

'79-#617-#

REPORT TO
HAT CREEK ENERGY CORP.
CONCERNING A
CONTINUING EXPLORATION PROGRAM
ON THE
B.R.X. GROUP OF CLAIMS
ON HURLEY RIVER
LILLOOET MINING DIVISION, B.C.

BY
SHERWIN F. KELLY, P. ENG.

May 4, 1979

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
1949

REPORT TO
HAT CREEK ENERGY CORP.
ON THE B.R.X. GROUP OF CLAIMS
LILLOET MINING DIVISION, B.C.

TABLE OF CONTENTS

INTRODUCTION.....	1
CLAIMS, LOCATIONS AND ACCESS.....	2
GEOLOGICAL SETTING.....	3
VEINS AND MINERALISATION.....	5
WORKINGS.....	7
POSSIBLE SOURCE OF MINERALISATION.....	10
CURRENT EXPLORATION.....	11
SUMMARY.....	16
CONCLUSIONS.....	22
RECOMMENDATIONS.....	23
CERTIFICATE OF QUALIFICATIONS.....	26
BIBLIOGRAPHY.....	27

REPORT TO
HAT CREEK ENERGY CORP.
CONCERNING A
CONTINUING EXPLORATION PROGRAM
ON THE B.R.X. GROUP OF CLAIMS
ON HURLEY RIVER
LILLOOET MINING DIVISION, B.C.
BY
SHERWIN F. KELLY, P. ENG.

INTRODUCTION

The Bridge River - Hurley River area of British Columbia, from Lillooet on the Fraser to the Bralorne-Pioneer complex on the Hurley tributary, Cadwallader Creek, was turbulent with gold mining excitement from the beginning of this century until the outbreak of World War II. That Catastrophe shut most of the gold mines in North America, many of them never to open again. In the Lillooet Mining Division, the only gold mines of importance to continue operation, were the Bralorne and the Pioneer mines, on the Cadwallader Creek headwaters of the Hurley River. They lie south of Gold Bridge, the town at the confluence of the Bridge and Hurley Rivers. The Bralorne-Pioneer complex finally ceased mining circa 1968, even though there was ore still available on the deep Bralorne levels. To recover that ore, however, would have required the sinking of a new shaft, a project considered uneconomic at the time.

Some properties in the Hurley River area were known to carry base metal sulphides, but these were ignored in the mining and milling of the gold ores. In the depression years between the two wars, prices of base metals were catastrophically low and even by 1939, copper was selling for only 11¢ per pound and lead and zinc were bringing 6¢ to 9¢ per pound. It was not worth while to make efforts to recover them. Today, not only the price of gold, but also the prices of base metals such as copper, lead, zinc, molybdenum and tungsten have prompted a revival of interest in some of those old camps and inspired a new look at their hidden potentialities.

The group of claims along Hurley River, extending south from Gold Bridge and formerly belonging to Bridge River Consolidated Mines Ltd. and to B.R.X. Consolidated Mines Ltd., falls in this category of former producers worthy of a complete re-valuation. This group of claims is now held by Hat Creek Energy Corp., which is currently conducting a new exploration and development program on that area. It was the subject of three prior reports by me, as follows. An extensive and detailed study of the geology and mineralisation was presented in a 40 page "Report to Paul & Vi Polischuk, Lillooet, on Mineral Claims Along Hurley River, Lillooet Mining Division, B.C.", August 5, 1977. That report was summarized in a "Resumé of Data, Conclusions and Recommendations Concerning B.R.X. Group of Claims on Hurley River, Lillooet Mining Division, B.C.", August 11, 1977. This was used in a Statement of Material Facts issued by Hat Creek Energy Corp., dated December 21, 1977. Finally, on July, 1978, I submitted a "Report to Hat Creek Energy Corp. on a Recommended Program of Accelerated Exploration at the B.R.X. Group of Claims, Lillooet Mining Division, B.C." which was written exclusively for the purpose of obtaining a grant for diamond drilling, under the Mineral Exploration Incentive Program in the Accelerated Mineral Development Plan of the Ministry of Mines, Energy & Petroleum Resources. A grant was obtained, for \$6.500.

CLAIMS, LOCATION, ACCESS

The holdings of Hat Creek Energy consist of mineral leases and located claims in a block roughly a mile wide (east and west) and extending southerly from the town of Gold Bridge for about 3.3 miles to the north boundary of the Bralorne Mines property. This block lies along Hurley River, a minor portion extending west of that river, but the larger portion occupying the plateau above its east bank. The block extends up-river from the town of Gold Bridge where the Hurley flows into Bridge River. The claims are valid to various dates between November 1979 and April 1980. The claim area lies about 150 miles northerly from Vancouver. The co-ordinates of the portal

of the adit to the "Arizona" workings (the principal subject of this report) are approximately latitude $50^{\circ} 50' 27''$ and longitude $122^{\circ} 50' 17''$ W. This portal is near the river and about $3/4$ of a mile south of Gold Bridge, from where it is accessible by gravel highway.

The Hurley River district lies in mountainous, forested territory where the rugged coastal mountains pass into the rolling topography of the interior plateau. Elevations on the claim group range from 2,300 ft. above sea level at the confluence of Hurley River with Bridge River, to 3,500 feet at the south end of the group, on the plateau to which the steep, eastern bank of Hurley River rises.

Access to the Area is via a graded and well maintained gravel highway, running northwesterly from Lillooet some sixty miles to Gold Bridge. There is a station at Lillooet on the B.C. Railway and another at Shalalth, 42 miles from Gold Bridge. A gravel and paved highway along the east bank of the Fraser River, connects Lillooet with Lytton, forty miles to the south and on the Trans-Canada Highway.

GEOLOGICAL SETTING

The Gold Bridge-Bralorne-Pioneer metalliferous zone lies in an area of complexly folded volcanic and sedimentary formations, mostly of Paleozoic and Mesozoic age. These were extensively faulted and also intruded by igneous masses of Jurassic age, the mineral-bearing veins being associated with these intrusives.

In the area of the Hat Creek claims, the formations of prime interest are as follows. On the west side of Hurley River lies the Fergusson series of volcanic and sedimentary beds, dipping steeply westerly. They are in contact with a band of serpentine 200 to 600 feet wide striking about N-S and standing vertically or dipping steeply west. The contact is a fault

contact which the Hurley River follows for some distance. The serpentine borders a core of intrusive and metamorphosed volcanic rocks about three miles long (north and south) by half a mile wide.

The north half of this core of intrusives and metamorphics consists of the Bralorne intrusive, made up of successive, increasingly silicic differentiates of a primary magma of Jurassic age. They range from gabbro through augite diorite, quartz diorite, soda granite, albitite and finally to quartz veins. The complex mineralisations of gold, silver, copper, lead zinc, molybdenum and tungsten, are believed to be late, or final differentiates of the magma and together with the preceding and accompanying silica and calcite, form the mineralised quartz and calcite veins.

The south half of the core is a mix of Bralorne augite diorite and intruded Pioneer greenstone. The latter, a volcanic, is metamorphosed and so mixed with the intrusive augite diorite that the two may be indistinguishable. The volcanic greenstone is of Triassic or Jurassic age. In less metamorphosed form, Pioneer greenstone bounds the east side of the mineral-bearing core of igneous intrusives and metamorphosed volcanics.

A complex of intrusive augite diorite and its silicic differentiates, like that underlying the northern part of these claims, is the main host for the gold mineralisation at the Bralorne Mine, a short distance to the south. A little further south, at the Pioneer Mine, metamorphosed Pioneer greenstone is the principal host rock, similar to the greenstone in the southern part of the Hat Creek claims.

The quartzose or silicic phases of the intrusive magma were the later differentiates, so probably did not extend as far upward as the prior, already cooled and more basic phases. The mineralised quartz veins tend to be associated with these later, silicic intrusive bodies. Some of the latter probably failed to penetrate far enough upward to be revealed at the present

surface. Therefore, there may be hidden bodies of silicic intrusives with associated quartz veins which have only minor, or no readily observable surface expression. Consequently, a zone of minimal differentiation, at surface or in underground workings, may pass, at greater depth, into one of pronounced differentiation. If so, conditions for mineralisation would improve with depth. This phenomenon has been observed at the Bralorne Mine.

VEINS AND MINERALISATION

The metalliferous quartz veins, presumably originating from the final, siliceous differentiates of the magma, filled fissures which cut the intrusive bodies, including the siliceous ones, the indeterminate diorite-greenstone complex and some other, adjacent formations, but not the serpentine. Where fissures carrying mineralised solutions entered the serpentine, however, this impermeable formation frequently acted as an impounding dam. When mineral-bearing fluids were thus concentrated against the serpentine wall, rich ore-shoots could result.

The vein-filled fissures, characteristic of the claim area, fall into two systems. One, striking NNW, follows the principal formational trend of the area; that is, the trend of the folds and the elongation of the larger intrusive bodies. The other set, striking NW, cuts across it. Both sets usually dip fairly steeply eastwards. Enriched shoots of mineralisation are associated with certain vein intersections, but both sets of fractures carry veins with gold and base metal mineralisation.

The veins are principally quartz-calcite fracture fillings which have, themselves, been subjected to repeated fracturing, re-opening and renewed injection of mineralising solutions. These successive events followed a pattern of decreasing temperature, as evinced in the suite of minerals deposited in each successive wave. The initial fracture filling was with

quartz and sparse pyrite and possibly scheelite, a calcium tungstate which is the common tungsten ore. This is a high temperature formation and implies a nearby parent magma. Further movement re-opened some of the veins and the chief stage of pyrite, arsenopyrite and pyrrhotite deposition took place, along with calcite and some gold. The next fracturing was followed by the principal stage of free gold formation, largely deposited on the fractured arsenopyrite. Along with it came calcite and the base metal sulphides, chalcopyrite, tetrahedrite, sphalerite, galena and molybdenite. The final stage, of low-moderate temperature (several hundred degrees Celsius) minerals consisted of some gold, acicular arsenopyrite and finely crystallized pyrite, together with quartz and calcite. Depending on its history of fracturing, a given vein might carry only one of these suites, or might carry all of them. This concept of vein variety is important to the evaluation of the content of a given vein and how it might be expected to change character, up and down dip.

Alteration of the wall rocks is common, and is a helpful guide in searching for mineralised veins. Alteration may extend from a few inches to many feet from the vein, the rock being softer and lighter in color. It will usually be predominantly ankerite or calcite, carrying some sericite and/or mariposite, and disseminated pyrite. Alteration is usually more pronounced around veins with predominantly quartz gangue than those in which the gangue is mostly calcite.

Mineral-bearing veins are from a few inches to 8 feet or more in width. Such quartz-calcite veins may extend for thousands of feet. At intervals, shoots occur of high grade mineralisation which the early operators mined. These ore shoots are typically in the form of distinctly curved, arcuate embayments interspersed in otherwise moderately straight, but slightly zig-zag stretches of vein with low gold values. Such curved shoots are usually 500 ft. or more in length and bend by about 50 ft. They are made

up of straight segments, from 10 ft. to 200 ft. in length, which represent the two different sets of faults characteristic of this area. In the northwest set, strikes range from N30°W to N60°W, for an average of about N43°W. In the north-northwest set, strikes range from N7°W to N27°W with the average about N16°W. Both sets dip easterly, generally about 50°. The mineral enrichment occurs mainly where these two sets intersect. In such zones of intersection, gold values run from 0.02 oz/ton (representative of the values found in the veins between the shoots) to 0.75 oz./ton. Vein widths vary from 3 in. to 96 in.

Early investigators recognized that vein intersections produce the better-mineralised shoots. Apparently they did not recognize, however, that distinctions needed to be made as to which fractures were involved. This became evident when detail assay maps of parts of the B.R.X. operations, found in an abandoned shack on the property, were made available to me. Close analysis of the recorded data enabled me to formulate the above concept; namely, that it is the intersections of the NNW set with the NW set of fractures that produce the best mineralisation. Mutual intersections within the NW set or within the NNW set are generally, but not universally less interesting. Careful mapping, on surface and underground, of mineralised fracture-filling veins may therefore provide valuable clues, pointing to possible locations of fracture system intersections where mineralisation may be found in higher concentrations.

WORKINGS

These vein systems in the northern portion of the Hat Creek claim block were explored, developed and mined by the B.R.X. company in about 10,000 ft. of underground workings. These included 2,300 ft. of a south-easterly adit cross-cut, from which a drift was driven north and south on the vein for 3,700 ft. At the south end of the drift, a 400 ft. cross-cut was driven easterly. From the middle, a 500 ft. vertical shaft was sunk and a cross-cut extended some 250 ft. easterly to intersect the vein again

at this lower level. Here, it was drifted on for another 3,000 ft. north and south. Maps are missing for the south 1,000 ft. on this lower level and for the south 1,000 ft. of the main level above.

A mill near the portal, long since dismantled, extracted the gold and at least one brick and one "button" were poured and despatched to the mint at Ottawa in 1938. No extraction of base metals were attempted.

The ore evidently came from at least three shoots of the type described above, one mapped on the main level and two shown on the level below it. Judging from scanty reports found with the old assay maps, there were probably other such shoots located in the areas of the missing maps. For example, it was reported that the lower level revealed more favorable geology in its southern extension and "short ore-shoots of erratic but in the main improved values". About 855 ft. south of the cross-cut off the shaft, the vein assayed 0.12 oz./ton in gold across 84 inches and a little further south, a parallel aplitic body carrying "ore values" was encountered. A car averaging 0.25 oz./ton in gold came from a vein 70 inches wide, in No. 2 stope. The location of the stope can not be identified, but it was probably on the main level. A ventilation raise was driven 725 ft. up from the main level to the surface, about 800 ft. SE of the adit cross-cut.

Only another 150 ft. southeasterly along the drift is the NW edge of one of the arcuate, well-mineralised shoots already described. The raise was reported to demonstrate the upward continuation of the better mineralisation. A promising vein was encountered 250 ft. up the raise and another, 4½ ft. wide a little further up. This was reported to contain "excellent ore but basic", referring to its base metal mineralisation of pyrite, galena, sphalerite and molybdenite. About one hundred ft. up the raise, some 160 ft. of drifting is shown extending southeasterly into the zone of higher grade mineralisation. It seems probable that there was a stope here, as Paul Polischuk reports that several thousand tons of muck have come down into the drift from the ground opened up by this raise.

This will have to be cleared out in order to inspect the workings beyond that point.

Some 580 ft. further along the drift, at the SE end of the arcuate zone of increased mineralisation, a cross-cut was driven 160 ft. into the hanging wall of the vein system. At 80 ft. it encountered the "D" & "E" veins, paralleling the strike of the main vein. They were reported to be strong veins with heavy mineralisation and better values than in the main vein; they also carry large amounts of molybdenite, both in fractures and in the wall rock.

A strong chalcopyrite-pyrite zone was reportedly found on the deeper levels of the "California" workings, which lie about a mile and a half east of south from the portal of the Arizona adit cross-cut. There, an adit cross-cut, at an elevation of about 3,400 ft., was driven some 1,000 ft. into the hillside, on the east bank of Hurley River. A shaft about 900 ft. deep was sunk from this adit and several levels driven off it. Cross-cutting and drilling were carried out at the bottom level, and a winze was sunk 137 ft. and drifting done off it. The work at the deepest levels was to explore the chalcopyrite zone. It must have been a good showing to warrant so much effort, but no records remain as to what was found. Gold values in the levels above were generally below economic value at that time, although one drill hole cut a 7 ft. vein assaying 0.80 oz./ton in gold. An interesting point is, that some of the NNW vein systems on the lower Arizona level, strike SSE towards the California workings.

The B.R.X. staff operating these properties, thought that the Arizona workings were on the California "shear". My reading of the maps shows that the two vein systems are about 1,700 feet apart, the California one being SW of the Arizona workings. Unless there is an undetected fault displacement of this magnitude, there are two, major and separate vein systems on this property, both of which demand extensive and intensive exploration.

The available evidence indicates that base metal sulphide mineralisation might very well be an economically important constituent of portions of these vein systems. It is not only the improved prices for metals, both

noble and base, which contributes to the enhanced interest in these deposits, but also the probability that better recovery of gold could be achieved by a more sophisticated milling circuit.

When the mine was operating, the mill utilized an all-sliming cyanide circuit. The complaint was voiced that there was too much "basic" ore in the feed, too much gold was retained in the circuit in solution and as "free" gold, and that important gold values were locked in the unrecovered pyrite. A milling circuit is needed which will recover not only the free gold, but also the silver and the base metal sulphides which are economic and which will, furthermore, separate the pyrite for special treatment to recover the gold locked within it.

POSSIBLE SOURCE OF MINERALISATION

Early investigators recorded exposures of silicic intrusives at the surface, between 1,500 and 2,000 ft. east of the intersection of the Arizona adit cross-cut and the main vein. Masses of soda granite, albitite (aplite) and rhyolite were noted and surface work revealed substantial widths of vein quartz carrying gold. These bodies were recognized as favorable host rock for gold-bearing veins. No mention was made, however, of the possibility that they could represent the magmatic source of the mineralised veins in this area.

This concept of a mineralising source lying to the east of the Arizona vein system, emerged from my study of the intersecting vein segments and their values, as entered on the old assay maps. The segment intersections show a pronounced tendency to converge down-dip toward the area of the silicic intrusives and, on the lower level especially, the NNW vein system tend to enter that area on strike.

If this concept is valid, it then follows that the vein systems

involved should show progressive changes up-dip from that magmatic source from mineralisation typical of high temperature deposition to that of lower temperatures, as previously described. Those veins which have undergone re-opening and renewed mineralisation, may show overlapping of types and superposition of one phase of mineralisation on another. These are likely to be the most interesting ones; on the lower level they are in the NNW set, but on the main level, in the NW set. This comparison of the two vein sets is a provisional deduction, and subject to confirmation or modification by further study.

Close to the invading magma, fracturing of the invaded rock would probably have been most extensive and mineralisation of the openings, by freshly released solutions, most intensive. Intensive mineralisation, however, may not necessarily be economically exciting, as it might be in the high temperature barren zone. But a vein which had been repeatedly re-opened and re-mineralised, would have received successive solutions of declining temperatures as the igneous source progressively cooled; it could therefore become the repository of a suite of lower temperature minerals of greater economic interest.

The above concepts of mineralising processes, the assay records and the vein descriptions in the old records found on the property, warrant the hope that mineralisation of minable grade and tonnage, can be found in these vein systems. An intensive exploration program should be mounted, up and down dip and along strike, to probe thoroughly for such possibilities.

CURRENT EXPLORATION

My report of Aug. 11, 1977, recommended the allocation of \$36,000 for some rehabilitation and sampling of a portion of the workings, plus diamond drilling a couple of holes near the face of the cross-cut adit. The latter were to probe the down-dip extensions of veins in the main level drift and

determine their characteristics and mineralisation on their nearer approach to the mass of silicic intrusives.

The cross-cut and drift conditions proved to be worse than anticipated and considerably greater sums will be needed to make the workings safely accessible. This was emphasized in my report of July 7, 1978, supporting Hat Creek's application for a grant under the Accelerated Exploration Program. It was stated that "The main drift appears to be in worse shape than anticipated and the previously allocated sums for rehabilitation were insufficient. It should be opened up to permit more extensive study and sampling of the veins, especially for base metal values." Immediate rehabilitation of the adit was urged, as "Rail needs to be laid to the face and for this, possibly 50% of the ties require replacement. This facility will be needed for the drilling near the face of the adit."

The report recommended an allocation of sums adequate to drill three 2,500 ft. holes from the surface. This was not granted. Instead, a lesser amount was provided, but for drilling additional holes underground, near the face of the adit. This drilling was in progress when I visited the workings and reviewed some of the core, March 3 & 4, 1979.

At the time of my visit, two holes had been drilled and a third was drilling. The first two were located 184 ft. east of the intersection of the adit cross-cut and the vein drift. The third was near the adit face, 409 ft. east of the adit-drift intersection. The first hole, drilled S 75° W at -38°, cut about 100 ft. of soda granite, from 129 ft. to 226 ft. This is evidently the down-dip extension of the body encountered at the cross-cut intersection with the drift. The second hole, from the same location, drilled S 45° W at -38° and encountered the hanging wall of the soda granite at 128 ft. The drill was still in the soda granite when stopped at 240 ft. These intersections indicate the hanging wall of the intrusive mass dips north-easterly at 50°. The intruded rock is augite diorite.

Soda granite in the first hole has not yet been sampled. A strong shear

zone, 9 ft. wide was encountered in the diorite at its contact with the hanging wall of the soda granite. It was veined with quartz. In the assays quoted for this and other samples, molybdenum was always less than 0.01%, zinc was 0.04% or less and silver 0.28 oz./ton or less, so no further reference to them will be made, and only the gold and tungsten results will be discussed. The shear, from 120 ft. to 125 ft., assayed 0.12 oz./ton in gold and 0.02% WO_3 (tungsten oxide). From 125 ft. to 129 ft. (the contact with the soda granite) gold was 0.044 oz./ton and WO_3 was 0.04%.

The second hole encountered a five-foot quartz vein in the soda granite, only three feet below the hanging wall. The diorite at the contact was bleached somewhat, but no important mineralisation was noted. The quartz vein assayed 0.021 oz./ton in gold, but ran 0.25% WO_3 .

The third hole, at 278 ft. depth, was still short about fifteen feet of reaching the projected position of the soda granite hanging wall. From 257 ft. to 260 ft. it cut a quartz vein in the diorite which, like the quartz-veined and mineralised shear at the diorite-granite contact in the first hole, is stronger in gold but weak in tungsten. The assays showed 0.22 oz./ton in gold and 0.03% WO_3 , across the three feet. Whether or not there is any connection between the two veins, is indeterminate at present. The deeper intersection, in the third hole, carries nearly double the amount of gold reported in the vein cut 180 ft. up-dip by the first hole.

About 14 ft. past (east, towards the crosscut face) the collar of the third hole, a mineralised shear some 7 ft. wide strikes across the crosscut, dipping 60° westerly. Both walls were sampled, the north across 7 ft. and the south across 2½ ft. In both, gold ran 0.011 oz./ton, silver 0.05 and 0.13 oz./ton and copper 0.04% and 0.08%. This shear, dipping against the prevailing direction of vein dips, is probably a hanging wall strand bleeding off from a deeper vein source, possibly one of those encountered by the drill in the diorite of the soda granite hanging wall.

The soda granite is intersected by the adit crosscut and the drift off the adit on the vein, is in the soda granite for some distance, especially to the south. A collection of random samples, from 20 ft. to 50 ft. south of the crosscut, yielded 0.34% WO_3 . Gold and silver were 0.02 and 0.04 oz./ton respectively and zinc was 0.01%. As in the other soda granite assays, stronger tungsten seems to go with weaker gold.

Some occurrences of scheelite were investigated in the 1940's and the mineral was reported from several localities, in both drift and crosscut. Only one assay was recorded at that time, however, on a sample from the area just mentioned, in the drift immediately south of the crosscut. It gave 0.43% WO_3 across 48 in. Recently, a grab sample from about 180 ft. south of the crosscut was reported by Paul Polischuk, of Hat Creek Energy, to assay 1.2% WO_3 . The 0.43% WO_3 assay gives a gross value of about \$60 per ton.

The relationship in some of these assays between gold and tungsten, leads to the supposition that the two vein systems are independent. The high temperature tungsten veins are found within the soda granite intrusive, but the probably slightly lower temperature gold is in fractures cutting the adjacent, invaded diorite. How the lower temperature, base metal sulphides will fit into this picture will have to be determined by further study of the deposits revealed in the workings. The scanty data cited above imply, but do not prove that the later movements which re-opened prior veins to the subsequent, lower temperature solutions, did not affect the tungsten veins in the soda granite. Further study to clarify this situation could well provide a valuable guide as to where to search for what minerals.

In addition to the drilling, partial re-opening and rehabilitation of some of the workings were undertaken. Road repair and preparation of the portal site for surface installations, required some bulldozing. A Gardner-Denver 315 CFM compressor was purchased and installed at the portal. The portal was timbered and the adit track repaired. The latter required replacement of about 300 ft. of ties and the laying of 800 ft. of rail.

To provide air power and ventilation, 2,400 ft. of 2 in. air pipe and 2,200 ft. of fan pipe, plus a fan, were purchased and installed.

A short length of the drift, some 900 ft. long, was opened up, requiring scaling, some timbering and the removing of a certain amount of muck.

Diamond drilling near the face of the adit crosscut included three holes, mentioned above. The total length, to date, is 746 ft. of AX hole. Only 17 ft. have been split and assayed so far, as previously described.

The work outlined above, required the purchase of such supplies as drill bits and rods, casing and casing shoes, core boxes, lamps, scaling bars, timber and plank, tools, fuel, oil and grease and the payment of wages and benefits to the crews, which varied from 1 to 4 men, from time to time.

The financial accounting for the expenditures made in connection with the work outlined, is not yet available. Reference should therefore be made, in that connection, to the company's financial statements.

SUMMARY

The area more or less centered on Gold Bridge, at the confluence of Hurley River with Bridge River, in the Lillooet Mining Division of British Columbia, was formerly the scene of intense gold mining activity. Several mines were in production from the beginning of the century, until World War II shut down most gold mines in North America. The Bralorne Mine continued operation in this area until a few years ago, however, when the added expense of getting the gold ore out from deeper and deeper levels, made continued operation uneconomic.

On some properties, base metal sulphides were noted but, for the most part they went into the tailings; prices for base metals were so depressed between the World Wars that their recovery from these operations was not worth while. In this category were the holdings of Bridge River Consolidated Mines Ltd. and B.R.X. Consolidated Mines Ltd., which now constitute the larger part of the Hat Creek Energy Corp. claim group on Hurley River.

The Hat Creek claim block is roughly one mile wide and extends about 3.3 miles south (upriver) largely along the east bank of Hurley River, from Gold Bridge to the north boundary of the Bralorne property. The mineral leases and staked claims are valid to various dates from November 1979 to April 1980.

I have written three prior reports on this property, the second one, "Resumé of Data, Conclusions and Recommendations Concerning B.R.X. Group of Claims Along Hurley River, Lillooet Mining Division, B.C.", dated August 11, 1977, having been published in a Statement of Material Facts issued by Hat Creek Energy Corp. Dec. 21, 1977. The third, "Report to Hat Creek Energy Corp. on a Recommended Program of Accelerated Exploration at the B.R.X. Group of Claims, Lillooet Mining Division, B.C." was written exclusively to obtain a grant under the Mineral Exploration Incentive Program in the Accelerated Mineral Development Plan of the Ministry of Mines, Energy & Petroleum Resources. A contributory grant of \$6,500 was obtained for diamond drilling.

The area lies some 150 miles northerly from Vancouver, in the Lillooet Mining Division of British Columbia. It is accessible from Lillooet on the Fraser River, by a graded, gravel highway extending 60 miles northwesterly to Gold Bridge (and on to Bralorne). There is a station of the B.C. Railway at Lillooet and another at Shalalth, 42 miles from Gold Bridge. The adit to the "Arizona" workings, the main subject of this report, is close to Hurley River on a gravel highway, 3/4 mile south of Gold Bridge. The adit co-ordinates are latitude 50° 50' 27" N and longitude 122° 50' 17" W.

The Hurley River district lies in the rugged and forested transition zone where the Coast Mtns. on the west merge into the rolling topography of the interior plateau to the east. Elevations of the Hat Creek holdings vary from 2,300 ft. above sea level near the confluence of the Hurley and Bridge Rivers, to 3,500 ft. at the south end of the block. The area is one of complexly folded volcanic and sedimentary rocks, mostly of Paleozoic and Mesozoic ages. These were faulted and intruded by igneous magmas of Jurassic age, with which the mineral-bearing veins are associated.

The geological core of interest on the Hat Creek holdings forms an oval about three miles long (N-S) by half a mile wide. This core of igneous intrusives and metamorphosed extrusives is bounded on the east by andesitic lavas of the Pioneer greenstone formation and on the west by a band of serpentine 200 to 600 feet wide, striking nearly N-S and dipping steeply west. The north half of the igneous-metamorphic core is intrusive augite-diorite with successive differentiates of the parent magma becoming increasingly silicic, from augite diorite to quartz diorite through soda granite and albitite to quartz veins and their accompanying mineralisation. The south half is made up of an indeterminate mixture of the intrusive diorite and metamorphosed andesites, or "greenstone", of the Pioneer formation. Augite diorite is the main host rock of the gold-quartz veins at the Bralorne Mine just south of the Hat Creek claims. At the Pioneer Mine, just south of the Bralorne, the diorite-greenstone complex is the principal host rock for the gold-quartz veins.

The veins, which are quartz-calcite fissure fillings, occupy two principal sets of fractures; one set corresponds with the formational trend, i.e. the direction of the fold axes and the elongation of the intrusive masses, and strikes NNW. The other set cuts across that trend with NW strike. Both sets dip steeply eastwards. In both sets there are veins showing evidence of repeated movement, re-opening and renewed injection of mineralising solutions. Mineralisation of the successive stages indicates a progression from deposition at high temperature of barren quartz and pyrite, followed by arsenopyrite, pyrrhotite, scheelite, molybdenite and some free gold; then medium temperature sequences of sulphides of the base metals and much of the free gold; and finally more free gold with finely crystallized arsenopyrite and pyrite. Quartz and calcite gangue commonly formed in all stages.

The veins opened but once show a distinctive suite of minerals, but those opened repeatedly carry a mixture of the various stages and are likely to be the most heavily mineralised. Enhanced mineralisation usually occurs at vein intersections, as was recognized at an early stage in the development of this area. But my study of the old assay maps indicates that this effect is most pronounced where a set of NW fractures intersects a band of the NNW set. Such intersections commonly form an arcuate bend in the usually NW striking veins, producing a curvature some 50 ft. deep over a length of 500 ft. or more. Such shoots were the sources of the gold ore mined and the gold that was shipped to the Ottawa mint during the operation of the mine. Fragments of the old assay maps show at least three such formations and letters refer to stopes in other sections, some evidently at locations covered by missing portions of the maps.

The mineralised quartz-calcite veins vary from a few inches in width up to 96 in. In the "barren" portions, gold runs about 0.02 oz./ton, but in the shoots there are assays as high as 0.75 oz./ton. The occurrence of "base sulphides", meaning base metal sulphides, was noted and references were made to molybdenum, lead and zinc as well as copper occurrences. No records remain, however, of any assays for such metals.

At a location on the main level, where a shoot was stoped off a raise to the surface, heavy base sulphide mineralisation was noted. A short distance away, an 80 ft. crosscut easterly into the hanging wall of the vein, encountered a new, parallel vein system with better values than the main vein and heavy mineralisation of molybdenite.

A chalcopyrite zone was extensively explored in the bottom levels of the "California" workings. These are about a mile and a half southerly from the Arizona adit portal, on a parallel vein system which lies about 1,700 ft. southwesterly from the Arizona vein system. No records remain as to the results of that investigation. The zone appears, however, to be in an area intersected by the prolongation SSE of some fractures of the NNW system found in the southern portion of the Arizona workings. The effort expended in this investigation indicates that the mineralisation must have been very promising.

Limited examinations of the Arizona workings in the 1940's revealed some occurrences of scheelite at several locations on the main level. Only one assay was reported, from the main drift just south of the adit crosscut. A value of 0.43% WO_3 (tungsten oxide) across 48 in. was recorded. Several months ago, a grab sample from the drift about 180 ft. south of the crosscut was reported to assay 1.2% WO_3 . At the time of my visit, a number of grab samples were collected between 20 ft. and 50 ft. south of the crosscut, the aggregate assaying 0.34% WO_3 ; gold, silver and zinc were negligible. The gross value of the 0.43% assay across 4 ft. would be about \$60 per ton.

The inter-relationships between the gold mineralisation and the deposition of the base metal sulphides, the silver and the scheelite remain to be clarified. No relevant data were entered on the old assay maps, so the investigation must start by studying the mineralisation exposed in the underground workings. These are extensive.

An adit crosscut extends 2,300 ft. easterly from the bank of Hurley River, intersecting the vein at 1,800 ft. Drifting on the vein extends 700 ft. northerly and 3,000 ft. southeasterly. At the south end, a 400 ft. crosscut extends easterly into the hanging wall and a 500 ft. shaft sunk

from that crosscut gives access to a lower level drift. This drift extends 1,000 ft. northwesterly and 2,000 ft. southeasterly from a short crosscut off the bottom of the shaft. Assay maps for the southern portions of both drifts are missing.

The workings were found to require more rehabilitation than anticipated, with the results that insufficient funds remained to undertake examination and sampling. Before that portion of the program can be implemented, more money will have to be spent to make the workings safe and accessible.

Study of the available maps nevertheless yields clues to possible sources of mineralisation and the consequent relationships of the mineralising episodes. The intersections of NNW fissure-veins with those of the NW set, tend to converge down-dip towards a region lying far beneath some surface exposures of silicic intrusives carrying gold-bearing quartz veins. These surface exposures are between 1,500 and 2,000 ft. easterly from the underground intersection of the adit crosscut with the vein, and some 600 or 700 ft. higher in elevation. They were recognized by early investigators as being favorable host rocks for gold-quartz veins but not, apparently, as the possible source magma for neighboring mineralisation.

If the magma giving rise to those silicic intrusives was the source of mineralising solutions, then the fractures intersecting the magmatic intrusive could be expected to be more heavily broken up in that vicinity. They would thus be well-suited to receive the freshly emanating solutions from the magma and offer favorable conditions for deposition of the contained minerals. Drilling into the area of contact could be expected to yield data on the types of mineralisation formed and provide clues as to what mineral suites to expect in the more distant (along strike and up-dip) portions of the veins. Such data will need to be correlated with the mineral showings in the workings, to arrive at useful conclusions.

The adit crosscut was cleaned out, the portal timbered, many ties replaced and track re-laid where needed, to make possible the drilling of

some holes near the face. This also required the purchase and installation of ventilating and air power equipment.

Three diamond drill holes have been drilled, for a total length of 746 ft. They drilled southwesterly, at -38° to -46° , at two locations between the face and the drift. The dip of the soda granite hanging-wall contact with the diorite was found to be $50\frac{1}{2}^{\circ}$ northeasterly. The soda granite appears to be a dike, about 100 ft. thick. Three feet below the hanging wall a five-foot quartz vein was cut in the sodagranite assaying 0.25% WO_3 but only 0.021 oz./ton in gold. In the hanging-wall diorite, close to the soda granite contact, two veins were cut, at different locations. One was a nine-foot silicified shear zone at the granite contact. Four feet at the contact assayed 0.044 oz./ton in gold and 0.04% WO_3 . The next five feet away from the contact assayed 0.12 oz/ton in gold and only 0.02% WO_3 . The other, a three-foot quartz vein 180 ft. further down dip, assayed 0.22 oz./ton in gold and 0.03% WO_3 . It is probably about 30 ft. into the hanging wall, as that drill hole had not yet reached the position of the soda granite contact.

The drilling and the sampling in the drift, indicate two different vein systems. The quartz-scheelite vein in the soda granite is strong in tungsten and weak in gold. The siliceous veins in the hanging wall diorite are strong in gold and weak in scheelite; base metal and silver assays were very low. The scheelite vein in the soda granite is probably a higher temperature deposit than are the gold veins in the diorite.

Further study in the drifts and stopes will be needed to clarify the relationship of these tungsten and gold veins to the base metal sulphide deposits. Some rehabilitation of the main drift has already been effected, by scaling, mucking and timbering for about 900 ft. south of the crosscut. Further advance is now blocked by a fall of some 3,000 tons of muck, according to Paul Polischuk, which has come down out of the stope off the raise to the surface, in an area of base metal and gold mineralisation. This will have to be mucked out and dumped; it should be sampled and assayed, however, for clues to the ore which was stoped in this area. The examination, sampling and assaying of the workings should then be implemented

CONCLUSIONS

The program proposed in my report of Aug. 11, 1977, has been initiated but not yet completed, due to higher costs than anticipated. The program was to involve drilling in the crosscut and rehabilitating, examining and sampling the workings, especially the main drift. The drilling has been done and the main drift cleared for some 900 ft., until blocked by a fall. Examination and sampling await further clearing.

The data from three drill holes in the crosscut lead to the conclusion that the soda granite, in the form of a dike some 100 ft. thick, dips northeasterly at $50\frac{1}{2}^{\circ}$. The holes revealed three vein structures. One is a quartz-scheelite vein in the soda granite, just below the hanging wall contact; it is strong in tungsten but weak in gold. The others are a silicified shear and a quartz vein in the diorite, just above the granite contact. They are strong in gold but weak in tungsten. It is concluded that there are two, separate vein formations involved, the tungsten vein probably representing a higher temperature deposition than the gold veins in the diorite. How and where the base metal sulphides become part of the mineralisation, requires further study.

Impressive gold mineralisation characterises the Pioneer-Bralorne-B.R.X.-Wayside axis of this area. It has a long history of gold production, dating back to the beginning of this century. Gold was produced from the extensive workings on the Arizona vein, in the B.R.X. company holdings. The presence of base metal sulphides was noted, but the low prices of base metals then prevailing, prevented attempts to recover them.

The prices for gold and for the base metals, have risen dramatically in the last few years, greatly improving the economic outlook for these deposits. In addition, molybdenum and tungsten are now of far greater interest than they were then. The known occurrence of molybdenite and scheelite in the Arizona vein system, adds a new interest to those veins.

The historical perspective, the mapped occurrences of some of the ore shoots, the records of production from stopes not yet identified, the reports of base metal mineralisation, the limited drilling which has confirmed the down-dip continuation of some vein formations, all serve to re-enforce the conclusion that this area of the Hat Creek holdings amply

deserves a continuing and thorough exploration, and development program, as recommended below.

RECOMMENDATIONS

The continuing exploration should involve both surface and underground programs. The surface work should commence with a thorough coverage of the claim area by a geochemical soil analysis and geological survey. Underground, drilling should be continued at the present site, while clearing and rehabilitating of the drift should carry forward, accompanied by sampling and assaying of the vein as it becomes accessible. Allocation of funds listed below is suggested. The proviso must be made, however, that it is not now possible to predict how much of the workings can be rehabilitated for the sum suggested, since the condition of the inaccessible portions of the drifts and cross-cuts is still unknown. Therefore the workings will have to be cleared and sampled as far as the allotted sums will allow.

For the surface survey, a grid will have to be cut with lines 100 metres apart and stations every 30 m. This will involve 60 km of line cutting, the gathering of some 2,000 samples and their analysis for gold, tungsten, molybdenum and zinc or copper.

Underground, the last hole should be extended to cut through the soda granite, which will require another 100 to 200 ft. of drilling. From close to the present set-up, two new holes should be drilled, north-westerly and southwesterly, to intersect the soda granite and veins at greater depths; they each will need to be about 500 ft. long.

Clearing, scaling and timbering of the drift should continue, with sampling of the vein at possibly 25 ft. intervals as the work progresses. The samples will be assayed for whatever metals are indicated by the minerals noted. The muck which has dropped into the drift from a stope above it, some 3,000 tons, will have to be cleared, trammed and dumped. It

should be sampled and assayed.

The suggested allocation of funds is as follows:

Geochemical survey.

Line cutting	\$ 4,600	
Collecting samples	2,000	
Analyses	10,000	
Mapping, transportation, etc.....	<u>1,500</u>	
	\$ 18,100	allow ...\$18,500

Drilling.

Three holes, 1,200 ft. total	\$ 24,000	\$24,000
------------------------------	-----------	----------

Rhabilitation of drift.

Ventilation fan and pipe	4,000	
Timbering	3,000	
Mucking out	15,000	
Equipment rental	<u>5,000</u>	
(trammer, mucker, cars)	\$ 27,000	\$27,000

Sampling of drift.

Taking 160 samples	2,000	
Assays at \$20 ea.	<u>3,200</u>	
	\$ 5,200	allow ... 5,500

Engineering, supervision and report

3,000

Contingency reserve

7,000

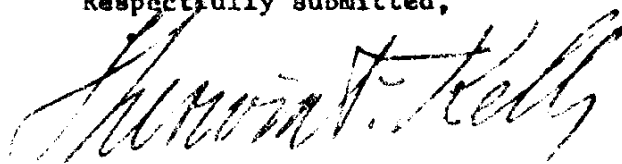
RECOMMENDED FUNDING\$85,000

The above sum does not include allowances for administrative, audit or legal fees.

The available evidence as to mineralisation of possible commercial value in this area, amply warrants the expenditure of the above sums for exploration and development of this property. In all probability, a succeeding stage of intensive and expanded investigation will be indicated by the work herein recommended, but procedures and costs can not be predicted until the results of this program have been evaluated.

The recommended work should be directed by an experienced professional engineer or geologist.

Respectfully submitted,

A handwritten signature in cursive script, reading "Sherwin F. Kelly". The signature is written in dark ink and is positioned above the typed name.

Sherwin F. Kelly, P. Eng.

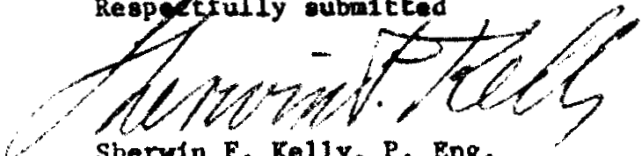
Box 277
Merritt, B.C.
May 4, 1979

CERTIFICATE OF QUALIFICATIONS

I, Sherwin F. Kelly, P. Eng., residing at the Adelphi Hotel in Merritt, B.C., certify that: ---

- (1) I am a registered Professional Engineer in the Province of British Columbia.
- (2) I received the degree of B. Sc. in Mining Engineering from the University of Kansas in 1917.
- (3) I have practised as a geologist and geophysicist in Europe, North Africa, United States, Canada, Mexico, Central America, South America and the Caribbean, since 1920. Since 1936, my work has been principally as a consultant.
- (4) I am the author of the accompanying "Report to Hat Creek Energy Corp. Concerning a Continuing Exploration Program on the B.R.X. Group of Claims on Hurley River, Lillooet Mining Division, B.C." dated May 4, 1979. This is based in part on my general knowledge of the area, to which I have made five or six visits in the last thirteen years, to report on various properties, and on my visit to the Arizona workings in early March, 1979. Data on the geology and workings of the claim group being reported on, were also obtained from sources cited in the Bibliography.
- (5) I have no interest in the claim group, nor in any company holding interest in the property, nor do I anticipate receiving any.

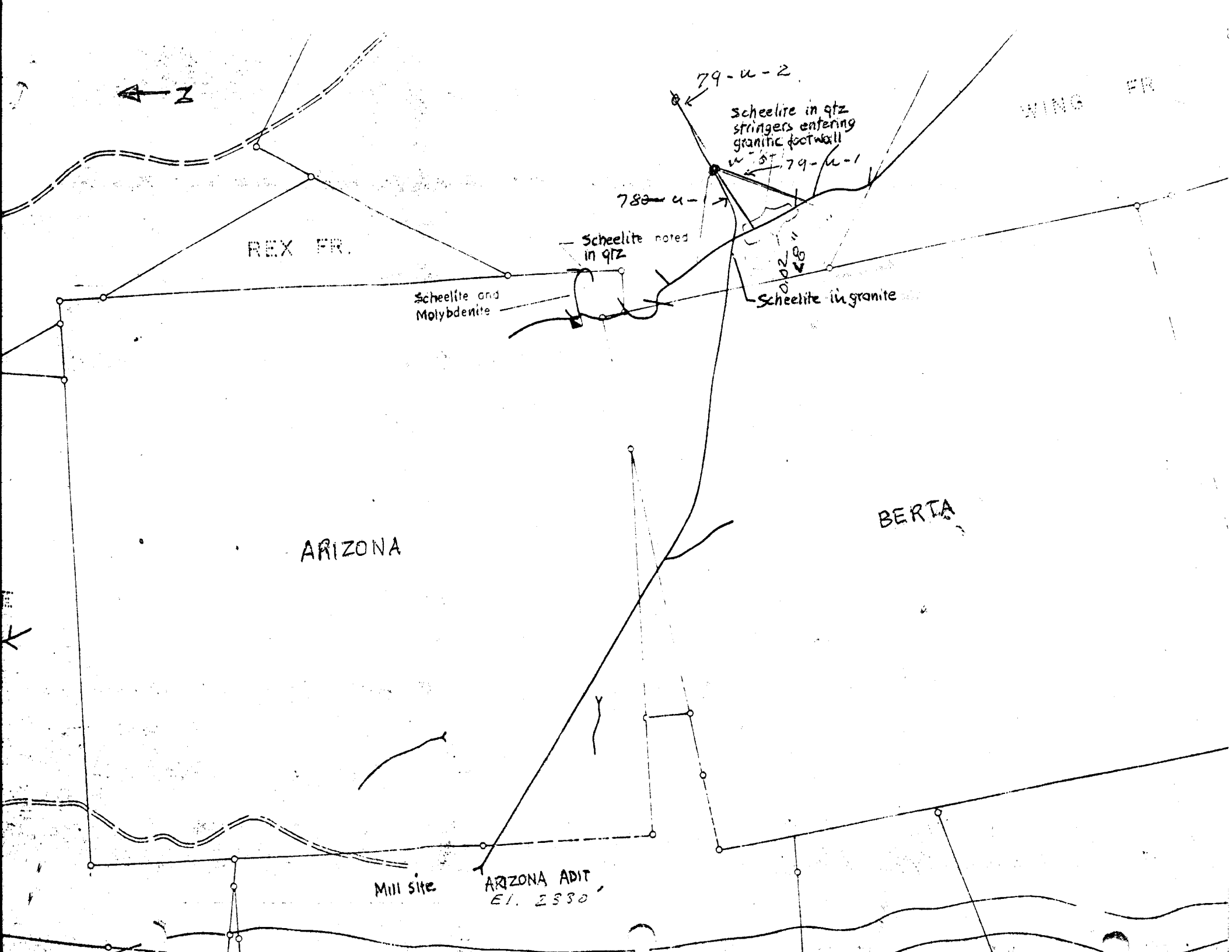
Respectfully submitted

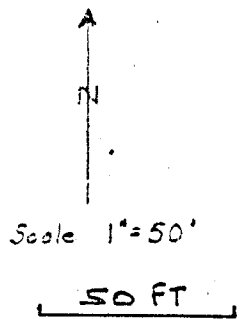

Sherwin F. Kelly, P. Eng.
Geologist and Geophysicist

Box 277
Merritt, B.C.
May 4, 1979

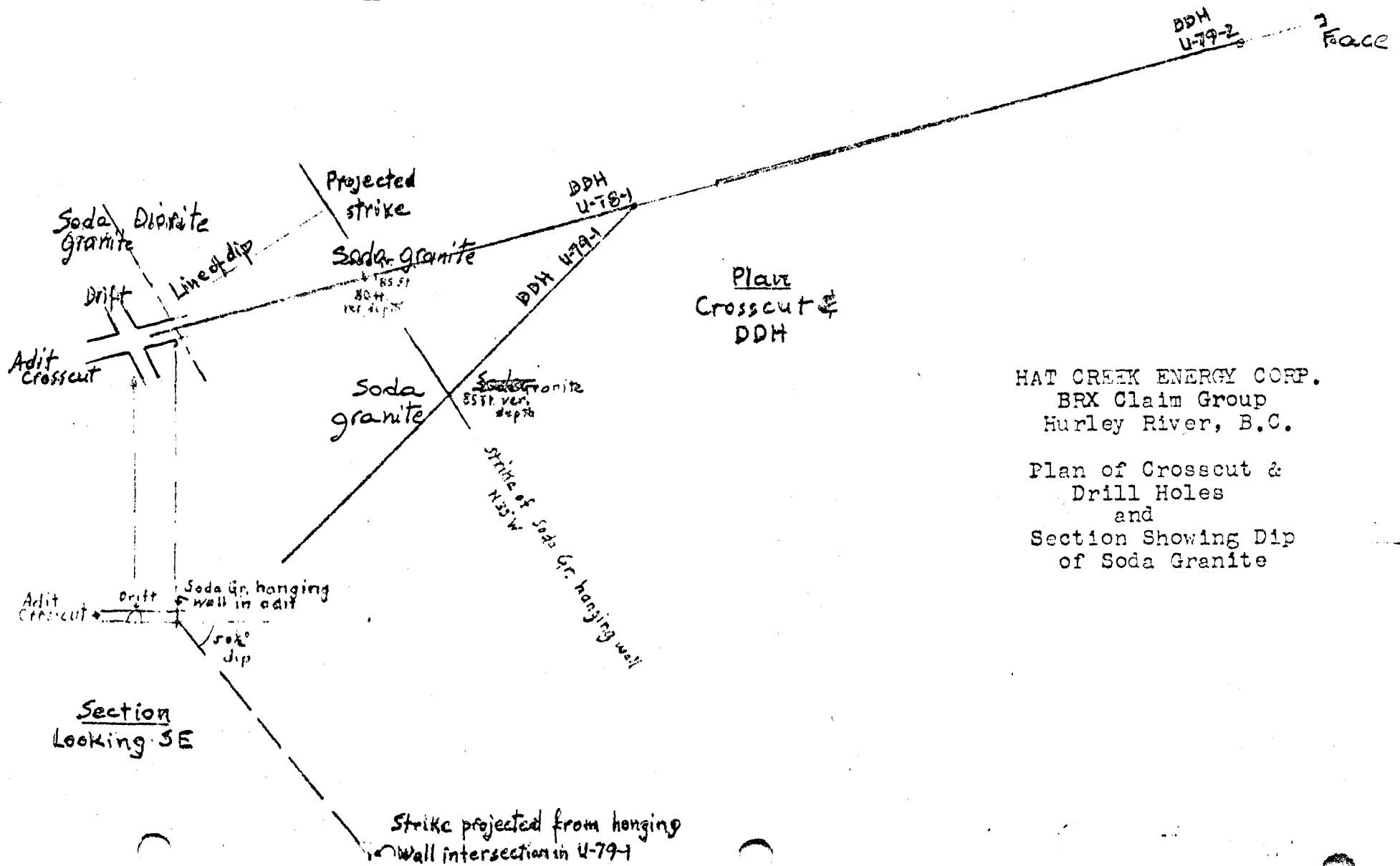
BIBLIOGRAPHY OF REFERENCES

- (1) Cairnes, C.E.: Geology and Mineral Deposits of the Bridge River Mining Camp, British Columbia; Dept. of Mines and Resources, Ottawa, Canada, Memoir 213: 1937.
- (2) McCann, W.S.: Geology and Mineral Deposits of the Bridge River Map-area, British Columbia; Geological Survey of Canada, Ottawa, Canada, Memoir 130; 1922.
- (3) Annual Report of B.C. Minister of Mines; Victoria, B.C., 1960.
- (4) Quarterly Reports, Bralorne-Pioneer Mines Ltd., 1959-67. Financial Post Corporation Service reports, 1958-68
- (5) Kelly, Sherwin P.: Report to Dawson Range Mines Ltd., on the Wayside Mine Property near Gold Bridge, B.C.; Merritt, B.C.; Feb. 10, 1972.
- (6) Bancroft, G. R.: Engineer's Report to the Board (the Board of Wayside Mine): Dec. 14, 1936.
- (7) Elwell, James Paul: Report on the Wayside Mine, Goldbridge Area, Lillooet Mining Division, B.C.; Vancouver, B.C.; April 21, 1971. Also, Progress Report on the Wayside Mine Property of Dawson Range Mine Ltd. (N.P.L.). Goldbridge Area, B.C.; Vancouver, B.C.; Nov. 2, 1971.
- (8) Annual Reports of the B.C. Minister of Mines: Victoria, B.C.; 1932-38, 1940, 1944-47, 1949-50, 1960-61.
- (9) Numerous maps, an Annual Report, reports by the Manager, E.R. Shepherd, and by the Consultant, A. Fonville, and mine reports to the Vancouver office, found in a safe left in the old, abandoned buildings, when Paul Polischuk acquired the claims. Also, data supplied personally by Paul Polischuk and Wallace McClelland.
- (10) Dolmage, Victor: The Cariboo and Bridge River Goldfields, British Columbia: Bulletin, Canadian Institute of Mining and Metallurgy; Montreal, P.Q.; 1934.
- (11) Park, Charles F., Jr.: The Zonal Theory of Ore Deposits; Economic Geology, Fiftieth Anniversary Volume, Part I; Economic Geology Publishing Co., Urbana, Ill.; 1955.





"Arizona" Workings



Plan Crosscut & DDH

HAT CREEK ENERGY CORP.
BRX Claim Group
Hurley River, B.C.

Plan of Crosscut &
Drill Holes
and
Section Showing Dip
of Soda Granite

FACE DPH U-79-1 @ 255°

DPH U78-1 @ 255°

Crosscut

DRIFT

Cross Cut @ 255° (face to drift)

38°

47 1/2°

SODA GRANITE

shear

"Arizona" Workings

Intersection with Soda Granite in U-79-1 projected to plane of section

Diorite Granite

Inclination of plane of drill hole

Quartz vein

DPH U79-1 @ 22.5° Same sta. as U78-1

38°

Qtz. v.

Soda Granite

HAT CREEK ENERGY CORP.
BRX Claim Group
Hurley River, B.C.

Sections on Drill Holes

Looking SE
Scale 1" = 50'
50ft


August 20, 1979

AUDITOR'S REPORT

To the Shareholders
Hat Creek Energy Corporation
Lillooet, B.C.

I have examined the balance sheet of your Company as at April 30, 1979, and the statements of deferred expenditures and changes in financial position for the year ended April 30, 1979. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the company as at April 30, 1979, the results of its deferred expenditures, and the changes in its financial position for the period then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.


Chartered Accountant
Vancouver, B.C.

HAT CREEK ENERGY CORPORATION
NOTES TO THE FINANCIAL STATEMENTS

APRIL 30, 1979

1. Incorporation

The Company was incorporated April 12, 1977 under the laws of the Province of British Columbia.

2. Accounting policies

In common with most mining companies in the exploration and development stages, the Company defers all direct expenditure on properties and related administration expenditure. At such time as the Company abandons or loses its interest in any property, the accumulated expenditure and the attributable administration expenditure are written off to deficit. If any property reaches commercial production, the applicable deferred expenditures will be amortized over the estimated productive life of the property.

Accordingly, amounts shown for claims and deferred expenditures represent costs to date, and do not necessarily reflect present or future values.

3. Drilling supplies

The inventory of drilling supplies [which includes recoverable bits, casing and rods] was not determined by physical count, but is the result of an estimate by management.

4. Claims

[a] BRX Groups - Lillooet Mining Division, B.C.
By agreement dated September 14, 1977, the Company acquired 46 claims from Paul Polischuk, one of the Company's directors for the following:

[i] Shares - 750,000 fully paid shares of the Company [all subject to escrow requirements established by the Superintendent of Brokers of the Province of B.C.] at a deemed value of 10¢ each \$75,000

[ii] Royalty - a royalty of 5% to be paid from net smelter returns to a total of \$500,000

A further five claims were staked directly by the Company 350

Most of these claims expire March 1980
[Also see Note 6] C/F 75,350

BRUCE T. HAMILTON
Chartered Accountant

HAT CREEK ENERGY CORPORATION
NOTES TO THE FINANCIAL STATEMENTS [Page 2]
APRIL 30, 1979

	Brought Forward	\$75,350
[b]	<u>U³⁰₃₀₈ Claim</u> - Kamloops Mining Division, B.C. By agreement dated September 14, 1977, the Company acquired one claim of 20 units [which expires January 1980] from Paul Polischuk, one of the Company's directors, for cash.	5,000
[c]	<u>Coal licences</u> - Lillooet Land District, B.C. Three licences, of about 640 acres each, were acquired and are valid until July 1979.	<u>30</u>
	<u>Total - Statement 1</u>	<u>\$80,380</u>

5. Share capital

During the period ended April 30, 1978, the following shares were allotted:

	<u>Shares</u>	<u>\$</u>
<u>For Cash</u>		
- subscribers	2	2
- private sales	321,500	32,150
- prospectus dated December 21, 1977	<u>350,000</u>	<u>59,600</u>
	671,502	91,752
<u>For mineral claims</u> - Note 3[a]	<u>750,000</u>	<u>75,000</u>
<u>Total - Statement 1</u>	<u>1,421,502</u>	<u>166,752</u>

[Also see Note 8]

6. Mineral Exploration Incentive Program

Under this program, sponsored by the B.C. Ministry of Energy, Mines and Petroleum Resources, the Company received a grant to conduct certain exploratory work on the BRX groups [see Note 4[a]]. If the exploration work results in the discovery of a commercial mineral deposit, the loan [without interest] must be repaid out of revenue.

7. Directors' and senior officers' remuneration

During the period the directors and senior officers received no remuneration as such. However, the following payments were made to directors and senior officers, or to companies of which they were principals, for services and expenses in the ordinary course of business:

BRUCE T. HAMILTON
Chartered Accountant

HAT CREEK ENERGY CORPORATION
NOTES TO THE FINANCIAL STATEMENTS [Page 3]
APRIL 30, 1979

Mining equipment	\$ 800
Site supplies [including timbers]	3,848
Site wages	9,000
Drill and truck rental	3,502
Legal services	<u>4,486</u>
	<u>\$21,636</u>

8. Subsequent events

- [a] On February 23, 1979 the Superintendent of Brokers approved the resolution granting an option to Mr. Paul Polischuk, a Company director, to purchase 71,000 shares at 30¢ each. The option was not exercised before its expiry on July 12, 1979.
- [b] On August 16, 1979 the Vancouver Curb Exchange approved a private placement of 223,654 shares at 25¢ each for which subscriptions had already been received.

BRUCE T. HAMILTON
Chartered Accountant

HAT CREEK ENERGY CORPORATION

BALANCE SHEET

APRIL 30, 1979 AND 1978

ASSETS

	<u>1979</u>	<u>1978</u>
<u>Current</u>		
Bank	\$ 2,409	12,472
Term deposit	-	40,048
Share subscriptions receivable	300	300
Deposit for VCE listing fee	-	2,000
Drilling supplies - Note 3	<u>6,500</u>	<u>-</u>
	<u>9,209</u>	<u>54,820</u>
<u>Mineral properties and claims</u>		
Claims - Note 4	80,380	80,200
Deferred expenditures - Statement 2	<u>105,061</u>	<u>31,935</u>
	<u>185,441</u>	<u>112,135</u>
<u>Fixed - at cost</u>		
Mining equipment	10,114	5,751
Less: accumulated depreciation	<u>3,034</u>	<u>-</u>
	<u>7,080</u>	<u>5,751</u>
<u>Other</u>		
Incorporation cost	<u>632</u>	<u>632</u>
	<u>\$202,362</u>	<u>173,338</u>

LIABILITIES

<u>Current</u>		
Accounts payable	15,589	886
Due to director	<u>20,021</u>	<u>5,700</u>
	<u>35,610</u>	<u>6,586</u>
<u>Share capital</u>		
Authorized: 5,000,000 shares, no par value		
Issued: 1,421,502 shares - Note 5	<u>166,752</u>	<u>166,752</u>
	<u>\$202,362</u>	<u>173,338</u>

Approved by the directors
August 20, 1979:

Paul Blundell Director

W.A. Hamilton Director

BRUCE T. HAMILTON
Chartered Accountant

HAT CREEK ENERGY CORPORATION

STATEMENT OF DEFERRED EXPENDITURES

FOR THE YEAR ENDED APRIL 30 1979

	<u>BRX Groups</u>	<u>U₃O₈</u>	<u>Coal Licenses</u>	<u>Total</u>
<u>Exploration and development</u>				
Balance - beginning of year	\$19,525	300	-	19,825
Depreciation	3,034			
Drilling and camp supplies	16,472			
Engineer and assays	1,415			
Equipment and truck rental	9,080			
Equipment maintenance, fuel, etc.	5,354			
Recording fees, ground rent, etc.	465	150	2,020	
Travel	-		662	
Wages	<u>23,669</u>			
	79,014	450	2,682	
Less: M.E.I.P. grant - Note 6	<u>[6,500]</u>			
	<u>72,514</u>	<u>450</u>	<u>2,682</u>	<u>75,646</u>
 <u>Administration</u>				
Balance - beginning of year				12,110
Audit			1,595	
Legal			4,486	
Listing fees, etc.			2,500	
Office			1,005	
Shareholders meetings, etc.			851	
Telephone			3,226	
Transfer agent			695	
Travel			<u>4,596</u>	
			18,954	
Less: interest			<u>[1,649]</u>	<u>17,305</u>
				<u>29,415</u>
 <u>Total deferred - Statement 1</u>				<u>\$105,061</u>

BRUCE T. HAMILTON
Chartered Accountant

HAT CREEK ENERGY CORPORATION
STATEMENT OF CHANGES IN FINANCIAL POSITION
FOR THE YEARS ENDED APRIL 30 1979 AND 1978

	<u>1979</u>	<u>1978</u>
<u>Source</u>		
Share capital:		
For cash	\$ -	91,752
For mineral properties	-	<u>75,000</u>
		<u>166,752</u>
 <u>Use</u>		
Claims:		
For cash	180	5,200
For shares	<u>-</u>	<u>75,000</u>
	180	80,200
Mining equipment	4,363	5,751
Deferred expenditures [less depreciation]	70,092	31,935
Incorporation cost	<u>-</u>	<u>632</u>
	<u>74,635</u>	<u>118,518</u>
<u>Working capital</u> - increase [decrease]	[74,635]	48,234
Working capital - beginning of year	<u>48,234</u>	<u>-</u>
<u>Working capital [deficiency]-end of year</u>	<u>\$[26,401]</u>	<u>48,234</u>
 <u>Working capital [deficiency] comprises:</u>		
Current assets	9,209	54,820
Current liabilities	<u>[35,610]</u>	<u>[6,586]</u>
	<u>\$[26,401]</u>	<u>48,234</u>

BRUCE T. HAMILTON
Chartered Accountant

$\$14,920 / 227.5 \text{ m} = \$65.6 / \text{m}$ (less than average claims)

O.K.

B. DRILLING

(Details as per report submitted)

COST
\$14,920

I wish to apply \$ 14,000 of this work to the claims listed below.
(State number of years to be applied to each claim and its month of record)

746 FT of INX DIAMOND DRILLING FROM THE ARIZONA XENT. 26 YEAR to each claim: 6452, 3182, 445, 6056, 6055, 6054, 6052, 6053, 2402, 2400, 3180, 2371, 2370, 2368, 2367, 366, 2364, 2361, 3178, 3177, 3176, 443, 442, 3179, 3178, 2409, 2408, 2407, 4813, 2369, 6444, 6446, 6451, 6454, 6449, 6448.

C. PROSPECTING

(Details as per report submitted)

COST
\$14,920

I wish to apply \$ _____ of this work to the claims listed below.
(State number of years to be applied to each claim and its month of record)

DIAMOND DRILL RECORD

COLLAR

NORTH
 EAST 409' E of drift
 ELEVATION
 AZIMUTH 255°
 DIPS 46°

COMPANY Hot Creek

PROPERTY B.R.X. Arizona Workings

LOCATION Arizona Cross-cut

HOLE U-79-2

STARTED Feb. '79

FINISHED

DEPTH

PURPOSE

LOGGED BY S.E. Kelly
Mar. 1979

% Core Recovery	From	To	Description	Samples				Assays				Averages		
				Sample No.	From	To	Width	Au	Ag	W ₂ O ₃	Zn			
	0	30	Augite diorite, hard siliceous, badly fractured, dissemin. pyr.											
	30	140	Augite diorite. Qtz vein at 140', few inches wide + mineral. with pyrite											
	140	180	Fine grained dior., miner. w. pyrite, some light-colored, small disse. Qtz veinlets at 180'											
	180	234	Augite diorite											
B-1?	234	259												
	234	257	Augite diorite. Fine gr., w. random Qtz veining											
	257	260	Qtz vein	2054A	257	260	3	0.22	0.28	0.03	0.02		Mo < 0.2	
	260	278	Augite diorite											

MINERAL ASSESSMENT REPORT
 NO. **7949**

DIAMOND DRILL RECORD

COLLAR

NORTH
 EAST 184 ft E & drift
 ELEVATION
 AZIMUTH 225°
 DIPS 38°

COMPANY Hat Creek Energy
 PROPERTY BRX Arizona workings
 LOCATION Arizona Cross-cut

HOLE U-79-1
 STARTED January '79
 FINISHED
 DEPTH 240 ft
 PURPOSE Intersect vein
 LOGGED BY S. Kelly
 Mar. 4/79

% Core Recovery	From	To	Description	Samples				Assays				Averages		
				Sample No.	From	To	Width	Au	Ag	Mo W ₂ O ₃	Zn			
	0	(124)	Augite diorite, med. to fine grain. Badly fractured Last 4 ft. lighter color											
	(124)	131	Soda granite, dissem. pyrite, minor scheelite											
	131	136	Qtz vein											
	136	240	Soda granite, random qtz stringers, mineralized w scheelite											
Box?	116	145												
	116	128	Augite diorite											
	128	131	Soda granite											
	131	136	Qtz vein	2053A	131	136	5	0.021	0.06	0.25	0.03	Mo < 0.01		

MINERAL RESOURCES BRANCH
7949
 NO

DIAMOND DRILL RECORD

COLLAR
 NORTH
 EAST 184 ft E of drift
 ELEVATION
 AZIMUTH 255°
 DIPS 38°

COMPANY Hot Creek Energy
 PROPERTY B.R.X. - Arizona Workings
 LOCATION Arizona Cross-cut

HOLE U-78-1
 STARTED Dec 1978
 FINISHED
 DEPTH 228 ft
 PURPOSE To intersect vein
 LOGGED BY S.F. Kelly
Mar 2/79

% Core Recovery	From	To	Description	Samples				Assays				Averages		
				Sample No.	From	To	Width	Au	Ag	WO ₂	Zn			
	0	120	Augite diorite											
	120	129	Shear											
	129	226	Soda granite irreg stringers of qtz carries dissem. pyr											
	226	228	Augite diorite - pyr End of hole											
Box?	117	136												
	117	120	Augite diorite											
	120	128	Shear zone irreg veining w. qtz + bleaching	2051A	120	125	5'	0.12	0.10	0.02	0.01	Mo	<0.01	
	128	125	Shear											
	125	129	Strong shearing	2052A	125	129	4	0.044	0.70	0.04	0.04	Mo	<0.01	

MINERAL RESOURCES BRANCH
 ASBESTOS REPORT

7949