

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87828
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Energy Minerals and Natural Resources

Oil Conservation
1220 South St.
Santa Fe, NM

E-PERMITTING - New Well Am.
Comp _____ P&A _____ TA _____
CSNG _____ Loc Chng _____
ReComp _____ Add New Well _____
Cancel Well _____ Create Pool _____

HOBBS OCD
APR 29 2015
RECEIVED

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

1. Operator Name and Address Owl SWD Operating, LLC 8214 Westchester Dr., Ste.850, Dallas, TX 75255		2. OGRID Number 308339
3. Property Code 314743		4. Property Name Limestone SWD
5. API Number 42534		6. Well No. 1

7. Surface Location									
UL - Lot C	Section 18	Township 23 S	Range 34 E	Lot Idn	Feet from 1048'	N/S Line North	Feet From 1663'	E/W Line West	County Lea

8. Proposed Bottom Hole Location									
UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information	
Pool Name SWD; Devonian	Pool Code 96101 ✓



Additional Well Information				
11. Work Type N	12. Well Type S	13. Cable/Rotary R	14. Lease Type P ✓	15. Ground Level Elevation 3502'
16. Multiple N	17. Proposed Depth 16,000' DTD	18. Formation Devonian	19. Contractor Sidewinder	20. Spud Date 6/15/2015
Depth to Ground water ~205'		Distance from nearest fresh water well > 1 mile		Distance to nearest surface water n/a

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program						
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	20.0"	16.0"	75.0# K-55 BT&C	1000'	625 sx 'C'	Circ. to Surf.
Intermed 1	14.5"	13.625"	88.2# Q-125 BT&C	5200'	891 sx 'C' + excs	Circ. to Surf.
Intermed 2	12.0"	10.75"	65.7# Q-125 BT&C	11,400'	1111 sx 'H' + excs	Circ. to Surf.

Casing/Cement Program: Additional Comments	
Disp. Lnr. - 9.25" hole; 7.625" 47.1# L-80 @ 11,100'-14,700' w/ 632 sx 'H'; TOC/TOL 11,100'	OPENHOLE - 6.0" 14,700'-16,000'

22. Proposed Blowout Prevention Program			
Type	Working Pressure	Test Pressure	Manufacturer
Double Blind Ram	5000 psi	3500 psi	TBD (Schaffer/Hydril Equiv.)

23. 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 <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> , if applicable. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Ben Stone		Approved By: 	
Title: Agent for Owl Oil and Gas, LLC		Title: Petroleum Engineer	
E-mail Address: ben@sosconsulting.us		Approved Date: 04/29/15 Expiration Date: 04/29/17	
Date: 4/27/2015	Phone: 903-488-9850	Conditions of Approval Attached See Attached	

Conditions of Approval

MAY 01 2015

CONDITIONS OF APPROVAL

API #	Operator	Well name & Number
30-025-42534	OWL SWD Operating Inc	LIMESTONE SWD # 001

Applicable conditions of approval marked with XXXXXX

Administrative Orders Required

XXXXXXX	Will require administrative order for SWD prior to placing the well on injection

Other wells

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Drilling

XXXXXXX	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

Casing

XXXXXXX	SURFACE & INTERMEDIATE(1) CASING - Cement must circulate to surface --
XXXXXXX	PRODUCTION CASING - Cement must circulate to surface --
XXXXXXX	LINER 1 - Cement must come to top of liner --
XXXXXXX	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
	South Area
XXXXXXX	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water

Pits

XXXXXXX	If using a pit for drilling and completions, must have an approved pit form prior to spudding the well

Completion & Production

XXXXXXX	Must notify Hobbs OCD office prior to conducting MIT (575) 393-6161 ext. 114
XXXXXXX	Must conduct MIT prior to any injection

**Owl SWD Operating, LLC
Limestone SWD Well No.1
1048' FNL & 1663' FWL
Section 18, Twp 23-S, Rng 34-E
Lea County, New Mexico**

Well Program - New Drill

Objective: Drill new well for commercial salt water disposal into the Devonian formation.

1. Geologic Information - Devonian Formation

This area of the Devonian consists of dolomites with some cherty domites characterized by intercrystalline and vugular porosity. Additional porosity can be found when the well bore encounters detrital carbonates interspersed throughout.

Estimated Formation Tops:

FORMATION DEPTHS	
Delaware Lime	4,970'
Cherry Canyon	6,100'
Brushy Canyon	8,530'
Wolfcamp	11,320'
Atoka	12,030'
Morrow	12,850'
Mississippian Lime	13,965'
Woodford	14,375'
Devonian	14,580'
Ellenburger	16,280'

2. Drilling Procedure

- a. MIRU drilling rig and associated equipment. Set up H2S wind direction indicators; brief all personnel on Emergency Evacuation Routes.
- b. All contractors conduct safety meeting prior to current task. All equipment inspected daily. Repair / replace as required.
- c. Well spud operations commence.
- d. Mud logger monitoring returns; cuttings & waste hauled to OCD permitted facility.
- e. After surface casing set/drilled; if H2S levels >20ppm detected, implement H2S Plan accordingly. (e.g., cease operations, shut in well, employ H2S safety trailer & personnel safety devices, install flare line, etc. - refer to plan.)
- f. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
- g. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion.

Well Program - New Drill (cont.)

3. Casing program - Casing designed as follows:

TYPE	HOLE SZ	CASING SZ	CSG WEIGHT	DEPTH	CEMENT	ESTIMATED TOC
Surface	20.0"	16.0"	75 lb/ft	1,000'	987	SURFACE
Intermediate 1	14.75"	13.625"	68 lb/ft	5,200'	1,320	SURFACE
Intermediate 2	12.25"	10.75"	65.7 lb/ft	11,400'	2,068	SURFACE
Prod. Liner	9.0"	7.75"	46.1 lb/ft	11,100'-14,700'	727	11,100'
Tubing	NA	5-1/2"	20 lb/ft	14,600'	NA	NA

4. Cementing Program:

Surface – LEAD 592 sx (13.5#; 1.758 ft³/sk); TAIL 395 sx (14.8#; 1.341 ft³/sk);

circulated to surface

1st Intermediate – LEAD 1127 sx (12.7#; 1.941 ft³/sk); TAIL 193 sx (14.8#; 1.332 ft³/sk) + excess; circulated to surface

2nd Intermediate – LEAD 1843 sx (11.9#; 2.448 ft³/sk); TAIL 225 sx (14.2#; 1.267 ft³/sk) + excess; circulated to surface

Prod Liner – 727 sx (14.2#; 1.271 ft³/sk); TOC = 11,100'

5. Pressure Control - BOP diagram is attached to this application. All BOP and related equipment shall comply with well control requirements as described NMOCD rules and regulations. Minimum working pressure of the BOP and related equipment required for the drilling operations shall be 5000 psi. OCD will be notified a minimum of 4 hours prior to BOP pressure tests. The test shall be performed utilizing a test plug (no cup or J-packer). The results of the test shall be submitted to the OCD Artesia district office. Test shall be conducted at:

- a. Installation;
- b. after equipment or configuration changes;
- c. at 30 days from any previous test, and;
- d. anytime operations warrant, such as well conditions

6. Mud Program & Monitoring - Mud will be balanced for all operations as follows:

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0-1000'	FW Spud Mud	8.5-9.2	70-40	20	12	NC	10.0
1000'-5200'	Brine Water	9.8-10.2	28-32	NC	NC	NC	10.0
5200'-11400'	FW/Gel	8.7-9.0	28-32	NC	NC	NC	9.5-10.5
11400'-14700'	XCD Brine Mud	11.0-12.5	45-48	20	10	<5	9.5-10.5
14700'-16000'	FW Mud	8.4-8.6	28-30	NC	NC	NC	9.5-10.5

Well Program - New Drill (cont.)

Mud and all cuttings monitored w/ cuttings recovered for disposal. Returns shall be visually and electronically monitored. In the event of H₂S, mud shall be adjusted appropriately by weight and H₂S scavengers.

7. Auxiliary Well Control and Monitoring - Hydraulic remote BOP operation, mudlogging to monitor returns.

8. H₂S Safety - There is a low risk of H₂S in this area. The operator will comply with the provisions of 19.15.11 NMAC. All personnel will wear monitoring devices and a wind direction sock will be placed on location.

9. Logging, Coring and Testing – Owl SWD Operating, LLC expects to run standard openhole porosity logs from TD to approximately 11,000'. No corings or drill stem tests will be conducted. (The well may potentially be step rate tested in the future if additional injection pressures are required.) Mudlogging is expected to adequately identify full Devonian exposure.

10. Potential Hazards - No abnormal pressures or temperatures are expected.

No loss of circulation is expected to occur with the exception of drilling into the target disposal zone. All personnel will be familiar with the safe operation of the equipment being used to drill this well.

The maximum anticipated bottom hole pressure is 8500 psi and the maximum anticipated bottom hole temperature is 180 F.

11. Waste Management - All drill cuttings and other wastes associated with and drilling operations will be transported to a CRI facility permitted by the Environmental Bureau of the New Mexico Oil Conservation Division.

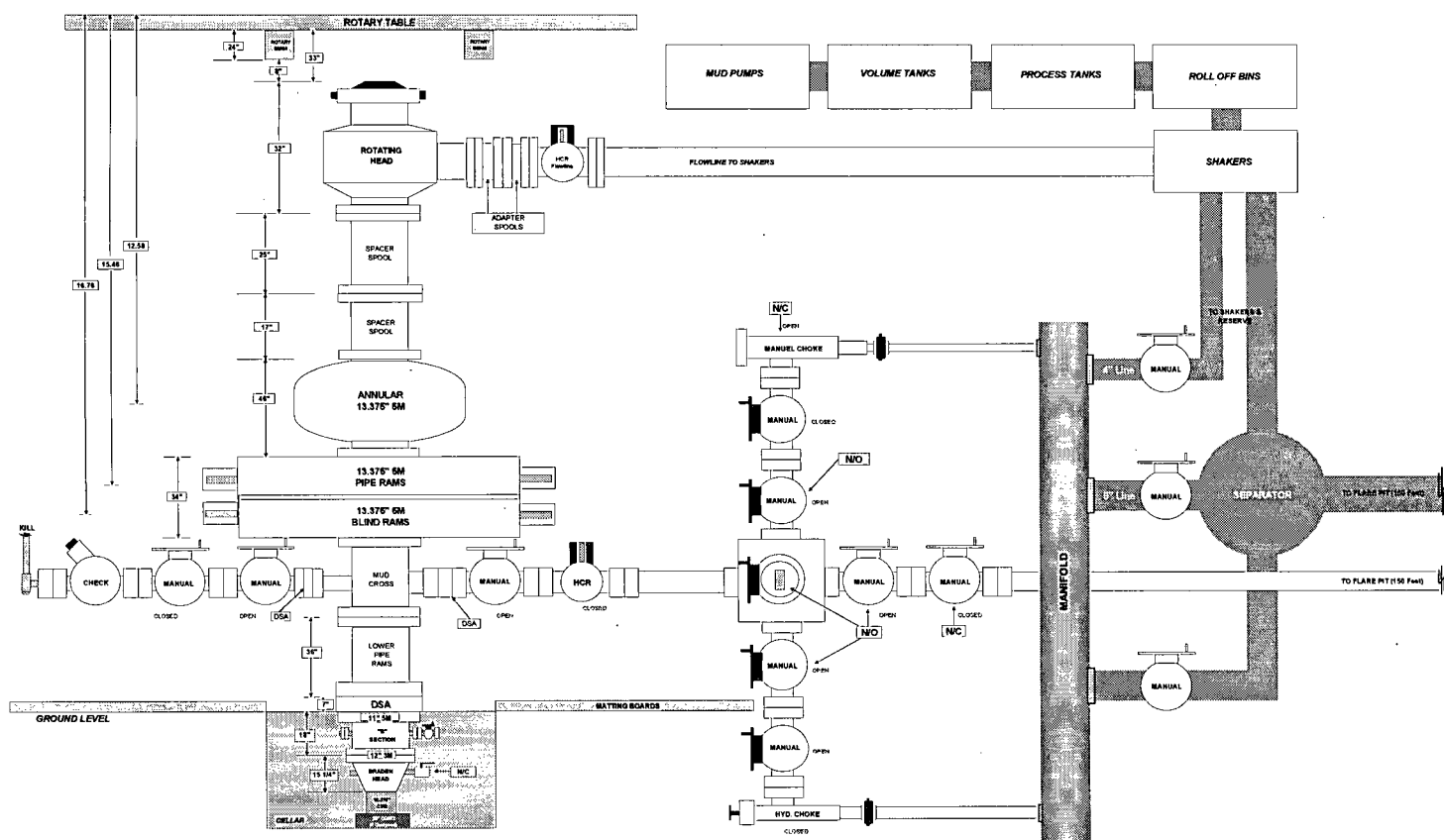
12. Anticipated Start Date - Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take six to seven weeks. Installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. At the time of this submittal, and subject to the availability of the drilling contractor, the anticipated start date is:

June 15, 2015

13. Configure for Salt Water Disposal - Prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity. Anticipated daily maximum volume is 30,000 bpd and average of 20,000 bpd at a maximum surface injection pressure of 2940 psi through 5.5" 20# tubing and below a nickel-plated packer.

HYDRIL BOP & CLOSED LOOP - SEWINDER RIG 224

BOPE 5K & Closed-Loop Schematic (w/ 13.375" Rams)

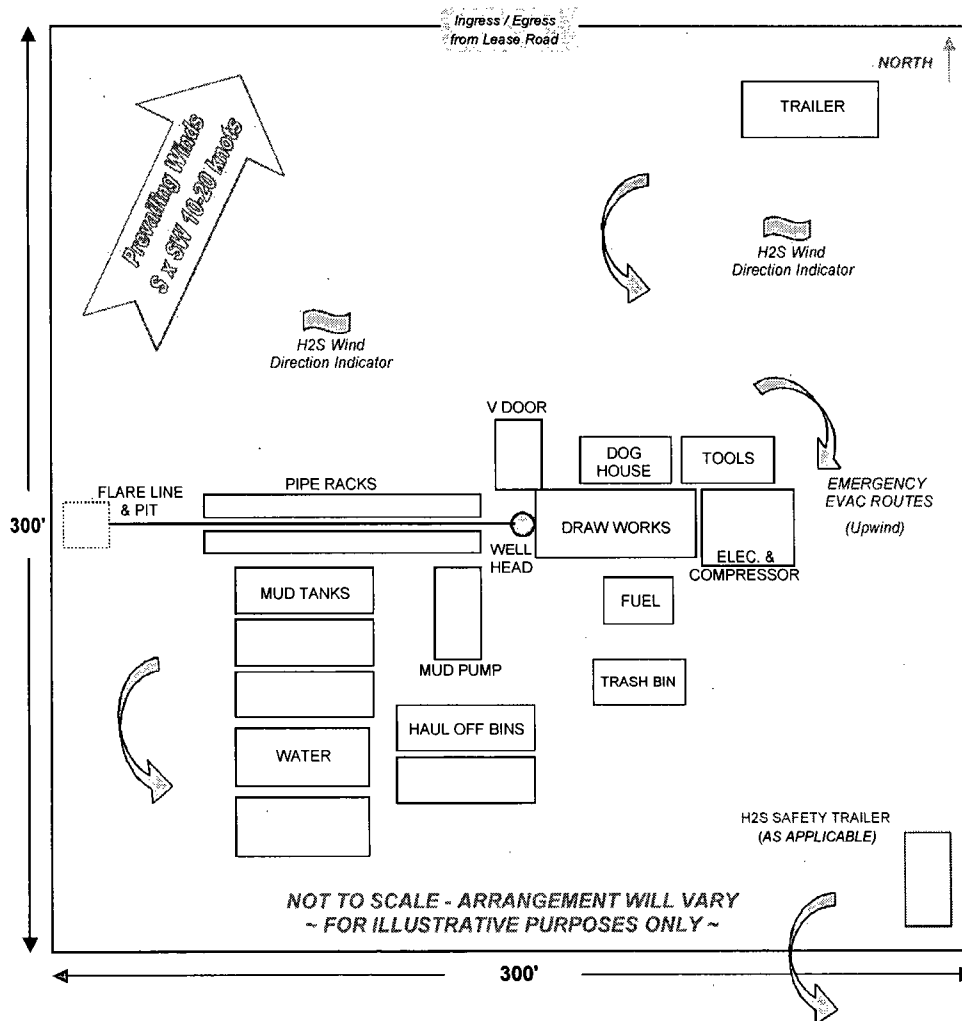


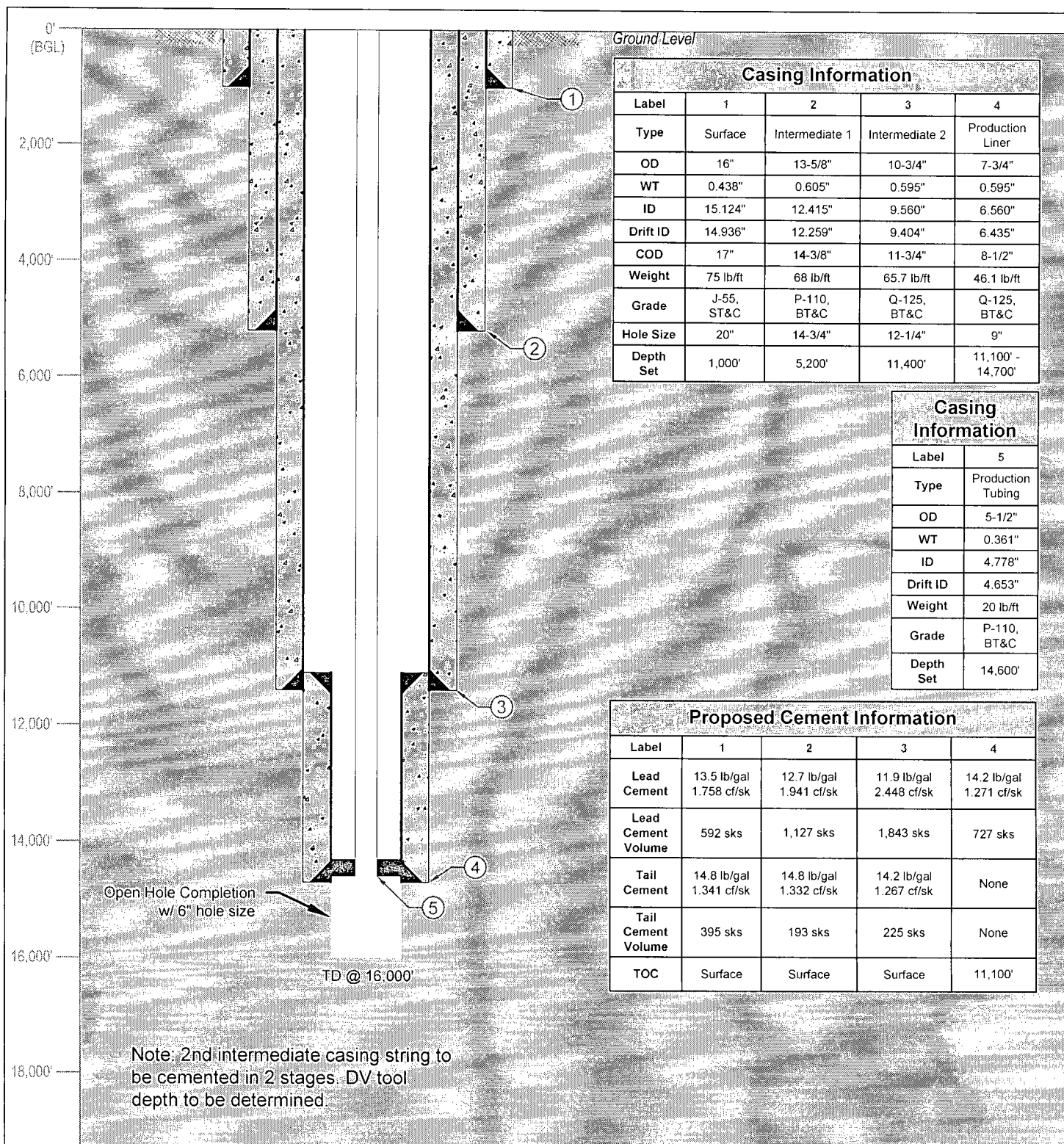
Standard Drill - Operating Procedure & Site Setup

ALL OPERATIONS CONDUCTED WITHIN EXISTING PAD SITE
NOT EXCEEDING SURVEYED SITE. ORIENTATION PER BEST FIT.

1. MIRU Drilling and drilling support contractors / equipment.
2. Set up H2S wind direction indicators; brief all personnel on Emergency Evacuation Routes.
3. All contractors conduct safety meeting prior to current task.
4. If H2S levels >20ppm detected, implement H2S Plan *accordingly*. (e.g., cease operations, shut in well, employ H2S safety trailer & personnel safety devices, install flare line, etc. - refer to plan.)
5. All equipment inspected daily. Repair / replace as required.
6. Mud logger monitoring returns; cuttings & waste hauled to specified facility. CRI - LEA COUNTY
7. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
8. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion.

TYPICAL LOCATION SETUP (V Door North)





LONQUIST

FIELD SERVICE

AUSTIN | WICHITA
HOUSTON | CALGARY

OWL SWD Operating, Inc

Limestone SWD No. 1

Country: USA

State/Province: New Mexico

County/Parish: Lea

Survey/STR:

Site:

Status: To Be Drilled

API No.:

Field:

Ground Elevation:

Texas License F-8652

State ID No.:

Project No:

Date: 4/23/2015

3345 Bee Cave Road, Suite 201
Austin, Texas 78746
Tel: 512.732.9812
Fax: 512.732.9816

Drawn: MMC

Reviewed: SLP

Approved: SLP

Rev No:

Notes: