Form 3160-5 (April 2004)

UNITED STATES OCD-HOBBS DEPARTMENT OF THE INTERIOR

FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007

BUREAU OF LAND MANAGEMENT								-,	
SUNDRY NOTICES AND REPORTS ON WELLS						5. Lease Serial No. NM-62223			
Do not use th	is form for proposals tell. Use Form 3160 - 3 (o drill or	to re-er	nter an	6.	. If India	nn, Allottee or Trib	e Name	
SUBMIT IN TRI	PLICATE- Other instr	ructions or	n revers	e side.	7	7. If Unit	or CA/Agreement	Name and/or	No.
1. Type of Well ✓ Oil Well	Gas Well Other				8	B. Well N	ame and No.		,
2. Name of Operator Enervest Ope	erating LLC				9	SHAF	RBRO FEDERA	L#9 /	
3a. Address 3b. Phone No. (include area code)						30-02	5-39819	· · ·	
1001 Fannin Street, Suite 300, Houston, TX 77002 713-495-6537 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)							nd Pool, or Explo DUNES, BON		
At Surface: 1980' FSL, 2080' FWL - Unit Letter K, Section 7, T-23-S, R-32-E						-	y or Parish, State COUNTY, NEW	MEXICO	/
12. CHECK AF	PROPRIATE BOX(ES) TO	INDICATE	NATURE	OF NOTI	ICE, REPO	ORT, O	R OTHER DA	TA	
TYPE OF SUBMISSION			TYPI	E OF ACTI	ION				
✓ Notice of Intent ☐ Subsequent Report	Acidize Alter Casing Casing Repair	Deepen Fracture To New Cons	truction	Reclam Recomp	plete		Water Shu Well Integ		
Final Abandonment Notice	✓ Change Plans Convert to Injection	Plug and A Plug Back	.bandon		rarily Aband Disposal	ion			
Attach the Bond under which the following completion of the inv	ctionally or recomplete horizontall the work will be performed or provi- tolved operations. If the operation al Abandonment Notices shall be	y, give subsurfa de the Bond No results in a mult	ce locations on file with the complete complete.	and measure th BLM/BIA. ction or recom	ed and true ve Required su apletion in a r	ertical dep ubsequent new interv	ths of all pertinent reports shall be fil al, a Form 3160-4	markers and z ed within 30 d shall be filed o	ones, lays once
Change to casing string (N	ew revised casing diagram att	tached)							
Change to cementing prog	ram (New revised cementing p	program attac	ched)			400			
	CHED FOR NS OF APPROV	HODE	3 0 201	0	BUREA CAI	JUL /s/ CI JU OF L/ RLSBAL	PROVEL 29 2010 hris Wall AND MANAGER OFIELD OFFIC	S MENT	
 I hereby certify that the foreg Name (Printed/Typed) Gary E. Miller 	going is true and correct		Title Age	ent					
Signature 9			Date	1-23	3-10)			
	THIS SPACE FOR F	EDERAL	OR ST	ATE OF	FICE US	3E			
PETROLEIM PNOWER - AUC 0.3 ROLL									

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.

Office

Conditions of approval, if any, are attached. Approval of this notice 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.

ENERVEST OPERATING SHARBRO FEDERAL #9 WELL TYPE VERTICAL TBD DATE 2/2/2010 RIG FIELD COUNTY IFA ELEVATION 3,532' GL SAND DUNES BAROID **BJ SERVICES** GAS/OIL OIL MUD CEMENT LOCATION 1980' FSL & 2080' FWL OF SEC. 7, T23S, R32E SBHT NA COMMENTS OBJECTIVE FORMATIONS: BONE SPRING SAND, AVALON SAND NOTE VERTICAL MUD SURVEYS WOB/GPM FORMATION TOPS MUD OPEN HOLE CEMENT WELLHEAD REMARKS **DEPTH** LOGGER BIT HOLE SIZES WEIGHT LOGS Cement to surface (100% Excess) Lead: 540 Sks Class C, 2% CaCl2, LCM, 4% Gel 300'/600'/TD 10/50/900 84-89 GR/N (CH) 17-1/2" (1.75 yield, 13.5ppg) Tail 200 Sks Class C, 2% CaCl2 (1.34 yield, 14 8ppg) Insert 13-3/8" 48# H-40 STC Casing 850 李 上京李京教育会》大学等 住在安全官 生物工作工作 医克里氏性多类 多数 子本子 医子子氏管 经存货 医生物 医多种性 医多种性 医多种性 Every 1000' 10/25/700 Cement to surface (50% Open Hole Excess) PDC 12-1/4" Lead: 940 Sks 50/50 POZ:C, 5% NaCl, LCM, 10% or less 10 ppg Gel, 0.1% Sodium Metasilicate (2.45 Yield, 11 8ppg) Motor Brine Tail. 370 Sks 50/50 POZ.C, 5% NaCl, LCM, 2% Gel GR/N (C.H.) (1.3 Yield, 14.2ppg) 4,000 TOC (5-1/2" String) Base of Salt 4,400 8-5/8" 32# J-55 STC Casing 4,600 THE PROPERTY OF THE PARTY OF TH 8 9-9 3 Every 1000' 10/25/500 **Cherry Canyon** 5,511 **Cut Brine** or less PDC Motor 7-7/8" Bring cement into intermediate casing @ 4000' 6,000 H2S Equip. DV Tool @ 6,000' Use 15% Excess Over OH Caliper Volume Operational Stage 1 (Estimated Volume): Lead. 440 Sks 15/61/11 POZ:Premium Plus C: CSE-2, 3% NaCl, 0.1% Sodium Metasilicate (1.61 Yield, 13 2ppg) Stage 2 (Estimated Volume): Lead: 100 Sks 50/50 POZ:C, 5% NaCl, 10% Gel (2 45 Yield, 11.8ppg) Tail. 235 Sks 50/50 POZ.C, 2% Gel (1.26 Yield, **Brushy Canyon** 8.235 14.2ppg) **Bone Spring** 8,522 Dual Induction, Spectra GR, Litho Density Neutron Avalon Sand 8.624 5-1/2" 17# N-80 LTC Casing 8,800 OFFICE HOME TBD AFE# REGULATORY TBD EV# SAFETY, HEALTH & ENVIRONMENTAL API# TBD GEOLOGIST

ENERVEST OPERATING, LLC

SHARBRO FEDERAL #9

1980' FSL & 2080' FWL SEC 7, T23S, R32E

LEA COUNTY, NM

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

Base of Salt	4400'	Cherry Canyon	5511'	Avalon Sand	8624'
Lamar Lime	4572'	Brushy Canyon	8235'	TD	8800'
Ramsev Sand	4608'	Bone Spring	8522'		

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:** 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 B.
 - 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. <u>Casing Program</u>: (All New)

Hole Size	Casing Size	Wt/ft	<u>Grade</u>	<u>Thread</u>	<u>Interval</u>	<u>Length</u>	Safety Factors
17 ½"	13 3/8"	48#	H-40	STC	0 – 850′	850′	1.86 (c) 3.26 (b) 7.89 (t)
12 ¼"	8 5/8"	32#	J-55	LTC	0 – 4600′	4600'	1.32 (c) 1.41 (b) 2.73 (t)
7 7/8"	5 ½"	17#	J-55	LTC	0 – 8800'	8800'	1.48 (c) 1.55 (b) 2.33 (t)

B. Cementing Program:

Surface Casing: 540 sks Class "C" + 4% Gel + 2% CaCl₂ (wt. 13.5 ppg, Yield 1.75 cu ft/sk) & 200 sks Class "C" + 2% CaCl₂ (wt. 14.8 ppg, Yield 1.34 cu ft/sk) Circulate to surface.

<u>Intermediate Casing</u>: 930 sks of 50/50 Poz "C" + 10% Gel + 5% Salt (wt. 11.8 ppg, Yield 2.45 cu ft/sk) & 370 sks 50/50 Poz "C" + 2% Gel + 5% Salt (wt. 14.2 ppg, Yield 1.3 cu ft/sk) <u>Circulate to surface</u>.

Production Casing: 1st stage: 440 sks (15:61:11) Poz: Premium "C": CSE-2 + 3% Salt (wt. 13.2 ppg, Yield 1.61 cu ft/sk) DV Tool set at approx. 6000'. 2nd stage: 100 sks 50/50 Poz "C" + 10% Gel (wt. 11.8 ppg, Yield 2.45 cu ft/sk) & 235 sks 50/50 Poz "C" + 2% Gel (wt. 14.2 ppg, Yield 1.26 cu ft/sk) Tie back to Intermediate Casing (500'). Volumes to be adjusted to caliper volume + 15%

5. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-850	FW Gel	8.4 - 8.9	32-36	N/C
850-4600	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 –850': Anticipated Max. BHP: 250 psi From 850 – 4600': Anticipated Max. BHP: 750 psi From 4600 – 8800' (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 Spring – 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:**

PECOS DISTRICT CONDITIONS OF APPROVAL

JUL 30 2010 HOBBSOCD

OPERATOR'S NAME: EnerVest Operating LLC

LEASE NO.: | NM-62223

WELL NAME & NO.: | Sharbro Federal #9

SURFACE HOLE FOOTAGE: 1980' FSL & 2080' FWL

BOTTOM HOLE FOOTAGE | SAME

LOCATION: | Section 07, T. 23 S., R 32 E., NMPM

COUNTY: Lea County, New Mexico

A. CASING

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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.

Possible lost circulation in the Glorieta, Delaware and Bone Spring Groups/Formations.

Possible water flows in the Salado, Castile, Blinebry, Delaware and Bone Spring Groups/Formations.

- 1. The 13-3/8 inch surface casing shall be set at approximately 850 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. The Rustler may be slightly deeper than 850, ensure casing is set 25 feet into the Rustler Anhydrite.
 - 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- 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 8-5/8 inch intermediate casing is:
 - ⊠ Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - a. First stage to DV tool, cement shall:
 - Ement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
 - b. Second stage above DV tool, cement shall:
 - Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. Will require additional cement as the excess calculates to negative 49%.
- 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.

CRW 072910