

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROW/APD

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

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 Zone ☐

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

1580' FSL 2625' FWL, NESW

proposed prod. zone

5. Lease Designation and Serial No.

SF-078771

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

Rosa Unit

8. Well Name and No.

RU-#21B

9. API Well No.

30-039-26554

10. Field and Pool, or Exploratory Area

Blanco-MV

11. Sec., T., R., M., or BLK.
and Survey or Area

K Section 23, T31N, R6W

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

Approximately 17.4 miles northeast of 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 1580'

16. No. of Acres in Lease

2560 acres

17. No. of Acres Assigned to This Well

320 acres, W/2

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

1350'

19. Proposed Depth

5972' KB —

20. Rotary or Cable Tools

Rotary

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

6230' GR —

22. Approximate Date Work will Start

April 1, 2001

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-181 cu ft Type III <i>Circ</i>
8-3/4"	7"	20#	3552'	390 sx-817 cu ft Type III 180sx-250 cu ft Type III <i>Circ</i>
6-1/4"	4-1/2"	10.5#	3452'-5972' —	80sx-116 cu ft 190sx-272 cu ft Class H + 50/50 poz

Williams Production Co. proposes to drill a vertical well to develop the Blanco Mesa Verde Formation in the described location above, and in accordance with the attached Operation and Surface Use plans. **The surface is under the jurisdiction of the Bureau of Land Management, Farmington Field Office.** Independent Contract Archaeology has surveyed the proposed location for Cultural Resources, and the report has been submitted to the BLM for review.

This proposed well would not require a new access road (see Pipeline & Well Plats #3 and #4). The proposed 151-feet long pipeline would tie into the Williams Gas Gathering System for the Rosa Unit #19 adjacent to the proposed well pad (see the attached Pipeline Plat Map # 4).

This action is subject to technical and procedural review pursuant to 43 CFR 2162.3 and 2162.4, and approval pursuant to 43 CFR 2166.4.

ALL ACTIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED TECHNICAL REQUIREMENTS

14. 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 November 6, 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

/s/ Jim Lovato

Team Lead, Petroleum Management

APPROVED BY:

TITLE

DATE

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

District II
PO Drawer 00, 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
Revised February 21,
Instructions on
Submit to Appropriate District C
State Lease - 4 C
Fee Lease - 3 C

AMENDED REP

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 50039-26554		*Pool Code 72319	*Pool Name Blanco Mesavende
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 218
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6230

10 Surface Location

UL or lot no. K	Section 23	Township 31N	Range 6W	Lot Idn.	Feet from the 1580	North/South line SOUTH	Feet from the 2625	East/West line WEST	County RIO ARRI
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
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12 Dedicated Acres 320 - W/2	13 Joint or Infill I	14 Consolidation Code II	15 Order No.
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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 here is true and complete to the best of my knowledge and belief.

Steve Nelson
Signature

Steve Nelson
Printed Name

Agent, Nelson Consulting
Title

November 6, 2000
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.

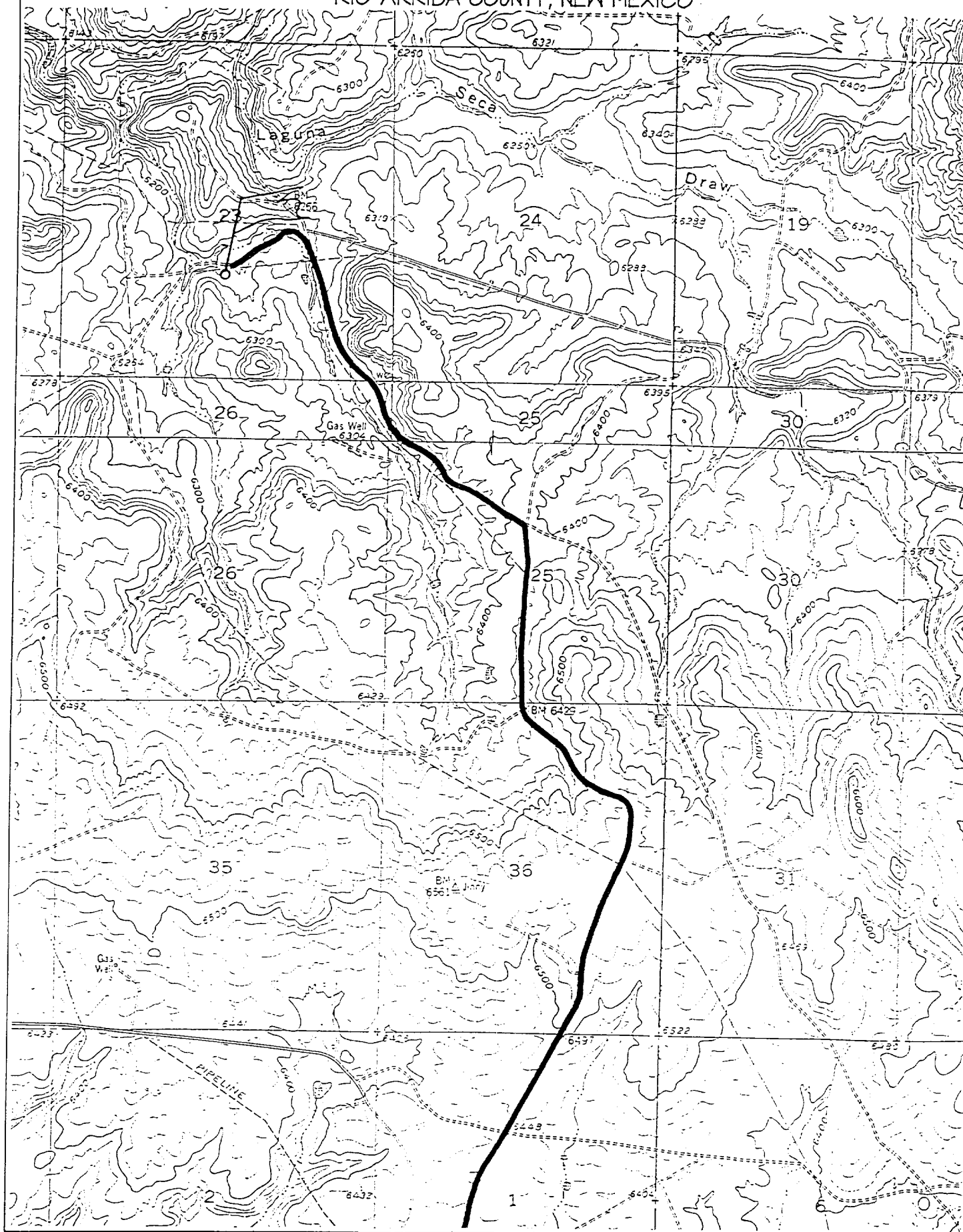
AUGUST 29, 2000
Date of Survey

Signature and Seal of Registered Professional Surveyor

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR
Certificate No. 685

WILLIAMS PRODUCTION COMPANY ROSA UNIT #21B

1580' FSL & 2625' FWL, SECTION 23, T31N, R6W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO



B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (3) joints of Surface Casing.
2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install one Turbulent centralizer on each of the bottom (3) joints and one standard centralizer every (4) joints to the surface casing. Total centralizers = (26) regular and (3) turbulent.
3. PRODUCTION CASING: 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20" bottom joint. Place marker joint above 5630'. Place one positive standoff turbolizer every other joint. Total turbolizers is 34.

C. CEMENTING:

1. SURFACE: Slurry: 130sx (181 cu.ft.) of "Type III" + 2% CaCl₂ + 1/4 # of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). The 125% excess should circulate cement to the surface. WOC 12 hours. Test csg to 1500psi.
2. INTERMEDIATE: Lead: 390sx (817 ft³) of "Type III" 65/35 poz + 8% gel + 1% CaCl₂ + 1/4 # cello-flake/sk (Yield = 2.09 ft³/sk, Weight = 12.1 #/gal.). Tail: 180sx (250 ft³) of class "Type III" + 1% CaCl₂ + 1/4 # cello-flake/sk. (Yield = 1.39 ft³/sk, Weight = 14.5#/gal.). The 100% excess in lead and tail should circulate cement to the surface. Total volume = 1067 ft³. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated to the surface. Test csg. to 1500psi.
3. PRODUCTION LINER: Lead: 80sx (116 ft³) of Class-H + 50/50 poz + 4 % gel + 0.4% FL-52. (Yield = 1.45 cu.ft./sk, Weight = 13.2 #/gal.). Tail: 190sx (272 ft³) of Class-H + 50/50 poz + 4 % gel + 0.4% FL-5 + 1/4# celloflake/sk and 4% Phenoseal (Yield = 1.45 ft³/sk, Weight = 13.2 #/gal.). Displace cement at a minimum of 8 BPM. The 50% excess in lead and tail should cover liner top. Total volume 388 ft³. 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

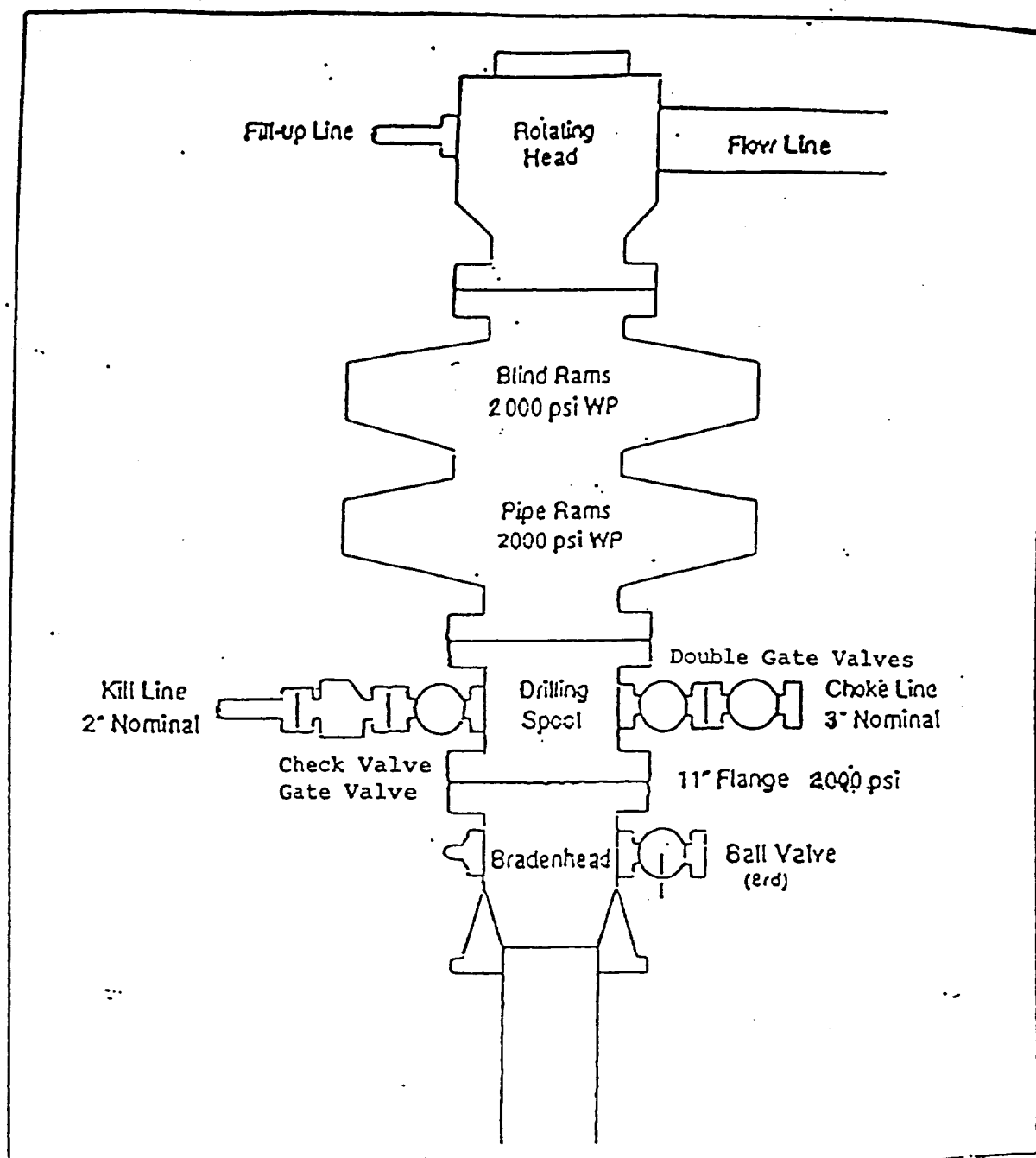
1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

1. Stimulate 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.

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 key cock with handle, floor safety valve with change overs for each tool joint in the string, and choke manifold all rated to 2000 psi.