

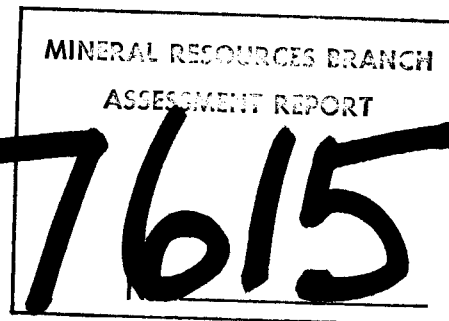
PROJECT PRINIC
GEOCHEMICAL REPORT ON URANIUM
IN STREAM SEDIMENTS FROM SOUTH
CENTRAL BRITISH COLUMBIA

N.T.S. 82E, L, 92H, I

by:

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Summary

Stream sediment geochemical data for uranium on 7401 samples from 5430 mi² of south central British Columbia have been computer plotted on 1:50,000 scale maps. In addition regional and residual uranium maps have been plotted at a scale of 1:125,000.

The regional uranium pattern shows that there is a correlation with the acid plutonic rocks of the area. Marked regional anomalies occur over nearly every age of granitic rock, however the Jurassic-Cretaceous and Tertiary intrusions appear to be more uraniumiferous. Northeast U trends dominate in the Okanagan batholith and occur also in the Shorts Creek and Pennask batholiths. North-south positive trends are common in the Similkameen and Nicola batholiths; northwest trends occur over the Shorts Creek and Eagle batholiths and Summers Creek stock. Finally east-west trends are apparent in the Pennask and Okanagan batholiths. Triassic Nicola Group volcanics are related to areas regionally low in uranium and Eocene volcanic-sedimentary basins frequently fringe many of the regionally high U areas associated with the granitic rocks. Such areas should be considered very favourable for uranium prospecting as there has been a plentiful source of uranium originating from the granitic rocks.

A total of 135 residual U anomalies have been outlined and rated; 22 have been designated as 1st class, 43 as 2nd class and 70 as 3rd class anomalies.

Staking has been recommended on available ground covering the 1st class anomalies. Initial follow-up work involving detail stream sediment, water, heavy minerals and rock sampling plus prospecting and geological mapping is recommended over the 1st and 2nd class anomalies.

Waters should be tested for pH and specific conductivity prior to shipping them to the laboratory for U analyses; all other sampled materials are to be analyzed geochemically for uranium.

PROJECT PRINIC REPORT ON
URANIUM IN STREAM SEDIMENTS
FROM SOUTH CENTRAL BRITISH COLUMBIA
(Canadian Oxy - E and B Joint Venture)

Introduction

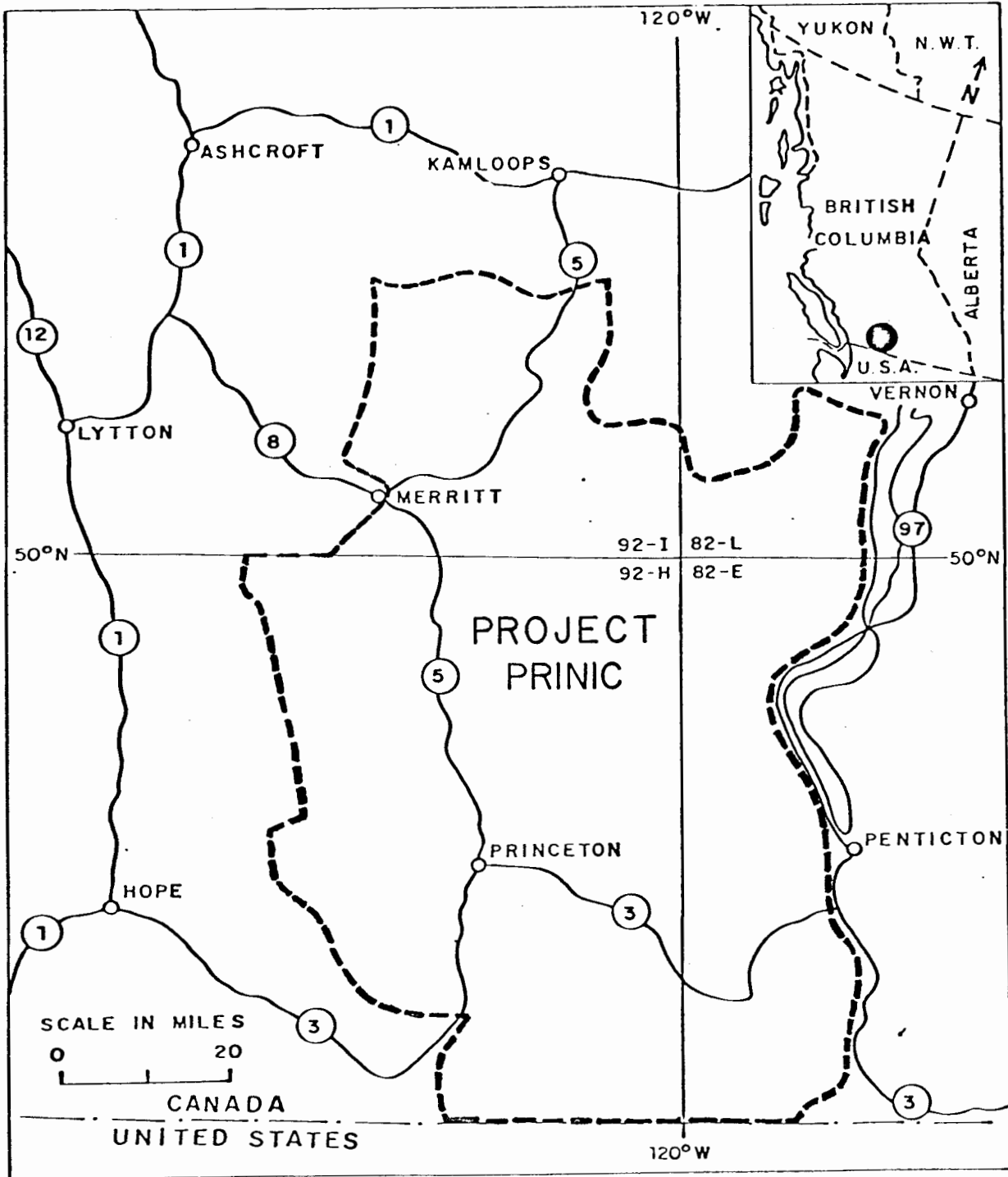
In 1973 and 1974 Canadian Occidental Petroleum (CanOxy) Ltd., Minerals Division, carried out a regional stream sediment survey covering some 5430 mi² (14,063 km²) in south-central British Columbia. Initially a total of 7850 samples were taken and analyzed geochemically for Cu, Zn and Mo (Wallis et al)*.

This year a joint venture agreement was made between Canadian Oxy and E and B Explorations Limited to explore the area for uranium. As a result 7401 of the original samples were analyzed geochemically for uranium. These data have been computer processed and plotted. These results and their economic implications will be discussed in this report.

Location

The project area lies between latitudes 49°00' north and 50°40' north and longitudes 119°30' west and 102°05' west. It covers all or parts of N.T.S. sheets 82E and L, 92H and I (Figure 1).

*Wallis, R.H., Brummer, J.J. and Gleeson, C.F. (1978) Geological Implications of Regional Stream Sediment Geochemical Data from South-Central British Columbia, CIMM.Bull., May, 1978



CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION
LOCATION MAP
PROJECT PRINIC

Figure 1

Access

In this region of British Columbia the network of roads generally follows the drainage system. The eastern limit of the project area is bounded by Highways 97 and 3A and Highways 5 and 1 giving access to the west and northern part of the area. A multitude of logging and mining roads provide access up many of the major rivers and streams.

Climate and Vegetation

At low elevations the winters are mild with little snowfall, e.g. Penticton has a January mean average temperature of 0°C and a total winter snowfall of 40 cms. (15 inches): however, above 4000 feet (1200 meters) snow remains on the ground until early June. Summer temperatures in the valleys may rise to over 35°C, but snowfalls have been recorded in all months at Apex Mountain (elevation 7372 feet, 2211 meters).

Forest growth is dependent on aspect and elevation. The valleys have sparse tree cover due to lack of moisture, e.g. the mean annual precipitation at Penticton is 10 inches (25 cms.), and there are extensive grasslands about Nicola Lake. Similarly, many south-facing slopes are almost devoid of tree cover. The tree line is at an elevation of about 6000 feet (1800 meters).

Physiography

The project area includes two major components of the Canadian Cordillera, the Thompson Plateau and the Cascade Mountains. At the U.S. border the Thompson Plateau is virtually pinched out between the Okanagan Highlands and Cascade Mountains, but from the Similkameen valley northwards the plateau widens until it eventually occupies the entire width from the Okanagan to the Fraser valley, a distance of 80 miles (128 kms.).

The Thompson Plateau consists of rolling uplands separated from each other by deep valleys; the elevation and ruggedness of the plateau increase to the south where the upland surface rises towards the mountains.

The Cascade Mountains, which make up the southwestern part of the project area, are grouped into three main ranges, the drainage of two of which, the Okanagan and the Hozameen, were sampled in this study. The greatest differential in elevation is between the Similkameen valley, 1200 feet (360 meters) above sea level and Snowy Mountain, 8507 feet (2552 meters) above sea level, a difference of 7300 feet (2190 meters). Ninety percent of the area is drained by three river systems, the Nicola, the Similkameen, and the Okanagan.

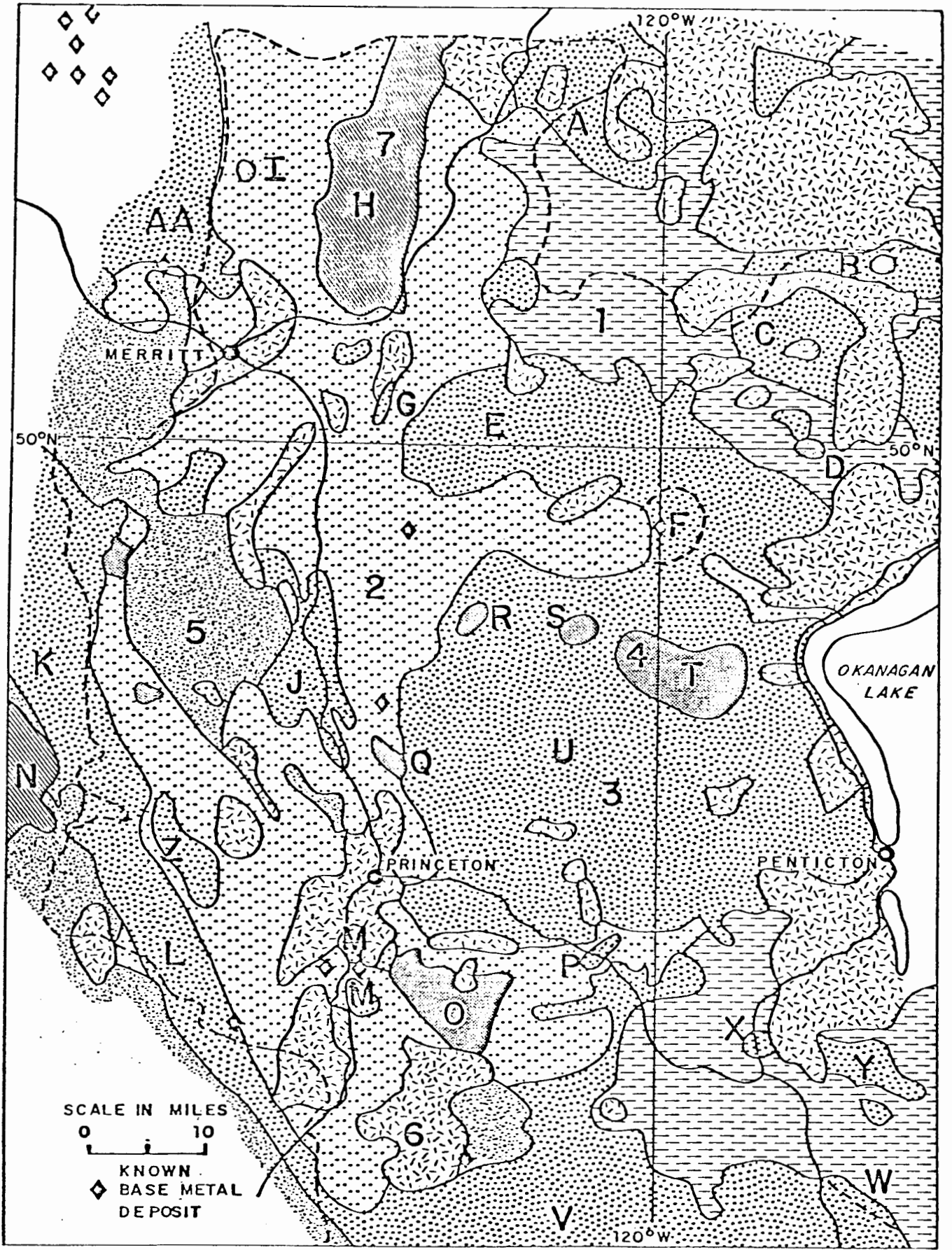
Glaciation

The entire Interior Plateau appears to have been covered by ice which moved onto it from both east and west; however, the major direction of ice transport was to the south. At its maximum development the ice overrode peaks as high as 8507 feet (2552 meters) on the northeast side of the Okanagan Range. The principal outlets for this ice were along the lower Similkameen valley and through gaps at the head of the Ashnola, Pasayten, and Similkameen Rivers.

During deglaciation the damming of these outlets and the slow melting of stagnant ice in the valleys caused the formation of a network of spillways which, coupled with the ice-dammed Fraser canyon to the west, caused the creation of numerous major lakes. Thus, varved silts and clays are conspicuous along the major valleys throughout the area and can be found to a height of almost 4000 feet (1200 meters) above present-day valleys.

Geology

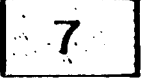
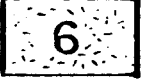
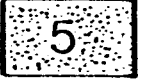
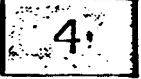


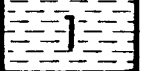
Geological Survey of Canada and the British Columbia Department of Mines maps provide excellent geological coverage of the project area. A series of compilation maps were assembled in 1973 by Canadian Oxy for this project; these involved a total of 47 major units and 68 minor units. For this report the regional stratigraphy has been condensed into major groups of plutonic rocks and volcanic-sedimentary sequences (see Table 1 and Fig. 2). Table 1 lists the sequences of volcanic and sedimentary units found in the



Generalized geology of south-central British Columbia

GEOLOGICAL LEGEND

FOR FIGURE 2

-  Tertiary Nicola Batholith
-  Tertiary sediments and volcanics
-  Cretaceous Kingsvale Group volcanics
-  Late Cretaceous intrusions
-  Late Triassic and Jurassic intrusions
-  Late Triassic Nicola Group volcanics
-  "Cache Creek" Group volcanics

Caption for Fig. 2 attached

Caption for Figure 2

- A Wild Horse batholith 200 m.y.
- B Whiteman Creek stock
- C Shorts Creek batholith
- D Whiterocks Mountain stock
- E Pennask batholith
- F Brenda stock 176 m.y.
- G Quilchena stock
- H Nicola batholith 60 m.y.
- I Rey Lake stock 67 m.y.
- J Allison Lake pluton 200 m.y.
- K Mt. Lytton batholith 98 m.y.
- L Eagle batholith 143-104 m.y.
- M Lost Horse-Copper Mountain stocks 200-194 m.y.
- N Needle Peak Pluton 39 m.y.
- O Verde Creek pluton 100 m.y.
- P Hedley gabbro 190-170 m.y.
- Q Summers Creek stock 97 m.y.
- R Siwash Creek stock
- S Trout Creek stock
- T Valhalla pluton 133 m.y.
- U Okanagan batholith 183-141 m.y.
- V Similkameen batholith 170-149 m.y.
- W Kruger syenite 191-177 m.y.
- X Ollala stock 179 m.y.
- Y Oliver stock 144 m.y.
- Z Tulameen ultramafic 204-175 m.y.
- AA Guichon Creek batholith 198 m.y.

+ geological legend

Table 1

Period	Epoch	Intrusive Rocks	Layered Rocks
Late Tertiary	Pliocene (2-10 m.y.)		Plateau basalts
	Oligocene (20-40 m.y.)	Needle Peak pluton (39 m.y.)	
Early Tertiary	Late Eocene (40 m.y.)		Kamloops Group volcanics
	Middle Eocene	Coryell stocks (55 m.y.)	
	Early Eocene (55 m.y.)		Coldwater Formation sediments
	Early Eocene	Nicola batholith (60 m.y.) Rey Lake stock (67 m.y.)	
Late & Early Cretaceous	(110-85 m.y.)		Kingsvale Group volcanics Spences Bridge Group volcanics Pasayten Group sediments Jackass Mountain Group sediments
Late Cretaceous	(135-65 m.y.)	Otter Lake stocks Lightning Creek stock Trout Creek stock Siwash Creek stock Whiteman Creek stock Summers Creek stock (97 m.y.) Rommel batholith (in part) Valhalla pluton (133 m.y.) Mt. Lytton batholith (98 m.y.) Verde Creek pluton (100 m.y.) McBride Creek stock (post 80 m.y.) Whipsaw Creek porphyries (post 104 m.y.)	
Late & Middle Jurassic	(140-160 m.y.)		Dewdney Creek Group - sediments Ladner Formation - sediments
Late & Middle Jurassic	(175-140 m.y.)	Okanagan batholith (141-183 m.y.) Pennask batholith Eagle batholith (104-143 m.y.) Similkameen batholith (149-170 m.y.) Shorts Creek batholith Brenda stock (176 m.y.) Hedley stock (156 m.y.)	
Late Triassic-Early Jurassic	(215-175 m.y.)	Guichon Creek batholith (198 m.y.) Allison Lake pluton (200 m.y.) Wild Horse batholith (200 m.y.) Quilchena stock	
		Tulameen Complex (204-175 m.y.) Iron Mask batholith (176 m.y.) Lost Horse stocks (204-194 m.y.) Kruger alkali syenite (177-191 m.y.) Ollala alkali complex (179- m.y.) Hedley gabbro-diorite (170-190 m.y.)	
Late Triassic	(205-210 m.y.)		Nicola Group volcanics
Pennsylvanian-Permian	(330-250 m.y.)		"Cache Creek" & equivalents volcanics and sediments

11

project area and tabulates the numerous episodes of igneous activity which have a 200 m.y. time span. The names and age of the various intrusions are given in the caption to Fig. 2.

In the following discussion in which the regional stream sediment geochemistry is related to bedrock geology, only seven units in Table 1 are volumetrically important.

These are:

- (7) Tertiary Nicola Batholith
- (6) Tertiary Sediments and volcanics
- (5) Cretaceous Kingsvale Group volcanics
- (4) Late Cretaceous intrusions
- (3) Late Triassic and Jurassic intrusions
- (2) Late Triassic Nicola Group volcanics
- (1) "Cache Creek" Group volcanics

The only rocks which are seriously deformed and metamorphosed are the pre-Upper Triassic "Cache Creek" rocks. Triassic Nicola rocks are only strongly deformed and metamorphosed at the batholithic margins, e.g. along the contact with the Eagle batholith, west of the Brenda stock, and in the Hedley area between the Similkameen and Okanagan batholiths. Elsewhere, the Nicola is gently folded and cut up into fault-bounded blocks. Later volcanic-sedimentary sequences are only slightly deformed except where involved in major faults, e.g. the Chuwanten or Pasayten Faults.

Much age data are now available on the plutonic rocks of the area (Figure 2). These together with cross-cutting and intrusive relationships have elucidated overall

intrusive sequence as documented in Table 1. The only major undated intrusion in the area is the batholith lying west of the northern part of Okanagan Lake, and this is assumed to be of similar age to the Okanagan batholith to the south.

The naming of the plutonic units is fraught with controversy. We have tried to retain the most common usage, and only in the case of the "Shorts Creek" batholith have we invoked a new and informal name.

Excellent descriptions of the rock types can be found in the various publications by the Geological Survey of Canada and the British Columbia Department of Mines, given in the reference list. The salient points are included in Table 1.

Mineral Deposits

The area contains two active mines, Brenda and Copper Mountain-Ingerbelle (Figure 3) as well as former gold mines near Hedley and many mineral occurrences.

The Brenda is a porphyry Cu-Mo deposit within a Jurassic granodiorite stock with reserves of 180 million tons grading 0.18% Cu and 0.05% Mo. The porphyry copper deposits at Copper Mountain occur in a roof pendant of late Triassic Nicola volcanics which is bounded by Copper Mountain (Early Jurassic) diorite syenite intrusions. The Ingerbelle deposit contains 76 million tons of 0.50% Cu and Copper Mountain has 35 million tons of 1.08% Cu.

Near Hedley, gold was mined from 1904 to the early 1960s. The deposits occurred in skarnified Triassic sediments which have been intruded by Jurassic diorite and gabbro.

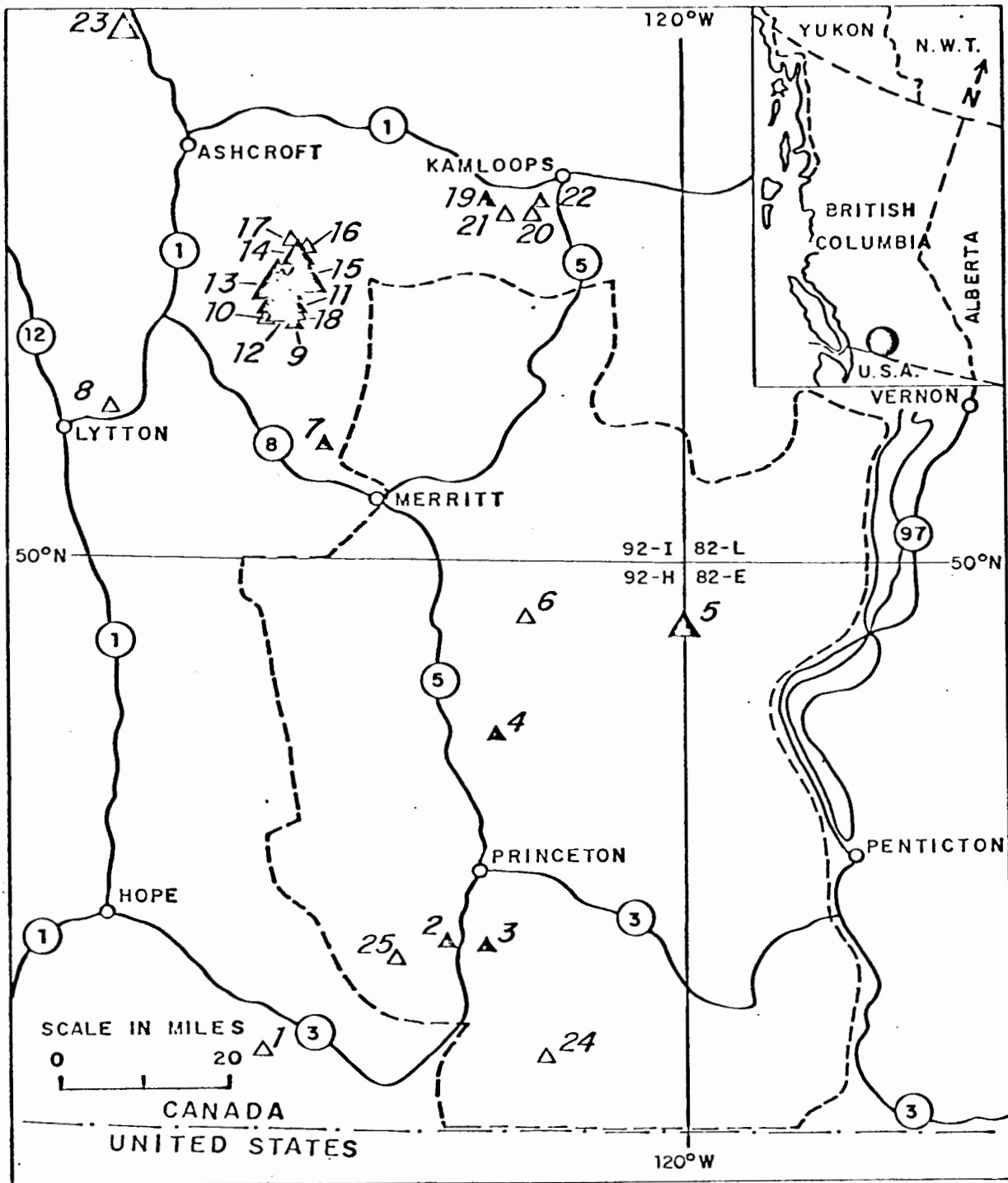


FIG. 3

Location of project area, including location of known mines and deposits and their contained equivalent copper content

Caption to Accompany Fig. 3

No.	Property Name	Size (million tons) (Tonnage Mined & Reserves*)			Contained equivalent copper content (tons) 1 lb. Mo = 4.54 lbs. Cu. Equivalent
		M. tons	%Cu	%Mo	
1)	Canam (Giant Copper)	8	0.61	-	48,800 tons
2)	Ingerbelle	76	0.50	-	378,000
3)	Copper Mountain	35	1.08	-	378,000
4)	Axe (Adonis)	50	0.45	0.012	257,000
5)	Brenda	180	0.184	0.05	742,480
6)	Primer (Pyramid)	23	0.2	-	46,000
7)	Craigmont	31	1.5	-	469,176
8)	Lytton	5	0.62	-	31,000
9)	Ann	48	0.27	-	129,000
0)	Highmont	150	0.51	equivalent	765,000
1)	Lornex	465	0.41	0.014	2,183,856
2)	Alwin (O.K.)	1.1	2.33	-	25,630
3)	Valley Copper	850	0.48	-	4,080,000
4)	Bethlehem	115	0.97	-	542,248
5)	J.A.	286	0.43	0.017	1,453,439
6)	South Seas	17	0.35	-	59,000
7)	Krain	14	0.56	-	90,000
8)	Minex	36	0.2	-	72,000
9)	Afton	34	1.0	-	340,000
0)	Ajax	10	0.8	-	80,000
1)	Galaxy	6	0.58	-	34,000
2)	Rainbow	20	0.55	-	110,000
3)	Maggie	200	0.4	equivalent	800,000
4)	Ash-Nola	20	0.15	-	30,000
5)	Whipsaw	100	0.21	-	210,000

*Reserves at Dec. 31st, 1975, or latest available from published reports.
 Large filled triangles equal greater than 1,000,000 tons contained equivalent copper content (c.e.c.c.)
 Medium filled triangles equal 500,000-1,000,000 tons c.e.c.c.
 Small filled triangles equal 100,000-500,000 tons c.e.c.c.
 Small open triangles equal less than 100,000 tons c.e.c.c.

c.e.c.c. = contained equivalent copper content

There are no known U deposits in the project area. However, 12-15 miles southeast of Kelowna, near Hydraulic Lake, uranium deposits have been found at the base of Tertiary sedimentary basins capped by Eocene volcanics. The most promising deposit found to date appears to be on the Blizzard property located some 15 miles southeast of Hydraulic Lake, it reportedly contains 1.8 million tons grading 5.5 lbs. U_3O_8 per ton.

Models of uranium emplacement for the project area include the following:

Deuteric granites - intragranitic veins

Deuteric granites - veins in contact aureoles
(or roof pendant related)

Deuteric granites - skarns - tactites

Tertiary and Cretaceous volcanics on granitoids -
unconformity related.

Tertiary fluviatile sediments - leaching from granitoids

Granitoids, low grade - high tonnage, porphyry
uranium type.

Dykes, high background uranium

Faults, deep leaching of fertile granitoids

Geochemical Survey

Field Procedure

In the ideal case sediment samples were collected from the centre of active streams but because of the arid climate many samples were taken from dry gullies or stream beds. A sample density of 1.4 per square mile (0.6 per sq. km.)

was partly determined by the logistics of working in a heavily forested area which necessitated foot traversing of almost all the streams. The best cost-time effective compromise was found to occur with a sampling interval of half a mile (0.8 km.) at which the ratio of time spent walking to sampling was 4:1.

When the helicopter was used, samplers were taken to their respective streams; the Party Chief then spent the remainder of the day "chopper hopping" above the tree line. Production was as follows: 8 samples per man/day from truck; 15 samples per man/day from helicopter; "chopper hopping", 26 samples per hour.

Samples were placed in pre-numbered Kraft envelopes, the sample number being also the station number. Stream and sample characteristics, together with N.T.S. co-ordinates and sample number, were entered on a sample card composed of an 80-character basis. The samples were air-dried and sieved to -80 mesh by Bondar-Clegg and Company Ltd. in Vancouver. All sample locations were plotted on 1:50,000 cronaflex topographic drainage maps provided by Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa. Copies of these maps accompany this report.

Laboratory Procedure

The samples were analyzed for U by Atomic Energy of Canada Ltd., Ottawa, using a neutron activation delayed neutron counting technique. This method has the advantage of being non-destructive. However, it does record total uranium, that is, uranium bound in resistate minerals as

as well as that present in more soluble forms.

Computer Procedure

The computation stages were carried out by Luciano Martin of C.A.S.E. (Computer Applications and Systems Engineering) of Toronto, using methods and programs which he has developed.

The data from the field cards and the analytical results were transferred to punched cards using an I.B.M. 29. The 1:50,000 scale field maps provided the positional data, the co-ordinates of all samples were digitized with an Instronics Gradicon and a Coradi co-ordinatograph. An independent origin was established on each 1:50,000 sheet and all positions on that sheet were related to it. An I.B.M. 370/168 computer was then employed to convert the digitized co-ordinates to standard U.T.M. values and merged with the corresponding field and analytical data.

The weighted, moving-average technique was then applied to separate the regional and residual components. This was accomplished as follows: At a given point on the map a search was made of all the samples enclosed by a circular window of radius 5 kms. (3.1 miles) centred at that point. The size of the search radius is determined by including a set minimum number of samples; if the search area fails to reach the minimum number the search radius at that point is increased. The computation positions were selected on a regular east-west, north-south grid lattice, spaced at 2.5 kms. (1.55 mile) in both directions. This

2.5 km. (1.55 mile) interval allows a 50% overlap of search windows in both east-west and north-south directions. The size of the search window, and hence of the lattice spacing, is determined by a step by step iterative basis to reach the best compromise between regional clarity and local detail. The particular window size and lattice spacing chosen is unique to any particular stream sediment study and the most important control is exercised by areas with the least complete sampling compared to the overall sampling density and by the complexity of local geological detail.

A weighted average of the values in each search area is then computed, with a maximum weight being set for samples close to the centre. These weighted, moving-average values at each search area approximate to the regional component.

The difference, at any one sample point, between the laboratory measured value and this computer generated regional value is the residual value. Maps of the residual values plotted at the original sample point are an exploration guide to specific geochemical anomalies within a given regional area; these have been computer plotted on a 1:125,000 scale base map and combined with the moving (regional) average map.

The regional component values were then contoured and plotted out by a Calcomp 748 flatbed plotter and specially prepared 1:125,000 base maps. The contour intervals were empirically chosen after a thorough study of the statistics.

No particular predetermined statistical parameter was used to choose contour intervals. The important criteria is the ability of the contours to illustrate metal distribution patterns; a compromise between clarity and clutter has to be accepted.

The measured values for U on 1:50,000 scale maps; the residual U values and contoured moving averages for U on 1:125,000 scale maps accompany this report. Background information on the regional distribution of Cu, Zn and Mo in this area can be found in the appended paper by Wallis et al, (1978)*

In addition to the above basic statistical parameters means and standard deviations were calculated and histograms and cumulative frequencies were calculated and plotted (Figure 4). A complete listing of computerized data can be found in the accompanying report from C.A.S.E.

Mean values were calculated for the total population (7401 samples) as well as for the "non-anomalous group". The cut-off for the latter was at the 95.5 percentile or 16 ppm; this procedure is carried out to normalize the distribution and to reduce the influence of extreme high values. A statistical summary of these parameters is presented in Table 2.

*Wallis, R.H. et al (1978) Op.Cit.

PROJECT PRINIC STREAM GEOCHEMISTRY

U HISTOGRAM AND CUMULATIVE FREQUENCY PERCENTAGES

INTERV PPM	FREQ.	CUM.FR	
	0.0		
0.50		0.0	
	0.78		*
0.60		0.78	
	0.51		*
0.70		1.30	
	0.80		*
0.80		2.09	
	1.11		**
0.90		3.20	
	1.97		***
1.00		5.17	
	6.34		*****
1.20		11.51	
	17.77		*****
1.60		29.28	
	14.05		*****
2.00		43.33	
	10.94		*****
2.50		54.28	
	9.86		*****
3.20		64.14	
	7.27		*****
4.00		71.41	
	6.00		*****
5.00		77.41	
	5.32		*****
6.30		82.73	
	4.59		*****
8.00		87.33	
	3.38		*****
10.00		90.70	
	2.68		*****
12.50		93.38	
	2.09		*****
16.00		95.47	
	1.50		**
20.00		96.97	
	0.89		*
25.00		97.87	
	0.70		*
31.50		98.57	
	0.42		
40.00		98.99	
	0.43		
50.00		99.42	
	0.19		
63.00		99.61	
	0.15		
80.00		99.76	
	0.07		
100.00		99.82	
	0.18		
999.90		100.00	

NUMBER OF SAMPLES = 7401

Table 2

Statistical Summary for Uranium⁽³⁾ in
Stream Sediments - South Central British Columbia

<u>Arith. Means</u>	<u>Std. Dev.</u>	<u>Geom. Means</u>	<u>Geom. Dev.</u>	<u>Range of Values</u>	<u>No. of Samples</u>
4.7 ⁽¹⁾	10	2.8	10.2	0.5-401	7401
3.3 ⁽²⁾	2.9	2.5	3.0	0.5-16	7066

(1) includes all samples

(2) includes 95.5% of the samples

(3) all values in ppm

Hence background for uranium in stream sediments from the area is 2.5 ppm (geometric mean) with a standard deviation of 3 ppm.

Results

Regional Uranium Trends:

Area A is in the south part of the map sheet. The 4 ppm contour outlines the Similkameen batholith (Jurassic granodiorite). Regional values over various phases of the pluton are as high as 14 ppm. There appears to be a north-south trend to the regional distribution of U over the western portion of the batholith. This corresponds to a similar regional trend found here for Mo and Zn (Wallis et al. 1978)*.

Area B is a northwest trending regional high of 4-5 ppm U overlying the north edge of an Upper Cretaceous granite stock (Summers Creek stock) east of Copper Mountain.

Area C this is the largest and most intense regional U anomaly in the project area. The 4 ppm contour outlines the

*Wallis, R.H., Brummer, J.J., and Gleeson C.F. (1978) Op.Cit.

Okanagan batholith (Jurassic granodiorite). Regional uranium values as high as and greater than 16 ppm outline various younger (Cretaceous) granite stocks and differentiated phases within the batholith. The southeast portion of Area "C" overlies Tertiary volcanics and sediments. Regional U trends over the batholith are northeasterly and more or less correspond to the Mo ones. (Wallis et al. 1978).

Area D is a northwest trending, low intensity (2-3 ppm) regional high which appears associated with an Eocene(?) porphyritic granite.

Area E represents a slight northwesterly trending regional increase (2-3 ppm) of uranium over Cretaceous granodiorite (Eagle batholith).

Area F is a small circular regional increase (2-5 ppm U) centred over a late Cretaceous granitic stock intruding Triassic Nicola Group volcanics.

Area G forms a circular regional high (2.5-4.5 ppm U) over a Late Cretaceous granite stock. There appears to be a positive east-west trend here linking Areas G, H and I.

Area H is a weak east-west trending regional anomaly (2.5-3 ppm U) underlain by Triassic Nicola Group volcanics, intruded by Triassic-Jurassic granodiorite (Allison Lake pluton) and flanked on its northeast side by Eocene volcanics and sediments.

Area I is another weak east-west oriented regional high (2-4 ppm) over Nicola Group volcanics intruded by a small stock of Jurassic granodiorite.

Area J is north and northeast of the Brenda Mine and it covers the southeast portion of the Pennask batholith (Jurassic quartz monzonite-granodiorite). Regional values vary from 4-10 ppm U and the anomaly is lobate in east-west and north-northeast directions.

Area K is a northwest elongated regional high outlined by the 4 ppm contour, maximum regional values are 10 ppm. The Shorts Creek Jurassic granodiorite batholith occurs here; it is overlain in part by Eocene sediments and volcanics.

Area L is a circular regional high (4-6 ppm U) outlining the Whiteman Creek Cretaceous granite stock. This granite intrudes the Shorts Creek batholith; Eocene volcanic and sedimentary rocks flank the stock to the north and south.

Area M is a circular regional high (4-10 ppm U) on the north edge of the Pennask batholith.

Area N lies west of M and it also is within the Pennask batholith; regional values for uranium range from 2 to 6 ppm. The trend appears to be northeast and Eocene volcanics and sediments are present on the north side of the anomaly.

Area O is another weak regional increase outlined by the 1.5 ppm contour and trending northeast. Triassic (Nicola Group) volcanics underlie the area and Eocene volcanic and sedimentary rocks bound it to the east.

Area P is similar to O, in that it is a low intensity (2 ppm) regional anomaly trending northeast. It overlies the southeastern end of the Guichon Creek batholith (Triassic-Jurassic granodiorite) which intrudes Nicola Group volcanics. Eocene sediments and volcanics occur in the vicinity of the east and southwest parts of P.

Area Q is a large north-south oriented regional U anomaly over the Nicola batholith (Tertiary). The edge of the batholith is outlined by the 4 ppm contour and regional U values reach a peak of 10 ppm over the centre of the batholith. An indentation in the top 1/3 of this regional high marks the position of a late east-west fault.

Area R is a regional high (3.5-9 ppm U) overlying a portion of the Triassic granodiorite batholith (Wildhorse) and flanked on its west side by Eocene volcanics and sediments.

Residual Uranium

All regional anomalies enclose positive residual uranium values. Anomalous areas have been outlined on the regional-residual U map and numbered sequentially starting in the southeast corner of the project area.

The residual anomalies have been rated and listed (Table 3). The evaluation of each anomaly has been made taking into account the areal extent of the anomaly, the range of values, the anomaly contrast and the geology, especially with regard to the proposed models for uranium emplacement mentioned earlier. Because of time and monetary restrictions, individual descriptions of each residual anomaly will not be attempted. Salient features of them are listed in Tables 3 and 4.

135 anomalous areas have been outlined of which 22 are designated as 1st class, 43 as 2nd class and 70 as 3rd class. The anomalies have been relisted on Table 4 in order of priority and remarks as to the availability of the ground for staking have been made.

There has been an upsurge of interest in the area since recent drilling results on the Blizzard property

Table 3

TABLE OF U ANOMALIES - PRINIC

<u>Anom. #</u>	<u>N.T.S.</u>	<u>Place Name</u>	<u>M.V.*</u>	<u>R.V.</u>	<u>REG.V.</u>	<u>GEOLOGY</u>	<u>R.</u>	<u>Remarks</u>
1	82E/4E	Lower Park Rill Cr.	5-27	12-19	7-8	Cret.-Jur.Grnd. (Nelson) fault ct. gns.cpt.	3 ⁺	Mo 2-4 GSC water 14.6 ppb U
2	82E/4E	Burnell Lake	7-105	22-99	7-8	Jur.grnd.Fairview	2 ⁺	52 Cu, 470 Zn, 25 Mo, G.S.C. water 3.7 ppb U
3	82E/4E	Blind Cr.	6-17	2-11	5	Jur.grnt-grnd. Olivier granite	3 ⁺	GSC water 9.1 ppb U
4	82E/4W	Snehumption Cr.	4-106	10-100	6	Jur-Cret.grnd. Similkameen	3 ⁺	275 Zn, 4-12 Mo; GSC 18-18 Mo, 5-20 U
5	"	Snowy Mtn.	8-10	2-6	4-5	Jur.grnd-syenite Perm.sedn-vlcc (Shoemaker)	3 ⁻	52 Cu
6	"	Flatiron Mtn.	709	2-4	4-5	Perm.sed.-vlcc (Old Tom-Shoemaker)	3 ⁻	75-82 Cu
7	"	Gillanders Cr.	5-19	3-14	5-6	Perm.seds-vlccs Shoemaker	3 ⁻	Cu-Mo-Zn-W anom.
8	"	Barrington Cr.	7-9	3-4	4-5	Perm.sed-volcc; Jur Cret.grnd (Similka- meen)	3 ⁺	GSC water <u>24</u> ppb U GSC 152 ppm Cu to N.W.
9	"	Keremeos Cr.	4-12	1-8	4-5	Eocene seds-volccs	2 ⁺	GSC water 2.3-2.4 ppb U
10	82E/5E	Park Rill Cr.	4-20	2-16	4-5	Eocene volcc-seds	1	GSC waters 2.5-8.9 ppb U 3-4 Mo
11	"	Mahonney Lake	7-9	3-5	5	Eocene vlcc fault ct. in Monashee gns	2	6 Mo; GSC seds have 12-18 Mo, 17-18 U in Kearns Cr.

12	82E/5E	Kearns Cr.	5-41	2-33	5-8	Eocene vlcc-seds	1	Indian Reserve GSC 2-12 ppb U water, 42 ppm U sed.
13	"	Shaha Cr.	4-13	1-8	6	Eocene vlcc-sed.	1	100-130 Cu; GSC water 2-12 ppb U
14	"	Marron Lake	7	2	5	Eocene vlcc-sed.	3	
15	"	Marron R.	8	2	5	Eocene vlcc-seds.	3 ⁺⁺	GSC water 8.6 ppb U, open
16	82E/5W	Clark Cr.	7-47	3-39	7-9	Eocene vlcc-seds, Jur.grnt.	1	52-56 Cu, 20Mo; GSC 8.9 ppb U water. <u>Stake</u>
17	"	Strayhorse Cr.	8-20	2-11	7-9	Jur.-Cret.grnt	3	2-6 Mo
18	"	Shatford Cr.	13	7	7	Jur.-grnd. (Nelson) Perm.vlcc-sed. (Independence)	3 ⁻	
19	"	Keremeos Cr.	7-8	1-2	3	Jur.grnd. (Similka- meen)	3 ⁻	203-Mo
20	"	Apex Mtn.	8016	3-11	4-5	Perm.vlcc-sed. (Independence) Jur.diorite (Hedley) Jur.grnd. (Similkameen)	3	230 Cu, 435 Zn, 5 Mo
21	"	Winters Cr.	7	2-3	4	Jur. grnd. Similkameen	3 ⁻	3 Mo
22	82E12E	Eneas Cr.	13-135	10-129	8-10	Jr.grnd.-Nelson	1	4-116 Mo, 69-76 Cu, GSC 5-13 ppb Uwater <u>Stake</u>
23	"	W.Summerland	5-28	1-23	6-7	Eocene vlcc-sed.	1	
24	"	Trout Cr.	12	5	7	Jur.grnd.-Eocene vlcc faulted N.W.	3	

25	82E/12E	I.R.1	6-47	2-38	7	Jur.diorite-grnd Eocene vlcc-NEfault	2	
25a	"	Mt. Nkwala	19			N.W.faulted Jur. grnd-Monashee gns.	2	GSCsed.185 U, 8.Mo; 39ppbU H2O
26	82E/12W	Skulaow Cr.	7-9	1-5	8	Jr.grnd	3 ⁻	
27	"	Shingle Cr.	10-46	7-37	10	Jur.grnd. in ct.in Eocene vlcc	2 ⁺	76 Cu
28	82E/12W	Riddle Cr.	8-14	105	9	Eocene vlcc over Jur.grnd.	1	GSC waters 2-6 ppb U, 79-170 W 132 Zn. <u>STAKE</u>
29	"	Isintok Cr.	6-18	1-8	9	Jur.grnd.Jura	3	3-8 Mo
30	"	Bull Cr. I	6-11	1-3	8	Jur.Grnd.(Nelson)	3	
31	"	Bull Cr. II	6-169	2-160	9	Jur.grnd.(Nelson)	1	50-64 Cu. <u>STAKE</u>
32	"	Agur Lk.	6-36	4-28	10	Jur.grnd(Nelson)	2	GSC seds 18-35U, 50 Mo Canoxy 34-46 U GSC waters 3-9 ppb U
33	"	Trout Cr.	5-24	1-16	8	Jur.diorite(Kirton)	3	
34	"	Bearpaw Cr.	6-38	4-22	9	Jur.grnd.(Nelson)	2 ⁻	140-540 Cu, 8Mo
35	"	Lost Chain Cr.	5-21	4-10	10	Jur.grnd.(Jura)	3	
36	"	Demuth	17-191	7-181	10	Jur.grnd.(Valhalla)	1	<u>Stake</u>
37	"	Darke Cr.	6-126	1-114	10-12	Jur.grnd(Valhalla)	1	<u>Stake</u>
38	"	Munro Lk	11-33	8-22	10	" " "	2	High Zn, Ag-Mo- Cu in GSC and Canoxy seds. MUN claims
39	"	Garnet Lk	4-42-3-34		7	Eocene grnt.porph (Coryell):Jur.grnd (Nelson)	2	GSC water 19ppb 8-176 Mo, 400-700 Zn

40	82E/12W	Upper Eneas Cr.	19-41	13-36	5	Jur.grnd(Nelson)	2 ⁺	89Cu,16 Mo; GSC 115 Cu, 180 Zn,38 U; 14 ppb U H20
41	82E/13W	Finlay Cr.	9-47	7-40	7	Jur.quartz monz. (McNulty)	2	134 Zn, 3Mo, 95 Cu
42	"	Peachland Cr.	18-66	14-62	4	Jur.grnd(Valhalla) Jur.diorite(Kirton)	2	57-207 Cu, 2-14 Mo
43	"	Upper Peachland Cr.	13	9	4	Jur.qtz monz. (McNulty)	3 ⁻	88 Cu, 4 Mo
44	"	Silver Lk.	11	6	5	"	3 ⁻	199 Cu, 470 Zn
45	"	Clover Cr.	11-20	3-10	10	"	3	
46	"	Lacoma Cr.	9-89	2-77	10	Crt.-Jur.grnd Valhalla	1	55-97 Cu,120- 139 Zn, 3-16 Mo GSC 49 U, H 20 3 ppb U
47	"	Trepanier Cr.	8-26	2-18	7	Cret.-Jur.grnd McNulty	3	<u>STAKE</u>
48	"	Upper Trepanier Cr.	8-46	1-38	7	"	3	High Cu-Zn-Mo
49	82E/13E	Powers Cr.	9-29	2-22	7	Cret.-Jur. grnd Valhalla & Eocene Seds.	2 ⁺	46 Cu
49A	"	Mount Last	17	"	5	Eocene seds.	2 ⁺	
50	"	McDougall Cr.	3-8	2-4	4	Eocene vlcc-seds.	3	GSC 65 ppm U seds,0.6 ppb H 20
51	"	Lambly Cr.	3-8	2-4	4	Perm.vlcc(CacheCr) Pliocene basalt Jur.grnd.	3 ⁺	GSC 1.5-4.2 ppb U H20,132C Oxy 47 Cu
52	82L /4E	Bald Range Cr.	34-84	25-76	8	Jur.grnd(Shorts Cr)	1	4-9 Mo, GSC H20 17 ppb U <u>STAKE</u>

53	82L/4E	Stuart Cr.	9-71	1-63	8	Jur.grnd(Shorts)Cr.)1 Eocene vlcc-sed.	GSC 1.6 ppb U H20 <u>STAKE</u>
54	"	E.Terrace Cr.	7-10	1-3	6	Eocene vlcc-seds. 2	
55	"	Terrace Cr.	9-20	5-11	9-10	Jur.grnd(Shorts Cr) 2 Eocene vlcc	2-11 Mo
56	"	Duo Via Lk	7-12	1-4	7	Eocene vlcc-sed. 3	9-11 Mo;GSC 16 Mo, 16U; GSC H20 0.3 ppb U
57	"	Lock Drinkie	8-29	6-23	6	Jur.grnd(Shorts, Cr) 2 ⁺ Eocene vlcc-seds.	81 Cu
58	"	Shorts Cr.	9-236	2-229	7	Jur.grnd(Shorts Cr) 1 Eocene vlcc	3-4 Mo <u>STAKE</u>
59	"	McMullen Cr.	7-11	2-7	5	Eocene vlccs-seds. 2 ⁺	3-4 Mo
60	"	Whiteman Cr.	7-98	1-92	6	Cret.grnt.Jur.grnd.1 Eocene vlcc	Mo,Cu,Zn anom ¹ Whit property ^W
61	82L/4W	Whiterocks Mtn.	23	18	4	Jur.grnd(Shorts Cr) 3 Perm. seds.	152 Zn 15 Mo
62	"	Nicola R.	21	16	5	Penn qtzite-sch. 2 Eocene vlcc-seds.	3 Mo
63	"	W.Nicola R.	16	12	4	Perm.seds. 2 Eocene vlcc-sed.	150 Cu, 3 Mo
64	"	Beak Cr.	7-13	3-5	6-7	Jur.grnd(Shorts Cr) 3 Eocene vlcc-sed.	
65	"	Upper Shorts Cr.	7-23	3-15	708	" " 2 ⁺	
66	92H/1E	Ewart Cr.	7-25	1-15	10	Cret.Jur.grnd 3 ⁻⁻⁻ Jura	3-13 Mo
67	"	Lakeview Cr.	7-30	4-21	9	Cret.-Jur.qtz-monz 3 ⁻⁻⁻ Eocene vlccs.	

68	92H/1E	Trib.Ashnola Rd.	7-31	5-23	8	Cret.-Jur.Qtz-monz. 3 ⁻⁻ Eocene vlccs		
69	"	Ikwadli Cr.	10-33	6-26	7	"	2 ⁻	4, 14 Mo
70	"	Etches Cr.	12-28	3-21	10	Tr.vlccs(Nicola) Cret-Jur.grnd(Jura)	2	14-17 Mo
71	92H/1W	Coal Cr.	10-21	3-14	7	Cret.vlcc(Kingsvale) Jur-Cret.grnd(Jura)	3	109 Zn
72	"	Lower Young Cr.	18	11	7	Cret.vlcc (Kingsvale)	3	
73	"	Young Cr.	17	12	5	"	3	
74	"	McBride	7-13	4-8	6	Eocene vlcc-sed. (Marron Fm)	2	High Cu-Zn-Mo
75	"	Trib.W.side Ashnola Rd.	29	21	7	Jur.grnd.	3	
76	"	Trib.E.side Ashnola Rd.	18	11	7	Jur-Cret.grnd	3 ⁻⁻	
77	"	Cathedral Fork	20	15	5	Jur.-Cret.grnd Jura	3 ⁻⁻	
78	"	Easygoing Creek	12-20	8-16	4	"	3	122 Zn
79	"	Upper Young Cr.	7	2	4-5	Eocene vlcc.	2 ⁻	7-37 Mo, 122 Zn
80	92H/7W	Champion Cr.	4-17	3-14	3	Jur.grnd.(Eagle)	3 ⁻	
81	"	Blakeburn	4-7	105	2	Eocene Seds.	2 ⁺	
82	92H/8W	Rainbow Lk.	12	7	4	Eocene seds.-fault ct. in TR.vlcc (Nicola)	2 ⁺	Mo 15 ppm, Cu showing in Nicola
83	"	N.side of Similkameen R..	9-38	12-28	9	Cret.Jur. grnd. Jura	3	62 Cu

84	92H/8	Steven Cr.	9-76	2-67	8	Cret.-Jur.grnd (Jura)TR.vlcc(Nicola)	2	102 Cu
85	"	Wolfe Cr.	7-35	8-28	6	Cret.-Jur.grnd (Jura)	3 ⁺	50-94 Cu 90-172 Zn
86	"	Willis Cr.	16-27	11-22	5	Cret.grnd-grnt (Otter)Minn Eocene vlcc	3	100-230 Cu 72-104 Zn
87	"	Wilbert Hills	13-14	8-9	5	Cret.grnt(Otter) Eocene vlccs-seds to north	3	94-98 Cu
88	"	Upper Willis Cr.	7-13	3-9	5	"	3	98-117 Zn 12-52 Mo
89	"	Smith Cr.	9	2-6	3	TR.vlcc; Jur.grnd Eocene vlccs-seds.	3 ⁺	97 Cu 176 Zn
90	"	Arcat Cr.	9-22	3-16	6	Jur.grnd (Similkameen)	3	51 Cu
91	"	McNulty Cr.	7-16	4-8	8	Jur.grnt;Eocene seds-vlccs	3 ⁺	
92	"	Pettigrew Cr.	8-9	4-5	4	TR.vlcc.Jr.grnd	3 ⁻	127 Cu
93	92H/9	Finnegan Cr.	12-54	10-38	10-18	Cret-Jur.grnd.qtz monz.McNulty- Eocene vlcc to south	2 ⁺	3-8 Mo
94	"	Alaric Cr.	8-74	3-59	16	Cret-Jur.grnd-qtz monz,Jura-McNulty	1 ⁻	3-5 Mo - more sed.H ₂ O sampling
95	"	Lori	9-43	1-31	12	Cret.-Jur.grnt Empress	1	70-88 Cu 125-218 Zn, 10-20 Mo
96	"	Link Lk.	16-401	3-386	14	Cret.-Jur.grnd Jura	1	45-56 Cu,4-15Mo 110 Zn, <u>STAKE</u>
97	"	Spukunne Cr.	10-28	1-20	7	"	2	2-6 Mo

98	92H/9	Simem Cr.	10-19	1-10	10	Cret.-Jur.grnd Jura	3	83-100 Zn 2-4 Mo
99	"	Eastmere Lk.	15-49	6-37	10	Cret.-Jur.grnd-gnt Jura, Empress	3	4 Mo
100	"	Chapman Cr.	8-42	4-32	10	Cret.-Jur.grnd. Valhalla	2 ⁺	2-8 Mo 70-170 Zn
101	92H/10	Connaly Cr.	45	42	3	Eocene porph TR.vlcc Nicola	3	
101A	92H9/10	Allison Cr.	25	22	3.5	Eocene seds. TR.Nicola volc	2 ⁺	
102	92H/15	Coldwater R.	8-14	1-9	4.5	Cret.Grnt. (Otter)	3	
103	"	McCullough Cr.	16	14	2-3	Eocene vlcc-seds. Cret.grnd(Jura)	2 ⁺	7 Mo
104	"	Shrimpton Cr.	22	19	3	TR.vlcc Pliocene basalt(?)	2	92 Cu 4 Mo
105	92H/16	Headwater Lks	16-21	14-18	3	Cret.-Jur.qtz monz McNulty	3	64-250 Cu 134-168 Zn 7-13 Mo
106	"	N. Trout Cr.	13-29	8-23	5	"	3	172 Cu 150 Zn, 2 MO
107	"	Galena Cr.	9-33	3-27	6	Cret.-Jur.grnd- grnt.Jura-Empress alt grnt & fluorite	2 ⁺	89-112 Cu Tepee Cr. Cu, Pb, Zn, Au, Ag; 68-96 Zn showings NE shear zones in grnt; 3-50 Mo TR Sn Ck.H.M for Sn
108	"	Barton Hill	9	7	2.5	Cret.-Jur.grnd Eocene vlcc.	3 ⁺	50 Cu
109	92 I/1	Millin Cr.	11-36	5-26	10	Cret.-Jur.grnd Pennask	2	40-75 Cu 88 Zn, 5 Mo

110	92 I/1	Wasley Lk.	10-13	5-8	5	Cret.-Jur.grnd Pennask	3 ⁻	3-4 Mo
111	"	Wasley Cr.	9-18	5-13	5	Cret.-Jur.grnd (Pennask) Eocene vlcc-sed.	2 ⁺	68-345 Cu 4 Mo
112	92 I/1	Lower Wasley Cr.	78	74	5	Cret.-Jur.grnd Pennask	1	38 Mo <u>STAKED</u>
113	"	Frank Ward Cr.	6-11	3-8	3	Perm.seds. (Cabe Cr.) Eocene vlccs	2	65-70 Zn
114	92 I/2	Godey Cr.	3-18	2-16	1.5	TR.vlcc(Nicola) Eocene seds.to south	3	12 Mo
115	"	Clapperton Cr.	11-46	3-36	10	Tert. grnd Nicola Jur.diorite	2 ⁺	47-410 Cu
116	"	Fox Lk	11-112	4-105	7	Tert. grnd Nicola	1	57-134 Cu 68 Zn. 6 Mo <u>STAKE</u>
117	"	Morgan Lk	3-15	2-13	2	Tert. T1-Cret. TR.vlcc (Nicola) Eocene seds.	3	3 Mo
118	92 I/7	Mab Lk.	8-28	3-18	10	Tert.grnd(Nicola)	3 ⁺	49-420 Cu
119	"	Conant Cr.	8-54	3-44	10	Tert.grnd(Nicola)	2	40-92 Cu 80-92 Zn, 2-8 Mo
120	"	Helmer Lk	24	20	4	TR.vlcc(Nicola)	3 ⁻	262 Cu
121	"	Sussex Lk	8-12	4-8	4	"	3 ⁻	92-800 Cu
122	"	Surrey Lk	7-9	4-6	3	"	3 ⁻	79-112 Cu, 3 Mo
123	"	Meadow Cr.	11	9	2	"	3 ⁻	46 Cu, 4 Mo
124	"	Ridge Cr.	7-11	4-6	5	Tert.grnd(Nicola)	3 ⁻	54-181 Cu

125	92I/7	Logan Lk.	10	8	2	Tr.vlcc(Nicola) Eocene sed.	3	60 Cu 72 Zn, 27 Mo
126	93I/8	Lac Le Saune	7-113	6-105	7	Tert.grnd(Nicola) Eocene vlcc	1 ⁻	72-111 Cu 4-10 Mo <u>STAKE</u>
127	"	Fred Lk	7-102	3-93	9	Tert.grnd(Nicola) TR.vlcc,Eocene vlcc	1	33 -140 Cu 3-10 Mo, 96 Zn <u>STAKE</u>
128	"	N. of Stump Lk.	16	14	2	Eocene vlccs	2	60 Cu 76 Zn, 23 Mo
129	"	Dropping Water Cr.	7	4	3	"	3 ⁺	72 Cu
130	"	Luke Cr.	9	6	2.5	"	3 ⁺	3 Mo
131	"	Smith Lk	7-31	3-21	9	Tr. .grnd (Wildhorse) Eocene vlcc	2 ⁺	100 Cu 7-21 Mo
132	"	Stump Lake Cr.	11	9	2	TR.vlcc,Nicola	3 ⁻	55 Cu, 90 Zn, 7 Mo

MV = Measured Value

RV = Residual Value

Reg V = Regional value

R = Rating 1 = 1st class
2 = 2nd class
3 = 3rd class

PROJECT PRINICRatings - in priority order

(A) 1st Class Anomalies (22 of)

<u>Number</u>	<u>NTS</u>	<u>Place Name</u>	<u>Remarks</u>
10	82E/5E	Park Rill Creek	Unavailable, Mineral Reserve
12	"	Kearns Creek	Unavailable, Mineral Reserve
13	"	Skaha Creek	Unavailable, Indian Reserve
16	82E/5W	Clark Creek	Partially staked by others, stake 88 claims for CanOxy & complete coverage early in season.
22	82E/12E	Eneas Creek	Partially staked by others, stake 44 claims for CanOxy & complete coverage early in season.
23	82E/12E	Summerland	Unavailable, is Summerland Village.
28	82E/12W	Riddle Creek	60% staked by others, stake part of 88 Claims for CanOxy and complete coverage early in season.
31	82E/12W	Bull Creek	Open, so stake part of 88 claims for CanOxy.
36	82E/12W	Demuth	Open, so stake 30 claims for CanOxy.
37	82E/12W	Darke Creek	Open, so stake 76 claims for CanOxy.
46	82E/13W	Lacoma Creek	Open, so stake 36 claims for CanOxy.
52	82L/4E	Bald Range Creek	Partially taked by others, stake part of 60 claims for CanOxy.
53	82L/4E	Stuart Creek	Partially staked by others, stake part of 60 claims for CanOxy.
58	82L/4E	Shorts Creek	Open, so stake 12 claims for CanOxy
60	82L/4E	Whiteman Creek	CanOxy WHIT claims, but do more recce
94	92H9	Alaric Creek	Open, but too large an area to stake; cannot do follow-up until July, too high.
95	92H9	Lori	75% staked, rest not worth follow-up
96	92H9	Link Lake	Open, so stake 42 CanOxy claims, and carry out follow- up early to test rest of available ground.
112	92I1	Lower Wasley Creek	100% staked by others
116	92I2	Fox Lake	Open, so stake 12 claims for CanOxy.

<u>Number</u>	<u>NTS</u>	<u>Place Name</u>	<u>Remarks</u>
126	92I8	Lac La Jeune	10% in Provincial Park, rest open, so stake 30 claims for CanOxy, and carryout follow-up early on.
127	92I8	Fred Lake	Open, so stake 30 claims for CanOxy, and carryout follow-up early on.
(B) <u>2+ Class Anomalies (19 of)</u>			
2	82E/4E	Burnell Lake	Is it open? If so, do follow-up early
9	82E/4W	Keremeos Creek	Is it open? If so, do follow-up early.
27	82E/12W	Shingle Creek	75% staked, so open 32 CanOxy claims and follow-up rest early on.
40	82E/12W	Upper Eneas Creek	All open, do early on
49	82E/13E	Powers Creek	What is land situation? if good, do early on
49A	82E/13E	Mt. Last	
57	82L/4E	Loch Drinkie	10% staked, rest open, do early on.
59	82L/4E	McMullen Creek	All open, do follow-up as soon as possible
65	82L/4W	Upper Shorts Creek	Is it open? moderate priority
81	92H/7W	Blakeburn	Is it open? moderate priority
82	92H/8W	Rainbow Lake	Accessible, land status?
93	92H/9	Finnegan Creek	At end of season with helicopter help.
100	92H/9	Chapman Creek	Is it open? moderate to high priority.
101A	92H9/10	Allison Creek	Is it open? do follow-up early
103	92H/15	McCullough Creek	Moderate priority.
107	92H/16	Galena Creek	Is it open, high priority but wait until it's accessible
111	92I/1	Upper Wasley Creek	Only moderate priority but if leave too late no water left
115	92I/2	Clapperton Creek	25%, do follow-up fairly early on
131	92I/8	Smith Lake	do early as possible
(C) <u>2nd Class Anomalies (20 of)</u>			
11	82E/5E	Mahonney Lake	Unavailable, Mineral Reserve
25	82E/12E	IR#1	What is land status? do early
25a	82E/12E	Mt. Nkwala	What is land status? do early
32	82E/12W	Agur Lake	60% staked, whats left is no good.
38	82E/12W	Munro Lake	CanOxy MUN claims are 20% rest is open so do early

<u>Number</u>	<u>NTS</u>	<u>Place Name</u>	<u>Remarks</u>
39	83E/12W	Garnet Lake	40% staked, CanOxy to stake #22, but still follow-up to do early.
42	82E/13W	Peachland Creek	Main road, no source, skip.
54	82L/4E	East Terrace Creek	90% staked, nothing useful left
55	83L/4#	Terrace Creek	50% staked, what's left is moderate priority.
62	82L/4W	Nicola River	What is land status? Moderate priority
63	82L/4W	West Nicola River	What is land status? Moderate priority.
70	92H/1E	Etches Creek	Moderate priority.
74	92H/1W	McBride Creek	Low priority
84	92H/8	Steven Creek	"
97	92H/9	Spukunne Creek	"
104	92H/15	Shrimpton Creek	"
109	92I/1	Mullen Creek	Moderately high priority, but do late in season.
113	92I/1	Frankland Creek	"
119	92I/7	Conant Creek	Moderate priority, do late in season, difficult access
128	92I/8	North Stump Lake	Do early, high priority

(D) 2⁻ Class Anomalies (4 of)

34	82E/12W	Bearpaw Creek	90% staked, so skip
41	82E/13W	Finlay Creek	All open, so do early on
69	92H/1E	Ikwaldi Creek	What is ground status?, do early.
79	92H/1W	Upper Young Creek	Low Priority

(E) 3⁺ Class Anomalies

1	82E/4E	Lower Park Rill Creek	What's land status? do early
3	82E/4E	Blind Creek	What's land status? do early
4	82E/4W	Snehumption Creek	Do late in season, need helicopter.
8	82E/4W	Barrington Creek	Do H ₂ O early, but is IR#13
15	82E/5E	Marron River	Do early, high priority
51	82E/13W	Lambly Creek	What's land status? do early
85	92H/8	Wolfe Creek	What's land status? low priority.
89	92H/8	Smith Creek	What's land status? moderate priority
91	92H/8	McNulty Creek	What's land status? moderate priority.
108	92H/16	Barton Hill	Leave until late in season.
118	92I/7	Mab Lake	Only if Fox Lake proves to be good.
129	92I/8	Dropping Water Creek	High priority, do early
130	92I/8	Luke Creek	High priority, do early

Class 3 Anomalies

<u>Number</u>	<u>NTS</u>	<u>Place Name</u>	<u>Remarks</u>
17	82E/5W	Strayhorse Creek	50% staked.
20	82E/11	Apex Mountain	100% staked.
24	82E/12E	Trout Creek	Sample early, High priority.
29	82E/12W	Isintok Creek	Low priority
30	"	Bull Creek I	Low priority
33	"	Trout Creek	"
35	"	Lost Chain Creek	"
45	82E/13W	Clover Creek	"
47	82E/13W	Trepanee Creek	"
48	82E/13W	Upper Trepanee Creek	"
50	82E/13E	McDougall Creek	What's land status? do early
56	82L/4E	Duo Via Lake	50% staked, low priority
61	82L/4W	Whiterocks Mtn.	low priority
64	82L/4W	Beak Creek	What's land status? Moderate priority.
71	92H/1W	Coal Creek	Low priority
72	"	Lower Young Creek	"
73	"	Young Creek	"
75	"	Trib. w. side of Ashnola River	"
78	"	Easygoing Creek	"
83	"	N. side of Similkameen River	"
86	92H/8	Willis Creek	What's land status? Moderate priority.
87	"	Wilbert Hills	" "
88	"	Upper Willis Creek	" "
90	"	Arcat Creek	" "
98	92H/9	Simen Creek	Low priority
99	"	Eastmere Lake	"
101	92H/10	Connaly Creek	"
102	92H/15	Coldwater River	"
105	92H/16	Headwater Lakes	"
106	92H/16	N. Trout Creek	"
114	92I/2	Godrey Creek	"
117	92I/2	Morgan Lake	"
125	92I/7	Morgan Lake	"

Class 3- Anomalies

5	-
6	-
7	-
14	100% staked
18	-
19	Park or staked
21	50% staked
26	-
43	low priority
44	low priority
66	Provincial Park

<u>Number</u>	<u>NTS.</u>	<u>Place Name</u>	<u>Remarks</u>
67			Provincial Park
68			"
76			"
77			"
80			Low priority
92			Moderate priority
110			Low priority
120			-
121			-
122			-
123			-
124			-
132			100% staked

have been published and since the G.S.C. open file release of regional stream sediment and water data (G.S.C. Open File Reports 409, 410 and 411). Hence staking has been recommended over many of the 1st class anomalies if the ground is available.

Preliminary follow-up work should be aimed at delineating as quickly as possible the source area of an anomaly. Therefore, initially more detailed stream sediment and water sampling as well as prospecting with the aid of a scintillometer, preliminary geological mapping and rock geochemistry as well as heavy mineral sampling will be carried out systematically over each anomalous area.

Because of the importance of pH and the total dissolved solids, especially carbonate, in keeping uranium in solution, all water samples will be tested for pH and specific conductivity prior to shipment to the laboratory. All samples will be analyzed for uranium. If after this preliminary phase second stage follow-up work is warranted then systematic geochemical soil sampling, radiometric work, rock geochemistry and geology will be carried out over selected areas. During the 1978 field season an attempt will be made to do preliminary evaluation on all 1st and 2nd second class anomalies. In time all anomalies should be followed-up. Just as there are many favourable conditions existent that help produce good U anomalies in the stream sediments and waters, there are also conditions (e.g. cover rock, overburden, sample density, etc.) that might inhibit the transfer of metal to the drainage

systems and as a result less intense anomalies than one would expect under favourable circumstances result.



Submitted by

A handwritten signature in cursive script that reads 'C.F. Gleeson'. The signature is written over a horizontal line.

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MINERAL EXPLORATION TECHNIQUES

Geological Implications of Regional Stream-Sediment Geochemical Data from South-Central British Columbia

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Abstract

Weighted moving-average contour maps have been constructed for molybdenum, copper and zinc using 7850 stream-sediment samples from 5430 square miles (14,063 sq. kms) of south-central British Columbia.

Regional trends for molybdenum and zinc are northeast, north and northwest and those for copper are north and northwest. These trends are interrupted by zones markedly low in metals. The metal-rich trends cross rocks of different lithology and age and thus appear to be structurally controlled.

The northeast trend may have exerted control on metal distribution at two different times. The molybdenum trend passes through the Brenda mine, where it correlates with

the northeast-trending stage 2A veins dated at 146 m.y. The molybdenum trend ends abruptly against a "Valhalla" pluton dated at 133 m.y. However, the zinc trend affects this pluton, and thus it appears that the northeast trend was reactivated in the late Cretaceous. Some of the most interesting north-south copper and molybdenum trends are within the Triassic Nicola volcanics, where they coincide with Preto's Central Belt. The regional sediment geochemical data suggest that the Central Belt may continue northward along the eastern side of the Guichon Creek valley.

The contoured data indicate that the dominant control of regional metal distribution is by age and rock-type. The Triassic-Jurassic intrusions are characterized by high regional molybdenum content and by zoning patterns that are negative with respect to copper and zinc and positive with respect to molybdenum. The late-Cretaceous intrusions are characterized by high regional zinc content in the stream sediments. The Tertiary batholith can be distinguished by its low regional molybdenum values, relatively high copper content and positively zoned regional zinc distribution pattern.

The southern outcrop area of pre-Mesozoic "Cache Creek" rocks is characterized by high regional copper, molybdenum



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Dr. Wallis was on the staff of the Geology Department of Cambridge University (1963-68) and worked in East Greenland in 1966 and in Spitsbergen in 1964, 65 and 67. In 1968, he joined the Saskatchewan Department of Mineral Resources, Precambrian Section, and mapped in northwest Saskatchewan (1968) and the Rabbit Lake area (1969). In 1970, he joined Barringer Research Ltd. as the senior geologist of their Canadian Joint Venture Program and also acted as manager (1970-71) of their Fiji porphyry copper exploration project. In 1972, he joined Canadian Occidental Petroleum Ltd., Minerals Division, where he is chief geologist.



J. J. Brummer, born in South Africa, became a naturalized Canadian in 1958. He attended Witwatersrand University in Johannesburg, and obtained a B.Sc. in mining engineering and a B.Sc. and M.Sc. in mining geology. He then entered McGill University in Montreal, where he was awarded his Ph.D. in geology in 1955.

Dr. Brummer acquired his professional experience in mining engineering at the gold mines of the Witwatersrand (1945-47), in mine geology and mineral exploration on the Copperbelt of Zambia (1947-53), in research on mineral deposits with the Quebec Department of Natural Resources (1953-54),

and in mineral exploration across Canada with Kennco Explorations (Canada) Ltd. (1955-61), Falconbridge Nickel Mines Ltd. (1961-70) and Occidental Minerals Petroleum Corporation (1970-72). He has been with Canadian Occidental Petroleum Ltd. since 1972, and currently holds the position of exploration manager, Minerals Division.



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Dr. Gleeson specialized in exploration geochemistry, working for Kennco during his graduate studies, where he researched the applications of exploration geochemistry in glaciolacustrine and bog environments of the Canadian Shield. Following graduation, he worked as exploration geologist for Patino Mines (Quebec) Ltd. in Chibougamau, Quebec, and for Pickands Mather & Company in Wabush, Newfoundland. In 1962, he joined the Geological Survey of Canada as an economic geologist-geochemist. His research work there involved heavy-mineral studies in the Yukon Territory, with special reference to the Klondike gold fields, and regional geochemical studies in the Keno Hill area. He joined SOQUEM as chief geochemist in 1965, where he was in charge of exploration geochemistry research and extensive exploration geochemical programs throughout Quebec.

In 1970, Dr. Gleeson formed his own company, C. F. Gleeson and Associates Limited. In his capacity as a consultant geologist-geochemist, he has worked throughout Canada for government and industry, as well as in Ireland, Algeria, Brazil, Cameroon and Malaysia.

Keywords: Exploration, Geochemical exploration, Stream-sediment geochemistry, British Columbia, Moving-average techniques, Molybdenum, Copper, Zinc, Metal distribution, Mineralization.

and zinc contents in the stream sediments. These values are in marked contrast with the low values typical of the northern outcrop area. However, recent fossil evidence suggests that most of the northern area is, in fact, late-Triassic, Nicola Group, volcanoclastic sediments. This suggestion gains support from the geochemical contrast.

Introduction

IN A geologically well-defined area of south-central British Columbia about 2 billion tons of 0.5% equivalent copper mineralization have been outlined, mainly in the last fifteen years (Fig. 1).

This prompted a two-year stream-sediment survey by Canadian Occidental Petroleum Ltd. in 1973-74 to outline metal-rich target areas, with particular emphasis on defining regions of potential copper-molybdenum porphyry-type mineralization.

The project area covers approximately 5430 sq. miles (14,063 sq. kms), including some or all of N.T.S. sheets 82E and H, 92H and I (Fig. 1), and a total of 7850 stream-sediment samples were collected (Fig. 2).

Geochemical Survey

FIELD PROCEDURE

In the ideal case, sediment samples were collected from the centre of active streams, but, because of the arid climate, many samples were taken from dry gullies or stream beds. The sample density was partly determined by the logistics of working in a heavily forested area, which necessitated foot traversing of almost all the streams.

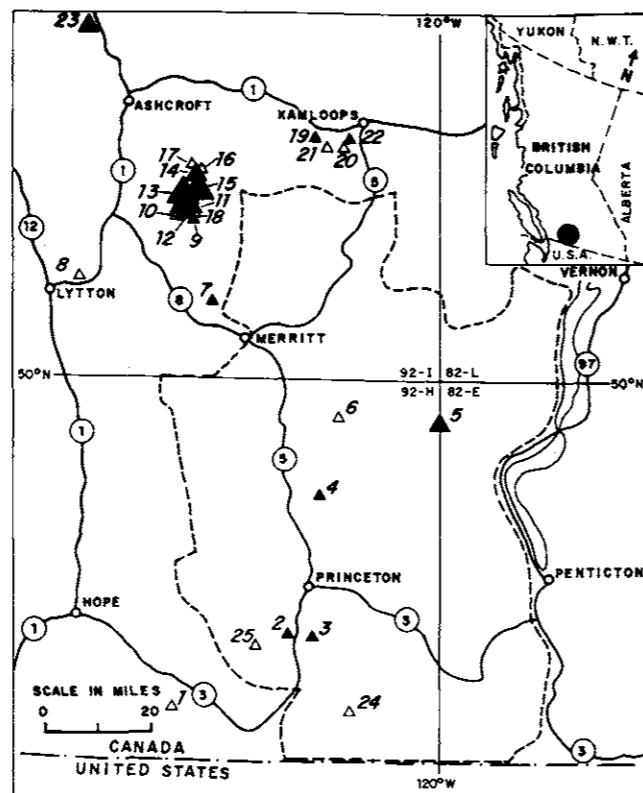


FIGURE 1—Location of project area, including the location of known mines and deposits and their contained equivalent copper content.

Table to accompany Figure 1.

No.	Property Name	Size (million tons) (tonnage mined & reserves*)			Contained equivalent copper content (tons) 1 lb Mo = 4.54 lb Cu equivalent
		M. tons	% Cu	% Mo	
1).....	Canam (Giant Copper)	8	0.61	—	48,800 tons
2).....	Ingerbelle	76	0.50	—	378,000
3).....	Copper Mountain	35	1.08	—	378,000
4).....	Axe (Adonis)	50	0.45	0.012	257,000
5).....	Brenda	180	0.184	0.05	742,480
6).....	Primer (Pyramid)	23	0.2	—	46,000
7).....	Craigmont	31	1.5	—	469,176
8).....	Lytton	5	0.62	—	31,000
9).....	Ann	48	0.27	—	129,000
10).....	Highmont	150	0.51	equivalent	765,000
11).....	Lornex	465	0.41	0.014	2,183,856
12).....	Alwin (O. K.)	1.1	2.33	—	25,630
13).....	Valley Copper	850	0.48	—	4,080,000
14).....	Bethlehem	115	0.97	—	542,248
15).....	J. A.	286	0.43	0.017	1,453,439
16).....	South Seas	17	0.35	—	59,000
17).....	Krain	14	0.56	—	90,000
18).....	Minex	36	0.2	—	72,000
19).....	Afton	34	1.0	—	340,000
20).....	Ajax	10	0.8	—	80,000
21).....	Galaxy	6	0.58	—	34,000
22).....	Rainbow	20	0.55	—	110,000
23).....	Maggie	200	0.4	equivalent	800,000
24).....	Ash-Nola	?	? low grade	—	?
25).....	Whipsaw	? large	0.2%	—	?

*Reserves at Dec. 31st, 1975, or latest available from published reports.

Large filled triangles equal greater than 1,000,000 tons contained equivalent copper content (c.e.c.c.).

Medium filled triangles equal 500,000-1,000,000 tons c.e.c.c.

Small filled triangles equal 100,000-500,000 tons c.e.c.c.

Small open triangles equal less than 100,000 tons c.e.c.c.

c.e.c.c. = contained equivalent copper content.

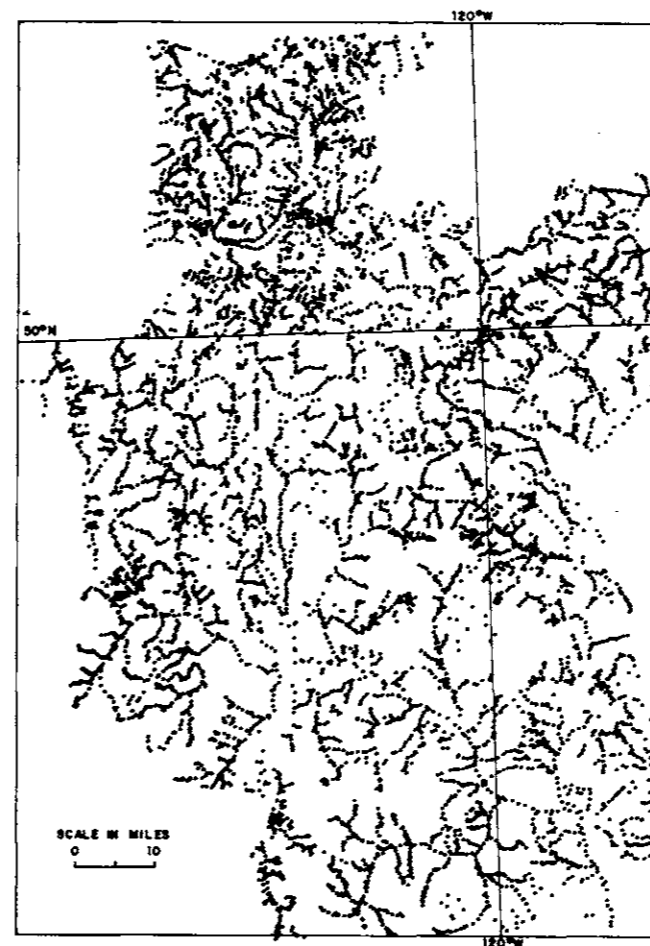


FIGURE 2—Stream-Sediment Sample Distribution Map. Location of the 7850 stream-sediment samples used as a data base for the weighted, moving-average contour maps (Figs. 7, 8 and 9). Although the over-all density is 1.4 samples per sq. mile (0.5 per sq. km), the non-uniform pattern inevitable in stream sampling is clearly shown, as is the necessity of using a computer-based system to produce regional contour maps.



FIGURE 3—Thompson Plateau and the Cascade Mountains. The even summit level of the Thompson Plateau merges imperceptibly with the semi-alpine Okanagan Range of the Cascade Mountains, as seen looking west from the summit of Snowy Mountain (8507 feet) (2552 meters). This terrain is ideal for setting down samplers to traverse streams on foot and for "chopper hopping" the uppermost tributaries.

Where the helicopter was used, samplers were taken to their respective streams, and the party chief then spent the remainder of the day "chopper hopping" above the tree line (Fig. 3). Stream and sample characteristics, together with N.T.S. coordinates and sample number, were entered on a sample card set up on an 80-character base. The samples were air-dried and processed by Bondar-Clegg and Company Ltd. in Vancouver. All sample locations were plotted on 1:50,000 cronaflex topographic drainage maps provided by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa.

LABORATORY PROCEDURE

Bondar-Clegg and Company Ltd., of Vancouver, dried, sieved and then analyzed the -80-mesh fraction of the stream sediment for Cu, Mo and Zn by atomic absorption spectrophotometry after digestion with hot solutions of HCl and HNO₃.

In the field, control samples were placed in the sample sequence at random intervals to check the precision of the analytical work. Using these control samples, precision at the 95% confidence level was calculated as 3.7%, 10.5% and 4.5% for Cu, Mo and Zn respectively.

COMPUTER PROCEDURE

The computation stages were carried out by Luciano Martin of C.A.S.E. (Computer Applications and Systems Engineering) of Toronto, using methods and programs which he has developed.

The data from the field cards and the analytical results were transferred to punched cards. The 1:50,000 field maps provided the positional data; the coordinates of all samples were digitized with an Instronics Gradicon and a Coradi coordinatograph. An independent origin was established on each 1:50,000 sheet and all positions on that sheet were related to it. An I.B.M. 370/167 computer was then employed to convert the digitized coordinates to standard U.T.M. values, which were merged with the corresponding field and analytical data.

Before the stream-sediment data were processed, it was decided to remove from the data file approximately ninety samples that were collected along 60 miles (100 kms) of the Similkameen River from just below Copper Mountain mine through Princeton and Hedley to the U.S. border. These samples all contained at least 100 ppm Cu and a high content of Mo and Zn, and only occur in the stream sediments of the Similkameen River. Clearly the source of this copper is the old mine workings and tailings at and above Princeton.

These excessively high values would have completely distorted the geological component in the contoured geochemical maps of this area, hence the decision to eliminate these samples from the data set prior to computation. Other long dispersion trains from natural sources of metal, e.g. zinc in Siwash Creek and copper in Summers Creek, were retained in the data file.

The weighted, moving-average technique was then applied to separate the regional and residual components. This was accomplished as follows: At a given point on the map a search was made of all the samples enclosed by a circular window of radius 5 kms (3.1 miles) centred at that point. The size of the search radius is determined by including a set minimum number of samples; if the search area fails to reach the minimum number, the search radius at that point is increased. The computation positions were selected on a regular east-west, north-south grid lattice, spaced at 2.5 kms (1.55 mile) in both directions. This 2.5-km (1.55-mile) interval allows a 50% overlap of search windows in both east-west and north-south directions. The

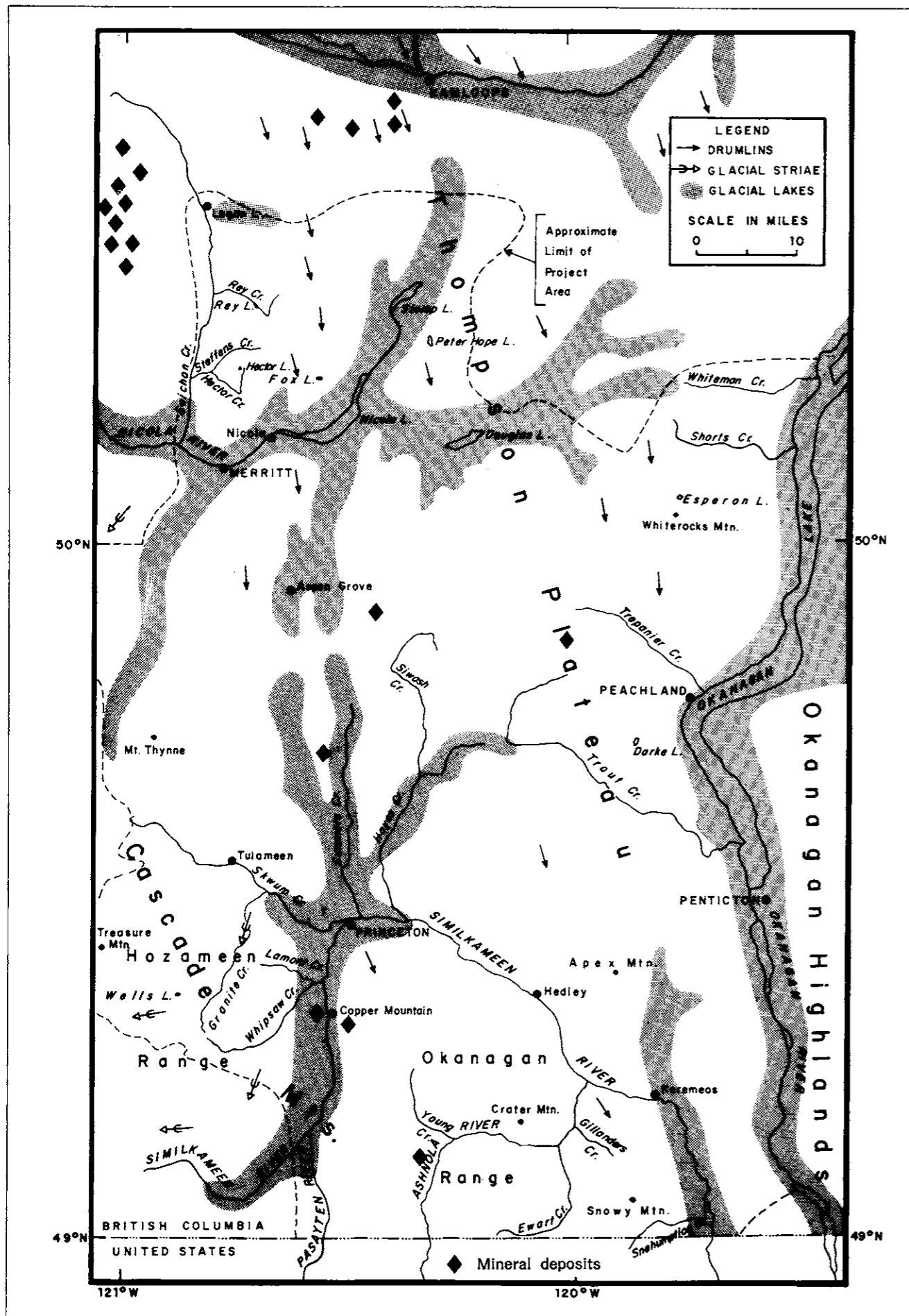


FIGURE 4 — Map of the project area, showing glacial features.

size of the search window, and hence of the lattice spacing, is determined using a step-by-step iterative approach to reach the best compromise between regional clarity and local detail. The particular window size and lattice spacing chosen is unique to any particular stream-sediment study and the most important control is exercised by areas with the least complete sampling compared to the over-all sampling density and by the complexity of local geological detail (Figs. 2 and 6).

A weighted average of the values in each search area is then computed, with a maximum weight being set for samples close to the centre. These weighted, moving-average values at each search area approximate to the regional component.

The difference, at any one sample point, between the laboratory-measured value and this computer-generated regional value is the residual value. Maps of the residual values (not shown) form an exploration guide to specific geochemical anomalies within a given regional area.

The regional component values were then contoured and plotted out by a Calcomp 748 flatbed plotter on specially prepared 1:125,000 base maps. The contour intervals were empirically chosen after a thorough study of the statistics. No particular predetermined statistical parameter was used to choose contour intervals. The important criterion is the ability of the contours to illustrate metal distribution patterns; a compromise between clarity and clutter has to be accepted.

Thus, the base data used in the following discussion are weighted, moving-average contour maps. This type of presentation is considered by the authors to best show the underlying regional, or geological, component of stream-sediment geochemistry. Such maps are neither trend-surface maps, which tend to ignore local geological variation, nor are they contoured data maps, which tend to be submerged by local geological variation. Figures 7, 8 and 9 can be compared and contrasted with the trend-surface maps (Figs. 9 and 10) of Fox and Rinehard (1972), which display stream-sediment data from an adjacent area in Washington State, or with the Geological Survey of Canada symbol presentation in Open File Reports Nos. 409 and 410, covering N.T.S. 82E and 82L.



FIGURE 5 — Former Lake Levels, Quilchena Valley. During deglaciation, the project area was covered by extensive glacial lakes (Fig. 4). These can often be recognized by wave-cut terraces, such as shown here on the east side of the Quilchena valley at an elevation of 3400 feet (1020 m). The present-day remnant, Nicola Lake, 6 miles (10 kms) to the north, is at an elevation of 2045 feet (613 m). Note also the extensive grasslands. Summer evaporation is too extensive to sustain tree growth except immediately adjacent to streams.

Physiography, Glaciation, Climate and Vegetation

PHYSIOGRAPHY

The project area includes two major components of the Canadian Cordillera, the Thompson Plateau and the Cascade Mountains (Bostock 1948, Holland 1964) (Fig. 3). At the U.S. border, the Thompson Plateau is virtually pinched out between the Okanagan Highlands and the Cascade Mountains, but from the Similkameen valley northward the plateau widens until it eventually occupies the entire width from the Okanagan to the Fraser valley, a distance of 80 miles (128 kms) (Fig. 4).

The Thompson Plateau consists of rolling uplands separated from each other by deep valleys; the elevation and ruggedness of the plateau increase to the south where the upland surface rises toward the mountains (Fig. 3). The Cascade Mountains, which make up the southwestern part of the project area, are grouped into three main ranges, the drainage of two of which, the Okanagan and the Hozomeen (Fig. 4), were sampled in this study. The greatest differential in elevation is between the Similkameen Valley, 1200 feet (360 m) above sea level and Snowy Mountain, 8507 feet (2552 m) above sea level, a difference of 7300 feet (2190 m). Ninety per cent of the area is drained by three river systems — the Nicola, the Similkameen and the Okanagan. Fulton (1969) has described in detail how these systems originated during deglaciation.

GLACIATION

The entire Interior Plateau appears to have been covered by ice which moved on to it from both east and west; however, the major direction of ice transport was to the south. At its maximum development, the ice overrode peaks as high as 8507 feet (2552 m) on the northeast side of the Okanagan Range. The principal outlets for this ice were along the lower Similkameen Valley and through gaps at the head of the Ashnola, Pasayten and Similkameen rivers (Bostock, 1948).

During deglaciation, the damming of these outlets and the slow melting of stagnant ice in the valleys caused the formation of a network of spillways which, coupled with the ice-dammed Fraser canyon to the west, created numerous major lakes (Fig. 4) (Fulton, 1969). Thus, varved silts and clays are conspicuous along the major valleys throughout the area and can be found to a height of almost 4000 feet (1200 m) above present-day valleys.

CLIMATE AND VEGETATION

At low elevations the winters are mild, with little snowfall. For example, Penticton has a January mean average temperature of 0°C and a total winter snowfall of 40 cms (15 inches); above 4000 feet (1200 meters), however, snow remains on the ground until early June. Summer temperatures in the valleys may rise to over 35°C, but snowfalls have been recorded in all months at Apex Mountain (elevation 7372 feet; 2211 m). Forest growth is dependent on aspect and elevation. The valleys have sparse tree cover due to lack of moisture, e.g. the mean annual precipitation at Penticton is 10 inches (25 cms), and there are extensive grasslands around Nicola Lake (Fig. 5). Similarly, many south-facing slopes are almost devoid of tree cover. The tree line is at an elevation of about 6000 feet (1800 m).

Geology

The Geological Survey of Canada and the British Columbia Department of Mines maps provide excellent

TABLE 1 — South-Central British Columbia — Stratigraphy

Period	Epoch	Intrusive Rocks	Layered Rocks
Late Tertiary	Pliocene (2-10 m.y.)		Plateau basalts
Early Tertiary	Oligocene (20-40 m.y.)	Needle Peak pluton (39 m.y.)	
	Late Eocene (40 m.y.)		
	Middle Eocene	Coryell stocks (48-51 m.y.)	Kamloops Group volcanics (45-50 m.y.)
	Early Eocene (55 m.y.)		Coldwater Formation Sediments
Late & Early Cretaceous	Early Eocene	Nicola batholith (60 m.y.) Rey Lake stock (67 m.y.)	
	(110-85 m.y.)		Kingsvale Group volcanics Spences Bridge Group volcanics Pasayten Group sediments Jackass Mountain Group sediments
Late Cretaceous	(135-65 m.y.)	Otter Lake stocks Lightning Creek stock Trout Creek stock Siwash Creek stock Whiteman Creek stock Summers Creek stock (97 m.y.) Rommel batholith (in part) "Valhalla pluton" (133 m.y.) Mt. Lytton batholith (98 m.y.) Verde Creek pluton (100 m.y.) McBride Creek stock (post 80 m.y.) Whipsaw Creek porphyries (post 104 m.y.) Eagle batholith (in part, 104 m.y.)	
Late & Middle Jurassic	(140-160 m.y.)		Dewdney Creek Group — sediments Ladner Formation — sediments
Late & Middle Jurassic	(175-140 m.y.)	Okanagan batholith (141-183 m.y.) Pennask batholith Eagle batholith (in part, 143 m.y.) Similkameen batholith (149-170 m.y.) Shorts Creek batholith Brenda stock (176 m.y.) Hedley stock (156 m.y.)	
Late Triassic - Early Jurassic	(215-175 m.y.)	(a) Granodiorite Clan Guichon Creek batholith (198 m.y.) Allison Lake pluton (200 m.y.) Wild Horse batholith (200 m.y.) Quilchena stock	
		(b) Ultramafic, Gabbro, Syenite Clan Tulameen Complex (204-175 m.y.) Iron Mask batholith (190-206 m.y.) Copper Mountain and Lost Horse stocks (204-194 m.y.) Kruger alkali syenite (177-191 m.y.) Ollala alkali complex (179- m.y.) Hedley gabbro-diorite (170-190 m.y.)	
Late Triassic	(205-210 m.y.)		Nicola Group volcanics
Pennsylvanian-Permian	(330-250 m.y.)		"Cache Creek" and equivalents — volcanics and sediments

geological coverage of the project area. For this paper, the regional stratigraphy has been condensed into major groups of plutonic rocks and volcanic-sedimentary sequences (Table 1 and Fig. 6). This usage closely follows other recent compilations (e.g. those by McMillan and Preto 1976 and Jackson 1976). Table 1 lists the sequences of volcanic and sedimentary units found in the project area and tabulates the numerous episodes of igneous activity which have a 200-m.y. time span. The names and age of the various intrusions are given in the caption to Figure 6.

In the following discussion, in which the regional stream-sediment geochemistry is related to bedrock geology, only seven units in Table 1 are volumetrically important. These are:

- (7) Tertiary — Nicola Batholith
- (6) Tertiary — sediments and volcanics
- (5) Cretaceous — Kingsvale Group volcanics
- (4) Late Cretaceous — intrusions
- (3) Late Triassic and Jurassic — intrusions
- (2) Late Triassic — Nicola Group volcanics
- (1) Pennsylvanian and Permian — "Cache Creek" Group volcanics

The only rocks which are seriously deformed and metamorphosed are the pre-Upper Triassic "Cache Creek" rocks. Triassic Nicola rocks are only strongly deformed and metamorphosed at the batholithic margins. Elsewhere, the Nicola is gently folded (Schau, 1970) and cut up into fault-bounded blocks (Preto 1975, 1977). Later volcanic-sedimentary sequences are only slightly deformed, except

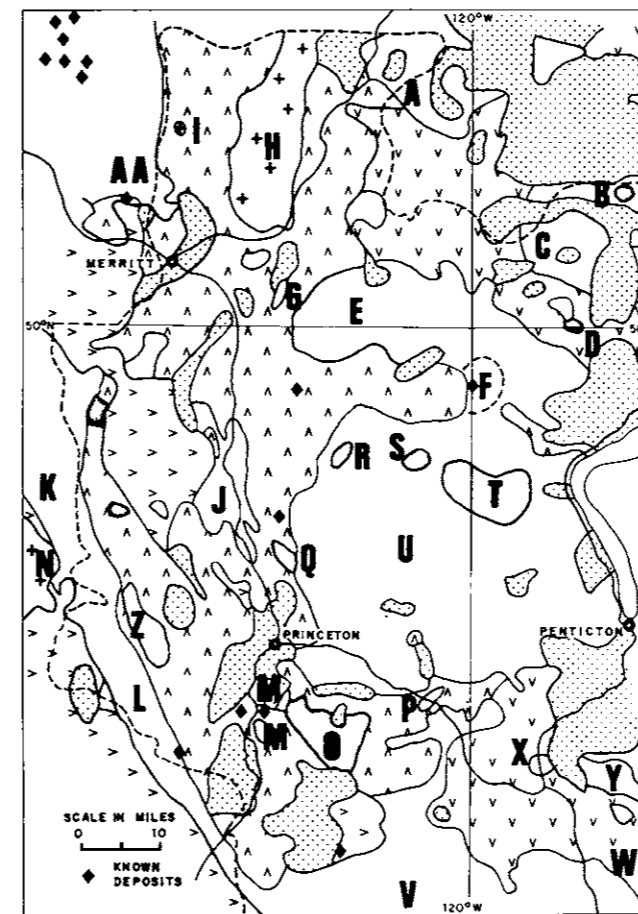
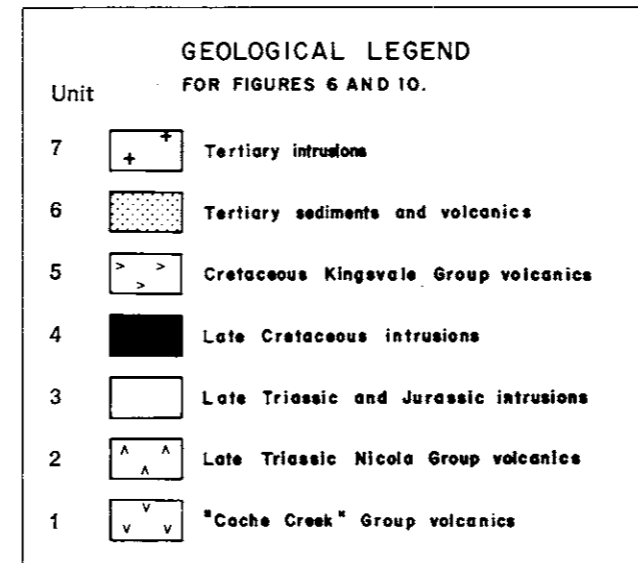


FIGURE 6 — Generalized geology of south-central British Columbia (compiled from G.S.C. & B.C. Dept. of Mines and Pet. Res. maps).

- A—Wild Horse batholith, 200 m.y.
- B—Whiteman Creek stock
- C—Shorts Creek batholith
- D—Whiterocks Mountain stock
- E—Pennask batholith
- F—Brenda stock, 176 m.y.
- G—Quilchena stock
- H—Nicola batholith, 60 m.y.
- I—Rey Lake stock, 67 m.y.
- J—Allison Lake pluton, 200 m.y.
- K—Mt. Lytton batholith, 98 m.y.
- L—Eagle batholith, 143-104 m.y.
- M—Lost Horse - Copper Mountain stocks, 204-194 m.y.
- N—Needle Peak pluton, 39 m.y.
- O—Verde Creek pluton, 100 m.y.
- P—Hedley gabbro, 190-170 m.y.
- Q—Summers Creek stock, 97 m.y.
- R—Siwash Creek stock
- S—Trout Creek stock
- T—"Valhalla pluton", 133 m.y.
- U—Okanagan batholith, 183-141 m.y.
- V—Similkameen batholith, 170-149 m.y.
- W—Kruger syenite, 191-177 m.y.
- X—Ollala stock, 179 m.y.
- Y—Oliver stock, 144 m.y.
- Z—Tulameen ultramafic, 204-175 m.y.
- AA—Guichon Creek batholith, 198 m.y.

where involved in major faults, e.g. the Chuwanten or Pasayten faults.

Much age data are now available on the plutonic rocks of the area, and these, together with cross-cutting and intrusive relationships, have elucidated the over-all intrusive sequence as outlined in Table 1. The only major undated intrusion in the area is the batholith lying west of the northern part of Okanagan Lake, and this is assumed to be of similar age to the Okanagan batholith to the south. The naming of the plutonic units is fraught with controversy. We have tried to retain the most common usage, and only in the case of the "Shorts Creek" batholith have we invoked a new and informal name.

Excellent descriptions of the rock types can be found in the various publications of the Geological Survey of Canada and the British Columbia Department of Mines and Petroleum Resources given in the reference list. The MINDEP Mineral Index Maps (Montgomery *et al.*, 1975a) were available for the area, with current information on over 250 known occurrences.

Molybdenum, Copper and Zinc Distribution in Terms of Metal Trends and Major Rock Type

REGIONAL MOLYBDENUM DISTRIBUTION

Metal Trends

The contoured moving-average map (Fig. 7) clearly shows certain major features, or metal trends, which appear to crosscut both age and type of rock. The eastern part of the area is characterized by higher molybdenum values than the western portion, however there are significant northeast and north-south positive molybdenum trends throughout. A weak but significant north-south trend which extends from south of Princeton to north of Merritt is defined by the 1.5-ppm Mo contour (Fig. 7).

The positive metal trends are crossed by prominent northwest and northeast negative trends (i-iv and v, respectively, on Fig. 7) which extend over considerable distances and appear to be unaffected by rock type.

Major Rock Types and Regional Moving-Average Molybdenum Values

Table 2 summarizes the relationships between the regional distribution of molybdenum and geology.

1) Permian + Pennsylvanian "Cache Creek" Rocks (Unit 1, Fig. 6)

In the north, the average regional stream-sediment value over these rocks is less than 1.0 ppm Mo, whereas in the south it is greater than 2.5 ppm Mo. In Area J, an extensive set of quartz-pyrite-molybdenite-scheelite veins and sericite-quartz-feldspar porphyry dykes has been found. In Area X, molybdenite occurs in veins and skarns on Apex Mountain.

2) Late Triassic Nicola Group (Unit 2, Fig. 6)

The Nicola Group is predominantly basaltic andesite, and sediments from streams draining it are generally low in molybdenum.

The only significant regional high value area is AA (Fig. 7), at Copper Mountain, where a small, but well-defined, area with values greater than 3.5 ppm Mo coincides exactly with the east-west roof pendant of Nicola volcanics lying between the enclosing Lost Horse intrusives.

Between Princeton and Aspen Grove, Preto (1975, 1977) has defined three north-south-striking lithological zones within the Nicola Group. There is a striking correlation between regional sediment values greater than 1.5 ppm

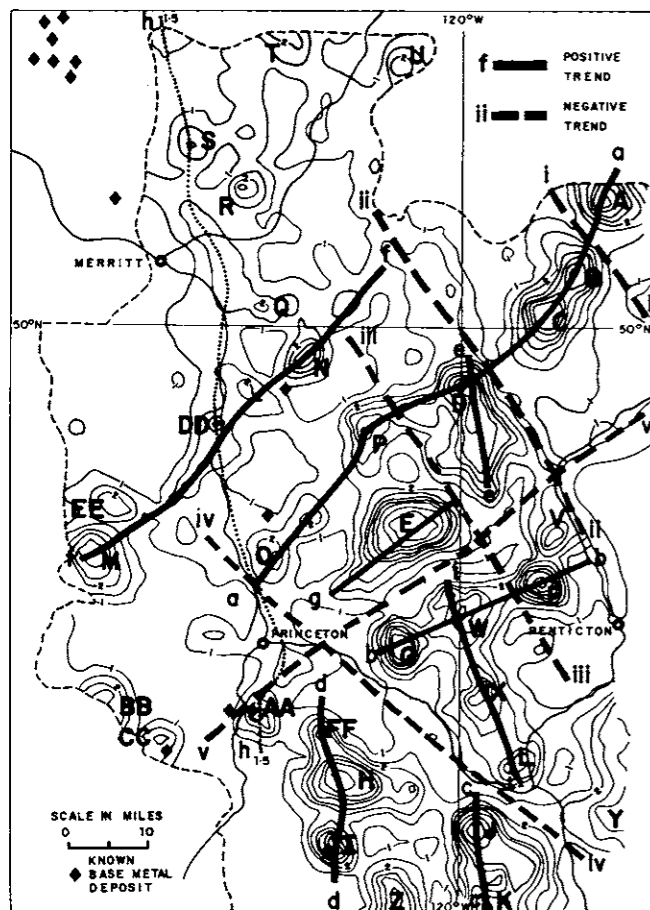


FIGURE 7—Molybdenum — Regional Distribution and Trends. The 1.0- and 2.0-ppm Mo regional stream-sediment contours are numbered. The other contours shown are at: 1.5, 2.5, 3.0, 3.5, 4.0, 5.0 and 6.0 ppm Mo. High-value areas are lettered in capitals, A through to FF. Positive metal trends are shown by solid lines lettered a to i. The dotted line, h, is the axial trace of the 1.5-ppm Mo contour. Negative metal trends are shown by broken lines numbered i to v.

Mo and Preto's "Central Belt", and the molybdenum content provides a clear distinction between this zone and the rest of the Nicola outcrop. Interestingly, the plus-1.5-ppm Mo contour extends northward along the eastern side of the Guichon Creek valley; this may suggest that a northward extension of Preto's "Central Belt" follows this direction. Along the axis of this trend is *Area S*, which is the only high-molybdenum area not associated with plutonic rocks in the northern part of the project area. *Area S* coincides, approximately, with regionally high copper and zinc values, and this may possibly indicate a Nicola volcanic centre.

3) Late Triassic and Jurassic Intrusions (Unit 3, Fig. 6)

The major northeasterly metal trend (a, Fig. 7) crosses the Okanagan, Pennask and Shorts Creek batholiths independently of their over-all geometry and independently of the foliation trends in the intervening Nicola and "Cache Creek" rocks. *Area D* lies along this metal trend at the intersection with the north-south trend (e). *Area D* is one of the highest regional molybdenum anomalies within the project area and it is virtually coincident with the Brenda stock (Carr, 1968).

Mineralization at Brenda is independent of rock-type (Carr, 1968), and the dominant mineralization is associated with "the NE-striking, stage 2A, veins . . ." (Soregaroli and Whitford, 1976). Detailed mapping of the distribution of pyrite and hydrothermal biotite in the Brenda area by

TABLE 2 — Age, Rock Type and Regional Molybdenum Stream-Sediment Content

Age and Rock Type	Average Regional Stream-Sediment Content in ppm Mo	Area (Fig. 7)	Peak Mo Contour (ppm)
Tertiary Intrusions			
Nicola batholith	1.0	R T	+2.5* +2.5
Cretaceous Kingsvale Volcanics			
— north area, less than	1.0		
— south area	1.5		
Late-Cretaceous Intrusions	1.5-2.0		
Whiteman Creek stock		A	+4.0
Whiterocks Mountain stock		C	+4.0
Summers Creek stock		O	+2.5
Verde Creek pluton		FF	+3.5
Young Creek intrusion?		H	+5.0
McBride Creek intrusions?		I	+4.0
Whipshaw Creek intrusions?		CC	+2.0
Mt. Thynne stock		EE	+2.0
Late Triassic - Jurassic Intrusions			
Shorts Creek batholith	1.5	B	+4.0
Pennask batholith	1.5	N	+3.0
Brenda stock	1.5	P	3.5
Okanagan batholith		D	6.0
		E	+6.0
		V	4.0
		F	+6.0
		W	+3.0
		G	+5.0
		L	+3.0
		Y	+3.0
Ollala stock		K	+3.0
Fairview stock		Z	+3.5
Similkameen batholith, east lobe	2.0	BB	+2.5
west lobe	1.0-1.5	M	+3.0
Eagle batholith	1.0	DD	+2.5
		Q	+2.0
		U	+2.5
Allison Lake pluton	1.5		
Quilchena stock			
Wildhorse batholith	1.0-1.5		
Triassic Nicola Volcanics			
less than	1.0	S	+2.0
but central belt	1.5	AA	3.5
Pennsylvanian-Permian "Cache Creek"			
northern area	1.0	J	+6.0
southern area	+2.0	X	+4.0

*+2.5 = greater than 2.5 ppm

the same authors also emphasizes the northeasterly alignment of the mineralization episode (Soregaroli and Whitford, 1976, Fig. 3); and Carr (1968) has also shown that there is a zone of intense fracturing, about 1½ miles (2 km) wide, trending northeast and extending through the mine area. The regional stream-sediment geochemistry suggests that the northeasterly metal trend extends for at least 30 miles (48 kms) both northeast and southwest of Brenda Mine (Fig. 7). An age for this metal trend is provided by data from Brenda. The apparent age of the Brenda stock is 176 m.y.; however, the Stage 2A northeast-striking mineralized vein set is post-crystalline and has been dated at 146 m.y. (Soregaroli and Whitford, 1976). Post-mineralization trachyte dykes have an age of 130 m.y. (Soregaroli, 1977, pers. comm.).

This close restriction on the age of the northeasterly molybdenum metal trend is strengthened by the observation that the metal trend does not cross the "Valhalla" pluton lying within the Okanagan batholith. Petö and Armstrong (1976) suggest that the composite Okanagan batholith ranges in age from 185 to 156 m.y. Petö's (1973) mapping has shown that the "Valhalla" pluton is a post-Okanagan intrusion and Medford (1975) has dated it at 133 m.y. Thus, the northeasterly molybdenum trend is bracketed as being post-156 m.y. and pre-133 m.y., which is in excellent agreement with Soregaroli and Whitford's (1976) 146-m.y. date.

The north-south metal trend (e, Fig. 7) lies normal to the constriction between the Okanagan and Pennask batholiths and is parallel to the dominant foliation in the adjacent Nicola rocks (Carr, 1968). Soregaroli and Whitford (1976) suggest that east-west compression is the dominant tectonic control at Brenda. Detailed mapping by Carr (1968) elucidated four structural belts within the stock, the most prominent of which is a north-south zone as much as 1¼ miles (2 kms) wide which encloses most of the copper-molybdenum occurrences. This north-south structural zone is over 7 miles (11 kms) long and extends both north and south of Carr's mapped area. Carr suggests that repeated movements in the underlying basement are responsible for these structural belts. Thus, the north-south metal trend may be related to this structural control within the Brenda stock and adjacent Nicola rocks.

Areas O-P-D, G-W-F-V and E appear to lie on north-easterly metal trends (a, b and g, Fig. 7) which cut across

internal plutons of the batholith and thus presumably post-date the plutons. It is suggested that these metal trends correlate in age and style with the northeast stage of mineralization characteristic of the Brenda camp. Areas G, W, F and V all lie along the southern contact of the Okanagan batholith, and they are within Petö's (1973) melanocratic Similkameen quartz diorite unit. The regional 6.0-ppm Mo contour of Area E coincides with the outcrop of the Empress granite pluton as outlined by Petö (1973). In Petö's sequence, the Empress granite is the youngest and most highly differentiated felsic unit within the Okanagan batholith. The results of extensive exploration work within the area indicate that molybdenite mineralization is widespread and is associated with extremely siliceous differentiates of the Empress granite.

The Similkameen batholith (V, Fig. 6) has been divided into numerous different plutons by Daly (1906); however, there is little obvious relationship between Daly's plutons and the molybdenum distribution. The regional molybdenum content over much of the batholith is relatively low (1-1.5 ppm), and there is one area where the molybdenum contents exceed 3.5 ppm, Area Z, in the massive, grey granodiorites of upper Ewart Creek.

Average regional molybdenum contents over the eastern lobe of the Similkameen batholith, east of the "Cache Creek" roof pendant, increase to 2.0 ppm. Under the central part of Area J (+4.0 ppm Mo), molybdenite mineralization is well known in the King Edward showings at Susap Creek, where it is associated with the marginal syenitic phase.

Smaller Jurassic intrusions are also associated with high (+3.0 ppm) regional molybdenum values; *Area L* is associated with the Olalla pluton where it intrudes "Cache Creek" strata, and molybdenite has been mined here at the Golconda deposit.

Regional values over the Eagle batholith are generally below 1.0 ppm Mo. The only high-value area centrally located with respect to the batholith is *Area BB*, Wells Lake (+2.5 ppm Mo), where molybdenite-chalcocopyrite mineralization is associated with the youngest and least foliated phases of the intrusion. *Area M* (+3.0 ppm Mo) in the upper part of Skwum Creek reflects mineralization associated with thermal effects on calc-silicate rocks within the Nicola Group.

Area Q (+2.0 ppm Mo) is associated with the Quilchena stock, a quartz monzonite body which has concentric zoned propylitic, argillic and potassic alteration associated with molybdenite-chalcocopyrite mineralization.

4) Late-Cretaceous Intrusions (Unit 4, Fig. 6)

The regional molybdenum stream-sediment content over these widespread and numerous intrusions is quite variable.

Area A (+4.0 ppm Mo) is associated with molybdenite mineralization in a syenite stock exposed along Whiteman Creek. *Area O* (+2.5 ppm Mo) lies on a westerly protuberance of the Okanagan batholith now known to be a distinctly younger intrusion, the Summers Creek stock (Preto, 1976). Interestingly, two nearby late-Cretaceous syenite intrusions, the Siwash and Trout Creek stocks (R & S, Fig. 6), have no associated molybdenum concentrations.

Area I (+4.0 ppm Mo) is a discrete, well-defined anomaly associated with the Ash-Nola property. As Montgomery *et al.* (1975b) make clear, this anomaly is not due to the Kingsvale volcanics, but to a post-Kingsvale, and thus presumably late-Cretaceous, quartz monzonite boss and associated porphyry dykes. Extensive molybdenite-chalcocopyrite-pyrite mineralization occurs over an area of 2 sq. miles (5.2 sq. kms). *Area H* (+5.0 ppm Mo)

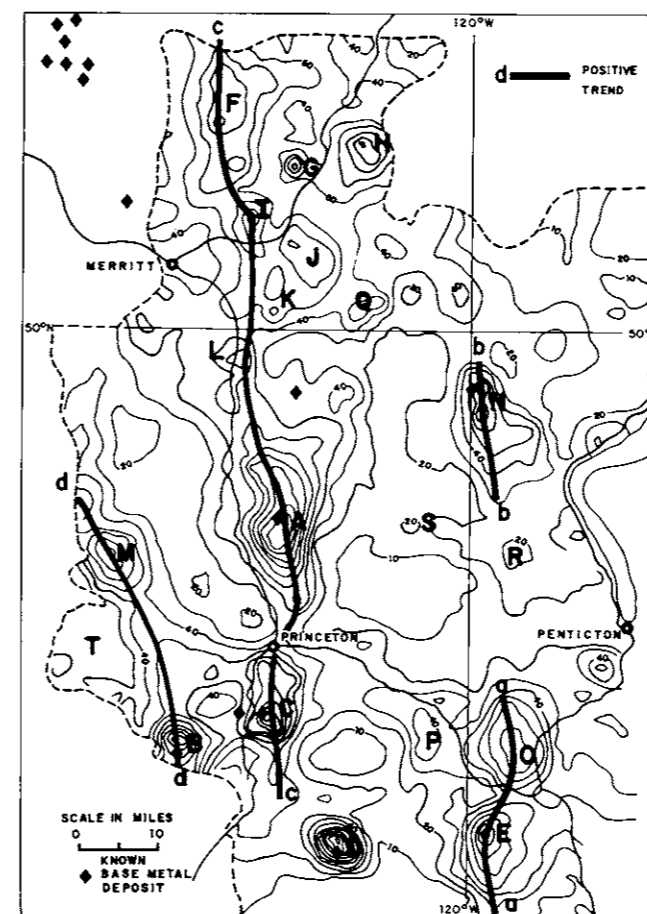


FIGURE 8—Copper — Regional Distribution and Trends. Contour interval is at 10 ppm Cu. High-value areas are lettered in capitals A through T. Positive metal trends are shown by solid lines lettered a to d.

occurs across the headwaters of Young Creek. The most likely cause appears to be a repetition of the situation at Area I, i.e. post-Kingsvale intrusives, which here are either less well mineralized or less well exposed. *Area CC* (+2.0 ppm Mo) at Whipsaw Creek is associated with post-Eagle batholith porphyries, and these are most probably late-Cretaceous. *Area EE* is underlain by a late-Cretaceous stock at Mt. Thynne, which has a greater than 2.0 ppm Mo contour coincident with it. *Area FF* (+3.5 ppm Mo) is a high-value area lying within the Verde Creek pluton. Recent exposures show that the anomaly is associated with molybdenite veins.

5) Cretaceous Kingsvale Volcanics (Unit 5, Fig. 6)

In both the northern area, southwest of Merritt, and the southern area, in the Ashnola valley, the average regional stream-sediment content is 1.0 ppm Mo or less.

6) Tertiary Intrusions (Unit 7, Fig. 6)

The most extensive Tertiary intrusive is the Nicola batholith (H, Fig. 6). Regionally, it has a relatively molybdenum-deficient core (average 1.0 ppm Mo), with higher contents toward the periphery. *Area R* (+2.5 ppm Mo) is associated with molybdenite-pyrite-quartz veins in porphyritic zones in the Fox Lake area.

REGIONAL COPPER DISTRIBUTION

Metal Trends

The contoured moving-average map for copper (Fig. 8) delineates three distinctive northerly metal trends. Trend (a) is in "Cache Creek" rocks and is parallel to the dominant local strike. Trend (b) is shown by the strong elongation of the copper contours in the Brenda area, and this coincides with the north-south structural feature as feature associated with the Nicola volcanics and extends outlined by Carr (1968). Trend (c) is a major regional from south of Copper Mountain to the northern edge of the project area. This north-south metal trend coincides almost exactly with the "Central Belt", as outlined by Preto (1975-1977), which represents a zone of initial rifting, volcanism and intrusion along the axis of the Nicola volcanics. Northwesterly trend (d) closely follows the eastern contact of the Eagle batholith (L, Fig. 6).

Crosscutting copper-deficient zones are not present, and it is obvious that the dominant factor controlling the regional distribution of copper is rock type rather than structure.

Major Rock Types and Regional Moving-Average Copper Values

Table 3 summarizes the relationships between the regional distribution of copper and geology.

1) Pennsylvanian-Permian "Cache Creek" Rocks (Unit 1, Fig. 6)

Over the northern outcrop area, east of Douglas Lake, the regional stream-sediment content is 20-30 ppm Cu, and no high-value areas occur. In contrast, in the southern outcrop area, in the vicinity of Keremeos, the regional sediment values are over 40 ppm Cu, and some significant high-value areas occur. At *Area E* (+100 ppm Cu), south of Keremeos, numerous small plugs and dykes of porphyritic felsite occupy the core of a major hornfels zone which has vein-type and skarn-type chalcopryite-molybdenite-sphalerite-scheelite-pyrite-quartz mineralization. *Area O* (+70 ppm Cu), near Apex Mountain, is associated with numerous small plugs and dykes with accompanying chalcopryite-sphalerite-pyrite skarn zones.

2) Late Triassic Nicola Group (Unit 2, Fig. 6)

Stream sediments from the northern outcrop area of

TABLE 3 — Age, Rock Type and Regional Copper Stream-Sediment Content

Age and Rock Type	Average Regional Stream-Sediment Content in ppm Cu	Area (Fig. 8)	Peak Cu Contour (ppm)
Tertiary Intrusions Nicola batholith.....	40-50		No high-value areas
Cretaceous Kingsvale Volcanics.....			No high-value areas
Northern area.....	20-30		
Southern area.....	30		
Late-Cretaceous Intrusions.....	10-20		
Whipsaw Creek.....		B	110
Ashnola.....		D	110
Jurassic Intrusions.....			
Shorts Creek batholith.....	20		
Pennask batholith, margin.....	25	Q	
core.....	50		
Brenda stock.....	60	N	80
Okanagan batholith, margin.....	30		
core.....	10		
Similkameen batholith, east lobe.....	20-30		
west lobe, margin.....	20		
core.....	10		
Eagle batholith.....	30	M	80
Allison Lake pluton.....	40		
Quilchena stock.....		K	60
Wildhorse batholith.....	20-30		
Nicola batholith, margin.....		G I	90 80
Late Triassic Nicola Volcanics.....			
Northern area.....	50	F H J	80 90 70
Central Belt.....	60	A C L	100 110 60
Southern area.....	30		
Pennsylvanian-Permian "Cache Creek" Northern area.....	20-30		
Southern area.....	40	E O	100 70

the Nicola are regionally high in copper content, with the average being over 50 ppm. *Area F* (+80 ppm Cu) occurs near Rey Lake. This is the site of Asarco's discovery of several hundred feet of 0.5% Cu in a breccia zone associated with a late-Cretaceous stock (McMillan, 1973). However, the mineralized zone is covered by up to 300 feet (90 m) of overburden, and thus the high stream-sediment values cannot readily be ascribed to the Rey Lake mineralization. The regional high values appear to originate from streams on the south slope of Guichon Mountain and probably represent a localized concentration of copper within the Nicola volcanics. *Area H* (+90 ppm Cu) lies just east of Peter Hope Lake and is associated with a sequence of porphyritic basaltic-andesite flows the copper content of which is more than 100 ppm. *Area J* (+70 ppm Cu) lies just south of Nicola Lake and, like *Area H*, is associated with Nicola flows which have an enhanced copper content. *Area L* (+60 ppm Cu) is a reflection of the bornite-chalcopryite mineralization at Aspen Grove. In this area, the 50-ppm Cu contour enclosed 90 per cent of all, the mineralized showings shown by Preto (1975).

Area A (+100 ppm Cu) is areally the largest regional copper anomaly; in part it is a result of the dispersion train along Summers Creek. Preto's (1976) mapping clearly shows that *Area A* is the geochemical expression of the Axe copper-molybdenum mineralization within the Nicola volcanics. South of the Tertiary sediment cover at Princeton is *Area C* (+100 ppm Cu), which lies on the southerly continuation of the major metal trend (c) (Fig. 8), and thus, by implication, on the continuation of Preto's "Central Belt". *Area C* represents the Copper Mountain - Ingerbelle mineralization; its north-south elongation reflects the overall structural control. The orebodies lie within a narrow east-west roof pendant of Nicola volcanics (Preto, 1972), and these and the surrounding Lost Horse intrusions all lie within the area outlined by the 70-ppm Cu contour.

South of Copper Mountain, the regional copper content of the stream sediments over the Nicola Group is only 30 ppm Cu, and no high-value areas are present. An easterly lobe of Nicola rocks extends from Copper Mountain to Hedley and the regional background for this area is also 30 ppm Cu; however, in the immediate vicinity of Hedley, *Area P* (+40 ppm Cu) reflects chalcopryite associated with the arsenopyrite-gold mineralization there.

These diminished values for copper over the Nicola rocks in the Copper Mountain - Hedley area could be interpreted as due to removal of copper from the Nicola rocks to form concentrations in the nearby copper deposits. However, the simpler geochemical correlation is between decreased copper content and a sympathetic increase in volcanoclastic sediment at the expense of volcanic basaltic-andesite.

A north-northwest-trending zone of Nicola volcanics runs parallel to the eastern boundary of the Eagle batholith (L, Fig. 6) and encloses the Tulameen ultramafic complex (Z, Fig. 6). This entire area is associated with regional copper values in excess of 40-50 ppm Cu within which two regional high-value areas occur. *Area M* (+80 ppm Cu) straddles the Nicola-Eagle batholith contact and represents copper mineralization in a contact zone at Skwum Creek. *Area B* also straddles the Nicola-batholith contact at Whipsaw creek; its significance is discussed later.

3) Late Triassic and Jurassic Intrusions (Unit 3, Fig. 6)

Stream sediments over the Pennask batholith (E, Fig. 6) have a moving-average content of about 25 ppm Cu, although the western part of the batholith has an inner core, *Area Q* (Fig. 8), with a regional content of 50 ppm Cu. This internal positive zoning of copper in the Pennask batholith is a contrast to that of the Okanagan and Similkameen batholiths.

The Brenda stock coincides with *Area N* (60-80 ppm Cu) and is unique in being the only extensive regional stream-sediment copper anomaly associated with a Jurassic intrusion. The 60-ppm Cu contour coincides with the major north-south structural zone outlined by Carr (1968), and the regional peak contour of 80 ppm Cu defines the copper mineralization at Brenda mine and in upper Trepanier Creek. Regionally averaged stream-sediment values over the Okanagan batholith show a systematic negative zoning pattern from 30 ppm Cu near the periphery to less than 10 ppm Cu at the centre. The 30-ppm Cu values tend to be associated with Preto's (1973) early dioritic phases. *Area R* represents the only internal 30-ppm Cu area and is related to chalcopryite mineralization on the Lodestar property. *Area S* (Fig. 8) represents two deflections of the internal 20-ppm Cu contour and reflects accessory chalcopryite associated with the Empress granite pluton and its molybdenum mineralization.

This negative annular arrangement of the regional copper contours crosscuts internal plutons as mapped by

Petö (1973), suggesting that the copper content is not solely controlled by lithology; the copper distribution strongly contrasts with the molybdenum distribution (Fig. 7), with its high-value central core. Thus, the regional controls of the copper and molybdenum distributions within the Okanagan batholith are independent of each other, as both the zoning pattern and the metal trends are different. It is interesting that a similar pattern of negative zoning with respect to copper was noted by Brabec and White (1971) in their study of the equivalent-aged Guichon Creek batholith (AA, Fig. 6). Their study was based on rock samples, but the pattern is identical to that of the present work based on stream-sediment samples (Table 6).

The regional copper content of the stream sediments over the Similkameen-Rommel batholith (V, Fig. 6) west of longitude 120°W is generally less than 20 ppm Cu; the batholith is negatively zoned, with the core having less than 10 ppm copper. East of longitude 120°W, the batholith is one of the few intrusions of this age associated with regional copper values as high as 40 ppm. The average regional content of the eastern lobe is 30 ppm Cu and levels in excess of 40 ppm Cu are associated with the marginal syenite bodies which host the well-known King Edward chalcopryite-molybdenite mineralization.

Sediments from streams draining the Eagle batholith (L, Fig. 6) have a regional content of 30 ppm Cu, and at *Area T* (+40 ppm Cu) chalcopryite-molybdenite mineralization occurs at Wells Lake.

The Allison Lake pluton (J, Fig. 6) is associated with a high regional average value of 40 ppm Cu and numerous small copper occurrences have been noted by Preto (1976). *Area K* (+60 ppm Cu) is a small, high-value area associated with the Quilchena stock. This intrusion possesses potassic-argillic-propylitic alteration zones and associated chalcopryite-molybdenite mineralization.

The core of the Nicola batholith is Tertiary in age, but its outer hybrid zone may be Jurassic. This outer zone is associated with two regionally high-value areas. *Area I* (+80 ppm Cu) is a reflection of the Toluca bornite-chalcopryite mineralization and *Area G* (+90 ppm Cu) is due to a chalcopryite-bornite vein system.

4) Late-Cretaceous Intrusions (Unit 4, Fig. 6)

The moving-average copper values over most of the late-Cretaceous intrusions are relatively low, being about 20 ppm Cu. The largest late-Cretaceous intrusion, the Verde Creek pluton, appears to be the most copper-deficient one, with a regional average value of only 10 ppm Cu.

Only two high-value areas are associated with late-Cretaceous intrusions — *Area B* at Whipsaw Creek and *Area D* in Ashnola valley. Neither of these intrusions has been age dated.

Area D (+110 ppm Cu) (Fig. 8). The 80-ppm Cu contour clearly defines a zone on the Ash-Nola property where extensive drilling has outlined a large tonnage of low-grade copper mineralization associated with a well-defined hydrothermal alteration system related to a quartz monzonite boss of presumed late-Cretaceous age (Montgomery *et al.*, 1975b).

Area B (+110 ppm Cu) at Whipsaw Creek straddles the Nicola-Eagle batholith contact. Preto (1969) has described a system of porphyry intrusions which cut the Eagle batholith and are thus post-104 m.y. These intrusions of probable late-Cretaceous age control porphyry-type mineralization for which both the Nicola volcanics and the Eagle batholith are hosts.

5) Cretaceous, Kingsvale Volcanics (Unit 5, Fig. 6)

Southwest of Merritt, over the northern outcrop area,

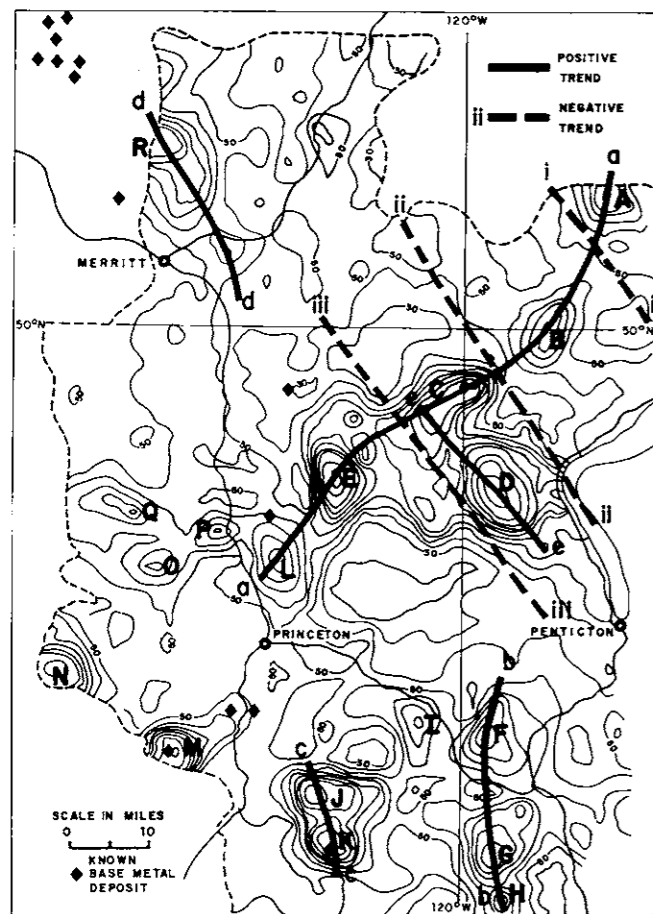


FIGURE 9 — Zinc — Regional Distribution and Trends. The 30- and 50-ppm Zn regional stream-sediment contours are numbered. The other contours shown are at 20, 40, 60, 70, 80, 90, 100, 120, 140, 160 and 180 ppm Zn. High-value areas are lettered in capitals A through R. Positive metal trends are shown by solid lines lettered a-d. Negative metal trends are shown by broken lines numbered i-iii.

the average regional stream-sediment contours show a negative zoning pattern, with 30 ppm Cu at the margin and less than 20 ppm Cu in the central core. The southern outcrop area in the Ashnola valley has an average sediment content of 30 ppm Cu.

6) Tertiary Intrusions (Unit 7, Fig. 6)

Regional copper values over the entire Nicola batholith are relatively high, being mostly 40-50 ppm Cu. However, it should be noted that all three high-value areas are associated with the marginal hybrid zone, and that no copper mineralization has been encountered in the inner, younger, porphyritic phase, which is of Early Tertiary age (60 m.y., McMillan, pers. comm., 1976).

REGIONAL ZINC DISTRIBUTION

Metal Trends

Some specific metal trends can be discerned from the regional distribution of zinc in stream sediments (Fig. 9). These trends are interrupted by linears low in zinc. Interestingly, there is a marked correlation between zinc metal trends and those for molybdenum (Fig. 7). The most obvious is the northeasterly trend (a), which appears to persist for over 60 miles (96 kms) and crosscuts different subunits of the Okanagan batholith, the Brenda stock and the Shorts Creek batholith. A north-south metal trend (b) occurs near Keremeos. This trend parallels the north-south strike of the local "Cache Creek" rocks. Other per-

TABLE 4 — Age, Rock Type and Regional Zinc Stream-Sediment Content

Age and Rock Type	Average Regional Stream-Sediment Content in ppm Zn	Area (Fig. 9)	Peak Zn Contour (ppm)
7) Tertiary Intrusions Nicola batholith	margin 30-40 core + 60	No high-value areas	
6) Cretaceous Kingsvale Volcanics	50	No high-value areas	
5) Jurassic-Cretaceous sediments	?	N	+ 120
4) Late-Cretaceous Intrusions	no average, but Verde Creek pluton — margin 40 — centre 60	A	+ 100
		B	+ 80
		D	+ 180
		E	+ 140
		J	+ 120
		K	+ 140
		L	+ 90
		M	+ 140
		O	+ 80
Q	+ 90		
3) Jurassic Intrusions	E. Similkameen batholith, margin 50; core 40 W. Similkameen batholith, margin 50; core 20 Okanagan, margin 40-60; core 20 Pennask, margin 50; core 30 Eagle, margin 50; core 40 Wildhorse, margin 40; core 30 Shorts Creek — average 40-50 Lost Horse — average 50	C	+ 120
		P	+ 90
2) Late-Triassic Nicola Volcanics	40-50	I	+ 80
		R	+ 100
1) Pennsylvanian- Permian "Cache Creek"	Northern area 50 Southern area 60	G	+ 120
		H	+ 100
		F	+ 100

*+80 = greater than 80 ppm

sistent northerly metal trends are (c) in the upper Ashnola valley and (d) in the Nicola rocks east of Guichon Creek. A less conspicuous metal trend (e) runs northwestward through Areas D-C.

The northwest-trending metal-deficient zones, clearly seen on the molybdenum map (Fig. 7), can be recognized, although less prominently, on the zinc regional contour map (i-iii, Fig. 9).

Major Rock Types and Regional Moving-Average Zinc Values

Table 4 summarizes the relationships between the regional distribution of zinc and geology.

1) Pennsylvanian-Permian "Cache Creek" Rocks (Unit 1, Fig. 6)

The northern outcrop area has an average regional sediment content of 50 ppm Zn, and there are no high-value areas.

The southern outcrop area is coincident with the 60-ppm regional zinc contour, and three areas of high values occur (Fig. 9). Area H (+100 ppm Zn) and Area G (+120 ppm Zn) coincide with the roof pendant, formed

of the Old Tom and Shoemaker formations, which divides the east and west lobes of the Similkameen batholith. In both areas, sphalerite has been observed in calc-silicate skarn zones formed from limy horizons within the Shoemaker Formation.

Area F (+100 ppm Zn) represents sphalerite associated with skarn mineralization due to limy beds in the Shoemaker and Independence formations south of Apex Mountain.

2) Late Triassic Nicola Group (Unit 2, Fig. 6)

The Nicola Group is characterized by a relatively low regional content for zinc (Fig. 9) ranging from 20-60 ppm in stream sediments.

Area I (+80 ppm Zn) lies within a negatively zoned region of Nicola, where the regional stream-sediment value is 45 ppm Zn and the inner core is 20 ppm Zn. Area I represents sphalerite associated with the arsenopyrite mineralization of the Hedley gold camp. The only extensive area of high regional values is Area R (+100 ppm Zn). It appears to be associated with numerous small syenite to monzonite stocks which have quartz-pyrite veins with high copper-zinc values. These high-level stocks appear to be penecontemporaneous with the porphyritic Nicola flows which they intrude in the Hector Lake area. This zone may represent a continuation of Preto's (1975-1977) "Central Belt", which would thus trend from the west side of the Quilchena valley, west of Nicola Lake and along the eastern side of the Guichon Creek valley.

3) Late Triassic and Jurassic Intrusions (Unit 3, Fig. 6)

The regional zinc values over these intrusions are characteristically uniform and exhibit marked zoning patterns, with zinc-depleted cores and relatively enriched margins. Details of the values for the margin and core of each batholith are given in Table 4. This pattern of negative zoning of zinc distribution was also noted by Brabec and White (1971) in their rock geochemical study of the equivalent-aged Guichon Creek batholith (AA, Fig. 6).

The only major zinc anomaly associated with this age of intrusion is Area C (+120 ppm Zn), centred over the Brenda stock and involving flanking Nicola rocks to the west. Area C lies on zinc metal trend (a) (Fig. 9); however, the north-south copper and molybdenum trends seen in the Brenda area are not discernible in the zinc data. As described in the section on molybdenum, the northeast metal trend is parallel to the dominant mineralization system at Brenda (Stage 2A veins of Soregaroli & Whitford, 1976), but crosscuts the dominant foliation in the Nicola rocks and the Nicola - Brenda stock - Okanagan - Pennask batholith contacts.

4) Late-Cretaceous Intrusions (Unit 4, Fig. 6)

Almost every late-Cretaceous intrusion is associated with a regional stream-sediment zinc anomaly (see Table 4).

This characteristic high zinc content clearly labels the Summers Creek stock (L, Fig. 9) as being late Cretaceous in age, even though Rice (1947) and Petö (1973) show it as being a protuberance of the Jurassic Okanagan batholith. However, recent isotopic dating (Preto, 1976) indicates that it is, in fact, a discrete 97-m.y.-old intrusive. Area D (+180 ppm Zn), the largest and highest regional zinc anomaly, coincides almost exactly with the outcrop of a "Valhalla" pluton mapped by Little (1961) and Petö (1973). The pluton is dated by Medford (1975) at 133 m.y. and is Cretaceous in age.

Drilling in the Darke Lake area shows that the zinc occurs as disseminated sphalerite grains in a stockwork of chalcopyrite-molybdenite-pyrite-quartz-sericite veins in an

altered granodiorite cut by post-mineralization quartz porphyry. The mineralized stockwork averages 3000 ppm Zn and represents "zinc porphyry" mineralization. Area D shows a distinct elongation in a northwest-southeast direction, and it is bounded on either side by zinc-deficient linears [(ii) and (iii) on Fig. 9]. It is noteworthy that these two metal-deficient zones were independently defined by the regional molybdenum data.

The northeasterly metal trend (a) is associated with anomalous areas L-E-C-B-A (Fig. 9). Although Area C is related to the Jurassic Brenda stock, the other high-value areas are all associated with late-Cretaceous intrusions.

Area A (+100 ppm Zn) is coincident with the Whiteman Creek syenite stock; Area B (+90 ppm Zn) is underlain by a "Coryell-age" intrusion (Little, 1961) south of Whiterocks Mountain; Area E (+140 ppm Zn) is centred over the Siwash Creek stock, with documented sphalerite mineralization (Rice, 1947); and Area L (+90 ppm Zn) is coincident with the Summers Creek stock.

It is of interest that the Trout Creek stock (S, Fig. 6), which is presumably of this age, shows no enhancement in zinc.

Area Q (+90 ppm Zn) is coincident with a late-Cretaceous stock on Mt. Thynne, and Area O (+90 ppm Zn) lies just west of the late-Cretaceous Otter Lake pluton.

The Verde Creek pluton (O, Fig. 6) is the largest late-Cretaceous intrusion in the project area. Although there is no positive regional zinc anomaly associated with it, there is a positive zonation; regionally, stream sediments from the margin average 40 ppm Zn and those from the core average 60 ppm Zn.

Other regional anomalies that appear to be related to late-Cretaceous intrusions are areas M, K and J (Fig. 9), but isotopic dating information is not yet available. Area M (+140 ppm Zn) at Whipsaw Creek is associated with porphyries which intrude both the Nicola volcanics and the Eagle batholith (Preto, 1969), and as such are post-104 m.y. and are thus probably late Cretaceous. Area K (+140 ppm Zn) coincides with the Ash-Nola property, where the Cretaceous Kingsvale rhyolitic volcanics are cut by a quartz monzonite boss and associated dykes (Montgomery *et al.*, 1975b), which are associated with a large zoned sulphide system. The probable age of the minor intrusions is late Cretaceous.

5) Cretaceous Sediments (Unit 5, Fig. 6)

Area N (+120 ppm Zn) is an isolated, regional anomaly associated with the Treasure Mountain sphalerite mineralization, which occurs in veins in sediments of the Pasayten Formation near the Chuwanten fault.

6) Cretaceous Kingsvale Volcanics (Unit 5, Fig. 6)

The northern outcrop area, southwest of Merritt, has an average regional sediment content of 50 ppm Zn; no average regional value can be assigned to the southern outcrop area in the Ashnola valley due to the influence of the two high-value areas J and K (Fig. 9).

7) Tertiary Intrusions (Unit 7, Fig. 6)

The regional zinc content of stream sediments over the Nicola batholith averages 40 ppm, but the regional distribution pattern clearly shows a positive zoning with a margin of 30-40 ppm zinc and a central core of +60 ppm zinc.

Summary and Conclusions

A total of 7850 stream-sediment samples were collected from 5430 sq. miles (14,063 sq. kms) of south-central

British Columbia, giving a sample density of 1.4 per sq. mile (0.5 per sq. km). As with any stream survey, however, the collection sites have a non-uniform distribution (Fig. 2). To facilitate interpretation of the data, the weighted, moving-average technique was applied to generate a series of regional contour maps. With the moving-average technique, the size of the search area, the spacing of the grid lattice and the weighting can all be modified to suit any individual stream survey. This particular computer approach is, therefore, sensitive to the geology and sample density of each particular stream survey.

The resulting contour maps (Figs. 7, 8 and 9) add some interesting insights to the regional geology of the project area. These concern (i) regional metal trends, (ii) relationships between metal content, age and lithology, (iii) metal zoning patterns within particular rock types and (iv) relationship to mineralization.

REGIONAL METAL TRENDS (Fig. 10)

All three metals, Mo, Cu and Zn, have distribution patterns that can be resolved into linear trends (Figs. 7, 8 and 9). These trends traverse a terrain underlain by rocks of various ages and lithology, thus suggesting structural control. These positive trends of high metal values are interrupted by zones of low metal values. This juxtaposition of high- and low-value trends may represent zones of contrasting fracture density.

The regional molybdenum and zinc contour maps (Figs. 7 and 9) display strong northeast metal trends and less marked north-south trends. In contrast, the regional contour map for copper (Fig. 8) shows no northeast trends, but does exhibit strong north-south trends and a less marked north-northwest trend. This variation in trend direction for the different metals suggests that their origins are to some extent independent of one another.

Another feature of the positive metal trends is that the relevant structural event controlling them may have occurred more than once; e.g. the major northeast molybdenum and zinc trends appear to be related to two such episodes.

Soregaroli and Whitford (1976) suggest an age of 186 m.y. for the emplacement of the Brenda stock and an age of 146 m.y. for the dominant, northeast-trending, stage 2A molybdenite veins. The high-value molybdenum trend extends for 25 miles (40 kms) southwest of Brenda across the Okanagan batholith, where it terminates against a "Valhalla" pluton. This is Unit 9 of Preto (1973) and is a post-batholith phase. Medford (1975) has given an age of 133 m.y. for this pluton and Soregaroli (pers. comm., 1977) finds that the post-molybdenite mineralization trachyte dykes at Brenda are 130 m.y. However, the northeast zinc metal trend affects the "Valhalla" pluton and many other late-Cretaceous stocks, including the Summers Creek stock, which Preto (1976) dates at 97 m.y. Hence, it appears that the northeast trend was reactivated in late-Cretaceous time as a zone along which intrusions were emplaced and along which zinc-rich fluids were mobilized. Thus, the metal trends which appear to have been imprinted at more than one period of time may be related to fundamental structural control in the basement.

The north-south metal trends of Cu and Mo are obvious in the Brenda area, where they correlate with the mapped limits of a north-south structural zone as outlined by Carr (1968). The north-south Mo-Cu-Zn trends in the Keremeos area are parallel to the dominant foliation and structural grain of the local "Cache Creek" rocks. The most interesting north-south trend is associated with the Upper Triassic Nicola Group in which Preto (1975-1977) has distinguished a "Central Belt" characterized by initial volcan-

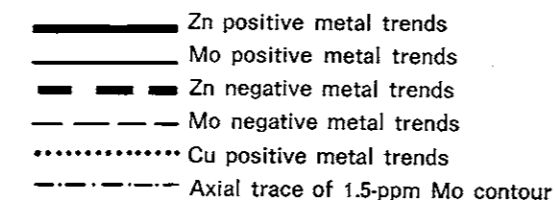
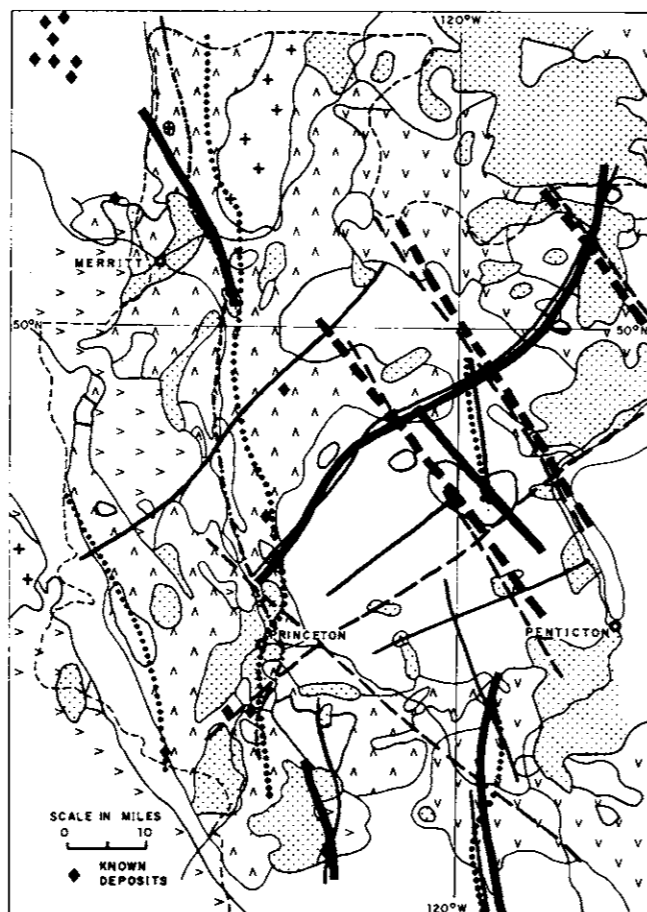


FIGURE 10—Compilation of Geology and Regional Metal Trends.

ism and penecontemporaneous syenitic-dioritic intrusions. Preto's mapping shows that this north-south zone extends from Copper Mountain to the north of Aspen Grove. The results of the present study show that the axial trace of the 1.5-ppm regional molybdenum contour and of the 60-ppm copper contour coincide with Preto's Central Belt, and the regional geochemical data from sediment analysis suggest that the Central Belt should terminate a few miles south of Copper Mountain and may continue northward along the eastern side of the Guichon Creek valley.

Thus, in three different geographic areas, in rocks of different ages, north-south metal trends are controlled, in part at least, by structure rather than by rock type.

ROCK TYPE AND AGE AVERAGE STREAM-SEDIMENT METAL CONTENT (Table 5)

Taken as a whole, the stream-sediment data suggest that the dominant control of regional metal distribution is by age and lithology rather than by structure; thus, 60% of the regional high values for molybdenum in sediments lie over late-Triassic-Jurassic intrusions, 50% of the high values of copper in stream sediments are related to the late-Triassic Nicola Group and 60% of the regional zinc anomalies are associated with late-Cretaceous intrusions.

TABLE 5 — Rock Type, Age and Related Regional Stream-Sediment Metal Content in ppm

Rock Type	Molybdenum		Copper		Zinc	
	Average Regional Value	Maximum Regional Contour	Average Regional Value	Maximum Regional Contour	Average Regional Value	Maximum Regional Contour
Intrusives						
Tertiary.....	1.0	+2.5	45	—	35	+ 60
Late Cretaceous.....	2.0	+5.0	15	+110	110	+180
Late Triassic, Jurassic.....	2.0	+6.0	25	+ 90	10	+120
Volcanics						
Cretaceous Kingsvale.....	1.9	—	25	—	50	—
Triassic Nicola.....	1.0	+3.5	55	+110	45	+100
Penn-Permian, "Cache Creek".....	2.0	+6.0	30	+100	35	+120

*Note: + = greater than

In fact, the data in Table 5 indicate that the main groups of intrusive and volcanic rocks can be distinguished by their associated Mo, Cu and Zn regional stream-sediment patterns.

Thus, stream sediments over Tertiary intrusions are low in molybdenum and zinc and relatively high in copper; late-Cretaceous intrusions have a very high zinc content in stream sediments, and moderate molybdenum and low copper values; stream sediments over Jurassic intrusions are high in molybdenum and low in copper and zinc. Regional stream-sediment values over the Cretaceous Kingsvale volcanics are low in molybdenum, copper and zinc; the late-Triassic Nicola volcanics have a high copper content in the sediments and low molybdenum and zinc contents; the "Cache Creek" volcanics have regional sediment values high in molybdenum and zinc, but relatively low in copper.

Significant high values in terms of mineralization are, however, not as predictable. Thus, important molybdenum mineralization occurs not only in Jurassic intrusions, but also in late-Cretaceous stocks, as at the Ash-Nola property, and in "Cache Creek" rocks at Gillanders Creek. Important copper mineralization occurs not only in Nicola rocks, but also in late-Cretaceous porphyries as at Whip-

saw Creek and the Ash-Nola property, in the Jurassic Brenda stock and in "Cache Creek" rocks at Gillanders Creek.

In addition to the distribution of regional high-value areas, there are interesting variations in the average regional background for the different metals within the same geological unit; e.g. in the "Cache Creek" rocks a contrast is seen in the regional pattern of molybdenum, copper and zinc between the northern area, east of Douglas Lake, and the southern area about Keremeos, with the latter showing consistently higher metal contents, as shown below:

	Mo ppm	Cu ppm	Zn ppm
Northern area.....	1.0	25	50
Southern area.....	+2.0	+40	+60

The northern outcrop area has no regional anomalies, whereas the southern outcrop area has high-value zones for all three metals.

Fossil evidence from east of Peter Hope Lake (Okulitch, pers. comm., 1976) and at Salmon River, east of Douglas Lake (Read and Okulitch, 1977), suggests that almost the entire outcrop of rocks shown by Cockfield (1948) to be "Cache Creek" Group(?), in the Douglas Lake area, could be late-Triassic, Nicola Group volcanoclastic sediments. Cockfield (p. 8, 1948) was aware of this possibility when he wrote: "The Cache Creek - Nicola contact was, therefore, drawn where rocks became preponderantly of volcanic origin, that is at the base of the massive Nicola greenstone".

Thus, the obvious geochemical contrast between the two areas shown as Unit 1, "Cache Creek", on Figure 6 clearly reflects the considerable difference in lithology between the volcanoclastic sediments, shales and sandstones in the north and the chert, shale and greenstones of the south. This difference may also be one of geological age.

PATTERNS OF METAL ZONING WITH ROCK TYPES OF A GIVEN AGE

The moving-average contour maps of the stream-sediment data (Figs. 7, 8 and 9) display well-marked and characteristic zoning patterns of metal distribution over the Jurassic batholiths. There is a positive pattern with regard to the molybdenum values and a negative pattern with regard to the copper and zinc values. This feature of negative zoning with respect to copper and zinc has been shown to occur in the equivalent-aged Guichon Creek

TABLE 6 — Zoned Cu-Zn-Mo Distributions Relative to Granitic Batholiths

Name	Metal	Values (ppm)	
		Margin	Core
Guichon Creek batholith, rock samples from Brabec and White, 1971	Cu	+100	-50
	Zn	+30	-20
	Mo	not available	
Okanagan batholith Regional stream-sediment results from this study	Cu	+ 30	-10
	Zn	+ 50	-20
	Mo	2.0	+ 6.0

+ = greater than
- = less than

batholith by Brabec and White (1971), although they used rock samples rather than stream-sediment samples (Table 6).

Most of the late-Cretaceous intrusions are too small to generate a metal zoning pattern, but the largest intrusion of this age, the Verde Creek pluton, is positively zoned with respect to zinc. The Tertiary Nicola batholith also has a positive zinc zoning pattern: regional Zn content at the margin is 35 ppm and near the core it is greater than 60 ppm.

RELATIONSHIP TO MINERALIZATION

With regard to economic mineralization, it is interesting to note that: (1) Brenda is associated with regional anomalies in molybdenum (+6.0 ppm), copper (+80 ppm) and zinc (+120 ppm); (2) Copper Mountain has high regional values for copper (+110 ppm) and molybdenum (+3.5 ppm); (3) the Ash-Nola property has high regional values in all three metals (molybdenum +4.0 ppm, copper +110 ppm, zinc +140 ppm); (4) the Whipsaw Creek property has regional anomalies in copper (+110 ppm), zinc (+140 ppm) and molybdenum (+2.0 ppm); (5) the Axe property has high regional values in copper (+100 ppm). Similar details can be plotted for almost all the known major occurrences in the project area.

From this discussion, it can be seen that computer treatment of systematically collected geochemical stream-sediment data and production of moving-average metal maps can lead to a better understanding of the metallogeny of an area. Although this survey involved only three metals, similar regional geochemical maps could be produced for any number of metals.

Recommendations

Regional, geochemical or airborne geophysical surveys produce much data that, when integrated with geology, yield a great deal of information of general interest to academics, government agencies and mineral exploration groups. However, in most of Canada this regional information does not become part of the general data pool, because the work is normally carried out before claim staking and is therefore not recorded in assessment files. It would seem worthwhile for the relevant government agencies to revise their assessment regulations to make regional surveys carried out prior to land acquisition eligible as an allowable expenditure to set against the properties acquired as a result of that survey.

Such a regulation would eliminate needless duplication of regional surveys, the data would be accessible to all after a confidentiality period and the samples could be made available for use by other groups for additional analyses.

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PROJECT PRINIC STREAM GEOCHEMISTRY

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APPENDIX II

CANADIAN OCCIDENTAL PETROLEUM

STREAM SEDIMENT GEOCHEMISTRY

PROJECT PRINIC

REPORT OF NUMERICAL TREATMENT

1978



Luciano Martin, P. Eng.

PROJECT PRINIC STREAM GEOCHEMISTRY

U HISTOGRAM AND CUMULATIVE FREQUENCY PERCENTAGES

INTERV PPH	FREQ.	CUM.FR	
	0.0		
0.50	0.78	0.0	*
0.60	0.51	0.78	*
0.70	0.80	1.30	*
0.80	1.11	2.09	**
0.90	1.97	3.20	***
1.00	6.34	5.17	*****
1.20	17.77	11.51	*****
1.60	14.05	29.28	*****
2.00	10.94	43.33	*****
2.50	9.86	54.28	*****
3.20	7.27	64.14	*****
4.00	6.00	71.41	*****
5.00	5.32	77.41	*****
6.30	4.59	82.73	*****
8.00	3.38	87.33	*****
10.00	2.68	90.70	*****
12.50	2.09	93.38	*****
16.00	1.50	95.47	**
20.00	0.89	96.97	*
25.00	0.70	97.87	*
31.50	0.42	98.57	
40.00	0.43	98.99	
50.00	0.19	99.42	
63.00	0.15	99.61	
75.00	0.07	99.76	
100.00	0.18	99.82	
999.90		100.00	

NUMBER OF SAMPLES = 7401

PROJECT PRINIC STREAM GEOCHEMISTRY

STATISTICAL SUMMARY OF ALL SAMPLES

METAL	AR.	MEAN	STD. DEV	GEOM MEAN	GEOM DEV	LN VAR	RANGE		SMPLS
							LOW	HIGH	
U		4.687	9.969	2.748	10.156	0.7734	0.500	411.000	7401

SUMMARY EXCLUDING HIGHEST ANOMALOUS VALUES

METAL	AR.	MEAN	STD. DEV	GEOM MEAN	GEOM DEV	LN VAR	CUT-OFF	SMPLS	TOTAL
U		3.282	2.884	2.461	2.998	0.5271	16.030	7066	7401

PROJECT PRINIC STREAM GEOCHEMISTRY

U	CLASS LIM	5.5	8.5	11.5	14.5	99999.9
U		5867 79.3	652 8.8	321 4.3	176 2.4	385 5.2
U	CUMUL	79.3	88.1	92.4	94.8	100.0
CU	CLASS LIM	45.0	67.0	89.0	111.0	99999.9
CU		5836 74.9	1053 13.5	436 5.6	202 2.6	262 3.4
CU	CUMUL	74.9	88.4	94.0	96.6	100.0
ZN	CLASS LIM	65.0	87.0	109.0	131.0	99999.9
ZN		5992 76.9	977 12.5	320 4.1	163 2.1	337 4.3
ZN	CUMUL	76.9	89.5	93.6	95.7	100.0
MO	CLASS LIM	2.0	3.0	4.0	6.0	99999.9
MO		5885 75.6	812 10.4	578 7.4	109 1.4	405 5.2
MO	CUMUL	75.6	86.0	93.4	94.8	100.0

NUMBER OF SAMPLES = 7789

PRINIC GEOCHEMISTRY POSITIVE RESIDUALS

STATISTICAL SUMMARY OF ALL SAMPLES

METAL	AR.	MEAN	STD. DEV	G E O M	M E A N	G E O M	D E V	L N	V A R	RANGE		S M P L S
										LOW	HIGH	
U		3.794	13.471	0.437	13.883	5.7172	0.100	385.600	2955			

SUMMARY EXCLUDING HIGHEST ANOMALOUS VALUES

METAL	AR.	MEAN	STD. DEV	G E O M	M E A N	G E O M	D E V	L N	V A R	CUT-OFF	S M P L S	TOTAL
U		1.707	2.815	0.345	3.128	4.9309	16.000	2801	2955			

PRINIC GECHEMISTRY POSITIVE RESIDUALS

U HISTOGRAM AND CUMULATIVE FREQUENCY PERCENTAGES

INTERV PPM	FREQ.	CUM.FR	
	20.30		*****
0.10		20.30	
	8.63		*****
0.20		28.93	
	7.24		*****
0.30		36.18	
	5.55		*****
0.40		41.73	
	4.33		*****
0.50		46.06	
	3.42		*****
0.60		49.48	
	3.21		*****
0.70		52.69	
	2.50		*****
0.80		55.19	
	2.06		*****
0.90		57.26	
	1.73		***
1.00		58.98	
	3.18		*****
1.20		62.17	
	2.71		*****
1.40		64.87	
	2.17		*****
1.60		67.04	
	2.20		*****
1.80		69.24	
	1.49		**
2.00		70.73	
	3.42		*****
2.50		74.15	
	4.33		*****
3.20		78.48	
	3.28		*****
4.00		81.76	
	3.25		*****
5.00		85.01	
	2.67		*****
6.30		87.68	
	2.30		*****
8.00		89.98	
	1.52		***
10.00		91.51	
	1.73		***
12.50		93.23	
	1.56		***
16.00		94.79	
	1.29		**
20.00		96.07	
	0.95		*
25.00		97.02	
	2.98		*****
999.90		100.00	

NUMBER OF SAMPLES = 2955

Sample:	Sample No.
East North:	UTM Coordinates
U:	Measured U value
URS:	Residual U value

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
1	690630	5576610	1.0	-0.3		2	686970	5568310	1.2	-0.2	
3	687140	5569340	0.9	-0.5		4	687580	5570070	0.8	-0.3	
5	686060	5569290	1.2	-0.2		6	685790	5569830	1.1	-0.3	
7	685430	5570600	0.9	-0.5		8	685650	5570980	1.3	-0.1	
9	685100	5570750	1.1	-0.3		10	684380	5571680	1.4	-0.7	
11	685000	5568150	1.1	-0.3		12	684960	5567760	1.1	-0.8	
13	684200	5567510	1.7	-0.2		14	684160	5567100	1.2	-0.4	
15	683350	5567020	1.1	-0.5		16	683520	5566860	1.0	-0.6	
17	682900	5566840	1.2	-0.4		18	683050	5566460	1.6	-0.0	
19	682780	5566410	1.3	-0.3		20	682550	5565960	1.1	-0.5	
21	690330	5577510	1.3	-0.1		22	688150	5576250	1.2	-0.3	
23	687360	5576220	1.4	-0.4		24	686840	5576440	1.2	-0.6	
25	680320	5564070	1.4	-0.8		26	681060	5563990	1.6	-0.6	
27	681750	5564000	1.5	-0.7		28	682560	5564020	1.5	-0.0	
29	683280	5564220	1.5	-0.0		31	693480	5557510	1.7	0.2	
32	693060	5557680	1.5	-0.0		33	692430	5558210	1.5	0.1	
34	692300	5558450	1.2	-0.2		35	692440	5558500	1.5	0.1	
36	691670	5558730	1.5	0.1		37	691500	5558960	1.4	0.0	
38	690850	5559830	1.7	0.3		39	689950	5560520	2.0	0.6	
40	689000	5561400	1.5	0.1		41	688250	5581290	1.7	0.1	
42	688760	5581400	1.7	0.1		43	688650	5580790	1.3	-0.3	
44	689180	5579500	2.3	0.7		45	689020	5579140	2.1	0.5	
46	688610	5579040	1.1	-0.5		47	688360	5562190	1.1	-0.3	
48	688450	5562770	1.5	0.1		49	688680	5563500	1.3	-0.1	
50	689110	5564180	1.3	-0.1		51	690310	5578500	1.7	0.3	
52	690920	5579730	0.7	-0.7		53	689880	5578000	1.2	-0.4	
54	689760	5577630	1.4	-0.2		55	688950	5577700	1.0	-0.6	
56	688320	5577410	1.2	-0.3		57	687150	5577050	1.3	-0.5	
58	686500	5576750	0.9	-0.9		59	679580	5561640	1.5	-2.0	
60	680420	5561610	2.7	0.8		51	686830	5567060	2.0	0.7	
62	687530	5566430	1.3	0.0		53	687330	5566190	2.1	0.8	
64	687370	5566020	1.3	-0.0		55	687140	5565180	1.0	-0.3	
66	686950	5565050	1.4	0.1		57	687300	5564350	1.2	-0.2	
68	687470	5563480	-1.0	0.0		59	687770	5563460	1.3	-0.1	
71	680700	5561670	1.7	-0.2		72	681330	5562300	2.4	0.5	
73	682540	5561580	1.4	-0.1		74	682220	5561810	1.4	-0.5	
75	685410	5577600	1.1	-0.8		76	685300	5578610	2.8	0.9	
77	685380	5577200	1.4	-0.4		78	685750	5577150	1.5	-0.3	
79	686340	5577150	4.5	2.7		80	686180	5576300	1.0	-0.8	
81	686070	5576320	1.1	-0.7		82	686080	5575750	2.2	0.4	
83	685650	5574930	1.9	0.4		84	685590	5574430	1.5	-0.0	
85	685290	5573910	1.4	-0.1		86	683950	5563880	1.5	-0.0	
87	684100	5563390	2.5	1.0		88	684850	5563100	1.4	-0.1	
89	685770	5562780	1.5	0.1		90	686430	5562290	2.0	0.6	
91	686910	5562540	1.6	0.2		92	687340	5562200	2.0	0.6	
93	688500	5561080	1.2	-0.2		94	688340	5560940	1.3	-0.1	
95	687850	5560560	1.2	-0.2		96	688030	5559650	2.1	0.8	
97	687800	5562830	1.3	-0.1		98	687980	5562570	1.3	-0.1	
99	687740	5562190	1.3	-0.1		100	685550	5572750	1.0	-0.5	
101	686700	5572470	0.7	-0.7		102	687080	5572610	1.3	-0.2	
104	688090	5572000	1.5	0.4		105	689550	5570300	1.2	0.1	
106	689290	5571620	-1.0	0.0		107	689350	5572500	0.8	-0.5	
108	689270	5573060	0.6	-0.7		109	683150	5561730	1.5	0.1	
110	688020	5561630	1.6	0.2		111	681080	5564550	1.2	-1.0	
112	681150	5565660	1.4	-1.2		113	681960	5565960	1.3	-1.3	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
114	682600	5565180	1.2	-0.4		115	682830	5564640	1.4	-0.1	
116	683450	5564860	1.2	-0.3		117	683670	5564670	1.2	-0.3	
118	684090	5564470	1.5	-0.0		119	684390	5564530	1.1	-0.4	
120	688970	5564380	1.3	-0.1		121	689550	5564880	1.2	-0.2	
122	689530	5565330	1.0	-0.3		123	689660	5565910	1.3	0.0	
124	689520	5565930	1.3	0.0		125	689350	5566560	1.5	0.2	
126	689520	5566460	1.3	0.0		127	689580	5567120	1.1	-0.2	
128	689530	5567750	0.9	-0.3		129	689670	5567930	1.0	-0.2	
130	689800	5568400	0.9	-0.3		131	689900	5569270	-1.0	0.0	
132	690160	5570930	0.9	-0.3		134	690330	5571640	1.1	-0.1	
135	690750	5571430	1.1	-0.1		136	685100	5581520	1.2	-0.6	
137	684800	5582020	1.2	-1.6		138	684520	5582650	1.5	-1.5	
139	684360	5583470	1.2	-1.8		140	684410	5584320	1.3	-1.7	
141	682690	5565750	1.2	-0.4		142	682130	5564860	1.2	-1.0	
143	681500	5570250	2.3	-0.8		144	681700	5571000	7.4	4.3	
145	681500	5571600	1.9	-1.2		146	681850	5572750	7.6	4.2	
147	682260	5573830	3.9	0.5		148	682310	5574520	2.3	-1.1	
149	682310	5575660	3.1	-1.1		150	681740	5576760	4.9	0.7	
151	690880	5565130	1.5	0.2		152	691330	5566270	1.5	0.2	
153	691660	5567270	1.3	-0.0		154	692520	5567220	1.2	-0.3	
155	692930	5567680	0.5	-0.9		156	693510	5568260	1.7	0.3	
157	694250	5568750	1.4	-0.0		158	692870	5570060	1.1	-0.3	
159	692890	5571040	0.9	-0.5		160	693060	5570830	0.7	-0.7	
161	681020	5558160	1.1	-0.5		162	686260	5546870	3.0	0.9	
163	686640	5547080	1.7	-0.4		164	686900	5548000	1.8	0.1	
165	686950	5548880	1.8	0.1		166	686650	5550850	0.9	-0.5	
167	686150	5549770	1.0	-0.7		168	686130	5549120	1.2	-0.5	
170	685320	5548270	1.2	-0.5		171	693030	5585830	2.0	-0.1	
172	692950	5586100	1.2	-0.9		173	692760	5586050	1.6	-0.5	
174	692130	5585670	1.3	-0.7		175	691360	5585380	2.0	-0.0	
176	690690	5584790	1.8	-0.0		177	690470	5584980	1.4	-0.4	
178	694820	5565660	2.6	1.1		179	694460	5565760	1.1	-0.4	
180	694200	5565670	1.7	0.2		181	688560	5559160	1.2	-0.1	
182	689050	5558430	1.1	-0.2		183	689710	5558650	1.1	-0.2	
184	690250	5558670	1.3	-0.1		185	690550	5558460	1.5	0.1	
186	690270	5557930	0.9	-0.5		187	690550	5557770	1.0	-0.4	
188	691170	5558550	1.7	0.3		189	691400	5558550	1.0	-0.4	
190	691600	5558280	1.3	-0.1		191	691710	5557770	1.3	-0.1	
192	691900	5558160	1.3	-0.1		193	692780	5591980	1.9	-0.1	
194	693100	5591750	1.9	-0.1		195	693650	5591420	1.6	-0.4	
196	684990	5573050	1.1	-1.2		197	697720	5559580	1.8	0.0	
198	697440	5560190	1.7	0.0		199	697290	5560310	2.9	1.2	
200	696570	5560380	1.7	0.0		201	696400	5561080	2.6	0.9	
202	696090	5560920	2.0	0.3		203	696030	5561400	2.3	0.6	
204	695860	5561800	1.7	0.0		206	695620	5562310	1.3	-0.4	
207	690050	5573950	0.8	-0.4		208	689550	5574670	1.0	-0.3	
209	689850	5575440	1.3	-0.2		210	686550	5556420	0.9	-0.3	
211	685950	5556350	1.3	0.1		212	686410	5557360	1.1	-0.1	
213	686070	5558350	1.0	-0.3		214	685260	5557980	1.0	-0.3	
215	684680	5558190	1.3	-0.1		216	685720	5559260	1.2	-0.1	
217	686700	5559790	1.5	0.2		218	686610	5560580	1.2	-0.2	
219	688180	5587180	2.1	0.1		220	688530	5586400	1.5	-0.5	
221	687420	5585930	1.0	-1.7		222	688560	5585520	1.0	-1.0	
223	691470	5590220	2.1	0.0		224	691300	5590360	3.8	1.7	
225	691120	5590820	1.5	-0.6		226	691150	5590910	1.5	-0.6	

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS
227	691310	5590960	1.3 -0.8	228	691200	5591570	1.3 -0.8
229	691320	5591670	1.0 -1.1	230	691260	5592420	1.3 -0.8
232	690540	5593460	2.1 0.2	233	691350	5593940	1.1 -0.8
234	684480	5564290	1.0 -0.5	235	685560	5563920	1.6 0.2
236	685820	5563820	1.0 -0.4	237	686030	5563750	0.9 -0.5
238	686190	5563400	1.4 0.0	239	686810	5563150	1.4 0.0
240	687250	5563260	1.5 0.1	241	694640	5557000	1.9 0.3
242	694200	5555530	2.4 0.8	243	692900	5554070	1.4 -0.3
244	693160	5553810	1.2 -0.5	245	695810	5570130	1.6 -0.0
246	696190	5570500	3.5 1.9	247	696140	5570840	1.7 0.1
248	696990	5572800	1.5 -0.1	249	696990	5572790	2.9 1.3
250	696820	5572370	1.5 -0.1	251	696390	5571550	1.5 -0.1
252	694330	5570500	1.1 -0.3	253	694450	5571950	1.4 0.0
254	683230	5569480	1.3 -0.6	255	683330	5569660	1.1 -0.8
256	682980	5569960	1.7 -0.2	257	693100	5593300	5.4 3.6
258	695650	5563290	1.5 -0.2	259	695600	5565070	1.4 -0.3
260	689330	5550000	1.5 0.1	261	688900	5549160	1.0 -1.1
262	688620	5548870	2.3 0.2	263	690240	5586620	1.7 -0.3
264	690100	5586630	15.7 13.7	265	689990	5587130	2.0 -0.0
266	689950	5587600	1.5 -0.7	268	689600	5588250	5.5 3.0
269	689580	5587300	0.5 -1.5	270	689700	5587110	1.5 -0.5
271	704150	5560940	2.9 0.6	272	703500	5561110	1.9 -0.4
273	703030	5561840	2.3 -0.0	274	693730	5590730	2.8 0.8
275	694000	5589930	2.4 0.3	276	694570	5590090	1.6 -0.4
277	694670	5589320	2.4 0.3	278	692660	5558840	1.3 -0.2
279	693020	5558760	1.4 -0.1	280	692860	5559130	1.5 -0.0
281	693070	5559260	1.3 -0.2	282	693460	5559810	1.6 0.1
283	692980	5560130	1.4 -0.1	284	693100	5560290	1.3 -0.2
285	693510	5560420	1.3 -0.2	286	693780	5560400	1.6 0.1
287	693860	5592700	2.6 0.8	288	694520	5592040	2.1 0.1
289	694400	5592460	2.0 0.0	290	683160	5548250	1.8 0.2
291	682870	5547520	4.1 2.5	292	683230	5547230	2.0 0.2
293	683740	5546660	4.8 3.0	294	689000	5584760	1.2 -0.5
295	699500	5562120	1.3 -0.6	296	699170	5562980	1.3 -0.6
297	698860	5563760	1.6 -0.3	298	698040	5564180	1.5 -0.4
299	697660	5563190	1.7 -0.2	301	697440	5562560	1.2 -0.5
302	696770	5561750	2.1 0.4	303	708270	5566210	1.3 -0.8
304	691650	5552320	1.4 -0.5	305	691030	5550760	1.9 0.0
306	691390	5550360	1.3 -0.6	307	690130	5550250	1.5 -0.4
308	690150	5549870	1.2 -1.9	309	687580	5545410	1.1 -1.7
310	685560	5544010	1.3 -1.1	311	684480	5545690	1.5 -0.3
312	684060	5547360	1.2 -0.6	313	683500	5549050	1.0 -0.6
314	682900	5550010	-1.0 0.0	315	682440	5551290	0.9 -0.5
316	681540	5552360	0.8 -0.5	317	681220	5553200	1.4 0.0
318	681210	5553540	1.3 -0.1	319	680290	5555880	1.3 -0.1
320	680580	5557380	1.1 -0.3	321	680250	5558550	0.6 -1.0
322	680040	5559910	1.5 -0.6	323	679970	5560040	1.9 -0.2
324	686390	5546000	2.9 0.8	325	684970	5585940	1.0 -3.2
326	685460	5585500	1.0 -1.7	327	685970	5585350	1.0 -1.7
328	686080	5585700	2.3 -0.4	329	686090	5586060	1.0 -1.7
330	686090	5586380	0.9 -1.8	331	686320	5585130	1.3 -1.4
333	686300	5584610	1.3 -0.7	334	686470	5584070	1.1 -0.9
335	687030	5583720	1.5 -0.5	336	687300	5583330	1.7 -0.3
337	685500	5555060	1.0 -0.2	338	684850	5553880	1.3 0.1
339	685160	5553510	1.0 -0.2	340	685940	5553230	1.0 -0.2

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
341	685040	5553200	1.2	0.0		342	684380	5554000	1.5	0.3	
343	683950	5552780	0.8	-0.4		344	683900	5552470	1.2	-0.2	
345	692880	5593070	1.3	-0.5		346	692500	5593330	1.5	-0.3	
347	692280	5593970	1.7	-0.2		348	692400	5594120	1.3	-0.6	
349	689800	5550750	1.4	-0.0		350	689550	5551080	1.3	-0.1	
351	688780	5550460	0.9	-0.5		352	688720	5551580	1.6	0.2	
353	688930	5552590	0.6	-0.7		354	690150	5553100	0.5	-1.0	
355	690030	5553690	1.1	-0.4		356	689530	5553910	1.0	-0.3	
357	691510	5592990	1.5	-0.4		358	691800	5592500	1.5	-0.4	
359	692220	5591840	2.3	0.2		360	692420	5592260	2.1	0.0	
361	687620	5544700	1.6	-1.6		362	689500	5544340	4.3	1.1	
363	692450	5595460	2.8	1.0		364	692250	5595400	1.1	-0.7	
365	692930	5594810	1.3	-0.5		366	693470	5594050	1.4	-0.4	
368	696750	5559540	1.3	-0.4		369	696000	5558920	1.2	-0.5	
370	695660	5559420	1.2	-0.5		371	695760	5559490	1.4	-0.3	
372	694840	5558710	1.4	-0.1		373	702960	5561930	1.5	-0.8	
374	702180	5562250	1.7	-0.4		375	701750	5562130	6.0	3.9	
376	701850	5561980	4.7	2.6		377	701300	5562830	2.2	0.1	
378	701230	5562960	1.6	-0.5		379	701380	5563000	1.4	-0.7	
380	701580	5563000	1.6	-0.5		381	703760	5561610	1.4	-0.9	
382	703780	5561800	1.4	-0.9		383	683540	5546540	2.2	0.4	
384	684090	5545850	1.3	-0.5		385	684350	5545080	1.8	-0.0	
386	685050	5545020	1.3	-0.6		387	685230	5544700	2.1	-0.3	
388	681850	5550510	2.7	1.3		389	681400	5549810	2.3	0.7	
390	690630	5581450	1.9	0.3		391	690750	5582190	1.4	-0.3	
392	690400	5582600	1.5	-0.3		393	694050	5565890	3.0	1.5	
394	692890	5565320	1.2	-0.3		395	693460	5565340	1.5	-0.0	
396	693700	5565420	1.1	-0.4		397	693430	5564470	3.6	2.0	
398	694120	5563940	1.9	0.3		399	692380	5562580	1.2	-0.3	
400	691850	5562720	1.1	-0.3		401	690620	5564620	1.1	-0.3	
403	684140	5552110	1.1	-0.3		404	683630	5551850	0.7	-0.7	
405	682020	5555780	1.0	-0.4		406	682260	5555790	1.1	-0.3	
407	682320	5556100	1.1	-0.3		408	682500	5555960	1.2	-0.1	
409	682700	5556430	1.3	0.0		410	682560	5556520	1.5	0.2	
411	682320	5556600	1.1	-0.3		412	683800	5558940	1.3	-0.1	
413	683960	5559470	1.1	-0.3		414	683820	5560090	2.2	0.7	
415	682870	5560520	1.1	-0.4		416	682650	5558550	1.5	0.1	
417	682900	5553370	1.1	-0.1		418	689420	5553660	1.3	0.0	
419	690720	5552630	1.1	-0.4		420	707000	5564680	1.8	-0.3	
421	706910	5563910	1.5	-0.6		422	706470	5562670	1.8	-0.3	
423	706160	5562280	2.0	-0.3		424	705810	5562690	1.3	-0.8	
425	705510	5562510	1.8	-0.3		426	705880	5562200	5.1	2.8	
427	705300	5562550	1.3	-0.8		428	705430	5561230	3.8	1.4	
429	693250	5546120	18.1	13.1		430	692360	5545750	8.6	4.5	
431	693010	5545620	4.1	-0.9		432	691710	5545280	2.0	-2.1	
433	691070	5545550	1.9	-2.2		434	690220	5545130	2.5	-1.6	
435	689910	5544190	2.0	-1.2		436	688610	5544360	77.9	74.7	
438	688380	5590850	1.3	-1.3		439	688900	5590910	2.0	-0.6	
440	688980	5591600	1.9	-0.7		441	688710	5592970	1.5	-0.8	
442	689000	5592840	2.6	0.3		443	688890	5592390	2.5	-0.1	
444	688590	5592340	1.3	-1.3		445	688930	5591920	9.0	6.4	
446	688810	5589720	4.3	1.8		447	692730	5556010	1.4	-0.2	
448	692230	5556780	1.0	-0.4		449	693130	5556130	1.5	-0.1	
450	693450	5556680	1.2	-0.4		451	684780	5546460	1.6	-0.2	
452	682880	5542660	2.0	0.1		453	682540	5542540	1.4	-0.3	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
454	682080	5542650	1.5	-0.3		455	681580	5543200	0.8	-1.0	
456	682410	5542770	1.5	-0.3		457	682900	5542940	1.3	-0.6	
458	683160	5543760	1.1	-0.8		459	682710	5544250	1.9	0.0	
460	682750	5544530	2.3	0.4		461	683050	5544960	1.5	-0.4	
462	691680	5590170	1.5	-0.5		463	691860	5590070	1.5	-0.6	
464	692350	5589270	1.8	-0.3		465	693130	5588640	2.5	0.4	
466	691790	5588560	1.2	-0.9		467	691110	5586910	1.6	-0.4	
468	703530	5562460	2.0	-0.3		470	703850	5562770	6.0	3.9	
471	703430	5563820	1.7	-0.4		472	703570	5564340	1.7	-0.4	
473	704300	5565880	1.6	-0.3		474	704460	5566220	1.3	-0.6	
475	704850	5566220	2.0	0.1		476	704640	5565900	1.2	-0.7	
477	690250	5582100	1.8	0.1		478	690030	5581950	1.3	-0.4	
479	689600	5581560	1.4	-0.2		480	689490	5581500	1.4	-0.2	
481	689170	5581690	1.6	-0.0		482	689080	5581770	1.8	0.2	
483	696800	5592430	1.9	-0.7		484	696350	5591960	1.7	-0.9	
485	695840	5591780	2.3	-0.3		486	695540	5592120	1.4	-1.2	
487	695170	5592440	1.3	-1.3		488	694750	5592760	1.5	-0.3	
489	695100	5593310	1.9	-0.3		490	694670	5594000	1.8	-0.0	
491	695540	5594080	1.7	-0.5		492	695370	5594520	1.5	-0.7	
493	695930	5594160	2.3	0.1		494	695910	5594350	1.7	-0.5	
495	695780	5594710	1.7	-0.5		496	695980	5595370	1.5	-0.5	
497	695430	5595160	1.5	-0.5		498	695240	5595770	1.7	-0.3	
499	680130	5595100	20.0	12.7		500	680210	5594930	5.1	-3.6	
501	680880	5594720	2.9	-5.8		502	681310	5594980	6.0	-2.7	
503	681310	5595550	4.5	-2.8		504	680930	5595360	2.3	-5.0	
506	682260	5584340	6.7	2.3		507	707180	5565410	1.7	-0.2	
508	705650	5564590	1.5	-0.6		509	705250	5563710	1.2	-0.9	
510	689030	5546650	2.3	-0.5		511	689970	5546780	2.9	0.1	
512	690700	5547220	2.6	-1.5		513	691680	5547610	9.0	5.9	
514	684760	5550540	1.1	-0.3		515	684870	5549720	1.1	-0.5	
516	686590	5550160	1.0	-0.4		517	686410	5549000	1.1	-0.6	
518	686700	5548380	2.1	0.4		519	685870	5548330	2.3	0.6	
520	686030	5547370	2.1	0.0		521	685700	5547360	1.5	-0.6	
522	685890	5546800	1.3	-0.8		523	690080	5564440	1.2	-0.2	
524	680410	5560680	2.2	0.3		525	680620	5560540	1.1	-0.8	
526	681620	5560520	1.2	-0.7		527	694070	5553870	1.9	0.2	
528	693790	5553070	1.7	-0.0		529	693600	5552640	1.7	-0.0	
530	693970	5552340	2.1	-0.4		531	694230	5552870	5.0	3.3	
532	695500	5553030	1.8	-0.2		533	694200	5553820	1.6	-0.1	
534	690030	5584020	1.3	-0.5		535	690850	5583660	1.5	-0.3	
536	690790	5583180	1.7	-0.1		537	691720	5583260	1.9	0.1	
538	691930	5583100	3.0	1.2		539	682980	5553390	1.7	0.5	
540	682140	5553350	1.1	-0.3		542	694620	5542330	1.1	-1.8	
543	692180	5542360	3.1	-0.2		544	680930	5563160	1.6	-0.6	
545	681650	5563390	1.5	-0.7		546	681950	5563460	1.4	-0.8	
547	682670	5563500	1.4	-0.1		548	683480	5563290	1.5	-0.0	
549	683750	5562580	1.3	-0.2		550	683930	5545170	1.2	-0.6	
551	697130	5547000	5.9	1.4		552	697230	5547050	8.8	4.3	
553	696490	5547690	15.5	11.3		554	695460	5547480	4.6	0.1	
555	694860	5546810	8.5	3.5		556	693760	5546130	2.7	-2.3	
557	695380	5595340	1.7	-0.3		558	696390	5595790	1.7	-0.3	
559	696300	5595850	1.6	-0.4		560	696930	5596330	1.7	-0.3	
561	697930	5596120	1.9	-0.8		562	698700	5596170	2.5	-0.2	
563	699590	5596250	3.0	0.3		564	699580	5596500	1.7	-1.0	
565	700010	5597370	2.2	-1.1		566	700410	5596550	1.7	-1.6	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
567	683280	5592430	3.0	-4.3		568	683170	5591630	45.1	37.8	
569	683580	5591550	13.5	6.2		570	689200	5588360	1.8	-0.7	
571	683380	5587320	5.3	1.1		572	679340	5589020	8.9	1.5	
573	679840	5588960	24.5	17.1		574	680330	5588940	4.3	-3.7	
576	680980	5588290	6.1	-1.9		577	687300	5593150	1.8	-2.0	
578	687530	5592590	1.8	-1.0		579	687810	5591870	1.9	-0.7	
580	687820	5592800	2.6	0.3		581	688080	5592830	1.5	-0.8	
582	688440	5591980	1.5	-1.1		583	688920	5593520	2.0	-0.3	
584	689050	5593630	1.6	-0.7		585	688320	5593850	1.9	-0.4	
586	688280	5594930	1.6	-0.7		587	688060	5595840	1.9	-0.1	
588	687860	5596950	1.3	-0.7		589	699970	5590050	31.3	20.6	
590	683560	5561840	1.7	0.2		591	683940	5561690	1.3	-0.2	
592	684350	5561660	1.5	0.0		593	684590	5561720	0.9	-0.6	
594	684720	5562140	1.1	-0.4		595	684520	5562530	1.1	-0.4	
596	684060	5562500	1.4	-0.1		597	685540	5562180	1.4	0.0	
598	685890	5562140	1.4	0.0		599	686150	5561340	1.5	0.1	
600	686330	5561070	1.1	-0.3		601	681400	5568120	1.6	-1.5	
602	681730	5568670	1.7	-1.4		603	681930	5569110	1.3	-1.8	
604	681880	5584880	4.0	-0.4		606	681780	5584650	5.3	0.9	
607	681400	5585060	2.4	-3.1		608	681230	5584880	3.1	-1.3	
609	680530	5585600	3.9	-1.6		610	685420	5546860	1.1	-1.0	
611	684500	5547850	1.3	-0.3		612	683610	5586000	4.5	0.3	
613	683250	5585050	4.7	0.5		614	683030	5584410	5.1	2.1	
615	682700	5583500	2.1	-0.9		616	683530	5583970	4.7	1.7	
617	683320	5583270	2.9	-0.1		618	682770	5582520	2.6	-0.4	
619	682500	5581900	3.0	0.2		620	681390	5580710	2.5	-2.0	
621	681790	5580930	4.3	-0.2		622	679460	5595750	3.2	-4.8	
623	679480	5596330	7.0	-1.0		624	679850	5596900	5.6	-2.4	
625	686250	5591410	4.4	0.1		626	685450	5591000	1.7	-2.6	
627	684900	5590840	2.7	-4.6		628	684480	5591540	1.8	-5.5	
629	683920	5592140	6.7	-0.6		630	684970	5547680	1.1	-0.5	
631	684760	5548720	0.9	-0.7		632	691190	5582210	2.7	1.1	
633	701670	5542680	1.1	-1.0		634	698250	5543750	2.5	-0.2	
636	698150	5543580	2.0	-0.7		637	697330	5543580	2.1	-1.4	
638	697000	5543280	8.5	5.0		639	696900	5542890	5.5	2.0	
640	695760	5542820	1.7	-1.8		641	695390	5542780	1.6	-1.9	
642	693420	5542340	3.3	0.4		643	693350	5542190	2.5	-0.4	
644	692000	5543220	4.6	0.6		645	690310	5543820	3.1	-0.9	
646	678100	5596570	13.0	105.0		647	677750	5596420	5.7	-2.3	
648	677570	5594760	13.8	5.5		649	677330	5595350	3.8	-2.5	
650	670360	5555000	0.5	-1.2		651	669700	5555340	1.1	-0.3	
652	669100	5555840	0.7	-0.7		653	669490	5556230	0.6	-0.8	
654	668990	5556580	1.1	-0.3		655	669230	5556940	0.6	-0.8	
656	669360	5557500	1.0	-1.9		657	668560	5558400	0.8	-2.1	
658	668200	5558680	1.3	-1.6		659	681380	5579830	6.0	1.3	
660	681390	5579050	6.7	2.0		661	681540	5578180	3.1	-1.6	
662	681630	5577260	3.5	-0.7		663	692300	5582460	3.0	1.4	
664	692610	5581650	2.0	0.4		665	693880	5582040	1.2	-0.4	
666	693450	5583000	1.4	-0.5		667	693080	5583680	1.7	-0.2	
668	693650	5583810	1.5	-0.4		669	693530	5584170	2.0	0.1	
671	678760	5591640	37.3	28.8		672	677560	5591100	4.1	-4.4	
673	677570	5589780	6.8	-0.6		674	677170	5590340	8.4	2.9	
675	683190	5550210	2.1	0.7		676	677000	5590790	10.7	5.2	
677	676100	5591330	11.3	5.8		678	675650	5591470	1.3	-4.2	
679	675180	5591650	1.3	-4.2		680	675180	5591900	2.5	-3.0	

SAMPLE EAST	NORTH	U OR U RS	SAMPLE EAST	NORTH	U OR U RS
681 674570 5592140	1.9	-1.3	682 681630 5588240	6.5	-1.5
683 700790 5591080	5.8	-1.3	684 700870 5591960	13.6	6.5
685 700650 5592890	14.4	9.5	686 700480 5593960	8.1	3.2
687 700220 5594850	2.6	-2.3	688 699910 5595560	2.7	0.0
689 665620 5552380	1.0	-0.3	690 665280 5552020	1.2	-0.1
691 664490 5552050	1.5	0.2	692 664560 5552170	1.4	0.1
693 663350 5552290	1.5	0.2	694 664040 5551340	1.7	0.4
695 663490 5552070	1.2	-0.1	696 662550 5552250	1.4	0.1
697 661620 5552830	1.3	-0.1	698 660960 5552890	1.7	0.3
699 668250 5546590	1.5	-0.2	700 680840 5585750	3.9	-1.6
702 680760 5586610	4.5	-1.0	703 703670 5593690	2.0	-2.5
704 703900 5593270	2.2	-2.3	705 704160 5592130	3.7	-1.9
706 704040 5591180	7.0	1.4	707 704780 5591490	5.6	0.0
708 674710 5551950	1.4	0.2	709 679550 5555760	1.2	-0.4
710 680020 5556920	1.5	0.1	711 680120 5557080	2.0	0.6
712 680100 5557240	1.1	-0.3	713 679690 5557680	1.4	-1.0
714 679510 5557450	1.3	-0.3	715 679250 5558820	1.5	-0.9
716 675310 5551690	1.1	-0.3	717 679270 5559390	4.0	1.6
718 679280 5559550	1.5	-0.9	719 671530 5550800	0.9	-0.3
720 685040 5590290	2.2	-2.1	721 684340 5589200	10.3	4.1
722 684190 5588890	10.2	4.0	723 684010 5588440	16.8	10.6
724 683540 5587870	3.2	-3.0	725 683530 5587080	4.6	0.4
726 689250 5596620	1.9	-0.1	727 689380 5596880	3.1	1.1
728 689590 5597160	1.0	-1.0	729 690030 5597090	1.1	-0.7
730 690100 5596420	2.7	0.9	731 690900 5594550	1.0	-0.9
732 691300 5594520	1.3	-0.6	733 690640 5595470	0.8	-1.0
734 691050 5595970	0.8	-1.0	736 692460 5597230	3.3	1.5
737 693330 5597320	1.8	0.0	738 693750 5596950	0.9	-0.9
739 693950 5597510	1.1	-0.6	740 681490 5588500	11.1	3.1
741 680930 5589040	12.2	4.2	742 681040 5590380	42.8	33.3
743 682790 5587880	5.3	-0.9	744 684550 5595120	5.2	-0.0
745 684260 5595490	1.7	-3.5	746 684080 5595340	1.5	-3.7
747 683830 5595550	2.1	-3.1	748 683400 5596590	4.9	-0.3
749 683100 5596690	3.6	-1.6	750 684480 5596080	2.1	-3.1
751 686280 5595000	3.0	-0.1	752 686350 5595190	1.9	-1.2
753 686610 5595390	7.0	3.9	754 684960 5596490	3.3	-1.9
755 685010 5596360	3.1	-0.0	756 686110 5596040	1.3	-1.8
757 686960 5593770	1.5	-2.3	758 705040 5597220	3.0	-0.4
759 705080 5597780	1.4	-2.0	750 683970 5590710	11.9	4.6
761 683970 5589970	11.3	5.1	752 684500 5589430	11.7	5.5
763 685030 5588890	0.8	-3.0	754 684870 5587740	1.2	-5.0
765 685660 5587020	1.9	-0.8	756 687160 5588000	1.8	-2.0
767 686960 5587300	1.2	-1.5	758 687130 5587250	1.0	-1.7
770 687250 5586760	1.7	-1.0	771 687330 5586370	0.8	-1.9
772 687870 5584850	0.7	-1.0	773 687850 5584290	1.1	-0.6
774 686530 5583070	1.4	-0.6	775 685810 5582530	1.2	-0.8
776 680680 5545070	2.8	1.1	777 684190 5581030	1.5	-1.3
778 697600 5589850	2.3	-3.2	779 697380 5588780	2.3	-0.5
780 705710 5595860	2.2	-1.2	781 705920 5595280	2.6	-0.8
782 706570 5595830	2.2	-1.2	783 666130 5549510	1.7	0.2
784 665870 5549670	1.0	-0.5	785 664740 5550350	0.9	-0.4
786 664290 5550810	1.6	0.3	787 664010 5550780	1.3	0.0
788 663100 5551110	1.4	0.1	789 662180 5551630	1.1	-0.3
790 661060 5552040	1.5	0.1	791 660730 5552490	1.0	-0.4
792 666600 5547360	0.7	-1.0	793 665550 5547570	0.7	-0.8

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS
794 665590 5547770	1.1	-0.4		795 665020 5547910	1.4	-0.1	
796 663540 5548220	1.4	0.1		797 663470 5547840	1.0	-0.3	
798 663180 5547680	1.3	-0.1		799 663340 5546920	1.1	-0.4	
800 697100 5587480	3.7	1.3		801 697410 5586650	2.8	0.4	
802 670100 5551500	1.5	0.3		803 669700 5551080	1.1	-0.2	
804 670130 5550960	1.3	0.1		806 670590 5549650	0.9	-0.4	
807 670180 5550140	1.1	-0.1		808 668960 5549880	2.5	1.0	
809 668660 5550050	1.4	0.1		810 668470 5550590	1.4	0.1	
811 667960 5549410	1.0	-0.5		812 667590 5548660	1.6	0.1	
813 667330 5548260	1.4	-0.1		814 666780 5547790	1.3	-0.2	
815 669960 5545760	1.2	-0.5		816 670250 5546790	1.2	-0.3	
817 670850 5545660	1.0	-0.5		818 671060 5545690	0.9	-0.6	
819 670550 5544950	1.0	-0.4		820 703000 5595090	3.7	0.3	
821 669270 5552380	0.5	-0.8		822 669250 5553100	1.0	-0.1	
823 669350 5553800	0.9	-0.2		824 668830 5552270	0.9	-0.4	
825 668460 5551860	1.3	0.0		826 667950 5551820	1.0	-0.3	
827 667060 5551940	1.7	0.4		828 666180 5551410	1.2	-0.1	
829 666550 5550560	0.9	-0.4		830 680580 5553200	1.6	0.2	
831 679880 5553230	1.0	-0.4		832 679510 5552860	1.5	0.1	
833 679080 5553240	2.5	1.1		834 679090 5553510	1.2	-0.2	
835 678320 5553130	1.5	0.1		836 678280 5554070	1.8	0.4	
837 678320 5555020	1.7	0.1		838 678520 5555320	1.5	-0.1	
839 678400 5555890	1.4	-0.2		840 672130 5550500	0.8	-0.4	
842 672520 5550280	0.9	-0.3		843 671280 5551340	1.5	0.3	
844 672070 5552440	1.5	0.3		845 672300 5551960	1.4	0.2	
846 673060 5552320	1.4	0.2		847 672900 5552800	2.3	1.1	
848 674080 5552890	1.4	0.2		849 674180 5552330	1.2	-0.0	
850 675580 5551200	1.1	-0.3		851 675820 5550630	0.8	-0.6	
852 675980 5551570	1.3	-0.1		853 676790 5551460	1.2	-0.2	
854 677550 5551380	1.3	-0.1		855 677690 5551250	1.5	0.1	
856 677550 5550730	1.5	0.1		857 677000 5550370	1.5	0.1	
858 677530 5550250	1.5	0.1		859 676970 5549900	1.7	0.3	
860 678220 5556170	1.6	-0.0		861 678690 5557280	1.8	0.2	
862 678390 5558760	1.9	-0.5		863 655130 5542870	1.6	0.2	
864 655350 5542150	1.2	-0.2		865 655610 5541470	1.5	0.1	
866 673660 5553850	0.9	-0.3		867 673380 5554430	0.8	-0.4	
868 674150 5554570	1.2	-0.0		869 674250 5554870	0.9	-0.3	
870 674420 5554860	1.1	-0.1		871 674350 5553530	1.3	0.1	
872 674920 5553840	1.0	-0.2		873 675630 5553650	0.9	-0.5	
875 676010 5552920	0.8	-0.6		876 676860 5552440	1.2	-0.2	
877 677500 5552080	1.6	0.2		878 677870 5552230	2.8	1.4	
879 653190 5543100	1.1	-0.2		880 654080 5542470	1.3	-0.0	
881 654050 5541610	0.7	-0.6		882 654080 5540790	1.3	-0.0	
883 653540 5541340	1.2	-0.1		884 652970 5541330	1.0	-0.3	
885 651930 5541160	1.2	-0.2		886 681250 5576670	2.7	-1.5	
887 680050 5576590	5.3	1.1		888 675070 5545870	1.3	-0.1	
889 675750 5545450	1.5	0.1		890 675630 5545060	1.2	-0.2	
891 675680 5544790	2.0	0.4		892 676060 5544680	2.6	1.0	
893 676000 5544320	2.0	0.4		894 676090 5544190	1.7	0.1	
895 676530 5543440	1.3	-0.3		896 676250 5543000	1.3	-0.3	
897 675720 5543410	1.6	0.0		898 675630 5543600	1.8	0.2	
900 670070 5544730	1.0	-0.4		901 670810 5544650	0.8	-0.6	
902 671600 5545450	0.7	-0.8		903 671820 5544480	1.0	-0.4	
904 671510 5543360	1.3	-0.1		905 671590 5542460	1.4	0.1	
906 671450 5542370	1.0	-0.3		907 666000 5552320	0.9	-0.4	

SAMPLE EAST	NORTH	U DR	U RS	SAMPLE EAST	NORTH	U DR	U RS
908	667170	5553140	0.8 -0.4	909	667530	5553830	0.7 -0.4
910	666900	5555760	0.9 -0.4	911	666750	5555630	0.7 -0.6
912	666530	5555880	1.1 -0.2	913	666380	5555980	0.5 -0.8
914	665780	5556440	1.2 -0.1	915	680170	5544840	0.9 -0.9
916	679460	5544630	3.0 1.3	917	678900	5544450	2.9 1.2
918	678740	5545050	1.4 -0.2	919	678830	5545750	1.5 -0.1
920	668710	5545900	17.7 16.0	921	668730	5544840	1.4 -0.2
922	668730	5545420	1.3 -0.4	923	668000	5544550	2.4 0.8
924	667160	5544580	1.0 -0.7	925	667350	5545090	1.6 -0.1
926	667010	5545280	1.9 0.2	927	666990	5545600	1.4 -0.3
928	667410	5545860	3.3 1.6	929	666790	5543550	2.0 0.3
930	665930	5543310	2.5 0.8	931	664910	5543160	0.8 -0.8
932	670790	5554220	1.3 0.2	934	670550	5553440	0.8 -0.3
935	670690	5553240	1.4 0.3	936	671230	5553840	1.0 -0.1
937	671350	5553090	1.8 0.7	938	671270	5552460	0.9 -0.3
939	670730	5551860	1.0 -0.2	940	662610	5548440	1.1 -0.3
941	662350	5548900	1.2 -0.1	942	660520	5550760	1.5 0.1
943	664710	5555220	1.8 0.5	944	664800	5554520	1.1 -0.2
945	665290	5554250	1.8 0.6	946	664960	5553240	1.4 0.1
947	664920	5553120	1.4 0.1	948	664400	5553100	0.9 -0.4
949	664190	5553380	1.3 -0.0	950	663560	5553090	1.5 0.2
951	662580	5552890	1.6 0.3	952	661750	5553400	1.6 0.2
953	683210	5550520	2.0 0.6	954	682320	5549700	2.0 0.4
955	681980	5548850	2.1 0.5	956	682050	5548590	1.3 -0.3
957	681760	5547760	1.4 -0.2	958	681610	5548220	1.3 -0.3
959	680580	5548550	1.2 -0.4	960	678630	5545800	1.6 -0.0
961	679100	5546340	1.9 0.3	962	679360	5546610	2.2 0.6
963	678290	5547390	1.5 -0.1	964	677650	5547790	0.8 -0.7
965	677280	5547760	1.7 0.3	967	659100	5542190	1.4 -0.1
968	658310	5542390	1.6 0.1	969	656260	5542550	1.2 -0.2
970	669530	5544250	1.1 -0.5	971	668950	5543720	0.8 -0.8
972	668560	5543420	0.9 -0.7	973	668380	5542340	1.3 -0.0
974	667940	5541500	1.1 -0.2	975	680360	5542010	2.2 0.4
976	680650	5542700	2.3 0.5	977	680800	5542750	1.8 0.0
978	676100	5548060	1.4 0.0	979	676830	5547780	1.3 -0.1
980	670410	5552140	0.9 -0.3	981	670180	5551770	2.0 0.8
982	670360	5552630	0.9 -0.2	983	681330	5550750	0.8 -0.6
984	681130	5550310	1.2 -0.2	985	680840	5549790	0.9 -0.7
986	680850	5549440	1.0 -0.6	987	680280	5549890	1.2 -0.4
988	679410	5549920	2.1 0.6	989	678760	5550610	1.5 0.1
990	678170	5550520	1.8 0.4	991	678200	5551620	1.0 -0.4
992	658440	5540900	1.5 0.0	993	657620	5540980	1.8 0.3
995	657130	5541450	1.4 0.0	996	656710	5542060	1.3 -0.1
997	655940	5542720	1.7 0.3	998	654870	5543380	1.5 0.2
999	654360	5543990	1.4 0.1	1000	653600	5543950	-1.0 0.0
1001	662080	5559980	1.6 0.2	1002	662690	5559430	1.3 -0.1
1003	663160	5558630	1.3 -0.1	1004	663440	5558140	1.3 -0.1
1005	654340	5564010	1.5 -0.5	1006	670800	5542160	0.7 -0.6
1007	670100	5541610	0.9 -0.4	1008	667030	5540550	1.2 -0.1
1009	666620	5541760	1.0 -0.3	1010	669060	5546940	0.9 -0.8
1011	668920	5546380	1.5 -0.2	1012	664820	5542930	2.7 1.1
1013	665200	5551000	1.1 -0.2	1014	664860	5550930	1.5 0.2
1015	657940	5548860	1.3 -0.0	1016	655740	5546030	1.1 -0.3
1017	655300	5545640	1.5 0.1	1018	661260	5564450	0.6 -0.8
1019	661250	5565250	1.5 0.1	1020	676420	5549650	1.8 0.4

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
1021	677460	5549430	2.1	0.7		1022	677430	5548700	1.6	0.2	
1023	661700	5545780	1.0	-0.4		1024	662220	5545900	1.3	-0.1	
1025	662650	5546380	1.5	0.0		1026	663170	5546800	1.5	0.0	
1027	663400	5546440	1.3	-0.2		1028	663420	5545940	1.4	-0.1	
1029	663820	5545960	1.6	0.1		1030	663250	5545260	1.4	-0.1	
1032	681210	5579140	4.1	-0.6		1033	680560	5579460	7.8	3.1	
1034	679630	5579780	6.1	-0.8		1035	678880	5580150	5.1	-0.8	
1036	673110	5544220	1.3	-0.1		1037	673810	5543830	1.4	-0.0	
1038	674720	5542790	1.5	0.1		1039	675210	5542560	1.8	0.2	
1040	680400	5548770	0.6	-1.0		1041	680050	5548420	1.5	-0.1	
1042	680200	5548120	1.8	0.2		1043	679100	5548220	1.3	-0.2	
1044	678370	5547630	1.4	-0.1		1045	658970	5545350	1.8	0.4	
1046	658500	5545450	1.5	0.1		1047	657920	5545630	1.4	0.0	
1048	657140	5546000	1.6	0.2		1049	657420	5547330	0.9	-0.5	
1050	687580	5546010	1.5	-1.3		1051	688100	5545890	1.4	-1.4	
1052	687890	5546000	1.3	-1.5		1053	688520	5547980	1.6	-0.5	
1054	688140	5548250	4.5	2.4		1055	687990	5549200	0.8	-1.3	
1056	674360	5544500	1.2	-0.2		1057	673880	5544970	0.7	-0.7	
1058	673720	5545680	0.9	-0.4		1059	673520	5546220	0.6	-0.7	
1060	675260	5542290	2.0	0.4		1061	674930	5541770	1.5	0.1	
1062	675140	5541660	1.6	-0.0		1063	674740	5541570	1.3	-0.1	
1064	674320	5541610	1.5	0.1		1065	676450	5546570	1.8	0.4	
1067	675550	5546770	1.5	0.1		1068	675850	5547550	1.4	0.0	
1069	663020	5542540	1.3	-0.3		1070	659310	5564660	2.0	0.1	
1071	658510	5566660	1.2	-0.5		1072	658750	5566500	0.9	-0.8	
1073	659350	5567180	1.2	-0.5		1074	659440	5567940	1.2	-0.2	
1075	658960	5565900	1.3	-0.4		1076	659680	5565550	1.1	-0.6	
1077	659940	5564570	1.7	-0.2		1078	660640	5564530	1.5	0.1	
1079	661220	5564220	1.2	-0.2		1080	673160	5546710	0.9	-0.4	
1081	673650	5546430	0.9	-0.4		1082	673680	5547250	0.7	-0.6	
1083	673420	5547540	0.8	-0.4		1084	673620	5548010	0.7	-0.5	
1085	674000	5547820	0.8	-0.4		1086	674830	5549260	0.7	-0.5	
1087	675230	5548770	0.6	-0.8		1088	675550	5548270	0.5	-0.9	
1089	655450	5561790	2.0	0.0		1090	656350	5562320	1.3	-0.7	
1091	656290	5562000	2.1	0.1		1092	657380	5562450	1.8	-0.2	
1093	657930	5562900	2.7	0.8		1094	654600	5561430	2.4	0.4	
1095	653600	5560800	1.8	-0.2		1096	661440	5562460	1.2	-0.2	
1097	661870	5562150	1.1	-0.3		1098	661760	5561710	1.3	-0.1	
1099	662180	5561850	1.4	-0.0		1101	676900	5547670	1.3	-0.1	
1102	676970	5546280	1.7	0.3		1103	677120	5546040	1.6	0.2	
1104	676920	5545870	2.0	0.6		1105	676680	5545310	1.5	0.1	
1106	677000	5545440	2.0	0.6		1107	677590	5544820	1.3	-0.4	
1108	676980	5545750	1.6	0.2		1109	677230	5546310	1.6	0.2	
1110	677550	5547070	1.8	0.2		1111	655770	5567640	2.3	0.8	
1112	656210	5563680	3.9	2.0		1113	656440	5565940	1.5	-0.4	
1114	657490	5564340	15.3	13.1		1115	657300	5564170	3.0	0.8	
1116	656670	5564220	1.5	-0.7		1117	656080	5563720	2.1	-0.1	
1118	656090	5563830	2.1	-0.1		1119	655310	5563930	1.3	-0.9	
1120	683480	5541770	1.5	-0.4		1121	684290	5541770	2.3	0.4	
1122	685040	5542220	1.7	-0.8		1123	685400	5542350	2.0	-0.5	
1124	685940	5541710	1.6	-0.9		1125	686950	5541950	3.7	1.2	
1125	690530	5577900	0.7	-0.7		1127	690940	5577890	2.0	0.6	
1128	690640	5577990	1.0	-0.4		1129	691280	5578170	0.6	-0.8	
1130	691760	5578650	0.8	-0.6		1131	692060	5577930	0.8	-0.6	
1132	692270	5577750	0.7	-0.7		1133	691680	5577000	0.8	-0.5	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
1135	691890	5576080	1.5	0.2		1136	691990	5575170	1.7	0.4	
1137	658950	5559750	1.9	0.3		1138	659300	5560440	1.8	0.1	
1139	659390	5561150	1.5	-0.2		1140	675430	5543250	1.4	-0.2	
1141	674650	5543520	1.4	-0.0		1142	654150	5557900	1.7	-0.3	
1143	654660	5558190	2.1	0.1		1144	655330	5559020	2.1	0.2	
1145	656250	5559260	1.5	-0.4		1146	657300	5559000	1.1	-0.8	
1147	658280	5559200	1.8	0.2		1148	659520	5559010	1.6	-0.0	
1149	660400	5558710	1.5	0.1		1150	662310	5563250	0.5	-0.9	
1151	662790	5562270	1.5	0.1		1152	663050	5562460	0.8	-0.6	
1153	663750	5563000	0.9	-0.5		1154	663950	5562050	0.7	-0.7	
1155	663650	5561660	0.7	-0.7		1156	664430	5561140	1.1	-0.3	
1157	664920	5560230	1.3	-0.1		1158	666720	5564940	1.1	-1.2	
1159	667600	5564780	0.8	-3.3		1150	657600	5566430	1.5	-0.2	
1161	657980	5567000	1.2	-0.5		1152	657610	5566950	1.8	0.1	
1163	657950	5567420	1.3	-0.4		1154	657340	5567550	1.2	-0.3	
1165	656580	5567800	1.7	0.2		1166	656350	5568130	1.3	-0.2	
1167	656080	5567950	1.1	-0.4		1169	655350	5568170	1.3	-0.2	
1170	654710	5568040	1.9	0.3		1171	661980	5542700	3.5	2.0	
1172	662030	5543190	1.8	0.3		1173	662210	5543970	1.3	-0.2	
1174	661820	5542250	2.1	0.6		1175	661720	5541640	1.6	0.1	
1176	661570	5541250	1.5	0.0		1177	662000	5541620	1.5	0.0	
1178	662680	5541790	1.3	-0.1		1179	663130	5541870	1.2	-0.2	
1180	659210	5561150	1.6	-0.1		1181	659040	5561780	1.5	-0.2	
1182	658970	5562450	1.5	-0.2		1183	659850	5562580	1.6	-0.3	
1184	660120	5562040	1.3	-0.1		1185	660410	5561710	1.8	0.4	
1186	659900	5561520	1.8	0.1		1187	664830	5562440	1.2	-0.2	
1188	665330	5562460	0.9	-1.4		1189	665250	5561770	1.2	-1.1	
1190	665760	5562200	1.0	-1.3		1191	665960	5562390	1.5	-0.8	
1192	665810	5562790	1.2	-1.1		1193	666200	5561600	1.6	-0.7	
1194	666310	5561070	1.7	-0.6		1195	666000	5561060	1.2	-1.1	
1196	666360	5560300	3.7	1.4		1197	666550	5559500	4.5	2.7	
1198	660040	5565660	1.5	0.1		1199	660120	5566450	1.0	-0.4	
1200	662760	5561720	1.3	-0.1		1201	663120	5561230	0.8	-0.6	
1202	663740	5560920	1.4	-0.0		1204	663960	5561030	1.2	-0.2	
1205	664260	5560730	1.0	-0.4		1206	664040	5560340	1.0	-0.4	
1207	664210	5560000	1.3	-0.1		1208	664460	5560220	1.5	0.1	
1209	665020	5560900	1.1	-1.2		1210	664980	5561330	1.1	-0.3	
1211	666620	5567000	1.2	-0.9		1212	665330	5567510	1.2	-1.0	
1213	664640	5569110	1.0	-0.5		1214	664250	5568120	1.4	-0.1	
1215	664440	5567660	2.2	0.7		1216	664490	5567120	1.4	-0.0	
1217	664980	5566730	1.5	0.1		1218	665220	5566750	1.7	-0.4	
1219	665310	5566260	1.4	-0.7		1220	665460	5567480	1.1	-1.0	
1221	662250	5566080	1.1	-0.3		1222	662620	5566400	2.0	0.6	
1223	663380	5566470	0.9	-0.5		1224	663470	5566630	1.3	-0.1	
1225	663750	5566060	1.1	-0.3		1226	664100	5565510	0.8	-0.6	
1227	674190	5576180	15.3	5.5		1228	674850	5573400	8.6	-0.9	
1229	674520	5572760	28.0	18.5		1230	668170	5564230	1.3	-2.8	
1231	668390	5564380	1.5	-2.6		1232	668480	5564170	2.1	-2.0	
1233	669030	5564050	2.3	-1.8		1234	667960	5563530	5.1	1.0	
1235	667600	5563150	1.9	-2.2		1236	667360	5562580	3.1	0.8	
1237	666950	5561890	3.3	1.0		1239	666590	5561290	2.0	-0.3	
1240	674230	5565600	19.3	11.1		1241	672900	5565840	7.2	-1.0	
1242	671940	5566140	4.2	-1.9		1243	671010	5566300	3.6	-2.5	
1244	670260	5566380	3.8	-2.3		1245	669720	5565960	16.6	12.9	
1246	669700	5566520	2.5	-1.2		1247	669560	5566610	2.5	-1.2	

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS
1248 669280 5567200	1.7	-2.0	1249 669260 5567840	5.2	1.7		
1250 661330 5565600	1.8	0.4	1251 661500 5565470	1.3	-0.1		
1252 663880 5565400	1.3	-0.1	1253 664560 5565230	1.1	-0.3		
1254 665310 5565130	1.2	-0.9	1255 665510 5563940	1.3	-1.0		
1256 668100 5568080	1.1	-2.4	1257 668150 5566820	1.0	-2.7		
1258 668300 5565310	2.0	-1.7	1259 668230 5565110	1.3	-2.4		
1260 668590 5564950	3.1	-1.0	1261 669200 5566200	3.9	0.2		
1262 669260 5566050	3.1	-0.6	1263 675550 5566250	59.6	52.2		
1264 676280 5565640	3.7	-3.7	1265 677100 5565120	4.1	-3.3		
1266 676140 5564340	3.5	-4.6	1267 677000 5563740	4.7	-3.4		
1268 677620 5563400	3.7	-0.4	1269 678080 5562950	3.6	-0.5		
1270 660030 5566980	0.8	-0.6	1271 660430 5566900	0.6	-0.8		
1272 661160 5567150	-1.0	0.0	1273 661540 5567940	-1.0	0.0		
1275 661720 5568050	1.1	-0.3	1276 662060 5567810	1.5	0.1		
1277 662330 5567750	1.6	0.2	1278 662190 5567140	1.1	-0.3		
1279 670530 5567000	6.1	-0.0	1280 670890 5567460	4.3	-1.8		
1281 671150 5568160	4.9	-0.4	1282 671330 5568650	8.5	3.2		
1283 671130 5568750	3.2	-2.1	1284 671390 5567730	6.6	1.3		
1285 672160 5567920	6.7	1.4	1286 673950 5568190	11.2	4.1		
1287 672940 5567950	8.3	1.2	1288 676400 5568900	6.3	-0.6		
1289 677400 5568950	3.7	-3.2	1290 672340 5560670	4.3	-3.0		
1291 672250 5561160	11.0	3.7	1292 672750 5561430	7.3	-2.1		
1293 672680 5561900	12.3	2.9	1294 673140 5562300	18.6	9.2		
1295 674530 5563420	14.5	4.3	1296 674860 5563660	46.3	36.1		
1297 675120 5562960	20.1	12.0	1298 675090 5562230	16.9	9.9		
1299 675350 5561540	15.9	8.9	1300 675700 5561110	6.1	-0.9		
1301 675470 5593890	1.8	-3.8	1302 675960 5593590	2.7	-2.9		
1303 674480 5592660	4.0	0.9	1304 675440 5593500	3.1	-2.5		
1306 674710 5593320	4.4	1.3	1307 674120 5592850	2.5	-0.6		
1308 673590 5592270	1.4	-1.8	1309 661790 5573050	1.1	-0.3		
1310 665390 5565600	1.7	-0.4	1311 665440 5564600	1.4	-0.9		
1312 670840 5561860	21.9	14.6	1313 671460 5562000	38.4	31.1		
1314 671750 5562500	23.9	16.3	1315 672130 5562940	35.1	27.5		
1316 670320 5561660	5.9	-1.4	1317 670150 5562380	1.2	-6.1		
1318 670110 5562660	1.6	-5.9	1319 669560 5562210	1.6	-2.5		
1320 669250 5562090	5.6	1.5	1321 669520 5561770	5.9	1.8		
1322 669440 5562470	1.8	-2.3	1323 668240 5563010	12.9	8.8		
1324 676770 5558860	1.6	-2.3	1325 676200 5558530	2.6	-1.3		
1326 675320 5557930	1.3	-2.6	1327 674750 5557680	1.1	-3.9		
1328 673940 5557530	1.2	-3.8	1329 673100 5557750	1.1	-3.9		
1330 680390 5573580	1.9	-1.5	1331 681360 5573430	1.6	-1.8		
1332 673740 5572120	5.7	-2.1	1333 673750 5571510	8.2	0.4		
1334 673960 5571280	5.2	-2.6	1335 673280 5571420	8.4	0.6		
1336 671850 5570780	2.7	-3.0	1337 671730 5571180	8.2	2.5		
1338 671960 5571830	9.3	3.6	1339 670630 5572320	10.6	4.9		
1341 676200 5567140	112.0	104.6	1342 676650 5566730	20.9	13.5		
1343 677170 5566690	7.3	-0.1	1344 677730 5566500	2.7	-1.9		
1345 678370 5566500	3.9	-0.7	1346 679260 5566430	3.3	-1.3		
1347 678870 5567650	4.5	-0.4	1348 679530 5567310	4.1	-0.5		
1349 665400 5577760	1.8	-0.2	1350 665300 5578360	1.0	-1.0		
1351 665480 5579100	1.2	-0.8	1352 665600 5579600	0.9	-1.1		
1353 665640 5580200	0.9	-0.9	1354 665480 5580480	1.3	-0.5		
1355 665940 5580600	1.4	-0.4	1356 666150 5580680	5.4	3.6		
1357 666550 5581110	0.8	-1.0	1358 666480 5581430	1.0	-0.8		
1359 666810 5581440	0.7	-1.1	1360 678680 5564800	4.9	0.8		

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
1361	678540	5564000	2.6	-1.5		1362	662050	5579820	1.3	-0.0	
1363	661500	5579750	0.9	-0.4		1364	661380	5580380	1.2	-0.0	
1365	660450	5580800	1.2	-0.0		1366	659490	5581140	1.1	-0.1	
1367	659300	5580740	1.5	0.3		1368	658430	5581520	1.2	0.0	
1369	657480	5581090	1.8	0.6		1370	656500	5580930	1.2	0.0	
1371	679630	5570820	3.3	-1.8		1372	678360	5571110	4.4	-0.7	
1373	677600	5571770	5.3	0.2		1374	677090	5572260	8.4	0.7	
1375	677410	5572540	10.5	3.0		1376	677440	5573700	2.9	-6.7	
1378	679260	5574190	2.4	-3.5		1379	679570	5573290	1.4	-4.5	
1380	678060	5568650	5.4	0.5		1381	678680	5568660	3.3	-1.6	
1382	679250	5563860	3.9	-1.0		1383	679950	5568520	7.6	2.7	
1384	677300	5559380	1.6	-2.3		1385	678030	5560060	2.5	-1.0	
1386	678430	5561030	6.5	3.0		1387	679450	5561830	2.8	-0.7	
1388	680200	5562750	1.7	-0.5		1389	680100	5563540	1.3	-0.9	
1390	679660	5564280	1.6	-2.5		1391	679570	5565430	1.6	-3.0	
1392	680150	5566490	1.1	-1.5		1393	680400	5567470	1.2	-1.4	
1394	681190	5568180	0.8	-2.3		1395	681520	5568870	2.2	-0.9	
1396	680550	5569230	8.3	5.2		1397	680300	5568410	6.9	3.8	
1398	679730	5567610	7.0	2.1		1399	679510	5566810	7.0	2.4	
1400	656620	5568950	1.8	0.3		1401	656830	5569680	0.8	-0.7	
1403	656650	5570580	1.5	0.2		1404	656810	5571470	1.6	0.3	
1405	657190	5572150	1.2	-0.1		1406	658100	5571750	1.0	-0.3	
1407	658100	5571090	0.7	-0.6		1408	658310	5570880	1.1	-0.2	
1409	658050	5570620	0.9	-0.4		1410	657650	5570040	1.5	0.2	
1411	656960	5569180	1.1	-0.4		1412	656650	5568680	1.0	-0.5	
1413	686460	5581250	1.2	-0.6		1414	685680	5580750	1.7	-0.1	
1415	661740	5580450	1.1	-0.1		1416	661620	5580940	1.2	-0.0	
1417	661420	5581660	1.0	-0.2		1418	661330	5582250	0.9	-0.3	
1419	661940	5581730	1.0	-0.2		1420	662250	5582560	1.5	0.4	
1421	662560	5582090	1.6	0.3		1422	663060	5582250	1.1	-0.2	
1423	663590	5582630	1.0	-0.3		1424	664090	5582540	0.8	-0.5	
1425	672390	5557970	0.9	-3.5		1426	671560	5557920	1.1	-3.3	
1427	670830	5558210	1.4	-3.0		1428	670180	5558380	-1.0	0.0	
1429	669600	5558570	-1.0	0.0		1430	668890	5558850	-1.0	0.0	
1431	668230	5558970	-1.0	0.0		1432	667740	5559220	-1.0	0.0	
1433	667230	5559050	-1.0	0.0		1434	667220	5559150	-1.0	0.0	
1436	667700	5559400	-1.0	0.0		1437	668680	5559420	-1.0	0.0	
1438	669550	5559170	-1.0	0.0		1439	670350	5558950	-1.0	0.0	
1440	670830	5558580	-1.0	0.0		1441	671320	5559090	-1.0	0.0	
1442	672090	5559130	-1.0	0.0		1443	672710	5559290	-1.0	0.0	
1444	673290	5559100	-1.0	0.0		1445	673830	5559060	-1.0	0.0	
1446	674510	5559520	-1.0	0.0		1447	675300	5559980	-1.0	0.0	
1448	675870	5560610	-1.0	0.0		1449	656950	5569190	1.3	-0.2	
1450	679130	5566070	1.4	-3.2		1451	678960	5565420	7.0	2.4	
1453	678440	5563570	1.6	-2.5		1454	677790	5562700	5.3	1.2	
1455	677300	5562100	3.9	-3.1		1456	676730	5561530	15.2	8.2	
1457	663490	5578220	1.3	-0.2		1458	663060	5577860	1.7	0.2	
1459	662620	5578000	1.5	0.0		1460	661980	5577860	1.7	0.4	
1461	661410	5577500	2.5	1.2		1462	661130	5577550	1.2	-0.1	
1463	674720	5574090	13.2	3.7		1464	660750	5576850	3.2	1.9	
1465	660780	5576660	1.1	-0.2		1466	660470	5576080	0.9	-0.4	
1467	674730	5574870	24.5	15.0		1468	674910	5574920	26.3	13.3	
1469	674460	5575420	53.8	44.0		1471	657480	5569610	1.1	-0.4	
1472	658040	5569490	1.1	-0.3		1473	661310	5567440	1.3	-0.1	
1474	660760	5569730	1.1	-0.3		1475	660750	5569130	1.0	-0.4	

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U CR	U RS
1476	661280	5569800	1.1 -0.3	1477	661130	5569270	1.1 -0.3
1478	660150	5569220	1.1 -0.3	1479	659520	5569340	2.2 0.8
1480	658910	5569560	0.7 -0.7	1481	655040	5573170	1.5 0.3
1482	655650	5573270	1.1 -0.1	1483	656230	5573640	1.1 -0.1
1484	656780	5574170	1.3 0.1	1485	657430	5574360	1.1 -0.1
1486	658020	5574770	1.0 -0.3	1487	658410	5575300	1.1 -0.1
1488	658830	5575190	1.1 -0.1	1489	658620	5575830	0.8 -0.4
1490	685290	5580170	0.5 -1.3	1491	685000	5579350	1.4 -0.5
1492	684400	5573810	1.5 -1.3	1493	684560	5579780	1.6 -1.2
1494	684510	5580480	1.1 -1.7	1495	685060	5581330	1.3 -0.5
1496	685850	5581660	1.2 -0.6	1497	686560	5582070	1.1 -0.7
1498	687030	5582740	1.9 -0.1	1499	687740	5583240	1.3 -0.4
1500	688200	5583760	1.4 -0.3	1501	688750	5584340	2.2 0.5
1502	689520	5584340	1.5 -0.2	1503	689780	5583750	1.5 -0.2
1504	689050	5583240	1.5 -0.2	1506	688520	5582820	0.5 -1.2
1507	688000	5582090	2.3 0.7	1508	687670	5581460	1.3 -0.3
1509	687020	5580920	1.3 -0.5	1510	657930	5576660	0.8 -0.4
1511	657450	5576800	1.1 -0.1	1512	656830	5576800	1.1 -0.1
1513	656160	5576570	1.2 0.0	1514	665340	5579100	1.0 -1.0
1515	665300	5579780	1.0 -1.0	1516	665250	5579640	0.8 -1.2
1517	665030	5579810	2.3 0.3	1518	664970	5579690	2.1 0.6
1519	665140	5580020	1.0 -0.8	1520	664850	5580250	1.0 -0.3
1521	664950	5580560	1.1 -0.2	1522	664650	5580950	1.2 -0.1
1523	664560	5581550	1.3 -0.0	1524	664060	5581280	2.1 0.8
1525	664080	5580580	1.0 -0.3	1526	664280	5580050	1.3 -0.0
1527	664060	5580230	0.8 -0.5	1528	663820	5580730	1.1 -0.2
1529	664610	5579290	1.1 -0.4	1530	681430	5594820	3.1 -5.6
1531	682080	5593970	4.6 -4.1	1532	682400	5593820	31.3 22.6
1533	681850	5593750	102.0 93.3	1534	681300	5593370	34.1 25.4
1535	680520	5594000	2.3 -6.4	1536	680170	5594100	2.4 -6.3
1537	680300	5593420	27.3 18.6	1538	679970	5593440	1.6 -6.7
1540	679400	5593270	27.9 19.6	1541	679150	5592620	13.9 5.6
1542	663280	5571900	1.5 -0.1	1543	663250	5572190	2.5 0.9
1544	662350	5572340	1.3 -0.1	1545	661560	5572330	1.4 0.0
1546	661490	5572060	1.2 -0.2	1547	661930	5571400	1.2 -0.2
1548	660770	5572250	2.2 0.8	1549	659960	5571970	1.6 0.3
1550	665170	5578770	1.3 -0.7	1551	691930	5574820	1.1 -0.1
1552	692330	5575220	1.1 -0.2	1553	692510	5575700	1.1 -0.2
1554	692840	5576060	2.0 0.7	1555	692870	5575880	1.3 0.0
1556	693500	5575520	0.5 -0.8	1557	694020	5575030	0.6 -0.7
1558	694630	5574730	1.7 0.4	1559	695270	5575110	1.4 -0.0
1560	695240	5575810	1.1 -0.3	1561	663910	5571110	1.6 0.0
1562	663820	5570590	2.0 0.4	1563	664460	5571620	3.7 2.1
1564	664210	5571260	1.9 0.3	1565	664190	5570980	0.9 -0.7
1566	664220	5569790	1.0 -0.5	1567	663900	5569470	1.9 0.4
1568	663560	5569460	1.3 -0.2	1570	680050	5572880	1.9 -1.5
1571	680330	5572470	1.9 -1.2	1572	680940	5571970	1.5 -1.6
1573	659380	5583000	0.9 -0.2	1574	669660	5572720	3.8 -0.1
1575	669600	5571880	7.6 3.8	1576	669700	5571390	2.3 -1.5
1577	669800	5571200	6.5 2.7	1578	669700	5570700	2.1 -1.7
1579	669610	5570900	3.3 -0.5	1580	669630	5569290	4.5 1.0
1581	667780	5568480	1.6 -1.9	1582	667330	5569320	1.1 -1.1
1583	666850	5570500	1.5 -0.9	1584	666720	5571530	1.5 -0.9
1585	668180	5570700	1.0 -2.8	1586	669300	5569780	1.1 -2.4
1587	695930	5578410	2.0 0.5	1588	695890	5577870	1.4 -0.1

SAMPLE EAST	NORTH	U OR U RS	SAMPLE EAST	NORTH	U OR U RS
1589	695590	5576980	1.7	0.3	
1591	672600	5572810	7.8	-1.7	
1593	669220	5574650	2.2	-1.7	
1595	665400	5575050	1.8	-0.5	
1597	666940	5575930	1.3	-1.0	
1599	667190	5576840	1.5	-0.8	
1601	659650	5572070	3.1	1.8	
1604	659200	5571480	1.1	-0.2	
1606	669080	5575660	0.5	-3.1	
1608	669180	5575940	6.4	2.8	
1610	669160	5576500	1.2	-2.4	
1612	669670	5576910	3.0	-0.6	
1614	670490	5577120	2.2	-4.0	
1616	670780	5577370	4.8	-1.4	
1618	671460	5577050	5.8	-0.4	
1620	670830	5571430	10.8	5.1	
1622	671420	5570550	2.3	-3.4	
1624	671030	5569540	2.9	-2.4	
1626	662830	5574420	0.5	-1.1	
1628	663670	5574990	1.9	0.3	
1630	663070	5575000	0.5	-1.1	
1632	662820	5575810	0.6	-1.0	
1634	663180	5576140	0.9	-0.7	
1636	663520	5577320	2.1	0.5	
1638	686670	5578100	10.8	8.9	
1641	661260	5573390	1.4	0.0	
1643	660910	5573770	1.6	0.2	
1645	661440	5574460	1.5	0.1	
1647	660800	5574690	1.1	-0.3	
1649	659480	5573470	1.6	0.3	
1651	658390	5572490	1.2	-0.1	
1653	674850	5578470	15.4	6.7	
1655	676040	5579100	10.2	1.4	
1657	677650	5578760	9.2	2.3	
1659	669260	5571880	2.9	-0.9	
1661	663860	5569840	1.3	-0.2	
1663	678620	5578360	6.9	-0.0	
1665	667680	5575580	1.7	-1.9	
1667	667390	5575390	1.3	-1.0	
1669	667860	5574160	1.9	-2.0	
1671	668520	5573760	3.4	-0.5	
1673	670320	5582770	5.4	1.3	
1676	668810	5585190	2.2	-0.2	
1678	671480	5585030	2.6	-0.5	
1680	685190	5575210	1.0	-0.8	
1682	685250	5576430	1.2	-0.6	
1684	685630	5575480	1.6	-0.2	
1686	677110	5580430	6.7	-0.4	
1688	678200	5578920	5.1	-1.8	
1690	679190	5578430	8.0	1.1	
1692	677440	5577780	8.1	-0.7	
1694	676990	5577120	12.4	2.3	
1696	678180	5578310	5.4	-1.5	
1698	680460	5578470	4.3	-0.4	
1700	696100	5576580	1.8	0.4	
1590	663100	5579150	1.7	0.2	
1592	670640	5573040	6.7	0.5	
1594	665790	5577900	1.2	-0.8	
1596	665350	5575930	1.8	-0.5	
1598	666950	5576070	1.4	-0.9	
1600	659970	5572280	1.4	0.1	
1602	659410	5571810	1.3	-0.0	
1605	658780	5571430	1.2	-0.1	
1607	669050	5575860	4.7	1.1	
1609	669050	5576040	23.5	19.9	
1611	669450	5576540	4.9	1.3	
1613	669970	5577070	4.2	0.6	
1615	670510	5577400	3.7	-2.5	
1617	670980	5577220	3.8	-2.4	
1619	671700	5576840	9.1	2.9	
1621	671150	5570760	7.8	2.1	
1623	671200	5570210	2.7	-3.0	
1625	662640	5574000	0.5	-1.1	
1627	663560	5574700	1.4	-0.2	
1629	663480	5575660	1.5	-0.1	
1631	663050	5575660	0.8	-0.8	
1633	663360	5576100	1.4	-0.2	
1635	663620	5576590	1.5	-0.1	
1637	687200	5578110	1.9	0.0	
1639	686430	5577520	3.8	1.9	
1642	660760	5573220	1.7	0.3	
1644	661420	5573840	2.0	0.6	
1646	661450	5575050	0.7	-0.6	
1648	659820	5574290	0.7	-0.6	
1650	658840	5573180	1.0	-0.3	
1652	674860	5578830	16.2	7.5	
1654	675560	5578720	11.9	3.1	
1656	676790	5578910	10.7	1.9	
1658	678450	5578620	5.2	-1.7	
1660	663650	5569650	1.3	-0.2	
1662	663880	5569040	1.5	0.0	
1664	668380	5575930	6.7	3.1	
1666	667710	5575350	4.0	0.4	
1668	667780	5574910	2.1	-1.8	
1670	668130	5574180	2.2	-1.7	
1672	670030	5583210	1.5	-2.6	
1674	669230	5584480	1.1	-1.6	
1677	669420	5584970	3.3	0.6	
1679	671370	5585590	7.0	3.9	
1681	685800	5576190	1.5	-0.3	
1683	685200	5576100	1.5	-0.3	
1685	677670	5579750	6.0	-0.9	
1687	676600	5581030	7.4	0.3	
1689	679160	5578620	10.6	3.7	
1691	678080	5577950	6.3	-0.6	
1693	677020	5577280	14.7	4.6	
1695	676350	5576800	12.1	2.0	
1697	679710	5578440	7.1	0.2	
1699	681120	5578070	2.7	-2.0	
1701	695120	5576310	1.5	0.1	

SAMPLE EAST	NORTH	U OR	U PS	SAMPLE EAST	NORTH	U OR	U RS
1702	694980	5576400	2..1 0.8	1703	695070	5577100	0.8 -0.6
1704	694680	5578150	1.3 -0.1	1705	693860	5577850	0.8 -0.5
1706	693660	5577020	1..7 0.4	1708	693630	5576350	1.5 0.2
1709	693140	5576360	1.5 0.2	1710	667680	5576910	1.3 -2.3
1711	667500	5576900	2.4 -1.2	1712	667950	5577600	2.5 -0.9
1713	668050	5578040	2.1 -1.3	1714	668290	5578430	1.5 -1.9
1715	668690	5578650	2.5 -0.9	1716	668870	5578860	2.0 -1.4
1717	669190	5579050	2.1 -1.3	1718	669530	5578840	2.0 -1.4
1719	669880	5578550	1.0 -2.4	1720	666290	5576880	1.2 -1.1
1721	672880	5585620	0.9 -3.0	1722	672660	5586680	1.5 -2.4
1723	672650	5587620	1.3 -2.2	1724	672320	5590250	1.6 -0.7
1725	667130	5590930	0.9 -0.7	1726	667040	5590820	1.3 -0.3
1727	667180	5590250	1.9 0.3	1728	666520	5589650	1.1 -0.5
1729	666700	5589690	1.0 -0.6	1730	666830	5589280	1.0 -0.6
1731	667080	5589090	0..8 -0..8	1732	667220	5586470	1.4 -0.3
1733	665750	5586480	0.7 -1.0	1734	665860	5587330	0.7 -1.0
1735	665210	5589400	0.9 -0.7	1736	665900	5590110	6.4 4.8
1737	666930	5588730	1.0 -0.6	1740	668810	5572560	2.3 -1.6
1742	668890	5573090	2.1 -1.8	1743	668700	5573530	2.1 -1.8
1744	668930	5573810	1.9 -2.0	1745	676030	5590550	7.3 1.8
1746	677280	5586810	5.9 1.0	1747	677550	5586160	3.3 -2.4
1748	677970	5585470	9.6 3.9	1749	678550	5584740	8.7 3.4
1750	678700	5583970	8.0 2.7	1751	678710	5583320	4.6 -0.7
1752	678830	5582800	3.8 -1.5	1753	678260	5582820	2.5 -2.8
1754	661550	5588960	1.2 -0.0	1755	661520	5587980	1.3 0.1
1756	661520	5587980	0.9 -0.3	1757	661250	5588020	1.2 -0.0
1758	660880	5587900	1.5 0.3	1759	660450	5587980	2.3 1.1
1760	672120	5577020	3.4 -2.8	1761	672550	5577250	5.3 -4.5
1762	672580	5577070	26.0 16.2	1763	673010	5576960	8.5 -1.3
1764	673280	5576900	8.7 -1.1	1765	673350	5576660	9.0 -0.8
1766	668830	5591570	1.4 -0.5	1767	668950	5591600	1.4 -0.5
1768	669700	5591880	1.3 -0.6	1769	670410	5591500	1.1 -1.2
1770	671080	5592170	0.6 -1.7	1771	671290	5592020	2.8 0.5
1772	672050	5592270	1.1 -1.2	1773	672150	5592560	1.3 -0.8
1775	673020	5592530	3.2 0.1	1776	672910	5592720	1.1 -2.0
1777	673250	5593190	1.3 -1.8	1778	673500	5593530	1.5 -1.6
1779	659830	5583510	0.8 -0.3	1780	669980	5578600	3.1 -0.3
1781	667520	5577090	2.0 -1.6	1782	669280	5591200	2.4 0.5
1783	669710	5590230	3.2 1.3	1784	669940	5590030	1.9 -0.4
1785	670510	5590530	2.2 -0.1	1786	671070	5590960	11.0 8.7
1787	671620	5591110	2.4 0.1	1788	672850	5591850	2.2 -1.0
1789	673340	5592090	2.2 -1.0	1790	669200	5581930	1.5 -1.6
1791	668880	5582840	1.1 -1.6	1792	668190	5583720	1.2 -1.5
1793	667460	5584460	1.3 -0.4	1794	666840	5584950	0.9 -0.8
1795	666280	5583580	1.3 -0.4	1796	668010	5582980	1.4 -1.3
1797	668480	5582120	1.9 -1.2	1798	668940	5581710	2.7 -0.4
1799	659280	5582370	0.9 -0.3	1800	658270	5583590	0.7 -0.4
1801	657530	5583340	0.9 -0.2	1802	656050	5586140	1.4 0.2
1804	655880	5589390	1.5 0.3	1805	654170	5595000	1.7 -0.7
1806	656100	5596060	1.3 -0.5	1807	656840	5596200	0.7 -1.1
1808	657510	5596020	1.0 -0.6	1809	659360	5595500	2.1 0.5
1810	660100	5595080	1.3 -0.1	1811	661080	5594830	1.0 -0.3
1812	661170	5594830	1.2 -0.1	1813	660720	5594970	1.3 -0.1
1814	661710	5594770	1.3 -0.1	1815	663620	5593820	1.1 -0.3
1816	664760	5593570	1.7 0.3	1817	666340	5592520	1.0 -0.5

SAMPLE	EAST	NORTH	U	OR	U	RS	SAMPLE	EAST	NORTH	U	OR	U	RS
1818	667420	5592070	1.2	-0.4	1819	668030	5592230	0.9	-1.0				
1820	659650	5587670	1.3	0.1	1821	659180	5587490	1.1	-0.1				
1822	658350	5587330	1.1	-0.1	1823	658400	5587150	1.0	-0.2				
1824	657640	5587450	1.2	0.0	1825	656730	5587390	1.1	-0.1				
1826	655900	5587530	1.5	0.3	1840	673100	5593600	0.8	-2.3				
1841	669280	5581100	1.7	-1.4	1842	669050	5581130	1.2	-1.9				
1843	669200	5580510	1.8	-1.3	1844	669290	5579750	7.8	4.4				
1845	669430	5579930	11.7	8.3	1846	670880	5579230	2.9	-3.2				
1847	671650	5579540	4.0	-2.1	1848	672450	5580110	17.2	9.5				
1849	673800	5579920	8.2	-0.5	1850	674390	5579360	9.4	0.7				
1851	670930	5579470	4.9	-1.2	1852	660490	5583880	1.7	0.6				
1853	660760	5584310	1.7	0.6	1854	661000	5584400	0.5	-0.6				
1855	661580	5584500	1.3	0.2	1856	661450	5585120	0.5	-0.7				
1857	661330	5585480	0.8	-0.4	1858	661250	5585540	1.4	0.2				
1859	660990	5585860	0.9	-0.3	1850	669210	5585560	1.3	-1.1				
1861	668460	5585800	8.9	6.5	1852	668250	5585630	9.0	6.6				
1863	668840	5587400	1.0	-1.4	1864	668150	5587820	1.4	-0.7				
1865	668690	5588570	1.1	-1.0	1856	668270	5588700	1.2	-0.9				
1867	668800	5588060	1.1	-1.0	1868	675380	5585160	4.2	-0.7				
1869	675200	5585850	4.9	0.0	1871	675250	5586300	1.7	-3.2				
1872	675790	5586570	2.4	-2.5	1873	675700	5586620	3.0	-1.9				
1874	675350	5586730	8.5	3.6	1875	675280	5587510	9.5	4.3				
1876	675340	5588210	3.9	-1.3	1877	674900	5587730	2.2	-1.3				
1878	674660	5587200	3.0	-0.9	1879	674660	5586470	1.8	-2.1				
1880	675530	5584570	1.9	-3.8	1881	675680	5584600	10.4	4.7				
1882	676360	5584310	4.3	-1.4	1883	676850	5584230	3.5	-2.2				
1884	677210	5583680	3.1	-2.6	1885	677600	5583420	5.6	0.3				
1886	678100	5583150	5.8	0.5	1887	678580	5583060	5.9	0.6				
1888	678880	5582950	3.5	-1.8	1889	679360	5582400	5.1	-0.8				
1890	680070	5582180	5.1	0.6	1891	680940	5582040	5.7	1.2				
1892	681050	5581820	6.5	2.0	1893	681260	5581470	3.5	-1.0				
1894	661600	5587820	0.8	-0.4	1895	661920	5587410	1.0	-0.2				
1896	662250	5586730	1.9	0.7	1897	662500	5586760	0.9	-0.4				
1898	662600	5586500	1.4	0.1	1899	662980	5586820	1.0	-0.3				
1900	674870	5586070	3.8	-0.1	1901	674350	5585630	2.3	-1.6				
1902	674640	5586120	2.2	-1.7	1903	674220	5586560	2.2	-1.7				
1904	673860	5585640	1.7	-2.2	1906	673700	5585870	2.2	-1.7				
1907	659990	5591560	0.9	-0.4	1908	659710	5591900	1.1	-0.2				
1909	659490	5592300	1.0	-0.3	1910	659150	5592940	1.0	-0.5				
1911	659300	5593090	2.1	0.6	1912	658660	5593480	1.1	-0.4				
1913	659030	5593780	1.2	-0.3	1914	658200	5594070	1.3	-0.2				
1915	657570	5594170	1.1	-0.4	1916	658630	5594440	1.3	-0.2				
1917	658760	5595180	1.1	-0.5	1918	658130	5595030	1.7	0.1				
1919	658250	5594810	1.3	-0.2	1920	672650	5584970	3.7	-1.6				
1921	672700	5584420	2.9	-2.4	1922	673160	5584040	3.1	-2.2				
1923	673270	5583470	5.6	0.3	1924	673760	5582930	7.7	2.4				
1925	674300	5582780	11.7	6.4	1926	674530	5582220	10.8	3.5				
1927	673590	5582870	9.4	4.1	1928	673320	5582570	14.4	9.1				
1929	673450	5582340	11.0	3.7	1930	673560	5581840	5.1	-2.2				
1931	660060	5589910	1.2	0.0	1932	659580	5590620	0.9	-0.4				
1933	658690	5590460	0.6	-0.7	1934	658150	5591420	2.4	1.1				
1935	657730	5590960	1.3	-0.0	1936	657850	5590910	1.5	0.2				
1937	657690	5590550	0.9	-0.4	1938	657920	5590340	0.9	-0.4				
1940	661080	5586550	0.9	-0.3	1941	661250	5587200	1.2	0.0				
1942	661130	5587770	1.3	0.1	1950	657110	5590030	1.2	-0.2				

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS
1961	656680	5589440	0.9 -0.3	1962	656310	5588850	1.1 -0.1
1963	656370	5588610	1.7 0.5	1964	657230	5588530	1.6 0.4
1965	655990	5588580	1.1 -0.1	1980	663110	5586530	0.5 -0.8
1981	663270	5586450	1.4 0.1	1982	663600	5586420	0.8 -0.5
1983	664100	5585960	0.6 -0.7	1984	664320	5586010	2.1 0.8
1985	664580	5586280	1.0 -0.3	1986	664620	5586650	1.3 0.0
1987	665020	5586810	1.1 -0.6	2000	654820	5593320	1.5 -0.8
2002	655270	5592970	1.3 -0.3	2003	655830	5590580	1.4 0.0
2041	656930	5594900	9.5 7.9	2042	656400	5593750	1.0 -0.6
2043	655960	5593310	1.1 -0.5	2044	655360	5593070	1.3 -0.3
1738	746490	5551250	4.3 -4.2	1739	746280	5551460	71.3 62.8
1827	746070	5551270	19.4 10.9	1828	746390	5550570	9.5 1.0
1829	746770	5550420	2.9 -5.6	1830	746050	5550020	4.8 -3.7
1831	745640	5549330	9.8 2.1	1832	745030	5549650	5.7 -2.0
1833	744280	5549640	5.3 -0.9	1834	747550	5550330	3.4 -5.3
1835	747770	5550180	4.3 -4.4	1836	747530	5549890	3.5 -5.2
1838	747360	5549060	3.8 -3.9	1839	742280	5553610	2.9 -3.3
1943	742510	5554150	3.4 -3.2	1944	742760	5554190	3.2 -3.4
1945	743360	5554260	3.4 -3.2	1946	743230	5554380	3.0 -3.6
1947	743460	5555200	3.3 -1.9	1948	743620	5555940	2.8 -2.4
1949	744150	5556300	3.7 -1.5	1950	744750	5556500	3.5 -1.7
1951	745050	5556400	3.7 -1.9	1952	745420	5556560	4.6 -1.0
1953	738240	5552110	3.3 -3.9	1954	738650	5551920	4.4 -2.8
1955	738680	5551460	13.1 5.9	1956	738870	5551470	2.7 -4.5
1957	738790	5550670	4.9 -2.3	1958	739190	5550880	3.7 -3.5
1959	739910	5551170	4.7 -2.5	1966	746620	5546800	3.2 -3.0
1967	747030	5546180	4.3 -1.9	1968	747500	5546130	4.3 -2.0
1969	746990	5545310	4.2 -2.0	1970	746760	5544520	4.1 -0.5
1971	744980	5552280	12.5 5.4	1972	745170	5552890	13.1 5.4
1973	745380	5553480	10.3 2.6	1974	745750	5552930	18.4 10.7
1976	745670	5553630	19.8 12.1	1977	745720	5554330	8.4 0.7
1978	745850	5554760	8.9 1.2	1979	745880	5554420	4.4 -3.3
1988	745650	5555360	4.7 -0.9	1989	745650	5555860	5.9 0.3
1990	745630	5556450	4.1 -1.5	1991	745950	5557050	4.2 -1.4
1992	739070	5548760	4.0 -1.9	1993	739450	5548080	3.7 -2.2
1994	740110	5547670	3.5 -1.8	1995	740470	5546930	4.5 0.3
1996	741020	5546270	2.9 -1.3	1997	741140	5546420	3.1 -1.1
1998	741640	5545980	3.4 -0.8	1999	741950	5545250	3.5 -0.7
2004	746480	5547430	18.8 12.6	2005	746720	5548110	2.7 -5.0
2006	746730	5547620	17.9 10.2	2007	747020	5548030	7.2 -0.5
2008	747300	5548700	4.1 -3.6	2009	747780	5549320	84.0 76.3
2010	748120	5549720	48.2 40.5	2011	748430	5550220	33.9 25.2
2012	742480	5557110	3.4 -2.2	2013	743060	5557020	3.3 -1.9
2014	743680	5557160	4.0 -1.2	2015	744310	5557290	4.4 -0.8
2016	745030	5557410	3.8 -0.7	2017	745600	5557720	4.7 0.3
2018	746000	5557370	3.4 -2.2	2019	746730	5557390	5.0 -0.6
2020	747370	5557730	6.0 1.6	2021	747970	5558120	3.7 -0.7
2022	749130	5558880	3.7 -0.7	2023	742130	5551280	5.1 -1.0
2024	741820	5550920	4.6 -1.5	2025	741770	5551230	4.0 -2.1
2026	741550	5550590	3.7 -2.4	2027	741750	5550340	4.5 -1.6
2028	741710	5550210	5.8 -0.3	2029	742040	5550200	6.9 0.8
2030	741650	5549080	3.2 -2.1	2031	741810	5549440	4.1 -1.2
2032	741810	5549020	4.1 -1.2	2033	741990	5548650	4.8 -0.5
2034	742380	5548530	3.9 -1.4	2036	741760	5548330	4.5 -0.8
2037	741600	5547930	3.0 -2.3	2038	741190	5547390	3.3 -0.9

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2039	735550	5549100	4.6	-2.2		2040	657880	5594360	1.2	-0.3	
2045	742530	5544560	2.6	-1.4		2046	734780	5549630	11.3	4.6	
2047	735340	5549370	3.9	-2.9		2048	736190	5549230	2.7	-4.1	
2049	736960	5549050	7.5	0.7		2050	737780	5549150	8.8	2.9	
2051	738430	5548660	6.4	0.5		2052	739040	5548400	8.3	2.4	
2053	735790	5550970	19.4	10.5		2054	735440	5550390	8.7	-0.2	
2055	734650	5550760	11.6	2.9		2056	733660	5550680	20.4	11.7	
2057	728800	5560830	12.0	4.5		2058	729280	5560400	12.9	5.4	
2059	730280	5560680	9.7	3.0		2060	736250	5548680	7.4	0.6	
2061	736630	5548120	6.9	0.1		2062	736950	5547650	6.7	-0.1	
2063	737590	5547400	3.5	-2.2		2064	738210	5547330	2.7	-1.9	
2065	738900	5547370	2.7	-1.9		2066	739580	5547580	3.3	-2.6	
2067	736710	5556000	4.8	-3.9		2068	737100	5555800	6.7	-2.0	
2070	740990	5552500	3.2	-2.9		2071	740170	5552280	2.7	-3.4	
2072	739470	5551840	3.4	-3.8		2073	738960	5551340	3.3	-3.9	
2074	741300	5556470	4.1	-1.5		2075	740960	5556970	6.8	1.2	
2076	741220	5557290	28.9	23.3		2077	741120	5557360	6.3	0.7	
2078	740890	5557940	1.5	-3.4		2079	740960	5557910	2.8	-2.1	
2080	740710	5551160	4.1	-2.0		2081	741150	5551650	3.0	-3.1	
2082	741090	5550780	7.0	0.9		2083	740520	5550440	8.7	2.6	
2084	739780	5550270	10.4	3.2		2085	739270	5549580	8.4	2.5	
2086	739000	5549630	5.8	-0.1		2087	737190	5552970	15.9	6.3	
2088	736400	5553360	16.5	6.9		2089	735900	5553930	15.4	5.8	
2090	735170	5554120	16.3	6.7		2091	734280	5554100	16.3	6.4	
2092	736130	5552440	8.6	-0.3		2093	735270	5552450	14.2	5.3	
2094	735200	5552300	13.6	4.7		2095	735960	5552020	20.0	11.1	
2096	736350	5551960	6.8	-2.1		2097	736840	5551840	3.7	-5.2	
2098	737350	5551830	10.4	1.5		2099	737690	5552300	23.0	15.8	
2100	737160	5556420	5.7	-3.0		2101	737220	5556920	9.3	0.6	
2102	737480	5557240	22.8	14.1		2104	737260	5557500	8.3	1.1	
2105	736830	5556950	2.0	-6.7		2106	737030	5557360	4.5	-4.2	
2107	736980	5557220	3.3	-5.4		2108	736980	5557210	3.9	-4.8	
2109	735580	5555210	2.2	-6.5		2110	735280	5554810	9.1	-0.5	
2111	737100	5555890	18.0	9.3		2112	736680	5555370	5.0	-3.7	
2113	736340	5555580	4.8	-3.9		2114	735750	5555610	13.7	5.0	
2115	740920	5556090	7.0	1.4		2116	740610	5555630	3.9	-1.7	
2117	740470	5555380	4.7	-0.9		2118	740230	5555160	5.6	0.0	
2119	740250	5555010	5.6	0.0		2120	734210	5548670	7.3	0.6	
2121	734940	5548570	8.5	1.8		2122	735720	5548460	12.3	5.5	
2123	736100	5547810	6.2	-0.6		2124	736510	5547190	5.1	0.1	
2125	736340	5546370	7.6	2.6		2126	736280	5545450	5.6	0.6	
2127	736350	5544500	3.9	0.3		2128	729070	5561520	7.5	-0.0	
2129	728330	5562100	7.2	-0.3		2130	728360	5562970	6.1	0.6	
2131	728050	5563530	6.9	1.4		2132	728320	5563780	8.3	2.8	
2133	738200	5564560	3.9	-0.3		2134	738890	5564150	3.7	-0.5	
2135	739270	5563860	5.6	1.4		2137	739010	5563700	4.4	0.2	
2138	738800	5563100	4.5	0.3		2139	738890	5563210	2.6	-1.6	
2140	734540	5546320	3.0	-1.9		2141	734660	5546350	1.8	-3.1	
2142	734720	5546970	2.6	-2.3		2143	734780	5545990	3.5	-1.4	
2144	735020	5545520	5.4	0.4		2145	734910	5545060	2.4	-1.7	
2146	734420	5545260	2.8	-2.1		2147	735330	5545160	2.3	-2.7	
2148	735650	5544730	6.6	3.0		2149	736130	5544260	2.1	-1.5	
2150	736480	5544020	3.6	-0.0		2151	736560	5559510	8.1	0.9	
2152	736260	5559760	236.0	223.8		2153	736130	5559790	6.4	-0.8	
2154	736870	5559700	6.6	-0.6		2155	737730	5559980	12.5	6.4	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2156	737640	5560380	1.5	-3.2		2157	738110	5560370	1.5	-3.2	
2158	738530	5559840	8.0	1.9		2159	739400	5559930	9.1	3.0	
2160	729940	5546020	6.4	2.9		2151	730400	5546240	22.7	13.4	
2162	730600	5546330	2.5	-1.8		2153	730890	5546420	3.6	-0.7	
2164	731400	5546800	4.2	-0.1		2155	732030	5547350	4.0	-0.3	
2166	732500	5547220	5.7	0.8		2157	733020	5547130	4.2	-0.7	
2168	733390	5546840	3.7	-1.2		2159	733250	5546830	3.0	-1.9	
2170	733950	5546550	3.0	-1.9		2172	741000	5564320	7.6	2.8	
2173	742080	5564770	6.5	1.7		2174	742500	5564960	1.6	-3.6	
2175	743550	5564940	8.0	3.2		2176	744450	5564190	1.7	-3.1	
2177	744950	5565140	3.1	-2.6		2178	745120	5565170	2.6	-2.4	
2179	745510	5566130	2.8	-2.2		2130	730770	5560910	11.5	4.8	
2181	730900	5560470	5.2	-1.5		2182	731570	5560290	9.3	2.6	
2183	731690	5560090	2.5	-4.2		2184	732090	5560060	9.7	3.0	
2185	732140	5560230	9.0	2.3		2186	732850	5559690	8.7	0.8	
2187	733140	5559760	10.7	2.8		2188	733800	5559590	8.3	0.4	
2189	734120	5559190	50.6	42.7		2190	734710	5559170	9.2	1.3	
2191	734500	5559040	5.4	-2.5		2192	739600	5565640	3.7	-1.2	
2193	740250	5566010	2.9	-2.9		2194	740580	5566180	4.2	-1.6	
2195	740290	5566380	2.6	-3.2		2196	740580	5566450	3.4	-2.4	
2197	740400	5566640	7.0	1.2		2198	739900	5567130	10.5	5.6	
2199	739450	5567760	8.7	3.3		2200	740000	5554540	6.9	0.8	
2202	739710	5554710	4.9	-2.8		2203	739820	5555300	11.0	3.8	
2204	740010	5555960	4.7	-0.9		2205	740400	5556270	3.9	-1.7	
2206	739630	5554020	11.5	3.8		2207	739040	5554130	7.4	-0.3	
2208	738720	5553650	6.2	-1.5		2209	738340	5553630	11.2	3.5	
2210	738120	5552980	12.4	4.7		2211	743260	5561760	2.7	-1.5	
2212	743130	5561620	4.6	0.3		2213	742500	5561730	4.7	0.4	
2214	741810	5561520	3.7	-0.9		2215	741100	5561580	5.6	1.0	
2216	741660	5562770	10.4	5.6		2217	742330	5562680	7.4	2.6	
2218	742970	5562310	11.1	6.8		2219	733220	5562190	2.2	-3.6	
2220	741230	5558790	4.8	-0.1		2221	741350	5559130	5.3	0.4	
2222	741820	5559430	3.3	-1.5		2223	742160	5559560	5.0	0.1	
2224	742140	5559440	4.1	-0.8		2225	742230	5559460	3.8	-1.1	
2226	742540	5559950	3.5	-0.5		2227	742720	5559880	3.9	-0.5	
2228	742750	5559960	1.1	-3.3		2229	743550	5560250	1.9	-2.4	
2230	744120	5560020	0.9	-3.4		2231	744020	5560020	5.6	1.3	
2232	744630	5559380	3.3	-1.1		2233	745110	5558540	4.4	0.0	
2234	745310	5558190	2.7	-1.7		2236	730900	5549280	1.8	-3.6	
2237	730340	5549750	2.0	-3.4		2238	729730	5550430	2.8	-2.4	
2239	728940	5551000	2.0	-3.2		2240	739540	5559850	3.6	-2.5	
2241	747230	5567890	3.7	-1.5		2242	746540	5567750	5.9	0.7	
2243	745550	5567910	4.5	-0.7		2244	744860	5568030	4.5	-1.8	
2245	744320	5567900	53.9	47.5		2246	744150	5568040	4.7	-1.6	
2247	743720	5568250	26.1	19.8		2248	743480	5568060	4.8	-1.5	
2249	743050	5568460	4.2	-2.1		2250	739080	5568920	5.3	-0.1	
2251	739430	5568750	6.2	0.8		2252	740170	5568770	3.1	-3.4	
2253	740400	5568680	4.1	-2.4		2254	741030	5568730	4.1	-2.4	
2255	741570	5568580	4.5	-2.0		2256	741750	5568420	98.4	91.9	
2257	741850	5568740	17.0	10.5		2258	742150	5568500	5.1	-1.4	
2259	748640	5568650	5.1	0.6		2260	745730	5566630	1.9	-3.1	
2251	746080	5567140	2.7	-2.3		2252	746610	5567670	2.5	-2.7	
2263	746140	5567730	4.5	-0.7		2254	727400	5546370	2.7	-0.5	
2265	726610	5546720	2.9	-0.4		2256	725860	5546830	2.5	-0.8	
2267	725190	5546500	3.4	0.1		2258	724640	5546880	4.4	0.7	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2269	724460	5546910	4.6	0.9		2271	725420	5547430	2.7	-0.6	
2272	726400	5547830	4.3	0.0		2273	727360	5547790	3.4	-0.9	
2274	727440	5547660	3.4	-0.9		2275	728120	5548020	4.8	0.4	
2276	731250	5567290	2.6	-0.9		2277	731480	5568420	3.0	-0.2	
2278	731620	5569070	2.8	-0.4		2279	732730	5569500	3.0	-0.4	
2280	738650	5563270	3.4	-0.8		2281	738730	5562860	3.0	-1.2	
2282	738960	5562480	3.5	-1.2		2283	739190	5562320	2.6	-2.1	
2284	739600	5561910	2.8	-1.9		2285	738930	5561660	2.0	-2.7	
2286	738780	5561830	1.4	-3.3		2287	738370	5561830	2.5	-2.2	
2288	737930	5561520	2.0	-2.7		2289	737210	5561440	3.0	-2.1	
2290	737170	5561830	3.0	-2.1		2291	736810	5562170	2.9	-2.2	
2292	737080	5562560	2.7	-1.1		2293	736230	5562600	3.1	-0.7	
2294	735800	5562600	2.8	-1.0		2295	735740	5562280	2.3	-2.8	
2296	733220	5554800	7.8	-2.1		2297	732770	5555140	15.3	5.9	
2298	732570	5554830	17.0	7.1		2299	732440	5554940	20.4	9.9	
2300	731860	5552120	8.4	1.8		2301	731800	5551670	13.4	6.8	
2302	731540	5551330	7.1	0.5		2303	731100	5551510	5.4	-1.2	
2305	730750	5551890	6.5	-0.1		2306	730480	5551880	5.2	-1.4	
2307	729950	5552090	5.3	0.1		2308	729660	5552360	5.2	0.0	
2309	729260	5552440	4.7	-0.5		2310	728650	5552600	1.6	-4.4	
2311	728080	5552570	4.5	-1.5		2312	727640	5552180	3.6	-1.6	
2313	727470	5552080	2.0	-3.0		2314	727800	5551690	2.3	-2.9	
2315	728120	5551480	2.0	-3.2		2316	727940	5551370	3.5	-1.7	
2317	719910	5546030	6.9	3.1		2318	719960	5546650	5.7	1.9	
2319	720280	5546960	6.9	2.9		2320	733090	5570530	3.3	-0.2	
2321	733780	5563800	2.9	-0.5		2322	734650	5568540	5.9	2.5	
2323	717760	5550400	3.5	-0.5		2324	717820	5550430	3.4	-0.6	
2325	717600	5541610	2.4	-0.7		2326	717460	5542500	2.7	-0.5	
2327	717510	5543330	7.8	4.4		2328	717390	5551730	3.1	-0.8	
2329	717100	5552120	3.1	-0.8		2330	717140	5552750	5.7	2.2	
2331	718220	5553140	3.1	-0.7		2332	718500	5553180	3.9	0.1	
2334	718810	5553380	4.3	0.5		2335	719020	5553440	1.1	-2.7	
2336	719330	5553770	2.9	-0.9		2337	719520	5553750	1.6	-2.2	
2338	720160	5554330	3.7	-0.9		2339	717320	5543310	2.3	-0.9	
2340	739320	5567730	9.9	4.5		2341	739030	5568110	3.5	-1.9	
2342	738960	5568550	7.6	2.2		2343	723290	5552310	4.9	-0.1	
2344	723570	5551820	5.7	0.7		2345	723830	5551340	21.1	16.1	
2346	723660	5550950	3.9	-1.1		2347	724180	5551410	3.4	-1.6	
2348	725000	5551890	4.4	-0.6		2349	725630	5551920	4.1	-0.9	
2350	726150	5552060	4.1	-0.9		2351	725710	5552110	5.1	0.1	
2352	725480	5552430	3.8	-1.2		2353	725100	5552710	2.6	-3.0	
2354	728730	5545010	2.4	-1.1		2355	728250	5544600	2.4	-1.0	
2356	728400	5543930	1.8	-1.6		2357	728130	5543620	2.1	-1.3	
2358	727670	5543450	2.3	-1.1		2359	727590	5544720	2.0	-1.4	
2360	733830	5562210	2.5	-3.3		2361	734670	5562430	2.7	-3.1	
2362	737980	5563660	2.3	-1.9		2363	739480	5563650	2.2	-2.0	
2364	740420	5563790	5.0	0.2		2365	728200	5553100	8.0	2.0	
2366	727560	5552940	4.7	-1.3		2367	727400	5553060	11.1	5.5	
2368	727190	5552760	4.5	-1.1		2369	727070	5552870	12.6	7.0	
2371	726380	5552340	6.0	0.4		2372	726880	5552480	2.2	-2.8	
2373	726360	5553170	2.8	-2.3		2374	726810	5553250	2.2	-3.4	
2375	726500	5553650	5.4	-0.2		2376	726150	5554100	4.6	-1.0	
2377	726900	5554010	11.5	5.9		2378	727270	5553510	3.1	-2.5	
2379	728120	5553520	6.8	0.8		2380	727200	5544270	1.7	-1.5	
2381	726680	5544270	0.5	-2.7		2382	726620	5543960	2.2	-1.0	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2383	728910	5544050	2.1	-1.3		2384	729370	5544540	2.1	-1.3	
2385	729810	5544960	2.6	-0.8		2386	729750	5545140	1.8	-1.7	
2387	734390	5564450	2.9	-1.1		2388	734690	5564300	2.6	-1.4	
2389	734800	5564790	3.0	-1.0		2390	735000	5564860	2.7	-1.1	
2391	735020	5565570	2.9	-0.8		2392	735200	5566350	2.7	-1.0	
2393	735140	5567130	2.8	-0.9		2394	735450	5567830	3.1	-1.0	
2395	717730	5547540	2.3	-1.8		2396	717680	5548530	3.3	-0.8	
2397	717690	5549250	3.7	-0.4		2398	716970	5552850	3.3	-0.2	
2399	716620	5553020	2.7	-0.8		2402	720500	5547540	3.1	-1.4	
2403	720290	5547580	5.3	0.8		2404	720020	5547900	5.6	1.1	
2405	719980	5548480	3.7	-0.4		2406	720330	5548060	4.7	0.2	
2407	720600	5548640	2.6	-1.9		2408	720360	5549190	6.0	1.5	
2409	719910	5550260	5.0	1.0		2410	719610	5550590	4.2	0.2	
2411	719250	5550650	6.5	2.5		2412	718650	5550480	4.5	0.5	
2413	736360	5568410	2.9	-1.2		2414	738330	5568550	3.3	-2.1	
2415	738680	5568800	4.2	-1.2		2416	738340	5568980	5.0	-0.4	
2417	738000	5563820	2.7	-2.7		2418	737310	5568980	2.7	-1.4	
2419	736820	5569180	3.2	-0.9		2420	732350	5555590	16.7	9.0	
2421	732360	5556490	2.8	-5.9		2422	732150	5554550	2.1	-5.7	
2423	732150	5554280	3.1	-4.7		2424	732260	5553570	3.1	-4.7	
2425	731500	5554600	5.5	-2.3		2426	730810	5554680	4.5	-3.3	
2427	730590	5554970	3.9	-3.9		2428	730210	5554430	4.7	-3.1	
2429	729720	5554020	6.0	-0.0		2430	729210	5553640	4.2	-1.8	
2431	728920	5553980	11.1	5.1		2432	728360	5554350	7.9	1.9	
2433	728460	5555000	7.3	-0.2		2434	724610	5544070	2.4	-0.8	
2435	725110	5543830	2.8	-0.4		2436	724060	5543690	2.4	-0.8	
2438	723760	5545680	2.6	-1.1		2439	723130	5545910	2.9	-0.8	
2440	720290	5545860	2.9	-1.1		2441	720810	5546060	2.4	-1.6	
2442	720910	5546600	2.9	-1.1		2443	720770	5546850	3.2	-0.8	
2444	721380	5546770	3.1	-0.9		2445	721770	5546930	4.9	0.9	
2446	721940	5546780	3.3	-0.7		2447	722040	5546800	3.0	-1.0	
2448	722470	5546320	2.4	-1.6		2449	721790	5547250	7.1	3.1	
2450	722390	5549290	3.5	-1.0		2451	722280	5549380	4.3	-0.2	
2452	722000	5549900	4.4	-0.1		2453	721660	5550340	5.7	1.0	
2454	722970	5549230	8.2	3.8		2455	722510	5548660	5.3	0.9	
2456	722190	5548520	3.7	-0.8		2457	721900	5548950	2.2	-2.3	
2458	721480	5549480	2.2	-2.3		2459	722000	5548150	10.0	5.5	
2460	709000	5549190	16.7	7.0		2461	708630	5548770	10.9	1.2	
2462	708230	5548250	5.7	-4.0		2463	708130	5547520	14.5	4.8	
2464	708450	5547200	25.7	16.5		2465	708560	5546660	23.7	14.5	
2466	708400	5546690	47.7	38.5		2467	708960	5550570	12.4	4.8	
2468	709100	5551120	6.9	-0.7		2469	709050	5551570	13.9	6.3	
2470	723010	5543650	2.3	-0.9		2471	722400	5543600	2.6	-0.8	
2473	722700	5543250	2.3	-0.9		2474	722120	5544100	2.7	-0.7	
2475	721860	5544800	3.5	0.1		2476	721330	5544350	3.9	0.5	
2477	720760	5545220	3.0	-1.0		2478	720190	5545590	2.2	-1.8	
2479	729920	5559520	12.2	3.8		2480	728850	5557010	10.2	2.7	
2481	728610	5557770	13.0	4.6		2482	728440	5558520	12.2	3.8	
2483	729000	5559060	7.5	-0.9		2484	728560	5559390	10.0	1.6	
2485	727810	5559420	15.2	6.8		2486	727870	5559720	2.5	-5.9	
2487	719840	5545410	5.8	2.0		2488	719360	5544840	4.1	0.7	
2489	719460	5545860	3.5	-0.3		2490	718690	5545950	3.3	-0.5	
2491	727520	5559670	9.0	0.6		2492	726760	5558860	2.5	-5.1	
2493	726040	5558320	-1.0	0.0		2494	725010	5558370	4.5	-3.1	
2495	724240	5557810	8.2	1.9		2496	723390	5557060	6.1	0.1	

SAMPLE	EAST	NORTH	U	OR	U	RS	SAMPLE	EAST	NORTH	U	OR	U	RS
24	722660	5557170	3.9	-2.1	2498	722050	5557250	11.3	6.7				
24	721770	5557430	4.1	-0.5	2500	721640	5548670	5.3	0.8				
2501	721290	5549100	5.8	1.3	2502	722050	5547880	4.2	-0.3				
2503	729510	5564590	3.6	-1.9	2505	729950	5564280	1.9	-3.6				
2506	730230	5564380	2.7	-2.0	2507	730580	5564820	2.5	-2.2				
2508	730460	5564790	3.4	-1.3	2509	730830	5564290	2.1	-2.6				
2510	730390	5563720	7.3	2.6	2511	730860	5563670	2.2	-2.5				
2512	730880	5563210	2.8	-1.9	2513	731260	5562830	2.3	-2.4				
2514	731330	5562080	3.1	-3.5	2515	731530	5562120	2.9	-3.8				
2516	732000	5562700	2.5	-2.2	2517	732440	5562910	3.7	-1.0				
2518	732610	5563670	4.0	0.0	2519	732600	5564110	2.9	-1.1				
2520	733180	5564250	5.3	1.3	2521	732580	5564500	5.0	1.0				
2522	750020	5554610	3.9	-4.3	2523	750350	5551000	2.3	-6.0				
2524	750350	5548570	1.8	-4.9	2525	750570	5547740	1.9	-4.8				
2526	750650	5545450	3.3	-2.5	2527	743700	5544350	3.0	-1.0				
2528	744050	5545070	2.9	-2.1	2529	748850	5558870	4.5	0.1				
2530	736540	5569390	2.8	-1.3	2531	736430	5568950	3.2	-0.9				
2532	723560	5542800	2.5	-0.7	2533	723840	5542940	4.6	1.4				
2534	724120	5542020	4.1	0.1	2535	723730	5541620	3.1	-0.9				
2536	724100	5541350	3.1	-0.9	2537	724380	5541500	2.6	-1.4				
2538	724790	5541010	2.1	-1.9	2539	725720	5541260	1.6	-3.1				
2541	725880	5541530	2.7	-2.0	2542	725610	5541520	2.7	-2.0				
2543	727100	5559500	23.4	15.8	2544	724700	5558350	4.4	-1.9				
2545	725530	5557950	12.9	5.3	2546	724220	5557530	7.4	1.1				
2547	723560	5556850	4.0	-2.0	2548	723020	5556770	13.8	7.8				
2550	722540	5557390	6.6	0.9	2550	716620	5553430	3.1	-0.4				
2551	716430	5553210	1.8	-1.7	2552	716260	5554080	2.7	-0.8				
2553	715820	5554700	2.6	-0.9	2554	715370	5555160	2.7	-0.5				
2555	715120	5555230	2.2	-1.0	2556	714900	5555830	3.1	-0.0				
2557	717160	5543270	2.7	-0.5	2558	716620	5543090	2.9	-0.3				
2559	716120	5543690	3.3	0.1	2560	715700	5544470	2.6	-0.6				
2561	716200	5545660	2.3	-1.2	2562	716540	5546400	2.3	-1.2				
2563	716630	5546850	3.4	-0.1	2564	717000	5547020	3.1	-0.4				
2565	717260	5547600	2.6	-1.3	2566	721130	5532650	3.3	-3.6				
2567	720760	5533520	2.7	-4.2	2568	722750	5532290	3.0	-5.5				
2569	722460	5533250	8.1	1.2	2570	717460	5544270	3.5	0.3				
2571	717640	5545010	2.7	-1.1	2572	717880	5545440	3.5	-0.3				
2573	717920	5545820	2.7	-1.1	2574	718160	5546230	2.7	-1.1				
2575	699430	5546820	1.3	-1.9	2576	700570	5547200	1.6	-0.8				
2577	728210	5542290	1.9	-2.8	2578	728580	5541970	3.1	-1.6				
2580	728930	5541640	1.3	-3.4	2581	729050	5541530	1.9	-2.8				
2582	729020	5541290	1.9	-2.8	2583	729290	5540780	2.7	-2.0				
2584	729650	5540160	2.5	-2.2	2585	729810	5540140	4.0	-0.7				
2586	729960	5539420	8.4	1.0	2587	698030	5544580	3.1	0.4				
2588	697850	5545220	2.0	-1.2	2589	704340	5543060	0.5	-2.4				
2590	721060	5557520	3.5	-1.5	2591	720500	5557000	3.4	-1.2				
2592	719950	5555600	5.2	1.5	2593	718950	5556270	3.5	-0.2				
2594	718210	5556230	3.9	0.2	2595	717300	5555640	7.5	4.3				
2596	716350	5555380	3.1	-0.1	2597	717320	5537070	7.7	4.0				
2598	716570	5536920	3.5	-0.2	2599	716040	5537370	6.4	2.7				
2600	715990	5538480	2.1	-1.0	2601	716400	5538690	2.9	-0.2				
2602	716510	5538910	2.8	-0.3	2603	716350	5539560	2.9	-0.2				
2604	716160	5539590	2.8	-0.3	2605	699260	5546930	1.2	-2.0				
2606	701160	5547350	1.5	-0.9	2607	723690	5535910	2.8	-6.0				
2608	723220	5536230	2.7	-6.1	2610	721870	5557600	2.0	-3.0				

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
2611	721000	5557770	2.3	-2.7		2612	720550	5557630	2.1	-2.9	
2613	719960	5556850	1.7	-2.0		2614	719710	5556720	3.3	-0.4	
2615	719710	5556150	3.7	0.0		2616	719770	5541950	4.7	1.6	
2617	719490	5541700	3.6	0.5		2618	719230	5541940	3.3	0.2	
2619	718930	5541710	2.3	-0.8		2620	713350	5541750	1.2	-1.9	
2621	718360	5542160	8.8	5.7		2622	719890	5541150	3.1	-0.0	
2623	700300	5544470	1.3	-0.8		2624	699580	5545300	1.9	-1.3	
2625	699100	5546390	1.6	-1.6		2626	724870	5537040	2.1	-6.7	
2627	724960	5536630	6.5	-2.3		2628	725150	5536250	5.8	-5.1	
2629	718070	5541570	2.4	-0.7		2630	745100	5561340	1.9	-2.0	
2631	716650	5551690	2.5	-1.4		2632	716430	5550960	3.4	-0.5	
2633	716330	5550170	3.2	-0.7		2634	715880	5549890	16.1	12.2	
2635	716030	5549670	3.3	-0.6		2636	715500	5549460	3.8	-0.1	
2637	716240	5540070	3.7	0.6		2638	715870	5540470	3.9	0.8	
2639	715680	5540680	3.0	-0.1		2640	715700	5541330	2.4	-0.7	
2641	715860	5542050	1.9	-1.2		2642	715910	5542210	2.9	-0.2	
2643	715430	5542760	4.5	1.3		2644	716370	5542750	3.9	0.7	
2646	716540	5542740	3.0	-0.2		2647	716460	5542090	2.6	-0.5	
2648	716510	5542010	4.5	1.4		2649	716320	5541500	3.3	0.2	
2650	722710	5536870	3.4	-5.4		2651	721040	5536750	5.2	-0.4	
2652	723090	5536860	1.9	-6.9		2653	724440	5535370	2.4	-6.4	
2654	708110	5542730	0.5	-6.2		2655	708420	5543010	5.2	-1.5	
2656	709800	5543660	26.3	19.6		2657	709190	5543080	13.3	6.6	
2658	710080	5543130	1.8	-3.7		2659	710150	5544160	2.2	-3.3	
2660	710250	5544520	1.9	-3.6		2661	710050	5544500	2.0	-3.5	
2662	706540	5550360	3.4	-2.6		2663	705680	5550380	2.3	-3.7	
2664	704470	5550410	2.3	-1.5		2665	703670	5550710	3.9	0.1	
2666	725530	5559380	5.3	-2.3		2667	725190	5559250	4.8	-2.8	
2669	725060	5559180	4.7	-2.9		2670	723370	5533620	2.5	-6.8	
2671	724030	5533320	2.4	-6.9		2672	723690	5534100	4.5	-4.8	
2673	698790	5543820	1.7	-1.0		2674	699180	5543270	1.5	-1.2	
2675	713220	5549850	0.7	-5.2		2676	713610	5549540	0.5	-5.4	
2677	712780	5549550	2.9	-3.0		2678	712040	5549620	6.7	-2.4	
2679	712210	5549270	2.5	-6.6		2680	711920	5548880	4.4	-4.7	
2681	704400	5550210	6.8	3.0		2682	703830	5549650	2.3	-2.2	
2683	703950	5549090	9.5	5.0		2684	704580	5548600	12.7	8.2	
2685	711800	5550350	5.2	-2.0		2686	711210	5551340	2.8	-4.4	
2687	711830	5551950	3.6	-3.6		2688	712550	5552580	4.0	-1.9	
2689	711030	5551650	61.9	54.7		2690	720110	5537510	5.1	2.0	
2691	719910	5537900	2.5	-0.7		2692	719540	5537800	1.9	-1.3	
2693	719460	5537970	2.3	-0.9		2694	719290	5538040	2.5	-0.7	
2695	719230	5533840	2.1	-1.1		2696	719340	5538920	3.0	-0.2	
2697	718890	5539620	2.3	-0.9		2698	718220	5540170	1.9	-1.2	
2700	717770	5540710	2.1	-1.0		2701	702880	5542660	5.1	2.2	
2702	702630	5543710	0.5	-2.4		2703	702680	5544560	0.7	-2.2	
2704	702950	5546290	2.2	-1.8		2705	702180	5546420	1.0	-1.4	
2706	701300	5546700	1.7	-0.7		2707	721360	5541870	1.8	-1.6	
2708	724880	5540180	3.0	-1.0		2709	707240	5549910	2.0	-5.4	
2710	707000	5549380	2.3	-5.1		2711	707160	5546510	2.5	-4.9	
2712	706860	5547950	2.8	-4.6		2713	706760	5548070	1.5	-5.9	
2714	710860	5543810	29.6	20.5		2715	709930	5543930	31.5	21.8	
2716	709590	5548930	47.1	37.4		2717	709860	5543390	34.4	24.7	
2718	709290	5549210	35.7	26.0		2719	701600	5555500	-1.0	0.0	
2720	701330	5556220	2.1	0.1		2721	701480	5556500	1.1	-0.9	
2722	701050	5556590	1.4	-0.6		2723	701310	5556670	1.1	-0.9	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2724	701730	5554560	4.7	2.5		2725	701700	5554860	2.5	0.3	
2726	701810	5553950	1.2	-1.0		2727	701940	5553120	1.6	-0.6	
2728	702220	5552370	1.4	-1.3		2729	706830	5555510	2.4	-0.5	
2730	704280	5543400	0.8	-2.1		2731	705440	5544070	3.7	-1.6	
2732	706390	5545720	2.7	-4.8		2733	697650	5551230	2.0	-0.6	
2735	697790	5552040	1.9	-0.7		2736	697700	5552120	1.9	-0.7	
2737	697560	5553160	3.6	1.6		2738	698450	5553420	2.0	-0.0	
2739	707310	5556040	2.7	-0.2		2740	707500	5556090	1.9	-1.3	
2741	707260	5556610	3.3	0.4		2742	706750	5557340	2.3	-0.6	
2743	706320	5558200	2.1	-0.5		2744	706960	5557590	1.6	-1.0	
2745	707640	5556820	6.1	2.9		2746	708140	5556300	1.5	-1.7	
2747	708920	5556110	1.5	-1.7		2748	705380	5557770	1.9	-0.7	
2749	705810	5559550	2.8	0.2		2750	725360	5535850	40.6	29.7	
2751	725490	5535500	72.8	61.9		2752	725350	5536260	18.8	7.9	
2753	725270	5536650	32.8	21.9		2754	725250	5537100	23.4	12.5	
2755	709220	5551900	7.4	-0.2		2756	709360	5552000	8.9	1.3	
2757	730360	5568470	2.8	-0.4		2758	730540	5567980	3.1	-0.1	
2759	729970	5567610	3.3	0.0		2759	730010	5567040	2.5	-1.0	
2761	730550	5568700	3.0	-0.2		2762	730580	5569180	2.6	-0.6	
2763	731900	5567790	3.3	0.1		2764	713450	5560940	1.6	-1.5	
2765	714030	5561910	2.0	-1.1		2766	714080	5562340	2.3	-0.8	
2767	714500	5563410	2.3	-0.9		2768	713680	5562600	6.4	3.2	
2769	713700	5561840	10.9	7.3		2771	709590	5560190	2.9	0.4	
2772	708870	5560100	2.3	-0.2		2773	713010	5558450	2.5	-0.4	
2774	713380	5557600	3.8	0.9		2800	725100	5559720	4.7	-2.9	
2801	725370	5560020	7.7	0.3		2802	725630	5560800	2.7	-4.7	
2803	726050	5561470	2.8	-4.6		2804	726880	5561850	13.2	5.8	
2805	710130	5561180	2.2	-0.6		2807	711350	5560880	3.2	0.4	
2808	712110	5560870	2.7	-0.1		2809	712700	5560540	2.2	-0.9	
2810	711160	5559540	2.3	-0.4		2811	711930	5559660	2.1	-0.6	
2812	714000	5557650	1.3	-1.6		2813	714050	5556760	2.7	-0.4	
2820	710680	5552140	2.8	-4.4		2821	710180	5552140	0.5	-6.7	
2822	710360	5552110	5.5	-1.7		2823	705900	5559760	2.9	0.3	
2824	706420	5559750	3.2	0.6		2825	699910	5559500	1.3	-0.5	
2826	699210	5558440	1.5	-0.3		2827	698880	5553260	1.0	-0.8	
2828	698200	5557930	1.2	-0.6		2829	697480	5557620	1.8	0.1	
2830	696000	5556780	2.2	0.5		2840	708650	5555180	5.2	2.0	
2841	709110	5555110	6.7	3.5		2843	709680	5554540	3.1	-1.8	
2844	709200	5554140	2.6	-2.3		2845	708920	5554840	2.0	-2.9	
2846	708510	5555120	1.6	-1.6		2847	708090	5555720	1.7	-1.5	
2848	706800	5554820	3.0	-1.1		2849	707060	5554190	3.1	-1.0	
2850	707710	5553620	3.5	-1.4		2851	696160	5552280	1.6	-1.1	
2852	696760	5551810	1.9	-0.8		2853	697520	5551170	1.7	-0.9	
2854	698100	5550410	1.7	-0.9		2855	699760	5550300	4.6	2.0	
2856	700790	5550620	1.7	-1.0		2857	701530	5550620	2.1	-0.6	
2858	702540	5550470	1.8	-2.0		2859	747300	5568610	3.9	-1.3	
2860	697140	5551820	1.3	-1.4		2861	698880	5550040	1.3	-1.3	
2862	698890	5549920	2.0	-1.3		2901	747040	5569340	3.8	-1.4	
2902	746860	5570190	4.2	-0.6		2903	746680	5570840	2.9	-1.9	
2904	746480	5570920	4.0	-0.8		2905	746290	5571160	3.6	-1.2	
2906	746580	5571120	3.0	-1.8		2907	745950	5571510	3.3	-1.0	
2908	745090	5571790	3.8	-1.0		2940	711190	5562090	3.0	0.2	
2941	711980	5561930	2.3	-0.5		2942	710440	5559820	2.2	-0.5	
2943	712510	5558790	2.2	-0.7		2944	712350	5558130	1.8	-1.1	
2945	709060	5556550	1.7	-0.4		2946	709420	5563990	2.1	-0.2	

SAMPLE EAST	NCRTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS		
1381	728180	5443220	-1.0	0.0	1882	728120	5443260	-1.0	0.0
1886	729070	5443660	-1.0	0.0	1890	729720	5443530	-1.0	0.0
1894	730320	5443600	-1.0	0.0	1901	730890	5444170	-1.0	0.0
1905	731810	5443910	-1.0	0.0	1909	732740	5443620	-1.0	0.0
1913	733680	5443270	-1.0	0.0	1920	734250	5443110	-1.0	0.0
1924	735130	5442970	-1.0	0.0	1928	736050	5442800	-1.0	0.0
1932	737070	5442870	-1.0	0.0	1936	732310	5442460	-1.0	0.0
1940	733490	5443040	-1.0	0.0	1940	733490	5443040	-1.0	0.0
2001	719280	5506060	17.3	6.8	2002	719400	5505790	10.0	-0.5
2003	719410	5505540	14.5	4.0	2004	719640	5505370	6.1	-4.4
2005	719740	5505140	10.6	0.1	2006	720010	5505000	7.7	-2.3
2007	720260	5504950	14.1	4.6	2008	720610	5504580	8.9	-0.6
2009	721000	5504480	11.8	2.3	2010	721230	5504500	13.2	3.7
2012	721550	5504840	13.7	4.2	2013	722570	5502260	7.8	0.4
2014	722740	5502800	18.4	9.6	2015	722400	5502950	6.8	-2.7
2016	722340	5503160	8.4	-1.1	2017	722480	5503420	9.6	0.1
2018	722230	5503750	12.2	2.7	2019	722030	5504280	8.3	-1.2
2020	722040	5504460	1.7	-7.8	2021	721910	5504640	40.7	31.2
2023	722650	5503280	2.1	-6.7	2024	723730	5502660	3.3	-5.5
2025	724780	5502250	2.0	-5.4	2026	725780	5501780	2.3	-3.6
2027	726070	5501640	7.1	1.2	2028	726400	5501660	8.0	2.1
2029	726830	5501410	2.3	-3.6	2030	728400	5500430	3.9	-1.7
2031	728430	5500120	4.2	-1.4	2032	729240	5500430	2.5	-3.1
2033	729610	5500450	2.9	-2.7	2034	730290	5500340	3.8	-3.6
2035	730900	5500330	8.1	0.7	2036	731650	5500280	5.0	-2.4
2037	732430	5499920	7.4	-0.1	2038	733130	5499810	9.9	1.6
2039	733960	5498280	8.9	0.6	2041	727630	5497490	6.4	-1.4
2042	727340	5497530	3.3	-2.5	2043	727660	5498210	4.2	-1.7
2044	728100	5499370	3.3	-2.6	2045	728250	5499790	4.5	-1.4
2046	727580	5500000	3.9	-1.0	2047	726610	5500690	5.9	-0.0
2048	726290	5501020	5.4	-0.5	2049	723280	5495530	8.6	-0.0
2051	724020	5498200	7.3	-0.5	2052	724410	5498740	7.5	-0.3
2053	725010	5499390	8.9	3.1	2054	725310	5499930	5.6	-0.2
2055	725610	5500600	3.7	-2.2	2057	725990	5511300	2.8	-5.4
2058	725940	5511690	2.9	-5.3	2059	725620	5511960	4.3	-3.9
2060	726130	5512070	2.0	-6.2	2051	726240	5512320	1.8	-6.4
2062	726260	5511890	2.9	-5.3	2053	726210	5511260	3.3	-4.9
2064	726490	5514200	2.6	-4.2	2055	719490	5491680	6.2	-3.0
2066	719050	5492010	10.3	1.1	2057	719690	5492310	8.8	-0.4
2068	720140	5492630	17.8	3.4	2059	719190	5492130	13.3	4.1
2070	719190	5492620	8.5	-0.9	2071	719720	5493120	7.7	-1.7
2072	719500	5493460	15.3	5.9	2073	720260	5493740	9.1	-0.3
2074	721260	5494110	10.0	0.6	2075	722400	5494960	5.6	-3.3
2076	723340	5495750	7.6	-1.0	2077	724580	5498060	2.8	-5.0
2078	725750	5498200	2.1	-3.7	2079	726990	5497020	3.5	-3.8
2080	726850	5498370	2.8	-3.0	2081	721650	5494670	13.1	3.7
2082	725960	5510690	9.9	1.7	2083	725490	5510360	3.7	-4.5
2084	724970	5509990	8.6	-1.8	2085	724390	5509700	126.0	114.6
2086	723590	5509210	6.4	-5.0	2087	724370	5508840	13.4	2.0
2088	725120	5509190	19.0	9.1	2089	725800	5509630	17.0	7.1
2090	726200	5509960	16.2	6.3	2091	726520	5510140	10.7	2.5
2093	721710	5511040	33.0	22.3	2094	721970	5511640	16.7	6.0
2095	722230	5511980	17.8	7.1	2096	723440	5511580	11.1	0.9
2097	724270	5511370	12.4	2.2	2098	724990	5511460	11.4	1.2
2099	725450	5511100	12.9	4.7	2100	725960	5510940	42.7	34.5

SAMPLE	EAST	NORTH	U	CR	U	RS	SAMPLE	EAST	NORTH	U	CR	U	RS
2101	726170	5510960	3.8	-4.4	2102	726370	5512300	2.3	-5.9				
2103	730610	5512300	19.1	12.9	2105	732400	5500480	4.5	-2.9				
2106	732470	5502120	17.9	10.5	2107	732110	5503640	12.8	4.0				
2108	733320	5505670	57.1	47.8	2109	733190	5504760	12.9	2.5				
2110	732410	5503900	3.4	-5.4	2111	725390	5514100	14.1	7.3				
2112	724170	5515030	24.0	16.9	2113	730340	5511460	4.0	-2.2				
2114	731270	5510710	5.9	-0.3	2116	721620	5512000	20.3	9.6				
2117	723930	5512190	3.9	-6.3	2118	724310	5511870	3.5	-6.7				
2119	725120	5511850	4.2	-4.0	2120	726640	5509920	8.6	-1.3				
2121	727460	5508910	4.3	-5.6	2122	728520	5508020	7.5	-0.7				
2123	729630	5507070	8.9	0.3	2124	731340	5504850	96.6	87.8				
2125	730540	5506030	7.4	-1.2	2127	729870	5488490	7.1	-2.0				
2128	729470	5488610	9.6	0.5	2129	729050	5488610	6.0	-3.1				
2130	728620	5488330	8.0	-1.1	2131	730240	5488560	5.1	-3.0				
2132	720110	5509630	18.7	7.5	2133	719690	5509580	13.5	3.4				
2134	731990	5488800	6.0	-2.1	2135	733270	5489030	6.0	-1.4				
2136	733950	5489560	5.7	-1.7	2138	725570	5501330	6.4	0.5				
2139	724800	5501760	5.2	-2.2	2140	724030	5501890	23.8	16.4				
2141	723560	5502240	21.5	14.1	2142	723100	5502730	9.2	0.4				
2143	722600	5502890	3.7	-5.1	2144	722330	5503050	10.1	0.6				
2146	730940	5492420	5.3	-3.5	2147	731000	5492100	2.7	-6.1				
2148	729310	5491550	9.4	-0.2	2149	730480	5491830	7.8	-1.0				
2150	731130	5491580	6.3	-2.5	2151	731490	5490860	7.2	-1.6				
2152	731750	5490010	9.8	1.0	2153	731740	5489250	7.2	-0.9				
2154	718530	5509230	13.3	3.2	2155	717770	5508410	9.7	-0.4				
2157	730010	5487840	9.3	1.2	2158	730770	5488370	5.4	-2.7				
2159	730860	5488650	7.3	-0.8	2160	720710	5504940	4.4	-5.1				
2161	732050	5509370	10.5	3.1	2162	729910	5489550	14.3	5.2				
2163	729990	5489210	8.1	-1.0	2164	730090	5488960	6.6	-1.5				
2165	730290	5483710	11.7	3.6	2166	730610	5488620	5.8	-2.3				
2168	732470	5510760	10.6	4.4	2169	719540	5508610	1.8	-8.3				
2170	719370	5508330	2.8	-7.3	2171	719020	5508070	3.3	-6.8				
2172	719950	5505670	3.2	-7.3	2173	726320	5501890	2.6	-3.3				
2174	727510	5501160	3.3	-2.3	2175	731790	5513890	3.3	-2.1				
2176	722120	5517170	3.4	-3.8	2177	722380	5516750	46.7	39.5				
2178	730550	5513740	41.4	36.0	2179	732700	5512970	2.2	-3.3				
2181	723330	5523230	3.8	-0.8	2182	723870	5522950	65.7	61.1				
2183	724520	5522600	18.3	13.7	2184	725470	5522480	5.6	1.2				
2185	726320	5522150	4.2	-0.2	2186	726920	5521620	3.1	-1.3				
2187	726970	5520920	5.3	0.9	2188	727330	5520410	2.9	-1.5				
2189	725880	5528710	11.3	3.4	2190	726060	5529580	11.5	3.6				
2192	727450	5520070	2.7	-1.0	2193	727610	5519620	2.6	-1.5				
2194	727910	5519030	3.3	-0.8	2195	728130	5518440	2.9	-1.2				
2196	728420	5517870	2.4	-1.7	2197	728640	5516760	7.6	2.7				
2198	728780	5516400	4.3	-0.6	2199	729080	5516090	1.7	-3.2				
2200	715620	5510020	5.9	-2.4	2201	716450	5509490	4.4	-5.3				
2203	731300	5510120	3.8	-2.4	2204	731270	5509550	2.5	-4.9				
2205	731710	5509120	3.9	-3.5	2206	731700	5508750	41.9	34.5				
2207	732220	5508330	3.3	-4.1	2208	732650	5508530	2.5	-4.7				
2209	735920	5497640	7.5	0.2	2210	736670	5497050	6.0	-1.6				
2211	737130	5496380	6.6	-1.0	2212	737560	5495760	4.9	-1.4				
2214	720130	5519370	1.9	-2.8	2215	721550	5519600	4.1	-0.6				
2216	723170	5520200	2.5	-2.0	2217	724200	5520230	2.3	-2.2				
2218	724920	5520380	1.6	-2.9	2219	725780	5520460	1.9	-2.5				
2220	726320	5520410	2.4	-2.0	2221	726880	5520320	2.2	-2.2				

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2222	727300	5520300	2.7	-1.7		2223	720770	5519460	2.7	-2.0	
2225	723980	5517870	9.1	4.0		2226	724820	5517650	4.1	-1.0	
2227	725410	5517280	3.6	-2.3		2228	725780	5517140	25.6	19.7	
2229	726300	5516470	2.8	-3.1		2230	726460	5515640	3.6	-2.3	
2231	726480	5514600	4.2	-2.6		2232	725730	5524900	2.0	-2.9	
2233	727030	5524650	10.8	5.9		2234	727450	5524230	1.4	-3.5	
2236	726810	5513940	7.2	0.4		2237	727580	5514000	2.3	-3.4	
2238	728070	5513350	3.9	-1.8		2239	728540	5512800	1.5	-4.2	
2240	729130	5512290	2.0	-4.8		2241	729850	5512450	2.1	-4.7	
2242	730400	5512130	2.8	-3.4		2243	729910	5514570	1.9	-3.8	
2244	728620	5515740	2.8	-2.1		2245	727600	5516160	5.2	0.3	
2246	720440	5525170	12.8	8.5		2247	717960	5524240	1.9	-1.4	
2248	717730	5524530	1.6	-1.7		2249	718110	5525110	1.7	-2.0	
2250	727160	5524020	2.5	-2.4		2251	724330	5524590	2.7	-1.9	
2252	725960	5524100	2.6	-2.3		2253	728220	5527260	5.2	-0.2	
2254	728480	5527260	11.7	6.3		2255	728280	5526710	5.9	0.5	
2256	726270	5530210	13.1	2.9		2257	726600	5530160	20.2	10.0	
2258	712090	5516350	24.8	14.7		2259	713600	5516300	12.8	2.9	
2260	713810	5514970	13.6	4.2		2261	715280	5513690	8.2	-0.3	
2262	715120	5514160	6.8	-1.7		2263	715020	5513920	5.2	-3.3	
2264	715730	5514490	7.7	-0.8		2265	716230	5514790	23.1	14.6	
2267	737760	5495000	11.5	5.2		2268	737730	5494330	4.2	-2.2	
2269	738960	5493690	3.6	-2.8		2270	739660	5494550	6.1	-0.3	
2271	717000	5510480	6.5	-1.8		2272	716550	5509820	2.5	-7.2	
2273	747610	5540010	1.1	-2.7		2274	747270	5539760	2.9	-1.3	
2275	746900	5539440	2.9	-1.3		2276	747170	5538920	3.8	-0.4	
2278	743950	5485820	3.2	-1.2		2279	743130	5485710	3.9	-0.5	
2280	742370	5485410	4.4	-0.1		2281	741880	5485100	6.2	1.7	
2282	741440	5485190	3.6	-0.9		2283	728390	5526270	5.0	-0.4	
2284	729050	5525380	4.5	-0.9		2285	729830	5524910	4.9	0.4	
2286	718760	5518470	2.6	-2.0		2287	719300	5518960	3.1	-1.5	
2288	719500	5519350	2.2	-2.4		2289	719240	5519760	2.4	-2.2	
2290	747350	5538900	3.1	-1.1		2291	746080	5538580	6.4	2.2	
2292	747240	5538790	2.9	-1.3		2294	723640	5529560	6.4	-0.5	
2295	722590	5531070	5.9	-2.6		2296	724620	5529330	7.2	0.3	
2297	727110	5527450	3.2	-2.5		2298	717550	5516750	2.9	-4.1	
2299	718530	5518000	9.8	5.2		2300	719460	5512160	8.0	-1.1	
2301	718560	5511430	2.4	-6.7		2302	719430	5509920	5.3	-4.8	
2303	736820	5481530	3.8	-3.0		2305	729070	5524600	2.2	-2.3	
2306	729510	5524850	4.1	-0.4		2307	724110	5531410	11.7	3.2	
2308	723340	5530880	6.7	-1.8		2309	724040	5530020	6.6	-1.9	
2310	718510	5513550	6.4	-2.1		2311	718750	5513100	8.1	-0.4	
2312	718030	5512440	5.9	-3.2		2313	717970	5511740	7.5	-1.6	
2314	717550	5510970	6.6	-2.5		2316	715510	5514550	17.3	8.8	
2317	715930	5514150	3.2	-5.3		2318	715280	5513570	12.2	3.7	
2319	714970	5513230	3.2	-6.2		2320	714900	5512980	6.1	-3.3	
2321	714770	5512870	29.8	20.4		2322	715100	5512000	4.4	-3.9	
2323	715480	5511000	3.9	-4.4		2324	737370	5492560	-1.0	0.0	
2325	737270	5492160	6.4	-1.4		2327	717100	5508900	4.1	-5.6	
2328	717860	5507820	4.8	-5.3		2329	718410	5507220	9.3	-1.2	
2330	718810	5506260	12.6	2.1		2331	737210	5492620	3.5	-4.7	
2332	740030	5493310	3.3	-1.5		2333	740910	5493660	3.2	-1.6	
2334	738730	5523870	4.3	-0.4		2335	710240	5510610	8.3	-0.7	
2336	710980	5510640	7.0	-2.0		2337	711950	5510620	9.2	0.2	
2338	713110	5510670	8.9	0.3		2339	714140	5510690	4.3	-4.3	

SAMPLE EAST	NORTH	U OR U RS	SAMPLE EAST	NORTH	U OR U RS				
2340	714870	5510410	6.5	-2.1	2341	715470	5510150	9.4	1.1
2342	747140	5541250	5.0	1.0	2343	746770	5540940	8.1	4.1
2344	743670	5540610	6.9	2.9	2346	743960	5543470	2.9	-1.1
2347	742760	5543760	4.7	0.7	2348	741050	5543710	2.5	-1.1
2349	745730	5543070	3.5	-1.1	2350	745270	5542650	2.7	-1.9
2351	736100	5486290	6.1	-0.5	2352	736880	5485260	5.1	-1.5
2353	739110	5528780	3.3	-1.4	2355	738770	5529480	4.0	-0.7
2356	738730	5530080	6.0	0.8	2357	739840	5529730	3.2	-1.5
2358	703850	5510820	48.8	37.4	2359	704540	5511230	32.1	20.7
2360	746660	5540230	5.7	1.7	2361	746830	5539870	3.0	-1.2
2362	734560	5489410	5.8	-1.6	2363	735180	5488790	-1.0	0.0
2364	735990	5488210	6.7	-0.3	2365	736090	5487280	-1.0	0.0
2367	748860	5537940	1.7	-2.1	2368	748580	5537290	7.4	3.7
2369	748880	5536770	3.6	-0.1	2370	749920	5536420	4.5	0.8
2371	736760	5482070	5.7	-1.1	2372	736840	5483020	8.5	1.6
2373	737120	5483590	5.1	-1.8	2374	737150	5484100	2.4	-4.5
2375	737350	5484250	6.1	-0.8	2376	744180	5537930	6.9	2.7
2378	736890	5491670	47.2	39.4	2379	736390	5491010	10.1	2.3
2380	744200	5539570	2.4	-1.8	2381	744040	5538890	3.6	-0.6
2382	744340	5538340	8.3	4.1	2383	744600	5533740	5.8	1.9
2384	744390	5534840	5.7	1.8	2385	744310	5533260	3.0	-0.9
2386	743550	5533290	3.0	-0.9	2388	740830	5492020	5.2	0.7
2389	740300	5493440	2.2	-2.6	2390	744160	5535440	5.4	1.2
2391	744620	5535790	6.7	2.5	2392	745190	5536200	4.3	0.1
2393	744020	5535140	4.8	0.6	2394	705620	5515130	15.5	7.9
2395	705750	5515660	3.8	-3.8	2396	706050	5516210	4.6	-3.0
2397	706230	5516740	3.2	-4.4	2399	733580	5494880	12.5	3.0
2400	733080	5495190	15.6	6.5	2401	732550	5495410	8.0	-1.1
2402	731950	5496070	5.7	-3.6	2403	731480	5496780	4.2	-5.1
2404	731560	5496020	36.5	27.2	2405	732160	5495500	17.8	8.5
2406	732550	5495020	6.3	-4.3	2407	738400	5530720	6.1	0.9
2408	738690	5530640	3.7	-1.5	2410	738910	5528260	1.4	-3.3
2411	739250	5527590	3.9	-0.8	2412	739920	5527070	4.6	0.5
2413	700960	5511350	2.6	-9.5	2414	701230	5511920	4.5	-7.6
2415	740680	5485190	2.3	-2.2	2416	740140	5484830	4.1	-1.3
2417	739490	5484710	5.7	-0.1	2418	739150	5484580	4.3	-1.5
2419	738590	5484420	4.9	-0.9	2421	737950	5484350	3.2	-2.6
2422	743830	5536760	2.5	-1.7	2423	743570	5536170	2.3	-1.9
2424	742120	5537190	3.6	-0.6	2425	742800	5536800	3.1	-1.1
2426	728350	5500770	4.3	-1.3	2427	729590	5501100	4.6	-1.0
2428	730260	5500760	9.0	1.6	2429	731450	5500820	5.0	-2.4
2430	735480	5500340	18.7	10.4	2432	743980	5536920	5.1	0.9
2433	742940	5533690	3.4	-0.5	2434	739480	5460270	5.5	1.5
2435	739410	5460730	3.4	-0.6	2436	739560	5461460	3.7	-0.3
2437	739360	5531510	2.8	-2.4	2438	741250	5527780	3.8	-0.0
2439	705600	5513610	3.8	-5.2	2440	705740	5514180	3.8	-5.2
2441	705290	5511810	3.4	-6.7	2443	744210	5534060	2.8	-1.1
2444	744650	5532950	2.8	-1.1	2445	744980	5531980	3.0	-0.5
2446	745020	5531260	2.9	-0.3	2447	744910	5530790	3.5	0.0
2448	743280	5536360	3.4	-0.8	2449	702970	5513440	28.6	19.0
2450	703570	5513120	6.0	-3.6	2451	703480	5512980	37.2	27.6
2452	703920	5512190	6.2	-5.2	2454	705690	5513440	15.0	6.0
2455	706340	5513510	5.9	-3.1	2456	707200	5513480	16.3	7.3
2457	707270	5513210	10.3	1.3	2458	708450	5513050	14.6	5.1
2459	709280	5512980	12.9	3.4	2460	738350	5466450	2.7	-1.8

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2461	738730	5466510	2.2	-2.3		2462	738880	5467440	2.5	-2.0	
2463	739270	5468050	3.3	-1.7		2465	705410	5511490	8.7	-1.4	
2466	745690	5467960	6.8	0.8		2467	745900	5468260	12.4	6.4	
2468	746400	5467990	3.2	-2.8		2469	747350	5466660	7.2	2.6	
2470	704310	5511800	7.9	-3.5		2471	704670	5511420	7.3	-4.1	
2472	742420	5468140	4.1	-1.5		2473	742900	5467220	2.8	-1.4	
2474	743200	5466970	3.3	-0.9		2476	701460	5512660	10.2	-0.4	
2477	701660	5513140	12.4	1.8		2478	701570	5512140	15.5	3.4	
2479	700780	5510540	15.3	3.2		2480	743570	5473170	23.0	15.1	
2481	743540	5472460	40.6	32.9		2482	743840	5471760	9.5	1.8	
2483	744480	5471280	6.0	-1.7		2484	744230	5470710	17.4	9.7	
2485	744890	5470630	10.1	2.4		2487	705240	5513070	5.4	-3.6	
2488	705420	5513070	6.1	-2.9		2489	705630	5513700	3.8	-5.2	
2490	705600	5514370	4.2	-4.8		2491	705700	5514890	3.7	-5.3	
2492	705230	5511130	30.9	20.8		2493	705800	5510920	2.0	-8.1	
2494	706620	5510630	4.4	-5.7		2495	707290	5510600	7.5	-2.6	
2496	708150	5510600	9.9	0.6		2497	747280	5464820	3.3	-0.7	
2498	747760	5464260	4.8	0.0		2500	735510	5499420	2.3	-5.0	
2501	732910	5507600	2.6	-4.6		2502	733280	5506920	10.1	0.8	
2503	733880	5506820	7.2	-2.1		2504	734610	5506570	4.3	-5.0	
2505	735750	5505350	135.0	126.5		2506	739330	5503390	2.6	-4.6	
2507	738760	5504380	3.1	-4.1		2508	738220	5505330	2.5	-4.6	
2509	736880	5507640	4.7	-2.7		2510	734570	5510320	2.3	-3.9	
2512	732770	5513640	2.0	-3.5		2513	739960	5476390	4.2	-1.5	
2514	740480	5476340	5.5	-1.1		2515	740270	5475480	3.8	-2.8	
2516	740630	5474720	3.3	-3.6		2517	744210	5478930	3.4	-3.1	
2518	741750	5479880	9.7	3.0		2519	741690	5480530	10.5	4.0	
2520	742020	5481400	4.1	-2.4		2521	742590	5481990	3.7	-2.4	
2523	745040	5468530	5.2	-0.8		2524	747280	5461250	3.3	-1.9	
2525	747090	5462510	3.7	-0.3		2526	746630	5463030	3.1	-0.9	
2527	745920	5463350	4.0	0.0		2528	745260	5463760	3.1	-0.9	
2529	744470	5463990	2.1	-1.5		2530	744800	5464320	3.1	-0.5	
2531	736360	5497470	2.1	-5.5		2532	737250	5497650	2.1	-5.2	
2534	743370	5466640	3.0	-1.2		2535	743340	5466370	2.6	-1.5	
2536	743740	5465910	3.5	-0.7		2537	744620	5465330	3.0	-1.2	
2538	744900	5464610	3.1	-0.5		2539	739050	5479340	6.0	-0.2	
2540	738000	5478350	4.0	-2.2		2541	737700	5478150	5.1	-1.1	
2542	738330	5478080	4.0	-2.2		2543	738590	5477630	2.3	-3.9	
2545	739080	5467740	11.0	6.0		2546	739760	5467580	2.2	-2.8	
2547	740140	5467360	20.0	15.7		2548	740640	5467660	3.7	-1.9	
2549	741420	5467700	3.4	-2.2		2550	742010	5467600	2.7	-2.9	
2551	742080	5467050	1.7	-2.6		2552	742540	5467550	3.2	-0.9	
2553	737230	5475090	3.9	-1.4		2554	736990	5475550	5.2	-0.1	
2556	741800	5468230	3.2	-2.4		2557	741930	5468880	4.6	-1.0	
2558	742100	5469500	10.6	5.0		2559	742940	5469770	10.5	4.6	
2560	743340	5469420	3.1	-2.8		2561	743900	5469350	2.9	-3.0	
2562	744610	5469350	3.6	-2.3		2563	737530	5467740	3.5	-1.5	
2564	737910	5468170	3.5	-1.5		2565	712680	5525730	1.7	-1.2	
2567	739770	5461620	2.5	-1.5		2568	739550	5462490	2.5	-1.5	
2569	738020	5462000	3.6	-0.4		2570	738720	5462620	4.1	0.3	
2571	739580	5463510	2.5	-1.3		2572	739460	5464480	2.4	-1.4	
2573	739230	5465060	2.7	-1.8		2574	739160	5465470	4.1	-0.4	
2575	739030	5465990	3.6	-0.9		2576	737480	5467250	5.7	1.6	
2578	748350	5463180	5.8	1.0		2579	741920	5495470	4.5	-1.2	
2580	742460	5494680	1.9	-2.9		2581	742600	5493980	3.2	-0.9	

SAMPLE EAST	NORTH	U OR U RS	SAMPLE EAST	NORTH	U OR U RS
2582 742860 5493690	3.8	-0.3	2583 743400 5493080	2.3	-1.8
2584 743600 5492580	3.3	-0.8	2585 743830 5492330	2.8	-1.1
2586 744230 5491710	2.7	-1.2	2587 744420 5491290	2.4	-1.5
2589 737580 5475980	6.4	0.7	2590 738160 5476700	4.8	-0.9
2591 738580 5476500	3.1	-2.6	2592 739270 5476630	3.7	-2.0
2593 703780 5524240	1.9	-1.6	2594 704150 5523860	2.6	-0.9
2595 703860 5523210	3.8	0.3	2596 703640 5523470	4.2	0.7
2597 703790 5523340	2.5	-1.0	2598 703920 5522800	3.0	-0.5
2600 711530 5520180	2.7	-2.1	2601 738190 5497520	4.1	-2.2
2602 739030 5497320	7.0	0.7	2603 739450 5498020	8.5	2.2
2604 739770 5497770	5.3	-1.0	2605 739900 5496780	4.5	-1.8
2606 740620 5496150	28.3	22.6	2607 711650 5521240	2.8	-2.0
2608 712150 5520870	4.0	-0.8	2609 712210 5520470	2.6	-2.2
2611 738800 5477030	9.3	3.5	2612 739550 5477000	6.7	1.0
2613 739770 5476550	6.9	1.2	2614 706350 5520610	12.5	8.1
2615 706660 5520530	2.8	-1.6	2616 741050 5474200	6.8	-0.1
2617 741550 5473820	5.7	-1.2	2618 742470 5474180	6.6	-0.3
2619 742800 5474440	9.1	1.2	2620 743420 5474640	10.8	2.9
2622 740830 5478400	6.9	0.2	2623 742320 5476800	7.5	0.9
2624 740520 5477830	8.7	2.0	2625 740240 5477830	6.3	-0.4
2626 738790 5478530	5.5	-0.7	2627 738500 5479080	6.8	0.6
2628 738220 5478370	8.3	2.1	2629 739130 5475890	5.7	-0.0
2630 739840 5475330	7.2	1.5	2631 740900 5473210	4.0	-2.9
2633 710600 5519680	8.0	0.2	2634 710500 5519430	9.8	2.0
2635 709760 5519270	16.9	10.1	2636 709310 5518940	20.2	13.4
2637 708970 5518970	4.5	-2.3	2638 744440 5490660	4.9	1.0
2639 744300 5490280	6.2	2.3	2640 709620 5524640	3.9	0.7
2641 709430 5524280	4.6	1.4	2642 709540 5524220	3.4	0.2
2643 710150 5523370	3.3	0.1	2644 742590 5482400	5.7	-0.1
2645 743280 5482190	7.9	1.8	2646 744330 5482140	9.1	3.0
2647 701230 5521870	8.6	4.0	2648 699970 5521820	4.0	-1.7
2649 699860 5520330	4.5	-1.2	2650 699050 5525840	7.4	1.6
2651 699230 5524620	5.2	-0.8	2652 699820 5523480	4.7	-1.3
2654 701890 5523380	3.0	-1.5	2655 702060 5522680	3.0	-1.5
2656 702370 5522150	3.3	-1.3	2657 702790 5522160	7.4	3.0
2658 740850 5475300	4.8	-1.8	2659 712590 5525930	2.7	-0.2
2660 712230 5525980	2.1	-0.6	2661 713230 5526060	4.0	1.1
2662 713650 5525860	5.7	2.8	2663 713840 5525610	3.6	0.7
2664 714190 5525560	2.5	-0.4	2665 714520 5524770	1.7	-1.5
2666 714930 5524110	1.8	-1.4	2667 715400 5523850	1.7	-1.4
2668 687310 5521740	4.0	1.7	2670 703790 5522440	2.0	-2.4
2671 704260 5521260	2.4	-2.0	2672 704380 5520630	2.2	-2.2
2673 715690 5502440	4.5	-5.4	2674 715990 5502690	8.9	-2.2
2675 716360 5503040	20.8	9.7	2676 716830 5502790	15.0	3.9
2677 718120 5502940	13.7	3.6	2678 718630 5502530	32.4	22.3
2679 719240 5503010	6.0	-4.1	2681 710580 5522850	2.3	-0.9
2682 710360 5522900	3.2	0.0	2683 710680 5521940	2.2	-2.6
2684 710830 5521590	1.8	-3.0	2685 699690 5507500	119.0	106.0
2686 699690 5508250	141.0	128.0	2687 699240 5509030	78.9	65.9
2688 698620 5509130	31.0	18.0	2689 697900 5509360	14.7	1.7
2690 707240 5503700	14.1	2.5	2692 697500 5522800	12.6	6.6
2693 699710 5520930	1.2	-4.5	2694 701050 5519920	7.7	2.2
2695 701750 5520210	3.0	-1.6	2696 702220 5520110	6.6	2.0
2697 703870 5520390	4.2	-0.2	2698 704390 5520290	3.7	-0.7
2699 704990 5519320	4.0	-1.6	2700 706190 5519890	29.1	23.2

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2701	730340	5524670	5.2	0.9		2703	702740	5521100	3.8	-0.6	
2704	702580	5523760	6.7	2.3		2705	702980	5520360	6.0	1.6	
2706	730660	5524450	4.1	-0.2		2707	731000	5524640	3.0	-1.3	
2708	731000	5524060	3.9	-0.4		2709	732120	5523390	3.7	-0.6	
2710	732720	5523310	8.9	4.6		2711	733370	5523270	5.1	0.8	
2712	733600	5523210	4.3	0.0		2714	706480	5520370	1.8	-2.6	
2715	707300	5520450	3.1	-1.3		2716	708000	5520530	7.1	2.4	
2717	709040	5521370	2.3	-2.4		2718	711240	5521800	1.9	-2.9	
2719	711450	5521300	1.5	-3.3		2720	712650	5521510	2.1	-2.3	
2721	712810	5521850	1.9	-2.5		2722	714720	5523350	16.8	13.6	
2723	711750	5521100	1.8	-3.0		2725	708780	5518650	8.3	1.5	
2726	708100	5518570	5.8	-1.0		2727	707350	5518310	6.7	0.8	
2728	706820	5517830	4.4	-1.5		2729	735210	5534070	18.8	11.8	
2730	735940	5533390	9.0	2.0		2731	736630	5532090	3.7	-2.3	
2732	736940	5531350	5.4	-0.6		2733	737070	5530450	17.2	11.2	
2735	702770	5506170	19.5	5.7		2736	703140	5506640	14.7	0.9	
2737	703450	5507170	18.3	4.5		2738	703870	5507620	24.8	11.6	
2739	704400	5507550	13.8	0.6		2740	704070	5508320	16.1	2.9	
2741	704130	5509150	22.4	9.2		2742	703840	5509970	52.5	39.3	
2743	703560	5510470	41.4	30.0		2744	694090	5510520	14.8	8.1	
2746	710250	5521820	1.6	-3.2		2747	733660	5522760	3.1	-1.2	
2748	734120	5522660	5.6	1.3		2749	733590	5523670	4.9	0.6	
2750	733750	5524390	3.4	-0.9		2751	734230	5524150	3.6	-0.7	
2752	734090	5524850	3.1	-1.2		2753	733840	5525220	3.3	-1.0	
2755	706280	5507370	9.8	-1.5		2756	734480	5525130	3.0	-1.3	
2757	729510	5534300	1.9	-8.4		2758	730470	5534600	2.5	-5.3	
2759	731460	5534950	6.7	-1.1		2750	731870	5535490	2.3	-5.2	
2761	732250	5535750	4.9	-2.6		2762	733300	5535610	10.5	3.7	
2763	733400	5535300	4.6	-2.2		2764	733960	5535160	29.4	22.6	
2765	734430	5534450	6.4	-0.9		2757	734400	5521930	4.4	0.2	
2768	735800	5521620	4.1	0.1		2769	736200	5521000	3.8	-0.2	
2770	687580	5521440	1.6	-2.1		2771	687310	5520950	1.5	-0.8	
2772	688480	5520850	1.4	-2.3		2773	688920	5520370	2.8	-0.9	
2774	689270	5520140	6.6	2.9		2775	690340	5519530	1.6	-3.8	
2776	688010	5521120	0.8	-2.9		2778	698030	5510820	4.2	-7.0	
2779	697030	5510320	4.8	-4.2		2780	695870	5505350	13.9	0.4	
2781	696270	5506460	15.7	2.2		2782	696210	5507160	9.2	-4.3	
2783	696020	5507830	3.0	-7.3		2784	696230	5508610	5.0	-5.3	
2785	697950	5509760	8.2	-4.8		2786	698980	5510390	9.1	-2.1	
2787	699150	5510660	2.3	-3.9		2789	690750	5518820	2.1	-3.3	
2790	691450	5519050	4.7	-0.7		2791	698030	5510560	2.6	-8.6	
2792	701980	5504210	19.6	4.3		2793	701440	5504590	12.2	-3.1	
2794	701180	5505010	58.2	42.7		2795	700890	5504990	12.7	-2.6	
2796	700700	5504610	36.6	21.3		2797	700190	5504960	11.1	-4.2	
2798	699670	5505140	22.3	6.9		2800	699550	5506150	12.3	-3.1	
2801	698950	5505920	401.0	385.6		2802	698720	5505740	13.7	-1.7	
2803	698260	5505970	16.4	1.0		2804	698070	5506180	53.8	38.4	
2805	697520	5505960	18.6	3.2		2806	696630	5505750	24.4	10.9	
2807	706890	5506010	13.5	2.2		2808	706970	5506560	19.4	8.1	
2809	706740	5507260	6.3	-5.0		2811	703650	5504030	-1.0	0.0	
2812	703530	5504360	7.8	-5.7		2813	702950	5504360	37.1	23.6	
2814	702400	5504230	21.6	6.3		2815	702160	5504200	17.6	2.3	
2816	702200	5503890	41.4	26.1		2817	702430	5503530	13.4	-1.9	
2818	702720	5503320	12.4	-1.1		2819	702310	5502960	13.7	-1.6	
2820	702460	5502100	9.7	-5.3		2822	708000	5503600	15.5	4.4	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
2823	707660	5503920	10.9	-0.2		2824	706980	5504180	8.0	-3.6	
2825	705980	5504620	7.3	-4.3		2826	705030	5504850	6.0	-5.5	
2827	703740	5504940	15.6	2.1		2828	702820	5505110	24.2	10.4	
2829	702210	5505660	19.9	4.4		2830	700300	5505520	8.4	-7.1	
2831	725960	5502520	4.5	-3.1		2833	715410	5502120	8.4	-1.5	
2834	714650	5502360	12.9	1.3		2835	715460	5502840	15.3	4.2	
2836	715690	5503190	10.8	-0.3		2837	715930	5503550	3.6	-7.5	
2838	716170	5503620	4.3	-6.8		2839	716360	5503610	8.9	-2.2	
2840	716430	5503910	13.3	2.2		2841	715880	5504700	11.4	0.3	
2842	715930	5504830	22.8	11.7		2844	715970	5509450	2.4	-7.3	
2845	715610	5509130	1.9	-7.8		2846	714770	5508370	16.9	7.3	
2847	714740	5507800	10.5	0.9		2849	716010	5507480	61.3	50.0	
2850	716600	5507600	191.0	181.3		2851	717200	5507570	78.6	68.9	
2852	717550	5507980	62.6	52.5		2853	715800	5505200	12.5	1.2	
2854	707110	5503580	5.3	-6.3		2855	706780	5503580	13.5	1.9	
2856	706460	5503890	10.1	-1.5		2857	706070	5504030	6.0	-5.6	
2859	716850	5505000	13.6	2.3		2850	716940	5504530	8.6	-2.5	
2861	718380	5505020	13.1	2.6		2852	718570	5505500	11.0	0.5	
2863	717650	5504850	11.6	1.5		2854	694160	5512120	8.9	2.2	
2865	691270	5516490	4.7	-0.1		2866	690830	5516740	6.7	1.9	
2867	689850	5516390	5.4	2.1		2868	692190	5515790	7.0	2.2	
2870	726700	5502320	1.4	-4.5		2871	726730	5502990	5.8	-1.8	
2872	726650	5503700	7.4	-0.2		2873	726910	5504260	11.3	3.7	
2874	725990	5504780	4.0	-3.6		2875	725800	5503020	2.4	-5.2	
2876	719300	5499300	4.2	-3.9		2877	719850	5499400	5.4	-2.7	
2878	720300	5499500	7.9	-0.7		2879	719930	5497300	5.2	-3.3	
2881	706920	5507970	7.1	-4.0		2882	707180	5508500	21.5	10.4	
2883	707960	5509040	10.7	1.2		2834	708290	5509830	9.7	0.2	
2885	727610	5492320	10.8	1.2		2886	726690	5492820	12.2	3.3	
2887	725480	5493130	11.5	2.6		2888	724900	5492660	5.3	-3.6	
2889	724320	5492210	6.8	-2.4		2890	723830	5491480	6.2	-3.0	
2891	723700	5491610	7.1	-2.1		2894	719950	5492150	7.8	-1.4	
2896	709180	5506000	5.5	-4.6		2897	709020	5506020	7.1	-3.0	
2898	709280	5506510	7.5	-2.5		2899	709050	5506640	7.1	-3.0	
2900	708920	5507100	5.3	-4.8		2901	708830	5507740	4.7	-4.8	
2902	708520	5508360	6.9	-2.6		2903	708340	5509260	6.9	-2.6	
2904	708280	5510180	8.1	-1.2		2905	708450	5510900	7.1	-2.2	
2907	705880	5504080	6.9	-4.7		2908	705310	5503910	10.7	-0.9	
2909	704860	5504070	8.7	-4.8		2910	704980	5503920	10.4	-3.1	
2911	704170	5503830	9.3	-4.2		2912	704040	5503640	15.1	1.6	
2913	722880	5508550	14.2	2.8		2914	722300	5507940	94.6	83.4	
2915	722470	5507060	49.9	39.2		2916	722850	5506310	43.4	32.5	
2918	724450	5507380	63.6	52.7		2919	724560	5506830	11.9	1.0	
2920	724110	5506420	11.8	0.9		2921	723410	5506070	36.0	25.1	
2922	723220	5505710	56.1	45.2		2923	721570	5506360	3.3	-7.4	
2924	721210	5505860	1.8	-8.9		2925	720760	5505190	2.6	-8.1	
2926	725190	5493810	13.5	4.6		2927	726240	5493030	7.5	-1.4	
2929	718870	5506150	6.2	-4.3		2930	720780	5498170	11.6	3.0	
2931	721800	5493850	9.1	0.5		2932	720130	5498450	5.0	-3.6	
2933	720990	5499030	5.5	-3.1		2934	721370	5499250	10.5	1.9	
2935	721300	5499350	5.7	-2.9		2936	721630	5499420	26.6	18.0	
2937	722430	5500030	6.0	-1.9		2938	723370	5500320	6.0	-1.4	
2940	722690	5505080	11.6	0.7		2941	722090	5497350	169.0	159.8	
2942	722500	5497720	70.4	62.6		2943	722580	5498550	10.7	2.9	
2944	724810	5500500	2.3	-5.1		2945	727370	5492890	8.6	-0.3	

SAMPLE	EAST	NORTH	U	OR	U	RS	SAMPLE	EAST	NORTH	U	OR	U	RS
2946	727850	5492190	13.9	4.3	2947	728200	5493350	2.4	-6.9				
2948	728470	5491650	8.1	-1.5	2949	728460	5490800	9.8	0.2				
2951	727850	5490450	16.8	7.2	2952	727830	5490680	46.1	36.5				
2953	731090	5494250	29.3	19.6	2954	729150	5496980	12.7	4.9				
2955	716350	5500820	6.4	-3.5	2956	716400	5499970	4.3	-4.7				
2957	716790	5500980	15.0	5.1	2958	717260	5501100	5.1	-4.8				
2959	717870	5501550	7.9	-1.1	2950	718270	5501390	4.5	-4.5				
2961	719010	5501550	7.9	-1.1	2952	719230	5501200	5.8	-3.2				
2963	719450	5501500	25.7	16.7	2954	719850	5501260	5.6	-3.4				
2965	712190	5527850	2.0	-0.4	2957	720060	5501080	3.2	-5.3				
2968	720100	5501260	5.1	-3.4	2959	720850	5501410	4.3	-4.2				
2970	721480	5501810	1.8	-6.7	2971	721920	5501760	5.7	-2.8				
2972	722710	5502470	7.0	-0.4	2973	717200	5496120	5.9	-3.6				
2974	717090	5496150	7.5	-2.0	2975	717350	5496610	5.0	-4.5				
2976	717540	5496550	10.4	1.9	2978	710280	5534190	2.4	0.2				
2979	710200	5533820	2.0	-0.2	2980	710990	5529060	2.9	0.5				
2981	711070	5528070	1.5	-0.9	2982	711730	5528570	8.7	6.3				
2983	712180	5529620	1.9	-0.5	2984	712930	5529580	2.6	-0.3				
2985	711590	5530820	0.5	-1.8	2986	711700	5532580	2.7	0.5				
2987	712200	5533140	1.4	-0.8	2988	720100	5496030	4.9	-4.3				
2990	718490	5495750	9.1	0.6	2991	718150	5496350	11.2	2.7				
2992	717910	5497040	8.3	-0.2	2993	717760	5497200	5.6	-2.9				
2994	718520	5497670	7.9	-0.2	2995	718350	5497860	7.5	-0.6				
2996	718880	5498260	9.8	1.7	2997	719550	5498770	7.8	-0.3				
2998	710510	5536080	1.6	-0.6	2999	710740	5536620	1.5	-0.7				
3001	710050	5535740	1.7	-0.5	3002	709910	5535300	1.7	-0.1				
3003	709740	5534460	2.2	0.4	3004	709130	5533270	1.6	-0.2				
3005	708470	5532550	2.3	0.5	3006	724120	5500580	5.3	-2.1				
3007	724630	5500820	6.2	-1.2	3008	708750	5532430	1.6	-0.3				
3009	708520	5531640	1.6	-0.3	3010	712940	5506190	15.2	3.5				
3011	713500	5506000	20.5	8.8	3013	709790	5533610	1.4	-0.4				
3014	709740	5532910	1.5	-0.3	3015	710060	5532050	2.2	-0.1				
3016	710310	5532010	2.1	-0.2	3017	713050	5504780	29.8	17.7				
3018	713080	5504540	43.4	31.3	3019	713080	5504320	15.6	3.5				
3020	713170	5504100	16.4	4.3	3021	713200	5503900	6.7	-5.4				
3022	713650	5504370	9.4	-2.7	3023	714190	5504400	13.1	1.0				
3025	713060	5504960	38.5	26.4	3026	714450	5504190	10.7	-1.4				
3027	715030	5504140	9.4	-1.7	3028	715030	5504350	11.2	0.1				
3029	714790	5503750	5.0	-7.1	3030	715380	5504370	9.9	-1.2				
3031	715610	5504600	9.4	-1.7	3032	693920	5511980	5.6	-1.1				
3033	693810	5511600	3.5	-3.2	3034	693490	5511100	5.6	-1.1				
3036	711190	5536040	2.7	0.5	3037	711250	5535670	1.5	-0.7				
3038	711650	5535810	1.9	-0.3	3039	712210	5535980	2.0	-0.2				
3040	712560	5535860	2.7	-0.2	3041	712510	5536440	1.3	-1.6				
3042	712400	5537030	1.8	-0.4	3043	693310	5511130	3.3	-3.4				
3044	693600	5510620	2.5	-4.2	3045	693220	5510370	3.1	-3.6				
3047	712190	5527990	1.1	-1.3	3048	712860	5528090	3.5	0.6				
3049	713480	5527950	2.3	-0.6	3050	713860	5527970	3.5	0.6				
3051	714040	5527520	1.8	-1.1	3052	715130	5527500	1.3	-2.5				
3053	715800	5527710	1.3	-2.5	3054	715890	5527300	2.2	-0.9				
3055	716230	5527670	2.7	-1.1	3056	716760	5526940	2.6	-0.5				
3058	710340	5529510	2.2	-0.2	3059	709820	5529610	1.4	-0.7				
3060	709820	5529870	1.7	-0.4	3051	709360	5530300	1.5	-0.4				
3062	708870	5530780	1.8	-0.1	3053	708510	5531000	1.8	-0.1				
3064	708530	5531280	2.4	0.5	3055	708590	5531840	1.4	-0.5				

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
3065	708700	5532100	2.1	0.2		3067	711380	5506290	7.3	-3.5	
3068	717190	5526240	1.8	-1.3		3069	717710	5525890	1.6	-2.1	
3070	718040	5525830	3.1	-0.6		3071	717790	5525310	1.6	-2.1	
3072	692830	5509590	3.4	-4.2		3073	692460	5509180	5.0	-1.6	
3074	692560	5503860	4.7	-2.9		3075	692370	5507950	3.9	-2.7	
3076	692200	5507190	3.2	-6.1		3077	692270	5506010	3.5	-5.8	
3079	712630	5535480	2.1	-0.8		3080	712540	5536120	2.5	-0.4	
3081	712380	5536670	2.2	0.0		3082	712610	5537310	2.3	-0.6	
3083	713260	5537310	1.9	-1.0		3084	713150	5538050	1.4	-1.3	
3085	711300	5505930	8.5	-2.3		3086	711740	5506470	7.3	-3.5	
3087	711940	5507020	6.6	-4.2		3088	712250	5507610	12.4	3.0	
3090	713860	5505550	22.8	11.1		3091	714430	5505350	22.3	10.5	
3092	714870	5505240	11.1	-0.6		3093	715030	5505550	9.5	-1.8	
3094	715600	5505530	9.9	-1.4		3095	715300	5505560	29.1	17.8	
3096	706230	5533070	1.5	-0.3		3097	706760	5533350	2.1	0.3	
3098	706340	5533650	1.7	-0.1		3099	705870	5534270	1.7	-0.1	
3101	712640	5508100	7.2	-2.4		3102	713010	5508580	6.0	-3.6	
3103	713180	5509300	6.4	-3.2		3104	712780	5509360	11.6	2.0	
3105	713580	5509940	9.0	-0.6		3106	713900	5510550	10.0	1.4	
3107	705700	5535050	1.7	-0.0		3108	706190	5535460	2.1	0.4	
3109	706170	5535970	1.2	-0.5		3110	706310	5536330	1.2	-0.5	
3112	709500	5536300	1.1	-0.7		3113	708980	5536720	1.3	-0.5	
3114	708610	5536840	1.4	-0.4		3115	708590	5536450	1.2	-0.6	
3116	707920	5536160	1.8	-0.0		3117	707450	5535660	1.2	-0.5	
3118	707020	5535760	1.0	-0.7		3119	706660	5536100	1.0	-0.7	
3120	706080	5536960	1.3	-0.4		3121	705830	5537390	1.7	-0.0	
3122	705700	5537950	1.3	-0.6		3124	714840	5538620	2.5	-0.2	
3125	715220	5538510	2.3	-0.8		3126	715090	5537940	3.3	0.2	
3127	714900	5537370	3.4	0.5		3128	714460	5537150	0.5	-2.4	
3129	713940	5526430	3.1	0.2		3130	713930	5526130	1.1	-1.8	
3131	714510	5525710	1.9	-1.0		3132	714960	5524980	1.5	-1.8	
3133	716590	5521170	2.1	-1.8		3135	714960	5536760	3.5	0.6	
3136	714770	5536020	3.1	0.2		3137	714950	5535610	6.4	3.5	
3138	714440	5535420	5.0	2.1		3139	713650	5537100	1.4	-1.5	
3140	718680	5521660	1.6	-1.8		3141	719260	5521320	1.9	-1.5	
3142	719780	5521300	1.5	-1.9		3143	719900	5521120	6.6	3.2	
3144	720100	5521200	1.9	-1.8		3146	705550	5538750	1.3	-0.6	
3147	705550	5539420	1.8	-0.1		3148	720070	5520410	1.8	-1.9	
3149	715000	5521290	4.2	0.3		3150	715560	5521550	1.3	-2.6	
3151	716130	5521690	2.1	-1.8		3152	715030	5522710	1.9	-1.2	
3153	716070	5522640	-1.0	0.0		3154	715120	5522320	2.0	-1.9	
3155	714560	5522260	1.8	-2.6		3157	705780	5533300	1.5	-0.3	
3158	715520	5539370	1.8	-1.3		3159	714160	5539590	2.0	-0.7	
3160	713760	5538250	3.9	1.2		3161	713080	5538320	1.3	-1.4	
3162	712980	5538710	1.8	-0.9		3163	713090	5539810	2.0	-0.7	
3164	712810	5540630	5.8	2.9		3165	712220	5541760	1.4	-2.1	
3166	712360	5542370	1.0	-2.5		3167	711270	5541410	1.8	-1.7	
3169	711950	5539940	1.8	-0.7		3170	711660	5539790	1.4	-1.1	
3171	711750	5537400	1.9	-0.3		3172	710510	5539500	9.3	6.8	
3173	708740	5540740	1.8	-2.2		3174	708140	5541240	1.7	-2.3	
3175	709220	5539430	2.1	-0.2		3176	717230	5540600	2.8	-0.3	
3177	717610	5540780	2.1	-1.0		3178	719820	5541260	3.3	0.2	
3180	716340	5539920	4.0	0.9		3181	716010	5540420	4.3	1.2	
3182	715650	5540810	4.3	1.2		3183	715420	5540560	1.9	-1.2	
3184	715000	5540400	4.1	1.0		3185	714250	5540460	2.8	-0.1	

SAMPLE	EAST	NORTH	U	OR	U	RS	SAMPLE	EAST	NORTH	U	OR	U	RS
3186	714120	5539580	1.9	-0.3	3187	714190	5538900	2.3	-0.4				
3188	720660	5541580	2.6	-0.8	3189	712940	5517940	13.0	5.4				
3190	713270	5517440	42.3	32.4	3191	713330	5516790	10.4	0.5				
3192	713800	5516070	24.3	14.4	3193	714020	5516540	26.1	16.2				
3194	713940	5516330	8.9	-1.0	3195	714170	5515870	8.9	-1.0				
3196	714350	5515580	8.0	-1.9	3197	715860	5523830	1.9	-1.2				
3198	715770	5524570	20.6	17.5	3200	714760	5514340	6.4	-3.0				
3201	714560	5515010	1.7	-8.2	3202	717760	5520820	5.8	2.4				
3203	718430	5520530	2.7	-0.7	3204	717190	5519970	2.3	-2.3				
3205	720000	5519910	1.7	-1.3	3206	736950	5533940	3.7	-3.3				
3207	737200	5533540	4.2	-2.8	3208	737480	5533140	4.1	-2.9				
3209	737580	5532780	4.3	-1.3	3210	737650	5532410	3.9	-1.3				
3211	738010	5531780	3.9	-1.3	3212	737530	5526400	6.2	2.1				
3213	737130	5525720	4.5	0.3	3214	737100	5524910	3.7	-0.4				
3215	736860	5523750	4.3	0.2	3216	736570	5522920	4.2	0.1				
3217	736310	5522010	4.0	-0.0	3218	723730	5541540	1.8	-2.2				
3219	723970	5542200	3.5	-0.5	3221	722540	5541640	1.8	-2.2				
3222	738370	5542350	1.8	-1.2	3223	716320	5513960	3.3	-5.2				
3224	716370	5514190	3.2	-5.3	3225	744970	5481910	1.4	-4.7				
3226	745120	5481540	2.6	-2.9	3227	745420	5480480	3.5	-2.0				
3228	746110	5478570	2.1	-4.0	3229	746030	5474140	2.6	-4.6				
3230	746800	5473120	2.6	-4.5	3231	748450	5479430	5.8	-0.5				
3232	749040	5469300	2.9	-2.7	3233	749810	5467670	5.0	-0.6				
3234	749430	5466790	3.2	-1.5	3235	748690	5464780	9.3	4.5				
3236	748530	5462110	2.3	-3.9	3237	746690	5461460	2.8	-2.4				
3238	745880	5461800	2.9	-2.3	3239	745350	5462010	2.1	-3.1				
3240	743930	5461630	2.4	-1.8	3242	743250	5461900	2.3	-1.9				
3243	742140	5461130	3.0	-1.0	3244	741090	5463800	5.1	1.5				
3245	741720	5463830	2.5	-1.1	3246	742800	5464000	2.5	-1.1				
3247	737230	5471070	4.2	-0.0	3248	736110	5471860	3.4	-0.8				
3249	736690	5471820	4.5	0.3	3250	736780	5470610	4.7	0.5				
3251	736540	5469920	3.7	-0.4	3252	738680	5470960	3.3	-1.9				
3253	745250	5474210	3.6	-3.5	3254	725920	5539830	14.2	6.2				
3255	726720	5539230	14.1	6.1	3256	727370	5538900	33.6	25.6				
3257	727620	5538150	10.5	3.1	3258	727770	5537510	9.0	1.6				
3259	727250	5537240	13.2	2.3	3261	727040	5536600	19.8	8.9				
3262	726340	5536180	15.4	4.5	3263	726180	5535350	16.7	5.8				
3264	725780	5534840	87.8	76.5	3265	725400	5534230	16.8	5.5				
3266	725170	5533070	22.7	11.4	3267	697180	5517710	10.6	3.9				
3268	696490	5517210	6.9	-0.3	3269	696420	5516840	3.4	-3.8				
3270	695710	5516900	3.8	-3.4	3271	694740	5516760	7.8	2.0				
3273	736300	5530100	0.6	-5.4	3274	736120	5529520	4.6	-0.4				
3275	735320	5529400	5.9	0.9	3276	734850	5528910	3.9	-1.0				
3277	734400	5528470	3.3	-1.6	3278	734050	5528730	5.9	1.0				
3279	733600	5529580	4.8	-0.1	3281	734190	5527800	3.9	-1.0				
3282	734100	5526900	3.5	-0.8	3283	734110	5537230	4.4	-2.4				
3284	734340	5535580	4.7	-2.1	3285	734400	5535920	9.7	2.9				
3286	734260	5535730	8.4	1.6	3287	734400	5535300	11.1	4.3				
3288	735040	5535550	7.0	0.3	3289	735760	5535270	6.6	-0.1				
3290	736380	5535300	7.3	0.5	3291	736380	5534800	5.3	-1.7				
3292	736170	5534220	16.3	9.3	3294	736360	5539240	3.1	-1.6				
3295	736570	5539820	1.8	-2.9	3296	737140	5540340	2.5	-0.9				
3297	737190	5540650	4.4	1.0	3298	737570	5540780	3.3	0.3				
3299	737670	5541160	1.9	-1.1	3300	737830	5541600	2.4	-0.6				
3301	733100	5537480	5.6	-1.2	3302	732320	5538110	6.5	0.5				

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
3303	731150	5538940	2.4	-3.6		3304	730040	5538830	5.0	-1.0	
3305	729590	5540100	6.4	1.7		3306	729460	5540860	3.5	-1.2	
3307	728630	5542090	1.9	-2.8		3308	728960	5541770	2.3	-2.4	
3309	729440	5539100	-1.0	0.0		3310	728540	5539620	11.2	3.8	
3311	724510	5541370	4.9	0.9		3312	725650	5541460	1.8	-2.9	
3313	726820	5540060	8.5	3.8		3314	727240	5540060	4.5	-0.2	
3315	737460	5542070	2.2	-1.2		3316	736700	5540770	4.1	0.7	
3317	735430	5538580	3.5	-1.2		3318	735810	5537700	2.5	-2.2	
3319	735070	5538030	3.7	-1.0		3321	750690	5537670	1.3	-2.2	
3322	733900	5526320	4.1	-0.2		3323	750220	5536170	2.4	-1.1	
3324	749260	5535360	2.4	-1.3		3325	748570	5533930	2.1	-1.4	
3326	748560	5532670	2.1	-1.4		3327	748720	5531160	2.0	-1.2	
3328	747740	5529810	2.5	-1.1		3329	745920	5528750	2.8	-0.3	
3330	744640	5527980	2.3	-1.0		3331	743990	5526540	2.8	-0.5	
3332	743160	5525480	4.0	0.7		3333	741380	5524810	3.2	-0.4	
3334	740680	5523540	3.5	-0.1		3335	739870	5521990	3.0	-0.8	
3336	738350	5521180	3.1	-0.7		3337	737140	5520440	2.7	-1.3	
3338	699010	5514090	11.1	0.9		3339	698610	5513350	8.6	-1.6	
3340	698030	5512940	19.1	8.9		3342	718630	5524070	2.1	-1.2	
3343	718630	5524440	3.3	-0.0		3344	719630	5524430	1.7	-1.6	
3345	720490	5524710	2.7	-1.1		3346	720730	5524480	2.2	-1.6	
3347	721380	5524270	1.5	-2.3		3348	722100	5524200	2.9	-0.9	
3349	722680	5523850	1.5	-3.1		3350	722750	5524130	2.5	-2.1	
3351	723080	5523510	2.0	-2.6		3352	715110	5533010	5.8	0.5	
3353	715480	5532990	4.8	-0.5		3354	715790	5533170	6.9	1.6	
3355	716120	5533310	6.6	1.3		3356	716600	5533130	5.5	0.2	
3357	717290	5532970	6.1	0.8		3358	717610	5532380	46.4	38.3	
3359	717430	5532340	3.3	-2.1		3360	718180	5532270	14.3	7.7	
3361	718300	5532080	5.7	-0.9		3362	718940	5531950	7.7	1.1	
3363	719960	5531850	4.4	-2.2		3364	720770	5531750	4.7	-2.4	
3365	721000	5531950	8.7	1.6		3366	721470	5531650	8.5	1.4	
3367	722010	5531720	7.5	0.4		3368	722470	5531520	25.5	18.4	
3369	722370	5531280	6.5	-0.6		3370	702350	5535710	1.6	-0.2	
3371	700620	5537070	1.9	0.1		3373	694020	5516620	6.6	0.8	
3374	693530	5515980	6.1	0.3		3375	693200	5515370	6.5	0.7	
3376	714230	5532950	2.4	-0.9		3377	713630	5533500	3.0	-0.3	
3378	712300	5531080	3.9	1.6		3379	723630	5523030	3.4	-1.2	
3380	724700	5522490	4.6	0.1		3381	725290	5522540	3.7	-1.2	
3382	723330	5529210	2.8	-4.1		3383	723210	5520300	3.2	-3.7	
3384	722660	5527620	1.9	-5.0		3385	692340	5518020	5.8	0.4	
3386	692030	5517650	3.4	-2.0		3387	692250	5517170	3.1	-1.7	
3388	692620	5517160	5.0	-0.8		3389	692500	5516720	2.2	-3.6	
3390	692660	5516080	2.3	-3.5		3392	692970	5514640	4.4	-1.7	
3393	692850	5514120	2.7	-3.4		3394	692660	5513450	7.8	1.7	
3395	692850	5512500	3.3	-2.8		3396	693380	5511760	2.7	-4.0	
3397	699920	5538000	1.1	-0.8		3398	737900	5541390	2.3	-0.7	
3399	738120	5541530	1.8	-1.2		3400	736080	5541930	2.3	-0.7	
3401	697240	5540290	1.2	-1.5		3402	697200	5539910	2.0	-0.2	
3403	698230	5539740	3.3	1.4		3404	698930	5538830	1.5	-0.4	
3405	692900	5515340	2.0	-3.8		3406	693080	5514850	3.5	-2.6	
3407	702640	5518900	3.3	-2.3		3408	702700	5518550	3.1	-2.5	
3409	697660	5521960	1.7	-4.0		3410	674380	5530950	1.0	-0.3	
3411	674880	5533500	1.1	-0.1		3412	674850	5534300	1.5	0.3	
3413	675480	5536510	1.4	-0.0		3414	676370	5534920	1.7	0.4	
3416	676130	5535510	1.1	-0.3		3417	694650	5535660	1.0	-0.7	

SAMPLE EAST	NORTH	U	CR	U	RS	SAMPLE EAST	NORTH	U	CR	U	RS
3418	686170	5535370	1.7	-0.2		3419	689350	5533900	1.7	-0.2	
3420	690360	5533760	1.0	-0.7		3421	691730	5533730	1.9	0.2	
3422	693050	5533460	1.5	-0.1		3423	693630	5533010	1.3	-0.3	
3424	694820	5533650	0.9	-0.7		3425	694830	5534760	1.2	-0.4	
3426	697380	5512550	18.3	7.3		3427	696680	5512210	9.8	0.8	
3428	696050	5512120	18.8	9.8		3429	695610	5512170	11.2	2.2	
3430	694560	5512320	8.6	1.9		3431	694170	5512320	2.4	-4.3	
3432	703770	5534850	2.1	0.1		3433	703730	5534520	4.6	2.6	
3434	703900	5534070	2.4	0.4		3435	703750	5533420	3.1	1.1	
3437	703400	5535750	1.6	-0.2		3438	703280	5536530	1.6	-0.2	
3439	703180	5537370	2.8	1.0		3440	702930	5538070	1.7	0.0	
3441	702690	5538010	2.0	0.3		3442	702150	5538410	1.9	0.2	
3443	700310	5539190	0.5	-1.2		3444	700020	5538950	1.5	-0.2	
3445	694710	5535560	1.5	-0.4		3446	692620	5541160	2.2	-0.7	
3447	703430	5533280	2.7	0.7		3448	703270	5532720	2.5	0.5	
3449	703660	5531950	2.2	0.1		3450	702350	5532680	2.1	0.0	
3451	702090	5533560	2.3	0.2		3452	702430	5534670	2.6	0.5	
3453	667680	5533990	1.0	-0.1		3454	667420	5534010	1.0	-0.1	
3455	666600	5533580	1.1	-0.0		3456	665640	5533340	0.8	-0.3	
3458	701540	5536190	2.0	0.2		3459	702420	5536290	2.2	0.4	
3460	702480	5536830	2.4	0.6		3461	702220	5537300	0.5	-1.3	
3462	702000	5537580	2.4	0.7		3463	701930	5538000	1.5	-0.2	
3464	701590	5538810	1.5	-0.2		3465	700840	5539530	1.7	-0.0	
3466	699500	5539140	1.2	-0.7		3467	699240	5538940	1.3	-0.6	
3468	700700	5533270	1.9	-0.2		3469	700950	5534190	1.3	-0.8	
3470	700760	5534800	2.1	0.0		3471	700690	5535530	1.6	-0.2	
3472	701020	5536200	2.0	0.2		3473	664720	5532950	0.9	-0.3	
3474	663580	5532380	1.3	-0.1		3475	663760	5531170	1.3	-0.1	
3476	662570	5530590	1.4	0.0		3477	663560	5534030	1.1	-0.1	
3479	662770	5533450	1.3	0.1		3480	661410	5533040	1.3	-0.0	
3481	660680	5532670	1.0	-0.3		3482	659220	5532530	1.1	-0.3	
3483	657820	5531650	1.4	-0.4		3484	655670	5530920	1.5	-0.4	
3485	655870	5532170	1.6	-0.3		3486	655810	5531470	1.4	-0.5	
3487	654720	5530660	1.6	-0.2		3488	653590	5531010	2.3	0.5	
3490	691900	5541380	2.2	-1.1		3491	663150	5525320	1.9	-0.4	
3492	662680	5526070	0.9	-1.4		3493	662440	5526460	0.9	-1.8	
3494	661700	5581800	0.9	-0.3		3495	662470	5530240	1.4	-0.2	
3496	662600	5529940	1.6	-0.0		3497	662660	5529350	1.5	-0.3	
3498	661820	5523650	5.0	2.9		3499	661770	5527800	1.4	-0.7	
3501	653310	5531170	1.9	0.1		3502	652660	5530930	1.5	-0.3	
3503	651250	5530710	1.7	-0.1		3504	649900	5530210	1.5	-0.6	
3505	658330	5521470	3.3	0.6		3506	659000	5521400	3.3	0.6	
3507	660070	5520980	2.6	0.0		3508	660350	5520180	3.0	0.4	
3509	661150	5532320	1.1	-0.5		3510	661130	5532140	1.6	0.0	
3511	660720	5532430	1.2	-0.4		3512	660360	5532910	0.9	-0.7	
3513	660080	5531510	1.3	-0.3		3514	659510	5531450	1.2	-0.6	
3515	659270	5530940	1.1	-0.7		3516	658560	5530920	3.6	1.8	
3517	663970	5535150	1.3	0.2		3518	664140	5536000	1.4	0.3	
3519	664370	5537160	1.2	0.1		3520	665630	5537820	0.8	-0.3	
3522	653680	5528580	2.2	0.1		3523	652970	5528150	2.1	-0.0	
3524	653120	5528300	1.9	-0.2		3525	652520	5528050	1.7	-0.4	
3526	651760	5527680	1.9	-0.1		3527	650910	5527510	1.9	-0.1	
3528	666070	5537200	1.0	-0.1		3529	667420	5538070	1.1	-0.0	
3530	664810	5538100	1.3	0.1		3531	665150	5538670	1.3	0.2	
3532	658920	5527780	1.8	-0.6		3533	653430	5528230	2.3	-0.1	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
3534	657680	5528490	6.3	3.9		3535	657420	5528650	3.8	1.4	
3536	657460	5528890	2.2	-0.2		3537	657370	5529330	1.6	-0.8	
3538	657620	5529720	2.0	-0.4		3539	657380	5530330	2.6	0.7	
3540	657660	5530790	1.6	-0.2		3541	658130	5531130	0.8	-1.0	
3543	659660	5526750	5.7	2.8		3544	660390	5526900	1.7	-1.0	
3545	660950	5526620	3.6	0.9		3546	661210	5526090	2.0	-0.7	
3547	661820	5526550	1.6	-1.1		3548	679490	5537170	2.1	0.6	
3549	678960	5537310	1.6	0.1		3550	678500	5537120	1.5	-0.0	
3551	678230	5537120	1.3	-0.2		3552	677830	5536950	1.3	-0.2	
3553	656070	5527600	3.7	1.3		3554	655730	5528610	2.9	0.5	
3555	655570	5529630	1.0	-1.4		3556	655710	5530500	1.2	-0.7	
3557	672760	5539660	1.4	0.0		3558	673610	5539830	1.4	0.0	
3559	674420	5539990	1.6	0.2		3560	674810	5540010	1.8	0.4	
3561	674620	5539580	1.6	0.2		3562	674680	5538860	1.9	0.5	
3564	653830	5528720	1.5	-0.6		3565	654220	5529070	3.1	1.0	
3566	654800	5528930	2.5	0.4		3567	654970	5528400	2.7	0.5	
3568	654420	5529500	3.5	1.4		3569	677430	5536940	1.6	0.2	
3570	676920	5537440	1.5	0.1		3571	676410	5537030	1.5	0.1	
3572	675790	5536830	1.6	0.2		3573	661180	5519840	1.6	-0.6	
3574	665130	5527020	1.6	-0.3		3575	665020	5526480	1.7	-0.2	
3576	664280	5526330	0.5	-1.8		3577	664030	5526030	1.1	-1.2	
3578	663580	5525740	1.6	-0.7		3579	663200	5525630	1.1	-1.2	
3580	680900	5530030	1.1	-0.5		3581	680890	5530550	0.5	-1.1	
3582	679990	5530410	1.4	-0.1		3583	678980	5530800	1.7	0.2	
3585	663450	5524750	16.4	13.9		3586	663630	5524110	1.7	-0.8	
3587	663640	5523670	1.8	-0.7		3588	663970	5523120	1.5	-1.0	
3589	664080	5522390	1.5	-0.8		3590	664200	5521530	1.5	-0.8	
3591	664630	5521020	1.7	-0.6		3592	664700	5520530	1.5	-0.8	
3593	682050	5534590	1.5	0.1		3594	682120	5535000	1.8	0.2	
3595	665890	5533800	0.5	-0.6		3596	665970	5539180	0.9	-0.2	
3597	666240	5539280	1.1	-0.0		3598	666730	5539990	1.1	-0.0	
3599	667860	5538690	1.1	-0.0		3600	666870	5539100	0.9	-0.2	
3602	674780	5538210	1.8	0.4		3603	674980	5537160	1.3	-0.0	
3604	660700	5519750	2.1	-0.1		3605	660340	5519830	2.6	0.4	
3606	659950	5519270	2.3	0.0		3607	659450	5518630	1.5	-0.8	
3608	658340	5518630	1.8	-0.5		3609	657510	5518460	1.7	-0.6	
3610	655540	5519710	2.0	-0.2		3611	655110	5519830	2.4	0.2	
3612	662120	5520960	1.7	-0.9		3613	662940	5520450	2.0	-0.3	
3614	663850	5520230	1.8	-0.5		3615	664170	5519390	2.1	0.1	
3616	664100	5518180	1.5	-0.5		3617	664120	5517650	1.6	-0.4	
3618	664640	5517450	1.1	-0.7		3619	686360	5529530	1.8	0.1	
3620	685210	5529370	1.5	-0.2		3621	684540	5528220	2.1	0.2	
3623	678210	5531420	0.9	-0.6		3624	677990	5531560	1.0	-0.5	
3625	677920	5532260	1.1	-0.4		3626	677810	5533090	0.9	-0.4	
3627	677490	5533450	1.1	-0.2		3628	677420	5534160	1.1	-0.2	
3629	676970	5534620	1.3	0.0		3630	667790	5540820	0.9	-0.4	
3631	664320	5537430	1.1	-0.0		3632	663690	5537430	0.9	-0.2	
3633	661710	5519140	-1.0	0.0		3634	661990	5518570	6.8	4.5	
3635	662280	5518050	1.4	-0.8		3635	662880	5517560	1.8	-0.2	
3637	663250	5517000	1.7	-0.1		3638	663720	5517190	1.5	-0.3	
3639	692720	5538080	1.1	-1.3		3640	692720	5538880	1.4	-1.0	
3641	692380	5539430	4.4	1.9		3642	691840	5539870	1.6	-0.9	
3644	663410	5533420	1.0	-0.2		3645	659610	5532960	1.3	-0.1	
3646	659770	5533620	1.4	-0.0		3647	659770	5534610	1.1	-0.3	
3648	659940	5535780	1.4	0.1		3649	659560	5537070	0.9	-0.4	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
3650	660500	5538170	1.3	0.0		3651	660910	5540220	1.7	0.2	
3652	660720	5539390	1.5	0.2		3653	660180	5538780	1.0	-0.3	
3654	660660	5537460	1.0	-0.2		3655	659580	5535120	0.9	-0.4	
3656	659050	5535680	1.2	-0.1		3657	658800	5535530	1.7	0.4	
3658	657750	5535820	0.9	-0.4		3660	657030	5535800	1.4	-0.1	
3661	656460	5536580	1.4	-0.1		3662	658590	5533280	1.8	0.4	
3663	692130	5534070	1.2	-0.5		3664	692720	5534280	1.1	-0.5	
3665	682180	5535730	1.2	-0.4		3666	681960	5536550	1.0	-0.6	
3667	682120	5537470	0.9	-0.7		3668	682410	5537670	1.6	-0.2	
3669	682360	5540360	1.8	0.0		3670	655000	5519530	1.6	-0.6	
3671	654260	5519710	2.3	0.3		3672	655370	5518580	2.3	0.1	
3673	654820	5517650	1.7	-0.3		3674	653810	5515260	2.1	0.2	
3676	651530	5513370	1.8	-0.1		3677	649960	5513210	1.1	-0.9	
3678	649370	5507960	7.1	4.7		3679	648840	5508970	4.0	1.6	
3680	650870	5513390	1.5	-0.4		3681	691900	5540820	2.1	-1.2	
3682	646820	5531320	5.4	3.0		3683	646280	5530140	5.9	3.5	
3684	646520	5529940	3.1	0.5		3685	646380	5530540	2.6	0.2	
3686	646900	5530760	3.2	0.8		3687	647230	5530230	2.5	0.1	
3688	647280	5530440	2.1	-0.3		3689	648070	5530320	2.4	0.3	
3690	648850	5530480	2.1	-0.0		3692	692750	5534980	1.5	-0.1	
3693	692870	5535610	1.4	-0.5		3694	692820	5536660	2.3	0.4	
3695	692840	5537210	3.5	1.6		3696	692980	5537740	1.2	-1.2	
3697	648370	5527120	2.3	-0.7		3698	648950	5527450	1.3	-1.7	
3699	649510	5528050	1.4	-0.9		3700	649930	5528620	1.6	-0.7	
3701	650460	5528250	1.5	-0.5		3702	683700	5527080	1.5	-0.6	
3703	684010	5526450	2.8	0.7		3704	684990	5526120	1.0	-1.1	
3705	685570	5526470	2.1	0.3		3706	686500	5526510	1.7	-0.1	
3708	687180	5527030	0.9	-0.9		3709	684230	5525830	1.2	-0.9	
3710	645670	5520260	1.5	-2.5		3711	646480	5520300	2.3	-1.7	
3712	646520	5520550	3.3	-0.7		3713	682050	5539820	1.6	-0.2	
3714	681700	5539650	1.7	-0.1		3715	682200	5538900	2.5	0.7	
3716	682120	5538180	2.7	0.9		3717	682080	5537800	2.4	0.6	
3718	681420	5538050	5.0	3.2		3719	681020	5538200	1.0	-0.8	
3720	646140	5522710	13.2	8.8		3721	645980	5522420	10.5	6.5	
3722	646460	5522140	10.1	6.1		3723	687590	5535960	1.7	-0.3	
3724	687260	5535410	2.0	0.1		3725	636700	5535450	4.4	2.5	
3726	685440	5535510	2.1	0.2		3727	683870	5535490	0.5	-1.2	
3728	683200	5535210	1.0	-0.7		3729	682730	5534690	1.3	-0.3	
3730	691310	5533770	1.0	-0.4		3731	648240	5524840	12.5	8.9	
3732	647970	5523780	4.3	0.7		3734	688530	5533500	2.1	0.2	
3735	687970	5533700	2.8	0.9		3736	687570	5532950	1.9	0.0	
3737	686910	5532390	2.1	0.4		3738	636460	5531850	1.6	-0.1	
3739	685870	5531360	1.3	-0.4		3740	685180	5530830	2.7	1.0	
3741	684190	5530640	1.4	-0.3		3742	683180	5530410	1.7	0.0	
3743	682020	5529540	1.0	-1.6		3744	693240	5539020	1.5	-0.9	
3745	693980	5538590	4.1	1.7		3746	694270	5540270	3.8	0.9	
3747	694690	5538910	4.3	1.9		3748	648160	5523420	1.5	-2.1	
3750	648630	5523970	4.0	0.4		3751	649260	5523800	5.0	1.4	
3752	649700	5523480	3.8	0.2		3753	650310	5523930	1.6	-1.1	
3754	650280	5524320	2.3	-0.4		3755	684010	5527540	1.2	-0.7	
3756	683450	5527250	1.0	-1.1		3757	682610	5526920	1.4	-0.7	
3758	650410	5527200	1.5	-0.9		3759	650220	5525920	1.5	-0.9	
3760	668500	5533560	1.7	0.6		3761	669140	5532750	0.6	-0.5	
3762	669940	5532150	1.0	-0.1		3764	649390	5530850	1.2	-0.9	
3765	649740	5540130	1.1	-0.3		3766	649200	5539620	1.5	-0.1	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
3767	648860	5539320	1.0	-0.6		3758	646720	5521850	13.6	9.6	
3769	647000	5522020	2.4	4.4		3770	647500	5521870	4.5	1.3	
3771	647830	5521960	2.4	-0.8		3772	648310	5521410	2.7	-0.5	
3773	648850	5535320	1.3	-0.4		3774	648500	5535230	1.3	-0.4	
3775	649070	5534660	1.2	-0.7		3776	649230	5533940	1.2	-0.7	
3777	648980	5533080	1.3	-0.6		3779	643530	5520600	1.4	-1.8	
3780	649660	5525410	1.7	-1.3		3781	643620	5525670	2.2	-0.8	
3782	648680	5526580	1.5	-1.5		3783	649490	5529330	1.5	-0.8	
3784	648910	5523800	1.3	-1.0		3785	649790	5535230	1.6	-0.1	
3786	650260	5535450	1.3	-0.4		3787	650610	5535450	1.7	0.0	
3788	651230	5535860	1.4	-0.3		3789	651930	5536210	1.3	-0.4	
3790	651070	5536940	1.5	-0.2		3791	650430	5536610	1.7	0.0	
3792	649110	5535230	1.5	-0.2		3793	672760	5537000	0.8	-0.5	
3795	647180	5520420	3.6	-0.4		3796	647320	5520280	2.2	-1.8	
3797	647770	5520230	1.5	-1.7		3798	648150	5520010	1.7	-1.5	
3799	653460	5532100	1.9	0.1		3800	654450	5534140	2.1	0.4	
3801	654470	5533340	1.5	-0.2		3802	655150	5533310	1.5	-0.1	
3803	655930	5533110	1.1	-0.5		3804	655600	5534210	2.2	0.6	
3805	655540	5532790	1.8	0.2		3806	648770	5538760	1.3	-0.3	
3807	648350	5537990	1.9	0.3		3808	648020	5537410	1.4	-0.3	
3809	648200	5536880	1.4	-0.3		3810	648130	5536100	2.2	0.5	
3811	672060	5535620	1.1	-0.1		3812	672680	5536350	0.7	-0.6	
3813	671320	5536320	1.7	0.5		3814	670440	5532530	0.5	-0.6	
3815	671570	5530120	1.0	-0.2		3817	670270	5531800	1.3	0.1	
3818	670430	5531050	1.0	-0.2		3819	670260	5530730	0.9	-0.3	
3820	670570	5530480	1.4	0.2		3821	670210	5530230	1.1	-0.1	
3822	670520	5529660	1.1	-0.3		3823	670300	5528610	1.5	0.1	
3824	671750	5541030	1.8	0.5		3825	671340	5539540	1.2	-0.0	
3826	671730	5538620	1.9	0.7		3827	670380	5528050	2.9	1.5	
3828	670950	5527430	1.1	-0.4		3829	671020	5526510	1.0	-0.5	
3830	671390	5526330	1.2	-0.3		3831	671300	5525620	0.8	-0.7	
3833	670990	5525750	1.4	-0.1		3834	670720	5524590	0.9	-0.6	
3835	670380	5523590	1.1	-0.4		3836	670380	5522600	2.8	1.3	
3837	670820	5522500	2.0	0.5		3838	654570	5532550	1.4	-0.3	
3839	653840	5532610	1.5	-0.2		3840	666650	5512000	1.7	-0.1	
3841	667290	5512300	1.6	-0.2		3842	665050	5513890	1.1	-0.6	
3843	663670	5514700	1.8	0.0		3844	663290	5514330	2.0	0.2	
3845	663340	5513690	1.7	-0.1		3846	660000	5500150	0.5	-1.3	
3847	642250	5521640	4.6	0.7		3848	649340	5532230	2.0	-0.1	
3849	649260	5531460	1.6	-0.5		3850	649700	5530850	1.7	-0.4	
3851	672450	5530600	1.0	-0.2		3852	674400	5533000	1.9	0.7	
3854	674850	5531430	1.3	0.0		3855	674990	5530960	1.3	0.0	
3856	674790	5530430	0.9	-0.4		3857	670300	5527530	0.9	-0.5	
3859	669670	5525710	1.2	-0.3		3859	651980	5537870	1.8	0.2	
3860	651530	5537640	2.0	0.4		3861	650580	5537250	2.1	0.4	
3862	650010	5537630	3.0	1.4		3863	649750	5538260	2.3	0.7	
3864	649500	5538750	1.1	-0.5		3865	641570	5521130	5.4	1.5	
3866	641950	5520680	4.9	1.0		3867	642250	5519800	3.0	-0.4	
3868	642900	5519150	2.3	-0.7		3869	643690	5517770	1.2	-1.8	
3870	643670	5516480	1.3	-0.8		3871	643390	5515840	1.5	-0.6	
3872	642840	5513780	2.9	1.0		3873	643470	5512550	1.6	-1.4	
3875	643530	5513820	2.0	-1.0		3876	641030	5523390	4.9	1.5	
3877	640820	5524890	2.8	-0.5		3878	639590	5529760	4.4	1.8	
3879	639930	5523870	3.8	1.2		3880	669630	5524430	1.6	0.0	
3881	669110	5523210	1.3	-0.3		3882	668910	5522420	0.9	-0.6	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
3883	668120	5522100	1.1	-0.4		3884	670050	5526800	1.9	0.4	
3885	672450	5522070	1.2	-0.2		3886	673020	5523100	1.2	-0.6	
3887	674590	5525860	1.1	-0.9		3888	642910	5530790	1.9	-0.4	
3889	642950	5531130	1.9	-0.4		3890	640970	5522710	3.9	0.6	
3891	641810	5522980	6.9	3.6		3892	642490	5523010	4.3	1.0	
3893	642650	5523210	1.1	-3.0		3894	643450	5523310	7.1	3.0	
3896	643300	5524790	2.3	-1.8		3897	641940	5524700	2.1	-1.2	
3898	640810	5524280	1.6	-1.7		3899	640300	5523960	1.3	-2.0	
3900	640180	5523630	1.3	-2.0		3901	637820	5539900	0.9	-0.4	
3902	637720	5539250	0.9	-0.4		3903	637570	5538620	1.1	-0.2	
3904	637110	5538040	1.4	0.1		3905	637340	5537250	2.2	0.7	
3906	637770	5536490	1.5	0.1		3907	679710	5489670	2.1	-1.0	
3908	680470	5489920	2.2	-1.9		3909	680490	5491530	1.9	-1.4	
3910	680390	5490710	1.9	-1.4		3911	639710	5536860	1.6	0.2	
3912	639850	5536760	1.5	0.1		3913	639280	5536390	1.5	0.1	
3914	638620	5536070	1.0	-0.4		3915	638000	5536160	1.5	0.1	
3917	638230	5535390	1.6	0.2		3918	638540	5534800	1.4	-0.2	
3919	638910	5535010	1.2	-0.2		3920	640310	5535660	1.1	-0.4	
3921	640570	5535170	1.4	-0.1		3922	641130	5528180	1.2	-0.9	
3923	641700	5528030	1.4	-0.7		3924	642270	5527980	1.3	-0.8	
3925	642820	5528030	1.5	-0.8		3926	642690	5527150	1.6	-1.4	
3928	642140	5527160	1.6	-0.8		3929	641350	5526840	1.6	-0.8	
3930	641230	5526610	1.7	-0.7		3931	640610	5526690	1.9	-0.5	
3932	640150	5527060	1.5	-0.9		3933	642950	5531780	2.5	0.2	
3934	643580	5532950	3.1	1.0		3935	643370	5532930	1.3	-0.8	
3936	643210	5532140	1.0	-1.3		3937	643420	5531190	3.0	0.7	
3938	644410	5530940	4.9	2.6		3939	643700	5531030	5.9	3.6	
3940	642770	5531250	1.5	-0.8		3941	642140	5530810	1.7	-0.4	
3942	641470	5530430	2.3	0.2		3943	641330	5530210	1.7	-0.4	
3945	641190	5533800	1.4	-0.4		3946	640200	5533530	1.3	-0.5	
3947	639760	5533530	1.7	0.1		3948	639910	5532490	2.2	0.4	
3949	639590	5531710	1.6	-0.4		3950	640230	5531820	1.6	-0.5	
3951	640770	5531780	1.3	-0.8		3952	641550	5532180	1.3	-0.8	
3953	687660	5515950	1.0	-2.3		3954	687080	5516290	0.5	-1.4	
3955	640530	5529110	1.5	-0.6		3956	640470	5527880	1.6	-0.5	
3957	640570	5528450	3.1	1.0		3958	641500	5529520	1.1	-1.0	
3959	641260	5529490	1.4	-0.7		3960	641930	5529400	1.5	-0.6	
3961	692500	5518530	6.4	0.2		3962	692970	5518940	13.4	7.2	
3963	693460	5519030	8.7	2.5		3964	693600	5519410	9.1	2.9	
3966	638080	5538230	1.1	-0.2		3967	637520	5535760	0.9	-0.5	
3968	637050	5535190	0.8	-0.7		3969	636470	5534750	1.3	-0.5	
3970	636540	5534320	1.1	-0.7		3971	636060	5533530	1.3	-0.5	
3972	635740	5532950	3.5	1.7		3973	634970	5532930	2.4	-0.1	
3974	634840	5532600	3.6	1.1		3975	635030	5530300	1.5	-0.6	
3976	635420	5529480	3.7	0.5		3977	635510	5528420	2.5	-0.7	
3978	635170	5525620	1.5	-2.7		3979	633320	5532960	1.1	-1.4	
3983	628010	5532970	2.0	-2.2		3984	629800	5533090	5.3	1.1	
3985	631170	5532910	3.5	-0.7		3986	639550	5535310	1.0	-0.4	
3987	687040	5521190	1.2	-1.1		3988	686180	5520890	1.1	-1.2	
3989	685640	5521040	2.9	0.6		3990	685800	5521340	1.3	-1.0	
3991	685260	5521680	1.3	-1.0		3992	686150	5521240	2.2	-0.1	
3993	686250	5515670	2.2	0.3		3994	685650	5516260	2.9	1.0	
3995	684760	5516660	1.4	0.0		3996	684950	5515740	1.6	0.2	
3997	684770	5516160	2.2	0.8		3998	683650	5515550	1.4	0.0	
3999	683000	5517120	0.9	-0.5		4001	693860	5519080	7.5	1.3	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
4002	694910	5519010	7.4	1.2		4003	694760	5519570	2.3	-3.9	
4004	674700	5517590	0.7	-0.7		4005	675250	5517410	1.3	-0.1	
4006	675390	5516720	1.6	0.2		4007	675220	5515460	3.4	2.0	
4008	675280	5514710	2.1	0.6		4009	674950	5514040	1.0	-0.7	
4010	675240	5513270	1.1	-0.4		4011	680180	5492320	2.1	-1.2	
4012	680380	5492940	2.6	-0.0		4013	680450	5493670	1.8	-0.8	
4014	680370	5494440	1.7	-0.9		4015	680210	5495210	2.2	0.2	
4017	680980	5496470	1.9	-0.1		4018	680480	5496000	1.8	-0.2	
4019	681000	5497080	1.4	-0.6		4020	681110	5497350	-1.0	0.0	
4021	680680	5497730	2.0	0.4		4022	680080	5498520	1.5	-0.1	
4023	680110	5499320	1.1	-0.5		4024	679750	5500010	1.5	0.1	
4025	679920	5500760	2.7	1.3		4026	679750	5501680	1.1	-0.3	
4027	679260	5502310	1.1	-0.3		4028	679090	5503100	1.3	0.0	
4029	679180	5503780	1.4	0.1		4031	678930	5504550	1.0	-0.3	
4032	679110	5505350	1.3	0.1		4033	679150	5506080	1.1	-0.1	
4034	679430	5506850	1.1	-0.1		4035	679060	5507630	1.8	0.6	
4036	679320	5508380	1.5	0.3		4037	679300	5509230	1.3	0.1	
4038	679260	5510110	1.0	-0.2		4039	679270	5510830	1.2	-0.0	
4040	679150	5511460	3.1	1.9		4041	679450	5512090	1.4	0.2	
4042	679940	5512860	0.9	-0.3		4043	680270	5513760	1.3	0.1	
4044	680510	5514270	1.0	-0.2		4045	680390	5514410	0.8	-0.4	
4047	680270	5515100	0.9	-0.3		4048	680270	5515730	0.9	-0.3	
4049	680550	5515500	1.1	-0.1		4050	676310	5507030	0.6	-0.5	
4051	676200	5507480	1.2	-0.0		4052	676440	5507890	1.2	-0.0	
4053	676190	5508020	1.0	-0.2		4054	676080	5508370	1.1	-0.1	
4055	676110	5509070	0.8	-0.4		4056	676210	5509580	1.3	0.1	
4057	676090	5510370	1.1	-0.3		4058	675560	5510890	0.8	-0.6	
4059	655300	5519500	1.9	-0.3		4060	655600	5518770	2.2	0.0	
4061	655790	5518030	2.6	0.4		4063	691450	5519320	4.1	-1.3	
4064	691190	5519670	3.5	-1.9		4065	691460	5520340	4.7	-0.8	
4066	691680	5520690	32.7	27.2		4067	691760	5521460	24.5	19.0	
4068	690860	5521420	4.0	-1.5		4069	691000	5520750	4.2	-1.3	
4070	691280	5520220	2.8	-2.7		4071	675730	5502820	1.0	-0.3	
4072	675590	5502000	1.3	-0.1		4073	674980	5501640	1.0	-0.5	
4074	674420	5512890	3.2	1.5		4075	674250	5512250	1.5	-0.2	
4076	674100	5511300	1.1	-0.6		4077	673890	5510330	1.2	-0.5	
4078	673470	5509520	1.4	-0.1		4079	672870	5508670	2.1	0.6	
4080	672820	5507750	1.0	-0.5		4081	672930	5506900	1.5	0.1	
4083	673040	5506070	1.6	0.2		4084	673130	5505540	1.3	-0.1	
4085	688210	5523350	2.2	-0.8		4086	688600	5523950	1.7	-1.3	
4087	688950	5524500	2.0	-1.0		4088	689220	5525040	2.7	0.6	
4089	689360	5525350	2.4	0.3		4091	687710	5522650	2.3	-0.7	
4092	688280	5515840	1.7	-1.6		4093	681310	5516140	0.9	-0.3	
4094	682080	5516470	1.9	0.7		4095	682360	5516600	1.2	-0.2	
4096	693630	5519800	8.9	2.7		4097	693870	5520290	9.7	3.1	
4098	693720	5521100	11.8	5.2		4099	693260	5520110	5.2	-1.4	
4100	693430	5519400	2.1	-4.1		4101	675650	5501350	1.2	-0.2	
4102	675250	5500990	1.5	0.1		4103	675350	5500690	1.4	-0.0	
4104	675240	5500220	1.8	0.4		4105	674850	5499690	1.3	-0.4	
4106	655960	5523930	5.1	2.1		4107	656070	5524590	3.5	0.5	
4108	655710	5524000	2.5	-0.5		4109	655610	5523410	6.7	3.7	
4110	655270	5522710	4.2	1.2		4112	674260	5515920	1.0	-0.5	
4113	675520	5513030	0.9	-0.5		4114	675850	5499570	1.7	0.1	
4115	676810	5498170	1.5	-0.1		4116	677730	5497190	1.3	-0.5	
4117	678190	5496230	1.2	-0.5		4118	678730	5493230	0.9	-1.3	

SAMPLE	EAST	NORTH	U	DR	U	RS	SAMPLE	EAST	NORTH	U	DR	U	RS
4119	678630	5494590	1.3	-0.9	4120	676230	5505820	1.0	-0.2				
4121	676000	5508000	1.4	0.2	4122	675450	5506700	0.5	-0.7				
4123	675020	5507390	0.9	-0.2	4124	674710	5507980	0.7	-0.8				
4125	674160	5507680	0.5	-1.0	4126	673910	5507790	1.0	-0.5				
4128	673210	5507310	1.4	-0.0	4129	652100	5521880	1.3	-0.7				
4130	643360	5511560	1.5	-0.5	4131	644140	5514330	1.6	-0.3				
4132	644360	5514830	1.9	0.0	4133	676740	5529310	0.9	-1.2				
4134	672450	5522080	0.7	-0.7	4135	680400	5520800	1.2	-0.3				
4136	678380	5519330	1.3	0.1	4137	650210	5523670	1.7	-1.0				
4138	649770	5523260	1.8	-1.8	4139	681750	5526210	5.9	3.1				
4140	683460	5523780	1.7	-0.3	4141	679300	5526910	22.0	19.0				
4142	679060	5525630	1.2	-1.3	4144	654880	5521960	2.6	0.2				
4145	654600	5521350	2.4	0.0	4146	654770	5520770	1.9	-0.5				
4147	655220	5520390	2.0	-0.6	4148	655110	5520030	2.2	0.0				
4149	664850	5518290	1.1	-0.9	4150	665130	5517600	1.0	-0.8				
4151	665560	5517290	1.3	-0.4	4152	666140	5517050	0.9	-0.8				
4153	666860	5517350	1.9	0.2	4154	680160	5525470	1.1	-1.7				
4155	679030	5524320	0.7	-1.5	4156	679300	5524160	1.1	-1.1				
4157	679190	5523290	1.1	-1.1	4158	679110	5522500	2.2	0.0				
4160	678800	5522700	1.4	-0.8	4161	678330	5522190	1.3	-0.2				
4162	678050	5521170	1.2	-0.3	4163	677680	5520070	1.0	-0.5				
4164	651490	5521640	1.7	-0.8	4165	671190	5521390	0.9	-0.5				
4166	670460	5521540	2.3	0.9	4167	670400	5520660	1.3	-0.1				
4168	670370	5519810	0.8	-0.6	4169	670740	5519700	1.2	-0.2				
4170	670250	5519080	1.2	-0.2	4171	669310	5518670	0.6	-1.0				
4172	669250	5517800	2.1	0.5	4173	668610	5517820	1.3	-0.3				
4174	667980	5517300	6.2	4.5	4175	672350	5500990	1.4	-0.2				
4176	672090	5500500	0.7	-0.9	4177	673060	5501550	0.5	-1.0				
4178	674150	5500600	1.3	-0.2	4179	674530	5499400	1.6	-0.1				
4181	674790	5498530	3.3	1.6	4182	675000	5497700	2.3	0.7				
4183	654300	5521910	1.7	-0.7	4184	654360	5523070	3.2	0.5				
4185	654760	5524010	3.1	0.4	4186	644810	5515660	1.2	-0.9				
4187	645360	5516320	1.9	-0.3	4188	645820	5517160	2.6	0.4				
4189	646750	5518350	1.5	-1.4	4190	647610	5519360	1.5	-1.0				
4191	655780	5519820	2.1	-0.1	4192	658330	5513730	2.1	-0.2				
4193	661330	5522670	3.1	0.2	4194	661620	5523460	5.9	3.0				
4195	661730	5524410	2.5	-0.4	4196	661250	5524460	1.4	-1.5				
4197	660370	5523740	4.6	1.7	4198	660830	5523270	2.6	-0.3				
4199	661100	5522640	3.2	0.3	4200	661590	5521750	2.3	0.2				
4202	658930	5510200	1.4	-0.3	4203	658700	5509070	1.5	-0.2				
4204	659530	5509220	1.6	-0.1	4205	659390	5508660	1.3	-0.4				
4206	659750	5508630	1.2	-0.5	4207	649500	5522680	1.7	-1.9				
4208	649330	5522090	2.1	-1.1	4209	649640	5521830	1.6	-1.6				
4210	650200	5521600	1.9	-0.6	4211	650780	5521070	1.7	-0.8				
4212	651470	5521390	2.1	-0.4	4213	652080	5521500	2.1	-0.4				
4214	652540	5520660	2.1	-0.3	4215	660250	5509020	3.1	1.4				
4216	653860	5507040	1.6	-0.1	4218	646050	5532070	2.2	-0.2				
4219	645150	5531990	2.7	0.3	4220	644310	5531850	1.6	-0.7				
4221	643700	5531600	2.4	0.1	4222	650640	5521340	1.5	-1.0				
4223	656200	5518030	2.4	0.2	4224	657020	5517690	2.1	-0.1				
4225	657890	5517360	2.6	0.6	4226	653570	5517490	1.7	-0.3				
4227	658830	5517530	3.2	0.9	4228	653750	5517240	2.5	0.5				
4229	658890	5515690	1.6	-0.4	4230	659240	5516490	1.6	-0.4				
4231	659700	5515910	1.9	-0.1	4232	660940	5515530	1.5	-0.4				
4233	660400	5515560	1.6	-0.3	4235	667150	5516800	1.6	-0.1				

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
4236	668040	5516960	1.7	0.0		4237	668450	5516640	1.1	-0.6	
4238	668360	5516010	0.5	-1.2		4239	668950	5515160	1.3	-0.4	
4240	669040	5514490	1.8	0.0		4241	668680	5514100	2.0	0.2	
4242	668190	5513720	2.1	0.3		4243	669280	5513500	2.1	0.3	
4244	669470	5514030	1.1	-0.7		4245	651750	5513100	2.3	0.4	
4246	652710	5513650	1.6	-0.2		4248	653630	5514150	1.7	-0.1	
4249	654090	5514430	1.9	0.1		4250	654550	5514280	1.8	0.0	
4251	655320	5514550	1.9	0.2		4252	655690	5514890	2.1	0.4	
4253	656120	5514910	1.9	0.2		4254	656600	5515120	1.9	-0.0	
4255	656830	5514850	1.7	-0.0		4256	672500	5504680	2.5	1.0	
4257	672760	5506070	2.0	0.6		4258	672530	5507130	2.8	1.4	
4259	672420	5508010	1.9	0.2		4260	671970	5508960	2.0	0.3	
4262	671630	5509320	2.2	0.5		4263	671870	5510560	1.6	-0.3	
4264	671890	5511450	2.5	0.6		4265	671440	5512030	2.2	0.3	
4266	679320	5490150	2.1	-0.5		4267	679030	5490910	2.5	-0.1	
4268	678240	5491750	2.2	-0.4		4269	678140	5492740	4.1	1.9	
4270	677540	5493230	1.9	-0.3		4271	676850	5493870	3.1	1.0	
4272	676720	5494800	2.1	0.0		4273	676260	5495380	2.9	1.0	
4274	676040	5496010	1.9	0.0		4276	675630	5496830	1.1	-0.8	
4277	671810	5501350	1.4	-0.2		4278	671710	5502690	3.2	1.5	
4279	671800	5503650	2.0	0.4		4280	657370	5515070	1.5	-0.4	
4281	657700	5515570	1.9	-0.1		4282	657980	5516210	1.9	-0.1	
4283	658480	5516580	1.8	-0.2		4284	698470	5490420	21.8	10.3	
4285	698460	5491140	21.3	9.8		4286	648200	5512450	1.0	-1.1	
4287	659940	5506610	1.4	-0.3		4288	660410	5505750	2.1	0.4	
4289	660680	5506370	1.4	-0.3		4291	660630	5503820	1.9	0.2	
4292	660060	5507620	1.4	-0.2		4293	659750	5505720	1.8	0.1	
4294	660640	5506690	1.7	0.0		4295	661130	5503190	1.9	0.2	
4296	702970	5492020	13.4	1.1		4297	702560	5492190	6.5	-5.8	
4298	660520	5514870	1.7	-0.1		4299	660540	5514060	1.6	-0.2	
4300	661240	5513420	2.0	0.2		4301	661630	5512620	1.7	-0.1	
4302	661760	5512120	2.5	0.7		4303	661650	5510860	1.9	0.1	
4304	661480	5509960	1.9	0.2		4305	661420	5509140	2.1	0.4	
4306	661460	5508460	1.8	0.1		4307	661270	5507580	1.9	0.2	
4308	661170	5506850	2.0	0.3		4309	660700	5505930	1.6	-0.1	
4310	660560	5505210	1.8	0.1		4311	660360	5504280	1.9	0.2	
4312	660730	5503640	1.3	0.1		4314	660450	5502720	1.8	0.1	
4315	660270	5501940	2.7	0.9		4316	692200	5483110	3.7	-0.5	
4317	691760	5487890	3.5	-0.6		4318	691560	5487920	6.0	-3.2	
4319	648730	5513280	2.0	-0.0		4320	648980	5514200	2.4	0.4	
4321	649310	5514350	4.8	2.9		4322	649170	5514870	2.3	0.3	
4323	649890	5515440	2.0	-0.1		4324	649850	5515690	1.6	-0.5	
4325	649940	5516070	0.9	-1.2		4326	650400	5516210	1.6	-0.3	
4327	650730	5516880	1.9	-0.0		4328	650880	5517730	1.6	-0.6	
4329	651120	5518700	2.2	0.0		4330	651160	5519480	1.5	-0.7	
4331	652090	5519860	1.6	-0.6		4332	652380	5520060	1.8	-0.6	
4333	692730	5488700	17.2	7.4		4335	693410	5489370	10.1	0.3	
4336	693330	5490340	10.2	-1.0		4337	693500	5491360	9.5	-1.7	
4338	693580	5492050	15.5	4.3		4339	693970	5492260	17.6	6.3	
4340	660030	5500840	1.6	-0.2		4341	660430	5499940	2.0	0.0	
4342	660700	5499070	1.8	-0.2		4343	661120	5493190	1.5	-0.5	
4344	661130	5497400	1.7	-0.5		4345	661360	5497420	1.7	-0.5	
4346	661430	5497210	2.7	0.5		4347	661290	5495510	2.0	-0.2	
4348	661380	5495690	2.3	0.1		4349	661470	5494820	4.8	2.6	
4350	661690	5493870	2.0	-0.2		4351	662160	5493060	2.9	0.7	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
4352	662350	5492500	1.8	-0.4		4353	662260	5492410	8.1	6.1	
4354	662240	5491530	1.7	-0.3		4355	604480	5487640	18.7	8.9	
4357	647790	5511950	3.0	0.9		4358	648470	5512260	1.7	-0.4	
4359	648730	5512420	2.6	0.5		4360	649460	5512210	-1.0	0.0	
4361	649760	5512350	1.9	-0.2		4362	704070	5491500	6.8	-5.5	
4363	703680	5490420	13.6	1.3		4364	703310	5490940	4.9	-7.4	
4365	703060	5491800	7.6	-4.7		4366	703600	5491950	16.9	4.6	
4367	690860	5488440	9.7	0.5		4368	701970	5492210	15.1	3.2	
4369	701470	5492080	15.9	4.0		4370	700620	5491770	8.7	-3.2	
4371	699990	5491110	8.0	-3.5		4372	699410	5490480	69.1	57.6	
4373	698560	5490120	7.7	-3.8		4374	700810	5490260	6.3	-5.6	
4375	696050	5488420	4.8	-5.2		4376	695160	5487260	5.6	-3.8	
4377	689380	5491500	13.7	5.0		4378	690300	5488710	5.2	-4.0	
4379	689800	5489020	5.5	-2.8		4380	688950	5489280	5.3	-3.0	
4381	688530	5483890	5.5	-2.8		4382	688150	5488160	4.9	-3.5	
4383	687780	5487340	6.3	-2.8		4384	687440	5487500	11.3	3.1	
4385	687220	5488160	10.8	3.9		4386	687310	5489010	8.4	1.5	
4388	704420	5492940	14.8	1.5		4389	703850	5462180	17.2	13.1	
4390	703610	5492690	11.6	-1.7		4391	703470	5492530	13.2	-0.1	
4392	702910	5493050	36.7	23.4		4393	702420	5493450	19.2	6.0	
4394	702850	5493450	11.8	-1.5		4395	703210	5493800	15.3	2.0	
4396	703420	5493180	10.1	-3.2		4397	691090	5490370	5.8	-4.3	
4398	694060	5491900	3.9	-7.3		4399	694750	5492100	21.4	10.1	
4400	652990	5495750	1.8	-0.2		4401	653190	5495480	1.4	-0.6	
4402	653240	5499506	1.8	-0.4		4404	694630	5486980	11.0	1.4	
4405	694500	5486450	10.7	1.1		4406	694630	5486320	25.1	15.5	
4407	693670	5486390	7.9	-1.7		4408	693300	5486840	16.9	7.3	
4409	692890	5486990	6.1	-3.5		4410	692220	5487470	7.0	-2.6	
4411	690620	5490440	8.8	-1.3		4412	653650	5500660	1.5	-0.8	
4413	653820	5500310	2.1	-0.2		4414	701440	5493120	13.3	0.1	
4415	701670	5492690	16.4	3.2		4416	701100	5492380	13.8	1.9	
4417	701000	5488530	5.4	-5.0		4418	700540	5489620	6.7	-3.7	
4420	696180	5489300	7.1	-2.9		4421	696300	5489550	6.9	-3.1	
4422	697040	5489910	9.0	-1.0		4423	697100	5489120	7.3	-2.7	
4424	696750	5488820	6.5	-3.5		4425	696780	5489430	6.6	-3.4	
4426	696960	5488410	14.7	4.7		4427	696920	5488190	10.5	0.5	
4428	697580	5488070	7.7	-2.4		4429	696130	5487600	9.7	-0.3	
4430	698010	5489450	9.1	-1.0		4431	697960	5491160	5.7	-5.8	
4432	699480	5493980	30.9	17.4		4433	699200	5493160	27.2	13.7	
4434	698560	5492360	1.6	-9.9		4435	695950	5487730	7.9	-2.1	
4436	695900	5487080	7.5	-1.9		4437	648300	5496040	3.3	0.9	
4438	647690	5496400	5.2	2.8		4439	648670	5497350	4.0	1.6	
4440	648930	5497470	2.1	-0.3		4441	649370	5496670	2.5	0.1	
4442	649310	5495970	2.1	-0.3		4443	643660	5505910	1.8	-0.2	
4444	644320	5505780	1.8	-0.2		4446	644710	5505830	1.7	-0.3	
4447	644880	5506110	1.7	-0.3		4448	645290	5505750	1.7	-0.5	
4449	652700	5497730	1.5	-0.7		4450	653070	5498130	1.8	-0.4	
4451	653450	5498570	1.8	-0.4		4452	654090	5498530	2.3	0.1	
4453	652670	5497170	2.0	-0.0		4454	684380	5519440	1.2	-0.3	
4455	683140	5518550	1.2	-0.3		4456	683580	5518060	1.3	-0.2	
4457	680340	5518270	0.7	-0.5		4458	676750	5520570	1.4	-0.1	
4459	648370	5493750	2.2	-0.2		4460	649460	5493610	3.6	1.2	
4462	649690	5493660	2.9	0.5		4463	650060	5493390	1.3	-0.8	
4464	650190	5493650	1.5	-0.6		4465	650550	5493660	1.4	-0.7	
4466	651270	5493760	2.1	0.0		4467	674820	5529780	1.1	-0.6	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
4468	674850	5523860	1.3	-0.4		4469	674830	5528070	1.9	0.2	
4470	648960	5495910	2.6	0.2		4471	648130	5495430	2.6	0.2	
4472	647080	5494940	6.8	4.4		4473	647150	5495160	4.1	1.6	
4474	646320	5495660	2.2	-0.3		4475	649740	5495850	2.3	-0.1	
4476	650380	5495510	2.1	-0.1		4477	650360	5494710	2.7	0.6	
4479	651310	5494280	1.7	-0.4		4480	644050	5503760	1.6	-0.4	
4481	653260	5499940	2.1	-0.1		4482	653040	5494940	1.4	-0.5	
4483	652720	5494620	1.2	-0.7		4484	652840	5494110	1.6	-0.3	
4485	652620	5493600	1.7	-0.2		4486	652140	5493690	1.7	-0.4	
4487	651510	5493980	2.0	-0.1		4488	670130	5527380	1.4	-0.1	
4489	669830	5527480	1.1	-0.4		4490	669170	5527630	1.4	0.1	
4491	652920	5499890	10.2	8.0		4492	652600	5499580	1.4	-0.8	
4494	652390	5499550	3.1	0.8		4495	652290	5498730	2.0	-0.3	
4496	645400	5511140	1.4	-0.7		4497	645120	5511480	1.8	-0.3	
4498	644600	5511420	1.1	-0.9		4499	643700	5511350	1.2	-0.8	
4500	676650	5504900	1.1	-0.2		4501	653470	5496150	2.0	-0.0	
4502	653650	5496370	1.8	-0.2		4503	654020	5496420	1.7	-0.3	
4504	654420	5496670	1.6	-0.4		4505	654390	5496420	1.5	-0.5	
4506	654940	5496600	1.9	-0.1		4507	655360	5496850	1.4	-0.6	
4508	653660	5494440	2.0	0.1		4510	653800	5494200	4.6	2.7	
4511	678000	5500910	1.2	-0.2		4512	644890	5506830	1.5	-0.5	
4513	644330	5506570	1.7	-0.3		4514	643770	5506490	1.7	-0.3	
4515	643460	5506250	2.1	0.1		4516	669150	5510470	2.1	0.2	
4517	668850	5510180	1.2	-0.7		4518	668790	5509550	1.5	-0.3	
4519	669140	5510980	1.3	-0.6		4520	669650	5511730	2.6	0.7	
4521	670170	5511670	1.7	-0.2		4522	644910	5508390	1.7	-0.3	
4523	645020	5508660	1.6	-0.6		4524	645520	5508660	2.0	-0.2	
4525	645810	5508290	1.7	-0.5		4527	646120	5508360	1.7	-0.5	
4528	646130	5508840	1.9	-0.3		4529	645430	5508890	2.0	-0.2	
4530	643550	5508700	1.5	-0.5		4531	643410	5508530	2.0	-0.0	
4532	651680	5509730	1.5	-0.8		4533	651650	5509900	2.2	-0.1	
4534	652210	5501640	1.4	-0.9		4535	651770	5503130	2.0	-0.2	
4536	651520	5502480	1.7	-0.6		4537	651820	5501970	2.0	-0.3	
4538	651060	5500250	1.7	-0.6		4539	652320	5498240	1.9	-0.4	
4540	653510	5495590	2.0	-0.0		4541	653630	5495030	1.7	-0.3	
4543	674790	5527640	1.9	0.2		4544	674890	5527450	1.9	-0.5	
4545	674640	5527370	4.9	2.9		4546	674640	5526920	1.2	-0.8	
4547	674840	5526140	3.6	1.6		4548	674810	5525720	4.8	2.8	
4549	674850	5525040	2.3	0.3		4550	674840	5524530	1.7	-0.1	
4551	674760	5524290	3.5	1.7		4552	663650	5512800	1.6	-0.2	
4553	668690	5527490	1.2	-0.3		4554	668180	5527910	1.3	-0.0	
4555	667930	5528430	1.4	0.1		4556	667930	5528760	1.1	-0.2	
4557	653730	5491640	1.7	-0.0		4559	654190	5491220	0.7	-1.0	
4560	654600	5491030	1.6	-0.1		4561	655030	5491020	1.0	-0.6	
4562	649430	5485170	1.1	-0.4		4563	649990	5485760	1.5	0.0	
4564	677320	5504470	0.8	-0.5		4565	677120	5504210	0.9	-0.4	
4566	677420	5503850	1.0	-0.3		4567	676980	5503460	1.0	-0.3	
4568	677390	5502570	1.2	-0.1		4569	677550	5501510	1.2	-0.2	
4570	675500	5488420	1.7	-0.5		4571	673850	5488880	1.7	-0.3	
4572	674200	5488100	1.8	-0.2		4575	675600	5521790	1.1	-0.4	
4576	655150	5491300	1.9	0.3		4577	655590	5491490	1.7	0.1	
4578	655850	5491110	1.5	-0.1		4579	656250	5490550	2.2	0.6	
4580	656020	5489780	1.6	0.2		4581	673720	5492930	2.6	0.6	
4582	674240	5493030	2.2	0.2		4583	674770	5493170	1.6	-0.4	
4584	675060	5492690	2.0	-0.1		4585	674030	5506370	1.0	-0.4	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
4585	674740	5506010	1.4	-0.0		4587	675680	5504290	2.2	0.9	
4588	648940	5485520	1.1	-0.4		4589	648680	5486070	1.1	-0.4	
4591	647820	5486200	1.2	-0.3		4592	647020	5485990	1.5	0.0	
4593	646150	5485910	1.2	-0.3		4594	648520	5486320	1.2	-0.3	
4595	648980	5485940	1.6	0.1		4596	644950	5498310	1.9	-0.3	
4597	645030	5499890	2.5	0.1		4598	644910	5500890	3.0	-0.7	
4599	645160	5501520	1.9	-0.4		4600	645090	5501720	1.8	-0.5	
4601	644710	5502330	2.2	0.1		4602	644510	5503710	1.8	-0.3	
4603	644510	5504550	1.9	-0.2		4604	643790	5502410	4.2	1.9	
4605	643170	5505120	1.3	-0.7		4607	642900	5507450	2.9	0.9	
4608	643320	5509840	2.7	0.7		4609	643680	5510840	4.1	2.1	
4610	657280	5489900	1.2	-0.2		4611	653130	5489610	1.1	-0.5	
4612	670800	5511550	2.5	0.6		4613	671430	5511620	2.6	0.7	
4614	671550	5511910	5.5	3.6		4615	652340	5483800	2.3	0.8	
4615	652990	5489250	0.7	-0.8		4617	653690	5489290	0.9	-0.6	
4618	654250	5489440	0.7	-0.8		4619	654780	5489330	1.0	-0.5	
4620	655790	5489490	1.5	0.1		4621	656250	5489460	2.9	1.5	
4623	650610	5486290	0.7	-0.7		4624	651070	5486960	1.0	-0.4	
4625	651450	5487680	1.6	-0.0		4626	651880	5487940	1.4	-0.2	
4627	671240	5508990	1.5	-0.2		4628	670780	5508330	1.3	-0.4	
4629	670290	5507610	1.5	-0.2		4630	670060	5505870	1.6	-0.1	
4631	670700	5505150	1.8	0.1		4632	669900	5504410	1.5	-0.1	
4633	663380	5513300	0.6	-1.2		4634	663230	5512720	1.7	-0.1	
4635	663000	5512530	2.3	0.5		4636	663000	5512270	1.6	-0.2	
4637	662900	5511660	1.8	0.0		4639	661870	5511460	2.1	0.3	
4640	674430	5492350	3.1	1.0		4641	674620	5491850	1.7	-0.4	
4642	674750	5491440	2.3	0.2		4643	674760	5491900	2.6	0.5	
4644	653220	5491880	1.3	-0.4		4645	653580	5492370	2.0	0.3	
4646	654280	5491680	1.7	-0.0		4647	653330	5489650	1.2	-0.4	
4648	659780	5489500	1.3	-0.3		4649	660680	5489670	1.4	-0.4	
4650	661810	5489890	1.2	-0.6		4651	662510	5489330	1.1	-1.1	
4652	675450	5487000	1.7	-0.4		4653	648570	5507170	3.6	1.2	
4655	661910	5507480	1.2	-0.5		4656	662330	5506810	1.5	-0.2	
4657	661350	5504400	1.6	-0.1		4658	661160	5504530	1.3	-0.4	
4659	694630	5504820	18.3	3.8		4660	692410	5504440	2.9	-10.3	
4661	692350	5503960	2.6	-10.6		4662	691950	5503250	7.3	-5.9	
4663	691260	5502880	19.2	6.0		4664	691080	5501200	8.5	-7.2	
4665	670360	5503580	1.5	-0.1		4666	670830	5503540	1.9	0.3	
4667	671440	5503290	1.9	0.3		4668	651820	5509210	1.5	-0.7	
4669	652180	5509800	1.3	-0.9		4671	652380	5509710	1.5	-0.7	
4672	653050	5510270	1.9	0.3		4673	652940	5510400	1.6	-0.0	
4674	654080	5510890	1.3	-0.3		4675	654190	5511150	1.6	-0.0	
4676	675150	5492150	1.7	-0.5		4677	675320	5492400	1.6	-0.6	
4678	676800	5492240	1.6	-0.6		4679	677180	5591900	1.2	-4.3	
4680	677870	5492100	2.3	-0.3		4681	649820	5508330	3.8	1.4	
4682	650050	5508800	2.7	0.5		4683	650040	5509030	1.7	-0.5	
4684	650710	5509420	1.5	-0.7		4685	650750	5509270	1.3	-0.9	
4687	651610	5509250	1.4	-0.8		4688	676160	5492120	1.6	-0.6	
4689	676520	5491860	1.5	-0.7		4690	647890	5506530	3.7	1.3	
4691	648030	5505860	3.8	1.4		4692	648360	5505690	2.6	0.2	
4693	647980	5505200	2.9	0.5		4694	647320	5505200	2.1	-0.3	
4695	648360	5504480	2.3	0.0		4696	648760	5504220	2.5	0.2	
4697	648940	5503340	2.2	-0.1		4698	648770	5502830	1.7	-0.6	
4699	649140	5502650	1.7	-0.6		4700	649340	5502750	2.3	0.0	
4701	649520	5501330	1.7	-0.5		4703	650130	5501030	2.0	-0.3	

SAMPLE EAST	NORTH	U	OR	U	PS	SAMPLE EAST	NORTH	U	OR	U	PS
4704	650760	5500580	2.2	-0.1		4705	671450	5496150	3.3	1.3	
4706	672120	5496200	3.2	1.2		4707	672330	5495800	2.4	0.5	
4708	672830	5495970	1.7	-0.2		4709	673520	5496000	1.6	-0.3	
4710	673980	5495980	2.0	0.1		4711	674610	5495900	1.7	-0.2	
4712	675160	5495710	1.7	-0.2		4713	675770	5495710	2.3	0.4	
4714	669480	5488730	2.7	-0.3		4715	669510	5488290	3.6	0.6	
4716	668960	5488480	4.3	1.3		4717	669210	5488530	45.3	42.3	
4719	667630	5488710	2.0	-1.0		4720	689690	5498660	11.3	-2.7	
4721	690940	5500310	17.0	1.3		4722	688750	5497170	12.3	-0.1	
4723	688370	5497000	13.5	1.1		4724	688480	5496230	3.8	-3.6	
4725	688120	5496360	8.7	-3.7		4726	687320	5493870	13.6	5.5	
4727	686550	5492670	11.4	3.3		4728	686350	5491760	12.9	5.9	
4729	685630	5490580	1.5	-5.5		4730	684810	5489900	5.9	0.7	
4731	684590	5491640	4.1	-0.8		4732	683900	5491950	3.8	-1.1	
4733	683890	5491950	3.6	-1.3		4735	650060	5506850	2.1	-0.2	
4736	650620	5506260	1.9	-0.4		4737	651390	5506400	1.7	-0.6	
4738	651890	5505830	1.7	-0.6		4739	652330	5505550	1.7	-0.2	
4740	653640	5505470	1.7	-0.2		4741	653720	5505220	2.0	0.1	
4742	654490	5505050	1.9	-0.0		4743	654960	5505120	2.4	0.5	
4744	655190	5504660	2.0	0.1		4745	655790	5504130	1.5	-0.4	
4746	656390	5503330	2.1	0.2		4747	656600	5502950	1.9	-0.0	
4748	657200	5503110	1.8	-0.1		4749	657970	5503470	2.0	0.2	
4751	658690	5503950	1.8	-0.0		4752	660300	5514720	1.7	-0.1	
4753	659700	5514890	1.7	-0.1		4754	660390	5513990	2.0	0.2	
4755	659890	5513310	1.8	-0.0		4756	660700	5508430	1.9	0.2	
4757	659850	5508010	1.2	-0.5		4758	659650	5505820	1.7	-0.0	
4759	660570	5505750	1.5	-0.2		4760	660110	5506450	1.7	0.0	
4761	660190	5503760	2.0	0.3		4762	660570	5497690	2.3	0.3	
4763	660730	5495480	1.0	-1.2		4764	661130	5495010	1.7	-0.5	
4765	660920	5494600	3.5	1.3		4767	661600	5493260	0.7	-1.5	
4768	661840	5492070	2.0	-0.0		4769	661780	5491080	1.7	-0.3	
4770	667270	5491600	5.4	2.6		4771	667890	5491190	2.4	-0.5	
4772	654810	5511050	0.5	-1.1		4773	655030	5511280	1.8	0.2	
4774	655690	5511470	1.2	-0.4		4775	656130	5511410	1.1	-0.5	
4776	656580	5511900	1.3	-0.3		4777	656900	5512580	1.6	-0.1	
4778	656950	5513540	1.5	-0.2		4779	657210	5514210	1.6	-0.1	
4780	657230	5514750	1.7	-0.0		4781	657620	5514460	1.1	-0.7	
4783	658200	5514710	1.4	-0.4		4784	658940	5514620	4.7	2.9	
4785	659450	5514630	2.1	0.3		4786	672120	5494630	2.1	-0.2	
4787	671900	5494000	2.6	0.3		4788	671750	5493700	1.6	-0.7	
4789	652200	5497710	1.8	-0.5		4790	652370	5496720	2.1	-0.1	
4791	652000	5498660	1.9	-0.4		4792	651360	5499350	2.0	-0.3	
4793	650890	5500260	2.2	-0.1		4794	675800	5487400	1.7	-0.4	
4795	676000	5486750	1.5	-0.6		4796	676050	5434960	1.3	-0.5	
4797	676900	5484210	1.5	-0.3		4799	677870	5433760	1.4	-1.2	
4800	674620	5490180	2.2	0.1		4802	674000	5487050	1.4	-0.3	
4803	673150	5586850	1.9	-2.0		4804	672150	5437000	2.4	0.7	
4805	674850	5587550	1.6	-1.9		4806	663750	5493710	2.0	-0.4	
4807	663540	5493670	1.9	-0.5		4808	663240	5494230	2.4	0.0	
4809	663160	5494920	2.9	0.5		4810	672300	5497010	1.7	-0.3	
4811	672510	5497790	1.6	-0.1		4812	672780	5493570	1.6	-0.1	
4813	673540	5493890	0.9	-0.8		4815	674140	5499220	1.7	0.0	
4816	677150	5519950	0.6	-0.7		4817	677510	5518800	1.5	0.3	
4818	677850	5518150	0.6	-0.6		4819	679010	5516860	1.5	0.3	
4820	679660	5515840	0.9	-0.3		4821	669750	5499600	1.5	-0.3	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
4822	670070	5498710	1.5	-0.2		4823	670420	5493710	1.5	-0.2	
4824	671220	5498540	1.6	-0.1		4825	671480	5499160	1.3	-0.4	
4826	671770	5499910	1.6	-0.1		4827	664630	5492140	2.5	0.1	
4828	665260	5492650	2.3	-0.2		4829	665870	5493030	4.1	1.6	
4831	665820	5493220	-1.0	0.0		4832	666330	5493670	-1.0	0.0	
4833	678510	5483170	2.2	-0.4		4834	665380	5495120	1.5	-0.7	
4835	664920	5494920	1.7	-0.5		4836	664910	5494580	1.7	-0.7	
4837	664420	5494170	1.7	-0.7		4838	663850	5494000	1.6	-0.8	
4839	663890	5493620	1.9	-0.5		4840	663870	5493340	1.6	-0.8	
4841	664310	5492720	1.8	-0.6		4842	664630	5491040	3.5	1.1	
4843	671850	5492900	2.6	0.3		4844	672480	5491900	1.6	-0.9	
4845	672350	5491920	1.9	-0.6		4847	672500	5491050	2.0	-0.1	
4848	672600	5491150	1.6	-0.5		4849	673170	5490250	1.7	-0.4	
4850	673250	5489700	1.8	-0.2		4851	673700	5489380	1.3	-0.7	
4852	679860	5516410	1.0	-0.2		4853	679360	5517210	1.3	0.1	
4854	673550	5487680	1.3	-0.7		4855	673500	5488400	1.7	-0.3	
4856	673750	5488480	1.5	-0.5		4857	673650	5488800	1.4	-0.5	
4858	674600	5521090	2.0	0.5		4859	673000	5518920	2.4	1.0	
4860	672580	5518330	1.0	-0.4		4861	667570	5490850	2.9	-0.0	
4863	667740	5490030	2.6	-0.3		4864	667820	5489280	1.7	-1.3	
4865	666510	5488420	2.2	-0.6		4866	642020	5484240	-1.0	0.0	
4867	642220	5483670	1.1	-0.4		4868	642210	5483360	1.6	0.1	
4869	642700	5483290	1.8	0.3		4870	666650	5494440	2.3	-0.2	
4871	666840	5494000	2.8	0.3		4872	664420	5492120	3.3	0.9	
4873	645170	5494630	1.8	-0.6		4874	645920	5494450	1.7	-0.7	
4875	646240	5494140	3.4	1.0		4876	666860	5488460	1.9	-0.9	
4877	666080	5488300	3.9	1.1		4879	642780	5479960	1.5	0.0	
4880	642740	5479830	1.7	0.2		4881	643170	5479670	1.4	-0.1	
4882	643510	5479400	1.0	-0.5		4883	643780	5479300	1.9	0.4	
4884	678450	5517700	1.1	-0.1		4885	677970	5518750	-1.0	0.0	
4886	677800	5519450	-1.0	0.0		4887	677540	5519870	1.2	0.0	
4888	677180	5520370	1.3	-0.2		4889	644310	5495000	0.8	-1.3	
4890	643850	5494550	1.6	-0.5		4891	643170	5493930	1.6	-0.5	
4892	643260	5493770	1.3	-0.8		4893	643330	5493340	1.5	-0.6	
4895	643110	5492800	1.7	-0.4		4896	663350	5495300	1.3	-0.4	
4897	663730	5496230	2.5	0.3		4898	664420	5489920	2.2	-0.0	
4899	549230	5498100	1.4	-0.9		4900	649230	5498330	1.9	-0.4	
4901	649920	5498510	1.9	-0.4		4902	649320	5498710	2.1	-0.2	
4903	650200	5498260	1.9	-0.4		4904	650970	5497510	2.0	-0.3	
4905	650930	5497200	1.6	-0.6		4906	671570	5517380	1.3	-0.3	
4907	672410	5514980	1.2	-0.4		4908	672210	5515690	1.2	-0.4	
4909	671690	5515920	1.9	0.3		4911	671360	5516690	1.1	-0.5	
4912	671150	5517210	1.1	-0.5		4913	642100	5474370	1.3	-0.1	
4914	642380	5474660	1.5	0.1		4915	643350	5474950	0.9	-0.5	
4916	640680	5476820	1.6	0.1		4917	641230	5477230	1.9	0.4	
4918	641660	5477160	2.1	0.6		4919	642370	5477160	1.9	0.4	
4920	642540	5477620	2.1	0.5		4921	642890	5477420	1.5	0.0	
4922	643560	5477470	1.8	0.3		4923	643890	5477270	1.7	0.2	
4924	643380	5475320	1.4	-0.1		4925	644080	5476130	1.5	0.0	
4927	646590	5493740	1.3	-1.1		4928	647130	5493220	1.2	-1.2	
4929	647430	5493480	2.9	0.5		4930	647980	5492720	1.3	-1.1	
4931	648510	5492450	6.3	4.2		4932	648240	5491690	2.2	0.1	
4933	648400	5491950	1.2	-0.9		4934	648800	5491880	1.3	-0.8	
4935	681780	5464810	1.4	-1.4		4936	681780	5465230	2.0	-2.0	
4937	650940	5496600	1.6	-0.6		4938	651280	5496650	1.7	-0.5	

SAMPLE	EAST	NORTH	U	CR	U	RS	SAMPLE	EAST	NORTH	U	CR	U	RS
4939	651920	5496210	1.8	-0.4	4940	652330	5495740	2.1	-0.1				
4941	659450	5484850	1.9	0.5	4943	658650	5484900	2.3	0.9				
4944	657280	5483180	1.5	0.3	4945	657760	5482470	0.8	-0.4				
4946	662200	5484810	6.9	5.1	4947	656980	5481730	0.9	-0.3				
4948	650580	5491660	5.9	4.0	4949	650010	5491350	2.0	0.1				
4950	649640	5490510	2.3	0.2	4951	649320	5490440	1.2	-0.9				
4952	649810	5489570	1.4	-0.3	4953	650090	5489070	2.1	0.5				
4954	650150	5488570	1.5	-0.1	4955	649950	5488240	1.4	-0.3				
4956	650740	5488480	1.6	-0.0	4957	651480	5488430	1.4	-0.2				
4959	642740	5493050	1.4	-0.7	4960	643210	5493330	1.7	-0.4				
4961	663200	5482860	2.3	0.4	4962	649160	5491700	2.4	0.3				
4963	663850	5482760	2.5	0.6	4964	664550	5482760	1.2	-0.7				
4965	665100	5483350	1.2	-0.6	4966	665580	5483590	1.3	-0.5				
4967	665840	5483900	1.4	-0.4	4968	666430	5484370	1.3	-0.5				
4969	643350	5483170	1.3	-0.2	4970	643730	5483080	1.2	-0.3				
4971	644360	5483050	1.7	0.2	4972	644650	5483250	1.9	0.4				
4973	644940	5483080	1.7	0.2	4975	645490	5482570	1.2	-0.4				
4976	646060	5482150	1.4	-0.2	4977	646590	5481880	1.1	-0.5				
4978	646990	5482070	1.4	-0.2	4979	648700	5484250	1.4	-0.1				
4980	643970	5479100	1.1	-0.4	4981	644210	5478870	1.5	0.0				
4982	644630	5479060	1.2	-0.3	4983	675520	5480370	1.5	-0.5				
4984	676280	5479980	1.7	-1.1	4985	676750	5479630	1.9	-0.9				
4986	677250	5479210	1.7	-1.1	4987	677980	5479560	1.3	-1.8				
4988	678860	5479670	1.8	-1.3	4989	678480	5480440	1.6	-0.8				
4991	648910	5484760	2.3	0.8	4992	663780	5489620	1.2	-1.0				
4993	664840	5489020	1.5	-0.7	4994	641580	5472820	1.3	-0.1				
4995	641210	5473950	1.3	-0.1	4996	641940	5473160	1.3	-0.1				
4997	641620	5473580	1.5	0.1	4998	641550	5473920	1.2	-0.2				
4999	641890	5474140	1.4	-0.0	5000	641770	5474530	1.5	0.1				
5001	655060	5481900	0.8	-0.4	5003	654780	5481450	0.6	-0.9				
5004	654810	5482310	0.7	-0.8	5005	655060	5483080	0.8	-0.4				
5006	654460	5484000	0.7	-0.5	5007	654200	5484100	0.5	-0.7				
5008	654570	5484820	1.1	-0.1	5009	655280	5485100	0.9	-0.4				
5010	655720	5485200	1.2	-0.1	5011	656020	5485590	0.8	-0.5				
5012	665650	5488210	1.3	-1.5	5013	665600	5487310	1.3	-1.0				
5014	666260	5486790	1.2	-1.1	5015	666920	5486270	1.7	-0.6				
5016	638510	5465140	2.5	-2.2	5017	639560	5465060	2.6	-2.1				
5019	690370	5465000	3.0	-1.9	5020	691300	5464850	7.1	2.7				
5021	656540	5485820	1.7	0.4	5022	656360	5486630	1.1	-0.2				
5023	667070	5485010	1.5	-0.8	5024	667680	5485580	1.3	-1.1				
5025	668250	5485920	1.8	-0.6	5026	687200	5467050	4.2	-0.8				
5027	687840	5467000	3.7	-1.0	5028	688520	5467180	14.0	9.3				
5029	689330	5467120	12.6	7.9	5030	689930	5466850	2.0	-2.7				
5031	690590	5466530	2.3	-2.6	5032	654980	5477830	16.6	14.3				
5033	667870	5486450	1.2	-1.2	5035	668590	5485680	1.6	-0.8				
5036	669270	5485460	1.0	-1.4	5037	670370	5485090	1.1	-1.0				
5038	670910	5484260	1.3	-0.4	5039	671380	5483500	1.4	-0.3				
5040	671800	5482540	1.4	-0.3	5041	672230	5481570	1.3	-0.2				
5042	673170	5480800	1.1	-0.5	5043	673730	5480850	1.2	-0.4				
5044	678300	5480590	2.5	0.1	5045	678310	5480820	1.7	-0.7				
5046	681940	5471830	3.3	-0.3	5047	682060	5472630	2.3	-0.5				
5048	682700	5472890	2.6	-0.6	5049	683010	5473190	2.3	-0.9				
5051	683620	5473220	2.3	-0.9	5052	684350	5473480	2.2	-1.0				
5053	684860	5474040	2.6	-0.6	5054	684980	5474840	4.8	1.6				
5055	647340	5482040	1.3	-0.3	5056	654350	5477610	4.3	2.0				

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
5057	653570	5478110	2.5	0.2		5058	652660	5478080	1.5	-0.8	
5059	652630	5478430	2.1	-0.2		5060	652000	5478190	2.9	1.0	
5061	651260	5478720	1.7	-0.2		5062	651870	5478030	1.4	-0.5	
5063	651370	5478420	1.6	-0.3		5064	656210	5481070	0.5	-0.7	
5065	647620	5482140	3.9	2.3		5067	648040	5481690	4.1	2.5	
5068	647710	5482530	1.1	-0.4		5069	648070	5483060	1.1	-0.4	
5070	648240	5483460	3.3	1.8		5071	648830	5483600	1.3	-0.2	
5072	649020	5484130	1.4	-0.1		5073	648410	5484420	2.2	0.7	
5074	648910	5484280	1.7	0.2		5075	666640	5506560	1.3	-0.4	
5076	650900	5479170	1.5	-0.4		5077	650690	5479100	1.4	-0.5	
5078	650550	5479630	3.0	1.1		5079	650770	5479890	1.4	-0.5	
5080	651260	5480980	1.3	-0.3		5081	651140	5481050	1.3	-0.3	
5083	651330	5482040	0.9	-0.7		5084	651080	5482110	1.4	-0.2	
5085	650690	5483050	1.1	-0.2		5086	650850	5483970	1.3	-0.0	
5087	686120	5470020	2.3	-1.8		5088	686090	5471090	2.3	-1.8	
5089	686230	5470730	2.0	-2.1		5090	686340	5471920	3.3	-0.8	
5091	686740	5473210	2.8	-1.0		5092	686480	5473780	4.8	1.0	
5093	686600	5474490	3.2	-0.6		5094	686430	5475390	2.3	-1.8	
5095	652640	5471260	1.8	-0.3		5096	652190	5470800	3.8	1.9	
5097	685180	5475520	4.2	0.1		5099	685630	5476030	1.6	-2.5	
5100	684760	5475980	1.7	-1.3		5101	644410	5477130	1.6	0.1	
5102	644490	5477860	1.2	-0.3		5103	644640	5478080	1.3	-0.2	
5104	644850	5478740	1.2	-0.3		5105	645250	5478830	1.2	-0.3	
5105	645310	5479280	0.8	-0.7		5107	645790	5479920	1.4	-0.1	
5108	681760	5465530	1.7	-2.3		5109	668530	5506620	3.3	1.6	
5110	666460	5508270	2.0	0.2		5111	665810	5508360	1.2	-0.6	
5112	651050	5485160	1.0	-0.4		5113	650300	5485780	0.6	-0.8	
5114	660470	5501110	1.7	-0.1		5115	661080	5501440	1.6	-0.2	
5117	661700	5501350	1.7	-0.1		5118	651090	5484710	1.0	-0.3	
5119	681440	5466940	2.4	-1.6		5120	681410	5467660	2.1	-2.3	
5121	681510	5466100	2.6	-1.4		5122	648800	5472320	1.6	-0.1	
5123	649050	5472820	1.0	-0.7		5124	651370	5470740	1.4	-0.5	
5125	650280	5470510	1.2	-0.7		5126	649880	5470410	0.8	-0.9	
5127	649230	5470640	0.9	-0.8		5128	649390	5471440	1.4	-0.3	
5129	657060	5487410	1.1	-0.2		5130	662380	5501020	2.2	0.4	
5131	663050	5500330	2.1	0.3		5133	663860	5500500	0.6	-1.2	
5134	660010	5500840	1.8	-0.0		5135	658000	5482140	0.8	-0.4	
5136	658690	5482280	0.9	-0.3		5137	659090	5482940	0.9	-0.5	
5138	659390	5483140	1.0	-0.4		5139	660180	5483270	0.8	-1.0	
5140	657570	5488140	1.1	-0.5		5141	657620	5483760	1.1	-0.5	
5142	657540	5489600	0.9	-0.7		5143	661680	5497250	2.9	0.7	
5144	662380	5497880	2.5	0.5		5145	662960	5498040	3.6	1.5	
5147	663310	5497500	2.5	0.4		5148	690290	5460860	2.9	-0.5	
5149	690060	5460020	2.3	-0.5		5150	689230	5459620	2.3	-0.5	
5151	646200	5480480	1.4	-0.2		5152	646200	5480650	0.9	-0.7	
5153	646590	5480970	1.8	0.2		5154	665440	5510690	1.9	0.1	
5155	665090	5510010	3.3	1.4		5156	664950	5509320	2.2	0.5	
5157	664540	5508680	1.6	-0.1		5158	664370	5508500	1.8	0.1	
5159	663780	5509120	1.3	-0.4		5160	663660	5509010	1.6	-0.1	
5161	648580	5472880	1.9	0.2		5163	648520	5473900	1.3	-0.4	
5164	648220	5474730	2.1	0.4		5165	647690	5474970	1.0	-0.7	
5166	646870	5475800	1.4	-0.0		5167	646140	5476960	1.0	-0.4	
5168	646040	5478370	1.2	-0.3		5169	646230	5479460	1.0	-0.5	
5170	657770	5479560	0.5	-0.7		5171	655390	5478820	1.0	-0.9	
5172	687700	5464880	1.7	-2.1		5173	686990	5465130	4.3	-0.2	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
5174	687390	5465580	1.3	-3.7		5175	687070	5466420	1.4	-3.6	
5176	686810	5466660	8.3	3.3		5177	686730	5467390	3.0	-2.0	
5179	686320	5468220	1.5	-3.5		5180	685910	5468930	1.8	-3.2	
5181	685590	5468550	26.5	21.5		5182	685770	5469110	26.4	21.4	
5183	666100	5506890	1.5	-0.2		5184	665450	5506600	2.9	1.2	
5185	665190	5505410	2.4	0.7		5186	665740	5505260	2.0	0.3	
5187	665270	5505970	1.9	0.2		5188	665140	5507070	1.6	-0.1	
5189	665050	5507770	1.3	-0.5		5190	664830	5507460	1.2	-0.5	
5191	664570	5507330	1.4	-0.3		5192	664610	5508030	1.4	-0.3	
5193	663360	5509430	1.4	-0.3		5195	662910	5509150	1.4	-0.3	
5196	662150	5508550	1.7	-0.0		5197	688230	5470240	1.7	-2.0	
5198	687700	5469760	1.9	-2.8		5199	686790	5469800	2.3	-2.7	
5200	686110	5469660	2.7	-2.3		5201	666370	5466890	1.2	-0.3	
5202	666920	5467080	1.8	0.3		5203	667340	5466730	1.8	0.3	
5204	658410	5480140	0.5	-0.7		5205	657920	5494270	1.5	-0.4	
5206	658670	5494460	1.5	-0.4		5207	659850	5494280	1.4	-0.5	
5208	660350	5494090	1.4	-0.8		5209	691670	5462730	2.1	-2.3	
5210	690840	5462120	2.3	-1.1		5211	690190	5461570	2.1	-1.3	
5212	690100	5461300	2.6	-0.8		5213	689500	5462190	2.7	-0.4	
5214	658970	5480590	0.8	-0.4		5215	659350	5480630	0.9	-0.3	
5217	659570	5480890	1.5	0.3		5218	659990	5480910	1.1	-0.1	
5219	660580	5481200	0.9	-0.5		5220	660380	5481390	1.3	-0.1	
5221	661060	5481890	1.4	0.0		5222	661360	5482510	1.6	-0.2	
5223	661740	5482980	1.6	-0.2		5224	662180	5483490	1.7	-0.1	
5225	653990	5475720	1.1	-1.3		5226	653240	5474600	1.1	-0.9	
5227	652880	5474000	1.3	-0.7		5228	651500	5474170	1.5	-0.5	
5229	651900	5472220	6.0	4.1		5230	651240	5473410	2.5	0.5	
5231	657110	5483600	1.2	0.0		5233	656620	5484070	1.3	0.1	
5234	656240	5483870	0.9	-0.3		5235	657340	5485160	1.7	0.4	
5236	659540	5485420	1.9	0.3		5237	659910	5485740	2.6	1.0	
5238	659900	5486300	2.1	0.5		5239	659700	5486350	1.7	0.1	
5240	660090	5487140	2.1	0.1		5241	660030	5487570	1.9	0.1	
5242	660300	5487980	2.0	0.2		5243	660620	5488410	2.2	0.4	
5244	660240	5489080	1.4	-0.4		5245	669830	5471370	1.6	-0.1	
5246	660590	5483650	2.0	0.2		5247	660900	5483330	1.3	-0.5	
5249	661090	5483560	1.4	-0.4		5250	661760	5483920	1.7	-0.1	
5251	662200	5484100	3.6	1.8		5252	662310	5483770	1.4	-0.4	
5253	662840	5483490	2.1	0.2		5254	669290	5474920	1.7	-0.1	
5255	669850	5474280	2.1	0.3		5256	670500	5473820	2.6	0.8	
5257	688030	5459420	3.0	0.2		5258	689270	5462630	8.8	5.0	
5259	688620	5462990	2.7	-1.1		5260	688730	5463120	2.8	-1.0	
5261	688160	5463910	2.5	-1.3		5262	669430	5462940	1.2	-0.3	
5263	668950	5463260	1.5	-0.0		5265	668220	5463570	1.2	-0.3	
5265	668160	5463350	1.6	0.1		5267	670070	5462760	1.2	-0.4	
5268	668220	5466370	2.1	0.6		5269	669120	5466200	1.6	0.1	
5270	668870	5465970	2.0	0.5		5271	668430	5465630	1.4	-0.1	
5272	667810	5465460	1.6	0.1		5273	669800	5465820	1.3	-0.2	
5274	670870	5465470	1.4	-0.1		5275	669910	5458980	3.4	1.6	
5276	670320	5458590	2.0	-0.4		5277	663740	5458040	1.3	0.0	
5278	687870	5459270	2.3	-0.5		5279	688190	5458730	2.0	-0.8	
5281	687630	5453860	2.3	-0.5		5282	687150	5459420	2.0	-0.5	
5283	687590	5459670	1.9	-0.9		5284	690150	5459700	2.6	-0.8	
5285	690340	5460200	3.9	0.5		5286	690450	5460660	2.2	-1.2	
5287	667280	5468480	0.9	-0.7		5288	667550	5468210	2.0	0.4	
5289	670680	5470930	3.7	2.0		5290	670600	5470310	1.3	-0.4	

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS
5291	671540	5465910	1.4 -0.1	5292	672120	5466550	1.3 -0.2
5293	675320	5471340	1.7 -0.0	5294	675950	5471130	1.9 0.2
5295	672910	5466990	1.2 -0.3	5297	673380	5567550	1.6 -5.5
5298	673720	5468140	1.6 0.1	5299	674050	5469210	1.7 0.2
5300	669910	5473400	1.8 0.0	5301	670010	5473120	2.0 0.2
5302	670730	5473610	1.7 -0.1	5303	670550	5473460	1.7 -0.1
5304	671570	5473160	1.6 -0.2	5305	672350	5472730	1.6 -0.2
5306	673220	5472280	1.9 0.3	5307	673830	5472100	1.6 -0.0
5308	674110	5472110	1.9 0.3	5309	674420	5471500	1.4 -0.2
5310	668880	5471120	1.3 -0.4	5311	668950	5470550	3.0 1.3
5313	669250	5470280	1.3 -0.4	5314	670260	5470080	1.3 -0.4
5315	671050	5469570	1.4 -0.2	5316	672070	5469230	1.9 0.3
5317	673200	5468860	1.5 -0.0	5318	673950	5468950	1.7 0.2
5319	665070	5458420	1.3 -0.1	5320	665850	5458400	1.1 -0.3
5321	668030	5468270	1.3 -0.3	5322	669000	5468310	1.4 -0.2
5323	669760	5467880	1.4 -0.2	5324	669720	5467560	1.6 -0.0
5325	670890	5467420	1.3 -0.2	5326	671720	5466940	1.5 -0.0
5327	669570	5461740	1.8 0.1	5329	670140	5461370	2.0 0.2
5330	670820	5460760	3.8 2.0	5331	669210	5461770	1.6 -0.1
5332	664190	5461810	0.7 -0.4	5333	664840	5462380	1.0 -0.1
5334	663670	5462600	1.0 -0.3	5335	664180	5462800	1.3 0.0
5336	665230	5461610	1.2 -0.2	5337	665850	5460940	0.9 -0.5
5338	681320	5437960	1.5 0.1	5339	682020	5437710	1.1 -0.3
5340	663760	5459910	1.0 -0.1	5341	662760	5460000	1.0 -0.1
5342	674560	5469740	1.3 -0.2	5343	675040	5470090	1.2 -0.3
5345	675610	5470550	1.3 -0.4	5346	676240	5471030	1.2 -0.5
5347	682200	5431100	2.5 0.8	5348	681890	5432320	0.8 -0.9
5349	681660	5431750	2.2 0.5	5350	679950	5432300	1.2 -0.4
5351	679310	5432900	1.9 0.4	5352	679470	5433560	1.3 -0.2
5353	679470	5434020	1.3 -0.2	5354	679630	5434400	1.5 -0.0
5355	679490	5435160	1.5 0.1	5356	679050	5435540	1.9 0.5
5357	679090	5435730	1.4 -0.0	5358	677220	5438550	1.4 0.0
5359	678090	5451490	1.3 -1.1	5361	678130	5452190	1.1 -1.3
5362	678080	5452550	1.7 -0.5	5363	678530	5453040	1.0 -1.2
5364	668820	5458560	2.0 0.2	5365	669130	5459080	3.2 1.4
5366	668920	5459020	1.7 -0.1	5367	668780	5459690	2.3 0.5
5368	668670	5460390	1.7 0.0	5369	668490	5460970	2.1 0.4
5370	668300	5460880	1.4 -0.3	5371	668860	5461330	1.4 -0.3
5372	684000	5430450	1.5 -0.0	5373	682750	5430710	2.2 0.7
5374	666810	5458250	1.1 -0.3	5375	667140	5458720	0.9 -0.5
5377	667500	5459210	1.5 -0.3	5378	667810	5459830	1.5 -0.3
5379	668070	5460550	1.4 -0.3	5380	679230	5442150	1.4 -0.1
5381	679390	5442420	3.2 1.7	5382	679930	5441740	1.6 0.1
5383	680050	5441160	1.2 -0.3	5384	679840	5441410	1.5 0.0
5385	670220	5463280	-1.0 0.0	5386	670650	5463360	-1.0 0.0
5387	670760	5463140	1.6 0.0	5388	670930	5464050	1.2 -0.4
5389	671360	5465100	1.4 -0.1	5390	677440	5471190	1.4 -0.3
5391	679120	5445090	2.7 0.9	5393	679000	5445260	1.7 -0.1
5394	678810	5445140	2.1 0.3	5395	678800	5445000	1.0 -0.8
5396	669850	5462380	1.5 -0.2	5397	680680	5437780	1.1 -0.3
5398	678210	5436690	2.5 1.1	5399	677560	5437550	1.4 -0.0
5400	675590	5442670	0.6 -0.9	5401	676370	5441180	0.7 -0.7
5402	675530	5441020	0.6 -0.3	5403	676370	5440230	0.9 -0.5
5404	676460	5439000	1.3 -0.1	5405	677010	5437150	1.2 -0.9
5406	662810	5459690	0.8 -0.3	5407	662270	5459490	1.0 -0.1

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
5409	661440	5459860	1.1	0.0		5410	661330	5459550	0.7	-0.4	
5411	660650	5459670	1.1	0.0		5412	660040	5459780	1.6	0.5	
5413	665030	5460000	1.0	-0.2		5414	665670	5460430	1.3	-0.1	
5415	666180	5460950	1.7	0.3		5416	666870	5460840	1.3	-0.1	
5417	679740	5441670	1.6	0.1		5418	679500	5441760	1.0	-0.5	
5419	679340	5441850	1.6	0.1		5420	679160	5441940	1.0	-0.5	
5421	678990	5442020	1.2	-0.3		5422	678110	5442610	1.7	0.1	
5423	678090	5442360	1.9	0.4		5425	678670	5442080	1.3	-0.2	
5426	678410	5442100	1.1	-0.4		5427	678200	5442110	1.6	0.1	
5428	678050	5442210	1.6	0.1		5429	678020	5442100	1.6	0.1	
5430	677880	5442060	1.4	-0.1		5431	677730	5442050	0.9	-0.5	
5432	677570	5442020	1.3	-0.2		5433	677360	5442020	1.2	-0.2	
5434	677130	5442060	1.5	0.1		5435	676890	5442100	1.1	-0.3	
5436	676590	5441970	1.2	-0.2		5437	679300	5457140	1.7	0.3	
5438	678780	5436670	1.5	0.1		5439	678270	5437210	2.4	1.0	
5441	677820	5437960	1.4	-0.0		5442	677550	5438610	1.8	0.4	
5443	677150	5439540	1.2	-0.2		5444	677160	5440640	1.7	0.3	
5445	676730	5441560	1.5	0.1		5446	685860	5447530	5.2	1.6	
5447	685840	5447310	3.7	0.2		5448	685180	5447250	2.8	-0.7	
5449	682110	5436810	1.3	-0.1		5450	681640	5437070	1.2	-0.2	
5451	681670	5436640	0.9	-0.5		5452	681610	5436130	1.8	0.4	
5453	681170	5436000	1.2	-0.2		5454	681240	5435500	1.2	-0.2	
5455	680560	5435800	1.1	-0.3		5457	679750	5436010	1.2	-0.2	
5458	679550	5435580	1.5	0.1		5459	675850	5443160	0.6	-0.9	
5460	677990	5437320	1.0	-0.4		5461	678630	5445010	1.7	-0.1	
5462	678440	5444730	1.1	-0.6		5463	678420	5444480	2.6	0.9	
5464	678580	5444230	3.7	2.1		5465	678900	5444170	1.5	-0.1	
5466	679190	5444250	2.2	0.6		5467	679500	5444230	3.7	2.1	
5468	677970	5444640	1.9	0.3		5469	677760	5444650	1.7	0.1	
5470	677360	5444710	1.9	0.4		5471	677070	5444710	1.7	0.2	
5473	676880	5444750	2.0	0.5		5474	679010	5432380	2.0	0.4	
5475	678880	5431520	1.8	0.2		5476	678360	5430940	1.9	0.3	
5477	678830	5430090	1.8	0.2		5478	679180	5430600	1.3	-0.3	
5479	679360	5431270	1.9	0.3		5480	679350	5432070	1.5	-0.1	
5481	676700	5436640	1.1	-1.0		5482	675970	5444150	1.1	-0.4	
5483	676570	5441820	1.3	-0.1		5484	676550	5442590	1.6	0.1	
5485	676380	5442780	0.5	-1.0		5486	676720	5443440	2.0	0.5	
5487	676800	5444590	1.5	-0.0		5489	676750	5445620	2.1	0.5	
5490	676450	5446420	1.4	-0.2		5491	676250	5447170	1.5	-0.1	
5492	676120	5447290	1.3	-0.3		5493	675680	5446820	1.1	-0.5	
5494	681650	5450800	2.9	-0.1		5495	681210	5451280	2.5	-0.5	
5496	680080	5452120	1.8	-1.2		5497	679080	5452350	1.2	-1.2	
5498	679320	5452530	1.2	-1.0		5499	679910	5453110	1.5	-0.7	
5500	680420	5454660	1.3	-1.1		5501	680070	5457540	1.2	-0.1	
5502	679540	5457730	1.2	-1.0		5503	681770	5458970	1.4	-0.8	
5505	681050	5458710	1.4	-0.8		5506	680210	5458450	1.8	-0.4	
5507	679540	5453260	1.2	-1.0		5508	679500	5459010	1.4	-0.8	
5509	679440	5459350	1.3	-0.9		5510	678870	5460000	1.3	-1.4	
5511	679460	5460640	1.4	-1.3		5512	679030	5461090	1.6	-1.1	
5513	678300	5461540	1.3	-1.4		5514	684880	5449280	3.9	0.3	
5515	684690	5449380	-1.0	0.0		5516	684310	5449160	-1.0	0.0	
5517	676510	5436910	-1.0	0.0		5518	677090	5471570	-1.0	0.0	
5519	677290	5471760	-1.0	0.0		5521	678350	5472560	-1.0	0.0	
5522	678060	5473350	-1.0	0.0		5523	677990	5474400	-1.0	0.0	
5524	678190	5475400	-1.0	0.0		5525	677820	5476210	-1.0	0.0	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
5525	678360	5476450	-1.0	0.0	0.0	5527	678510	5477110	-1.0	0.0	0.0
5528	679220	5477760	-1.0	0.0	0.0	5529	679390	5478830	-1.0	0.0	0.0
5530	687820	5486810	-1.0	0.0	0.0	5531	688140	5486160	-1.0	0.0	0.0
5532	688600	5485240	-1.0	0.0	0.0	5533	677970	5451140	-1.0	0.0	0.0
5534	674260	5445550	-1.0	0.0	0.0	5535	674390	5445930	-1.0	0.0	0.0
5537	675180	5447140	-1.0	0.0	0.0	5538	678090	5449030	-1.0	0.0	0.0
5539	676170	5448080	-1.0	0.0	0.0	5540	678530	5449840	-1.0	0.0	0.0
5541	678260	5450590	-1.0	0.0	0.0	5542	677450	5450990	-1.0	0.0	0.0
5543	677580	5452000	-1.0	0.0	0.0	5544	677790	5452690	-1.0	0.0	0.0
5545	678030	5453330	-1.0	0.0	0.0	5546	678310	5454220	-1.0	0.0	0.0
5547	676320	5456780	-1.0	0.0	0.0	5548	675680	5457750	-1.0	0.0	0.0
5549	673420	5457780	-1.0	0.0	0.0	5550	674140	5457810	-1.0	0.0	0.0
5551	673220	5457850	-1.0	0.0	0.0	5553	673080	5458990	-1.0	0.0	0.0
5554	674420	5457640	-1.0	0.0	0.0	5555	675540	5459530	-1.0	0.0	0.0
5556	676750	5459350	-1.0	0.0	0.0	5557	678950	5455860	-1.0	0.0	0.0
5558	676630	5458920	-1.0	0.0	0.0	5559	677390	5458990	-1.0	0.0	0.0
5560	675510	5468710	-1.0	0.0	0.0	5561	672600	5450420	-1.0	0.0	0.0
5562	678680	5450470	-1.0	0.0	0.0	5563	683350	5481950	-1.0	0.0	0.0
5564	685230	5482260	-1.0	0.0	0.0	5565	686630	5481570	-1.0	0.0	0.0
5566	688380	5481580	-1.0	0.0	0.0	5567	679070	5453070	-1.0	0.0	0.0
5569	679410	5453550	-1.0	0.0	0.0	5570	679830	5454420	-1.0	0.0	0.0
5571	679780	5455010	-1.0	0.0	0.0	5572	679810	5455590	-1.0	0.0	0.0
5573	682080	5448940	-1.0	0.0	0.0	5574	681380	5448780	-1.0	0.0	0.0
5575	680700	5449300	-1.0	0.0	0.0	5576	680400	5450090	-1.0	0.0	0.0
5577	688900	5481800	-1.0	0.0	0.0	5578	683620	5449070	-1.0	0.0	0.0
5579	682780	5449120	-1.0	0.0	0.0	5580	690320	5482060	-1.0	0.0	0.0
5581	691430	5482050	-1.0	0.0	0.0	5582	693230	5481440	-1.0	0.0	0.0
5583	694900	5479940	-1.0	0.0	0.0	5585	696490	5479750	-1.0	0.0	0.0
5586	676290	5465120	-1.0	0.0	0.0	5587	675920	5460940	-1.0	0.0	0.0
5588	676570	5461430	-1.0	0.0	0.0	5589	675170	5463080	-1.0	0.0	0.0
5590	675990	5463050	-1.0	0.0	0.0	5591	697330	5479280	-1.0	0.0	0.0
5592	698740	5478090	-1.0	0.0	0.0	5593	699030	5477500	-1.0	0.0	0.0
5594	700280	5475620	-1.0	0.0	0.0	5595	701330	5475580	-1.0	0.0	0.0
5596	702480	5474890	-1.0	0.0	0.0	5597	704160	5473590	-1.0	0.0	0.0
5598	705510	5473670	-1.0	0.0	0.0	5599	706650	5473350	3.7	0.6	0.0
5601	707120	5472880	1.7	-1.4	0.0	5602	707860	5472410	2.2	-0.5	0.0
5603	710560	5471280	3.1	-0.3	0.0	5604	709030	5471890	-1.0	0.0	0.0
5605	704900	5473480	-1.0	0.0	0.0	5606	703730	5473600	-1.0	0.0	0.0
5607	701520	5475260	-1.0	0.0	0.0	5608	699410	5475510	-1.0	0.0	0.0
5609	698700	5476780	-1.0	0.0	0.0	5610	685140	5446960	-1.0	0.0	0.0
5611	684630	5447130	-1.0	0.0	0.0	5612	684580	5446990	-1.0	0.0	0.0
5613	685380	5445990	-1.0	0.0	0.0	5614	685100	5445780	-1.0	0.0	0.0
5615	685000	5446460	-1.0	0.0	0.0	5617	683770	5446470	-1.0	0.0	0.0
5618	683850	5447110	-1.0	0.0	0.0	5619	683520	5447440	-1.0	0.0	0.0
5620	682810	5447660	-1.0	0.0	0.0	5621	682080	5447830	-1.0	0.0	0.0
5622	698550	5477850	-1.0	0.0	0.0	5623	697050	5479140	-1.0	0.0	0.0
5624	694770	5479870	-1.0	0.0	0.0	5625	693660	5480790	-1.0	0.0	0.0
5626	690310	5481110	-1.0	0.0	0.0	5627	688910	5484290	-1.0	0.0	0.0
5628	689240	5483380	-1.0	0.0	0.0	5629	689950	5482630	-1.0	0.0	0.0
5630	690770	5481920	-1.0	0.0	0.0	5631	708770	5484340	-1.0	0.0	0.0
5633	708850	5483790	-1.0	0.0	0.0	5634	708990	5483880	-1.0	0.0	0.0
5635	709330	5484450	-1.0	0.0	0.0	5636	680260	5455750	-1.0	0.0	0.0
5637	679660	5451800	-1.0	0.0	0.0	5638	681580	5451910	-1.0	0.0	0.0
5639	680800	5452520	-1.0	0.0	0.0	5640	681670	5447200	-1.0	0.0	0.0
5641	680920	5446930	-1.0	0.0	0.0	5642	688740	5481270	-1.0	0.0	0.0

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
5643	686750	5481480	-1.0	0.0	0.0	5644	684750	5481470	-1.0	0.0	0.0
5645	683730	5481650	-1.0	0.0	0.0	5646	682180	5481400	-1.0	0.0	0.0
5647	710430	5478500	7.3	-1.4	0.0	5649	710570	5478440	14.5	5.8	0.0
5650	710660	5477730	16.2	7.5	0.0	5651	710800	5476920	11.7	3.9	0.0
5652	711420	5476350	-1.0	0.0	0.0	5653	711840	5475830	11.3	3.5	0.0
5654	711580	5475100	4.9	-2.9	0.0	5655	711850	5474990	1.9	-3.9	0.0
5656	711880	5474240	9.7	3.9	0.0	5657	712380	5473410	5.7	-0.1	0.0
5658	713030	5472910	6.0	0.2	0.0	5659	712850	5471840	4.3	0.6	0.0
5660	705330	5465900	3.1	0.3	0.0	5661	705970	5466090	2.2	-0.6	0.0
5662	706240	5466450	2.7	-0.1	0.0	5663	709780	5484980	-1.0	0.0	0.0
5665	709830	5485400	-1.0	0.0	0.0	5666	710270	5485910	-1.0	0.0	0.0
5667	710320	5486620	-1.0	0.0	0.0	5668	709110	5483310	-1.0	0.0	0.0
5669	697300	5470550	-1.0	0.0	0.0	5670	696900	5471040	-1.0	0.0	0.0
5671	696540	5471570	-1.0	0.0	0.0	5672	696210	5472270	-1.0	0.0	0.0
5673	696190	5472960	-1.0	0.0	0.0	5674	709340	5482160	-1.0	0.0	0.0
5675	709200	5481680	-1.0	0.0	0.0	5676	709470	5481330	-1.0	0.0	0.0
5677	704550	5469100	1.2	-1.1	0.0	5678	709870	5480370	-1.0	0.0	0.0
5679	710340	5479440	-1.0	0.0	0.0	5681	704770	5469230	1.3	-1.0	0.0
5682	705310	5470060	2.1	-0.1	0.0	5683	705460	5470790	2.5	0.3	0.0
5684	705750	5471510	1.9	-0.3	0.0	5685	706180	5480510	-1.0	0.0	0.0
5686	707230	5480140	-1.0	0.0	0.0	5687	707700	5479480	-1.0	0.0	0.0
5688	708290	5478750	-1.0	0.0	0.0	5689	709180	5478160	-1.0	0.0	0.0
5690	709810	5478370	4.8	-2.9	0.0	5691	700940	5464880	2.4	-0.4	0.0
5692	701830	5465260	2.0	-0.5	0.0	5693	702410	5465960	1.6	-0.9	0.0
5694	702720	5466760	1.9	-0.9	0.0	5695	687120	5489700	-1.0	0.0	0.0
5697	686640	5490200	-1.0	0.0	0.0	5698	686700	5490700	-1.0	0.0	0.0
5699	686550	5491250	-1.0	0.0	0.0	5700	702230	5461530	1.7	-1.8	0.0
5701	700420	5464830	1.8	-1.0	0.0	5702	698740	5462820	-1.0	0.0	0.0
5703	699110	5463370	-1.0	0.0	0.0	5704	697580	5461870	-1.0	0.0	0.0
5705	697260	5462500	-1.0	0.0	0.0	5706	707600	5482250	-1.0	0.0	0.0
5707	706940	5482650	-1.0	0.0	0.0	5708	706360	5483180	-1.0	0.0	0.0
5709	705620	5483700	-1.0	0.0	0.0	5710	708340	5482080	-1.0	0.0	0.0
5711	708740	5481860	-1.0	0.0	0.0	5713	708720	5481400	-1.0	0.0	0.0
5714	709080	5476820	6.8	-0.1	0.0	5715	709130	5480590	-1.0	0.0	0.0
5716	708390	5485220	-1.0	0.0	0.0	5717	710000	5477580	5.2	-3.3	0.0
5718	710140	5477050	7.1	-0.7	0.0	5719	708770	5485260	-1.0	0.0	0.0
5720	708400	5485910	-1.0	0.0	0.0	5721	708240	5486460	-1.0	0.0	0.0
5722	705960	5466550	4.1	1.3	0.0	5723	705800	5467550	2.8	0.6	0.0
5724	705680	5468450	2.9	0.7	0.0	5725	705320	5468920	2.1	-0.1	0.0
5726	705240	5469610	2.9	0.7	0.0	5727	698240	5457820	-1.0	0.0	0.0
5728	697460	5458140	-1.0	0.0	0.0	5729	698050	5458270	-1.0	0.0	0.0
5730	698190	5458330	-1.0	0.0	0.0	5731	698120	5458730	-1.0	0.0	0.0
5733	698080	5459620	-1.0	0.0	0.0	5734	698040	5459960	-1.0	0.0	0.0
5735	697670	5461000	-1.0	0.0	0.0	5736	697460	5462950	-1.0	0.0	0.0
5737	693590	5463130	5.2	1.0	0.0	5738	694070	5463700	2.3	-1.9	0.0
5739	695560	5462970	2.3	-1.1	0.0	5740	695500	5463910	2.7	-0.7	0.0
5741	720410	5475460	3.9	-1.7	0.0	5742	719780	5475210	5.4	-0.9	0.0
5743	719740	5474510	2.1	-2.2	0.0	5744	722890	5474780	3.2	-1.7	0.0
5745	730280	5475730	1.7	-3.0	0.0	5747	706170	5472320	2.6	0.4	0.0
5748	706850	5472900	1.9	-1.2	0.0	5749	692050	5464650	13.1	8.7	0.0
5750	692900	5464800	8.7	4.5	0.0	5751	693950	5465000	5.1	1.0	0.0
5752	703050	5461140	2.0	-2.1	0.0	5753	702740	5461950	1.6	-2.5	0.0
5754	702940	5462370	2.6	-1.5	0.0	5755	703060	5463090	1.6	-1.9	0.0
5756	703240	5463990	2.0	-1.5	0.0	5757	704080	5464340	2.0	-1.5	0.0
5758	704790	5464780	7.9	4.4	0.0	5759	704640	5465100	2.8	0.0	0.0

SAMPLE EAST	NORTH	U OR	U PS	SAMPLE EAST	NORTH	U OR	U RS
5760	698850	5471390	4.6 1.8	5751	700020	5471830	8.5 5.8
5763	693880	5471260	2.4 -0.5	5754	693830	5471080	2.0 -0.9
5765	707970	5487280	12.8 4.1	5756	708270	5488290	16.1 3.7
5767	708400	5484300	3.9 -2.1	5758	699930	5470520	2.4 -0.4
5769	700720	5470850	2.4 -0.3	5770	703520	5467430	1.8 -1.0
5771	703940	5468100	2.0 -0.3	5772	701610	5470980	2.3 -0.4
5773	702330	5471330	2.3 -0.4	5774	702420	5471380	2.5 -0.2
5775	702700	5472450	2.4 0.1	5776	703500	5472890	2.0 -0.8
5777	703930	5473260	1.6 -1.2	5779	726440	5471990	4.5 1.1
5780	726670	5471220	2.6 -0.8	5781	727380	5470710	2.1 -1.3
5782	728440	5470780	4.8 2.0	5783	696090	5468870	2.8 0.2
5784	696590	5467910	1.3 -1.3	5785	696180	5468230	1.3 -1.3
5786	695800	5467960	1.7 -0.9	5787	695250	5467730	1.6 -1.0
5788	696560	5468640	1.9 -0.7	5789	696780	5469490	2.3 -0.3
5790	697290	5470010	2.3 -0.4	5791	728320	5468870	0.9 -1.5
5792	726750	5470050	2.3 -1.1	5793	726640	5470510	1.8 -1.6
5795	726130	5471330	2.3 -1.1	5796	725840	5472280	3.3 -0.1
5797	724600	5472500	8.1 3.2	5798	694860	5470810	3.4 0.5
5799	695730	5470640	3.2 0.5	5800	696390	5470300	4.3 1.5
5801	721510	5473720	3.5 -1.0	5802	720940	5473290	3.7 -0.8
5803	720430	5472650	3.1 -1.4	5804	720500	5472460	3.8 -0.3
5805	719590	5471980	2.8 -0.8	5806	719260	5470800	2.9 -0.7
5807	719120	5469670	2.9 -0.9	5808	719340	5468520	7.2 3.4
5809	695000	5465000	4.7 1.1	5811	695540	5464930	2.9 -0.5
5812	696330	5465320	3.4 0.6	5813	697160	5465680	1.5 -1.3
5814	697470	5464690	1.9 -1.5	5815	697360	5461090	1.9 -1.6
5816	719150	5468580	6.1 2.3	5817	719230	5467780	6.8 3.0
5818	718970	5467840	4.3 0.5	5819	718130	5467020	6.6 3.3
5820	717630	5466310	1.7 -1.6	5821	717360	5466340	3.0 0.1
5822	716440	5465940	2.8 -0.1	5823	727940	5466980	1.5 -0.6
5824	726500	5466390	3.8 1.4	5825	697720	5470140	1.7 -1.1
5827	699280	5470310	2.3 -0.5	5828	700350	5471260	1.8 -0.9
5829	701360	5471380	2.1 -0.6	5830	727040	5469010	2.5 -0.1
5831	727610	5468470	2.3 -0.1	5832	728080	5468420	2.6 0.2
5833	728460	5467640	1.7 -0.7	5834	729200	5466990	1.8 -0.3
5835	729540	5465980	1.8 -0.3	5836	729960	5465400	1.5 -0.6
5837	730140	5465530	2.4 0.0	5838	730670	5465030	1.4 -1.0
5839	731040	5464690	1.4 -0.9	5840	743210	5445700	2.0 0.1
5841	744030	5446160	1.6 -0.3	5843	743960	5446580	2.0 0.1
5844	744880	5446030	1.8 -0.1	5845	745930	5445350	1.5 -0.2
5846	745490	5445400	1.7 -0.0	5847	729080	5466000	1.6 -0.5
5848	729090	5466260	1.9 -0.2	5849	728400	5466660	-1.0 0.0
5850	727370	5466310	2.2 -0.2	5851	728580	5470400	3.1 0.3
5852	729320	5470300	2.7 -0.1	5853	730290	5470150	2.6 -0.2
5854	731330	5470010	2.5 -0.3	5855	742120	5447750	5.4 3.3
5856	741540	5448080	1.9 -0.2	5857	741340	5447890	1.2 -0.9
5859	741250	5448620	2.0 -0.1	5860	741070	5449440	1.3 -0.8
5861	741190	5449580	1.7 -0.4	5862	745150	5449870	1.0 -0.8
5863	746030	5449380	2.6 0.8	5864	747050	5449230	2.7 0.9
5865	747810	5449520	1.4 -0.8	5866	748540	5449440	1.9 -0.3
5867	716680	5453410	2.8 -0.1	5868	714460	5452190	3.3 -0.4
5869	714420	5452510	3.3 -0.5	5870	715200	5452350	5.9 2.9
5871	715650	5452680	4.1 1.2	5872	716070	5453090	3.3 0.4
5873	729280	5474040	2.2 -1.3	5875	729150	5473760	3.0 -0.5
5876	729830	5473200	2.9 -0.6	5877	731330	5473260	2.7 -0.6

SAMPLE EAST	NORTH	U OR U RS	SAMPLE EAST	NORTH	U OR U RS
5878 731290 5472980	3.0	-0.3	5879 731780 5471750	1.7	-1.1
5880 731980 5470670	2.2	-0.6	5881 731390 5469640	2.0	-0.5
5882 731250 5468570	1.8	-0.8	5883 731640 5467730	1.9	-0.7
5884 731900 5467040	2.3	-0.1	5885 730880 5478130	3.1	-3.4
5886 735240 5479290	4.9	-1.2	5887 735500 5479790	5.9	-0.2
5888 734130 5473800	4.3	-2.2	5889 733000 5478210	3.8	-2.7
5891 733660 5477670	3.5	-3.0	5892 733720 5473300	4.5	-2.0
5893 733830 5478550	5.3	-1.2	5894 732580 5478370	6.2	-0.3
5895 723750 5473600	15.9	11.0	5896 724160 5476390	10.1	4.5
5897 725520 5476300	6.7	1.5	5898 726200 5477550	7.3	1.4
5899 725990 5478280	5.1	-0.8	5900 726910 5478010	4.9	-1.0
5901 726950 5478420	5.6	-0.3	5902 726520 5479060	4.7	-1.2
5903 727530 5478800	5.5	-0.5	5904 727440 5478710	2.7	-3.2
5905 728370 5478600	4.3	-1.7	5907 741920 5457140	10.2	5.3
5908 742550 5457710	5.8	0.0	5909 743620 5449870	3.5	1.5
5910 743260 5450700	-1.0	0.0	5911 743030 5451860	-1.0	0.0
5912 743310 5451940	-1.8	-0.4	5913 743860 5452530	1.3	-2.8
5914 744900 5452890	1.1	-3.0	5915 745970 5452970	1.6	-3.7
5916 746850 5452660	1.6	-3.7	5917 714560 5451040	3.7	0.0
5918 715260 5451160	2.1	-0.9	5919 715220 5450930	5.0	2.0
5920 715490 5450780	2.1	-0.9	5921 715750 5450830	1.6	-1.4
5923 716110 5451160	2.3	-0.7	5924 716460 5451000	1.8	-1.2
5925 717260 5451390	2.6	-0.4	5926 724770 5475500	8.0	2.4
5927 724960 5475540	4.8	-0.8	5928 747300 5445380	1.8	0.1
5929 748370 5445850	1.5	-0.3	5930 749040 5446330	1.7	-0.1
5931 711220 5451030	8.1	2.6	5932 710870 5450620	5.0	-0.5
5933 710760 5449390	2.6	-2.5	5934 740890 5452610	1.8	-1.5
5935 741460 5456510	4.2	-0.7	5936 742200 5457320	4.2	-0.7
5937 740760 5455960	4.6	-0.3	5939 740030 5455070	3.6	-0.1
5940 739410 5454450	3.2	0.2	5941 739670 5455510	1.7	-2.5
5942 738490 5453640	3.2	0.2	5943 714190 5453530	1.9	-1.9
5944 715070 5454190	3.0	0.1	5945 715350 5454580	1.7	-1.2
5946 716010 5453890	1.8	-1.1	5947 716200 5455800	1.5	-1.3
5948 716830 5455590	1.6	-1.2	5949 716830 5454830	1.5	-1.4
5950 717200 5454380	1.8	-1.1	5951 718480 5450850	2.5	-0.5
5952 718370 5450090	4.0	1.0	5953 718290 5449540	3.2	-0.0
5955 740590 5450000	2.0	-0.1	5956 740590 5450210	1.3	-0.8
5957 740020 5450400	1.8	-0.3	5958 738780 5451150	2.1	0.0
5959 738500 5451190	1.6	-0.5	5960 738460 5451330	1.9	-0.2
5961 743120 5458230	7.6	1.8	5962 743450 5458600	17.1	11.3
5963 744540 5457710	4.7	-1.1	5964 745060 5459580	2.8	-4.2
5965 745720 5458560	3.9	-3.1	5966 748480 5454250	105.0	99.0
5967 743890 5448440	1.8	-0.1	5968 744160 5447960	2.3	0.4
5969 744850 5447820	0.6	-1.3	5971 745460 5443080	1.0	-0.8
5972 746040 5448080	0.7	-1.1	5973 746410 5447850	-1.0	0.0
5974 747030 5447950	2.4	0.6	5975 747790 5448120	1.3	-0.9
5975 748440 5448340	1.2	-1.0	5977 749120 5448430	3.9	1.7
5978 746930 5455810	29.3	21.9	5979 747560 5455640	7.4	-0.5
5980 748350 5455940	7.2	-0.7	5981 748400 5457620	3.0	-4.7
5982 748150 5459950	26.5	13.8	5983 748960 5458710	19.5	11.8
5984 749600 5459300	4.8	-2.9	5985 695340 5432360	4.1	-1.0
5987 695140 5432680	3.7	-1.5	5988 695520 5432670	6.1	0.9
5989 695020 5433820	2.6	-2.6	5990 721450 5456190	2.7	-0.0
5991 721020 5456660	2.9	0.2	5992 720300 5456630	2.3	-0.4
5993 720300 5456350	4.1	1.4	5994 720230 5455740	4.7	2.0

SAMPLE EAST	NORTH	U	CR	U	RS	SAMPLE EAST	NORTH	U	CR	U	RS
5995	719270	5454840	3.5	0.8		5996	718790	5453960	2.9	0.2	
5997	718720	5453050	3.1	0.4		5998	718390	5452440	3.3	0.3	
5999	718430	5451630	3.2	0.2		6000	718210	5451390	2.6	-0.4	
6001	712140	5450400	2.9	-2.6		6003	712170	5449570	2.3	-2.8	
6004	712520	5443710	3.5	-0.1		6005	712160	5448300	5.6	0.5	
6006	712530	5447880	2.7	-0.9		6007	712720	5447290	4.1	0.3	
6008	712440	5446940	3.7	-1.1		6009	712320	5446190	3.7	-1.1	
6010	724160	5476390	6.0	0.4		6011	728410	5478940	13.4	7.4	
6012	710370	5448150	4.6	-0.5		6013	710800	5447400	4.0	-0.8	
6014	711040	5445530	3.0	-1.8		6015	718800	5479330	7.6	-0.1	
6016	718500	5478670	9.9	2.2		6017	718510	5478430	10.1	2.4	
6019	717090	5478340	11.0	1.9		6020	716170	5477590	10.1	1.0	
6021	715610	5477720	10.4	1.3		6022	714340	5478010	20.1	10.8	
6023	717970	5448760	3.2	-0.1		6024	717320	5448090	2.9	-0.2	
6025	716760	5447130	4.3	0.7		6026	716260	5446540	3.1	-0.5	
6027	715200	5446250	2.8	-0.8		6028	714300	5446050	3.2	-0.6	
6029	713540	5446090	3.2	-0.6		6030	712830	5446120	3.5	-0.3	
6031	712200	5446070	2.7	-2.1		6032	711380	5446090	2.9	-1.9	
6033	710160	5445940	3.0	-1.8		6035	709360	5446260	3.3	-2.5	
6035	708290	5445640	3.4	-2.4		6037	707340	5447090	2.5	-4.0	
6038	706590	5447910	5.3	-2.1		6039	705790	5447890	2.1	-5.3	
6040	704540	5447770	3.7	-3.6		6041	703820	5447880	4.5	-2.8	
6042	702830	5448000	2.7	-4.6		6043	701860	5447660	3.7	-3.3	
6044	725400	5474830	3.1	-1.2		6045	726180	5474160	2.9	-1.4	
6046	727080	5473900	2.8	-1.5		6047	727050	5474030	3.2	-1.1	
6048	728190	5473850	2.3	-1.2		6049	728080	5474010	3.5	-0.0	
6051	728780	5473960	3.7	0.2		6052	694750	5434010	4.7	0.3	
6053	694100	5435410	4.5	0.1		6054	694030	5435190	1.7	-2.7	
6055	693950	5435940	7.0	2.6		6056	694130	5436120	3.8	-0.6	
6057	694250	5437030	3.0	-1.4		6058	694380	5436780	1.9	-2.5	
6059	694700	5437520	4.3	-1.1		6060	695040	5438140	2.9	-3.2	
6061	695550	5439050	4.0	-2.1		6062	695380	5439260	26.8	20.7	
6063	695680	5439800	4.0	-2.1		6064	695770	5440620	18.0	10.8	
6065	695860	5440960	3.6	-3.6		6067	695380	5440870	2.2	-5.0	
6068	695970	5441770	2.7	-4.5		6069	696340	5442570	6.7	-0.4	
6070	696140	5443080	7.7	0.6		6071	696690	5443440	2.6	-4.5	
6072	696700	5443550	12.2	5.1		6073	696710	5444210	4.0	-3.1	
6074	697130	5445210	3.5	-3.2		6075	697560	5446120	4.8	-1.9	
6076	697670	5445730	3.7	-3.0		6077	698610	5446180	4.4	-2.3	
6078	698650	5447010	-1.0	0.0		6079	699500	5447240	2.8	-3.9	
6080	700340	5447410	2.8	-4.0		6081	700040	5447670	3.9	-3.1	
6083	730700	5448350	6.0	2.5		6084	712920	5450570	3.3	-0.4	
6085	713050	5449660	2.2	-1.4		6086	713630	5448750	2.5	-1.1	
6087	714500	5448570	1.5	-2.1		6088	714720	5448130	1.6	-2.0	
6089	715460	5447930	1.7	-1.4		6090	716150	5447680	3.1	0.0	
6091	716780	5447340	2.5	-1.1		6092	727690	5463570	1.5	-0.5	
6093	728320	5462730	1.7	-0.3		6094	716730	5453820	2.5	-0.4	
6095	717530	5453940	1.3	-1.4		6096	717620	5453630	2.2	-0.5	
6097	717560	5453480	3.3	0.6		6099	718310	5453010	2.9	0.2	
6100	719480	5473710	4.1	-0.2		6101	729940	5446730	1.7	-2.7	
6102	729730	5447720	3.4	-1.0		6103	729930	5448290	5.7	1.3	
6104	731440	5448940	1.6	-1.9		6105	731830	5449770	0.9	-2.6	
6106	732530	5450500	1.1	-1.2		6107	733290	5450290	1.1	-1.2	
6108	734250	5450150	1.2	-1.1		6109	735300	5450250	1.1	-0.9	
6110	713410	5458920	3.6	0.0		6111	713600	5458780	7.4	3.8	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
6112	713940	5459020	2.3	-1.3		6113	714250	5459080	2.6	-1.0	
6115	727530	5449280	3.3	-1.1		6116	728510	5449310	8.5	4.1	
6117	729330	5450250	7.2	3.4		6118	729960	5450460	8.6	4.8	
6119	730460	5450340	2.9	-0.3		6120	730700	5451050	4.1	0.9	
6121	730300	5451970	4.2	1.0		6122	728690	5481660	5.0	-1.8	
6123	728530	5481750	5.2	-1.6		6124	728420	5481550	6.8	-0.0	
6125	728540	5480830	6.9	0.1		6126	727870	5480130	5.7	-1.1	
6127	727940	5479740	6.5	0.5		6128	730120	5478680	3.5	-3.0	
6129	729700	5452170	1.1	-2.7		6131	729740	5452760	4.8	1.8	
6132	729940	5453630	2.6	-0.4		6133	728060	5462620	1.6	-0.4	
6134	729140	5462390	2.0	-0.0		6135	729500	5461730	0.9	-1.1	
6136	729410	5461410	0.5	-1.5		6137	730120	5461370	0.6	-2.1	
6138	730700	5462070	1.4	-1.3		6139	725250	5447340	19.4	14.0	
6140	724680	5447950	3.9	-1.6		6141	714100	5478350	3.5	-5.8	
6142	713590	5477730	8.3	-1.0		6143	713370	5477640	-1.0	0.0	
6144	712800	5477000	3.9	-4.3		6145	712040	5476260	10.2	2.4	
6147	709520	5461080	4.3	0.2		6148	708760	5460800	8.9	4.8	
6149	709420	5459880	5.9	0.8		6150	710270	5459640	4.3	-0.2	
6151	711040	5459700	2.0	-2.5		6152	718810	5473140	1.8	-2.5	
6153	717440	5473620	5.4	0.5		6154	717910	5472720	3.1	-1.2	
6155	717180	5472280	2.9	-0.7		6156	716840	5472310	2.8	-0.8	
6157	716780	5471600	2.7	-0.9		6158	716440	5470550	-1.0	0.0	
6159	715580	5469070	-1.0	0.0		6150	715200	5469530	3.2	-0.1	
6161	714360	5468930	4.5	1.7		6152	731020	5460420	4.5	1.8	
6163	727790	5447810	5.8	1.4		6154	728080	5447330	4.5	0.1	
6165	728040	5446850	4.8	0.4		6156	735010	5464400	6.3	2.2	
6167	735510	5464920	5.5	1.4		6158	735820	5465530	4.6	0.5	
6169	736030	5466330	4.0	-0.1		6170	735940	5469780	4.2	0.1	
6171	734960	5469530	4.4	1.1		6173	733770	5469030	6.2	2.9	
6174	733160	5468320	3.5	0.2		6175	732910	5467370	3.3	-0.0	
6176	731970	5466720	2.1	-0.3		6177	731430	5465760	6.2	3.8	
6178	731150	5464850	2.7	0.4		6179	730400	5463720	3.1	0.8	
6180	730580	5462640	3.8	1.5		6181	731000	5460400	1.7	-1.0	
6183	731060	5459460	1.4	-1.7		6184	731280	5458350	2.0	-1.1	
6185	731450	5457090	2.0	-1.1		6186	731920	5455960	1.7	-1.4	
6187	733040	5455570	2.6	-0.9		6189	734140	5455100	2.1	-1.4	
6190	735410	5454180	2.4	-0.4		6191	735550	5452890	2.6	-0.2	
6192	727140	5448500	5.2	-0.2		6193	711780	5459640	2.9	-1.6	
6194	712630	5459360	2.5	-1.1		6195	713220	5459050	2.5	-1.1	
6196	691200	5446790	2.1	-2.9		6197	691120	5447550	2.3	-2.0	
6198	691180	5448120	2.7	-1.6		6199	691570	5448230	2.0	-2.3	
6200	692150	5449000	2.0	-2.3		6201	692110	5449240	4.5	0.2	
6202	692990	5449220	3.4	-1.8		6203	724340	5448270	5.3	-0.2	
6205	723960	5448510	6.4	0.9		6206	723740	5448550	5.2	-0.3	
6207	723520	5448110	3.5	-2.0		6208	723370	5447490	5.0	-0.4	
6209	723010	5447480	2.7	-2.7		6210	722740	5447060	8.5	3.1	
6211	722160	5447150	4.6	0.2		6212	721460	5447130	4.4	0.0	
6213	721080	5447030	4.0	-0.4		6214	726700	5450230	3.7	-0.2	
6215	726820	5450990	2.2	-1.7		6216	726450	5451760	1.8	-2.1	
6217	726550	5452720	1.6	-1.2		6218	727050	5453720	1.9	-0.9	
6219	710170	5452490	5.9	0.4		6221	709570	5452830	5.3	-2.3	
6222	709810	5453620	6.0	-1.6		6223	709630	5454590	9.5	1.9	
6224	710280	5455220	9.8	4.4		6225	728620	5446910	6.7	2.3	
6226	728690	5446800	3.9	-0.5		6227	729840	5446230	2.7	-1.7	
6228	730020	5446370	1.5	-1.9		6229	710860	5455950	6.2	0.8	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
6230	710760	5456000	4.3	-1.1		6231	712010	5456820	6.6	1.2	
6232	712700	5457840	7.0	3.4		6233	693630	5449470	3.4	-1.8	
6234	693550	5449660	4.6	-0.6		6235	720540	5447350	3.1	-1.3	
6237	720130	5447990	3.4	-0.8		6238	719700	5448660	3.2	-0.1	
6239	718810	5449180	2.8	-0.5		6240	711150	5461730	1.3	-2.3	
6241	711880	5461920	2.0	-1.6		6242	712680	5461900	2.8	-0.3	
6243	713520	5462010	2.3	-0.8		6244	714240	5462270	2.6	-0.5	
6245	714950	5462510	3.6	0.9		6246	730720	5446520	1.6	-1.8	
6247	735110	5447900	1.4	-0.4		6248	735150	5448270	1.3	-0.5	
6249	722720	5456150	2.0	-0.5		6250	723840	5455630	2.5	0.0	
6251	725100	5455320	2.0	-0.2		6253	726560	5454660	3.5	0.7	
6254	727430	5454210	2.0	-0.8		6255	728980	5454200	2.2	-0.8	
6256	730150	5454280	1.9	-1.1		6257	731220	5454230	2.6	-0.4	
6258	732420	5454710	3.8	0.8		6259	733380	5454290	1.7	-1.1	
6260	734770	5453880	1.6	-1.2		6261	714790	5457210	2.3	-1.4	
6262	714940	5457140	3.0	-0.7		6263	715640	5457820	2.3	-0.5	
6264	715970	5457830	1.7	-1.1		6265	716170	5458420	1.7	-1.1	
6266	711330	5456830	6.0	0.6		6267	711330	5456600	8.4	3.0	
6269	712120	5457130	4.8	-0.6		6270	689300	5445550	2.0	-1.7	
6271	687650	5446420	2.2	-1.5		6272	695950	5443750	12.0	4.9	
6273	710380	5451390	3.9	-1.6		6274	709690	5450770	13.1	5.4	
6275	709360	5449940	12.3	5.6		6276	708700	5449690	22.2	15.5	
6277	708430	5449400	18.5	11.8		6278	707870	5449290	10.4	3.7	
6279	707900	5448940	12.5	5.8		6280	707750	5448310	-1.0	0.0	
6281	707290	5447550	-1.0	0.0		6282	689330	5444940	1.3	-2.5	
6283	689250	5444200	2.1	-1.7		6285	688980	5444090	2.1	-1.7	
6286	715500	5462850	3.0	0.4		6287	715680	5462730	1.7	-0.9	
6288	715980	5461740	2.2	-0.5		6289	716560	5460760	2.0	-0.7	
6290	717200	5459760	1.9	-0.9		6291	688650	5443890	3.3	-0.5	
6292	688950	5443420	2.1	-1.7		6293	689400	5443000	1.9	-1.9	
6294	689900	5443020	2.1	-1.7		6295	690770	5442850	3.0	-2.3	
6296	690970	5444940	13.2	7.9		6297	691770	5444440	8.6	3.3	
6298	693090	5444530	12.3	5.5		6299	693340	5444010	12.4	5.7	
6301	693670	5443580	7.9	1.2		6302	694390	5443490	8.4	1.7	
6303	694470	5443070	8.8	2.1		6304	695380	5443170	9.8	2.7	
6305	687480	5475470	3.2	-0.9		6306	688270	5475710	7.3	1.8	
6307	690580	5442580	2.5	-2.8		6308	690280	5441850	3.6	-1.0	
6309	690630	5441860	3.6	-1.0		6310	691300	5441410	10.1	5.5	
6311	691160	5441170	8.1	3.5		6312	691720	5440840	10.4	5.8	
6313	714510	5459040	4.4	0.8		6314	714720	5459220	2.3	-1.3	
6315	715330	5459250	5.7	2.9		6317	716140	5459100	3.0	0.2	
6318	716260	5458800	2.6	-0.2		6319	717250	5458990	3.2	0.4	
6320	717710	5459100	1.7	-0.9		6321	718150	5458220	1.9	-0.7	
6322	718830	5457670	1.9	-0.7		6323	719950	5456950	2.2	-0.4	
6324	680050	5468030	12.1	7.7		6325	680840	5467890	2.5	-1.9	
6326	682100	5469970	1.5	-2.9		6327	683250	5469620	16.2	11.2	
6328	682730	5469630	2.4	-2.6		6329	682080	5474410	1.5	-1.3	
6330	682290	5476130	2.0	-0.8		6331	681880	5477310	4.9	2.1	
6333	684830	5478490	2.2	-1.3		6334	695400	5444300	11.7	4.6	
6335	695050	5445000	3.9	-2.9		6336	689360	5473600	2.3	-1.8	
6337	689290	5473500	2.9	-1.2		6338	690330	5472100	2.7	-0.7	
6339	690700	5472350	1.8	-1.6		6340	689930	5472810	1.7	-2.4	
6341	689080	5472650	2.3	-1.8		6342	709340	5467050	1.7	-0.8	
6343	709110	5467210	1.3	-1.2		6344	691590	5440600	3.7	-0.9	
6345	691850	5440510	11.2	6.6		6346	691910	5440320	7.3	2.7	

SAMPLE EAST	NORTH	U	DR	U	RS	SAMPLE EAST	NORTH	U	DR	U	RS
6347	691750	5439940	3.4	-0.5		6349	691860	5439180	3.9	-0.0	
6350	692110	5438920	4.1	0.2		6351	691960	5438560	1.9	-2.0	
6352	692500	5438250	1.9	-3.5		6353	692900	5437510	2.9	-2.5	
6354	693250	5437480	2.4	-2.0		6355	693660	5437110	4.3	-0.1	
6356	691680	5474420	2.3	-1.7		6357	691920	5475100	1.8	-3.7	
6358	691940	5475770	1.7	-3.8		6359	691580	5475730	4.8	-0.7	
6360	692290	5476430	1.1	-4.4		6361	692720	5476990	1.2	-3.2	
6362	692730	5477700	1.8	-4.2		6363	709810	5465890	2.0	-0.5	
6365	710720	5465850	2.8	0.3		6366	694100	5449120	6.3	1.1	
6367	694830	5443820	4.4	-0.8		6368	694940	5443580	5.5	0.3	
6369	695970	5448360	4.0	-2.4		6370	696800	5443340	2.6	-3.8	
6371	697730	5447660	18.1	11.1		6372	697750	5447390	6.2	-0.5	
6373	698280	5447190	3.9	-2.8		6374	699220	5447150	4.2	-2.5	
6375	694220	5474000	4.6	1.1		6376	712030	5470240	2.8	-0.6	
6377	712910	5469650	2.2	-0.6		6378	713430	5468650	3.1	0.3	
6379	713910	5468250	1.5	-1.3		6381	714570	5467690	1.9	-0.9	
6382	714940	5466870	1.6	-1.0		6383	715540	5466110	1.4	-1.5	
6384	715860	5465360	1.8	-1.1		6385	715820	5464640	2.1	-0.5	
6386	715820	5463510	1.2	-1.4		6387	688980	5476280	9.1	3.6	
6388	689490	5476500	13.0	7.5		6389	690270	5476540	1.4	-4.1	
6390	690980	5476630	16.3	10.8		6391	691290	5477250	18.7	13.2	
6392	691540	5477870	34.9	27.9		6393	687270	5479780	1.7	-2.6	
6394	687460	5480500	2.3	-2.5		6395	694270	5478660	2.7	-3.3	
6397	695370	5479070	1.6	-4.1		6398	733030	5482890	46.9	38.5	
6399	733020	5481870	42.5	34.4		6400	732910	5480970	3.9	-4.2	
6401	733420	5480250	9.1	1.0		6402	733870	5479520	7.1	0.6	
6403	735060	5451770	2.1	0.1		6404	692380	5478270	2.5	-4.5	
6405	693020	5478480	8.1	2.1		6406	734230	5484820	5.3	-3.1	
6407	734630	5485140	7.1	-0.4		6408	734220	5486170	6.9	-0.6	
6409	733890	5486950	7.7	0.2		6410	737170	5458420	5.7	1.3	
6411	737330	5457600	6.1	1.7		6413	712820	5464630	2.6	-0.2	
6414	712640	5464330	7.6	4.8		6415	713750	5464090	2.9	0.1	
6416	714500	5464040	2.8	0.0		6417	715170	5464220	2.9	0.3	
6418	736030	5458410	4.7	0.3		6419	735670	5457530	4.0	-0.4	
6420	735060	5458570	4.1	-0.3		6421	734970	5457790	4.4	0.4	
6422	732620	5458850	12.2	8.2		6423	694500	5474060	3.3	-0.2	
6424	694620	5474750	2.6	-0.9		6425	695120	5475380	3.1	-0.9	
6426	695650	5475970	1.9	-2.1		6427	697040	5475740	2.4	-1.6	
6429	697770	5475610	2.6	-2.0		6430	698550	5475810	2.3	-2.3	
6431	731740	5478720	9.9	3.4		6432	731840	5479270	10.6	4.1	
6433	732060	5480100	9.7	1.6		6434	732090	5480780	6.6	-1.5	
6435	731840	5481680	8.4	0.3		6436	731740	5482540	13.1	4.5	
6437	733800	5459140	5.6	1.6		6438	733560	5453230	4.8	0.8	
6439	733180	5457470	6.1	2.6		6440	701190	5478430	9.0	2.9	
6441	701110	5479930	2.4	-3.7		6442	700550	5478010	13.3	7.2	
6443	701680	5477560	2.8	-3.3		6445	702500	5476820	2.0	-2.3	
6446	703660	5475000	3.2	-1.1		6447	703480	5474470	3.4	0.6	
6448	728170	5439920	5.3	0.2		6449	727070	5439080	10.0	5.6	
6450	726650	5440380	1.6	-2.1		6451	726490	5441630	6.0	2.3	
6452	725950	5442700	2.6	-1.4		6453	681960	5504690	1.7	0.3	
6454	682160	5503660	1.9	0.5		6455	681740	5502570	1.7	0.3	
6456	681480	5502420	1.1	-0.4		6457	682130	5505630	1.9	0.5	
6458	691510	5484650	37.6	28.1		6459	691120	5484750	12.3	2.8	
6461	691340	5483560	4.9	-4.5		6462	691250	5484020	21.2	11.7	
6463	701350	5477750	2.1	-4.0		6464	693200	5483630	6.4	-2.9	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
6465	692660	5484380	8.5	-0.8		6466	693670	5484840	6.8	-2.5	
6467	693790	5484050	3.9	-5.4		6468	693550	5482910	5.9	-3.4	
6469	693610	5483480	5.0	-4.3		6470	701760	5478830	22.0	15.9	
6471	702030	5478760	4.1	-2.0		6472	702380	5479270	3.9	-2.2	
6473	702570	5479870	5.2	-0.1		6474	694360	5482580	8.9	-0.4	
6475	696720	5481510	11.7	3.9		6477	697410	5481600	9.5	1.7	
6478	697910	5482230	11.2	3.4		6479	698320	5482660	3.9	-4.7	
6480	698150	5483450	6.5	-2.1		6481	696500	5483850	5.1	-3.9	
6482	696750	5483140	6.1	-2.9		6483	696540	5482970	76.2	67.2	
6484	703080	5480090	6.3	0.9		6485	737240	5456500	4.8	0.9	
6486	737070	5455410	4.6	0.7		6487	736890	5454640	2.5	-0.3	
6488	704100	5480850	4.2	-1.2		6489	717890	5436090	5.7	0.4	
6490	718580	5436660	3.5	-1.8		6491	718250	5436580	9.1	3.8	
6493	718170	5437410	3.1	-2.2		6494	718110	5438290	11.1	5.9	
6495	717670	5438670	3.6	-1.6		6496	717940	5439030	5.3	0.1	
6497	717920	5440330	7.8	3.0		6498	717810	5440500	6.7	1.9	
6499	717800	5441240	3.2	-1.6		6500	717310	5442000	6.5	1.5	
6501	709610	5467690	1.8	-0.4		6502	711650	5468360	2.5	0.1	
6503	711100	5467590	2.1	-0.3		6504	710290	5467420	1.8	-0.7	
6505	710080	5468860	1.4	-1.0		6506	708980	5469930	1.6	-0.6	
6507	708440	5470180	1.5	-1.2		6508	707010	5470640	1.6	-0.6	
6509	707790	5468910	1.7	-0.5		6510	708450	5469150	1.5	-0.7	
6511	706350	5469950	1.4	-0.8		6512	725970	5435820	1.5	-4.0	
6513	725500	5437050	1.9	-3.6		6514	724850	5437890	8.2	4.1	
6515	724940	5438030	1.7	-2.4		6517	706200	5436600	13.5	4.7	
6518	706250	5437320	9.4	0.6		6519	706130	5437680	5.1	-3.6	
6520	706330	5438230	15.9	7.2		6521	706510	5438270	5.8	-2.9	
6522	706190	5438510	4.2	-4.5		6523	706580	5438860	8.0	-0.7	
6524	706520	5439040	8.9	0.2		6525	706330	5439170	3.6	-5.1	
6526	706830	5439670	12.8	4.1		6527	706760	5439920	6.5	-2.2	
6528	706970	5440050	19.7	11.6		6529	707140	5440970	7.2	-0.9	
6530	734850	5484430	6.9	-1.5		6531	735190	5483600	13.3	6.4	
6533	735230	5482940	10.9	4.0		6534	735420	5482640	6.5	-0.4	
6535	735720	5451170	2.4	0.4		6536	736120	5450090	1.7	-0.3	
6537	736200	5448970	1.9	0.1		6538	736550	5447950	2.4	0.6	
6539	736470	5446890	1.8	-0.8		6540	736650	5446050	2.2	-0.4	
6541	737580	5445020	2.1	-1.2		6542	738110	5444410	2.1	-1.0	
6543	738600	5443800	2.2	-0.9		6544	738710	5443070	1.9	-1.2	
6545	739550	5441920	2.5	-0.9		6546	740270	5441200	1.6	-1.3	
6547	681510	5501420	1.5	0.0		6549	681360	5500250	1.8	0.3	
6550	681550	5499050	1.4	-0.2		6551	681270	5497620	1.8	0.2	
6552	656810	5476910	2.2	0.0		6553	656750	5477580	0.9	-1.0	
6554	724150	5438690	4.7	0.6		6555	723530	5439460	2.6	-1.5	
6556	723700	5439620	3.5	-0.6		6557	722890	5440260	1.8	-1.6	
6558	725220	5442160	1.7	-2.0		6559	725230	5441340	1.9	-1.8	
6560	724440	5441100	3.4	0.0		6561	723920	5441190	2.2	-1.2	
6562	723660	5441370	1.8	-1.6		6563	722830	5441230	2.5	-0.9	
6565	722160	5441640	2.1	-2.0		6566	721510	5442230	1.1	-3.0	
6567	721250	5442580	3.3	-0.9		6568	720820	5442520	2.6	-1.6	
6569	720070	5442400	2.9	-1.9		6570	704360	5441830	7.0	-1.1	
6571	703510	5442080	13.8	5.7		6572	704060	5442640	30.6	23.1	
6573	703810	5443150	7.0	-0.5		6574	703990	5443210	4.7	-2.8	
6575	704050	5443670	3.1	-4.4		6576	703690	5444270	4.7	-2.8	
6577	703910	5444800	4.5	-3.0		6578	703730	5445170	3.7	-3.1	
6579	703980	5445590	6.7	-0.1		6581	703810	5445940	6.9	0.1	

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
6582	703810	5446570	9.9	3.1		6583	703950	5447280	4.5	-2.3	
6584	704020	5447700	2.6	-4.7		6585	695540	5495640	28.3	11.8	
6586	695250	5496060	35.2	18.7		6587	694690	5496020	35.1	18.7	
6588	708380	5432200	24.9	14.5		6589	708950	5431780	16.8	6.4	
6590	709400	5431630	16.3	5.9		6591	709300	5431370	12.0	1.6	
6592	709620	5431400	13.1	2.7		6593	710230	5431500	7.3	-2.0	
6594	710970	5431850	5.9	-3.4		6595	711640	5431670	5.2	-4.1	
6597	712510	5431930	4.4	-3.2		6598	713360	5432250	7.5	-0.1	
6599	714080	5432520	5.7	-1.2		6600	714090	5432690	8.8	1.9	
6601	714520	5432840	5.9	-1.0		6602	715660	5433250	6.0	0.3	
6603	716650	5434080	6.4	0.7		6604	717200	5434960	3.8	-1.9	
6605	717690	5435710	4.9	-0.4		6606	710190	5494700	19.1	4.4	
6607	708260	5493790	3.1	-11.9		6608	709060	5493660	14.3	-0.7	
6609	709500	5493330	24.1	9.1		6610	709730	5493670	17.1	2.1	
6611	709600	5492580	15.7	0.7		6613	710250	5492070	10.7	-2.7	
6614	730300	5438600	8.1	2.4		6615	726960	5434780	3.7	-2.7	
6616	726800	5434300	6.9	0.5		6617	724940	5433730	106.0	99.7	
6618	723840	5434680	5.7	-0.6		6619	723030	5435720	6.5	1.1	
6620	723840	5432540	4.8	-1.5		6621	723770	5433400	6.6	0.3	
6622	721990	5431990	-1.0	0.0		6623	721150	5432710	-1.0	0.0	
6624	719750	5433980	4.4	-1.0		6625	709720	5491960	11.2	-3.0	
6626	709050	5491710	11.2	-3.0		6627	709290	5491250	19.9	5.7	
6629	708850	5490840	13.2	-1.0		6630	708420	5490110	13.1	-1.1	
6631	708210	5489560	21.9	9.5		6632	653560	5471300	0.7	-1.4	
6633	653760	5471590	5.0	2.9		6634	653990	5471550	3.3	1.2	
6635	653940	5471920	1.4	-0.7		6636	707430	5441210	29.5	21.4	
6637	707500	5441730	7.3	-0.2		6638	707680	5442260	4.1	-3.4	
6639	707920	5442360	4.0	-3.5		6640	708320	5443190	3.7	-2.5	
6641	708760	5443130	4.6	-1.6		6642	709240	5443360	7.7	1.5	
6643	710220	5443710	6.6	1.4		6645	710400	5443770	6.6	1.4	
6646	710940	5444500	7.3	2.1		6647	710730	5444460	5.8	0.6	
6648	711140	5445190	6.0	1.2		6649	690270	5508280	26.3	19.7	
6650	689770	5507940	5.4	-0.6		6651	689690	5507610	7.3	1.3	
6652	690060	5507390	6.4	-1.2		6653	690060	5506640	8.5	-0.8	
6654	703520	5440390	1.5	-6.6		6655	702720	5440970	11.6	3.5	
6656	702580	5440730	6.0	-2.1		6657	702700	5441650	5.9	-2.2	
6658	702430	5441780	6.8	-0.9		6659	702170	5441780	12.1	4.4	
6661	701910	5442510	6.9	-0.5		6662	701530	5442940	5.5	-1.9	
6663	701570	5443410	7.3	-0.1		6664	701410	5443530	10.7	3.3	
6665	701790	5444090	7.1	-0.3		6666	701950	5444420	12.1	4.7	
6667	701790	5444870	8.3	0.9		6668	701680	5445460	6.1	-0.7	
6669	701500	5446060	11.0	4.2		6670	701150	5446760	7.9	1.1	
6671	701120	5447270	8.3	1.5		6672	695830	5501320	34.6	17.3	
6673	695390	5501010	31.0	13.7		6674	695350	5500780	23.2	5.9	
6675	694850	5501160	28.6	11.7		6677	694650	5501410	20.9	4.0	
6678	694040	5501160	16.8	-0.1		6679	693740	5501290	30.1	13.2	
6680	693690	5501520	38.7	21.8		6681	721870	5440160	5.7	1.5	
6682	720960	5440160	4.3	0.2		6683	720090	5440720	4.2	0.1	
6684	719420	5441180	5.2	0.4		6685	719050	5441530	5.5	0.7	
6686	718610	5441960	3.9	-0.9		6687	712890	5498750	4.9	-7.4	
6688	713040	5499310	7.7	-4.6		6689	712430	5498520	27.2	11.4	
6690	712330	5497960	48.6	32.8		6691	711720	5497700	40.7	24.9	
6693	711600	5497110	28.3	12.2		6694	711690	5496670	18.1	2.0	
6695	711140	5496260	18.8	2.7		6696	710740	5495600	16.8	0.7	
6697	710920	5495390	22.7	15.6		6698	710450	5495120	17.7	1.6	

SAMPLE EAST	NORTH	U OR U RS	SAMPLE EAST	NORTH	U OR U RS				
6699	653760	5472120	1.4	-0.7	6700	654090	5472230	1.0	-1.1
6701	654510	5472850	1.6	-0.4	6702	654650	5473230	2.0	-0.0
6703	655140	5473220	1.7	-0.1	6704	655650	5473240	1.5	-0.3
6705	656530	5473520	1.5	-0.3	6706	657310	5473470	2.6	0.8
6707	716760	5442680	5.7	1.4	6709	716970	5442790	6.7	2.4
6710	716680	5443390	5.2	0.9	6711	716870	5443620	3.7	-0.6
6712	716170	5443610	3.8	-0.5	6713	716450	5444380	2.2	-2.1
6714	716340	5444230	5.9	1.6	6715	716160	5445090	5.6	2.0
6716	716040	5445880	5.0	1.4	6717	716790	5442420	4.6	-0.4
6718	719940	5442560	9.2	4.4	6719	719260	5442340	7.3	2.5
6720	718720	5442210	4.3	-0.5	6721	717970	5442330	3.6	-1.2
6722	717330	5442370	1.4	-3.6	6723	705360	5499800	6.5	-9.1
6725	706130	5499460	47.5	31.9	6726	706810	5499200	74.1	58.5
6727	709430	5498440	30.0	13.2	6728	713140	5499880	22.6	10.3
6729	714490	5499590	5.3	-7.0	6730	713230	5496920	27.0	14.0
6731	717800	5490440	6.4	-2.8	6732	717910	5488770	6.5	-1.6
6733	719600	5487000	5.7	-1.3	6734	718710	5485770	5.8	-1.2
6735	712850	5484000	0.5	-5.5	6736	712690	5485660	4.2	-2.2
6737	714450	5487940	1.8	-7.5	6738	714450	5488000	2.2	-7.1
6739	712530	5489660	11.3	2.0	6741	711100	5489920	30.2	18.9
6742	715340	5492100	16.1	6.3	6743	712150	5494030	4.9	-9.8
6744	713440	5493670	2.8	-9.8	6745	714930	5498620	6.5	-5.8
6746	715970	5499340	3.7	-5.3	6747	663880	5506970	1.7	0.0
6748	693950	5496180	12.1	-4.3	6749	693350	5496670	20.5	4.1
6750	692580	5497100	21.9	5.5	6751	691670	5497160	17.0	2.4
6752	691240	5497640	1.5	-14.5	6753	690560	5497960	17.0	1.0
6754	689960	5498520	32.5	18.5	6755	679850	5488790	25.3	22.1
6757	681230	5488410	3.1	-1.0	6758	682210	5486210	5.1	0.8
6759	690050	5506000	23.7	14.4	6759	690300	5505710	10.1	0.8
6761	690670	5504710	26.6	13.4	6762	690780	5503410	28.0	14.8
6763	661690	5475730	1.1	-0.1	6764	662520	5475960	1.3	-0.1
6765	663230	5476160	1.3	-0.1	6766	663820	5476510	1.4	0.0
6767	664250	5476390	1.1	-0.3	6768	664660	5477020	1.6	0.2
6769	665270	5477710	1.5	0.0	6770	665790	5477130	1.5	-0.0
6771	665870	5477570	1.6	0.1	6773	665280	5478050	1.5	0.0
6774	665440	5478950	1.3	-0.2	6775	693110	5501100	31.8	14.9
6775	692280	5501050	40.2	24.5	6777	691560	5500730	27.3	11.6
6778	691350	5500880	53.7	38.0	6779	655460	5498440	2.9	0.8
6780	655840	5499040	2.4	0.3	6781	655670	5499160	2.1	0.0
6782	682320	5483800	2.3	-1.8	6783	682550	5489070	3.7	-1.5
6784	657160	5479220	1.0	-0.9	6785	657040	5478950	0.7	-1.2
6786	658090	5478460	0.6	-0.6	6787	659040	5478250	0.7	-0.5
6789	659650	5478760	0.7	-0.5	6790	657360	5477230	1.8	-0.4
6791	657240	5477450	0.8	-1.4	6792	657630	5476830	1.0	-0.3
6793	658200	5476640	0.7	-0.6	6794	658000	5476830	1.6	0.3
6795	658770	5477040	1.0	-0.3	6796	659440	5477210	0.5	-0.8
6797	659600	5476980	0.7	-0.6	6798	659760	5476510	1.4	0.1
6799	660240	5476270	1.1	-0.1	6800	660860	5475670	1.1	-0.1
6801	690030	5529510	0.8	-1.2	6802	690380	5529200	1.6	-0.4
6803	690810	5529110	1.2	-0.8	6805	690710	5528860	2.2	0.2
6806	690790	5528010	1.5	-0.5	6807	690810	5527450	1.2	-1.5
6808	690740	5527260	2.0	-0.7	6809	690970	5527070	2.3	-0.4
6810	691420	5526850	1.4	-1.3	6811	707210	5493450	43.4	27.8
6812	707400	5498250	52.2	36.6	6813	708500	5497810	21.3	4.5
6814	708240	5497640	46.0	29.2	6815	708320	5497040	12.9	-3.8

SAMPLE EAST	NORTH	U DR	U RS	SAMPLE EAST	NORTH	U DR	U RS
6816	708840	5496920	17.4 0.7	6817	709040	5496760	17.9 1.2
6818	709420	5496110	19.2 2.5	6819	709840	5495280	9.9 -6.8
6821	710220	5495200	20.4 4.3	6822	657360	5465760	2.2 0.7
6823	660070	5479430	0.6 -0.6	6824	660780	5479570	0.8 -0.4
6825	661190	5479120	1.5 0.3	6826	661520	5478670	1.2 -0.0
6827	661400	5478300	1.1 -0.1	6828	662170	5478460	1.5 0.3
6829	662340	5473820	1.2 -0.0	6830	662650	5478880	1.6 0.2
6831	662780	5479600	1.1 -0.3	6832	662900	5480350	2.3 0.8
6833	663180	5480300	1.5 -0.0	6834	663480	5480980	2.1 0.6
6835	663700	5481350	1.3 -0.2	6837	694340	5524560	1.4 -3.9
6838	694580	5525050	5.6 2.2	6839	694290	5525250	2.9 -0.5
6840	694000	5525730	3.1 -0.3	6841	693720	5526480	2.5 -0.9
6842	693610	5527360	2.8 -0.6	6843	697920	5454570	5.4 -2.9
6844	693320	5527640	2.5 -0.0	6845	693280	5528390	2.9 0.4
6845	693540	5528910	3.9 1.4	6847	682290	5484180	1.5 -2.2
6848	682500	5483820	11.9 7.2	6849	659640	5491200	1.3 -0.4
6850	659000	5498780	1.7 -0.3	6851	659540	5498290	1.8 -0.2
6853	707860	5526650	1.5 -1.0	6854	708410	5526770	2.3 -0.2
6855	708430	5526170	1.8 -0.7	6856	709060	5526030	1.6 -0.9
6857	655810	5499510	5.1 3.0	6858	656150	5499710	2.4 0.3
6859	656540	5500000	1.5 -0.6	6859	656350	5500000	2.2 0.1
6861	656830	5500290	1.7 -0.4	6852	657350	5500150	1.7 -0.4
6863	658180	5499600	1.7 -0.3	6854	658120	5499840	2.2 0.2
6865	658500	5499180	1.9 -0.1	6856	658250	5498910	1.6 -0.4
6867	663900	5505050	1.3 -0.4	6869	666850	5504300	0.5 -1.2
6870	668830	5507280	1.0 -0.7	6871	666450	5499410	2.1 0.1
6872	656420	5480220	0.9 -0.3	6873	652330	5475280	1.0 -1.0
6874	650730	5475280	2.8 0.8	6875	655190	5467780	1.4 -0.3
6876	655170	5466930	2.1 0.6	6877	655300	5465730	1.0 -0.5
6878	655710	5465150	0.5 -1.0	6879	681730	5509900	0.5 -0.7
6880	682220	5510660	0.5 -0.7	6881	682980	5511220	0.8 -0.7
6882	684600	5510710	1.3 -0.2	6883	685050	5509530	1.8 -2.4
6885	687200	5507930	4.7 0.5	6886	687730	5507760	1.8 -4.2
6887	688500	5506870	1.6 -6.7	6888	657720	5473340	1.5 0.0
6889	657820	5472830	1.6 0.1	6890	658210	5472770	1.7 0.2
6891	658610	5473360	1.4 -0.1	6892	659310	5473430	1.3 -0.2
6893	659580	5474060	1.3 -0.2	6894	660390	5474820	1.3 -0.1
6895	660990	5475140	1.5 0.3	6896	691610	5527120	2.4 -0.3
6897	691820	5527270	1.8 -0.9	6898	692340	5527250	1.8 -0.9
6899	692850	5527370	2.5 -0.9	6901	665120	5479770	1.3 -0.2
6902	665320	5479980	1.5 0.0	6903	664730	5480620	1.4 -0.1
6904	664380	5481250	1.2 -0.3	6905	706910	5526490	2.0 -0.4
6906	706220	5526380	1.5 -0.9	6907	705700	5527140	1.9 -0.5
6908	658140	5465540	1.1 -0.4	6909	658720	5466670	2.2 0.7
6910	658990	5467370	1.4 -0.1	6911	659230	5467500	0.8 -0.8
6912	659820	5468540	1.7 0.1	6913	660150	5468530	1.4 -0.1
6914	661130	5469200	1.4 -0.1	6915	661230	5470080	1.7 0.3
6917	661450	5470810	1.5 0.1	6918	661430	5472150	1.4 -0.0
6919	661690	5472150	1.5 0.1	6920	662240	5472710	1.4 0.0
6921	662800	5473360	1.4 -0.0	6922	663160	5473800	1.8 0.4
6923	663120	5474410	1.5 0.1	6924	662500	5466260	1.4 -0.1
6925	662790	5466330	1.5 0.0	6926	662970	5466810	1.3 -0.2
6927	663170	5467340	1.3 -0.2	6928	663360	5467440	1.9 0.4
6929	663050	5467400	2.0 0.5	6930	663350	5467680	1.8 0.3
6931	663190	5468040	1.1 -0.4	6933	662850	5468750	1.4 -0.1

SAMPLE EAST	NORTH	U OR	U RS	SAMPLE EAST	NORTH	U OR	U RS
6934	662830	5469280	1.4 -0.1	6935	663050	5469400	1.2 -0.3
6936	662770	5470160	1.3 -0.2	6937	662960	5470940	1.6 0.1
6938	663270	5471160	1.5 0.0	6939	662800	5471950	1.5 0.0
6940	662490	5472520	1.3 -0.1	6941	662950	5475520	1.5 0.1
6942	741300	5432960	2.5 -1.7	6943	741290	5433760	3.1 -1.1
6944	741550	5434670	2.2 -2.0	6945	709840	5526190	2.1 -0.4
6946	710480	5525780	2.3 -0.4	6947	710900	5526350	2.1 -0.6
6949	710970	5527250	1.3 -1.4	6950	711110	5527890	2.1 -0.3
6951	702490	5434600	7.2 1.2	6952	702030	5435050	6.5 0.2
6953	705760	5528160	1.6 -0.4	6954	705510	5527870	1.9 -0.1
6955	705020	5528980	1.7 -0.3	6956	705210	5529880	1.7 -0.3
6957	704890	5531050	1.4 -0.7	6958	705190	5530940	1.7 -0.2
6959	705420	5531910	2.1 0.2	6950	706070	5532410	1.4 -0.5
6961	705860	5532430	1.6 -0.3	6952	701000	5453270	20.5 10.5
6963	700700	5453450	9.2 -0.8	6955	700650	5453250	9.3 -0.7
6966	688220	5508550	2.5 -3.5	6957	687730	5513420	1.0 -2.1
6968	685580	5513960	1.2 -0.4	6959	686250	5514910	1.2 -0.4
6970	696970	5524140	12.2 6.0	6971	697070	5526810	2.9 -1.9
6972	698410	5528690	9.0 4.3	6973	698950	5526420	16.6 10.8
6974	701900	5526710	2.9 -1.7	6975	703120	5524860	0.5 -3.0
6976	701040	5531440	2.4 -0.2	6977	699730	5533280	1.6 -0.4
6978	693220	5529430	4.6 2.1	6979	693390	5529160	1.3 -1.2
6981	699630	5530270	2.8 -0.1	6982	698410	5529820	1.8 -2.9
6983	696100	5528370	2.1 -1.6	6984	693220	5529770	1.6 -0.9
6985	713020	5437630	7.8 1.7	6986	713970	5435800	4.5 -2.3
6987	706600	5525010	6.5 4.1	6988	706390	5524360	1.9 -1.4
6989	705950	5523900	1.7 -1.6	6990	706030	5523470	1.5 -1.8
6991	706200	5522830	1.9 -1.4	6992	707190	5522320	2.5 -1.9
6993	707810	5522070	2.6 -2.1	6994	708490	5521280	2.2 -2.5
6995	709700	5521300	2.2 -2.5	6997	687290	5436220	0.8 -0.8
6998	711990	5434170	10.4 1.7	6999	711710	5434730	6.0 -2.7
7000	710880	5436450	7.3 -0.3	7934	679080	5452350	-1.0 0.0
7935	679380	5451960	-1.0 0.0	7936	679250	5452050	-1.0 0.0
8001	701240	5431160	3.4 -2.6	8002	700470	5431540	3.9 -2.1
8003	699900	5431660	1.8 -3.7	8004	700000	5431950	15.7 9.7
8005	699550	5432370	2.9 -2.6	8006	698880	5433010	4.1 -1.5
8007	698720	5433760	2.0 -3.6	8008	698420	5433930	4.0 -1.6
8009	698330	5434640	20.3 14.7	8010	698000	5435070	5.2 -0.5
8011	697690	5435550	3.8 -1.9	8025	698260	5452990	5.4 -2.9
8012	718600	5502830	-1.0 0.0	8013	718630	5502690	-1.0 0.0
8014	718680	5502530	-1.0 0.0	8015	718720	5502300	-1.0 0.0
8016	718800	5502190	-1.0 0.0	8021	681650	5450800	-1.0 0.0
8022	679840	5451430	-1.0 0.0	8023	679690	5451710	-1.0 0.0
8211	649330	5496050	-1.0 0.0	8212	649360	5496210	-1.0 0.0
8213	649340	5496320	1.9 -0.5	8026	698700	5452920	2.4 -5.9
8027	698460	5452100	4.5 -3.2	8028	698700	5451870	6.6 -1.1
8029	698520	5451440	10.3 2.6	8030	697960	5451320	5.0 -2.7
8031	697760	5451290	4.9 -2.8	8032	697780	5450420	6.4 -1.3
8033	698250	5449620	4.8 -2.2	8034	698320	5448600	5.1 -1.9
8035	699490	5448370	4.8 -2.2	8036	699530	5448520	20.8 13.3
8047	698060	5453680	6.8 -1.5	8039	751470	5437450	2.6 -1.6
8040	751580	5438090	2.3 -1.9	8041	751590	5438970	3.3 -0.9
8046	751650	5439250	2.3 -1.9	8048	701620	5434830	6.4 0.4
8049	700650	5434950	5.2 -0.8	8050	699840	5435320	5.5 -0.2
8051	699440	5435810	3.5 -2.2	8052	699100	5435760	5.7 -0.0

SAMPLE EAST	NORTH	U	OR	U	RS	SAMPLE EAST	NORTH	U	OR	U	RS
8053	698300	5435970	4.1	-1.5		8054	697650	5435800	8.7	3.0	
8055	697100	5436110	4.5	-0.8		8056	696540	5436490	3.1	-2.2	
8057	695720	5437010	3.2	-2.1		8058	695150	5437410	4.0	-1.3	
8066	700860	5452840	10.8	0.8		8059	731950	5496070	9.8	0.5	
8060	732780	5495210	10.2	1.1		8061	732940	5495060	10.5	1.4	
8062	733580	5494880	16.4	6.9		8063	741730	5480040	12.8	6.3	
8064	741750	5479890	14.3	7.5		8065	741770	5479750	8.1	1.4	
8067	701000	5452610	11.6	1.6		8068	701240	5452610	28.1	18.1	
8069	702630	5451220	12.2	3.2		8070	701360	5451840	14.8	6.0	
8071	702390	5451080	8.9	0.1		8072	702930	5450440	6.0	-3.0	
8073	702980	5450060	6.6	-2.4		8074	703070	5449650	6.1	-1.2	
8075	703370	5449740	9.0	1.7		8076	703480	5449230	7.9	0.6	
8077	703750	5448920	1.3	-6.0		8078	703790	5448550	33.4	26.1	
8079	703540	5448100	10.6	3.3		8081	711040	5438600	4.4	-2.4	
8082	709770	5437130	1.6	-6.8		8101	687730	5435710	0.5	-1.7	
8083	741740	5480650	4.9	-1.6		8084	741690	5480530	7.8	1.3	
8085	741690	5480370	6.0	-0.5		8086	650820	5493760	1.7	-0.4	
8087	650720	5493750	1.4	-0.7		8088	650590	5493790	1.4	-0.7	
8089	650190	5493660	1.1	-1.0		8090	650060	5493590	1.5	-0.6	
8091	650040	5493500	1.5	-0.6		8092	650020	5493500	1.1	-1.0	
8093	650060	5493390	1.7	-0.4		8094	649810	5493650	2.3	-0.1	
8095	649690	5493660	2.6	0.2		8096	649540	5493720	2.8	0.4	
8097	649460	5493610	3.2	0.8		8098	649530	5493580	3.0	0.6	
8099	648870	5493760	3.1	0.7		8117	649730	5495850	2.0	-0.4	
8102	687960	5435710	0.6	-1.6		8103	688760	5435290	0.6	-1.6	
8104	689710	5434890	0.7	-1.7		8105	690250	5435230	0.6	-2.6	
8106	690360	5434890	0.5	-2.6		8107	690780	5434820	0.6	-2.5	
8108	691750	5434710	0.9	-2.2		8109	692690	5434760	3.6	-0.8	
8110	692720	5434660	1.1	-3.3		8111	693350	5434890	1.0	-3.4	
8112	693780	5435440	12.1	7.7		8113	693750	5435600	12.2	7.8	
8114	693520	5435920	19.9	15.5		8115	694260	5434960	2.8	-1.6	
8126	688960	5452500	5.9	2.3		8127	689150	5452390	2.0	-1.6	
8119	650860	5494710	1.9	-0.2		8120	651510	5493930	2.4	0.3	
8128	689860	5452730	2.3	-1.3		8129	690210	5453060	3.1	-1.0	
8130	690660	5452710	3.1	-1.0		8131	691280	5452140	3.0	-1.1	
8132	691460	5451770	2.4	-1.7		8133	692020	5451540	3.2	-0.9	
8134	692520	5451270	2.9	-1.9		8135	692870	5450620	5.5	0.7	
8136	693390	5450050	17.1	12.3		8138	688670	5440390	3.0	-0.5	
8139	689060	5440140	2.1	-1.4		8140	689100	5440030	1.6	-1.9	
8141	689460	5439880	2.0	-0.7		8142	689600	5439900	2.1	-0.6	
8143	689560	5439390	1.5	-1.2		8144	690320	5438850	1.7	-2.2	
8145	690760	5438460	1.1	-2.8		8146	691020	5438560	1.8	-2.1	
8147	691240	5438780	2.4	-1.5		8148	691680	5438530	1.8	-2.1	
8149	691600	5438390	1.7	-2.2		8185	693610	5456080	6.8	2.0	
8186	693780	5455120	9.8	5.0		8187	694020	5455110	5.9	1.1	
8188	693660	5454330	3.4	-1.4		8189	693800	5454430	5.9	1.1	
8190	693820	5453550	3.6	-1.2		8191	693700	5453630	4.3	-0.5	
8192	693290	5452780	3.2	-1.6		8193	692590	5452190	4.5	-0.3	
8194	692690	5451310	6.0	1.2		8214	649640	5496610	5.8	3.4	
8215	649280	5496910	2.5	0.1		8216	649190	5497230	2.7	0.3	
8217	649160	5497960	2.1	-0.2		8218	650770	5496420	2.1	-0.1	
8219	672270	5536890	0.6	-0.6		8220	672060	5536850	1.7	0.5	
8223	672000	5536690	0.7	-0.5		8224	671840	5536540	1.2	0.0	
E4160	735250	5443760	-1.0	0.0		E4682	731170	5445850	-1.0	0.0	
E4686	732040	5445530	-1.0	0.0		E4690	732930	5445200	-1.0	0.0	

PROJECT PRINIC STREAM GEOCHEMISTRY

U	CLASS LIM	5.5	8.5	11.5	14.5	99999.9
U		5867 79.3	652 8.8	321 4.3	176 2.4	385 5.2
U	CUMUL	79.3	88.1	92.4	94.8	100.0

DU	CLASS LIM	45.0	67.0	89.0	111.0	99999.9
DU		5836 74.9	1053 13.5	436 5.6	202 2.6	262 3.4
DU	CUMUL	74.9	88.4	94.0	96.6	100.0

UN	CLASS LIM	65.0	87.0	109.0	131.0	99999.9
UN		5992 76.9	977 12.5	320 4.1	163 2.1	337 4.3
UN	CUMUL	76.9	89.5	93.6	95.7	100.0

UD	CLASS LIM	2.0	3.0	4.0	6.0	99999.9
UD		5885 75.6	812 10.4	578 7.4	109 1.4	405 5.2
UD	CUMUL	75.6	86.0	93.4	94.8	100.0

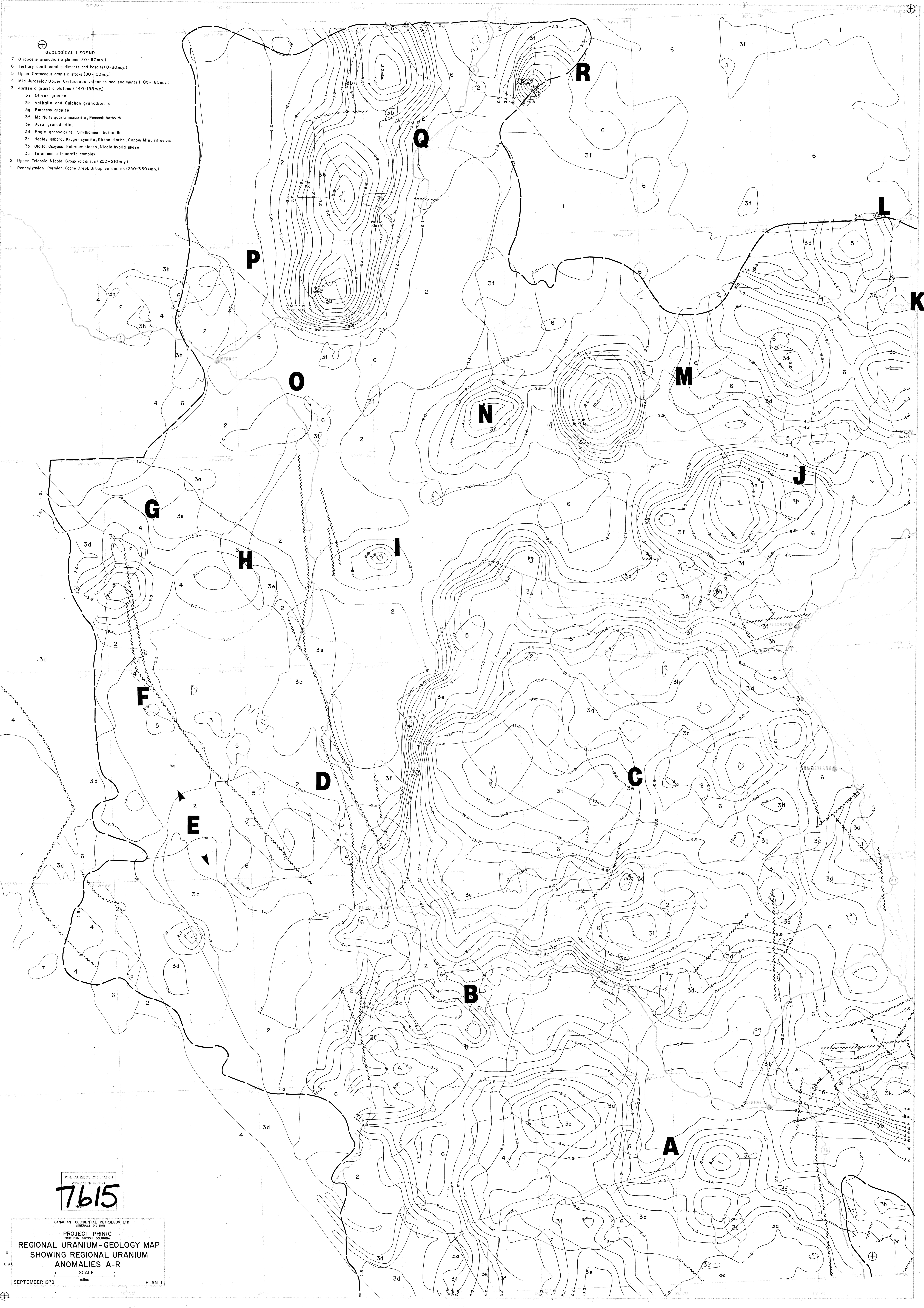
NUMBER OF SAMPLES = 7789

PROJECT PRINIC STREAM GEOCHEMISTRY

U HISTOGRAM AND CUMULATIVE FREQUENCY PERCENTAGES

INTERV PPM	FREQ.	CUM. FR	
	0.0		
0.50	0.78	0.0	*
0.60	0.51	0.78	*
0.70	0.80	1.30	*
0.80	1.11	2.09	**
0.90	1.97	3.20	***
1.00	6.34	5.17	*****
1.20	17.77	11.51	*****
1.60	14.05	29.28	*****
2.00	10.94	43.33	*****
2.50	9.86	54.28	*****
3.20	7.27	64.14	*****
4 J	6.00	71.41	*****
5.00	5.32	77.41	*****
6.30	4.59	82.73	*****
8.00	3.38	87.33	*****
10.00	2.68	90.70	*****
12.50	2.09	93.38	*****
16.00	1.50	95.47	**
20.00	0.89	96.97	*
25.00	0.70	97.87	*
1.50	0.42	98.57	
0.00	0.43	98.99	
0.00	0.19	99.42	
3.00	0.15	99.61	
0.00	0.07	99.76	
0.00	0.18	99.82	
3.90		100.00	

NUMBER OF SAMPLES = 7401



- GEOLOGICAL LEGEND**
- 7 Oligocene granodiorite plutons (20-60m.y.)
 - 6 Tertiary continental sediments and basalts (0-80m.y.)
 - 5 Upper Cretaceous granitic stocks (80-100m.y.)
 - 4 Mid Jurassic/Upper Cretaceous volcanics and sediments (105-160m.y.)
 - 3 Jurassic granitic plutons (140-195m.y.)
 - 3i Oliver granite
 - 3h Vahalla and Guichen granodiorite
 - 3g Empress granite
 - 3f Mc Nutty quartz monzonite, Penask batholith
 - 3e Jura granodiorite
 - 3d Eagle granodiorite, Similkameen batholith
 - 3c Hedley gabbro, Kruger syenite, Kinton diorite, Copper Mtn. intrusives
 - 3b Olatto, Oaypos, Fairview stocks, Nicola hybrid phase
 - 3a Tulameen ultramafic complex
 - 2 Upper Triassic Nicola Group volcanics (200-210m.y.)
 - 1 Pennsylvanian-Ferrian, Cache Creek Group volcanics (250-330m.y.)

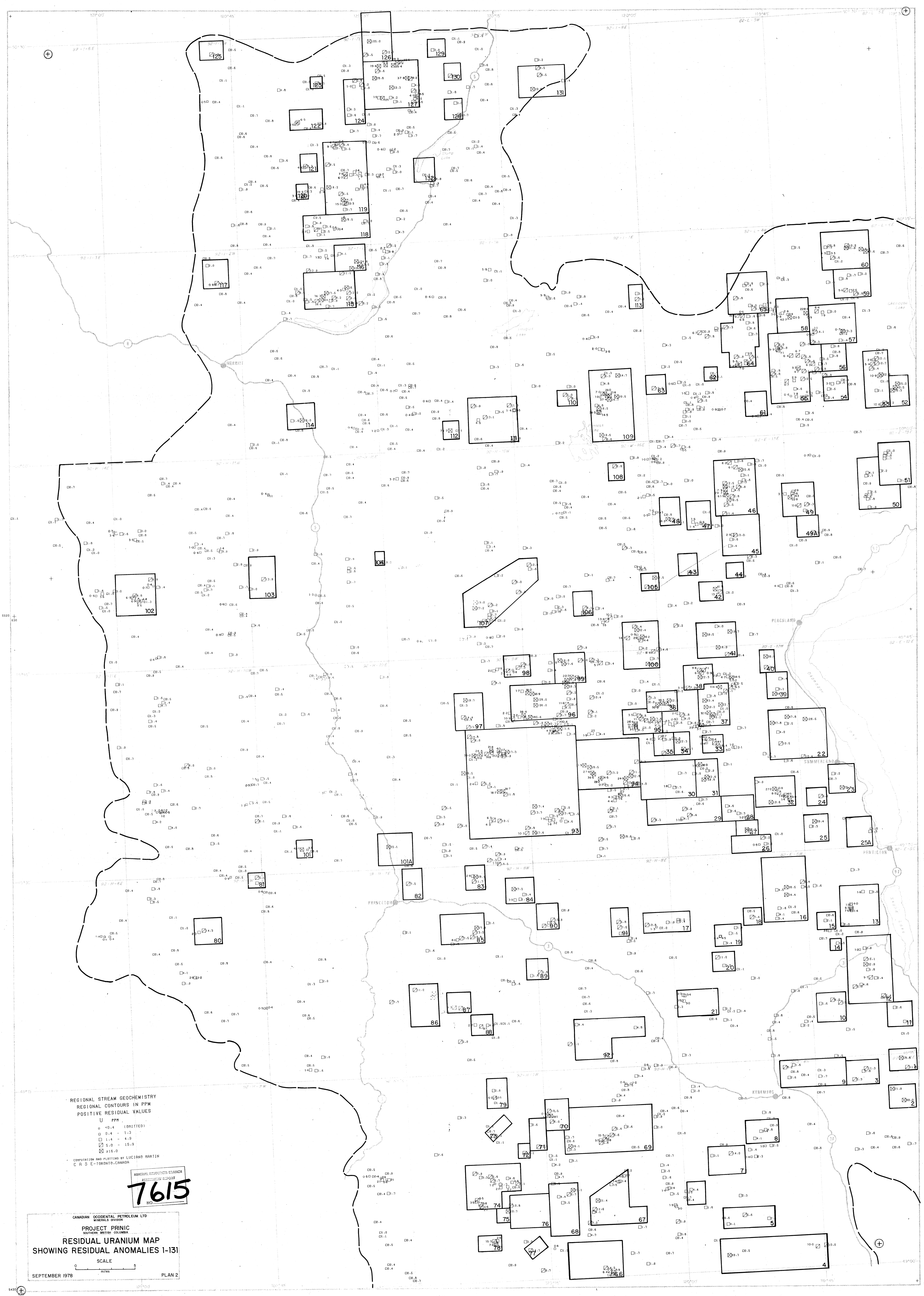
7615

CANADIAN OCCIDENTAL PETROLEUM LTD.
MINERALS DIVISION

PROJECT PRINIC
SOUTHERN BRITISH COLUMBIA

REGIONAL URANIUM-GEOLOGY MAP
SHOWING REGIONAL URANIUM
ANOMALIES A-R

SCALE 1:50,000
SEPTEMBER 1978 PLAN 1



REGIONAL STREAM GEOCHEMISTRY
 REGIONAL CONTOURS IN PPM
 POSITIVE RESIDUAL VALUES
 U PPM

- < 0.4 (OMITTED)
- 0.4 - 1.3
- 1.4 - 4.9
- 5.0 - 15.9

COMPILED AND PLOTTED BY LUCIANO MARTIN
 C. S. C. - TORONTO, CANADA

7615
 NO.

CANADIAN OCCIDENTAL PETROLEUM LTD.
 MINERALS DIVISION
PROJECT PRINIC
 RESIDUAL URANIUM MAP
 SHOWING RESIDUAL ANOMALIES 1-131
 SCALE
 0 5
 MILES
 SEPTEMBER 1978 PLAN 2

