AT5-11-412

Form 3160-3
(August 2007)

OCD-HOBBS HOBBS OCD

AUG 0 5 2011

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FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM-62223	
6. If Indian, Allotee or Tribe Name	
1a. Type of work: ☑ DRILL ☐ REENTER	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. Sharbro Federal #11 (305951)
2. Name of Operator EnerVest Operating LLC (143199)	9. API Well No. 30-015-025-40219
3a. Address 1001 Fannin Street, Suite 800 Houston, Texas 77002	3b. Phone No. *(include area code)* (713) 495-6530
	10. Field and Pool, or Exploratory Sand Dunes, Bone Springs (53800)
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface 1980' FSL, 660 FEL, Unit Letter I At proposed prod. zone	11. Sec., T. R. M. or Blk. and Survey or Area Section 7, T-23-S, R-32-E
14. Distance in miles and direction from nearest town or post office* 39 miles west and north of Jal, New Mexico	12. County or Parish Lea / 13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'	16. No. of acres in lease 280	17. Spacing Unit dedicated to this well 40 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,282'	19. Proposed Depth 8,900'	20. BLM/BIA Bond No. on file NMB000503
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3554' GL	22. Approximate date work will start* 06/15/2011	23. Estimated duration 2 weeks

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must 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 BLM.

25. Signature Bridget Helfrich	Name *(Printed/Typed)* Bridget Helfrich	Date 5-6-11
Title Regulatory Technician		
Approved by *(Signature)* /s/ George McDonnell	Name *(Printed/Typed)*	Date AUG - 4 2011
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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, 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.

(Continued on page 2)

*(Instructions on page 2)

KZ 08/05/11

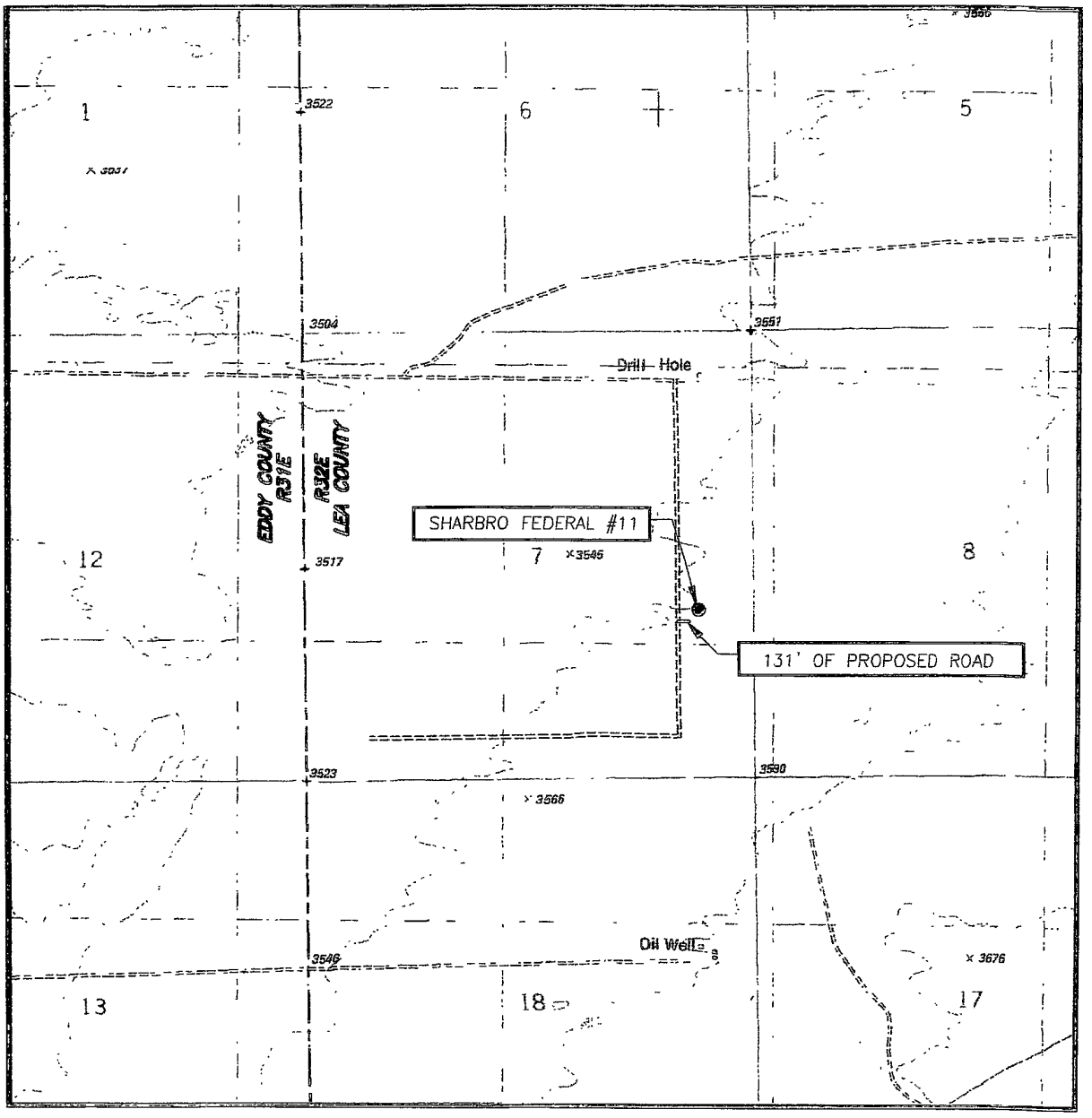
Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

AUG 0 8 2011

Approval Subject to General Requirements
& Special Stipulations Attached

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
BOOTLEG RIDGE, N.M. – 10'

SEC. 7 TWP. 23-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3559'

OPERATOR ENERVEST OPERATING, LLC

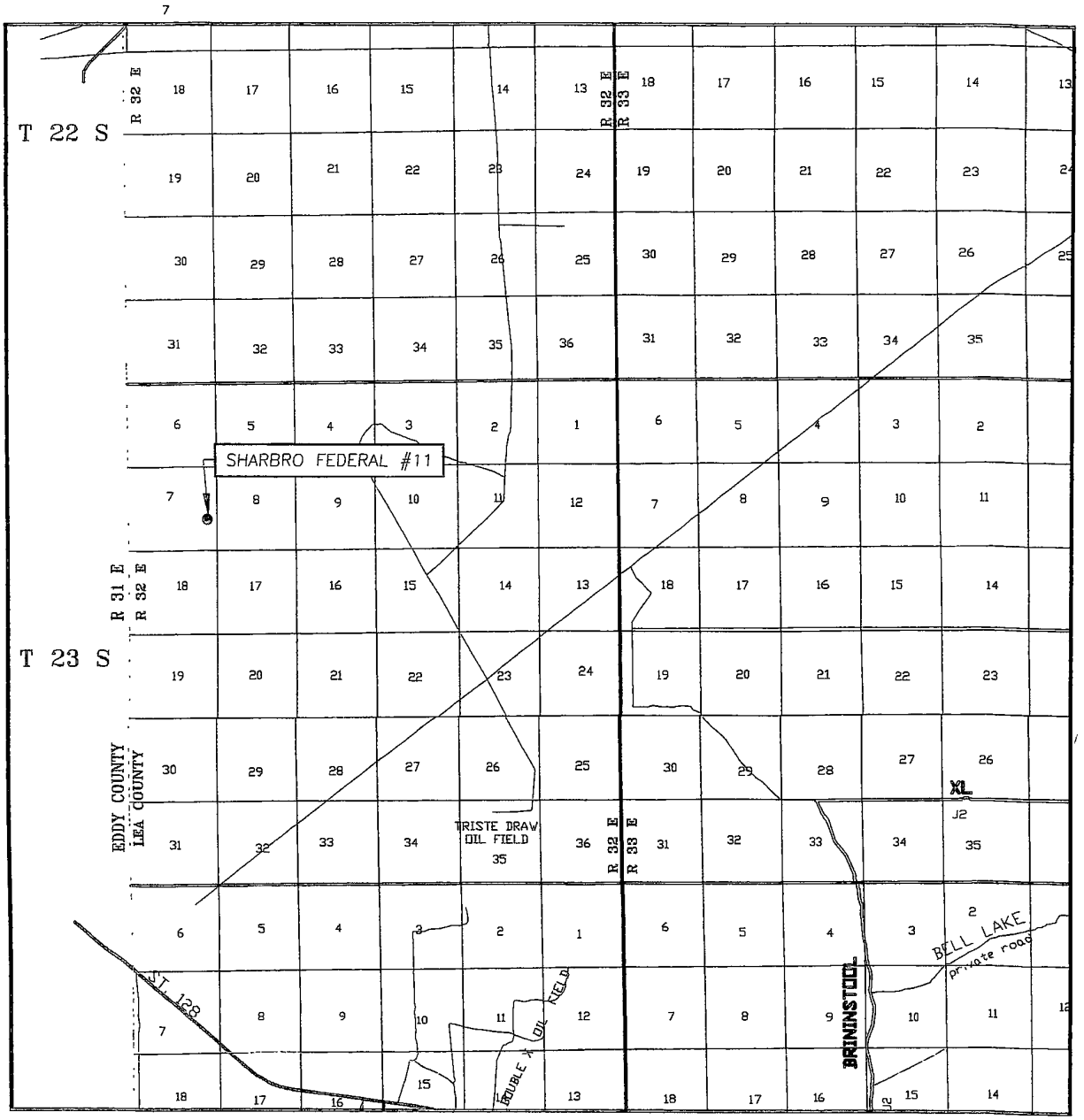
LEASE SHARBRO FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
BOOTLEG RIDGE, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

EXHIBIT 2

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 7 TWP. 23-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3559'

OPERATOR ENERVEST OPERATING, LLC

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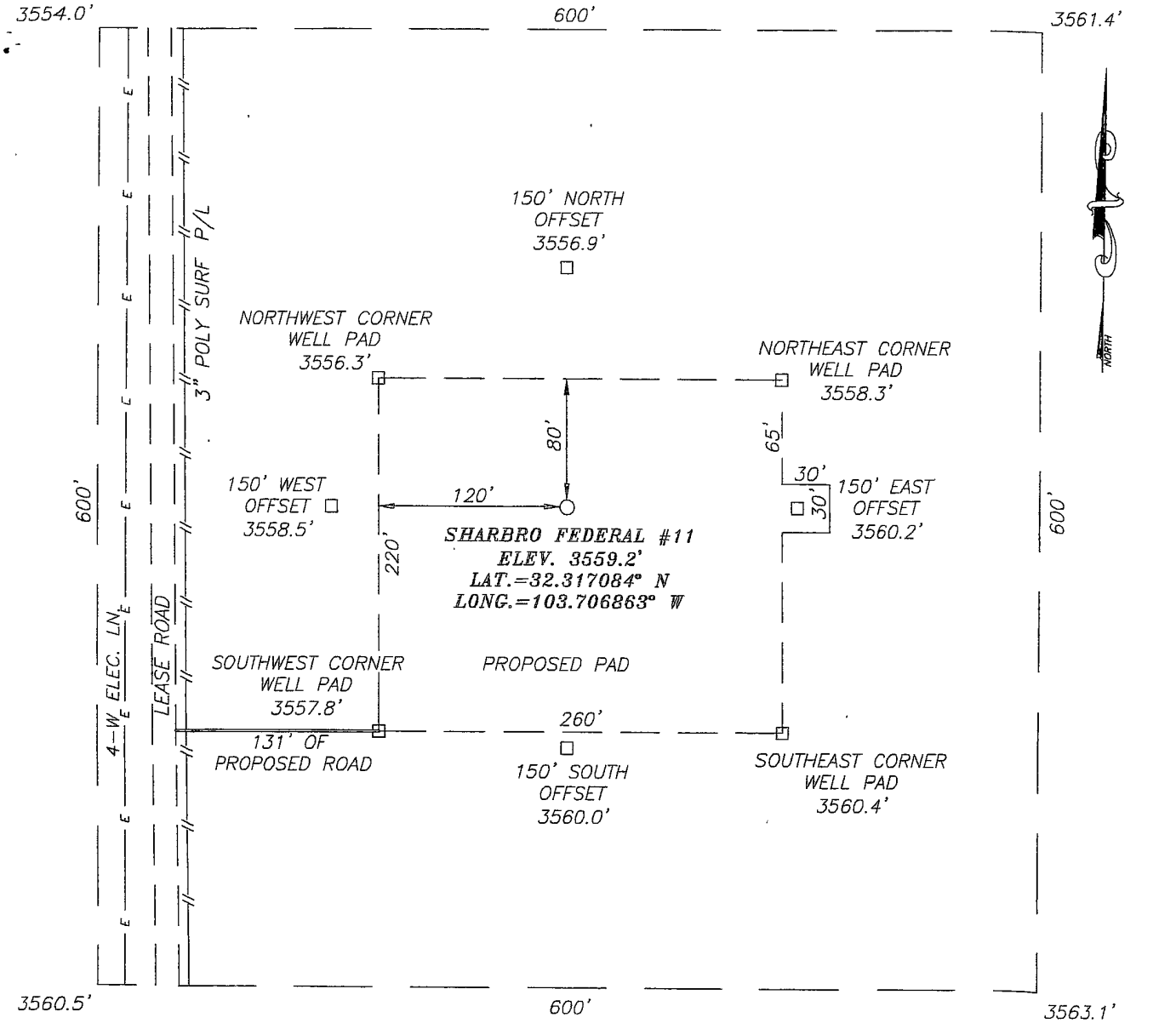
EXHIBIT 3

SEC 7, T 23 S, R 32 E, N.M.P.M.,
LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #128 AND CO. RD. #789 (RED ROAD), GO NORTH ON RED ROAD APPROX. 5.1 MILES. TURN RIGHT AND GO EAST APPROX. 1.8 MILES. TURN RIGHT AND GO SOUTH APPROX. 0.5 MILES TO A PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY 131 FEET EAST TO THIS LOCATION.

100 0 100 200 Feet
Scale: 1"=100'

ENERVEST OPERATING, LLC

SHARBRO FEDERAL #11 WELL
LOCATED 1980 FEET FROM THE SOUTH LINE
AND 660 FEET FROM THE EAST LINE OF SECTION 7,
TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

Survey Date: 3/19/11 Sheet 1 of 1 Sheets
W.O. Number: 11.13.0873 Dr By: LA Rev 1: N/A
Date: 4/20/11 REL: 11110391 11130873 Scale: 1"=100'

EXHIBIT 4

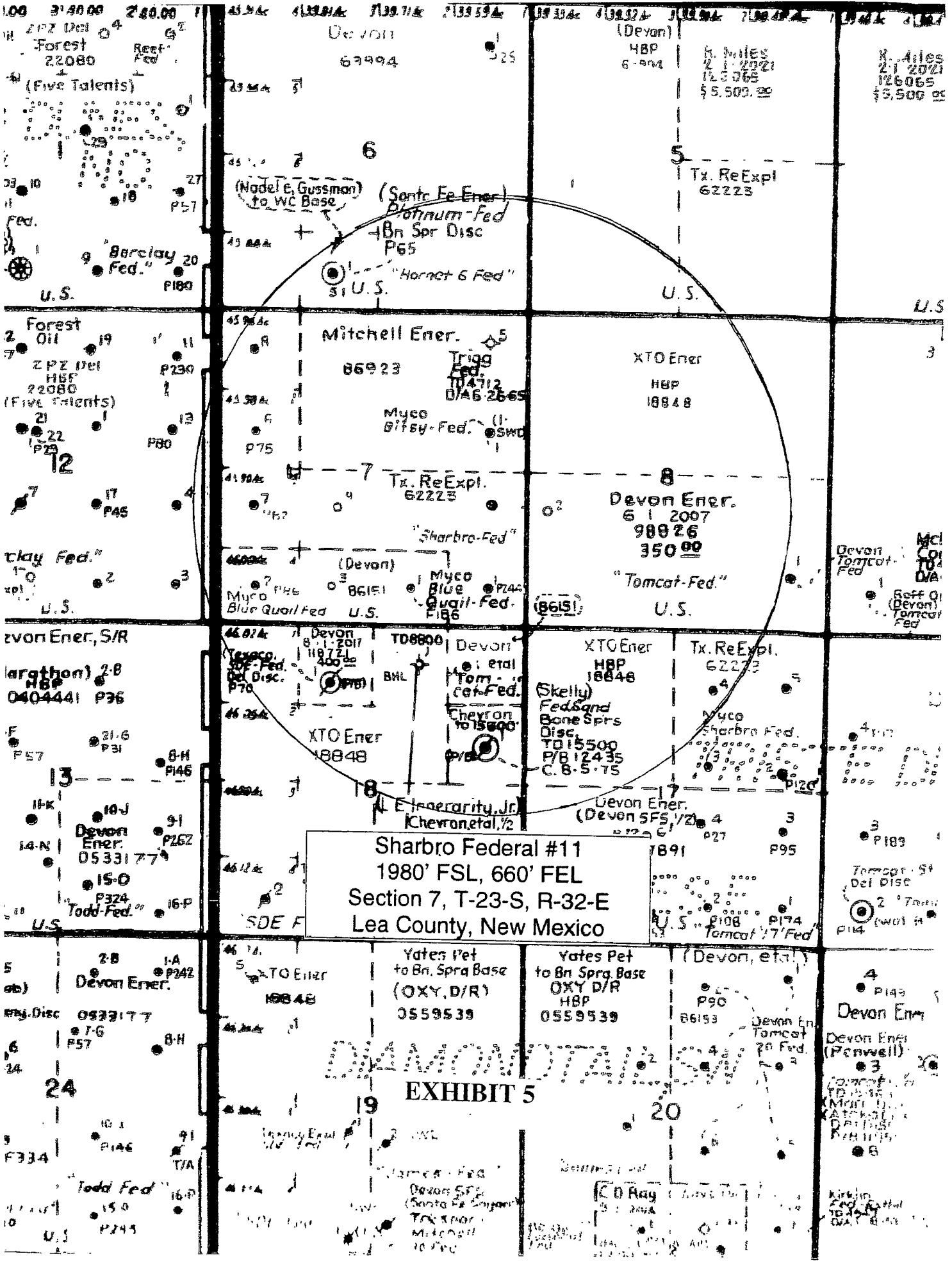
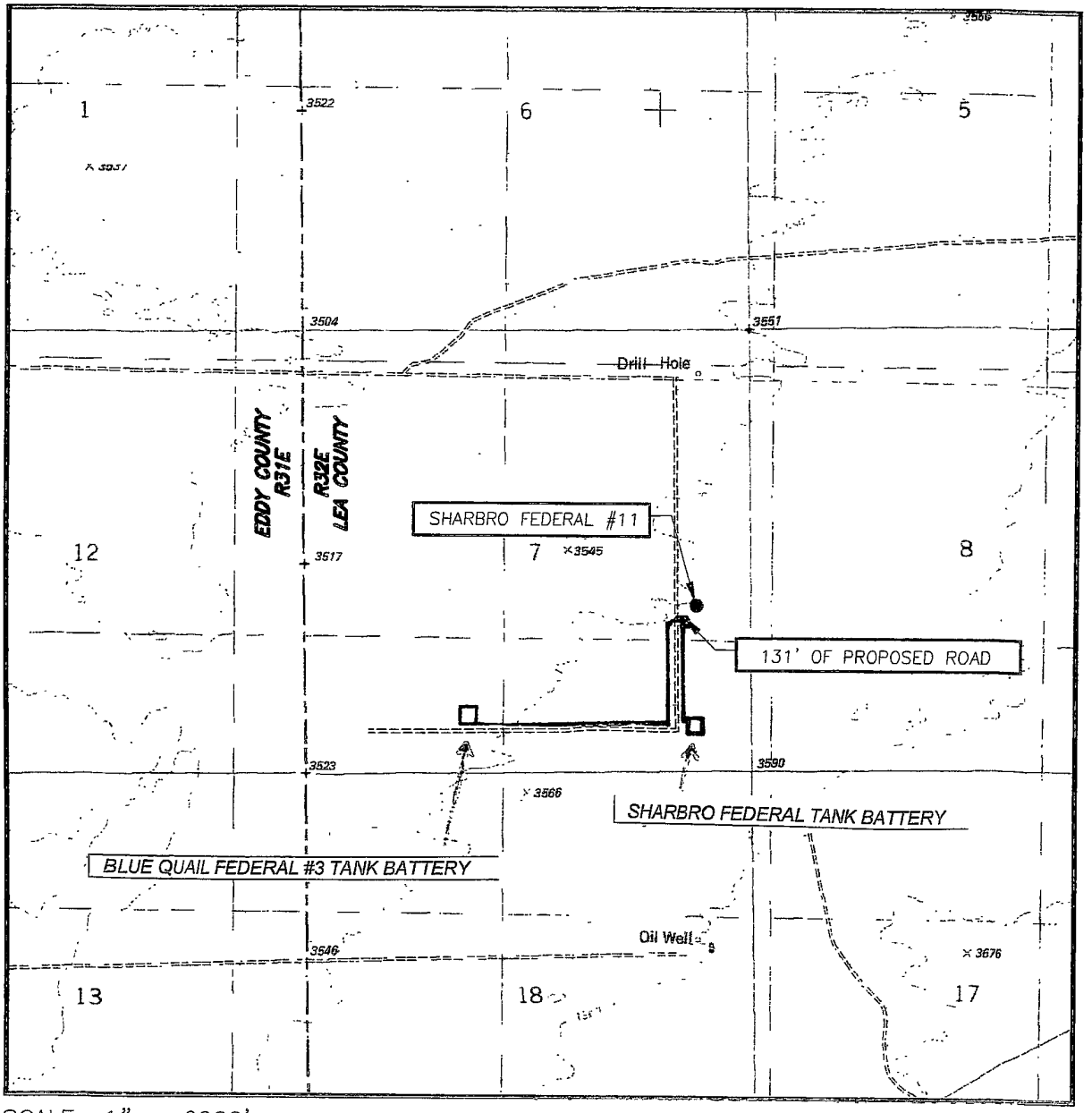

Sharbro Federal #11
1980' FSL, 660' FEL
Section 7, T-23-S, R-32-E
Lea County, New Mexico

EXHIBIT 5

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
BOOTLEG RIDGE, N.M. – 10'

SEC. 7 TWP. 23-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3559'

OPERATOR ENERVEST OPERATING, LLC

LEASE SHARBRO FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
BOOTLEG RIDGE, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

EXHIBIT 6

EXHIBIT 7

HOBBS OCD

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ENERVEST OPERATING, LLC

SHARBRO FEDERAL #11

LEA COUNTY, NM

1980' FSL & 660' FEL

1. The estimated tops of geologic markers are as follows:

Rustler Anhydrite	915'	Ramsey Sand	4625'	Avalon Sand	8556'
Top of Salt	4360'	Cherry Canyon	5529'	TD	8900'
Base of Salt	4530'	Brushy Canyon	6828'		
Lamar Lime	4600'	Bone Spring	8485'		

NC Correct

2. The estimated depths at which anticipated water, oil or gas bearing formations are expected to be encountered:

   Water: 150-250'

   Oil or Gas: 5600-8700'

3. **PRESSURE CONTROL EQUIPMENT:** A 13-5/8" BOPE will be installed on the 13-3/8" casing and rated for at least 3M. BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit 9.

   3A. **AUXILIARY EQUIPMENT:** Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and drill collars will be available on the rig floor in the open position at all times for use when the Kelly is not in use.

4. **PROPOSED CASING AND CEMENTING PROGRAM:**

   A. **Casing Program: (All New)**

see COA

Hole Size	Casing Size	Wt/ft	Grade	Thread	Interval	Length	Safety Factors
17-1/2"	13-3/8"	48#	H-40	STC	0-925'	925'/940	1.86 (c) 3.26 (b) 7.89 (t)
12 ¼"	8-5/8"	32#	J-55	STC	0-4600'	4600'	1.32 (c) 1.41 (b) 2.73 (t)
7-7/8"	5-1/2"	17#	N-80	LTC	0-8900'	8900'	1.48 (c) 1.55 (b) 2.33 (t)

   B. **Cementing Program:**

   13-3/8" Surface Casing: ~~925~~'
   Lead - 580 sx lite prem cmt w/2% $CaCl_2$ + 0.125 ppsx Poly-E-Flake + 5 lb Gilsonite (wt. 12.30 ppg, Yield 1.95 ft^3/sx)
   Tail – 180 sx Class G prem cmt w/2% $CaCl_2$ + 0.125 ppsx Poly-E-Flake (wt. 15.80 ppg, Yield 1.17 ft^3/sx). Cement to surface using 100% excess cement.

   8-5/8" Intermediate Casing: 4,600':
   Lead - 1150 sxs lite prem cmt + 12% salt + .1% Versaset (wt. 12.50 ppg, Yield 2.01 ft^3/sxs)
   Tail: 300 sx 50/50 Poz prem + 12% Salt + .1% Versaset (wt. 13.50 ppg, Yield 1.44 ft^3/sx.
   Cement to surface using 50% excess cement.

5-1/2" Production Casing – 8900':
1st stage: Lead w/260 sxs lite prem cmt + 5 ppg/sx Gilsonite + .125 ppg/sx Poly-E-Flake + .3% HR-5 + 1 ppg/sx Pheno Seal Medium (wt. 12.30 ppg, Yield 1.93 ft^3/sx)
Tail w/100 sxs 50/50 Poz prem + 2.5 ppg/sx Gilsonite + .125ppg/sx Poly-E-Flake +.3% Halad(R)-9 + .1% CFR-3 (wt. 13.50 ppg, Yield 1.29 ft^3/sx). DV Tool set at approx. 6000'.
2nd stage: Lead w/180 lite prem cmt + 5 ppg/sx gilsonite + .125 ppg/sx Poly-E-Flake + .2% Halad(R)-9 (wt. 12.30 ppg, Yield 1.92 ft^3/sx)
Tail w/50 sx of Class "G" prem cmt + .3% Halad(R)-9 (wt 15.80 ppg; Yield 1.15 ft^3 sx Tie back to Intermediate Casing (4000'). Volumes to be adjusted using 25% excess cement.

See COA

5. **MUD PROGRAM AND AUXILIARY EQUIPMENT**:

Interval	Type	Weight	Viscosity	Fluid Loss
0-925 /1040	FW Gel	8.4-8.9	32-26	N/C
925-4600	Brine	10.0	28	N/C
4600-TD	Cut Brine	8.9-9.3	28	<15.0

Sufficient mud material to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

6. **EVALUATION PROGRAM:**

Samples:	Every 10' from intermediate casing to TD
Logging:	G/R/N from surface to TD; Dual Induction Spectra G/R, Litho Density from 4500' to TD
Coring:	None anticipated
DST's:	None anticipated

7. **ABNORMAL CONDITIONS AND ANTICIPATED BHP:**

From 0-925':	Anticipated Max. BHP: 250 psi
From 925 – 4600':	Anticipated Max. BHP: 750 psi
From 4600 – 8,900' (TD):	Anticipated Max. BHP: 2620 psi

Anticipated Potential Hazards: None

Abnormal Pressures Anticipated: None

Lost circulation Zones Anticipated: per COA – Glorieta, Delaware, Bone Spring

H_2S Zones Anticipated: Per COA – Bone Springs – Hydrogen Sulfide Drilling Plan to be activated 500' prior to drilling the Bone Spring formation.

Maximum Bottom Hole Temperature: 160° F

8. **ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 16 days to drill the well with completion taking another 10 days. This well lies in the CRMA prairie chicken area as defined by the 1966 NM GAP analysis study; NM State University. ENERVEST OPERATING, LLC REQUESTS AN EXEMPTION FROM THE MARCH 15-JUNE 15 PRAIRIE CHICKEN STIPS FOR THE DRILLING, COMPLETION & WORKOVER PHASES OF THIS WELL. EnerVest contends that there are no prairie chickens in this area, as supported by the attached field survey prepared by Auburn University in 2000, attached to the Surface Use of Operations.

WELL	SHARBRO FEDERAL 11		ENERVEST OPERATING
TYPE	VERTICAL	RIG	TBD
FIELD	SAND DUNES	COUNTY	LEA
GAS/OIL	OIL	MUD	
LOCATION	1980' FSL & 660' FEL OF SEC. 7, T23S, R32E		
COMMENTS:	OBJECTIVE FORMATIONS: BONE SPRING SAND, AVALON SAND		
NOTE:			

DATE	6/22/2011
ELEVATION	3,555' GL
CEMENT	
SBHT	NA

MUD-LOGGER	SURVEYS	WOB/GPM BIT	FORMATION TOPS HOLE SIZES	VERTICAL DEPTH	MUD WEIGHT	OPEN HOLE LOGS	CEMENT	WELLHEAD	REMARKS
							Cement to surface (100% Excess)		
	300'/600'/TD	10/50/900	17-1/2"		8.4-8.9	GR/N (C H.)			
		Insert	Rustler Anhydrite Est 903'						
			13-3/8" 48# H-40 STC Casing	925					
Set Surface Casing 25' into the Rustler Anhydrite									
	Every 1000' or less	10/25/700 PDC Motor	12-1/4"		10 ppg Brine		Cement to surface (50% Open Hole Excess)		
						GR/N (C.H.)			
				4,000		TOC (5-1/2" String)			
			Top of Salt	4,360					
			Base of Salt	4,530					
			Lamar Lime						
			8-5/8" 32# J-55 STC Casing	4,600					
			Ramsey Sand	4,625					
	Every 1000' or less	10/25/500 PDC Motor	Cherry Canyon	5,529	8 9-9 3 Cut Brine				
6,000' H_2S Equip. Operational			7-7/8"		DV Tool @ 6,000'		Bring cement into intermediate casing @ 4000' Use 15% Excess Over OH Caliper Volume Stage 1 (Estimated Volume):		
							Stage 2 (Estimated Volume):		
			Brushy Canyon	6,828					
			Bone Spring	8,485		Dual Induction, Spectra GR, Litho Density Neutron			
			Avalon Sand	8,556					
			5-1/2" 17# N-80 LTC Casing	8,900					

		Office
AFE #	Regulatory Janet Bienski	713 495 1571
EV #	Engineer RG Trueheart	713.495 1561
API #	Geologist Gary Kowalczyk	713.495 6590

BOP Diagram

SHARBRO FEDERAL #11
LEA COUNTY, NM

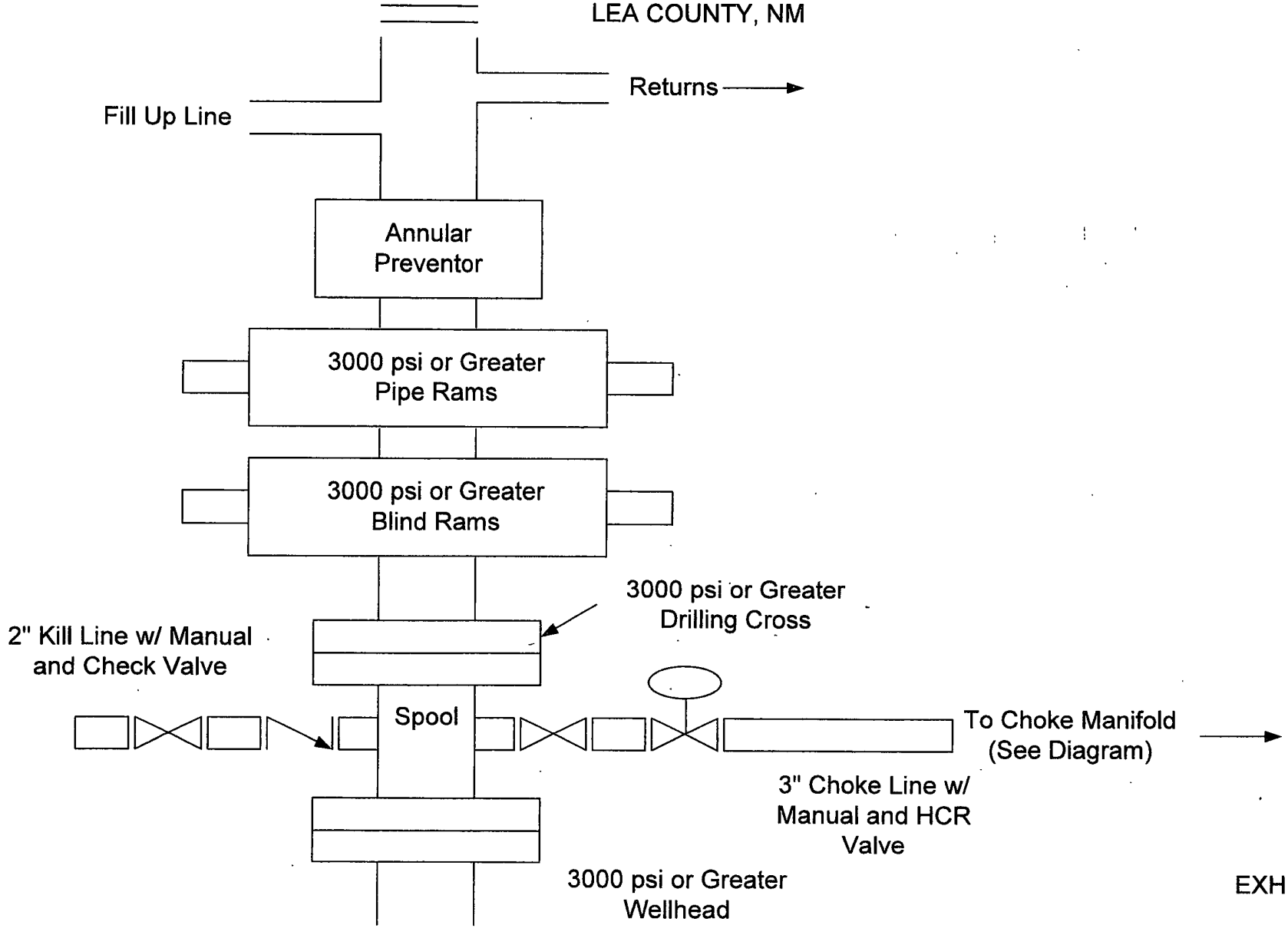
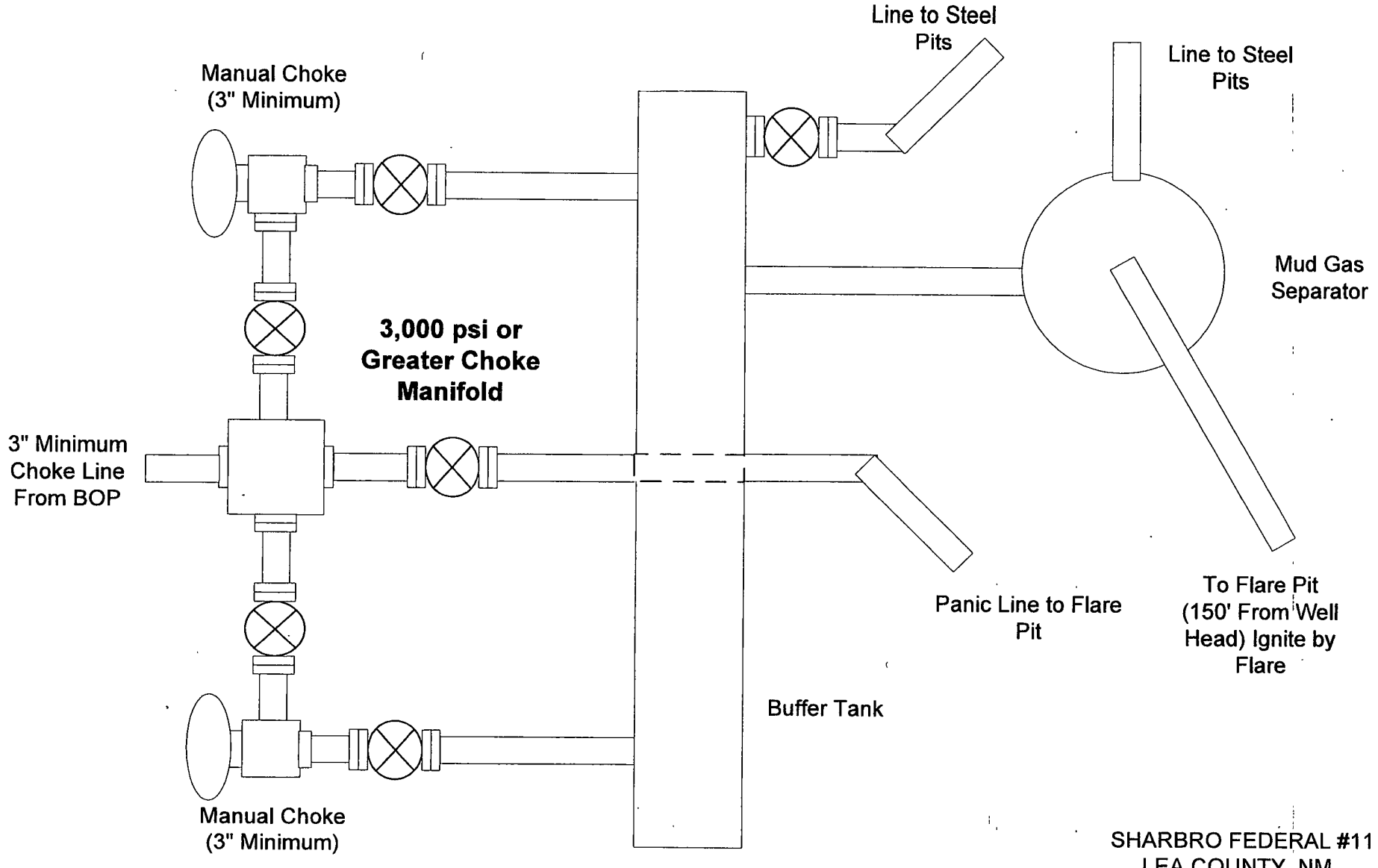


EXHIBIT 9

Sand Dunes
Choke Manifold & Piping Configuration



SHARBRO FEDERAL #11
LEA COUNTY, NM

EXHIBIT 9A

CLOSED LOOP SCHEMATIC
SHARBRO FEDERAL #11

SAND DUNES LOCATION LAYOUT

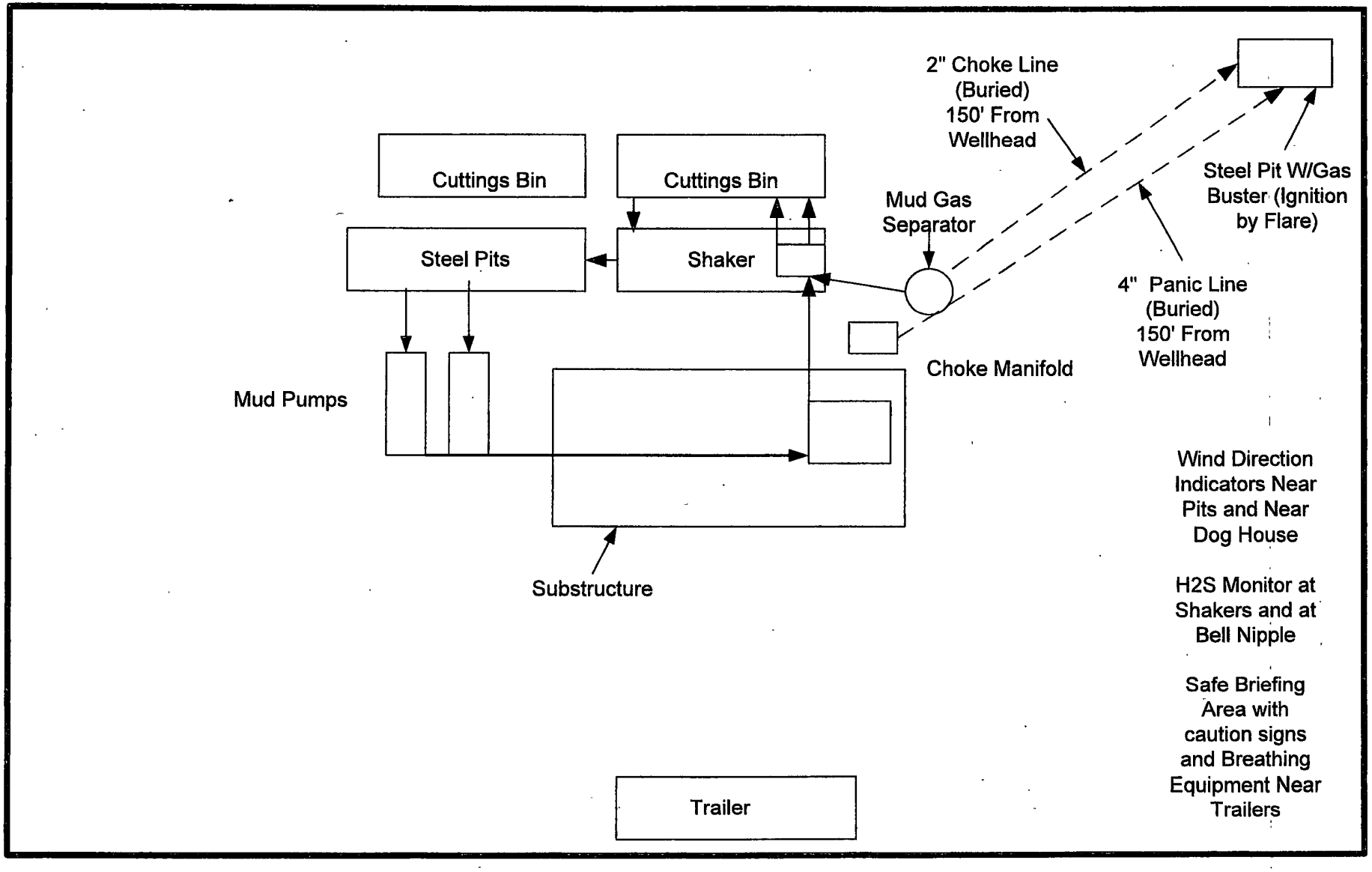


EXHIBIT 10

ENERVEST OPERATING LLC

CLOSED-LOOP DESIGN PLAN

EnerVest Operating LLC ("EnerVest") shall design and construct its closed-loop system closed-loop system to ensure the confinement of oil, gas or water to prevent uncontrolled releases.

The design plan for the closed-loop system shall use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan shall include operating and maintenance procedures and a closure plan, as set out below. For further information on the closed-loop system design, please see the attached diagram.

EnerVest's closed loop system will not use a drying pad, temporary pit, below grade tank or sump. It will use an aboveground haul-off bin suitable for holding solids and fluids from rig operations. No fencing will be constructed around the closed-loop system. Signage shall be posted per the C-144 form to which this plan is attached.

CLOSED-LOOP OPERATING AND MAINTENANCE PLAN

EnerVest shall operate and maintain the closed-loop system in a manner that will contain solids and liquids, maintain the system's integrity, prevent contamination of fresh water and protect public health and the environment. To attain this goal, the following procedures will be followed:

1. EnerVest shall recycle, reuse or reclaim or dispose of all drilling fluids in a manner approved by NMOCD rules.

2. EnerVest shall not discharge into or store any hazardous waste in the closed-loop system, including the haul-off bin, nor shall it allow miscellaneous solid waste or debris into same.

3. The haul-off bin will be of sufficient volume to maintain a safe freeboard prior to disposal of the solids and liquids from rig operations. Disposal will be done on a periodic basis, whenever a haul-off bin is determined to be at full volume capacity. The solids and liquids in the closed-loop system will be transported off the drill site and disposed at the NMOCD-permitted disposal facility or facilities listed below. The designated NMOCD-permitted disposal facility is:

Disposal Facility:	NMOCD Permit No.:
Controlled Recovery, Inc.	NM-01-0006
Gandy Marley, Inc.	DP-1041

4. The closed-loop system will be inspected at least daily while the drilling or workover rig is on-site EnerVest shall maintain a log of such inspections.

5. If some component of the closed-loop system develops a leak, or if any penetration of a component occurs below the liquid's surface, then EnerVest shall promptly remove all liquid above the damage or leak line, notify the appropriate NMOCD district office within 48 hours of the discovery and repair the damage or replace the affected closed-loop system component.

CLOSED-LOOP CLOSURE PLAN

The closure for this drill site is not subject to the closure requirements for temporary pits specified in Subsection B of 19.15.17.13, NMAC, as EnerVest will not use any temporary pits in conjunction with its closed-loop system. The closure for this drill site is not subject to the closure requirements for closed-loop systems using drying pads specified in Subsection D of 19.15.17.13, NMAC, as ENERVEST will not use any drying pads in conjunction with its closed-loop system. Further, the closed-loop system operations and associated activities will all be performed on the drilling pad, and will not be performed on or in areas that will not be used for future service and operations. The closure for the closed-loop system at this site will be performed as follows:

1. Immediately following termination of rig operations, all solids and liquids remaining in the closed-loop system will be transported in the haul-off bin or bins to the NMOCD-permitted facility(ies) listed above.

2. The closed-loop system components, including any and all haul-off bins, will be removed from the location in conjunction with the move of the drilling or completion rig from the well site.

3. Within six months from the date that EnerVest releases the drilling or workover rig, EnerVest will complete and execute items 9 and 10 of the attached C-144 CLEZ and file same with the appropriate NMOCD district office.