

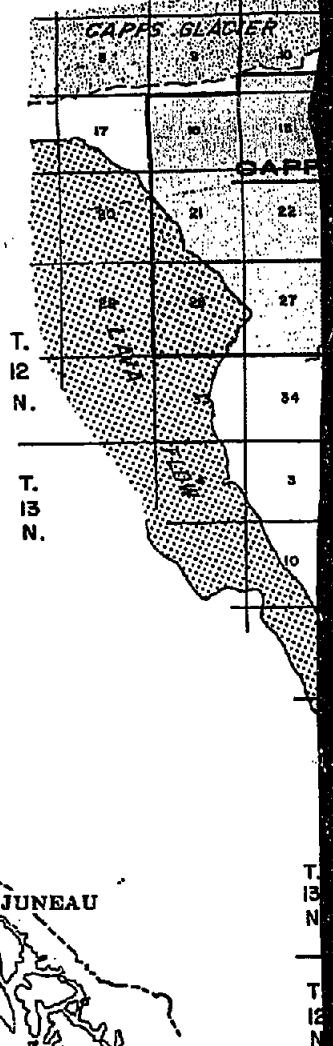
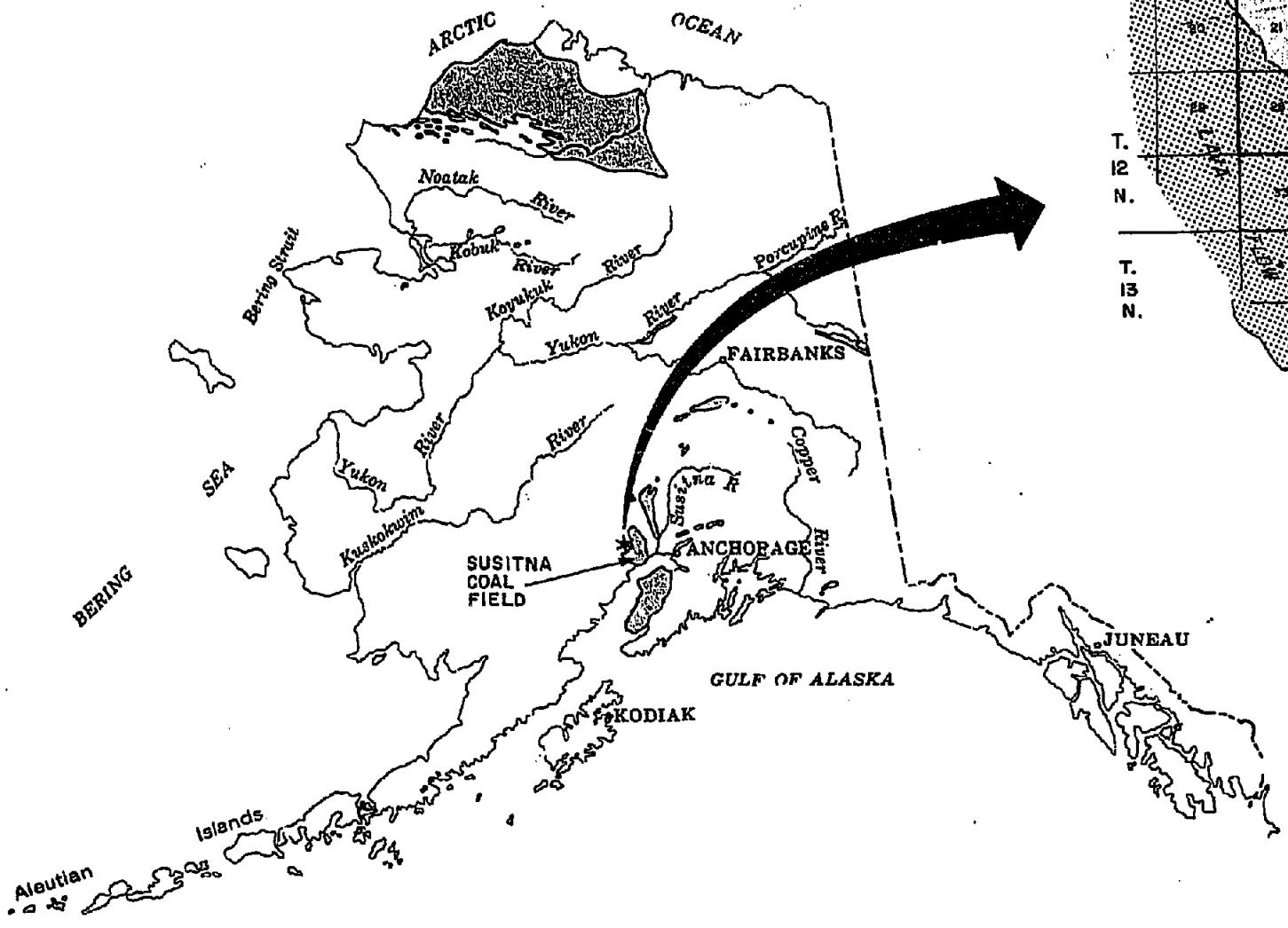
FIGURES

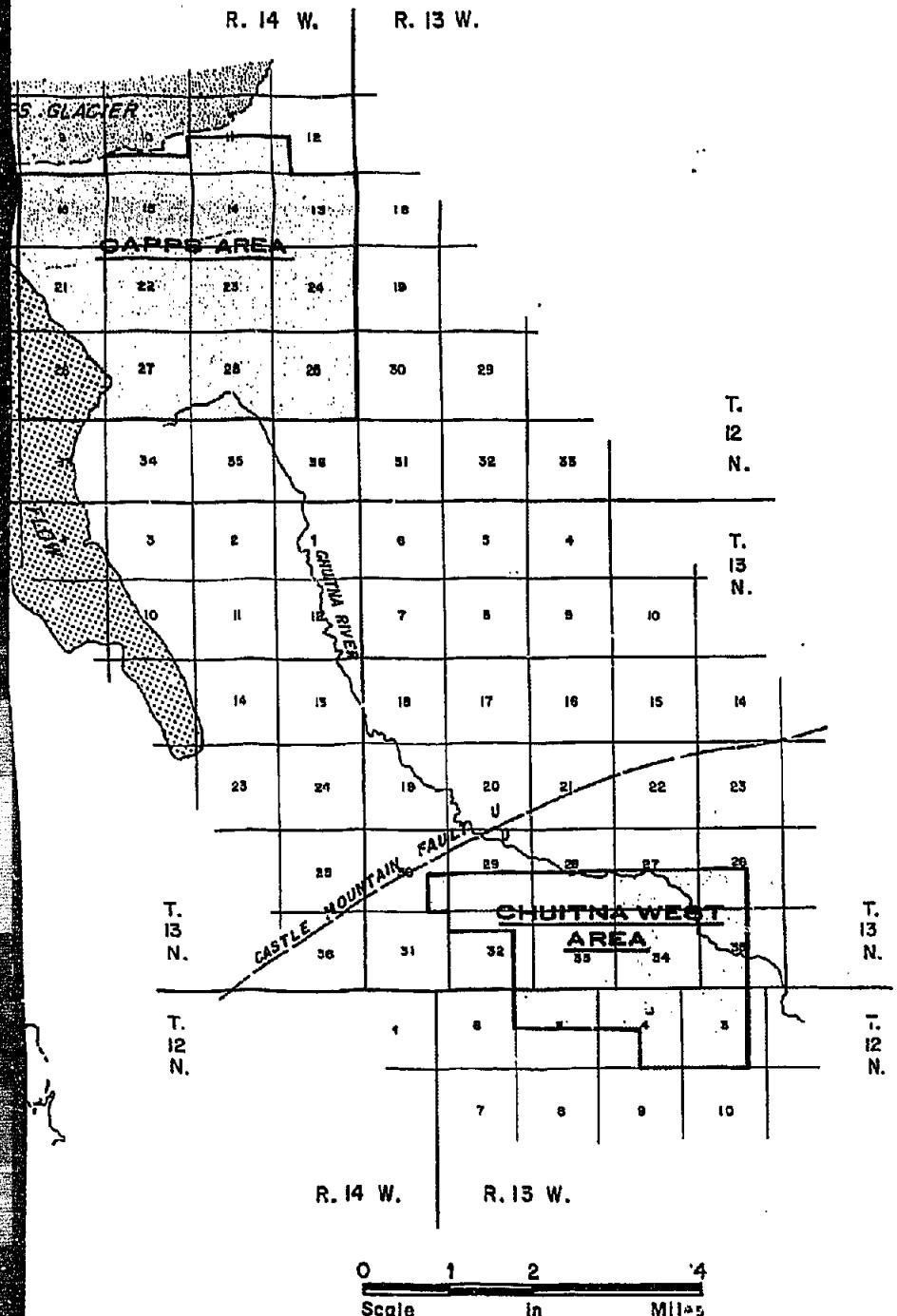
1. Location Map
2. Generalized Stratigraphic Column

EXHIBITS

- A. Drill Hole Locations, Chuitna West Area
- B. Drill Hole Locations, Capps Area
- C. Cross Sections, Chuitna West Area
- D. Structure, Top G Bed, Chuitna West Area
- E. Net Coal Isopachs, G Bed, Chuitna West Area
- F. Net Coal Isopachs, K Bed, Chuitna West Area
- G. Structure, Top K Bed, Chuitna West Area
- H. Net Coal Isopachs, M Bed, Chuitna West Area
- I. Structure, Top M Bed, Chuitna West Area
- J. Structure, Top J Bed, Chuitna West Area
- K. Net Coal Isopachs, O Bed, Chuitna West Area
- L. Structure, Top Q Bed, Chuitna West Area
- M. Net Coal Isopachs, Q Bed, Chuitna West Area
- N. Cross Sections, Capps Area
- O. Net Coal Isopachs, Capps Seam, Capps Area
- P. Structure, Top Capps Seam, Capps Area
- Q. Overburden Isopachs, Capps Seam, Capps Area
- R. Net Parting Isopachs, Capps Seam, Capps Area
- S. Net Parting Isopachs, Waterfall Seam, Capps Area
- T. Structure, Top Waterfall Seam, Capps Area
- U. Net Coal Isopachs, Waterfall Seam, Capps Area
- V. Overburden/Interburden Isopachs, Waterfall Seam, Capps Area
- AA. Conceptual View of Portion of Capps Mine
- BB. Capps Area, Typical Cross Section Thru Active Mining Zone

- CC. Capps Area, Dragline Stripping Sequence and Main Coal Haulage Roads
- DD. Capps Area, Sequence of Shovel Removal of Overburden Below Capps Seam
- EE. Capps Area, Sequence of Shovel Removal of Overburden Above Capps Seam
- FF. Conceptual View of Portion of Chuitna West Mine
- GG. Chuitna West, Projected Mining Progress Thru Year 5
- HH. Chuitna West, Projected Mining Progress Thru Year 10
- II. Chuitna West, Projected Mining Progress Thru Year 15
- JJ. Chuitna West, Projected Mining Progress Thru Year 20
- KK. Chuitna West, Projected Mining Progress Thru Year 25
- LL. Chuitna West, Projected Mining Progress Thru Year 30





MAJOR COAL FIELDS

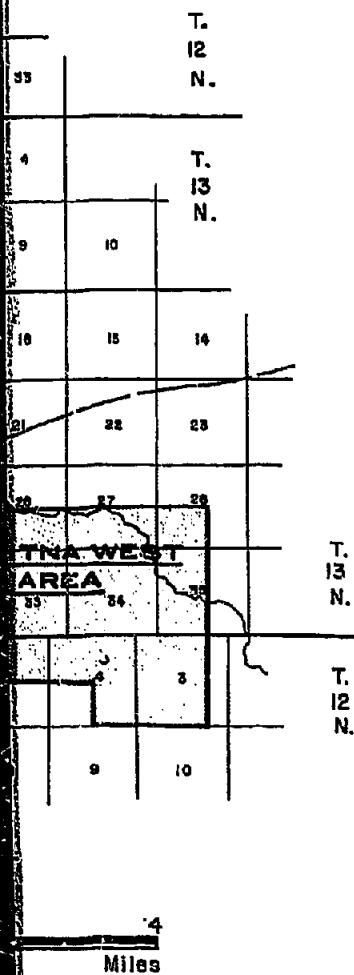
**CIRI-PLACER**  
**BELUGA METHANOL PROJECT**  
**COOK INLET, ALASKA**

PAUL WEI  
INCOR.  
CHICAGO

**LOCATION MAP**

FIGURE 1  
JULY, 1981  
SCALE: SEE  
JOB NO. 2750

FIGURE 1



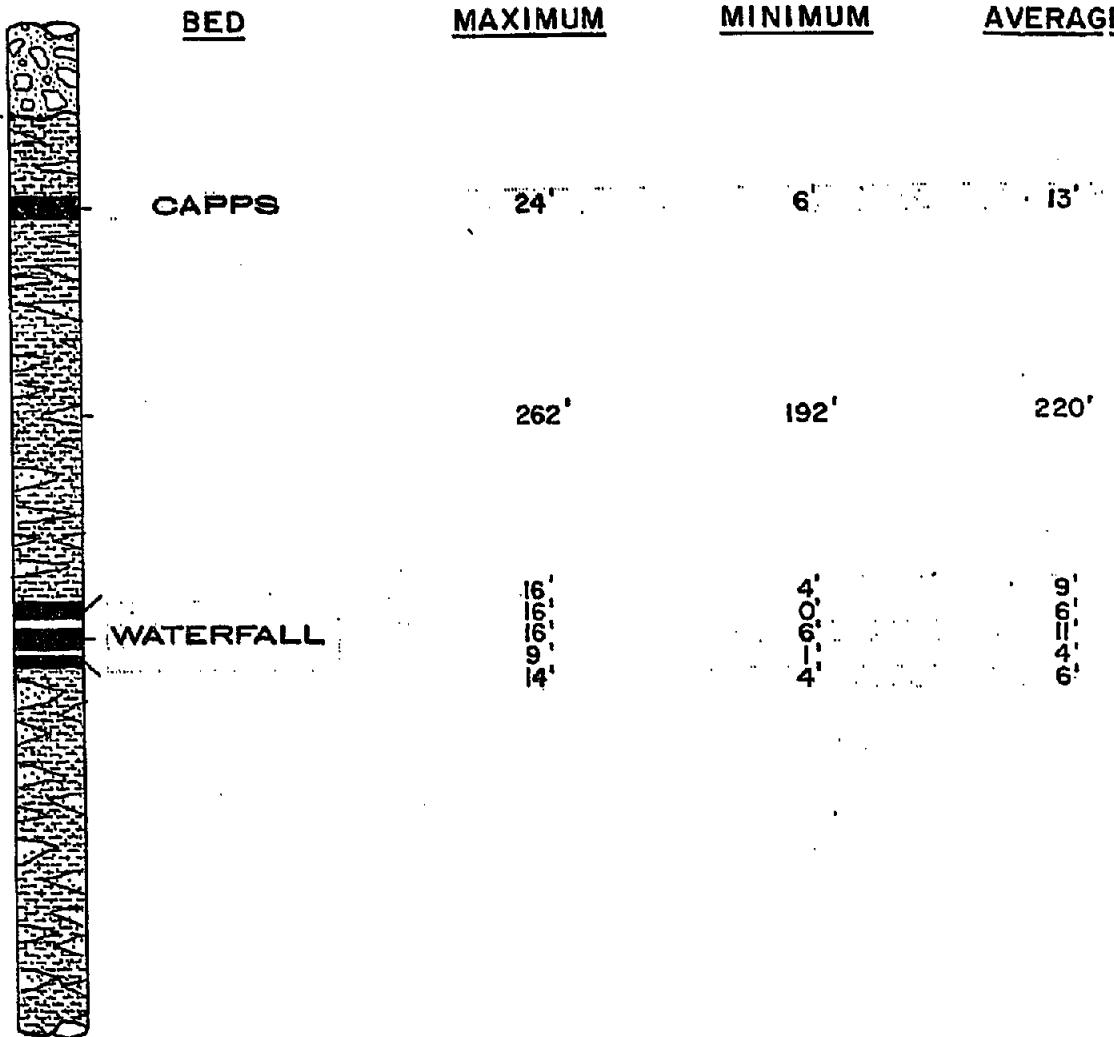
GENERALIZED STRATIGRAPHIC  
SECTIONS

CHUITNA WEST AREA

BED	MAXIMUM	MINIMUM	AVERAGE
G	36'	17'	22'
	239	148'	208'
K	34'	10'	22'
	321'	220'	264'
M	54'	30'	39'
	140'	68'	96'
O	13'	5'	9'
	130'	47'	85'
Q	14'	8'	10'

TIGRAPHIC

CAPPS AREA



CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA

PAUL  
CH

GENERALIZED  
SECTIONS

FIGURE  
JULY, 19  
SCALE:  
JOB NO:

CAPPS AREA

MAXIMUM      MINIMUM      AVERAGE

24'      6'      13'

262'      192'      220'

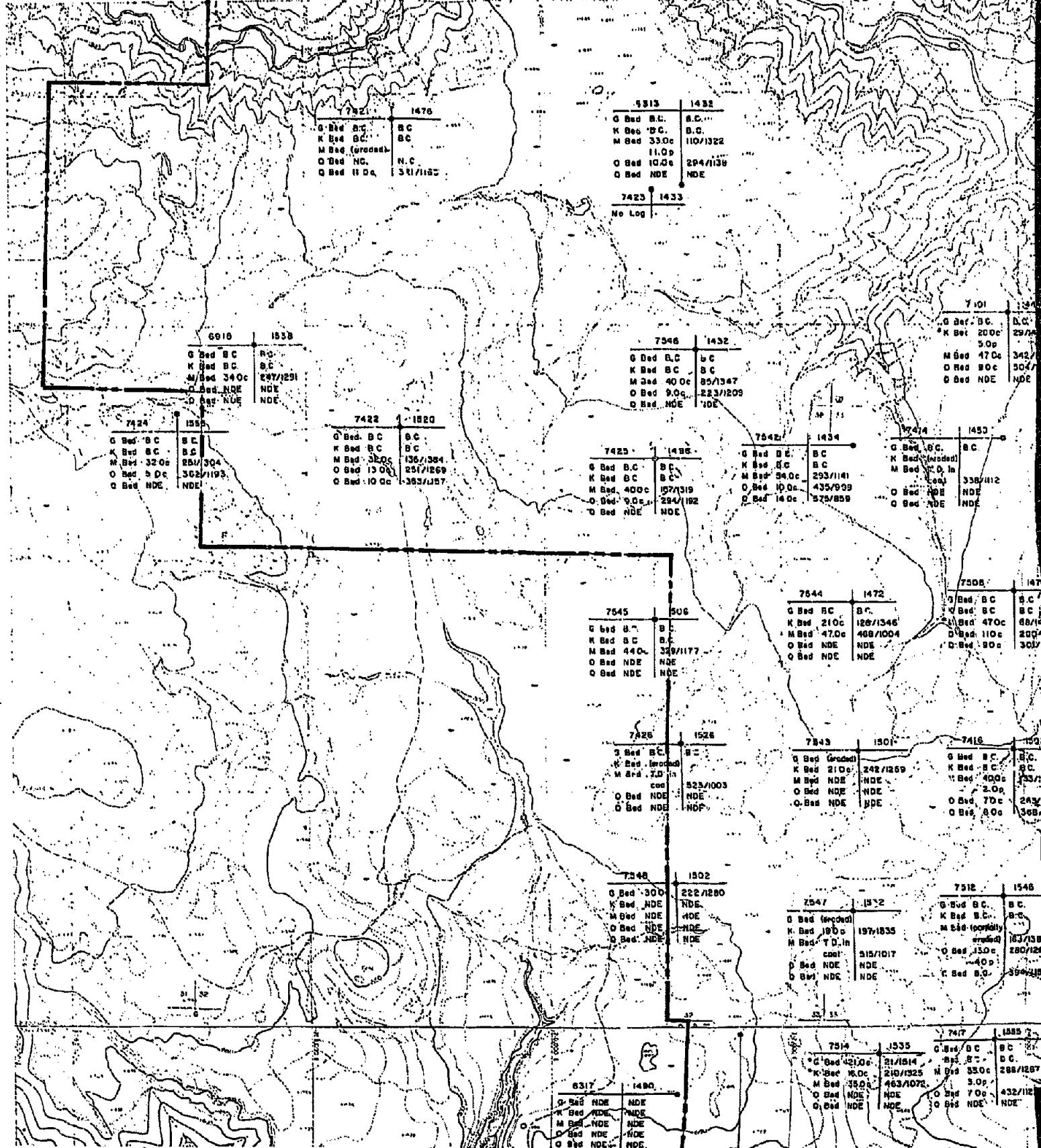
16'  
16'  
16'  
9'  
14'  
4'  
0'  
6'  
II'  
4'  
6'  
4'

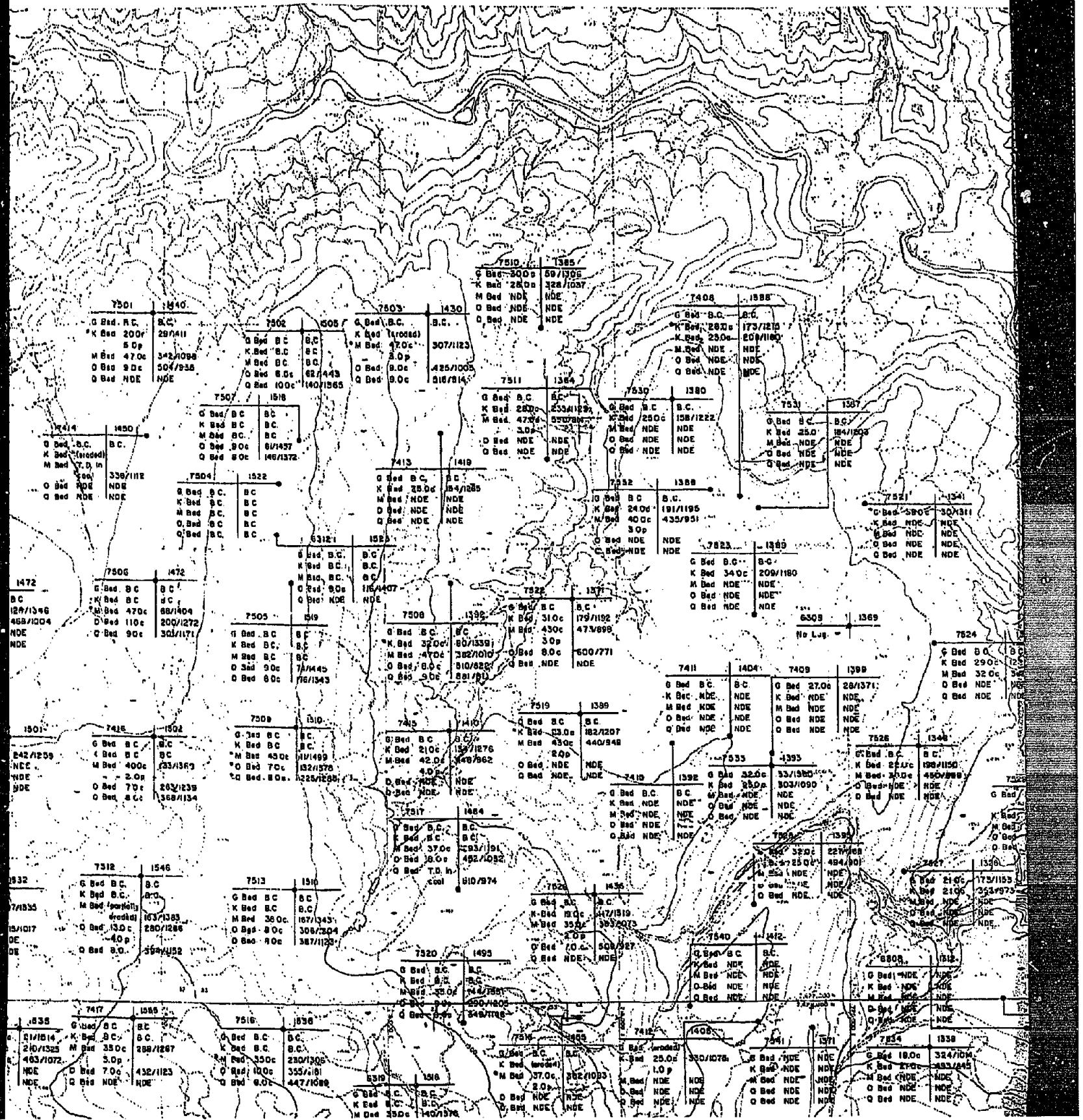
**CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA**

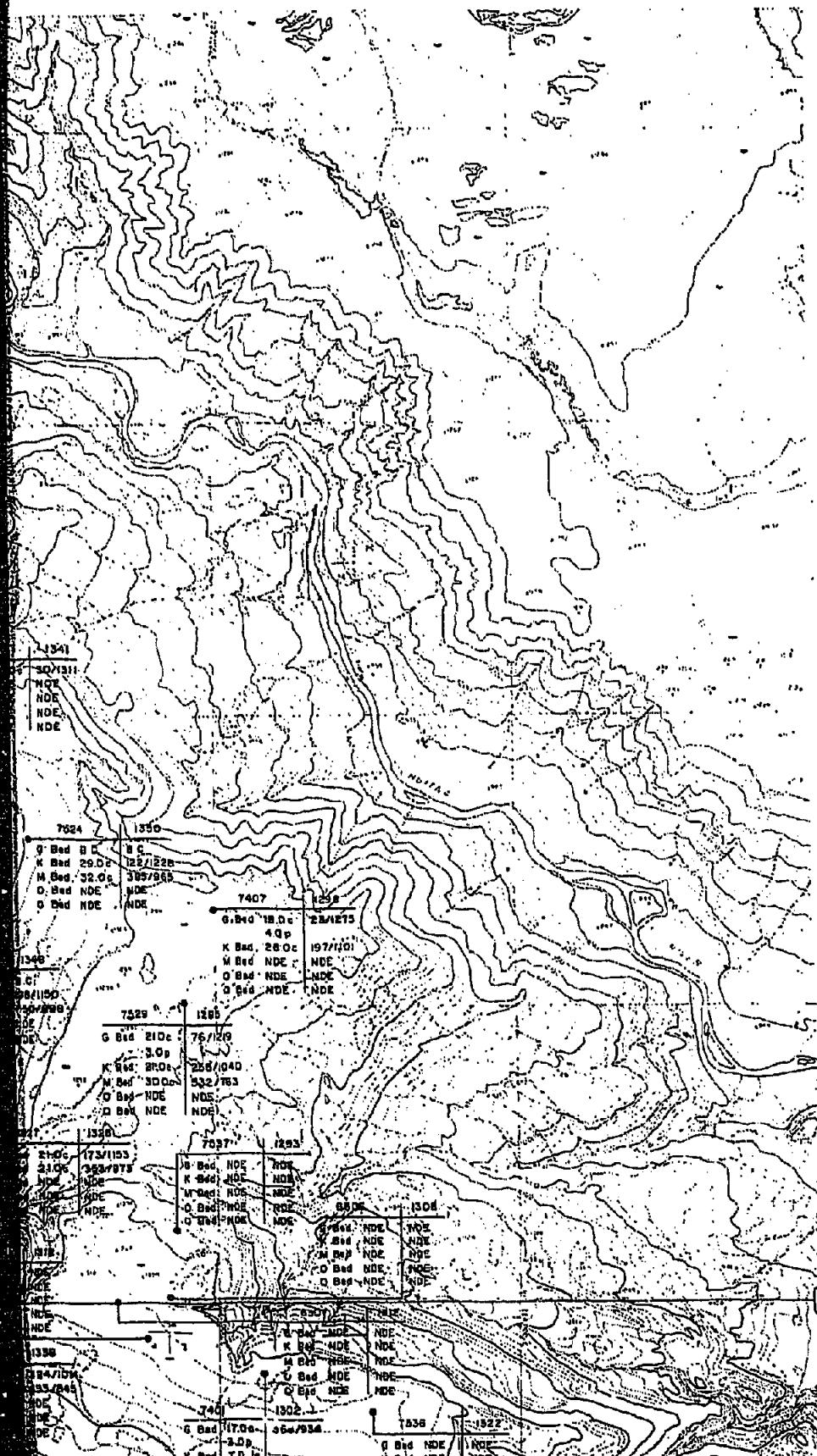
**PAUL WEIR COMPANY  
INCORPORATED  
CHICAGO, ILLINOIS 60605**

**GENERALIZED  
SECTIONS**

**FIGURE 2  
JULY, 1981  
SCALE: 1" = 100'  
JOB NO. 2750-A**







**PROPERTY LINE**

**DRILL HOLE LOCATION  
SHOWING:**

Drill Hole Number	Sur
G Bed Thickness (in feet)	De
K Bed Thickness (in feet)	Ele
M Bed Thickness (in feet)	De
O Bed Thickness (in feet)	Ele
Q Bed Thickness (in feet)	De

\* = Cored Interval  
 c = Coal Thick. (in feet)  
 p = Parting Thick. (in feet)  
 B.C. = Below Coal  
 NDE = Not Deep Enough

# EXHIBIT - A

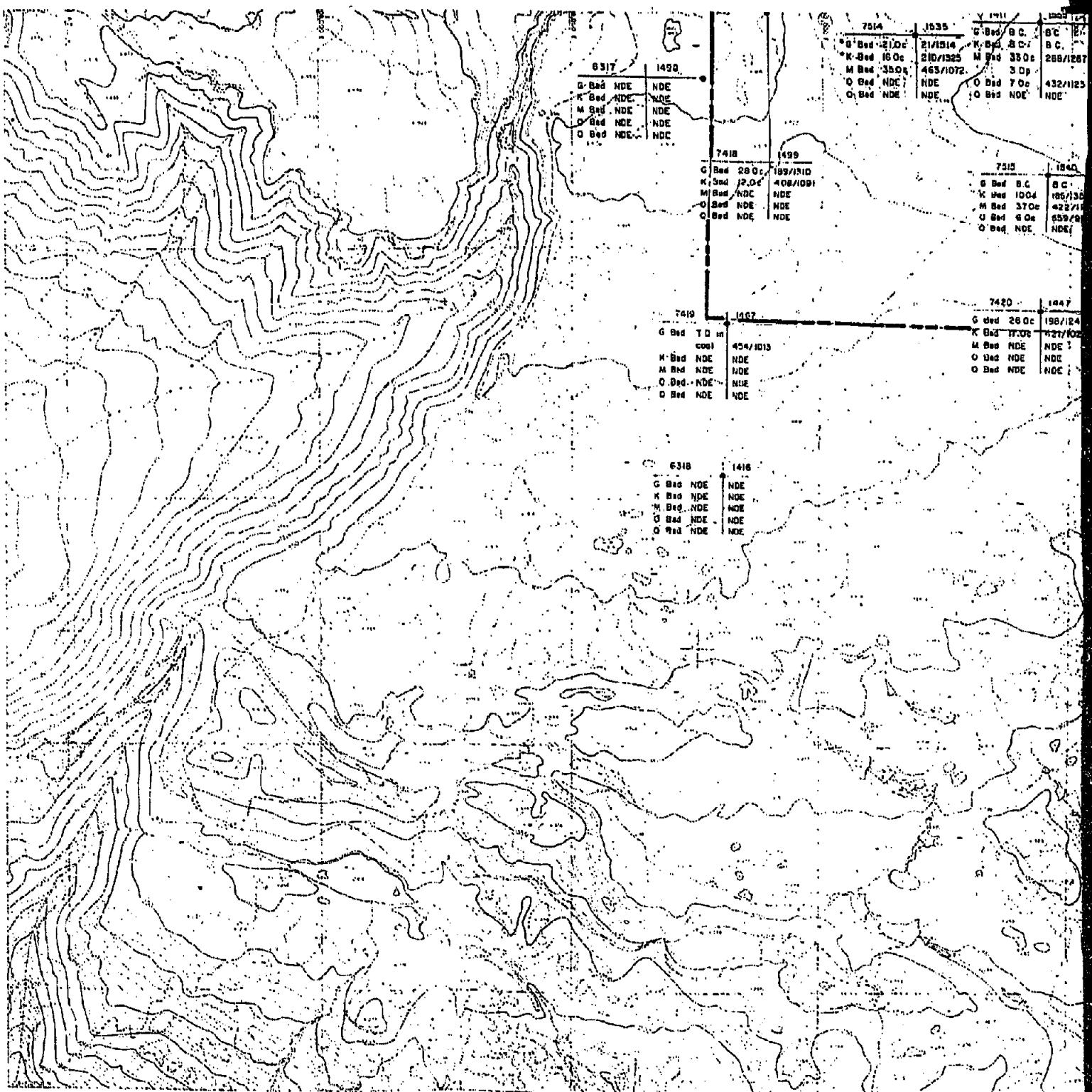
## LEGEND

PROPERTY LINE -----

DRILL HOLE LOCATION -----  
SHOWING:

Drill Hole Number	Surface Elev. (in feet)
G Bed Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)
K Bed Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)
M Bed Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)
O Bed Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)
Q Bed Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)

\* = Corad Interval  
c = Coal Thick. (in feet)  
p = Parting Thick. (in feet)  
B.C. = Below Coal  
NDE = Not Deep Enough



7515	1440	7516	1535	7517	1536	7518	1445	7519	1400	7520	1371	7521	1358	7522	1401
G Bed BC	BC	O Bed BC	BC	O Bed BC	BC	O Bed BC	BC	C Bed (wedge)	N Bed 25.0c	S Bed NDE	O Bed 18.0c	D Bed NDE	O Bed NDE	NDE	
M Bed NDE	NDE	K Bed BC	BC	M Bed NDE	NDE	M Bed 37.0c	35.0c	N Bed	25.0c	K Bed NDE	NDE	M Bed NDE	NDE	324/104	
3 Op	288/287	3 Op	287/286	3 Op	305/181	3 Op	362/103	2 Op	30.0c	M Bed NDE	NDE	O Bed NDE	NDE	483/815	
7 Dc	432/1123	7 Dc	432/1123	7 Dc	447/1089	7 Dc	447/1089	O Bed NDE	NDE	O Bed NDE	NDE	O Bed NDE	NDE	O Bed NDE	
NDE	NDE	NDE	NDE	NDE	NDE	NDE	NDE	O Bed NDE	NDE	O Bed NDE	NDE	O Bed NDE	NDE	O Bed NDE	
7515	1440	7516	1535	7517	1536	7518	1445	7519	1400	7520	1371	7521	1358	7522	1401
Bed BC	BC	Bed BC	BC	Bed BC	BC	Bed BC	BC	Bed BC	BC	Bed BC	BC	Bed BC	BC	Bed BC	BC
Bed 100c	100c	Bed 100c	100c	Bed 100c	100c	Bed 100c	100c	Bed 100c	100c	Bed 100c	100c	Bed 100c	100c	Bed 100c	100c
Bed 37.0c	37.0c	Bed 37.0c	37.0c	Bed 37.0c	37.0c	Bed 37.0c	37.0c	Bed 37.0c	37.0c	Bed 37.0c	37.0c	Bed 37.0c	37.0c	Bed 37.0c	37.0c
Bed 6.0c	6.0c	Bed 6.0c	6.0c	Bed 6.0c	6.0c	Bed 6.0c	6.0c	Bed 6.0c	6.0c	Bed 6.0c	6.0c	Bed 6.0c	6.0c	Bed 6.0c	6.0c
Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE

7420	1447	7421	1507	7422	1508	7423	1405	7424	1405	7425	1365				
Bed 25.0c	198/1249	Bed 18.0c	BC	K Bed 18.0c	BC	M Bed 38.0c	38.0c	G Bed 16.0c	37.0c/1029	K Bed 17.0c	546/829.	M Bed 23.0c	3.0p	Bed 26.0c	1365
Bed 17.0c	17.0c	Bed 17.0c	17.0c	Bed 17.0c	17.0c	Bed 17.0c	17.0c	Bed 17.0c	4.0p	Bed 17.0c	5.0p	Bed 17.0c	3.0p	Bed 26.0c	1365
Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE
Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE	Bed NDE	NDE

6320

G Bed BC	BC
K Bed DC	BC
M Bed BC	BC
O Bed BC	BC
C Bed BC	BC

1414

7403

G Bed 16.0c	37.0c/1029
K Bed 17.0c	546/829.
M Bed 18.0c	3.0p
O Bed NDE	NDE
C Bed NDE	NDE

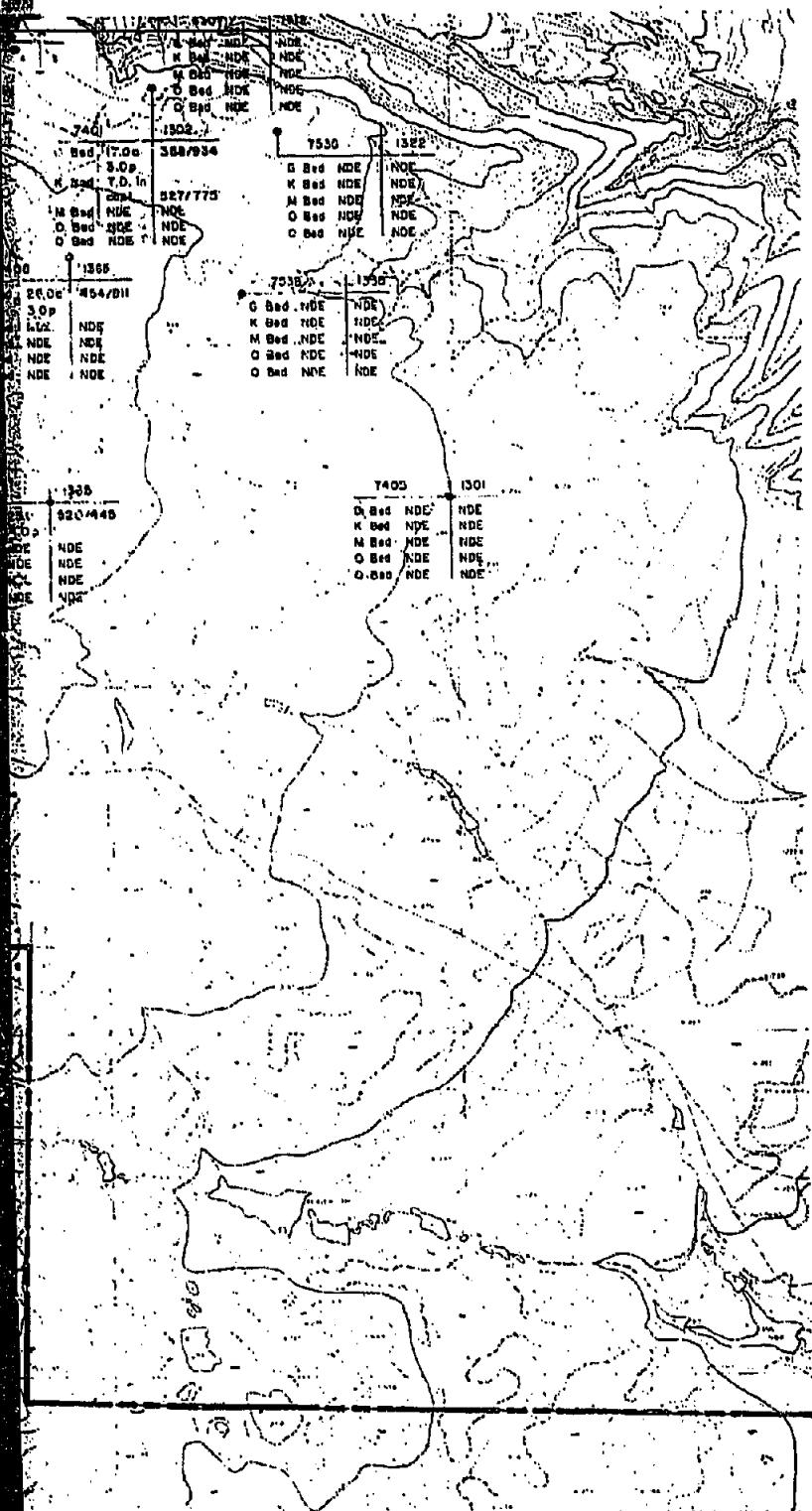
1405

7402

G Bed 26.0c	1365
K Bed 23.0c	3.0p
M Bed NDE	NDE
O Bed NDE	NDE
C Bed NDE	NDE

1365

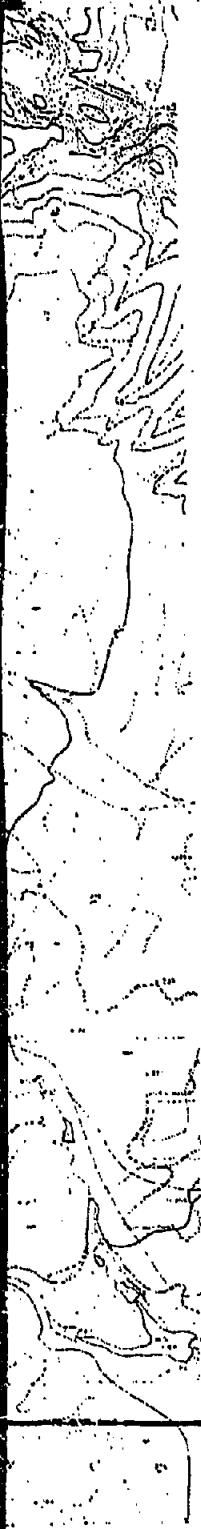
P = Parting Thick. (in feet)  
B.C. = Below Coal  
NDE = Not Deep Enough



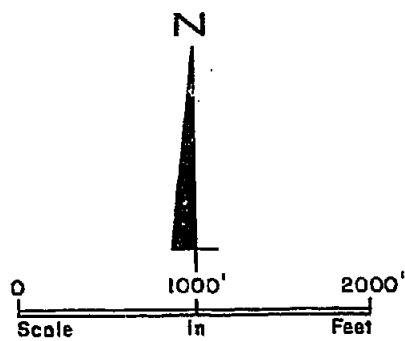
Scale

CIRI-PLACER  
BELUGA METHANOL PLANT  
COOK INLET, ALASKA

DRILL HOLE LOCATIONS  
CHUITNA WEST AREA



P = Parting Thick (in feet)  
B.C. = Below Coal  
NDE = Not Deep Enough

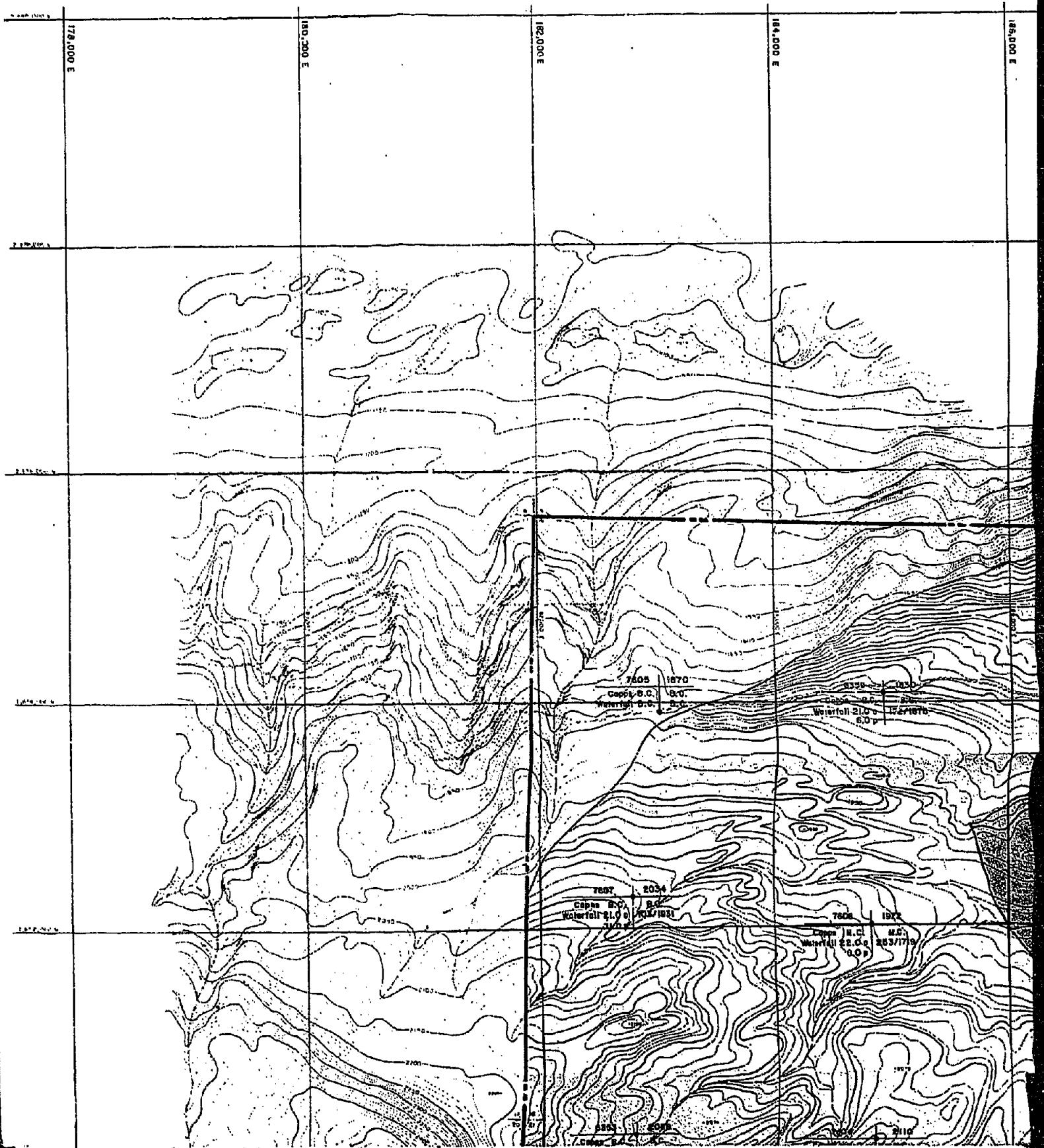


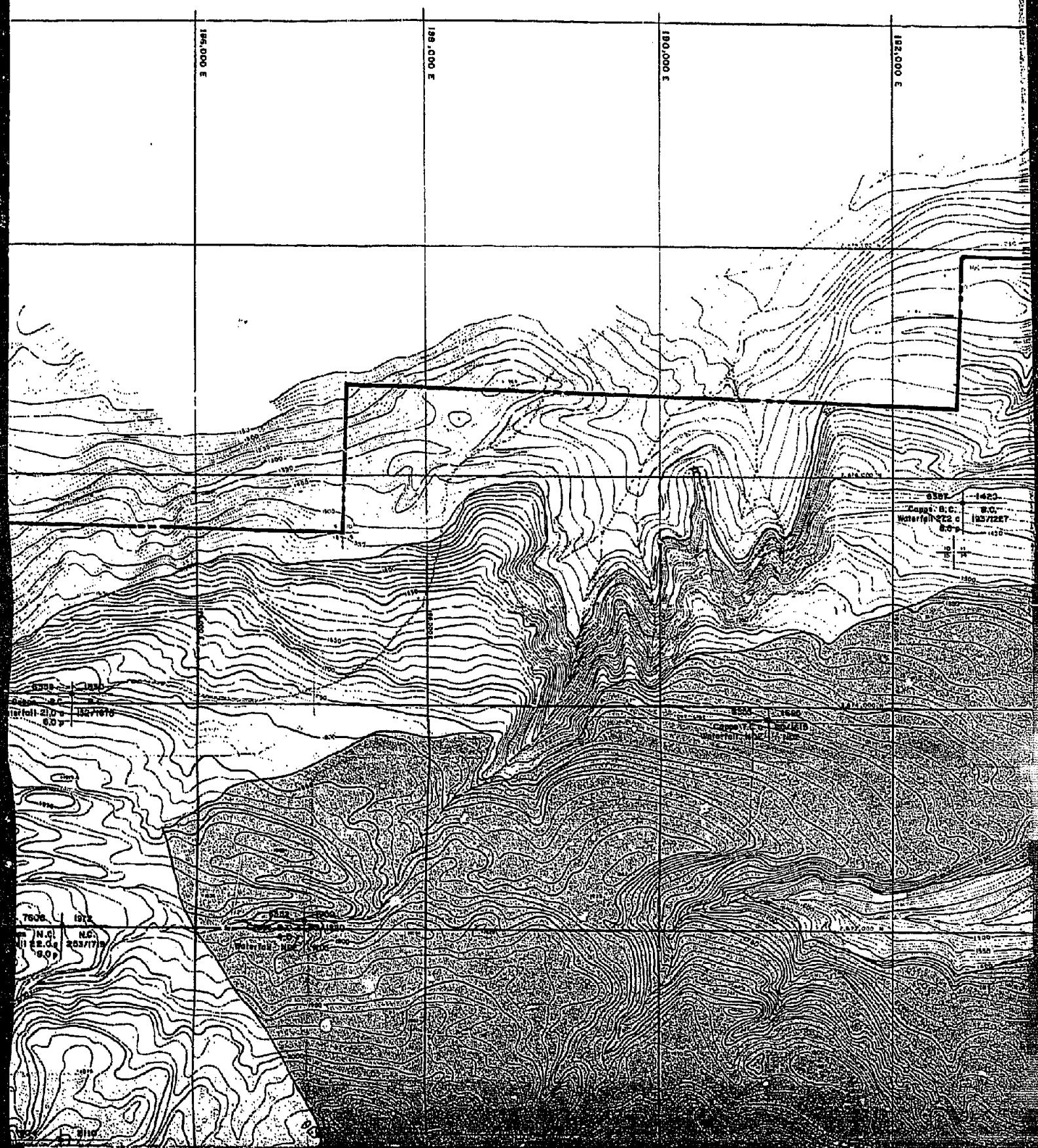
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**BELUGA METHANOL PROJECT**  
**COOK INLET, ALASKA**

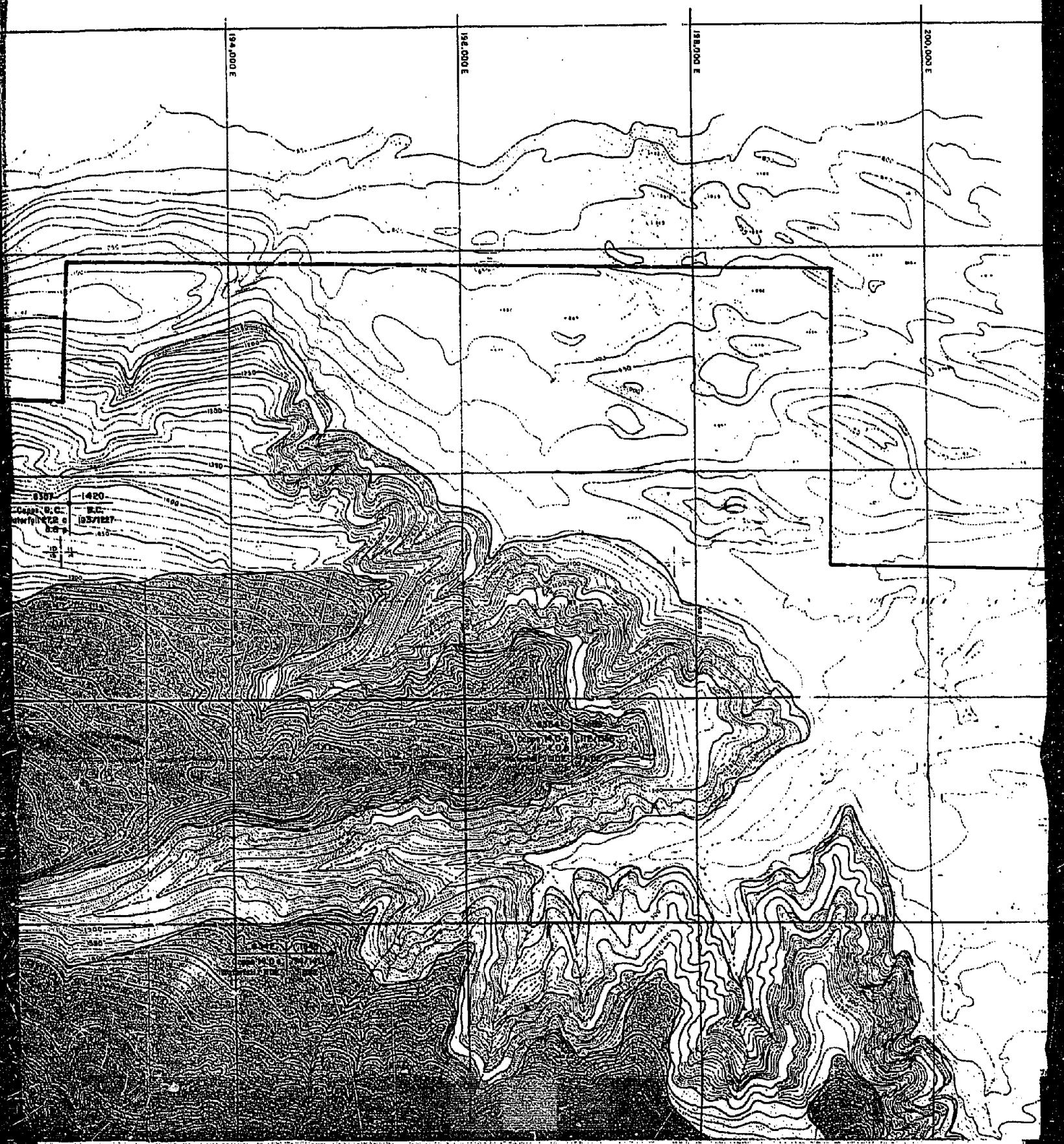
**PAUL WEIR COMPANY**  
INCORPORATED  
CHICAGO, ILLINOIS 60606

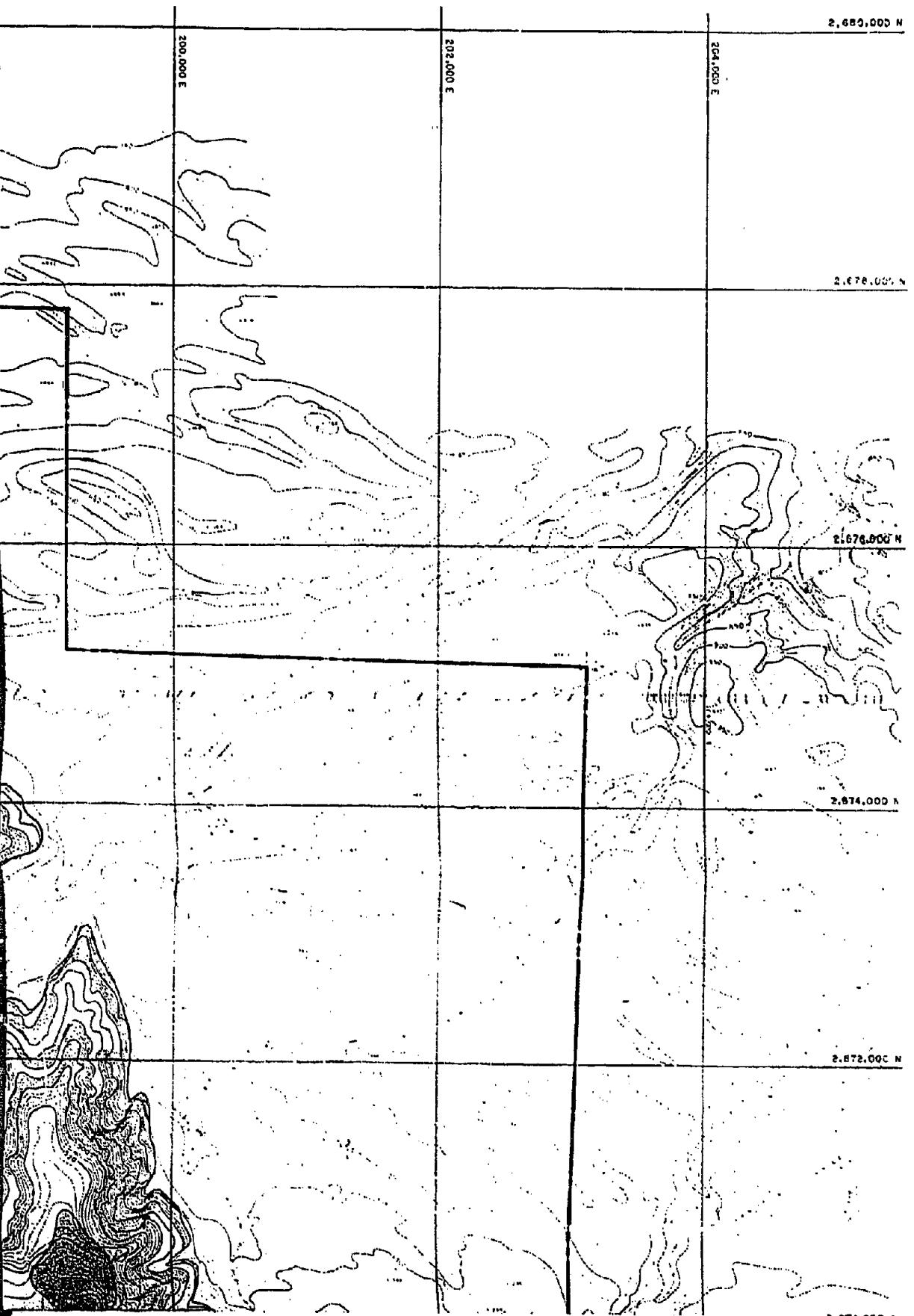
**DRILL HOLE LOCATIONS**  
**CHUITNA WEST AREA**

EXHIBIT A  
JULY, 1981  
SCALE: 1" = 1000'  
JOB NO. 2750-A



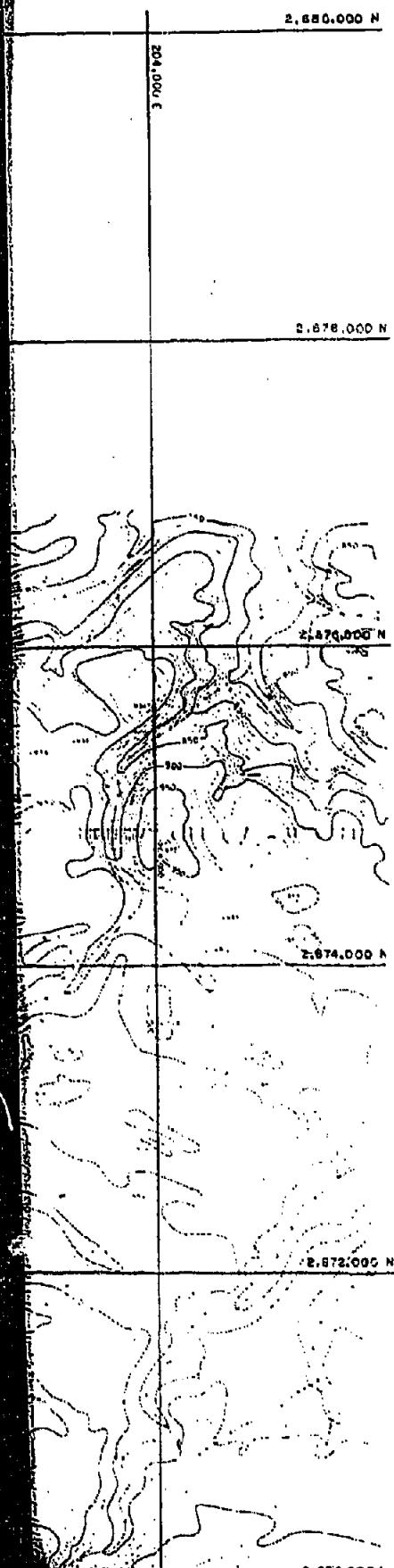






PROPERTY  
WATERFALL

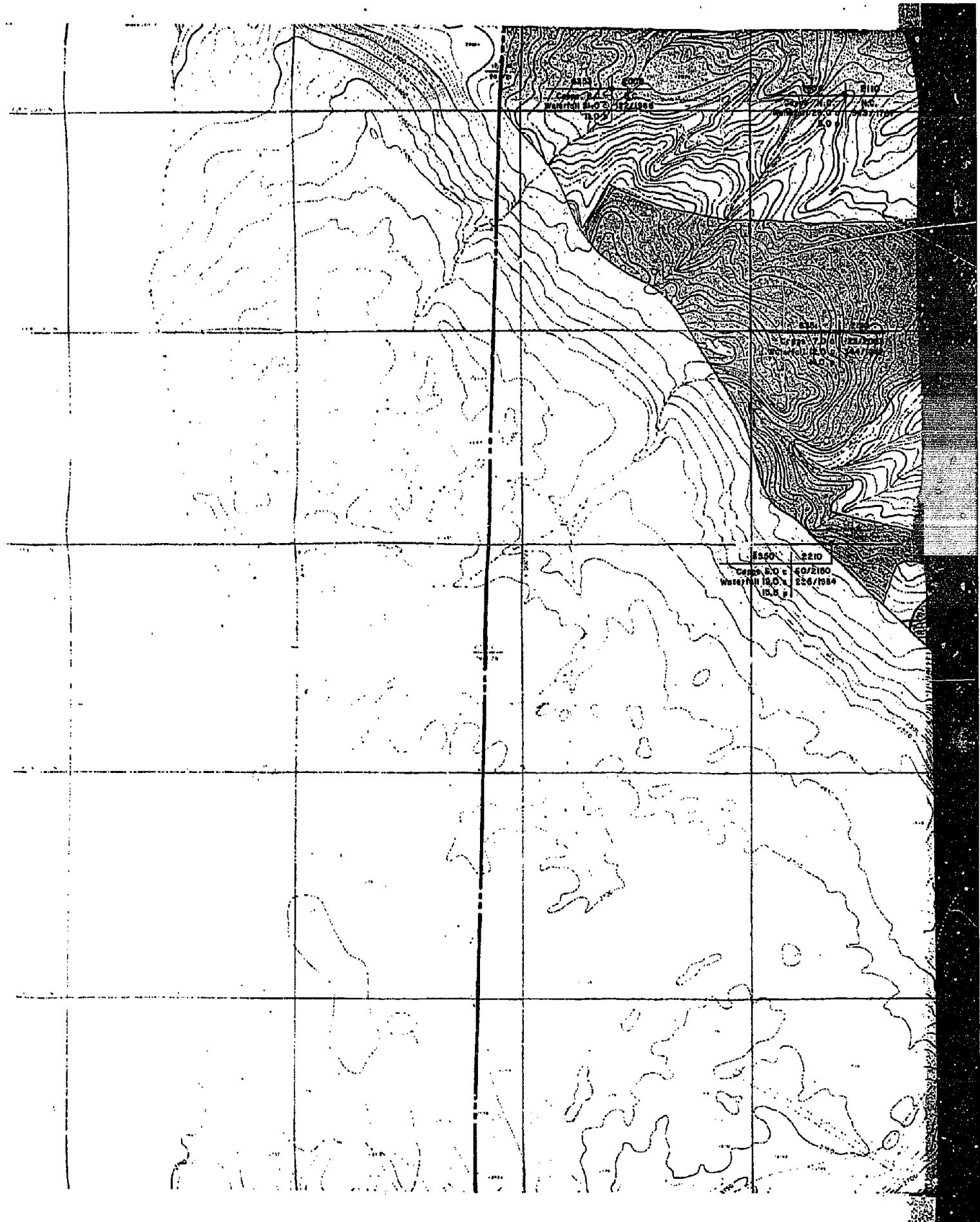
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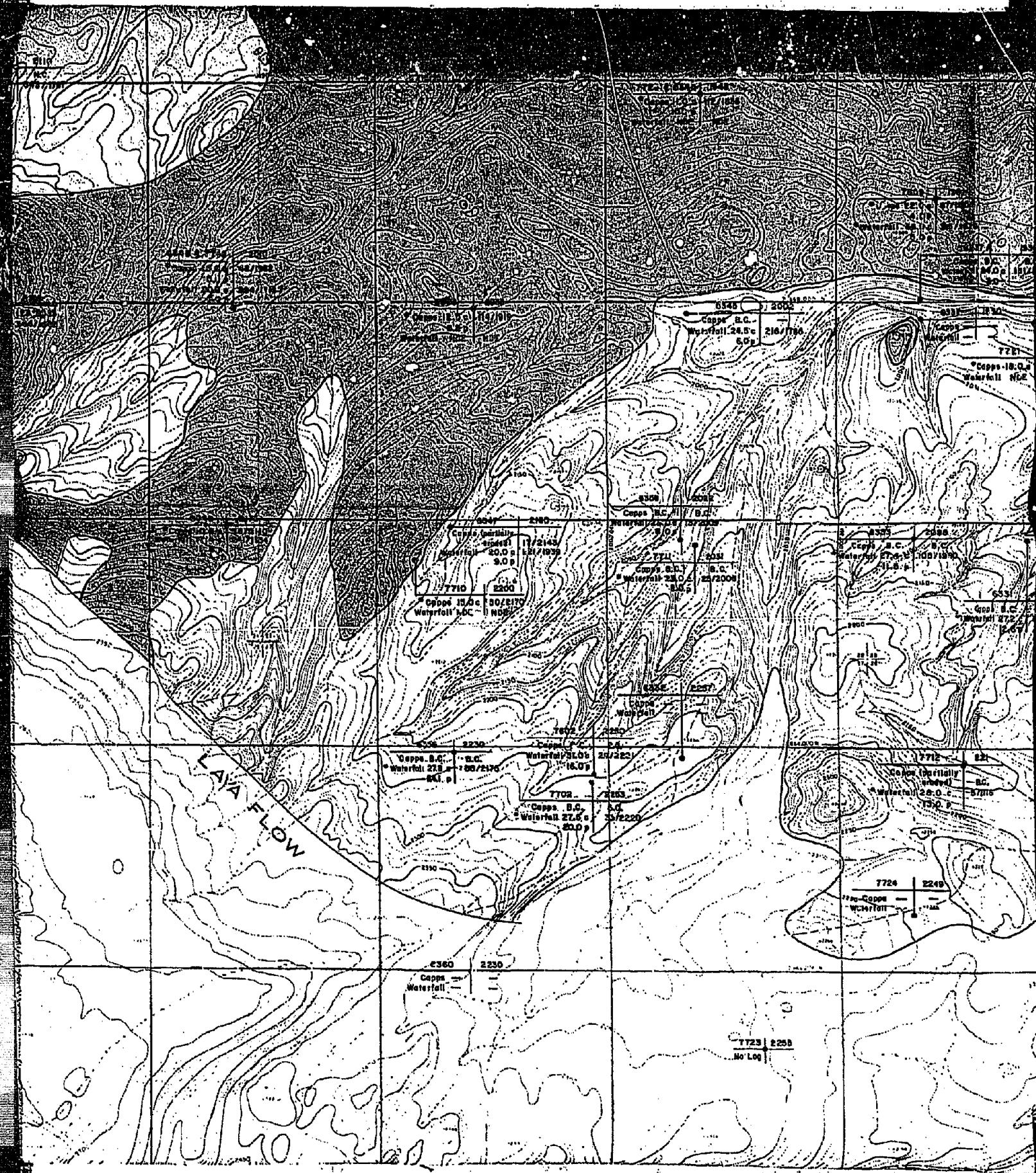


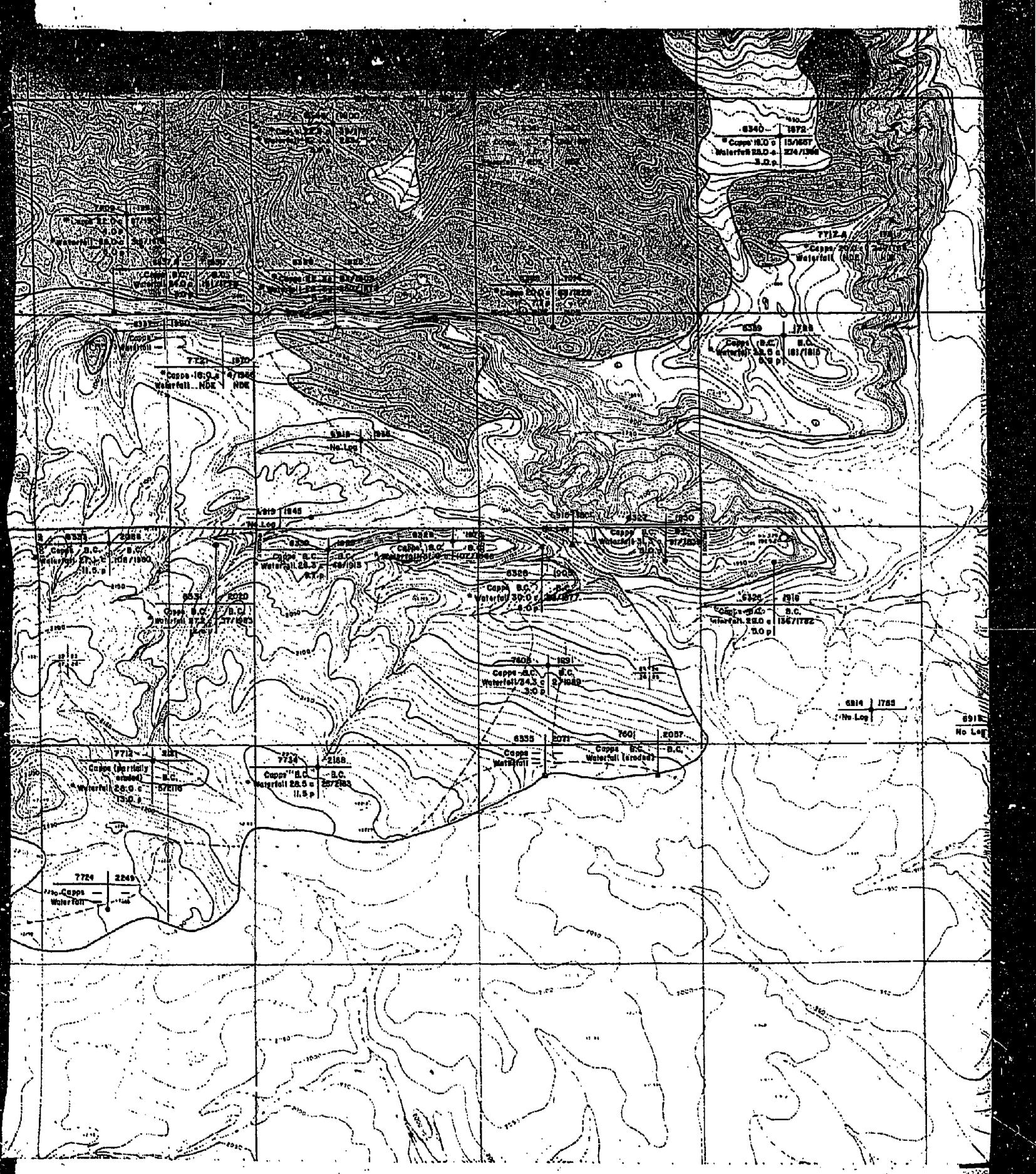
LEGEND

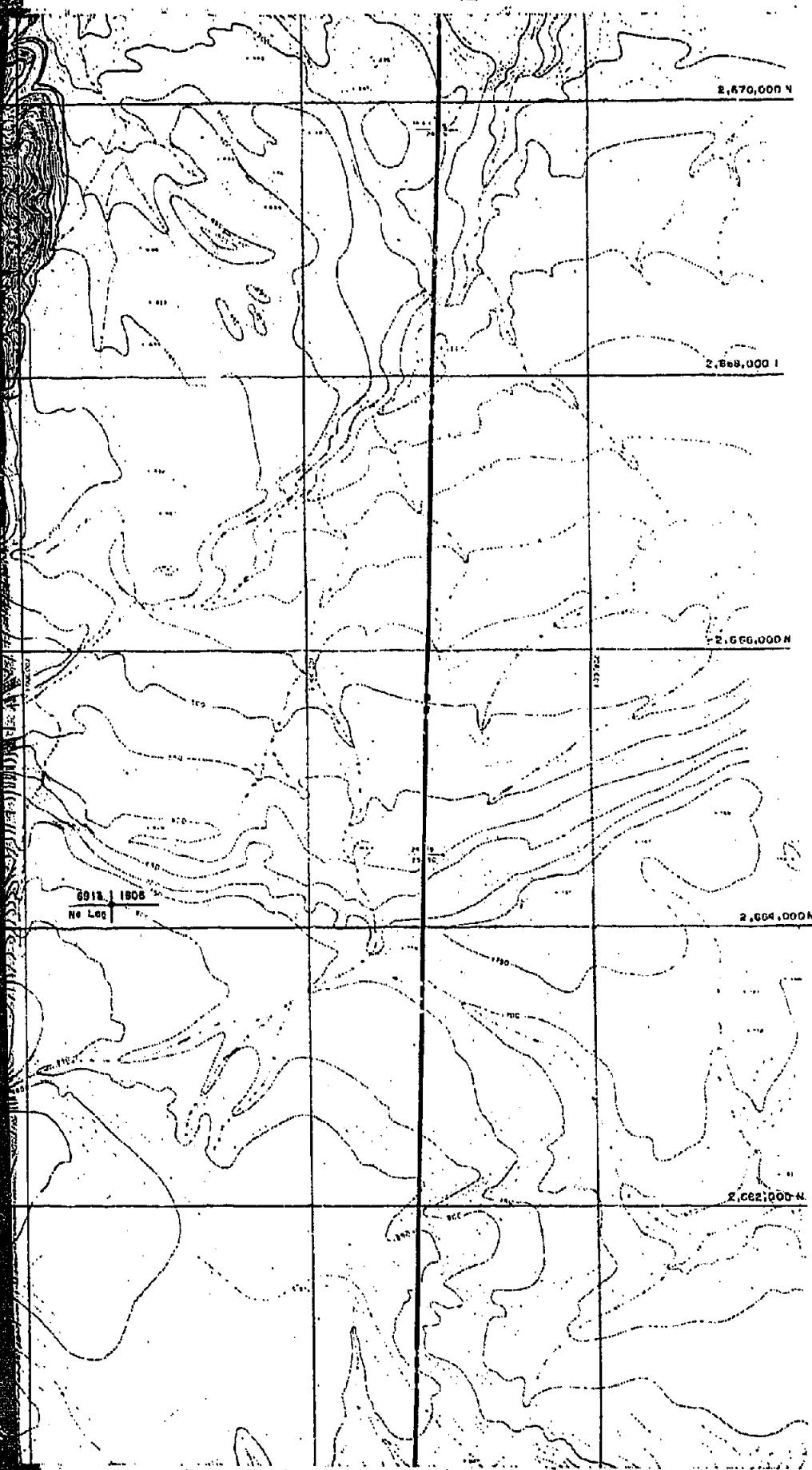
**PROPERTY LINE** \_\_\_\_\_

#### **WATERFALL SEAM**









**PROPERTY LINE**

**WATERFALL SEAM  
RESOURCE AREA**

**CAPPS AND WATERFALL  
SEAM RESOURCE AREA**

**DRILL HOLE LOCATION  
SHOWING:**

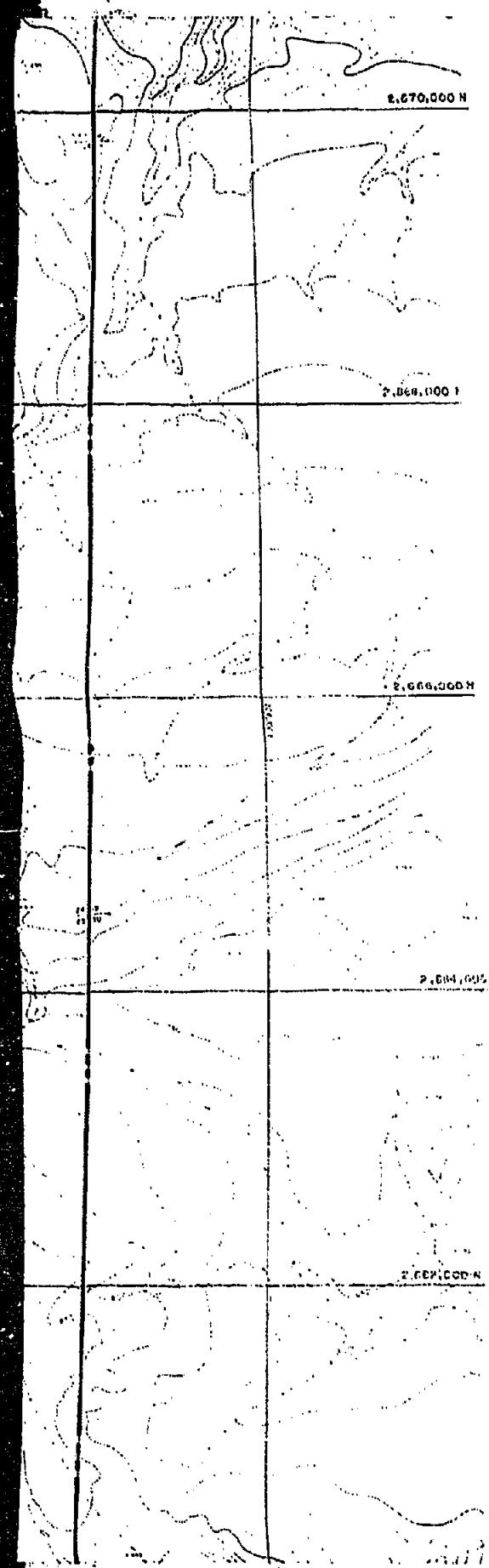
Drill Hole Number	Surface
Capps Seam Thickness (in feet)	Depth
Waterfall Seam Thickness (in feet)	Elev.
	Depth
	Elev.

\* = Core Hole  
 c = Coal Thick. (in feet)  
 p = Parting (in feet)  
 B.C. = Below Coal  
 NDE = Not Deep Enough  
 — = Bad Log



0

1000'



**PROPERTY LINE** \_\_\_\_\_

**WATERFALL SEAM**

**RESOURCE AREA** \_\_\_\_\_



**CAPPS AND WATERFALL**

**SEAM RESOURCE AREA** \_\_\_\_\_



**DRILL HOLE LOCATION** \_\_\_\_\_

**SHOWING:**

Drill Hole Number	Surface Elev. (in feet)
Capps Seam Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)
Waterfall Seam Thickness (in feet)	Depth Top of Coal (in feet) / Elev. Top of Coal (in feet)

\* = Core Hole

c = Coal Thick. (in feet)

p = Parting (in feet)

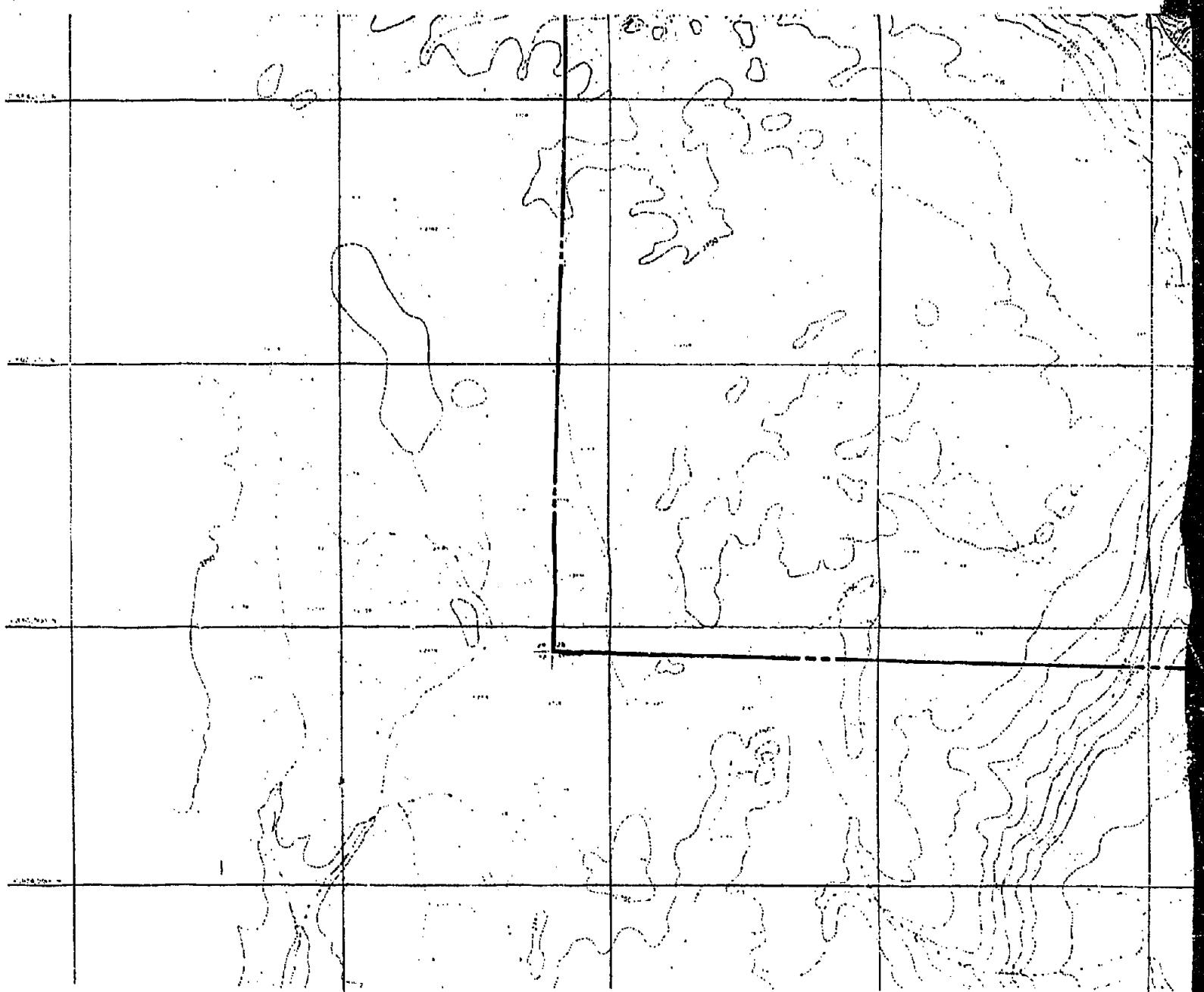
B.C. = Below Coal

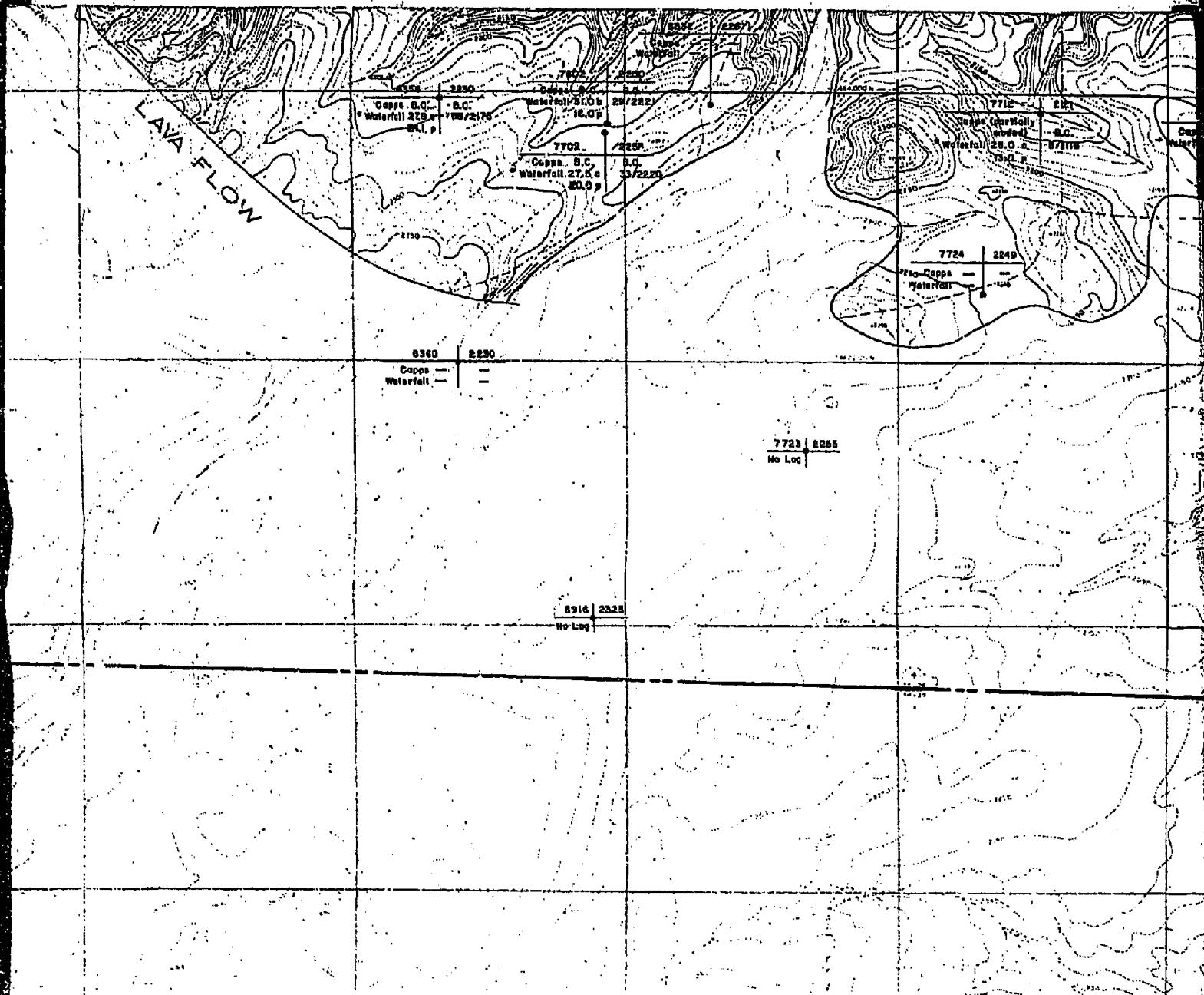
NDE = Not Deep Enough

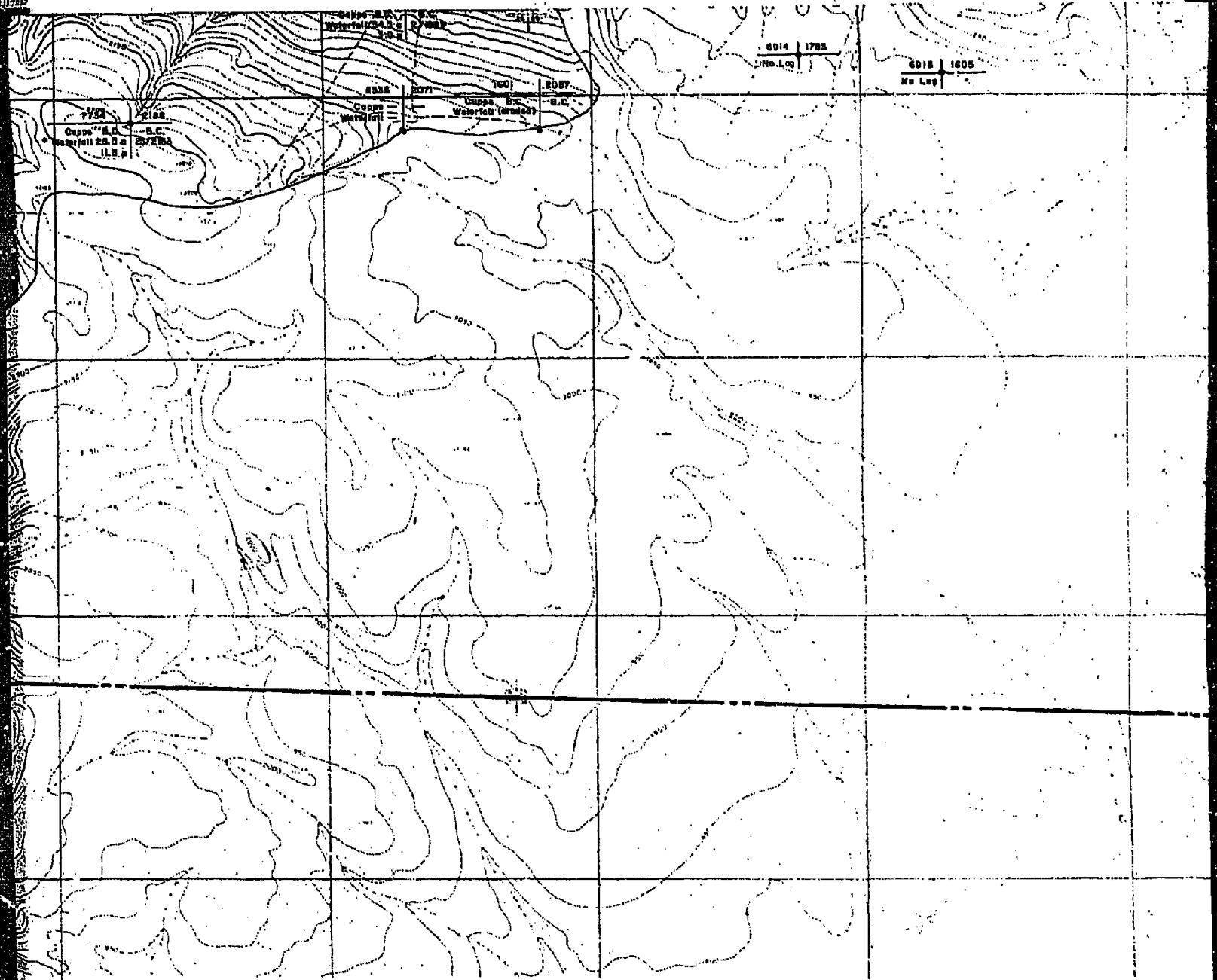
— = Bad Log

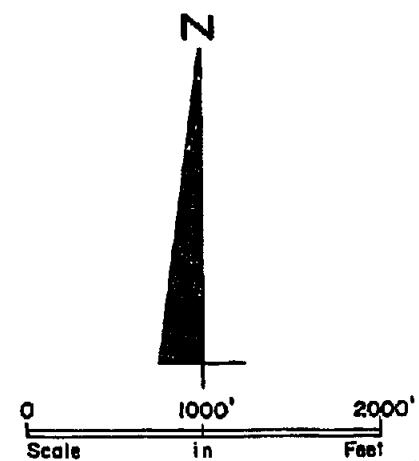
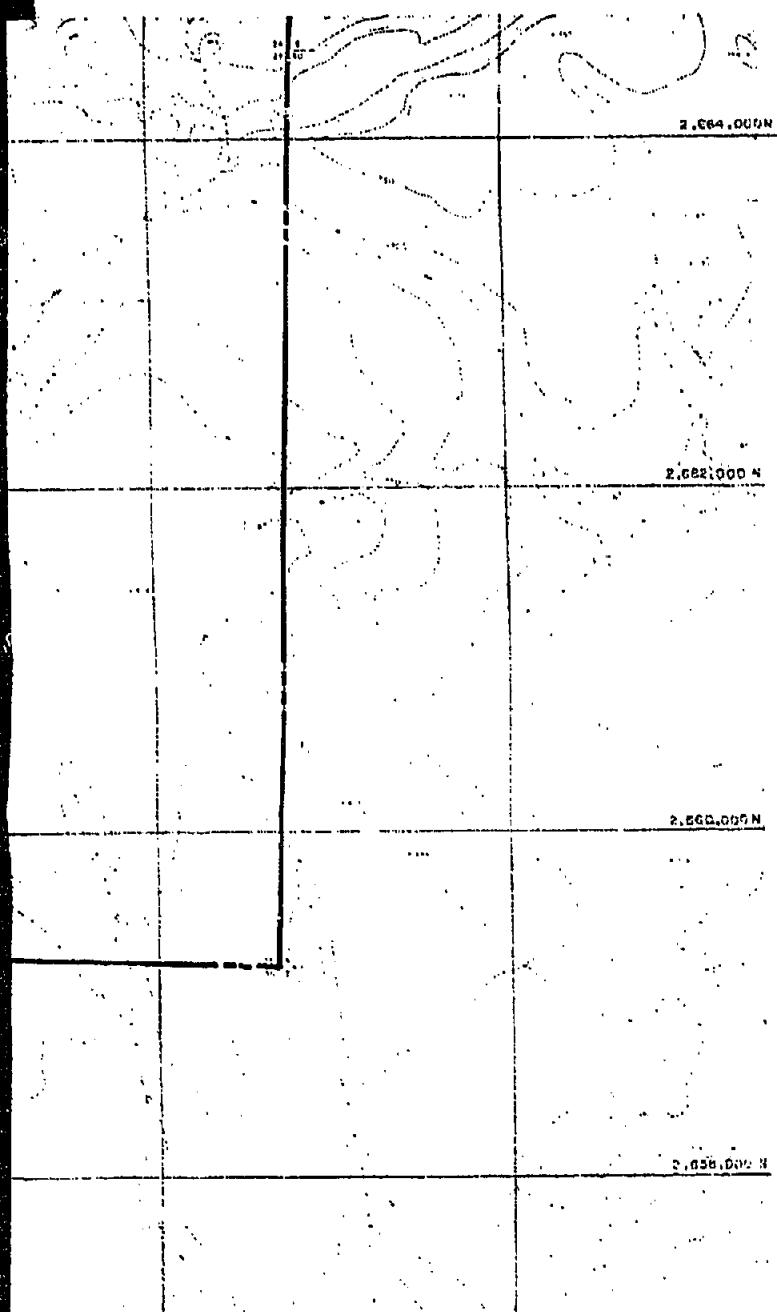
N

0 1000' 2000'









**CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA**

**PAUL W.  
INC.  
CHICAGO**

**DRILL HOLE  
LOCATIONS  
CAPP'S AREA**

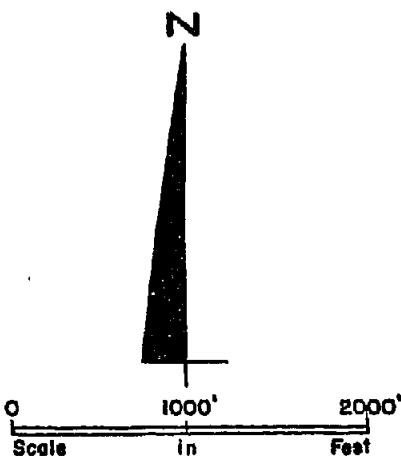
**EXHIBIT B  
JULY, 1981  
SCALE: 1" =  
JOB NO. 275**

2,684,000N

2,684,000N

2,684,000N

2,684,000N



**CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA**

**PAUL WEIR COMPANY  
INCORPORATED  
CHICAGO, ILLINOIS 60636**

**DRILL HOLE  
LOCATIONS  
CAPPS AREA**

**EXHIBIT B  
JULY, 1981  
SCALE: 1"=1000'  
JOB NO. 2750-A**

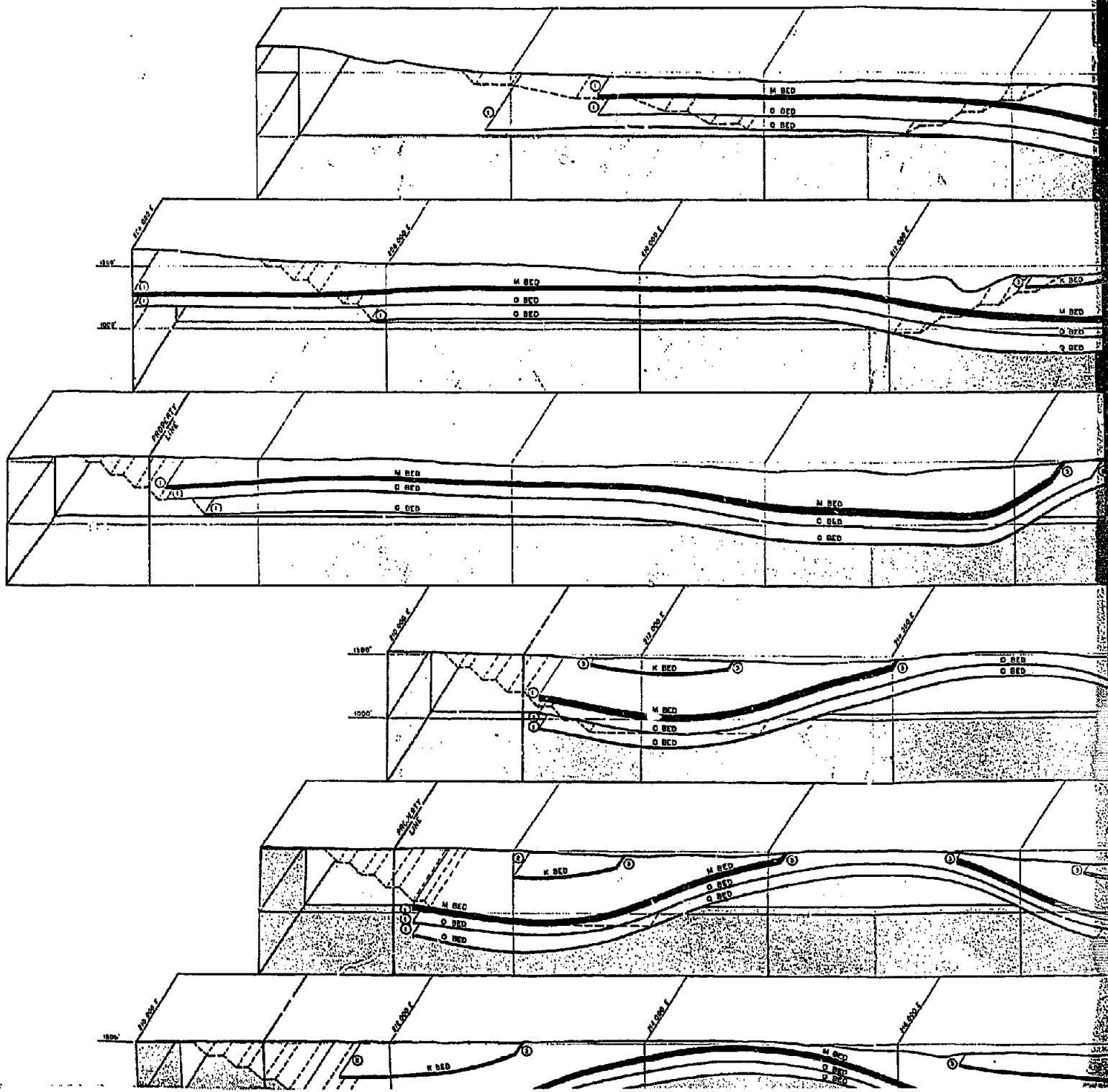
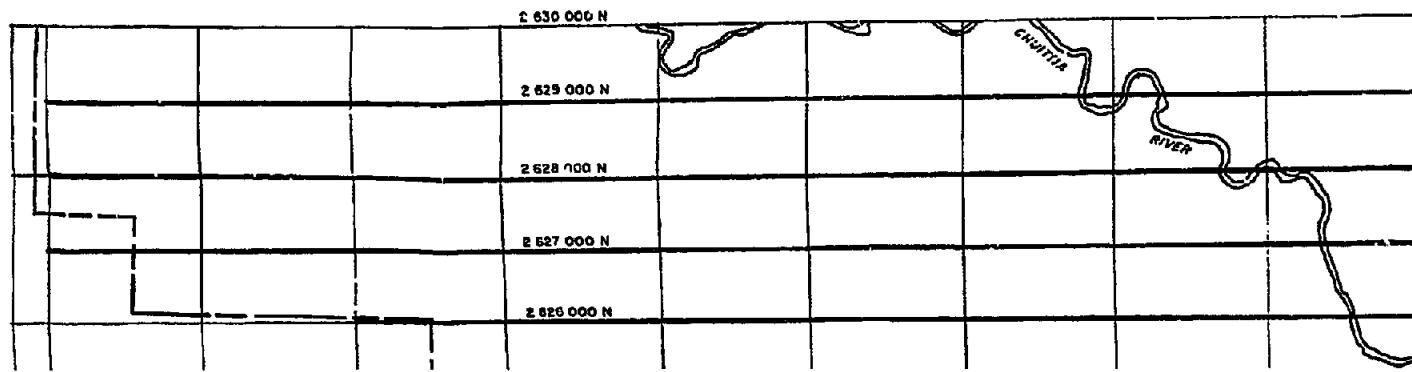
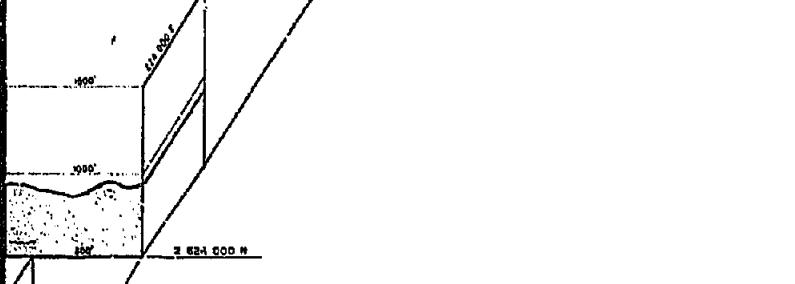
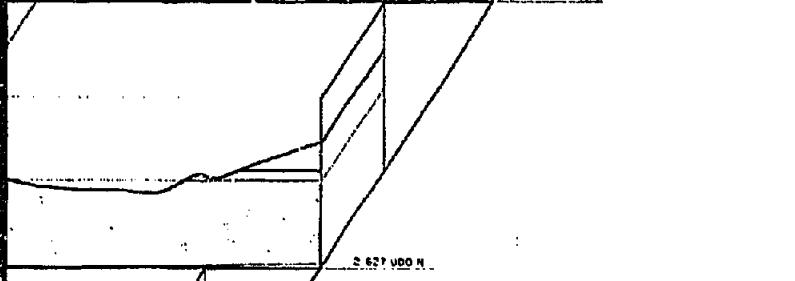
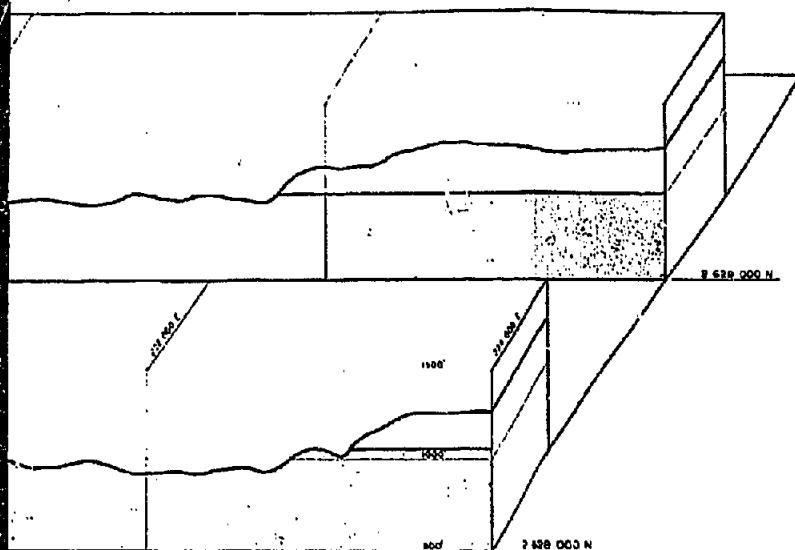
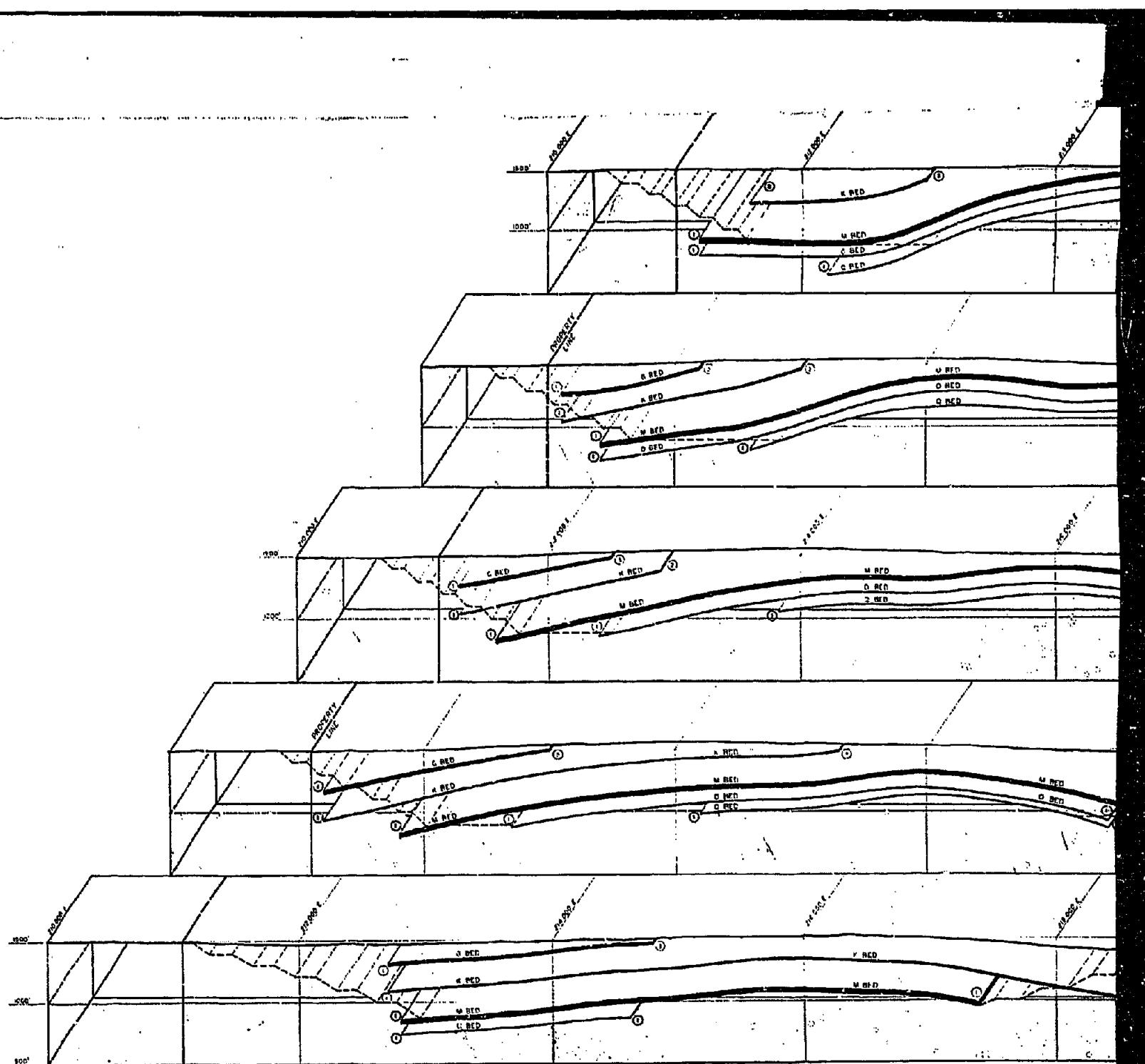
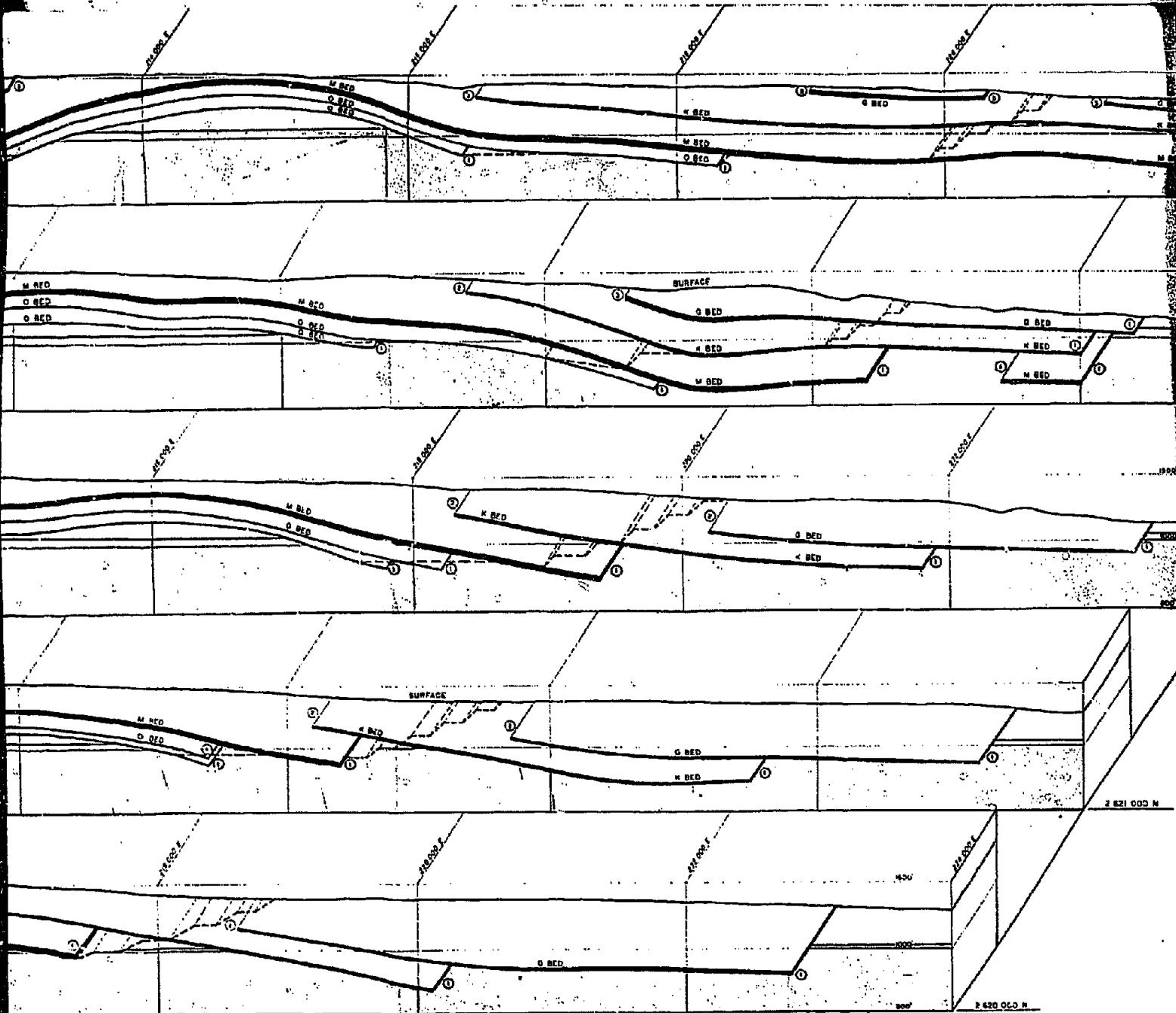


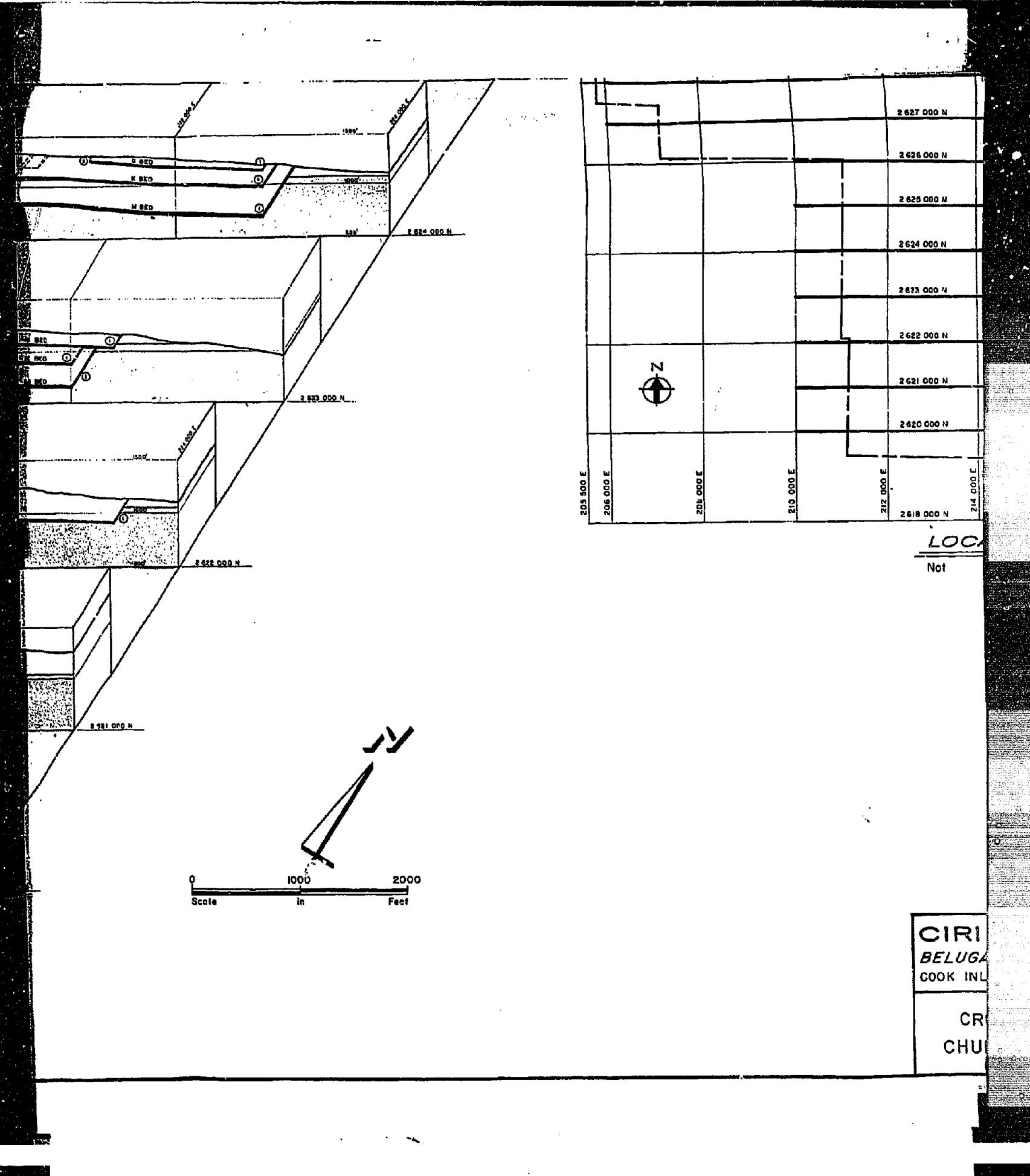


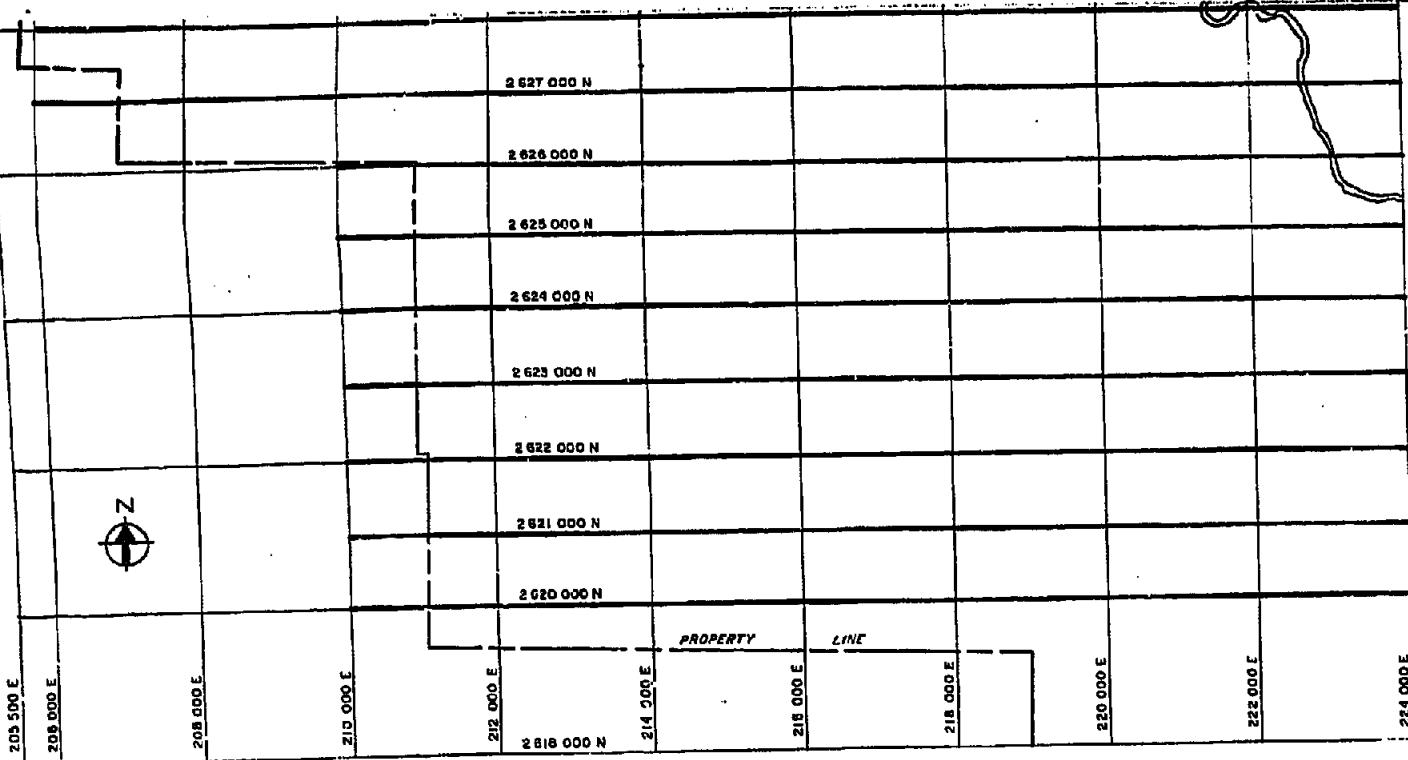
EXHIBIT - C











LOCATION MAP

Not to Scale

LEGEND

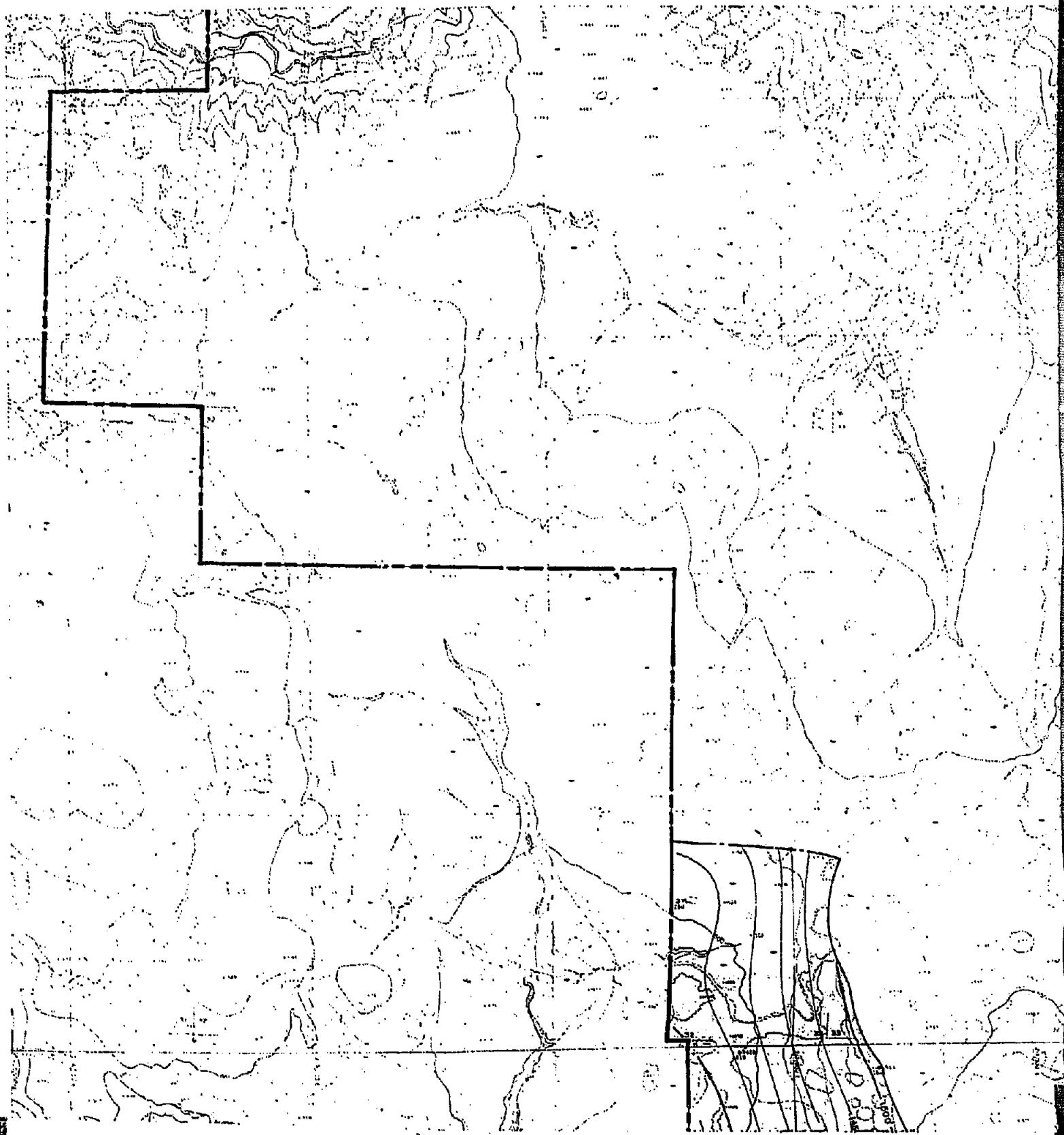
- LIMIT OF DATA \_\_\_\_\_ (1)
- ERODED \_\_\_\_\_ (2)
- SUBCROP \_\_\_\_\_ (3)
- LIMIT OF MINING \_\_\_\_\_

**CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA**

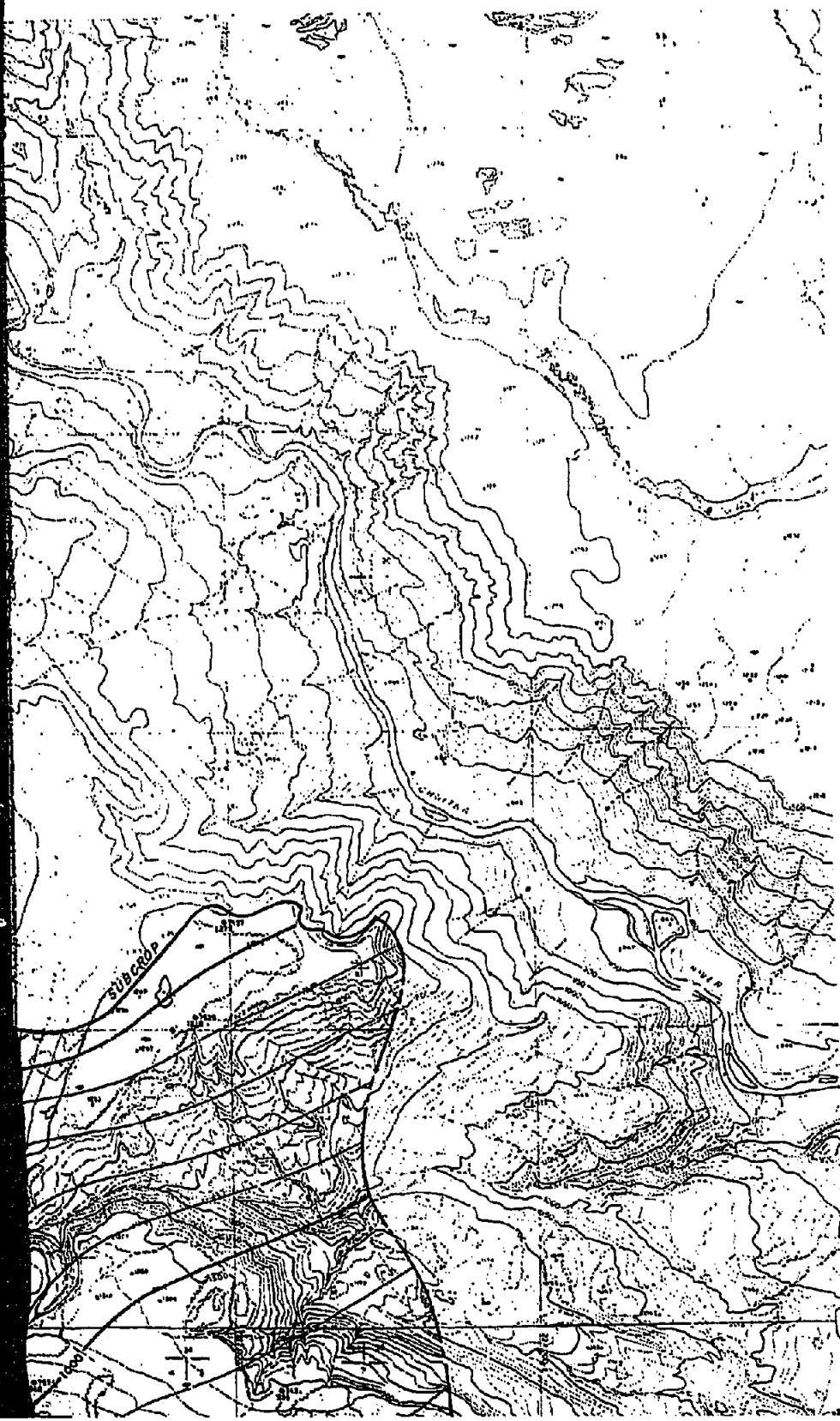
**CROSS SECTIONS  
CHUITNA WEST AREA**

**PAUL WEIR COMPANY  
INCORPORATED  
CHICAGO, ILLINOIS 60606**

**EXHIBIT C  
JULY, 1981  
SCALE: SEE EXHIBIT  
JOB NO. 2750-A**

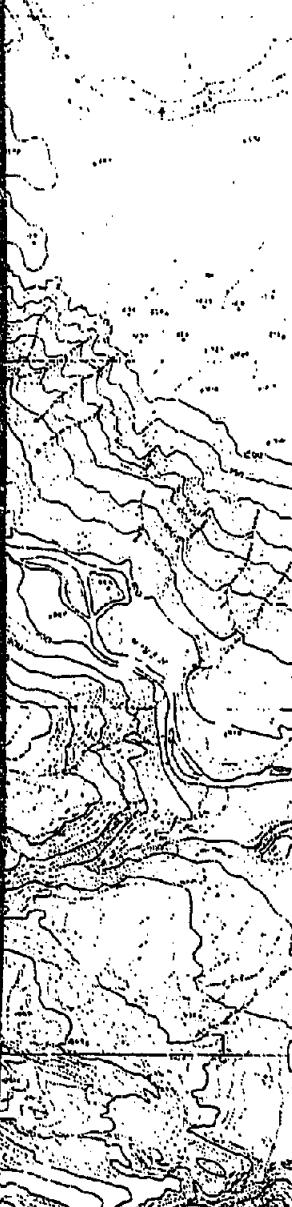






L  
PROPERTY LINE \_\_\_\_\_  
LIMIT OF DATA \_\_\_\_\_  
STRUCTURE \_\_\_\_\_  
RESOURCE AREA \_\_\_\_\_

**EXHIBIT - D**



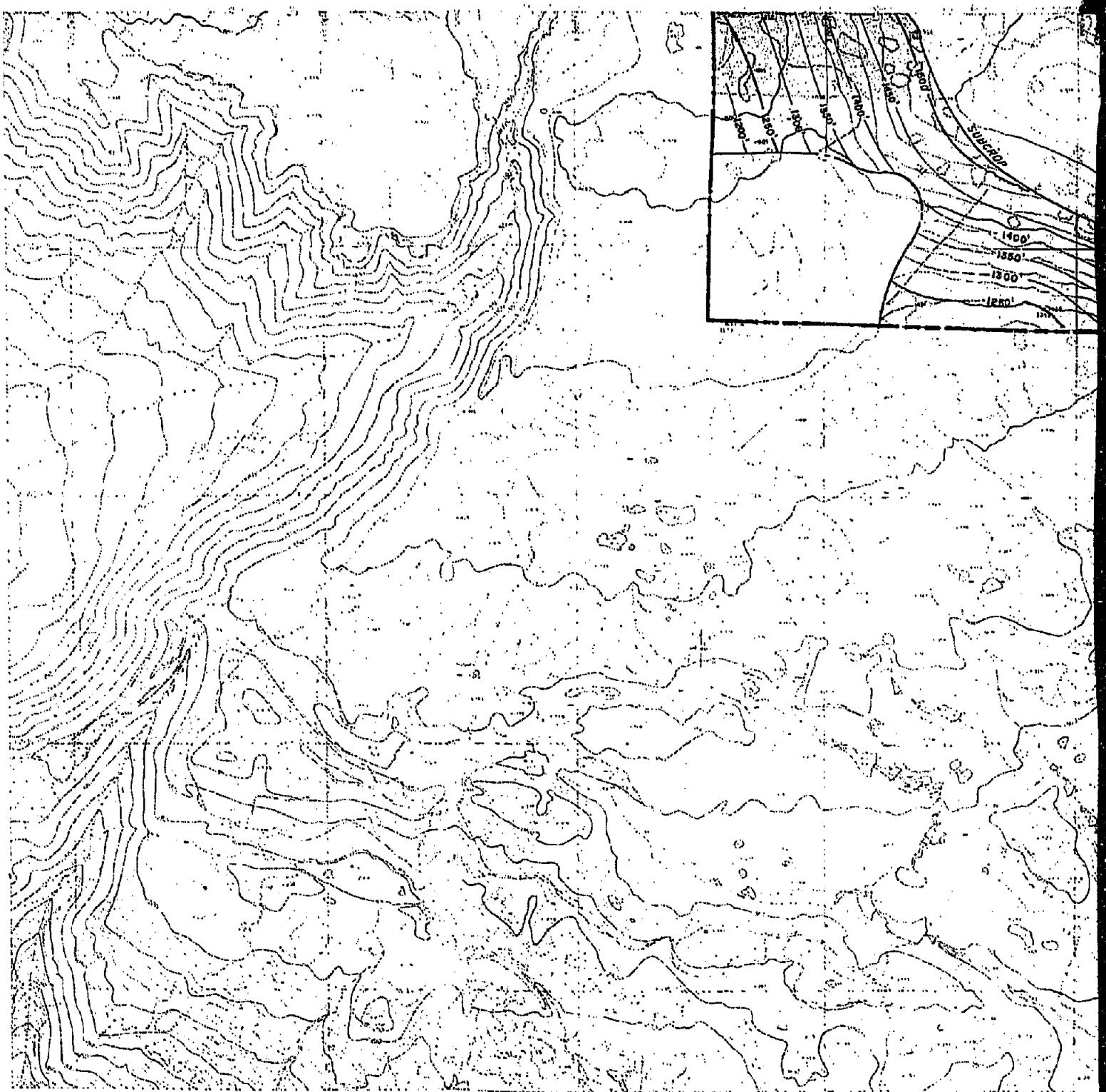
**LEGEND**

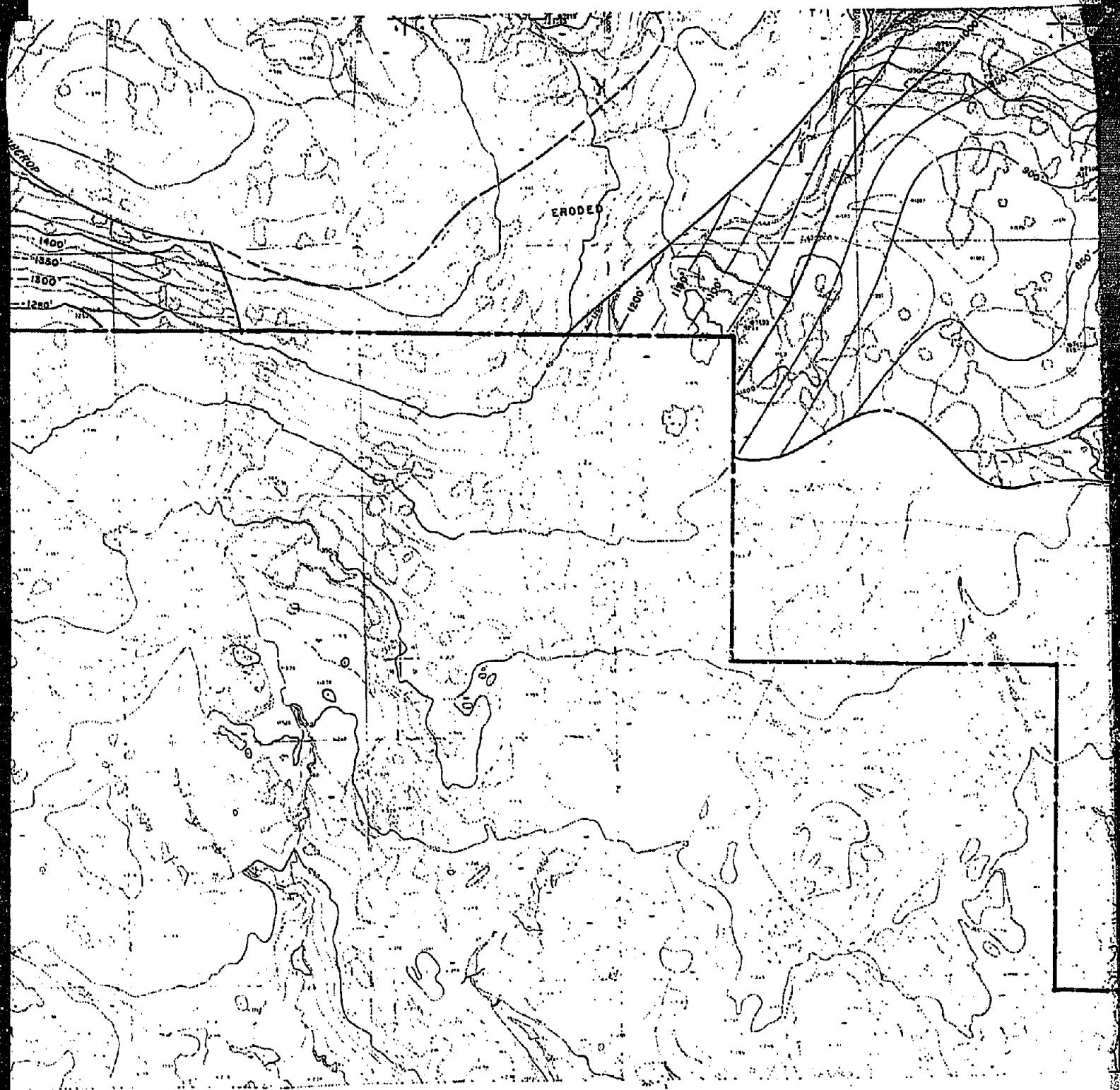
PROPERTY LINE \_\_\_\_\_

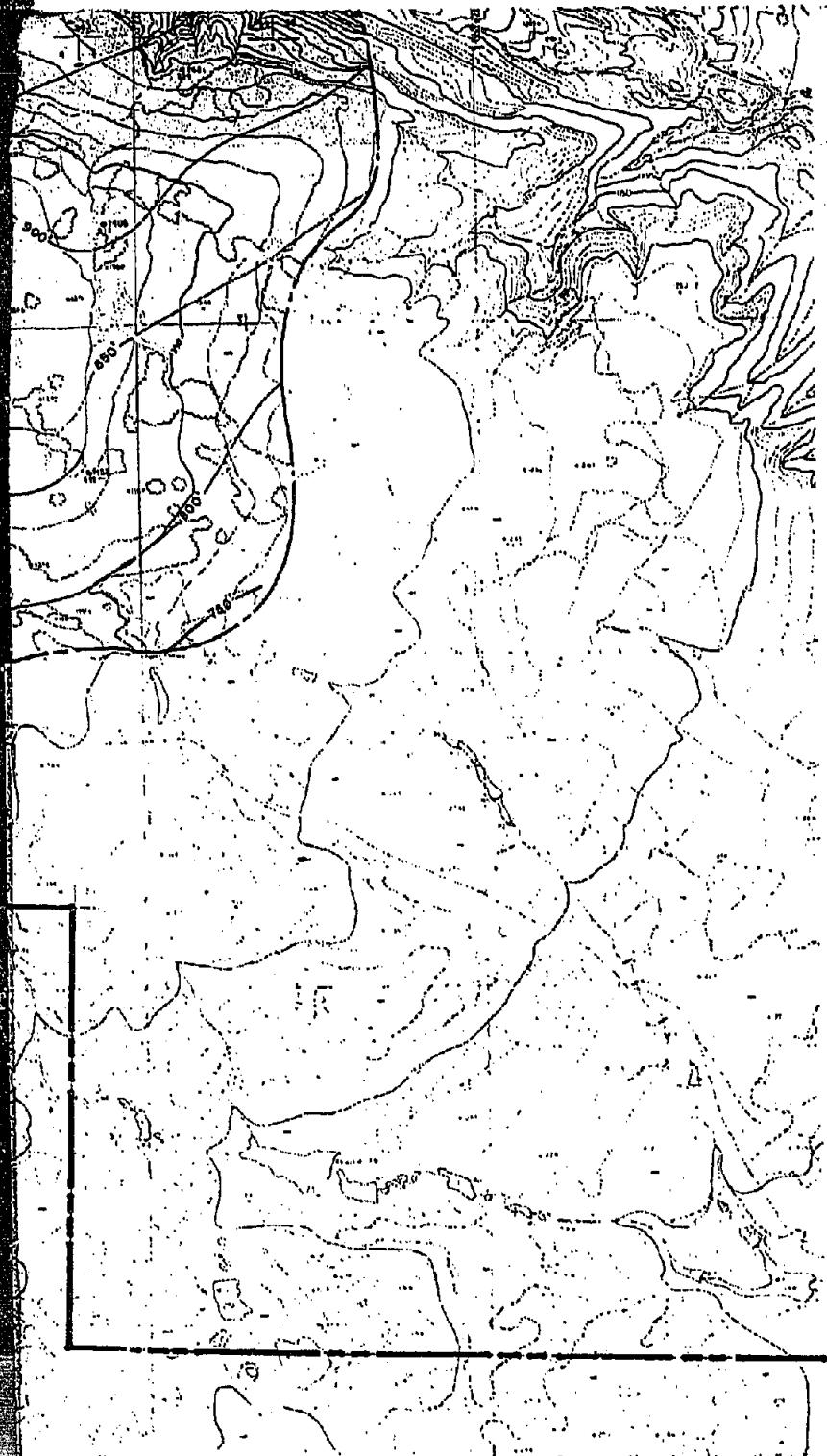
LIMIT OF DATA \_\_\_\_\_

STRUCTURE \_\_\_\_\_ 100'

RESOURCE AREA \_\_\_\_\_



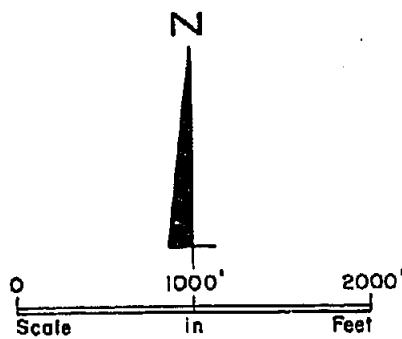




O  
Sc

CIRI-PLACE  
BELUGA METHANOL  
COOK INLET, ALASKA

STRUCTURE  
G BED  
CHUITNA WEST

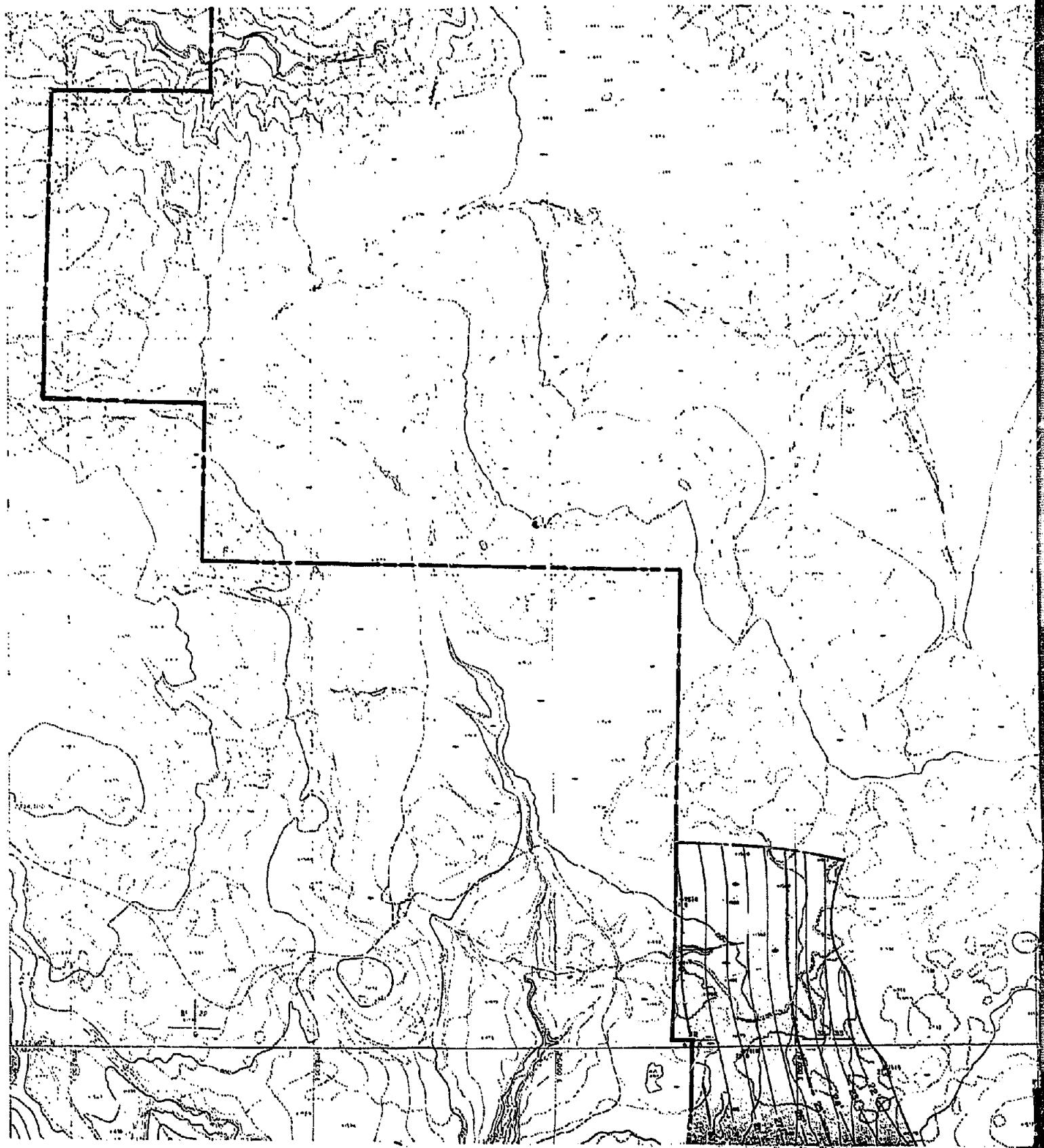


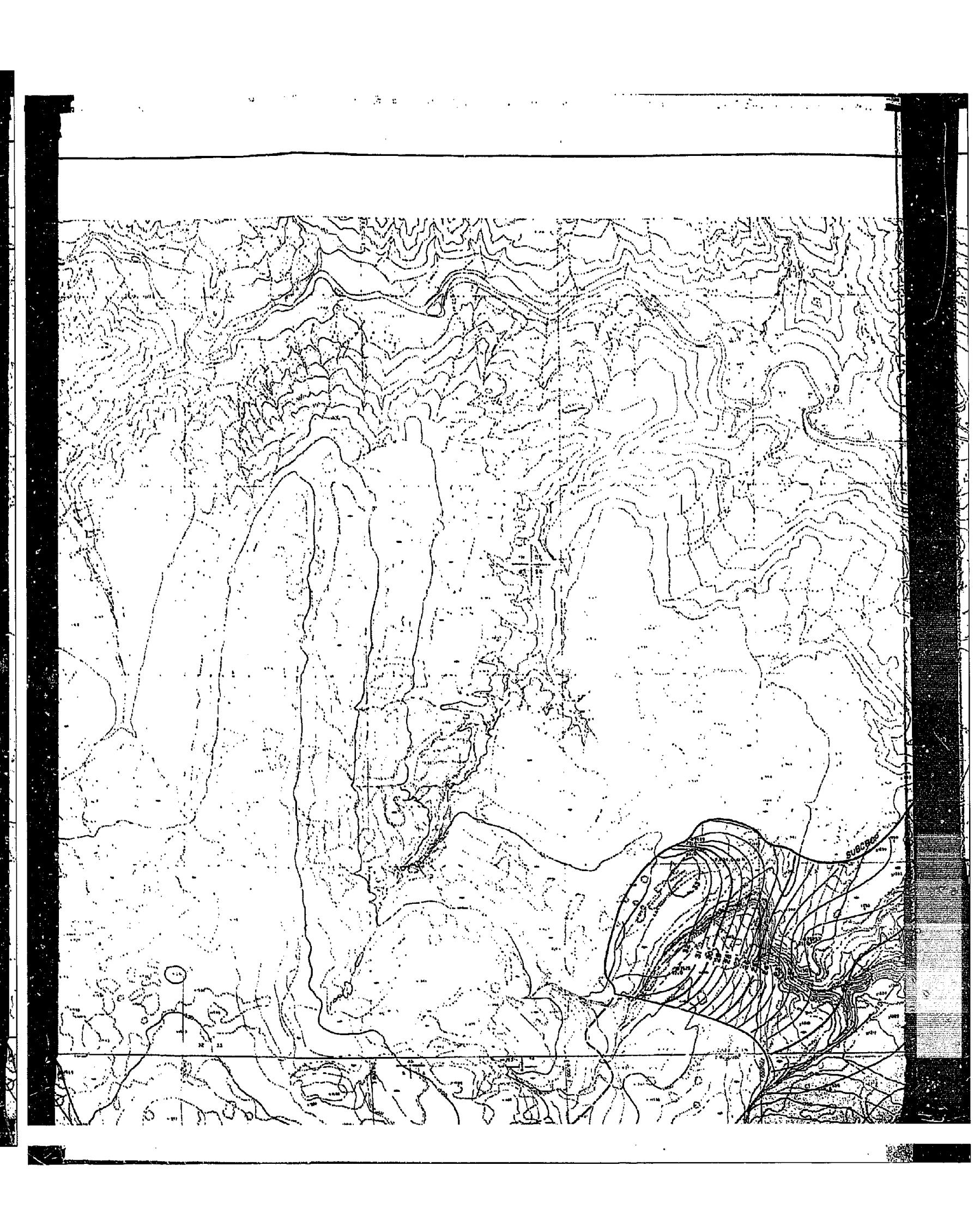
CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA

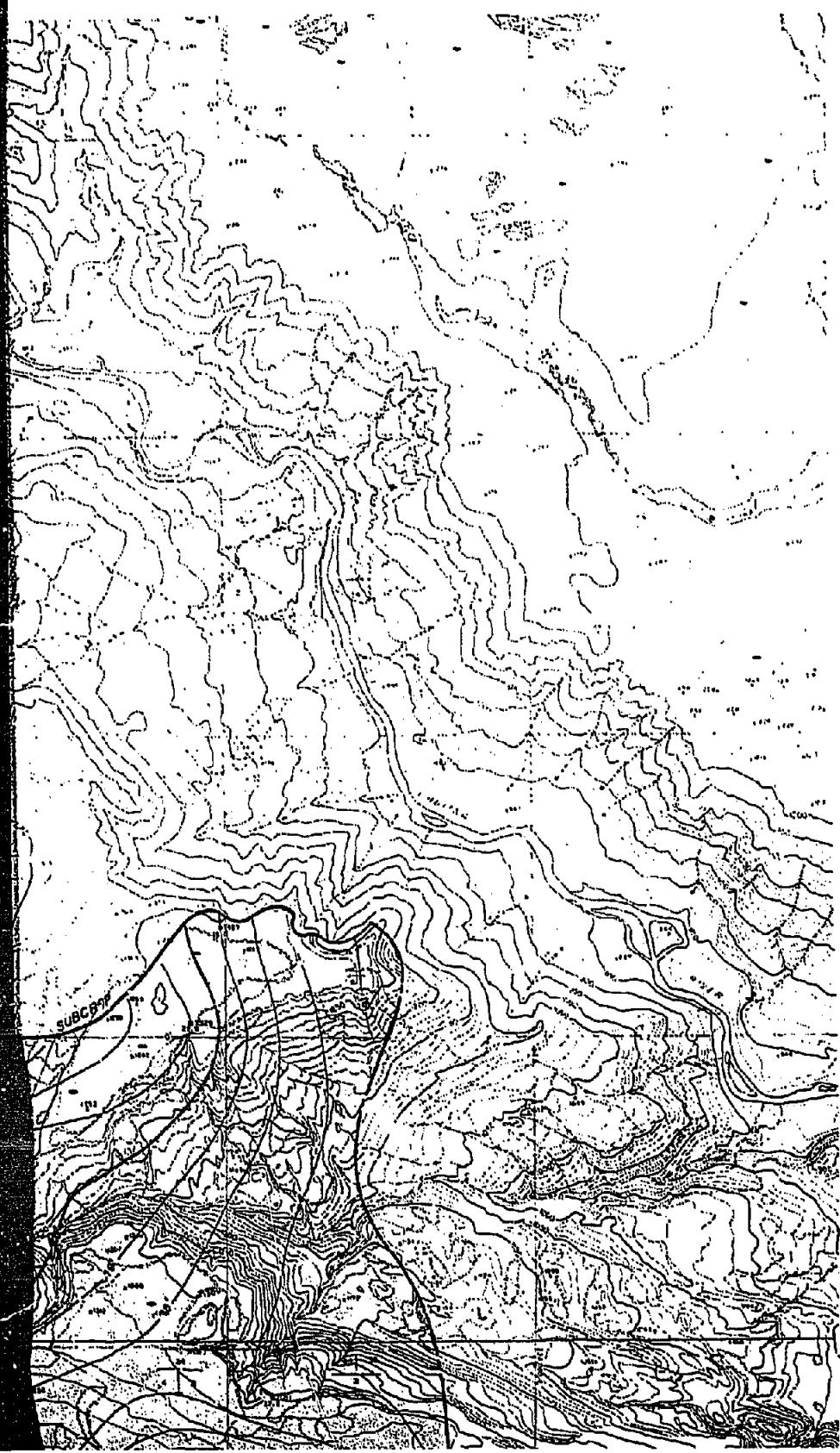
PAUL WEIR COMPANY  
INCORPORATED  
CHICAGO, ILLINOIS 60606

STRUCTURE (TOP)  
G BED  
CHUITNA WEST AREA

EXHIBIT D  
JULY, 1981  
SCALE: 1" = 1000'  
JOB NO. 2750-A







L4

PROPERTY LINE \_\_\_\_\_

LIMIT OF DATA \_\_\_\_\_

NET COAL ISOPACHS \_\_\_\_\_

RESOURCE AREA \_\_\_\_\_

**EXHIBIT-E**

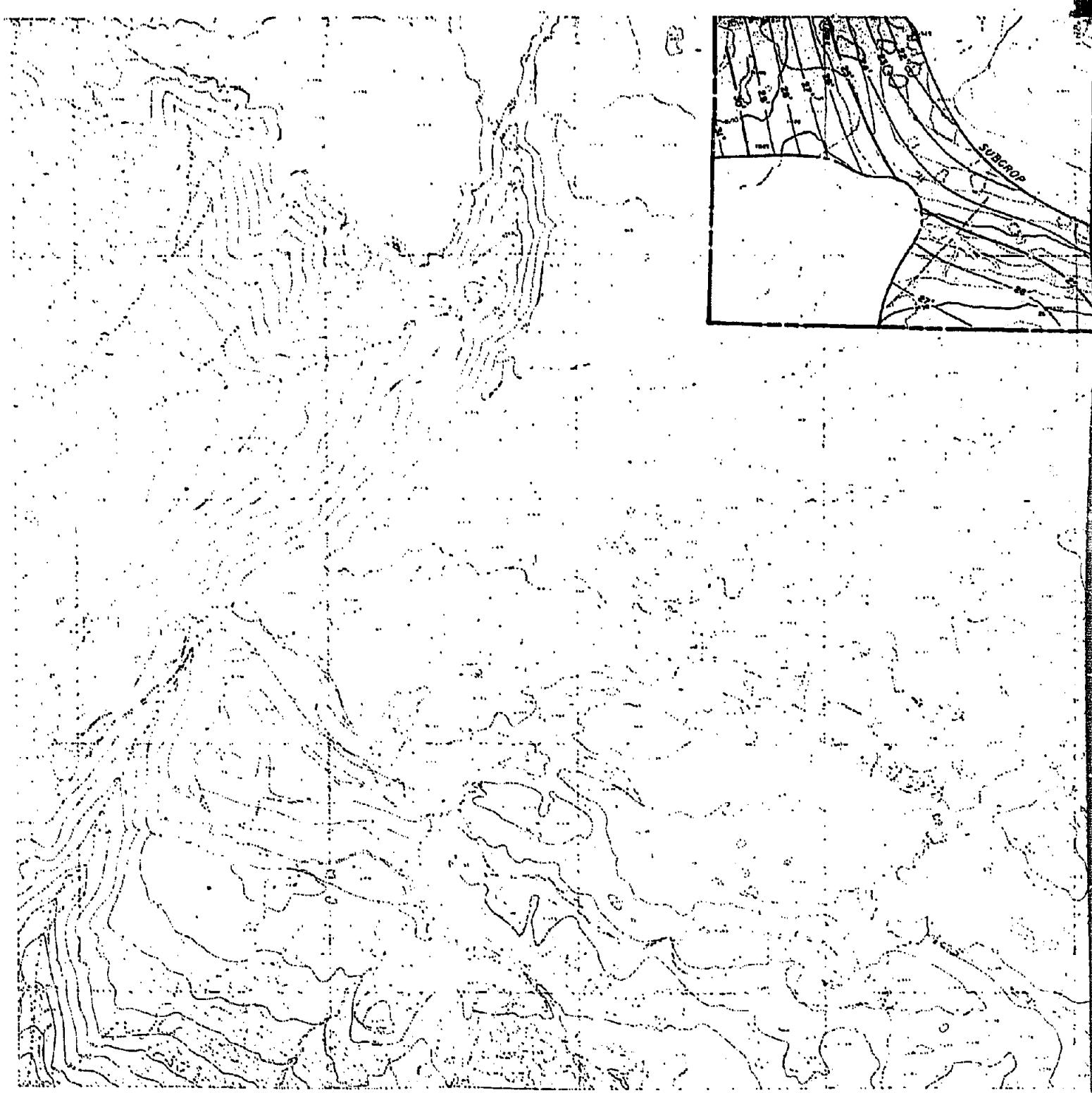
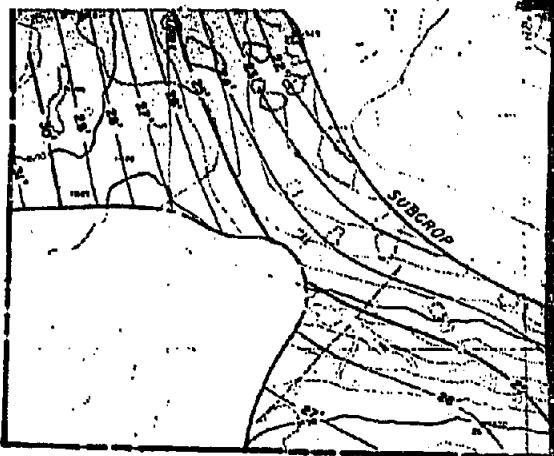
**LEGEND**

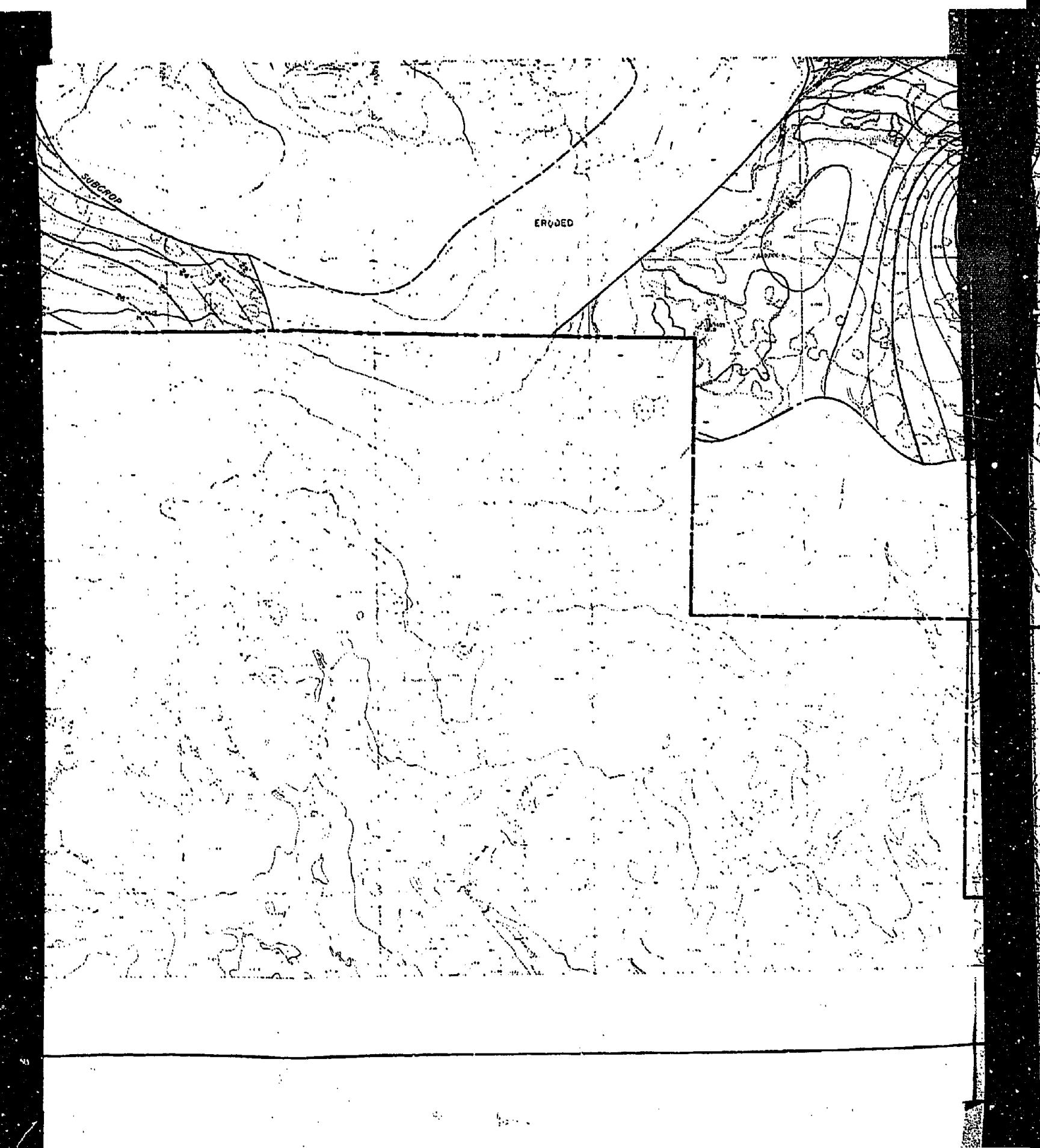
PROPERTY LINE \_\_\_\_\_

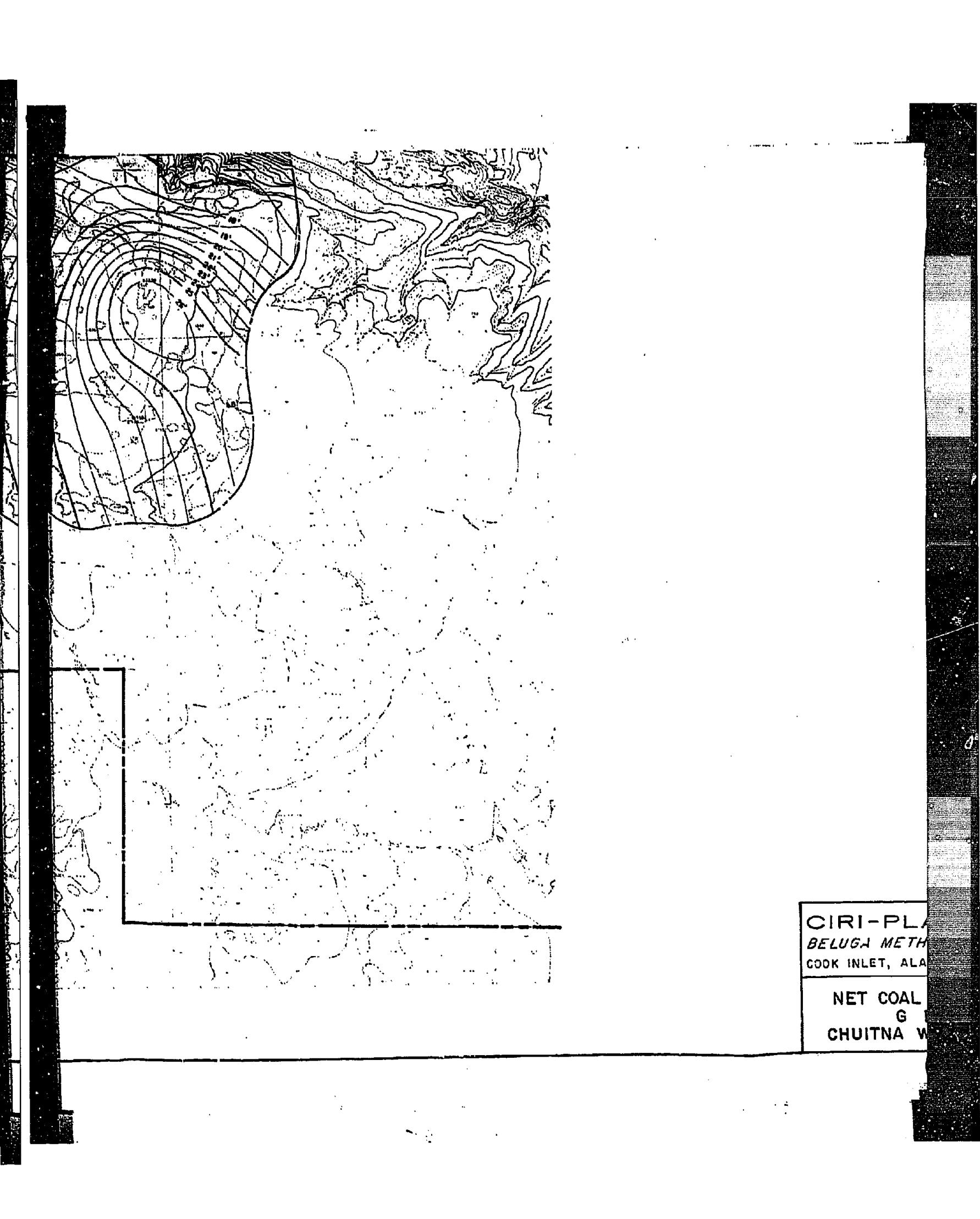
LIMIT OF DATA \_\_\_\_\_

NET COAL ISOPACHS \_\_\_\_\_ 25'

RESOURCE AREA \_\_\_\_\_

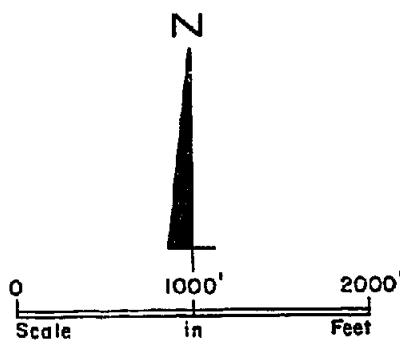






CIRI-PLA  
BELUGA METH  
COOK INLET, ALA

NET COAL  
G  
CHUITNA W



CIRI-PLACER  
BELUGA METHANOL PROJECT  
COOK INLET, ALASKA

PAUL WEIR COMPANY  
INCORPORATED  
CHICAGO, ILLINOIS 60603

NET COAL ISOPACHS  
G BED  
CHUITNA WEST AREA

EXHIBIT E  
JULY, 1981  
SCALE: 1" = 1000'  
JOB NO. 2750-A