

ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE

DIRECTOR OF SURVEYS AND MAPPING

THE REPLY TO THIS LETTER SHOULD BE MARKED  
FOR THE ATTENTION OF

YOUR FILE NO.

OUR FILE NO.

DIRECTOR AND SURVEYOR-GENERAL

FIELD OPERATIONS DIVISION

LEGAL SURVEYS DIVISION

MAP PRODUCTION DIVISION

## SURVEYS AND MAPPING BRANCH

DEPARTMENT OF ENVIRONMENT

VICTORIA, BRITISH COLUMBIA

V8V 1X5

February 23, 1976

CIRCULAR LETTER TO ALL BRITISH COLUMBIA LAND SURVEYORS

Dear Sir:

Re: General Instructions Respecting the Survey of  
Mineral Claims

Please refer to circular letter no. 260 of April 18, 1975 wherein it was drawn to your attention that the Mineral Act Amendment Act of 1974 came into force as of March 1, 1975.

Mineral claims located after February 28, 1975 are all in metric terms - basically multiples of 500 metre squares. For the sake of uniformity, all mineral claim legal surveys are to be made in metric measurements and consequently it has been necessary to make two sets of survey instructions.

1. B.C. Reg. 778/75 - General Instructions Respecting the Survey of Mineral Claims Located on or before February 28, 1975.  
- Two-post staking system -

These are the old instructions, converted to metric terms but of course with only a soft or direct equivalent conversion, of all feet and decimals thereof which govern the old claims, to metric measurements. These surveys will be assigned District Lot numbers as has always been the case.

2. B.C. Reg. 783/75 - General Instructions Respecting the Survey of Mineral Claims Located after February 28, 1975.  
- Unit System -

These are new instructions and should be self-explanatory as per the above title. These surveys will not be assigned a District Lot number. Their description location is based on U.T.M. coordinates of the S.W. corner of the survey. They may be complicated by existing claims located on or before February 28, 1975 which, if they lie within the new area to be surveyed, will have to be surveyed "out" of the new claim - using the instructions referred to in 1. above.

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Note that the Specimen Plans attached show quadrantal bearings, however according to 7.08(c) of the Instructions you may use full circle bearings if you so wish.

Standard metric paper sizes have been called for - however since this decision was made it appears that Canada may not be prepared as yet to accept these sizes and therefore we will accept either the sizes as specified herein or the former sizes (which were multiples of  $8\frac{1}{2}$  x 11 inches) converted to metric equivalents.

Note that Division 8 of B. C. Reg. 778/75 - two post system does not cancel the old Specimen Plans. However again since that decision was made it was found impractical, therefore the New Specimen plans and diagrams attached are considered to replace the old ones attached to B. C. Reg. 99/70, and should be all the explanation that is needed.

Please read these instructions carefully, with particular attention being given to the method by which dimensions are shown on the plans.

Later - possibly this year, all instructions for all surveys will require a change over to the metric system. It is delayed at present owing to lack of authority in the Land Act and Land Registry Act, to do so. There will be plenty of warning given to the anticipated change date and an allowance made for surveys in progress.

Yours truly,



W. A. Taylor,  
Acting Surveyor General

## MINERAL ACT

### GENERAL INSTRUCTIONS RESPECTING THE SURVEY OF MINERAL CLAIMS LOCATED ON OR BEFORE FEBRUARY 28, 1975

(Authorized under section 33 and section 34 of the *Mineral Act* as amended, 1974)

#### *Foreword*

The object of these instructions is to place before British Columbia land surveyors, in convenient form for reference, the rules that now guide the Surveyor-General in performing his duties under the *Mineral Act* in respect of mineral claims located on or before February 28, 1975.

It is believed that these instructions conform with decisions of the Courts where decisions have been given, with the best legal opinion in other cases, and with the practice of experienced surveyors. Adherence to these instructions will ensure prompt approval of the survey returns, whereas departure may delay approval.

*Surveyor-General.*

*Victoria, British Columbia.*

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#### *Division (1)—Interpretation*

1.01 These regulations may be cited as the "Mineral Act Survey Instructions, Two-post Staking System."

1.02 In these regulations the word "Department" refers to the Department of Lands, Forests, and Water Resources.

1.03 In these regulations the word "records" under the *Mineral Act* shall include the record of the mineral claim in Form A and the affidavit of the locator in the prescribed forms.

#### *Division (2)—General*

2.01 A survey under these instructions consists of the delineation on the ground of the area to which the holder of a mineral-claim record is entitled under the provisions of the *Mineral Act*.

2.02 The instructions herein contained apply more particularly to mineral claims located between May 15, 1893 and February 28, 1975, inclusive. If called upon to survey claims located prior to that period, the surveyor shall acquaint himself with the provisions of the statutes in force at the time of location.

2.03 On application to the Surveyor-General, lot numbers and any available information regarding existing surveys will be furnished. On making application for numbers, the surveyor shall state for which land district same are required, but if unable to do so, he shall give the best information in his possession as to the location of the claims to be surveyed, in order that the district in which they are located may be determined by the Department.

2.04 The survey shall be made under the personal supervision, on the ground, of the surveyor signing the plan. If a previous survey, made by another surveyor, forms a common boundary with the claim being surveyed, such boundary shall be traversed and all details of the traverse shall be shown on the plan and the closure shall be shown, using the dimensions thus determined.

2.05 All surveys shall be referred to the astronomic meridian, which shall be determined by astronomic (preferably stellar) observation, from the Provincial Triangulation System or by gyroscopic meridian indicator except that in cases of surveys of small extent (not more than four claims) the meridian of adjacent surveys may be adopted, or when atmospheric conditions prohibit an observation, the meridian as determined by magnetic compass may be accepted. In the case of magnetic compass, the magnetic declination used shall be recorded.

2.06 The conventional method of survey requires that angles shall be read with a transit, and distances shall be measured with a steel tape or with electronic measuring equipment. Tapes shall be compared from time to time with the standard of length adopted by Canada. Electronic equipment shall be calibrated periodically, and when necessary the measured distance compared to a known distance. If other than conventional methods of survey are to be employed, prior approval is required from the Surveyor-General.

2.07 All linear measurements shall be in metres and decimals thereof.

2.08 All surveys shall be closed. The allowable linear error of closure shall be 1 part in 2,500 parts. If, due to unavoidable circumstances, the error of closure exceeds the allowable limit, the letter accompanying the survey returns shall contain an explanation for the error.

2.09 All surveys shall be connected to existing surveys, provided such surveys are situated within the following distances:—

(a) 2 km, if heavily wooded or precipitous country:

(b) 3 km, if in open or partly open country:

(c) 5 km, if along a trail, wagon-road, on ice, or along open foreshore.

If no previous survey is within these distances, an acceptable tie shall be made to Provincial triangulation, an identification on an air photograph, some prominent nearby topographical feature shown on a Departmental map, or to improvements of a permanent nature made upon the claim, such as the mouth of a tunnel or shaft, and the covering letter with the survey returns shall contain details of the claim as will facilitate its identification and location at a future date.

2.10 Where practicable, the surveyor is encouraged to include in his survey returns of a claim or group of claims a suitable air-photo identification.

### *Division (3)—Types of Survey*

#### *Separate Claims*

3.01 The boundary-lines of all claims shall be run, or traversed where it is not practicable to run them, and all surveys shall be closed. Monuments shall be placed at all corners and angles of each claim or leasehold and at points of intersection of the boundaries of the claim being surveyed with the boundaries of other district lots, sections, etc. One district lot number will be required for each claim.



### *Perimeter Survey*

3.02 This type of survey is authorized by section 33 (2) of the *Mineral Act*. All claims within the perimeter must be under one common ownership and there must be no "open ground" between the claims.

3.03 It is permissible to create an "inner perimeter" within the group of claims being surveyed in order to exclude a claim or claims held under different ownership. All such "inner perimeters" shall be fully monumented.

3.04 All boundary-lines on the perimeter of the group being surveyed shall be run, or traversed where it is not practicable to run them. Monuments shall be placed on the perimeter at all corners and angles and at points of intersection with other district lots, sections, etc., and shall be stamped with the lot number and a series of consecutive numbers, as detailed in section 4.11.

3.05 The true bearing and length of all location-lines shall be determined by traverse, and location posts shall be replaced or witnessed by a monument, the reference post to which shall be marked in accordance with section 4.14 (a) (ii). The remaining boundaries of each claim within the perimeter shall then be determined by calculation. A co-ordinate table may be shown on the plan, together with a grid.

3.06 Each complete perimeter survey shall be given a district lot number.

3.07 If, subsequent to the approval of a perimeter survey, the leaseholder wishes to amend the perimeter boundaries by deleting one or more claims, the surveyor shall request special instructions from the Surveyor-General.

### *Control Survey for Open-pit or Strip-mining Operation*

3.08 This type of survey is intended for use where surface stripping would destroy monuments which would normally be set in separate claim or perimeter surveys.

3.09 The true bearing and length of all location-lines shall be determined by traverse and all remaining claim boundaries determined by calculation. Co-ordinates for all corners and intersections and all posts found within the survey shall be computed and based on a common origin, the meridian of which shall be established by stellar observation. Wherever possible, the origin of co-ordinates should be a Provincial, or geodetic survey control monument.

3.10 (a) Monuments shall be placed so that a density of one monument per 457.20 metres (1,500 feet) of control boundary is obtained, within the perimeter of the claims being surveyed and outside of the proposed area of surface mining with a view to permanence. These monuments need not necessarily be placed on claim boundaries, but shall be integrated and given co-ordinates based on the same origin as that of the group of claims being surveyed in order to assist in future establishment of individual claims on the ground, if required.

(b) In addition to the monumentation required in subsection (a) above, the surveyor shall monument internal location posts in a manner similar to that described in section 3.05 if, in his opinion, the monuments are not likely to be disturbed by mining operations.

3.11 Separate district lot numbers for each claim will be supplied by the Surveyor-General upon receipt of a written request for instructions for this type of survey. A statement of intention, in writing, to operate a surface mine by the mining company shall accompany the surveyor's request for instructions.

#### *Division (4)—Monumentation*

4.01 A survey monument shall consist of a standard post and one or more of the reference marks described in the Instructions Regarding Permanent Survey Monuments.

4.02 Posts shall be of the following types:—

Type 1: Standard Concrete Post.

Type 2: Standard Rock Post.

Type 4: Standard Capped Post.

Type 5: Standard Post.

4.03 The Type 2 post shall be used to mark every corner which falls on bed-rock, an immovable boulder, or a permanent stone or concrete structure.

4.04 The Type 1 or Type 2 post shall be used for control surveys for open-pit operations as outlined in section 3.09 (a), and shall be placed with a density of one in three, with the intervening posts being Type 4. Intervisibility is desirable, but every control monument must "see" at least one other control monument.

4.05 The Type 4 post shall be used for separate claim and perimeter surveys, and for control surveys as described in section 4.04.

4.06 The Type 5 post may be used for the following purposes only:—

- (a) Marking location posts of claims in a perimeter survey as outlined in section 3.05, except where the location post falls on the perimeter itself, in which case a Type 4 post shall be used.
- (b) Marking location posts of claims in control surveys, as permitted in subsection (b) of section 3.10.
- (c) Marking location posts of claims in separate claim surveys where the location posts do not fall on the corner of a claim.
- (d) Marking the intersection of surveyed right-of-way boundaries with the boundaries of claims being surveyed under sections 3.01 and 3.04. These intersections shall be posted in the same manner (i.e., one boundary or both boundaries) as the right-of-way is posted.

4.07 Where no tie to a cadastral survey or trig. point is possible within the limits required by section 2.11, a monument of Type 1, 2, or 4, stamped as a reference to the lot being surveyed, must be set and referenced with bearing-trees, or other tie (e.g., to the footings of a bridge) at a prominent topographical feature which is identifiable on existing maps or photos. A traverse is required from the reference monument to the survey.

4.08 The required type of post shall be set at each corner of the lot being surveyed. Any existing lot-corner tied to in the course of the survey, at which no post of Type 1, 2, 4, or 5 is found, shall be reposted with a post of Type 5 or better.

4.09 A corner which falls in an inaccessible position in a locality unfavourable to the planting of a post, or where a post is likely to be disturbed or destroyed, shall be witnessed by posts of Type 1, 2, or 4, planted at the nearest accessible points to the corner on the two boundary-lines which intersect at the corner, or on a boundary produced.

4.10 Each standard post shall be set with the crown on the cap toward the north and with the corner point, as nearly as possible, at the centre of the cap. After setting the post, the true point shall be marked by a small hole punched or drilled in the cap.



4.11 (a) When used for separate claim surveys, the space provided on the cap shall be used to indicate diagrammatically the direction of the boundary-lines and the number of the lots adjoining the corner. The surveyor shall also mark upon the cap the year in which the post was set and the registry number of his commission as a British Columbia land surveyor. In the case of a witness-post, it shall also be marked with the letters "WT" followed by the distance and general direction to the corner witnessed. This post marking is best done with steel dies of the letters and numbers required.

(b) When used for perimeter surveys, the post cap shall carry, in addition to the items detailed in paragraph (a) above, a number, of a consecutive series starting from 1, which will serve to identify the corner on the survey plan.

(c) When used for control surveys, the cap shall be marked with the year in which the post was set, the surveyor's commission number, the district lot number of the lot within which it is situated or on the boundary of which it is situated, and a number, of a consecutive series starting from 1, which will serve to identify the monument on the survey plan.

(d) An existing monument which is used in connection with an adjoining current survey shall be stamped with the new lot number.

4.12 The position of every post shall be referenced by at least three bearing-trees, wherever trees are available. The distance to each bearing-tree shall be measured in metres and tenths from a point 1 metre vertically above the top of the post to the face of the blaze. The bearing-tree shall be carved with the letters "BT" and the slope distance to the corner. The magnetic bearing from the post to the tree shall be recorded on the plan, together with the diameter and species of each tree.

4.13 Cairns shall be built, if possible, to reference the position of all posts set. At a true corner post, the cairn shall be in the shape of a pyramid 1.5 metres square at the base and 1 metre high; its centre shall lie due south of the post, with one corner adjoining the post. At a witness-post, the cairn shall be conical, 1.5 metres in diameter at the base and 1 metre high. It shall stand on the opposite side of the post from the corner witnessed, with its centre 1 metre from the post. Should it be impractical to build the cairn as specified, its position in relation to the post may be varied and details of such variation shall be recorded.

4.14 Every post of Type 1, 2, 4, and 5 shall be accompanied by a reference post of one of the following types:—

(a) A wooden post of triangular cross-section, not less than 8 cm wide on any face.

(i) When referencing a post of Type 1, 2, or 4, the wooden post shall stand not less than 1 metre high and be marked "Mon" on the side facing the standard post. The top of a hewn post shall be pointed to shed water, or, if milled, the top shall be chamfered.

- (ii) When accompanying a post of Type 5, the wooden reference post shall be painted white if possible, shall stand not less than 30 cm high, and shall be marked "IP" on the side facing the Type 5 post. A wooden post accompanying a Type 5 post set under subsections (a), (b), or (c) of section 4.06 shall also bear the location post number and claim name, either carved or painted thereon. When accompanying a Type 5 post set under subsection (d) of section 4.06, the wooden post shall show the lot number only in addition to "IP". The lot number may be either carved or painted thereon.
- (b) A metal reference post, which shall consist of an aluminum plate of approximately 22-gauge thickness, approximately 10 x 20 cm in size, bolted to a galvanized angle-iron post. The plate shall be marked "B.C.L.S. Survey Post 20 cm from this Ref. Post".
- When used to accompany a post of Type 1, 2, or 4, the metal post shall stand not less than 1 metre high, or if used to accompany a post of Type 5, it shall not be less than 30 cm high.

#### *Division (5)—Determination of Boundaries*

5.01 In determining the boundaries of a mineral claim, the surveyor shall be guided by Part II of the *Mineral Act*, and by the instructions herein contained. Copies of the records of the claim shall be obtained from the Mining Recorder of the mining division in which the claim is situate.

5.02 If the surveyor finds that the data on the No. 1 and No. 2 posts differ from the data on the records of the claim, the Mining Recorder shall be consulted.

5.03 Prior mineral claims shall be surveyed as rectangles. The straight line between the No. 1 and No. 2 posts shall govern the direction of the side lines. The end lines shall be established by running lines at right angles to the location-line—one from No. 1 post and the other from No. 2 post, or the position of No. 2 post as corrected in accordance with section 27 (1) of the *Mineral Act*. In connection with section 27 (1), it should be noted that even though the position of the No. 2 post shall be brought back if necessary to 457.20 metres (1,500 feet) from the No. 1 post, the original No. 2 post itself must be left in place as found. It is not necessary to run the true location-line unless the location-line forms one boundary of a claim being surveyed under sections 3.01, 3.03 and 3.04 and the surveyor may determine the true bearing and length of the location-line by running a traverse or trial line between the No. 1 and No. 2 posts.

5.04 When, because of the impossibility of setting a group of location-posts over the same point, two or more location-posts are found within a distance of a metre or two and are interpreted by the surveyor as marking the same point, the monument marking said point shall be placed at the site of the post having the earliest location date.

5.05 When a monument is required to be placed at the corner of a claim, and the corner falls on the site of a location post of said claim, the location post shall be replaced by the monument (and reference post), and the location post (and reference post) shall be left in the cairn adjacent to the monument. If the location post is in the form of a tree stump, the stump shall be left "*in situ*" and the monument set as a witness-post on a true line.



5.06 Should one or more of the location posts be obliterated or lost, the evidence used for restoring or re-establishing the said post or posts may be in the form of a statutory declaration by the locator of the claim or some other person who was present at the time of location, or has definite knowledge of the location. This shall not relieve the surveyor from the obligation of procuring any further evidence, corroborative or otherwise, as can be obtained, and of reaching a conclusion from all the evidence available. A covering letter to accompany the survey returns must explain the evidence used and the reason for not producing an affidavit, if one was not obtained.

5.07 Due regard shall be given to prior locations in the survey of subsequent and fractional locations, and when survey data are obtained on the ground for the purpose of excluding a prior claim from the claim being surveyed, these data shall be incorporated in the survey returns, together with a true copy of the records of the prior locations.

5.08 When two or more adjoining claims in good standing are in the same ownership at time of surveying and have the same location date, the surveyor may indicate priorities and carry out his survey accordingly, regardless of any numbers in the legal names of the claims.

5.09 No mineral claim may consist of more than one parcel. Where a claim is divided by prior locations into two or more parcels, the parcel nearest the No. 1 post shall constitute the claim.

5.10 The "fraction so created," referred to in section 27 (2) of the *Mineral Act*, shall be formed by producing a side line of the claim being surveyed to meet that boundary of the previously located claim which is touched or crossed by the location-line of the new claim.

5.11 Should the production of the side line not effect this intersection, then the point of intersection of this side line with the line drawn at right angles to the location-line from the No. 1 or No. 2 post (adjusted if necessary to place it at the allowable maximum distance from No. 1) shall be joined to the nearest extremity of the aforesaid boundary of the prior claim. (See explanatory diagrams Nos. 1 to 9.)

5.12 A "fraction so created" may be included at either or both ends of the location-line, provided that this location-line touches or crosses the boundaries of previously located claims. If one "fraction so created" is so great in area that it would cause the maximum area of the claim to be exceeded, it cannot be reduced in area, but must be eliminated entirely. If the fractions combined, but neither singly, would cause the maximum area to be exceeded, the fraction nearest the No. 1 post shall be included in the survey.

5.13 The surveyor shall include in his survey any "fraction so created," provided that the limiting area is not thereby exceeded.

5.14 In surveying a claim located and recorded as a fractional mineral claim, it is important that the surveyor shall obtain a copy of the locator's sketch-map on the back of the application for record (Form H) and to include on survey, as nearly as possible, the ground called for by the record and the sketch, in no case to exceed 20.90 ha (51.65 acres) in area.

5.15 No. 1 and No. 2 posts of a fractional mineral claim, while possibly not essential to the determination of the boundaries of the claim, shall in all cases be properly tied to the survey.

5.16 If a fractional mineral claim is described on the record of said claim as being surrounded on all sides by previously located claims, which are also unsurveyed, the surveyor shall submit with his survey returns of the fractional claim copies of the records of all the surrounding claims concerned.

5.17 In the event of the claim to be surveyed being so staked that it overlaps a Crown-granted mineral claim which has reverted to the Crown but of which the survey had not been cancelled at the time when the new claim was staked, the new claim shall be surveyed so as not to include any of the area covered by the reverted claim. The boundaries of the reverted claim shall be treated in the same way as regards the inclusion of the "created fraction," etc., as though the reverted claim were in good standing. Should, however, the survey of the reverted claim have been cancelled prior to the date of staking of the claim to be surveyed, the area occupied by the cancelled claim shall be treated as vacant Crown land, in so far as the cancelled claim is concerned.

5.18 The boundary of a previously surveyed claim shall not be used to close the survey of the claim to be surveyed without having been retraced by the surveyor.

5.19 When surveying mineral claims along the International Boundary, either along the 49th parallel of latitude or the Canada-Alaska boundary, the reserve of 18.29 metres (60 ft.) width adjacent to these boundaries shall be respected and eliminated from the survey of any claims affected.

5.20 Boundaries of mineral claims shall include all water areas covered by the record and not reserved.

5.21 As water areas will be excluded from the area of a mineral claim when dealing with the disposition of surface rights over Crown land, a survey of the natural boundary of the water area is required of sufficient accuracy only to determine the area and shape. Compass and chain, stadia, or a photogrammetric method may be used. In the latter case, at least two photo points must be surveyed in to control the scale and azimuth. The photo points are to be identified on the photo in the course of the ground survey. Alternatively, where a map prepared from photos exists, and providing two common points on the map and survey can be identified, the detail of the natural boundary may be obtained from the map by an accurate enlargement process.

5.22 Small watercourses or ponds of a temporary or seasonal nature with poorly definable boundaries are not to be considered as having a natural boundary. Such watercourses shall not be shown within or crossing the boundaries of a claim, however, as their existence on the ground has a topographic value, they shall be shown if possible according to section 7.08 (h) on the side of the boundary opposite the area being surveyed.

5.23 Disposition of surface rights of mineral claims by the Crown will except the type of roads as follows:—

- (a) Public roads, by virtue of section 6 or 8 of the *Highway Act*;
- (b) Forest access roads which are unsurveyed;
- (c) Petroleum development roads which are unsurveyed;
- (d) Existing roads which are not "public" under the *Highway Act* but which are travelled by the public.



- (e) Surveyed roads for which a plan is on deposit (where the road has been gazetted at a greater width than surveyed, the gazette boundary is to apply).

5.24 Roads in categories (a) to (d) will be traversed on centre line, using either transit and chain, compass and chain, or transit and stadia, commencing and terminating at intersection points on the road centre line and with the boundaries. The traverse is for plotting purposes only and precision to the standard of the claim boundaries being surveyed is not required. Alternatively, where a map prepared from photos exists and providing two common points on the map and survey can be identified, the detail of the road alignment may be obtained from the map by an accurate enlargement process.

5.25 Roads in category (e), when contained within a claim, need not be retraced to recover or reset all the road boundary posts. Each boundary intersection of the claim being surveyed with the road survey or gazette-width boundary must be posted as a result of tying into two posts of the road survey.

#### *Division (6)—Disputed Claims*

6.01 When surveying a claim which overlaps or is in dispute with a previously surveyed claim, the surveyor shall note the intersection of lines and determine the courses and distances from the corners situate within the boundaries of his survey, together with ties to all location posts involved, so that the overlap may be clearly shown on the plan.

#### *Division (7)—Survey Returns*

7.01 In order to comply with sections 34 (2) and 56 of the *Mineral Act*, and to guard against obvious possible abuse, survey returns of mineral claims shall be filed with the Surveyor-General as soon as practicable, and in all cases within six months of the date of completion of the field work, and, if sent back to the surveyor for amendments, shall be returned within one month. If survey returns are not filed within the above time limit, the Surveyor-General, before dealing with them, may call upon the surveyor for an affidavit to the effect that he has again visited the ground and has checked and found the survey monuments in good order and in their true position.

7.02 Survey returns required to be filed with the Department shall consist of the following:—

- (a) A survey plan.
- (b) Machine-made copies of the records of all claims being surveyed.
- (c) Machine-made copies of the records of all claims which affect the determination of the boundaries of the claims being surveyed.
- (d) Machine-made copies of the sketch plans from the back of the locator's affidavit for fractional mineral claims.
- (e) Printed forms, stocked by the Department, on which the surveyor shall record the serial number of the identification tags as found by him, as well as the information found written on the tags.
- (f) Where necessary copies of air-photographs showing information required in sections 2.11, 2.12, and 5.21.

7.03 (a) The survey returns shall be forwarded direct to the Department by the surveyor and not through the surveyor's agent or client. A covering letter shall be sent to the Department in the same mail, and should include an explanation of any deviation from the regulations or instructions.

(b) The statutory fee of twenty dollars (\$20) per claim shall accompany the covering letter.

#### *Survey Plan*

7.04 A survey plan shall bear a title similar to "Survey Plan of Mineral Claim(s), being Lot(s) \_\_\_\_\_ District."

7.05 The plan shall be prepared on tracing-linen or film with a matte finish to a scale of 1:1, 1:2 or 1:5 or multiples of same by integral powers of 10. These scales shall be used for all survey plans and for inserted enlargements unless due to the circumstances a "not to scale" inset is necessary. The smallest scale shall be chosen so that all the required detail may be shown clearly and without congestion, and shall be such that the smallest parcel surveyed is represented by not less than 6 square cm. In cases where the foregoing would necessitate an unduly large plan to permit the showing of a few details, the main body of the plan shall be drawn to an authorized reasonable scale and the details shown on inserted enlargements.

7.06 All information on the plan shall be printed, and only the signatures shall be written.

7.07 Standard sheet sizes authorized for the preparation of survey plans are as follows:—

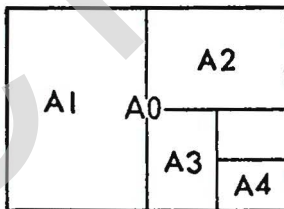
A0—1 189 x 841 mm

A1— 841 x 594 mm

A2— 594 x 420 mm

A3— 420 x 297 mm

A4— 297 x 210 mm



7.08 The plan shall be draughted in black ink only (except for red outlining as called for by subsection (r) hereof) and shall show all the details, as follows:—

- (a) Boundary-lines run, as full lines.
- (b) Boundary-lines not run, as broken lines.
- (c) Bearings of all boundaries on the quadrantal or full circle system.
- (d) Dimensions of all boundaries in metres and decimals.
- (e) Bearings and dimensions of traverse lines and triangulation rays. These lines and rays shall be in fine broken lines. If more convenient, the bearing and dimensions may be shown in tabular form elsewhere on the plan.
- (f) A table showing co-ordinates prepared in compliance with section 3.09 or as provided in section 3.05.
- (g) The boundaries of surveyed rights-of-way crossing the lot or block shall be shown as fine broken lines. Boundary intersection dimensions and posting details, as required by section 4.06 (d), shall be shown.



- (h) Such topographical features, types of timber, and improvements as can be shown without detriment to the clarity of the plan. Where line trees are shown, the distance along the line to the centre of the tree must be given. Improvements shall include buildings, fences, gas and oil wells, unsurveyed utility lines, cultivation, mine workings, etc.
- (i) The designation of land on both sides of the line; i.e., the lot number and claim name, or "unsurveyed Crown land." In no case shall abbreviations or initials of official claim names be used.
- (j) The lot number, name, date of location, and record number of the claim surveyed, and of adjoining claims.
- (k) The correct designation of any lots surveyed under the *Land Act* which may overlap the claim surveyed.
- (l) The area of each claim being surveyed. In perimeter surveys, the total area of the district lot comprising the perimeter shall also be shown. A claim, 457.20 by 457.20 metres (1 500 by 1 500 feet), closed in accordance with section 2.10, is accepted as containing 20.90 hectares (51.65) acres. Areas are to be shown to the nearest hundredth of a hectare.
- (m) Monuments found and set, together with details of their markings and references. Monument markings shall, where applicable, be shown in the form of a sketch of the post cap. Where a previously established corner is entirely obliterated, the method employed to re-establish the corner shall be clearly shown.
- (n) The direction of flow of creeks and rivers crossed, their width and average depth, together with the distance along the boundary to the centre of the watercourse.
- (o) The directions, whence and whither of roads and trails crossed.
- (p) Offset distances from boundary or traverse-lines to improvements and topographical features. The distance along the boundary or traverse-line to the point of offset must be shown.
- (q) A connection to nearby surveys, or, if no connection was made, the position of the parcel in relation to some prominent topographic feature. Should the scale of the plan be too large to show this information, it shall be shown as an inset at a suitable smaller scale.
- (r) The line of red ink around the area dealt with by the plan shall be contiguous to and inside the boundary-lines of the said area. The red outline shall be applied on the face of the linen or film. Dimensions and other details shall be so placed on the plan that they will not be obscured by the said red line and will show up clearly on reproductions.
- (s) The boundary courses of a road in category (e) of section 5.23, between intersected courses, shall be dimensioned by copying from the registered plan, providing no gross error is apparent.
- (t) The centre lines of roads in categories (a) to (d) of section 5.23 should be shown in a broken black line, with the type of road indicated alongside.

- (u) Traverses or photogrammetric methods used to define natural boundaries, which are within the area being surveyed, need not be shown. Distances along the boundaries to the centre line of rivers or creeks crossed shall be shown as usual, with their width and depth.
- (v) The plan shall show the scale, a north point, a note regarding the derivation of bearings, and shall be dated and signed by the surveyor.
- (w) The survey plan shall bear the surveyor's affidavit in Form L prescribed under the *Land Registry Act*.

7.09 Annexed are specimens of survey plans for the guidance of surveyors in the preparations of survey returns. For the sake of uniformity, surveys shall, so far as possible, adopt the style and method exemplified by the specimens. Approved symbols and abbreviations can be found on the specimen plans and in the General Instructions Respecting Permanent Survey Monuments.

7.10 In cases where a mineral claim involves Indian reserve lands, the surveyor should ensure that the necessary approval by the appropriate Gold Commissioner has been given before including such lands within his survey (see section 2, *Indian Reserve Mineral Resources Act*, R.S.B.C. 1960, chapter 187).

#### *Division (8)—Cancellation*

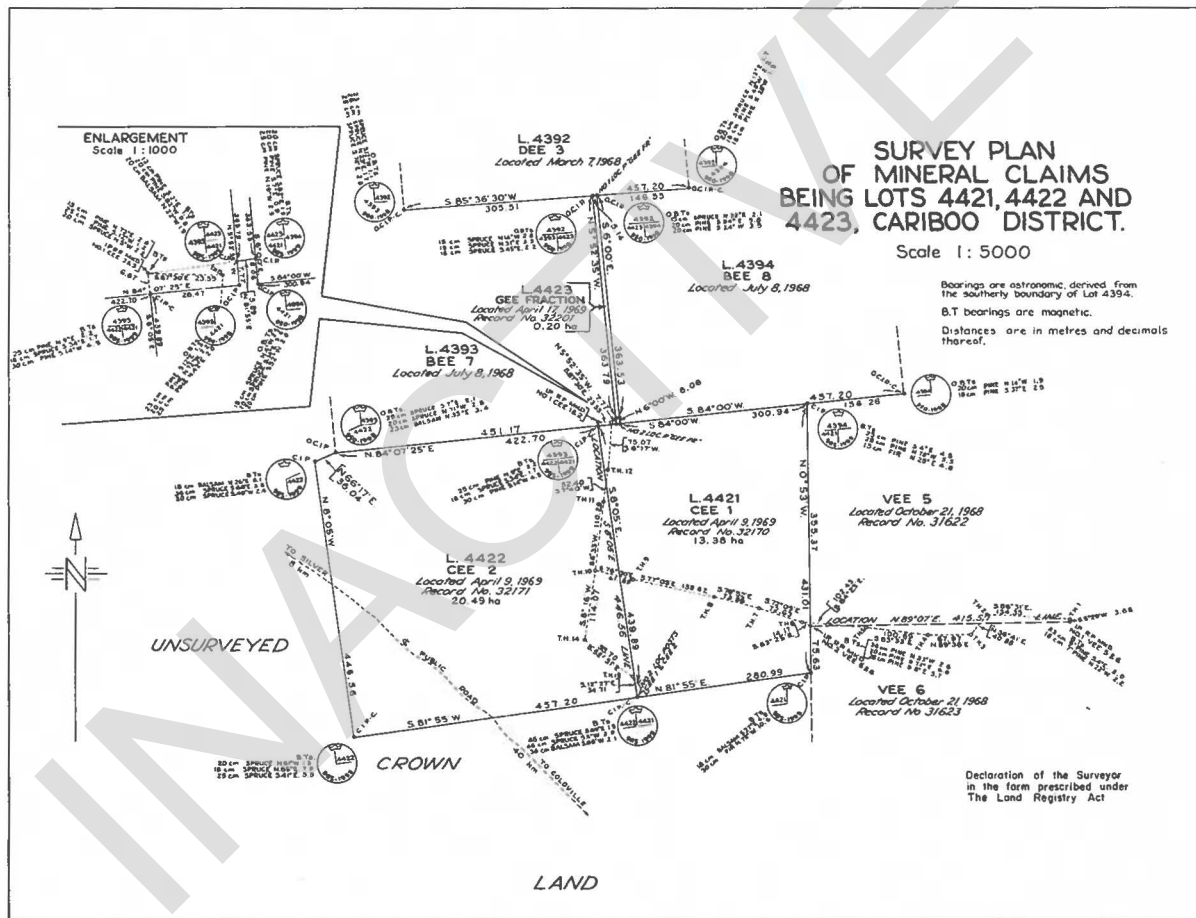
8.01 The following regulations issued by the Surveyor-General are hereby cancelled:—

B.C. Regulation 99/70 *except* the specimen plans referred to in section 7.09 thereof and explanatory diagrams 1 to 9, which form part of *this* Regulation.

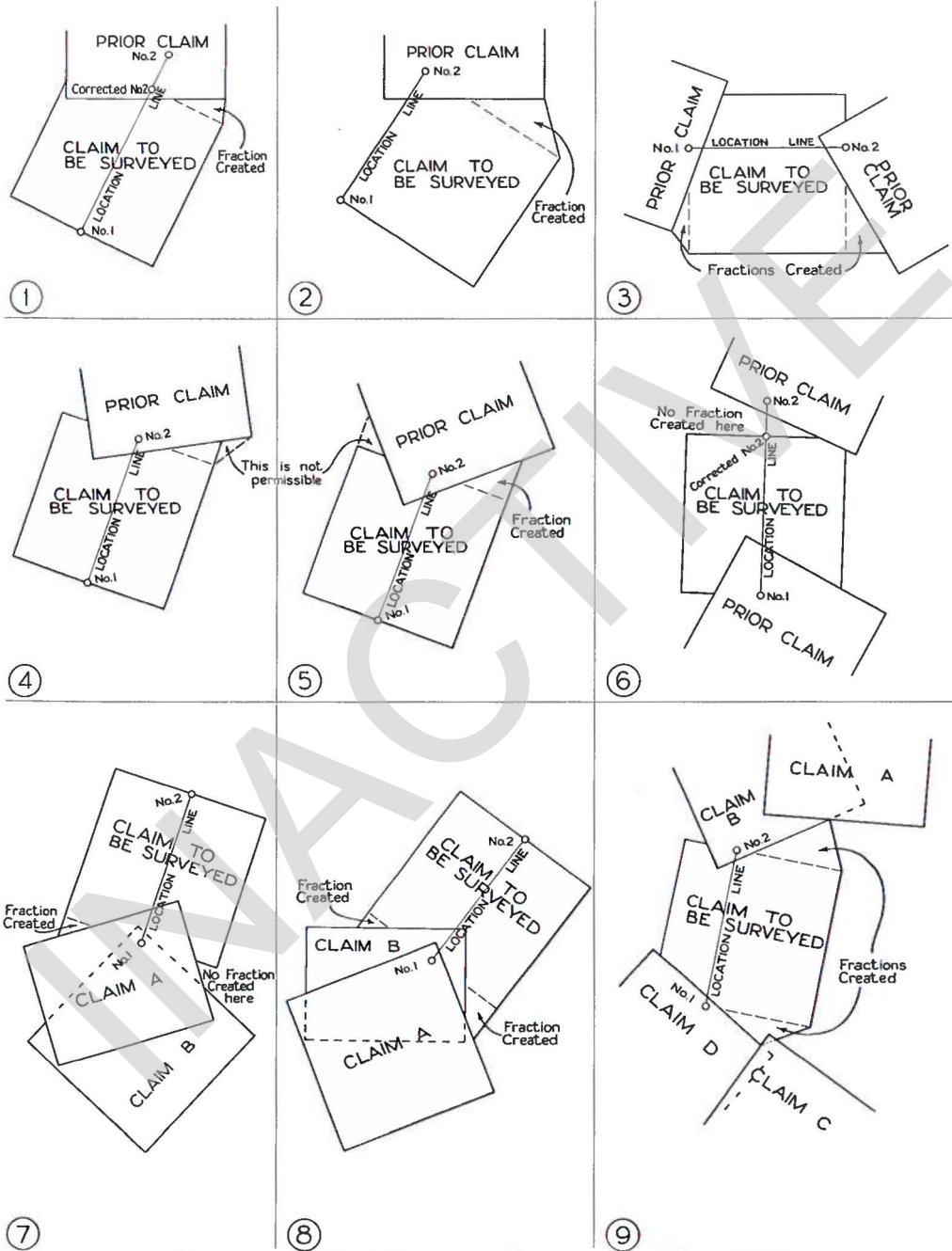
de23—8405

**SPECIMEN - SEPARATE CLAIM SURVEY**  
ORIGINAL PLAN - A 2 SIZE (594 x 420 mm)

NOTE: A line of red ink shall outline the area dealt with by the plan.



# EXPLANATORY DIAGRAMS - SEE DIVISION 5.11



The Courts have declared the right of a claim to ground within a previously located claim to be "void ab initio." The production of the north-east boundary of Claim B (Fig. 7) and the south boundary of Claim B (Fig. 9), into Claim A may bound a void if that be possible, but it is not the boundary of a mineral claim.



# SPECIMEN - PERIMETER SURVEY ORIGINAL PLAN-A2 SIZE (594 x 420mm)

NOTE: A line of red ink shall outline the perimeter boundaries of the lot.

## SURVEY PLAN OF MINERAL CLAIMS BEING LOT 2201 CARIBOO DISTRICT.

Scale: 1 : 5000

Bearings are astronomic, derived from stellar observations, and are referred to the meridian through the north-east corner of Lot 2170.

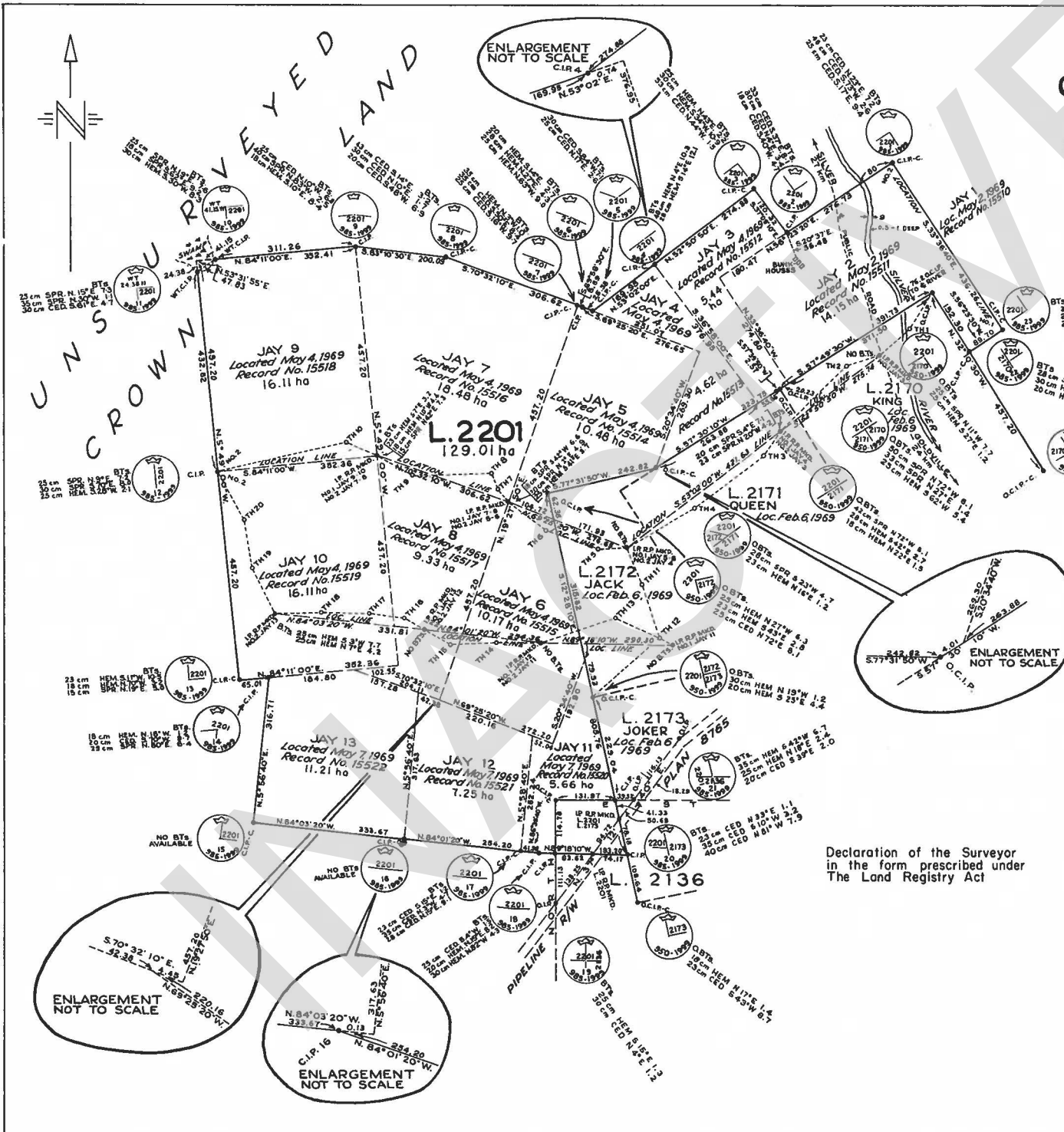
B.T. Bearings are magnetic.

Distances are in metres and decimals thereof.

### TRAVERSE TABLE

STATION	BEARING	DISTANCE
LOCATION LINES		
NO.1 JAY 3		
TH 2	S.72°20'50"W	75.87
NO.2 JAY 3-NO.1 JAY 4	S.45°46'30"W	205.69
TH 3	S.34°35'00"W	64.47
TH 4	S.53°17'30"W	190.44
NO.2 JAY 4-NO.1 JAY 5,6	S.59°35'30"W	171.16
TH 5	S.87°04'40"W	64.11
TH 6	N.70°55'20"W	121.19
NO.2 JAY 5,6-NO.1 JAY 7,8	N.52°52'30"W	100.89
TH 7	N.36°22'20"W	37.56
TH 8	N.23°47'00"W	35.95
TH 9	S.68°48'10"W	173.75
NO.2 JAY 7,8-NO.1 JAY 9,10	N.61°30'40"W	89.53
TH 10	N.67°37'00"W	69.72
NO.2 JAY 9,10	S.77°43'20"W	292.78
NO.2 JAY 4		
TH 11	S.24°05'20"E	65.36
TH 12	S.19°04'10"E	121.99
NO.1 JAY 11	S.59°30'10"E	31.90
TH 12	N.59°30'10"W	31.90
TH 13	N.67°13'40"W	105.83
NO.2 JAY 11-NO.1 JAY 12	S.72°01'10"W	173.69
TH 14	S.89°44'40"W	95.68
TH 15	S.87°16'30"W	101.42
NO.2 JAY 12-NO.1 JAY 13	N.60°27'50"W	64.38
TH 16	N.60°27'50"W	49.83
TH 17	N.83°42'40"W	76.20
TH 18	N.89°01'30"W	106.60
NO.2 JAY 13	S.89°54'50"W	106.32
TIES		
NO.1 JAY 3		
TH 1	N.49°38'20"E	85.66
N.E. LOT 2170	N.29°57'20"E	94.43
TH 12		
S.W. LOT 2172	S.48°48'50"W	200.15
NO.2 JAY 13		
TH 19	N.27°03'00"W	112.78
TH 20	N.11°16'50"W	106.66
NO.2 JAY 9,10	N.27°18'00"W	116.46

Declaration of the Surveyor  
in the form prescribed under  
The Land Registry Act



# SURVEY PLAN OF MINERAL CLAIM SHIRLEY

ZONE 10, 687500E 5463200N

Scale 1:2000

N.T.S. 92H/8d

Bearing are astronomic, derived  
from stellar observation and referred  
to the meridian through the Legal corner post.  
Distances are in metres and decimals thereof  
B.T. bearings are magnetic  
Id.P. Identification post

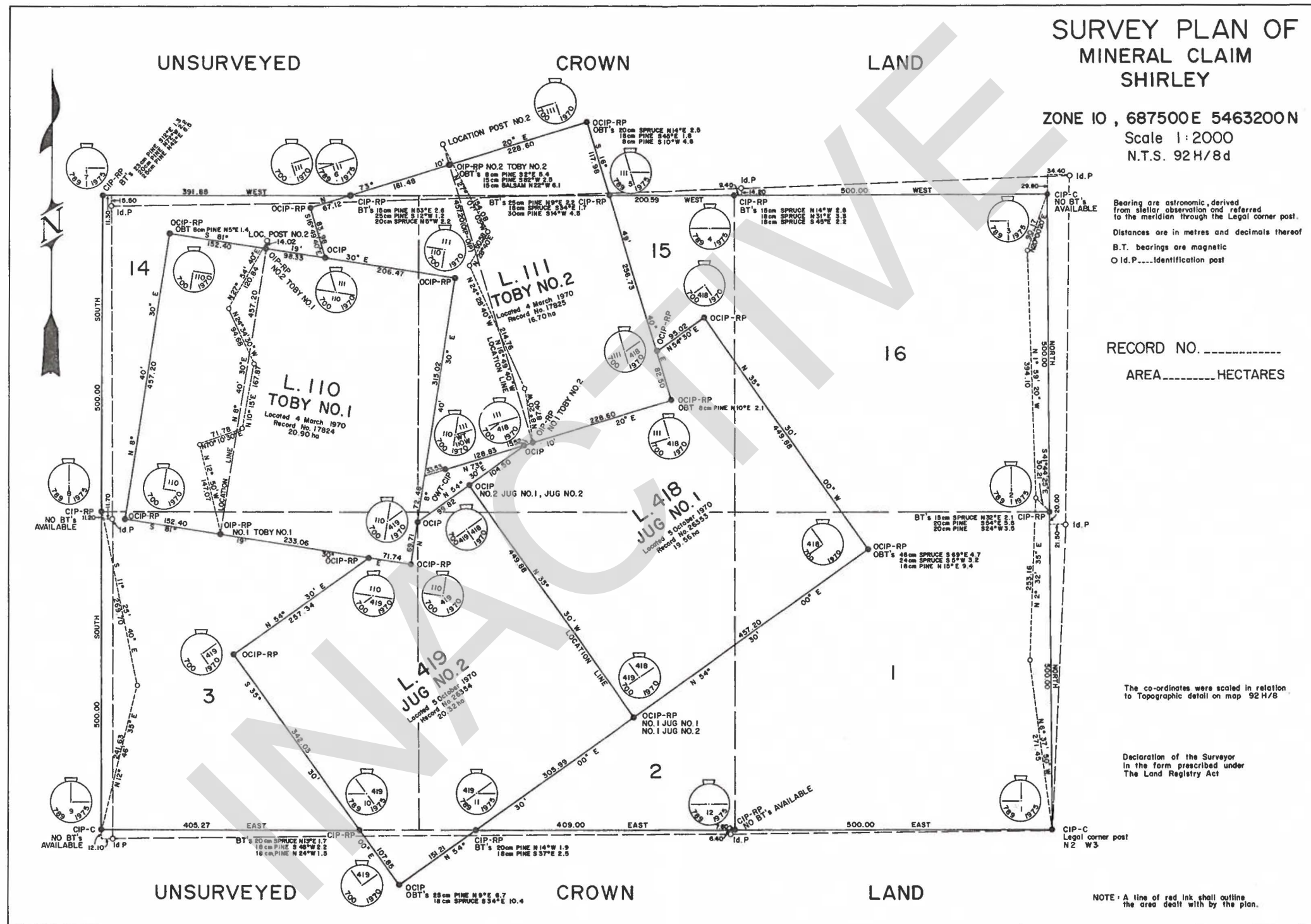
RECORD NO. \_\_\_\_\_

AREA \_\_\_\_\_ HECTARES

The co-ordinates were scaled in relation  
to Topographic detail on map 92H/8

Declaration of the Surveyor  
in the form prescribed under  
The Land Registry Act

NOTE: A line of red ink shall outline  
the area dealt with by the plan.





## MINERAL ACT

### GENERAL INSTRUCTIONS RESPECTING THE SURVEY OF MINERAL CLAIMS LOCATED AFTER FEBRUARY 28, 1975

Authorized under section 34 (1) (c) of the *Mineral Act* as amended, 1974

#### *Foreword*

The object of these instructions is to place before British Columbia land surveyors, in convenient form for reference, the rules that now guide the Surveyor-General in performing his duties under the *Mineral Act* and in accordance with the regulations governing the locating of mineral claims under the *Mineral Act*, B.C. Reg. 611/74.

Surveyor-General.

Victoria, British Columbia.

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#### *Division (1)—Interpretation*

1.01 These regulations may be cited as the "Mineral Act Survey Instructions, Unit System."

1.02 In these regulations the word "Department" refers to the Department of Lands, Forests, and Water Resources.

1.03 In these regulations the word "records" under the *Mineral Act* shall include the record of the mineral claim and the affidavit of the locator in the prescribed forms.

#### *Division (2)—General*

2.01 A survey under these instructions consists of the delineation on the ground of the area to which the holder of a mineral-claim record is entitled under the provisions of the *Mineral Act*.

2.02 The instructions herein contained apply particularly to mineral claims located after February 28, 1975.

2.03 The survey shall be made under the personal supervision, on the ground, of the surveyor signing the plan. If a previous survey, made by another surveyor, forms a common boundary with the claim being surveyed, such boundary shall be traversed and all details of the traverse and the closure shall be shown, using the dimensions thus determined.

2.04 All surveys shall be referred to the astronomic meridian, which shall be determined by astronomic (preferably stellar) observation or from the Provincial Triangulation System or by a gyroscopic meridian indicator, except that in cases of surveys of small extent (not more than four units) the meridian of adjacent surveys may be adopted.

2.05 The conventional method of survey requires that angles shall be read with a transit, and distances shall be measured with a steel tape or with electronic measuring equipment. Tapes shall be compared from time to time with the standard of length adopted by Canada. Electronic equipment shall be calibrated periodically, and when necessary the measured distance compared to a known distance. If other than conventional methods of survey are to be employed, prior approval is required from the Surveyor-General.

2.06 All linear measurements shall be in metres and decimals thereof.

2.07 All surveys shall be closed. The allowable linear error of closure shall be 1 part in 2,500 parts. If, due to unavoidable circumstances, the error of closure exceeds the allowable limit, the letter accompanying the survey returns shall contain an explanation for the error.

2.08 All surveys shall be connected to existing surveys, provided such surveys are situated within the following distances:—

(a) 2 km. if in heavily wooded or precipitous country:

(b) 3 km. if in open or partly open country:

(c) 5 km. if along a trail, wagon-road, on ice, or along open foreshore.

If no previous survey is within these distances, an acceptable tie shall be made to Provincial triangulation, an identification on an air photograph, some prominent nearby topographical feature shown on a Departmental map, or to improvements of a permanent nature made upon the claim, such as the mouth of a tunnel or shaft, and the covering letter with the survey returns shall contain details of the claim as will facilitate its identification and location at a future date.

2.09 Where practicable, the surveyor is encouraged to include in his survey returns of a claim or group of claims a suitable air-photo identification.

### *Division (3)—Types of Survey*

#### *Single Unit and Fractional Claims*

3.01 The boundary-lines of all claims shall be run, or traversed where it is not practicable to run them, and all surveys shall be closed. Monuments shall be placed at all corners (and angles) of the unit and at points of intersection of the boundaries of the claim being surveyed with the boundaries of other district lots, sections, etc.

#### *Multi Unit Claims*

3.02 This will be the usual type and applies to all surveys of claims of more than one unit. (See Mineral Act Regulations, B.C. Reg. 611/74.)

3.03 It is permissible to create an "inner perimeter" within the claim being surveyed in order to exclude a claim or claims held under different ownership. All such "inner perimeters" shall be fully monumented except for intersections made by unit boundaries.

3.04 All boundary-lines on the perimeter of the claim being surveyed shall be run, or traversed where it is not practicable to run them. Monuments shall be placed on the perimeter at all unit corners and angles and at points of intersection with other district lots, sections, etc., and shall be stamped with a series of consecutive numbers, as detailed in section 4.11.



3.05 The true bearing and length of all boundary lines shall be determined by traverse. The remaining boundaries of each unit within the perimeter shall then be determined by calculation. A co-ordinate table may be shown on the plan, together with a grid.

3.06 Each single unit or multi unit claim survey shall be given a number consisting of the coordinates of the southwest corner of the claim together with the addition of the claim name and record number. The coordinates shall be the U.T.M. rectangular coordinates rounded to the nearest 100 metres. They shall serve as a reference to the general location of the claim but shall not be used for the purpose of establishing exact position. When the U.T.M. rectangular coordinates of the southwest corner of the claim cannot be easily established by a tie to survey control they may be scaled from the best planimetric map available or obtained by photogrammetric methods.

3.07 If, subsequent to the approval of a perimeter survey, the claim holder wishes to amend the perimeter boundaries by deleting one or more units his surveyor shall request special instructions from the Surveyor-General.

#### *Control Surveys and Surface Mining Operations*

3.08 This type of survey is intended for use where surface stripping would cross mineral claim boundaries and destroy monuments which normally would be set in the survey of the adjoining mineral claims.

3.09 The true bearings and lengths of all boundary lines shall be determined by traverse and all remaining claim boundaries determined by calculation. Co-ordinates for all corners and intersections shall be computed and based on a common origin, the meridian of which shall be established by stellar observation or gyroscopic meridian indicator. Wherever possible the origin of coordinates should be a provincial or geodetic survey control monument.

3.10 Monuments shall be placed so that a density of at least one monument per 500 metres is obtained outside the proposed area of the surface mining operation. These monuments set in the most suitable places with a view to permanence shall be integrated and given coordinates based on the same origin as that of the group of claims being surveyed in order to assist in the future establishment of individual claims on the ground if required.

3.11 For this type of survey the surveyor engaged should request special instructions from the Surveyor-General and submit a statement of intention by the mining company to carry out surface mining operations.

#### *Division (4)—Monumentation*

4.01 A survey monument shall consist of a standard post and one or more of the reference marks described in the Instructions Regarding Permanent Survey Monuments.

4.02 Posts shall be of the following types:—

Type 1: Standard Concrete Post.

Type 2: Standard Rock Post.

Type 4: Standard Capped Post.

Type 5: Standard Post.

4.03 The Type 2 posts shall be used to mark every corner which falls on bed-rock, an immovable boulder, or a permanent stone or concrete structure.

4.04 The Type 1 or Type 2 post shall be used for control surveys for surface mining operations as outlined in section 3.10, and shall be placed with a density of one in three, with the intervening posts being Type 4. Intervisibility is desirable, but every control monument must "see" at least one other control monument.

4.05 The Type 4 post shall be used for single unit, multi unit and fractional claims and for control surveys as described in section 4.04.

4.06 The Type 5 post may be used for the following purposes only:—

- (a) Marking the accepted location post of a group of posts tied under section 5.04.
- (b) Marking the intersection of surveyed right-of-way boundaries with the boundaries of claims being surveyed under sections 3.01 and 3.04. These intersections shall be posted in the same manner (i.e., one boundary or both boundaries) as the right-of-way is posted.

4.07 Where no tie to a cadastral survey or trig. point is possible within the limits required by section 2.08 a monument of Type 1, 2, or 4, stamped as a reference to the lot being surveyed, must be set and referenced with bearing-trees, or other tie (e.g., to the footings of a bridge) at a prominent topographical feature which is identifiable on existing maps or photos. A traverse is required from the reference monument to the survey.

4.08 Any existing lot-corner tied to in the course of the survey, at which no post of Type 1, 2, 4, or 5 is found, shall be reposted with a post of Type 5 or better.

4.09 A corner which falls in an inaccessible position in a locality unfavourable to the planting of a post, or where a post is likely to be disturbed or destroyed, shall be witnessed by posts of Type 1, 2, or 4, planted at the nearest accessible points to the corner on the two boundary-lines which intersect at the corner, or on a boundary produced.

4.10 Each standard post shall be set with the crown on the cap toward the north and with the corner point, as nearly as possible, at the centre of the cap. After setting the post, the true point shall be marked by a small hole punched or drilled in the cap.

4.11 (a) When used for separate claim surveys, the space provided on the cap shall be used to indicate diagrammatically the direction of the boundary-lines and the number of the lots adjoining the corner. The surveyor shall also mark upon the cap the year in which the post was set and the registry number of his commission as a British Columbia land surveyor. In the case of a witness-post, it shall also be marked with the letters "WT" followed by the distance and general direction to the corner witnessed. This post marking is best done with steel dies of the letters and numbers required.

(b) When used for multi unit claims, the post cap shall carry, in addition the items detailed in paragraph (a) above, a number, of a consecutive series starting from 1, which will serve to identify the corner on the survey plan.



(c) When used for control surveys, the cap shall be marked with the year in which the post was set, the surveyor's commission number, and a number, of a consecutive series starting from 1, which will serve to identify the monument on the survey plan.

4.12 The position of every post shall be referenced by at least three bearing-trees, wherever trees are available. The distance to each bearing-tree shall be measured in metres and tenths from a point 1 metre vertically above the top of the post to the face of the blaze. The bearing-tree shall be carved with the letters "BT" and the slope distance to the corner. The magnetic bearing from the post to the tree shall be recorded on the plan, together with the diameter and species of each tree.

4.13 Cairns shall be built, if possible, to reference the position of all posts set. At a true corner post, the cairn shall be in the shape of a pyramid 1.5 metres square at the base and 1 metre high; its centre shall lie due south of the post, with one corner adjoining the post. At a witness-post, the cairn shall be conical, 1.5 metres in diameter at the base and 1 metre high. It shall stand on the opposite side of the post from the corner witnessed, with its centre 1 metre from the post. Should it be impractical to build the cairn as specified, its position in relation to the post may be varied and details of such variation shall be recorded.

4.14 Every post of Type 1, 2, 4, and 5 shall be accompanied by a reference post of one of the following types:—

(a) A wooden post of triangular cross-section, not less than 8 cm wide on any face.

(i) When referencing a post of Type 1, 2, or 4, the wooden post shall stand approximately 1 metre high and be marked "Mon" on the side facing the standard post. The top of a hewn post shall be pointed to shed water, or if milled, the top shall be chamfered.

(b) A metal reference post, which shall consist of an aluminum plate of approximately 10 x 20 cm in size, bolted to a galvanized angle-iron post. The plate shall be marked "B.C.L.S. Survey Post 20 cm from this Ref. Post." When used to accompany a post of Type 1, 2, or 4, the metal post shall stand approximately 1 metre high.

#### *Division (5)—Determination of Boundaries*

5.01 In determining the boundaries of a mineral claim including a fractional claim, the surveyor shall be guided by section 33 (5) of the *Mineral Act*, the *Mineral Act Regulations* (B.C. Reg. 611/74) and by the instructions herein contained. Copies of the records of the claim including any mining inspector's reports verifying the positions of legal corner posts shall be obtained from the Mining Recorder of the mining division in which the claim is situate.

5.02 If the surveyor finds that the data on the "legal corner post" differs from the data on the records of the claim, the Mining Recorder shall be consulted.

5.03 Prior mineral claims, (located on or before February 28, 1975.) shall be surveyed as rectangles. The straight line between the No. 1 and No. 2 posts shall govern the direction of the side lines. The end lines shall be established by running lines at right angles to the location-line—one from No. 1 post and the other from No. 2 post, or the position of No. 2 post as corrected in accordance with section 27 (1) of the *Mineral Act*. In connection with section 27 (1), it should be noted that



5.22 Small watercourses or ponds of a temporary or seasonal nature with poorly definable boundaries are not to be considered as having a natural boundary. Such watercourses shall not be shown within or crossing the boundaries of a claim, however, as their existence on the ground has a topographic value, they shall be shown if possible according to section 7.08 (h) on the side of the boundary opposite the area being surveyed.

5.23 The type of roads to be shown on the plan are as follows:

- (a) Public roads, by virtue of section 6 or 8 of the *Highway Act*;
- (b) Forest access roads which are unsurveyed;
- (c) Petroleum development roads which are unsurveyed;
- (d) Existing roads which are not "public" under the *Highway Act* but which are travelled by the public.
- (e) Surveyed roads for which a plan is on deposit (where the road has been gazetted at a greater width than surveyed, the gazette boundary is to apply).

5.24 Roads in categories (a) to (d) will be traversed on centre line, using either transit and chain, compass and chain, or transit and stadia, commencing and terminating at intersection points on the road centre line and with the boundaries. The traverse is for plotting purposes only and precision to the standard of the claim boundaries being surveyed is not required. Alternatively, where a map prepared from photos exists and providing two common points on the map and survey can be identified, the detail of the road alignment may be obtained from the map by an accurate enlargement process.

5.25 Roads in category (e), when contained within a claim, need not be retraced to recover or reset all the road boundary posts. Each boundary intersection of the claim being surveyed with the road survey or gazette-width boundary must be posted as a result of tying into two posts of the road survey.

#### *Division (6)—Disputed Claims*

6.01 When surveying a claim which overlaps or is in dispute with a previously surveyed claim, the surveyor shall note the intersection of lines and determine the courses and distances from the corners situate within the boundaries of his survey, together with ties to all location posts involved, so that the overlap may be clearly shown on the plan.

#### *Division (7)—Survey Returns*

7.01 In order to comply with sections 34 (2) and 56 of the *Mineral Act*, and to guard against obvious possible abuse, survey returns of mineral claims shall be filed with the Surveyor-General as soon as practicable, and in all cases within six months of the date of completion of the field work, and, if sent back to the surveyor for amendments, shall be returned within one month. If survey returns are not filed within the above time limit, the Surveyor-General, before dealing with them, may call upon the surveyor for an affidavit to the effect that he has again visited the ground and has checked and found the survey monuments in good order and in their true position.

7.02 Survey returns required to be filed with the Department shall consist of the following:—

- (a) A survey plan.
- (b) Machine-made copies of the records of all claims being surveyed.
- (c) Machine-made copies of the records of all claims which affect the determination of the boundaries of the claims being surveyed.
- (d) Machine-made copies of the sketch plans from the back of the locator's affidavit for fractional mineral claims.
- (e) Printed forms, stocked by the Department, on which the surveyor shall record the serial number of the identification tags as found by him, as well as the information found written on the tags.
- (f) Where necessary, copies of air-photographs showing information required in sections 2.11, 2.12, and 5.21.

7.03 (a) The survey returns shall be forwarded direct to the Department by the surveyor and not through the surveyor's agent or client. A covering letter shall be sent to the Department in the same mail, and should include an explanation of any deviation from the regulations or instructions.

(b) The statutory fee of twenty dollars (\$20) per Unit, with a maximum of \$200 for one claim shall accompany the covering letter.

#### *Survey Plan*

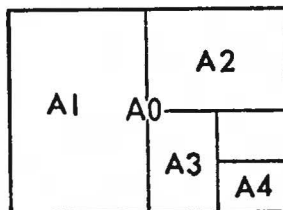
7.04 A survey plan shall bear a title similar to "Survey Plan of Mineral Claim(s), followed by the U.T.M. coordinates referred to in section 3.06 consisting of Zone, Eastings and Northings, in that order with no trailing zeros omitted.

7.05 The plan shall be prepared on tracing-linen or film with a matte finish to a scale of 1:1, 1:2 or 1:5 or multiples of same by integral powers of 10. These scales shall be used for all survey plans and for inserted enlargements unless due to the circumstances a "not to scale" inset is necessary. The smallest scale shall be chosen so that all the required detail may be shown clearly and without congestion, and shall be such that the smallest parcel surveyed is represented by not less than 6 square cm. In cases where the foregoing would necessitate an unduly large plan to permit the showing of a few details, the main body of the plan shall be drawn to an authorized reasonable scale and the details shown on inserted enlargements.

7.06 All information on the plan shall be printed, and only the signatures shall be written.

7.07 Standard sheet sizes authorized for the preparation of survey plans are as follows:—

- A0 1 189 x 841 mm
- A1 841 x 594
- A2 594 x 420
- A3 420 x 297
- A4 297 x 210



7.08 The plan shall be draughted in black ink only (except for red outlining as called for by subsection (r) hereof) and shall show all the details, as follows:—

- (a) Boundary-lines run, as full lines.
- (b) Boundary-lines not run, as broken lines.
- (c) Bearings of all boundaries on the quadrantal or full circle system.
- (d) Dimensions of all boundaries in metres and decimals.
- (e) Bearings and dimensions of traverse lines and triangulation rays. These lines and rays shall be in fine broken lines. If more convenient, the bearings and dimensions may be shown in tabular form elsewhere on the plan.
- (f) A table showing co-ordinates prepared in compliance with section 3.09 or as provided in section 3.05.
- (g) The boundaries of surveyed rights-of-way crossing the lot or block shall be shown as fine broken lines. Boundary intersection dimensions and posting details, as required by section 4.06 (d), shall be shown.
- (h) Such topographical features, types of timber, and improvements as can be shown without detriment to the clarity of the plan. Where line trees are shown, the distance along the line to the centre of the tree must be given. Improvements shall include buildings, fences, gas and oil wells, unsurveyed utility lines, cultivation, mine workings, etc.
- (i) The designation of land on both sides of the line; i.e., any lot numbers and claim names or "unsurveyed Crown land." In no case shall abbreviations or initials of official claim names be used.
- (j) The date of location, and record number of the claim surveyed, and of adjoining claims.
- (k) The correct designation of any lots surveyed under the *Land Act* which may overlap the claim surveyed.
- (l) The area in hectares, of each claim being surveyed. In multi unit perimeter surveys, the total area within the perimeter shall also be shown. A claim, 500 by 500 metres closed in accordance with section 2.07 is accepted as containing 25 hectares. Areas are to be shown to the nearest hundredth of an hectare.
- (m) Monuments found and set, together with details of their markings and references. Monument markings shall, where applicable, be shown in the form of a sketch of the post cap. Where a previously established corner is entirely obliterated, the method employed to re-establish the corner shall be clearly shown.
- (n) The direction of flow of creeks and rivers crossed, their width and average depth, together with the distance along the boundary to the centre of the watercourse.
- (o) The directions, whence and whither of roads and trails crossed.
- (p) Offset distances from boundary or traverse-lines to improvements and topographical features. The distance along the boundary or traverse-line to the point of offset must be shown.



- (q) A connection to nearby surveys, or, if no connection was made, the position of the parcel in relation to some prominent topographic feature. Should the scale of the plan be too large to show this information, it shall be shown as an inset at a suitable smaller scale.
- (r) The line of red ink around the area dealt with by the plan shall be contiguous to and inside the boundary-lines of the said area. The red outline shall be applied on the face of the linen, or film. Dimensions and other details shall be so placed on the plan that they will not be obscured by the said red line and will show up clearly on reproductions.
- (s) The boundary courses of a road in category (e) of section 5.23, between intersected courses, shall be dimensioned by copying from the registered plan, providing no gross error is apparent.
- (t) The centre lines of roads in categories (a) to (d) of section 5.23 should be shown in a broken black line, with the type of road indicated alongside.
- (u) Traverses or photogrammetric methods used to define natural boundaries, which are within the area being surveyed, need not be shown. Distances along the boundaries to the centre line of rivers or creeks crossed shall be shown as usual, with their width and depth.
- (v) The plan shall show the scale, a north point, a note regarding the derivation of bearings, and shall be dated and signed by the surveyor.
- (w) The survey plan shall bear the surveyor's affidavit in Form L prescribed under the *Land Registry Act*.

7.09 Annexed is a specimen of a survey plan for the guidance of surveyors in the preparations of survey returns. For the sake of uniformity, surveyors shall, so far as possible, adopt the style and method exemplified by the specimen. Approved symbols and abbreviations can be found on the specimen plan and in the General Instructions Respecting Permanent Survey Monuments.

7.10 In cases where a mineral claim involves Indian reserve lands, the surveyor should ensure that the necessary approval by the appropriate Gold Commissioner has been given before including such lands within his survey (*see* section 2, *Indian Reserve Mineral Resources Act*, R.S.B.C. 1960, chapter 187).