

N.M. Oil Cons. Div-Dist. 2

1301 W. Grand Avenue

Artesia, NM 88210

Form 3180-3

(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE

(Other instructions on
reverse side)

FORM APPROVED

OMB NO. 1004-0136

Expires: February 28, 1995

5. LEASE DESIGNATION AND SERIAL NO.

NMNM 092160

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Pending

8. FARM OR LEASE NAME, WELL NO.

Chosa Draw 27 Federal Com No. 1

9. API WELL NO.

30-015-32918

10. FIELD AND POOL, OR WILDCAT

White City; Penn (Undesg)

11. SEC. T., R., M., BLOCK AND SURVEY

OR AREA

Sec. 27 T25S R26E

12. COUNTY OR PARISH

Eddy

13. STATE

NM

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

1b. TYPE OF WELL

OIL ☐GAS ☒SINGLE ☐MULTIPLE ☐

WELL

WELL

OTHER

ZONE

ZONE

2. NAME OF OPERATOR

Gruy Petroleum Management Co.

3. ADDRESS AND TELEPHONE NO.

P.O. Box 140907 Irving TX 75014 972-401-3111

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

SHL 330' FNL & 1980' FEL BHL 1650' FNL & 1650' FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

24 miles South of Carlsbad

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, T.O.

(Also to nearest drtg. unit line, if any)

1650'

16. NO. OF ACRES ON LEASE

1330

NO. OF ACRES ASSIGNED

TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

NA

19. PROPOSED DEPTH

20. ROTARY OR CABLE TOOLS

Rotary

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

3254' GR

CARLSBAD CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START*

07-15-03

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2" WITNESS	H-40 13 3/8"	48 #	425' WITNESS	490 sx circulate
12 1/4"	J-55 9 5/8"	40 #	3200'	1200 sx circulate
7 7/8"	N-80/S-95 5 1/2"	17 #	12500'	1620 sx TOC 2700'

The proposed well will be drilled to a depth of 12500' and completed as a White City Penn Morrow producer.

From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 - psi BOP system. We are requesting a variance for the 13 3/8" surface casing from Onshore Order No. 2, which states all casing strings below the conductor, shall be pressure tested to .22 psi per foot or 1500 # whichever is greater, but not to exceed 70% of the manufactures stated maximum internal yield. Per onshore order 2 the 13 3/8" 48 # H-40 casing should be tested at 70% of its maximum internal yield of 1730 # or 1211 #. During the running of the surface pipe we do not anticipate any pressures greater than 500 #, and are requesting a variance to test the 13 3/8" casing to 500 #

IN ABOVE SPACE, DESCRIBE PROPOSED PROGRAM:

If proposal is to deepen, 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

Zero Farris

TITLE

Mgr. Ops. Admin

DATE

05-22-03

(This space for Federal or State office use)

PERMIT No.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those lands in which the proposed lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

Joe G. Lara

TITLE

FIELD MANAGER

DATE

29 JUL 2003

*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.

SUBJECT TO LIKE
APPROVAL BY STATEAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Application to Drill

Gruy Petroleum Management Co.
Chosa Draw 27 Federal Com 1
Unit Letter G Section 27
T25S - R26E Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6 the following information is provided for your consideration:

- 1 Location: SHL 330' FNL & 1980' FEL Sec. 27- 25S 26E
BHL 1650' FNL & 1650' FEL Sec. 27-25S-26E
- 2 Elevation above sea level: GR 3265'
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: 12500'
- 6 Estimated tops of geological markers:

T/Salt	250'	Cisco Canyon	9928
B/Salt	800'	Strawn	10078
Delaware	1450	Atoka	10388
Bone Spring	6168	Morrow	11,158
Wolfcamp	8098	Barnett	11,768

- 7 Possible mineral bearing formation:

Wolfcamp	Oil
Atoka	Gas
Morrow	Gas

- 8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17 1/2"	0-425'	13 3/8"	48	8-R	ST&C	H-40
12 1/4"	0-3200'	9 5/8"	40	8-R	ST&C	J-55
7 7/8"	0-13000'	5 1/2"	17	8-R	ST&C	N-80 / S-95

Application to Drill

Gruy Petroleum Management Co.
Chosa Draw 27 Federal Com 1
Unit Letter G Section 27
T25S - R26E Eddy County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 425' of 13 3/8" H-40 48# ST&C casing. Cement with 490 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 3200' of 9 5/8" J-55 40# ST&C casing. Cement in two stages, first stage cement with 1000 Sx. Of Class POZ/C Cement + additives, second stage cement with 200 Sx. Of Class "C" + additives, circulate cement to surface.
5 1/2"	Production	Set 12500' of 5 1/2" NP-80 / S-95 17# ST&C casing. Cement in two stages, first stage cement with 1020 Sx. of Class POZ/C Cement + additives. Second stage cement with 600 Sx of Class "C" Estimated top of cement 2700'.

10 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. BOP unit will be hydraulically operated. BOP will be nipped up on the 9 5/8" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 425'	9.2 - 9.6	30 - 32	ay lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
425' - 3200'	9.7 - 10.0	28 - 29	ay lose circ.	Brine water. Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.
3200' - 8300'	8.4 - 9.9	28 - 29	NC	Fresh water. Paper for seepage. Lime for pH (9 - 9.5)
8300' - 10000'	8.45 - 8.9	28 - 29	NC	Cut brine. Caustic for pH control.
10000' - 12500'	8.9 - 9.7	29 - 45	NC	XCD Polymer mud system.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

Application to Drill

Gruy Petroleum Management Co.
Chosa Draw 27 Federal Com 1
Unit Letter G Section 27
T25S - R26E Eddy County, NM

12 Testing, Logging and Coring Program:

- A. Mud logging program: One-man unit from 8000' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DST's, or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures or H₂S gas are expected. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 2500 PSI, estimated BHT 1000 .

14 Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 35 - 45 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Morrow / Atoka pay will be perforated and stimulated. The well will be tested and potentialized as a gas well.

Hydrogen Sulfide Drilling Operations Plan

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems.
 - D. Principle and operation of H₂S detectors, warning system and briefing
 - E. Evacuation procedure, routes and first aid.
 - F. Proper use of 30 minute pressure demand air pack.
- 2 H₂S Detection and Alarm Systems
 - A. H₂S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
 - C. There should be a windsock at entrance to location.
- 4 Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H₂S present in dangerous concentration. Only emergency personnel admitted to location.
- 5 Well control equipment
 - A. See exhibit "E"
- 6 Communication
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing
 - A. Exhausts will be watered.
 - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
 - C. If location is near any dwelling a closed DST will be performed.

Hydrogen Sulfide Drilling Operations Plan

- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.



**Gruy Petroleum Management Co.
New Mexico
Eddy County
Chosa Draw 27 Fed Com - Plan 05/22/03
(A)**

Sperry-Sun

Proposal Report

22 May, 2003

Data Source: Information from Wade Wiley

Proposal Ref: pro6546

HALLIBURTON

Proposal Report for Chosa Draw 27 Fed Com - Plan 05/22/03 (A)
Data Source: Information from Wade Wiley

Measured Depth (ft)	Incl. (Deg)	Azim. (Deg)	Station TVD (ft)	Coordinates Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Comment
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00		
7947.00	0.000	0.000	7947.00	0.00 N	0.00 E	0.00	0.00	Kick-Off at 7947.00ft
8000.00	1.060	165.964	8000.00	0.48 S	0.12 E	0.49	2.00	
8100.00	3.060	165.964	8099.93	3.96 S	0.99 E	4.08	2.00	
8200.00	5.060	165.964	8199.67	10.83 S	2.71 E	11.16	2.00	
8300.00	7.060	165.964	8299.11	21.07 S	5.27 E	21.72	2.00	
8400.00	9.060	165.964	8398.11	34.67 S	8.67 E	35.74	2.00	
8500.00	11.060	165.964	8496.57	51.62 S	12.90 E	53.21	2.00	
8571.99	12.500	165.964	8567.05	65.88 S	16.47 E	67.91	2.00	Build Rate = 2.00°/100ft
8600.00	13.060	165.964	8594.36	71.89 S	17.97 E	74.10	2.00	
8700.00	15.060	165.964	8691.36	95.46 S	23.86 E	98.39	2.00	
8800.00	17.060	165.964	8787.45	122.29 S	30.57 E	126.06	2.00	
8900.00	19.060	165.964	8882.52	152.37 S	38.09 E	157.06	2.00	
9000.00	21.060	165.964	8976.45	185.64 S	46.41 E	191.35	2.00	
9100.00	23.060	165.964	9069.12	222.08 S	55.52 E	228.91	2.00	
9196.99	25.000	165.964	9157.70	260.39 S	65.10 E	268.40	2.00	End of Build at 9196.99ft
9200.00	25.000	165.964	9160.43	261.62 S	65.41 E	269.68	0.00	
9300.00	25.000	165.964	9251.06	302.62 S	75.66 E	311.94	0.00	
9400.00	25.000	165.964	9341.69	343.62 S	85.91 E	354.20	0.00	
9500.00	25.000	165.964	9432.32	384.62 S	96.16 E	396.46	0.00	
9600.00	25.000	165.964	9522.95	425.62 S	106.41 E	438.72	0.00	
9700.00	25.000	165.964	9613.59	466.62 S	116.66 E	480.98	0.00	
9800.00	25.000	165.964	9704.22	507.62 S	126.91 E	523.25	0.00	
9900.00	25.000	165.964	9794.85	548.62 S	137.16 E	565.51	0.00	
10000.00	25.000	165.964	9885.48	589.62 S	147.41 E	607.77	0.00	
10100.00	25.000	165.964	9976.11	630.62 S	157.66 E	650.03	0.00	
10200.00	25.000	165.964	10066.74	671.62 S	167.91 E	692.29	0.00	
10300.00	25.000	165.964	10157.37	712.62 S	178.16 E	734.55	0.00	
10400.00	25.000	165.964	10248.00	753.62 S	188.41 E	776.81	0.00	
10489.21	25.000	165.964	10328.85	790.20 S	197.55 E	814.51	0.00	Hold Angle at 25.000°
10500.00	25.000	165.964	10338.63	794.62 S	198.66 E	819.08	0.00	
10600.00	25.000	165.964	10429.26	835.62 S	208.90 E	861.34	0.00	
10700.00	25.000	165.964	10519.90	876.62 S	219.15 E	903.60	0.00	
10800.00	25.000	165.964	10610.53	917.62 S	229.40 E	945.86	0.00	
10900.00	25.000	165.964	10701.16	958.62 S	239.65 E	988.12	0.00	
11000.00	25.000	165.964	10791.79	999.62 S	249.90 E	1030.38	0.00	
11100.00	25.000	165.964	10882.42	1040.62 S	260.15 E	1072.64	0.00	
11200.00	25.000	165.964	10973.05	1081.62 S	270.40 E	1114.91	0.00	
11300.00	25.000	165.964	11063.68	1122.62 S	280.65 E	1157.17	0.00	
11400.00	25.000	165.964	11154.31	1163.62 S	290.90 E	1199.43	0.00	
11500.00	25.000	165.964	11244.94	1204.62 S	301.15 E	1241.69	0.00	
11600.00	25.000	165.964	11335.57	1245.62 S	311.40 E	1283.95	0.00	
11700.00	25.000	165.964	11426.20	1286.62 S	321.65 E	1326.21	0.00	
11781.42	25.000	165.964	11500.00	1320.00 S	330.00 E	1360.62	0.00	Chosa Draw 27 Target A, Current Target
11800.00	25.000	165.964	11516.84	1327.62 S	331.90 E	1368.48	0.00	

HALLIBURTON

Gruy Petroleum Management Co.
New Mexico
Eddy County

Proposal Report for Chosa Draw 27 Fed Com - Plan 05/22/03 (A) Data Source: Information from Wade Wiley

Measured Depth (ft)	Incl. (Deg)	Azim. (Deg)	Station Coordinates TVD (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Comment
11900.00	25.000	165.964	11607.47	1368.62 S	342.15 E	1410.74	0.00	
12000.00	25.000	165.964	11698.10	1409.62 S	352.40 E	1453.00	0.00	
12100.00	25.000	165.964	11788.73	1450.61 S	362.65 E	1495.26	0.00	
12200.00	25.000	165.964	11879.36	1491.61 S	372.90 E	1537.52	0.00	
12300.00	25.000	165.964	11969.99	1532.61 S	383.15 E	1579.78	0.00	
12333.11	25.000	165.964	12000.00	1546.19 S	386.55 E	1593.78	0.00	Total Depth at 12333.11ft

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to RKB. Northings and Eastings are relative to Wellhead.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Wellhead and calculated along an Azimuth of 165.964° (Grid).

Coordinate System is NAD27 New Mexico State Planes, Eastern Zone.
Grid Convergence at Surface is -0.003°. Magnetic Convergence at Surface is -8.929° (22-May-03)

Based upon Minimum Curvature type calculations, at a Measured Depth of 12333.11ft.,
The Bottom Hole Displacement is 1593.78ft., in the Direction of 165.964° (Grid).

Comments

Measured Depth (ft)	Station Coordinates TVD (ft)	Northings (ft)	Eastings (ft)	Comment
7947.00	7947.00	0.00 N	0.00 E	Kick-Off at 7947.00ft
8571.99	8567.05	65.88 S	16.47 E	Build Rate = 2.00°/100ft
9196.99	9157.70	260.39 S	65.10 E	End of Build at 9196.99ft
10489.21	10328.85	790.20 S	197.55 E	Hold Angle at 25.000°
12333.11	12000.00	1546.19 S	386.55 E	Total Depth at 12333.11ft

Targets associated with this wellpath

Target Name	Target Entry Coordinates TVD (ft)	Northings (ft)	Eastings (ft)	Target Shape	Target Type
Chosa Draw 27 Target A	11500.00	1320.00 S	330.00 E	Point	Current Target

HALLIBURTON

Gruy Petroleum Management Co.

DrillQuest™

Sperry-Sun

New Mexico
Eddy County
Sec. 27-T25S-R26E
Chosa Draw 27 Fed Com
Plan 05/22/03 (A)



Scale: 1 inch = 300ft

Eastings

Kick-Off at 7947.00ft

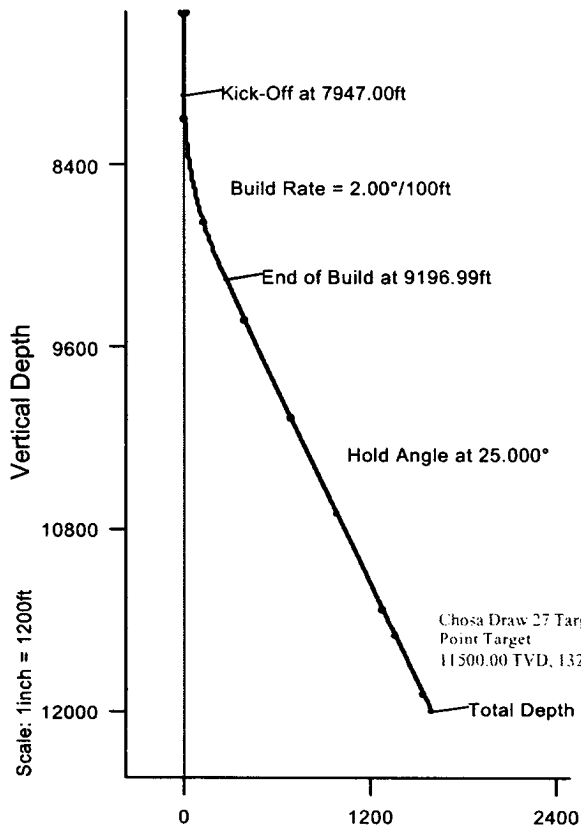
Build Rate = 2.00°/100ft

End of Build at 9196.99ft

Hold Angle at 25.000°

Chosa Draw 27 Target A
Point Target
11500.00 TVD, 1320.00 S, 330.00 E

Total Depth at 12333.11ft



Scale: 1 inch = 1200ft

Section Azimuth: 165.964° (Grid North)

Vertical Section

Northings

Scale: 1 inch = 300ft

Prepared by:
Admin

Date/Time:
22 May, 2003 - 11:56

Checked:

Approved:

State of New Mexico

DISTRICT I

P.O. Box 1880, Hobbs, NM 88241-1880

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II

P.O. Drawer DD, Aracoma, NM 86211-0719

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT III

1000 Rio Brazos Rd., Artec, NM 87410

DISTRICT IV

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name White City; Undesignated
Property Code	Property Name CHOSA DRAW 27 FEDERAL COM	Well Number 1
OGRID No. 162683	Operator Name GRUY PETROLEUM MANAGEMENT CO.	Elevation 3265'

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	27	25-S	26-E		330'	NORTH	1980'	EAST	EDDY

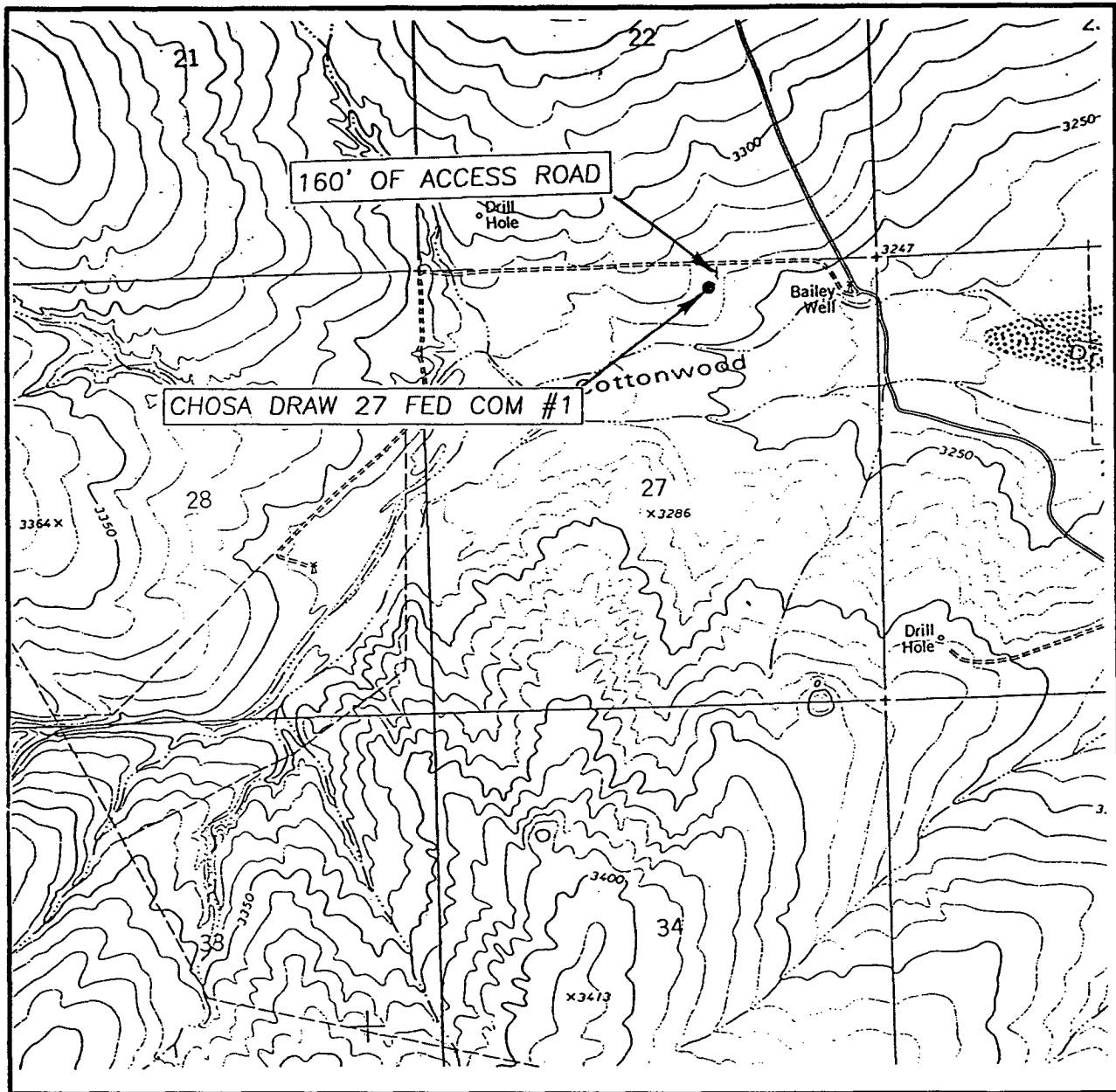
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	27	25-S	26-E		1876'	North	1594'	East	Eddy
Dedicated Acres 320	Joint or Infill N	Consolidation Code C	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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Zeno Farris</i> Signature Zeno Farris Printed Name Manager, Operations Admin Title May 29, 2003 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 supervision, and that the same is true and correct to the best of my belief. May 02, 2003 Date Surveyed Signature & Seal of Professional Surveyor <i>Ronald J. Edson</i> 5/05/05 03.11.0469
	Certificate No. RONALD J. EDSON 3239 GARY EDSON 12641

LOCATION VERFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
JUMPING SPRING, N.M.

SEC. 27 TWP. 25-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 330' FNL & 1980' FEL

ELEVATION 3265'

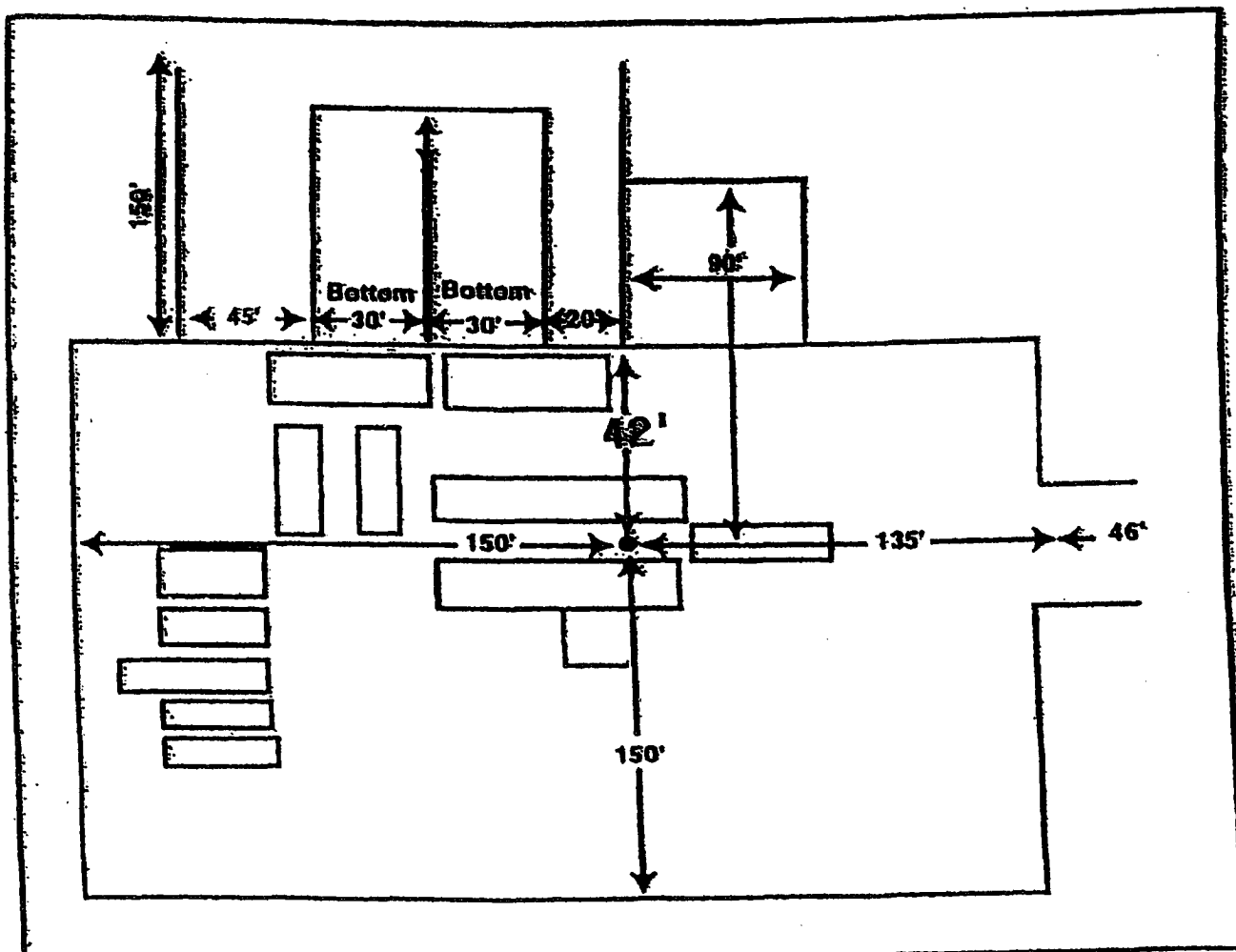
OPERATOR GRUY PETROLEUM MANAGEMENT CO.

LEASE CHOSA DRAW 27 FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP
JUMPING SPRING, N.M.

Exhibit "C"

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117



Rig 80

Exhibit "D"
 Rig Layout Plan
 Gruy Petroleum Management Co.
 Chosa Draw 27 Federal Com 1
 Surface: Unit B; Sec. 27; T25S R26E
 330' FNL 1980' FEL
 Bottom: Unit G; Sec. 27; T25S R26E
 1876' FNL 1594' FEL
 Eddy County, NM

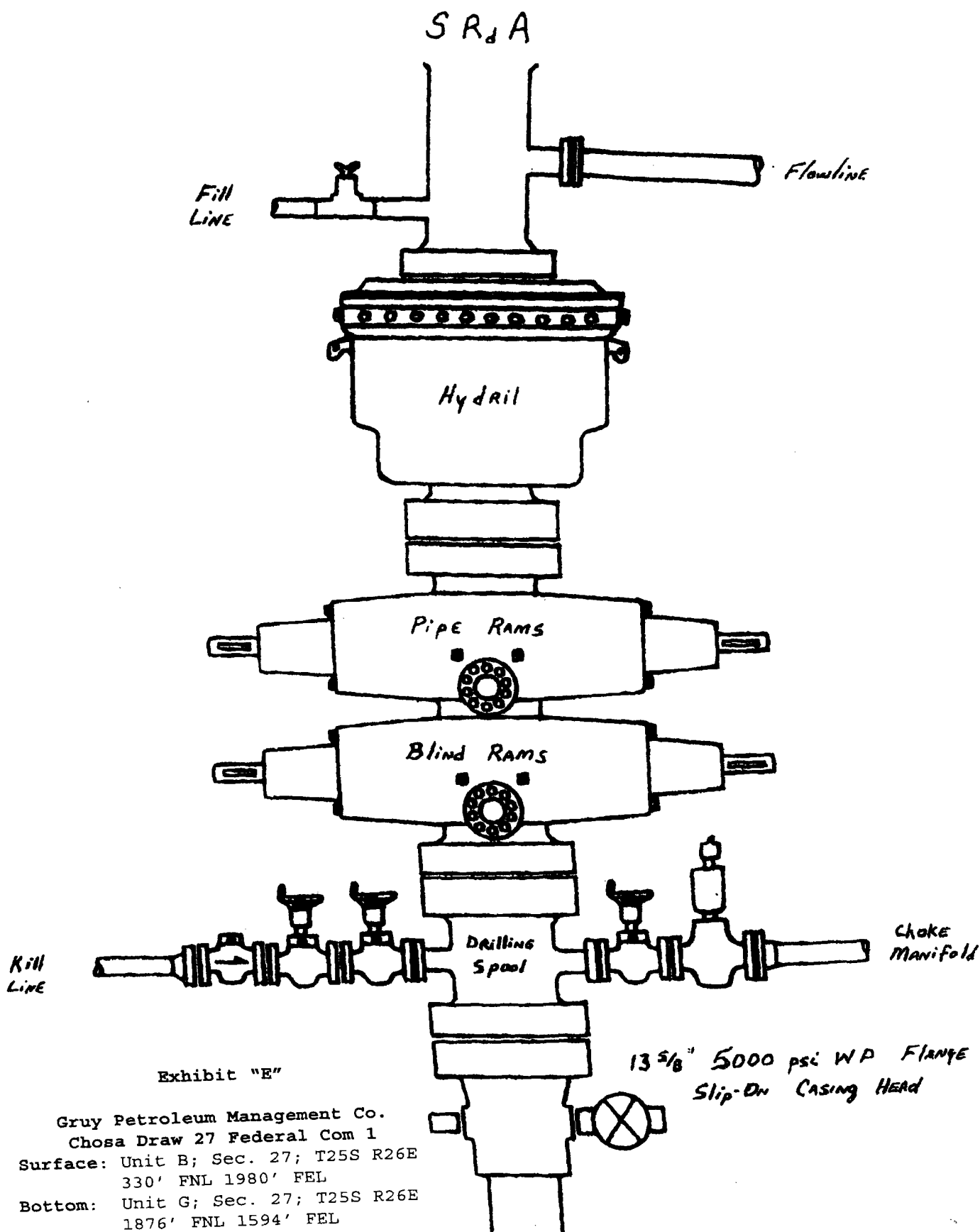


Exhibit "E"

Gruy Petroleum Management Co.
 Chosa Draw 27 Federal Com 1
 Surface: Unit B; Sec. 27; T25S R26E
 330' FNL 1980' FEL
 Bottom: Unit G; Sec. 27; T25S R26E
 1876' FNL 1594' FEL
 Eddy County, NM