Crabtree #1
Burma PS-5
-6

PROGRESS REPORT

July, 1959

EXTRA COPY
O. M. E.
RECEIVED AUG 26 1959
DATE | INITIALS

Docket No. DMEA-4947

Contract No. Idm-E 1224

Roland F. Beers, Inc. Troy, New York

TABLE OF CONTENTS

GENERAL INFORMATION

AREA 3

AREA 4

LEASING ACTIVITY

DRILL LOGS
- Crabtree #1
- Burns PS-5
- Burns PS-6

MAP SECTION
- Geology map Area #3
- Geology map Area #4
- Crabtree Grid - Geology (showing pack-sack drill hole locations)
  - Magnetometer survey
  - Self-potential survey
  - Topographic
- Manks Grid - Geology
  - Magnetometer survey
  - Horizontal-loop EM survey
  - Self-potential survey
- Lease Location Map - Malcolm O. Hannan

GENERAL INFORMATION

Geological-geophysical investigations proceeded in Areas 3 and 4 in both Phases I and II. In Area 3, a greater proportion of time was spent in geologic evaluation of the prospect area (Phase I); Phase II work was restricted to a limited extension of the Crabtree grid. In Area 4, the only Phase II work was pack-sack drilling on the Burns grid. Phase I investigations were both reconnaissance and grid.

AREA 3

Phase I work in the Hope-Lincolnville prospect area was largely that of bedrock evaluation and tracing boulder trains. During the search of the area on the 1/4-mile grid, several areas of high potential were blocked out. A detailed search of each area was carried out during July. A geologic map of the area follows in this report. The geologic picture of the area is made considerably more complete and useful by this work. Further, one additional basic rock mass was discovered, that exposed on the south shore of Alford Lake. To date, it has not been possible to thoroughly investigate this occurrence. The occurrence does, however, contribute greatly to the significance of the geophysical anomalies lying under Alford Lake.

Phase II investigations were restricted to extending and filling in the Crabtree grid. The grid now extends to 12S along the baseline, with traverses to the lake on the east and westward to 500 feet. Geology, magnetics and self-potential were run on the new grid. Maps showing the results of these surveys form part of this report. High topographic relief on the west side of the grid prevented satisfactory operation of the horizontal-loop EM unit. Although data were taken, they are considered "not significant" and are not included herein. One pack-sack drill hole (EX size) was put down in peridotite outcrop at grid coordinates 0.1S + 0.65E. A detailed log of the core follows in this report (Crabtree #1). Examination of the core revealed a very low sulfide content, probably because of the effects of the numerous pegmatite stringers in the immediate area.

AREA 4

A reconnaissance geologic map of Area 4 is nearly completed, a part of the data incorporated therein being derived from mapping

on the prescribed 1,320-foot grid lines. A copy of the geologic map, showing progress to August 1st, forms part of this report. As a direct result of the mapping project, two peridotite discoveries were made during July. These have been designated "Manks" and "Newbert". With the taking of the Malcolm Hannan lease, the Manks prospect is completely leased (Manks, Cummings, Feyler and Hannan leases); negotiations are underway for the Newbert tract. Several other areas of basic rock accumulation are being investigated geologically, and attempts are being made to determine land ownership.

A reconnaissance grid was laid out on the Manks prospect. This grid is 1,600 feet long and 1,000 feet wide, with five traverse lines equally spaced at 400 feet. This grid was mapped geologically and surveyed with the magnetometer, electromagnetic unit and self-potential equipment. The high-tension transmission line angling across the grid interfered greatly with EM mapping; nonetheless, the data obtained are graphically presented on an attached map. Other accompanying maps show the results of the magnetic and self-potential surveys. It should be noted that the SP survey is referenced to 26N+5E on the Burns grid. There were no major anomalies mapped by any of the techniques; however, because of the relative abundance of basic rock outcrop, the grid area should be extended and the traverse spacing decreased to insure full evaluation of the area. Further, shallow, pack-sack drilling should be utilized to determine the nature of the outcropping basic rocks. Permission will be requested of the Field Team to advance this prospect to Phase II.

Pack-sack drilling on the Burns prospect constituted the only Phase II work in Area 4. Two shallow, EX-size holes were drilled on the peridotite outcrop at grid coordinates 0 + 0 (Burns PS-5 and PS-6). Results of the drilling are given in detailed drill logs which follow. The drilling showed that the peridotite extends to a very limited vertical depth and that it is probably concordant with the bedding of enclosing metasediments. It could be conjectured that the basic rock mass at this point is sill-like in form.

* * * * *

LEASING ACTIVITY

The following lease was taken since date of last report. Copy of the agreement has been sent to Mr. Robert A. Laurence, at Knoxville.

Lease No.	Lessor	Acres
9.0-4-26	Malcolm and Jennie Hannan	60

* * * * *

DRILL LOG

Hole No.:	Crabtree #1	Depth:	23'4"
Location:	0.1S + 0.65E	Angle:	-90°
Elevation:	353'	Logged by:	D. E. Wyke

Core size: 0 - 23'4" EX

Depth	Lithology
0 - 1'8"	soil; no core.
1'8" - 4'6"	medium to coarse grained pyroxene peridotite; biotitic reaction zone top and base; trace pyrrhotite.
4'6" - 8'11"	alternating bands of quartz-biotite pegmatite and biotite-rich pyroxene peridotite; trace sulfides.
8'11" - 14'3"	medium to coarse grained pyroxene peridotite; bitotitic reaction zone top and base; trace pyrrhotite.
14'3" - 15'2"	quartz-biotite stringer partially cutting pyroxene peridotite.
15'2" - 21'1"	medium to coarse grained pyroxene peridotite; trace sulfides.
21'1" - 21'8"	quartz-biotite pegmatite.
21'8" - 23'4"	medium to coarse grained pyroxene peridotite; biotitic reaction zone top and base; trace pyrrhotite.

* * * TDA - 23'4" * * *

DRILL LOG

Hole No.:	Burns PS-5	Depth:	35'2"
Location:	0 + 0	Angle:	-90°
Elevation:		Logged by:	R. S. Young

Core size: 0 - 35'2" EX

Depth	Lithology
0 - 5'3"	pyroxene peridotite; trace sulfides; peridotite biotite rich for 6" above base.
5'3" - 7'4"	medium grained quartz-biotite pegmatite.
7'4" - 14'1"	pyroxene and biotite peridotite; biotite zones probably associated by pegmatites not cut by drill.
14'1" - 27'7"	pegmatized quartz-biotite-chlorite-garnet schist; foliation variable but averages nearly normal to core azis.
27'7" - 29'9"	quartz-chlorite-sericite schist; minor garnets; trace pyrite; serpentine on slickensides at 28'4".
29'9" - 35'2"	quartz-biotite-chlorite-graphite schist; 8" zone with high content of small pink garnets with top at 31'2"; trace pyrite, generally as platelets parallel foliation.

* * * TDA - 35'2" * * *

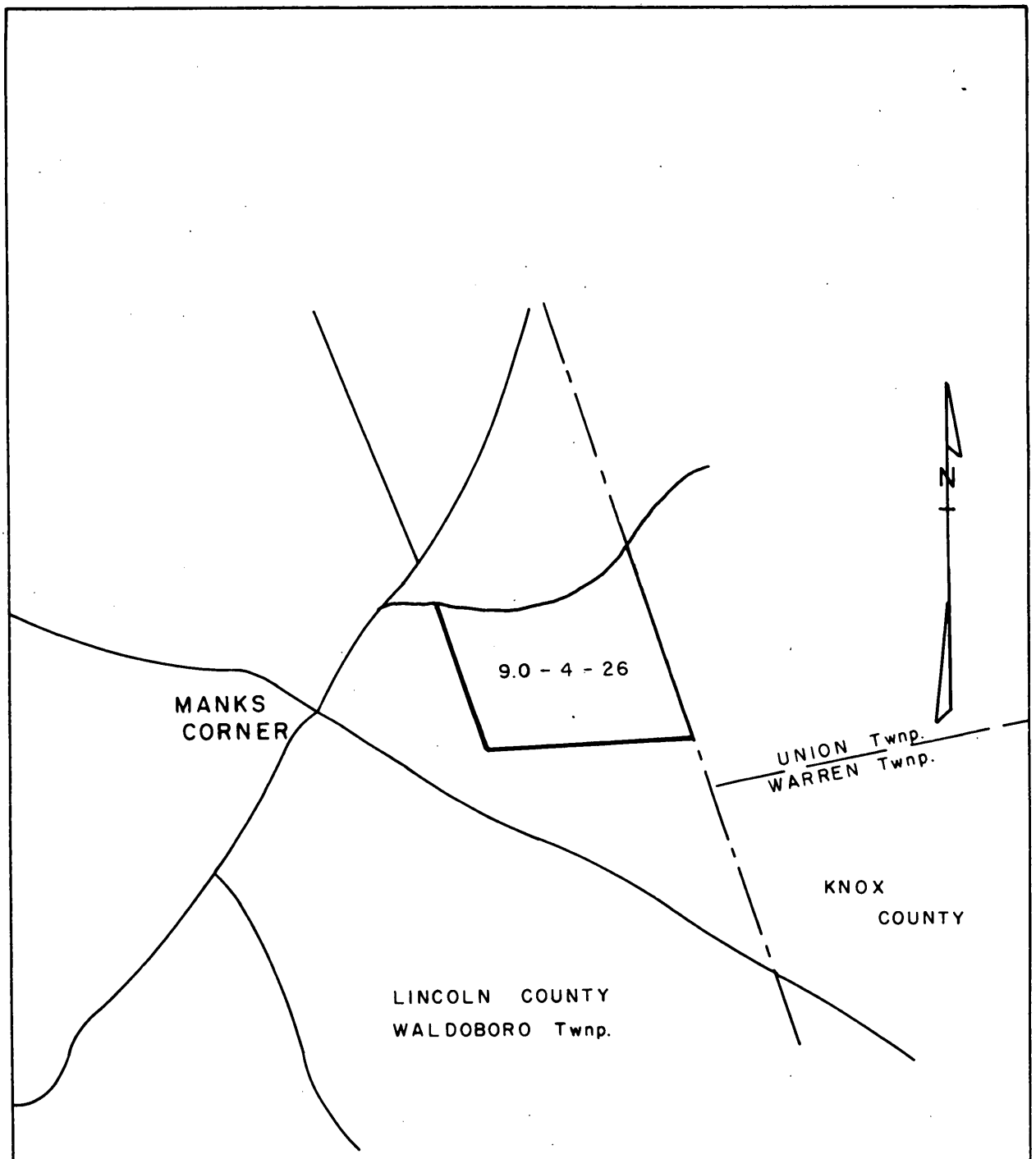
DRILL LOG

Hole No.:	Burns PS-6	Depth:	18'5"
Location:	approx. 0 + 0	Angle:	-90°
Elevation:		Logged by:	R. S. Young

Core size: 0 - 18'5" EX

Depth	Lithology
0 - 11'2"	medium to fine-grained pyroxene peridotite; trace sulfides; biotitic in scattered areas.
11'2" - 13'9"	medium-grained quartz-biotite pegmatite with 3" biotite peridotite top at 12'11".
13'9" - 18'5"	quartz-biotite-chlorite-garnet schist; pegmatitic; foliation at large angle to c.a., nearly 90°.

* * * TDA - 18'5" * * *



LEASE DISTRIBUTION MAP

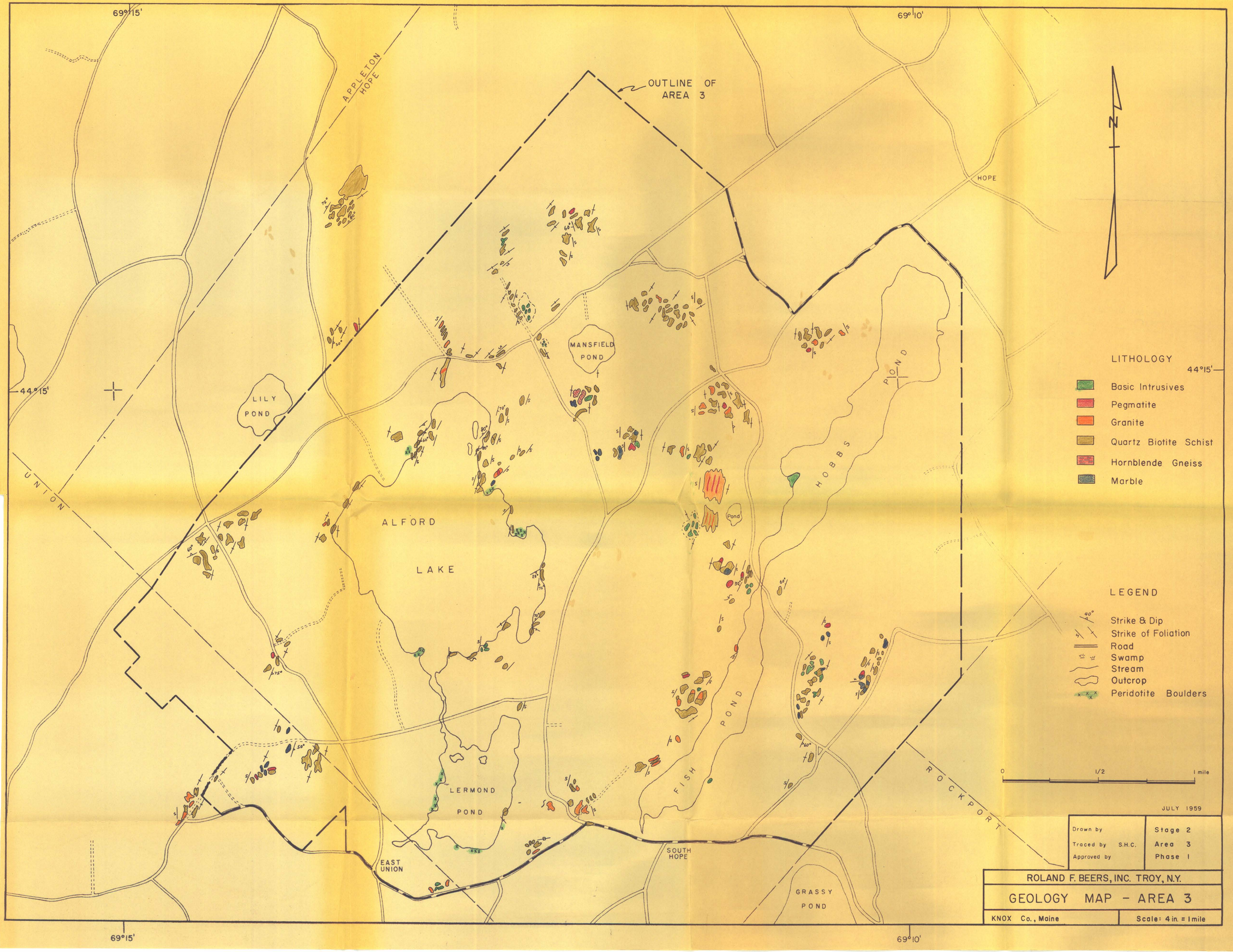
9.0-4-26 MALCOLM HANNAN

Scale: 1 in. = 1320 ft.

R. F. BEERS, INC. TROY, N. Y.

Docket No. DMEA 4947
R. F. Beers, Inc.

Fig 13


69°15'
69°10'
44°15'
OUTLINE OF AREA 3
APPLETON
HOPE
HOPE
N
LITHOLOGY
Basic Intrusives
Pegmatite
Granite
Quartz Biotite Schist
Hornblende Gneiss
Marble
LEGEND
Strike & Dip
Strike of Foliation
Road
Swamp
Stream
Outcrop
Peridotite Boulders
0
1/2
1 mile
LILY POND
MANSFIELD POND
ALFORD LAKE
LERMOND POND
FISH POND
HOBBS POND
Pond
UNION
EAST UNION
SOUTH HOPE
GRASSY POND
ROCKPORT
JULY 1959
Drawn by
Traced by S.H.C.
Approved by
Stage 2
Area 3
Phase 1
ROLAND F. BEERS, INC. TROY, N.Y.
GEOLOGY MAP - AREA 3
KNOX Co., Maine
Scale: 4 in. = 1 mile

OUTLINE OF AREA 4
N
8 W
7 W
6 W
69° 20'
5 W
4 W
3 W
2 W
1 N
0
1 S
2 S
3 S
4 S
5 S
5.5 S
44° 10'
69° 25'
STICKNEY CORNER
SHEPARDS HILL
MUD POND
ROUND POND
Medomak River
KNOX CO.
LINCOLN CO.
CLARY HILL
JACKSON PROSPECT
LITTLE MEDOMAK POND
MEDOMAK POND
MANKS PROSPECT
MANKS CORNER
FLANDERS CORNER
NORTH WALDOBORO
NEWBERT PROSPECT
Alford Brook
WHITNEY CORNER
BURNS PROSPECT
BENNER CORNER
JOHANSSON PROSPECT
Bogues Corner
Levensaler Brook
Ortfs Corner
Davis Corner
0
1/2
1 mile
LEGEND
Strike & Dip
Strike of Foliation
Road
Swamp
Stream
Outcrop
Peridotite Boulders
LITHOLOGY
Basic Intrusives
Pegmatite
Granite
Quartz Biotite Schist
Hornblende Gneiss
JULY 1959
Drawn by
Traced by S.H.C.
Approved by
Stage 2
Area 4
Phase 1
ROLAND F. BEERS, INC. TROY, N.Y.
GEOLOGY MAP - AREA 4
KNOX & LINCOLN Co., Maine
Scale: 4 in. = 1 mile

LEGEND

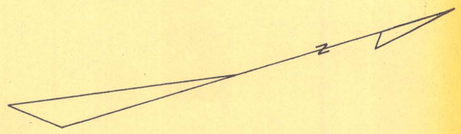
- Strike & Dip
- Strike of Foliation
- Road
- Woods Road
- Tree Line
- Stone Wall
- Swamp
- Stream
- Intermittent Stream
- Gravel Pit
- Drill Hole

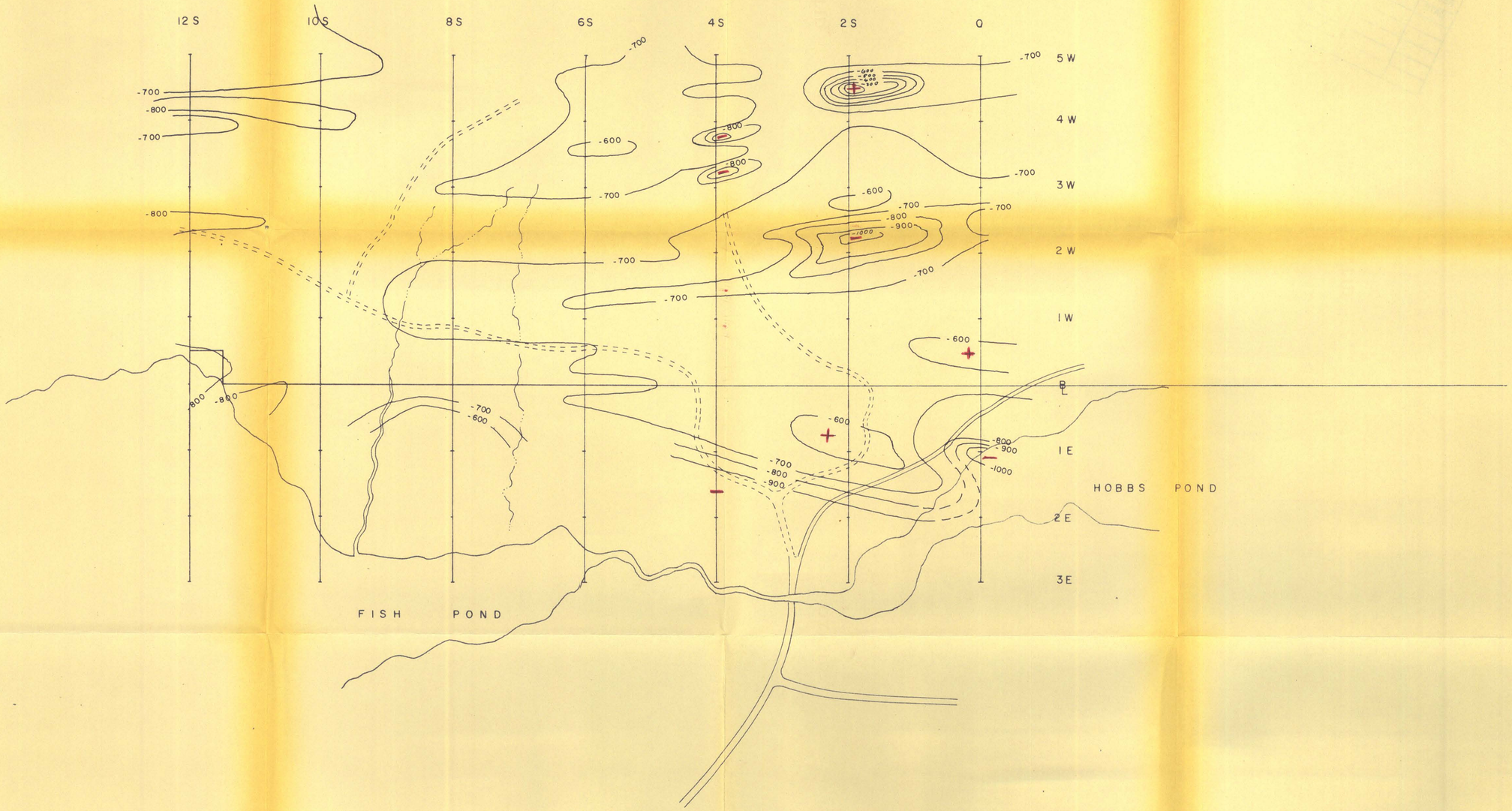
LITHOLOGY

- Pegmatite
- Quartz Biotite Schist
- Gneiss
- Basic Intrusives

GEOLOGY

Drawn by	Stage 2	ROLAND F. BEERS, INC. TROY, N.Y.
Traced by R. P.	Area 3	CRABTREE PROSPECT
Approved by	Phase 2	Co. KNOX · Twnp HOPE · Scale 1in.= 100 ft.





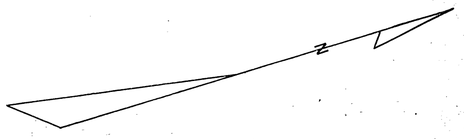
LEGEND

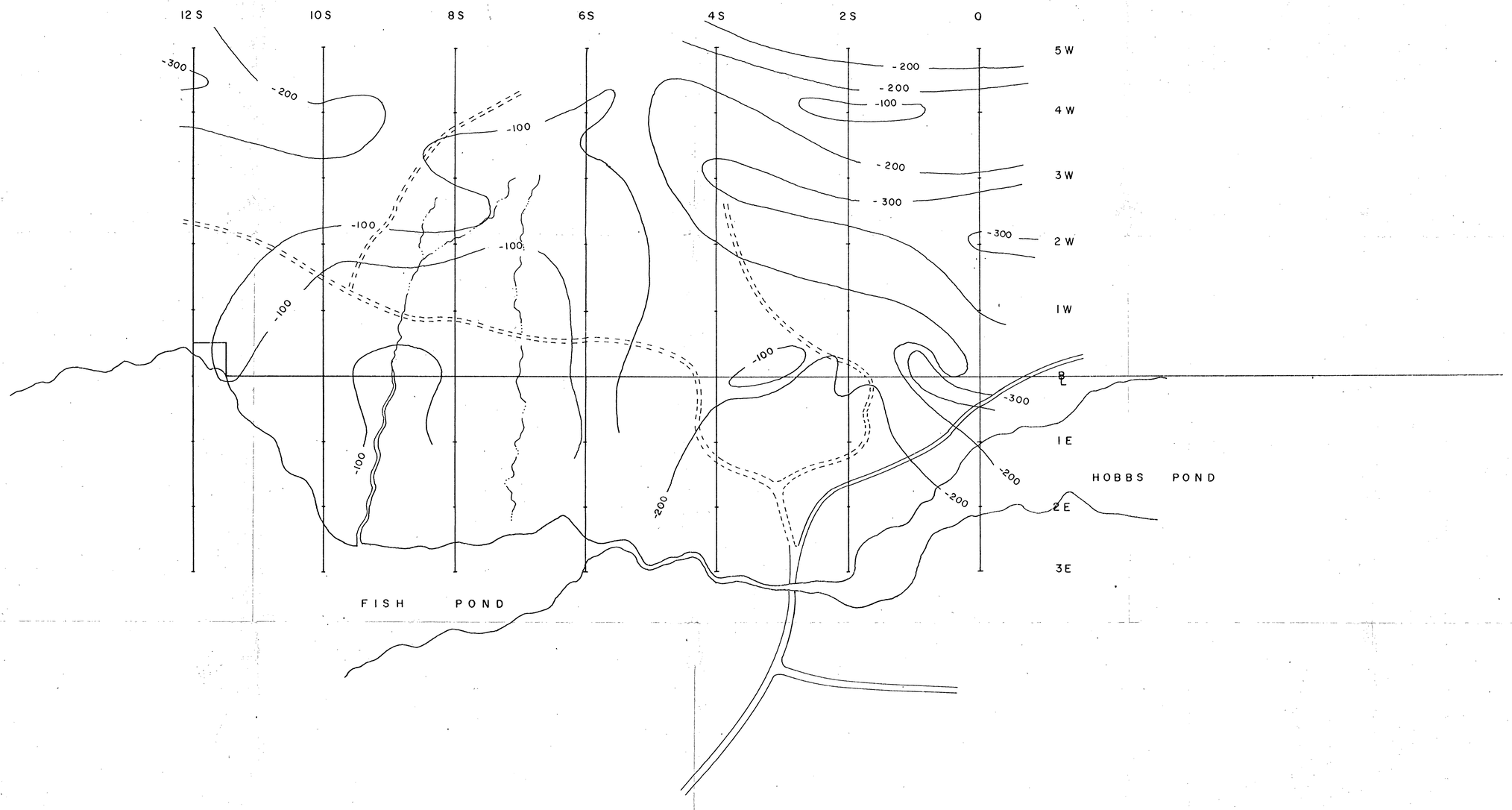
- Road
- Woods Road
- Stream
- Intermittent Stream

MAGNETIC SURVEY

Contour Interval 100γ

Drawn by	Stage 2	ROLAND F. BEERS, INC. TROY, N.Y.
Traced by R. P.	Area 3	CRABTREE PROSPECT
Approved by	Phase 2	Co. KNOX · Twnp HOPE · Scale 1 in. = 100 ft.





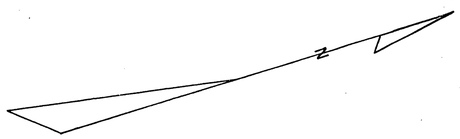
LEGEND

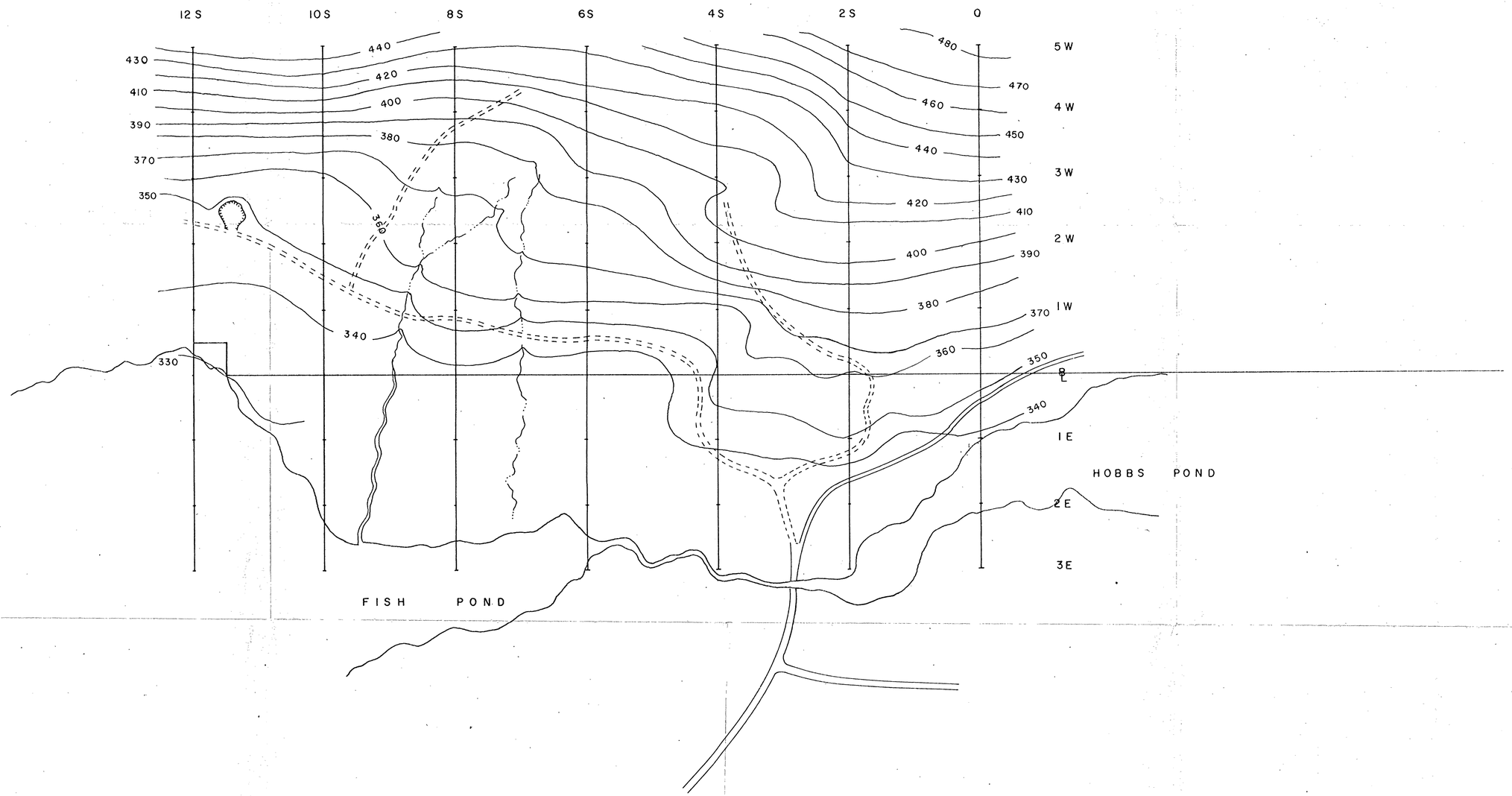
- Road
- Woods Road
- Stream
- Intermittent Stream

SELF-POTENTIAL SURVEY

Contour Interval 100 millivolts

Drawn by	Stage 2	ROLAND F BEERS, INC. TROY, N.Y.
Traced by R.P.	Area 3	CRABTREE PROSPECT
Approved by	Phase 2	Co. KNOX · Twnp HOPE · Scale 1in.= 100 ft.



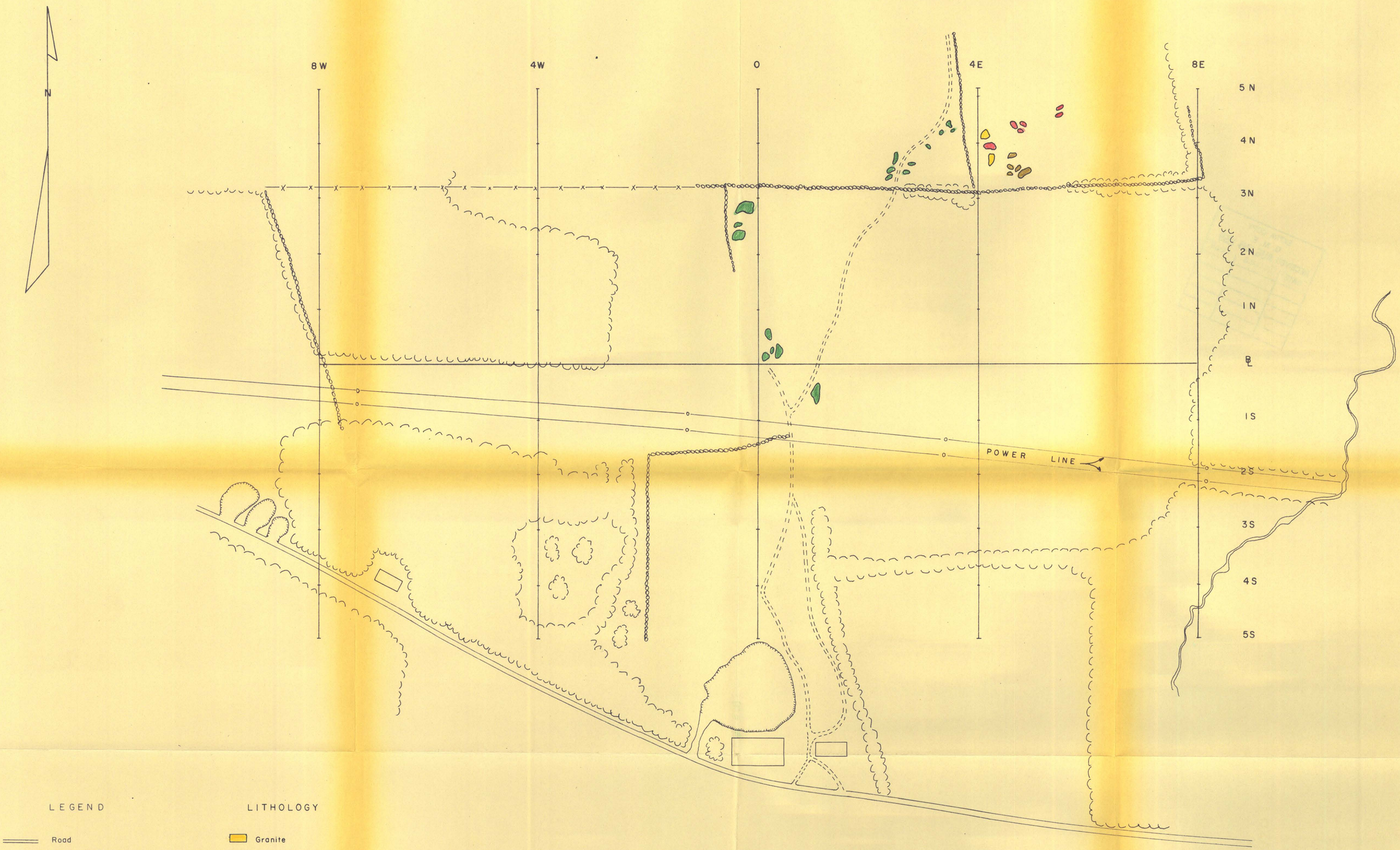


LEGEND

- Road
- Woods Road
- Stream
- Intermittent Stream
- Gravel Pit

TOPOGRAPHY

Drawn by	Stage 2	ROLAND F BEERS, INC. TROY, N.Y.
Traced by R.P.	Area 3	CRABTREE PROSPECT
Approved by	Phase 2	Co. KNOX · Twnp HOPE · Scale 1in.= 100 ft.



LEGEND

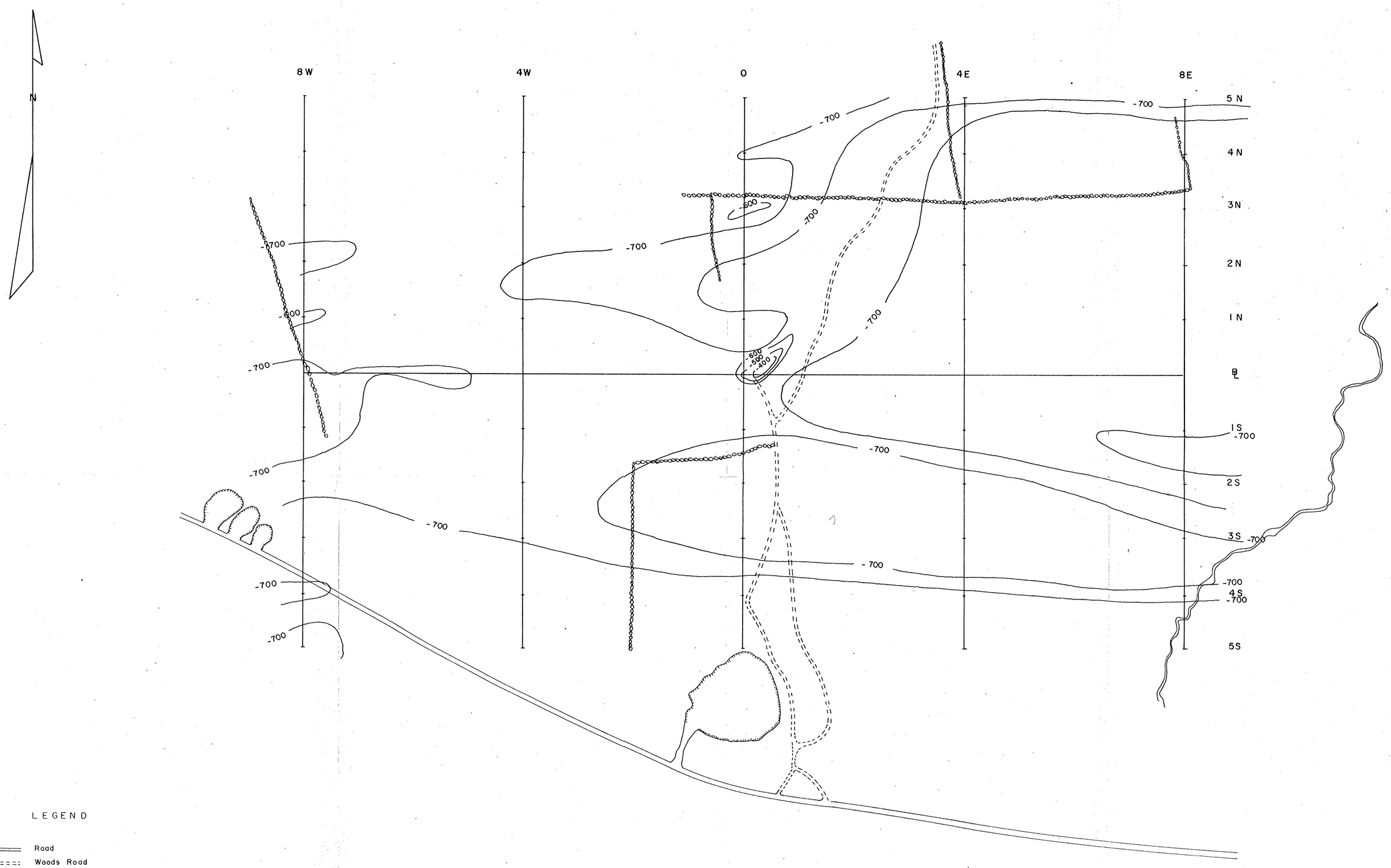
- Road
- Woods Road
- Stone Fence
- Stream
- Gravel Pit
- Tree Line
- Stream
- Barb Wire Fence
- Building

LITHOLOGY

- Granite
- Quart-Biotite Schist
- Basic Intrusive
- Diorite

GEOLOGY

Drawn by -	Stage 2	ROLAND F. BEERS, INC. TROY, N.Y.
Traced by R.P.	Area 4	MANKS PROSPECT
Approved by	Phase 1	Co. LINCOLN Twnp WALDOBORO Scale 1in.= 100 ft.



LEGEND

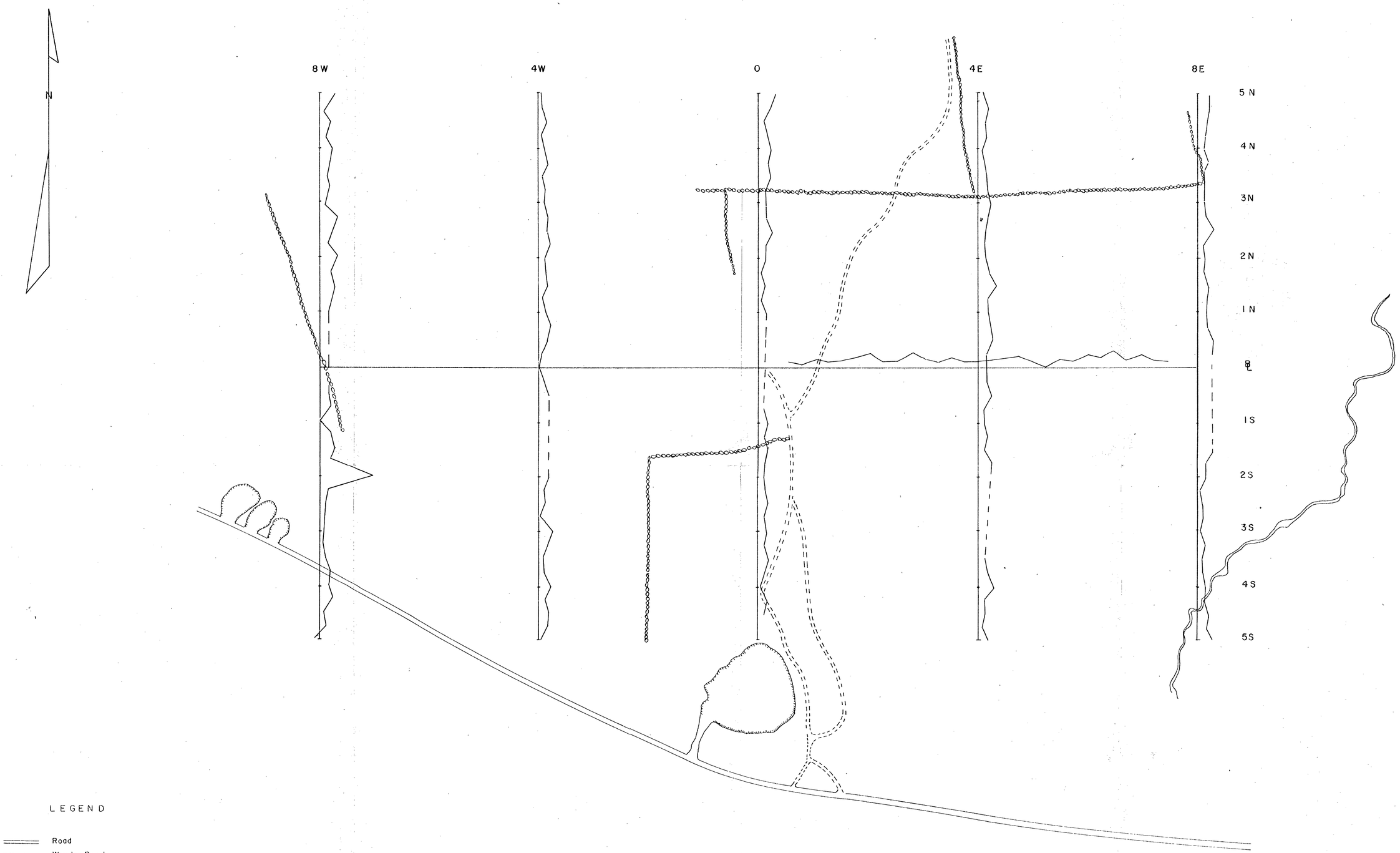
- Road
- Woods Road
- Stone Fence
- Stream
- Gravel Pit

MAGNETIC SURVEY

Contour Interval 100γ

Background = -600 to -700

Drawn by	Stage 2	ROLAND F BEERS, INC. TROY, N.Y.
Traced by R.P	Area 4	MANKS PROSPECT
Approved by	Phase 1	Co. LINCOLN · Twnp WALDOBORO · Scale 1in = 100 ft.



LEGEND

- Road
- Woods Road
- Stone Fence
- Stream
- Gravel Pit

HORIZONTAL LOOP E M SURVEY

1 in. = 20°

+ on right & up

- on left & down

Drawn by	Stage 2	ROLAND F BEERS, INC. TROY, N.Y.
Traced by R P	Area 4	MANKS PROSPECT
Approved by	Phase 1	Co. LINCOLN · Twnp WALDOBORO · Scale 1 in = 100 ft.