# GEOPHYSICAL REPORT ON

# VLF-EM SURVEY

# OVER ELK CLAIM GROUP

# MOUNT MERCER AREA

# NEW WESTMINSTER MINING DIVISION

# BRITISH COLUMBIA



| | |
|---|---|
| **PROPERTY:** | 16 km EES of Chilliwack, B.C. in Mount Mercer Area<br>49 07' North Latitude<br>121 44' West Longitude<br>N.T.S. 92H/4 |
| **WRITTEN FOR:** | DOMINION PIONEER RESOURCES LTD.<br>#816-850 West Hastings Street<br>Vancouver, B.C. V6C 1E2 |
| **WRITTEN BY:** | Andrew Rybaltowski, Geophysicist |
| **DATED:** | February 1990 |

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# INTRODUCTION

This Report describes procedures and results of the geophysical programme consisting of a VLF-EM Survey. The survey was carried out over the Elk Claim Group located 16 km Southeast of Chilliwack, B.C., New Westminster Mining Division. The geophysical survey was conducted by Dominion Pioneer Resources Ltd. of Vancouver, B.C.

Duration of the programme was from November 26 to December 4, 1989 including mobilization from Vancouver, field activities and demobilization. The survey was conducted by a crew of three men: A. Anczykowski - instrument operator, G. Price - line/compass man and A. Michaelis - assistant under the supervision of Richard S. Simpson.

A total of 14.9 km of grid lines and a base line were established on the Property. Time and budget constrains resulted in a reconnaissance character of this geophysical survey.

The main purpose of the geophysical programme was to establish effectiveness of the VLF-EM method in delineating lithological and structural units on the Property partially covered by glacial and recent alluvial deposits.

The underlying exploratory objective was to delineate EM conductors caused by sulphidic mineralization with possible association to gold mineralization.

In addition, results of VLF-EM survey were used to set up a background for further development of the Elk Claim Group.

## CONCLUSIONS

The 1989 geophysical programme has proven that the VLF-EM survey provides an effective tool for the reconnaissance exploration of the Elk Claim Group.

The rock units present on the Property are very resistive thus even small and weak conductors are creating noticeable geophysical anomalies. Moreover, the Jim Creek (NLK) transmitter provides a very strong signal in the area of the Elk Claim Group. Eventually, direction to that station is consistent with the trend of major faults in the Property area.

The observed geophysical response does not indicate presence of massive sulphides within the surveyed grid area.

The VLF-EM conductors are probably indicating fault and fracture zones.

Mineralization in the region of the Elk Claim Group is believed to be structurally controlled. That directs exploration efforts to observation of major fault zones.

A question of the causative source of the encountered EM anomalies can be positively answered only by direct geological observations.

Strong terrain effects within the surveyed area and a pioneer character of this EM survey require careful examinations of even weak and questionable conductors.

The EM survey over the Elk Claim Group revealed existence of weak conductors, mainly of a limited strike length.

The most important features are conductive zones located in the eastern part of the survey grid. Those conductors are possibly distorted by crossfaulting.

## PROPERTY AND OWNERSHIP

The Property consists of 5 mineral claims totalling 100 units as outlined below:

| Claim Name | No. Units | Record No. | Expiry Date |
|---|---|---|---|
| Elk #1 | 20 | 3517 | Dec 04, 1989 |
| Elk #2 | 20 | 3523 | Dec 04, 1989 |
| Elk #3 | 20 | 3518 | Dec 07, 1989 |
| Elk #4 | 20 | 3520 | Dec 09, 1989 |
| Miner #1 | 20 | 3521 | Dec 09, 1989 |

The above mineral claims were grouped on 4th of December 1989 under the name of the Elk Claim Group.

Expiry dates shown above do not take into account the 1989 VLF-EM survey discussed here as being accepted for assessment credits.

The Property is registered in the name of Richard S. Simpson of Vancouver, B.C. and beneficially owned by Dominion Pioneer Resources Ltd.

## LOCATION AND ACCESS

The Elk #1, Elk #2, Elk #3, Elk #4 and Miner #1 mineral claims, constituting the Elk Claim Group, are located in southern British Columbia, 16 kilometers southeast of Chilliwack, in the New Westminster Mining Division.

Location of the above claims is shown on Map 1.

The geographical coordinates of the Property are 49 07' north latitude and 121 44' west longitude.

The Property is accessible from Trans Canada Highway near Chilliwack by the Vedder Crossing Road and then by the Chilliwack Lake Road. After 26.4 km from Vedder Crossing, the Chilliwack Lake Road recrosses Chilliwack River and very shortly thereafter there is a logging road going to the north. After 2 km the logging road meets the Foley Lake Road. At that crossing one needs to turn west and stay on the Foley Lake Road for another 4.6 km where the Mount Thurston Road goes off to the north. After 7 km along the Mount Thurston Road the Property is reached.

Northern part of the Property (Elk #2 and Elk #3 claims) is also accessible from Bridal Falls on Trans Canada Highway by a system of rough, logging roads. The claim Elk #1 is not accessible by road.

The main logging roads on the Property are in good condition. The secondary logging roads are accessible only in good weather conditions. Some places on the Property are extremely difficult to reach due to the steep terrain and bush.

## PHYSIOGRAPHY

The Property lies within the northern border of the Cascade Mountains, south of Cheam Range. The terrain is very characteristic for a mountainous country: steep, rugged and difficult to reach.

The lowest area of the Property spreads in the upper part of Chipmunk Creek Valley and is elevated from 1000 m to 1200 m above see level. Chipmunk Creek crosses Miner #1 and Elk #4 claims in northern direction.

Higher elevations range from 1584 m above see level in the southern part of the Miner #1 claim, to 1520 m in the western part of the Elk #4 claim, to 1729 m in the centre of the Elk #3 claim. The highest elevation point on the Property is located within the Elk #1 claim, at Cheam Peak which reaches 2112 m above see level.

The southern part of the Property is drained by a large Chipmunk Creek, tributary of Chilliwack River. Northern claims are drained by Anderson Creek and Bridal Creek which fall into Fraser River.

The Property is located entirely within relatively high mountains. A deep valley of Chipmunk Creek runs across the Elk #4 claim to the east. Despite years of logging, the Property is in part wooded with fir and spruce. The forest cover varies from immature stands resulting from reforestation program to beautiful, mature stands. Higher areas are usually open to the south allowing to see spectacular views of the Northern Cascades across Chilliwack River Valley.

## HISTORY OF PREVIOUS WORK

Records of any previous geological, geophysical or geochemical works performed on the Property or its portion remain unknown to the author of this Report.

# GEOLOGY

(largely after Monger, 1970)

The Property is located in the Cascade Mountains, south of Cheam Range. According to the GSC Map 12-1969 (Hope - West Half), the predominant basement rock types to be found within the Elk Claim Group belong to two major lithological units: the Chilliwack Group and the Cultus Formation.

Locally, basement units are covered by pleistocene and recent deposits consisting of glacial, glaciofluvial and fluvial gravel, sand and clay, talus and slopewash deposits.

The Paleozoic (Lower Pensylvanian to Lower Permian) Chilliwack Group consists of metamorphosed pelite, sandstone and minor conglomerate, pyroclastic acidic tuff, altered basic volcanic rock - greenstone, limestone and minor chert.

The Chilliwack Group is overlain discomfortably by Upper Triasic rocks of the Cultus Formation.

Bedding on both sides of the contact is parallel and both Mesozoic and Paleozoic rocks have undergone two deformational phases and the same degree of metamorphism.

The Cultus Formation consists of an undivided sequence of pelites and predominantly fine-grained sandstones. The Cultus Formation contains rocks of upper Triasic and Lower and Upper Jurasic age. The rock sequence is homogeneous with no evident physical breaks allowing to subdivide the Formation.

Regionally, gold mineralization is associated with northwest and north trending fault and fracture zones as well as Tertiary plutons intruding major faults.

The Chilliwack Batholith, one of the biggest Tertiary plutons of the area, is located southeast of the Property.

## INSTRUMENTATION AND SURVEY PROCEDURES

For the VLF-EM observations, a VLF-EM receiver Sabre E.M. Model #27 manufactured by Sabre Electronics of Vancouver, British Columbia was utilized.

During the EM survey, the in-phase vertical magnetic component of electromagnetic field was recorded. The above parameter, a tilt angle (tilt of major axis of the polarization ellipse), results totally from the anomalous current flow. The tilt angle is the most often used parameter in VLF-EM prospecting.

During the EM survey on the Elk Claim Group, a signal from one VLF transmitting stations was used. The station was NLK, located in Jim Creek, Washington and operating at frequency of 24.8 kHz. Selection of the transmitting VLF-EM station was dictated by direction of survey lines established at a right angle to expected strike direction of geological structures on the Property.

The Jim Creek station transmitted uninterruptedly for duration of the geophysical programme. Diurnal variations of signal strength were minimal and did not affect progress of observations.

The 1989 geophysical survey grid was established on the Miner #1 claim with use of a hipchain and a compass.

For the entire VLF-EM survey, a distance between survey lines was 50 m and a survey station separation was 25 m.

Location of the geophysical survey is indicated on Map 1.

Claim posts tied-in to the survey grid are shown on Map 4.

## COMPILATION OF DATA

The raw results of the VLF-EM survey over the Elk Claim Group are presented in a form of stack profile plots on Map 2. Tilt angle readings were subsequently Fraser Filtered and are presented in a stack profile form on Map 3.

Fraser Filter is a difference operator commonly used during interpretation of VLF-EM data. An application of Fraser Filter to tilt angle readings results in transformation of zero-crossings into peaks. Furthermore, Fraser Filter acts as a low-pass filter reducing noise.

Fraser Filtered tilt angle measurements are also presented in a form of a contour map (Map 4). In order to separate areas of increased conductivity, only the positive values of filtered data were contoured. The contouring interval is 2 degrees.

Tilt angle observations are susceptible to terrain effects. Due to the rugged topography of the Elk Claim Group, data presentation as well as interpretation of the results take into account terrain effects.

Stack profile plots (Map 2 and Map 3) are not smoothed. The profiles display data points connected with straight lines. This simple procedure allows for an application of the "average background" technique in isolating EM anomalies.

In mountainous regions, a standard interpretation method of VLF-EM measurements based on observations of zero-crossings is not entirely reliable due to terrain effects.

The "average background" method is based on an observation of crossovers of the average background of the recorded profile, not just the crossovers of an instrumental "zero" line.

Due to increased ambiguity of VLF-EM interpretation in mountainous areas, all delineated EM conductors generally require confirmation by means of direct geological observations and detailed geophysical surveys.

The numeric values of all geophysical measurements under discussion in this Report are presented in Appendix A.

## DISCUSSION OF RESULTS

The results of VLF-EM survey over the Elk Claim Group are presented on Maps 2, 3 and 4.

Interpretation of the VLF-EM survey consists of selective analysis of zero crossover points and average background crossover points of tilt angle profiles (Map 2) as well as analysis of profile and contour maps of Fraser Filtered data (Map 3 and Map 4).

The results of interpretation are presented on Map 4. The EM conductors are coded alphabetically in order of importance.

Due to the significant terrain effects, position of an interpreted EM conductor may carry an error of +- 20 m on each of survey lines. The exact position of all presented EM conductors can be obtained by means of direct geological observations combined with a detail geophysical survey.

The EM conductors encountered on the Elk Claim Group are mainly expected to reflect geological structures as a fault, shear or breccia zones.

A question of causative source of all encountered conductors can be answered positively only by direct geological observations.

The following paragraphs describe interpretation of EM conductors on the Elk Claim Group.

Interpreted positions of the conductors within the survey grid are illustrated on Map 4.

The EM conductors encountered on the Elk Claim Group are weak and only a part of the anomaly A is indicated by zero crossover of the tilt angle profile (please, see Map 2). The conductor A has strike length of about 340 m. The southern part of this conductor trends NW - SE, whereas the northern part has NNS - SSE strike direction.

Possibly, both A and A1 conductors are caused by the same wide fracture zone. Precise positioning of a conductor within such zone is uncertain due to overlapping, low amplitude effects and, probably, strong terrain influence.

The conductors B, C, D and E are very weak and questionable. Interpretation of the above anomalies is based exclusively on analysis of average background crossovers and Fraser Filtered data.

The conductors A, A1 and B are probably a part of NNW - SSE trending fault zone which was subsequently displaced by EW striking discontinuity separating conductors A and A1.

The anomalies C, D and E are of secondary importance. Their possible causative sources are poorly water saturated and undeveloped fracture zones.

## REFERENCES

1. Danner, W.R. An Introduction to the Stratigraphy of Southwestern British Columbia and Northwest Washington, Guidebook for Geological Field Trips in Southwestern British Columbia, Department of Geology, UBC Report No. 6, April 1968.

2. Fraser, D.C. Contouring of VLF-EM Data, Geophysics, Vol. 34, No. 6, December 1969, pp. 958-967.

3. Mathews, W.H. Geomorphology, Southwestern British Columbia, Guidebook for Geological Field Trips in Southwestern British Columbia, Department of Geology, UBC Report No. 6, April 1968.

4. Monger, J.W.H. Hope Map Area, West Half (92HW1/2), British Columbia, GSC Paper 69-47, Department of Mines and Resources, 1970.

5. White, Wm.H. Granitic Rocks of Southwestern British Columbia, Guidebook for Geological Field Trips in Southwestern British Columbia, Department of Geology, UBC Report No. 6, April 1968.

6. Whittles, A.B.L., Prospecting with Radio Frequency EM-16 in Mountainous Regions, B.C. Institute of Technology Paper.

# GEOPHYSICIST'S CERTIFICATE

I, Andrew Rybaltowski, hereby certify:

1. That I am a practising geophysicist with residence at #205-1445 Pendrell St., Vancouver, B.C. V6G 1S3.

2. That I am a graduate of The University of Mining and Metallurgy in Poland (1980) and hold a M.Sc. degree in Geophysics.

3. That I have been practising my profession for the past nine years and have been active in the mining industry for the past fourteen years.

4. That this Report is compiled from data gathered during a VLF-EM survey carried out by the crew of Dominion Pioneer Resources Ltd. in the period of November 26 to December 4, 1989.

5. That I do not hold any interest in Dominion Pioneer Resources Ltd.

Andrew Rybaltowski
Geophysicist

Vancouver, February 28, 1990

## AFFIDAVIT OF EXPENSES

The VLF-EM survey was carried out from November 26 to December 4, 1989 on the Elk Claim Group, Mount Mercer Area, New Westminster Mining Division, B.C. to the value of the following:

FIELD:

| | | |
|---|---|---|
| Instrument Operator | 9 days @ $225.00 | $ 2,025.00 |
| Line/compass man | 9 days @ $200.00 | 1,800.00 |
| Assistant | 9 days @ $150.00 | 1,350.00 |
| Pick-up truck | 9 days @ $ 95.00 | 855.00 |
| 2 man rough terrain vehicle | 9 days @ $ 65.00 | 585.00 |
| Room & board | 27 mandays @ $ 50.00 | 1,350.00 |
| Supplies | | 120.00 |
| Instrument rental Sabre V.L.F.-E.M. Model #27 | 9 days @ $ 30.00 | 270.00 |
| Supervisor (Nov. 3,4,5) | 2.5 days @ $250.00 | 625.00 |
| Supervisor - room and board | 2.5 days @ $ 50.00 | 125.00 |
| Supervisor vehicle | 2.5 days @ $ 40.00 | 100.00 |
| | | --- |
| Total Field Cost | | $ 9,205.00 |

OFFICE:

| | |
|---|---|
| Drafting, interpretation, typing, and Report compilation | $ 1,400.00 |
| | --- |
| GRAND TOTAL | $10,605.00 |

Respectfully submitted,
Dominion Pioneer Resources Ltd.

Richard S. Simpson

# APPENDIX A

## List of Numeric Values of Geophysical Measurements on Elk Claim Group

### Raw and Fraser Filtered Data

ELK CLAIM GROUP
VLF-EM SURVEY 1989

| Line N(+);S(-) | Station | Reading tilt angle | Fraser Filter | Station for filtered data |
|---|---|---|---|---|
| 550 | 700 | -14 | -1 | 737.5 |
| 550 | 725 | -10 | -1 | 762.5 |
| 550 | 750 | -12 | -2 | 787.5 |
| 550 | 775 | -11 | 4 | 812.5 |
| 550 | 800 | -10 | 8 | 837.5 |
| 550 | 825 | -11 | 4 | 862.5 |
| 550 | 850 | -14 | -1 | 887.5 |
| 550 | 875 | -15 | -1 | 912.5 |
| 550 | 900 | -14 | -2 | 937.5 |
| 550 | 925 | -14 | -4 | 962.5 |
| 550 | 950 | -14 | -6 | 987.5 |
| 550 | 975 | -12 | -5 | 1012.5 |
| 550 | 1000 | -12 | 1 | 1037.5 |
| 550 | 1025 | -8 | 2 | 1062.5 |
| 550 | 1050 | -11 | -5 | 1087.5 |
| 550 | 1075 | -10 | -8 | 1112.5 |
| 550 | 1100 | -11 | 1 | 1137.5 |
| 550 | 1125 | -5 | 8 | 1162.5 |
| 550 | 1150 | -8 | 3 | 1187.5 |
| 550 | 1175 | -9 | -3 | 1212.5 |
| 550 | 1200 | -12 | -2 | 1237.5 |
| 550 | 1225 | -8 | 0 | 1262.5 |
| 550 | 1250 | -10 | 1 | 1287.5 |
| 550 | 1275 | -8 | -2 | 1312.5 |
| 550 | 1300 | -10 | -9 | 1337.5 |
| 550 | 1325 | -9 | -10 | 1362.5 |
| 550 | 1350 | -7 | -2 | 1387.5 |
| 550 | 1375 | -3 | 7 | 1412.5 |
| 550 | 1400 | -3 | 11 | 1437.5 |
| 550 | 1425 | -5 | 11 | 1462.5 |
| 550 | 1450 | -8 | -6 | 1487.5 |
| 550 | 1475 | -11 | -21 | 1512.5 |
| 550 | 1500 | -13 | 0 | 1537.5 |
| 550 | 1525 | 0 | 17 | 1562.5 |
| 550 | 1550 | -3 | 9 | 1587.5 |
| 550 | 1575 | -10 | 2 | 1612.5 |
| 550 | 1600 | -10 | -2 | 1637.5 |
| 550 | 1625 | -12 | -4 | 1662.5 |
| 550 | 1650 | -10 | -9 | 1687.5 |
| 550 | 1675 | -10 | -9 | 1712.5 |
| 550 | 1700 | -8 | 2 | 1737.5 |
| 550 | 1725 | -3 | 2 | 1762.5 |
| 550 | 1750 | -6 | -9 | 1787.5 |
| 550 | 1775 | -7 | -12 | 1812.5 |
| 550 | 1800 | -4 | -8 | 1837.5 |
| 550 | 1825 | 0 | -7 | 1862.5 |
| 550 | 1850 | 1 | 0 | 1887.5 |
| 550 | 1875 | 3 | 0 | 1912.5 |
| 550 | 1900 | 5 | 0 | 1937.5 |

| | | | | |
|---|---|---|---|---|
| 500 | 700 | -13 | -1 | 737.5 |
| 500 | 725 | -14 | -3 | 762.5 |
| 500 | 750 | -14 | 2 | 787.5 |
| 500 | 775 | -12 | 6 | 812.5 |
| 500 | 800 | -13 | 4 | 837.5 |
| 500 | 825 | -15 | -1 | 862.5 |
| 500 | 850 | -16 | -5 | 887.5 |
| 500 | 875 | -16 | -3 | 912.5 |
| 500 | 900 | -14 | -1 | 937.5 |
| 500 | 925 | -13 | -2 | 962.5 |
| 500 | 950 | -14 | -1 | 987.5 |
| 500 | 975 | -12 | 0 | 1012.5 |
| 500 | 1000 | -13 | -1 | 1037.5 |
| 500 | 1025 | -12 | -4 | 1062.5 |
| 500 | 1050 | -13 | -2 | 1087.5 |
| 500 | 1075 | -11 | -1 | 1112.5 |
| 500 | 1100 | -10 | -2 | 1137.5 |
| 500 | 1125 | -12 | 2 | 1162.5 |
| 500 | 1150 | -8 | -1 | 1187.5 |
| 500 | 1175 | -12 | -6 | 1212.5 |
| 500 | 1200 | -10 | -4 | 1237.5 |
| 500 | 1225 | -9 | -5 | 1262.5 |
| 500 | 1250 | -7 | -7 | 1287.5 |
| 500 | 1275 | -8 | -4 | 1312.5 |
| 500 | 1300 | -3 | -4 | 1337.5 |
| 500 | 1325 | -5 | -1 | 1362.5 |
| 500 | 1350 | -2 | 8 | 1387.5 |
| 500 | 1375 | -2 | 12 | 1412.5 |
| 500 | 1400 | -4 | 10 | 1437.5 |
| 500 | 1425 | -8 | 6 | 1462.5 |
| 500 | 1450 | -10 | 0 | 1487.5 |
| 500 | 1475 | -12 | -4 | 1512.5 |
| 500 | 1500 | -12 | -4 | 1537.5 |
| 500 | 1525 | -10 | -2 | 1562.5 |
| 500 | 1550 | -10 | 6 | 1587.5 |
| 500 | 1575 | -8 | 5 | 1612.5 |
| 500 | 1600 | -10 | -5 | 1637.5 |
| 500 | 1625 | -14 | -5 | 1662.5 |
| 500 | 1650 | -9 | 1 | 1687.5 |
| 500 | 1675 | -10 | 2 | 1712.5 |
| 500 | 1700 | -8 | -10 | 1737.5 |
| 500 | 1725 | -12 | -18 | 1762.5 |
| 500 | 1750 | -8 | -12 | 1787.5 |
| 500 | 1775 | -2 | -8 | 1812.5 |
| 500 | 1800 | 0 | -9 | 1837.5 |
| 500 | 1825 | 2 | 7 | 1862.5 |
| 500 | 1850 | 4 | 0 | 1887.5 |
| 500 | 1875 | 7 | 0 | 1912.5 |
| 500 | 1900 | -8 | 0 | 1937.5 |
| 600 | 700 | -15 | 2 | 737.5 |
| 600 | 725 | -13 | 1 | 762.5 |
| 600 | 750 | -15 | 0 | 787.5 |
| 600 | 775 | -15 | 1 | 812.5 |
| 600 | 800 | -14 | -2 | 837.5 |
| 600 | 825 | -16 | -2 | 862.5 |
| 600 | 850 | -14 | 0 | 887.5 |

| | | | | |
|---|---|---|---|---|
| 600 | 875 | -14 | 0 | 912.5 |
| 600 | 900 | -14 | 1 | 937.5 |
| 600 | 925 | -14 | 2 | 962.5 |
| 600 | 950 | -14 | -2 | 987.5 |
| 600 | 975 | -15 | -4 | 1012.5 |
| 600 | 1000 | -15 | -1 | 1037.5 |
| 600 | 1025 | -12 | 0 | 1062.5 |
| 600 | 1050 | -14 | 2 | 1087.5 |
| 600 | 1075 | -12 | -1 | 1112.5 |
| 600 | 1100 | -14 | -4 | 1137.5 |
| 600 | 1125 | -14 | 2 | 1162.5 |
| 600 | 1150 | -11 | 2 | 1187.5 |
| 600 | 1175 | -13 | -1 | 1212.5 |
| 600 | 1200 | -14 | 0 | 1237.5 |
| 600 | 1225 | -12 | -3 | 1262.5 |
| 600 | 1250 | -14 | -3 | 1287.5 |
| 600 | 1275 | -12 | -4 | 1312.5 |
| 600 | 1300 | -11 | -14 | 1337.5 |
| 600 | 1325 | -12 | -17 | 1362.5 |
| 600 | 1350 | -7 | -2 | 1387.5 |
| 600 | 1375 | -2 | 10 | 1412.5 |
| 600 | 1400 | 0 | 4 | 1437.5 |
| 600 | 1425 | -7 | -2 | 1462.5 |
| 600 | 1450 | -5 | -6 | 1487.5 |
| 600 | 1475 | -6 | -5 | 1512.5 |
| 600 | 1500 | -4 | 1 | 1537.5 |
| 600 | 1525 | -1 | -2 | 1562.5 |
| 600 | 1550 | -4 | 3 | 1587.5 |
| 600 | 1575 | -2 | 16 | 1612.5 |
| 600 | 1600 | -1 | 13 | 1637.5 |
| 600 | 1625 | -8 | 2 | 1662.5 |
| 600 | 1650 | -11 | -4 | 1687.5 |
| 600 | 1675 | -11 | -12 | 1712.5 |
| 600 | 1700 | -10 | -19 | 1737.5 |
| 600 | 1725 | -8 | -17 | 1762.5 |
| 600 | 1750 | -1 | -15 | 1787.5 |
| 600 | 1775 | 2 | -10 | 1812.5 |
| 600 | 1800 | 6 | 3 | 1837.5 |
| 600 | 1825 | 10 | 9 | 1862.5 |
| 600 | 1850 | 8 | 0 | 1887.5 |
| 600 | 1875 | 5 | 0 | 1912.5 |
| 600 | 1900 | 4 | 0 | 1937.5 |
| 650 | 700 | -12 | 5 | 737.5 |
| 650 | 725 | -13 | 2 | 762.5 |
| 650 | 750 | -14 | -3 | 787.5 |
| 650 | 775 | -16 | -2 | 812.5 |
| 650 | 800 | -13 | -2 | 837.5 |
| 650 | 825 | -14 | -2 | 862.5 |
| 650 | 850 | -13 | 0 | 887.5 |
| 650 | 875 | -12 | 1 | 912.5 |
| 650 | 900 | -13 | 1 | 937.5 |
| 650 | 925 | -12 | -1 | 962.5 |
| 650 | 950 | -14 | 0 | 987.5 |
| 650 | 975 | -12 | 2 | 1012.5 |
| 650 | 1000 | -13 | 2 | 1037.5 |
| 650 | 1025 | -13 | 0 | 1062.5 |

| | | | | |
|---|---|---|---|---|
| 650 | 1050 | -14 | -3 | 1087.5 |
| 650 | 1075 | -14 | -3 | 1112.5 |
| 650 | 1100 | -13 | -1 | 1137.5 |
| 650 | 1125 | -12 | 0 | 1162.5 |
| 650 | 1150 | -12 | 0 | 1187.5 |
| 650 | 1175 | -12 | -3 | 1212.5 |
| 650 | 1200 | -12 | -5 | 1237.5 |
| 650 | 1225 | -12 | -1 | 1262.5 |
| 650 | 1250 | -9 | 0 | 1287.5 |
| 650 | 1275 | -10 | -3 | 1312.5 |
| 650 | 1300 | -10 | -7 | 1337.5 |
| 650 | 1325 | -9 | -10 | 1362.5 |
| 650 | 1350 | -8 | -4 | 1387.5 |
| 650 | 1375 | -4 | 3 | 1412.5 |
| 650 | 1400 | -3 | 3 | 1437.5 |
| 650 | 1425 | -5 | 0 | 1462.5 |
| 650 | 1450 | -5 | -1 | 1487.5 |
| 650 | 1475 | -6 | 0 | 1512.5 |
| 650 | 1500 | -4 | 6 | 1537.5 |
| 650 | 1525 | -6 | 16 | 1562.5 |
| 650 | 1550 | -4 | 14 | 1587.5 |
| 650 | 1575 | -12 | 0 | 1612.5 |
| 650 | 1600 | -14 | -11 | 1637.5 |
| 650 | 1625 | -16 | -8 | 1662.5 |
| 650 | 1650 | -10 | -2 | 1687.5 |
| 650 | 1675 | -9 | -3 | 1712.5 |
| 650 | 1700 | -9 | -6 | 1737.5 |
| 650 | 1725 | -8 | -11 | 1762.5 |
| 650 | 1750 | -7 | -15 | 1787.5 |
| 650 | 1775 | -4 | -11 | 1812.5 |
| 650 | 1800 | 0 | -3 | 1837.5 |
| 650 | 1825 | 4 | 0 | 1862.5 |
| 650 | 1850 | 3 | 0 | 1887.5 |
| 650 | 1875 | 4 | 0 | 1912.5 |
| 650 | 1900 | 3 | 0 | 1937.5 |
| 700 | 600 | -14 | 2 | 637.5 |
| 700 | 625 | -11 | 4 | 662.5 |
| 700 | 650 | -13 | 3 | 687.5 |
| 700 | 675 | -14 | 2 | 712.5 |
| 700 | 700 | -14 | 0 | 737.5 |
| 700 | 725 | -16 | 2 | 762.5 |
| 700 | 750 | -14 | 1 | 787.5 |
| 700 | 775 | -16 | -3 | 812.5 |
| 700 | 800 | -16 | -5 | 837.5 |
| 700 | 825 | -15 | -4 | 862.5 |
| 700 | 850 | -14 | 2 | 887.5 |
| 700 | 875 | -12 | 3 | 912.5 |
| 700 | 900 | -13 | 0 | 937.5 |
| 700 | 925 | -15 | 2 | 962.5 |
| 700 | 950 | -13 | 1 | 987.5 |
| 700 | 975 | -15 | -4 | 1012.5 |
| 700 | 1000 | -15 | -8 | 1037.5 |
| 700 | 1025 | -14 | -9 | 1062.5 |
| 700 | 1050 | -12 | -5 | 1087.5 |
| 700 | 1075 | -9 | 3 | 1112.5 |
| 700 | 1100 | -8 | 5 | 1137.5 |

| | | | | |
|---|---|---|---|---|
| 700 | 1125 | -8 | 0 | 1162.5 |
| 700 | 1150 | -12 | -1 | 1187.5 |
| 700 | 1175 | -9 | -7 | 1212.5 |
| 700 | 1200 | -11 | -6 | 1237.5 |
| 700 | 1225 | -9 | 9 | 1262.5 |
| 700 | 1250 | -4 | 7 | 1287.5 |
| 700 | 1275 | -10 | -4 | 1312.5 |
| 700 | 1300 | -12 | -6 | 1337.5 |
| 700 | 1325 | -9 | -7 | 1362.5 |
| 700 | 1350 | -9 | -7 | 1387.5 |
| 700 | 1375 | -6 | -4 | 1412.5 |
| 700 | 1400 | -5 | -5 | 1437.5 |
| 700 | 1425 | -3 | -9 | 1462.5 |
| 700 | 1450 | -4 | -1 | 1487.5 |
| 700 | 1475 | 1 | 10 | 1512.5 |
| 700 | 1500 | 1 | 10 | 1537.5 |
| 700 | 1525 | -3 | 10 | 1562.5 |
| 700 | 1550 | -5 | 9 | 1587.5 |
| 700 | 1575 | -7 | 5 | 1612.5 |
| 700 | 1600 | -11 | 6 | 1637.5 |
| 700 | 1625 | -10 | 3 | 1662.5 |
| 700 | 1650 | -13 | -7 | 1687.5 |
| 700 | 1675 | -14 | -11 | 1712.5 |
| 700 | 1700 | -12 | -7 | 1737.5 |
| 700 | 1725 | -8 | -9 | 1762.5 |
| 700 | 1750 | -7 | 0 | 1787.5 |
| 700 | 1775 | -6 | 0 | 1812.5 |
| 700 | 1800 | 0 | 0 | 1837.5 |
| 750 | 600 | -13 | 3 | 637.5 |
| 750 | 625 | -12 | 4 | 662.5 |
| 750 | 650 | -13 | 0 | 687.5 |
| 750 | 675 | -15 | 0 | 712.5 |
| 750 | 700 | -14 | 1 | 737.5 |
| 750 | 725 | -14 | 0 | 762.5 |
| 750 | 750 | -15 | 3 | 787.5 |
| 750 | 775 | -14 | 4 | 812.5 |
| 750 | 800 | -15 | 0 | 837.5 |
| 750 | 825 | -17 | -1 | 862.5 |
| 750 | 850 | -16 | 2 | 887.5 |
| 750 | 875 | -16 | 3 | 912.5 |
| 750 | 900 | -16 | 1 | 937.5 |
| 750 | 925 | -18 | 3 | 962.5 |
| 750 | 950 | -17 | 4 | 987.5 |
| 750 | 975 | -18 | -2 | 1012.5 |
| 750 | 1000 | -20 | -2 | 1037.5 |
| 750 | 1025 | -19 | 1 | 1062.5 |
| 750 | 1050 | -17 | -2 | 1087.5 |
| 750 | 1075 | -20 | -1 | 1112.5 |
| 750 | 1100 | -17 | -1 | 1137.5 |
| 750 | 1125 | -18 | -4 | 1162.5 |
| 750 | 1150 | -18 | 2 | 1187.5 |
| 750 | 1175 | -16 | 8 | 1212.5 |
| 750 | 1200 | -16 | -6 | 1237.5 |
| 750 | 1225 | -20 | -18 | 1262.5 |
| 750 | 1250 | -20 | -8 | 1287.5 |
| 750 | 1275 | -10 | 2 | 1312.5 |

| | | | | |
|---|---|---|---|---|
| 750 | 1300 | -12 | 7 | 1337.5 |
| 750 | 1325 | -10 | 7 | 1362.5 |
| 750 | 1350 | -14 | -6 | 1387.5 |
| 750 | 1375 | -15 | -16 | 1412.5 |
| 750 | 1400 | -16 | -21 | 1437.5 |
| 750 | 1425 | -7 | -25 | 1462.5 |
| 750 | 1450 | -8 | 0 | 1487.5 |
| 750 | 1475 | 6 | 21 | 1512.5 |
| 750 | 1500 | 4 | 12 | 1537.5 |
| 750 | 1525 | -6 | 11 | 1562.5 |
| 750 | 1550 | -5 | 11 | 1587.5 |
| 750 | 1575 | -9 | 6 | 1612.5 |
| 750 | 1600 | -13 | 6 | 1637.5 |
| 750 | 1625 | -12 | 2 | 1662.5 |
| 750 | 1650 | -16 | -4 | 1687.5 |
| 750 | 1675 | -15 | -6 | 1712.5 |
| 750 | 1700 | -15 | 1 | 1737.5 |
| 750 | 1725 | -12 | 6 | 1762.5 |
| 750 | 1750 | -12 | 0 | 1787.5 |
| 750 | 1775 | -16 | 0 | 1812.5 |
| 750 | 1800 | -14 | 0 | 1837.5 |
| 850 | 600 | -20 | 4 | 637.5 |
| 850 | 625 | -18 | 2 | 662.5 |
| 850 | 650 | -21 | -2 | 687.5 |
| 850 | 675 | -21 | -2 | 712.5 |
| 850 | 700 | -20 | 1 | 737.5 |
| 850 | 725 | -20 | 3 | 762.5 |
| 850 | 750 | -19 | 1 | 787.5 |
| 850 | 775 | -22 | 1 | 812.5 |
| 850 | 800 | -20 | 1 | 837.5 |
| 850 | 825 | -22 | -2 | 862.5 |
| 850 | 850 | -21 | -6 | 887.5 |
| 850 | 875 | -22 | -10 | 912.5 |
| 850 | 900 | -19 | -10 | 937.5 |
| 850 | 925 | -18 | 0 | 962.5 |
| 850 | 950 | -13 | 6 | 987.5 |
| 850 | 975 | -14 | -1 | 1012.5 |
| 850 | 1000 | -17 | -2 | 1037.5 |
| 850 | 1025 | -16 | 5 | 1062.5 |
| 850 | 1050 | -14 | 3 | 1087.5 |
| 850 | 1075 | -17 | 1 | 1112.5 |
| 850 | 1100 | -18 | 3 | 1137.5 |
| 850 | 1125 | -16 | -4 | 1162.5 |
| 850 | 1150 | -20 | -8 | 1187.5 |
| 850 | 1175 | -17 | -3 | 1212.5 |
| 850 | 1200 | -15 | 2 | 1237.5 |
| 850 | 1225 | -14 | 5 | 1262.5 |
| 850 | 1250 | -15 | 7 | 1287.5 |
| 850 | 1275 | -16 | 3 | 1312.5 |
| 850 | 1300 | -18 | -3 | 1337.5 |
| 850 | 1325 | -20 | -3 | 1362.5 |
| 850 | 1350 | -17 | -5 | 1387.5 |
| 850 | 1375 | -18 | -13 | 1412.5 |
| 850 | 1400 | -16 | -18 | 1437.5 |
| 850 | 1425 | -14 | -13 | 1462.5 |
| 850 | 1450 | -7 | -2 | 1487.5 |

| | | | | |
|---|---|---|---|---|
| 850 | 1475 | -5 | 1 | 1512.5 |
| 850 | 1500 | -3 | 4 | 1537.5 |
| 850 | 1525 | -7 | 17 | 1562.5 |
| 850 | 1550 | -2 | 13 | 1587.5 |
| 850 | 1575 | -12 | 2 | 1612.5 |
| 850 | 1600 | -14 | 3 | 1637.5 |
| 850 | 1625 | -13 | -3 | 1662.5 |
| 850 | 1650 | -15 | -11 | 1687.5 |
| 850 | 1675 | -15 | -9 | 1712.5 |
| 850 | 1700 | -10 | -2 | 1737.5 |
| 850 | 1725 | -9 | 0 | 1762.5 |
| 850 | 1750 | -7 | 0 | 1787.5 |
| 850 | 1775 | -10 | 0 | 1812.5 |
| 850 | 1800 | -6 | 0 | 1837.5 |
| 800 | 600 | -17 | 1 | 637.5 |
| 800 | 625 | -17 | 1 | 662.5 |
| 800 | 650 | -17 | 1 | 687.5 |
| 800 | 675 | -18 | 4 | 712.5 |
| 800 | 700 | -17 | 6 | 737.5 |
| 800 | 725 | -19 | 3 | 762.5 |
| 800 | 750 | -20 | 0 | 787.5 |
| 800 | 775 | -22 | 2 | 812.5 |
| 800 | 800 | -20 | 0 | 837.5 |
| 800 | 825 | -22 | -1 | 862.5 |
| 800 | 850 | -22 | 4 | 887.5 |
| 800 | 875 | -20 | 2 | 912.5 |
| 800 | 900 | -23 | -1 | 937.5 |
| 800 | 925 | -23 | 1 | 962.5 |
| 800 | 950 | -22 | -1 | 987.5 |
| 800 | 975 | -23 | -5 | 1012.5 |
| 800 | 1000 | -23 | -4 | 1037.5 |
| 800 | 1025 | -21 | 1 | 1062.5 |
| 800 | 1050 | -20 | 3 | 1087.5 |
| 800 | 1075 | -20 | 0 | 1112.5 |
| 800 | 1100 | -22 | 0 | 1137.5 |
| 800 | 1125 | -21 | 0 | 1162.5 |
| 800 | 1150 | -21 | -5 | 1187.5 |
| 800 | 1175 | -22 | -6 | 1212.5 |
| 800 | 1200 | -20 | -4 | 1237.5 |
| 800 | 1225 | -18 | -5 | 1262.5 |
| 800 | 1250 | -18 | -5 | 1287.5 |
| 800 | 1275 | -16 | 0 | 1312.5 |
| 800 | 1300 | -15 | 5 | 1337.5 |
| 800 | 1325 | -14 | 2 | 1362.5 |
| 800 | 1350 | -17 | -5 | 1387.5 |
| 800 | 1375 | -17 | -16 | 1412.5 |
| 800 | 1400 | -16 | -29 | 1437.5 |
| 800 | 1425 | -13 | -23 | 1462.5 |
| 800 | 1450 | -4 | -1 | 1487.5 |
| 800 | 1475 | 4 | 13 | 1512.5 |
| 800 | 1500 | 2 | 17 | 1537.5 |
| 800 | 1525 | -1 | 17 | 1562.5 |
| 800 | 1550 | -6 | 14 | 1587.5 |
| 800 | 1575 | -10 | 6 | 1612.5 |
| 800 | 1600 | -14 | -4 | 1637.5 |
| 800 | 1625 | -16 | -5 | 1662.5 |

| | | | | |
|---|---|---|---|---|
| 800 | 1650 | -14 | -3 | 1687.5 |
| 800 | 1675 | -12 | -5 | 1712.5 |
| 800 | 1700 | -13 | -1 | 1737.5 |
| 800 | 1725 | -10 | 0 | 1762.5 |
| 800 | 1750 | -10 | 0 | 1787.5 |
| 800 | 1775 | -12 | 0 | 1812.5 |
| 800 | 1800 | -8 | 0 | 1837.5 |
| 900 | 600 | -20 | -4 | 637.5 |
| 900 | 625 | -21 | -5 | 662.5 |
| 900 | 650 | -20 | 2 | 687.5 |
| 900 | 675 | -17 | 4 | 712.5 |
| 900 | 700 | -19 | -1 | 737.5 |
| 900 | 725 | -20 | -4 | 762.5 |
| 900 | 750 | -20 | -2 | 787.5 |
| 900 | 775 | -18 | -2 | 812.5 |
| 900 | 800 | -18 | -4 | 837.5 |
| 900 | 825 | -18 | -4 | 862.5 |
| 900 | 850 | -16 | -6 | 887.5 |
| 900 | 875 | -16 | -8 | 912.5 |
| 900 | 900 | -14 | -5 | 937.5 |
| 900 | 925 | -12 | 3 | 962.5 |
| 900 | 950 | -10 | 11 | 987.5 |
| 900 | 975 | -11 | 10 | 1012.5 |
| 900 | 1000 | -14 | 5 | 1037.5 |
| 900 | 1025 | -18 | 8 | 1062.5 |
| 900 | 1050 | -17 | 9 | 1087.5 |
| 900 | 1075 | -20 | 1 | 1112.5 |
| 900 | 1100 | -23 | -2 | 1137.5 |
| 900 | 1125 | -23 | 4 | 1162.5 |
| 900 | 1150 | -21 | 1 | 1187.5 |
| 900 | 1175 | -23 | -10 | 1212.5 |
| 900 | 1200 | -25 | -4 | 1237.5 |
| 900 | 1225 | -20 | 4 | 1262.5 |
| 900 | 1250 | -18 | -2 | 1287.5 |
| 900 | 1275 | -23 | -2 | 1312.5 |
| 900 | 1300 | -19 | 0 | 1337.5 |
| 900 | 1325 | -20 | -7 | 1362.5 |
| 900 | 1350 | -20 | -13 | 1387.5 |
| 900 | 1375 | -19 | -14 | 1412.5 |
| 900 | 1400 | -14 | -13 | 1437.5 |
| 900 | 1425 | -12 | -3 | 1462.5 |
| 900 | 1450 | -7 | 10 | 1487.5 |
| 900 | 1475 | -6 | 7 | 1512.5 |
| 900 | 1500 | -10 | -2 | 1537.5 |
| 900 | 1525 | -13 | -1 | 1562.5 |
| 900 | 1550 | -10 | 0 | 1587.5 |
| 900 | 1575 | -11 | -3 | 1612.5 |
| 900 | 1600 | -11 | -3 | 1637.5 |
| 900 | 1625 | -10 | -2 | 1662.5 |
| 900 | 1650 | -9 | -4 | 1687.5 |
| 900 | 1675 | -9 | -3 | 1712.5 |
| 900 | 1700 | -8 | -2 | 1737.5 |
| 900 | 1725 | -6 | -8 | 1762.5 |
| 900 | 1750 | -8 | 0 | 1787.5 |
| 900 | 1775 | -4 | 0 | 1812.5 |
| 900 | 1800 | -2 | 0 | 1837.5 |

| | | | | |
|---|---|---|---|---|
| 950 | 600 | -22 | 4 | 637.5 |
| 950 | 625 | -23 | 8 | 662.5 |
| 950 | 650 | -24 | 7 | 687.5 |
| 950 | 675 | -25 | -6 | 712.5 |
| 950 | 700 | -30 | -11 | 737.5 |
| 950 | 725 | -26 | -3 | 762.5 |
| 950 | 750 | -23 | -1 | 787.5 |
| 950 | 775 | -22 | -8 | 812.5 |
| 950 | 800 | -24 | -6 | 837.5 |
| 950 | 825 | -20 | 2 | 862.5 |
| 950 | 850 | -18 | 0 | 887.5 |
| 950 | 875 | -20 | -4 | 912.5 |
| 950 | 900 | -20 | -13 | 937.5 |
| 950 | 925 | -18 | -23 | 962.5 |
| 950 | 950 | -18 | -8 | 987.5 |
| 950 | 975 | -7 | 14 | 1012.5 |
| 950 | 1000 | -6 | 16 | 1037.5 |
| 950 | 1025 | -11 | 6 | 1062.5 |
| 950 | 1050 | -16 | 1 | 1087.5 |
| 950 | 1075 | -17 | 1 | 1112.5 |
| 950 | 1100 | -16 | -1 | 1137.5 |
| 950 | 1125 | -18 | 1 | 1162.5 |
| 950 | 1150 | -16 | 4 | 1187.5 |
| 950 | 1175 | -17 | 4 | 1212.5 |
| 950 | 1200 | -18 | 3 | 1237.5 |
| 950 | 1225 | -19 | 2 | 1262.5 |
| 950 | 1250 | -20 | 5 | 1287.5 |
| 950 | 1275 | -20 | 4 | 1312.5 |
| 950 | 1300 | -21 | -4 | 1337.5 |
| 950 | 1325 | -24 | -5 | 1362.5 |
| 950 | 1350 | -21 | -2 | 1387.5 |
| 950 | 1375 | -20 | -7 | 1412.5 |
| 950 | 1400 | -20 | -9 | 1437.5 |
| 950 | 1425 | -19 | -2 | 1462.5 |
| 950 | 1450 | -14 | -3 | 1487.5 |
| 950 | 1475 | -16 | -6 | 1512.5 |
| 950 | 1500 | -15 | 0 | 1537.5 |
| 950 | 1525 | -12 | -1 | 1562.5 |
| 950 | 1550 | -13 | -9 | 1587.5 |
| 950 | 1575 | -14 | -8 | 1612.5 |
| 950 | 1600 | -10 | -2 | 1637.5 |
| 950 | 1625 | -8 | 4 | 1662.5 |
| 950 | 1650 | -8 | 7 | 1687.5 |
| 950 | 1675 | -8 | -1 | 1712.5 |
| 950 | 1700 | -12 | -9 | 1737.5 |
| 950 | 1725 | -11 | -10 | 1762.5 |
| 950 | 1750 | -8 | 0 | 1787.5 |
| 950 | 1775 | -6 | 0 | 1812.5 |
| 950 | 1800 | -3 | 0 | 1837.5 |
| 1050 | 600 | -20 | 1 | 637.5 |
| 1050 | 625 | -19 | 5 | 662.5 |
| 1050 | 650 | -18 | 2 | 687.5 |
| 1050 | 675 | -22 | 0 | 712.5 |
| 1050 | 700 | -20 | -1 | 737.5 |
| 1050 | 725 | -22 | 1 | 762.5 |
| 1050 | 750 | -20 | 0 | 787.5 |

| | | | | |
|---|---|---|---|---|
| 1050 | 775 | -21 | -6 | 812.5 |
| 1050 | 800 | -22 | -4 | 837.5 |
| 1050 | 825 | -19 | -1 | 862.5 |
| 1050 | 850 | -18 | -3 | 887.5 |
| 1050 | 875 | -19 | -4 | 912.5 |
| 1050 | 900 | -17 | -1 | 937.5 |
| 1050 | 925 | -17 | 3 | 962.5 |
| 1050 | 950 | -15 | 3 | 987.5 |
| 1050 | 975 | -18 | 2 | 1012.5 |
| 1050 | 1000 | -17 | 0 | 1037.5 |
| 1050 | 1025 | -19 | 0 | 1062.5 |
| 1050 | 1050 | -18 | 1 | 1087.5 |
| 1050 | 1075 | -18 | 3 | 1112.5 |
| 1050 | 1100 | -19 | 7 | 1137.5 |
| 1050 | 1125 | -18 | 6 | 1162.5 |
| 1050 | 1150 | -22 | 5 | 1187.5 |
| 1050 | 1175 | -22 | 3 | 1212.5 |
| 1050 | 1200 | -24 | -1 | 1237.5 |
| 1050 | 1225 | -25 | -2 | 1262.5 |
| 1050 | 1250 | -24 | -2 | 1287.5 |
| 1050 | 1275 | -24 | -3 | 1312.5 |
| 1050 | 1300 | -23 | -3 | 1337.5 |
| 1050 | 1325 | -23 | 0 | 1362.5 |
| 1050 | 1350 | -21 | -2 | 1387.5 |
| 1050 | 1375 | -22 | -7 | 1412.5 |
| 1050 | 1400 | -22 | -5 | 1437.5 |
| 1050 | 1425 | -19 | 1 | 1462.5 |
| 1050 | 1450 | -18 | 2 | 1487.5 |
| 1050 | 1475 | -18 | -6 | 1512.5 |
| 1050 | 1500 | -20 | -13 | 1537.5 |
| 1050 | 1525 | -18 | -11 | 1562.5 |
| 1050 | 1550 | -14 | -5 | 1587.5 |
| 1050 | 1575 | -11 | -5 | 1612.5 |
| 1050 | 1600 | -10 | -6 | 1637.5 |
| 1050 | 1625 | -10 | 0 | 1662.5 |
| 1050 | 1650 | -6 | 0 | 1687.5 |
| 1050 | 1675 | -8 | -6 | 1712.5 |
| 1050 | 1700 | -8 | -7 | 1737.5 |
| 1050 | 1725 | -6 | -4 | 1762.5 |
| 1050 | 1750 | -4 | 0 | 1787.5 |
| 1050 | 1775 | -3 | 0 | 1812.5 |
| 1050 | 1800 | -3 | 0 | 1837.5 |
| 1000 | 600 | -24 | -3 | 637.5 |
| 1000 | 625 | -24 | -7 | 662.5 |
| 1000 | 650 | -24 | -5 | 687.5 |
| 1000 | 675 | -21 | -1 | 712.5 |
| 1000 | 700 | -20 | 0 | 737.5 |
| 1000 | 725 | -20 | -2 | 762.5 |
| 1000 | 750 | -20 | -6 | 787.5 |
| 1000 | 775 | -20 | -4 | 812.5 |
| 1000 | 800 | -18 | 1 | 837.5 |
| 1000 | 825 | -16 | -1 | 862.5 |
| 1000 | 850 | -18 | -5 | 887.5 |
| 1000 | 875 | -17 | -6 | 912.5 |
| 1000 | 900 | -16 | -5 | 937.5 |
| 1000 | 925 | -14 | -1 | 962.5 |

| | | | | |
|---|---|---|---|---|
| 1000 | 950 | -13 | 5 | 987.5 |
| 1000 | 975 | -12 | 8 | 1012.5 |
| 1000 | 1000 | -14 | 5 | 1037.5 |
| 1000 | 1025 | -16 | -1 | 1062.5 |
| 1000 | 1050 | -18 | -3 | 1087.5 |
| 1000 | 1075 | -17 | 1 | 1112.5 |
| 1000 | 1100 | -16 | 8 | 1137.5 |
| 1000 | 1125 | -16 | 10 | 1162.5 |
| 1000 | 1150 | -18 | 4 | 1187.5 |
| 1000 | 1175 | -22 | 3 | 1212.5 |
| 1000 | 1200 | -22 | 5 | 1237.5 |
| 1000 | 1225 | -22 | -2 | 1262.5 |
| 1000 | 1250 | -25 | -8 | 1287.5 |
| 1000 | 1275 | -24 | -5 | 1312.5 |
| 1000 | 1300 | -21 | -2 | 1337.5 |
| 1000 | 1325 | -20 | -4 | 1362.5 |
| 1000 | 1350 | -20 | -8 | 1387.5 |
| 1000 | 1375 | -19 | -8 | 1412.5 |
| 1000 | 1400 | -17 | -4 | 1437.5 |
| 1000 | 1425 | -14 | -1 | 1462.5 |
| 1000 | 1450 | -14 | -2 | 1487.5 |
| 1000 | 1475 | -13 | -4 | 1512.5 |
| 1000 | 1500 | -14 | -3 | 1537.5 |
| 1000 | 1525 | -11 | -6 | 1562.5 |
| 1000 | 1550 | -12 | -5 | 1587.5 |
| 1000 | 1575 | -10 | 4 | 1612.5 |
| 1000 | 1600 | -7 | 2 | 1637.5 |
| 1000 | 1625 | -10 | -4 | 1662.5 |
| 1000 | 1650 | -11 | -5 | 1687.5 |
| 1000 | 1675 | -8 | -4 | 1712.5 |
| 1000 | 1700 | -9 | 0 | 1737.5 |
| 1000 | 1725 | -5 | -5 | 1762.5 |
| 1000 | 1750 | -8 | -12 | 1787.5 |
| 1000 | 1775 | -6 | -8 | 1812.5 |
| 1000 | 1800 | -2 | -2 | 1837.5 |

# DOMINION PIONEER RESOURCES LTD.

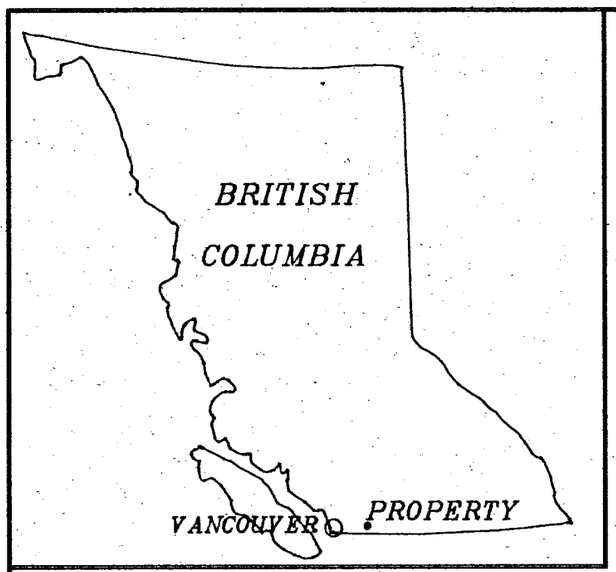
## ELK CLAIM GROUP

### VLF–EM SURVEY

### CLAIM LOCATION

| SCALE 1:50000 | FEBRUARY 1990 | NTS: 92 H/4 | MAP 1 |
|---|---|---|---|






ELK #2

ELK #1

ELK #3

ELK #4

MINER #1

SURVEY AREA

N

AIRPLANE CR.

CHIPMUNK CR.

FOLEY CR.

PIERCE CR.

CHILLIWACK RIVER

TO ACCOMPANY REPORT BY ANDREW RYBALTOWSKI, GEOPHYSICIST

E+600.00 E+700.00 E+800.00 E+900.00 E+1000.00 E+1100.00 E+1200.00 E+1300.00 E+1400.00 E+1500.00 E+1600.00 E+1700.00 E+1800.00 E+1900.00 E+2000.00

N+1100.00 N+1000.00 N+900.00 N+800.00 N+700.00 N+600.00 N+500.00 N+400.00 N+300.00

A A1 B C D E

direction to transmitter

INSTRUMENT: SABRE EM, MODEL #27
STATION: JIM CREEK, WA, (NLK) – 24.8kHz

– EM CONDUCTOR

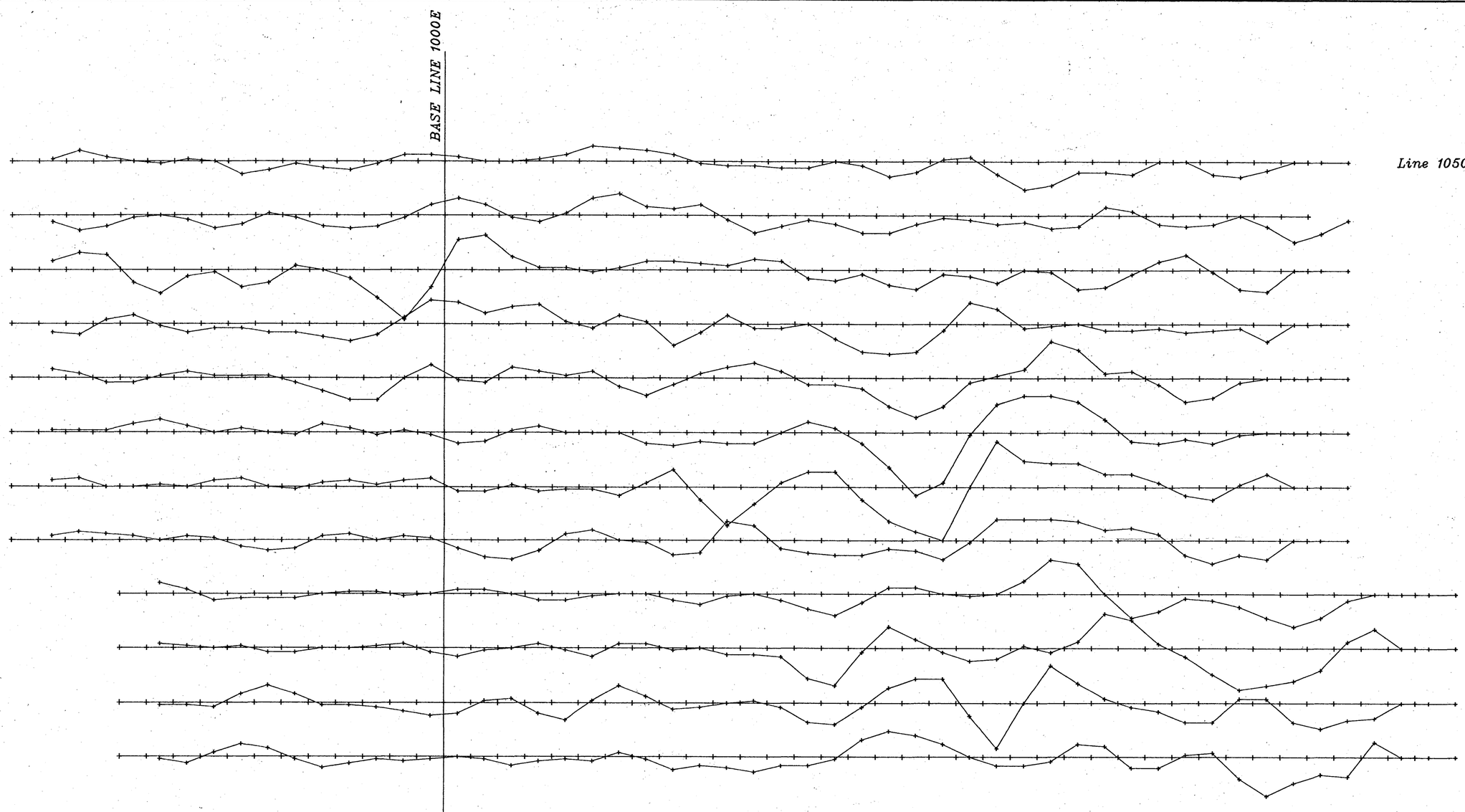
MINER #1
LOCATION POST 3S

0 50m 100m 150m 200m 300m



| DOMINION PIONEER RESOURCES LTD. | | | |
|---|---|---|---|
| ELK CLAIM GROUP | | | |
| VLF–EM SURVEY | | | |
| IN–PHASE COMPONENT, FRASER FILTERED – CONTOURS | | | |
| SCALE 1:2500 | FEBRUARY 1990 | NTS: 92 H/4 | MAP 4 |

TO ACCOMPANY REPORT BY ANDREW RYBALTOWSKI, GEOPHYSICIST




INSTRUMENT: SABRE EM, MODEL #27
STATION: JIM CREEK, WA, (NLK) – 24.8kHz

TO ACCOMPANY REPORT BY ANDREW RYBALTOWSKI, GEOPHYSICIST

| DOMINION PIONEER RESOURCES LTD. | | | |
|---|---|---|---|
| ELK CLAIM GROUP | | | |
| VLF–EM SURVEY<br>IN–PHASE COMPONENT, FRASER FILTERED | | | |
| SCALE 1:2500 | FEBRUARY 1990 | NTS: 92 H/4 | MAP 3 |

BASE LINE 1000E

Line 1050N

direction to transmitter

+20
+10
0 vertical scale [degrees]
−10
−20

0 50m 100m 150m 200m 300m

INSTRUMENT: SABRE EM, MODEL #27
STATION: JIM CREEK, WA, (NLK) – 24.8kHz

TO ACCOMPANY REPORT BY ANDREW RYBALTOWSKI, GEOPHYSICIST



| DOMINION PIONEER RESOURCES LTD. | | | |
|---|---|---|---|
| ELK CLAIM GROUP | | | |
| VLF–EM SURVEY<br>IN–PHASE COMPONENT (TILT ANGLE) | | | |
| SCALE 1:2500 | FEBRUARY 1990 | NTS: 92 H/4 | MAP 2 |