

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTN.M. Oil Cons. Div-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

FORM APPROVED

OMB NO. 1004-0136

Expires: February 28, 1995

DESIGNATION AND SERIAL NO.

C 028784-B 028793A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		7. UNIT AGREEMENT NAME Grayburg Deep Unit NM 70954 X	
1b. TYPE OF WELL OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> WELL WELL OTHER ZONE <input checked="" type="checkbox"/> MULTIPLE <input type="checkbox"/> ZONE		8. FARM OR LEASE NAME, WELL NO. Grayburg Deep Unit No. 20 34850	
2. NAME OF OPERATOR Gruy Petroleum Management Co. 162683		9. API WELL NO. 30-015-34192	
3. ADDRESS AND TELEPHONE NO. P.O. Box 140907 Irving TX 75014 972-401-3111		10. FIELD AND POOL, OR WILDCAT Sand Tank Morrow 84872	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) 1640' FSL & 2100' FEL Sec. 19-17S-30E		11. SEC. T., R., M., BLOCK AND SURVEY OR AREA Sec. 19 T17S R30E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 26 miles East of Artesia		12. COUNTY OR PARISH Eddy	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, T.O. (Also to nearest drig. unit line, if any) 1640'		13. STATE NM	
16. NO. OF ACRES IN LEASE 624.52		17. 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. N/A		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3619' GR		22. APPROX. DATE WORK WILL START* 06-30-05	

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	J-55 13 3/8"	54.5 #	350' - 500' *	490 sx circulate
12-1/4"	P-110/N-80 9 5/8"	40 #	4000'	1200 sx circulate
7-7/8"	P-110 5 1/2"	17 #	12500'	1620 sx TOC 2700'

*Set surface casing 25' into the top of the Rustler, which is estimated to be between 350' and 500'.

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 and BOP testing 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 manufacturer's stated maximum internal yield. During the running of the surface pipe and the drilling of the intermediate hole we do not anticipate any pressures greater than 1000#, and we are requesting a variance to test the 13 3/8" casing and BOP system to 1000# psi and use rig pumps instead of an independent service company.

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 Famy TITLE Mgr. Ops. Admin DATE 05-05-05

(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 rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

/s/ Joe G. Lara

TITLE

FIELD MANAGER

DATE

MAY 26 2005

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

APPROVAL FOR 1 YEAR
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

NSL - 5229

29.5 sat

French Dr., Hobbs, NM 88240
W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
March 12, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Gruy Petroleum Management Co. Telephone: 972-443-6489 e-mail address: zfarris@magnumhunter.com

Address: P.O. Box 140907, Irving, Tx 75014-0907

Facility or well name: Grayburg Deep Unit No. 20 API #: U/L or Qtr/Qtr^J Sec 19 T17S R30E

County: Eddy Latitude 324901.82N Longitude 1040032.65W NAD: 1927 ☒ 1983 ☐ Surface Owner Federal ☐ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Volume
bbl

Below-grade tank

Volume: bbl Type of fluid:

Construction material:

Double-walled, with leak detection? Yes ☐ If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high
water elevation of ground water.)

Less than 50 feet

50 feet or more, but less than 100 feet

100 feet or more

(20 points)

(10 points)

(0 points)

Wellhead protection area: (Less than 200 feet from a private domestic
water source, or less than 1000 feet from all other water sources.)

Yes

No

(20 points)

(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas,
irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

200 feet or more, but less than 1000 feet

1000 feet or more

(20 points)

(10 points)

(0 points)

Ranking Score (Total Points)

-0-

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility (3) Attach a general description of remedial action taken including remediation start date and en
date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface ft. and attach sample results. (5) Attach soil sample results and a
diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has
been/will be constructed or closed according to NMOCD guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

Date: 05-05-05

Printed Name/Title Zeno Farris Manager Operations Administration

Signature

Zeno Farris

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or
otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or
regulations.

Approval:

Date: MAY 12 2005

Printed Name/Title

Signature



Gruy Petroleum Management Co.

600 East Las Colinas Blvd. • Suite 1100 • Irving, TX 75039 • (972) 401-3111 • Fax (972) 443-6450
Mailing Address: P.O. Box 140907 • Irving, TX 75014-0907

A wholly-owned subsidiary of Magnum Hunter Resources, Inc., an American Stock Exchange company

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management
2909 West 2nd Street
Roswell New Mexico 88201-2019
Attn: Ms. Linda Askwig

Gruy Petroleum Management Co. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below:

Lease No.: LC-028784-B

Legal Description: S/2 Sec 19, T17S-R30E
Containing 320.00 acres, Lea County New Mexico

Formation (S): Morrow

Bond Coverage: Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature: _____

Zeno Farris
Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: 05/05/05

Application to Drill

Gruy Petroleum Management Co.
Grayburg Deep Unit No. 20
Unit Letter J Section 19
T17S - R30E 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: 1640' FSL & 2100' FEL Sec. 19- 17S-30E
- 2 Elevation above sea level: GR 3619'
- 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:

Rustler	500'
San Andres	3400
Wolfcamp	8200'
Atoka	10200'
Morrow	10800'
- 7 Possible mineral bearing formation:

Grayburg/San Andre:	Oil
Atoka	Gas
Morrow	Gas

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17 1/2"	0-500'	13 3/8"	54.5	8-R	ST&C	J-55
12 1/4"	0-4000'	9 5/8"	40	8-R	ST&C	P-110/N-80
7 7/8"	0-12500'	5 1/2"	17	8-R	ST&C	P-110

WITNESS

Application to Drill

Gruy Petroleum Management Co.
Grayburg Deep Unit No. 20
Unit Letter J Section 19
T17S - R30E Eddy County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 350' to 500' of 13 3/8" J-55 54.5 ST&C casing to a depth of 25' into the Rustler. Cement with 490 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 4000' of 9 5/8" P-110/N-80 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" P-110 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 - 500'	8.4 - 8.6	30 - 32	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
500' - 4000'	9.7 - 10.0	28 - 29	May 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.
4000' - 8300'	8.4 - 9.9	28 - 29	NC	Brine 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.
Grayburg Deep Unit No. 20
Unit Letter J Section 19
T17S - R30E 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 are expected. The area has a potential H2S hazard. An H2S drilling plan is attached. 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 4000 PSI, estimated BHT 175.

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 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 flow 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.
- 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 not anticipated.



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

Surface Use Plan

Gruy Petroleum Management Co.
Grayburg Deep Unit No. 20
Unit Letter J Section 19
T17S - R30E Eddy County, NM

- 1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Lea Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
 - A. Exhibit "A" shows the proposed well site as staked.
 - B. From the intersection of Hwy 82 and General American Road West of Loco Hills go East 0.5 miles. Turn right and go South 0.2 miles. Turn left and go East 0.1 miles to the BKU # 229 well. Proposed well is 200' East.
- 2 PLANNED ACCESS ROADS: No new access road will be constructed.
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"
 - A. Water wells - None known
 - B. Disposal wells - None known
 - C. Drilling wells - None known
 - D. Producing wells - As shown on Exhibit "A"
 - E. Abandoned wells - As shown on Exhibit "A"

DISTRICT I
1225 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		Sand Tank; Morrow
Property Code	Property Name	Well Number
	GRAYBURG DEEP UNIT	20
GRID No.	Operator Name	Elevation
162683	GRUY PETROLEUM MANAGEMENT COMPANY	3619'

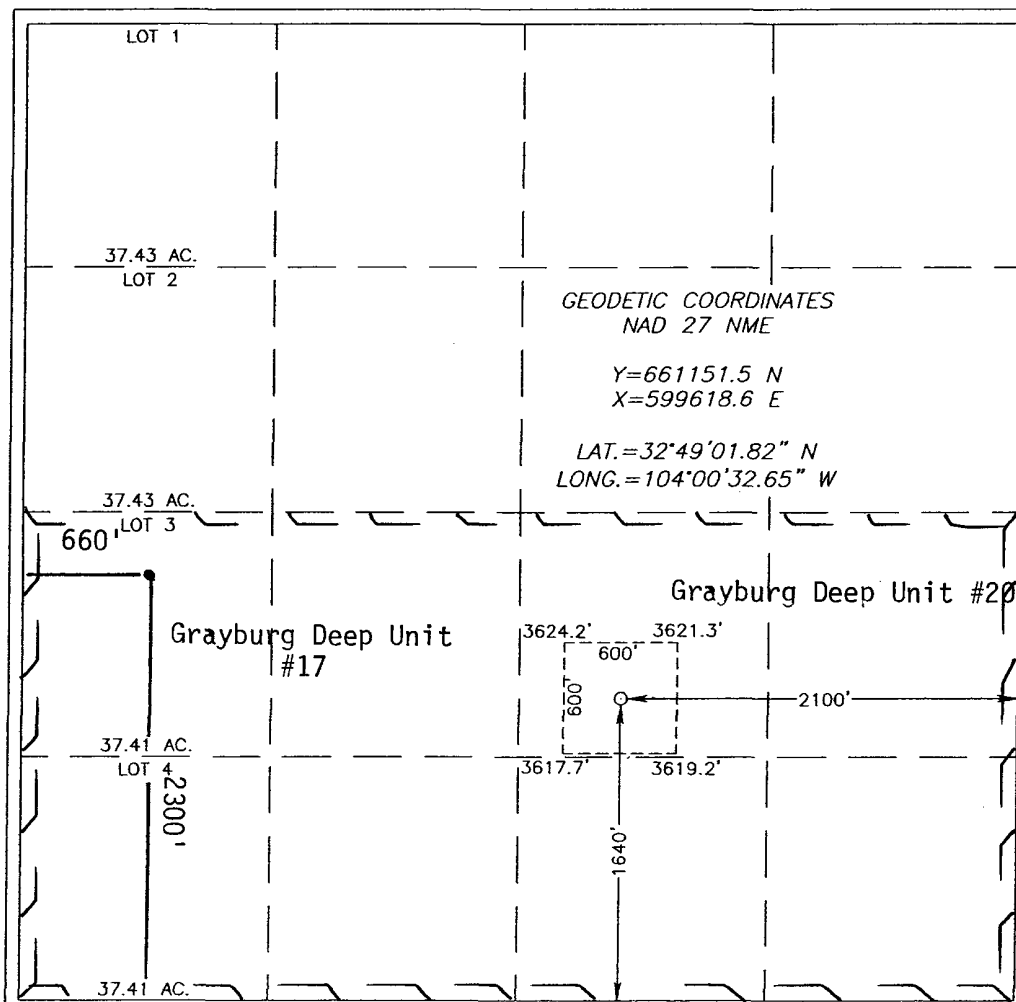
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	19	17-S	30-E		1640	SOUTH	2100	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
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
320314.82	Y								

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.

Zeno Farris

Signature

Zeno Farris

Printed Name

Mgr Operations Admin

Title

May 5, 2005

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.

APRIL 4, 2005

Date Surveyed

LA

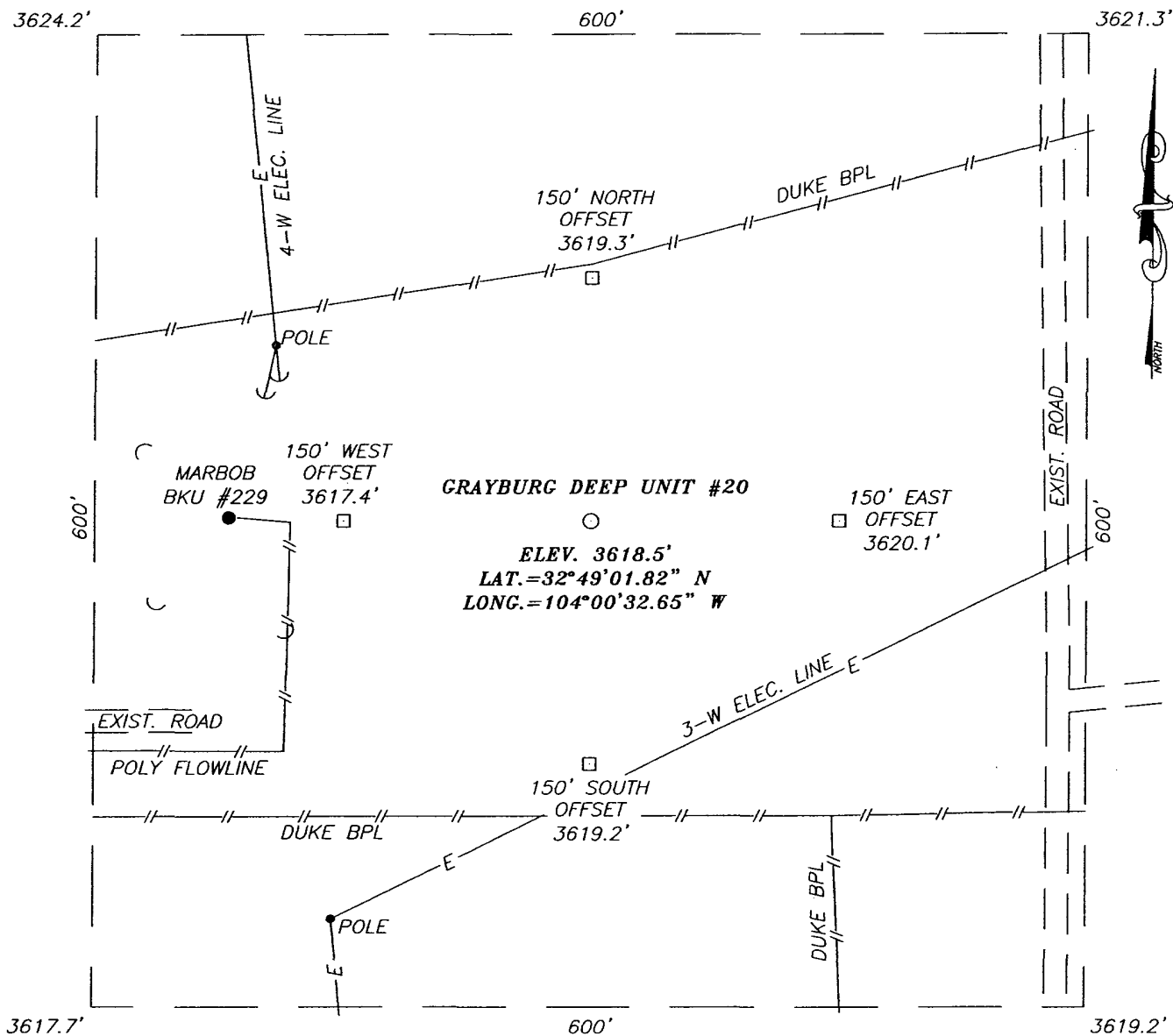
Signature & Seal
Professional Surveyor



Certificate No. GARY EIDSON

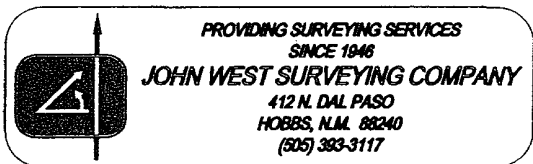
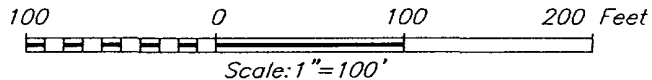
12841

SECTION 19, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HIGHWAY #82 AND GENERAL AMERICAN ROAD WEST OF LOCO HILLS GO EAST 0.5 MILES. TURN RIGHT AND GO SOUTH 0.2 MILES. TURN LEFT AND GO EAST 0.1 MILES TO THE BKU #229 WELL. PROPOSED WELL IS 200' EAST.

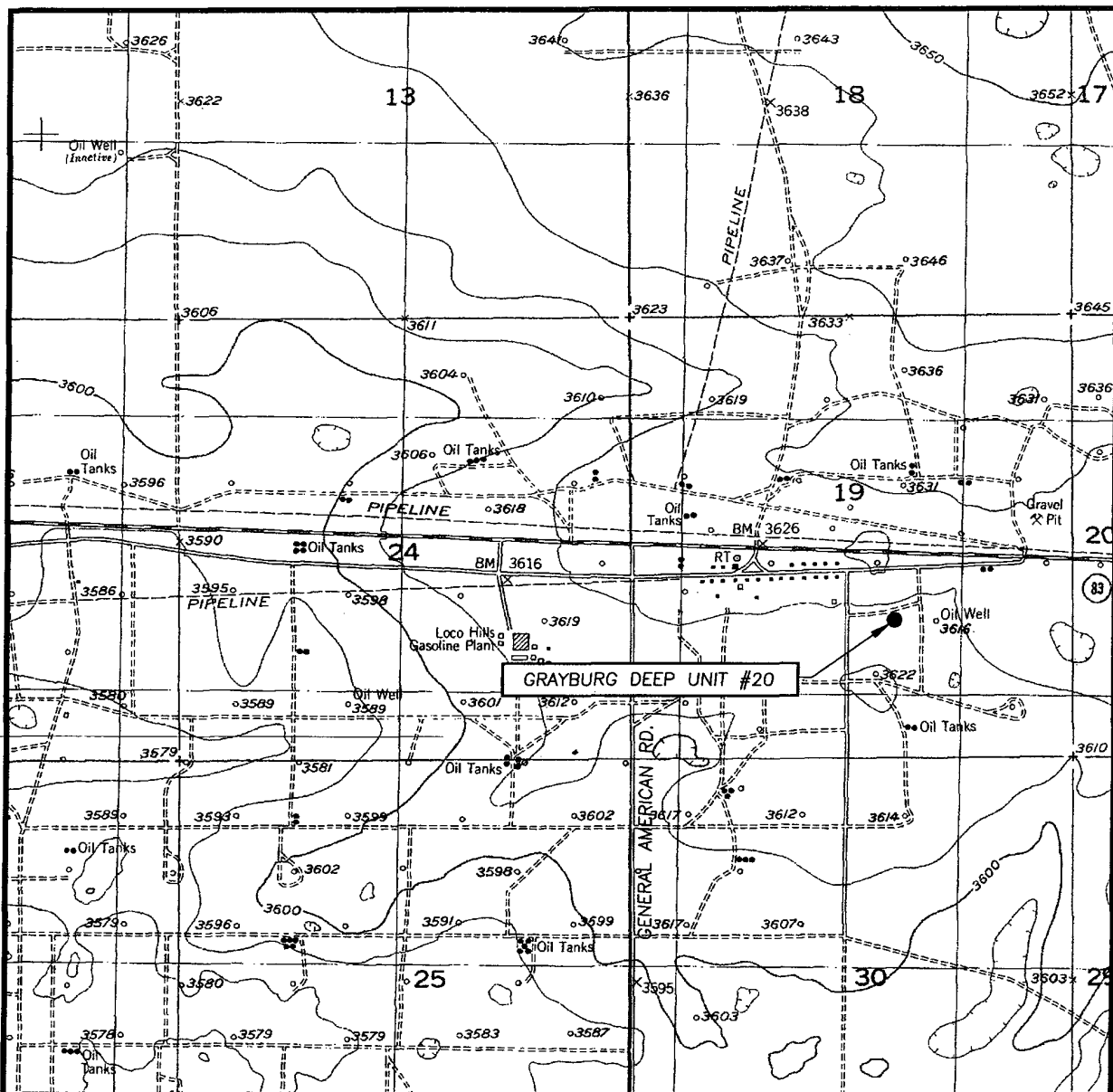


GRUY PETROLEUM MANAGEMENT COMPANY

GRAYBURG DEEP UNIT #20 WELL
 LOCATED 1640 FEET FROM THE SOUTH LINE
 AND 2100 FEET FROM THE EAST LINE OF SECTION 19,
 TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

Survey Date: 4/4/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.0509	Dr By: LA
Date: 4/06/05	Disk: CD#4
05110509	Scale: 1"=100'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
REDLAKE SE, N.M. - 10'

SEC. 19 TWP. 17-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1640' FSL & 2100' FEL

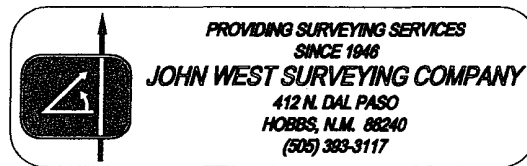
ELEVATION 3619'

OPERATOR GRUY PETROLEUM
MANAGEMENT COMPANY

LEASE GRAYBURG DEEP UNIT

U.S.G.S. TOPOGRAPHIC MAP
REDLAKE SE, N.M.

Exhibit C



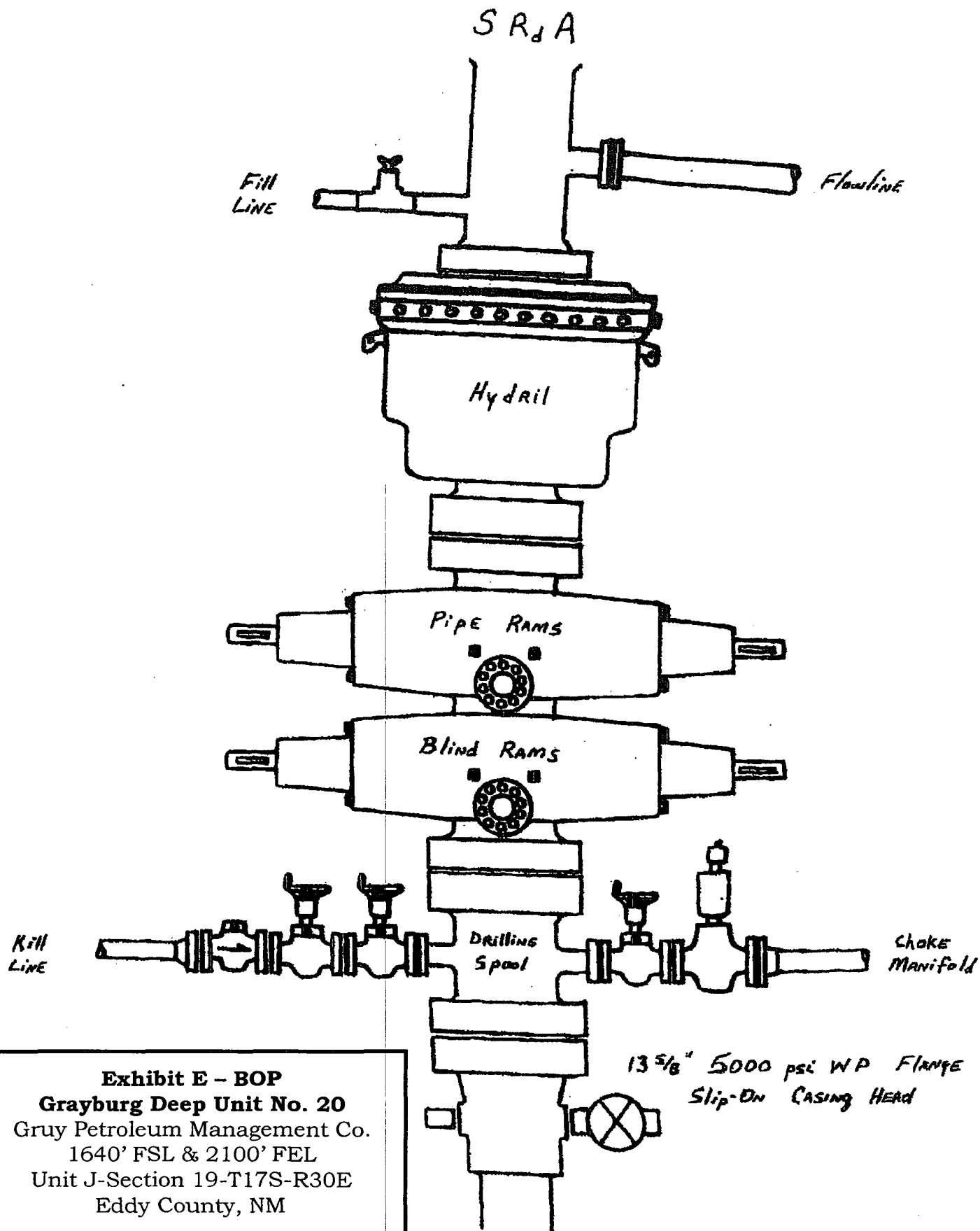


Exhibit E - BOP
Grayburg Deep Unit No. 20
 Gruy Petroleum Management Co.
 1640' FSL & 2100' FEL
 Unit J-Section 19-T17S-R30E
 Eddy County, NM

DRILLING OPERATIONS
CHOKE MANIFOLD
5M SERVICE

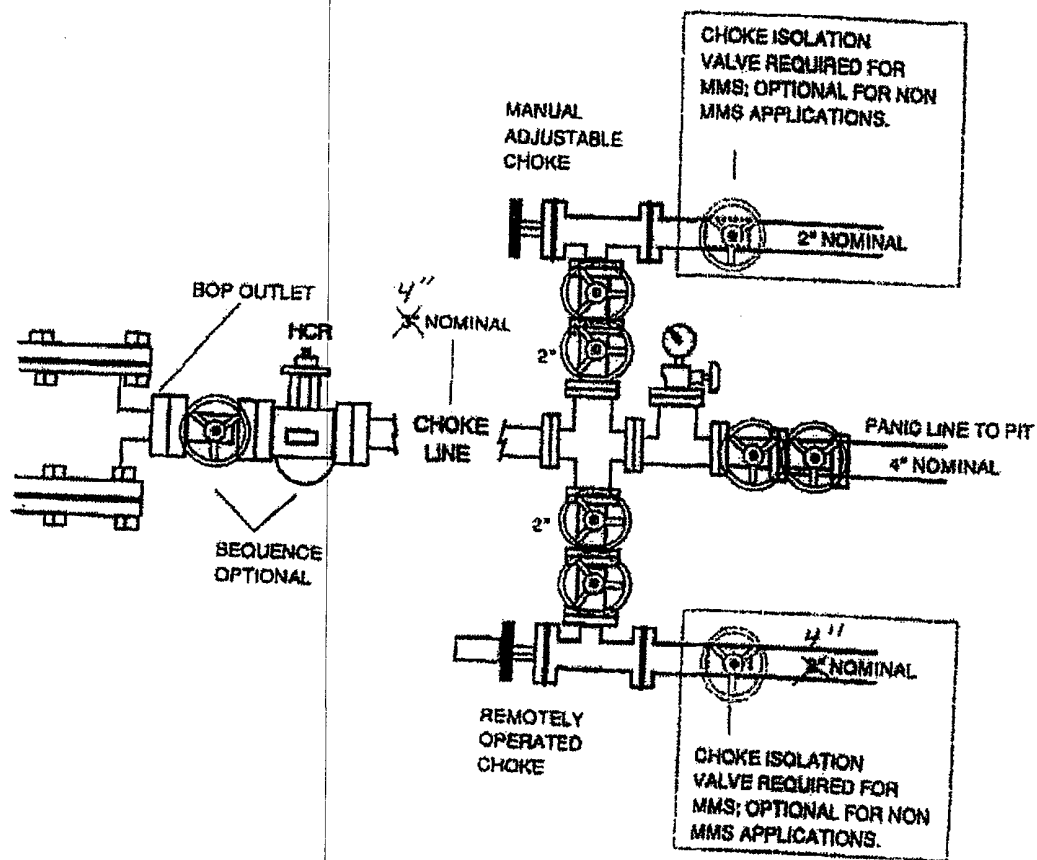


Exhibit E Cont'd - Choke Manifold
Grayburg Deep Unit No. 20
 Gruy Petroleum Management Co.
 1640' FSL & 2100' FEL
 Unit J-Section 19-T17S-R30E
 Eddy County, NM