Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS
RECEIVED
JAN 18 2011
HOBBSOCD

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

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.

SUBMIT IN TRIPLICATE – *Other instructions on page 2.*

5. Lease Serial No.
LC-029489C

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

8. Well Name and No.
Cockburn G Federal 5H

2. Name of Operator
Devon Energy Production Company, L.P.

9. API Well No.
30-025-39961

3a. Address
20 North Broadway, Oklahoma City, OK 73102

3b. Phone No. *(include area code)*
405-235-3611

10. Field and Pool or Exploratory Area
Bone Spring

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
SHL: NW/SW 1650 FSL& 330 FWL Unit L SEC 10 T18S R33E
BHL: NW/NW 330 FNL & 940 FWL Unit D SEC 10 T18S R33E

11. Country or Parish, State
Lea County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Devon Energy Production Company L. P. respectfully requests to make the following changes to the original APD.

This well was initially permitted as a single stage cement job for the 9 5/8" casing intermediate.

The casing will stay the same as the initial permit. ← See COA, casing changed

I am requesting a two stage cement job with the following cement attachment.

(Please see attached)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/Typed)*
Judy A. Barnett

Title Regulatory Specialist

Signature Judy A. Barnett

Date 01/07/2011

PETROLEUM ENGINEER

JAN 19 2011

APPROVED

JAN 12 2011

Date

WESLEY W. INGRAM
PETROLEUM ENGINEER

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Office

Conditions of approval, if any, are attached. Approval of this notice 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.

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.

(Instructions on page 2)

Proposal No: 215856297B

Devon Energy Corp
Cockburn Fed #5H

Lea County, New Mexico
January 7, 2011

Well Proposal

Prepared for:
Pat Brown
Drilling Engineer
Oklahoma City, Oklahoma
Bus Phone: (405) 228-8964

Prepared by:
John Parks
Region Technical Rep.
Oklahoma City, Oklahoma

THE BLUE WELLBORE℠
Makes better wells

Service Point:
Hobbs
Bus Phone: (575) 392-5556
Fax: (575) 392-7307

Service Representatives:
Steve Matlock
District Sales Supervisor
Hobbs, New Mexico

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Surface Casing
Date:	January 7, 2011

Proposal No: 215856297B

JOB AT A GLANCE

Depth (TVD)	1,600 ft
Depth (MD)	1,600 ft
Hole Size	17.5 in
Casing Size/Weight	13 3/8 in, 54.5 lbs/ft
Pump Via	13 3/8" O.D. (12.615" .I.D) 54.5
Total Mix Water Required	11,835 gals
Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Lead Slurry	
35:65:4 Poz:Class C	910 sacks
Density	12.8 ppg
Yield	1.97 cf/sack
Tail Slurry	
Class C	350 sacks
Density	14.8 ppg
Yield	1.35 cf/sack
Displacement	
Mud	241 bbls
Density	9.0 ppg

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Surface Casing
Date:	January 7, 2011

Proposal No: 215856297B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
17.500 HOLE	1,600	1,600

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
13.375	12.615	54.5	1,600	1,600

Float Collar set @	1,560 ft
Mud Density	9.00 ppg
Est. Static Temp.	93 ° F
Est. Circ. Temp.	85 ° F

VOLUME CALCULATIONS

1,286 ft	x	0.6946 cf/ft	with	100 %	excess	=	1786.6 cf
314 ft	x	0.6946 cf/ft	with	100 %	excess	=	436.2 cf
40 ft	x	0.8680 cf/ft	with	0 %	excess	=	34.7 cf (inside pipe)
			TOTAL SLURRY VOLUME			=	2257.6 cf
						=	402 bbls

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Surface Casing
Date:	January 7, 2011

Proposal No: 215856297B

FLUID SPECIFICATIONS

Spacer — 20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR		AMOUNT AND TYPE OF CEMENT
Lead Slurry	1787	/	1.97	=	910 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 1% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.3% Fresh Water
Tail Slurry	471	/	1.35	=	350 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water

Displacement — 241.2 bbls Mud @ 9 ppg

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	12.80	14.80
Slurry Yield (cf/sack)	1.97	1.35
Amount of Mix Water (gps)	10.56	6.35
Estimated Pumping Time - 70 BC (HH:MM)	3:30	2:30
COMPRESSIVE STRENGTH		
7 hrs @ 93 ° F (psi)		
12 hrs @ 93 ° F (psi)		500
17 hrs @ 93 ° F (psi)	350	1000
24 hrs @ 93 ° F (psi)	500	
72 hrs @ 93 ° F (psi)	750	1600
		2700

ACTUAL CEMENT VOLUMES MAY VARY BASED ON FLUID CALIPER.

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Intermediate Casing
Date:	January 7, 2011

Proposal No: 215856297B

JOB AT A GLANCE

Depth (TVD)		2,900 ft
Depth (MD)		2,900 ft
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		8,339 gals
Stage No: 1	**Float Collar set @**	2,860 ft
Spacer		
Fresh Water		20 bbls
Density		8.3 ppg
Lead Slurry		
35:65:4 Poz:Class C		275 sacks
Density		12.8 ppg
Yield		1.97 cf/sack
Tail Slurry		
Class C		300 sacks
Density		14.8 ppg
Yield		1.33 cf/sack
Displacement		
Mud		221 bbls
Density		10.0 ppg

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Intermediate Casing
Date:	January 7, 2011

Proposal No: 215856297B

JOB AT A GLANCE (Continued)

Stage No: 2 **Stage Collar set @** ~~1,550~~ ft See COA

Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Lead Slurry	
35:65:4 Poz:Class C	275 sacks
Density	12.8 ppg
Yield	1.97 cf/sack
Tail Slurry	
Class C	100 sacks
Density	14.8 ppg
Yield	1.33 cf/sack
Displacement	
Displacement Fluid	120 bbls

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Intermediate Casing
Date:	January 7, 2011

Proposal No: 215856297B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.615 CASING	1,600	1,600
12.250 HOLE	2,900	2,900

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
9.625	8.921	36	2,900	2,900

STAGE: 1

Float Collar set @	2,860 ft
Mud Density	10.00 ppg
Est. Static Temp.	103 ° F
Est. Circ. Temp.	93 ° F

VOLUME CALCULATIONS

50 ft	x	0.3627 cf/ft	with	0 %	excess	=	18.1 cf
748 ft	x	0.3132 cf/ft	with	120 %	excess	=	515.1 cf
552 ft	x	0.3132 cf/ft	with	120 %	excess	=	380.6 cf
40 ft	x	0.4341 cf/ft	with	0 %	excess	=	17.4 cf (inside pipe)
			TOTAL SLURRY VOLUME			=	931.2 cf
						=	166 bbls

STAGE: 2

Stage Collar set @	1,550 ft
Mud Density	10.00 ppg
Est. Static Temp.	92 ° F
Est. Circ. Temp.	85 ° F

VOLUME CALCULATIONS

1,184 ft	x	0.3627 cf/ft	with	0 %	excess	=	429.5 cf
366 ft	x	0.3627 cf/ft	with	0 %	excess	=	132.6 cf
			TOTAL SLURRY VOLUME			=	562.2 cf
						=	100 bbls

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Intermediate Casing
Date:	January 7, 2011

Proposal No: 215856297B

FLUID SPECIFICATIONS

STAGE NO. 1

Spacer — 20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	533	/	1.97	= 275 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 1% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.3% Fresh Water
Tail Slurry	398	/	1.33	= 300 sacks Class C Cement + 0.125 lbs/sack Cello Flake + 56.1% Fresh Water

Displacement — 221.1 bbls Mud @ 10 ppg

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	12.80	14.80
Slurry Yield (cf/sack)	1.97	1.33
Amount of Mix Water (gps)	10.56	6.32
Estimated Pumping Time - 70 BC (HH:MM)	3:30	2:30
COMPRESSIVE STRENGTH		
12 hrs @ 95 ° F (psi)		
15 hrs @ 95 ° F (psi)	340	
24 hrs @ 95 ° F (psi)	500	
12 hrs @ 101 ° F (psi)	800	
8 hrs @ 106 ° F (psi)		850
24 hrs @ 106 ° F (psi)		500
72 hrs @ 106 ° F (psi)		2250
		3000

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Intermediate Casing
Date:	January 7, 2011

Proposal No: 215856297B

FLUID SPECIFICATIONS (Continued)

STAGE NO. 2

Spacer — 20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	430	/	1.97	= 275 sacks (35:65) Poz (Fly Ash):Class C Cement + 4% bwoc Bentonite + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 1% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.3% Fresh Water
Tail Slurry	133	/	1.33	= 100 sacks Class C Cement + 0.125 lbs/sack Cello Flake + 56.1% Fresh Water
Displacement				119.8 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	12.80	14.80
Slurry Yield (cf/sack)	1.97	1.33
Amount of Mix Water (gps)	10.56	6.32
Estimated Pumping Time - 70 BC (HH:MM)		

ACTUAL CEMENT VOLUMES MAY VARY BASED ON CALIPER.

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Long String
Date:	January 7, 2011

Proposal No: 215856297B

JOB AT A GLANCE

Depth (TVD)		9,300 ft
Depth (MD)		12,900 ft
Hole Size		8.75 in
Casing Size/Weight		5 1/2 in, 17 lbs/ft
Pump Via		5 1/2" O.D. (4.892" .I.D) 17
Total Mix Water Required		23,309 gals
Stage No: 1	**Float Collar set @**	12,860 ft
Spacer		
Fresh Water		10 bbls
Density		8.3 ppg
Spacer		
Mud Clean II		1,500 gals
Density		8.5 ppg
Spacer		
Fresh Water		10 bbls
Density		8.3 ppg
Lead Slurry		
35:65:6 Poz:Class H		760 sacks
Density		12.5 ppg
Yield		2.00 cf/sack
Tail Slurry		
50:50 Poz:Class H		1,130 sacks
Density		14.2 ppg
Yield		1.28 cf/sack
Displacement		
Displacement Fluid		299 bbls

JOB AT A GLANCE (Continued)

Stage No: 2 **Stage Collar set @** 5,500 ft

Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Lead Slurry	
Class C + Additives	420 sacks
Density	11.4 ppg
Yield	2.89 cf/sack
Tail Slurry	
60:40 Poz:Class C (MPA)	150 sacks
Density	13.8 ppg
Yield	1.37 cf/sack
Displacement	
Displacement Fluid	128 bbls

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Long String
Date:	January 7, 2011

Proposal No: 215856297B

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.921 CASING	2,900	2,900
8.750 HOLE	12,900	9,300

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	12,900	9,300

STAGE: 1

Float Collar set @	12,860 ft
Mud Density	9.50 ppg
Est. Static Temp.	154 ° F
Est. Circ. Temp.	154 ° F

VOLUME CALCULATIONS

3,000 ft	x	0.2526 cf/ft	with	100 %	excess	=	1515.6 cf
4,400 ft	x	0.2526 cf/ft	with	30 %	excess	=	1444.8 cf
40 ft	x	0.1305 cf/ft	with	0 %	excess	=	5.2 cf (inside pipe)
			TOTAL SLURRY VOLUME			=	2965.6 cf
						=	529 bbls

STAGE: 2

Stage Collar set @	5,500 ft
Mud Density	9.50 ppg
Est. Static Temp.	124 ° F
Est. Circ. Temp.	108 ° F

VOLUME CALCULATIONS

400 ft	x	0.2691 cf/ft	with	0 %	excess	=	107.6 cf
2,192 ft	x	0.2526 cf/ft	with	100 %	excess	=	1107.5 cf
408 ft	x	0.2526 cf/ft	with	100 %	excess	=	206.0 cf
			TOTAL SLURRY VOLUME			=	1421.1 cf
						=	253 bbls

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Long String
Date:	January 7, 2011

Proposal No: 215856297B

FLUID SPECIFICATIONS

STAGE NO. 1

Spacer	10.0 bbls Fresh Water @ 8.34 ppg
Spacer	1,500.0 gals Mud Clean II @ 8.45 ppg
Spacer	10.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1516	/	2	= 760 sacks (35:65) Poz (Fly Ash):Class H Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.7% bwoc FL-52A + 105.4% Fresh Water
Tail Slurry	1450	/	1.28	= 1130 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 57.3% Fresh Water
Displacement				299.0 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	12.50	14.20
Slurry Yield (cf/sack)	2.00	1.28
Amount of Mix Water (gps)	10.99	5.77
Estimated Pumping Time - 70 BC (HH:MM)	4:30	3:30
Free Water (mls) @ ° F @ 90 ° Angle		0.0
Fluid Loss (cc/30min) at 1000 psi and ° F		50.0
COMPRESSIVE STRENGTH		
12 hrs @ 140 ° F (psi)	175	300
24 hrs @ 140 ° F (psi)	250	1500
72 hrs @ 140 ° F (psi)	700	2000

Operator Name:	Devon Energy Corp
Well Name:	Cockburn Fed #5H
Job Description:	Long String
Date:	January 7, 2011

Proposal No: 215856297B

FLUID SPECIFICATIONS (Continued)

STAGE NO. 2

Spacer				20.0 bbls Fresh Water @ 8.34 ppg
Lead Slurry	1215	/	2.89	= 420 sacks Class C Cement + 1% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 3% bwoc Sodium Metasilicate + 157.8% Fresh Water
Tail Slurry	206	/	1.37	= 150 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.1% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 65.4% Fresh Water

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Displacement			127.9 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	11.40	13.80
Slurry Yield (cf/sack)	2.89	1.37
Amount of Mix Water (gps)	17.78	6.43
Estimated Pumping Time - 70 BC (HH:MM)	3:45	2:30
Free Water (mls) @ ° F @ 90 ° Angle		
Fluid Loss (cc/30min) at 1000 psi and ° F		
COMPRESSIVE STRENGTH		
12 hrs @ 112 ° F (psi)	130	
24 hrs @ 112 ° F (psi)	300	
12 hrs @ 125 ° F (psi)		900
24 hrs @ 125 ° F (psi)		1800
72 hrs @ 125 ° F (psi)		2500

CEMENT VOLUMES MAY VARY BASED ON CALIPER.

Cockburn G Federal 5H
30-025-39961
Devon Energy Production Company, L.P.
January 12, 2011
Conditions of Approval

1. Cement plan attached shows surface casing to 1600'. Operator was instructed in original Conditions of Approval that the surface casing shall be set at approximately 1625'. The cement report has different yields than what was approved in the original APD. These new yields will be used, but this was not mentioned on the sundry.

2. DV tool shall be set a minimum of 50' below the surface casing. This insures that cement will be across the surface casing shoe and also enables a bradenhead squeeze should the cement not circulate on the first stage.

3. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

   a. First stage to DV tool:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

   b. Second stage above DV tool, cement shall circulate. **Additional cement will be required as second stage excess calculates to 12%.**

      1. 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 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.

      2. 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.

      3. If cement falls back, remedial cementing will be done prior to drilling out that string.

4. Future cement changes shall include excess cement percentage as per Onshore Order 1.

WWI 011211