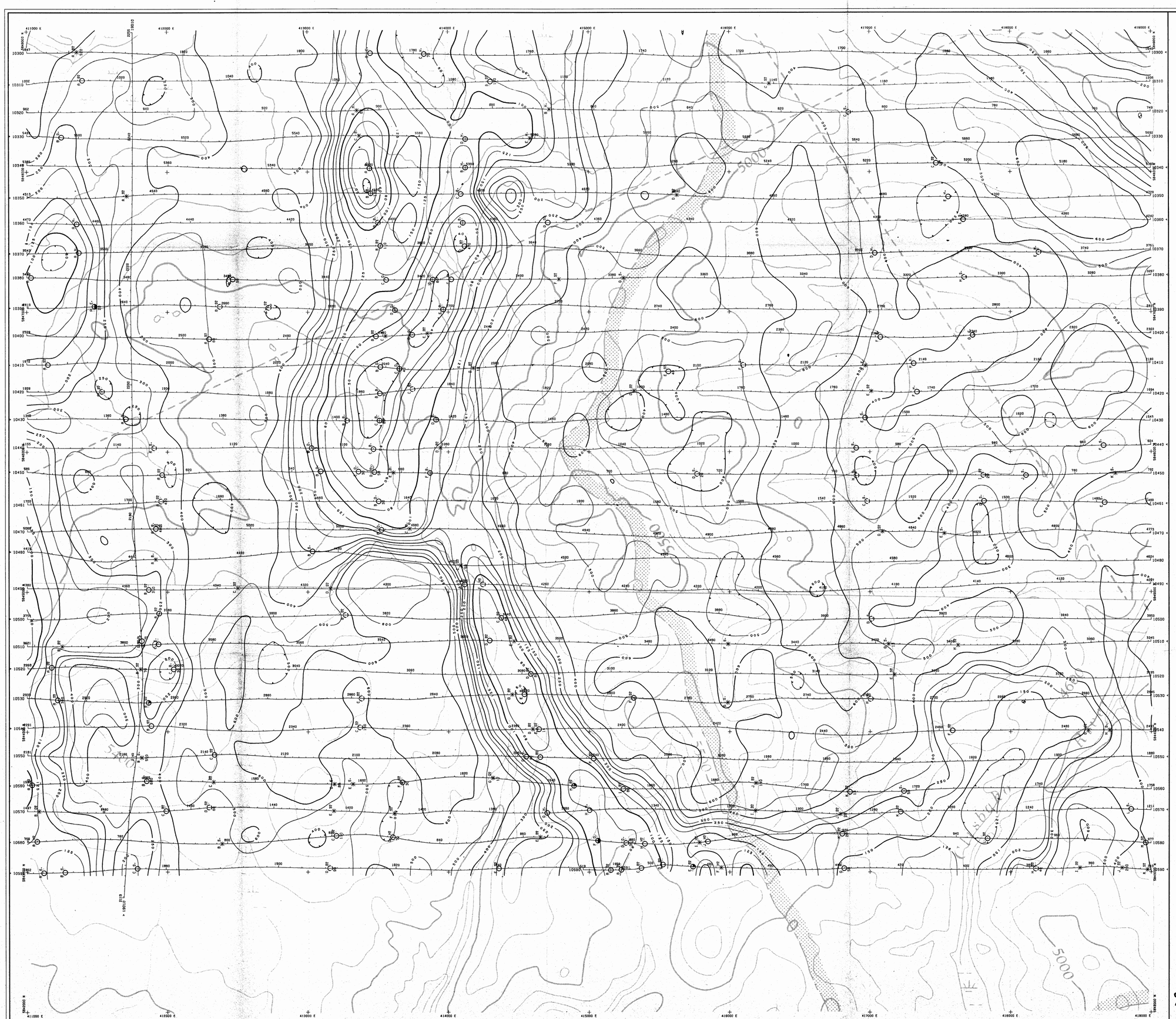


TECHNICAL SUMMARY

Navigation . . . . . Sercel real time differential GPS positioning
Data reduction grid interval . . . . 50 metres
Terrain clearance . . . . . Helicopter 60 m
Electromagnetic sensor 30 m
Magnetometer, VLF receiver 40 m

Data sampling interval . . . . . 0.1 second
Magnetometer / sensitivity . . . . Scintrex cesium / 0.01 nT
VLF receiver / sensitivity . . . . Herz 2A / 15
Electromagnetic system . . . . . DIGHEM*

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◉	50–100 siemens
5	◕	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	<1 siemens
–	✳	Questionable anomaly

Anomaly Identifier
Interpretive symbol
Depth is greater than
- 15 m
- 30 m
- 45 m
- 60 m
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half spoce")
E	Edge of broad conductor ("edge of half spoce")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

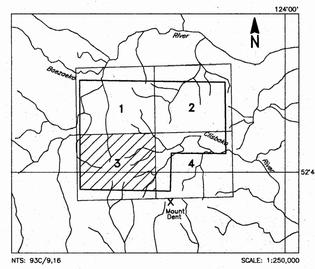
Flight direction
Flight line number
11020
Refilght Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm-m at 10 intervals per decade

LOCATION MAP



NTS: 93C/9,16
SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

RESISTIVITY
900 Hz COPLANAR

DIGHEM * SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 3

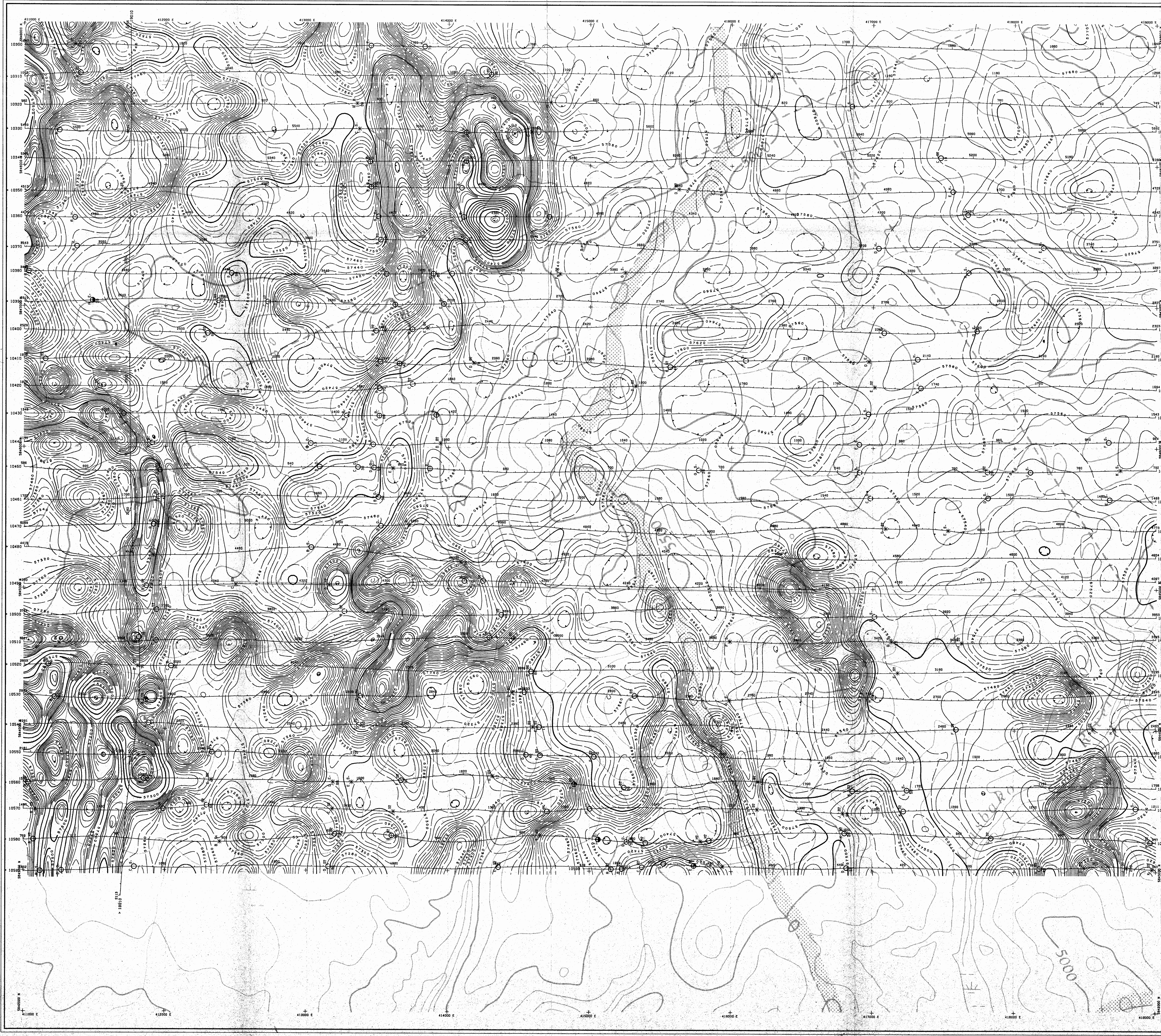
DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 MI
Scale 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DIGHEM
Quality and Service in Airborne Geophysics

23,630



TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer. VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◒	20–50 siemens
4	⊕	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier
Interpretive symbol
Depth is greater than
· 15 m
: 30 m
⋮ 45 m
⋮ 60 m
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

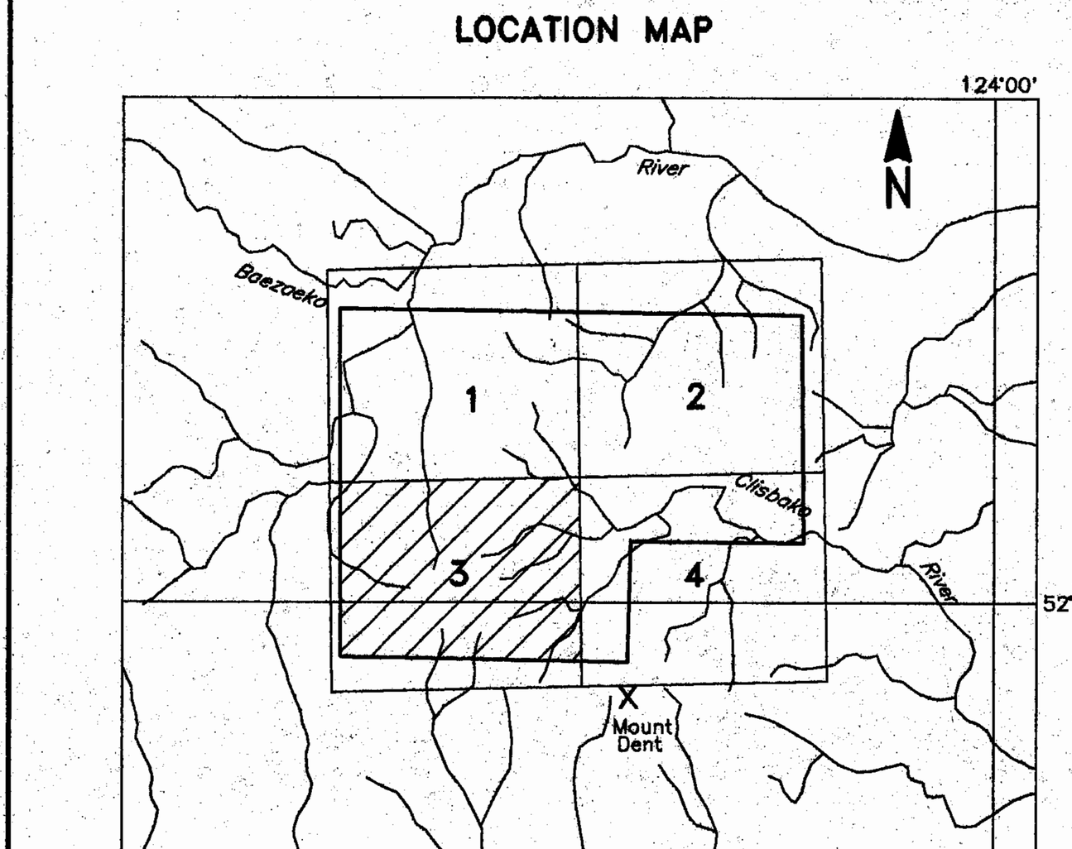
Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

TOTAL FIELD MAGNETIC CONTOURS

thick line	500 nT
line	100 nT
thin line	20 nT
dashed line	10 nT
ellipse	magnetic low

Magnetic inclination within the survey area: 74 degrees

LOCATION MAP



NTS: 93C/9,16   SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

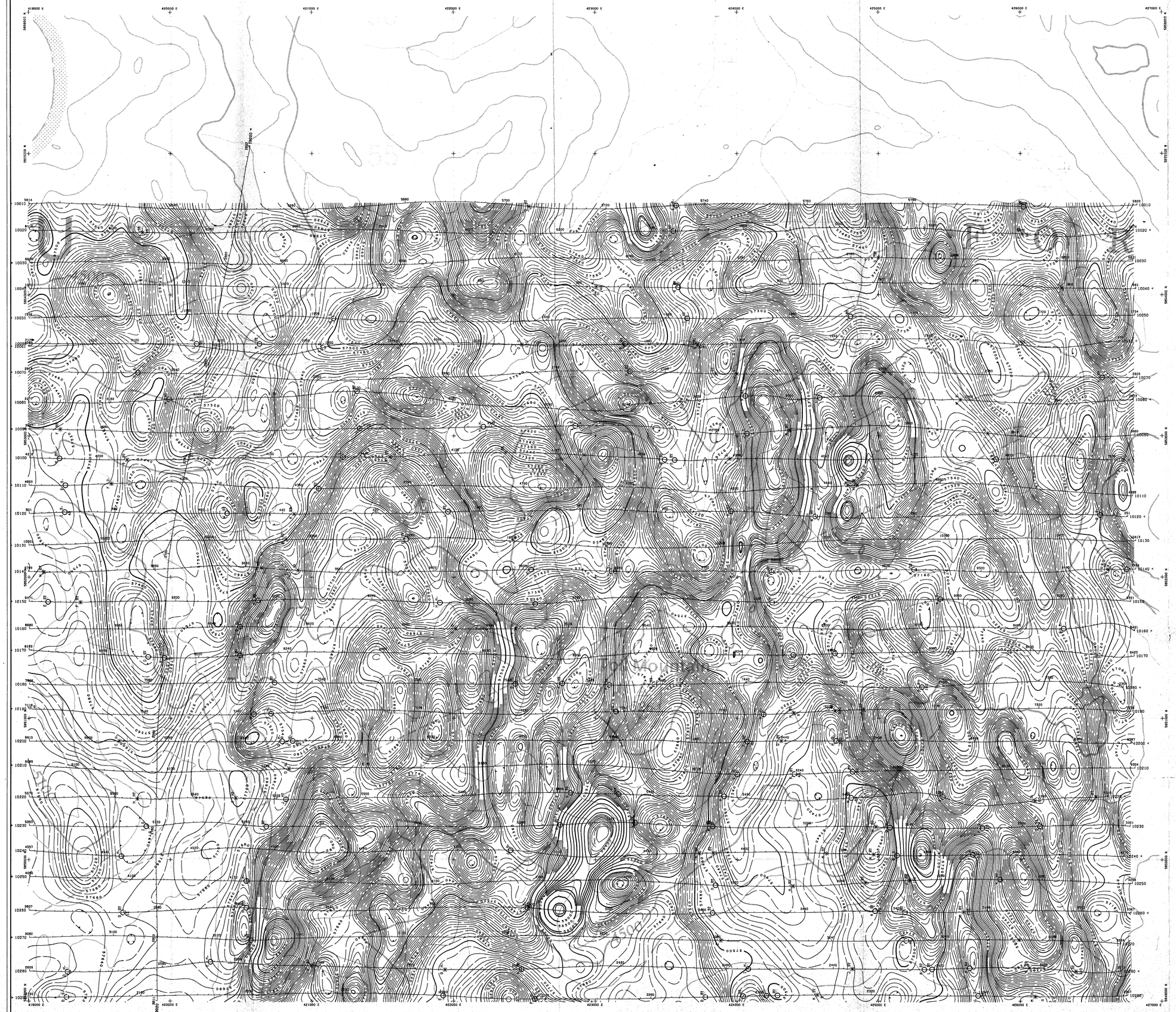
TOTAL FIELD MAGNETICS

DIGHEM^V SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 3

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0.5 Mi
Scale 1:10 000

DIGHEM
Quality and Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	< 1 siemens
–	✳	Questionable anomaly

Anomaly Identifier — Interpretive symbol — Inphase and Quadrature of coaxial coil is greater than

Depth is greater than
- 15 m
- 30 m
- 45 m
- 60 m

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

- 5 ppm
- 10 ppm
- 15 ppm
- 20 ppm

FLIGHT LINES WITH EM ANOMALIES

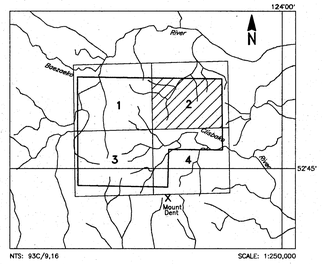
Flight direction
Flight line number — 11020 — Reflight Number / Line Number / Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

TOTAL FIELD MAGNETIC CONTOURS

- 500 nT
- 100 nT
- 20 nT
- 10 nT
- magnetic low

Magnetic inclination within the survey area: 74 degrees

LOCATION MAP



NTS: 93C/9,16 SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

TOTAL FIELD MAGNETICS

DIGHEM^V SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 2

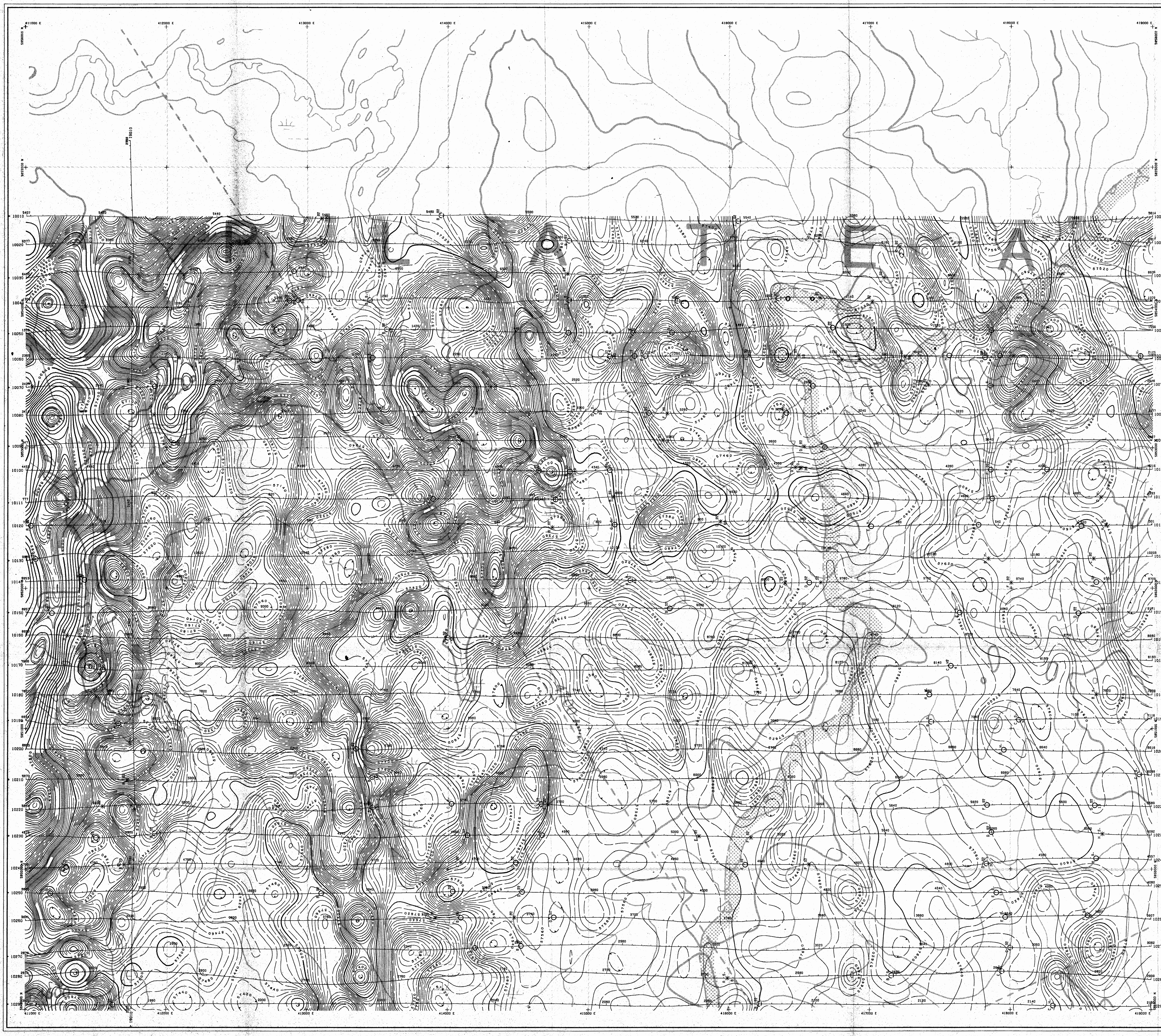
DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 MI
Scale 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DIGHEM
Quality and Service in Airborne Geophysics

23,630



TECHNICAL SUMMARY

Navigation . . . . Sercel real time differential GPS positioning
Data reduction grid interval . . . . 50 metres
Terrain clearance . . . . Helicopter 60 m
Electromagnetic sensor 30 m
Magnetometer, VLF receiver 40 m
Data sampling interval . . . . 0.1 second
Magnetometer / sensitivity . . . . . Scintrex cesium / 0.01 nT
VLF receiver / sensitivity . . . . . Herz 2A / 1%
Electromagnetic system . . . . . . DIGHEM^V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◒	20–50 siemens
4	⊕	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	*	Questionable anomaly

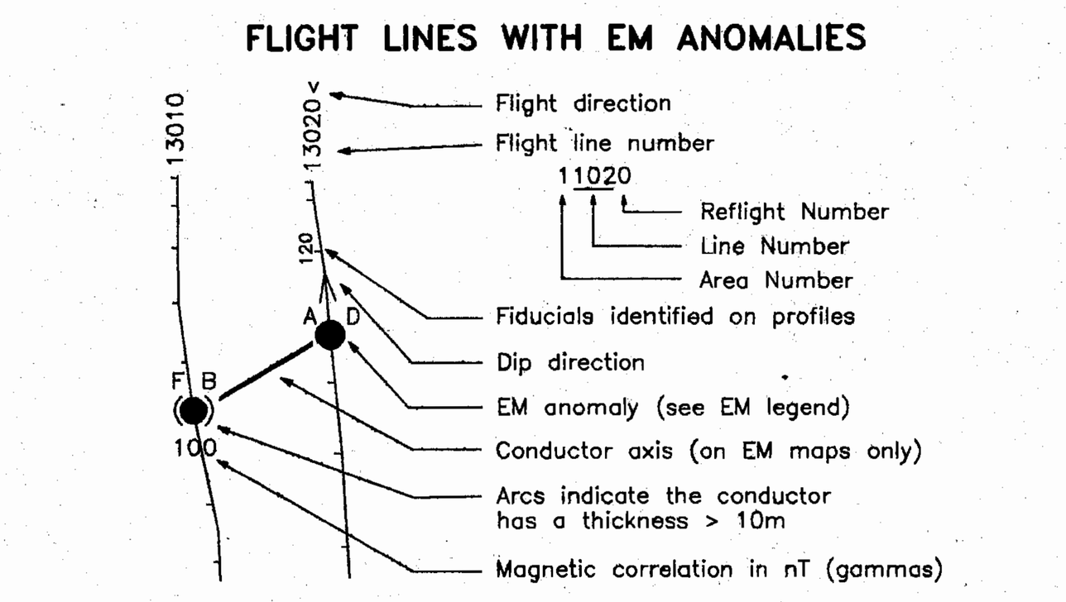
Anomaly identifier — Interpretive symbol

Depth is greater than: · 15 m; : 30 m; ⋮ 45 m; ⁞ 60 m

Inphase and Quadrature of coaxial coil is greater than: . 5 ppm; .. 10 ppm; ... 15 ppm; .... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

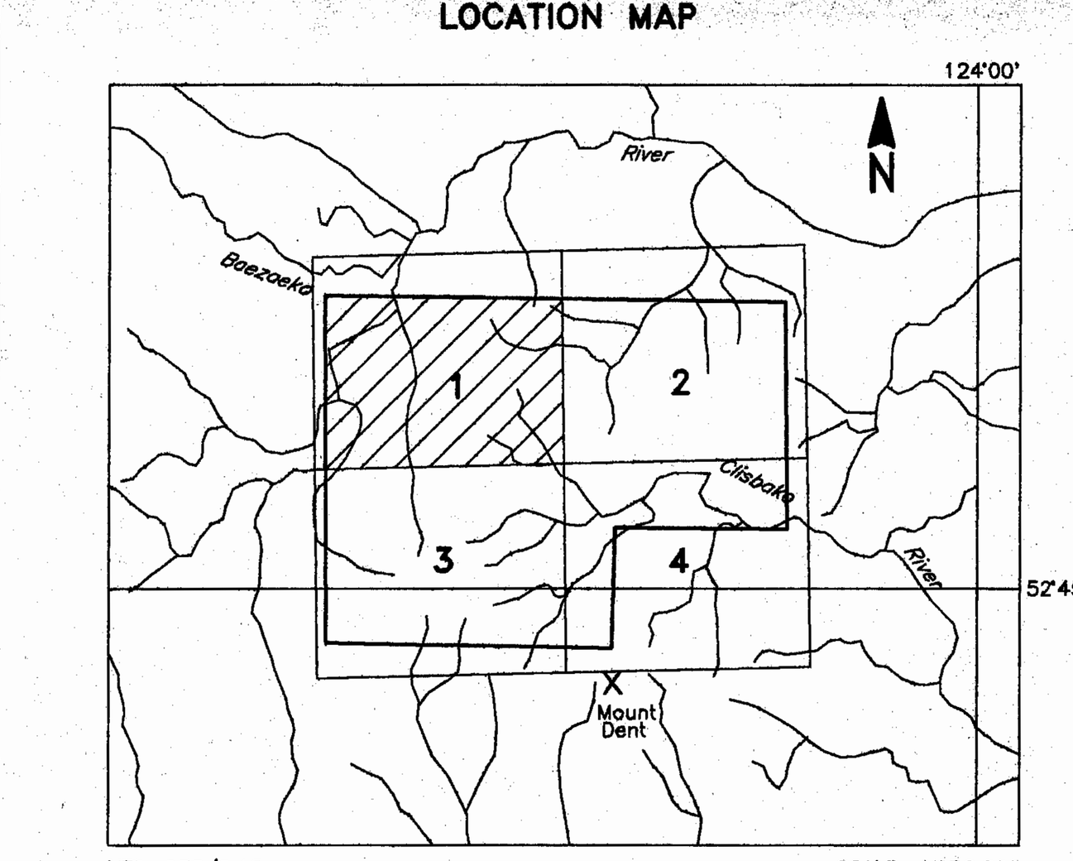


TOTAL FIELD MAGNETIC CONTOURS

. . . . 500 nT
. . . . 100 nT
. . . . 20 nT
. . . . 10 nT
. . . . magnetic low

Magnetic inclination within the survey area: 74 degrees

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

TOTAL FIELD MAGNETICS

DIGHEM^V SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 1

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 Mi
Scale 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DIGHEM
Quality and Service in Airborne Geophysics

23,630

TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM⁵

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier
Interpretive symbol
Depth is greater than
: 15 m
: 30 m
: 45 m
: 60 m
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

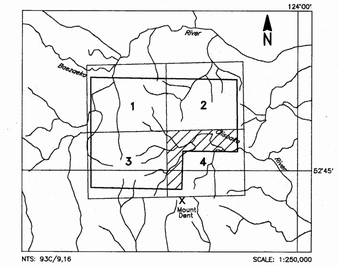
13010
13020
11020
Flight direction
Flight line number
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm-m at 10 intervals per decade

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

RESISTIVITY
56,000 Hz COPLANAR

DIGHEM⁵ SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 4

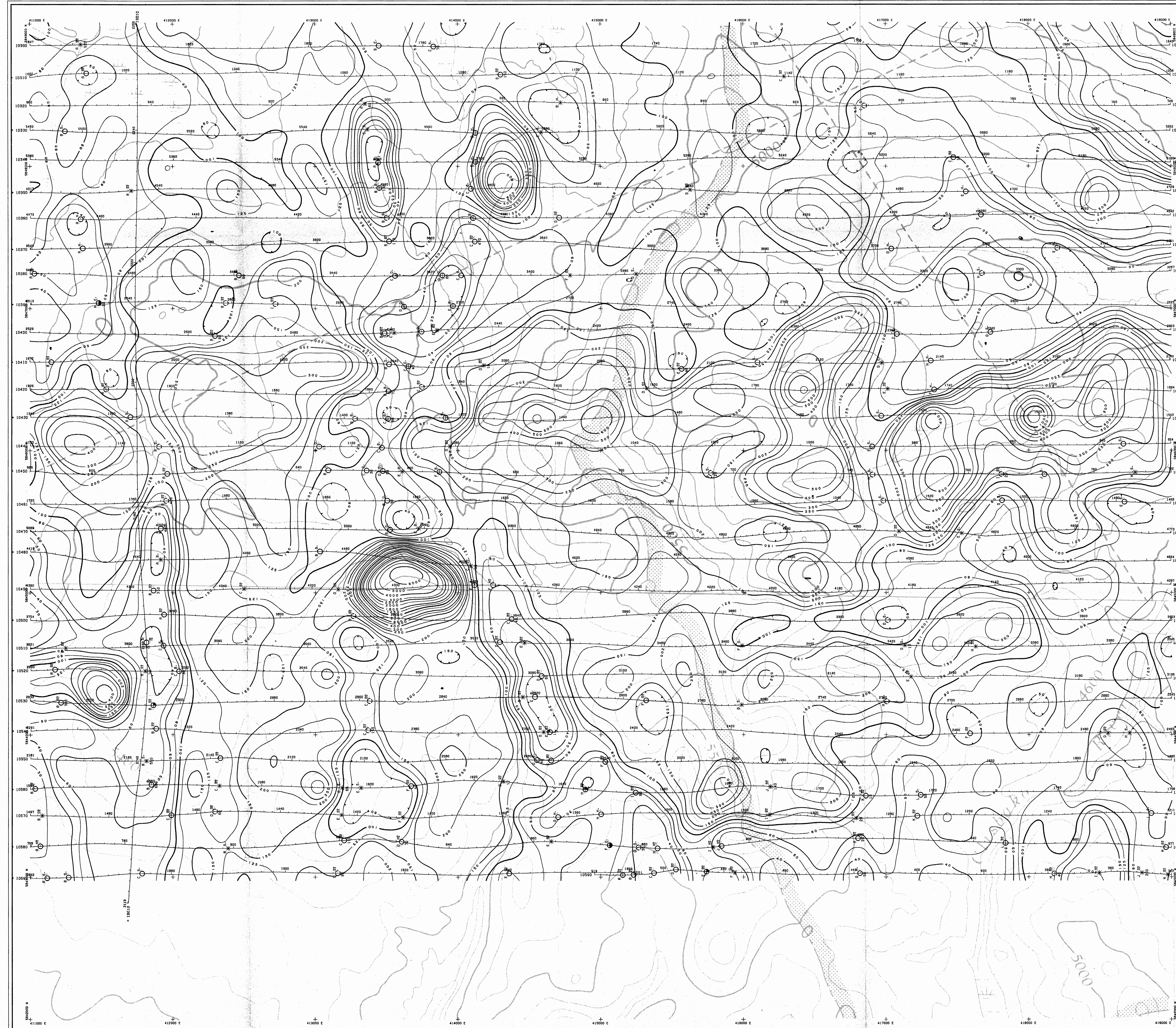
DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0.5 MI
SCALE 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DIGHEM
Quality and Service in Airborne Geophysics

23,630



TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer. VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◓	20–50 siemens
4	⊕	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

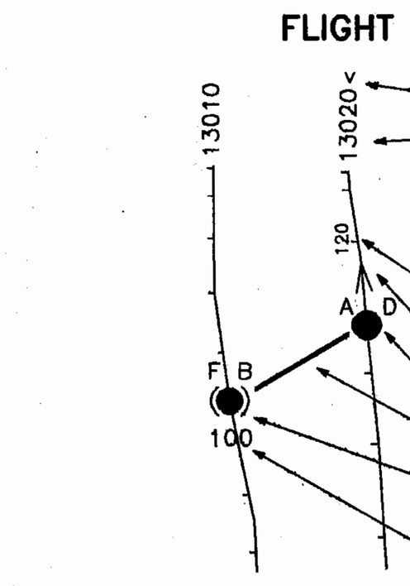
Anomaly identifier — Interpretive symbol

Depth is greater than: · 15 m, : 30 m, ⁝ 45 m, ⁞ 60 m

Inphase and Quadrature of coaxial coil is greater than: . 5 ppm, .. 10 ppm, ... 15 ppm, ... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

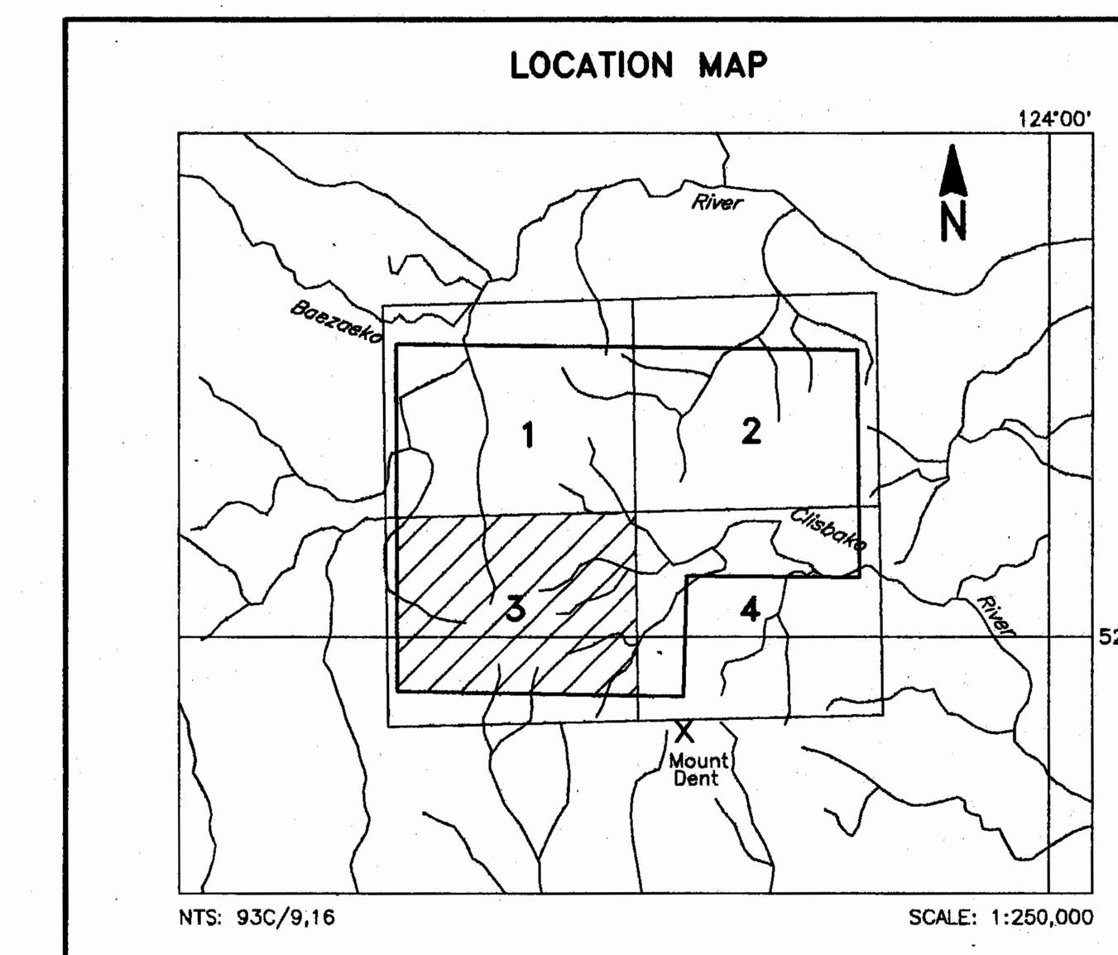


RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm–m at 10 intervals per decade

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

RESISTIVITY
56,000 Hz COPLANAR

DIGHEM^V SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 3

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 Mi
Scale 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DIGHEM
Quality and Service in Airborne Geophysics

23,630

TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter: 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^4

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier; Interpretive symbol; Depth is greater than: . 15 m, : 30 m, ⁝ 45 m, ⁞ 60 m; Inphase and Quadrature of coaxial coil is greater than: . 5 ppm, : 10 ppm, ⁝ 15 ppm, ⁞ 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

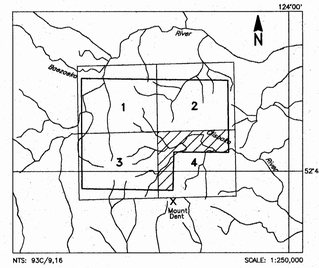
Flight direction
Flight line number: 1020 — Reflight Number; Line Number; Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

TOTAL FIELD MAGNETIC CONTOURS

500 nT
100 nT
20 nT
10 nT
magnetic low

Magnetic inclination within the survey area: 74 degrees

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

TOTAL FIELD MAGNETICS

DIGHEM^4 SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 4

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 Mi
Scale 1:10 000

DIGHEM
Quality and Service in Airborne Geophysics

TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM⁵

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

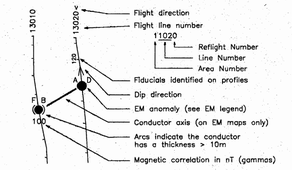
Anomaly identifier — Interpretive symbol

Depth is greater than
- . 15 m
- .. 30 m
- ... 45 m
- .... 60 m

Inphase and Quadrature of coaxial coil is greater than
- . 5 ppm
- .. 10 ppm
- ... 15 ppm
- .... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

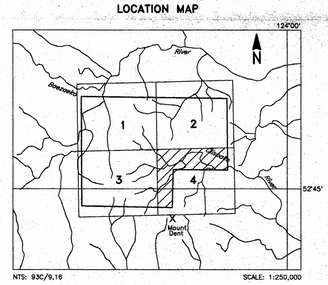


RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm–m at 10 intervals per decade

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

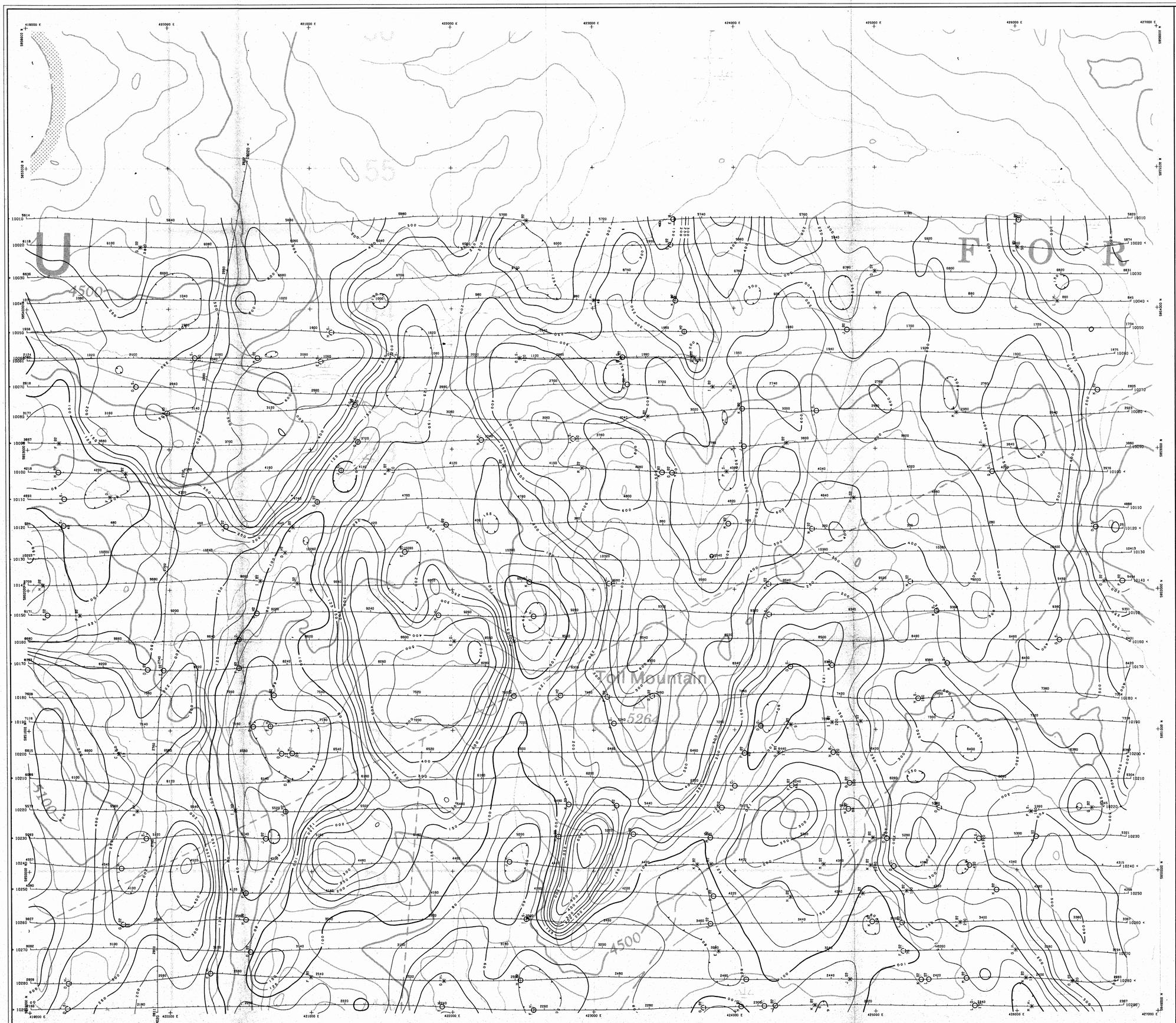
RESISTIVITY
7200 Hz COPLANAR

DIGHEM⁵ SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 4

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 Mi
Scale 1:10 000

DIGHEM — Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM*

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◉	50–100 siemens
5	⊕	20–50 siemens
4	◑	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	<1 siemens
–	✳	Questionable anomaly

Anomaly identifier → C1a ← Interpretive symbol

Depth is greater than
: 15 m
: 30 m
: 45 m
: 60 m

Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

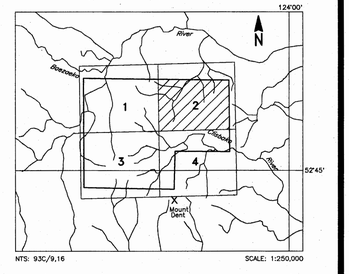
Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm-m at 10 intervals per decade

LOCATION MAP



NTS: 93C/9,16 SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

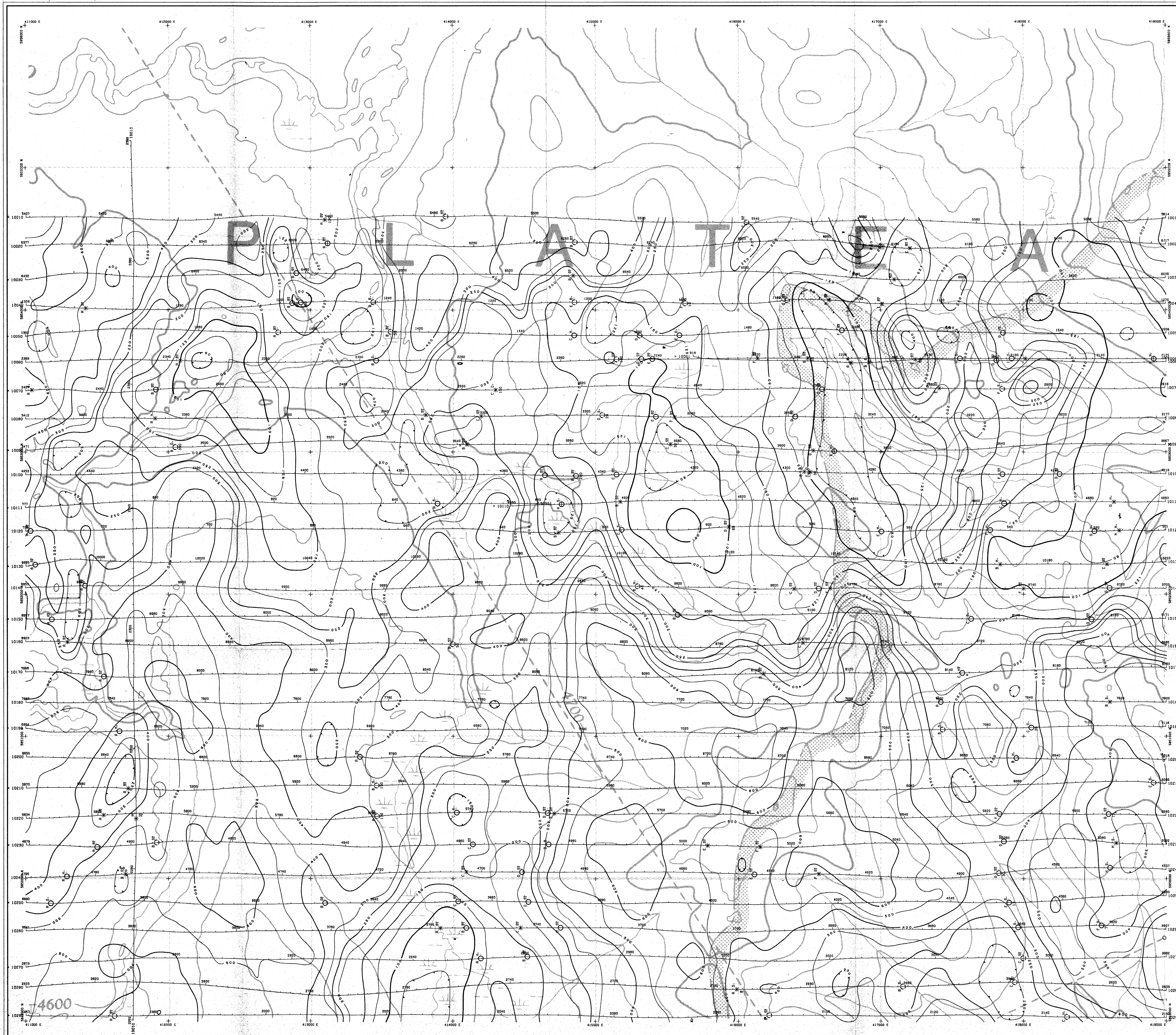
RESISTIVITY
900 Hz COPLANAR

DIGHEM * SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 2

DIGHEM SURVEYS & PROCESSING INC.

0.5 0 1.0 Km
Scale 1:10 000
0.5 Mi

DIGHEM
Quality and Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation . . . . Sercel real time differential GPS positioning
Data reduction grid interval . . . . 50 metres
Terrain clearance . . . . Helicopter 60 m
Electromagnetic sensor 30 m
Magnetometer. VLF receiver 40 m
Data sampling interval . . . . 0.1 second
Magnetometer / sensitivity . . . . . Scintrex cesium / 0.01 nT
VLF receiver / sensitivity . . . . . Herz 2A / 1%
Electromagnetic system . . . . . . DIGHEM V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◒	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	*	Questionable anomaly

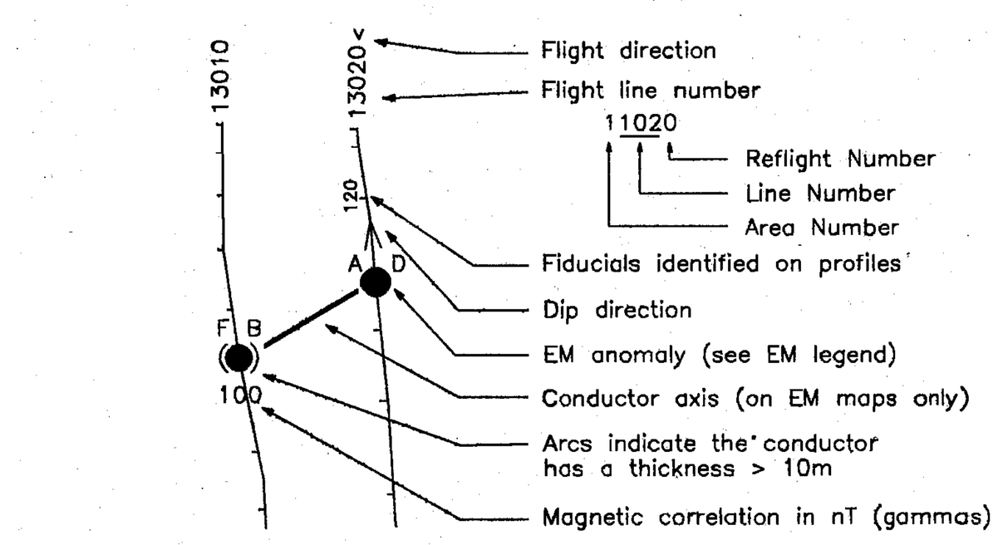
Anomaly identifier — Interpretive symbol

Depth is greater than: · 15 m, : 30 m, ⋮ 45 m, ⁞ 60 m

Inphase and Quadrature of coaxial coil is greater than: . 5 ppm, .. 10 ppm, ... 15 ppm, ... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

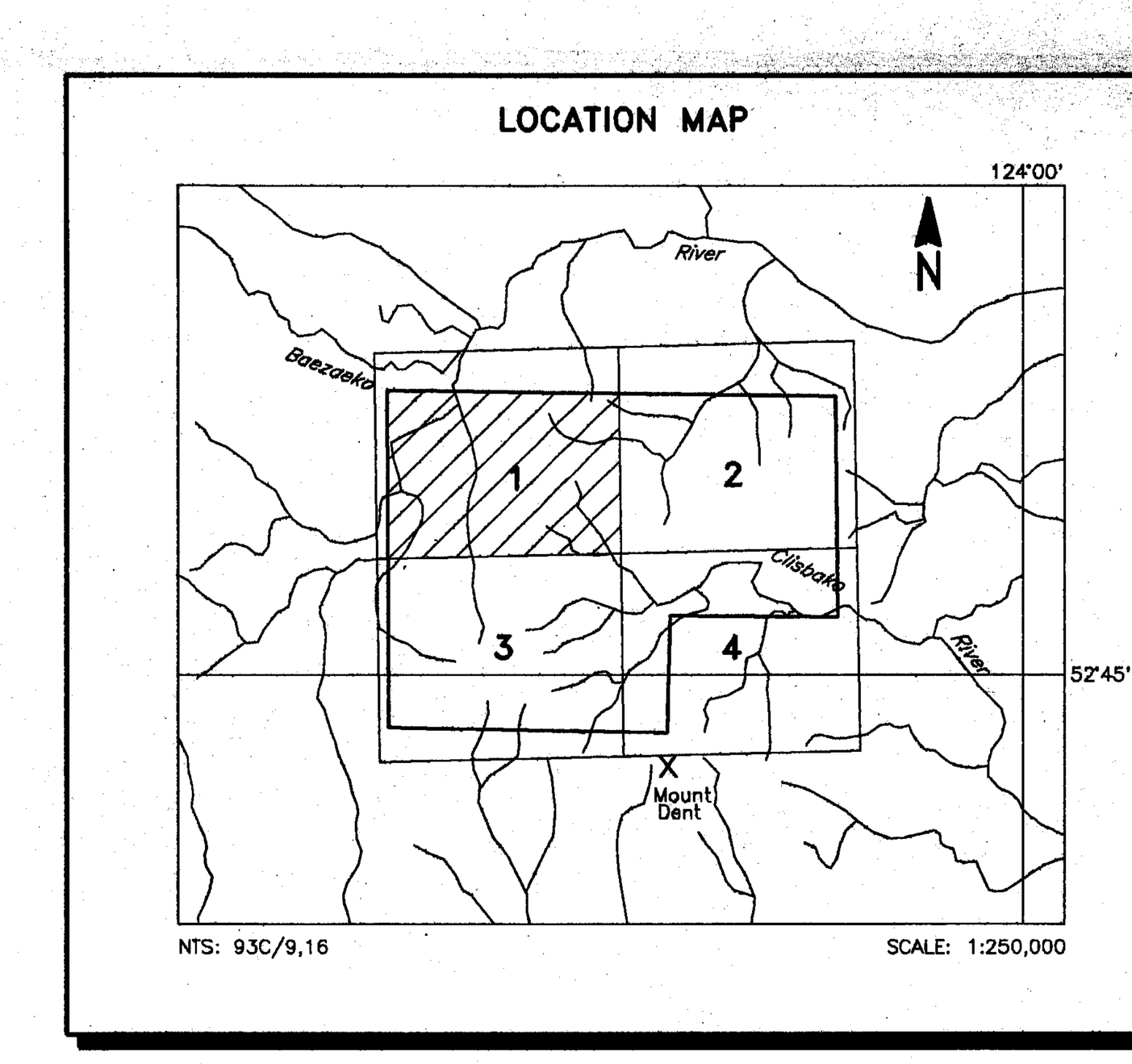


RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm–m at 10 intervals per decade

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

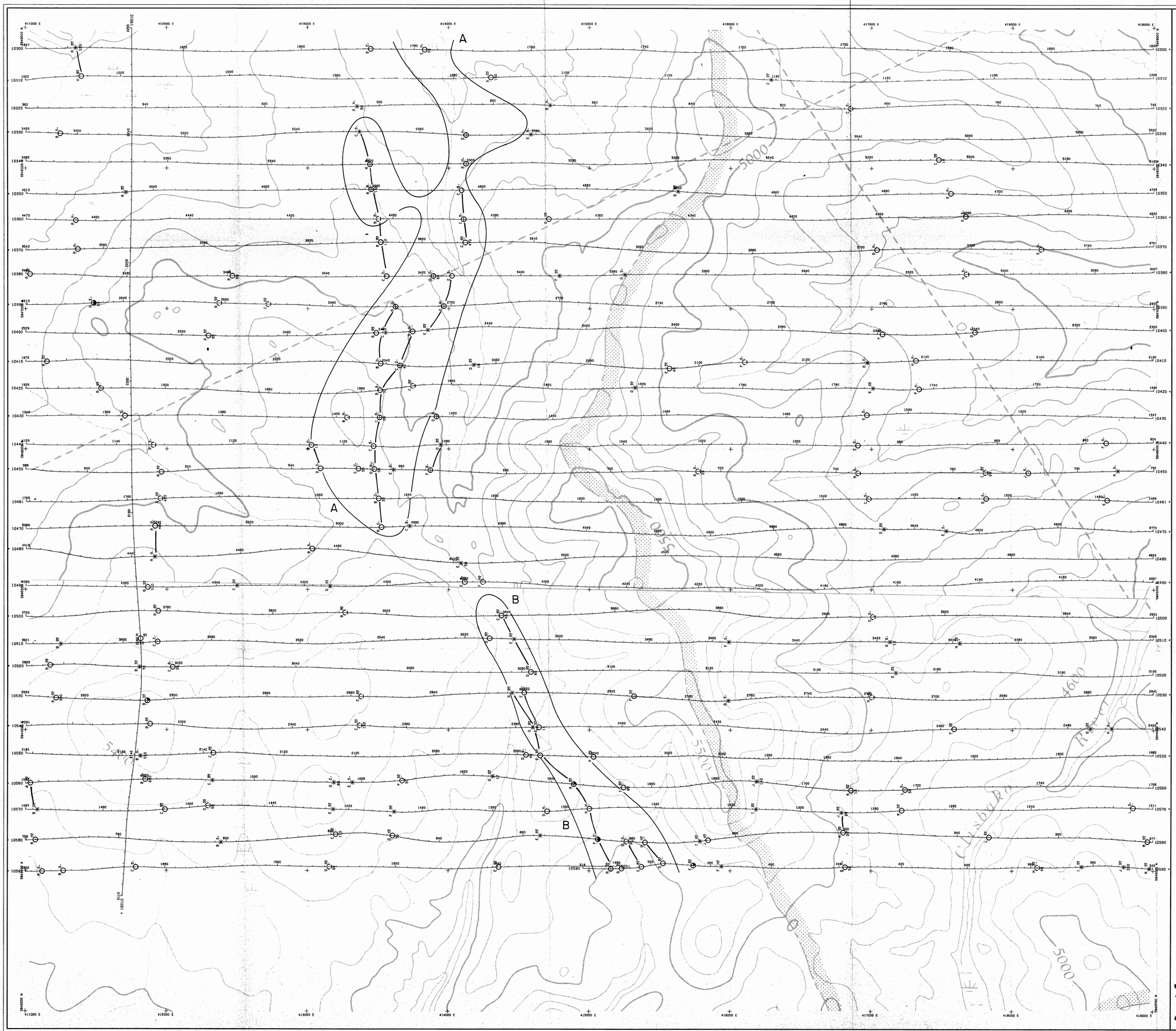
RESISTIVITY
900 Hz COPLANAR

DIGHEM V SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 1

DIGHEM SURVEYS & PROCESSING INC.

0 — 0.5 — 1.0 Km
0 — 0.5 Mi
Scale 1:10 000

DIGHEM
Quality and Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation . . . . . Sercel real time differential GPS positioning
Data reduction grid interval . . . 50 metres
Terrain clearance . . . . . Helicopter 60 m
Electromagnetic sensor 30 m
Magnetometer. VLF receiver 40 m
Data sampling interval . . . . . 0.1 second
Magnetometer / sensitivity . . . . . Scintrex cesium / 0.01 nT
VLF receiver / sensitivity . . . . . Herz 2A / 1%
Electromagnetic system . . . . . DIGHEM*

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	⌐○	< 1 siemens
–	✳	Questionable anomaly

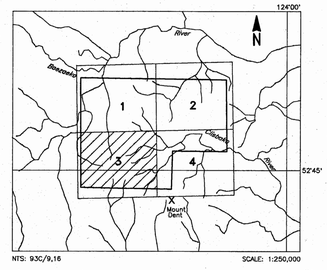
Anomaly identifier
Interpretive symbol
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm
Depth is greater than
· 15 m
: 30 m
⁝ 45 m
⁞ 60 m

Interpretive symbol	Conductor ("made")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

LOCATION MAP



NTS: 93C/9,16
SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

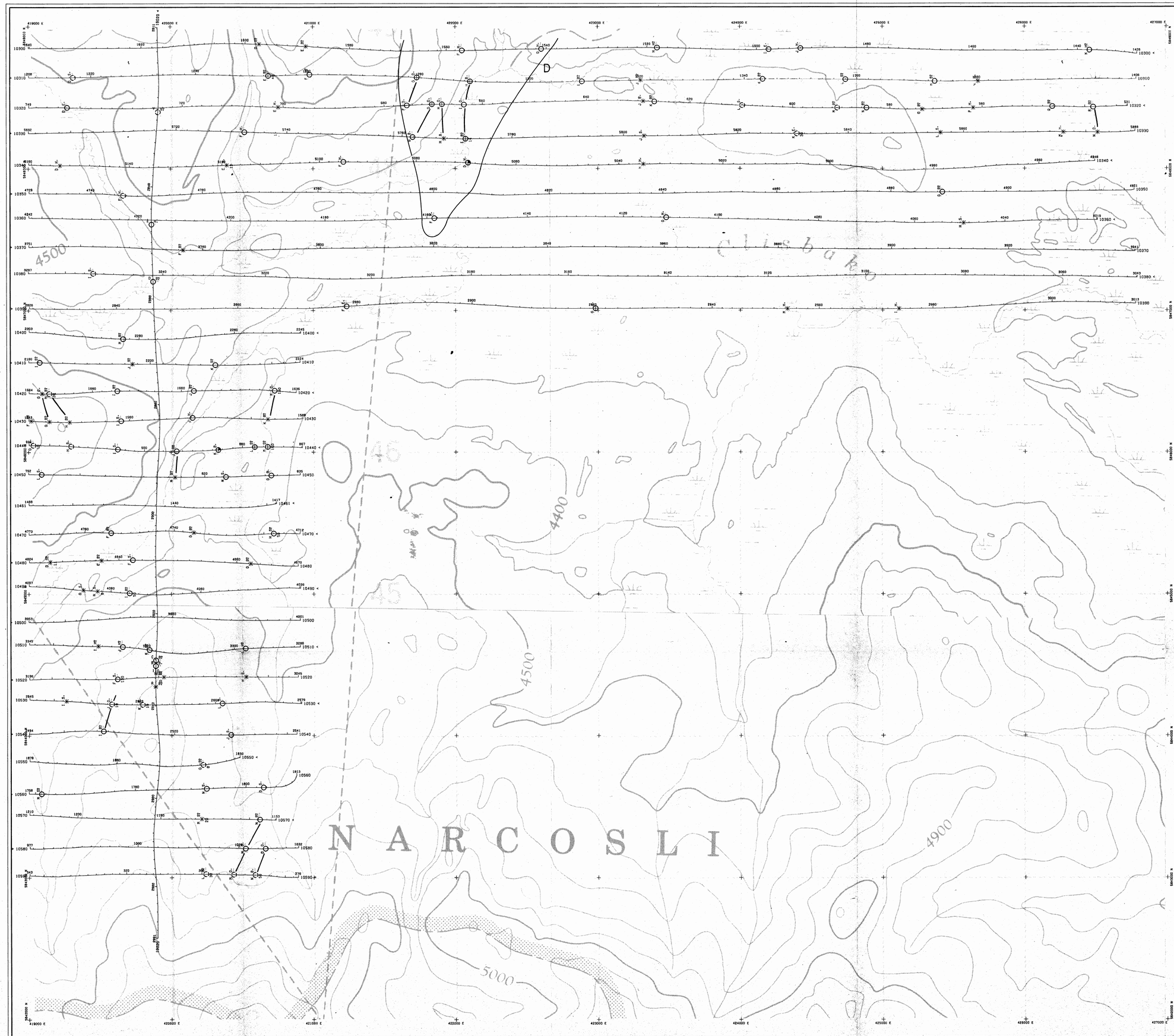
ELECTROMAGNETIC ANOMALIES

DIGHEM * SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 3

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0.5 Mi
SCALE 1:10 000

DIGHEM
Quality and Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM⁵

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	< 1 siemens
–	✳	Questionable anomaly

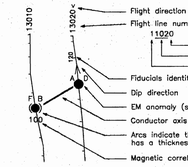
Anomaly identifier → Interpretive symbol

Depth is greater than
- . 15 m
- : 30 m
- : 45 m
- : 60 m

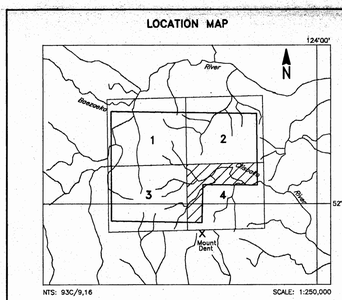
Inphase and Quadrature of coaxial coil is greater than
- 5 ppm
- .. 10 ppm
- ... 15 ppm
- .... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES



LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

ELECTROMAGNETIC ANOMALIES

DIGHEM⁵ SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 4

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 MI
Scale 1:10 000

TECHNICAL SUMMARY

Navigation . . . . . Sercel real time differential GPS positioning
Data reduction grid interval . . . . 50 metres
Terrain clearance . . . . . Helicopter 60 m
Electromagnetic sensor 30 m
Magnetometer, VLF receiver 40 m
Data sampling interval . . . . . 0.1 second
Magnetometer / sensitivity . . . . . Scintrex cesium / 0.01 nT
VLF receiver / sensitivity . . . . . Herz 2A / 1%
Electromagnetic system . . . . . DIGHEM*

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◕	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	< 1 siemens
–	✳	Questionable anomaly

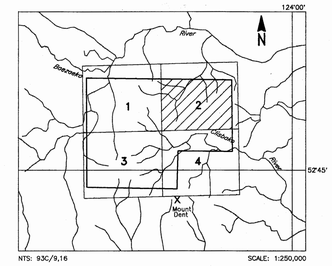
Anomaly identifier
Interpretive symbol
Depth is greater than
: 15 m
: 30 m
: 45 m
: 60 m
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

LOCATION MAP



NTS: 93C/9,16 SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

ELECTROMAGNETIC ANOMALIES

DIGHEM * SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 2

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0.5 MI
Scale 1:10 000

DIGHEM
Digital Service in Airborne Geophysics

TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM*

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◉	50–100 siemens
5	◉	20–50 siemens
4	◉	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	<1 siemens
–	✳	Questionable anomaly

Anomaly Identifier — Interpretive symbol — Depth is greater than: 15 m, 30 m, 45 m, 60 m

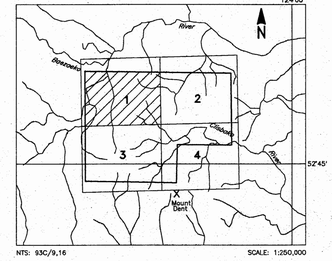
Inphase and Quadrature of coaxial coil is greater than: 6 ppm, 10 ppm, 15 ppm, 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

Flight direction
Flight line number
11020 — Reflight Number, Line Number, Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

LOCATION MAP



NTS: 93C/9,16 SCALE: 1:250,000

PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

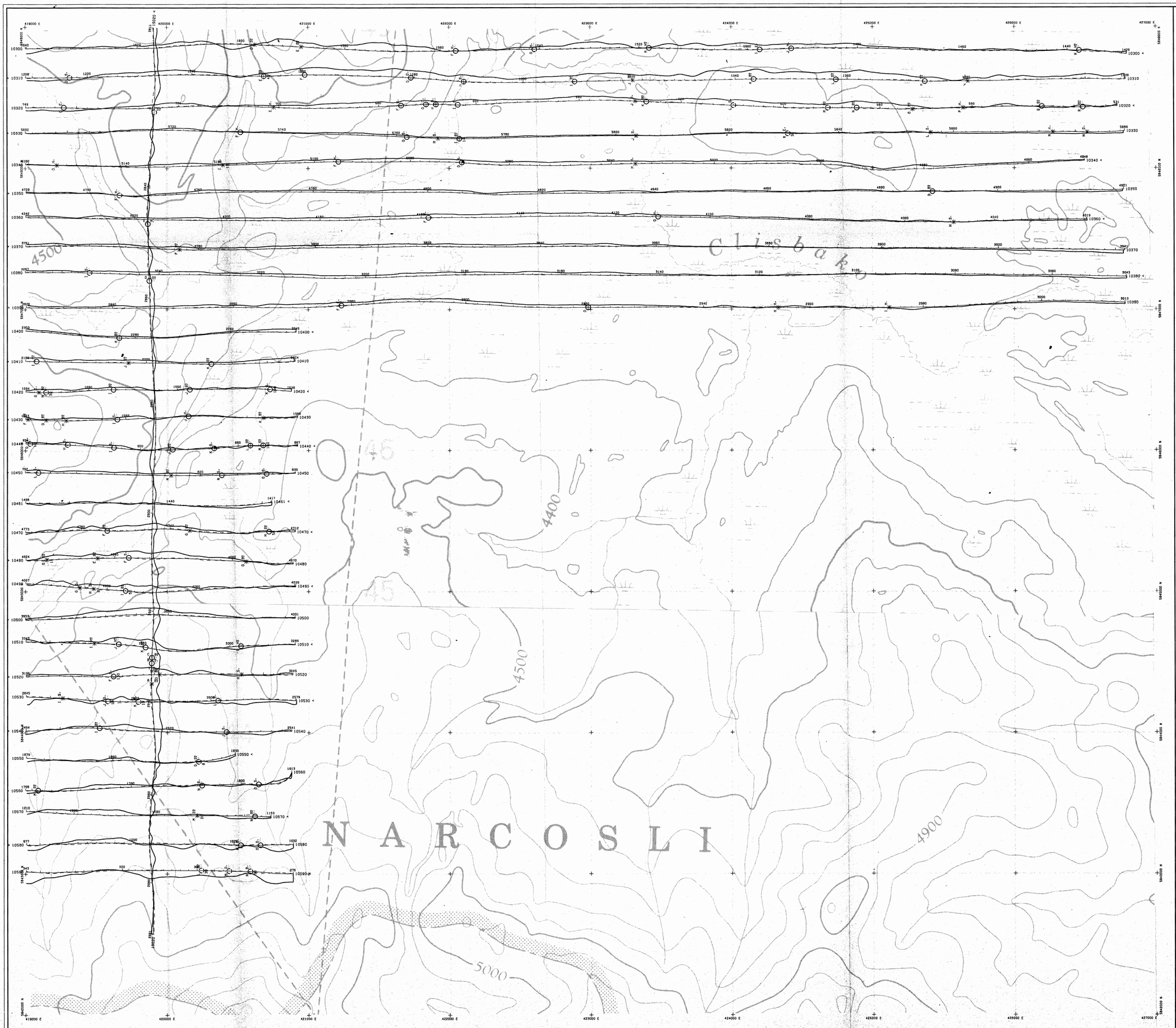
ELECTROMAGNETIC ANOMALIES

DIGHEM * SURVEY	NTS: 93C/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 1

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 MI
1:10 000

DIGHEM
Quality and Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation . . . . . Sercel real time differential GPS positioning
Data reduction grid interval . . . . 50 metres
Terrain clearance . . . . . Helicopter 60 m
Electromagnetic sensor 30 m
Magnetometer, VLF receiver 40 m
Data sampling interval . . . . . 0.1 second
Magnetometer / sensitivity . . . . Scintrex cesium / 0.01 nT
VLF receiver / sensitivity . . . . Herz 2A / 1%
Electromagnetic system . . . . . DIGHEM^V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◉	50–100 siemens
5	⊕	20–50 siemens
4	⊕	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier
Interpretive symbol
Depth is greater than
: 15 m
: 30 m
: 45 m
: 60 m
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("mode")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

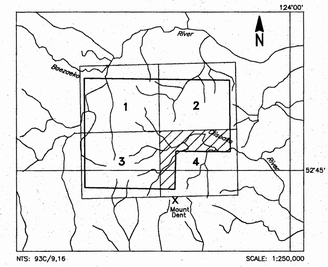
FLIGHT LINES WITH EM ANOMALIES

Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

VLF TOTAL FIELD & QUADRATURE PROFILES

Total field 4% per mm
Quadrature field 4% per mm
STATION: NLK Seattle (Wash.) – 24.8 kHz

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

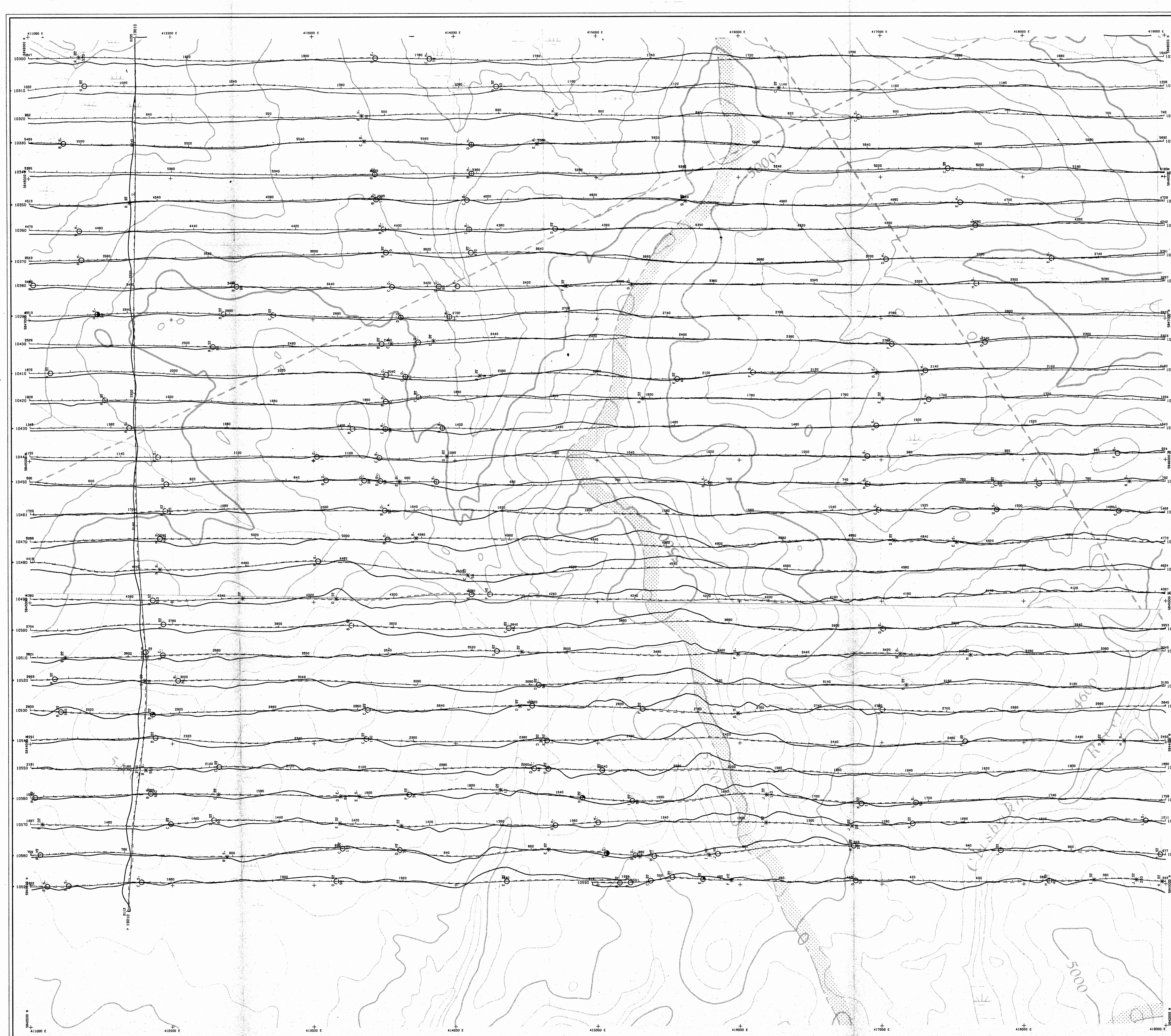
VLF PROFILES

DIGHEM^V SURVEY	NTS: 93O/9,16	GEOPHYSICIST:
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 4

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 Mi
Scale 1:10 000

DIGHEM
Quality and Service in Airborne Geophysics



TECHNICAL SUMMARY

Navigation	Sercel real time differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM[V]

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	1.0 ppm	Horizontal coplanar

N

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	⊕	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier
Interpretive symbol
Depth is greater than
· 15 m
: 30 m
⁝ 45 m
⁞ 60 m
Inphase and Quadrature of coaxial coil is greater than
. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

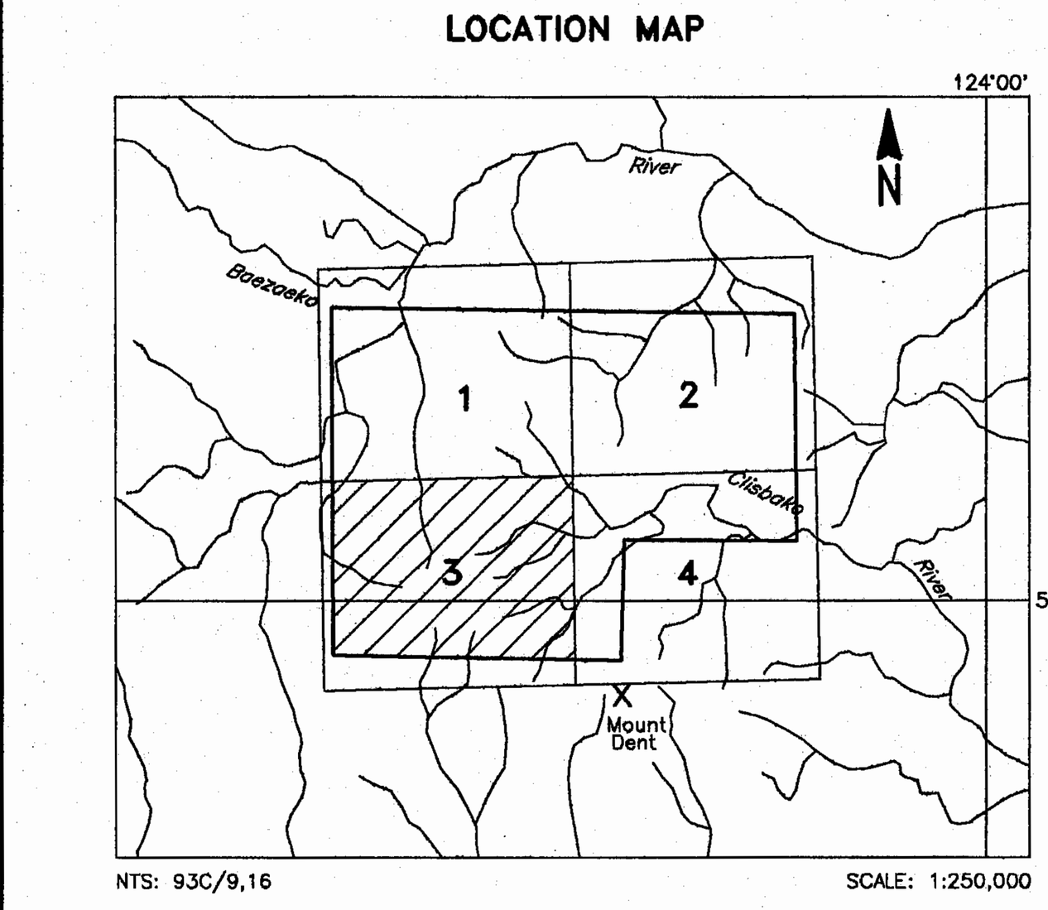
FLIGHT LINES WITH EM ANOMALIES

13010
13020<
Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
120
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
100
Magnetic correlation in nT (gammas)

VLF TOTAL FIELD & QUADRATURE PROFILES

——— Total field 4% per mm
– – – Quadrature field 4% per mm
STATION: NLK Seattle (Wash.) – 24.8 kHz

LOCATION MAP



PHELPS DODGE CORPORATION OF CANADA LIMITED
MT. DENT AREA, B.C.

VLF PROFILES

DIGHEM[V] SURVEY	NTS: 93C/9,16	GEOPHYSICIST: [illegible]
DATE: NOVEMBER 1993	JOB: 1157	SHEET: 3

DIGHEM SURVEYS & PROCESSING INC.

0 0.5 1.0 Km
0 0.5 Mi
Scale 1:10 000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DIGHEM
Quality and Service in Airborne Geophysics

23,630