



State of New Mexico  
**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**  
Santa Fe, New Mexico 87505



**BRUCE KING**  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

MATTHEW BACA  
DEPUTY SECRETARY

March 18, 1992

KELLAHIN, KELLAHIN & AUBREY  
Attorneys at Law  
P. O. Drawer 2265  
Santa Fe, New Mexico 87504

RE: CASE NO. 10424  
ORDER NO. R-9648

Dear Sir:

Enclosed herewith are two copies of the each of the above-referenced Division order recently entered in the subject case.

Sincerely,

Florene Davidson  
OC Staff Specialist

FD/sl

cc: BLM - Farmington  
OCD Aztec Office  
Steve Keene - TRD

**VILLAGRA BUILDING - 408 Galisteo**

Forestry and Resources Conservation Division  
P.O. Box 1948 87504-1948  
827-5830

Park and Recreation Division  
P.O. Box 1147 87504-1147  
827-7465

**2040 South Pacheco**

Office of the Secretary  
827-5950

Administrative Services  
827-5925

Energy Conservation & Management  
827-5900

Mining and Minerals  
827-5970

**LAND OFFICE BUILDING - 310 Old Santa Fe Trail**

Oil Conservation Division  
P.O. Box 2088 87504-2088  
827-5800

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

*CASE NO. 10424*  
*ORDER NO. R-9648*

APPLICATION OF CITATION OIL & GAS  
CORPORATION FOR DOWNHOLE COMMINGLING,  
MCKINLEY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 AM on December 19, 1991, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 18th day of March, 1992, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) By Division Order No. R-4389, as amended by Order No. R-4389-A, the (Tenneco) Lower Hospah Pressure Maintenance Project was established for the purpose of injecting water and gas into the South Hospah-Lower Sand Oil Pool to recover secondary oil production from the "Hospah" Lease underlying the W/2 NE/4 and NW/4 of Section 12, Township 17 North, Range 9 West, NMPM, McKinley County, New Mexico. By Division Administrative Order PMX-56(A), dated March 4, 1974, said Lower Hospah Project Area was expanded to include the E/2 NE/4 of said Section 12.

(3) The South Hospah Unit Area was approved by the US Department of the Interior in 1968 for secondary recovery from the South Hospah-Upper Sand Oil Pool underlying the N/2 and N/2 S/2 of Section 12 and the SE/4 NE/4 and NE/4 SE/4 of Section 11, both in Township 17 North, Range 9 West, NMPM, McKinley County, New Mexico. Prior to unitization, the Division by Order No. R-3325, dated October 4, 1967, authorized the (Tenneco) South Upper Hospah Waterflood Project in said Section 12 for the injection of water into the South Hospah-Upper Sand Oil Pool.

(4) The current operator of both projects, Citation Oil and Gas Corporation, obtained 100 percent working interest of said properties in November, 1987.

(5) Currently there are fourteen active oil producing wells and eight water injection wells in the Upper Hospah interval. Average daily oil production from said zone is currently 2.9 barrels of oil per day per well and approximately 214 barrels of water per day per well (41 BOPD and 3000 BWPD pool wide).

(6) The Lower Hospah interval currently has twenty-two active oil producing wells and nine water injection wells. Average daily oil production poolwide is 132 barrels of oil per day (6 BOPD per well) and the poolwide daily water production is approximately 15,000 barrels per day (682 BWPD per well).

(7) Neither the Upper or Lower Hospah Pool produces any measurable amount of gas.

(8) At this time, Citation Oil and Gas Corporation seeks approval to downhole commingle oil production from the South Hospah-Upper Sand Oil Pool and the South Hospah-Lower Sand Oil Pool within those wellbores described in Exhibits "A" and "B" attached hereto and made a part hereof, all located in Section 12, Township 17 North, Range 9 West, N.M.P.M., McKinley County, New Mexico.

(9) At the time of the hearing, the applicant requested this case be restricted to wells located only in the N/2 of said Section 12.

(10) The applicant presented evidence showing that both projects are rapidly approaching their respective economic limits and that downhole commingling would extend the economic life of the combined projects an estimated three additional years and would also allow for the recovery of an estimated additional 128,200 barrels of oil that may otherwise be abandoned thereby preventing waste of recoverable hydrocarbons.

(11) Although the royalty ownership is not identical between the two pools, the applicant has proposed an allocation formula for the equitable distribution of commingled production so that the correlative rights of all royalty owners could best be served and protected.

(12) Citation recommended allocating production on a monthly basis using a ratio of remaining recoverable reserves which results in 79.9% of the total estimated remaining reserves being attributed to the Lower Hospah and 20.1% to the Upper Hospah.

(13) The reservoir characteristics of each of the two pools are such that underground waste would not be caused by the proposed commingling of production.

(14) In addition, the applicant, at the time of the hearing, presented adequate testimony and evidence which shows that:

- (a) there will be no crossflow between the two commingled pools;
- (b) neither commingled zone exposes the other to damage by produced liquids;
- (c) the fluids from each zone are compatible with the other;
- (d) the bottomhole pressure of the lower pressure zone is not less than 50 percent of the bottomhole pressure of the higher pressure zone adjusted to a common datum; and
- (e) the value of the commingled production is not less than the sum of the values of the individual production.

(15) Proper notice was provided to all parties affected by this case and no party appeared in opposition to this application.

(16) The operator should be responsible for reporting any monthly gas production from the subject wells by utilizing the proposed allocation formula.

(17) For reporting purposes the operator should also allocate water production based on the current water production in both intervals:

83% - Lower Hospah  
17% - Upper Hospah.

(18) Waterflow into both projects through all water injection wells must remain segregated.

(19) An annual report should be submitted by the operator to both the Aztec District Office of the Division and to the Santa Fe Office showing the complete computation for each month.

(20) This application should be approved and an allocation adopted as proposed by the applicant.

(21) The operator of any well so commingled should immediately notify the Division's Aztec district office any time any such well commingled under terms of this order has been shut-in for seven consecutive days and should concurrently present to the Division a plan for remedial action.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Citation Oil and Gas Corporation, is hereby authorized to commingle South Hospah-Upper Sand Oil Pool production with South Hospah-Lower Sand Oil Pool production in each producing well listed on Exhibits "A" and "B" attached hereto and made a part hereof, all located within the N/2 of Section 12, Township 17 North, Range 9 West, N.M.P.M., McKinley County, New Mexico.

(2) The allocation of production from both pools shall be subject to the monthly allocation formula hereby adopted for these wells so that 79.9% of the oil and gas production is allocated to the South Hospah-Lower Sand Oil Pool and 20.1% of the oil and gas production is allocated to the South Hospah-Upper Sand Oil Pool. Water production for each well shall be allocated such that 83% is appropriated to the South Hospah-Lower Sand Oil Pool and 17% is appropriated to the South Hospah-Upper Sand Oil Pool.

(3) The operator is responsible for reporting the monthly production from the subject wells to the Division by utilizing the allocation formulas herein adopted. An annual report shall be submitted by the operator to both the Aztec District Office and the Santa Fe Office of the Division showing the complete computation for the previous twelve month period. Said annual report must be submitted no later than April 1, 1993 and annually thereafter.

(4) Waterflow into all injection wells shall remain segregated between pools.

(5) Any variance from the allocation method herein approved by this order shall be made only after due notice and hearing.

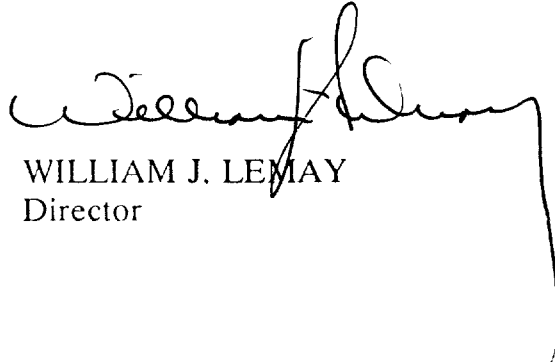
(6) The operator of the subject wells shall notify the Division's Aztec District Office any time any of these subject wells has been shut-in for seven consecutive days and shall concurrently present to the Division a plan for remedial action.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

**EXHIBIT "A"**  
**CASE NO. 10424**  
**ORDER NO. R-9648**

**South Hospah Unit (Upper Sand)**  
**South Hospah-Upper Sand Pool**  
**Section 12, Township 17 North, Range 9 West, NMPM**  
**McKinley County, New Mexico**

<b>Well No.</b>	<b>Status</b>	<b>Type</b>	<b>Well Location</b>
1X	Active	Oil	1980 FNL - 2062 FEL
2	Active	Oil	2310 FNL - 2310 FWL
4	Active	Oil	990 FNL - 2310 FWL
15	Active	Oil	2500 FNL - 330 FWL
16	Active	Oil	1755 FNL - 2330 FWL
26	Active	Oil	330 FNL - 380 FEL
27	T/A	Oil	1570 FNL - 330 FEL
28	Active	Oil	933 FNL - 1485 FEL
29	Active	Oil	410 FNL -1870 FEL
30	Active	Oil	950 FNL - 1980 FEL
31	Active	Oil	330 FNL - 2800 FEL
34	T/A	Oil	1820 FNL - 1700 FWL
37X	T/A	Oil	1280 FNL - 1280 FWL
40	T/A	Oil	2420 FNL - 1650 FEL
48	Active	Oil	1485 FNL - 2817 FEL
55	T/A	Oil	1750 FNL - 1550 FEL
65	T/A	Oil	1418 FNL - 2769 FEL
66	T/A	Oil	1646 FNL - 2667 FEL

**EXHIBIT "B"**  
**CASE NO. 10424**  
**ORDER NO. R-9648**

**South Hospah Unit (Lower Sand)**  
**South Hospah Lower Sand Pool**  
**Section 12, Township 17 North, Range 9 West, NMPM**  
**McKinley County, New Mexico**

Well No.	Status	Type	Well Location
3	Active	Oil	1650 FNL - 1392 FEL
6	Active	Oil	330 FNL - 330 FEL
7	Active	Oil	1650 FNL - 330 FEL
8	Active	Oil	1650 FNL - 2051 FEL
9	Active	Oil	330 FNL - 2051 FEL
10	Active	Oil	990 FNL - 2300 FWL
11	Active	Oil	1650 FNL - 2310 FWL
12	Active	Oil	2160 FNL - 990 FWL
14	Active	Oil	1700 FNL - 1300 FWL
24	Active	Oil	330 FNL - 2650 FEL
25	Active	Oil	330 FNL - 1505 FEL
32	Active	Oil	550 FNL - 2370 FWL
34	T/A	Oil	1820 FNL - 1700 FWL
35	Active	Oil	330 FNL - 850 FEL
37X	Active	Oil	1280 FNL - 1280 FWL
38	Active	Oil	660 FNL - 660 FEL
46	Active	Oil	1700 FNL - 700 FWL
47	Active	Oil	785 FNL - 1775 FWL
49	Active	Oil	885 FNL - 2117 FEL
50	Active	Oil	950 FNL - 900 FEL
53	T/A	Oil	950 FNL - 330 FEL
61	Active	Oil	1120 FNL - 2510 FEL
62	Active	Oil	650 FNL - 1770 FEL
64	Active	Oil	1360 FNL - 900 FEL