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New Mexico Oil Conservation Division Case # 12069 October 29, 1998



#### 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. 12,069

APPLICATION OF BURLINGTON RESOURCES OIL )
AND GAS COMPANY TO INCREASE THE VERTICAL )
LIMITS, PROVIDE FOR NOTICE REQUIREMENTS, )
ESTABLISH ADMINISTRATIVE PROCEDURES, AMEND SPECIAL POOL RULE 2 (b) AND ADOPT )
NEW SPECIAL POOL RULES 2(c) AND 3 FOR )
THE BLANCO-MESAVERDE GAS POOL FOR 
PURPOSES OF INCREASING WELL DENSITY AND )
CHANGING WELL LOCATION REQUIREMENTS FOR )
MESAVERDE WELLS, RIO ARRIBA AND SAN JUAN )
COUNTIES, NEW MEXICO )

### OFFICIAL EXHIBIT FILE (1 of 2: Burlington Exhibits 1-17) EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

October 29th, 1998

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGMER, Hearing Examiner, on Thursday, October 29th, 1998, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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## OFFICIAL EXHIBIT FILE (1 of 2: Burlington Exhibits 1-17) EXAMINER HEARING

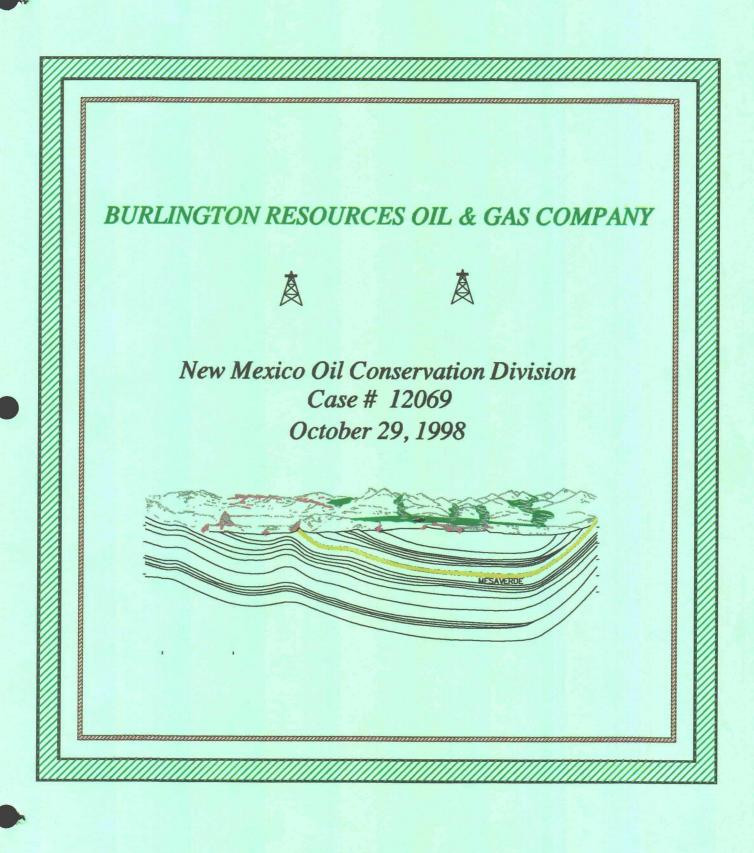
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\* \* \*



#### KELLAHIN AND KELLAHIN

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September 28, 1998

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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

#### CERTIFIED MAIL-RETURN RECEIPT REQUESTED

### TO: NOTICE OF THE HEARING OF THE FOLLOWING NEW MEXICO OIL CONSERVATION DIVISION CASE:

Re: Application of Burlington Resources Oil & Gas Company to increase vertical limits, provide notice requirements, establish administrative procedures and adopt Rule 2(c), Rule 3 and to amend Rule 2(b) of the Special Rules and Regulations for the Blanco Mesaverde Gas Pool for purposes of increasing well density and changing well location requirements for Mesaverde wells, Rio Arriba and San Juan Counties. New Mexico.

On behalf of Burlington Resources Oil & Gas Company, please find enclosed a copy of its referenced application. This case has been set for hearing on the New Mexico Oil Conservation Division Examiner's docket now scheduled for 8:15 am, Wednesday, October 28, 1998. The hearing will be held at the Division hearing room located at 2040 South Pacheco, Santa Fe, New Mexico.

As party who may be affected by this application, we are notifying you of your 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. Failure to appear at the hearing may preclude you from any involvement in this case at a later date.

Pursuant to the Division's Memorandum 2-90, you are further notified that if you desire to appear in this case, then you are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, October 16, 1998, with a copy delivered to the undersigned.

Very truly yours,

W. Thomas Kellahin

### NOTICE OF CHANGE OF HEARING DATE FOR THE FOLLOWING NEW MEXICO OIL CONSERVATION DIVISION CASE:

Re: Application of Burlington Resources Oil & Gas Company to increase vertical limits, provide notice requirements, establish administrative procedures and adopt Rule 2(c), Rule 3 and to amend Rule 2(b) of the Special Rules and Regulations for the Blanco Mesaverde Gas Pool for purposes of increasing well density and changing well location requirements for Mesaverde wells, Rio Arriba and San Juan Counties, New Mexico.

The referenced case was originally scheduled for hearing on Wednesday, October 28, 1998. Due to a conflict in scheduling, please be advised that the hearing date has been changed to **Thursday**, October 29, 1998 at 8:15 am. Please disregard the date stipulated in the Notice of Hearing and Application set forth in the September 28, 1998 letter by Kellahin & Kellahin, Attorneys at Law.

CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF BURLINGTON RESOURCES
OIL & GAS COMPANY TO INCREASE THE
VERTICAL LIMITS, PROVIDE NOTICE
REQUIREMENTS, ESTABLSIH ADMINISTRATIVE
PROCEDURES AND ADOPT A NEW RULE 2(c),
RULE 3 AND TO AMEND RULE 2(b) FOR
THE SPECIAL RULES AND REGULATIONS FOR
THE BLANCO MESAVERDE POOL,
RIO ARRIBA AND SAN JUAN COUNTIES, NEW MEXICO

CASE NO	_

#### **APPLICATION**

Comes now BURLINGTON RESOURCES OIL & GAS COMPANY, by and through its attorneys, Kellahin and Kellahin, and applies to the New Mexico Oil Conservation Division to increase the vertical limits, provide notice requirements, provide administrative procedures and adopt a new Rule 2(c), Rule 3 and to amend Rule 2(b) of the Special Rule and Regulations for the Blanco-Mesaverde Gas Pool to increase the well density and change well location requirements from the current maximum of two (2) wells per 320-acre gas proration and spacing unit (160-acre infill) provided in Order R-8170, as amended, to a maximum of four (4) wells per 320-acre gas proration and spacing unit (80-acre infill) for wells dedicated to the Blanco Mesaverde Gas Pool.

In support of its application, Burlington Resources Oil & Gas Company ("Burlington"). states:

- (1) Burlington is the operator of approximately 2287 wells currently producing from the Blanco Mesaverde Gas Pool.
- (2) On November 14, 1974, the New Mexico Oil Conservation Division ("Division") issued Order R-1670-T adopted "infill drilling" for the Blanco-Mesaverde Gas Pool by permitting in Rule 2 for the drilling of a second well within a 320-acre gas proration and spacing unit ("GPU") providing this one optional "infill well" to be located on the opposite 160-acres from the 160-acres containing the original well ("the initial well") and further providing that these infill wells were not closer than 790 feet (but subject to a 200 foot topographical allowance) to the outerboundary of a quarter section.
- (3) On September 20, 1978, the Division issued Order R-1670-U amending Rule 2 to permit the initial well on the proration unit to be drilled on either 160-acre tracts comprising the unit, so long as the well is no closer than 790 feet to the outer boundary of the quarter section and no closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
- (4) On March 28, 1986, the Commission issued Order R-8170 which, among other things, promulgated the Rules and Regulations for the Prorated Gas Pools, including "reformatting" Rule 2 of the Rules and Regulations for the Blanco Mesaverde Gas Pool which currently provides:

NMOCD Application of Burlington Resources Oil & Gas Company Inc. Page 2

#### "A. WELL ACREAGE AND LOCATION REQUIREMENTS

RULE 2(a). Standard GPU (Gas proration Unit) in the Blanco-Mesaverde Gas Pool shall be 320 acres.

#### **RULE 2(b) Well Location:**

- 1. THE INITIAL WELL drilled on a GPU shall be located not closer than 790 feet to any outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
- 2. THE INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well, and shall be located with respect to the GPU boundaries as described in the preceding paragraph."
- (5) Based upon a study of the geological and reservoir engineering data, Burlington has concluded that in order to increase ultimate recovery of gas from this pool there is a need to adopt and amend rules and regulations for this pool in order to drill more wells per GPU than is currently permitted by Rule 2(b) of the pool rules.
- (6) Proposed rule changes: Accordingly, Burlington desires that the Division amend the Special Rules and Regulations for the Blanco Mesaverde Gas Pool to allow a maximum of four (4) wells per GPU ("80-acre infill") in this pool as set forth in Exhibit 1 attached.
- (7) Proposed special qualifying area: The proposed Special Qualifying Area of this pool is shown on the map attached as Exhibit 2 and as shown in the acreage description set forth in Exhibit 3.
- (8) Increasing the vertical limit of the pool:
  - (a) The current top vertical limit for this pool is the Huerfanito bentonite marker.
  - (b) There is a need to increase the current top vertical limit of the pool to include that interval from the Huerfanito bentonite marker up to 400 feet above this marker.

#### (9) Notifications:

- (a) With the exception of Rule 2(a) dealing with the size of a gas proration and spacing unit in this pool, all other rules for this pool involve operational aspects dealt with by the operators of existing GPU's for this pool.
- (b) The Division should adopt a procedure whereby future changes in the rules and regulations for the pool, excluding Rule 2(a), may be made based upon notice to operators and not to all interest owners in the pool.

NMOCD Application of Burlington Resources Oil & Gas Company Inc. Page 3

#### (10) Grandfathering:

- (a) Order R-1670-T currently limits the number of wells in a GPU to an original well and to one optional infill well drilled on the opposite 160-acres from the 160-acre containing the original well.
- (b) Notwithstanding this limitation, a third well ("second infill well") has been allowed to be drilled in a number of GPUs.
- (c) Any second infill well drilled to or completed in this pool prior to the effective date of an order approving this application shall be deemed to have also approved these existing second infill wells.

#### (11) Coordination with BLM:

- (a) Because the proposed special qualifying area of this pool includes numerous federal oil and gas leases, it is necessary to adopt a procedure to allow the BLM to withhold its approval of an application for permit to drill ("APD") until such time as the applicant has submitted to the BLM proof that the applicant has satisfied the requirements of proposed Rule 2(b).
  - (b) The Division's District Supervisor should be authorized to develop with the concurrence of the Bureau of Land Management such a procedures to insure compliance with proposed Rule 2(b).
- (12) Copies of this application have been sent to all operators in the pool and to those owners who have been identified as currently receiving payment for or a share of production from this pool.
- (13) Approval of this application is in the best interests of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE Applicant requests that this matter be set for hearing on October 28, 1998 before a duly appointed Examiner of the Oil Conservation Division and that after hearing is matter, the Division enter its order granting this application.

Respectfully submitted

W. Thomas Kellahin

KELLAHIN and KELLAHIN

P. O. Box 2265

Santa Fe, New Mexico 87504

#### EXHIBIT 1

#### CURRENT RULES FOR BLANCO MESAVERDE POOL

#### "A. WELL ACREAGE AND LOCATION REQUIREMENTS

RULE 2(a). Standard GPU (gas proration unit) in the Blanco-Mesaverde Gas Pool shall be 320 acres.

#### **RULE 2(b) Well Location:**

- (1) THE INITIAL WELL drilled on a GPU shall be located not closer than 790 feet to any outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary.
- (2) THE INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well, and shall be located with respect to the GPU boundaries as described in the preceding paragraph."

#### PROPOSED RULE CHANGES

Burlington proposes that the Division amend the Special Rules and Regulations for the Blanco Mesaverde Gas Pool to allow a maximum of four (4) wells per GPU ("80-acre infill") in this pool as follows:

#### "A. WELL ACREAGE AND LOCATION REQUIREMENTS

RULE 2(a). Standard GPU (Gas proration Unit) in the Blanco-Mesaverde Gas Pool shall be 320 acres.

#### RULE 2(b) Well locations and well density in Special Qualifying Area:

Within the Special Qualifying Area of the Pool, a second and third optional "infill" well may be drilled within a GPU in accordance with Rule 2(c) pursuant to the following procedures:

1. Operators of an existing GPU which contains both an original well and a first infill well and who desire to file an Application for Permit to Drill ("APD") to drill a second or third optional infill wells shall notify adjacent

- operator(s) by certified mail-return receipt requested advising that they have twenty (20) days from receipt to file with the Division's District Supervisor a written objection to the APD application.
- 2. An adjacent operator shall be any operator of a Mesaverde GPU whose side boundary or corner adjoins the side boundary or corner of the quarter section in which the proposed optional infill well is to be located.
- 3. The Division's District Supervisor may approve the application for permit to drill ("APD") upon receipt of the APD and certification by the applicant that all adjacent operators have received notification and no objections have been received within a twenty (20) day notice period.
- 4. Well locations for approved second or third optional infill wells in the Special Qualifying Area shall not be closer than permitted by Rule 2(c)(1)(i).
- 5. In the event an objection is timely received, or the District Supervisor upon its own initiative, the application shall be set for a hearing before a Division Examiner.

In the event the Division desires to adopt criteria for approval of an infill well even in the absence of objection, the following is suggested:

- 5. A map of the GPU showing the location of all existing Mesaverde wells, and any two (2) of the following:
- (a) Estimate of initial reservoir pressure (Initial Pressure) for both the original well and first infill well, estimated ultimate cumulative recovery and current rate for each Mesaverde well within the GPU and calculations of pressure drop per year derived from the Initial Pressure from the original well subtracting the Initial Pressure of the first infill well and then dividing that difference by the number of years between the drilling of the original well and the drilling of the first infill well.
- (b) volumetric estimates of drainage areas for the original and first infill well in the GPU;
- (c) reservoir simulations of drainage areas for the original and first infill wells in the GPU.
- RULE 2(c) Well locations and well density for all acreage in the pool outside any special qualifying area:

Within any area of the Pool outside any special qualifying area, an original well and up to three (3) optional "infill" wells may be drilled within a GPU, subject to the following restrictions:

#### (1) Well Locations:

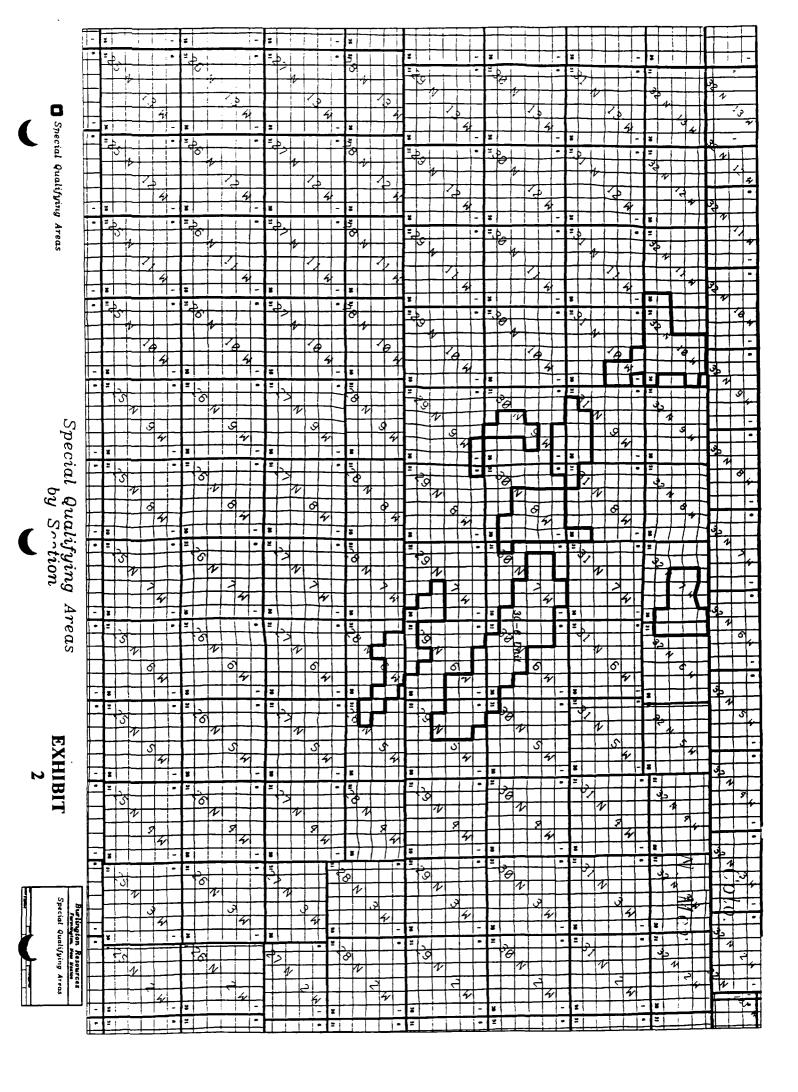
- (i) wells drilled on a GPU shall be located not closer than 660 feet to the North, South, East and West lines of a GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.
- (ii) wells located within federal exploratory units shall not be closer than 10 feet to any section, quarter section or interior quarter-quarter section line or subdivision inner boundary except that wells located within one-half mile of the outer boundary of any such unit, shall not be closer than permitted by Rule 2(c)(1)(i) above.

#### (2) Well Density:

- (i) the FIRST INFILL WELL drilled on a GPU shall be located in the quarter section of the GPU not containing a Mesaverde well;
- (ii) the SECOND INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;
- (iii) the THIRD INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well.

#### **RULE 3. Administrative Exceptions**

The Division Director, in accordance with the applicable provisions of General Rule 104, may grant an exception to Rule 2 when an application has been submitted to the Division including notification to the affected parties as set forth in proposed Rule 2(b)2.



### Lands included in Special Qualifying Area

Township 28 North Range 05 West NMPM Sections 19, 29, 30 Township 28 North Range 06 West NMPM Sections 8, 9, 10, 11, 13, 14, 15, 16, 17, 21, 24 Township 29 North Range 05 West NMPM Sections 5, 6, 7, 8, 9, 16, 17, 18, 20, 21 Township 29 North Range 06 West NMPM Sections 1, 2, 3, 4, 11, 12, 13, 14, 28, 31, 32, 33, 34 Township 29 North Range 07 West NMPM Sections 22, 23, 24, 25, 26, 36 Township 29 North Range 08 West NMPM Section 6 Township 29 North Range 09 West NMPM Sections 1, 2 Township 30 North Range 05 West NMPM Section 31 Township 30 North Range 06 West NMPM Sections 7, 8, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36 Township 30 North Range 07 West NMPM Sections 2, 3, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 22, 23, 24, 25, 30 Township 30 North Range 08 West NMPM Sections 1, 2, 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26 Township 30 North Range 09 West NMPM Sections 1, 2, 3, 14, 15, 21, 22, 27, 28, 34 Township 31 North Range 08 West NMPM Sections 25, 31, 32, 36 Township 31 North Range 09 West NMPM Sections 25, 26, 27, 28, 32, 33, 34, 35, 36 Township 31 North Range 10 West NMPM Sections 2, 3, 11, 12, 13, 14 Township 32 North Range 06 West NMPM Sections 7, 18, 19, 30 Township 32 North Range 07 West NMPM Sections 12, 13, 14, 15, 16, 21, 22, 23, 24, 25 Township 32 North Range 10 West NMPM Sections 9, 10, 11, 13, 14, 15, 16, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 Township 32 North Range 11 West NMPM Sections 25, 36

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In the event the Division desires to adopt criteria for approval of an infill well even in the absence of objection, the following is suggested:

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- (b) volumetric estimates of drainage areas for the original and first infill well in the GPU;
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- RULE 2(c) Well locations and well density for all acreage in the pool outside any special qualifying area:

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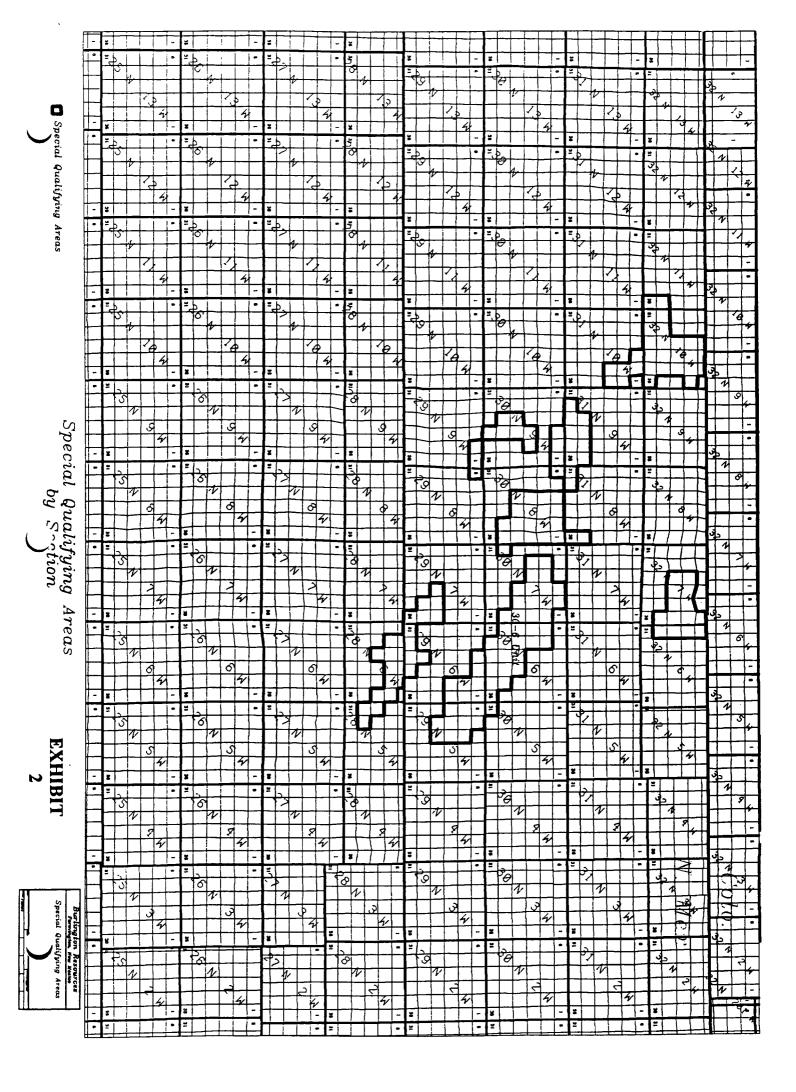
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#### (2) Well Density:

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- (ii) the SECOND INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well;
- (iii) the THIRD INFILL WELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mesaverde well and within a quarter section of the GPU not containing more than one (1) Mesaverde well.

#### **RULE 3. Administrative Exceptions**

The Division Director, in accordance with the applicable provisions of General Rule 104, may grant an exception to Rule 2 when an application has been submitted to the Division including notification to the affected parties as set forth in proposed Rule 2(b)2.

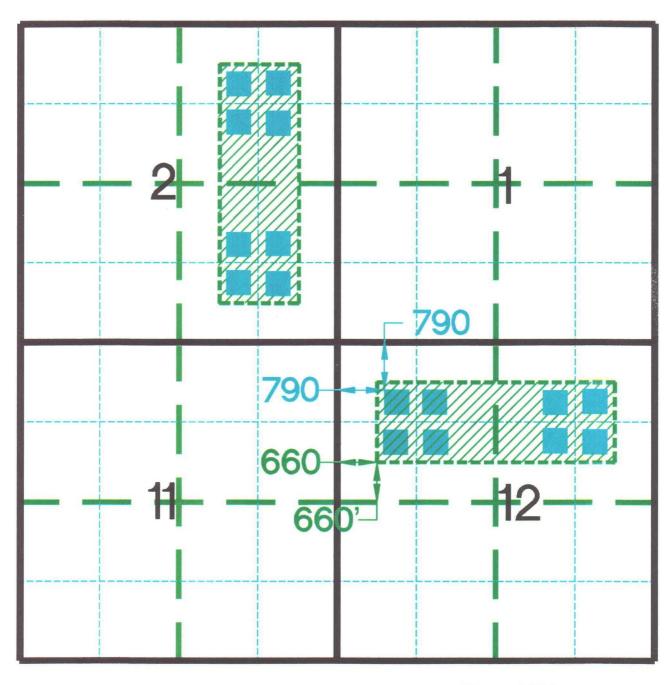


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Sections 25, 36

### DRILLING WINDOWS



29 acres



Current Rules
Drilling Window
790' from Otr Sec.
130' from Otr/Otr

119 acres



Proposed Rules
Drilling Window
660' from GPU
Less 10' from internal
boundaries

# 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. 11625 ORDER NO. R-10720

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY FOR APPROVAL OF A PILOT PROJECT INCLUDING AN EXCEPTION FROM RULE 2(b) OF THE SPECIAL RULES AND REGULATIONS FOR THE BLANCO-MESAVERDE GAS POOL FOR PURPOSES OF ESTABLISHING A PROGRAM IN ITS SAN JUAN 29-7 UNIT TO DETERMINE PROPER WELL DENSITY AND WELL LOCATION REQUIREMENTS IN MESAVERDE WELLS, RIO ARRIBA COUNTY, NEW MEXICO.

#### ORDER OF THE DIVISION

#### BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 17, 1996, at Santa Fe. New Mexico, before Examiner David R. Catanach.

NOW, on this 9th day of January, 1997, 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) The Blanco-Mesaverde Gas Pool is currently governed by the General Rules for the Prorated Gas Pools of New Mexico/Special Rules and Regulations for the Blanco-Mesaverde Gas Pool as contained within Division Order No. R-8170, as amended. Rule Nos. 2(a) and 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool require that a standard gas proration unit (GPU) comprise 320 acres, that the initial well on a GPU be located no closer than 790 feet from the outer boundary of the quarter section on which the well is located nor closer than 130 feet from any quarter-quarter section line or subdivision inner boundary, and that the infill well within a standard GPU be located in the quarter section not containing a Mesaverde well at a location which conforms to the setback requirements described above.

- (3) The applicant, Burlington Resources Oil & Gas Company (Burlington), seeks authority to institute a pilot infill drilling program within its San Juan 29-7 Unit whereby up to four wells may be drilled on a standard gas proration unit. The applicant further seeks:
  - a) to establish a ½ mile buffer zone within the outer boundary of the San Juan 29-7 Unit in which area standard well density for the Blanco-Mesaverde Gas Pool shall apply in order to protect the correlative rights of offset operators;
  - b) an exception to Rule No. 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool whereby the applicant may locate the proposed infill wells anywhere within the proration unit provided that such wells are located no closer than 10 feet from any section, quarter-section or quarter-quarter section line;
  - c) authority to commence drilling the following described eight wells within Phase I of its proposed infill drilling program:

#### WELL NAME

#### WELL LOCATION

SJ 29-7 Unit No. 37B	2370' FNL & 805' FWL (E) 12-29N-7W
SJ 29-7 Unit No. 37C	2630' FNL & 2630' FWL (F) 12-29N-7W
SJ 29-7 Unit No. 47B	2610' FSL & 2200' FEL (J) 2-29N-7W
SJ 29-7 Unit No. 57B	(Surf.) 1500' FSL & 1660' FEL (J) 11-29N-7W
	(BH) 465' FSL & 2340' FWL (N) 11-29N-7W
SJ 29-7 Unit No. 64B	(Surf.) 1510' FSL & 1640' FEL (J) 11-29N-7W
	(BH) 820' FSL & 150' FEL (P) 11-29N-7W
SJ 29-7 Unit No. 64C	225' FNL & 1995' FEL (B) 11-29N-7W
SJ 29-7 Unit No. 85B	(Surf.) 1795' FSL & 1510' FWL (K) 1-29N-7W
	(BH) 285' FSL & 245' FWL (M) 1-29N-7W
SJ 29-7 Unit No. 85C	(Surf.) 1820' FSL & 1520' FWL (K) 1-29N-7W
	(BH) 2630' FNL & 300' FWL (E) 1-29N-7W

- d) no increase in the gas allowable or in the method of calculating gas allowables in the Blanco-Mesaverde Gas Pool for any of the standard gas proration units targeted for the proposed infill drilling.
- (4) The applicant is the current operator of the San Juan 29-7 Unit, a Federal exploratory unit comprising some 22,500 acres and encompassing Sections 1 through 36, Township 29 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.

- (5) According to applicant's testimony, its plan of development for the San Juan 29-7 Unit includes drilling fourteen (14) 160-acre infill Mesaverde wells in 1997, at which point the unit will be fully developed in the Blanco-Mesaverde Gas Pool.
- (6) Applicant testified that the Mesaverde Participating Area (PA) and consequently the Mesaverde interest ownership within the San Juan 29-7 Unit has been fixed since 1959 and is not subject to further revisions.
- (7) The evidence and testimony presented indicates that the applicant has undertaken a study to analyze the drainage efficiency of Mesaverde gas wells in the San Juan Basin. As part of this study, the applicant has examined various geologic and engineering factors which may affect ultimate gas recoveries.
- (8) In its investigation, the applicant gathered initial shut-in wellhead pressure data from both the initial and infill wells on approximately 1,200 standard gas proration units within the San Juan Basin. Applicant then utilized this data to construct pressure drop maps.
- (9) Applicant's data indicates that there are considerable pressure drop differences between areas in the San Juan Basin. Pressure drops range from greater than 30 psi/year to less than 5 psi/year.
- (10) The pressure drop within the San Juan 29-7 Unit is relatively low ranging from approximately 5-15 psi/year.
- (11) Applicant, utilizing core data from the Mesaverde formation taken from wells in both the high and low pressure drop areas of the basin, as well as other geologic data, has reached the following geologic conclusions:
  - a) the calculated pressure drops are a good indication of effective permeability in the Mesaverde reservoir;
  - b) areas with low pressure drops are most likely not being efficiently and effectively drained by existing well density;
  - c) the difference between areas of high and low pressure drop cannot be attributed to differences in matrix porosity and permeability, reservoir structure or reservoir thickness:
  - d) the presence and density of natural fractures in the Mesaverde reservoir appear to account for the differences between areas of high and low pressure drop, and resulting differences in drainage efficiency;

- e) data from applicant's Mesaverde Strat Test Weil No. 2, a pressure observation well, indicates that the Menefee interval, one of the primary producing intervals in the Mesaverde formation, exhibits near virgin reservoir pressure even though this interval has been produced in offset wells for a considerable period of time; and,
- f) the Menefee, Cliffhouse and Point Lookout to a lesser extent, can be laterally discontinuous from one well location to another.
- (12) Applicant testified that in its reservoir modeling for the proposed pilot project, it will utilize geostatistics and stochastic modeling to input geologic parameters. According to applicant's evidence and testimony, this method of analyzing geologic data allows you to capture and quantify the correlatability and directionality of existing data, and distribute this data in a non-averaging method between data points.
- (13) Utilizing geostatistics and stochastic modeling allows the input of more realistic geologic data which should ultimately result in a much more accurate and realistic flow simulation within the Mesaverde reservoir.
- (14) Applicant presented engineering evidence and testimony which indicates that:
  - a) in high pressure drop areas, (i.e. those areas containing natural fractures in the Mesaverde formation), the recovery rates of gas, based upon volumetrics and decline curve analysis, range from approximately 60-80 percent of the original gas in place. Correspondingly, those areas of low pressure drop typically exhibit low recovery rates of gas in the range of approximately 20-50 percent of original gas in place;
  - the recovery rate of gas from the San Juan 29-7 Unit, subsequent to the completion of 160-acre infill drilling, will be approximately 51 percent of the original gas in place.
- (15) Due to the low recovery rates within the San Juan 29-7 Unit, applicant has determined this to be an ideal location to conduct the pilot infill drilling study.

- (16) The applicant presented the results of a reservoir simulation study conducted on that portion of the San Juan 29-7 Unit comprising Sections 1, 2, 11 and 12. The simulation was conducted using runs which assume 1, 2, 3 and 4 additional wells are drilled per section. The results indicate that significant increases in ultimate gas recovery are achieved by drilling one and two additional wells per section, and that lesser increases in ultimate gas recovery are achieved by drilling more than two additional wells per section.
- (17) Applicant estimates that by drilling an additional two wells per section within the San Juan 29-7 Unit, ultimate gas recovery from the unit will increase from approximately 63 BCFG to approximately 74 BCFG.
- (18) Applicant has notified all interest owners in the San Juan 29-7 Unit as well as all operators in the Blanco-Mesaverde Gas Pool of its application in this case.
- (19) No offset operator and/or interest owner appeared at the hearing in opposition to the application.
- (20) Preliminary geologic and engineering data indicate that the proposed pilot infill drilling program within the San Juan 29-7 Unit will allow the applicant the opportunity to test the effectiveness of its geostatistics and stochastic modeling, will allow the applicant the opportunity to gather additional geologic and engineering data to determine proper well density in this portion of the Blanco-Mesaverde Gas Pool, will allow the recovery of additional gas reserves from the San Juan 29-7 Unit which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.
- (21) The applicant should be authorized to conduct its pilot infill drilling program within its entire San Juan 29-7 Unit area with the exception of the following described "buffer zone":

#### TOWNSHIP 29 NORTH, RANGE 7 WEST, NMPM

Section 1: N/2, SE/4

Sections 2 through 5: N/2

Section 6: N/2, SW/4

Sections 7, 18, 19, 30: W/2

Section 31: W/2, SE/4

Sections 32 through 35: S/2

Section 36: S/2, NE/4

Sections 12, 13, 24, 25: E/2

#### IT IS THEREFORE ORDERED THAT:

- (1) The applicant, Burlington Resources Oil & Gas Company, is hereby authorized to conduct a pilot infill drilling program within its San Juan 29-7 Unit whereby up to four wells may be drilled on a standard gas proration unit in the Blanco-Mesaverde Gas Pool.
- (2) The pilot project area shall comprise applicant's entire San Juan 29-7 Unit area with the exception of the following described "buffer zone", in which area standard well density for the Blanco-Mesaverde Gas Pool shall apply:

#### TOWNSHIP 29 NORTH, RANGE 7 WEST, NMPM

Section 1: N/2, SE/4

Sections 2 through 5: N/2

Section 6: N/2, SW/4

Sections 7, 18, 19, 30: W/2

Section 31: W/2, SE/4

Sections 32 through 35: S/2

Section 36: S/2, NE/4

Sections 12, 13, 24, 25: E/2

- (3) As an exception to Rule No. 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool, the applicant is hereby authorized to drill the infill wells within the pilot project area anywhere within a standard gas proration unit provided that such wells are located no closer than 10 feet from any section, quarter-section or quarter-quarter section line.
- (4) The applicant is hereby further authorized to commence drilling the following described infill wells within Phase I of its pilot project, provided however, that such wells shall be located at a location in conformance with the setback requirements described above:

#### **WELL NAME** WELL LOCATION 2370' FNL & 805' FWL (E) 12-29N-7W SJ 29-7 Unit No. 37B SJ 29-7 Unit No. 37C 2630' FNL & 2630' FWL (F) 12-29N-7W SJ 29-7 Unit No. 47B 2610' FSL & 2200' FEL (J) 2-29N-7W (Surf.) 1500' FSL & 1660' FEL (J) 11-29N-7W SJ 29-7 Unit No. 57B (BH) 465' FSL & 2340' FWL (N) 11-29N-7W (Surf.) 1510' FSL & 1640' FEL (J) 11-29N-7W SJ 29-7 Unit No. 64B (BH) 820' FSL & 150' FEL (P) 11-29N-7W 225' FNL & 1995' FEL (B) 11-29N-7W SJ 29-7 Unit No. 64C SJ 29-7 Unit No. 85B (Surf.) 1795' FSL & 1510' FWL (K) 1-29N-7W (BH) 285' FSL & 245' FWL (M) 1-29N-7W (Surf.) 1820' FSL & 1520' FWL (K) 1-29N-7W SJ 29-7 Unit No. 85C (BH) 2630' FNL & 300' FWL (E) 1-29N-7W

- (5) The wells and/or standard gas proration units within the pilot project area shall not receive a gas allowable greater than that which would normally be assiged a proration unit containing two wells in the Blanco-Mesaverde Gas Pool.
- (6) 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. LAMAY

Director

SEAL

# 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. 11879 ORDER NO. R-10936

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY FOR APPROVAL OF A PILOT PROJECT INCLUDING AN EXCEPTION FROM RULE 2(b) OF THE SPECIAL RULES AND REGULATIONS FOR THE BLANCO-MESAVERDE GAS POOL FOR PURPOSES OF ESTABLISHING A PILOT INFILL DRILLING PROGRAM WITHIN ITS SAN JUAN 27-5 UNIT WHEREBY UP TO FOUR WELLS MAY BE DRILLED ON A STANDARD GAS PRORATION UNIT TO DETERMINE PROPER WELL DENSITY AND WELL LOCATION REQUIREMENTS FOR MESAVERDE WELLS, RIO ARRIBA COUNTY, NEW MEXICO.

#### ORDER OF THE DIVISION

#### **BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on November 6, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 8<sup>th</sup> day of January, 1998, 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) The Blanco-Mesaverde Gas Pool is currently governed by the General Rules for the Prorated Gas Pools of New Mexico/Special Rules and Regulations for the Blanco-Mesaverde Gas Pool as contained within Division Order No. R-8170, as amended. Rule Nos. 2(a) and 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool require that a standard gas proration unit (GPU) comprise 320 acres, that the initial well on a GPU be located no closer than 790 feet from the outer boundary of the quarter section on which the well is located nor closer than 130 feet to any quarter-quarter section line or subdivision inner boundary, and that the infill well within a standard GPU be located in the quarter section not containing a Mesaverde well at a location which conforms to the setback requirements described above.

- (3) The applicant, Burlington Resources Oil & Gas Company (Burlington), seeks authority to institute a pilot infill drilling program within its San Juan 27-5 Unit whereby up to four wells may be drilled on a standard 320-acre gas proration unit. The applicant further seeks:
  - a) to establish a ½ mile buffer zone within the outer boundary of the San Juan 27-5 Unit in which area standard well density for the Blanco-Mesaverde Gas Pool shall apply in order to protect the correlative rights of offset operators;
  - b) an exception to Rule No. 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool whereby it may locate the proposed infill wells anywhere within the proration unit provided that such wells are located no closer than 10 feet from any section, quarter-section or quarter-quarter section line;
  - c) no increase in the gas allowable or in the method of calculating gas allowables in the Blanco-Mesaverde Gas Pool for any of the standard gas proration units targeted for the proposed infill drilling.
- (4) The applicant is the current operator of the San Juan 27-5 Unit, a Federal exploratory unit comprising some 23,043.99 acres and encompassing Sections 1 through 36, Township 27 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.
- (5) According to applicant's testimony, the San Juan 27-5 Unit is not fully developed in the Blanco-Mesaverde Gas Pool at this time (160-acre infill wells).
- (6) Applicant testified that the Mesaverde Participating Area (PA) and consequently the Mesaverde interest ownership within the San Juan 27-5 Unit has been fixed since 1981 and is not subject to further revisions.
- (7) The evidence and testimony presented indicates that the applicant has undertaken a study to analyze the drainage efficiency of Mesaverde gas wells in the San Juan Basin. As part of this study, the applicant has examined various geologic and engineering factors which may affect ultimate gas recoveries.
- (8) In its investigation, the applicant gathered initial shut-in wellhead pressure data from both the initial and infill wells on approximately 1,200 standard gas proration units within the San Juan Basin. Applicant then utilized this data to construct pressure drop maps.
- (9) Applicant's data indicates that there are considerable pressure drop differences between areas in the San Juan Basin. Pressure drops range from greater than 30 psi/year to less than 5 psi/year.

- (10) The pressure drop within the San Juan 27-5 Unit is relatively low ranging from approximately 5-15 psi/year.
- (11) Applicant, utilizing core data from the Mesaverde formation taken from wells in both the high and low pressure drop areas of the basin, as well as other geologic data, has reached the following geologic conclusions:
  - a) the calculated pressure drops are a good indication of effective permeability in the Mesaverde reservoir;
  - b) areas with low pressure drops are most likely not being efficiently and effectively drained by existing well density;
  - the difference between areas of high and low pressure drop cannot be attributed to differences in matrix porosity and permeability, reservoir structure or reservoir thickness;
    - d) the presence and density of natural fractures in the Mesaverde reservoir appear to account for the differences between areas of high and low pressure drop, and resulting differences in drainage efficiency;
    - e) data from applicant's Mesaverde Strat Test Well No. 2, a pressure observation well, indicates that the Menefee interval, one of the primary producing intervals in the Mesaverde formation, exhibits near virgin reservoir pressure even though this interval has been produced in offset wells for a considerable period of time; and,
    - f) the Menefee, Cliffhouse and Point Lookout to a lesser extent, can be laterally discontinuous from one well location to another.
- (12) Applicant testified that in its reservoir modeling for the proposed pilot project, it will utilize geostatistics and stochastic modeling to input geologic parameters. According to applicant's evidence and testimony, this method of analyzing geologic data allows you to capture and quantify the correlatability and directionality of existing data, and distribute this data in a non-averaging method between data points.
- (13) Utilizing geostatistics and stochastic modeling allows the input of more realistic geologic data which should ultimately result in a much more accurate and realistic flow simulation within the Mesaverde reservoir.
  - (14) Applicant presented engineering evidence and testimony which indicates that:

- a) in high pressure drop areas, (i.e. those areas containing natural fractures in the Mesaverde formation), the recovery rates of gas, based upon volumetrics and decline curve analysis, range from approximately 60-80 percent of the original gas in place. Correspondingly, those areas of low pressure drop typically exhibit low recovery rates of gas in the range of approximately 20-50 percent of original gas in place;
- b) the recovery rate of gas from the San Juan 27-5 Unit, subsequent to the completion of 160-acre infill drilling, will be approximately 31 percent of the original gas in place.
- (15) Due to the low recovery rates within the San Juan 27-5 Unit, applicant has determined this to be an ideal location to conduct the pilot infill drilling study.
- (16) The applicant presented the results of a reservoir simulation study conducted on that portion of the San Juan 27-5 Unit comprising Sections 3, 4, 9 and 10. The simulation was conducted using runs which assume 1, 2, 3 and 4 additional wells are drilled per section. The results indicate that significant increases in ultimate gas recovery are achieved by drilling additional infill wells per section.
- (17) Applicant estimates that by drilling an additional two wells per section within the San Juan 27-5 Unit, ultimate gas recovery from the unit will increase from approximately 37.3 BCFG to approximately 50.7 BCFG.
- (18) Applicant has notified all interest owners in the San Juan 27-5 Unit of its application in this case.
- (19) No offset operator and/or interest owner appeared at the hearing in opposition to the application.
- (20) Preliminary geologic and engineering data indicate that the proposed pilot infill drilling program within the San Juan 27-5 Unit will allow the applicant the opportunity to test the effectiveness of its geostatistics and stochastic modeling, will allow the applicant the opportunity to gather additional geologic and engineering data to determine proper well density in this portion of the Blanco-Mesaverde Gas Pool, will allow the recovery of additional gas reserves from the San Juan 27-5 Unit which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.
- (21) The applicant should be authorized to conduct its pilot infill drilling program within its entire San Juan 27-5 Unit area with the exception of the following described "buffer zone":

#### TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

Section 1: N/2, SE/4
Sections 2 through 5: N/2
Section 6: N/2, SW/4
Sections 7, 18, 19, 30: W/2

Sections 12, 13, 24, 25: E/2

Section 31: W/2, SE/4

Sections 32 through 35: S/2

Section 36: S/2, NE/4

#### IT IS THEREFORE ORDERED THAT:

- (1) The applicant, Burlington Resources Oil & Gas Company, is hereby authorized to conduct a pilot infill drilling program within its San Juan 27-5 Unit whereby up to four wells may be drilled on a standard gas proration unit in the Blanco-Mesaverde Gas Pool.
- (2) The pilot project area shall comprise applicant's entire San Juan 27-5 Unit area with the exception of the following described "buffer zone", in which area standard well density for the Blanco-Mesaverde Gas Pool shall apply:

#### TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

Section 1: N/2, SE/4

Sections 2 through 5: N/2

Section 6: N/2, SW/4

Sections 7, 18, 19, 30: W/2

Sections 12, 13, 24, 25: E/2

Section 31: W/2, SE/4

Sections 32 through 35: S/2

Section 36: S/2, NE/4

- (3) As an exception to Rule No. 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool, the applicant is hereby authorized to drill the infill wells within the pilot project area anywhere within a standard gas proration unit provided that such wells are located no closer than 10 feet from any section, quarter-section or quarter-quarter section line.
- (4) The wells and/or standard gas proration units within the pilot project area shall not receive a gas allowable greater than that which would normally be assigned a proration unit containing two wells in the Blanco-Mesaverde Gas Pool.
- (5) 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

KATHLEEN A. GARLAND

**Acting Director** 

S E A L

# 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. 11880 ORDER NO. R-10949

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY FOR APPROVAL OF A PILOT PROJECT INCLUDING AN EXCEPTION FROM RULE 2(b) OF THE SPECIAL RULES AND REGULATIONS FOR THE BLANCO-MESAVERDE GAS POOL TO INSTITUTE A PILOT INFILL DRILLING PROGRAM WITHIN A FOUR SECTION AREA INCLUDING SIX UNORTHODOX GAS WELL LOCATIONS FOR PURPOSES OF ESTABLISHING A PROGRAM TO DETERMINE PROPER WELL DENSITY AND WELL LOCATION REQUIREMENTS FOR MESAVERDE WELLS, SAN JUAN COUNTY, NEW MEXICO.

#### **ORDER OF THE DIVISION**

#### BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 6, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 3<sup>rd</sup> day of February, 1998, 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) The Blanco-Mesaverde Gas Pool is currently governed by the General Rules for the Prorated Gas Pools of New Mexico/Special Rules and Regulations for the Blanco-Mesaverde Gas Pool as contained within Division Order No. R-8170, as amended. Rule Nos. 2(a) and 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool require that a standard gas proration unit (GPU) comprise 320 acres, that the initial well on a GPU be located no closer than 790 feet from the outer boundary of the quarter section on which the well is located nor closer than 130 feet from any quarter-quarter section line or subdivision inner boundary, and that the infill well within a standard GPU be located in the quarter section not containing a Mesaverde well at a location which conforms to the setback requirements described above.

(3) The applicant, Burlington Resources Oil & Gas Company (Burlington), seeks authority to institute a pilot infill drilling program within a four section area, described as follows, whereby up to four wells may be drilled on a standard 320-acre gas proration unit:

#### **INFILL PILOT PROJECT AREA**

Section 1, Township 30 North, Range 11 West, NMPM Section 36, Township 31 North, Range 11 West, NMPM Section 31, Township 31 North, Range 10 West, NMPM Section 6, Township 30 North, Range 10 West, NMPM

- (4) The applicant further seeks:
- a) to establish a ½ mile buffer zone within the outer boundary of the four section pilot project area in which area standard well density for the Blanco-Mesaverde Gas Pool shall apply in order to protect the correlative rights of offset operators;
- b) an exception to Rule No. 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool whereby it may locate and drill six infill wells at the proposed unorthodox gas well locations described as follows:

#### Well Name & Number

#### Well Location

Pubco State Com No. 1B	325' FSL & 2510' FEL, Unit O, 36-31N-11W
Atlantic "C" No. 4C	1385' FSL & 445' FWL, Unit L, 31-31N-10W
Atlantic "C" No. 6B	380' FNL & 2190' FWL, Unit C, 6-30N-10W
Atlantic "C" No. 6C	2240' FNL & 2005' FWL, Unit F, 6-30N-10W
Sunray "C" No. 1B	2135' FNL & 395' FEL, Unit H, 1-30N-11W
Sunray "C" No. 1C	2220' FNL & 2520' FEL, Unit G, 1-30N-11W

- c) no increase in the gas allowable or in the method of calculating gas allowables in the Blanco-Mesaverde Gas Pool for any of the standard gas proration units targeted for the proposed infill drilling.
- (5) The applicant proposes to locate its six infill wells on the following described Blanco-Mesaverde Gas Pool proration units within the subject four section area:

Gas Proration Unit	Infill Wells	Current Operator
W/2 Section 31, T-31N, R-10W	Atlantic "C" No. 4C	Burlington
W/2 Section 6, T-30N, R-10W	Atlantic "C" No. 6B Atlantic "C" No. 6C	Burlington
N/2 Section 1, T-30N, R-11W	Sunray "C" No. 1B Sunray "C" No. 1C	Burlington
S/2 Section 36, T-31N, R-11W	Pubco State Com No. 1	Great Western Drilling Company

- (6) According to applicant's evidence and testimony, the working interest ownership within the W/2 of Section 31, the W/2 of Section 6 and the N/2 of Section 1 is owned 100% by Burlington. There are, however, additional various royalty and overriding royalty interest owners within these subject proration units.
- (7) Further testimony indicates that the working interest ownership within the S/2 of Section 36 is owned by Great Western Drilling Company, Davoil Inc., Taurus Exploration and Conoco Inc..
- (8) At the time of the hearing, the applicant testified that it has made arrangements with the working interest owners in the S/2 of Section 36 whereby it will drill the proposed Pubco State Com No. 1B and will operate the well for a period of approximately six months at which time it will turn over operations of the well to Great Western Drilling Company.
- (9) Due to current Division policy which prohibits having two operators within a single proration unit, the applicant, subsequent to the hearing, advised the Division that it will drill and complete the Pubco State Com Well No. 1B, and will subsequently turn over operations of the well to Great Western Drilling Company.
- (10) Applicant testified that it has notified all interest owners, including working, royalty and overriding royalty interest owners within the four section pilot project area of its application in this case. In addition, applicant has notified the only affected offset operator, Amoco Production Company.
- (11) The evidence and testimony presented indicates that the applicant has undertaken a study to analyze the drainage efficiency of Mesaverde gas wells in the San Juan Basin. As part of this study, the applicant has examined various geologic and engineering factors which may affect ultimate gas recoveries.

- (12) In its investigation, the applicant gathered initial shut-in wellhead pressure data from both the initial and infill wells on approximately 1,200 standard gas proration units within the San Juan Basin. Applicant then utilized this data to construct pressure drop maps.
- (13) Applicant's data indicates that there are considerable pressure drop differences between areas in the San Juan Basin. Pressure drops range from greater than 30 psi/year to less than 5 psi/year.
- (14) The pressure drop within the four section pilot project area is relatively low ranging from approximately 5-15 psi/year.
- (15) Applicant, utilizing core data from the Mesaverde formation taken from wells in both the high and low pressure drop areas of the basin, as well as other geologic data, has reached the following geologic conclusions:
  - a) the calculated pressure drops are a good indication of effective permeability in the Mesaverde reservoir;
  - b) areas with low pressure drops are most likely not being efficiently and effectively drained by existing well density;
  - c) the difference between areas of high and low pressure drop cannot be attributed to differences in matrix porosity and permeability, reservoir structure or reservoir thickness;
  - d) the presence and density of natural fractures in the Mesaverde reservoir appear to account for the differences between areas of high and low pressure drop, and resulting differences in drainage efficiency;
  - e) data from applicant's Mesaverde Strat Test Well No. 2, a pressure observation well, indicates that the Menefee interval, one of the primary producing intervals in the Mesaverde formation, exhibits near virgin reservoir pressure even though this interval has been produced in offset wells for a considerable period of time; and,
  - f) the Menefee, Cliffhouse and Point Lookout to a lesser extent, can be laterally discontinuous from one well location to another.
- (16) Applicant testified that in its reservoir modeling for the proposed pilot project, it will utilize geostatistics and stochastic modeling to input geologic parameters. According to applicant's evidence and testimony, this method of analyzing geologic data allows you to capture and quantify the correlatability and directionality of existing data, and distribute this data in a non-averaging method between data points.

- (17) Utilizing geostatistics and stochastic modeling allows the input of more realistic geologic data which should ultimately result in a much more accurate and realistic flow simulation within the Mesaverde reservoir.
  - (18) Applicant presented engineering evidence and testimony which indicates that:
  - a) in high pressure drop areas, (i.e. those areas containing natural fractures in the Mesaverde formation), the recovery rates of gas, based upon volumetric and decline curve analysis, range from approximately 60-80 percent of the original gas in place. Correspondingly, those areas of low pressure drop typically exhibit low recovery rates of gas in the range of approximately 20-50 percent of original gas in place;
  - b) given the current well density, the recovery rate of gas from the four section pilot project area will be approximately 31 percent of the original gas in place.
- (19) Due to the low recovery rates within the four section pilot project area, applicant has determined this to be an ideal location to conduct the pilot infill drilling study.
- (20) The applicant presented the results of a reservoir simulation study conducted on the four section pilot project area. The simulation was conducted using runs which assume 1, 2, 3 and 4 additional wells are drilled per section. The results indicate that significant increases in ultimate gas recovery are achieved by drilling additional infill wells per section.
- (21) Applicant estimates that by drilling an additional two wells per section within the four section pilot project area, ultimate gas recovery from the project area will increase from approximately 42.0 BCFG to approximately 61.4 BCFG.
- (22) No offset operator and/or interest owner appeared at the hearing in opposition to the application.
- (23) Preliminary geologic and engineering data indicates that the proposed infill drilling program within the four section pilot project area will allow the applicant the opportunity to test the effectiveness of its geostatistics and stochastic modeling, will allow the applicant the opportunity to gather additional geologic and engineering data to determine proper well density in this portion of the Blanco-Mesaverde Gas Pool, will allow the recovery of additional gas reserves from the pilot project area which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.
- (24) The applicant should be authorized to drill infill wells within the four section pilot project area with the exception of the following described "buffer zone":

Township 31 North, Range 10 West, NMPM

Section 31: E/2, NW/4

Township 31 North, Range 11 West, NMPM Section 36: W/2, NE/4

Township 30 North, Range 11 West, NMPM Section 1: W/2, SE/4

Township 30 North, Range 10 West, NMPM Section 6: E/2, SW/4

### IT IS THEREFORE ORDERED THAT:

(1) The applicant, Burlington Resources Oil & Gas Company, is hereby authorized to conduct a pilot infill drilling program within a four section area, described as follows, whereby up to four wells may be drilled on a standard 320-acre gas proration unit:

### **INFILL PILOT PROJECT AREA**

Section 1, Township 30 North, Range 11 West, NMPM Section 36, Township 31 North, Range 11 West, NMPM Section 31, Township 31 North, Range 10 West, NMPM Section 6, Township 30 North, Range 10 West, NMPM

(2) The pilot project area shall comprise the entire four section area as described above with the exception of the following described "buffer zone", in which area standard well density for the Blanco-Mesaverde Gas Pool shall apply:

Township 31 North, Range 10 West, NMPM Section 31: E/2, NW/4

Township 31 North, Range 11 West, NMPM Section 36: W/2, NE/4

Township 30 North, Range 11 West, NMPM Section 1: W/2, SE/4

Township 30 North, Range 10 West, NMPM Section 6: E/2, SW/4 (3) As an exception to Rule No. 2(b) of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool, the applicant is hereby authorized to drill the following described six infill wells within the pilot project area, all of which are located at unorthodox gas well locations, also hereby approved.

### Well Name & Number

### Well Location

Pubco State Com No. 1B	325' FSL & 2510' FEL, Unit O, 36-31N-11W
Atlantic "C" No. 4C	1385' FSL & 445' FWL, Unit L, 31-31N-10W
Atlantic "C" No. 6B	380' FNL & 2190' FWL, Unit C, 6-30N-10W
Atlantic "C" No. 6C	2240' FNL & 2005' FWL, Unit F, 6-30N-10W
Sunray "C" No. 1B	2135' FNL & 395' FEL, Unit H, 1-30N-11W
Sunray "C" No. 1C	2220' FNL & 2520' FEL, Unit G, 1-30N-11W

- (4) The wells and/or standard gas proration units within the pilot project area shall not receive a gas allowable greater than that which would normally be assigned a proration unit containing two wells in the Blanco-Mesaverde Gas Pool.
- (5) As per the agreement with the various working interest owners within Section 36, including Great Western Drilling Company, the applicant is hereby authorized to drill and complete its Pubco State Com No. 1B, as described above. Subsequent to the completion of drilling and completion operations, the applicant shall turn over operations of the Pubco State Com No. 1B to Great Western Drilling Company.
- (6) 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

KATHLEEN A. GARLAND

**Acting Director** 

### FCAPL October 9, 1998

### Agenda

1.	Welcome (Lunch)			
2.	FCAPL-Update -Membersh -Lunch \$16	nip 5.50 (include	es gratuity)	D. Price
3.	Director's Report			R. Richardson
4.	Financial Report			P. Hall
5.	Monthly Meetings	10/9/98 11/11/98		D. Price
		12/9/98	6PM	Christmas Party
			Se	nior Pepper's Banquet Room
6.	New Business			Members/From the floor
7.	Intro of Speaker			D. Price
8.	Speaker			Alan Alexander
				Mesaverde Infill Talk
9.	Close			

### M-E-M-O-R-A-N-D-U-M (3-98-11)

To:

Blanco Mesaverde and Ignacio Blanco Mesaverde Operators

From:

Ernie Busch, New Mexico Oil Conservation Division

Morris Bell, Colorado Oil & Gas Conservation Commission

Subject:

Meeting of Mesaverde Operators and Regulators

Date:

August 28, 1998

The New Mexico Oil Conservation Division and the Colorado Oil and Gas Conservation Commission will jointly hold a meeting at 9:00 A.M. on September 16, 1998, in room 9010 at San Juan College in Farmington, New Mexico, for operators in the Blanco Mesaverde Pool and the Ignacio Blanco Mesaverde Pool and for other regulatory and industry interest groups. The following issues will be discussed:

### 1. Well Density

Burlington Resources has done some testing which indicates that denser drilling may be possible in the Blanco Mesaverde Pool. They have some proposed rules which will be available on the OCD electronic bulletin board at:

http://www.emnrd.state.nm.us/ocdbbs/disc1\_toc.htm

### 2. Vertical Limits

Current thinking is that the Lewis Shale formation may contain reserves that should be included in Mesaverde completions but lie above the current defined limits of the Pool.

Please come fully prepared to discuss your concerns about these issues. The discussions from this group may result in recommended rule changes.

### Tentative Agenda:

- ·Burlington Resources technical presentation for well density change
- ·Discussion of density issues
- ·Discussion of proposed rules
- ·Lewis Shale presentation
- ·Proposed rules for Blanco Mesaverde vertical limits change

If you have questions, please contact Ernie Busch at 505-334-6178 ext 14 or ebusch@state.nm.us

## MESAVERDE WELL DENSITY/VERTICAL LIMITS MEETING SEPTEMBER 16, 1998

## ATTENDENCE

NAME	COMPANY OR AGENCY	ADDRESS	PHONE	FAX/EMAIL
Jerry Stadulis	Cross Timbers Oil	810 Houston St. Ft. Worth 1x 76102 817-870-2800	B17-870-2800	73621.2717 (2 Compuserva. Com
all Theline	Dusat Western Arla	22 Rd 2894 Aztec	505-534-6473	505-327-0495
Bary Love !	Cross Timbers	810 Hows bur St Fflooth, TX 7602	817-870-8462	
Kobin TRACY	CROSS TEMBERS DEC CU.	,	817-870-280V	
CARY BURCH	CROSS TIMBLES DIL CO.	810 Houston St. Ft. Worth, TX 76102	817-870-2800	817-882-7299
Alexannes	BULLINGTON	3535 E. 30 CH ST. FAOMINIATION 87401	FASONINATION 8740 505-326-9757	505-324-978
Shamon Nichols	Budineta	٤	505 599-4010	505 726-9781
MARK ASHLEY	NMOCD	STA FE	(64) 827. 8183	(505)827-/389
Maris Bell	COGCC	1120 Linah Str. #801 Denver (0 80205 (303)854-2100	(201)854-2100	703/189-2/89
Marc Shanger	Conoco	10 Desta Dr. Ste 100 W Midland TX 79705 (915) 686-5499	9	951686 -5508
Tour Johnson	-	"	///	"
Scott Jordan	S	٤	915 686-5702	•
Just Cartin	Parene OF Redamation	non Bx 640 Durango	970-3852522	
the Stoler	Amaco	P.O. BOX 800 DIENNER CO80201 303-830-5349	303-830-5349	303-830-5388
Mark Tamasak	Amoco	PO Box 800 D- nuer Co 20201	307-830-5841	11
John G. Khuston	//	ž ,	303-830-5096	.,
Steve Grosz	Comocio	10 Desta Dive Midland TX	915-686-5730	915-686-5510
Bos Moor	Amow	POBOX 800 DANVER CO SUJOI	303-830-4537	303-830-5388
Win Rjan	(17055 Timbers	610 Houston St. Sv. Ar 2000, FLLBAH, TY7600	B17-877-2336	817-BB3-734
Martina fi th	BOR- / Field Willicitor	150 Works to the SF NH 87301	(05) 988-6200	91 217

NAME	COMPANY OR AGENCY	ADDRESS	PHONE	FAX/EMAIL
PALIO Dome	Dugan Production	P. U. Box 420	505-325-1821	KD5-327-4613
DOUG VAN BROWS	KOCH JND.	HOUSTON TY	713 599 - 5829	713-599-6161
Dea Johnson	Koch Explicention Co	Aztec NM	505-334-9111	3831-1888
Dan Goden	Gatas Resources	Honston, TX	281-584-3316	DCROSSY@ WASTAR. CON
Winda Bnohue C	Burlington Resource	P.O. Bux 4289 Farmington, MM 87499	505-326-9760	505-326-9781
Thes stassylon	Rushum	//	38-5756	336-9761
Duna Spenier	BLO	1235 LatlaTa Hu, From 87411	(505) 595. 4350	55-576-8597
G.D Simon	JAT	PU Box 14749 116. 87191	505 821 2555	505 823 8329
MIKE DANKHERTY	MMRCHIBIN OICE AND TH	BIND SCIENT BAY SAN SHALL	<b>.</b>	
Tom Mullins	PHILLIPS PERBlem	Po Bex 256 87499	505 325-6561	505-325-6585
iland South	Williams Production	3704 S. Bermela hue	(914) 574 - 1431	
tim Stration	Amo co	Fmto, NM	(505) <b>336</b> -9200	(5)4) 326-9262
Robert Con: FExe	D) Simmen 1	Farmington, NA	505 326 3753	327 1659
Batus Snows	Be	11	50° 316 4712	
Ut sia Code	Be	1,	sas 126 5770	
JUNA BIRON	DJ. Simmous Jui	FAMILARY MA	505 326-3753	6.59.4.6.28
JIE HEWAT	OL3	Farmingles N. 73	508 579-6365	
Scott B. DAVES	Maik Wist Ersoulles	Englewood CO	900- 7W- 8388	303 290 - 8769
Lirea W Toylersill	cross +imbers	FBF Mindian	632 5200	
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JE AN HASCH	Amoc PRODUCTED Co	P.D. BOX 8000 DENVOR 80001	2124-068-606 19	

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genrishingson@br-inc.com	605) 826-5733	335 30# St. Family	BR	Oke Christians
205: 334-6170		Astas 1	NMOCD	Ernie Busch
	4559-562 (026)	romad CO	US.BOR	Bill Walsh
632-5406	632-5200	6001 Huy 64 Farming lan	Coas Tinbres	Bory Markey had
599-3447	599-3459	5525 Huy64 Farmington	Phillips	Mikelarimer
11	:	U		Earle William
33-025	563-0140	Laruero	Sixten ut Tribe	Tick Barrelmon
327-4659	326-3755	Furminator C	D.J. Symmons Co,	LIGA CHURK
599. HOY	326-9721	Farmer Lon	Durley lin	Jan Drock CC
327-4659	(505)326-3753	P.O. BOX 1469 FARMINGTON	1-	B. D. Garry.
334-9688		70 Boy day Ilou Vula	Louis Dr. Aus	mile Temmel
CABBAJM @ LDNGC . O.	MF 248-2755	Kon Quan CARMAL PKOY	LOGI DRETRY ATT SAN	JAY GASSASSO
599-8947	599-6361	1235 L. Plato Huy Stoth		Chip Harroder
	3a6-33&5	PO BOX 2810	Contral Resources	
327-9267	327.9267	PO Bex 111	c. Hle 0.14 Gas	Franky Elledge
327-4613 Fagrating Paylorgi	325-1821	termination	Ducen	Auct Fearchies
326- 98FO	3.56-925	Farmington	Burlington	John Zent
FAX/EMAIL	PHONE	ADDRESS	COMPANY OR AGENCY	NAME



### INDEPENDENT PETROLEUM

ASSOCIATION OF NEW MEXICO

# 1998 Anna Meeting

Inn of the Mountain Gods Ruidoso, New Mexico August 6 and 7, 1998

Name badges will be required for admission to all functions.

### IPANM 1998 Annual Meeting Inn of the Mountain Gods

### **AGENDA**

Thursday, August 6, 1998

9:00 to 5:00 Registration at Mescalero Inn 9:00 to 5:00 **IPANM Golf Tournament** 

Presidents Reception at the Museum of the Horse 6:30 to 8:30

George Yates, IPAA Chairman

Friday, August 7, 1998

8:00 to 8:30 Registration at Mescalero Inn

8:30 to 9:00

Welcome and Opening Remarks
Frank Garban, IPANM President

IPANM Organization and Staffing:
Santa Fe Office - Torn Nance; Roswell Office - Ritter, Barr & Co.
IPANM Legislative and Regulatory Agenda

Financial Overview

1999 Annual Meeting - Proposed Tamarron Hilton Resort at Durango, Colorado; August 5, 6, 7 Proposed IPANM Political Endorsements

9:00 to 9:30 Northwest Region Report

Tucker Bayless, IPANM Northern Vice-President

9:30 to 10:15 Proposal to NMOCD for Basin-Wide 80 Acre Increased Density in

the San Juan Mcsaverde

Brent Smolik, Burlington Resources

10:15 to 10:30 Coffee Break

10:30 to 11:00 Southeast/Permian Region Report

Frank Yates Jr., IPANM Southern Vice-President

	<b>7</b> 4000 G
Friday, August	: 7, 1998 - Continued
11:00 to 11:45	Federal Royalty in Kind Legislation (RIK)
	Charles Gentry, IPAA RIK Task Force
	David Blackman, Burlington Resources
•	Mark Murphy, IPANM Past President
12:00 to 1:30	Membership Luncheon
	Governor Gary Johnson
1:30 to 2:30	Access to Public Lands - Panel
	Ray Powell, Public Lands Commissioner
	Greg Bawers, Carisbad BI_M Manager
	Dan Girand, Mack Energy/IPANM
2:30 to 3:15	EMNRD and OCD Activity
•	Jennifer Salisbury, Secretary of EMNRD
	Lari Wrotenbery, OCD Director
3:15 to 3:30	Coffee Break
3:30 to 4:15	Deregulation of New Mexico Electric Utilities
	Ben Montoya, Chairman PNM
4:15 to 4:30	Closing Comments and Conference Evaluation
	Annual Awards Dinner at West Conference Center
6:30 to 7:30	Cocktail Party
7:30 to 7:35	Invocation and Introductions
7:35 to 7:50	Senator Jeff Bingaman
7:50 to 8:45	Dinner
8:45 to 9:00	Awards Presentations
9:00 to 9:45	Special Entertainment
	Very Funny Magic by Dennis Dubondt
	I'unctions will be held at the Inn of the Mountain Gods' meeting facilities located and the West Conference Center, 1.5 miles away. Shuttle service is provided to these
	and the west Conjerence Censer, 1.5 miles away. Shuttle service is provided to those early Recention will be held at the Museum of the Harre Jacated in Ruidara Danme.

locations. The President's Reception will be held at the Museum of the Horse, located in Ruidoso Downs.

### IPANM 1998 Annual Meeting

Participants (Listed alphabetically by ORGANIZATION)

<i>Y</i>	ization	Last Name	First Name	Spouse	Address	City	State	Zip	Phone
•		F	<b>A</b>		COSA Mallaniah			~~~	
		Emahoff	Steven		5831 Valkeith	Houston	TX	77096	F4F 50F 6
		Kryder	Barbara		P.O. Box 1000	Roswell	NM	86202	505-625-6
-	Cobinet Secretary of Envi	Maggiore	Peter		1190 St. Francis Dr.	Santa Fe	NM	87503	505-827-2
	Energy Company	Lanning December	David	Beveriee	105 S 4th Street	Artesia	NM	88210	505-748-4
•	Ruergy Company	Ragadale	Paul	Cindy	105 S. 4th Street	Artesie	NM	87125	505-748-4
	Production Company	Brewer	Scott	Michelle	200 N. Loraine, Ste 1222	Midland	TX	79707	915-867-9
-	noe Drilling Co.	Schalk	Steve		P.O. Box 26667	<b>Vipndreudne</b>	NM	87125	505-681-6
sista	nt to Governor	Hickok	Shannon	•					505-827-3
lanti	c Richfield	Anderson	Robert O.	<b>Barbera</b>	P.O. Box 1000	Roswell	NM	88202	505-625-6
torne	ry	Waggoner	WE		529 W. San Francisco	Senta Fe	NM	87501	505-983-3
WOOd	i, Maione, Turner & Sabi	Nelson	John		P.O. Drawer 700	Roswell	NM	88202	505-622-0
J Ser	vices	Gerainer	Mice		400 Pennsylvania, Ste. 990D	Roswell	NM	88201	505-622-0
ndm	Paribas	Liftman	Doug		1200 Smith Street, Sutte 3100	Houston	MM	77002	713-640-4
rylesi	Drilling Company	Bayless	Tucker	Karen	P.O. Box 2660	<b>Farmington</b>	NM	87499	506-326-3
njor	-Montin-Greer Drilling	Greer	Albert		4900 College Boulevard	Farmington	NM	67402	505-325-
ream	of Land Management	Bowers	Gery		101 E. Mermod	Carisbad	NM	86220	505-887-
rling	gion Resources	Alexander	Alan		P.O. Box 4289	Farmington	NM	<b>87499</b>	505-326-
rlin	ton Resources	Bahcock	841		P.O. Box 4289	Farmington	NM	57499	505-326-
rlin	tion Resources	Bleckman	David		P.O. Box <b>4289</b>	Farminglon	NM	87499	505-326-
rlinj	gion Resources	Smolik	Brent		P.O. Box 4289	Farmington	NM	87499	505-326-
100	General Partnerskip	Gorham	Berto	Barbera	P.O. Box 451	Albuquerque	NM	87103	505-843-
0	General Partnerskip	Gorhem	<b>Frank</b>	Rameay	P.O. Box 451	Albuquerque	MM	87103	505-843-
nco (	General Partnership	Gortnern	Mark	Ingrid	P.O. Box 451	Albuquerque	NM	87103	505-843-
inco (	General Partnership	Gorham	Tim	Susan	P.O. Box 451	Albuquerque	NM	87103	505-843-
nco (	General Partnership	Hajny	David	Laurie	P.O. Box 451	Albuquerque	NM	67103	505-843-
	General Partnerskip	Langon	Betty	Pat	P.O. Box 451	Albuquerque	NM	87103	505-843-
	General Partnership	Stewart	Rick	Robin	P.O. Box 451	Albuquerque	NM	<b>67103</b>	505-843-
	General Partnerskip	Usinger	Bud	Patsy	P.O. Box 451	Albuquerque	NM	87103	505-843-
	General Partnerskip	Widner	Jane	John	P.O. Box 451	Albuquerque	NM	87103	505-843-
	nas Bank	Bowen	Kathy	Greg	24 Grannway Plaza, Ste 1401	Houston	TX	77046	713-968-
-	us Bank	Burchard	Curtis	·	24 Greenway Plaza, Sta 1401	Houston	ΤX	87499	713-958-
-	o, Inc.	Luiner	Rabbie		P.O. Box 2197	Houston	TX	77252	281-293-
	Timbers Oil Company	Vermerberg	Vaughn		810 Houston Street, Suite 200		TX	76102	817-870-
	immons, Inc.	Byrom	John		3005 Northridge Dr., Ste L	Farmington	NM	87401	505-326-
	• • •	Parles	Jeff		3005 Northridge Dr., Ste L	Farmington	NM	87401	505-326-
	mmans, Inc.	McGee	Gary		20 N. Brondway, Suite 1500	Oldehorna City	OK	73102	405-552-
	Energy Corporation	Nichols	Larry	Polly	20 N. Brondwy, Suite 1500	Oldahoma City	OK	73102	405-552-
	Energy Corporation	Sallabury	Jennifer	,	2040 S. Pacheco	Senta Fe	NM	87505	505-627-
	or of EMNR	Poege	David	Karen	P.O. Box 420	Farmington	NM	87401	505-325-
-	Production Corporation	Tibbets	Phil	· 100 (8)	1001 Louisiana	Houston	TX	77002	713-757-
	o Energy Marketing	Enrgie	David		P.O. Box 2511	Houston	ΤX	77252	713-420-7
	o Field Services	Hoover	Cindy		614 Reilly Ave.		NM	87401	505-599-1
-	o Field Services	Ellott	Steve	Kathu	•	Farmington Downell		86202	505-622-5
	Oil Company			Kathy	P.O. Box 1355	Roswell	NM T~		
	Oil & Ranch	Kvasnicka	Sally		303 West Walf, Suite 1900	Midland	TX	79701	915-687-1

Tuesday, August 18, 1998

Page 1 of 3

Gover	may of New Mexico	-	Gary		outh copilor bragily alor than	Santa Fe	NM.		505-827-3024
	reposeum corporation		Milte			Roswell	NM		505-623-5053
	eco Inc.		Patrick			Solano Bench	CA		760-436-3691
	ijin Oit & Gus		Barbara			Roswell	NM		505-623-4618
	gin On a Gus	Schertz	Morris			Rosweli	NM		505-623-4618
	Mill Lettotema Corborage.		H. Loe			Roswell	NM	88202	505-623-1581
	ard Petroleum Corporation		Jeff			Roswell	NM	88202	505-623-1581
Harve	and Petroleum Corporation	Humber	Kerry	Susen		Roswell	NM	88202	505-623-1581
Harve	ery E. Yales Company	Yates	George			Roswell	NM	88201	505-623-6601
Indep	endent	Conine	Gary	Carol		Santa Fe	NM	87505	505-962-7381
Indep	rendant	Harrington	Geraid	_		Roswell	NM	88211	505-622-1550
<b>IPAA</b>	RIK Taskforce	Gentry	Charles	Geny		Artington	VA	22202	703-665-4111
IPAN	M	Nence	Tom		P.O. Bax 576	Santa Fe	NM	87504	505-982-3944
KHIL,	Inc.	Lae	Krute	Annie	P.O. Drawer 14688	Abuquerque	NM	87191	505-299-2200
KM F	Production Company	McCord	Kevin		P.O. Box 2406	Fermington	NM	57499	506-325-6900
KPM	G	Fleming	Joe Bob		P.O. Box 3939	Albuquerque	NM	87190	505-884-3939
Liber	ty Pump & Supply Compan	Daupres	Eddle	Crystal	P.O. Box 1386	Hobbs	NM	88241	505-393-9708
Lone	Star Mud, Inc.	Rogers	Doug	Susan	P.O. Box 50213	Midland	TX	79710	915-884-7446
Los A	Lamos National Labs		Donna Smith	Thomas	MS C331	Los Alemos	NM	87025	505-567-8940
Louis	s Dreyfus Natural Gas Corp	Welch	J <b>i</b> m	Tricia	, - ,	Oldehoma City	OK	73134	405-749-1300
Maci	k Energy Corporation	Brewer	Malt	Kelly	P.O. Box 980	Artesia	NM	88211	506-748-1288
Maci	k Energy Corporation	Carter	Crissa	Rodney	P.O., Box 960	Artesia	NM	88211	505-748-1288
Maci	k Buergy Corporation	Chase	Robert	Deb	P,O, Box 960	Artesia	NM	88211	505-748-1288
Mod	k Energy Corporation	Girand	Den	Jan	P.O. Box 960	Artesia	NM	88211	505-748-1288
4	Energy Corporation	Mitcheli	Marc	Debbie	P,O. Bak 980	Artecia	NM	88211	505-748-1288
Mall	on Oil Company	Ericleson	Donald M.		900 18th St., Sie 1700	Denver	CO	80202	303-293-2333
Mall	lan Oil Campany	<b>Fitzgeraid</b>	Kevin	Kathryn "	999 18th St., Ste. 1700	Denver	CO	80202	303-293-2333
	• •				999 18th St., Ste 1700	Denver			303-223-2333
Mali	ion Oil Campany	Mellon	George O.				CO	80202	
	• •	Jensen	Tom		P.O. Bax 2148	Santa Fe	NM	87504	505-982-1935
McE McE	ion Oil Compony Train Oil & Gas Properties Urain Oil & Gas Properties	Jensen McElvain	Tom Guy	Sharon	P.O. Box 2148 P.O. Box 2148	Santa Fe Santa Fe	MM MM	87504 87504	505-982-1935 505-982-1935
McE McE Merr	ion Oil Company Ivain Oil & Gas Properties Ivain Oil & Gas Properties rion Oil & Gas Energy Mar	Jensen	Tom Guy T. Greg	Susan	P.O. Box 2148 P.O. Box 2148 610 Reilly Ave.	Senta Fe Senta Fe Fermington	NM NM	87504 87504 87401	505-982-1935 505-982-1935 505-327-9801
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McE McE Marr Myce	ion Oil Company Ivain Oil & Gas Properties Ivain Oil & Gas Properties rion Oil & Gas Energy Mar	Jermen McElvain Merrion Turner	Torn Guy T. Greg Frank Yutes Malcom	Susan	P.O. Box 2148 P.O. Box 2148 610 Reilly Ava. P.O. Box 640 901 Main Street, 64th Floor	Santa Fe Santa Fe Fermington Artesia Dalles	MM MM MM MM XT	87504 87504 87401 88211 75202	505-982-1935 505-982-1935 505-327-9801 505-748-1471 214-508-1259
McE McE Merr Myce Natio	ion Oil Company Irain Oil & Gas Properties Irain Oil & Gas Properties Irain Oil & Gas Energy Mar o Industries, Inc. onsBank onsBank	Jersen McElvain Merrion Turner Worstell	Torn Guy T. Greg Frank Yates Malcom Earl	Susan	P.O. Box 2148 P.O. Box 2148 610 Reilly Ave. P.O. Box 840 901 Main Street, 64th Floor P.O. Box 2516	Santa Fe Santa Fe Farmington Artesia Dalles Houston	MM MM MM TX TX	87504 87504 87401 88211 75202 77252	505-882-1935 505-982-1935 505-327-9801 505-748-1471 214-508-1259 713-247-6926
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Tuesday, August 12, 1998

Page 2 of 3

	?NM	O'Brien	Tim		Alvarado Square MS-2610	Albuquerque	NM	87158	505-241-2674
		Sanders	Tommy		Alvarado Square - MS-2610	Albuquerque	NM	87158	505-241-2571
	70M	Woody	Babby		Alvarado Square - MS-2610	Albuquerque	NM	87158	505-241-2664
	PNM Chairman	Monitoye	B <b>enjam</b> in		Alvarado Square - MS-2824	Albuquerque	NM	87158	505-241-2754
	Press Secretary to Governor	Kinderweter	Dinne						505-827-3024
	Pro NM Energy, Inc.	Gallegos	Gene		460 St. Michael's Dr., #402	Santa Fe	NM	87505	505-988-4171
	Rep. Candidate for Attorney Gen	iginales	Cavid		529 W. San Francisco	Santa Fe	NM	87501	505-474-2880
	Ritter, Barr & Company	Garlinger	Pam		P.O. Box 1836	Roswell	NM	88202	505-622-2566
	Ritter, Barr & Company	Olvera	Francisco	Cinda	P.O. Box 1836	Roswell	NM	86202	505-622-8500
	Ritter, Barr & Company	Ritter	Bruce	Mary	P.O. 90x 1836	Roswell	NM	88202	505-622-8500
	Ritter, Barr & Company	Rogers	Karen		P.O. Box 1836	Roswell	NM	88202	505-622-8500
	Ritter, Barr & Company	Silva	Debbie		P.O. Box 1836	Roswell	NM	88202	505-622-2566
	Ritter, Barr & Company	Slebbins	John	Fran	P.O. Box 1836	Roswell	NM	88202	505-622-8500
	Robert Hamifin	Hannilin	Robert	Mardne	P.O. Box 218	Midlend	TX	79702	915-684-5352
	Robert L. Bayless, Producer	Baylens	Robert	Bernice	P.O. Box 168	Farmington	NM	87499	50\$-326-2659
	Saga Petroleum	Farmer	Chuck	Colleen	415 W. Wall, Ste. 835	Midland	TX	79701	915-684-4293
	Schlumberger Wireline & Testin	Brown	Mile		414 E. College	Rosweil	NM	88201	505-622-9090
	Schlumberger Wireline & Testin	Feetherstone	Joe		414 E, College	Roswell	NM	88201	505-622-9080
	Schlumberger Wireline & Testin	Fisher	Jim	i <b>G</b> m	414 E, College	Roswell	NM	88201	505-622-0080
	Schlumberger Wireline & Testin	Wentworth	Dennis		414 E. College	Roswell	NM	88201	505-622-9080
	Southern Regional Director for	Corn	Poé		3010 N. Washington	Roswell	NM	88201	505-623-1747
	State Land Office	Kehoe	Larry		P.O. Bax 1148	Santa Fe	NM	87504	505-827-5744
	State Land Office	Turpin	Charles		P.O. Box 1148	Senta Fe	NM	<b>87504</b>	505-827-5744
	Stat-Representative	Dene	Dara		6574 Cherokee Road	Deder	NM	88230	505-624-0638
1	motor	Adair	Red	Dane	P.O. Box 95	Roswell	NM	88202	505-627-8372
•	Strata Production Company	Garcia	Carol		P.O. Box 1030	Roswell	NM	88202	506-622-1127
	Strata Production Company	Morgan	Frank	Robyn	P.O. Bax 1030	Roswell	NM	88202	505-822-1127
	Strata Production Company	Murphy	Mark	Susen	P.O. Box 1030	Roswell	Ned	88202	505-622-1127
	Strate Production Company	Rogers	Chert	Lany	P.O. Box 1030	Roswell	NM	88202	505-622-1127
	Strata Production Company	Smith	Jan	Virgil	P.O. Bat 1030	Roswell	NM	88202	505-622-1127
	Strategic Technology Resources	Martin	Deve	Dorothy	P.O. Box 2545	Rosweii	NM	88201	505-822-0937
	Survailey Energy	Anderson	Phelps	Ann	108 E. Third, Sta. 406	Roswell	NM	88202	506-625-8152
	Survailey Energy	Hunnicutt	Larry		108 E. Third, Ste. 408	Roswell	NM	88201	505-625-9152
	Taurus Exploration U.S.A., Inc.	Niederhofer	Joe D.	Darla	2196 Bloomfield Highway	Farmington	NM	87401	505-326-6131
	Thompson Engineering & Produ	Thompson	Paul	Lecie	7415 E. Main St.	Fermington	NM	87402	505-327-4892
	Tristar Gas Marketing Company	Eade	Ron		100 N.E. Loop 410, Suite 1000	San Antonio	TX	78218	214-373-2524
	U.S. Senator	Bingaman	Jeff		2nd & C St. NE	Washington	DC	20510	202-224-5521
	Vastar Resources, Inc.	Reddin	Michael		15375 Memorial Dr., #3608	Houston	TX	77079	281-584-3354
	Williams Field Service	Brown	Charles	Janet	P.O. Bax 58900	Saft Laite City	UT	84158	801-584-6765
	Williams Field Service	Secret	David	P.J.	P.O. Box 58900	Salt Laks City	UT	84158	801-584-7010
	Yates Petroleum	Gideon	Delbert	Glenda	105 S. 4th	Artesia	NM	88210	505-748-4407
	Yates Petroleum	Moran	Chuck		105 S. 4th St.	Artesis	NM	88210	505-748-4407
	Yweea Energy, Inc.	Devidson	James	Sandra	P.O. Box 1932	Midland	TX	79702	915-682-6482

Tuesday, August 18, 1998

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SAN JUAN DIVISION

August 27, 1998

Mr. Richard Griebling
Director, Colorado Oil & Gas Conservation Commission
The Chancery Building
1120 Lincoln Street, Ste. 801
Denver, CO 80203-2136

Re:

Bianco Mesaverde Pool

San Juan/Rio Arriba County, New Mexico

Dear Mr. Griebling:

Burlington Resources Oil & Gas Company has been compiling subsurface data over the preceding twelve months to further quantify and analyze the Blanco Mesaverde Gas Pool in New Mexico. Based on this new data, Burlington is preparing for a hearing before the New Mexico Oil & Gas Conservation Division to request pool rule changes in the Blanco Mesaverde Pool. The proposed rule change would provide for up to four (4) wells per drilling and producing unit and possibly address the vertical limits of the pool.

Enclosed for your review is a copy of a technical presentation, with speaker notes, which Burlington has previously given to industry to gather support for the proposed rule changes. Mr. Frank Chavez, NMOCD, will be hosting a final industry review on September 16, 1998 in Farmington to discuss the rule changes. If you have any questions regarding the enclosed presentation notes, Burlington's conclusions, or the proposed rule changes prior to the industry meeting, to which you will be invited, please feel free to contact me.

Respectfully,

John F. Zent Land Manager

End.

XC:

file

A. Alexander

D. Cook

Mr. Frank Chavez, NMOCD



SAN JUAN DIVISION August 26, 1998

Mr. Robert Santistevan
Director, Energy Resource Division
Southern Ute Indian Tribe
P. O. Box 737
Ignacio, CO 81137

Re:

Blanco Mesaverde Pool

San Juan/Rio Arriba County, New Mexico

Dear Mr. Santistevan:

Burlington Resources Oil & Gas Company has been compiling subsurface data over the preceding twelve months to further quantify and analyze the Blanco Mesaverde Gas Pool in New Mexico. Based on this new data, Burlington is preparing for a hearing before the New Mexico Oil & Gas Conservation Division to request pool rule changes in the Blanco Mesaverde Pool. The proposed rule change would provide for up to four (4) wells per drilling and producing unit and possibly address the vertical limits of the pool.

Enclosed for your review is a copy of a technical presentation, with speaker notes, which Burlington has previously given to industry to gather support for the proposed rule changes. Mr. Frank Chavez, NMOCD, will be hosting a final industry review on September 16, 1998 in Farmington to discuss the rule changes. If you have any questions regarding the enclosed presentation notes, Burlington's conclusions, or the proposed rule changes prior to the industry meeting, to which you will be invited, please feel free to contact me.

Respectfully,

Yohn F. Zent Land Manager

Encl.

XC:

file

A. Alexander

D. Cook

Mr. Frank Chavez, NMOCD



July 25, 1996

San Juan 29-7 Unit Working Interest Owners

Re: Working Interest Owners Meeting

August 27, 1996, 10:00 a.m. Burlington Resources Office

3535 East 30th Street Farmington, New Mexico

Dear Interest Owner:

This is to advise of a working interest owner meeting that is planned for the referenced date.

The main purpose of the meeting is to present technical justification for a pilot program to increase the density for Mesaverde wells. Your understanding of our proposal is desired prior to processing with regulatory agencies for approval. Your formal approval would be sought following the meeting.

If you desire any other discussion topics, please advise.

The meeting is expected to last 2-3 hours with lunch being provided.

Please advise by August 20, 1996, if you will be in attendance by executing and returning a copy of this letter.

If there are questions, please call me at (505) 326-9760.

Yours very truly

Linda Donohue Senior Landman

LD/cj San Juan 29-7:5:0

<b>COMPANY</b>	NAME				
WILL NOT	BE ABLE	TO ATTEN	I <b>D</b>		
WILL ATTE	ND WITH	THE FOL	LOWING	REPRESE	NTATIVES:
		·			
			=		

### SAN JUAN 29-7 UNIT WORKING INTEREST OWNERS

A. Lewis Soens

Amoco Production Company

Barbara Wall Johnson

**Bolack Minerals Company** 

Burlington Resources Oil & Gas Company

C. W. Bolin

Cathy Wall Pound

Citadel Energy Inc.

Conoco Inc.

Dan H. Bolin

Donald S. Ironside

Douglas Cameron McLeod

**Dugan Production Company** 

Estate of Dolores P. Bolin

Final Four LLC

First Interstate Bank for David A. Pierce

First Interstate Bank for Dirk V. Reemtsma

Four Star Oil & Gas Company

Gregory Wall

Ida O. Hancock

James M. Raymond Ind. & as Trustee for Corinne M. Gay & Maydell M. Mast Trusts

John A. Wali

John S. Catron

Lance B. Reemtsma

Mary Jane Oshea Estate

Michael D. Brown

Moore Loval Trust

Pamela Ann Coats

Pamela Pollock Bruns

Pat S. Bolin

Perry H. Pollock

Phillips Petroleum Company

Phillips-San Juan Partners LP

R. L. Bolin

Robert Paul Soens

Roderick A. Ironside

Sam G. Wall III

Shirley M. Wall Gauldin

T. H. McElvain Oil & Gas Limited Partnership

Thomas B. Catron

**Thomas Pollock** 

Vastar Resources, Inc.

Virginia M. Wall Goret

Virginia Oliver Hatfield

Williams Production Company

### **SIGN-IN SHEET**

San Juan 29-7 Unit Working Interest Owner Meeting 10:00 a.m., August 27, 1996 Farmington, New Mexico

### ATTENDEES:

Company/Owner:	Representatives:
Amoco Production Company	Alla Jukins  Jen Stoloy  Jeni Jostin  David Admise
Conoco, Inc.	Porte Powse
Dugan Production Corporation	Journa Stugar
Four Star Oil & Gas Company	Philip W. Smith  Bary Oberhausley
Phillips Petroleum Company	W.D. Japp SEAN C. HELTON
T. H. McElvain Oil & Gas	LO. VAN RYAN Searce Brooms
Vastar Resources, Inc.	de Carlella
Williams Production Company	Mike Turnbaugh
Burlington Resources O & G Company	Cash Southwick XXXX RAYBON
Finde Donohue	Frank Soidel BRUCE BOVEL
lacte Mireals Conjung Fichers Tully	Rob Stanfield  MRK M'GOVEN  Mile Brown  Anthony Smith  Sean Woodweeten  Ling Sen
	Kan Johnson ALAN ALEXANDER Bobby Tennedy Rose Construction

### BURLINGTON RESOURCES

SAN JUAN DIVISION

July 13, 1998

Blanco-Mesaverde Operators (see attached list)

RE: JUNE 16, 1998 MEETING INCREASED DENSITY STUDY BLANCO-MESAVERDE POOL

### Ladies and Gentlemen:

Burlington Resources Oil & Gas Company would like to thank all of the Blanco-Mesaverde operators that attended our Increased Density Study meeting held June 16, 1998, for their participation and contribution. A list of the attendees is enclosed for your information.

If you have any further questions regarding this matter, please contact the undersigned at (505) 326-9757.

Sincerely,

Maclorra Blakley

Alan Alexander

Senior Land Advisor

AA:mb

MESAVERDE INCREASE JENSITY MEETING 6/16/98
ATTENDANCE SHEET

NAME	COMPANY	TITLE	PHONE
1 Frank Corlam	Cine General Partricks	cfui	505 8436149
2 Jours Sr 126	MELLAND ON 1 Sas		Jos: 573-09:5
3 George B. Brame	` ' '	1P, Land	505-982-1935
4 Mike Larimer	Phillips	Reservoir Engineer	505-579-3459
5 TOAN AIMETINS	P 1111 (115 S	ENGINEE R	505. 32 5. 6561
6 - meta Denchuse C	Burling len Kykurce	Jandman	002 300 4460
7 Gary Kump	De von toere	Sr Resigner Oner	405-552-4525
8 CHARLES SPEER	DEJON ENERGY COLP. 1	DISTRICT LANDMAN	
9 DAMEL CREEKY	VASTAR RESOURCES	Reserver Engineer	(281) 584-3316
10 KICHARD CORORAN	TAURUS EXPLORATION	LANDANAN O	505 325-6800
11 Cle D. Mimor Hol Ten	TAMANS CXPLUMIN USA.	GLONDA HANAGEN	505 - 345-6800
12 LALLE E HAVELYON	1502 1 2011 CAN 1500	1. 9016 111111	316 62 5-5-7/2
13 Per Johnson	Koch Exploration Co.	Coeptins Margel	505-334-9111
14 28 - 15 - 0 M	hood It shooting	Ch. of Enguerale	216-828-3242
15 Copy a. Huston	Omace-	Kemure Mandous.	302-150-50%
11 2 1 1 1 21 2 1		6 AMINGERATION	23-52- 1612
17 Mark H. Yamasak;	A mac D	Engineer	203-836-584/
18 / July 11. 10 Miles		Luniasi	303 - 315 - 4333
19 Steve TREFZ	Anoco	CHISIDE OPERATED GRUP	303-830-4520
20 Sugar Milanter	Anoco	ENGINER	305 BSO 5736
21 Barry Voigt	Cross Timbers	Received Engineer	317 870-8462
2	Coss Trubers	M- openhions	505 632-5200
23 Kut Fegnelins	Dugin	(Scolegist	Se5-325-164
24 MARK KOVAR	Texaco	Englaper	505 325-4397
25 Philip W. Smith	Texaco	Engineer	303 - 793 - 4526
26 Dove Chark	BR	Gerlagist	205-316-9762
27 Mare Syandon	Conoco	Staff Engr	915-686-5499
28 MARK STODOLA	PHILLIPS	REPRUDIA ÉMUR.	95- 599-3455
29 Pariey MESKING	Course	Rad Enge	715-685-6511
30 1000 0000	Caroco	Geslos	915-686-6111
31 KINDA KEAZAR	CoNoce	Land man	915/181-5582

MESAVERDE INCREASE ENSITY MEETING 6/16/98
ATTENDANCE SHEET

	NAME	COMPANY	TITIE	PHONE
2	(00	7, 60	TOWA TO L	2277-980/02/14
25	Verige hange	menion al las	and sheet is to be	26/100/00/17
33	TANK TINDAGSON	WILLIAMS PERSON DE 712N	Acert	327-4892
34	5 Ames STRICKIER	Ringlinoton	SIL SAME LAWA	306.92 <b>56</b>
35	CILBE ALEXANDERS	तियत्राम ६ पटा स्	74WD	505.324-9757
98	SHANDED MICHELS	BERLINGTON	7400	505-519-4010
37	SEAN WOOGUERTON	BUALLNG TON	RES. ENGINEER	505-324-9837
38		BURLINGTON	751901037	505-324-9782
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### BLANCO MESAVERDE OPERATORS

COMMENTS	Phone Message		Letter	Phone Message	rax	Letter	Phone Message		Letter	Letter	Letter		Phone Message	Letter	Phone Message	Letter		Phone Message
YES/NO ATTENDEES COMMENTS	9		<b>,</b>	3 or 4	•	ო	7		ന	-	60			<b>~</b>	2	<del>,</del>		7
ÆS/NO	Yes		Yes	Yes	5	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes	Yes		Yes
NAME	Steve Trefz		Frank Gorham	Mark Shannon	(harles Speer	Thomas Dugan	Phil Smith		Lance Harmon	George Sharpe	Mike Larimer		Dan Crosby	M.J. Turnbaugh	Rich Cochran	Barry Voigt		George Broom
TELEPHONE	303-830-4520y		505-843-6149y	915-686-5499y	11018 562 5011	505-325-1821y	303-793-4784y	•	316-828-5910y	505-327-9801y	505-599-3400y	•	281-584-3316y	918-588-2000y	505-325-6800y	817-870-2800y		505-982-1935y
COMPANY	AMOCO PRODUCTION CO	BLACKWOOD & NICHOLS LTD PTR	CINCO GENERAL PARTNERSHIP	CONOCO INC	<b>DEVON ENERGY CORPORATION</b>	DUGAN PRODUCTION CORP	FOUR STAR OIL & GAS CO	GREAT WESTERN DRILLING CO	KOCH EXPLORATION CO	MERRION OIL & GAS CORP	PHILLIPS PETROLEUM CO NW	UNION OIL CO OF CALIFORNIA	VASTAR RESOURCES INC	WILLIAMS PRODUCTION COMPANY	TAURUS EXPLORATION	CROSS TIMBERS OIL COMPANY	KELLAHIN & KELLAHIN	MCELVAIN OIL & GAS
ITEM	;;	7	က်	4;	ιĊ	9	7.	∞ <b>i</b>	6	10.	. 11.	12.	13.	14.	15.	16.	17.	18.

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BURLINGTON RESOURCES

SAN JUAN DIVISION

file: Hearings

May 26, 1998

List of Operators Mesaverde Formation

RE: BLANCO MESAVERDE POOL INCRESED DENSITY STUDY

Dear Sirs:

Burlington Resources Oil & Gas Company will be conducting a meeting at our West Building office located at 3535 East 30th Street on June 16, 1998 from 9:00 a.m. until 12:00 noon. The meeting will take place in the 4th floor conference room to discuss the current status of Burlington's Mesaverde Increased Density Study. The purpose of this study is to evaluate the current level of recovery of hydrocarbons from the reservoir and to discuss the need to increase the density of wells to enhance recovery.

Based upon the results to-date of our pilot increased density projects, feedback from Mesaverde Pool operators and discussions resulting from the June 16<sup>th</sup> meeting, we anticipate filing an application with the New Mexico Oil & Gas Conservation Division to increase the Pool density (up to four (4) wells per 320 acre proration unit) sometime in the 4<sup>th</sup> quarter of this year.

Please find attached a "work in progress" map reflecting our analysis of current drainage of wells in the study area, proposed criteria for amending the Pool rules and an acreage listing of the proposed "Administrative Areas" (see criteria for definitions of Administrative Areas).

If you would like to attend this meeting, please respond either by phone at (505) 326-9795 or by signing and returning a copy of this letter to the attention of Maclovia Blakley in the Land Department.

If you have any questions regarding this matter, please contact the undersigned at (505) 326-9757.

Sincerely,

Alan Alexander
Senior Land Advisor

AA:mb

xc: Bill Babcock
Sean Woolverton
Shannon Nichols

I WILL \_\_\_\_, WILL NOT \_\_\_\_ ATTEND THE BLANCO MESAVERDE
POOL INCRESED DENSITY STUDY MEETING TO BE HELD JUNE 16, 1998.

NAME: \_\_\_\_\_
COMPANY: \_\_\_\_

### BLANCO MESAVERDE OPERATORS

### ITEM OPERATORS

- 1. AMOCO PRODUCTION CO
- 2. BLACKWOOD & NICHOLS LTD PTR
- 3. CINCO GENERAL PARTNERSHIP
- 4. CONOCO INC
- 5. DEVON ENERGY CORPORATION
- 6. DUGAN PRODUCTION CORP
- 7. FOUR STAR OIL & GAS CO
- 8. GREAT WESTERN DRILLING CO
- 9. KOCH EXPLORATION CO
- 10. MERRION OIL & GAS CORP
- 11. PHILLIPS PETROLEUM CO NW
- 12. UNION OIL CO OF CALIFORNIA
- 13. VASTAR RESOURCES INC
- 14. WILLIAMS PRODUCTION COMPANY
- 15. TAURUS EXPLORATION
- 16. CROSS TIMBERS OIL COMPANY
- 17. KELLAHIN & KELLAHIN

### Blanco Mesaverde Pool Rules

### Suggested Criteria for Implementation of Rule Change To Allow for Increase in Density

- Increase the density to four (4) wells per Blanco Mesaverde proration unit.
  - Proration unit will continue to consist of 320 acres more or less.
  - Increase in density will apply to the entire Mesaverde Pool subject to restrictions in specified areas referred to a "Administrative Areas".
- Exclude Administrative Areas from automatic increase in density.
  - Administrative areas to be specifically defined by Section (including Qtr/Qtr) / Township / Range.
  - Establish an NMOCD application process to allow operators the opportunity to increase density in Administrative Areas.
  - Application process would involve certified notice to encroach upon operators and Santa Fe NMOCD.
  - An application to increase density in Administrative Areas would be approved by NMOCD if encroached upon operators do not object within 20 days from receipt of notice by operator.
  - Objection from an encroached upon operator would cause an NMOCD examiner hearing to be docketed so that evidence can be presented on the merits.
  - Operator applying for increase density in Administrative Area could proceed with an examiner hearing or withdraw the application.
  - NMOCD examiner could docket an examiner hearing for increase density in Administrative Areas on his own initiative.
- Establish footage setback requirements for increase density wells.
  - Increase density well (non-Federal Unit drill blocks) could be no closer than 330' to the East and West lines of the proration unit, nor could they be closer than 660' to the North and South lines of the proration unit.
  - Internal proration unit setback (non-Federal Unit) would be 10' from interior quarter/quarter or half section lines.
  - Setbacks inside Federal Units would be 10' from all subdivision lines except in a one-half mile buffer zone around the perimeter of the Unit were the setback for non-Federal Unit drill blocks would apply.
  - Setback requirements (Federal Unit or non Federal Unit drill blocks) would be identical for approved increase density in the Administrative Areas
  - No more than two (2) wells may exist in a quarter section.
- Previously approved non-standard proration units would be grandfathered for increased density wells.
- Exceptions to the Blanco Mesaverde Pool Rules for all increase density well locations
  can be approved by administrative application to NMOCD Santa Fe upon 20 day
  certified notice to encroached upon operator.
- NMOCD Santa Fe can grant exceptions or revisions to general Blanco Mesaverde Pool
  Rules after hearing based upon certified notice to Blanco Mesaverde Pool
  Operators.

### MESAVERDE INCREASED DENSITY ADMINISTRATIVE ENTRY AREAS DEPENDENT RE-SURVEY ACREAGE

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Sem   John   Loss 5 (95.37), 6 (26.33), 7 (25.19), 6 (26.05), 9 (14.12), 10 (14.00), 11 (13.88), 12 (31.09), 13 (32.28), 14.080, 11 (15.17), 25.084, 14.12), 10 (14.00), 11 (13.88), 12 (31.09), 13 (32.28), 10 (14.24), 11 (31.24), 12 (23.09), SE4, SC SWM, APRTS OF TRACT 30, 8 4 (32.28), 10 (14.24), 11 (31.24), 12 (23.09), SE4, SC SWM, APRTS OF TRACT 40, 8 4 (32.28), 10 (14.29), 11 (31.24), 12 (23.09), SE4, SC SWM, APRTS OF TRACT 40, 8 4 (32.28), 10 (14.20), 11 (31.24), 12 (23.09), SE4, SC SWM, APRTS OF TRACT 40, 8 4 (32.28), 10 (14.20), 11 (31.24), 12 (23.09), SE4, SC SWM, APRTS OF TRACT 40, 8 4 (32.28), 10 (14.20), 10 (14.20), 11 (31.24), 12 (23.09), SE4, SC SWM, APRTS OF TRACT 40, 8 4 (32.28), 10 (17.90), WZ SE4, SWM4, NAW4 NAW4, SC SWM, APRTS OF TRACT 40, 8 4 (32.28), 10 (17.90), WZ SE4, SWM4, NAW4 NAW4, SC SWM, APRTS OF TRACT 40, 11 (17.28), 2 (18.01), 3 (18.07), 4 (18.15), WZ E72, WZ SE4, SWM4, NAW4 NAW4, SC SWM, APRTS OF TRACT 40, 11 (17.28), 2 (18.01), 3 (18.07), 4 (18.15), WZ E72, WZ SE4, SWM4, NAW4 NAW4, SC SWM4, NAW4 NAW4, NAW4 NAW4, NAW4 NAW4, NAW4 NAW4, NAW4 NAW4, NAW4, NAW4 NAW4,	29N	06W	1 2		638.36
29N   09W   4  ALL   - Lobs 5 (17.11), 6 (13.34), 7 (13.58), 8 (9.50), 9 (14.35), 10 (14.24), 11 (31.24), 12 (23.09), SE4, SC, SWM-A, PARTS OF TRACT 40 & 4.1				ALL - Lots 5 (35.37), 6 (26.33), 7 (26.19), 8 (26.05), 9 (14.12), 10 (14.00), 11 (13.88), 12 (31.09), 13	640.19
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29N 09W   11   ALL - Let 1 (20.34), E2 NWW, SWW, NWW, EZ, SWW, PORTION OF THE NEW SZEW, OWN 16, 500, 2 (15.40), 3 (16.50), 4 (15.60), 5 (15.20), 6 (17.90), W/Z SEM, SWW, NWW, NWW, SEM, SWW, NWW, NWW, SEM, SWW, SWW, SWW, SWW, SWW, SWW, SWW, SW	29N	05W	1 4		639.26
12   ALL - Lubs 1 (8-50), 2 (15-40), 3 (18-50), 6 (12-30), 6 (17-30), W/2 SE/4, SW/4, NW/4 NW/4, SZ SZ NW/4, PART OF TRACT 37	2011	DEM	11		640
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129N   07W   25 ALL   28N   07W   36 ALL   28N   28N   36N	- }-				640
29N   07W   26   ALL   Lots 1 (42.24), 2 (41.80), 8 (28.84), 9 (11.46), 10 (12.86), 11 (30.77), 12 (33.71), 13 (13.99), 14   14   15   15   15   15   15   15	129N		7	ALL	640
29N 09W 6 ALL - Loss 1 (42.24), 2 (41.90), 8 (28.84), 9 (11.45), 10 (12.66), 11 (30.77), 12 (33.71), 13 (13.99), 14 (15.33), 15 (38.36), 52 NE4. SE4 29N 09W 1 ALL - Loss 5 (43.64), 6 (43.56), 7 (43.52), 8 (43.45), 9 (42.52), 10 (42.50), 11 (42.43), 12 (42.40), S/2 29N 09W 2 ALL - Loss 1 (39.95), 2 (40.65), 3 (41.35), 4 (42.05), S/2 N/2, S/2 30N 05W 31 ALL 30N 06W 7 ALL 30N 06W 17 ALL 30N 06W 18 ALL 30N 06W 19 ALL 30N 06W 19 ALL 30N 06W 19 ALL 30N 06W 20 ALL 30N 06W 12 ALL - Loss 1 (28.99), 2 (23.29), 3 (25.99), SW/4 SW/4, N/2 SW/4, N/2 PART OF TRACT 42 & 43 30N 06W 22 ALL 30N 06W 22 ALL 30N 06W 22 ALL 4 Loss 1 (23.79), 2 (10.34), NY/4 SW/4, N/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 06W 26 ALL 30N 06W 27 ALL - Loss 1 (10.32), 2 (28.27), 3 (28.99), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), S/2 50N 06W 30 ALL 30N 06W 30 ALL 30N 06W 30 ALL 30N 06W 31 ALL 50S 1 (10.32), 2 (28.27), 3 (28.90), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), S/2 50N 06W 32 ALL 50S 1 (10.34), 3 (3.96), 4 (31.01), 5 (22.42), 8 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4, SW/4, SW/4, SW/4, PART OF TRACT 42 & 43 30N 06W 32 ALL 50S 1 (35.49), 2 (25.57), 3 (28.65), 4 (31.01), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4, PART OF TRACT 47 30N 06W 33 ALL - Loss 1 (17.50), 2 (17.54), 3 (17.55), 4 (17.52), W/2 E/2, W/2 30N 07W 31 ALL - Loss 1 (17.50), 2 (17.54), 3 (17.55), 4 (17.52), W/2 E/2, W/2 30N 07W 31 ALL - Loss 1 (18.87), 2 (7.85), 3 (11.26), NW/4, E/2, PART OF TRACT 47 30N 07W 31 ALL - Loss 1 (18.87), 2 (7.85), 3 (11.26), NW/4, E/2, PART OF TRACT 5 40 & 41 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 16 ALL 30N 07W 17 ALL 30N 07W 17 ALL 30N 07W 18 ALL 3					640
(15.33) .15 (38.38) .9/2 NE/4 . SE/4		_	3	ALL 1-4-1 (42.24) 2 (41.60) 8 (28.60) 9 (11.45) 10 (12.60) 11 (30.77) 12 (33.71) 13 (13.90) 14	506.79
29N 09W 1 ALL - Lots 5 (43.64), 6 (43.56), 7 (43.52), 8 (43.45), 9 (42.52), 10 (42.50), 11 (42.43), 12 (42.40), S/2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	29N	CEAA	١,		330.73
29N 09W 2 ALL - Lobs 1 (39.95), 2 (40.65), 3 (41.35), 4 (42.05), S/2 N/2, S/2 30N 05W 7 ALL 30N 05W 7 ALL 30N 05W 17 ALL 30N 05W 18 ALL 30N 05W 18 ALL 30N 05W 18 ALL 30N 05W 20 ALL 30N 05W 21 ALL - Lobs 1 (26.99), 2 (23.29), 3 (26.99), SW/4 SW/4, N/2 SW/4, N/2 PART OF TRACTS 42 & 43 30N 05W 21 ALL - Lobs 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 05W 22 ALL - Lobs 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 05W 27 ALL - Lobs 1 (10.32), 2 (26.27), 3 (26.99), 4 (13.00), 5 (29.82), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 05W 28 ALL - Lobs 1 (10.32), 2 (25.27), 3 (26.99), 4 (13.00), 5 (29.82), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 05W 29 ALL 30N 05W 30 ALL 30N 05W 31 ALL - Lobs 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 8 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 05W 31 ALL - Lobs 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 8 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 05W 31 ALL - Lobs 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 8 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 05W 35 ALL - Lobs 1 (35.70), 2 (25.57), 3 (28.69), 4 (31.10), 5 (22.42), 8 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 05W 36 ALL - Lobs 1 (35.70), 2 (25.57), 3 (28.54), 4 (31.10), 5 (22.42), 8 (33.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 05W 36 ALL - Lobs 1 (35.70), 2 (25.57), 3 (28.54), 4 (31.10), 5 (22.42), 8 (32.42), 2 (22.22), 2 (23.22), 3 (2	29N	OPW	1-,	ALL - Lots 5 (43.64), 6 (43.58), 7 (43.52), 8 (43.45), 9 (42.52), 10 (42.50), 11 (42.43), 12 (42.40), S/2	664.04
30N 05W 31 ALL 30N 05W 8 W/2 30N 05W 17 ALL 30N 05W 17 ALL 30N 05W 18 ALL 30N 05W 19 ALL 30N 05W 20 ALL 30N 05W 21 ALL-Lote 1 (28.99), 2 (23.29), 3 (28.99), SW/4 SW/4, N/2 \$W/4, N/2, PART OF TRACTS 42 & 43 30N 05W 22 ALL 30N 05W 22 ALL-Lote 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 05W 25 ALL 30N 05W 27 ALL-Lote 1 (10.32), 2 (25.27), 3 (26.99), 4 (13.00), 5 (29.52), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 05W 27 ALL-Lote 1 (10.32), 2 (25.27), 3 (26.99), 4 (13.00), 5 (29.52), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 05W 22 ALL 30N 05W 32 ALL 30N 05W 33 ALL-Lote 1 (35.21), 2 (25.50), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 05W 33 ALL-Lote 1 (35.07), 2 (13.49), 3 (8.95), 4 (31.01), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4, PART OF TRACT 47 30N 05W 33 ALL-Lote 1 (35.07), 2 (13.49), 3 (8.95), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 05W 33 ALL-Lote 1 (35.09), 2 (25.57), 3 (26.59), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 05W 35 ALL-Lote 1 (35.09), 2 (35.57), 3 (36.95), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 05W 35 ALL-Lote 1 (35.09), 2 (35.57), 3 (36.95), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 05W 35 ALL-Lote 1 (35.09), 2 (35.57), 3 (36.95), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 05W 35 ALL-Lote 1 (35.09), 8 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 2 ALL-Lote 1 (15.57), 2 (7.85), 3 (11.25), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W	<u> </u>		1		ļ
30N 06W 7 ALL 30N 06W 17 ALL 30N 06W 19 ALL 30N 06W 19 ALL 30N 06W 20 ALL 30N 06W 20 ALL 30N 06W 21 ALL - Lots 1 (28.90), 2 (23.29), 3 (26.99), SW/4 SW/4, N/2 SW/4, N/2 PART OF TRACTS 42 & 43 30N 06W 22 ALL - Lots 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 06W 27 ALL - Lots 1 (34.06), 2 (13.10), 3 (34.23), SW/4 NW/4, SW/4, E/2, PART OF TRACT 43 30N 06W 28 ALL - Lots 1 (10.32), 2 (28.27), 3 (26.99), 4 (13.00), 5 (23.62), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 28 ALL - Lots 1 (10.32), 2 (28.27), 3 (26.99), 4 (13.00), 5 (23.62), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 30 ALL 30N 06W 30 ALL 30N 06W 31 ALL - Lots 1 (35.21), 2 (25.80), 3 (25.88), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 31 ALL - Lots 1 (31.07), 2 (13.49), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, E/2, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (26.46), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (26.46), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 36 ALL - Lots 1 (16.87), 2 (7.86), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 3 E/2 - Lots 5 (39.39), 6 (39.35), 7 (39.33), 6 (39.29), S/2 N/2, S/2 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 16 ALL 30N 07W 16 ALL 30N 07W 17 ALL 30N 07W 16 ALL 30N 07W 17 ALL					644
30N 06W 8 W/Z 30N 06W 18 ALL 30N 06W 18 ALL 30N 06W 19 ALL 30N 06W 20 ALL 30N 06W 22 ALL 30N 06W 26 ALL 30N 06W 27 ALL 40s 1 (34.05), 2 (10.34), NW/4 SW/4, NE/4 SW/4, NZ, SE/4, PART OF TRACT 43 30N 06W 27 ALL 40s 1 (10.32), 2 (26.27), 3 (26.99), 4 (13.00), 5 (29.82), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 28 ALL 30N 06W 29 ALL 30N 06W 29 ALL 30N 06W 30 ALL 30N 06W 30 ALL 30N 06W 31 ALL 4.0s 1 (35.21), 2 (25.80), 3 (25.88), 4 (30.39), N/2 S/Z, N/Z, PART OF TRACT S 40 & 41 30N 06W 31 ALL 4.0s 1 (35.21), 2 (25.80), 3 (25.88), 4 (31.10), 5 (22.42), 6 (13.44), W/Z NE/4, NW/4, N/Z SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL 4.0s 1 (35.49), 2 (26.57), 3 (28.45), 4 (31.10), 5 (22.42), 6 (13.44), W/Z NE/4, NW/4, N/Z SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL 4.0s 1 (35.49), 2 (26.57), 3 (28.45), 4 (31.01), E/Z W/Z, E/Z, PART OF TRACT 47 30N 06W 36 ALL 5.0s 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.52), W/Z E/Z, W/Z 30N 07W 36 ALL 5.0s 1 (16.87), 2 (7.56), 3 (11.28), NW/4, E/Z, PART OF TRACT 5 40 & 41 30N 07W 16 ALL 5.0N 07W 13 ALL 5.0N 07W 13 ALL 5.0N 07W 15 ALL 5.0N 07W 17 ALL 5.0N 07W 16 ALL 5.0N 07W 17 ALL 5.0N 07W 1	_				640
30N 06W 17 ALL 30N 06W 18 ALL 30N 06W 20 ALL 30N 06W 21 ALL - Lobs 1 (28.90), 2 (23.29), 3 (28.90), SW/4 SW/4, N/2 SW/4, N/2 PART OF TRACTS 42 & 43 30N 06W 22 ALL - Lobs 1 (23.70), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 06W 23 ALL - Lobs 1 (34.05), 2 (13.10), 3 (34.23), SW/4 NW/4, SW/4, E/2, PART OF TRACT 43 30N 06W 28 ALL - Lobs 1 (34.05), 2 (28.27), 3 (26.90), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), S/2 SW/4, SW/4 SE/4, E/2 SE/4, PART OF TRACT 42 & 43 30N 06W 29 ALL 30N 06W 30 ALL 30N 06W 31 ALL - Lobs 1 (35.21), 2 (25.80), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 32 ALL 30N 06W 33 ALL - Lobs 1 (35.21), 2 (25.80), 3 (25.68), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL - Lobs 1 (35.70), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 06W 36 ALL - Lobs 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 36 ALL - Lobs 5 (39.33), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3 E/2 - Lobs 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 3 E/2 - Lobs 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 17 ALL 30N 07W 16 ALL 30N 07W 17 ALL 30N 07W 17 ALL 30N 07W 16 ALL 30N 07W 17 ALL 30N 07W 17 ALL 30N 07W 16 ALL 30N 07W 17 ALL 30N					320
30N 06W 18 ALL 30N 06W 20 ALL 30N 06W 20 ALL 30N 06W 21 ALL - Lobs 1 (28.99), 2 (23.29), 3 (28.99), SW/4 SW/4, N/2 SW/4, N/2 PART OF TRACTS 42 & 43 30N 06W 22 ALL - Lobs 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 06W 27 ALL - Lobs 1 (34.05), 2 (13.10), 3 (34.23), SW/4 NW/4, SW/4, E/2, PART OF TRACT 43 30N 06W 27 ALL - Lobs 1 (10.32), 2 (28.27), 3 (26.99), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 29 ALL 30N 06W 30 ALL 30N 06W 32 ALL 30N 06W 32 ALL 30N 06W 32 ALL 30N 06W 33 ALL - Lobs 1 (35.21), 2 (25.90), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACT 40 & 41 30N 06W 34 ALL - Lobs 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.01), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL - Lobs 1 (35.69), 2 (25.57), 3 (28.46), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lobs 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.20), W/2 E/2, W/2 E/2, W/2 30N 07W 2 ALL - Lobs 1 (35.90), 2 (36.93.5), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 2 ALL - Lobs 1 (36.93), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3 E/2 - Lobs 5 (39.33), 8 (39.42), S/2 NE/4, SE/4 30N 07W 1 ALL - Lobs 1 (16.87), 2 (7.88), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 13 ALL - Lobs 1 (17.50), 2 (17.59), 3 (11.29), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 13 ALL - Lobs 1 (15.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4 NO 07W 15 ALL NO 07W 16 ALL - Lobs 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4 NO 07W 17 ALL - Lobs 1 (15.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4					640
30N 06W 20 ALL 30N 06W 21 ALL - Lots 1 (28.99), 2 (23.29), 3 (28.90), SW/4 SW/4, N/2 SW/4, N/2 PART OF TRACTS 42 & 43 30N 06W 21 ALL - Lots 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 06W 25 ALL 30N 06W 27 ALL - Lots 1 (34.06), 2 (13.10), 3 (34.23), SW/4 NW/4, SW/4, E/2, PART OF TRACT 43 30N 06W 27 ALL - Lots 1 (10.32), 2 (28.27), 3 (28.90), 4 (13.00), 5 (29.82), 8 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 29 ALL 30N 06W 30 ALL 30N 06W 30 ALL 30N 06W 31 ALL - Lots 1 (35.21), 2 (25.60), 3 (25.68), 4 (30.30), N/2 S/2, N/2, PART OF TRACT 40 & 41 30N 06W 31 ALL - Lots 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (28.57), 3 (28.6), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.56), 4 (17.52), W/2 E/2, W/2 30N 07W 3 E/2 - Lots 5 (39.30), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.38), NW/4					640
30N 06W 21 ALL - Lots 1 (28.99), 2 (23.29), 3 (28.99), SWM 5WM, NZ 5WM, NZ, PART OF TRACTS 42 & 43 30N 06W 22 ALL - Lots 1 (23.79), 2 (10.34), NYM 5WM, NE/4 SWM, NZ, SE/4, PART OF TRACT 43 30N 06W 25 ALL 30N 06W 27 ALL - Lots 1 (10.32), 2 (28.27), 3 (28.99), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), SZ 30N 06W 28 ALL - Lots 1 (10.32), 2 (28.27), 3 (28.99), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), SZ 30N 06W 30 ALL 30N 06W 30 ALL 30N 06W 33 ALL - Lots 1 (35.21), 2 (25.80), 3 (25.88), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 34 ALL - Lots 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (26.45), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.52), W/2 E/2, W/2 30N 07W 2 ALL - Lots 1 (35.49), 2 (39.42), S/2 NE/4, SE/4 30N 07W 3 E/2 - Lots 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.36), NW/4 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.36), NW/4	30N	06W	T 19	PALL	640
30N 06W 22 ALL - Lots 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43 30N 06W 22 ALL 30N 06W 27 ALL - Lots 1 (10.32), 2 (23.27), 3 (26.99), 4 (13.00), 5 (29.62), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 28 ALL - Lots 1 (10.32), 2 (28.27), 3 (26.99), 4 (13.00), 5 (29.62), 6 (34.23), 7 (29.73), 8 (35.51), S/2 30N 06W 29 ALL 30N 06W 30 ALL 30N 06W 32 ALL 30N 06W 32 ALL 30N 06W 33 ALL - Lots 1 (35.21), 2 (25.60), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 34 ALL - Lots 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4 PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (25.65), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 2 ALL - Lots 5 (39.39), 6 (39.42), S/2 NE/4, SE/4 30N 07W 3 E/2 - Lots 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.38), NW/4			+ 2	NALL - 1 (16 90) 2 (73 20) 3 (26 90) SWI4 SWI4 N/2 SWI4 N/2 PART OF TRACTS 42 & 41	640 640
30N 06W 25 ALL 30N 06W 27 ALL - Lobs 1 (34.05), 2 (13.10), 3 (34.23), \$W/4 NW/4, \$W/4, \$E/2, PART OF TRACT 43 30N 06W 28 ALL - Lobs 1 (10.32), 2 (28.27), 3 (28.99), 4 (13.00), 5 (29.62), 8 (34.23), 7 (29.73), 8 (35.51), \$V/2 \$W/4 \$W/4 \$E/4, \$E/2 \$E/4, \$PART OF TRACT 42 & 43 30N 06W 30 ALL 30N 06W 32 ALL 30N 06W 32 ALL 30N 06W 33 ALL - Lobs 1 (35.21), 2 (25.60), 3 (25.68), 4 (30.39), \$W/2 \$Y/2, \$W/2, \$PART OF TRACTS 40 & 41 30N 06W 34 ALL - Lobs 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), \$W/2 \$NE/4, \$NW/4, \$W/2 \$W/4, \$PART OF TRACT 47 30N 06W 35 ALL - Lobs 1 (35.49), 2 (25.57), 3 (28.46), 4 (31.10), 5 (22.42), 6 (13.44), \$W/2 \$NE/4, \$NW/4, \$W/2 \$W/4, \$PART OF TRACT 47 30N 06W 35 ALL - Lobs 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), \$W/2 \$E/2, \$W/2 30N 07W 2 ALL - Lobs 6 (39.39), 6 (39.35), 7 (39.33), 8 (39.29), \$V/2 \$W/2, \$V/2, \$V/2 30N 07W 3 \$E/2 - Lobs 5 (39.33), 6 (39.42), \$V/2 \$NE/4, \$E/4 30N 07W 9 ALL 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 16 ALL 30N 07W 17 ALL - Lobs 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), \$NW/4 \$W/4 \$W/4 \$W/4 \$W/4 \$W/4 \$W/4 \$W/4 \$W/4			+ 2	ALL - Las 1 (23.79), 2 (10.34), NW/4 SW/4, NE/4 SW/4, N/2, SE/4, PART OF TRACT 43	644
20N   06W   27   ALL - Lots 1 (34,06), 2 (13,10), 3 (34,23), \$WW NWW, \$WW, \$EZ, PART OF TRACT 43     30N   06W   28   ALL - Lots 1 (10,32), 2 (28,27), 3 (28,99), 4 (13,00), 5 (29,82), 8 (34,23), 7 (29,73), 8 (35,51), \$ZZ     30N   06W   29   ALL     30N   06W   30   ALL     30N   06W   32   ALL     30N   06W   33   ALL - Lots 1 (31,07), 2 (13,46), 3 (8,96), 4 (30,39), \$NZ \$SZ, \$NZ, \$PART OF TRACT \$40 & 41     30N   06W   34   ALL - Lots 1 (31,07), 2 (13,46), 3 (8,96), 4 (31,10), 5 (22,42), 6 (13,44), \$WZ \$NEZ, \$NZ			7	SAL	640
SWIA. SWIA. SEIA. E/2. SEIA. PART OF TRACT 42 & 43	_		7	7 ALL - Lots 1 (34.05), 2 (13.10), 3 (34.23), SW/4 NW/4, SW/4, E/2, PART OF TRACT 43	640
30N 08W 29 ALL 30N 08W 30 ALL 30N 08W 32 ALL 30N 08W 32 ALL 30N 08W 32 ALL 30N 08W 32 ALL - Lots 1 (35.21), 2 (25.89), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 08W 34 ALL - Lots 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4, PART OF TRACT 47 30N 08W 35 ALL - Lots 1 (35.49), 2 (25.57), 3 (28.46), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 08W 35 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 2 ALL - Lots 5 (39.39), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3 E/2 - Lots 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 8 ALL - Lots 1 (16.87), 2 (7.86), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 15 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	30N	06W	2	BIALL - Lots 1 (10.32), 2 (20.27), 3 (20.99), 4 (13.00), 5 (29.52), 6 (34.23), 7 (29.73), 8 (35.51), \$/2	640
30N 06W 30 ALL 30N 06W 32 ALL 30N 06W 33 ALL - Lots 1 (35.21), 2 (25.80), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 34 ALL - Lots 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (26.46), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 2 ALL - Lots 1 (35.49), 6 (39.35), 7 (39.33), 6 (39.29), S/2 N/2, S/2 30N 07W 3 E/2 - Lots 5 (39.39), 6 (39.42), S/2 NE/4, SE/4 30N 07W 8 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 9 ALL 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	2044	COL	+-		640
30N 06W 32 ALL 30N 06W 33 ALL - Lots 1 (35.21), 2 (25.80), 3 (25.68), 4 (30.30), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 34 ALL - Lots 1 (31.07), 2 (13.46), 3 (8.96), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (28.46), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 2 ALL - Lots 5 (39.30), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3 E/2 - Lots 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 8 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 11 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (18.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	_				640
30N 06W 33 ALL - Lots 1 (35.21), 2 (25.80), 3 (25.68), 4 (30.39), N/2 S/2, N/2, PART OF TRACTS 40 & 41 30N 06W 34 ALL - Lots 1 (31.07), 2 (13.40), 3 (8.86), 4 (31.10), 5 (22.42), 6 (13.44), W/2 NE/4, NW/4, N/2 SW/4, SW/4 SW/4, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (35.49), 2 (26.57), 3 (26.45), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2 30N 07W 2 ALL - Lots 5 (39.39), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3 E/2 - Lots 5 (39.39), 6 (39.42), S/2 NE/4, SE/4 30N 07W 8 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 9 ALL 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4			3	PALL	540
SW/4 SW/4 PART OF TRACT 47  30N 06W 35 ALL - Lots 1 (35.49), 2 (26.57), 3 (26.45), 4 (31.01), E/2 W/2, E/2, PART OF TRACT 47  30N 06W 35 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2  30N 07W 2 ALL - Lots 1 (35.49), 6 (39.35), 7 (39.35), 8 (39.29), S/2 N/2, S/2  30N 07W 3 E/2 - Lots 5 (39.33), 6 (39.42), S/2 NE/4, SE/4  30N 07W 6 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41  30N 07W 9 ALL  30N 07W 10 ALL  30N 07W 11 ALL  30N 07W 13 ALL  30N 07W 13 ALL  30N 07W 15 ALL  30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	30N	06W	3	ALL - Lobs 1 (35.21), 2 (25.80), 3 (25.68), 4 (30.39), N2 S/2, N/2, PART OF TRACTS 40 & 41	640
30N 06W 35 ALL - Lots 1 (35.49), 2 (28.57), 3 (28.45), 4 (31.01), E/2 W/Z, E/2, PART OF TRACT 47 30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/Z E/Z, W/Z 30N 07W 2 ALL - Lots 5 (39.39), 6 (39.35), 7 (39.33), 8 (39.29), S/Z N/Z, S/Z 30N 07W 3 E/Z - Lots 5 (39.33), 6 (39.42), S/Z NE/4, SE/4 30N 07W 8 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/Z, PART OF TRACTS 40 & 41 30N 07W 9 ALL 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL N 07W 15 ALL N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	30N	06W	3		640
30N 06W 36 ALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2  30N 07W 2 ALL - Lots 5 (39.39), 6 (39.35), 7 (39.33), 8 (39.29), 5/2 N/2, S/2  30N 07W 3 E/2 - Lots 5 (39.33), 8 (39.42), S/2 NE/4, SE/4  30N 07W 8 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41  30N 07W 9 ALL  30N 07W 10 ALL  30N 07W 11 ALL  30N 07W 12 ALL  30N 07W 13 ALL  30N 07W 14 ALL  30N 07W 15 ALL  30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	304	ORM	1 3	ALL - Lots 1 (35.49), 2 (26.57), 3 (26.45), 4 (31.01), E/2 W/2, E/2. PART OF TRACT 47	640
30N 07W 2   ALL - Lots 5 (39.39), 6 (39.35), 7 (39.33), 8 (39.29), S/2 N/2, S/2 30N 07W 3   E/2 - Lots 5 (39.33), 6 (39.42), S/2 NE/4, SE/4 30N 07W 8   ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 9   ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41 30N 07W 10   ALL - SON 07W 11   ALL - SON 07W 13   ALL - SON 07W 14   ALL - SON 07W 15   ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4			3	BIALL - Lots 1 (17.50), 2 (17.54), 3 (17.58), 4 (17.62), W/2 E/2, W/2	550.2
30N 07W 8 ALL - Lots 1 (16.87), 2 (7.85), 3 (11.28), NW/4, E/2, PART OF TRACTS 40 & 41  30N 07W 9 ALL  30N 07W 10 ALL  30N 07W 11 ALL  30N 07W 12 ALL  30N 07W 13 ALL  30N 07W 14 ALL  30N 07W 15 ALL  30N 07W 15 ALL  30N 07W 15 ALL  30N 07W 16 ALL  30N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	30N	07W			537.36
30N 07W 9 ALL 30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 17 ALL 30N 07W 18 ALL			1	E/Z - Lots 3 (38.33), 5 (38.42), 5/2 NE/4, 5E/4	318.75
30N 07W 10 ALL 30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 15 ALL 30N 07W 17 ALL 30N 07W 18 ALL 30N 07W 17 ALL - Lobs 1 (13.57), 2 (22.96), 3 (18.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4	_				640
30N 07W 11 ALL 30N 07W 12 ALL 30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL N 07W 15 ALL N 07W 15 ALL N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (18.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.36), NW/4					640
30N 07W 13 ALL 30N 07W 14 ALL 30N 07W 15 ALL N 07W 16 ALL N 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.38), NW/4			1	ALL	640
30N   07W   14   ALL					540
ON 07W 15 ALL  N 07W 16 ALL  ON 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4					640
N 07W 16 ALL ON 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.86), 6 (14.36), 7 (32.16), 8 (34.38), NW/4					640
ON 07W 17 ALL - Lots 1 (13.57), 2 (22.96), 3 (16.92), 4 (11.34), 5 (29.66), 6 (14.36), 7 (32.16), 8 (34.38), NW/4			1	BIALL	640
NE/4, E/Z E/Z, PART UP TRACTS 41, 42, 43, 44 & 45			1		640.1
30N 07W 22 ALL	1	67941	+~		644

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### MESAVERDE INCREASED DENSITY ADMINISTRATIVE ENTRY AREAS DEPENDENT RE-SURVEY ACREAGE

30N	07W		<u> </u>	640
	_אַניי		<u> </u>	640 320
£	W	25	E/2 ALL - Lote 5 (12.16), 6 (12.28), 7 (12.40), 8 (12.52), E/2 W/2, E/2	529.36
30×.	_/W	- 34	ALL - Lots 1 (40.28), 2 (40.82), 3 (41.38), 4 (41.92), S/2 N/2, S/2	644.4
30N 30N	08W	- 늵	ALL - Lots 1 (42.18), 2 (42.12), 3 (42.08), 4 (42.02), S/2 N/2, S/2	648.4
30N	08W		ALL - Lots 1 (41.80), 2 (41.40), 3 (41.00), 4 (40.60), S/2 N/2, S/2	644.8
30N	08W		ALL - Lots 1 (40.38), 2 (40.32), 3 (40.28), 4 (40.22), S/2 N/2, S/2	641.2
30N	06W	6	ALL - Lots 3 (40.12), 4 (14.36), 5 (14.72), 6 (15.06), 7 (15.42) 8 (42.38), 9 (41.97), 10 (41.21), 11 (41.55), SE/4 NW/4, E/2 SW/4, SE/4	546.81
30N	08W	6	ALL	540
30N	08W		ALL - Lots 1 (42.57), 2 (42.10), 3 (45.53), SE/4 NE/4, SE/4, W/2	650.3
30N	08W		ALL - Lots 1 (38.09), 2 (39.41), 3 (37.50), 4 (36.79), 5 (35.83), 6 (36.42), 7 (37.85), 8 (38.46), 9	640 607.29
30N	W80		ALL - Lobs 1 (32.42), 2 (34.32), 9 (35.69), 4 (37.80), NW/4 NW/4, E/2 NW/2, NE/4 SW/4, E/2	620.03
30N 30N	08W		ALL - Lots 1 (35.47), 2 (35.10), 3 (36.37), 4 (37.59), 5 (37.25), 6 (36.03), 7 (35.00), 8 (35.35), 9	579.06
	ا ۳۰۰		(35,66), 10 (36,08), 11 (36,67),12 (37,31), 13 (36,93), 14 (36,51), 15 (35,98), 16 (35,56)	
30N	08W	15	ALL - Lats 1 (38.00), 2 (38.58), 3 (38.21), 4 (37.63), N/2, SW/4	632.42
30N	08W		<u> </u>	320
30N	08W		<u> </u>	320
30N	08W		ALL ALL	640 640
30N	08W		ALL	640
30N	08W		ALL	640
30N	08W		ALL	640
30N	09W		ALL - Lots 1 (40.25), 2 (40.75), 3 (41.25), 4 (41.75), S/2 N/2, S/2	644
30N	09W		ALL - Lots 1 (41.79), 2 (41.37), 3 (40.95), 4 (40.53), S/2 N/2, S/2	644.64
30N	09W	_	E/2 - Lots 1 (40.50), 2 (40.88), S/2 NE/4, SE/4	321.38
30N	09W		ALL	640 640
30N	09W	I	ALL	640
30N	09W		ALL	640
30N	09W		ALL	640
30N	09W	28	<u>E/2</u>	320
30N	09W		<u>E2</u>	320
31N	06W	25	ALL - Lots 1 (14.37), 2 (14.33), 3 (14.27), 4 (14.23), E/2 W/2, E/2	537,2
31N	OBW _		W/2	320
31N 31N	08W		ALL	640
31N		25	ALL - Lots 1 (40.45), 2 (40.23), 3 (40.22), 4 (39.93), 5 (39.85), 6 (39.40), 7 (39.32), 8 (39.34), 9 (39.42), 10 (39.62), 11 (39.70), NW/4 NE/4, NW/4	637.48
J	79W	26	ALL - Lots 1 (39.00), 2 (38.99), 3 (38.98), 4 (38.97), 5 (39.06), 6 (39.06), 7 (39.09), 8 (39.10), 9	626.12
			(39.20), 10 (39.19), 11 (39.18),12 (39.16), 13 (39.26), 14 (39.27), 15 (39.29), 16 (39.30)	
31N	09W	27	ALL - Lots 1 (38.99), 2 (39.03), 3 (39.05), 4 (39.18), 5 (39.15), 6 (39.12), W/2 NW/4, S/2 ALL - Lots 1 (39.10), 2 (39.20), 3 (39.39), 4 (39.43), NE/4, E/2 NW/4, NW/4 NW/4, SW/4 SW/4, E/2	634.53 637.12
1	1000		SW/4, N/2 SE/4   ALL - Lots 1 (40.04), 2 (39.83), 3 (39.40), 4 (40.11), 5 (39.67), N/2, S/2 SW/4, NE/4 SE/4	639.05
31N 31N		32	ALL - Lots 1 (39.54), 2 (39.50), 3 (39.46), 4 (39.42), 5 (39.44), 6 (39.46), 7 (39.52), 8 (39.56), 9	632.16
1317	10000	ļ	20 56) 10 (39 54) 11 (39 50) 12 (39 46), 13 (39 48), 14 (39 52), 15 (39 56), 16 (39 60)	
31N	09W	34	ALL - Lots 1 (39.46), 2 (39.48), 3 (39.48), 4 (39.51), 5 (39.48), 6 (39.45), 7 (39.53), 8 (39.49), 9	631.56
		<u> </u>	(39.52), 10 (39.51), 11 (39.37), 12 (39.43), 13 (39.41), 14 (39.34), 15 (39.55), 16 (39.56)	630.17
31N		<u> </u>	ALL - Lots 1 (39.40), 2 (39.38), 3 (39.33), 4 (39.31), 5 (39.33), 6 (39.34), 7 (39.49), 8 (39.50), 9 (39.55), 10 (39.42), 11 (39.18), 12 (39.28), 13 (39.29), 14 (39.19), 15 (39.53), 16 (39.85)	640
31N		<del>  3</del>	ALL -   ALL - Lots 1 (40.35), 2 (40.43), 3 (40.49), 4 (40.57), S/2 N/2, S/2	641.84
31N		+-	ALL - Loss 4 (39.99), 5 (35.53), 6 (35.70), 7 (35.86), 8 (36.37), 9 (36.05), 10 (36.79), 11 (36.70), 12 (37.63), 13 (37.72), S/2 NW/4, SW/4	606.34
31N	10W	11	(37.63), 13 (37.72), 32.71115, 317115,	635.06
	1000	+	2 (34.59), 5 (34.59), 5 (34.32), 6 (34.36), 11 (33.96), 12 (33.94), 13 (34.22), 14 (34.26)	274.3
31N		1	3 (34.58), 4 (34.53), 5 (34.88), 6 (34.93), 11 (34.85), 12 (34.79), 13 (34.46), 14 (34.52)	277.54
31N		14	4ALL - Loss 1 (39.37), 2 (39.57), 3 (39.96), 4 (40.17), 5 (40.04), 6 (39.29), 7 (39.09), 8 (39.09), 9	636.2
32N	06W	1	7 ALL - Lots 1 (18.52), 2 (18.37), 3 (18.22), 4 (17.48), 5 (38.88), 6 (39.05), 7 (39.22), 5/2 NE/4, SE/4	549.74
32N	06W	11	NALL - Lots 1 (39,35), 2 (39,42), 3 (39,49), 4 (39,56), E/2 W/2, E/2	637.83
32N	06W	11	ALL - Lots 1 (39.50), 2 (39.30), 3 (39.11), 4 (38.92), E/2 W/2, E/2	636.83
32N		<del>  3</del>	ALL - Lots 1 (38.76), 2 (38.86), 3 (38.55), 4 (38.45), E/2 W/2, E/2 ALL - Lots 1 (19.79), 2 (19.76), 3 (19.74), 5 (28.26), 6 (44.42), 7 (44.93), E/2 SW/4, SE/4	634.42 414.9
32N		+!	2 ALL - Lots 1 (19.79), 2 (19.79), 5 (19.74), 5 (20.20), 6 (49.42), 7 (49.93), 22 54974, 324 3 ALL - Lots 1 (46.08), 2 (45.19), 2/2 NW/2, SW/4, 2/2	650.27
32N 32N		1	ALL - Loss 1 (44.47), 2 (42.37), 3 (44.62), 4 (44.75), 5 (42.47), 8 (42.62), 7 (44.90), NW/4 NE/4, W/2	666.2
32N	07W	1	5 ALL - Lots 1 (39.71), 2 (41.20), 3 (42.69), 4 (42.67), 5 (41.18), 6 (39.70), 7 (38.20), 8 (38.20), 9 (39.88), 10 (41.17), 11 (42.68), 12 (42.64), 13 (41.15), 14 (39.67), 15 (38.18), NE/4 NE/4	648.7
32N	07W	10	BIFO	320
32N	07W	2	E/2 - Lots 1 (44.48), 2 (44.49), W/2 NE/4, SE/4	328.97
32N	07W	2	2 ALL - Lots 1 (40.44), 2 (42.08), 3 (43.65), 4 (45.28), 5 (45.13), 6 (43.50), 7 (42.05), 8 (40.42), 9	668.96
32N	07W	+ -	(40.59), 10 (42.62), 11 (42.61),12 (40.58), SW/4	640
32N			AALL	640
32N		7 2	5 62	320
224	10W		ALL - Loss 1 (44.29), 2 (44.48), 3 (44.71), 4 (44.97), 9 (39.27), 10 (39.02), 11 (38.78), 12 (38.54)	334.00
	10W		DI ALL - Lots 2 (46.25), 3 (46.15), 4 (46.05), 5 (43.84), 6 (37.54), \$/2 SW/4, \$E/4 SE/4	339.83
4		, 1	1 ALL - Lots 5 (44.65), 6 (44.35), 7 (44.14), 8 (43.94), 9 (37.80), 10 (37.80), 11 (37.80), 12 (37.80)	328.:
-	10W	<del>  ;</del>	3[W/2 + Lots 3 (38.49), 4 (38.04), 5 (38.09), 6 (38.54), 11 (38.58), 12 (38.14), 13 (38.19), 14 (38.83)	306
32N	10W	1	3 W/2 - Loss 3 (38.49), 4 (38.04), 5 (38.09), 6 (38.54), 11 (38.58), 12 (38.14), 13 (38.19), 14 (38.63) 4 ALL - Loss 1 (37.80), 2 (37.80), 3 (37.81), 4 (37.82), 5 (37.83), 6 (37.82), 7 (37.81), 8 (37.81), 9	306.1 605.1

### MESAVERDE INCREASED DENSITY ADMINISTRATIVE ENTRY AREAS DEPENDENT RE-SURVEY ACREAGE

334	10W	15 Att - Lots 1 (37.72	), 2 (37.80), 3 (37.91), 4 (38.00), W/2 E/2, W/2	631.43
	10W	16 ALL		640
12-04	1000	21 ALL - Lote 1 (39 64	i), 2 (39.34), 3 (39.36), 4 (39.33), 5 (39.31), 6 (39.72), 7 (39.47), 8 (39.39), 9	635.2
	IUVV	(39.64), NE/4 NE/4		
32N	10W	22 All - Lote 1 (37 91	), 2 (37.88), 3 (37.77), 4 (37.80), 5 (37.45), 6 (38.85), 7 (36.81), 8 (37.35), NW/4,	621.82
32N	1044	NE/4 SW/4, W/2 S		
32N	10W	22 ALL - Lote 1 (37 79	i), 2 (37.79), 3 (37.79), 4 (37.79), 5 (37.67), 6 (37.67), 7 (37.67), 8 (37.67), 9	601.82
32N	1000		11 (37.55) 12 (37.55) 13 (37.44) 14 (37.44) 15 (37.44) 16 (37.44)	337.32
32N	10W	26 All -1 obs 1 (37 44	9, 2 (37.43), 3 (37.43), 4 (37.43), 5 (37.54), 6 (37.54), 7 (37.54), 8 (37.55), 9	601.58
32N	1044		11 (37.65), 12 (37.65), 13 (37.76), 14 (37.76), 15 (37.77), 16 (37.77)	331.33
32N	10W		3), 2 (38.58), 3 (38.67), 4 (38.07), 5 (37.87), 6 (37.90), 7 (37.99), 8 (37.96), W/2	625.02
	10W		), 2 (39.10), 3 (38.33), 4 (39.74), E/2 NE/4, S/2 NW/4, S/2	636.94
32N	10W		i), 2 (39.95), 3 (40.37), 4 (40.13), 5 (40.54), 6 (41.27), 7 (41.66), 8 (40.95), NW/4,	644.6
324	1000	E/2 SW/4, W/2 SE		
32N	10W		2), 6 (41.43), 7 (41.24), 8 (40.54), 9 (40.44), 10 (41.41), 11 (41.13),12 (41.42), 13	653.22
المحدا			15 (40.73), 16 (40.26), 17 (39.80), 18 (40.26), 19 (40.36), 20 (40.77)	
32N	10W		5), 6 (39.86), 7 (39.92), 8 (39.01), 9 (38.27), 10 (39.94), 11 (39.98),12 (39.77), 13	629.29
13213	1.011		. 15 (39.74), 16 (37.46), 17 (36.73), 18 (39.76), 19 (39.78), 20 (39.77)	
32N	10W		, 2 (41.40), N/2, NW/4 SW/4, E/2 SW/4, W/2 SE/4, SE/4 SE/4	642.24
32N	10W	33 ALL		640
	_		0), 2 (37.49), 3 (36.66), 4 (36.75), 5 (36.86), 6 (36.24), 7 (36.39), 8 (36.56), 9	601.48
1			11 (35.49), N/2 NW/4, SW/4 NW/4, W/2 SW/4	
32N	10W		2), 2 (37.92), 3 (37.97), 4 (37.97), 5 (38.29), 6 (38.29), 7 (38.15), 8 (38.15), 9	614.2
	1.2		. 11 (38.70).12 (38.63). 13 (38.95). 14 (39.02). 15 (38.71). 16 (38.65)	
32N	10W	36 W/2		320
32N	11W	25 ALL		640
32N	11W	36 ALL		640
			TOTAL ADMINISTRATIVE ENTRY ACREAGE	96,954,36
	1			1
		BLANCO MESAV		
		45,519,733,077.7		
		1,044,989.3 acres		
		1,632.8 square mil		ļ
<u> </u>	<b>↓</b> —	MEGANEDOS ATI	UDY AREA (study area equals 84.76% of Blanco Mesaverde Pool)	<b></b>
<b>—</b>				-
<b> </b>	+	38 580 580 257.08	September 1995	<del></del>
1—	+	885,688.25 acres 1,383.89 aquare m	ilea	<del></del>
	+	1,303.09 EQUEVE M		-
<b> </b>	₩-	4 DAMMETR 4 TRA	E ENTRY (administrative entry acreage equals 9.28% of Blanco Mesaverde Pool)	<del>                                     </del>
<b>├</b>		4,223,331,921.6 sc		
<u></u>	+-	96.954.36 acres	And the	<del></del>
_	—	151,49 square mile		<del> </del>
_	1	1101.48 SQUARE ITEM	<del></del>	<u> </u>

### 1998 Four Corners Oil Gas Conference May 5-6, 1998

Tuesday, May 5, 1998 McGee Park, Farmington, New Mexico

7:30-5:30	Exhibits open
3:00-8:15	Ribbon Cutting - Farmington Red Coats
;e==:30	Welcome, Introductions and Overview - Linda Donohue, Burlington Resources and T. Greg Merrion, Merrion Oil & Gas
5	BLM Cooperative Excellence Award - Lee Otteni, District Manager-BLM's Farmington District Office
9:15	State of the Energy & Minerals Industry in New Mexico - Jennifer Salisbury, Secretary of NM Energy, Minerals & Natural Resources
:15-9:45	IOGCC Update - Transfer of I&E from BLM to State - Jim Carter, Dir. of Utah Oil, Gas & Mining Division & Chmn. IOGCC Committee
9:45-10:15	Utah O&GCC Regulatory Update - Jim Certer, Director of Utah Oil, Gas & Mining Division
10:15-10:45	Break, refreshments and view exhibits
10:45-11:30	BIA Regulatory Update & Indian Minerals competitiveness - Dick Wilson, Director BIA Energy & Minerals Office
11:30-12:00	Farmington Indian Minerals Office (FIMO) Update - Kevin Gambrell, Director FIMO
12:00-1:30	Lunch & Exhibits
1:30-2:00	NMOCD Regulatory Update - Lori Wrotenbery, Director of NMOCD
2:00-2:30	Colorado O&GCC Regulatory Update - David K. Dillon, Engr. Supvr. & Mark Weems, Durango Area Insp. Colorado O&G Comm.
2:30-3:00	Department of Interior & BLM Issues Update - Bob Armstrong, Assistant Secretary for Land & Minerals Management
3:00-3:30	Break, refreshments and view exhibits
3:30-4:00	NM State Land Office Regulatory Update - Charles Turpen
4:00-4:30	NM Environmental Division Update - Peter Maggorie (Enviro Protection)
4:30-5:30	View contribits
5:30-8:30	Reception at the Holiday Inn

Wednesday, May 6, 1998

***************************************	77 7.127 37 2.222	
	and the state of the second state of the secon	Technical Seastant Rooms 2001 1970/19
8:00-8:30	Comparison of Methods for Determining Coalbed Methane Gas in	Well and Equipment Purging Procedure Following Servicing
	<u>Place,</u> Charles Nelson, GRI	David Simpson, Arnoco
8:40-9:10	Nitrogen Injection to Enhance Coalbed Methane Production	Well and Equipment Purging Procedure Following Servicing (Cont.)
	Daryl Erickson, Amoco	David Simpson, Amoco
9:20-9:50	San Juan Basin Lewis Shale Developments	Natural Gas Sampling Procedures
	Mike Larimer, Phillips Petroleum	Bob & Chelle Durbin, Gas Analysis Co. & Dave Schilhabel, EPFS
10:00-10:30	Break, refreshments & view exhibits	Break, refreshments & view exhibits
10:30-11:00	Optimizing Messverde Stimulation Methods	Ultrasonic Inspections for Corrosion
l	Brian Ault, Resource Services	Larry Weigel, Rohrback Cosasco Systems
11:10-11:40	Potential for increased Density drilling in the Mesaverde Reservoir	internet Resources for Petroleum Professionals
<u> </u>	of the San Juan Basin, Bill Babcock & Sean Woolverton, Burlington	Bob Emery, NMPRRC
11:40-1:00	Lunch	Lunch
1:41:30	Sidetracting in a Single Trip	Minimizing the Effects of Pulsation Induced Gas Measurement Error
i	Charles Dewey, Smith Drilling & Completion	Royce Miller, PGI International
2:10	Marginal Gas Well Production Technology & Techniques	Current Environmental Issues-SARA Title III. SPCC Plans.
	Bob Blaylock, NMPRRC/PTTC	Pit Closure, LEPC, Myke Lane, Onsite Technology
2:20-2:50	Porosity & Saturations from Old Logs	Environmental Liabilities Associated with Exploration & Production
	Shaochang Wo & Bill Weiss, NMPRRC	John Harju & Bert Fisher, GRI
3:00-3:30	Break, refreshments & view exhibits	Breek, refreshments & view exhibits

Alternate Topics: <u>Underreaming While Drilling</u> - Charles Dewey, Smith Drilling & Completion

Handling of Hazmat - Randy Hicks, Hicks Consulting Reliable Reservoir Characterization - Bill Weiss, NMPRRC

	CORRESPONDED
	PEC Basic Safety Awareness Instructor: Brenda Brooks, San Juan College
Location: Class Rm #1	The Four Corners Petroleum Education Council's Basic Safety Awareness will introduce participants to the basics of the Hazzonn
Date/Time: 5/5/98, 8-5 pm	Standard, drug and alcohol policies, use of personal protection equipment and other regulatory compliance safety issues. A PEC
Cost: \$25 °	card will be issued upon course completion. Min. Attend.: None CANCELED
Maria Ma	H.S Safety Instructor: Don Smith, Safety Alliance, Inc.
Location: Class Rm #2	The training requirements of OSHA Standards will be covered with participants learning how to recognize the effects and charac-
Date/Time: 5/5/98, 1-5 pm	teristics of Hydrogen Sulfide. Also, participants will learn the proper use and maintenance of H <sub>2</sub> S detection and breathing equip-
Cost: \$25 °	ment. A certificate of completion will be issued to each successful attendee. Min. Attend.: 8
The state of the s	Annual 8-hour Hazwoper Retresher Instructor: Mary Balley - MBA Training
Location: Class Rm #1	The annual training requirements of OSHA Standards will be covered & successful participants will receive a certificate of
Date/Time: 5/6/98, 8-5 pm	completion. CANCELED
Cost: \$60 °	Min. Attend.: 10
raningkom pr	Internet Resources for Petroleum Professionals Instructor: NMPRRC/PTTC Staff listed below
Location: SJC Rm #1414	Participants will receive "hands on" instruction to use the internet and the many resources available on the internet. The work-
Date/Time: 5/7/98, 8-12 pm	shop will be at San Juan College's Internet Ready Computer Lab. Instructors: Martha Cather, Bob Emery & Dave Martin
Cost: \$25 °	Min. Attend.: None (Same building as the San Juan College Little Theatre)
	NMOCD Forms & Administrative Application Procedures Instructor: NMOCD Staff listed below
Location: Class Rm #3	This workshop is divided into 4 sessions, each lesting 21/2-4 hours and will provide detailed instruction on preparation of NMOCD
√Time: May 5-6, 1998	Forms, C-115 reporting, environmental rules# & Administrative Application Procedures. Min. Attend.: None
\$25 '	Tues. 5/5/98, 8:30 am-4:30 pm - Frank Chevez, Rend Cerroll and Ed Mertin
ciudes Workshop #6	Weds. 5/6/96, 8:00 am-5:00 pm - Roger Anderson, David Catanach, Ben Stone & Michael Stogner & Workshop #6
Carlos Santo Santo Carlos Santo S	Improving Profit & Avoiding Problems Through Environmental Stewardship
Location: Class Rm #3	Instructor: Randy Hicks, Hicks Consulting; R.C. Cudney, Environmental Services Inc., Roger Anderson, NMOCD
Date/Time: 5/6/98, 10-12pm	The environmental laws, rules & regulations governing oil field production & service companies will be presented, emphasizing
Cost: \$0	weste menagement & environmental permitting, sponeored by Sunco Trucking. In conjunction with workshop #5.
* . Fees include refreshment	at breeks, cisesroom materials and codificates, breasur kinch tickets must be numbered expensely at time of expiritation (REPO).

<sup>-</sup> Fees include refreehments at breaks, classroom materiels and certificates, however lunch tickets must be purchased separately at time of registration. (\$5.00)



SAN JUAN DIVISION Via Certified Mail-Return receipt requested

October 1, 1997

San Juan 27-5 Unit Working Interest Owners (on attached list)

> RE: San Juan 27-5 Unit

> > **Working Interest Owner Meeting**

Increased Density Study - Mesaverde formation

Rio Arriba County, New Mexico

### Dear Interest Owner:

Burlington Resources is in the process of investigating a pilot increased density study of the Mesaverde formation in the San Juan 27-5 Unit Area in Rio Arriba County, New Mexico. As you are probably aware, the current density of wells for the Blanco Mesaverde pool is two (2) wells per 320 acre spacing unit. We propose drilling increased density wells (up to four (4) wells per spacing unit) as shown on the attached plat. The study will determine the additional reserves that could be developed by increasing the density in the subject unit. We have received favorable results from a similar study in another portion (T29N, R7W) of the Basin.

Burlington would like to request your participation in this project. We want to discuss the technical merits of our proposed project. Please indicate on this letter ballot if you would like to discuss this project in a meeting at Burlington's Farmington office on October 22, 1997, at 10:00 am. Lunch will be provided for attendees, so we would appreciate a response if you plan to attend. If a majority of the Mesaverde Participating Area working interest owners subsequently approve our study, a hearing and order from the New Mexico Oil & Gas Conservation Division (NMOCD) will be required. We would like to schedule a hearing before the NMOCD on November 6, 1997, the application for which should be filed by October 13, 1997.

You may contact the undersigned at (505) 326-9760, or Bill Babcock, Geologist at (505) 326-9782, if you have any questions or comments regarding this proposal.

Senior Staff Landman

LD/ci xc: SJ 27-5, 5.0 Tom Kellahin I (We) plan to attend the San Juan 27-5 Unit Working interest owner meeting on October 22, 1997. (Please indicate all names if more than one representative will be attending.

Name:	 		
Company:			

### SAN JUAN 27-5 UNIT WORKING INTEREST OWNERS

Amoco Production Company

Bedrock Limited Partnership

Burlington Resources Oil & Gas Company

Cinco General Partnerhship

Coastal Oil & Gas Corporation

Cruzelia C. & Pat Montoya

**Devon Energy Corporation** 

Donald R. & Florence M. Candelaria

EJE Brown Company

Francis Lerby Candelaria

Genevieve Candelaria

Gerald F. Harrington Trust

Harco Limited Partnership

Harold O. Pool Irrevocable Trust

James M. Raymond, Ind. & As Trustee for Corinne M. Gay & Maydell M. Mast

James V. Harrington

J. Fidel & Cordelia Candelaria

John Christoper Candelaria

Langdon D. Harrison

MAR Oil & Gas Corporation, Inc.

Mary Jone Chappell

Mercedes M. Skidmore

Nick G. Candelaria

Pablo Lenny Candelaria

Paul M. Candelaria

Paulette Sharon Candelaria

Robert & Frances Tinnin Revoc. Trust

Robert L. Bayless

Ruth Zimmerman Trust

Samuel L. Dazzo & Frances J. Dazzo

Stephanie A. & Carlos Martinez

Sunwest Bank for Kathleen Quinn

Tempe LTD Partnership

T. H. McElvain Oil & Gas Limited Partnership

Thelma Pool Revocable Trust

The Wiser Oil Company

Thomas & Mary Dugan

Williams Production Company

### San Juan 27-5 Unit Working Interest Owner Meeting 10:00 a.m., October 22, 1997 Farmington, New Mexico

### ATTENDEES:

Company/Owner:	Representatives:
Amoco Production Company	Bare Zimney 6.336938
Gerald F. Harrington Estate	Vince M. Harrington 5.106354
Dugan Production Corporation	Kurt Foodelin
Cross Timbers Oil Company	Jeff Lummus (Amous) Borry Vorg+
Cinco General Partnership	Frank Gorham 5.958775 Beb Field
T. H. McElvain Oil & Gas	LATTY LONG 1.018533
Williams Production Company	andy sveran is Current but.
Burlington Resources Oil & Gas Company	John Zent BRUCE BOVER BROWN SMOLIK 326-9712 Arden Wolker 326-9712 Ainda Donothue Alan Alexander Bill Babcock Vamin McNeil
(Others not listed above)	Les D. Niemen Horen - TAMPUS EXPL.  GREY BRINK - TAMENS EXPLORATION  LICH CHROSEAN -TAURUS EXPLORATION



SAN JUAN DIVISION

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 1, 1997

Royalty and ORRI Owners (see attached list)

RE:

Increased Density Study - Mesaverde formation

San Juan 27-5 Unit

Sections 1-36, T27N, R5W Rio Arriba County, New Mexico

### Ladies & Gentlemen:

Burlington Resources is in the process of investigating a pilot increased density study of the Mesaverde formation in the San Juan 27-5 Unit Area in Rio Arriba County, New Mexico. As you are probably aware, the current density of wells for the Blanco Mesaverde pool is two (2) wells per 320 acre spacing unit. We propose drilling increased density wells (up to four (4) wells per spacing unit) as shown on the attached plat. As you can see on the attached plat, we will establish a ½ mile buffer zone to protect offset wells from being drained. The study will determine the additional reserves that could be developed by increasing the density in each of the subject spacing units. We have received favorable results from a similar study in another portion (T29N, R7W) of the San Juan Basin.

If all working interest owners in the pilot area agree with this project, it will require a hearing and subsequent order from the New Mexico Oil & Gas Conservation Division (NMOCD) in order to proceed. We would like to schedule a hearing before the NMOCD on November 6, 1997, the application for which should be filed by October 13, 1997. Each owner listed on the attached sheet will receive notice of the application if we decide to proceed with this project.

Each royalty or overriding royalty owner is not required to take any action (approval or disapproval) in regard to this proposal unless you perceive a problem, in which case we would like to discuss your concerns. You may contact the undersigned at (505) 326-9760 if you have any questions or comments regarding this proposal.

Linda Donohue Senior Staff Landman

LD/cj SJ 27-5, 5.0

### San Juan 27-5 Unit ORRI & RI Interest Owners

ALICE JANE WEBB ALICE M VICENTI AMALIA S SANCHEZ AMOCO PRODUCTION COMPANY BEDROCK LIMITED PARTNERSHIP **BURLINGTON RESOURCES O&G CO CORINNE MILLER GAY TRUST** CRUEZELIA C MONTOYA CRUZELIA & PAT D MONTOYA HWJT DEREK PETER VENEZIA **DIOCESE OF GALLUP** DONALD & FLORENCE M CANDELARIA DONALD R CANDELARIA E J E BROWN COMPANY **EDNA E MORRELL LIVG TRUST ELEANOR G HAND ELIZABETH T CALLOWAY** FRANCIS LEROY CANDELARIA FRANK D GORHAM JR FREDDY ARNOLD FREDERICK EUGENE TURNER FRIEDA M HOLT **GENEVIEVE CANDELARIA** GERALD F HARRINGTON HARCO LTD PTSHP HAROLD O POOL IRRV RESIDUAL TR **HORACE & ELMYRA MCKAY TRUST** IRIS ANN DAHARSH J FIDEL & CORDELIA CANDELARIA J FIDEL CANDELARIA J GLENN TURNER JR JAMES M RAYMOND JAMES R PAYNE & JEAN PAYNE JAMES V HARRINGTON **JO ANN SCHMIDT** JOHN C MEADOWS JOHN CHRISTOPHER CANDELARIA JOHN LEE TURNER JOSEPH R ABRAHAM JUAN R MONTANO

**KATHLEEN QUINN** 

KATHRYN L CAMPBELL KERR-MCGEE CORPORATION LANGDON C HARRISON LANGDON D HARRISON MANUEL A SANCHEZ TRUST MARIA ERNESTINA GALLEGOS TRST MARIE PEEK MARY JO WELLS MARY JONE CHAPPELL MAYDELL MILLER MAST TRUST **MERCEDES M SKIDMORE** MINERALS MANAGEMENT SERVICE **NICK G CANDELARIA** PABLO LENNY CANDELARIA PATRICIA ANN ASHBURN PAUL MICHAEL CANDELARIA PAULETTE SHARON CANDELARIA RAYMOND MARTINEZ RICHARD ARNOLD **ROBERT & FRANCES TINNIN TR** ROBERT L BAYLESS **ROBERT P & ANNA D EARNEST TR ROMERO FAMILY LTD PARTNERSHIP RUFIE LUJAN RUTH ZIMMERMAN TRUSTEE** SCOTT ANTHONY VENEZIA STANLEY R ARNOLD STATE OF NEW MEXICO STEPHANIE A & CARLOS MARTINEZ TH MCELVAIN OIL & GAS LTD PAR **TEMPE LTD PARTNERSHIP** THELMA POOL REV MARITAL TRUST THOMAS A DUGAN & MARY E DUGAN TOTAL MINATOME CORPORATION **U/W FOSTER MORRELL DECD** UNION OIL CO OF CALIF **VASTAR RESOURCES INC VERDA L BOCCACIO VIRGINIA M MARTINEZ** W G PEAVY OIL COMPANY **WILLIAM G WEBB** 

### FOUR CORNERS OIL & GAS CONFERENCE

### **PROGRAM**

TIME	PROGRAM ITEM	SPEAKER(S)
07:30 - 11:30		
	REGISTRATION	
08:30 - 0 8:35	Ribbon Cutting	Farmington Chamber of Commerce Red Coats
08:35 - 06:40	Introduction	Norman Norvelle & T. Greg Merrion
08:40 - 09:00	Welcome Address	Dr. James Henderson, President SJC
09:00 - 09:30	Keynote Address	Roy Willis, Vice-President, IPAA
09:30 - 09:45	BLM Cooperative Excellence Award	Mike Pool, District Manager BLM
09:45 - 10:00	BREAK - REFRESHMENTS	EXHIBITS AREA OPEN TO 5:30 PM
10:00 - 12:00	Tribal Oil & Gas Development Panel	*See Below
12:00 - 01:30	LUNCH	
01:30 - 02:00	BLM Regulatory Update	Duane Spencer, BLM
02:00 - 02:30	NMOCD Regulatory Update	Frank Chavez, NMOCD
02:30 - 03:00	COGCC Regulatory Update	Dave Dillon & Mark Weems, COGCC
03:00 -03:30	BREAK - REFRESHMENTS	EXHIBITS AREA ONLY
03:30 - 04:00	NMED Regulatory Update	Mark Weidler, NMED
04:00 - 04:30	OSHA Regulatory Update	Dan Stone, NMED (OSHA)
04:30 - 05:00	State Land Office Update	Maurice Lierz, SLO
05:10 - 05:15	EXHIBITOR TICKET DRAWING	EXHIBIT AREA - GYM
05:30 - 07:30	RECEPTION	HENDERSON FINE ARTS CENTER

W	EDNESDAY, MARCH 20, 1996 TECHI	NICAL SESSION ROOM 1
TIME	PROGRAM ITEM	SPEAKER(S)
07:30 - 11:30	REGISTRATION OPEN	
08:00 - 04:00	EXHIBITS AREA OPEN	
08:00 - 08:30	Gas Sampling Procedures	Bob & Chelle Durbin, Gas Analysis Service
08:40 - 09:10	Appropriate Sampling Methodology for Soil & Water Samples	Jeff Blagg, Blagg Engineering, Inc.
09:20 - 09:50	Advances in Regulatory Sample Preparation for the Oil & Gas Industry	Robert Lockerman, CEM
10:00 - 10:30	BREAK - REFRESHMENTS	EXHIBITS AREA ONLY
10:30 - 11:00	Predicting Unconventional Well Logs from Conventional Logs	Dr. Adwait Chawathe, PRRC - NMT
11:10 - 11:40	Naturally Fractured Log Analysis-Techniques in the Mesaverde Formation	William Babcock, Meridian Oil Inc.
11:40 - 01:00	LUNCH	
01:00 - 01:30	Numerical Welf Test Interpretation Techniques	Greg Rusicauff, INTERA, Inc.
01 40 - 02 10	Lower Emissions with CAT 3600 Technology	Paul K. Ludwick, The Hanover Company & Matthew E. Tschimart, El Paso, Field Service
02 20 - 02 50	Cleanoum III Microprocessor Controls Technology for Natural Gas Engines	Paul D. Freen, Cooper Energy Services
03 00 -03 30	BREAK - REFRESHMENTS	EXHIBITS AREA ONLY
30 - 04:00	The PerfClean Tool Presentation	Rex Dodd, PerfCean interrestores
10 - 04:40	Archaeology in the Gas Fields: The Fruitland Coal Gas Data Recovery Program	um Copeand, Bureau of Land Managemen

WEDNESDAY, MARCH 20, 1996 TECH		NICAL SESSION ROOM 2			
TIME	PROGRAM ITEM		SPEAKER(S)		
07:30 - 11:30	REGISTRATION OPEN				
08:00 - 04:00	EXHIBITS AREA OPEN				
08:00 - 08:30	Analysis of the Success of Cavity Completions in the Fairway Zone of the San Juan Basin		R. Muthukumarappan, Univ. of Wyoming		
08:40 - 09:10	The Mechanics of Dynamic Cavity Completions for Coal Seam Degasification Wells		Dana Weida, Advanced Resources International		
09:20 - 09:50	The Use of Coil Tubing to Deploy an Electric Submersible Pump for Production- A Case Study		Terry Eagle, Dowell Schlumberger		
10:00 - 10:30	BREAK - REFRESHMENTS		EXHIBITS AREA ONLY		
10:30 - 11:00	Enhanced Coal Gas Recovery by Carbon Dioxide Injection		Craig McCracken, Meridian Oil Inc.		
11:10 - 11:40	Milagro Plant Co-Generation Project		Paul Lookabaugh, Williams Field Services		
11:40 - 01:00	LUNCH				
01:00 - 01:30	A Reality Based Risk Assessment Case Study: Potential Implications for Oil & Gas Facilities		Brian P. Sullivan, Los Alamos Technical Associates, Inc.		
01:40 - 02:10	Process Safety and Risk Management for Oil & Gas Industry		Mike McKibben, Rapley Engineering Services, Inc		
02:20 - 02:50	San Juan County LEPC/Region I Response Team		Don Cooper, San Juan County & William Robertson, Farmington Fire Department		
03:00 -03:30	BREAK - REFRESHMENTS		EXHIBITS AREA ONLY		
03:30 - 04:00	Reducing Reconditioning Costs Using Applied CP Survey Technology		Charles Hall, FERA Corporation		
04:10 - 04:40	Automation of Cathodic Protection Data		Charles Half, FERA Corporation		

<sup>&</sup>lt;sup>a</sup> Tribal Oil & Gas Development Panel Members: Mary Lou Drywater - Navajo Area BIA, Thurman Velarde - Jicarilia Apache, Ken Young - Albuquerque Area BIA & Ute Mountain Ute, Bob Zahradnik - Southern Ute, and Akhtar Zaman - Navajo Nation.

ALTERNATE TOPICS	
SVC EnvironAIDE System: A Useful Cost Saving Tool for Monitoring & Controlling Clean Up - Robert Prindle, SVS, Inc.	
Rapid Sample Prep. of Oils & Process Materials for Elemental & Chromatographic Analysis using Accelerated Microwave	Techniques- R.L. Lockerman, CEM
OSHA 1910.119 Mechanical Integrity Process Safety Management Subpart (j) - Richard Kucharyson, Honeywell IAC	
Pit Closure: What's at Risk? Myke Lane, On Site Technologies, Ltd.	
Workman's Compensation - Leonard SpellBring, NM WC	
NORM Management without Pain - Philip Underhill, P.T. Underhill & Associates	

ካ 18	Introduction to NORM	WORKSHOP 5:00 PM - 9:00 PM	\$ 45	SJC Business and Industry Training	(505) 599-0418
h 20	Annual HAZWOPER Refresher	8:00 AM - 5:00 PM	\$120	SJC Business and Industry Training	(505) 599-0418
rch 21	Trenching & Excav. Compet.Person	8:00 AM - 5:00 PM	\$ 95	SJC Business and Industry Training	(505) 599-0418
March 21	DOT HM 181 Training	8:00 AM - 5:00 PM	\$120	SJC Business and Industry Training	(505) 599-0418
March 21	PEC Basic Safety Orientation	8:00 AM - 4:00 PM	\$55-85	SJC Business and Industry Training	(505) 599-0418
March 21	Stimulation Design & Monitoring	8:00 AM - 5:00 PM	\$45	Bob Blaylock, NMT - PTTC	(505) 835-5938
March 21 - 22	NORM Surveyor Training Class, 16 hr	8:00 AM - 5:00 PM	\$475	SJC Business and Industry Training	(505) 599-0418

## Project Timeline

1950's Initial 320-Acre Spacing

Infilled to 160-Acre Spacing

1970's

1977

Limits of Blanco Mesaverde Pool (Chacra Line) Segregation of the Vertical / Horizontal

Localized Mesaverde Study Initiated Sept, 1994

Basin-Wide Study Initiated Mar, 1995

## Project Timeline

Jan, 1997

Approval Received for 29-7 Unit Pilot

Mid-1997

Eight 29-7 Unit Wells Drilled / Completed

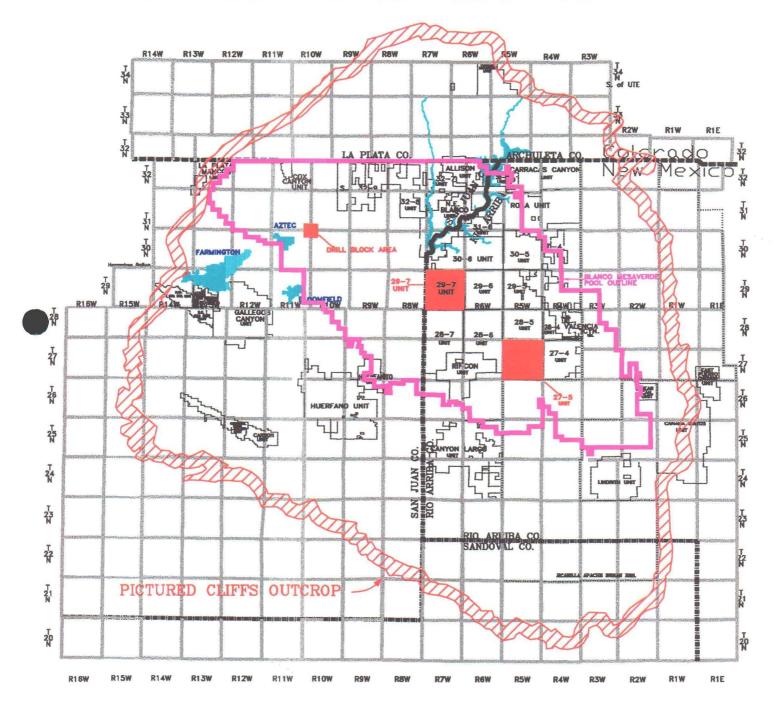
Jan, 1998

Pilots (San Juan 27-5 Unit and Drillblock) Approval Received for Two Additional

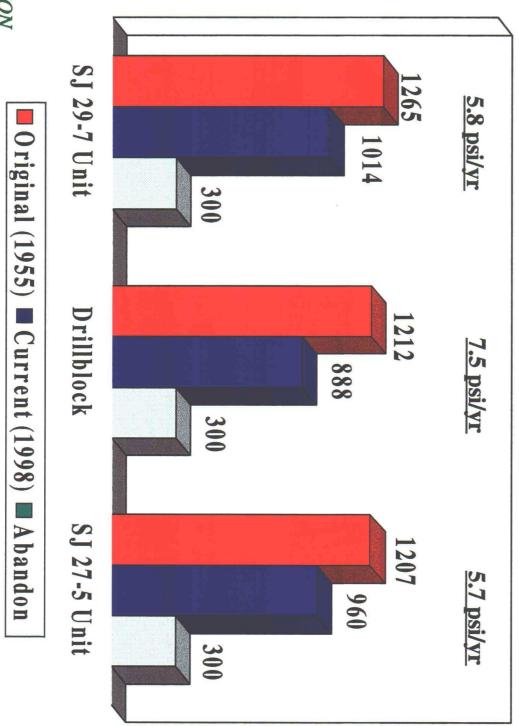
1998

Additional Pilot Areas Drilled / Completing

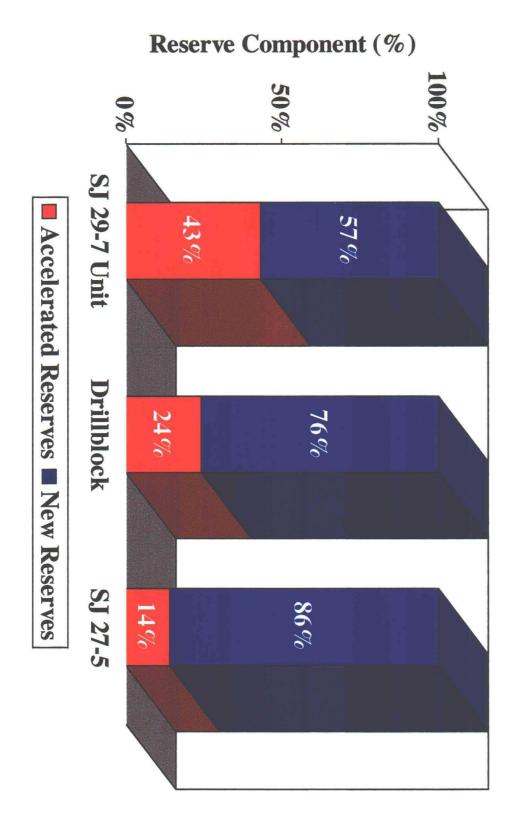
#### SAN JUAN BASIN LOCATION MAP

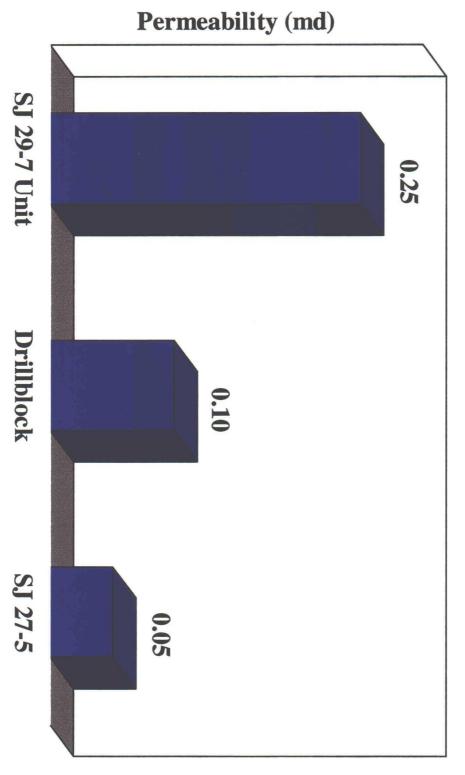


### **Average Bottomhole Pressures** Pilot Areas (psi)

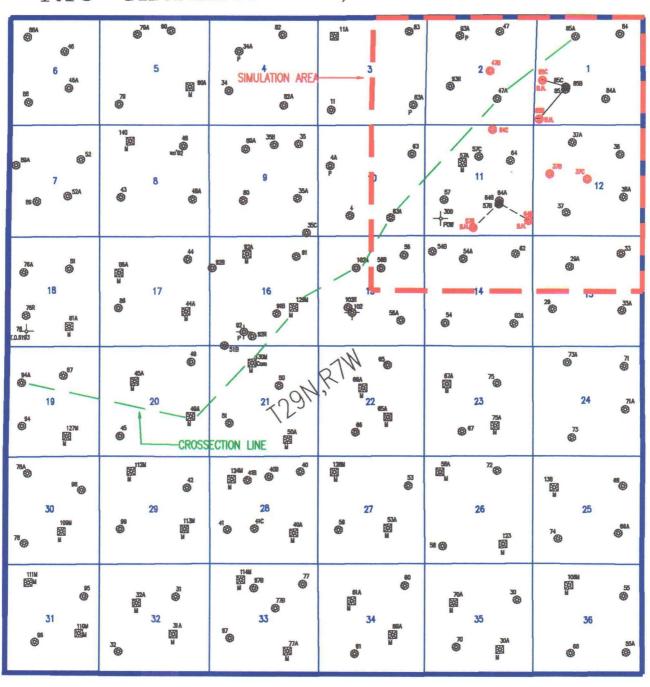


### New Well Reserve Component Two Wells per GPU

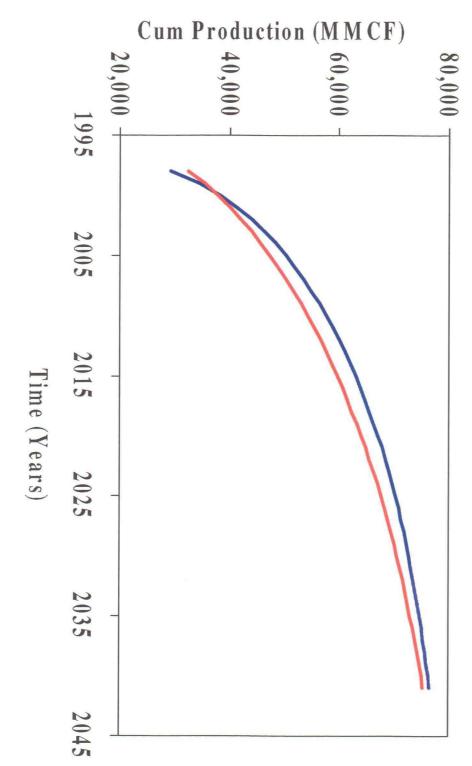




#### SAN JUAN 29-7 UNIT RIO ARRIBA CO., NEW MEXICO



#### Pre-Drill Simulation vs. Post-Drill Simulation San Juan 29-7 Unit Infill Pilot Cumulative Production





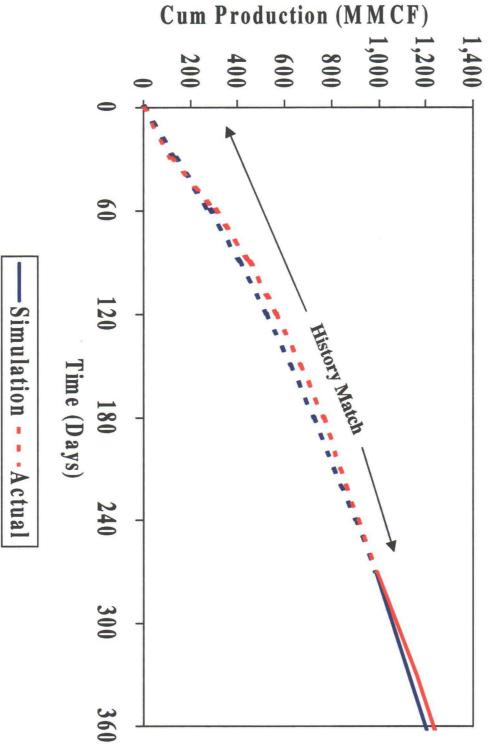
Pressure (psi)

800

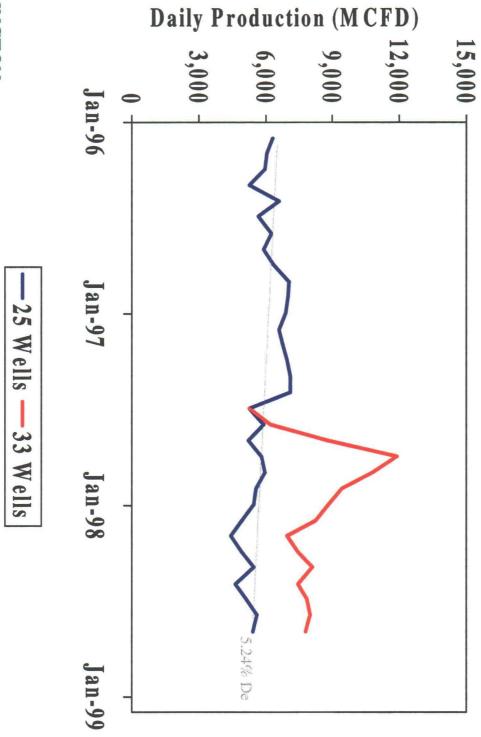
BURLINGTON RESOURCES



# Cumulative Production San Juan 29-7 Unit Infill Pilot Simulation vs. Actual



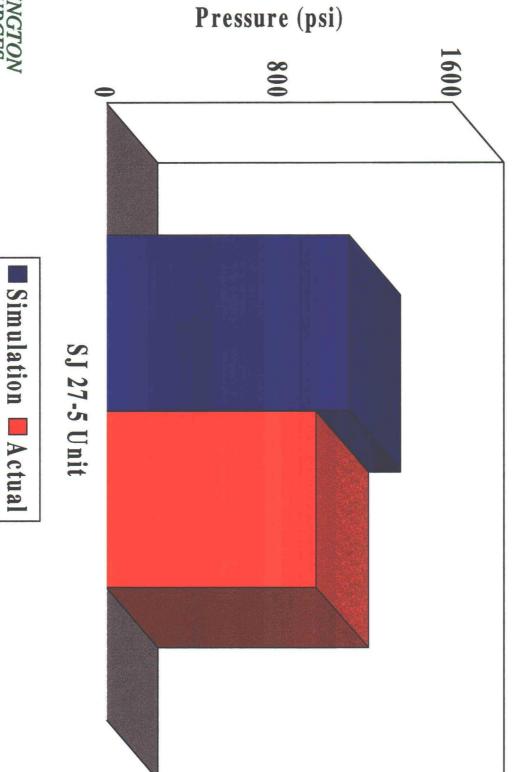
# Daily Production San Juan 29-7 Unit Infill Pilot



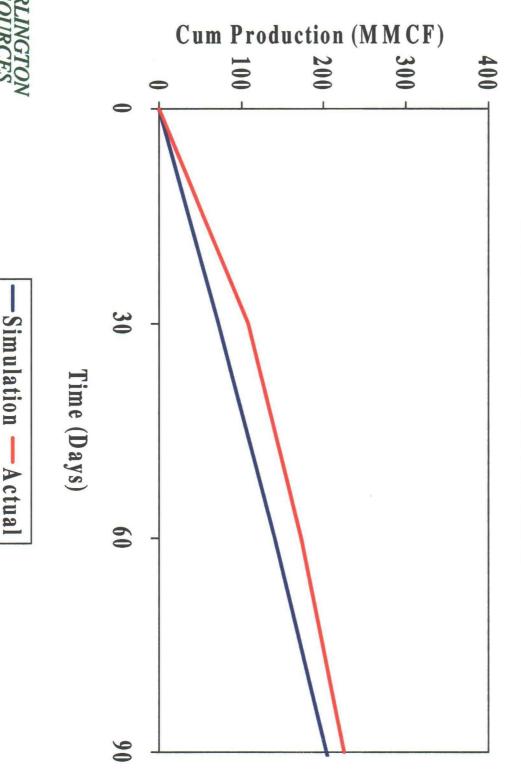
#### SAN JUAN 27-5 UNIT RIO ARRIBA CO., NEW MEXICO

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	6 45A C	P 61⊗	52A ₽	\$ <sup>2a</sup>	23A C ®	\$55
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	1259M 233 680 883 M	255 <sup>701</sup> M	, 8 8 8 2 20	113E 101A 101A		TION AREA
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# Bottomhole Pressure San Juan 27-5 Unit Infill Pilot Simulation vs. Actual



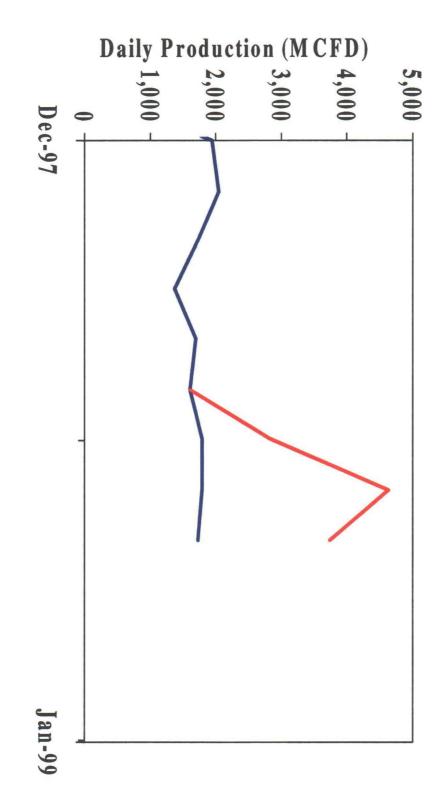
## Cumulative Production San Juan 27-5 Unit Infill Pilot Simulation vs. Actual



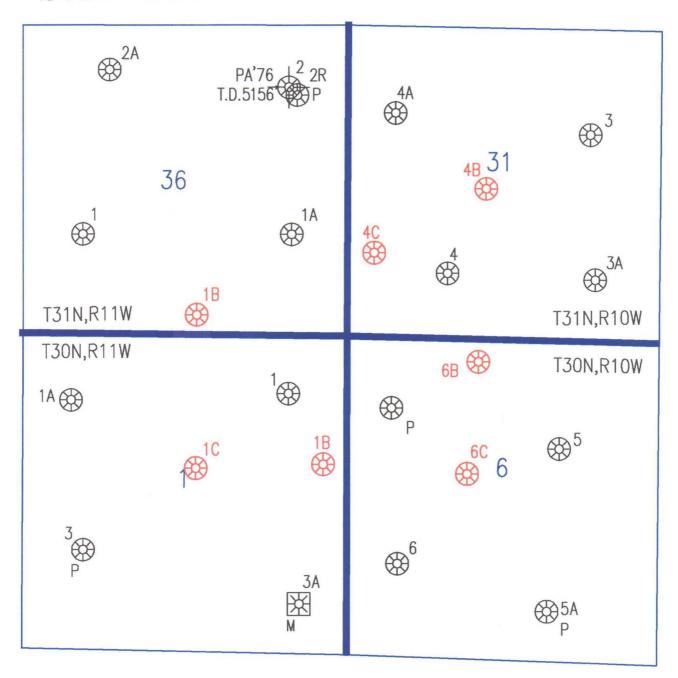
-16 Wells

—21 Wells

# Daily Production San Juan 27-5 Unit Infill Pilot



#### DRILL BLOCK PILOT AREA SAN JUAN CO., NEW MEXICO



-12 Wells

-18 Wells

### Daily Production Drillblock Infill Pilot

