Form 3160-5 (February 2005)

(Instructions on page 2)

#### **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.

NMLC 060613 6 If Indian, Allottee or Tribe Name

7 If Unit of CA/Agreement, Name and/or No

SUBMIT IN TRIPLICATE — Other instructions on page 2.			7 If Unit of CA/Agree	onent, rance and or the	
1 Type of Well Oil Well Gas W	ell Other	SEP 1 0 2008	8 Well Name and No Indian	Draw 6 Fed Com 2	
2 Name of Operator Devon Energy Production Co., LP		OCD-ARTESIA	9 API Well No 30-0	9 API Well No 30-015-36294	
3a Address 20 North Broadway OKC, OK 73102		3b Phone No <i>(include ai ea code)</i> (405)-552-7802		10 Field and Pool or Exploratory Area Carlsbad; East Morrow	
4 Location of Well (Footage, Sec , $T_{\rm s}$ , SWNW 1330' FNL & 860' FWL Sec 6-T22S-R28E	R ,M , or Survey Description,	`		11 Country or Parish, State Eddy County, NM	
12 CHEC	K THE APPROPRIATE BO	X(ES) TO INDICATE NATURE OF NOT	TICE, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSION		TYPE OF AG	CTION		
Notice of Intent	Acidize Alter Casing	Fracture Treat Re	oduction (Start/Resume)	Water Shut-Off Well Integrity	
Subsequent Report  Final Abandonment Notice	Casing Repair Change Plans Convert to Injection	Plug and Abandon Te	complete mporarily Abandon ater Disposal	Other APD Changes	
the proposal is to deepen directions Attach the Bond under which the v following completion of the involv testing has been completed. Final determined that the site is ready for	ally or recomplete horizontally or recomplete horizontally ork will be performed or project operations. If the operation Abandonment Notices must be final inspection.)	tinent details, including estimated starting ly, give subsurface locations and measured ovide the Bond No on file with BLM/BIA on results in a multiple completion or recorde filed only after all requirements, including	and true vertical depths of Required subsequent repupletion in a new interval agreelamation, have been	of all pertinent markers and zones norts must be filed within 30 days , a Form 3160-4 must be filed once	
,	espectfully advises a chang	ge from the initial APD to the following:			
From: 9 5/8" 40# HCP-110 LT&C @ 5, 5 1/2 17# HCP-110 LTC @ 0 - 9 5 1/5 20# HCP-110 LTC @ 9,90  To:	,900' 0 - 12,400'	Co		ED FOR OF APPROVAL	
9 5/8" 40# J-55 LT&C @ 2,750' 5 1/2" 17# F-110 LT&C @ 12,30 HCP DV tool set @ 8500'. See attached	00'	nallenec og - Pot Bro	Win		
HCP - per o  DV tool set @ 8500'. See attached  14 I hereby certify that the foregoing is to		nallanec 0g - Pat Bro	Wń		
		Title Sr. Staff Engineer			
14 I hereby certify that the foregoing is to Name (Printed/Typed)	rue and correct	Title Sr. Staff Engineer  Date 09/03/2008	ring Technician	\PPROVED	
14 I hereby certify that the foregoing is to Name (Printed/Typed) Stephanie A Ysasaga Signature	rue and correct	Title Sr. Staff Engineei	ring Technician	\PPROVED	
14 I hereby certify that the foregoing is to Name (Printed/Typed) Stephanie A Ysasaga  Signature  Approved by	THIS SPACE	Title Sr. Staff Engineer  Date 09/03/2008  FOR FEDERAL OR STATE OF	FFICE USE	SEP 3 2008	
14 I hereby certify that the foregoing is to Name (Printed/Typed) Stephanie A Ysasaga Signature	THIS SPACE	Title Sr. Staff Engineer  Date 09/03/2008  FOR FEDERAL OR STATE OF Title  not warrant or certify	FFICE USE		



**Proposal No: 215854627A** 

## Devon Energy Corp Indian Draw 6 Fed Com #2

Carlsbad East Field Sec. 6-22S-28E Eddy County, New Mexico August 27, 2008

### **Well Recommendation**

### Prepared for:

Brent Evans
Drilling Engineer
Oklahoma City, Oklahoma
Bus Phone: (405) 228-2435

# 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 Well Name:

Operator Name: Devon Energy Corp

Indian Draw 6 Fed Com #2

Job Description: Intermediate Casing Date:

August 27, 2008



Proposal No: 215854627A

# **JOB AT A GLANCE**

Depth (TVD)

2,750 ft

Depth (MD)

2,750 ft

**Hole Size** 

12.25 in

Casing Size/Weight:

9 5/8 in, 40 lbs/ft

Pump Via

9 5/8" O.D. (8.835" .I.D) 40

**Total Mix Water Required** 

9,180 gals

Spacer

Fresh Water

20 bbls

Density

8.3 ppg

**Lead Slurry** 

35:65:6 Poz:Class C

725 sacks

**Density** 

12.7 ppg

Yield

1.95 cf/sack

**Tail Slurry** 

60:40 Poz:Class C (MPA)

300 sacks

Density

13.8 ppg

Yield

1.38 cf/sack

Displacement

Mud

205 bbls

**Density** 

10.0 ppg

Well Name: Indian Draw 6 Fed Com #2

Job Description: Intermediate Casing Date:

August 27, 2008



Proposal No: 215854627A

# **WELL DATA**

#### **ANNULAR GEOMETRY**

ANNULAR I.D. (in)	DEP MEASURED	TH(ft) TRUE VERTICAL
12.615 CASING	410	410
12.250 HOLE	2,750	2,750

# **SUSPENDED PIPES**

	ER (in)	WEIGHT	<b>DEP</b>	H(ft)海绵等外条等。
O.D.	d.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
9.625	8.835	40	2,750	2,750

Float Collar set @ 2,710 ft **Mud Density** 10.00 ppg 108 ° F Est. Static Temp. 93°F Est. Circ. Temp.

### **VOLUME CALCULATIONS**

410 ft	Х	0.3627 cf/ft	with	0 % excess	=	148.7 cf
1,778 ft	Х	0.3132 cf/ft	with	125 % excess	=	1253.2 cf
562 ft	Х	0.3132 cf/ft	with	125 % excess	=	395.7 cf
40 ft	Х	0.4257 cf/ft	with	0 % excess	=	17.0 cf (inside pipe)

TOTAL SLURRY VOLUME ≈ 1814.7 cf

323 bbls

Well Name:

Indian Draw 6 Fed Com #2

Date:

Job Description: Intermediate Casing August 27, 2008

Proposal No: 215854627A

# **FLUID SPECIFICATIONS**

Spacer

20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1402	/ 1.95 =	725 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 6% bwoc Bentonite + 95.8% Fresh Water
Tail Slurry	413	I 1.38 =	300 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 65.5% Fresh Water
Displacement		205.5	bbls Mud @ 10 ppg

**CEMENT PROPERTIES** 

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.70	13.80
Slurry Yield (cf/sack)	1.95	1.38
Amount of Mix Water (gps)	10.00	6.44
Estimated Pumping Time - 70 BC (HH:MM)	4:00	3:00
COMPRESSIVE STRENGTH	<	
12 hrs @ 100 ° F (psi)	325	
17 hrs @ 100 ° F (psi)	500	
24 hrs @ 100 ° F (psi)	630	
8 hrs @ 108 ° F (psi)		500
12 hrs @ 108 ° F (psi)		1550
24 hrs @ 108 ° F (psi)		2350

IF CIRCULATION IS LOST DURING DRILLING, PUMP 180 SX CLASS H + 10% A-10 (GYPSUM) + 1% CACL2 + 10 PPS GILSONITE + 1/4 PPS CELLO FLAKE. MIX CEMENT @ 14.6 PPG (6.16 GPS WATER) AND PUMP AHEAD OF THE LEAD CEMENT LISTED ABOVE.

Well Name:

Operator Name: Devon Energy Corp

Indian Draw 6 Fed Com #2

Job Description: Long String Date:

August 27, 2008



Proposal No: 215854627A

## **JOB AT A GLANCE**

Depth (TVD) 12,300 ft

Depth (MD) 12,300 ft

8.75 in **Hole Size** 

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

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

22,068 gals **Total Mix Water Required** 

Stage No: 1 Float Collar set @ 12,220 ft

**Spacer** 

40 bbls **Turbo Flow III Density** 11.5 ppg

**Spacer** 

Fresh Water 5 bbls 8.3 ppg Density

**Spacer** 

1,000 gals Surebond III Density 9.4 ppg

**Spacer** 

10 bbls Fresh Water Density 8.3 ppg

**Cement Slurry** 

Super C Modified 926 sacks 13.3 ppg **Density** 1.57 cf/sack Yield

Displacement

**Displacement Fluid** 284 bbls

Well Name:

Indian Draw 6 Fed Com #2

Job Description: Long String Date:

August 27, 2008

Proposal No: 215854627A

# **JOB AT A GLANCE** (Continued)

Stage No: 2 Stage Collar set @ 8,500 ft

**Spacer** 

10 bbls Fresh Water 8.3 ppg **Density** 

**Spacer** 

Mud Clean II 1,000 gals Density 8.3 ppg

**Lead Slurry** 

35:65:6 Poz:Class H 910 sacks **Density** 12.5 ppg 1.95 cf/sack Yield

**Tail Slurry** 

60:40 Poz:Class H (MPA) 940 sacks 13.8 ppg **Density** 1.34 cf/sack Yield

Displacement

198 bbls **Displacement Fluid** 

Well Name:

Indian Draw 6 Fed Com #2

Job Description: Long String Date:

August 27, 2008



Proposal No: 215854627A

### **FLUID SPECIFICATIONS**

STAGE NO.: 1

40.0 bbls Turbo Flow III @ 11.5 ppg Spacer

Spacer 5.0 bbls Fresh Water @ 8.34 ppg

Spacer 1,000.0 gals Surebond III @ 9.35 ppg

10.0 bbls Fresh Water @ 8.34 ppg Spacer

**VOLUME VOLUME** 

**FLUID** AMOUNT AND TYPE OF CEMENT CU-FT **FACTOR** 

Cement Slurry 1450 I 1.57 = 926 sacks (15:61:11) Poz (Fly Ash):Premium Plus

C Cement: CSE-2 + 0.3% bwoc R-3 + 1% bwow Potassium Chloride + 0.75% bwoc EC-1 + 0.125 lbs/sack Cello Flake + 0.4% bwoc CD-32 + 3 lbs/sack LCM-1 + 0.6% bwoc FL-25 + 0.6% bwoc

FL-52A + 72.3% Fresh Water

Displacement 284.1 bbls Displacement Fluid

#### **CEMENT PROPERTIES**

	SLURRY NO. 1
Slurry Weight (ppg)	13.30
Slurry Yield (cf/sack)	1.57
Amount of Mix Water (gps)	7.54
Estimated Pumping Time - 70 BC (HH:MM)	4:15
Free Water (mls) @ 159 ° F @ 90 ° angle	0.0
Fluid Loss (cc/30min) at 1000 psi and 159 ° F	50.0
COMPRESSIVE STRENGTH	
12 hrs @ 203 ° F (psi)	1400
24 hrs @ 203 ° F (psi)	2000
72 hrs @ 203 ° F (psi)	2500

Well Name:

Indian Draw 6 Fed Com #2

Job Description: Long String Date:

August 27, 2008



Proposal No: 215854627A

# **FLUID SPECIFICATIONS** (Continued)

**STAGE NO.: 2** 

Spacer

10.0 bbls Fresh Water @ 8.34 ppg

Spacer

1,000.0 gals Mud Clean II @ 8.34 ppg

Lead Slurry

1772

1 1.95 = 910 sacks (35:65) Poz (Fly Ash):Class H Cement +

0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 +

6% bwoc Bentonite + 0.4% bwoc FL-52A + 99.3%

Fresh Water

Tail Slurry

1263

1 1.34 = 940 sacks (60:40) Poz (Fly Ash): Class H Cement +

1% bwow Sodium Chloride + 0.1% bwoc R-3 +

0.125 lbs/sack Cello Flake + 2 lbs/sack Kol Seal + 0.75% bwoc BA-10A + 4% bwoc MPA-5 + 61.3%

Fresh Water

Displacement

197.6 bbls Displacement Fluid

#### **CEMENT PROPERTIES**

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.50	13.80
Slurry Yield (cf/sack)	1.95	1.34
Amount of Mix Water (gps)	10.36	6.02
Estimated Pumping Time - 70 BC (HH:MM)	4:00	2:45
Free Water (mls) @ ° F @ 90 ° angle		0.0
Fluid Loss (cc/30min)		
at 1000 psi and ° F		300.0
COMPRESSIVE STRENGTH		
12 hrs @ 145 ° F (psi)	175	
24 hrs @ 145 ° F (psi)	250	
72 hrs @ 145 ° F (psi)	700	
12 hrs @ 165 ° F (psi)		1100
24 hrs @ 165 ° F (psi)		2100
72 hrs @ 165 ° F (psi)		3000

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

ACTUAL CEMENT VOLUMES MAY VARY BASED ON CALIPER.

TOP OF 2ND STAGE TAIL MAY VARY.

# Indian Draw 6 Fed Com 2 30-015-36294 Devon Energy Production Co., L.P. September 3, 2008 Conditions of Approval

- 1. Depth change to 12,300' is approved.
- 2. Drilling below the 9-5/8" shoe can commence after WOC of 18 hours as that is the greater time from provided WOC times and time for water basin.
- 3. Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. The pressure to be applied at surface is 1100 psi, which will place a total pressure of 2560 psi on the formation a maximum distance of 20' below the intermediate shoe. NOTE the setting point of 2750' places the casing in the Bell Canyon, which is a dolomite and can be hydrocarbon bearing at that depth. The Bell Canyon has some highly porous areas. If the formation fails the test, an additional casing string will be required.
- 4. 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 should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

WWI 090208