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Farmington Field Office
Bureau of Land Management

Form 3160-3
(August 2007)

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. Jicarilla Contract 155

6. If Indian, Allotee or Tribe Name: Jicarilla Apache

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

8. Lease Name and Well No. Jicarilla Apache 155 No. 16M

9. API Well No. 30-039-29995

10. Field and Pool, or Exploratory: Blanco Mesaverde/Basin Dakota

11. Sec., T. R. M. or Blk. and Survey or Area: Sec 30, T-26N, R-5W, UL C

12. County or Parish: Rio Arriba

13. State

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator: Enervest Operating, L.L.C.

3a. Address: 1001 Fannin Street, Suite 800, Houston, TX 77002

3b. Phone No. *(include area code)*: 713-495-6537

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: 760' FNL & 2570' FWL
At proposed prod. zone

14. Distance in miles and direction from nearest town or post office*: 30 miles from Lindrith, NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 760'

16. No. of acres in lease: 2477.56

17. Spacing Unit dedicated to this well: MV-159.57, DK-319.57 N/2 NW/4 NSP1400

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft: 700'

19. Proposed Depth: 7538'

20. BLM/BIA Bond No. on file: NMB000503

RCVD APR 3 '12
OIL CONS. DIV.
DIST. 3

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 6707' GR

22. Approximate date work will start*: 04/01/2012

23. Estimated duration: 2-3 wks

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 01/12/2012
Title: Regulatory Tech.		
Approved by *(Signature)* *[signature]*	Name *(Printed/Typed)*	Date 3/29/12
Title: AFM	Office: FFO	

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.

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)

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

*(Instructions on page 2)

NOTIFY AZTEC OCD 24 HRS. PRIOR TO CASING & CEMENT

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

NMOCD

APR 3 0 2012

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

RCVD APR 20 '12
OIL CONS. DIV.
DIST. 3

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised July, 16, 2010
Submit one copy to appropriate District Office

[X] AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039- 29995	72319/71599	BLANCO MESAVERDE / BASIN DAKOTA

[4] Property Code	[5] Property Name	[6] Well Number
306758	JICARILLA CONTRACT 155	16M

[7] OGRID No.	[8] Operator Name	[9] Elevation
143199	ENERVEST OPERATING, LLC	6707'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	30	26-N	5-W		760	NORTH	2570	WEST	RIO ARRIBA

[11] 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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
MV - 319.57 N/2 DK - 319.57 N/2	Y		

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

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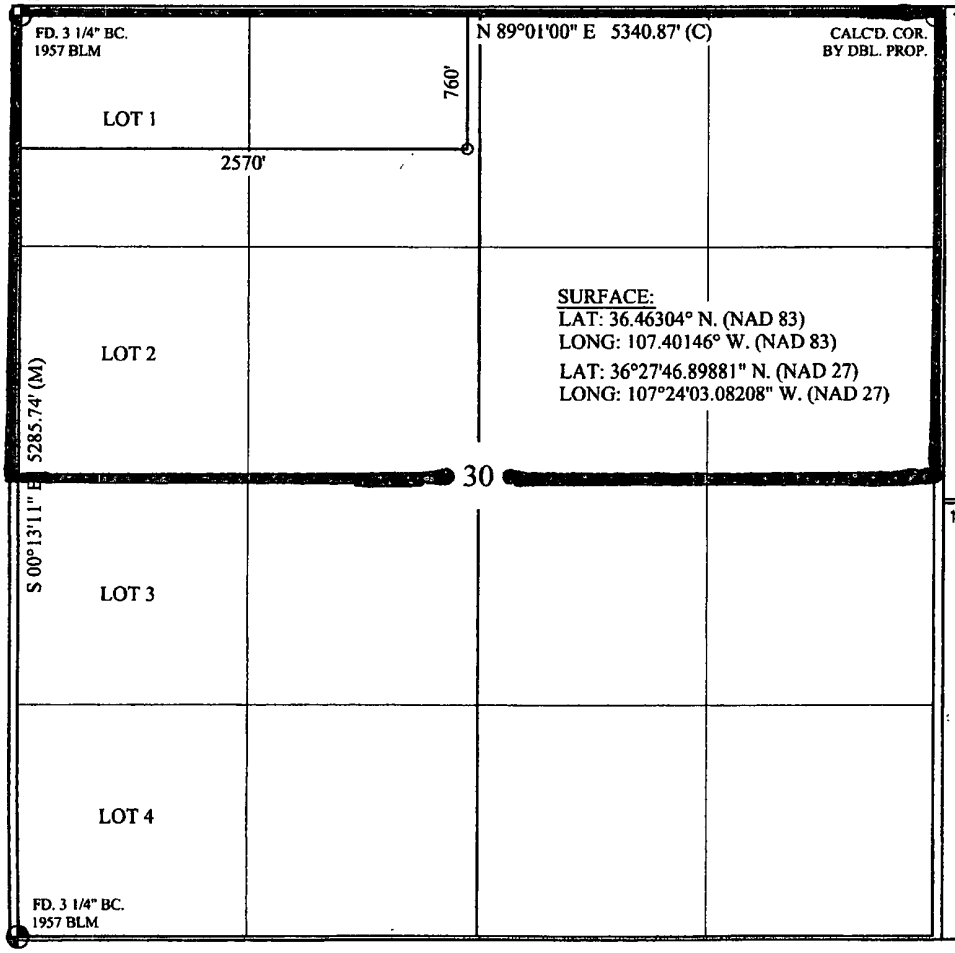

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OPERATOR CERTIFICATION

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 or has a right to drill this well at this 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.

Bridget Helfrich 4-12-12
Signature Date

Bridget Helfrich
Printed Name

bhelfrich@enervest.net
E-mail Address

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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 supervision, and that the same is true and correct to the best of my belief.

OCTOBER 7, 2005
Date of Survey

Signature and Seal of Professional Surveyor:

NEW MEXICO 8894 REGISTERED PROFESSIONAL LAND SURVEYOR

12-11

Certificate Number

EnerVest Operating, LLC
Jicarilla 155 # 16M
760' FNL, 2570' FWL Unit C Sec. 30, T26N R05W Rio Arriba County, NM
GL Elev: 6707'

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.

Formation Name	Depth	Rock Type	Comments
San Jose	Surface	Sandstone	
Ojo Alamo	2480'	Sandstone	Possible Gas, Water
Kirtland	2692'	Shale	
Fruitland	2903'	Coal, Shale, Sandstone	Possible Lost Circ, Gas, Water
Pictured Cliffs	3084'	Sandstone	Possible Lost Circ, Gas, water
Lewis	3161'	Shale	Sloughing Shale
Huerfanito Bentonite	3540'	Shale	
Chacra	3980'	Siltstone	Gas, Water
Mesa Verde (Cliffhouse)	4752'	Sandstone	Possible Lost Circ, Gas, Water
Mesa Verde (Menefee)	4805'	Coal, Sandstone, Shale	Possible Lost Circ, Gas, Water
Mesa Verde (Point Lookout)	5304'	Sandstone	Possible Lost Circ, Gas, Water
Mancos	5489'	Shale	Sloughing Shale
Gallup	6495'	Siltstone, Shale	Gas, Oil
Greenhorn	7214'	Limestone	Gas, Oil
Graneros	7270'	Shale	Gas, Oil, Water
Dakota (Two Wells)	7296'	Sandstone	Gas, Oil, Water
Dakota (Paguate)	7392'	Sandstone	Gas, Oil, Water
Dakota (Upper Cubero)	7434'	Sandstone	Gas, Oil, Water
Dakota (Main Body)	7466'	Shale, Sandstone	Gas, Oil, Water
Dakota (Lower Cubero)	7518'	Shale, Sandstone	Gas, Oil, Water
Dakota (Burro Canyon)	7546'	Sandstone	Gas, Water
Proposed Total Depth	7538'		

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.

4.3 PRESSURE CONTROL:

Maximum expected pressure is ~1658 (.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.

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	3440'
Prod Casing	6 1/4"	4 ½"	11.6	N-80	New	LT&C	0	7538'

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 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 +/- 2592'. 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 (139 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 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 213 sacks (454 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 pump50 sacks (70 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 88 sacks (187 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 pump222 sacks (445 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.

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'-3440'	LSND/Gel sweeps, LCM as needed	8.5-9.4	20-40	4-6 cc
3440'- 7538'	LSND/Gel sweeps, LCM as needed	8.5-9.4	2-40	6-10 cc

The well will be drilled utilizing a reserve pit. If a reserve pit cannot be permitted due to NMOCD pit rules, a closed loop system will be used. The NMOCD pit permit shall state the type of pit and specifications of the pit to be used on each specific well pad.
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.
Nitrogen will be used to drill the 6 $^{1}/_{4}$" section of the hole to reduce the hydrostatic pressure while drilling the pay zones. It is planned to drill the hole from the base of the intermediate casing to TD with an air hammer and 6 $^{1}/_{4}$" bit. An alternate plan will be in place to drill this section of the hole with mud should the hole conditions necessitate drilling this section with mud.
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.

4.8 CORING, TESTING, & LOGGING

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

350' to 3440'; GR/ Cement Bond Log, if cement is not circulated to surface.

3440 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:	< 1658 psi
b.	Anticipated abnormal pressure:	None
c.	Anticipated abnormal temperatures:	None
d.	Anticipated hazardous gas (H2S):	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.

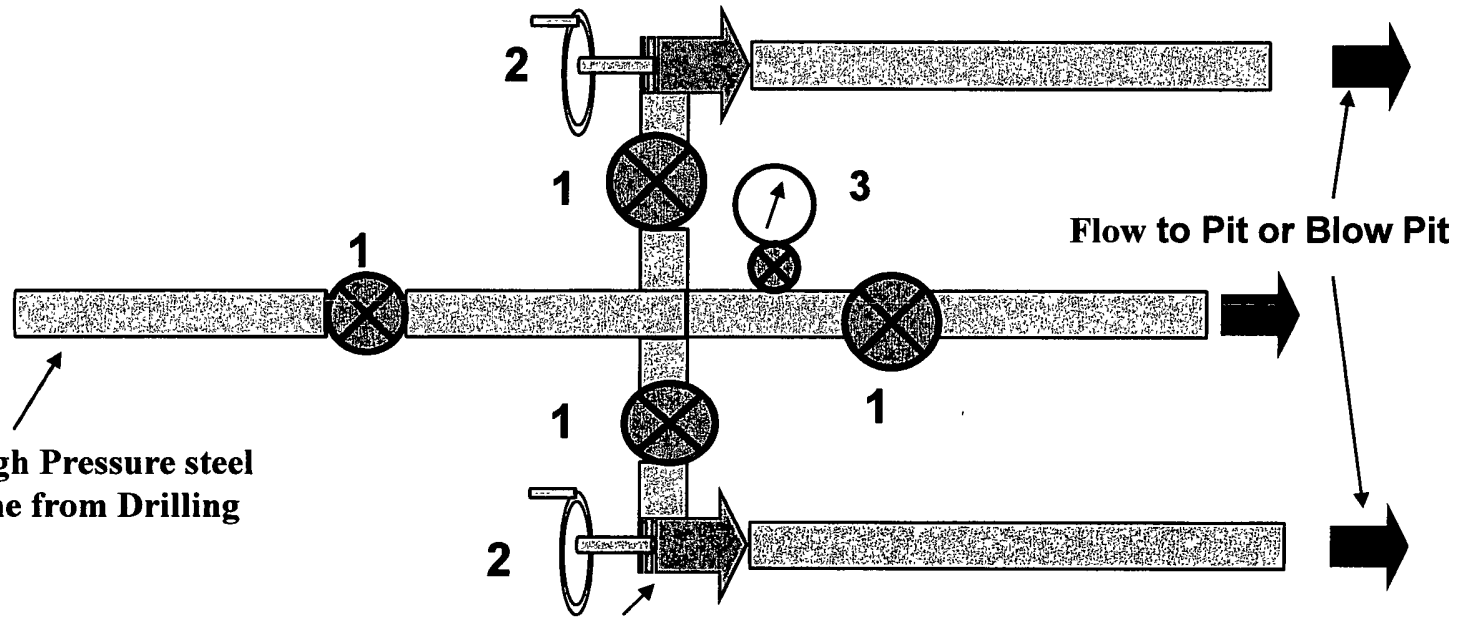
Completion will start about one to two weeks after the finish of the drilling operations. A completion rig will be moved in for the completion phase. The completion phase of the well is expected to +/- two weeks. The completion phase will include; perforating, acidizing, fracture stimulation and well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

Exhibit B

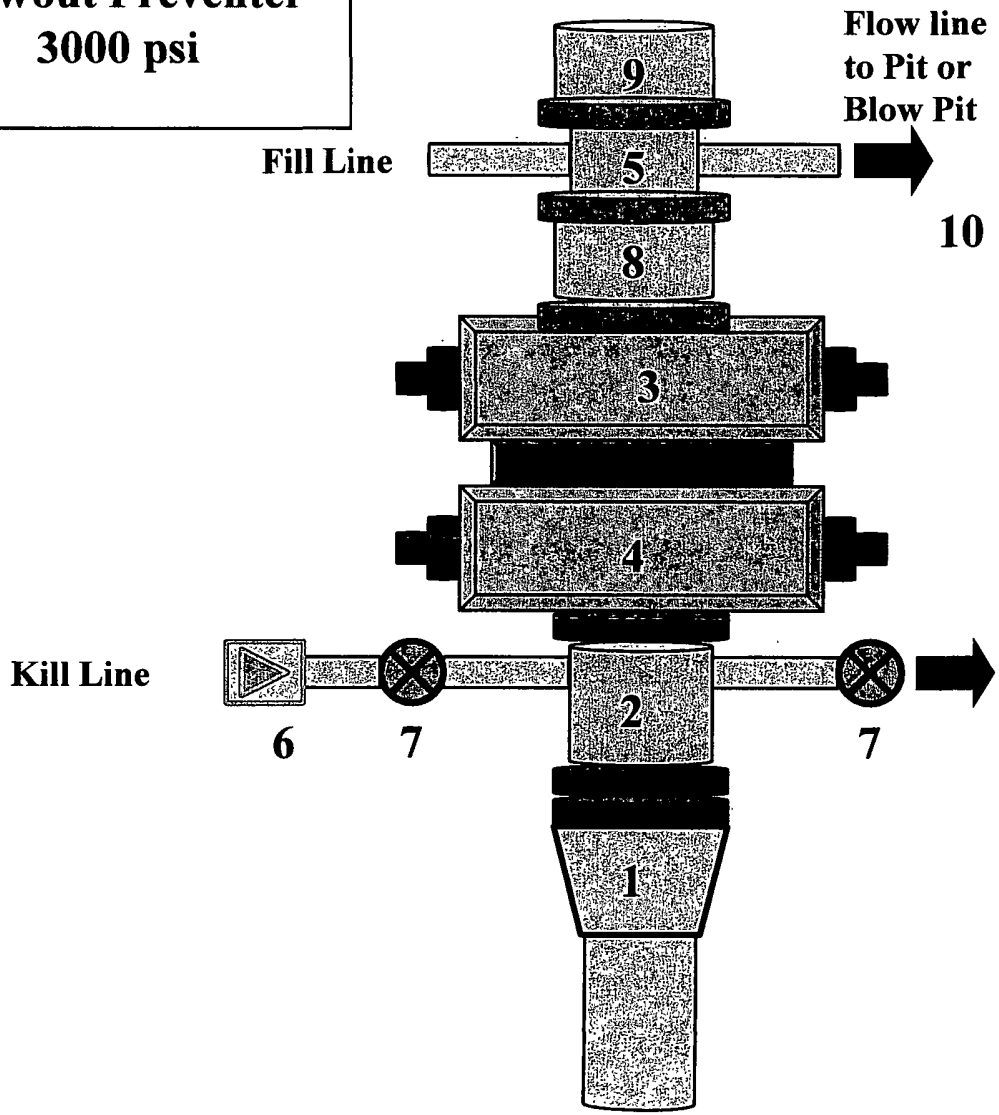
EnerVest
Jicarilla 155 # 16M
3000 psi Choke Manifold

Components
1. 3" Valves (3M)
2. Adjustable Chokes
3. Gauge



EnerVest
Jicarilla 155 # 16M
Blowout Preventer
3000 psi

Exhibit A



Components

1. Wellhead 9 5/8"
2. Drilling Spool
3. Pipe Rams
4. Blind Rams
5. Bell Nipple
6. 2" Check Valve
7. 3" Manual Valves
8. Annular Preventer
9. Rotating Head, when needed for Air Drilling
10. Blooie Line will be used for air drilling