

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
June 16, 2001

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

HOBBS OGD

☐ AMENDED REPORT

APR 29 2013

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

RECEIVED

¹ Operator Name and Address Sundown Energy, LP 13455 Noel Road, Suite 2000 Dallas, Texas 75240		² OGRID Number 232611
		³ API Number 30-025-03145
³ Property Code 34564 39852	⁵ Property Name State Lea 405 Com	⁶ Well No. 1
⁹ Proposed Pool 1 SWD Devonian (96101)		¹⁰ Proposed Pool 2

⁷ 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	27	18S	35E	C	660'	N	1980'	W	Lea

⁸ Proposed 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

Additional Well Information

¹¹ Work Type Code E	¹² Well Type Code S	¹³ Cable/Rotary Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3893'
¹⁶ Multiple N	¹⁷ Proposed Depth 11,883'	¹⁸ Formation Devonian	¹⁹ Contractor	²⁰ Spud Date

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
15 1/2"	13 3/8"	54.5	325'	400	Surface
12 1/4"	9 5/8"	36	4,990'	1900	31'
8 3/4"	7"	23	11,783'	1 st -150; 2 nd -150 DV Tool @ 8,812'	8,090'
	7"	23	5,100'-Surface	180	4,361'

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

The State Lea 405 Com No. 1 was drilled in 1957 to test the Devonian formation. The Devonian watered out, and the well was subsequently tested and/or produced from the Bone Spring, Delaware and Queen intervals. The well was PA'd in 1971. Sundown proposes to re-enter the well, deepen to a new T.D. of approximately 11,883' and utilize the well as a produced water disposal well, injection to occur into the Devonian formation through the open-hole interval from 11,783'-11,883'. New 7" casing will be run from 5,100' to surface and cemented to a depth of approximately 4,361' with 180 sx. Class H. Existing squeezed and/or open perforations in the well from 11,686'-11,774' (Devonian), 8,649'-8,681' (Bone Spring), 6,134'-6,494' (Delaware) and 4,652'-4,843' (Queen) will be re-squeezed with Class H cement. 3 1/2" IPC tubing will be run and set in a Arrowset 1-X Packer at a depth of approximately 11,730'. A complete description of the procedure is attached, as well as a wellbore diagram. Form C-108 has been filed with the OCD and injection into the Devonian formation will not occur until OCD issues a produced water disposal permit for this well.

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

Permit Expires 2 Years From Approval
Date Unless Drilling Underway

OIL CONSERVATION DIVISION

Signature:

David Catanach

Approved by:

Petroleum Engineer

Printed name:

David Catanach

Title:

Petroleum Engineer

Title:

Agent for Sundown Energy, LP

Approval Date:

04/30/13

Expiration Date:

04/30/15

E-mail Address:

drcatanach@netscape.com

Date:

4/29/2013

Phone:

(505) 690-9453

Conditions of Approval Attached ☐

CONDITION OF APPROVAL-CANNOT dispose
down wellbore until Salt Water Disposal order is
approved by the OCD Santa Fe Office.

MAY 01 2013

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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
APR 29 2013
☐ AMENDED REPORT

RECEIVED
WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-03145	Pool Code 96101	Pool Name SWD Devonian
Property Code 3456439852	Property Name State Lea 405 Com	Well Number 1
OGRID No. 232611	Operator Name Sundown Energy, LP	Elevation 3893

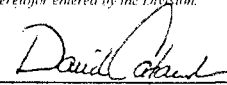
Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	27	18 South	35 East		660	North	1980	West	Lea

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
Dedicated Acres N/A	Joint or Infill	Consolidate Code	Order No.						

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

1980'	660'			OPERATOR CERTIFICATION <i>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 bottomhole 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 hereafter entered by the Division.</i>  4/29/13 Signature Date David Catanach, Agent Printed Name drcatanach@netscape.com E-mail Address
	State Lea 405 Com Well No. 1			
				SURVEYOR CERTIFICATION <i>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.</i> Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

APR 29 2013

State Lea 405 Com No. 1
660' FNL and 1980 FWL
Section 27, T-18-S, R-35-E
API # 30-025-03145
Lea County, New Mexico

RECEIVED

Procedure to re-enter and complete as a Devonian SWD

Find casing stub below ground level. Weld and tie-back 13-3/8" surface casing and 9-5/8" intermediate casing. NU BOP's. MIRU workover unit. MIRU reverse unit and steel circulating pit. Plan on using produced Devonian water for all drilling operations. PU 8-3/4" drill bit and bit sub, 3-1/2" N-80 EUE workstring and six 4-1/2" drill collars (or equivalent). Drill out 25 sxs cmt surface plug RIH and drill out cmt retainer at 4,956'. Drill out 25 sxs cmt plug from 4,990'-5,100'. 7" casing stub is at 5,100'. POOH. RIH and with mill and dress off the top of the 7" casing stub.

PU and RIH 6.5" drill bit and six 4.5" drill collars (or equivalent). Drill out cmt inside 7" casing below the casing stub. Pressure up on casing to 300 psig and see if well holds pressure. Drill out cmt sqz perforations from 6,134' to 6,494'. If possible pressure test to see if these sqz perforations will hold pressure. (May not work if well is bleeding off below the intermediate casing shoe and 7" casing stub).

Drill out 40 sx cmt plug from 8,450'-8,685'. Drill CIBP at 11,602'. **DO NOT DRILL OUT Devonian squeezed perforations from 11,769' to 11,774'.** If well would not hold pressure across the intermediate casing shoe and the 7" casing stub. RIH w/ packer and RBP and pressure test perforations from 6,134'-6,494'.

Depending on tests on the various perforations, plan on cement squeezing the Devonian perforations 11,686'-11,722' with 125 sxs class "H" neat cmt with FLA. Cement squeeze under a cmt retainer set at 11,602'. Once the Devonian perforations are squeezed, POOH and proceed with cement squeezing the Bone Spring perforations.

Set cmt retainer at 8,550' and cement squeeze Bone Spring perforations 8,649'-8,681' with 175 sxs class "H" neat cement with FLA. POOH.

RIH w/ 7" Bowen casing bowel patch with cementing ports. RIH w/ 7" 26# J-55 casing. Tie back the 7" casing. RIH w/ cmt retainer and set retainer at 5,050'. RIH w/ 3.5" workstring and sting into cmt retainer. Mix and pump 180 sxs class "H" neat cement. Unsting from retainer. POOH.

RIH w/ 6.5" drill bit and six 4.5" drill collars. Drill out all cmt squeezed perforations. **Test all squeeze perforations with reverse unit prior to drilling out the next set of squeezed perforations.**

State Lea 405 Com No. 1
660' FNL and 1980 FWL
Section 27, T-18-S, R-35-E
API # 30-025-03145
Lea County, New Mexico

Procedure to re-enter and complete as a Devonian SWD
PAGE 2

Drill out 7" casing shoe at 11,783'. Deepen well 100', down to 11,883'. This will deepen the well below the original Devonian Oil-Water contact at 11,790'. Clean well up with Devonian water. Well may need to be dry drilled. Well will start taking fluid. Plan on securing Devonian water from offsetting Devonian producers. **Make sure the drill bit assembly is not getting "sticky"**. Well may require acid-soluble LCM material (calcium carbonate).

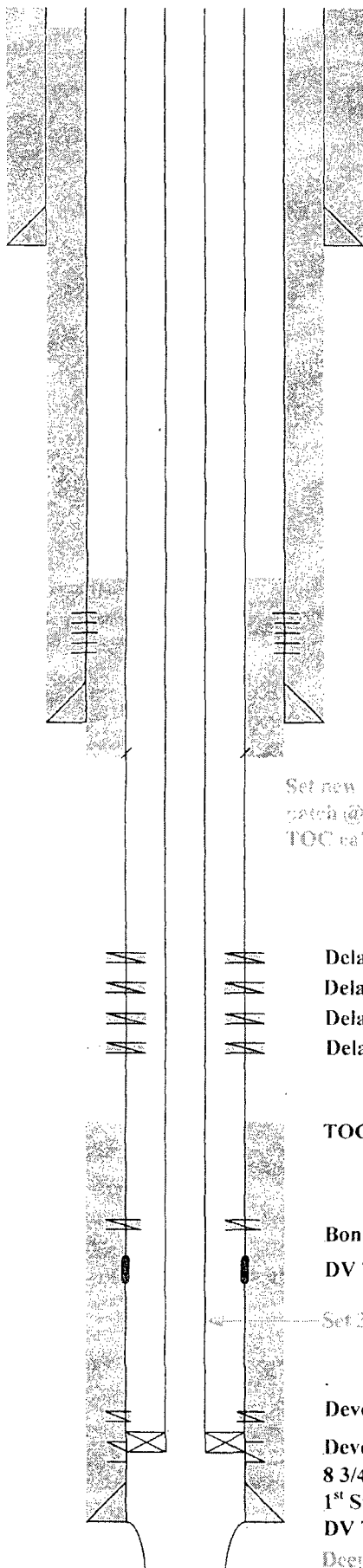
POOH. RIH w/ purchased 7" Arrow-set 1-X packer on 3.5" N-80 workstring. Set packer at 11,730'. Pressure test backside to 500 psig prior to acidizing Devonian open hole interval.

Acidize Devonian perforations with 12,000 gallons 15% NEFE HCl. Plan on pumping the acid at a high volume of 16 BPM. Start with 2,000 gallons of acid then drop 3,000 lbs of rock salt in x-linked gelled brine. Repeat process after pumping 2,000 gallons of acid. Have 20,000 lbs of rock salt on location. Have Devonian water on location to run step rate test with high-rate acid pump truck. Pump 100 bbls of Devonian water to dissolve rock salt. Proceed to pump another 200 bbls of Devonian water at various rates and pressures to establish injection rates for the subject disposal well.

POOH and LD 3.5" N-80 workstring. PU 3.5" IPC 9.3# N-80 injection tubing string. RIH w/ redressed 7" Arrow-set 1-X packer. Set packer at 11,730'. Run MIT test. Build Lea 403 Queen-Devonian battery and injection station. Plan on running 3.5" Steel poly-lined injection tubing from the Lea 403 battery to the new State Lea 405 Com No. 1 SWD well.

Proposed Wellbore Configuration

Sundown Energy, L.P.
State Lea 405 Com No. 1
API No. 30-025-03145
660' FNL & 1980' FWL (Unit C)
Section 27, T-18 South, R-35 East, NMPM



15 1/2" Hole; Set 13 3/8" Csg @ 325'
 Cemented w/400 Sx.
 Cement circulated to Surface

Proposed TOC @ 4,361

Queen Perforations 4,652'-4,777' Squeezed w/200 sx.
 Queen Perforations 4,753'-4,843'

12 1/4" Hole; Set 9 5/8" Csg @ 4,990'
 Cemented w/1900 sx.
 TOC @ 31' by Well File

Set new 7" 23# LTC casing w/Driven casing bowl/
 patch @ 5,100'. Cement w/380 sx. Class H.
 TOC calculated @ 4,361'

Delaware Perforations 6,134'-6,151'

Delaware Perforations 6,334'-6,340' squeezed w/75 sx. (Re-squeeze perforated interval
 Delaware Perforations 6,368'-6,374' from 6,134'-6,494' w/150 sx. Class H)
 Delaware Perforations @ 6,494' squeezed w/75 sx.

TOC @ 8,090' (Well File)

Bone Spring Perforations: 8,649'-8,681' (Squeeze w/175 Sx. Class H)

DV Tool @ 8,812'

Set 3 1/2" 9.3# N-80 IPC Tubing in Arrowset J-X Packer @ 11,720'

Devonian Perforations: 11,686'-11,722' (Squeeze w/175 sx. Class H)

Devonian Perforations: 11,769'-11,774'. Squeezed w/ 125 Sx.

8 3/4" Hole; Set 7" Csg. @ 11,783'

1st Stage-150 Sx. 2nd Stage-150 Sx.

DV Tool @ 8,812' TOC @ 8,090' by Well File

Deepen well to new T.D. 11,883' (Injection Interval: 11,783'-11,883' Open-Hole)