

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

RECEIVED
MAR 17 1995

OIL CON. DIV.
DIST. 3

Form C-101
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address. NORTHWEST PIPELINE CORPORATION c/o Walsh Engr. & Prod. Corp. 7415 E. Main Farmington, New Mexico 87402		OGRID Number 16189
		API Number 30-039-25494
Property Code 008480	Property Name ROSA UNIT	Well No. 152

Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
E	36	32N	6W		1880	North	800	West	Rio Arriba

Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
Proposed Pool 1 72319 BLANCO MESA VERDE					Proposed Pool 2				

Work Type Code N	Well Type Code G	Cable/Rotary R	Lease Type Code S	Ground Level Elevation 6641
Multiple N	Proposed Depth 6230	Formation Mancos	Contractor N/A	Spud Date 5/15/95

Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	9-5/8"	36.0	250-320	135 (161 cuft)	Surface
8-3/4"	7"	20.0	3890'	630 (1147 cuft)	Surface
6-1/4"	4-1/2"	10.5	3790'-6230'	235 (407 cuft)	3790'

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

NORTHWEST PIPELINE proposes to drill a vertical well to develop the Mesa Verde formation at the above described location in accordance with the attached drilling plan. After surface pipe is set, a 3000# BOP will be installed for the remainder of the well. Please refer to the attached BOP and Choke Manifold Diagram.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Paul C. Thompson</i>		OIL CONSERVATION DIVISION 3-20-95	
Printed name: Paul C. Thompson, PE		Approved by: <i>Emile Busch</i>	
Title: Agent		Title: DEPUTY OIL & GAS INSPECTOR, DIST. #3	
Date: 3/16/95		Approval Date: MAR 20 1995	Expiration Date: MAR 20 1996
Phone: 505 327-4892		Conditions of Approval: Attached <input type="checkbox"/>	

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State of New Mexico
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OIL CONSERVATION DIVISION
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 Santa Fe, NM 87504-2088

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number <i>30-039-25494</i>		1 Pool Code 72319		1 Pool Name BLANCO MESA VERDE	
4 Property Code 008480		4 Property Name Rosa Unit			4 Well Number 152
1 OGRID No. 16189		1 Operator Name Northwest Pipeline Production			1 Elevation 6641'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	36	32 N	6 W		1880	North	800	West	R.A.

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

12 Dedicated Acres <i>320</i>	13 Joint or Infill N	14 Consolidation Code U	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

8/1/92 Clean

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

Paul C. Thompson
 Signature

Paul C. Thompson, PE (AGENT)
 Printed Name President

Walsh Engr. & Prod. Corp.
 Title

3/16/95
 Date

RECEIVED
 MAR 17 1995
 OIL CON. DIV.
 DIST. 3

16

5415.26'

1880'

800'

5353.32'

2647.26'

2634.06'

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.

2-24-95
 Date of Survey

NEAL E. C. EDWARDS
 Signature and Seal of Professional Surveyor

8857
 8857
 CERTIFIED LAND SURVEYOR

Certificate Number

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 9-5/8" notched regular pattern guide shoe.
2. **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 2743' to the surface. Total centralizers: 5 regular & 23 turbulent.
3. **PRODUCTION CASING:** 4-1/2" whirler type cement nose guide shoe with a float collar and an insert float on top of bottom joint.

C. CEMENTING:

1. **SURFACE:** Use 135 sx (161 cu.ft.) of class "B" with 3% CaCl₂ and 1/4# of cello-flake/sk (Yield = 1.19 cu.ft./sk, Weight = 15.6 #/gal.). Use 100% excess to circulate the surface. WOC 12 hours. Test to 1500#.
2. **INTERMEDIATE:** Lead - 460 sx (943 cu.ft.) of class "B" 65/35 poz with 2% CaCl₂, 8% gel and 1/4# cello-flake/sk (Yield = 2.05 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 170 sx (204 cu.ft.) of class "B", 1/4# cello-flake/sk and 2% CaCl₂ (Yield = 1.18 cu.ft./sk, Weight = 15.6 #/gal.). Use 100% excess in lead to circulate surface and 75% excess in tail to circulate Fruitland. Reciprocate pipe while cementing. Total volume = 1127 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated. Test to 1500#.
3. **PRODUCTION LINER:** Use 235 sx (407 cu.ft.) of class "B" with 4% gel, 6-1/4# fine gilsonite/sk and CF14 (Yield = 1.73 cu.ft./sk, Weight = 13.5 #/gal.). Displace cement at a minimum of 10 BPM. Use 60% excess to cover liner top. WOC 12 hours. Run a temperature survey after 8 hours if liner top is not circulated. Test to 1500#.


Mark McCallister
Sr. Engineer, Production & Drilling

GENERAL ROSA UNIT DRILLING PLAN
Mesa Verde

ROSA 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, R05W: 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 shales	fresh	no	no	no	no
KIRTLAND	Shale w/ interbedded sandstones	no	poss.	no	no	no
FRUITLAND	Inter. SS, SltSt, SH & Coals w/ Carb. SS, SltSt, 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

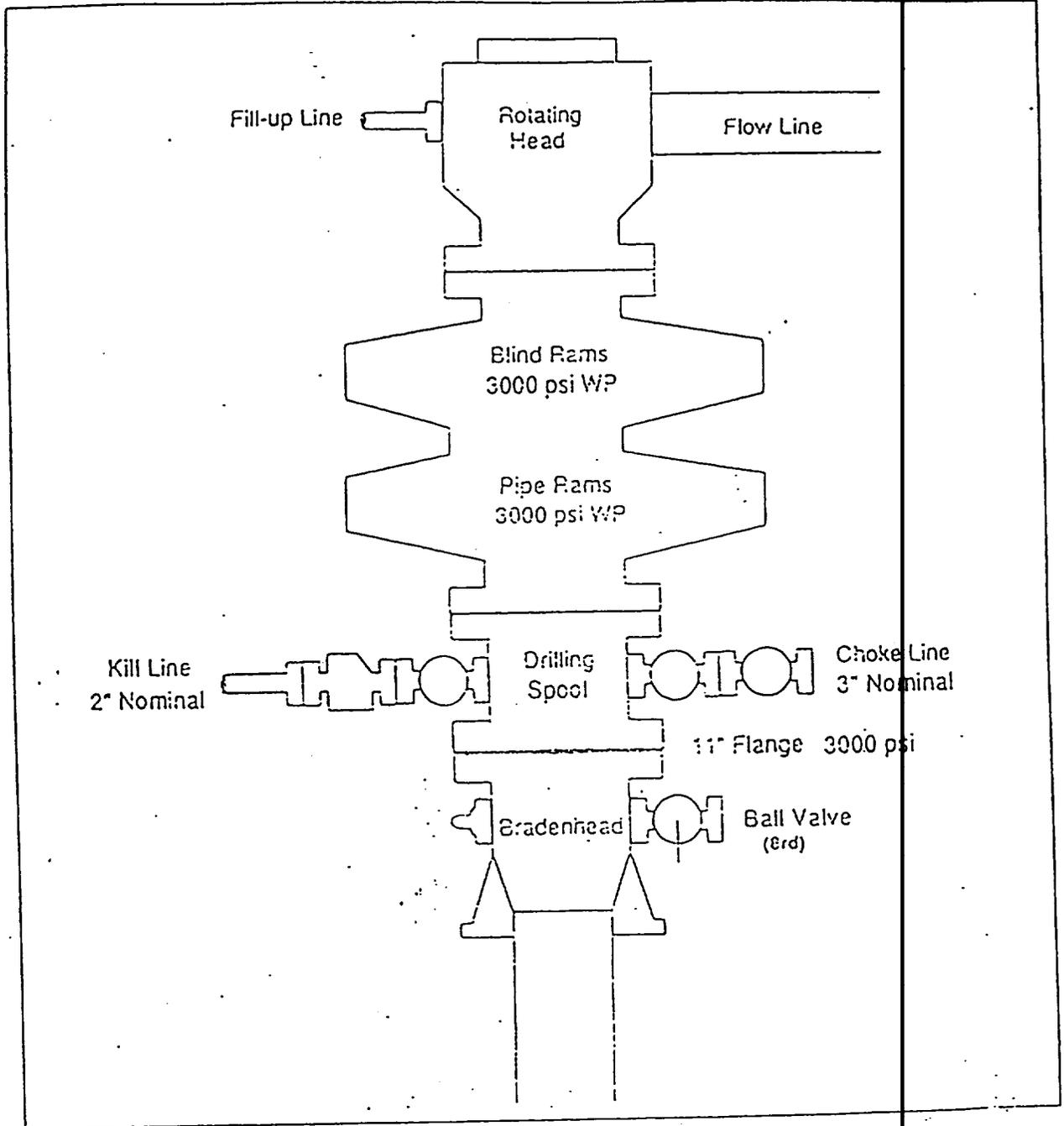
Potential Hazards

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

Mud System

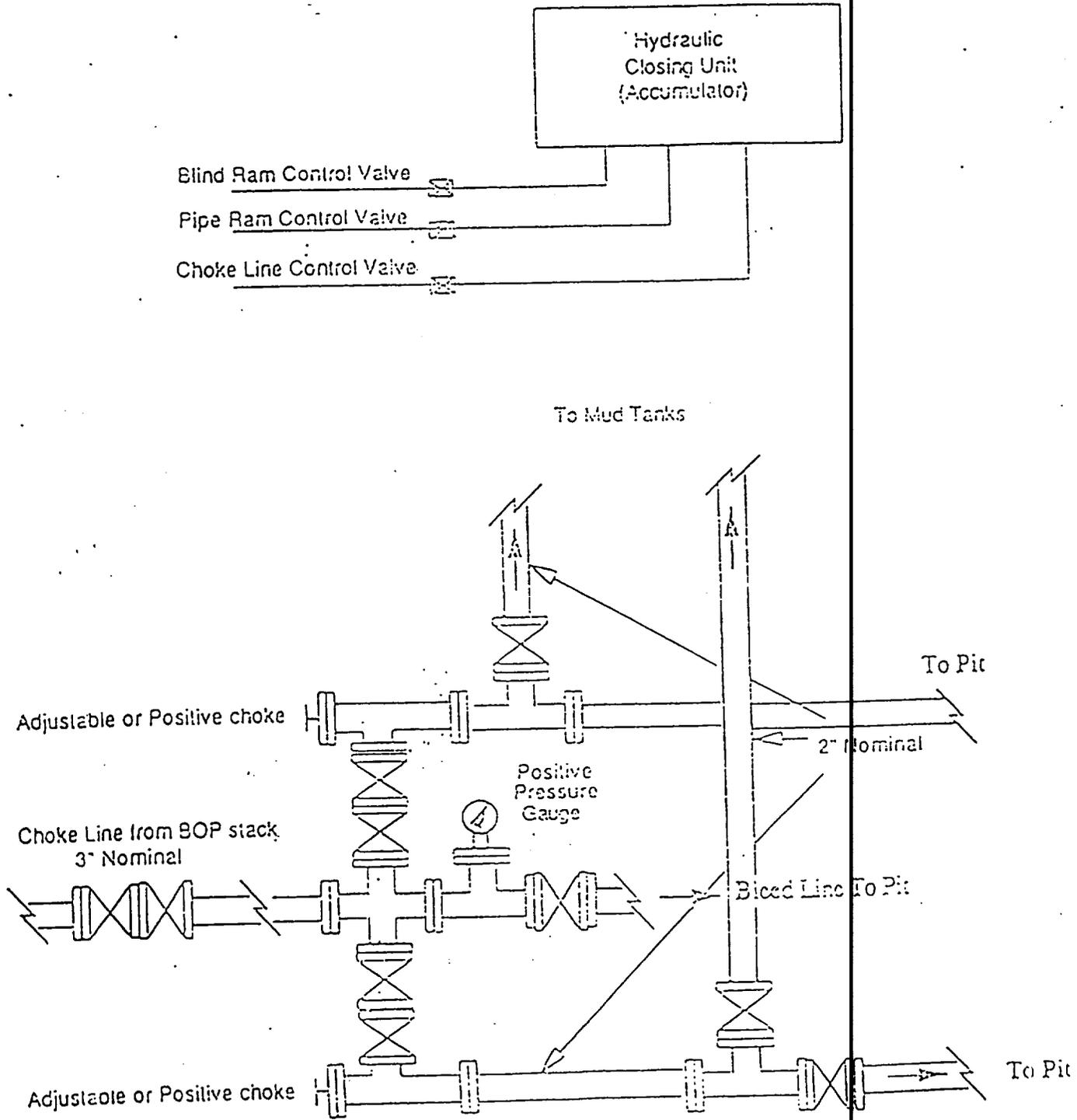
1. Surface: The surface hole will be drilled with a Low-solids Non-Dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 #/gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate: The 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.

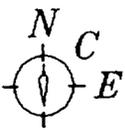
BOP STACK ARRANGEMENT



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

Choke Manifold & Accumulator Schematic



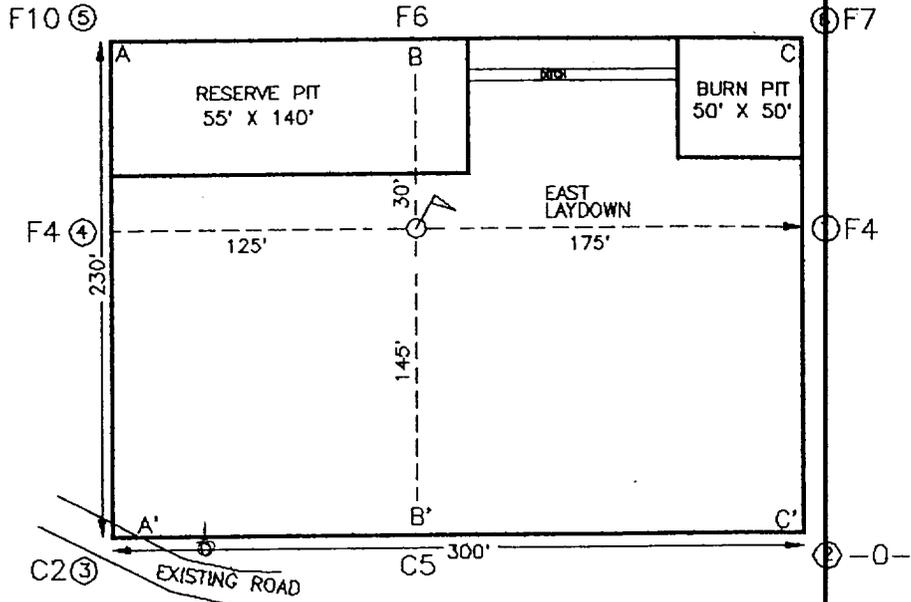


P.O. BOX 6612
 FARMINGTON, NEW MEXICO 87402
 (505) 325-2654

SURVEYS, INC.

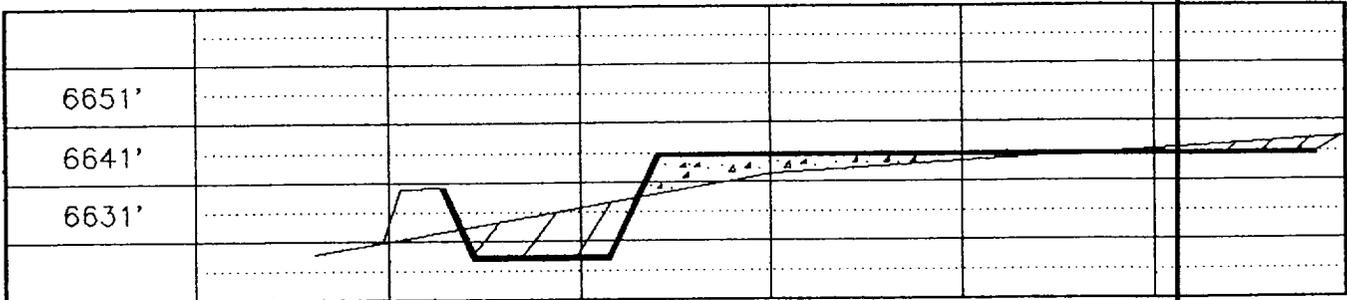
NAME: NORTHWEST PIPELINE PROD. ROSA UNIT #152
 FOOTAGE: 1880' FNL 800' FWL
 SECTION: 36 T 32 N, R 6 W, NMPM
 COUNTY: RIO ARRIBA STATE: NEW MEXICO
 ELEVATION: 6641' DATE: 2/22/95

PLAT #2



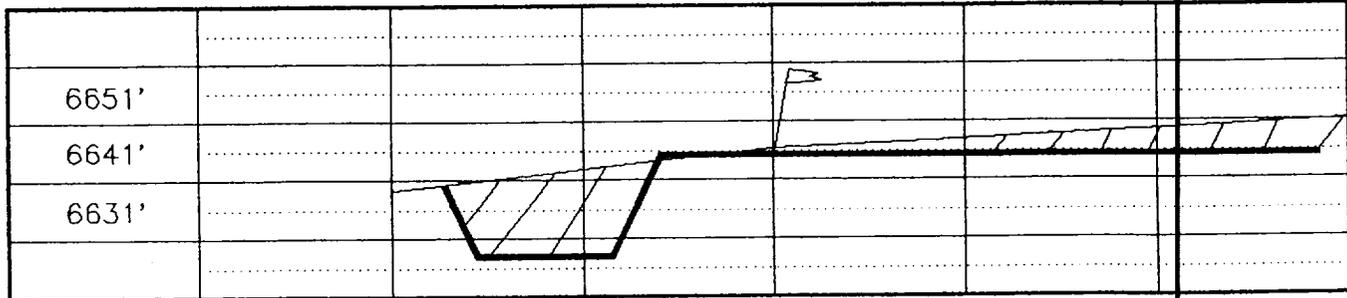
A-A'

C/L



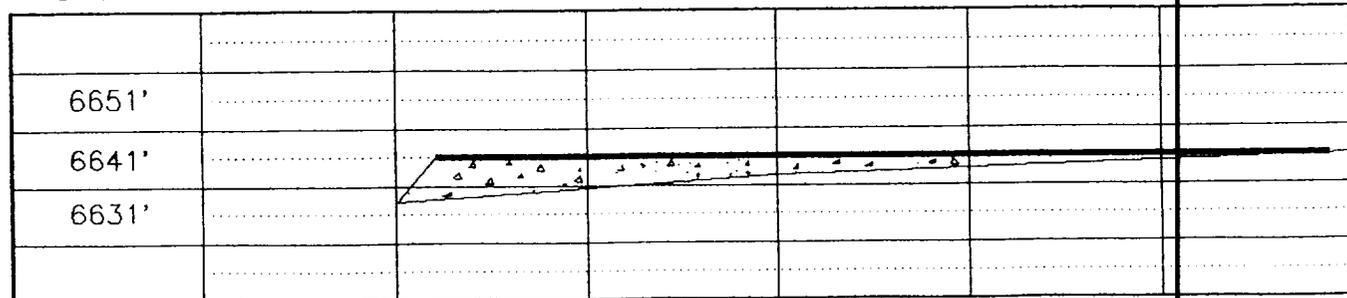
B-B'

C/L



C-C'

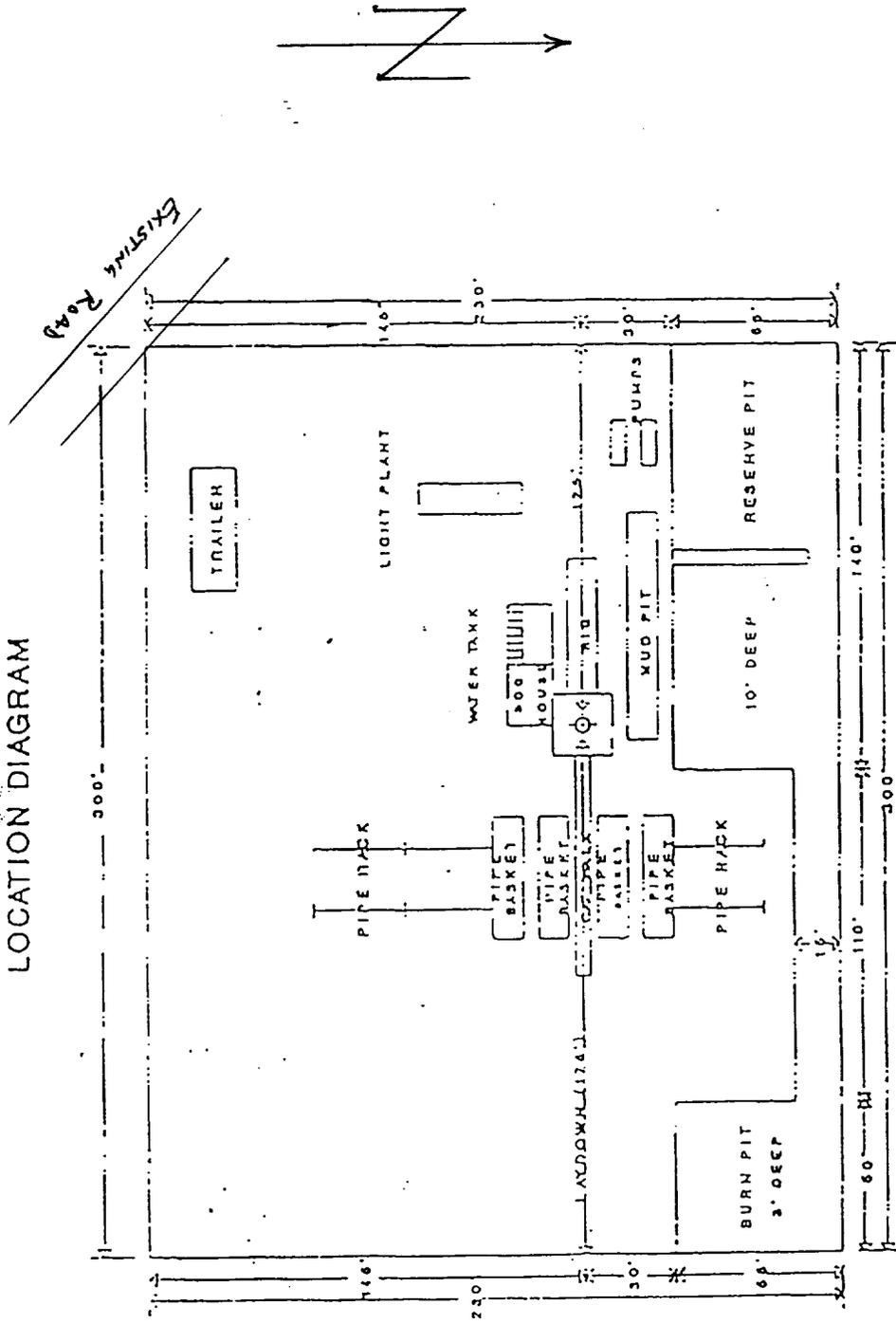
C/L



PLAT #3

NORTHWEST PIPELINE CORPORATION

LOCATION DIAGRAM



NORTHWEST PIPELINE CORPORATION
ROSA UNIT #152
1880'FNL & 800'FWL, SEC. 36, T32N, R6W
Rio Arriba County, New Mexico