

Case #1085

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Case #1085

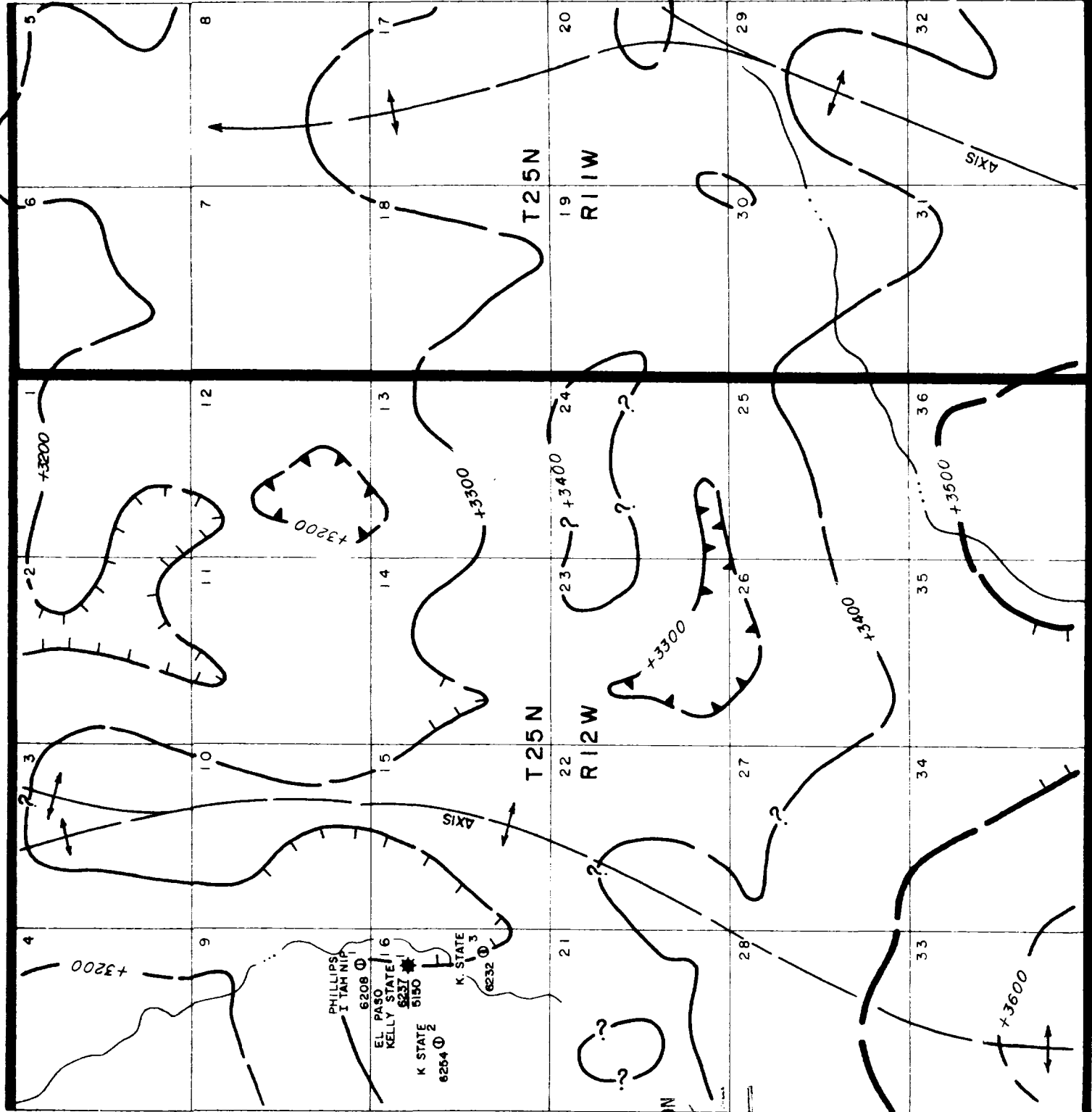
Reg. No. A16416-17

SAN JUAN CO., NEW MEXICO

CARSON AREA

CONTOURS ON A  
REFLECTING HORIZON IN  
THE CRETACEOUS

SCALE: 1" = 4000'



Carson Unit 5

Decline Curve

Run from 5-1-58 - 2-25-88

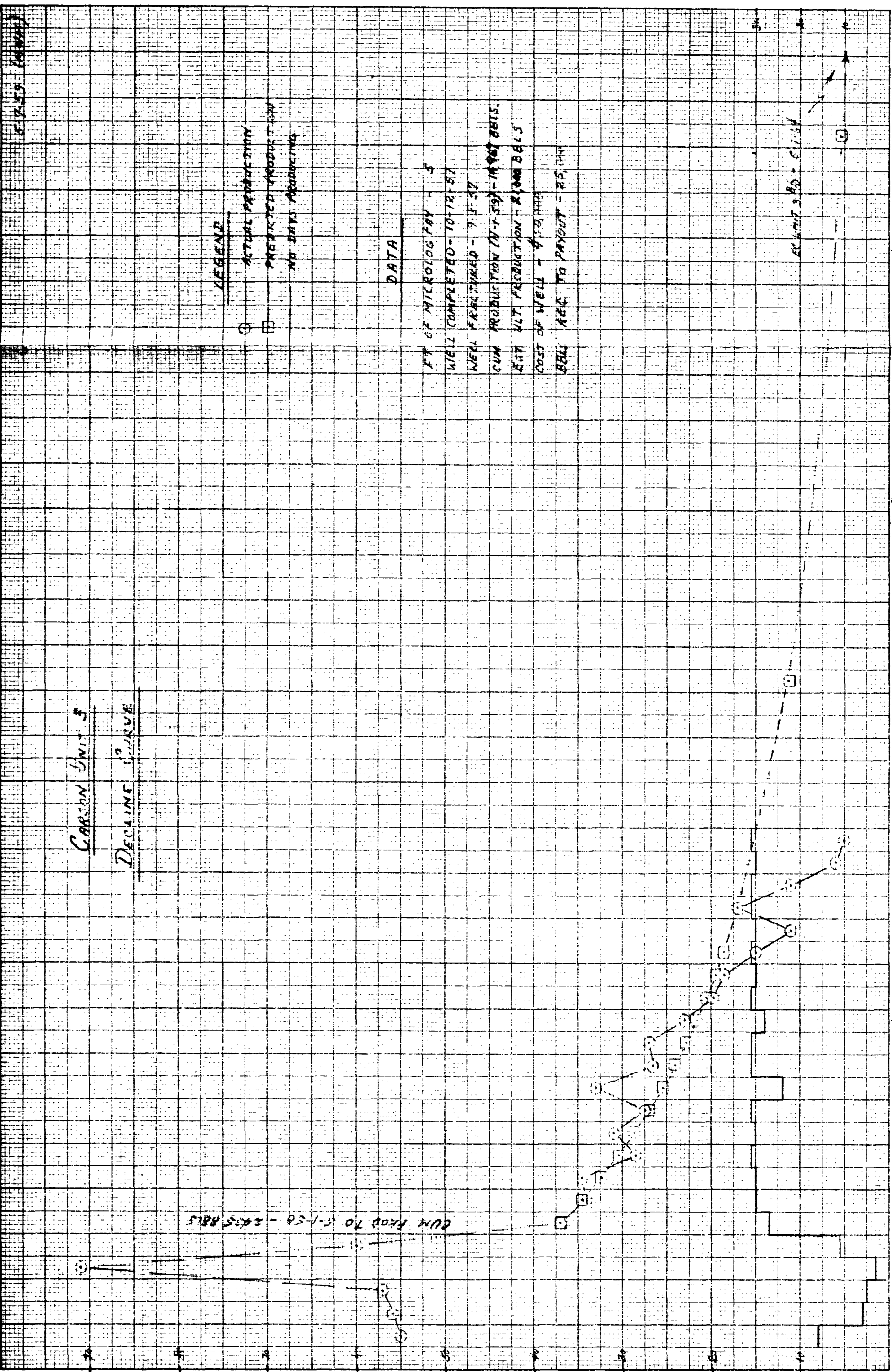
LEGEND

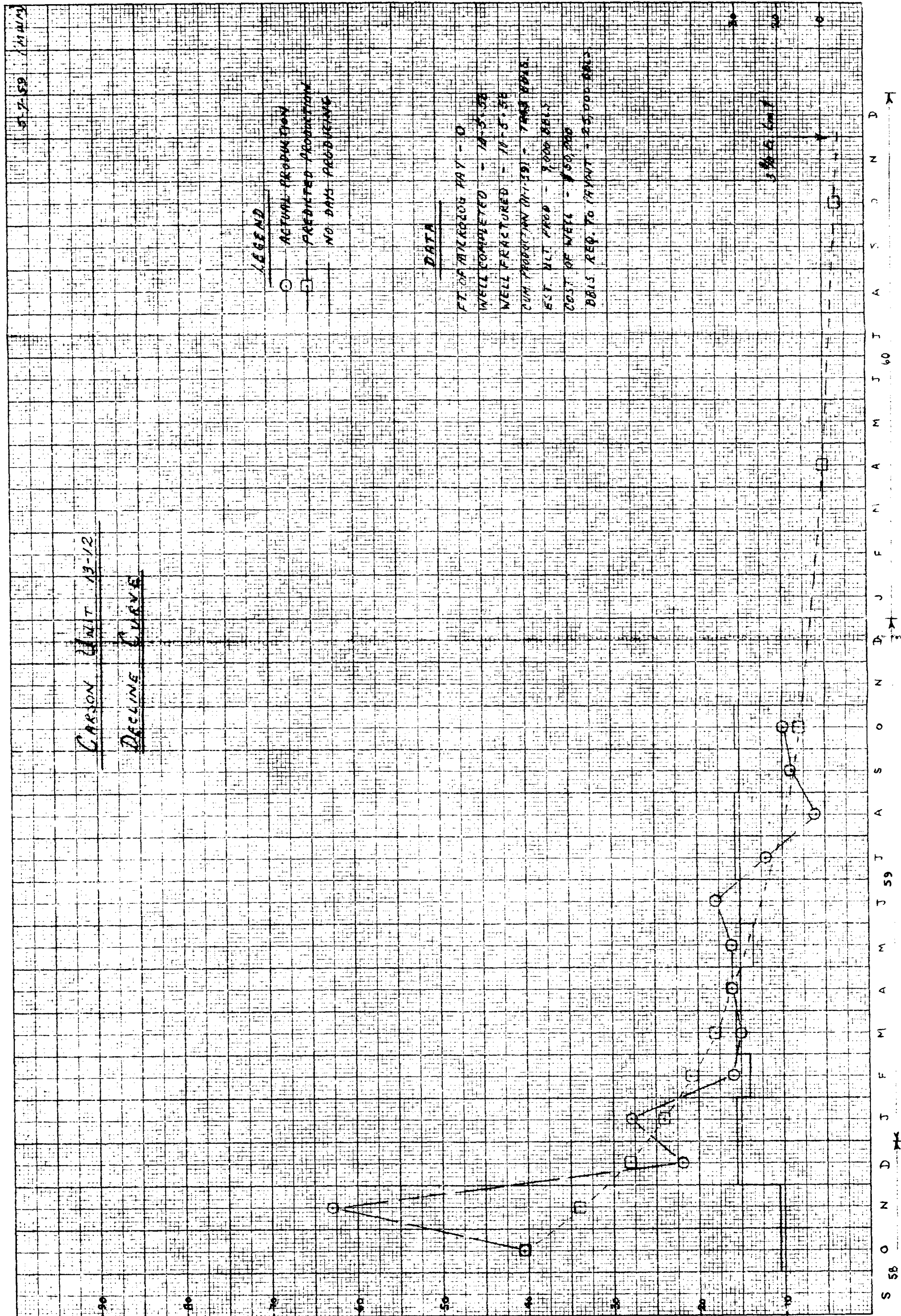
- ACTUAL PRODUCTION
- PREDICTED PRODUCTION
- NO DAYS PRODUCING

DATA

FT OF MICROLOG PAY - 5  
 WELL COMPLETED - 10-12-57  
 WELL FRACTURED - 9-1-57  
 CUM PRODUCTION (A-V-39) - 14,967 BBL'S  
 EST VLT PRODUCTION - 2,000 BBL'S  
 COST OF WELL - \$150,000  
 WELL AGE TO PAYOUT - 25.14 YRS

ACUMT 3 RD - 51164





Production Rate, B/D

10 x 10 to the 1/2 inch, both lines accepted  
MADE IN U.S.A.

## GEOLOGIC REPORT - CARSON AREA

MAIN OFFICE OCC SAN JUAN COUNTY, NEW MEXICO

1953 JUN 4 AM 8:18

Geology

The Carson area is located in the west central part of the San Juan Basin 22 miles southeast of Farmington, New Mexico. It includes Section 16, T. 25 N., R. 12 W. in which the recent Gallup sandstone (Cretaceous) oil discovery was made by the El Paso Natural Gas Company in their Kelly State No. 1 wildcat.

The Shell Oil Company conducted a seismic survey over the area in 1953 and 1954 and a resurvey in 1954-1955, the results of which delineated a structural platform extending across the area breaking the continuity of the regional northeasterly dip. Superimposed on this platform are several small anticlinal culminations. A seismic contour map based on a Cretaceous reflecting horizon (see attached plat) indicates that structural conditions may not control the oil accumulation found in Kelly State No. 1 or in subsequently drilled tests in the immediate vicinity, as these wells appear to occupy a structural position near the axis of a small syncline.

Formations which outcrop in the Carson area consist of gentle northeasterly-dipping Tertiary and upper Cretaceous beds. The Torrejon-Puerco formation of Tertiary age is exposed over most of the area with a small exposure of upper Cretaceous rocks being present in the northwestern and southwestern portions of the area.

A tabulation of the average formation thicknesses anticipated in the wells we propose to drill at Carson is as follows:

Generalized Thickness

TERTIARY	
Torrejon-Puerco	150
UPPER CRETACEOUS	
Ojo Alamo, Kirtland, Fruitland	1120
Pictured Cliffs	160
Lewis Shale	180
Cliff House	535
Allison-Memefee	1560
Point Lookout	190
Mancos (Upper)	900
Gallup	300
Mancos (Lower)	170
Sanastee	140
Mancos	210
Greenhorn	60
Graneros	70
Dakota	230

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The primary objective includes the sandstones of the Gallup formation which are productive of oil in the Kelly State wells. Other objectives are the Pictured Cliffs, Cliff House, Allison-Menefee, Point Lookout, and Dakota sandstones, all of which are productive in various portions of the San Juan Basin.

As the Gallup sandstones are erratically developed throughout the general area, we plan to drill five Cretaceous tests on the proposed Carson unit, four of which will test the Gallup with the fifth to penetrate the Dakota. None of these tests will offset the El Paso discovery but will be spread out over the unit in such a manner as to gain maximum stratigraphic and structural information.

#### Unit Area

We have outlined a proposed unit area on the attached structure and land plats. As is apparent from the structural interpretation, the unit outline must be based upon considerations other than the geology alone. The possibility exists that structure may not control the entrapment of oil and/or gas, and as we have insufficient data to define favorable zones of sandstone development we believe the best course is to unitize on an equivalent township rather than on a strictly geologic basis. You will recall the conference held between your Messrs. Anderson, Canfield, and Stipp on January 30, 1956 with our Mr. Nantker in which the matter of the Carson Unit was discussed. While a unit strictly on township lines might conform to earlier San Juan Basin Units, Sunray Mid-Continent, who hold the majority of the western one-third of T. 25 N., R. 12 W., plan to explore their properties without unitization. It is necessary, therefore, to move the proposed unit in an easterly direction both for geologic and development reasons. The eastern limitation results from the fact that the easterly two-thirds of T. 25 N., R. 11 W. is comprised of predominantly Indian Allotted lands which were sold at Sale 54 on October 29, 1955. Approval of these leases is pending and considerable time will be required for the various lessees to secure their leases and clear their titles. Township lines mark the north and south boundaries of the unit.

Accordingly, we have included in the proposed unit the western one-third of T. 25 N., R. 11 W. and the eastern two-thirds of T. 25 N., R. 12 W. as outlined in the Land Exhibit "B" accompanying this application. The total area within this outline is approximately 23,044.87 acres, consisting of 17,122.92 acres of U. S. Government land or 74.30%, 3,362.83 acres of Indian Allotted lands or 14.59%, and 2,559.12 acres of State of New Mexico lands or 11.10%. The lands within the unit outline (see Exhibit "A", Land Map) are held as follows:

<u>Company</u>	<u>Acres</u>	<u>Percentage</u>
Shell Oil Company	17,202.92	74.65%
El Paso Natural Gas Company	2,119.12	9.20%
Skelly Oil Company	800.00	3.47%
Phillips Petroleum Company	641.84	2.79%
Humble Oil Company	640.58	2.78%
Amerada Petroleum Company	479.92	2.08%
Stanolind Oil & Gas Company	320.00	1.39%
Woodriver Oil & Refining Company	280.00	1.21%
Southern Union Gas Company	160.00	0.69%
Monsanto Chemical Company	160.48	0.70%
Magnolia Petroleum Company	160.00	0.69%
E. C. Everson	80.00	0.35%
	<u>23,044.86</u>	<u>100.00%</u>

For the reasons cited above we believe our proposed unit bounded on the west by the Sunray Mid-Continent block and on the east by the Indian Allotted block is an area logically subject to unitization in order to insure an orderly development of any oil or gas field which might be found in the area. As other parties will be involved in the unit it becomes increasingly important to insure such orderly development. Many of the parties are "unit minded" and have indicated a willingness to join the proposed unit. The unit agreement policy suggested by U. S. Geological Survey will be acceptable to us. It is requested that the geological information presented here in support of the application be treated as confidential as provided in Section 226.3 of Title 30, Code of Federal Regulations.

PROPOSED  
CARSON UNIT AREA

LAND EXHIBIT "D"

Survey of Township 25 North, Range 11 West approved September 28, 1883.  
Resurveyed January 24, 1935.

Survey of Township 25 North, Range 12 West approved July 19, 1915.

Tract  
No.

Description

Federal Lands

- |                               |  |
|-------------------------------|--|
| 1. Lease Serial No. SF-078061 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 17: S-1/2<br>Section 20: W-1/2<br>Section 29: All<br><br>containing 1280 acres  |
| 2. Lease Serial No. SF-078062 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 5: SW-1/4<br>Section 6: Lots 1, 2, S-1/2 NE-1/4,<br>SE-1/4 (E-1/2)<br>Section 8: All<br>Section 17: NE-1/4<br>Section 18: SE-1/4<br><br>containing 1440.30 acres  |
| 3. Lease Serial No. SF-078063 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 7: Lots 1, 2, 3, 4, E-1/2 W-1/2,<br>E-1/2 (All)<br>Section 19: Lots 1, 2, 3, 4, E-1/2 W-1/2,<br>E-1/2 (All)<br>Section 30: Lots 1, 2, 3, 4, E-1/2 W-1/2,<br>E-1/2 (All)<br>Section 31: Lots 1, 2, 3, 4, E-1/2 W-1/2,<br>E-1/2 (All)<br><br>containing 2563.86 acres |
| 4. Lease Serial No. SF-078064 | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 1: Lots 1, 2, 3, 4, S-1/2 N-1/2,<br>S-1/2 (All)<br>Section 12: All<br>Section 13: All<br>Section 24: All<br><br>containing 2559.60 acres  |



5. Lease Serial No. SF-078065

T. 25 N., R. 12 W., N.M.P.M.  
Section 21: All  
Section 28: All  
Section 33: All  
Section 34: All

containing 2560 acres

6. Lease Serial No. SF-078066

T. 25 N., R. 12 W., N.M.P.M.  
Section 4: Lots 1, 2, S-1/2 NE-1/4,  
(NE-1/4)  
Section 9: N-1/2  
Section 10: NE-1/4, S-1/2  
Section 15: All  
Section 22: N-1/2, SE-1/4  
Section 26: NW-1/4  
Section 27: W-1/2

containing 2559.84 acres

7. Lease Serial No. SF-078067

T. 25 N., R. 12 W., N.M.P.M.  
Section 3: Lots 1, 2, 3, 4, S-1/2 N-1/2  
(N-1/2) SE-1/4  
Section 11: All  
Section 14: All  
Section 23: All  
Section 26: NE-1/4

containing 2559.32 acres

8. Lease Serial No. SF-078068

T. 25 N., R. 12 W., N.M.P.M.  
Section 25: All  
Section 26: S-1/2  
Section 35: All

containing 1600 acres

Navajo Indian Allotted Lands

9. Contract No. 14-20-603-291

T. 25 N., R. 12 W., N.M.P.M.  
Section 22: SW-1/4

containing 160 acres

10. Contract No. 14-20-603-292

T. 25 N., R. 12 W., N.M.P.M.  
Section 27: NE-1/4

containing 160 acres

11. Contract No. 14-20-603-293

T. 25 N., R. 12 W., N.M.P.M.  
Section 27: SE-1/4

containing 160 acres



- |                                 |  |                         |
|---------------------------------|--|-------------------------|
| 12. Contract No. 14-20-603-321  | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 4: SW-1/4                               | containing 160 acres    |
| 13. Contract No. 14-20-603-322  | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 4: Lots 3, 4, S-1/2 NW-1/4<br>(NW-1/4)  | containing 159.92 acres |
| 14. Contract No. 14-20-603-326  | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 9: SW-1/4                               | containing 160 acres    |
| 15. Contract No. 14-20-603-1228 | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 9: SE-1/4                               | containing 160 acres    |
| 16. Contract No. 14-20-603-1283 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 18: NE-1/4                              | containing 160 acres    |
| 17. Contract No. 14-20-603-1284 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 18: Lots 1, 2, E-1/2 NW-1/4<br>(NW-1/4) | containing 160.77 acres |
| 18. Contract No. 14-20-603-1285 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 18: Lots 3, 4, E-1/2 SW-1/4<br>(SW-1/4) | containing 161.07 acres |
| 19. Contract No. 14-20-603-1337 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 5: Lots 1, 2, S-1/2 NE-1/4<br>(NE-1/4)  | containing 160.64 acres |
| 20. Contract No. 14-20-603-1338 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 5: SE-1/4                               | containing 160 acres    |

- |                                 |   |                         |
|---------------------------------|---|-------------------------|
| 21. Contract No. 14-20-603-1339 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 6: Lots 3, 4, 5, SE-1/4 NW-1/4<br>(NW-1/4) | containing 160.22 acres |
| 22. Contract No. 14-20-603-1340 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 6: Lots 6, 7, E-1/2 SW-1/4<br>(SW-1/4)     | containing 159.72 acres |
| 23. Contract No. 14-20-603-1359 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 5: Lots 3, 4, S-1/2 NW-1/4<br>(NW-1/4)     | containing 160.48 acres |
| 24. Contract No. 14-20-603-1423 | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 3: SW-1/4                                  | containing 160 acres    |
| 25. Contract No. 14-20-603-1424 | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 4: SE-1/4                                  | containing 160 acres    |
| 26. Contract No. 14-20-603-1435 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 17: NW-1/4                                 | containing 160 acres    |
| 27. Contract No. 14-20-603-1440 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 20: NE-1/4                                 | containing 160 acres    |
| 28. Contract No. 14-20-603-1441 | <u>T. 25 N., R. 11 W., N.M.P.M.</u><br>Section 20: SE-1/4                                 | containing 160 acres    |
| 29. Contract No. 14-20-603-1449 | <u>T. 25 N., R. 12 W., N.M.P.M.</u><br>Section 10: NW-1/4                                 | containing 160 acres    |

State Lands

30. State of New Mexico Oil and Gas Lease E-3148-1  
T. 25 N., R. 11 W., N.M.P.M.  
Section 32: N-1/2 NE-1/4, N-1/2 SE-1/4,  
SW-1/4 SE-1/4  
containing 200 acres
31. State of New Mexico Oil and Gas Lease E-5622  
T. 25 N., R. 11 W., N.M.P.M.  
Section 32: N-1/2 NW-1/4  
containing 80 acres
32. State of New Mexico Oil and Gas Lease E-6223  
T. 25 N., R. 11 W., N.M.P.M.  
Section 32: S-1/2 NE-1/4  
containing 80 acres
33. State of New Mexico Oil and Gas Lease E-6597  
T. 25 N., R. 12 W., N.M.P.M.  
Section 2: Lots 1, 2, 3, 4, (N-1/2 N-1/2)  
S-1/2  
Section 16: All  
Section 36: S-1/2  
containing 1439.12 acres
34. State of New Mexico Oil and Gas Lease E-6633  
T. 25 N., R. 12 W., N.M.P.M.  
Section 2: S-1/2 N-1/2  
containing 160 acres
35. State of New Mexico Oil and Gas Lease E-6644-1  
T. 25 N., R. 12 W., N.M.P.M.  
Section 36: N-1/2  
containing 320 acres
36. State of New Mexico Oil and Gas Lease E-10894-6  
T. 25 N., R. 11 W., N.M.P.M.  
Section 32: S-1/2 NW-1/4, SW-1/4,  
SE-1/4 SE-1/4  
containing 280 acres

<u>Type Land</u>	<u>Percentage</u>	<u>Acres</u>
Federal Lands	74.30%	17,122.92
Indian Allotted Lands	14.59%	3,362.83
State Lands	11.10%	2,559.12
Total Acres in Proposed Unit	99.99%	23,044.87