

ATS-15-133

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No. **NMNM 110835**
SWD-R-13889 NMNM 09640(Expired)

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
Blue Quail SWD # 1

(315072)

9. API Well No. **FEDERAL**
30-025- **42717**

10. Field and Pool, or Exploratory
SWD; ~~Delaware~~ Bell Canyon **96769**

11. Sec., T, R, M. or Bk. and Survey or Area
Sec. 11, T25S-R32E

1a. Type of work. DRILL REENTER

1b. Type of Well: Oil Well Gas Well Other **SWD** Single Zone Multiple Zone

2. Name of Operator Mesquite SWD, Inc **(161968)**

3a. Address
P.O. Box 1479, Carlsbad, NM 88221

3b. Phone No. (include area code)
Agent: 575-626-4518

4. Location of Well (Report location clearly and in accordance with any State requirements *)
At surface **2000' FNL & 1660' FWL**
2100
At proposed prod. zone Same

14. Distance in miles and direction from nearest town or post office*
27 miles west of Jal, NM

12. County or Parish
Lea Co.

R-13889

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
2000' FNL & 1660' FWL

16. No. of acres in lease
NA

17. Spacing Unit dedicated to this well
NA

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
None

19. Proposed Depth
6200'

20. BLM/BIA Bond No. on file
NMB000612

21. Elevations (Show whether DF, KIDB, RT, GL, etc.)

22. Approximate date work will start*

23. Estimated duration

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 **Kay Havenor**

Name (Printed Typed)
Kay Havenor

Date
10/07/2014

Title

Approved by (Signature) **13/ Ed Fernandez** **Steve Caffey**
Title **FIELD MANAGER**

Name (Printed Typed)
Office **CARLSBAD FIELD OFFICE**

Date **JUL 2 1 2015**

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)

575-706-7288

*(Instructions on page 2)

Ka
08/09/15

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

AUG 03 2015

Mesquite SWD, Inc.
DRILLING PROGRAM

Blue-Quail-SWD #1, 2000' FNL & 1660' FWL
Sec. 1, T25S-R32E, Lea Co., NM

Supplemental to Form 3160-3, Application for Permit to drill the subject well, Mesquite SWD, Inc submits the following information as per Bureau of Land Management requirements.

1. Geologic Name of Surface Formation

Surface is Quaternary eolian and piedmont deposits Holocene to middle Pleistocene. (New Mexico Bureau of Geology and Mineral Resources, 2003, Geologic Map of New Mexico, 1:500,000)

2. Formation Tops and Estimated Fresh Water:

The geologic markers and estimated depths at which anticipated water, oil or gas formations are expected to be encountered as follows:

B/Alluvium	90'	Estimated potable water, if present, approx 80'.
Rustler	770'	
Salado	2,320'	
Base-of-salt	4,510'	
Lamar limestone	4,790'	
Bell Canyon	4,750'	Possible shows from depleted production in field
Olds	4,820'	
Cherry Canyon	6,250'	Estimated - Planned TD 6,200'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas.

None of the formations within the proposed Bell Canyon disposal interval have been found to be commercially prospective or productive of oil or gas in or east of the present Cotton Draw field in the disposal interval for this well. No fresh water wells are reported in the NM OCD 2-mile area of review, none would be expected beneath the Alluvium. Potential shallow sands will be protected by 13-3/8" casing set at 860' with cement circulated to the surface.

See COA

4. Proposed Casing Program: All casing is new and API approved.

Design Parameter Factors:

Casing Size	Collaps Design Factor	Burst Design Factor	Tension Design Factor	Setting Depth
20"	5.55	22.5	7.46	20'
13-3/8" 48# H-40 STC	1.647	3.85	7.76	930'
9-5/8" 36# J-55 LTC	1.173	1.44	2.64	3000'
9-5/8" 40# J-55 LTC	1.194	1.16	8.67	4200'
9-5/8" 40# N-80 LTC	1.266	2.36	30.71	4750'
7" 23# J-55 LTC	1.153	1.58	2.18	6200'

See COA

Hole Size	Casing	Depth Set	Cement	Top Cement
26"	20" Conductor	20'	144 ft	Surface
17-1/2"	13-3/8" 48# H-40	930'	680 ss	Circulated
12-1/2"	9-5/8" 36/40# J-55/N-80	4750'	2200 ss	Circulated
8-5/8"	7" 23# J-55	6200'	475 ss	Circulated

All new or ~~Vintage~~ (used certified to API standards). Note: cement calculated @50% excess

see COA

Hole Size	Casing	Depth Set	Cement	Top Cement
26"	20" Conductor	20'	144 ft	Circulated
17-1/2"	13-3/8" H-40 48#	1260'	580 ss	Circulated
12-1/2"	9-5/8" J-55 36#	4750'	2200 ss	Circulated
8-5/8"	7" J-55	6200'	750 ss	Circulated

NOT NEEDED

Do NOT USE

Hole Size	Interval	OD Casing	New Used	Wt	Connection	Grade	Collaps Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0-860'	13-3/8"	New	54.5#	STC	J-55	1.125	1.125	1.6
12-1/2"	0-4750'	9-5/8"	New	40#	8-R STC	H40/K55	1.125	1.125	2.00
8-5/8"	0-6200'	7"	New	26#	8-R LTC	K-55	1.183	1.580	2.18

Do NOT use

4-A. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 9-5/8" casing shoe until the 7" casing is cemented. Breathing equipment will be on location upon drilling the 9-5/8" shoe until total depth is reached.

see COA

Mesquite SWD, Inc.
Blue Quail SWD #1
2000' FNL & 1660' FWL
Sec. 11, T25S-R32E, Lea Co., NM

5. **Cement Program:**

13-³/₈" 0-860' w/560 sx cmt

360 sx C+ 4% PF20 + 2% PF1 + .125 pps PF29 + .4 pps PF45 Density 13.5 Yield 1.75 H²O 9.137
200 sx C+ 2% PF1 Density 14.85 Yield 1.34 H²O 6.321

9-⁵/₈" 0-4550' w/1255 sx cmt

Stage 1

Lead - 415 sx 35/65 Poz/C + 5% (BWOW) PF44 + 6% PF20 + 1% PF1 + .125 pps pf29 + .4 pps PF45 + 3 pps PF42 Density 12.9 Yield 1.92 H²O 9.945

Tail - 200 sx C + .2% PF13 Density 14.8 Yield 1.33 H²O 6.307

*See
COA*

Operator has proposed DV tool at depth of 2300', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Stage 2

Lead - 540 sx 35/65 Poz/C + 6% PF20 + 1% PF1 + .125% pps PF29 + .4 pps PF45 + 3 pps PI-42
Density 12.09 Yield 1.32 H²O 9.945

Tail - 100 sx C NEAT
Density 14.8 Yield 1.32 H²O 6.311

7" 0-approx 6200'

Stage 1

200 sx C + .3% PF13
Density 14.8 Yield 1.33 H²O 6.331

*See
COA*

Operator has proposed DV tool at depth of 5000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Stage 2

550 sx 35/65 Poz/C + 5% (BWOW) PF44 + 6% PF20 + .125 pps PF29 & pps PF45
Density 12.09 Yield 1.89 H²O 10.051

100 sx C + .2% PF13
Density 14.8 Yield 1.33 H²O 6.331

6. Pressure Control Equipment:

BOP system, Exhibit 1 below, used to drill the intermediate hole will consist of a double ram-type (3M) preventer and annular preventer. Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. BOP will be tested in accordance with Onshore Oil & Gas order No. 2 as a **3M system** prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a double ram-type (3M) preventer and annular preventer. BOP will be tested in accordance with Onshore Oil & Gas order No. 2 as a **3M system** prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily drillers log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at **3,000 psi WP**.

Vent line will extend to pad margin to provide sufficient distance, approximately 150' to flare boom, from any ignition source in the event natural gas should be encountered. No gas has been reported to this depth in the drilling of adjacent holes.

7. Proposed Mud Program and Circulation System:

Drilling and returned circulation will be from and to a closed loop system w/surface tanks. No earthen mud or reserves pits will be constructed or used for this well. Drilling fluids and cuttings will be trucked to a certified disposal facility upon completion of re-entry operations.

Depth	Mud Wt.	Viscosity	Fluid Loss	Type Mud
0 - 860'	8.4 - 8.5	29	NC	Fresh water
860'-4,550'	9.9-10.0	29	NC	Brine
4,550'--6200'	9.0	29	NC	Cut Brine/Fresh water

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Manifold schematic with routing to closed loop system is illustrated in Exhibit 2, below.

8. Estimated BHP:

At proposed TD 6,200' estimated BHP will be 2542 psi.

9. Potential Hazards:

No abnormal pressures or temperatures were reported in the nearby drilling operations. H₂S detection equipment will be in operation during the drilling operation. H₂S is not considered a potential hazard because it was not reported in the surrounding area. See H₂S schematic Exhibit 3, below.

10. Anticipated Starting Date and Duration of Operations:

Road and location construction will begin as soon as the BLM approves this APD. Move-in and drilling will follow as soon thereafter as rig and equipment are available.

11. Logging, Coring, and Testing Program:

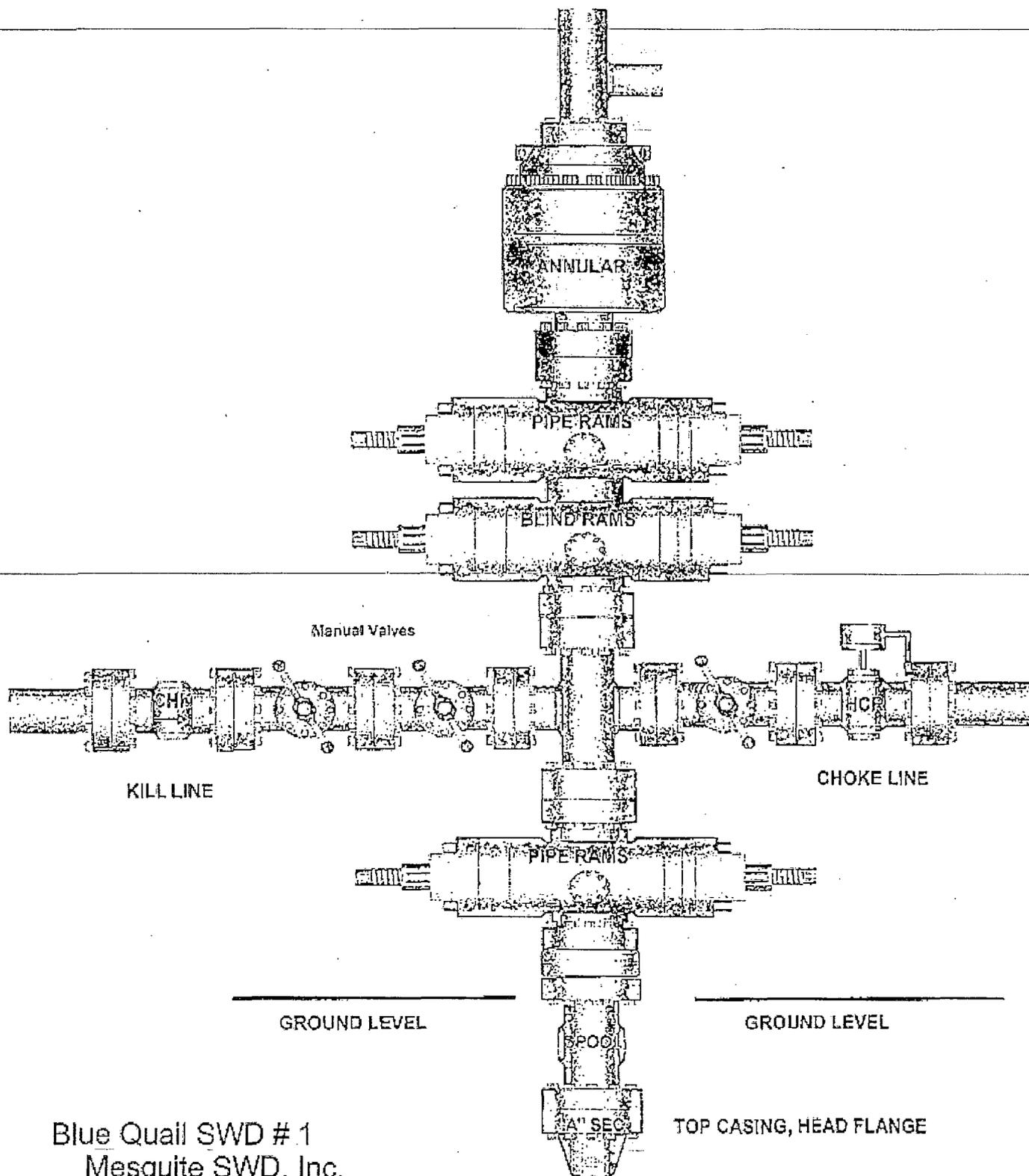
No coring or formation testing is anticipated. A mud logging unit will be operational from 4,550' to TD. Formation e-logs will include gamma-ray, density and neutron.

Additional Information:

MUD PROGRAM

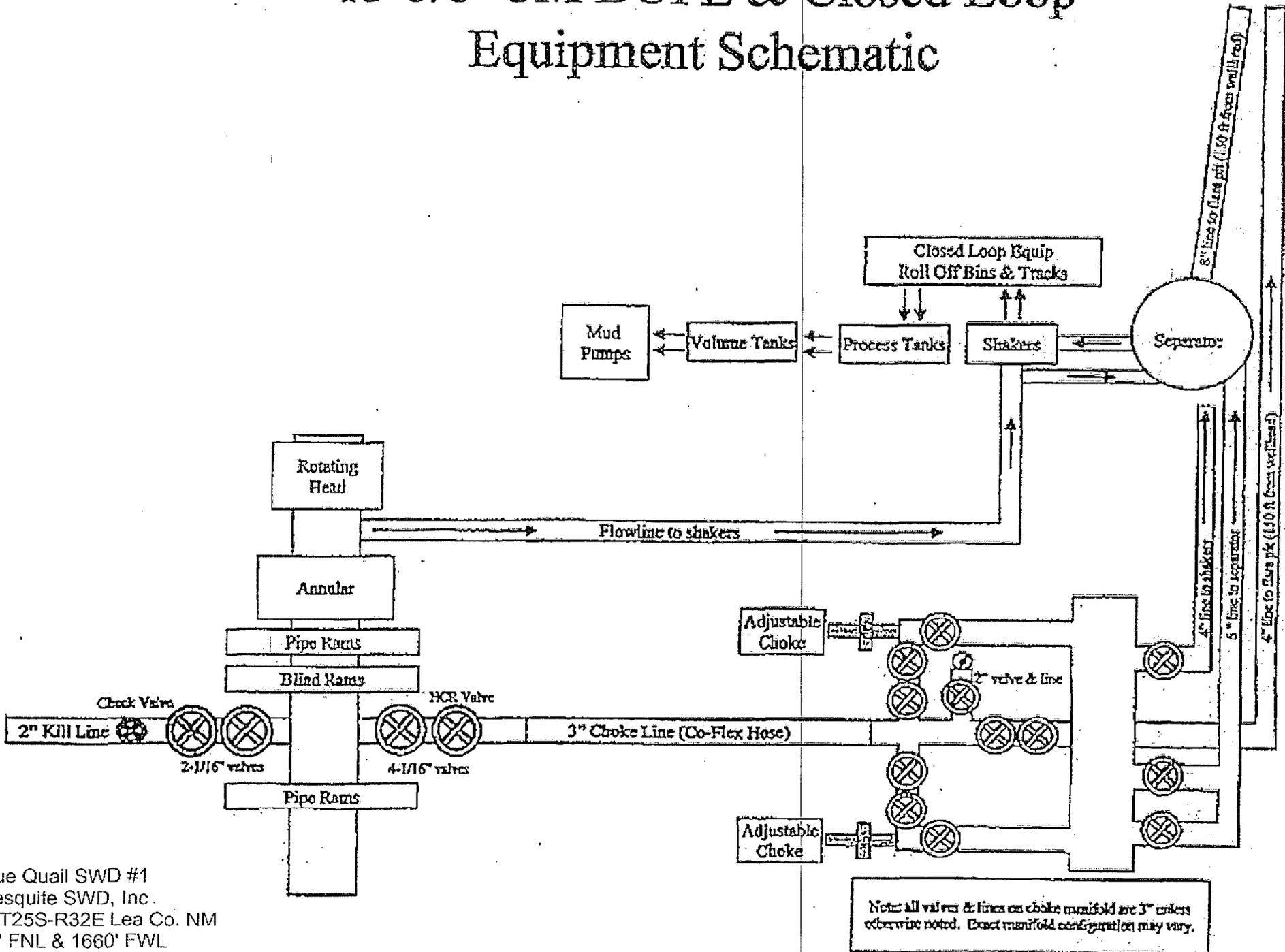
Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel. Mud level monitoring: After surface casing is set, an electronic PVT system will be installed as our primary mud level monitoring system. A secondary system will also be implemented as to insure the PVT system is functioning properly. The secondary system will be comprised of the derrick hand checking the fluid level in the pits periodically using a nut on the end of a rope hanging just above the fluid level in the pit.

13 7/8" x 3,000 psi BOP Stack



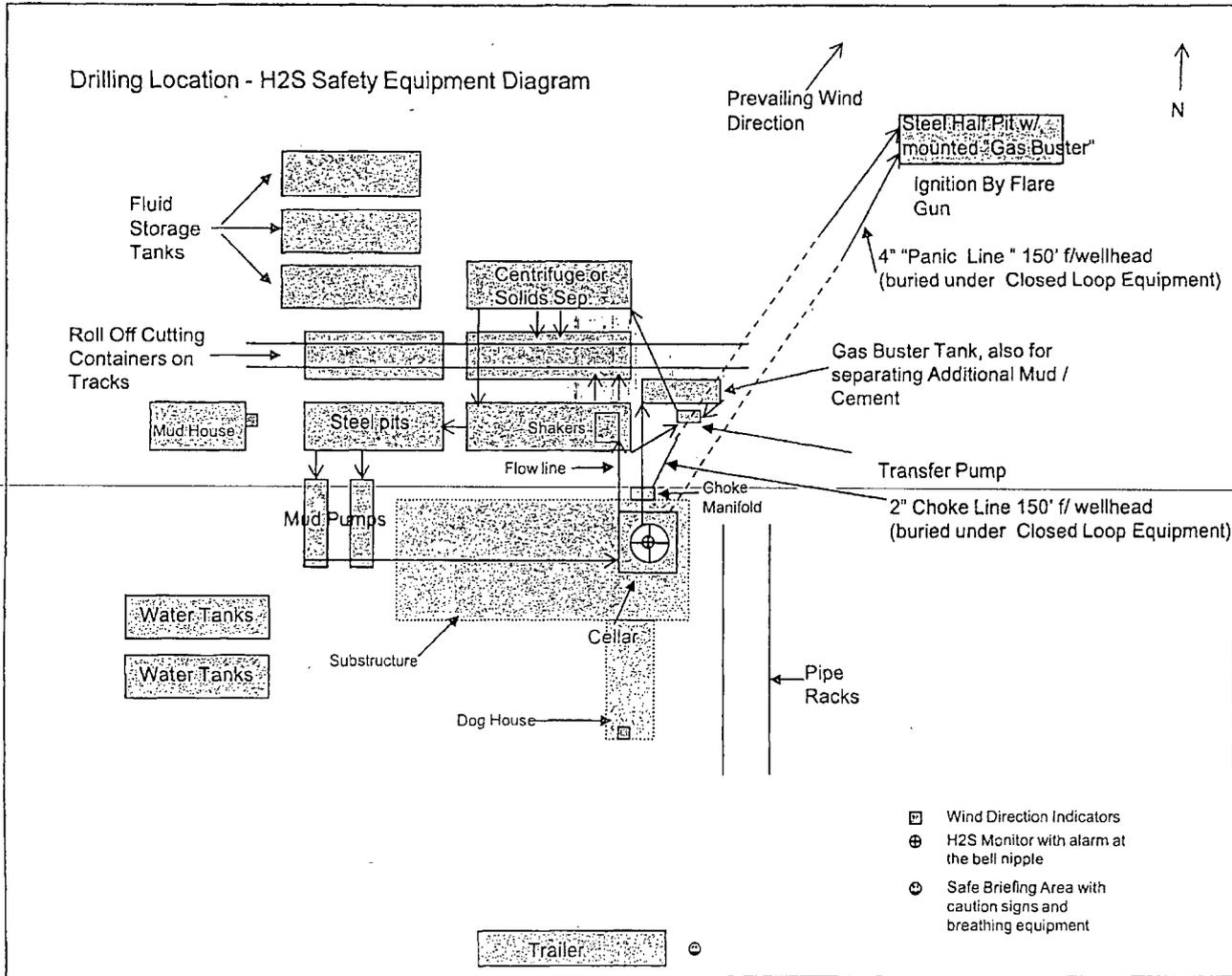
Blue Quail SWD # 1
Mesquite SWD, Inc.
Sec. 11, T25S-R32E Lea Co., NM
Surf & BHL 2100' FNL & 1660' FWL

13-5/8" 3M BOPE & Closed Loop Equipment Schematic



Blue Quail SWD #1
 Mesquite SWD, Inc.
 T25S-R32E Lea Co. NM
 0' FNL & 1660' FWL

Exhibit 3 Generalized Pad Layout for H₂S Safety Layout



Addendum: Non-productive zones

Many wells up-dip and west of the drill site acreage in the surrounding area have tested, completed in and/or depleted the upper Ramsey of the Bell Canyon in the AOR,. Numerous deeper wells have drilled, evaluated and/or tested the Ramsey/Olds, and underlying Bell Canyon in the greater area but have not demonstrated production or commercial potential. This new-drill SWD will not penetrate the underlying Cherry Canyon, Brushy Canyon or deeper formations.

Mesquite SWD, Inc.
Blue Quail SWD #1
2000' FNL & 1660' FWL
Sec. 11, T25S-R32E, Lea Co., NM

12. Operator's Representative:

Kay Havenor
904 Moore Ave.
Roswell, NM 88201-1144
(575) 626-4518

Operator Certification

Operator: Mesquite SWD, Inc.
P.O. Box 1479
Carlsbad, NM 88221
575-706-1840

Field Representative: Riley Neatherlin
575-706-7288

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 23rd Day of September, 2014: Kay C Havenor

Name: Kay Havenor
Position Title: Agent for Mesquite SWD, Inc.
Address: 904 Moore Ave. Roswell, NM 88201-1144
Telephone: 575-626-4518
Email: Kay@georesources.com

Mesquite SWD, Inc.
 Blue Quail SWD #1
 2000' FNL & 1660' FWL
 Sec. 11, T25S-R32E, Lea Co., NM

Notice of Staking

NOTICE OF STAKING

NOTICE OF STAKING Not to be used in place of Application for Permit to Drill (Form 3160-3)	
1. Name Address, and Telephone of Operator: Mesquite SWD, Inc. P.O. Box 1479 Carlsbad, NM 88221 2. Name & Phone # of Contact Person: Kay Havenor 575-626-4518	3. Lease Number: NMLC _____ NMNM 090540 (Expired)
4. Well Name and Number Surface Location of Well SHL: <u>2000' FNL & 1660' FWL</u> (Anticipated) BHL: <u>Same</u> Attach: (a) Sketch showing road entry onto pad, pad dimensions, and reserve pit (b) Topographical or other acceptable map (e.g. a USGS 7 1/2" Quadrangle) showing location, access road, and lease boundaries	5. Section, Township, Range 11, T25S-R32E
	6. County Lea
8. Oil Well _____ Gas Well _____ Other (Specify) SWD	7. Field Name or Wildcat: SWD, Delaware, Bell Canyon
	9. Agreement Number:
10. Estimated Well Depth: 6,200'	11. # of Acres Dedicated to this well: NA
12. Name and Depth of Formation Objective(s) Delaware Bell Canyon	13. Operator Bond # NMB000612
14. Estimated Well Depth 6,200'	15. API # (if available):
17. Additional information (as appropriate; include surface owner's name, address & phone #). BLM surface owner	
18. Signed <u>Kay Havenor</u> Title Agent Date <u>9/24/2014</u>	

Note: When the Bureau of Land Management receives this Notice, the agency will schedule the date of the onsite inspection. You must stake the location and flag the access road before the onsite inspection. Operators should consider the following before the onsite inspection and incorporate these considerations into the Notice of Staking Option, as appropriate:

- (a) H₂S Potential;
- (b) Cultural Resources (Archaeology); and
- (c) Federal Right-of-Way or Special Use Permit.