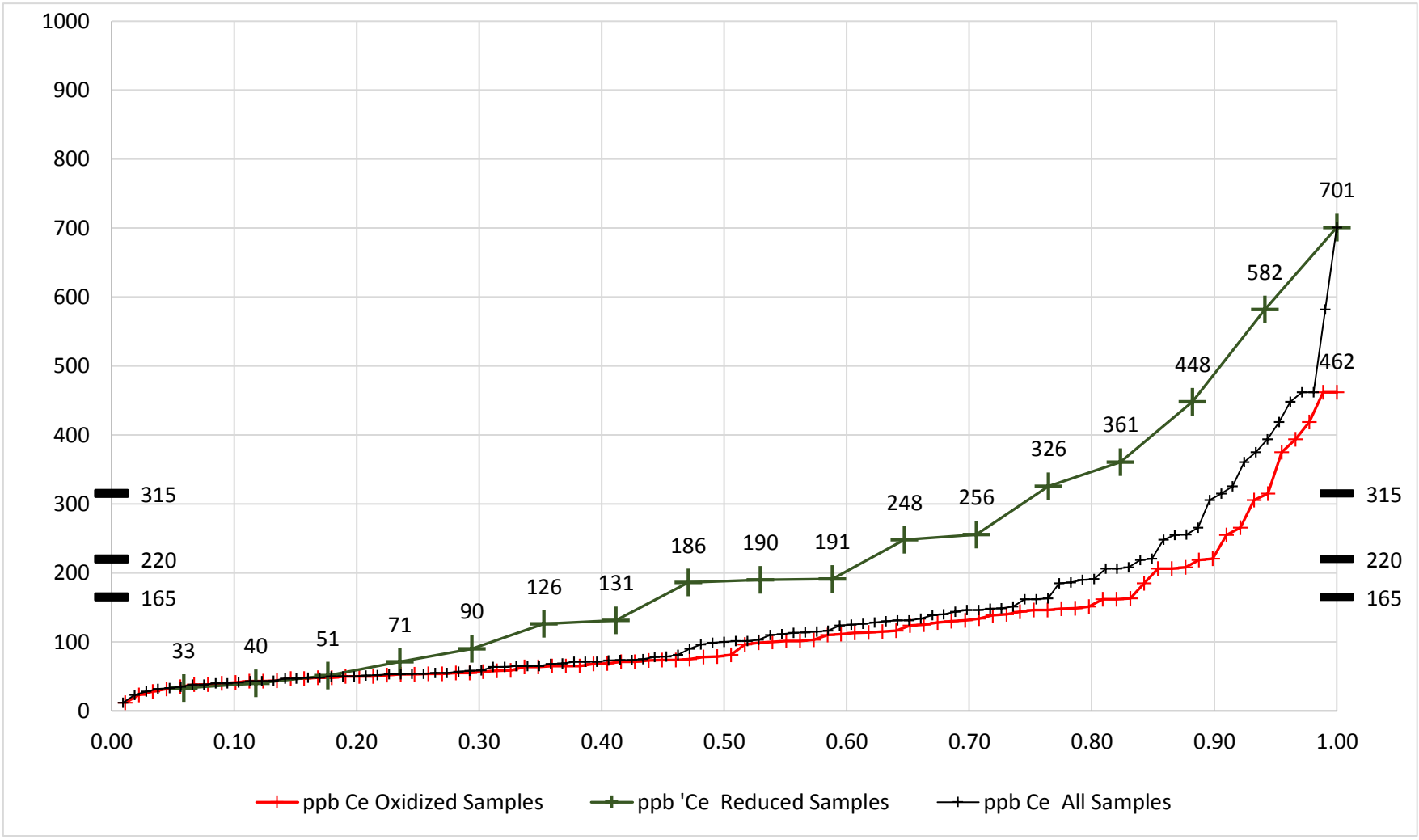


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

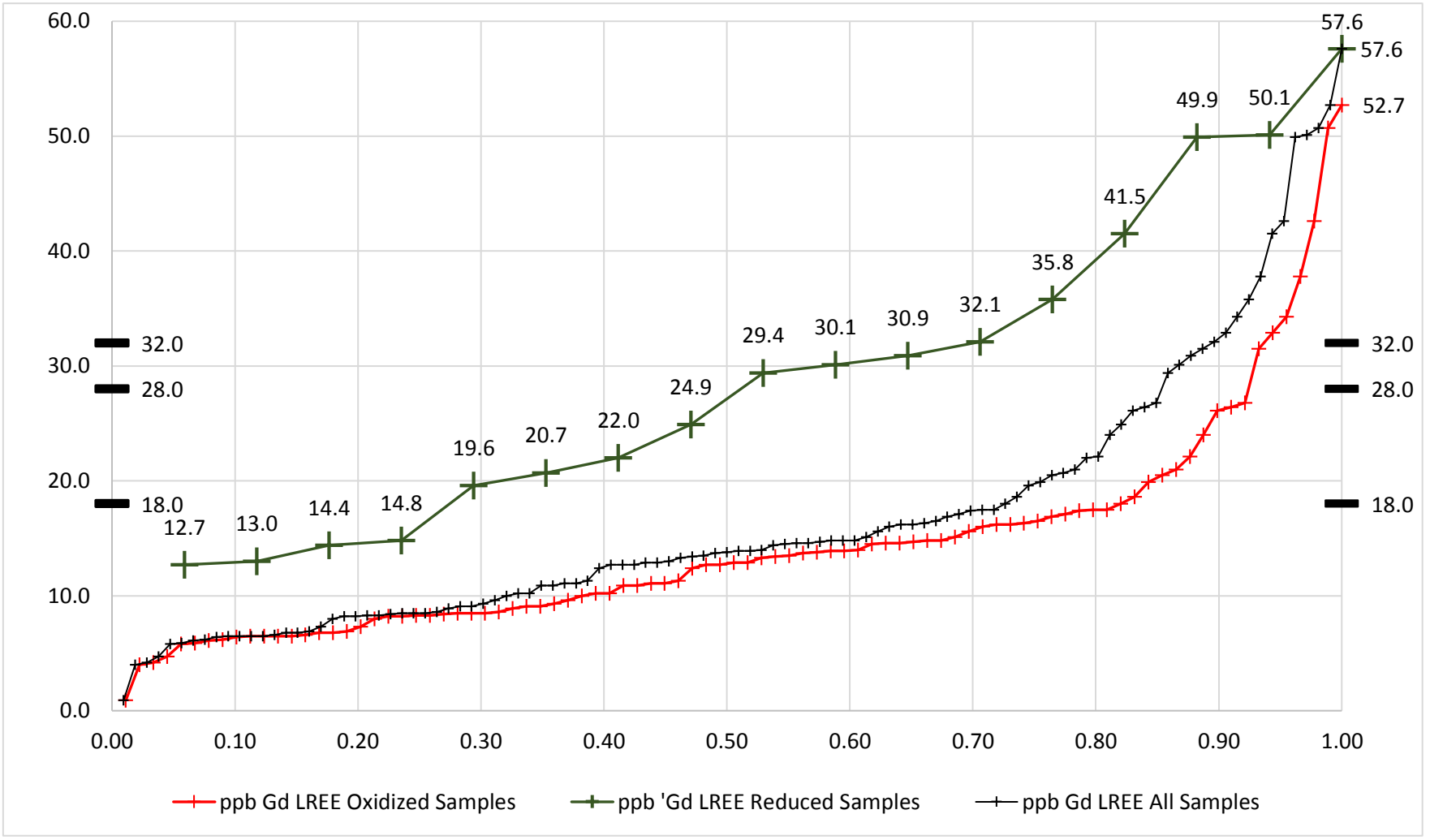
Statistical Rank by Metal Content and Oxidation/Reduction State

>100 Possibly anomalous, >125Probably Anomalous, >150 Anomalous *(Soil PH Cause?)*

$Y^R x0.56$ is equivalent to Y^O



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims
Statistical Rank by Metal Content and Oxidation/Reduction State
>165 Possibly anomalous, >220 Probably Anomalous, >315 Anomalous *(Lithological Cause)*
$Ce^{R}x0.56$ is equivalent to Ce^{O}

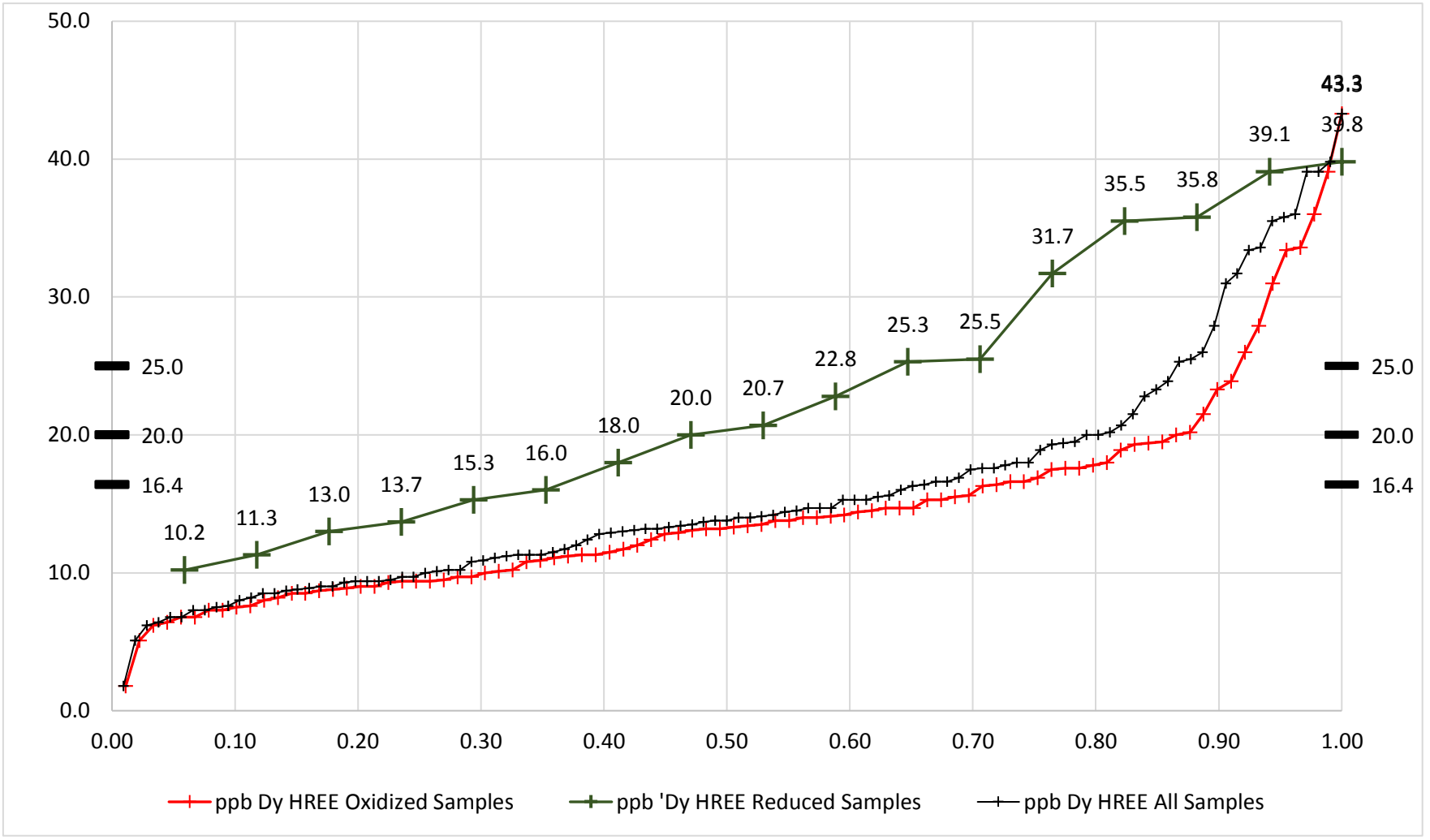


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>18.0 Possibly anomalous, >28.0 Probably Anomalous, >32.0 Anomalous *(Lithological Cause)*

LREE Gd^{R}x0.56 is equivalent to Gd^{O}

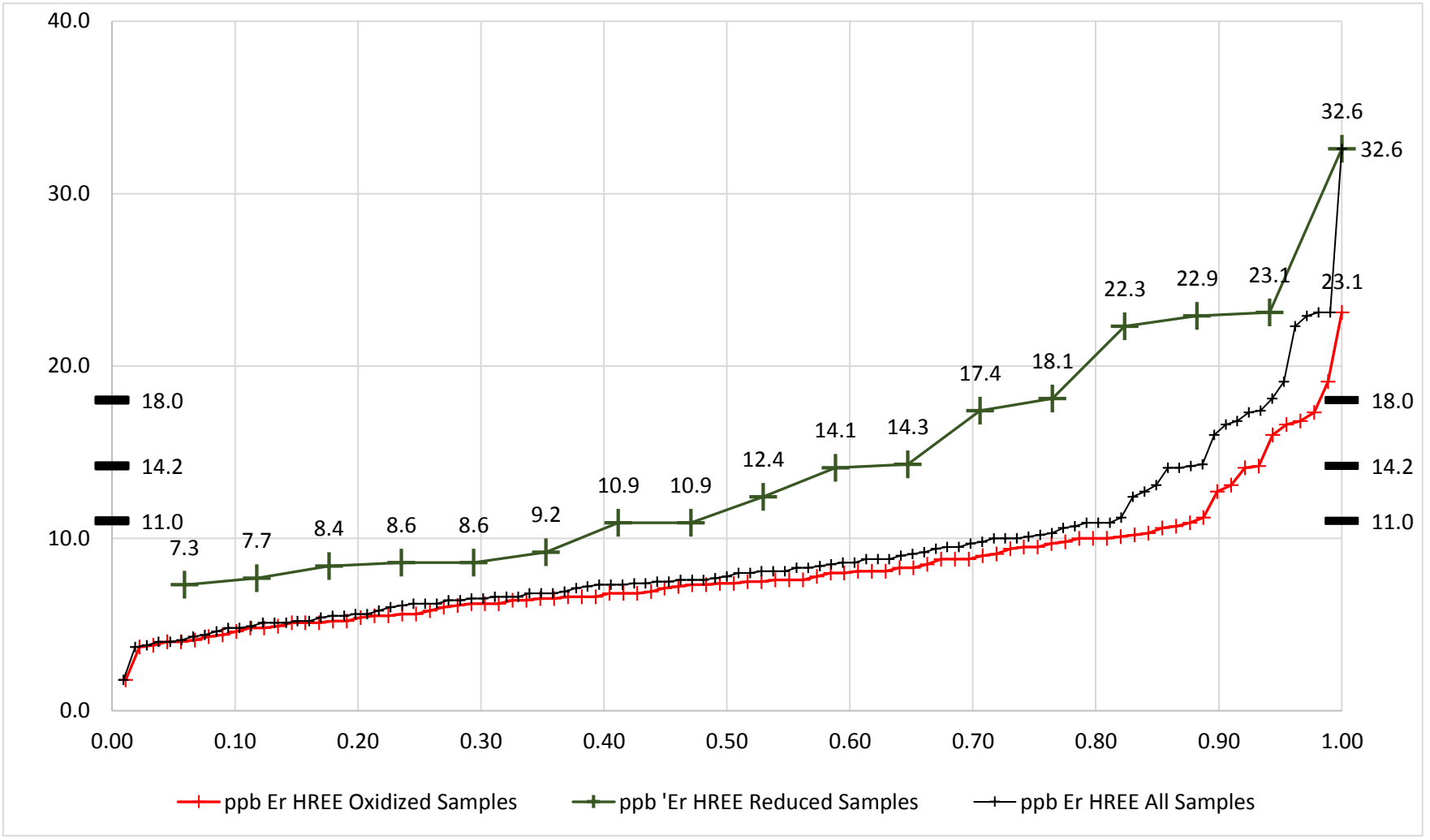


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>16.4 Possibly anomalous, >20 Probably Anomalous, >25 Anomalous *(Lithological Cause)*

$Dy^{R}x0.64$ is equivalent to Dy^{O}

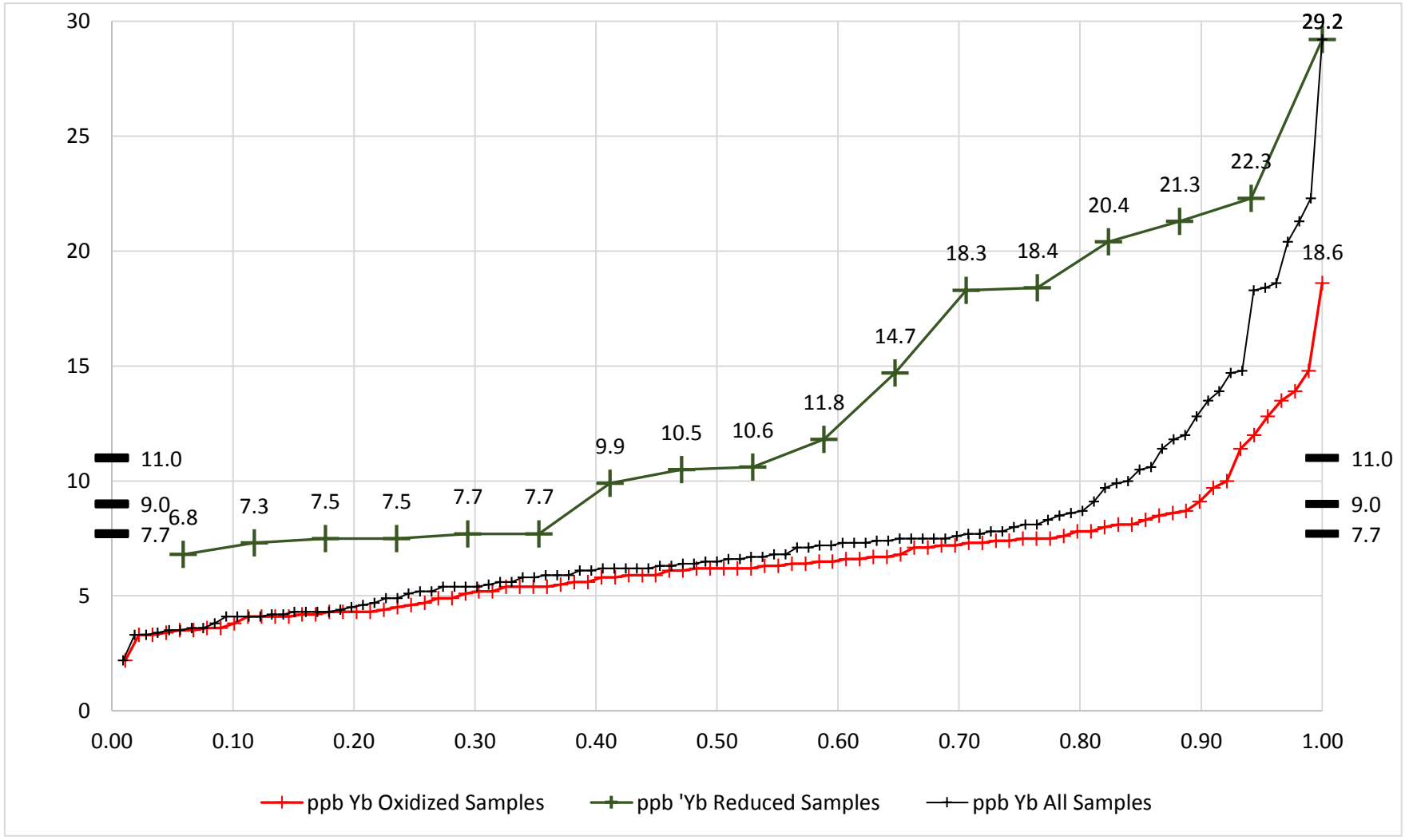


Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>11.0 Possibly anomalous, >14.2 Probably Anomalous, >18.0 Anomalous *(Lithological Cause)*

HREE $Er^{R}x0.66$ is equivalent to Er^{O}



Mobile Metal Ion Soil Geochemical Survey Eby Tp Grid: Reed Robinson Claims

Statistical Rank by Metal Content and Oxidation/Reduction State

>7.7 Possibly anomalous, >9.0 Probably Anomalous, >11.0 Anomalous *(Lithological Cause)*

HREE Yb^{R}x0.42 is equivalent to Yb^{O}

Eby Robinson Claims of Reed-Robinson-Marion Group

MMI Sample Log

This is phase 2 of an orientation study to determine the signature of MMI responses to typical soils above Archean Subcrop.
Normally a 12.5 meter sample interval is used in systematic surveys
Locally the sample interval was reduced to a 6 meter give greater resolution and to better establish **geological noise**.
Grid rehabilitation, rechaining and picketing by Douglas Robinson and Betty Robinson
Samples collected Nov 03-05, 2016 by Douglas Robinson and Betty Robinson
Samples weighed, logged and processed for shipping November 6-18, 2016.
Samples Shipped by Purolator November 19, 2016.
Each individual sample was bagged in double zippered Ziploc freezer bag (**inner bag**).
The inner bag was then bagged in a similar double zippered Ziploc freezer bag (**outer bag**).
The air was expelled from both the inner and outer bags at the time of sampling.
Waterproof commercial sample tags with the number in bold text were inserted in the inner sample bag with the number facing out.
The numeric sample number was hand written in felt pen on the outside of the inner and outer sample bags prior to sampling.
All completed samples had all least three legible sample numbers visible from the exterior.
Organic depth is believed to be a function of surface elevation relative to the elevation of humus interface with mineral soil.
Locally significant humus is present.
Notes focused on organic mineral soil interface and sample depth. Some auxiliary notes taken.
Cobbles and boulders were universally present in the sandy silty soils.
No distinction was made between cobbles and boulders. Boulders and cobbles ranged from sub angular to well rounded.
Soil logged as sand generally had a prominent gritty texture when rubbed between the fingers.
Soil logged as silt generally had a weakly discernable granular texture when rubbed between the fingers.
Soil logged as clay generally had no discernable grain texture when rubbed between the fingers.
2x2 inch square commercial pickets from were established at 25 meter intervals to supplement the original pickets.
Samples were shipped to SGS Laboratories

O = Oxidized sample

R = Reduced sample

gm		Sample Number	Line		Interval		Depth Organics	Sample Interval cm		Soil Type		Sample Description	Date Sampled	Sample Number
328	1	Z046801	Line 2700E		-295	N	2	13-27		Sandy silt among boulders	0	0-2 organic litter organics, 2-27 Red silt among boulders. Top of cliff with slope to south. Balsam Fir.	3-Nov-26	Z046801
256	2	Z046802	Line 2700E		-287.5	N	7	17-32		Sandy silt among boulders	0	0-7 organic & organic litter, 7-27 grey silt 27-32 red silt on outcrop. Slope 10% ENE. Balsam fir.	3-Nov-26	Z046802
360	3	Z046803	Line 2700E		-275	N	5	10-20		Sandy silt among boulders	0	0-5 organics & organic litter, 5-20 greyish brown sandy silt from among 80% boulders in out-crop depression. Wet sample. Balsam fir.	3-Nov-26	Z046803
256	4	Z046804	Line 2700E		-262.5	N	8	15-25		Sandy silt among boulders	0	0-8 organics & organic litter, 8025 dark brown sandy silt and pebbles from among 80% boulders. balsam fir.	3-Nov-26	Z046804
331	5	Z046805	Line 2700E		-250	N	4	14 29		Sandy silt among boulders	0	0-4 organics & organic litter, 4-20 grey, 20-29 dark brown sandy silt from among boulders. Slope N. Balsam fir.	3-Nov-26	Z046805
259	6	Z046806	Line 2700E		-237.5	N	3	13-28		Sandy silt among boulders	0	0-3 organics & organic litter, 3-13 grey, 13-28 brown sandy silt from among boulders. Slope 7% N. Balsam fir.	3-Nov-26	Z046806
231	7	Z046807	Line 2700E		-225	N	3	13-28		Sandy silt among boulders	0	0-3 organics & organic litter, 3-10 grey, 10-28 brown sandy silt (with yellowish tint) from among boulders. Flat slope. Balsam fir.	3-Nov-26	Z046807
195	8	Z046808	Line 2700E		-212.5	N	3	13-28		Sandy silt among boulders	0	0-3 organics & organic litter, 3-4 grey, 4-28 brown sandy silt from among boulders. Slope 15% N. Balsam fir.	3-Nov-26	Z046808
196	9	Z046809	Line 2700E		-206.3	N	3	13-28		Sandy silt among boulders	0	0-3 organics & organic litter, 3-4 grey, 4-28 pale brown sandy silt from among boulders. Slope 15% N. Balsam fir.	3-Nov-26	Z046809
238	10	Z046810	Line 2700E		-200	N	5	15-30		Sandy silt among boulders	0	0-5 organics & organic litter, 5-39 brown sandy silt from among boulders. Slope 15% N. Balsam fir.	3-Nov-26	Z046810
266	11	Z046811	Line 2700E		-193.8	N	5	15-30		Sandy silt among boulders	0	0-5 organics & organic litter, 5-30 dark brown sandy silt from among boulders. Slope 20% N. Balsam fir.	3-Nov-26	Z046811

280	12	Z046812	Line 2700E		**-187.5**	N	50	60-75		Wet sandy silt	R	0-50 black organics, 50-55 black sandy silt, 55-75 dark grey sandy silt from among boulders. South edge of flat swamp. 1 m north from out-crop. White cedar. Water in hole.	3-Nov-26	Z046812
277	13	Z046813	Line 2700E		**-181.3**	N	25	35-50		Wet sandy silt	R	0-25 black organics, 25-50grey sandy silt from among boulders. Water to top of hole. Flat swamp. Balsam fir.	3-Nov-26	Z046813
377	14	Z046814	Line 2700E		**-175**	N	25	35-50		Wet sandy silt	R	0-25 black organics, 25-50 grey sandy silt. Boulders over silt. Water in hole. Flat swamp. Balsam fir.	3-Nov-26	Z046814
281	15	Z046815	Line 2700E		**-168.8**	N	5	15-30		Sandy silt among boulders	O	0-5 organics & organic litter, 5-30 brown sandy silt and slightly rounded pebbles from among boulders. Near green out-crop. Slope 15% S. Balsam fir.	3-Nov-26	Z046815
222	16	Z046816	Line 2700E		**-162.5**	N	5	15-30		Dry sandy silt among boulders	O	0-5 organics & organic litter, 5-30 brown changing to yellowish brown sandy silt down the hole. Sample includes slightly rounded pebbles from among boulders. Near green out-crop. Slope 15% SSW. Balsam fir.	3-Nov-26	Z046816
254	17	Z046817	Line 2700E		**-156.3**	N	4	14-29		Dry sandy silt	O	0-4 organics & organic litter, 4-29 yellowish brown sandy silt. Slope 15% SSW. Balsam fir.	3-Nov-26	Z046817
297	18	Z046818	Line 2700E		**-150**	N	4	14-19		Dry sandy silt from among boulders	O	0-4 organics & organic litter, 4-29 dark brown sandy silt and slightly rounded pebbles from among boulders. Sample from base of out-crop. Slope 25% SSW. Balsam fir.	3-Nov-26	Z046818
228	19	Z046819	Line 2700E		**-137.5**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-13 yellow, 13-28 dark brown sandy silt and slightly rounder pebbles from among boulders. Slope 30% NW. Balsam fir. Difficult sample.	3-Nov-26	Z046819
266	20	Z046820	Line 2700E		**-125**	N	4	14-29		Damp sandy silt from among boulders	R ?	0-4 organics & organic litter, 4-6 grey, 6-29 yellowish grey from among boulders. Slope 5% SW. Balsam fir.	3-Nov-26	Z046820

	21	No Sample	Line 2700E		**-100**	N						No sample . **See Z046826**	3-Nov-26	No Sample
256	22	Z046821	Line 2700E		**-93.75**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 grey, 13-28 dark brown sandy silt and slightly rounded pebbles from among boulders. Slope? Balsam fir.	3-Nov-26	Z046821

256	23	Z046822	Line 2700E		**-87.5**	N	3	13-28		Wet sandy silt from among boulders	O ?	0-3 organics & organic litter, 3-10 pale yellow, 10-27 brown sandy silt from among boulders. Flat. Balsam fir.	3-Nov-26	Z046822
325	24	Z046823	Line 2700E		**-81.25**	N	5	15-30		Wet sandy silt from among boulders	R ?	0-5 organics & organic litter, 5-30 pale yellow sandy silt from among boulders. Flat. Balsam fir.	3-Nov-26	Z046823
233	25	Z046824	Line 2700E		**-76**	N	5	15-30		Moderately dry sandy silt from among boulders	R	0-5 organics & organic litter, 5-30 grey sandy silt and sub-angular pebbles from among boulders. Sample from base of out-crop. Sample site moved due to boulders.	3-Nov-26	Z046824
224	26	Z046825	Line 2695E		**-116**	N	3	13-28		Dry sandy silt	O	**Special Sample. Sample moved 5m west of line due to out-crop.** 0-3 organics & organic litter, 3-28 dark brown sandy silt. Slope 5% W. Balsam fir. Sample moved 5m west of line.	4-Nov-26	Z046825
293	27	Z046826	Line 2685E		**-100**	N	3	13-28		Dry sandy silt	O	**Special Sample. Sample moved 15m west of line due to out-crop.** 0-3 organics & organic litter, 3-5 grey, 5-28 medium brown sandy silt. Slope 2% NW. Balsam fir.	4-Nov-26	Z046826
211	28	Z046827	Line 2700E		**-68.75**	N	4	14-19		Dry sandy silt from among boulders	O	0-4 organics & organic litter, 4-5 grey, 5-29 medium brown sandy silt from among boulders. Sample over out-crop. Slope 5% W. Balsam fir.	4-Nov-26	Z046827
187	29	Z046828	Line 2700E		**-62.5**	N	3	13-29		Dry sandy silt	O	0-3 organics & organic litter, 3-4 grey, 4-29 dark brown sandy silt from depression. Slope 1% E. Balsam fir.	4-Nov-26	Z046828
191	30	Z046829	Line 2700E		**-56.25**	N	4	14-29		Dry sandy silt from among boulders	O	0-4 organics & organic litter, 4-6 grey, 6-29 dark brown sandy silt from among boulders. Slope 2% SE. Balsam fir.	4-Nov-26	Z046829
271	31	Z046830	Line 2700E		**-47**	N	2	12-25		Dry sandy silt from among boulders.	O	0-2 organics & organic litter, 4-25 dark brown sandy silt and sub rounded pebbles from among boulders, 25 out-crop. Sampled at top of hill. Flat. Balsam fir.	4-Nov-26	Z046830
197	32	Z046831	Line 2700E		**-37.5**	N	3	13-28		Dry sandy silt from among boulders.	O	0-3 organics & organic litter, 23-28 dark brown sandy silt from among boulders. Slope 15% E. Balsam fir.	4-Nov-26	Z046831
175	33	Z046832	Line 2700E		**-31.25**		4	14-29		Dry sandy silt from among boulders.	O	0-4 organics & organic litter, 4-29 dark brown sandy silt with slightly rounded pebbles from among boulders. Slope 5% N. Balsam fir.	4-Nov-26	Z046832

256	34	Z046833	Line 2700E		**-25**	N	1	11-24		dry sandy silt from among boulders	R	0-1 organics & organic litter, 1-24 grey sandy silt from among boulders. Slope 3% W. Balsam fir.	4-Nov-26	Z046833
274	35	Z046834	Line 2700E		**-18.75**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-6 grey, 6-28 dark brown sandy silt from among boulders. Slope 10%S. Balsam fir.	4-Nov-16	Z046834
172	36	Z046835	Line 2700E		**-12.5**	N	2	42731		Dry sandy silt from among boulders.	O	0-2 organics & organic litter, 2-6 grey, 6-27 dark brown sandy silt with pebbles from among boulders. Slope 5% SW. Balsam fir.	4-Nov-16	Z046835
296	37	Z046836	Line 2700E		**-6.25**	N	3	13-28		Dry sandy silt	O	0-3 organics & organic litter, 3-28 brown sandy silt. Slope 5% SW. Balsam fir.	4-Nov-16	Z046836
276	38	Z046837	Line 2700E		**0**	N	3	13-28		Dry sandy silt	O	0-3 organics & organic litter, 3-6 grey, 6-28 brown. Flat slope. Balsam fir.	4-Nov-16	Z046837
241	39	Z046838	Line 2700E		**6.25**	N	2	12-27		Dry sandy silt from among boulders	O	0-2 organics & organic litter, 2-27 dark brown sandy silt from among boulders. Slope flat. Balsam fir.	4-Nov-16	Z046838
270	40	Z046839	Line 2700E		**12.5**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-5 pale grey, 5-28 light brown sandy silt from among boulders. Slope South. Balsam fir.	4-Nov-16	Z046839
247	41	Z046840	Line 2700E		**18.75**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-28 dark brown sandy silt from among boulders. Slope 5% S. Balsam fir.	4-Nov-16	Z046840
213	42	Z046841	Line 2700E		**25**	N	3	13-28		Dry sandy silt from among boulders.	O	0-3 organics & organic litter, 3-28 dark brown sandy silt from among boulders. Slope 15 S. Balsam fir.	4-Nov-16	Z046841
371	43	Z046842	Line 2700E		**31.25**	N	5	15-30		Wet sandy silt from among boulders.	O ?	0-5 organics & organic litter, 5-grey, 30 dark brown sandy silt from among boulders. Dark brown sandy silt on tip of auger from 30-31cm. Wet sample. Sample taken at top of hill. Flat slope. Balsam fir.	4-Nov-16	Z046842
	44	No Sample			**37.5**	N						No sample	4-Nov-16	No Sample
207	45	Z046843	Line 2700E		**43.75**	N	5	15-30		Dry sandy silt from among boulders	O	0-5 organics & organic litter, 5-30 dark brown sandy silt with angular pebbles from among boulders. Difficult sample. Slope 5% N. Balsam fir.	4-Nov-16	Z046843
236	46	Z046844	Line 2700E		**50**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-28 dark brown sandy silt with angular pebbles from among boulders. Difficult sample. Slope?. Balsam fir.	4-Nov-16	Z046844
224	47	Z046845	Line 2700E		**57**	N	5	15-30		Dry sandy silt	O	0-5 organics & organic litter, 5-7 grey, 3-30 dark brown sandy silt. Sample site moved to base of out-crop. Slope 15% N. Balsam fir.	5-Nov-16	Z046845

180	48	Z046846	Line 2700E		**62.5**	N	2	12-27		Dry sandy silt	O	0-28 dark brown sandy silt. Sample site top of very steep out-crop hill. Slope?. Balsam fir.	5-Nov-16	Z046846
250	49	Z046847	Line 2700E		**77**	N	3	13-28		Dry sandy silt	O	0-3 organics & organic litter , 5-28 medium brown sandy silt from among boulders. Slope 20% N. Balsam fir.	5-Nov-16	Z046847
261	50	Z046848	Line 2694E		**83**	N	2	12-27		Dry sandy silt	O	0-2 organics & organic litter , 2-4 grey, 4-27 dark brown sandy silt from among boulders. Sample site moved to 83 N due to boulders. Slope 60% N. Sample from 2m above swamp elevation. White cedar.	5-Nov-16	Z046848
265	51	Z046849	Line 2700E		**87.5**	N	35	45-60		Wet sandy silt	O	0-35 black organics, 35-60 yellow sandy silt with pebbles from among boulders. Water in hole. Sample at bottom of out-crop. Slope 0% in swamp. White cedar and balsam fir.	5-Nov-16	Z046849
382	52	Z046850	Line 2700E		**93.75**	N	15	25-40		Wet sandy silt	O	0-15 black organics, 15-40 grey sandy silt from among boulders. Swamp. Flat. White cedar.	5-Nov-16	Z046850
309	53	Z046751	Line 2700E		**100**	N	80	90-105		Wet sandy silt with grit.	R	0-80 Black muck and fine woody chips and boulders, 80-105 grey sandy silt with grit and pebbles. Pushed auger through upper 2/3rds of muck and boulders into compact black muck. Open water in depressions. White cedar swamp. Slope flat. White cedar.	5-Nov-16	Z046751
222	54	Z046752	Line 2700E		**106.25**	N	65	75-90		Wet sandy silt	R	0-145 black muck and fine woody chips,145-170 grey sandy silt with very fine sand. Silt is very compact like clay. No pebbles. White cedar swamp. Slope flat. White cedar.	5-Nov-16	Z046752
286	55	Z046753	Line 2700E		**112.5**	N	145	155-170		Wet sandy silt	R	0-65 Black muck and fine woody chips, 65-90 grey sandy silt with very fine sand. Silt is very compact like clay. No pebbles. White cedar swamp with water in depressions. Slope flat. White cedar.	5-Nov-16	Z046753
346	56	Z046754	Line 2700E		**118.75**	N	125	135-150		Wet sandy silt	R	0-125 black muck and fine woody chips, 125-150 grey sandy silt with very fine sand. Silt is very compact like clay. No pebbles or boulders in hole. White cedar swamp with water in depressions. Slope flat. White cedar.	5-Nov-16	Z046754

389	57	Z046755	Line 2700E		**125**	N	120	130-145		Wet sandy silt with grit	R	0-120 black muck and fine woody chips, 120-145 grey sandy silt with very angular grit to 2mm. Silt is very compact like clay. No pebbles or boulders in hole. White cedar swamp with water in depressions. Slope flat. White cedar.	5-Nov-16	Z046755
328	58	Z046756	Line 2700E		**131.25**	N	125	135-150		Wet sandy silt with medium sand	R	0-125 black muck and fine woody chips, 122-150 grey sandy silt with medium sand. No pebbles or boulders in hole. White cedar swamp with water in depressions. Slope flat. White cedar.	5-Nov-16	Z046756
356	59	Z046757	Line 2700E		**137.5**	N	125	135-150		Wet sandy silt	R	0-125 black organics, 125-150 grey sandy silt and very fine sand. No pebbles or boulders. Flat white cedar swamp. Open water in depressions. White cedar.	5-Nov-16	Z046757
390	60	Z046758	Line 2700E		**143.75**	N	100	110-125		Wet sandy silt	R	0-100 black organics, 100-125 pale grey sandy silt and very fine sand. No pebbles or boulders. Flat white cedar swamp. Open water in depressions. White cedar.	5-Nov-16	Z046758
337	61	Z046759	Line 2700E		**150**	N	100	110-125		Wet sandy silt	R	0-70 loose black organics, 70-100 dense black organics, 100-125 grey sandy silt and minor grit to 2mm. No pebbles or boulders. Flat white cedar swamp. Open water in depressions. White cedar. The organics in this hole are typical of the swamp on this line. The auger was easily pushed to the top of dense organics without turning or pulling the auger. The dense bottom part of the organics has many light-medium brown organic chips to 3 mm.	5-Nov-16	Z046759
346	62	Z046760	Line 2700E		**156.25**	N	80	90-105		Wet sandy silt	R	0-70 black organics, 70-80 loose black organics, 80-105 pale grey sandy silt and very fine sand. No pebbles or boulders. Flat white cedar swamp. Open water in depressions. White cedar.	5-Nov-16	Z046760
340	63	Z046761	Line 2700E		**162.5**	N	90	100-105		Wet sandy silt	R	0-90 black organics, 90-215 pale grey sandy silt and sand. No pebbles or boulders. Sample taken under a several major large cedar blown-downs. Flat white cedar swamp. Open water in depressions. White cedar.	5-Nov-16	Z046761

326	64	Z046762	Line 2700E		**168.75**	N	100	110-125		Wet sandy silt	R	0-70 black organics, 70-100 black organics among boulders, 100-125 pale grey sandy silt. No pebbles or boulders. Flat white cedar swamp. Open water in depressions. White cedar.	5-Nov-16	Z046762
228	65	Z046763	Line 2700E		**175**	N	70	70-75		Wet sandy silt from among boulders.	R	0-70 boulders and black organics, 70-75 appears to be fine gravel and sandy silt from among boulders. Very poor sample. Re-entered hole several times for sample and all of sample fell of auger on pulling auger from hole. Hole approximately 0.5 meters elevation above water level in swamp to the south. Gentle slope south., White cedar.	5-Nov-16	Z046763
387	66	Z046764	Line 2700E		**181.25**	N	50	60-75		Wet sandy silt	R	0-50 boulders and black organics, 50-75 grey sandy silt and coarse grit from among boulders. 0.5m above water level of swamp to the south. Sample 3 meters south of out-crop. Slope south. White cedar.	5-Nov-16	Z046764
251	67	Z046765	Line 2700E		**187.5**	N	3	13-20		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-20 dark brown sandy silt with coarse grit and angular pebbles from among boulders. Shallow sample from above out-crop cliff. Slope 10% S. Balsam fir.	5-Nov-16	Z046765
294	68	Z046766	Line 2700E		**193.75**	N	4	14-20		Wet sandy silt from among boulders.	R ?	0-4 organics & organic litter, 4-20 grey sandy silt with pebbles and from among many boulders. Slope 5% E. Balsam fir. Shallow hole	5-Nov-16	Z046766
224	69	Z046767	Line 2700E		**200**	N	5	15-30		Dry sandy silt from among boulders.	O	0-5 organics & organic litter, 5-30 sandy silt with grit from among boulders. Slope 2% SE. Balsam fir.	5-Nov-16	Z046767
202	70	Z046768	Line 2700E		**206.25**	N	3	13-28		Dry sandy silt with pebbles from among boulders	O	0-3 organics & organic litter, 3-28 dark brown sandy silt with pebbles from among boulders. Slope 5% SSE. Balsam fir.	5-Nov-16	Z046768
298	71	Z046769	Line 2700E		**212.5**	N	3	13-28		Dry sandy silt from among boulders	O	0-3 organics & organic litter, 3-8 grey, 8-28 dark brown sandy silt with angular pebbles from among boulders. Slope 5% SSE. Balsam fir.	5-Nov-16	Z046769
254	72	Z046770	Line 2700E		**218.75**	N	4	14-29		Dry sandy silt from among boulders	O	0-4 organics & organic litter , 4-14 grey, 14-29 dark brown sandy silt with angular pebbles from among boulders. slope 10% S. Balsam fir.	5-Nov-16	Z046770
293	73	Z046771	Line 2700E		**225**	N	2	13-27		Dry sandy silt with angular grit	O	0-5 organics & organic litter, 2-27 dark brown sandy silt with angular pebbles from among boulders. Slope 25% S. Balsam fir.	5-Nov-16	Z046771

313	74	Z046772	Line 2700E		**231.25**	N	3	13-28		Dry sandy silt with angular grit	O	Nov 5 2016. 0-3 organics & organic litter, 3-28 dark brown sandy silt from among boulders. Slope 30% S. Balsam fir.	5-Nov-16	Z046772
270	75	Z046773	Line 2700E		**237.5**	N	2	42731		Dry sandy silt with angular grit	O	2016-11-06 0-2 organics & organic litter, 2-27 light brown sandy silt from among boulders. Slope 25% S. Balsam fir. Difficult sample.	5-Nov-16	Z046773
242	76	Z046774	Line 2700E		**243.75**	N	4	14-29		Dry sandy silt with angular grit & pebbles	O	0-4 organics & organic litter, 4-6 grey, 6-29 brown sandy silt from among boulders. sample 4 m S of high out-crop. Slope 25% S. Balsam fir.	5-Nov-16	Z046774
241	77	Z046775	Line 2700E		**250**	N	4	14-29		Dry sandy silt with angular grit & pebbles	O	0-4 organics & organic litter, 4-29 dark brown sandy silt among boulders. Top of high out-crop. Slope 5% S. Balsam fir.	5-Nov-16	Z046775
364	78	Z046776	Line 2700E		**256.25**	N	5	15-30		Dry sandy silt with angular grit & pebbles	O	0-5 organics & organic litter, 5-30 medium yellowish brown sandy silt and pebbles from among boulders. Difficult sample. Flat top of out-crop. Balsam fir.	5-Nov-16	Z046776
310	79	Z046777	Line 2700E		**262.5**	N	3	13-28		Dry sandy silt with angular grit	R ?	0-3 organics & organic litter, 3-28 Yellowish brown sandy silt from among boulders. Slope flat. Balsam fir.	5-Nov-16	Z046777
244	80	Z046778	Line 2700E		**268.75**	N	3	13-28		Dry sandy silt with angular grit & pebbles	O	0-3 organics & organic litter, 3-28 dark brown sandy silt & pebbles from among boulders. Slope 5% S. Balsam fir.	5-Nov-16	Z046778
244	81	Z046779	Line 2700E		**275**	N	5	15-30		Dry sandy silt with angular grit & pebbles	O	0-5 organics & organic litter, 5-30 dark brown sandy silt & pebbles from among boulders. Slope 5% SSE. Balsam fir.	5-Nov-16	Z046779
220	82	Z046780	Line 2700E		**281.25**	N	3	13-28		Dry sandy silt with angular grit & pebbles	O	0-3 organics & organic litter, 3-6 grey, 6-28 dark brown sandy silt from among boulders. Slope 5% SSE. Balsam fir.	5-Nov-16	Z046780
237	83	Z046781	Line 2700E		**287.5**	N	4	14-29		Dry sandy silt with angular grit & pebbles	O	0-4 organics & organic litter, 4-29 dark brown sandy silt with pebbles from among boulders. Slope 5% SSE. Balsam fir.	5-Nov-16	Z046781
258	84	Z046782	Line 2700E		**293.75**	N	4	14-29		Dry sandy silt with angular grit & pebbles	O	0-4 organics & organic litter, 4-7 grey, 2-29 dark brown sandy silt with pebbles from among boulders. Difficult Sample. Slope 5% SE. Balsam fir.	5-Nov-16	Z046782
304	85	Z046783	Line 2700E		**300**	N	5	15-30		Dry sandy silt with angular grit & pebbles	O	0-5 organics & organic litter, 5-7 grey, 7-30 dark brown sandy silt with pebbles from among boulders. Slope 10% S. Balsam fir.	5-Nov-16	Z046783

259	86	Z046784	Line 2700E		**306.25**	N	4	14-29		Dry sandy silt with angular grit & pebbles	O	0-4 organics & organic litter, 4-29 dark brown sandy silt with pebbles from among boulders at east edge of out-crop. Slope 3% E. Balsam fir.	5-Nov-16	Z046784
330	87	Z046785	Line 2700E		**312.5**	N	4	14-27		Moderately wet sandy silt with angular grit	R ?	0-4 organics & organic litter, 4-27 yellowish brown sandy silt from among boulders at east edge of out-crop. 27 cm appears to be out-crop or large boulder. Slope flat. Balsam fir.	5-Nov-16	Z046785
279	88	Z046786	Line 2700E		**318.75**	N	2	2-27		Dry sandy silt with angular grit	O	0-2 organics & organic litter, 2-27 dark brown sandy silt from among boulders. Slope flat. Balsam fir.	5-Nov-16	Z046786
290	89	Z046787	Line 2700E		**325**	N	2	2-27		Dry sandy silt with angular grit	O	0-2 organics & organic litter, 2-27 dark brown sandy silt from among boulders. Slope 3%E. Balsam fir.	5-Nov-16	Z046787
320	90	Z046788	Line 2700E		**331.25**	N	7	17-32		Dry sandy silt with angular grit and sub-angular pebbles	O	0-7 organics & organic litter, 17-32 dark brown sandy silt from among boulders. Slope 3% ESE. Balsam fir.	5-Nov-16	Z046788
276	91	Z046789	Line 2700E		**337.5**	N	3	13-28		Wet sandy silt with angular grit and sub-angular pebbles	O	0-3 organics & organic litter, 17-32 dark brown sandy silt & pebbles from among boulders. Wet. Slope 3% ESE. Balsam fir.	5-Nov-16	Z046789
179	92	Z046790	Line 2700E		**343.75**	N	5	15-30		Dry sandy silt with angular grit	O	0-5 organics & organic litter, 5-10 pale grey brown, 10-30 dark brown sandy silt among boulders. From base of out-crop 1m N of this out-crop. Slope 2%E. Balsam fir. Difficult sample.	5-Nov-16	Z046790
318	93	Z046791	Line 2700E		**350**	N	4	14-29		Dry sandy silt with angular grit & pebbles	O	0-4 organics & organic litter , 4-6 light brown, 2-29 dark brown sandy silt with pebbles among boulders. Slope 3% SSW. Balsam fir.	5-Nov-16	Z046791
281	94	Z046792	Line 2700E		**356.25**	N	3	13-28		Dry sandy silt with angular grit & pebbles	O	0-3 organics & organic litter, 28 dark brown sandy silt with angular pebbles among boulders. Slope 5% SSE. Balsam fir.	5-Nov-16	Z046792
389	95	Z046793	Line 2700E		**362.5**	N	4	10-20		Dry sandy silt with angular grit & pebbles	O ?	0-4 organics & organic litter, 4-20 medium brown sandy silt with angular pebbles among boulders. Sample taken from out-crop surface **4m south of quartz vein**. Balsam fir.	5-Nov-16	Z046793

396	96	Z046794	Line 2695E		**368.75**	N	5	15-30		Wet sandy silt with angular grit & pebbles	O	0-5 organics & organic litter, 5-30 medium brown sandy silt with angular pebbles among boulders. Appeared grey in field. Sample taken from 2 meter wide N-S depression between out-crops. Slope 1% N. Balsam fir. Off line sample	5-Nov-16	Z046794
358	97	Z046795	Line 2700E		**375**	N	5	5-15		Dry sandy silt with angular grit & pebbles	O	0-5 organics & organic litter, 5-15 dark brown sandy silt with angular pebbles among boulders. Appeared grey in field. Sample taken from a N-S depression between out-crops. White cedar. Off line sample	5-Nov-16	Z046795
313	98	Z046796	Line 2700E		**383**	N	5	15-30		Dry sandy silt with angular grit and pebbles	O	0-5 organics & organic litter, 5-30 dark brown sandy silt with angular pebbles among boulders. Appeared grey in field. Sample taken from a N-S depression between out-crops. Hand dug hole. White cedar. Off line sample.	5-Nov-16	Z046796
137	99	Z046797	Line 2700E		**394**	N	5	5-15		Dry sandy silt with angular grit and pebbles	O	0-5 organics & organic litter, 5-15 dark brown sandy silt with angular pebbles among boulders. Appeared grey in field. Sample taken from out-crop surface. Hand dug hole. Slope 40% N. Balsam fir. Poor sample.	5-Nov-16	Z046797
241	100	Z046798	Line **2684E**		**353**	N	4	14-29		Dry sandy silt with angular grit and pebbles	O	0-4 organics & organic litter, 4-5 grey, 5-29 dark brown sandy silt with angular pebbles. Slope flat. Balsam fir.	5-Nov-16	Z046798
204	101	Z046799	Line **2684E**		**359**	N	4	15-25		Dry sandy silt with angular grit and pebbles	O	0-4 organics & organic litter, 4-25 dark brown sandy silt with angular pebbles. Slope 2% S. Balsam fir white cedar.	5-Nov-16	Z046799
319	102	Z046800	Line **2684E**		**365**	N	4	15-25		Dry sandy silt with angular grit and pebbles	O	0-4 organics & organic litter, 4-25 grey, 25-29 dark Brown sandy silt with angular pebbles. Slope 3% N. Balsam fir.	5-Nov-16	Z046800
169	103	Z046701	Line **2684E**		**372**	N	4	14-25		Dry sandy silt with angular grit and pebbles	O	0-4 organics & organic litter, 4-6 grey, 6-25 dark brown sandy silt. Slope 15% N. Cedar white and balsam fir. Difficult sample.	5-Nov-16	Z046701
266	104	Z046702	Line **2684E**		**377**	N	5	15-25		Dry sandy silt with angular grit and pebbles	O	0-5 organics & organic litter, 5-25 brown sandy silt among boulders. Slope 20% N. Cedar white and poplar. Bottom of hole appears to be at out-crop.	5-Nov-16	Z046702

gm		Sample Number	Line		Interval		Depth Organics	Sample Interval **cm**		Soil Type		Sample Description	Date Sampled	Sample Number
213	105	Z046703	Line **2713E**		**353**	N	3	15-27		Dry sandy silt with angular grit and pebbles	O	0-3 organics & organic litter, 3-6 grey, 6-27 medium brown sandy silt among boulders. Slope 3% E. Balsam fir.	5-Nov-16	Z046703
262	106	Z046704	Line **2713E**		**359**	N	7	17-32		Dry sandy silt with angular grit	O	0-7 organics & organic litter, 7-30 dark brown sandy silt. Slope 3% ESE. Cedar white and balsam fir.	5-Nov-16	Z046704
290	107	Z046705	Line **2713E**		**365**	N	5	15-30		Dry sandy silt with angular grit	O	0-5 organics & organic litter, 5-30 dark brown sandy silt. Slope 5% SE. Balsam fir.	5-Nov-16	Z046705
180	108	Z046706	Line **2713E**		**371**	N	5	15-30		Dry sandy silt with angular grit and pebbles	O	0-5 organics & organic litter, 5-30 dark brown sandy silt with pebbles. Slope 5% N. Balsam fir.	5-Nov-16	Z046706

Certificate of Analysis
Work Order : VC163738
[Report File No.: 0000020265]

Date: December 16, 2016

To: **Doug Robinson**
COD SGS ASSAYERS
Doug Robinson Consulting
Box 218 Swastika
Ontario P0K 1T0

P.O. No.: Doug Robinson/Z046801-50,751-800,701-706
Project No.: -
Samples: 106
Received: Nov 28, 2016
Pages: Page 1 to 22
(Inclusive of Cover Sheet)

Methods Summary

No. Of Samples	Method Code	Description
106	G_LOG02	Pre-preparation processing, sorting, logging, boxing
106	GE_MMI_M	Mobile Metal ION standard package/ICP-MS

Storage: Pulp & Reject
REJECT STORAGE : DISCARD

Certified By :
John Chiang
QC Chemist

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

Report Footer: L.N.R. = Listed not received; n.a. = Not applicable; I.S. = Insufficient Sample; – = No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted

Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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	Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	1	10	0.1	10	0.5	2	1
	Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
Z046801		0.8	209	10	0.3	320	0.8	8	12
Z046802		1.4	296	30	0.1	400	2.0	4	10
Z046803		0.7	314	20	0.2	420	1.2	15	25
Z046804		0.7	220	20	0.2	240	0.7	4	5
Z046805		3.1	308	10	0.1	320	1.2	6	16
Z046806		5.6	236	10	<0.1	170	0.7	3	15
Z046807		4.0	320	10	0.1	370	<0.5	4	14
Z046808		8.0	252	<10	0.2	620	<0.5	11	27
Z046809		6.8	301	10	0.2	1170	0.6	16	8
Z046810		5.1	369	20	0.1	860	1.2	30	10
Z046811		1.9	328	60	0.2	1600	4.1	56	45
Z046812		3.8	45	30	<0.1	400	<0.5	326	7
Z046813		7.2	91	10	0.4	1440	<0.5	398	33
Z046814		4.8	66	40	0.6	2460	0.6	259	24
Z046815		5.6	349	40	0.1	1840	1.6	52	11
Z046816		6.3	339	30	0.2	1550	2.1	13	18
Z046817		8.9	277	<10	0.2	1910	0.7	7	9
Z046818		2.1	318	90	0.2	730	3.8	23	29
Z046819		2.8	271	10	0.2	850	1.8	12	38
Z046820		15.9	404	30	0.2	2160	2.2	28	11
Z046821		2.9	266	<10	<0.1	620	0.6	23	18
Z046822		3.4	307	10	0.2	790	0.6	27	5
Z046823		5.8	332	10	0.2	2860	1.9	54	2
Z046824		13.6	286	50	0.1	550	2.6	87	39
Z046825		4.0	234	<10	<0.1	360	<0.5	7	32
Z046826		11.0	258	<10	0.2	610	1.1	10	12
Z046827		4.7	384	90	0.1	1400	1.9	20	28
Z046828		14.7	301	110	0.1	800	1.3	4	50
Z046829		15.6	261	20	0.1	510	1.2	15	61
Z046830		10.5	320	30	0.2	470	0.9	13	44
Z046831		36.2	265	20	0.2	1180	<0.5	40	81
Z046832		14.2	322	30	0.2	610	0.9	50	29
Z046833		7.4	244	20	0.3	2730	1.6	169	14
Z046834		11.2	156	10	0.2	750	<0.5	206	14
Z046835		14.5	328	20	0.1	500	0.6	19	44
Z046836		31.6	317	20	0.2	500	<0.5	18	18
Z046837		12.2	375	60	<0.1	1200	2.4	39	37
Z046838		6.6	303	20	0.1	1560	1.6	81	25
Z046839		6.8	236	<10	0.2	730	0.9	33	20
Z046840		14.5	285	10	0.2	1140	0.9	37	29

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	Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	1	10	0.1	10	0.5	2	1
	Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
Z046841		21.4	253	<10	0.2	610	<0.5	86	17
Z046842		1.2	281	30	0.2	1130	1.4	18	24
Z046843		1.5	282	50	0.1	1660	4.2	122	59
Z046844		5.2	326	<10	0.1	1010	0.5	20	18
Z046845		1.8	365	30	<0.1	1000	2.3	14	19
Z046846		4.7	300	<10	<0.1	710	0.5	13	16
Z046847		7.8	381	10	0.1	1050	0.7	14	19
Z046848		1.8	279	<10	0.1	650	0.6	28	32
Z046849		2.5	128	<10	0.3	550	<0.5	233	6
Z046850		2.4	58	10	0.4	1440	<0.5	298	7
Z046751		4.9	66	10	0.2	2250	<0.5	450	20
Z046752		7.4	107	10	0.4	3360	0.7	500	18
Z046753		14.0	18	20	0.5	3250	<0.5	573	6
Z046754		11.9	17	<10	0.6	3500	<0.5	463	7
Z046755		8.6	21	20	0.8	3160	<0.5	494	6
Z046756		8.9	27	30	0.7	3590	<0.5	593	10
Z046757		13.3	16	20	0.7	4280	<0.5	532	9
Z046758		6.5	20	20	0.5	8250	<0.5	579	5
Z046759		2.7	78	20	0.4	2660	<0.5	576	78
Z046760		6.1	66	50	0.7	2850	<0.5	471	63
Z046761		6.6	35	40	0.8	4050	<0.5	536	20
Z046762		4.3	48	50	0.7	3480	<0.5	450	35
Z046763		3.2	67	20	0.4	3310	<0.5	510	18
Z046764		4.3	47	80	0.3	2140	<0.5	307	13
Z046765		5.7	218	30	0.3	870	0.7	204	26
Z046766		4.7	306	20	0.2	1790	0.7	135	2
Z046767		7.2	338	30	<0.1	1130	0.7	96	14
Z046768		6.6	283	20	<0.1	590	<0.5	13	25
Z046769		5.3	280	<10	<0.1	1410	<0.5	42	13
Z046770		6.6	283	30	<0.1	980	0.9	58	14
Z046771		8.1	395	50	0.2	1350	2.0	19	32
Z046772		13.4	321	30	0.2	1730	1.0	96	25
Z046773		22.3	295	90	0.1	500	0.7	24	4
Z046774		10.7	417	70	0.2	1880	1.7	85	36
Z046775		0.7	278	50	<0.1	480	2.8	12	12
Z046776		2.1	346	50	0.3	2810	2.7	93	10
Z046777		1.4	417	20	0.2	1500	2.5	52	5
Z046778		1.5	278	20	0.2	1020	0.8	29	8
Z046779		2.8	333	30	0.2	1110	1.8	50	28
Z046780		1.1	349	10	0.1	780	1.1	13	15

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	Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	1	10	0.1	10	0.5	2	1
	Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
Z046781		1.8	330	<10	0.1	570	<0.5	29	21
Z046782		3.5	334	20	0.1	640	0.8	11	13
Z046783		0.7	254	30	0.1	390	0.9	11	9
Z046784		2.3	335	20	0.1	810	1.0	6	14
Z046785		0.9	275	50	<0.1	1560	2.0	24	18
Z046786		1.9	216	10	<0.1	220	<0.5	6	13
Z046787		2.1	221	<10	0.2	280	<0.5	5	4
Z046788		5.3	224	10	0.5	390	0.7	14	7
Z046789		1.5	278	10	1.1	220	<0.5	3	6
Z046790		3.1	309	10	<0.1	410	0.7	8	22
Z046791		5.2	295	10	0.1	620	1.2	24	17
Z046792		3.4	347	20	<0.1	1030	0.9	11	15
Z046793		1.7	316	30	0.4	900	0.9	9	11
Z046794		0.9	241	<10	1.6	2290	1.2	86	4
Z046795		<0.5	302	20	<0.1	1150	7.6	67	41
Z046796		2.1	402	50	0.2	1430	3.9	38	19
Z046797		0.7	161	20	<0.1	630	1.8	265	74
Z046798		4.0	312	20	0.1	880	0.6	15	27
Z046799		2.2	348	50	0.4	1600	2.7	21	11
Z046800		1.9	295	40	0.1	620	1.4	21	17
Z046701		2.1	295	50	0.1	480	1.2	17	12
Z046702		2.3	317	40	0.1	1390	2.2	92	32
Z046703		3.2	342	20	0.1	1090	1.1	21	18
Z046704		2.4	265	<10	0.1	440	<0.5	18	7
Z046705		2.1	276	10	0.2	370	0.6	20	26
Z046706		0.6	249	30	0.2	390	2.3	65	24

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	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046801		113	43	<100	3.9	3090	14.0	7.3	4.4
Z046802		23	59	<100	2.4	870	5.1	3.8	1.2
Z046803		38	61	<100	2.0	1140	13.3	7.6	2.2
Z046804		43	55	<100	5.4	3460	8.5	6.2	1.7
Z046805		100	121	<100	2.3	1160	17.5	10.7	4.3
Z046806		74	59	<100	6.1	810	17.6	10.6	3.7
Z046807		48	193	<100	3.2	240	7.6	4.6	2.1
Z046808		48	120	<100	6.9	340	11.3	6.4	2.3
Z046809		146	118	100	7.0	600	18.0	10.0	4.8
Z046810		111	112	300	7.4	380	13.1	6.6	5.2
Z046811		148	338	300	8.4	740	15.3	8.1	4.0
Z046812		582	101	<100	0.9	3050	31.7	14.1	22.5
Z046813		256	68	<100	1.6	4300	35.8	23.1	10.2
Z046814		701	506	100	2.8	5330	39.8	22.9	15.1
Z046815		221	116	400	6.2	950	13.2	8.5	3.8
Z046816		419	196	200	10.4	770	43.3	23.1	14.8
Z046817		124	75	<100	5.6	260	16.3	10.0	4.3
Z046818		125	302	400	3.6	590	13.2	7.6	3.4
Z046819		44	165	100	4.3	860	12.9	7.8	2.3
Z046820		131	65	300	9.6	480	15.5	7.4	4.9
Z046821		52	73	<100	5.2	330	15.3	8.8	3.6
Z046822		146	82	<100	6.4	300	19.4	9.8	5.9
Z046823		394	59	200	10.8	230	31.0	16.0	11.7
Z046824		114	67	100	1.6	420	13.5	6.5	4.2
Z046825		69	51	<100	7.9	650	14.7	8.1	3.4
Z046826		110	60	<100	5.7	420	20.2	11.2	5.6
Z046827		81	74	400	5.7	810	9.7	6.2	2.1
Z046828		55	97	200	4.7	710	10.2	7.2	2.1
Z046829		28	66	100	3.0	450	7.3	4.9	1.4
Z046830		40	105	200	4.2	490	8.7	5.5	2.0
Z046831		55	62	100	4.9	570	6.8	4.1	2.2
Z046832		219	207	200	5.2	1060	19.3	10.0	5.6
Z046833		306	108	200	4.9	370	19.5	9.5	6.7
Z046834		266	47	<100	3.5	630	9.7	4.8	3.4
Z046835		50	139	200	5.0	580	11.3	6.8	2.6
Z046836		116	79	100	5.1	660	17.6	8.8	4.7
Z046837		208	259	400	7.1	740	16.9	9.4	4.4
Z046838		151	121	300	9.2	300	11.1	6.5	2.8
Z046839		99	24	<100	4.7	240	14.5	7.5	4.3
Z046840		73	58	200	4.0	620	11.5	6.4	2.9

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	Element	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046841		65	49	100	4.2	360	10.0	5.6	2.8
Z046842		47	54	400	4.2	670	7.3	4.3	1.7
Z046843		65	172	500	5.4	690	8.5	5.4	2.2
Z046844		101	58	100	6.3	550	14.4	7.3	3.5
Z046845		54	79	300	5.5	840	9.5	7.1	1.7
Z046846		134	62	<100	11.2	770	20.0	10.3	4.4
Z046847		139	85	200	8.6	540	14.2	7.6	4.5
Z046848		75	173	<100	2.7	720	16.4	9.5	3.4
Z046849		140	73	<100	10.6	11400	12.0	7.5	3.4
Z046850		315	135	<100	2.9	4230	11.7	6.6	5.0
Z046751		361	160	<100	0.9	6990	18.0	10.9	6.2
Z046752		191	131	<100	3.5	12600	39.1	32.6	8.5
Z046753		71	46	<100	0.2	8520	20.7	12.4	5.2
Z046754		40	45	<100	0.2	8130	13.7	8.6	3.1
Z046755		90	53	<100	0.4	8350	16.0	9.2	4.7
Z046756		131	45	<100	0.4	11300	15.3	8.6	4.6
Z046757		51	77	<100	0.3	15000	13.0	8.4	3.3
Z046758		33	43	<100	0.3	11200	11.3	7.7	3.4
Z046759		190	91	<100	2.1	12800	25.5	18.1	7.5
Z046760		186	124	100	4.8	11700	25.3	17.4	7.6
Z046761		248	116	<100	1.8	15900	22.8	14.3	8.2
Z046762		448	140	100	2.2	23600	35.5	22.3	12.7
Z046763		126	123	<100	0.9	8040	10.2	7.3	3.8
Z046764		326	75	100	5.1	9460	20.0	10.9	8.4
Z046765		185	392	400	5.5	1170	23.9	14.2	7.2
Z046766		255	42	300	6.1	790	26.0	13.1	9.4
Z046767		206	88	300	6.7	610	23.3	12.7	7.3
Z046768		101	123	<100	3.8	470	21.5	10.9	4.9
Z046769		59	80	<100	4.4	400	12.8	6.0	3.0
Z046770		144	102	400	4.5	560	16.6	8.3	5.1
Z046771		462	325	500	9.6	2320	36.0	17.3	9.1
Z046772		96	118	500	7.0	950	14.7	8.1	4.4
Z046773		162	118	400	5.8	1350	33.6	16.8	8.7
Z046774		162	177	700	8.5	1030	27.9	16.6	7.3
Z046775		35	125	<100	2.0	520	6.8	4.8	1.1
Z046776		130	93	400	10.7	2920	16.6	9.7	5.1
Z046777		206	207	700	10.2	610	14.1	6.6	4.8
Z046778		71	157	200	3.7	1090	8.9	5.1	2.5
Z046779		115	136	400	6.7	700	17.8	10.2	4.6
Z046780		53	136	100	4.0	600	9.0	5.6	1.9

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	Element	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046781		58	75	200	5.9	470	10.1	5.1	2.4
Z046782		64	181	300	4.5	840	13.8	8.8	2.9
Z046783		41	149	200	2.2	590	9.4	7.4	1.6
Z046784		50	65	200	6.2	700	9.4	5.2	2.0
Z046785		53	56	400	3.6	390	9.0	5.8	2.4
Z046786		78	78	300	5.3	580	13.8	8.0	3.8
Z046787		163	46	100	4.2	1220	18.9	10.1	5.8
Z046788		375	57	200	4.6	940	33.4	14.1	12.0
Z046789		64	34	<100	4.0	500	13.4	6.8	3.7
Z046790		65	80	200	3.3	730	10.9	6.9	2.6
Z046791		128	103	500	3.6	510	15.6	8.0	5.0
Z046792		79	143	200	6.2	960	10.8	6.8	2.8
Z046793		71	63	<100	2.0	2690	8.8	5.2	2.6
Z046794		462	30	<100	2.1	3260	39.1	19.1	14.6
Z046795		12	114	<100	1.3	310	1.8	1.8	0.4
Z046796		68	75	200	9.7	1350	9.3	6.1	2.4
Z046797		57	179	<100	1.3	2080	12.4	8.3	2.9
Z046798		74	96	300	3.3	510	11.2	6.2	3.0
Z046799		149	131	800	4.9	530	8.2	4.0	2.7
Z046800		43	100	100	2.5	640	7.5	4.4	2.1
Z046701		32	79	200	1.9	510	6.2	3.7	1.3
Z046702		103	296	200	9.7	3060	14.0	9.0	3.9
Z046703		54	120	200	1.8	430	6.4	4.0	2.1
Z046704		47	44	<100	5.2	1540	14.7	9.1	2.7
Z046705		50	73	<100	7.0	2610	9.4	5.5	2.2
Z046706		38	63	<100	1.8	1490	8.0	5.1	1.6

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	Element	Fe	Ga	Gd	Hg	In	K	La	Li
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
Z046801		96	7.8	14.8	2	0.2	7.8	41	2
Z046802		172	34.2	4.2	1	0.6	7.8	12	6
Z046803		97	42.8	8.5	<1	0.4	5.6	17	7
Z046804		192	10.1	6.5	2	0.2	11.4	21	4
Z046805		78	36.6	16.0	1	0.3	10.3	43	4
Z046806		43	9.7	13.7	<1	0.2	18.7	31	2
Z046807		84	28.1	6.9	<1	0.2	4.6	22	5
Z046808		50	6.2	8.5	<1	0.2	9.4	19	5
Z046809		108	26.3	17.1	<1	0.3	13.4	44	17
Z046810		157	54.2	13.4	1	0.3	14.6	50	23
Z046811		118	16.9	14.6	2	0.8	23.8	43	9
Z046812		142	1.8	57.6	<1	0.1	4.5	200	<1
Z046813		145	2.9	41.5	<1	0.2	2.5	106	1
Z046814		314	5.1	50.1	<1	0.3	5.5	202	8
Z046815		387	82.0	12.4	<1	0.3	16.1	51	57
Z046816		100	23.7	52.7	<1	0.4	14.4	166	14
Z046817		79	22.7	14.8	<1	0.2	13.0	39	11
Z046818		384	96.2	12.7	<1	1.4	15.3	34	18
Z046819		69	11.3	9.3	<1	0.3	12.8	17	6
Z046820		217	101	16.2	<1	0.5	16.7	65	47
Z046821		64	17.8	12.9	<1	0.3	13.5	23	7
Z046822		95	19.9	21.0	<1	0.2	7.0	68	11
Z046823		109	73.5	37.8	<1	0.2	12.2	148	51
Z046824		110	44.3	13.9	<1	0.6	11.1	53	10
Z046825		34	7.0	13.3	2	0.1	13.3	27	2
Z046826		86	23.7	19.9	<1	0.4	9.3	46	10
Z046827		262	62.4	6.8	<1	0.5	26.0	26	46
Z046828		163	42.0	8.4	1	0.6	11.1	23	20
Z046829		120	28.0	5.9	<1	0.4	11.8	13	10
Z046830		148	45.9	6.6	<1	0.4	12.7	18	27
Z046831		105	23.8	6.8	<1	0.2	10.8	21	19
Z046832		88	18.8	20.5	<1	0.3	7.5	53	12
Z046833		105	26.4	24.0	<1	0.4	10.1	106	16
Z046834		34	3.4	11.3	<1	<0.1	9.6	26	<1
Z046835		109	25.7	8.6	<1	0.2	43.4	20	15
Z046836		81	26.0	15.6	<1	0.2	13.7	44	8
Z046837		238	81.8	14.7	1	0.7	32.9	52	50
Z046838		135	48.6	10.2	<1	0.3	17.6	25	34
Z046839		52	15.8	14.5	<1	0.3	13.3	38	8
Z046840		97	26.9	10.0	1	0.3	13.8	28	18

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	Element	Fe	Ga	Gd	Hg	In	K	La	Li
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
Z046841		58	11.3	10.2	<1	0.1	10.8	27	4
Z046842		287	47.5	5.8	<1	0.3	9.5	24	12
Z046843		270	74.3	8.0	1	0.8	25.1	24	31
Z046844		65	12.8	12.9	<1	0.2	19.4	36	7
Z046845		341	84.5	6.1	1	0.8	16.0	26	39
Z046846		69	14.4	18.6	<1	0.2	19.8	56	5
Z046847		121	29.3	15.1	<1	0.3	7.2	61	14
Z046848		74	11.9	13.9	<1	0.3	15.3	27	4
Z046849		101	1.4	14.0	<1	0.1	6.6	26	<1
Z046850		133	4.8	16.9	<1	<0.1	6.1	85	<1
Z046751		182	3.9	22.0	<1	0.1	8.0	123	3
Z046752		186	7.0	35.8	<1	0.2	9.4	137	20
Z046753		31	1.2	24.9	<1	<0.1	13.6	22	18
Z046754		25	1.0	14.8	<1	<0.1	13.7	13	24
Z046755		28	1.5	20.7	<1	<0.1	11.5	28	13
Z046756		36	1.4	19.6	<1	<0.1	10.1	44	14
Z046757		20	1.3	14.4	<1	<0.1	14.0	16	25
Z046758		33	0.9	12.7	<1	<0.1	8.9	11	7
Z046759		48	5.1	30.9	<1	<0.1	7.5	105	11
Z046760		63	5.4	29.4	<1	<0.1	8.2	91	6
Z046761		55	2.4	32.1	<1	<0.1	10.2	115	10
Z046762		66	4.0	49.9	<1	<0.1	10.5	201	15
Z046763		47	1.7	13.0	<1	<0.1	8.0	50	4
Z046764		58	2.8	30.1	<1	<0.1	6.3	130	<1
Z046765		145	18.1	26.8	<1	0.3	9.2	93	11
Z046766		142	43.6	32.9	<1	0.2	7.6	162	24
Z046767		146	35.4	26.1	<1	0.2	8.8	92	21
Z046768		40	9.3	17.5	<1	0.1	5.1	40	6
Z046769		68	14.5	11.1	<1	0.2	7.6	29	7
Z046770		103	20.6	16.5	<1	0.3	17.8	60	14
Z046771		121	19.2	34.3	1	0.5	14.0	103	16
Z046772		176	46.2	16.3	<1	0.3	8.9	39	26
Z046773		135	28.2	31.5	<1	0.3	18.4	54	16
Z046774		346	96.9	26.4	1	0.4	15.6	68	82
Z046775		251	29.9	4.0	<1	1.0	16.1	16	9
Z046776		301	83.1	18.0	<1	0.7	14.5	50	63
Z046777		205	93.0	16.2	<1	0.4	17.9	71	79
Z046778		235	18.8	8.3	1	0.2	20.3	30	17
Z046779		160	32.9	17.4	2	0.4	15.9	45	18
Z046780		115	24.5	6.4	<1	0.4	9.5	22	10

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	Element	Fe	Ga	Gd	Hg	In	K	La	Li
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
Z046781		64	10.3	8.9	1	0.2	14.3	24	7
Z046782		147	25.7	11.1	<1	0.4	18.6	27	17
Z046783		331	26.8	6.5	<1	0.3	11.1	19	12
Z046784		120	24.5	7.3	<1	0.4	16.3	23	11
Z046785		325	74.7	8.2	<1	0.3	10.4	28	21
Z046786		46	9.0	13.5	<1	0.1	12.1	34	7
Z046787		30	6.1	22.1	1	0.1	5.9	62	4
Z046788		44	11.6	42.6	<1	0.2	8.9	151	5
Z046789		81	11.7	13.8	<1	0.4	3.6	27	3
Z046790		119	22.4	9.1	<1	0.4	13.5	28	6
Z046791		93	16.9	17.5	<1	0.3	8.7	63	10
Z046792		167	37.9	9.6	2	0.5	12.4	37	33
Z046793		208	34.9	8.5	<1	0.3	6.5	37	15
Z046794		148	21.2	50.7	<1	0.3	5.9	213	12
Z046795		144	29.4	0.9	<1	1.5	21.6	6	11
Z046796		289	153	8.3	1	0.8	21.0	35	67
Z046797		77	13.7	12.7	<1	0.6	15.2	20	9
Z046798		110	38.3	10.9	<1	0.2	11.0	34	17
Z046799		311	94.1	9.1	<1	0.6	11.7	73	40
Z046800		159	52.4	6.5	<1	0.5	11.4	20	13
Z046701		280	39.4	4.7	<1	0.4	13.1	16	14
Z046702		225	79.1	14.6	1	0.7	21.3	42	55
Z046703		178	62.4	6.2	<1	0.6	15.8	32	9
Z046704		88	15.0	10.9	1	0.2	9.9	21	8
Z046705		107	8.6	8.2	2	0.2	15.2	23	4
Z046706		175	42.0	6.5	<1	0.5	13.5	18	12

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	Element	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
Z046801		1.3	3400	2	3.2	61	142	1.3	239
Z046802		1.9	200	2	9.8	13	209	2.6	359
Z046803		2.5	3500	2	12.6	25	139	5.2	415
Z046804		1.5	<100	5	2.5	23	143	4.1	80
Z046805		1.9	1700	4	9.0	61	206	3.5	289
Z046806		0.8	500	<2	1.6	52	126	1.2	387
Z046807		1.6	500	<2	7.3	28	252	2.5	158
Z046808		1.5	2500	<2	1.1	30	330	1.4	323
Z046809		4.5	2700	3	8.7	67	345	2.1	184
Z046810		7.4	1100	4	18.2	62	238	3.8	232
Z046811		7.6	5200	5	5.9	61	353	5.7	1910
Z046812		20.0	6800	16	<0.5	450	251	0.5	44
Z046813		26.4	12300	14	1.0	173	393	0.3	373
Z046814		16.2	22700	14	3.7	309	355	0.8	95
Z046815		13.7	4900	8	35.2	57	358	3.7	181
Z046816		5.0	7800	4	8.9	245	214	2.5	648
Z046817		2.8	2400	<2	7.8	60	290	1.1	396
Z046818		10.4	11600	10	28.6	49	212	5.7	710
Z046819		3.1	2400	<2	3.1	30	389	1.8	563
Z046820		10.9	1500	8	34.0	71	191	6.6	351
Z046821		3.1	1400	<2	3.8	39	239	1.6	381
Z046822		4.9	600	3	4.6	91	289	2.3	211
Z046823		16.1	2100	7	44.6	198	155	1.5	365
Z046824		10.4	2300	4	14.0	64	181	5.7	406
Z046825		0.9	5300	<2	0.9	46	165	1.7	315
Z046826		2.3	1800	2	6.3	74	151	1.4	485
Z046827		10.1	1300	3	27.0	30	221	5.2	543
Z046828		4.5	3600	4	11.6	29	369	4.3	323
Z046829		4.3	3900	2	7.1	18	244	2.8	623
Z046830		8.3	1600	2	14.1	24	432	2.4	228
Z046831		7.9	2100	3	7.7	26	385	2.6	189
Z046832		6.0	2700	3	5.4	78	377	2.6	247
Z046833		12.5	6500	5	11.7	127	199	3.9	388
Z046834		4.9	1100	3	<0.5	45	187	0.3	156
Z046835		4.3	1600	2	8.6	30	296	2.4	267
Z046836		2.3	2000	<2	6.1	63	288	2.3	214
Z046837		13.3	8700	8	29.4	61	450	6.5	410
Z046838		11.3	11600	4	26.9	34	214	4.7	447
Z046839		4.5	3300	3	4.6	55	145	1.4	454
Z046840		5.9	4400	3	7.7	38	293	3.1	287

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	Element	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
Z046841		3.3	2400	<2	1.6	37	232	1.8	168
Z046842		6.8	700	3	14.6	23	314	16.2	105
Z046843		17.1	19400	6	23.9	29	337	11.4	1020
Z046844		3.2	2000	<2	3.9	47	282	2.5	221
Z046845		11.9	1000	5	29.2	25	212	8.2	287
Z046846		2.1	1500	<2	3.7	77	191	2.7	335
Z046847		2.9	500	<2	9.3	75	229	3.3	217
Z046848		4.9	3500	<2	2.4	47	315	2.3	379
Z046849		4.0	9300	12	0.5	42	129	<0.1	353
Z046850		11.6	24300	13	1.9	114	170	0.3	101
Z046751		40.7	30400	32	4.5	162	432	0.2	305
Z046752		42.7	12000	23	3.9	161	420	1.1	631
Z046753		62.1	5600	157	<0.5	63	215	<0.1	653
Z046754		45.0	8800	43	<0.5	35	179	<0.1	759
Z046755		40.3	6200	54	<0.5	68	243	<0.1	600
Z046756		40.1	8000	87	1.3	83	282	<0.1	605
Z046757		38.0	13000	27	<0.5	41	321	<0.1	677
Z046758		33.5	8000	29	<0.5	31	191	<0.1	683
Z046759		34.0	18800	23	3.7	145	623	0.3	532
Z046760		29.4	17000	42	4.6	145	491	0.4	548
Z046761		36.3	11700	52	2.2	183	484	0.2	541
Z046762		40.1	12400	52	2.6	294	317	0.5	609
Z046763		62.3	15300	17	1.1	75	367	<0.1	417
Z046764		16.7	12700	35	0.7	189	263	0.3	226
Z046765		17.5	9600	3	5.1	118	464	1.6	167
Z046766		11.4	300	3	13.4	177	140	2.8	147
Z046767		10.2	1000	3	11.8	115	296	2.6	171
Z046768		3.1	300	<2	1.5	81	385	1.2	201
Z046769		5.0	1100	<2	3.8	39	194	1.5	212
Z046770		5.9	2300	<2	7.0	71	316	1.6	433
Z046771		7.8	4700	<2	7.0	141	711	5.5	555
Z046772		15.5	2700	3	14.4	55	539	3.7	266
Z046773		4.5	6800	7	9.9	96	872	1.5	264
Z046774		19.4	3200	8	29.2	97	546	4.8	290
Z046775		6.4	1400	<2	11.4	15	148	8.9	409
Z046776		19.8	3900	4	28.5	65	406	6.6	349
Z046777		18.8	17900	4	37.6	76	295	8.9	244
Z046778		7.2	1100	<2	6.5	36	582	3.1	145
Z046779		8.0	7500	3	11.3	62	490	5.2	615
Z046780		2.9	1000	<2	6.8	26	502	3.2	445

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	Element	Mg	Mn	Mo	Nb	Nd	Ni	P	Pb
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
Z046781		6.3	3000	<2	2.8	34	275	3.0	251
Z046782		4.1	2000	<2	8.1	41	378	3.2	281
Z046783		5.6	700	<2	8.2	22	248	4.0	50
Z046784		3.4	800	<2	6.3	28	281	3.9	446
Z046785		7.5	1800	6	32.8	28	351	6.2	95
Z046786		1.2	500	2	2.8	49	355	1.0	234
Z046787		0.6	300	2	1.2	96	230	0.6	193
Z046788		1.7	2200	4	3.3	198	178	1.3	245
Z046789		0.5	200	3	2.7	41	105	2.4	192
Z046790		3.2	600	3	5.8	34	358	3.7	227
Z046791		3.4	1200	6	4.4	74	452	2.3	314
Z046792		4.0	4500	7	13.6	40	308	3.5	244
Z046793		3.8	700	2	12.2	35	121	5.3	158
Z046794		3.8	800	3	10.2	255	90	2.0	412
Z046795		16.7	4100	4	10.3	4	182	4.1	332
Z046796		16.6	3700	14	49.1	33	190	7.6	459
Z046797		13.2	11200	2	3.1	37	347	1.4	1090
Z046798		4.6	1600	4	10.5	43	610	2.5	309
Z046799		14.3	4300	9	28.8	49	231	6.7	188
Z046800		4.9	900	2	15.8	26	194	5.2	280
Z046701		5.3	500	4	11.5	17	179	5.3	108
Z046702		11.1	17100	12	22.7	55	325	6.1	561
Z046703		6.2	2400	5	14.8	30	594	4.1	417
Z046704		2.4	1700	4	2.3	37	532	2.7	193
Z046705		2.1	5500	5	1.3	28	209	3.8	224
Z046706		7.0	3400	8	16.5	23	306	9.1	459

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	Element	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	1	0.5	0.1	1	0.5	5	1	1
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046801		<1	13.6	<0.1	46	<0.5	72	15	<1
Z046802		<1	2.9	<0.1	60	<0.5	36	3	2
Z046803		<1	4.9	<0.1	64	<0.5	53	7	3
Z046804		<1	5.2	<0.1	94	<0.5	44	6	<1
Z046805		<1	13.8	<0.1	44	<0.5	56	16	2
Z046806		<1	11.1	<0.1	116	<0.5	43	12	<1
Z046807		<1	6.1	<0.1	42	<0.5	40	7	1
Z046808		<1	6.3	<0.1	146	<0.5	35	7	<1
Z046809		<1	14.3	<0.1	128	<0.5	59	16	1
Z046810		<1	14.2	<0.1	128	<0.5	68	14	3
Z046811		<1	13.3	<0.1	185	1.0	57	14	4
Z046812		<1	88.7	<0.1	29	1.7	252	79	<1
Z046813		<1	38.2	<0.1	33	1.0	151	40	<1
Z046814		<1	71.4	<0.1	60	<0.5	183	58	<1
Z046815		<1	13.0	<0.1	126	1.2	124	13	7
Z046816		<1	54.7	<0.1	176	0.8	79	57	2
Z046817		<1	12.5	<0.1	169	0.7	49	13	1
Z046818		<1	10.6	<0.1	95	1.9	94	12	8
Z046819		<1	6.3	<0.1	129	<0.5	56	8	<1
Z046820		<1	16.8	<0.1	198	0.9	112	17	8
Z046821		<1	8.1	<0.1	143	<0.5	45	11	<1
Z046822		<1	20.6	<0.1	83	<0.5	37	20	<1
Z046823		<1	44.3	<0.1	157	<0.5	126	41	7
Z046824		<1	14.3	<0.1	39	<0.5	63	13	4
Z046825		<1	10.1	<0.1	190	<0.5	35	12	<1
Z046826		<1	15.9	<0.1	150	<0.5	57	18	1
Z046827		<1	6.9	<0.1	223	<0.5	108	6	4
Z046828		<1	6.5	<0.1	93	0.7	76	7	2
Z046829		<1	3.8	<0.1	147	<0.5	44	5	1
Z046830		<1	5.1	<0.1	104	0.7	63	6	3
Z046831		<1	6.3	<0.1	131	<0.5	48	7	1
Z046832		<1	17.5	<0.1	125	<0.5	67	20	1
Z046833		<1	30.7	<0.1	124	<0.5	68	27	2
Z046834		<1	10.2	<0.1	93	<0.5	27	11	<1
Z046835		<1	6.3	<0.1	269	<0.5	53	8	1
Z046836		<1	14.4	<0.1	140	<0.5	49	16	<1
Z046837		<1	14.1	<0.1	239	2.4	111	15	7
Z046838		<1	7.5	<0.1	178	<0.5	91	9	4
Z046839		<1	12.2	<0.1	182	<0.5	43	14	<1
Z046840		<1	8.7	<0.1	134	<0.5	52	10	1

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	Element	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	1	0.5	0.1	1	0.5	5	1	1
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046841		<1	8.3	<0.1	145	<0.5	40	10	<1
Z046842		<1	5.5	<0.1	89	1.5	97	6	4
Z046843		<1	6.6	<0.1	105	1.4	89	7	8
Z046844		<1	10.5	<0.1	231	0.5	51	11	<1
Z046845		<1	5.8	<0.1	99	1.3	98	6	6
Z046846		<1	17.1	<0.1	244	<0.5	48	18	<1
Z046847		<1	18.1	<0.1	149	<0.5	54	16	2
Z046848		<1	9.8	<0.1	135	<0.5	34	12	<1
Z046849		<1	9.3	<0.1	86	1.7	68	11	<1
Z046850		<1	28.1	<0.1	55	1.2	41	21	<1
Z046751		<1	37.8	<0.1	32	1.0	76	27	<1
Z046752		<1	38.3	<0.1	58	1.4	139	33	<1
Z046753		<1	11.3	<0.1	21	0.9	11	18	<1
Z046754		<1	6.2	0.1	21	2.3	6	10	<1
Z046755		<1	13.3	<0.1	40	3.7	10	18	<1
Z046756		<1	17.5	<0.1	37	3.8	11	19	<1
Z046757		<1	7.5	0.1	53	7.1	6	11	<1
Z046758		<1	5.4	0.2	43	2.3	7	9	<1
Z046759		<1	34.0	<0.1	49	6.4	67	28	<1
Z046760		<1	32.2	<0.1	54	9.3	105	29	<1
Z046761		<1	40.9	0.2	59	9.3	32	34	<1
Z046762		<1	65.9	0.2	62	12.4	51	53	<1
Z046763		<1	16.8	<0.1	55	3.3	23	14	<1
Z046764		<1	42.7	0.1	66	5.4	41	35	<1
Z046765		<1	27.3	<0.1	96	0.6	67	26	1
Z046766		<1	41.9	<0.1	87	0.7	86	36	2
Z046767		<1	27.4	<0.1	125	<0.5	65	27	2
Z046768		<1	16.4	<0.1	65	<0.5	30	17	<1
Z046769		<1	9.0	<0.1	141	<0.5	38	10	<1
Z046770		<1	15.8	<0.1	129	0.5	67	16	1
Z046771		<1	33.0	<0.1	187	1.5	91	34	2
Z046772		<1	12.3	<0.1	205	0.6	79	15	3
Z046773		<1	20.1	<0.1	223	<0.5	104	27	1
Z046774		<1	20.4	<0.1	155	1.6	147	25	6
Z046775		<1	3.8	<0.1	62	1.2	61	3	3
Z046776		<1	14.4	<0.1	186	1.5	120	16	5
Z046777		<1	18.1	<0.1	142	0.8	161	17	8
Z046778		<1	8.3	<0.1	87	<0.5	49	8	1
Z046779		<1	13.7	<0.1	167	1.0	61	16	2
Z046780		<1	5.6	<0.1	118	<0.5	42	6	2

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	Element	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	1	0.5	0.1	1	0.5	5	1	1
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046781		<1	7.0	<0.1	166	<0.5	37	8	<1
Z046782		<1	8.9	<0.1	98	<0.5	62	10	1
Z046783		<1	4.8	<0.1	55	<0.5	84	6	2
Z046784		<1	6.4	<0.1	130	<0.5	47	7	1
Z046785		<1	6.6	<0.1	73	0.7	81	7	8
Z046786		<1	10.7	<0.1	102	<0.5	42	11	<1
Z046787		<1	21.4	<0.1	56	<0.5	40	20	<1
Z046788		<1	46.6	<0.1	99	<0.5	63	46	<1
Z046789		<1	8.7	<0.1	24	<0.5	33	13	<1
Z046790		<1	7.9	<0.1	86	<0.5	37	9	1
Z046791		<1	16.9	<0.1	71	<0.5	55	17	<1
Z046792		<1	10.0	<0.1	146	0.9	76	9	3
Z046793		<1	8.7	<0.1	33	0.9	67	8	2
Z046794		<1	61.5	<0.1	45	<0.5	101	53	2
Z046795		<1	1.2	<0.1	34	0.5	62	<1	4
Z046796		<1	8.1	<0.1	141	1.6	199	7	14
Z046797		<1	7.7	<0.1	47	<0.5	59	11	<1
Z046798		<1	9.7	<0.1	56	<0.5	69	10	2
Z046799		<1	13.2	<0.1	99	1.5	116	11	9
Z046800		<1	6.1	<0.1	67	<0.5	71	6	3
Z046701		<1	4.1	<0.1	59	<0.5	86	4	2
Z046702		<1	12.8	<0.1	189	1.4	127	13	6
Z046703		<1	7.1	<0.1	40	<0.5	64	6	3
Z046704		<1	7.3	<0.1	92	<0.5	62	9	<1
Z046705		<1	6.5	<0.1	145	0.8	63	7	<1
Z046706		<1	5.0	<0.1	29	1.3	88	6	4

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	Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046801		<10	1	2.3	40	19.2	690	0.2	6.4
Z046802		20	<1	0.7	40	5.9	2880	0.3	3.1
Z046803		20	1	1.9	40	8.5	5510	0.2	3.2
Z046804		<10	<1	1.3	40	6.1	680	0.6	6.3
Z046805		<10	<1	2.8	20	10.3	2890	0.3	5.2
Z046806		<10	<1	2.5	20	6.3	600	0.3	3.4
Z046807		10	<1	1.2	20	5.7	2520	0.2	2.5
Z046808		30	<1	1.7	20	6.7	440	0.2	3.6
Z046809		40	<1	2.7	10	15.1	3140	0.4	4.6
Z046810		60	<1	2.1	<10	12.0	6470	0.4	4.4
Z046811		120	<1	2.4	<10	33.2	1910	0.7	6.6
Z046812		450	<1	6.8	20	12.8	60	<0.1	31.8
Z046813		580	<1	5.7	20	13.8	130	0.2	129
Z046814		440	<1	7.0	20	52.3	580	0.3	26.9
Z046815		160	2	2.1	10	24.9	12600	0.8	8.5
Z046816		60	<1	7.4	<10	44.6	2410	0.8	9.5
Z046817		30	<1	2.5	10	17.5	2660	0.4	4.1
Z046818		60	1	2.1	<10	20.0	16000	0.5	7.6
Z046819		50	<1	1.8	<10	10.4	1300	0.3	3.9
Z046820		80	2	2.6	<10	22.6	11300	0.7	7.7
Z046821		40	<1	2.3	<10	6.9	1380	0.4	3.5
Z046822		80	<1	3.3	<10	8.6	1660	0.4	4.0
Z046823		170	3	5.2	<10	39.2	13500	1.2	11.8
Z046824		170	<1	2.1	<10	12.7	6890	0.4	5.5
Z046825		<10	<1	2.3	<10	9.6	490	0.3	5.7
Z046826		10	<1	3.1	<10	10.1	2340	0.5	4.2
Z046827		80	<1	1.3	<10	20.5	9760	0.5	6.7
Z046828		10	<1	1.4	<10	13.0	4430	0.4	5.1
Z046829		50	<1	1.0	<10	13.2	2770	0.3	3.3
Z046830		70	<1	1.2	<10	9.7	5170	0.3	4.5
Z046831		50	<1	1.2	<10	11.4	2590	0.3	5.6
Z046832		70	<1	3.2	<10	19.6	2200	0.4	6.9
Z046833		290	<1	3.6	<10	58.7	3110	0.7	8.4
Z046834		180	<1	1.8	<10	12.5	260	0.2	5.4
Z046835		40	<1	1.6	<10	10.6	3470	0.3	3.9
Z046836		20	<1	2.7	<10	11.1	2500	0.4	4.4
Z046837		110	<1	2.6	<10	29.3	9450	0.7	11.2
Z046838		180	<1	1.7	<10	25.1	8710	0.6	7.2
Z046839		70	<1	2.3	<10	15.7	1930	0.5	4.5
Z046840		60	<1	1.8	<10	12.6	2910	0.4	5.2

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	Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046841		110	<1	1.6	<10	8.7	1100	0.1	3.9
Z046842		90	<1	1.1	<10	15.5	5550	0.5	7.2
Z046843		230	2	1.3	<10	16.6	9890	0.5	6.3
Z046844		60	<1	2.2	<10	20.1	1280	0.4	4.6
Z046845		60	1	1.3	<10	15.1	12500	0.6	8.2
Z046846		30	<1	3.2	<10	33.8	1230	0.3	6.4
Z046847		40	<1	2.4	<10	12.0	3080	0.5	6.0
Z046848		90	<1	2.3	<10	11.7	1150	0.3	3.6
Z046849		210	<1	1.9	<10	8.4	110	<0.1	16.2
Z046850		390	<1	2.4	<10	11.8	510	<0.1	23.0
Z046751		840	<1	3.1	<10	21.9	220	0.3	49.1
Z046752		1190	<1	5.5	10	19.7	590	0.6	217
Z046753		1510	<1	3.2	<10	34.3	40	<0.1	24.4
Z046754		1370	<1	2.2	<10	24.4	20	0.2	26.1
Z046755		1110	<1	2.6	<10	31.1	70	<0.1	23.0
Z046756		1200	<1	2.5	<10	43.5	50	<0.1	36.7
Z046757		1450	<1	2.2	<10	25.3	30	0.4	18.4
Z046758		1430	<1	1.9	<10	18.4	30	<0.1	7.7
Z046759		1050	<1	4.0	<10	18.4	200	0.7	94.1
Z046760		890	<1	4.0	<10	13.0	170	0.5	90.7
Z046761		1020	<1	4.0	<10	32.2	90	0.2	37.8
Z046762		910	<1	6.2	<10	29.7	250	0.3	37.9
Z046763		910	<1	1.7	<10	19.8	40	0.2	23.4
Z046764		590	<1	3.7	<10	15.0	160	<0.1	23.5
Z046765		340	<1	3.9	<10	15.9	2330	0.2	7.0
Z046766		280	<1	4.8	<10	23.7	3820	0.5	8.8
Z046767		240	<1	3.8	<10	17.4	4360	0.6	5.5
Z046768		50	<1	3.0	<10	6.7	680	0.3	2.7
Z046769		200	<1	2.0	<10	10.3	1370	0.3	4.1
Z046770		90	<1	2.6	<10	16.3	2590	0.3	5.0
Z046771		60	<1	5.7	<10	43.2	2070	0.6	10.2
Z046772		170	<1	2.5	<10	13.7	6280	0.4	4.7
Z046773		30	<1	5.2	<10	30.2	3570	0.2	15.6
Z046774		180	1	4.4	<10	20.4	12000	0.6	9.2
Z046775		40	<1	0.8	<10	11.2	2590	0.2	3.8
Z046776		220	1	2.7	<10	19.7	8290	0.8	6.6
Z046777		80	2	2.5	<10	38.9	11600	1.0	12.9
Z046778		130	<1	1.5	<10	8.6	2020	0.3	4.1
Z046779		110	<1	2.8	<10	16.1	4320	0.4	6.5
Z046780		60	<1	1.4	<10	9.8	2270	0.3	3.9

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	Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Z046781		90	<1	1.6	<10	8.0	950	0.2	3.3
Z046782		30	<1	2.0	<10	10.8	2950	0.3	4.4
Z046783		30	<1	1.3	<10	9.0	3020	0.2	3.7
Z046784		30	<1	1.4	<10	12.4	2430	0.4	4.7
Z046785		90	3	1.5	<10	11.1	11700	0.5	5.0
Z046786		<10	<1	2.0	<10	5.5	930	0.3	2.8
Z046787		<10	<1	3.1	<10	8.6	460	0.4	3.5
Z046788		<10	<1	5.9	<10	23.9	1010	0.4	10.5
Z046789		<10	<1	2.2	<10	9.1	730	0.3	4.8
Z046790		30	<1	1.6	<10	6.8	2060	0.3	2.9
Z046791		30	<1	2.6	<10	10.4	2280	0.4	4.6
Z046792		20	<1	1.6	<10	10.0	3760	0.4	4.7
Z046793		10	<1	1.4	<10	9.5	3830	0.3	3.6
Z046794		180	<1	6.9	<10	23.7	3770	0.4	16.1
Z046795		160	<1	0.2	<10	5.2	7710	0.3	2.8
Z046796		60	3	1.4	<10	14.2	18000	0.9	5.7
Z046797		260	<1	2.0	<10	6.6	1430	0.2	2.6
Z046798		30	<1	1.7	<10	8.4	3920	0.4	3.7
Z046799		80	2	1.5	<10	19.4	15200	0.5	5.8
Z046800		50	<1	1.0	<10	7.0	5090	0.4	4.0
Z046701		30	<1	0.9	<10	8.8	4610	0.2	3.0
Z046702		90	1	2.3	<10	16.8	8190	0.7	7.4
Z046703		90	<1	1.0	<10	8.0	5370	0.4	3.3
Z046704		10	<1	2.0	<10	4.9	1150	0.3	4.3
Z046705		10	<1	1.4	<10	6.8	750	0.5	3.6
Z046706		50	<1	1.2	<10	7.8	7210	0.2	4.0

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	Element	W	Y	Yb	Zn	Zr
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	1	0.2	10	2
	Units	ppb	ppb	ppb	ppb	ppb
Z046801		1.7	59	5.9	890	41
Z046802		2.2	26	3.6	350	30
Z046803		2.3	61	6.1	1600	46
Z046804		1.3	44	5.8	260	20
Z046805		1.1	99	8.5	810	39
Z046806		<0.5	103	8.6	610	19
Z046807		1.0	39	4.3	600	33
Z046808		<0.5	57	5.2	560	23
Z046809		0.8	90	7.6	420	51
Z046810		0.8	65	4.9	510	68
Z046811		0.9	67	6.4	1730	73
Z046812		1.7	163	11.8	50	21
Z046813		1.6	245	20.4	160	35
Z046814		1.0	223	22.3	350	154
Z046815		2.9	67	7.3	320	127
Z046816		0.6	220	18.6	460	92
Z046817		<0.5	86	8.1	200	44
Z046818		2.8	62	6.7	1100	96
Z046819		<0.5	67	6.5	1170	36
Z046820		1.6	69	6.3	430	117
Z046821		<0.5	80	6.3	720	24
Z046822		<0.5	102	7.1	140	31
Z046823		1.9	153	12.0	250	179
Z046824		0.5	63	4.2	2130	65
Z046825		<0.5	75	6.1	1340	25
Z046826		<0.5	111	8.7	210	36
Z046827		1.2	44	5.8	2440	116
Z046828		<0.5	57	6.6	3590	59
Z046829		<0.5	40	4.3	6980	40
Z046830		<0.5	45	4.7	4700	56
Z046831		<0.5	33	3.4	16300	48
Z046832		<0.5	91	8.1	5350	56
Z046833		<0.5	87	7.1	3690	119
Z046834		<0.5	44	3.8	3940	21
Z046835		<0.5	54	5.2	5870	47
Z046836		<0.5	78	6.2	2910	42
Z046837		1.5	80	7.8	2240	127
Z046838		<0.5	60	6.2	2520	100
Z046839		<0.5	70	5.4	770	41
Z046840		<0.5	52	5.1	2470	49

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	Element	W	Y	Yb	Zn	Zr
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim.	0.5	1	0.2	10	2
	Units	ppb	ppb	ppb	ppb	ppb
Z046841		<0.5	47	4.3	1440	33
Z046842		<0.5	32	3.6	1520	87
Z046843		2.2	46	4.6	3880	95
Z046844		<0.5	72	5.4	790	44
Z046845		2.2	51	7.2	930	95
Z046846		<0.5	97	7.2	600	45
Z046847		0.6	71	6.4	710	47
Z046848		<0.5	93	6.6	960	27
Z046849		<0.5	73	6.2	80	14
Z046850		<0.5	69	6.2	150	28
Z046751		0.9	105	10.5	110	38
Z046752		1.9	254	29.2	140	59
Z046753		2.1	106	10.6	20	31
Z046754		1.2	65	7.7	30	23
Z046755		1.3	76	7.5	40	27
Z046756		2.4	77	7.5	40	24
Z046757		3.2	75	7.3	40	19
Z046758		1.3	66	6.8	30	20
Z046759		1.1	170	18.4	500	33
Z046760		0.8	162	18.3	780	48
Z046761		1.6	147	14.7	160	34
Z046762		1.0	234	21.3	160	65
Z046763		<0.5	67	7.7	150	16
Z046764		<0.5	119	9.9	140	22
Z046765		<0.5	146	11.4	580	36
Z046766		0.8	126	10.0	100	73
Z046767		<0.5	118	9.1	370	57
Z046768		<0.5	101	8.0	170	17
Z046769		<0.5	60	4.4	480	27
Z046770		<0.5	82	6.5	330	51
Z046771		0.5	146	13.9	940	88
Z046772		0.7	76	6.8	510	65
Z046773		<0.5	131	12.8	160	89
Z046774		2.2	141	13.5	600	116
Z046775		<0.5	34	4.1	490	45
Z046776		1.5	86	8.3	740	108
Z046777		2.3	64	5.9	380	159
Z046778		<0.5	43	4.2	320	36
Z046779		0.7	93	7.8	610	59
Z046780		<0.5	47	4.9	430	35

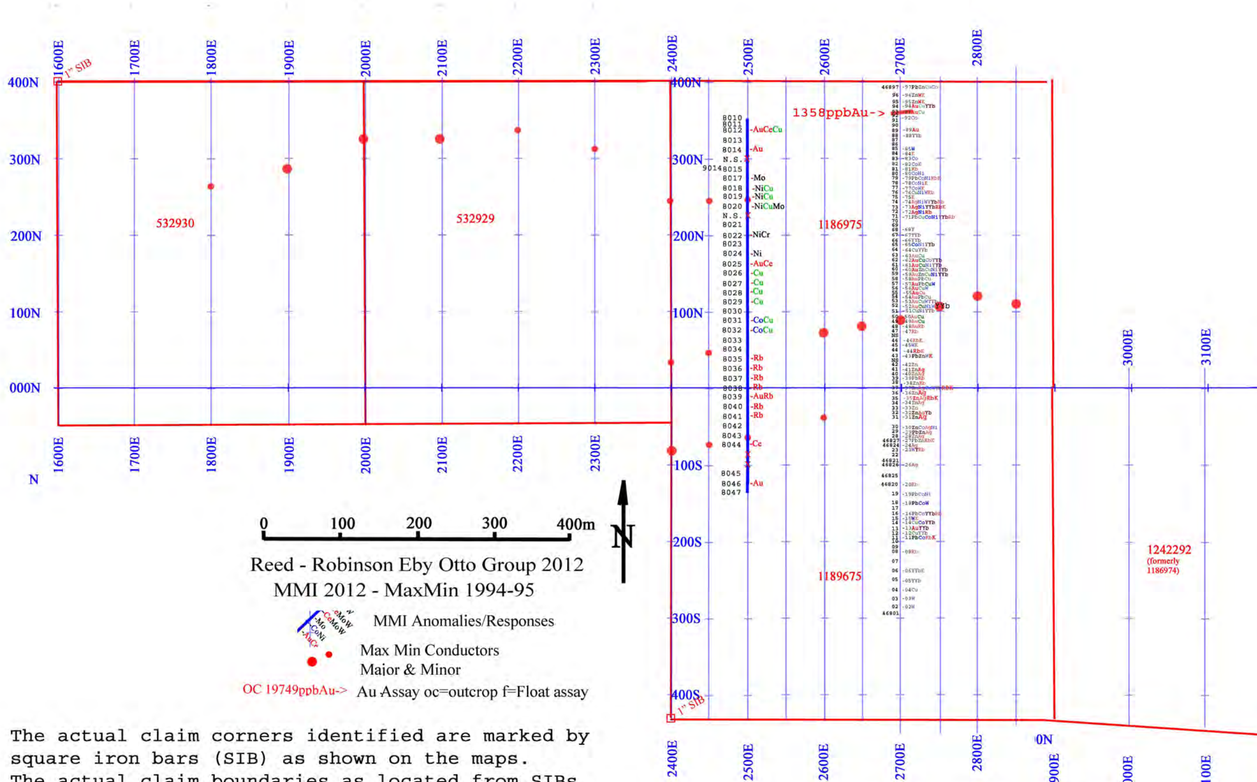
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Element	W	Y	Yb	Zn	Zr
Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
Det.Lim.	0.5	1	0.2	10	2
Units	ppb	ppb	ppb	ppb	ppb
Z046781	<0.5	48	3.5	780	25
Z046782	<0.5	76	7.5	670	49
Z046783	<0.5	48	7.5	360	42
Z046784	<0.5	42	4.5	730	43
Z046785	2.7	47	5.9	400	91
Z046786	<0.5	75	6.7	260	25
Z046787	<0.5	95	7.4	130	23
Z046788	0.7	130	9.7	130	56
Z046789	<0.5	53	5.5	140	29
Z046790	0.7	53	5.6	390	34
Z046791	0.7	74	5.6	210	46
Z046792	1.1	57	6.2	550	56
Z046793	1.5	42	4.1	500	49
Z046794	1.3	187	14.8	200	68
Z046795	3.4	10	2.2	1640	50
Z046796	3.7	51	5.4	1310	139
Z046797	0.6	71	7.4	1660	22
Z046798	0.7	60	5.4	310	46
Z046799	3.6	36	3.3	850	124
Z046800	0.9	34	4.1	850	43
Z046701	0.9	27	3.3	450	51
Z046702	2.5	75	7.5	1270	90
Z046703	1.0	32	3.5	270	52
Z046704	0.7	82	7.3	440	21
Z046705	<0.5	45	4.3	1330	26
Z046706	2.2	41	4.1	1220	49

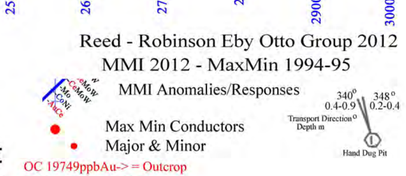
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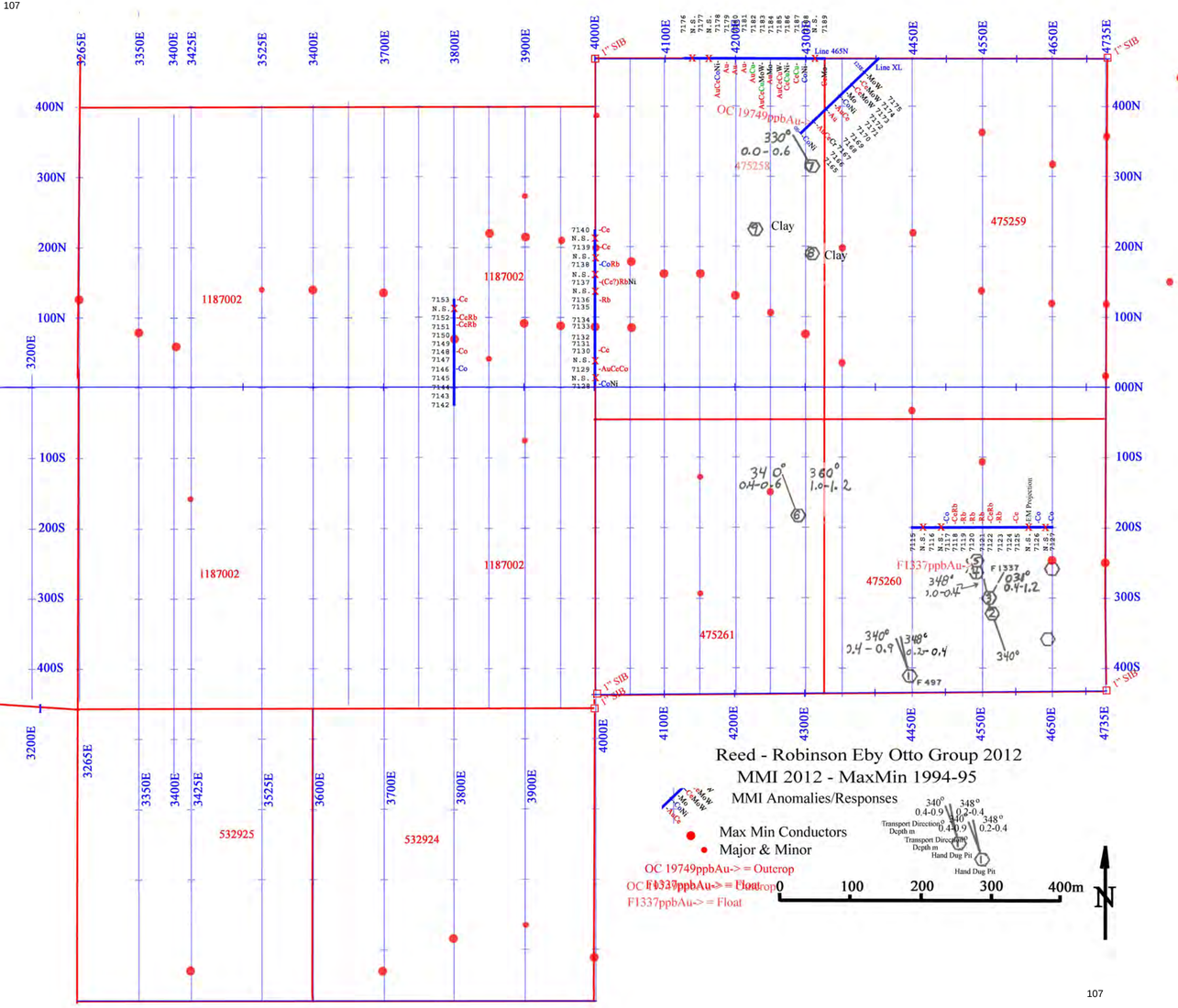
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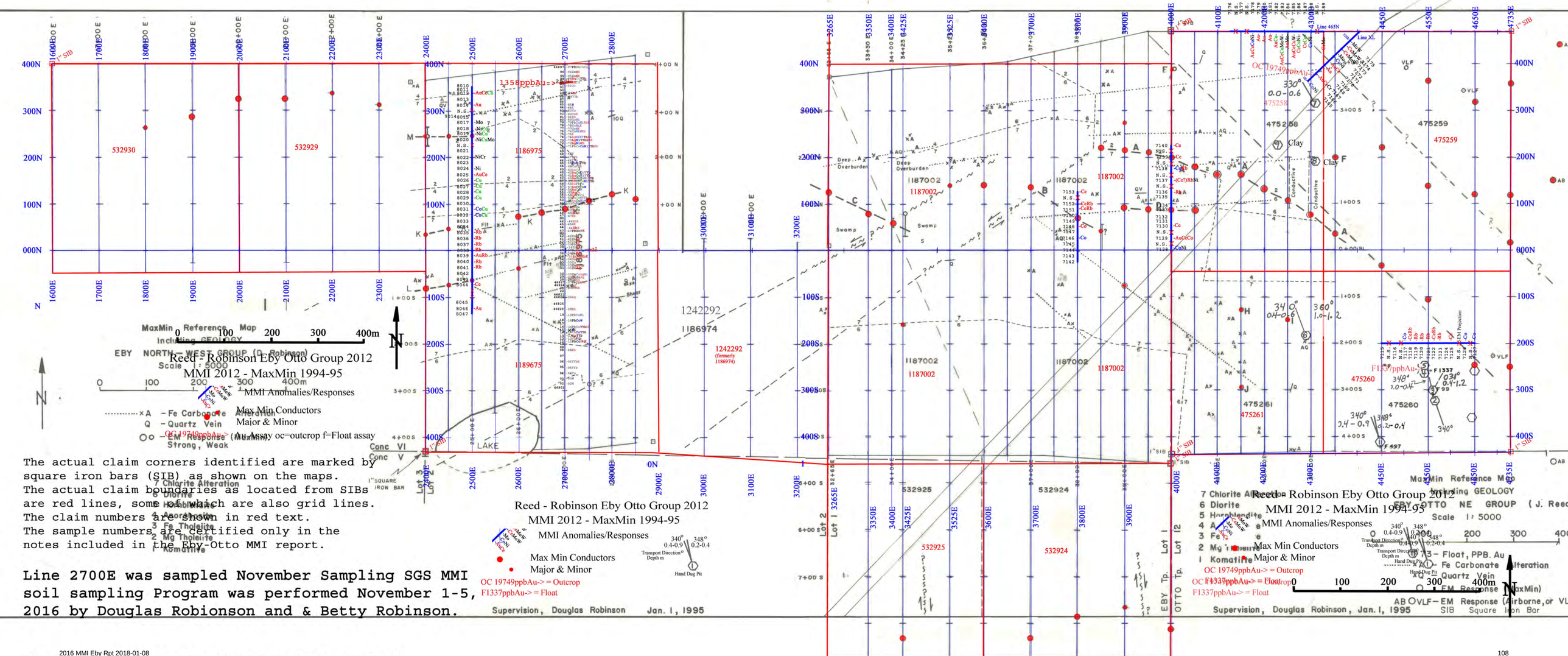
The actual claim corners identified are marked by square iron bars (SIB) as shown on the maps.
The actual claim boundaries as located from SIBs are red lines, some of which are also grid lines.
The claim numbers are shown in red text.
The sample numbers are certified only in the notes included in the Eby-Otto MMI report.

Line 2700E was sampled November Sampling SGS MMI soil sampling Program was performed November 1-5, 2016 by Douglas Robionson and & Betty Robinson.



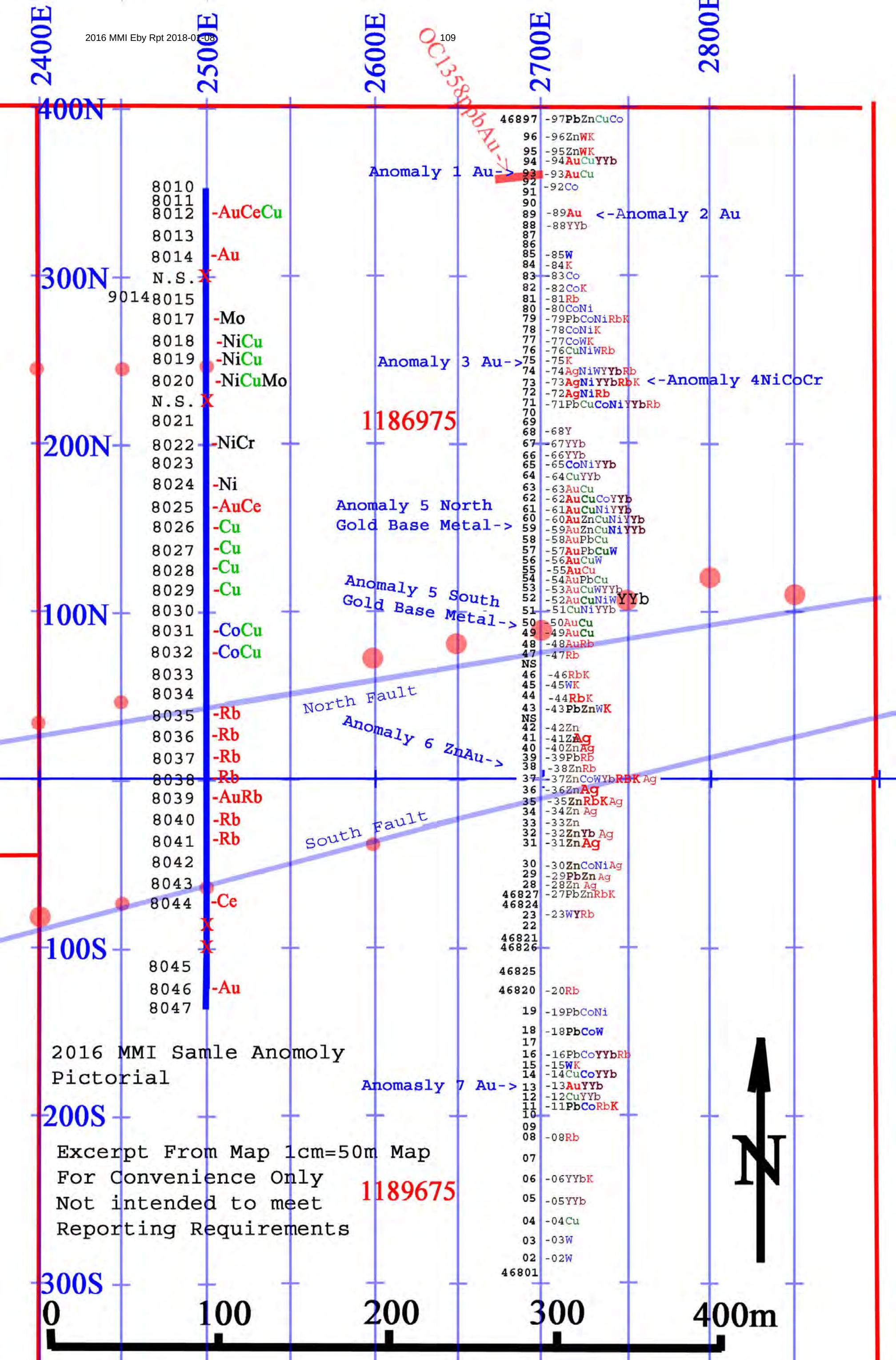


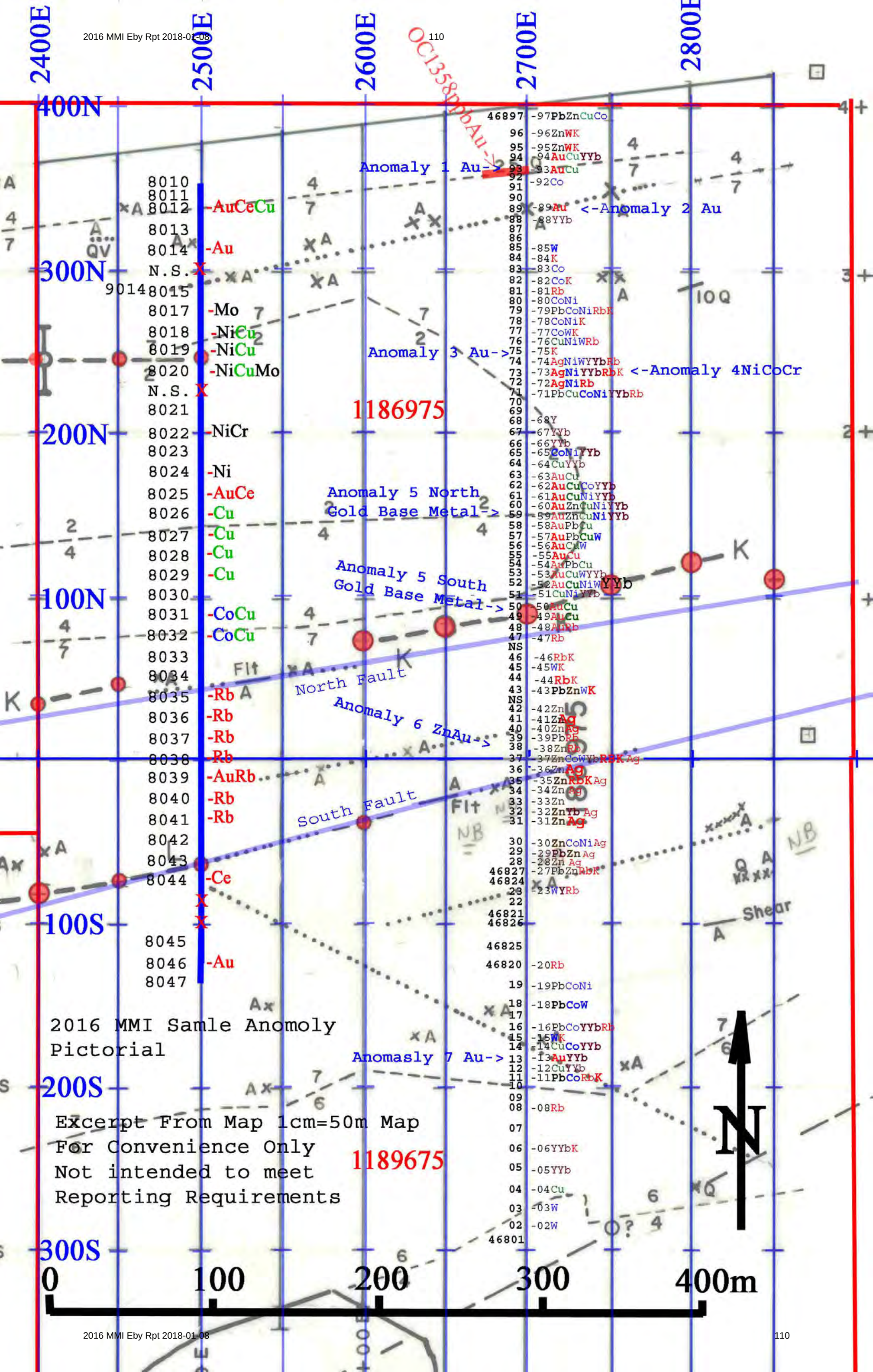
Eby-Otto MMI 2016 1cm=50m 2018-01-08 Master w Ag.pdf



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The actual claim boundaries as located from SIBs are red lines, some of which are also grid lines.
The claim numbers are shown in red text.
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Line 2700E was sampled November Sampling SGS MMI soil sampling Program was performed November 1-5, 2016 by Douglas Robionson and & Betty Robinson.


2400E
2500E
2600E
2700E
2800E
400N
300N
200N
100N
100S
200S
300S
OC1358ppbAu->
Anomaly 1 Au->
<-Anomaly 2 Au
Anomaly 3 Au->
<-Anomaly 4NiCoCr
Anomaly 5 North
Gold Base Metal->
Anomaly 5 South
Gold Base Metal->
North Fault
Anomaly 6 ZnAu->
South Fault
Anomasly 7 Au->
1186975
1189675
8010
8011
8012 -AuCeCu
8013
8014 -Au
N.S. X
9014 8015
8017 -Mo
8018 -NiCu
8019 -NiCu
8020 -NiCuMo
N.S. X
8021
8022 -NiCr
8023
8024 -Ni
8025 -AuCe
8026 -Cu
8027 -Cu
8028 -Cu
8029 -Cu
8030
8031 -CoCu
8032 -CoCu
8033
8034
8035 -Rb
8036 -Rb
8037 -Rb
8038 -Rb
8039 -AuRb
8040 -Rb
8041 -Rb
8042
8043
8044 -Ce
X
X
8045
8046 -Au
8047
46897 -97PbZnCuCo
96 -96ZnWK
95 -95ZnWK
94 -94AuCuYYb
93 -93AuCu
92 -92Co
91
90
89 -89Au
88 -88YYb
87
86
85 -85W
84 -84K
83 -83Co
82 -82CoK
81 -81Rb
80 -80CoNi
79 -79PbCoNiRbK
78 -78CoNiK
77 -77CoWK
76 -76CuNiWRb
75 -75K
74 -74AgNiWYYbRb
73 -73AgNiYYbRbK
72 -72AgNiRb
71 -71PbCuCoNiYYbRb
70
69
68 -68Y
67 -67YYb
66 -66YYb
65 -65CoNiYYb
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63 -63AuCu
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61 -61AuCuNiYYb
60 -60AuZnCuNiYYb
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55 -55AuCu
54 -54AuPbCu
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50 -50AuCu
49 -49AuCu
48 -48AuRb
47 -47Rb
NS
46 -46RbK
45 -45WK
44 -44RbK
43 -43PbZnWK
NS
42 -42Zn
41 -41ZnAg
40 -40ZnAg
39 -39PbRb
38 -38ZnRb
37 -37ZnCoWYbRbK Ag
36 -36ZnAg
35 -35ZnRbK Ag
34 -34Zn Ag
33 -33Zn
32 -32ZnYb Ag
31 -31ZnAg
30 -30ZnCoNiAg
29 -29PbZn Ag
28 -28Zn Ag
46827 -27PbZnRbK
46824
23 -23WYRb
22
46821
46826
46825
46820 -20Rb
19 -19PbCoNi
18 -18PbCoW
17
16 -16PbCoYYbRb
15 -15WK
14 -14CuCoYYb
13 -13AuYYb
12 -12CuYYb
11 -11PbCoRbK
10
09
08 -08Rb
07
06 -06YYbK
05 -05YYb
04 -04Cu
03 -03W
02 -02W
46801
2016 MMI Samle Anomoly
Pictorial
Excerpt From Map 1cm=50m Map
For Convenience Only
Not intended to meet
Reporting Requirements
N
0
100
200
300
400m



2016 MMI Samle Anomoly
Pictorial

Excerpt From Map 1cm=50m Map
For Convenience Only
Not intended to meet
Reporting Requirements