HIS-08-103

JAN 05 2009

OCD-ARTESIA

OCD-ARTESIA

Form 3160-3
(August 2007)

FORM APPROVED
OMB No 1004-0136
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EC

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. NMNM69163
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. GRUY CROW 5 FED COM 1
2. Name of Operator GRUY PETROLEUM MGT CO LLC Contact: DEBORAH HAWTHORNE E-Mail dhawthorne@newtecheng com	9. API Well No. 30.015.36880
3a. Address 1046 TEXAN TRAIL GRAPEVINE, TX 76051 / 3b. Phone No. (include area code) Ph: 817.939.1044	10. Field and Pool, or Exploratory CROW FLATS
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NESE 1350FSL 1100FEL At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area Sec 5 T17S R27E Mer NMP SME: BLM
14 Distance in miles and direction from nearest town or post office* 5 MILES NORTHWEST FROM ARTESIA, NM	12. County or Parish EDDY / 13. State NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 30' FROM LEASE LINE, 1100' FROM COM LINE / 16. No. of Acres in Lease 120.00	17. Spacing Unit dedicated to this well 320.00
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 4450' / 19. Proposed Depth 9300 MD	20. BLM/BIA Bond No. on file NMB000543
21. Elevations (Show whether DF, KB, RT, GL, etc. 3371 GL / 22. Approximate date work will start 12/01/2008.	23. Estimated duration 30 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature (Electronic Submission)	Name (Printed/Typed) DEBORAH K HAWTHORNE Ph: 281-951-4330 Ext: 400	Date 10/14/2008
Title AGENT FOR GRUY PETROLEUM		
Approved by (Signature) /s/ James Stovall	Name (Printed/Typed) /s/ James Stovall	Date DEC 30 2008
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify 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, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C Section 1001 and Title 43 U.S.C. Section 1212, make 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.

Additional Operator Remarks (see next page)

Electronic Submission #63824 verified by the BLM Well Information System
For GRUY PETROLEUM MGT CO LLC, sent to the Carlsbad
Committed to AFMSS for processing by TESSA CISNEROS on 10/15/2008 (09TLC0028AE)

ENTERED
AFMSS
1-8-09

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Roswell Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

DISTRICT I
1625 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 October 12, 2005

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
30-015-36880	75720	CROW FLATS; MORROW (GAS)

Property Code	Property Name	Well Number
37549	GRUY CROW "5" FEDERAL COM	1

OGRID No.	Operator Name	Elevation
260972	GRUY PETROLEUM MANAGEMENT CO., LLC	3371'

Surface Location

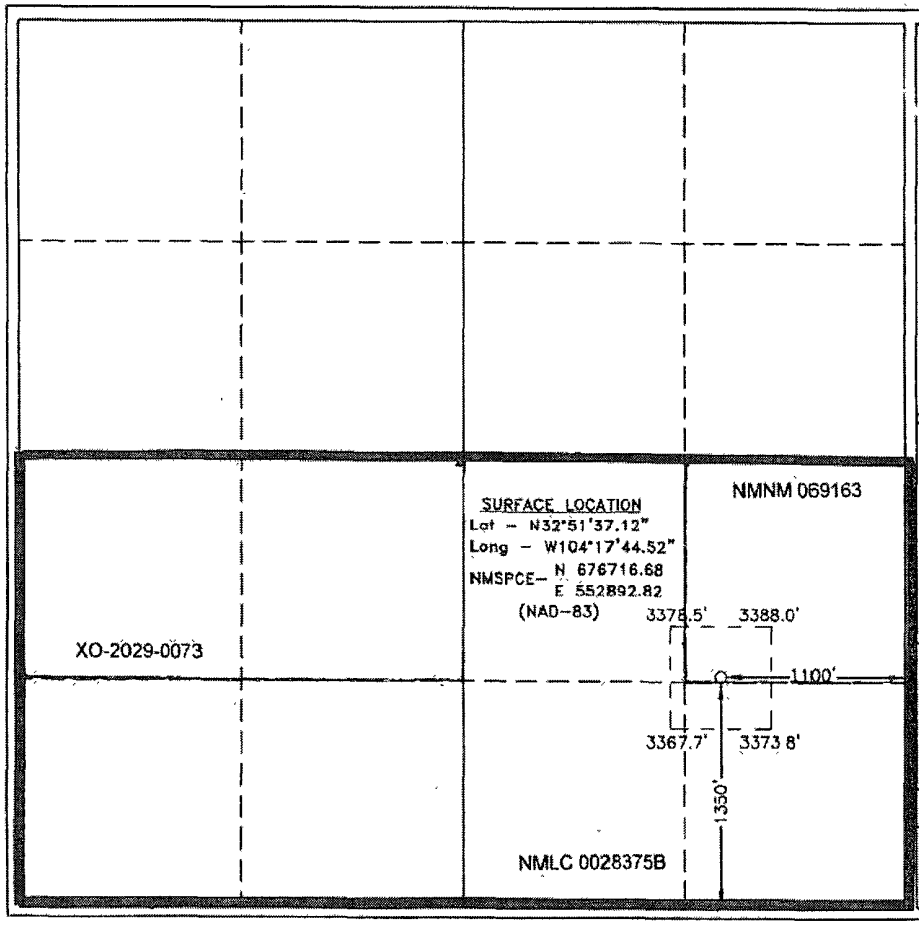
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	5	17 S	27 E		1350	SOUTH	1100	EAST	EDDY

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.
320			

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 that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Linda Smith 9-15-08
Signature Date

LINDA Smith
Printed Name

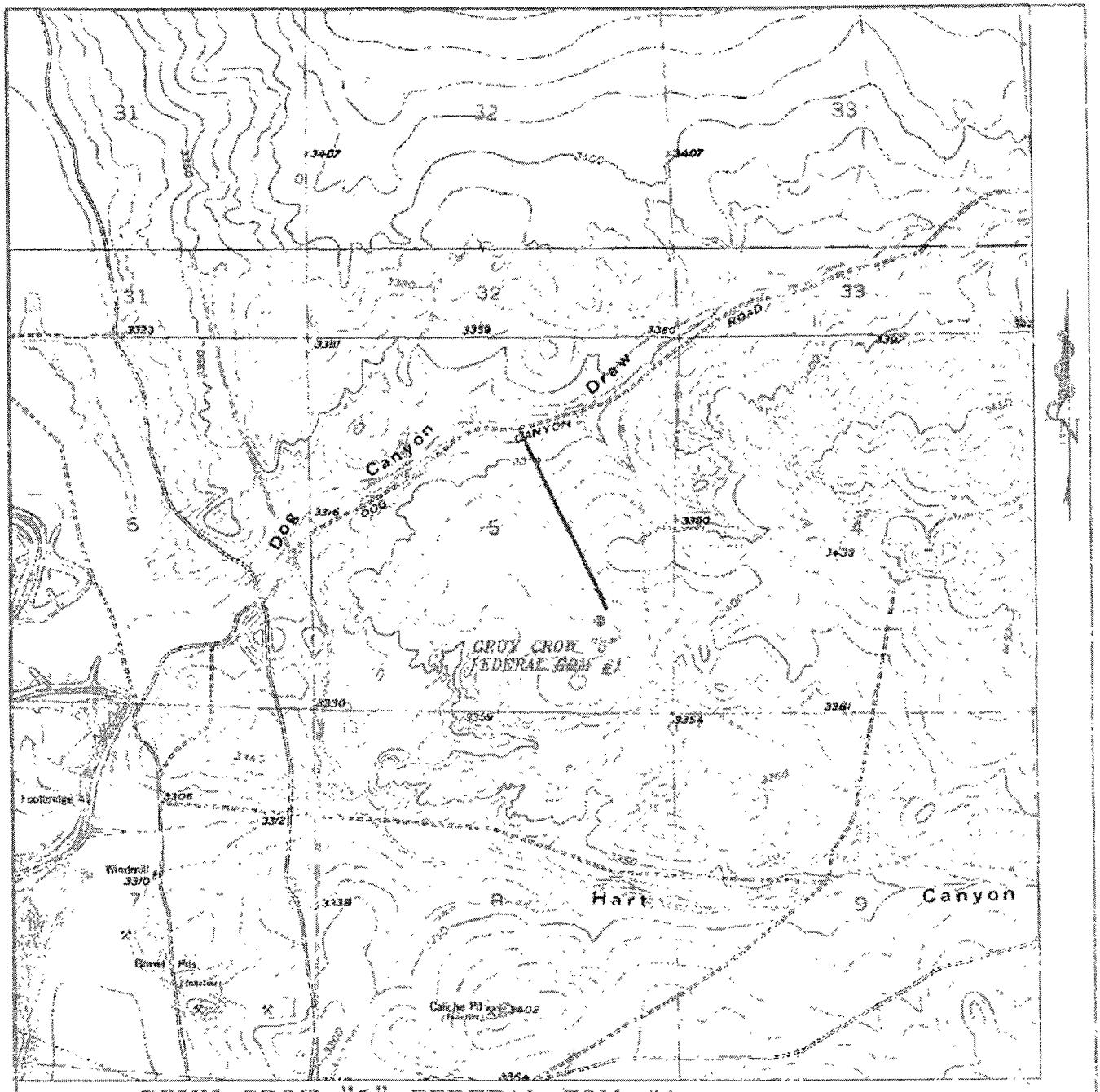
SURVEYOR CERTIFICATION

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.

SEPTEMBER 8, 2008
Date Surveyed: L. JONES
Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

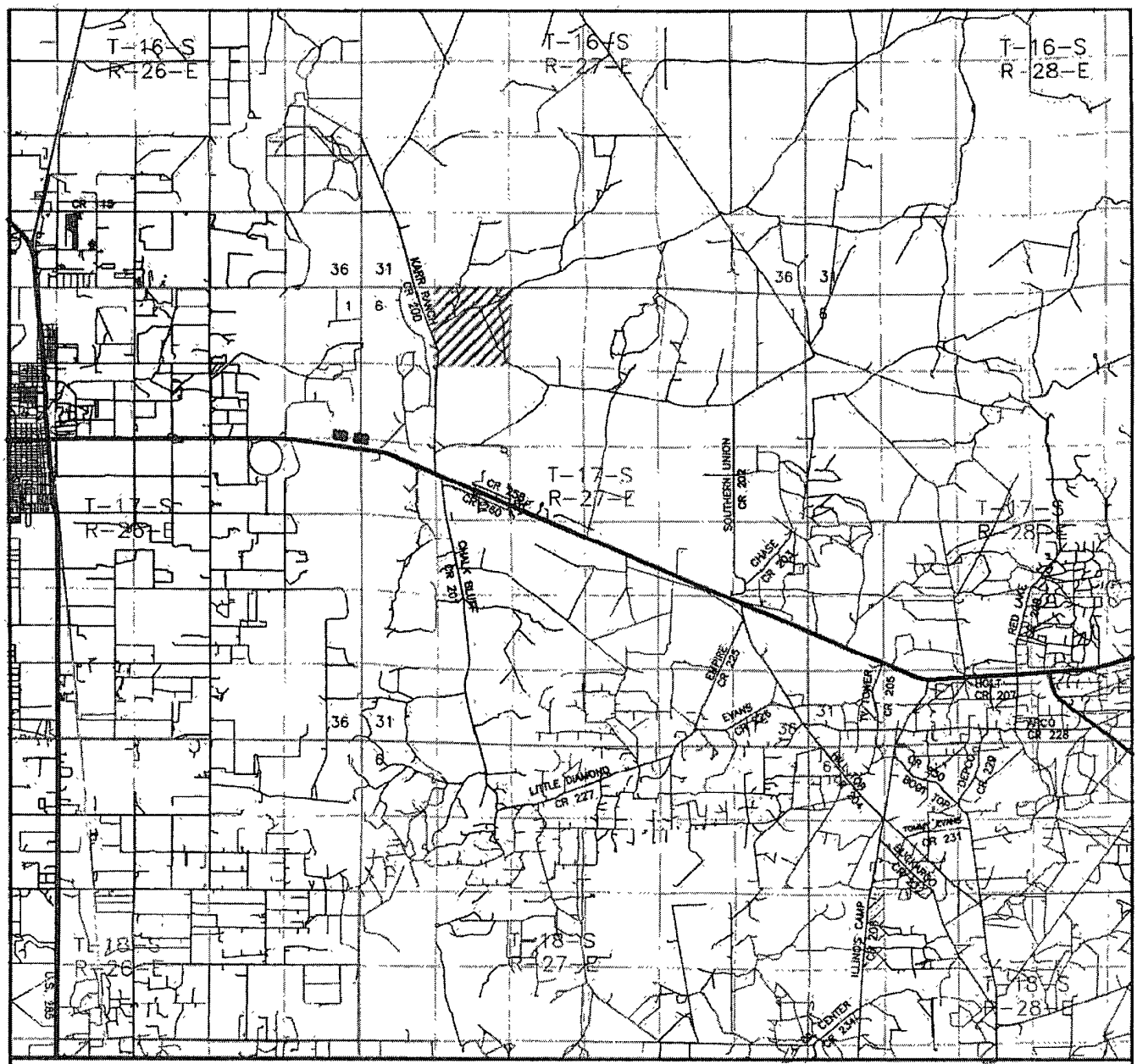


GRUY CROW "5" FEDERAL COM #1
Located 1350' FSL and 1100' FEL
Section 5, Township 17 South, Range 27 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 28386
Survey Date: 09-05-2008
Scale: 1" = 2000'
Date: 09-09-2008

GRUY PETROLEUM MANAGEMENT CO., LLC



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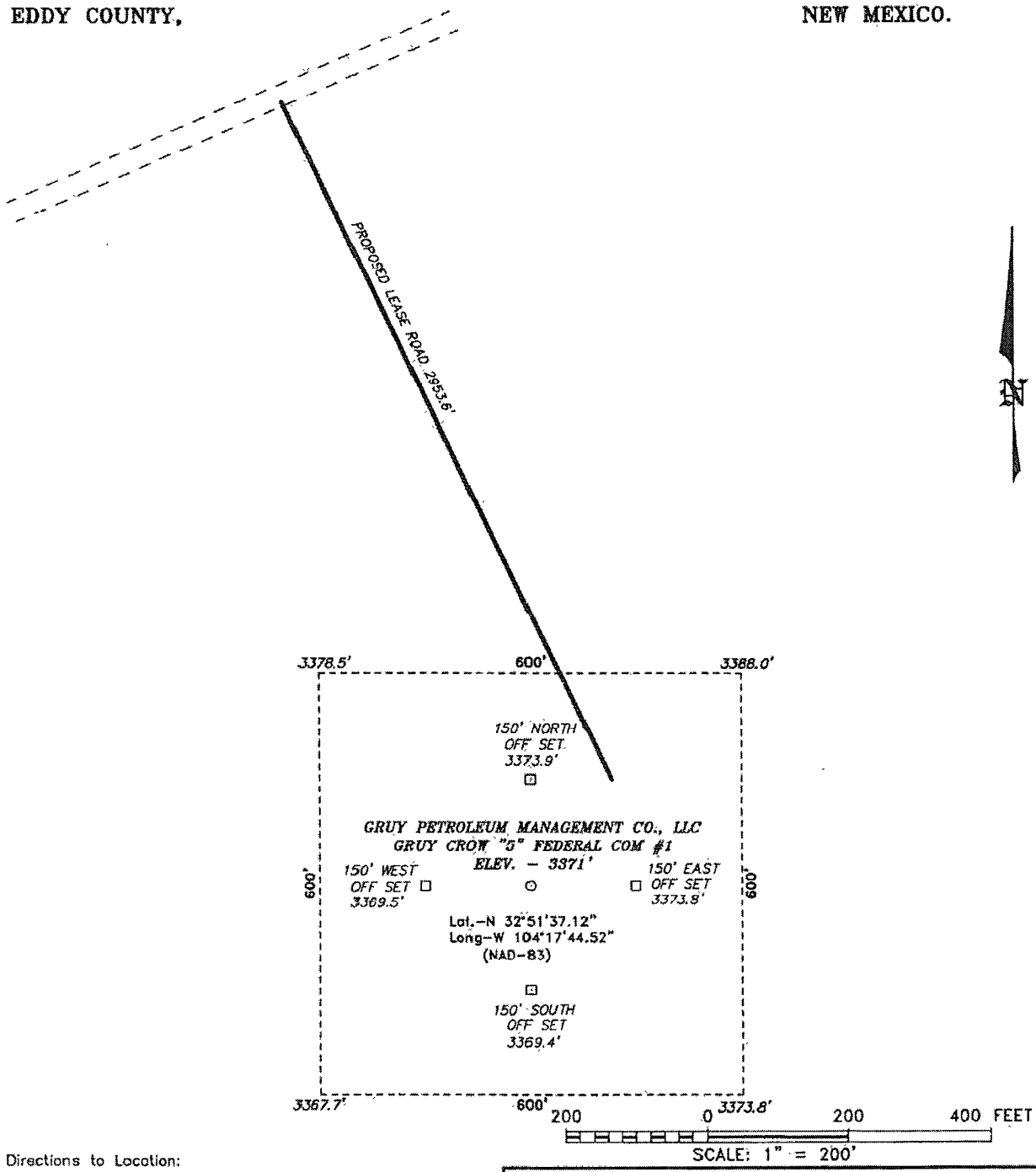
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 20360
Survey Date:	09-08-2008
Scale:	1" = 2 MILES
Date:	09-09-2008

GRUY PETROLEUM MANAGEMENT CO., LLC

SECTION 5, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF HWY 82 AND KARR RANCH, GO NORTH ON KARR RANCH FOR 1.8 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 0.7 MILES TO 2-TRACK, ON 2-TRACK GO SOUTH 0.5 MILES TO PROPOSED LEASE ROAD.

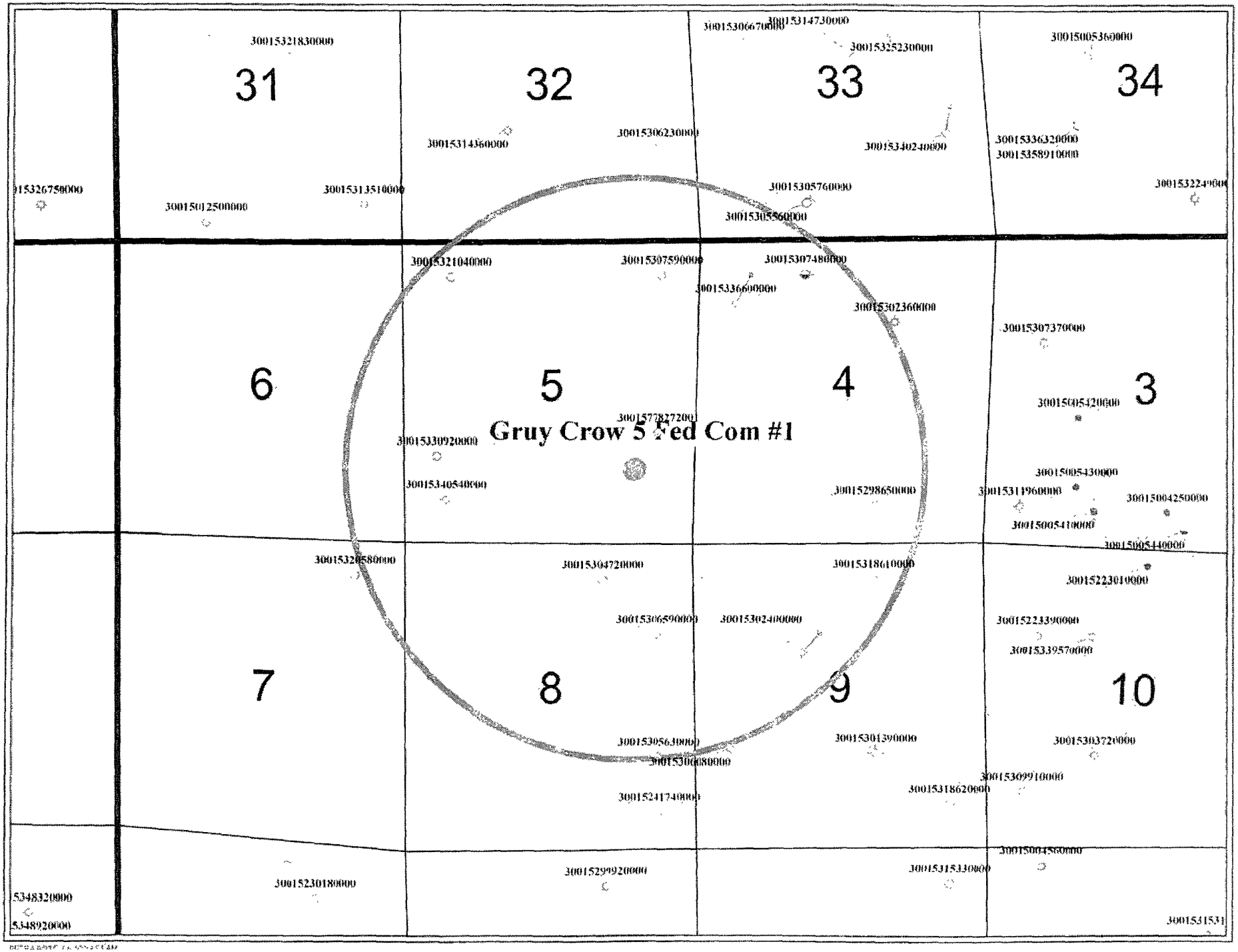
GRUY PETROLEUM MANAGEMENT CO., LLC

REF: GRUY CROW "5" FEDERAL COM #1 / WELL PAD TOPO

THE GRUY CROW "5" FEDERAL COM #1 LOCATED 1350' FROM THE SOUTH LINE AND 1100' FROM THE EAST LINE OF SECTION 5, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 20360	Drawn By: J. SMALL	Survey Date: 09-08-2008	Sheet 1 of 1 Sheets
Date: 09-09-2008	Disk: JMS 20360		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32
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10
Gruy Crow 5 Fed Com #1

Additional Operator Remarks:

Attached:
Exhibit A - Proposed well site as staked showing all producing & abandoned wells w/in 1 mile radius
Exhibit B - Eddy County general highway map
Exhibit C - USGS topo map w/ existing & proposed roads
Exhibit D - Location & rig layout
Exhibit E - drawing of 5000 psi BOP
Exhibit E-1- diagram of choke manifold
Drilling Plan
Surface Use Plan
H2S Plan
Operator Certification

Application to Drill

Gruy Petroleum Management Co., LLC
Gruy Crow 5 Fed Com #1
Sec 5, T17S, 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:

SHL: 1350' FSL & 1100' FEL, Sec 5, T17S, R27E

2 Elevation above sea level:

GR 3371'

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.

9300'

6 Estimated tops of geological markers:

Glorietta	2627'
Tubb	3917'
Abo Shale	4684'
Atoka	8476'
Morrow	~~8471'~~ 8575'

7 Possible mineral bearing formation:

per operator 11/24/2008 NC

Atoka	Gas
Morrow	Gas

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade	Condition
17 1/2"	0-400'	13 3/8"	48	8-R	ST&C	H-40	New
12 1/4"	0-1800'	9 5/8"	40	8-R	LT&C	J-55	New
8 3/4"	0-9300'	5 1/2"	17	8-R	LT&C	P-110	New

see COA

Safety factors:

Collapse Factor	Burst Factor	Tension Factor
1 2	1.2	1.8

9 Cementing & Setting Depth: ← See COA

13 3/8"	Surface	Set 400' of 13 3/8" 48#, H-40 ST&C casing. Cement with a lead of 130 sx Light Premium Plus cement + 1 #/sx Pheno Seal + 1% Calcium Chloride (1.984 ft³/sk, 12.5 #/gal) and tail with 250 sx Premium Plus cement + 2% Calcium Chloride (1.343 ft³/sk, 14.8 #/gal), circulate cement to surface.
9 5/8"	Intermediate	Set 1800' of 9 5/8" 40#, J-55 LT&C casing.. Cement with a lead of 270 sx Interfill C cement + 1 #/sx Pheno Seal (2.460 ft³/sk, 11.9 #/gal) and tail with 200 sx of Premium Plus Cement + 1% Calcium Chloride (1.334 ft³/sk, 14.8 #/gal), circulate cement to surface.
5 1/2"	Production	Set 9300' of 5-1/2" 17#, P-110 LT&C casing. Cement with a lead of 680 sx Interfill H cement + 1 #/sx Phen Seal + 0.1% HR-7 retarder (2.771 ft³/sk, 11.5 #/gal) and tail with 360 sx Super H cement + 0 5% Halad 344 low fluid loss control + 0.25% D-AIR 3000 defoamer + 0.4% CFR-3 dispersant + 1 #/sx salt accelerator + 3 #/sx Pheno Seal + 0.35% HR-7 retarder (1.621 ft³/sk, 13.2 #/gal) . Estimate top of cement is 1500'. ← See COA

All cement volumes are approximate. Actual volumes may differ slightly depending upon hole conditions.

10 Pressure control Eqpt: See COA

Exhibit "E". A 11" 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 1800'. 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 while drilling

13 3/8

See COA

Gruy is requesting a variance for testing the 13-3/8" surface casing from Onshore Order No 2, which states that all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500 psi, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. Gruy is requesting to test the 13-3/8" casing to 1000 psi using rig pumps The BOP will be tested by an independent service company.

11 Proposed Mud Circulating System:

See COA

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 400'	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.
400' - 1800'	9.7 - 10.0	28 - 29	May lose circ.	Fresh water / Brine Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.
1800' - 7500'	8.4 - 9.9	28 - 29	NC	Cut Brine. Paper for seepage. Control pH. Sweep as needed to clean hole
7500' - 9300'	8.9 - 9 7	29 - 45	NC	Mud up with an ALL Zan / ALL Pac mud system. Adjust weight with brine as needed. Maintain pH with caustic soda. Sweep as needed to clean hole.

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 rur and cemented.

12 Testing, Logging and Coring Program:

A. Mud logging program: One-man unit from 1800' to TD

B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR, Sonic

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 4000 PSI, estimated BHT 150°.

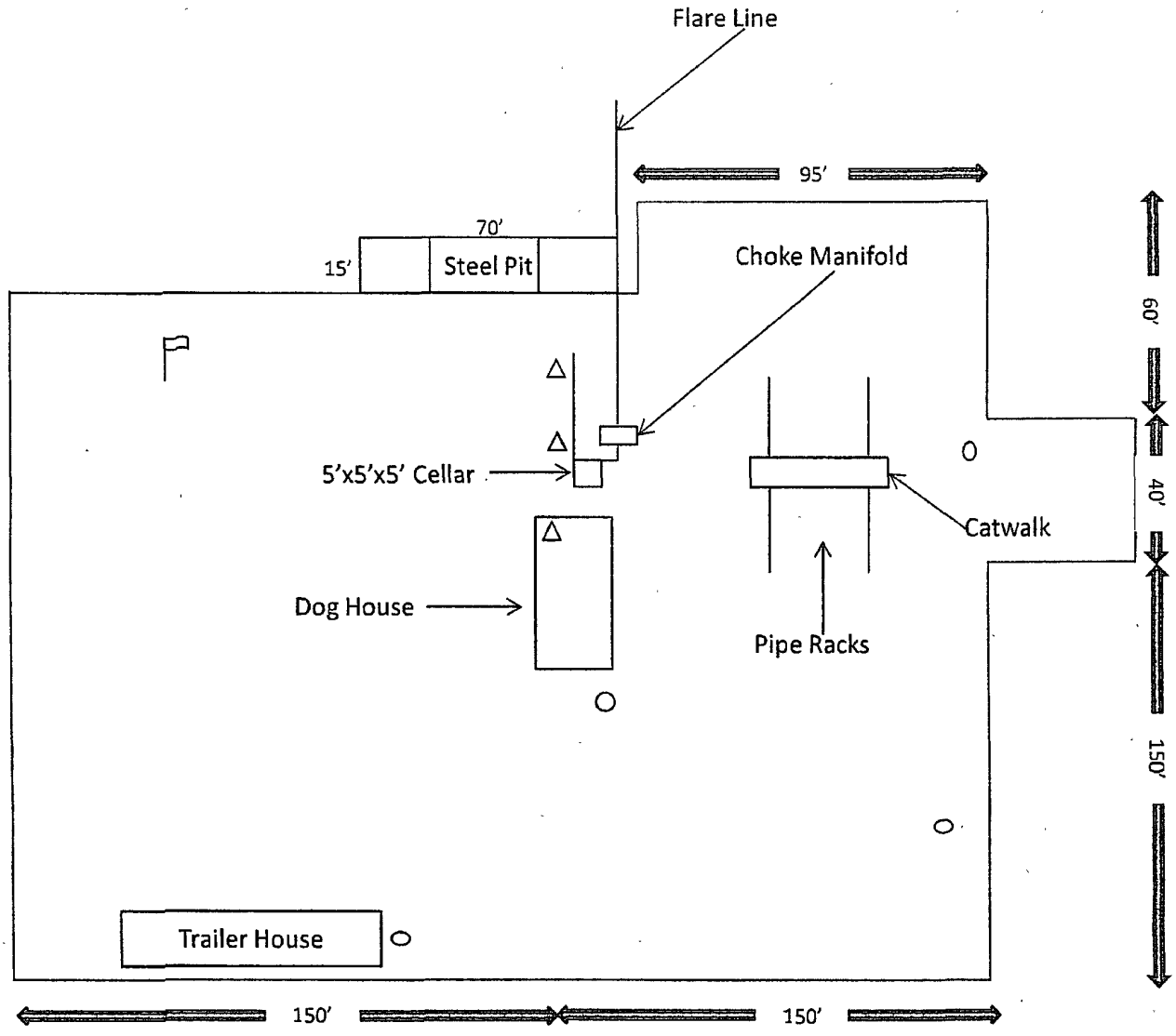
Gruy does not anticipate that there will be enough H2S from the surface to the Morrow to meet the minimum requirement for the submission of an H2S Drilling Operation Plan or Public Protection Plan for the drilling and completion of this well. However, safety is a top priority therefore an H2S Drilling Operations Plan is attached.

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 should take approximately 30 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 potentialed as a gas well.



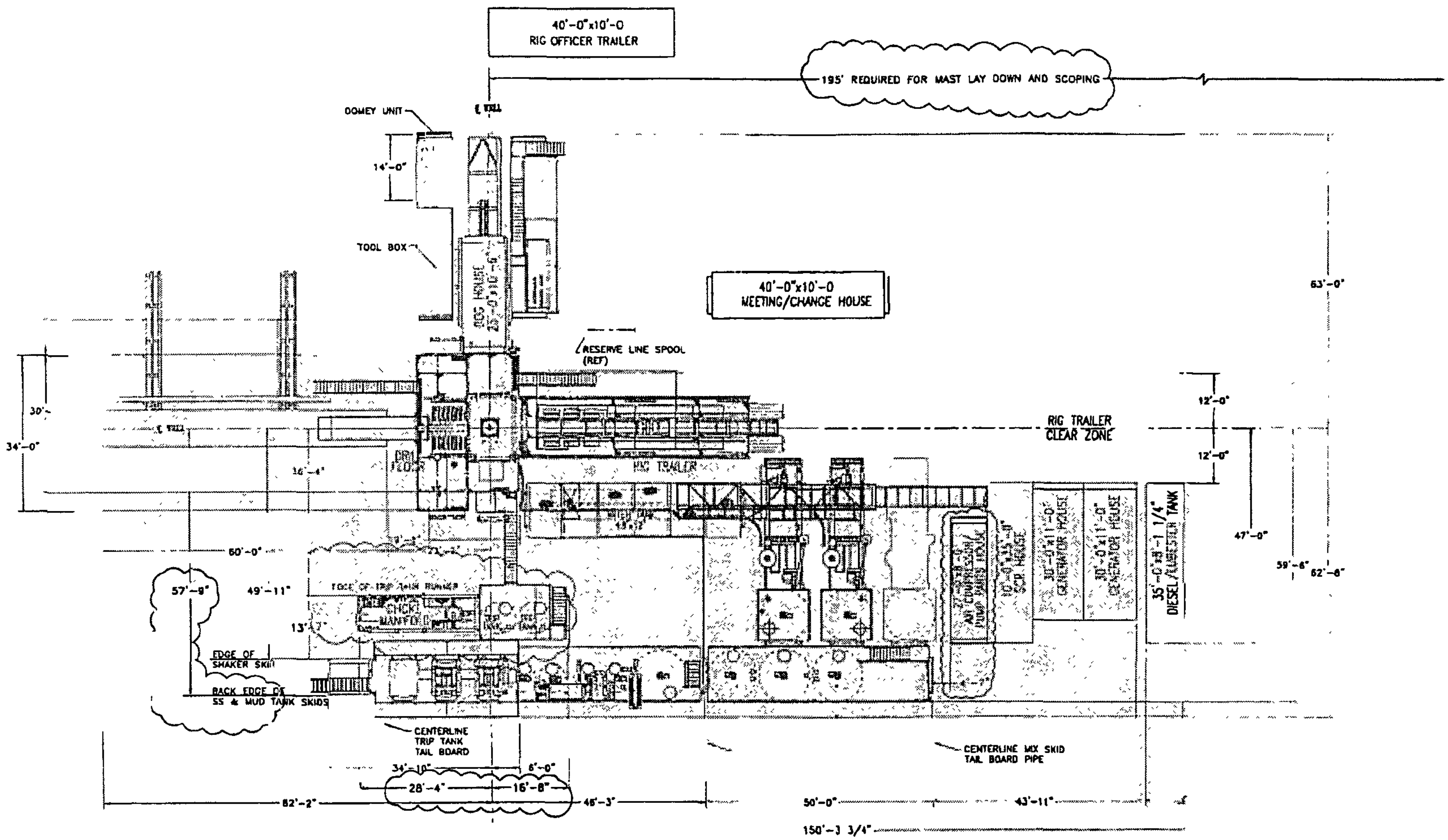
Wind Direction Indicators
(wind sock or streamers)

△ H2S Monitors
(alarms at bell nipple and shale shaker)

⬭ Briefing Areas

○ Remote BOP Closing Unit

Exhibit D - Rig Diagram
H&P Rig #188



PLAN VIEW

PROPRIETARY

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

TITLE: FLEX RIG DRILL SITE

CUSTOMER: H&P

PROJECT: H&P

DATE: 8/28/00

DWG NO.: 178-TL-01

REV: 3

Gruy Petroleum Management Co., LLC

Proposed Blowout Preventor Stack

Valve Nomenclature

1.) 2 1/16" 5m Check Valve
2.) 2 1/16" 5m Manual Gate Valve
3.) 4 1/16" 5m Manual Gate Valve
4.) 4 1/16" 5m Hydraulic Gate Valve
5.) 2 1/16" 5m Manual Gate Valve

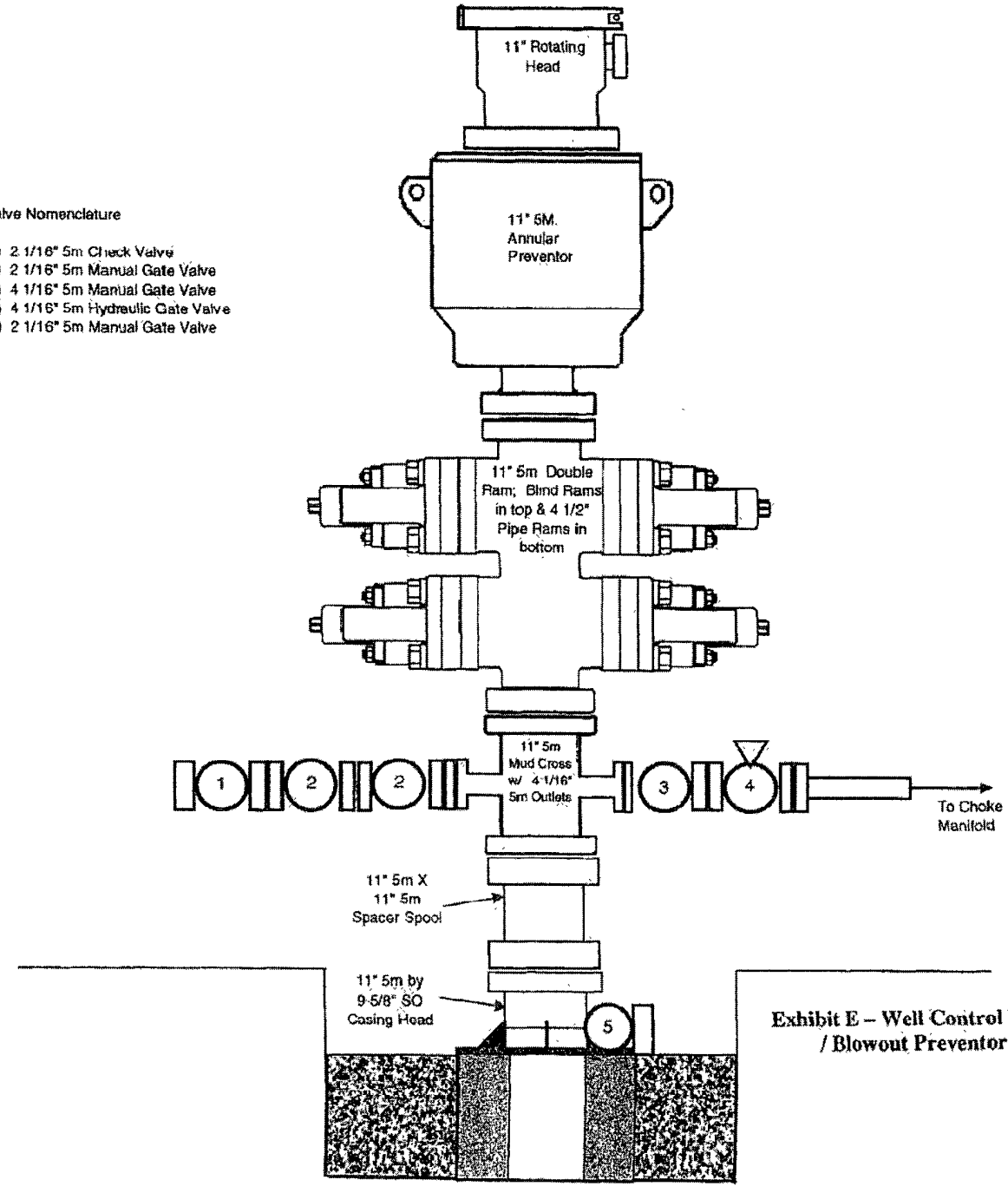


Exhibit E – Well Control Equipment / Blowout Preventor Stack

Gruy Petroleum Management Co., LLC

Choke Manifold

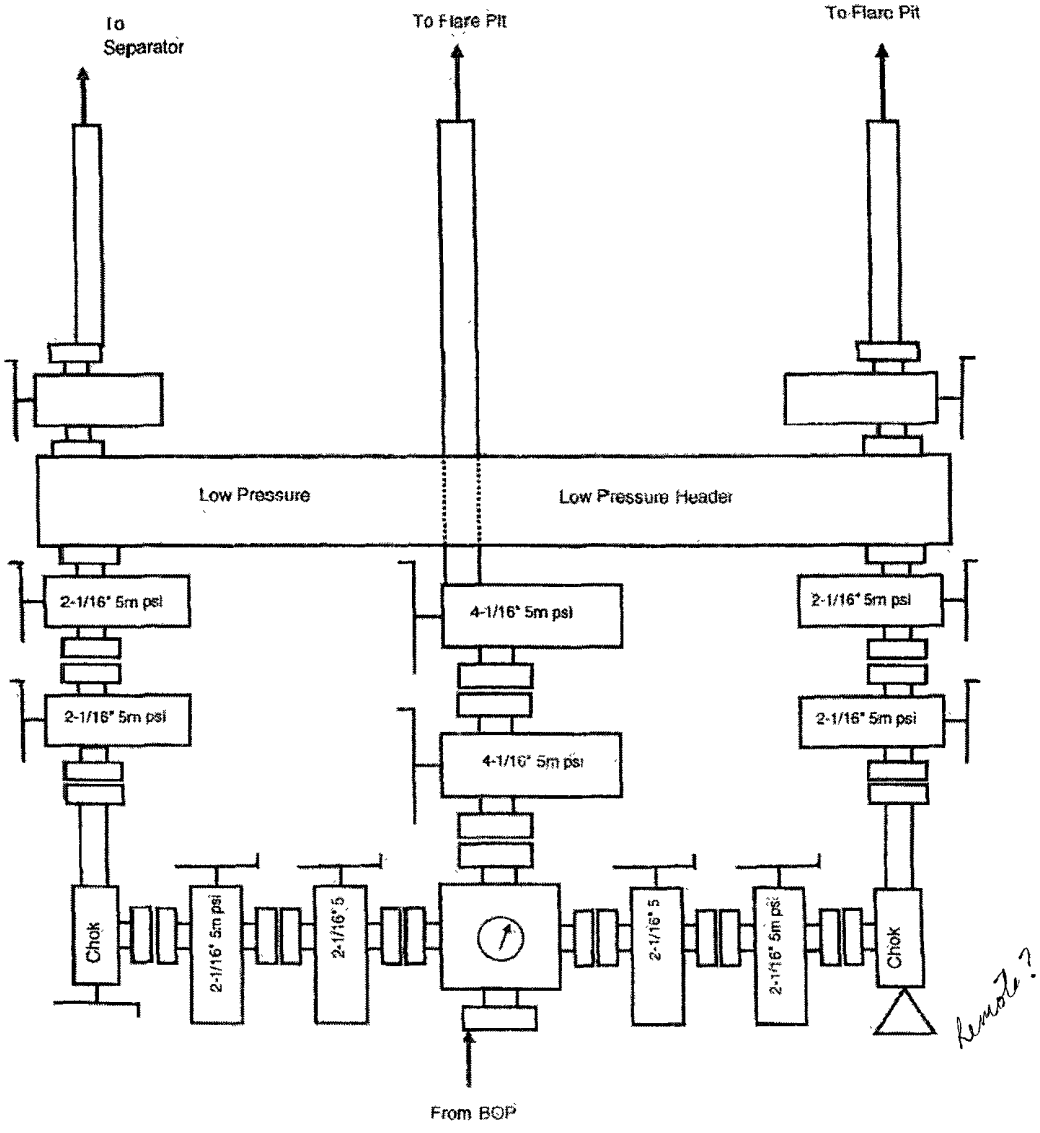


Exhibit E-1 – Choke Manifold and Closing Unit

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

No DST's are planned at this time. Should DST requirements change:

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.

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 necessary.

Hydrogen Sulfide Contingency Plan

Emergency Procedures

In the event of a release of gas containing H2S into the atmosphere, all personnel should evacuate and report to upwind briefing area. The first responder(s) must:

A. Isolate the area and prevent entry by other persons into the 100 ppm ROE.
B. Evacuate any public places encompassed by the 100 ppm ROE
C. Take care not to injure themselves during this operation by:
   1. Being equipped with H2S monitors and air packs in order to control the release
   2. Use the buddy system to secure well and perform rescue(s).
D. Contact operator and/or local officials to aid in this operation. See attached list of phone numbers.
E. Have received training in the following:
   1. Detection of H2S.
   2. Measures for protection against the gas.
   3. Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO2). Intential ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police shall be the Incident Command of any major release. Ignite upwind and take care to protect downwind.

Characteristics of H2S and SO2.

Common Name	Chemical Formula	Specific Gravity Air = 1.0	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H2S	1.189	10 ppm	100 ppm / hr	600 ppm
Sulfur Dioxide	SO2	2.21	2 ppm	N/A	1000 ppm

Contacting Authorities

Gruy Petroleum Management Co., LLC's personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site and/or Lat/Long coordinates. The following call list of essential and potential responders has been prepared for use during a release. Gruy's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

Hydrogen Sulfide Contingency Plan
Emergency Contacts

Company Office

Gruy Petroleum Management Co., LLC			817-756-1340

Key Personnel

Tom Strother	Drilling Supt / Engineer	Office: 817-885-8294	Mobile: 972-533-6004
Sherry Reid Carroll	Ops Mgr	Office: 817-756-1215	Mobile: 972-672-5295

Public Authorities

New Mexico State Police		911	
	Artesia	575-748-9718	
	Carlsbad	575-885-3138	
	Hobbs	575-392-5580	
Eddy County Sheriff's Office		911	
	Artesia	575-746-9888	
	Carlsbad	575-887-7551	
Lea County Sheriff's Office		911	
	Hobbs	575-396-3611	
Local City Police		911	
	Artesia	575-746-5000	
	Carlsbad	575-885-2111	
	Hobbs	575-397-9265	
Local Emergency Preparedness			
	Eddy County	575-887-9511	
	Lea County	575-397-9231	
New Mexico Oil & Gas Commission			
	Artesia	575-748-1283	
	Hobbs	575-393-6161	575-370-3186 (on call beeper)
NM Emergency Response Commission			
	Santa Fe	505-476-9600	
	Santa Fe (24 hrs)	505-827-9126	
NM State Emergency Operations Center		505-476-9635	
U.S. Bureau of Land Management			
	Carsbad Field Office	575-887-6544	
	Hobbs Field Station	575-339-3612	

Emergency Services

Fire Fighting, Rescue, Ambulance		911	
	Artesia Fire Dept.	575-746-5050	
	Carlsbad Fire Dept.	575-885-3125	
	Hobbs Fire Dept.	575-397-9308	
Flight for Life	Lubbock, TX	806-743-9911	
Aerocare	Lubbock, TX	806-747-8923	
Med Flight Air Ambulance	Albuquerque, NM	505-842-4433	

Other

Boots & Coots Well Control		800-256-9688	or	281-931-8884
Cudd Pressure Control		432-699-0139	or	432-563-3356
Halliburton	Midland, TX	800-844-8451		
	Hobbs	800-416-6081		

Surface Use Plan

Gruy Petroleum Management Co., LLC
Gruy Crow 5 Fed Com #1
Sec 5, T17S, R27E
Eddy

1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Eddy 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 junction of Hwy 82 and Karr Ranch, go north on Karr Ranch for 1.8 miles to lease road. On lease road, go east 0.7 miles to 2-track. On 2-track, go south 0.5 miles to proposed lease road.

2 PLANNED ACCESS ROADS:

approximately 2954' of 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"

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 transported over the access route as shown on Exhibit "C".

7 METHODS OF HANDLING WASTE MATERIAL:

A. Well will be drilled with a closed-loop system utilizing haul-off bins. All drilling fluids and drill cuttings will be hauled to disposal facility.

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. Drilling fluids will be contained in steel pits in a closed-loop circulating system. Fluids will be hauled off by transports and disposed of at a state approved disposal facility. Water produced during testing will be put in tanks and hauled off to disposal. 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.

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 drill cuttings will be stored in steel containment pits while awaiting transportation to disposal facility

D. Cuttings will be stored in steel haul-off bins until being hauled to a state approved disposal facility.

E If the well is completed as a producer, 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.

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

11 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.

D. There are no known dwellings within 1-1/4 miles of this location.

12 OPERATORS REPRESENTATIVE:

Gruy Petroleum Management Co., LLC
1046 Texan Trail
Grapevine, Texas 76051
Office Phone: (817) 756-1215

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 Co., LLC 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.

OPERATOR'S REPRESENTATIVES

BEFORE CONSTRUCTION	DURING AND AFTER CONSTRUCTION
Deborah K Hawthorne	Sherry Reid Carroll
New Tech Engineering 1030 Regional Park Dr. Houston, Texas 77060 Phone: 281 951.4330 Cell: 817.939.1044	Gruy Petroleum Management Co , LLC 1046 Texan Trail Grapevine, Texas 76051 Phone: 817.756.1360 Cell: 972.672.5295

NAME 
Deborah K Hawthorne

DATE: 10/13/2008

TITLE: Agent for Gruy Petroleum Management Co., LLC

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Gruy Petroleum
LEASE NO.:	NMNM69163
WELL NAME & NO.:	Gruy Crow 5 Fed Com No 1
SURFACE HOLE FOOTAGE:	1350' FSL & 1100' FEL
BOTTOM HOLE FOOTAGE	
LOCATION:	Section 5, T. 17 S., R 27 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Conditions of Approval
Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

Pad Berming:
The pad will be bermed on the downslope sides to prevent oil, salt, and other chemical contaminants from leaving the pad.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.
A closed mud system using steel tanks for all cuttings and fluids is required. All fluids and cuttings will be hauled off site for disposal. No pits are allowed.

Tank Battery Liners and Berms:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

Communitization Agreement

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.

VI. CONSTRUCTION

V-DOOR EAST

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 4 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

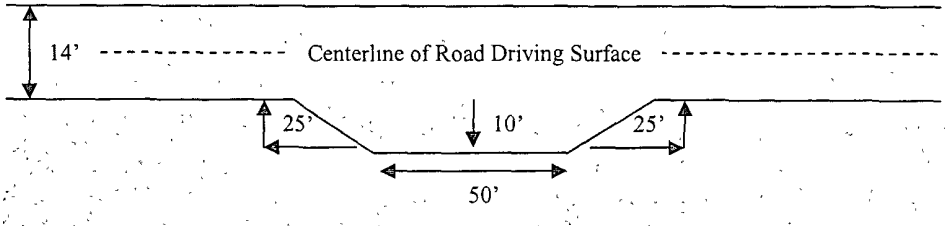
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

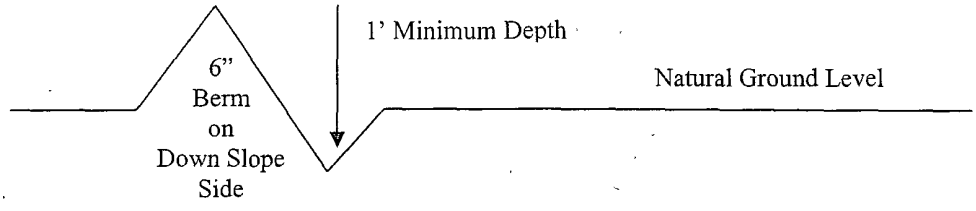


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

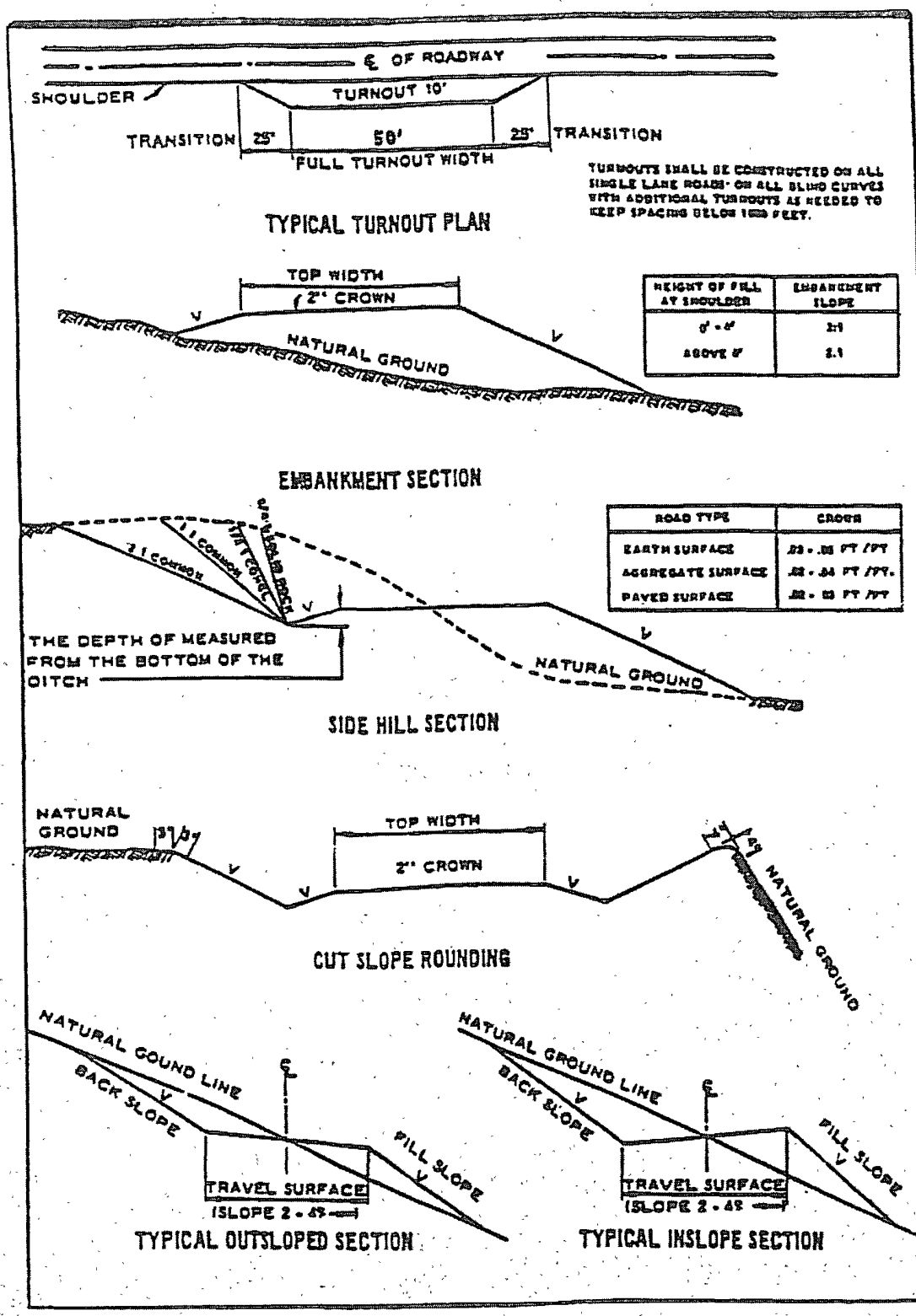
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

Note: All geological marker tops should be noted as well as all zones that could contain hydrocarbons.

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. 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.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

High cave/karst.
Possible lost circulation in the Grayburg and San Andres formations.
Possible high pressure in the Wolfcamp and Atoka Clastics.

1. The **13-3/8** inch surface casing shall be set **between 400 and 500 feet in the Seven Rivers and above the Bowers Sand** and cemented to the surface. **Fresh water mud to be used to setting depth.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement should tie-back at least 300 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8"** intermediate casing shoe shall be **5000 (5M)** psi.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 121708

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent gemination = pounds pure live seed

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.