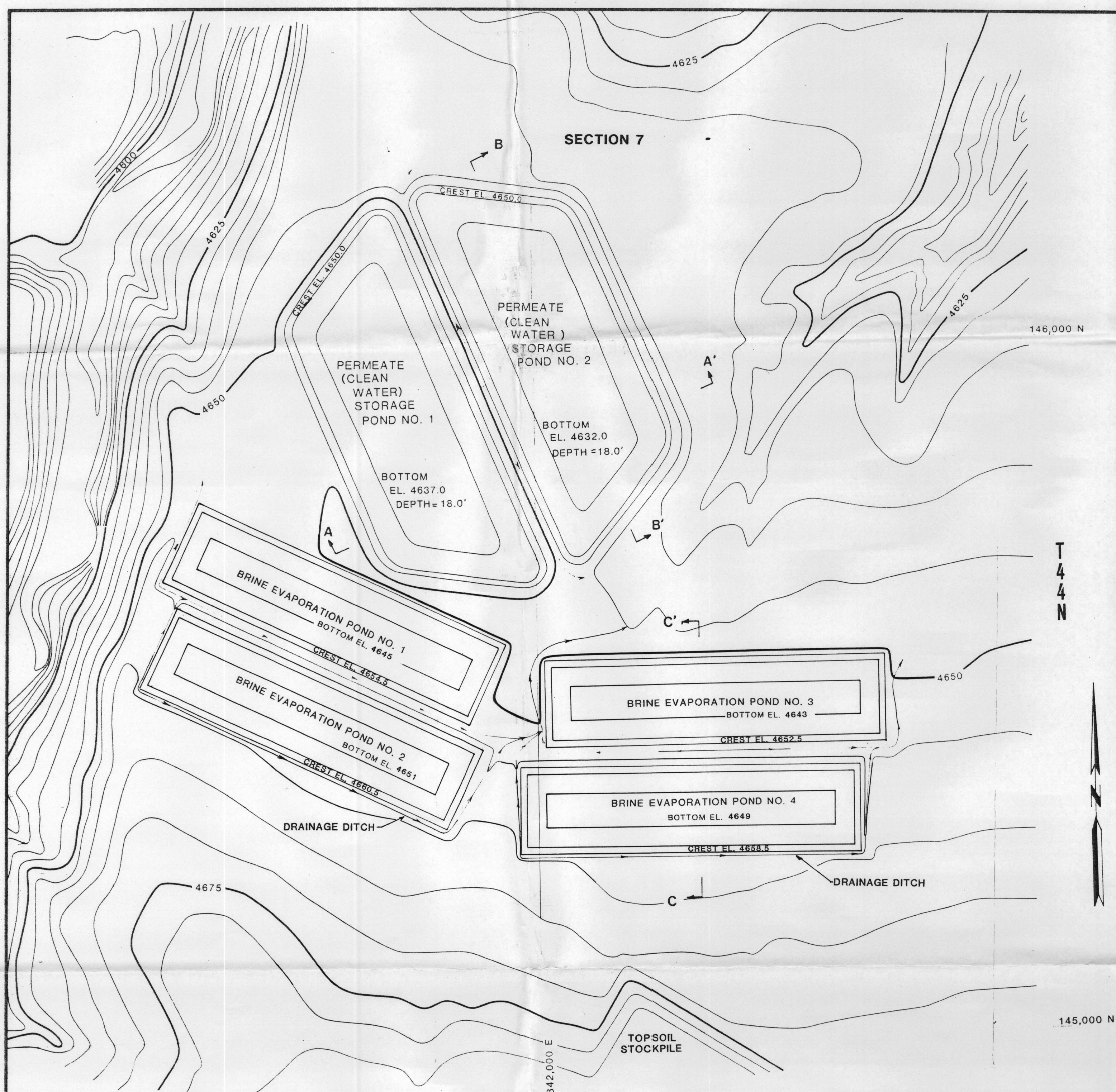




PERMEATE AND BRINE EVAPORATION PONDS PLAN VIEW

SCALE: 1" = 100'
CONTOUR INTERVAL = 5'

VOLUME CALCULATIONS (USING PRISMOIDAL FORMULA)

1. PERMEATE PONDS (TWO REQUIRED, SAME DIMENSIONS)

A. TOTAL CAPACITY

TOP AREA = 2.22 ac
BOTTOM AREA = 1.18 ac
MIDDLE AREA = 1.68 ac
DEPTH = 18 ft
VOLUME = 18/6 (2.22 + 4(1.68) + 1.18) = 30.4 ac-ft

B. MAXIMUM CAPACITY CREATED BY EMBANKMENT

TOP AREA = 2.22 ac
BOTTOM AREA = 1.61 ac (at 8' depth)
MIDDLE AREA = 1.92 ac
VOLUME = 10/6 (2.22 + 4(1.92) + 1.61) = 19.2 ac-ft

C. CAPACITY AT HWL (OPERATING LEVEL)

TOP AREA = 2.08 ac
BOTTOM AREA = 1.18 ac
MIDDLE AREA = 1.61 ac
VOLUME = 16/6 (2.08 + 4(1.61) + 1.18) = 25.87 ac-ft

2. BRINE EVAPORATION PONDS (FOUR REQUIRED, ALL WITH SAME DIMENSIONS)

A. TOTAL CAPACITY

TOP AREA = 1.17 ac
BOTTOM AREA = 0.48 ac
MIDDLE AREA = 0.80 ac
DEPTH = 9.5 ft
VOLUME = 7.68 ac-ft

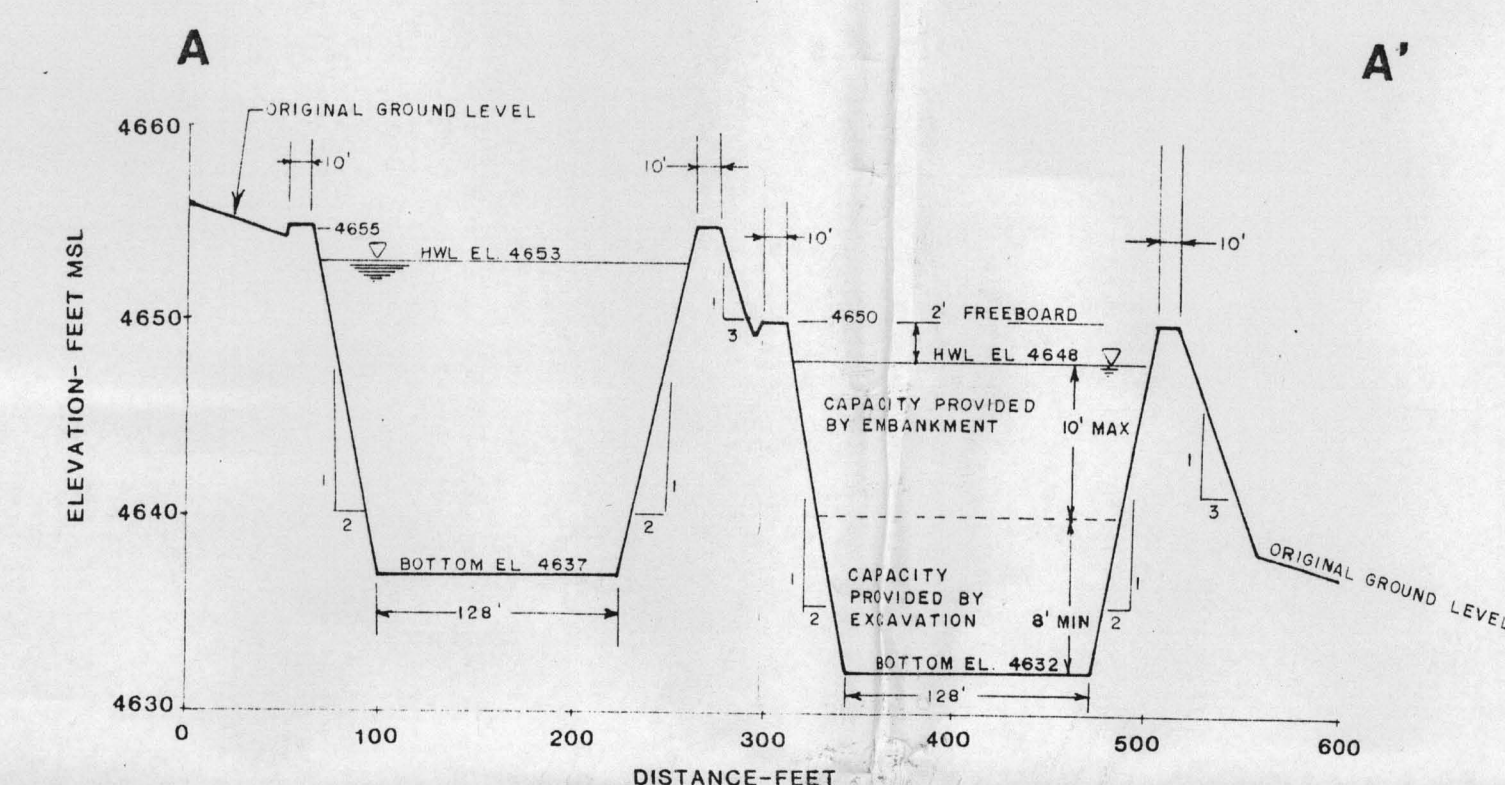
B. CAPACITY AT HWL (OPERATING LEVEL)

TOP AREA = 1.01 ac
BOTTOM AREA = 0.48 ac
MIDDLE AREA = 0.73 ac
DEPTH = 7.5 ft
VOLUME = 6.51 ac-ft

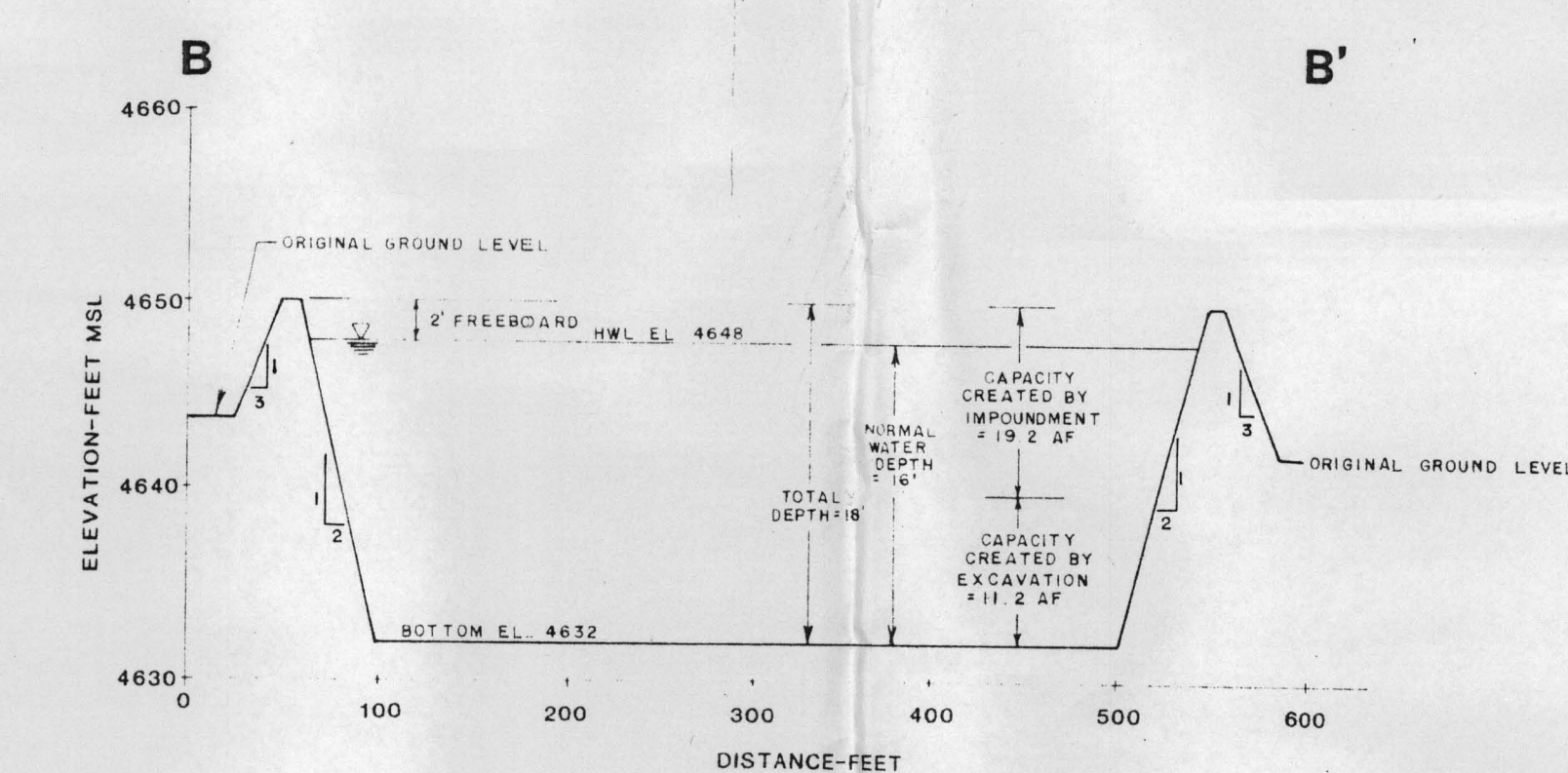
C. FREEBOARD CAPACITY

*TOTAL CAPACITY - CAPACITY AT HWL
= 7.68 - 6.51 = 2.17 ac-ft

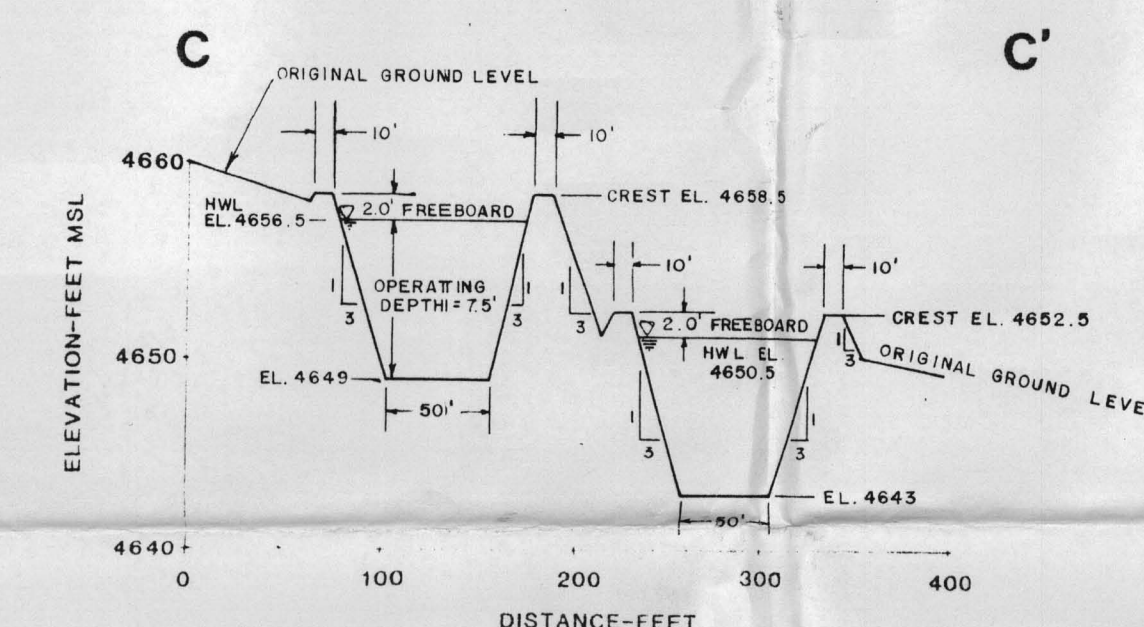
SINCE FREEBOARD CAPACITY OF ANY THREE PONDS (3 x 2.17 = 6.51 ac-ft) IS GREATER THAN OPERATING CAPACITY OF ANY ONE POND, THERE WILL AT ALL TIMES BE THE CAPACITY AVAILABLE TO EMPTY ANY POND INTO THE OTHER THREE.



SECTION A-A'
SCALE: HOR. 1" = 100', VERT. 1" = 10'



SECTION B-B'
SCALE: HOR. 1" = 100', VERT. 1" = 10'



SECTION C-C'
SCALE: HOR. 1" = 100', VERT. 1" = 10'

- NOTES: 1. MSHA PERMIT NOT REQUIRED SINCE CAPACITY CREATED BY EMBANKMENT IN ANY POND IS <20 ac-ft.
2. SPILLWAYS NOT REQUIRED SINCE ALL RUNOFF IS DIVERTED AWAY FROM PONDS.
3. PERMEATE PONDS 1 AND 2 WILL STORE CLEAN WATER (PERMEATE FROM REVERSE OSMOSIS TREATMENT UNIT) AND WILL BE UNLINED. THIS WATER MAY BE USED FOR WELL FIELD RESTORATION.
4. BRINE EVAPORATION PONDS 1-4 WILL STORE BRINE FROM THE RO UNIT AND WILL BE EQUIPPED WITH LINERS AND LEAK DETECTION SYSTEMS. DETAILS ARE PROVIDED ON MAP 4.

ANSTEC
APERTURE
CARD

CERTIFICATE

I, DOYL M. FRITZ HEREBY CERTIFY THAT THIS DRAWING WAS PREPARED UNDER MY SUPERVISION USING MY DESIGN AND THAT IT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.
DOYL M. FRITZ
P.E. WYO. #1487



COGEMA Mining, Inc.
P.O. Box 730 Mills, Wyoming 82644

CHRISTENSEN RANCH RESERVOIR MAP

DATE BY: KR wwc
DATE: 10-15-87
AS NOTED
4.2

DO6