END<u>RICK</u>

BOX AZTEC, NEW MEXICO 87410 • (505) 334-2555

August 6, 1986

Oil Conservation Division

P.O. Box 2088

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AUG - 7 1986 Santa Fe, New Mexico 87504-2088

Re: Application for Downhole Commingling Curtis J. Little Warren #3E H-26-T25N-R6W Devils Fork Gallup Pool Basin Dakota Pool

Gentlemen:

Enclosed in duplicate is the application for downhole commingling for the Curtis J. Little Warren #3E well located H-26-T25N-R6W.

A copy of the application is being mailed at this mailing to all offset operators, the Oil Conservation Division District Office and to the U.S. Bureau of Land Management Office at the addresses shown on an exhibit in the application.

If there are questions please contact me.

Yours very truly,

mbrick

A. R. Kendrick

Enclosures

APPLICATION FOR DOWNHOLE COMMINGLING

OPERATOR: Curtis J. Little, Box 1258, Farmington, New Mexico 87499-1258

- WELL: Warren #3E, 1750' FNL 790' FEL, H-26-T25N-R6W, Devils Fork-Gallup Oil Pool and Basin-Dakota Gas Pool.
- PLAT: See attachment.
- TEST: See attached Form C-116.

PRODUCTION GRAPH: See attachments.

- BOTTOM HOLE PRESSURES: No bottomhole pressures have been measured due to production problems. Based on the 1985 Packer Leakage Test Report and assuming a gas gravity of .650, the calculated pressures are <u>885</u> psi for the Gallup formation and <u>1385</u> psi for the Dakota zone at a common datum of 6600' of depth. (The lower pressure being 64% of the higher.)
- FLUIDS DESCRIPTION: All petroleum products in the San Juan Basin from the Cretceous formations are chemically compatable and form no precipitates.
- VALUES: The value of combined stream of production from the subject well will not be impaired by commingling.
- ALLOCATION FORMULA: Based on reserves of 30,000 barrels of oil and 300 MMcf gas in the Gallup zone and 7,000 barrels of oil and 1.0 Bcf gas in the Gallup-Dakota zone, the proposed production split would be 81% of the oil and 23% of the gas to the Gallup zone and 19% of the oil and 77% of the gas to the Dakota zone.
- NOTIFICATIONS: A copy of this application is being mailed to all offset operators and to the Bureau of Land Management, the addresses of which are shown on an attachment.

APPLICATION FOR DOWNHOLE COMMINGLING IN THE BLANCO MESAVERDE GAS POOL AND QUITO GALLUP-DAKOTA OIL POOL

CURTIS J. LITTLE WARREN #3E H-26-T25N-R6W

RULE 303 C. DOWNHOLE COMMINGLING

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1 (a) For Wells Involving Oil Zones:

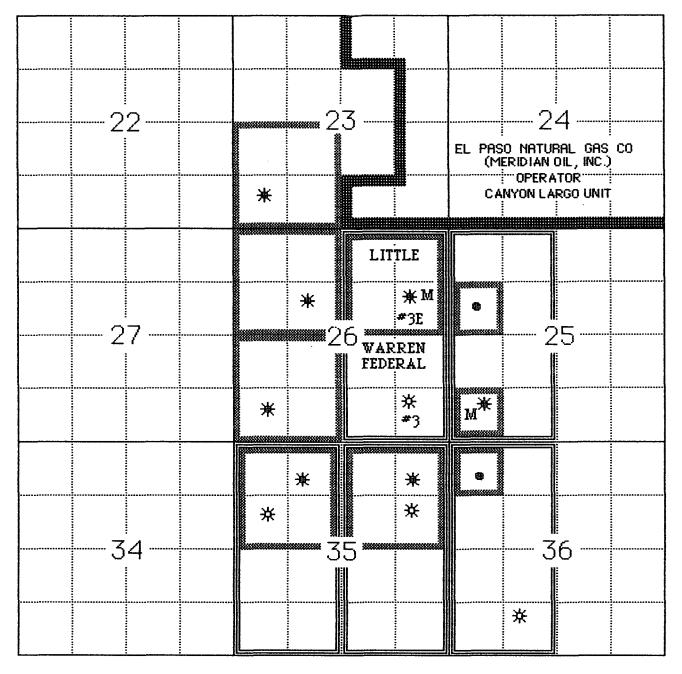
- (1) The total combined oil production will not exceed 60 barrels of oil per day the limit set for wells completed down to 8,999' (the range of the lowermost perforation). $l_{e}g40$
- (2) The well will be produced by artificial lift.
- (3) The total water production is less than the oil limit set in (1) above.
- (4) The fluids are compatable in the two production zones.
- (5) The value of the commingled product will not be impaired by the commingling.
- (6) Ownership of all interests in the well are common.
- (7) The commingling will not jeopardize the efficiency of present or future secondary recovery operations in either of the zones to be commingled.

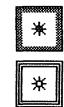
(b) For Wells Involving Gas Zones:

- (1) The downhole commingling is necessary to allow the recovery of products that would otherwise not be economically feasible to recover.
- (2) There will be no or minimal crossflow between zones.
- (3) There are no fluid-sensitive sands within the proposed completion zones.
- (4) The fluids are compatable and precipitates will not be formed which may damage the reservoir(s).
- (5) The ownership of all interests in the well are common.
- (6) The bottom hole pressure of the lower pressure zone is at least 50% of the pressure of the higher pressure zone when reduced to a common datum.

GALLUP AND DAKOTA COMPLETIONS

T 25 N, R 6 W





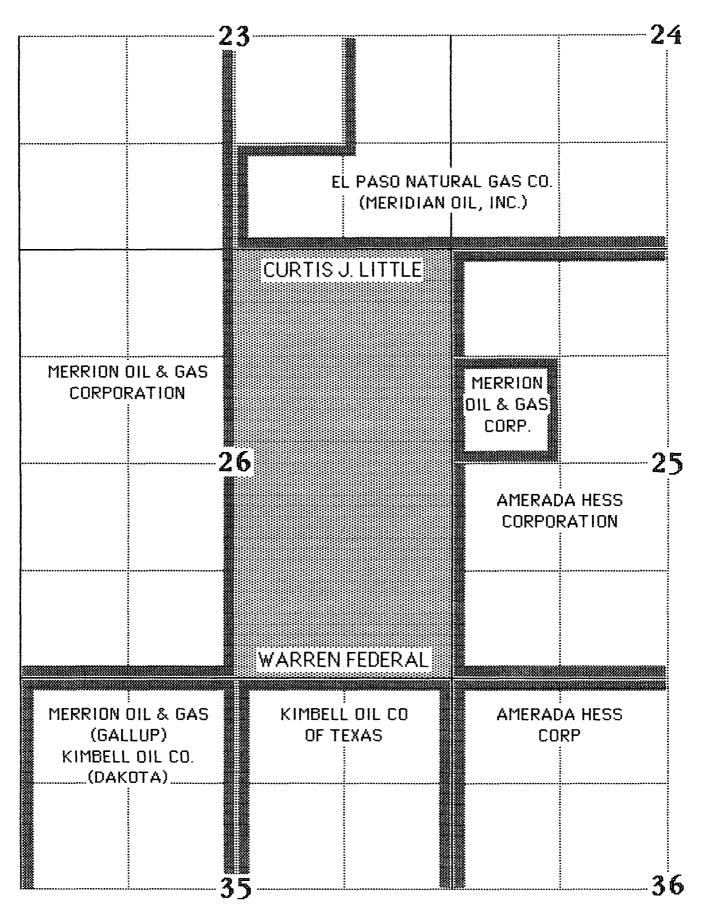
GALLUP PRORATION UNIT

★=DEVILS FORK, @=OTERO

MULTIPLE COMPLETION GALLUP / DAKOTA

BASIN DAKOTA GAS WELL

OFFSET OPERATORS



OFFSET OPERATORS TO THE

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CURTIS J. LITTLE WARREN #3E H-26-T25N-R6W

Amerada Hess Corporation Drawer D Monument, New Mexico 88265

EL Paso Natural Gas Company P.O. Box 990 Farmington, New Mexico 87499-0990

Kimbell Oil Company of Texas P.O. Box 1097 Farmington, New Mexico 87499-1097

Merrion Oil & Gas Corporation P.O. Box 1017 Farmington, New Mexico 87499-1017

Oil Conservation Division 1000 Rio Brazos Road Aztec, New mexico 87410

Bureau of Land Management Caller Service 4104 Farmington, New Mexico 87499-4104

CURTIS J. LITTLE WARREN #3E

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| MONT | H | ZONE | VOL | UME | GRAPH | | | | | | | | | | |
|------------|-------------|------------|------|------------|--|--|--|--|--|--|--|--|--|--|--|
| APR | · 05 | GAL | 200 | MCF | 872 | | | | | | | | | | |
| APR | | DAK | 2702 | MCF | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| MRY | | GAL | 507 | MCF | 22222 | | | | | | | | | | |
| May | '8 5 | DAK | 4560 | MCF | | | | | | | | | | | |
| JUN | 185 | GAL | 1679 | MCF | | | | | | | | | | | |
| JUN | | DAK | 5049 | MCF | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| JUL | _ | GAL | 2864 | MCF | | | | | | | | | | | |
| JUL | '85 | DAK | 715 | MCF | | | | | | | | | | | |
| RUG | '85 | GAL | 6433 | MCF | | | | | | | | | | | |
| AUG | | DAK | 715 | MCF | \$7777772 | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| SEP | | GAL | | MCF | | | | | | | | | | | |
| SEP | '85 | Dak | 575 | MCF | | | | | | | | | | | |
| OCT | '85 | GAL | 5299 | MCF | | | | | | | | | | | |
| OCT | - | DAK | 588 | MCF | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| NOV | | Gal. | 3085 | MCF | | | | | | | | | | | |
| NOV | '85 | Dak | 3084 | MCF | | | | | | | | | | | |
| DEC | '85 | GAL | 312 | MCF | 222 | | | | | | | | | | |
| DEC | | DAK | 2811 | MCF | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| JAN | | GAL | 320 | MCF | | | | | | | | | | | |
| JAN | .80 | dak | 2880 | MCF | | | | | | | | | | | |
| FEB | '86 | GAL | 1492 | MCF | | | | | | | | | | | |
| FEB | | DAK | 166 | MCF | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| MAR | | GAL | | MCF | <u>/////////////////////////////////////</u> | | | | | | | | | | |
| mar | 60 | Dak | 143 | MCF | | | | | | | | | | | |
| APR | '86 | GRL | 891 | MCF | | | | | | | | | | | |
| APR | | Drik | 99 | MCF | | | | | | | | | | | |
| MOL | • OF | 601 | 2370 | MOT | 777777777777777777777777777777 7 | | | | | | | | | | |
| May May | | gal Dak | 2370 | ncf Mcf | | | | | | | | | | | |
| 1911 | | M UV | ~~~ | 1100 | | | | | | | | | | | |
| JUN | | Gal | 697 | MCF | | | | | | | | | | | |
| JUN | '8 6 | Dak | 77 | MCF | 8 | | | | | | | | | | |

OIL PRODUCTION GRAPH

CURTIS J. LITTLE WARREN #3E

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| Month | NTH 20NE | | JME | GRAPH |
|-----------|----------|----|------|---------|
| APR '85 | GAL | 0 | BBL | |
| APR '85 | DAK | 10 | BBL | |
| MAY '85 | GAL | 55 | BBL. | |
| MAY '85 | DRK | 37 | BBL | |
| JUN '85 | GAL | 19 | BBL | |
| JUN '85 | DRK | 28 | BBL | |
| JUL '85 | GAL | 32 | BBL | |
| JUL '85 | DAK | 49 | BBL | |
| AUG '85 | GRL | 20 | BBL | <i></i> |
| aug '85 | Dak | 30 | BBL | |
| SEP '85 | GAL | 30 | BBL. | |
| SEP '85 | Dak | 44 | BBL. | |
| OCT '85 | GAL | 34 | BBL | |
| OCT '85 | DAK | 50 | BBL | |
| NOV '85 | GAL | 0 | BBL. | |
| NOV '85 | DAK | 0 | BBL | |
| DEC '85 | GAL. | | | |
| DEC '85 | Dak | 8 | BBL | |
| Jan '86 | GAL | 0 | BBL | |
| Jan '86 | Dak | 0 | BBL | |
| FEB '86 | GAL | 1 | BBL | 0 |
| FEB '86 | Drik | 1 | BBL. | |
| MAR '86 | GAL | 1 | BBL | 0 |
| Mar '86 | Dak | 1 | BBL | |
| APR '86 | GAL | 13 | BBL | |
| APR '85 | drik | 19 | BBL | |
| MRY '85 | GAL | 0 | BBL | |
| MRY '86 | drik | 0 | BBL | |
| JUN '86 | GAL | 18 | BBL | |
| JUN '86 | Dak | 27 | BBL | |

WELLS AUTHORIZED FOR DOWNHOLE COMMINGLING NEAR THE SUBJECT WELL OF THIS APPLICATION

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OTERO GALLUP OIL POOL BASIN DAKOTA GAS POOL

| LOCATION | OPERATOR | <u>WELL</u> | DHC ORDER NUMBER | prodl <u>Zone</u> | ICTION <u>OIL%</u> | SPLIT <u>GAS%</u> |
|-------------|-----------------|---------------------|---------------------|----------------------|-----------------------|----------------------|
| M-30-25N-5W | EL PASO NATURAL | JICARILLA 67 #10 | R-6096 | GALLUP DAKOTA | 100 0 | 0 100 |
| L-31-25N-5W | TEXACO, INC. | JICARILLA B #20E | R-5854 | GALLUP DAKOTA | | |
| M-25-25N-6W | AMERADA HESS | McKENZIE FEDERAL #1 | R-5138 | GALLUP DAKOTA | 100 0 | 0 100 |
| 0-25-25N-6W | AMERADA HESS | McKENZIE FEDERAL #3 | R-5138 | GALLUP DAKOTA | 100 0 | 0 100 |
| N-36-25N-6W | AMERADA HESS | HARVEY STATE #10 | R-5138 | GALLUP DAKOTA | 100 0 | 0 100 |

| STATE OF ENERGY 440 MINE | STATE OF NEW MEXICO ENERGY 400 MINERALS DEPARTMENT | . F | | | S. | P. O. UOX 2084 SANTA FE, NEW MEXICO 87501 | P. O. UOX 208U FE, NEW MEXICC | 87501 | | | | | u, a | Form C-116 Revised 10-1-70 | |
|--|---|--|-------------------------------|---------------------------------|------------------------------------|---|---|------------------------------|---|------------------|--|--|----------------------------------|-------------------------------|--|
| | | | | | | GAS-OIL RATIO TESTS | RATIO TE | STS | | | | | | | 2 |
| CURTIS J. LITTLE | | | Pcol | Devils | s Fork | k Gallup | | | <u> </u> | County Rio |) Arriba | ba | | | |
| 1258, | Farmington, | MN | 87499 | 66 | | | TYPE OF TEST - (X) | | Scheduled | | Ű | Completion | | 9 33 | Special (X) |
| | MELL | | LOC | LOCATION | | DATEOF | S CHOKE | T BC | | | | PROD. | PROD. DURING | TEST | GAS - CIL |
| LEASE NAME | NO. | 2 | s. | - | æ | TEST | 1412 | | S. ABLE | TEST HOUNS | WATER Bals. | GRAV. | V OIL | GAS M.C.F. | RATIO CU.FT/BBL |
| Warren | · 3-E | Н | 26 | 25 | و | 6/21/86 | 5 | | | | | | | 13 | 13000 |
| | | | | - | | | <u> </u> | | • | | <u>. </u> | | | | |
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| No well will be assigned an allowable greater than the amount of oll produced During gas-oil ratio test, each well shall be produced at a rate not excect located by more than 25 percent. Operator la encouraged to take advantage of this increased allowables when authorized by the Division. | essigned an allowable greater than the amount of oil produced on the official test. ratio test, each well shall be produced at a rate not exceeding the top unit allo 5 percent. Operator la encouraged to take advantage of thia 25 porcent tolerance ren authorized by the Division. | ter than be prod buraged ion. | the amo uced at to take | unt of ol a role adventag | l produce not exce se of thi | oduced on the official teat. exceeding the top unit allowable for the pool in which well is of thia 25 porcent tolerance in order that well can be assigned | al teat. init allowabi lerance in g | ie for the pa rder that w | i on the official teat. Sing the top unit allowable for the pool in which well is 25 porcent tolerance in order that well can be assigned | ell 1s igneri | I h is tru ledge | I hcreby ccrtify is true and compl ledge and belief. | certify th complete elief. | at the abov to the bes | I hcreby ccrtify that the above information is true and complete to the best of my know- ledge and belicf. |
| Gas volumes must be reported in MCF measured at a pressure base of 15.025 pain and a temperature of 60° P. Specific gravity base will be 0.60. Report same pressure in the of their community for any well confined thanks position | ported in MCF mea | sured at | a pres | ture bas | e of 15.0 | 25 pelo and a l | emp era ture | of 60° P. S ₁ | secific grevity | base | | 1 | N | Ń | |
| Mell original and one copy of this report to the district office of the New Mexico Oli Conservation Division in accordance with Rule 101 and appropriate pool rules. | a trea a voing pre opy of this report i iles. | is the d | latrict o | llice of | the New | Nexico Oli Co | nservation | Division In | accordance v | /Ith | $\mathbf{n} \in \mathbb{R}^{n}$ | J. | N. | | Ċ, |
| | | | | | | | | | - | | | о Ч | Operator | Or Drainte | |
| | | | | | | | | | | | | | 2 | (Tide) | • |

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| • • • | • • • | | EF ect al X | CAS - CIL | RATIO CU.FT/BBL | | 3000 | | | | | | | | | | | I hereby certify that the above information is true and complete to the best of my know- | | Ĵ) | | | 7 | |
| form C-116 Revised 10-1-78 | | | C ^b eC | TEST | GAS M.C.F. | - | ო | | | | | | | | | | | t the above to the best | | .) | in the | 6 | (Tiule) | |
| for Rev | | | | DURING | 01L BBLS | | - | | | _ | | | | | | | | rtify tha mplete | ief. | \sim | R | Operator | | |
| | | | ation | | GRAV. | | | | | | | | | | | | | eby ce and co | nd bel | | | ope | | |
| | | Arriba | Completion | d R | WATER Bals. | | | ····· | | | | | | | | | | I her is true | ledge and belicf. | | | | | |
| | | | | . 64674 | | | | | | | ·· = - | | | | | i | ==== | : | t | | | | | = |
| | | County | Scheduled | DAILY | ALLOW- ABLE | | | | | | | | • . | | | | | No well will be assigned an allowable greater than the amount of oll produced on the official test. Dwing gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is | can be assig | 3 pais and a temperature of our if. Specific gravity base sh cashes. | Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules. | | | |
| P. O. JOX 2088 SANTA FE, NEW MEXICO 87501 | .0 | | Sch Sch | TBG. | PRESS. | | | • | | | | | • | _ | | | | t the pool | that well | sede •,1 • | sion in ac | | | |
| | IO TESTS | | Е О F 1 (X) | CHOKE | SIZE | est | - - 2 | | | | | | | | | | | at. líowable foi | ce in order | | ation Divi | | | |
| P. 0, BOX 2088 FE, NEW MEXI | RAT | | TYPE TEST | L L | 1472 | | | | | | • | <u>-</u> . | | | | | | clal ter unit el | toleran | | on serv | | | |
| P. O. NTA FE, N | GAS-OIL RATIO TESTS | kota | | DATEOF | TEST | a recent | 4/18/86 | | | | | | | | | , | | No well will be essigned an allowable greater than the amount of oll produced on the official test. During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit alfo by any other to exceed on the second of the second | 25 porcent | 0.60. Report casue pressure in lieu of tubing pressure for any well producing through casing. | Aexico Oll C | | | |
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| L | | looq | 87499 | LOCATION | S | days, | 26 | • | | | | | | | | | | e amoun | | any well | trict off | | | |
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| STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT | | LITTLE | | | AME | produced | | | | | | | | | • | | | be eacig | by more than 23 percent. Operator is encouraged to take advantage of this of allowables when authorized by the Division. Gas volumes must be reported in VCW monuted at a distance here of it on | presu | and one lete poo | | | |
| ENERG | | د | Box | | LEASE NAME | not p | с | | | | | | | | | | | ell will E gan-o | -120 | 1 600 1 | original appropr | | | |
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P. O. BOX 2088