2014 Tulsequah Project: Feasibility Study Optimization

APPENDIX II

TULSEQUAH CHIEF PLAN AND VERTICAL SECTIONS

BC Geological Survey
Assessment Report
35093c

Tulsequah River Area
Northwestern BC
NTS 104K/12

Atlin Mining Division

Latitude 58°44'N, Longitude 133°35'W

Owner & Operator:

Chieftain Metals Inc.
2 Bloor Street West, Suite 2510
Toronto, Ontario

15350 y
15300 y
15250 y
15200 y
15150 y
15100 y
15050 y
15000 y
14950 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x

Geological Legend

Surface / End

- CASE casing
- OVB overburden
- EOH end of hole
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

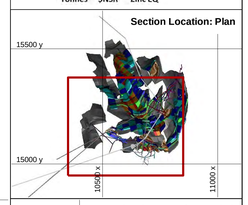
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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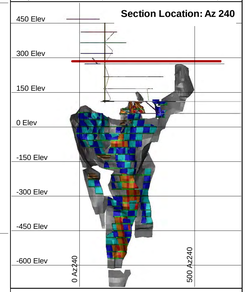

Level +270m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes, and All Drilling with Resource two metre capped Assay Composites

Scale 1:500

metres

Drawn by: BA	Planview elev 285m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
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RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
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Au(g/t) Ag(g/t) Lithology Depth(m) Drill Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

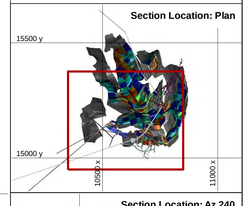
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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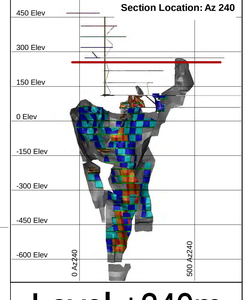

Level +240m

CHIEFTAIN METALS INC

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Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev 255m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
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BAT	basalt ash tuff	BAHY	basalt hyaloclastite
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Intermediate Extrusive Rocks

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AFL	andesite flow	DFLX	dacite flow breccia
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ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

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RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

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SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
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PYF	pyrite facies		

Faults / Structures

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FBX	fault breccia	QCBX	quartz carbonate vein
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suffix codes

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2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

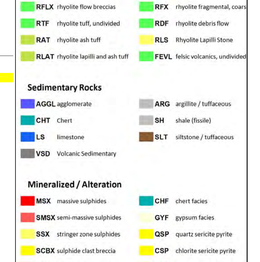
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level +210m

CHIEFTAIN METALS INC

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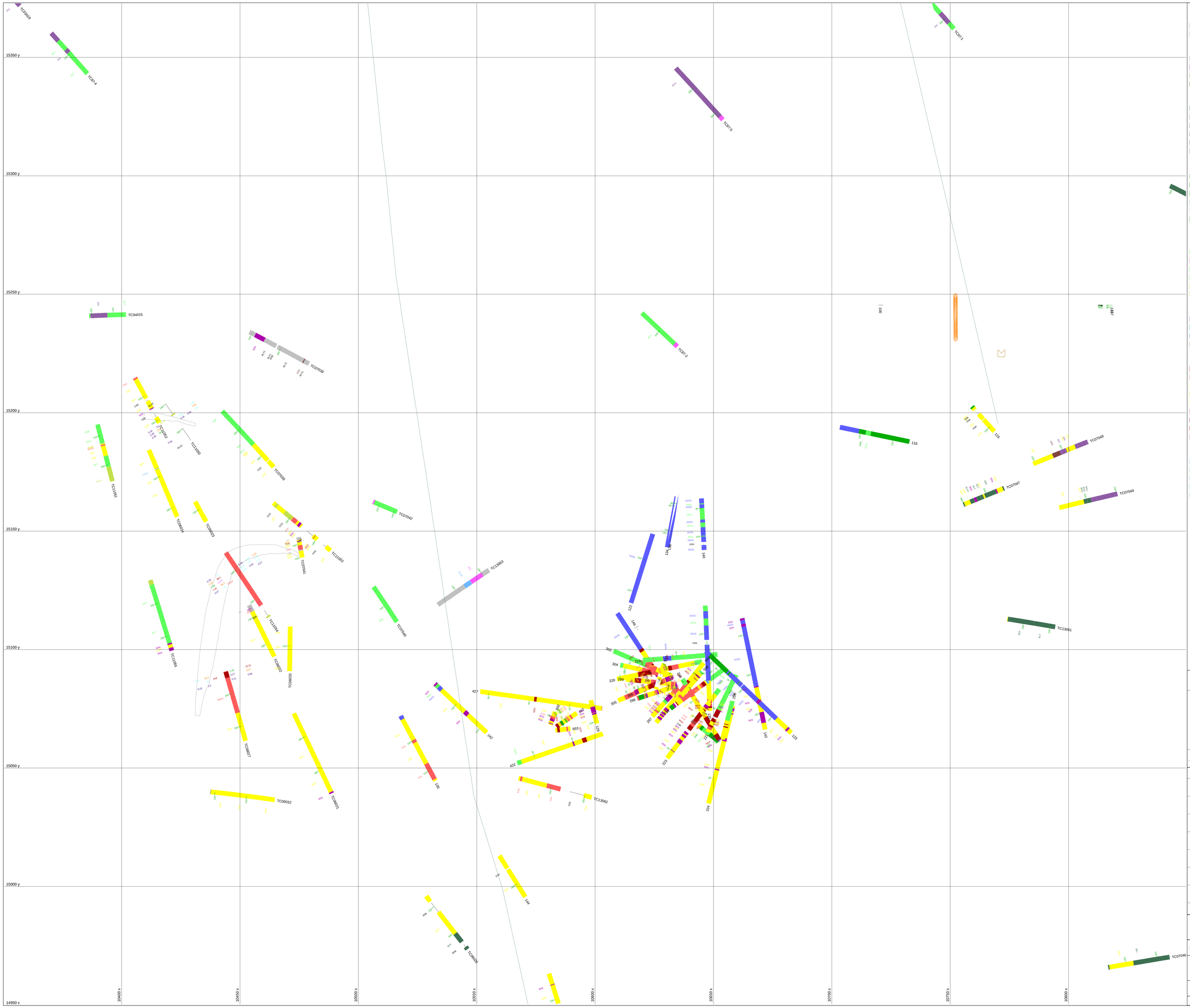
Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Planview elev 225m; ±15m	21 Nov 2014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Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
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RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

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Au(g/t) Ag(g/t) Lithology Depth(m) INT Trace Cu(%) Pb (%) Zn(%)

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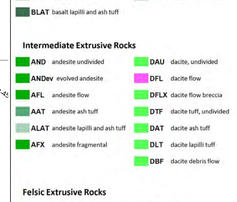
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level +150m

CHIEFTAIN METALS INC

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Scale 1:500

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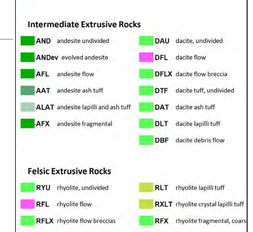
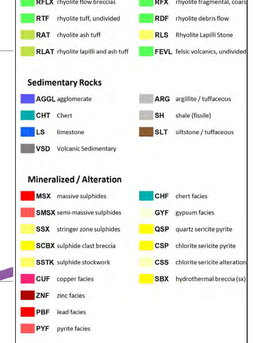


Section Location: Az 240



Level +120m

CHIEFTAIN METALS INC

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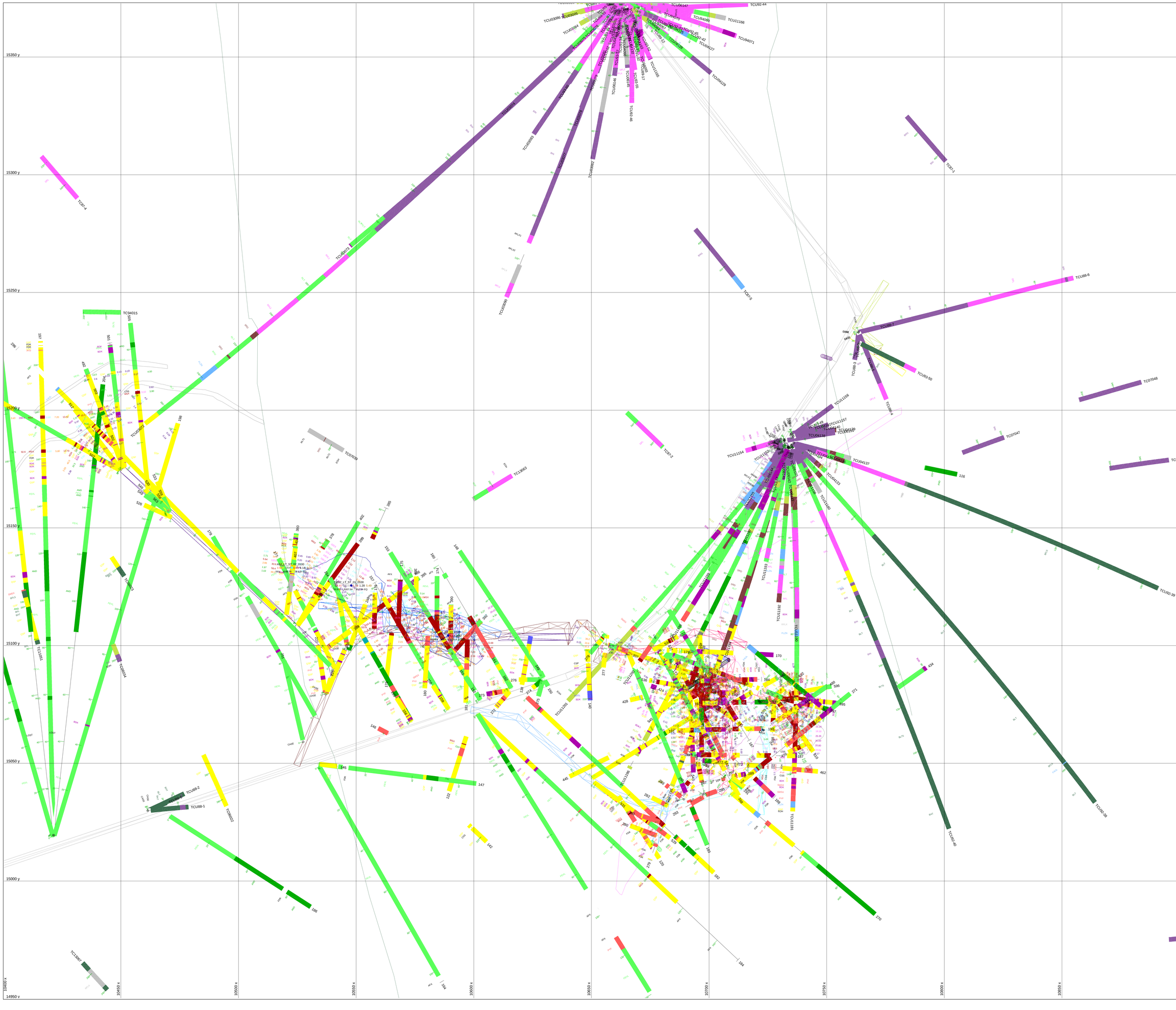
metres

Drawn by: BA	Planview elev 135m; ±15m	21 Nov 2014



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BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

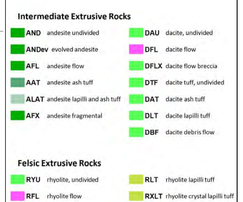
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

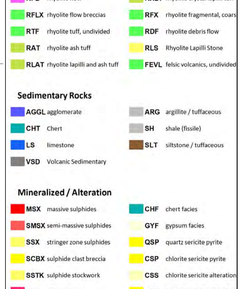
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level +90m

CHIEFTAIN METALS INC

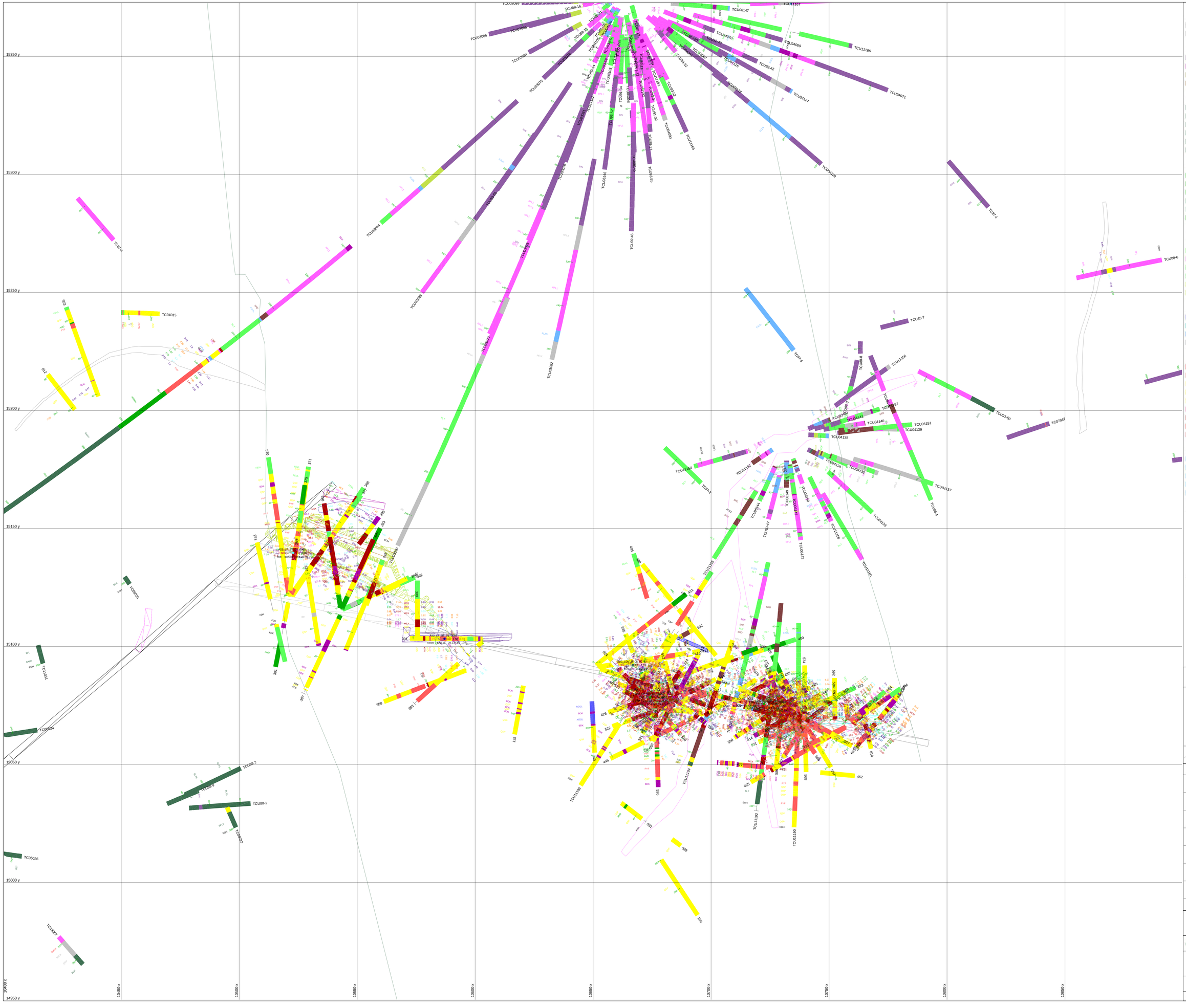
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev 105m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Dil Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

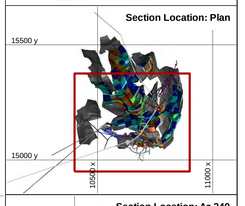
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

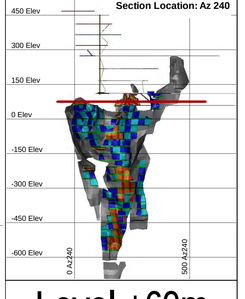
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level +60m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev 75m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) **DH Trace**

2014 Stope Information

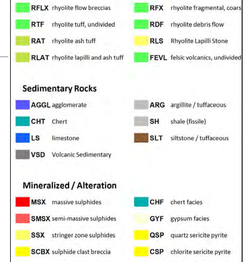
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level +30m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA	Planview elev 45m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) **Cu(%)** Pb (%) Zn(%) **DH Trace**

2014 Stope Information

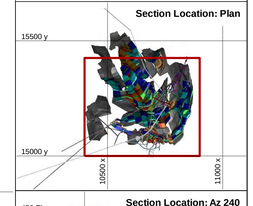
Development	
Cut and Fill	Primary
Longitudinal	Secondary

Stope_Name

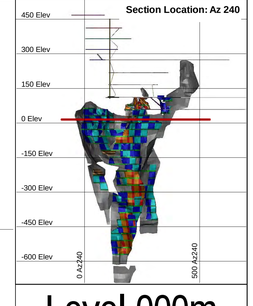
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level 000m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev 15m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) HH Stope

2014 Stope Information

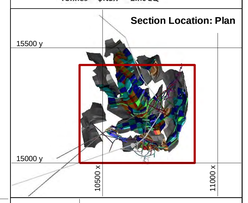
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

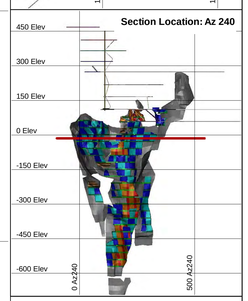
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -30m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Planview elev -15m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

DH Trace

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

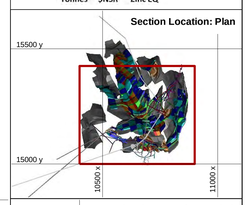
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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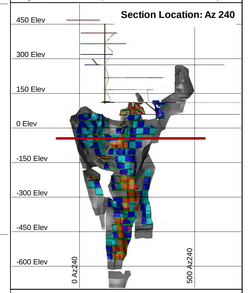


Level -60m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

Scale 1:500

metres

Drawn by: BA	Planview elev -45m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

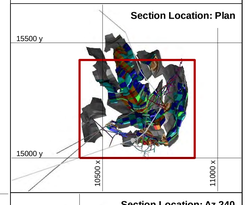
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/i) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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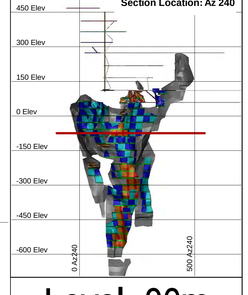


Level -90m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes, and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -75m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) **HW trace** Cu(%) Pb (%) Zn(%)

2014 Stope Information

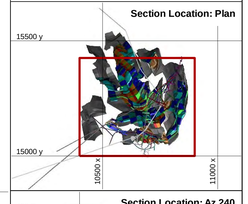
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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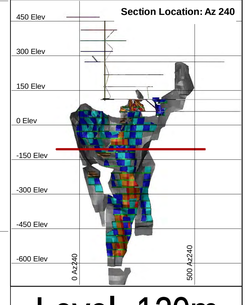


Level -120m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Planview elev -105m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) DH Trace

2014 Stope Information

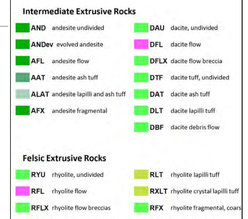
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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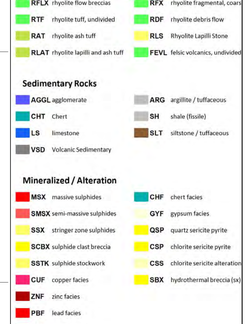


Level -150m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

Scale 1:500

Drawn by: BA	Planview elev -135m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

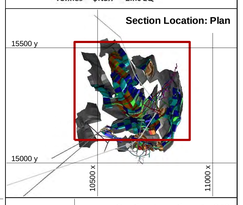
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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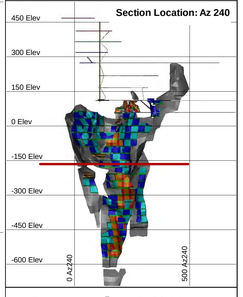


Level -180m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Planview elev -165m; ±15m	21 Nov 2014

15500 y
15450 y
15400 y
15350 y
15300 y
15250 y
15200 y
15150 y
15100 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) DH Type

2014 Stope Information

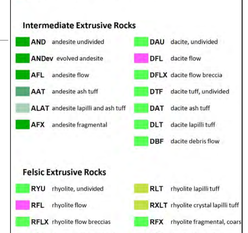
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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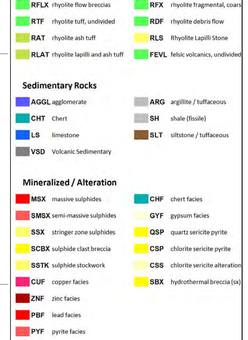


Level -210m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -195m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

DH Type

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

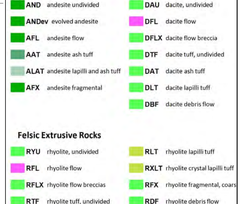
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

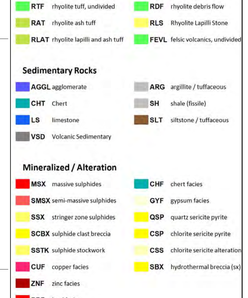
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -240m

CHIEFTAIN METALS INC

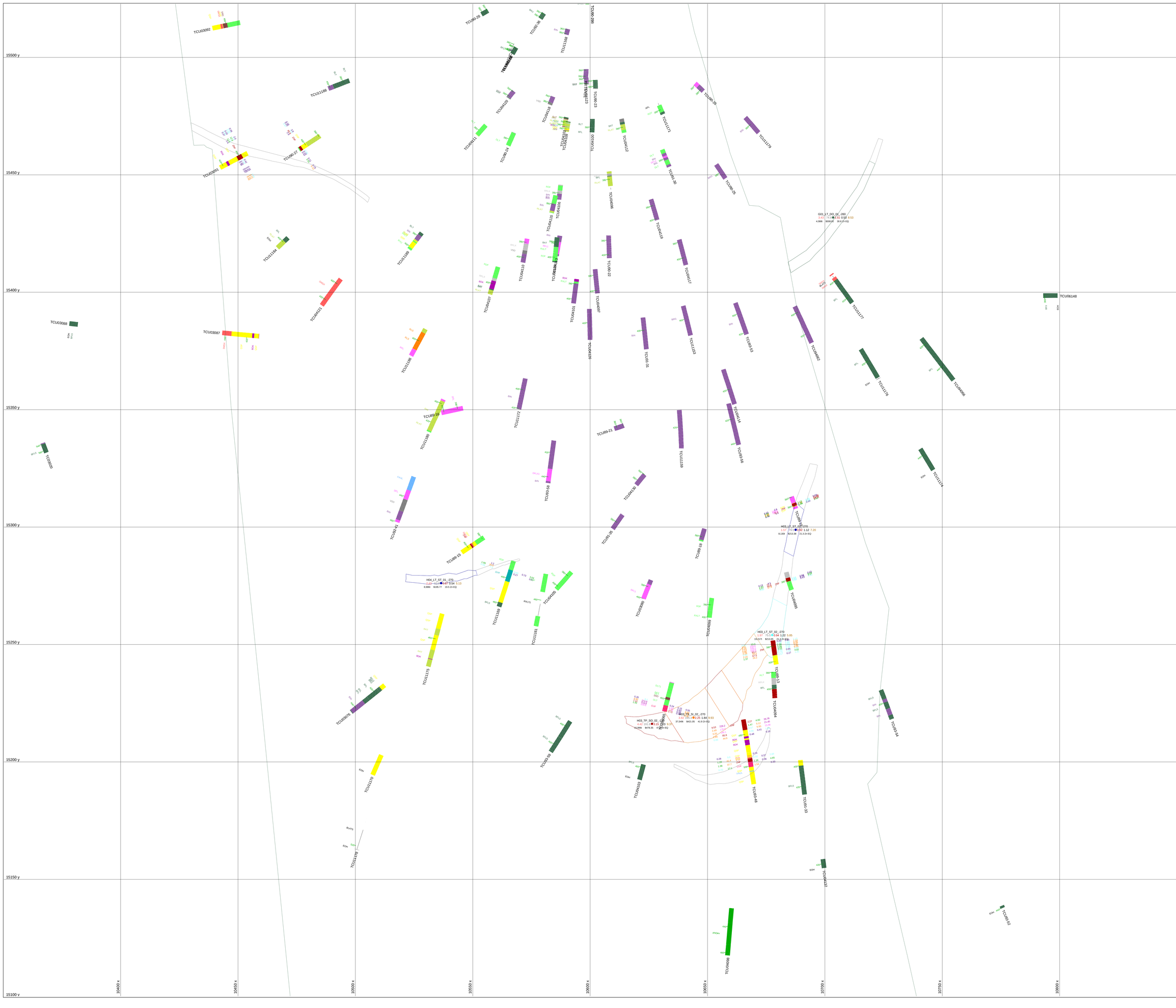
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -225m; ±15m	21 Nov 2014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10600 x
10650 x
10700 x
10750 x
10800 x
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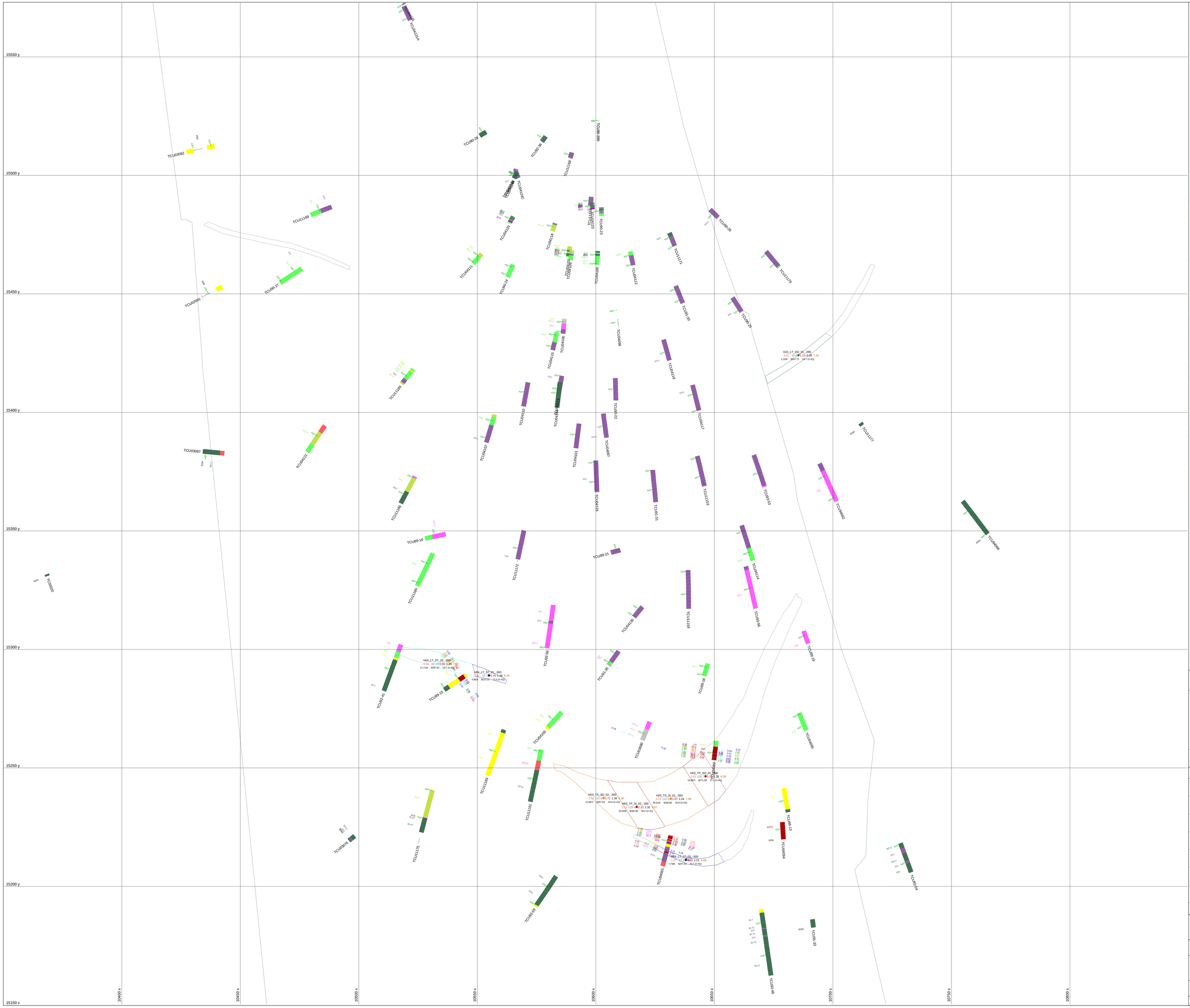
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10600 x
10650 x
10700 x
10750 x
10800 x
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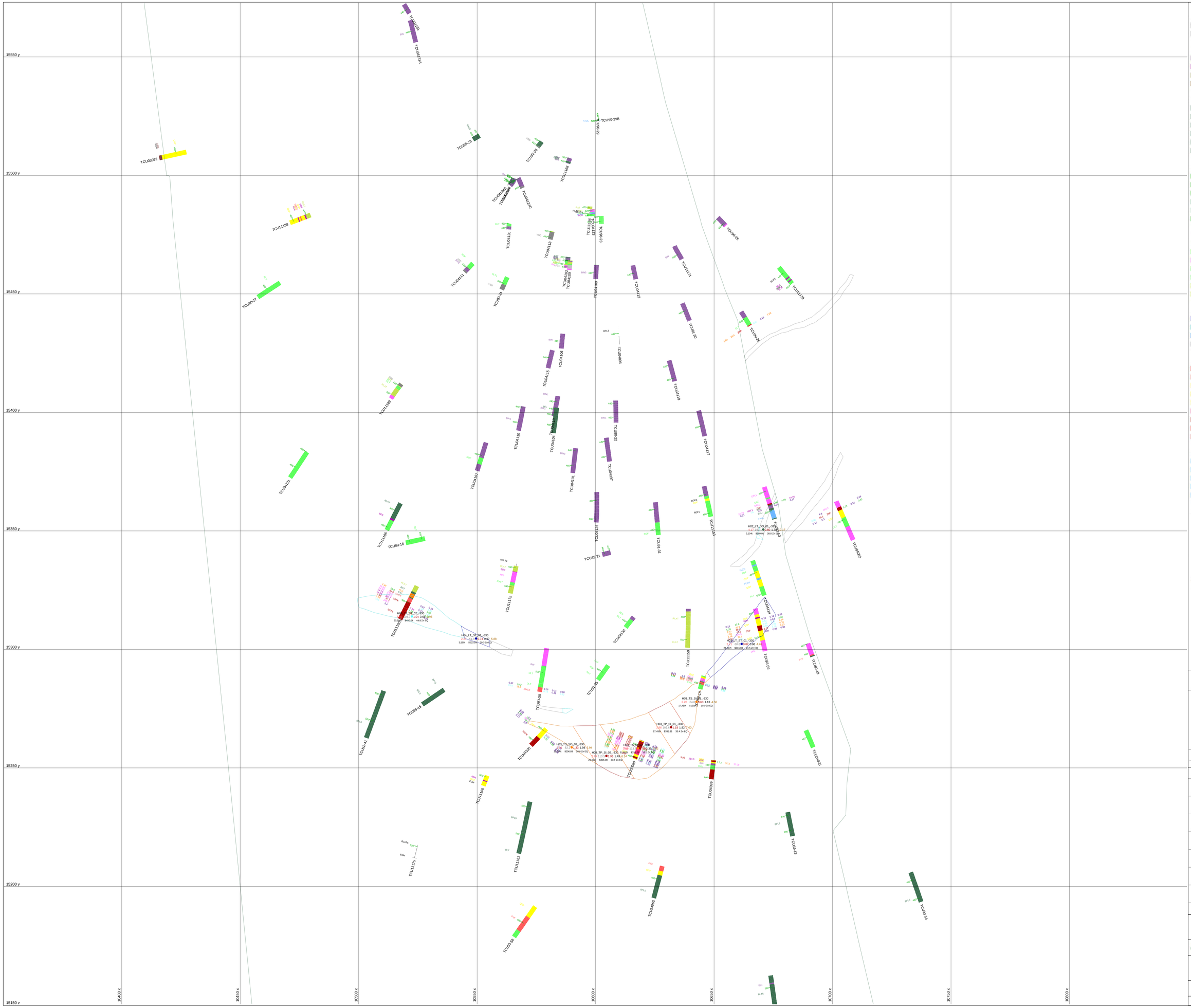

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

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CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

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SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

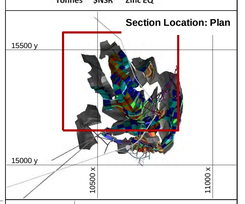
Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) DH Trace

2014 Stope Information

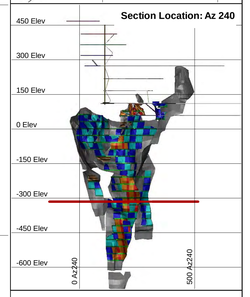
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -330m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA	Planview elev -315m; ±15m	21 Nov 2014

15550 y
15500 y
15450 y
15400 y
15350 y
15300 y
15250 y
15200 y
15150 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x

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TCU89-59

H04_LT_ST_02_-360
3.87 75.1 61.02 0.09 0.54
9,447t $275.9T 27.5 Zn EQ

H04_LT_ST_01_-360
4.38 80.9 1.03 0.12 5.89
21,429t $432.1M 26.1 Zn EQ

H02_LT_DO_01_-345
2.24 75.2 0.04 1.12 0.03
3,879t $209.4T 20.9 Zn EQ

H03_LT_ST_01_-360
2.80 73.9 1.14 1.12 4.77
17,537t $246.2M 24.5 Zn EQ

H03_TS_SI_01_-360
1.28 78.3D 1.03 2.26 0.13 0.56
10,000t $814.9M 19.4 Zn EQ 0.13 3.23 22.8
0.13 1.92 7.82
0.13 1.92 7.82

H02_LT_ST_02_-360
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12,648t $242.6M 24.7 Zn EQ

H03_TP_SI_01_-360
3.38 125.2 1.45 2.04 9.34
8,843t $330.4T 32.9 Zn EQ

H03_TS_SI_02_-360
1.82 120.4 1.80 1.41 4.09
25,983t $286.4T 29.5 Zn EQ

H03_TP_SO_02_-360
2.96 146.7 2.13 1.63 8.99
13,204t $614.6T 31.3 Zn EQ

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** **Depth(m)** **HH Trace** **Cu(%)** Pb (%) Zn(%)

2014 Stope Information

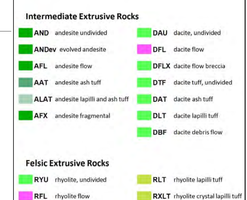
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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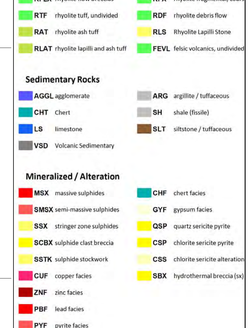

Level -360m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -345m; ±15m	21 Nov 2014

15550 y
15500 y
15450 y
15400 y
15350 y
15300 y
15250 y
15200 y
15150 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x

TCU64131
TCU64131A
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H02_LT_ST_01_390
0.41 89.8 5.62 1.49 0.64
25,066 $27.45 22.7 Zn EQ

H02_LT_ST_02_390
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36,557t $243.58 24.3 Zn EQ

H04_LT_ST_01_390
1.42 48.1 90.74 1.49 2.22
18,068 $194.80 19.4 Zn EQ

H04_LT_ST_02_390
0.95 0.58 22.22
$27.51 25.9 Zn EQ

H02_LT_ST_03_390
5.19 121.8 0.91 1.53 5.29
24,267t $277.56 27.7 Zn EQ

H03_LT_ST_02_390
2.39 207.8 2.81 1.39
16,548t $367.81 36.6 Zn EQ

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
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Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
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ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

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Sedimentary Rocks

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suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

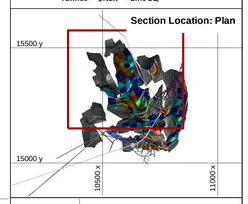
Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) DH Trace

2014 Stope Information

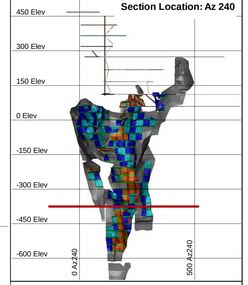
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -390m

CHIEFTAIN METALS INC

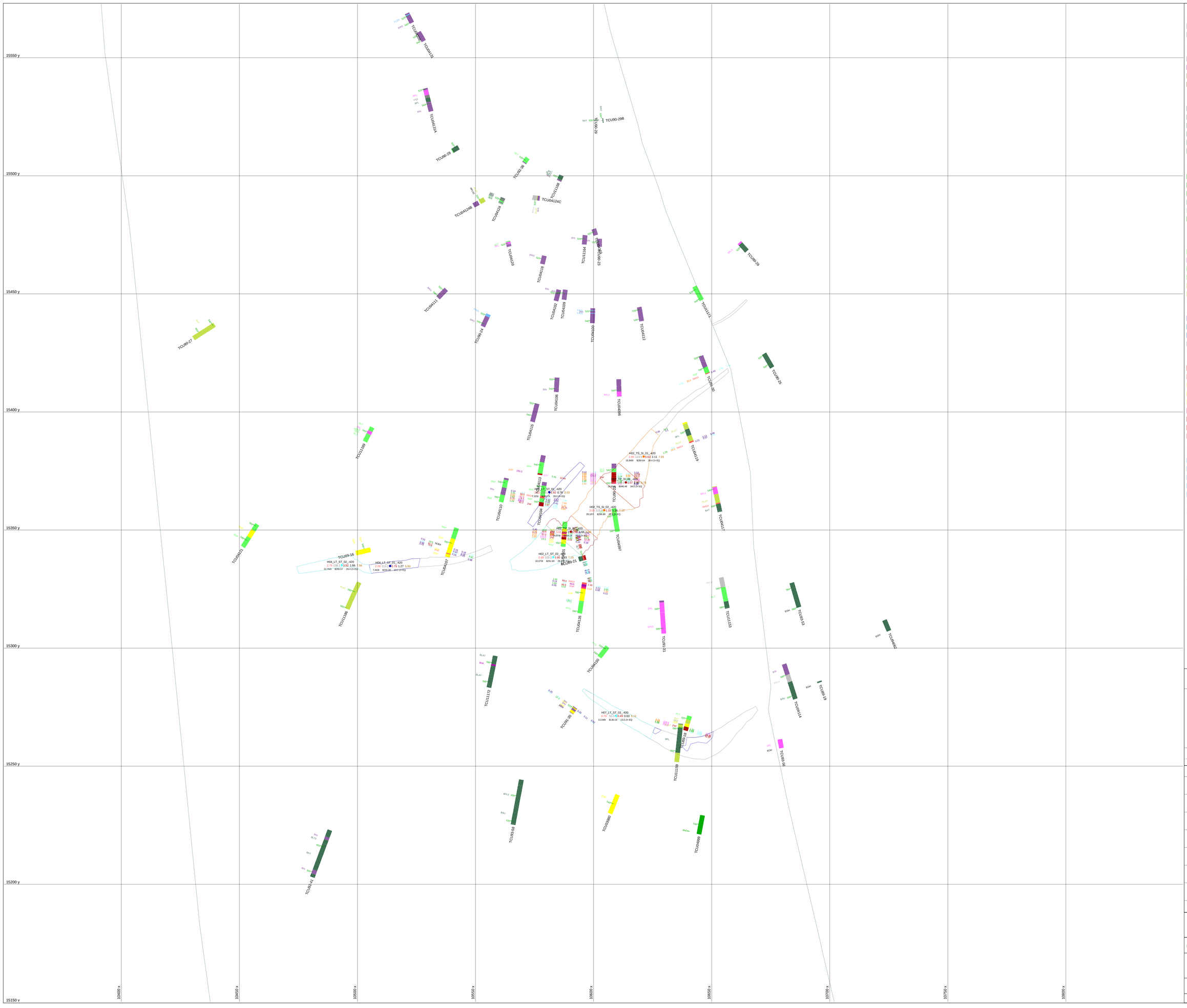
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes, and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -375m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) DH Trace

2014 Stope Information

Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

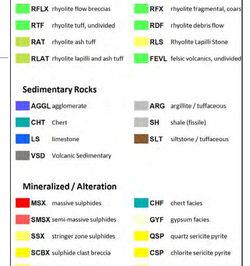
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -420m

CHIEFTAIN METALS INC

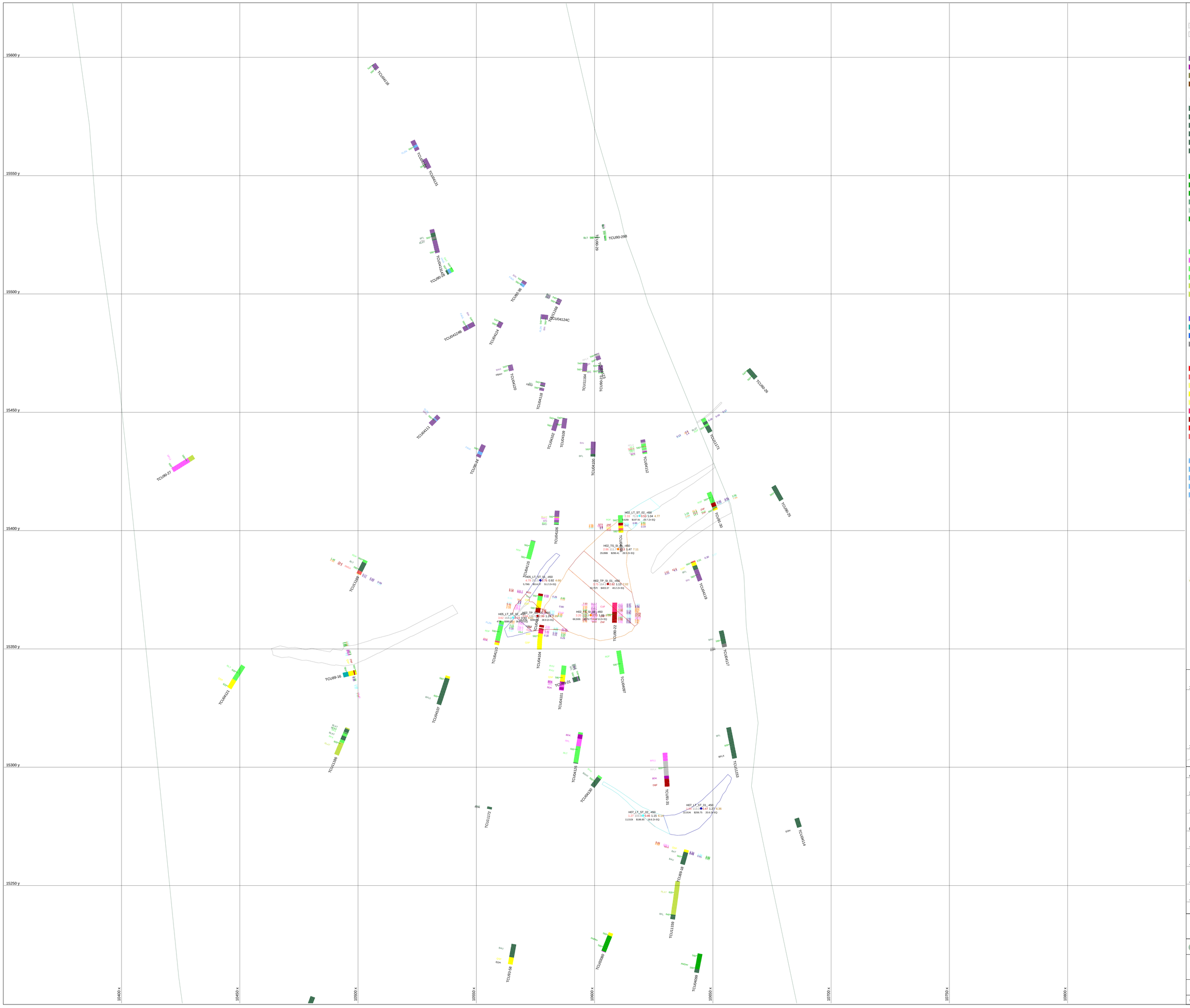
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -405m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Dil Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

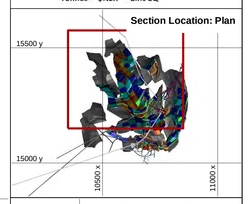
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

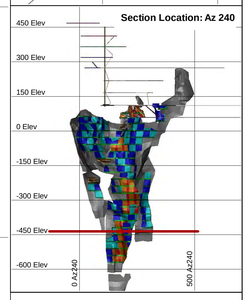
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -450m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -435m; ±15m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

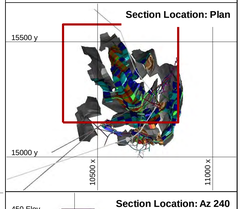
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

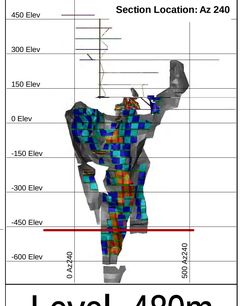
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -480m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -465m; ±15m	21 Nov 2014

15600 y
15550 y
15500 y
15450 y
15400 y
15350 y
15300 y
15250 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x

TCU04116
TCU04113
TCU04131
TCU90-29B
TCU90-29
TCU90-28
TCU04131A
TCU90-36
TCU11198
TCU04124C
TCU04124B
TCU04124
TCU04123
TCU11164
TCU90-23
TCU04125
TCU04118
TCU90-26
TCU04111
H02_LT_ST_02_-510
-510 127 -19.99 1.35 7.23
49.225t $283.30 28.2 Zn EQ
H02_TS_SI_01_-510
-510 105 42 0.91 7.38
$317.87 31.7 Zn EQ
TCU04102
TCU90-27
TCU90-24
H02_TP_SI_01_-510
3.63 108 1.86 1.04 0.50
26.563t $345.43 34.4 Zn EQ
TCU04100
TCU03112
TCU11171
TCU90-25
H02_TS_SI_02_-510
4.92 115 2.37 1.50 10.10
35.874t $436.82 43.5 Zn EQ
TCU04105
TCU04096
TCU03120
TCU04115
TCU11199
TCU04113
TCU89-16
TCU90-22
TCU04110
TCU04104
TCU04101
TCU04121
TCU06097
TCU11193
TCU04122
TCU03131
TCU04099

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

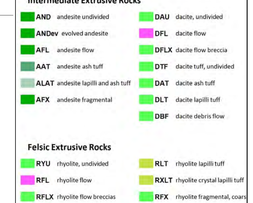
Au(g/t) Ag(g/t) Lithology Depth(m) INTERVAL Cu(%) Pb (%) Zn(%)

2014 Stope Information

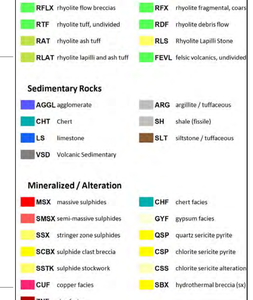
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -510m

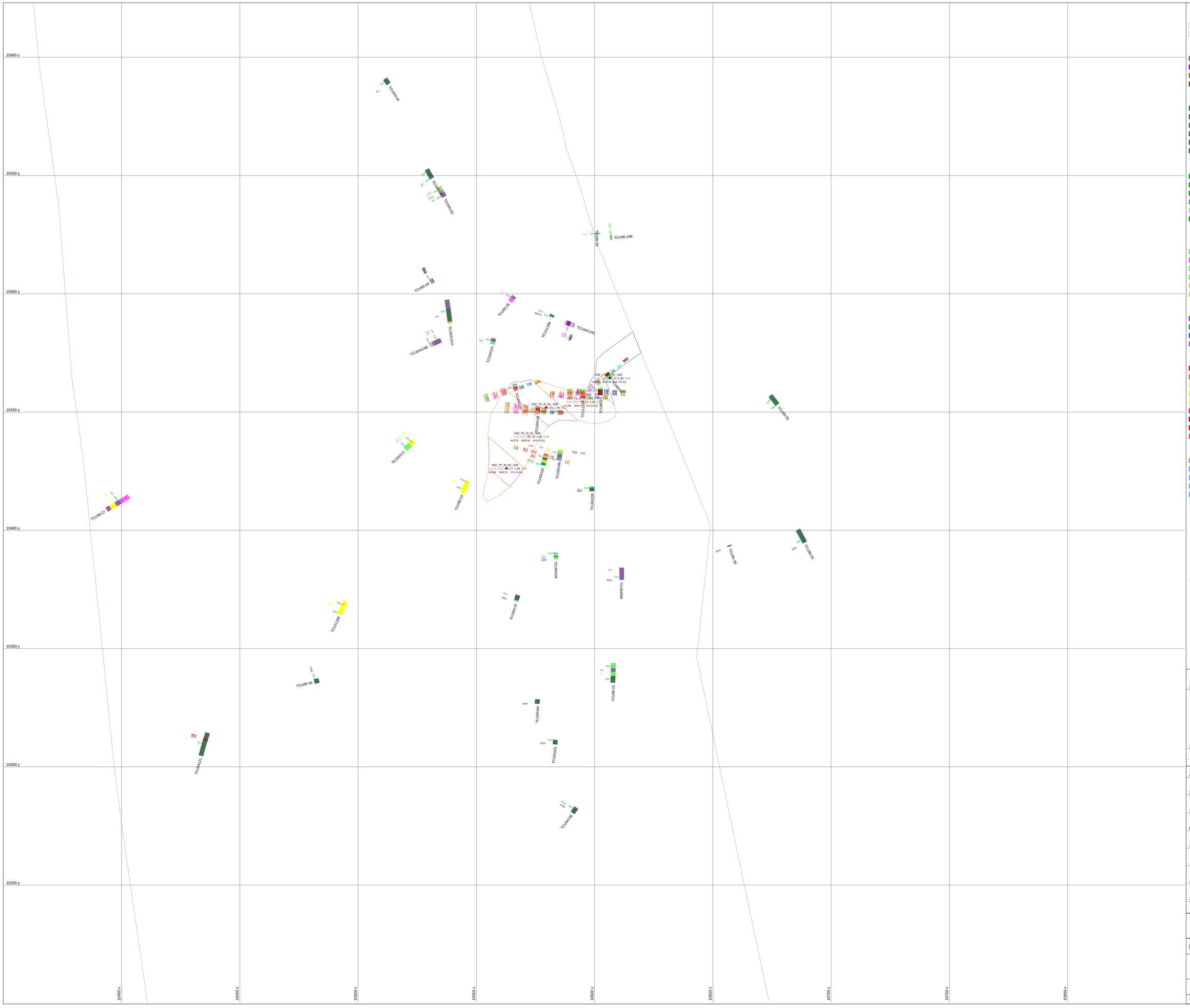
CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA	Planview elev -495m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

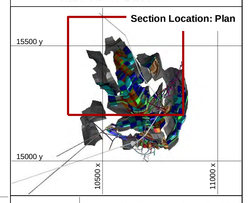
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

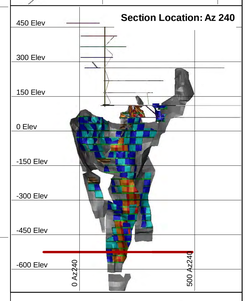
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -540m

CHIEFTAIN METALS INC

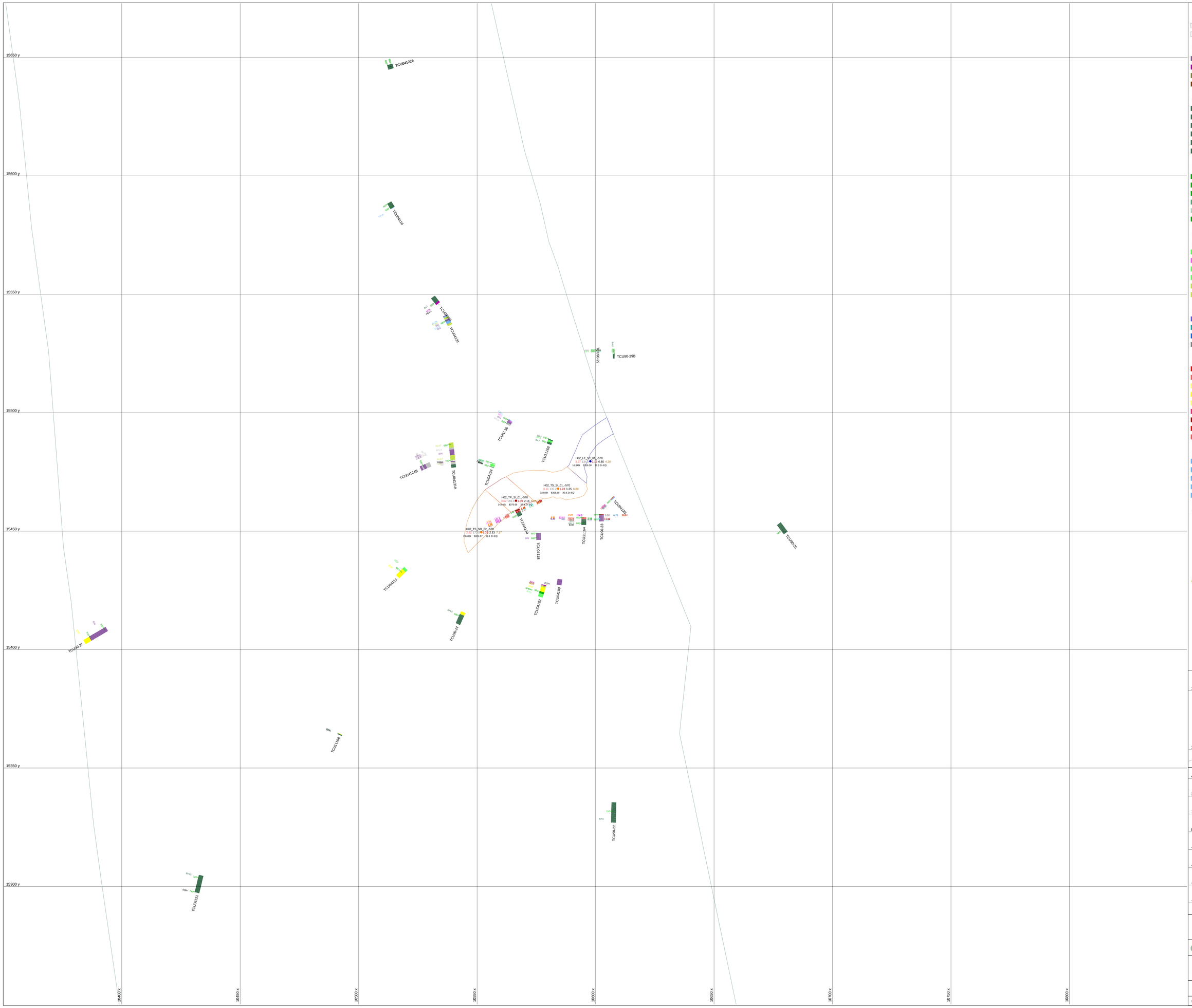
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -525m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Dil Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

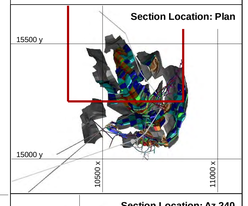
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

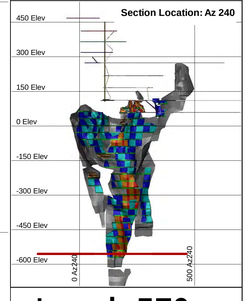
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -570m

CHIEFTAIN METALS INC

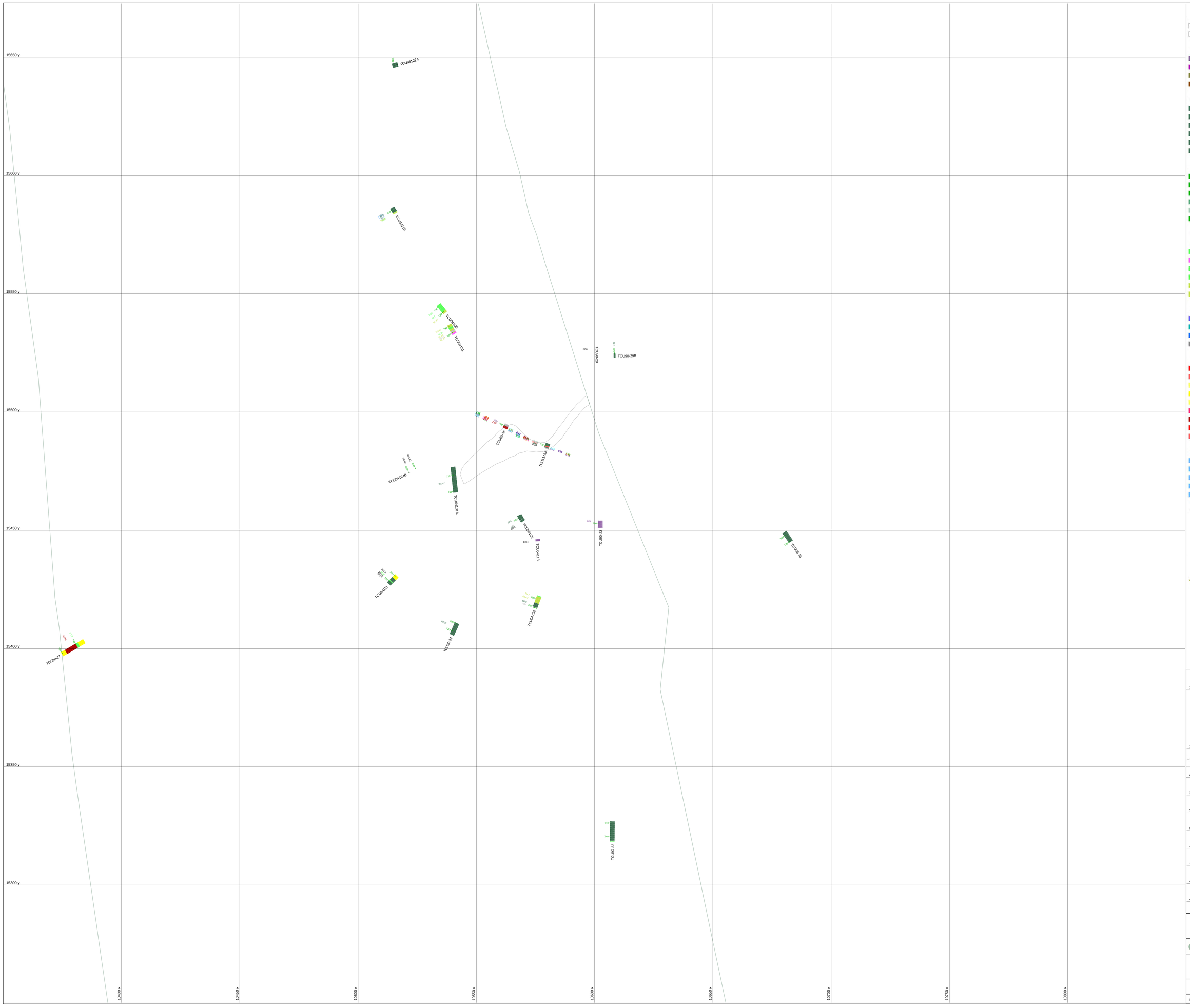
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -555m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Dil Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

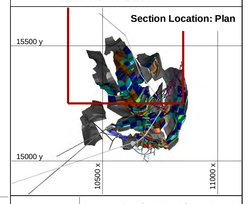
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

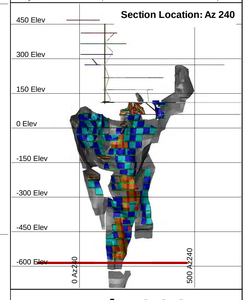
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -600m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -585m; ±15m	21 Nov 2014

15650 y
15600 y
15550 y
15500 y
15450 y
15400 y
15350 y
15300 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x
TCU04122A
TCU04116
TCU04108
TCU04131
TCU90-29B
TCU92-06
TCU04124B
TCU04131A
TCU90-23
TCU90-26
TCU04111
TCU04102
TCU90-24
TCU90-27
TCU90-22

Geological Legend

Surface / End

- CASE casing
- OVB overburden
- EOH end of hole
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

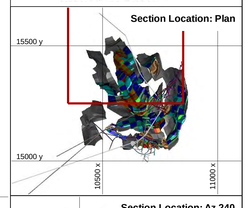
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

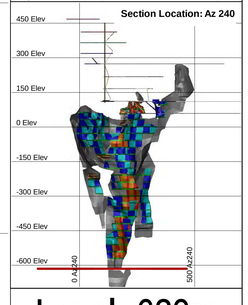
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -630m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -615m; ±15m	21 Nov 2014

15650 y
15600 y
15550 y
15500 y
15450 y
15400 y
15350 y
15300 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x
TCU04122A
TCU04116
TCU04108
TCU04131
TCU90-29B
TCU05-30
TCU04124B
TCU90-23
TCU90-26
TCU04105
TCU90-24
TCU90-27
TCU90-22

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Type Cu(%) Pb (%) Zn(%)

2014 Stope Information

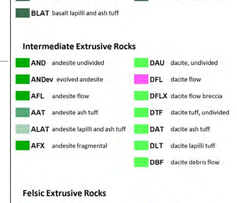
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -660m

CHIEFTAIN METALS INC

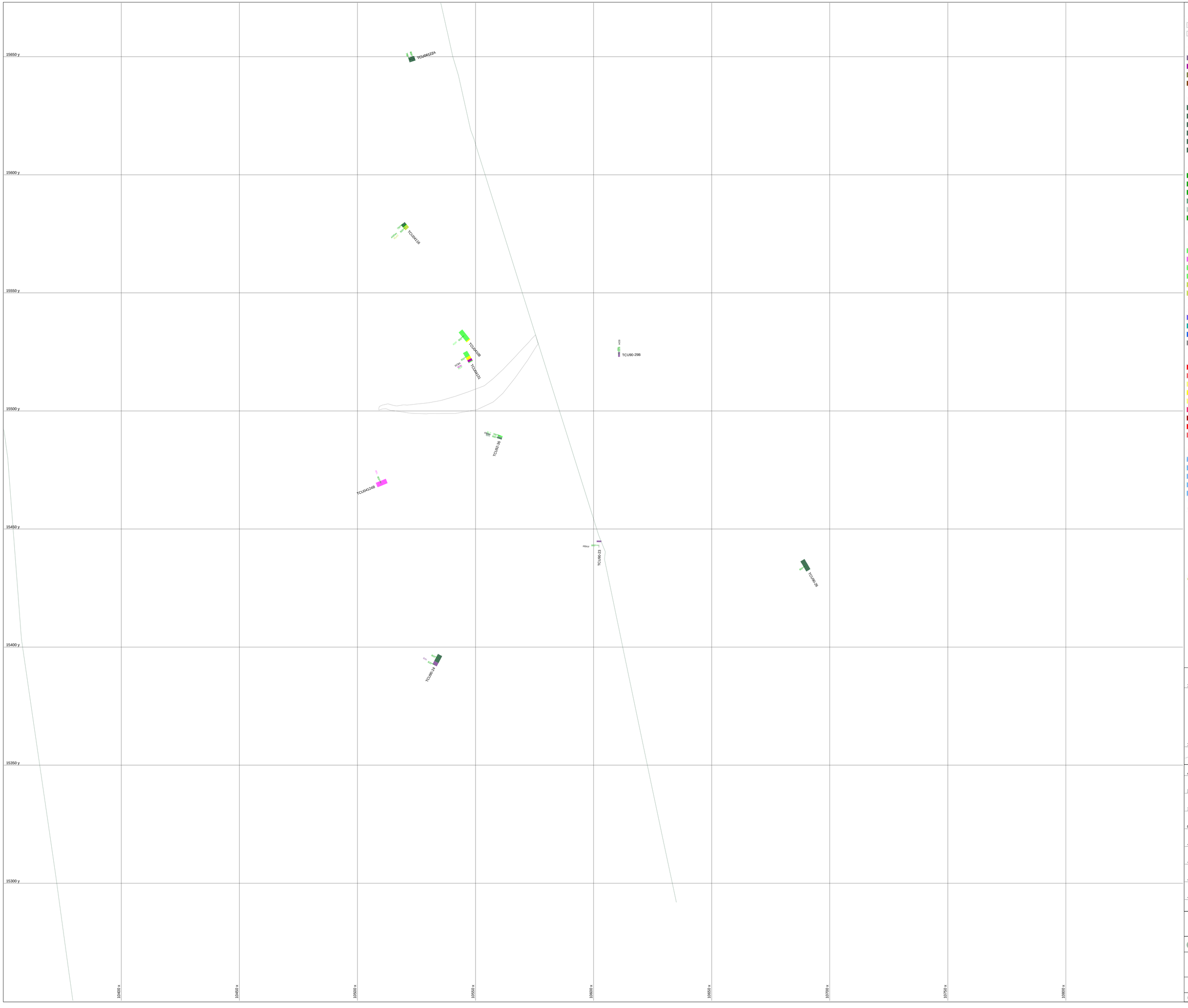
Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -645m; ±15m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

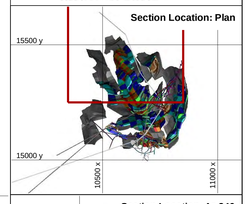
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

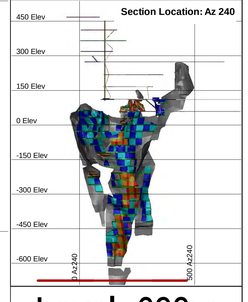
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Level -690m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -675m; ±15m	21 Nov 2014

15650 y
15600 y
15550 y
15500 y
15450 y
15400 y
15350 y
15300 y
10400 x
10450 x
10500 x
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x

TCU04122A
TCU04124B
TCU04121B
TCU04131
TCU04121A
TCU09-24
TCU09-23
TCU09-26
TCU09-28
EOH
FOH
FOH
EOH 622m+/-

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) **DH Type** Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development
Cut and Fill **Primary**
Longitudinal **Secondary**

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes **$NSR** **Zinc EQ**

Section Location: Plan



Section Location: Az 240



Level -720m

CHIEFTAIN METALS INC

Tulsequah Chief: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), Main Faults, Dikes; and All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Planview elev -705m; ±15m	21 Nov 2014

300 elev
250 elev
200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev

250 Az150
300 Az150
350 Az150
400 Az150
450 Az150
500 Az150
550 Az150
600 Az150
650 Az150
700 Az150

133
TCU03073
TCU06032
TCU03072
122
TCU13604
TCU13607
TCU13605
196
205
197
204
198
561

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

- 1 feldspar
- qp quartz porphyry
- 2 quartz
- fp feldspar porphyry
- 3 amphibole
- qfp quartz feldspar porphyry
- 4 pyroxene
- 5 amygdaloidal

Drillhole Trace Information

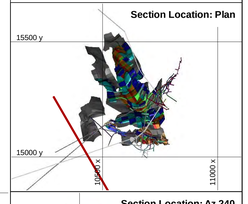
DH Trace
Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

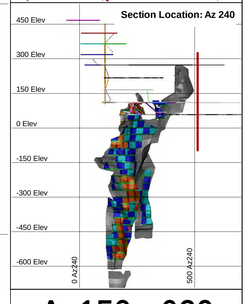
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 620

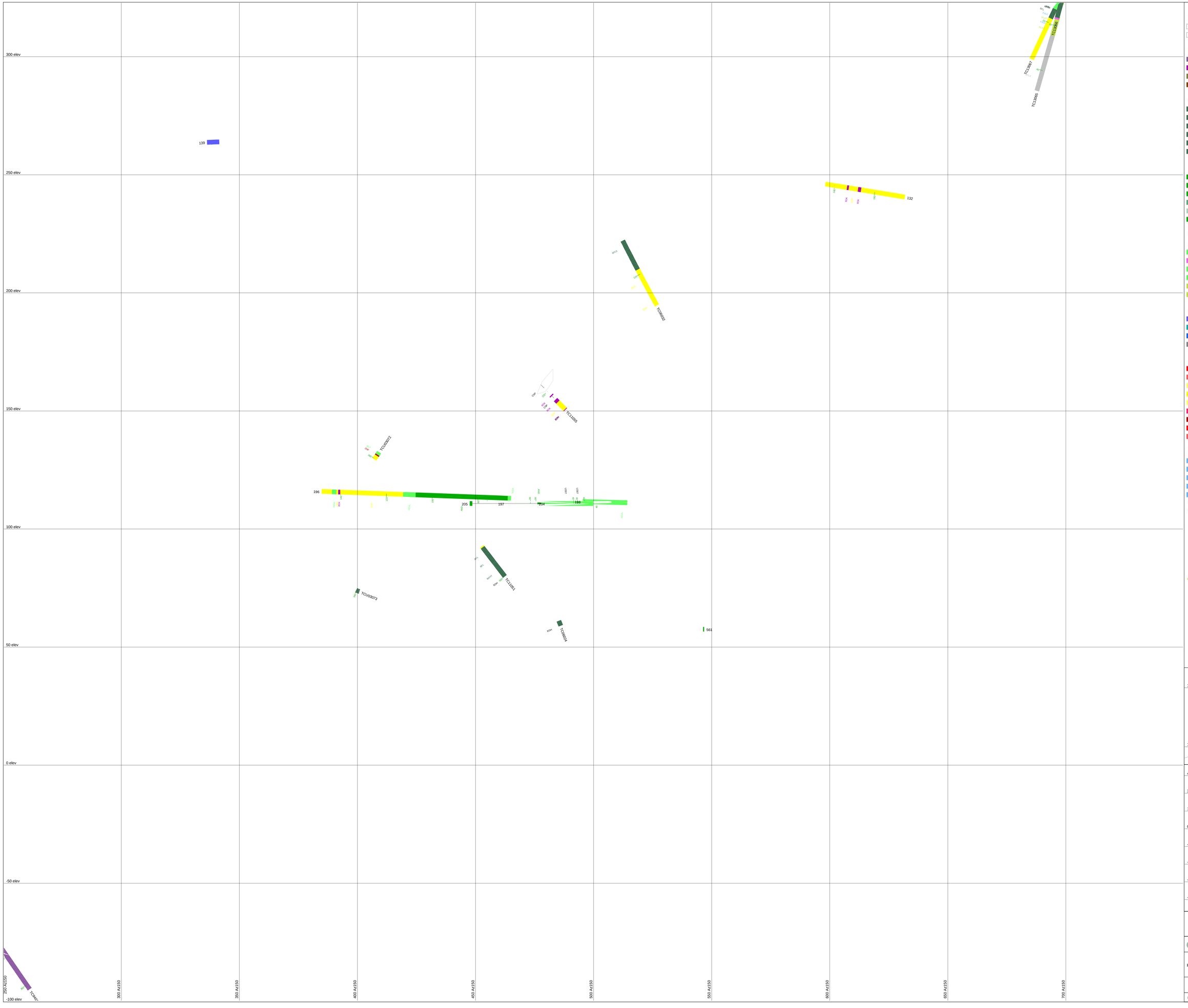
CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA | Vert Az150 Sect 620; ±10m | 21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

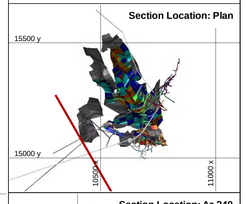
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

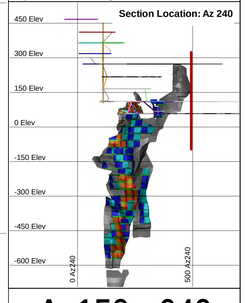
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 640

CHIEFTAIN METALS INC

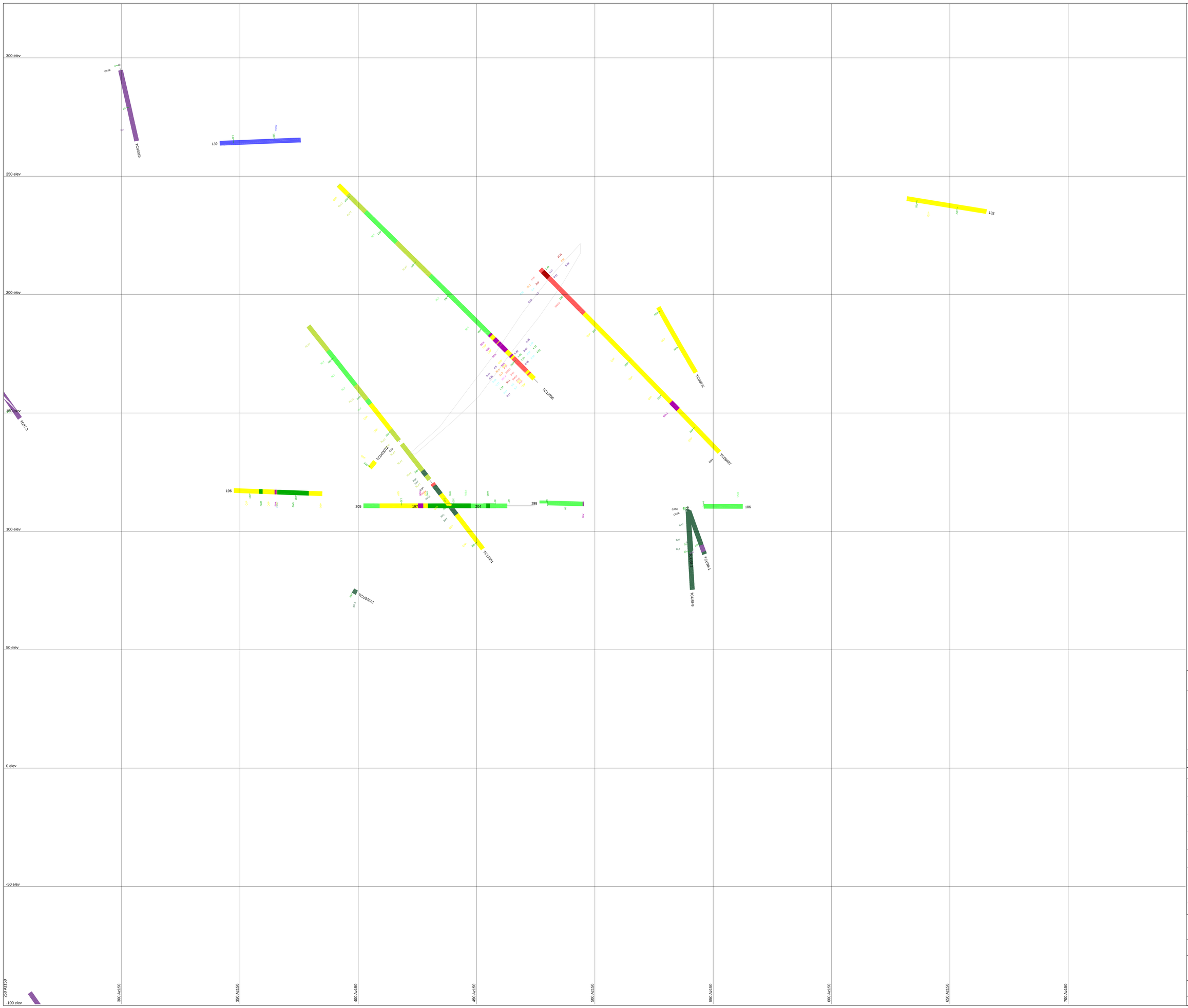
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 640; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) **DH Trace** Cu(%) Pb (%) Zn(%)

2014 Stope Information

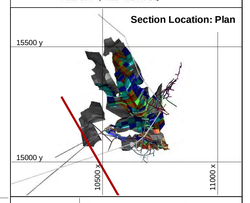
Development
Cut and Fill — Primary
Longitudinal — Secondary

Stope_Name

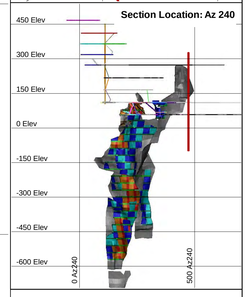
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 660

CHIEFTAIN METALS INC

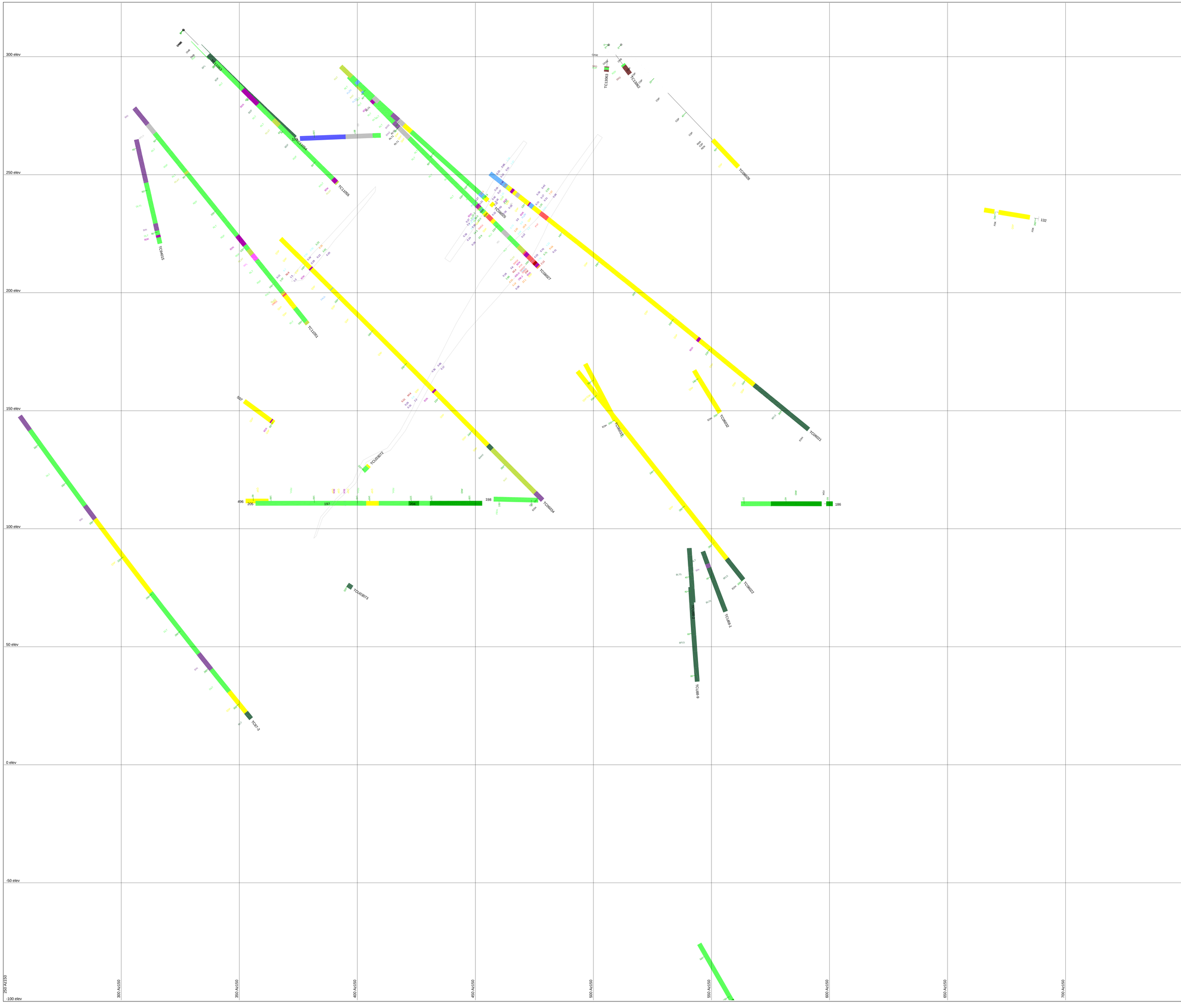
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 660; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

DH Trace

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

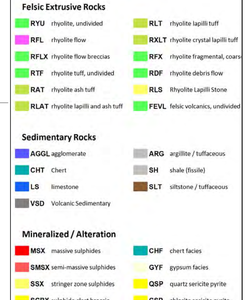
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 680

CHIEFTAIN METALS INC

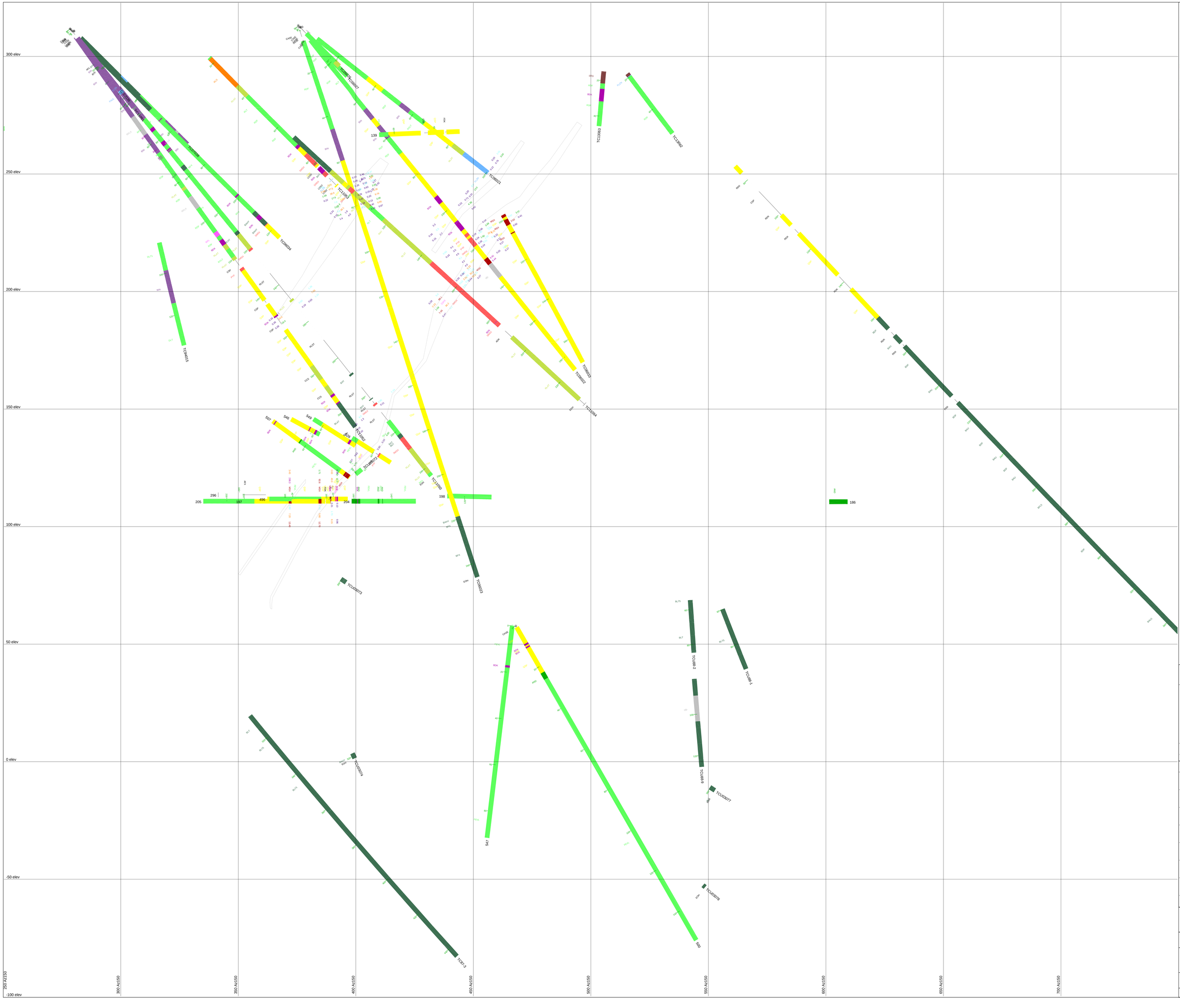
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 680; ±10m	21 Nov 2014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100 elev
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-50 elev
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700 Az150
TCU0047
TCU0026
TCU0054
TCU0015
TCU0021
TCU0027
TCU0033
TCU0064
TCU0050
TCU0072
TCU0073
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TCU0074
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TCU0002
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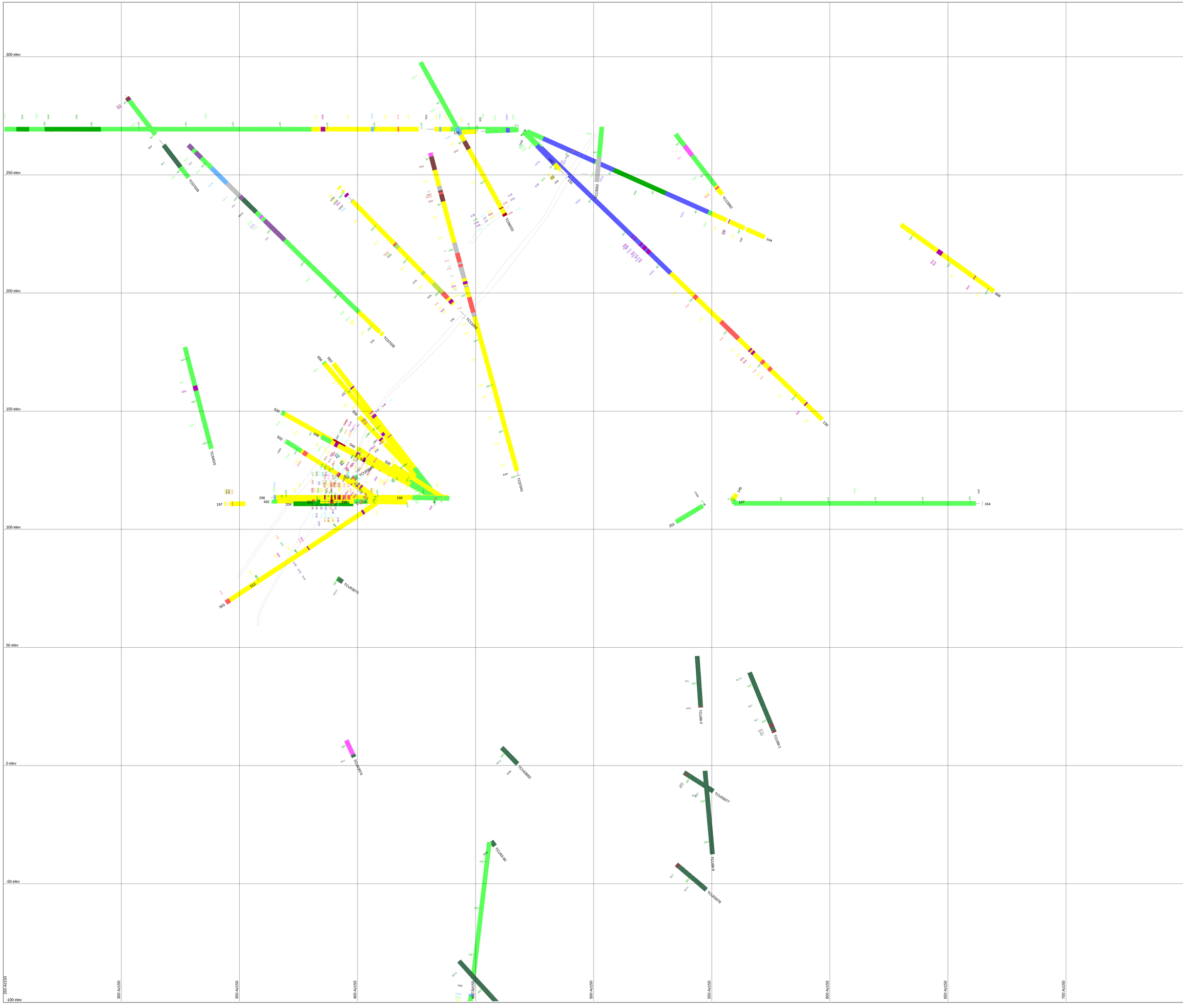
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200 elev
150 elev
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TCD7039
TCD7038
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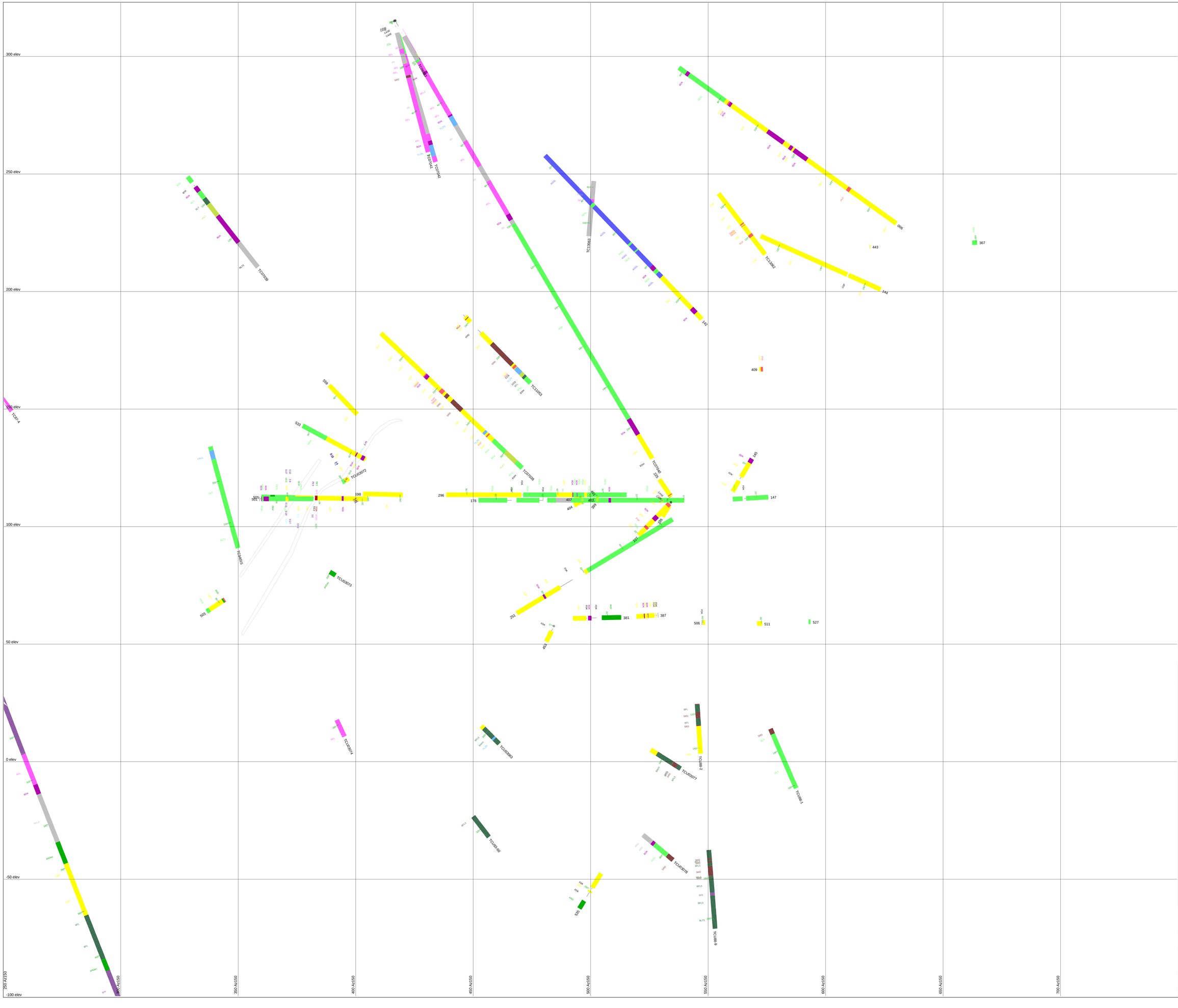
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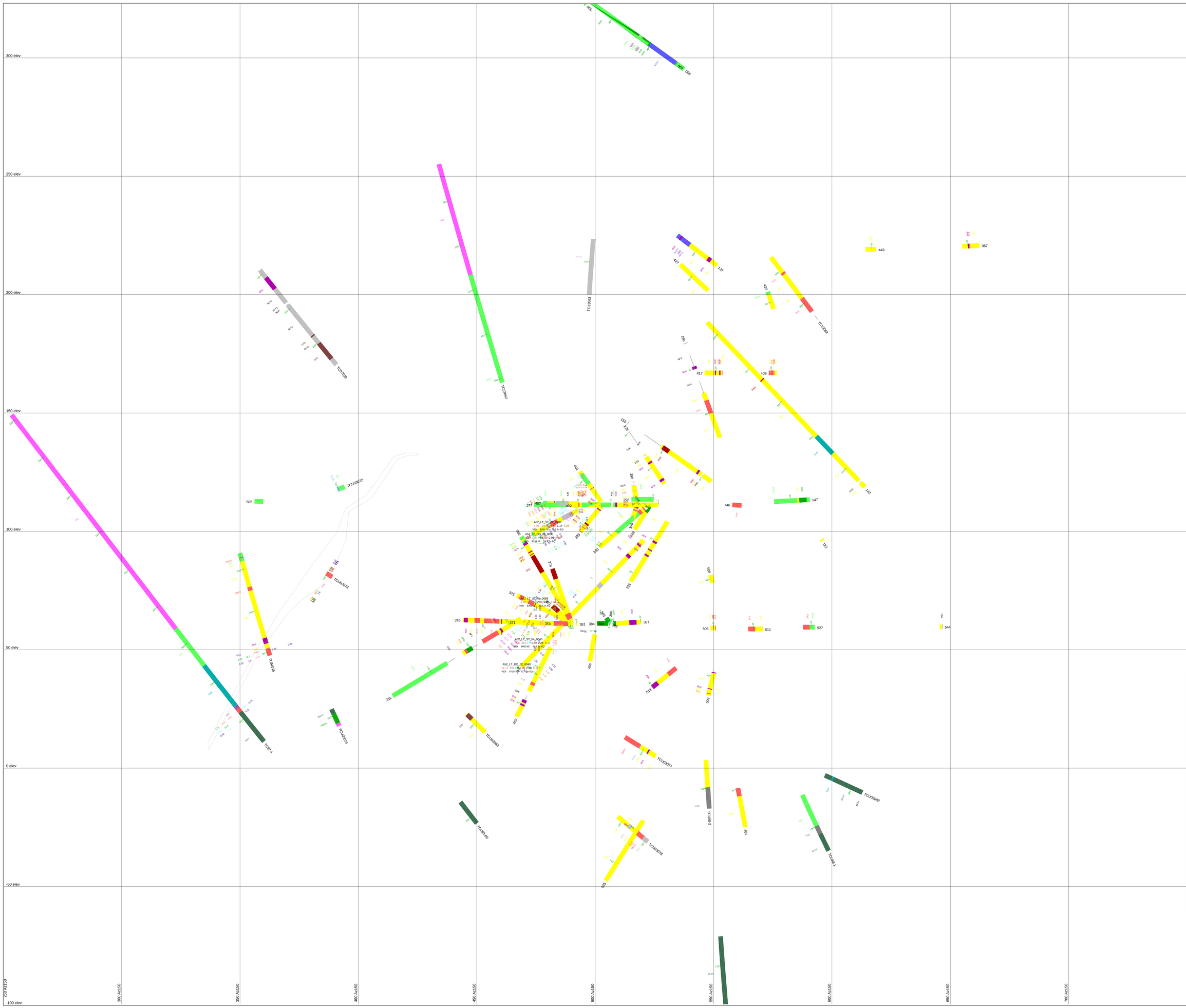


Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapillii tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

DH Trace

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

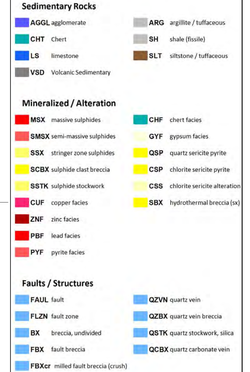
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 760

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 760; ±10m	21 Nov 2014

300 elev
250 elev
200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
250 Az150
300 Az150
350 Az150
400 Az150
450 Az150
500 Az150
550 Az150
600 Az150
650 Az150
700 Az150

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

UH Trace

2014 Stope Information

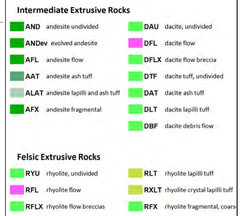
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

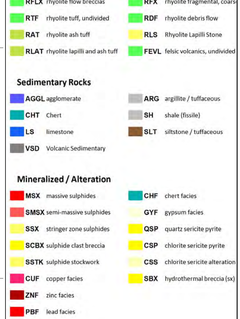
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 780a

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 780; ±10m	21 Nov 2014

-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
-400 elev
-450 elev
-500 elev

100 Az150
150 Az150
200 Az150
250 Az150
300 Az150
350 Az150
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550 Az150

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TCU03088
TCU03075
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TCU03081
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TCU88-41
TCR7-4

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

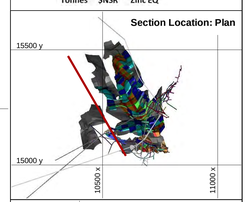
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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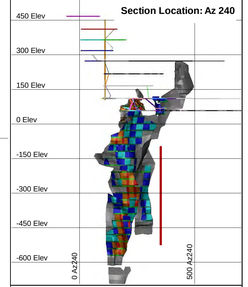


Az150 - 780b

CHIEFTAIN METALS INC

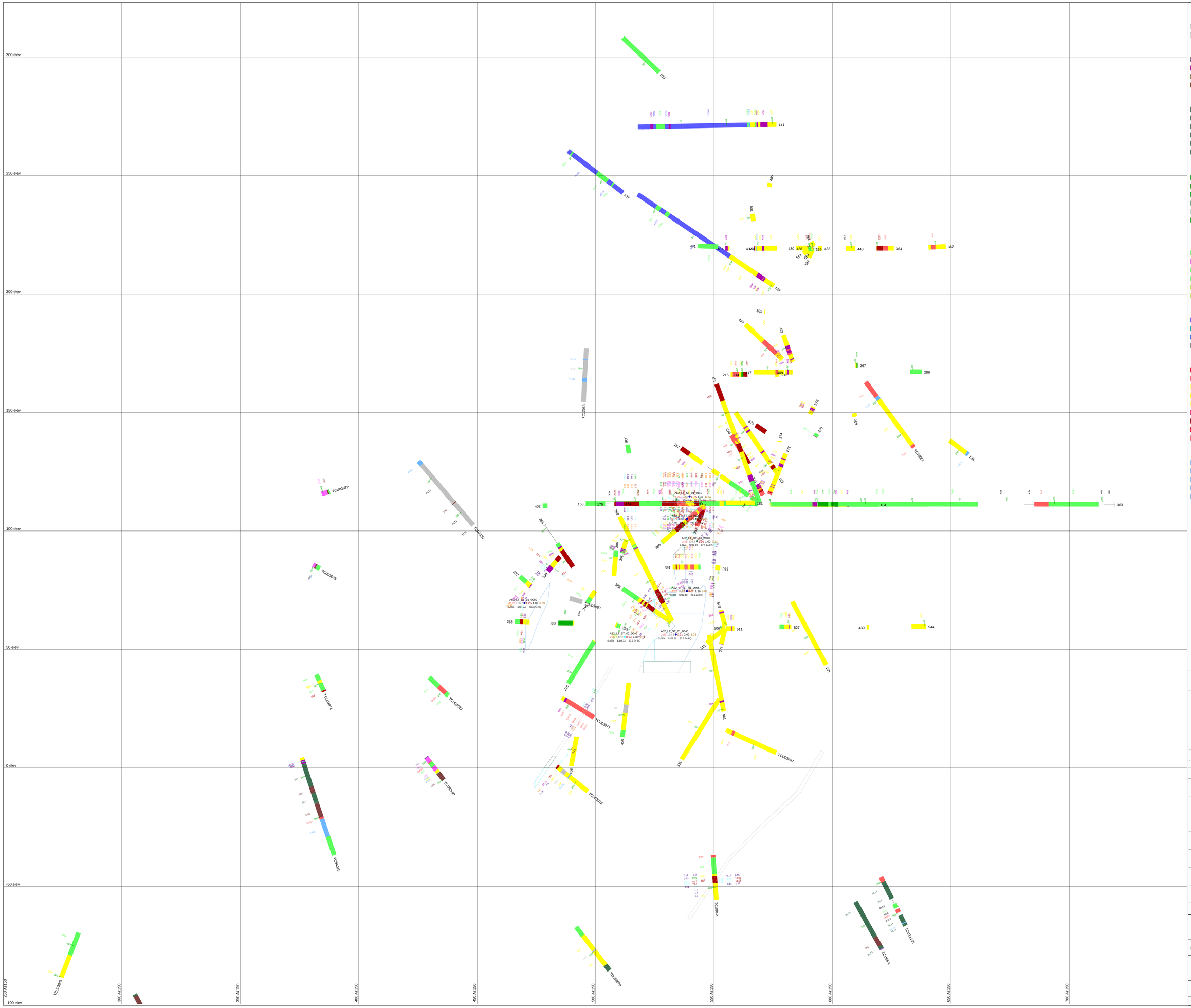
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 780; ±10m	21 Nov 2014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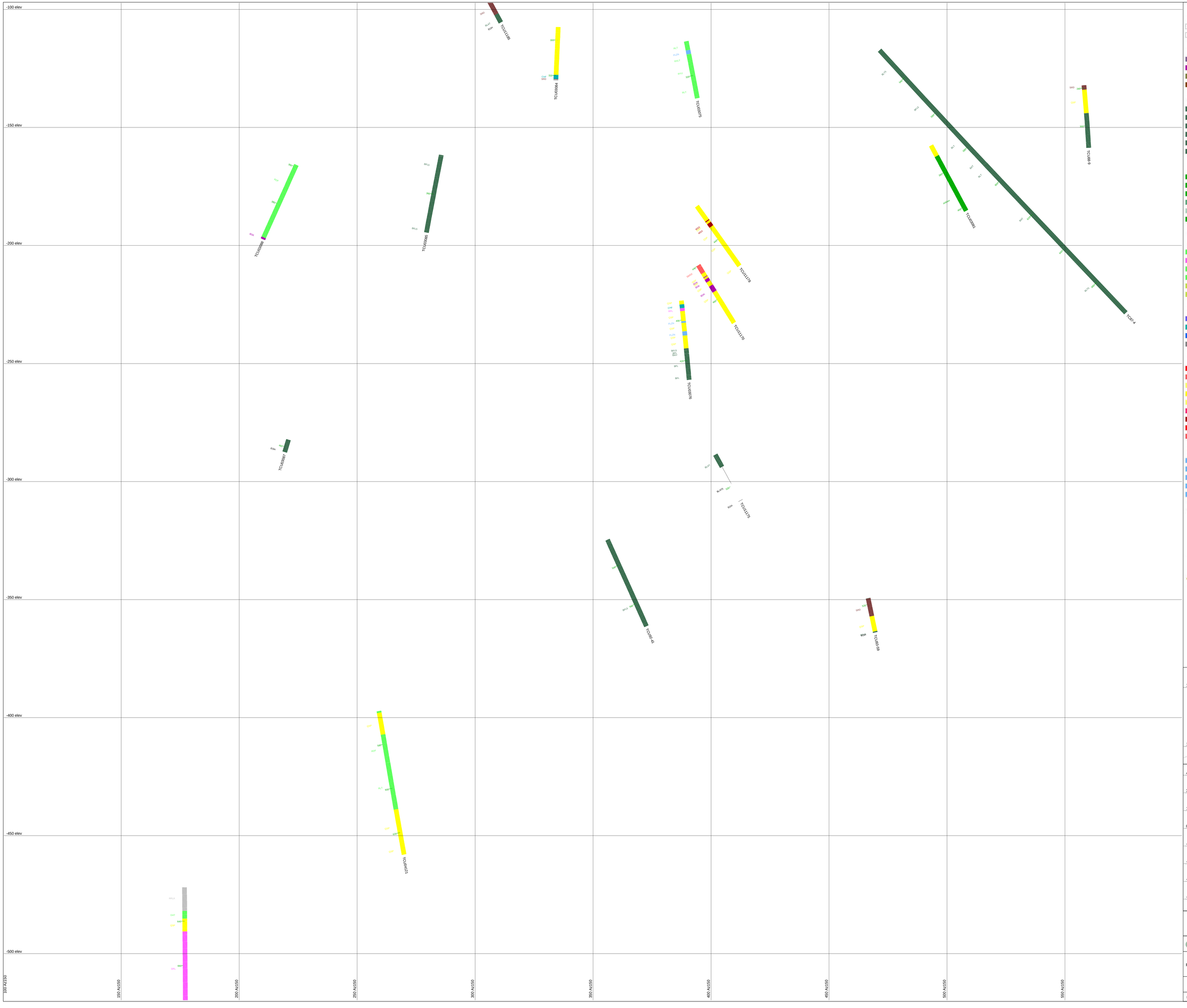


Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

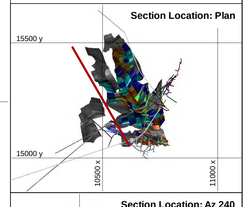
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

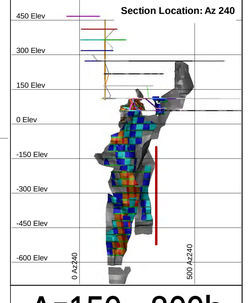
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 800b

CHIEFTAIN METALS INC

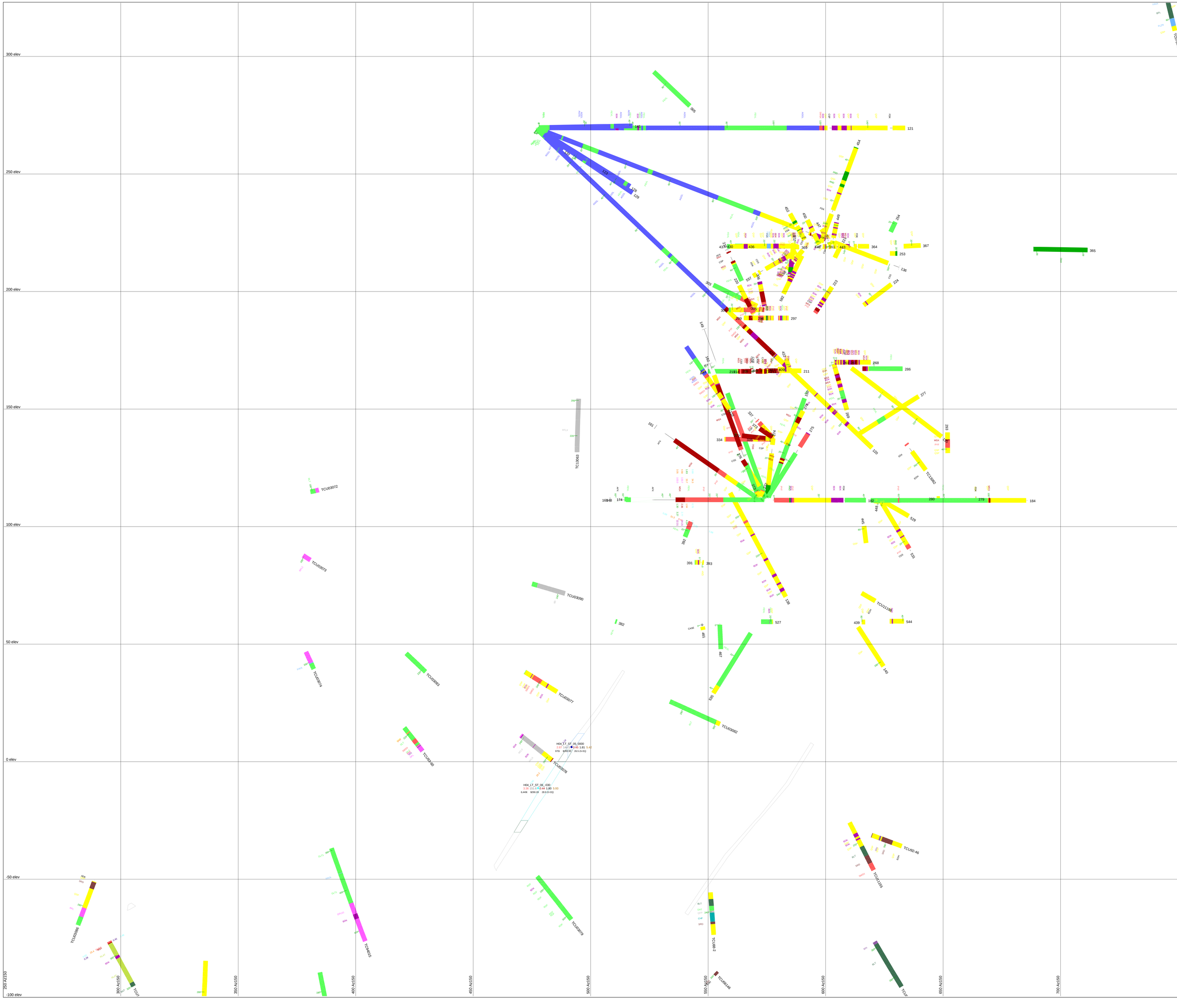
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 800; ±10m	21 Nov 2014



Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) HoleName

2014 Stope Information

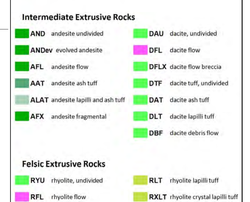
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

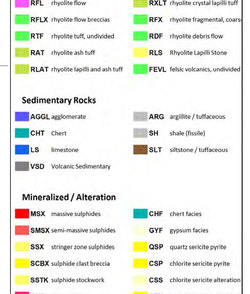
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 820a

CHIEFTAIN METALS INC

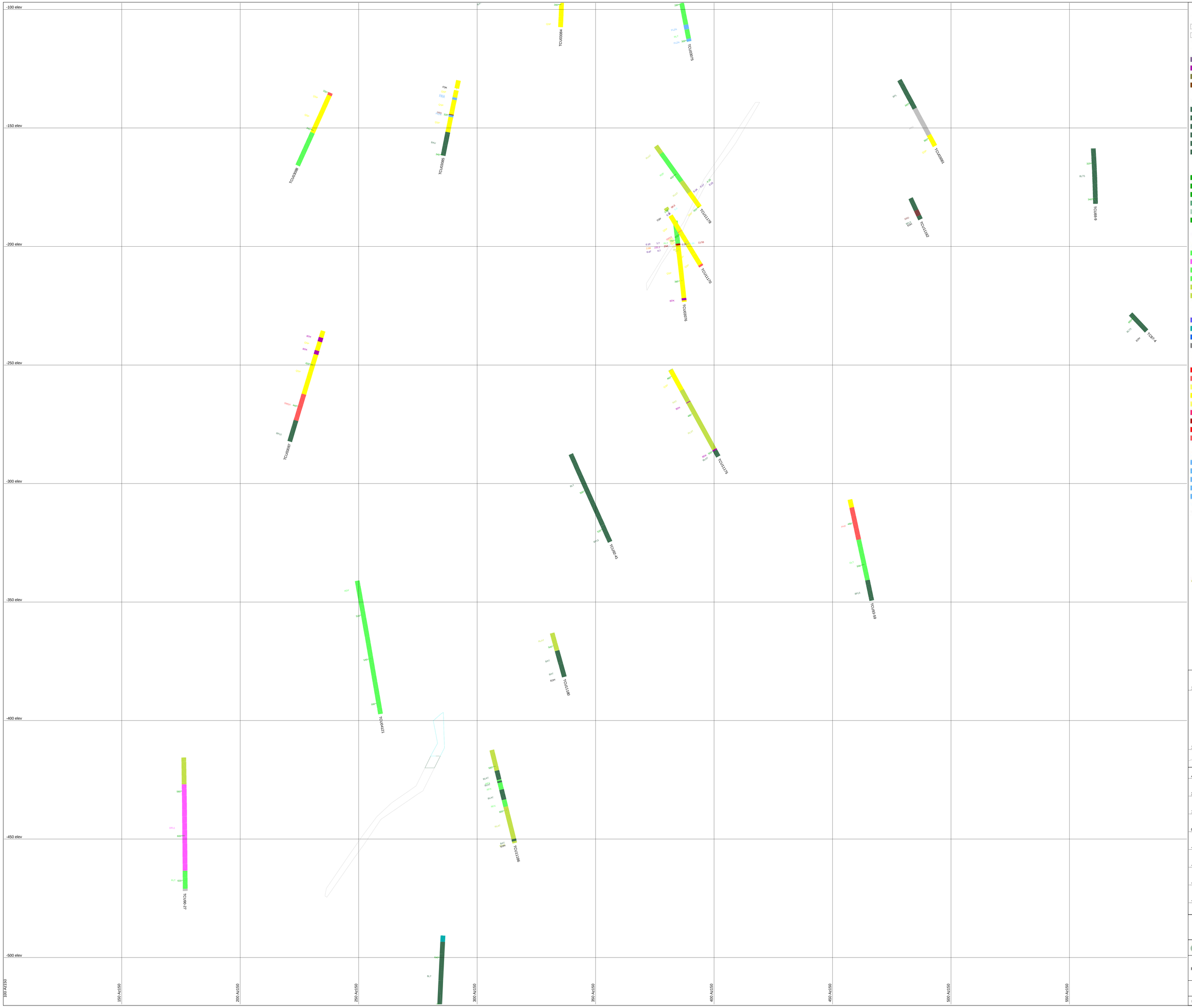
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 820; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

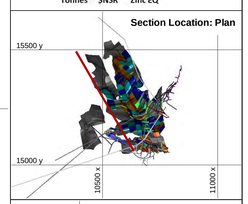
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

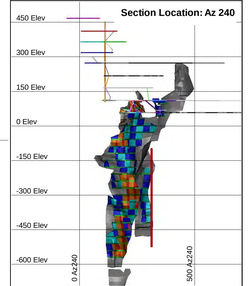
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 820b

CHIEFTAIN METALS INC

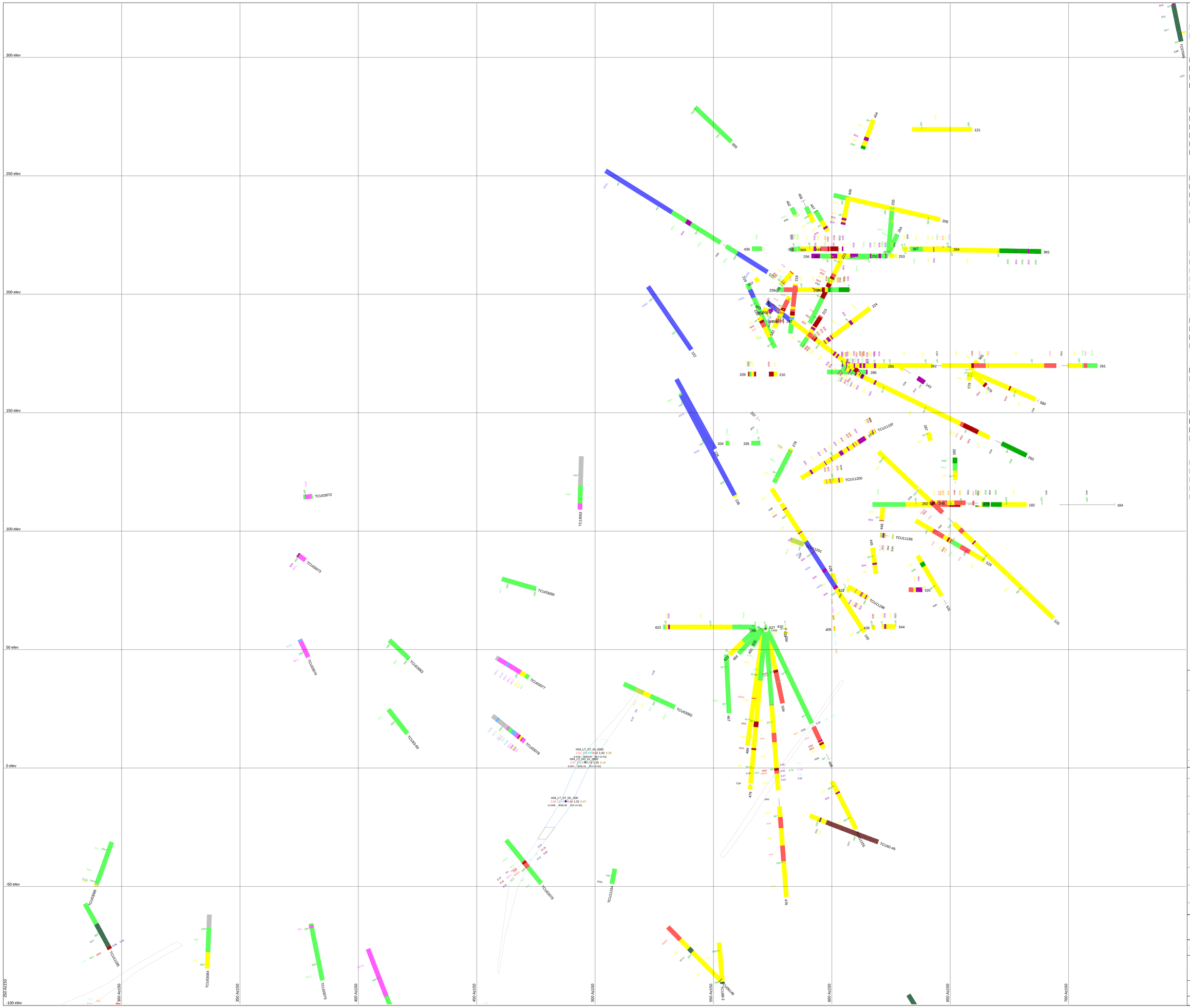
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 820; ±10m	21 Nov 2014



Geological Legend

Surface / End

- CASE casing
- OVB overburden
- EOH end of hole
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

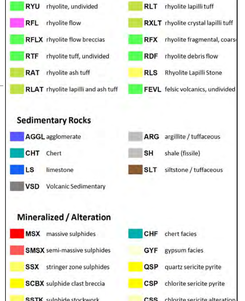
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 840a

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 840; ±10m	21 Nov 2014

-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
-400 elev
-450 elev
-500 elev

100 Az150
150 Az150
200 Az150
250 Az150
300 Az150
350 Az150
400 Az150
450 Az150
500 Az150
550 Az150

TCU03888
TCU03885
TCU11187
TCU03890
TCU03887
TCU11183
TCU03876
TCU11179
TCU11177
TCU04315
TCU03881
TCU03857
TCU11182
TCU03859
TCU03891
TCU04431
TCU11175
TCU03841
TCU11180
TCU11186
TCU90-27
TCU89-16
TCU89-15
TCU11169
TCU11181
TCU89-59
TCU89-58
TCU89-14
TCU89-6

H04_LT_ST_04_-210
1.47 81.3 0.15 0.62 4.46
2228t $151.30 15.1 Zn EQ

H04_LT_DO_02_-210
1.69 85.4 0.21 0.73 5.17
1,830t $183.70 18.3 Zn EQ

H04_LT_ST_03_-240
2.53 95.4 0.35 0.70 5.82
5,642t $212.84 21.2 Zn EQ

H04_LT_DO_01_-240
3.42 81.1 0.27 0.50 4.80
1,765t $186.96 18.6 Zn EQ

H04_LT_ST_01_-270
2.43 82.0 0.67 0.54 5.13
8,999t $106.77 10.5 Zn EQ

H04_LT_ST_02_-300
4.15 80.1 0.60 0.39 7.02
7,716t $297.67 29.7 Zn EQ

H04_LT_ST_02_-330
6.86 103.7 1.04 0.65 2.95
30,806t $450.54 44.8 Pb EQ

H04_LT_ST_02_-360
2.87 72.9 1.02 0.09 9.54
9,447t $270.67 27.5 Zn EQ

H04_LT_DO_01_-360
3.78 95.7 1.20 0.12 14.33
5,667t $359.16 26.8 Zn EQ

H04_LT_ST_02_-390
2.79 105.1 0.82 1.66 7.56
12,792t $295.67 29.4 Zn EQ

H04_LT_DO_01_-390
3.28 120.7 1.04 0.53 7.03
5,021t $298.41 28.7 Zn EQ

H04_LT_DO_01_-420
2.43 83.1 0.77 1.65 6.42
3,479t $198.61 19.8 Zn EQ

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%) INT Trace

2014 Stope Information

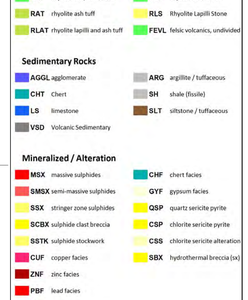
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 840b

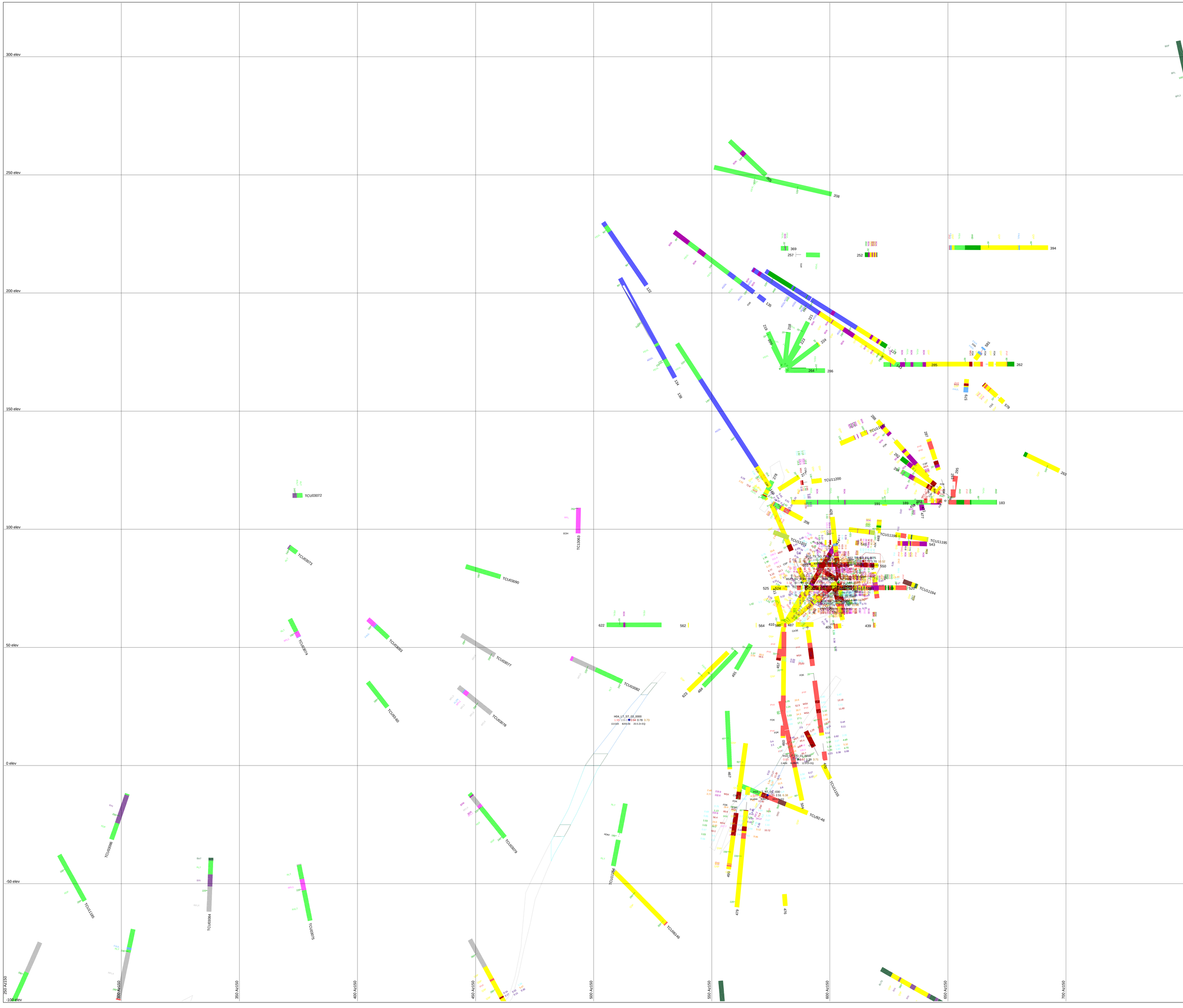
CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA	Vert Az150 Sect B40; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

Interval

2014 Stope Information

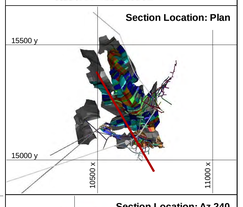
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

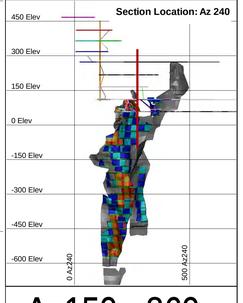
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 860a

CHIEFTAIN METALS INC

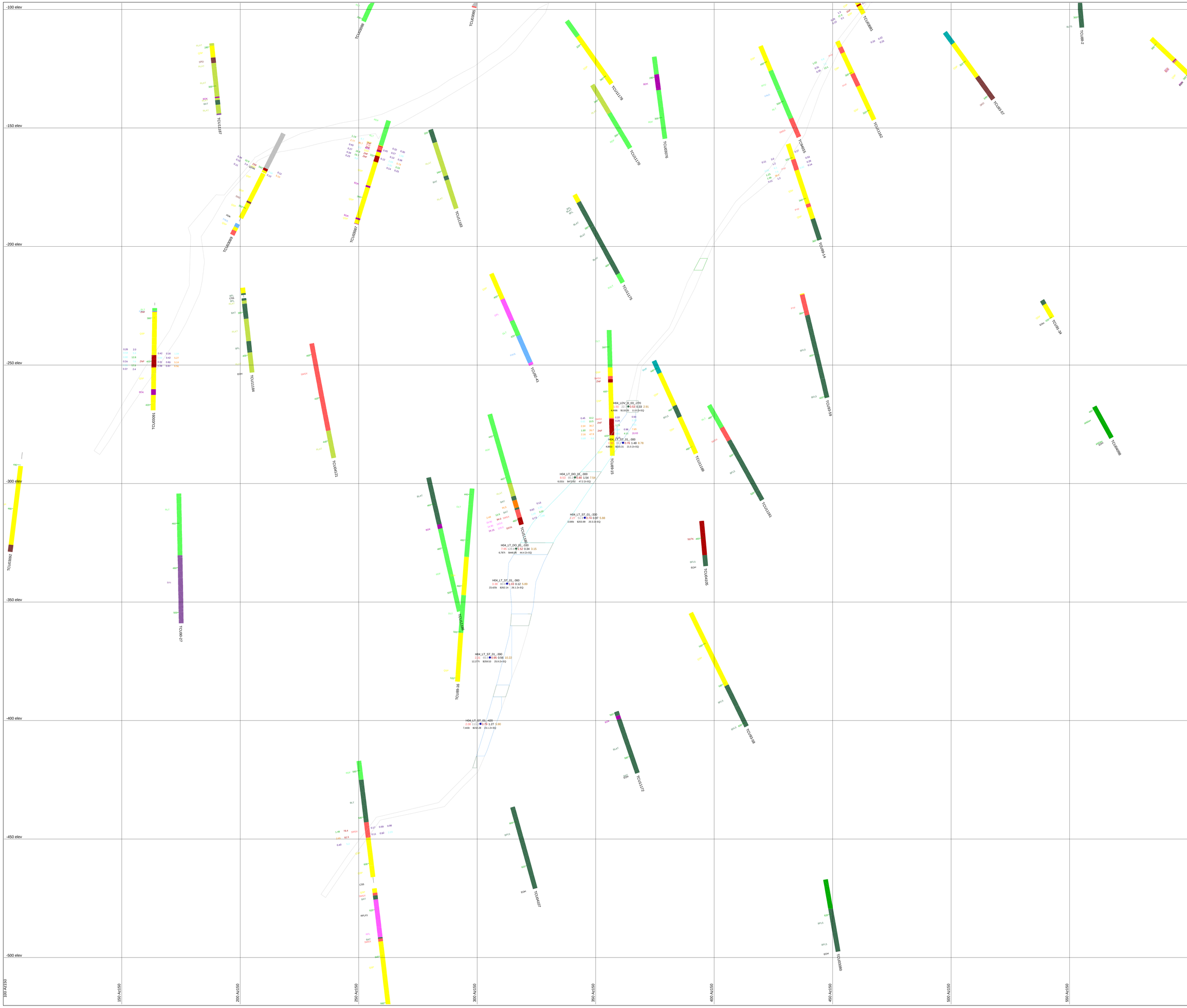
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 860; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

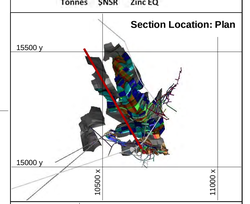
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

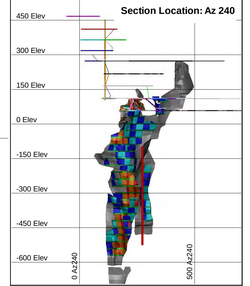
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 860b

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 860; ±10m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

DH Trace

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

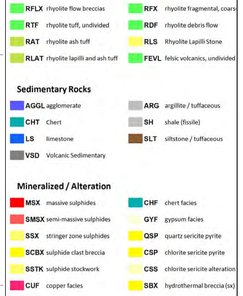
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 880a

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 880; ±10m	21 Nov 2014

-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
-400 elev
-450 elev
-500 elev
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200 Az150
250 Az150
300 Az150
350 Az150
400 Az150
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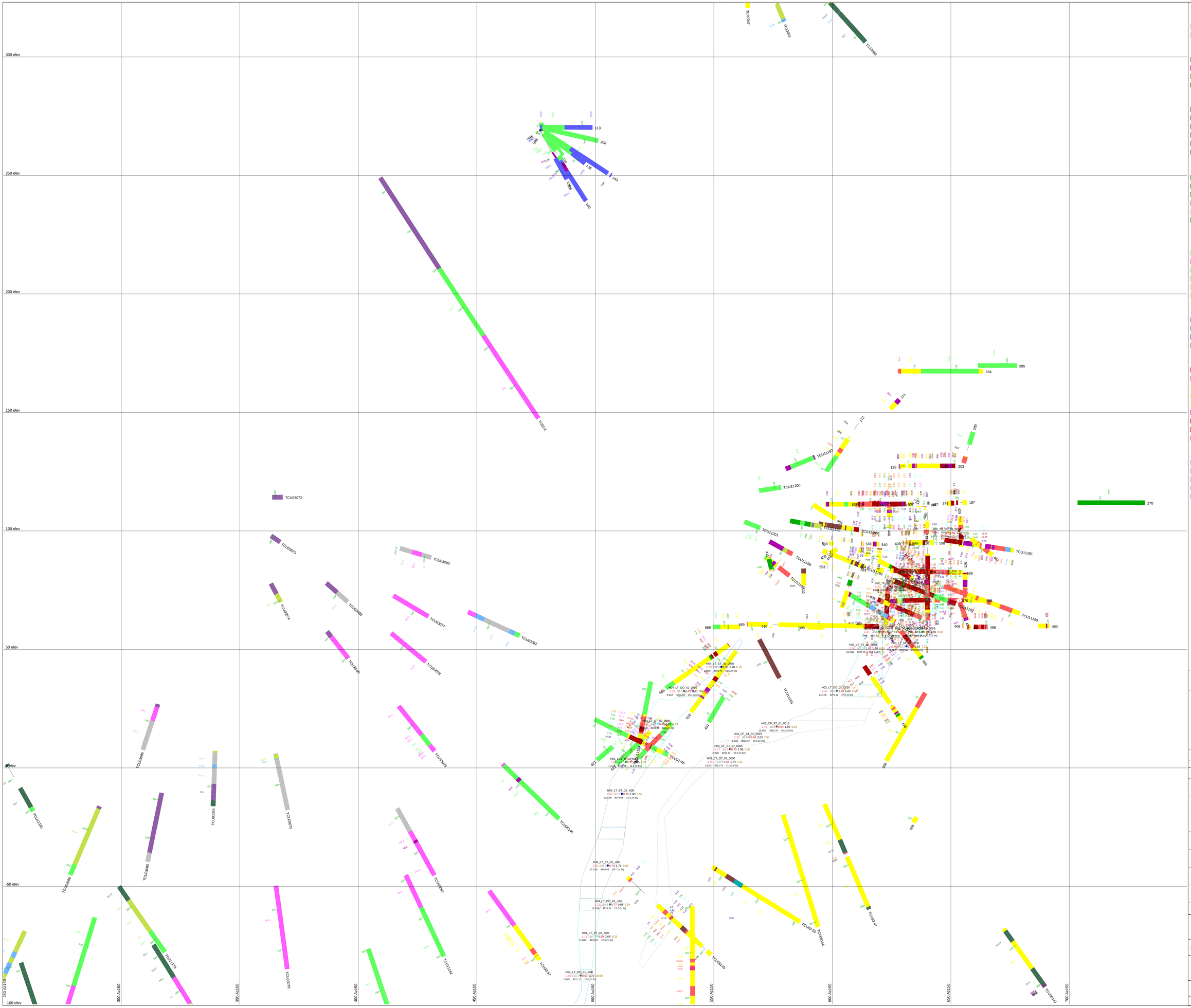


Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) **DH Trace** Cu(%) Pb (%) Zn(%)

2014 Stope Information

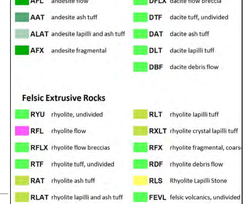
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

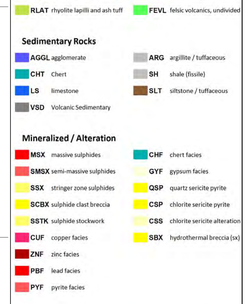
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 900a

CHIEFTAIN METALS INC

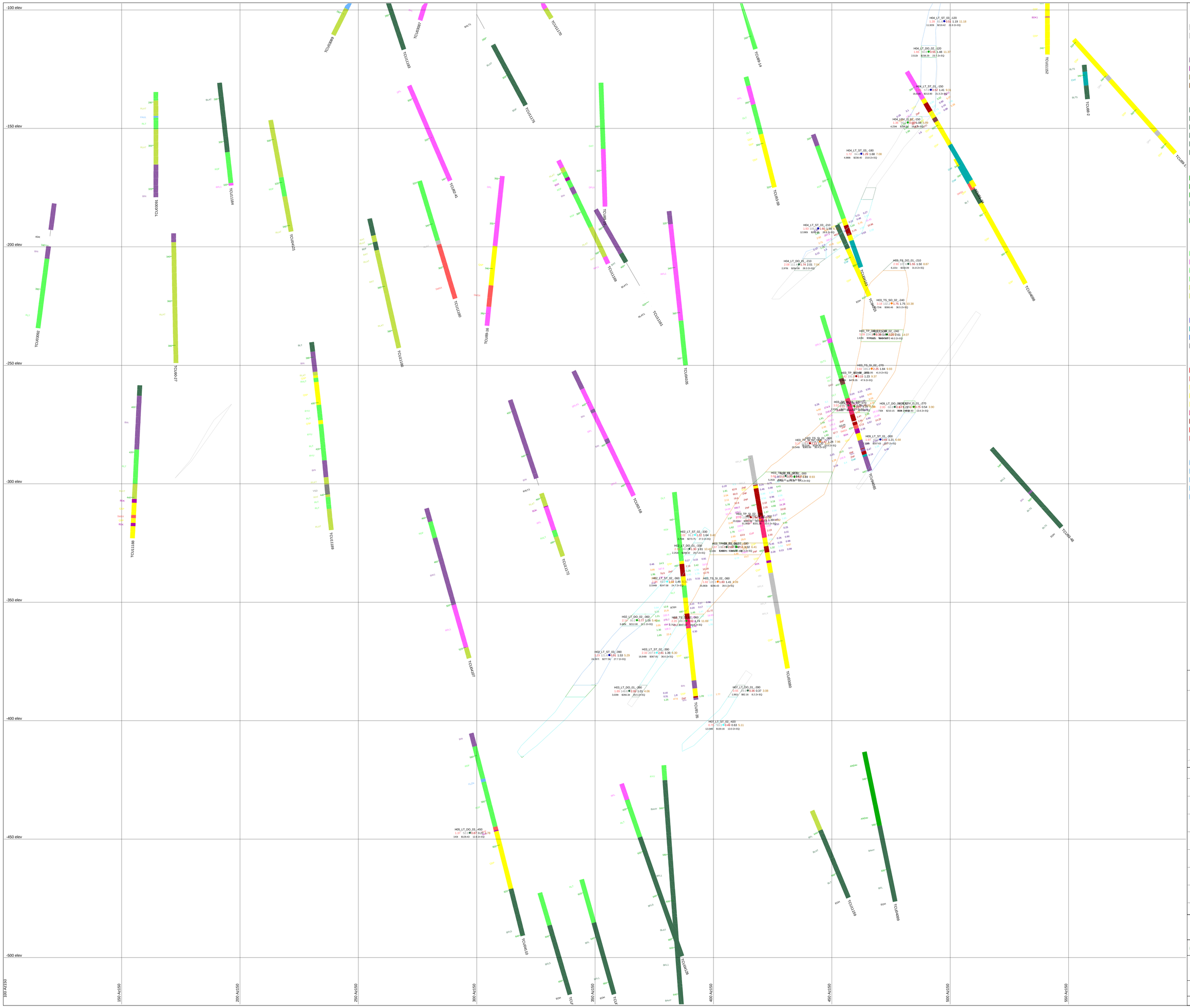
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 900; ±10m	21 Nov 2014



Geological Legend

Surface / End

- CASE casing
- OVB overburden
- EOH end of hole
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

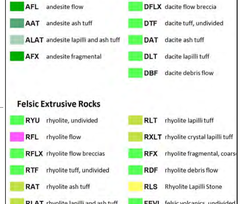
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

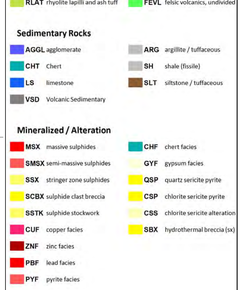
Au (g/i) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 900b

CHIEFTAIN METALS INC

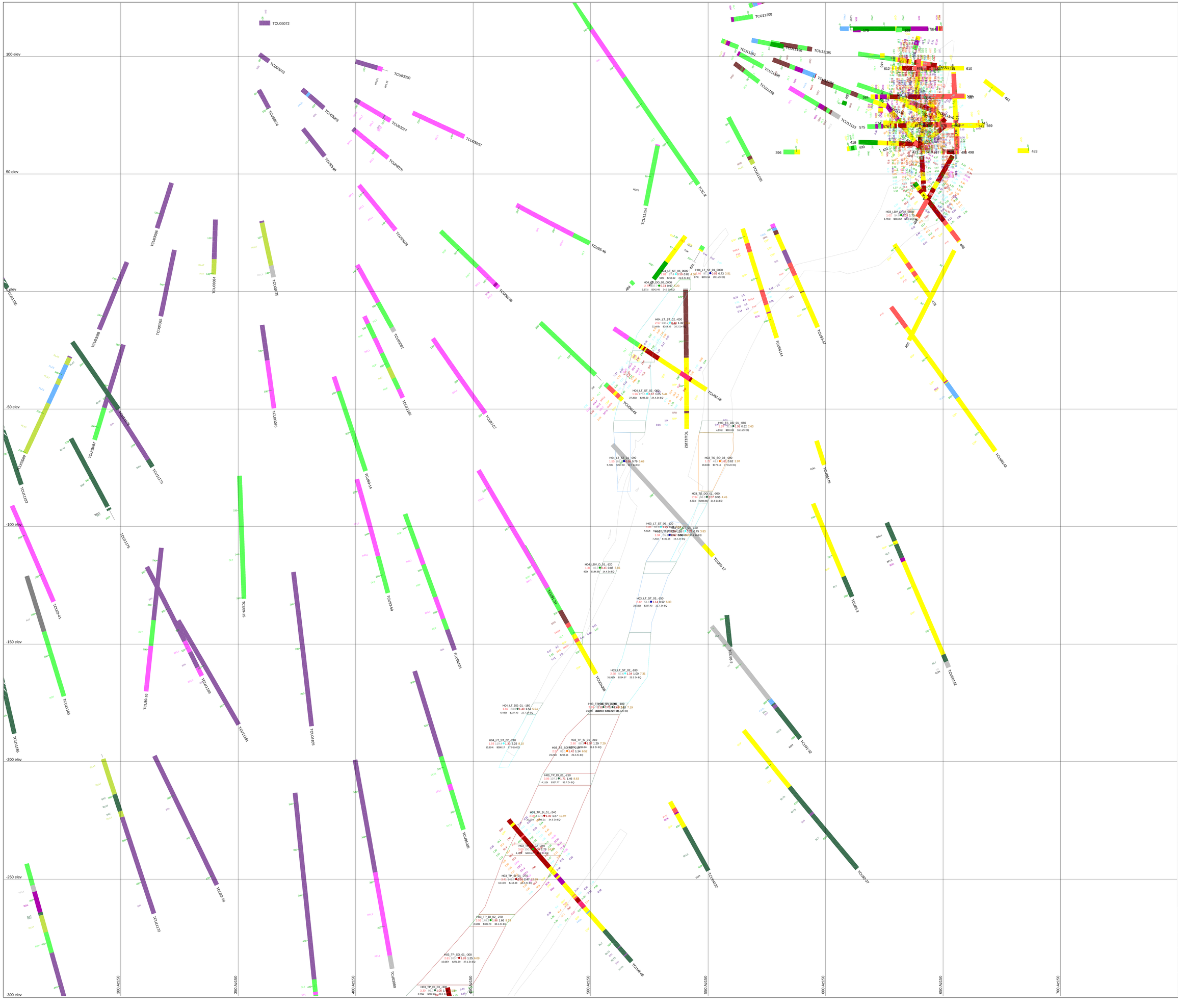
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 900; ±10m	21 Nov 2014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-300 elev

-350 elev

-400 elev

-450 elev

-500 elev

-550 elev

-600 elev

-650 elev

-700 elev

50 Az150

100 Az150

150 Az150

200 Az150

250 Az150

300 Az150

350 Az150

400 Az150

450 Az150

500 Az150

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
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Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
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		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
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CUF	copper facies	SBX	hydrothermal breccia (sx)
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PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development

Cut and Fill

Longitudinal

Primary

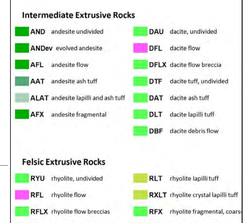
Secondary

Stope_Name

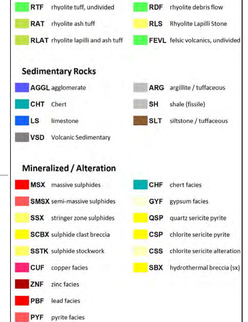
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 920b

CHIEFTAIN METALS INC

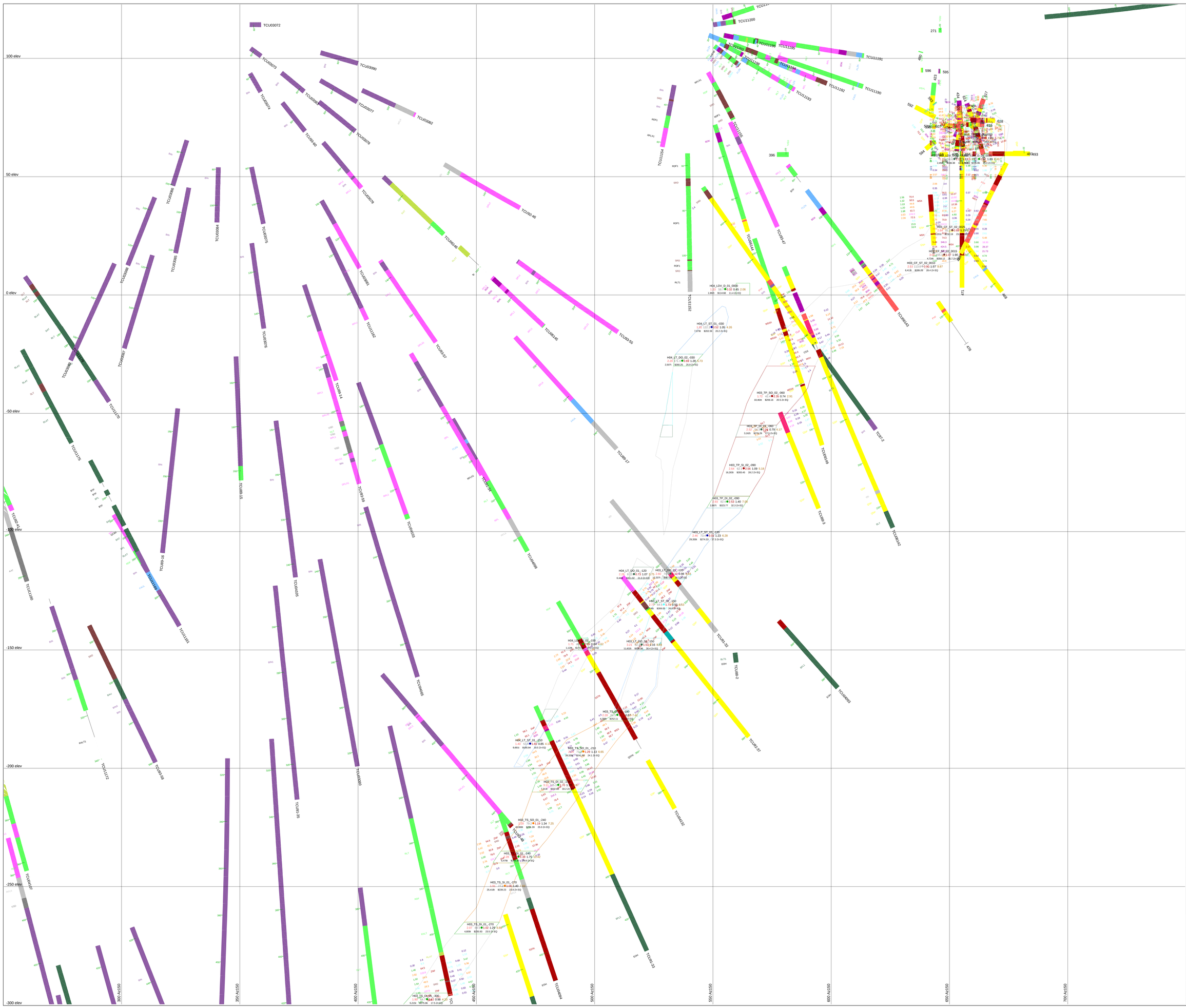
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 920; ±10m	21 Nov 2014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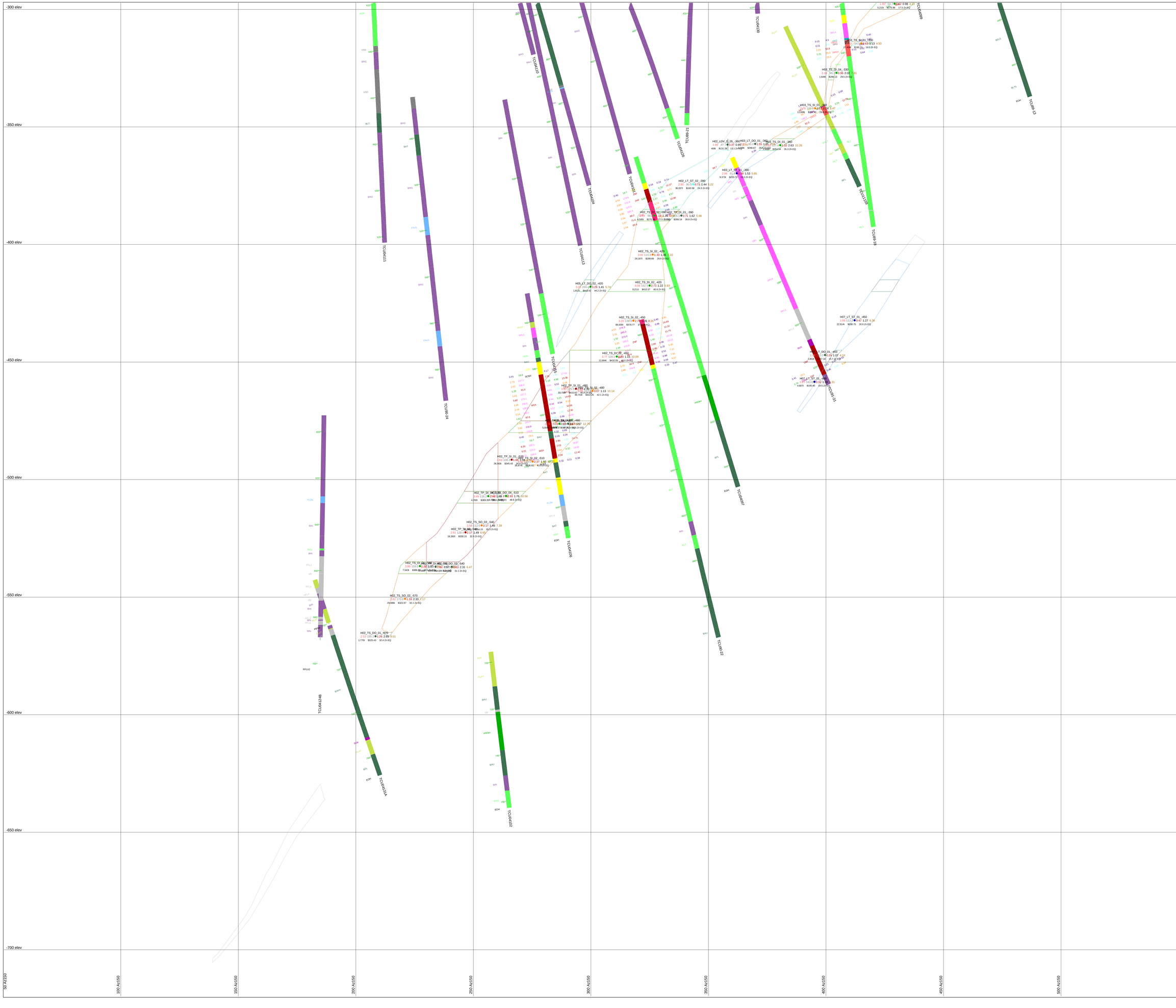

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
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FBXcr	milled fault breccia (crush)		

suffix codes

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2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DDH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

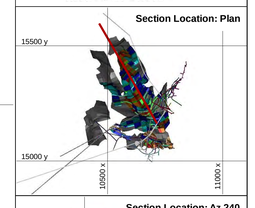
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

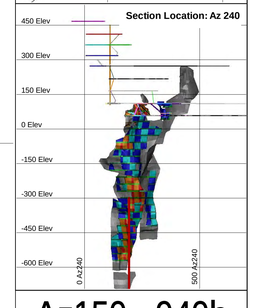
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 940b

CHIEFTAIN METALS INC

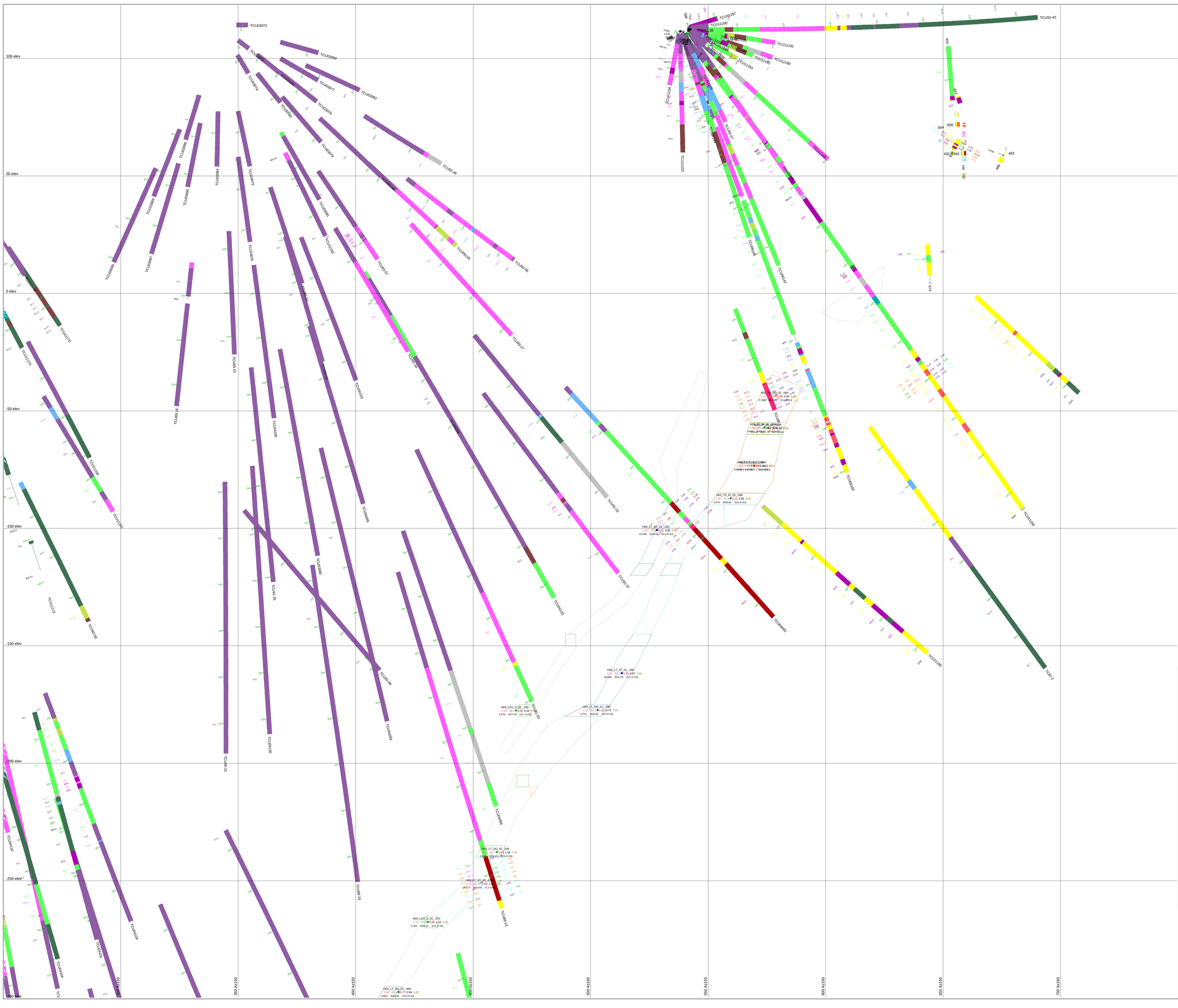
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 940; ±10m	21 Nov 2014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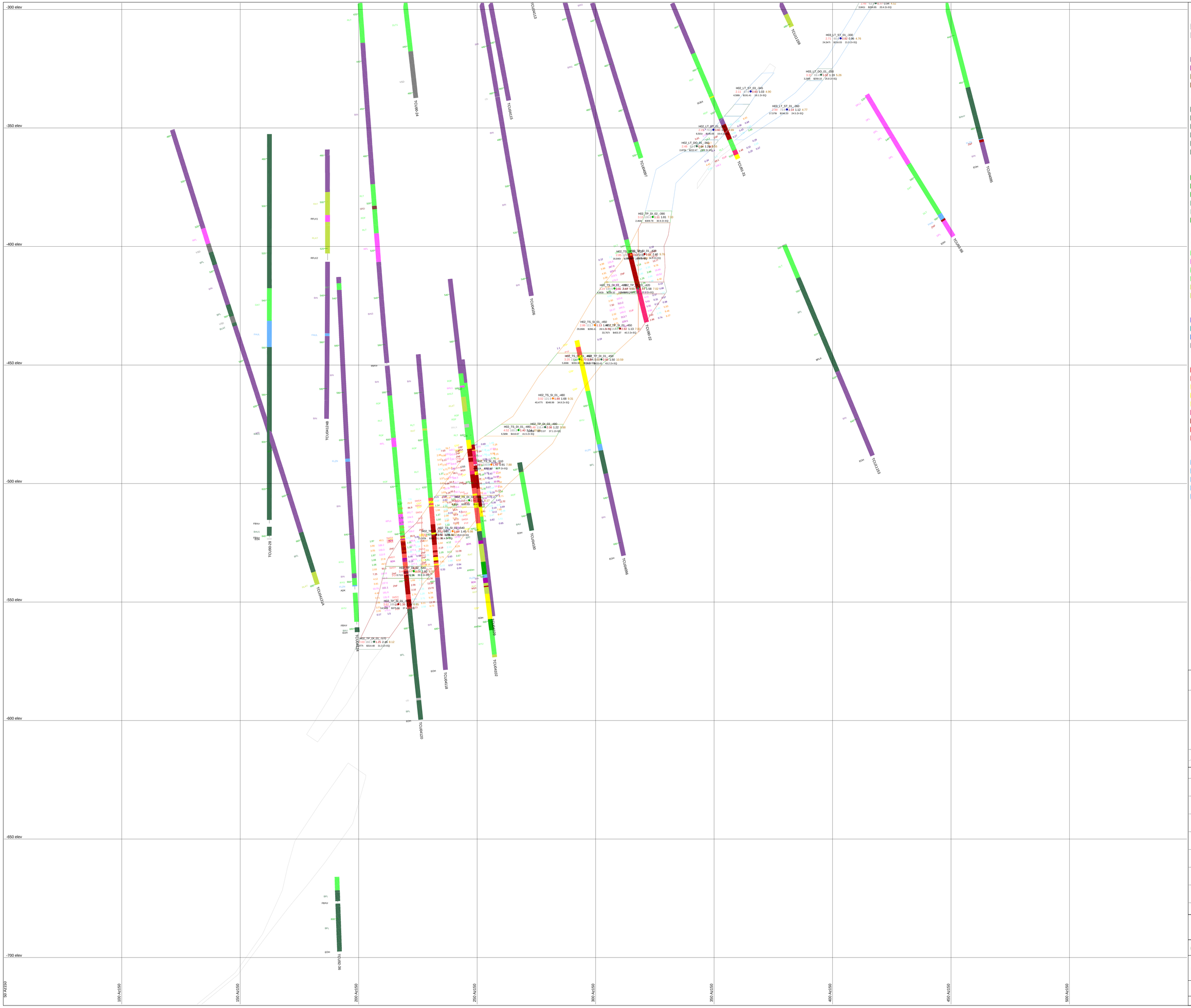
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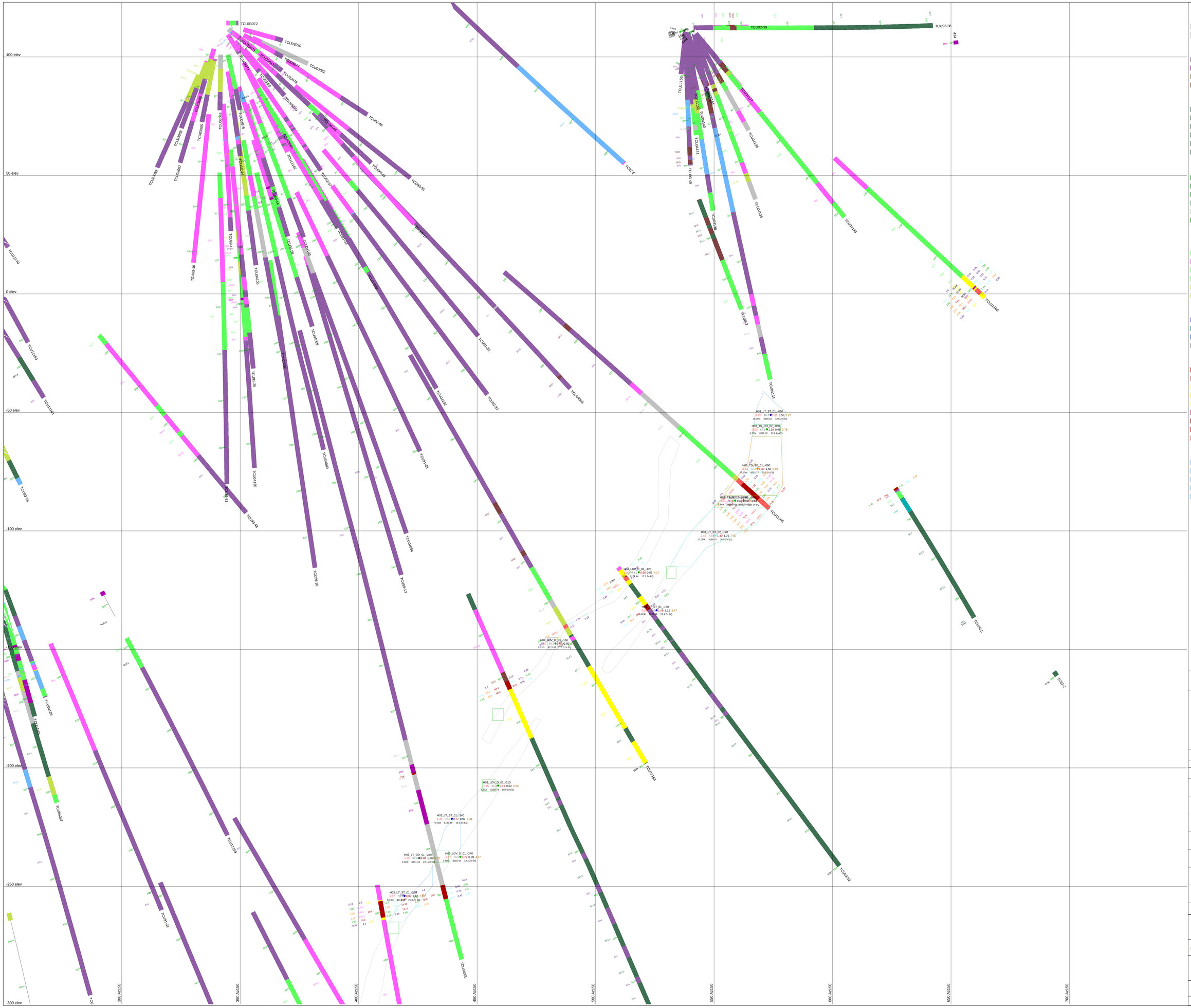
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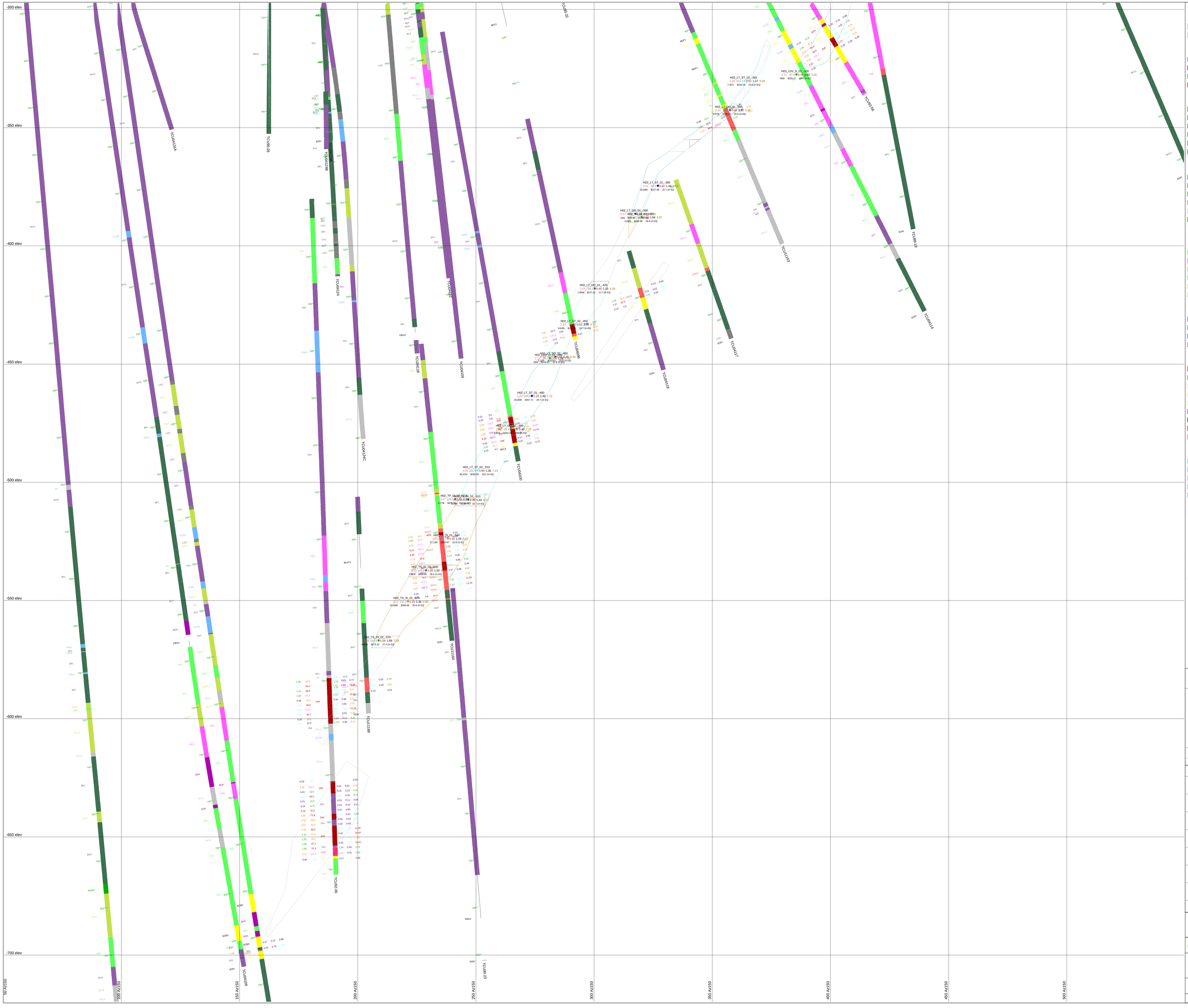

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
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suffix codes

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2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

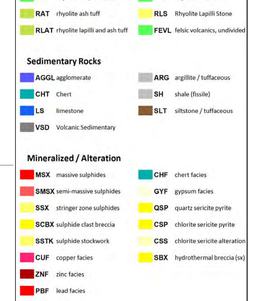
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 980b

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 980; ±10m	21 Nov 2014

100 elev

50 elev

0 elev

-50 elev

-100 elev

-150 elev

-200 elev

-250 elev

-300 elev

300 Az150

350 Az150

400 Az150

450 Az150

500 Az150

550 Az150

600 Az150

650 Az150

700 Az150

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
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5	amygdaloidal		

Drillhole Trace Information

DH Type

Au(g/t) Ag(g/t) Lithology Depth(m) Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development

Cut and Fill — Primary

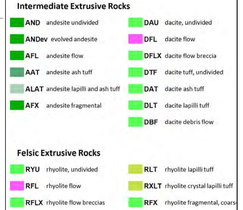
Longitudinal — Secondary

Stope_Name

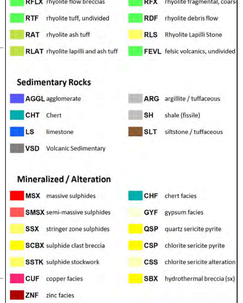
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 1000a

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az150 Sect 1000; ±10m	21 Nov 2014

-300 elev

-350 elev

-400 elev

-450 elev

-500 elev

-550 elev

-600 elev

-650 elev

-700 elev

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TCU04117

TCU04119

TCU09-53

TCU11104

TCU11169

TCU04112

TCU01-30

TCU04123

TCU08-21

H02_LT_ST_01_315
5.85 213 0.73 2.51 14.09
1,367 854,613 53.9 Zn EQ

H02_LT_DD_01_319
1.47 [illegible] 0.50 1.78 10.17
2,598 $899.05 ≤58.0 Zn EQ

H02_LT_ST_01_345
3.41 154.1 0.46 1.45 8.20
6,548 $551.99 ≤92 Zn EQ

H02_LT_ST_01_485
21.9 0.83
1,856 $3,349 Zn EQ

H02_LT_DD_01_510
28.9 1271 0.74 1.69 7.75
2,449 $292.64 29.4 Zn EQ

H02_LT_DD_01_555
1.22 0.05
3,236 $33.64 29.2 Zn EQ

H02_LT_ST_01_570
3.27 134.9 2.15 0.85 4.28
16,340 $359.30 31.5 Zn EQ

H02_LT_DD_01_570
1.08 113.9 1.22 0.70 5.54
2,294 $234.76 23.4 Zn EQ

Geological Legend

Surface / End

- CASE casing
- OVB overburden
- EOH end of hole
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) **HH Trace** Cu(%) Pb (%) Zn(%)

2014 Stope Information

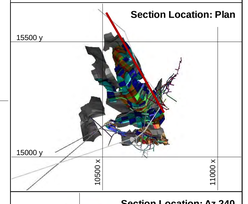
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

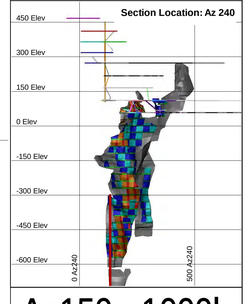
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 1000b

CHIEFTAIN METALS INC

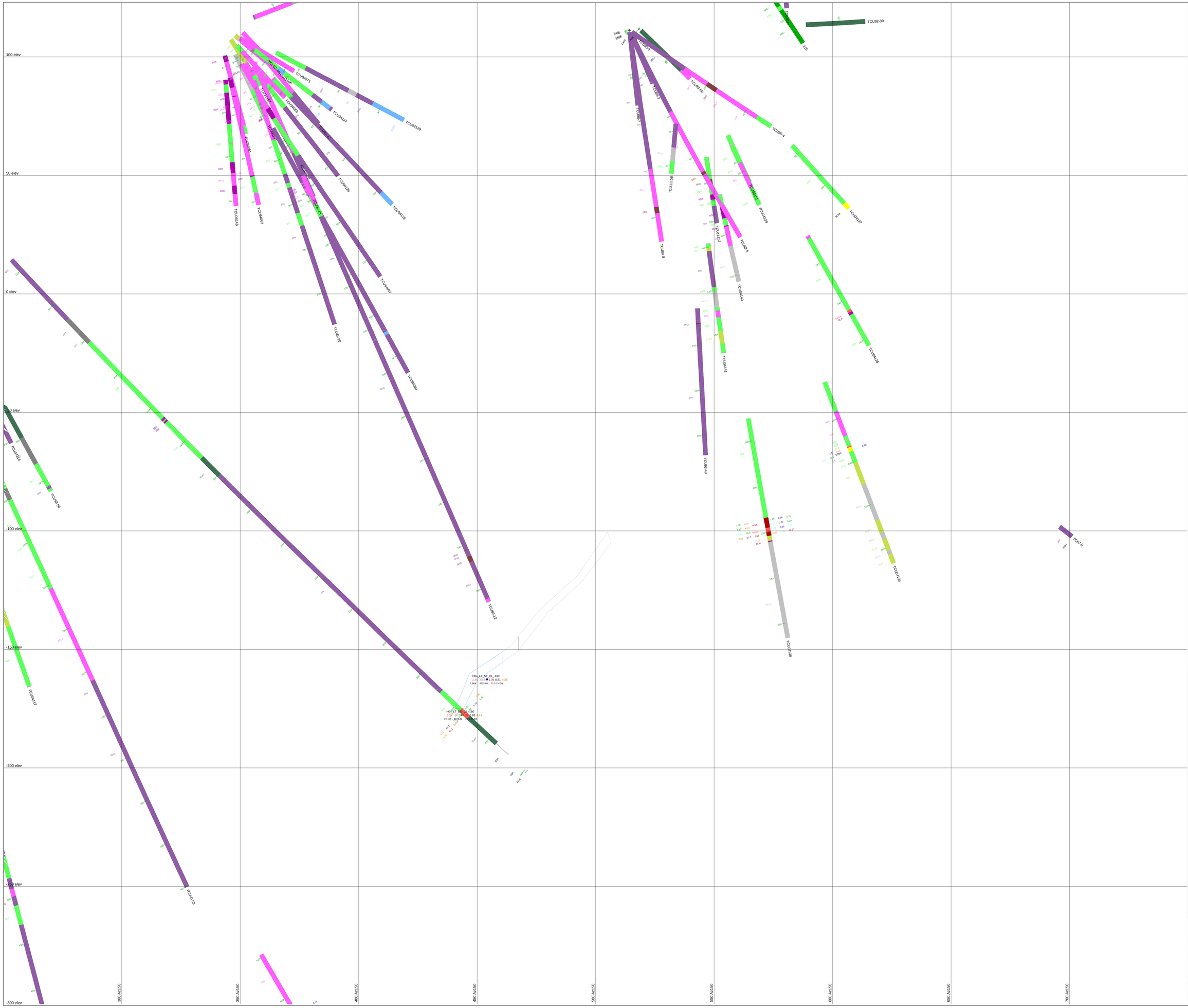
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 1000; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

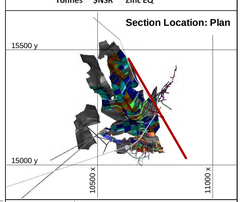
Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

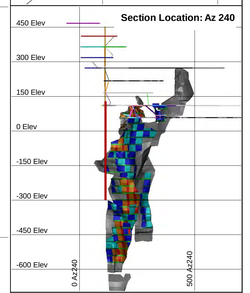
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 1020a

CHIEFTAIN METALS INC

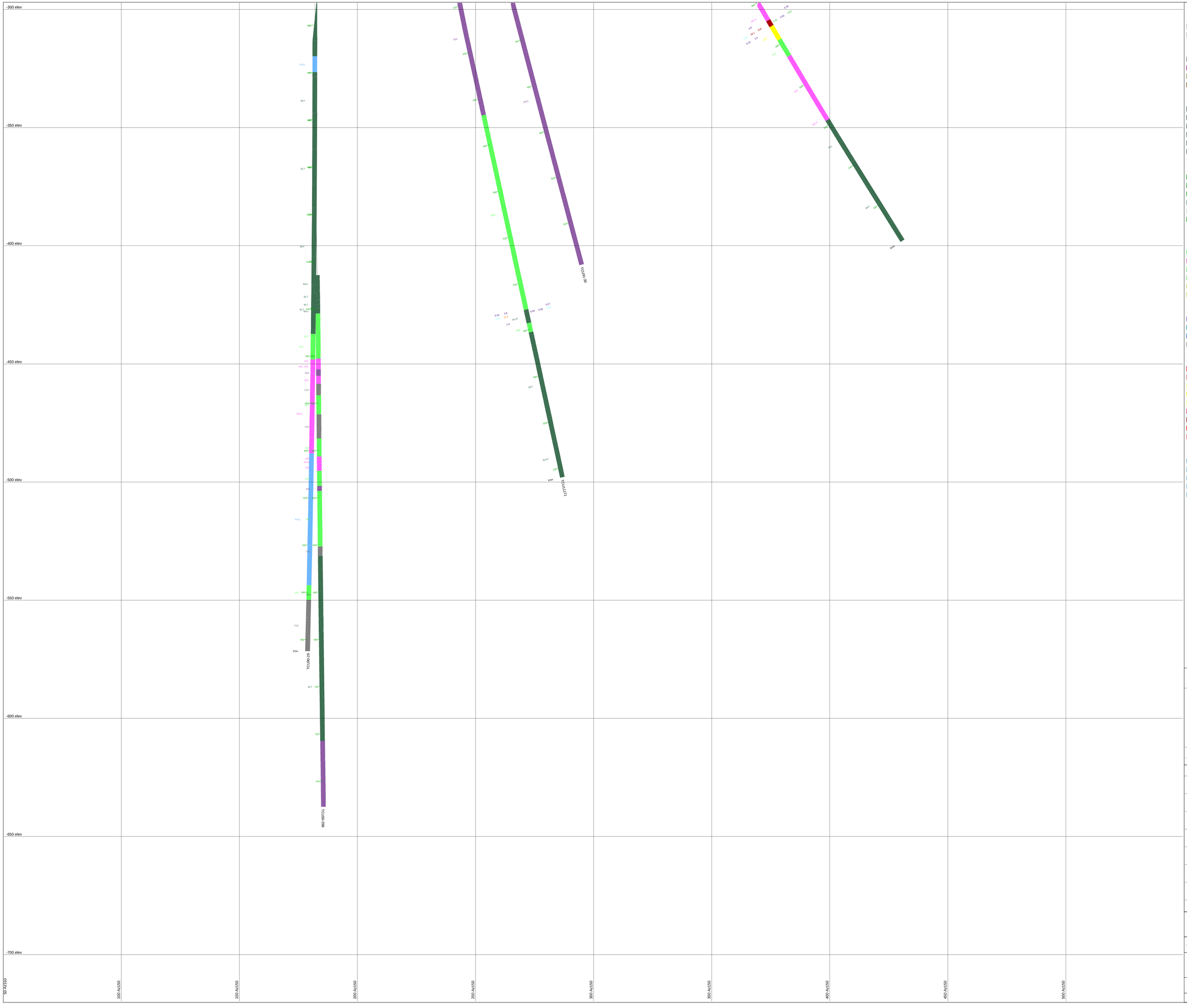
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 1020; ±10m	21 Nov 2014



Geological Legend

Surface / End

- CASE casing
- OVB overburden
- EOH end of hole
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

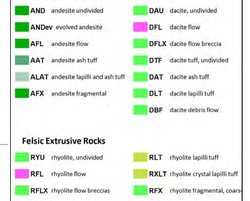
Au(g/t) Ag(g/t) Lithology Depth(m) DH_TYPE Cu(%) Pb (%) Zn(%)

2014 Stope Information

Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



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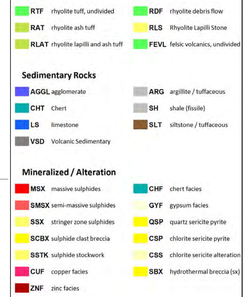


Az150 - 1020b

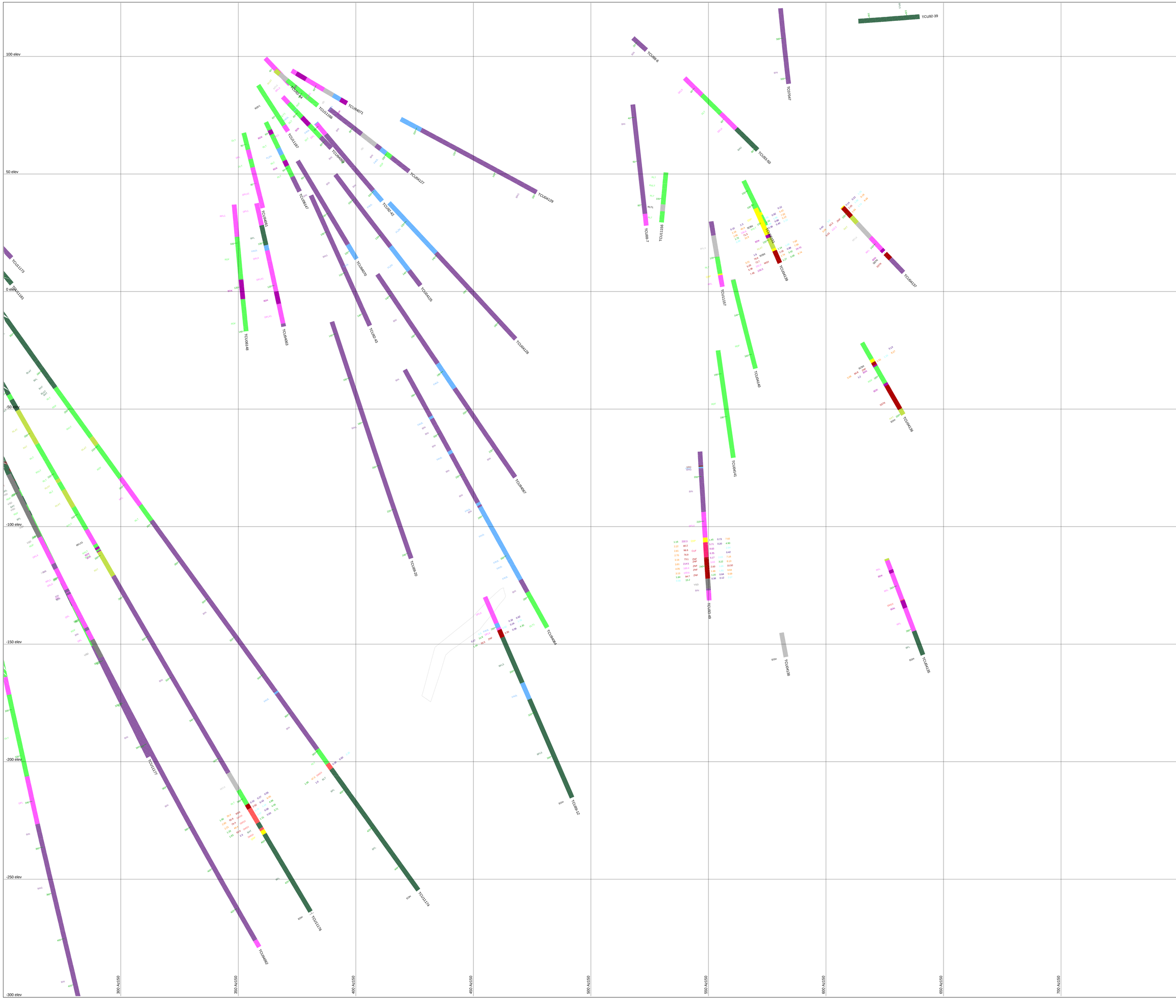
CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az150 Sect 1020; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) Dil Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

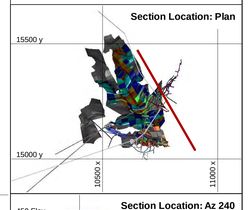
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

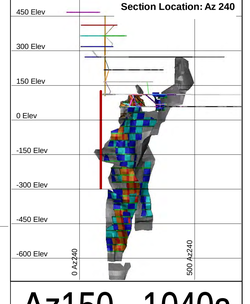
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 1040a

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 1040; ±10m	21 Nov 2014

-300 elev
-350 elev
-400 elev
-450 elev
-500 elev
-550 elev
-600 elev
-650 elev
-700 elev

50 Az150
100 Az150
150 Az150
200 Az150
250 Az150
300 Az150
350 Az150
400 Az150
450 Az150
500 Az150

TCU90-26

TCU90-25

TCU90-298

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

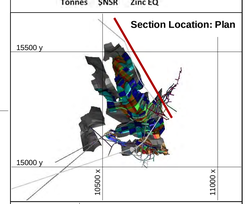
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

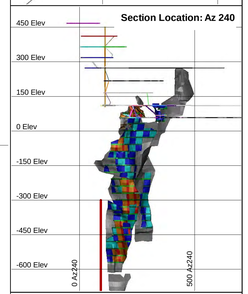
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 240



Az150 - 1040b

CHIEFTAIN METALS INC

Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 1040; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

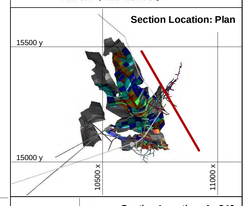
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



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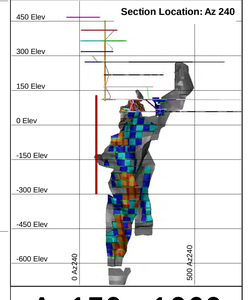


Az150 - 1060

CHIEFTAIN METALS INC

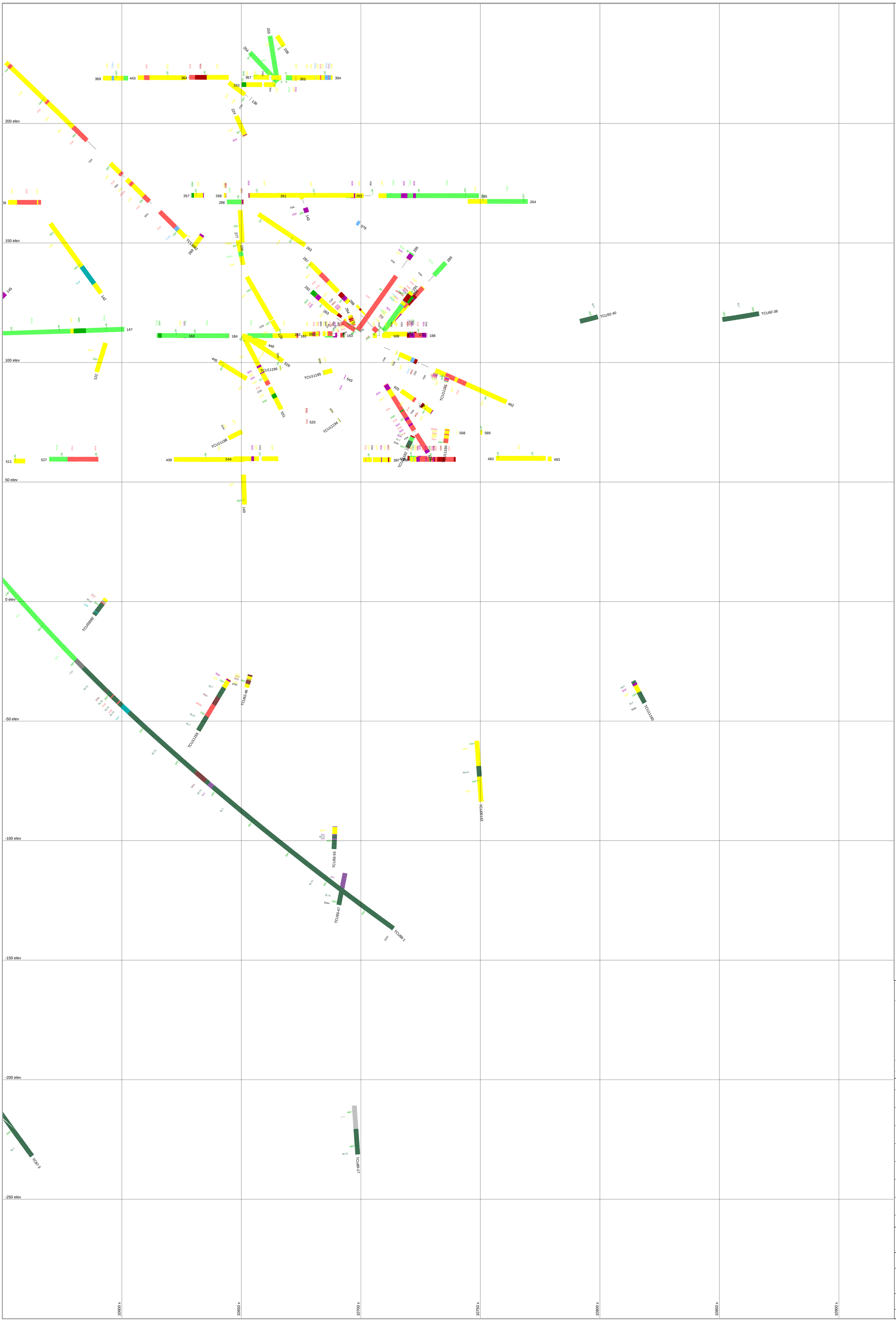
Tulsequah Chief H Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az150 Sect 1060; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

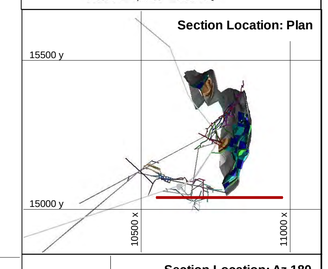
Development	
Cut and Fill	Primary
Longitudinal	Secondary

Stope_Name

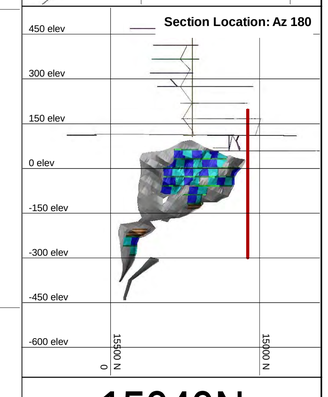
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15040N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25

Scale 1:500 metres

Drawn by: BA	Vert Az090 Sect 15040N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10040 x
10090 x
10100 x
10150 x
10200 x
10250 x
10300 x
10350 x
10400 x

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

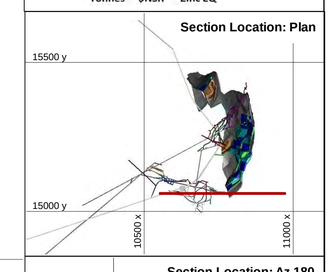
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

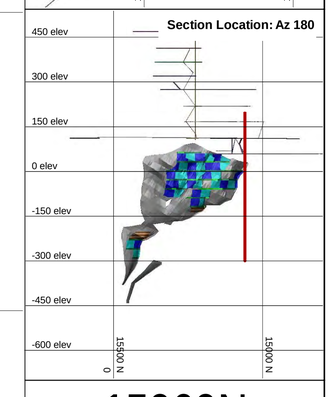
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15060N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15060N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x
10900 x

TCU11197
TCU11200
TCU11196
TCU11201
TCU11198
TCU11199
TCU11155
TCU92-46
TCU92-40
TCU92-38
TCU03082
TCU88-2
TCU88-9
TCU06144
TCU06145
TCU93-47
TCU93-55
TCU06142
TCU88-3
TCU89-17
TCU92-37
TCU11165
TCU11158
TCU11160
TCU06143
TCU89-5
TCU87-2
TCU87-5
TCU89-4
TCU66-4

G01_LT_ST_07_-030
0.63 95.5 - 0.72 0.56 3.51
11,194t $199.78 19.9 Zn EQ

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

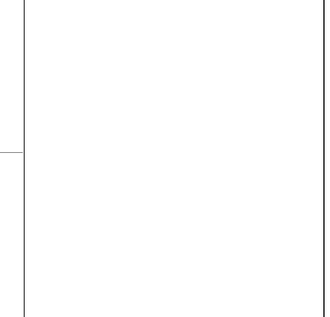
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15080N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA	Vert Az090 Sect 15080N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x
10900 x

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

- 1 feldspar
- qp quartz porphyry
- 2 quartz
- fp feldspar porphyry
- 3 amphibole
- qfp quartz feldspar porphyry
- 4 pyroxene
- 5 amygdaloidal

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

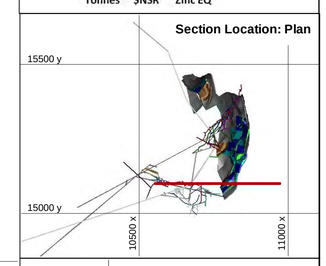
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

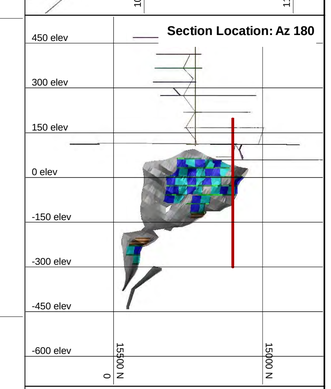
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15100N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15100N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x
10900 x
10950 x

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
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- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
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- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
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- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

- 1 feldspar
- qp quartz porphyry
- 2 quartz
- fp feldspar porphyry
- 3 amphibole
- qfp quartz feldspar porphyry
- 4 pyroxene
- 5 amygdaloidal

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

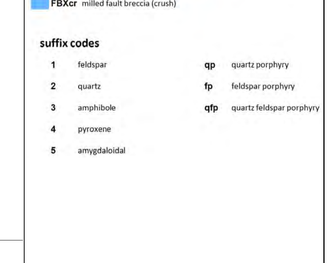
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

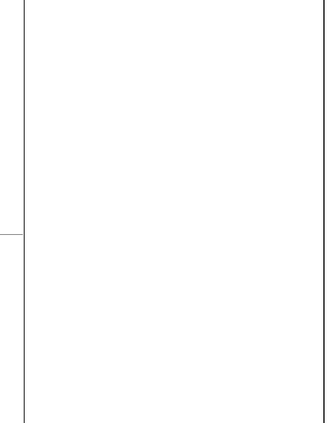
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15120N

CHIEFTAIN METALS INC

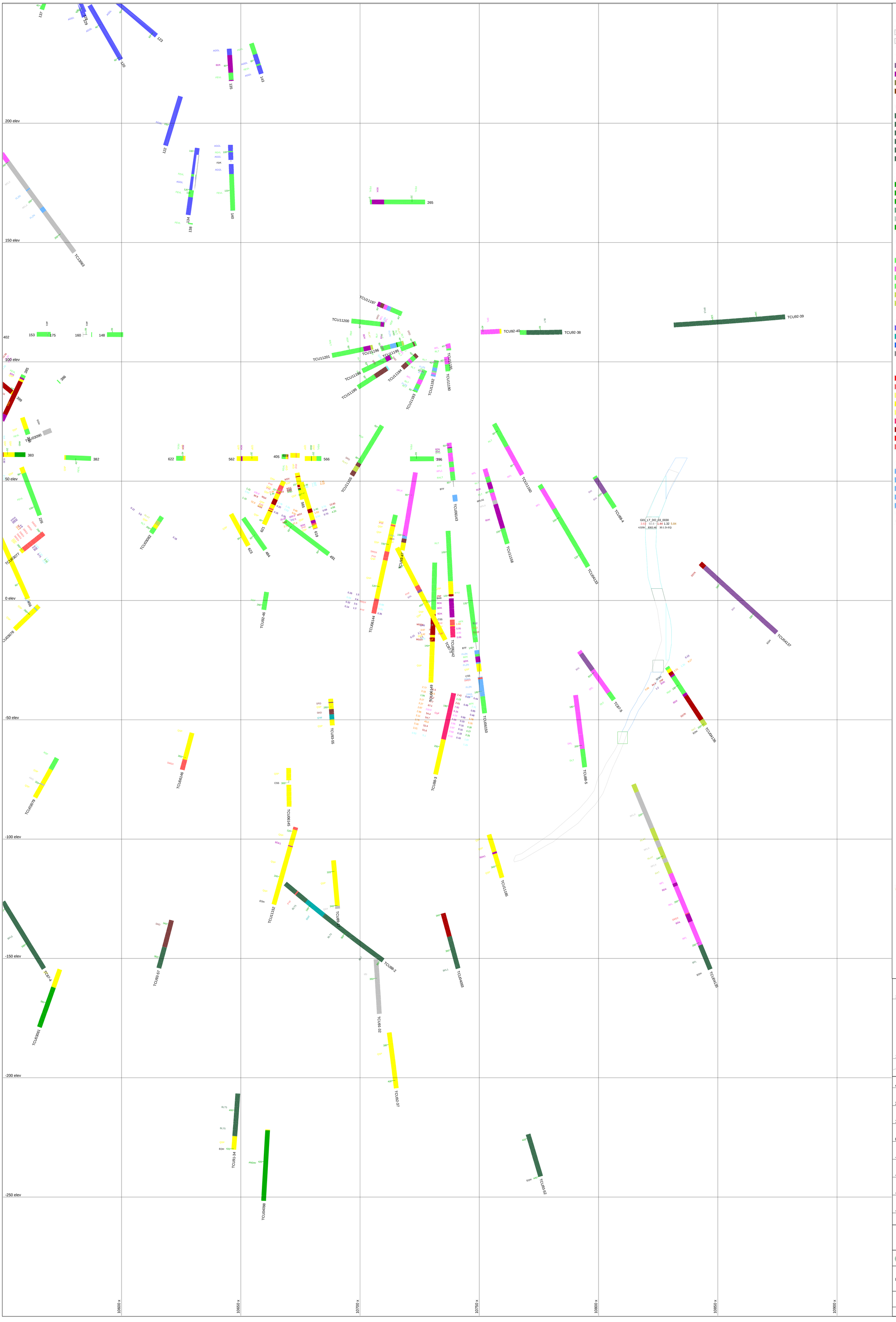
Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15120N; ±10m	21 Nov 2014



Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

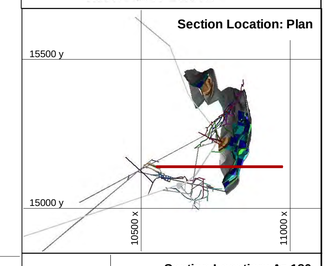
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

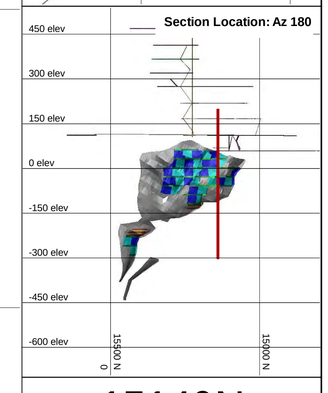
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15140N

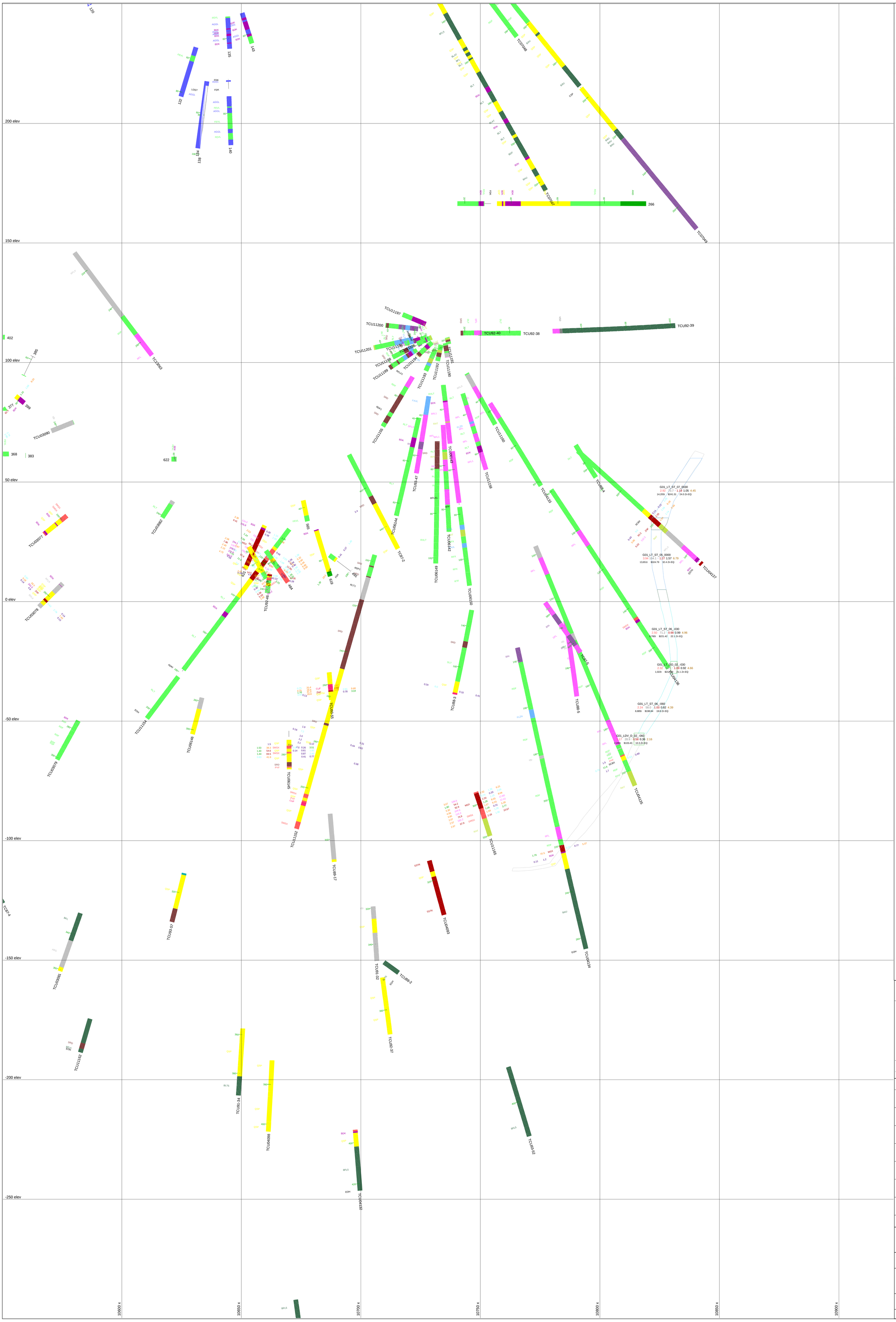
CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az090 Sect 15140N; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

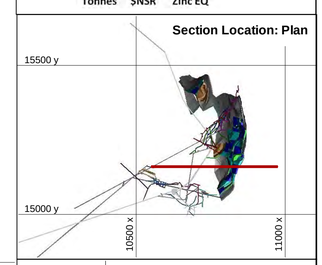
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

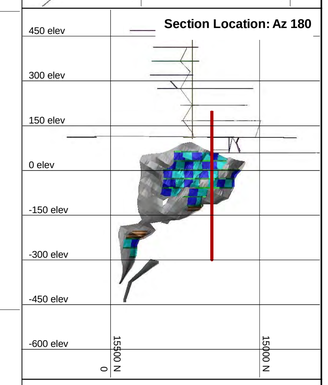
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15160N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15160N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10000 x
10050 x
10100 x
10750 x
10800 x
10850 x
10900 x

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) **DH Trace** Cu(%) Pb (%) Zn(%)

2014 Stope Information

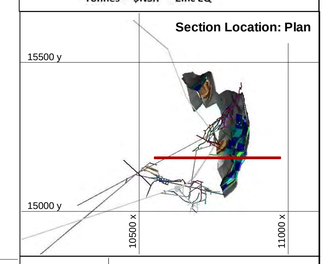
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

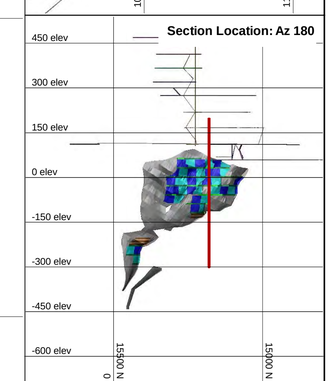
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15180N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15180N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x
10900 x

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

- 1 feldspar
- qp quartz porphyry
- 2 quartz
- fp feldspar porphyry
- 3 amphibole
- qfp quartz feldspar porphyry
- 4 pyroxene
- 5 amygdaloidal

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

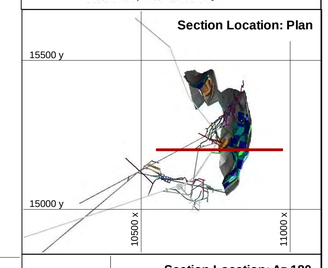
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

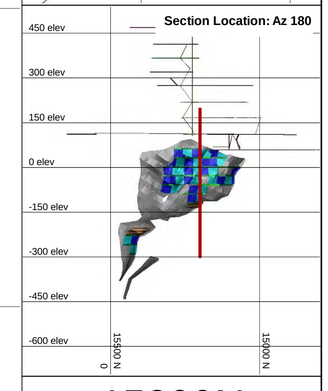
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15200N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15200N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x
10900 x

Geological Legend

Surface / End
- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks
- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks
- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks
- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks
- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks
- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration
- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures
- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

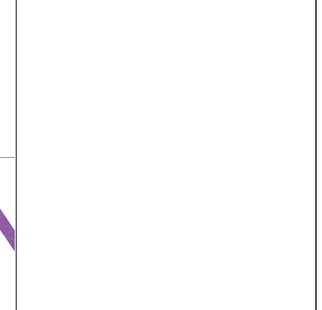
suffix codes
- 1 feldspar
- qp quartz porphyry
- 2 quartz
- fp feldspar porphyry
- 3 amphibole
- qfp quartz feldspar porphyry
- 4 pyroxene
- 5 amygdaloidal

Drillhole Trace Information
Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan


Section Location: Az 180


15220N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres
Scale 1:500

Drawn by: BA	Vert Az090 Sect 15220N; ±10m	21 Nov 2014

200 elev
150 elev
100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x
10900 x

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

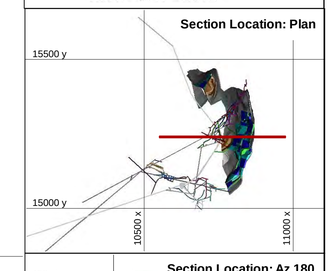
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

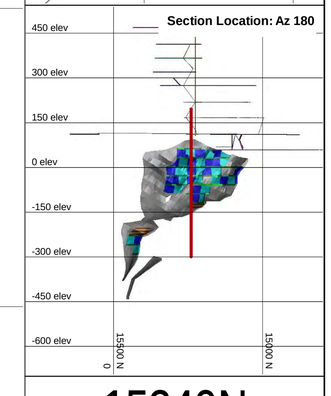
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15240N

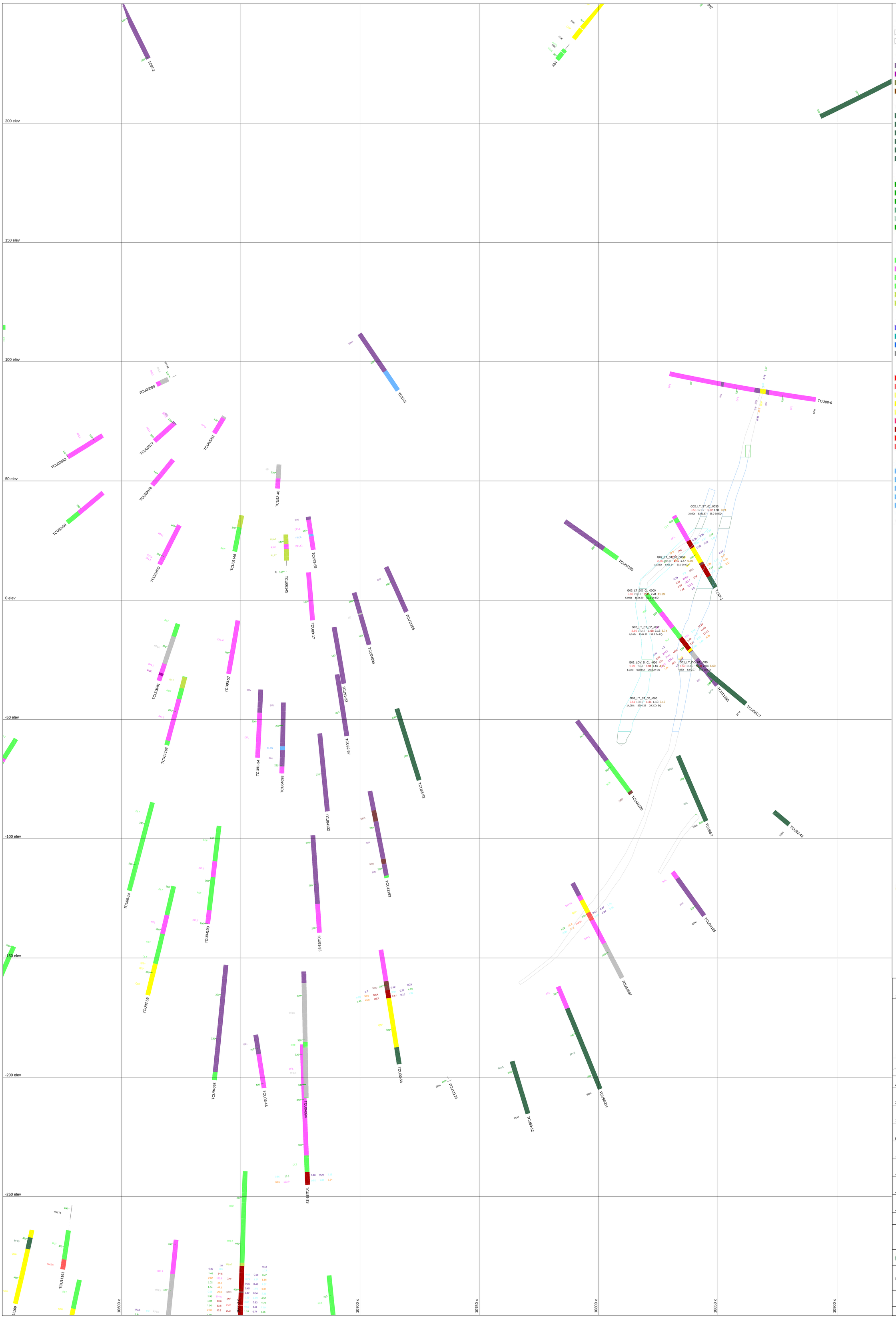
CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az090 Sect 15240N; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) **Lithology** Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

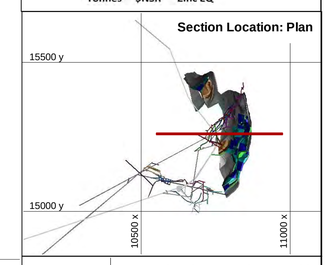
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

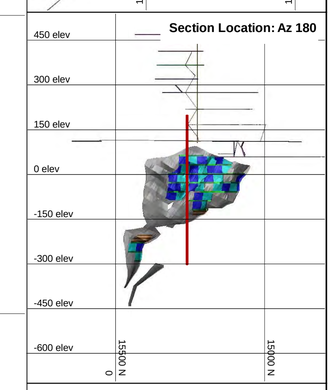
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15260N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25

Scale 1:500 metres

Drawn by: BA	Vert Az090 Sect 15260N; ±10m	21 Nov 2014

200 elev

150 elev

100 elev

50 elev

0 elev

-50 elev

-100 elev

-150 elev

-200 elev

-250 elev

10600 x

10650 x

10700 x

10750 x

10800 x

10850 x

10900 x

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

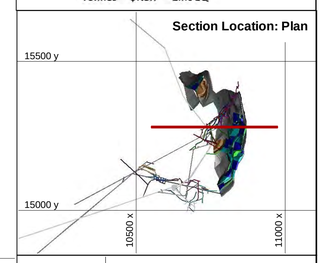
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

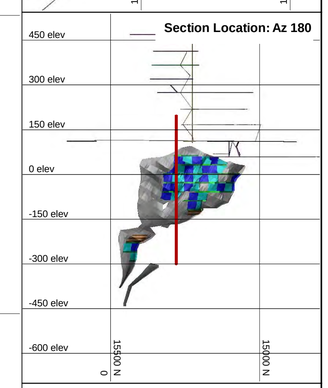
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15280N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15280N; ±10m	21 Nov 2014

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

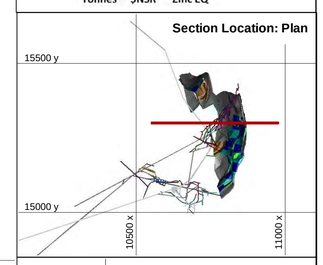
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

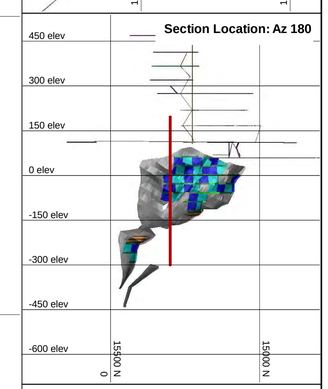
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15300N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15300N; ±10m	21 Nov 2014

100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
10900 x
10950 x
11000 x
11050 x
11100 x
11150 x
11200 x
11250 x
11300 x

TCU03072
TCU03073
TCU03074
TCU03075
TCU03076
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TCU03080
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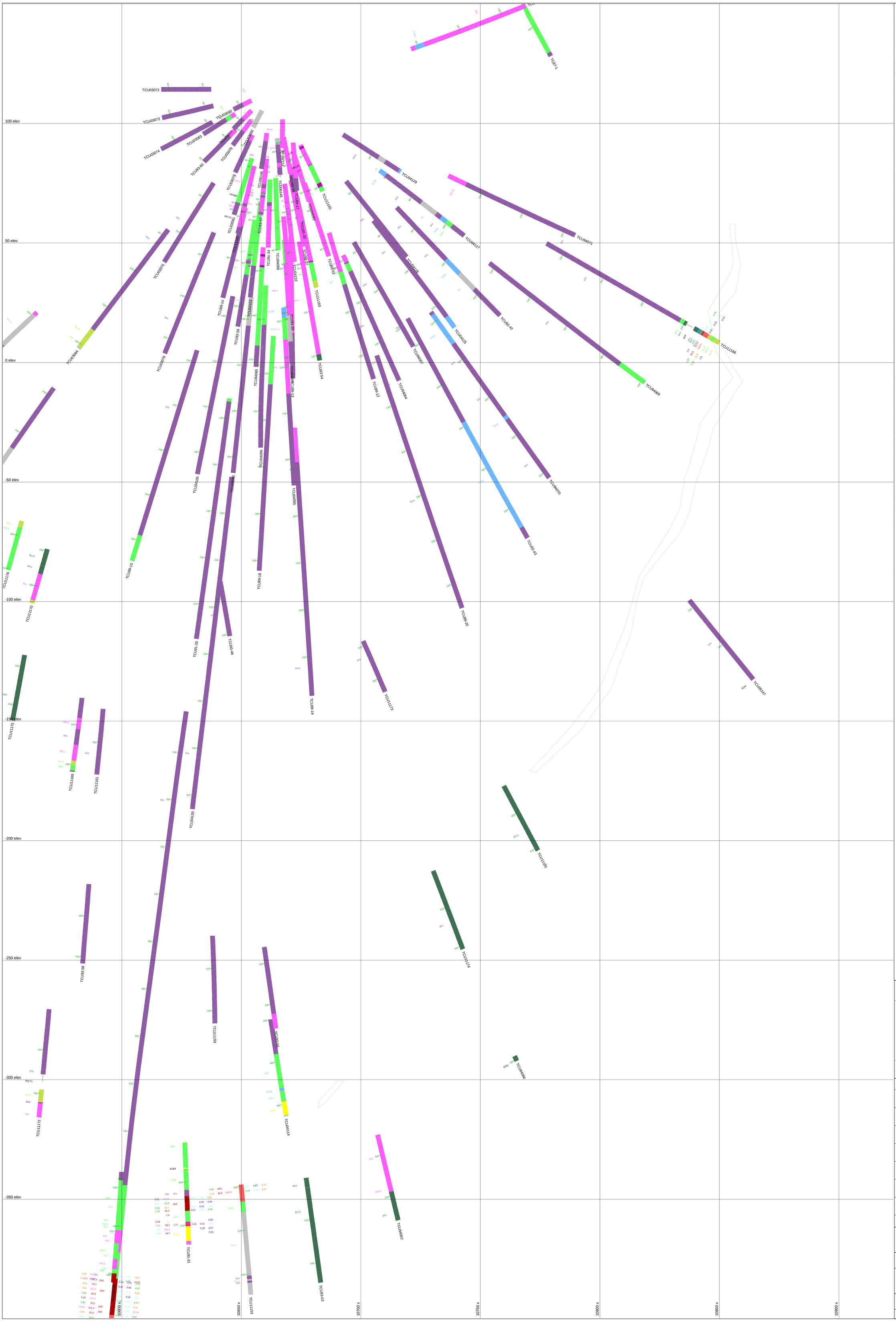


Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

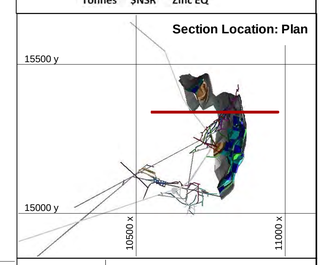
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

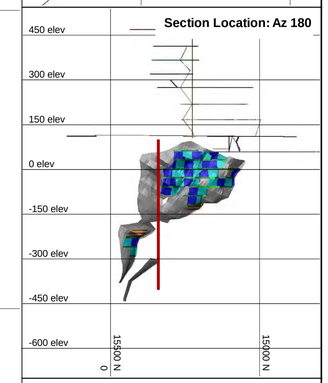
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15340N

CHIEFTAIN METALS INC

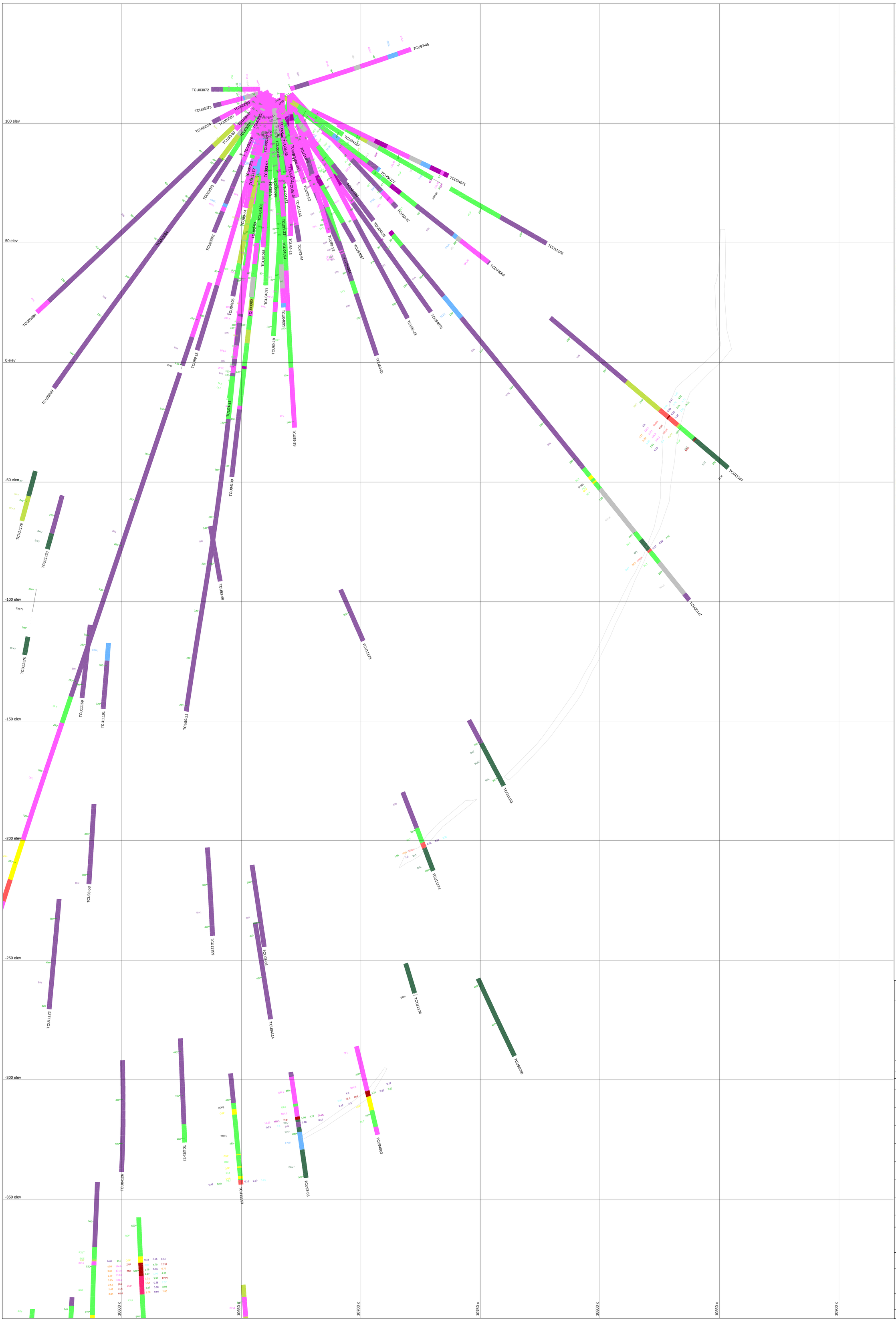
Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15340N; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

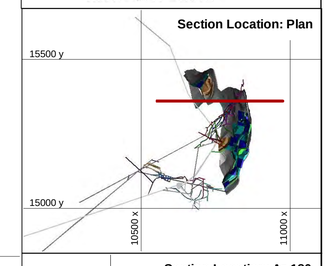
Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

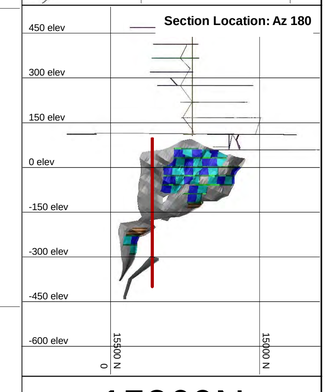
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15360N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25
Scale 1:500 metres

Drawn by: BA	Vert Az090 Sect 15360N; ±10m	21 Nov 2014

100 elev
50 elev
0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
10600 x
10700 x
10750 x
10800 x
10850 x
10900 x

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

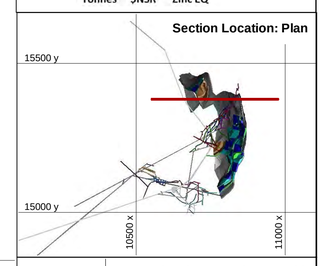
- Development
- Cut and Fill
- Longitudinal
- Primary
- Secondary

Stope_Name

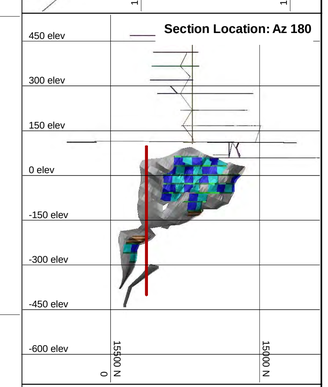
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15380N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15380N; ±10m	21 Nov 2014

100 elev

50 elev

0 elev

-50 elev

-100 elev

-150 elev

-200 elev

-250 elev

-300 elev

-350 elev

10600 x

10700 x

10750 x

10800 x

10850 x

10900 x

TCU11428

TCU11170

TCU11175

TCU11169

TCU11161

TCU11173

TCU11180

TCU11172

TCU11159

TCU11181

TCU11174

TCU11176

TCU11182

TCU11177

TCU04107

TCU04101

TCU04126

TCU04097

TCU04110

TCU04104

TCU04113

TCU04114

TCU04117

TCU04062

TCU04056

TCU04049

TCU84001

TCU93-48

TCU93-58

TCU93-56

TCU93-53

TCU91-31

TCU90-22

TCU11153

G01_CF_ST_01_-205

G01_CF_ST_01_-210

G01_CF_ST_01_-215

G01_CF_ST_01_-220

G01_CF_ST_01_-225

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- BDK basalt dyke
- ADK andesite dyke
- FDK felsic dyke
- RDK rhyolite dyke
- SRD rhyolite dyke, Sloko Fm
- qfp quartz feldspar porphyry

Mafic Extrusive Rocks

- BAU basalt undivided
- BFL basalt flow
- BFLX basalt flow breccia
- BTF basalt tuff, undivided
- BAT basalt ash tuff
- BLAT basalt lapilli and ash tuff
- BLT basalt lapilli tuff
- BXLT basalt crystal lapilli tuff
- BFX basalt fragmental
- BDF basalt debris flow
- BAHY basalt hyaloclastite

Intermediate Extrusive Rocks

- AND andesite undivided
- ANDev evolved andesite
- AFL andesite flow
- AAT andesite ash tuff
- ALAT andesite lapilli and ash tuff
- AFX andesite fragmental
- DAU dacite, undivided
- DFL dacite flow
- DFLX dacite flow breccia
- DTF dacite tuff, undivided
- DAT dacite ash tuff
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RFL rhyolite flow
- RFLX rhyolite flow breccias
- RTF rhyolite tuff, undivided
- RAT rhyolite ash tuff
- RLAT rhyolite lapilli and ash tuff
- RLT rhyolite lapilli tuff
- RXLT rhyolite crystal lapilli tuff
- RFX rhyolite fragmental, coars
- RDF rhyolite debris flow
- RLS Rhyolite Lapilli Stone
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- CHT Chert
- LS limestone
- VSD Volcanic Sedimentary
- ARG argillite / tuffaceous
- SH shale (fissile)
- SLT siltstone / tuffaceous

Mineralized / Alteration

- MSX massive sulphides
- SMSX semi-massive sulphides
- SSX stringer zone sulphides
- SCBX sulphide clast breccia
- SSTK sulphide stockwork
- CUF copper facies
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies
- CHF chert facies
- GYF gypsum facies
- QSP quartz sericite pyrite
- CSP chlorite sericite pyrite
- CSS chlorite sericite alteration
- SBX hydrothermal breccia (sx)

Faults / Structures

- FAUL fault
- FLZN fault zone
- BX breccia, undivided
- FBX fault breccia
- FBXcr milled fault breccia (crush)
- QZVN quartz vein
- QZBX quartz vein breccia
- QSTK quartz stockwork, silica
- QCBX quartz carbonate vein

suffix codes

- 1 feldspar
- 2 quartz
- 3 amphibole
- 4 pyroxene
- 5 amygdaloidal
- qp quartz porphyry
- fp feldspar porphyry
- qfp quartz feldspar porphyry

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

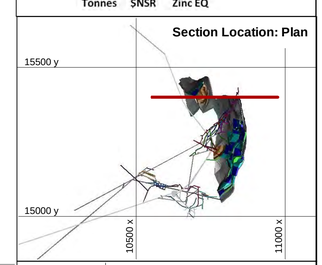
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

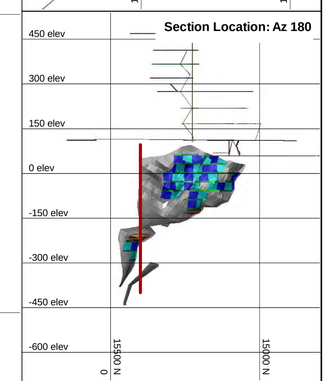
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15400N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15400N; ±10m	21 Nov 2014

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
- BDF basalt debris flow
- BAT basalt ash tuff
- BAHY basalt hyaloclastite
- BLAT basalt lapilli and ash tuff

Intermediate Extrusive Rocks

- AND andesite undivided
- DAU dacite, undivided
- ANDev evolved andesite
- DFL dacite flow
- AFL andesite flow
- DFLX dacite flow breccia
- AAT andesite ash tuff
- DTF dacite tuff, undivided
- ALAT andesite lapilli and ash tuff
- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

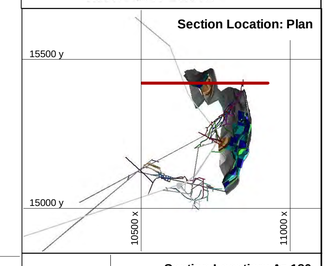
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name

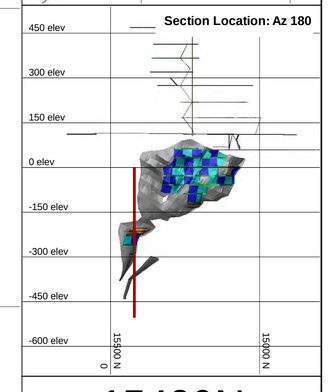
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15420N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az090 Sect 15420N; ±10m	21 Nov 2014

0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
-400 elev
-450 elev
-500 elev
10500 x
10600 x
10700 x
10750 x
10800 x
10850 x

TCU11185
TCU11178
TCU11170
TCU93-48
TCU11175
TCU11169
TCU11161
TCU11183
TCU11173
TCU11181
TCU93-41
TCU11180
TCU11172
TCU93-58
TCU11174
TCU11159
TCU93-56
TCU04114
TCU11186
TCU11176
TCU94066
TCU11182
TCU04121
TCU91-31
TCU11158
TCU93-53
TCU94062
TCU11177
TCU04107
TCU04126
TCU04097
TCU04110
TCU04104
TCU04118
TCU90-22
TCU04117
TCU04119
TCU11189
TCU04115
TCU04106
TCU04096
TCU91-30
TCU90-25
TCU11179
TCU90-24
TCU04100
TCU04112

G01_LT_ST_02_-260
3.05 72.0 1.36 0.49 7.33
8,429t $275.21 27.4 Zn EQ

G01_LT_DO_01_-260
3.43 74.8 1.51 0.53 8.53
4,088t $308.92 30.8 Zn EQ

Geological Legend

Surface / End

- CASE casing
- EOH end of hole
- OVB overburden
- LOST

Intrusive Rocks

- BIN basalt intrusion
- RDK rhyolite dyke
- BDK basalt dyke
- SRD rhyolite dyke, Sloko Fm
- ADK andesite dyke
- qfp quartz feldspar porphyry
- FDK felsic dyke

Mafic Extrusive Rocks

- BAU basalt undivided
- BLT basalt lapilli tuff
- BFL basalt flow
- BXLT basalt crystal lapilli tuff
- BFLX basalt flow breccia
- BFX basalt fragmental
- BTF basalt tuff, undivided
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- BAT basalt ash tuff
- BAHY basalt hyaloclastite
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- DAT dacite ash tuff
- AFX andesite fragmental
- DLT dacite lapilli tuff
- DBF dacite debris flow

Felsic Extrusive Rocks

- RYU rhyolite, undivided
- RLT rhyolite lapilli tuff
- RFL rhyolite flow
- RXLT rhyolite crystal lapilli tuff
- RFLX rhyolite flow breccias
- RFX rhyolite fragmental, coars
- RTF rhyolite tuff, undivided
- RDF rhyolite debris flow
- RAT rhyolite ash tuff
- RLS Rhyolite Lapilli Stone
- RLAT rhyolite lapilli and ash tuff
- FEVL felsic volcanics, undivided

Sedimentary Rocks

- AGGL agglomerate
- ARG argillite / tuffaceous
- CHT Chert
- SH shale (fissile)
- LS limestone
- SLT siltstone / tuffaceous
- VSD Volcanic Sedimentary

Mineralized / Alteration

- MSX massive sulphides
- CHF chert facies
- SMSX semi-massive sulphides
- GYF gypsum facies
- SSX stringer zone sulphides
- QSP quartz sericite pyrite
- SCBX sulphide clast breccia
- CSP chlorite sericite pyrite
- SSTK sulphide stockwork
- CSS chlorite sericite alteration
- CUF copper facies
- SBX hydrothermal breccia (sx)
- ZNF zinc facies
- PBF lead facies
- PYF pyrite facies

Faults / Structures

- FAUL fault
- QZVN quartz vein
- FLZN fault zone
- QZBX quartz vein breccia
- BX breccia, undivided
- QSTK quartz stockwork, silica
- FBX fault breccia
- QCBX quartz carbonate vein
- FBXcr milled fault breccia (crush)

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

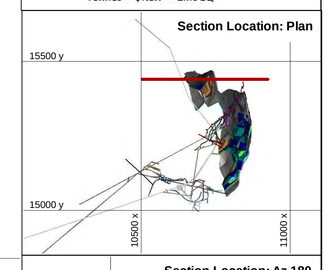
Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

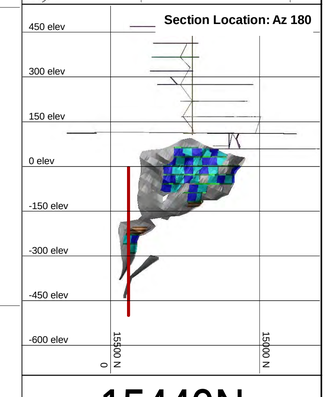
- Development
- Cut and Fill
- Primary
- Longitudinal
- Secondary

Stope_Name
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)
Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15440N

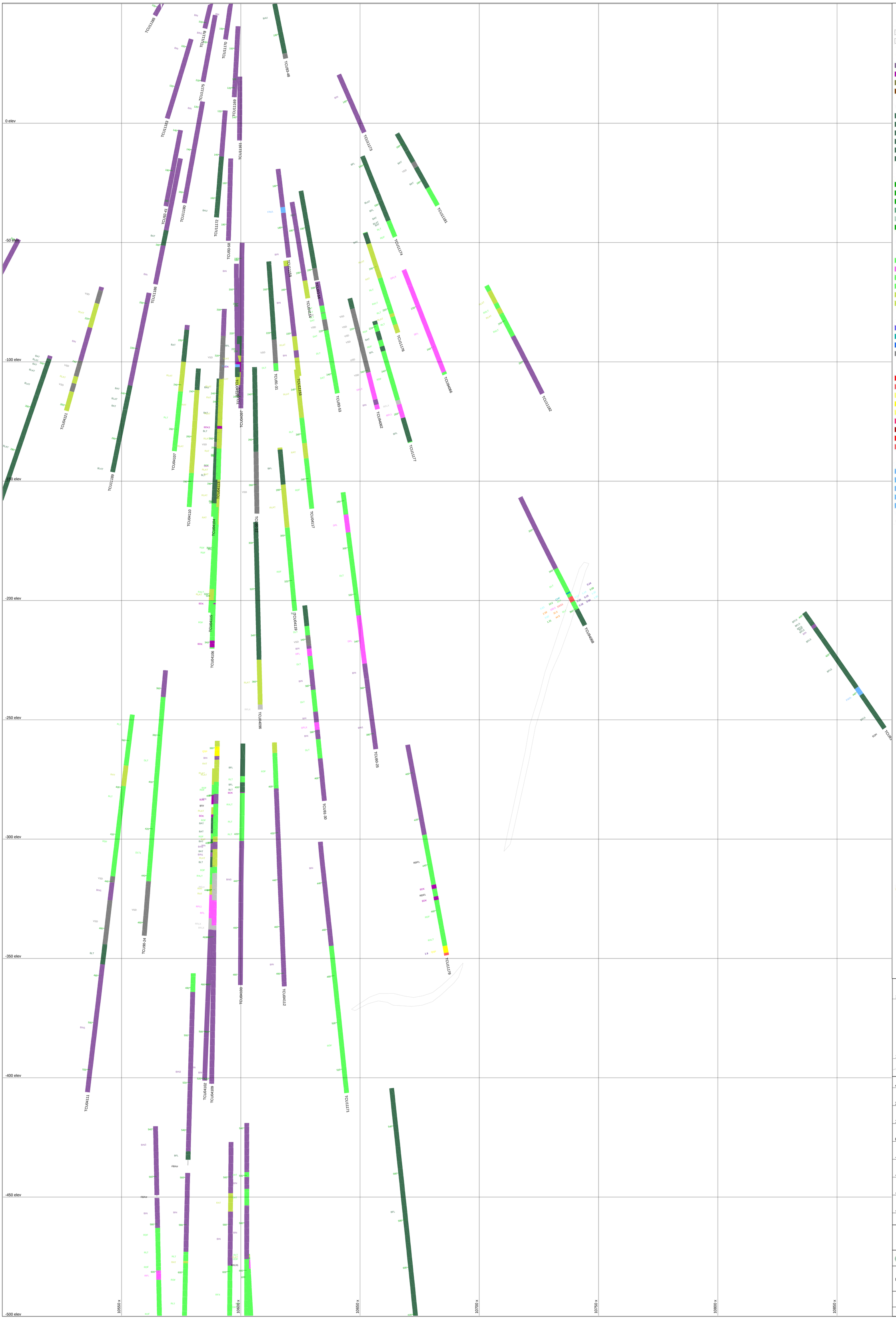
CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az090 Sect 15440N; ±10m	21 Nov 2014



Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
BDK	basalt dyke	SRD	rhyolite dyke, Sloko Fm
ADK	andesite dyke	qfp	quartz feldspar porphyry
FDK	felsic dyke		

Mafic Extrusive Rocks

BAU	basalt undivided	BLT	basalt lapilli tuff
BFL	basalt flow	BXLT	basalt crystal lapilli tuff
BFLX	basalt flow breccia	BFX	basalt fragmental
BTF	basalt tuff, undivided	BDF	basalt debris flow
BAT	basalt ash tuff	BAHY	basalt hyaloclastite
BLAT	basalt lapilli and ash tuff		

Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
ANDev	evolved andesite	DFL	dacite flow
AFL	andesite flow	DFLX	dacite flow breccia
AAT	andesite ash tuff	DTF	dacite tuff, undivided
ALAT	andesite lapilli and ash tuff	DAT	dacite ash tuff
AFX	andesite fragmental	DLT	dacite lapilli tuff
		DBF	dacite debris flow

Felsic Extrusive Rocks

RYU	rhyolite, undivided	RLT	rhyolite lapilli tuff
RFL	rhyolite flow	RXLT	rhyolite crystal lapilli tuff
RFLX	rhyolite flow breccias	RFX	rhyolite fragmental, coars
RTF	rhyolite tuff, undivided	RDF	rhyolite debris flow
RAT	rhyolite ash tuff	RLS	Rhyolite Lapilli Stone
RLAT	rhyolite lapilli and ash tuff	FEVL	felsic volcanics, undivided

Sedimentary Rocks

AGGL	agglomerate	ARG	argillite / tuffaceous
CHT	Chert	SH	shale (fissile)
LS	limestone	SLT	siltstone / tuffaceous
VSD	Volcanic Sedimentary		

Mineralized / Alteration

MSX	massive sulphides	CHF	chert facies
SMSX	semi-massive sulphides	GYF	gypsum facies
SSX	stringer zone sulphides	QSP	quartz sericite pyrite
SCBX	sulphide clast breccia	CSP	chlorite sericite pyrite
SSTK	sulphide stockwork	CSS	chlorite sericite alteration
CUF	copper facies	SBX	hydrothermal breccia (sx)
ZNF	zinc facies		
PBF	lead facies		
PYF	pyrite facies		

Faults / Structures

FAUL	fault	QZVN	quartz vein
FLZN	fault zone	QZBX	quartz vein breccia
BX	breccia, undivided	QSTK	quartz stockwork, silica
FBX	fault breccia	QCBX	quartz carbonate vein
FBXcr	milled fault breccia (crush)		

suffix codes

1	feldspar	qp	quartz porphyry
2	quartz	fp	feldspar porphyry
3	amphibole	qfp	quartz feldspar porphyry
4	pyroxene		
5	amygdaloidal		

Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

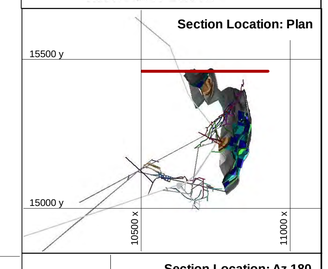
Development
Cut and Fill
Primary
Longitudinal
Secondary

Stope_Name

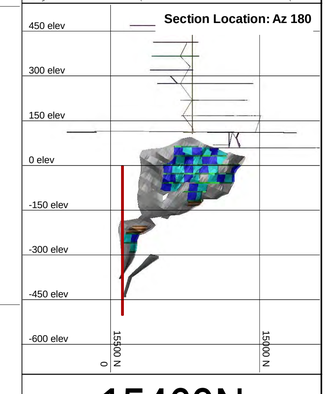
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15460N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

Scale 1:500 (-5 0 5 10 15 20 25 metres)

Drawn by: BA	Vert Az090 Sect 15460N; ±10m	21 Nov 2014

0 elev
-50 elev
-100 elev
-150 elev
-200 elev
-250 elev
-300 elev
-350 elev
-400 elev
-450 elev
-500 elev
10550 x
10600 x
10650 x
10700 x
10750 x
10800 x
10850 x

Geological Legend

Surface / End

CASE	casing	EOH	end of hole
OVB	overburden	LOST	

Intrusive Rocks

BIN	basalt intrusion	RDK	rhyolite dyke
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Intermediate Extrusive Rocks

AND	andesite undivided	DAU	dacite, undivided
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Drillhole Trace Information

Au(g/t) Ag(g/t) Lithology Depth(m) DH Trace Cu(%) Pb (%) Zn(%)

2014 Stope Information

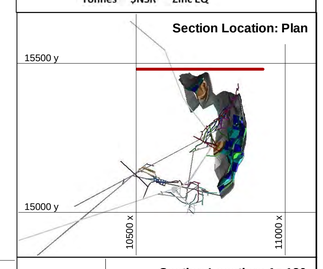
Development
Cut and Fill
Longitudinal
Primary
Secondary

Stope_Name

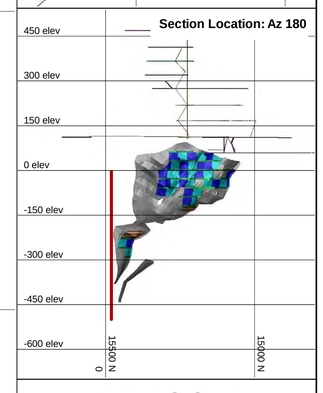
Au (g/t) Ag (g/t) Cu (%) Pb (%) Zn (%)

Tonnes $NSR Zinc EQ

Section Location: Plan



Section Location: Az 180



15480N

CHIEFTAIN METALS INC

Tulsequah Chief G Lenses: 2014 JDS Mine Plan Stopes

Resource Lenses(grey), 2014 Stopes(coloured), All Drilling with Resource two metre capped Assay Composites

-5 0 5 10 15 20 25 metres

Scale 1:500

Drawn by: BA	Vert Az090 Sect 15480N; ±10m	21 Nov 2014