

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-101
Revised February 21, 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

¹ Operator Name and Address. WILLIAMS PRODUCTION COMPANY c/o Walsh Engr. & Prod. Corp. 7415 E. Main Farmington, New Mexico 87402		² OGRID Number 120782
		³ API Number 30-039-25568
⁴ Property Code 008480 17033	⁵ Property Name Rosa Unit	⁶ Well No. 24A

⁷ 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	32	31N	5W		1695	North	1165	West	R.A.

⁸ Proposed 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
72319									
⁹ Proposed Pool 1 Blanco Mesa Verde W/320					¹⁰ Proposed Pool 2 Basin Dakota W/320				

¹¹ Work Type Code N	¹² Well Type Code MG	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 6505
¹⁶ Multiple Y	¹⁷ Proposed Depth 8240	¹⁸ Formation Dakota	¹⁹ Contractor N/A	²⁰ Spud Date May 1996

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
13 3/4	10 3/4	32.75# H-40	300	200	Surface
9 7/8	7 5/8	26.4 # K-55	3755	610 & 215	Surface
6 3/4	5 1/2	17.0 # M-80	8240	340 & 100	3655

²² 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.

WILLIAMS PRODUCTION COMPANY plans to drill a vertical well and test the Mesa Verde and Dakota according to the attached Operations Plan.

RECEIVED
MAR 26 1996

OIL CON. DIV.
DIST. 3

²³ 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	
Printed name: Paul C. Thompson		Approved by: <i>Ernie Busche</i> 3-27-96	
Title: Agent		Title: DEPUTY OIL & GAS INSPECTOR, DIST. #3	
Date: 3/19/96		Approval: MAR 27 1996 Expiration Date: MAR 27 1997	
Phone: (505) 327-4892		Conditions of Approval: Attached <input type="checkbox"/>	

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-039-25568		2 Pool Code 72319		3 Pool Name Blanco Mesa Verde		
4 Property Code 008480-17633		5 Property Name Rosa Unit			6 Well Number 24A	
7 OGRID No. 120782		8 Operator Name Williams Production Co.			9 Elevation 6505'	

10 Surface Location

UL or lot no. E	Section 32	Township 31 N	Range 5 W	Lot Idn	Feet from the 1695	North/South line North	Feet from the 1165	East/West line West	County R.A.
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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 W / 320	13 Joint or Infill Y	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

16		5280.00'		17 OPERATOR CERTIFICATION	
1695'				I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
1165'				Signature Paul C. Thompson, Agent	
5280.00'				Printed Name President Walsh Engr. & Prod. Corp.	
32				Title 3/19/96	
				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.	
				2-14-96	
				Date of Survey	
				Signature and Seal of Professional Surveyor	
				NEHE C. EDWARDS 3857 685	
				Certificate Number	
				RECEIVED MAR 26 1996 OIL CON. DIV. DIST. 3	
				5280.00'	

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WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-039-25568		1 Pool Code 71599		1 Pool Name Basin Dakota	
1 Property Code 008480 17033		1 Property Name Rosa Unit			1 Well Number 24A
1 OGRID No. 120782		1 Operator Name Williams Production Co.			1 Elevation 6505'

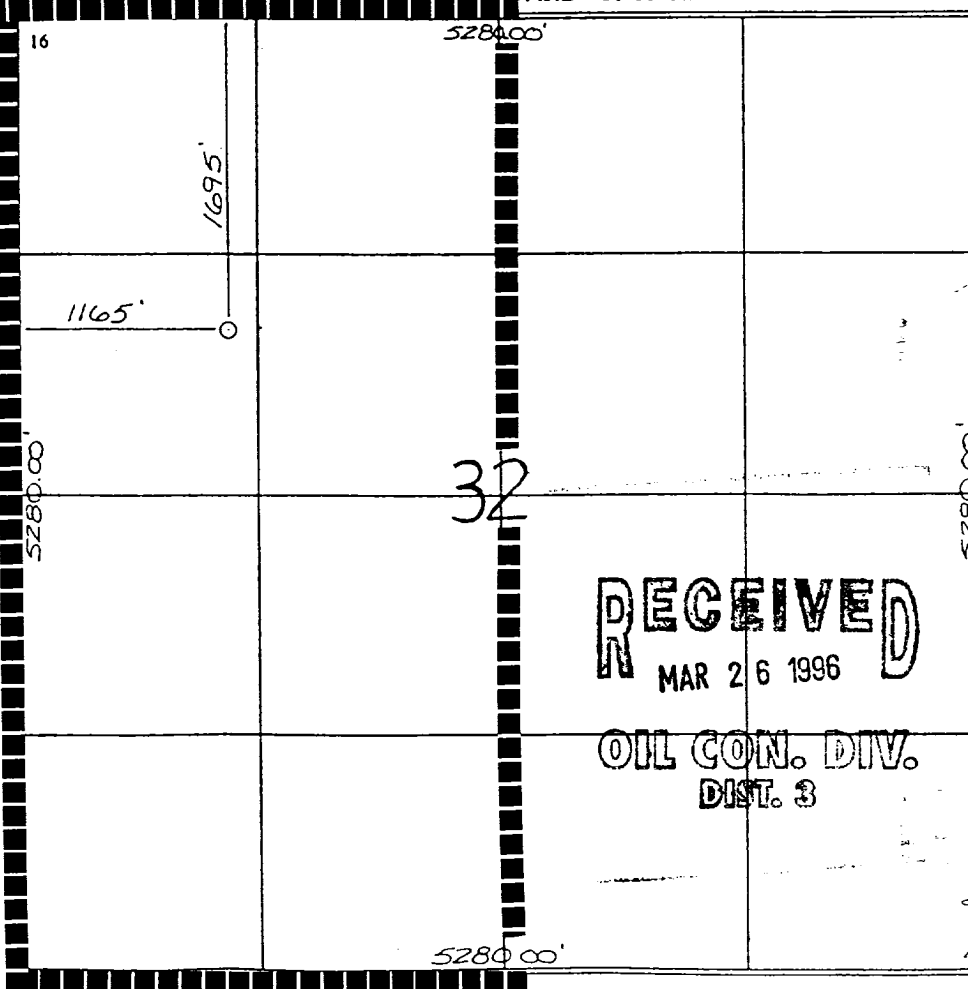
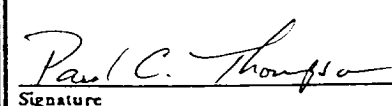
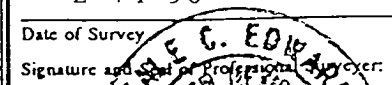
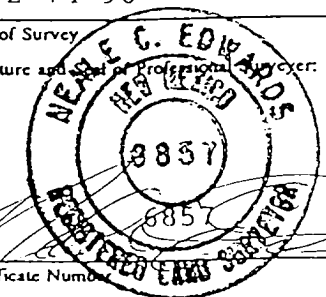
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
E	32	31 N	5 W		1695	North	1165	West	R.A.

11 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
12 Dedicated Acres W/ 320		13 Joint or Infill Y		14 Consolidation Code U		14 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  Signature Paul C. Thompson Printed Name Agent Title 3/19/96 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. 2-14-96 Date of Survey  Signature and Seal of Professional Surveyor  Certificate Number	

<u>CASING TYPE</u>	<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CASING SIZE</u>	<u>WT. & GRADE</u>
Surface	13-3/4"	300'	10-3/4"	32.75# H-40
Intermediate	9-7/8"	3755'	7-5/8"	26.4# K-55
Production	6-3/4"	8240'	5-1/2"	17.0# N-80

B. FLOAT EQUIPMENT:

1. **SURFACE CASING:** 10-3/4" notched regular pattern guide shoe.
2. **INTERMEDIATE CASING:** 7-5/8" 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 2600' to the surface. Total centralizers: 5 regular and 19 turbulent.
3. **PRODUCTION CASING:** 5-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' joint. Place 20' marker joint on top of 10th joint and one above 5490'.

C. CEMENTING:

1. **SURFACE:** Use 200 sx (240cu.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 - 610 sx (1273 cu.ft.) of class "B" 65/35 poz with 8% gel and 1/4# cello-flake/sk (Yield = 2.1 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 215 sx (257 cu.ft.) of class "B" , 1/4# cello-flake/sk and 2% CaCl₂ (Yield = 1.20 cu.ft./sk, Weight = 15.6#/gal.). Use 100% excess in Lead and 75% in tail to circulate to surface. Total volume = 1530 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated. Test to 1500#.
3. **PRODUCTION CASING:** Use 340 sx (462 cu.ft.) of class "B" 50/50 poz with 4% gel, 6-1/4# fine gilsonite/sk and 0.5% CF-14 (Yield = 1.35 cu.ft./sk, Weight = 13.4 #/gal.). Tail 100sx (150 cu.ft) of class "H" with 35% silica flour, 1/4# cello-flake/sk, 1.8% FL-62 and 0.2% A-2 (Yield =1.50 cf/sk, Weight 15.9 #/gal). Displace cement at a minimum of 10 BPM. Use 60% excess in lead and tail to circulate 100' into intermediate casing. Total volume = 612 cu ft. WOC 12 hours. Run a temperature survey after 8 hours to determine TOC behind 5-1/2" casing.

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 7-5/8 to 3300# & 5-1/2" casing to 6000# for 15 minutes.

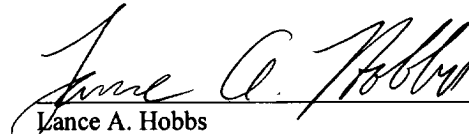
C. STIMULATION

1. Stimulate Dakota with approximately 100,000# of 20/40 sand in x-link foam.
2. Isolate Dakota with a RBP..
3. Stimulate Point Lookout with approximately 100,000# of 20/40 sand in slick water.
4. Isolate Point Lookout with a RBP.
5. Perforate the Menefee/Cliff House as determined from the open hole logs.
6. Stimulate with approximately 80,000# of 20/40 sand in slick water.
7. Test each zone before removing bridge plugs.

D. RUNNING TUBING

1. Dakota: Run 1-1/2", 2.9#, J-55 EUE tubing with 1/2 mule shoe on bottom, SN with pump-out plug on top of adeem joint and 5 Seal Units. Land tubing approximately 100' below top Dakota perf.

1. Mesa Verde: Run 1-1/4", 2.3#, J-55, IJ tubing with a bull plugged perforated nipple on bottom and a SN with pump-out plug on top of bottom joint. Land tubing approximately 25' above the bottom Point Lookout perforation.


Lance A. Hobbs
Engineer, Production & Drilling

file:#24Aopp

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, 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 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

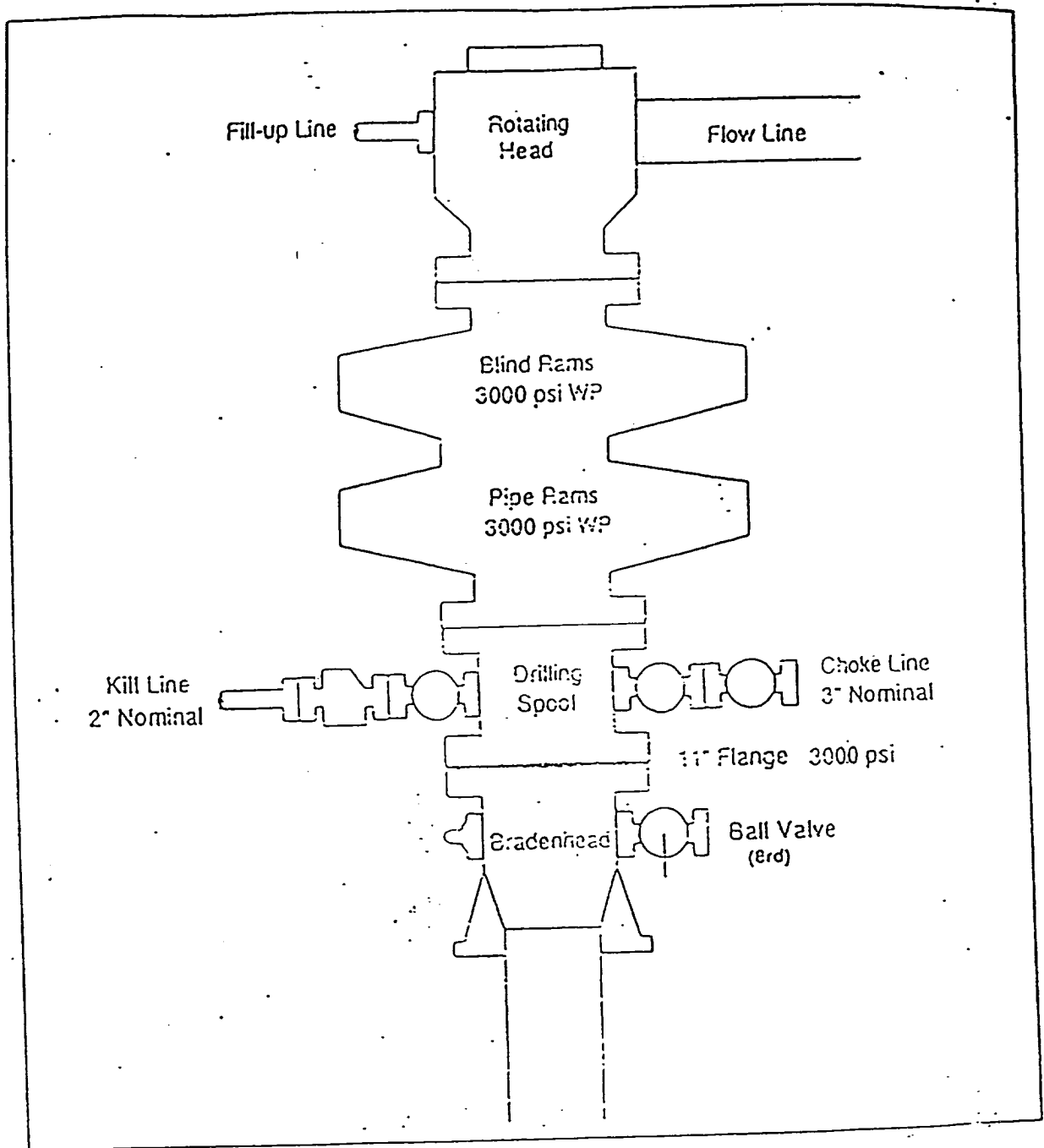
Potential Hazards

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

Mud System

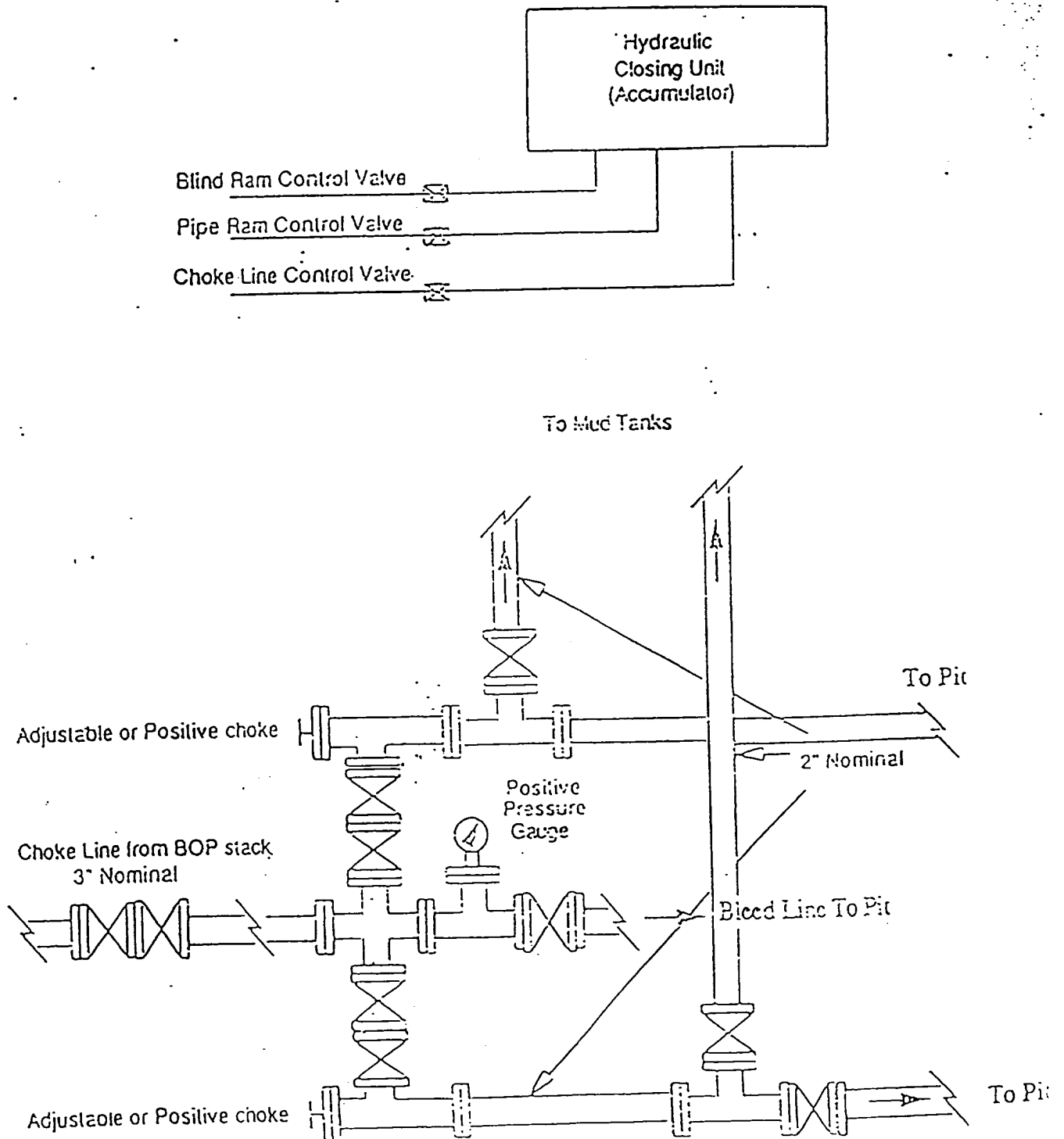
1. Surface: The surface hole will be drilled with a Low-solids Non-Dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 #/gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate: The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

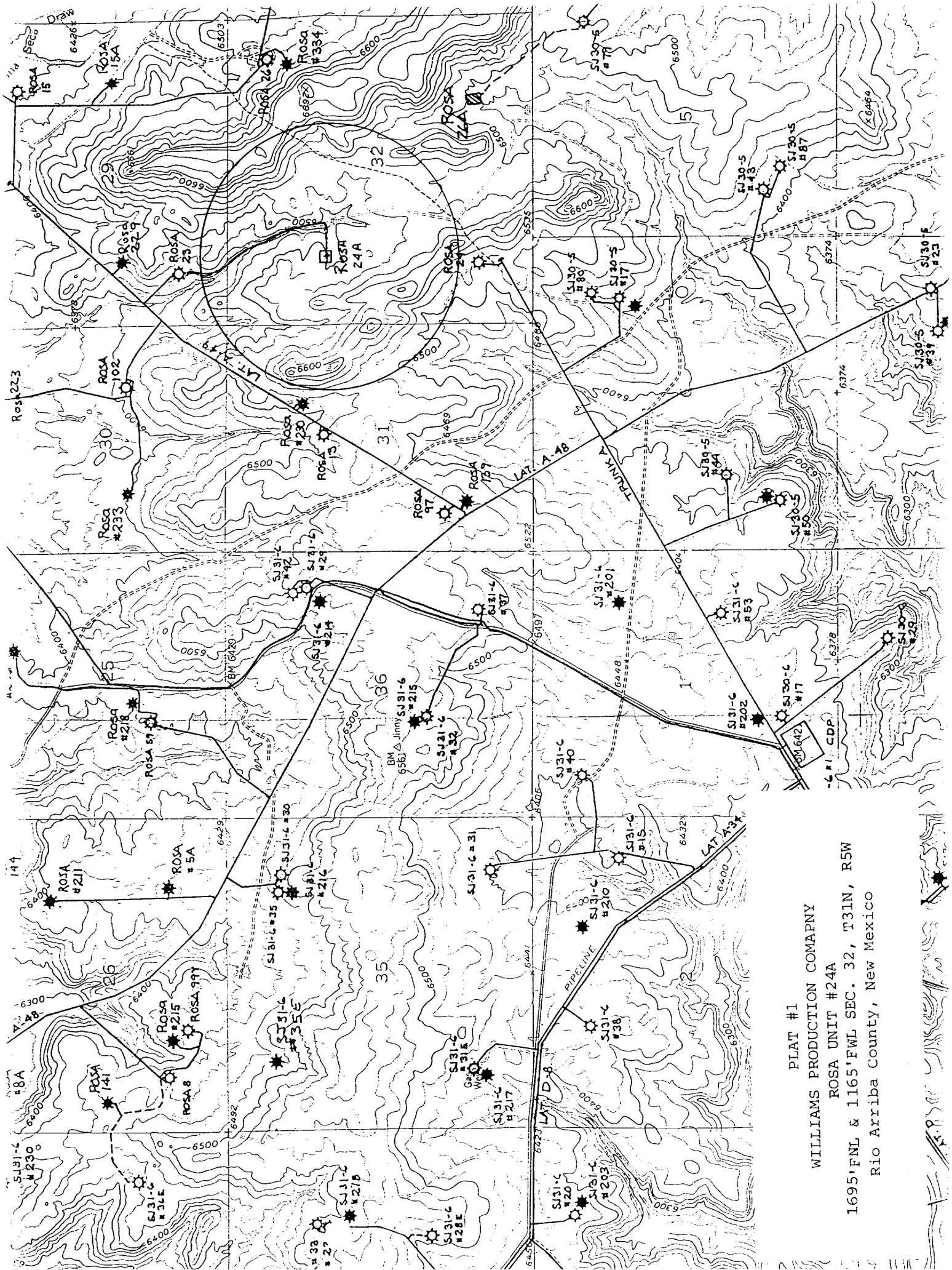
BOP STACK ARRANGEMENT



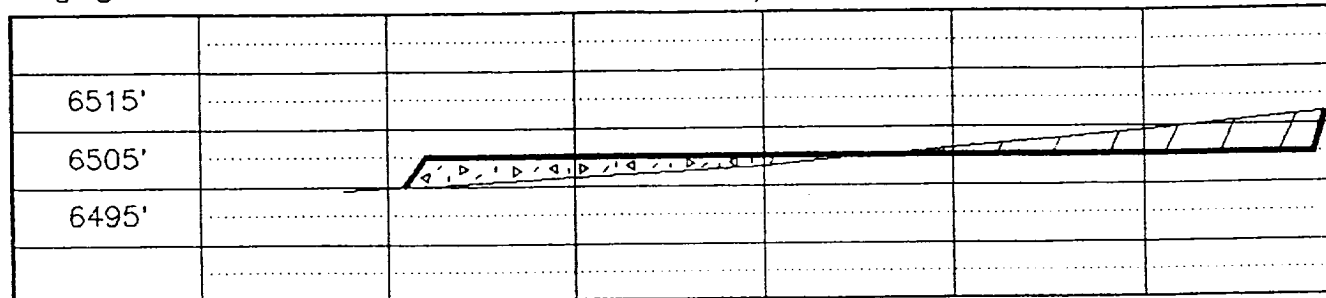
All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi. The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kill cock with handle, floor safety valve with change overs for each tool joint in the string, and choke manifold all rated to 3000 psi.

Choke Manifold & Accumulator Schematic





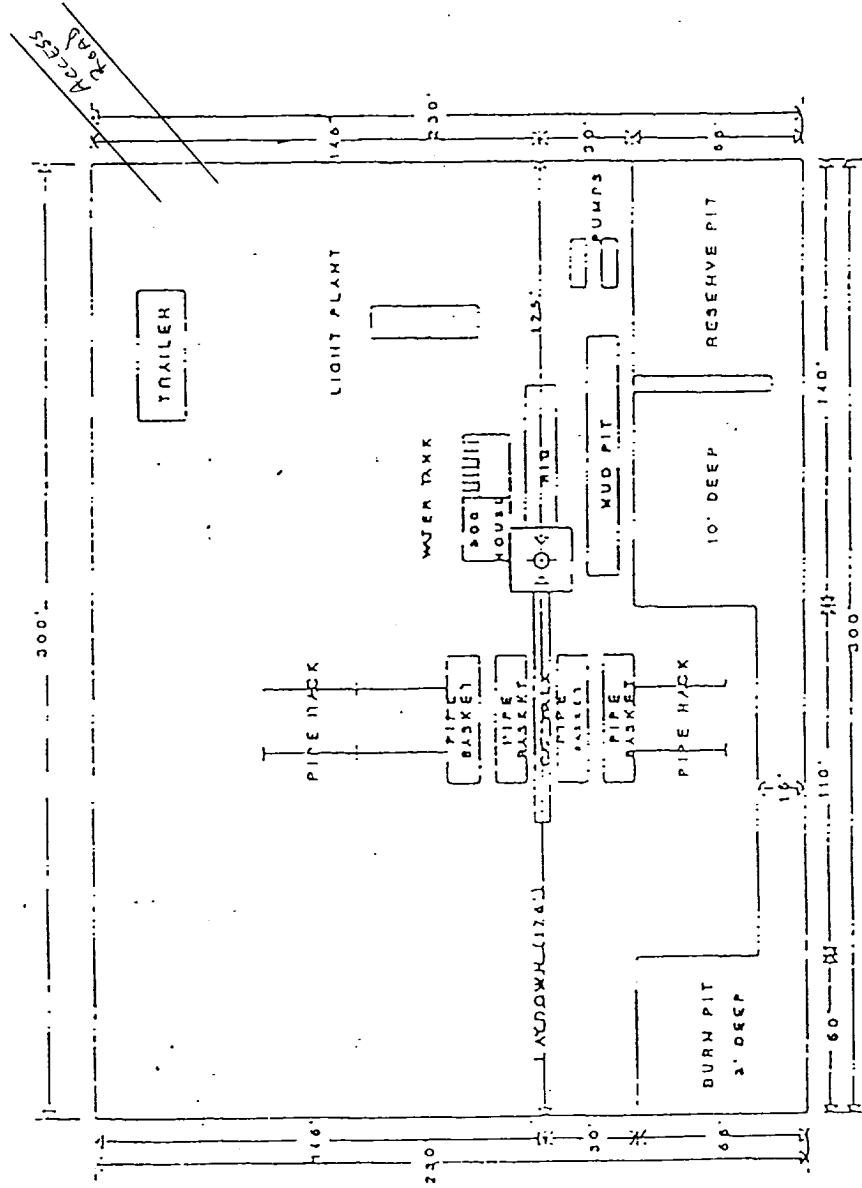
PLAT #1
WILLIAMS PRODUCTION COMPANY
ROSA UNIT #24A
1695'PNL & 1165'FWL SEC. 32, T31N, R5W
Rio Arriba County, New Mexico



PLAT #3

WILLIAMS PRODUCTION COMPANY

LOCATION DIAGRAM



WILLIAMS PRODUCTION COMPANY
 ROSA UNIT #24A
 1695'FNL & 1165'FWL Sec. 32, T31N, R5W
 Rio Arriba County, New Mexico