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A Report on the Mineral Potential
of the
Purcell Wilderness Conservancy

by

K. F. Northcote, Ph.D., P.Eng.

PROPERTY FILE

A Report on the Mineral Potential
of the
Purcell Wilderness Conservancy

PROPERTY FILE

by K.E. Northcote Ph.D., P.Eng.,
Mineral Land Use Specialist,
Mineral Resources Branch,
Ministry of Energy, Mines and
Petroleum Branch.

November 21, 1979.

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Correspondence Regarding Purcell Wilderness Conservancy.

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Mineral Potential of the
Purcell Wilderness Conservancy

BACKGROUND

A study entitled Purcell Study, Integrated Resource Management for British Columbia's Purcell Mountains was released July 4, 1974. The report restated the problem and made a number of recommendations and pertinent statements regarding integrated land use.

One of the main recommendations was for establishment of Regional Resource Management Committees charged with the responsibility of developing resource management plans in the region, thus allowing decisions to be made at the district level. This recommendation was carried out. The report also stressed the importance of continuous gathering of data; and further stated that because information concerning resources and the demands on them change with time, the essence of integrated resource management lies in the design of planning, decision and management procedures that can respond to changes in the information that becomes available. Four conflicts were documented:

- (a) Fry-Carney logging road issue.
- (b) White Creek to Alton Creek forest access.
- (c) Subalpine logging.
- (d) Domestic grazing and wildlife management.

The importance of mining in the Purcell region is mentioned in the report. A mineral potential map, current at the time, was included and showed the position of important properties. However, no direct conflicts were reported and no specific proposals regarding mineral potential assessment were offered.

REVIEW OF ORDERS IN COUNCIL

Order-in-Council 1728-24.05.74 established a mineral-placer reserve for the period May 24, 1974 to March 1, 1976. This reserve was requested by the Environment and Land Use Committee Secretariat for the area presently designated as the Purcell Wilderness Conservancy, in order that a study may be carried out with respect to establishing a Recreational Area and Wilderness Conservancy. Claims affected by the reserve area were noted and the owner was notified of the impending reserve.

Subsequently Order-in-Council 3801-04.12.74 pursuant to Environment and Land Use Act established the Purcell Wilderness Conservancy. This decision was made in the name of conservation. No geological or geochemical studies were made and if MEMPR was consulted it is not evident in the appropriate files. This action precluded carrying out geological and geochemical studies and having mineral potential taken into consideration.

MOVE BY MEMPR TO RETAIN RESERVE

The mineral-placer reserve established by Order-in-Council 1728-24.05.74 terminated March 1, 1976. This created an awkward situation which made it legally possible to stake claims in the Purcell Wilderness Conservancy but Order-in-Council 3801-04.12.74 prevented exploration or development of the claims. Consequently, to avoid the government embarrassment and to prevent conflict the mineral reserve was reestablished for specific periods by Order-in-Council 3535-17.11.77 for the period 17th of November 1977 to December 31, 1978 and by Order-in-Council 934-29.03.79 for the period March 29, 1979 to February 28, 1980. This was done pending a decision regarding possible park status for the Purcell Wilderness Conservancy.

DEVELOPMENTS IN KNOWLEDGE

Prior to establishment of the wilderness area aeromagnetic data were available for the N.T.S. area 82F which covered the lower half of the wilderness area. These data in conjunction with geologic maps providing insight into geologic environment, and limited data on mineral occurrences and claims in the area were available to delineate areas of greatest apparent mineral potential and point out which areas required intensive but non-destructive investigation before decisions were made which would be extremely difficult to reverse.

Since 1974, when the area was designated a Wilderness Conservancy, a joint Federal-Provincial regional geochemical silt and water program was conducted in N.T.S. area 82F and K, and covered the entire conservancy. This survey gives regional silt geochemical data for 12 elements Zn, Cu, Pb, Ni, Co, Mn, Fe, Sn, Mo, W, Hg and U and two, U and F, for water. These data support the geological and geophysical data.

Others who have utilized this same public information have arrived at similar conclusions regarding mineral potential. There has been quick response and considerable pressure by prospectors and individuals in major mining companies to have all or portions of the conservancy reopened to mining exploration. These people have the same right to be heard and have these arguments taken into consideration as individuals and members of societies who are concerned with preservation of areas in a natural state. See appendix "A" for some of the correspondence.

DISCUSSION

When an area is being considered for some single use, if mineral potential is considered at all, it is commonly assumed that if there are few claims in the area at a given time the same situation will prevail for the next 200 years. This assumption is grossly in error. Mineral potential assessment uses existing claim density but to a relatively minor extent. Geologic environment and trace elements, and geophysical (aeromagnetic) studies, where available, are considerably more important in the evaluation.

Literally, billions of dollars in lost resources are at stake. It is inevitable that those who are charged with the responsibility of making land use decisions will sometime be of greater disservice than service to the people of the province through errors in judgement but the probability is greatly increased if poorly informed resource assessments are used.

If land is being considered for alienation from extractive resource use there should first be the best possible measure made of those resources then the decision made on the basis of all the information. There is opportunity at that time to exclude specific areas and modify proposed boundaries; a procedure which is extremely difficult to initiate after an area has been designated. Environmentalists and news media are quick to criticize any attempt to modify any park or conservancy area once designated. Decisions either for or against modification evoke much controversy. Also, once the area is alienated from minerals one of the most important mineral potential assessment processes is precluded; that is active exploration by mining companies.

SOURCE OF INFORMATION

The conclusions and recommendations outlined in this report are derived from maps and reports which are public information. Letters of concern from individuals within the mining industry and government substantiate the conclusions and recommendations of this report.

The sources of information include:

- (a) Mineral claim maps: 82K7E & W, 8W, 1W, 2E.
82F/16E & W, 15E.
- (b) Geologic maps and reports:
 - 1/. J.E. Reesor (1958) Dewar Creek Map-Area(etc.)
G.S.C. Memoir 292.
 - 2/. H.M.A. Rice (1940) Nelson East Half
G.S.C. Memoir 228.
 - 3/. J.E. Reesor (1957) Lardeau East Half
G.S.C. Map 12-1957.
 - 4/. J.T. Fyles (1964) Geology of Duncan Lake
Area MEMPR Bulletin #49.
 - 5/. T. Hoy - Geology of Riodel Area
MEMPR Preliminary Map No. 16.
- (c) Uranium Reconnaissance Program Map 82F and 82K.
- (d) Aeromagnetic Map 82F.
- (e) Mineral Index Map 82F and 82K and Minfile print-outs
of properties.

Note - The original Mineral Deposit Land Use map for the Purcell Area requires updating. A too conservative an estimate of mineral potential is indicated in the light of new geochemical data and geologic concepts.

Figure 1 is a composite geological map after the geologic maps listed previously. Figure 2 indicates the documented mineral showings and claims that are in good standing in and immediately around the conservancy and also indicates that the southern two thirds of the conservancy has moderate to high mineral potential. Figure 3 outlines areas of high and anomalous values for specific elements.

GEOLOGY, MINERAL OCCURRENCES AND MINERAL CLAIMS

Geology:

Figure 1 is a composite map of the geology of the Purcell Wilderness Conservancy. There are 10 main rock units represented ranging from Lower Division Aldridge of Proterozoic age, which is the stratigraphic horizon at which the Sullivan orebody occurs, to the Lardeau Series of Pre-Mississippian age. The old formations are cut by diorite and quartz diorite of unknown age and more differentiated quartz monzonite and granodiorite batholiths and stocks of Cretaceous age. The Cretaceous plutons, including the White Creek and Fry Creek batholiths and the Frying Pan Creek stock, which all have associated mineral occurrences and geochemical highs, plus the Lower Aldridge constitute the rocks with highest mineral potential in the conservancy areas. See Figure 1, 2 and 3.

Mineral Occurrences:

There are four documented mineral occurrences within the Purcell Wilderness Conservancy (see Figure 2). None of these have reached the stage of exploration or development to provide reserve figures. Three of these occurrences are molybdenite or molybdenite-tungsten which type are presently of great interest and are being actively explored in other areas of B.C. It is also of interest to note that all three of these occurrences are at the edge or within the Cretaceous quartz monzonite, granodiorite plutons.

82F N NE #73 Molly 82F/16W 49° 56.2'; 116°18.2'
Mo, W Elevation 2533m
Skarn in limestone near granite stock Mo, W.

82F N NE #105 Eel 82F/15E 49° 53.7'; 116°32.6'
Elevation 2133m
Molybdenite occurs in fractures and veins along the edge of the Fry Creek Batholith.

82F N NE #115 Peg leg. Mo
No other information presently available.

82F N NE #124 Hotsprings 2
Proposed for Ecological Reserve status.

The Mineral King Mine, a former producer of Ag, Cu, Pb, Zn, Cd and now producing barite, is located on the northeast edge of the conservancy associated with Mt. Nelson formation. Only a small body of this stratigraphically important formation is located within the conservancy at the head of Toby Creek.

Mineral Claims

The Purcell area was designated a wilderness conservancy at a time when there were few active claims in the area. A result of recent availability of regional geochemical silt data, new interest in uranium, tungsten and porphyry molybdenum deposits would be more claims in the area if staking and work on claims was presently allowed. On the other hand, if a decision is reached to give the area "park status" the legal complications regarding preexisting claims would be minimal.

Figure 2 shows the number and location of claims within and near the wilderness area. Cominco's block of 8 Molly claims are so situated that it would not be possible to accommodate them without splitting the conservancy into two separate areas. See Figure 2, property 82F 73, at northeast side of St. Mary's Alpine Park. Of the claims in the conservancy these are the ones which appear to have highest mineral potential. The "claims" problem can't be ignored forever, eventually a settlement will have to be reached by negotiation, expropriation or exclusion from the conservancy.

DIRECT CONFLICTS

82K/1W, east boundary, Pert Peak, Barn Mountain, Frying Pan Creek, west side of Barn Groups of claims:

Barn 1	211	(6)
2	212	(6)
3	213	(6)
4	214	(6)
6	216	(6)

82K/7E L 12501 CG on north boundary of conservancy between Blockhead Mountain and Redtop Mountain.

82F/15E Mt. Gill, south boundary of conservancy.

Gill 3	463	(6)
Gill 1	461	(6)

82F/16W Headwaters Skookumchuck Creek - Alton Creek, northeast side of St. Mary Alpine Park, mineral occurrence 82F 73, 8 two post claims.

Molly 1-8 3497 K to 3500 K, 13458 E to 13551 E.

AREA OF SIGNIFICANT MINERAL POTENTIAL

White Creek Batholith

The White Creek Batholith underlies the southeast projecting spur of the conservancy. It is a nearly concentric, zoned, differentiated batholith becoming more silicious and less mafic-rich inwards. The final differentiates are aplite-pegmatite dykes and quartz veins. In addition there are abundant tourmaline and known occurrences of MoS₂ mineralization within or near the batholith. The above characteristics indicate a prime geological environment for tungsten and porphyry molybdenum mineralization - particularly if detailed mapping shows shallow environment explosive brecciation.

It should be noted that this area was mapped in 1950-52, prior to discovery of porphyry deposits and knowledge of their characteristics in B.C., and therefore deserves careful attention now. See Figure 1.

George Addie, District Geologist, Nelson, has stressed the importance of geophysical (aeromagnetic) anomalies in the Buhl Creek and Irish Queen Mountain areas. He lists 8 known mineral occurrences on the northwest flank of the batholith. One of these occurrences, Molly, covered by 8 claims lies at the edge of the batholith in the wilderness conservancy.

G.S.C. - M.E.M.P.R. geochemical field studies have generated additional interest in the White Creek batholith. There are high or anomalous values for uranium and tungsten in silt, and uranium and fluorine in water. These "pathfinder" high or anomalous values make the area attractive for molybdenum, tin and tungsten associated with porphyries and uranium associated with pegmatites. See Figure 3.

In the above context it should be noted that the west and most differentiated part of the White Creek batholith is already alienated from mining by St. Mary Alpine Park and within existing park-use policy cannot be evaluated in the future. Any minerals present are lost and there is no way of measuring what that loss might be.

Aldridge Formation

The upper part of the lower Aldridge Formation hosts the Sullivan Pb, Zn, Ag, Cd mine which is located 16km southeast of the wilderness area. There has been about half a century of discussion regarding the origin of this deposit with a submarine exhalative origin seeming the most probable. Such an environment is possible at any level in the Aldridge Formation and therefore has some potential for Sullivan type stratiform mineralization. The Federal-Provincial Uranium Reconnaissance Map 82K indicates high or anomalous tin and tungsten values in silt in the area. See Figure 3. Cominco holds a group of claims immediately east of the conservancy boundary.

Fry Creek Batholith

The Fry Creek batholith has generated considerable interest in the past few years particularly for Mo, W and U. Although most geologic maps depict the batholith as a solid mass, it is also a multiphase intrusive that has undergone differentiation. This batholith has high or anomalous values for mercury, uranium and tungsten in silt and uranium and fluorine in water. See Figure 3. Detailed geologic mapping of this batholith is required to give a better indication of mineral potential. These data would be applicable to the Fry Creek recreation area as well.

Findlay Creek - Dutch Creek Area

Interest in the Findlay Creek - Dutch Creek area and Little Frying Pan Creek stock was generated by new geochemical information published by joint Federal-Provincial Uranium Reconnaissance Map 82K which shows high or anomalous values in tungsten, tin, lead and zinc. Claims were staked on the east side of the conservancy boundary and scheelite (W) mineralization was located on the ground.

CONCLUSIONS

- (1) The Purcell Wilderness Conservancy, although an excellent concept, was, from the point of view of mineral land use, too hastily conceived. There should have been opportunity for discussion leading to possible trade off of areas of higher mineral potential for areas of lower potential. There are areas of moderate to high mineral potential which should not have been included in the Purcell Wilderness Conservancy without first having had serious consideration given to mineral potential. This is the reason for the present review.
- (2) However unpopular the suggestion might be, the logical route for solving the dilemma is through strictly controlled, coordinated land use practice in the southern half of the conservancy area which would involve Parks Branch, MEMPR and operating mining companies or prospectors.
- (3) A special kind of land use category might be established whereby strict exploration and development controls can be imposed for a specific period of time allowing both evaluation of mineral potential and also ensuring preservation of wilderness aspects of the area. Land acquisition could be achieved through a process of map staking. Establishment of such land use categories for specific areas and the regulations governing them might have to be accomplished through legislation.
- (4) There are many exploratory procedures which would give an abundance of information without the use of destructive procedures in the area.
For example:
 - a) geologic mapping in detail looking for specific geological environments.
 - b) prospecting
 - c) geochemical surveys- silt, soil and rock.
 - d) geophysical surveys
 - e) diamond drilling with helicopter moves.
- (5) The area which could be reopened to mineral exploration and possible development is indicated on Figure 2. This area includes:
 - White Creek Batholith
 - Fry Creek Batholith
 - Aldridge Formation plus Little Frying Pan Creek stock.

(6) The entire area of the Purcell Wilderness Conservancy should undergo a detailed geologic-geochemical study by a crew of six with helicopter support over a two month period. The cost of such a survey would be about \$120,000.00. See Table 1, Geologic-Geochemical Study Costs. This study would require special funding and would be carried out under the direction of MEMPR but should not alter priorities of existing projects nor add appreciably to work load of existing staff.

Presumably simultaneous studies of other resources including wilderness and recreation aspects would be in progress. At some reasonable specified time data from all sources would be assessed, recommendations put forward and decisions made on the basis of all the information.

Table #1

Geologic-Geochemical Study Costs

Crew 4 geochemical silt samplers.
2 geologists
6 total

Period - 1½ to 2 months.

Coverage - Entire Wilderness Conservancy with special attention paid to southern 2/3rds.

Costs/month:

(a) Wages	4 @ \$ 1,500/mo.	\$ 6,000.00/mo.
	2 @ \$ 2,000/mo.	\$ 4,000.00/mo.
(b) Board & Room	6 x \$37.00 x 30 days	\$ 6,660.00/mo.
(c) Transportation	2 Trucks @ \$500/mo.	\$ 1,000.00/mo.
	Helicopter \$350 x 5hrs. x 20 days/mo.	\$ 35,000.00/mo.
		\$ 52,660.00/mo.

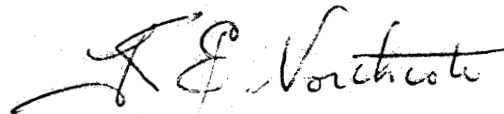
Estimated Field Cost for 2 months aprox.	\$105,320.00
Silt sample analyses - 800 samp. x \$10 ea.	\$ 8,000.00
Geologist 4 months to prepare maps & report	\$ 8,000.00
(4 x \$2,000)	<u>\$121,320.00 TOTAL COST</u>

RECOMMENDATIONS

(1) That the status of the Purcell Wilderness area, respecting mineral development, be clarified before the 1980 field season.

(2) That discussions between officials of MEMPR and Parks Branch be initiated with the objective of:

- (a) amending boundaries to allow recording of claims and exploration in areas of high mineral potential by excluding them from the designated Purcell Wilderness Conservancy.
- (b) allowing the Ministry Energy, Mines and Petroleum Resources to carry out, with special funding, further geological and geochemical surveys to define more specifically areas of high mineral potential. Estimated cost of the survey is \$120,000.00.
- (c) developing special categories of land within the Purcell Wilderness area to allow development of mineral resources under strict controls.
- (d) working with Parks Branch and the Forest Service on a joint submission to Cabinet.



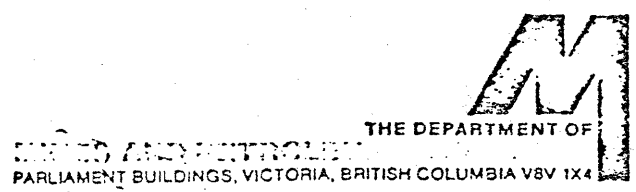
K.E. Northcote, Ph.D., P.Eng.,
Mineral Land Use Specialist.
Mineral Resources Branch.

APPENDIX "A"

Purcell Wilderness Conservancy

(correspondence)

MEMORANDUM FROM W. D. McCartney,
Geologist,
Geological Division
TO: R. Rutherford,
Deputy Chief Gold Commissioner,
Titles Division



RECEIVED
NOV 7 1976
NELSON B.C.

DATE: Nov 3rd, 1976

RE: Your file 113 (325), (325A).

With respect to mineral potential in the large Purcell Wilderness Conservancy, we prepared a Mineral Deposit-Land Use map of the Purcell Mountains in a one-month crash program in June, 1973, and I collaborated with Dr. S. S. Holland in his memo on mineral claims of March 29th, 1974 (this file). This map was considered in defining the boundaries of the Wilderness Conservancy. Since then, A. H. Matheson has revised and this Department has published Mineral Deposit/Land Use map 82K LARDEAU, September, 1975. (attached). Further areas of moderately good mineral potential (3C) are now shown within the Purcell Wilderness Conservancy.

Mr. Phil Olsen reported to me that local prospectors feel strongly that, even though staking is not prohibited (as yet), the Wilderness Conservancy was created in response to the wishes of a highly vocal minority and that they had no opportunity to express their views on the mineral potential of the land involved. At one of their meetings this spring in Cranbrook attended by Mr. Olsen, feelings ran high that our 1973 Mineral Deposit/Land Use map under-rated part of the lands. With Mineral Deposit/Land Use maps I emphasise that they are our best judgement based solely on the geological maps and on data available within our Mineral Inventory file and library. They are open to continual improvement as new data becomes available. A ban on mineral exploration in perpetuity would effectively block further data collection.

Thus, before proceeding with a total mineral reserve on the Purcell Wilderness Conservancy, I request permission to draw this proposal to the attention of the Parks Committee of the B. C. and Yukon Chamber of Mines. This committee in industry can commonly assemble the results of regional geochemical surveys and first-hand, modern data not accessible to our Mineral Inventory files. I further believe that the prospectors of the district who expressed their earlier grave concern to Phil Olsen should be given an opportunity to contribute their factual knowledge, possibly through the offices of George Addie, District Geologist, of this Department, 310 Ward Street, Nelson, or the Chamber of Mines of Eastern B. C., 371 Baker Street, Nelson (tel. 352-5242). Their views and particularly new data should have a place in this decision to withdraw mineral lands in expected perpetuity. Unlike the creation of Class A Parks, my feeling is that all factors may not have been fully weighed when staking remained permissible in the formation of this Wilderness Conservancy, but we should not proceed to a total mineral reserve without grave consideration.

W. D. McCartney

WDMcC/crd
cc. G. Addie ✓
P. Olsen
N.C. Carter

MEMORANDUM FROM
&
TO T. Kalnins
W.D. McCartney



THE DEPARTMENT OF
PARLIAMENT BUILDINGS, VICTORIA, BRITISH COLUMBIA V8V 1X4

NELSON D.C.

DATE Nov. 10th, 1976

RE: PURCELL WILDERNESS CONSERVANCY (RE:Gold Commissioner File 113(325))


Preliminary review of reported uranium occurrences in the Conservancy area does not indicate any uranium occurrences (P.A. Christopher, 1976, B.C.D.M. Preliminary Map 22). The joint federal-provincial Uranium Reconnaissance Program (URP) is presently studying the geochemical environment for uranium in southeastern British Columbia. The Conservancy is situated within an area proposed for a regional geochemical survey in 1977. The survey includes water analyses for U, F and Ph and silt analyses for U, Cu, Mo, Pb, Zn, Ag, Co, Ni and Mn. Results of the URP, and input from industry and other government personnel (eg. Dr. T. Hoy, George Addie, etc.) should be jointly evaluated before a total mineral reserve is applied.

Peter Christopher, Ph.D., P.Eng.,
Geological Division,
Mineral Resources Branch.

PAC/gm

MEMORANDUM FROM J. A. Garnett, Geologist

TO Mr. R. Rutherford
Deputy Chief Gold Commissioner


THE DEPARTMENT OF
MINES AND PETROLEUM RESOURCES
PARLIAMENT BUILDINGS, VICTORIA, BRITISH COLUMBIA V8V 1X4

DATE September 13, 1977

Re: Purcell Wilderness Conservancy

Further to the mineral evaluation supplied by D. McCartney (November 3, 1976, File 113(325)), a geochemical survey of a large area including this Conservancy has been conducted. This sampling was conducted as part of the joint federal-provincial Uranium Reconnaissance Program. Confidential preliminary results indicate areas of anomalous uranium content within the Conservancy. The official detailed results will be released to the public next spring. The release of such data will undoubtedly create increased claim staking in anomalous areas.

It is clear from these evaluations that there is significant mineral potential within this area that this Division cannot approve alienation of the mineral rights at this time. If the Parks Branch wants to create a Class A park here, it will be necessary for us to conduct a more detailed evaluation and possibly suggest boundary changes to accommodate the most favourable exploration areas. Otherwise, it is our recommendation that staking be allowed. If sufficient legitimate staking is undertaken, then the intent of O.I.C. #3801 (ELU Act) must be clarified. This Ministry should undertake to warn claim stakers that although staking is permitted, examination of the property is restricted by O.I.C. #3801.

This is certainly not a satisfactory solution to this problem, but it is a better one than placing an unlimited reserve on an area that, within six months, will be documented as having high potential for uranium exploration.

The suggestion by L. Brooks that co-ordinated land use management is the ultimate solution to such problems is an excellent one. In the meantime, this Ministry cannot be even a tacit participant in the alienation of areas of mineral potential to solve government created administrative dilemmas.

J. A. Garnett

J. A. Garnett
Geologist

JAG/eg

MEMORANDUM

TO Dr. K. Northcote, P. Eng., PhD.,
 Special Projects, Geological Division,
 Victoria.

FROM G. Addie, P. Eng., P. Geol.,
 District Geologist, Nelson.
 February 27th 1979

SUBJECT

OUR FILE

YOUR FILE

Enclosed is background material pertaining to the Purcell Wilderness Conservancy. You can see my objection started in 1976.

G. Addie
 G. Addie, P. Eng., P. Geol.,
 District Geologist.

GA/elg

Encl. Unpublished paper "Uranium Fieldnotes from the Nelson District and Prospecting Targets" dated Nov. 8, 1976.

MINISTRY OF MINES AND PETROLEUM RESOURCES		
Rec'd MAR 1 - 1979		
138	130	

310 Ward Street, Nelson, B.C. V1L 5S4.

November 15th, 1976.

Mr W.D. McCartney,
Resource Geology,
Department of Mines & Petroleum Resources,
Parliament Buildings,
Victoria, B.C.

Dear Mr McCartney,

Re: Purcell Wilderness Conservancy.

I have written to Mr Garry Mason, P. Eng., who is giving a prospector's course in Cranbrook to find out what he knows about this area.

Why are we entertaining the idea of a conservancy to start with? Again, is this for the benefit of the Sierra Club?

I know one prospector (David Putt - PAA 1975) who reports a little Molly up Fry Creek. Too the area contains some of the Kootenay Arc which in several places this summer, have been found to be radioactive. (Ref. Uranium Fieldnotes from the Nelson District and Prospecting Targets dated November 8th, 1976, for Dr. Grove).

T.J. Lewis in "Canadian Journal of Earth Sciences" Vol.13 Nov. 1976, points out (p.1633) that the Fry Creek Batholith has 6.6 ± 2.0 ppm of Uranium as compared to the Nelson Batholith with 3.8 ± 2.0 ppm Uranium. And we have a target (Lemon Creek) in the Nelson Batholith! It is only a matter of time before we find a showing in the Fry Creek Batholith.

Yours truly,

G.Addie, P. Eng., P. Geol.,
District Geologist.

MINERAL RESOURCES BRANCH
DEPARTMENT OF MINES AND PETROLEUM RESOURCES

310 Ward Street,
Nelson. B.C. V1L 5S4.

March 9th, 1977.

Dr. James T. Fyles,
Deputy Minister,
Ministry of Mines & Petroleum Resources,
Parliament Buildings,
Victoria. B.C.

Dear Dr. Fyles,

Re: Purcell Wilderness Conservancy

I was just talking to Mr Tony Mitchell and he will be sending his file to you.

Mr Basil Erickson, an applicant for P.A.A. from Kaslo, showed me an assay from Ottawa (May 1, 1952) with a radiometric assay of 0.11% U_3O_8 (we will call this "equivalent" until we see the material). It comes from the south fork of Fry Creek which is in our wilderness area. The claim maps indicate this outline, but not that staking is prohibited. I understand from Tony that staking is allowed, but that there cannot be any development. Most strange!

In the interest of "multiple use" rhetoric is there any mechanism whereby we can withdraw units from the wilderness area so that development can indeed take place?

Yours truly,

G.A.
G. Addie, P. Eng. P. Geol.,
District Geologist.

c.c. Mr Tony Mitchell, P. Eng.,
Dr. E.W. Grove, P. Eng.

MAR 11 '77 AM



2577

REFERRED TO	DATE	INITIAL
D.G.C.	<i>S/11/3</i>	<i>A</i>
D.C.G.C.		
G.C.		
FILE NO.		
FILING CLERK		<i>[Signature]</i>

DEPT. OF MINES
AND PETROLEUM RESOURCES

MEMORANDUM

TO Dr K. Northcote, P.Eng.,
Special Projects Geologist,
Victoria.

FROM G. Addie, P. Eng., P. Geol.,
District Geologist. Nelson.

March 15th 1979

SUBJECT Re: Purcell Wilderness Convservancy

OUR FILE.....
YOUR FILE.....

As mentioned to you, Mr Walter Stephens PAA requested permission the other day to stake claims in the conservancy area for molybdenite. His request was directed to Mr Phil Whitfield, Regional Planner here in Nelson. His request was turned down.

Ref. Dr. McCartney's letter of November 3rd 1976. Apparantly in the past staking was tolerated.

It is only now that the Fry Creek area has taken on new significance because of new information. My prospector's paper of Feb. 14, 1979 clearly indicates important target areas associated with the southern end of the Fry Creek Batholith (which is not in the conservancy) and the Dewar Creek Batholith which is in the conservancy.

We also now know that the Fry Creek Batholith is relatively radioactive and warrants further prospecting.

Returning to Molybdenite, David Putt, MSc (PAA 1975) of Argenta also is aware of molybdenite in the Fry Creek area. (Ref. letter of Nov. 15, 1976).

In conclusion I request that the Fry Creek Conservancy be open to prospecting and mining and that these people be subjected only to the normal Department of Energy, Mines & Petroleum Resources regulations, which are quite adequate to handle even park situations.

MINISTRY OF MINES
AND PETROLEUM RESOURCES
Rec'd 15/3/79
RSE | KCN

G. Addie
G. Addie, P. Eng., P. Geol.,
District Geologist.

GA/elg



YOUR FILE
OUR FILE 5-3-2-174

February 23, 1979

Mr. George Addie
District Geologist
Ministry of Mines & Petroleum Resources
Provincial Government Building
310 Ward Street
NELSON, B.C.

MINES
BOOK
ND
N
SC

Dear Sir:

Re: Purcell Wilderness Conservancy

The Purcell Wilderness Conservancy was established as a recreational wilderness under Section VI of the Environment and Land Use Act. A subsequent O.i.C. #3801 assigned administration guidelines to the Parks Branch.

Section VI of the Environment and Land Use Act reads as follows. . .
"The Lieutenant-Governor in Council, on the recommendation of the committee may make such orders respecting the environment, or land use, as he may consider necessary or advisable, and he may make such orders under this Act, notwithstanding any other Act or regulation, and no Minister, Ministry of Government, or agent of the Crown specified in the order shall exercise any power granted under any other Act or Regulation except in accordance with the order."

A photocopy of the O.i.C. mentioned above is enclosed. It further defines the nature of development and concept for the Conservancy.

Yours very truly,

D.M. Herman
Regional Planning Technician

enc.

DMH/gh

*There was no enclosure
as mentioned in final paragraph.*

116°00'

50°00'



1. THE DEWAR CREEK BATHOLITH TARGETS.

Known deposits on the NW flank of the batholith:-

73	Molly	Mo, W
90	Val	W, Sn
92	Skö	Sn, W,
107	MC	Pb, Zn, Cu.
132	Nine Lake	Pb, Zn, Cu, W.
112	Greenland	Beryl
89	Pico	W
122	Burnt	Cu

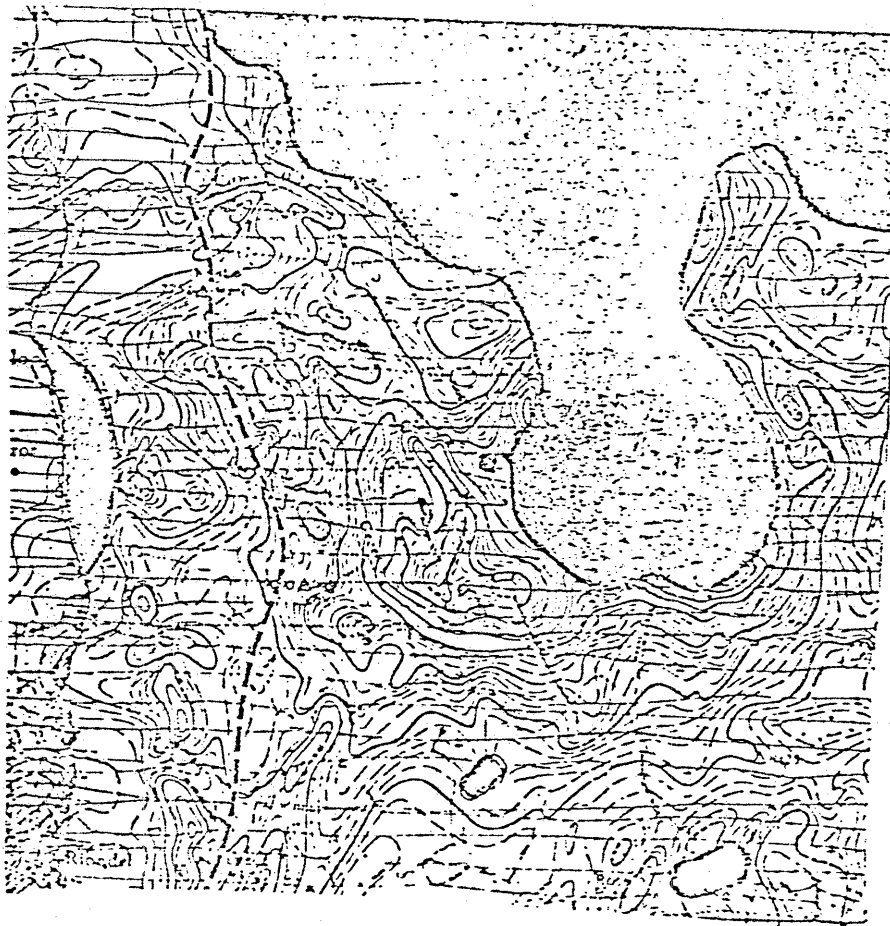
Only the "Molly" is within the biotite granodiorite (see GSC Memoir 292) of the batholith, all others are peripheral. Obviously this batholith has generated some ore mineralization and is worthy of further prospecting.

Note the anomalies at

1. Irish Queen Mountain
2. Buhl River

From: G. Addie

1979 Nelson Prospecting Targets
Based on Aeromagnetic Map 82 F (No 7685 G).



2. FRY CREEK BATHOLITH TARGETS.

Known mineral deposits are:-

49	Leviathan	Fe
50	Otto	Pb Zn
74	-	Zn
106	Alice	Zn Pb
127	Irish	Mo

Recent staking in the area has been for Uranium associated with the Fry Creek Batholith.

Before you dash off staking, make sure you know where the "Purcell Wilderness Conservancy" is located!

Note the large anomalous area around the bottom lobe of the intrusion.

Also note the dashed line marking the limestones of the Kootenay Arc. Obviously large areas are underlain by igneous rocks. These areas are prime targets for skarn deposits.

From G. Addie 1979 Nelson Prospecting Targets
 Based on Aeromagnetic Map 52 F (No 7695 G).

Review' raises fears of mining in Purcell wilderness preserve

By MOIRA FARROW
Environmentalists fear the provincial government is planning to trim boundaries of a huge wilderness conservancy to allow mining in this now protected area.

The ministry of lands, parks and housing admitted last month that a "staff review" is under way of the 325,000-acre Purcell Wilderness Conservancy in the Kootenays, created in

Sierra Club spokesman Emery Fox said Friday he is extremely worried the boundaries will be

changed to accommodate mining.

"This is B.C.'s only wilderness conservancy and we oppose any change of boundaries," she said. "Our sources indicate that the government's plan is to allow mining in the Purcells."

The Vancouver Sun learned Friday from Ken Northcote of the geological division of the ministry of energy, mines and petroleum resources that a report on mineral resources in the Purcell wilderness conservancy is being prepared.

He said the report is being done for senior as-

sistant deputy minister J.T. Fyles and will be ready Sept. 1.

"The report is about molybdenum and other metals in the area but I can't say any more than that," said Northcote.

"We've been working on it for some time. Every area which has been alienated from mining comes up for review as time goes by and we gain additional information about the mineral resources that are there."

Last month, the office of Lands, Parks and Housing Minister Jim Chabot announced that a staff review of the Purcell wilderness conservancy was being carried out as part of a "management plan whereby park areas are subject to periodic review."

The review, according to the ministry, will cover everything from "environmental management" to "boundary problems, if any."

It was initiated by the

discovery that the "existing regulations under the Environment and Land Use Act do not provide for a long-term withdrawal of the area from staking of mineral claims."

The ministry's announcement concluded by saying that no public review of the conservancy is "considered necessary."

Fox said the Sierra Club believes that no boundary changes should be considered without public hearings.

"It's disgraceful that the government is doing this sort of thing almost secretly and then tells us it's all part of an internal management process," she said.

Dan Santano, president of the B.C. Wildlife Federation, said his organization had also heard about the review of conservancy boundaries.

"But we understand no changes are contemplated at the moment, it's just an updating of the inventory,"

he said. "But when that report on the mineral resources comes out we may have something to say."

Acting assistant deputy minister Tom Lee of the parks branch was on vacation Friday and unavailable for comment.

The order-in-council establishing the reserve states that "no exploitation or development, except that necessary for preservation of natural processes, is permissible . . . all forms of commercial

activity as well as the use of combustion engines for recreational purposes shall be prohibited. Any improvement or development will be limited to that which is required to protect the environment and to ensure the safety of the visitor."

The Purcell wilderness conservancy, on the spine of the Purcell Mountains between Nelson and Kimberley, was created by the New Democratic Party government.

The conservancy includes alpine ridge metre peaks, the waters of numerous creeks, three spectacular glaciers, dozens of lakes, more than 20 waterfalls, significant herds of elk, moose, caribou and mountain sheep and excellent grizzly bear habitat.

The conservancy was created after great outcry against a proposed logging operation in the area.



Exploration

Dr. K.E. Northcote,
Energy, Mines & Petroleum Resources,
411 Douglas Building,
Victoria, B.C.
V8V 1X4

31 January 1979.

kw

Dear Ken:

I wish to bring to your attention our concerns with respect to the establishment of the large Purcell Wilderness Conservancy in the East Kootenay District. We had some communication with Jim Fyles on this subject in 1976 but I am not sure that any formal objection was put forth by Cominco at that time.

Cominco owns eight claims in the southeasterly part of the proposed Conservancy near the headwaters of Skookumchuk Creek. We have held some of these claims which cover tungsten-molybdenum showings since 1958. In 1969 a program of detailed mapping, trenching, and packsack drilling was carried out on the property. Eleven short holes were drilled at that time. Our work indicated a marginal situation but with recent renewed interest in Mo and WO_3 the property will be reconsidered. A small ore reserve is indicated on the property.

As a result of the GSC release of regional geochemical data early in 1978 Cominco staked 6 claims (93 units) adjoining the east side of the proposed Conservancy between Findlay Creek and Dutch Creek. Some 17 claim units probably overlap into the Conservancy area. The released geochemical data also apparently overlapped into the area. These claims were staked on the basis of anomalous Pb,Zn,Mo stream silt values. Scheelite mineralization was located on the ground. Further investigation is planned in this area.

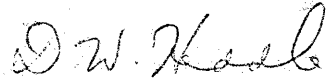
The proposed Conservancy also covers a strip of Aldridge Formation some four miles wide and 14 miles long lying astride the Findlay River immediately north of the St. Marys Alpine Park. Cominco holds a group of 4 claims (28 units) with lead-zinc indications immediately east of the proposed Conservancy boundary. The Aldridge Formation within the proposed boundary to the west of our claims holds some potential for Sullivan type stratiform mineralization.

2/31 January 1979/K.E. Northcote

It is apparent that the proposed Conservancy holds potential of Pb/Zn and Mo-WO₃ mineralization. The mineralized occurrences referred to above are only those held by Cominco - there are many more on record. It is recommended that the establishment of the Purcell Wilderness Conservancy be seriously reconsidered.

I hope that this information will be helpful to you.

Yours very truly,



D. W. Heddle,
Assistant Manager,
Exploration.

DWH/pm

ESSO MINERALS CANADA

1281 WEST GEORGIA STREET
VANCOUVER, B.C. V6H 3T7
(604) 684-4325

TELETYPE UNIT
TELEPHONE UNIT
FACSIMILE UNIT

MV-4744

February 5, 1979

File: 2.2.0

Dr. K. E. Northcote
British Columbia Ministry of
Energy, Mines & Petroleum Resources
Geological Division, Douglas Building
Victoria, B.C. V8V 1X4

MINISTRY OF MINES
AND PETROLEUM RESOURCES

Rec'd FEB - 8 1979

2513

NCE
LEN

Dear Ken:

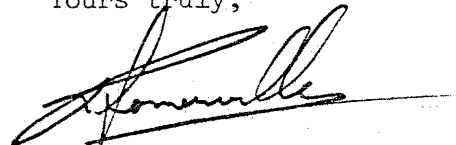
My company and I would regard with great regret the formation of the Purcell Wilderness Conservancy and the withdrawal of this area from active mineral exploration.

Recent work which we have done around the Purcell Wilderness Conservancy Area, coupled with work over a three year period in the early 70's has indicated very strongly that the Fry Creek batholith and the small stocks surrounding it are (geochemically) rich in molybdenum, and possibly tungsten. High level intrusives with metal potential are few enough and difficult enough to find, without losing the right to explore for minerals through the creation of a "park".

I hope you will use every effort to convince the Parks Committee to withdraw this Conservancy Area or at least allow exploration to go on within the area.

Best regards.

Yours truly,



R. Somerville, P.Eng.
Senior Geologist

RS:JW

CANADIAN SUPERIOR EXPLORATION LIMITED

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VANCOUVER, BRITISH COLUMBIA V7Y 1G8

TELEPHONE 681-9426

TELEX 04-55297

RECEIVED
AUG 22 1979
PARLIAMENT BUILDINGS
VICTORIA, B.C.

August 22, 1979.

The Honourable J.J. Hewitt,
Minister of Energy, Mines and Petroleum Resources,
Parliament Building,
Victoria, B.C.

SENIOR ASSISTANT
DEPUTY MINISTER E. M. & P.
AUG 27 '79

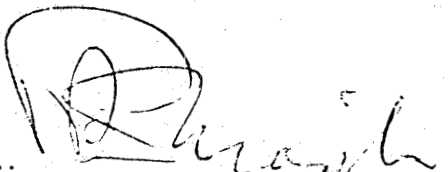
Dear Sir:

We have been led to believe that your Ministry is giving consideration to recommending modifications to the present boundary of the Purcell Wilderness Conservancy. This letter is to advise you that we favour such modifications and are prepared to make specific recommendations for the reasons stated below.

In June, 1978, results were released of a geochemical survey of streams in Southeast British Columbia sponsored by the Provincial and Federal Governments. Considerable effort was expended by the mining industry following up anomalous metal values indicated by the survey and while many claims were staked throughout the area, such action was precluded from the Purcell Wilderness due to the moratorium on staking therein. We now have first hand knowledge that in at least one specific case, anomalous values in the Purcell Wilderness relate to a mineralized zone which from surface evidence has definite economic potential. This zone should be excluded from the Purcell Wilderness in which event we would like the opportunity to explore and if warranted develop such zone for mining purposes.

We respectfully ask that you take note of our interest and provide us the opportunity to meet with you at your convenience to discuss the matter further.

Yours very truly,
CANADIAN SUPERIOR EXPLORATION LIMITED

Per: 
R.A. Dujardin, Vice President

RAD:mc

DEPUTY MINISTER OF ENERGY, MINES & PETROLEUM RESOURCES
RECEIVED AUG 27 1979 VIC, B.C.
REFER TO Dr. Fyles
FOR REPORT DRAFT REPLY NOTED
FYI COMMENTS DISCUSS
COPY TO
FILE ORIGINAL 2153 FILE COPY



September 6, 1979

MINISTRY OF MINES
AND PETROLEUM RESOURCES

Rec'd Sep 24 1979

Mr. R.A. Dujardin
Vice President
Canadian Superior Exploration Limited
P.O. Box 10104 Pacific Centre
18th Floor - 701 West Georgia Street
Vancouver, British Columbia
V7Y 1C8

Dear Mr. Dujardin:

Thank you for your letter of August 22nd regarding the Purcell Wilderness area. My staff is reviewing the mineral potential of this area and will be working with officials of the Parks Branch this fall to recommend policy for determining the status of the area for mineral development.

While I cannot offer much encouragement that the status of the area will be very different from the present status, your views will be considered in our review.

This review project is in preliminary stages and I suggest that we defer the meeting you suggest until staff have progressed further with their work.

Yours very truly,

James J. Hewitt
MINISTER

cc: E.R. Macgregor
A. Sutherland Brown
K.E. Northcote ✓