NORTHWEST PIPELINE CORPORATION
PRODUCTION & DRILLING
3539 East 30th Street
Farmington, New Mexico 87401
4320-PD-035-89

February 9, 1989

NMOCC
Michael Stogner
310 Old Santa Fe Trail
Room #206
Santa Fe, NM 87503

Re: Non-Standard Proration Unit
Rosa Unit #231

Dear Mr. Stogner:

I have reviewed the subject well again and since Northwest Pipeline operates the entire Rosa Unit as well as both the San Juan 30-5 Unit to the south and the 31-6 Unit to the west and southwest, I don't believe any offset operators exist that might need notification.

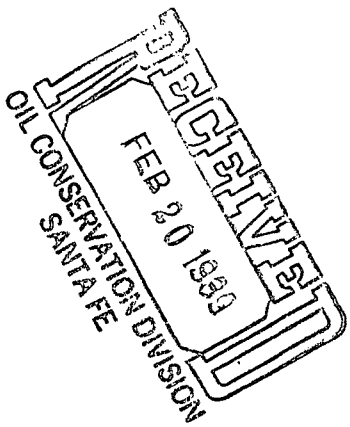
If your records indicate something other than this please let me know and I will be able to notify them.

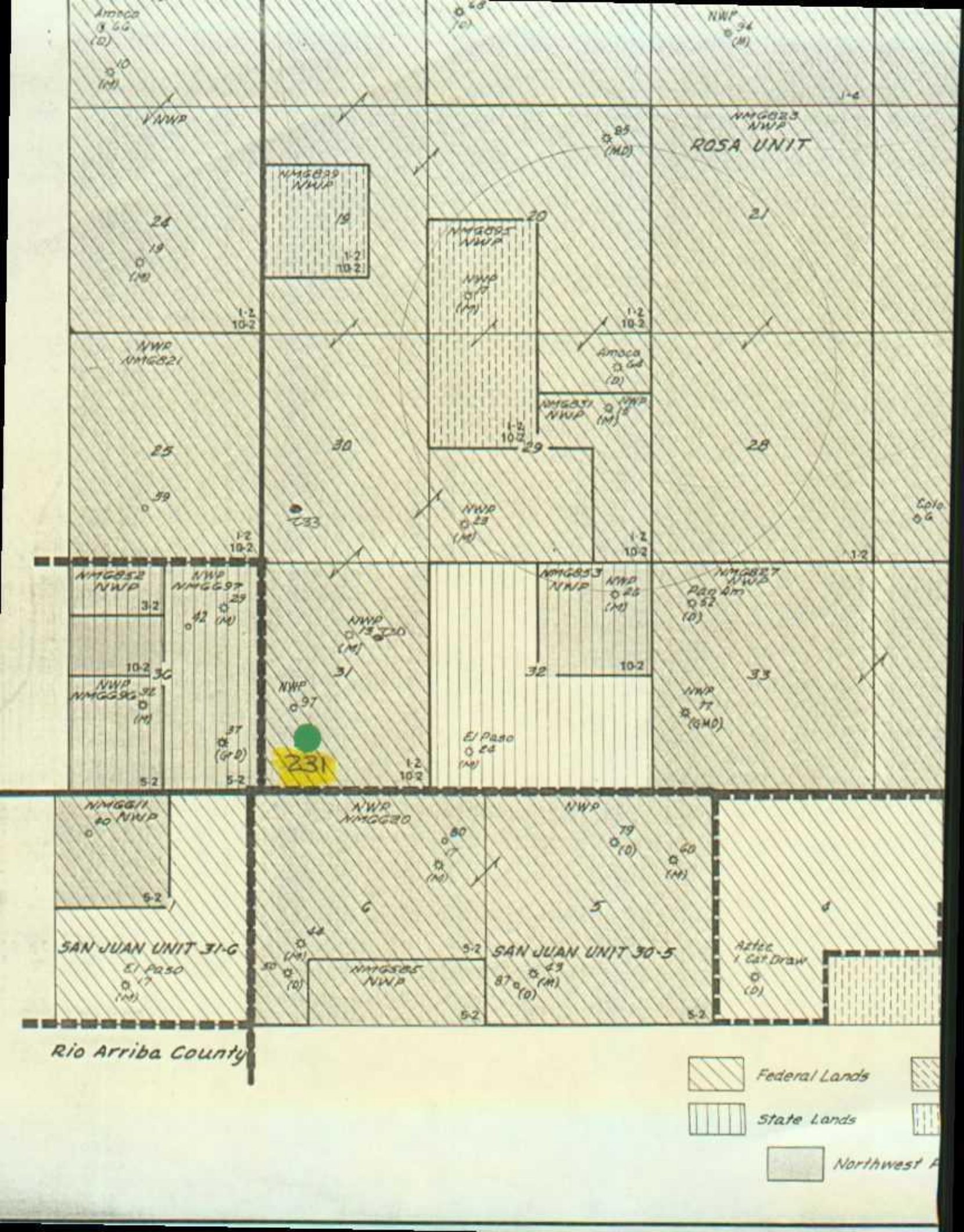
As you can see, there is a considerable amount of paper in a Federal APD package. Please discard those forms, etc. which are of no use to you.

Sincerely,

Mike Turnbaugh
Senior Engineer

MJT/ch




ROSA UNIT
SAN JUAN UNIT 31-G
SAN JUAN UNIT 30-5
Aztec 1 Cat Draw
Rio Arriba County
231
Federal Lands
State Lands
Northwest

Mike

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: SF-078764

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: Rosa Unit

8. FARM OR LEASE NAME: Rosa Unit

2. NAME OF OPERATOR: Northwest Pipeline Corporation

9. WELL NO.: #231

3. ADDRESS OF OPERATOR: 3539 East 30th Street - Farmington, NM 87401

10. FIELD AND POOL, OR WILDCAT: Basin Fruitland Pool

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 730' FWL & 1275' FSL SE/4 SW/4

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

At proposed prod. zone: Same

Sec. 31, T31N, R6W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 20 miles to Gobernador

12. COUNTY OR PARISH: Rio Arriba | 13. STATE: New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
730'	N/A	232.99
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
± 12,000'	3330'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6543' GR

22. APPROX. DATE WORK WILL START*: 3-1-89

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	32.3#	200'	125 cu.ft.
8-3/4"	7"	20#	3166'	145 cu.ft.
6-1/4"	5-1/2"	23#	3330'	Open hole completion

The S/2 of Section 31 is dedicated to this well.

Location is unorthodox due to non-standard size section. W/2 is only 1205' wide. E/2 is standard size.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED mtb 2-9 TITLE Sr. Engineer DATE 11-8-88

Mike Turnbaugh

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ch-1

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NORTHWEST PIPELINE CORPORATION
OPERATIONS PLAN

Well Name: Rosa Unit #231 Date: November 8, 1988

I. Location: 730' FWL & 1275' FSL
Sec. 31, T31N, R5W
Rio Arriba County, NM

Elevation: 6543' GR
6555' KB

Field: Basin Fruitland Pool

Surface: BLM
Minerals: Fed SF-078764

II. Geology: Surface formation - San Jose

A.

Formation Tops	Depth
Ojo Alamo	2605'
Kirtland	2736'
Fruitland Sand	3130'
Fruitland Coal	3181'
Pictured Cliffs	3331'
Intermediate TD	3166'
Final TD	3330'

B. Logging Program:

C. Natural Gauges: Gauge any noticeable increases in gas flow. Record all gauges on daily drilling and morning reports.

III. Drilling:

A. Contractor:

B. Mud Program: Mud, water & gas will be furnished by Northwest Pipeline Corporation from surface to total depth.

a) From surface to total casing depth to be drilled with mud.

C. 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. All tests will be reported in the Northwest Pipeline Tour Reports as to time and date.

IV. Materials:

A. Casing Program:

Hole Size	Depth O.H.	Casing Size	Wt. & Grade
12-1/4	200'	9-5/8"	32.3# H-40
8-3/4"	3166'	7"	20# K-55
6-1/4	3330'	5-1/2"	23# P110

B. Float Equipment:

a) Surface Casing: 9-5/8" - B&W Regular Pattern Shoe.

b) Intermediate Casing: 7" - Dowell guide shoe (Code #50101-070) and self fill insert float collar (Code #53003-070). Five (5) centralizers (Code #56011-070) spaced every other joint above the shoe. Place float one joint above shoe.

c) Liner: 5-1/2" - Perforated liner w/ notched collar on bottom. Liner hanger with neopreme pack off.

C. Tubing Program: 3280' of 2-7/8" 6.4#, EUE, J-55 tubing w/ seating nipple on top of bottom joint. Expendable check valve on bottom.

D. Wellhead Equipment: Rector well head drawing 88-0203 or equivalent. Wellhead company representative to set slips and make cut off.

V. Cementing

A. Surface Casing: 9-5/8" - Use 105 sx (125 cu.ft.) of Cl "B" w/ 1/4# gel flake/sx and 3% $CaCl_2$ (Yield=1.19) (100% excess to circulate). WOC 12 hrs. Test surface casing to 600 psi for 30 min.

B. Intermediate Casing: 7" - Cement w/ 80 sx Cl "B" w/ 6% gel and 6-1/4# gils/sx (Yield=1.87) (145 cu.ft.) 70% excess to cover Ojo Alamo. WOC 12 hrs. Test casing to 1200 psi for 30 min. Run temperature survey in 8 hrs.

C. Production Liner: 5-1/2" - Perforated liner will be run without cement (open hole completion).

M.J. Turnbaugh
Sr. Engineer

MJT/ch
Original: Well file
cc: Regular distribution

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Northwest Pipeline Corporation	Rosa Unit	231

Unit Letter	Section	Township	Range	County
N	31	31 North	5 West	Rio Arriba

Actual Footage Location of Well:
1275 feet from the South line and 730 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6543	Fruitland	Basin Fruitland Pool	232.99 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

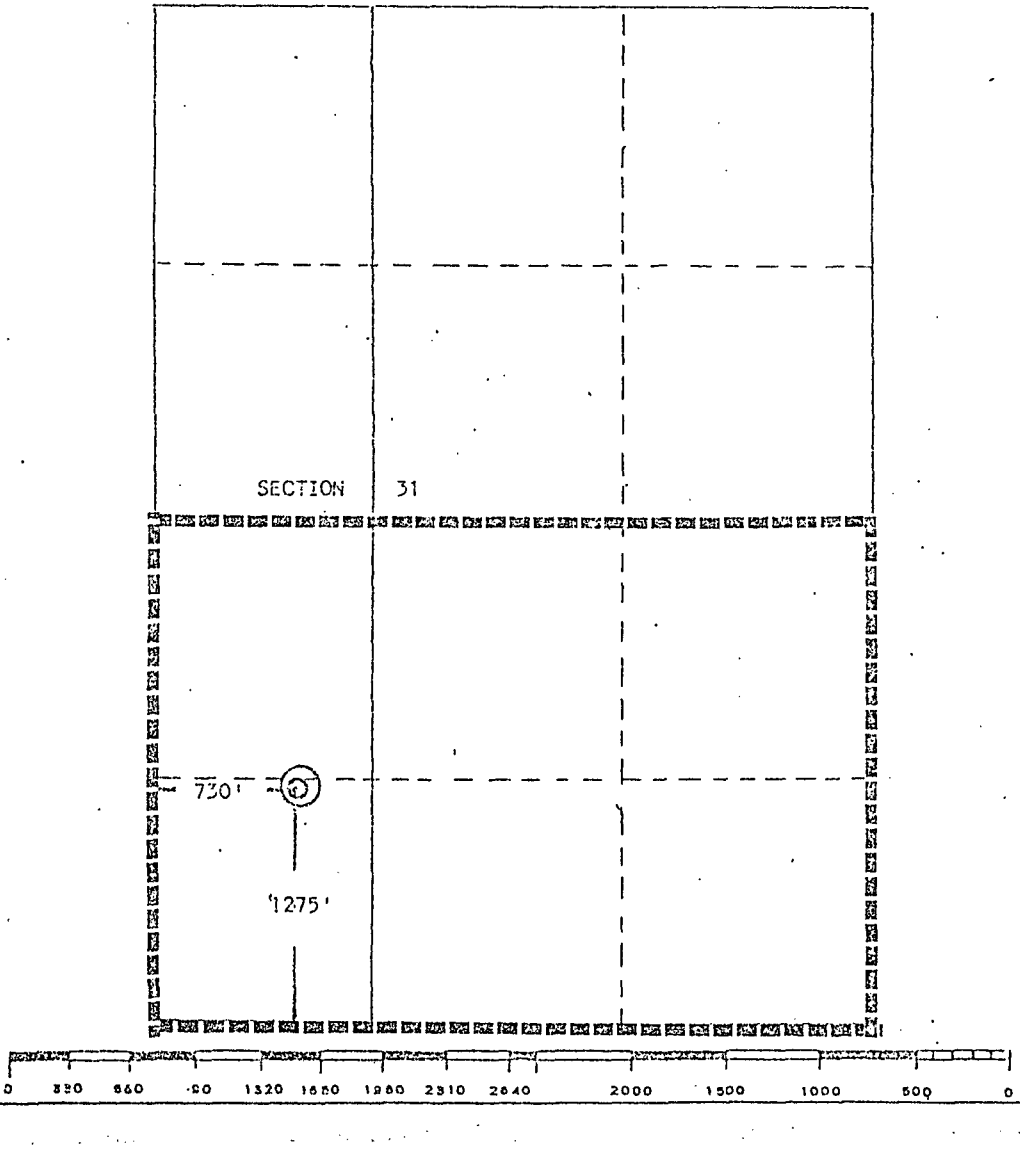
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☒ Yes ☐ No If answer is "yes," type of consolidation unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Mike Turnbaugh

Name: Mike Turnbaugh

Position: Senior Engineer

Company: Northwest Pipeline Corp.

Date: 10-21-88

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 knowledge and belief.

EDGAR L. RISENHOOVER NEW MEXICO 5979 REGISTERED LAND SURVEYOR

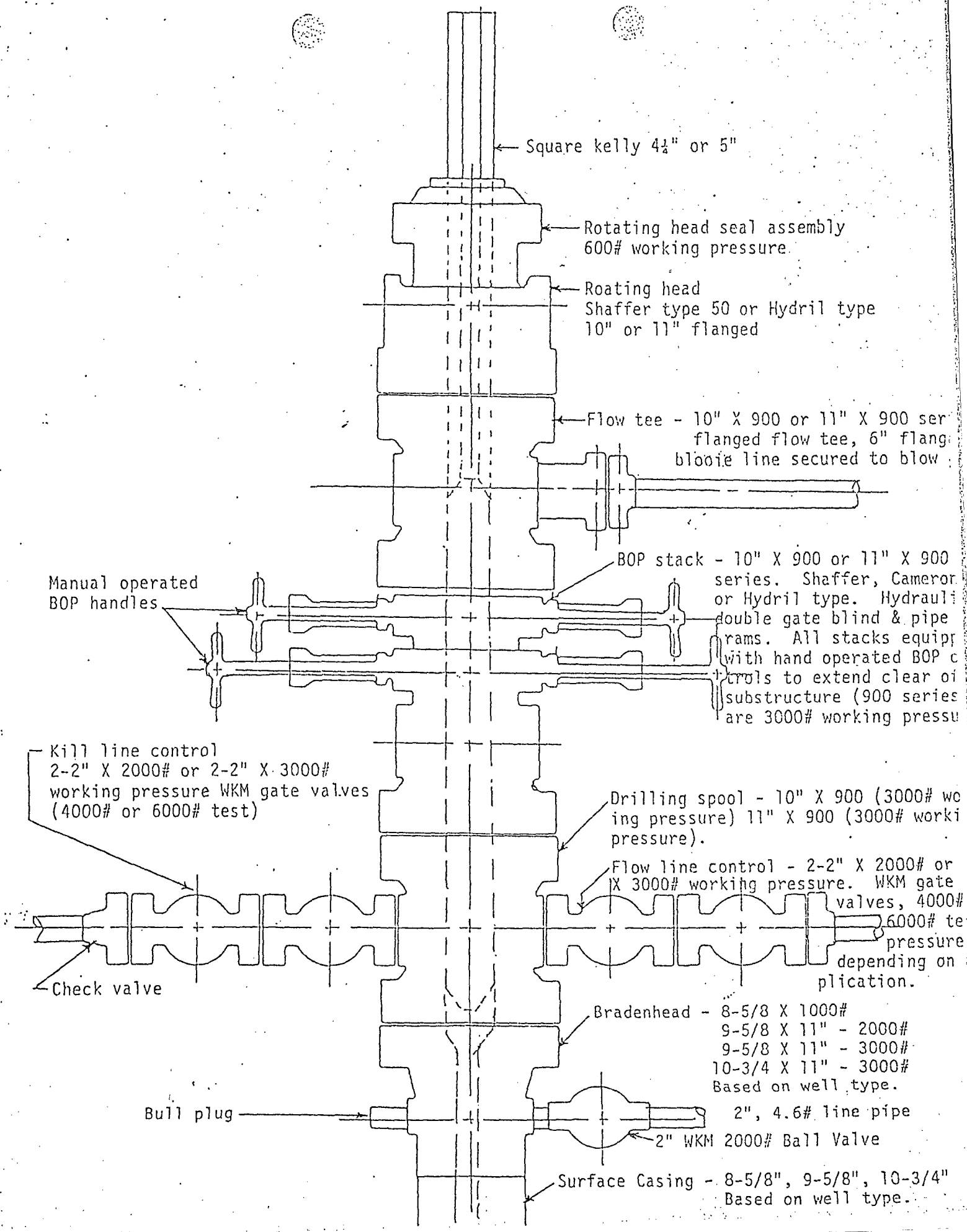
Date Surveyed: September 20, 1988

Registered Professional Engineer and/or Land Surveyor

Edgar L. Risenhoover

Certificate No. 5979

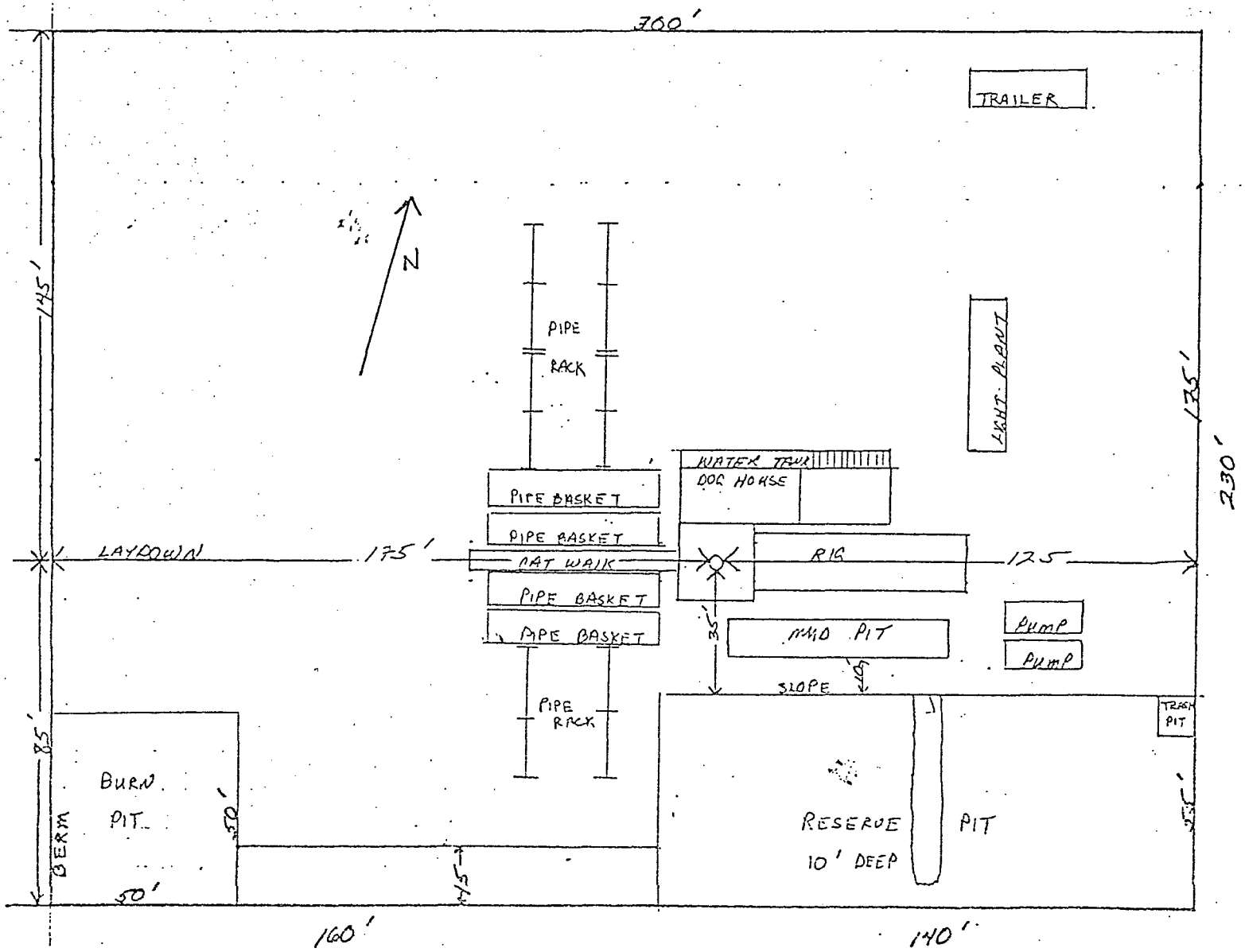
Edgar L. Risenhoover L.S.

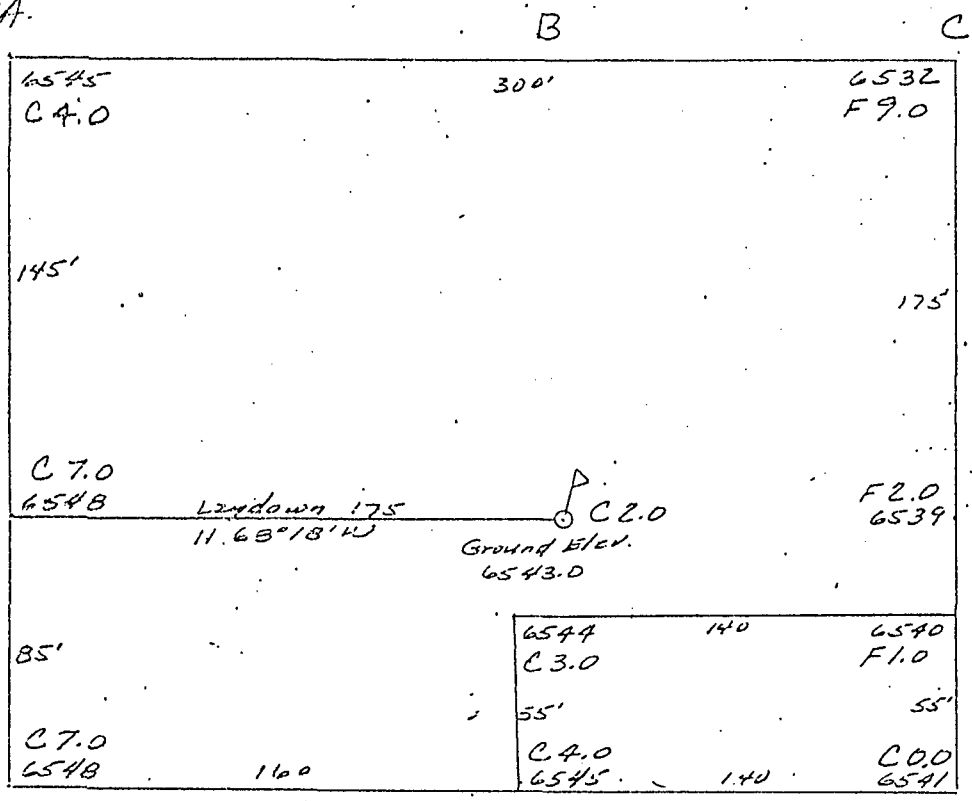

Square kelly 4¼" or 5"
Rotating head seal assembly
600# working pressure
Roating head
Shaffer type 50 or Hydril type
10" or 11" flanged
Flow tee - 10" X 900 or 11" X 900 ser
flanged flow tee, 6" flang
blooie line secured to blow
BOP stack - 10" X 900 or 11" X 900
series. Shaffer, Cameron
or Hydril type. Hydrauli
double gate blind & pipe
rams. All stacks equipp
with hand operated BOP c
trols to extend clear of
substructure (900 series
are 3000# working pressu
Manual operated
BOP handles
Kill line control
2-2" X 2000# or 2-2" X 3000#
working pressure WKM gate valves
(4000# or 6000# test)
Drilling spool - 10" X 900 (3000# wo
ing pressure) 11" X 900 (3000# worki
pressure).
Flow line control - 2-2" X 2000# or
X 3000# working pressure. WKM gate
valves, 4000#
6000# te
pressure
depending on
plication.
Check valve
Bradenhead - 8-5/8 X 1000#
9-5/8 X 11" - 2000#
9-5/8 X 11" - 3000#
10-3/4 X 11" - 3000#
Based on well type.
Bull plug
2", 4.6# line pipe
2" WKM 2000# Ball Valve
Surface Casing - 8-5/8", 9-5/8", 10-3/4"
Based on well type.

NORTHWEST PIPELINE CORPORATION

LOCATION LAYOUT

ROSA Unit 231





Northwest Pipeline Corp.
OPERATOR

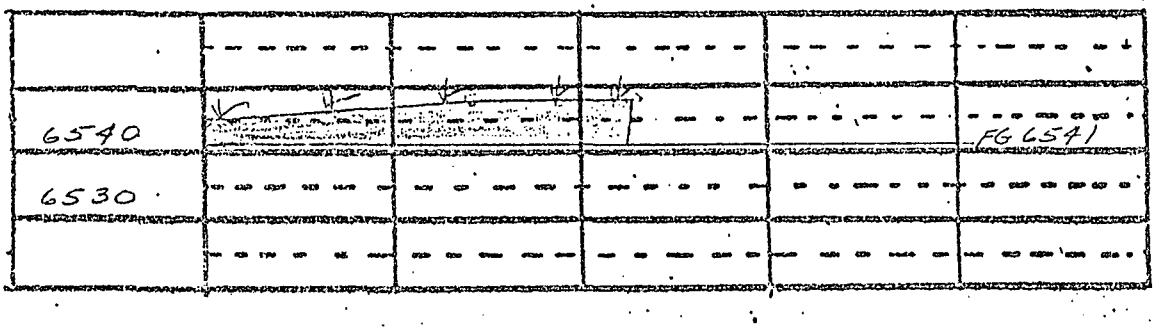
Rosa Unit 231
WELL NAME & NO.

1275' F/SL 730' F/WL
FOOTAGES

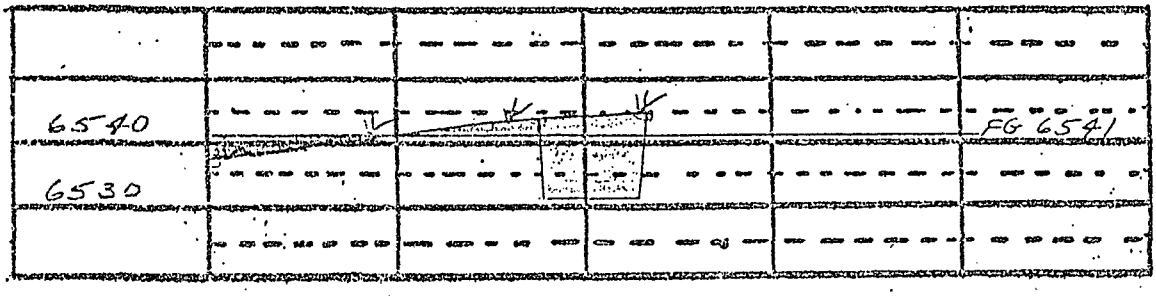
31 31N 5W
SEC. TWP. RGE.

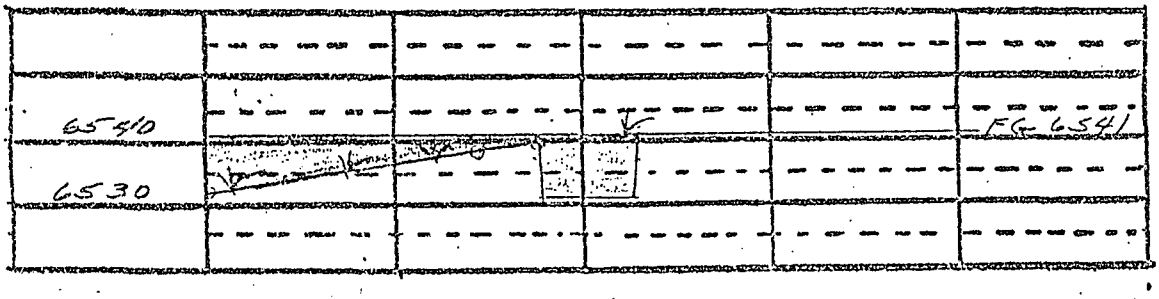
Rio Arriba, NM.
COUNTY

September 20, 1988
DATE



Horiz. 1" = 100'
Vert. 1" = 30'





Multi-Point Surface Use Plan

1. Existing Roads

To reach the proposed location, start from Farmington, New Mexico and go on N.M. 64, approximately 45 miles to Gobernador. Turn north on Sims Highway and travel approximately 5 miles. Turn right on Rosa Road 15 miles to location.

All existing roads used to access the proposed location shall be maintained in the same or better condition than presently found. Access road classified as "Temporary Resource Road".

2. Planned Access Roads

The required new access road is shown on the attached map. The proposed route is flagged and approximately 100' feet in length. The road surface will not exceed 20 feet in width. Grade of the road will be consistent with the local terrain with a maximum grade of five percent. Upon completion of the project, the access road shall be adequately drained to control soil erosion. Water bars, culverts or turnouts will be used as necessary. Gates will be installed where the access road crosses an existing fence line as per map. Access road to be classified "Temporary Resource Road".

3. Location of Existing Wells

Attached map shows existing wells within a one mile radius of the proposed wells.

4. Location of Production Facilities

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

To protect livestock and wildlife, the reserve pit will be fenced. The condensate tanks will be enclosed by a dyke.

Upon completion of drilling, the location and surrounding area will be cleared of all debris. All trash will be disposed of in the trash pit.

5. Water Supply

Water for drilling and completion operations will be hauled by truck from La Jara water hole.

6. Source of Construction Materials

No additional construction materials will be required to build the proposed location.

7. Methods for Handling Waste Disposal

a. The drill cuttings, fluids and completion fluids will be placed in the reserve pit. The reserve pit will be fenced on three sides away from the pad during drilling and the fourth side fenced as soon as the rig moves out. The reserve pit will be allowed to dry, and materials remaining in the reserve pit buried. The reserve pit will be backfilled, leveled and contoured so as to prevent any materials being carried into the watershed. Upon completion, the pad will be leveled, contoured, and reseeded with the appropriate seed mixture.

b. All garbage and trash will be placed in a burn pit (Plat 2). This earthen pit will be four to six feet deep with small mesh wire fenc ing to prevent the scattering of trash. Upon cleanup, any refuse in the burn pit will be buried at least three feet deep.

c. Portable toilets will be provided and maintained during drilling operations. See Plat 2 for location.

8. Ancillary Facilities

No ancillary facilities are planned.

9. Well Site Layout

A cross-section of the drill pad with approximate cuts, fills and pad orientation is attached. Location of drilling equipment, rig orientation, and access road approach is also attached.

10. Plans for Restoration of Surface

When the well is abandoned, the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with the appropriate seed mixture.

If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equip ment will be painted the color designated by the surface managing agency. A stock pond will be built adjacent to the location as per map.

11. Surface Ownership

a. The surface ownership is Bureau of Land Management, administered by the Bureau of Land Management.

12. Other Information

Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

13. Lessee's or Operator's Representative

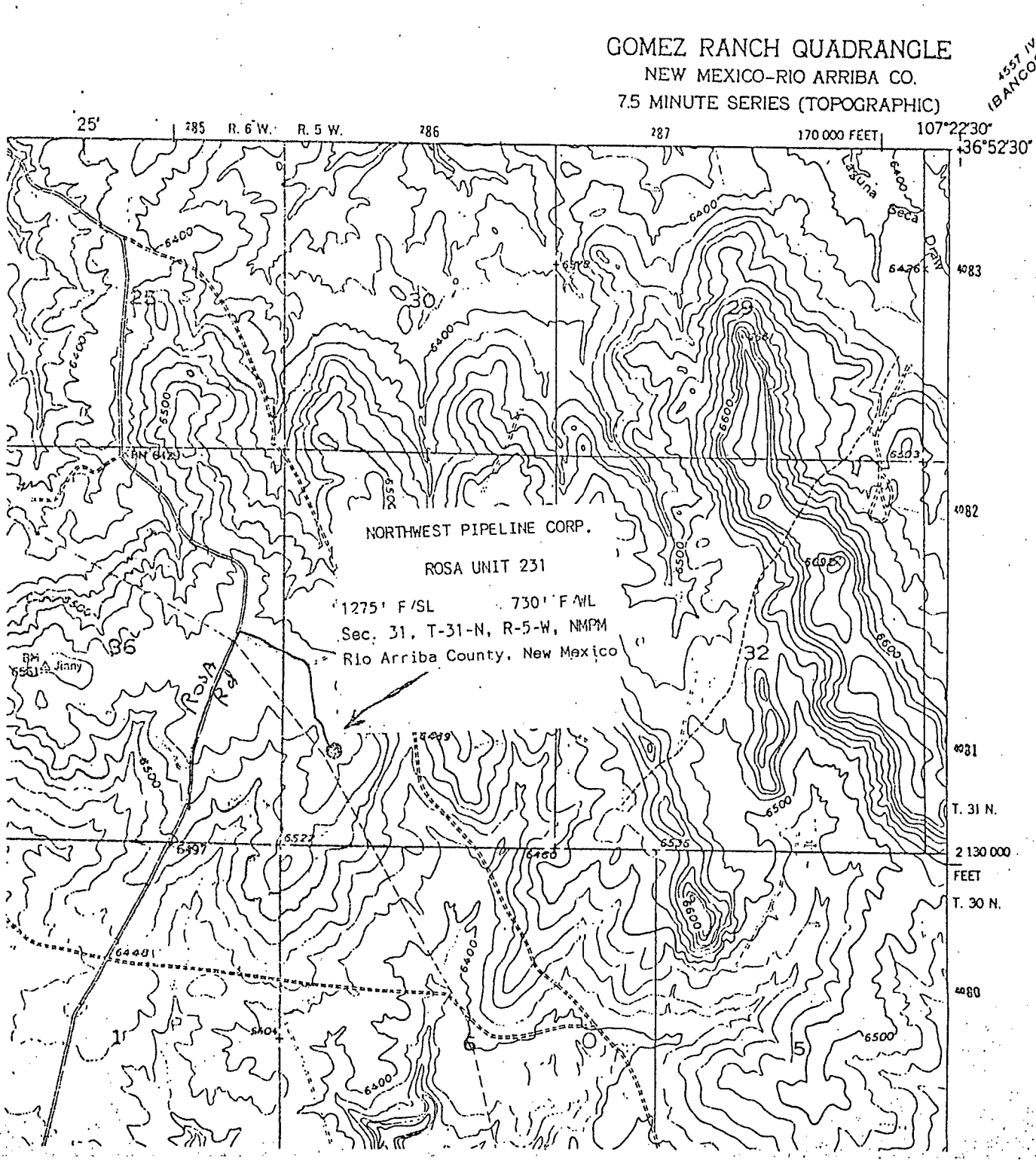
Northwest Pipeline Corporation
Production & Drilling Department
3539 East 30th Street
Farmington, New Mexico 87401
Phone: 505/327-5351

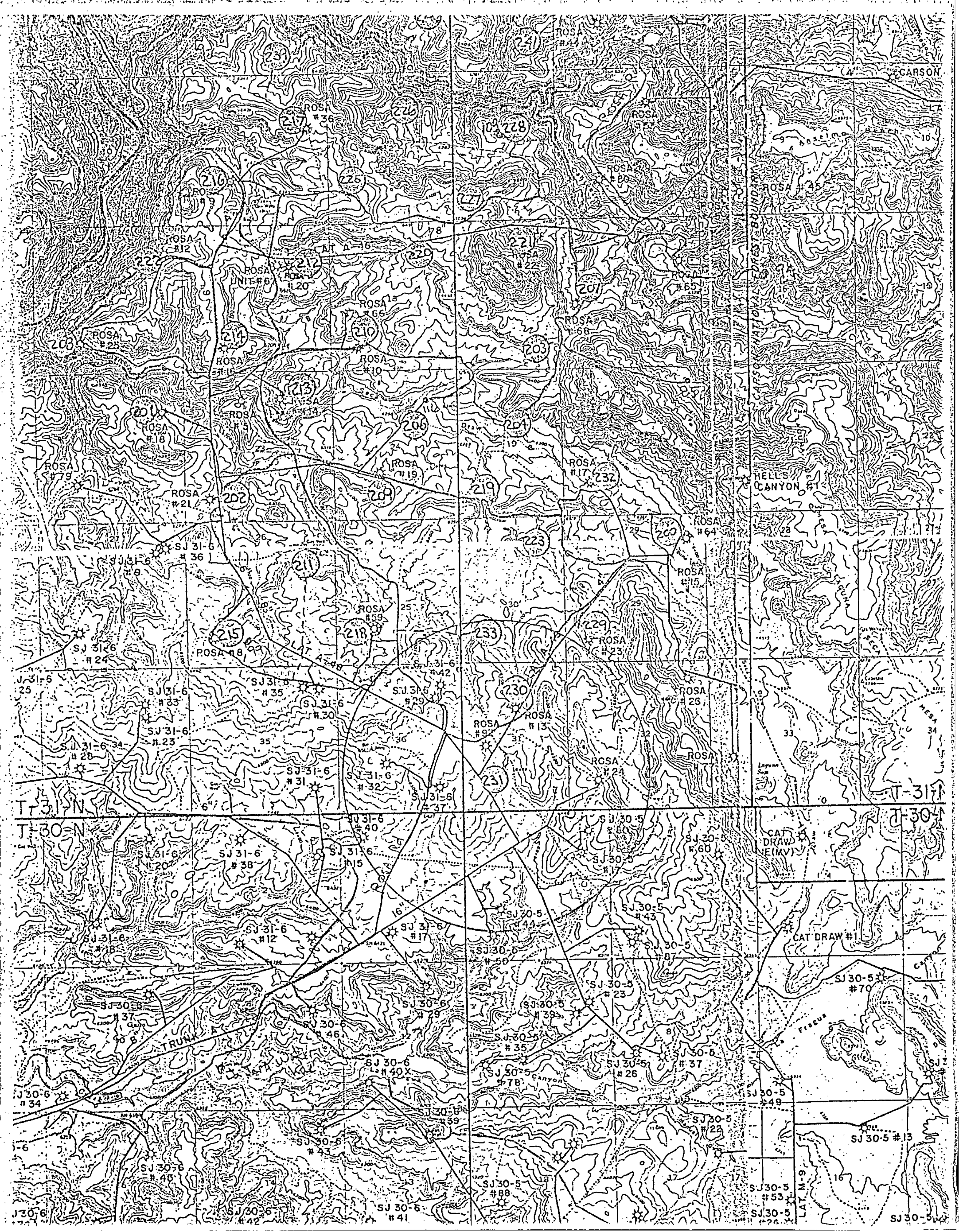
14. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite 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, ture and correct; and, that the work associated with the operations proposed herein will be performed by Northwest Pipeline Corporation, and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

11-8-88
Date

Mike Turnbaugh
Senior Engineer


GOMEZ RANCH QUADRANGLE
NEW MEXICO-RIO ARRIBA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
4557 IV NE
(BANCOS MESA)
25'
285
R. 6 W.
R. 5 W.
286
287
170 000 FEET
107°22'30"
+36°52'30"
NORTHWEST PIPELINE CORP.
ROSA UNIT 231
1275' F/SL 730' F/WL
Sec. 31, T-31-N, R-5-W, NMPM
Rio Arriba County, New Mexico
Rosa Rd
Laguna Seca Draw
T. 31 N.
T. 30 N.
2 130 000 FEET
4083
4082
4081
4080


ROSA #36
ROSA #22
ROSA #65
ROSA #68
ROSA #66
ROSA #10
ROSA #25
ROSA #18
ROSA #79
ROSA #21
ROSA #12
ROSA UNIT #6
ROSA #20
ROSA #19
ROSA #17
ROSA #64
ROSA #15
ROSA #59
ROSA #23
ROSA #26
ROSA #13
ROSA #9
ROSA #24
ROSA #45
ROSA #80
LAT A-46
LAT A-48
CARSON
CARSON NATIONAL FOREST BOUNDARY
HELLS CANYON #1
SJ 31-6 #36
SJ 31-6 #9
SJ 31-6 #24
SJ 31-6 #35
SJ 31-6 #33
SJ 31-6 #30
SJ 31-6 #29
SJ 31-6 #42
SJ 31-6 #23
SJ 31-6 #28
SJ 31-6 #31
SJ 31-6 #32
SJ 31-6 #37
SJ 31-6 #40
SJ 31-6 #20
SJ 31-6 #38
SJ 31-6 #15
SJ 31-6 #18
SJ 31-6 #12
SJ 31-6 #17
T-31-N
T-30-N
CAT DRAW #1
SJ 30-5 #60
SJ 30-5 #1
SJ 30-5 #43
SJ 30-5 #44
SJ 30-5 #50
SJ 30-5 #87
SJ 30-5 #70
SJ 30-5 #23
SJ 30-5 #39
SJ 30-5 #35
SJ 30-5 #26
SJ 30-5 #78
SJ 30-5 #49
SJ 30-5 #22
SJ 30-5 #13
SJ 30-5 #88
SJ 30-5 #53
SJ 30-6 #37
SJ 30-6 #29
SJ 30-6 #46
SJ 30-6 #40X
SJ 30-6 #39
SJ 30-6 #43
SJ 30-6 #34
SJ 30-6 #40
SJ 30-6 #42
SJ 30-6 #41
SJ 30-8 #37
TRUNK A
LAT M-9