

15-644

Form 3160-3  
(March 2012)HOBBS OCD  
OCD Hobbs

DEC 21 2015

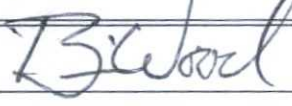
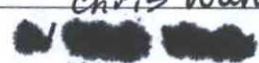
FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. 945 SHL & BHL: NMNM-132495	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A	
2. Name of Operator SDX RESOURCES, INC. (20851)		7. If Unit or CA Agreement, Name and No. N/A	
3a. Address P. O. BOX 5061 MIDLAND, TX 79704		8. Lease Name and Well No. (315700) EAGLECLAW FEDERAL 1H	
3b. Phone No. (include area code) 432 685-1761		9. API Well No. 30-025- 42988	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 190' FNL & 467' FWL At proposed prod. zone 330' FNL & 467' FWL		10. Field and Pool, or Exploratory (98176) WC-025 G-08 520357M;UAR WC	
14. Distance in miles and direction from nearest town or post office* 13 AIR MILES W OF MONUMENT, NM		11. Sec., T. R. M. or Blk. and Survey or Area Lot 4 (aka, NWNW) 5-20S-35E NMMPM	
15. Distance from proposed* location to nearest property or lease line, ft. SHL: 190' BHL: 330' (Also to nearest drig. unit line, if any)		12. County or Parish LEA	
16. No. of acres in lease 322.32		13. State NM	
17. Spacing Unit dedicated to this well Lot 4, SWNW, & W2SW4		18. Distance from proposed location* N/A to nearest well, drilling, completed, applied for, on this lease, ft.	
19. Proposed Depth TVD: 11,250' MD: 15,778' Pilot hole TD: 11,400'		20. BLM/BIA Bond No. on file BLM NMB-001226	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,696' UNGRADED		22. Approximate date work will start* 08/01/2015	
23. Estimated duration 3 MONTHS		24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 		Name (Printed/Typed) BRIAN WOOD (PHONE: 505 466-8120)		Date 05/11/2015
Title CONSULTANT		(FAX: 505 466-9682)		
Approved by (Signature) 		Name (Printed/Typed)		DEC 7 2015
Title FIELD MANAGER		Office CARLSBAD FIELD OFFICE		

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)

\*(Instructions on page 2)

Lea County Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations AttachedSEE ATTACHED FOR  
CONDITIONS OF APPROVAL

DEC 21 2015

SDX Resources, Inc.  
Eagleclaw Federal 1H  
SHL: 190' FNL & 467' FWL  
BHL: 330' FSL & 467' FWL  
Sec. 5, T. 20 S., R. 35 E., Lea County, NM

DRILL PLAN PAGE 1

HOBBS OCR

DEC 21 2015

Drilling Program

RECEIVED

1. ESTIMATED TOPS

<u>Name</u>	<u>TVD</u>	<u>MD</u>	<u>Content</u>
Quaternary	0'	0'	fresh water
Rustler	1,851'	1,851'	anhydrite
Top salt	1,941'	1,941'	salt
Base salt	3,359'	3,359'	salt
Yates	3,592'	3,592'	oil, gas
Seven Rivers	4,000'	3,750'	brine water
Queen	4,598'	4,598'	oil, gas
Cherry Canyon	5,549'	5,549'	oil, gas
Bone Spring	8,139'	8,139'	---
1st Bone Spring Sandstone	9,581'	9,581'	oil, gas
2nd Bone Spring Sandstone	10,189'	10,189'	oil, gas
3rd Bone Spring Sandstone	10,994'	11,013'	oil, gas
Wolfcamp	11,165'	11,261'	oil, gas
BHL	11,250'	15,778'	oil, gas
Pilot hole TD	11,400'	11,400'	

2. NOTABLE ZONES

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded. Closest water well (L 04158) is 5,195' southeast. Depth to water is 64'.



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DRILL PLAN PAGE 2

3. PRESSURE CONTROL

See COA  
Will nipple up on 13-3/8" casing with minimum 2M annular BOP which will be tested to 50% of the working pressure. An independent contract tester will test the remainder of the system to 2000 psi.

Will nipple up on 9-5/8" casing with minimum 5M annular and double ram preventers. Annular will be tested to 50% of working pressure. An independent contract tester will test the remainder of the system to 5000 psi.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and minimum 3" choke line will be included in the drilling spool located below the ran-type BOP. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 5000 psi working pressure rating.

An upper Kelly cock, full opening stabbing valve, H2S detection and safety equipment will be installed after drilling out the surface shoe and remain in place until the long string is cemented.

4. CASING & CEMENT

See COA  
Casing will be kept full at all times to avoid collapse.

Hole O. D.	Interval (ft MD)	Casing O. D.	Age	lb/ft	Grade	Connection	Collapse Min SF	Burst Min SF	Tension Min SF
17.5"	GL - 1930' <del>1930' 1966</del>	13.375"	New	54.5	J-55	ST&C	1.125	1.125	1.6
12.25"	GL - 3650' <del>3650' 4100</del>	9.625"	New	36	J-55	LT&C	1.125	1.125	1.6
7.875"	GL - 15778'	5.5"	New	17	P-110	LT&C	1.125	1.125	1.6

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# DRILL PLAN PAGE 3

A 7.875" pilot hole will be drilled to a TD of 11,400' MD and logged as described herein. After logging, 380 sacks (372 cubic feet) of Class H balanced cement + 0.65% C37 + 0.25 C20 will be set as a kick off plug from 11,400' to 10,400'. Cement specifications are 17.5 pounds per gallon, 0.98 ft<sup>3</sup>/sack, 3.35 gallons per sack, and 10% excess.

After WOC, the kick off cement plug will be dressed off to a kick off point of 10,677'. A 10°/100' curve will then be built and landed at 11,577' MD (11,250' TVD). The horizontal lateral will be drilled at a 90° inclination to 15,778' MD at an azimuth of 179.48°.

See  
COA

casing	interval	sacks cement	TOC	pounds per gallon	ft <sup>3</sup> per sack	gallons per sack	total cubic feet	% excess	blend
surface lead	0' -	890	GL	13.5	1.75	9.08	1557	40	1
surface tail	<del>1930'</del> 1960'	225		14.8	1.34	6.31	301		2
intermediate lead	0' -	825	GL	13.5	1.75	9.08	1443	80	3
intermediate tail	<del>3650'</del> 4100'	200		14.8	1.34	6.31	268		4
production lead	3350' - 15778'	900	3350'	11.9	2.51	9.08	2259	70	5
production tail		1140		14.4	1.25	5.7	1425		6

## Surface Casing:

Centralizers will be installed on each of the first 3 joints.

Blend 1 (lead) will consist of Class C + 4% gel + 2% CaCl<sub>2</sub>.

Blend 2 (tail) will consist of Class C + 2% CaCl<sub>2</sub>.

## Intermediate Casing:

Centralizers will be installed on each of the first 3 joints.

Blend 3 (lead) will consist of Class C + 4% gel + 1% CaCl<sub>2</sub>.

Blend 4 (tail) will consist of Class C + 2% CaCl<sub>2</sub>.



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DRILL PLAN PAGE 4

Production Casing:

Centralizers, suitable for horizontal wells, will be set at least on every other joint through the pay zone.

Blend 5 (lead) will consist of Class H 50/50/10 + 8 pounds salt per sack + 5 pounds per pack coal seal + 0.5% Halad-322 + 0.3% HR-601 + ¼ pound per sack D-Air 500.

Blend 6 (tail) will consist of Class H 50/50/2 + 1% salt + 0.4% gas stop + 0.3% CFR-3 + 0.1% HR601.

5. MUD PROGRAM

A visual and electronic mud monitoring system with a minimum pit volume totalizer, stroke counter, and flow sensor will be rigged up prior to spud. After setting intermediate casing, a third party gas unit detection system will be installed. A mud contractor will make a daily mud check if weight and/or viscosity are introduced to the mud system. Rig personnel will make a mud check each shift.

See  
CON

Interval	Type	Weight	Viscosity	Fluid Loss
<del>0' - 1930'</del>	fresh water	8.5	29	no control
<del>1930' - 3650'</del>	brine water	10.0	29	no control
3650' - 11400' pilot hole	cut brine	8.6 - 9.6	29	no control
10660' - TD	cut brine	8.6 - 9.2	29	no control

Sufficient mud materials will be kept on location at all times in order to control lost circulation or abnormal pressures. In the event of poor hole conditions, mud properties may have to be adjusted in order to run open hole logs or casing.

6. CORES, TESTS, & LOGS

No core is planned.

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DRILL PLAN PAGE 5

Drill stem tests will depend on mud log shows.

A 2 person mud logging unit will be used from 3650' to TD.

Dual laterolog-micro laterolog, gamma ray, compensated neutron - Z density log, and caliper logs will be run from TD to intermediate casing. Compensated neutron and gamma ray logs will be run from TD to surface.

#### 7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is 5450 psi and expected bottom hole temperature is 172° F.

No H<sub>2</sub>S is expected while drilling. Nevertheless, a H<sub>2</sub>S safety package will be on site before drilling out of the surface casing until the long string is cemented.

Adequate flare lines will be installed to safely vent gas from the mud gas separator away from the rig to a point at least 150' from the wellhead.

#### 8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take 3 months to drill and complete the well.

This will be a Wolfcamp completion.