

CASE # 10721 APRIL 22, 1993

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. 10721

APPLICATION OF MERIDIAN OIL INC. FOR AN UNORTHODOX GAS WELL LOCATION AND DOWNHOLE COMMINGLING, SAN JUAN COUNTY, NEW MEXICO. ROWLEY COM #500 WELL

CERTIFICATE OF MAILING

AND

COMPLIANCE WITH ORDER R-8054

W. THOMAS KELLAHIN, attorney in fact and authorized representative of Meridian Oil Inc., states that the notice provisions of Division Rule 1207 (Order R-8054) have been complied with, that Applicant has caused to be conducted a good faith diligent effort to find the correct addresses of all interested parties entitled to receive notice, that on March 30, 1993, I caused to be mailed by certified mail return-receipt requested notice of this hearing and a copy of the application for the above referenced case along with the cover letter, at least twenty days prior to the hearing set for April 22, 1993, to the parties shown in the application as evidenced by the attached copies of return receipt cards, and that pursuant to Division Rule 1207, notice has been given at the correct addresses provided by such rule.

W. Thomas Kellahin

SUBSCRIBED AND SWORN to before me this APRIL, 1993.

Public

My Commission Expires:

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION

MERINIAN EXHIBIT NO.

CASE NO. 10725

SENDER: • Complete items 1 and/or 2 for additional services.	I also wish to receive the
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Madeline Galt C/O Tom Galt SSE 352 Fifth Street Atlantic Beach, FL 32233 7.	ce 1. Addressee's Address 33

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

NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF

W. THOMAS KELLAHIN*

March 29, 1993

Mr. William J. LeMay
Oil Conservation Division
State Land Office Building
310 Old Santa Fe Trail, Room 219
Santa Fe, New Mexico 87501

RE: Application of Meridian Oil, Inc. for an Unorthodox Gas Well Location and Downhole Commingling, San Juan County, New Mexico Rowley Com #500 Well



HAND DELIVERED

Dear Mr. LeMay:

On behalf of Meridian Oil, Inc. please find enclosed our Application for an unorthodox gas well location and downhole commingling as referenced above, which we request be set for hearing on the next available Examiner's docket now scheduled for April 22, 1993.

By copy of this letter and application, sent certified mail-return receipt requested, we are notifying all interested parties offsetting the subject well and its proposed spacing and proration unit 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. Also, all parties entitled to notice are hereby informed that pursuant to the Division Memorandum 2-90 all parties appearing in this case are requested to file a Pre-Hearing Statement with the Division no later than 4:00 p.m. on Friday, April 16, 1993.

Mr. William J. LeMay March 29, 1993 Page 2

Also enclosed is our suggested advertisement for this case.

W. Thomas Kellahin

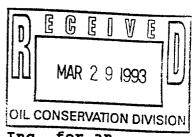
WTK/lam Enclosures

with Enclosures

Alan Alexander - Meridian Oil Inc.

By Certified Mail - Return Receipt
All Parties Listed on Exhibits B, C & D of Application

ltrt329.330



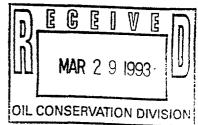
PROPOSED ADVERTISEMENT

: 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 proposed Rowley Com #500 Well to be drilled at an unorthodox gas well location for the Fulcher Kutz-Pictured Cliffs Gas Pool 1850 feet FWL and 2335 feet FSL, (Unit K) Section 7, T27N, R10W, NMPM, San Juan County, New Mexico. Said well is to be dedicated a standard 332.92-acre gas spacing unit for the Basin-Fruitland Coal Gas Pool being W/2 of Section 7 and to a standard 166.61-acre gas spacing unit for the Fulcher Kutz-Pictured Cliffs Gas Pool being the SW/4 of Section 7. The well is located approximately 10 (miles) south (direction) from Bloomfield, 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 proposed Rowley Com #500 Well to be drilled at a standard gas well location for the Basin Fruitland Coal Gas Pool but an unorthodox gas well location for the Fulcher Kutz-Pictured Cliffs Gas Pool being 1850 feet FWL and 2335 feet FSL, (Unit K) Section 7, T27N, R10W, NMPM, San Juan County, New Mexico. The W/2 of Section 7 is to be dedicated to the subject well forming a standard 332.92-acre gas spacing unit for the Basin-Fruitland Coal Gas Pool. The SW/4 of Section 7 is to be dedicated to the subject well forming a standard 166.61-acre gas spacing unit for the Fuclher-Pictured Cliffs Gas Pool.

In support of its application, Meridian states:

(1) Meridian is the operator for the proposed Rowley Com #500 Well to be drilled at a gas well location 1850 feet FWL and 2335 feet FSL (Unit K), Section 7, T27N, R10W, NMPM, San Juan County, New Mexico as shown on Exhibit "A" attached.

Application of Meridian Oil, Inc. Page 2

- (2) Said location is a standard gas well location for the Basin Fruitland Coal Gas Pool but is an unorthodox gas well location for the Fuclher-Pictured Cliffs Gas Pool being only 305 feet rather than the required 790 feet from the north line of the 160 acre spacing unit.
- (3) The Well is to be drilled 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 7 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 SW/4 of Section 7 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 different between these two spacing units.
- (7) In accordance with Division Rule 303-C-l.(b), the Applicant states and will demonstrate at hearing:
- 1. That drilling the Rowley Com #500 Well initially for downhole commingling in the wellbore is necessary because it is not otherwise economic to attempt to drill and complete a separate well for Pictured Cliffs gas production nor is it economic to attempt to dually complete those formations in the proposed well.
- 2. That there will be no crossflow between the two zones commingled.
- 3. That while the ownership is each of the two spacing units is not common between the two pools, no impairment of correlative rights will occur.
- 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.

Application of Meridian Oil, Inc. Page 3

- 5. That the value of the commingled production will not be less than the sum of the values of the individual production.
- (8) The Pictured Cliffs formations in this area of the basin should be marginally productive and cannot be economically produced unless it is done so by downhole commingling that production with the Basin Fruitland Coal Gas Pool production.
- (9) Meridian has selected to drill the proposed well in the SW/4 instead of the NW/4 of Section 7 because that location appears to have a greater opportunity for a successful Fruitland formation well.
- (10) In addition, the SW/4 of Section 7 is a standard location for a Fruitland Coal Gas Well while the NW/4 is an unorthodox location.
- (11) 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.
- (12) The ownership between the Basin Fruitland Coal Gas Pool spacing unit and the Fulcher Kutz-Pictured Cliffs Gas Pool spacing unit is not identical and accordingly, applicant seeks the approval of the Division after notice and hearing.
- (13) Applicant requests that this matter be docketed for hearing on the Division's Examiner docket now scheduled for April 22, 1993.
- (14) Copy of this application has been sent to all offsetting operators and to the owners of interests in the affected production within the two spacing units as set forth on Exhibits B, C and D.

Application of Meridian Oil, Inc. Page 4

WHEREFORE Applicant requests that this matter be set for hearing on April 22, 1993 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

app329.330

MERIDIAN OIL INC. ROWLEY # 500 WELL 1850'FWL,2335'FSL SECTION 7-27N-10W

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* PICTURED CLIFFS WELL

FRUITLAND COAL WELL

DAKOTA WELL



SPACING UNIT (FRUITLAND COAL)

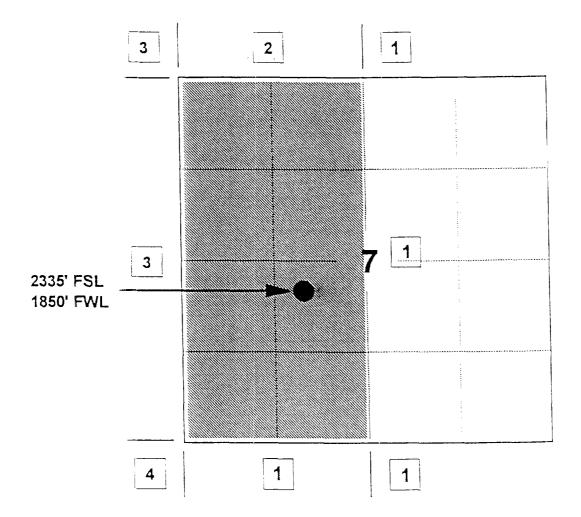


SPACING UNIT (PICTURED CLIFFS)

MERIDIAN OIL INC

OFFSET OPERATOR \ OWNER PLAT ROWLEY #500 Fruitland Coal \ Pictured Cliffs Formations Commingle

Township 27 North, Range 10 West

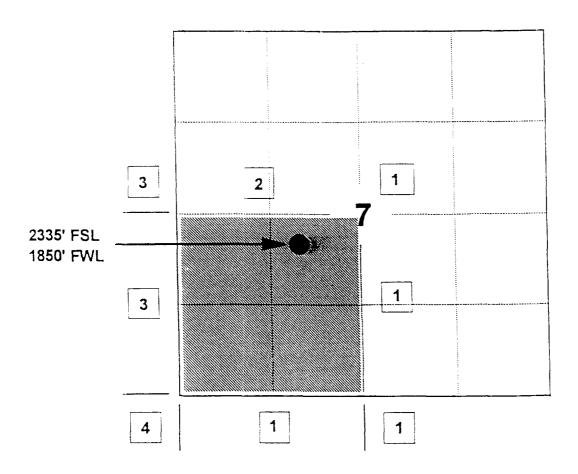


1) Meridian Oil Inc	
2) Amoco Production Company	PO Box 800, Denver, CO 80202
3) BHP Petroleum	5847 San Felipe, Suite 3600, Houston, TX 77057
4) Bonneville Fuels Corp.	1600 Lincoln St., Suite 1800, Denver, CO 80264

MERIDIAN OIL INC

OFFSET OPERATOR \ OWNER PLAT ROWLEY #500 Fruitland Coal \ Pictured Cliffs Formations Commingle

Township 27 North, Range 10 West



2) Amoco Production Company	PO Box 800, Denver, CO 80202
Cenoco, Inc	10 Desta Dr., Suite 100W, Midland, TX 79705-4500
ARCO Oil & Gas Company	PO Box 1610, Midland, TX 79702-1610
Hondo Oil & Gas Company	PO Box 2208, Roswell, NM 88202-2208
3) BHP Petroleum	5847 San Felipe, Suite 3600, Houston, TX 77057
4) Bonneville Fuels Corp.	1600 Lincoln St., Suite 1800, Denver, CO 80264

ROWLEY #500

Working Interest Owners:

Devon Energy Corporation 1500 Mid American Tower 20 North Broadway Oklahoma City, OK 73102-8250

Devon Energy Partners a Limited Partnership P.O. Box 840563 Dallas, TX 75284-0563

Amoco Production Company P.O. Box 800 Denver, CO 80201

Conoco Inc.
Attn: Steve Klein
10 Desta Drive West
Midland, TX 79705

El Paso Production Company P.O. Box 4289 Farmington, NM 87401

S. Lawrence Farrington & John C. Vaughey CO-Execu. E. A. Vaughey Estate 1840 Capital Towers 125 S. Congress St. Jackson, MS 39201-3382

ORRI Owners:

Lucille H. Piplin, Personal Rep of the Estate of Pearl O. Pipkin P.O. Box 1174 Roswell, NM 88201

Madeline Galt c/o Tom Galt 352 Fifth Street Altantic Beach, FL 32233

Royalty Owner:

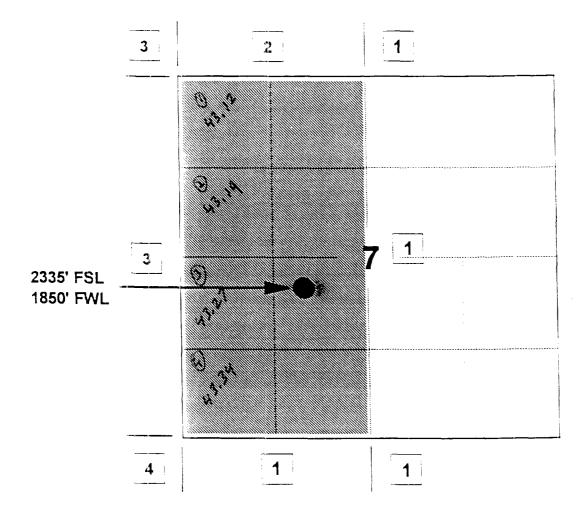
U.S.A.

MERIDIAN OIL INC

OFFSET OPERATOR \ OWNER PLAT ROWLEY #500

Fruitland Coal \ Pictured Cliffs Formations Commingle

Township 27 North, Range 10 West

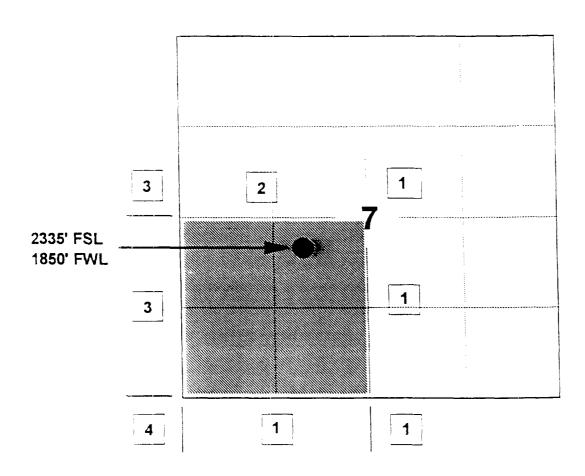


1) Meridian Oil Inc	
2) Amoco Production Company	PO Box 800, Denver, CO 80202
3) BHP Petroleum	5847 San Felipe, Suite 3600, Houston, TX 77057
4) Bonneville Fuels Corp.	1600 Lincoln St., Suite 1800, Denver, CO 80264

MERIDIAN OIL INC

OFFSET OPERATOR \ OWNER PLAT ROWLEY #500 Fruitland Coal \ Pictured Cliffs Formations Commingle

Township 27 North, Range 10 West



2) Amoco Production Company	PO Box 800, Denver, CO 80202
Conoco, Inc	10 Desta Dr., Suite 100W, Midland, TX 79705-4500
ARCO Oil & Gas Company	PO Box 1610, Midland, TX 79702-1610
Hondo Oil & Gas Company	PO Box 2208, Roswell, NM 88202-2208
3) BHP Petroleum	5847 San Felipe, Suite 3600, Houston, TX 77057
4) Bonneville Fuels Corp.	1600 Lincoln St., Suite 1800, Denver, CO 80264

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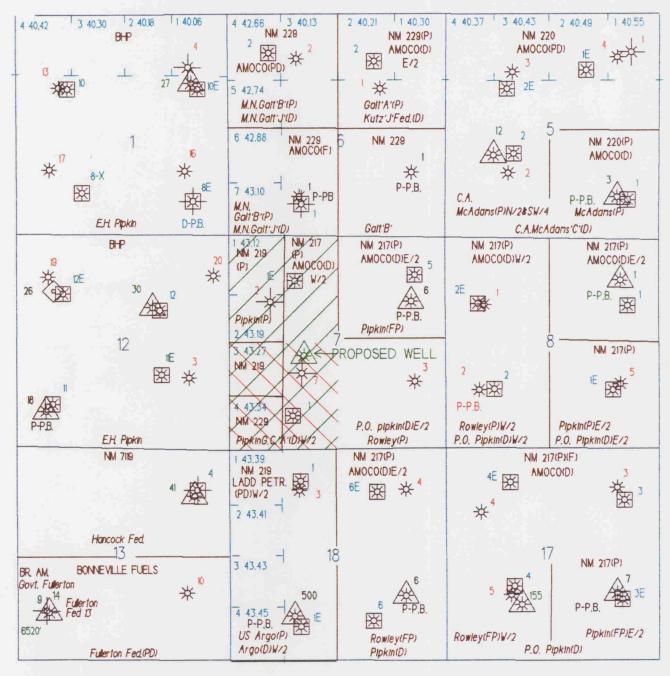
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MERIDIAN OIL INC. ROWLEY COM # 500 WELL 1850'FWL,2335'FSL SECTION 7-27N-10W



* PICTURED CLIFFS WELL
FRUITLAND COAL WELL

M DAKOTA WELL

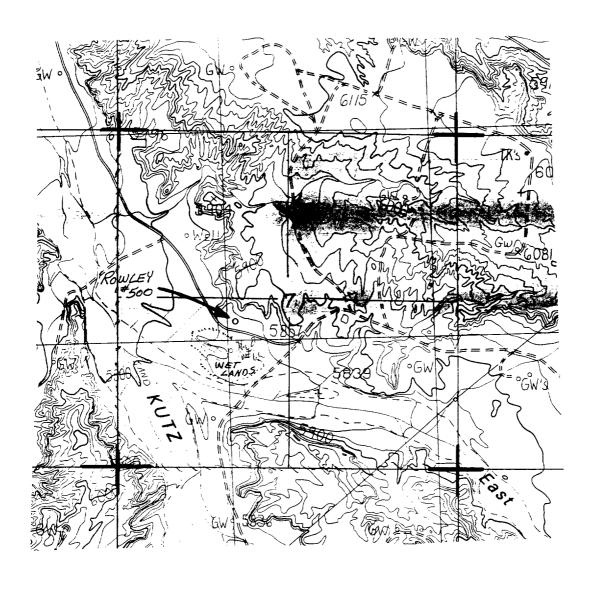
SPACING UNIT (FRUITLAND COAL)



SPACING UNIT (PICTURED CLIFFS)

MERIDIAN OIL INC.

MOI ROWLEY #500 2335' FSL, 1850' FWL SECTION 7, T27N, R10W, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO





THIS LOCATION IS NON-STANDARD DUE TO THE FACT THAT KUTZ WASH AND THE EAST FORK OF KUTZ WASH OCCUPY MUCH OF THE SOUTHWEST QUARTER OF THIS SECTION. RESULTING IN B.L.M. DISAPPROVAL OF LOCATIONS BEING TOO CLOSE TO MAJOR DRAINAGE. THERE IS ALSO AN EXISTING WELL AND GAS PIPELINE IN THIS QUARTER OF THE SECTION.

4-15-93 DATE

N.M.R.L.S. #6857

ROWLEY COM #500

MONTHLY GAS PRODUCTION ALLOCATION FORMULA

GENERAL EQUATION

Q = 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:

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

WHERE: Qpci = INITIAL PC MONTHLY FLOW RATE (CALCULATED FROM FLOW TEST

Dpc = PICTURED CLIFFS MONTHLY DECLINE DATE DETERMINED FROM:

MATERIAL BALANCE (FIELD ANALOGY):
VOLUMETRIC RESERVES (LOG ANALYSIS)

 $G f(P^*) = 0.84 MMCF/PSI \times P^* \times Rf$

P* = INITIAL RESERVOIR PRESSURE (7 DAY SIBHP)

RF = RECOVERY (FIELD ANALOGY): = 0.85

THUS: Qftc = $Qt - Qpci * e^{-(Dpc)*(T)}$

WHERE: (t) IS IN MONTHS

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

ROWLEY COM #500

DETERMINATION OF Qpci: (INITIAL PICTURED CLIFFS MONTHLY PRODUCTION)

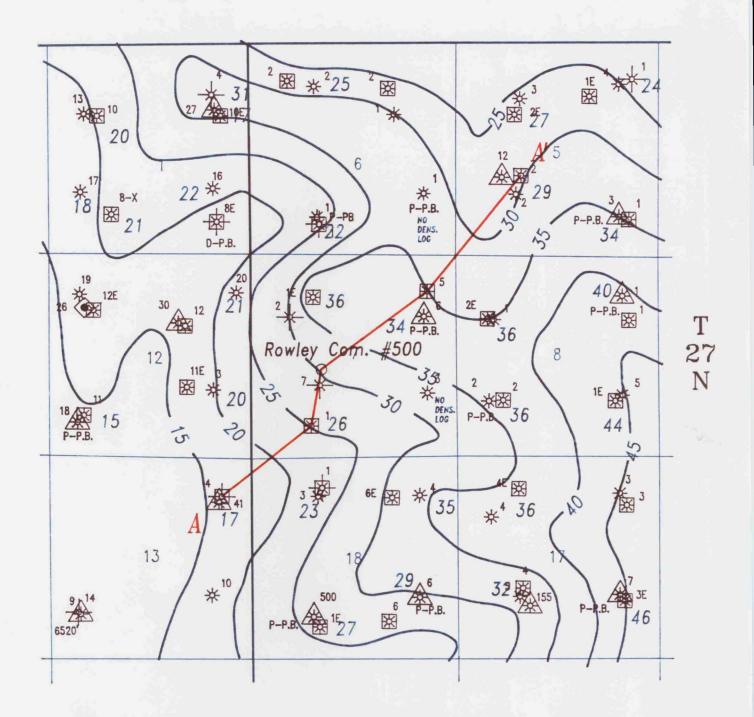
$$\frac{Qpci = Qt(1) * Qpc(P) \setminus \{Qpc(p) + Qftc(p)\}}{\emptyset}$$

WHERE:

Qt(1) = FIRST MONTH TOTAL PRODUCTION (MCF)

Qpc(p) = FINAL PICTURED CLIFFS FLOW TEST (MCFPD)

Qftc(p) = FINAL FRUITLAND COAL FLOW TEST (MCFPD)

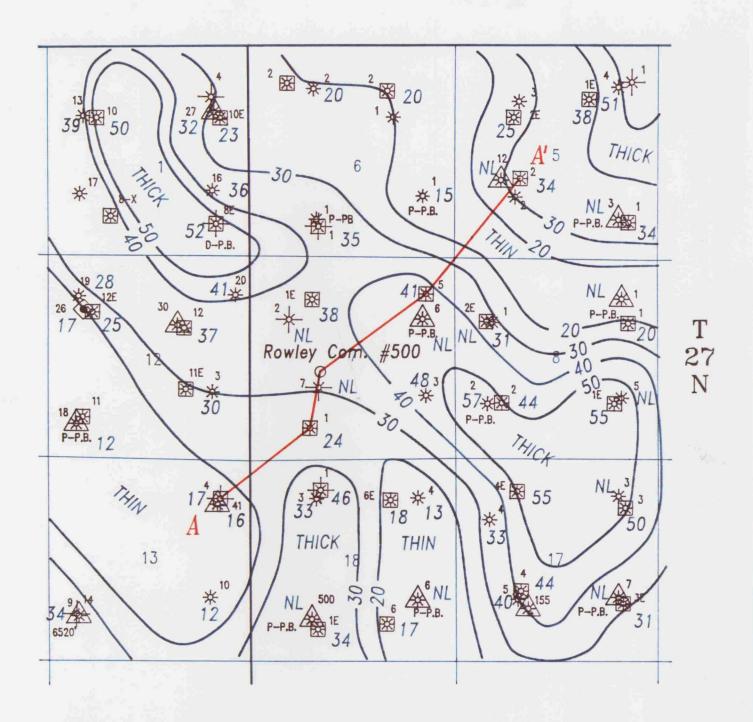


Net Pay = Rt > Shale Baseline & Sp > (-10) mv Deflection Scale 2" = 1 mile NL no log

FRUITLAND

Fruitland Coal Net Pay Isopach

C.I. = 5 FT. San Juan Co., N.M.



Net Pay = Rt \rangle Shale Baseline & Sp \rangle (-10) mv Deflection Scale 2" = 1 mile NL no log

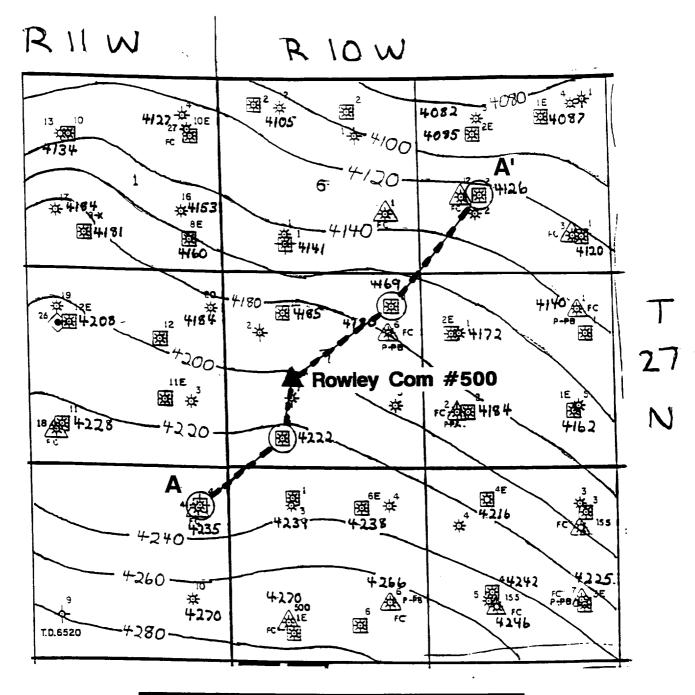
FRUITLAND

* PICTURED CLIFFS

DAKOTA

Pictured Cliffs Net Pay Isopach

C.I. = 10 FT. San Juan Co., N.M.



MERIDIAN OIL		
GEOSCIENTIST DRAFTER/GEOTECH	Structure Bas	e Fruitland Coal
DATE	San Juan Cour	nty, New Mexico
OFFICE LOC.	C.l.: 20 ft.	2 in. : 1 mi.
MAP NUMBER	SCALE	C. 1.



Type Log for Rowley Com. #500 Pipkin Gas Com. A #1 sesw 7-27n-10w

