

# MAR 19570012: CENTRAL ALBERTA

Received date: Dec 31, 1957

Public release date: Jan 01, 1959

## **DISCLAIMER**

By accessing and using the Alberta Energy website to download or otherwise obtain a scanned mineral assessment report, you ("User") agree to be bound by the following terms and conditions:

- a) Each scanned mineral assessment report that is downloaded or otherwise obtained from Alberta Energy is provided "AS IS", with no warranties or representations of any kind whatsoever from Her Majesty the Queen in Right of Alberta, as represented by the Minister of Energy ("Minister"), expressed or implied, including, but not limited to, no warranties or other representations from the Minister, regarding the content, accuracy, reliability, use or results from the use of or the integrity, completeness, quality or legibility of each such scanned mineral assessment report;
- b) To the fullest extent permitted by applicable laws, the Minister hereby expressly disclaims, and is released from, liability and responsibility for all warranties and conditions, expressed or implied, in relation to each scanned mineral assessment report shown or displayed on the Alberta Energy website including but not limited to warranties as to the satisfactory quality of or the fitness of the scanned mineral assessment report for a particular purpose and warranties as to the non-infringement or other non-violation of the proprietary rights held by any third party in respect of the scanned mineral assessment report;
- c) To the fullest extent permitted by applicable law, the Minister, and the Minister's employees and agents, exclude and disclaim liability to the User for losses and damages of whatsoever nature and howsoever arising including, without limitation, any direct, indirect, special, consequential, punitive or incidental damages, loss of use, loss of data, loss caused by a virus, loss of income or profit, claims of third parties, even if Alberta Energy have been advised of the possibility of such damages or losses, arising out of or in connection with the use of the Alberta Energy website, including the accessing or downloading of the scanned mineral assessment report and the use for any purpose of the scanned mineral assessment report so downloaded or retrieved.
- d) User agrees to indemnify and hold harmless the Minister, and the Minister's employees and agents against and from any and all third party claims, losses, liabilities, demands, actions or proceedings related to the downloading, distribution, transmissions, storage, redistribution, reproduction or exploitation of each scanned mineral assessment report obtained by the User from Alberta Energy.

52000

ECONOMIC FILE REPORT NO. <u>BNT-AE-05</u> 19570012
---

FINAL REPORT

8 A 11

LETTER OF PRIVILEGE TO EXPLORE FOR  
 BENTONITE  
 issued to  
 BAROID OF CANADA, LTD.  
 operating under  
 PERMIT NO. 198

This report covers certain lands located in Townships 56  
 and 57, Range One, West of the 5th Meridian as shown on  
 the accompanying plats.

83/6/16

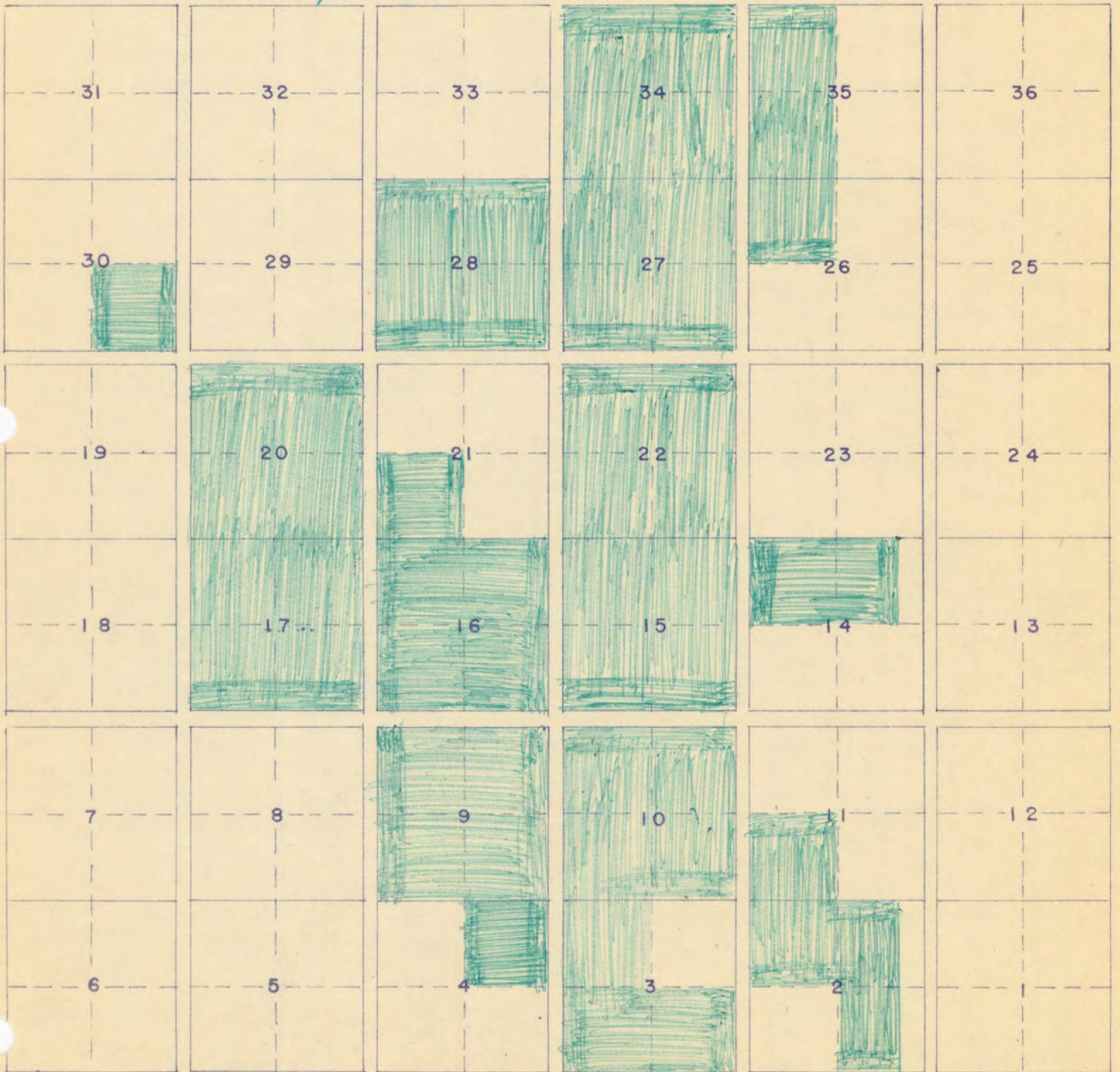
October 25, 1957

R. Keith Collins



Indexing Document No. 700732

T56 - R1 - W5





T57 - R1 - W5

31	32	33	34	35	36
30	29	28	27	26	25
19	20	21	22	23	24
18	17	16	15	14	13
7	8	9	10	11	12
6	5	4	3	2	1



## FINAL REPORT

All lands held under this reservation are shown on the accompanying plat.

Exploration for bentonite on these lands was conducted with a Parmanco drill. Samples of bentonite obtained by drilling were sent to our laboratory in Colony, Wyoming and tested by standard industry methods.

The accompanying maps of those quarter-sections upon which drilling was conducted show the location of each hole and its identifying number. Above the number we have shown first, the inches of bentonite and secondly, the depth of overburden in feet and inches. Below the hole number we have shown the initial yield of the various samples from that hole. The yield is expressed in barrels of drilling fluid per ton.

It is difficult to estimate tonnage with accuracy in this area because of the erratic nature of the deposits, however, I have estimated that the drilled out areas under this reservation contain approximately 250,000 tons of bentonite. Of this amount, it may be possible to utilize some 9,800 tons as drilling mud. Further tests must be made to confirm this.

Bentonite in this area occurs in the Edmonton Formation which occurs in the Montana Epoch, Upper Cretaceous Period of the Mesozoic Era.

This formation was laid down as a delta along a shoreward zone of the Fox Hills sea at a time of extensive volcanic activity to the west. Among the conditions of delta sedimentation are forset bedding, lensed arrangements, local thin cross-bedding and interlamination of strata of different mechanical composition.

The geologic history of the Edmonton formation indicates the type of bentonite deposits we could expect to find. The field work we have done has shown this to be true. The overburden and bentonite deposits have followed closely the delta deposition patterns. The bentonite deposits are found as small, scattered lenses at no fixed horizon in the formation. Bentonite deposits clearly show that their



deposition was by foreset bedding in brackish waters from a few feet deep to depths of over thirty feet. Typically, the deposits show interlamination between clean bentonite and muddy or dirty bentonites containing rock. These rocks of iron-carbonate composition range from zero to one inch in size and appear to be very numerous. These alternating beds are normally about two feet thick in this area. The drill logs tend to show much thicker sections because of the attitude of the beds due to forset bedding. This situation also precludes the economical mining of the bentonite. Occasionally beds will be found that are free of rock, although this area appears to be relatively uniform in this respect. The rocks are impossible to remove economically, and their presence precludes use of the material as a drilling mud because of the resulting excessive grit content. This entire area has not been drilled, however the area which has been drilled is believed to be typical of the entire area.

The enclosed maps of the following lands cover all drilling under this letter of privelege:

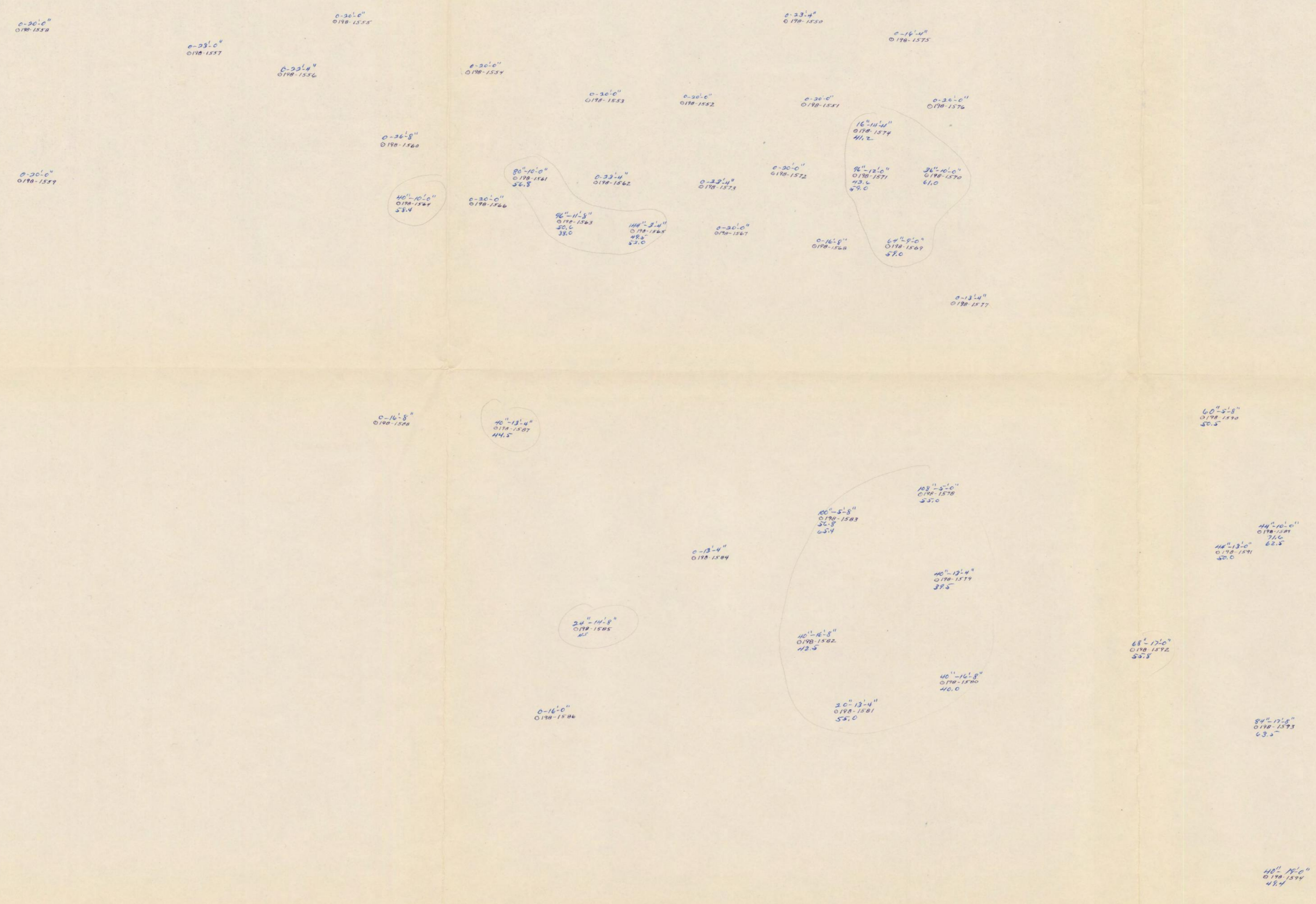
- #1 - NE  $\frac{1}{4}$  of Section 8, T56, R1, W5
- #2 - NE  $\frac{1}{4}$  of Section 9, T56, R1, W5
- #3 - NW  $\frac{1}{4}$  of Section 9, T56, R1, W5
- #4 - NW  $\frac{1}{4}$  of Section 10, T56, R1, W5
- #5 - SW  $\frac{1}{4}$  of Section 15, T56, R1, W5
- #6 - SE  $\frac{1}{4}$  of Section 16, T56, R1, W5
- #7 - NE  $\frac{1}{4}$  of Section 16, T56, R1, W5





17  
6

17  
8



PERMIT NO. 198  
 BAROID OF CANADA, LTD.  
 DRILL HOLE MAP  
 NE ¼ SEC. 8, T56, R1, W5  
 ALBERTA, CANADA  
 SCALE 1" = 100' AUGUST, 1957

83 G 116

RFC  
1957 0012  
41



16  
9

0-20'-0"  
0198-1243

0-16'-0"  
0198-1242

0-20'-0"  
0198-1244

0-20'-0"  
0198-1245

0-20'-0"  
0198-1246

0-20'-0"  
0198-1247

16  
9

0-20'-0"  
0198-1248  
0-20'-0"  
0198-1249  
0-20'-0"  
0198-1250  
0-20'-0"  
0198-1251  
0-20'-0"  
0198-1252  
0-20'-0"  
0198-1253  
0-20'-0"  
0198-1254  
0-20'-0"  
0198-1255  
0-20'-0"  
0198-1256  
0-20'-0"  
0198-1257  
0-20'-0"  
0198-1258  
0-20'-0"  
0198-1259  
0-20'-0"  
0198-1260  
0-20'-0"  
0198-1261  
0-20'-0"  
0198-1262  
0-20'-0"  
0198-1263  
0-20'-0"  
0198-1264  
0-20'-0"  
0198-1265  
0-20'-0"  
0198-1266  
0-20'-0"  
0198-1267  
0-20'-0"  
0198-1268  
0-20'-0"  
0198-1269  
0-20'-0"  
0198-1270  
0-20'-0"  
0198-1271  
0-20'-0"  
0198-1272  
0-20'-0"  
0198-1273  
0-20'-0"  
0198-1274  
0-20'-0"  
0198-1275  
0-20'-0"  
0198-1276  
0-20'-0"  
0198-1277  
0-20'-0"  
0198-1278  
0-20'-0"  
0198-1279  
0-20'-0"  
0198-1280  
0-20'-0"  
0198-1281  
0-20'-0"  
0198-1282  
0-20'-0"  
0198-1283  
0-20'-0"  
0198-1284  
0-20'-0"  
0198-1285  
0-20'-0"  
0198-1286  
0-20'-0"  
0198-1287  
0-20'-0"  
0198-1288  
0-20'-0"  
0198-1289  
0-20'-0"  
0198-1290  
0-20'-0"  
0198-1291  
0-20'-0"  
0198-1292  
0-20'-0"  
0198-1293  
0-20'-0"  
0198-1294  
0-20'-0"  
0198-1295  
0-20'-0"  
0198-1296  
0-20'-0"  
0198-1297  
0-20'-0"  
0198-1298  
0-20'-0"  
0198-1299  
0-20'-0"  
0198-1300

0-20'-0"  
0198-1301

0-20'-0"  
0198-1302

0-20'-0"  
0198-1303

0-20'-0"  
0198-1304

16  
9

PERMIT NO. 198  
BAROID OF CANADA, LTD.  
DRILL HOLE MAP  
NE 1/4 SEC. 9, T56, R1, W5  
ALBERTA, CANADA  
SCALE 1" = 100' JUNE, 1957

836/16

11570012  
# 12

RKC



17  
89

16  
9

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-16'-0" 019-1524

0-13'-0" 019-1524

0-16'-0" 019-1524

0-13'-0" 019-1524

0-13'-0" 019-1524

0-15'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-20'-0" 019-1524

0-23'-0" 019-1524

0-23'-0" 019-1524

0-15'-0" 019-1524

0-23'-0" 019-1524

0-15'-0" 019-1524

0-15'-0" 019-1524

0-17'-0" 019-1524

0-30'-0" 019-1524

0-15'-0" 019-1524

0-20'-0" 019-1524

89

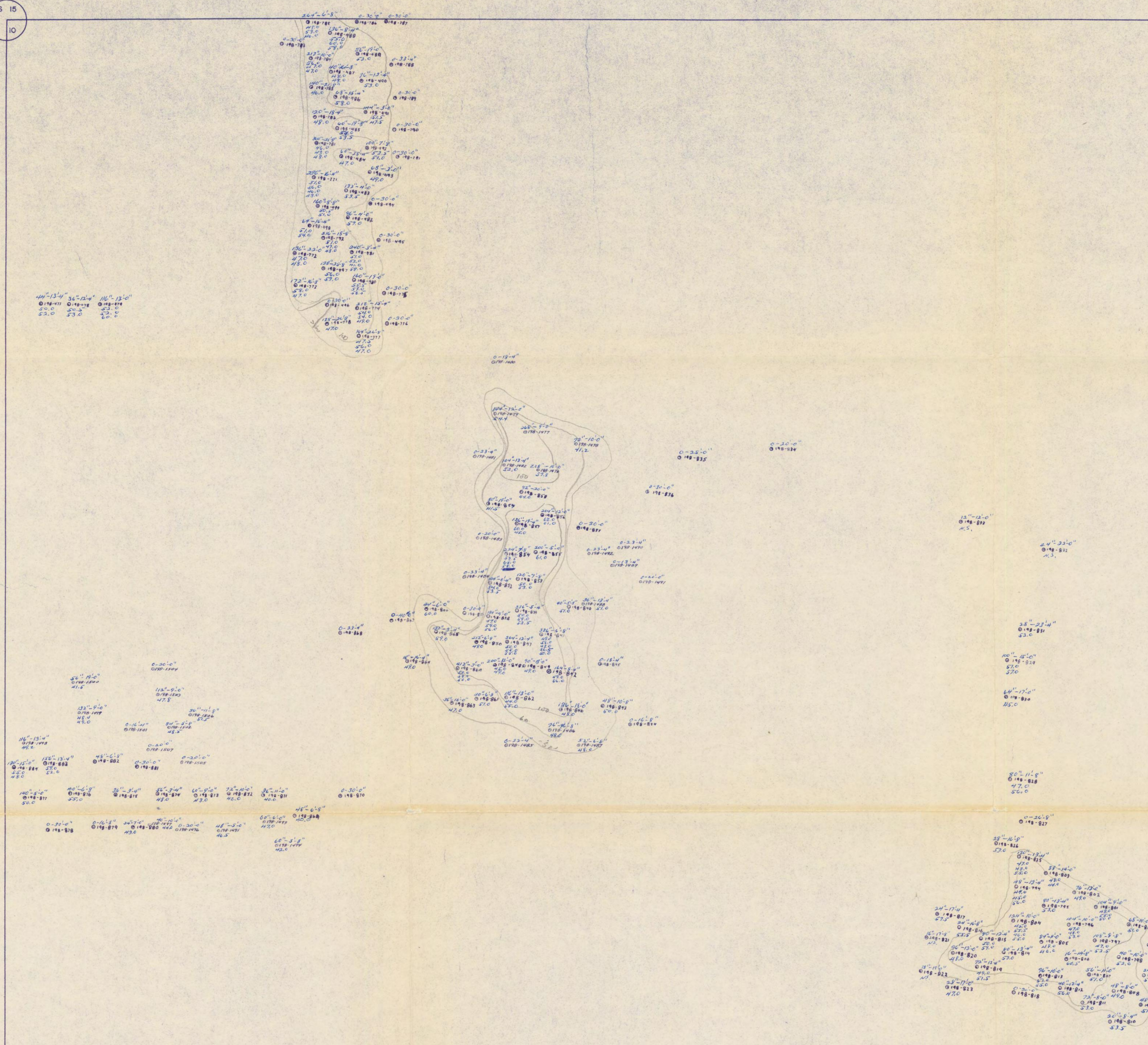
PERMIT NO. 198  
 BAROID OF CANADA, LTD.  
 DRILL HOLE MAP  
 NW 1/4 SEC. 9, T56 R1, W5  
 ALBERTA, CANADA  
 SCALE 1" = 100' JUNE, 1957

830/16



16 15  
9 10

15  
10



600 x 150 Δ 30, 550 x 100 Δ 100, up to 300' 74-60 124.50  
 600 x 130 Δ 30, 350 x 150 Δ 100 up to 400' 44-62, 52  
 350 x 200 Δ 30, 200 x 100 Δ 60 up to 170 44-60 50

PERMIT NO. 198

BAROID OF CANADA LTD.  
 DRILL HOLE MAP  
 NW QTR. SECTION 10 T. 56, R. 1, W. 5.  
 JULY 1956.  
 SCALE - 1" = 100 FT.  
 REVISED JUNE, 1957

836116  
 17570012 # 4



16 15

0-22-0"  
019-1417

0-20-0"  
019-1414

0-21-0"  
019-1416

0-23-0"  
019-1417

0-23-0"  
019-1418

0-23-0"  
019-1414

0-16-0"  
019-1419

0-20-0"  
019-1409

0-20-0"  
019-1378

0-20-0"  
019-1377

0-20-0"  
019-1400

0-10-0"  
019-1412

20'-12'-0"  
019-1411  
27.2

10'-13'-5"  
019-1400  
27.8

24'-16'-5"  
019-1379  
42.2

70'-12'-4"  
019-1388  
42.2

0-10-0"  
019-1407

25'-12'-4"  
019-1401  
42.0

20'-10'-0"  
019-1414  
42.4

0-20-0"  
019-1404

22'-13'-8"  
019-1402  
47.1

24'-13'-0"  
019-1403  
47.0

0-23-0"  
019-1408

23'-5'-3"  
019-1404  
46.8

16 15

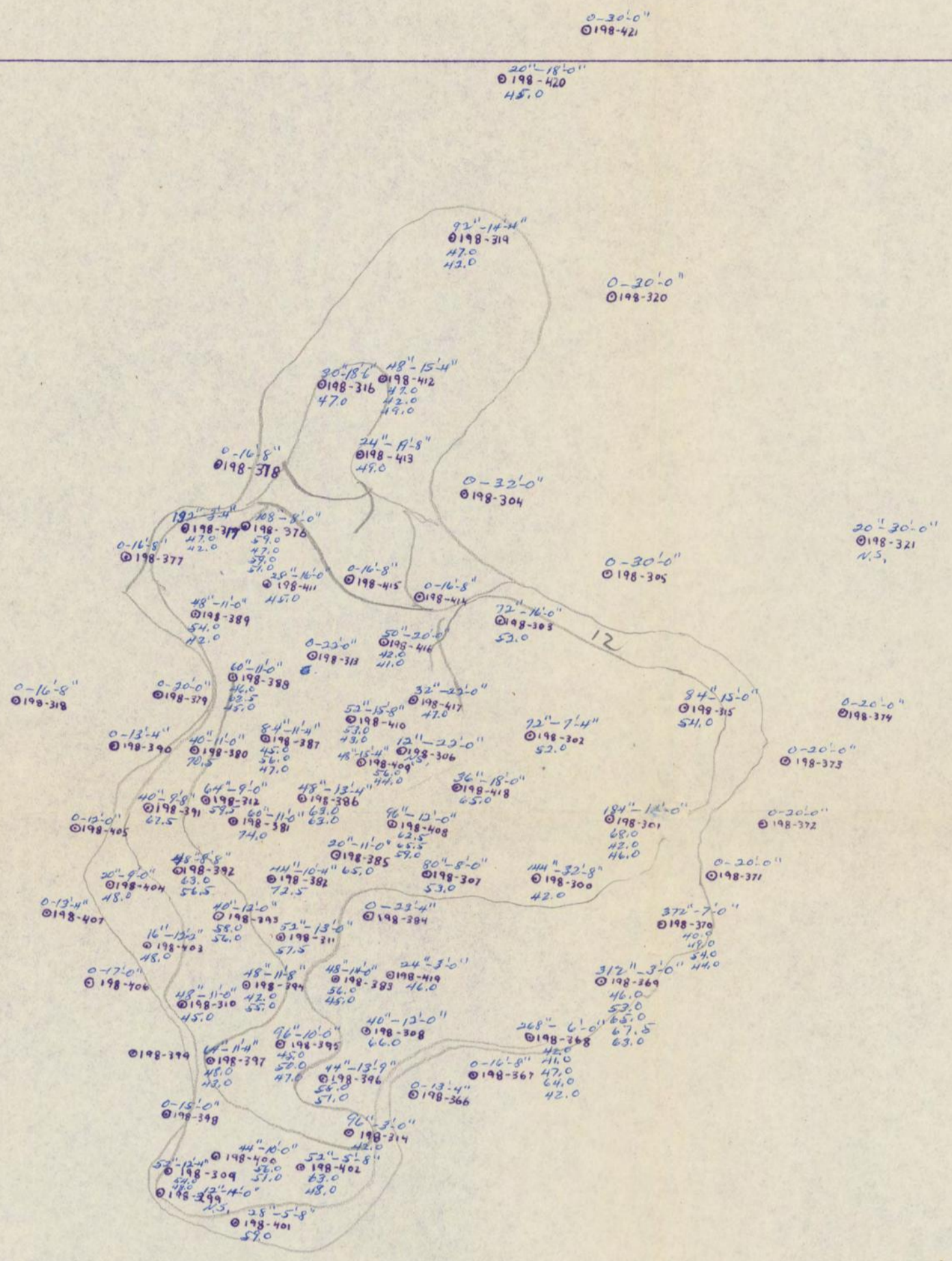
16 15

PERMIT NO. 198  
BAROID OF CANADA, LTD.  
DRILL HOLE MAP  
SW ¼ SEC. 15, T56, R1, W5  
ALBERTA, CANADA  
SCALE 1" = 100' JUNE, 1957

8 2 6/16

19570012  
45  
R.K.C.





400 x 600 - 12, 280 x 300 x 30, up to 300, 42-63 = 53

BAROID OF CANADA LTD.  
 DRILL HOLE MAP  
 S.E. QTR. SECTION 16,  
 T. 56 - R. 1, WEST OF 5TH MERIDIAN  
 SCALE - 1" = 100 FT.  
 JUNE, 1956.

830/16

11570012  
# 6

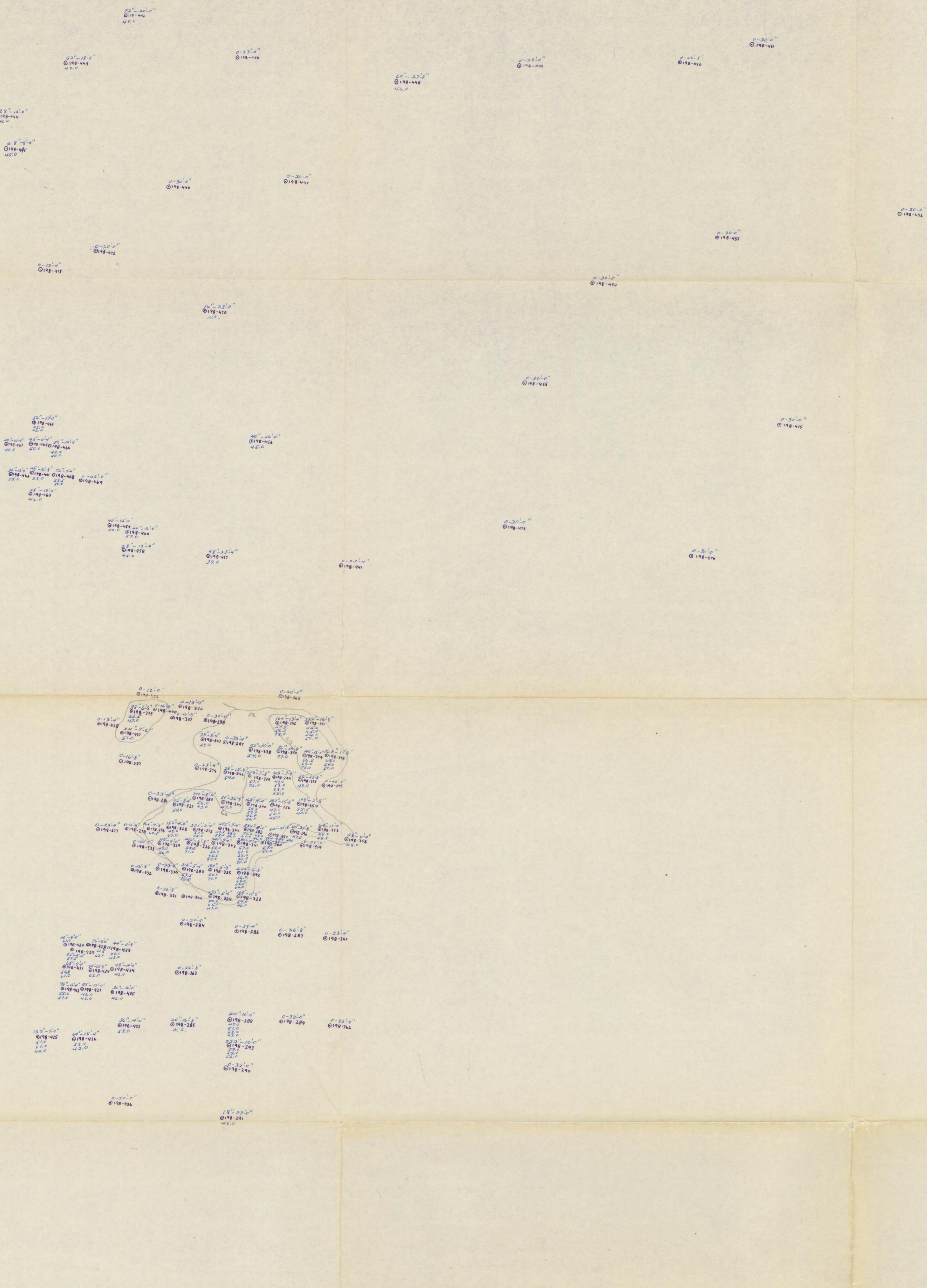


21 16

21 22  
16 15

16 15

360 x 300 212 300 x 100 260 600 h 100 21-83 557



BAROID OF CANADA LTD.  
 DRILL HOLE MAP  
 NE QTR. SECTION 16, T. 56, R. 1  
 WEST OF 5 TH MERIDIAN  
 SCALE - 1" = 100 FT.  
 JUNE, 1956. *e.36/16*

1757 0012  
# 7