District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised March 17, 1999

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	[2] OGRID Number
Conoco Inc., 10 Desta Drive, Suite 649W, Midland, TX 79705	005073
	[3] API Number 30-025-35155

[4] Property Code	[5] Property Name	[6] Well No.
13396	Hardy "36" State	30

[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
B	36	20S	37E		520	North	1650	East	Lea

[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	[10] Proposed Pool 2
North Hardy Tubb-Drinkard	

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	O	R	S	3506'
[16] Multiple	[17] Proposed Depth	[18] Formation	[19] Contractor	[20] Spud Date
No	7100'	Tubb/Drinkard		9/15/00

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	J-55, 8-5/8"	24#	1500'	657	Surface
7-7/8"	J-55, 5-1/2"	17#	7100'	828	Surface

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.

1. Well Location and Acreage Dedication Plat (C-102)
2. Proposed Well Plan Outline
3. Cementing Program
4. BOP/Choke Diagram

Permit Expires 1 Year From Approval Date Unless Drilling Underway

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Jo Ann Johnson

Printed name: Jo Ann Johnson

Title: Sr. Property Analyst

Date: 9/6/00 Phone: 915/686-5515

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date: Expiration Date:

Conditions of Approval:

Attached ☐

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-35155	96356	North Hardy Tubb-Drinkard

Property Code	Property Name	Well Number
13396	HARDY 36 STATE	30

OGRID No.	Operator Name	Elevation
005073	CONOCO INC.	3506

Surface Location

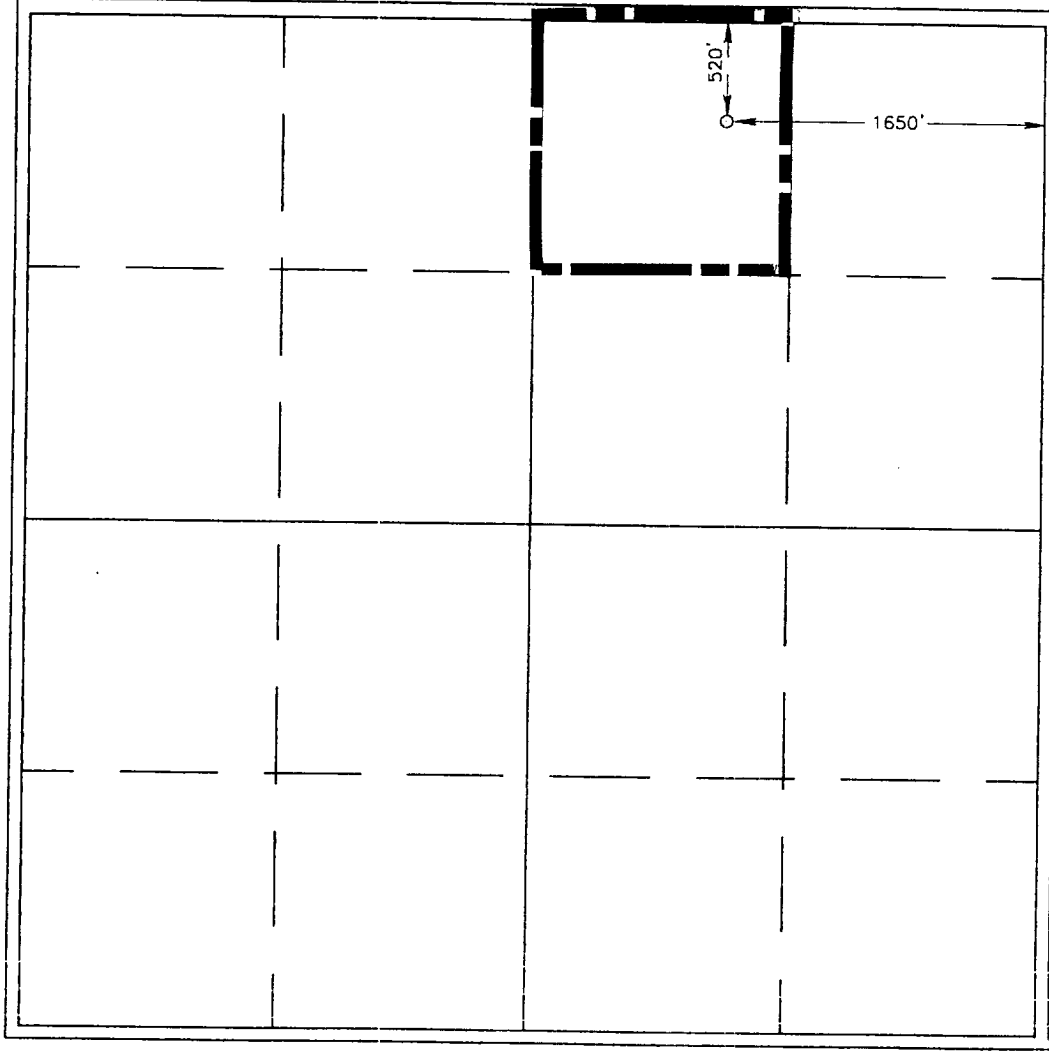
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	20 S	37 E		520	NORTH	1650	EAST	LEA

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.
40			

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



OPERATOR CERTIFICATION

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

Jo Ann Johnson
Signature

Jo Ann Johnson
Printed Name

Sr. Property Analyst
Title

September 6, 2000
Date

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 supervison, and that the same is true and correct to the best of my belief.

AUGUST 24, 2000
Date Surveyed

DC

Signature & Seal of Professional Surveyor

8/31/00

00-11-1047

Certificate No. RONALD J. EIDSON 3239
GARY L. EIDSON 12641

PROPOSED WELL PLAN OUTLINE

WELL NAME: Hardy 36 State #30
LOCATION: 790' FNL & 2045' FEL, Sec 36, T20S & R37E (prior to staking)

Ground Level: 3,501' (est)
Kelly Bushing: 11' AGL

Depth MD	FORMATION TOPS (from GL)	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE	CASING PROGRAM	FRAC GRAD	FORM. PRES. GRAD.	Mud Weight & Type	Days
0		Possible Hole Enlargement & Sloughing		12-1/4"			Less than 8.3	8.4 - 9.5 Fresh	
1000									
	Top Salt @ 1,400'				8-5/8", 24#, J-55 ST&C @ 1,500'				3
		Washouts in Salt Section		7-7/8"	Circulate Cement			10 Brine	
2000							Less than 8.4		
	Base Salt @ 2,557'		Mud Loggers @ 2,600'						
	Yates 2,703'		H2S monitor equipment on @ 2,600'						
	7 Rivers 2,958'								
3000									
	Queen 3,523'								
	Penrose 3,690'								
	Grayburg 3,808'								
4000									
	San Andres 4,038'								
		Mud loss in San Andres is possible.							
5000									
	Glorietta 5,263'								7
		Possible differential sticking thru Glorietta							
	Blinebry 5,818'								
6000									
	Tubb 6,338'								
									10
	Drinkard 6,683'								
			First Log Run:					10 ppg	
7000	Abo 6,933'		GR-CAL-DLL-MLL-SGR-SONIC					Starch Gel	
			FDC-CNL-PE : TD to 2000'						
	TD @ 7,100'		Pull GR-CNL-Cal to Surf						
			SGR interval to be chosen						
		Starch up prior to drilling into Strawn.	Second Log Run: 30 rotary sidewall cores		5-1/2", 17#, J-55 LT&C set @ 7,100'				
		Offset data from:	Possible Third Run:		Circulate cement				17
			FMI imaging log		either single or 2 stage				
8000		State 'KL' 36 #29							

DATE: 06-Sep-00

Joe Huck, Geologist

APPROVED

David Delao, Drilling Engineer

Joe Miller, Reservoir Engineer

Proposal No: 180254607A

Conoco
Hardy 36 State #30

Lea County, New Mexico
August 28, 2000

Well Recommendation

Prepared for:
Mr. David Delao
Drilling Engineer

Prepared by:
Rocky Chambers
Region Engineer
Midland, Texas
Bus Phone: 915/683-2781
Mobile: 915/557-1239
Pager: 915/498-1605

POWERVISION℠

Service Point:
Hobbs
Bus Phone: (505) 392-5556
Fax: (505) 392-7307

Service Representatives:
Wayne Davis
Account Manager
Bus Phone: (915) 683-2781
Fax: (915) 683-1443

Operator Name: Conoco
Well Name: Hardy 36 State #3
Job Description: 8 5/8" Surface
Date: August 28, 2000

Proposal No: 180254607A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	1,500	1,500

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
8.625	8.097	24	1,500	1,500

Float Collar set @	1,460 ft
Mud Density	8.40 ppg
Est. Static Temp.	89 ° F
Est. Circ. Temp.	85 ° F

VOLUME CALCULATIONS

1,200 ft	x	0.4127 cf/ft	with	100 % excess	=	990.4 cf
300 ft	x	0.4127 cf/ft	with	100 % excess	=	247.9 cf
40 ft	x	0.3576 cf/ft	with	0 % excess	=	14.3 cf (inside pipe)
				TOTAL SLURRY VOLUME	=	1252.6 cf
					=	223 bbls

Operator Name: Conoco
Well Name: Hardy 36 State #
Job Description: 8 5/8" Surface
Date: August 28, 2000

Proposal No: 180254607A

FLUID SPECIFICATIONS

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	990	/	2.15	= 462 sacks Class C Cement + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 2% bwoc Sodium Metasilicate + 109.4% Fresh Water
Tail Slurry	262	/	1.34	= 195 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.005 gps FP-6L + 56.3% Fresh Water
Displacement				93.0 bbls Water @ 8.4 ppg

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.40	14.80
Slurry Yield (cf/sack)	2.15	1.34
Amount of Mix Water (gps)	12.33	6.35
Amount of Mix Fluid (gps)	12.33	6.35
Estimated Pumping Time - 70 BC (HH:MM)	6:25	2:20
Free Water (mls) @ 80 ° F @ 90 ° angle	0.0	0.0
COMPRESSIVE STRENGTH		
12 hrs @ 89 ° F (psi)	124	1200
24 hrs @ 89 ° F (psi)	250	2000

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.097 CASING	1,500	1,500
7.875 HOLE	7,100	7,100

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	7,100	7,100

Float Collar set @	7,060 ft
Mud Density	8.40 ppg
Est. Static Temp.	123 ° F
Est. Circ. Temp.	116 ° F

VOLUME CALCULATIONS

1,500 ft	x	0.1926 cf/ft	with	0 % excess	=	288.9 cf
4,100 ft	x	0.1733 cf/ft	with	50 % excess	=	1066.4 cf
1,500 ft	x	0.1733 cf/ft	with	50 % excess	=	389.9 cf
40 ft	x	0.1305 cf/ft	with	0 % excess	=	5.2 cf (inside pipe)
			TOTAL SLURRY VOLUME		=	1750.4 cf
					=	312 bbls

FLUID SPECIFICATIONS

Pre-flush — 1,500.0 gals Mud Clean I @ 8.4 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1355	/	2.41	= 563 sacks (50:50) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 10% bwoc Bentonite + 136.9% Fresh Water
Tail Slurry	395	/	1.49	= 265 sacks (15:61:11) Poz (Fly Ash):Class C Cement:CSE + 5% bwow Sodium Chloride + 1% bwoc FL-62 + 0.005 gps FP-6L + 70% Fresh Water

Displacement — 164.1 bbls Water @ 8.4 ppg

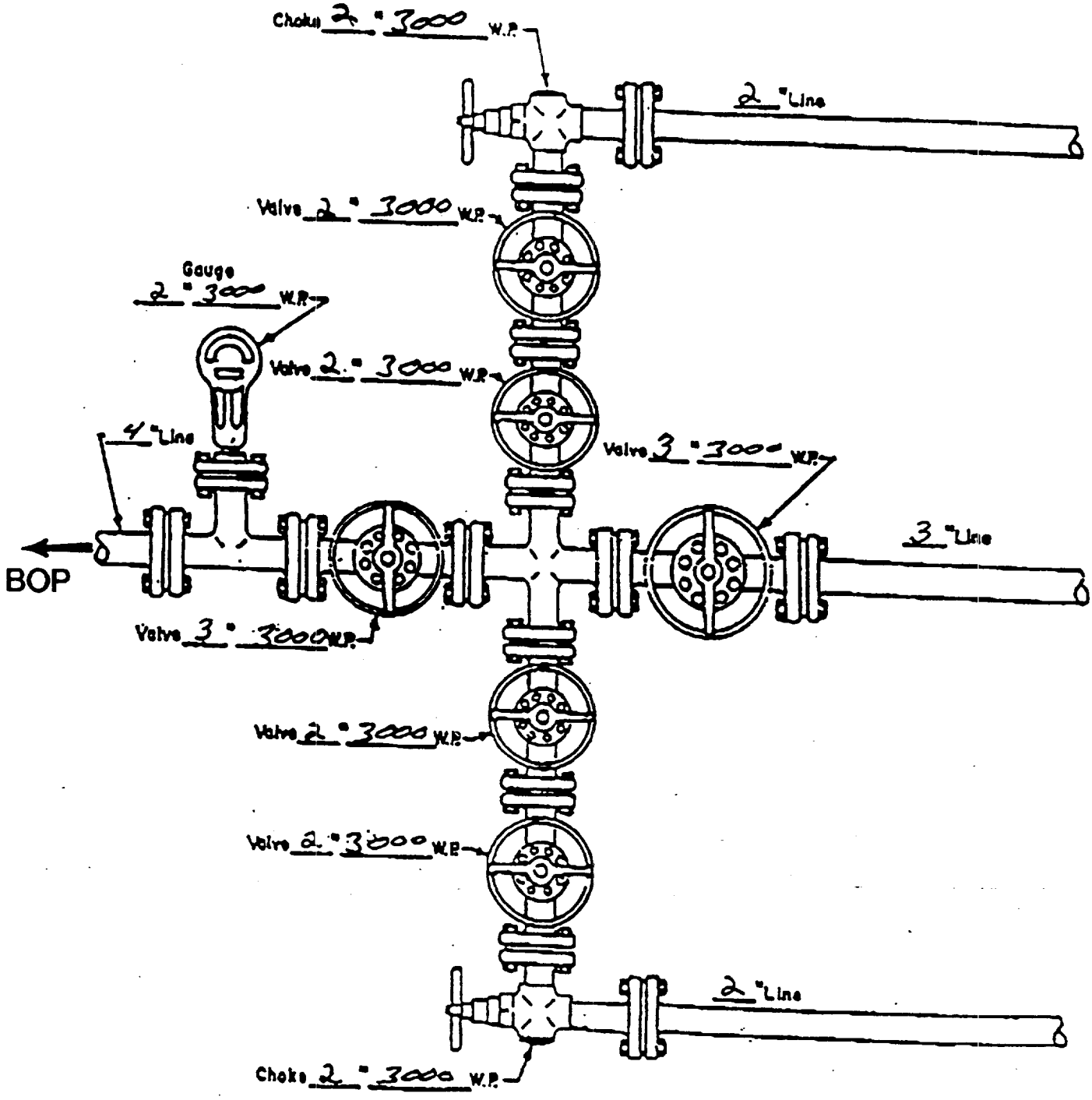
CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	11.85	13.60
Slurry Yield (cf/sack)	2.41	1.49
Amount of Mix Water (gps)	13.79	7.31
Amount of Mix Fluid (gps)	13.79	7.31
Estimated Pumping Time - 70 BC (HH:MM)	2:58	2:31
Free Water (mls) @ 80 ° F @ 90 ° angle	1.0	0.0
Fluid Loss (cc/30min) at 1000 psi and 80 ° F	792.0	62.0
COMPRESSIVE STRENGTH		
12 hrs @ 124 ° F (psi)	175	1013
24 hrs @ 124 ° F (psi)	350	1877

RHEOLOGIES

FLUID		TEMP	600	300	200	100	6	3
Lead Slurry	@	80 ° F	104	101	96	81	39	31
Tail Slurry	@	80 ° F	210	150	110	60	7	4

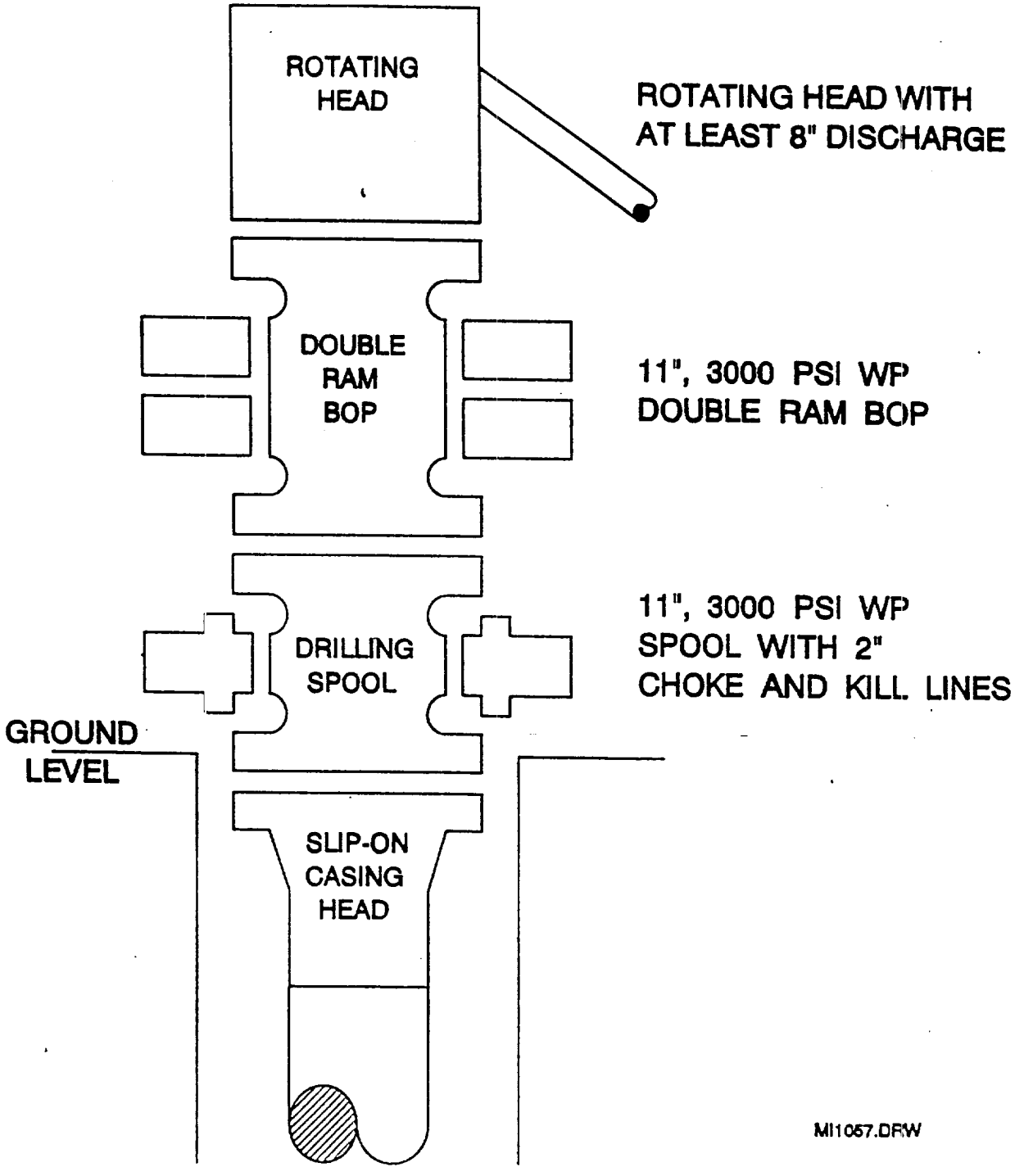
CHOKE MANIFOLD DIAGRAM



MANIFOLD
3000 #W.P

☒ Manual
☐ Hydraulic

BOP SPECIFICATIONS



ELF 7/3/01

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WILL BE RELEASED