DRILLING REPORT ON THE ASH 1 - 3 MINERAL CLAIMS AGUR - ASH PROPERTY, OSOYOOS M.D.

Lat. 49° 31' North; Long. 119° 47' West
N.T.S. Map-Sheet 82E/12W

by

D.G. Leighton, B.Sc.

18 June, 1979

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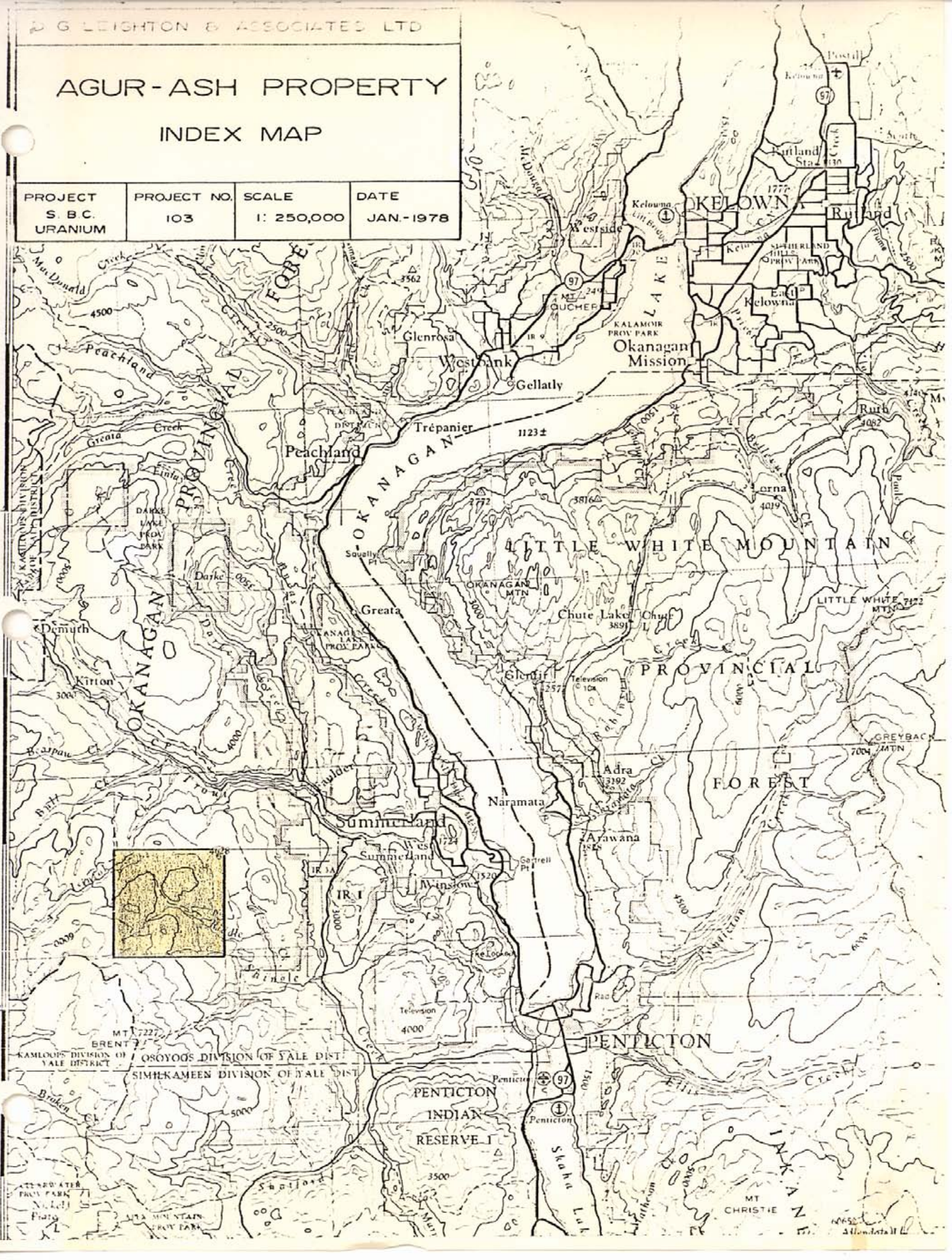
AGUR-ASH PROPERTY

INDEX MAP

PROJECT	PROJECT NO.	SCALE	DATE
S.B.C. URANIUM	103	1: 250,000	JAN.-1978



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TELEPHONE: (604) 731-7367

D. G. LEIGHTON & ASSOCIATES LTD.
GEOLOGICAL CONSULTANTS

3155 WEST 12TH AVENUE
VANCOUVER, B.C.
V6K 2R6

AGUR-ASH PROPERTY

DIAMOND DRILL REPORT

GENERAL

A diamond drill program consisting of 881 feet (268.5 metres) in seven holes was carried out in October, 1978 on the ASH mineral claims located 15 km west of Penticton, B.C. The drilling was done under contract by Wink International Exploration Drilling Ltd. of Richmond, B.C., using a Hydra-Wink type drill and BQ size bits. Lack of readily available water was the major constraint to choosing drill sites. The geological objectives were as follows:

1. To test a zone between trachyte and phonolite flows to see if this contained sufficient thickness of conglomerate or other detrital deposits to be an exploration target. The lower sub-volcanic horizon (below the phonolites) was not felt to be intersectable with any certainty in a short hole, except near its one exposure at the "Thor" radioactive occurrence.

2. To test certain radioactive zones in which angular rocks in the soil suggested near outcrop conditions, but in which the soils themselves were not anomalous in U or Th.

3. To test certain lineaments along which strong geochemical anomalies in uranium (and other metals) had been found.

The area selected for testing lies at or beyond the western edge of the trachyte flow, with six of the seven holes south of Riddle Creek. That area is cut by two prominent lineaments of approximate north-south orientation. These will be referred to as the 1600W and 2000W lineaments in view of their

grid locations. Most of the drilling water came from a small pond at the summit of the former lineament, and both are associated with geochemical and radioactive anomalies. They are, in part, separated by an intrusion of the radioactive "boxwork syenite".

Drill hole locations relative to topographic and geologic features and claim boundaries are shown on an accompanying map (see pocket).

DRILL CORE LOGS

Hole No. 1

Angle - 90°
Overburden - 15 feet (4.57 m)
Depth - 63 feet (19.2 m)

This was spotted to drill through the edge of the trachyte flow and test material below, at a site adjacent to a partial geochemical "cut-off" in the 1600W lineament. Site selected was a slight ridge with high background radioactivity, low soil geochemistry and copious trachyte fragments in overburden. (An abrupt decrease in background to the west was thought to mark the edge of the radioactive trachyte.)

An adjacent test pit showed that trachyte float was only in a surficial soil and below this was a great depth of a white material of ashy texture which showed patchy yellow and brown staining. The radioactivity originated in the upper parts of this thick layer.

The "rock" drilled was altered almost entirely to a pyritiferous clay. Recovery was very poor and erratic (only 10 feet of core "chips" from first 45 feet of drilling) and what core was brought up could not even be washed without disintegrating in the hand. Little could be told about the rock except that it had been thoroughly altered by pyrite and epidote before the intense weathering. It was suspected that we were drilling down a shear zone, although no topographic expression of this is visible. At 65 feet a short section of recognizable phonolite was encountered, suggesting that we were

below that horizon to be tested, and drilling was halted. Sections of "core" were then set in cement casts and stabbed with a diamond saw. Some pieces proved to be highly altered arkose or conglomerate, and others remains of phonolite boulders. The last piece of core at 68 feet was still in conglomerate. No radioactive zones were encountered.

Several interesting conclusions stem from this hole:

1. An ashy overburden layer of considerable depth is encountered in this area and its adsorption of ions affects surface radioactivity.

2. There is a considerable depth of conglomerate below the trachyte flow.

3. The conglomerate has undergone strong hydrothermal alteration at this site, but appears to have maintained porosity, unlike the "pink grit" channels farther south.

4. Copious pyrite is involved, which is capable of precipitating uranium from aquifers by reduction of oxidizing solution or ventralization of alkaline ones. Paradoxically, this pyrite will likely mean leaching of uranium in areas of secondary weathering.

Hole No. 2

Angle - 50^{o} @ 85^{o} AST
Bedrock - 20 feet (6.09 m)
Depth - 63 feet (19.2 m)

This was spotted to test a small radioactive lineament paralleling the 1600W lineament. Soils here were dry, and did not carry geochemical anomalies, but the angular float had included the ZoT-1 sample with 12.5% Th and .21% U.

Once again the radioactivity proved to be related to a thick ashy layer, and the float occurred only in overlying soil. The hole intersected dykes of syenite intruded into chloritized diorite. There was one well defined shear

zone which was not altered or mineralized, and whose gouge ran 54 ppm uranium. The hole was stopped at 63 feet having passed under the lineament. Pyrite was found in the core, and minor chalcopyrite.

The only important point established by this hole was that the Tertiary syenites are here intruded into pre-Tertiary rocks, and the phonolite does not extend beyond the trachyte as it does further northwest.

Hole No. 3

Angle - 45° @ 85° AST
Depth - 118 feet (35.9 m)

This hole was used to test the main 1600W lineament, a site of strong geochemical anomalies in uranium and some other metals. It was disappointing, cutting almost continuous quartz diorite through its 118 foot length. No major shear zone was encountered, despite the prominence of the 1600W lineament, and the few small fractures which were encountered proved to be clean, without alteration or mineralization. The hope of finding a deposit directly along this fracture system seems dim, and the anomaly is hence presumably transported.

Hole No. 4

Angle - 45° @ 240° AST
Depth - 153 feet (46.6 m)
Overburden - 24 feet (7.31 m)

There is a geochemical cut-off in the 2000 W lineament which occurs where a small side-lineament (also with anomalous radioactivity and geochemistry) enters from the east. The hole was spotted to cut the lower part of the side-fracture and then the main lineament immediately above the cut-off.

Three dominant rocks were intersected, namely syenite, pre-Tertiary diorite and an extremely vuggy, high-level granite. Several shear or fracture zones were also encountered. Pyritization occurred along some of these and both pyrite and hematite were common in the rocks, especially the granite. One three foot section was so rich in fine hematite veinlets that it turned the

drill water a pink colour. No zones of radioactivity were encountered.

24 - 43 feet (7.31 - 13.1 m)

Medium to coarse grained syenite with miarolitic cavities, moderately magnetic

43 - 57 feet (13.1 - 17.4 m)

Heterogeneous granite

57 - 153 feet (17.4 - 46.6 m)

Hornblende diorite, medium grained, moderately magnetic

Holes No. 5 and No. 6

Angle - 45^{o} @ 195^{o}, 270^{o} AST
Depth - 128 feet, 173 feet (39.0 m, 52.7 m)
Overburden - 25 feet, 24 feet (7.62 m, 7.3 m)

A very strongly radioactive zone of about 800 metres in length leads from near the "boxwork syenite" area (between the 1600W and 2000W lineament) in a north-westerly direction to Riddle Creek. Radioactivity as high as 2000 cps occurs here in areas completely covered with overburden. One syenite outcrop occurs in the vicinity of the zone, and in several areas angular pieces of the radio-active "felted" trachyte were found in the soil. Where the zone crosses the 2000W lineament, radioactivity also extends down along this structure. Hole No. 5 was spotted to test the main zone, and No. 6 to cut the lineament from the same site.

Both holes cored a fairly monotonous "boxwork" syenite for their entire lengths. Narrow greenstone dikes, fracture zones, textural variations and alteration bands provided the only features for logging. The alterations included some minor pyrite zones and a type of hematized shattering which varied from fine parting to a brecciation. Minor fluorite was occasionally associated with this. Neither form of alteration affected the radioactivity noticeably.

Although the syenite of these cores averages 500 ppm Th and 90 ppm U, there was no indication of any hydrothermal activity which might have concentrated

uranium in late stage fluids. Once again, however, the surficial radioactive zone does not appear to be directly related to the syenite. Overburden is deep (about 18 feet) and as at the first hole sites the radioactive, angular float is largely in the upper soil. Furthermore, most of this float is not of the coarse syenite, but the finer "felted trachyte". These observations suggest that the radioactive zone is more complex than the limited drill holes suggest, and a small program of pitting is recommended in search of uranium concentration in the deeper overburden horizons.

Hole No. 5

25 - 78 feet (7.62 - 23.77 m)

Medium grained pink syenite, boxwork type, with occasional biotite - fluorite veinlet

78 - 80 feet (23.77 - 24.38 m)

Fault zone

80 - 128 feet (24.38 - 39.0)

As above

Hole No. 6

24 - 38 feet (7.31 - 11.58 m)

Pink boxwork syenite with hematite - fluorite alteration

38 - 43 feet (11.58 - 13.1 m)

Diabase dyke

43 - 69 feet (13.1 - 21.03 m)

Syenite as above

69 - 77 feet (21.03 - 23.46 m)

Diabase dyke

77 - 150 feet (23.46 - 45.72 m)

Syenite cut by numerous calcite - hematite veinlets

150 - 163 feet (45.72 - 49.68 m)

Fault zone

Hole No. 6 (Cont.)

163 - 173 feet (49.68 - 52.7 m)

Syenite breccia, matrix contains fresh biotite x/s.

Hole No. 7

Angle - 75° @ 010° AST
Depth - 173 feet (52.7 m)

This was the only hole spotted north of Riddle Creek. In this area there is little outcrop, but along one prominent gully is the only observed exposure of the conglomerate underlying the trachyte flows. (The trachyte is here represented by radioactive ignimbrite.)

Hole No. 7 was sited to drill through the ignimbrite and determine whether the underlying conglomerate has significant thickness and porosity. Classic ignimbrite was never observed in the core, but rocks with an ashflow texture appear to change downward into an unsorted, multilithic conglomerate. This is a peculiar rock comprised of rounded or sub-rounded fragments of various volcanic species and a lesser component of granitic lithologies. Most of the larger boulders are of the (presumably underlying) phonolite. There is no cementation present, the interstitial material being simply silt or ash. This is in direct contrast to the Springbrook and other Tertiary clastic units of properties further south. Porosity is hence moderately good, and might be better in areas of well defined stream channels. The resulting softness of the rock presumably accounts for its lack of outcrop. Hole No. 1 likely involved the same unit, only there altered by hydrothermal fluids (which would find this lithology a very receptive host). It is also a thick unit, Hole No. 7 being terminated at 173 feet without finding its base.

DRILLING COSTS (approximate only - for assessment purposes)

Direct (drill contract)	$16,751.35
Helicopter support	7,003.80
Other (drill site preparation, supervision, etc.)	2,975.00
Total	$26,730.00

CORE STORAGE

Core is presently stored at the following address:

670 Vancouver Avenue
Penticton, B.C.
V2A 1A6

Respectfully submitted,

D. G. Leighton

D. G. LEIGHTON
D. G. Leighton

GEOLOGICAL ASSOCIATION OF CANADA · FELLOW ·

18 June, 1979

CERTIFICATION

I, D.G. Leighton, do hereby certify that:

1. I am a professional geologist with offices at 3155 West 12th Ave., Vancouver, B.C.

2. I am a graduate of the University of British Columbia, B.Sc. (1968).

3. I have practiced mining exploration work for eleven years, most of which was based in British Columbia.

4. I am a member (Fellow) in good standing of the Geological Association of Canada.

5. I have personally visited the AGUR-ASH property and supervised exploration work carried out there.

Respectfully submitted,

D.G. Leighton

GEOLOGICAL ASSOCIATION OF CANADA · FELLOW · D.G. LEIGHTON

18 June, 1979

LEGEND

Radioactive zones, due to Boxwork syenite or felted dykes (FR)

Phono. porph. - unusually r/a float areas - also denoted RP

Syenitic area - porphyritic

Syenitic area - coarse, granular

Trachyte porph. lavas, outcrop and fresh float areas denoted by Ⓟ

ABX Altered and brecciated rocks

Flt Float

D.D.H. Diamond Drill Hole

Gdio Granite rocks

To accompany drilling report
on the ASH claims
by D.G. Leighton
dated 18 June, 1979

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7362

D.G. Leighton

FIG. 6A

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AGUR - ASH PROPERTY

GEOLOGY

SCALE 1:5000

METRES 100 0 100 200 300 400 METRES

PROJECT	PROJECT No.	DATE	DRAWN BY
S. BC. URANIUM	103	NOV. - 1978	R.R.C.