

Form 3160-5  
RECEIVED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

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

RECEIVED  
Serial No.  
NM-04591

DEC 10 2010 SUNDRY NOTICES AND REPORTS ON WELLS

HOBBSS 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 reverse side.

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

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

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

3b. Phone No. (include area code)  
**405-397-2584**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**510 FNL & 545 FEL, Sec 24 T18S R33E**

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
**New Mexico 24 Federal Com 3H**

9. API Well No.  
**30-025-39741**

10. Field and Pool, or Exploratory Area  
**EK Delaware**

11. County or Parish, State  
**Lea County, NM**

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

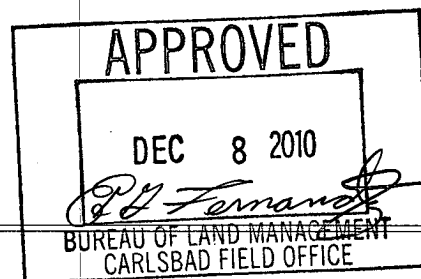
TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recompleat 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

If downhole conditions warrant the need for a 2nd intermediate casing string before 5,800' MD, the following attached program will override all previously approved hole size, casing, & cementing programs for the hole interval 3,100-8,300' MD. The 2nd intermediate string may be set between 3,100' and whenever downhole conditions warrant, up to a maximum depth of 5,800'. A liner will be run from TD and set 500' back into the 2nd intermediate casing shoe or 4,300', whichever is shallower.

Also, the Cement Program for the 5 1/2" has been modified to bring cement to surface.

All cement volumes could be revised pending caliper measurement.



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

**Johnathan Ashcraft**

Title **Drilling Engineer**

Signature

Date

**12/06/2010**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

PETROLEUM ENGINEER  
Title

Office

Date

**DEC 13 2010**

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)

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this

form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or

present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well and date well site conditioned for final inspection looking to approval of the abandonment.

## NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

**ROUTINE USES:** Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

**EFFECT OF NOT PROVIDING THE INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

This information is being collected to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

## BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240

New Mexico 24 Fed 3ComH  
JTA 12/2/2010

If downhole conditions warrant the need for a 2nd intermediate casing string before 5,800' MD, the following program will override all previously approved hole size, casing, & cementing programs for the hole interval 3,100-8,300' MD. The 2nd intermediate string may be set between 3,100' and whenever downhole conditions warrant, up to a maximum depth of 5,800'. A liner will be run from TD and set 500' back into the 2nd intermediate casing shoe or 4,300', whichever is shallower. Also, the Cement Program for the 5 1/2" has been modified to bring cement to surface. All cement volumes could be revised pending caliper measurement.

Casing Program

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weigh</u>	<u>Collar</u>	<u>Grade</u>
8 3/4"	Between 3,100' – 5,800'	7"	Top: 0' Bottom: 3,100' to 5,800'	29#	BTC	HCP-110
6 1/8"	Between 3,100' – 8,300'	4 1/2"	Top: 4,300 or 500' above 2 <sup>nd</sup> Intermediate Casing Shoe Bottom: TD	11.6#	BTC	HCP-110

Design Parameter Factors:

<u>Casing Size S.F.</u>	<u>Collapse Design S.F.</u>	<u>Burst Design S.F.</u>	<u>Tension Design S.F.</u>
			<u>Dry</u>
7"	3.57	4.36	3.87
4 1/2"	1.3	1.8	6.77

New Mexico 24 Fed 3ComH  
JTA 12/2/2010

## Cementing Program

### 5 1/2" Production Cementing Modification

#### 1 St Stage

**Lead:** 250 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.1% bwoc ASA-301 + 6% bwoc Bentonite + 0.2% bwoc FL-52A + 107.8% Fresh Water  
**Yield:** 2.04 cf/sack.

#### Tail

**Lead:** 845 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 + 0.2% bwoc FL-52A + 57.4% Fresh Water  
**Yield:** 1.28 cf/sack.

**DV TOOL at ~4,000**

#### 2<sup>Nd</sup> Stage

**Lead:** 370 sacks Class C Cement + 3% bwoc Sodium Metasilicate + 0.75% bwoc R-3 + 0.125 lbs/sack Cello Flake + 157% Fresh Water  
**Yield:** 2.88 cf/sk

**Tail:** 150 sacks Class C Cement  
**Yield:** 1.33 cf/sk

TOC for 5 1/2"  
Production: 0'

### Cementing Program for 2<sup>nd</sup> Intermediate & Liner Contingency

7" 2<sup>nd</sup> Intermediate

#### 1 St Stage

**Lead:** 845 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 + 0.2% bwoc FL-52A + 57.4% Fresh Water  
**Yield:** 1.18 cf/sack.

**DV TOOL at ~4,000 (Withing 500' of waterflow)**

#### 2<sup>Nd</sup> Stage

**Lead:** 630 sacks Class H Cement + 2% bwoc Calcium Chloride + 3 lbs/sack LCM-1 + 0.125 lbs/sack Cello Flake + 43.8% Fresh Water  
**Yield:** 1.2 cf/sk

4 1/2" Liner

**Lead:** 773 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 + 0.2% bwoc FL-52A + 57.4% Fresh Water  
**Yield:** 1.28 cf/sk

TOC for Contingency Casing Strings

2<sup>nd</sup> Intermediate: 0

Liner: 500' above 2<sup>nd</sup> Intermediate Casing Shoe Or 4,300'



Proposal No: 215856209C

Devon Energy Corp  
New Mexico 24 Fed #3H

API # 30-025-39741-0000

Sec. 24-18S-33E  
Lea County, New Mexico  
December 1, 2010

**Well Proposal**

**Prepared for:**

Johnathan Ashcraft  
Drilling Engineer  
Oklahoma City, Oklahoma  
Bus Phone: (405) 228-8964

**Prepared by:**

John Parks  
Region Technical Rep.  
Oklahoma City, Oklahoma



**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: New Mexico 24 Fed #3H  
Job Description: Long String - 5 1/2 Option  
Date: December 1, 2010



Proposal No: 215856209C

## JOB AT A GLANCE

Depth (TVD)	5,440 ft
Depth (MD)	8,270 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	15,190 gals
Stage No: 1	Float Collar set @ 8,230 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	250 sacks
Density	12.5 ppg
Yield	2.04 cf/sack
Tail Slurry	
50:50 Poz:Class H	845 sacks
Density	14.2 ppg
Yield	1.28 cf/sack
Displacement	
Displacement Fluid	191 bbls

Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: Long String - 5 1/2 Option  
Date: December 1, 2010



Proposal No: 215856209C

**JOB AT A GLANCE (Continued)**

<b>Stage No: 2</b>	<b>Stage Collar set @</b>	<b>4,000 ft</b>
<b>Spacer</b>		
<b>Fresh Water</b>		20 bbls
<b>Density</b>		8.3 ppg
<b>Lead Slurry</b>		
<b>Class C + Additives</b>		370 sacks
<b>Density</b>		11.4 ppg
<b>Yield</b>		2.88 cf/sack
<b>Tail Slurry</b>		
<b>Class C</b>		150 sacks
<b>Density</b>		14.8 ppg
<b>Yield</b>		1.33 cf/sack
<b>Displacement</b>		
<b>Displacement Fluid</b>		93 bbls

Operator Name: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Long String - 5 1/2 Option  
 Date: December 1, 2010



Proposal No: 215856209C

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.835 CASING	3,135	3,135
8.750 HOLE	8,270	5,440

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	8,270	5,440

**STAGE: 1**      Float Collar set @      8,230 ft  
                  Mud Density      9.50 ppg  
                  Est. Static Temp.      124 ° F  
                  Est. Circ. Temp.      124 ° F

### VOLUME CALCULATIONS

1,000 ft    x    0.2526 cf/ft    with    100 % excess    =    505.2 cf  
 3,270 ft    x    0.2526 cf/ft    with    30 % excess    =    1073.8 cf  
     40 ft    x    0.1305 cf/ft    with    0 % excess    =    5.2 cf (inside pipe)  
                                  **TOTAL SLURRY VOLUME**    =    1584.2 cf  
                                  =    282 bbls

**STAGE: 2**      Stage Collar set @      4,000 ft  
                  Mud Density      9.50 ppg  
                  Est. Static Temp.      112 ° F  
                  Est. Circ. Temp.      99 ° F

### VOLUME CALCULATIONS

3,135 ft    x    0.2607 cf/ft    with    0 % excess    =    817.4 cf  
     471 ft    x    0.2526 cf/ft    with    100 % excess    =    238.1 cf  
     394 ft    x    0.2526 cf/ft    with    100 % excess    =    198.9 cf  
                                  **TOTAL SLURRY VOLUME**    =    1254.4 cf  
                                  =    224 bbls



**Operator Name:** Devon Energy Corp  
**Well Name:** New Mexico 24 Fed #3H  
**Job Description:** Long String - 5 1/2 Option  
**Date:** December 1, 2010



**Proposal No:** 215856209C

## 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

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	505	/ 2.04	= 250 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.1% bwoc ASA-301 + 6% bwoc Bentonite + 0.2% bwoc FL-52A + 107.8% Fresh Water
Tail Slurry	1079	/ 1.28	= 845 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 + 0.2% bwoc FL-52A + 57.4% Fresh Water
Displacement			191.3 bbls Displacement Fluid

### CEMENT PROPERTIES

	<u>SLURRY NO.1</u>	<u>SLURRY NO.2</u>
Slurry Weight (ppg)	12.50	14.20
Slurry Yield (cf/sack)	2.04	1.28
Amount of Mix Water (gps)	11.25	5.78
Estimated Pumping Time - 70 BC (HH:MM)	5:00	4:30
Free Water (mls) @ ° F @ 90 ° Angle		0.0
Fluid Loss (cc/30min) at 1000 psi and ° F		

### COMPRESSIVE STRENGTH

12 hrs @ 124 ° F (psi)		50.0
24 hrs @ 124 ° F (psi)	200	250
72 hrs @ 124 ° F (psi)	500	1200
	650	1600

**Operator Name:** Devon Energy Corp  
**Well Name:** New Mexico 24 Fed #3H  
**Job Description:** Long String - 5 1/2 Option  
**Date:** December 1, 2010



**Proposal No:** 215856209C

## FLUID SPECIFICATIONS (Continued)

### STAGE NO. 2

Spacer				20.0 bbls Fresh Water @ 8.34 ppg
Lead Slurry	1056	/	2.88	= 370 sacks Class C Cement + 3% bwoc Sodium Metasilicate + 0.75% bwoc R-3 + 0.125 lbs/sack Cello Flake + 157% Fresh Water
Tail Slurry	199	/	1.33	= 150 sacks Class C Cement

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Displacement			93.0 bbls Displacement Fluid

### CEMENT PROPERTIES

	<b>SLURRY NO.1</b>	<b>SLURRY NO.2</b>
Slurry Weight (ppg)	11.40	14.80
Slurry Yield (cf/sack)	2.88	1.33
Amount of Mix Water (gps)	17.69	6.33
Estimated Pumping Time - 70 BC (HH:MM)	4:30	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	1400
24 hrs @ 112 ° F (psi)	300	1900

CEMENT VOLUMES MAY VARY BASED ON CALIPER.

Operator: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Long String - 5 1/2 Option  
 Date: December 1, 2010



Proposal No: 215856209C

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
520	94lbs	Class C Cement	4,914.00
585	94lbs	Class H Cement	5,569.20
1305	lbs	Bentonite	214.67
1470	lbs	Sodium Metasilicate	1,888.22
261	lbs	R-3	300.54
78	lbs	Cello Flake	124.76
510	74lbs	Poz (Fly Ash)	2,561.48
3206	lbs	Sodium Chloride	516.17
1500	gals	Mud Clean II	792.75
186	lbs	FL-52A	1,568.91
213	lbs	CD-32	887.15
355	lbs	FL-25	2,516.06
22	lbs	ASA-301	139.76
Product Material Subtotal:			\$21,993.67

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	53.20
1735	cu ft	Bulk Materials Service Charge	2,386.49
Service Charges Subtotal:			\$2,439.69

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.  
 The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.  
 This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Operator: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Long String - 5 1/2 Option  
 Date: December 1, 2010



Proposal No: 215856209C

### PRICE ESTIMATE

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	6hrs	Cement Pumping, 8001 - 9000 ft	2,747.50
1	job	Fas-Lok Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
270	miles	Mileage, Heavy Vehicle	807.98
90	miles	Mileage, Auto, Pick-Up or Treating Van	152.15
1	stage	Multiple Stage Cementing	1,330.00
1	6hrs	Cement Pump, Reserve, 1st 6 hrs	1,356.25
1	job	Field Storage Bin	418.25
1	job	Centrifugal Transfer Pump, Trailer	395.50
Equipment Subtotal:			\$7,954.88

#### Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
3345	tonmi	Bulk Delivery, Dry Products	3,336.64
Freight/Delivery Charges Subtotal:			\$3,336.64
<b>TOTAL:</b>			<b>\$35,724.88</b>

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.

This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: Whipstock Plug  
Date: December 1, 2010



Proposal No: 215856209C

### JOB AT A GLANCE

Depth (TVD)	6,000 ft
Depth (MD)	6,000 ft
Hole Size	8.75 in
Casing Size/Weight	9 5/8 in, 40 lbs/ft
Pump Via	Casing 4 1/2" O.D. (4.000" I.D) 11.6
Total Mix Water Required	2,174 gals
Spacer	
Mud Clean II	15 bbls
Cement Slurry	
Class H	725 sacks
Density	18.0 ppg
Yield	0.90 cf/sack

Operator Name: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Whipstock Plug  
 Date: December 1, 2010



Proposal No: 215856209C

# FLUID SPECIFICATIONS

Spacer

= 15.0 bbls Mud Clean II

<u>PLUG NO.</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
1	654	/ .9	= 725 sacks Class H Cement + 5% bwow Sodium Chloride + 1.2% bwoc CD-32 + 26.6% Fresh Water

# CEMENT PROPERTIES

	<u>PLUG NO.1</u>
Slurry Weight (ppg)	18.00
Slurry Yield (cf/sack)	0.90
Amount of Mix Water (gps)	3.00
Estimated Pumping Time - 70 BC (HH:MM)	2:30
COMPRESSIVE STRENGTH	
12 hrs @ 128 ° F (psi)	3900
24 hrs @ 128 ° F (psi)	5800

# PLUG GEOMETRY

	<u>PLUG TOP</u>		<u>PLUG BOTTOM</u>	
1	4700 ft	to	6000 ft	with 8.75 inch Open Hole PDSqT = 110 ° F PDST = 128 ° F

Operator: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Whipstock Plug  
 Date: December 1, 2010



Proposal No: 215856209C

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
725	94lbs	Class H Cement	6,902.00
906	lbs	Sodium Chloride	145.87
630	gals	Mud Clean II	332.96
818	lbs	CD-32	3,406.97
Product Material Subtotal:			\$10,787.80

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	53.20
761	cu ft	Bulk Materials Service Charge	1,046.76
Service Charges Subtotal:			\$1,099.96

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	6hrs	Cement Pumping, 5001 - 6000 ft	2,012.50
1	job	Data Acquisition, Cement, Standard	539.00
90	miles	Mileage, Heavy Vehicle	269.33
90	miles	Mileage, Auto, Pick-Up or Treating Van	152.15
Equipment Subtotal:			\$2,972.98

#### Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1572	tonmi	Bulk Delivery, Dry Products	1,568.07
Freight/Delivery Charges Subtotal:			\$1,568.07

**TOTAL: \$16,428.81**

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: 2nd Intermediate - 7" Option  
Date: December 1, 2010



Proposal No: 215856209C

### JOB AT A GLANCE

Depth (TVD)	5,440 ft
Depth (MD)	5,767 ft
Hole Size	8.75 in
Casing Size/Weight	7 in, 29 lbs/ft
Pump Via	7" O.D. (6.184" I.D) 29
Total Mix Water Required	5,346 gals
Stage No: 1	Float Collar set @ 5,727 ft
Spacer	
Turbo Flow III	40 bbls
Density	13.5 ppg
Spacer	
Fresh Water	5 bbls
Density	8.3 ppg
Cement Slurry	
Class H	455 sacks
Density	15.6 ppg
Yield	1.18 cf/sack
Displacement	
Displacement Fluid	213 bbls



Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: 2nd Intermediate - 7" Option  
Date: December 1, 2010



Proposal No: 215856209C

**JOB AT A GLANCE (Continued)**

Stage No: 2	Stage Collar set @	4,000 ft
<b>Spacer</b>		
Fresh Water		10 bbls
Density		8.3 ppg
<b>Cement Slurry</b>		
Class H		630 sacks
Density		15.6 ppg
Yield		1.20 cf/sack
<b>Displacement</b>		
Displacement Fluid		149 bbls



## WELL DATA

## ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.835 CASING	3,135	3,135
8.750 HOLE	5,767	5,440

## SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
7.000	6.184	29	5.767	5.440

<b><u>STAGE:</u> 1</b>	<b>Float Collar set @</b>	<b>5,727 ft</b>
	<b>Mud Density</b>	<b>13.00 ppg</b>
	<b>Est. Static Temp.</b>	<b>124 ° F</b>
	<b>Est. Circ. Temp.</b>	<b>108 ° F</b>

## VOLUME CALCULATIONS

1,767 ft	x	0.1503 cf/ft	with	100 % excess	=	531.3 cf
40 ft	x	0.2086 cf/ft	with	0 % excess	=	8.3 cf (inside pipe)
<b>TOTAL SLURRY VOLUME</b>					=	539.6 cf
					=	96 bbls

<b><u>STAGE: 2</u></b>	<b>Stage Collar set @</b>	<b>4,000 ft</b>
	<b>Mud Density</b>	<b>13.00 ppg</b>
	<b>Est. Static Temp.</b>	<b>112 ° F</b>
	<b>Est. Circ. Temp.</b>	<b>99 ° F</b>

## VOLUME CALCULATIONS

3,135 ft	x	0.1585 cf/ft	with	0 % excess	=	496.8 cf
865 ft	x	0.1503 cf/ft	with	100 % excess	=	260.1 cf
<b>TOTAL SLURRY VOLUME</b>					=	756.9 cf
					=	135 bbls

Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: 2nd Intermediate - 7" Option  
Date: December 1, 2010



Proposal No: 215856209C

## FLUID SPECIFICATIONS

### STAGE NO. 1

Spacer 40.0 bbls Turbo Flow III @ 13.5 ppg  
Spacer 5.0 bbls Fresh Water @ 8.34 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Cement Slurry	540	/ 1.18	= 455 sacks Class H Cement + 0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 43.7% Fresh Water
Displacement			212.8 bbls Displacement Fluid

### CEMENT PROPERTIES

#### SLURRY NO.1

Slurry Weight (ppg)	15.60
Slurry Yield (cf/sack)	1.18
Amount of Mix Water (gps)	4.92
Estimated Pumping Time - 70 BC (HH:MM)	3:45

#### COMPRESSIVE STRENGTH

12 hrs @ 124 ° F (psi)	
24 hrs @ 124 ° F (psi)	1200
	1900

Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: 2nd Intermediate - 7" Option  
Date: December 1, 2010



Proposal No: 215856209C

## FLUID SPECIFICATIONS (Continued)

### STAGE NO. 2

Spacer

10.0 bbls Fresh Water @ 8.34 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Cement Slurry	757	1 1.2	= 630 sacks Class H Cement + 2% bwoc Calcium Chloride + 3 lbs/sack LCM-1 + 0.125 lbs/sack Cello Flake + 43.8% Fresh Water
Displacement			148.6 bbls Displacement Fluid

### CEMENT PROPERTIES

#### SLURRY NO.1

Slurry Weight (ppg)	15.60
Slurry Yield (cf/sack)	1.20
Amount of Mix Water (gps)	4.93
Estimated Pumping Time - 70 BC (HH:MM)	2:45

#### COMPRESSIVE STRENGTH

12 hrs @ 112 ° F (psi)	1100
24 hrs @ 112 ° F (psi)	1800

Operator: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: 2nd Intermediate - 7" Option  
 Date: December 1, 2010



Proposal No: 215856209C

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1085	94lbs	Class H Cement	10,329.20
1185	lbs	Calcium Chloride	476.96
3255	lbs	LCM-1	1,241.78
136	lbs	Cello Flake	217.53
40	bbls	Turbo Flow III, 13.5 - 13.9 ppg	1,890.00
Product Material Subtotal:			\$14,155.47

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	53.20
1183	cu ft	Bulk Materials Service Charge	1,627.22
Service Charges Subtotal:			\$1,680.42

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	6hrs	Cement Pumping, 5001 - 6000 ft	1,916.25
1	job	Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
90	miles	Mileage, Heavy Vehicle	269.33
90	miles	Mileage, Auto, Pick-Up or Treating Van	152.15
1	stage	Multiple Stage Cementing	1,330.00
1	job	Field Storage Bin, Up To 5 Days	418.25
1	job	Centrifugal Transfer Pump, Trailer	395.50
Equipment Subtotal:			\$5,228.73

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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Operator: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: 2nd Intermediate - 7" Option  
Date: December 1, 2010



Proposal No: 215856209C

**PRICE ESTIMATE**

**Freight/Delivery Charges**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
2397	tonmi	Bulk Delivery, Dry Products	2,391.01
Freight/Delivery Charges Subtotal:			\$2,391.01
<b>TOTAL:</b>			<b>\$23,455.63</b>

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Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: Liner - 4 1/2 Option  
Date: December 1, 2010



Proposal No: 215856209C

## JOB AT A GLANCE

Depth (TVD)	5,440 ft
Depth (MD)	8,270 ft
Hole Size	6.125 in
Liner Size/Weight	4 1/2 in, 11.6 lbs/ft
Pump Via	Casing 3 1/2" O.D. (2.992" I.D) 9.3 Casing 4 1/2" O.D. (4.000" I.D) 11.6
Total Mix Water Required	1,994 gals
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
Cement Slurry	
50:50 Poz:Class H	345 sacks
Density	14.2 ppg
Yield	1.28 cf/sack
Displacement	
Displacement Fluid	95 bbls

Operator Name: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Job Description: Liner - 4 1/2 Option  
Date: December 1, 2010



Proposal No: 215856209C

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
6.184 CASING	5,767	5,440
6.125 HOLE	8,270	5,440

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
4.500	4.000	11.6	8,270	5,440

Casing 3.5 (in) OD, 2.992 (in) ID,  
9.3 (lbs/ft) set @

4,850 ft

Casing 4.5 (in) OD, 4.0 (in) ID,  
11.6 (lbs/ft) set @

8,270 ft

Depth to Top of Liner

4,850 ft

Float Collar set @

8,230 ft

Mud Density

9.50 ppg

Est. Static Temp.

124 ° F

Est. Circ. Temp.

124 ° F

### VOLUME CALCULATIONS

200 ft	x	0.2086 cf/ft	with	0 % excess	=	42 cf
917 ft	x	0.0981 cf/ft	with	0 % excess	=	90 cf
2,503 ft	x	0.0942 cf/ft	with	30 % excess	=	306 cf
40 ft	x	0.0873 cf/ft	with	0 % excess	=	3 cf (inside pipe)
<b>TOTAL SLURRY VOLUME</b>					=	442 cf
					=	79 bbls



Operator Name: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Liner - 4 1/2 Option  
 Date: December 1, 2010



Proposal No: 215856209C

# FLUID SPECIFICATIONS

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

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Cement Slurry	442	/ 1.28	= 345 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 + 0.2% bwoc FL-52A + 57.4% Fresh Water
Displacement			94.7 bbls Displacement Fluid

## CEMENT PROPERTIES

	<b>SLURRY NO.1</b>
Slurry Weight (ppg)	14.20
Slurry Yield (cf/sack)	1.28
Amount of Mix Water (gps)	5.78
Estimated Pumping Time - 70 BC (HH:MM)	4:30
Free Water (mls) @ 124 ° F @ 90 ° Angle	0.0
Fluid Loss (cc/30min) at 1000 psi and 124 ° F	50.0
<b>COMPRESSIVE STRENGTH</b>	
12 hrs @ 124 ° F (psi)	250
24 hrs @ 124 ° F (psi)	1200
72 hrs @ 124 ° F (psi)	1600

CEMENT VOLUMES MAY VARY BASED ON CALIPER.

Operator: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Liner - 4 1/2 Option  
 Date: December 1, 2010



Proposal No: 215856209C

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
173	94lbs	Class H Cement	1,646.96
174	lbs	Sodium Metasilicate	223.50
173	74lbs	Poz (Fly Ash)	868.89
831	lbs	Sodium Chloride	133.79
1500	gals	Mud Clean II	792.75
58	lbs	FL-52A	489.23
87	lbs	CD-32	362.36
145	lbs	FL-25	1,027.69
Product Material Subtotal:			\$5,545.17

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	53.20
1	4hrs	Batch Mix Truck, 100-150 bbl, 1st 4 Hrs	988.75
2	hrs	Batch Mix Truck, 100-150 bbl, After 4hrs	497.00
368	cu ft	Bulk Materials Service Charge	506.18
Service Charges Subtotal:			\$2,045.13

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Operator: Devon Energy Corp  
 Well Name: New Mexico 24 Fed #3H  
 Job Description: Liner - 4 1/2 Option  
 Date: December 1, 2010



Proposal No: 215856209C

### PRICE ESTIMATE

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	6hrs	Cement Pumping, 8001 - 9000 ft	2,747.50
1	job	Fas-Lok Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
360	miles	Mileage, Heavy Vehicle	1,077.30
90	miles	Mileage, Auto, Pick-Up or Treating Van	152.15
1	6hrs	Cement Pump, Reserve, 1st 6 hrs	1,356.25
1	job	Field Storage Bin	418.25
1	job	Centrifugal Transfer Pump, Trailer	395.50
Equipment Subtotal:			\$6,894.20

#### Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
681	tonmi	Bulk Delivery, Dry Products	679.30
Freight/Delivery Charges Subtotal:			\$679.30

**TOTAL: \$15,163.80**

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## CONDITIONS

**BJ Services' performance of services and sale of materials is expressly conditioned upon the applicability of the Terms and Conditions contained in the current BJ Services Price Book.** The Terms and Conditions include, among other things, an indemnity in favor of BJ Services from Customer for damage to the well bore, reservoir damage, loss of the hole, blowouts and loss of control of the well, even if caused by the negligence or other fault of BJ Services. The Terms and Conditions also limit the warranties provided by the BJ Services and the remedies to which Customer may be entitled in the event of a breach of warranty by BJ Services. For these reasons, we strongly recommend that you carefully review a copy of the Terms and Conditions. **If you do not have a copy of the BJ Services Price Book, you can view the Terms and Conditions on BJ Services Web Site, [www.bjservices.com](http://www.bjservices.com).** By requesting that BJ Services perform the services described herein, Customer acknowledges that such Terms and Conditions are applicable to the services. Further, by requesting the services, Customer warrants that its representative on the well location or other service site will be fully authorized to acknowledge such Terms and Conditions by executing a Field Receipt or other document presented by BJ Services containing such Terms and Conditions.

In the event that Customer and BJ Services have executed a Master Services Agreement covering the work to be performed, such Master Services Agreement shall govern in place of the Terms and Conditions. If you are interested in entering into Master Services Agreement with BJ Services, please contact us through the "Go BJ" button on the BJ Services Web Site.

**Operator:** Devon Energy Corp  
**Well Name:** New Mexico 24 Fed #3H  
**Date:** December 1, 2010



**Proposal No:** 215856209C

## **PRODUCT DESCRIPTIONS**

### **ASA-301**

Additive used to reduce or eliminate free water and settling in cement slurries.

### **Bentonite**

Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.

### **CD-32**

A patented, free-flowing, water soluble polymer that is an efficient and effective dispersant for primary and remedial cementing.

### **Calcium Chloride**

A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development.

### **Cello Flake**

Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.

### **Class C Cement**

Intended for use from surface to 6000 ft., and for conditions requiring high early strength and/or sulfate resistance.

### **Class H Cement**

Class H cement is an API type, all purpose oil well cement which is used without modification in wells up to 8,000 ft. It possesses a moderate sulfate resistance. With the use of accelerators or retarders, it can be used in a wide range of well depths and temperatures.

### **FL-25**

An all purpose salt-tolerant fluid loss additive that provides exceptional fluid loss control across a wide range of temperatures and salinity conditions and remedial cementing applications.

### **FL-52A**

A water soluble, high molecular weight fluid loss additive used in medium to low density slurries. It is functional from low to high temperature ranges.

### **LCM-1**

A graded (8 to 60 mesh) naturally occurring hydrocarbon, asphaltite. It is used as a lost circulation material at low to moderate temperatures and will act as a slurry extender. Cement compressive strength is reduced.

### **Mud Clean II**

A water-base mud wash designed for use ahead of cement slurries to aid in mud and drilling debris removal and to prevent contamination of the cement slurry. It should be used only when water-base mud is used.

### **Poz (Fly Ash)**

A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.

Operator: Devon Energy Corp  
Well Name: New Mexico 24 Fed #3H  
Date: December 1, 2010



Proposal No: 215856209C

### **PRODUCT DESCRIPTIONS (Continued)**

#### **R-3**

A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.

#### **Sodium Chloride**

At low concentrations, it is used as an accelerator for cement slurries. At high concentrations, it is used for formation compatibility.

#### **Sodium Metasilicate**

An accelerator used to decrease the thickening time of cement slurries.

#### **Sodium Metasilicate**

An extender used to produce an economical, low density cement slurry.

#### **Turbo Flow III**

A water-based weighted cement spacer designed for water based drilling muds. Turbo Flow III easily achieves turbulence in most hole geometries and is compatible with cements and most drilling muds.

**Operator Name:** Devon Energy Corp  
**Well Name:** New Mexico 24 Fed #3H  
**Date:** December 1, 2010



**Proposal No:** 215856209C

**End of Report**