2005 GEOLOGICAL REPORT

FOR THE

SPHINX PROPERTY

Nelson / Fort Steele Mining Division, Southeastern B.C.
Mapsheets 82F057, 82F067
Latitude 49°38' N, Longitude 116°40'W

VOLUME II
APPENDICES

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Prepared for

EAGLE PLAINS RESOURCES LTD.
200-16 11th Ave. S.
Cranbrook, B.C., V1C 2P1
Tel: 1 250 426-0749 Fax: 1 250 426-6899
Email: info@eagleplains.ca
Fax: 604 669 3041

by

C.C. Downie, P.Geo
Exploration Manager, Eagle Plains Resources Ltd.
Cranbrook B.C., Canada

and

David Pighin, P.Geo
High-Grade Geological Consulting
301 8th St. S.
Cranbrook B.C., Canada

December 02, 2005

APPENDIX I

CONDOR CONSULTING DIGHEM REPORT

REPORT ON REPROCESSING AND INTERPRETATION

of

St. MARY RIVER DIGHEM DATA

IN VICINITY OF SPHINX AREA

for

EAGLE PLAINS RESOURCES INC.

April 2005

Condor Consulting
Lakewood Colorado
USA

CONTENTS

1. INTRODUCTION

At the request of Mr. Chris Gallagher of Eagle Plains Resources Ltd. (Eagle Plains), selected Dighem EM data over the Sphinx area have been reprocessed by Condor Consulting, Inc. (Condor) to produce conductivity depth images (CDI).

Sphinx is located 15 km east of Crawford Bay, BC, Canada.

The Dighem survey was flown in 1995 for the British Columbia, Ministry of Employment and Investment, Energy and Minerals Division, Geological Survey Branch and the Geological Survey of Canada; the data is now open file.

Previously, Condor has processed data from a VTEM survey carried out in this area for Eagle Plains in 2004 (Condor Consulting 2005). The Dighem survey covered the VTEM survey area, but encompassed a considerably larger area and the main purpose of the present study was to determine the extent of several conductors that appeared to extend outside the boundary of the VTEM survey. In addition the study has enabled the direct comparison of VTEM and Dighem along several flight lines where the two systems flew closely similar flight paths. A small subset of the St Mary River Dighem was selected for this purpose (see below).

The inversions to produce CDIs were carried out using UBC FarEM (EM1DFM) software. Details are provided in Section 3 below.

Correlation of these CDI sections and images with known geology will assist Eagle Plains in further exploration. The survey area is prospective for copper-gold mineralization associated with iron oxide breccias.

Detailed interpretation of the data by Condor was not part of the processing contract, but some general comments about the significance of the data are included below.

2. CLIENT PROVIDED DATA

The St. Mary River Dighem survey covering a large area was carried out by Geoterrex-Dighem (now Fugro Airborne Surveys) in 1995. Eagle Plains supplied data that had been obtained from the Canadian government. Unfortunately, it was found that the GPS height and the barometric altimeter height were both corrupted, but after considerable effort Condor was able to arrange for the government to supply replacement SRTM (Shuttle Radar Topography Mission) elevation data that has reasonable resolution.

Figure 1 shows the extent of the St. Mary River Dighem survey and the location of the Sphinx VTEM survey. The underlying image is the Dighem 7200 Hz conductivity calculated by Geoterrex-Dighem.

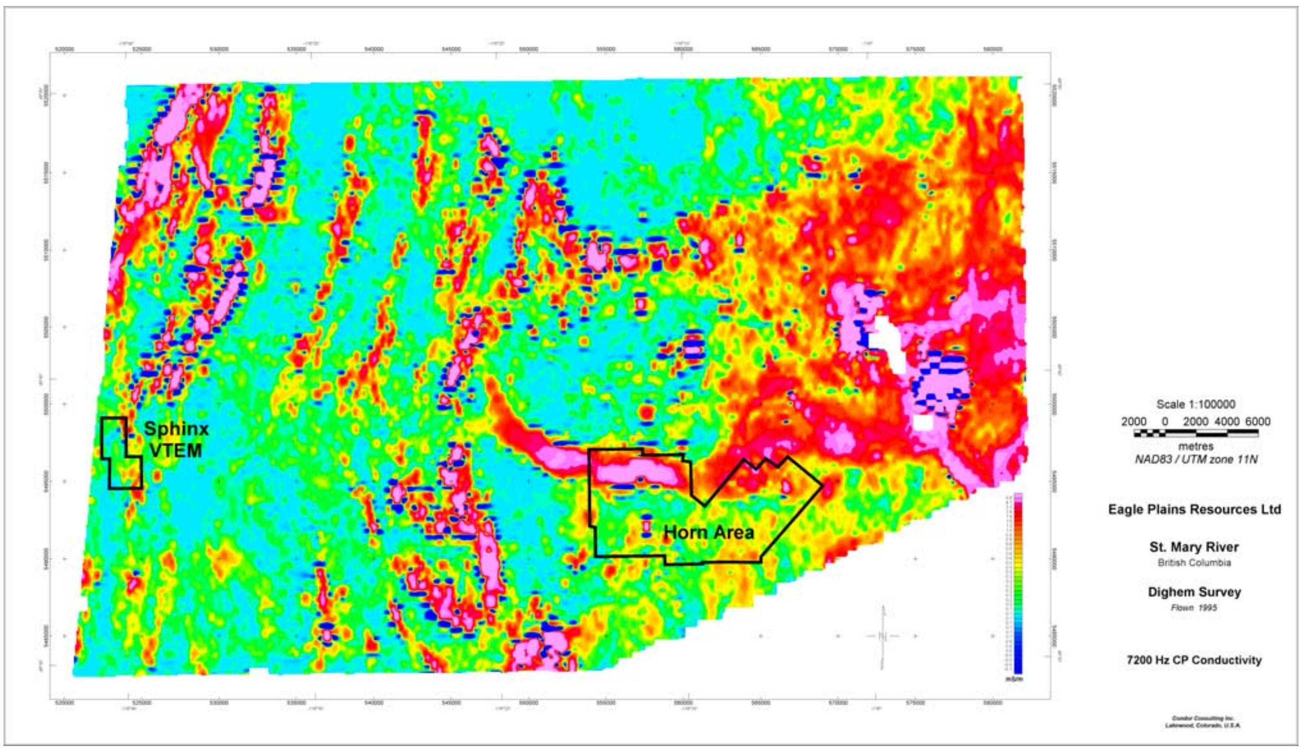


Figure 1 St Mary River Dighem survey, showing location of Sphinx VTEM survey

The Dighem flight line spacing was 400 m, considerably wider than the nominal 100 m used for the Sphinx VTEM.

Figure 2 shows the locations of 12 Dighem lines selected by Chris Gallagher to be processed to CDI sections, overlain on claim boundaries. The underlying image is the Dighem 7200 Hz conductivity.

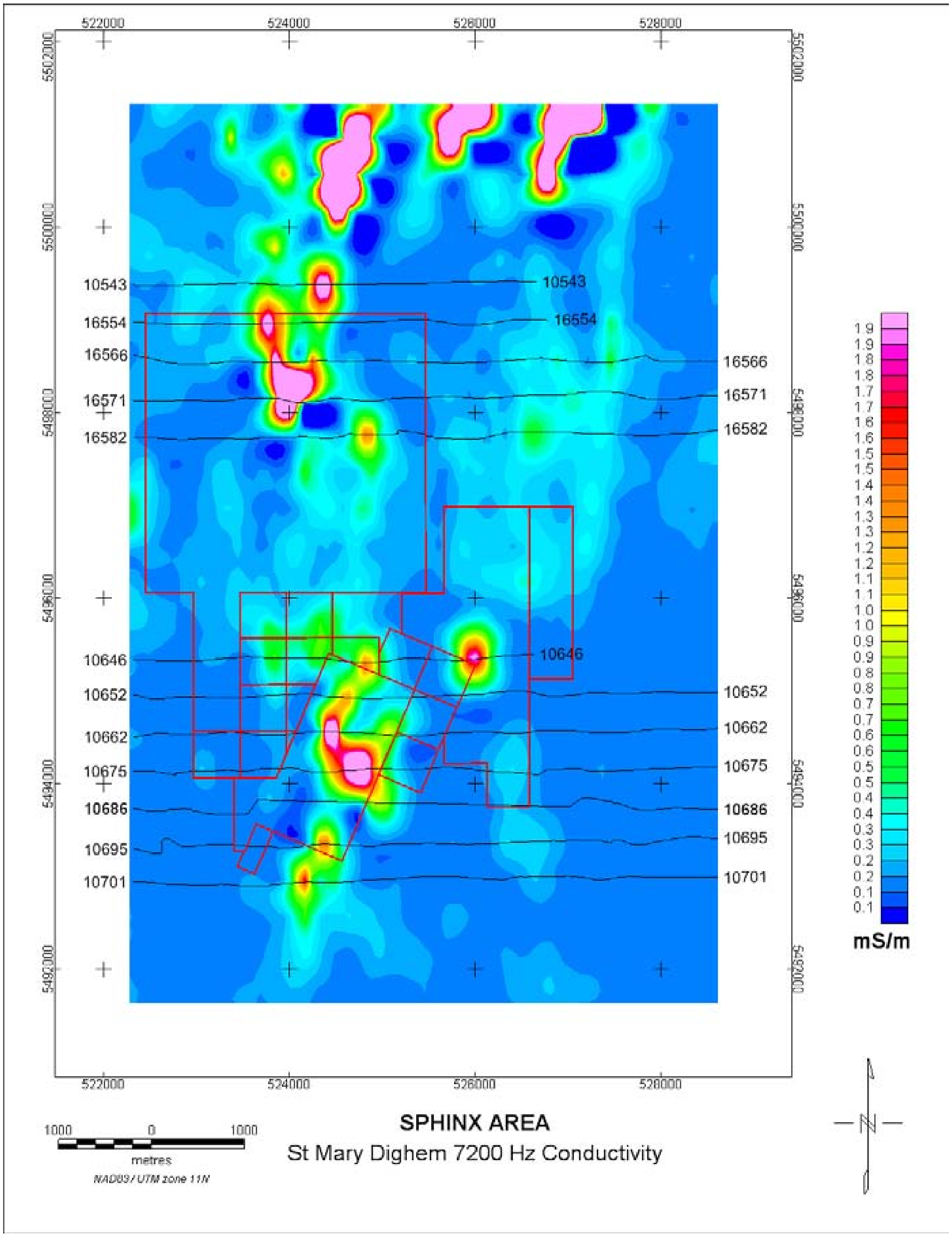


Fig. 2 Selected Dighem lines and claim boundaries (base is 7200 Hz conductivity)

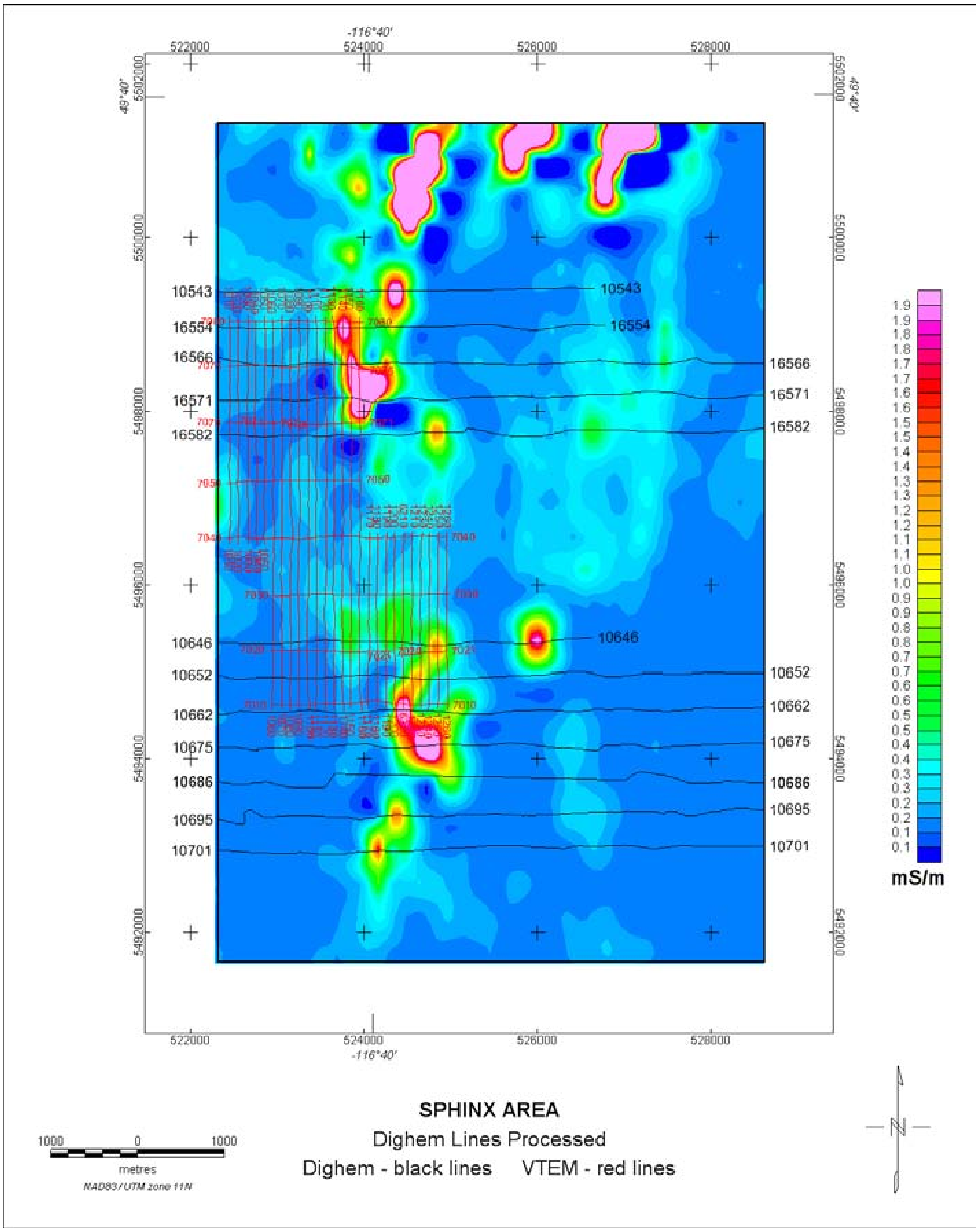


Fig. 3 Selected Dighem lines and all VTEM lines (base is 7200 Hz conductivity)

The locations of the selected Dighem lines in comparison with the VTEM lines are show in Figure 3.

The lines chosen consisted of the following:-

10543
16554
16566
16571
16582
10646
10652
10662
10675
10686
10695
10701

Radiometric data was also acquired with the Dighem survey. No processing has been done on this data, but for sake of completeness, images showing the three radiometric ratios (Th/K, U/K and U/Th) covering the area around Sphinx have been included in Appendix A.

3. EM PROCESSING

3.1 FarEM

FarEM (previously known as EM1DFM) is a product of the University of British Columbia, Geophysical Inversion Facility (Farquharson and Oldenburg, 2000). The program is a one-dimensional inversion routine designed to model frequency domain EM of the variety typically recorded with Max-Min (ground) or Dighem-style helicopter EM systems. The program can recover both conductivity and magnetic permeability of the subsurface within the limits of the specific acquisition system being employed.

Due to the nature of the algorithm, flat lying conductors are more likely to be imaged at their proper depth whereas steeply dipping conductors tend to be imaged deeper than their actual depth. Whenever possible, conductor depths on CDI images should be calibrated with local geological control.

3.2 FarEM Processing Parameters

All 5 frequencies (3 coplanar and two coaxial) were used in the inversions. A total of 28 logarithmically spaced layers, ranging in thickness from 1 m to 26.5 m were used, to a maximum depth of 250 m.

Starting conductivity: 0.0001 S/m
Reference conductivities: 0.0001 S/m and 0.0005 S/m
Fixed Trade Off with Beta: 2

Two inversion runs were made with the different reference conductivities, in order to estimate the depth of penetration along the line. Where the inversions differed by more than 20% at depth, these results were nulled and replaced with white on the CDI sections.

4. PRODUCTS

4.1 Plan Products

Maps showing images of the following Dighem survey parameters were produced, each showing the location of the VTEM survey boundary. These are included in Appendix A.

- Topography (DEM)
- Magnetics (with VTEM magnetics stitched in)
- 7200 Hz conductivity with VTEM AdTau time constant stitched in
- Th/K ratio
- U/K ratio
- U/Th ratio

The ratios largely remove the effects of altitude differences and are thus preferable to the individual K, Th and U values.

4.2 MultiPlots™

MultiPlots™ (produced using Encom's Profile Analyst (PA) application) were produced for each Dighem survey line at a uniform horizontal scale and are included in Appendix B. These display a variety of primary and derived data from the survey:

Each MultiPlot™ displays the following information:

- 56K Hz coplanar inphase and quadrature (observed and FAREM predicted)
- 7200 Hz coplanar inphase and quadrature (observed and FAREM predicted)
- 900 Hz coplanar inphase and quadrature (observed and FAREM predicted)
- TMI magnetics
- FAREM CDI inversion (including EM bird track above topography)
- Trackmap showing flight path on topographic map

5. COMPARISON OF DIGHEM AND VTEM

The Dighem flight lines were oriented east-west and the VTEM flight lines were oriented north-south, so direct comparison of the data and inversions was not possible in most cases. However, six of the VTEM tie lines were located reasonably close to Dighem lines (see Figure 4) and these have been compared below (full-size versions are in Appendix C).

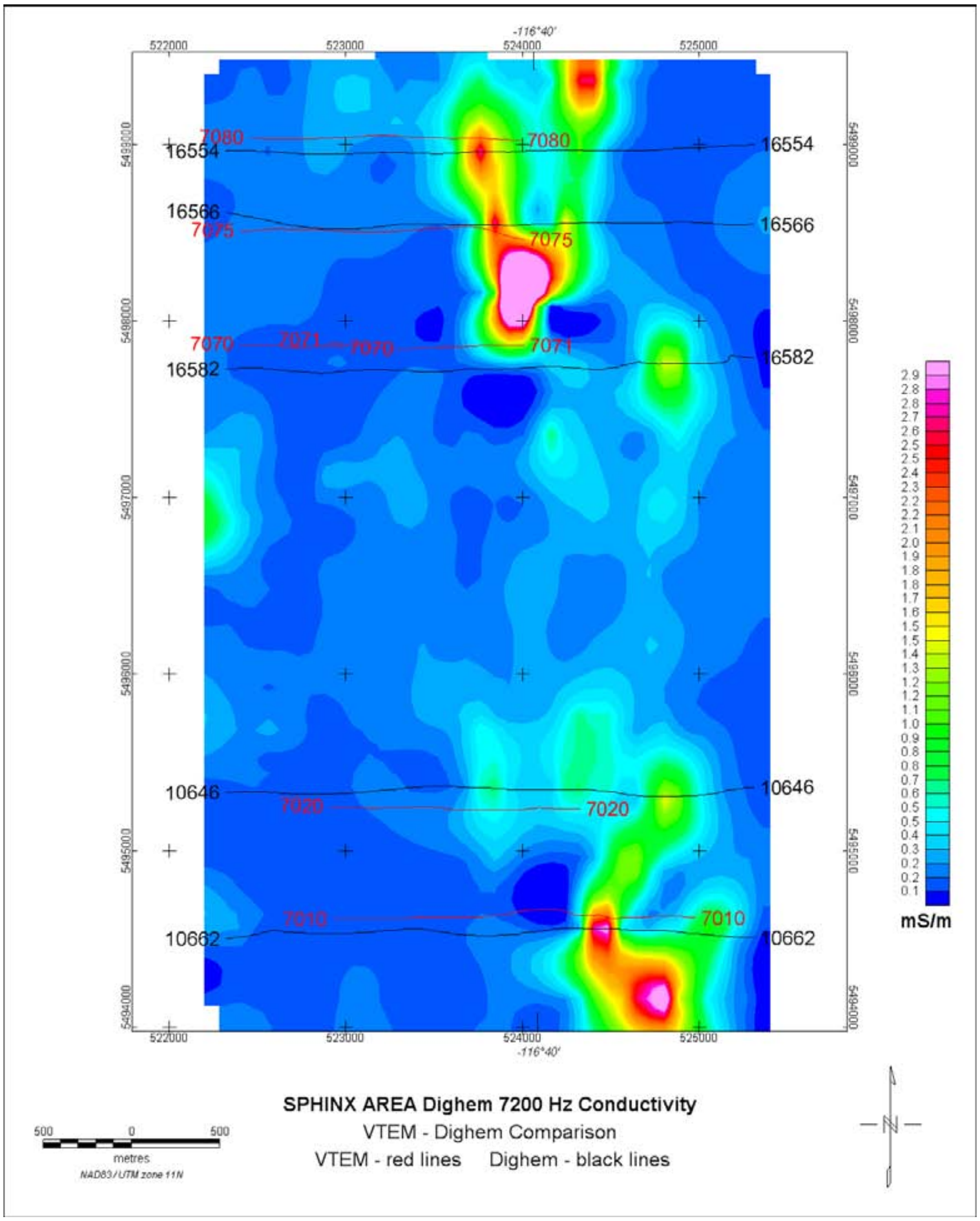
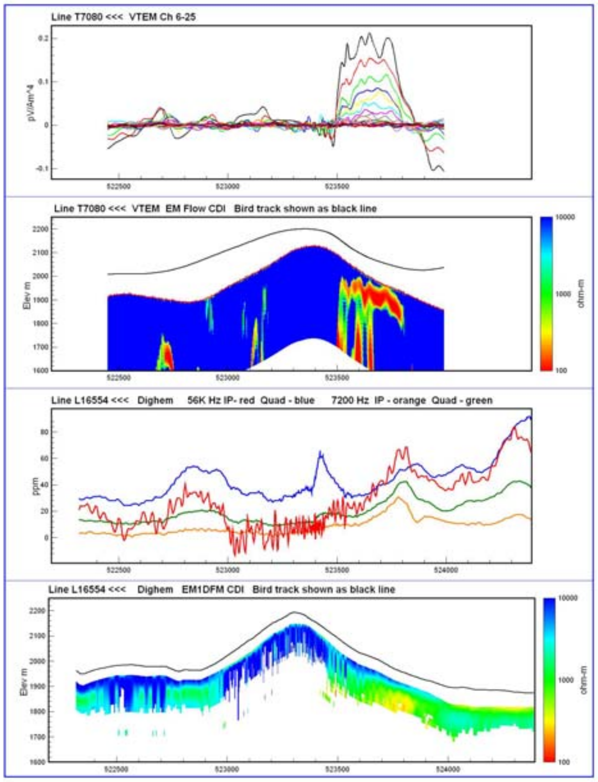
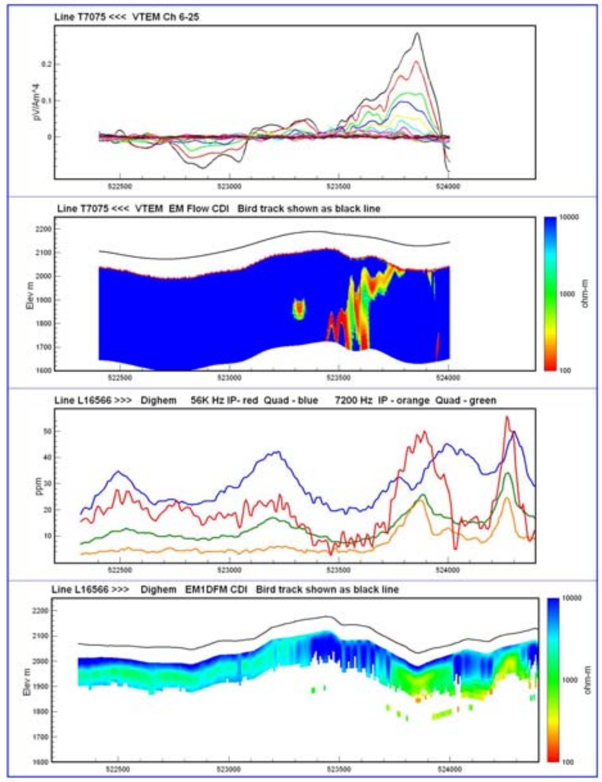
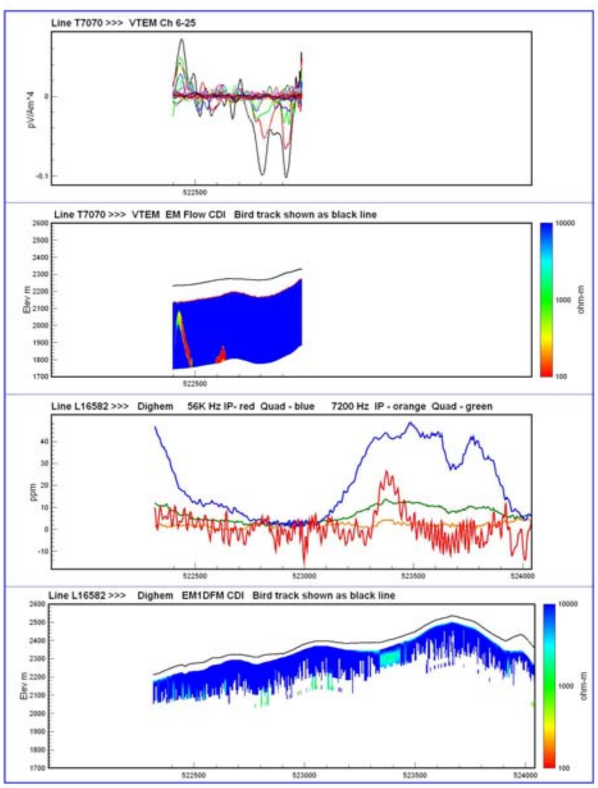
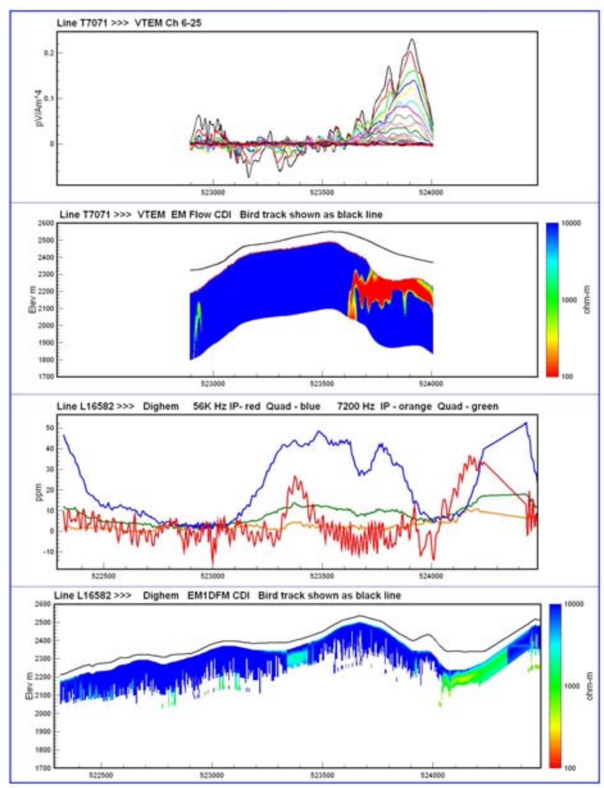


Fig. 4 Direct comparison of Dighem and VTEM data


Line T7080 <<< VTEM Ch 6-25
Line T7080 <<< VTEM EM Flow CDI Bird track shown as black line
Line L16554 <<< Dighem 56K Hz IP- red Quad - blue 7200 Hz IP - orange Quad - green
Line L16554 <<< Dighem EM1DFM CDI Bird track shown as black line


Line T7075 <<< VTEM Ch 6-25
Line T7075 <<< VTEM EM Flow CDI Bird track shown as black line
Line L16566 >>> Dighem 56K Hz IP- red Quad - blue 7200 Hz IP - orange Quad - green
Line L16566 >>> Dighem EM1DFM CDI Bird track shown as black line


Line T7070 >>> VTEM Ch 6-25
Line T7070 >>> VTEM EM Flow CDI Bird track shown as black line
Line L16582 >>> Dighem 56K Hz IP- red Quad - blue 7200 Hz IP - orange Quad - green
Line L16582 >>> Dighem EM1DFM CDI Bird track shown as black line


Line T7071 >>> VTEM Ch 6-25
Line T7071 >>> VTEM EM Flow CDI Bird track shown as black line
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Line L16582 >>> Dighem EM1DFM CDI Bird track shown as black line

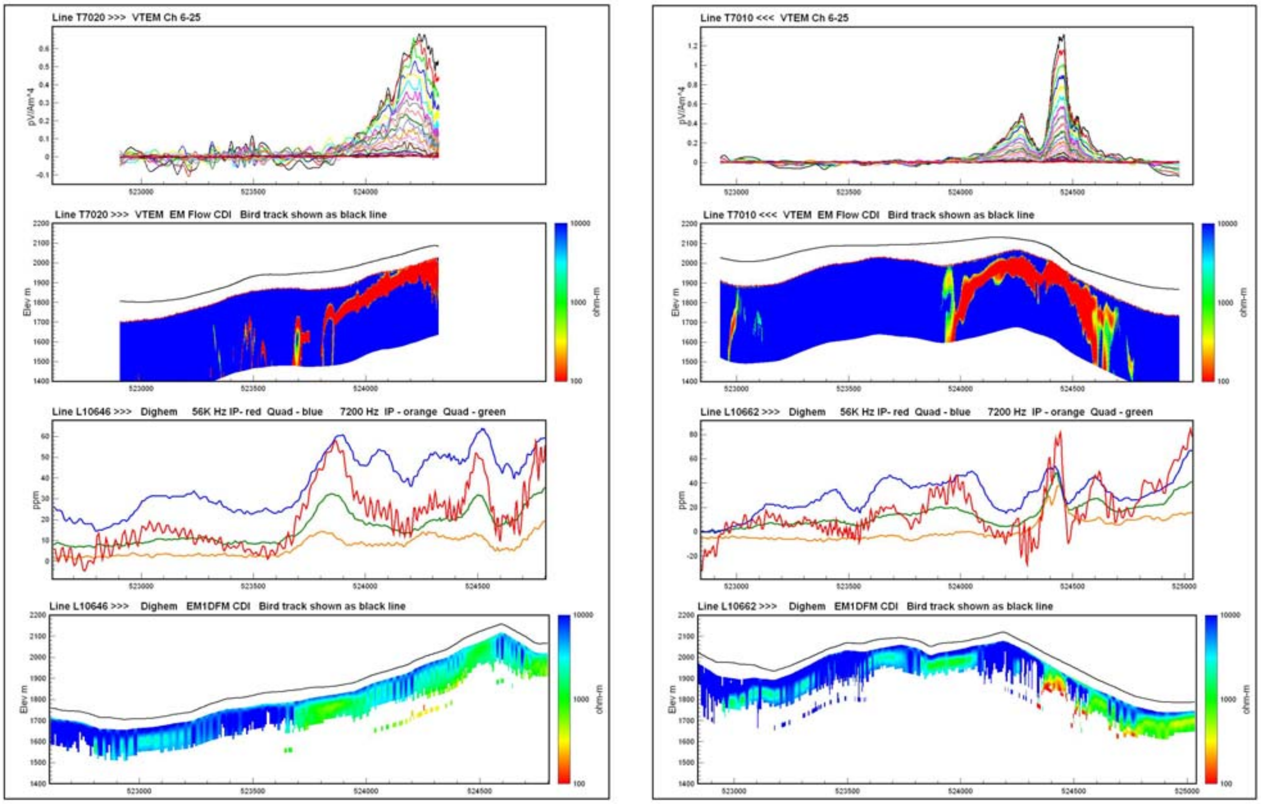


Fig. 5 VTEM – Dighem comparisons for six lines

The vertical scales of the VTEM and Dighem CDI sections are the same. It is noticeable that the pilot employed for the Dighem flying did a generally better job of draping the rugged topography than the pilot on the VTEM survey. As previously observed, the superior depth penetration of the VTEM makes this of little consequence.

Where significant VTEM anomalies occur, in most cases some conductivity is observed in the Dighem CDI section. However, these are generally not so well defined. However, in some cases no significant conductor appears on the Dighem CDI: one example is VTEM T7071 and Dighem 16582 where the VTEM CDI shows a shallow conductor. Another is VTEM T7020 where a shallow conductor is shown on the CDI, which has no direct response on the Dighem CDI (although there is some adjacent conductivity). In the author's opinion, the VTEM data is more believable than the Dighem in this environment.

6. DISCUSSION

On two of the Dighem lines the radar altimeter data appears erroneous over short distances (viz. Lines 10686, 10701). However, this does not significantly compromise the overall results.

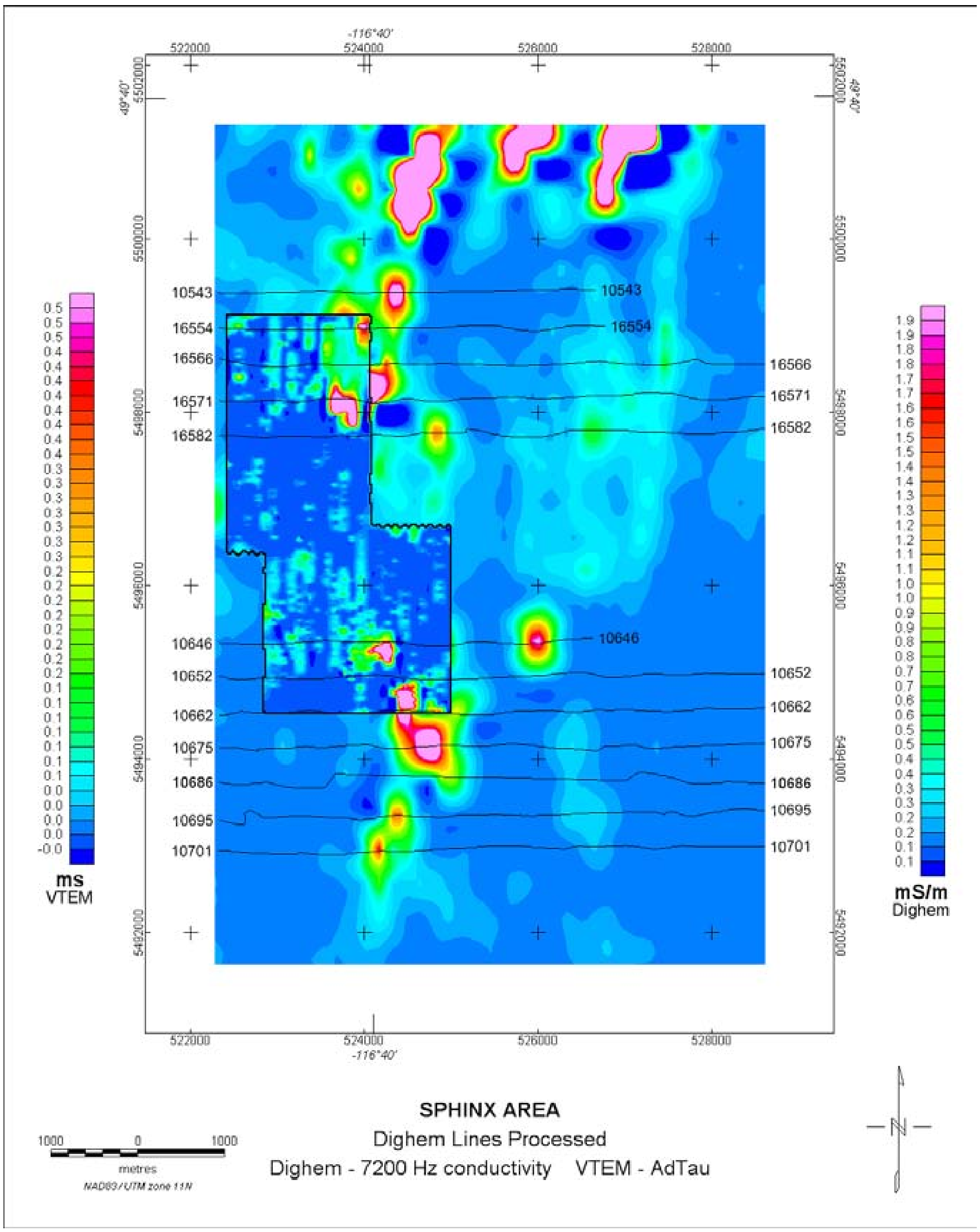


Fig. 6 VTEM AdTau image superimposed on Dighem 7200 Hz conductivity

Most of the 12 lines processed exhibit significant conductors, some of which occur within the Sphinx VTEM survey area and other outside it. In Figure 6 the flight lines are shown in relation to a base map consisting of the VTEM AdTau image superimposed on the Dighem 7200 Hz conductivity image.

6.1 Conductors Within VTEM Survey Area

- On Line 16544 a bedrock conductor near 523800E correlates with a partly-delineated AdTau anomaly on the edge of the VTEM survey.
- A similar conductor on Line 16566 occurs at the edge of the VTEM survey (and is not defined on the latter).
- A bedrock conductor on Line 16571 at 524000E is located just to the East of a relatively strong AdTau anomaly on the VTEM
- On Line 10646 an area of elevated conductivity between 523700E and 525000E encompasses a smaller, discrete AdTau anomaly.
- A bedrock conductor on Line 10652 centered on 524600E lies immediately north of an AdTau anomaly.
- A bedrock conductor on Line 10662 at 524400E correlates with an Adtau anomaly at the southern boundary of the VTEM survey. Bedrock conductivity extends to the east.

6.2 Conductors Outside VTEM Survey Area

- A good bedrock conductor on Line 10543 at 524330E, which correlates with the southern end of a north-south trending magnetic anomaly.
- A shallow (outcropping?) conductor with limited depth extent on Line 16544 near 524500E, which lies due south of the bedrock conductor on Line 10543.
- A bedrock conductor on Line 16566 at 524260E
- A bedrock conductor on Line 16571 at 524000E
- A narrow bedrock conductor on Line 16582 at 524800E
- A wide, flat-dipping, near-surface bedrock conductor on Line 10646 at 526000E that is definitely worthy of follow-up.

- A wide bedrock conductor on Line 10675 centered at 524700E, which does not appear to outcrop and extends beneath the depth of penetration of the Dighem. This lies immediately south of the VTEM survey boundary and warrants follow-up.
- A discrete bedrock conductor on Line 10695 at 524400E.
- A similar, but weaker, bedrock conductor on Line 10701. This is probably the same conductor as observed on Line 10695, but the 400 m line spacing does not allow definite correlation.

7. CONCLUSIONS

The CDI reprocessing of the Dighem data from the Sphinx area has produced new information on the conductivity distribution, particularly the depth distribution, which will aid in prioritizing exploration targets in this area.

Direct comparisons were made with the VTEM data. In most cases there is reasonable correlation, but the VTEM has superior depth penetration and also appears to have more discrimination in terms of defining lateral extent and conductance via the AdTau parameter.

Respectfully submitted

Condor Consulting, Inc.

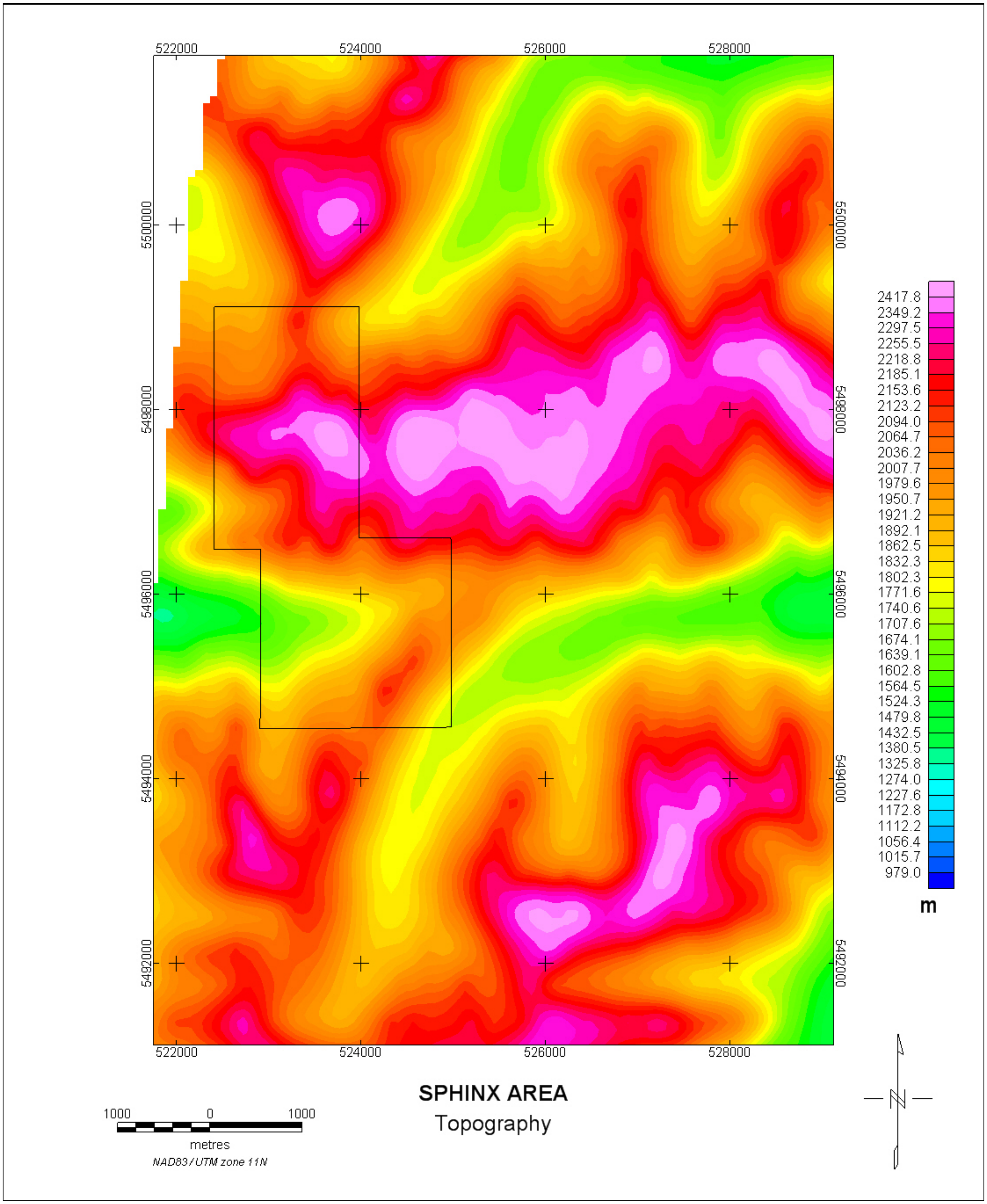
April 13, 2005

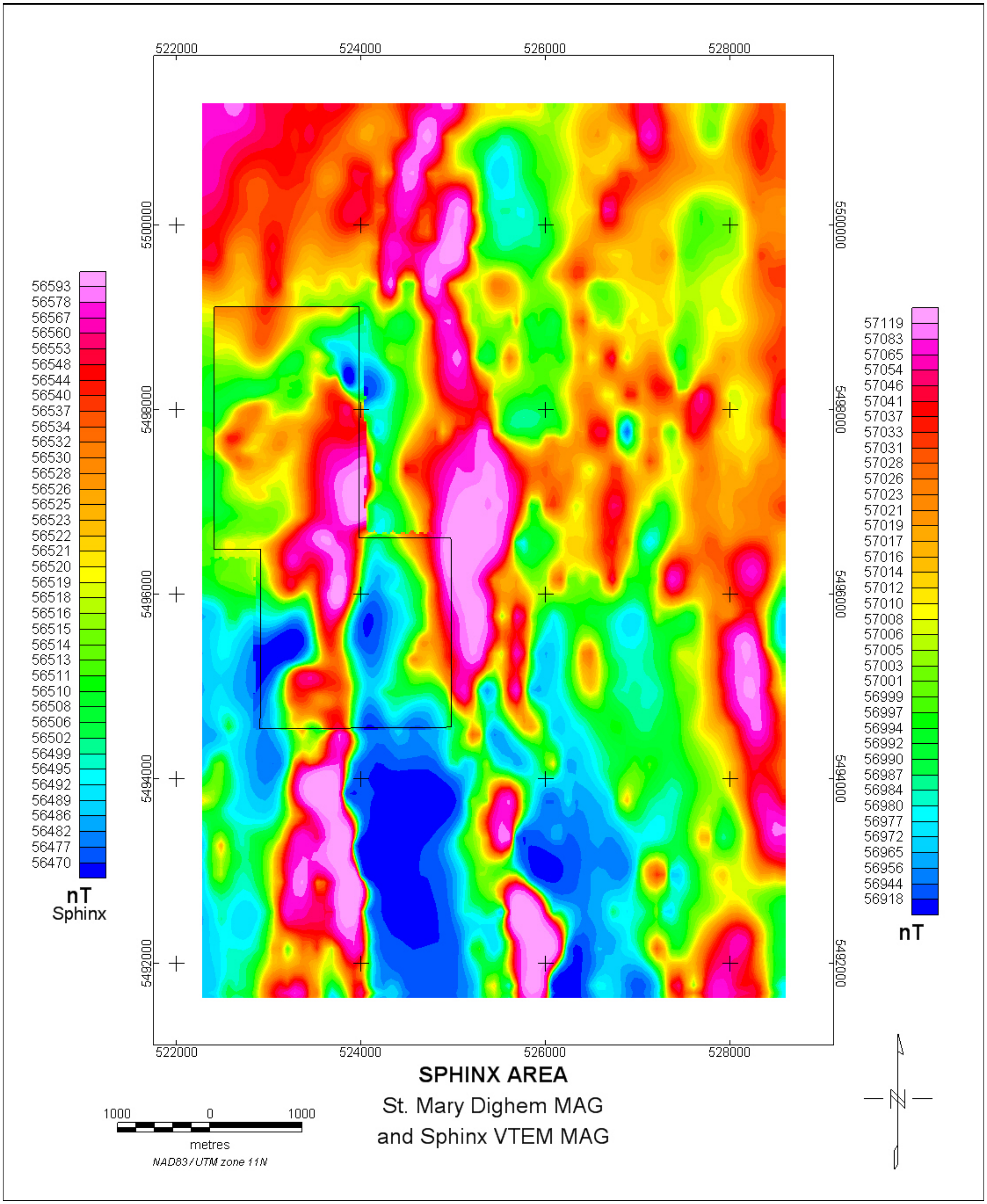
8. REFERENCES

Condor Consulting, (2005) Report on reprocessing and interpretation of Sphinx VTEM data for Eagle Plains Resources Inc.

Farquharson, C. G. & Oldenburg, D. W. (2000) Automatic estimation of the trade-off parameter in nonlinear inverse problems using the GCV and L-curve criteria. SEG 70^{th} Annual Meeting, Calgary, Alberta, 6-11 August, 2000.

APPENDIX A - Plan Products


522000
524000
526000
528000
5500000
5498000
5496000
5494000
5492000
2417.8
2349.2
2297.5
2255.5
2218.8
2185.1
2153.6
2123.2
2094.0
2064.7
2036.2
2007.7
1979.6
1950.7
1921.2
1892.1
1862.5
1832.3
1802.3
1771.6
1740.6
1707.6
1674.1
1639.1
1602.8
1564.5
1524.3
1479.8
1432.5
1380.5
1325.8
1274.0
1227.6
1172.8
1112.2
1056.4
1015.7
979.0
m
SPHINX AREA
Topography
1000 0 1000
metres
NAD83 / UTM zone 11N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56537
56534
56532
56530
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56526
56525
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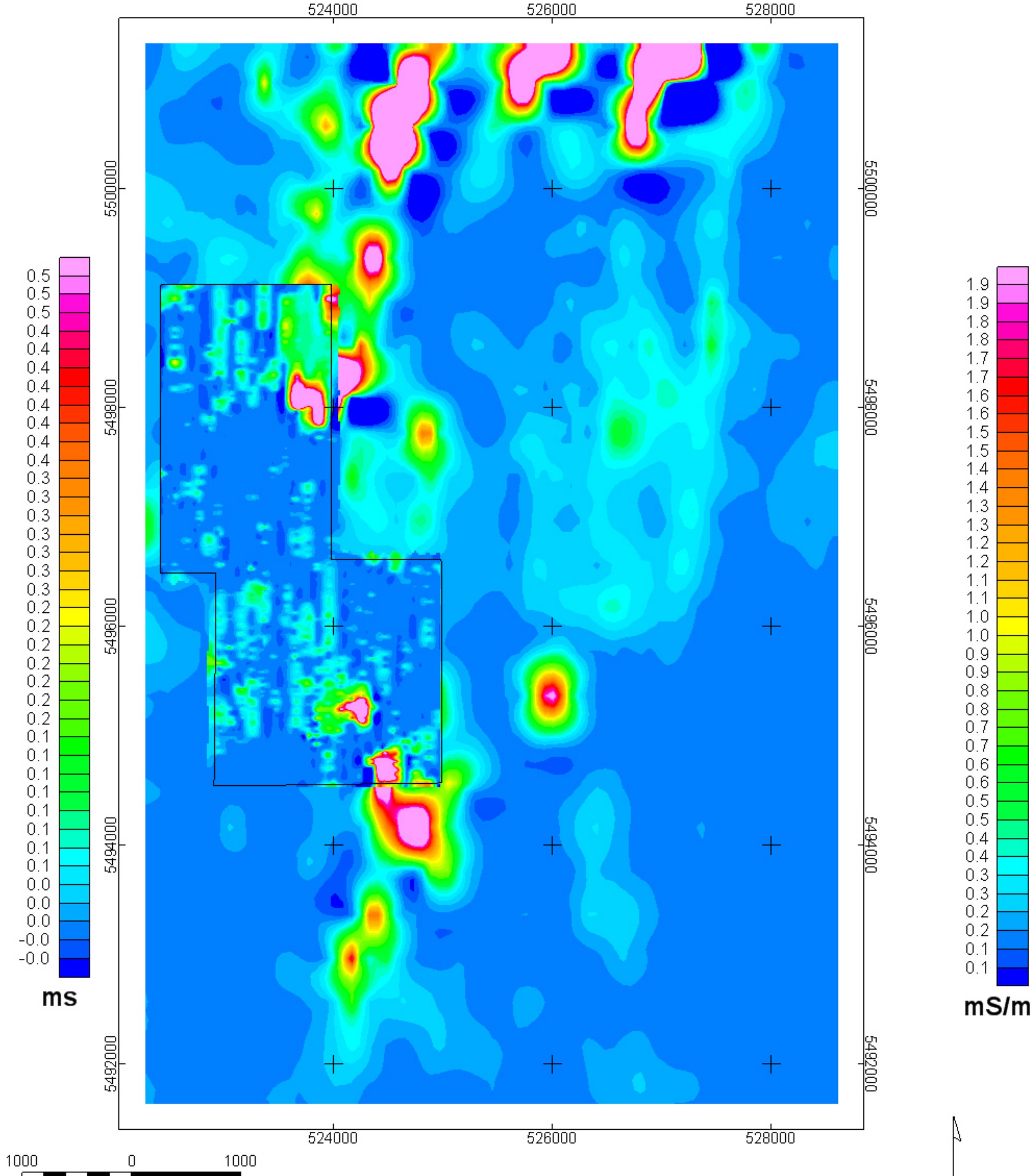
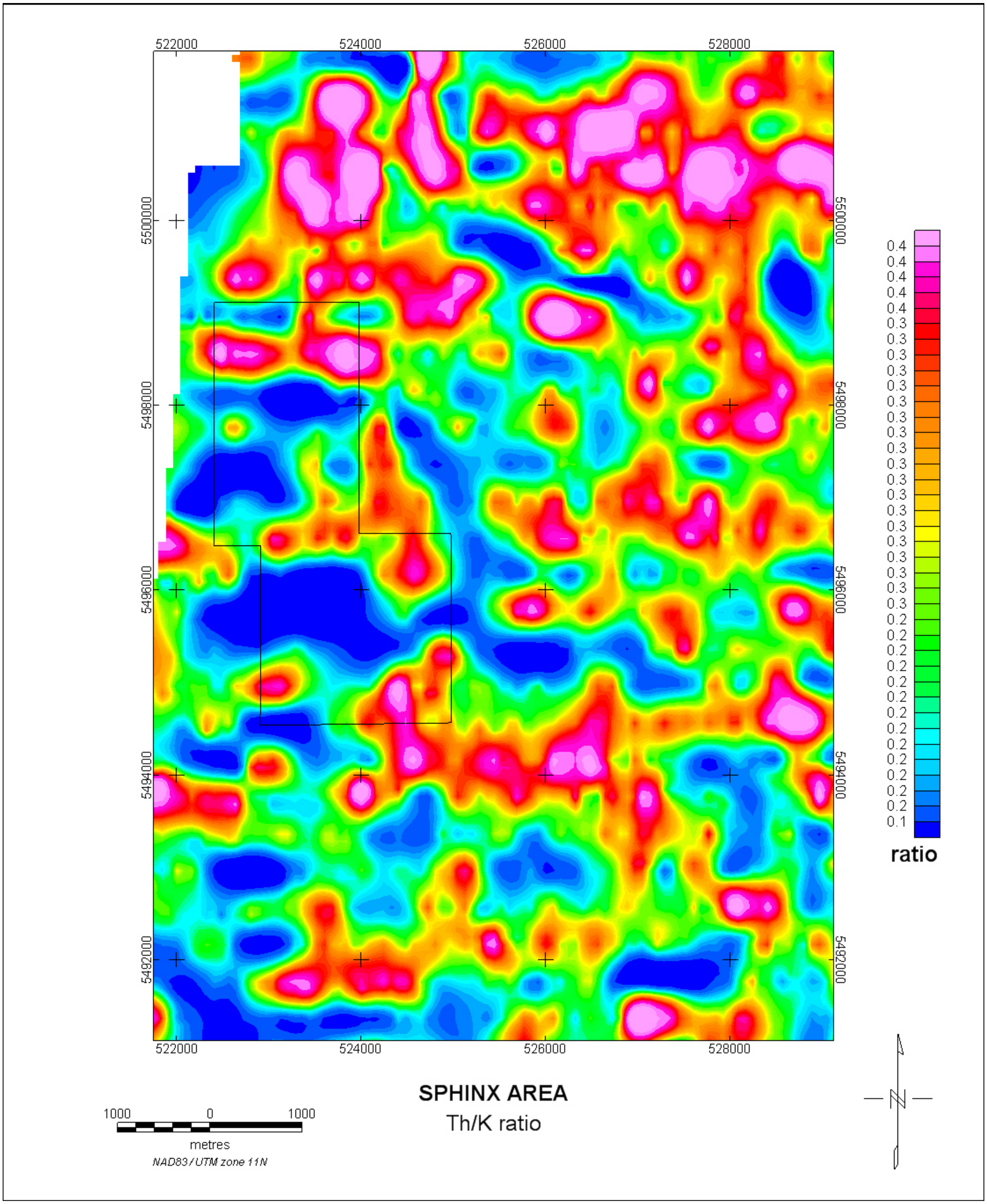
56522
56521
56520
56519
56518
56516
56515
56514
56513
56511
56510
56508
56506
56502
56499
56495
56492
56489
56486
56482
56477
56470
nT
Sphinx
57119
57083
57065
57054
57046
57041
57037
57033
57031
57028
57026
57023
57021
57019
57017
57016
57014
57012
57010
57008
57006
57005
57003
57001
56999
56997
56994
56992
56990
56987
56984
56980
56977
56972
56965
56956
56944
56918
nT
SPHINX AREA
St. Mary Dighem MAG
and Sphinx VTEM MAG
1000 0 1000
metres
NAD83 / UTM zone 11N

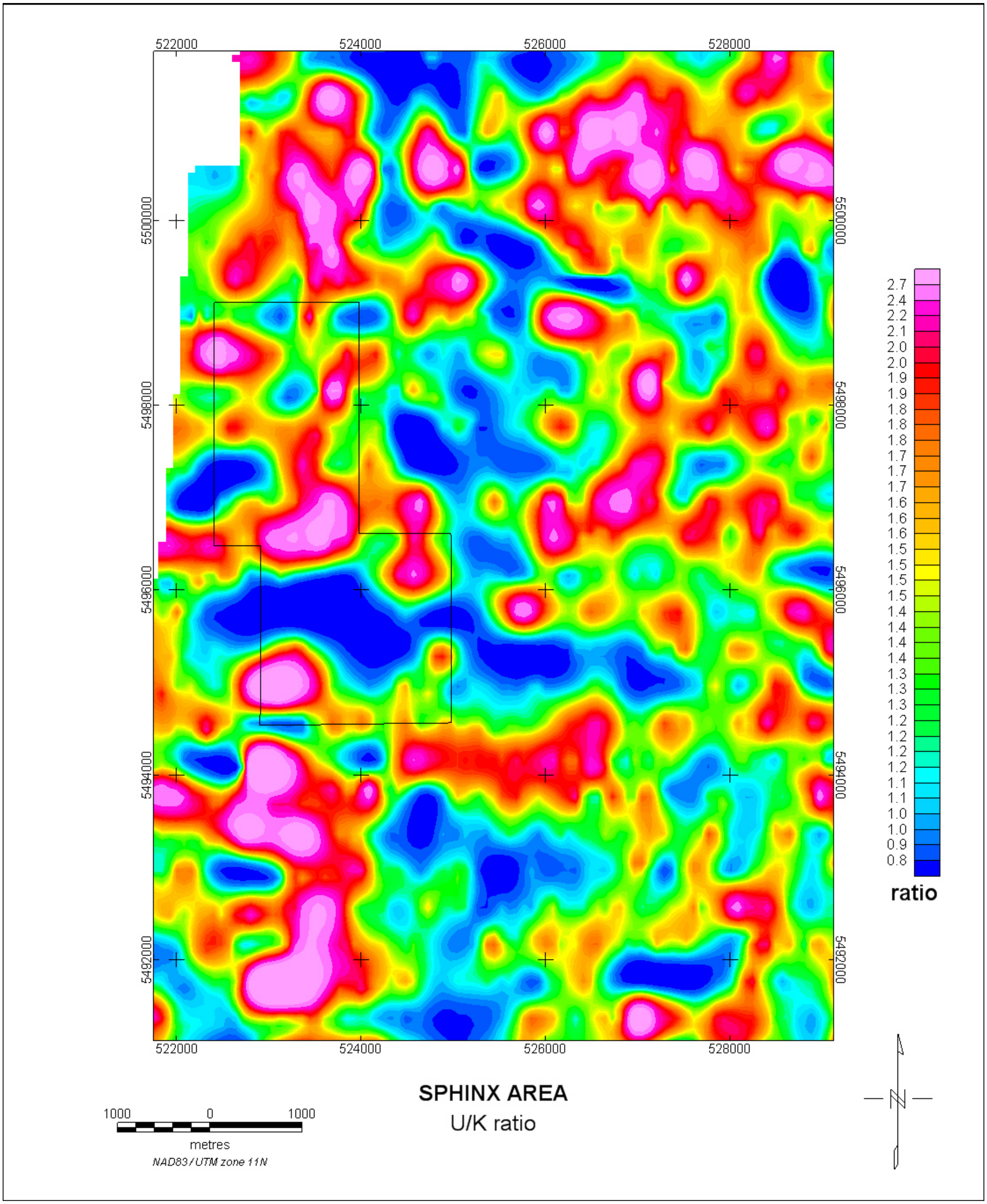


SPHINX AREA

St. Mary Dighem 7200 Hz CP Conductivity mS/m
and Sphinx Adtau



522000
524000
526000
528000
5500000
5498000
5496000
5494000
5492000
0.4
0.3
0.2
0.1
ratio
SPHINX AREA
Th/K ratio
1000
0
1000
metres
NAD83 / UTM zone 11N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2.4
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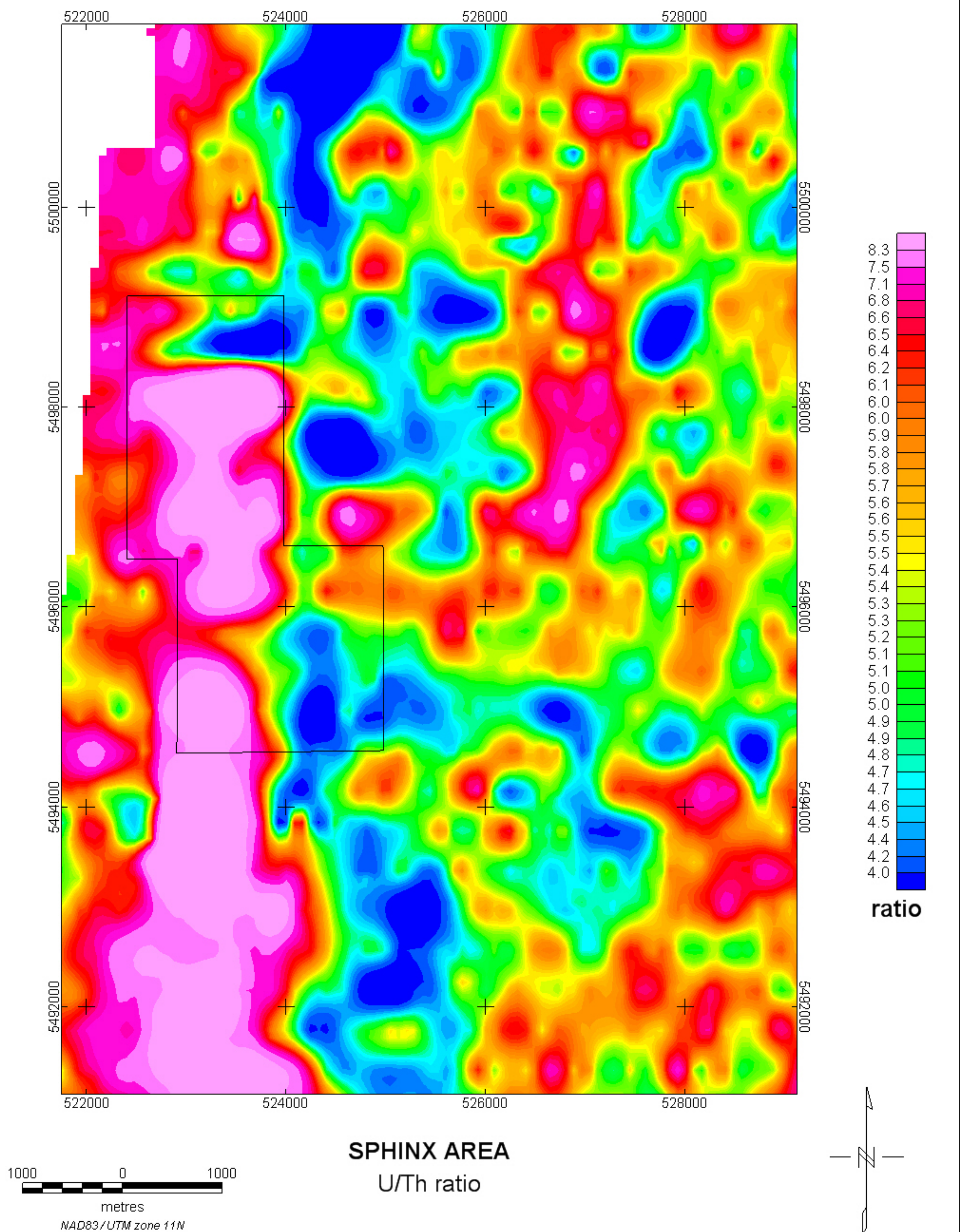
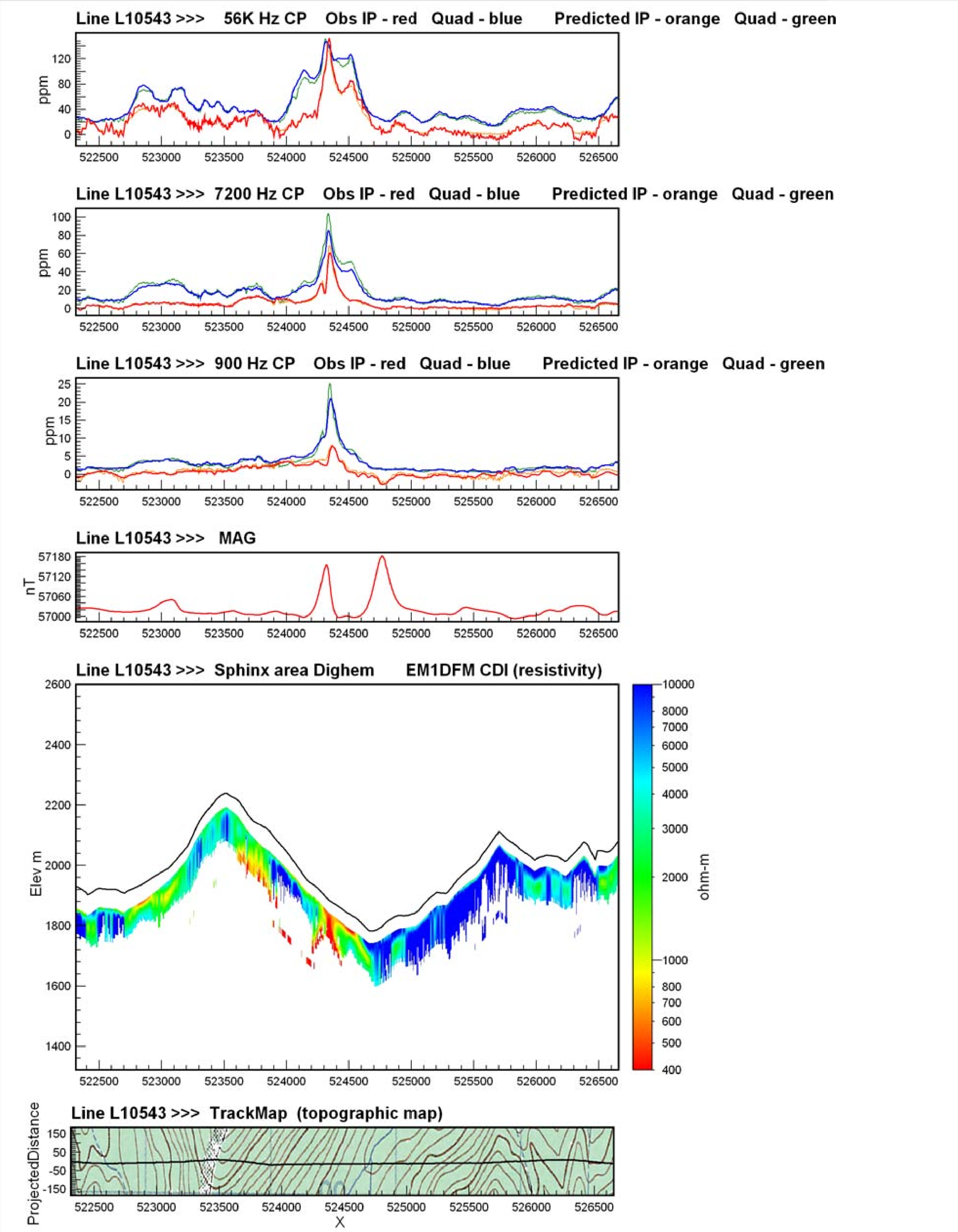
2.0
1.9
1.9
1.8
1.8
1.8
1.7
1.7
1.7
1.6
1.6
1.6
1.5
1.5
1.5
1.5
1.4
1.4
1.4
1.4
1.3
1.3
1.3
1.2
1.2
1.2
1.2
1.1
1.1
1.0
1.0
0.9
0.8
ratio
SPHINX AREA
U/K ratio
1000
0
1000
metres
NAD83 / UTM zone 11N



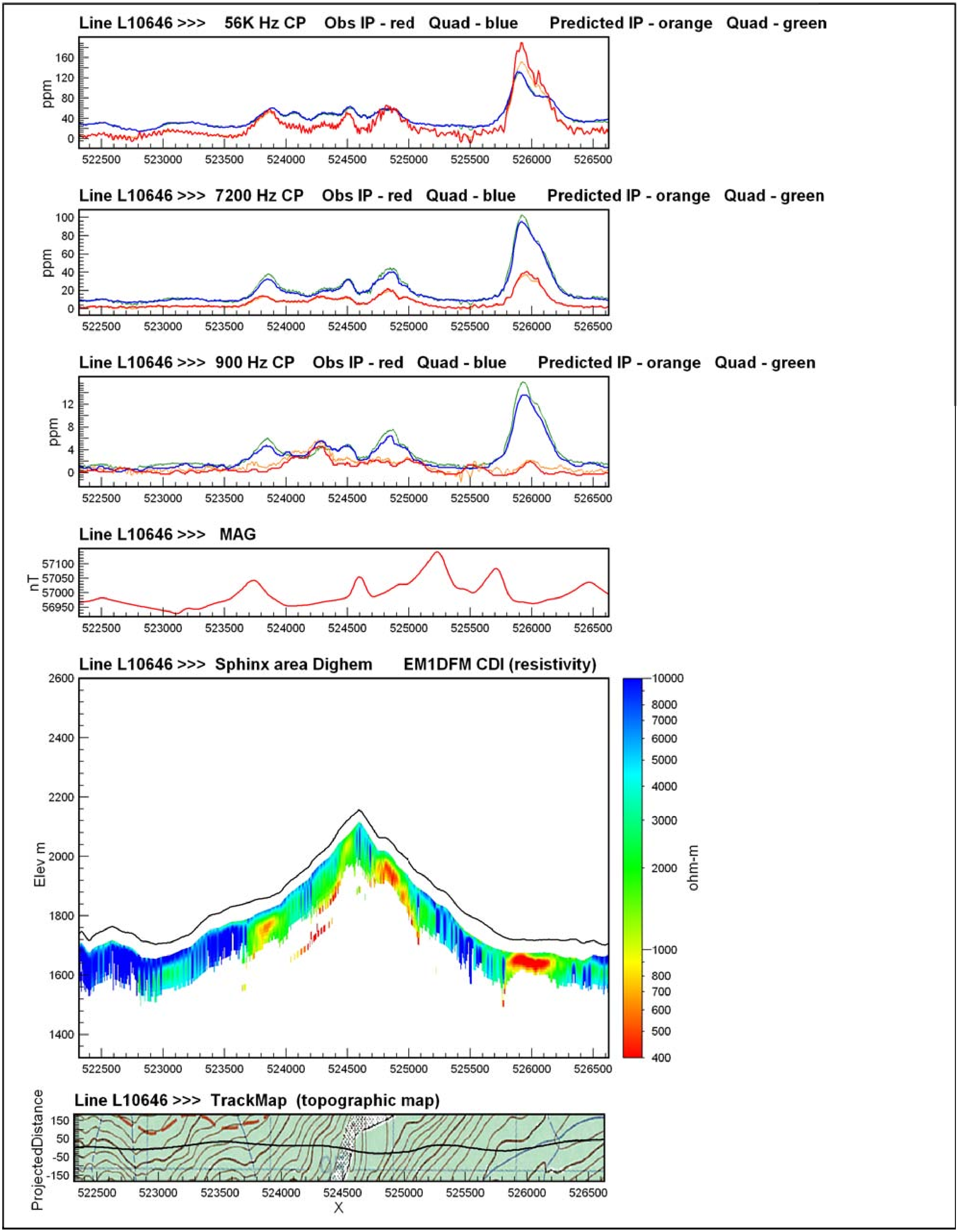
SPHINX AREA

U/Th ratio

APPENDIX B - MultiPlots™



Line L10543 >>> 56K Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10543 >>> 7200 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10543 >>> 900 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10543 >>> MAG
nT
Line L10543 >>> Sphinx area Dighem EM1DFM CDI (resistivity)
Elev m
ohm-m
Line L10543 >>> TrackMap (topographic map)
ProjectedDistance
X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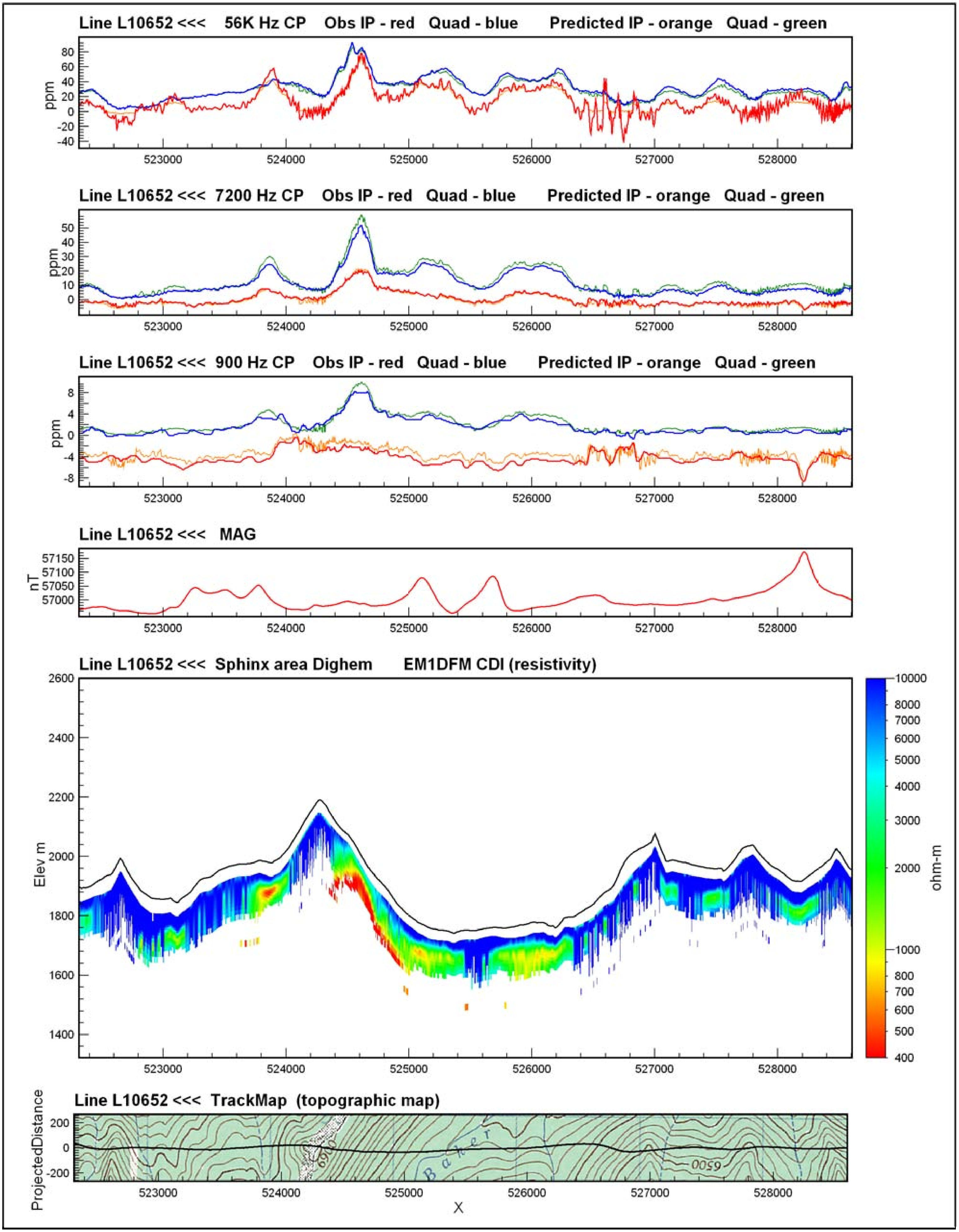
ppm
160
120
80
40
0
522500 523000 523500 524000 524500 525000 525500 526000 526500
Line L10646 >>> 7200 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
100
80
60
40
20
0
522500 523000 523500 524000 524500 525000 525500 526000 526500
Line L10646 >>> 900 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
12
8
4
0
522500 523000 523500 524000 524500 525000 525500 526000 526500
Line L10646 >>> MAG
nT
57100
57050
57000
56950
522500 523000 523500 524000 524500 525000 525500 526000 526500
Line L10646 >>> Sphinx area Dighem EM1DFM CDI (resistivity)
Elev m
2600
2400
2200
2000
1800
1600
1400
522500 523000 523500 524000 524500 525000 525500 526000 526500
ohm-m
10000
8000
7000
6000
5000
4000
3000
2000
1000
800
700
600
500
400
Line L10646 >>> TrackMap (topographic map)
ProjectedDistance
150
50
-50
-150
522500 523000 523500 524000 524500 525000 525500 526000 526500
X



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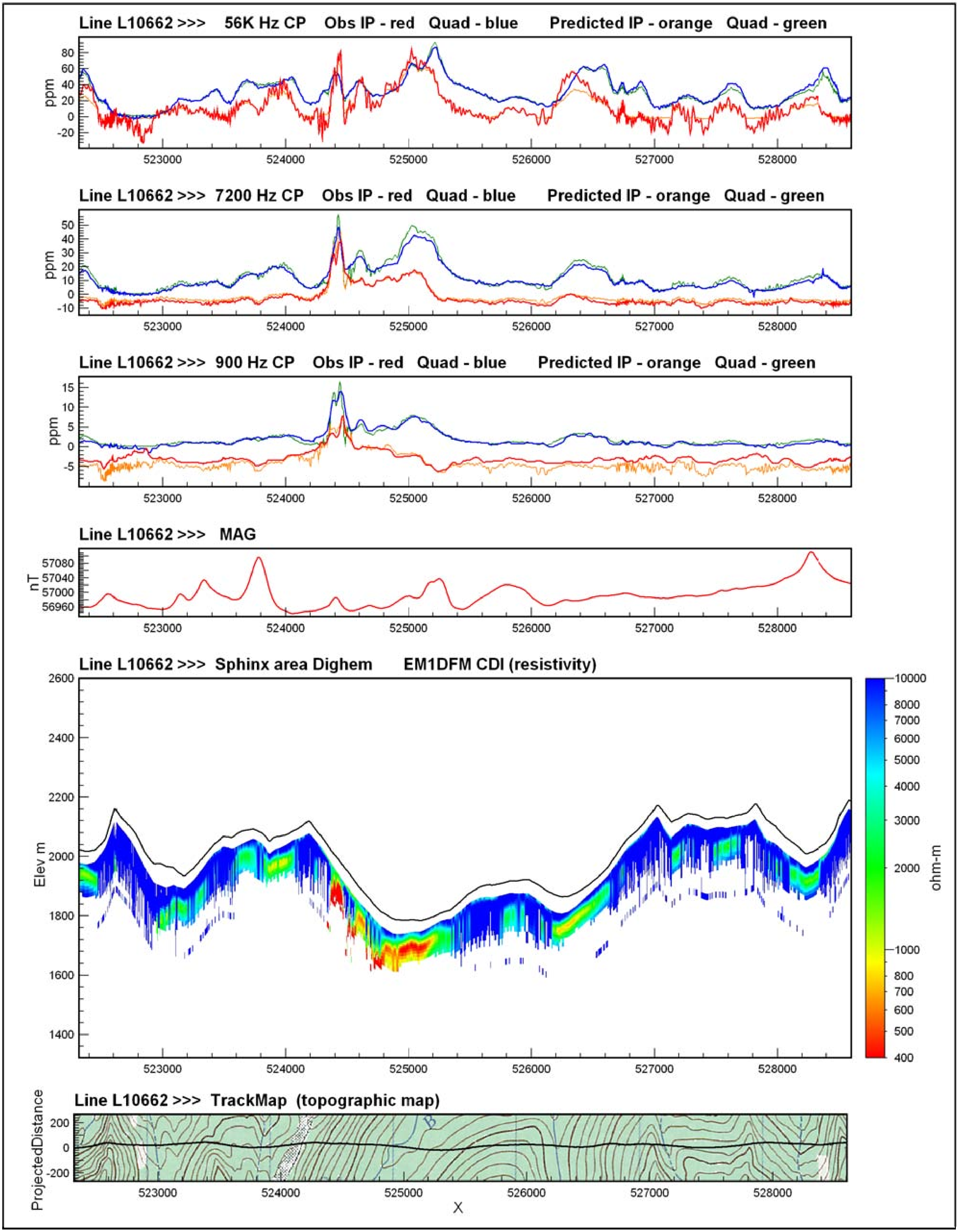
ppm
Line L10652 <<< 7200 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10652 <<< 900 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10652 <<< MAG
nT
Line L10652 <<< Sphinx area Dighem EM1DFM CDI (resistivity)
Elev m
ohm-m
Line L10652 <<< TrackMap (topographic map)
ProjectedDistance
X
523000
524000
525000
526000
527000
528000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ppm
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60
40
20
0
-20
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524000
525000
526000
527000
528000
Line L10662 >>> 7200 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
50
40
30
20
10
0
-10
523000
524000
525000
526000
527000
528000
Line L10662 >>> 900 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
15
10
5
0
-5
523000
524000
525000
526000
527000
528000
Line L10662 >>> MAG
nT
57080
57040
57000
56960
523000
524000
525000
526000
527000
528000
Line L10662 >>> Sphinx area Dighem EM1DFM CDI (resistivity)
Elev m
2600
2400
2200
2000
1800
1600
1400
523000
524000
525000
526000
527000
528000
ohm-m
10000
8000
7000
6000
5000
4000
3000
2000
1000
800
700
600
500
400
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ProjectedDistance
200
0
-200
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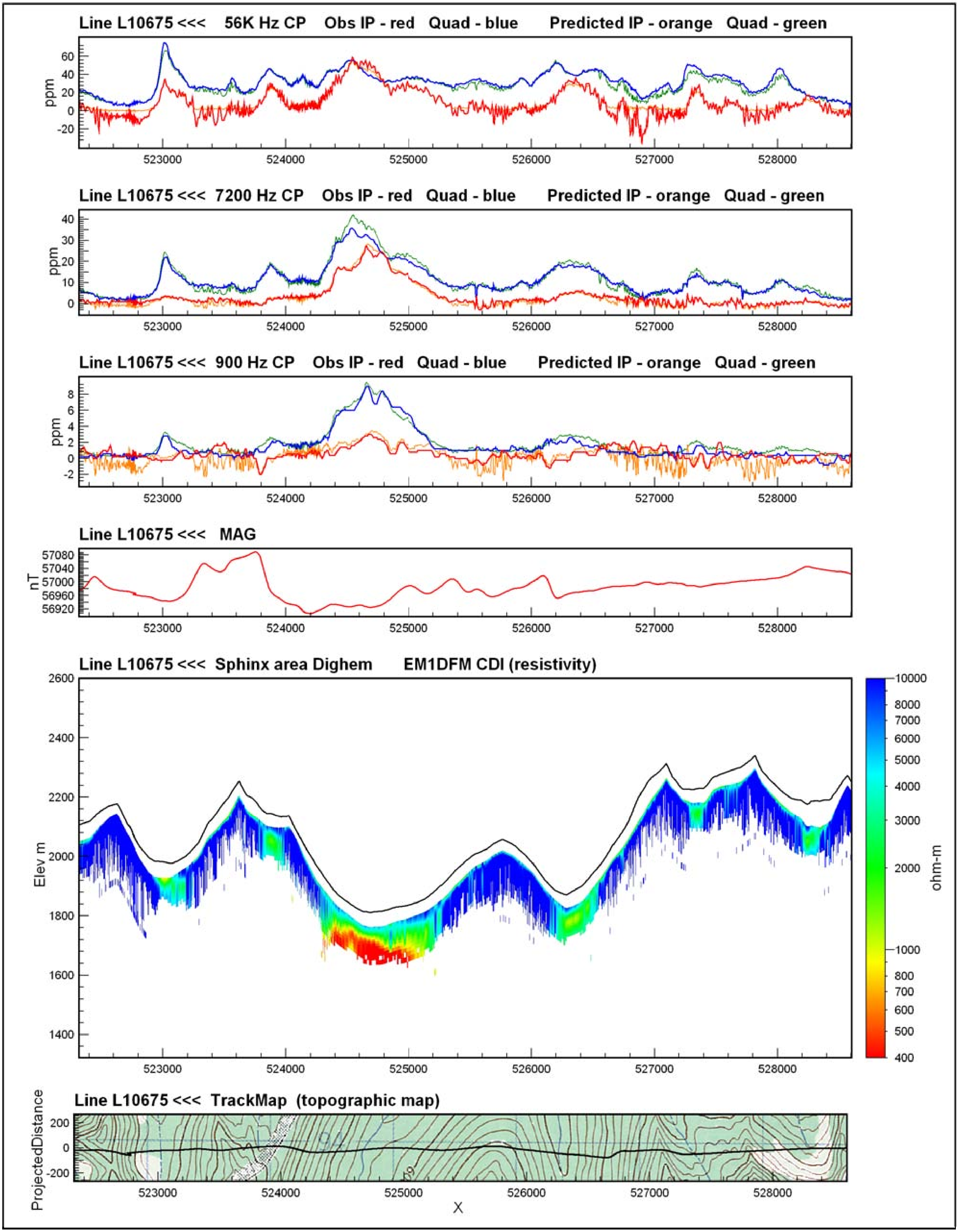
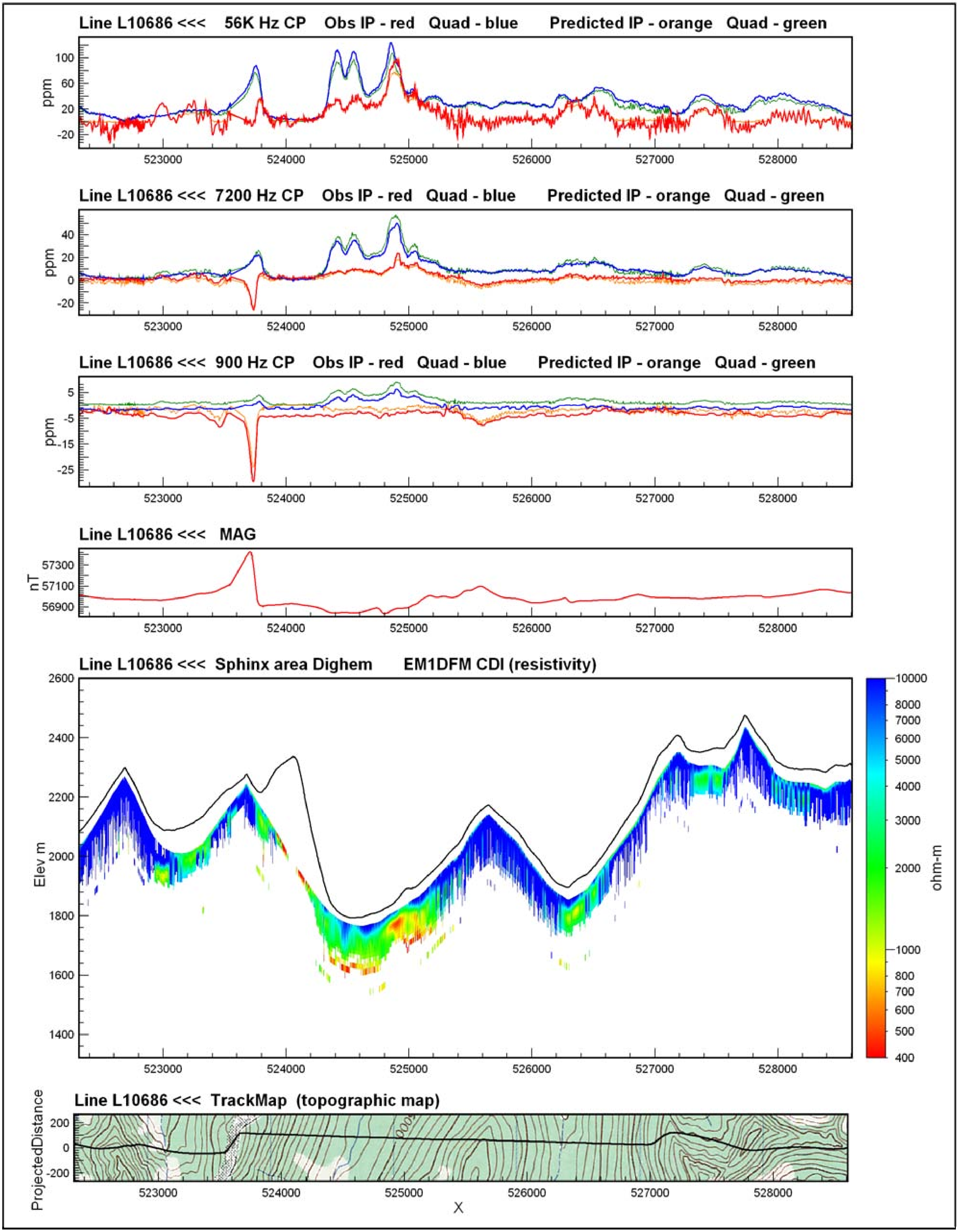
524000
525000
526000
527000
528000
X


Line L10675 <<< 56K Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10675 <<< 7200 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10675 <<< 900 Hz CP Obs IP - red Quad - blue Predicted IP - orange Quad - green
ppm
Line L10675 <<< MAG
nT
Line L10675 <<< Sphinx area Dighem EM1DFM CDI (resistivity)
Elev m
ohm-m
Line L10675 <<< TrackMap (topographic map)
ProjectedDistance
X



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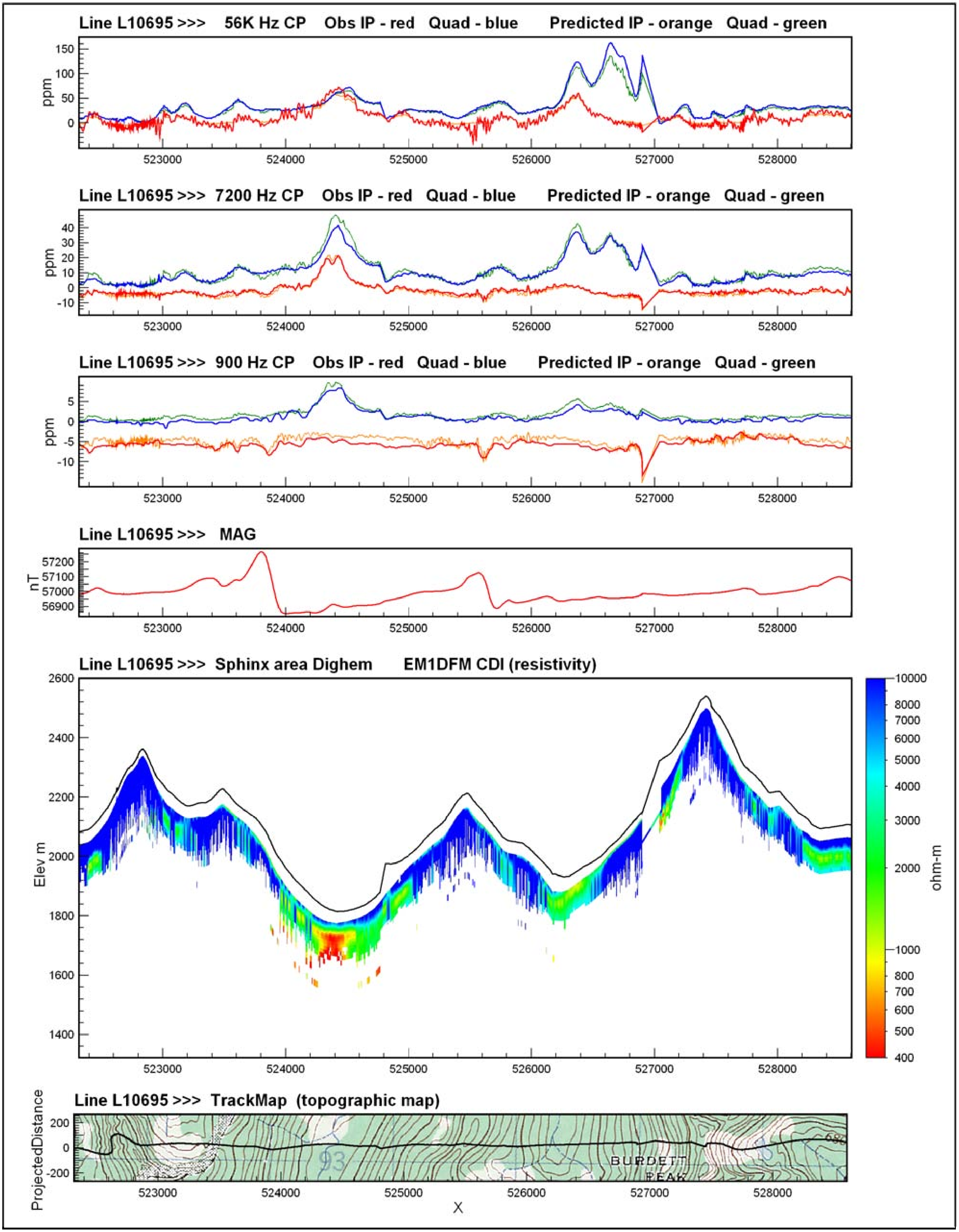
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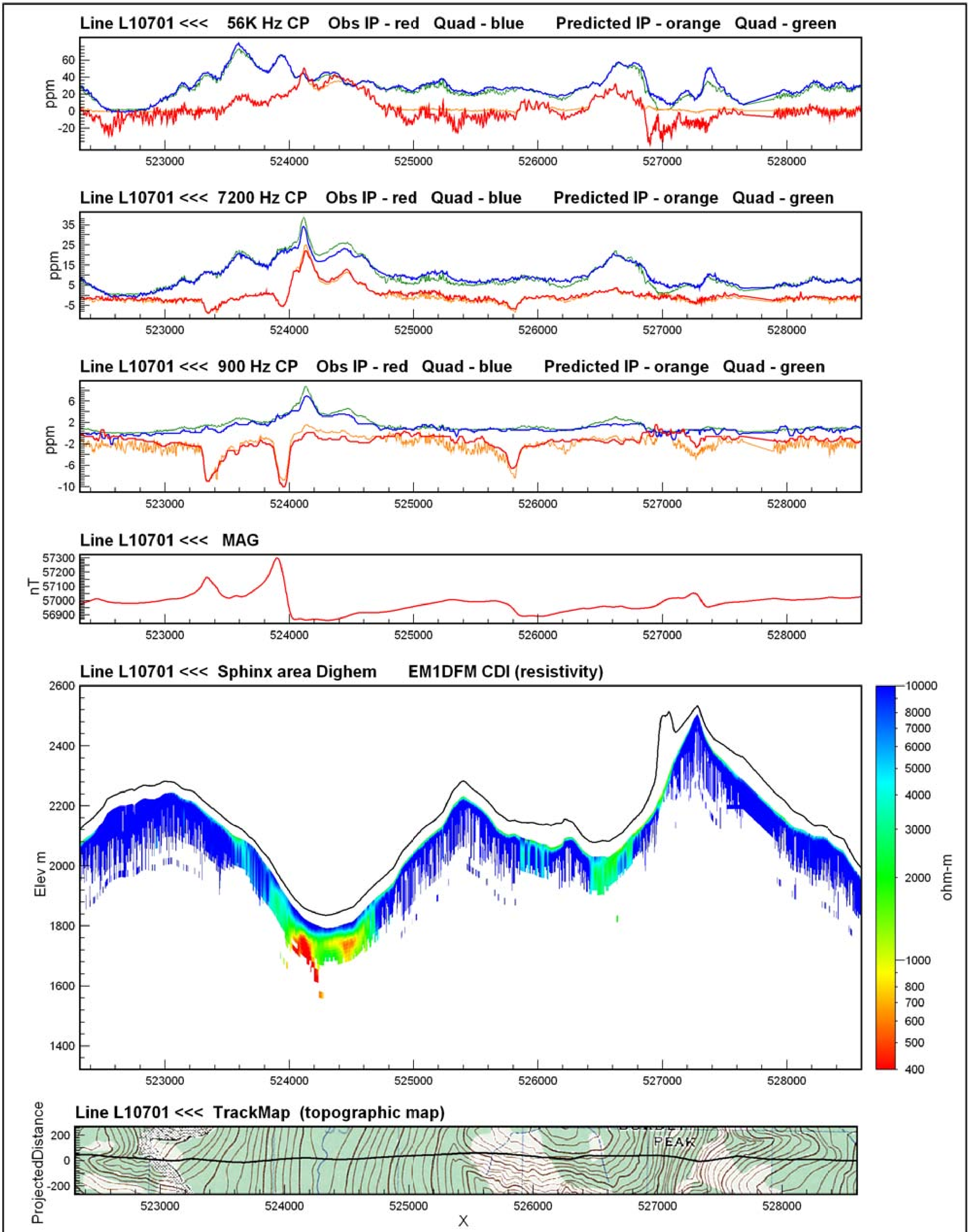
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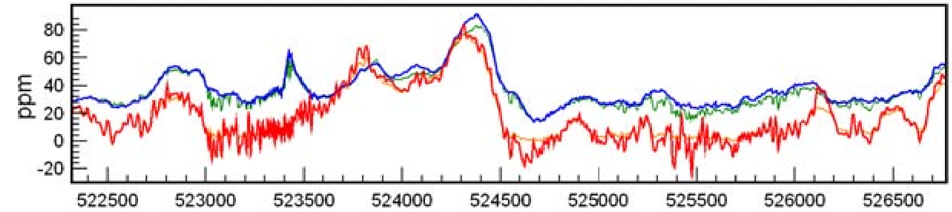

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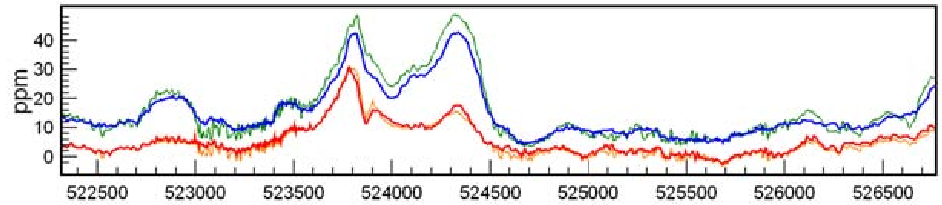

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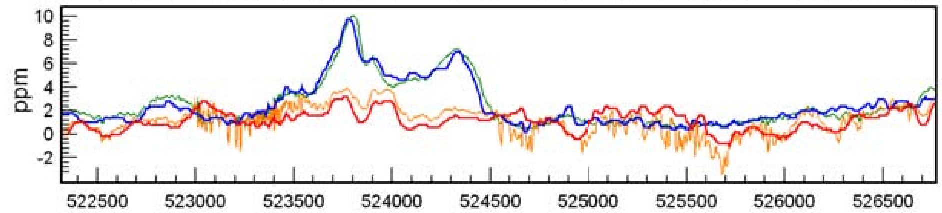

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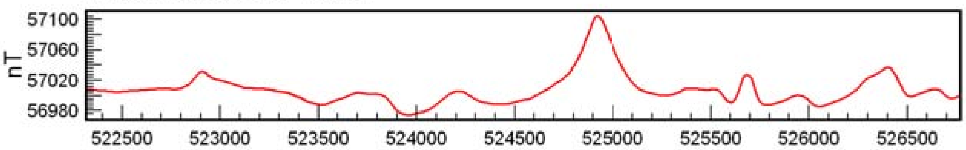

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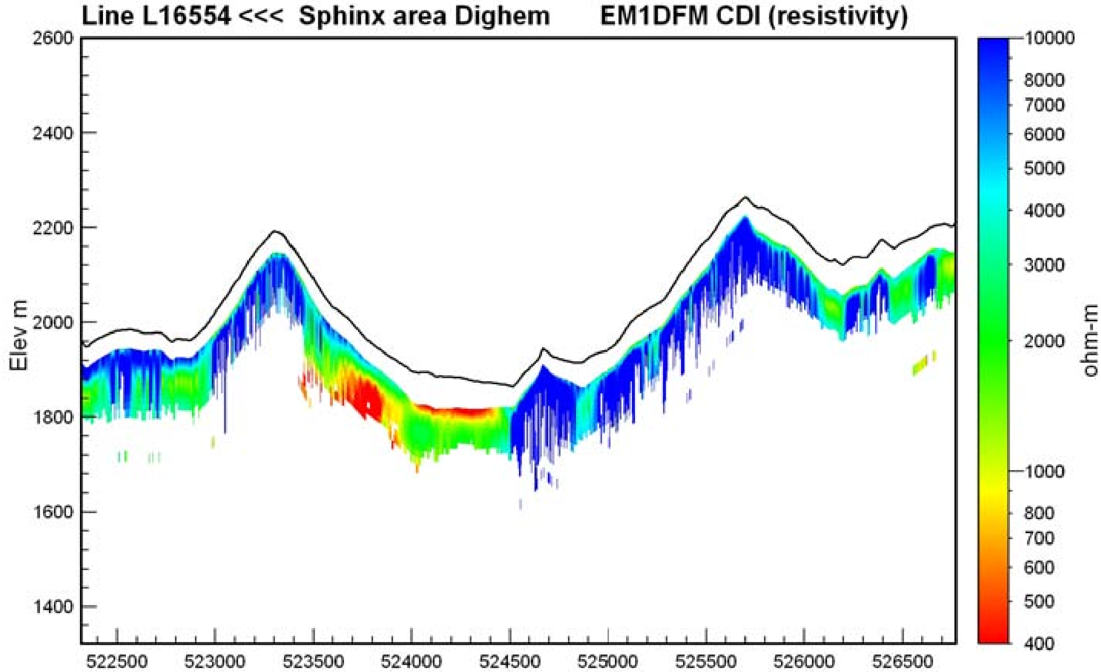

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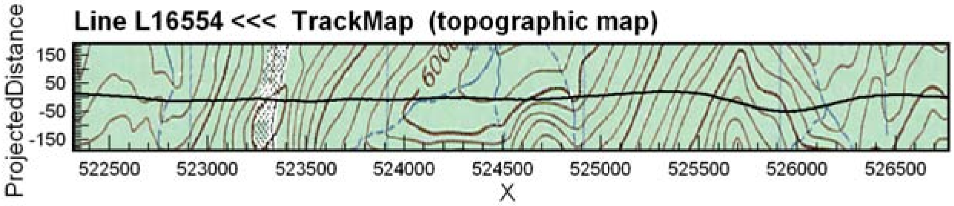

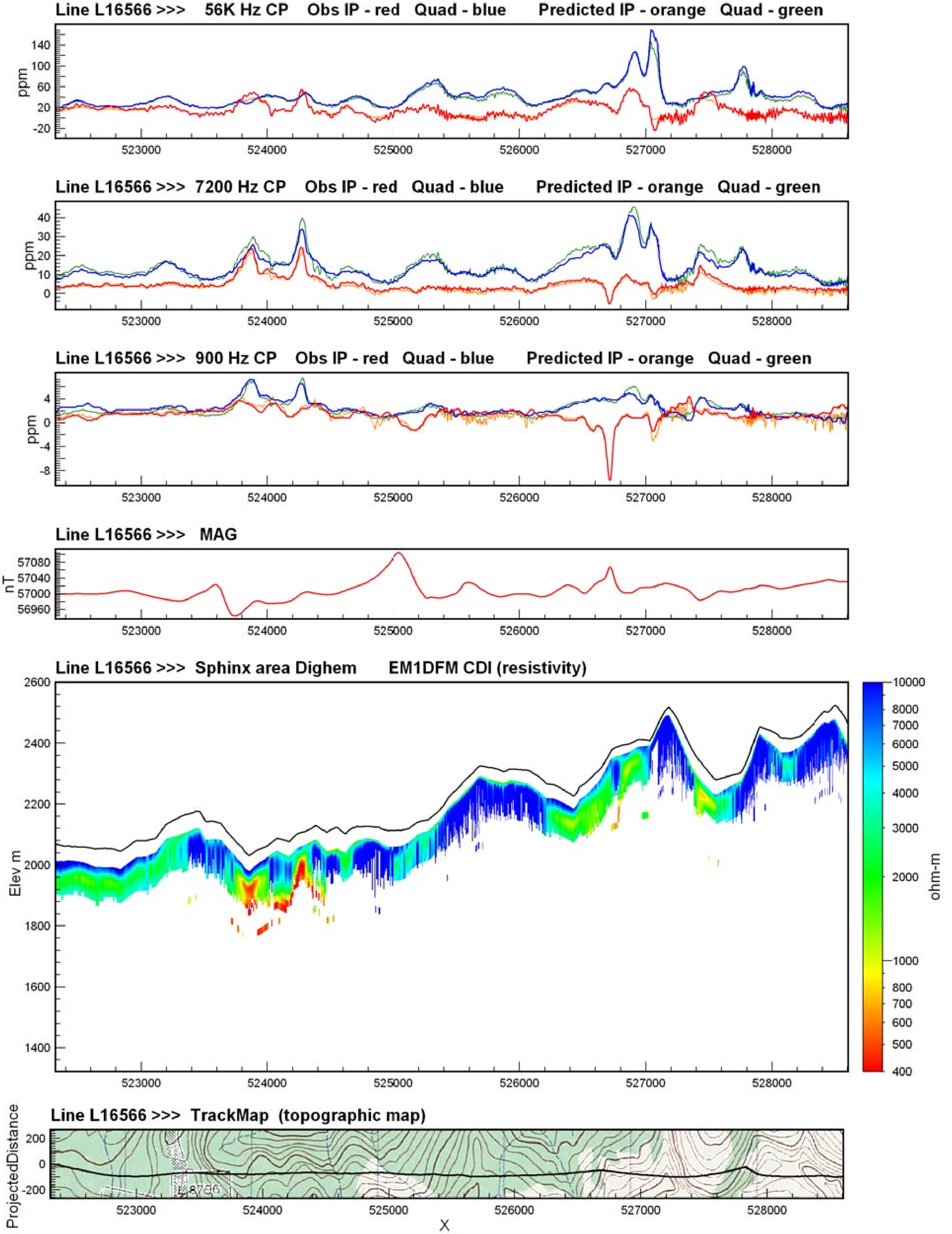
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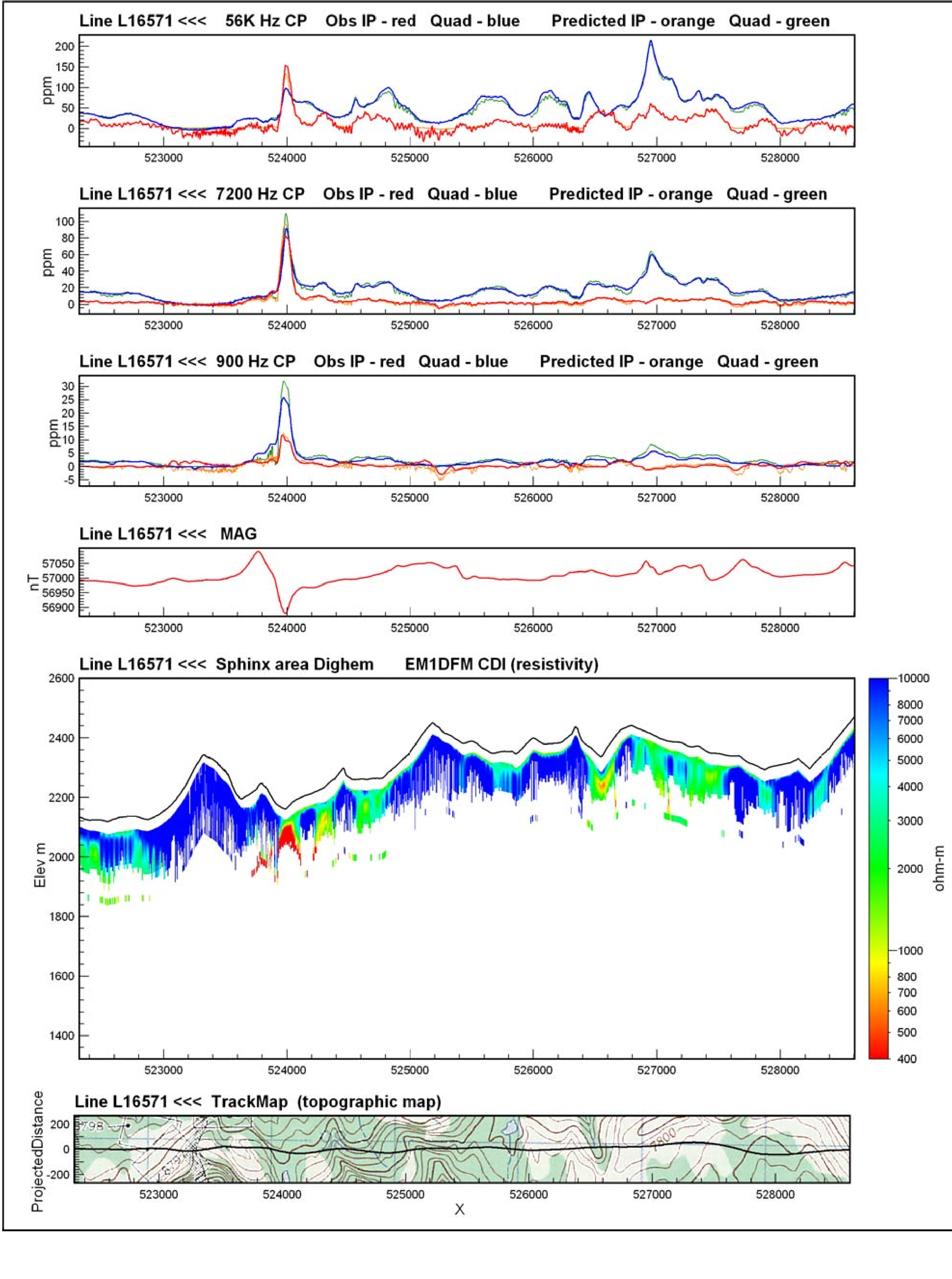

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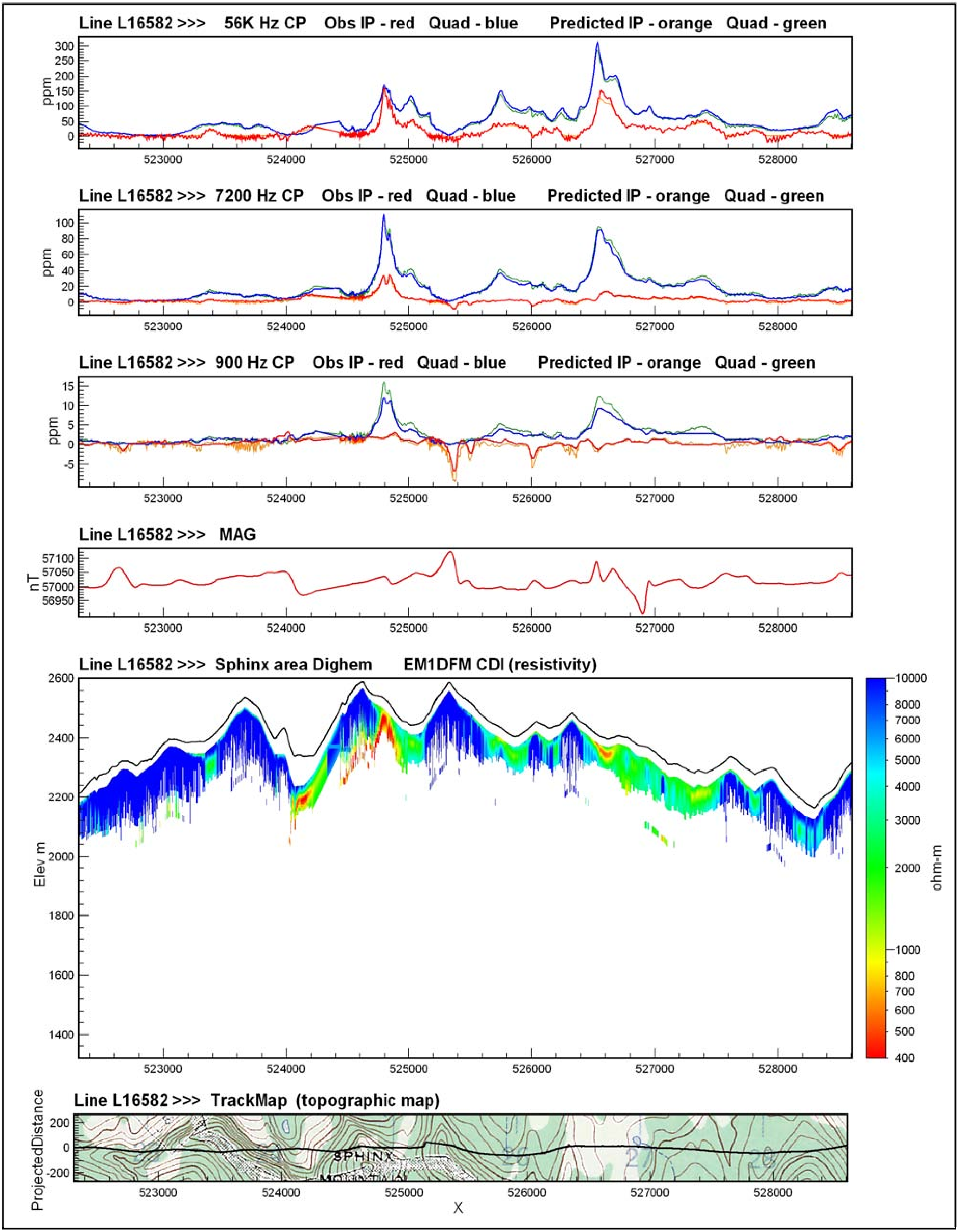
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Line L16582 >>> TrackMap (topographic map)
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APPENDIX II

MOLYBDENUM FACT SHEETS

2.1 MOLYBDENUM by Micheal J. Magyar from 2004 US Geological Survey Yearbook
2.2 MOLYBDENUM from 2005 US Geological Survey Yearbook
2.3 Molybdenum prices 1998 - Sept 2004
2.4 MOLYBDENUM by Lynda Duchesne from 1996 Canadian Mineral Yearbook
2.5 Mining Journal, August 5, 2005
2.6 Article by Ken Resner from Kitco Base Metals Website
2.7 Article by Mike Hoy from Kitco Base Metals Website

APPENDIX 2.1

MOLYBDENUM by Micheal J. Magyar from 2004 US Geological Survey Yearbook

MOLYBDENUM

By Michael J. Magyar

Domestic survey data and tables were prepared by Cindy C. Chen, statistical assistant, and the world production table was prepared by Linder Roberts, international data coordinator.

Molybdenum is a refractory metallic element used principally as an alloying agent in cast iron, steel, and superalloys to enhance hardenability, strength, toughness, and wear- and corrosion-resistance. To achieve desired metallurgical properties, molybdenum, primarily in the form of molybdic oxide (MoX) or ferromolybdenum (FeMo), is frequently used in combination with or added to chromium, columbium (niobium), manganese, nickel, tungsten, or other alloy metals. The versatility of molybdenum in enhancing a variety of alloy properties has ensured it a significant role in contemporary industrial technology, which increasingly requires materials that are serviceable under high stress, expanded temperature ranges, and highly corrosive environments. Moreover, molybdenum finds significant use as a refractory metal in numerous chemical applications, including catalysts, lubricants, and pigments. The variety of uses for molybdenum materials, few of which afford acceptable substitution, has resulted in an increase in Western molybdenum consumption to an estimated 144,000 metric tons per year (t/yr) (318 million pounds per year) in 2004 from about 68,000 t/yr (150 million pounds per year) in 1983 (Adams, 2004).

Molybdenum reserves and production capacity were concentrated in a few countries of the world. World mine output was estimated to be 141,000 metric tons (t) (molybdenum contained in concentrate), of which, in descending order of production, the United States, Chile, China, Peru, Canada, and Mexico provided about 93% (table 11). Chile, China, and the United States also held about 85% of the estimated 19 million metric tons (Mt) of molybdenum in the world reserve base.

Production

Domestic production data for molybdenum were derived by the U.S. Geological Survey by means of three separate voluntary surveys. These surveys are “Molybdenum Ore and Concentrate” (annual), “Molybdenum Concentrate” (monthly), and “Molybdenum Products and Molybdenum Concentrates” (monthly). Surveys are sent to all eight operations that produce molybdenum ore and products, and all responded, representing 100% of the U.S. production listed in table 1.

In 2004, U.S. mine production of molybdenum concentrate was 41,500 t, about a 24% increase from 33,500 t in 2003. World mine production of molybdenum in 2004 increased to 141,000 t, about an 8% increase from 130,000 t in 2003. The U.S. share of world production was about 29% in 2004. Net production of molybdenum products increased to 24,300 t in 2004 from 11,800 t in 2003 (table 2).

Primary molybdenum production continued at the Henderson Mine in Colorado, the Questa Mine in New Mexico, and the Thompson Creek Mine in Idaho. The Climax Mine in Colorado has been inactive since 1995. Molybdenum was produced as a byproduct of copper production at the Bagdad and Sierrita Mines in Arizona, the Continental Pit in Montana, the Chino Mine in New Mexico, and the Bingham Canyon Mine in Utah. Montana Resources’ Continental Pit in Montana resumed operation in November 2003 and made the first shipments of molybdenite concentrate in early 2004 (Platts Metals Week, 2003). The byproduct molybdenum recovery circuit at the Chino Mine was restarted in the fourth quarter and produced a minor amount of concentrate in 2004.

With byproduct molybdenum recovery at a copper mine, all mining costs associated with producing the molybdenum concentrate are allocated to the primary metal (copper). Owing to this cost advantage, byproduct molybdenite recovery from copper circuits at selected porphyry copper mines was estimated to account for 79% of Western and 55% of worldwide molybdenum supply. Phelps Dodge Corp. and Kennecott Utah Copper Corp. increased copper production and byproduct molybdenum recovery, and Montana Resources resumed copper and byproduct molybdenum shipments in 2004. Kennecott Utah Copper increased molybdenum production by more than 35% compared with that of 2003.

Primary molybdenum mines operate in a swing capacity and have a limited ability to change production rate to meet spikes in demand. The Henderson Mine operated at about 75% of its 16,300-t/yr (36- million-pound-per-year) capacity, about a 24%, as compared with that of 2003. The Thompson Creek Mine produced at about 50% of its 9,000-t/yr (20- million-pound-per-year) capacity in 2004, and the Questa Mine continued to operate its mine and mill separately at intervals of about 6 months (Ryan’s Notes, 2003). Phelps Dodge Corp. commissioned two 6-month-long studies to determine the economic feasibility of reopening the Climax Mine, but industry sources don’t expect Climax to restart until the Henderson deposit in Empire, CO, about 100 kilometers east, is exhausted. Neither Montana Resources nor Questa Molycorp announced expansion plans.

In May, Thompson Creek informed some of its Japanese customers that it would be supplying some of their molybdenum oxide requirements from its U.S. facility rather than from its Endako Mine in Canada (Ryan’s Notes, 2004f). The rock slides at Endako earlier in 2004 forced Thompson Creek to mine lower ore grades at the site, and consequently, production was lower than in 2003. Rather than delay shipping to Japan, Thompson Creek was to ship molybdenum oxide from its Langloth, PA, roaster to meet some customer requirements.

Golden Phoenix Minerals, Inc. announced it could begin producing molybdenum by December at its Ashdown project in Nevada. A drill program began in mid-August to confirm past evaluations by other operators that identified a 132,000-t molybdenum resource averaging 2.9% molybdenum and a separate 1.1-Mt gold resource averaging about 0.125 troy ounces per metric ton. Golden Phoenix reported that water pollution control and reclamation permit applications had been submitted to the Nevada Department of

Environmental Protection in August. The permit applications stipulated that about 9,100 t of stockpiled material would be processed in an existing pilot mill to determine flow sheet design for a production mill. Golden Phoenix acquired a pilot test mill and was to deliver and commission the mill within 45 days upon receiving permits to operate (Platts Metals Week, 2004e).

Consumption

In 2004, reported consumption (roasting) of molybdenum concentrate was 38,700 t, an increase of about 11,200 t compared with that of 2003. The increase resulted from increased mine production and because molybdenum concentrates from Thompson Creek were roasted domestically in 2004. Domestic mine production of molybdenum concentrate was roasted, exported for conversion, or purified to lubricant-grade molybdenum disulfide. Technical-grade MoX consumption in 2004 was about 4% greater than that of 2003. Oxide was the chief form of molybdenum used by industry, particularly in making full alloy, stainless and tool steel, and superalloys; however, some of the oxide was converted to other molybdenum products, such as ammonium and sodium molybdates, FeMo, high-purity oxide, and metal powder (table 3).

Metallurgical applications continued to dominate molybdenum use in 2004, accounting for more than 82% of total consumption. In 2004, ferromolybdenum accounted for about 38% of the molybdenum-bearing materials used to make steel, a 1% decrease from that of 2003. Nonmetallurgical applications included catalysts, chemicals, lubricants, and pigments. The dominant nonmetallurgical use was in catalysts.

Stocks

At yearend, producer plus consumer industry stocks contained about 4,900 t of molybdenum, an increase of about 200 t compared with those at yearend 2003. Inventories of molybdenum in concentrate at mines and plants increased by about 100 t. Producer stocks of molybdenum in such products as FeMo, molybdates, MoX, metal powders, and other types increased by about 100 t compared with those of 2003. Total stocks of about 7,500 t represented about a 23-week supply. Supply was calculated as reported stocks divided by annual consumption (table 1).

Prices

Prices were reported in Platts Metals Week in dollars per kilogram of contained molybdenum. The annual time-average prices for 2004 were MoX, $36.729 per kilogram and FeMo, $40.452 per kilogram of contained molybdenum, which represented increases of 213% and 209%, respectively, compared with 2003 prices. Molybdenum prices rose steadily in 2004 from January through March, spiked in April, and then rose steadily through November before spiking again in December. The MoX monthly average price ranged from $17.499 per kilogram in January to $54.289 per kilogram in November, and the FeMo monthly average price ranged from $19.304 per kilogram in January to $57.458 per kilogram in November. In December the MoX monthly average price spiked at $68.861 per kilogram, and the FeMo price spiked at $76.500 per kilogram.

In March, molybdenum prices increased sharply in Europe, as output by producers appeared to lag the market (Ryan's Notes, 2004c). The bull market was driven by buyers looking for prompt material, which limited the number of suppliers and carried premium prices. This also meant the buyers had to come back on a regular basis, which kept the market buoyant (Platts Metals Week, 2004f).

In December, for the fourth consecutive month, European ferromolybdenum prices increased, trading in the range of $75 to $85 per kilogram in December compared with about $20 per kilogram in December 2003. The December price rise represented an increase of about 14% more than that of the previous month. Chinese ferromolybdenum prices continued to rise and traded at $65 per kilogram in December, about $5 per kilogram more than that of the previous month. Further price hikes were expected in 2005 as Chinese producers compensate for lost revenue owing to the removal of China's export tax rebate (Metal Bulletin Research, 2004c).

In mid-June, Chinese ferromolybdenum traders were concerned by the surge in price of Western ferromolybdenum as Chinese ferromolybdenum ranged from $31 to $33 per kilogram, while European ferromolybdenum rose to a range of $47 to $52 per kilogram. A U.S.-based trader agreed that a two-tiered market was in place, and a major reason for it was that the European Union (EU) was enlarged by 10 new countries in May. This reportedly had the effect of reducing Chinese ferromolybdenum consumption by the new Eastern European members owing to antidumping duties in place on Chinese ferromolybdenum imports into the EU (Platts Metals Week, 2004c).

Foreign Trade

In 2004, molybdenum-containing material exports collectively contained about 47,100 t of molybdenum and were valued at $554 million (table 6). Imports for consumption of molybdenum-containing materials (products) collectively were valued at $501 million (table 9).

World Industry Structure

Capacity.—As of December 31, U.S. rated capacity, for mines and mills, was estimated to be 75,000 t/yr of contained metal. Rated capacity was defined as the maximum quantity of product that can be produced in a period of time on a normally sustainable long-term operating rate based on the physical equipment of the plant and given acceptable routine operating procedures involving energy, labor, maintenance, and materials. Capacity included operating plants temporarily closed that can be brought into production within a short period of time with minimal capital expenditure.

Reserves.—The U.S. molybdenum reserve base was estimated to be about 5.4 Mt, about 28% of the world molybdenum reserve base. About 90% of U.S. reserves occur in large low-grade porphyry molybdenum deposits mined or anticipated to be mined primarily for molybdenum and as an associated metal sulfide in low-grade porphyry copper deposits. These deposits were in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, and Utah. Other molybdenum sources contribute insignificantly to U.S. reserves.

Most Canadian reserves of molybdenum were associated with porphyry molybdenum and porphyry copper-molybdenum deposits in British Columbia. Other Canadian reserves were associated with minor copper-molybdenum porphyry deposits in New Brunswick and Quebec.

Molybdenum reserves in Central America and South America were associated mainly with large copper porphyry deposits. Of several such deposits in Chile, the Chuquicamata and El Teniente deposits were among the world's leading deposits and accounted for 85% of molybdenum reserves in Chile. Peru also had substantial reserves, and the La Caridad deposit in Mexico was a leading producer. Numerous other porphyry copper deposits that may contain recoverable quantities of molybdenum have been identified in Central America and South America. Many of these deposits were being actively explored and evaluated and could substantially add to reserves in the future. Reserves of molybdenum in China and the Commonwealth of Independent States were thought to be substantial, but definitive information about the current sources of supply or prospects for future development in these two areas was lacking.

World Review

European Union.—European converters worked to produce more FeMo. Treibacher Industrie AG said it doubled its usual summer output. Phelps Dodge Corp. closed its Climax Molybdenum facility in Stowmarket, United Kingdom, for 3 weeks, starting the last week in July, to install production upgrades to increase FeMo capacity by 20%. The Stowmarket facility was believed to produce about 1,000 metric tons per month of FeMo. Belgian molybdenum processor Sadaci (a subsidiary of Chile's Molymet) maintained normal production levels at its FeMo unit and its roaster rather than taking its usual summer shutdown (Ryan's Notes, 2004a).

Germany's Steel Federation announced that it planned to open a review of the European Commission's antidumping duty on Chinese molybdenum imports. A duty of 22.5% was placed on Chinese-origin FeMo by the European Commission in January 2002 after a finding that dumping of Chinese material had caused harm to the European FeMo industry. Specialty steelmakers have been adversely affected by the current high prices and limited supply (Metal Bulletin Research, 2004b).

Armenia.—Comsup Commodities Inc., a U.S. company, became the holder of 100% of the shares of Agarak Copper-Molybdenum Complex for $600,000. In compliance with the contract, the company bound itself to invest $3.5 million for modernizing the facilities and to increase ore production within 2 years. Agarak planned to reach an ore production rate of 2.5 million metric tons per year, its rated capacity, by yearend. Agarak produced 2.3 Mt of ore last year (Metal-Pages, 2004§[1]).

Canada.—Roca Mines Inc. announced plans to study two development scenarios for its MAX molybdenum project in southeastern British Columbia, following completion of a resource estimate for the project. Roca planned studies of a fast-track mining and milling operation based on an estimated measured resource of 1.01 Mt grading 1.01% molybdenite at a 0.50% cutoff grade. The company also planned to study a large-scale mining and milling option that would process 2,000 to 3,000 metric tons per day (t/d) of ore from a 9.34-Mt resource grading 0.35% molybdenite at a 0.20% cutoff grade (Platts Metals Week, 2004a).

Chile.—Molibdenos y Metales (Molymet), Santiago, announced plans to boost molybdenum concentrate processing capacity at the San Bernardo plant by 18,000 t/yr (40 million pounds per year) and at its Sacaci subsidiary's plant in Ghent, Belgium, by 4,500 t/yr (10 million pounds per year). The expansion in Chile should be completed in 2007, but the expansion in Belgium may not be completed until 2009. Molymet expected to increase its ferromolybdenum conversion capacity in the first half of 2004 by 9,000 t/yr (20 million pounds per year) to about 23,000 t/yr (50 million pounds per year). Molymet produced ferromolybdenum and molybdenum oxide at plants in Belgium, Chile, Germany, and Mexico (Ryan's Notes, 2004d).

Compania Minera Dona Ines de Collahuasi, one of Chile's leading copper producers, approved a $40 million project to produce molybdenum concentrate from its Collahuasi copper mine in northern Chile. Concentrates will be extracted from the new Rosario deposit owing to much higher molybdenum content in the ore than in the nearby Ujina pit. The plant, to be built at the company's Puerto Patache port facility, is expected to produce 4,500 to 7,000 t/yr of contained molybdenum, depending on ore grade, with production expected to commence in late 2006 (Platts Metals Week, 2004d).

Amerigo Resources Ltd. (Amerigo) received approval to construct a processing plant to extract molybdenum from a copper concentrate produced at Minera Valle Central (MVC) near Santiago (Ryan's Notes, 2004b). MVC recovers copper from tailings discarded from the El Teniente Mine, producing an average of 140 t/d of copper concentrate grading 0.894% molybdenum. Expected molybdenum production would be about 320 t/yr (700,000 pounds per year) contained in concentrate. Amerigo estimated operating costs to be about $2 per pound.

China.—Jinduicheng Molybdenum Mining Corp. acquired a 65% stake in a leading molybdenum mine in Ruyang County, Henan Province. The new mine has a molybdenum concentrate capacity of 600 to 800 t/yr, but was expected to expand to 2,500 to 3,000 t/yr by the end of 2004. Ruyang's molybdenum reserves were estimated to be 400,000 t (Platts Metals Week, 2004b).

Several Chinese molybdenum producers targeted China's domestic market in 2004 in response to the Government's decision to cut the export tax rebate on molybdenum concentrates to 8% from 14%, effective January 1, 2004 (Platts Metals Week, 2004b). This

[1]References that include a section mark (§) are found in the Internet References Cited section.

decision, combined with supply disruptions in China and Russia, likely caused molybdenum oxide quotes to rise in 2004. Growing demand from China's stainless steel mills curbed Chinese ferromolybdenum exports to the Asian market, contributing to ferromolybdenum's price rise (Metal Bulletin Research, 2004a).

Russia.—Russia retained its 49% share in the Russian-Mongolian copper-and-molybdenum joint-venture Erdenet Mining Corporation. Erdenet has developed several ore deposits, which make up several fields, and is a leading Mongolian producer of raw copper. Reserves in the northwest mining sector are estimated to be 6 Mt of copper and 170,000 t of molybdenum. The company was attempting to raise processing capacity in 2004 and was considering building a 25,000-t/yr copper cathode plant (Metal Pages, 2003§).

Outlook

Phelps Dodge Corp. announced that it expected to achieve full capacity production at its Bagdad concentrator by the end of the second quarter of 2004 and at its Sierrita concentrator by the fourth quarter of 2004. Phelps Dodge expected to produce about 13,600 t (30 million pounds) of molybdenum concentrate in 2004 from the two operations, a slight increase from that in 2003. While achieving full capacity production at the two mines depended on the ore grades being mined, the output numbers showed that Phelps Dodge operated at about 80% of its historical high in 2004 (Ryan's Notes, 2004e). The Henderson Mine was expected to produce according to plan at about 12,700 t (28 million pounds) of molybdenum.

Growth in the production of stainless steel in China, Europe, and India was expected to continue, leading to strong molybdenum demand. The International Stainless Steel Forum had predicted that growth in Europe for 2004 would reach an estimated 5%. However, output increased sharply in the second half of the year, making it likely that the industry exceeded this target. In a separate development, China's National Development and Reform Commission completed a new policy for the Chinese steel industry, which is awaiting state approval. The policy is structured to increase the volume of high-technology flat products, which should reduce China's dependence on imported goods. This should have a positive effect on existing and planned stainless steel plants in China. In India, Jindal announced plans to expand its existing operations to 750,000 t/yr for hot rolling and 250,000 t/yr for cold rolling facilities. Currently, the company exports approximately 50% of its stainless steel output, predominantly to China (Metal Bulletin Research, 2004d).

Because of abundant resources and adequate production capacity in Chile, China, the United States, and other countries, world producers expected to readily meet the future requirement for molybdenum. The principal use for molybdenum will continue to be in chemicals and catalysts and as an additive in steel manufacturing in general, most importantly alloy and stainless steel.

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TABLE 1
SALIENT MOLYBDENUM STATISTICS[1]

		2000	2001	2002	2003	2004
United States:						
Concentrate, Mo content:						
Production	metric tons	40,900	37,600	32,300 r	33,500	41,500
Shipments:						
Quantity	do.	40,400	37,000	32,300	33,600	42,000
Value	thousands	$210,000	$192,000	$232,000	$324,000	$1,420,000
Reported consumption[2]	metric tons	33,800	33,300	21,200	27,500	38,700
Imports for consumption	do.	6,120	6,010	4,710	5,190	8,780
Stocks, December 31, Mo content:						
Concentrate, mine and plant	do.	4,030	4,210	3,870	2,520	2,610
Product producers[3]	do.	5,360	5,600	4,300	2,760	2,840
Consumers	do.	2,050	869	1,800	1,900 r	2,030
Total	do.	11,400	10,700	9,970	7,180 r	7,480
Primary products, Mo content:						
Production	do.	42,900	40,300	31,300	41,400	66,300
Shipments	do.	34,600	32,600	27,500	30,100	39,300
Reported consumption	do.	18,300	15,800	15,300	16,400 r	17,400
World, mine production, Mo content	do.	135,000 r	132,000 r	121,000	130,000 r	141,000 e

[e]Estimated. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Molybdenum concentrates roasted to make molybdenum oxide.

[3]Includes ammonium, calcium, and sodium molybdate; briquets; ferromolybdenum; molybdenum hexacarbonyl; molybdenum metal; molybdenum pentachloride; molybdic acid; pellets; phosphomolybdic disulfide; and technical and purified molybdic oxide.

TABLE 2

PRODUCTION, SHIPMENTS, AND STOCKS OF MOLYBDENUM PRODUCTS IN THE UNITED STATES[1]

(Metric tons of contained Mo)

	Metal powder		Other[2]		Total	
	2003	2004	2003	2004	2003	2004
Received from other producers	--	--	16,800	15,100	16,800	15,100
Gross production during year	3,490	4,210	37,900	62,000	41,400	66,300
Molybdenum products used to make other products	2,730	3,340	26,900	38,600	29,600	42,000
Net production	760	868	11,000	23,400	11,800	24,300
Shipments	739	889	29,300	38,500	30,100	39,300
Producer stocks, December 31	194	172	2,570	2,660	2,760	2,840

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes ammonium, calcium, and sodium molybdate; ferromolybdenum; molybdenum disulfide; molybdenum hexacarbonyl; molybdenum metal; molybdenum pentachloride; molybdic acid; molybdic oxides; pellets; and phosphomolybdic acid.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS[1]

(Kilograms of contained Mo)

End use	Molybdic oxides	Ferromolybdenum[2]	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2003:						
Steel:						
Carbon	239,000	350,000	--	--	W	589,000
High-strength low-alloy	365,000	124,000	--	--	W	489,000
Stainless and heat-resisting	2,430,000	830,000	--	11,800	160,000	3,430,000
Full alloy	1,330,000	1,920,000	--	--	18,500	3,270,000
Tool	577,000	W	--	546	--	577,000
Total	4,950,000	3,230,000	--	12,400	178,000	8,360,000
Cast irons (gray, malleable, ductile iron)	W	995,000 r	--	--	27,000	1,020,000 r
Superalloys	676,000	19,500	--	(3)	1,250,000	1,950,000
Alloys (other than steels, cast irons, superalloys):						
Welding materials (structural and hard-facing)	--	43,600	--	--	424	44,000
Other alloys	W	34,600	--	882	1,140	36,700
Mill products made from metal powder[4]	--	--	--	--	1,090,000	1,090,000
Cemented carbides and related products[5]	--	--	--	--	79	79
Chemical and ceramic uses:						
Pigments	W	--	235,000	--	--	235,000
Catalysts	1,730,000	--	W	--	179,000	1,910,000
Other	--	--	--	--	14,400	14,400
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	289,000	289,000
Other	214,000	99,200	888,000	--	206,000	1,410,000
Grand total	7,570,000	4,420,000 r	1,120,000	13,200	3,240,000	16,400,000 r
Stocks, December 31	460,000	478,000 r	41,100	51,300	866,000	1,900,000 r
2004:						
Steel:						
Carbon	362,000	378,000	--	--	W	740,000
High-strength low-alloy	426,000	168,000	--	--	W	594,000
Stainless and heat-resisting	2,630,000	836,000	--	22,700	117,000	3,610,000
Full alloy	1,760,000	2,200,000	--	--	18,100	3,980,000
Tool	603,000	W	--	442	--	604,000
Total	5,790,000	3,580,000	--	23,100	135,000	9,520,000
Cast irons (gray, malleable, ductile iron)	W	920,000	--	--	27,000	947,000
Superalloys	948,000	19,500	--	(3)	1,400,000	2,360,000
Alloys (other than steels, cast irons, superalloys):						
Welding materials (structural and hard-facing)	--	68,000	--	--	733	68,700
Other alloys	W	28,000	--	913	1,050	30,000
Mill products made from metal powder[4]	--	--	--	--	1,420,000	1,420,000
Cemented carbides and related products[5]	--	--	--	--	46	46
Chemical and ceramic uses:						
Pigments	W	--	207,000	--	--	207,000
Catalysts	1,010,000	--	W	--	179,000	1,190,000
Other	--	--	--	--	14,500	14,500
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	350,000	350,000
Other	114,000	78,900	889,000	--	187,000	1,270,000
Grand total	7,860,000	4,690,000	1,100,000	24,000	3,710,000	17,400,000
Stocks, December 31	464,000	656,000	16,800	17,200	880,000	2,030,000

[r]Revised. W Withheld to avoid disclosing company proprietary data; included with "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes calcium molybdate.
[3]Included with "Superalloys, other alloys."
[4]Includes construction, mining, oil and gas, and metal working machinery.
[5]Includes ingot, wire, rod, and sheet.

TABLE 4

U.S. EXPORTS OF MOLYBDENUM PRODUCTS, BY PRODUCT AND COUNTRY[1]

Product and country	HTS[2] code	2003 Quantity (metric tons)	2003 Value (thousands)	2004 Quantity (metric tons)	2004 Value (thousands)
Oxides and hydroxides, gross weight:	2825.70.0000				
Brazil		3	$46	(3)	$3
Canada		1,560	13,300	2,340	23,100
Japan		123	1,360	661	12,500
Mexico		59	383	3	56
Other		837	4,840	2,280	44,700
Total		2,580	20,000	5,280	80,300
Molybdates all, gross weight:	2841.70.0000				
Australia		10	110	14	131
Brazil		(3)	4	6	117
Canada		574	3,060	845	5,800
Colombia		10	91	6	41
Honduras		2	12	--	--
Japan		332	3,360	279	2,650
Korea, Republic of		36	346	3	43
Mexico		262	3,390	370	5,240
Netherlands		1,000	5,870	876	13,400
Taiwan		25	177	6	113
Other		20	261	278	955
Total		2,270	16,700	2,680	28,500
Ferromolybdenum, contained weight:[4]	7202.70.0000				
Canada		547	7,690	870	18,700
Mexico		43	688	34	1,130
Netherlands		26	255	--	--
Other		1	21	21	1,400
Total		617	8,660	925	21,200
Molybdenum other, gross weight:[5]	Various[6]				
Australia		10	156 r	(3)	43
Brazil		59	1,730	89	3,680
Canada		69	2,030	77	2,850
France		25	1,060	42	1,770
Germany		66	1,510	100	3,970
Hungary		5	158	84	3,180
India		29	752	37	1,520
Italy		8	322	25	1,010
Japan		238	6,990	442	22,800
Mexico		14	1,000	13	1,270
Netherlands		42	1,550	24	1,760
Spain		7	189 r	14	717
Sweden		2	144 r	24	461
Taiwan		117	2,200	101	4,140
United Kingdom		279	4,230	246	7,690
Other		87	4,440 r	203	9,150
Total		1,060	28,500	1,520	66,000

[r]Revised. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Harmonized Tariff Schedule of the United States.

[3]Less than ½ unit.

[4]Ferromolybdenum contains about 60% to 65% molybdenum.

[5]Includes powder, unwrought, waste and scrap, wire, wrought, and other.

[6]Includes HTS codes 8102.10.0000, 8102.94.0000, 8102.97.0000, 8102.96.0000, 8102.95.0000, and 8102.99.0000.

Source: U.S. Census Bureau.

TABLE 5

U.S. EXPORTS OF MOLYBDENUM ORE AND CONCENTRATES

(INCLUDING ROASTED AND OTHER CONCENTRATES), BY COUNTRY[1]

Country	2003 Quantity (metric tons of contained Mo)	2003 Value (thousands)	2004 Quantity (metric tons of contained Mo)	2004 Value (thousands)
Australia	102	$1,200	30	$322
Austria	--	--	1,310	$6,460
Belgium	3,190	30,200	6,470	57,900
Brazil	43	484	31	462
Canada	910	5,080	1,370	14,700
Chile	368	4,470	1,380	23,100
China	83	254	36	98
Costa Rica	23	46	27	67
Finland	--	--	638	3,990
Germany	1	4	295	1,000
Japan	2,000	21,200	5,730	26,000
Korea, Republic of	61	675	95	890
Mexico	3,730	17,300	3,910	26,500
Netherlands	10,900	60,900	14,100	125,000
Slovenia	--	--	815	3,610
Spain	4	57	765	3,760
Sweden	26	228	38	650
United Kingdom	7,880	49,500	8,910	61,000
Other	206 r	2,390 r	279	1,760
Total	29,500	194,000	46,200	358,000

[r]Revised. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6

U.S. EXPORTS OF MOLYBDENUM PRODUCTS[1]

		2003			2004		
Item	HTS[2] code	Gross weight (metric tons)	Contained Mo (metric tons)	Value (thousands)	Gross weight (metric tons)	Contained Mo (metric tons)	Value (thousands)
Molybdenum ore and concentrates, roasted	2613.10.0000	NA	18,100	$116,000	NA	33,800	$237,000
Molybdenum ore and concentrates, other	2613.90.0000	NA	11,400	78,500	NA	12,400	121,000
Molybdenum chemicals:							
Oxides and hydroxides	2825.70.0000	2,580	NA	20,000	5,280	NA	80,300
Molybdates, all	2841.70.0000	2,270	NA	16,700	2,680	NA	28,500
Ferromolybdenum	7202.70.0000	1,030	617	8,660	1,540	925	21,200
Molybdenum powders	8102.10.0000	308	NA	6,770	478	NA	18,200
Molybdenum unwrought, bars and rods	8102.94.0000	94	NA	2,160	181	NA	3,510
Molybdenum waste and scrap	8102.97.0000	294	NA	2,370	216	NA	4,330
Molybdenum wire	8102.96.0000	111	NA	4,730	177	NA	8,540
Molybdenum, other	Various[3]	252	NA	12,400	469	NA	31,400
Total		6,940	30,100	268,000	11,000	47,100	554,000

NA Not available.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Harmonized Tariff Schedule of the United States.

[3]Includes HTS codes 8102.95.0000 and 8102.99.0000.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS OF MOLYBDENUM PRODUCTS, BY PRODUCT AND COUNTRY[1]

Product and country	HTS[2] code	2003 Quantity (metric tons)	2003 Value (thousands)	2004 Quantity (metric tons)	2004 Value (thousands)
Oxides and hydroxides, gross weight:	2825.70.0000				
Belgium		9	$66	--	--
Chile		279	2,570	231	$6,270
China		664	4,600	216	3,600
Kyrgyzstan		151	775	--	--
Russia		--	--	36	499
Other		196	1,600	339	5,460
Total		1,300	9,600	822	15,800
Molybdates all, contained weight:	Various[3]				
Belgium		6	188	--	--
Canada		12	93	2	33
Chile		575	7,630	850	11,400
China		468	4,440	425	5,770
Germany		7	95	140	2,120
Other		13	167	27	477
Total		1,080	12,600	1,440	19,800
Molybdenum orange, gross weight:	3206.20.0020				
Canada		871	4,030	945	4,520
Colombia		46	121	43	86
Korea, Republic of		1	4	--	--
Mexico		22	50	28	65
Philippines		1	4	--	--
United Kingdom		20	13	--	--
Other		25	87	17	89
Total		987	4,310	1,030	4,760
Ferromolybdenum, contained weight:[4]	7202.70.0000				
Belgium		62	509	12	719
Canada		14	185	44	1,370
Chile		13	153	116	3,860
China		3,400	35,000	4,850	148,000
Korea, Republic of		--	--	12	560
United Kingdom		198	1,630	231	2,520
Other		5	54	35	811
Total		3,690	37,500	5,310	158,000
Other, gross weight:	Various[5]				
Austria		149	5,440	268	14,200
Canada		(6)	16	33	852
China		345	4,330	265	7,250
Germany		61	1,320	32	2,580
Hong Kong		41	346	21	415
Japan		28	1,190	87	3,640
Korea, Republic of		--	--	(6)	8
Russia		19	1,110	90	2,600
United Kingdom		10	272	16	599
Other		60	1,410	84	2,240
Total		712 r	15,400	896	34,300

[r]Revised. -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Harmonized Tariff Schedule of the United States.
[3]Includes HTS codes 2841.70.1000 and 2841.70.5000.
[4]Ferromolybdenum contains about 60% to 65% molybdenum.
[5]Includes HTS codes 8102.10.0000, 8102.94.0000, 8102.95.3000, 8102.95.6000, 8102.96.0000, 8102.97.0000, and 8102.99.0000.
[6]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8

U.S. IMPORTS OF MOLYBDENUM ORE AND CONCENTRATES (INCLUDING ROASTED AND OTHER CONCENTRATES), BY COUNTRY[1]

Country	2003		2004	
	Quantity (metric tons of contained Mo)	Value (thousands)	Quantity (metric tons of contained Mo)	Value (thousands)
Belgium	22	$172	--	--
Canada	2,580	23,600	2,680	$76,900
Chile	280	3,270	3,570	110,000
China	57	513	18	608
Italy	--	--	5	38
Japan	3	15	5	38
Mexico	2,250	23,700	2,210	70,300
Netherlands	--	--	37	217
Other	--	--	258	9,300
Total	5,190	51,300	8,780	268,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 9

U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS[1]

		2003			2004		
Item	HTS[2] code	Gross weight (metric tons)	Contained Mo (metric tons)	Value (thousands)	Gross weight (metric tons)	Contained Mo (metric tons)	Value (thousands)
Molybdenum ore and concentrates, roasted	2613.10.0000	6,310	3,960	$41,800	7,580	4,720	$133,000
Molybdenum ore and concentrates, other	2613.90.0000	2,870	1,230	9,570	9,330	4,070	135,000
Molybdenum chemicals:							
Oxides and hydroxides	2825.70.0000	1,300	NA	9,600	822	NA	15,800
Molybdates, all	Various[3]	1,940	1,080	12,600	2,200	1,440	19,800
Molybdenum orange	3206.20.0020	987	NA	4,310	1,030	NA	4,760
Ferromolybdenum	7202.70.0000	5,740	3,690	37,500	8,310	5,310	158,000
Molybdenum powders	8102.10.0000	57	43	1,950	139	95	4,930
Molybdenum unwrought, bars and rods	8102.94.0000	139	136	1,680	151	151	3,520
Molybdenum waste and scrap	8102.97.0000	425	388	4,900	454	415	10,200
Molybdenum wire	8102.96.0000	11	NA	751	20	NA	2,010
Molybdenum, other	Various[4]	80	NA	6,160	132	NA	13,700
Total		19,900	10,500	131,000	30,200	16,200	501,000

NA Not available.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Harmonized Tariff Schedule of the United States.

[3]Includes HTS codes 2841.70.1000 and 2841.70.5000.

[4]Includes HTS codes 8102.95.3000, 8102.95.6000, and 8102.99.0000.

Source: U.S. Census Bureau.

TABLE 10
MOLYBDENUM-PRODUCING MINES IN THE UNITED STATES IN 2004

State and mine	County	Operator	Source of molybdenum
Arizona:			
Bagdad	Yavapai	Phelps Dodge Corp.	Copper-molybdenum ore, concentrated.
Sierrita	Pima	do.	Do.
Colorado, Henderson	Clear Creek	do.	Molybdenum ore, concentrated.
Idaho, Thompson Creek	Custer	Thompson Creek Metals Co.	Do.
Montana, Continental Pit	Silver Bow	Montana Resources	Copper-molybdenum ore, concentrated.
New Mexico:			
Chino	Grant	Chino Mines Co.	Do.
Questa	Taos	Molycorp, Inc.	Molybdenum ore, concentrated.
Utah, Bingham Canyon	Salt Lake	Kennecott Utah Copper Corp.	Copper-molybdenum ore, concentrated.

TABLE 11

MOLYBDENUM: WORLD MINE PRODUCTION, BY COUNTRY[1, 2]

(Metric tons of contained molybdenum)

Country[3]	2000	2001	2002	2003	2004[e]
Armenia	3,820 r	2,943 r	2,884 r	2,763 r	2,950
Canada	7,457	8,556	7,953 r	8,887 r	5,681 p
Chile	33,639 r	33,492	29,467 r	33,375 r	41,483 4
China[e]	28,800	28,200	29,300	31,000 r	29,000
Iran[e]	1,600	1,500	1,400	1,400	1,500
Kazakhstan	215	225	230	230	230
Kyrgyzstan[e]	250	250	250	250	250
Mexico	6,886	5,518	3,428	3,524 r	3,730 p
Mongolia	1,335	1,514	1,590	1,793 r	1,650
Peru	7,193	9,499	8,613 r	9,561 r	9,600
Russia[e]	2,400	2,600	2,900	2,900	2,900
United States	40,900	37,600	32,300 r	33,500	41,500
Uzbekistan[e]	500	500	500	500	500
Total	135,000 r	132,000 r	121,000	130,000 r	141,000

[e]Estimated. [p]Preliminary. [r]Revised.

[1]World totals, U.S. data, and estimated data are rounded to no more than three significant digits; may not add to totals shown.

[2]Table includes data available through July 13, 2005.

[3]In addition to the countries listed, North Korea, Romania, and Turkey are believed to produce molybdenum, but output is not reported quantitatively, and available general information is inadequate to make reliable estimates of output levels.

[4]Reported figure.

APPENDIX 2.2

MOLYBDENUM from 2005 US Geological Survey Yearbook

MOLYBDENUM

(Data in metric tons of molybdenum content unless otherwise noted)

Domestic Production and Use: In 2004, molybdenum, valued at about $1.18 billion (based on average oxide price), was produced by seven mines. Molybdenum ore was produced at three primary molybdenum mines, one each in Colorado, Idaho, and New Mexico, whereas four copper mines (two in Arizona, one each in Montana and Utah) recovered molybdenum as a byproduct. Three roasting plants converted molybdenite (MoS_2) concentrate to molybdic oxide, from which intermediate products, such as ferromolybdenum, metal powder, and various chemicals, were produced. Iron and steel, cast and wrought alloy, and superalloy producers accounted for about 75% of the molybdenum consumed.

Salient Statistics—United States:	2000	2001	2002	2003	2004[e]
Production, mine	40,900	37,600	32,300	33,600	39,900
Imports for consumption	15,000	12,800	11,500	11,900	15,900
Exports	27,900	31,500	23,800	35,700	54,100
Consumption:					
Reported	18,300	15,800	15,300	15,700	16,800
Apparent	28,600	19,600	20,700	12,800	1,700
Price, average value, dollars per kilogram[1]	5.64	5.20	8.27	11.65	29.67
Stocks, mine and plant concentrates, product, and consumer materials	11,400	10,700	10,000	6,900	6,900
Employment, mine and plant, number	618	518	489	510	568
Net import reliance[2] as a percentage of apparent consumption	E	E	E	E	E

Recycling: Molybdenum in the form of molybdenum metal or superalloys was recovered, but the amount was small. Although molybdenum is not recovered from scrap steel, recycling of steel alloys is significant, and some molybdenum content is reutilized. The amount of molybdenum recycled as part of new and old steel and other scrap may be as much as 30% of the apparent supply of molybdenum.

Import Sources (2000-03): Ferromolybdenum: China, 78%; United Kingdom, 20%; and other, 2%. Molybdenum ores and concentrates: Mexico, 58%; Canada, 38%; Chile, 2%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12-31-04
Molybdenum ore and concentrates, roasted	2613.10.0000	12.8¢/kg + 1.8% ad val.
Molybdenum ore and concentrates, other	2613.90.0000	17.8¢/kg.
Molybdenum chemicals:		
Molybdenum oxides and hydroxides	2825.70.0000	3.2% ad val.
Molybdates of ammonium	2841.70.1000	4.3% ad val.
Molybdates, all others	2841.70.5000	3.7% ad val.
Molybdenum pigments:		
Molybdenum orange	3206.20.0020	3.7% ad val.
Ferroalloys:		
Ferromolybdenum	7202.70.0000	4.5% ad val.
Molybdenum metals:		
Powders	8102.10.0000	9.1¢/kg + 1.2% ad val.
Unwrought	8102.94.0000	13.9¢/kg + 1.9% ad val.
Wrought bars and rods	8102.95.3000	6.6% ad val.
Wrought plates, sheets, strips, etc.	8102.95.6000	6.6% ad val.
Wire	8102.96.0000	4.4% ad val.
Waste and scrap	8102.97.0000	Free.
Other	8102.99.0000	3.7% ad val.

Depletion Allowance: 22% (Domestic); 14% (Foreign).

Government Stockpile: None.

Prepared by **Michael J. Magyar [(703)-648-4964, mmagyar@usgs.gov, fax: (703) 648-7757]**

MOLYBDENUM

Events, Trends, and Issues: U.S. mine output of molybdenum in 2004 increased about 19% from that of 2003. U.S. imports for consumption increased an estimated 34% from those of 2003, while the U.S. exports increased 51% from those of 2003. The increase in exports reflects the return to full production levels by the end of 2004 by some copper companies after reduced byproduct molybdenum production in 2003. U.S. reported consumption increased 7% from that of 2003. Mine capacity utilization was about 53%.

China continued its high level of steel production and consumption, thus providing a stable demand for molybdenum. Strong copper prices and a deficit of refined copper allowed the Bagdad and Sierrita Mines in Arizona to return to full production capacity, thus increasing byproduct molybdenum production. The Continental Pit operation in Butte, MT, resumed mining activities and was expected to produce about 3,200 tons (7 million pounds) of molybdenum in 2004. With the continuing high price of nickel-bearing stainless steel in 2004, consumers increasingly considered use of duplex stainless steel, with higher molybdenum content.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves[3]	Reserve base[3]
	2003	2004[e]	(thousand metric tons)	
United States	33,600	39,900	2,700	5,400
Armenia	3,500	3,500	200	400
Canada	7,500	9,700	450	910
Chile	30,000	33,400	1,100	2,500
China	30,600	31,000	3,300	8,300
Iran	1,400	1,400	50	140
Kazakhstan	230	230	130	200
Kyrgyzstan	250	250	100	180
Mexico	3,500	3,500	90	230
Mongolia	1,600	1,700	30	50
Peru	9,600	11,000	140	230
Russia[e]	2,900	2,900	240	360
Uzbekistan[e]	500	500	60	150
World total (rounded)	125,000	139,000	8,600	19,000

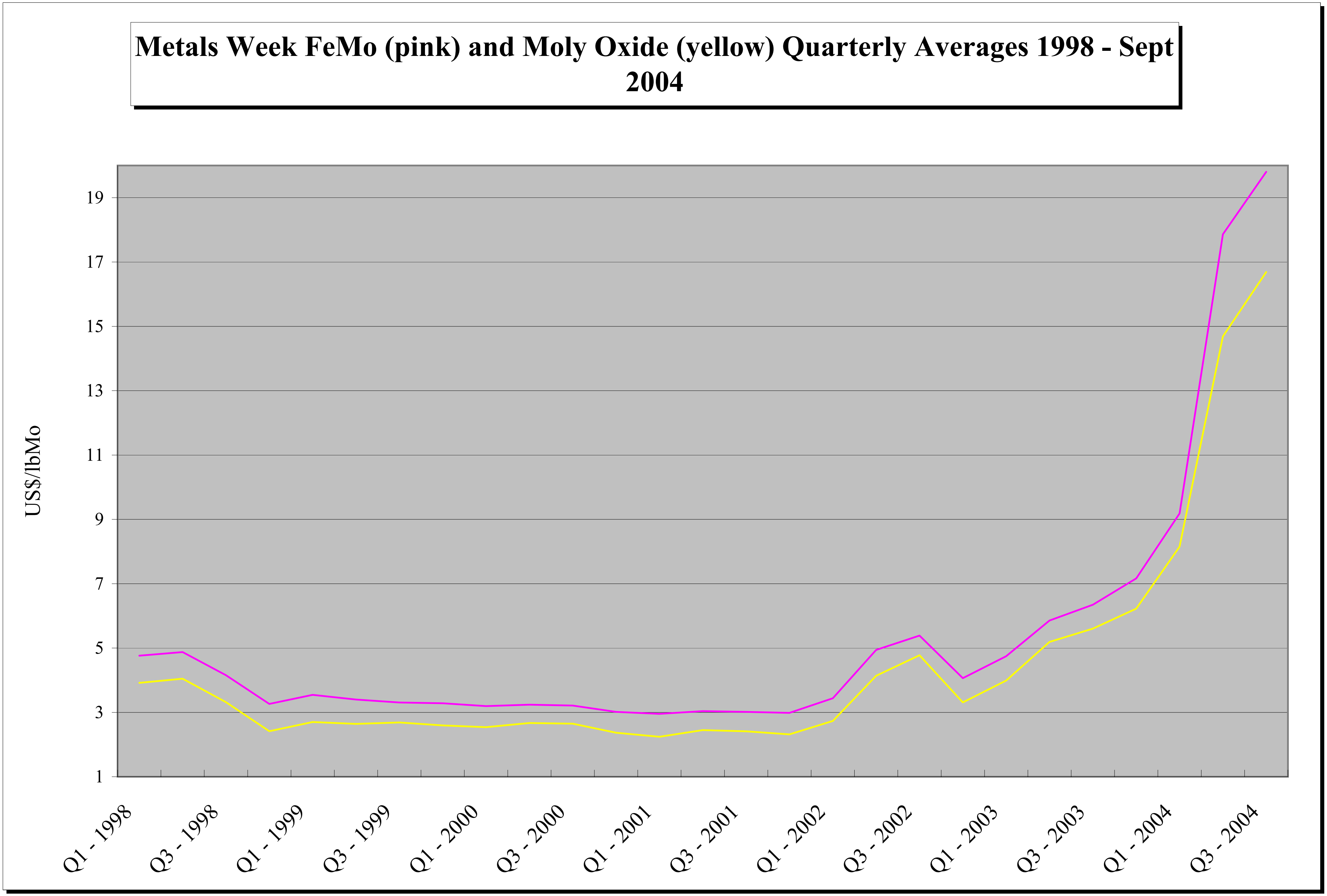
World Resources: Identified resources amount to about 5.4 million tons of molybdenum in the United States and about 13 million tons in the rest of the world. Molybdenum occurs as the principal metal sulfide in large low-grade porphyry molybdenum deposits and as an associated metal sulfide in low-grade porphyry copper deposits. Resources of molybdenum are adequate to supply world needs for the foreseeable future.

Substitutes: There is little substitution for molybdenum in its major application as an alloying element in steels and cast irons. In fact, because of the availability and versatility of molybdenum, industry has sought to develop new materials that benefit from the alloying properties of the metal. Potential substitutes for molybdenum include chromium, vanadium, columbium (niobium), and boron in alloy steels; tungsten in tool steels; graphite, tungsten, and tantalum for refractory materials in high-temperature electric furnaces; and chrome-orange, cadmium-red, and organic-orange pigments for molybdenum orange.

[e]Estimated. E Net exporter.
[1]Time-average price per kilogram of molybdenum contained in technical-grade molybdic oxide, as reported by Platts Metals Week.
[2]Defined as imports – exports + adjustments for Government and industry stock changes.
[3]See Appendix C for definitions.

APPENDIX 2.3

Molybdenum prices 1998 - Sept 2004


Metals Week FeMo (pink) and Moly Oxide (yellow) Quarterly Averages 1998 - Sept 2004
US$/lbMo
1
3
5
7
9
11
13
15
17
19
Q1 - 1998
Q3 - 1998
Q1 - 1999
Q3 - 1999
Q1 - 2000
Q3 - 2000
Q1 - 2001
Q3 - 2001
Q1 - 2002
Q3 - 2002
Q1 - 2003
Q3 - 2003
Q1 - 2004
Q3 - 2004

APPENDIX 2.4

MOLYBDENUM by Lynda Duchesne from 1996 Canadian Mineral Yearbook

Molybdenum

Lynda Duchesne

The author is with the Minerals and Metals Sector,
Natural Resources Canada.
Telephone: (613) 992-8226

SUMMARY

At the beginning of 1995, molybdenum prices were at their highest level in 15 years due to a supply shortage. In January 1994, as reported by Metals Week, dealer oxide (MoO_3) prices were around US$6.00/kg of contained molybdenum, and they had increased to about US$30/kg by year-end. The prices reached their peak of US$34.17/kg in January 1995 and, during the first quarter of the year, stayed exceptionally high, but then decreased gradually to US$9.26/kg by the end of December. In 1996, prices started the year at US$9.26/kg and finished the year at US$9.04/kg.

Sales earnings for 1995 were considerably higher than in 1994 for all molybdenum producers. This important revenue increase was attributable to sharply higher molybdenum prices in 1995. In 1996, prices were back to "normal" compared to the exceptionally high prices of early 1995.

During 1995, many "dormant" projects were reviewed: Cyprus Amax Minerals Company temporarily restarted the Climax primary molybdenum mine in Colorado and boosted production at the Henderson mine; ASARCO Incorporated restarted its by-product molybdenum recovery circuit at its Mission copper mine in Arizona; and Molycorp, Inc. re-opened the Questa primary mine in New Mexico.

CANADIAN DEVELOPMENTS

Canada is the fourth largest producer of molybdenum in the world after the United States, China and Chile. In 1996, Canadian companies produced approximately 8845 t of contained molybdenum in the form of molybdenum ore and concentrate, which was down from the 9113 t produced in 1995 and the 9759 t produced in 1994. The production decrease in 1996 was a combined result of the closure of the Island Copper mine and the lower grade of ore being mined. The value of production was $113 million in 1994; it jumped to $203 million in 1995, and then fell back to approximately $103 million in 1996.

In 1995, Canadian molybdenum consumption remained at the same level as in 1994 after gradually increasing over a five-year period. Compared to 1990 levels, the 2000 t consumed in 1995 represented an increase of 69% (Figure 1).

In 1995, 98% of Canadian molybdenum exports were sold as ore and concentrate (mainly roasted) and 1% as ferromolybdenum. Total exports of all types of molybdenum, which have averaged 9400 t/y since 1993, will be lower in 1996 at about 8700 t. The largest market for Canadian molybdenum is Japan followed by the United States.

The volume of imports is less important than exports in Canadian molybdenum trade. However, imports increased considerably between 1993 and 1995 from 2000 t to 4500 t respectively. Imports for 1996 will decrease to about 3600 t. Canadian imports were split among roasted concentrate, oxides, and ferromolybdenum, which was the major type of molybdenum imported in 1995 and 1996. Canada imports most of its molybdenum from the United States. In 1995, Canada increased its imports by 127% compared to 1993 while, for the same period, Canadian exports fell by 8%.

Canada has three operating molybdenum mines, all located in British Columbia; one is a primary producer and two are producers of copper with molybdenum as a by-product. A third copper mine, the Huckleberry project, is expected to start production by the end of 1997.

The Endako mine owned by Placer Dome Inc. is the primary producer. The mine is located at Endako, British Columbia, just above the 54th parallel close to Fraser Lake (about 150 km west of Prince George). The mine has reserves of about 70 Mt of ore grading 0.082% molybdenum. Placer Dome has two roasters with a total capacity of 10 800 t/y and an ultra-pure lubricant-grade molybdenum disulfide site with a capacity of 450 t/y. Long-term contracts represent 85% of Endako's total sales, with Japan being its largest market; the other 15% is sold through

Figure 1
Canadian Consumption of Molybdenum, 1990-95

Source: Natural Resources Canada.
p Preliminary.

traders. Molybdenum production in 1997 will decrease due to a lower grade of mined ore.

The following two copper mines produce molybdenum as a by-product:

- Highland Valley Copper is a joint venture with the following ownership: Cominco Ltd., 50%; Rio Algom Limited, 33.6%; Teck Corporation, 13.9%; and Highmont Mining Company, 2.5%. The mine is located at Highland Valley, British Columbia, above the 50th parallel close to Logan Lake (about one hour's drive from Kamloops). Highland Valley reserves are estimated at 504 Mt grading an average of 0.42% copper and 0.007% molybdenum. The material comes from two open pits: 80% from the Valley pit with an average molybdenum grade of 0.005%, and 20% from the Lornex pit with a higher grade of 0.012-0.014%. Its molybdenum concentrate production in 1995 was 2925 t at an average grade of 53.5%. All of the molybdenum is sold through traders. Three quarters of Highland Valley's output of molybdenum concentrate is roasted in Europe. Production for both pits is currently planned until the year 2008. However, the company is still carrying on with exploration programs to ensure the longest possible economic life of the operation.

- Gibraltar Mines Limited was acquired by Westmin Resources Limited from Placer Dome Inc. in the fall of 1996. The McLeese Lake mine, located at McLeese Lake (above the 52nd parallel), British Columbia, has reserves of about 76 Mt of proven and probable ore and 229 Mt of measured and indicated ore. The proven ore grades 0.31% copper and 0.009% molybdenum. The mine's production of molybdenum was halted in December 1992 (last month of production, although shipments continued until April 1993) because of low molybdenum prices. Its molybdenum recovery circuit was refurbished and production was brought back on stream in November 1995.

Huckleberry Mines Ltd. is owned 60% by Princeton Mining Corporation and 40% by a Japanese consortium (Mitsubishi Materials Corporation, Dowa Mining Co. Ltd., Furukawa Co. Ltd., and Marubeni Corporation). The mine will be managed and operated by Princeton Mining Corporation. The Huckleberry copper-molybdenum-gold-silver deposit is located near Houston, just below the 54th parallel. As a reference, it is located about 150 km southwest of the Endako mine. Its proven and probable reserves are 90 Mt grading 0.51% copper and 0.014% molybdenum. The mine is scheduled to begin production in October 1997 and will be operating at full capacity three months later. It has a life expectancy of 16 years with an average annual production of close to 600 t of molybdenum.

Extensive work has been done in evaluating projects that may contain molybdenum:

- Spokane Resources Ltd. is looking at its wholly owned Mac property in British Columbia, located about 100 km northwest of the Endako mine, where the company is planning to conduct an extensive diamond drilling program in 1997.

- Molycor Gold Corp. (formerly Amcorp Industries Inc.) and Verdstone Gold Corporation are working on two molybdenum projects, both in British Columbia: the Crow-Rea property and the Salal Creek property. Crow-Rea is located 20 km west of Summerland in south-central British Columbia, and Salal Creek is located 70 km northwest of Pemberton, British Columbia.

- Pacific Sentinel Gold Corp. is studying its wholly owned Casino project located in southwest Yukon.

The Island Copper mine of BHP Minerals Canada Ltd. closed in December 1995 due to the depletion of ore reserves.

Under the Canada-U.S. Free Trade Agreement, trade in molybdenum products will be completely tariff free on January 1, 1998. Currently, roasted concentrate is the only type of molybdenum exported to the United States with a tariff; all the other forms of molybdenum are already tariff free.

WORLD DEVELOPMENTS

Argentina

The feasibility study on the El Pachon copper-molybdenum project in the San Juan province, 50% owned by Cambior inc. of Canada, should be completed in 1997. El Pachon is expected to produce 800 000 t/y of copper concentrate grading 28% copper and 45% molybdenum. Its proven and probable reserves are 990 Mt grading 0.61% copper and 0.014% molybdenum. If the project goes into production, the molybdenum will be shipped to roasting facilities in Europe.

Elsewhere in Argentina, exploration work at the Agua Rica (formerly Mi Vida) copper-gold-molybdenum deposit in Catamarca province will continue in 1997. The deposit, jointly owned by BHP Minerals International Inc. (70%) and a Canadian company, Northern Orion Explorations Ltd. (30%), could contain about 400 000 t of molybdenum. Although the deposit is geologically rich with a good grade of molybdenum, it is complex and dispersed, and it is therefore questionable whether it will be economical to mine.

Chile

Chile's molybdenum production was 16 028 t in 1994, 17 500 t in 1995 (an increase of 9%) and an estimated 18 400 t in 1996 (an increase of 5%). Most of Chile's production is concentrated in the four mines belonging to state-owned Codelco-Chile, which account for approximately 8% of the world molybdenum market. There are only two other Chilean copper mines where molybdenum is recovered: the Disputada mine owned by Exxon Minerals Chile Inc., and the Los Pelambres mine owned by Anaconda Minerals Company.

Codelco-Chile produced 15 950 t of molybdenum in 1994 and 16 717 t in 1995 with its Chuquicamata mine accounting for 64% of the total, followed by the El Teniente mine (16%) and its Andina and El Salvador mines (10% each).

Codelco-Chile's Andina mine has embarked on an expansion that will almost double its ore production. The Unit Mill project consists of the construction of a unified crusher that will produce finer material, which could increase the recovery of molybdenum from 55% to 58.8% and could increase production by 115 t/y. On the other hand, molybdenum output from the Chuquicamata mine will decrease due to the lower molybdenum content in the ore that will be mined.

In the summer of 1995, Codelco-Chile gained control of Chile's Renio y Briquetas SA (Rebrisa), a producer of molybdenum briquettes and rhenium at the Chuquicamata mine. Rebrisa was formed in 1989 by Codelco-Chile and was purchased by the employees.

China

China's molybdenum production has averaged 20 000 t/y in recent years. The Yang Jia Zhang Zi Mining Bureau, established in 1940, was the first molybdenum mine in China; its production has declined to 4500 t/y of roasted concentrate due to the mine's depletion of resources. Founded in 1958, Jinduicheng Molybdenum Mining Corp. (JDC) is the largest molybdenum producer in China and has extensive reserves. In 1995, JDC produced 17 600 t of molybdenum concentrate. In late 1995 and early 1996, Chinese molybdenum production was lower than usual because producers were affected by power-supply shortages caused by cold, dry weather. Production problems and increasing domestic demand resulted in lower Chinese exports for 1996. Estimated molybdenum consumption in China was 6500 t in 1993 and around 7000-7500 t in 1994. Chinese domestic consumption of molybdenum is growing rapidly and should continue to increase towards the year 2000 to an estimated 13 000-14 000 t/y.

Namibia

A feasibility study should be completed early in 1997 for the possible commercial development of the Haib project, which is a joint venture between Great Fitzroy Mines NL and Namibian Copper Mines Inc. If the project goes ahead, the companies will produce primarily copper with molybdenum and gold as by-products. Its potential production is estimated at 360 t/y of molybdenum.

Panama

Adrian Resources Ltd., a Canadian company, holds a 52% interest in the Petaquilla project, while the remaining 48% is held by Inmet Mining Corporation. Studies of the project estimate reserves at 3900 t grading 0.015% molybdenum.

Peru

Southern Peru Copper Corporation (SPCC), owned 54% by the U.S. company ASARCO Incorporated, produced 3600 t of molybdenum in 1995, an increase of 31% from 1994, as by-product from its two copper mines: Toquepala (1700 t in 1995 vs. 1400 t in 1994) and Cuajone (1900 t in 1995 compared to 1400 t in 1994). Its 1996 production is expected to be around 4000 t.

The Canadian consortium of Rio Algom Limited and Inmet Mining Corp. won the bidding on the option to develop the Antamina prospect in Peru. The two companies formally set up a new company, Minera Antamina S.A., each with a 50% stake. Over the next two years (after the bid date of July 12, 1996), the companies will determine if they will exercise their option to move the project forward. The deposit grades 0.04% molybdenum.

United States

Cyprus Amax Minerals Company (Cyprus Amax) is the world's largest producer of molybdenum with an estimated 35% share of the global market and over 50% of the U.S. market. Cyprus Amax is probably the only company in a position to stabilize the molybdenum market. In fact, it re-opened the Climax primary molybdenum mine (dormant since 1991) near Leadville, Colorado, on April 4, 1995. On August 13, 1995, four months after re-opening, Cyprus Amax returned the Climax mine to standby status because of weak customer demand and also as a countermeasure to the weakening world molybdenum market. The Climax mine produced only 900 t of the planned 2300 t in 1995; it has a capacity of 7000 t/y.

Cyprus Amax's production totalled 25 900 t in 1994, 34 000 t in 1995 and an estimated 25 400 t in 1996. The company's primary molybdenum mine in Colorado, the Henderson mine, which is its largest producer of molybdenum, operated at full capacity in 1995 but reduced its production in 1996 to 13 200 t of its total capacity of 18 000 t/y.

At the end of 1995, Cyprus Amax sold its Climax Specialty Metals unit to a group of investors that included some of the subsidiary's management. The company was renamed CSM Inc. and is based in Cleveland, Ohio. One of its main activities is the conversion of molybdenum oxide and other raw materials to molybdenum metal.

Kennecott Corporation, which is wholly owned by RTZ-CRA Group, produced 10 750 t of molybdenum in 1995, 10 886 t in 1996, and plans to produce 9100 t in 1997 at its Bingham Canyon mine.

ASARCO Incorporated re-started its by-product molybdenum circuit at its Mission mine in Arizona at the beginning of 1995 and produced 270 t out of a total capacity of 680 t/y.

Molycorp, Inc. resumed operations at its Questa mine in New Mexico, a primary molybdenum mine with a capacity of 9000 t/y that had been shut down in 1991. Molycorp first dewatered the mine, resumed mining in the summer, and resumed operation of the concentrator in the fall of 1996. The roasting plant, located in Washington, Pennsylvania, might also resume operations, but not before 1998. Currently, three firms will roast the Questa mine's output into molybdenum oxide: Molibdenos y Metales S.A. (Molymet) of Chile, Cyprus Amax's Climax plant in Rotterdam, and Sadaci NV of Belgium.

Molybdenum oxides and hydroxides from Chile have regained U.S. duty-free GSP (Generalized System of Preferences) status. The duties have dropped to zero from the previous 3.2% most-favoured-nation rate.

International Molybdenum Association

The International Molybdenum Association was founded in 1989 by all sectors of the industry. Its activities focus on: the collection of statistics on supply, demand and inventory; health, safety and the environment; the promotion of molybdenum uses; and providing assistance to its members. Several Canadian companies are members of the association.

USES

Molybdenum and its compounds have a number of diverse uses. It is used as a pure metal, an alloy additive, a lubricant, a catalyst, and in a number of chemical compounds. In order of market share, these uses are discussed below.

Alloying Element

Molybdenum is a very versatile and cost-effective alloying element. It is added to steel and ferrous castings as molybdic oxide (MoO_3) or as ferromolybdenum (an alloy of iron and molybdenum). In this form, molybdenum is readily dissolved in molten steel with very little loss; therefore, ferromolybdenum is often used in making fine adjustments to the chemistry of batches of steel.

Metal

Molybdenum metal is the product of a rather sophisticated refining process. The metal oxide is refined to high levels of purity by precipitation from solution. The oxide powder is then reduced in hydrogen and the metal powder is compressed into billets prior to required forming operations. Molybdenum metal has a number of valuable properties. Specifically, it has a low coefficient of thermal expansion, the refractory property of a high melting temperature, corrosion resistance, low levels of erosion from molten metal, low density, relatively high thermal conductivity, low specific heat, a high modulus of elasticity, relatively high electrical conductivity, and good electrical contact properties. It is used in such diverse end uses as glass melting electrodes, powder and spray coatings for high-wear engine parts, steel additives, disks for semi-conductors, and electrical products.

Chemical Compounds

Molybdenum is an element that is an important component of a wide variety of chemicals. These chemicals are used as lubricants, reagents, dyeing compounds, pigments, vitreous glazes and enamels, electroplating compounds, catalysts, fertilizers, flame retardants, and paints and inks.

Other Uses

Molybdenum is valued for its properties as a catalyst in the petroleum refining and chemical processing industries. Pure molybdenum disulfide is an excellent dry lubricant because it has a lamellar structure with a low coefficient of friction between the laminations and the property of bonding to other materials. Molybdenum can also be used in the production of rechargeable dry batteries. These lithium-molybdenum batteries have more power per cell volume than conventional nickel-cadmium or alkaline batteries.

PRICES

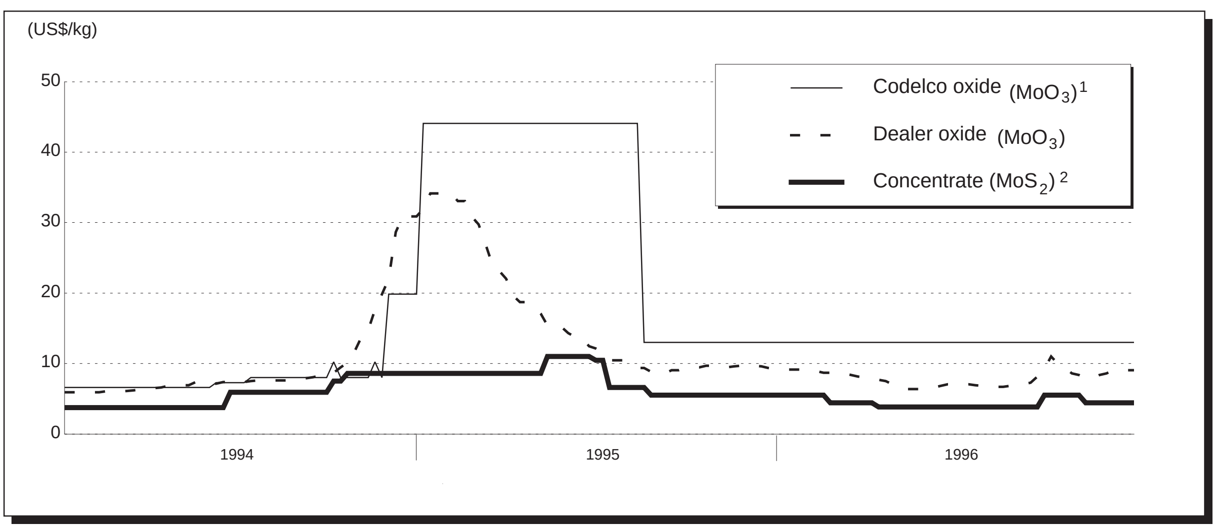
The Canadian price for contained molybdenum in concentrate averaged C$6.35/kg in 1993, C$11.62/kg in 1994, C$22.27/kg in 1995, and is estimated at C$11.64/kg for 1996.

On the world market, according to *Metals Week*, Figure 2 shows the fluctuation of prices between 1994 and 1996, in US$ per kilogram, for molybdic oxide (MoO_3) in drums at producer price for Codelco-Chile, dealer oxide (MoO_3), and concentrate (MoS_2) obtained as a by-product.

The price of by-product molybdenum concentrate was US$3.75/kg in January 1994 and US$8.60/kg in December 1994. The price stayed constant at US$8.60/kg during the first quarter of 1995 and then jumped to US$11.02/kg in May for only two months, and finally closed the year at US$5.51/kg. For 1996, the price was more stable and at year-end was situated at US$4.41/kg, although it had fallen in the spring to under the US$4.00/kg mark.

Dealer oxide prices started 1994 at US$5.91/kg in January and reached US$30.86/kg at year-end. In mid-January 1995, the price peaked at US$34.17/kg and then decreased gradually to fall below the US$10.00/kg mark at the end of July. The price remained stable in the second half of the year moving between US$9.00 and $10.00/kg. The price continued to fall during the first half of 1996, starting the year at US$9.26/kg in January, reaching bottom in May at US$6.39/kg, and then recovering to US$9.04/kg in December.

Figure 2
Molybdenum Prices, 1994-96



Source: *Metals Week.*
[1] Molybdic oxide (MoO_3) in drums at producer price for Codelco-Chile. [2] Molybdenum concentrate (MoS_2) obtained as a by-product.

Finally, Codelco-Chile drum oxide prices increased from US$6.61/kg in January 1994 to US$19.84/kg at year-end. Another jump brought the price to US$44.09/kg in January 1995. It stayed at that level until August when it decreased radically to US$13.00/kg. The price in 1996 stayed constant at US$13.00/kg for the entire year.

OUTLOOK

Canadian molybdenum production is forecast to decrease slightly in 1997, even with the start-up of the new Huckleberry mine, as the grade of ore that will be mined will be lower at the Endako mine and at Highland Valley Copper. Over the longer term, production should remain stable unless new projects are developed and become operational, or current producers reduce or cease production. Other Canadian projects offering potential to add to the national production capacity of molybdenum include the Casino project in the Yukon; the Crow-Rea, Salal Creek and Mac properties in British Columbia; Mount Pleasant in southern New Brunswick; and a deposit located 50 km southeast of Timmins, Ontario.

Domestic consumption of molybdenum in China is growing rapidly and should continue to increase towards the year 2000 with an estimated consumption of 13 000-14 000 t/y. The growing domestic demand will directly affect China's molybdenum trade, causing a reduction in its exports to support domestic demand. While China will remain the second largest producer of molybdenum in the world, Canada should become the third largest exporter by the end of the century, keeping its fourth-place ranking as a world producer.

In the longer term, over the next five to ten years, demand for molybdenum should continue to increase. This expectation of higher consumption is reasonable because, even at prices of US$17-$22/kg, molybdenum is a bargain alloying element compared to alternative elements. The expected long-term availability of molybdenum at competitive prices, in combination with its versatile performance, should result in a continuing increase in its use.

About 70% of world molybdenum is produced as a by-product or co-product of copper mining. This production is price-inelastic and is generally sold for whatever the market offers. In fact, the supply of by-product molybdenum is a function of the demand for, and price of, copper. On the other hand, future supply from primary molybdenum mines will gradually increase since many new copper discoveries contain less molybdenum. The result will be that, contrary to present figures where most of the molybdenum is produced as a by-product, primary molybdenum mines will supply the major part of the market in the longer term.

Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 70. (2) Information in this review was current as of February 1, 1997.

TARIFFS

Item No.	Description	Canada			United States	EU	Japan[1]
		MFN	GPT	USA	Canada	MFN	GATT
2613	Molybdenum ores and concentrates						
2613.10	Roasted	Free	Free	Free	1.3¢/kg on molybdenum content + 0.1%	Free	Free
2613.90	Other	Free	Free	Free	Free	Free	Free
2825.70.10	Molybdenum oxides	3%	1%	Free	Free	5.3%	Free
2825.70.20	Molybdenum hydroxides	Free	Free	Free	Free	5.3%	Free
28.41	Salts of oxometallic or peroxometallic acids						
2841.70	Molybdates	4%	3%	Free	Free	5.9%	3.7%
7202.70	Ferromolybdenum	8.1%	5%	Free	Free	3.6%	4.3%
8102.10	Molybdenum powders						
8102.10.10	Not alloyed	2.5%	Free	Free	Free	4.8%	2.2%
8102.10.20	Alloyed	2.5%	Free	Free	Free	4.8%	2.2%
8102.91	Unwrought molybdenum, including bars and rods obtained simply by sintering; waste and scrap						
8102.91.10	Unwrought molybdenum, not alloyed	Free	Free	Free	Free	3.8%	2.2%
8102.91.20	Unwrought molybdenum, alloyed; waste and scrap	Free	Free	Free	Free	2-3.8%	2.2%
8102.92	Bars and rods, other than those obtained simply by sintering, profiles, plates, sheets, strip and foil	5.9%	3%	Free	Free	6.2%	2.9%
8102.93	Wire						
8102.93.10	Molybdenum wire, not coated or covered	4.4%	2%	Free	Free	8%	2.9%
8102.93.20	Molybdenum wire, coated or covered	4.4%	2%	Free	Free	8%	2.9%
8102.99	Other	4%	2%	Free	Free	8.2%	2.9%

Sources: Customs Tariff, effective January 1997, Revenue Canada; Harmonized Tariff Schedule of the United States, 1997; The "Bulletin International des Douanes," Journal Number 14 (18th Edition), European Union, 1995-1996, "Conventional" column; Customs Tariff Schedules of Japan, 1996.
[1] GATT rate is shown; lower tariff rates may apply circumstantially.

TABLE 1. CANADA, MOLYBDENUM PRODUCTION AND TRADE, 1994-96, AND CONSUMPTION, 1993-1995

Item No.		1994		1995		1996[p]	
		(tonnes)	($000)	(tonnes)	($000)	(tonnes)	($000)
PRODUCTION (Shipments)[1]							
	British Columbia	9 759	113 365	9 113	202 931	8 845	102 950
	Total	9 759	113 365	9 113	202 931	8 845	102 950
EXPORTS							
2613.10	Molybdenum ores and concentrates, roasted						
	Japan	3 213[r]	29 457[r]	3 215	80 968	3 168	35 826
	United States	1 115	6 287	2 040	24 762	2 116	13 057
	South Korea	388	3 955	142	5 012	279	3 043
	Australia	98	1 042	164	5 778	222	2 764
	Netherlands	366	1 751	52	448	72	653
	Other countries	1 307	5 822	524	5 484	108	943
	Total	6 487[r]	48 314[r]	6 137	122 452	5 965	56 286
2613.90	Molybdenum ores and concentrates, other						
	Netherlands	606	2 930	50	639	1 132	4 949
	Belgium	128	870	–	–	926	3 744
	Japan	5	59	8	93	283	1 837
	Other countries	1 644	8 945	2 803	36 176	208	1 865
	Total	2 383	12 804	2 861	36 908	2 549	12 395
2825.70	Molybdenum oxides and hydroxides						
	United States	–	–	24	220	–	–
	India	13	170	–	–	–	–
	Brazil	33	129	–	–	–	–
	Total	46	299	24	220	–	–
2841.70	Metallic molybdates	–	–	–	–	–	–
7202.70	Ferromolybdenum						
	United States	121	1 063	130	2 448	237	2 719
	Mexico	–	–	11	7	–	–
	Philippines	. . .	2	–	–	–	–
	Total	121	1 065	141	2 455	237	2 719
8102.10	Molybdenum powders						
	United States	. . .	30	. . .	4	. . .	14
	South Korea	. . .	1	–	–	–	–
	Total	. . .	31	. . .	4	. . .	14
8102.91	Molybdenum, unwrought, including bars or rods simply sintered; waste and scrap						
	United States	12	196	53	1 253	22	117
	Total	12	196	53	1 253	22	117
8102.92	Molybdenum bars and rods, other than those obtained simply by sintering, profiles, plates, sheets, strip and foil	–	–	–	–	–	–
8102.93	Molybdenum wire						
	India	. . .	44	1	108	–	–
	Total	. . .	44	1	108	–	–
8102.99	Molybdenum and articles thereof, n.e.s.						
	United States	4	140[r]	. . .	4	. . .	3
	Total	4	140[r]	. . .	4	. . .	3

TABLE 1 (cont'd)

Item No.		1994		1995		1996p	
		(tonnes)	($000)	(tonnes)	($000)	(tonnes)	($000)
IMPORTS2							
2613.10	Molybdenum ores and concentrates, roasted						
	Mexico	–	–	347	6 554	300	2 895
	United States	689	5 166	280	3 611	261	2 315
	Chile	246	2 203	64	914	203	1 861
	Belgium	378	2 620	277	3 055	88	1 003
	United Kingdom	20	188	–	–	110	891
	China	19	91	17	222	–	–
	Total	1 352	10 268	985	14 356	962	8 965
2613.90	Molybdenum ores and concentrates, n.e.s.						
	United States	435	3 753	480	7 940	18	219
	Germany	. . .	3	–	–	–	–
	Sweden	5	38	–	–	–	–
	Total	440	3 794	480	7 940	18	219
2825.70.10	Molybdenum oxides						
	United States	480	4 820	1 161	16 987	846	7 428
	Chile	12	114	. . .	4	10	101
	Mexico	–	–	15	139	4	41
	China	11	88	–	–	–	–
	Total	503	5 022	1 176	17 130	860	7 570
2825.70.20	Molybdenum hydroxides						
	United States	. . .	3	. . .	. . .	23	262
	United Kingdom	–	–	–	–	. . .	. . .
	Total	. . .	3	. . .	. . .	23	262
2841.70	Metallic molybdates						
	United States	461	2 923	379	3 488	396	3 022
	China	–	–	–	–	5	33
	United Kingdom	. . .	1	1	6	1	7
	Other countries	. . .	2	2	11	–	–
	Total	461	2 926	382	3 505	402	3 062
7202.70	Ferromolybdenum						
	Chile	528	4 198	705	11 822	540	5 576
	United States	189	1 687	358	4 966	420	3 844
	United Kingdom	39	393	60	817	157	1 529
	China	–	–	126	2 305	91	876
	Mexico	–	–	–	–	64	620
	Belgium	130	888	120	2 423	11	121
	Other countries	. . .	3	46	790	–	–
	Total	886	7 169	1 415	23 123	1 283	12 566
8102.10.10	Molybdenum powders, not alloyed						
	United States	6	243	8	349	5	223
	Belgium	–	–	. . .	5	. . .	5
	Germany	. . .	6	. . .	9	. . .	4
	France	–	–	–	–	. . .	1
	Total	6	249	8	363	5	233
8102.10.20	Molybdenum powders, alloyed						
	Germany	–	–	–	–	1	50
	United States	2	101	12	218	1	33
	Other countries	–	–	–	–	. . .	2
	Total	2	101	12	218	2	85
8102.91.10	Unwrought molybdenum, not alloyed						
	United States	. . .	8	7	239	8	302
	Germany	–	–	–	–	. . .	1
	Total	. . .	8	7	239	8	303

TABLE 1 (cont'd)

Item No.		1994		1995		1996p	
		(tonnes)	($000)	(tonnes)	($000)	(tonnes)	($000)
IMPORTS (cont'd)							
8102.91.20.10	Unwrought molybdenum, alloyed						
	United States	1	35	. . .	1	1	40
	Total	1	35	. . .	1	1	40
8102.91.20.20	Molybdenum, waste and scrap						
	United States	22	499	25	695	19	587
	Total	22	499	25	695	19	587
8102.92	Molybdenum bars and rods, other than those obtained simply by sintering, profiles, plates, sheets, strip and foil						
	United States	11	572	21	1 087	27	1 168
	Other countries	. . .	. . .	. . .	1	. . .	40
	Total	11	572	21	1 088	27	1 208
8102.93.10	Molybdenum wire, not coated or covered						
	United States	2	73	4	242	1	64
	Belgium	1	44	1	48	1	51
	Australia	–	–	–	–	. . .	4
	Total	3	117	5	290	2	119
8102.93.20	Molybdenum wire, coated or covered						
	United States	4	110	2	78	1	47
	Germany	–	–	–	–	. . .	2
	Total	4	110	2	78	1	49
8102.99	Molybdenum and articles thereof, other						
	United States	18	822	25	1 335	29	1 622
	Other countries	. . .	13	. . .	3	. . .	7
	Total	18	835	25	1 338	29	1 629

		1993	**1994**	**1995p**
			(kilograms)	
CONSUMPTION[3] (Mo content)				
	Carbon steel	603 286	531 567	580 001
	Stainless steel	249 964	456 760	397 766
	Other steel	680 364	813 030	713 976
	Cast iron	120 385	134 975	224 899
	Other uses[4]	65 941	74 362	81 244
	Total	1 719 940	2 010 694	1 997 886

Sources: Natural Resources Canada; Statistics Canada.
– Nil; . . . Amount too small to be expressed; n.e.s. Not elsewhere specified; p Preliminary; r Revised.
1 Producers' shipments (Mo content of molybdenum concentrates, molybdic oxide and ferromolybdenum). 2 Imports from "Other countries" may include re-imports from Canada. 3 Available data, as reported by consumers. 4 Nonferrous alloys, electrical, pigments and other uses.
Note: Numbers may not add to totals due to rounding.

TABLE 2. CANADA, MOLYBDENUM PRODUCTION, TRADE AND CONSUMPTION, 1975, 1980, 1985-96

		Exports[2]	Imports		
	Production[1]	Molybdenum Ores and Concentrates, Oxides and Hydroxides[3]	Molybdic Oxides and Hydroxides[4,5]	Ferro-molybdenum[6,7]	Consumption[8]
		(kilograms)			
1975	13 323 144	15 710 300	56 400	269 281	1 436 883
1980	11 889 000	14 584 500	361 700	53 618	1 055 107
1985	7 852 060	5 637 000	187 000	274 076	772 301
1986	11 250 625	11 367 000	203 000	347 784	684 043
1987	14 771 252	14 253 000	193 000	233 335	969 993
1988[a]	13 535 186	14 026 855	187 691	345 664	1 213 248
1989	13 542 984	16 131 760	123 706	1 150 139	1 382 505
1990	12 188 487	11 086 429	176 481	581 780	1 179 374
1991	11 436 809	10 305 832	304 869	544 300	1 643 170
1992	8 870 267	7 138 674	249 767	493 260	1 534 941
1993	10 250 004	9 977 571	200 190	699 141	1 719 940
1994	9 758 885	8 914 141[r]	502 529	886 303	2 010 694
1995	9 112 733	9 021 654	1 175 928	1 414 171	1 997 886
1996[p]	8 844 560	8 511 505	884 071	1 283 132	. .

Sources: Natural Resources Canada and Statistics Canada, except where noted.
. . Not available; [p] Preliminary; [r] Revised.
[a] Beginning in 1988, exports and imports are based on the Harmonized System and may not be in complete accordance with previous method of reporting.
[1] Producers' shipments (Mo content of molybdenum concentrates, oxide and ferromolybdenum). [2] Exports include H.S. classes 2613.10, 2613.90 and 2825.70. [3] Mo content, oxides, ores and concentrates. [4] Molybdic oxide includes H.S. classes 2825.70.10 and 2825.70.20. [5] Gross weight. [6] Ferromolybdenum includes H.S. class 7202.70. [7] For the years 1975 and 1980, U.S. exports to Canada are reported by the U.S. Bureau of Commerce, Exports of Domestic and Foreign Merchandise (Report 410), over 50% molybdenum, and for 1985-95 by Statistics Canada. [8] Mo content of molybdenum products reported by consumers.

APPENDIX 2.5

Mining Journal, August 5, 2005

Molybdenum kick-starts British Columbian exploration

A 1% molybdenite (MoS_2) ore contains 20 lb of MoS_2 per short ton, of which approximately 59% of the MoS_2 is elemental molybdenum (Mo), or 11.80 lb per short ton. At a commodity price of US$30/lb for molybdenum in oxide, the approximate value of 1% MoS_2 ore is US$390/t (metric).

Due to the high level of international steel production – led by consumption in China – there is a burgeoning demand for molybdenum, which has few alternatives as an alloying element

BY ED SCHILLER

THE price of molybdenum recently peaked at US$39/lb (compared with barely US$5/lb in 2002), and averaged US$35/lb during the quarter to June 30. The increased exploration interest in the metal has been particularly noteworthy in Canada, and "moly is back in town" (an expression extolled by geologists Tom Schroeter and Nick Carter at a recent British Columbia exploration meeting in Kamloops) summarises the local activity.

Every known molybdenum or copper-molybdenum prospect in the province has been staked and most are under active investigation. Geologically, BC is the best place in Canada to develop a molybdenum deposit based on the widespread presence of porphyry intrusions that extend from Alaska/Yukon through BC into Washington State and southward. The 'MinFile' database of BC's Ministry of Energy and Mines lists 1,350 molybdenum-bearing occurrences in the province, of which 430 contain molybdenum as the primary commodity. Elsewhere in Canada, production has been limited to Québec, from pegmatite and copper-molybdenum-hosted deposits.

Canada is the world's fourth-largest molybdenum producer, with 9,700 t in 2004 from the three mines in BC. World mine production last year is estimated at 139,000 t (125,000 t in 2003); the US produced 39,900 t, Chile 33,400 t and China 31,000 t. World reserves are reported as 8.6 Mt, with China having 3.3 Mt, US 2.7 Mt, Chile 1.1 Mt and Canada 450,000 t.

BC'S APPEAL

In the 1960s and 1970s it was recognised that BC had all the geological ingredients comparable to the molybdenum-rich western US. During this period, numerous molybdenum and molybdenum-copper deposits were discovered and put into production. Examples of pure molybdenum mines included Endako, Boss Mountain, Kitsault and Coxey. The copper-molybdenum mines included Brenda, Lornex/Highmont (both now part of the Highland Valley Copper operation), Gibraltar and Island Copper. Total molybdenum production from BC mines since 1965 has been 320,300 t.

BC's principal molybdenum producer is the Endako operation, 160 km west of Prince George in the central part of the province. The mine was operated by Placer Dome Inc between 1965-97, before being sold to Thompson Creek Mining Co of Denver (75%) and Sojitz Corp (25%). The Endako orebody consists of an elongated stockwork of quartz-molybdenum veins developed within the Endako quartz monzonite intrusion of Late Jurassic age and three types of felsic pre-ore dikes.

Production is at a rate of 28,000 t/d with a grade of 0.066% Mo. Output in 2004 was 4,889 t of molybdenum, down from 5,000 t in 2003. Reserves are estimated at 80.7 Mt, at an average grade of 0.063% Mo, with a mine life of 11 years.

Molybdenum is also co-produced from three open-pit copper porphyry deposits; Highland Valley Copper, Gibraltar and Huckleberry. Highland Valley, south of Kamloops, mined 65.8 Mt of ore in 2004 and produced 10.7 Mlb of molybdenum (although production is expected to drop to 5 Mlb/y in the near future due to lower grades).

The recently reopened Gibraltar mine, near Williams Lake, owned by Taseko Mines Ltd, mines and mills 35,000 t/d at a grade of 0.30% Cu and 0.01% Mo. In the 12-year mine plan the measured and indicated resources amount to 149 Mt, at 0.31% Cu and 0.01% Mo, with an additional, off-plan, 596 Mt at 0.28% Cu and 0.01% Mo.

The Huckleberry mine, operated by Imperial Metals Ltd, is 125 km south of Houston. Last year the mine extracted 6.87 Mt at 0.45% Cu and 0.014% Mo, amounting to 426,658 lb of molybdenum and 62.92 Mlb of copper. Probable mineral reserves at December 31, 2004, were given as 19.44 Mt at an average grade of 0.53% Cu, 0.015% Mo, 0.15 g/t Au and 2.98 g/t Ag (at a cut-off grade of 0.26% Cu).

The two most advanced molybdenum exploration projects in BC are at Trout Lake and Atlin. At Trout Lake, 60 km south of Revelstoke, in southeastern BC, Roca Mines Ltd is preparing to put the Max deposit into production. Previous exploration, including surface and underground drilling and underground sampling, by Newmont Exploration of Canada Ltd and Esso Minerals Ltd totalled C$14.9 million between 1975-82. Work on the project has included 17,873 m of surface drilling (including drilling by Roca in 2004); some 2,000 m of underground development; and 22,151 m of underground diamond drilling.

Work recommenced in 2004 when molybdenum prices reached US$8/lb, and Roca acquired an option to earn a 100% interest in the deposit. In order to accelerate development of the project, the company is looking at a small high-grade operation to mine 72,000 t/y at a grade of about 2.0% MoS_2 (a 'Small Mines' permit is available in BC which allows fast tracking of the application process). The project site is accessible by road all year.

Roca anticipates molybdenum output of 3.76 Mlb/y (in a molybdenite concentrate) over an approximately 2½-year period. The estimated capital costs are

Market forecast

PHELPS Dodge Corp is forecasting a molybdenum price at, or above, US$30/lb for the quarter to September 30.

Arthur Miele, the company's senior vice president of sales and marketing, said recently that he expects low inventories to continue to be a major influence on the market in the September quarter. The steel industry traditionally curtails production during the September quarter for maintenance, but Mr Miele said curtailments announced by US and European steel companies go beyond normal shutdowns.

However, Mr Miele expects the strong growth in demand from the chemical industry to continue.

On the supply side, Mr Miele said that the molybdenum market has been hit by significant disruptions in China. Mines that were shut in February by the Chinese Government, to address safety and environmental concerns (representing about half of China's molybdenum-processing capacity), remain closed.

Left: Adanac Molybdenum Corp's Ruby Creek
Below, top to bottom: The Huckleberry mine, and blasting at the same mine. The Davidson project

US$4 million for mining, US$4 million for the concentrator, US$800,000 for tailings management systems and US$1.2 million for start-up and contingency costs.

Adanac Molybdenum Corp has recently completed its prefeasibility study for the 278 Mlb Ruby Creek deposit, which has a projected open-pit life of over 20 years at 10 Mlb/y. Ruby Creek is expected to become the world's next primary molybdenum mine, with an initial production of 20,000 t/d to produce 12.0 Mlb/y of molybdenum over the first five years. The company expects to begin permit applications in September.

The deposit is near the border with the Yukon, 24 km northeast of Atlin. Exploration in the 1960s and 1970s (valued at some C$10 million) by Kerr Addison Mines Ltd, Climax Mining Ltd and Placer Dome outlined a resource estimate of 152 Mt at 0.063% Mo. In 2003, the Ruby Creek claims became available and were staked by Adanac, which now holds a 100% interest in the claims. Adanac completed a 9,000 m drilling programme last year, and established a revised measured and indicated resource of 205.1 Mt at an average grade of 0.062% Mo (0.04% cut off).

Other companies pursuing molybdenum exploration/development projects include:

Tenajon Resources Corp – At the Ajax property, near Alice Arm in northwest BC, the company is attempting to duplicate the 178.5 Mt resource estimate (at an average grade of 0.07% Mo) that was established by Newmont Mining Corp and Inco Ltd in the 1960s. The programme is designed to replicate three previously-drilled holes to verify the geological setting and grades by the previous explorers. If successful, a much larger programme is planned.

New Cantech Ventures Inc – The company is exploring the Lucky Ship property near Houston where previous work by Amax Exploration Inc and its predecessor Southwest Potash Corp between 1964-68 outlined a deposit estimated to contain a resource of 18 Mt at 0.163% MoS_2. The project is a joint venture between New Cantech Ventures Inc (50%) and Candorado Operating Co (50%).

Blue Pearl Mining Ltd – The company owns the Davidson deposit (formerly Yorke-Hardy) near Smithers in central BC. The company proposes construction of an underground mine to produce 2,000 t/d. Crushed ore would be transported off the site for processing. An existing adit would be enlarged for access. The property is estimated to contain a measured and indicated resource of 83 Mt, at 0.295% MoS_2 (0.20% MoS_2 cut-off), representing 489 Mlb of MoS_2. The deposit offers good potential for an expansion of resources with the addition of tungsten as a by-product.

SNL Enterprises Ltd – The company holds a 50% interest in the Sunshine and Roundy Creek mining claims in the Alice Arm area of western BC. Alice Arm is a well-known molybdenum-mineralised region and is host to several deposits. The SNL claims have a drill-indicated resource of 8 Mt at an average grade of 0.12% MoS_2.

Leeward Capital Corp – The company is exploring the Nithi Mountain prospect, 8 km south of Fraser Lake in central BC and 18 km southeast of the producing Endako molybdenum mine. Previous drilling encountered extensive mineralisation, including one hole that intersected 115 m at 0.10 % MoS_2. The results of 17 holes (4,130 m) drilled earlier this year were released in July. The programme was designed to test three zones within the northeast-bearing Alpha trend of molybdenite showings 2.5 km wide and 4.5 km long. The best hole intersected 256 m at 0.057% MoS_2.

Eagle Plains Resources Ltd – The company has completed the first phase of drilling on its 100%-controlled Sphinx property, 60 km west of Kimberley, southeast BC. A total of 14 holes (3,330 m) intersected significant molybdenum mineralisation in almost all of the holes. One of the better holes (SX05002) intersected 228 m (from an initial depth of only 3 m) of 0.066 % MoS_2, including a 47 m interval that returned 0.167% MoS_2.

Ed Schiller is a consulting geologist based in Kelowna, British Columbia. In 1991, Dr Schiller was involved in the discovery of the Etaki diamond deposit at Lac de Gras, Northwest Territories. He writes for several resource magazines, and grows grapes in BC's Okanagan Valley

APPENDIX 2.6

Article by Ken Resner from Kitco Base Metals Website

KITCO BASE METALS WEBSITE

AUTHOR : KEN RESER

Molybdenum... Molymania... Exciting times for some of our super alloy base metals these days it seems. Moly@$34.25 p/lb as I write. Rhenium - the by-product of some Molybdenum deposits (derived from roasting process) - @ +/- $1000.00 p/oz. It seems prudent then that we should all have a better understanding of what Moly is and what it can be used for. We have many past, present and future uses of Molybdenum to cover so I shall do so in point form. Also I would like to address the projected future price of Molybdenum as expected by end users and producers thru 2005. Lastly a comparison of primary and by-product Molybdenum production should be made.

Molybdenum typically occurs in skarns or porphyrys. Usually the porphyry deposits are much larger, and thus more economic.

Moly is a soft ductile, refractory metal suitable for alloys requiring high strength, and rigidity at temperatures up to 3,000 degrees F.

Moly itself has a melting point of 4730 degrees F, the 5th highest melt point of all the elements.

The unique properties of Molybdenum alloys are utilized in many different applications

Corrosion resistance and strength in stainless steel, wrought alloys and super alloys. These uses accounted for approximately 75% of Moly consumption in 2004.

High temperature heating elements, radiation shields, forging dies, rotating X-ray anodes in clinical diagnostics, glass melting furnace electrodes, heat sinks for matching silicon for semiconductor chip mounts, interconnects on integrated circuit chips, coatings for piston rings and machine components.

Smoke suppressants & solid lubricants to reduce friction, Moly lubricants ie: grease & oils, engine corrosion inhibitors in coolants, lubricants in space vehicles.

Chemical processing equipment, vessels, tanks & pipelines, flame retardants, dry lubricants, light bulb filaments, inorganic paint pigments, chemical catalysts and desulfurization catalysts.

Non-ferrous alloys (super alloys) or nimonics account for about 3% of total demand for Moly. They are used in jet engine turbines, nuclear plants, gas turbines, space exploration and general aviation.

Nuclear reactor vessels. The reactor vessel serves to contain and support the reactor core and vessel internals. It is constructed of Moly carbon steel, lined with stainless Moly steel and has 8 inch thick walls.

Molybdenum is used for scrubbers in flue gas desulfurization (FGD) in coal fired power stations around the world. 9% to 16% Moly is used in inconel alloys for this process.

Soil supplement in agriculture as well as human and animal supplements.

Molybdenum alloyed with Rhenium (Mo-41Re & Mo-47.5Re) is used in electronics, space programs & nuclear industries. Moly-25% & Rhenium alloys are used for rocket engine components and liquid metal heat exchangers.

Moly steel is used extensively in the millions of miles of oil, gas and water pipelines around the world. (ie; 2 million mi of oil pipelines in USA and 1.3 million mi of gas pipelines) (source-U.S. Dept of Energy) the EIA in a working paper states that "to meet the U.S. Energy demand for natural gas alone the pipeline mileage must increase by 30% or more. (cost est. $150 b). By 2025 EIA expects the US will need 47% more oil & 54% more natural gas.

Now one must consider how many of the pipelines built between 1930 and 1969 (over 2/3 of the current lines in use today) need replacement, and how many 100s of thousands of miles of new pipelines will be needed around the world for our booming oil & gas industry and ever-increasing demands. Consider the refineries and gas plants that need to be built as well. Molybdenum plays a very big part in all of these endeavors.

One of the largest uses of Molybdenum is in drill stem steel tubing. In the 1970's when oil boomed so did the price of Molybdenum rise. The many 1000s of onshore and offshore drill rigs (and service rigs) in the world constantly replace this drill tubing due to heat and metal fatigue, especially with the depths now reached by our technology, and the heat encountered at the greater depths & with the down-hole weight of the drill stem stretching over many thousands of feet. This may be one of the times in history when the demands on Moly won't ease as the frantic search for new oil & gas supplies due to peak oil having been reached will give a new constant impetus to drill exploration.

On the immediate horizon for stainless steel and Moly use also is the fact that new maritime regulations now stipulate that all single hulled oil tankers built before 1987 must be decommissioned by 2010, and thus will be replaced by double hulled tankers. From the information available it appears that 170 vessels will be affected by this law by Apr. 5th 2005, the oil containment tanks in these ships are constructed of a Moly alloy steel also. Coupled with China's maritime fleet building in progress (military and commercial) it looks like a bright future for Moly in this area as well. There are at present about 3,600 tankers in the world. 1/3 of the world's oil is transported by just 435 of them, the large VLCCs (very large crude carriers).

Now to the space age and future of Molybdenum
(This is the interesting part)

The SAFE-400 space fission reactor (safe affordable fission engine) is a 400 kWt HPS producing 100 kWe to power a space vehicle using two Brayton Power Systems gas turbines driven directly by the hot gas from the reactor. The heat exchanger outlet temperature is 880 degrees. The reactor has 127 identical heat pipe modules made of Molybdenum.

Wall material for space reactors. Thin 99.9% purity Molybdenum foils for use in gas core reactors. Temperature ranges from 1500 to 2000 K.

Molybdenum Rhenium alloys for spacecraft reactor applications.

Molybdenum in ION space thrusters.

Molybdenum wire in radio telescopes.

NEXT generation ION thrusters, currently being developed as well as near term Nuclear Electric Propulsion (NEP) Program. Molybdenum & Carbon.

Multi layering in space telescopes with Molybdenum, Carbide and Silicon. TRACE (Transition Region And Corona Explorer) revealing the secrets of the Sun.

Molybdenum, Lithium "heat pipe." Los Alamos N.M. A pencil sized tube of Molybdenum, with Lithium core that moves heat from one end to the other may someday allow astronauts to travel to Mars and beyond. The heat pipes on NASA spacecraft will be in groups from 5 feet to 24 feet long. NASA's Marshall Space Flight Center is working to develop heat pipes for use in nuclear reactors to produce propulsion and generate electricity for spacecraft to travel the outer limits of the solar system. Heat pipes have been tested in space from shuttle missions & performed flawlessly.

Now you can possibly see why the world is viewing Molybdenum in a different light and it isn't just the demand from China, India and developing nations that is driving the price and uses. Moly is truly a metal of the future in many ways and we may never see the same past monetary values placed on it in our future. The era of the second industrial revolution is upon us and it 'is' the 3rd world coming into the 21st century at a very rapid rate that is placing great pressure on base metal demand, but it also is the age of new and ever-changing metal technologies, and I personally think Molybdenum will play a very important part in this new era and will be a major component of any base metal bull market.

If one considers that Moly mines may have a new and more secure future than in the past then one should consider that a "primary pure Molybdenum mine" has no sulfides or copper to leach out of the finished product. The Moly when crushed can be floated off by using a simple soap or diesel fuel additive to the floatation tanks or columns and agitated. The Moly particles adhere to the air bubbles and rise to the surface to be collected (skimmed off). This is a very simple, cost efficient and environmentally friendly process. It is generally accepted that in the Moly by-product production of copper mines, it takes 10 lbs. of CU produced to acquire 1lb of Molybdenum. There are few primary Moly mines at present in the world and fewer still coming to future production.

Let us not forget the adage. "If the whole world had the lifestyle, material comfort and luxuries of the western world, we'd need another planet for the supply of natural resources." Because that transformation is coming fast and the resources are finite, the cost of base metals and energy sources is obviously going to get much more expensive as time & world growth progresses. Mankind's demands on base metals in our future will prove historical.

The 2005 Moly price projection - in a survey done by "Ryan's Notes" in a presentation by Alice Agoo, given in Ryan's Notes' 2005 Molybdenum meeting. This survey was taken from 17 end users of Moly & 20 producers (sellers).

The consensus forecast of each group in the survey is the overall average, as are the combined forecasts.

End users:
Mid June /05...$27.39
Year end /05...$16.58

Sellers:
Mid June /05...$22.72
Year end /05...$15.31

Combined forecasts
Mid June /05...$24.92
Year end /05...$15.84

APPENDIX 2.7

Article by Mike Hoy from Kitco Base Metals Website

KITCO BASE METALS WEBSITE

AUTHOR : MIKE HOY

For those of you who haven't noticed; it appears that the price of Molybdenum (moly) is on the move and the funny thing is, it is moving in the opposite direction of what most of the analysts and newsletter writers have predicted. HOW CAN THAT BE? How can they be wrong about a base metal that has skyrocketed in price by more than 12 X in the last 3 years? Funny thing about this is the fact that it is not really their fault that they have been on the wrong side of the price movement with their predictions.

Moly is one of the most unknown and mis-understood base metals in the world today. This metal is unquestionably the metal of the 21st century. Not only is it the metal of the 21st century but very few individuals, investors, newsletter writers and even companies that produce moly have a clue to the importance that moly will play in shaping the rest of our lives and the lives of generations to come.

The best part about this is the fact that we, as consumers, are going to be the big winners. Not only will the consumer be a huge winner but countries such as the US and China can now look at each other as partners in the development of crucial technology and power plants that will easily solve the world's energy problems and needs rather than fierce competitors for the worlds dwindling supplies of natural resources.

Think about it for a second! What better way to cool the world's frayed nerves than to come up with a solution to the world's energy crisis! Think of the possibility of buying gasoline at $1.50-$2.00/gallon again. Believe it or not there is a solution to the world's energy crisis and the technology has been around for decades! In fact this technology is now in the process of becoming a reality.

China and South Africa are working together to develop and build power plants that will liquify coal in a process that makes their vast reserves of coal economical and the finished product is burned pollution free. Think of what this means! Both the US and China can tell the oil producing nations, of the world, to go take a "high flying leap off their tallest oil rig." For the first time in years I have positive feelings about the future and I can see a way for the US to solve many of its pressing problems. Think of automobiles and power plants burning fuel that is virtually pollution free for a lot less than we pay for the same energy today! This technology will not only solve our energy crisis but it will also do wonders in solving the world's air pollution crisis and the threat of global warming.

I hope you are getting as excited as I am because from my standpoint I have searched for a very long time to find anything to be positive about in the world today. Not only does this give me something to cheer about but the timing cannot be better.

Now you have got to be asking yourself "how does moly fit in to this?" The answer to that is very simple but yet it has been kept a "BIG SECRET!" Very few people know or understand the fact that MOLY is the catalyst to clean the impurities out of the vast quantities of coal and stranded natural gas that exists in the world today. With moly as the catalyst there is very little doubt about the fact that the demand for moly can do anything but increase significantly over the years to come.

Very few newsletter writers, analysts or even producing moly companies understand the fact that the world of the 21st century cannot exist, in the manner that it will, without a much larger supply of moly than is available in the market today..

Without this knowledge there is no way that many of these very intelligent people could come to the conclusion that the price of moly could do anything but fall in price. That would be a logical and practical opinion to form.

For months newsletter writers and analysts have said that moly prices would fall below $15/lb. after peaking above $39/lb. For months end users of moly have waited for the pullback in price. Most of these end users felt that moly had no-where to go in price but down. As a result of this thinking these end users kept their inventories of moly at very low levels. They waited and hoped that the price of moly would fall. Moly did have a pullback; all the way to the meager level of $29/lb.

The funny thing about moly is the fact that moly, as a commodity, is not traded as a commodity on any of the publicly traded commodity exchanges. The important point to this is the fact that moly then has to trade on the basis of pure supply and demand. Pure supply and demand eliminates all the games and manipulation that is created by speculators, hedge funds and those who attempt to manipulate markets to their advantage.

Moly prices are now rising because the end users can wait no longer for the price to fall. The end users must buy to replenish inventories that do not exist and this, coupled with thin supplies, is the real reason why the price of moly is now rising. It has nothing to do with roasters or any other garbage that certain people and companies want you to believe. These naysayers have their own best interest at heart and they may be the ones who truly know what is going on behind the scene and doing everything they can to keep moly a big secret while they take full advantage to position themselves for the future.

Ken Reser just posted a magnificent article called "THE BIG SECRET!" I love this guy as I have learned so much from him in the short time that I have had the privilege of knowing and working with him. Ken is one of these guys who spends an incredible amount of time in the pursuit of knowledge and the truth. Ken is the first individual; I know of, to post an article revealing the importance that moly plays in the development of this new technology that literally is the "SAVIOR OF THE WORLD!"

Now that the truth is coming out; all these people, who have felt that moly prices would pull back, now have a perfectly good reason to alter their opinions! I believe we will read lots of articles, in the near future, from analysts and newsletter writers who have "flip-flopped" with their opinion on the future direction in the price of moly. Even Jim Cramer on "romper room" or excuse me I mean CNBC was talking about the positive future of the base metals and moly as one base metal in particular. In other words the rest of the investing world is beginning to stand up and take notice.

LOOK OUT WORLD BECAUSE HERE COMES MOLY AND THE MOLY STOCKS! I feel that moly, as a sector will outperform and give returns better than the oil and uranium sectors. After all why mess with uranium and the consequences of the liabilities and cleaning the messes it leaves behind when you can burn pollution-free coal and stranded natural gas FOR A LOT LESS THAN IT COSTS TODAY TO FILL OUR CARS AND HEAT OUR HOMES.

With the vast quantities of coal and stranded natural gas that exists in the world today the US and the rest of the world can become completely independent in the development and supplies OF THEIR OWN NATURAL RESOURCES FOR CENTURIES TO COME. Wouldn't this be an absolutely wonderful feeling and position to be in for the rest of our lives and the lives of generations to come? Wouldn't it be great to leave our children and grandchildren something to be proud of? Isn't it about time for the people of the world to stand up and demand that attention and vast amounts of capital be spent on the development of this absolutely necessary and timely power and technology!

For those of you who believe that a recession or depression is eminent, after the hyperinflation, and the resulting slowdown will change the demand for moly; I ask you to think about this. What will the government do when the economy comes to a standstill?

I believe that our government will do exactly what they did in the depression of the 30's; except this time the money will be spent to completely realign our energy industry. I believe they will create vast quantities of jobs that will put the people back to work. I also believe these jobs will be of the same nature that existed in the 30's when The Hoover Dam was built. I believe power plants across the country will be built and these power plants will run on coal and stranded natural gas using vast quantities of moly as a catalyst to clean the impurities.

In other words I believe a slowdown in the US could create a greater demand for moly as a result of the money being spent in a manner that puts people back to work and at the same time solves our great countries energy and pollution needs with all the problems that go with it! This would take negative, short term, economic times and transfer that pain into long term growth and gain for future generations to come.

APPENDIX III

SAMPLE DESCRIPTIONS

3.1 Silt Sample Descriptions
3.2 Rock Sample Descriptions
3.3 Soil Sample Descriptions

3.1 Silt Sample Descriptions

Sample Number	Date	UTM X	UTM Y	UTM Zone	Turbidity	Depth (CM)	Size (1-5)	Quality
GHSXS004	20/07/2005	523949	5496297	UTM Nad 83 Zone 11N	LOW	5	4	4
GHSXS003	20/07/2005	523987	5496275	UTM Nad 83 Zone 11N	LOW	5	4	3
BSSXS001	11/07/2005	524700	5495986	UTM Nad 83 Zone 11N	LOW	15	4	4
DDSXS004	25/07/2005	524227	5498314	UTM Nad 83 Zone 11N	LOW	5	5	4
DDSXS003	25/07/2005	524212	5497967	UTM Nad 83 Zone 11N	LOW	5	5	5
DDSXS002	24/07/2005	523971	5498198	UTM Nad 83 Zone 11N	MED	5	3	3
DDSXS001	24/07/2005	523545	5498562	UTM Nad 83 Zone 11N	LOW	5	5	5

3.2 Rock Sample Descriptions

SAMPLE NUMBER	DATE	LOCATION METHOD	ELEVATION	UTM X	UTM Y	UTM ZONE	ROCK TYPE MAJOR	COLOR FRESH	COLOUR WEATHERING	GRAINSIZE	MINERLIZATION MAJOR
BRSXR001	24/07/2005	GPS	2120	524575	5498242	NAD83 UTM ZONE 11N	Mudstone	black	rusty	fine	pyrite

3.3 Soil Sample Descriptions

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL01 00+00	18/07/2005	SOIL	525529	5496081	NAD 83 UTM ZONE 11N
SXL01 00+25E	18/07/2005	SOIL	525551.5965	5496079.242	NAD 83 UTM ZONE 11N
SXL01 00+50E	18/07/2005	SOIL	525574.3072	5496077.423	NAD 83 UTM ZONE 11N
SXL01 00+75E	18/07/2005	SOIL	525597.0179	5496075.604	NAD 83 UTM ZONE 11N
SXL01 01+00E	18/07/2005	SOIL	525619.7287	5496073.785	NAD 83 UTM ZONE 11N
SXL01 01+25E	18/07/2005	SOIL	525642.4394	5496071.967	NAD 83 UTM ZONE 11N
SXL01 01+50E	18/07/2005	SOIL	525665.1501	5496070.148	NAD 83 UTM ZONE 11N
SXL01 01+75E	18/07/2005	SOIL	525687.8608	5496068.329	NAD 83 UTM ZONE 11N
SXL01 02+00E	18/07/2005	SOIL	525710.5716	5496066.51	NAD 83 UTM ZONE 11N
SXL01 02+25E	18/07/2005	SOIL	525733.2823	5496064.691	NAD 83 UTM ZONE 11N
SXL01 02+50E	18/07/2005	SOIL	525755.993	5496062.872	NAD 83 UTM ZONE 11N
SXL01 02+75E	18/07/2005	SOIL	525778.7037	5496061.054	NAD 83 UTM ZONE 11N
SXL01 03+00E	18/07/2005	SOIL	525801.4145	5496059.235	NAD 83 UTM ZONE 11N
SXL01 03+25E	18/07/2005	SOIL	525824.1252	5496057.416	NAD 83 UTM ZONE 11N
SXL01 03+50E	18/07/2005	SOIL	525846.8359	5496055.597	NAD 83 UTM ZONE 11N
SXL01 03+75E	18/07/2005	SOIL	525869.5466	5496053.778	NAD 83 UTM ZONE 11N
SXL01 04+00E	18/07/2005	SOIL	525892.2574	5496051.96	NAD 83 UTM ZONE 11N
SXL01A 00+00	19/07/2005	SOIL	525605	5495851	NAD 83 UTM ZONE 11N
SXL01A 00+25E	19/07/2005	SOIL	525628.1869	5495850.088	NAD 83 UTM ZONE 11N
SXL01A 00+50E	19/07/2005	SOIL	525651.7185	5495849.167	NAD 83 UTM ZONE 11N
SXL01A 00+75E	19/07/2005	SOIL	525675.25	5495848.247	NAD 83 UTM ZONE 11N
SXL01A 01+00E	19/07/2005	SOIL	525698.7816	5495847.327	NAD 83 UTM ZONE 11N
SXL01A 01+25E	19/07/2005	SOIL	525722.3132	5495846.407	NAD 83 UTM ZONE 11N
SXL01A 01+50E	19/07/2005	SOIL	525745.8447	5495845.487	NAD 83 UTM ZONE 11N
SXL01A 01+75E	19/07/2005	SOIL	525769.3763	5495844.567	NAD 83 UTM ZONE 11N
SXL01A 02+00E	19/07/2005	SOIL	525792.9079	5495843.646	NAD 83 UTM ZONE 11N
SXL01A 02+25E	19/07/2005	SOIL	525816.4394	5495842.726	NAD 83 UTM ZONE 11N
SXL01A 02+50E	19/07/2005	SOIL	525839.971	5495841.806	NAD 83 UTM ZONE 11N
SXL01A 02+75E	19/07/2005	SOIL	525863.5026	5495840.886	NAD 83 UTM ZONE 11N
SXL01A 03+00E	19/07/2005	SOIL	525887.0341	5495839.966	NAD 83 UTM ZONE 11N
SXL01A 03+25E	19/07/2005	SOIL	525910.5657	5495839.045	NAD 83 UTM ZONE 11N
SXL01A 03+50E	19/07/2005	SOIL	525934.0973	5495838.125	NAD 83 UTM ZONE 11N
SXL01A 03+75E	19/07/2005	SOIL	525957.6288	5495837.205	NAD 83 UTM ZONE 11N
SXL01A 04+00E	19/07/2005	SOIL	525981.1604	5495836.285	NAD 83 UTM ZONE 11N
SXL01A 04+25E	19/07/2005	SOIL	526004.6919	5495835.365	NAD 83 UTM ZONE 11N
SXL01A 04+50E	19/07/2005	SOIL	526028.2235	5495834.445	NAD 83 UTM ZONE 11N
SXL01A 04+75E	19/07/2005	SOIL	526051.7551	5495833.524	NAD 83 UTM ZONE 11N
SXL01A 05+00E	19/07/2005	SOIL	526075.2866	5495832.604	NAD 83 UTM ZONE 11N
SXL01A 05+25E	19/07/2005	SOIL	526098.8182	5495831.684	NAD 83 UTM ZONE 11N
SXL01A 05+50E	19/07/2005	SOIL	526122.3498	5495830.764	NAD 83 UTM ZONE 11N
SXL01A 05+75E	19/07/2005	SOIL	526145.8813	5495829.844	NAD 83 UTM ZONE 11N
SXL01A 06+00E	19/07/2005	SOIL	526169.4129	5495828.923	NAD 83 UTM ZONE 11N
SXL01A 06+25E	19/07/2005	SOIL	526192.9445	5495828.003	NAD 83 UTM ZONE 11N
SXL01A 06+50E	19/07/2005	SOIL	526216.476	5495827.083	NAD 83 UTM ZONE 11N
SXL01A 06+75E	19/07/2005	SOIL	526240.0076	5495826.163	NAD 83 UTM ZONE 11N
SXL01A 07+00E	19/07/2005	SOIL	526263.5392	5495825.243	NAD 83 UTM ZONE 11N
SXL01A 07+25E	19/07/2005	SOIL	526287.0707	5495824.322	NAD 83 UTM ZONE 11N
SXL01A 07+50E	19/07/2005	SOIL	526310.6023	5495823.402	NAD 83 UTM ZONE 11N
SXL01A 07+75E	19/07/2005	SOIL	526334.1339	5495822.482	NAD 83 UTM ZONE 11N
SXL01A 08+00E	19/07/2005	SOIL	526357.6654	5495821.562	NAD 83 UTM ZONE 11N
SXL01A 08+25E	19/07/2005	SOIL	526381.197	5495820.642	NAD 83 UTM ZONE 11N
SXL01A 08+50E	19/07/2005	SOIL	526404.7286	5495819.722	NAD 83 UTM ZONE 11N
SXL01A 08+75E	19/07/2005	SOIL	526428.2601	5495818.801	NAD 83 UTM ZONE 11N
SXL01A 09+00E	19/07/2005	SOIL	526451.7917	5495817.881	NAD 83 UTM ZONE 11N
SXL01A 09+25E	19/07/2005	SOIL	526475.3233	5495816.961	NAD 83 UTM ZONE 11N
SXL01A 09+50E	19/07/2005	SOIL	526498.8548	5495816.041	NAD 83 UTM ZONE 11N
SXL01A 09+75E	19/07/2005	SOIL	526522.3864	5495815.121	NAD 83 UTM ZONE 11N
SXL01A 10+00E	19/07/2005	SOIL	526546	5495814	NAD 83 UTM ZONE 11N
SXL02 00+00	09/07/2005	SOIL	526131	5495586	NAD 83 UTM ZONE 11N
SXL02 00+25E	09/07/2005	SOIL	526155.0832	5495584.794	NAD 83 UTM ZONE 11N
SXL02 00+25W	09/07/2005	SOIL	526105.2679	5495586.612	NAD 83 UTM ZONE 11N
SXL02 00+50E	09/07/2005	SOIL	526179.3351	5495583.546	NAD 83 UTM ZONE 11N
SXL02 00+50W	09/07/2005	SOIL	526079.7045	5495587.181	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL02 00+75E	09/07/2005	SOIL	526203.587	5495582.298	NAD 83 UTM ZONE 11N
SXL02 00+75W	09/07/2005	SOIL	526054.1411	5495587.75	NAD 83 UTM ZONE 11N
SXL02 01+00E	09/07/2005	SOIL	526227.8389	5495581.049	NAD 83 UTM ZONE 11N
SXL02 01+00W	09/07/2005	SOIL	526028.5777	5495588.32	NAD 83 UTM ZONE 11N
SXL02 01+25E	09/07/2005	SOIL	526252.0908	5495579.801	NAD 83 UTM ZONE 11N
SXL02 01+25W	09/07/2005	SOIL	526003.0143	5495588.889	NAD 83 UTM ZONE 11N
SXL02 01+50E	09/07/2005	SOIL	526276.3427	5495578.552	NAD 83 UTM ZONE 11N
SXL02 01+50W	09/07/2005	SOIL	525977.4508	5495589.458	NAD 83 UTM ZONE 11N
SXL02 01+75E	09/07/2005	SOIL	526300.5946	5495577.304	NAD 83 UTM ZONE 11N
SXL02 01+75W	09/07/2005	SOIL	525951.8874	5495590.027	NAD 83 UTM ZONE 11N
SXL02 02+00E	09/07/2005	SOIL	526324.8465	5495576.055	NAD 83 UTM ZONE 11N
SXL02 02+00W	09/07/2005	SOIL	525926.324	5495590.596	NAD 83 UTM ZONE 11N
SXL02 02+25E	09/07/2005	SOIL	526349.0984	5495574.807	NAD 83 UTM ZONE 11N
SXL02 02+25W	09/07/2005	SOIL	525900.7606	5495591.166	NAD 83 UTM ZONE 11N
SXL02 02+50E	09/07/2005	SOIL	526373.3503	5495573.559	NAD 83 UTM ZONE 11N
SXL02 02+50W	09/07/2005	SOIL	525875.1972	5495591.735	NAD 83 UTM ZONE 11N
SXL02 02+75E	09/07/2005	SOIL	526397.6022	5495572.31	NAD 83 UTM ZONE 11N
SXL02 02+75W	09/07/2005	SOIL	525849.6338	5495592.304	NAD 83 UTM ZONE 11N
SXL02 03+00E	09/07/2005	SOIL	526421.8541	5495571.062	NAD 83 UTM ZONE 11N
SXL02 03+00W	09/07/2005	SOIL	525824.0704	5495592.873	NAD 83 UTM ZONE 11N
SXL02 03+25E	09/07/2005	SOIL	526446.106	5495569.813	NAD 83 UTM ZONE 11N
SXL02 03+25W	09/07/2005	SOIL	525798.507	5495593.442	NAD 83 UTM ZONE 11N
SXL02 03+50E	09/07/2005	SOIL	526470.3579	5495568.565	NAD 83 UTM ZONE 11N
SXL02 03+50W	09/07/2005	SOIL	525772.9436	5495594.011	NAD 83 UTM ZONE 11N
SXL02 03+75E	09/07/2005	SOIL	526494.6098	5495567.316	NAD 83 UTM ZONE 11N
SXL02 03+75W	09/07/2005	SOIL	525747.3802	5495594.581	NAD 83 UTM ZONE 11N
SXL02 04+00E	09/07/2005	SOIL	526518.8617	5495566.068	NAD 83 UTM ZONE 11N
SXL02 04+00W	09/07/2005	SOIL	525721.8168	5495595.15	NAD 83 UTM ZONE 11N
SXL02 04+25E	09/07/2005	SOIL	526543.1136	5495564.82	NAD 83 UTM ZONE 11N
SXL02 04+25W	09/07/2005	SOIL	525696.2534	5495595.719	NAD 83 UTM ZONE 11N
SXL02 04+50E	09/07/2005	SOIL	526567.3656	5495563.571	NAD 83 UTM ZONE 11N
SXL02 04+50W	09/07/2005	SOIL	525670.69	5495596.288	NAD 83 UTM ZONE 11N
SXL02 04+75E	09/07/2005	SOIL	526591.6175	5495562.323	NAD 83 UTM ZONE 11N
SXL02 04+75W	09/07/2005	SOIL	525645.1266	5495596.857	NAD 83 UTM ZONE 11N
SXL02 05+00E	09/07/2005	SOIL	526616	5495561	NAD 83 UTM ZONE 11N
SXL02 05+00W	09/07/2005	SOIL	525619	5495597	NAD 83 UTM ZONE 11N
SXL03 00+00	09/07/2005	SOIL	525588	5495382	NAD 83 UTM ZONE 11N
SXL03 00+25E	09/07/2005	SOIL	525610.7013	5495380.524	NAD 83 UTM ZONE 11N
SXL03 00+50E	09/07/2005	SOIL	525633.5777	5495378.947	NAD 83 UTM ZONE 11N
SXL03 00+75E	09/07/2005	SOIL	525656.4542	5495377.37	NAD 83 UTM ZONE 11N
SXL03 01+00E	09/07/2005	SOIL	525679.3306	5495375.792	NAD 83 UTM ZONE 11N
SXL03 01+25E	09/07/2005	SOIL	525702.207	5495374.215	NAD 83 UTM ZONE 11N
SXL03 01+50E	09/07/2005	SOIL	525725.0834	5495372.638	NAD 83 UTM ZONE 11N
SXL03 01+75E	09/07/2005	SOIL	525747.9598	5495371.061	NAD 83 UTM ZONE 11N
SXL03 02+00E	09/07/2005	SOIL	525770.8362	5495369.484	NAD 83 UTM ZONE 11N
SXL03 02+25E	09/07/2005	SOIL	525793.7126	5495367.907	NAD 83 UTM ZONE 11N
SXL03 02+50E	09/07/2005	SOIL	525816.589	5495366.33	NAD 83 UTM ZONE 11N
SXL03 02+75E	09/07/2005	SOIL	525839.4654	5495364.753	NAD 83 UTM ZONE 11N
SXL03 03+00E	09/07/2005	SOIL	525862.3418	5495363.175	NAD 83 UTM ZONE 11N
SXL03 03+25E	09/07/2005	SOIL	525885.2182	5495361.598	NAD 83 UTM ZONE 11N
SXL03 03+50E	09/07/2005	SOIL	525908.0947	5495360.021	NAD 83 UTM ZONE 11N
SXL03 03+75E	09/07/2005	SOIL	525930.9711	5495358.444	NAD 83 UTM ZONE 11N
SXL03 04+00E	09/07/2005	SOIL	525953.8475	5495356.867	NAD 83 UTM ZONE 11N
SXL03 04+25E	09/07/2005	SOIL	525976.7239	5495355.29	NAD 83 UTM ZONE 11N
SXL03 04+50E	09/07/2005	SOIL	525999.6003	5495353.713	NAD 83 UTM ZONE 11N
SXL03 04+75E	09/07/2005	SOIL	526022.4767	5495352.135	NAD 83 UTM ZONE 11N
SXL03 05+00E	09/07/2005	SOIL	526045.3531	5495350.558	NAD 83 UTM ZONE 11N
SXL03 05+25E	09/07/2005	SOIL	526068.2295	5495348.981	NAD 83 UTM ZONE 11N
SXL03 05+50E	09/07/2005	SOIL	526091.1059	5495347.404	NAD 83 UTM ZONE 11N
SXL03 05+75E	09/07/2005	SOIL	526113.9823	5495345.827	NAD 83 UTM ZONE 11N
SXL03 06+00E	09/07/2005	SOIL	526136.8587	5495344.25	NAD 83 UTM ZONE 11N
SXL03 06+25E	09/07/2005	SOIL	526159.7352	5495342.673	NAD 83 UTM ZONE 11N
SXL03 06+50E	09/07/2005	SOIL	526182.6116	5495341.096	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL03 06+75E	09/07/2005	SOIL	526205.488	5495339.518	NAD 83 UTM ZONE 11N
SXL03 07+00E	09/07/2005	SOIL	526228.3644	5495337.941	NAD 83 UTM ZONE 11N
SXL03 07+25E	09/07/2005	SOIL	526251.2408	5495336.364	NAD 83 UTM ZONE 11N
SXL03 07+50E	09/07/2005	SOIL	526274.1172	5495334.787	NAD 83 UTM ZONE 11N
SXL03 07+75E	09/07/2005	SOIL	526296.9936	5495333.21	NAD 83 UTM ZONE 11N
SXL03 08+00E	09/07/2005	SOIL	526319.87	5495331.633	NAD 83 UTM ZONE 11N
SXL03 08+25E	09/07/2005	SOIL	526342.7464	5495330.056	NAD 83 UTM ZONE 11N
SXL03 08+50E	09/07/2005	SOIL	526365.6228	5495328.479	NAD 83 UTM ZONE 11N
SXL03 08+75E	09/07/2005	SOIL	526388.4993	5495326.901	NAD 83 UTM ZONE 11N
SXL03 09+00E	09/07/2005	SOIL	526411.3757	5495325.324	NAD 83 UTM ZONE 11N
SXL03 09+25E	09/07/2005	SOIL	526434.2521	5495323.747	NAD 83 UTM ZONE 11N
SXL03 09+50E	09/07/2005	SOIL	526457.1285	5495322.17	NAD 83 UTM ZONE 11N
SXL03 09+75E	09/07/2005	SOIL	526480.0049	5495320.593	NAD 83 UTM ZONE 11N
SXL03 10+00E	09/07/2005	SOIL	526503	5495319	NAD 83 UTM ZONE 11N
SXL04 00+00	10/07/2005	SOIL	525554	5495147	NAD 83 UTM ZONE 11N
SXL04 00+25E	10/07/2005	SOIL	525577.2782	5495145.212	NAD 83 UTM ZONE 11N
SXL04 00+50E	10/07/2005	SOIL	525600.578	5495143.412	NAD 83 UTM ZONE 11N
SXL04 00+75E	10/07/2005	SOIL	525623.8779	5495141.612	NAD 83 UTM ZONE 11N
SXL04 01+00E	10/07/2005	SOIL	525647.1778	5495139.812	NAD 83 UTM ZONE 11N
SXL04 01+25E	10/07/2005	SOIL	525670.4776	5495138.012	NAD 83 UTM ZONE 11N
SXL04 01+50E	10/07/2005	SOIL	525693.7775	5495136.212	NAD 83 UTM ZONE 11N
SXL04 01+75E	10/07/2005	SOIL	525717.0773	5495134.412	NAD 83 UTM ZONE 11N
SXL04 02+00E	10/07/2005	SOIL	525740.3772	5495132.612	NAD 83 UTM ZONE 11N
SXL04 02+25E	10/07/2005	SOIL	525763.6771	5495130.812	NAD 83 UTM ZONE 11N
SXL04 02+50E	10/07/2005	SOIL	525786.9769	5495129.012	NAD 83 UTM ZONE 11N
SXL04 02+75E	10/07/2005	SOIL	525810.2768	5495127.212	NAD 83 UTM ZONE 11N
SXL04 03+00E	10/07/2005	SOIL	525833.5766	5495125.412	NAD 83 UTM ZONE 11N
SXL04 03+25E	10/07/2005	SOIL	525856.8765	5495123.612	NAD 83 UTM ZONE 11N
SXL04 03+50E	10/07/2005	SOIL	525880.1764	5495121.812	NAD 83 UTM ZONE 11N
SXL04 03+75E	10/07/2005	SOIL	525903.4762	5495120.012	NAD 83 UTM ZONE 11N
SXL04 04+00E	10/07/2005	SOIL	525926.7761	5495118.212	NAD 83 UTM ZONE 11N
SXL04 04+25E	10/07/2005	SOIL	525950.0759	5495116.412	NAD 83 UTM ZONE 11N
SXL04 04+50E	10/07/2005	SOIL	525973.3758	5495114.612	NAD 83 UTM ZONE 11N
SXL04 04+75E	10/07/2005	SOIL	525996.6756	5495112.812	NAD 83 UTM ZONE 11N
SXL04 05+00E	10/07/2005	SOIL	526019.9755	5495111.012	NAD 83 UTM ZONE 11N
SXL04 05+25E	10/07/2005	SOIL	526043.2754	5495109.212	NAD 83 UTM ZONE 11N
SXL04 05+50E	10/07/2005	SOIL	526066.5752	5495107.412	NAD 83 UTM ZONE 11N
SXL04 05+75E	10/07/2005	SOIL	526089.8751	5495105.612	NAD 83 UTM ZONE 11N
SXL04 06+00E	10/07/2005	SOIL	526113.1749	5495103.812	NAD 83 UTM ZONE 11N
SXL04 06+25E	10/07/2005	SOIL	526136.4748	5495102.012	NAD 83 UTM ZONE 11N
SXL04 06+50E	10/07/2005	SOIL	526159.7747	5495100.211	NAD 83 UTM ZONE 11N
SXL04 06+75E	10/07/2005	SOIL	526183.0745	5495098.411	NAD 83 UTM ZONE 11N
SXL04 07+00E	10/07/2005	SOIL	526206.3744	5495096.611	NAD 83 UTM ZONE 11N
SXL04 07+25E	10/07/2005	SOIL	526229.6742	5495094.811	NAD 83 UTM ZONE 11N
SXL04 07+50E	10/07/2005	SOIL	526252.9741	5495093.011	NAD 83 UTM ZONE 11N
SXL04 07+75E	10/07/2005	SOIL	526276.2739	5495091.211	NAD 83 UTM ZONE 11N
SXL04 08+00E	10/07/2005	SOIL	526299.5738	5495089.411	NAD 83 UTM ZONE 11N
SXL04 08+25E	10/07/2005	SOIL	526322.8737	5495087.611	NAD 83 UTM ZONE 11N
SXL04 08+50E	10/07/2005	SOIL	526346.1735	5495085.811	NAD 83 UTM ZONE 11N
SXL04 08+75E	10/07/2005	SOIL	526369.4734	5495084.011	NAD 83 UTM ZONE 11N
SXL04 09+00E	10/07/2005	SOIL	526392.7732	5495082.211	NAD 83 UTM ZONE 11N
SXL04 09+25E	10/07/2005	SOIL	526416.0731	5495080.411	NAD 83 UTM ZONE 11N
SXL04 09+50E	10/07/2005	SOIL	526439.373	5495078.611	NAD 83 UTM ZONE 11N
SXL04 09+75E	10/07/2005	SOIL	526462.6728	5495076.811	NAD 83 UTM ZONE 11N
SXL04 10+00E	10/07/2005	SOIL	526486	5495075	NAD 83 UTM ZONE 11N
SXL05 00+00	10/07/2005	SOIL	525483	5494500	NAD 83 UTM ZONE 11N
SXL05 00+25E	10/07/2005	SOIL	525506.7323	5494499.302	NAD 83 UTM ZONE 11N
SXL05 00+50E	10/07/2005	SOIL	525530.5936	5494498.514	NAD 83 UTM ZONE 11N
SXL05 00+75E	10/07/2005	SOIL	525554.455	5494497.726	NAD 83 UTM ZONE 11N
SXL05 01+00E	10/07/2005	SOIL	525578.3163	5494496.938	NAD 83 UTM ZONE 11N
SXL05 01+25E	10/07/2005	SOIL	525602.1777	5494496.15	NAD 83 UTM ZONE 11N
SXL05 01+50E	10/07/2005	SOIL	525626.039	5494495.362	NAD 83 UTM ZONE 11N
SXL05 01+75E	10/07/2005	SOIL	525649.9004	5494494.574	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL05 02+00E	10/07/2005	SOIL	525673.7617	5494493.786	NAD 83 UTM ZONE 11N
SXL05 02+25E	10/07/2005	SOIL	525697.6231	5494492.998	NAD 83 UTM ZONE 11N
SXL05 02+50E	10/07/2005	SOIL	525721.4844	5494492.21	NAD 83 UTM ZONE 11N
SXL05 02+75E	10/07/2005	SOIL	525745.3458	5494491.422	NAD 83 UTM ZONE 11N
SXL05 03+00E	10/07/2005	SOIL	525769.2071	5494490.634	NAD 83 UTM ZONE 11N
SXL05 03+25E	10/07/2005	SOIL	525793.0685	5494489.846	NAD 83 UTM ZONE 11N
SXL05 03+50E	10/07/2005	SOIL	525816.9298	5494489.058	NAD 83 UTM ZONE 11N
SXL05 03+75E	10/07/2005	SOIL	525840.7912	5494488.269	NAD 83 UTM ZONE 11N
SXL05 04+00E	10/07/2005	SOIL	525864.6526	5494487.481	NAD 83 UTM ZONE 11N
SXL05 04+25E	10/07/2005	SOIL	525888.5139	5494486.693	NAD 83 UTM ZONE 11N
SXL05 04+50E	10/07/2005	SOIL	525912.3753	5494485.905	NAD 83 UTM ZONE 11N
SXL05 04+75E	10/07/2005	SOIL	525936.2366	5494485.117	NAD 83 UTM ZONE 11N
SXL05 05+00E	10/07/2005	SOIL	525960.098	5494484.329	NAD 83 UTM ZONE 11N
SXL05 05+25E	10/07/2005	SOIL	525983.9593	5494483.541	NAD 83 UTM ZONE 11N
SXL05 05+50E	10/07/2005	SOIL	526007.8207	5494482.753	NAD 83 UTM ZONE 11N
SXL05 05+75E	10/07/2005	SOIL	526031.682	5494481.965	NAD 83 UTM ZONE 11N
SXL05 06+00E	10/07/2005	SOIL	526055.5434	5494481.177	NAD 83 UTM ZONE 11N
SXL05 06+25E	10/07/2005	SOIL	526079.4047	5494480.389	NAD 83 UTM ZONE 11N
SXL05 06+50E	10/07/2005	SOIL	526103.2661	5494479.601	NAD 83 UTM ZONE 11N
SXL05 06+75E	10/07/2005	SOIL	526127.1274	5494478.813	NAD 83 UTM ZONE 11N
SXL05 07+00E	10/07/2005	SOIL	526151	5494478	NAD 83 UTM ZONE 11N
SXL06 00+00	20/07/2005	SOIL	524323	5496115	NAD 83 UTM ZONE 11N
SXL06 00+25W	20/07/2005	SOIL	524299.5368	5496121.195	NAD 83 UTM ZONE 11N
SXL06 00+50W	20/07/2005	SOIL	524275.535	5496127.504	NAD 83 UTM ZONE 11N
SXL06 00+75W	20/07/2005	SOIL	524251.8004	5496134.778	NAD 83 UTM ZONE 11N
SXL06 01+00W	20/07/2005	SOIL	524228.1812	5496142.381	NAD 83 UTM ZONE 11N
SXL06 01+25W	20/07/2005	SOIL	524206.4335	5496154.324	NAD 83 UTM ZONE 11N
SXL06 01+50W	20/07/2005	SOIL	524185.0031	5496166.853	NAD 83 UTM ZONE 11N
SXL06 01+75W	20/07/2005	SOIL	524163.5754	5496179.387	NAD 83 UTM ZONE 11N
SXL06 02+00W	20/07/2005	SOIL	524141.5843	5496190.848	NAD 83 UTM ZONE 11N
SXL06 02+25W	20/07/2005	SOIL	524119.6068	5496202.249	NAD 83 UTM ZONE 11N
SXL06 02+50W	20/07/2005	SOIL	524099.5147	5496216.828	NAD 83 UTM ZONE 11N
SXL06 02+75W	20/07/2005	SOIL	524079.3971	5496231.369	NAD 83 UTM ZONE 11N
SXL06 03+00W	20/07/2005	SOIL	524058.4279	5496244.656	NAD 83 UTM ZONE 11N
SXL06 03+25W	20/07/2005	SOIL	524038.2046	5496258.992	NAD 83 UTM ZONE 11N
SXL06 03+50W	20/07/2005	SOIL	524019.0574	5496274.79	NAD 83 UTM ZONE 11N
SXL06 03+75W	20/07/2005	SOIL	523999.8713	5496290.542	NAD 83 UTM ZONE 11N
SXL06 04+00W	20/07/2005	SOIL	523979.4103	5496304.47	NAD 83 UTM ZONE 11N
SXL06 04+25W	20/07/2005	SOIL	523959.55	5496318.241	NAD 83 UTM ZONE 11N
SXL06 04+50W	20/07/2005	SOIL	523948.1007	5496318.608	NAD 83 UTM ZONE 11N
SXL06 04+75W	20/07/2005	SOIL	523934.3329	5496297.953	NAD 83 UTM ZONE 11N
SXL06 05+00W	20/07/2005	SOIL	523923.3233	5496275.76	NAD 83 UTM ZONE 11N
SXL06 05+25W	20/07/2005	SOIL	523913.301	5496253.049	NAD 83 UTM ZONE 11N
SXL06 05+50W	20/07/2005	SOIL	523903.0833	5496230.426	NAD 83 UTM ZONE 11N
SXL06 05+75W	20/07/2005	SOIL	523891.5038	5496209.741	NAD 83 UTM ZONE 11N
SXL06 06+00W	20/07/2005	SOIL	523868.1517	5496203.984	NAD 83 UTM ZONE 11N
SXL06 06+25W	20/07/2005	SOIL	523843.3411	5496204.762	NAD 83 UTM ZONE 11N
SXL06 06+50W	20/07/2005	SOIL	523818.5324	5496204.32	NAD 83 UTM ZONE 11N
SXL06 06+75W	20/07/2005	SOIL	523793.9622	5496205.915	NAD 83 UTM ZONE 11N
SXL06 07+00W	20/07/2005	SOIL	523769.9595	5496212.154	NAD 83 UTM ZONE 11N
SXL06 07+25W	20/07/2005	SOIL	523745.9949	5496218.597	NAD 83 UTM ZONE 11N
SXL06 07+50W	20/07/2005	SOIL	523721.6247	5496223.185	NAD 83 UTM ZONE 11N
SXL06 07+75W	20/07/2005	SOIL	523696.8647	5496223.397	NAD 83 UTM ZONE 11N
SXL06 08+00W	20/07/2005	SOIL	523672.0469	5496223.006	NAD 83 UTM ZONE 11N
SXL06 08+25W	20/07/2005	SOIL	523647.2227	5496222.989	NAD 83 UTM ZONE 11N
SXL06 08+50W	20/07/2005	SOIL	523622.6672	5496220.421	NAD 83 UTM ZONE 11N
SXL06 08+75W	20/07/2005	SOIL	523598.0606	5496217.985	NAD 83 UTM ZONE 11N
SXL06 09+00W	20/07/2005	SOIL	523573.2537	5496218.676	NAD 83 UTM ZONE 11N
SXL06 09+25W	20/07/2005	SOIL	523548.6883	5496221.625	NAD 83 UTM ZONE 11N
SXL06 09+50W	20/07/2005	SOIL	523525.1482	5496229.418	NAD 83 UTM ZONE 11N
SXL06 09+75W	20/07/2005	SOIL	523502.1692	5496238.81	NAD 83 UTM ZONE 11N
SXL06 10+00W	20/07/2005	SOIL	523479	5496248	NAD 83 UTM ZONE 11N
SXL07 00+00	11/07/2005	SOIL	524721	5495982	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL07 00+25W	11/07/2005	SOIL	524696.4394	5495983.105	NAD 83 UTM ZONE 11N
SXL07 00+50W	11/07/2005	SOIL	524672.3043	5495983.876	NAD 83 UTM ZONE 11N
SXL07 00+75W	11/07/2005	SOIL	524648.1691	5495984.647	NAD 83 UTM ZONE 11N
SXL07 01+00W	11/07/2005	SOIL	524624.0339	5495985.418	NAD 83 UTM ZONE 11N
SXL07 01+25W	11/07/2005	SOIL	524599.8988	5495986.189	NAD 83 UTM ZONE 11N
SXL07 01+50W	11/07/2005	SOIL	524575.7636	5495986.961	NAD 83 UTM ZONE 11N
SXL07 01+75W	11/07/2005	SOIL	524551.6284	5495987.732	NAD 83 UTM ZONE 11N
SXL07 02+00W	11/07/2005	SOIL	524527.4933	5495988.503	NAD 83 UTM ZONE 11N
SXL07 02+25W	11/07/2005	SOIL	524503.3581	5495989.274	NAD 83 UTM ZONE 11N
SXL07 02+50W	11/07/2005	SOIL	524479.2229	5495990.045	NAD 83 UTM ZONE 11N
SXL07 02+75W	11/07/2005	SOIL	524455.0878	5495990.816	NAD 83 UTM ZONE 11N
SXL07 03+00W	11/07/2005	SOIL	524430.9526	5495991.587	NAD 83 UTM ZONE 11N
SXL07 03+25W	11/07/2005	SOIL	524406.8174	5495992.358	NAD 83 UTM ZONE 11N
SXL07 03+50W	11/07/2005	SOIL	524382.6823	5495993.129	NAD 83 UTM ZONE 11N
SXL07 03+75W	11/07/2005	SOIL	524358.5471	5495993.9	NAD 83 UTM ZONE 11N
SXL07 04+00W	11/07/2005	SOIL	524334.4119	5495994.671	NAD 83 UTM ZONE 11N
SXL07 04+25W	11/07/2005	SOIL	524310.2768	5495995.442	NAD 83 UTM ZONE 11N
SXL07 04+50W	11/07/2005	SOIL	524286.1416	5495996.213	NAD 83 UTM ZONE 11N
SXL07 04+75W	11/07/2005	SOIL	524262.0064	5495996.984	NAD 83 UTM ZONE 11N
SXL07 05+00W	11/07/2005	SOIL	524237.8713	5495997.755	NAD 83 UTM ZONE 11N
SXL07 05+25W	11/07/2005	SOIL	524213.7361	5495998.526	NAD 83 UTM ZONE 11N
SXL07 05+50W	11/07/2005	SOIL	524189.6009	5495999.297	NAD 83 UTM ZONE 11N
SXL07 05+75W	11/07/2005	SOIL	524165.4658	5496000.068	NAD 83 UTM ZONE 11N
SXL07 06+00W	11/07/2005	SOIL	524141.3306	5496000.84	NAD 83 UTM ZONE 11N
SXL07 06+25W	11/07/2005	SOIL	524117.1954	5496001.611	NAD 83 UTM ZONE 11N
SXL07 06+50W	11/07/2005	SOIL	524093.0603	5496002.382	NAD 83 UTM ZONE 11N
SXL07 06+75W	11/07/2005	SOIL	524068.9251	5496003.153	NAD 83 UTM ZONE 11N
SXL07 07+00W	11/07/2005	SOIL	524044.7899	5496003.924	NAD 83 UTM ZONE 11N
SXL07 07+25W	11/07/2005	SOIL	524020.6548	5496004.695	NAD 83 UTM ZONE 11N
SXL07 07+50W	11/07/2005	SOIL	523996.5196	5496005.466	NAD 83 UTM ZONE 11N
SXL07 07+75W	11/07/2005	SOIL	523972.3844	5496006.237	NAD 83 UTM ZONE 11N
SXL07 08+00W	11/07/2005	SOIL	523948.2493	5496007.008	NAD 83 UTM ZONE 11N
SXL07 08+25W	11/07/2005	SOIL	523924.1141	5496007.779	NAD 83 UTM ZONE 11N
SXL07 08+50W	11/07/2005	SOIL	523899.9789	5496008.55	NAD 83 UTM ZONE 11N
SXL07 08+75W	11/07/2005	SOIL	523875.8438	5496009.321	NAD 83 UTM ZONE 11N
SXL07 09+00W	11/07/2005	SOIL	523851.7086	5496010.092	NAD 83 UTM ZONE 11N
SXL07 09+25W	11/07/2005	SOIL	523827.5734	5496010.863	NAD 83 UTM ZONE 11N
SXL07 09+50W	11/07/2005	SOIL	523803.4382	5496011.634	NAD 83 UTM ZONE 11N
SXL07 09+75W	11/07/2005	SOIL	523779.3031	5496012.405	NAD 83 UTM ZONE 11N
SXL07 10+00W	11/07/2005	SOIL	523755.1679	5496013.176	NAD 83 UTM ZONE 11N
SXL07 10+25W	12/07/2005	SOIL	523731.0327	5496013.948	NAD 83 UTM ZONE 11N
SXL07 10+50W	12/07/2005	SOIL	523706.8976	5496014.719	NAD 83 UTM ZONE 11N
SXL07 10+75W	12/07/2005	SOIL	523682.7624	5496015.49	NAD 83 UTM ZONE 11N
SXL07 11+00W	12/07/2005	SOIL	523658.6272	5496016.261	NAD 83 UTM ZONE 11N
SXL07 11+25W	12/07/2005	SOIL	523634.4921	5496017.032	NAD 83 UTM ZONE 11N
SXL07 11+50W	12/07/2005	SOIL	523610.3569	5496017.803	NAD 83 UTM ZONE 11N
SXL07 11+75W	12/07/2005	SOIL	523586.2217	5496018.574	NAD 83 UTM ZONE 11N
SXL07 12+00W	12/07/2005	SOIL	523562.0866	5496019.345	NAD 83 UTM ZONE 11N
SXL07 12+25W	12/07/2005	SOIL	523537.9514	5496020.116	NAD 83 UTM ZONE 11N
SXL07 12+50W	12/07/2005	SOIL	523513.8162	5496020.887	NAD 83 UTM ZONE 11N
SXL07 12+75W	12/07/2005	SOIL	523489.6811	5496021.658	NAD 83 UTM ZONE 11N
SXL07 13+00W	12/07/2005	SOIL	523465.5459	5496022.429	NAD 83 UTM ZONE 11N
SXL07 13+25W	12/07/2005	SOIL	523441.4107	5496023.2	NAD 83 UTM ZONE 11N
SXL07 13+50W	12/07/2005	SOIL	523417.2756	5496023.971	NAD 83 UTM ZONE 11N
SXL07 13+75W	12/07/2005	SOIL	523393.1404	5496024.742	NAD 83 UTM ZONE 11N
SXL07 14+00W	12/07/2005	SOIL	523369.0052	5496025.513	NAD 83 UTM ZONE 11N
SXL07 14+25W	12/07/2005	SOIL	523344.8701	5496026.284	NAD 83 UTM ZONE 11N
SXL07 14+50W	12/07/2005	SOIL	523320.7349	5496027.055	NAD 83 UTM ZONE 11N
SXL07 14+75W	12/07/2005	SOIL	523296.5997	5496027.827	NAD 83 UTM ZONE 11N
SXL07 15+00W	12/07/2005	SOIL	523272.4646	5496028.598	NAD 83 UTM ZONE 11N
SXL07 15+25W	12/07/2005	SOIL	523248.3294	5496029.369	NAD 83 UTM ZONE 11N
SXL07 15+50W	12/07/2005	SOIL	523224.1942	5496030.14	NAD 83 UTM ZONE 11N
SXL07 15+75W	12/07/2005	SOIL	523200.0591	5496030.911	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL07 16+00W	12/07/2005	SOIL	523175.9239	5496031.682	NAD 83 UTM ZONE 11N
SXL07 16+25W	12/07/2005	SOIL	523151.7887	5496032.453	NAD 83 UTM ZONE 11N
SXL07 16+50W	12/07/2005	SOIL	523127.6536	5496033.224	NAD 83 UTM ZONE 11N
SXL07 16+75W	12/07/2005	SOIL	523104	5496034	NAD 83 UTM ZONE 11N
SXL08 00+00	11/07/2005	SOIL	524614	5495742	NAD 83 UTM ZONE 11N
SXL08 00+25W	11/07/2005	SOIL	524589.7915	5495742.864	NAD 83 UTM ZONE 11N
SXL08 00+50W	11/07/2005	SOIL	524565.429	5495743.853	NAD 83 UTM ZONE 11N
SXL08 00+75W	11/07/2005	SOIL	524541.0664	5495744.843	NAD 83 UTM ZONE 11N
SXL08 01+00W	11/07/2005	SOIL	524516.7039	5495745.832	NAD 83 UTM ZONE 11N
SXL08 01+25W	11/07/2005	SOIL	524492.3413	5495746.821	NAD 83 UTM ZONE 11N
SXL08 01+50W	11/07/2005	SOIL	524467.9788	5495747.81	NAD 83 UTM ZONE 11N
SXL08 01+75W	11/07/2005	SOIL	524443.6162	5495748.799	NAD 83 UTM ZONE 11N
SXL08 02+00W	11/07/2005	SOIL	524419.2537	5495749.789	NAD 83 UTM ZONE 11N
SXL08 02+25W	11/07/2005	SOIL	524394.8911	5495750.778	NAD 83 UTM ZONE 11N
SXL08 02+50W	11/07/2005	SOIL	524370.5286	5495751.767	NAD 83 UTM ZONE 11N
SXL08 02+75W	11/07/2005	SOIL	524346.1661	5495752.756	NAD 83 UTM ZONE 11N
SXL08 03+00W	11/07/2005	SOIL	524321.8035	5495753.745	NAD 83 UTM ZONE 11N
SXL08 03+25W	11/07/2005	SOIL	524297.441	5495754.734	NAD 83 UTM ZONE 11N
SXL08 03+50W	11/07/2005	SOIL	524273.0784	5495755.724	NAD 83 UTM ZONE 11N
SXL08 03+75W	11/07/2005	SOIL	524248.7159	5495756.713	NAD 83 UTM ZONE 11N
SXL08 04+00W	11/07/2005	SOIL	524224.3533	5495757.702	NAD 83 UTM ZONE 11N
SXL08 04+25W	11/07/2005	SOIL	524199.9908	5495758.691	NAD 83 UTM ZONE 11N
SXL08 04+50W	11/07/2005	SOIL	524175.6282	5495759.68	NAD 83 UTM ZONE 11N
SXL08 04+75W	11/07/2005	SOIL	524151.2657	5495760.67	NAD 83 UTM ZONE 11N
SXL08 05+00W	11/07/2005	SOIL	524126.9031	5495761.659	NAD 83 UTM ZONE 11N
SXL08 05+25W	11/07/2005	SOIL	524102.5406	5495762.648	NAD 83 UTM ZONE 11N
SXL08 05+50W	11/07/2005	SOIL	524078.178	5495763.637	NAD 83 UTM ZONE 11N
SXL08 05+75W	11/07/2005	SOIL	524053.8155	5495764.626	NAD 83 UTM ZONE 11N
SXL08 06+00W	11/07/2005	SOIL	524029.4529	5495765.616	NAD 83 UTM ZONE 11N
SXL08 06+25W	11/07/2005	SOIL	524005.0904	5495766.605	NAD 83 UTM ZONE 11N
SXL08 06+50W	11/07/2005	SOIL	523980.7278	5495767.594	NAD 83 UTM ZONE 11N
SXL08 06+75W	11/07/2005	SOIL	523956.3653	5495768.583	NAD 83 UTM ZONE 11N
SXL08 07+00W	11/07/2005	SOIL	523932.0027	5495769.572	NAD 83 UTM ZONE 11N
SXL08 07+25W	11/07/2005	SOIL	523907.6402	5495770.561	NAD 83 UTM ZONE 11N
SXL08 07+50W	11/07/2005	SOIL	523883.2776	5495771.551	NAD 83 UTM ZONE 11N
SXL08 07+75W	11/07/2005	SOIL	523858.9151	5495772.54	NAD 83 UTM ZONE 11N
SXL08 08+00W	11/07/2005	SOIL	523834.5525	5495773.529	NAD 83 UTM ZONE 11N
SXL08 08+25W	11/07/2005	SOIL	523810.19	5495774.518	NAD 83 UTM ZONE 11N
SXL08 08+50W	11/07/2005	SOIL	523785.8274	5495775.507	NAD 83 UTM ZONE 11N
SXL08 08+75W	11/07/2005	SOIL	523761.4649	5495776.497	NAD 83 UTM ZONE 11N
SXL08 09+00W	11/07/2005	SOIL	523737.1023	5495777.486	NAD 83 UTM ZONE 11N
SXL08 09+25W	11/07/2005	SOIL	523712.7398	5495778.475	NAD 83 UTM ZONE 11N
SXL08 09+50W	11/07/2005	SOIL	523688.3772	5495779.464	NAD 83 UTM ZONE 11N
SXL08 09+75W	11/07/2005	SOIL	523664.0147	5495780.453	NAD 83 UTM ZONE 11N
SXL08 10+00W	11/07/2005	SOIL	523639.6521	5495781.443	NAD 83 UTM ZONE 11N
SXL08 10+25W	12/07/2005	SOIL	523615.2896	5495782.432	NAD 83 UTM ZONE 11N
SXL08 10+50W	12/07/2005	SOIL	523590.927	5495783.421	NAD 83 UTM ZONE 11N
SXL08 10+75W	12/07/2005	SOIL	523566.5645	5495784.41	NAD 83 UTM ZONE 11N
SXL08 11+00W	12/07/2005	SOIL	523542.2019	5495785.399	NAD 83 UTM ZONE 11N
SXL08 11+25W	12/07/2005	SOIL	523517.8394	5495786.389	NAD 83 UTM ZONE 11N
SXL08 11+50W	12/07/2005	SOIL	523493.4768	5495787.378	NAD 83 UTM ZONE 11N
SXL08 11+75W	12/07/2005	SOIL	523469.1143	5495788.367	NAD 83 UTM ZONE 11N
SXL08 12+00W	12/07/2005	SOIL	523444.7517	5495789.356	NAD 83 UTM ZONE 11N
SXL08 12+25W	12/07/2005	SOIL	523420.3892	5495790.345	NAD 83 UTM ZONE 11N
SXL08 12+50W	12/07/2005	SOIL	523396.0266	5495791.334	NAD 83 UTM ZONE 11N
SXL08 12+75W	12/07/2005	SOIL	523371.6641	5495792.324	NAD 83 UTM ZONE 11N
SXL08 13+00W	12/07/2005	SOIL	523347.3016	5495793.313	NAD 83 UTM ZONE 11N
SXL08 13+25W	12/07/2005	SOIL	523322.939	5495794.302	NAD 83 UTM ZONE 11N
SXL08 13+50W	12/07/2005	SOIL	523298.5765	5495795.291	NAD 83 UTM ZONE 11N
SXL08 13+75W	12/07/2005	SOIL	523274.2139	5495796.28	NAD 83 UTM ZONE 11N
SXL08 14+00W	12/07/2005	SOIL	523249.8514	5495797.27	NAD 83 UTM ZONE 11N
SXL08 14+25W	12/07/2005	SOIL	523225.4888	5495798.259	NAD 83 UTM ZONE 11N
SXL08 14+50W	12/07/2005	SOIL	523201.1263	5495799.248	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL08 14+75W	12/07/2005	SOIL	523176.7637	5495800.237	NAD 83 UTM ZONE 11N
SXL08 15+00W	12/07/2005	SOIL	523152.4012	5495801.226	NAD 83 UTM ZONE 11N
SXL08 15+25W	12/07/2005	SOIL	523128.0386	5495802.216	NAD 83 UTM ZONE 11N
SXL08 15+50W	12/07/2005	SOIL	523103.6761	5495803.205	NAD 83 UTM ZONE 11N
SXL08 15+75W	12/07/2005	SOIL	523079.3135	5495804.194	NAD 83 UTM ZONE 11N
SXL08 16+00W	12/07/2005	SOIL	523054.951	5495805.183	NAD 83 UTM ZONE 11N
SXL08 16+25W	12/07/2005	SOIL	523030.5884	5495806.172	NAD 83 UTM ZONE 11N
SXL08 16+50W	12/07/2005	SOIL	523006.2259	5495807.161	NAD 83 UTM ZONE 11N
SXL08 16+75W	12/07/2005	SOIL	522981.8633	5495808.151	NAD 83 UTM ZONE 11N
SXL08 17+00W	12/07/2005	SOIL	522958	5495809	NAD 83 UTM ZONE 11N
SXL09 00+00	12/07/2005	SOIL	523905	5495529	NAD 83 UTM ZONE 11N
SXL09 00+25E	12/07/2005	SOIL	523926.5437	5495529.284	NAD 83 UTM ZONE 11N
SXL09 00+25W	12/07/2005	SOIL	523880.4984	5495530.878	NAD 83 UTM ZONE 11N
SXL09 00+50E	12/07/2005	SOIL	523948.8601	5495528.847	NAD 83 UTM ZONE 11N
SXL09 00+50W	12/07/2005	SOIL	523857.461	5495531.343	NAD 83 UTM ZONE 11N
SXL09 00+75E	12/07/2005	SOIL	523971.1765	5495528.409	NAD 83 UTM ZONE 11N
SXL09 00+75W	12/07/2005	SOIL	523834.4236	5495531.807	NAD 83 UTM ZONE 11N
SXL09 01+00E	12/07/2005	SOIL	523993.493	5495527.971	NAD 83 UTM ZONE 11N
SXL09 01+00W	12/07/2005	SOIL	523811.3862	5495532.272	NAD 83 UTM ZONE 11N
SXL09 01+25E	12/07/2005	SOIL	524015.8094	5495527.533	NAD 83 UTM ZONE 11N
SXL09 01+25W	12/07/2005	SOIL	523788.3488	5495532.737	NAD 83 UTM ZONE 11N
SXL09 01+50E	12/07/2005	SOIL	524038.1258	5495527.096	NAD 83 UTM ZONE 11N
SXL09 01+50W	12/07/2005	SOIL	523765.3115	5495533.201	NAD 83 UTM ZONE 11N
SXL09 01+75E	12/07/2005	SOIL	524060.4423	5495526.658	NAD 83 UTM ZONE 11N
SXL09 01+75W	12/07/2005	SOIL	523742.2741	5495533.666	NAD 83 UTM ZONE 11N
SXL09 02+00E	12/07/2005	SOIL	524082.7587	5495526.22	NAD 83 UTM ZONE 11N
SXL09 02+00W	12/07/2005	SOIL	523719.2367	5495534.131	NAD 83 UTM ZONE 11N
SXL09 02+25E	12/07/2005	SOIL	524105.0751	5495525.783	NAD 83 UTM ZONE 11N
SXL09 02+25W	12/07/2005	SOIL	523696.1993	5495534.595	NAD 83 UTM ZONE 11N
SXL09 02+50E	12/07/2005	SOIL	524127.3916	5495525.345	NAD 83 UTM ZONE 11N
SXL09 02+50W	12/07/2005	SOIL	523673.1619	5495535.06	NAD 83 UTM ZONE 11N
SXL09 02+75E	12/07/2005	SOIL	524149.708	5495524.907	NAD 83 UTM ZONE 11N
SXL09 02+75W	12/07/2005	SOIL	523650.1245	5495535.525	NAD 83 UTM ZONE 11N
SXL09 03+00E	12/07/2005	SOIL	524172.0244	5495524.47	NAD 83 UTM ZONE 11N
SXL09 03+00W	12/07/2005	SOIL	523627.0872	5495535.989	NAD 83 UTM ZONE 11N
SXL09 03+25E	12/07/2005	SOIL	524194.3409	5495524.032	NAD 83 UTM ZONE 11N
SXL09 03+25W	12/07/2005	SOIL	523604.0498	5495536.454	NAD 83 UTM ZONE 11N
SXL09 03+50E	12/07/2005	SOIL	524216.6573	5495523.594	NAD 83 UTM ZONE 11N
SXL09 03+50W	12/07/2005	SOIL	523581.0124	5495536.919	NAD 83 UTM ZONE 11N
SXL09 03+75E	12/07/2005	SOIL	524238.9737	5495523.157	NAD 83 UTM ZONE 11N
SXL09 03+75W	14/07/2005	SOIL	523557.975	5495537.383	NAD 83 UTM ZONE 11N
SXL09 04+00E	12/07/2005	SOIL	524261.2902	5495522.719	NAD 83 UTM ZONE 11N
SXL09 04+00W	14/07/2005	SOIL	523534.9376	5495537.848	NAD 83 UTM ZONE 11N
SXL09 04+25E	12/07/2005	SOIL	524283.6066	5495522.281	NAD 83 UTM ZONE 11N
SXL09 04+25W	14/07/2005	SOIL	523511.9003	5495538.313	NAD 83 UTM ZONE 11N
SXL09 04+50E	12/07/2005	SOIL	524305.923	5495521.844	NAD 83 UTM ZONE 11N
SXL09 04+50W	14/07/2005	SOIL	523488.8629	5495538.777	NAD 83 UTM ZONE 11N
SXL09 04+75E	12/07/2005	SOIL	524328.2395	5495521.406	NAD 83 UTM ZONE 11N
SXL09 04+75W	14/07/2005	SOIL	523465.8255	5495539.242	NAD 83 UTM ZONE 11N
SXL09 05+00E	12/07/2005	SOIL	524350.5559	5495520.968	NAD 83 UTM ZONE 11N
SXL09 05+00W	14/07/2005	SOIL	523442.7881	5495539.707	NAD 83 UTM ZONE 11N
SXL09 05+25E	12/07/2005	SOIL	524372.8723	5495520.531	NAD 83 UTM ZONE 11N
SXL09 05+25W	14/07/2005	SOIL	523419.7507	5495540.171	NAD 83 UTM ZONE 11N
SXL09 05+50E	12/07/2005	SOIL	524395.1888	5495520.093	NAD 83 UTM ZONE 11N
SXL09 05+50W	14/07/2005	SOIL	523396.7134	5495540.636	NAD 83 UTM ZONE 11N
SXL09 05+75E	12/07/2005	SOIL	524417.5052	5495519.655	NAD 83 UTM ZONE 11N
SXL09 05+75W	14/07/2005	SOIL	523373.676	5495541.101	NAD 83 UTM ZONE 11N
SXL09 06+00E	12/07/2005	SOIL	524439.8216	5495519.218	NAD 83 UTM ZONE 11N
SXL09 06+00W	14/07/2005	SOIL	523350.6386	5495541.565	NAD 83 UTM ZONE 11N
SXL09 06+25E	12/07/2005	SOIL	524462.1381	5495518.78	NAD 83 UTM ZONE 11N
SXL09 06+25W	14/07/2005	SOIL	523327.6012	5495542.03	NAD 83 UTM ZONE 11N
SXL09 06+50E	12/07/2005	SOIL	524485	5495518	NAD 83 UTM ZONE 11N
SXL09 06+50W	14/07/2005	SOIL	523304.5638	5495542.495	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL09 06+75W	14/07/2005	SOIL	523281.5265	5495542.959	NAD 83 UTM ZONE 11N
SXL09 07+00W	14/07/2005	SOIL	523258.4891	5495543.424	NAD 83 UTM ZONE 11N
SXL09 07+25W	14/07/2005	SOIL	523235.4517	5495543.889	NAD 83 UTM ZONE 11N
SXL09 07+50W	14/07/2005	SOIL	523212.4143	5495544.353	NAD 83 UTM ZONE 11N
SXL09 07+75W	14/07/2005	SOIL	523189.3769	5495544.818	NAD 83 UTM ZONE 11N
SXL09 08+00W	14/07/2005	SOIL	523166.3396	5495545.283	NAD 83 UTM ZONE 11N
SXL09 08+25W	14/07/2005	SOIL	523143.3022	5495545.747	NAD 83 UTM ZONE 11N
SXL09 08+50W	14/07/2005	SOIL	523120.2648	5495546.212	NAD 83 UTM ZONE 11N
SXL09 08+75W	14/07/2005	SOIL	523097.2274	5495546.677	NAD 83 UTM ZONE 11N
SXL09 09+00W	14/07/2005	SOIL	523074	5495547	NAD 83 UTM ZONE 11N
SXL10 00+00	14/07/2005	SOIL	523735	5495303	NAD 83 UTM ZONE 11N
SXL10 00+25E	15/07/2005	SOIL	523758.5761	5495302.187	NAD 83 UTM ZONE 11N
SXL10 00+25W	14/07/2005	SOIL	523710.584	5495303.918	NAD 83 UTM ZONE 11N
SXL10 00+50E	15/07/2005	SOIL	523782.2012	5495301.33	NAD 83 UTM ZONE 11N
SXL10 00+50W	14/07/2005	SOIL	523686.3043	5495304.793	NAD 83 UTM ZONE 11N
SXL10 00+75E	15/07/2005	SOIL	523805.8263	5495300.474	NAD 83 UTM ZONE 11N
SXL10 00+75W	14/07/2005	SOIL	523662.0247	5495305.668	NAD 83 UTM ZONE 11N
SXL10 01+00E	15/07/2005	SOIL	523829.4514	5495299.617	NAD 83 UTM ZONE 11N
SXL10 01+00W	14/07/2005	SOIL	523637.7451	5495306.543	NAD 83 UTM ZONE 11N
SXL10 01+25E	15/07/2005	SOIL	523853.0765	5495298.761	NAD 83 UTM ZONE 11N
SXL10 01+25W	14/07/2005	SOIL	523613.4655	5495307.418	NAD 83 UTM ZONE 11N
SXL10 01+50E	15/07/2005	SOIL	523876.7015	5495297.904	NAD 83 UTM ZONE 11N
SXL10 01+50W	14/07/2005	SOIL	523589.1858	5495308.293	NAD 83 UTM ZONE 11N
SXL10 01+75E	15/07/2005	SOIL	523900.3266	5495297.048	NAD 83 UTM ZONE 11N
SXL10 01+75W	14/07/2005	SOIL	523564.9062	5495309.168	NAD 83 UTM ZONE 11N
SXL10 02+00E	15/07/2005	SOIL	523923.9517	5495296.191	NAD 83 UTM ZONE 11N
SXL10 02+00W	14/07/2005	SOIL	523540.6266	5495310.043	NAD 83 UTM ZONE 11N
SXL10 02+25E	15/07/2005	SOIL	523947.5768	5495295.335	NAD 83 UTM ZONE 11N
SXL10 02+25W	14/07/2005	SOIL	523516.3469	5495310.918	NAD 83 UTM ZONE 11N
SXL10 02+50E	15/07/2005	SOIL	523971.2019	5495294.478	NAD 83 UTM ZONE 11N
SXL10 02+50W	14/07/2005	SOIL	523492.0673	5495311.793	NAD 83 UTM ZONE 11N
SXL10 02+75E	15/07/2005	SOIL	523994.827	5495293.622	NAD 83 UTM ZONE 11N
SXL10 02+75W	14/07/2005	SOIL	523467.7877	5495312.668	NAD 83 UTM ZONE 11N
SXL10 03+00E	15/07/2005	SOIL	524018.4521	5495292.765	NAD 83 UTM ZONE 11N
SXL10 03+00W	14/07/2005	SOIL	523443.5081	5495313.543	NAD 83 UTM ZONE 11N
SXL10 03+25E	15/07/2005	SOIL	524042.0772	5495291.909	NAD 83 UTM ZONE 11N
SXL10 03+25W	14/07/2005	SOIL	523419.2284	5495314.418	NAD 83 UTM ZONE 11N
SXL10 03+50E	15/07/2005	SOIL	524065.7023	5495291.052	NAD 83 UTM ZONE 11N
SXL10 03+50W	14/07/2005	SOIL	523394.9488	5495315.293	NAD 83 UTM ZONE 11N
SXL10 03+75E	15/07/2005	SOIL	524089.3274	5495290.196	NAD 83 UTM ZONE 11N
SXL10 03+75W	14/07/2005	SOIL	523370.6692	5495316.168	NAD 83 UTM ZONE 11N
SXL10 04+00E	15/07/2005	SOIL	524112.9524	5495289.339	NAD 83 UTM ZONE 11N
SXL10 04+00W	14/07/2005	SOIL	523346.3896	5495317.043	NAD 83 UTM ZONE 11N
SXL10 04+25E	15/07/2005	SOIL	524136.5775	5495288.483	NAD 83 UTM ZONE 11N
SXL10 04+25W	14/07/2005	SOIL	523322.1099	5495317.918	NAD 83 UTM ZONE 11N
SXL10 04+50E	15/07/2005	SOIL	524160.2026	5495287.626	NAD 83 UTM ZONE 11N
SXL10 04+50W	14/07/2005	SOIL	523297.8303	5495318.793	NAD 83 UTM ZONE 11N
SXL10 04+75E	15/07/2005	SOIL	524183.8277	5495286.769	NAD 83 UTM ZONE 11N
SXL10 04+75W	14/07/2005	SOIL	523273.5507	5495319.668	NAD 83 UTM ZONE 11N
SXL10 05+00E	15/07/2005	SOIL	524207.4528	5495285.913	NAD 83 UTM ZONE 11N
SXL10 05+00W	14/07/2005	SOIL	523249.271	5495320.543	NAD 83 UTM ZONE 11N
SXL10 05+25E	15/07/2005	SOIL	524231.0779	5495285.056	NAD 83 UTM ZONE 11N
SXL10 05+25W	14/07/2005	SOIL	523224.9914	5495321.418	NAD 83 UTM ZONE 11N
SXL10 05+50E	15/07/2005	SOIL	524255	5495284	NAD 83 UTM ZONE 11N
SXL10 05+50W	14/07/2005	SOIL	523200.7118	5495322.293	NAD 83 UTM ZONE 11N
SXL10 05+75W	14/07/2005	SOIL	523176.4322	5495323.168	NAD 83 UTM ZONE 11N
SXL10 06+00W	14/07/2005	SOIL	523152.1525	5495324.043	NAD 83 UTM ZONE 11N
SXL10 06+25W	14/07/2005	SOIL	523127.8729	5495324.918	NAD 83 UTM ZONE 11N
SXL10 06+50W	14/07/2005	SOIL	523103.5933	5495325.793	NAD 83 UTM ZONE 11N
SXL10 06+75W	14/07/2005	SOIL	523079.3136	5495326.668	NAD 83 UTM ZONE 11N
SXL10 07+00W	14/07/2005	SOIL	523055.034	5495327.543	NAD 83 UTM ZONE 11N
SXL10 07+25W	14/07/2005	SOIL	523030.7544	5495328.418	NAD 83 UTM ZONE 11N
SXL10 07+50W	14/07/2005	SOIL	523006.4748	5495329.293	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL10 07+75W	14/07/2005	SOIL	522982.1951	5495330.168	NAD 83 UTM ZONE 11N
SXL10 08+00W	14/07/2005	SOIL	522958	5495331	NAD 83 UTM ZONE 11N
SXL11 00+00	14/07/2005	SOIL	523878	5495060	NAD 83 UTM ZONE 11N
SXL11 00+25E	15/07/2005	SOIL	523899.5213	5495059.126	NAD 83 UTM ZONE 11N
SXL11 00+25W	14/07/2005	SOIL	523853.4959	5495060.9	NAD 83 UTM ZONE 11N
SXL11 00+50E	15/07/2005	SOIL	523921.2552	5495058.14	NAD 83 UTM ZONE 11N
SXL11 00+50W	14/07/2005	SOIL	523829.5086	5495061.537	NAD 83 UTM ZONE 11N
SXL11 00+75E	15/07/2005	SOIL	523942.9891	5495057.155	NAD 83 UTM ZONE 11N
SXL11 00+75W	14/07/2005	SOIL	523805.5213	5495062.174	NAD 83 UTM ZONE 11N
SXL11 01+00E	15/07/2005	SOIL	523964.723	5495056.169	NAD 83 UTM ZONE 11N
SXL11 01+00W	14/07/2005	SOIL	523781.5339	5495062.811	NAD 83 UTM ZONE 11N
SXL11 01+25E	15/07/2005	SOIL	523986.4568	5495055.184	NAD 83 UTM ZONE 11N
SXL11 01+25W	14/07/2005	SOIL	523757.5466	5495063.448	NAD 83 UTM ZONE 11N
SXL11 01+50E	15/07/2005	SOIL	524008.1907	5495054.198	NAD 83 UTM ZONE 11N
SXL11 01+50W	14/07/2005	SOIL	523733.5592	5495064.085	NAD 83 UTM ZONE 11N
SXL11 01+75E	15/07/2005	SOIL	524029.9246	5495053.213	NAD 83 UTM ZONE 11N
SXL11 01+75W	14/07/2005	SOIL	523709.5719	5495064.721	NAD 83 UTM ZONE 11N
SXL11 02+00E	15/07/2005	SOIL	524051.6585	5495052.227	NAD 83 UTM ZONE 11N
SXL11 02+00W	14/07/2005	SOIL	523685.5845	5495065.358	NAD 83 UTM ZONE 11N
SXL11 02+25E	15/07/2005	SOIL	524073.3924	5495051.241	NAD 83 UTM ZONE 11N
SXL11 02+25W	14/07/2005	SOIL	523661.5972	5495065.995	NAD 83 UTM ZONE 11N
SXL11 02+50E	15/07/2005	SOIL	524095.1262	5495050.256	NAD 83 UTM ZONE 11N
SXL11 02+50W	14/07/2005	SOIL	523637.6099	5495066.632	NAD 83 UTM ZONE 11N
SXL11 02+75E	15/07/2005	SOIL	524116.8601	5495049.27	NAD 83 UTM ZONE 11N
SXL11 02+75W	14/07/2005	SOIL	523613.6225	5495067.269	NAD 83 UTM ZONE 11N
SXL11 03+00E	15/07/2005	SOIL	524138.594	5495048.285	NAD 83 UTM ZONE 11N
SXL11 03+00W	14/07/2005	SOIL	523589.6352	5495067.906	NAD 83 UTM ZONE 11N
SXL11 03+25E	15/07/2005	SOIL	524160.3279	5495047.299	NAD 83 UTM ZONE 11N
SXL11 03+25W	14/07/2005	SOIL	523565.6478	5495068.543	NAD 83 UTM ZONE 11N
SXL11 03+50E	15/07/2005	SOIL	524182.0617	5495046.314	NAD 83 UTM ZONE 11N
SXL11 03+50W	14/07/2005	SOIL	523541.6605	5495069.179	NAD 83 UTM ZONE 11N
SXL11 03+75E	15/07/2005	SOIL	524203.7956	5495045.328	NAD 83 UTM ZONE 11N
SXL11 03+75W	14/07/2005	SOIL	523517.6731	5495069.816	NAD 83 UTM ZONE 11N
SXL11 04+00E	15/07/2005	SOIL	524226	5495044	NAD 83 UTM ZONE 11N
SXL11 04+00W	14/07/2005	SOIL	523493.6858	5495070.453	NAD 83 UTM ZONE 11N
SXL11 04+25W	14/07/2005	SOIL	523469.6984	5495071.09	NAD 83 UTM ZONE 11N
SXL11 04+50W	14/07/2005	SOIL	523445.7111	5495071.727	NAD 83 UTM ZONE 11N
SXL11 04+75W	14/07/2005	SOIL	523421.7238	5495072.364	NAD 83 UTM ZONE 11N
SXL11 05+00W	14/07/2005	SOIL	523397.7364	5495073.001	NAD 83 UTM ZONE 11N
SXL11 05+25W	14/07/2005	SOIL	523373.7491	5495073.637	NAD 83 UTM ZONE 11N
SXL11 05+50W	14/07/2005	SOIL	523349.7617	5495074.274	NAD 83 UTM ZONE 11N
SXL11 05+75W	14/07/2005	SOIL	523325.7744	5495074.911	NAD 83 UTM ZONE 11N
SXL11 06+00W	14/07/2005	SOIL	523301.787	5495075.548	NAD 83 UTM ZONE 11N
SXL11 06+25W	14/07/2005	SOIL	523277.7997	5495076.185	NAD 83 UTM ZONE 11N
SXL11 06+50W	14/07/2005	SOIL	523253.8124	5495076.822	NAD 83 UTM ZONE 11N
SXL11 06+75W	14/07/2005	SOIL	523229.825	5495077.458	NAD 83 UTM ZONE 11N
SXL11 07+00W	14/07/2005	SOIL	523205.8377	5495078.095	NAD 83 UTM ZONE 11N
SXL11 07+25W	14/07/2005	SOIL	523181.8503	5495078.732	NAD 83 UTM ZONE 11N
SXL11 07+50W	14/07/2005	SOIL	523157.863	5495079.369	NAD 83 UTM ZONE 11N
SXL11 07+75W	14/07/2005	SOIL	523133.8756	5495080.006	NAD 83 UTM ZONE 11N
SXL11 08+00W	14/07/2005	SOIL	523109.8883	5495080.643	NAD 83 UTM ZONE 11N
SXL11 08+25W	14/07/2005	SOIL	523085.9009	5495081.28	NAD 83 UTM ZONE 11N
SXL11 08+50W	14/07/2005	SOIL	523061.9136	5495081.916	NAD 83 UTM ZONE 11N
SXL11 08+75W	14/07/2005	SOIL	523037.9263	5495082.553	NAD 83 UTM ZONE 11N
SXL11 09+00W	14/07/2005	SOIL	523014	5495083	NAD 83 UTM ZONE 11N
SXL12 00+00	15/07/2005	SOIL	523890	5494850	NAD 83 UTM ZONE 11N
SXL12 00+25E	15/07/2005	SOIL	523912.7013	5494848.908	NAD 83 UTM ZONE 11N
SXL12 00+25W	15/07/2005	SOIL	523864.9419	5494850.976	NAD 83 UTM ZONE 11N
SXL12 00+50E	15/07/2005	SOIL	523935.4409	5494847.823	NAD 83 UTM ZONE 11N
SXL12 00+50W	15/07/2005	SOIL	523839.9556	5494851.927	NAD 83 UTM ZONE 11N
SXL12 00+75E	15/07/2005	SOIL	523958.1804	5494846.739	NAD 83 UTM ZONE 11N
SXL12 00+75W	15/07/2005	SOIL	523814.9694	5494852.877	NAD 83 UTM ZONE 11N
SXL12 01+00E	15/07/2005	SOIL	523980.92	5494845.655	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL12 01+00W	15/07/2005	SOIL	523789.9831	5494853.827	NAD 83 UTM ZONE 11N
SXL12 01+25E	15/07/2005	SOIL	524003.6596	5494844.57	NAD 83 UTM ZONE 11N
SXL12 01+25W	15/07/2005	SOIL	523764.9969	5494854.778	NAD 83 UTM ZONE 11N
SXL12 01+50E	15/07/2005	SOIL	524026.3992	5494843.486	NAD 83 UTM ZONE 11N
SXL12 01+50W	15/07/2005	SOIL	523740.0106	5494855.728	NAD 83 UTM ZONE 11N
SXL12 01+75E	15/07/2005	SOIL	524049.1388	5494842.401	NAD 83 UTM ZONE 11N
SXL12 01+75W	15/07/2005	SOIL	523715.0244	5494856.678	NAD 83 UTM ZONE 11N
SXL12 02+00E	15/07/2005	SOIL	524071.8783	5494841.317	NAD 83 UTM ZONE 11N
SXL12 02+00W	15/07/2005	SOIL	523690.0381	5494857.629	NAD 83 UTM ZONE 11N
SXL12 02+25E	15/07/2005	SOIL	524094.6179	5494840.233	NAD 83 UTM ZONE 11N
SXL12 02+25W	15/07/2005	SOIL	523665.0519	5494858.579	NAD 83 UTM ZONE 11N
SXL12 02+50E	15/07/2005	SOIL	524117.3575	5494839.148	NAD 83 UTM ZONE 11N
SXL12 02+50W	15/07/2005	SOIL	523640.0657	5494859.53	NAD 83 UTM ZONE 11N
SXL12 02+75E	15/07/2005	SOIL	524140.0971	5494838.064	NAD 83 UTM ZONE 11N
SXL12 02+75W	15/07/2005	SOIL	523615.0794	5494860.48	NAD 83 UTM ZONE 11N
SXL12 03+00E	15/07/2005	SOIL	524162.8367	5494836.98	NAD 83 UTM ZONE 11N
SXL12 03+00W	15/07/2005	SOIL	523590.0932	5494861.43	NAD 83 UTM ZONE 11N
SXL12 03+25E	15/07/2005	SOIL	524185.5762	5494835.895	NAD 83 UTM ZONE 11N
SXL12 03+25W	15/07/2005	SOIL	523565.1069	5494862.381	NAD 83 UTM ZONE 11N
SXL12 03+50E	15/07/2005	SOIL	524208.3158	5494834.811	NAD 83 UTM ZONE 11N
SXL12 03+50W	15/07/2005	SOIL	523540.1207	5494863.331	NAD 83 UTM ZONE 11N
SXL12 03+75E	15/07/2005	SOIL	524231.0554	5494833.726	NAD 83 UTM ZONE 11N
SXL12 03+75W	15/07/2005	SOIL	523515.1344	5494864.282	NAD 83 UTM ZONE 11N
SXL12 04+00E	15/07/2005	SOIL	524253.795	5494832.642	NAD 83 UTM ZONE 11N
SXL12 04+00W	15/07/2005	SOIL	523490.1482	5494865.232	NAD 83 UTM ZONE 11N
SXL12 04+25E	15/07/2005	SOIL	524276.5346	5494831.558	NAD 83 UTM ZONE 11N
SXL12 04+25W	15/07/2005	SOIL	523465.1619	5494866.182	NAD 83 UTM ZONE 11N
SXL12 04+50E	15/07/2005	SOIL	524299.2741	5494830.473	NAD 83 UTM ZONE 11N
SXL12 04+50W	15/07/2005	SOIL	523440.1757	5494867.133	NAD 83 UTM ZONE 11N
SXL12 04+75E	15/07/2005	SOIL	524322.0137	5494829.389	NAD 83 UTM ZONE 11N
SXL12 04+75W	15/07/2005	SOIL	523415.1894	5494868.083	NAD 83 UTM ZONE 11N
SXL12 05+00E	15/07/2005	SOIL	524344.7533	5494828.304	NAD 83 UTM ZONE 11N
SXL12 05+00W	15/07/2005	SOIL	523390.2032	5494869.034	NAD 83 UTM ZONE 11N
SXL12 05+25E	15/07/2005	SOIL	524367.4929	5494827.22	NAD 83 UTM ZONE 11N
SXL12 05+25W	15/07/2005	SOIL	523365.2169	5494869.984	NAD 83 UTM ZONE 11N
SXL12 05+50E	15/07/2005	SOIL	524390.2325	5494826.136	NAD 83 UTM ZONE 11N
SXL12 05+50W	15/07/2005	SOIL	523340.2307	5494870.934	NAD 83 UTM ZONE 11N
SXL12 05+75E	15/07/2005	SOIL	524412.972	5494825.051	NAD 83 UTM ZONE 11N
SXL12 05+75W	15/07/2005	SOIL	523315.2444	5494871.885	NAD 83 UTM ZONE 11N
SXL12 06+00E	15/07/2005	SOIL	524435.7116	5494823.967	NAD 83 UTM ZONE 11N
SXL12 06+00W	15/07/2005	SOIL	523290.2582	5494872.835	NAD 83 UTM ZONE 11N
SXL12 06+25E	15/07/2005	SOIL	524458.4512	5494822.883	NAD 83 UTM ZONE 11N
SXL12 06+25W	15/07/2005	SOIL	523265.2719	5494873.786	NAD 83 UTM ZONE 11N
SXL12 06+50E	15/07/2005	SOIL	524481.1908	5494821.798	NAD 83 UTM ZONE 11N
SXL12 06+50W	15/07/2005	SOIL	523240.2857	5494874.736	NAD 83 UTM ZONE 11N
SXL12 06+75E	15/07/2005	SOIL	524503.9304	5494820.714	NAD 83 UTM ZONE 11N
SXL12 06+75W	15/07/2005	SOIL	523215.2994	5494875.686	NAD 83 UTM ZONE 11N
SXL12 07+00E	15/07/2005	SOIL	524526.6699	5494819.629	NAD 83 UTM ZONE 11N
SXL12 07+00W	15/07/2005	SOIL	523190.3132	5494876.637	NAD 83 UTM ZONE 11N
SXL12 07+25E	15/07/2005	SOIL	524549.4095	5494818.545	NAD 83 UTM ZONE 11N
SXL12 07+25W	15/07/2005	SOIL	523165.3269	5494877.587	NAD 83 UTM ZONE 11N
SXL12 07+50E	15/07/2005	SOIL	524572.1491	5494817.461	NAD 83 UTM ZONE 11N
SXL12 07+50W	15/07/2005	SOIL	523140.3407	5494878.538	NAD 83 UTM ZONE 11N
SXL12 07+75E	15/07/2005	SOIL	524594.8887	5494816.376	NAD 83 UTM ZONE 11N
SXL12 07+75W	15/07/2005	SOIL	523115.3544	5494879.488	NAD 83 UTM ZONE 11N
SXL12 08+00E	15/07/2005	SOIL	524617.6283	5494815.292	NAD 83 UTM ZONE 11N
SXL12 08+00W	15/07/2005	SOIL	523090.3682	5494880.438	NAD 83 UTM ZONE 11N
SXL12 08+25E	15/07/2005	SOIL	524640.3678	5494814.207	NAD 83 UTM ZONE 11N
SXL12 08+25W	15/07/2005	SOIL	523065.382	5494881.389	NAD 83 UTM ZONE 11N
SXL12 08+50E	15/07/2005	SOIL	524663.1074	5494813.123	NAD 83 UTM ZONE 11N
SXL12 08+50W	15/07/2005	SOIL	523040.3957	5494882.339	NAD 83 UTM ZONE 11N
SXL12 08+75E	15/07/2005	SOIL	524686	5494812	NAD 83 UTM ZONE 11N
SXL12 08+75W	15/07/2005	SOIL	523015.4095	5494883.29	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL12 09+00W	15/07/2005	SOIL	522990.4232	5494884.24	NAD 83 UTM ZONE 11N
SXL12 09+25W	15/07/2005	SOIL	522966	5494885	NAD 83 UTM ZONE 11N
SXL13 00+00	18/07/2005	SOIL	523865	5494588	NAD 83 UTM ZONE 11N
SXL13 00+25E	18/07/2005	SOIL	523890.2571	5494587.376	NAD 83 UTM ZONE 11N
SXL13 00+25W	18/07/2005	SOIL	523841.2018	5494587.829	NAD 83 UTM ZONE 11N
SXL13 00+50E	18/07/2005	SOIL	523915.8102	5494586.597	NAD 83 UTM ZONE 11N
SXL13 00+50W	18/07/2005	SOIL	523817.5456	5494587.503	NAD 83 UTM ZONE 11N
SXL13 00+75E	18/07/2005	SOIL	523941.3633	5494585.819	NAD 83 UTM ZONE 11N
SXL13 00+75W	18/07/2005	SOIL	523793.8894	5494587.178	NAD 83 UTM ZONE 11N
SXL13 01+00E	18/07/2005	SOIL	523966.9164	5494585.04	NAD 83 UTM ZONE 11N
SXL13 01+00W	18/07/2005	SOIL	523770.2332	5494586.852	NAD 83 UTM ZONE 11N
SXL13 01+25E	18/07/2005	SOIL	523992.4695	5494584.262	NAD 83 UTM ZONE 11N
SXL13 01+25W	18/07/2005	SOIL	523746.577	5494586.527	NAD 83 UTM ZONE 11N
SXL13 01+50E	18/07/2005	SOIL	524018.0226	5494583.483	NAD 83 UTM ZONE 11N
SXL13 01+50W	18/07/2005	SOIL	523722.9208	5494586.201	NAD 83 UTM ZONE 11N
SXL13 01+75E	18/07/2005	SOIL	524043.5756	5494582.704	NAD 83 UTM ZONE 11N
SXL13 01+75W	18/07/2005	SOIL	523699.2647	5494585.875	NAD 83 UTM ZONE 11N
SXL13 02+00E	18/07/2005	SOIL	524069.1287	5494581.926	NAD 83 UTM ZONE 11N
SXL13 02+00W	18/07/2005	SOIL	523675.6085	5494585.55	NAD 83 UTM ZONE 11N
SXL13 02+25E	18/07/2005	SOIL	524094.6818	5494581.147	NAD 83 UTM ZONE 11N
SXL13 02+25W	18/07/2005	SOIL	523651.9523	5494585.224	NAD 83 UTM ZONE 11N
SXL13 02+50E	18/07/2005	SOIL	524120.2349	5494580.369	NAD 83 UTM ZONE 11N
SXL13 02+50W	18/07/2005	SOIL	523628.2961	5494584.899	NAD 83 UTM ZONE 11N
SXL13 02+75E	18/07/2005	SOIL	524145.788	5494579.59	NAD 83 UTM ZONE 11N
SXL13 02+75W	18/07/2005	SOIL	523604.6399	5494584.573	NAD 83 UTM ZONE 11N
SXL13 03+00E	18/07/2005	SOIL	524171.3411	5494578.812	NAD 83 UTM ZONE 11N
SXL13 03+00W	18/07/2005	SOIL	523580.9837	5494584.248	NAD 83 UTM ZONE 11N
SXL13 03+25E	18/07/2005	SOIL	524197	5494578	NAD 83 UTM ZONE 11N
SXL13 03+25W	18/07/2005	SOIL	523557.3276	5494583.922	NAD 83 UTM ZONE 11N
SXL13 03+50W	18/07/2005	SOIL	523533.6714	5494583.596	NAD 83 UTM ZONE 11N
SXL13 03+75W	18/07/2005	SOIL	523510.0152	5494583.271	NAD 83 UTM ZONE 11N
SXL13 04+00W	18/07/2005	SOIL	523486.359	5494582.945	NAD 83 UTM ZONE 11N
SXL13 04+25W	18/07/2005	SOIL	523462.7028	5494582.62	NAD 83 UTM ZONE 11N
SXL13 04+50W	18/07/2005	SOIL	523439.0466	5494582.294	NAD 83 UTM ZONE 11N
SXL13 04+75W	18/07/2005	SOIL	523415.3904	5494581.969	NAD 83 UTM ZONE 11N
SXL13 05+00W	18/07/2005	SOIL	523391.7343	5494581.643	NAD 83 UTM ZONE 11N
SXL13 05+25W	18/07/2005	SOIL	523368.0781	5494581.317	NAD 83 UTM ZONE 11N
SXL13 05+50W	18/07/2005	SOIL	523344.4219	5494580.992	NAD 83 UTM ZONE 11N
SXL13 05+75W	18/07/2005	SOIL	523320.7657	5494580.666	NAD 83 UTM ZONE 11N
SXL13 06+00W	18/07/2005	SOIL	523297.1095	5494580.341	NAD 83 UTM ZONE 11N
SXL13 06+25W	18/07/2005	SOIL	523273.4533	5494580.015	NAD 83 UTM ZONE 11N
SXL13 06+50W	18/07/2005	SOIL	523249.7971	5494579.69	NAD 83 UTM ZONE 11N
SXL13 07+00W	18/07/2005	SOIL	523202.4848	5494579.038	NAD 83 UTM ZONE 11N
SXL13 07+25W	18/07/2005	SOIL	523178.8286	5494578.713	NAD 83 UTM ZONE 11N
SXL13 07+50W	18/07/2005	SOIL	523155.1724	5494578.387	NAD 83 UTM ZONE 11N
SXL13 07+75W	18/07/2005	SOIL	523131.5162	5494578.062	NAD 83 UTM ZONE 11N
SXL13 08+00W	18/07/2005	SOIL	523107.86	5494577.736	NAD 83 UTM ZONE 11N
SXL13 08+25W	18/07/2005	SOIL	523084.2039	5494577.411	NAD 83 UTM ZONE 11N
SXL13 08+50W	18/07/2005	SOIL	523060.5477	5494577.085	NAD 83 UTM ZONE 11N
SXL13 08+75W	18/07/2005	SOIL	523036.8915	5494576.759	NAD 83 UTM ZONE 11N
SXL13 09+00W	18/07/2005	SOIL	523013.2353	5494576.434	NAD 83 UTM ZONE 11N
SXL13 09+25W	18/07/2005	SOIL	522990	5494576	NAD 83 UTM ZONE 11N
SXL14 00+25E	28/07/2005	SOIL	524034.6291	5494288.278	NAD 83 UTM ZONE 11N
SXL14 00+50E	28/07/2005	SOIL	524059.2795	5494287.541	NAD 83 UTM ZONE 11N
SXL14 00+75E	28/07/2005	SOIL	524083.9299	5494286.805	NAD 83 UTM ZONE 11N
SXL14 01+00E	28/07/2005	SOIL	524108.5803	5494286.068	NAD 83 UTM ZONE 11N
SXL14 01+25E	28/07/2005	SOIL	524133.2307	5494285.332	NAD 83 UTM ZONE 11N
SXL14 01+50E	28/07/2005	SOIL	524157.8811	5494284.595	NAD 83 UTM ZONE 11N
SXL14 01+75E	28/07/2005	SOIL	524182.5315	5494283.859	NAD 83 UTM ZONE 11N
SXL14 02+00E	28/07/2005	SOIL	524207.1819	5494283.123	NAD 83 UTM ZONE 11N
SXL14 02+25E	28/07/2005	SOIL	524231.8323	5494282.386	NAD 83 UTM ZONE 11N
SXL14 02+50E	28/07/2005	SOIL	524256.4827	5494281.65	NAD 83 UTM ZONE 11N
SXL14 02+75E	28/07/2005	SOIL	524281.1331	5494280.913	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL14 03+00E	28/07/2005	SOIL	524305.7835	5494280.177	NAD 83 UTM ZONE 11N
SXL14 03+25E	28/07/2005	SOIL	524330.4339	5494279.44	NAD 83 UTM ZONE 11N
SXL14 03+50E	28/07/2005	SOIL	524355.0843	5494278.704	NAD 83 UTM ZONE 11N
SXL14 03+75E	28/07/2005	SOIL	524379.7347	5494277.967	NAD 83 UTM ZONE 11N
SXL14 04+00E	28/07/2005	SOIL	524404.3851	5494277.231	NAD 83 UTM ZONE 11N
SXL14 04+25E	28/07/2005	SOIL	524429.0355	5494276.494	NAD 83 UTM ZONE 11N
SXL14 04+50E	28/07/2005	SOIL	524453.6859	5494275.758	NAD 83 UTM ZONE 11N
SXL14 04+75E	28/07/2005	SOIL	524478.3363	5494275.022	NAD 83 UTM ZONE 11N
SXL14 05+00E	28/07/2005	SOIL	524502.9867	5494274.285	NAD 83 UTM ZONE 11N
SXL14 05+25E	28/07/2005	SOIL	524527.6371	5494273.549	NAD 83 UTM ZONE 11N
SXL14 05+50E	28/07/2005	SOIL	524552.2875	5494272.812	NAD 83 UTM ZONE 11N
SXL14 05+75E	28/07/2005	SOIL	524577	5494272	NAD 83 UTM ZONE 11N
SXL15 00+00	29/07/2005	SOIL	523610	5494157	NAD 83 UTM ZONE 11N
SXL15 00+25E	29/07/2005	SOIL	523637.6715	5494154.011	NAD 83 UTM ZONE 11N
SXL15 00+50E	29/07/2005	SOIL	523665.3529	5494151.011	NAD 83 UTM ZONE 11N
SXL15 00+75E	29/07/2005	SOIL	523693.0343	5494148.012	NAD 83 UTM ZONE 11N
SXL15 01+00E	29/07/2005	SOIL	523720.7157	5494145.012	NAD 83 UTM ZONE 11N
SXL15 01+25E	29/07/2005	SOIL	523748.3971	5494142.012	NAD 83 UTM ZONE 11N
SXL15 01+50E	29/07/2005	SOIL	523776.0785	5494139.013	NAD 83 UTM ZONE 11N
SXL15 01+75E	29/07/2005	SOIL	523803.7599	5494136.013	NAD 83 UTM ZONE 11N
SXL15 02+00E	29/07/2005	SOIL	523831.4413	5494133.013	NAD 83 UTM ZONE 11N
SXL15 02+25E	29/07/2005	SOIL	523859.1227	5494130.014	NAD 83 UTM ZONE 11N
SXL15 02+50E	29/07/2005	SOIL	523886.8041	5494127.014	NAD 83 UTM ZONE 11N
SXL15 02+75E	29/07/2005	SOIL	523914.4855	5494124.014	NAD 83 UTM ZONE 11N
SXL15 03+00E	29/07/2005	SOIL	523942.1669	5494121.015	NAD 83 UTM ZONE 11N
SXL15 03+25E	29/07/2005	SOIL	523969.8483	5494118.015	NAD 83 UTM ZONE 11N
SXL15 03+50E	29/07/2005	SOIL	523997.5297	5494115.015	NAD 83 UTM ZONE 11N
SXL15 03+75E	29/07/2005	SOIL	524025.2111	5494112.016	NAD 83 UTM ZONE 11N
SXL15 04+00E	29/07/2005	SOIL	524052.8925	5494109.016	NAD 83 UTM ZONE 11N
SXL15 04+25E	29/07/2005	SOIL	524080.5739	5494106.016	NAD 83 UTM ZONE 11N
SXL15 04+50E	29/07/2005	SOIL	524108.2553	5494103.017	NAD 83 UTM ZONE 11N
SXL15 04+75E	29/07/2005	SOIL	524135.9367	5494100.017	NAD 83 UTM ZONE 11N
SXL15 05+00E	29/07/2005	SOIL	524163.6181	5494097.018	NAD 83 UTM ZONE 11N
SXL15 05+25E	29/07/2005	SOIL	524191.2995	5494094.018	NAD 83 UTM ZONE 11N
SXL15 05+50E	29/07/2005	SOIL	524219	5494091	NAD 83 UTM ZONE 11N
SXL16 00+00	13/07/2005	SOIL	524163	5493921	NAD 83 UTM ZONE 11N
SXL16 00+25W	13/07/2005	SOIL	524139.6529	5493921.92	NAD 83 UTM ZONE 11N
SXL16 00+50W	13/07/2005	SOIL	524116.3355	5493922.828	NAD 83 UTM ZONE 11N
SXL16 00+75W	13/07/2005	SOIL	524093.018	5493923.735	NAD 83 UTM ZONE 11N
SXL16 01+00W	13/07/2005	SOIL	524069.7006	5493924.643	NAD 83 UTM ZONE 11N
SXL16 01+25W	13/07/2005	SOIL	524046.3831	5493925.551	NAD 83 UTM ZONE 11N
SXL16 01+50W	13/07/2005	SOIL	524023.0657	5493926.458	NAD 83 UTM ZONE 11N
SXL16 01+75W	13/07/2005	SOIL	523999.7482	5493927.366	NAD 83 UTM ZONE 11N
SXL16 02+00W	13/07/2005	SOIL	523976.4308	5493928.274	NAD 83 UTM ZONE 11N
SXL16 02+25W	13/07/2005	SOIL	523953.1133	5493929.181	NAD 83 UTM ZONE 11N
SXL16 02+50W	13/07/2005	SOIL	523929.7958	5493930.089	NAD 83 UTM ZONE 11N
SXL16 02+75W	13/07/2005	SOIL	523906.4784	5493930.997	NAD 83 UTM ZONE 11N
SXL16 03+00W	13/07/2005	SOIL	523883.1609	5493931.904	NAD 83 UTM ZONE 11N
SXL16 03+25W	13/07/2005	SOIL	523859.8435	5493932.812	NAD 83 UTM ZONE 11N
SXL16 03+50W	13/07/2005	SOIL	523836.526	5493933.72	NAD 83 UTM ZONE 11N
SXL16 03+75W	13/07/2005	SOIL	523813.2086	5493934.627	NAD 83 UTM ZONE 11N
SXL16 04+00W	13/07/2005	SOIL	523789.8911	5493935.535	NAD 83 UTM ZONE 11N
SXL16 04+25W	13/07/2005	SOIL	523766.5737	5493936.443	NAD 83 UTM ZONE 11N
SXL16 04+50W	13/07/2005	SOIL	523743.2562	5493937.351	NAD 83 UTM ZONE 11N
SXL16 04+75W	13/07/2005	SOIL	523719.9388	5493938.258	NAD 83 UTM ZONE 11N
SXL16 05+00W	13/07/2005	SOIL	523696.6213	5493939.166	NAD 83 UTM ZONE 11N
SXL16 05+25W	13/07/2005	SOIL	523673.3038	5493940.074	NAD 83 UTM ZONE 11N
SXL16 05+50W	13/07/2005	SOIL	523649.9864	5493940.981	NAD 83 UTM ZONE 11N
SXL16 05+75W	13/07/2005	SOIL	523626.6689	5493941.889	NAD 83 UTM ZONE 11N
SXL16 06+00W	13/07/2005	SOIL	523603.3515	5493942.797	NAD 83 UTM ZONE 11N
SXL16 06+25W	13/07/2005	SOIL	523580.034	5493943.704	NAD 83 UTM ZONE 11N
SXL16 06+50W	13/07/2005	SOIL	523556.7166	5493944.612	NAD 83 UTM ZONE 11N
SXL16 06+75W	13/07/2005	SOIL	523533.3991	5493945.52	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL16 07+00W	13/07/2005	SOIL	523510.0817	5493946.427	NAD 83 UTM ZONE 11N
SXL16 07+25W	13/07/2005	SOIL	523486.7642	5493947.335	NAD 83 UTM ZONE 11N
SXL16 07+50W	13/07/2005	SOIL	523463.4468	5493948.243	NAD 83 UTM ZONE 11N
SXL16 07+75W	13/07/2005	SOIL	523440.1293	5493949.15	NAD 83 UTM ZONE 11N
SXL16 08+00W	13/07/2005	SOIL	523417	5493950	NAD 83 UTM ZONE 11N
SXL17 00+00	13/07/2005	SOIL	524085	5493720	NAD 83 UTM ZONE 11N
SXL17 00+25W	13/07/2005	SOIL	524061.5205	5493721.02	NAD 83 UTM ZONE 11N
SXL17 00+50W	13/07/2005	SOIL	524038.2729	5493722.024	NAD 83 UTM ZONE 11N
SXL17 00+75W	13/07/2005	SOIL	524015.0252	5493723.028	NAD 83 UTM ZONE 11N
SXL17 01+00W	13/07/2005	SOIL	523991.7776	5493724.031	NAD 83 UTM ZONE 11N
SXL17 01+25W	13/07/2005	SOIL	523968.5299	5493725.035	NAD 83 UTM ZONE 11N
SXL17 01+50W	13/07/2005	SOIL	523945.2823	5493726.039	NAD 83 UTM ZONE 11N
SXL17 01+75W	13/07/2005	SOIL	523922.0346	5493727.042	NAD 83 UTM ZONE 11N
SXL17 02+00W	13/07/2005	SOIL	523898.787	5493728.046	NAD 83 UTM ZONE 11N
SXL17 02+25W	13/07/2005	SOIL	523875.5393	5493729.05	NAD 83 UTM ZONE 11N
SXL17 02+50W	13/07/2005	SOIL	523852.2917	5493730.054	NAD 83 UTM ZONE 11N
SXL17 02+75W	13/07/2005	SOIL	523829.044	5493731.057	NAD 83 UTM ZONE 11N
SXL17 03+00W	13/07/2005	SOIL	523805.7964	5493732.061	NAD 83 UTM ZONE 11N
SXL17 03+25W	13/07/2005	SOIL	523782.5487	5493733.065	NAD 83 UTM ZONE 11N
SXL17 03+50W	13/07/2005	SOIL	523759.3011	5493734.068	NAD 83 UTM ZONE 11N
SXL17 03+75W	13/07/2005	SOIL	523736.0534	5493735.072	NAD 83 UTM ZONE 11N
SXL17 04+00W	13/07/2005	SOIL	523712.8058	5493736.076	NAD 83 UTM ZONE 11N
SXL17 04+25W	13/07/2005	SOIL	523689.5581	5493737.079	NAD 83 UTM ZONE 11N
SXL17 04+50W	13/07/2005	SOIL	523666.3105	5493738.083	NAD 83 UTM ZONE 11N
SXL17 04+75W	13/07/2005	SOIL	523643.0628	5493739.087	NAD 83 UTM ZONE 11N
SXL17 05+00W	13/07/2005	SOIL	523619.8152	5493740.09	NAD 83 UTM ZONE 11N
SXL17 05+25W	13/07/2005	SOIL	523596.5675	5493741.094	NAD 83 UTM ZONE 11N
SXL17 05+50W	13/07/2005	SOIL	523573.3199	5493742.098	NAD 83 UTM ZONE 11N
SXL17 05+75W	13/07/2005	SOIL	523550.0722	5493743.101	NAD 83 UTM ZONE 11N
SXL17 06+00W	13/07/2005	SOIL	523526.8246	5493744.105	NAD 83 UTM ZONE 11N
SXL17 06+25W	13/07/2005	SOIL	523503.5769	5493745.109	NAD 83 UTM ZONE 11N
SXL17 06+50W	13/07/2005	SOIL	523480.3293	5493746.112	NAD 83 UTM ZONE 11N
SXL17 06+75W	13/07/2005	SOIL	523457.0816	5493747.116	NAD 83 UTM ZONE 11N
SXL17 07+00W	13/07/2005	SOIL	523434	5493748	NAD 83 UTM ZONE 11N
SXL18 00+00	03/08/2005	SOIL	524145	5493505	NAD 83 UTM ZONE 11N
SXL18 00+25W	03/08/2005	SOIL	524121.0813	5493506.142	NAD 83 UTM ZONE 11N
SXL18 00+50W	03/08/2005	SOIL	524097.1807	5493507.276	NAD 83 UTM ZONE 11N
SXL18 00+75W	03/08/2005	SOIL	524073.2802	5493508.41	NAD 83 UTM ZONE 11N
SXL18 01+00W	03/08/2005	SOIL	524049.3796	5493509.543	NAD 83 UTM ZONE 11N
SXL18 01+25W	03/08/2005	SOIL	524025.4791	5493510.677	NAD 83 UTM ZONE 11N
SXL18 01+50W	03/08/2005	SOIL	524001.5785	5493511.811	NAD 83 UTM ZONE 11N
SXL18 01+75W	03/08/2005	SOIL	523977.678	5493512.945	NAD 83 UTM ZONE 11N
SXL18 02+00W	03/08/2005	SOIL	523953.7774	5493514.078	NAD 83 UTM ZONE 11N
SXL18 02+25W	03/08/2005	SOIL	523929.8768	5493515.212	NAD 83 UTM ZONE 11N
SXL18 02+50W	03/08/2005	SOIL	523905.9763	5493516.346	NAD 83 UTM ZONE 11N
SXL18 02+75W	03/08/2005	SOIL	523882.0757	5493517.48	NAD 83 UTM ZONE 11N
SXL18 03+00W	03/08/2005	SOIL	523858.1752	5493518.613	NAD 83 UTM ZONE 11N
SXL18 03+25W	03/08/2005	SOIL	523834.2746	5493519.747	NAD 83 UTM ZONE 11N
SXL18 03+50W	03/08/2005	SOIL	523810.3741	5493520.881	NAD 83 UTM ZONE 11N
SXL18 03+75W	03/08/2005	SOIL	523786.4735	5493522.015	NAD 83 UTM ZONE 11N
SXL18 04+00W	03/08/2005	SOIL	523762.573	5493523.148	NAD 83 UTM ZONE 11N
SXL18 04+25W	03/08/2005	SOIL	523738.6724	5493524.282	NAD 83 UTM ZONE 11N
SXL18 04+50W	03/08/2005	SOIL	523714.7719	5493525.416	NAD 83 UTM ZONE 11N
SXL18 04+75W	03/08/2005	SOIL	523690.8713	5493526.55	NAD 83 UTM ZONE 11N
SXL18 05+00W	03/08/2005	SOIL	523666.9708	5493527.683	NAD 83 UTM ZONE 11N
SXL18 05+25W	03/08/2005	SOIL	523643.0702	5493528.817	NAD 83 UTM ZONE 11N
SXL18 05+50W	03/08/2005	SOIL	523619.1697	5493529.951	NAD 83 UTM ZONE 11N
SXL18 05+75W	03/08/2005	SOIL	523595.2691	5493531.085	NAD 83 UTM ZONE 11N
SXL18 06+00W	03/08/2005	SOIL	523571.3686	5493532.218	NAD 83 UTM ZONE 11N
SXL18 06+25W	03/08/2005	SOIL	523547.468	5493533.352	NAD 83 UTM ZONE 11N
SXL18 06+50W	03/08/2005	SOIL	523523.5675	5493534.486	NAD 83 UTM ZONE 11N
SXL18 06+75W	03/08/2005	SOIL	523499.6669	5493535.62	NAD 83 UTM ZONE 11N
SXL18 07+00W	03/08/2005	SOIL	523475.7663	5493536.753	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL18 07+25W	03/08/2005	SOIL	523451.8658	5493537.887	NAD 83 UTM ZONE 11N
SXL18 07+50W	03/08/2005	SOIL	523428	5493539	NAD 83 UTM ZONE 11N
SXL19 00+00	24/07/2005	SOIL	524666	5498739	NAD 83 UTM ZONE 11N
SXL19 00+25E	24/07/2005	SOIL	524679.8998	5498763.046	NAD 83 UTM ZONE 11N
SXL19 00+25W	24/07/2005	SOIL	524653.2853	5498711.529	NAD 83 UTM ZONE 11N
SXL19 00+50E	24/07/2005	SOIL	524692.4248	5498786.648	NAD 83 UTM ZONE 11N
SXL19 00+50W	24/07/2005	SOIL	524636.082	5498686.421	NAD 83 UTM ZONE 11N
SXL19 00+75E	24/07/2005	SOIL	524717.7781	5498785.775	NAD 83 UTM ZONE 11N
SXL19 00+75W	24/07/2005	SOIL	524616.88	5498662.757	NAD 83 UTM ZONE 11N
SXL19 01+00E	24/07/2005	SOIL	524743.9963	5498780.523	NAD 83 UTM ZONE 11N
SXL19 01+00W	24/07/2005	SOIL	524599.0235	5498638.06	NAD 83 UTM ZONE 11N
SXL19 01+25E	24/07/2005	SOIL	524770.155	5498774.948	NAD 83 UTM ZONE 11N
SXL19 01+25W	24/07/2005	SOIL	524573.7592	5498652.231	NAD 83 UTM ZONE 11N
SXL19 01+50E	24/07/2005	SOIL	524795.7463	5498767.26	NAD 83 UTM ZONE 11N
SXL19 01+50W	24/07/2005	SOIL	524546.2113	5498660.292	NAD 83 UTM ZONE 11N
SXL19 01+75E	24/07/2005	SOIL	524819.5632	5498755.116	NAD 83 UTM ZONE 11N
SXL19 01+75W	24/07/2005	SOIL	524516.3637	5498654.153	NAD 83 UTM ZONE 11N
SXL19 02+00E	24/07/2005	SOIL	524843.0844	5498742.382	NAD 83 UTM ZONE 11N
SXL19 02+00W	24/07/2005	SOIL	524486.4208	5498649.021	NAD 83 UTM ZONE 11N
SXL19 02+25E	24/07/2005	SOIL	524866.597	5498729.633	NAD 83 UTM ZONE 11N
SXL19 02+25W	24/07/2005	SOIL	524458.904	5498659.64	NAD 83 UTM ZONE 11N
SXL19 02+50E	24/07/2005	SOIL	524887.828	5498713.931	NAD 83 UTM ZONE 11N
SXL19 02+50W	24/07/2005	SOIL	524434.9028	5498678.415	NAD 83 UTM ZONE 11N
SXL19 02+75E	24/07/2005	SOIL	524907.0383	5498695.436	NAD 83 UTM ZONE 11N
SXL19 02+75W	24/07/2005	SOIL	524410.6211	5498696.723	NAD 83 UTM ZONE 11N
SXL19 03+00E	24/07/2005	SOIL	524928.9125	5498680.044	NAD 83 UTM ZONE 11N
SXL19 03+00W	24/07/2005	SOIL	524381.6297	5498704.816	NAD 83 UTM ZONE 11N
SXL19 03+25E	24/07/2005	SOIL	524940.6642	5498703.404	NAD 83 UTM ZONE 11N
SXL19 03+25W	24/07/2005	SOIL	524351.4774	5498709.138	NAD 83 UTM ZONE 11N
SXL19 03+50E	24/07/2005	SOIL	524955.8754	5498724.683	NAD 83 UTM ZONE 11N
SXL19 03+50W	24/07/2005	SOIL	524321.5972	5498715.126	NAD 83 UTM ZONE 11N
SXL19 03+75E	24/07/2005	SOIL	524979.4201	5498737.127	NAD 83 UTM ZONE 11N
SXL19 03+75W	24/07/2005	SOIL	524293.3551	5498708.805	NAD 83 UTM ZONE 11N
SXL19 04+00E	24/07/2005	SOIL	525003.7152	5498748.314	NAD 83 UTM ZONE 11N
SXL19 04+00W	24/07/2005	SOIL	524263.9658	5498700.741	NAD 83 UTM ZONE 11N
SXL19 04+25E	24/07/2005	SOIL	525027.9288	5498759.674	NAD 83 UTM ZONE 11N
SXL19 04+25W	24/07/2005	SOIL	524234.4066	5498693.423	NAD 83 UTM ZONE 11N
SXL19 04+50E	24/07/2005	SOIL	525051.31	5498772.582	NAD 83 UTM ZONE 11N
SXL19 04+50W	24/07/2005	SOIL	524208.3798	5498680.371	NAD 83 UTM ZONE 11N
SXL19 04+75E	24/07/2005	SOIL	525073.9093	5498786.882	NAD 83 UTM ZONE 11N
SXL19 04+75W	24/07/2005	SOIL	524184.1241	5498662.109	NAD 83 UTM ZONE 11N
SXL19 05+00E	24/07/2005	SOIL	525094.6709	5498803.644	NAD 83 UTM ZONE 11N
SXL19 05+00W	24/07/2005	SOIL	524165.5726	5498638.471	NAD 83 UTM ZONE 11N
SXL19 05+25E	24/07/2005	SOIL	525113.0141	5498823.101	NAD 83 UTM ZONE 11N
SXL19 05+25W	24/07/2005	SOIL	524149.3856	5498615.992	NAD 83 UTM ZONE 11N
SXL19 05+50E	24/07/2005	SOIL	525131.0152	5498842.883	NAD 83 UTM ZONE 11N
SXL19 05+50W	24/07/2005	SOIL	524121.1656	5498626.165	NAD 83 UTM ZONE 11N
SXL19 05+75E	24/07/2005	SOIL	525150.5406	5498861.155	NAD 83 UTM ZONE 11N
SXL19 05+75W	24/07/2005	SOIL	524094.2458	5498640.398	NAD 83 UTM ZONE 11N
SXL19 06+00E	24/07/2005	SOIL	525170.1582	5498879.336	NAD 83 UTM ZONE 11N
SXL19 06+00W	24/07/2005	SOIL	524065.8573	5498651.311	NAD 83 UTM ZONE 11N
SXL19 06+25E	24/07/2005	SOIL	525189.8861	5498897.395	NAD 83 UTM ZONE 11N
SXL19 06+25W	24/07/2005	SOIL	524036.4622	5498659.346	NAD 83 UTM ZONE 11N
SXL19 06+50E	24/07/2005	SOIL	525209.8453	5498915.199	NAD 83 UTM ZONE 11N
SXL19 06+50W	24/07/2005	SOIL	524006.8842	5498666.651	NAD 83 UTM ZONE 11N
SXL19 06+75E	24/07/2005	SOIL	525229.6504	5498933.175	NAD 83 UTM ZONE 11N
SXL19 06+75W	24/07/2005	SOIL	523983.1004	5498657.358	NAD 83 UTM ZONE 11N
SXL19 07+00E	24/07/2005	SOIL	525249.4555	5498951.152	NAD 83 UTM ZONE 11N
SXL19 07+00W	24/07/2005	SOIL	523970.3764	5498629.726	NAD 83 UTM ZONE 11N
SXL19 07+25E	24/07/2005	SOIL	525269.2703	5498969.117	NAD 83 UTM ZONE 11N
SXL19 07+25W	24/07/2005	SOIL	523955.6307	5498603.157	NAD 83 UTM ZONE 11N
SXL19 07+50E	24/07/2005	SOIL	525286.1845	5498989.544	NAD 83 UTM ZONE 11N
SXL19 07+50W	24/07/2005	SOIL	523937.9702	5498578.323	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL19 07+75E	24/07/2005	SOIL	525297.4249	5499013.735	NAD 83 UTM ZONE 11N
SXL19 07+75W	24/07/2005	SOIL	523920.5357	5498553.327	NAD 83 UTM ZONE 11N
SXL19 08+00E	24/07/2005	SOIL	525306.491	5499038.899	NAD 83 UTM ZONE 11N
SXL19 08+00W	24/07/2005	SOIL	523898.9578	5498532.597	NAD 83 UTM ZONE 11N
SXL19 08+25E	24/07/2005	SOIL	525315.5572	5499064.062	NAD 83 UTM ZONE 11N
SXL19 08+25W	24/07/2005	SOIL	523872.6908	5498517.16	NAD 83 UTM ZONE 11N
SXL19 08+50E	24/07/2005	SOIL	525325.246	5499088.991	NAD 83 UTM ZONE 11N
SXL19 08+50W	24/07/2005	SOIL	523846	5498505	NAD 83 UTM ZONE 11N
SXL19 08+75E	24/07/2005	SOIL	525335	5499113	NAD 83 UTM ZONE 11N
SXL20 00+50E	25/07/2005	SOIL	524255.8464	5498372.589	NAD 83 UTM ZONE 11N
SXL20 00+50W	24/07/2005	SOIL	524179.625	5498337.075	NAD 83 UTM ZONE 11N
SXL20 01+00E	25/07/2005	SOIL	524304.2468	5498398.431	NAD 83 UTM ZONE 11N
SXL20 01+00W	24/07/2005	SOIL	524134.0403	5498340.107	NAD 83 UTM ZONE 11N
SXL20 01+50E	25/07/2005	SOIL	524329.9282	5498445.853	NAD 83 UTM ZONE 11N
SXL20 01+50W	24/07/2005	SOIL	524089.6576	5498319.326	NAD 83 UTM ZONE 11N
SXL20 02+00E	25/07/2005	SOIL	524362.4937	5498489.084	NAD 83 UTM ZONE 11N
SXL20 02+00W	24/07/2005	SOIL	524046.9998	5498295.352	NAD 83 UTM ZONE 11N
SXL20 02+50E	25/07/2005	SOIL	524409.4225	5498512.574	NAD 83 UTM ZONE 11N
SXL20 02+50W	24/07/2005	SOIL	524006.5304	5498267.777	NAD 83 UTM ZONE 11N
SXL20 03+00E	25/07/2005	SOIL	524449.6107	5498475.272	NAD 83 UTM ZONE 11N
SXL20 03+00W	24/07/2005	SOIL	523972.9787	5498232.17	NAD 83 UTM ZONE 11N
SXL20 03+50E	25/07/2005	SOIL	524475.0359	5498426.997	NAD 83 UTM ZONE 11N
SXL20 03+50W	24/07/2005	SOIL	523927.8336	5498239.019	NAD 83 UTM ZONE 11N
SXL20 04+00E	25/07/2005	SOIL	524512.0955	5498386.8	NAD 83 UTM ZONE 11N
SXL20 04+00W	24/07/2005	SOIL	523899.0479	5498275.8	NAD 83 UTM ZONE 11N
SXL20 04+50E	25/07/2005	SOIL	524550.2055	5498347.764	NAD 83 UTM ZONE 11N
SXL20 04+50W	24/07/2005	SOIL	523860.8964	5498304.914	NAD 83 UTM ZONE 11N
SXL20 05+00E	25/07/2005	SOIL	524599.7452	5498363.07	NAD 83 UTM ZONE 11N
SXL20 05+00W	24/07/2005	SOIL	523817.5262	5498327.648	NAD 83 UTM ZONE 11N
SXL20 05+50E	25/07/2005	SOIL	524648.5062	5498381.796	NAD 83 UTM ZONE 11N
SXL20 05+50W	24/07/2005	SOIL	523780.4733	5498359.608	NAD 83 UTM ZONE 11N
SXL20 06+00E	25/07/2005	SOIL	524687.9838	5498411.385	NAD 83 UTM ZONE 11N
SXL20 06+00W	24/07/2005	SOIL	523741.1369	5498387.601	NAD 83 UTM ZONE 11N
SXL20 06+50E	25/07/2005	SOIL	524722.1057	5498454.184	NAD 83 UTM ZONE 11N
SXL20 06+50W	24/07/2005	SOIL	523706.7757	5498420.99	NAD 83 UTM ZONE 11N
SXL20 07+00E	25/07/2005	SOIL	524753.3391	5498498.674	NAD 83 UTM ZONE 11N
SXL20 07+00W	24/07/2005	SOIL	523673.0021	5498456.025	NAD 83 UTM ZONE 11N
SXL20 07+50E	25/07/2005	SOIL	524800.1109	5498526.713	NAD 83 UTM ZONE 11N
SXL20 07+50W	24/07/2005	SOIL	523638.0204	5498422.945	NAD 83 UTM ZONE 11N
SXL20 08+00E	25/07/2005	SOIL	524854.5884	5498527.614	NAD 83 UTM ZONE 11N
SXL20 08+00W	24/07/2005	SOIL	523605.0277	5498387.98	NAD 83 UTM ZONE 11N
SXL20 08+50E	25/07/2005	SOIL	524907.1368	5498512.805	NAD 83 UTM ZONE 11N
SXL20 08+50W	24/07/2005	SOIL	523565.8876	5498410.12	NAD 83 UTM ZONE 11N
SXL20 09+00E	25/07/2005	SOIL	524960.3155	5498499.124	NAD 83 UTM ZONE 11N
SXL20 09+00W	24/07/2005	SOIL	523540.6422	5498452.073	NAD 83 UTM ZONE 11N
SXL20 09+50E	25/07/2005	SOIL	525015.0067	5498494.089	NAD 83 UTM ZONE 11N
SXL20 09+50W	24/07/2005	SOIL	523509.7225	5498488.66	NAD 83 UTM ZONE 11N
SXL20 10+00E	25/07/2005	SOIL	525068.3074	5498481.839	NAD 83 UTM ZONE 11N
SXL20 10+00W	24/07/2005	SOIL	523494.229	5498534.5	NAD 83 UTM ZONE 11N
SXL20 10+50E	25/07/2005	SOIL	525120.9878	5498472.776	NAD 83 UTM ZONE 11N
SXL20 10+50W	24/07/2005	SOIL	523485.4322	5498582.71	NAD 83 UTM ZONE 11N
SXL20 11+00E	25/07/2005	SOIL	525162.4474	5498507.874	NAD 83 UTM ZONE 11N
SXL20 11+00W	24/07/2005	SOIL	523468.5941	5498628.204	NAD 83 UTM ZONE 11N
SXL20 11+50E	25/07/2005	SOIL	525198.8814	5498548.501	NAD 83 UTM ZONE 11N
SXL20 11+50W	24/07/2005	SOIL	523438.6834	5498663.261	NAD 83 UTM ZONE 11N
SXL20 12+00E	25/07/2005	SOIL	525249.237	5498570.009	NAD 83 UTM ZONE 11N
SXL20 12+00W	24/07/2005	SOIL	523433.3389	5498711.87	NAD 83 UTM ZONE 11N
SXL20 12+50E	25/07/2005	SOIL	525292.3107	5498601.279	NAD 83 UTM ZONE 11N
SXL20 12+50W	24/07/2005	SOIL	523398.818	5498709.717	NAD 83 UTM ZONE 11N
SXL20 13+00E	25/07/2005	SOIL	525312.8569	5498652.177	NAD 83 UTM ZONE 11N
SXL20 13+00W	24/07/2005	SOIL	523354.5392	5498688.715	NAD 83 UTM ZONE 11N
SXL20 13+50E	25/07/2005	SOIL	525327.8357	5498704.986	NAD 83 UTM ZONE 11N
SXL20 13+50W	24/07/2005	SOIL	523310.2604	5498667.713	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL20 14+00E	25/07/2005	SOIL	525338.2822	5498758.914	NAD 83 UTM ZONE 11N
SXL20 14+00W	24/07/2005	SOIL	523277.5475	5498648.959	NAD 83 UTM ZONE 11N
SXL20 14+50E	25/07/2005	SOIL	525354.7151	5498810.961	NAD 83 UTM ZONE 11N
SXL20 14+50W	24/07/2005	SOIL	523316.7583	5498619.595	NAD 83 UTM ZONE 11N
SXL20 15+00E	25/07/2005	SOIL	525382.603	5498858.299	NAD 83 UTM ZONE 11N
SXL20 15+00W	24/07/2005	SOIL	523323.9151	5498576.59	NAD 83 UTM ZONE 11N
SXL20 15+50E	25/07/2005	SOIL	525417.6949	5498900.195	NAD 83 UTM ZONE 11N
SXL20 15+50W	24/07/2005	SOIL	523304.0755	5498531.886	NAD 83 UTM ZONE 11N
SXL20 16+00E	25/07/2005	SOIL	525450.4771	5498942.732	NAD 83 UTM ZONE 11N
SXL20 16+00W	24/07/2005	SOIL	523282.9658	5498488.118	NAD 83 UTM ZONE 11N
SXL20 16+50E	25/07/2005	SOIL	525469.6291	5498994.21	NAD 83 UTM ZONE 11N
SXL20 16+50W	24/07/2005	SOIL	523292.627	5498440.303	NAD 83 UTM ZONE 11N
SXL20 17+00E	25/07/2005	SOIL	525503.7189	5499037.185	NAD 83 UTM ZONE 11N
SXL20 17+00W	24/07/2005	SOIL	523275.5842	5498397.607	NAD 83 UTM ZONE 11N
SXL20 17+50E	25/07/2005	SOIL	525536.1871	5499081.282	NAD 83 UTM ZONE 11N
SXL20 17+50W	24/07/2005	SOIL	523238.0247	5498366.208	NAD 83 UTM ZONE 11N
SXL20 18+00E	25/07/2005	SOIL	525565.1902	5499127.812	NAD 83 UTM ZONE 11N
SXL20 18+00W	24/07/2005	SOIL	523199.131	5498336.393	NAD 83 UTM ZONE 11N
SXL20 18+50E	25/07/2005	SOIL	525595.9304	5499173.346	NAD 83 UTM ZONE 11N
SXL20 18+50W	24/07/2005	SOIL	523161.6133	5498304.908	NAD 83 UTM ZONE 11N
SXL20 19+00E	25/07/2005	SOIL	525625	5499220	NAD 83 UTM ZONE 11N
SXL20 19+00W	24/07/2005	SOIL	523123.4858	5498274.561	NAD 83 UTM ZONE 11N
SXL20 19+50W	24/07/2005	SOIL	523084.2232	5498245.598	NAD 83 UTM ZONE 11N
SXL20 20+00W	24/07/2005	SOIL	523043	5498217	NAD 83 UTM ZONE 11N
SXL21 00+00	25/07/2005	SOIL	523575	5498163	NAD 83 UTM ZONE 11N
SXL21 00+50W	25/07/2005	SOIL	523559.4127	5498209.344	NAD 83 UTM ZONE 11N
SXL21 01+00W	25/07/2005	SOIL	523518.3215	5498224.741	NAD 83 UTM ZONE 11N
SXL21 01+50W	25/07/2005	SOIL	523479.6049	5498256.723	NAD 83 UTM ZONE 11N
SXL21 02+00W	25/07/2005	SOIL	523446.2927	5498295.48	NAD 83 UTM ZONE 11N
SXL21 02+50W	25/07/2005	SOIL	523409.682	5498330.344	NAD 83 UTM ZONE 11N
SXL21 03+00W	25/07/2005	SOIL	523362.3439	5498313.182	NAD 83 UTM ZONE 11N
SXL21 03+50W	25/07/2005	SOIL	523321.848	5498282.287	NAD 83 UTM ZONE 11N
SXL21 04+00W	25/07/2005	SOIL	523282.958	5498249.207	NAD 83 UTM ZONE 11N
SXL21 04+50W	25/07/2005	SOIL	523239.5857	5498222.481	NAD 83 UTM ZONE 11N
SXL21 05+00W	25/07/2005	SOIL	523206.2494	5498186.502	NAD 83 UTM ZONE 11N
SXL21 05+50W	25/07/2005	SOIL	523189.5395	5498138.191	NAD 83 UTM ZONE 11N
SXL22 00+00	20/07/2005	SOIL	524229	5497393	NAD 83 UTM ZONE 11N
SXL22 00+50E	20/07/2005	SOIL	524248.0184	5497343.219	NAD 83 UTM ZONE 11N
SXL22 01+00E	20/07/2005	SOIL	524273.9811	5497296.659	NAD 83 UTM ZONE 11N
SXL22 01+50E	20/07/2005	SOIL	524302.8487	5497252.5	NAD 83 UTM ZONE 11N
SXL22 02+00E	20/07/2005	SOIL	524338.3038	5497212.901	NAD 83 UTM ZONE 11N
SXL22 02+50E	20/07/2005	SOIL	524382.5889	5497183.115	NAD 83 UTM ZONE 11N
SXL22 03+00E	20/07/2005	SOIL	524427.2005	5497154.201	NAD 83 UTM ZONE 11N
SXL22 03+50E	20/07/2005	SOIL	524469.0318	5497120.924	NAD 83 UTM ZONE 11N
SXL22 04+00E	20/07/2005	SOIL	524509.0942	5497085.552	NAD 83 UTM ZONE 11N
SXL22 04+50E	20/07/2005	SOIL	524521.2678	5497036.24	NAD 83 UTM ZONE 11N
SXL22 05+00E	20/07/2005	SOIL	524517.9058	5496983.265	NAD 83 UTM ZONE 11N
SXL22 05+50E	20/07/2005	SOIL	524500.8279	5496932.574	NAD 83 UTM ZONE 11N
SXL22 06+00E	20/07/2005	SOIL	524479.4096	5496883.653	NAD 83 UTM ZONE 11N
SXL22 06+50E	20/07/2005	SOIL	524451.8019	5496837.865	NAD 83 UTM ZONE 11N
SXL22 07+00E	20/07/2005	SOIL	524432.0794	5496790.116	NAD 83 UTM ZONE 11N
SXL22 07+50E	20/07/2005	SOIL	524436.8869	5496736.837	NAD 83 UTM ZONE 11N
SXL22 08+00E	20/07/2005	SOIL	524442.7981	5496683.673	NAD 83 UTM ZONE 11N
SXL22 08+50E	21/07/2005	SOIL	524466.4348	5496647.667	NAD 83 UTM ZONE 11N
SXL22 09+00E	21/07/2005	SOIL	524519.6337	5496642.048	NAD 83 UTM ZONE 11N
SXL22 09+50E	21/07/2005	SOIL	524568.5706	5496660.176	NAD 83 UTM ZONE 11N
SXL22 10+00E	21/07/2005	SOIL	524593.7419	5496707.319	NAD 83 UTM ZONE 11N
SXL22 10+50E	21/07/2005	SOIL	524610.8006	5496757.754	NAD 83 UTM ZONE 11N
SXL22 11+00E	21/07/2005	SOIL	524624.161	5496809.512	NAD 83 UTM ZONE 11N
SXL22 11+50E	21/07/2005	SOIL	524638.4937	5496861.055	NAD 83 UTM ZONE 11N
SXL22 12+00E	21/07/2005	SOIL	524649.0933	5496913.463	NAD 83 UTM ZONE 11N
SXL22 12+50E	21/07/2005	SOIL	524664.5906	5496964.427	NAD 83 UTM ZONE 11N
SXL22 13+00E	21/07/2005	SOIL	524687.2695	5497012.277	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL22 13+50E	21/07/2005	SOIL	524726.0411	5497049.042	NAD 83 UTM ZONE 11N
SXL22 14+00E	21/07/2005	SOIL	524753.7828	5497094.449	NAD 83 UTM ZONE 11N
SXL22 14+50E	21/07/2005	SOIL	524791.9591	5497128.652	NAD 83 UTM ZONE 11N
SXL22 15+00E	21/07/2005	SOIL	524842.711	5497145.556	NAD 83 UTM ZONE 11N
SXL22 15+50E	21/07/2005	SOIL	524895.126	5497147.754	NAD 83 UTM ZONE 11N
SXL22 16+00E	21/07/2005	SOIL	524926.9808	5497117.329	NAD 83 UTM ZONE 11N
SXL22 16+50E	21/07/2005	SOIL	524967.093	5497107.114	NAD 83 UTM ZONE 11N
SXL22 17+00E	21/07/2005	SOIL	525018.865	5497109.675	NAD 83 UTM ZONE 11N
SXL22 17+50E	21/07/2005	SOIL	525058.6364	5497073.947	NAD 83 UTM ZONE 11N
SXL22 18+00E	21/07/2005	SOIL	525099.9392	5497040.01	NAD 83 UTM ZONE 11N
SXL22 18+50E	21/07/2005	SOIL	525139.6539	5497061.914	NAD 83 UTM ZONE 11N
SXL22 19+00E	21/07/2005	SOIL	525155.4316	5497112.513	NAD 83 UTM ZONE 11N
SXL22 19+50E	21/07/2005	SOIL	525174.9168	5497161.716	NAD 83 UTM ZONE 11N
SXL22 20+00E	21/07/2005	SOIL	525198.675	5497209.622	NAD 83 UTM ZONE 11N
SXL22 20+50E	21/07/2005	SOIL	525223.2573	5497256.669	NAD 83 UTM ZONE 11N
SXL22 21+00E	21/07/2005	SOIL	525256.1636	5497295.532	NAD 83 UTM ZONE 11N
SXL22 21+50E	21/07/2005	SOIL	525304.792	5497275.142	NAD 83 UTM ZONE 11N
SXL22 22+00E	21/07/2005	SOIL	525355.0178	5497257.378	NAD 83 UTM ZONE 11N
SXL22 22+50E	21/07/2005	SOIL	525400.0128	5497229.01	NAD 83 UTM ZONE 11N
SXL22 23+00E	21/07/2005	SOIL	525433.6144	5497187.474	NAD 83 UTM ZONE 11N
SXL22 23+50E	21/07/2005	SOIL	525453.0531	5497138.376	NAD 83 UTM ZONE 11N
SXL22 24+00E	21/07/2005	SOIL	525466.7546	5497087.377	NAD 83 UTM ZONE 11N
SXL22 24+50E	21/07/2005	SOIL	525476.1274	5497035.869	NAD 83 UTM ZONE 11N
SXL22 25+00E	21/07/2005	SOIL	525502	5496989	NAD 83 UTM ZONE 11N
SXL23 00+00	20/07/2005	SOIL	523701	5496798	NAD 83 UTM ZONE 11N
SXL23 00+25E	20/07/2005	SOIL	523723.5798	5496792.321	NAD 83 UTM ZONE 11N
SXL23 00+25W	20/07/2005	SOIL	523699.2348	5496776.209	NAD 83 UTM ZONE 11N
SXL23 00+50E	20/07/2005	SOIL	523740.9389	5496799.077	NAD 83 UTM ZONE 11N
SXL23 00+50W	20/07/2005	SOIL	523696.9441	5496752.541	NAD 83 UTM ZONE 11N
SXL23 00+75E	20/07/2005	SOIL	523756.6297	5496816.367	NAD 83 UTM ZONE 11N
SXL23 00+75W	20/07/2005	SOIL	523694.4638	5496729.011	NAD 83 UTM ZONE 11N
SXL23 01+00E	20/07/2005	SOIL	523772.9181	5496833.084	NAD 83 UTM ZONE 11N
SXL23 01+00W	20/07/2005	SOIL	523696.6108	5496705.285	NAD 83 UTM ZONE 11N
SXL23 01+25E	20/07/2005	SOIL	523787.433	5496851.334	NAD 83 UTM ZONE 11N
SXL23 01+25W	20/07/2005	SOIL	523707.3282	5496686.217	NAD 83 UTM ZONE 11N
SXL23 01+50E	20/07/2005	SOIL	523797.4512	5496872.401	NAD 83 UTM ZONE 11N
SXL23 01+50W	20/07/2005	SOIL	523709.1191	5496662.45	NAD 83 UTM ZONE 11N
SXL23 01+75E	20/07/2005	SOIL	523806.869	5496893.765	NAD 83 UTM ZONE 11N
SXL23 01+75W	20/07/2005	SOIL	523709.7999	5496638.618	NAD 83 UTM ZONE 11N
SXL23 02+00E	20/07/2005	SOIL	523818.516	5496910.903	NAD 83 UTM ZONE 11N
SXL23 02+00W	20/07/2005	SOIL	523710.7455	5496615.133	NAD 83 UTM ZONE 11N
SXL23 02+25E	20/07/2005	SOIL	523841.6684	5496913.648	NAD 83 UTM ZONE 11N
SXL23 02+25W	20/07/2005	SOIL	523714.0583	5496591.659	NAD 83 UTM ZONE 11N
SXL23 02+50E	20/07/2005	SOIL	523864.8207	5496916.497	NAD 83 UTM ZONE 11N
SXL23 02+50W	20/07/2005	SOIL	523713.019	5496567.878	NAD 83 UTM ZONE 11N
SXL23 02+75E	20/07/2005	SOIL	523888.0907	5496918.013	NAD 83 UTM ZONE 11N
SXL23 02+75W	20/07/2005	SOIL	523700.7173	5496549.2	NAD 83 UTM ZONE 11N
SXL23 03+00E	20/07/2005	SOIL	523911.1008	5496914.667	NAD 83 UTM ZONE 11N
SXL23 03+00W	20/07/2005	SOIL	523679.7522	5496537.898	NAD 83 UTM ZONE 11N
SXL23 03+25E	20/07/2005	SOIL	523933.395	5496907.736	NAD 83 UTM ZONE 11N
SXL23 03+25W	20/07/2005	SOIL	523657.5911	5496529.251	NAD 83 UTM ZONE 11N
SXL23 03+50E	20/07/2005	SOIL	523955.6438	5496900.656	NAD 83 UTM ZONE 11N
SXL23 03+50W	20/07/2005	SOIL	523634.6659	5496530.982	NAD 83 UTM ZONE 11N
SXL23 03+75E	20/07/2005	SOIL	523977.0785	5496898.625	NAD 83 UTM ZONE 11N
SXL23 03+75W	20/07/2005	SOIL	523613.0465	5496541.005	NAD 83 UTM ZONE 11N
SXL23 04+00E	20/07/2005	SOIL	523990.503	5496917.723	NAD 83 UTM ZONE 11N
SXL23 04+00W	20/07/2005	SOIL	523592.1787	5496552.497	NAD 83 UTM ZONE 11N
SXL23 04+25E	20/07/2005	SOIL	524004.3269	5496936.539	NAD 83 UTM ZONE 11N
SXL23 04+25W	20/07/2005	SOIL	523572.9108	5496566.223	NAD 83 UTM ZONE 11N
SXL23 04+50E	20/07/2005	SOIL	524018.2757	5496955.262	NAD 83 UTM ZONE 11N
SXL23 04+50W	20/07/2005	SOIL	523563.2537	5496588.006	NAD 83 UTM ZONE 11N
SXL23 04+75E	20/07/2005	SOIL	524029.7486	5496975.436	NAD 83 UTM ZONE 11N
SXL23 04+75W	20/07/2005	SOIL	523554.527	5496610.193	NAD 83 UTM ZONE 11N

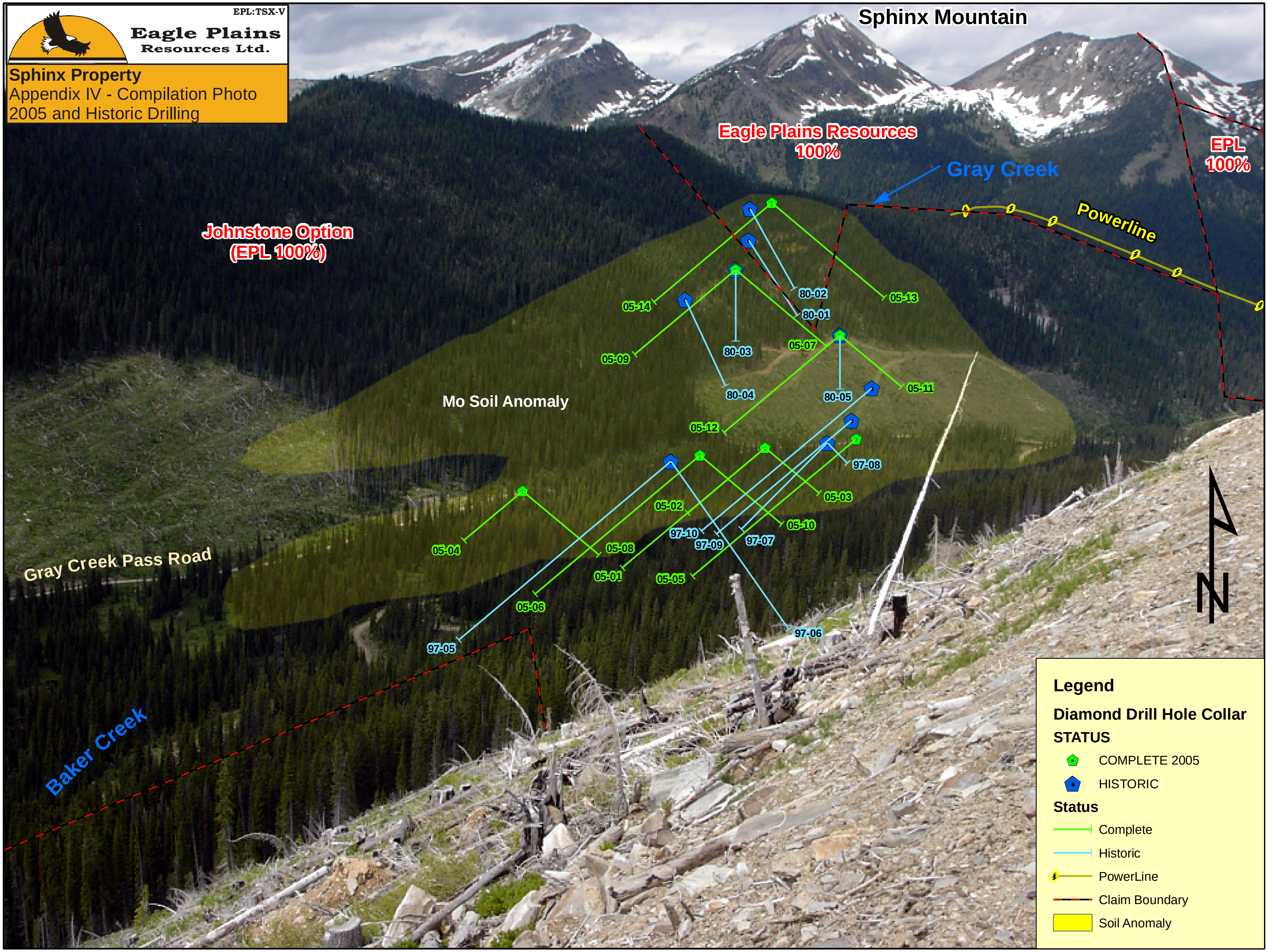
SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL23 05+00E	20/07/2005	SOIL	524038.4641	5496997.094	NAD 83 UTM ZONE 11N
SXL23 05+00W	20/07/2005	SOIL	523545.7763	5496632.371	NAD 83 UTM ZONE 11N
SXL23 05+25E	20/07/2005	SOIL	524046.9523	5497018.844	NAD 83 UTM ZONE 11N
SXL23 05+25W	20/07/2005	SOIL	523535.6806	5496653.97	NAD 83 UTM ZONE 11N
SXL23 05+50E	20/07/2005	SOIL	524059.2539	5497038.568	NAD 83 UTM ZONE 11N
SXL23 05+50W	20/07/2005	SOIL	523526.1285	5496675.81	NAD 83 UTM ZONE 11N
SXL23 05+75E	20/07/2005	SOIL	524074.9937	5497055.813	NAD 83 UTM ZONE 11N
SXL23 05+75W	20/07/2005	SOIL	523515.7944	5496697.22	NAD 83 UTM ZONE 11N
SXL23 06+00E	20/07/2005	SOIL	524090.0357	5497073.599	NAD 83 UTM ZONE 11N
SXL23 06+00W	20/07/2005	SOIL	523498.6068	5496713.723	NAD 83 UTM ZONE 11N
SXL23 06+25E	20/07/2005	SOIL	524098.3088	5497056.035	NAD 83 UTM ZONE 11N
SXL23 06+25W	20/07/2005	SOIL	523478.083	5496725.208	NAD 83 UTM ZONE 11N
SXL23 06+50E	22/07/2005	SOIL	524105.8519	5497034.119	NAD 83 UTM ZONE 11N
SXL23 06+50W	20/07/2005	SOIL	523455.262	5496732.094	NAD 83 UTM ZONE 11N
SXL23 06+75E	22/07/2005	SOIL	524120.6699	5497016.119	NAD 83 UTM ZONE 11N
SXL23 06+75W	20/07/2005	SOIL	523432.4094	5496738.879	NAD 83 UTM ZONE 11N
SXL23 07+00E	22/07/2005	SOIL	524137.3113	5496999.833	NAD 83 UTM ZONE 11N
SXL23 07+00W	20/07/2005	SOIL	523421.8849	5496751.926	NAD 83 UTM ZONE 11N
SXL23 07+25E	22/07/2005	SOIL	524157.161	5496987.547	NAD 83 UTM ZONE 11N
SXL23 07+25W	20/07/2005	SOIL	523430.1339	5496774.226	NAD 83 UTM ZONE 11N
SXL23 07+50E	22/07/2005	SOIL	524171.4858	5496969.193	NAD 83 UTM ZONE 11N
SXL23 07+50W	20/07/2005	SOIL	523435.5263	5496797.436	NAD 83 UTM ZONE 11N
SXL23 07+75E	22/07/2005	SOIL	524185.1046	5496950.229	NAD 83 UTM ZONE 11N
SXL23 07+75W	20/07/2005	SOIL	523441.9842	5496820.37	NAD 83 UTM ZONE 11N
SXL23 08+00E	22/07/2005	SOIL	524198.2998	5496930.972	NAD 83 UTM ZONE 11N
SXL23 08+00W	20/07/2005	SOIL	523444.5857	5496843.818	NAD 83 UTM ZONE 11N
SXL23 08+25E	22/07/2005	SOIL	524211.2679	5496911.557	NAD 83 UTM ZONE 11N
SXL23 08+25W	20/07/2005	SOIL	523443.5779	5496867.637	NAD 83 UTM ZONE 11N
SXL23 08+50E	22/07/2005	SOIL	524224.5424	5496892.35	NAD 83 UTM ZONE 11N
SXL23 08+50W	20/07/2005	SOIL	523442.6372	5496891.453	NAD 83 UTM ZONE 11N
SXL23 08+75E	22/07/2005	SOIL	524237.8349	5496873.2	NAD 83 UTM ZONE 11N
SXL23 08+75W	20/07/2005	SOIL	523439.0353	5496914.942	NAD 83 UTM ZONE 11N
SXL23 09+00E	22/07/2005	SOIL	524248.1023	5496852.358	NAD 83 UTM ZONE 11N
SXL23 09+00W	20/07/2005	SOIL	523431.1936	5496937.454	NAD 83 UTM ZONE 11N
SXL23 09+25E	22/07/2005	SOIL	524259.0712	5496831.747	NAD 83 UTM ZONE 11N
SXL23 09+25W	20/07/2005	SOIL	523423.0359	5496959.854	NAD 83 UTM ZONE 11N
SXL23 09+50E	22/07/2005	SOIL	524271.1797	5496811.816	NAD 83 UTM ZONE 11N
SXL23 09+50W	20/07/2005	SOIL	523409.8425	5496978.806	NAD 83 UTM ZONE 11N
SXL23 09+75E	22/07/2005	SOIL	524284.6256	5496792.728	NAD 83 UTM ZONE 11N
SXL23 09+75W	20/07/2005	SOIL	523389.9725	5496991.958	NAD 83 UTM ZONE 11N
SXL23 10+00E	22/07/2005	SOIL	524295.9292	5496772.395	NAD 83 UTM ZONE 11N
SXL23 10+00W	20/07/2005	SOIL	523369.9063	5497004.834	NAD 83 UTM ZONE 11N
SXL23 10+25E	22/07/2005	SOIL	524304.6583	5496750.745	NAD 83 UTM ZONE 11N
SXL23 10+25W	21/07/2005	SOIL	523349.8398	5497017.71	NAD 83 UTM ZONE 11N
SXL23 10+50E	22/07/2005	SOIL	524310.8853	5496728.541	NAD 83 UTM ZONE 11N
SXL23 10+50W	21/07/2005	SOIL	523329.1997	5497029.592	NAD 83 UTM ZONE 11N
SXL23 10+75E	22/07/2005	SOIL	524312.6309	5496705.263	NAD 83 UTM ZONE 11N
SXL23 10+75W	21/07/2005	SOIL	523308.067	5497040.628	NAD 83 UTM ZONE 11N
SXL23 11+00E	22/07/2005	SOIL	524315.0621	5496682.042	NAD 83 UTM ZONE 11N
SXL23 11+00W	21/07/2005	SOIL	523288.0398	5497053.498	NAD 83 UTM ZONE 11N
SXL23 11+25E	22/07/2005	SOIL	524317.4881	5496658.82	NAD 83 UTM ZONE 11N
SXL23 11+25W	21/07/2005	SOIL	523273.428	5497071.027	NAD 83 UTM ZONE 11N
SXL23 11+50E	22/07/2005	SOIL	524319.9109	5496635.598	NAD 83 UTM ZONE 11N
SXL23 11+50W	21/07/2005	SOIL	523269.3249	5497094.454	NAD 83 UTM ZONE 11N
SXL23 11+75E	22/07/2005	SOIL	524322.5893	5496612.415	NAD 83 UTM ZONE 11N
SXL23 11+75W	21/07/2005	SOIL	523266.7333	5497118.147	NAD 83 UTM ZONE 11N
SXL23 12+00E	22/07/2005	SOIL	524326.8321	5496589.46	NAD 83 UTM ZONE 11N
SXL23 12+00W	21/07/2005	SOIL	523265.8099	5497141.804	NAD 83 UTM ZONE 11N
SXL23 12+25E	22/07/2005	SOIL	524339.8642	5496570.316	NAD 83 UTM ZONE 11N
SXL23 12+25W	21/07/2005	SOIL	523273.2921	5497164.404	NAD 83 UTM ZONE 11N
SXL23 12+50E	22/07/2005	SOIL	524355.0641	5496552.6	NAD 83 UTM ZONE 11N
SXL23 12+50W	21/07/2005	SOIL	523282.7956	5497186.261	NAD 83 UTM ZONE 11N
SXL23 12+75E	22/07/2005	SOIL	524372.0872	5496536.8	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL23 12+75W	21/07/2005	SOIL	523295.8114	5497206.114	NAD 83 UTM ZONE 11N
SXL23 13+00E	22/07/2005	SOIL	524393.6382	5496528.071	NAD 83 UTM ZONE 11N
SXL23 13+00W	21/07/2005	SOIL	523310.0941	5497225.204	NAD 83 UTM ZONE 11N
SXL23 13+25E	22/07/2005	SOIL	524416.5296	5496523.478	NAD 83 UTM ZONE 11N
SXL23 13+25W	21/07/2005	SOIL	523324.1138	5497244.484	NAD 83 UTM ZONE 11N
SXL23 13+50E	22/07/2005	SOIL	524439.5365	5496519.526	NAD 83 UTM ZONE 11N
SXL23 13+50W	21/07/2005	SOIL	523337.136	5497264.264	NAD 83 UTM ZONE 11N
SXL23 13+75E	22/07/2005	SOIL	524462.6266	5496516.068	NAD 83 UTM ZONE 11N
SXL23 13+75W	21/07/2005	SOIL	523346.3407	5497286.257	NAD 83 UTM ZONE 11N
SXL23 14+00E	22/07/2005	SOIL	524485.7374	5496512.748	NAD 83 UTM ZONE 11N
SXL23 14+00W	21/07/2005	SOIL	523355.771	5497308.155	NAD 83 UTM ZONE 11N
SXL23 14+25E	22/07/2005	SOIL	524508.8741	5496509.62	NAD 83 UTM ZONE 11N
SXL23 14+25W	21/07/2005	SOIL	523362.9659	5497330.707	NAD 83 UTM ZONE 11N
SXL23 14+50E	22/07/2005	SOIL	524532.0197	5496509.009	NAD 83 UTM ZONE 11N
SXL23 14+50W	21/07/2005	SOIL	523357.9657	5497353.27	NAD 83 UTM ZONE 11N
SXL23 14+75E	22/07/2005	SOIL	524554.528	5496514.953	NAD 83 UTM ZONE 11N
SXL23 14+75W	21/07/2005	SOIL	523346.8366	5497374.299	NAD 83 UTM ZONE 11N
SXL23 15+00E	22/07/2005	SOIL	524575.9915	5496524.142	NAD 83 UTM ZONE 11N
SXL23 15+00W	21/07/2005	SOIL	523350	5497397	NAD 83 UTM ZONE 11N
SXL23 15+25E	22/07/2005	SOIL	524597.3249	5496533.629	NAD 83 UTM ZONE 11N
SXL23 15+25W	21/07/2005	SOIL	523319.2954	5497414.592	NAD 83 UTM ZONE 11N
SXL23 15+50E	22/07/2005	SOIL	524618.55	5496543.317	NAD 83 UTM ZONE 11N
SXL23 15+50W	21/07/2005	SOIL	523301.1142	5497432.104	NAD 83 UTM ZONE 11N
SXL23 15+75E	22/07/2005	SOIL	524637.2433	5496557.19	NAD 83 UTM ZONE 11N
SXL23 15+75W	21/07/2005	SOIL	523283.8575	5497450.513	NAD 83 UTM ZONE 11N
SXL23 16+00E	22/07/2005	SOIL	524654.8319	5496572.545	NAD 83 UTM ZONE 11N
SXL23 16+00W	21/07/2005	SOIL	523272.0808	5497472.02	NAD 83 UTM ZONE 11N
SXL23 16+25E	22/07/2005	SOIL	524672.8475	5496587.39	NAD 83 UTM ZONE 11N
SXL23 16+25W	21/07/2005	SOIL	523266.2633	5497496.03	NAD 83 UTM ZONE 11N
SXL23 16+50E	22/07/2005	Soil	524687	5496604	NAD 83 UTM ZONE 11N
SXL23 16+50W	21/07/2005	SOIL	523243.2268	5497486.915	NAD 83 UTM ZONE 11N
SXL23 16+75E	22/07/2005	Soil	524703	5496623	NAD 83 UTM ZONE 11N
SXL23 16+75W	21/07/2005	SOIL	523218.6306	5497481.292	NAD 83 UTM ZONE 11N
SXL23 17+00E	21/07/2005	SOIL	524719	5496640	NAD 83 UTM ZONE 11N
SXL23 17+00W	21/07/2005	SOIL	523194.2169	5497475.555	NAD 83 UTM ZONE 11N
SXL23 17+25E	21/07/2005	SOIL	524739.3126	5496647.461	NAD 83 UTM ZONE 11N
SXL23 17+25W	21/07/2005	SOIL	523170.4012	5497467.296	NAD 83 UTM ZONE 11N
SXL23 17+50E	21/07/2005	SOIL	524762.8649	5496650.792	NAD 83 UTM ZONE 11N
SXL23 17+50W	21/07/2005	SOIL	523147.0552	5497457.695	NAD 83 UTM ZONE 11N
SXL23 17+75E	21/07/2005	SOIL	524786.66	5496653.321	NAD 83 UTM ZONE 11N
SXL23 17+75W	21/07/2005	SOIL	523123.7092	5497448.095	NAD 83 UTM ZONE 11N
SXL23 18+00E	21/07/2005	SOIL	524810.5533	5496654.577	NAD 83 UTM ZONE 11N
SXL23 18+00W	21/07/2005	SOIL	523100.5533	5497438.058	NAD 83 UTM ZONE 11N
SXL23 18+25E	21/07/2005	SOIL	524834.4803	5496654.993	NAD 83 UTM ZONE 11N
SXL23 18+25W	21/07/2005	SOIL	523076.6757	5497429.877	NAD 83 UTM ZONE 11N
SXL23 18+50E	21/07/2005	SOIL	524858.2266	5496652.8	NAD 83 UTM ZONE 11N
SXL23 18+50W	21/07/2005	SOIL	523052.7315	5497421.884	NAD 83 UTM ZONE 11N
SXL23 18+75E	21/07/2005	SOIL	524881.3644	5496646.698	NAD 83 UTM ZONE 11N
SXL23 18+75W	21/07/2005	SOIL	523029.9273	5497411.592	NAD 83 UTM ZONE 11N
SXL23 19+00E	21/07/2005	SOIL	524904.4098	5496640.235	NAD 83 UTM ZONE 11N
SXL23 19+00W	21/07/2005	SOIL	523011.3567	5497394.614	NAD 83 UTM ZONE 11N
SXL23 19+25E	21/07/2005	SOIL	524927.5081	5496633.979	NAD 83 UTM ZONE 11N
SXL23 19+25W	21/07/2005	SOIL	522994.1397	5497376.168	NAD 83 UTM ZONE 11N
SXL23 19+50E	21/07/2005	SOIL	524951.178	5496630.973	NAD 83 UTM ZONE 11N
SXL23 19+50W	21/07/2005	SOIL	522973.2918	5497362.334	NAD 83 UTM ZONE 11N
SXL23 19+75E	21/07/2005	SOIL	524975.0692	5496632.352	NAD 83 UTM ZONE 11N
SXL23 19+75W	21/07/2005	SOIL	522951.1928	5497350.135	NAD 83 UTM ZONE 11N
SXL23 20+00E	21/07/2005	SOIL	524998.8956	5496634.547	NAD 83 UTM ZONE 11N
SXL23 20+00W	21/07/2005	SOIL	522929.7527	5497336.915	NAD 83 UTM ZONE 11N
SXL23 20+25E	21/07/2005	SOIL	525021.4519	5496642.154	NAD 83 UTM ZONE 11N
SXL23 20+25W	21/07/2005	SOIL	522910.3526	5497320.771	NAD 83 UTM ZONE 11N
SXL23 20+50E	21/07/2005	SOIL	525043.4067	5496651.667	NAD 83 UTM ZONE 11N
SXL23 20+50W	21/07/2005	SOIL	522892.0658	5497303.39	NAD 83 UTM ZONE 11N

SAMPLE NUMBER	DATE	SAMPLE TYPE	UTM X	UTM Y	UTM ZONE
SXL23 20+75E	21/07/2005	SOIL	525065.5465	5496660.752	NAD 83 UTM ZONE 11N
SXL23 20+75W	21/07/2005	SOIL	522874.0296	5497285.729	NAD 83 UTM ZONE 11N
SXL23 21+00E	21/07/2005	SOIL	525078.7214	5496680.22	NAD 83 UTM ZONE 11N
SXL23 21+00W	21/07/2005	SOIL	522854.733	5497271.651	NAD 83 UTM ZONE 11N
SXL23 21+25E	21/07/2005	SOIL	525090.1575	5496701.023	NAD 83 UTM ZONE 11N
SXL23 21+25W	21/07/2005	SOIL	522829.6949	5497274.19	NAD 83 UTM ZONE 11N
SXL23 21+50E	21/07/2005	SOIL	525098.3591	5496722.258	NAD 83 UTM ZONE 11N
SXL23 21+50W	21/07/2005	SOIL	522812.0945	5497289.401	NAD 83 UTM ZONE 11N
SXL23 21+75E	21/07/2005	SOIL	525105.5383	5496745.09	NAD 83 UTM ZONE 11N
SXL23 21+75W	21/07/2005	SOIL	522798.7489	5497310.815	NAD 83 UTM ZONE 11N
SXL23 22+00E	21/07/2005	SOIL	525112.7175	5496767.923	NAD 83 UTM ZONE 11N
SXL23 22+00W	21/07/2005	SOIL	522784.0281	5497331.311	NAD 83 UTM ZONE 11N
SXL23 22+25E	21/07/2005	SOIL	525120.252	5496790.636	NAD 83 UTM ZONE 11N
SXL23 22+25W	21/07/2005	SOIL	522769.6574	5497352.06	NAD 83 UTM ZONE 11N
SXL23 22+50E	21/07/2005	SOIL	525131.5113	5496811.68	NAD 83 UTM ZONE 11N
SXL23 22+50W	21/07/2005	SOIL	522755.5848	5497373.007	NAD 83 UTM ZONE 11N
SXL23 22+75E	21/07/2005	SOIL	525146.592	5496830.266	NAD 83 UTM ZONE 11N
SXL23 22+75W	21/07/2005	SOIL	522756.1329	5497397.7	NAD 83 UTM ZONE 11N
SXL23 23+00E	21/07/2005	SOIL	525161.5775	5496848.923	NAD 83 UTM ZONE 11N
SXL23 23+00W	21/07/2005	SOIL	522754.3211	5497422.664	NAD 83 UTM ZONE 11N
SXL23 23+25E	21/07/2005	SOIL	525180.1284	5496863.388	NAD 83 UTM ZONE 11N
SXL23 23+25W	21/07/2005	SOIL	522748.7688	5497447.275	NAD 83 UTM ZONE 11N
SXL23 23+50E	21/07/2005	SOIL	525202.3474	5496871.798	NAD 83 UTM ZONE 11N
SXL23 23+50W	21/07/2005	SOIL	522734.4022	5497466.755	NAD 83 UTM ZONE 11N
SXL23 23+75E	21/07/2005	SOIL	525218.2811	5496889.418	NAD 83 UTM ZONE 11N
SXL23 23+75W	21/07/2005	SOIL	522714.177	5497481.859	NAD 83 UTM ZONE 11N
SXL23 24+00E	21/07/2005	SOIL	525237.8358	5496903.215	NAD 83 UTM ZONE 11N
SXL23 24+00W	21/07/2005	SOIL	522693.3999	5497496.182	NAD 83 UTM ZONE 11N
SXL23 24+25E	21/07/2005	SOIL	525257.5993	5496916.715	NAD 83 UTM ZONE 11N
SXL23 24+25W	22/07/2005	SOIL	522674.7927	5497513.206	NAD 83 UTM ZONE 11N
SXL23 24+50E	21/07/2005	SOIL	525277.3415	5496930.244	NAD 83 UTM ZONE 11N
SXL23 24+50W	22/07/2005	SOIL	522657.837	5497531.884	NAD 83 UTM ZONE 11N
SXL23 24+75E	21/07/2005	SOIL	525296.2432	5496931.414	NAD 83 UTM ZONE 11N
SXL23 24+75W	22/07/2005	SOIL	522641.4968	5497551.111	NAD 83 UTM ZONE 11N
SXL23 25+00E	21/07/2005	SOIL	525313.3397	5496914.679	NAD 83 UTM ZONE 11N
SXL23 25+00W	22/07/2005	SOIL	522624.8614	5497569.833	NAD 83 UTM ZONE 11N
SXL23 25+25E	21/07/2005	SOIL	525330.2161	5496897.709	NAD 83 UTM ZONE 11N
SXL23 25+25W	22/07/2005	SOIL	522603.2356	5497582.761	NAD 83 UTM ZONE 11N
SXL23 25+50E	21/07/2005	SOIL	525345.4988	5496879.3	NAD 83 UTM ZONE 11N
SXL23 25+50W	22/07/2005	SOIL	522580.9133	5497594.548	NAD 83 UTM ZONE 11N
SXL23 25+75E	21/07/2005	SOIL	525358.2602	5496859.061	NAD 83 UTM ZONE 11N
SXL23 25+75W	22/07/2005	SOIL	522558.6092	5497606.368	NAD 83 UTM ZONE 11N
SXL23 26+00E	21/07/2005	SOIL	525370.4837	5496838.496	NAD 83 UTM ZONE 11N
SXL23 26+00W	22/07/2005	SOIL	522536.5599	5497618.624	NAD 83 UTM ZONE 11N
SXL23 26+25E	21/07/2005	SOIL	525378.1853	5496816.197	NAD 83 UTM ZONE 11N
SXL23 26+25W	22/07/2005	SOIL	522513.1813	5497628.144	NAD 83 UTM ZONE 11N
SXL23 26+50E	21/07/2005	SOIL	525384	5496790	NAD 83 UTM ZONE 11N
SXL23 26+50W	22/07/2005	SOIL	522489.8026	5497637.665	NAD 83 UTM ZONE 11N
SXL23 26+75W	22/07/2005	SOIL	522466.7889	5497647.972	NAD 83 UTM ZONE 11N
SXL23 27+00W	22/07/2005	SOIL	522447.7743	5497664.249	NAD 83 UTM ZONE 11N
SXL23 27+25W	22/07/2005	SOIL	522429.9179	5497682.091	NAD 83 UTM ZONE 11N
SXL23 27+50W	22/07/2005	SOIL	522412.0615	5497699.934	NAD 83 UTM ZONE 11N
SXL23 27+75W	22/07/2005	SOIL	522392.2501	5497715.407	NAD 83 UTM ZONE 11N
SXL23 28+00W	22/07/2005	SOIL	522370.7298	5497728.594	NAD 83 UTM ZONE 11N
SXL23 28+25W	22/07/2005	SOIL	522350.0562	5497742.904	NAD 83 UTM ZONE 11N
SXL23 28+50W	22/07/2005	SOIL	522335.3294	5497763.329	NAD 83 UTM ZONE 11N
SXL23 28+75W	22/07/2005	SOIL	522321.2236	5497784.263	NAD 83 UTM ZONE 11N
SXL23 29+00W	22/07/2005	SOIL	522307.1178	5497805.197	NAD 83 UTM ZONE 11N
SXL23 29+25W	22/07/2005	SOIL	522293.0121	5497826.131	NAD 83 UTM ZONE 11N
SXL23 29+50W	22/07/2005	SOIL	522279	5497847	NAD 83 UTM ZONE 11N

APPENDIX IV

PHOTO PLATE


EPL:TSX-V
Eagle Plains Resources Ltd.
Sphinx Property
Appendix IV - Compilation Photo
2005 and Historic Drilling
Sphinx Mountain
Eagle Plains Resources 100%
EPL 100%
Gray Creek
Powerline
Johnstone Option (EPL 100%)
Mo Soil Anomaly
Gray Creek Pass Road
Baker Creek
05-14
05-13
80-02
80-01
05-09
80-03
05-07
80-04
80-05
05-11
05-12
97-08
05-03
05-02
05-10
97-10
97-09
97-07
05-04
05-08
05-01
05-05
05-06
97-06
97-05
N
Legend
Diamond Drill Hole Collar
STATUS
COMPLETE 2005
HISTORIC
Status
Complete
Historic
PowerLine
Claim Boundary
Soil Anomaly