RADIO-METRIC AND GEOLOGIC REPORT
ON LIN CLAIMS 13, 14, 16, 18, 21/26
114^{0} 16' - 49^{0} 3'

OPAL CLAIMS 1/9
114^{0} 5' - 49^{0} 1'

FORT STEELE MINING DIVISION
SOUTH-EASTERN BRITISH COLUMBIA

KINTLA EXPLORATIONS LIMITED

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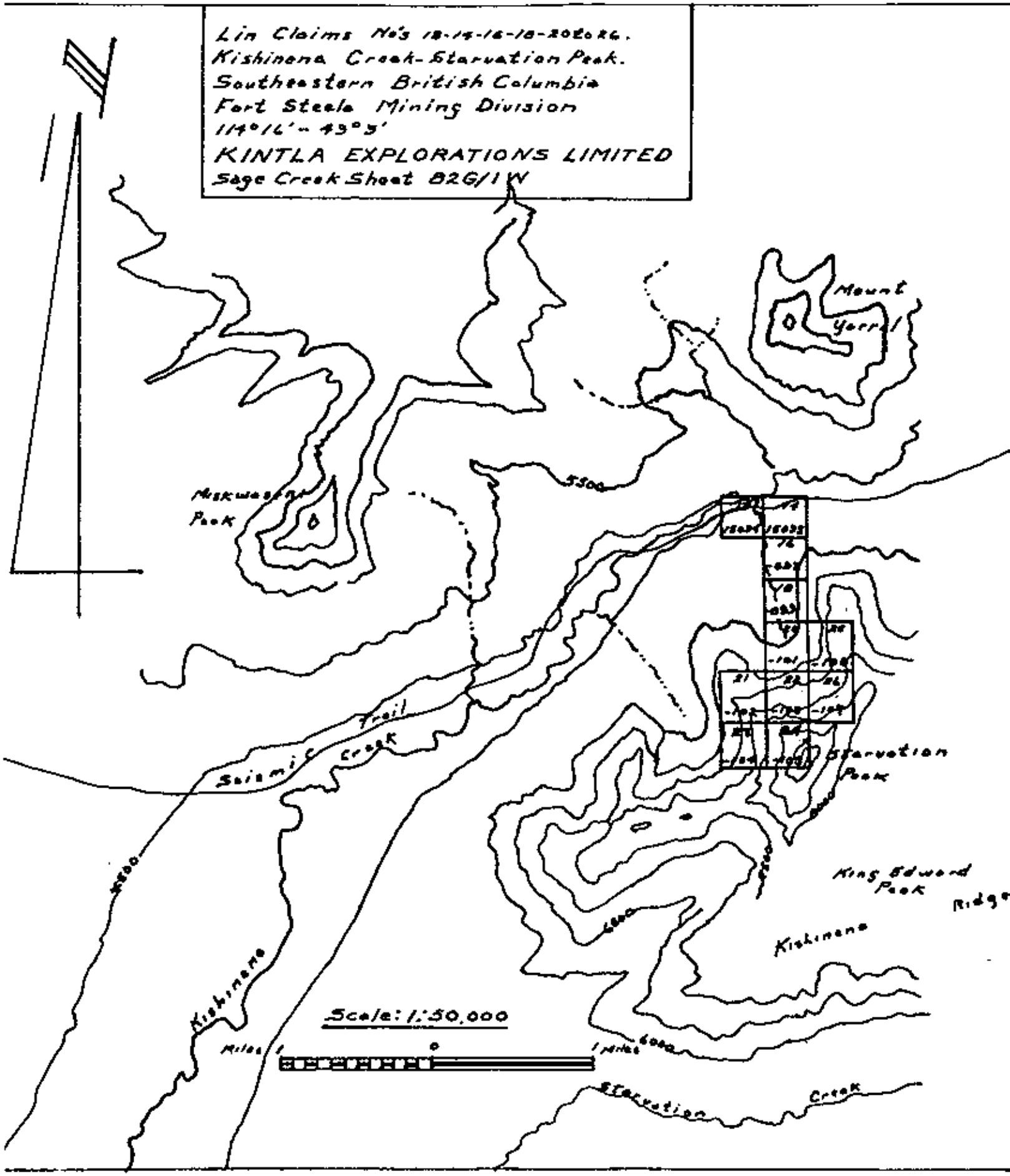

Lin Claims No's 18-14-16-18-20 to 26.
Kishinena Creek-Starvation Peak.
Southeastern British Columbia
Fort Steele Mining Division
114°16'-49°3'
KINTLA EXPLORATIONS LIMITED
Sage Creek Sheet 82G/1W
Mount Yerrall
Miskwasenie Peak
5500
Seismic Trail
Seismic Creek
Starvation Peak
King Edward Peak
Ridge
Kishinena
Scale: 1:50,000
Miles
1 Mile
Starvation Creek

The Grinnell Formation

The Grinnell Formation consists mainly of red argillite. Bright red argillites are dominant in the lower part and are mottled and banded with subordinate light green argillite and interbedded with minor amounts of white coa-grained quartzitic sandstone and red fine-grained sandstone. Mud-cracks are common, and cut-and-fill structures, cross-bedding, current-bedding, ripple-marks, and argillite-pebble intraformational conglomerates are associated with the sandstone interbeds. White quartzitic sandstone interbeds become more common and thicker towards the top of the formation. The Grinnell thins from approximately 1,700 feet in south-western Clarke Range adjacent to Sage Creek and Kishinena Creek to 1,100 feet in the southeast, east of Mount Blakiston (Douglas, 1952); to 750 feet in northeastern Clarke Range on Pincher Ridge (Hage, 1943); and to 350 feet in northwestern Clarke Range near Hollebeke Mountain, (Price, 1959). (R.A. Price, Paper 61-24, 1961).

Introduction: The Lin Claims, Kishinena Valley.

The Lin Claims were staked in the fall of 1969 after some preliminary prospecting in the area as a follow-up to the discovery of sedimentary copper by the Gobles in the Grinnell Formation in south-western Alberta in 1963. Subsequent prospecting of the area covered by the original staking indicated that the best mineralization was on the north side of Starvation Peak in the zone running from the west shoulder of the Peak to the south side of Kishinena Creek. Some of the claims were dropped, leaving a block of 11 claims in a group running from Kishinena Creek up the side of Starvation Peak.

In 1975 the Gobles discovered Uranium in the red beds of the Grinnell Formation, and in some of the copper bearing beds of the Grinnell. The uranium was traced throughout the Grinnell around the rim of the formation and into British Columbia, through Sage and Kishinena Creeks to the International Boundary on Long Knife Ridge on the south side of the Starvation Valley.

In 1977 a preliminary radio-metric survey was conducted on the Lin Claims. This survey gave some encouragement, and in 1978 a more detailed examination was undertaken.

Because of the extremely difficult terrain on the north face of Starvation Peak on claims 22, 23, 24, and 26, a base line was not used. Instead, the contours were followed, with control maintained by Altimeter and Compass. Many areas, because of the sheerness of the rock face, had to be missed.

Location and Access:

The Lin Claims are in a block running south from Kishinena Creek up the north side of Starvation Peak for 6 claim lengths, at approximately 114^{0} 16' - 49^{0} 3'. Kishinena Creek is a tributary of the Flathead River, on the east side of the Flathead Valley in the extreme south-eastern corner of British Columbia.

Access to the north side of the block of claims is now reasonably good. A logging road has been constructed by the B.C. Forestry through the north side of the claims. This logging road joins the Flathead Road to No. 2 Highway at Morrissey and at the Corbin junction.

Regional Geology:

The Lin Claims were staked on the Grinnell Formation, the red bed formation that carries the sedimentary copper throughout the entire Belt sequence of Pre-Cambrian rock in the Clarke Range of south-eastern British Columbia and south-western Alberta, and which continues on south through Glacier National Park in Montana. The area is part of the Lewis Thrust Sheet, and many thrust faults are apparent. The topography is very rugged. The valley floor on the north boundary of the claim block lies at an elevation of 4,300 feet, and Starvation Peak on the south boundary of the claims has an elevation of 9,500 feet. The Grinnell Formation as exposed on the north side of Starvation Peak is 1,500 to 1,800 feet in thickness.

The Grinnell Formation is described on Page 1 of this report.

A Diorite Sill runs through the Upper Grinnell across the shoulder and face of Starvation feet, fairly thin, and eventually disappearing altogether. The greatest thickness, near a fold, was approximately 9 feet. This is likely a continuation of the large Diorite Sill on Starvation Creek on the Opal Claims.

Mineralization:

The copper-silver mineralization located in the Grinnell Formation has been dealt with in previois Reports on the Lin Claims (1975). This survey disclosed the presence of low-grade Molybdenite in two of the quartzite beds, in association with the higher grades of copper mineralization. Molybdenite was first discovered in the thin beds of the lower Grinnell on the Commerce Claims.

The Uranium mineralization is associated primarily with the red and green argillites of the Appekunny and Grinnell Formations. Most red, grey, and white quartzites and sandstones are barren, as is the limestones and dolomites of the other formations. The best grades located have been in association with the thin-bedded and reasonably high grade sandstones and quartzites of the lower Grinnell, although in this survey two locations (this is probably the same bed) in the Upper Grinnell on claims 24 and 26 were found to be more radio-active than the surrounding argillites. It is significant that these two ? beds also carry a higher grade of copper.

The small diorite sill near the top of the upper Grinnell is not radio-active. Malachite, minor Azurite, Bornite, Covellite, and Specular Hematite is found in some localities along the chilled margins of this sill. Some very minor Galena was also noted.

Radio-Metric Survey, Lin Claims 21, 22, 23, 24, 26.

Location:
The north-facing slope of Starvation Peak, on claims 21-24, 26.

Control:
Control was maintained by Altimeter and Compass. Sage Creek Map Sheet 82 G 1/E was used for over-all control. A control point was established at the 6,500 foot level to check and set the Altimeters each day.

A preliminary survey along the lower side of the Lower Grinnell and thence across the Grinnell Formation to the upper edge of the Upper Grinnell on the west side of Starvation Peak at the 9,300 foot level was made to locate and flag the different contour intervals prior to the start of the survey.

Instruments:
2 McPhar Spectrometers were used, Model TV-1A. These instruments are calibrated 0 to 100,000 Counts Per Minute. 100,000 CPM being the equivalent of approximately 2,000 CPS (Counts Per Second) on the BGS IS Scintrex.

Line Miles:
It is difficult to estimate the number of line miles actually covered by the survey. The sheerness of the high wall of Starvation Peak made it impossible to continue any one line completely across. Many readings were obtained only by climbing down and then back up to the contour interval in a more accessible location. An initial climb of some + - 4,000 feet was required each day to reach the survey area.

Geology:
The Grinnell Formation has been described on Page 1 of this Report. A Type Section of the Grinnell, from Yarrow Creek in Alberta, is appended to this Report. The Grinnell beds on Starvation Peak dip to the north-east, generally at 16 to 30 degrees. There is much folding in some sections of the cirque wall, and in the upper

Grinnell running down to Kishinena Creek. One fairly thin Diorite dyke was located in the upper Grinnell.

Anomalous Zones:

For the purposes of this survey, any reading of 100 (10,000) or over was regarded as being anomalous. Back-ground count was not subtracted prior to plotting the readings on the map. Readings were taken with the instrument touching the rock. Continuous readings were taken where possible, but only those that were anomalous were plotted except at the 150 foot interval. All readings at 150 foot intervals were plotted. Plotting on the map was done as 1/100th of the actual count, as: 100 = 10,000CPM.

Several anomalous beds were located during the survey, and are plotted on the accompanying map.

Date of Work:

Work was carried out during July of 1979, mostly between July 5 and July 31. Two Geologist-Prospectors were involved.

Conclusions:

The entire Grinnell Formation carries low-grade uranium mineralization, with the best concentrations located on the survey with the copper-silver mineralization located previously in other surveys.
Somewhere in the Grinnell Formation there should be an enriched zone, possibly of the roll-front type. Special attention should be given to any location where there could be an old channel in the Grinnell.

The mineralized copper-silver-molybdenum beds located on this survey should be traced out and given a very detailed survey with the Spectrometer. After the beds have been traced, they should be sampled at regular intervals.

Radio-Metric Survey, Lin Claims,

Statement of Costs:

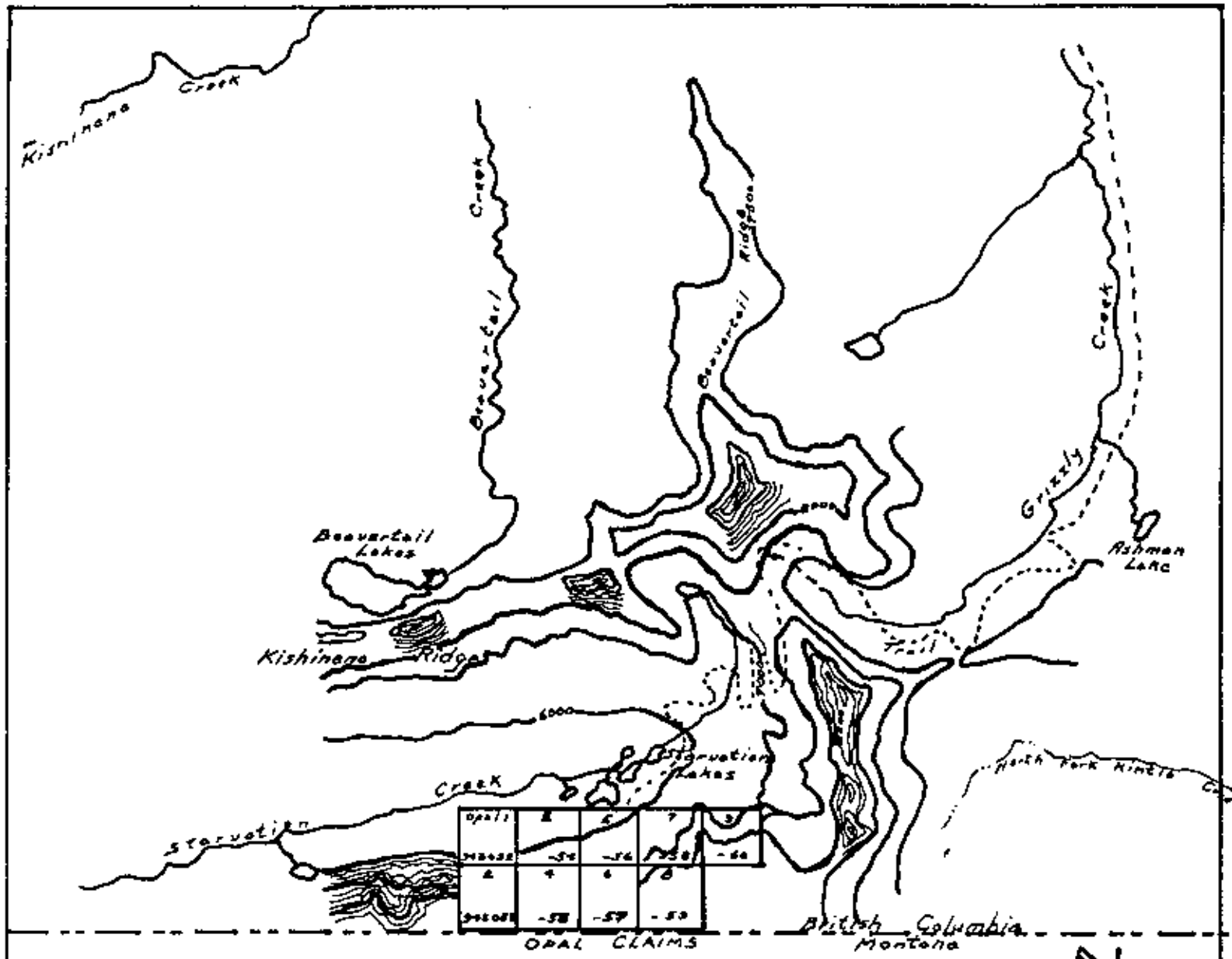
Wages, July, 1979,

2 men, 2 X $2,200.00	$4,400.00	
Food & camp costs	780.00	
Transportation	230.00	
Instrument rental, 2 instruments, 2 X $200.00	400.00	
Supplies, (flagging, etc.)	67.00	$5,877.00
Office, 10%		587.70
Total costs		$6,464.70

KINTLA EXPLORATIONS LIMITED

per: Frank Gable

Frank Gable, Managing Director



Opal Claims No's 1-9 inclusive
Starvation Lakes - Starvation Valley
Fort Steele Mining Division
114° 13' - 49° 00'
KINTLA EXPLORATIONS LIMITED
Sage Creek Sheet 82 G/1 E

Scale: 1:50,000

MILES 1 0 1 MILES

Introduction, The Opal Claims, Starvation Valley.

The Opal Claims, 1-9, in the Starvation Valley on Starvation Ridge, (Long Knife Ridge), in the south-eastern corner of British Columbia, were staked in late 1969 and late 1970 following the preliminary prospecting in the area as a result of the discovery by the Gobles of sedimentary copper-silver in the Grinnell Formation of south-western Alberta and the subsequent tracing of the host beds into British Columbia along the eastern side of the Flathead Valley. Some of the original claims were dropped after it was found that the mineralization did not extend into them. A total of 9 claims are now held in the valley, with the southern boundary of the claim block touching the International Boundary between Canada and the United States on the northern boundary of Glacier National Park, Montana.

After the discovery of Uranium mineralization in the red-bed formations of the Grinnell and Kintla, the anomalous beds were subsequently traced around the exposed rim of the syncline into the claim block on Starvation Ridge (Long Knife Ridge).

Location and Access:

The Opal Claims are a block of 9 claims paralleling the International boundary near the head of the Starvation Valley of south-eastern British Columbia, lying at approximately 114^{0} $13'$ - 49^{0} 00^{0}.

Access is very difficult. A saddle horse or foot trail runs from the Seismic road in the Akamina Valley at Gloyen's Camp, up Grizzly Gulch and into the head of Starvation Valley, a distance of some 10 miles. This 'trail' is almost impassable owing to the great numbers of large trees that have been blown down in recent years. Another route is from Wall Lake up through Bennett Pass and into the North Fork of Kintla Creek valley, to the head of the valley, and through the small pass running across Long Knife Ridge and into the head of the south side of Starvation Valley. A third route is to follow the international Boundary from Kishinena Creek, over Kishinena Ridge and up to

the head of the Starvation Valley.

The easiest access is by helicopter. The old road through the Akamina Pass from Waterton Lakes National Park has been closed to vehicular traffic, and access by vehicle to the Kishinena Valley is now possible only from the Flathead road.

Regional Geology:

The Opal Claims were staked on the Grinnell Formation, the red-bed formation that carries the sedimentary copper-silver-molybdenum mineralization throughout the entire sequence of the Belt Formation of the Pre-Cambrian rock unit of south-western Alberta and south-eastern British Columbia. The area is part of the Lewis Thrust Sheet. Topography in the Starvation, especially on the south wall of the valley running up to Cut Knife Ridge. The valley floor at the small lakes at the head of the valley near the north side of the claims is at an elevation of 5700 feet. The wall above and to the south rises to 8700 feet along the International Boundary, and is higher across the boundary. The Grinnell Formation runs at an angle down the south side of the valley, disappears into the overburden at the head of the valley, and reappears as it strikes to the north-west up the side of the valley and through the top of King Edward Peak. The most significant feature in the Grinnell in the valley is the Diorite Sill near the bottom of the Grinnell, from 50 to 150 feet in thickness, with several dykes and sills associated with the upper side of the main sill.

A description of the Grinnell has been given on Page 1 of this report.

While no exact measurement of the thickness of the Grinnell Formation on the south wall of the Starvation has been possible, it has been estimated to have a thickness of 1,500 to 2,000 feet.

Mineralization:

The copper-silver mineralization has been dealt with in the Report filed on the Opal Claims in 1975. (Kintla Explorations Report).

Uranium Mineralization was discovered by the Gobles in the Grinnell Formation in Alberta in 1975. It was traced north in Alberta to the North Kootenay and Middle Kootenay Passes, south through the Commerce Mountain, Sage Creek, and Kishinena Creek areas to Starvation Creek and the Opal Claims on Starvation Ridge (Long Knife Ridge). The Uranium mineralization appears to be associated primarily with the red and green argillites of the Grinnell and Appekunny Formations, although it has been found as well in the red beds of the Kintla Formation which lies at a much higher horizon. Grades in the argillites run from 0.035 pounds U_3O_8 per ton to 0.10 pounds per ton, although one locality was found that assayed at 0.30 pounds per ton. The mineralization in the red beds is very consistent. The thin-bedded quartzites and sandstones in the lower Grinnell, beds that carry a good grade of copper, also have the best grade of uranium, up to 4 pounds per ton in two areas. It has now been found that these same high-grade thin beds also carry Molybdenum.

Radio-Metric Survey, Opal Claims 1/9.

Location:
The north-facing wall of Long Knife Ridge (Starvation Ridge), adjoining the U.S. - B.C. boundary, on claims 1 to 6.

Control:
Control was maintained by Altimeter and Compass. Sage Creek Map Sheet 82 G 1/E was used for over-all control. A control point was establised at the 5,700 foot level to check and set the Altimeters each day.

A preliminary survey, to the top of Long Knife Ridge, was made to locate and flag the contour intervals along which the survey would be conducted.

Line Miles:
Again, as in the survey on the Lin Claims, it is impossible to accurately give the number of line miles covered during the survey.

The wall of Long Knife Ridge is extremely difficult to traverse. Easiest access is in some of the vertical gorges cutting down the side. Many of the readings were obtained only by climbing up the wall to a point, and then returning to the starting point to move over and make another climb.

Geology:

The most striking geologic feature of the Grinnell on the Opal Claims is the fairly thick Diorite Sill that cuts down the side of the ridge to disappear in the talus at the head of the valley, to re-appear on the north slope as a much thinner unit. The Diorite is mineralized with Silver, Copper, and minor Galena, mainly concentrated along the chilled margins and in the small dykes and sills running off the top of the main sill. Grades for silver have gone as high as 18 ounces per ton, with Copper running at 0.50 pounds per ton, and lead at 3.5 pounds per ton. The Dyke is not anomalous. Some of the mineralized faces are covered with Azurite. Some of the quartzite and sandstone beds carry a good grade of sedimentary copper and silver. This has been referred to in previous reports on the claims. Some interesting zones of copper mineralization were located on this survey, and the uranium appeared to be highest in the copper beds. Readings as high as 32,000 Counts Per Minute were noted.

Anomalous Zones:

For the purpose of this survey, any reading of 100 (10,000) or over was regarded as being anomalous. Back-ground count was not subtracted prior to plotting the readings on the map. Readings were taken with the instrument touching the rock. Continuous readings were taken where possible, but only those that were anomalous or that came at the 150 foot interval were plotted. Plotting on the map was done as 1/100th of the actual count, as 100 = 10,000 CPM.

Date of Work:

Work was carried out during August of 1979. Two Geologist-Prospectors were involved.

Conclusions:

The entire Grinnell Formation carries low-grade uranium mineralization, with the best grades located on the survey associated with the copper-silver mineralization. There is a direct association between the uranium and the copper-silver-molybdenum.

Further work should be done on the area, with especial attention being paid to the copper-silver-molybdenum beds, and to the possibility of there being an old river or creek channel somewhere in the area. Two of these old channels have been located on the Alberta side, one in the Waterton Formation along the Continental Divide, and the second one in the Grinnell Formation on Yarrow Creek. It is also possible that there could be a roll-frontttype of ore bodysomewhere in the area.

The area warrants more work, both on the copper-silver-molybdenum-uranium bering beds, and throughout the red beds.

GRINNELL TYPE SECTION - YARROW CREEK

Unit #	Thickness	Description
27	5'	massive white quartzite - TOP OF GRINNELL
26	18'	reddish clastic quartzite, minor red argillite
25	12'	dominantly red argillite, minor red clasty quartzite with ripple marks
24	9'	bedded reddish quartzite, bottom 2' limy bed (somewhat rusty) with very well developed load casts; quite massive, ripple marks on top MINERALIZATION DETECTED
23	21'	soft, clasty poorly bedded red quartzite, minor red argillite; topped by 6" of red argillite, quartzite immediately below having good ripple marks MINERALIZATION DETECTED 14' BELOW TOP
22	10'	dominantly red argillite, two thin bands of reddish clasty quartzite
21	14'	poorly bedded soft red clasty quartzite, one 2' band of bedded greenish quartzite in center
20	8½'	mainly red argillite, one 1' band of clasty red quartzite in middle
19	7'	mainly hard greenish-white quartzite top 2' - coarse grained massive 'cap' showing large irregular flute casts and good cross bedding, much darker than 3' directly below next 3' - very massive hard green quartzite weathering reddish on bottom half, some cross bedding next 1' - less massive dirtier quartzite with some cross-bedding, few pebbles bottom 1' - soft thin bedded quartzite containing green argillite pebbles, coarse grained MINERALIZATION DETECTED
18	30'	poorly bedded clasty red quartzite, bottom 1½' cross bedded hard white quartzite, one band of hard white quartzite 1' thick in middle
17	3'	mainly red argillite with two thin quartzite beds in middle
16	7'	top 5' - massive hard greenish quartzite, weathers reddish; some green pebbles middle 1' - red argillite bottom 1' - massive dirty clasty reddish quartzite
15	23'	mainly red argillite with minor clasty red quartzite; 2' band of massive greenish quartzite 10' from base

Unit #	Thickness	Description
14	8'	three bands of hard white quartzite separated by distinct bands of red argillite top 1¼' - top of band hard massive white quartzite with some green pebbles, bottom of band reddish clasty quartzite with good cross bedding; good ripple marks on top of band next 3' - red argillite middle 1' - hard white quartzite with green argillite pebbles, weathers reddish next 1¼' - red argillite bottom 1½' - hard white quartzite
13	45'	red clasty quartzite, red argillite; resistant bands of quartzite up to 1' thick occur at 20' from base MINERALIZATION DETECTED 20' FROM BASE
12	7½'	massive greenish and reddish quartzite, weathered colour light red; minor black-red argillite pebbles near base, greenish quartzite tends to be in middle; minor interbedded discontinuous red argillite bands
11	7'	mainly red argillite, band of 1½' of quartzite through center, band consists of two beds of greenish quartzite topped by one bed of clasty red quartzite with very well developed ripple marks
10	5½'	top 3½' - massive reddish quartzite with minor pebbles, top 1' cleaner and harder with good ripple marks middle ½' - red argillite bottom 1½' - massive greenish quartzite with irregular ripple marks, some green argillite pebbles
9	15'	reddish clasty quartzite and red argillite, no definite beds
8	5'	massive greenish white quartzite; top 2' dark reddish clasty quartzite with cross bedding; next 2½' massive greenish white quartzite with very good cross bedding; bottom 6" heavily weathered greenish white quartzite with green argillite pebbles and poorly developed ripple marks MINERALIZATION DETECTED
7	5½'	mainly red argillite, minor bands of red quartzite
6	7'	three beds of white quartzite separated by 1'-2' of red argillite top 2' - clasty reddish quartzite with red argillite pebbles next 1½' - red argillite middle 1½' - top 3"-5" hard reddish quartzite with irregular ripple marks and flute casts, middle 6" hard reddish quartzite with good ripple marks, bottom 4"-8" clasty reddish quartzite with red and green argillite pebbles

Unit #	Thickness	Description
		next 1¼' - red argillite bottom 3/4' - hard swell sorted white quartzite with green argillite pebbles near bottom; ripple marks
5	26½'	mainly red argillite with irregular bands of soft clasty red quartzite; eight definite bands of reddish quartzite up to 8" thick, quartzite beds better developed near base
4	1½'	reddish clasty quartzite, ripple marks
3	7'	mainly red argillite, two 2"-3" beds of reddish quartzite
2	10'	fine grained very well sorted hard reddish white quartzite; top 8' massive reddish white quartzite, next 1' red argillite, bottom 1' clasty red quartzite tipped with moderately sorted ripple marked red quartzite
1	250'-280' ?	LOWER GRINNELL mainly red argillite, minor greenish argillite, and reddish quartzite

Radio-Metric Survey, Opal Claims,

Statement of Costs:

Wages, August, 1979, 2 men, 2 X $2,200.00	$4,400.00	
Food & Camp Costs	630.00	
Transportation	279.00	
Instrument rental, 2 instruments, 2 X $200.00	400.00	
Supplies (Flagging, etc.)	43.00	$5,752.00
Office, 10%		575.20
Total Costs		$6,327.20

KINTLA EXPLORATIONS LIMITED

per: Frank Goble

Frank Goble, Managing Director

CERTIFICATE:

I HEREBY CERTIFY THAT:

1. I am a graduate of the University of Alberta (1969) with the degree of Bachelor of Science in Geology.

2. I am a member in good standing in the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

3. The appended statement of costs is a true and accurate statement of expenditures undertaken in the described program.

4. I personally supervised the program described in the Report.

5. I have an interest in the property.

Certified in the City of Lethbridge in the Province of Alberta this 15th day of October, 1979.

E. D. Gable, B.Sc.,
Geologist & Prof. Eng.

7678

Radio-Metric Survey - Geologic Map
Opal Claims 1-6 - Long Knife Ridge
Starvation Valley - South-east B.C.
Sage Creek Map Sheet 82 G/1 E.
Fort Steele Mining Division
114°13' 49°00'
Instrument: McPhar Spectrometer
Calibrated: 0 - 100,000 C.P.M.
(Counts Per Minute)
Plotted as 1/100th e.g.: 40: 4,000 C.P.M.
Background Count: 25 : 2,500 C.P.M.
Formational Contact:
Grinnell Formation:
Diorite Sills and Dykes:
Control by Altimeter and Compass
Work Conducted by Kintla Explorations Limited
Map by F. Goble September 1979
Scale: 1 inch : 150 feet
0' 150' 300'
Opal 1
Opal 2
Opal 3
Opal 4
Opal 5
Opal 6
Appekunny Formation
Lower Grinnell Formation
Middle Grinnell Formation
Upper Grinnell Formation
Siyeh Formation
rubble
Talus
inaccessible
cliff
ice
British Columbia
Montana
Canada
U.S.A.
International Boundary
Long Knife Ridge
Glacier National Park