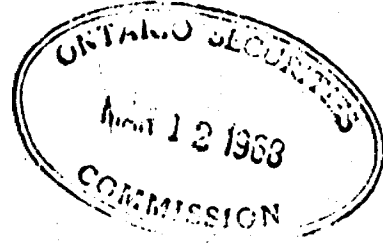




41105SW0056 SHAKESP32C1 SHAKESPEARE

010



REPORT ON
RICK MINES LTD.
SHAKESPEARE TWP. PROPERTY
GROUP 2
SUDBURY MINING DIVISION
ONTARIO

BY

A. C. A. HOWE INTERNATIONAL LIMITED

J. E. TILSLEY
F.G.A.C.

REPORT NO. 99
TORONTO, ONTARIO

DECEMBER, 1967

A. C. A. HOWE INTERNATIONAL LIMITED



411055W0056 SHAKESP32C1 SHAKESPEARE

010C

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SUMMARY

Pick Mines Ltd. has acquired a group of 23 unpatented mineral claims in Shakespeare Township, Sudbury Mining Division, Ontario. The property covers a portion of Agnew Lake and land on the east and west shores of the lake. Sedimentary rocks (Mississagi formation Precambrian) in which uranium deposits have been found in the Blind River-Elliot Lake area underlie about one third of the property. The remainder of the claim group is underlain by basic intrusives in which copper and copper-nickel occurrences are noted.

Exploration, consisting chiefly of geophysical surveys, which must be carried out during the winter when the lake is frozen, and geological mapping scheduled for May or June, 1968, is recommended.

The cost of the geophysical surveys is estimated at \$6,428.12. The cost of the geological mapping is estimated at \$1,045.00.

The total cost of the exploration program is therefore an estimated \$7,473.12.

PROPERTY

The property consists of 23 contiguous unpatented mineral claims located in Shakespeare Township, Sudbury Mining Division, Ontario.

The claims are more fully described in the following

table: -

<u>Claim No.</u>	<u>Lot</u>	<u>Concession</u>
145430 ✓	NE $\frac{1}{4}$ N $\frac{1}{2}$ 7	V(Water Only)
145213 ✓	SE $\frac{1}{4}$ S $\frac{1}{2}$ 7	VI
214 ✓	NE $\frac{1}{4}$ S $\frac{1}{2}$ 7	VI
215 ✓	SW $\frac{1}{4}$ S $\frac{1}{2}$ 6	VI
216 ✓	NW $\frac{1}{4}$ S $\frac{1}{2}$ 6	VI
217 ✓	NE $\frac{1}{4}$ S $\frac{1}{2}$ 6	VI
218 ✓	SE $\frac{1}{4}$ S $\frac{1}{2}$ 6	VI
219 ✓	NW $\frac{1}{4}$ S $\frac{1}{2}$ 5	VI
220 ✓	SW $\frac{1}{4}$ S $\frac{1}{2}$ 5	VI
145349 ✓	SW $\frac{1}{4}$ N $\frac{1}{2}$ 6	VI
350 ✓	NE $\frac{1}{4}$ N $\frac{1}{2}$ 6	VI
351 ✓	SE $\frac{1}{4}$ N $\frac{1}{2}$ 6	VI
352 ✓	NW $\frac{1}{4}$ N $\frac{1}{2}$ 5	VI
353 ✓	SW $\frac{1}{4}$ N $\frac{1}{2}$ 5	VI
354 ✓	NE $\frac{1}{4}$ N $\frac{1}{2}$ 6	V
355 ✓	NW $\frac{1}{4}$ N $\frac{1}{2}$ 5	V
356 ✓	SW $\frac{1}{4}$ S $\frac{1}{2}$ 7	VI
357 ✓	NW $\frac{1}{4}$ S $\frac{1}{2}$ 7	VI
358 ✓	SW $\frac{1}{4}$ N $\frac{1}{2}$ 7	VI
359 ✓	NW $\frac{1}{4}$ N $\frac{1}{2}$ 7	VI
360 ✓	NE $\frac{1}{4}$ N $\frac{1}{2}$ 7	VI
361 ✓	SE $\frac{1}{4}$ N $\frac{1}{2}$ 7	VI
362 ✓	NW $\frac{1}{4}$ N $\frac{1}{2}$ 6	VI

The claims are in good standing until May 19, 1968.

LOCATION

Approximate co-ordinates: 46° 21' 30" N
81° 52' 30" W

The property is located in lots 5, 6 and 7, Concessions V and VI, Shakespeare Township, Sudbury Mining District, Ontario. The claims lie six miles due north of Webbwood, a village on Highway No. 17 about 46 miles west of Sudbury.

ACCESS

The claims are readily accessible by road. A township road follows the line between lots 6 and 7. The distance via this road from Webbwood is 7.0 miles.

The claims cover a section of Lake Agnew (Spanish River) and can also be reached in summer by boat from any point on the lake.

The Canadian Pacific Railway main east -- west line and the Trans Canada Highway pass through Webbwood. There is a railway station and siding in the village.

TOPOGRAPHY

The land portion of the claims is rough, the ground being hilly with vertical or nearly vertical faces rising 20' to 50'. The elevation of Agnew Lake is 857' AMSL. The hills rise to 150' - 200' above the lake level.

CLIMATE

The climate is temperate, tending toward sub-arctic.

The mean summer temperature is 65.3° F (July) and the mean winter temperature is 8.4° F (January). Summer maximums up to 99° F and winter minimums of -47° F have been recorded in the area.

Total annual precipitation is 31.60 inches of water, made up of 23.80 inches of rain and 7.8 inches of snow (7.8 inches H₂O Equiv.).

POWER

Two power lines of Ontario Hydro Commission pass about four miles south of the property. These are major transmission lines between Sudbury and Blind River. One line carries 230,000 V, 3 phase 60 cycle current, the other is 115,000 V, 3 phase 60 cycle.

HISTORY

Prospecting for and development of mineral resources has been done in Shakespeare Twp. since 1900. In 1903 - 1905 a gold mine was operated in lot 5, Concessions 1 and 2. Copper and copper-nickel prospects have been investigated in lot 2, Concession III and lots 1 and 2 Concession V respectively.

Exploration for uranium was done during 1952 to 1957.

During 1953 - 54 exploration of local quartz pebble conglomerate beds in Mississagi quartzite located in lot 4, Concession 5 and lot 5 Concession 6 was done. Trenching, geological and geophysical surveys and 3 drill holes were completed.

Values ranging from 0.03% U_3O_8 and 0.05 ThO_2 to 0.56% U_3O_8 and 0.09% ThO_2 across thickness of 0.75 to 2.0 feet were reported.

In 1956-1957 uranium bearing quartzite beds were cut by drilling carried out in lots 8 and 9, Concession 1. Basement was not reached by any of the four holes completed. The 1.5 foot quartzite bed mentioned above contained 0.063% U_3O_8 .

In 1966 uranium values up to 9 lbs. U_3O_8 per ton across 4 feet are reported from shear zones in Mississagi quartzite. The shear zones are reported to be up to 30' in width. This work was done in the north east part of the township.

There is no record of work being performed on the ground held by Pick Mines Ltd.

GENERAL GEOLOGY

The township has not yet been mapped in detail. The geology in general terms is as follows: Shakespeare Township is underlain by Precambrian rocks which are subdivided as shown in Table 1.

TABLE 1

<u>AGE</u>	<u>ROCK TYPES</u>
Recent	Stream gravels and fine sediments
Pleistocene	Glacial drift, lacustrine clays
Post Huronian	Basic Intrusives: gabbro and diorite.
Huronian	Bruce group - Mississagi formation quartzite and pebble conglomerate.
Pre Huronian	Older granitic rocks: - gneiss (granite) basic intru- sives.

The older granitic rocks underlie most of the western 2/3, as well as the north half of the south-east quarter of the township. The south half of the SE quarter of the township is underlain by Huronian sediments which have been intruded in part by Post-Huronian basic rocks.

The north half of the township shows mainly basic intrusives cutting Mississagi quartzites. The sediments strike generally north-north east and dip about 30° to the north.

The intrusives generally trend parallel to the strike of the sediments.

GEOLOGY OF THE PROPERTY

Fifteen of the 23 claims in the group are water claims. The remaining claims show exposures of basic intrusives on the west

part of the group and Mississagi quartzites on the eastern half.

The relationship between these formations where their outcrop is covered by water is not established.

EXPLORATION PROGRAM

Uranium is found in pebble conglomerates interbedded with quartzites of the Mississagi formation. Copper is also found in vein structures cutting the quartzites.

Copper and copper-nickel occurrences are known in the basic intrusives of the area.

The exploration program should be designed to give information which will aid in the interpretation of the geology beneath the lake and also indicate any zones of sulphide or radioactive mineralization.

A program of geophysical surveys to be carried out during the winter months is recommended.

The surveys should be done on a grid system set up with a base line running east-west through the center of the property and with profiles at 400' intervals extending to the north and south boundaries.

Magnetic, electromagnetic and scintillometer surveys as outlined below are recommended.

Line Cutting:			
Base Line	1.25 miles)		
Profiles	20.00 miles) @ \$55/mile		\$1,306.25
Tie lines	2.50 miles)		
Magnetic Survey	21.25 miles @ \$70/mile		1,487.50
Electromagnetic Survey	20.00 miles @ \$70/mile		1,400.00
Gamma Ray Spectrometer Survey	20.00 miles @ \$70/mile		1,400.00
Mobilization			250.00
Contingency @ 10%			<u>584.37</u>
	Total		<u><u>\$6,428.12</u></u>

In addition to the geophysical surveys described, a thorough geological survey of all the land area is recommended. This work would have to be done in the spring after the snow has melted.

The cost of this work is estimated as follows:

Geological mapping	500.00
Mobilization and boat rental	350.00
Room & board @ \$10/day for 10 days	<u>100.00</u>
	950.00
Contingency 10%	<u>95.00</u>
	<u><u>\$1,045.00</u></u>

The total cost of the exploration program is estimated at \$7,473.12.

CONCLUSIONS AND RECOMMENDATIONS

The Pick Mines Ltd. Agnew Lake property warrants exploration programs for uranium and copper-nickel. This exploration will consist of geophysical surveying and geological mapping.

The exploration program outlined above is recommended.

Respectfully submitted,

A. C. A. HOWE INTERNATIONAL LIMITED,


James E. Tilsley, F.G.A.C.


DATED AT TORONTO, ONTARIO THIS 19th DAY OF DECEMBER, 1967.

CERTIFICATE

I, James E. Tilsley, of the Village of Cooksville, in the County of Peel, in the Township of Toronto, in the Province of Ontario, hereby certify that:

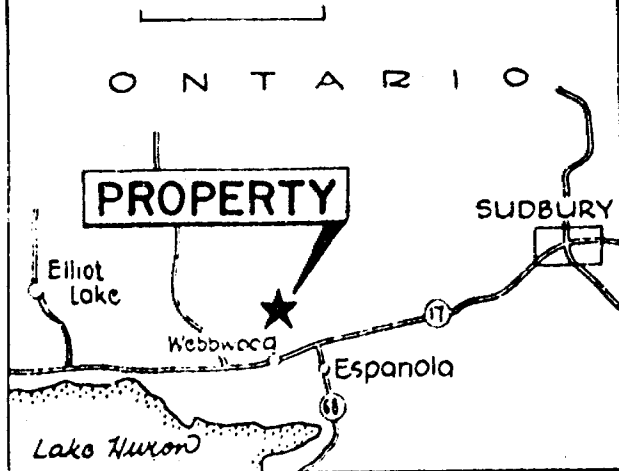
1. I am a Geologist and reside at 3219 Ibbetson Crescent, Cooksville, Ontario.
2. I am a graduate of Acadia University with the degree of B.A., 1959, and have practiced my profession since that time.
3. I am a Fellow of the Geological Association of Canada.
4. I have not, nor do I expect to receive, any direct or indirect interest in the properties or securities of Pick Mines Ltd.
5. This report is based on a personal knowledge of the area and on a study of government maps and reports.

DATED AT TORONTO, ONTARIO THIS 19th DAY OF DECEMBER, 1967.


James E. Tilsley, F.G.A.C.

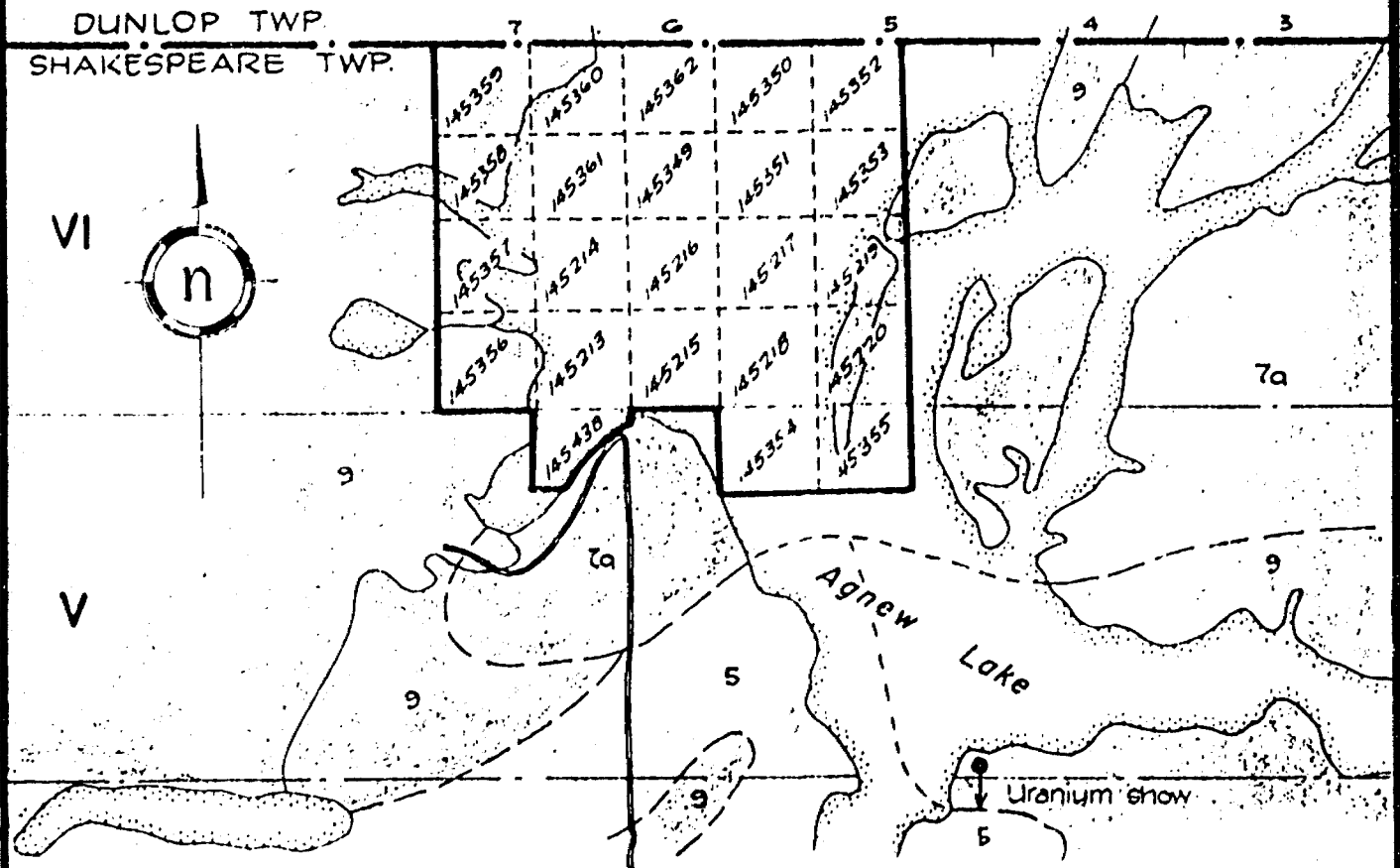
KEY MAP

Scale: 1 inch = 28 miles



LEGEND

- 9 **POST HURONIAN**
basic intrusives, gabbro
diabase
- 7a **HURONIAN - Bruce Group**
Mississaugi formation
- 5 **PRE-HURONIAN**
Older granites, gneiss



GEOLOGY & CLAIMS LOCATION, GROUP 2

PICK MINES LTD.

SHAKESPEARE TWP, DIST OF SUDBURY

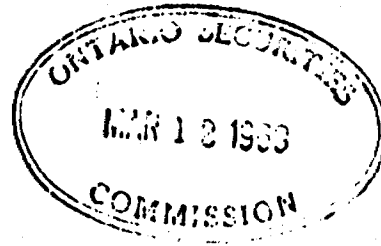
SCALE: 1 IN. to 1/2 MI.

J. E. Talsberg



41105SW0056 SHAKESP32C1 SHAKESPEARE

020



REPORT ON
PICK MINES LTD.
SHAKESPEARE TWP. PROPERTY
GROUP 1
SUDBURY MINING DIVISION
ONTARIO

BY

A. C. A. HOWE INTERNATIONAL LIMITED

J. E. TILSLEY
F.G.A.C.

REPORT NO. 100
TORONTO, ONTARIO.

DECEMBER, 1967

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MAPS		

SUMMARY

Pick Mines Ltd. has acquired a group of eight unpatented mining claims located in lots 7 and 8, Concessions V and VI, Shakespeare Township, Sudbury Mining Division, Ontario.

Six of the claims are underlain by basic intrusive rock in which copper and copper-nickel occurrences are known in the area.

Two claims are partially underlain by Mississagi quartzites, host for uranium deposits in the Blind River-Elliot Lake area.

A program of magnetic and electromagnetic surveying to cover the entire property and in addition a gamma ray spectrometer survey on the two claims underlain by Mississagi quartzites is recommended.

The cost of this program is estimated at \$2,643.25.

PROPERTY

The property consists of eight unpatented mineral claims located in Shakespeare Township, Sudbury Mining Division, Ontario.

The claims are in good standing until September 26th, 1968 and are more fully described below: -

<u>Claim No.</u>	<u>Lot</u>	<u>Concession</u>	<u>Remarks</u>
146082 ✓	NW $\frac{1}{4}$ N $\frac{1}{2}$ 7	V	Water only
146083 ✓	SE $\frac{1}{4}$ N $\frac{1}{2}$ 8	V	
146084 ✓	NE $\frac{1}{4}$ N $\frac{1}{2}$ 8	V	
146085 ✓	SW $\frac{1}{4}$ N $\frac{1}{2}$ 8	V	
146086 ✓	NW $\frac{1}{4}$ N $\frac{1}{2}$ 8	V	
146087 ✓	SW $\frac{1}{4}$ S $\frac{1}{2}$ 8	VI	
146088 ✓	SE $\frac{1}{4}$ S $\frac{1}{2}$ 8	VI	
146093 ✓	SW $\frac{1}{4}$ N $\frac{1}{2}$ 7	V	Water only

Claims 146083 to 146088 incl. are contiguous. Claims 146082 and 146093 adjoin one another but are separated from the main group by about 400'.

LOCATION

Approximate co-ordinates: 46° 21' 30" N
81° 52' 30" W

The property is located in lots 7 and 8, Concession V and VI, Shakespeare Township, Sudbury District, Ontario.

The claims lie six miles due north of the village of Webbwood which is located on Highway No. 17, 46 miles west of Sudbury.

ACCESS

The south boundary of the land claims can be reached by gravel road from Webbwood, a distance of 7.0 miles.

The Trans Canada Highway (Ont. No. 17) and the main C.P.R. Transcontinental line pass through Webbwood.

TOPOGRAPHY

The land portion of the claims is rough, the ground being hilly with vertical or nearly vertical faces rising 20' to 50'. The elevation of Agnew Lake is 857' AMSL. The hills rise to 150' - 200' above the lake level.

CLIMATE

The climate is temperate, tending toward sub-arctic.

The mean summer temperature is 65.3° F (July) and the mean winter temperature is 8.4° F (January). Summer maximums up to 99° F and winter minimums of -47° F have been recorded in the area.

Total annual precipitation is 31.60 inches of water, made up of 23.80 inches of rain and 78 inches of snow (7.8 inches H₂O Equiv.).

POWER

Two power lines of Ontario Hydro Commission pass about four miles south of the property. These are major transmission lines between Sudbury and Blind River. One line carries 230,000 V, 3 phase 60 cycle current, the other is 115,000 V, 3 phase 60 cycle.

HISTORY

Prospecting for and development of mineral resources has been done in Shakespeare Twp. since 1900. In 1903 - 1905 a gold mine was operated in lot 5, Concessions 1 and 2. Copper and copper-nickel prospects have been investigated in lot 2, Concession III and lots 1 and 2 Concessions V respectively.

Exploration for uranium was done during 1952 to 1957.

During 1953 - 54 exploration of local quartz pebble conglomerate beds in Mississagi quartzite located in lot 4, Concession 5 and lot 5, Concession 6 was done. Trenching, geological and geophysical surveys and 3 drill holes were completed.

Values ranging from 0.03% U_3O_8 and 0.05% ThO_2 to 0.56% U_3O_8 and 0.09% ThO_2 across thickness of 0.75 to 2.0 feet were reported.

In 1956-1957 uranium bearing quartzite beds were cut by drilling carried out in lots 8 and 9, Concession 1. Basement was not reached by any of the four holes completed. The 1.5 foot quartzite bed mentioned above contained 0.063% U_3O_8 .

In 1966 uranium values up to 9 lbs. U_3O_8 per ton across 4 feet are reported from shear zones in Mississagi quartzite. The shear zones are reported to be up to 30' in width. This work was done in the north east part of the township.

There is no record of work being performed on the ground held by Pick Mines Ltd.

GENERAL GEOLOGY

The township has not yet been mapped in detail. The geology in general terms is as follows: Shakespeare township is underlain by Precambrian rocks which are subdivided as shown in Table 1:

TABLE 1

<u>AGE</u>	<u>ROCK TYPES</u>
Recent	Stream gravels and fine sediments
Pleistocene	Glacial drift, lacustrine clays
Post Huronian	Basic Intrusives: gabbro and diorite
Huronian	Bruce group - Mississagi formation quartzite and pebble conglomerate
Pre Huronian	Older granitic rocks - gneiss (granite) basic intru- sives

The older granitic rocks underlie most of the western 2/3, as well as the north half of the south-east quarter of the township. The south half of the SE quarter of the township is underlain by Huronian sediments which have been intruded in part by Post Huronian basic rocks.

The north half of the township shows mainly basic intrusives cutting Mississagi quartzites. The sediments strike generally north-north east and dip about 30° to the north.

The intrusives generally trend parallel to the strike of the sediments.

GEOLOGY OF THE PROPERTY

The six land claims are underlain by basic intrusives, mainly diabase and gabbro, probably of Post Huronian age.

The water claims appear to be underlain by both basic intrusives and Mississagi sediments. The contact between the intrusives and the sediments runs in a north-easterly direction through the claims.

EXPLORATION PROGRAM

The land claims should be covered by magnetic and electromagnetic surveys, since copper or copper-nickel deposits could occur in the basic intrusives.

The two water claims should also be covered by the magnetic and electromagnetic survey and be covered as well by a gamma ray spectrometer survey.

The surveys are outlined below:

Line cutting - (land Claims)

Base line and Tie lines	1.5 miles @ \$65/mile	97.50
Profiles	6.0 miles @ \$65/mile	390.00

(water claims)

Base line	0.5 miles @ \$55/mile	
Profiles	1.5 miles @ \$55/mile	110.00

Magnetic Survey	9.5 miles @ \$70/mile	665.00
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Electromagnetic Survey	7.0 miles @ \$70/mile	490.00
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Gamma Ray Spectrometer Survey	1.5 miles @ \$70/mile	<u>105.00</u>
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1,357.50

Contingency 10%		<u>185.75</u>
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Total		<u><u>\$2,043.25</u></u>
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Mobilization charges can be avoided if the geophysical surveys are carried out on this property at the same time as surveys recommended for the adjacent Pick Mines Ltd. Agnew Lake property.

The claims should be mapped geologically as soon as the snow has melted in the spring. The cost of the geological work, assuming that it is done at the same time as the mapping of the adjacent claim group mentioned above is \$600.00.


CONCLUSIONS AND RECOMMENDATIONS

The Pick Mines Ltd. property described above should be explored by geological mapping and geophysical surveys as recommended in the body of this report.

The cost of the recommended exploration is \$2,643.25.

Respectfully submitted,

A. C. A. HOWE INTERNATIONAL LIMITED,


James E. Tilsley, F.G.A.C.

DATED AT TORONTO, ONTARIO THIS 10th, DAY OF DECEMBER, 1967.

CERTIFICATE

I, James E. Tilsley, of the Village of Cooksville, in the County of Peel, in the Township of Toronto, in the Province of Ontario, hereby certify that:

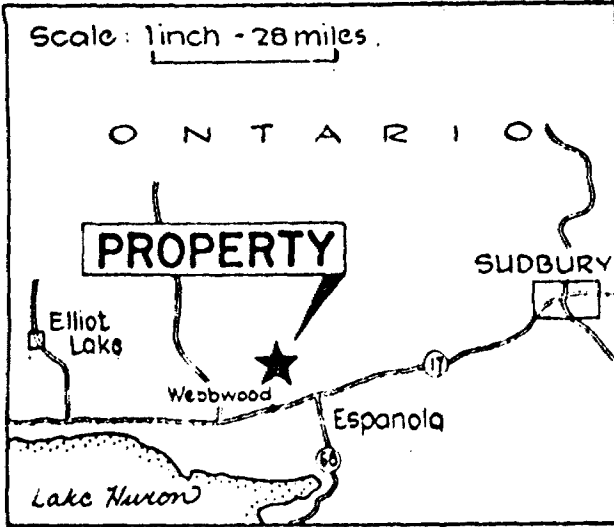
1. I am a Geologist and reside at 3219 Ibbetson Crescent, Cooksville, Ontario.
2. I am a graduate of Acadia University with the degree of B.A., 1959, and have practiced my profession since that time.
3. I am a Fellow of the Geological Association of Canada.
4. I have not, nor do I expect to receive, any direct or indirect interest in the properties or securities of Pick Mines Ltd.
5. This report is based on a personal knowledge of the area and on a study of government maps and reports.

DATED AT TORONTO, ONTARIO THIS 19th DAY OF DECEMBER, 1967.


James E. Tilsley, F.G.A.C.

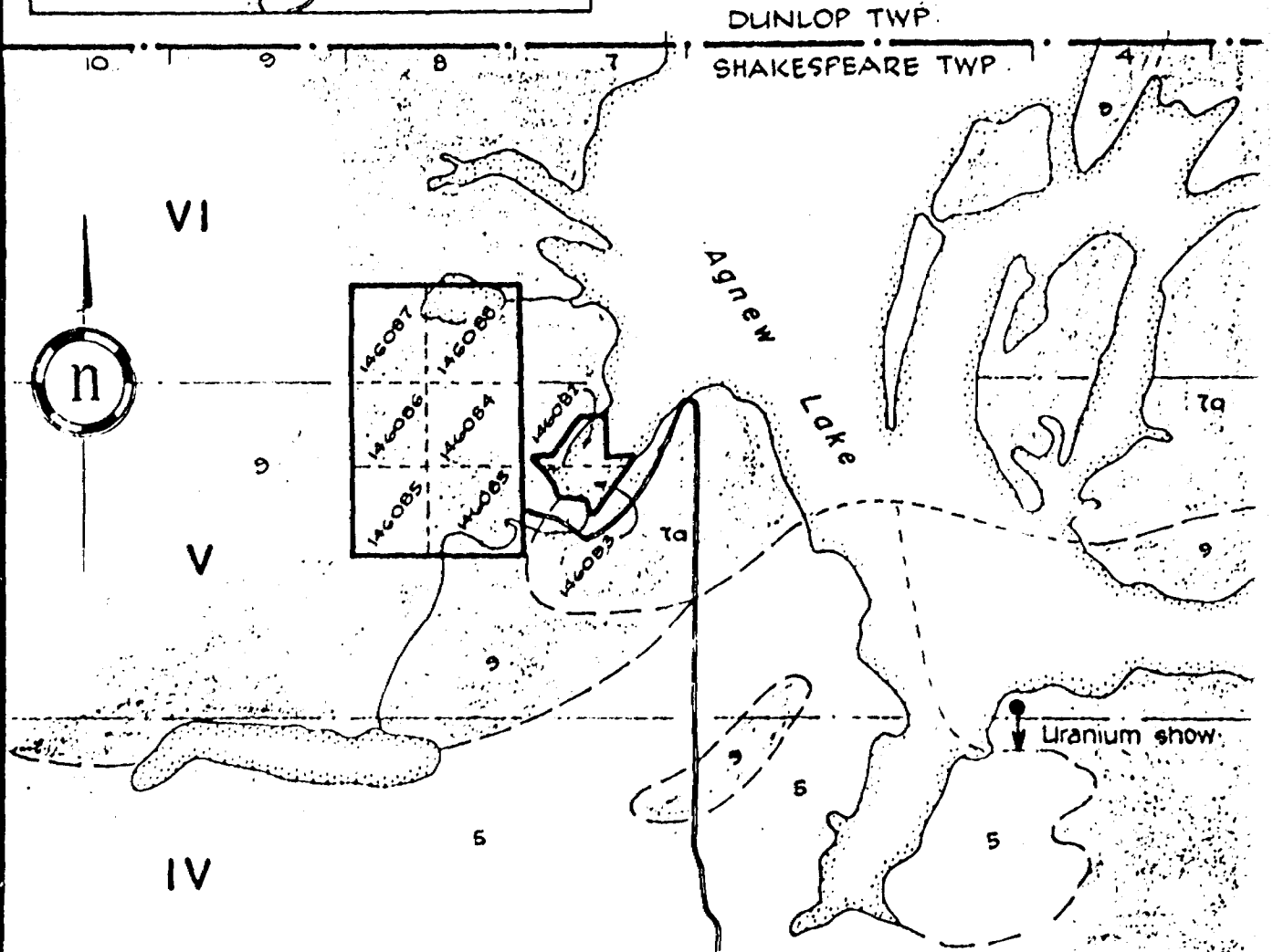
KEY MAP

Scale: 1 inch = 20 miles.



LEGEND

- 9- [9] POST HURONIAN
basic intrusives, gabbro
diabase
- 7a- [7a] HURONIAN - Bruce Group
Mississauga formation
- 5 [5] PRE-HURONIAN
Older granites, gneiss



GEOLOGY & CLAIMS LOCATION, GROUP 1

PICK MINES LTD.

SHAKESPEARE TWP, DIST OF SUDBURY

SCALE: 1 IN. = 1/2 MI.

J. P. Pickles

Source: O.D.M.map ~ M1104

A.C.A. HOWE INTERNATIONAL LTD.














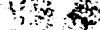

SHAKESPEARE

DISTRICT OF
SUDBURY

SUDBURY
MINING DIVISION


SCALE: 1-INCH = 40 CHAINS


LEGEND

- PATENTED LAND 
- CROWN LAND SALE 
- LEASES 
- LOCATED LAND 
- LICENSE OF OCCUPATION 
- MINING RIGHTS ONLY 
- SURFACE RIGHTS ONLY 
- ROADS 
- IMPROVED ROADS 
- KING'S HIGHWAYS 
- RAILWAYS 
- POWER LINES 
- MARSH OR MUSKEG 
- MINES 
- CANCELLED 

NOTES

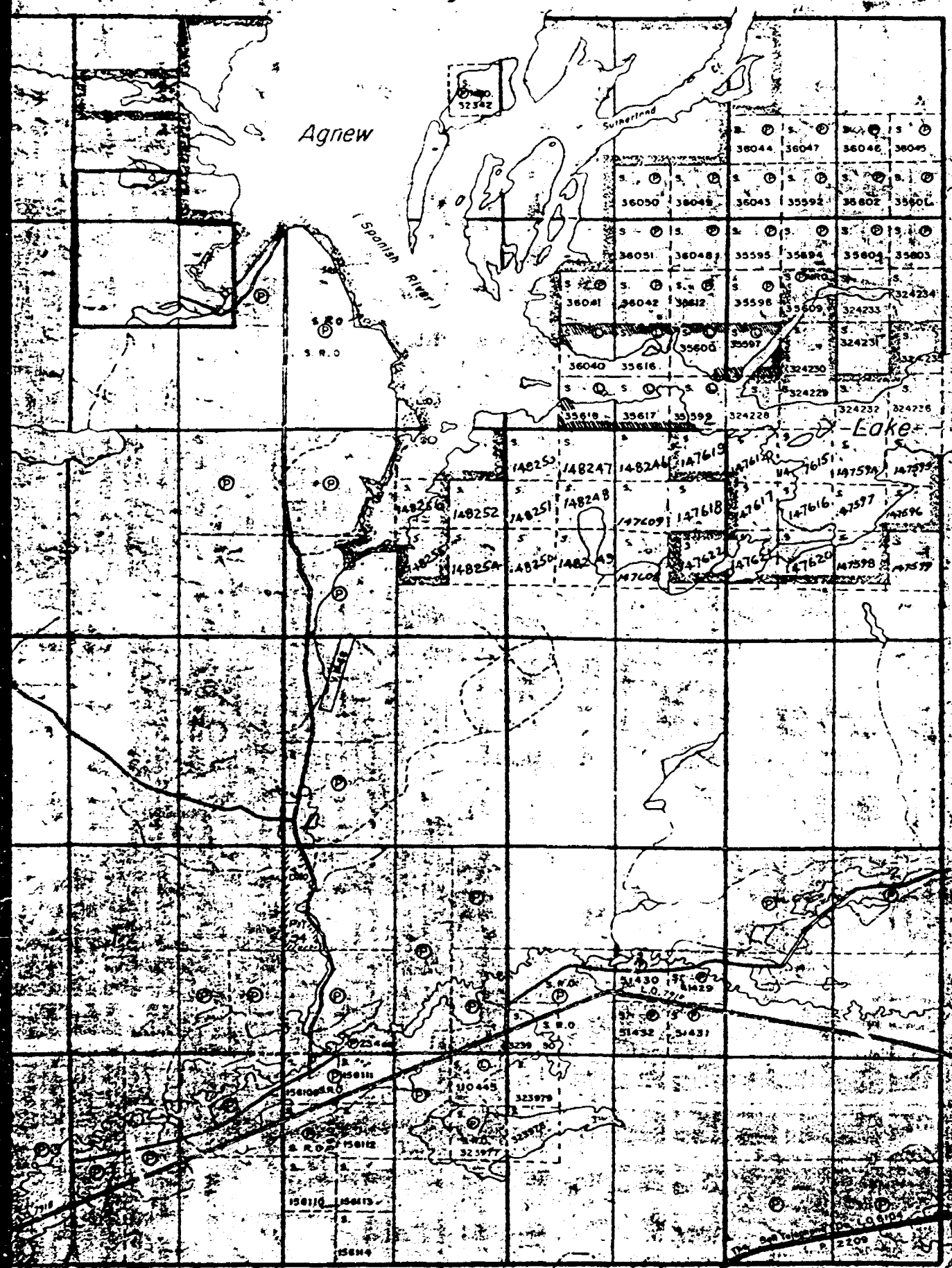
400' SURFACE RIGHTS RESERVATION AROUND ALL LAKES AND RIVERS.

AREA SHOWN THUS  W.P.L. NO. 269 MINING CLAIMS WITHIN THIS AREA ARE FOR MINING RIGHTS ONLY.

AREA SHOWN THUS  M.R.O.

MINING LANDS
DATE OF ISSUE
APR 4 1953
MINISTRY
OF NATURAL RESOURCES

PLAN NO. M 1104



VI

V

IV

III

II

Baldwin Twp. (M.645)

Agnew

Spanish River

Lake

15816 15817

15045 15046

32579 32580

2209 2210