

**GW - 32**

---

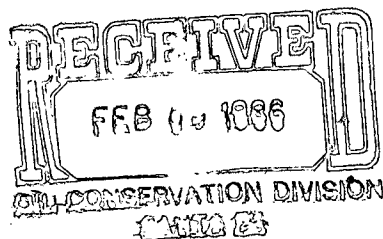
*2/86*

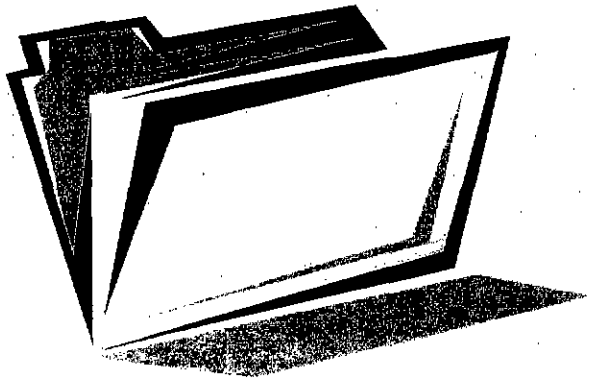
**PERMITS,  
RENEWALS,  
& MODS**

**Application**

File  
Copy

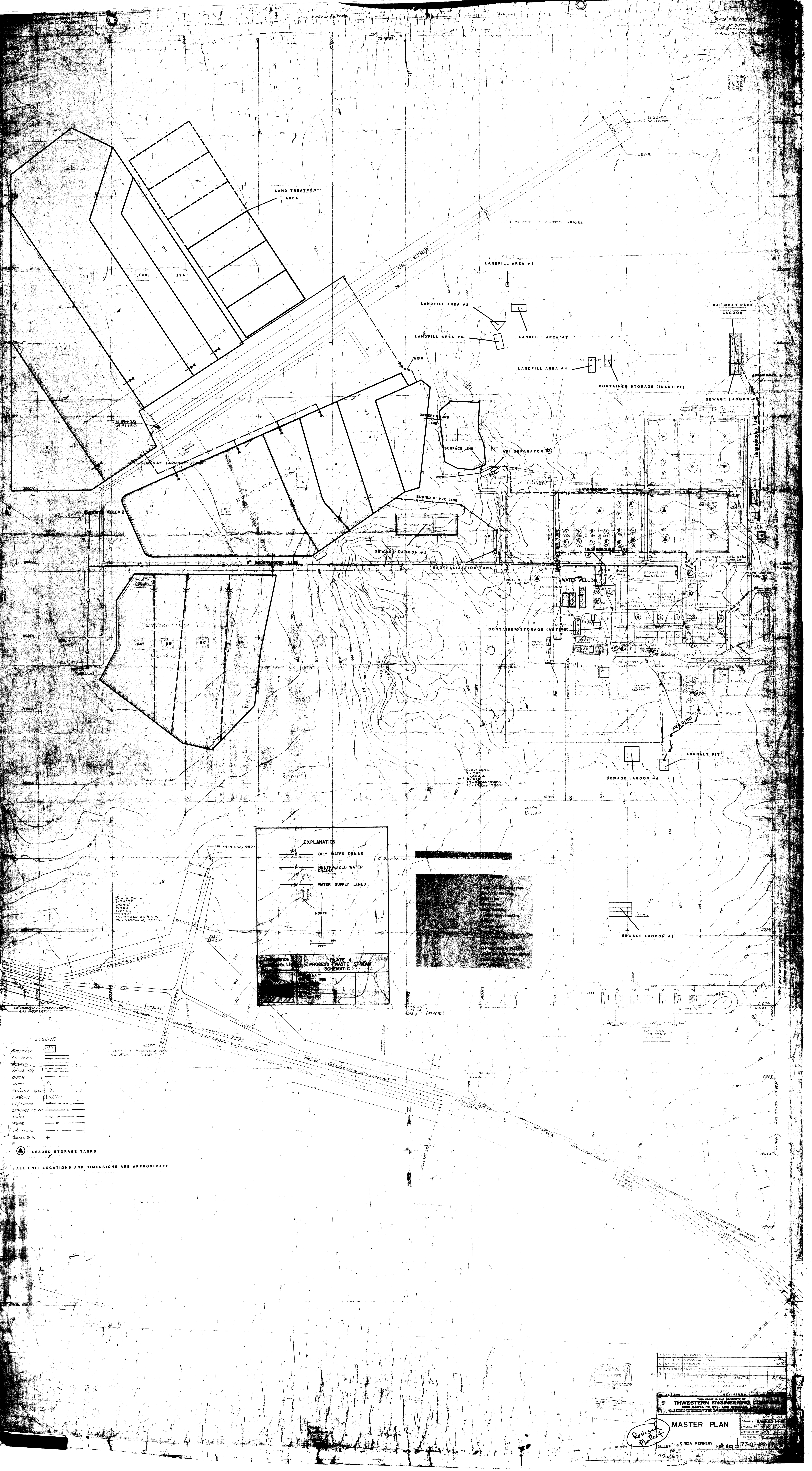
ATTACHMENTS A-1, A-2, AND A-3  
REPLY TO NMOCD COMMENTS RE:  
DISCHARGE PLAN APPLICATION (GW-32)  
GIANT CINIZA REFINERY





**REPRODUCTION OF DOCUMENTS  
IN THIS FILE CANNOT BE  
IMPROVED DUE TO CONDITION  
OF ORIGINALS**





|     |          |          |     |      |
|-----|----------|----------|-----|------|
| 7   | REVISION | DATE     | BY  | CHKD |
| 1   | INITIAL  | 10/10/68 | WJH | WJH  |
| 2   | REVISION | 10/10/68 | WJH | WJH  |
| 3   | REVISION | 10/10/68 | WJH | WJH  |
| 4   | REVISION | 10/10/68 | WJH | WJH  |
| 5   | REVISION | 10/10/68 | WJH | WJH  |
| 6   | REVISION | 10/10/68 | WJH | WJH  |
| 7   | REVISION | 10/10/68 | WJH | WJH  |
| 8   | REVISION | 10/10/68 | WJH | WJH  |
| 9   | REVISION | 10/10/68 | WJH | WJH  |
| 10  | REVISION | 10/10/68 | WJH | WJH  |
| 11  | REVISION | 10/10/68 | WJH | WJH  |
| 12  | REVISION | 10/10/68 | WJH | WJH  |
| 13  | REVISION | 10/10/68 | WJH | WJH  |
| 14  | REVISION | 10/10/68 | WJH | WJH  |
| 15  | REVISION | 10/10/68 | WJH | WJH  |
| 16  | REVISION | 10/10/68 | WJH | WJH  |
| 17  | REVISION | 10/10/68 | WJH | WJH  |
| 18  | REVISION | 10/10/68 | WJH | WJH  |
| 19  | REVISION | 10/10/68 | WJH | WJH  |
| 20  | REVISION | 10/10/68 | WJH | WJH  |
| 21  | REVISION | 10/10/68 | WJH | WJH  |
| 22  | REVISION | 10/10/68 | WJH | WJH  |
| 23  | REVISION | 10/10/68 | WJH | WJH  |
| 24  | REVISION | 10/10/68 | WJH | WJH  |
| 25  | REVISION | 10/10/68 | WJH | WJH  |
| 26  | REVISION | 10/10/68 | WJH | WJH  |
| 27  | REVISION | 10/10/68 | WJH | WJH  |
| 28  | REVISION | 10/10/68 | WJH | WJH  |
| 29  | REVISION | 10/10/68 | WJH | WJH  |
| 30  | REVISION | 10/10/68 | WJH | WJH  |
| 31  | REVISION | 10/10/68 | WJH | WJH  |
| 32  | REVISION | 10/10/68 | WJH | WJH  |
| 33  | REVISION | 10/10/68 | WJH | WJH  |
| 34  | REVISION | 10/10/68 | WJH | WJH  |
| 35  | REVISION | 10/10/68 | WJH | WJH  |
| 36  | REVISION | 10/10/68 | WJH | WJH  |
| 37  | REVISION | 10/10/68 | WJH | WJH  |
| 38  | REVISION | 10/10/68 | WJH | WJH  |
| 39  | REVISION | 10/10/68 | WJH | WJH  |
| 40  | REVISION | 10/10/68 | WJH | WJH  |
| 41  | REVISION | 10/10/68 | WJH | WJH  |
| 42  | REVISION | 10/10/68 | WJH | WJH  |
| 43  | REVISION | 10/10/68 | WJH | WJH  |
| 44  | REVISION | 10/10/68 | WJH | WJH  |
| 45  | REVISION | 10/10/68 | WJH | WJH  |
| 46  | REVISION | 10/10/68 | WJH | WJH  |
| 47  | REVISION | 10/10/68 | WJH | WJH  |
| 48  | REVISION | 10/10/68 | WJH | WJH  |
| 49  | REVISION | 10/10/68 | WJH | WJH  |
| 50  | REVISION | 10/10/68 | WJH | WJH  |
| 51  | REVISION | 10/10/68 | WJH | WJH  |
| 52  | REVISION | 10/10/68 | WJH | WJH  |
| 53  | REVISION | 10/10/68 | WJH | WJH  |
| 54  | REVISION | 10/10/68 | WJH | WJH  |
| 55  | REVISION | 10/10/68 | WJH | WJH  |
| 56  | REVISION | 10/10/68 | WJH | WJH  |
| 57  | REVISION | 10/10/68 | WJH | WJH  |
| 58  | REVISION | 10/10/68 | WJH | WJH  |
| 59  | REVISION | 10/10/68 | WJH | WJH  |
| 60  | REVISION | 10/10/68 | WJH | WJH  |
| 61  | REVISION | 10/10/68 | WJH | WJH  |
| 62  | REVISION | 10/10/68 | WJH | WJH  |
| 63  | REVISION | 10/10/68 | WJH | WJH  |
| 64  | REVISION | 10/10/68 | WJH | WJH  |
| 65  | REVISION | 10/10/68 | WJH | WJH  |
| 66  | REVISION | 10/10/68 | WJH | WJH  |
| 67  | REVISION | 10/10/68 | WJH | WJH  |
| 68  | REVISION | 10/10/68 | WJH | WJH  |
| 69  | REVISION | 10/10/68 | WJH | WJH  |
| 70  | REVISION | 10/10/68 | WJH | WJH  |
| 71  | REVISION | 10/10/68 | WJH | WJH  |
| 72  | REVISION | 10/10/68 | WJH | WJH  |
| 73  | REVISION | 10/10/68 | WJH | WJH  |
| 74  | REVISION | 10/10/68 | WJH | WJH  |
| 75  | REVISION | 10/10/68 | WJH | WJH  |
| 76  | REVISION | 10/10/68 | WJH | WJH  |
| 77  | REVISION | 10/10/68 | WJH | WJH  |
| 78  | REVISION | 10/10/68 | WJH | WJH  |
| 79  | REVISION | 10/10/68 | WJH | WJH  |
| 80  | REVISION | 10/10/68 | WJH | WJH  |
| 81  | REVISION | 10/10/68 | WJH | WJH  |
| 82  | REVISION | 10/10/68 | WJH | WJH  |
| 83  | REVISION | 10/10/68 | WJH | WJH  |
| 84  | REVISION | 10/10/68 | WJH | WJH  |
| 85  | REVISION | 10/10/68 | WJH | WJH  |
| 86  | REVISION | 10/10/68 | WJH | WJH  |
| 87  | REVISION | 10/10/68 | WJH | WJH  |
| 88  | REVISION | 10/10/68 | WJH | WJH  |
| 89  | REVISION | 10/10/68 | WJH | WJH  |
| 90  | REVISION | 10/10/68 | WJH | WJH  |
| 91  | REVISION | 10/10/68 | WJH | WJH  |
| 92  | REVISION | 10/10/68 | WJH | WJH  |
| 93  | REVISION | 10/10/68 | WJH | WJH  |
| 94  | REVISION | 10/10/68 | WJH | WJH  |
| 95  | REVISION | 10/10/68 | WJH | WJH  |
| 96  | REVISION | 10/10/68 | WJH | WJH  |
| 97  | REVISION | 10/10/68 | WJH | WJH  |
| 98  | REVISION | 10/10/68 | WJH | WJH  |
| 99  | REVISION | 10/10/68 | WJH | WJH  |
| 100 | REVISION | 10/10/68 | WJH | WJH  |

MASTER PLAN

THWESTERN ENGINEERING CO.  
1000 SANTA FE AVE., ALBUQUERQUE, N.M. 87102  
TELEPHONE: 253-1111  
FAX: 253-1111



W 5000

W 4000

W 3000

W 2000

W 1000

0

N 6000

N 6000

N 5000

N 5000

N 4000

N 4000

N 3000

N 3000

N 2000

N 2000

N 1000

N 1000

S 1000

S 1000

W 5000

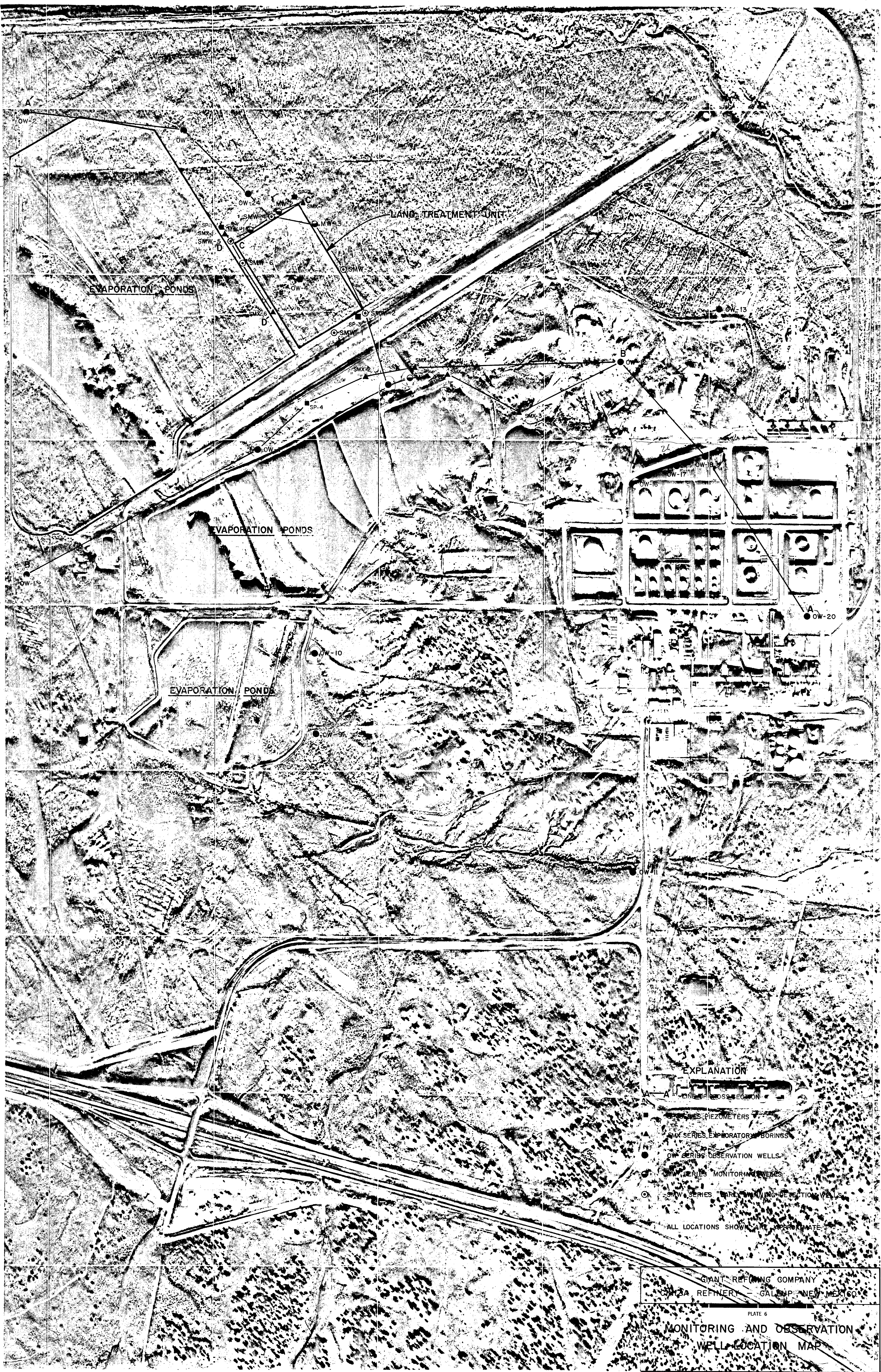
W 4000

W 3000

W 2000

W 1000

0



EXPLANATION

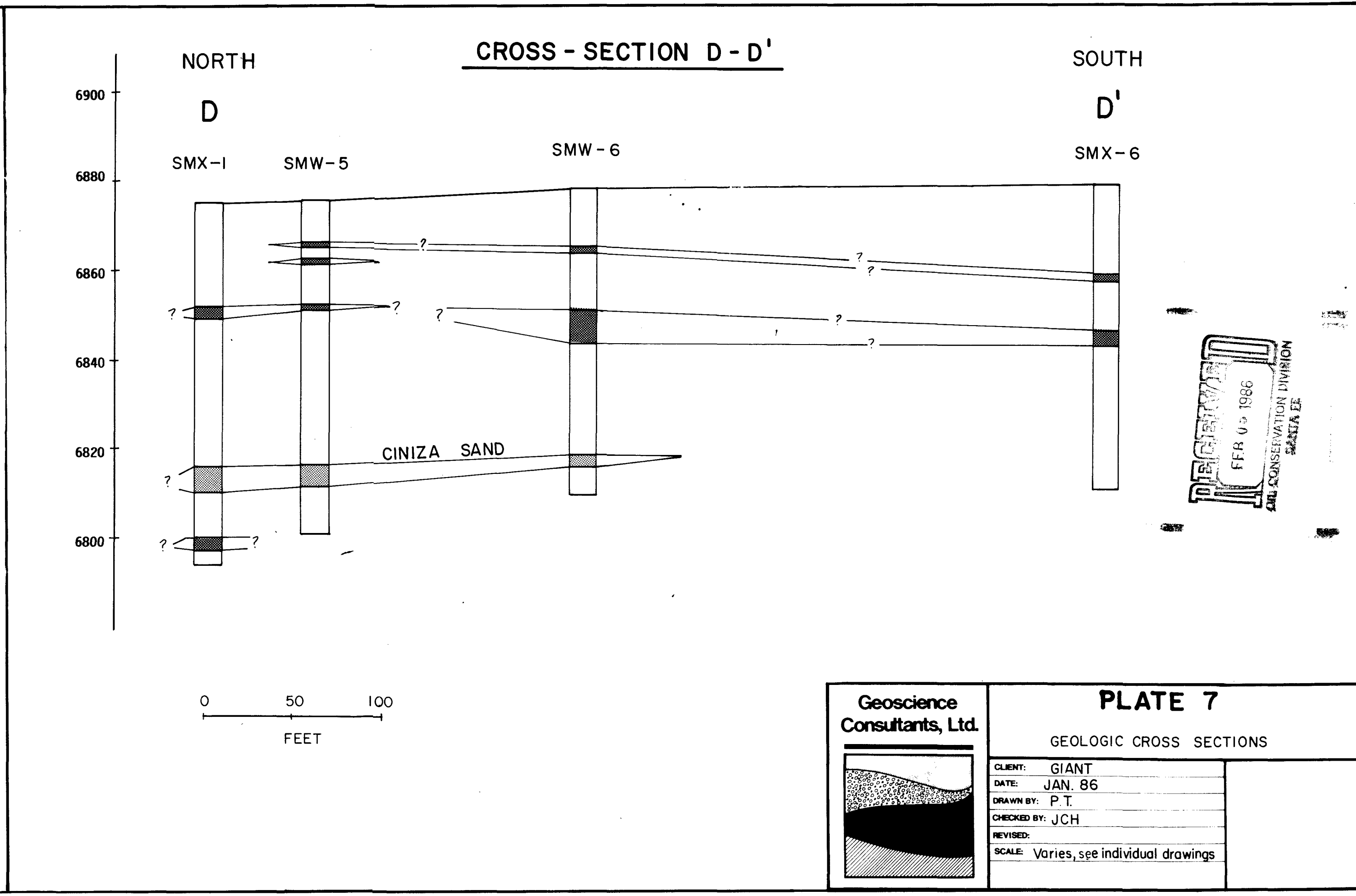
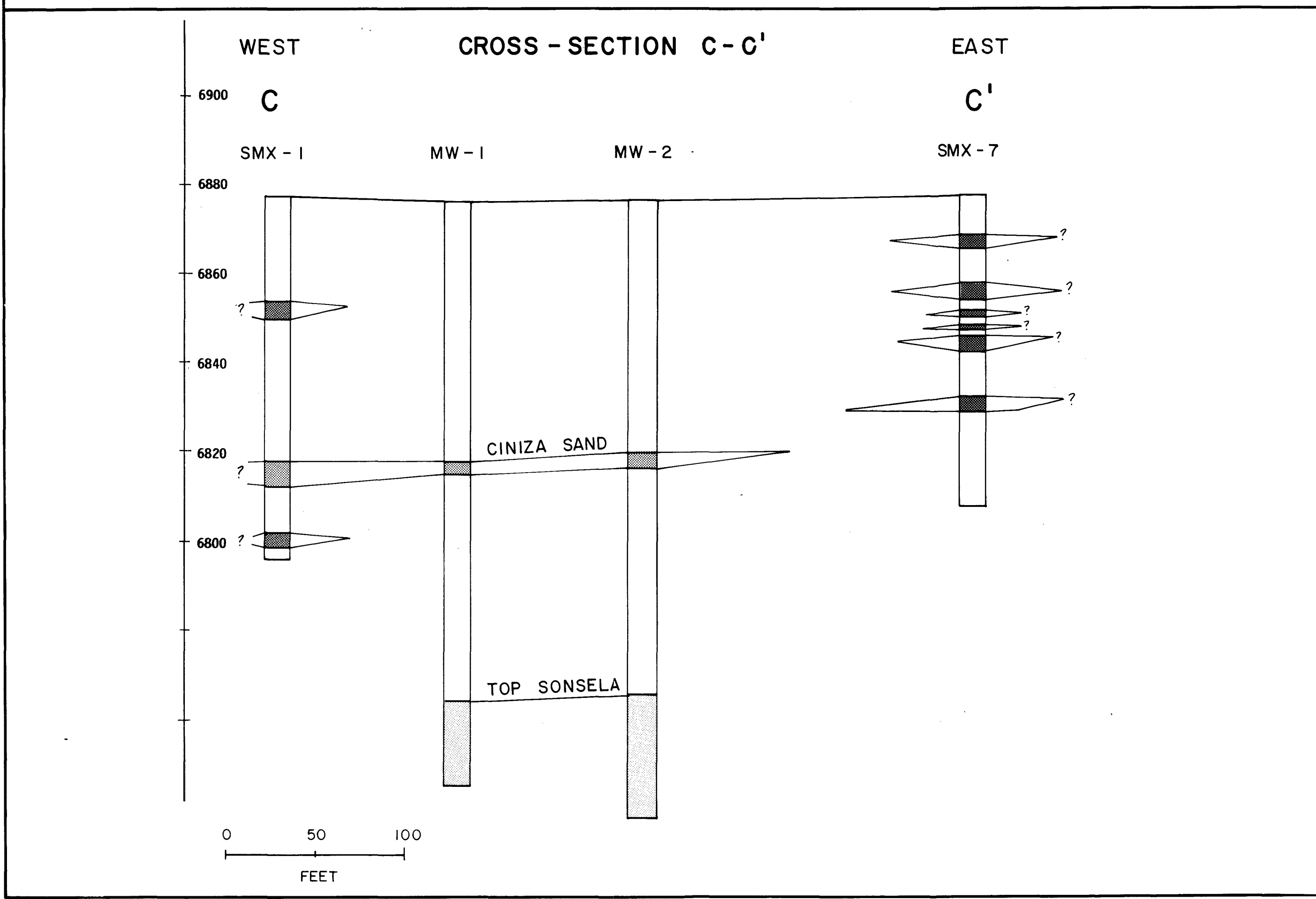
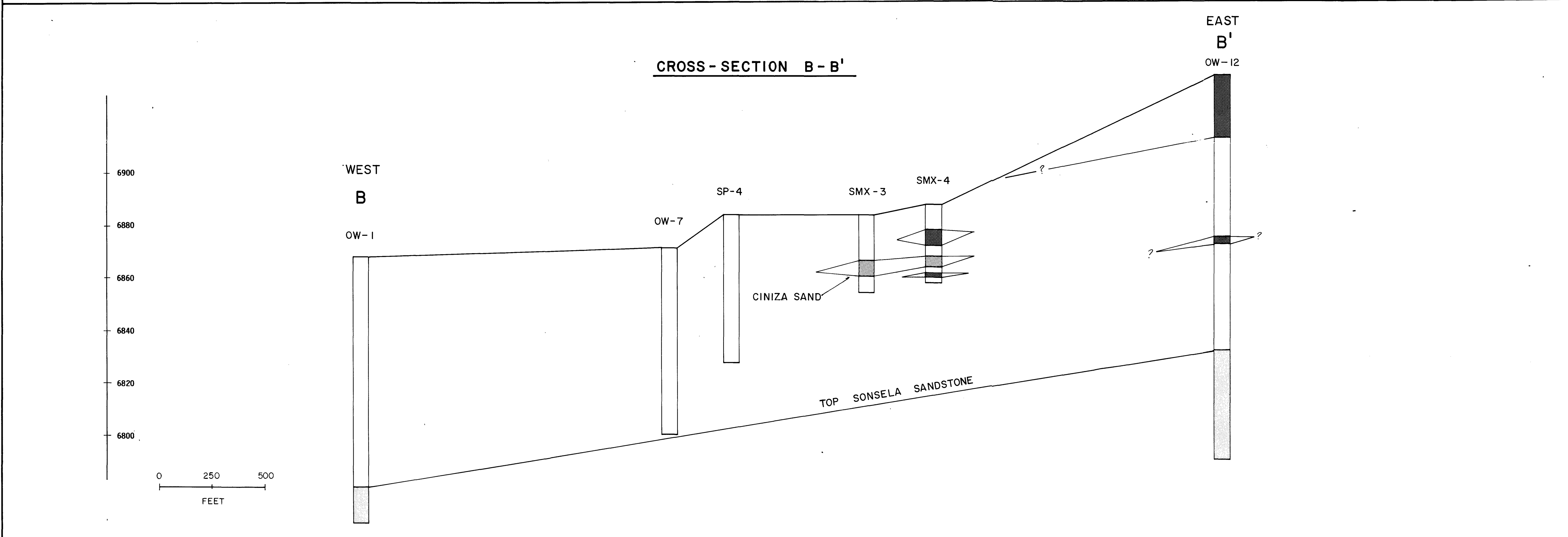
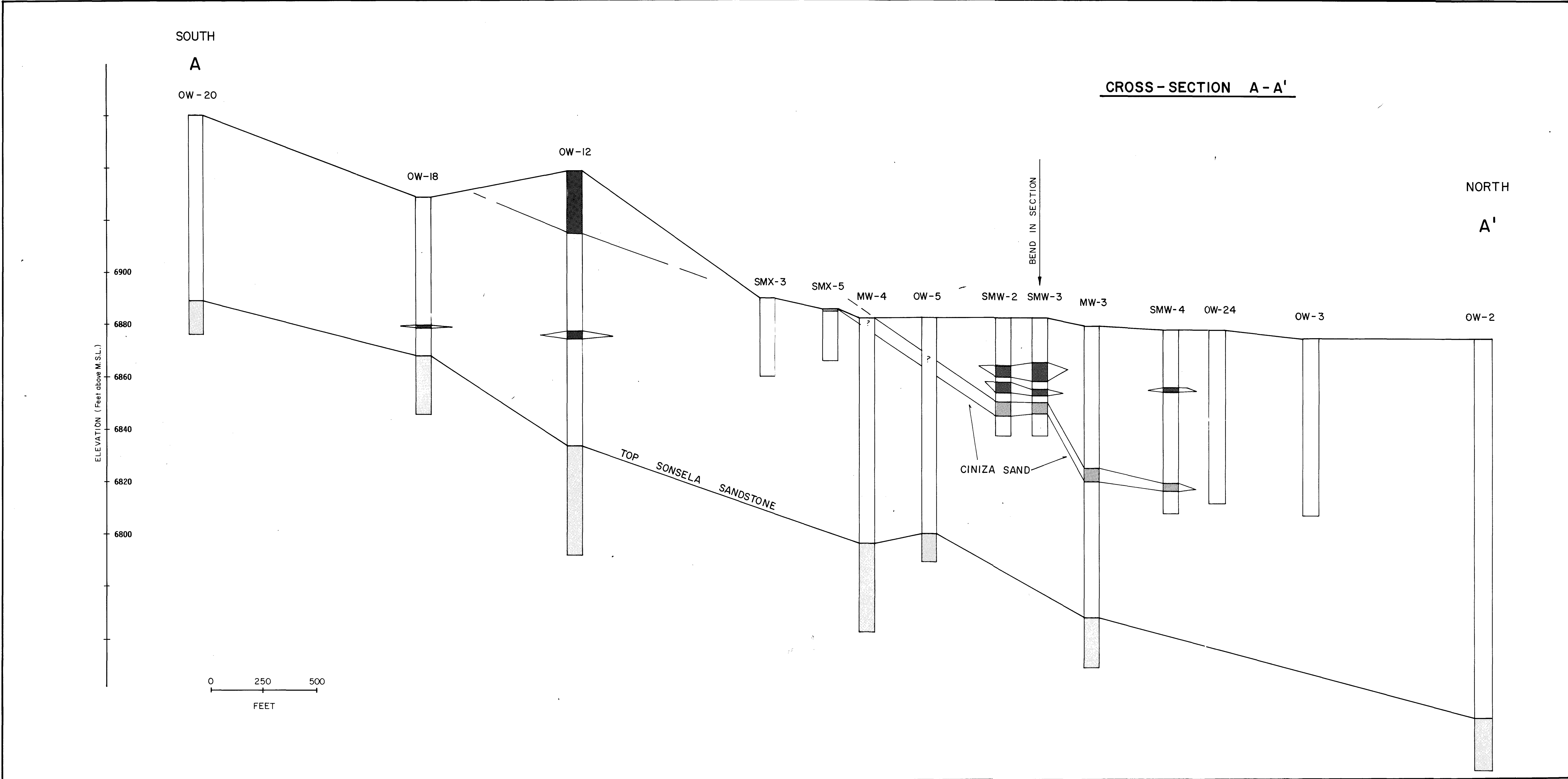
- LINE OF CROSS SECTION
- PIEZOMETERS
- EXPLORATORY BORINGS
- OBSERVATION WELLS
- MONITORING WELLS
- EARLY WARNING DETECTION WELLS
- ALL LOCATIONS SHOWN ARE APPROXIMATE

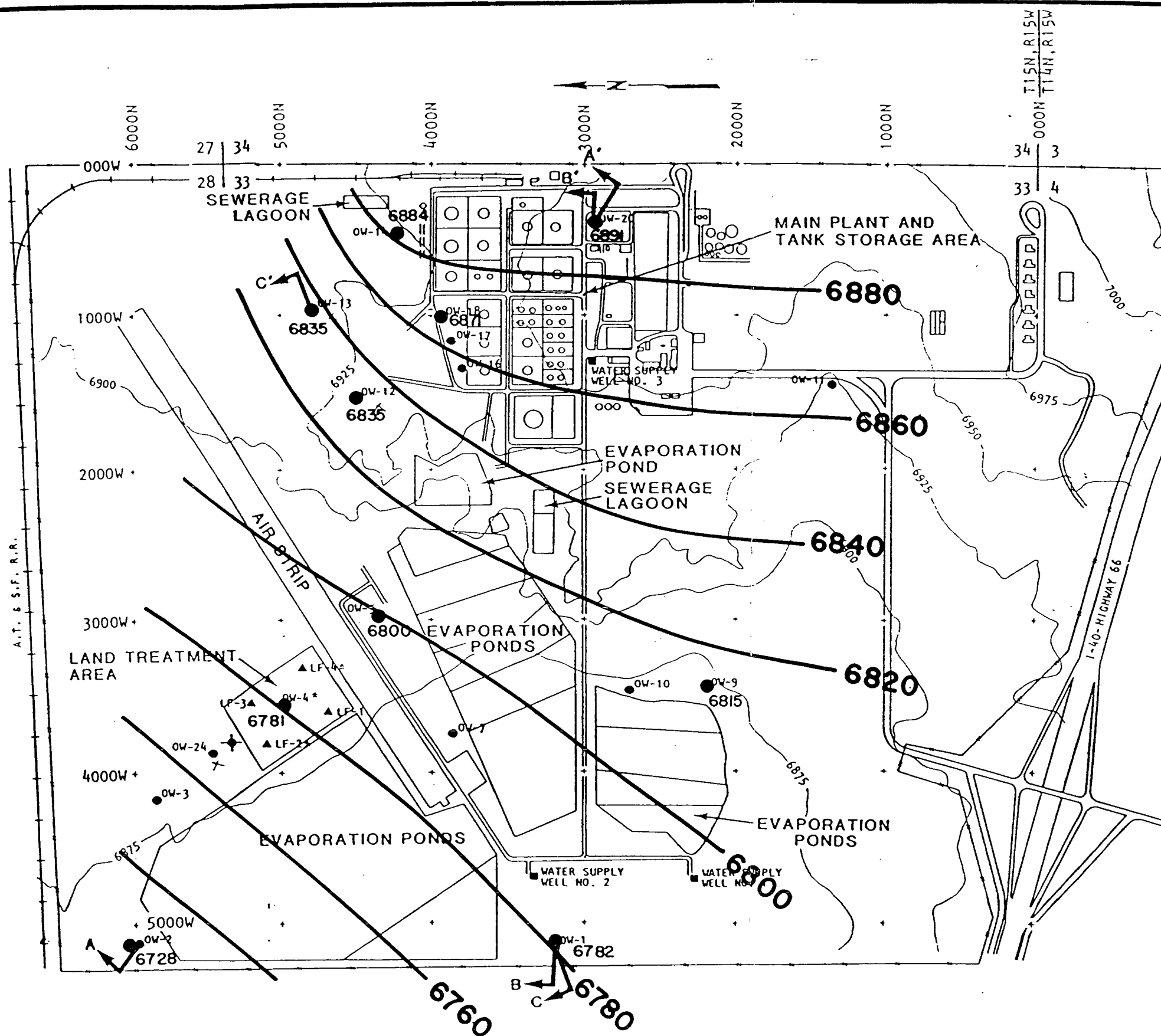
GIANT REFINING COMPANY  
GALFORD REFINERY - GALFORD, NEW MEXICO

PLATE 6  
MONITORING AND OBSERVATION  
WELL LOCATION MAP

RECEIVED  
FEB 04 1986  
FEDERAL CONSERVATION DIVISION  
SANTA FE







- KEY:
- OW-5 OBSERVATION WELL  
INSTALLED BY DAMES & MOORE
  - WATER SUPPLY WELL #1
  - ▲ LF-2 TEST PIT IN LAND  
TREATMENT AREA
  - ▲ LF-4\* INDICATES INFILTRMETER  
TEST SITE
  - ✦ PROPOSED MONITOR WELL
  - A A' INDICATES CROSS SECTION LINE  
SEE PLATES 5A AND 5B
  - 33 34 SECTION CORNER  
4 3

SCALE  
0 500 1000  
FEET

BASE MAP REFERENCE: MASTER PLAN, CINIZA  
REFINERY, GALLUP, NEW MEXICO, SOUTHWESTERN  
ENGINEERING COMPANY, ZZ-02-122-EP, REVISION  
8-6-71. EVAPORATION POND BOUNDARIES ARE  
ESTIMATED.

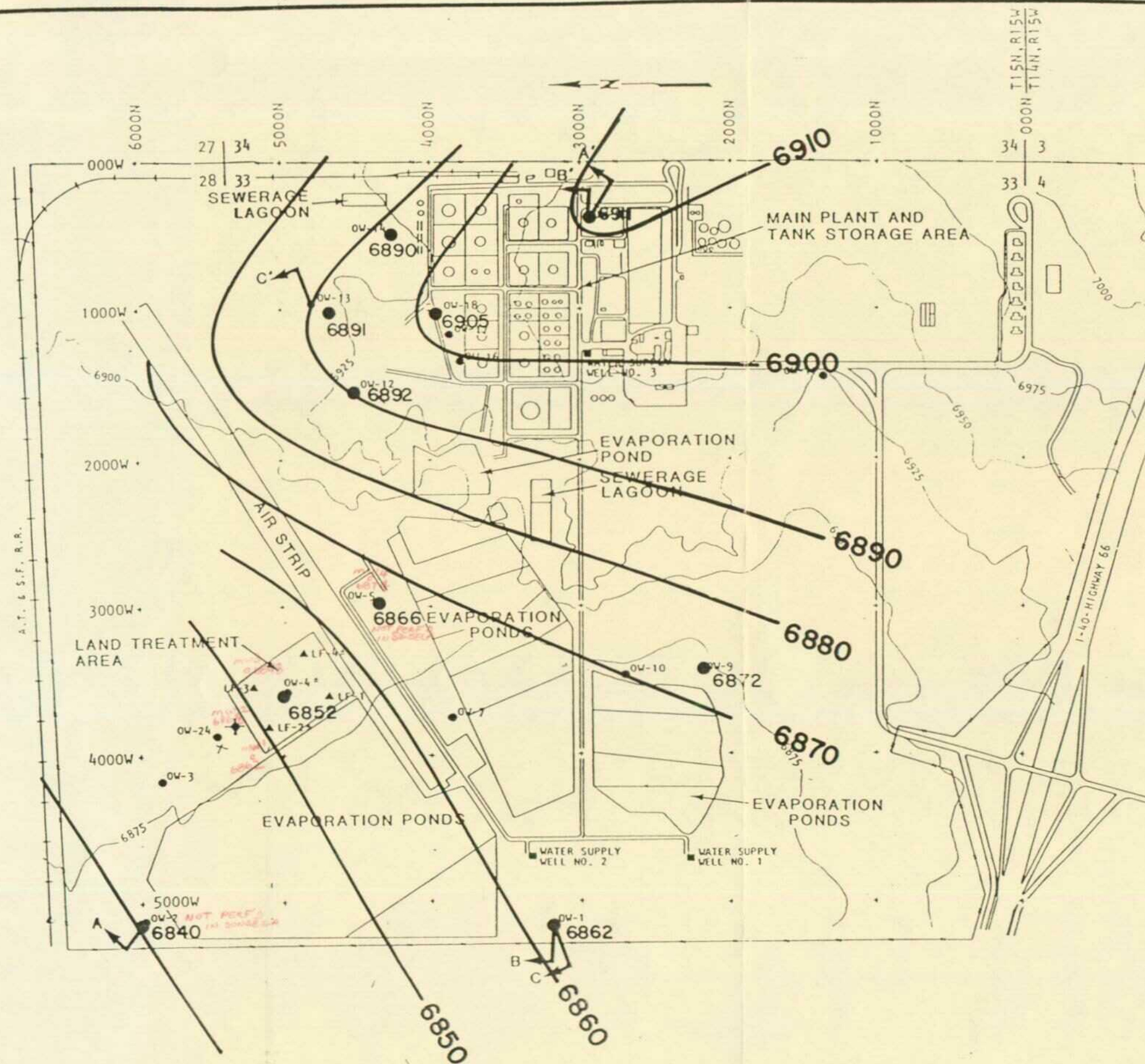
PREPARED  
FOR

Shell Oil Co.

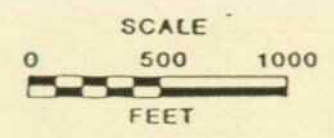
**FIGURE 4-6**  
STRUCTURE CONTOURS  
ON TOP OF SONSELA SAND

BY Dames & Moore

Plate 1

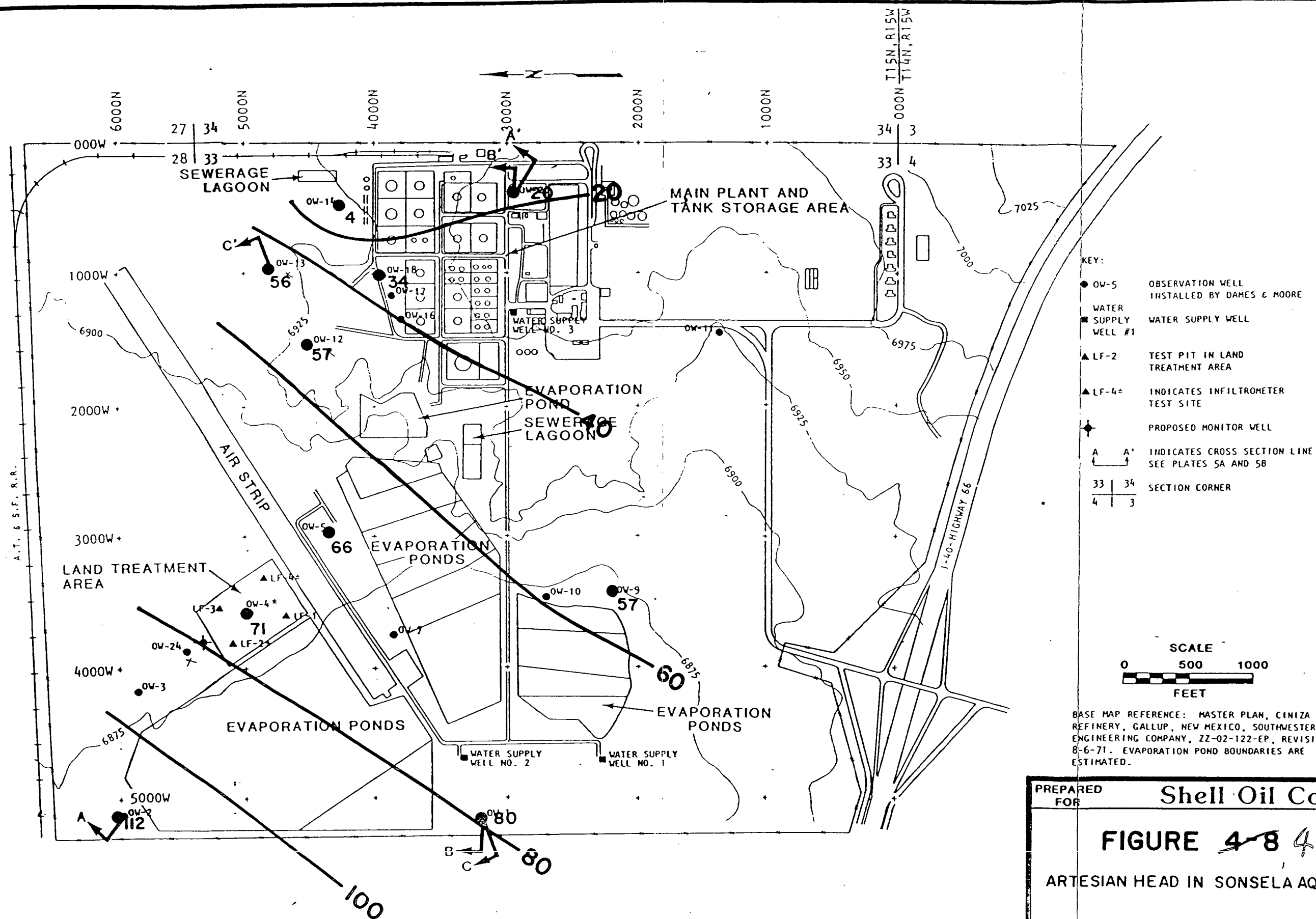


- KEY:
- OW-5 OBSERVATION WELL INSTALLED BY DAMES & MOORE
  - WATER SUPPLY WELL #1
  - ▲ LF-2 TEST PIT IN LAND TREATMENT AREA
  - ▲ LF-4\* INDICATES INFILTRATOR TEST SITE
  - ✦ PROPOSED MONITOR WELL
  - A A' INDICATES CROSS SECTION LINE SEE PLATES 5A AND 5B
  - 33 | 34 SECTION CORNER
  - 4 | 3



BASE MAP REFERENCE: MASTER PLAN, CINIZA REFINERY, GALLUP, NEW MEXICO, SOUTHWESTERN ENGINEERING COMPANY, 22-02-122-EP, REVISION 8-6-71. EVAPORATION POND BOUNDARIES ARE ESTIMATED.

|                                                                       |                       |
|-----------------------------------------------------------------------|-----------------------|
| PREPARED FOR                                                          | Shell Oil Co.         |
| <b>FIGURE 4-7</b><br>POTENTIOMETRIC SURFACE OF THE<br>SONSELA AQUIFER |                       |
| BY                                                                    | Dames & Moore Plate 1 |



PREPARED  
FOR

Shell Oil Co.

FIGURE 4-8 4-7a

ARTESIAN HEAD IN SONSELA AQUIFER

BY Dames & Moore

Plate 1

