

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 15 2012

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

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.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Enervest Operating, LLC

3a. Address

1001 Fannin St. Ste 800 Houston, TX 77002

3b. Phone No. (include area code)

713-495-6537

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2380' ENL & 2440' FEL

SW/4 NE/4 Sec 29 - T 26N - R 5W

5. Lease Serial No.

Jicarilla Contract 155

6. If Indian, Allottee or Tribe Name

Jicarilla Apache

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Jicarilla Contract
155 #19M

9. API Well No.

30-039-29937

10. Field and Pool, or Exploratory Area

Blanco MV/Basin DK

11. County or Parish, State

Rio Arriba NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> Acidize | <input type="checkbox"/> Deepen | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Alter Casing | <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Reclamation | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete | <input type="checkbox"/> Other |
| <input checked="" type="checkbox"/> Change Plans | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon | |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back | <input type="checkbox"/> Water Disposal | |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomplate in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

RCVD MAY 25 '12

Enervest Operating, LLC respectfully submits a modified drilling plan for approval OIL CONS. DIV.

DIST. 3

This well was initially permitted by CDK Gas. Enervest has modified the drilling plan from the original. The well will also be drilled utilizing a Closed Loop System to meet the requirements of the MOC pit rule. Attached please find the modified drilling plan (6 pages plus Idealized Location Diagram/Drilling).

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

BLM'S APPROVAL OF THIS ACTION DOES NOT RELEASE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Bridget Helfrich

Title

Regulatory Analyst II

Signature

Bridget Helfrich

Date

5-14-12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Shen C. Vahl

Title

PE

Date

5/15/12

Office

FFO

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.

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

NMOCD IV

EnerVest Operating, LLC

Jicarilla 155 # 19M

2380' FNL, 2440' FEL Unit G Sec. 29, T26N R05W Rio Arriba County, NM
GL Elev: 6458'

Drilling Plan

All Lease and /or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations, BLM Onshore orders and EnerVest's approved Further Development Project Plan. The operator is fully responsible for the actions of its subcontractors. A copy of the APD and Conditions of Approval will be available to the field representatives to ensure compliance.

4.1, 4.2 ESTIMATED FORMATION TOPS (KB) and NOTABLE ZONES:

The following formation depths and proposed casing depths are used as an example only and will be furnished on a site-specific basis for each proposed well.

<u>Formation Name</u>	<u>Depth</u>	<u>Rock Type</u>	<u>Comments</u>
San Jose	Surface	Sandstone	
Ojo Alamo	2056'	Sandstone	Possible Gas, Water
Kirtland	2392'	Shale	
Fruitland	2611'	Coal, Shale, Sandstone	Possible Lost Circ, Gas, Water
Pictured Cliffs	2792'	Sandstone	Possible Lost Circ, Gas, water
Lewis	2885'	Shale	Sloughing Shale
Huerfanito Bentonite	3239'	Shale	
Chacra	3687'	Siltstone	Gas, Water
Mesa Verde (Cliffhouse)	4439'	Sandstone	Possible Lost Circ, Gas, Water
Mesa Verde (Menefee)	4499'	Coal, Sandstone, Shale	Possible Lost Circ, Gas, Water
Mesa Verde (Point Lookout)	5092'	Sandstone	Possible Lost Circ, Gas, Water
Mancos	5239'	Shale	Sloughing Shale
Gallup	6192'	Siltstone, Shale	Gas, Oil
Greenhorn	6911'	Limestone	Gas, Oil
Graneros	6969'	Shale	Gas, Oil, Water
Dakota (Two Wells)	6993'	Sandstone	Gas, Oil, Water
Dakota (Paguete)	7088'	Sandstone	Gas, Oil, Water
Dakota (Upper Cubero)	7128'	Sandstone	Gas, Oil, Water
Dakota (Main Body)	7158'	Shale, Sandstone	Gas, Oil, Water
Dakota (Lower Cubero)	7213'	Shale, Sandstone	Gas, Oil, Water
Dakota (Burro Canyon)	7242'	Sandstone	Gas, Water

Proposed Total Depth 7236'

Fresh water zones will be adequately protected by setting and cementing the surface casing.
All zones containing commercial quantities of oil or gas will be cased and cemented.

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4.3 PRESSURE CONTROL:

*Sundry previously submitted to change
to 2m system*

Maximum expected pressure is ~1592 (.22 pressure gradient) psi. The drilling contract has not yet been awarded, thus the exact BOP and Choke Manifold model to be used is not yet known. A typical 11" 3,000 psi model is pictured in Exhibits A & B.

A remote accumulator will be used, the pressures, capacities location of the remote and manual controls will be identified at the time of the BLM supervised BOP test.

BOP equipment, accumulator, choke manifold and all accessories will meet or exceed BLM requirements as listed in Onshore Order #2 for the 3M systems. The pressure control equipment considerations include but will not be limited to:

1. Annular Preventer.
2. BOP will be a double gate ram preventer with a set of blind rams and a set of properly-sized pipe rams.
3. Accumulator will have sufficient capacity to close the BOP rams and annular preventer and retain 200 psi above pre charge.
4. Accumulator system will have 2 independent power sources to close the preventers.
5. Accumulator to have capacity of double the usable fluid volume and the fluid volume is to be maintained at manufacturer's recommendations.
6. BOP will also have manual closing handles available.
7. 2" minimum kill line and kill line valves (2).
8. Choke manifold (3" lines) with 2 adjustable chokes with valves and gauge.
9. Manually operated Kelly cocks available.
10. Safety valve and sub(s) with adequate opening for all drill strings used.
11. Fill line and flow line above the upper-most BOP rams.
12. Rotating Head installed when needed for air-drilled portion of the hole.
13. Blooie line installed when air drilling.

BOPs will be pressure tested; after initial installation, before drilling out from under all set and cemented casing strings and any time a seal is broken. The BOPs will also be pressure tested a minimum of once every 21 days by a 3rd party. Additionally, the BOPs will be operationally checked every 24 hours.

All tests and pressure tests will be recorded on IADC log.

Ram type preventors, choke manifold and related pressure control equipment will be pressure tested to the rated working pressure of 3000 psi (high) and 250 psi (low).

The casing strings will be pressure tested per BLM Onshore Order #2 for 30 min as follows:

- a. Surface casing tested to 600 psi prior to drilling out the shoe.
- b. Intermediate casing tested to 1500 psi prior to drilling out the shoe.
- c. Production casing tested to 5400 psi (0.70% of yield) prior to commencement of completion operations.

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4.4 PROPOSED CASING PROGRAM:

The casings proposed in the following table are typical for this development area, if a different casing be required, it will be listed in the site specific APD.

Hole/Casing Description	Hole Size	Casing OD	Weight lb/ft	Grade	Age	Connection	Top MD	Bottom MD
Surface	12 1/4"	9 5/8"	36	J-55	New	ST&C	0	350'
Intermediate	8 3/4"	7"	23	J-55	New	LT&C	0	3135'
Prod Casing	6 1/4"	4 1/2"	11.6	N-80	New	LT&C	0	7236'

Surface and Intermediate casings are to be cemented to surface, production casing is to be cemented with a 200' overlap into the intermediate casing.

4.5 CASING CEMENT:

A prototypical cementing program is listed as follows, site-specific cement designs will be produced for each well as the hole conditions warrant. The cement program will be designed to meet the BLM Onshore Order #2 and NMOCD requirements.

Surface casing will be cemented to the surface.

Cement and properties; Mix and pump 158 sacks (219 cu ft) Type III cement (or equivalent) cement. Slurry density is to be 14.6 (yield = 1.39 cu ft/sx). Volume will include 100% excess. Cement is to be displaced using a top plug.

Two centralizers will be run on the shoe joint, one centralizer each on the next two joints and then one centralizer on every third joint thereafter.

The surface casing will be pressure tested to 600 psi prior to drilling out the shoe.

Intermediate casing will be cemented to surface in 2 stages, stage tool to be set at +/- 2292'. Cement will be designed to circulate to surface. Volumes will be based on 45% excess in OH.

Stage 1:

Lead cement; mix and pump 65 sacks (138 cu ft) premium lite slurry with CaCl₂, cello flake and gilsonite. Estimated slurry density is to be 12.1 (yield = 2.13 cu ft/sx).

✓

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Tail cement; mix and pump 33 sacks (46 cu ft) Type III cement (or equivalent) cement. Slurry density is to be 14.6 (yield = 1.39 cu ft/sx). or equivalent cement.

Stage 2:

Lead cement; mix and pump 183 sacks (389 cu ft) premium lite slurry with CaCl₂, cello flake and gilsonite. Estimated slurry density is to be 12.1 (yield = 2.13 cu ft/sx).

Tail cement; mix and pump 50 sacks (69 cu ft) Type III cement (or equivalent) cement. Slurry density is to be 14.6 (yield = 1.39 cu ft/sx). or equivalent cement.

Two centralizers will be run on the shoe joint, one centralizer on every other joint for 14 joints and then one centralizer on every third joint thereafter.

The Intermediate casing will be pressure tested to 1500 psi prior to drilling out the shoe.

Production casing will be cemented into the intermediate casing with a minimum of 200 ft overlap. Volumes based on 45% excess in OH.

A 20 bbl sweep of 10.5 ppg scavenger slurry will be pumped ahead of the cement to wet and condition the air-drilled hole.

Lead cement; mix and pump 78 sacks (166 cu ft) premium lite slurry with CaCl₂, cello flake and gilsonite. Estimated slurry density is to be 12.1 (yield = 2.13 cu ft/sx).

Tail cement; mix and pump 232 sacks (467 cu ft) premium lite high strength cement with CaCl₂, cellophane, gilsonite and fluid loss agent. Slurry density is to be 12.5 (yield = 2.01 cu ft/sx).

Two centralizers will be run on the shoe joint, one centralizer on every other joint into the intermediate casing, then every 3rd joint to surface.

The production casing will be pressure tested to 5400 psi for 30 minutes prior to commencement of completion operations.

Where cement has not been circulated to surface (or to planned depth) a CBL or temperature survey will be run to determine the TOC for that casing string. A CBL log will be run in the production casing prior to the commencement of completion operations.

Cement specifications may vary slightly due to cement and cement contractor availability.

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4.6 MUD PROGRAM

Depth	Type	Wt / pp	Visc	Fluid Loss
0-350'	FW gel/Lime Spud Mud	8.4-9.0	30-40	N/C
350'-3135'	LSND/Gel sweeps, LCM as needed	8.5-9.4	40-60	20-40 cc
3135'- 7236'	LSND/Gel sweeps, LCM as needed	8.5-9.4	20-40	6-10 cc

The well will be drilled utilizing a closed loop mud handling system. The closed loop system will comply with the NMOCD pit rules pertaining to the use of the system and disposal of the drill cuttings and waste. Drilling mud will be moved for re-use to drill subsequent wells whenever possible.

Viscosity, mud weight and other physical and chemical characteristics of the drilling mud will be varied as required to keep the hole clean, circulate drill cuttings, prevent caving, prevent lost circulation and maximize penetration rate.

Sufficient mud and materials will be kept on site to maintain mud properties and meet lost circulation or mud weight requirements at all times.

Mud design may change depending on well conditions, LCM, fluid loss and viscosity will be determined by the EnerVest representative and the mud engineer on site.

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4.8 CORING, TESTING, & LOGGING

No cores or drill stem tests are planned. Well logs to be run are:

350' to 3135'; GR/ Cement Bond Log, if cement is not circulated to surface.

3135' to TD; GR/Induction/Density Neutron. (Cased hole GR/Neutron will be run if the hole conditions do not allow the use of the open hole logs)

Deviation surveys will be run at 500 ft intervals and at the base of each hole section prior to setting casing.

4.9 ANTICIPATED PRESSURES AND TEMPERATURES:

- | | | |
|----|---|------------|
| a. | Expected bottom hole pressure: | < 1592 psi |
| b. | Anticipated abnormal pressure: | None |
| c. | Anticipated abnormal temperatures: | None |
| d. | Anticipated hazardous gas (H ₂ S): | None |

If any of the foregoing conditions are unexpectedly encountered, suitable steps will be taken to mitigate according to accepted industry best practices.

5.0 OTHER INFORMATION:

The anticipated spud date is spring 2012. The spud date will be dependent on the weather conditions, road conditions and the Conditions of Approval.

The dirt work for road and well pad construction will commence upon approval of the APD and will be dependent on weather conditions.

The well will be spud after well pad construction is complete and a suitable rig becomes available. The duration of drilling operations is expected to be from two to three weeks. The drilling rig and associated equipment will be removed and preparations will be made for the completion of the well.

Completion will start about one to two weeks after the finish of the drilling operations. A completion rig will be moved in for the completion phase. The completion phase of the well is expected to +/- two weeks. The completion phase will include; perforating, acidizing, fracture stimulation and well testing.

Some events/situations may arise that could potentially change the starting date or project duration that are out of EnerVest's control. If such events/situations arise, the proper officials will be promptly notified.

EnerVest Operating, LLC

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Idealized Location Diagram/ Drilling

250'

