If earthen pits are used in association with the drilling of this ELICATE* FORM APPROVED well, an OCD pit permit must be Form 3160×3 OMB NO. 1004-0136 (July 1992) UNITED S obtained prior to pit construction. Expires: February 28, 1995 5. LEASE DESIGNATION AND SERIAL NO DEPARTMENT OF NMNM110348 **BUREAU OF LAND MANAGEMENT** 6. IF INDIAN, ALLOTTES OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL OR DEEPEN 1a. TYPE OF WORK 7. UNIT AGREEMENT NAME DRILL X DEEPEN 1b. TYPE OF WELL GAS X MULTIPLE OIL SINGLE WEL OTHER ZONE ZONE 2. NAME OF OPERATOR Merganser 6 Federal Com No. 1 Gruy Petroleum Management Co. 9 API WELL NO. 3. ADDRESS AND TELEPHONE NO RECEIVED 30 - 015 - 34 5 26 P.O. Box 140907 Irving TX 75014 972-401-3111 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. hosa Draw; Morrow SEC. T., R., M., BLOCK AND SURVEY Section 6 - T25S - R27E OR AREA 660' FNL & 990' FWL Sec. 6 T25S R27E 12, COUNTY OR PARISH 13 STATE 17 miles South of Carlsbad Eddy NM 15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST 16. NO. OF ACRES IN LEASE 17. NO. OF ACRES ASSIGNED TO THIS WELL PROPERTY OR LEASE LINE, T.O. 320 660' (Also to nearest drig. unit line, if any) 18. DISTANCE FROM PROPOSED LOCATION 19. PROPOSED DEPTH 20. ROTARY OR CABLE TOOLS TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. NA 13000' Rotary 21, ELEVATIONS (Show whether DF, RT, GR, etc.) 22. APPROX, DATE WORK WILL START **Catholical Water Boston** 3341' GR March 15, 2006 PROPOSED CASING AND CEMENTING PROGRAM WEIGHT PER FOOT SIZE OF HOLE GRADE, SIZE OF CASING SETTING DEPTH QUANTITY OF CEMENT MITMESS 17-1/2" H-40 ST&C 13 3/8" 200' 48# 225 sx circulate J-55 LT&C 9 5/8" 40 # 12-1/4" 3200' 1000 sx circulate 8-3/4" 13000' P-110 LT&C 5 1/2" 1920 sx TOC 2700' 17#

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 0.22 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 are requesting a variance to test the 13-3/8" casing and BOP system to 1000 # psi and to use rig pumps instead of an independent service company.

	E, DESCRIBE PROPOSED PROGRAM: or deepen directionally, give pertinent data on subs		to deepen, give data on present productions and measured and true vertical depths.		
SIGNED	ZawFami	TITLE	Mgr. Ops. Admin	DATE	09-19-05
(This space for Federal or PERMIT No.	State office use)		APPROVAL DATE		
Application approval does a CONDITIONS OF AF	not warrant or certify that the applicant holds legal or equitable little PROVAL, IF ANY: /S/ Joe G. Lara	TITLE	(@ject lease which would entitle the applicant to co	onduct operations thereon.	DEC 2 9 2005

*See Instructions On Reverse Side APPROVAL FOR 1 YEAR MANAGED TO THE MANAGED TO THE STATE OF THE

Special requirements at Special stipinations

ATTACHED

State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

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

320

N

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

Form C-102

Revised JUNE 10, 2003

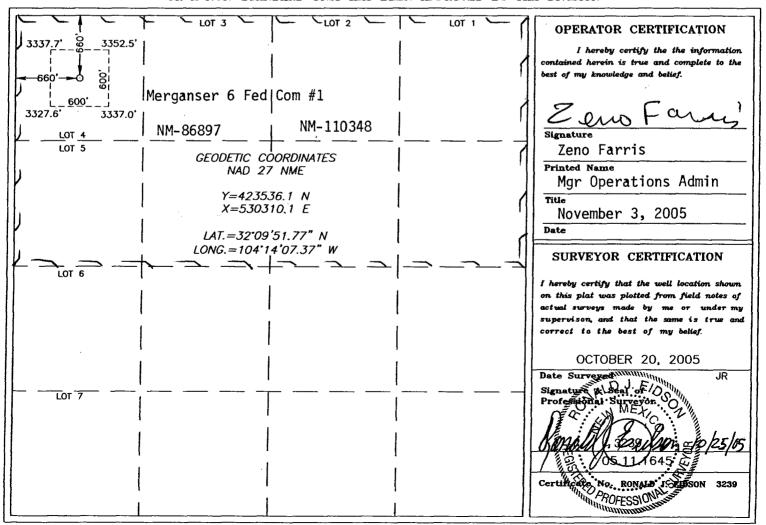
Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT III 1000 Rio Brazos	Rd., Aztec, N	M 87410				FRANCIS DR. exico 87505		Fee Leas	e — 3 Copies
DISTRICT IV	DR., SANTA FE.	NM 87505	WELL LO	CATION	AND ACREA	GE DEDICATI	ON PLAT	□ AMEND	ED REPORT
API	Number			Pool Code	C.	nosa 'Draw	Pool Name ; Morrow		
Property Code			Property Name MERGANSER 6 FEDERAL COM				Well Number		
ogrid no. 162683			Operator Name Gruy Petroleum Management Co.			Elevation 3333	_		
					Surface Loca	ation			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
. , , 4	6	25-S	27-E	·	660	NORTH	660	WEST	EDDY
			Bottom	Hole Loc	cation If Diffe	rent From Sur	face		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acre	s Joint o	r Infill Co	nsolidation (Code Or	der 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



District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III
1000 Rio Brazos Road, Aztec, NM 87410 1220 S. St. Francis Dr., Santa Fe, NM 87505

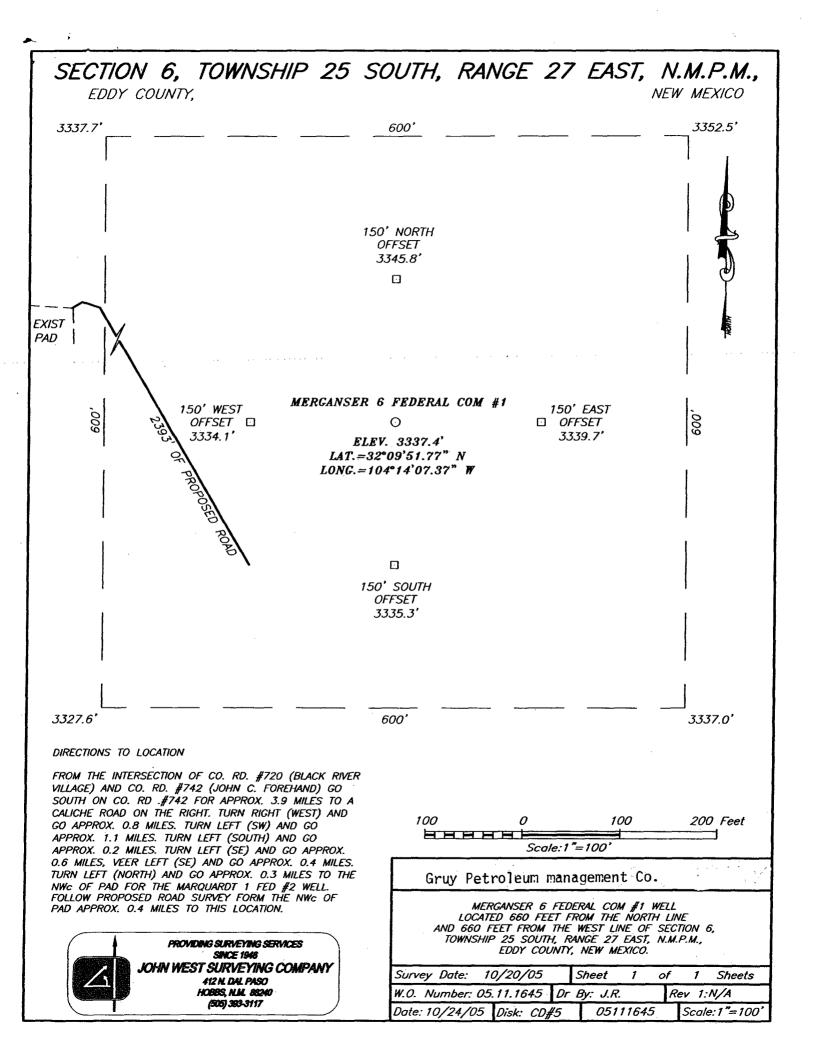
State of New Mexico **Energy Minerals and Natural Resources**

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

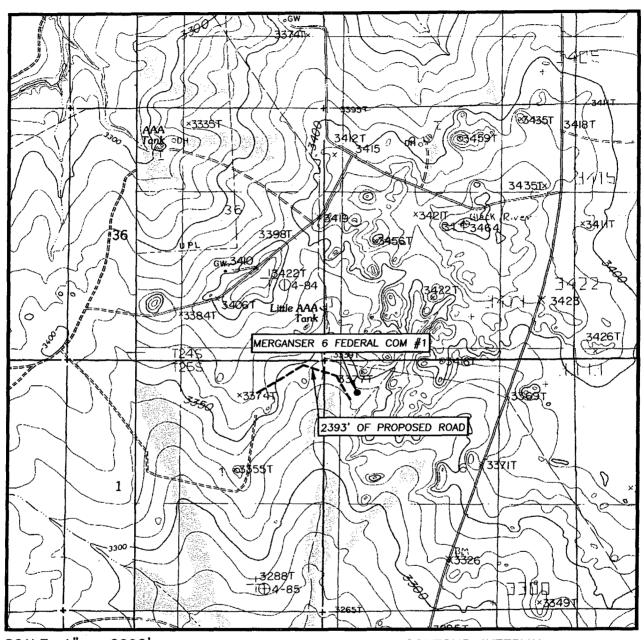
Form C-144 March 12, 2004

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

	de Tank Registration or Closu k covered by a "general plan"? Yes \(\sime\) No	
Type of action: Registration of a pit of	r below-grade tank 🔀 Closure of a pit or below-gr	SEP 2 9 2005
Dperator: Gruy Petroleum Management Co. Telephone: 9: Address: P.O. Box 140907, Irving, Tx 75014-0907	72-443-6489_e-mail address: zfarris@magnumhun	SEP 2 9 2005 SEP 2 9 2005 SEP 2 9 2005
	U/L or Qtr/Qtr ⁴ Sec 6 T2	5S R 27E
-	03.54 W NAD: 1927 ⊠ 1983 ☐ Surface C	Owner Federal State Private Indian
<u> </u>	Below-grade tank	
	Volume:bbl Type of fluid:	
Workover ☐ Emergency ☐	Construction material:	
Lined Unlined	Double-walled, with leak detection? Yes 🔲 If n	ot, explain why not.
Liner type: Synthetic Thickness 12 mil Clay □ Volume Liner type: Synthetic III Thickness 12 mil Clay □ Volume		
Ponth to ground unter (vertical dictance from bottom of six to account high	Less than 50 feet	(20 points)
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	50 feet or more, but less than 100 feet	(10 points)
valer elevation of ground water.)	100 feet or more	(0 points)
Wellhead protection area: (Less than 200 feet from a private domestic	Yes	(20 points)
water source, or less than 1000 feet from all other water sources.)	No	(0 points)
water source, or less than 1000 feet from all other water sources.)	-	
Distance to surface water: (horizontal distance to all wetlands, playas,	Less than 200 feet	(20 points)
rrigation canals, ditches, and perennial and ephemeral watercourses.)	200 feet or more, but less than 1000 feet	(10 points)
	1000 feet or more	0 points
	Ranking Score (Total Points)	-0-
If this is a pit closure: (1) attach a diagram of the facility showing the pit's	s relationship to other equipment and tanks. (2) Ind.	icate disposal location:
onsite offsite from If offsite, name of facility		
date. (4) Groundwater encountered: No 🗌 Yes 🔲 If yes, show depth belo	ow ground surfaceft. and attach sam	ple 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 been/will be constructed or closed according to NMOCD guidelines . a Date: 09-21-05	a general permit \square , or an (attached) alternative	he above-described pit or below-grade tank has OCD-approved plan [].
Printed Name/Title Zeno Farris Manager Operations Administration	_Signature Zeno Far	مسن
Your certification and NMOCD approval of this application/closure does not otherwise endanger public health or the environment. Nor does it relieve the regulations.	relieve the operator of liability should the contents	of the pit or tank contaminate ground water or ny other federal, state, or local laws and/or
Approva OCT 3 2005 Date:	000	
Printed Name/Title Field Supervisor	Signature	
	000	



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SEC. 6 TWP. 25-S RGE. 27-E

SURVEY_____N.M.P.M.

COUNTY EDDY

DESCRIPTION 660' FNL & 660' FWL

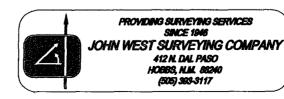
ELEVATION 3337'

OPERATOR Gruy Petroleum Mgmt. Co.

LEASE MERGANSER 6 FEDERAL COM

U.S.G.S. TOPOGRAPHIC MAP BOND DRAW, N.M.

CONTOUR INTERVAL: BOND DRAW, N.M. – 10' BLACK RIVER VILLAGE, N.M. – 20'





Gruy Petroleum Management Co.

600 East Las Colinas Blvd. • Suite 1100 • Irving, TX 75039 • (972) 401-3111 • Fax (469) 420-2710 Mailing Address: P.O. Box 140907 • Irving, TX 75014-0907

A wholly-owned subsidiary of Cimarex Energy, Inc., a NYSE company XEC

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.:

NMNM - 110348

Legal Description:

N/2 Sec 6, T25S-R27E

Containing 320 acres, Eddy County New Mexico

Formation (S):

Morrow/Atoka/Strawn

Bond Coverage:

Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: September 19, 2005

Application to Drill

Gruy Petroleum Management Co. Merganser 6 Federal Com No. 1 Lot No. 1 Section 6 T25S - R27E 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:

660' FNL & 990' FWL

2 Elevation above sea level:

GR 3341'

3 Geologic name of surface formation:

Quaternery 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:

13000'

6 Estimated tops of geological markers:

T/Salt	200	Cisco Canyon	9,928
B/Salt	800	Strawn	10,078
Delaware	1,500	Atoka	10,388
Bone Spring	6,168	Morrow	11,158
Wolfcamp	8.098	Barnett	11.768

7 Possible mineral bearing formation:

Strawn	Gas
Atoka	Gas
Morrow	Gas

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade	_
17 1/2"	0-200'	13 3/8"	48	8-R	ST&C	H-40	•
12 1/4"	0-1900'	9 5/8"	40	8-R	LT&C	J-55	
8-3/4"	0-13000'	5 1/2"	17	8-R	LT&C	P-110	

Application to Drill

Gruy Petroleum Management Co. Merganser 6 Federal Com No. 1 Lot No. 1 Section 6 T25S - R27E Eddy County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 200' of 13 3/8" H-40 48# ST&C casing. Cement with 225 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 3200' of 9 5/8" J-55 40# LT&C casing or casing sufficient to reach the base of the reef complex. Cement lead with 800 sx Class POZ/C Cement + additives and tail with 200 sx Class "C" + additives, circulate cement to surface.
5 1/2"	Production	Set 13000' of 5 1/2" P-110 17# LT&C casing. Cement in two stages, first stage cement with 870 Sx. of Class POZ/C Cement + additives. Second stage cement with 1050 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 nippled 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

11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 200'	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.
200' - 1900'	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.
1900' - 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' - 13000'	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.
Merganser 6 Federal Com No. 1
Lot No. 1 Section 6
T25S - R27E 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 <u>4000</u> PSI, estimated BHT <u>190</u>.

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 <u>35 - 45</u> 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 <u>Strawn / Morrow / Atoka pay</u> will be perforated and stimulated. The well will be tested and potentialed 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.
- 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 seperator will be brought into service along with H2S scavengers if

Gruy Petroleum Management Co. Merganser 6 Federal Com No. 1 Lot No. 1 Section 6 T25S - R27E 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 Co. Rd. #720 (Black River Village Road) and Co. Rd. #742 (John D. Forehand Road), go South on Co. Rd. #742 approx. 4.0 miles. Turn right (West) and go approx. 0.8 miles. Turn right (Southwest) and go approx 1.2 miles. Turn left (East-Southeast) and go approx 0.7 miles. Turn left (East) and go approx 0.3 miles to an intersection. Continue East and go approx. 0.4 miles to proposed road survey. This location is approx. 2600' North-Northeast along proposed road survey.
- 2 PLANNED ACCESS ROADS: 2600' of access road will be constructed all on lease NMNM-110348
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"

A. Water wells - None Know

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"

Gruy Petroleum Management Co. Merganser 6 Federal Com No. 1 Lot No. 1 Section 6 T25S - R27E Eddy County, NM

4 If, on completion this well is a producer Gruy Petroleum Management Co. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied with a Sundry Notice.

5 LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6 SOURCE OF CONSTRUCTION MATERIAL:

If possible construction will be obtained from the excavation of drill site, if additional material is needed it will be purchased from a local source and

7 METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pit.
- B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
- D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8 ANCILLARY FACILITIES:

A. No camps or airstrips to be constructed.

Gruy Petroleum Management Co. Merganser 6 Federal Com No. 1 Lot No. 1 Section 6 T25S - R27E Eddy County, NM

9 WELL SITE LAYOUT

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of reserve and trash pits; and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with PVC or polyethylene line. The pit liner will be 6 mils thick. Pit liner will extend a minimum, 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10 PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountered to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

Gruy Petroleum Management Co. Merganser 6 Federal Com No. 1 Lot No. 1 Section 6 Eddy County, NM T25S - R27E

OTHER INFORMATION:

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by The United States Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.

12 OPERATORS REPRESENTATIVE:

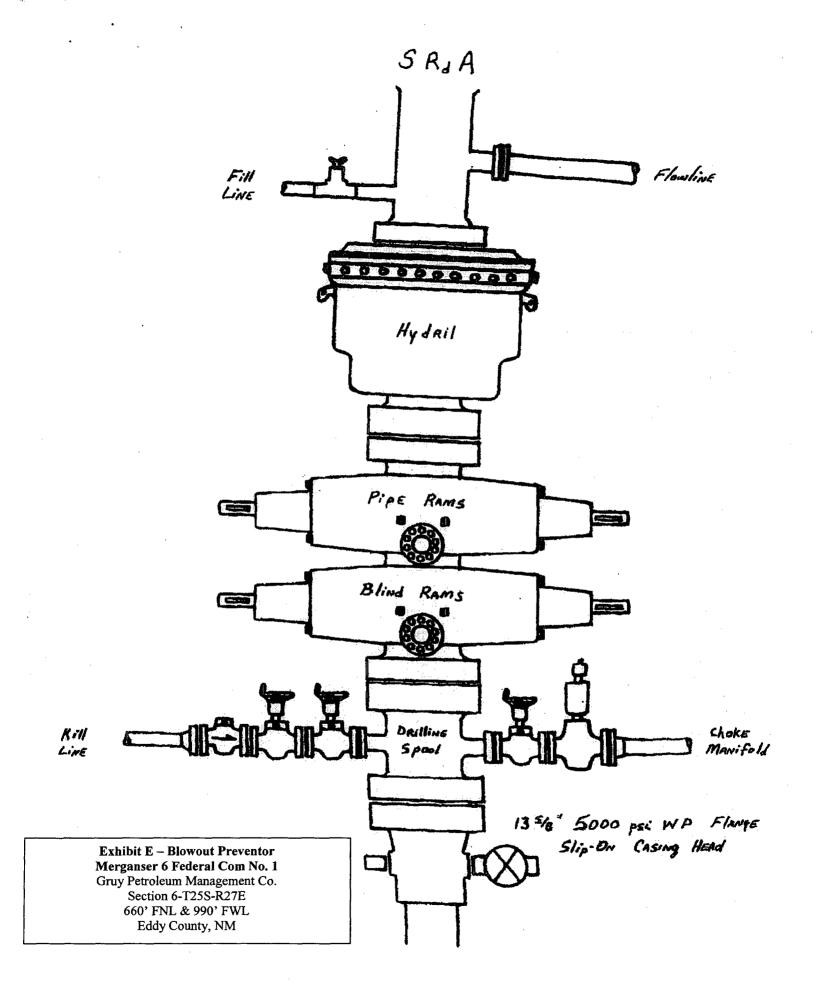
Gruy Petroleum Management Company P.O. Box 14097 Irving, TX 75014 Office Phone: (972) 443-6489

Zeno Farris

13 CERTIFICATION: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exit; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Gruy Petroleum Management Company and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME: Zemo F September 19, 2005

TITLE: Manager, Operations Administration



ORILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

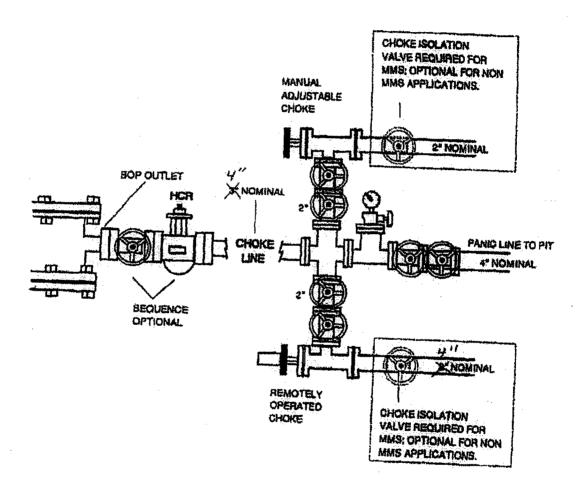


Exhibit E1 – Choke Manifold Diagram Merganser 6 Federal Com No. 1

Gruy Petroleum Management Co. Section 6-T25S-R27E 660' FNL & 990' FWL Eddy County, NM

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

Gruv Petroleum Management Co.

Well Name & No.

Merganser 6 Federal Com #1

Location:

660' FNL, 990' FWL, Section 6, T. 25 S., R. 27 E., Eddy County, New Mexico

Lease:

NM-110348 (60)

Luase. 111-110040 000 flat the SN detal 11-3-05 C **I. DRILLING OPERATIONS REQUIREMENTS:**

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

- A. Well spud
- B. Cementing casing: 13-3/8 inch 9-5/8 inch 5-1/2 inch
- C. BOP tests
- 2. A Hydrogen Sulfide (H2S) Drilling Operation Contingency Plan shall be activated prior to drilling into the **Delaware** formation. A copy of the plan shall be posted at the drilling site.
- 3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as: spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.
- 5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
- 6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

II. CASING:

- 1. The 13-3/8 inch surface casing shall be set at approximately 200 feet and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is to be circulated to the surface.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

NOTE: A variance to test the 13-3/8 inch casing to 1000 # is granted.

- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 5000 psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the <u>Wolfcamp</u> formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- Recording pit level indicator to indicate volume gains and losses.
- Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

9/28/05 acs