

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 - 25563
⁴ Property Code 170.33 008480	⁵ Property Name Rosa Unit	⁶ Well No. 23A

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
NF	29	31N	5W		1850	North	1800	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
⁹ Proposed Pool 1 72319 Blanco Mesa Verde W/320					¹⁰ Proposed Pool 2				

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 6388
¹⁶ Multiple N	¹⁷ Proposed Depth 6110	¹⁸ Formation Mesa Verde	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
12-1/4"	9-5/8"	36# K-55	250	157	Surface
8-3/4"	7"	20# K-55	3690	890 + 172	Surface
6-1/4"	4-1/2"	10.5# K-55	3590-6110	414	3590

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 proposes to drill a vertical well to test the Mesa Verde Formation according to the attached drilling plan.

RECEIVED
FEB 29 1996

OIL CON. DIV.

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> Printed name: Paul C. Thompson Title: Agent Date: 2/28/96		OIL CONSERVATION DIVISION Approved by: <i>Ernest D. Bush</i> 3-1-96 Title: DEPUTY OIL & GAS INSPECTOR, DIST. #3 Approval: MAR - 1 1996 Expiration: MAR - 1 1997 Conditions of Approval: Attached <input type="checkbox"/>	
Phone: (505) 327-4892			

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Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
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Form C-1
Revised February 21, 1996
Instructions on b.
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <u>30-034-25563</u>		Pool Code 72319	Pool Name Blanco Mesa Verde
Property Code <u>17033</u> 008480	Property Name Rosa Unit		Well Number 23A
GRID No. 120782	Operator Name Williams Production Co.		Elevation 6388'

10 Surface Location

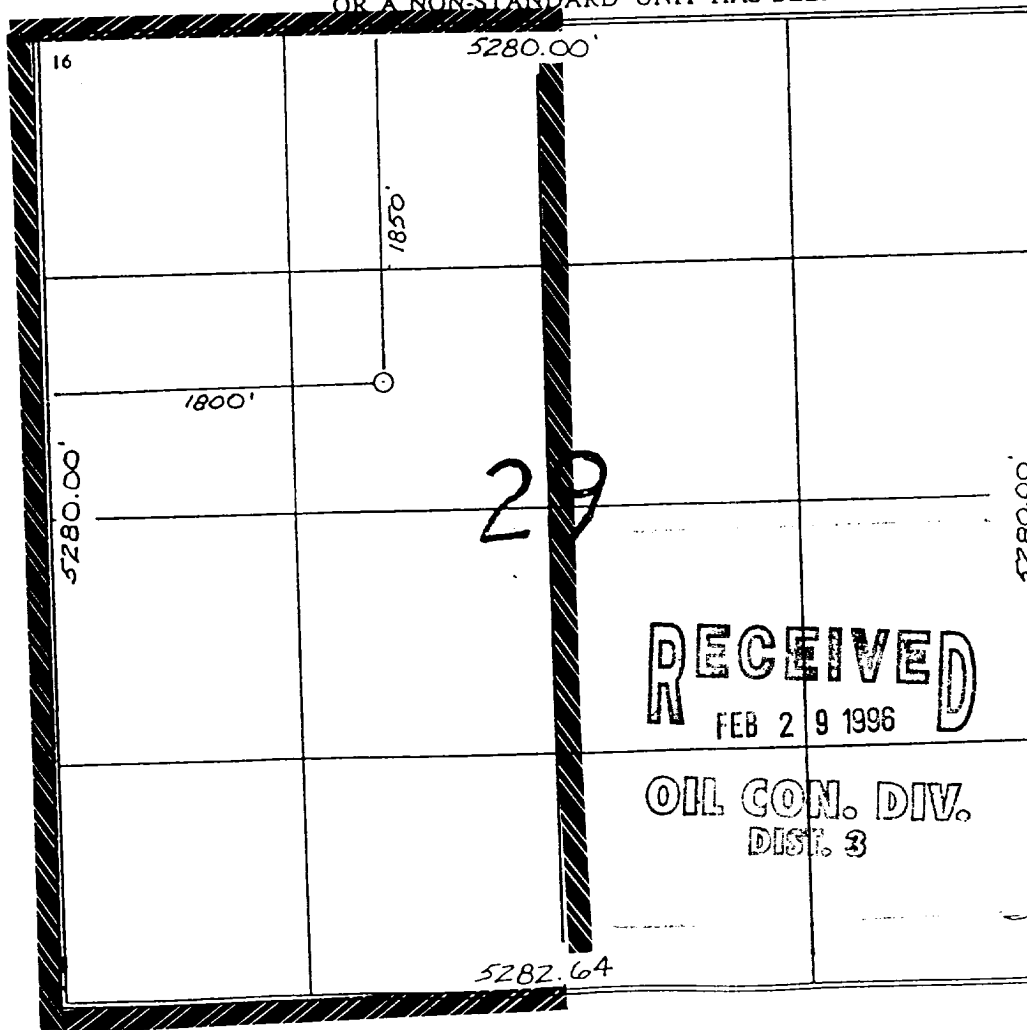
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	29	31 N	5 W		1850	North	1800	West	R.A.

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

" Dedicated Acres	" Joint or Infill	" Consolidation Code	" Order No.
320	N	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



17 OPERATOR CERTIFICATION

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

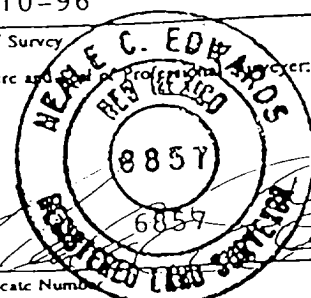
Paul C. Thompson
Signature
Paul C. Thompson, P.E. (Agent)
Printed Name
Walsh Engr. & Prod. Corp.
Title
2/28/96
Date

18 SURVEYOR CERTIFICATION

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

1-10-96

Date of Survey
Signature and Title of Professional Surveyor



Certificate Number

WILLIAMS PRODUCTION COMPANY
OPERATIONS PLAN

DATE: 2/1/96

<u>WELLNAME:</u>	ROSA UNIT #23A	<u>FIELD:</u>	Blanco MV
<u>LOCATION:</u>	SE/4 NW/4 Sec. 29, T31N, R5W San Juan Co., NM	<u>SURFACE:</u>	BLM
<u>ELEVATION:</u>	6388' GR	<u>MINERALS:</u>	FEE
<u>TOTAL DEPTH:</u>	6110'	<u>LEASE #</u>	FEE

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS:

Ojo Alamo	2535	Cliff House	5440'
Kirtland	2645'	Menefee	5490'
Fruitland	3070'	Point Lookout	5710'
Pictured Cliffs	3270	Mancos	5875
Lewis	3540'	Total Depth	6110'

B. LOGGING PROGRAM: IND/GR, CDL/SNL. Log the Pictured Cliffs from TD to the Kirtland. Log the Mesa Verde from TD to 500' above the Cliff House.

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. & GRADE</u>
Surface	12-1/4"	250'	9-5/8"	36# K-55
Intermediate	8-3/4"	3690'	7"	20# K-55
Prod. Liner	6-1/4"	3590-6110'	4-1/2"	10.5# K-55

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 2535' to the surface. Total centralizers = 5 regular and 19 turbulent.

3. **PRODUCTION CASING:** 4-1/2" whirler type cement nose guide shoe with a latch collar on top of 20' shoe joint. Place 20' marker joint above 5440'.

C. CEMENTING:

1. **SURFACE:** Use 132 sx (157cu.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 - 430 sx (890 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 - 145 sx (172 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 = 1062 cu.ft. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated. Test to 1500#.
3. **PRODUCTION LINER:** Use 239 sx (414 cu.ft.) of class "B" with 4% gel, 6-1/4# fine gilsonite/sk and 0.5% CF-14 (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.

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

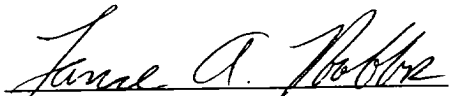
1. Pressure test 7" & 4-1/2" casing to 3300# for 15 minutes.

C. STIMULATION

1. Stimulate with approximately 100,000# of 20/40 sand in slick water.
2. Isolate Point Lookout with a RBP.
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 25' above the bottom Point Lookout perforation.


Lance Hobbs
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, 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, SiltSt, SH & Coals w/ Carb. SS, SiltSt, 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

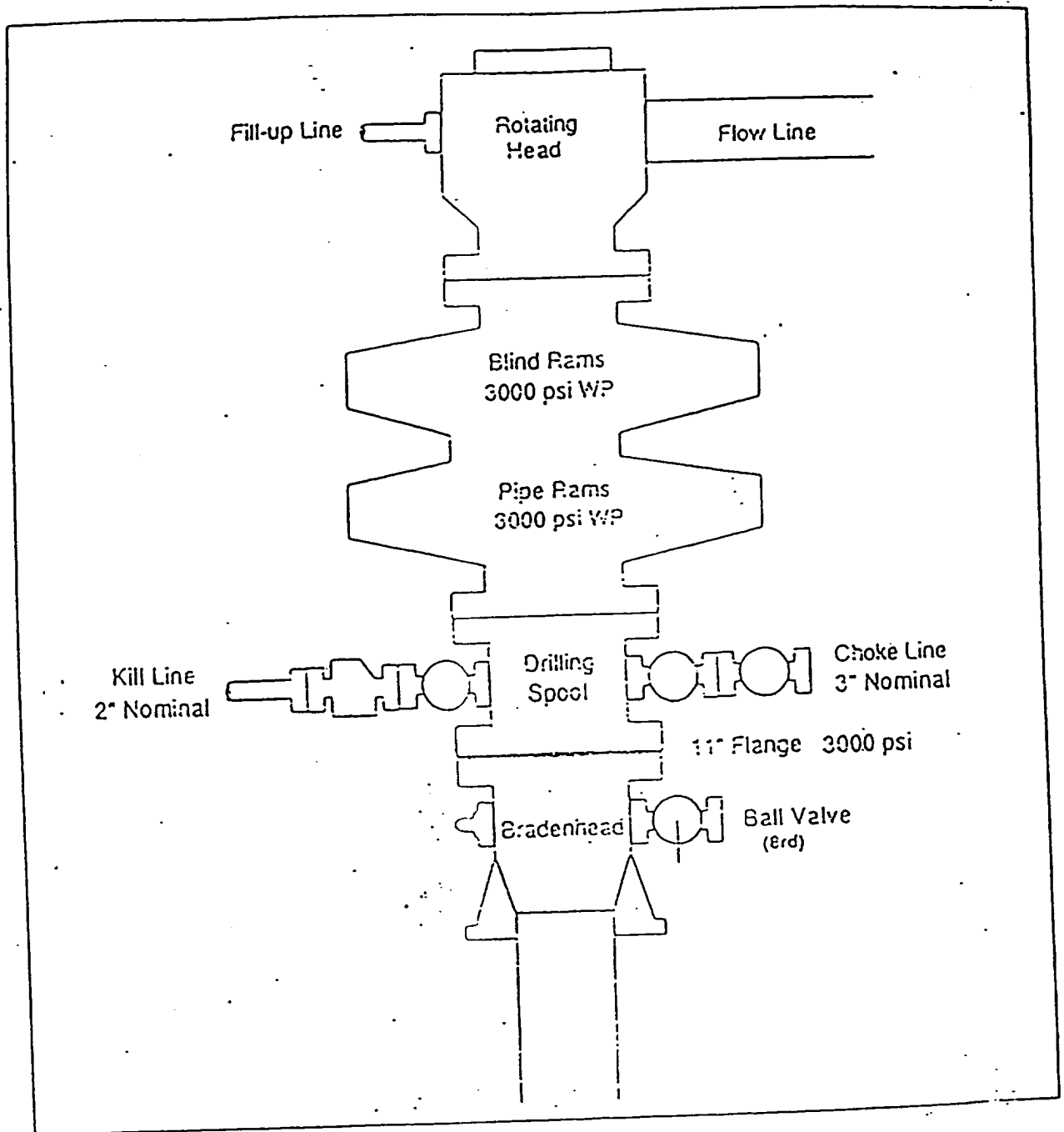
Potential Hazards

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

Mud System

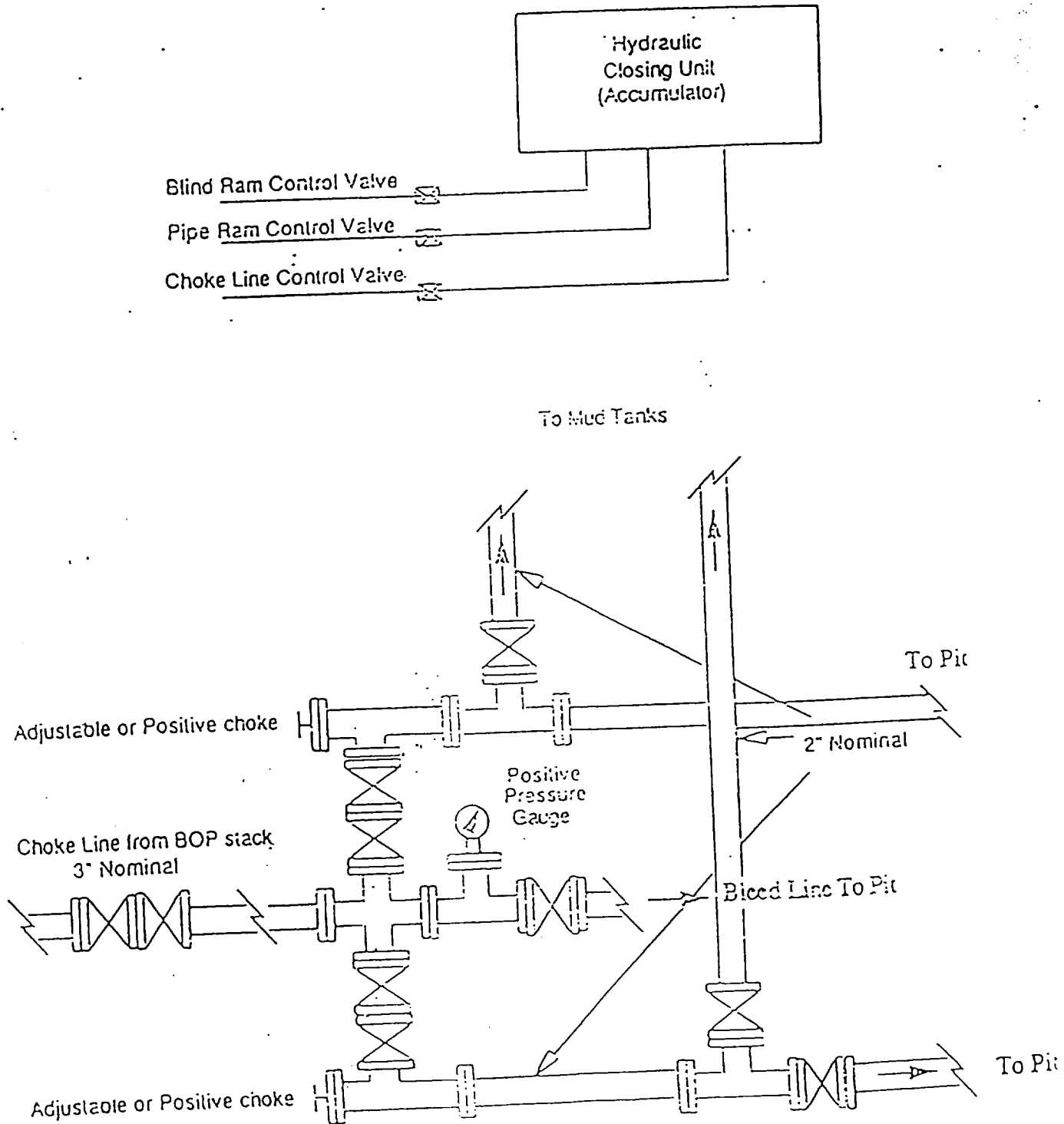
1. Surface: The surface hole will be drilled with a Low-solids Non-Dispersed system with starch and lost circulation material as needed. Expected mud weights will be in the 8.4 to 9.0 #/gal range. Viscosities will be in the 30 to 60 sec/qrt range as needed to remove drill cuttings.
2. Intermediate: The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

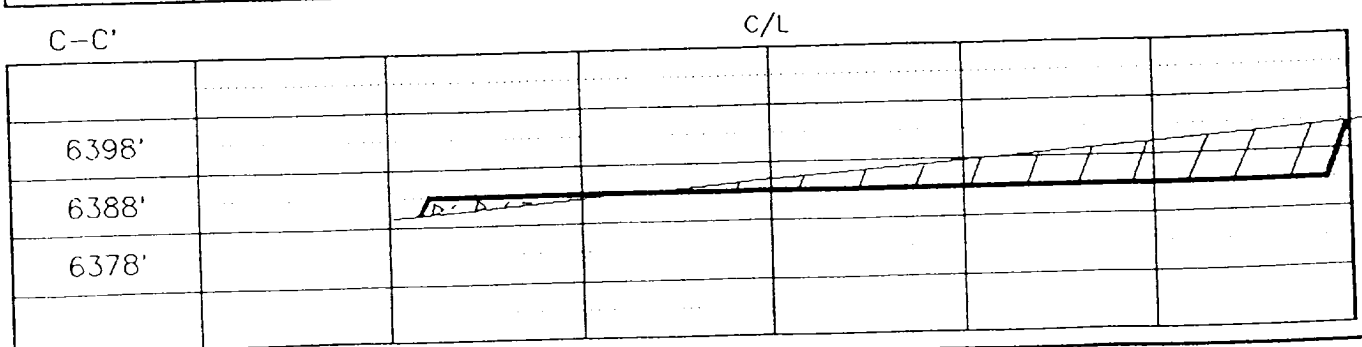
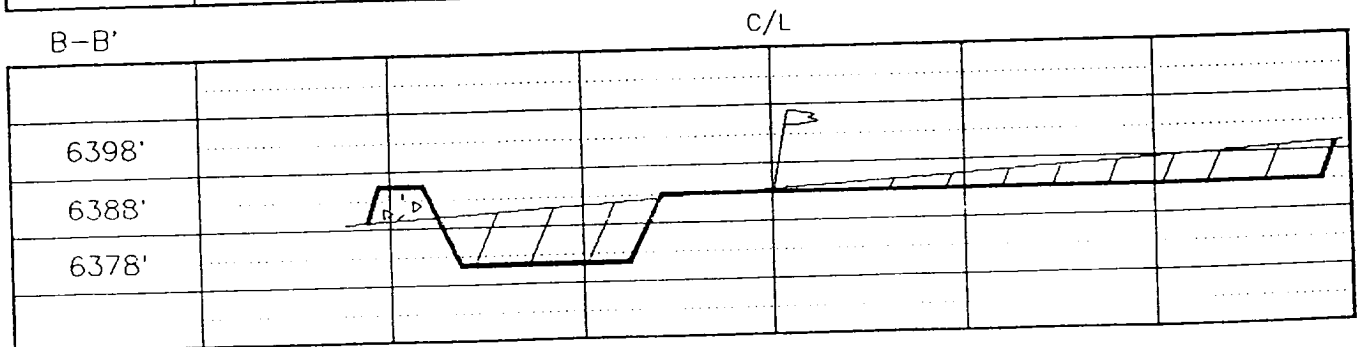
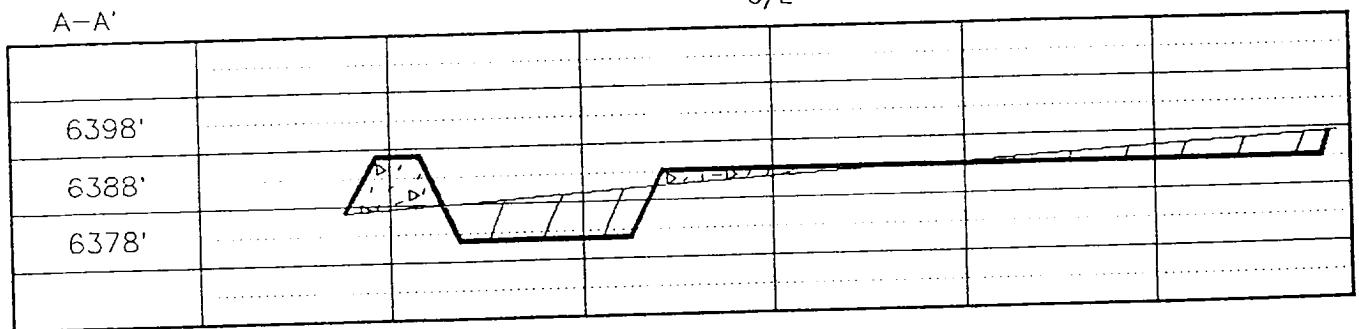
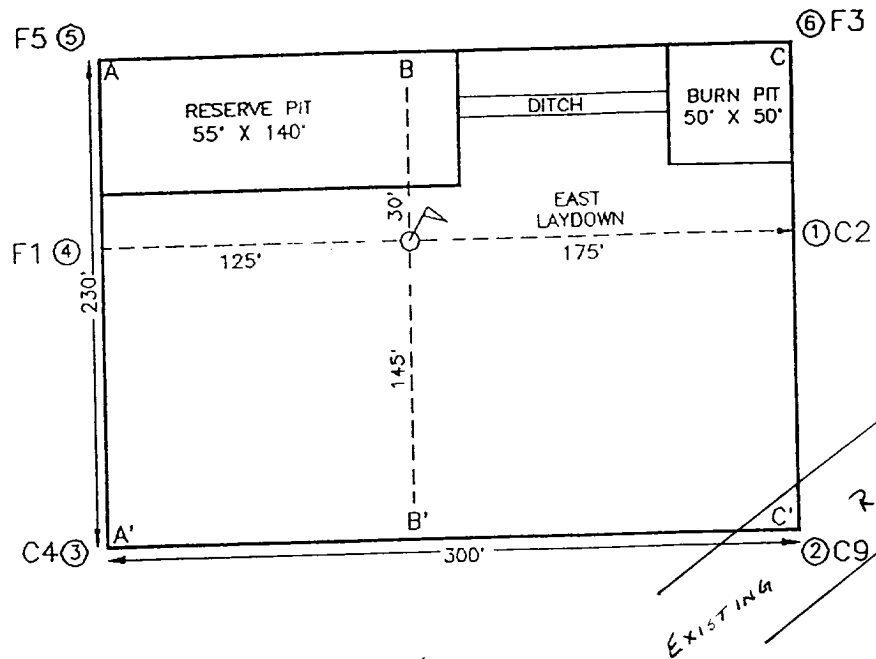


All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1500 psi. The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment 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



NAME: WILLIAMS P AUCTION CO. ROSA UNIT #23A
FOOTAGE: 1850' FNL 1800' FWL
SECTION: 29 T 31 N, R 5 W, NMPM
COUNTY: RIO ARRIBA STATE: NEW MEXICO
ELEVATION: 6388' DATE: 1/10/96



This is a detailed topographic map of the ROSA UNIT #23A, located in the 1850' FNL & 1800' FWL Sec. 29, T31N, R5W, Rio Arriba County, New Mexico. The map is oriented with North at the top. It features numerous contour lines indicating elevation, with labels such as 5500, 5600, 5700, 5800, 5900, 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700, 6800, 6900, 7000, 7100, 7200, 7300, 7400, 7500, 7600, 7700, 7800, 7900, 8000, 8100, 8200, 8300, 8400, 8500, 8600, 8700, 8800, 8900, 9000, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9800, 9900, 10000, 10100, 10200, 10300, 10400, 10500, 10600, 10700, 10800, 10900, 11000, 11100, 11200, 11300, 11400, 11500, 11600, 11700, 11800, 11900, 12000, 12100, 12200, 12300, 12400, 12500, 12600, 12700, 12800, 12900, 13000, 13100, 13200, 13300, 13400, 13500, 13600, 13700, 13800, 13900, 14000, 14100, 14200, 14300, 14400, 14500, 14600, 14700, 14800, 14900, 15000, 15100, 15200, 15300, 15400, 15500, 15600, 15700, 15800, 15900, 16000, 16100, 16200, 16300, 16400, 16500, 16600, 16700, 16800, 16900, 17000, 17100, 17200, 17300, 17400, 17500, 17600, 17700, 17800, 17900, 18000, 18100, 18200, 18300, 18400, 18500, 18600, 18700, 18800, 18900, 19000, 19100, 19200, 19300, 19400, 19500, 19600, 19700, 19800, 19900, 20000, 20100, 20200, 20300, 20400, 20500, 20600, 20700, 20800, 20900, 21000, 21100, 21200, 21300, 21400, 21500, 21600, 21700, 21800, 21900, 22000, 22100, 22200, 22300, 22400, 22500, 22600, 22700, 22800, 22900, 23000, 23100, 23200, 23300, 23400, 23500, 23600, 23700, 23800, 23900, 24000, 24100, 24200, 24300, 24400, 24500, 24600, 24700, 24800, 24900, 25000, 25100, 25200, 25300, 25400, 25500, 25600, 25700, 25800, 25900, 26000, 26100, 26200, 26300, 26400, 26500, 26600, 26700, 26800, 26900, 27000, 27100, 27200, 27300, 27400, 27500, 27600, 27700, 27800, 27900, 28000, 28100, 28200, 28300, 28400, 28500, 28600, 28700, 28800, 28900, 29000, 29100, 29200, 29300, 29400, 29500, 29600, 29700, 29800, 29900, 30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 31000, 31100, 31200, 31300, 31400, 31500, 31600, 31700, 31800, 31900, 32000, 32100, 32200, 32300, 32400, 32500, 32600, 32700, 32800, 32900, 33000, 33100, 33200, 33300, 33400, 33500, 33600, 33700, 33800, 33900, 34000, 34100, 34200, 34300, 34400, 34500, 34600, 34700, 34800, 34900, 35000, 35100, 35200, 35300, 35400, 35500, 35600, 35700, 35800, 35900, 36000, 36100, 36200, 36300, 36400, 36500, 36600, 36700, 36800, 36900, 37000, 37100, 37200, 37300, 37400, 37500, 37600, 37700, 37800, 37900, 38000, 38100, 38200, 38300, 38400, 38500, 38600, 38700, 38800, 38900, 39000, 39100, 39200, 39300, 39400, 39500, 39600, 39700, 39800, 39900, 40000, 40100, 40200, 40300, 40400, 40500, 40600, 40700, 40800, 40900, 41000, 41100, 41200, 41300, 41400, 41500, 41600, 41700, 41800, 41900, 42000, 42100, 42200, 42300, 42400, 42500, 42600, 42700, 42800, 42900, 43000, 43100, 43200, 43300, 43400, 43500, 43600, 43700, 43800, 43900, 44000, 44100, 44200, 44300, 44400, 44500, 44600, 44700, 44800, 44900, 45000, 45100, 45200, 45300, 45400, 45500, 45600, 45700, 45800, 45900, 46000, 46100, 46200, 46300, 46400, 46500, 46600, 46700, 46800, 46900, 47000, 47100, 47200, 47300, 47400, 47500, 47600, 47700, 47800, 47900, 48000, 48100, 48200, 48300, 48400, 48500, 48600, 48700, 48800, 48900, 49000, 49100, 49200, 49300, 49400, 49500, 49600, 49700, 49800, 49900, 50000, 50100, 50200, 50300, 50400, 50500, 50600, 50700, 50800, 50900, 51000, 51100, 51200, 51300, 51400, 51500, 51600, 51700, 51800, 51900, 52000, 52100, 52200, 52300, 52400, 52500, 52600, 52700, 52800, 52900, 53000, 53100, 53200, 53300, 53400, 53500, 53600, 53700, 53800, 53900, 54000, 54100, 54200, 54300, 54400, 54500, 54600, 54700, 54800, 54900, 55000, 55100, 55200, 55300, 55400, 55500, 55600, 55700, 55800, 55900, 56000, 56100, 56200, 56300, 56400, 56500, 56600, 56700, 56800, 56900, 57000, 57100, 57200, 57300, 57400, 57500, 57600, 57700, 57800, 57900, 58000, 58100, 58200, 58300, 58400, 58500, 58600, 58700, 58800, 58900, 59000, 59100, 59200, 59300, 59400, 59500, 59600, 59700, 59800, 59900, 60000, 60100, 60200, 60300, 60400, 60500, 60600, 60700, 60800, 60900, 61000, 61100, 61200, 61300, 61400, 61500, 61600, 61700, 61800, 61900, 62000, 62100, 62200, 62300, 62400, 62500, 62600, 62700, 62800, 629

WILLIAMS PRODUCTION COMPANY

1850' FNL & 1800' FWL Sec. 29, T31N, R5W

Rio Arriba County, New Mexico

