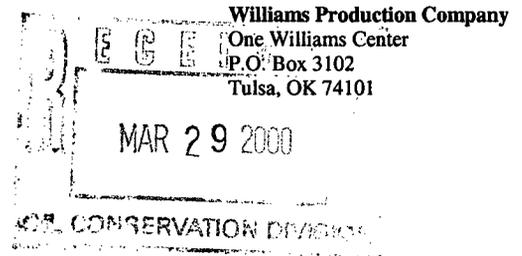




Via Federal Express

March 28, 2000



New Mexico Oil Conservation Division  
Attention: Mr. Mike Stogner  
2040 South Pacheco  
Santa Fe, New Mexico 87505

Re: Administrative application dated March 8, 1000 to establish two non-standard lay-down gas spacing and proration units within the Blanco-Mesaverde Pool to comprise: (i) Lots 1 and 2 and the NE/4 (N/2 equivalent) of Irregular Section 18, Township 31 North, Range 5 West, NMPM, Rio Arriba County, New Mexico; and (ii) Lots 3 and 4 and the SE/4 (S/2 equivalent) of Irregular Section 18.

Dear Mr. Stogner:

Pursuant to your letter dated March 22, 2000 in support of the referenced Application, enclosed is the following information:

1. Copies of APDs for the Rosa Unit #22A, #182 and #182A.
2. Plat showing the boundaries of the Rosa Unit and the Rosa Unit Mesaverde Participating Area.
3. Copy of the Rosa Unit 2000 Plan of Development approved by Roy Johnson of the State of New Mexico Oil Conservation Commission.

I appreciate your cooperation in this matter. If you need anything further please contact me at (918) 573-6169. Any information we have which may further this application will be promptly provided.

Sincerely,

M. Vern Hansen  
Senior Landman

cc: Mr. Frank Chavez  
NMOCD - Aztec

District I  
 PO Box 1980, Hobbs, NM 88241-1980  
 District II  
 PO Drawer DD, Artesia, NM 88211-0719  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
 Energy, Minerals & Natural Resources Department

Form C-104  
 Revised February 21, 1994  
 Instructions on back  
 Submit to Appropriate District Office  
 5 Copies

OIL CONSERVATION DIVISION  
 PO Box 2088  
 Santa Fe, NM 87504-2088

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Operator name and Address <b>WILLIAMS PRODUCTION COMPANY P.O. BOX 58900 SALT LAKE CITY, UTAH 84158-0900</b>		OGRID Number 120782
		Reason for Filing <b>MAR 30 2/15 1995</b> CH EFFECTIVE DATE: 1/7/95
API Number 3003907971	Well Name BLANCO MESA VERDE	Well Code 72319
Property Code <b>017033</b>	Property Name ROSA UNIT	Well Number 822

II. Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
A	18	31N	05W		890	NORTH	890	EAST	RIO ARRIBA

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County

Lea Code <b>F</b>	Producing Method Code	Gas Connection Date	C-129 Permit Number	C-129 Effective Date	C-129 Expiration Date
----------------------	-----------------------	---------------------	---------------------	----------------------	-----------------------

III. Oil and Gas Transporters

Transporter OGRID	Transporter Name and Address	POD	O/G	POD ULSTR Location and Description
008471	GARY WILLIAMS ENERGY 310 17TH ST. SUITE 5300 DENVER CO 80202	2005010	O	A 18 31N 05W
025244	WILLIAMS FIELD SERVICES ATTN:GLENN BITTON PO BOX 58900 SALT LAKE CITY UTAH 84158-0900	2005030	G	

RECEIVED  
 APR 13 1995

IV. Produced Water

POD 2005050	POD ULSTR Location and Description <b>OIL CON. DIV. DIST. 3</b>
----------------	------------------------------------------------------------------------

V. Well Completion Data

Spud Date	Ready Date	TD	FBTD	Perforations

Hole Size	Casing & Tubing Size	Depth Set	Sacks Cement

VI. Well Test Data

Date New Oil	Gas Delivery Date	Test Date	Test Length	Thg. Pressure	Csg. Pressure

Choke Size	Oil	Water	Gas	AOF	Test Method

I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Connie Lambert*

Printed name: CONNIE LAMBERT  
 Title: SR. OFFICE ASSISTANT

Date: December 13, 1994 Phone: (505)504-7084

OIL CONSERVATION DIVISION

Approved by: *27.8*  
 Title: SUPERVISOR DISTRICT #3

Approval Date: APR 13 1995

If this is a change of operator fill in the OGRID number and name of the previous operator  
 NORTHWEST PIPELINE CORPORATION #016189

Previous Operator Signature Printed Name Title Date

NO. OF COPIES RECEIVED	5
DISTRIBUTION	
SAH TA FE	1
FILE	1
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL 1 GAS 1
OPERATOR	
PROBATION OFFICE	

**NEW MEXICO OIL CONSERVATION COMMISSION  
REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS**

Form C-104  
Supersedes Old C-104 and C-11  
Effective 1-1-65

**I. Operator**  
 Northwest Pipeline Corporation  
 Address  
 501 Airport Drive, Farmington, New Mexico 87401  
 Reason(s) for filing (check proper box)  
 New Well  Change in Transporter of:  
 Recompletion  Oil  Dry Gas   
 Change in Ownership  Casinghead Gas  Condensate

If change of ownership give name and address of previous owner: El Paso Natural Gas Company, PO Box 990, Farmington, New Mexico 87401

**II. DESCRIPTION OF WELL AND LEASE**  
 Lease Name: Rosa Unit Well No.: 22 Pool Name, including Formation: Blanco Mesa Verde Kind of Lease: State, Federal or Fee SF 078764 Lease No.:  
 Location  
 Unit Letter A ; 890 Feet From The North Line and 800 Feet From The East  
 Line of Section 18 Township 31N Range 5W , NMPM, Rio Arriba County

**III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS**  
 Name of Authorized Transporter of Oil  or Condensate  Northwest Pipeline Corporation Address (Give address to which approved copy of this form is to be sent) 501 Airport Drive, Farmington, New Mexico 87401  
 Name of Authorized Transporter of Casinghead Gas  or Dry Gas  Northwest Pipeline Corporation Address (Give address to which approved copy of this form is to be sent) 501 Airport Drive, Farmington, New Mexico 87401  
 If well produces oil or liquids, give location of tanks. Unit A Sec. 18 Twp. 31N Rge. 5W Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number:

**IV. COMPLETION DATA**

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Some Res'v.	Diff. Res'v.
Date Spudded	Date Compl. Ready to Prod.		Total Depth		P.B.T.D.			
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay		Tubing Depth			
Perforations						Depth Casing Shoe		

**TUBING, CASING, AND CEMENTING RECORD**

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

**V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL** (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bble.	Water - Bble.	Gas - MCF

**GAS WELL**

Actual Prod. Test - MCF/D	Length of Test	Bble. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	Tubing Pressure (shut-in)	Casing Pressure (shut-in)	Choke Size

**VI. CERTIFICATE OF COMPLIANCE**

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

*R. L. Manaffey*  
 (Signature)  
 OFFICE SUPERVISOR  
 JAN 9 1974  
 (Date)

OIL CONSERVATION COMMISSION  
 APPROVED FEB 7 1974  
 BY *Clarence C. Caves*  
 SUPERVISOR DIST. #3  
 TITLE

This form is to be filed in compliance with RULE 1104.  
 If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.  
 All sections of this form must be filled out completely for allowable on new and recompleted wells.  
 Fill out only Sections I, II, III, and VI for changes of owner well name or number, or transporter, or other such change of condition.  
 Separate Forms C-104 must be filed for each pool in multiple completed wells.

MAIN OFFICE OCC

SAN ANTONIO, NEW MEXICO

(File the original and 4 copies with the appropriate district office)

1960 MAY 31 AM 8:39  
CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator El Paso Natural Gas Company Lease Rosa Unit

Well No. 22-18 Unit Letter A S 18 T 31N R 5W Pool Blanco Mesaverde

County Rio Arriba Kind of Lease (State, Fed. or Patented) Federal

If well produces oil or condensate, give location of tanks: Unit S T R

Authorized Transporter of Oil or Condensate El Paso Natural Gas Products Company

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas El Paso Natural Gas Company

Address Box 997, Farmington, New Mexico Date Connected \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well ( )

Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )

Change in Ownership ( ) Other (X)

Remarks: \_\_\_\_\_ (Give explanation below)

Change operator from Pacific Northwest Pipeline Corporation.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 13th day of April 19 60



Approved \_\_\_\_\_ APR 20 1960 \_\_\_\_\_ 19 \_\_\_\_\_

OIL CONSERVATION COMMISSION

By [Signature]

Title Supervisor Dist. # 3

By [Signature]

Title Petroleum Engineer

Company El Paso Natural Gas Company

Address Box 997

Farmington, New Mexico

MAIN OFFICE OCC

1957 NOV 27 AM 8:20

OIL CONSERVATION COMMISSION

BOX 697

120 EAST CHACO

AZTEC, NEW MEXICO

NOTICE OF GAS CONNECTION

DATE November 1, 1957

THIS IS TO NOTIFY THE OIL CONSERVATION COMMISSION THAT CONNECTION FOR THE PURCHASE OF GAS FROM

THE Pacific Northwest Pipeline Corporation  
OPERATOR

Rosa Unit #22-18 "A" 18-31-5  
LEASE WELL UNIT S-T-R

Blanco Mesa Verde El Paso Natural Gas Company  
POOL NAME OF PURCHASER

WAS MADE ON October 30, 1957 , FIRST DELIVERY October 30, 1957  
DATE DATE

AOF 3,928  
Choke 3,016  
INITIAL POTENTIAL

*12/16/57*

El Paso Natural Gas Company  
PURCHASER

*[Signature]*  
REPRESENTATIVE

Chief Dispatcher  
TITLE

CC: TO OPERATOR  
OIL CONSERVATION COMMISSION - SANTA FE  
F. N. WOODRUFF - EL PASO  
B. D. ADAMS

FILE



NEW MEXICO OIL CONSERVATION COMMISSION  
MAIN OFFICE OCC SANTA FE, NEW MEXICO

(File the original and 4 copies with the appropriate district office)

1957 AUG 12 AM 9:16

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator Pacific Northwest Pipeline Corporation Lease Rosa Unit

Well No. 22-18 Unit Letter A S 18 T 3LN R 5W Pool Blanco Mesa Verde

County Rio Arriba Kind of Lease (State, Fed. or Patented) \_\_\_\_\_

If well produces oil or condensate, give location of tanks: Unit S T R

Authorized Transporter of Oil or Condensate \_\_\_\_\_

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas El Paso Natural Gas Company

Address Box 997, Farmington, New Mexico

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well \_\_\_\_\_ (x)

Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )

Change in Ownership \_\_\_\_\_ ( ) Other \_\_\_\_\_ ( )

Remarks: \_\_\_\_\_ (Give explanation below)



NOISSIMMOO NOITAVREBNOE NO

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_

Approved AUG 5 1957 19 \_\_\_\_\_

OIL CONSERVATION COMMISSION

By Emory C. ...

Title Supervisor Dist. # 3

By George H. Peppin

Title District Proration Engineer

Company Pacific Northwest Pipeline Corporation

Address 405 1/2 West Broadway

Farmington, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

MAIN OFFICE OCG  
(File the original and 5 copies with the appropriate district office)

1957 JUL 28 8:38  
CERTIFICATE OF COMPLIANCE AND AUTHORIZATION  
TO TRANSPORT OIL AND NATURAL GAS

Company or Operator Pacific Northwest Pipeline Corporation Lease Rosa Unit

Well No. 22-18 Unit Letter A S 18 T 31 R 5 Pool Blanco Mesa Verde

County Rio Arriba Kind of Lease (State, Fed. or Patented) \_\_\_\_\_

If well produces oil or condensate, give location of tanks: Unit S T R

Authorized Transporter of Oil or Condensate \_\_\_\_\_

Address \_\_\_\_\_

(Give address to which approved copy of this form is to be sent)

Authorized Transporter of Gas Pacific Northwest Pipeline Corporation

Address 405 1/2 West Broadway, Farmington, New Mexico

(Give address to which approved copy of this form is to be sent)

If Gas is not being sold, give reasons and also explain its present disposition:

Reasons for Filing: (Please check proper box) New Well \_\_\_\_\_ (X)

Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )

Change in Ownership \_\_\_\_\_ ( ) Other \_\_\_\_\_ ( )

Remarks: \_\_\_\_\_ (Give explanation below)

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 9 day of July 19 57

Approved JUL 11 1957 19 \_\_\_\_\_

By George 16-DIST. COM

Title District Probation Engineer

OIL CONSERVATION COMMISSION

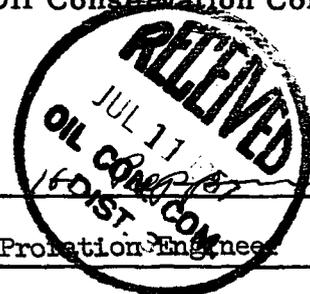
By Emery C. Lewis

Title Supervisor Dist. # 3

Company Pacific Northwest Pipeline Corp.

Address 405 1/2 West Broadway

Farmington, New Mexico



NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

(Form C-104)  
(Revised 7/1/52)

REQUEST FOR (OIL) - (GAS) ALLOWABLE

New Well  
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Farmington, New Mexico 7-9-57  
(Place) (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Pacific Northwest Pipeline Corporation Rosa UNIT Well No. 22-18, in NE 1/4 NE 1/4,  
(Company or Operator) (Lease)

A, Sec. 18, T. 31N, R. 5W, NMPM, Blanco Mesa Verde Pool  
Unit Letter

Rio Arriba County. Date Spudded 5-5-57, Date Completed 6-12-57

Please indicate location:

D	C	B	A X
E	F	G	H
L	K	J	I
M	N	O	P

890N 800E

Casing and Cementing Record

Size Feet Sax

10-3/4	242	175
7-5/8	3667	150
5 1/2	5930	150
2-3/8	5830	

Elevation 6386 Total Depth 5930, P.B.

Top oil/gas pay 5530 Name of Prod. Form Mesa Verde

Casing Perforations: 5530 - 5848 or

Depth to Casing shoe of Prod. String

Natural Prod. Test BOPD

based on bbls. Oil in Hrs. Mins.

Test after acid or shot BOPD

Based on bbls. Oil in Hrs. Mins.

Gas Well Potential 3,923 Mcf/d CAOF

Size choke in inches

Date first oil run to tanks or gas to Transmission system: W/O Pipeline

Transporter taking Oil or Gas:

Remarks: Frac Mesa Verde with water only. Top liner at 3546.

I hereby certify that the information given above is true and complete to the best of my knowledge.

Approved JUL 11 1957, 19

Pacific Northwest Pipeline Corporation  
(Company or Operator)

OIL CONSERVATION COMMISSION

By: *Charles H. Pappin*  
(Signature)

By: *Emery Arnold*

Title: District Proration Engineer

Title Supervisor Dist. # 3

Send Communications regarding well to:

Name

Address



2 - USGS  
2 - BMOCC

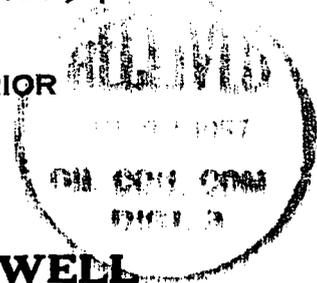
Budget Bureau No. 42-R355.4  
Approval expires 12-31-60.

Form 9-330 1 - L. G. Truby  
1 - File

U. S. LAND OFFICE Santa Fe  
SERIAL NUMBER SF-078764  
LEASE OR PERMIT TO PROSPECT 14-28-001-587


MAIN OFFICE OCC

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



**LOG OF OIL OR GAS WELL**

LOCATE WELL CORRECTLY

Company PACIFIC NORTHWEST PIPELINE CORP. Address 405 1/2 West Broadway, Farmington  
Lessor or Tract Range Field Blanca Mesa Verde State New Mexico  
Well No. 22-18 Sec. 18 T. 31N R. 5W Meridian N.M.P.M. County Rio Arriba (Ext.)  
Location 890 ft. N of S Line and 200 ft. W of E Line of Section 18 Elevation 6388'  
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed George W. Peppin  
Date July 2, 1957 Title District Production Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling May 5, 1957 Finished drilling May 20, 1957.

**OIL OR GAS SANDS OR ZONES**

(Denote gas by G)

No. 1, from 6584 to 5530 No. 4, from \_\_\_\_\_ to \_\_\_\_\_  
No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 5, from \_\_\_\_\_ to \_\_\_\_\_  
No. 3, from \_\_\_\_\_ to \_\_\_\_\_ No. 6, from \_\_\_\_\_ to \_\_\_\_\_

**IMPORTANT WATER SANDS**

No. 1, from None to \_\_\_\_\_ No. 3, from \_\_\_\_\_ to \_\_\_\_\_  
No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_

**CASING RECORD**

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From-	To-	
10-3/4	32.75	Ord.	CP&I	230.35	Tex. Pat.				
7-5/8									
5-1/2	14	Ord.	CP&I	230.35	Flat				
2-3/8	4.7	Ord.		520.71	(Tubing)				

**MUDDING AND CEMENTING RECORD**

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10-3/4	242.35'	175	Pump Plug		
7-5/8	3667.61'	200	Pump Plug		
5-1/2	5930'	250	Pump Plug		

**PLUGS AND ADAPTERS**

Heaving plug—Material \_\_\_\_\_ Length \_\_\_\_\_ Depth set \_\_\_\_\_  
Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

FOLD MARK

FOLD

**PLUGS AND ADAPTERS**

Heaving plug—Material \_\_\_\_\_ Length \_\_\_\_\_ Depth set \_\_\_\_\_  
 Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

**SHOOTING RECORD**

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

**TOOLS USED**

Rotary tools were used from \_\_\_\_\_ feet to \_\_\_\_\_ feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
 Cable tools were used from \_\_\_\_\_ feet to \_\_\_\_\_ feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

**DATES**

\_\_\_\_\_ 19\_\_\_\_ Put to producing \_\_\_\_\_ 19\_\_\_\_  
 May 30, 1957  
 The production for the first 24 hours was \_\_\_\_\_ barrels of fluid of which \_\_\_\_\_% was oil; \_\_\_\_\_% emulsion; \_\_\_\_\_% water; and \_\_\_\_\_% sediment. Gravity, °Bé. \_\_\_\_\_

If gas well, cu. ft. per 24 hours \_\_\_\_\_ Gallons gasoline per 1,000 cu. ft. of gas \_\_\_\_\_

Rock pressure, lbs. per sq. in. 3,016.000

Tubing 1258 casing 1257 CAOF 1,257

**EMPLOYEES**

\_\_\_\_\_, Driller Shut in 7 days \_\_\_\_\_, Driller  
 \_\_\_\_\_, Driller \_\_\_\_\_, Driller

**FORMATION RECORD**

FROM—	TO—	TOTAL FEET	FORMATION
0'	2490'	2490'	Surface
2490'	2624'	134'	Ojo Alamo
2624'	3080'	456'	Kirtland
3080'	3238'	158'	Fruitland
3238'	3622'	384'	Pictured Cliffs
3622'	5430'	1808'	Lewis
5430'	5510'	80'	Cliff House
5510'	5708'	198'	Menefee
5708'	TD	222'	Point Lookout
5930'			Total Depth
5903'			Plug Back Total Depth

(OVER)

15-AM

DATE	DEPTH	REMARKS	REMARKS	REMARKS	REMARKS
FRACTIONAL WELL OPERATING RECORD					

16-43004-2 U. S. GOVERNMENT PRINTING OFFICE

### HISTORY OF OIL OR GAS WELL

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

5-31-57, Perf 5848-44, 9830-26, 9822-18, 9814-10, 9806-5750, 9794-78, 9774-46, 9756-38, 9730-12, 9560-56, 9540-39. 2 shots/ft.

Fract w/134,000 gals water. IR 2500', IP 3000', max 2600', max 3500', final 2400', standing 400%, overall IR 59.5 bbls/min. Used 200 rubber balls. Irax thru perfor.

Logs: Schlumberger SS, 3623' to 5151', Lane Ellis Gamma Ray, Surface to 5891', Neutron, Surface to 5903' and Multispaced Neutron, 5903' to 4950' and 3650' to 3000'.

MAX DEVIATION

Max Deviation 2' @ 5250'.

DATE OF THIS RECORD OR SOURCE

Comments on this record...

The accuracy of this data is the responsibility of the person who prepared it.

DATE OF THIS RECORD OR SOURCE

Signature of the person who prepared this record.

The information herein is for the use of the Bureau of Land Management and is not to be used for any other purpose.

Location of well (Section, Township, Range) and name of well.

Operator of well.

County.

Comments.

LOCAL WELL COLLAR LOG

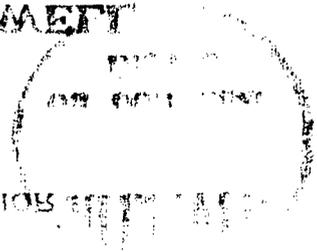

### LOG OF OIL OR GAS WELL

GEOLOGIC SURVEY

DEPARTMENT OF THE INTERIOR

WELL LOGS

WELL OFFICE OCC



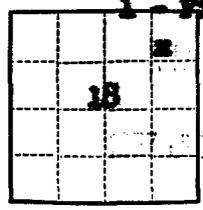
DATE OF THIS RECORD OR SOURCE

Signature of the person who prepared this record.

Comments on this record...

3 - GWS  
2 - HCCC  
1 - L. G. Truby  
1 - File

(SUBMIT IN TRIPLICATE)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Land Office Santa Fe  
Lease No. 67-07016  
Unit Room  
14-03-001-97

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	<input checked="" type="checkbox"/>
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR.....	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	
NOTICE OF INTENTION TO ABANDON WELL.....		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

June 14, 1957

Well No. 22-18 is located 890 ft. from N line and 800 ft. from E line of sec. 18  
NE/4 NE/4 Sec. 18 31 North S West T.14.N.  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Blanco Mesa Verde Nat. Rio Arriba New Mexico  
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~measured~~ <sup>ungraded ground</sup> above sea level is 6385 ft.

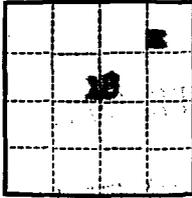
DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 5-5-57. Set 231.35' of 10-1/4" casing @ 244.35', cemented w/175 sz w/2% CaCl. Casing tested ok.  
 Set 3655.1' of 7-5/8" casing @ 3667.61', cemented w/150 sz 8 1/2 gal and 90 sz neat. Casing tested ok.  
 Set 2384.35' of 5-1/2" liner @ 5930', Burnt Liner Hanger @ 3545.65', cemented w/150 sz reg. Spaced top of liner w/100 sz reg. Tested ok.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company PACIFIC NORTHWEST PIPELINE CORPORATION  
 Address 405 1/2 West Broadway  
Farrington, New Mexico  
 By Original signed by T. A. Dugan  
 Title Division Manager



3 - HSGS  
2 - HSOCC  
1 - L. G. Truby (SUBMIT IN TRIPLICATE)  
1 - File

Land Office Santa Fe  
Lease No. 87-9776  
Unit 18-03-001-587

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL	<b>Report of Well Completion</b>	<b>X</b>

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

June 17, 1957

Well No. 82-18 is located 890 ft. from [N] line and 800 ft. from [E] line of sec. 18

31 North 5 West N.M.P.M.  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Blanco Mesa Verde Ext. Rio Arriba New Mexico  
(Field) (County or Subdivision) (State or Territory)

The elevation of the ungraded ground above sea level is 6356 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Perf 5828-14, 5830-26, 5822-18, 5814-10, 5806-5790, 5784-78, 5774-04, 5756-38, 5730-12, 5560-56, 5540-30, 2 shots/ft.

Flow 4/154,000 gals water. ID 2500#, IP 2800#, avg 2600#, SP 3600#, TP 2400#, standing 400#, inj rate before balls 68 bbls/min, after balls 59.5 bbls/min. Used 200 rubber balls.

Cleaned out to total depth, set 5821' of 2" tubing @ 5830', completed well.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company PACIFIC NORTHWEST PIPELINE CORPORATION

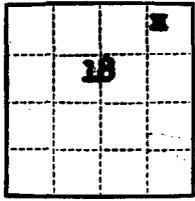
Address 605 1/2 West Broadway

Farmington, New Mexico

By Original signed by T. A. Dugan

Title Division Manager

2 - HCCC  
1 - L. G. Truby  
1 - File



(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Land Office Santa Fe  
Lease No. 27-07870  
Area  
14-08-001-987

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR.....
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....
NOTICE OF INTENTION TO ABANDON WELL.....	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

April 24, 1957

Well No. 22-18 is located 890 ft. from N line and 800 ft. from E line of sec. 18  
NE/4 NE/4 Sec. 18 31 North 5 West N.M.P.M.  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Blanco Mesa Verde Ext. Rio Arriba New Mexico  
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 6386 ft.  
ungraded ground

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Propose to drill to 200' and set 10-3/4" casing, cement to surface. Set 7-5/8" casing @ 3700', cement to 1000' above shoe using 8% gal w/50 sx neat on bottom. Set 5-1/2" liner @ 5930', cement w/150 sx reg. Bristlehead squeeze top of liner w/50 sx reg if necessary.

Mesa Verde to be fractured thru perforis using approx 150,000 gals water. Clean out to total depth, run tubing and complete well.

The N/2 of Section 18, containing 320 acres, is dedicated to this well.

100% Pacific Northwest

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.  
 Company PACIFIC NORTHWEST PIPELINE CORPORATION  
 Address 405 1/2 West Broadway  
Farmington, New Mexico  
 By Original signed by T. P. Dugan  
 Title Assistant Division Manager



NEW MEXICO  
OIL CONSERVATION COMMISSION

Form C-128

Well Location and/or Gas Proration Plat

Date April 24, 1957

Operator Pacific Northwest Pipeline Corporation Lease None

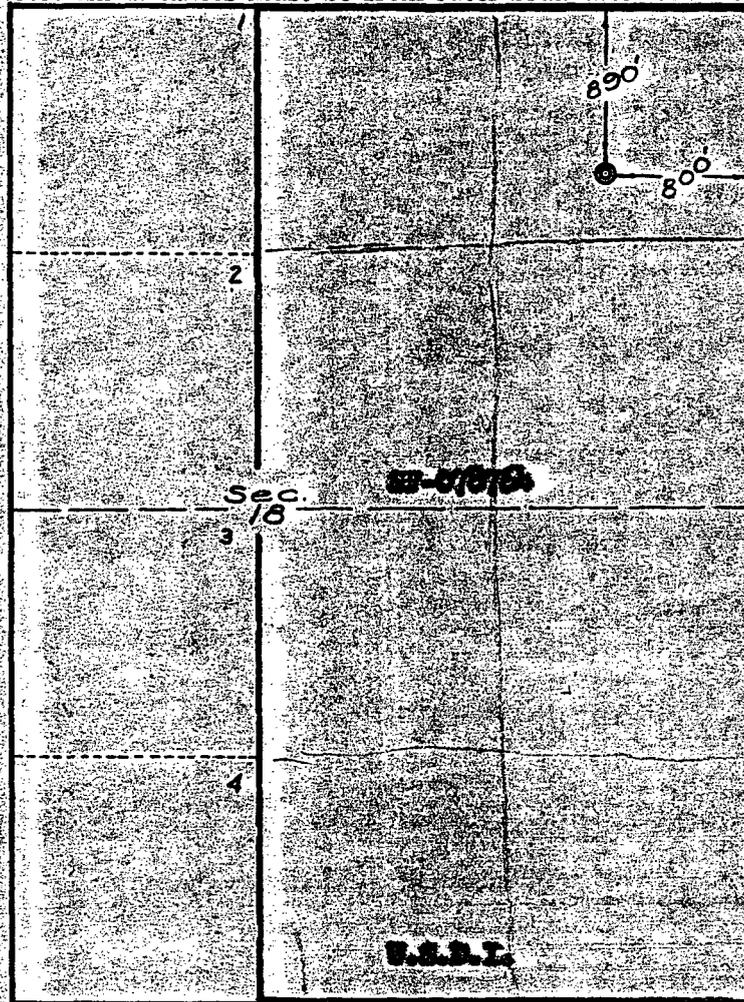
Well No. 25-18 Section 18 Township 31 North Range 5 West NMPM

Located 890 Feet From North Line, 800 Feet From East Line,

Rio Arriba County, New Mexico, G. L. Elevation 6386

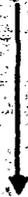
Name of Producing Formation Mesa Verde Pool None Dedicated Acreage 300

(Note: All distances must be from outer boundaries of Section)



NOTE

This section of form is to be used for gas wells only.



SCALE: 1"=1000'

1. Is this Well a Dual Comp. ? Yes  No
2. If the answer to Question 1 is yes, are there any other dually completed wells within the dedicated acreage?  
Yes  No

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge.



Name Original signed by T. A. Dugan  
Position Assistant Division Manager  
Representing PACIFIC NORTHWEST PIPELINE CORP.  
Address 107 1/2 W. Broadway, Farmington, N.M.

Date Surveyed April 17, 1957  
Ernest V. Echohawk  
Ernest V. Echohawk  
Reg. Land Surveyor, N. Mex., Reg. No. 1545

(19) **SHADOW ALLOWABLE:** The gas volume calculated for a marginal GPU that is equal to the allowable assigned to a non-marginal GPU in the same pool of the same A (acreage) or A and AD (acreage deliverability) factors as the marginal GPU. [5-30-98]

(20) **UNDERPRODUCTION:** The volume of assigned non-marginal allowable not produced on a GPU. Underproduction accumulates month to month during the proration period. [5-30-98]

#### 605.B. WELL ACREAGE AND LOCATION REQUIREMENTS

(1) **STANDARD GAS PRORATION UNIT SIZE AND WELL SPACING:**

- (a) Unless otherwise provided for in applicable special pool rules, gas wells in prorated gas pools shall be drilled according to the well spacing and acreage requirements contained in these Rules provided that when wells are drilled in pools with 640 acre spacing, a government section shall comprise the proration unit.
- (b) Any GPU drilled according to paragraph (a) which contains acreage within the tolerances below shall be considered a standard GPU for calculating allowables:

<u>STANDARD PRORATION UNIT</u>	<u>ACREAGE TOLERANCE</u>
160 acres	158-162 acres
320 acres	316-324 acres
640 acres	632-648 acres

[5-30-98]

(2) **NON-STANDARD GAS PRORATION UNITS:**

- (a) The District Supervisor of the appropriate district office of the Division has the authority to approve a nonstandard GPU without notice and hearing when the unorthodox size and shape of the GPU is necessitated by a variation in the legal subdivision of the U.S. Public Land Surveys and the nonstandard GPU is not less than 75% nor more than 125% of a standard GPU by accepting a Form C-102 land plat showing the proposed nonstandard GPU with the number of acres contained therein, and shall assign an allowable

to the nonstandard GPU based upon the acreage factor for that acreage.

- (b) Nonstandard proration units and unorthodox locations may be approved by the Division according to applicable special pool rules or Division Rules.

[5-30-98]

### 605. C. NOMINATIONS

#### (1) GAS PURCHASERS OR GAS TRANSPORTERS SHALL NOMINATE:

Each gas purchaser or each gas transporter as herein provided shall file with the Division its nomination for the amount of gas which it in good faith desires to purchase and/or expects to transport during the ensuing allocation period from each gas pool regulated by this order. The purchaser may delegate the nomination responsibility to the transporter, operator, or broker by notifying the Division's Santa Fe office. One copy of such nomination for each pool shall be submitted to the Division's Santa Fe office on Form C-121-A by the first day of the month during which the Division will consider at its allocation hearing the nominations for the succeeding allocation period. The Division shall consider at its allocation hearing the nominations received, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste during the ensuing allocation period.

The Division Director may, at his discretion, suspend this rule whenever it appears that the nominations are of little or no value. [5-30-98]

(2) **SCHEDULE:** The Division shall issue a gas proration schedule for each allocation period showing the monthly allowable for each GPU that may be produced during each month of the ensuing allocation period, the current classification of each GPU, and such other information as is necessary to show the allowable production status of each GPU on the schedule. The Division may issue supplemental proration schedules during an allocation period as necessary to show changes in GPU classification, adjustments to allowables due to changes in market conditions, or to reflect any other changes as the Division deems necessary. [5-30-98]

(3) **PRORATION OF ALL GAS WELLS WITHIN A POOL:** The Division shall include in the proration schedule the gas wells in the gas pools regulated by this order delivering to a gas transporter, and shall include in the proration schedule any well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility, which is reasonably capable of handling the type of gas produced by such a well. [5-30-98]

*A-4.*

FORM APPROVED  
Budget Bureau No. 1004-0136  
Expires: February 28, 1995

Form 3160-3  
(July 1992)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

ROW/APD

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. Type of Work  
**DRILL**  **DEEPEN**

b. Type of Well  
Oil Well  Gas Well  Other  Single Well  Multiple Zones

2. Name of Operator  
**Williams Production Company**

3. Address and Telephone No.  
**P.O. Box 3102, MS 37-2, Tulsa, OK. 74101**

4. Location of Well (Footages)  
At Surface  
**880' FNL 260' FWL, NWNW**  
  
proposed prod. zone

14. Distance in Miles and Directions from Nearest Town or Post Office  
**Approximately 20.3 miles northeast of Navajo Dam Post Office (straight line)**

15. Distance from Proposed Location to Nearest Property or Lease Line, Ft  
**260'**

16. No. of Acres in Lease  
**2507.3 acres**

17. No. of Acres Assigned to This Well  
**231.89 acres N/2**

18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT  
**516'**

19. Proposed Depth  
**6287' KB**

20. Rotary or Cable Tools  
**Rotary**

21. Elevations (Show whether DF, RT, GR, etc)  
**6515' GR**

22. Approximate Date Work will Start  
**April 1, 2000**

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	250'	130 sx-176 cu ft Type III
8-3/4"	7"	20#	3852'	440 sx-916 cu ft Lite 175 sx-242 Cu ft-Type III
6-1/4"	4-1/2"	10.5#	3752' - 6287'	80 sx-116-cuft 190 sx-276cuft Poz/Class H 50/50

Williams Exploration & Production proposes to drill a vertical well to develop the Mesa Verde Formation at the above described location, in accordance with the attached Operation and Surface Use plans. The surface is under the jurisdiction of the Bureau of Land Management. Moore Anthropological Research of Aztec, NM, has surveyed the proposed location for Cultural Resources. The report has been submitted to your office for review.

This APD also is serving as an application to obtain BLM road and pipeline on lease rights-of-way. This well will require the construction of a new 800-foot access road (see Pipeline & Well Plats #3 and #4). The proposed 516-foot long pipeline would tie into the Williams Gathering System on the Rosa Unit Well #227 (see the attached Pipeline Plat Map # 4).

14. Above and below the proposed casing and cementing program, if proposal to deepen, give present productive zone and proposed new productive zone.  
Signed Steve Nelson Steve Nelson Title Agent

COPIES: BLM+4, WELL FILE+1  
Date February 24, 2000

(This space for Federal or State office use)

Permit No. \_\_\_\_\_ Approval Date \_\_\_\_\_  
Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any:

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-10  
Revised February 21, 1999  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code	*Pool Name
		72319	Blanco - MV
*Property Code	*Property Name		*Well Number
17033	ROSA UNIT		22A
*GRID No.	*Operator Name		*Elevation
120782	WILLIAMS PRODUCTION COMPANY		6515'

<sup>10</sup> Surface Location

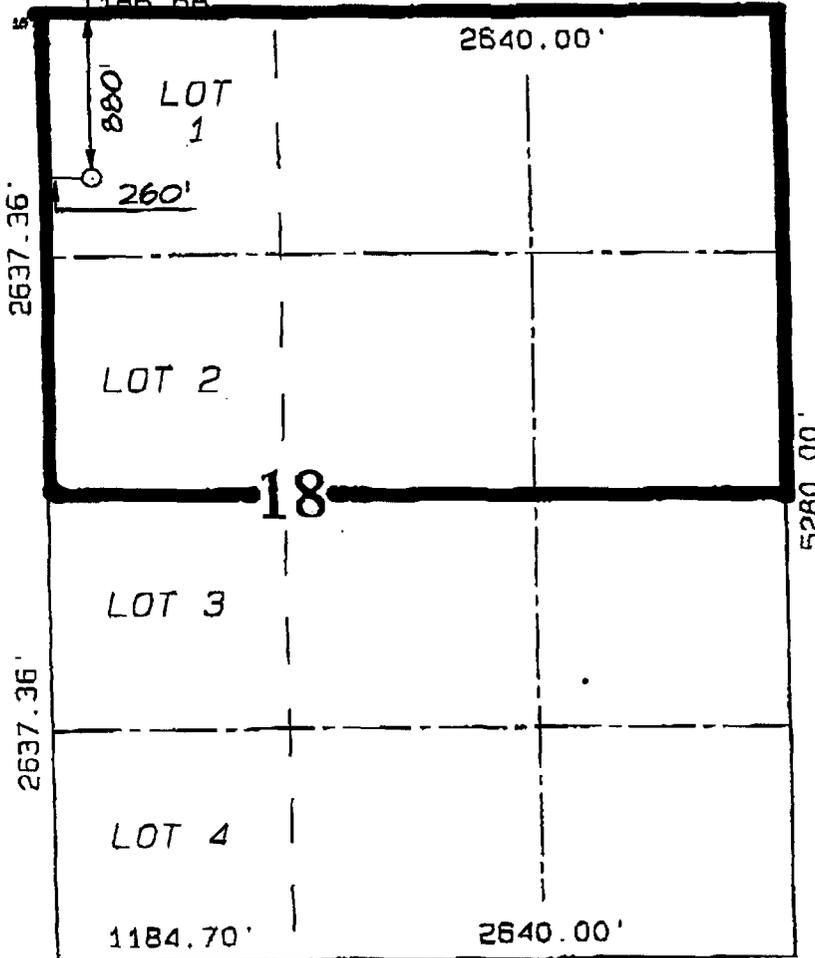
UL or lot no.	Section	Township	Range	Lot 1/4	Feet from the	North/South line	Feet from the	East/West line	County
C	18	31N	5W		880	NORTH	260	WEST	RIO ARRIBA

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1/4	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
231.89 N/2	I	U	

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Steve Nelson*  
Signature

Steve Nelson  
Printed Name

Agent, Nelson Consulting  
Title

February 24, 2000  
Date

<sup>16</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by or under my supervision, and that the same is true and correct to the best of my belief.

JANUARY 21, 2000

Date of Survey

Signature and Seal



Certificate Number 8857



Exploration & Production  
*Operations Plan*

**DATE:** 2/09/00

<b><u>WELLNAME:</u></b>	ROSA UNIT #22A	<b><u>FIELD:</u></b>	Blanco MV
<b><u>LOCATION:</u></b>	Lot 1 Sec.18, T31N, R5W Rio Arriba Co., NM	<b><u>SURFACE:</u></b>	BLM
<b><u>ELEVATION:</u></b>	6515' GR	<b><u>MINERALS:</u></b>	Federal
<b><u>TOTAL DEPTH:</u></b>	6287'	<b><u>LEASE #</u></b>	SF-078764

**I. GEOLOGY:** Surface formation - San Jose

**A. FORMATION TOPS:**

Ojo Alamo	2627'	Cliff House	5567'
Kirkland	2757'	Menefee	5612'
Fruitland	3147'	Point Lookout	5837'
Pictured Cliffs	3377'	Mancos	6157'
Lewis	3667'	Total Depth	6287'

**B. LOGGING PROGRAM:** 8-3/4" IND/GR/Temp log from TD to surface. CDL interval selected by onsite geologist. 6-1/4" IND/GR/Temp log from TD to Intermediate TD. CDL interval selected by onsite geologist.

**C. NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

**II. DRILLING**

**A. MUD PROGRAM:** Clear water with benex to 7" casing point. LSND to log and run pipe.

**B. BOP TESTING:** While drill pipe is in use, the pipe rams will be tested not less than once each day. The blind rams will be tested once each trip. The drum brakes will be inspected and tested each tour. All tests and inspections will be recorded in the tour book as to time and results.

**III. MATERIALS**

**A. CASING PROGRAM:**

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. &amp; GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3852'	7"	20# K-55
Prod. Liner	6-1/4"	3752'-6287'	4-1/2"	10.5# K-55

**B. FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe.

Rosa Unit #22A  
Operation Plan  
Page #2

1. **INTERMEDIATE CASING:** 7" cement nose guide shoe with a self- fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 2800' to the surface. Total centralizers = 5 regular and 23 turbulent.
2. **PRODUCTION CASING:** 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' joint. Place 20' marker joint above 5500'.

**C. CEMENTING:**

1. **SURFACE:** Use 130 sx (176cu.ft.) of class "Type III" with 2% CaCl<sub>2</sub> and 1/4# of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). Use 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.

2. **INTERMEDIATE:** Lead - 440sx (916 cu.ft.) of class "Premium Lite" 65/35 Type III/Poz with 8% gel, 1% CaCl<sub>2</sub>, and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 175sx (242cu.ft.) of class "Type III" with, 1% CaCl<sub>2</sub>, and 1/4# cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5#/gal.). Use 100 excess in lead and tail to circulate to surface. Total volume = 1158 cu.ft. WOC 12 hours. Test to 1500#.

3. **PRODUCTION LINER:** Lead - 80sx (116 cu.ft.) of Poz/Class H, 50/50 with 4 % gel, 0.4% FL-50, 1% CaCl<sub>2</sub>, (Yield = 1.45 cu.ft./sk, Weight = 13.2 #/gal.) Tail - 190sx (276 cu.ft.) of Poz/Class H, 50/50 with 4 % gel, 0.4% FL-50, 1% CaCl<sub>2</sub>, 4% Phenoseal and 1/4# cello-flake/sk (Yield = 1.46 cu.ft./sk, Weight = 13.2 #/gal.) Displace cement at a minimum of 8 BPM. Use 50% excess in lead and tail to cover liner top. Total volume 390 cuft. WOC 12 hours.

**IV COMPLETION**

**A. CBL**

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings.

**B. PRESSURE TEST**

1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

**C. STIMULATION**

1. Stimulate Point Lookout with approximately 80,000# of 20/40 sand in slick water.
2. Isolate Point Lookout with a CIBP.
3. Perforate the Menefee/Cliff House as determined from the open hole logs.
4. Stimulate with approximately 80,000# of 20/40 sand in slick water.
5. Test each zone before removing bridge plugs.

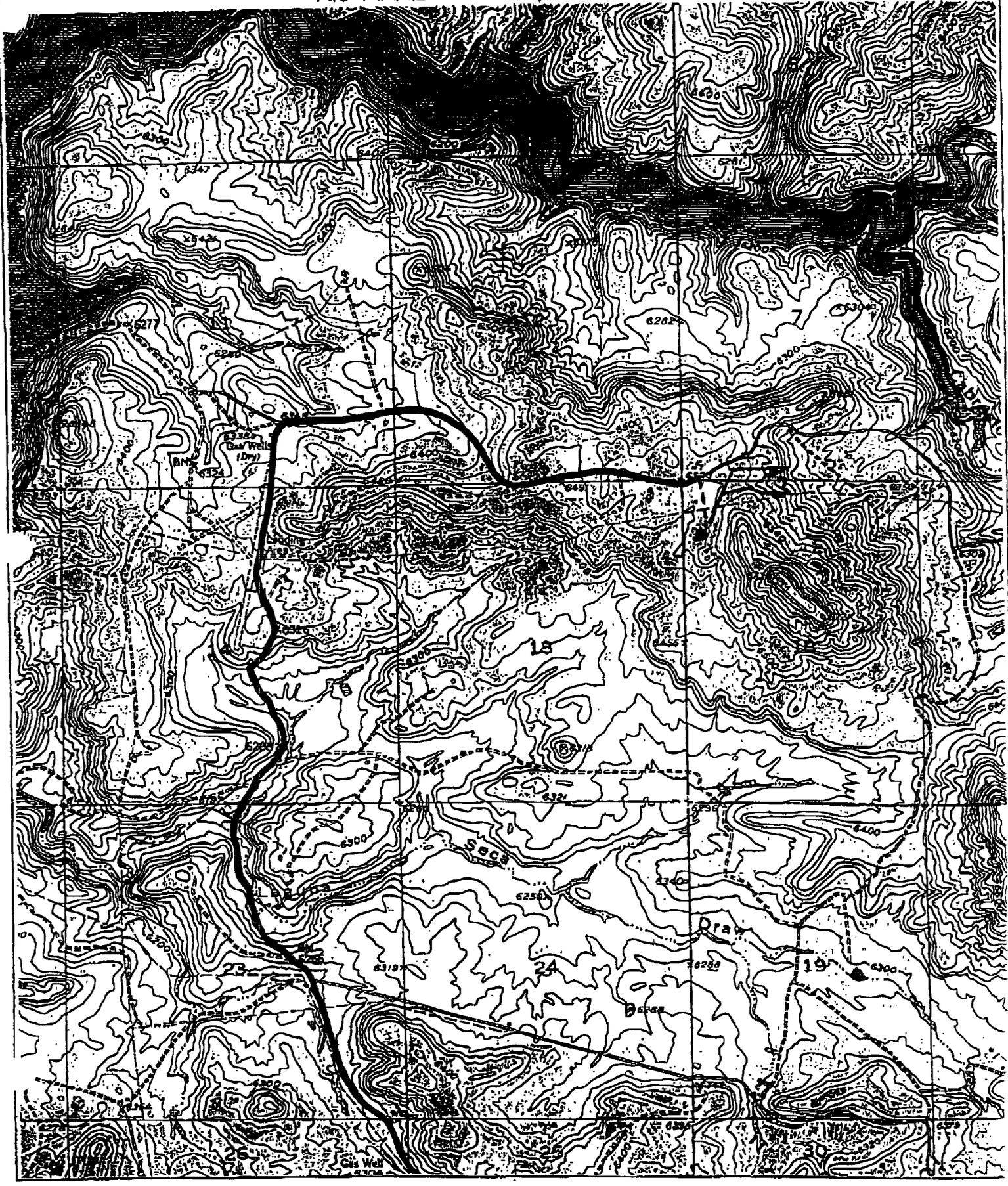
**D. RUNNING TUBING**

1. Mesa Verde: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 50' above the bottom Point Lookout perforation.

  
David Spitz  
Engineer, Production & Drilling

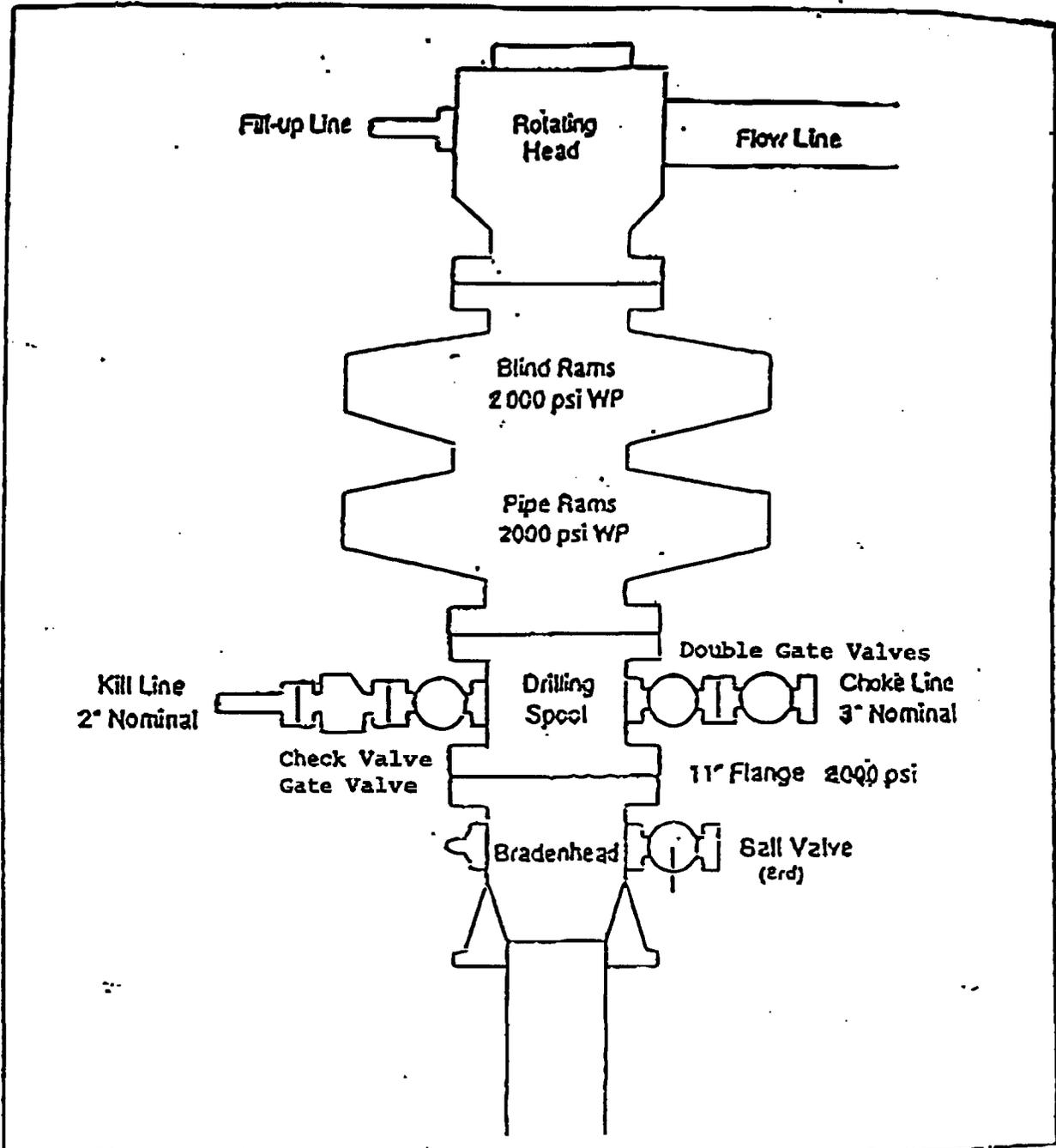
# WILLIAMS PRODUCTION COMPANY ROSA UNIT #22A

880' FNL & 260' FNL, SECTION 18, T31N, R5W, N.M.P.M.  
RIO ARriba COUNTY, NEW MEXICO



## EXHIBIT 1

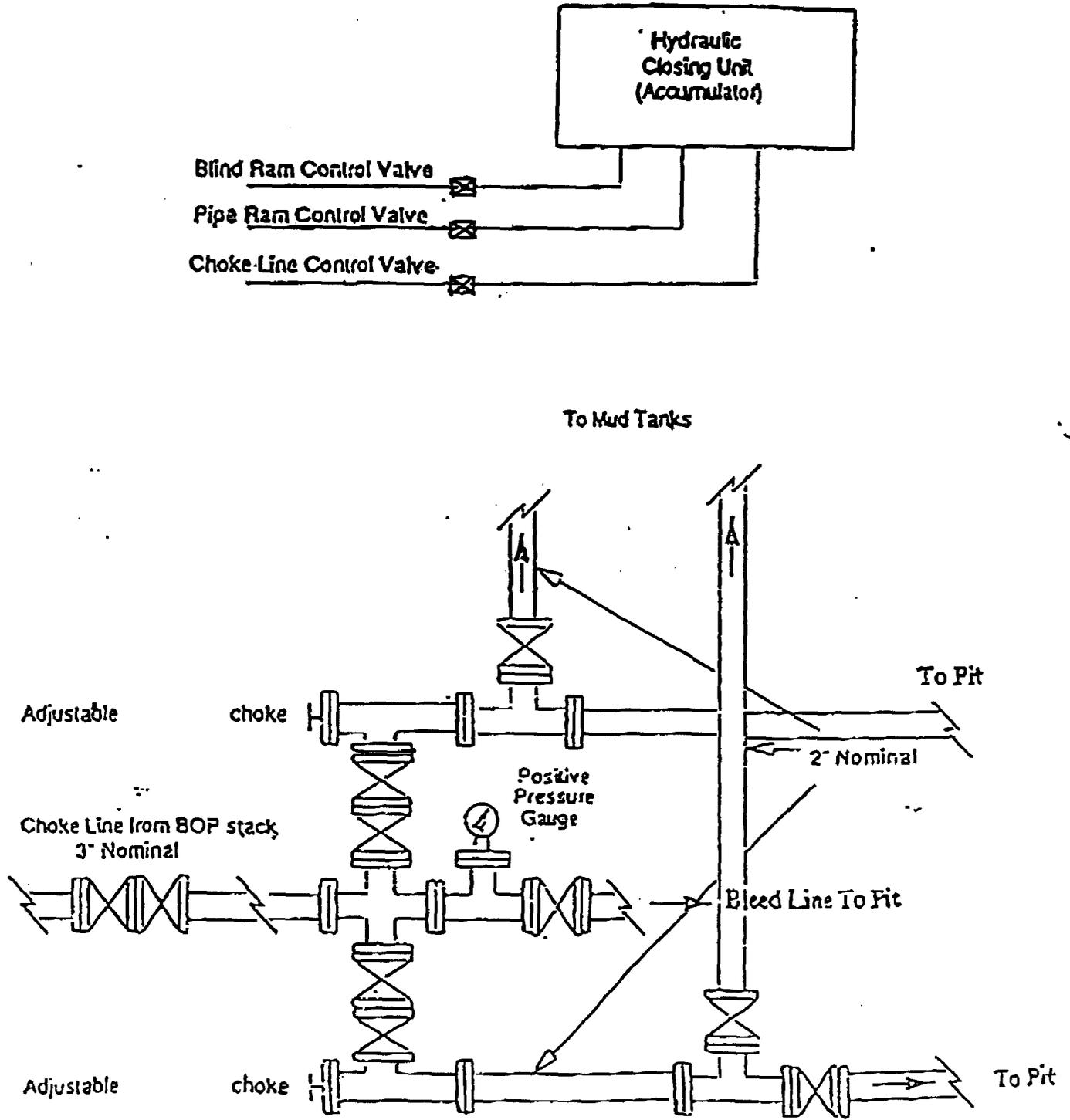
## BOP STACK ARRANGEMENT



All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi. The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock with handle, floor safety valve with change overs for each tool joint in the string, and choke manifold all rated to 2000 psi.

EXHIBIT 2

Choke Manifold & Accumulator Schematic



## GENERAL ROSA UNIT DRILLING PLAN

OSA UNIT BOUNDARIES: T31N, R04W: All - Except sections 32-36; T31N, R05W: All - Except sections 1 & 2  
 T31N, R06W: All - Except sections 6,7,16,20,27-36; T32N, R06W: Sections 32-36

## FORMATION CHARACTERISTICS:

FORMATION	LITHOLOGY	WATER	GAS	OIL	OVER PRES.	LOST CIRC.
NACIMIENTO	Interbedded shales, siltstones & sandstones	no	no	no	no	no
OJO ALAMO	Sandstone & conglomerates w/ lenses of shale	fresh	no	no	no	no
KIRTLAND	Shale w/ Interbedded sandstones	no	poss.	no	no	no
FRUITLAND	Inter, SS, S&SH & Coals w/ Carb. SS, S&SH, SH	yes	yes	no	poss.	no
PICTURED CLIFFS	Massive Sandstone w/ thin Interbedded Shales	poss.	yes	poss.	no	poss.
LEWIS	Shale w/ thin Interbedded sandstones & siltstones	no	poss.	no	no	no
CLIFF HOUSE	Transgressive sandstone	poss.	yes	no	no	no
MENEFEE	Sandstones, Carb shales & coal	poss.	yes	no	no	no
POINT LOOKOUT	Regressive coastal barrier sandstone	poss.	yes	poss.	no	yes
MANCOS	Marine shale	no	no	no	no	no

## DRILLING

## Potential Hazards

1. There are no overpressured zones expected in this well.
2. No H<sub>2</sub>S zones will be permitted while drilling this well.

## Mud System

1. Surface: The surface hole will be drilled with a Low-solids Non-Dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 #/gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate: The Intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be Low-solids Non-Dispersed with mud weights in the 9 to 10 #/gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.
3. Production: The well will be drilled using natural gas from the intermediate casing point to TD.

### ROSA UNIT PORE PRESSURES

FORMATION	DEPTH	FRAC GRADIENT	PORE PRESSURE	RESERVOIR PRESS
FRUITLAND	2960	0.69	1578	1400
PICTURED CLIFFS	3200	0.65	1520	1400
CLIFF HOUSE	5200	0.50	1300	1200
MENEFEE	5350	0.50	1338	1200
POINT LOOKOUT	5650	0.48	1201	1200
GALLUP	6800	0.55	2210	2000
DAKOTA	7850	0.65	3729	2600

Based on:  $F = 1/3(1+2P/D)$   
 $P = (3F - 1)D/2$

Where: F = Frac Gradient  
P = Pore Pressure  
D = Depth

**MULTI-POINT SURFACE USE PLAN  
ROSA UNIT Well #22A**

**1. Existing Roads:**

All existing roads used to access the proposed location are shown on the attached Plat Map #1 and shall continue to be maintained in the same or better condition than presently maintained.

**2. Planned Access Roads:**

The proposed Rosa Unit Well #22A would require the construction of 800 feet of new access road, and would begin at an existing gas field road. The new access road would be maintained in at least the same manner and like current condition as all other gas field roads in the vicinity, and will be upgraded where necessary to provide uninterrupted access to the proposed well location.

**3. Location of Existing Wells:**

There are approximately 23 existing wells within a one-mile radius of the proposed Rosa Unit Well #22A (see Plat Map #1).

**4. Location of Production Facilities:**

The production facilities would be located on the drill pad. The actual placement of this equipment would be determined when the well's production characteristics can be evaluated after well completion.

The 4-1/2-inch diameter, 516-foot long buried steel pipeline would be constructed. The pipe wall thickness would be 0.188-inch, and the wall strength would be 1,750 PGSI. The proposed Rosa Unit Well #22A well would be connected to the Williams Gathering System and would tie into the Rosa Unit Well #227. The well pipeline would not be used for the transporting of natural gas for the purpose of drilling the Rosa Unit Well #22A (Refer to attached Plat Map #4 for pipeline tie-in details).

To protect wildlife and livestock, the reserve pit would be fenced. Appropriate dikes would enclose tanks placed on the well pad that would be used during the production process.

Upon completion of the drilling process, the well location and surrounding area would be cleared of all debris.

**5. Water Supply:**

Water for the drilling and completion operations would be hauled by truck from Navajo Lake, La Jara waterhole.

#### 6. Source of Construction Materials:

No additional construction materials would be required to construct the proposed well location.

#### 7. Methods for Handling Waste Disposal:

- a. The drill cuttings, fluids, and completion fluids would be placed in the reserve pit. Three sides of the reserve pit would be fenced prior to setting the rig on location and beginning the drilling process. Upon completion of the proposed well the reserve pit would be allowed to dry, and materials remaining in the reserve pit would be buried. The reserve pit would be back-filled, leveled, and re-contoured to prevent any materials from being transported via run-off into any existing watersheds. The portion of the well location not needed for the production facilities would then be re-contoured, leveled, and reseeded with the appropriate BLM stipulated seed mixture.
- b. All garbage and trash would be placed in a metal trash cage. All trash would be hauled off to a State of New Mexico approved landfill for disposal.
- c. Portable toilets would be provided and maintained for human use during the drilling and completion operations (see Plat Map #2).

#### 8. Ancillary Facilities:

Ancillary facilities are to be based on the proposed wells productivity. See the proposed gathering pipeline for this proposed well on Plat Map # 4.

#### 9. Well Site Layout:

A cross section of the drill pad with the approximate cuts, fills, and pad orientation is attached as Plat # 3. Location of the drilling equipment, rig orientation, and access road is on the attached Plat Maps #2 and #3.

#### 10. Plans for Restoration of Surface:

When the proposed well is abandoned, the well location and access road would be restored to as near its original condition as possible. The area would be seedbed prepped and reseeded with the appropriate BLM seed mixture.

Should the proposed well be productive, areas not used in production would be re-contoured and reseeded with the BLM stipulated seed mixture. Production equipment would be painted the color designated by the BLM to blend into the surrounding ecosystem.

**11. Surface Ownership:**

The Bureau of Land Management, Farmington Field Office is the surface managing agency.

**12. Other Information:**

The proposed well is within the Rosa Big Game Wintering Habitat Area and has a seasonal closure of December 1 to April 1 for any surface disturbing activities.

The soils in the proposed well location area exist of alluvial, eolian, and colluvium material derived from sandstone and shale.

Moore Anthropological Research of Aztec, NM, has submitted the Cultural Resources Survey Report to the BLM.

Cabresto Canyon an arm of Navajo Reservoir is approximately one mile northeast of the proposed well.

**13. Lessee's or Operator's Representative:**

Steve Nelson, President  
Nelson Consulting, Inc.  
600 Reilly Ave.  
Farmington, NM 87401

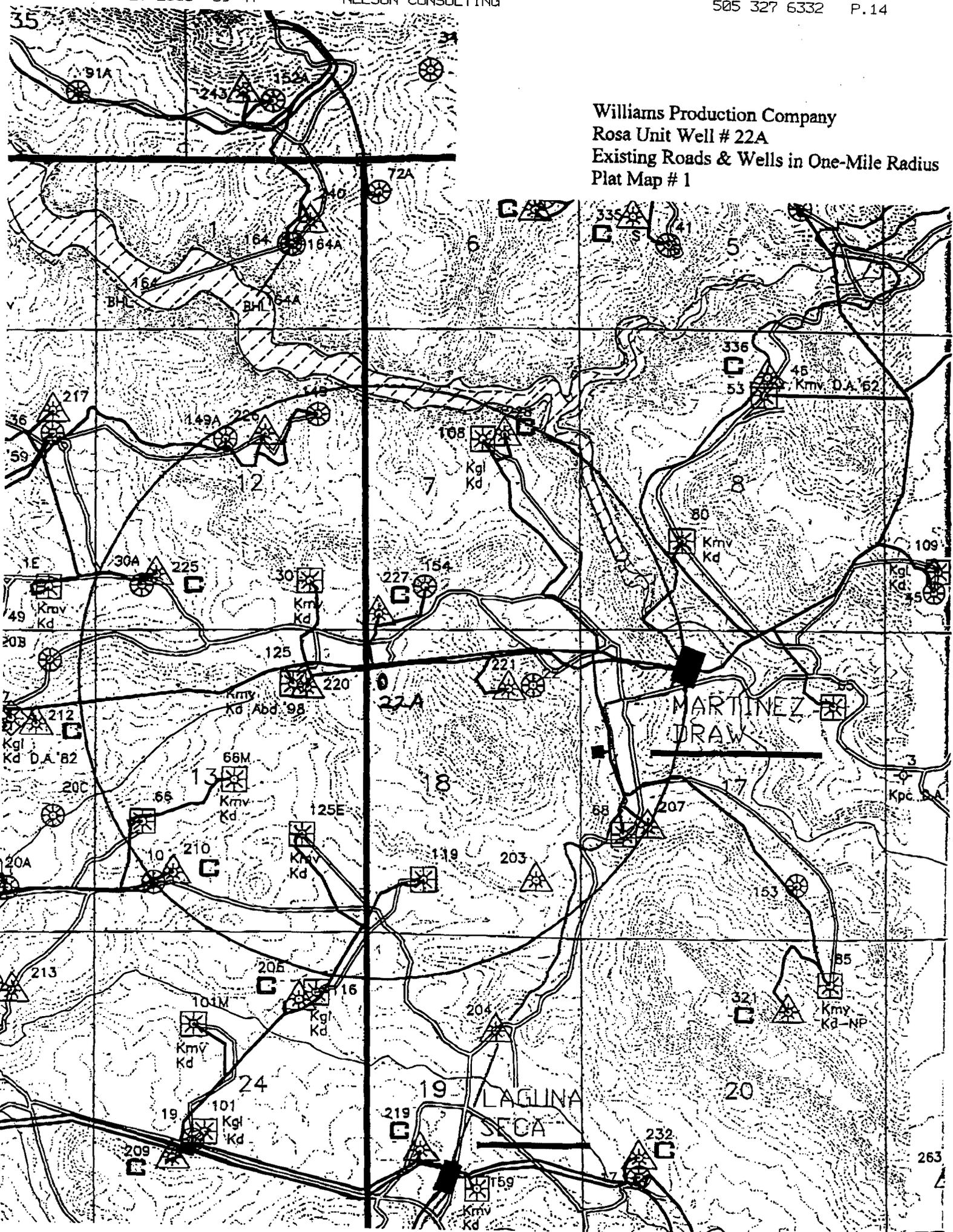
**14. Certification:**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Williams Exploration and Production, and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to 18 U.S. Code 1001 for the filing of a false statement.

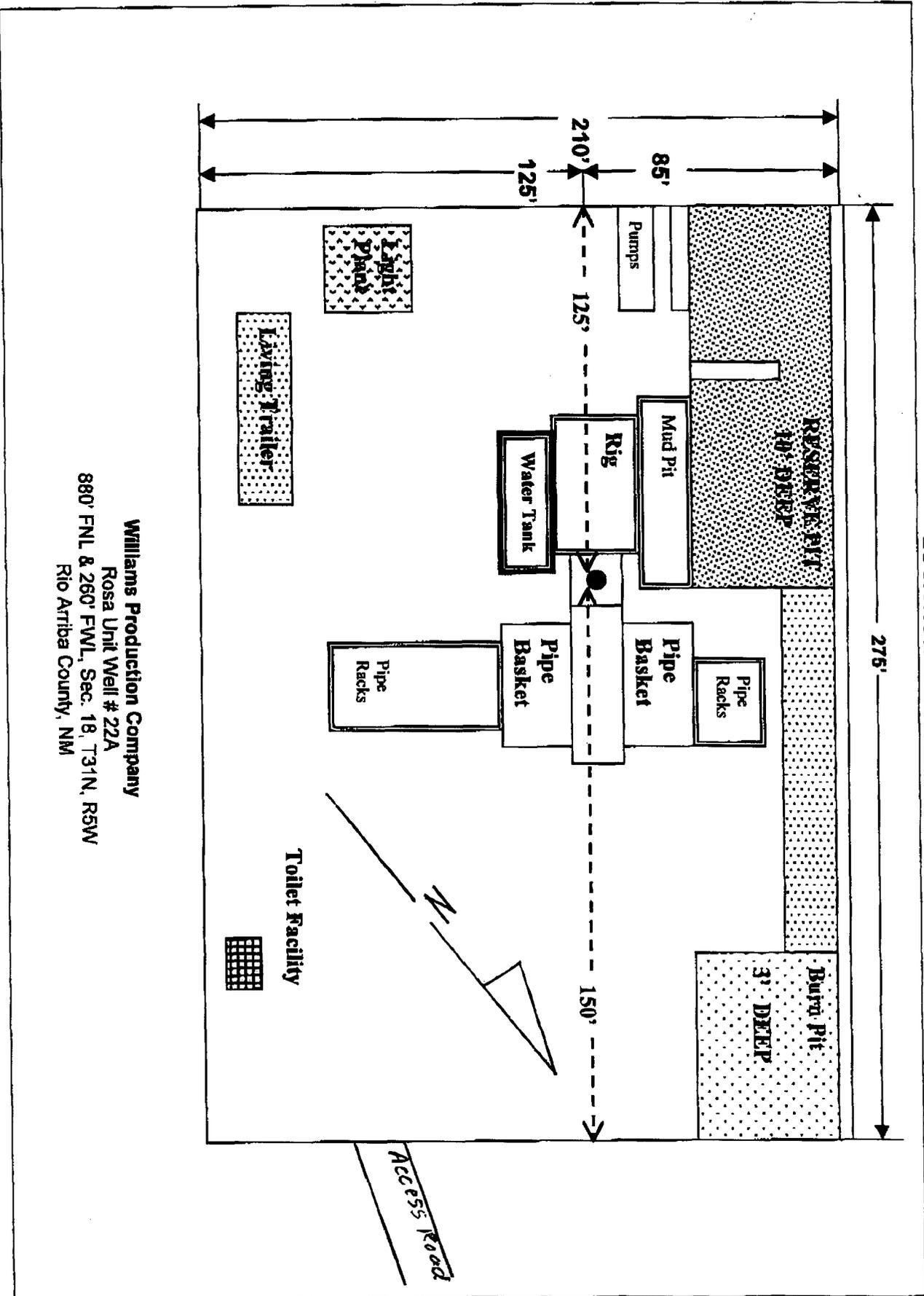
February 24, 2000

  
\_\_\_\_\_  
Steve Nelson, President

Williams Production Company  
 Rosa Unit Well # 22A  
 Existing Roads & Wells in One-Mile Radius  
 Plat Map # 1

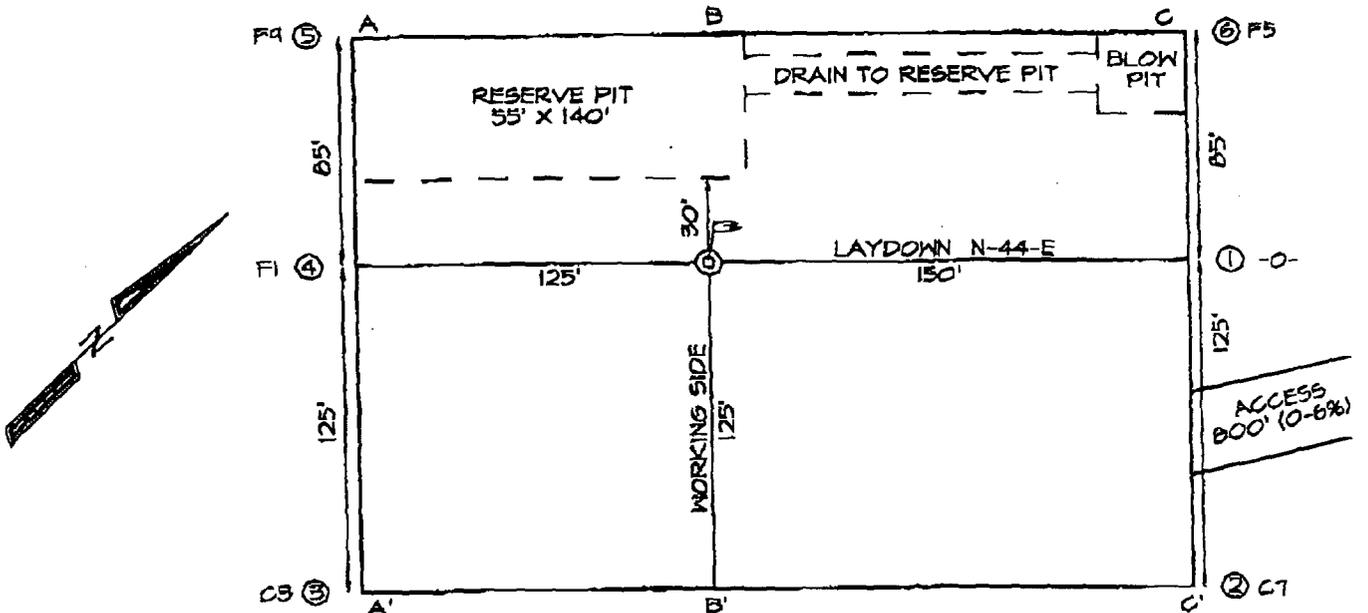


PLAT # 2  
LOCATION DIAGRAM



Williams Production Company  
 Rosa Unit Well # 22A  
 880' FNL & 260' FWL, Sec. 18, T31N, R5W  
 Rio Arriba County, NM

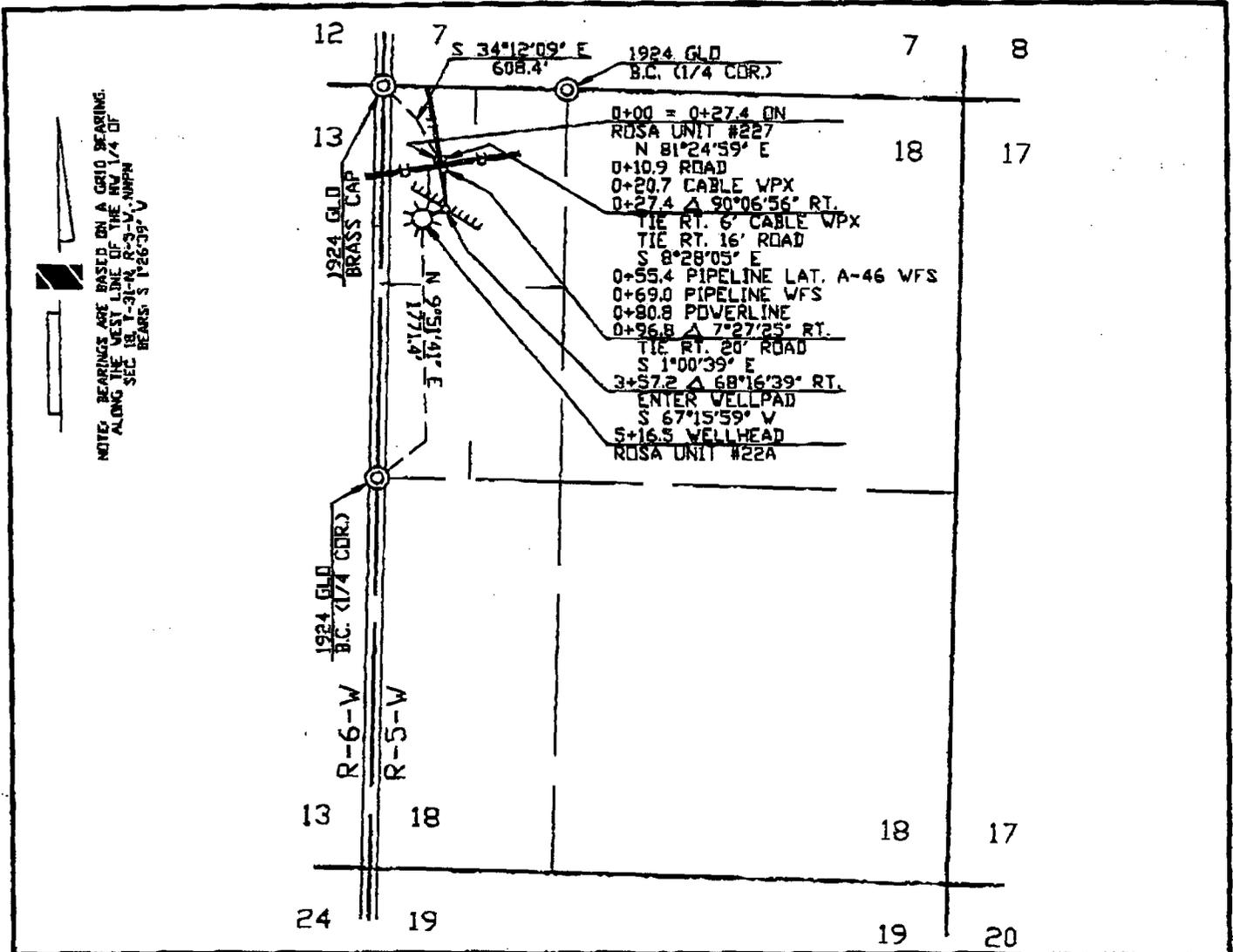
**WILLIAMS PRODUCTION COMPANY ROSA UNIT #22A**  
**880' FNL & 260' FWL, SECTION 18, T31N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO**  
**GROUND ELEVATION: 6515'**



A-A'					
6525'					
6515'					
6505'					

B-B'					
6525'					
6515'					
6505'					

C-C'					
6525'					
6515'					
6505'					



PIPC DATA

SUBDIVISION	OWNER	FEET	MILES	ACRES	RODS	APPLICATION DWG.
0+00 TO 5+16.5	BUREAU OF LAND MANAGEMENT	516.5	0.098	0.474	31.303	

NO.	DATE	BY	DESCRIPTION	V.D.ND.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	V.D.ND.	CHK.	APP.
2	2/11/00	JH	LINE CHANGE PER NOTES 1/31/00										
1	1/20/00	JH	ISSUED FOR REVIEW										

INFO				STATE: NEW MEXICO		WILLIAMS GAS PROCESSING	
DRAFTING				COUNTY: RIO ARRIBA		ONE OF THE WILLIAMS COMPANIES	
R/V N:	04386	DRAWN BY:	JH	DATE:	1/20/00	SAN JUAN GATHERING SYSTEM WPX - ROSA UNIT #22A 0+00 = 0+27.4 ON ROSA UNIT #227 (REF. DWG. 46A765.0-47-1) SEC. 18, T-31-N, R-5-W, NMPN	
METER #:		CHECKED BY:	JDB	DATE:	1/20/00		
SURVEYED:	12/30/99	APPROVED BY:	RR	DATE:	1/21/00		
		ENGINEER:		BY:			
		DESIGNED BY:		SCALE:	1"=1000'	DWG NO.	46A765.0-99-1
		PRQ. APPROVED:		V.D. NO.		SHEET	REV
						1	2

Y:\DISCHAPPLING\DRAWINGS\SAN JUAN\765\00\46A765.0-99-1\_R02.DWG 02/14/2000 8:38AM JHCF:MAN

Plat Map #4

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

ROW/APD

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. Type of Work <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>		5. Lease Designation and Serial No. SF-078764
b. Type of Well Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/> Single Well <input checked="" type="checkbox"/> Multiple Zone <input type="checkbox"/>		6. If Indian, Allottee or Tribe Name
2. Name of Operator Williams Exploration & Production		7. If Unit or CA, Agreement Designation Rosa Unit
3. Address and Telephone No. P.O. Box 3102, MS 37-2, Tulsa, OK. 74101		8. Well Name and No. RU-# 182
4. Location of Well (Footages) At Surface 1085' FSL 790' FWL (SESW)		9. API Well No. 30-039-26283
At proposed prod. zone Same		10. Field and Pool, or Exploratory Area Blanco - MV
14. Distance in Miles and Directions from Nearest Town or Post Office 20.2 miles East Navajo Dam Post Office (straight line)		11. Sec., T., R., M., or BLK. and Survey or Area Section 18, T31N, R5W
15. Distance from Proposed Location to Nearest Property or Lease Line, Ft 790'		12. County or Parish Rio Arriba
16. No. of Acres in Lease 2507.3 acres		13. State NM
17. No. of Acres Assigned to This Well 231.83 acres S/2		
18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT 200'		19. Proposed Depth 6107'
20. Rotary or Cable Tools Rotary		21. Elevations (Show whether DF, RT, GR, etc) 6335' GR
22. Approximate Date Work will Start April 1, 2000		

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	250'	130 sx-176 cu ft Type III
8-3/4"	7"	20#	3672'	410 sx-862 cu ft Lite 175 sx-242 Cu ft-Type III
6-1/4"	4-1/2"	10.5#	3572' - 6107'	70 sx-150-cuft 110 sx-240cuft Lite HS 65/35

Williams Exploration & Production proposes to drill a vertical well to develop the Mesa Verde Formation at the above described location, in accordance with the attached Operation and Surface Use plans. The location has been surveyed for Cultural Resources by Moore Antropological Research. The report has been submitted to your office for review.

This APD also is serving as an application to obtain BLM road and pipeline rights-of-way. This well will be accessed by constructing approximately 150-feet of a new re-routed access road which ties into an existing road (see plat #4). The proposed 245-foot long pipeline would tie into the Williams Gathering System (see the attached Plat Map # 4).

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

I hereby certify that the above information is true and correct. If proposal to deepen, give present productive zone and proposed new productive zone.  
Signed Steve Nelson Title Agent      COPIES: BLM+4, WELL FILE+1  
Date December 21, 1999

(This space for Federal or State office use)

Permit No. \_\_\_\_\_ Approval Date \_\_\_\_\_  
Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any: \_\_\_\_\_ OPERATOR

APPROVED BY: [Signature] DATE: 3/3/00



Exploration & Production  
*Operations Plan*

**DATE:** 11/30/99

**WELLNAME:** ROSA UNIT #182      **FIELD:** Blanco MV

**LOCATION:** SESW Sec.18, T31N, R5W      **SURFACE:** BLM  
Rio Arriba Co., NM

**ELEVATION:** 6335' GR      **MINERALS:** Federal

**TOTAL DEPTH:** 6107'      **LEASE #** SF-078764

**I. GEOLOGY:** Surface formation - San Jose

**A. FORMATION TOPS:**

Ojo Alamo	2447'	Cliff House	5387'
Kirkland	2577'	Menefee	5432'
Fruitland	2967'	Point Lookout	5657'
Pictured Cliffs	3197'	Mancos	5977'
Lewis	3487'	Total Depth	6107'

**B. LOGGING PROGRAM:** 8-3/4" IND/GR/Temp log from TD to surface. CDL interval selected by onsite geologist. 6-1/4" IND/GR/Temp log from TD to Intermediate TD. CDL interval selected by onsite geologist.

**C. NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

**II. DRILLING**

**A. MUD PROGRAM:** Clear water with benex to 7" casing point. LSND to log and run pipe.

**B. BOP TESTING:** While drill pipe is in use, the pipe rams will be tested not less than once each day. The blind rams will be tested once each trip. The drum brakes will inspected and tested each tour. All tests and inspections will be recorded in the tour book as to time and results.

**III. MATERIALS**

**A. CASING PROGRAM:**

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. &amp; GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3672'	7"	20# K-55
Prod. Liner	6-1/4"	3572'-6107'	4-1/2"	10.5# K-55

**B. FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe.

1. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 2625' to the surface. Total centralizers = 5 regular and 22 turbulent.
2. PRODUCTION CASING: 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' joint. Place 20' marker joint above 5300'.

#### C. CEMENTING:

1. SURFACE: Use 130 sx (176cu.ft.) of class "Type III" with 2% CaCl<sub>2</sub> and 1/4# of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). Use 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.
2. INTERMEDIATE: Lead - 410sx (862cu.ft.) of class "Premium Lite" 65/35 Type III/Poz with 8% gel, 1% CaCl<sub>2</sub>, and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 175sx (242cu.ft.) of class "Type III" with, 1% CaCl<sub>2</sub>, and 1/4# cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5#/gal.). Use 100 excess in lead and tail to circulate to surface. Total volume = 1104 cu.ft. WOC 12 hours. Test to 1500#.
3. PRODUCTION LINER: Lead - 70 sx (150 cu.ft.) of class "Premium Lite HS" 65/35, Type III/Poz with 6 % gel, 0.5% FL-52, 1% CaCl<sub>2</sub>, (Yield = 2.13 cu.ft./sk, Weight = 12.3 #/gal.) Tail - 110sx (240 cu.ft.) of class "Premium Lite HS" 65/35, Type III/Poz with 6 % gel, 0.5% FL-52, 1% CaCl<sub>2</sub>, 4% Phenoseal and 1/4# cello-flake/sk (Yield = 2.16 cu.ft./sk, Weight = 12.3 #/gal.) Displace cement at a minimum of 8 BPM. Use 50% excess in lead and tail to cover liner top. Total volume 390 cuft. WOC 12 hours.

#### IV COMPLETION

##### A. CBL

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings.

##### B. PRESSURE TEST

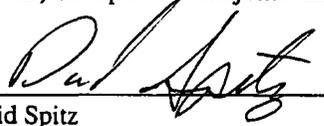
1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

##### C. STIMULATION

1. Stimulate Point Lookout with approximately 80,000# of 20/40 sand in slick water.
2. Isolate Point Lookout with a CIBP.
3. Perforate the Menefee/Cliff House as determined from the open hole logs.
4. Stimulate with approximately 80,000# of 20/40 sand in slick water.
5. Test each zone before removing bridge plugs.

##### D. RUNNING TUBING

1. Mesa Verde: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 50' above the bottom Point Lookout perforation.

  
David Spitz  
Engineer, Production & Drilling

District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

District II  
PO Box 100, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

AMENDED REPORT

District III  
1000 Brazos Rd., Aztec, NM 87410

OTO WASHINGTON, NM

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
County Code	Property Name ROSA UNIT		Well Number 182
Well No.	Operator Name WILLIAMS PRODUCTION COMPANY		Elevation 6335

10 Surface Location

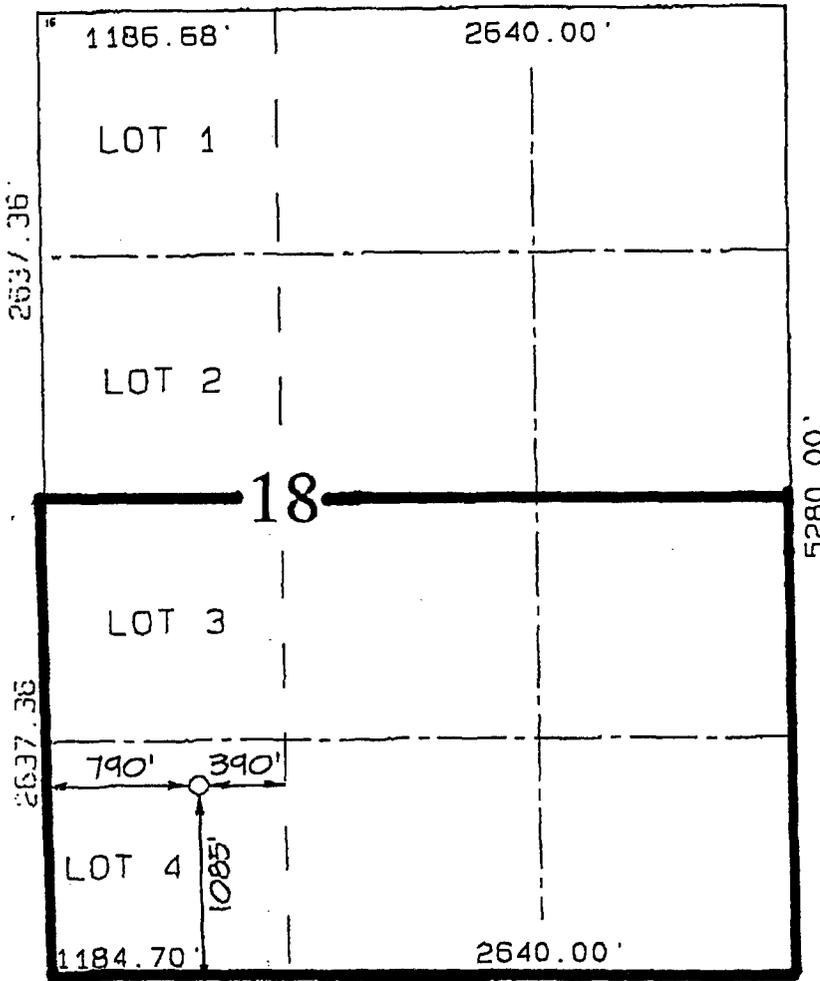
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
18	31N	5W		1085	SOUTH	790	WEST	RIO ARriba

11 Bottom Hole Location If Different From Surface

Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dec. by Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

*Steve Nelson*  
Signature

Steve Nelson  
Printed Name

Agent, Nelson Consulting  
Title

December 22, 1999  
Date

18 SURVEYOR CERTIFICATION

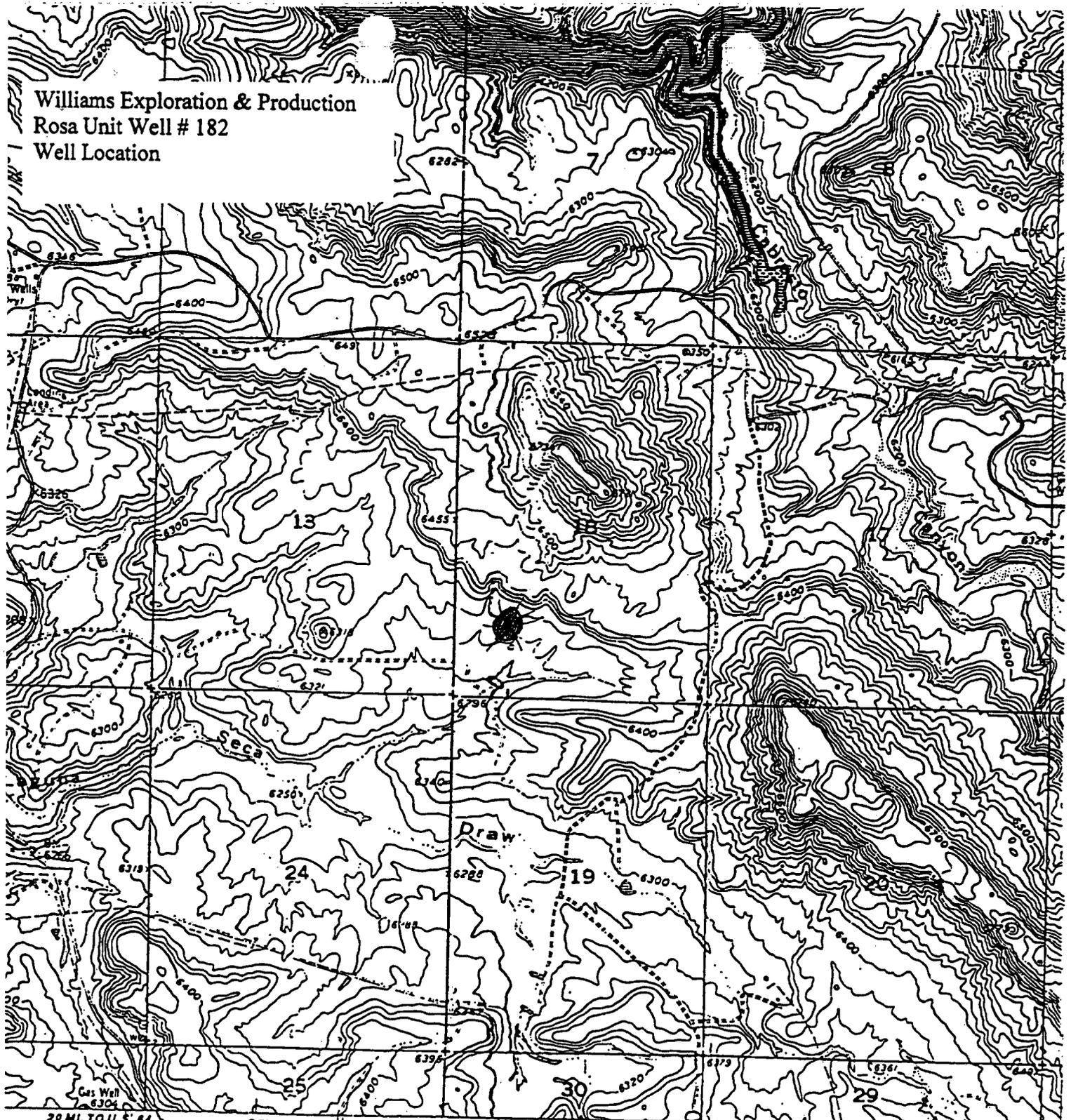
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

SEPTEMBER 1, 1999

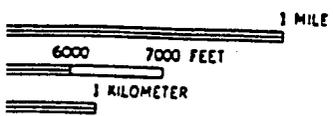
Date of Survey  
Signature and Seal of Surveyor

NEALE G. EDWARDS  
NEW MEXICO  
6857  
PROFESSIONAL SURVEYOR  
Certificate Number 6857

Williams Exploration & Production  
 Rosa Unit Well # 182  
 Well Location



20 MI. TO U.S. 64 25' 11285 R 6 W R 5 W GEOLOGICAL SURVEY, RESTON, VIRGINIA—1982 630 000 FEET (WEST) 288000m E 107°2



QUADRANGLE LOCATION

ROAD CLASSIFICATION

Light-duty ————— Unimproved dirt .....

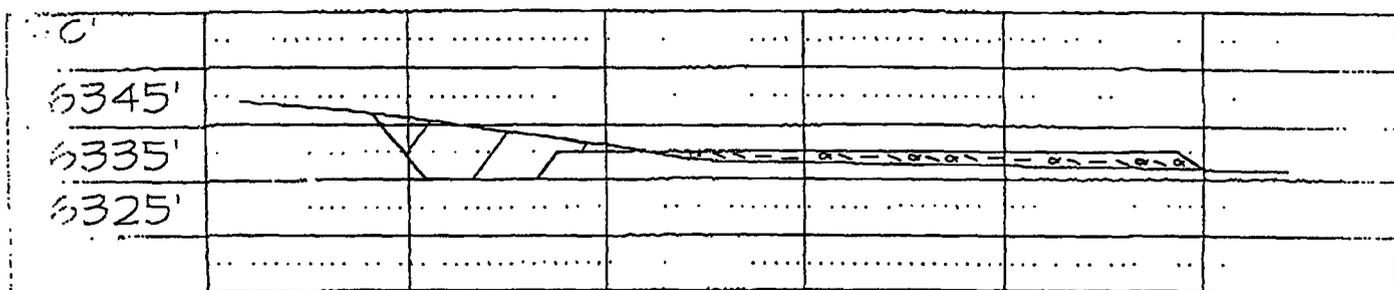
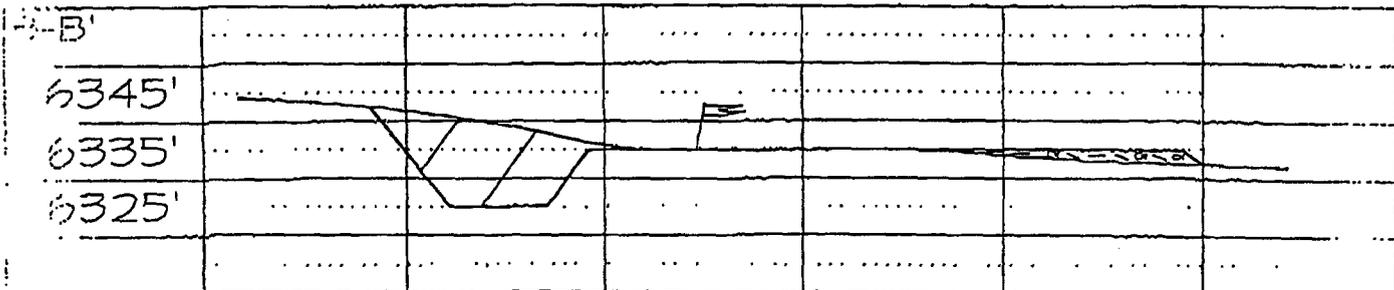
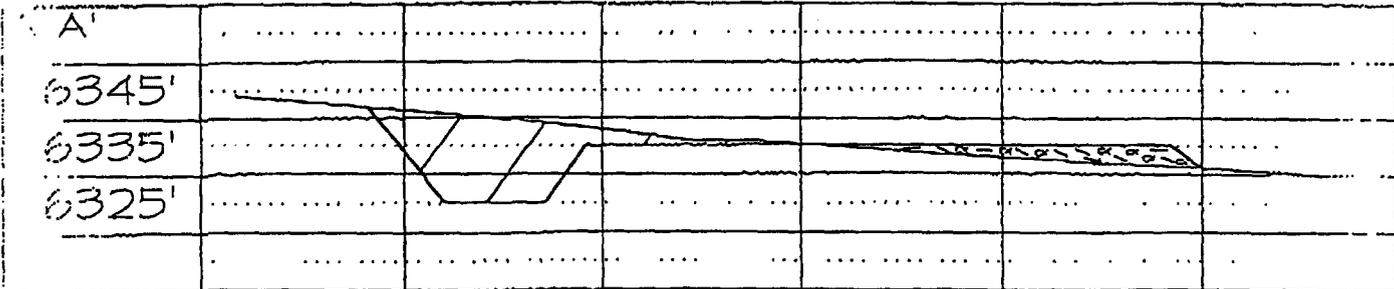
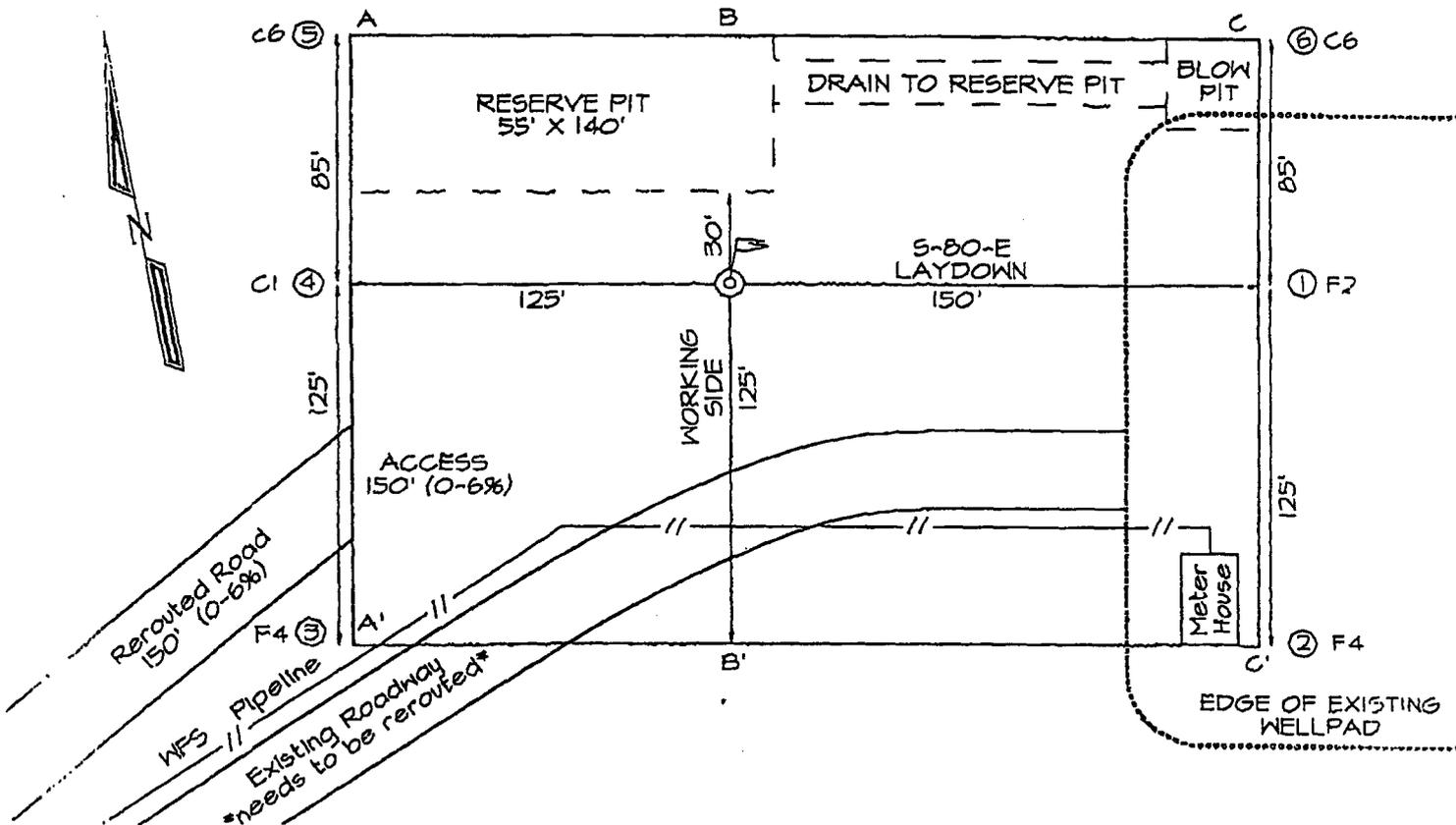
STANDARDS  
 FOR RESTON, VIRGINIA 22092  
 AVAILABLE ON REQUEST

Revisions shown in purple and woodland compiled from  
 aerial photographs taken 1981 and other source data  
 Partial field check by U.S. Forest Service. Map edited 1982

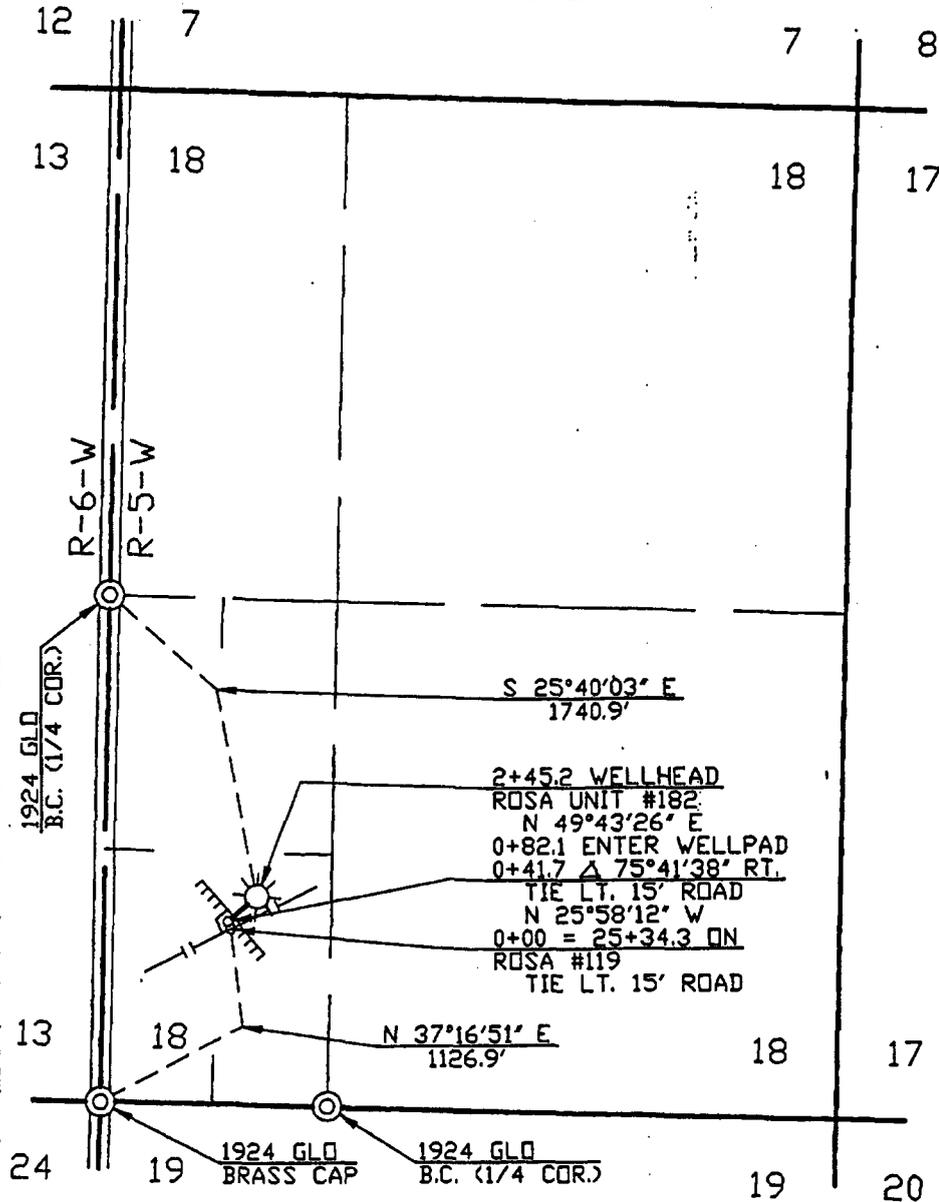
BANCOS MESA -N.W. N. MEX.  
 (FORMERLY ROSA)  
 N3652.5—W10722.5/7.5

1954  
 PHOTOREVISED 1982

**WILLIAMS PRODUCTION COMPANY ROSA UNIT #182**  
**1085' FSL & 790' FWL, SECTION 18, T31N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO, GROUND ELEVATION: 6335'**



NOTE: BEARINGS ARE BASED ON A GRID BEARING ALONG THE WEST LINE OF THE SW 1/4 OF SECTION 18, T-31-N, R-5-W, NMPM BEARS N 1°18'18" E



PIPE DATA

OWNER'S DATA

REVISION

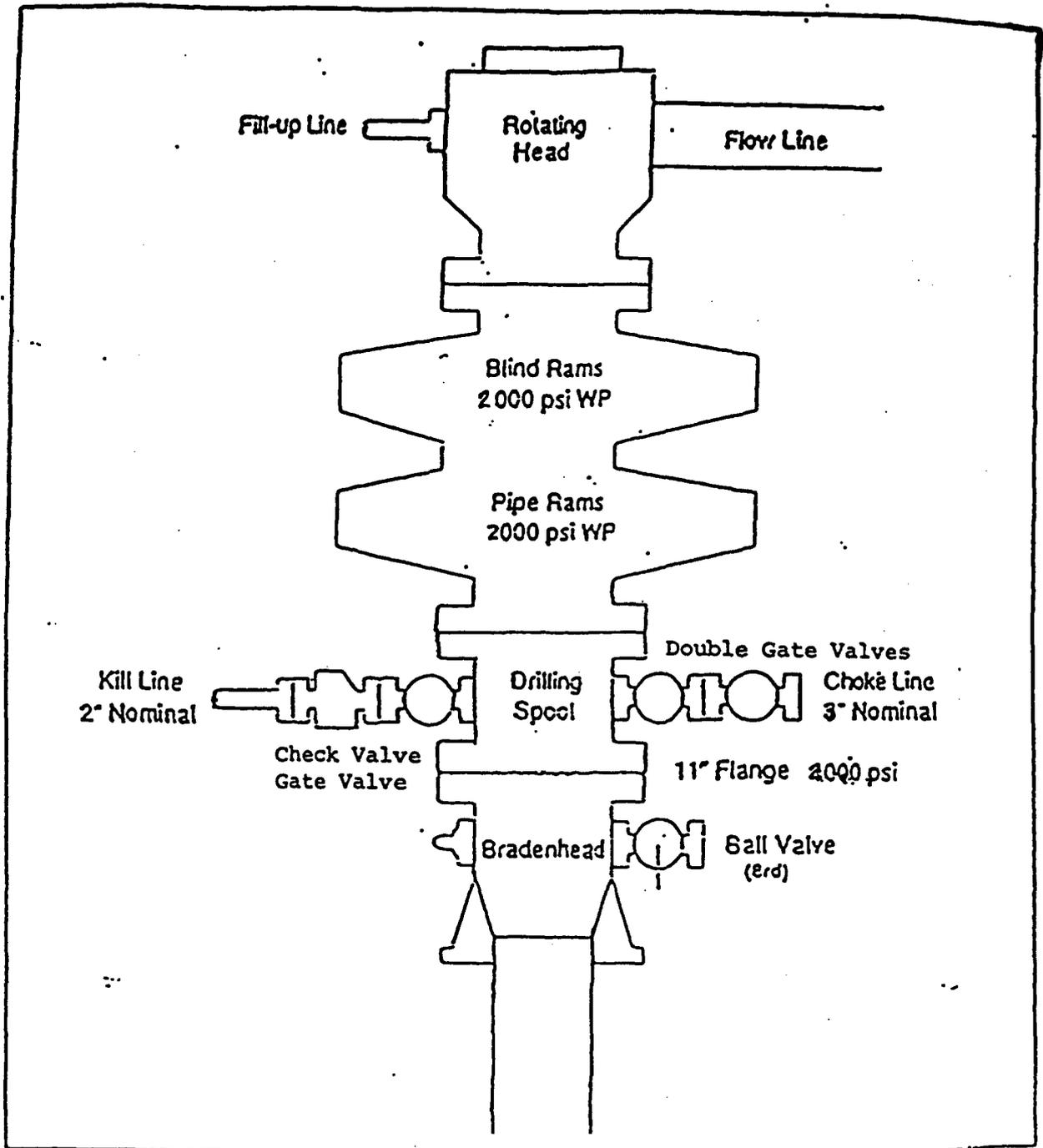
SUBDIVISION	OWNER	FEET	MILES	ACRES	RODS	APPLICATION DVG.
0+00 TO 2+45.2	BUREAU OF LAND MANAGEMENT	245.2	0.046	0.225	14.861	

NO.	DATE	BY	DESCRIPTION	V.O.NO.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	V.O.NO.	CHK.	APP.
1	10/5/99	JH	ISSUED FOR REVIEW										

<b>INFO</b>				STATE: NEW MEXICO				<b>WILLIAMS GAS PROCESSING</b> ONE OF THE WILLIAMS COMPANIES			
DRAWN BY: JH				COUNTY: RIO ARRIBA							
R/W #:				SAN JUAN GATHERING SYSTEM				WPX - ROSA UNIT #182 0+00 = 25+34.3 ON ROSA #119 (REF. DWG. 48A765.0-32-1) SECTION 18, T-31-N, R-5-W, NMPM			
METER #:				APPROVED BY:							
SURVEYED: 9/11/99				ENGINEER BY DATE:							
DESIGNED BY:				SCALE: 1"=1000'							
DWG NO. 48A765.0-25-1								SHEET 1		REV 1	

EXHIBIT 1

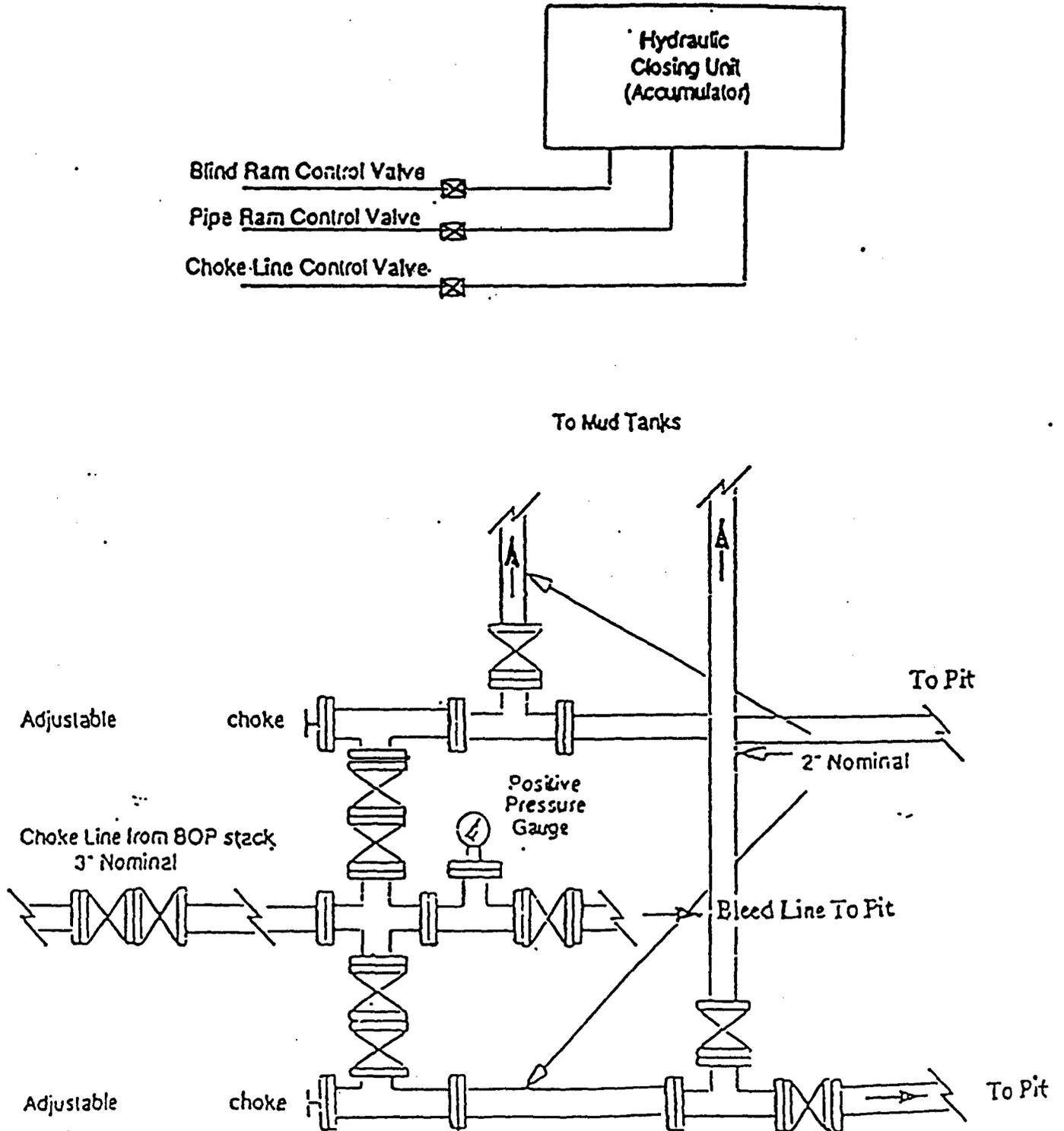
BOP STACK ARRANGEMENT



All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi. The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock with handle, floor safety valve with change overs for each tool joint in the string, and choke manifold all rated to 2000 psi.

EXHIBIT 2

Choke Manifold & Accumulator Schematic



## GENERAL ROSA UNIT DRILLING PLAN

ROSA UNIT BOUNDARIES: T31N, R04W: All - Except sections 32-36; T31N, R05W: All - Except sections 1 & 2  
 T31N, R06W: All - Except sections 6,7,16,20,27-36; T32N, R06W: Sections 32-36

### FORMATION CHARACTERISTICS:

FORMATION	LITHOLOGY	WATER	GAS	OIL	OVER PRES.	LOST CIRC.
NACIMIENTO	Interbedded shales, siltstones & sandstones	no	no	no	no	no
OJO ALAMO	Sandstone & conglomerates w/ lenses of shale	fresh	no	no	no	no
KIRTLAND	Shale w/ interbedded sandstones	no	poss.	no	no	no
FRUITLAND	Inter, SS, S&ST, SH & Coals w/ Carb. SS, S&ST, SH	yes	yes	no	poss.	no
PICTURED CLIFFS	Massive Sandstone w/ thin Interbedded Shales	poss.	yes	poss.	no	poss.
LEWIS	Shale w/ thin Interbedded sandstones & siltstones	no	poss.	no	no	no
CLIFF HOUSE	Transgressive sandstone	poss.	yes	no	no	no
MENEFEE	Sandstones, Carb shales & coal	poss.	yes	no	no	no
POINT LOOKOUT	Regressive coastal barrier sandstone	poss.	yes	poss.	no	yes
MANCOS	Marine shale	no	no	no	no	no

### DRILLING

#### Potential Hazards

1. There are no overpressured zones expected in this well.
2. No H2S zones will be permitted while drilling this well.

#### Mud System

1. Surface: The surface hole will be drilled with a Low-solids Non-Dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 #/gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate: The intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be Low-solids Non-Dispersed with mud weights in the 9 to 10 #/gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.
3. Production: The well will be drilled using natural gas from the intermediate casing point to TD.

## ROSA UNIT PORE PRESSURES

FORMATION	DEPTH	FRAC GRADIENT	PORE PRESSURE	RESERVOIR PRESS
FRUITLAND	2950	0.69	1578	1400
PICTURED CLIFFS	3200	0.65	1520	1400
CLIFF HOUSE	5200	0.50	1300	1200
MENEFEE	5350	0.50	1338	1200
POINT LOOKOUT	5650	0.48	1201	1200
GALLUP	6800	0.55	2210	2000
DAKOTA	7850	0.65	3729	2600

Based on:  $F = 1/3(1+2P/D)$   
 $Pf = (3F - )D/2$

Where: F = Frac Gradient  
 Pf = Pore Pressure  
 D = Depth

MULTI-POINT SURFACE USE PLAN  
ROSA UNIT Well #182

1. Existing Roads:

All existing roads used to access the proposed location are shown on the attached Plat #1, and shall continue to be maintained in the same or better condition than presently maintained.

2. Planned Access Roads:

Approximately 150-feet of new access road would be constructed for this location (See Plat Maps #3 and 4 for details). The existing access road and new access road will be maintained in at least the same manner and like current condition, and will be upgraded where necessary to provide uninterrupted access to the proposed location.

3. Location of Existing Wells:

The attached Plat #1 shows the 20 existing wells within a one-mile radius of the proposed well (Rosa Unit #182).

4. Location of Production Facilities:

The production facilities would be located on the drill pad. The actual placement of this equipment would be determined when the well's production characteristics can be evaluated after well completion.

The 4-1/2-inch diameter, 245-foot long buried steel pipeline would be constructed. The pipe wall thickness would be 0.188-inch, and the wall strength would be 1,750 PGSI. The proposed RU Well #182 well would be connected to the Williams Company's Gathering System. The well pipeline would not be used for the transporting of natural gas for the purpose of drilling the RU Well # 182 (Refer to attached Plat #3 for pipeline tie-in details).

To protect wildlife and livestock, the reserve pit would be fenced. Appropriate dikes would enclose tanks placed on the well pad that would be used during the production process.

Upon completion of the drilling process, the well location and surrounding area would be cleared of all debris.

5. Water Supply:

Water for the drilling and completion operations would be hauled by truck from Navajo Lake or the La Jara Waterhole.

#### 6. Source of Construction Materials:

No additional construction materials would be required to construct the proposed well location.

#### 7. Methods for Handling Waste Disposal:

- a. The drill cuttings, fluids, and completion fluids would be placed in the reserve pit. Three sides of the reserve pit would be fenced prior to setting the rig on location and beginning the drilling process. Upon completion of the proposed well the reserve pit would be allowed to dry, and materials remaining in the reserve pit would be buried. The reserve pit would be back-filled, leveled, and re-contoured to prevent any materials from being transported via run-off into any existing watersheds. The portion of the well location not needed for the production facilities would then be re-contoured, leveled, and reseeded with the appropriate BLM stipulated seed mixture.
- b. All garbage and trash would be placed in a metal trash cage. All trash would be hauled off to a State of New Mexico approved landfill for disposal.
- c. Portable toilets would be provided and maintained for human use during the drilling and completion operations. See attached Plat #2.

#### 8. Ancillary Facilities:

Ancillary facilities are to be based on the proposed wells productivity. See the proposed gathering pipeline for this proposed well on Plat # 3.

#### 9. Well Site Layout:

A cross section of the drill pad with the approximate cuts, fills, and pad orientation is attached as Plat # 4. Location of the drilling equipment, rig orientation, and access road is on the attached Plat #2.

#### 10. Plans for Restoration of Surface:

When the proposed well is abandoned, the well location and access road would be restored to as near its original condition as possible. The area would be seedbed prepped and reseeded with the appropriate BLM seed mixture.

Should the proposed well be productive, areas not used in production would be re-contoured and reseeded with the BLM stipulated seed mixture. Production equipment would be painted the color designated by BLM to blend into the surrounding ecosystem.

#### 11. Surface Ownership:

The Bureau of Land Management is the surface managing agency.

12. Other Information:

The proposed well is within the BLM designated Rosa Big Game Wintering Range Habitat Area, that has a seasonal closure of December 1 to April 1.

The soils in the proposed well location area exist of alluvial, eolian, and colluvium material derived from sandstone and shale.

The Cultural Resources Survey Report has been submitted to BLM by Moore Anthropological Research.

Cabresto Canyon, an arm of Navajo Lake is approximately 1.2 miles northeast of the proposed location at its nearest point.

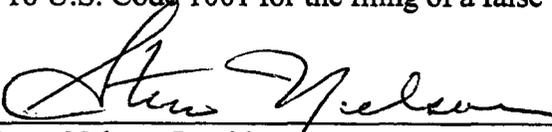
13. Lessee's or Operator's Representative:

Steve Nelson, President  
Nelson Consulting, Inc.  
600 Reilly Ave.  
Farmington, NM 87401

14. Certification:

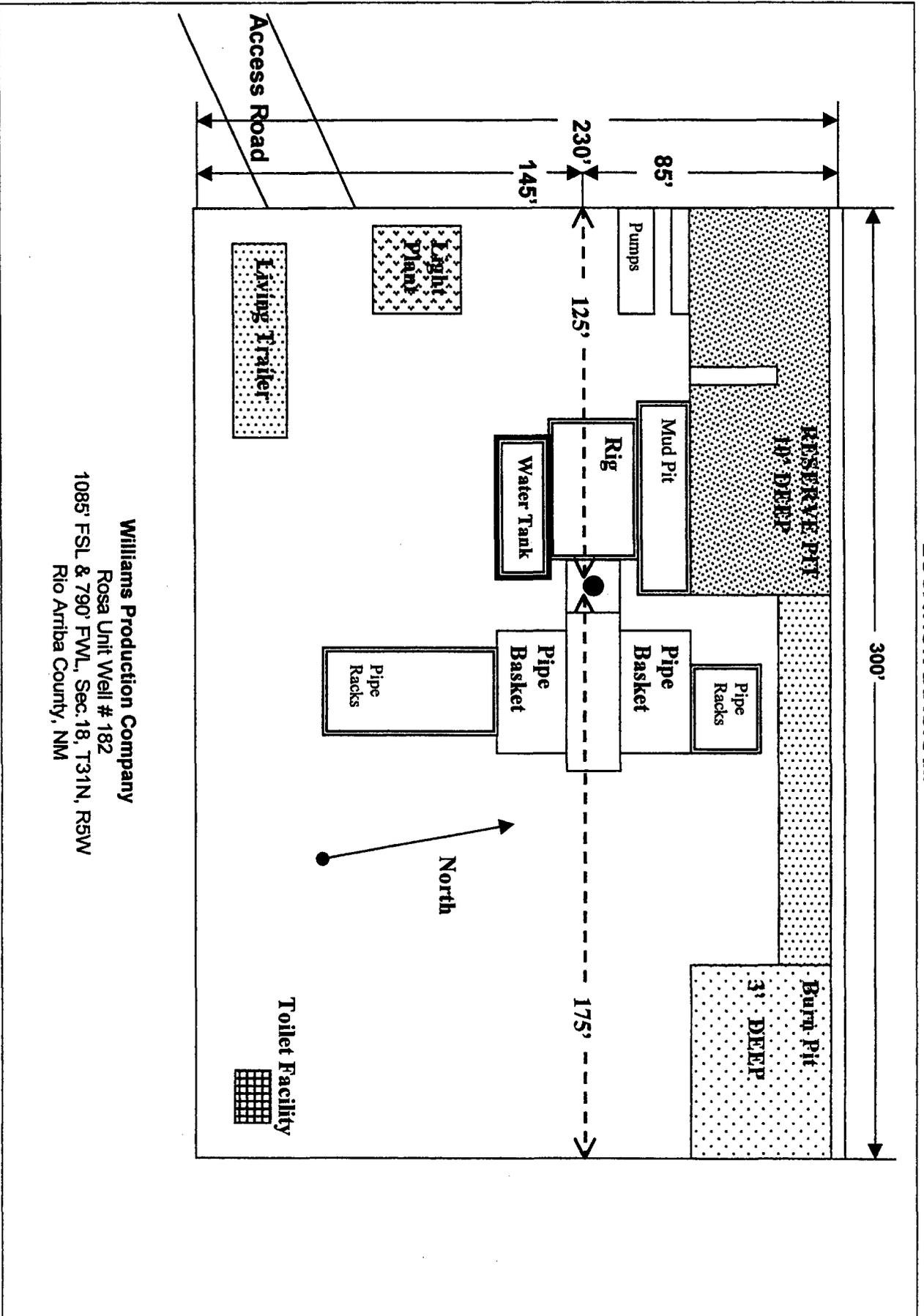
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Williams Exploration and Production, and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to 18 U.S. Code 1001 for the filing of a false statement.

December 17, 1999

  
\_\_\_\_\_  
Steve Nelson, President

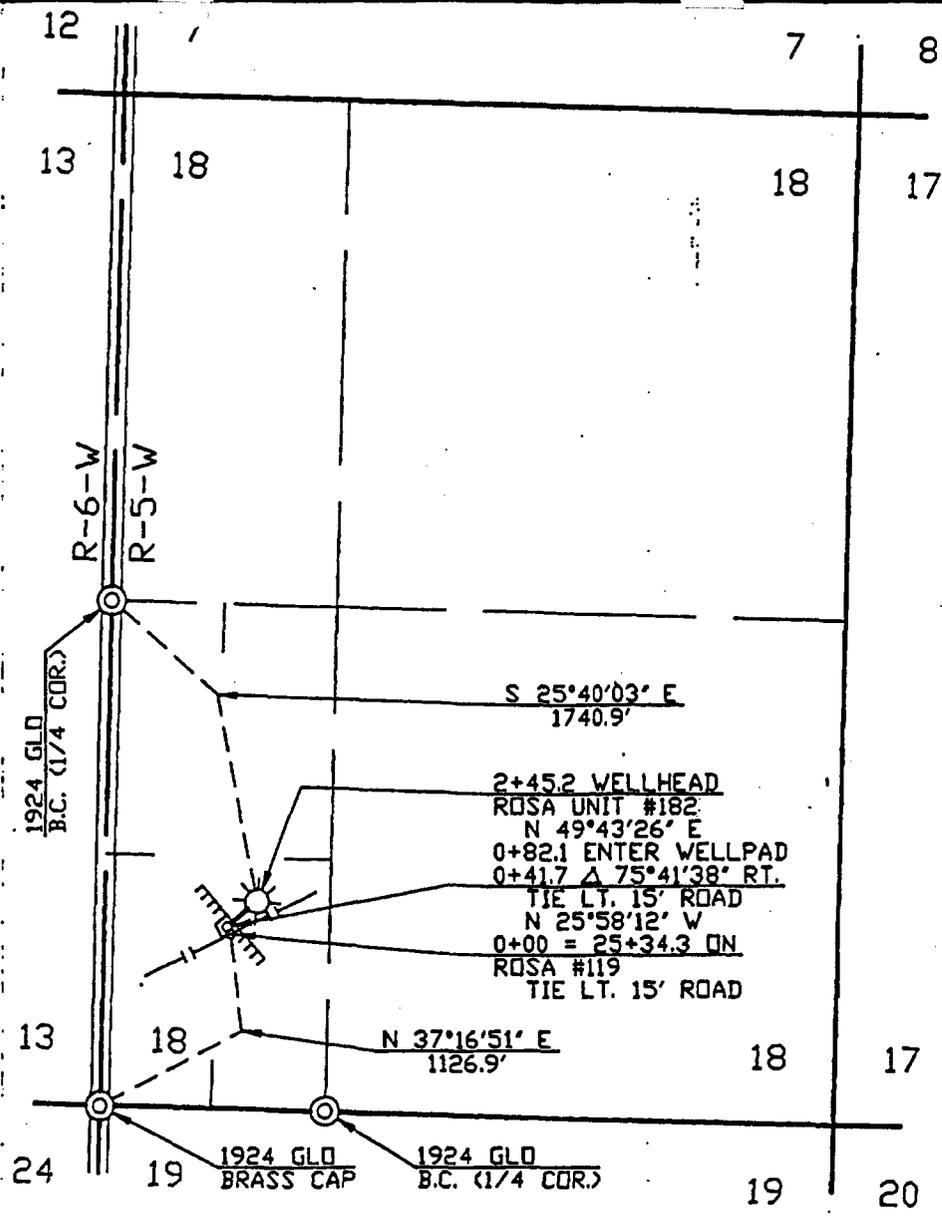


**PLAT # 2  
LOCATION DIAGRAM**



**Williams Production Company**  
 Rosa Unit Well # 182  
 1085' FSL & 790' FWL, Sec. 18, T31N, R5W  
 Rio Arriba County, NM

NOTE: BEARINGS ARE BASED ON A GRID BEARING ALONG THE WEST LINE OF THE SV 1/4 OF SECTION 18, T-31-N, R-5-W, NMPM BEARS: N 1°18'18" E



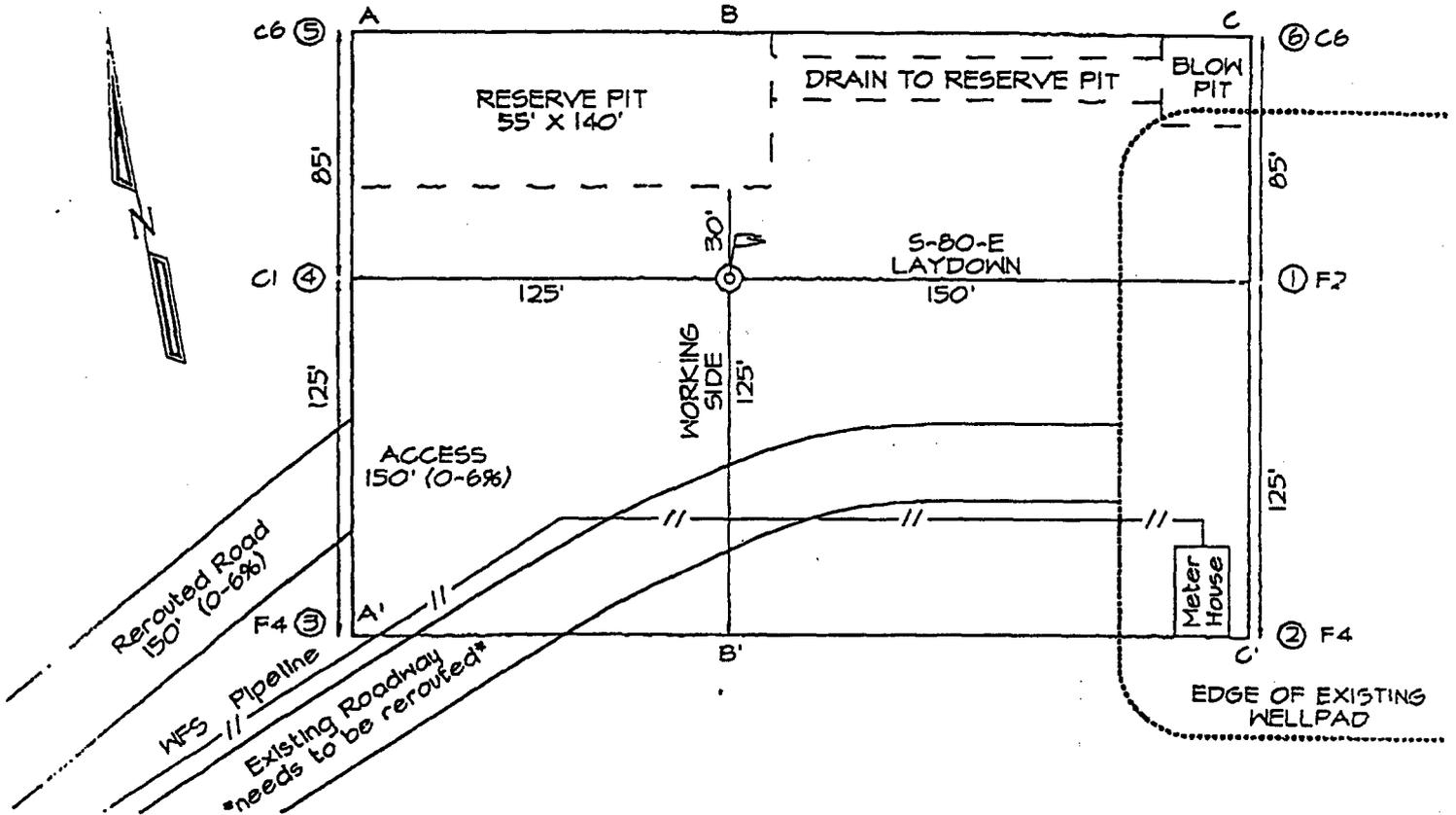
Williams Exploration & Production  
 Rosa Unit Well # 182  
 Pipeline Tie  
 Plat Map # 3

SUBDIVISION	OWNER	FEET	MILES	ACRES	RODS	APPLICATION DVG.
0+00 TO 2+45.2	BUREAU OF LAND MANAGEMENT	245.2	0.046	0.225	14.861	

NO.	DATE	BY	DESCRIPTION	V.O.NO.	CHK.	APP. NO.	DATE	BY	DESCRIPTION	V.O.NO.	CHK.	APP.
1	10/5/99	JH	ISSUED FOR REVIEW		FAD							

<b>INFO</b> DRAFTER #: METER #: SURVEYED: 9/11/99	<b>DRAFTING</b> DRAWN BY: JH CHECKED BY: FAD APPROVED BY:	<b>BY</b> JH FAD	<b>DATE</b> 10/5/99 10/5/99	STATE: NEW MEXICO COUNTY: RIO ARRIBA	<b>WILLIAMS GAS PROCESSING</b> ONE OF THE WILLIAMS COMPANIES SAN JUAN GATHERING SYSTEM WPX - ROSA UNIT #182 0+00 = 25+34.3 ON ROSA #119 (REF. DWG. 48A765.0-32-1) SECTION 18, T-31-N, R-5-W, NMPM
	<b>ENGINEER</b> DESIGNED BY:	<b>BY</b> :	<b>DATE</b> :	SCALE: 1"=1000'	
	DWG NO. 48A765.0-85-1			SHEET 1 OF 1	
	REV 1			1	

**WILLIAMS PRODUCTION COMPANY ROSA UNIT #182**  
**1085' FSL & 790' FWL, SECTION 18, T31N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO, GROUND ELEVATION: 6335'**



A'	6345'	[Profile line]				
	6335'	[Profile line]				
	6325'	[Profile line]				
B'	6345'	[Profile line]				
	6335'	[Profile line]				
	6325'	[Profile line]				
C'	6345'	[Profile line]				
	6335'	[Profile line]				
	6325'	[Profile line]				

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

ROW/APD

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. Type of Work

DRILL

DEEPEN

070' FSL 1070' FEL (SESE)

5. Lease Designation and Serial No.  
SF-078764

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation  
Rosa Unit

8. Well Name and No.  
RU-# 182A

9. API Well No.

10. Field and Pool, or Exploratory Area  
Blanco - MV

11. Sec., T., R., M., or BLK.  
and Survey or Area  
Section 18, T31N, R5W

b. Type of Well

Oil Well

Gas Well

Other

Single Well

Multiple Zone

2. Name of Operator

Williams Exploration & Production

3. Address and Telephone No

P.O. Box 3102, MS 37-2, Tulsa, OK. 74101

4. Location of Well (Footages)

At Surface

1070' FSL 1070' FEL (SESE)

At proposed prod. zone

Same

14. Distance in Miles and Directions from Nearest Town or Post Office

20.6 miles East Navajo Dam Post Office (straight line)

12. County or Parish  
Rio Arriba

13. State  
NM

15. Distance from Proposed Location to Nearest

Property or Lease Line, Ft 1070'

16. No. of Acres in Lease

2507.3 acres

17. No. of Acres Assigned to This Well

231.83 acres S/2

18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT

321'

19. Proposed Depth

6209'

20. Rotary or Cable Tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc)

6429' GR

22. Approximate Date Work will Start

April 1, 2000

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	250'	130 sx-176 cu ft Type III
8-3/4"	7"	20#	3771'	430 sx-892 cu ft Lite 175 sx-242 Cu ft-Type III
6-1/4"	4-1/2"	10.5#	3671' - 6209'	70 sx-150-cuft 110 sx-240cuft Lite HS 65/35

Williams Exploration & Production proposes to drill a vertical well to develop the Mesa Verde Formation at the above described location, in accordance with the attached Operation and Surface Use plans. The location has been surveyed for Cultural Resources by Moore Antropological Research. The report has been submitted to your office for review.

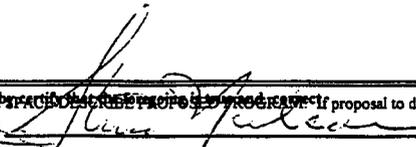
This APD also is serving as an application to obtain BLM road and pipeline rights-of-way. This well will be accessed by an existing access road which accesses the Rosa Unit Well # 203 (see plat #4). The proposed 321-foot long pipeline would tie into the Williams Gathering System (see the attached Plat Map # 4).

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

8. ABOVE SPACE IS FOR FEDERAL PROPOSED PROGRAM. If proposal to deepen, give present productive zone and proposed new productive zone.

Signed



Steve Nelson

Title Agent

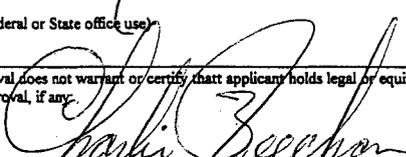
COPIES: BLM+4, WELL FILE+1  
Date December 22, 1999

(This space for Federal or State office use)

Permit No.

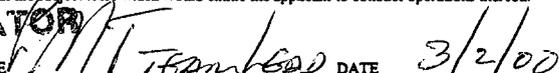
Approval Date

Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

APPROVED BY: 

OPERATOR

TITLE



DATE

3/2/00



Exploration & Production  
*Operations Plan*

**DATE:** 11/30/99

<b>WELLNAME:</b>	ROSA UNIT #182A	<b>FIELD:</b>	Blanco MV
<b>LOCATION:</b>	SESE Sec.18, T31N, R5W Rio Arriba Co., NM	<b>SURFACE:</b>	BLM
<b>ELEVATION:</b>	6429' GR	<b>MINERALS:</b>	Federal
<b>TOTAL DEPTH:</b>	6206'	<b>LEASE #</b>	SF-078764

**I. GEOLOGY:** Surface formation - San Jose

**A. FORMATION TOPS:**

Ojo Alamo	2546'	Cliff House	5486'
Kirkland	2676'	Menefee	5531'
Fruitland	3066'	Point Lookout	5756'
Pictured Cliffs	3296'	Mancos	6076'
Lewis	3586'	Total Depth	6206'

**B. LOGGING PROGRAM:** 8-3/4" IND/GR/Temp log from TD to surface. CDL interval selected by onsite geologist. 6-1/4" IND/GR/Temp log from TD to Intermediate TD. CDL interval selected by onsite geologist.

**C. NATURAL GAUGES:** Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

**II. DRILLING**

**A. MUD PROGRAM:** Clear water with benex to 7" casing point. LSND to log and run pipe.

**B. BOP TESTING:** While drill pipe is in use, the pipe rams will be tested not less than once each day. The blind rams will be tested once each trip. The drum brakes will inspected and tested each tour. All tests and inspections will be recorded in the tour book as to time and results.

**III. MATERIALS**

**A. CASING PROGRAM:**

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. &amp; GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3771'	7"	20# K-55
Prod. Liner	6-1/4"	3671'-6206'	4-1/2"	10.5# K-55

**B. FLOAT EQUIPMENT:**

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe.

1. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float one(1) joint above the shoe and five(5) centralizers, spaced every other joint, starting with the float collar. Place turbulent centralizers, at 120' intervals, starting at 2725' to the surface. Total centralizers = 5 regular and 23 turbulent.
2. PRODUCTION CASING: 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' joint. Place 20' marker joint above 5400'.

**C. CEMENTING:**

1. SURFACE: Use 130 sx (176cu.ft.) of class "Type III" with 2% CaCl<sub>2</sub> and 1/4# of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). Use 125% excess to circulate the surface. WOC 12 hours. Test to 1500#.
2. INTERMEDIATE: Lead - 430sx (892cu.ft.) of class "Premium Lite" 65/35 Type III/Poz with 8% gel, 1% CaCl<sub>2</sub>, and 1/4# cello-flake/sk (Yield = 2.09 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 175sx (242cu.ft.) of class "Type III" with, 1% CaCl<sub>2</sub>, and 1/4# cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5#/gal.). Use 100 excess in lead and tail to circulate to surface. Total volume = 1143 cu.ft. WOC 12 hours. Test to 1500#.
3. PRODUCTION LINER: Lead - 70 sx (150 cu.ft.) of class "Premium Lite HS" 65/35, Type III/Poz with 6 % gel, 0.5% FL-52, 1% CaCl<sub>2</sub>, (Yield = 2.13 cu.ft./sk, Weight = 12.3 #/gal.) Tail - 110sx (240 cu.ft.) of class "Premium Lite HS" 65/35, Type III/Poz with 6 % gel, 0.5% FL-52, 1% CaCl<sub>2</sub>, 4% Phenoseal and 1/4# cello-flake/sk (Yield = 2.16 cu.ft./sk, Weight = 12.3 #/gal.) Displace cement at a minimum of 8 BPM. Use 50% excess in lead and tail to cover liner top. Total volume 390 cuft. WOC 12 hours.

**IV COMPLETION**

**A. CBL**

1. Run Cement Bond Log across all intervals to be perforated and find Top of Cement behind all casing strings.

**B. PRESSURE TEST**

1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

**C. STIMULATION**

1. Stimulate Point Lookout with approximately 80,000# of 20/40 sand in slick water.
2. Isolate Point Lookout with a CIBP.
3. Perforate the Menefee/Cliff House as determined from the open hole logs.
4. Stimulate with approximately 80,000# of 20/40 sand in slick water.
5. Test each zone before removing bridge plugs.

**D. RUNNING TUBING**

1. Mesa Verde: Run 2-3/8", 4.7#, J-55, EUE tubing with a SN (1.91" ID) on top of bottom joint. Land tubing approximately 50' above the bottom Point Lookout perforation.

  
\_\_\_\_\_  
David Spitz  
Engineer, Production & Drilling

Dist: 1  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 4 Copies

Dist: 11  
PO Box 100, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION

PO Box 2088, 34  
Santa Fe, NM 87504-2088

Dist: 11  
PO Box 2088, Aztec, NM 87410

070 PALMINGTON, NM

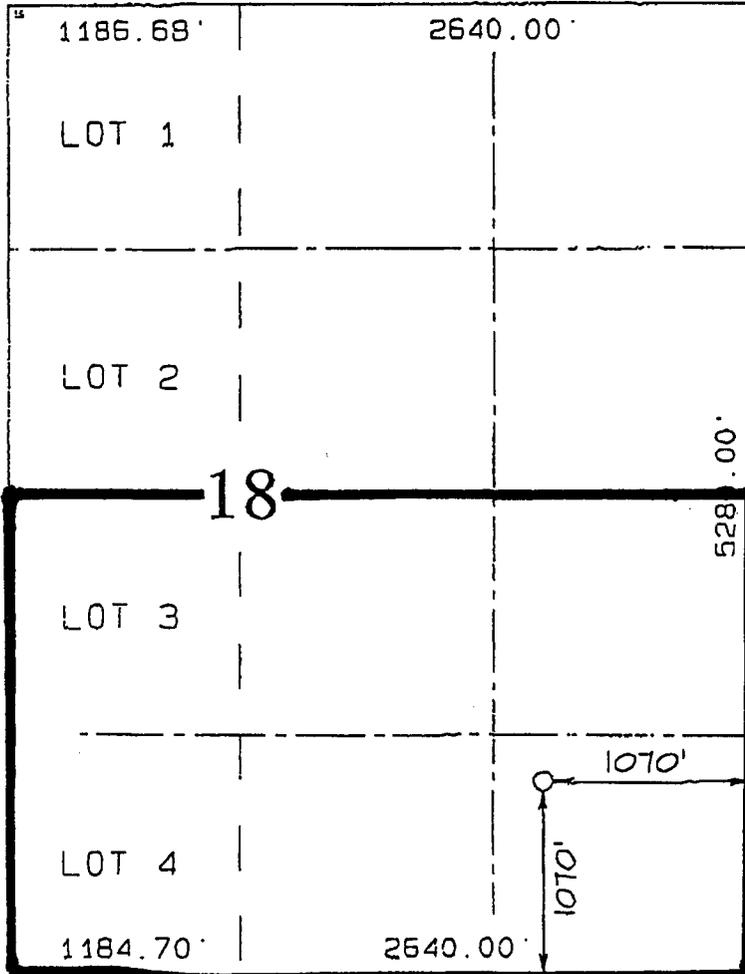
Dist: 11  
PO Box 2088, Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code		Pool Name					
Party Code	Property Name ROSA UNIT			Well Number 182A					
SEC No	Operator Name WILLIAMS PRODUCTION COMPANY			Elevation 6429					
10 Surface Location									
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	East/West line	County
18	31N	5W		1070	SOUTH	1070	EAST		MTJ ARR-15A
11 Bottom Hole Location If Different From Surface									
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	East/West line	County
12	13 Joint or Infill	14 Consolidation Code	15 Order No						

WELL OWNER WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



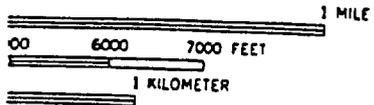
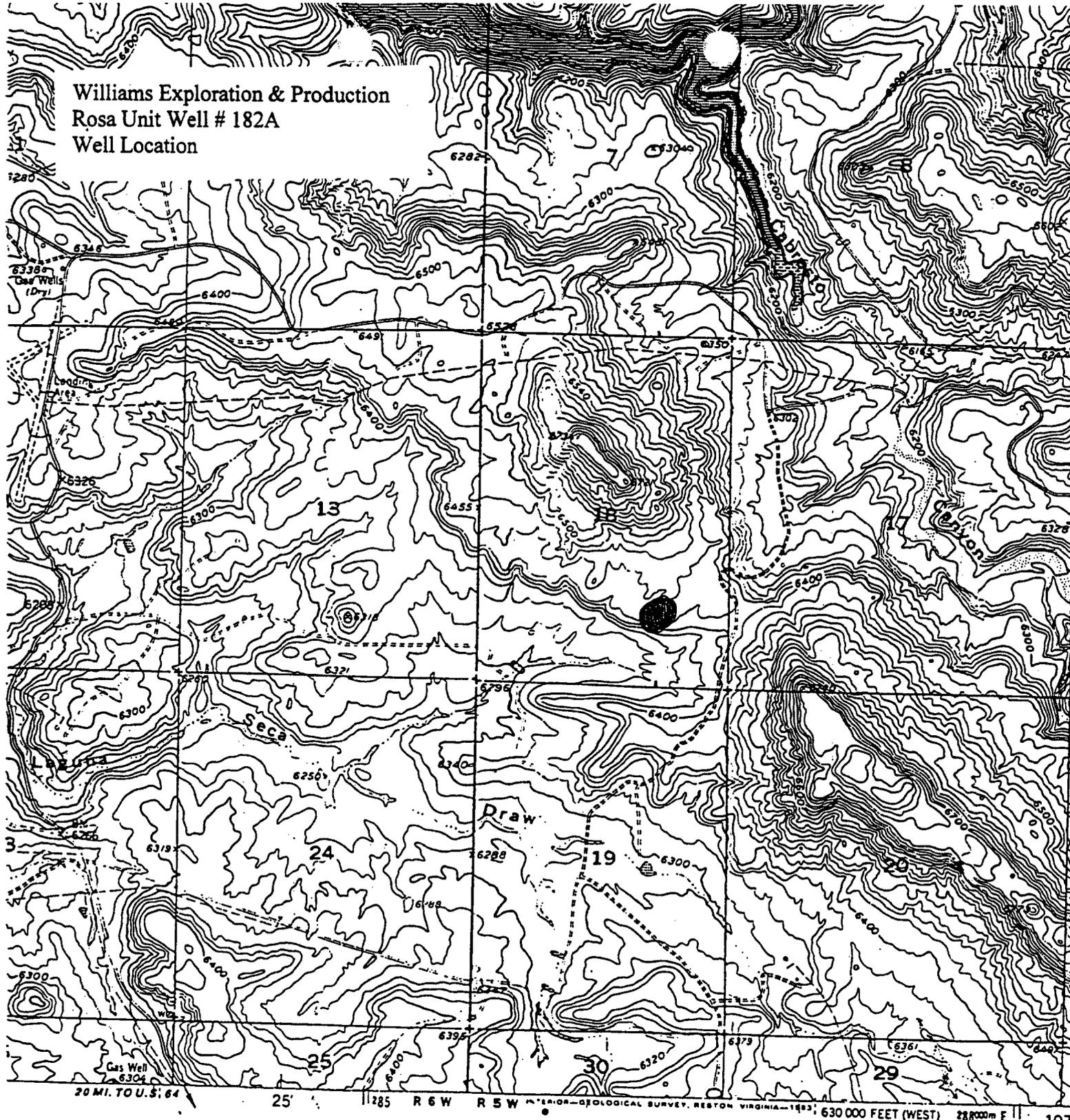
17 OPERATOR CERTIFICATION  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Steve Nelson*  
Signature  
Steve Nelson  
Printed Name  
Agent, Nelson Consulting  
Title  
December 22, 1999  
Date

18 SURVEYOR CERTIFICATION  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my belief.

AUGUST 18, 1999  
Date of Survey  
Signature and Seal of Professional Surveyor  
**NEALE O. EDWARDS**  
NEW MEXICO  
6857  
Professional Surveyor  
Certificate No. 2088  
6857

Williams Exploration & Production  
 Rosa Unit Well # 182A  
 Well Location



929



QUADRANGLE LOCATION

ROAD CLASSIFICATION

Light-duty ————— Unimproved dirt - - - - -

STANDARDS  
 25, OR RESTON, VIRGINIA 22092  
 AVAILABLE ON REQUEST

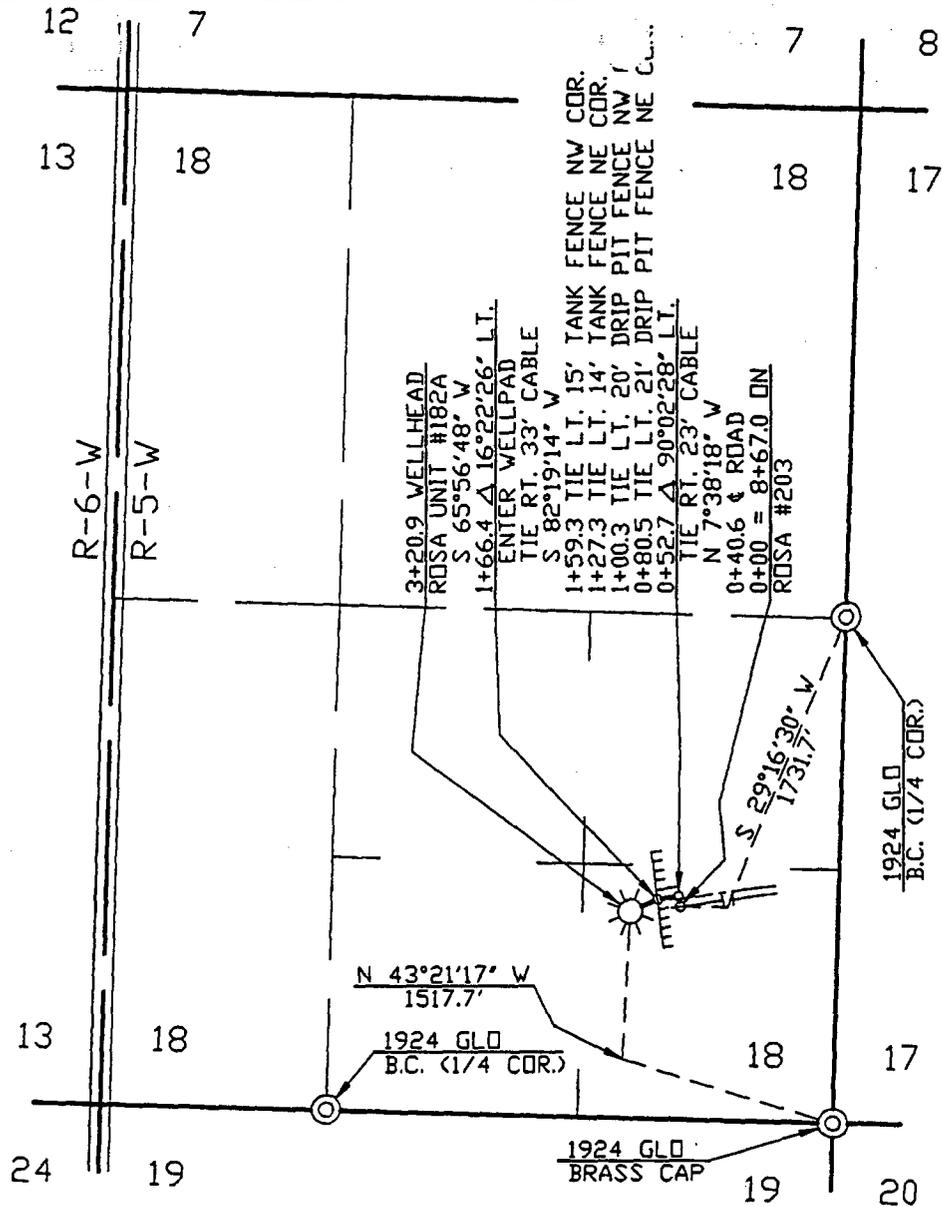
Revisions shown in purple and woodland compiled from  
 aerial photographs taken 1981 and other source data  
 Partial field check by U.S. Forest Service. Map edited 1982

BANCOS MESA NW, N. MEX  
 (FORMERLY ROSA)  
 N3652.5—W10722.5/7.5

1954  
 PHOTOREVISED 1982  
 DMA 4557 IN 5000 SERIES



NOTE: BEARINGS ARE BASED ON A GRID BEARING ALONG THE EAST LINE OF THE SE 1/4 OF SECTION 18, T-31-N, R-5-W, NMPM BEARS: N 1°25'33" E



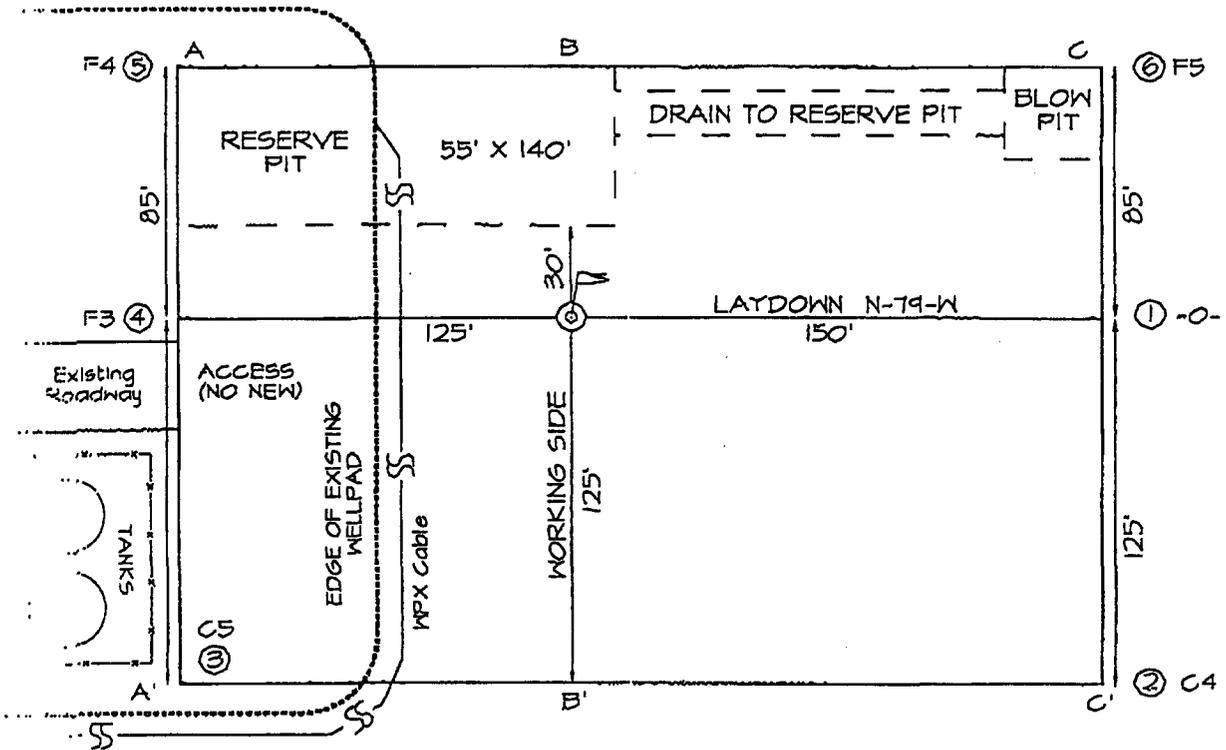
PIPE DATA

DIVERSHIP	SUBDIVISION		OWNER	FEET	MILES	ACRES	RODS	APPLICATION DIV.
		0+00 TO 3+20.9		BUREAU OF LAND MANAGEMENT	320.9	0.061	0.295	19.449

REVISION	NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	W.D.NO.	CHK.	APP.
1	10/5/99	JH		ISSUED FOR REVIEW		FAO	RR							

<b>INFO</b>				STATE: NEW MEXICO		<b>WILLIAMS GAS PROCESSING</b>			
R/W #:				COUNTY: RIO ARRIBA		ONE OF THE WILLIAMS COMPANIES			
METER #:				SAN JUAN GATHERING SYSTEM		WPX - ROSA UNIT #182A			
SURVEYED: 9/11/99				0+00 = 8+67.0 ON ROSA #203		(REF. DWG.)			
ENGINEER BY DATE				SECTION 18, T-31-N, R-5-W, NMPM					
DESIGNED BY				SCALE: 1"=1000'		DWG NO. 46A765.0-90-1			
PROJ. APPROVED				W.D. NO.		SHEET 1 OF 1 REV 1			

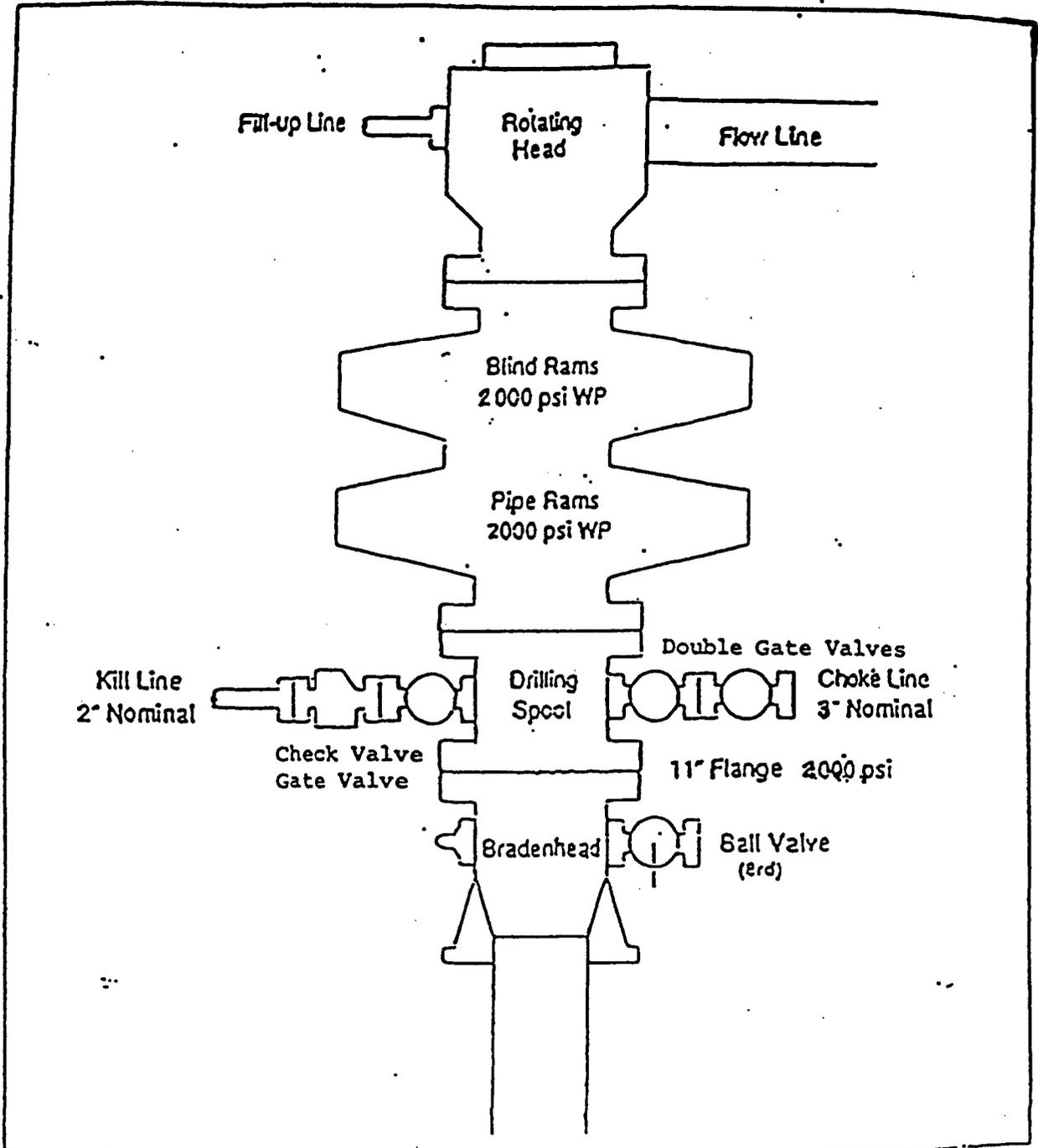
**WILLIAMS PRODUCTION COMPANY ROSA UNIT #182A**  
**1070' FSL & 1070' FEL, SECTION 18, T31N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO, GROUND ELEVATION: 6429'**



A'	6439'	6429'	6419'
B'	6439'	6429'	6419'
C'	6439'	6429'	6419'

EXHIBIT 1

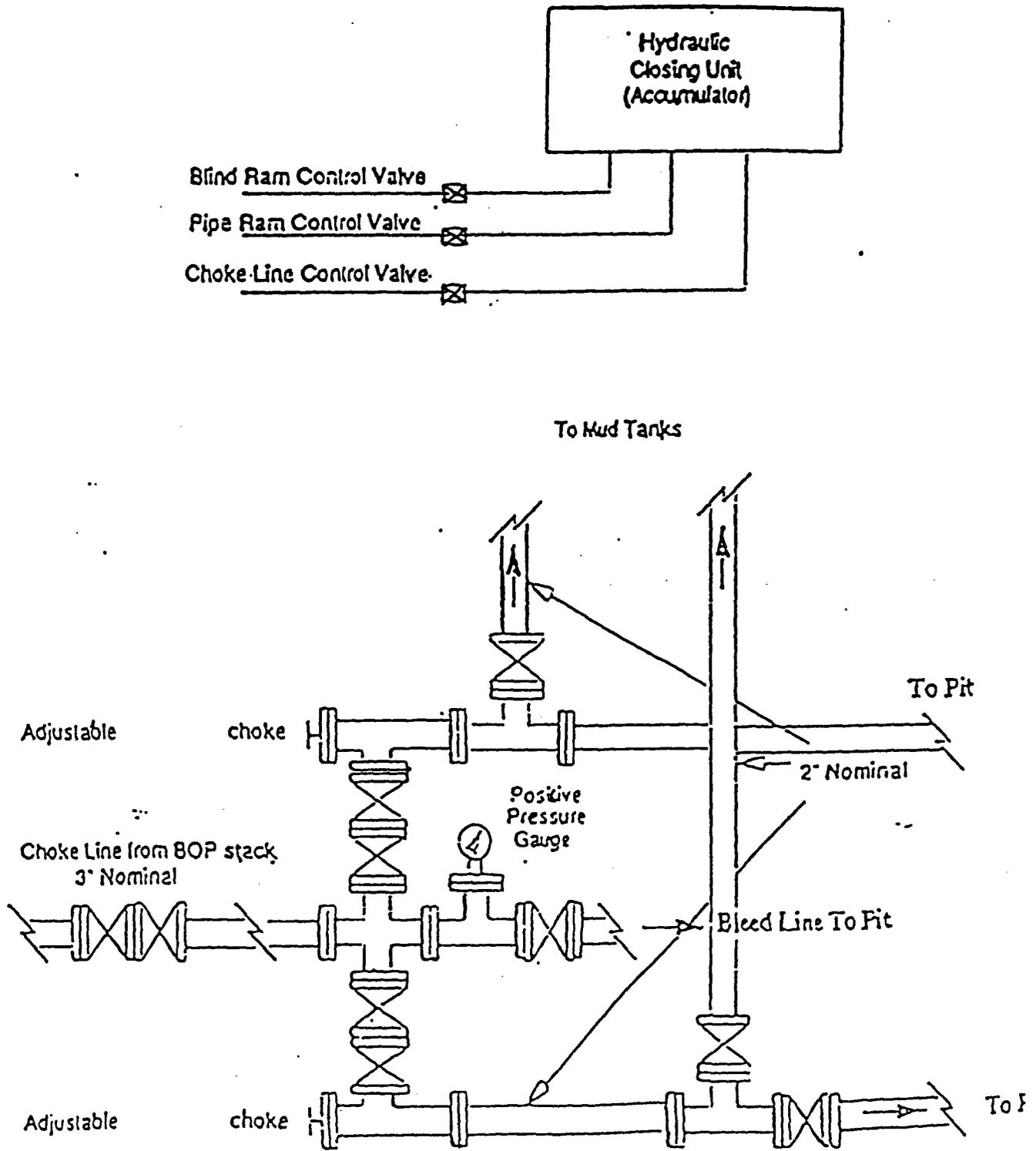
BOP STACK ARRANGEMENT



All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi. The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock with handle, floor safety valve with change overs for each tool joint in the string, and choke manifold all rated to 2000 psi.

EXHIBIT 2

Choke Manifold & Accumulator Schematic



## GENERAL ROSA UNIT DRILLING PLAN

OSA UNIT BOUNDARIES: T31N, R04W: All - Except sections 32-36; T31N, R05W: All - Except sections 1 & 2  
 T31N, R06W: All - Except sections 6,7,18,20,27-36; T32N, R06W: Sections 32-36

### FORMATION CHARACTERISTICS:

FORMATION	LITHOLOGY	WATER	GAS	OIL	OVER PRES.	LOST CIRC.
NACIMIENTO	Interbedded shales, siltstones & sandstones	no	no	no	no	no
OJO ALAMO	Sandstone & conglomerates w/ lenses of shale	fresh	no	no	no	no
KIRTLAND	Shale w/ interbedded sandstones	no	poss.	no	no	no
FRUITLAND	Inter. SS, SRSL, SH & Coals w/ Carb. SS, SRSL, SH	yes	yes	no	poss.	no
PICTURED CLIFFS	Massive Sandstone w/ thin Interbedded Shales	poss.	yes	poss.	no	poss.
LEWIS	Shale w/ thin Interbedded sandstones & siltstones	no	poss.	no	no	no
CLIFF HOUSE	Transgressive sandstone	poss.	yes	no	no	no
MENEFEE	Sandstones, Carb shales & coal	poss.	yes	no	no	no
POINT LOOKOUT	Regressive coastal barrier sandstone	poss.	yes	poss.	no	yes
MANCOS	Marine shale	no	no	no	no	no

### DRILLING

#### Potential Hazards

1. There are no overpressured zones expected in this well.
2. No H2S zones will be permitted while drilling this well.

#### Mud System

1. Surface: The surface hole will be drilled with a Low-solids Non-Dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 #/gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate: The intermediate hole will be drilled with clear water and Benex to TD where the well will be mudded up to log and run casing. The mud system will be Low-solids Non-Dispersed with mud weights in the 9 to 10 #/gal range as needed to control the well. Viscosities will be in the 45 to 55 range as needed to support any weight material. The weight material will consist of Barite.
3. Production: The well will be drilled using natural gas from the intermediate casing point to TD.

## ROSA UNIT PORE PRESSURES

FORMATION	DEPTH	FRAC GRADIENT	PORE PRESSURE	RESERVOIR PRESS
FRUITLAND	2960	0.69	1578	1400
PICTURED CLIFFS	3200	0.65	1520	1400
CLIFF HOUSE	5200	0.50	1300	1200
MENEFEE	5350	0.50	1338	1200
POINT LOOKOUT	5650	0.48	1201	1200
GALLUP	6800	0.55	2210	2000
DAKOTA	7850	0.65	3729	2600

Based on:  $F = 1/3(1+2P/D)$   
 $P_f = (3F - 1)D/2$

Where: F = Frac Gradient  
P<sub>f</sub> = Pore Pressure  
D = Depth

MULTI-POINT SURFACE USE PLAN  
ROSA UNIT Well #182A

1. Existing Roads:

All existing roads used to access the proposed location are shown on the attached Plat #1, and shall continue to be maintained in the same or better condition than presently maintained.

2. Planned Access Roads:

The well would be accessed by an existing road (the Rosa Unit Well # 203) and would not require any new road construction for this location (See Plat Maps #3 and 4 for details). The existing access road and new access road will be maintained in at least the same manner and like current condition, and will be upgraded where necessary to provide uninterrupted access to the proposed location.

3. Location of Existing Wells:

The attached Plat #1 shows the 15 existing wells within a one-mile radius of the proposed well (Rosa Unit #182A).

4. Location of Production Facilities:

The production facilities would be located on the drill pad. The actual placement of this equipment would be determined when the well's production characteristics can be evaluated after well completion.

The 4-1/2-inch diameter, 321-foot long buried steel pipeline would be constructed. The pipe wall thickness would be 0.188-inch, and the wall strength would be 1,750 PGSI. The proposed RU Well #182A well would be connected to the Williams Company's Gathering System. The well pipeline would not be used for the transporting of natural gas for the purpose of drilling the RU Well # 182A (Refer to attached Plat #3 for pipeline tie-in details).

To protect wildlife and livestock, the reserve pit would be fenced. Appropriate dikes would enclose tanks placed on the well pad that would be used during the production process.

Upon completion of the drilling process, the well location and surrounding area would be cleared of all debris.

5. Water Supply:

Water for the drilling and completion operations would be hauled by truck from Navajo Lake or the La Jara Waterhole.

## 6. Source of Construction Materials:

No additional construction materials would be required to construct the proposed well location.

## 7. Methods for Handling Waste Disposal:

- a. The drill cuttings, fluids, and completion fluids would be placed in the reserve pit. Three sides of the reserve pit would be fenced prior to setting the rig on location and beginning the drilling process. Upon completion of the proposed well the reserve pit would be allowed to dry, and materials remaining in the reserve pit would be buried. The reserve pit would be back-filled, leveled, and re-contoured to prevent any materials from being transported via run-off into any existing watersheds. The portion of the well location not needed for the production facilities would then be re-contoured, leveled, and reseeded with the appropriate BLM stipulated seed mixture.
- b. All garbage and trash would be placed in a metal trash cage. All trash would be hauled off to a State of New Mexico approved landfill for disposal.
- c. Portable toilets would be provided and maintained for human use during the drilling and completion operations. See attached Plat #2.

## 8. Ancillary Facilities:

Ancillary facilities are to be based on the proposed wells productivity. See the proposed gathering pipeline for this proposed well on Plat # 3.

## 9. Well Site Layout:

A cross section of the drill pad with the approximate cuts, fills, and pad orientation is attached as Plat # 4. Location of the drilling equipment, rig orientation, and access road is on the attached Plat #2.

## 10. Plans for Restoration of Surface:

When the proposed well is abandoned, the well location and access road would be restored to as near its original condition as possible. The area would be seedbed prepped and reseeded with the appropriate BLM seed mixture.

Should the proposed well be productive, areas not used in production would be re-contoured and reseeded with the BLM stipulated seed mixture. Production equipment would be painted the color designated by BLM to blend into the surrounding ecosystem.

## 11. Surface Ownership:

The Bureau of Land Management is the surface managing agency.

12. Other Information:

The proposed well is within the BLM designated Rosa Big Game Wintering Range Habitat Area, that has a seasonal closure of December 1 to April 1.

The soils in the proposed well location area exist of alluvial, eolian, and colluvium material derived from sandstone and shale.

The Cultural Resources Survey Report has been submitted to BLM by Moore Anthropological Research.

Cabresto Canyon, an arm of Navajo Lake is approximately one mile north of the proposed location at its nearest point.

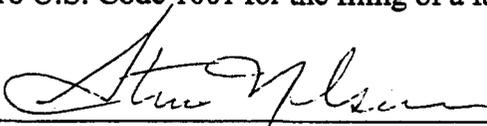
13. Lessee's or Operator's Representative:

Steve Nelson, President  
Nelson Consulting, Inc.  
600 Reilly Ave.  
Farmington, NM 87401

14. Certification:

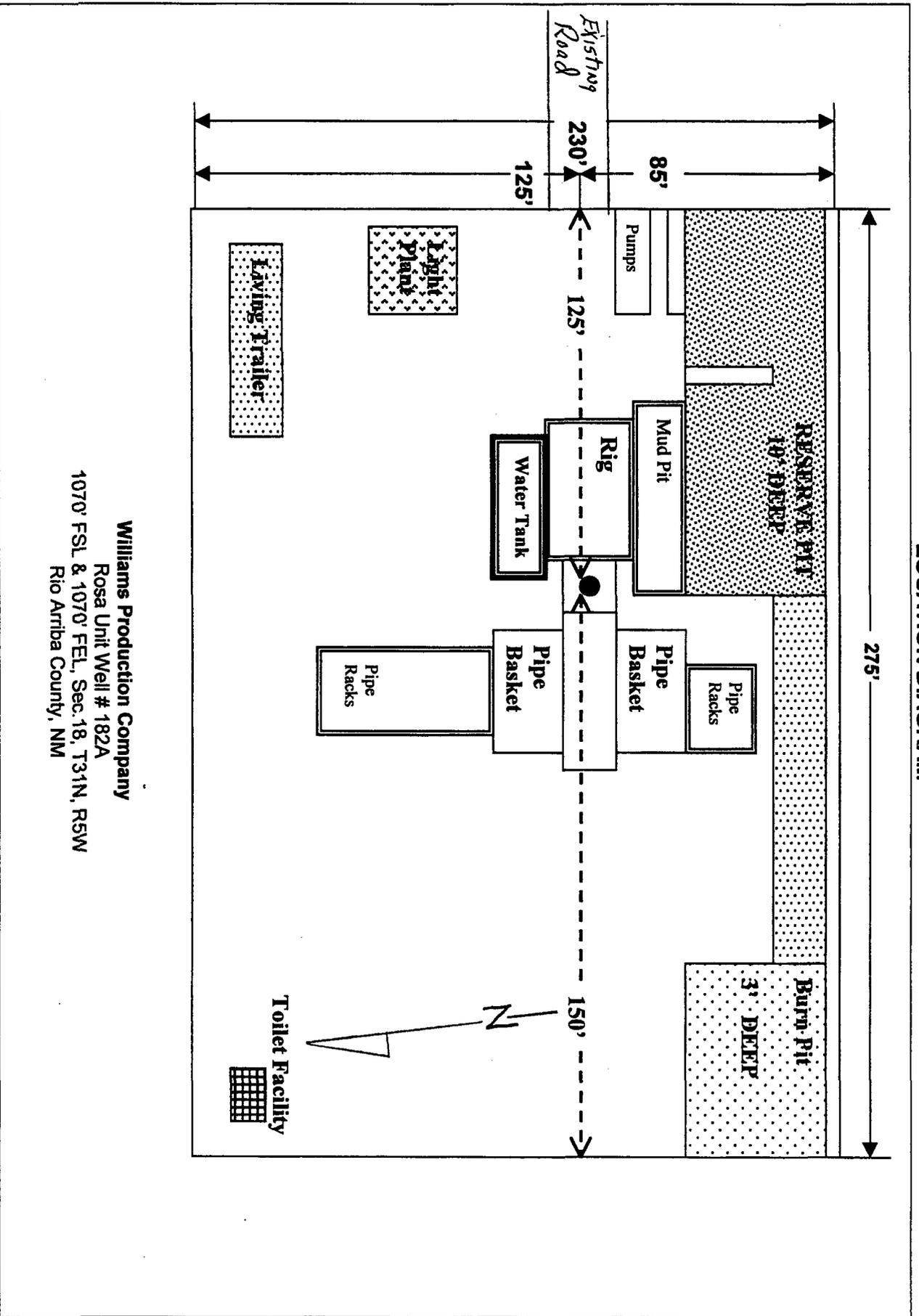
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Williams Exploration and Production, and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to 18 U.S. Code 1001 for the filing of a false statement.

December 22, 1999

  
\_\_\_\_\_  
Steve Nelson, President



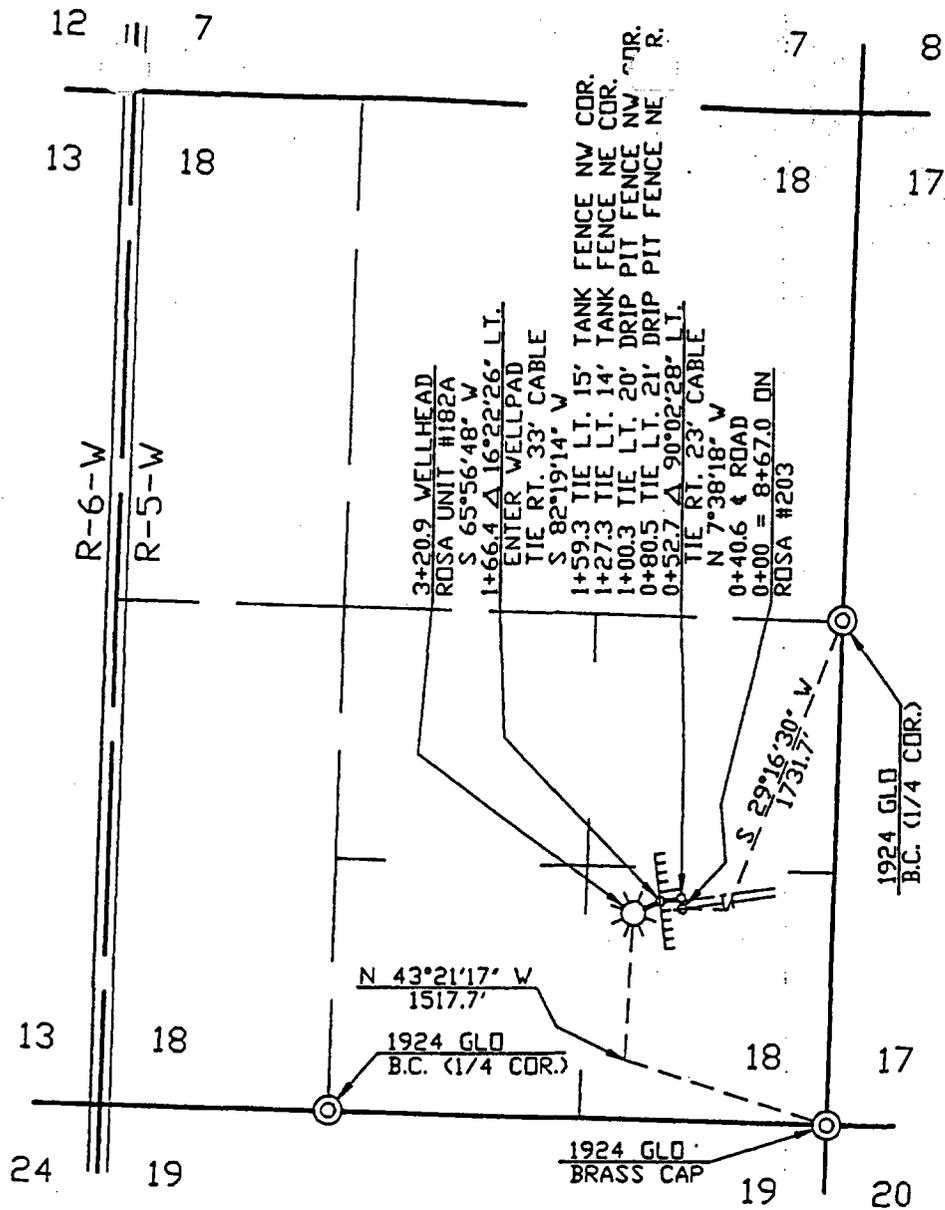
**PLAT # 2**  
**LOCATION DIAGRAM**



**Williams Production Company**  
 Rosa Unit Well # 182A  
 1070' FSL & 1070' FEL, Sec. 18, T31N, R5W  
 Rio Arriba County, NM



NOTE: BEARINGS ARE BASED ON A GRID BEARING ALONG THE EAST LINE OF THE SE 1/4 OF SECTION 18, T-31-N, R-5-W, NMPM BEARS: N 1°25'33" E



PIPE DATA

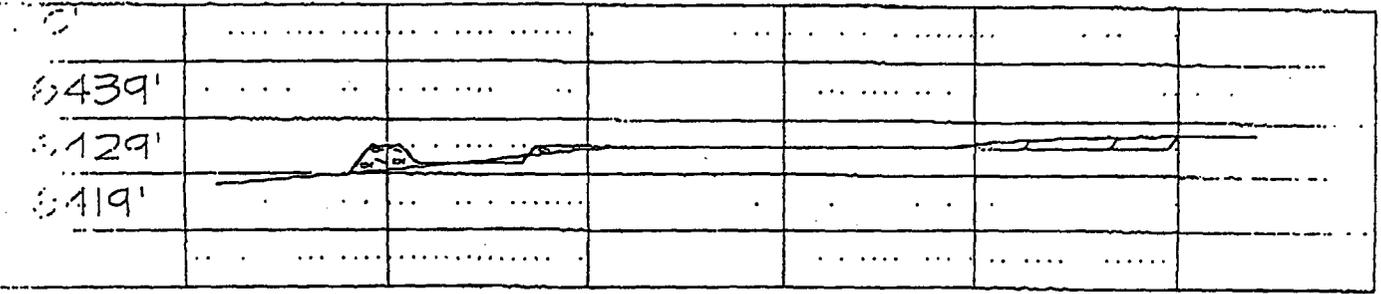
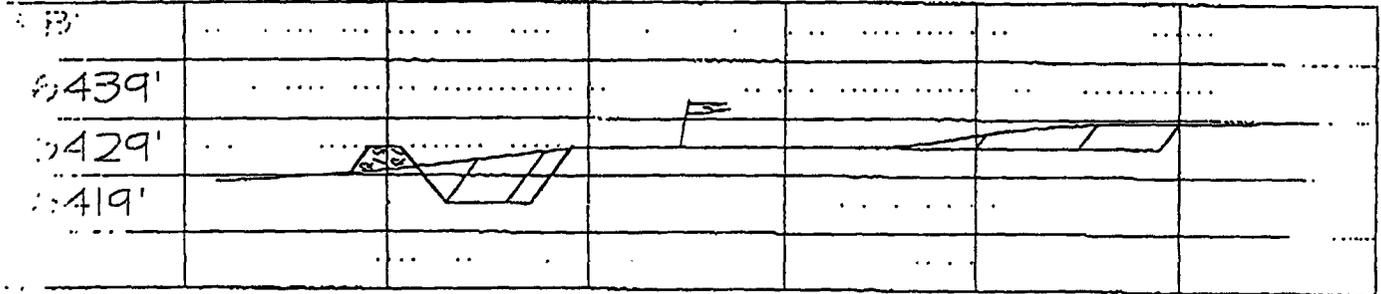
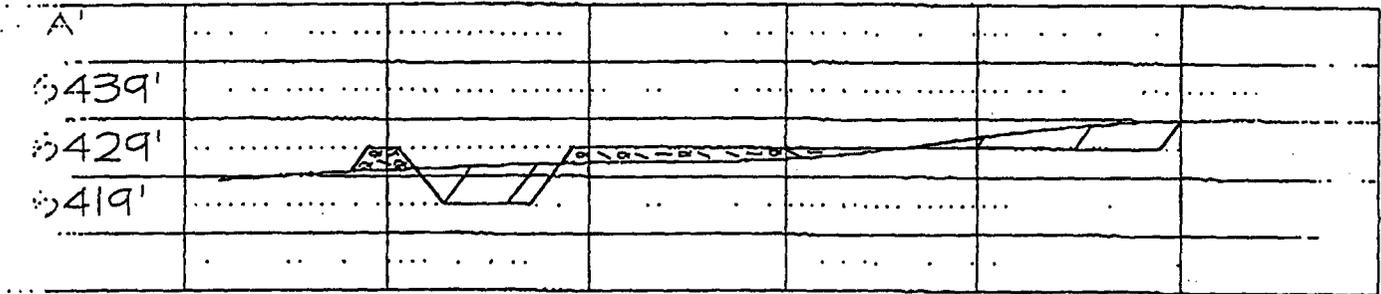
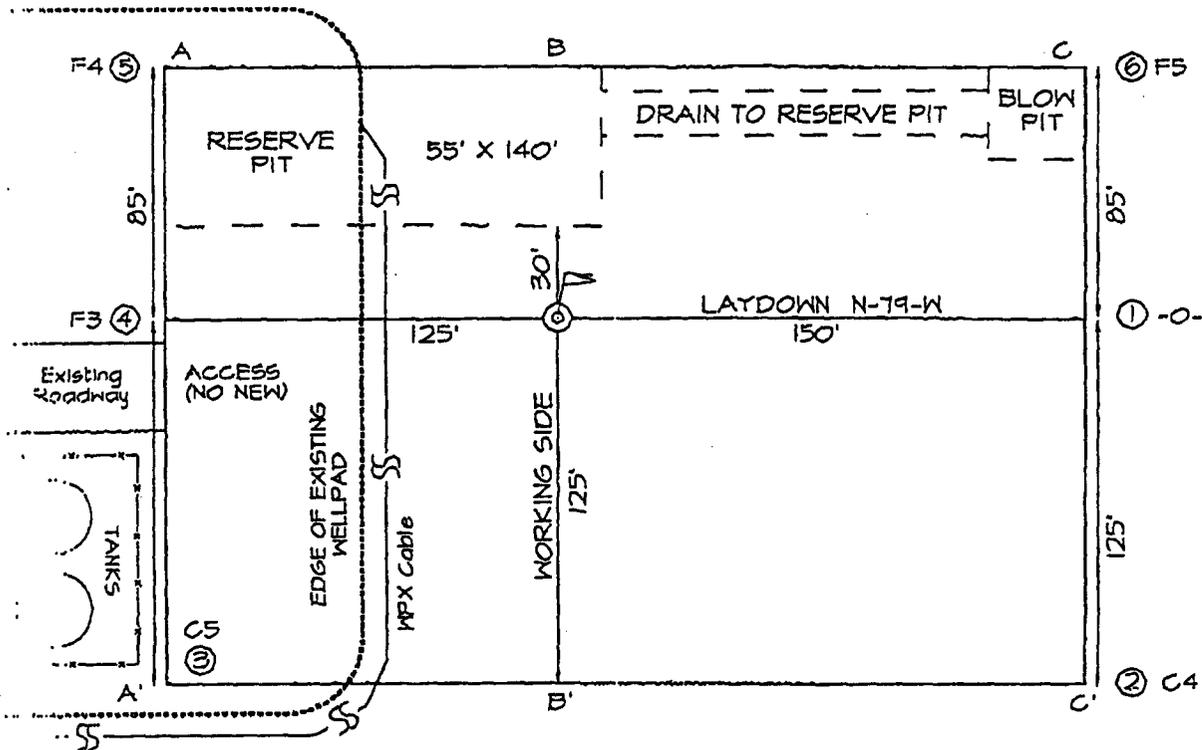
Williams Exploration & Production  
Rosa Unit Well # 182A  
Pipeline Tie  
Plat Map # 3

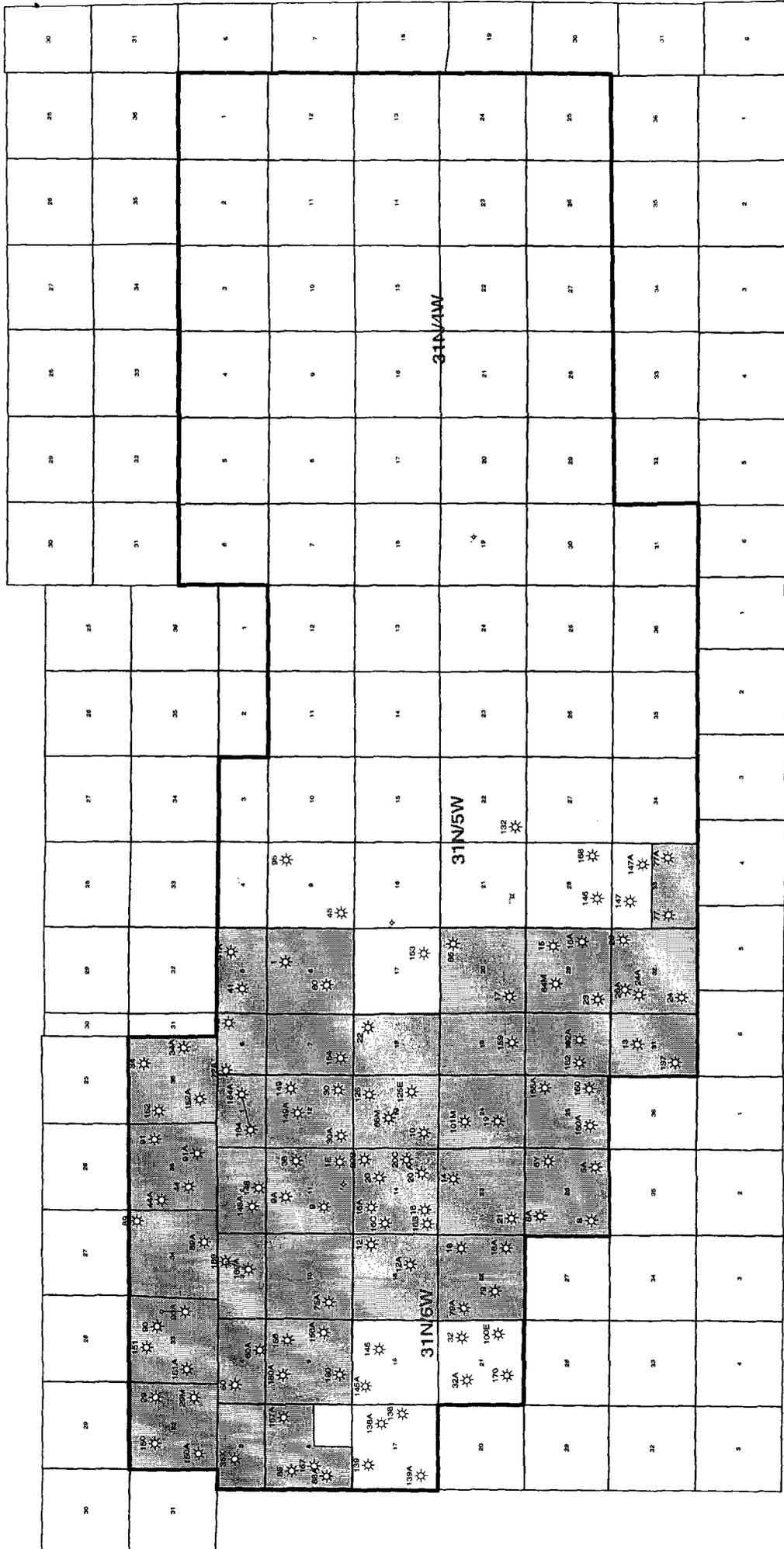
SUBDIVISION		OWNER	FEET	MILES	ACRES	RODS	APPLICATION DVG.
0+00 TO 3+20.9		BUREAU OF LAND MANAGEMENT	320.9	0.061	0.295	19.449	

NO.	DATE	BY	DESCRIPTION	V.O.NO.	CHK.	APP.	NO.	DATE	BY	DESCRIPTION	V.O.NO.	CHK.	APP.
1	10/5/99	JH	ISSUED FOR REVIEW		FAO	RR							

INFO				STATE: NEW MEXICO		WILLIAMS GAS PROCESSING	
R/W #:	DRAFTING	BY	DATE	COUNTY: RIO ARRIBA		ONE OF THE WILLIAMS COMPANIES	
METER #:	DRAWN BY	JH	10/5/99	SAN JUAN GATHERING SYSTEM WPX - ROSA UNIT #182A 0+00 = 8+67.0 ON ROSA #203 (REF. DWG.) SECTION 18, T-31-N, R-5-W, NMPM			
SURVEYED: 9/11/99	CHECKED BY	FAO	10/5/99				
	APPROVED BY	RR	10/7/99				
	ENGINEER	BY	DATE	SCALE: 1"=1000'	DWG NO. 46A765.0-90-1		SHEET 1 OF 1
	DESIGNED BY			V.O. NO.			REV 1
	PROJ. APPROVED						

**WILLIAMS PRODUCTION COMPANY ROSA UNIT #182A**  
**1070' FSL & 1070' FEL, SECTION 18, T31N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO, GROUND ELEVATION: 6429'**





MESAVERDE PARTICIPATING AREA



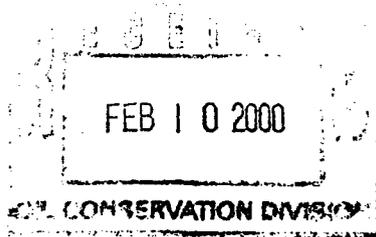
**ROSA UNIT  
MESAVERDE FORMATION WELLS**

2/1/2000

Scale 1:110059.82



**Williams Production Company**  
 One Williams Center  
 P.O. Box 3102  
 Tulsa, Oklahoma 74101



February 4, 2000

FEB 15 2000

Assistant District Manager, Minerals  
 Bureau of Land Management  
 Farmington Resource Area  
 1235 La Plata Highway  
 Farmington, New Mexico 87401

State of New Mexico  
 Oil Conservation Commission  
 2040 South Pacheco  
 Santa Fe, New Mexico 87505

State of New Mexico  
 Commissioner of Public Lands  
 P. O. Box 1148  
 Santa Fe, New Mexico 87504-1148

Re: Rosa Unit I, Sec.No.587  
 San Juan and Rio Arriba Counties, New Mexico  
 2000 Plan of Development

Gentlemen:

By letters dated February 9, April 30, August 3 and September 9, 1999, Williams Production Company as Rosa Unit Operator, filed the 1998 Plan of Development for the Rosa Unit. Following is a summary of the operations proposed under the 1999 Plan of Development:

<u>Well Name</u>	<u>Formation</u>	<u>Operations Status</u>
Rosa Unit #5Y	Mesaverde	Completed/Producing
Rosa Unit #12A	Pictured Cliffs	Completed/Producing
Rosa Unit #16B	Mesaverde	Completed/Producing
Rosa Unit #16C	Mesaverde	Completed/Producing
Rosa Unit #20B	Mesaverde	Completed/Producing
Rosa Unit #20C	Mesaverde	Completed/Producing
Rosa Unit #21A	Mesaverde	Carry Over to 2000 P.O.D.
Rosa Unit #25A	Mesaverde	Carry Over to 2000 P.O.D.
Rosa Unit #30A	Mesaverde	Completed/Producing
Rosa Unit #34A	Mesaverde	Completed/Producing
Rosa Unit #44A	Mesaverde	Completed/Producing
Rosa Unit Com #60	Mesaverde	Completed/Producing
Rosa Unit Com #60A	Mesaverde	Completed/Producing
Rosa Unit #75	Mesaverde	Completed/Producing
Rosa Unit #75A	Mesaverde	Carry Over to 2000 P.O.D.
Rosa Unit Com #129	Mesaverde	Carry Over to 2000 P.O.D.

<u>Well Number</u>	<u>Formation</u>	<u>Operations Status</u>
Rosa Unit Com #129A	Mesaverde	Carry Over to 2000 P.O.D.
Rosa Unit #137A (Pictured Cliffs/ Mesaverde Dual)	Pictured Cliffs	Completed/Producing
	Mesaverde	Completed/Producing
Rosa Unit #162	Mesaverde	Completed/Producing
Rosa Unit #162A	Mesaverde	Completed/Producing
Rosa Unit #164	Mesaverde	Completed/Producing
Rosa Unit #164A	Mesaverde	Completed/Producing
Rosa Unit #165 (Pictured Cliffs/ Mesaverde Dual)	Pictured Cliffs	Completed/Producing
	Mesaverde	Completed/Producing
Rosa Unit #165A	Mesaverde	Completed/Producing
Rosa Unit #167	Mesaverde	Completed/Producing
Rosa Unit #167A	Mesaverde	Completed/Producing
Rosa Unit Com #169	Mesaverde	Completed/Producing
Rosa Unit Com #169A	Mesaverde	Completed/Producing
Rosa Unit #341	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #342	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #343	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #344	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #345	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #347	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #350	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #351	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #354	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit Com #355	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #357	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit Com #358	Fruitland	Carry Over to 2000 P.O.D.
Rosa Unit #500 (MV/PC/Ojo Test)	Mesaverde	Dropped from P.O.D.
	Pictured Cliffs	Dropped from P.O.D.
	Ojo Alamo	Ojo tested and abandoned, well deepened and topset for Fruitland completion – 2000 P.O.D.
Rosa Unit #501 (PC/Ojo Test)	Pictured Cliffs	Dropped from P.O.D.
	Ojo Alamo	Dropped from P.O.D.
Rosa Unit #502 (PC/Ojo Test)	Pictured Cliffs	Dropped from P.O.D.
	Ojo Alamo	Dropped from P.O.D.
Rosa Unit #503 (PC/Ojo Test)	Pictured Cliffs	Dropped from P.O.D.
	Ojo Alamo	Dropped from P.O.D.
Rosa Unit #504 (PC/Ojo Test)	Pictured Cliffs	Dropped from P.O.D.
	Ojo Alamo	Dropped from P.O.D.
Rosa Unit #505	Ojo Alamo	Dropped from P.O.D.
Rosa Unit #506	Ojo Alamo	Dropped from P.O.D.
Rosa Unit #507	Pictured Cliffs	Dropped from P.O.D.

The Participating Areas which have been established in the Rosa Unit are as follows:

<u>Formation</u>	<u>Revision</u>	<u>Effective</u>
Mesaverde	Fifteenth	January 1, 1983
Dakota	Ninth	January 1, 1992

Attached are maps of each of the producing formations within the Rosa Unit showing the boundaries of the Participating Areas as applicable. There were no wells commingled within the Rosa Unit during 1999.

Pursuant to Section 9 of the Rosa Unit Agreement, Williams Production Company is submitting a Plan of Development providing for the completion of the following wells during 2000:

<u>Well Number</u>	<u>Drilling Block</u>	<u>Formation</u>
Rosa Unit #6Y	S/2 Sec.27,T31N,R5W	Mesaverde
Rosa Unit #13A	N/2 Sec.31,T31N,R5W	Mesaverde
Rosa Unit #14A	E/2 Sec.23,T31N,R6W	Mesaverde
Rosa Unit #17A	S/2 Sec.20,T31N,R5W	Mesaverde
Rosa Unit #21A	W/2 Sec.23,T31N,R6W	Mesaverde
Rosa Unit #22A	N/2 Sec. 18,T31N,R5W	Mesaverde
Rosa Unit #25A	W/2 Sec.15,T31N,R6W	Mesaverde
Rosa Unit #31	W/2 Sec.17,T31N,R5W	Mesaverde
Rosa Unit #31A	W/2 Sec.17,T31N,R5W	Mesaverde
Rosa Unit #35A	ALL Sec.5,T31N,R6W	Mesaverde
Rosa Unit #46A	E/2 Sec.8,T31N,R5W	Mesaverde
Rosa Unit #75A	W/2 Sec.10,T31N,R6W	Mesaverde
Rosa Unit #80A	W/2 Sec.8,T31N,R5W	Mesaverde
Rosa Unit #85A	N/2 Sec.20,T31N,R5W	Mesaverde
Rosa Unit Com #129	W/2 Sec.34,T32N,R6W	Mesaverde
Rosa Unit Com #129A	W/2 Sec.34,T32N,R6W	Mesaverde
Rosa Unit #146A	W/2 Sec.28,T31N,R5W	Mesaverde
Rosa Unit #153A	E/2 Sec.17,T31N,R5W	Mesaverde
Rosa Unit #154A	S/2 Sec.7,T31N,R5W	Mesaverde
Rosa Unit #159A	S/2 Sec.19,T31N,R5W	Mesaverde
Rosa Unit #160 (Recomplete PC, Dual with existing MV)	SE/4 Sec.25,T31N,R6W	Pictured Cliffs
Rosa Unit #163	E/2 Sec.24,T31N,R6W	Mesaverde
Rosa Unit #163A	E/2 Sec.24,T31N,R6W	Mesaverde
Rosa Unit #166	N/2 Sec.30,T31N,R5W	Mesaverde
Rosa Unit #166A	N/2 Sec.30,T31N,R5W	Mesaverde
Rosa Unit #168A	E/2 Sec.28,T31N,R5W	Mesaverde
Rosa Unit #171	N/2 Sec.7,T31N,R5W	Mesaverde
Rosa Unit #171A	N/2 Sec.7,T31N,R5W	Mesaverde
Rosa Unit #181	E/2 Sec.10,T31N,R6W	Mesaverde
Rosa Unit #181A	E/2 Sec.10,T31N,R6W	Mesaverde
Rosa Unit #182	S/2 Sec.18,T31N,R5W	Mesaverde
Rosa Unit #182A	S/2 Sec.18,T31N,R5W	Mesaverde
Rosa Unit #183	N/2 Sec.19,T31N,R5W	Mesaverde
Rosa Unit #183A	N/2 Sec.19,T31N,R5W	Mesaverde
Rosa Unit #184	E/2 Sec.34,T31N,R5W	Mesaverde
Rosa Unit #184A	E/2 Sec. 34,T31N,R5W	Mesaverde
Rosa Unit #185	S/2 Sec.16,T31N,R6W	Mesaverde
Rosa Unit #185A	S/2 Sec.16,T31N,R6W	Mesaverde
Rosa Unit #186	N/2 Sec.27,T31N,R5W	Mesaverde
Rosa Unit #187	W/2 Sec.21,T31N,R5W	Mesaverde
Rosa Unit #188	W/2 Sec.34,T31N,R5W	Mesaverde
Rosa Unit #188A	W/2 Sec.34,T31N,R5W	Mesaverde

<u>Well Number</u>	<u>Drilling Block</u>	<u>Formation</u>
Rosa Unit #341	W/2 Sec.16,T31N,R6W	Fruitland
Rosa Unit #342	N/2 Sec.21,T31N,R6W	Fruitland
Rosa Unit #343	S/2 Sec.26,T31N,R5W	Fruitland
Rosa Unit #344	S/2 Sec.25,T31N,R5W	Fruitland
Rosa Unit #345	S/2 Sec.23,T31N,R5W	Fruitland
Rosa Unit #347	E/2 Sec.11,T31N,R4W	Fruitland
Rosa Unit #350	E/2 Sec.10,T31N,R5W	Fruitland
Rosa Unit #351	W/2 Sec.11,T31N,R5W	Fruitland
Rosa Unit #354	E/2 Sec.19,T31N,R4W	Fruitland
Rosa Unit Com #355	E/2 Sec.33,T32N,R6W	Fruitland
Rosa Unit #357	E/2 Sec.36,T32N,R6W	Fruitland
Rosa Unit #358	W/2 Sec.34,T32N,R6W	Fruitland
Rosa Unit #500	W/2 Sec.23,T31N,R4W	Fruitland
Rosa Unit #510	SW/4 Sec.11,T31N,R4W	Ojo Alamo
Rosa Unit #511	SW/4 Sec.13,T31N,R4W	Ojo Alamo
Rosa Unit #512	NE/4 Sec.15,T31N,R4W	Ojo Alamo
Rosa Unit #513	NE/4 Sec.23,T31N,R4W	Ojo Alamo

Williams Production Company, as Unit Operator, will drill any offset wells that may be required to prevent drainage of unitized substances and any other wells deemed necessary or which are requested by the Unit Operator or the Working Interest Owners.

If this Plan of Development is acceptable, please signify your approval as required under Section 9 of the Unit Agreement in the space provided in the enclosed sheet and return an approved copy to Williams Production Company.

Copies of this Plan of Development are being sent to the Working Interest Owners as shown on the enclosed sheet.

Sincerely,



M. Vern Hansen  
Senior Landman

Enclosures:

cc: Working Interest Owners  
Mike Turnbaugh  
Kris Russell  
Tony Scheiper  
Tracy Ross

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Assistant District Manager, Minerals  
Bureau of Land Management  
Subject to like approval by the  
Commissioner of Public Lands and  
the Oil Conservation Commission

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
Commissioner of Public Lands  
Subject to like approval by the Area  
Oil and Gas Supervisor and the Oil  
Conservation Commission

APPROVED:  \_\_\_\_\_ DATE: 2/10/00  
Oil Conservation Commission  
Subject to like approval by the Area  
Oil and Gas Supervisor and the  
Commissioner of Public Lands

The foregoing approvals are for the 2000 Plan of Development for the Rosa Unit I, Section No.587.

WORKING INTEREST OWNERS

ROSA UNIT

AMOCO PRODUCTION COMPANY  
ATTN: SAN JUAN ASSET TEAM  
P O BOX 3092  
HOUSTON, TX 77253-3092

MR. FRANK A SCHULTZ  
LINCOLN PLAZA, #2160 LO-1  
500 NORTH ARARD  
DALLAS, TX 75606-4079

MS. ELIZABETH T. CALLOWAY  
4801 ST. JOHNS DRIVE  
DALLAS, TX 75205

MR. FRED E. TURNER  
ONE ENERGY SQUARE, #852  
4925 GREENVILLE AVENUE  
DALLAS, TX 75206-4079

COASTAL OIL & GAS CORPORATION  
ATTN: HENRY HANSEN  
P O BOX 719  
BELLAIRE, TX 77402-0719

CROSS TIMBERS OIL COMPANY  
ATTN: EDWIN S. RYAN, JR.  
810 HOUSTON STREET, SUITE 2000  
FORT WORTH, TX 76102-6298

MR. J. GLENN TURNER, JR.  
3131 TURTLE CREEK BLVD.  
#1201  
DALLAS, TX 75219

J. K. EDWARDS ASSOCIATES  
ATTN: KEITH EDWARDS  
1401 17<sup>th</sup> STREET, SUITE 1400  
DENVER, CO 80202

MARY FRANCES TURNER, JR TRUST  
ATTN: IRIS GLEISER  
P O BOX 660197  
DALLAS, TX 75266-0197

MR. JOHN TURNER  
HC73, BOX 122, SUITE 277  
PARK HILL, OK 74451

MS. PATRICIA PENROSE SCHIEFFER, TRUSTEE  
ATTN: J. THOMAS SCHIEFFER  
1000 BALLPARK WAY, #300  
ARLINGTON, TX 76102

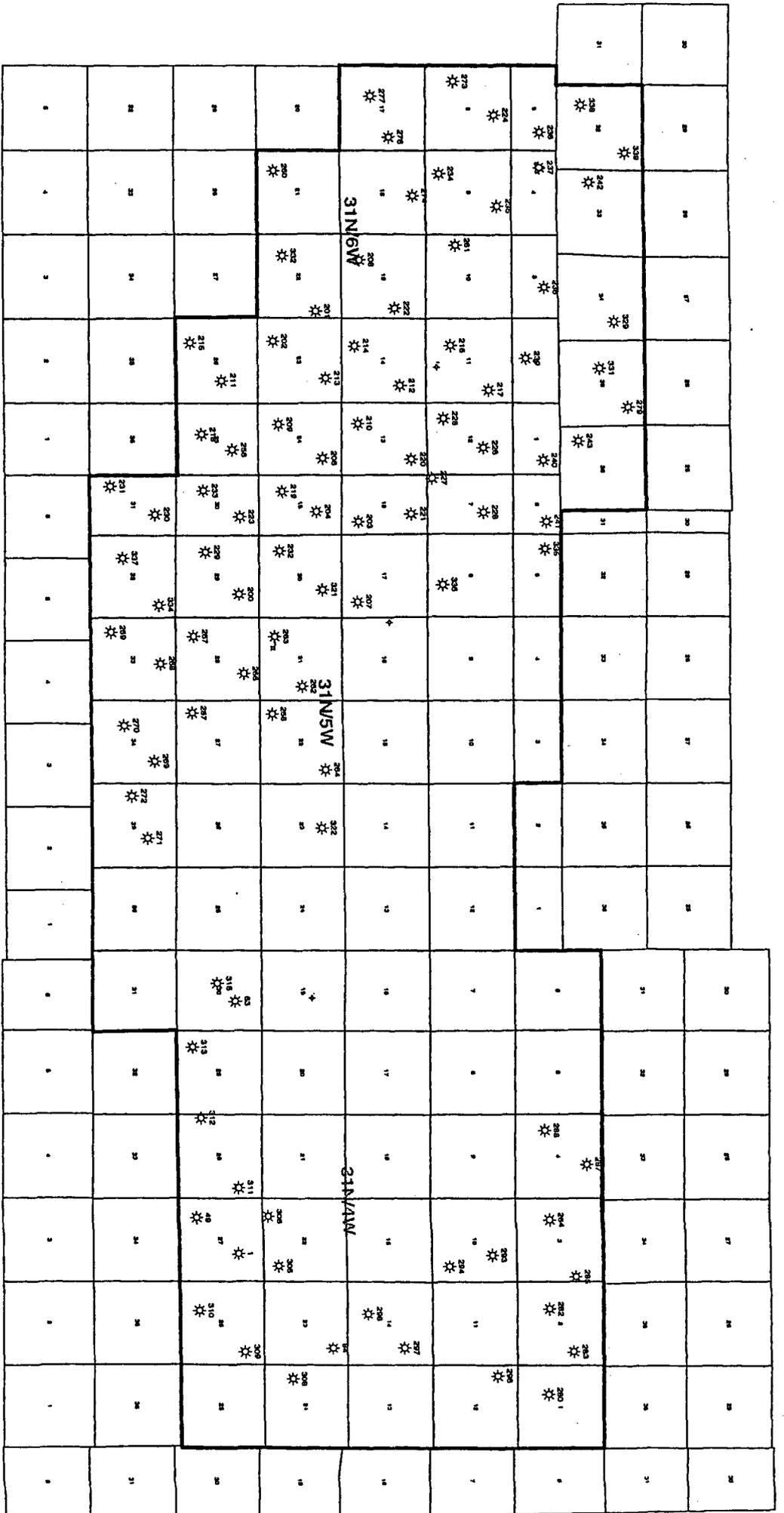
THE WISER OIL COMPANY  
ATTN: LAURIE BLOCK  
8115 PRESTON ROAD, #400  
DALLAS, TX 75225

MR. WILLIAM G. WEBB  
8226 DOUGLAS AVENUE, SUITE 709  
DALLAS, TX 75225-5929

PHILLIPS PETROLEUM CO.  
ATTN: S. SCOTT PRATHER  
5525 HWY 64 NBU 3004  
FARMINGTON, NM 87401

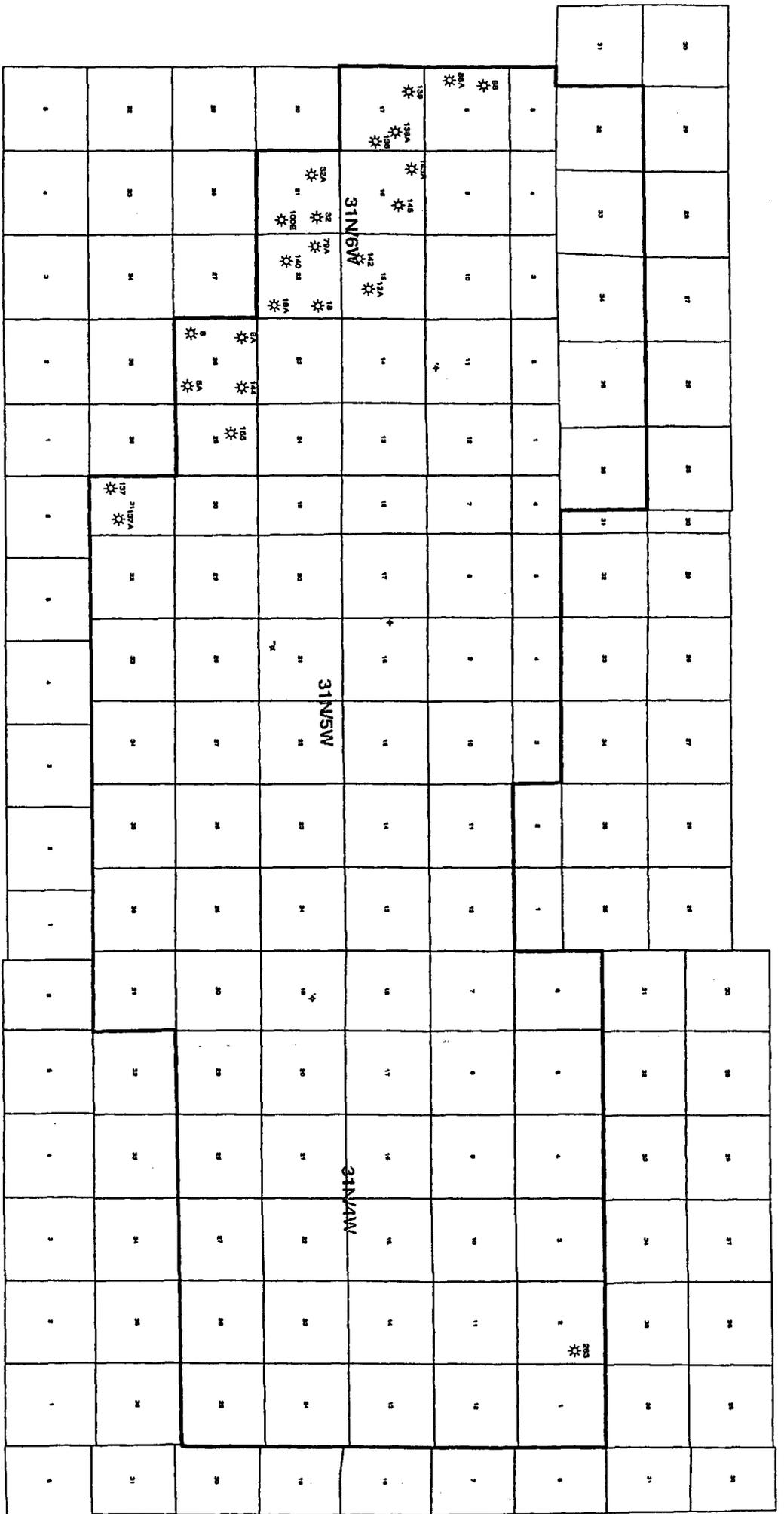
MALLON OIL COMPANY  
999 18<sup>th</sup> STREET, SUITE 1700  
DENVER, CO 80202

J. M. HUBER CORPORATION  
ATTN: ANDY LYDYARD  
1050 17<sup>th</sup> STREET, SUITE 1850  
DENVER, CO 80265



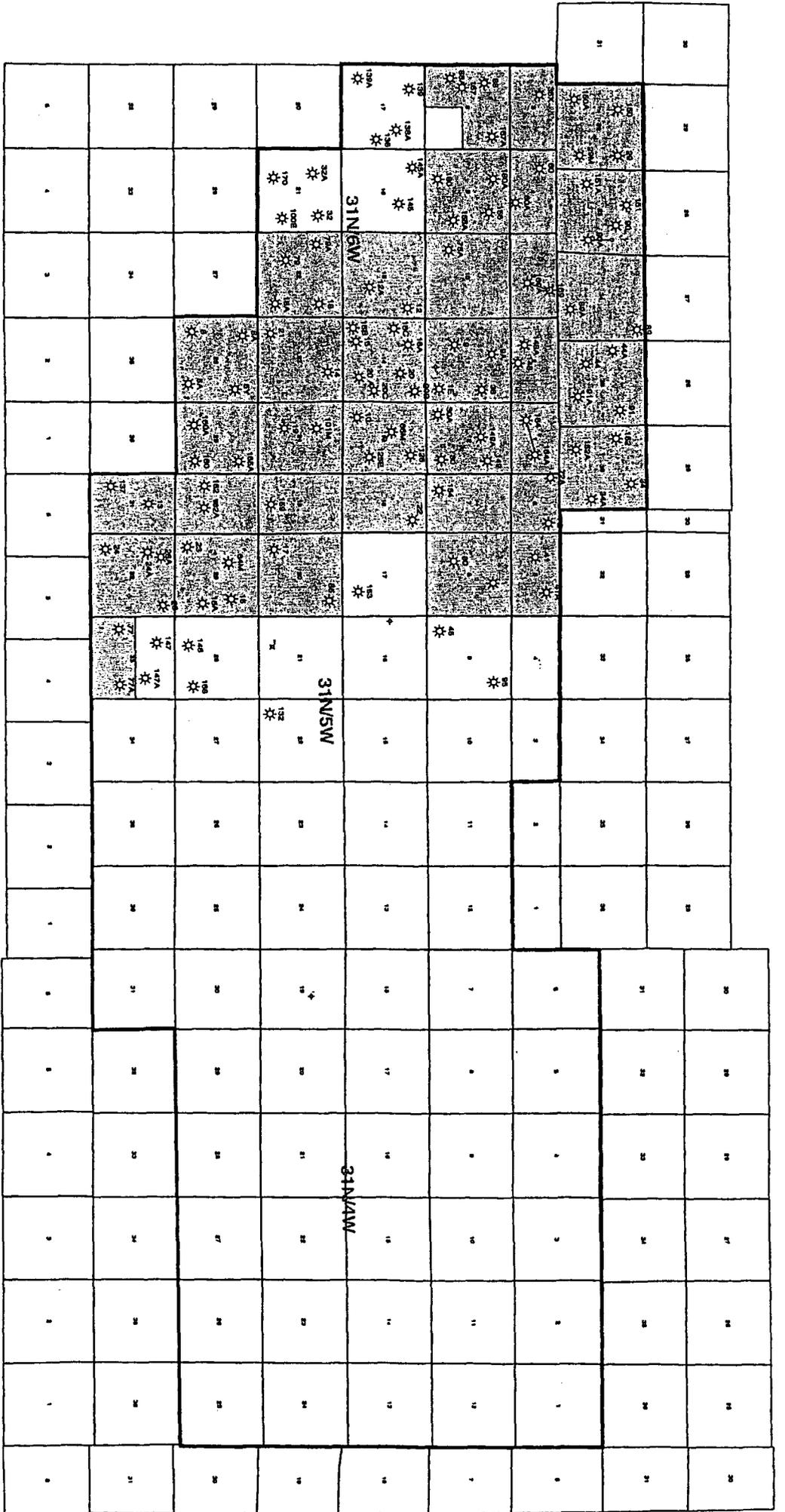
ROSA UNIT  
FRUITLAND COAL FORMATION WELLS

Scale 1:110059.82  
2/1/2000



ROSA UNIT  
 PICTURED CLIFFS FORMATION WELLS

Scale 1:110059.82  
 2/1/2000



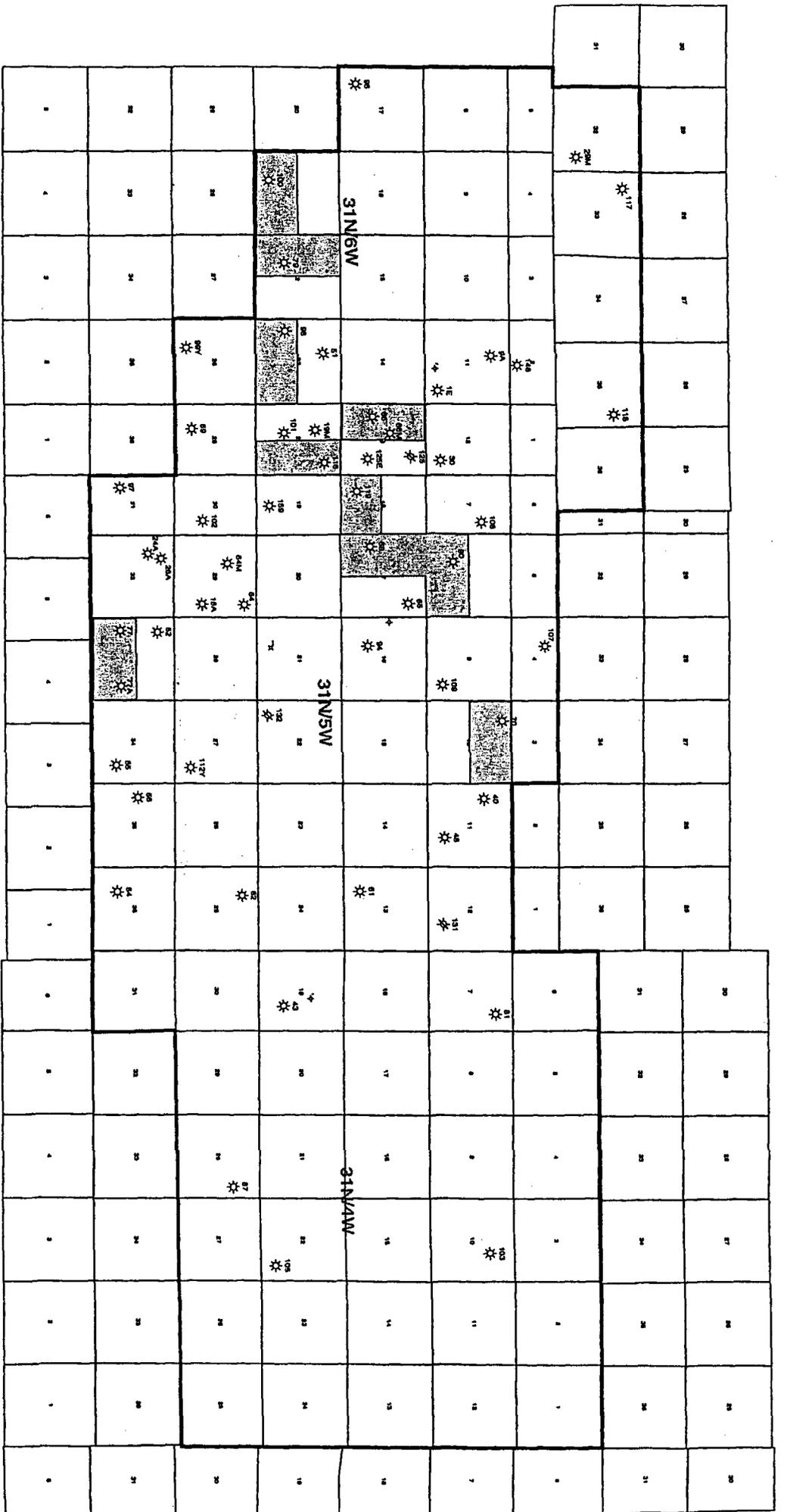
MESAVERDE PARTICIPATING AREA



ROSA UNIT  
MESAVERDE FORMATION WELLS

Scale 1:110059.82		2/1/2000	
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 Dakota Participating Area



ROSA UNIT  
DAKOTA FORMATION WELLS

2/1/2000

Scale 1:110831.41