RETURN

To an Order of the House for a copy of instructions to Messrs. Farwell and Sproat, before leaving for Kootenay, and a copy of their report on the Mining, Agricultural and Timber resources of that district.

JNO. ROBSON,

Provincial Secretary's Office,
15th January, 1884.

Provincial Secretary.

The Honourable Provincial Secretary to Mr. G. M. Sproat.

VICTORIA, B. C., 12th July, 1883.

SIR,—You are instructed to proceed at once to Kootenay, in company with Mr. Farwell, for the purpose of examining and reporting upon that territory, or as much thereof as may be possible within the necessarily brief period at your disposal.

The primary object of the expedition is to obtain such a descriptive report upon the areas covered by the Ainsworth scheme, and the Baillie-Grohman reclamation scheme, as will enable the Government to form correct conclusions respecting the value of the country for farming, grazing, mining, and other economic purposes; but you will, at the same time, give as extended a description of the country drained by the Kootenay and Upper Columbia Rivers, lying within the Province, as may be compatible with the time and means at your disposal.

In addition to such a general description of the country, and its advantages as a field for settlement and the employment of capital in mining and other industrial pursuits, you will also report upon the Indian population, and indicate approximately what lands (if any) may be required for the purpose of Indian reserves.

In point of time, your first duty will be to report upon the Kootenay River lands intended to be leased for reclamation purposes, in order that the Government may be in a position, at the earliest possible date, to complete the lease.

It will scarcely be necessary for me to enjoin upon you the utmost economy in time and expenses, as the Government have only a very limited sum at their disposal for the exploration.

I have, &c.,

(Signed) JNO. ROBSON,
Provincial Secretary.

The Honourable Chief Commissioner of Lands and Works to Mr. A. S. Farwell,

LANDS AND WORKS DEPARTMENT,
VICTORIA, B. C., 14th July, 1883.

SIR,—That the Government may be possessed of full information in regard to certain lands in Kootenay District, situated on the Kootenay River, and lying between the International Boundary and Kootenay Lake, I have the honour to instruct you to proceed, with all convenient dispatch, to the place in question. You will there make such surveys as may be necessary to enable you to report upon the extent and character of the valley on each side of the river, the approximate area of the lands subject to overflow, and the average depth of flood water, and upon the nature and magnitude of the operations necessary to reclaim the submerged lands, together with any information bearing on the subject which you may gather.

You will also report particularly upon the number of Indians (if any?) who, by usage, may have claims for grazing or other purposes, upon the lands proposed to be reclaimed, and generally upon Indian requirements in the locality.

G. M. Sproat, Esq., who will accompany you to Kootenay, charged with a separate service, will render you such assistance as may be in his power.

A cheque for $250 is herewith enclosed as an advance, to be repaid by voucher. The remuneration for your services will be at the rate of $150 per month, together with travelling and living expenses, represented by voucher. It will be necessary that you exercise the strictest economy in the matter of your expenses, and that, at the earliest date practicable, you return to Victoria with your report upon the reclamation scheme.

I have, &c.,
(Signed) WM. SMITHE,
Chief Commissioner of Lands and Works.

MR. SPROAT'S REPORT ON KOOTENAY.

To the Honourable
The Provincial Secretary.

MEMORANDUM.

Surface of the District of Kootenay.

The surface of the district of Kootenay differs in some respects from that of the mainland of our Province, lying west of the Columbia River. There is not a wide plateau between the mountain systems of Kootenay, namely, the Rockies and Selkirks, as there is, between the mountain systems of Yale district. The Rockies, and the Selkirks, almost inosculate about the top of the Big Bend, but, as the trend of the Rockies is south-easterly while the Selkirks have a general north and south direction, with less of a character of a range, the two systems become somewhat detached and leave between them, in the southern part of the district, a country comparatively lower, but not of the nature of a plateau.

The Rockies form the eastern wall of the Kootenay district. Though presenting an axial range, no doubt from a bird's-eye view, they are composed of several ranges, differing in height and appearance, and running transversely in parts, but generally lying close together with a parallelism north-west and south-east.

It is the Selkirks that give character to the district of Kootenay. They are less entitled than the Rockies to the appellation of a range, except from the top of the Bend to the head of Upper Arrow Lake, which area sheds water pretty regularly, east and west. Nor are the Selkirks a broad mass filling the whole region with Alpine elevations. Their greatest elevation, or at any rate the largest collection of lofty mountains in the whole Selkirk system, is in the above-mentioned area towards the northern part of the Bend. Many fine snow-peaks exist there. Going southerly, there is a wide depression with southerly flowing streams. In the lowest parts of this depression lie the Upper Kootenay Lake and the great Flatbow or Kootenay Lake. This depression has rather a high eastern rim, diminishing southerly, which forces the Columbia River to a northerly, and the Kootenay River to a southerly, course. On the western side of this depression, particularly between the great Kootenay Lake and Slocan Lake, or the Columbia River, the mountains form a broad mass, rising, in parts, high, with some snow-peaks, and shedding water in all directions.

The configuration of Kootenay district, thus, is an isosceles triangle, with its base on the 49th parallel (United States boundary) and its summit at the head of the Big Bend, or, more familiarly, it may be likened to a pointed horseshoe enclosing a smaller one—the latter rimming the central Flatbow or Kootenay Lake depression above-mentioned.

Mountains and Hills.

The whole surface of the district is mountainous or hilly, without any extensive plains, level uplands or undulating plateaus.

The heights visible from the valleys and great water-ways are less than the traveller expects from the general mountainous character of the surface. The snow-peaks, as a rule, are hidden behind hills except in the northern parts of the Bend. Some of these peaks probably reach a height of 7,000 to 10,000 feet, but the hills that commonly meet the eye are from 1,000 to 2,500 feet above the surface.

Most of the snow-peaks are sharp, regular cones, though some have flattish summits with broad shoulders. Some stand out like great square castles, while others resemble gigantic

chimneys. Bare, high serrated sections are not uncommon in the peeps one gets of the main Rocky range.

The hills are of all shapes, with pleasing diversities of form. Their outline generally, is soft, and vegetation, such as it is, covers them. I have seen more sternness and wildness in a ten days' excursion in the Scotch Highlands than during my whole visit to Kootenay.

Lakes.

The lakes in general, when not great riverine expansions, are the familiar British Columbian mountain lakes, running north and south, and very long in proportion to their width, closely bordered by hill-sides from which much of the soil has been washed down, and with swamp-grass patches at the mouths of the larger incoming streams. The want of islands somewhat mars their beauty.

Valleys.

The Eastern valley of Kootenay is the principal valley in the district. It is a portion of one of the most remarkable topographical features in North America, namely, the deep sunk valley or great trough which runs in a nearly straight N. W. and S. E. course, for more than 400 miles, edging, for the most part, the foot-hills of the Rockies.

Within the district of Kootenay, the Upper Columbia and middle Kootenay Rivers lie in this valley. It stretches beyond the international boundary line.

The ordinary valleys of the mountain streams, as a rule, are narrow, many of them being gorges. Their beds, often, are V-shaped, for long distances, and their expansions are ended by bluffs, projecting into the stream. A common feature, is a cañon or rocky obstruction near their mouths, above which there are long stretches of canoe navigation, almost invariably, however, ended by falls or rapids that make portages necessary.

Through the country near the railway line, great cracks or fissures in the mountains are here and there seen.

Eagle Pass (partly in Yale and partly in Kootenay Districts, and the natural entrance to Kootenay District from the west), is one of these, and the expectancy that this "crack" stretched eastward thence through the Selkirks beyond the region explored by Mr. Moberly in 1865, enabled Major Rogers to find the pass, or depression, for the railway route, with which his name will be associated.

Natural Direction of Traffic-ways.

The above-mentioned northerly and southerly trend of the Rockies, and the genera irregular parallelism of the Selkirks, give, necessarily, a corresponding character and course to the valleys and rivers. The surface is corrugated, pressed together easterly and westerly, like the narrow part of a fan. Instead of opening westerly towards the ocean, the valleys are shut off by several mountain ranges. The open part of the Kootenay topographical horseshoe is to the south, where, as above said, the mountain systems of the district separate somewhat. The natural facilities of intercourse, both by land and water, are therefore greater in a north and south direction than from east to west.

Internally, for purposes of traffic intercourse, the district is composed of *three dissevered areas:*—

(1.) The western leg of the Columbia, shut from the Kootenay Lake region by mountains, except through one rugged cut or depression, and severed from the Upper Columbia by unnavigable stretches of water.

(2.) The Kootenay Lake region, a "pocket" with its body in our territory and its mouth opening into the United States—a place by itself—an inner horseshoe, as, elsewhere, I have called it, with a crack on its west side.

(3.) The Eastern Valley of Kootenay, severed from the western leg of the Columbia by mountains and unnavigable stretches of water, and reachable from Kootenay Lake region only by a long pack trail, with bad feed, through a country where a waggon road is not likely to be required.

Confusion arises when these areas are lumped under one word "Kootenay," in discussing some matters appertaining to the district. The question, always, is, which of these three severed areas of Kootenay are you speaking of?

For instance, on a strictly topographic view, it follows from what is said above as to the natural formation of Kootenay Lake region, that the only possible way in which Canada can

try to get at the trade of that region, if ever there will be trade, is by the proposed "Ainsworth railway," which breaks through one of the rugged sides of the "horseshoe" at its only crack.

Without a road, or railway, through the cut or depression stretching west from Kootenay Lake to the Columbia, all the trade of Kootenay Lake region *must* be with the United States. Nature has shut argument on this question by mountain walls and unnavigable water.

Accessibleness of the District.

With the exception of Vancouver Island, Kootenay, as to most of it, is in fact, naturally, the most accessible region in the Province through water-ways and passes.

The Fort Shepherd trail appears to have been a mistake. The natural entrance to Kootenay district from the west is, as already said, through Eagle Pass. The region of the mother lakes of the Columbia is the real centre of the whole district. You can go north and south from that region by open natural ways, into, and through, a far larger mining, arable, and grazing area than from any other point.

Navigableness of the Columbia.

The Columbia River, which runs 440 miles within British territory, is, except when closed by ice, navigable in our Province for long distances by suitable steamboats.

The longest stretch is from the United States boundary up to Death Rapids, a distance of about 229 miles, divisible as follows:—

The distance by the Columbia River from the boundary to the mouth of the Kootenay River, is about 31 miles; thence to north end of Lower Arrow Lake, 75 miles; thence through the river to south end of Upper Arrow Lake, 17 miles; thence to north end of Upper Arrow Lake (not including Nin-com-ap-a-lux, its north-easterly arm, which is about 7 miles) 40 miles; thence to Eagle Pass, 29 miles; approximate distance, by river, from the boundary to Eagle Pass, 192 miles; ditto, mouth of Kootenay River to Eagle Pass, 161 miles; Eagle Pass to Death Rapids, about 37 miles. Total mileage, of navigation on the Columbia River, from the boundary to Death Rapids, 229 miles.

It is perhaps, not absolutely impossible to take a steamboat through Death Rapids.

In the opinion of some, a steamboat intended for service on up-river stretches, might be taken through these rapids at a suitable season by an expert captain, who watched chances, but their navigation by steamboat, in the ordinary sense of the word, is impossible.

Of the above 229 miles, about 115 miles are slack water, chiefly in the Arrow Lakes.

The current of the remainder is in many parts as strong as between Yale and Hope on the Fraser.

The Indians in canoes do not try, as a rule, to breast the current; they keep along the the bank, taking advantage of eddies; and they often use poles or ropes. Steamboats for this river should be powerful stern-wheel boats, and they would require liberal permission in the use of steam. Screw propellers would be useful on the Arrow Lakes only. The rapids of the Columbia, called the "Kootenay rapids," from their occurring in the Columbia immediately above the mouth of the Kootenay River, are troublesome, owing to the crookedness of the channel. In the event of trade springing up three or four big boulders in these rapids should be removed.

The "Little Dalles," by which I mean the British "Little Dalles," two miles above Eagle Pass, are not always navigable for steamboats. During the June floods, a steamboat might have to wait a few days at the Little Dalles for a chance to go through these rapids. They could be improved by blasting.

There might be a railway portage link at Death Rapids if traffic on the Upper River justified its construction. From Death Rapids to Boat Encampment there is a navigable stretch of about 20 miles. Thence to the foot of the riverine expansion usually called Kinbasket Lake, say about 25 miles, the Columbia River could be made navigable only by costly improvements. That lake is about 9 miles long, and, through it, and for about 25 miles farther, there is good navigation.

The next 25 miles, up to about the proposed railway crossing, is not good. The river, thence to the mother lakes, a distance of abont 110 miles, is navigable. There are not many rocks in the latter stretch, but, as in the Oregon River Willamette, low-water islets, gravel bars and shoots. The salmon spawning beds somewhat obstruct the entrance to the lower of the two mother lakes, at low water, and the bit of river between these two lakes, may need some improvement, but not much.

I ought here perhaps to mention that the Columbia River is open at the boundary and for 17 miles southerly beyond it. The Little Dalles (American) there occur, which steamboats cannot pass except at low stages of water.

The portage is about a mile, on ground suitable for a railway. A waggon road leads up from the south to these Little Dalles. About 27 miles below the Little Dalles, and of course also in United States territory, the impassable Kettle Falls occur. Both these obstructions to traffic could be overcome by portage links, were the game worth the candle. The Northern Pacific trunk line is distant. Spokane Falls City, the nearest station of the Northern Pacific railway, is about 130 miles by waggon road from the boundary where the Columbia crosses it. That city is about 100 miles from White's Landing (Boundary Commission old barracks). It is supposed that to the neighbourhood of this latter a railway feeder of the North Pacific may by and by be constructed to tap the United States Colville District, but no survey of such a line has been made yet.

Navigableness of Kootenay River and Lake.

The Kootenay River is navigable at certain seasons by light stern-wheel steamboats, for nearly 100 miles, between Tobacco Plains, at the United States boundary, and the junction of the river, with Findlay Creek, which comes in from the west, near the mother lakes of the Columbia; but this navigation is somewhat impeded in parts by drifts and shallows, and, economically, is unimportant.

From Bonner's Ferry, 60 miles down the Kootenay River, to the British boundary, and thence fa ther down the river, 33 miles, to Kootenay Lake, the navigation is good for any sized vessel. The river winds much. It is 500 to 600 feet wide, 30 to 60 feet deep; with few snags and a gentle current. The low, soft banks are favourable for steamboat landings almost everywhere.

Kootenay Lake, in its whole length of about 65 miles, is deep and clear of rocks.

The lower course of Kootenay River, namely, from the outlet of Kootenay Lake to the Columbia River, is not navigable for steamboats, owing to falls and rapids. Light boats and birch bark canoes can be used on it, but from five to seven portages have to be made, according to the stage of water.

It is unnecessary to mention inferior water-ways in this report. The Yahk and Mooyie, which cross the boundary in their southerly course, are not navigable.

Climate.

The climate of the whole district of Kootenay is healthful, and less severe than its mountainous surface and surroundings would lead one to expect. On a broad general comparison, it more resembles that of the region from Clinton southerly, than of any other region in the Province. The difference is caused mainly by the different surface of Kootenay, which, as already said, has not a wide plateau like that of Yale district, but is more mountainous and has, at least in its interior, narrow valleys that lie higher above the sea. On the other hand, Kootenay has greater water areas in its rivers and lakes, and is opener than Yale district to the south, whence warm air is indrawn. The three valleys opening to the south and extending far into United States territory, namely, (1) the Eastern Valley lying along the Rocky Mountains; (2) The valley of the Kootenay, leading to the central depression in which the Kootenay lake lies; and (3) the valley of the Columbia, have an important influence on the general climate of the district, particularly as they all are water-beds and water-courses, and as two of them, the eastern and western valleys, meeting at Boat Encampment, really form a single valley that encircles two-thirds of the district—a conduit of warmth among the mountains.

The irregular surface of the country, extending, as it does, over more than three degrees of latitude, of course causes local variations of climate. Unfortunately, no meteorological, or even temperature, observations have been made systematically in Kootenay.

Snow-Fall.

The most notable difference in the climatic subdivisions of the district would appear to be in the snow-fall, by which I do not mean the total precipitation, but the average depth that lies seasonally on the ground.

The area of the heaviest snow-fall in Kootenay with a *minimum* on low ground of four feet, or thereabouts, is above a line drawn rather north of east from about the head of Upper

Arrow Lake. The average farther down the Columbia, and also on the bottoms south of Kootenay Lake, is less than this by eighteen inches or two feet. The area of smallest snow-fall, say with a *maximum* of about two feet, lessening to a foot or under a foot, in certain localities, is in the eastern valley along the Rocky Mountains, for about 150 miles up from the United States boundary. Northward the snow lies deeper, the average on low ground about Kicking Horse River being from three and a half to four feet.

Rain-Fall.

The whole district is characterized by the light rain-fall of the extensive comparatively dry region immediately west of the Rocky Mountains, both north and south of the United States boundary, of which region Kootenay naturally is a part. 1883 was a very dry year. I remember only a single wet day, and two or three showers, during my stay in Kootenay, from the 23rd July to the 2nd November. The weather, however, as a rule, breaks and becomes more or less rainy, or showery rather than rainy, over the whole country, about the middle of October. The eastern valley, from the boundary far up towards the first railway crossing of the Columbia, has the light summer rain-fall of the Thompson valley, but probably a hygrometer would show more moisture in the atmosphere. The same may be said of the Kootenay Bottoms, south of Kootenay Lake, except that more clouds—rain-like clouds—pass high overhead. There is more rain-fall on Kootenay Lake than on the bottoms, but not much.

The rain-fall on the Columbia, from the boundary up to Arrow Lake, also, is light, though somewhat heavier than in the eastern valley above-mentioned. On the Upper Arrow Lake, judging by the vegetation, there is more rain-fall than in the Lower Arrow Lake. This increase is maintained northerly, but there is no locality, so far as I could learn, that has a wet summer. In the regions of comparatively heavy rain-fall, the augmentation is caused by heavier spring and fall rains, and more showers in summer.

The very moist appearance of many localities in Kootenay is not caused by excessive rain-fall, so much as by stream-floods, slow melting of snow heaps in fissures, ravines, or nooks, and by woods that obstruct sunlight and perpetuate dampness.

Dew-Deposit.

There is a very copious dew-deposit on the bottom lands of the Lower Kootenay—much greater than on the eastern valley of the district, or in the valley of the Lower Columbia. The true effect of dew-deposit in agriculture is an interesting little-known subject, which I have not space to discuss.

Temperature.

In the absence of systematic observations, it is difficult to do more than indicate the range of temperatures, without attempting to state the mean, on which, during certain months, ripening of crops depends. There was so much smoke this year, in the important months of July and August, that I could gaze at the sun every day without winking. But this is an unusual circumstance. The summer heat, in the valleys, is great, probably varying from 80° to over 100°—sometimes a good bit over 100° for a few days—but the great bodies of water and occasional breezes, modify its effect in the larger valleys. The side valleys are more sultry. In winter the temperature varies much, and suddenly, every season, and in different years, more particularly in the areas of the greatest influence of the south winds, which extends northward far up the valleys. In the southern area generally the mean winter temperature probably will be found to be somewhere about 15°, say nearer to that of Clinton than to that of Spence's Bridge. Occasionally, there are short intervals of very cold weather, 30° or 40° below zero, changing surprisingly almost to mildness in a short time. Towards the north of the district the climate has similar characteristics with a lower temperature.

Systematic meteorological observations should be made at Galbraith's Ferry, the Mother Lakes of the Columbia, Eagle Pass, and the Kootenay Bottoms.

Scenery.

In a young country like ours, the question of scenery takes an inferior place, unlike its position in crowded England, where, lately, a House of Commons Committee rejected Bills for "Railway and Mineral Developement," on the expressed ground that "serious injury would "have been done to the beauty of scenery in the Cumberland Lake District." But the ques-

tion, for simply utilitarian considerations, is not without interest to us, now that a railway is opening our country. The scenery in Kootenay, though much of it was not seen by me, owing to the prevalence of smoke, and I did not visit the grander parts of the district, may confidently be said to be fine. It is of a character to attract tourists, and the possible contributions of tourists to the business of the Switzerland of America should not be overlooked.

What has already been said of the general surface of the country, must, to a great extent, have anticipated what can be said of its scenery. The district, as a whole, has the two main elements of beauty—variety of outline and variety of colour—and the features of many localities that I remember are grouped so as to form impressive combinations.

Eastern Valley.

The eastern valley of Kootenay, forming part of the extraordinary long valley already mentioned as stretching along the base of the Rockies far north and south of Kootenay district, is about 294 miles long from the boundary to Boat Encampment, and for the most part has an average width of 8 or 10 miles, narrowing towards the north. The mother lakes of the Columbia, 2,850 feet above sea level, lie about the centre of the most valuable part of the valley. It is one of the prettiest and most favoured valleys in the Province, having good grass and soil, a fine climate, established gold mines and promising gold and silver mines, excellent water-ways, and an easy surface for road-making. Its chief navigable water-way leads to a station of the Canadian Pacific Railway. At present the valley is as much out of the way as Omineca, but in two years its people will have the newspapers of the world, nearly a couple of days before the people of Victoria get them.

Eastern Valley—Grass.

The valley for about 150 miles of it forms a first class bunch-grass grazing area, well watered for stock. The general appearance of much of the valley is not unlike that of the South Thompson above Kamloops—grassy terraces, slopes and knolls, but with a wider river bed. Some of the lateral valleys afford excellent summer grazing. The upper course of the Kootenay until it enters the eastern valley near the mother lakes, and also the Elk River Valley, are timbered pine-grass, not bunch-grass, regions.

Mosquitoes and gnats are troublesome everywhere, but not so troublesome as they are east of the Rockies. They are about as vigorous as they are in Kamloops district.

The total number of cattle in Kootenay at present, probably does not exceed 500—the larger portion being owned by the Indians.

Bunch-grass and pine-grass are the two commonest native small grasses in Kootenay. I noticed also blue-grass, wool-grass and sheep-grass, then there are the various kinds of swamp-grass in considerable abundance, red-top and blue-joint sparingly, also a good deal of wild rye in the salty earths. Wild sage is common, and wild timothy can be traced across the Rockies. On the bottom lands there is a considerable quantity of browsing trees and shrubs. None of these grasses, except the bunch, pine and swamp grasses, occur in large areas.

Eastern Valley—Winterage.

Over the whole valley up to half-way between the mother lakes and the railway "first crossing" of the Columbia, the snow-fall may be said to average 18 inches to 2 feet, the latter of which depths, of course, covers bunch-grass that has been much eaten. But in several localities the average is only one-half of this fall, and the snow seldom lies long at even these depths; the warm wind comes, perhaps half or more of the snow melts, then another fall and so on. Towards spring there may be only 9 inches in parts. It thus happens often, that cattle need not be fed. The Canadian Pacific Railway survey pack-horses wintered out last winter on the east of the lower mother lake and were "hog-fat" in spring. The Indians make no provision for their stock. Nevertheless, here, as elsewhere, winter provision is desirable. There was a fatal winter in 1879, owing to the snow crusting hard suddenly, in February, but the Indians do not remember a similar season. From "Steamboat Landing" northward the snow-fall is deeper, by a foot or more, but winter thaws occur there too. I do not think, however, that cattle could winter out there. Some say the country is deficient in wild hay, but I am not satisfied that this is the case. I saw some good meadows, and think that the swamp-grasses on the river beds, particularly on the Kootenay, may be utilised. The aquatic trees there afford browsing and shelter.

Eastern Valley—Soil.

The soil of the eastern valley is undoubtedly fertile, but its qualities have not been fully tested, as very little farming has been undertaken as yet. I think that both the soil and climate are suitable for agriculture for at least 150 miles up the valley from the frontier. The soil will yield wheat and whatever else is grown in Kamloops or Okanagan, though the greater elevation and the differing nature of the soil will require more care in Kootenay than in these districts. There may be in parts a little more danger from summer frosts. I saw ripe beans (climbers) in the highest part of the valley, back from the water-way.

There are 20,000 to 25,000 acres of bottom lands on the middle Kootenay River (between the mother lakes of the Columbia and the boundary) which probably would be made available for arable purpose if the Upper Kootenay were turned into the above lakes. These bottom lands have very fertile soil, and lie for the most part along the base of bunch-grass slopes and hills. Their great value if reclaimed would justify the necessary works of irrigation.

I am inclined to think that the advantages of turning the upper course of the Kootenay into the Columbia would outweigh the disadvantage of lessening or even destroying the navigableness of the stretch of the Kootenay down the eastern valley to the boundary. The navigation is inferior and comparatively unimportant in relation to locality and traffic. Anyhow, a waggon road is required for half the way, and can be cheaply made. We have to balance considerations. The bringing in of a large, valuable area of arable land would seem to be the paramount consideration. Notwithstanding the turning away of the upper course of the Kootenay, the affluents of the middle Kootenay and its own lakelet expansions would still make it a considerable stream.

Eastern Valley—Timber.

The whole valley is more or less wooded, but of course thinly wooded in the extensive areas of bunch-grass—a grass that will not grow well in shade. The portion of the valley examined by me will not afford much timber for export. The prevailing tree in the eastern valley from the boundary up to the mother lakes is the yellow pine (*pinus p.*) mixed with black pine, Douglas fir, tamarac, etc.--tamarac prevailing on the foot-hills of the Rockies. On the river bottoms there is a small but healthy growth of cottonwood, aspens, birch, &c.

Eastern Valley—Mining.

The eastern valley has mineral, as well as arable and grazing resources. The true coal formation of the Bow River District crosses for a short distance into the south-east angle of Kootenay, but is there, however, so far from easy means of transport, that the coal can only have a prospective value. A vein of coal is reported in the Kicking Horse district, but my informant could not describe its nature.

At the old-established gold mines of Wild Horse Creek more than 100 men are still working. Perry Creek, Weaver Creek, the head waters of the Mooyie and Bull River gold regions, are all in the southern part of the valley. Little doubt exists that Findlay Creek and other streams in the neighbourhood of the mother lakes of the Columbia also are gold-bearing and will yet yield a harvest to miners, when the prices of supplies and prospecting conditions are favourable. Gold was found in 1883 in a creek on the west side of the Columbia near Kicking Horse river. Good miners confidently expect to find gold quartz ledges towards the head of the valley at the upper part of the Big Bend. Nor is the eastern valley without its galena silver-bearing deposits. There is on the Spallumcheen river a silver-bearing galena deposit—a large cropping, the top of which one can follow without a break for the length of the claim. It runs north-east and south-west, with a very slight dip. The probability is that there is more of it. The specimens from this cropping that I saw were remarkable in their variety. Assays have shown that the ore carries silver, but no sufficient assay has been made as yet. In its general character, this prospect seems to resemble the silver-bearing galena ore lately discovered, near the railway line about the summit of the Rockies, which some think is in British Columbia and not in Alberta. This is a question that should be determined without delay, as from all accounts there is an extensive silver-yielding region in that quarter.

Lower Kootenay Bottom Lands.

The valley, in which the bottom lands lie, seems to be the southern half of Kootenay Lake, made into land by material brought down by the Kootenay River, which still continues its land-forming work, aided by the effect of the annual inundation of the whole bottom lands

from the lake to Bonner's Ferry. Probably the elevating of the land is due jointly to deposits from the water and the gradually diminishing rise of the water at the period of overflow. There is evidence around the lake of a higher rise of water formerly. The bottoms also are hardening slowly.

The side-hills of the valley are low, say from 1,000 to 2,000 feet above the surface. Those on the west side are steepish with granitic rocks frequently exposed, soil scanty and very little grass—pine grass. Scrubby larches (tamarac) and Douglas fir seem to prevail, growing more or less thinly up to the summits. These hills do not afford any important area either for agriculture or pasture.

The hills on the east side of the valley are lower and less regular. They have an easier slope and do not retire to high mountains.

Within our territory, on the east side of the valley, the hills are somewhat higher than on the same side in American territory, and show precipitous bluffs in parts, without, however, losing the general character of a rolling upland, until merged in the eastern flankers of Kootenay Lake.

Down the valley thus formed and bordered, the river meanders into Kootenay Lake—a fine navigable stream with low soft banks. On each bank there is a belt, chiefly of cottonwood, from three to five chains in width, which of course crosses the view with the windings of the river, as one looks up or down the valley. Scarcely a tree is visible between that riverine belt and the hills. The treeless, grassy surface reminded me of Matsqui or Sumass—large green areas of swamp grass surrounding russet intervals, showing the presence of rushes and goose grass on the wetter portions. One looks with expectation, for bands of large, fat cattle and the smoke of rich homesteads, but these have yet to come.

A nearer view and a tramp over the surface of the bottoms are somewhat disappointing. Much of the surface under the long green grass is soft and mucky in August, though one can slowly walk over it, at the cost of wet feet, without sinking or sticking. The tule areas of course are wetter, and often lumpy from the effects of the winter frosts. As a rule near the river banks and the banks of large sloughs, the ground is higher and therefore drier with some red-top grass in consequence, but not much blue-joint. The ground in many parts is slightly lower towards the side-hills than near the banks of the river—an unevenness, common on overflowed lands, owing to the quick subsidence of the heavier particles as soon as the current loses its velocity by leaving the banks of the rivers or sloughs.

Bottom lands—Soil.

The whitish silty soil of these bottom lands is unquestionably very fertile. It is of great depth, no subsoil being visible. But owing to the periodic inundation, agriculture is, at present, impossible except on little patches raised here and there above the ordinary overflow. The high water would kill cereals, timothy and the cultivated grasses.

In their present state, the bottoms however, have certain winterage capabilities if the grass is cut and stacked in time. The shelter and winter browsing in parts are good. Being however remote from good summerage, and the snow-fall being deepish, with occasionally hard winters, the lands in their present state might not sell readily for the sake of such winterage as they afford. They may therefore, perhaps, be considered as unavailable property of the Government in their present condition.

If reclaimed every acre of these fertile lands would be at once applied for by the best class of settlers, as all the cereals and the ordinary root crops and vegetables would grow well and ripen, if early sown or planted.

Some have expressed a doubt as to whether complete reclamation would not make irrigation necessary, having regard to the dry climate during most, if not during all, years, but the general opinion is that it would not be necessary.

Side-hills—Soil.

The characteristic soil on the side-hills generally, is a heavy clay, sometimes arenaceous, and changing to a lighter sandy loam in parts. It appears to be generally fertile, but the available agricultural areas are limited. On the west side-hills I have said there are none. On the east side-hills which are more rolling, detached portions not, however, aggregating any important acreage, might be cultivated for local markets as long as the bottoms are unavailable.

Side-hills—Grazing.

There is hardly any pasture on the west side-hills. On the east side-hills, especially south of the boundary line, there is in the open sunny parts of the valley-slopes a species of bunch grass, less stout and bunchy than the Kamloops grass: elsewhere, pine grass prevails. The latter is the common grass between the boundary line and Kootenay Lake; there is very little bunch grass; probably it would grow if the timber were burned off. There are two or three good meadows on the Goat River trail. I would class these wooded pine grass east side-hills within our territory, as a third class summer stock-range, for moderate bands; they do not possess naturally, winter food and shelter for any number of stock.

Patches of saline clay, occurring generally as banks or small ridges, are distributed along the side-hills. There is a sufficiency of water for stock and many living springs chiefly along the base of the hills near the bottoms, which do not freeze in winter.

I do not think there are any richer lands in the Province than these bottom lands of the Lower Kootenay. It is to be hoped they may be soon reclaimed and covered with homesteads.

It may be remarked here that if the lessee of these Lower Kootenay bottom lands near Kootenay Lake turn the upper course of the Kootenay into the mother lakes of the Columbia as part of his scheme of reclaiming the Lower Kootenay bottoms, the effect will be to reclaim, or largely reclaim (whether the Lower Kootenay bottoms are reclaimed successfully or not), about 20,000 acres of very fertile bottom lands along the upper or what we may call the middle Kootenay River namely, that portion of its course between the mother lakes and the international boundary at the 49th parallel. This large area of reclaimed land would belong to the Government and not to the lessee.

Kootenay Lake.

The granitic hill sides round Kootenay Lake are steep and are backed by mountains. Long narrow sandy beaches, and low rocky, generally rounded, promontories, like those on the inner side of Vancouver Island, are common on the lake margin. A torrent flows in at almost all the beaches, having in fact helped to form them. Not many even small agricultural areas can be found.

A few low-lying areas near the water, also small bowls or basins and narrow beaver-dam bottoms among the hills, may perhaps be cultivated some day as gardens or farm patches. Near the mouth of the Lardo at the north end of the lake, there are about 1,500 acres of overflowed bottom land that probably could be cultivated if reclaimed, but the extent might not justify the cost of reclamation.

The soil round the lake is scanty; much of it has been washed down into the lake. I am inclined to think that as soil, it is not sterile, but the region is of very small value either for agriculture or grazing. Its value is in its minerals.

Timber on Kootenay Lake.

The steepish rocky hills appear to be everywhere covered with trees, but extensive areas have been burned.

The trees are in great variety—Douglas fir, western larch (tamarac), white, black, and yellow pines, balsam firs, birch, maple, cedar, hemlock, yew, cottonwood, &c., resembling in this varied character the forestry of the Cascades rather than the Rockies. But the lie of the land, the scantiness of the soil and the effect of recurring fires have prevented the superior tree-growth which the climate favours. The trees in general are small; where not scrubby they are rather tall in proportion to their thickness. There are few places where one can speak of a body of commercial timber and the surface is not well adapted generally for team logging. Probably Douglas fir is the prevailing tree, then tamarac and cedars. Black pine is abundant on the elevations, and balsam firs towards the mountain summits. The yellow pines are scattered among the other trees towards the lower end of the lake, and the white pines, some of them good trees, occur also dispersedly.

I do not consider that the timber of Kootenay Lake is of any considerable value at present. It is an inferior body of timber in itself, and is hardly available, owing to its location, for the supply of Canadian markets east of the Rockies. There are better timber tracts yet untouched in the United States territory immediately to the southward—in Pack River Pass for instance, also Snake River, etc.

Kootenay Lake Mining.

Very little is known of the mineral resources of Kootenay Lake. It looks like a mining region, and prospectors for paying gold diggings are sanguine that they will be struck. The old galena ledge on the east side, which contains silver, has again attracted attention, owing to the approach of railways to the district, and, perhaps, more largely owing to improvements in the process of separating the silver from the lead, which create hopes that such low grade ore may now be handled profitably. Other ledges, which, it is said, contain more silver in the ore, were discovered last year on the west side of the lake. Several practical men who were sent in 1883 to examine the region generally and spent several months in exploring, were, I am informed, satisfied with its promising character. It is probable, therefore, that the region is a good silver mining region. A single paying mine on Kootenay Lake, or the erection of smelting works, would open a new mineral industry that would be of great importance to the Province. Silver-bearing galena mining especially requires capital, experience, and economical management.

Immediately behind the Big Ledge on the east side of Kootenay Lake there is a narrow basin of fine clay which seemed to me to be a fine earthenware clay, possibly kaolin, or porcelain clay, for we here have the felspar. Mr. Sproule mentioned having seen some of the fertiliser called apatite (native phosphate of lime) at the head of the lake. The rocks generally being largely micaceous it is possible that mica may be found of sufficient size to give it commercial value, for stove doors, etc. On the west side of the lake there are hot springs, and Mr. McLoughlin remembers that white miners in the old days, told him that they had seen sulphur springs a considerable distance back from the water, on the east side of the lake.

The rocks round the lake that I saw seemed generally of too loose structure for good building stone. Mr. Hall told us that he saw compact marble on the banks of the east branch of the Lardo, a few miles up from the head of Kootenay Lake.

Along the Kootenay between Kootenay Lake and the Columbia.

I will now mention the strip along the Kootenay River from the outlet of Kootenay Lake to the Columbia River. The river has a southerly trend in crossing. Its outlet from the lake is described by Mr. Farwell. The line of the proposed Ainsworth Railway is longitudinally through the above strip, but on approaching the Columbia, it may perhaps be made to turn northerly and come in less a couple of miles above the mouth of the Kootenay River. This would avoid the "Kootenay" rapids of the Columbia which are immediately above the mouth of the Kootenay River. Whether that northerly turn would improve the railway route is not known, as only a reconnaissance of the locality has been made as yet.

The width of the Kootenay varies in this portion of its course, but probably averages about 400 feet. The number of portages depends as I have said, somewhat on the stage of water. At high water, canoes can run the first rapids at the outlet. Speaking of the river in August, the whole stream, a mile and a half down from the above rapids, falls sheer about 12 feet. The rapids immediately above this fall and those immediately below it, together with the fall, probably cause a total fall at this place of about 20 feet in quarter of a mile. After 3 or 4 miles farther of rapid water, navigable by canoes, another 10 feet fall is reached, beyond which a similar stretch brings the traveller to the big falls. These consist of two falls separated by rapids, each fall about 25 feet, but estimates vary much. The portage is $2\frac{1}{2}$ miles. An expansion below the falls, with islands in it at some stage of the water, affords fine scenery. Onward for 10 miles the water generally is rapid and very rough in parts, leading to a bad rapid where a portage of $1\frac{3}{4}$ miles is necessary. A mile of comparatively easy water thence reaches the Columbia.

It is unnecessary to say that such a stream is useless as a commercial water-way.

LAND.

The land on both sides is rough, as might be expected in a narrow break through the hills. The margin of the river is not terraced, but is struck by low spurs of the hills that make numerous ravines. There are no "box" cañons or formidable rocky bluffs that cannot be for the most part avoided by a road or railway. The rock chiefly is loose granite. It is neither an easy place, nor is it, I am told from an engineering point of view, a very difficult place for a railway.

There is no agricultural or grazing land worth a description within this portion of the reserve. The timber is inferior and scanty, and has suffered much from fires. The Indians say there is

a quantity of white pine on Slocan Lake, but that is a long way beyond the 6-mile reserve, the Slocan River itself being about 30 miles in length.

Minerals.

It is known that gold existed, and probably may still be found, in this section, from the experience of miners who, in the old days, got considerable quantities of gold on the southern tributary of the Kootenay, in this part of its course, known as "Forty Nine" creek. I could not hear anything of other minerals in this strip.

Columbia River from the Boundary to Eagle Pass.

The soil all the way up from the boundary to Eagle Pass may be described as a light sandy soil, hardly a loam. I should expect it to be fertile, but easily exhausted. There are some localities where the soil is rather clayey, and these, altogether, however a moderate area, might be cultivated to supply lumbering, or other industries in the neighbourhood. I cannot class this region as of much agricultural value. Owing to the contour of the country generally along the river, and also along the lakes, there seem to be comparatively few areas where settlers could find locations, good as regards soil and facilities of irrigation.

As far as I can ascertain, much of what is said above applies also to the portion of the reserve up towards Death Rapids, which, as above said, I have not personally examined. It is known from experience, in the old mining days of Big Bend, that the soil and climate, as far up at least as Gold Creek, will permit the growth of ordinary garden produce in suitable localities.

GRAZING WITHIN THE AINSWORTH RESERVE ON THE COLUMBIA.

As regards grazing on the western leg of the Columbia, there is a bunch grass country for over 30 miles above Colville in the U. S. Territory, and bunch grass grows more or less up to near the boundary, and raggedly on a few low sunny benches for some distance within British Territory (along the Pend d'Oreille there is a not inconsiderable area of fair bunch grass), but there is no natural pasture properly speaking that I saw, available for bands of cattle along the Columbia from the boundary to Eagle Pass. There may be summer browsing in parts, and a picking of pine grass for a few head. Hay land, also, is deficient both on the water-way and the bordering streams. There is more wild hay land further north—in the area of the Big Bend of the Columbia, but it occurs dispersedly.

The trees from the boundary well up Lower Arrow Lake, for the most part, are small and scrubby, creeping in gradations according to their nature, to the summits of the low hills visible from the river, wherever they can find soil on their rocky slopes. They consist of yellow pine (*pinus ponderosa*,) black pine (bull or western scrub), western larch (tamarac), Douglas firs etc. An inferior growth of yellow pine is found scattered on the benches and sunny lower slopes, chiefly on the left bank of the Columbia, a long way up from the boundary towards the mouth of Kootenay River, and it appears in considerable abundance, and often of good size, in Lower Arrow Lake ceasing, however, in the wetter Upper Arrow Lake region.

Trees.

The Douglas fir or spruce generally occurs in a mass towards the head of Lower Arrow Lake and on Upper Arrow Lake, and on the water-way above the latter lake, chiefly on the hill-sides. I did not find it as large as that upon the coast. Most of the trees are young, not big enough for general purposes, but they would make good tie timber.

The western larch or tamarac, which is not found west of Shuswap Lake, probably is the commonest tree in Kootenay.

I had a good opportunity of observing the prevalence of the tamarac in Kootenay from the yellow autumnal hue that decorated the prospect. It constitutes about one-third of the forests on the Lower Columbia and Arrow Lakes, but appears to cease between Upper Arrow Lake, and Eagle Pass. Its general appearance is that of the Scotch larch with a redder bark. It grows larger but is said not to have the same excellent timber qualities. It is a very heavy wood, lasts well under ground, and is good for rails and next to cedar for easy splitting. Some say it does not hold nails well, and therefore is not suitable for ties, but against this is the fact that it is used for ties, at least in the Pend d'Oreille division of the Northern Pacific Railway. I believe that two varieties of this tree, the western, and the Lyell larch, exist in Kootenay, but I had not time to satisfy myself on this point. In some parts it grows large; those I saw

on the Arrow Lake were of small growth. In commercial value the tamarac probably would about rank with the heavy yellow pine.

The western hemlock which is like the eastern hemlock, but larger, is found first in any quantity, in ascending the Columbia, towards the head of Lower Arrow Lake, indicating the occurrence of an increased rain-fall there and upwards from that point. It is abundant in Upper Arrow Lake; and higher up on the Columbia, and through Eagle Pass. It is probably the best grown tree in the region; the big trees are generally on the uplands. Unfortunately the wood, unless it differs from the hemlocks of the coast, which is improbable, is of less economical value than that of any of these trees above mentioned.

The mountain pine (white pine) is very generally distributed among the other trees, as individuals or at the most, in groves rather than masses. Though supposed commonly to love elevations, it is found in various parts of Kootenay, growing to a goodly stature, on low ground among cedars. I did not see any area into which it would pay to put a logging team for the sale of white pine alone, such as are now said to exist on the upper Spallmucheen River, in Yale district, but there may be such places.

There is a considerable quantity of cottonwood of good growth on the flats of the Columbia, but I cannot form an opinion as to its probable value without further examination. I am inclined to think it differs from the coast cottonwood, which is suitable for various purposes, for instance—sugar barrel staves.

The last important tree to be mentioned is the western cedar (giant or red cedar.) This is common along streams, and on flats, and grows occasionally to a great size, but most of the trees are from 15 to 20 feet in diameter at a third from the butt. The quantity of cedars is very considerable on and above Upper Arrow Lake. There, as elsewhere in the Province, the large trees are generally hollow, but this does not prevent them from furnishing a large proportion of available timber. A test with the axe shewed that, in some places, about a third of the small cedar trees (15 to 20 inches at a third from the butt) were decayed at the heart for 10 or 15 feet up; in other localities the proportion of sound trees was greater. A stumpage tax on these smaller trees might check trade in them. The durableness and easy splitting of the cedar, and the cheapness with which it can be "logged" on many parts of the Columbia, may create a demand for it east of the Rockies.

Quantity of Timber.

I have said that one goes pretty well up the Columbia from the boundary towards the head of Lower Arrow Lake, without being impressed with the sense of being in much of a timber country, commercially viewed. It does not follow that from thence upwards, there is continuously available timber. The timber appears to be in belts and patches, here and there on benches, in the alluvial flats of streams, and back up their courses, and on low ground where the hills bend back from the water. The areas barren of available timber stretching as far as the eye can reach, greatly exceed those on which such timber now grows. Probably great recurring fires have destroyed much of the timber, and also of the soil, a supposition strengthened by the prevalence of a small growth of timber The best timber tract I saw is from the Upper Arrow Lake to Eagle Pass, but that is not within the Ainsworth Reserve. Some think the best timber on the whole western leg may prove to be between Eagle Pass and Boat Encampment.

Though the general nature of the timber region is as above stated, yet, having regard to the waterway and the railway, its value is very considerable. I can well understand that one familiar with the excellent timber areas of portions of our sea coast may undervalue timber on the Columbia, while, on the other hand, men from the timberless regions of the United States immediately to the southward may overvalue it; still, making every allowance and deduction, there is a large body of available timber in scattered patches on the western leg of the Columbia and on the Upper Arrow Lake and on the upper portion of Lower Arrow Lake.

I need not mention here the logging and sawmilling facts that affect the value of these tracts.

The construction of the Canadian Pacific Railway must immediately raise their value by connecting them with the extensive treeless region east of the Rocky Mountains that cannot be very well supplied with timber from distant Kewatin, or from the northern timbered region of the Canadian North-West territories. Probably all kinds of timber will be in demand, and the smallness of the trees will not be so great a defect for that eastern market, as it would be for sawmilling on our coast.

There is an extensive treeless region also in the United States Territory to the southward, which gradually is becoming settled on the Lower Columbia.

Minerals on the Lower Columbia.

With respect to minerals on the western leg of the Columbia from the boundary to Eagle Pass, I cannot pretend to say anything as the result of a rapid canoe trip up the river on the eve of winter. A few Chinamen were mining for gold on the banks below the boundary, and I noticed some worked-out diggings further up the river within our territory, but no one appeared to know whether the tributaries of the Columbia and the Arrow Lakes had been prospected thoroughly. In the early mining days, men passed on up to the Big Bend region. The impression is that gold probably exists but in small paying quantities at the present prices of commodities. I was told that iron ore had been seen, but the particular locality was unknown to my informant. The only systematic exploration of this section for minerals in general is that of the "Kootenay Bill" grantees last summer. A gentleman employed by them, accompanied by two Indians, spent three months on the Columbia, the Arrow Lakes and up the Ille-cille-waet river, and took away samples with him in the middle of October. I, of course, have no information as to where these were found, what they were, or the results of their assay. The Government could only get similar information by a similarly complete, leisurely method of exploring.

Trade of Kootenay—Past and Present.

The district of Kootenay has been supplied of late years entirely from the United States.

The goods have been brought in by pack routes. Kootenay has not reached the humble level of a bull-team country. One pack route is from Missoula, Montana, through Tobacco Plains and northerly along the east side of the Kootenay River to Wild Horse Creek.

The other route, and the one hitherto most used, is that by which goods were brought from Walla Walla and other places by teams or trains to Sand Point (on Lake Pend d'Oreille in Idaho), and thence 165 miles by pack-train up the Mooyie Valley to Joseph's Prairie, or Wild Horse Creek, as centres of distribution. The Northern Pacific Railway now comes to Sand Point.

The long pack-train transport on these routes has made goods high priced in Kootenay, and the tendency of the present Canadian Tariff has been to raise prices. This fact largely accounts for the slow progress of the district.

Consider the price that ironwork must reach under such circumstances! Flour, now, is $22 a barrel at the Upper Columbia Lakes.

The approach of the Northern Pacific Railway to the district has somewhat tended to cheapen transport, but the Canadian Pacific Railway will make the most important change in this respect and in the direction of trade. The district will be mainly supplied direct from the east. Our seaboard cities will have to make considerable effort to secure a share of the Kootenay trade. Kicking Horse and Eagle Pass stations will be the natural points of distribution, but, perhaps, a railway town, somewhere between Spallmucheen and Savona's Ferry, may succeed in preventing the growth of a village at the latter place. Much will depend on the traffic arrangements of the railway.

Good flour from the east will be delivered next spring at Kicking Horse Pass at $13.50 a barrel.

Impending temporary increase of Population.

It does not fall within my instructions to advert to the great change which the introduction of 7,000 or 8,000 men this year to work on the Canadian Pacific Railway and on other works and in prospecting, will make in the district, and more particularly in its eastern valley.

Fish and game.

Salmon ascend the Columbia to its headwaters, but, probably, after their long swim from the sea, are not good enough to be cured for export. Sturgeon perhaps, and some of the fine lake trout, which especially are large and numerous in Kootenay Lake, may be exported. There are many angling streams throughout the district. The ordinary varieties of grouse are in fair abundance, while those who love hard sport can find mountain goats, mountain sheep, cariboo, grizzly and black bears, and deer. Elk formerly were numerous on the Upper Columbia, but

seem to have retired, or been killed out. The ordinary fur-bearing animals in this zone form one of the resources of Kootenay, but the district has never been a prime fur region.

Main Requirements.

Nothing is more needful now, to the development of Kootenay, than suitable means of communication down the whole eastern valley from the Canadian Pacific Railway to the boundary at the 49th parallel. All applications for expenditure or communications within the district should, now, be considered in their relation to the necessity.

Indian Land Question.

It is to be regretted that the abnormal trade which it was expected would be created for a couple of years or so, by the construction of the Canadian Pacific Railway within the district of Kootenay, will not benefit the district much. This might have been useful to Kootenay, particularly to the eastern valley, in giving that start which, to young districts, as to young men is so important.

But Kootenay was not ready for the trade, and on trying to get ready this year, the continued neglect in adjusting the Indian Land Question repulsed incoming capital and settlers, and crushed her hopes. The adjustment of this vital question in 1884, will only enable beginnings to be made in 1885, and 1885 will pretty well see the end of railway construction expenditure, not only in Kootenay but in the Province.

In the absence of any one in Kootenay to represent the Dominion Government in Indian land matters, I did not think it prudent to make the inquiries respecting reserves which I was instructed to make, if circumstances permitted.

Conclusion.

It is evident from the foregoing brief account, that the district of Kootenay has considerable resources. To develope these needs some care on the part of the Government and the cheapening of commodities by improved means of access and transit.

It is likely to be a productive mineral country over nearly its whole extent. The placer diggings and quartz ledges of the Big Bend will yield rich returns. Kootenay Lake district may be another Washoe, and the Lower Kootenay bottoms a thriving agricultural settlement if the reclamation works succeed. There will be large sawmills on the western leg of the Columbia, with plenty of work for both the team-logger and the hand-logger. The tourist, the sportsman and the Alpine climber will spend freely among us their money and their muscle, if we properly advertise Kootenay. In the eastern valley there will be a mixed stock-raising and farming community of several hundred persons, and many more than that, if the 20,000 acres of fine bottom lands on the middle Kootenay are reclaimed. That section also will be the scene of increased mining prosperity as regards both gold and silver.

I have the honour to be,

Sir,

Your obedient servant,

GILBERT MALCOLM SPROAT.

7th January. 1884.

[*For Mr. Farwell's Report on the Kootenay Reclamation Scheme, see Public Works Report, page 225, Sessional Papers.*]

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