



42E06NW0002 10 GATHERING LAKE

010

AREA OF GATHERING LAKE REPORT NO. 10

This file contains work performed by Standard Lithuim Corp. on claim:

TB.69354	Hole # 1	Aug-Sept/55
	2	Aug-Sept/55
	3	Sept/55
	4	Sept/55
	5	Sept/55
	6	Sept/55
	7	Sept/55
	8	Sept/55
	9	Sept/55
	10	Sept/55
	11	Sept/55
	12	Sept/55

*Trapnarrow Lake Area  
M 1937*

*File  
4-12-238*

STANDARD LITHIUM CORPORATION

STANCAN URANIUM CORPORATION

Blind River Camp  
Blind River Ontario

REPORT ON THE RESULTS OF DIAMOND DRILLING

NELSON OPTION, GATHERING LAKE, ONTARIO

INTRODUCTION

During July, 1955 the spodumene-bearing pegmatite near Gathering Lake on ground held by Eric Nelson of Port Arthur was inspected by Drs. Steenland, Robertson and Brophy. Options were acquired on the 12 claims of the Nelson group and 51 surrounding claims, and a contract arranged with Fathom Drilling Ltd. of Red Lake, Ontario for 3,000 feet of AX drilling. H. L. Sobel and R. C. Riley were on the ground from August 3 to September 14 to supervise the drilling and prospect the properties for other mineralized pegmatites.

Results of the early phase of drilling were extremely disappointing, and since no other mineralised pegmatites had been discovered it was decided to discontinue the drilling program after the completion of 12 holes totalling 1,203 feet.

It is recommended that the options on both groups of ground be dropped.

GEOLOGY

Pre-Cambrian schist and granite underlay the region and apparently were equally attractive as host rocks for the pegmatite dikes. Outcrops are rare and most often small (see fig. 1). The schist is a soft rock composed of chloritized biotite and minor fine-grained quartz. Locally, incipient banding and coarsening of grain are present, giving the rock a gneissic appearance. The granite, intrusive into the schist, is composed of feldspar, quartz, and biotite. It is a very coarse-grained, fresh appearing rock.

Because of the few outcrops it is difficult to determine regional structure. The foliation of the schist is variable -

strikes were measured in many directions and dips vary from  $50^{\circ}$  to vertical. The granite is a massive rock except for slight to moderate jointing. Joints occur in many directions, but the predominant trend is  $N35^{\circ}E - N45^{\circ}E$ , with dips varying from  $35^{\circ}$  West to  $35^{\circ}$  East. These northeast-trending joints are the structural control of the pegmatites.

The majority of the pegmatite dikes occur in the southeast portion of the Nelson option in a broad zone trending northeast (see fig. 1). Probably within this zone many more dikes exist beneath the cover. Individual dikes vary in width from 10 to 100 feet and are as much as 800 feet long. They strike northeast and dip southeast or northwest at various angles. Where schist is the host rock the dikes tend to be more irregular and in places follow the schistosity.

The spodumene-bearing dike occurs in a second, smaller, northeast-trending zone near the northwest corner of the Nelson group. The dike strikes about  $N8^{\circ}E$ , dips  $65-85^{\circ}$  to the West and is definitely controlled by a joint. It is unique not only in being the only mineralised dike, but also because it is the only dike found on the property with a northerly strike. For lack of more evidence it is difficult to speculate about the geological significance of these facts. In prospecting the claims attention was focused on searching for dikes or jointed areas with a northerly strike.

The pegmatite dikes are of the simple variety being unzoned and consisting principally of twinned white feldspar up to 2 feet long, with minor quartz and muscovite. Locally the feldspar and muscovite are orientated but no persistent pattern was observed.

The mineralised dike is at the western base of a high hill held up by an easterly dipping barren pegmatite. A thin border of granite is along the west wall of the dike, and the immediate area to the west is covered. The exposed strike length of the dike is about 120 feet with true thickness ranging from 12 to 14 feet. Pale green spodumene crystals up to 8 inches long occur along the west wall in an irregular zone 1 to 4 feet wide. The grade varies greatly but probably is 5-10% spodumene for the mineralised portion of the dike. Other minerals found in small quantities are tourmaline, apatite, small garnets, and possibly a few beryl crystals.

#### DRILLING (See fig. 2)

Twelve holes, the deepest being 192 feet, were completed with a total footage of 1,203 feet. One hole was inclined  $30^{\circ}$ , the

others 45°. Hole 10 was stopped at 64 feet in overburden as it is probable that at this depth the hole had passed over the eroded dike.

Holes 1, 3, 4 and 6 cut thick intersections of barren pegmatite in the covered area west of the dike. Two possibilities exist regarding these intersections: Either the pegmatite under the cover is contiguous with and essentially part of the exposed dike, and the granite and schist cut along the west wall of the dike are inclusions; or, more likely, the pegmatite under the cover is another dike dipping flatly to the east as does the large dike to the east of the showing. The intersections of holes 1 and 2 support the latter possibility, and suggest that the mineralised dike may be cut off by another, barren dike.

The dike changes character rapidly with depth. Thickness decreases from about 13 feet on the surface to 10-11 feet at 60-foot depth. Texturally it grades downward through pegmatoid rock into a fine-grained sugary aplite. Very few spodumene crystals were cored-pegmatite rock; where the dike is aplitic no spodumene is present. Small green-blue apatite crystals, rare in the pegmatite, are abundant in the aplite.

### SAMPLING

Sixteen samples were split from the core, totalling more than 100 feet of pegmatite and aplite. Because of the obvious barren nature of the bulk of the rock, only 3 samples, considered representative of all the pegmatite and aplite cored, were selected for assay. These ran:

	<u>Hole No.</u>	<u>Footage</u>
0.06% Li over 15.0 feet	4	25.0-40.0
0.18 " " 5.0 "	6	40.0-45.0
0.36% " " 5.8 "	7	64.0-69.8

In the district, 1.0% Li is considered marginal ore.

The remaining 13 samples will be retained at the Blind River office.

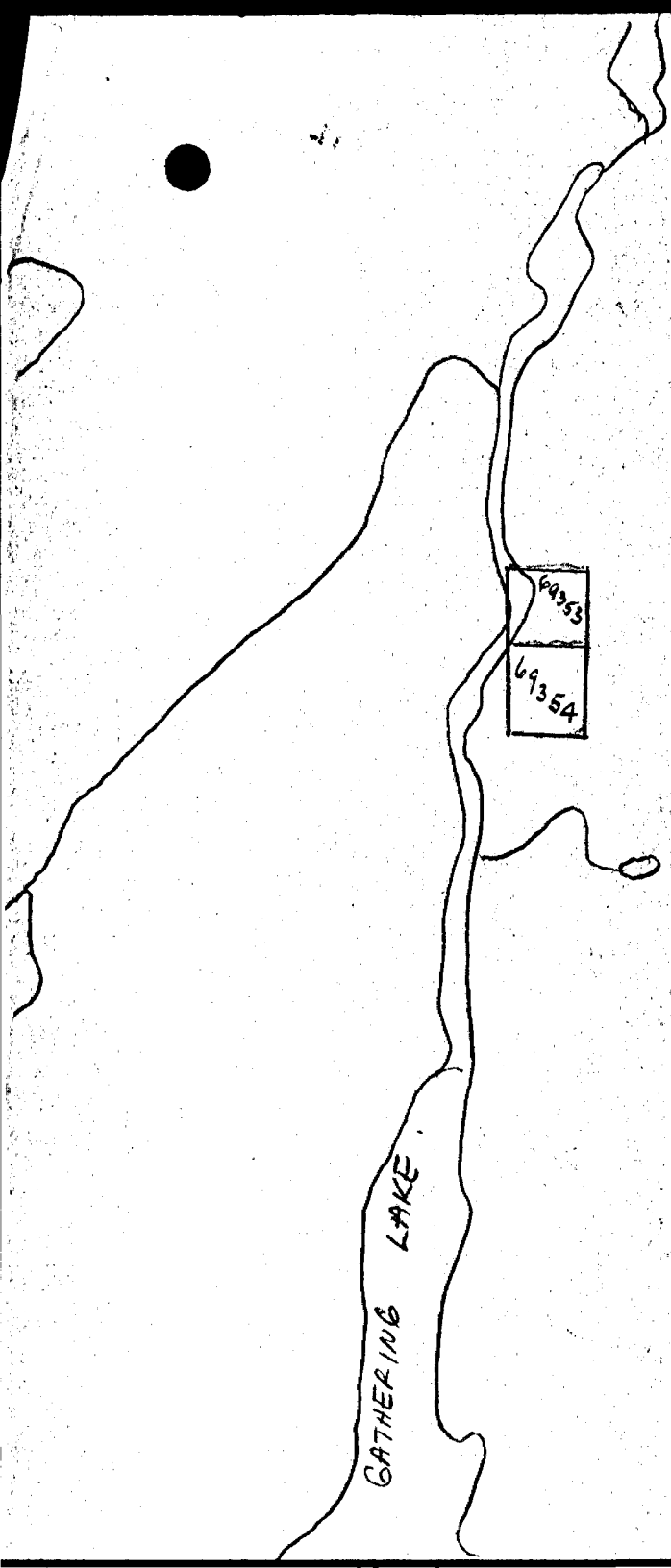
### CONCLUSIONS

The drilling results conclusively show that the spodumene-bearing pegmatite rapidly changes in depth to an aplite with resulting decrease in grade. The pegmatite also becomes thinner with depth and possibly is cut off completely by another southeasterly-dipping dike. The pegmatite intersected under the cover to the

west, whether part of or unrelated to the mineralised dike, is essentially barren and of no commercial interest.

As the drilled dike is not of economic interest, and as no other mineralised dike was found on the property, it is recommended that both options be allowed to lapse.

HARVEY L. SOBEL



GATHERING  
LAKE AREA  
M2861

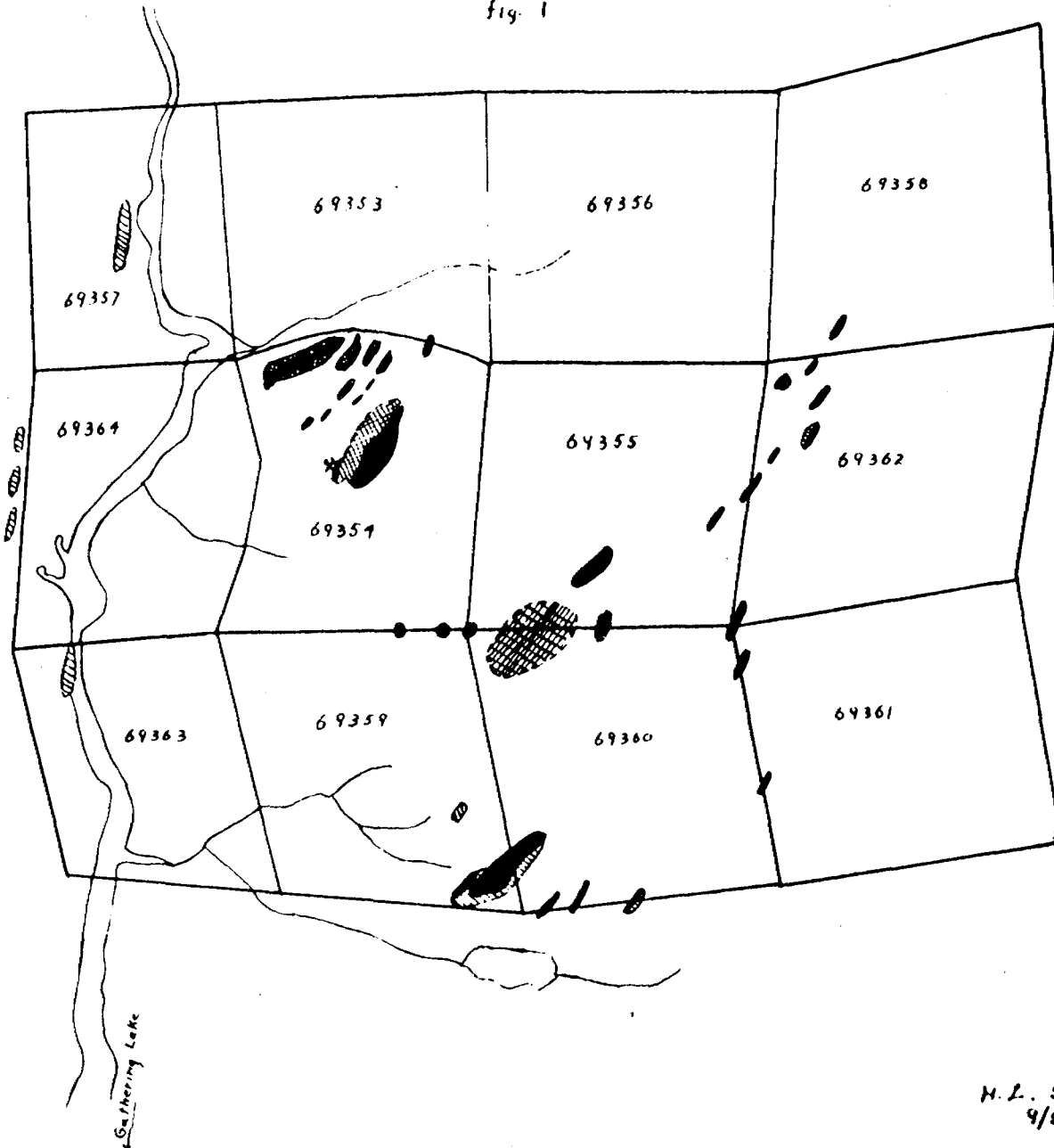
MARGARET L.  
Lake

Sketch map showing claims and  
 outcrops, Nelson option, Gathering Lake  
 Thunder Bay Mining District, Ontario  
 Stancan Uranium Corp. Standard Lithium Corp.

- ▬ Pegmatite
- ✕ Spodumene-bearing pegmatite
- Granite
- ▨ Schist

1 in. = 1200 feet

fig. 1



H. L. Sobel  
 4/55

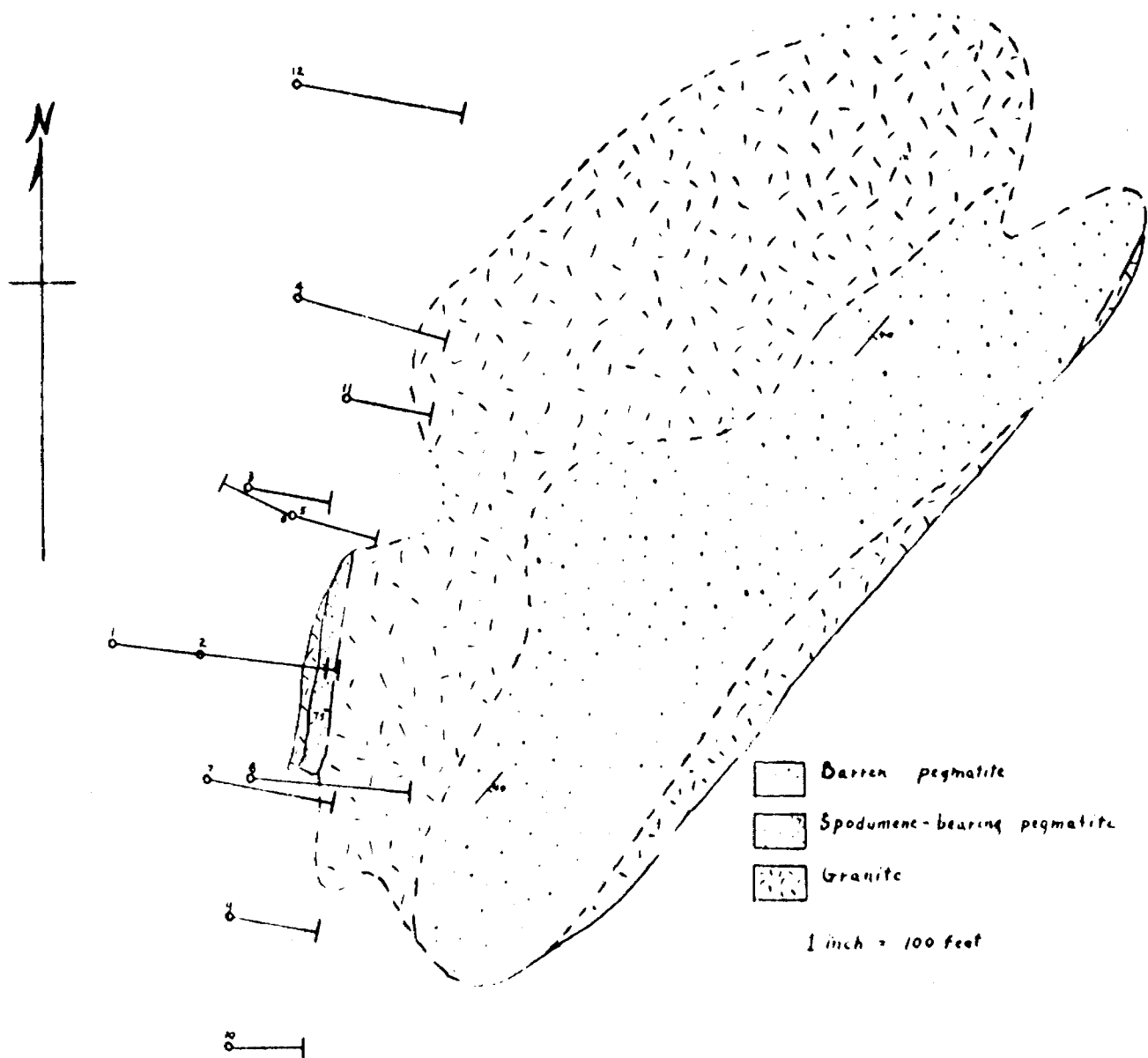


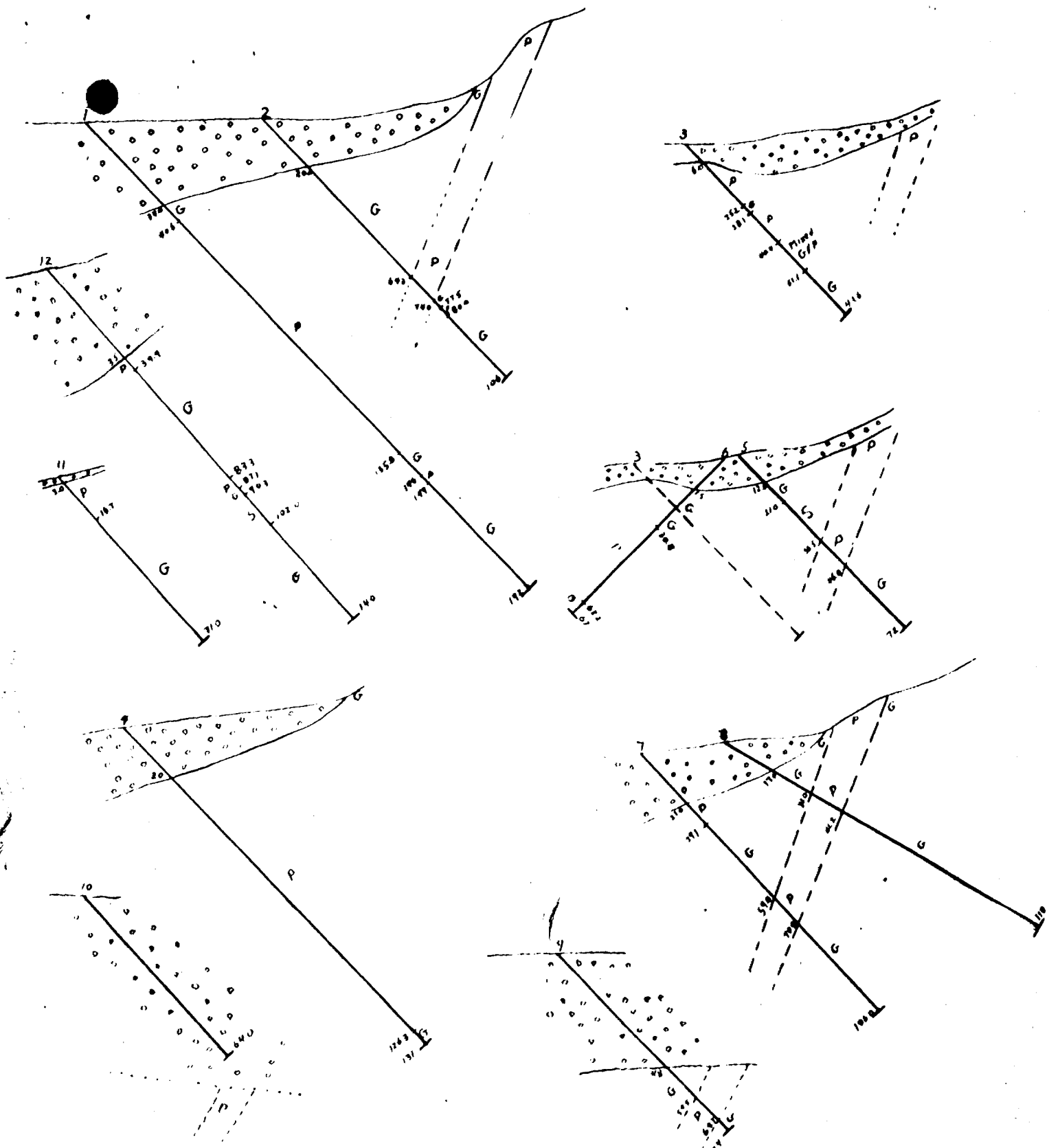
fig 2

Location and horizontal projection of diamond drill holes Nos. 2-12, claim TB 64354  
 Nelson Option, Gathering Lake, Thunder Bay Mining District, Ontario

Standard Lithium Corp.  
 Stancan Uranium Corp.

M.L.S.  
 Sept 1955





- Overburden
- P Pegmatite
- G Granite
- S Schist

1" = 40 feet  
 Looking approx N10E

Sections thru drill holes 1-12, Nelson Option  
 Gathering Lake, Ontario

Stanco Uranium Corp - Standard Lithium Corp.

LOGS OF DIAMOND DRILL HOLES 1-12, NELSON OPTION,  
GATHERING LAKE, CLAIM TB 69354. CORE SIZE: AX.  
DRILLED FROM AUGUST 19 - SEPTEMBER 12, 1955

Hole 1

Location: 123 feet west of west contact of spodumene-bearing  
pegmatite.

Inclination: 45°  
Bearing: S83E  
Total depth: 192 feet  
Core Recovery: 97%

- 
- 0-34 Casing.
- 40.6 Biotite granite, coarse grained, gray, unaltered; moderately jointed at 90° to core axis. Biotite content 10-15%, not oriented contact with pegmatite below at 30° to core axis.
- 135.8 Pegmatite. Predominately twinned white feldspar with minor quartz and muscovite. The muscovite is most abundant in the center of the pegmatite. Small green-blue apatite crystals up to 1/8" disseminated throughout, but most abundant near the granite contacts - total content less than 0.1% of rock.
- 55.0-56.0 - granite remnant
- 57.9 - small spodumene crystals up to 1/4" long
- 127.5-127.7 - Several dark green crystals, 1/8" long. Probably apatite.
- 146 Granite (as above). Contact with pegmatite below hazy - approximately at 60° to core axis.
- 139.5 - 2" pegmatite at 30° to core axis.
- 149 Pegmatite. Very scarce mica and quartz. Contact with granite below at 55° to core axis. Close jointing at 30° to core.
- 192 Granite.

*J. A. Nelson*

Hole 2

Location: 53 feet east of Hole #1.  
Inclination: 45°  
Bearing: S83E  
Total depth: 106  
Core Recovery: 96%

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- 0-20          Coring.
- 64.3          Granite, typical. Slightly jointed at 50° to core.  
33.0 - 33.4 - pegmatite.  
40.8 - 41.0 - pegmatite. Contact at 50° to core.  
59.7-59.9    - pegmatite.  
Contact with pegmatite below at 50° to core.
- 74.0          "Pegmatite". Predominately aplite with little mica  
becoming pegmatoid with abundant coarse muscovite at  
the basal sector.  
Small apatite crystals disseminated throughout, not  
exceeding 0.5% of total. Few small tourmaline crystals.  
69.0 - spodumene crystal 1" long.
- 77.5          Granite.
- 80.0          Mixed rock. Vitreous quartz and granite, contact with  
one another at 10% to core axis. Few apatite crystals.  
78.0 - radiating aggregate of small greenish crystals  
(spodumene?).
- 106          Granite, massive.

*J E Nelson*

Hole #3

Location: 100 feet N25E of Hole #2  
Inclination:  $-45^{\circ}$   
Bearing: 880E  
Total depth: 70  
Core Recovery: 100%

- 
- 0-6           Casing.
- 25.2           Pegmatite. White feldspar with little quartz and muscovite except at:  
10.7 - 12.5 - Massive muscovite back at  $25^{\circ}$  to core axis.  
9.5, 10.5, 13.3 - clusters of green apatite crystals  
          small green apatite crystals disseminated throughout.  
          Less than 0.1% of total contact with granite below at  $50^{\circ}$  to core.
- 28.1           Granite, typical
- 40.4           Pegmatite - white feldspar with minor quartz and muscovite evenly distributed.  
28.7 - Spodumene crystal  
37.0-38.2 - Streaks of minute, pink garnet crystals at  $59^{\circ}$  to core contact with granite below at  $20^{\circ}$ - $30^{\circ}$  to core.
- 43.6           Granite. Contact with pegmatite below at  $25^{\circ}$  to core.
- 47.0           Pegmatite - brittle muscovite.  
46.5 - Spodumene crystal
- 49.2           Granite, typical
- 51.1           Pegmatite. Few small pink garnets.  
          Contacts above and below at approximately  $25^{\circ}$  to core.
- 70.0           Granite. Slightly jointed at  $35^{\circ}$  to core.  
54.0 - 2" pegmatite.

*J E Nelson*

Hole #4

Location: 115 feet, N15E of Hole #3  
Inclination: 45°  
Bearing: S75F  
Total depth: 131  
Core Recovery: 98%

- 0-20 Casing
- 126.3 Pegmatite. White feldspar with minor quartz and muscovite. Muscovite most abundant in central portion. Close joints at 40-70° to core 22.8 - 24.3 granite at 10° to core axis.  
27.5, 32.5, 70.0-71.3 - Small apatite crystals in aplitic rock.  
No spodumene apparent  
Contact with granite below at 30° to core axis.
- 131 Granite, typical

*J. E. Nelson*

Hole #5

Location: 31 feet SoOE from Hole #3  
Inclination: 45°  
Bearing: S75E  
Total depth: 72 feet  
Core Recovery: 100%

- 0-12 Casing
- 21.0 Granitite, typical.  
jointed at 20° and 40° to core axis  
13.8 - 2" pegmatite at 45° to core
- 36.5 Chlorite schist. Dark green, low quartz content, soft and weathered. Locally becomes a low-grade gneiss. Schistosity at 13° to core.  
22.3 - 22.7 - pegmatite in schistosity  
24.2 - 26.2 - granite in schistosity  
contacts with above and below approximately parallel to schistosity.
- 46.0 Pegmatite. Little quartz and muscovite  
Few small disseminated pink garnets  
No spodumene apparent  
39.3-42.7 - granit remanant, at 5° to core axis  
Contact with granite below at 45° to core
- 72.0 Granite, typical  
49.8-50.8 - pegmatite - contact at 10° to core  
51.6 - 52.4 - " " " " " "

*J. E. Nelson*

Hole #6

Location: 29 feet S60E from Hole #3 (same set-up as Hole #5)  
Inclination: 45°  
Bearing: N65W  
Total depth: 67 feet  
Core Recovery: 100%

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- 0-15 Casing
- 30.8 Granite, typical  
jointed at 50° to core  
18.0 - 19.0 - pegmatite at 20° to core  
27.7 - 3" pegmatite at 30° to core
- 62.2 Pegmatite. White feldspar with minor quartz and muscovite  
31.8 - cluster of anheadral-green apatite crystals.  
32.0-33.5 - massive muscovite hook at 13° to core  
41.5-42.1 - single spodumene crystal approximately parallel to core  
43.3 - small spodumene crystal  
61.0 - cluster of anheadral apatite crystals  
contact with granite below at 50° to core
- 67.0 Granite - typical  
few joints at 5° to core  
63.3-65.0 - pegmatite

*J E Nelson*

Hole #7

Location: 70 feet S4E from Hole #2  
Inclination: 45°  
Bearing: S80E  
Total depth: 106 feet  
Core Recovery: 100%

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- 0-21 Casing.
- 29.1 Pegmatite. White feldspar with little quartz and muscovite. Slightly weathered.  
No spodumene apparent.
- 59.0 Granite, typical Few joints at 45° to core  
contact with pegmatite below at 60° to core
- 70.0 "Pegmatite". Predominately white, fine grained, sugary apatite with little mica. Locally pegmatoid with coarse muscovite. Small green-blue apatite crystals disseminated throughout.  
Granite, typical, massive.

*J E Nelson*

Hole #8

Location: Due east, 26 feet from Hole #7  
Inclination: 30°  
Bearing: 88SE  
Total depth: 110 feet  
Core Recovery: 100%

0-17 Casing

41.2 "Pegmatite". Predominately sugary aplite. Locally pegmatoid with coarse muscovite. Small green apatite crystals disseminated throughout. Less than .5% of total.  
36.0-37.5 - 12 or more small spodumene crystals - up to 1/2" long. This unit rich in pale green sericite(?).

110 Granite, typical. Few joints at 45° to core.

*J E Nelson*

Hole #9

Location: 82 feet, S10W from Hole #8  
Inclination: 45°  
Bearing: S80E  
Total depth: 74.0  
Core Recovery: 100%

0-48 Casing

59.5 Granite, typical. Few joints at 50° to core axis. Contact with pegmatite below at 60° to core.

69.7 "Pegmatite". Mixed pegmatite with coarse mica, and white sugary aplite with no mica. Few small apatite crystals disseminated in the aplite.  
63.0-63.5 - Four or more small spodumene crystals less than 1/2" long.

74.0 Granite.

*J E Nelson*

Hole #10

Location: 77 feet due south from Hole #9  
Inclination: 45°  
Bearing: Due East  
Total depth: 64 feet  
Core Recovery:

0-64 Overburden. Gravel, sand and boulders.

*J E Nelson*

Hole #11

Location: 74 feet, N25E of Hole #5  
Inclination: 45°  
Bearing: S80E  
Total depth: 71 feet  
Core Recovery: 100%

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0-2           Casing

16.7          Pegmatite. Coarse white feldspar with little muscovite  
and quartz. Upper section partly aplitic.  
No spodumene crystal apparent.

71            Granite, typical.

*J. E. Nelson*

Hole #12

Location: 126 feet due north of Hole #4  
Inclination: 45°  
Bearing: S80E  
Total depth: 140 feet  
Core Recovery: 98%

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0-35          Casing

39.9          Pegmatite. Coarse feldspar, little quartz and muscovite.  
Locally aplitic.  
No spodumene crystals apparent  
Contact with granite at 20° to core

83.3          Granite, typical

87.1          Pegmatite, typical, barren  
Contacts with granite at 30° to core

90.3          Granite, typical

102.0         Chlorite schist, with little quartz. Dark green. Fair  
schistosity at 15° to core.

140          Granite, with numerous small bands of sugary aplite in  
upper portion

*J. E. Nelson*