0144 Javy N.M. Oil Cons. DIV-Dist. 2 1301 W. Grand Avanuate FORM APPROVED Form 3160-3 OMB NO. 1004-0136 UNITED STATES Artesia, NM 88210 (July 1992) Expires: February 28, 1995 5. LEASE DESIGNATION AND SERIAL NO. DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT** NM 26105 6. IF INDIAN, ALLOTTES OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL OR DEEPEN 1a TYPE OF WORK DRILL X 7. UNIT AGREEMENT NAME **DEEPEN** 1b. TYPE OF WELL SINGLE **MULTIPLE** GAS X OIL 8. FARM OR LEASE NAME, WELL NO. WELL WELL OTHER ZONE ZONE 2. NAME OF OPERATOR Federal 13 Com No. 3 Gruy Petroleum Management Co. RECEIVED 9. API WELL NO. 3. ADDRESS AND TELEPHONE NO. DEC 2 8 2004 50-015-33785 P.O. Box 140907 Irving TX 75014 972-401-3111 10. FIELD AND POOL, OR WILDCAT OOD: NOTESIA (Report location clearly and in accordance with any State requirements.*) White City; Penn dated 11/10/04 11. SEC. T.,R.,M., BLOCK AND SURVEY OR AREA BHL: 1175/5\$ 1750/c Section 13-25S-26E Sec. 13 T25S R26E 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 12. COUNTY OR PARISH 13 STATE 17 miles South of Carlsbad NM 15. DISTANCE FROM PROPOSED 17. NO. OF ACRES ASSIGNED 16. NO. OF ACRES IN LEASE LOCATION TO NEAREST TO THIS WELL PROPERTY OR LEASE LINE, T.O. 1175' 640 160 (Also to nearest drig, unit line, if any) 18. DISTANCE FROM PROPOSED LOCATION 20. ROTARY OR CABLE TOOLS 19. PROPOSED DEPTH TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2165' 13000' Rotary 22. APPROX. DATE WORK WILL START 21. ELEVATIONS (Show whether DF, RT, GR, etc.) CARLSBAD CONTROLLED WATER RAS 3220 'GR 11-30-04 PROPOSED CASING AND CEMENTING PROGRAM QUANTITY OF CEMENT SIZE OF HOLE GRADE, SIZE OF CASING **WEIGHT PER FOOT** SETTING DEPTH WITNESS 17-1/2" J-55 13 3/8" 200 250 sx circ to surf 54.5 # 1900' NS-110 9 5/8" 40 # 12 1/4" 475 sx circ tp surf 100000 8 3/4" P-110 1675 sx circ to surf 23# HCP-110 4 1/2" 13000' 485 sx TOC 7500' 6 1/8" 11.6# 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 manufactures 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 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 10-28-04 DATE SIGNED TITLE Mgr. Ops. Admin 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 FIELD MANAGER TITLEN APPROVED BY 7004 *See Instructions On Reverse Side Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED <u>District I</u> 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 District IV 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 Closur	
Is pit or below-grade tank Type of action: Registration of a pit or	k covered by a "general plan"? Yes No r below-grade tank Closure of a pit or below-grade	le tank 🗌
Address: P.O. Box 140907, Irving, Tx 75014-0907 Facility or well name: Federal 13 Com # 3 API #: 30-015-	72_443_6489e-mail address: zfarris@magnumhunte	5S_R_26E
County: Eddy Latitude 32*07'32.21" N Longitude 104*1	4'35.26 W NAD: 1927 ⊠ 1983 ☐ Surface Ow	vner Federal 🗌 State 🗌 Private 🔲 Indian 🗍
<u>Pit</u>	Below-grade tank	·
Type: Drilling ☑ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☑ Unlined ☐ Liner type: Synthetic ☑ Thickness 12 mil Clay ☐ Volume	Volume:bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes If 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	(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 onsite ☐ offsite ☐ If offsite, name of facility	(3) Attach a general description of remedial acti	on taken including remediation start date and end
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: 11-1-04 Printed Name/Title Zeno Farris Manager Operations Administration Your certification and NMOCD approval of this application/closure does not otherwise endanger public health or the environment. Nor does it relieve the regulations.	general permit, or an (attached) alternative Of Signature	CD-approved plan . O the pit or tank contaminate ground water or
Approval: Date:	Signature	

RECEIVED

DEC 2 _ 2004

OOD-ARTERIA

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

Form 3160-5 (November 1994)

united state 1301 W. Grand Avenue department of the interior sia, NW 88210 BUREAU OF LAND MANAGEMENT SIA, NW 88210

FORM APPROVED OMB No. 1004-0135 Expires July 31, 1996

	SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.							NM 26105 6. If Indian, Allottee or Tribe Name			
	SUBMIT IN TR	IPLIC	ATE - Other instr	ructi	ons on rever	se side	2	7. If Unit	or CA	/Agreement, Name and/or No.	
1.	Type of Well	<u> </u>				<u>1000 ja .</u>	<u> </u>				
	Oil Well Gas Well	Othe	ा ।		·			8. Well N			
2. Name of Operator								Federal			
_	Gruy Petroleum Manag	eme	nt Co.	120	D1 31 (1)			9. API W 30-0		•	
3a.	Address P.O. Boy 140907 Invin	a TX	75014-0907	30	o. Phone No. (incl.) 972.401.3		coae)			ol, or Exploratory Area	
P.O. Box 140907 Irving, TX 75014-0907 972 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)					0.2.10111					;Penn (Gas)	
••	SHL 725' FSL & 1750'			,				11. County		```	
	BHL 1175' FSL & 175)' FE	L Sec 13-25S-26E						E	ddy, NM	
	12. CHECK AP	PROI	PRIATE BOX(ES) T	O IN	NDICATE NAT	URE C	F NOTICE, R	EPORT, C	R O	THER DATA	
	TYPE OF SUBMISSION					TYPE O	F ACTION	-			
×	Notice of Intent		Acidize		Deepen		Production (Start	/Resume)		Water Shut-Off	
<u>_</u>	Nouce of Intent		Alter Casing		Fracture Treat		Reclamation			Well Integrity	
	Subsequent Report		Casing Repair		New Construction	, 🗅	Recomplete		\boxtimes	Other New SHL, BHL	
Г	Final Abandonment Notice	Ø	Change Plans		Plug and Abandon	n 🗅	Temporarily Ab	andon			
_	- Final Abandonment Notice		Convert to Injection		Plug Back		Water Disposal				
Atta C-1	BLM request SHL move ached are the following re 02, location plat, vicinity d. A preliminary direction	egard map,	ling this change: , and location verifi								
14.	I hereby certify that the foregoin Name (Printed/Typed) Zeno Farris	ig is tru	e and correct		Title Ma	ınager,	Operations A	dministra	tion		
	Signature Zin	e F	- and		Date 1	1-10-0	4				
			THIS SPACE	FOR	FEDERAL OR	STATE	OFFICE USE				
			a Ketson		lin	Title FIE	LD MANA	AGER	Date	DEC 2.7 2004	
Conditions of approval, if any, are attached. Approval of this notice does not warn certify that the applicant holds legal or equitable title to those rights in the subject which would entitle the applicant to conduct operations thereon.					es not warrand or the subject lease	Office	CARLSI	BAD FI	ELI	O OFFICE	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

State of New Mexico

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

Energy, Minerals and Natural Resources Department

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 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 IV 1220 S. ST. FRANCIS DR., SANTA PR., NM 87505	WELL LOCATION AND	ACREAGE DEDICATION PLAT	□ AMENDED REPORT
API Number	Pool Code	Pool Name	
		White City; Penn (Gas)	
Property Code	Proj	erty Name	Well Number
	FEDERA	AL 13 COM	3
OGRID No.	-	rator Name	Elevation
162683	GRUY PETROLEUM	MANAGEMENT COMPANY	3222'

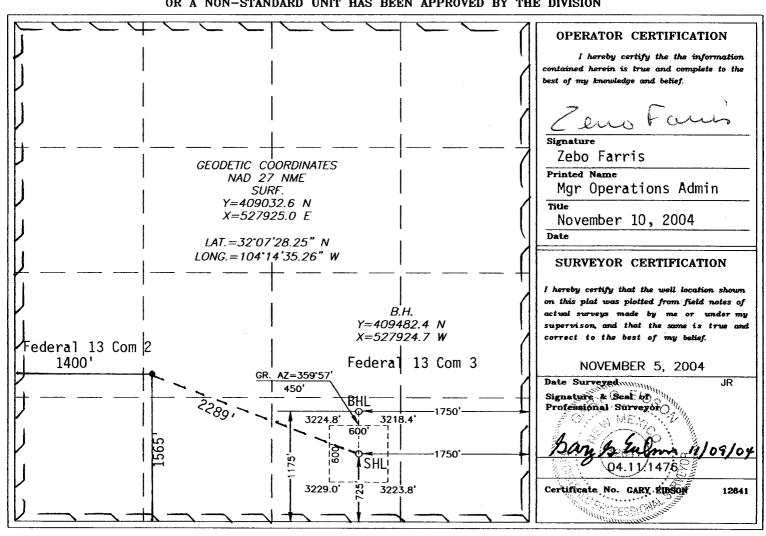
Surface Location

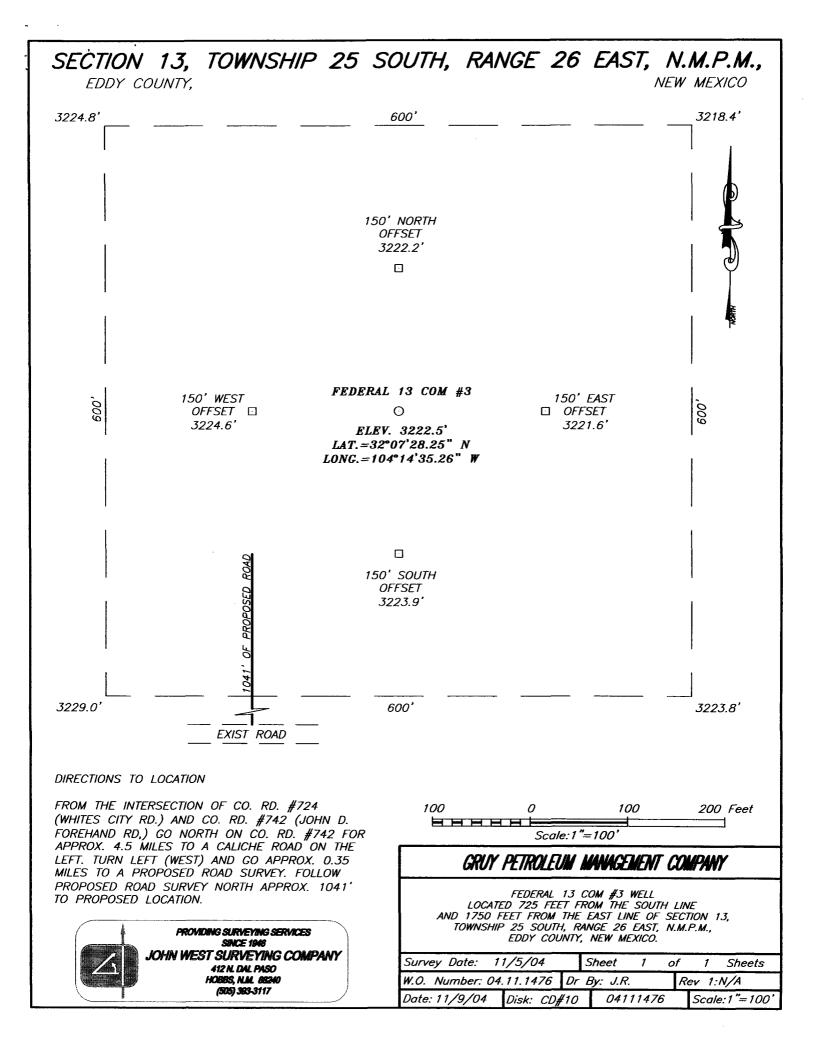
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	13	25-S	26-E		725	SOUTH	1750	EAST	EDDY

Bottom Hole Location If Different From Surface

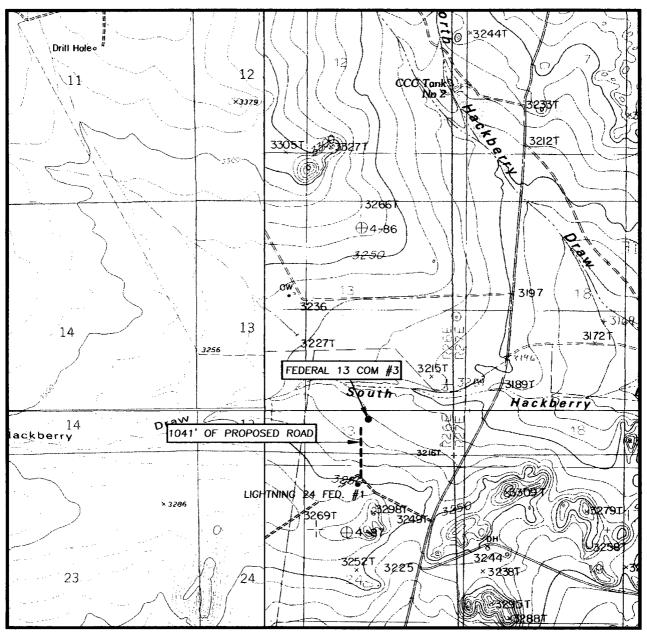
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	13	25-	S 26-E		1175	SOUTH	1750	EAST	EDDY
Dedicated Acres	Joint o	r Infill	Consolidation	Code Or	der No.				
640	\\	<u>'</u>	С						

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





LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SEC. <u>13</u> TWP. <u>25-S</u> RGE. <u>26-E</u>

SURVEY N.M.P.M.

COUNTY____EDDY

DESCRIPTION 725' FSL & 1750' FEL

ELEVATION____ <u>322</u>2'

GRUY PETROLEUM OPERATOR MANAGEMENT COMPANY

LEASE____ FEDERAL 13 COM

U.S.G.S. TOPOGRAPHIC MAP

BOND DRAW, N.M.

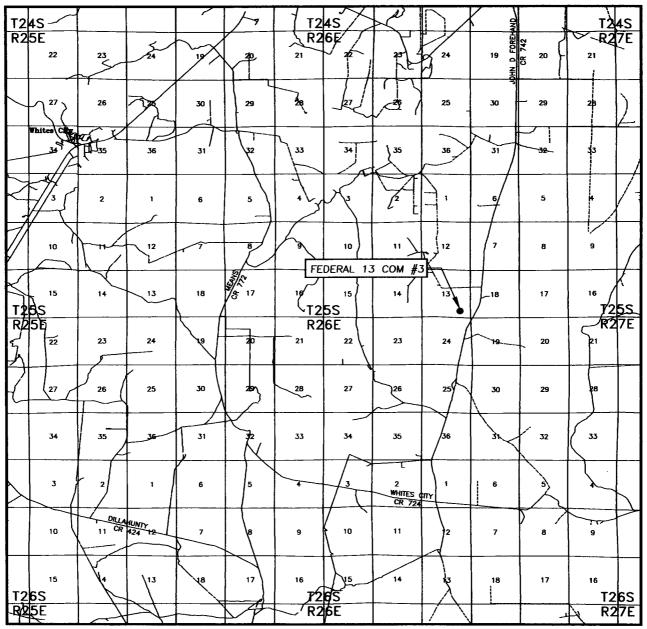
CONTOUR INTERVAL: BOND DRAW, N.M. - 10' JUMPING SPRINGS, N.M. - 10' COTTONWOOD HILLS, N.M. - 10' BLACKRIVER VILLAGE, N.M. - 20'



Exhibit "B"

PROVIDING SURVEYING SERVICES **SINCE 1946** JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240 (505) 303-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 13	IWP. <u>25-S</u> RGE. <u>26-E</u>
SURVEY	N.M.P.M.
COUNTY	EDDY
DESCRIPTIO	N 725' FSL & 1750' FEL
ELEVATION_	3222'
OPERATOR_	GRUY PETROLEUM MANAGEMENT COMPANY
LEASE	FEDERAL 13 COM

Exhibit "C"



PROVIDING SURVEYING SERVICES
SINCE 1948
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117



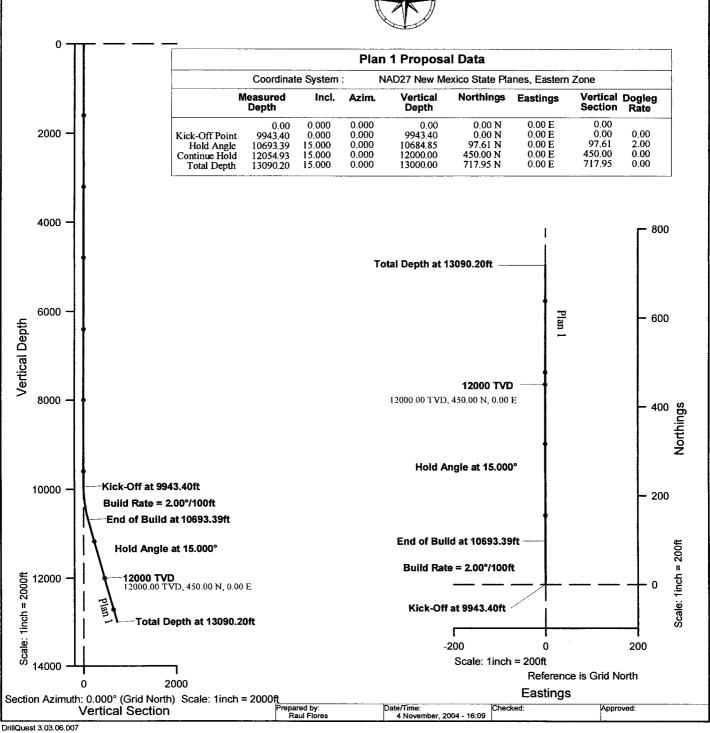
HALLIBURTON

Gruy Petroleum Management

DrillQuest

Rig: Patterson 80 **Eddy County, NM** Sec 13-T25S-R26E Federal 13 #3 Plan 1







Gruy Petroleum Management New Mexico Eddy County Sec 13-T25S-R26E Federal 13 #3 - Plan 1

Sperry-Sun Proposal Report

4 November, 2004

Proposal Ref: pro8802

HALLIBURTON

HALLIBURTON

Proposal Report for Sec 13-T25S-R26E - Federal 13 #3 - Plan 1

Measured Depth (ft)	Incl. (Deg)	Grid Azim. (Deg)	Stat TVD (ft)	ion Coordi Northings (ft)	n a t e s Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Comment
0.00 9943.40 10000.00 10100.00 10200.00	0.000 0.000 1.132 3.132 5.132	0.000 0.000 0.000 0.000 0.000	0.00 9943.40 10000.00 10099.92 10199.66	0.00 N 0.00 N 0.56 N 4.28 N 11.48 N	0.00 E 0.00 E 0.00 E 0.00 E 0.00 E	0.00 0.00 0.56 4.28 11.48	0.00 2.00 2.00 2.00	Kick-Off at 9943.40ft
10300.00	7.132	0.000	10299.08	22.17 N	0.00 E	22.17	2.00	Build Rate = 2.00°/100ft
10318.39	7.500	0.000	10317.32	24.51 N	0.00 E	24.51	2.00	
10400.00	9.132	0.000	10398.07	36.31 N	0.00 E	36.31	2.00	
10500.00	11.132	0.000	10496.50	53.90 N	0.00 E	53.90	2.00	
10600.00	13.132	0.000	10594.27	74.92 N	0.00 E	74.92	2.00	
10693.39 10700.00 10800.00 10900.00 11000.00	15.000 15.000 15.000 15.000 15.000	0.000 0.000 0.000 0.000 0.000	10684.85 10691.24 10787.83 10884.42 10981.02	97.61 N 99.32 N 125.21 N 151.09 N 176.97 N	0.00 E 0.00 E 0.00 E 0.00 E 0.00 E	97.61 99.32 125.21 151.09 176.97	2.00 0.00 0.00 0.00 0.00	End of Build at 10693.39ft
11100.00	15.000	0.000	11077.61	202.85 N	0.00 E	202.85	0.00	Hold Angle at 15.000°
11200.00	15.000	0.000	11174.20	228.73 N	0.00 E	228.73	0.00	
11300.00	15.000	0.000	11270.79	254.61 N	0.00 E	254.61	0.00	
11374.16	15.000	0.000	11342.43	273.81 N	0.00 E	273.81	0.00	
11400.00	15.000	0.000	11367.39	280.49 N	0.00 E	280.49	0.00	
11500.00	15.000	0.000	11463.98	306.38 N	0.00 E	306.38	0.00	
11600.00	15.000	0.000	11560.57	332.26 N	0.00 E	332.26	0.00	
11700.00	15.000	0.000	11657.16	358.14 N	0.00 E	358.14	0.00	
11800.00	15.000	0.000	11753.76	384.02 N	0.00 E	384.02	0.00	
11900.00	15.000	0.000	11850.35	409.90 N	0.00 E	409.90	0.00	
12000.00 12054.93 12100.00 12200.00	15.000 15.000 15.000 15.000	0.000 0.000 0.000 0.000	11946.94 12000.00 12043.53 12140.13	435.78 N 450.00 N 461.66 N 487.55 N	0.00 E 0.00 E 0.00 E 0.00 E	435.78 450.00 461.66 487.55	0.00 0.00 0.00 0.00	12000 TVD Target - 12000 TVD, Current Target
12300.00	15.000	0.000	12236.72	513.43 N	0.00 E	513.43	0.00	
12400.00	15.000	0.000	12333.31	539.31 N	0.00 E	539.31	0.00	
12500.00	15.000	0.000	12429.91	565.19 N	0.00 E	565.19	0.00	
12600.00	15.000	0.000	12526.50	591.07 N	0.00 E	591.07	0.00	
12700.00	15.000	0.000	12623.09	616.95 N	0.00 E	616.95	0.00	
12800.00	15.000	0.000	12719.68	642.84 N	0.00 E	642.84	0.00	
12900.00	15.000	0.000	12816.28	668.72 N	0.00 E	668.72	0.00	Total Depth at 13090.20ft
13000.00	15.000	0.000	12912.87	694.60 N	0.00 E	694.60	0.00	
13090.20	15.000	0.000	13000.00	717.95 N	0.00 E	717.95	0.00	

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

The Dogleg Severity is in Degrees per 100 feet. Vertical Section is from Well and calculated along an Azimuth of 0.000° (Grid).

Coordinate System is NAD27 New Mexico State Planes, Eastem Zone. Grid Convergence at Surface is 0.000° .

HALLIBURTON

Proposal Report for Sec 13-T25S-R26E - Federal 13 #3 - Plan 1

Based upon Minimum Curvature type calculations, at a Measured Depth of 13090.20ft., The Bottom Hole Displacement is 717.95ft., in the Direction of 0.000° (Grid).

Comments

Measured	Sta	tion Coordi	nates	
Depth (ft)	TVD (ft)	Northings (ft)	Eastings (ft)	Comment
9943.40	9943.40	0.00 N	0.00 E	Kick-Off at 9943.40ft
10318.39	10317.32	24.51 N	0.00 E	Build Rate = 2.00°/100ft
10693.39	10684.85	97.61 N	0.00 E	End of Build at 10693.39ft
11374.16	11342.43	273.81 N	0.00 E	Hold Angle at 15.000°
12054.93	12000.00	450.00 N	0.00 E	12000 TVD
13090.20	13000.00	717.95 N	0.00 E	Total Depth at 13090.20ft

Targets associated with this wellpath

	Target	t Entry Coordi	inates		
Target Name	TVD (ft)	Northings (ft)	Eastings (ft)	Target Shape	Target Type
12000 TVD	12000.00	450.00 N	0.00 E	Point	Current Target



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., a NYSE company MHR

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.:

NM - 26105

Legal Description: All Sec 13, T25S-R26E

Containing 640 acres, Eddy County New Mexico

Formation (S):

Morrow/Pennsylvanian

Bond Coverage:

Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

Representing Gruy Petroleum Management Co.

Zeno Farin

Name: Zeno Farris

Title: Manager, Operations Administration

Date: 10/28/04

Application to Drill

Gruy Petroleum Management Co. Federal 13 Com No. 3 Unit Letter O Section 13 T25S - R26E Eddy County, NM

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

1 Location:

1125' FSL & 1750' FEL Sec. 13- 25S 26E

2 Elevation above sea level:

GR 3220'

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	250'	Cisco Canyon	9928
B/Salt	800'	Strawn	10078
Delaware	1450	Atoka	10388
Bone Spring	6168	Morrow	11,158
Wolfcamp	8098	Barnett	11,768

7 Possible mineral bearing formation:

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"	54.5	8-R	ST&C	J-55	_
12 1/4"	0-1900'	9 5/8"	40	8-R	ST&C	NS-110	
8 3/4"	0-10000'	7"	23	8-R	ST&C	P-110	
6 1/8"	0-13000'	4 1/2"	11.6	8-R	ST&C	HCP-110	

Application to Drill

Gruy Petroleum Management Co. Federal 13 Com No. 3 Unit Letter O Section 13 T25S - R26E Eddy County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 200' of 13 3/8" J-55 54.5# ST&C casing. Cement with 250 Sx. Of Premium Plus cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 1900' of 9 5/8" NS-110 40# ST&C casing. Cement with 675 Sx. Of Interfill "H" & Premium Plus Cement + additives, circulate cement to surface.
7"	Intermediate	Set 10000' of 7" P-110 23# ST&C casing. Cement in two stages, first stage cement with 625 Sx. of Interfill "H" & Super "H" Cement + additives. Second stage cement with 1050 Sx of Interfill "C" & Premium Plus Neat, circulate cement to surface.
4 1/2"	Production	Set 13000' of 4 1/2" HCP-110 11.6# ST&C casing. Cement with 485 Sx. of Super "H" Cement + additives. Estimated TOC 7200

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 while drilling.

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	Fresh 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. Federal 13 Com No. 3 Unit Letter O Section 13 T25S - R26E Eddy County, NM

12 Testing, Logging and Coring Program:

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

13 Potential Hazards:

No abnormal pressures or temperatures or H2S gas are expected. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP <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 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 <u>Strawn / Morrow / Atoka pay will be perforated and stimulated</u>. The well will be tested and potentialed as a gas well.

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- 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 Eddy County road # 724 and Eddy County Road # 742, go north 4.5 miles on County Road # 742 to a good caliche road on left. Turn left and go 0.35 miles to proposed road survey and follow north 1435' to location.
- 2 PLANNED ACCESS ROADS: 1435' 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"

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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. 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:

No camps or airstrips to be constructed.

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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 to be lined with PVC or polyethylene liner. The pit liner will be 12 mils thick and will extend a minimum of 2' 00" over the reserve pit dikes where the liner will be
- D. 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.

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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 1/2 miles of this location.

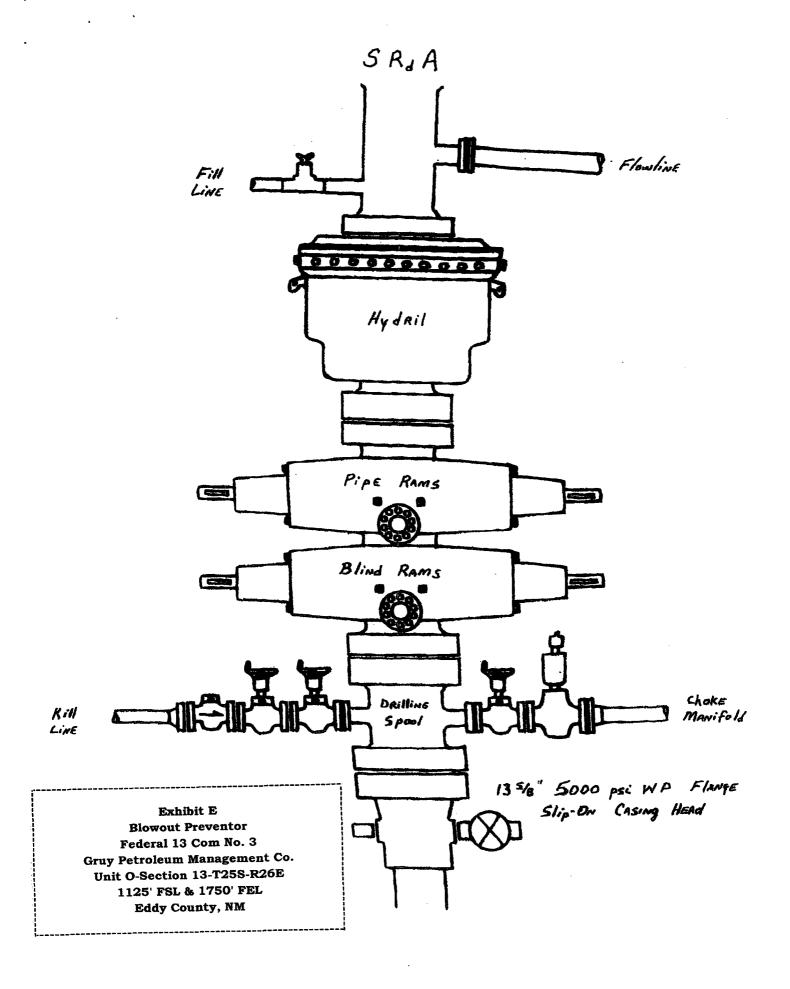
12 OPERATORS REPRESENTATIVE:

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 exist; 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 and subcontractors, and will be 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.

TITLE: Manager, Operations Administration



DRILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

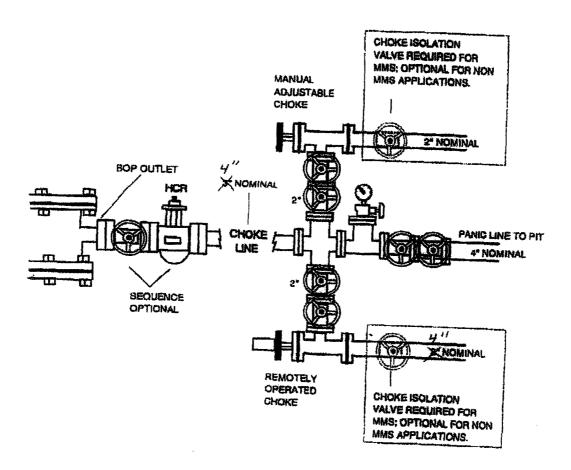


Exhibit E-Cont'd

Blowout Preventor-Choke Manifold
Federal 13 Com No. 3

Gruy Petroleum Management Co.
Unit O-Section 13-T25S-R26E
1125' FSL & 1750' FEL
Eddy County, NM