CASE # 10919 FEBRUARY 17,1994

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

TELEPHONE (505) 982-4285 TELEFAX (505) 982-2047

JASON KELLAHIN (RETIRED 1991)

"NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

W. THOMAS KELLAHIN*

January 24, 1994

HAND DELIVERED

Mr. William J. LeMay Oil Conservation Division State Land Office Building 310 Old Santa Fe Trail, 2nd Floor Santa Fe, New Mexico 87501

Lodewick #1 Well 18-T27N, R9W

> Application of Meridian Oil Inc. for an unorthodox coal gas well location and downhole commingling,

San Juan County, New Mexico

Dear Mr. LeMay:

On behalf of Meridian Oil Inc., please find enclosed our referenced application which we request be set for hearing on the next available Examiner's docket now scheduled for February 17, 1994.

By copy of this letter and application, sent certified mail, we are notifying all interested parties. of their right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application and that failure to appear at the hearing may preclude them from any involvement in this case at a later date.

Mr. William J. LeMay January 24, 1994 Page Two

Pursuant to the Division's Memorandum 2-90, all parties are hereby informed that if they appear in this case, then they are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, February 11, 1994, with a copy delivered to the undersigned.

Also enclosed is our proposed advertisement of this case for the NMOCD docket.

Very truly yours,

W. Thomas Kellahin

WTK/mg Enclosure

cc: Meridian Oil Inc. and

By Certified Mail - Return Receipt

All Interested Parties

Mr. William J. LeMay January 24, 1994 Page Two

PROPOSED ADVERTISEMENT

: Application of Meridian Oil Inc. for an unorthodox gas well location and downhole commingling, San Juan County, New Mexico. Applicant seeks approval to downhole commingle Fulcher Kutz-Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool production within the wellbore of its Lodewick #1 Well, a existing Pictured Cliffs formation well, located 990 feet FNL and 990 feet FWL, (Unit D) Section 18, T27N, R9W, NMPM, San Juan County, New Mexico. Said well would be an "off-pattern" unorthodox coal gas well and would be dedicated to a standard 320-acre gas spacing unit for the Basin-Fruitland Coal Gas Pool being W/2 of Section 18 and to a standard 160-acre gas spacing unit for the Fulcher Kutz-Pictured Cliffs Gas Pool being the NW/4 of Section 18. The well is located approximately 2 miles northeast from Angels Peak, New Mexico.

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:

APPLICATION OF MERIDIAN OIL INC. FOR AN UNORTHODOX GAS WELL LOCATION AND DOWNHOLE COMMINGLING SAN JUAN COUNTY, NEW MEXICO. CASE:

APPLICATION

Comes now MERIDIAN OIL INC., ("Meridian") by and through its attorneys, Kellahin and Kellahin, and applies to the New Mexico Oil Conservation Division for approval to downhole commingle Fulcher Kutz-Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool production within the wellbore of its Lodewick #1 Well, a existing Pictured Cliffs formation well, located 990 feet FNL and 990 feet FWL, (Unit D) Section 18, T27N, R9W, NMPM, San Juan County, New Mexico. Said well would be an "off-pattern" unorthodox coal gas well and would be dedicated to a standard 322.40-acre gas spacing unit for the Basin-Fruitland Coal Gas Pool being W/2 of Section 18 and to a standard 161.32-acre gas spacing unit for the Fulcher Kutz-Pictured Cliffs Gas Pool being the NW/4 of Section 18.

In support of its application, Meridian states:

(1) Meridian is the operator for the Lodewick #1 Well, an existing Pictured Cliffs producing well, located 990 feet FWL and 990 feet FNL (Unit D), Section 18, T27N, R9W, NMPM, San Juan County, New Mexico as shown on Exhibit "A" attached.

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- (2) Said location is an unorthodox gas well location for the Basin-Fruitland Coal Gas Pool being located in the NW/4 rather than either the NE/4 or SW/4.
- (3) The Well is to be recompleted so that production from the Basin-Fruitland Coal Gas Pool and the Fulcher Kutz-Pictured Cliffs Gas Pool can be downhole commingled in the wellbore.
- (4) The W/2 of Section 18, being 322.40 acres, is to be dedicated to any production from the Basin-Fruitland Coal Gas Pool which is spaced on 320-acre gas spacing units.
- (5) The NW/4 of Section 18, being 161.32 acres, is to be dedicated to any production from the Fulcher Kutz-Pictured Cliffs Gas Pool which is spaced on 160-acre gas spacing units.
- (6) The ownership is not common between these two spacing units.
- (7) In accordance with Division Rule 303-C-1.(b), the Applicant states and will demonstrate at hearing:
- 1. That the Pictured Cliffs production in this well is marginal and production cannot be economically continued unless it is done so by downhole commingling that production with Basin Fruitland Coal Gas production in this well.
- 2. That there will be no crossflow between the two zones commingled.

Application of Meridian Oil, Inc. Page 3

- 3. That the value of the commingled production will not be less than the sum of the values of the individual production.
- 4. It is expected that the bottom hole pressure of the lower pressure zone is not less than 50 percent of the bottom hole pressure of the higher pressure zone adjusted to a common datum.
- 5. That the value of the commingled production will not be less than the sum of the values of the individual production.
- (8) In order to salvage the remaining Pictured Cliffs production from this spacing unit, Meridian has elected to add the Fruitland Coal Gas formation to this well rather than drill a new coal gas well at a standard location in this section. The opportunity for a successful Basin Fruitland Coal Gas well is similar between the two quarter-sections in this spacing unit.
- (9) Due to the nature of the Basin-Fruitland Coal Gas production, straight allocation of gas volumes from both zones is not appropriate. Meridian therefore seeks the adoption of a monthly allocation formula to be presented at the time of the hearing.
- (10) Applicant requests that this matter be docketed for hearing on the Division's Examiner docket now scheduled for February 17, 1994.
- (11) Copy of this application has been sent to all offsetting operators to the two spacing units as set forth on Exhibits B and C.

Application of Meridian Oil, Inc. Page 4

(12) A copy of this application has been sent to all owners of production within the spacing unit who may be affected by downhole commingling.

WHEREFORE Applicant requests that this matter be set for hearing on February 17, 1994 before a duly appointed Examiner of the Oil Conservation Division and that after notice and hearing as required by law, the Division enter its order granting this application.

Respectfully submitted

W. Thomas Kellahin KELLAHIN and KELLAHIN

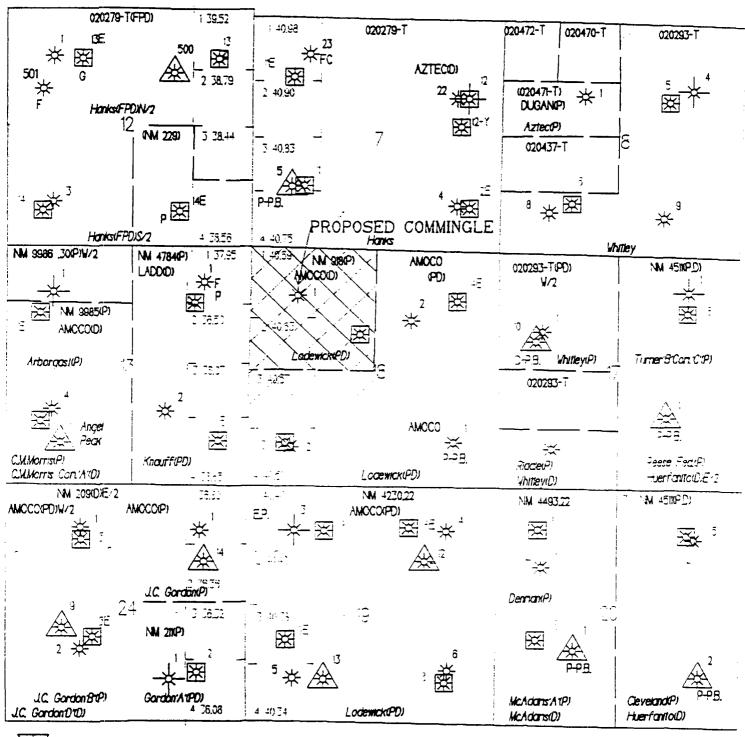
P. O. Box 2265

Santa Fe, New Mexico 87501

(505) 982-4285

Attorneys for Applicant

LODEWICK # 1 WELL NWNW SECTION 18, T27N, R9W SAN JUAN CO. NEW MEXICO



FRUITLAND SAND WELL

FRUITLAND COAL WELL

* PICTURED CLIFFS WELL

MESAVERDE WELL

网 DAKOTA WELL

SALLUP WELL

SPACING UNIT PICTURED CLIFFS

SPACING UNIT FRUITLAND COAL

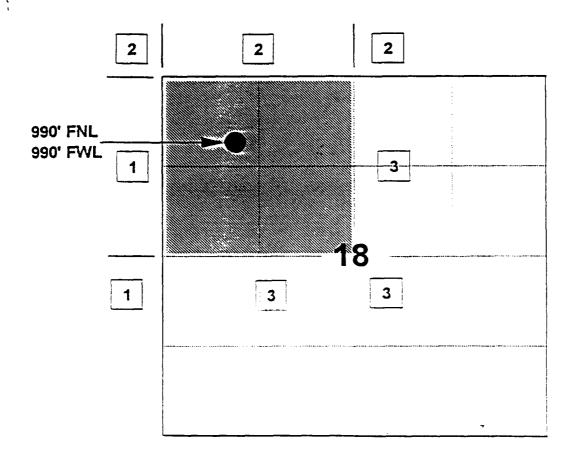
MERIDIAN OIL INC

LODEWICK #1

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 27 North, Range 9 West



1)	Meridian Oil Inc	
2)	Southland Royalty Company	
3)	Amoco Production Company	PO Box 800, Denver, CO 80201
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Exhibit B

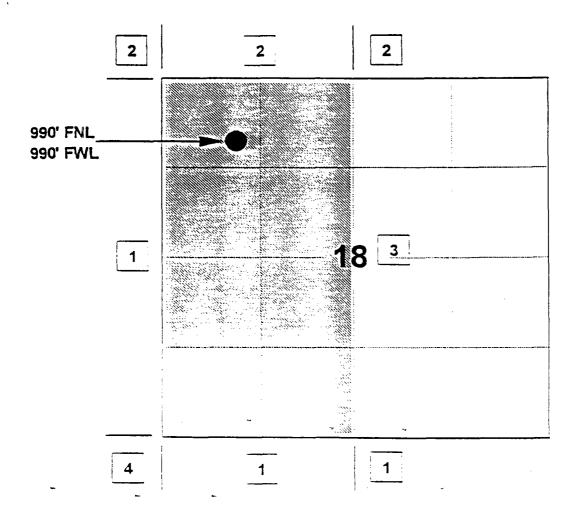
MERIDIAN OIL INC

LODEWICK #1

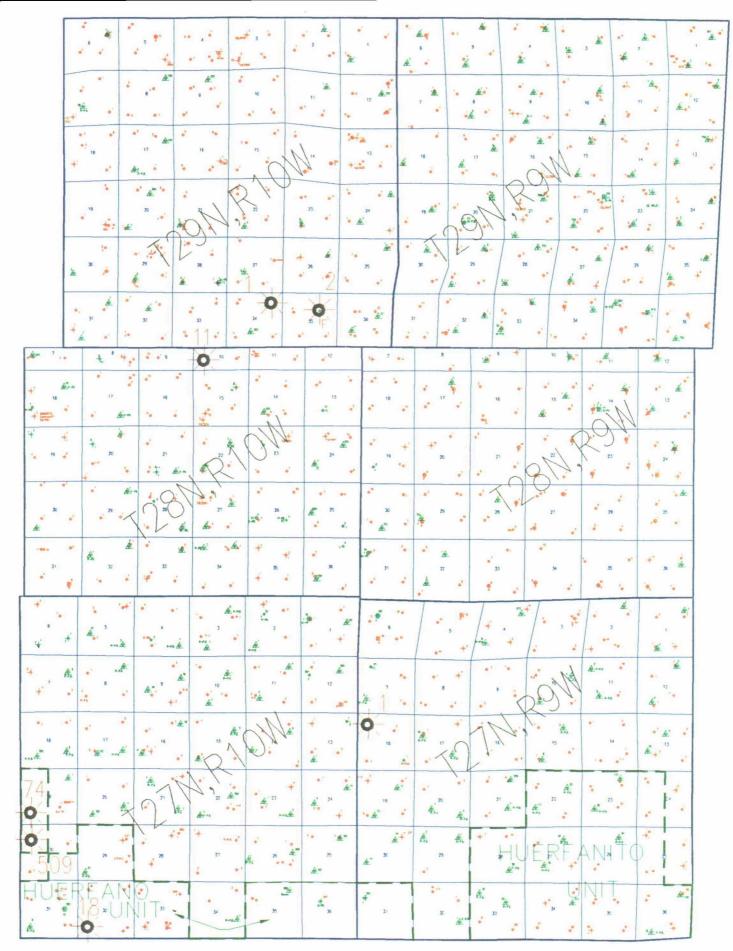
OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

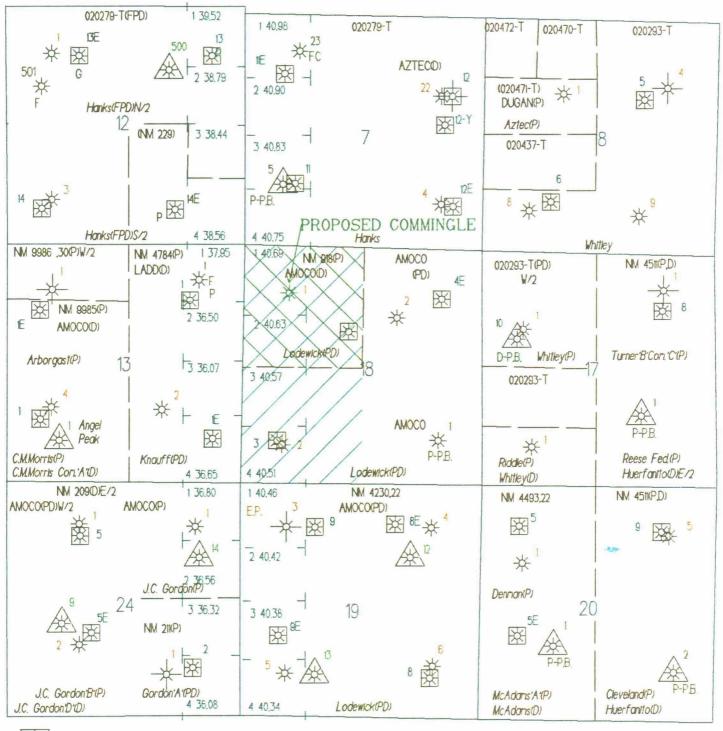
Township 27 North, Range 9 West



I) Meridian Oil Inc	
2) Southland Royalty Company	
3) Amoco Production Company	PO Box 800, Denver, CO 80201
4) Meridian Oil Inc &	
McKenzie Methane Corp.	1625 Broadway, Suite 2580, Denver, CO 80201
	



LODEWICK # 1 WELL NWNW SECTION 18, T27N, R9W SAN JUAN CO., NEW MEXICO



FRUITLAND SAND WELL

FRUITLAND COAL WELL

PICTURED CLIFFS WELL

MESAVERDE WELL

T DAKOTA WELL

GALLUP WELL



SPACING UNIT PICTURED CLIFFS



SPACING UNIT FRUITLAND COAL

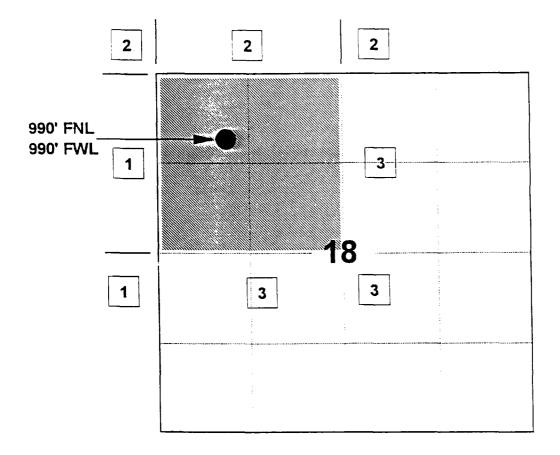
MERIDIAN OIL INC

LODEWICK #1

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 27 North, Range 9 West



1) Meridian Oil Inc	
2) Southland Royalty Company	
3) Amoco Production Company	PO Box 800, Denver, CO 80201

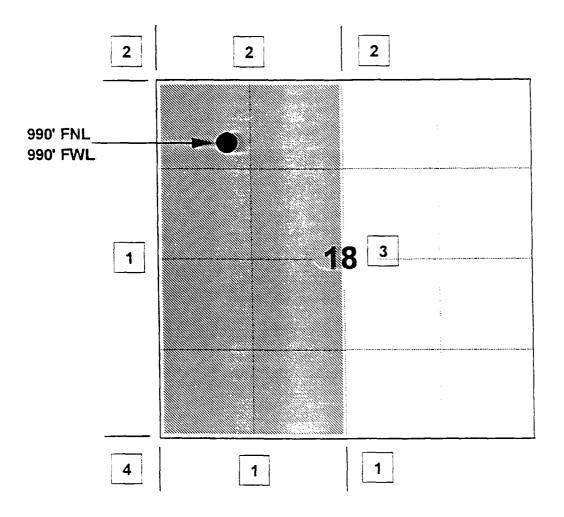
MERIDIAN OIL INC

LODEWICK #1

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 27 North, Range 9 West



PO Box 800, Denver, CO 80201
1625 Broadway, Suite 2580, Denver, CO 80201

ADDRESS LIST FOR LODEWICK I WELL

OWNER NAME	ADDRESS	ADDRESS	CITY	STATE	STATE ZIP CODE INTEREST	INTEREST
MINERALS MANAGEMENT SERVICE	MINERALS MANAGEMENT SERVICE ROYALTY MANAGEMENT PROGRAM	PO BOX 5810	DENVER	00	80217	RI
BETTIANNE H. BOWEN	1902 IVANHOE LANE		ABILENE	TX	79605-5023	ORRI
CHARLES E. HINKLE	LONOAK RT., BOX 4		KING CITY	CA	93930-0004	ORRI
CYNTHIA HINKLE TRUSTEE	F/B/O CYNTHIA, KRISTIN, JEANNA HINKLE	RT. 3, BOX 519	CARMEL	CA	93923-9432	ORRI
JAMES L. HINKLE	P.O. BOX 2002		ROSWELL	MN	88202-2002	ORRI
JOHN T. HINKLE	P.O. BOX 1793		ROSWELL	NM	88202-1793	ORRI
LILLIAN T. HINKLE	P.O. BOX 2002		ROSWELL	MN	88202-2002	ORRI
LAURA PATRICIA LODEWICK	LAURA B. LODEWICK ATTORNEY	511 NEWELL	DALLAS	ΤΧ	75223-1155	ORRI
JOHN WIDNEY LODEWICK	3305 WENTWOOD		DALLAS	TX	75225-4847	ORRI
RICHARD B. LODEWICK	2100 W. WADLEY #21		MIDLAND	TX	79705-6434	ORRI

Lodewick #4 offset you light 1850 FNL 2300 FWL Codewick #1 990 FNL 990 FNL Sec. 18, TZ7N, R9W Gec. 18, T27N, R9W EB G187A Lodewit #1 depths In In G., NM SGA shellower KB 6243 F (est.) Frithly FM. Pichired Chiffs Sudstare

LODEWICK #1

MONTHLY GAS PRODUCTION ALLOCATION FORMULA

GENERAL EQUATION

Qt = Qftc + Qpc

WHERE: Qt = TOTAL MONTHLY PRODUCTION (MCF/MONTH)

Qftc = FRUITLAND COAL (ftc) MONTHLY PRODUCTION

Qpc = PICTURED CLIFFS (pc) MONTHLY PRODUCTION (MCF/MONTH)

REARRANGING THE EQUATION TO SOLVE FOR Qftc:

Qftc = Qt - Qpc

ANY PRODUCTION RATE OVER WHAT IS CALCULATED FOR THE PICTURED CLIFFS (PC) USING THE APPLIED FORMULA IS FRUITLAND COAL (FTC) PRODUCTION.

PICTURED CLIFFS (PC) FORMATION PRODUCTION FORMULA IS:

 $Qpc = Qpci X e^{-(Dpc) X (t)}$

WHERE: Qpci = INITIAL PC MONTHLY FLOW RATE (DETERMINED FROM LAST MONTH OF PC

ONLY PRODUCTION, PRIOR TO RECOMPLETION & COMMINGLE)

Dpc = PICTURED CLIFFS MONTHLY DECLINE RATE CALCULATED FROM DECLINE

CURVE AND MATERIAL BALANCE ANALYSIS:

Dpc = (0.00102/M)

THUS: Qftc = Qt - Qpci X $e^{-(0.00102)}$ X (t)}

WHERE: (t) IS IN MONTHS

REFERENCE: Thompson, R. S., and Wright, J. D., "Oil Property Evaluation", pages 5-2, 5-3, 5-4.

