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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101  
Revised November 14, 2012

Energy Minerals and Natural Resources

Oil Conservation Division

AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

HOBBS OGD

OCT 01 2013

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address <b>RECEIVED</b> AMTEX ENERGY INC P.O. Box 3418 Midland, TX 79702		<sup>2</sup> OGRID Number 785
		<sup>3</sup> API Number 30-025-29991
<sup>4</sup> Property Code 40156	<sup>5</sup> Property Name MERCHANT STATE UNIT	<sup>6</sup> Well No. 1

<sup>7</sup> Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	35	21S	33E		2309'	South	990'	East	Lea

<sup>8</sup> Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

<sup>9</sup> Pool Information

Pool Name Wildcat, <del>West Grama Ridge</del> Bone Springs	Pool Code 28432
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Additional Well Information

<sup>11</sup> Work Type E	<sup>12</sup> Well Type Oil	<sup>13</sup> Cable/Rotary	<sup>14</sup> Lease Type State	<sup>15</sup> Ground Level Elevation 3661.4'
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 13,600'	<sup>18</sup> Formation Strawn	<sup>19</sup> Contractor	<sup>20</sup> Spud Date
Depth to Ground water		Distance from nearest fresh water well 2.5 miles		Distance to nearest surface water 3 miles

<sup>21</sup> Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	20"	13 3/8"	48	615'	350	Surface
Int.	12.25"	10 3/4"	40.5/ 45.5	5183'	1675	Surface
Prod.	8.75"	7.0"	29	12,550'	1,400	2,500 (inside 10 3/4")

Casing/Cement Program: Additional Comments

MIRU Alliance Pulling Unit Rig X weld on new Well Head and drill out CMT Plugs with 9 1/2" Bit inside of the 10 3/4" Intermediate Casing. Drill to 5,794' and POH w/9.5" Bit and RIH and Pump 300sx +/- of 18lb./gal. Kick-off CMT. Plug from 5,794' up to 5,100'. POH X RIMO Rig in order to allow CMT Plug to set up and harden.

MIRU Drilling Rig and PU a 8.75" bit, bend and motor and RIH and Blind Sidetrack at 7,247'. After sidetracking, drop back to vertical and drill new 8.75" hole down to 12,550'. At 12,550' run new logs and sidewall cores. Then condition hole and LD the drill pipe, collars and bit. RIH with 7.0" Casing, 29lb./ft., HCP110 Buttress, from the surface to 12,550', and cement back to tie back into the Intermediate Casing, and 7.0" Casing cemented in 2 stages, 1<sup>st</sup> stage is 800sx Class H Cement, DV Tool @ 8,000', 2<sup>nd</sup> stage is 850sx Class C Cement and TOC @ 800' from surface. The 7.0" Casing Slips are set and landed in the Well Head. Drill out w/6.125" Bit to 13,600' X Set 4 1/2", HCP110, 13.5# Liberty FJ Liner from 13,600' to 12,450' X Cement with 300sx of Completion Cement.

<sup>22</sup> Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
DoubleRam	3000	3000	Cameron

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

I further certify that I have complied with 19.15.14.9 (A) NMAC  and/or 19.15.14.9 (B) NMAC , if applicable.

Signature: *William J. Savage*

Printed name: William J. Savage

Title: President

E-mail Address: bsavage@amtenergy.com

Date: 09/18/2013

Phone: (432) 686-0847

OIL CONSERVATION DIVISION

Approved By: *[Signature]*

Title: *Dist Mgr*

Approved Date: *10-1-2013* Expiration Date: *10-1-2015*

Conditions of Approval Attached

OCT 10 2013



## Merchant State Unit Well No. 1

API #30-025-29991

**Objective** – Re-entry Multiple Completions in the Wildcat, West Grama Ridge- Bone Springs.

API# 30-025-29991

Location - Lea Co. - Sec 35(I) - T21S - R33E

GL – 3,661.4'

KB - 3,683.4'

TD – 13,600

Casing	OD	WT/FT	Grade	Top	Bottom	TOC	Collapse (psi)	Burst (psi)
Surface	13.375"	48#	H40	0	615'	Surface	770	1,730
Intermediate	10 3/4	40.5,45.5#	K-55 & S-80	0	5,183'	Surface	2,570	3,950
Production	7 "	29#	HCP110	0	12,550'	2,500'	8,510	11,220

Marker Joints: TBD

OFFSET WELLS WITHIN ¼ MILE- NONE

Operator:	Well Name:	Sec-T-R:	Surf Loc:	Distance:	Frac Stg Proximity	Well Status
	NONE					

### Completion Procedure

- 1) Reconnect to wellhead.
- 2) Drill out cement plugs.
- 3) Pump 300sx +/-, of 18lb./gal. Kick off- CMT. Plug from 5,794' up to 5,100'. POH X RIMO Rig to allow CMT plug to set up and harden.
- 4) MIRU Drilling Rig and PU a 8.75" bit, bend and motor and RIH and Blind Sidetrack at 7,247'. After sidetracking, drop back to vertical and drill new 8.75" hole down to 12,550'. At 12,550' run new logs and sidewall cores.
- 5) Condition hold and LD the drill pipe, collars and bit. RIH with 7.0" CSG, 29lb./ft., HCP110 Buttress, from the surface to 12,550' and CMT.
- 6) Drill out w/6.125" bit to 13,600' X set 4 ½", HCP110, 13.5# Liberty FJ Liner from 13,600' to 12,450' X CMT with 300sx of Completion Cement. RDMODR X Prep to Complete.

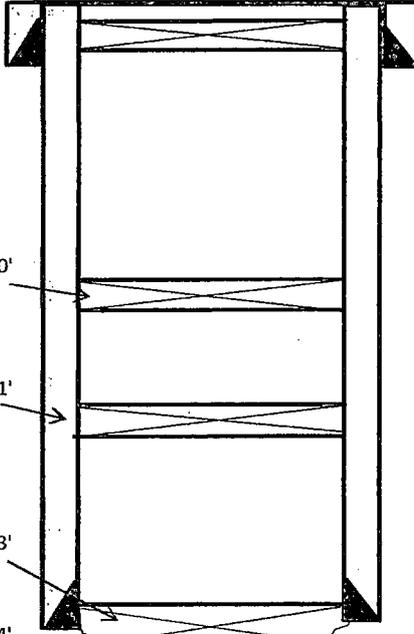
09/18/13

Lease Name: Merchant State Unit

OPERATOR: AMTEX ENERGY, INC.	NAME OF LEASE: Grama-Ridge-35-State	Date: 05/05/2010
API: 30-025-29991	Well: No. 1	By: T.M.
LOCATION: Unit I, 2310' FML, 990' FEL, Sec. 35, T-21-S, R-33-E, Lea County, New Mexico		

10 sx surf plug  
 65 sx "C" @ 670'  
 tag @ 536'

13-3/8" csg, 48#, H-40 set @ 615', 350 sx to surface



10-3/4" csg, 40.5# K-55, 45.5# K-55, 45.5# S-80 @ 5183'  
 cmt w/ 225 sx Class C, then 1450 sx HLC to surface  
 pressure tested to 1800 psi / 30"

DV @ 3799'

65 sx "C" plug @ 2450'  
 calc TOC @ 2295'

65 sx "C" plug @ 3861'  
 calc TOC @ 3706'

75 sx "C" plug @ 5233'  
 tag TOC @ 5025'

65 sx "C" plug @ 5844'  
 Tag @ 5654'

Open Hole from 5183'-5794'

7-5/8" pulled @ 5794'

7-5/8" 33.7# GR95 Seal Lock, 29.7# GR95 Seal Lock, 29.7# GR95 LT&C  
 set @ 12,238', cmt w/ 775 sx TLW & 450 sx class H  
 TOC @ 5770'; Pressure tested to 2000 psi / 30"

120 sx "C" plug @ 9068',  
 Tag at 8186'

5-1/2" pulled @ 8300'

OWWO: 5-1/2", 17# set @ 12,024', cmt w/ 100 sx Class H  
 TOC @ 10,935'

20 sx "C" plug @ 10,790',  
 Tag @ 10,570'

CIBP @ 11,925' w/ 20 sx  
 calc TOC @ 11,723'

CIBP

OWWO: 12238' - 13150' OH A/ 3000 Gal 15% + 50 Q CO2  
 12590' - 13150' OH A/3000 Gas 15% NEFE

50 sx, 13,250' - 13,150'

OWWO: PBDT 13,150'

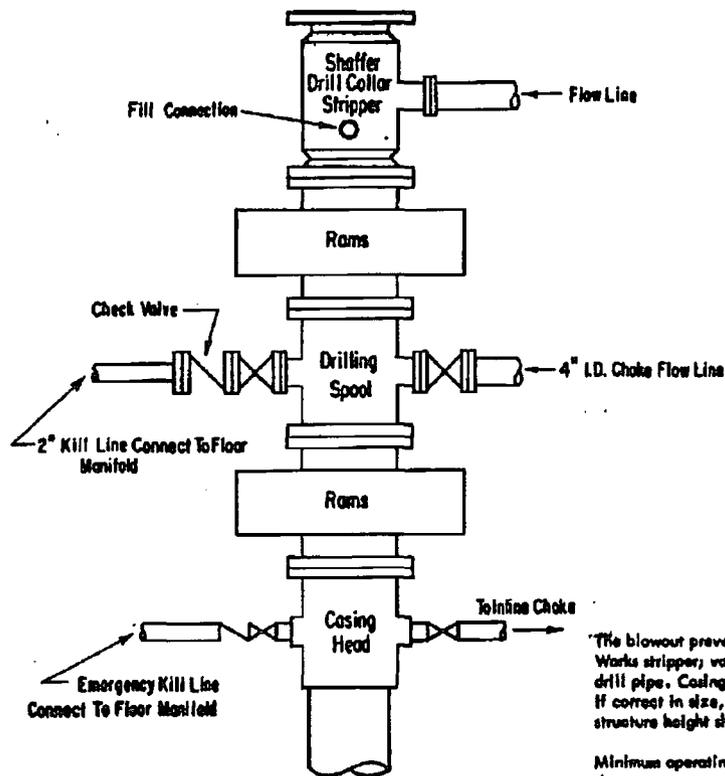
50 sx, 13,960' - 13,860'

open hole 12,024 - 16,450'

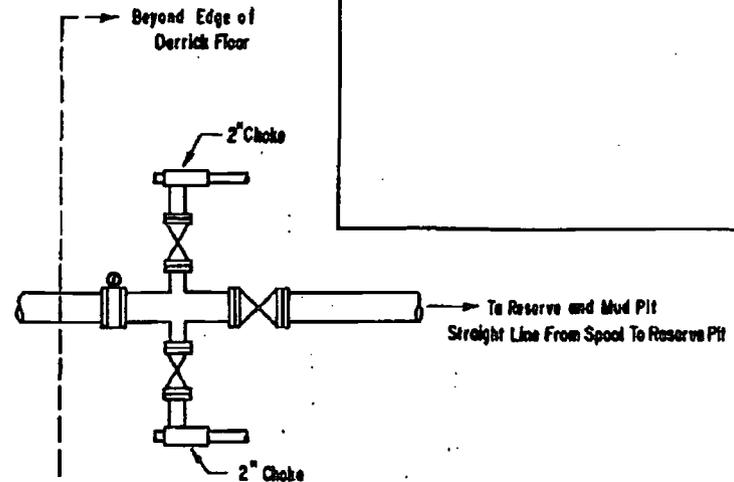
50 sx, 15,600' - 15,500'

50 sx, 16,450' - 16,350'

TD @ 16,450'



**3000 PSI WORKING PRESSURE  
BLOWOUT PREVENTER HOOK-UP**



**ADDITIONS - DELETIONS - CHANGES  
SPECIFY**

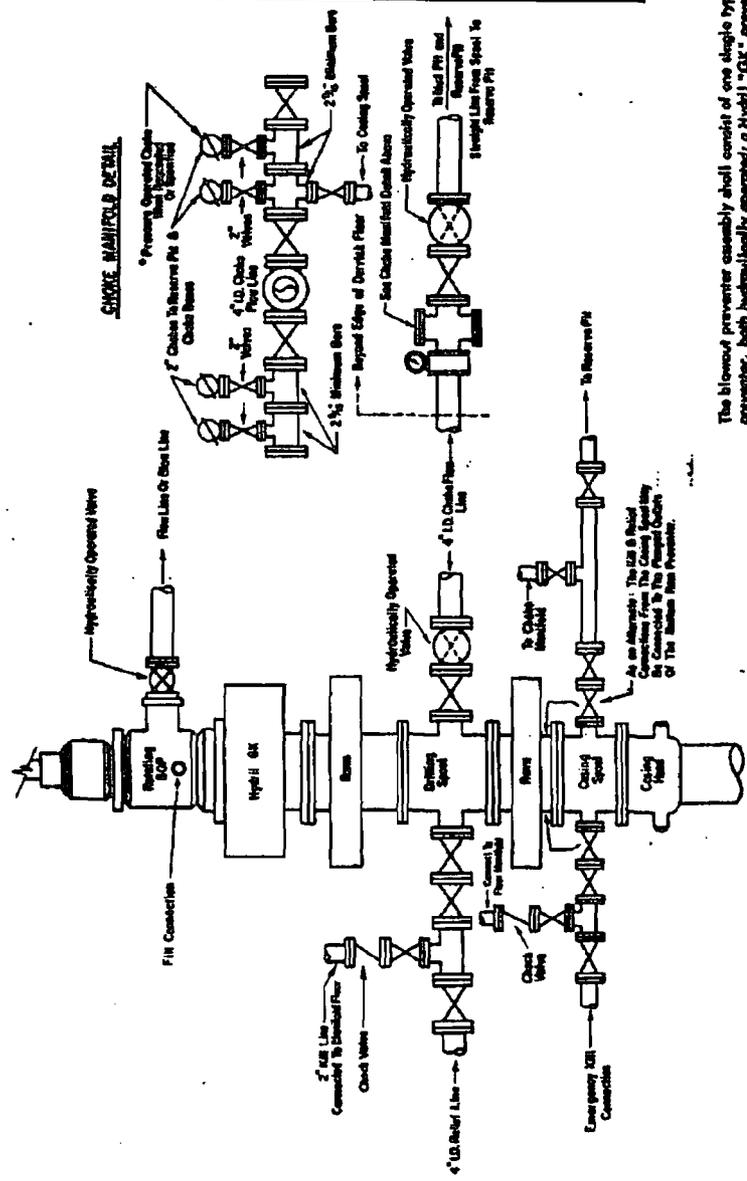
The blowout preventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated; a Shaffer Tool Works stripper; valves; chokes and connectors, as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing rams to fit the preventers are to be available as needed. The ram preventers may be two singles or a double type. If correct in size, the flanged outlets of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and kill line. The substructure height shall be sufficient to install a rotating blowout preventer.

Minimum operating equipment for the preventers shall be as follows: (1) Pump (a), driven by a continuous source of power, capable of closing all the pressure-operated devices simultaneously within \_\_\_\_\_ seconds. The pump (a) is to be connected to a closed type hydraulic operating system. (2) When requested, accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive a fluid charge from the above pump (a). With the charging pump (a) shut down, the pressurized fluid volume stored in the accumulators must be sufficient to close all the pressure-operated devices simultaneously within \_\_\_\_\_ seconds; after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume at least \_\_\_\_\_ percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above pump (a); or there shall be an additional pump (a) operated by separate power and equal in performance capabilities.

The closing manifold shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided if a Hydril preventer is used. Gulf Lagon No. 38 hydraulic oil, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line and choke lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valve connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

ADDITIONS - DELETIONS - CHANGES  
SPECIFY



**5000 # PSI WORKING PRESSURE  
BLOWOUT PREVENTER HOOK-UP**

The blowout preventer assembly shall consist of one single type billed ram preventer and one single type pipe ram preventer, both hydraulically operated, a Hydril "GK" preventer, a rotating blowout preventer, valve choke and connections, as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing runs to fit the preventers are to be available as needed. If correct in size, the flanged outlet of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and 4-inch I.D. relief line, except when air or gas drilling. All preventer connections are to be open-face flanged.

Minimum operating equipment for the preventer and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continuous source of power, capable of fluid changing the total accumulator volume from the nitrogen precharge pressure to its rated pressure within \_\_\_\_\_ minutes. Also, the pumps are to be connected to the nitrogen precharge pressure to its rated pressure within \_\_\_\_\_ minutes. (2) Accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive the aforementioned fluid change. With the changing pumps shut down, the pressurized fluid volume stored in the accumulator must be sufficient to close all the pressure-operated devices simultaneously within \_\_\_\_\_ seconds after closure. The remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume at least \_\_\_\_\_ percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above pumps or there shall be additional pumps operated by separate power and equal in performance capabilities.

The closing manifold and remote control shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided for operating the Hydril preventer. When requested, a second pressure reducer shall be available to limit operating fluid pressure to ram preventer. Gulf Legion No. 30 hydraulic oil, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, relief line, and choke lines are to be supported by metal stands and subsequently anchored. The choke flow line, relief line, and choke lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. If deemed necessary, walkways and stairs shall be erected in and around the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valves and well of line valves connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

\* To include derrick floor mounted controls.

# **Amtex Energy, Inc.**

## **Operating and Maintenance for a Closed Loop System**

### **19.15.17.12 OPERATIONAL REQUIREMENTS:**

A. General specifications. An operator shall maintain and operate a pit, closed-loop system, below-grade tank or sump in accordance with the following requirements.

(1) The operator shall operate and maintain a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and maintain the integrity of the liner, liner system or secondary containment system, prevent contamination of fresh water and protect public health and the environment.

**Operator shall operate and maintain a Closed Loop System.**

(2) The operator shall recycle, reuse or reclaim or dispose of all drilling fluids in a manner, approved by division rules, that prevents the contamination of fresh water and protects public health and the environment.

**Operator shall recycle, reuse or reclaim all drilling fluids used. Excess or unused fluid shall be disposed of at division approved facilities.**

(3) The operator shall not discharge into or store any hazardous waste in a pit, closed-loop system, below-grade tank or sump.

**Operator shall not knowingly discharge hazardous waste into the closed loop system.**

(4) If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then the operator shall notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the liner.

**No Pit Liner. A Closed Loop System will be used.**

(5) If a pit develops a leak, or if any penetration of the pit liner, below-grade tank liquid's surface, then the operator shall remove all liquid above the damage or leak line within 48 hours and repair the damage or replace the pit liner.

**No Pit Liner. A Closed Loop System will be used. If a leak develops in any of the closed loop tanks, all liquids shall be removed from the effected tank within 48 hours and any damage shall be repaired prior to putting the tank back in service.**

- (6) The operator shall operate and install a level measuring device in a lined pit containing fluids to monitor the level of the fluid surface, so that the operator may recognize unanticipated change in volume of fluids.

**No pit. A Closed Loop System will be used. Excess fluid shall be removed appropriately from the catch tanks.**

- (7) The injection or withdrawal of liquids from a lined pit shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.

**No pit. A Closed Loop System will be used. Excess fluid shall be removed appropriately from the catch tanks using a re-circulating pump or vacuum trucks.**

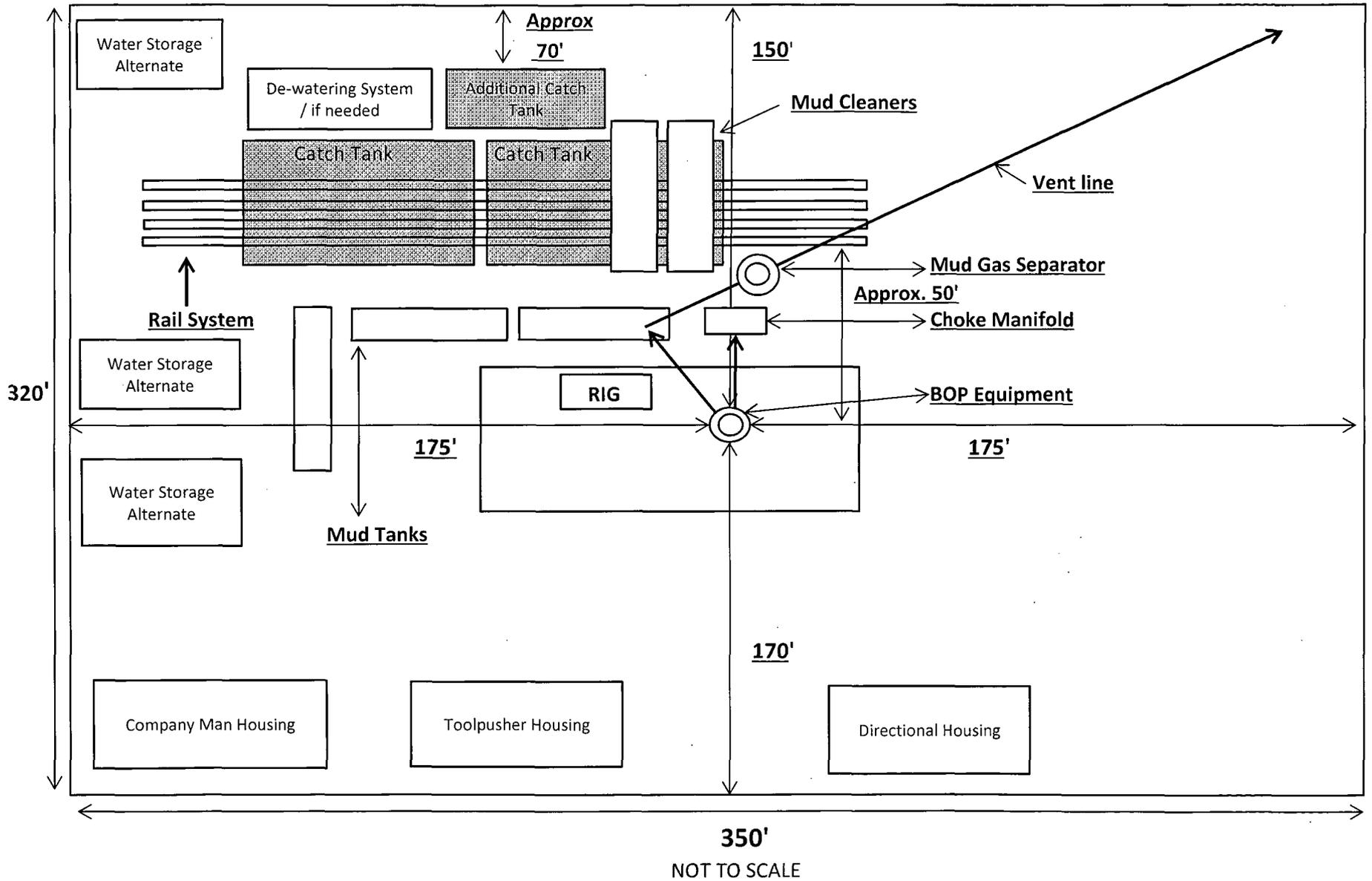
- (8) The operator shall operate and install a pit, below-grade tank or sump to prevent the collection of surface water run-on.

**Operator shall berm or collect surface water run-on and dispose of it at a division approved facility.**

- (9) The operator shall install, or maintain on site, an oil absorbent boom or other device to contain and remove oil from a pit's surface.

**Operator shall install a skimmer system on catch tanks, circulating tanks and over-flow tanks as need to collect oil.**

Amtex Energy, Inc.  
Closed Loop Location Design Plan



# **Amtex Energy, Inc.**

## **Closure Plan for Closed Loop Drilling System**

### **1. METHODS OF HANDLING WASTE MATERIALS**

- A. Drill cuttings shall be disposed of in steel cuttings bins (catch tanks) on the drilling pad (behind the steel mud tanks). The bin and cuttings shall be hauled to a division approved facility by an approved facility by an approved transporter. At the facility, the cuttings shall be removed from the bin and the bin shall be returned to the drilling site for reuse, moved to the next drilling site or returned to the provider.
  
- B. Remaining drilling fluids shall be hauled off by approved transports to a division approved disposal facility. Water produced during completion shall be put in storage tanks and disposed of at a division approved facility. Oil and condensate produced shall be put in a storage tank and sold or put in a sales pipeline.

### **2. RECLAMATION**

- A. Within 120 days after the drilling and completion of the well, the location area shall be reduced as determined by operator to minimum area necessary to safely and effectively operate the well. The reclaimed location area shall be restored to the condition that existed prior to oil and gas operations.