Form 3160-5 (February 2005)

UNITED STATES

DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

FORM APPROVED OMB No 1004-0137 Expires March 31, 2007

5. Lease Serial No

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

Tifle 18 19 S. G. Section 1001 and Title 43.15 S. G. Section 1212 make it a crime for any person knowingly and willfully to make

6	If Indian, Allottee or Tribe	PECEIVE	D

abandoned Well.	Use Form 3160-3 (A	APD) for suc	n proposa	is. 	Im 1011 : 00111	FEB 2 2 2010
SUBMIT IN TRIPLICATE Other instructions on page 2.				7. If Unit of CA/Agree		
1 Type of Well				8. Well Name and No.	NMOCD ARTESIA	
✓ Oil Well Gas V				Strawbe	erry 7 Federal 3	
2 Name of Operator Devon Energy Production Co., LP					9. API Well No. 30-0	15-37171
3a. Address 20 North Broadway	-	3b Phone No.	'ınclude area co	de)	10. Field and Pool or E	•
OKC, OK 73102		(405)-552-780	2			Bone Springs, North
4 Location of Well (Footage, Sec., T., NWNW 330 FNL & 660 FWL Sec 7-T19S-R31E - Lot D	R.,M, or Survey Description	n)			11. Country or Parish, S Eddy	State County, NM
12. CHEC	CK THE APPROPRIATE BO	OX(ES) TO INDI	CATE NATUR	E OF NOTIC	CE, REPORT OR OTHE	ER DATA
TYPE OF SUBMISSION			TY	PE OF ACT	ION	
✓ Notice of Intent	Acidıze	☐ Deepe	n	Produ	uction (Start/Resume)	Water Shut-Off
Notice of Intent	Alter Casing	Fractu	re Treat	Recla	amation	Well Integrity
	Casing Repair	☐ New C	Construction	Reco	mplete	Other APD Changes
Subsequent Report	Change Plans	Plug a	nd Abandon	Temr	porarily Abandon	
Final Abandonment Notice	Convert to Injection	Plug B			r Disposal	
following completion of the involve testing has been completed. Final determined that the site is ready for the second of the se	Abandonment Notices must r final inspection.) espectfully requests approtence the Rustler top is 425'. espectfully requests approtence of the ST&C J-59 and ST&C J-59 espectfully requests approtence of the state	be filed only after oval to change the coval t	r all requirement the following or the f	ts, including the surface the interme	e casing depth: ediate 12 1/4" hole: t - 3.07 Tensile - 7.98 ediate the 7 7/8" hole:	PPROVED
14 I hereby certify that the foregoing is t Name (Printed/Typed)	rue and correct				BUREAU C	OF LAND MANAGEMENT SBAD FIELD OFFICE
Stephanie A. Ysasaga Signature			Title Sr. Staff	Engineerin	-	
			Date 02/18/20	010	-	
1//	THIS SPACE	FOR FEDER	RAL OR ST	ATE OFF	FICE USE	
Approved by			Title		D	ate
Conditions of approval, if any, are attached hat the applicant holds legal or equitable t	Approval of this notice doe itle to those rights in the subject	es not warrant or ce ect lease which wou	rtify			D 4



Devon Energy Corp Strawberry 7 Fed Com #3

API # 30-015-37171-0000

Sec. 7-19S-31E Eddy County, New Mexico February 17, 2010

Well Recommendation

Prepared for:

Pat Brown
Drilling Engineer
Oklahoma City, Oklahoma
Bus Phone: (405) 228-8511

Prepared by:

John Parks Region Technical Rep. Oklahoma City, Oklahoma Bus Phone: (405) 228-4302



Service Point:

Artesia

Bus Phone: (505) 746-3140 Fax: (505) 746-2293

Service Representatives:

Larry Johnson Senior Sales Rep Artesia, New Mexico

Operator Name: Devon Energy Corp Strawberry 7 Fed Com #3

Job Description: Surface Casing Date: February 17, 2010



Proposal No: 215855013B

JOB AT A GLANCE

500 ft Depth (TVD)

500 ft Depth (MD)

Hole Size 17.5 in

Casing Size/Weight: 13 3/8 in, 48 lbs/ft

Pump Via 13 3/8" O.D. (12.715" .I.D) 48 #

Total Mix Water Required 3,651 gals

Spacer

20 bbls **Fresh Water Density** 8.3 ppg

Lead Slurry

Class C + Additives 225 sacks Density 13.5 ppg Yield 1.75 cf/sack

Tail Slurry

Class C 250 sacks Density 14.8 ppg 1.35 cf/sack Yield

Displacement

72 bbls Mud **Density** 9.0 ppg

Strawberry 7 Fed Com #3

Job Description: Surface Casing Date:

February 17, 2010



Proposal No: 215855013B

WELL DATA

ANNULAR GEOMETRY

ANNULAR)(D) (iii)	DEP MEASURED	TH(ft) TIRUE:VERTICAL
17.500 HOLE	500	500

SUSPENDED PIPES

DIAMETI	R ((in)	WEIGHT	DEP	TH(ft)
OD.	(I)D\	((lbs/ft)	MEASURED	TRUEVERTICAL
13.375	12.715	48	500	500

Float Collar set @	460 ft
Mud Density	9.00 ppg
Est. Static Temp.	80 ° F
Est. Circ. Temp.	80 ° F

VOLUME CALCULATIONS

283 ft	X	0.6946 cf/ft	with	100 % excess	==	393.5 cf
217 ft	· X	0.6946 cf/ft	with	100 % excess	=	301.1 cf
40 ft	X	0.8818 cf/ft	with	0 % excess	=	35.3 cf (inside pipe)

TOTAL SLURRY VOLUME = 729.9 cf 130 bbls

Operator Name: Devon Energy Corp Strawberry 7 Fed Com #3

Date:

Job Description: Surface Casing February 17, 2010



Proposal No: 215855013B

FLUID SPECIFICATIONS

Spacer

20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	394	<i>I</i> 1.75 =	= 225 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water
Tail Slurry	336	/ 1.35 =	= 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water
Displacement		72.2 l	obls Mud @ 9 ppg

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	13.50	14.80
Slurry Yield (cf/sack)	1.75	1.35
Amount of Mix Water (gps)	9.17	6.35
Estimated Pumping Time - 70 BC (HH:MM)	3:30	2:30
COMPRESSIVE STRENGTH		
8 hrs @ 80 ° F (psi)		500
12 hrs @ 80 ° F (psi)	400	865
15 hrs @ 80 ° F (psi)	500	
24 hrs @ 80 ° F (psi)	700	1475
72 hrs @ 80 ° F (psi)		2700
15 hrs @ 80 ° F (psi) 24 hrs @ 80 ° F (psi)	500	1475

Operator Name: Devon Energy Corp Strawberry 7 Fed Com #3 Job Description: Intermediate Casing

Date:

February 17, 2010



Proposal No: 215855013B

JOB AT A GLANCE

2,200 ft Depth (TVD)

2,200 ft Depth (MD)

Hole Size 12.25 in

Casing Size/Weight: 9 5/8 in, 36 lbs/ft

Pump Via 9 5/8" O.D. (8.921" .I.D) 36 #

Total Mix Water Required 6,602 gals

Spacer

Fresh Water 20 bbls **Density** 8.3 ppg

Lead Slurry

35:65:4 Poz:Class C 445 sacks **Density** 12.8 ppg Yield 1.97 cf/sack

Tail Slurry

Class C 300 sacks **Density** 14.8 ppg Yield 1.34 cf/sack

Displacement

Mud 167 bbls **Density** 10.0 ppg

Strawberry 7 Fed Com #3 Job Description: Intermediate Casing

Date:

February 17, 2010



WELL DATA

ANNULAR GEOMETRY

ANNULARID	DEP	TH(ft)
((in))	MEASURED	TRUEVERTICAL
12.715 CASING	500	500
12.250 HOLE	2,200	2,200

SUSPENDED PIPES

DIAMETE	R)((in))	WEIGHT	DER	H(ft)
(O!D.)	l!D.	(lbs/ft)	MEASURED	TRUE VERTICAL.
9.625	8.921	36	2,200	2,200

Float Collar set @	2,160 ft
Mud Density	10.00 ppg
Est. Static Temp.	98 ° F
Est. Circ. Temp.	90 ° F

VOLUME CALCULATIONS

500 ft		0.0705 .66		0.0/		400.0 - 5
500 ft	Х	0.3765 cf/ft	with	0 % excess	=	188.3 cf
1,088 ft	X	0.3132 cf/ft	with	100 % excess	=	681.4 cf
612 ft	X	0.3132 cf/ft	with	100 % excess	=	383.4 cf
40 ft	×	0.4341 cf/ft	with	0 % excess	=	17.4 cf (inside pipe)

TOTAL SLURRY VOLUME = 1270.5 cf 226 bbls

Date:

Strawberry 7 Fed Com #3 Job Description: Intermediate Casing February 17, 2010



Proposal No: 215855013B

FLUID SPECIFICATIONS

20.0 bbls Fresh Water @ 8.34 ppg

<u>FLUID</u>	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	870	I 1.97	= 445 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 5% bwoc MPA-5 + 1% bwoc Sodium Metasilicate + 101.3% Fresh Water
Tail Slurry	401	<i>l</i> 1.3	= 300 sacks Class C Cement + 1% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.2% Fresh Water
Displacement CEMENT PROPERTIE	:S	167.0) bbls Mud @ 10 ppg
			CITIDDY CITIDDY

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.80	14.80
Slurry Yield (cf/sack)	1.97	1.34
Amount of Mix Water (gps)	10.56	6.34
Estimated Pumping Time - 70 BC (HH:MM)	3:30	2:30
COMPRESSIVE STRENGTH		
12 hrs @ 95 ° F (psi)	340	
15 hrs @ 95 ° F (psi)	500	
24 hrs @ 95 ° F (psi)	800	
8 hrs @ 100 ° F (psi)		500
12 hrs @ 100 ° F (psi)		850
24 hrs @ 100 ° F (psi)		2250
72 hrs @ 100 ° F (psi)		3000

ACTUAL CEMENT VOLUMES MAY VARY BASED ON CALIPER.

Operator Name: Devon Energy Corp Strawberry 7 Fed Com #3

Job Description: Long String

Date:

February 17, 2010



Proposal No: 215855013B

JOB AT A GLANCE

Depth (TVD) 10,200 ft

10,200 ft Depth (MD)

Hole Size 8.5 in

5 1/2 in, 17 lbs/ft Casing Size/Weight:

Pump Via 5 1/2" O.D. (4.892" .I.D) 17 #

17,676 gals **Total Mix Water Required**

Float Collar set @ 10,120 ft Stage No: 1

Spacer

20 bbls Water 8.3 ppg **Density**

Spacer

40 bbls Surebond III **Density** 9.4 ppg

Spacer

10 bbls Water **Density** 8.3 ppg

Cement Slurry

Super C Modified 1,000 sacks **Density** 13.3 ppg 1.56 cf/sack Yield

Displacement

235 bbls **Displacement Fluid**

Operator Name: Devon Energy Corp Strawberry 7 Fed Com #3

Job Description: Long String

Date:

February 17, 2010



Proposal No: 215855013B

JOB AT A GLANCE (Continued)

Stage No: 2 Stage Collar set @ 5,000 ft

Spacer

20 bbls Fresh Water **Density** 8.3 ppg

Lead Slurry

815 sacks 35:65 Poz:Class C **Density** 12.5 ppg 2.04 cf/sack Yield

Tail Slurry

150 sacks 60:40 Poz:Class C 13.8 ppg **Density** Yield 1.38 cf/sack

Displacement

116 bbls **Displacement Fluid**

Strawberry 7 Fed Com #3

Job Description: Long String

Date:

February 17, 2010



Proposal No: 215855013B

WELL DATA

ANNULAR GEOMETRY

ANNULARIID: (in)	DEP.	TH(ft)
8.921 CASING	2,200	2,200
8.500 HOLE	10,200	10,200

SUSPENDED PIPES

DIAMET	ER ((in)	WEIGHT	DEP	TH(ft))
(O.D.	III.	((lbs/ft))	MEASURED	LTRUE VERTICAL
5.500	4.892	17	10,200	10,200

STAGE: 1

Float Collar set @

10,120 ft

Mud Density

9.50 ppg 162 ° F

Est. Static Temp. Est. Circ. Temp.

139 ° F

VOLUME CALCULATIONS

5,200 ft

0.2291 cf/ft Х

with

30 % excess 1552.5 cf

80 ft 0.1305 cf/ft with 0 % excess 10.4 cf (inside pipe)

TOTAL SLURRY VOLUME =

1562.9 cf 279 bbls

STAGE: 2

Stage Collar set @

5,000 ft

Mud Density

9.50 ppg

Est. Static Temp.

120 ° F

Est. Circ. Temp.

105 ° F

VOLUME CALCULATIONS

2,200 ft	X	0.2691 cf/ft	with	0 % excess	=	592.0 cf
2,350 ft	X	0.2291 cf/ft	with	100 % excess	=	1076.4 cf
450 ft	X	0.2291 cf/ft	with	100 % excess	=	_ 206.4 cf

TOTAL SLURRY VOLUME = 1874.8 cf

334 bbls

Operator Name: Devon Energy Corp Strawberry 7 Fed Com #3

Job Description: Long String

Date:

February 17, 2010



Proposal No: 215855013B

FLUID SPECIFICATIONS

STAGE NO.: 1

Spacer 20.0 bbls Water @ 8.34 ppg

Spacer 40.0 bbls Surebond III @ 9.35 ppg

10.0 bbls Water @ 8.34 ppg Spacer

VOLUME VOLUME

FLUID CU-FT FACTOR AMOUNT AND TYPE OF CEMENT

Cement Slurry 1563 / 1.56 = 1000 sacks (15:61:11) Poz (Fly Ash):Class C

Cement: CSE-2 + 1% bwow Potassium Chloride + 0.75% bwoc EC-1 + 0.4% bwoc CD-32 + 3

lbs/sack LCM-1 + 0.6% bwoc FL-25 + 0.6% bwoc

FL-52A + 72.4% Fresh Water

Displacement 235.3 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO. 1
Slurry Weight (ppg)	13.30
Slurry Yield (cf/sack)	1.56
Amount of Mix Water (gps)	7.55
Estimated Pumping Time - 70 BC (HH:MM)	3:45
Free Water (mls) @ 139 ° F @ 90 ° anglé	0.0
Fluid Loss (cc/30min) at 1000 psi and 139 ° F	50.0
COMPRESSIVE STRENGTH	
12 hrs @ 162 ° F (psi)	1200
24 hrs @ 162 ° F (psi)	2000
72 hrs @ 162 ° F (psi)	2500

Strawberry 7 Fed Com #3

Job Description: Long String

Date:

February 17, 2010



Proposal No: 215855013B

FLUID SPECIFICATIONS (Continued)

STAGE NO.: 2

20.0 bbls Fresh Water @ 8.34 ppg Spacer

Lead Slurry 1668 1 2.04 = 815 sacks (35:65) Poz (Fly Ash): Class C Cement +

> 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.25% bwoc FL-52A

+ 107.7% Fresh Water

Tail Slurry 206 1 1.38 = 150 sacks (60:40) Poz (Fly Ash):Class C Cement +

5% bwow Sodium Chloride + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 65.5% Fresh

Water

116.2 bbls Displacement Fluid Displacement

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.50	13.80
Slurry Yield (cf/sack)	2.04	1.38
Amount of Mix Water (gps)	11.24	6.44
Estimated Pumping Time - 70 BC (HH:MM)	4:00	2:30
Free Water (mls) @ ° F @ 90 ° angle		
Fluid Loss (cc/30min)		
at 1000 psi and ° F		
COMPRESSIVE STRENGTH		
12 hrs @ 112 ° F (psi)	300	
24 hrs @ 112 ° F (psi)	600	
72 hrs @ 112 ° F (psi)	850	
12 hrs @ 120 ° F (psi)		900
24 hrs @ 120 ° F (psi)		1800
72 hrs @ 120 ° F (psi)		2500

CEMENT VOLUMES WILL BE BASED ON CALIPER + 20% EXCESS.

BATCH MIX THE SUPER C MODIFIED CEMENT SLURRY IF FALCON CEMENT PUMP IS NOT AVAILABLE.

CONDITIONS OF APPROVAL

OPERATOR'S NAME: | Devon Energy Production Co.

LEASE NO.: | NMNM-100561

WELL NAME & NO.: | Strawberry 7 Fed 3 SURFACE HOLÉ FOOTAGE: | 330' FNL & 660' FWL

LOCATION: Section 7, T. 19 S., R 31 E., NMPM

COUNTY: | Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- 1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Yates formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.
- 2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Artesia Group and the Capitan Reef. Possible water flows in the Artesia and Salado Groups.

- 1. The 13-3/8 inch surface casing shall be set at approximately 560 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is: Per R-111-P potash requirements, the salt protection string must be set a minimum of 100' below the salt and not more than 600' below the salt. Casing should be set in the Tansill formation at approximately 2200 feet.
 - □ Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to R-111-P potash. Per plan submitted, WOC will be greater than 24 hours.

Fresh water mud to be used between 2200' and 7500'.

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - a. First stage to DV tool, cement shall:
 - Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.
 - b. Second stage above DV tool, cement shall:
 - Cement to circulate. If cement does not circulate, contact the appropriate BLM office.
- 4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

- a. For surface casing only: If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 inch intermediate casing shoe shall be 5000(5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
 - b. The tests shall be done by an independent service company utilizing a test plug.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 - f. Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

CRW 021910