Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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 reverse side.

5. Lease Serial No.
NMLC069464A

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
STRAWBERRY 7 FED COM 9H

2. Name of Operator
DEVON ENERGY PRODUCTION CO.LP
Contact: TRINA C COUCH
E-Mail: trina.couch@dvn.com

9. API Well No.
30-015-41574

3a. Address
DEVON ENERGY PRODUCTION CO.LP 333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 73102-5015

3b. Phone No. (include area code)
Ph: 405-228-8203
Fx: 405-552-8113

10. Field and Pool, or Exploratory
HOUSE;BERRY

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 7 T19S R31E 1500FSL 340FEL

11. County or Parish, and State
EDDY COUNTY COUNTY, NM

12. CHECK 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
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 shall 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 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.)

Devon Energy Production Co. L.P. respectfully requests permission to add a DV Tool and External Casing Packer to the 9-5/8" Intermediate casing string due to total losses of circulation at 2610'. Lost-Circulation Material sweeps were utilized to reduce losses while drilling continued to Intermediate TD to 3107'. The approved Application For Permit To Drill does not include a Stage Cementing Tool and External Casing Packer. Devon recommends the addition of a DV Tool placed on the 9-5/8", 40 ppf, J-55, LTC Intermediate casing with the top of the DV Tool placed from 2457' to 2460', and the External Casing Packer immediately below from 2460' to 2486'.
Attached, please find the updated Drilling Well Plan with updated depths, cement slurry descriptions, volumes and the Cementing Program.

Thank you.

Accepted for record
NMOCD JCS 12/19/2013

RECEIVED
DEC 17 2013
NMOCD ARTESIA

Verbal approval granted 12/07/2013

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #228934 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO.LP, sent to the Carlsbad
Committed to AFMSS for processing by JOHNNY DICKERSON on 12/11/2013 ()

Name *(Printed/Typed)* TRINA C COUCH — Title REGULATORY ASSOCIATE

Signature (Electronic Submission) — Date 12/09/2013

ACCEPTED FOR RECORD
DEC 16 2013
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____

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. Office

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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Strawberry 7 Fed Com 9H – APD DRILLING PLAN
SKS 02-22-2013
AAA 11-30-2013 (revision for addition of DVT/ECP on 13-3/8" Surface Csg)

Casing Program

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17-1/2"	0 - 575	13-3/8"	0 - 575	48#	STC	H-40
12-1/4"	575 - 3100	9-5/8"	0 - 3100	36#	LTC	J-55
8-3/4"	3100 - 7378	5-1/2"	0 - 7378	17#	LTC	P-110
8-3/4"	7378 - 12335	5-1/2"	7378 - 12335	17#	BTC	P-110

Note: only new casing will be utilized

MAXIMUM LATERAL TVD **7,975**

Design Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13-3/8"	3.36	7.54	23.00
9-5/8"	1.59	2.45	4.05
5-1/2" 17# P-110 LTC	2.48	3.08	2.12
5-1/2" 17# P-110 BTC	2.30	2.85	5.28

Mud Program:

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0 - 575	8.4 – 9.0	30 – 34	N/C	FW
575 - 3100	9.8 – 10.0	28 – 32	N/C	Brine
3100 - 12335	8.6 – 9.0	28 – 32	N/C	FW

Pressure Control Equipment:

The BOP system used to drill the intermediate hole will consist of a 13-5/8" Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2, a 3M system will be installed and tested prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 a 3M system will be installed prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed**. The line will be kept as straight as possible with minimal turns.

Cementing Program changes for Surface Casing due to loss returns while drilling and the addition of a Stage Tool and External Packer (cement volumes calculated with 100% excess)

13-3/8" Surface 575 ft

<u>1st Stage</u>

Lead: 211 sacks (60:40) Poz (Fly Ash) Class C Cement:Poz (Fly Ash): + 5% bwow Sodium Chloride + 0.25 lbs/sack CelloFlake + 1% bwoc Sodium Metasilicate; Mix Water Required is 8.90 gps, 90.5% Fresh Water, 12.6 ppg

Yield: 1.76 cf/sk

Tail: 200 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake; Mix Water Required is 6.36 gps, 56.4% Fresh Water, 14.8 ppg

Yield: 1.34 cf/sk

TOC @ DV Tool set at 208'

<u>2nd Stage</u>

Cement Slurry: 215 sacks Class C Cement + 2% bwoc Calcium Chloride; Mix Water Required is 6.36 gps, 56.4% Fresh Water, 14.8ppg

Yield: 1.34 cf/sk

TOC @ Surface

Proposal No: 899150407H

DEVON ENERGY PRODUCTION COMPANY LP

Strawberry `7` Fed Com #9H

McVay 10 Rig
API # 30-015-41574-0000
Hackberry North Field
7I-19S-31E
Eddy County, New Mexico
December 7, 2013

Well Proposal

Prepared for:
Art A. Alarcon
Drilling Engineer
Oklahoma City, Oklahoma
Bus Phone: (405) 228-8397

Prepared by:
Steven F Sanders
Region Engineer
Bus Phone: (405) 228-3069

Service Point:
BJS, ARTESIA
Bus Phone: 505-7463140
Fax: 575-746-2235

Service Representatives:
Michael R Sarabia
Field Supervisor

Powered by
PowerVision

Operator Name:	DEVON ENERGY PRODUCTION COMPANY LP
Well Name:	Strawberry `7` Fed Com #9H
Job Description:	Intermediate Casing
Date:	December 7, 2013

Proposal No: 899150407H

JOB AT A GLANCE

Depth (TVD)	3,100 ft
Depth (MD)	3,100 ft
Hole Size	12.5 in 14.375 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	14,958 gals

Stage No: 1 **Float/Landing Collar set @** 3,060 ft

Spacer	
Fresh Water	10 bbls
Density	8.3 ppg
Spacer	
SealBond	50 bbls
Density	8.8 ppg
Cement Slurry	
60:40 Poz:Class C (MPA)	340 sacks
Density	13.8 ppg
Yield	1.39 cf/sack
Displacement	
Brine	232 bbls
Density	10.0 ppg

JOB AT A GLANCE (Continued)

Stage No: 2 **Stage Collar set @** 2,450 ft

Spacer	
Fresh Water	10 bbls
Density	8.3 ppg
Lead Slurry	
60:40 Poz:Class C	1,370 sacks
Density	12.6 ppg
Yield	1.73 cf/sack
Tail Slurry	
60:40 Poz:Class C	150 sacks
Density	13.8 ppg
Yield	1.39 cf/sack
Displacement	
Mud	186 bbls
Density	10.0 ppg

Operator Name:	DEVON ENERGY PRODUCTION COMPANY LP
Well Name:	Strawberry `7` Fed Com #9H
Job Description:	Intermediate Casing
Date:	December 7, 2013

Proposal No: 899150407H

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.715 CASING	575	575
14.375 HOLE	2,450	2,450
12.500 HOLE	3,100	3,100

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
9.625	8.835	40	3,100	3,100

STAGE: 1

Float/Landing Collar set @	3,060 ft
Mud Density	10.00 ppg
Est. Static Temp.	103 ° F
Est. Circ. Temp.	94 ° F

VOLUME CALCULATIONS

650 ft	x	0.3469 cf/ft	with	100 % excess	=	451.0 cf
40 ft	x	0.4257 cf/ft	with	0 % excess	=	17.0 cf (inside pipe)
			TOTAL SLURRY VOLUME		=	468.0 cf
					=	83 bbls

STAGE: 2

Stage Collar set @	2,450 ft
Mud Density	10.00 ppg
Est. Static Temp.	98 ° F
Est. Circ. Temp.	91 ° F

VOLUME CALCULATIONS

575 ft	x	0.3765 cf/ft	with	0 % excess	=	216.5 cf
1,708 ft	x	0.6218 cf/ft	with	100 % excess	=	2123.9 cf
167 ft	x	0.6218 cf/ft	with	100 % excess	=	207.8 cf
			TOTAL SLURRY VOLUME		=	2548.1 cf
					=	454 bbls

Operator Name:	DEVON ENERGY PRODUCTION COMPANY LP
Well Name:	Strawberry `7` Fed Com #9H
Job Description:	Intermediate Casing
Date:	December 7, 2013

Proposal No: 899150407H

FLUID SPECIFICATIONS

STAGE NO. 1

Spacer — 10.0 bbls Fresh Water @ 8.34 ppg

Spacer — 50.0 bbls SealBond + 10 lbs/bbl SealBond Plus @ 8.75 ppg

FLUID	VOLUME CU-FT		VOLUME FACTOR		AMOUNT AND TYPE OF CEMENT
Cement Slurry	468	/	1.39	=	340 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 0.5% bwoc Sodium Metasilicate + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 60% Fresh Water

Displacement — 232.0 bbls Brine @ 10 ppg

CEMENT PROPERTIES

	SLURRY NO.1
Slurry Weight (ppg)	13.80
Slurry Yield (cf/sack)	1.39
Amount of Mix Water (gps)	5.90
Estimated Pumping Time - 70 BC (HH:MM)	3:00
COMPRESSIVE STRENGTH	
7 hrs @ 112 ° F (psi)	500
24 hrs @ 112 ° F (psi)	1900
72 hrs @ 112 ° F (psi)	2700

FLUID SPECIFICATIONS (Continued)

STAGE NO. 2

Spacer				10.0 bbls Fresh Water @ 8.34 ppg
Lead Slurry	2340	/	1.73	= 1370 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 0.25% bwoc FL-52 + 1% bwoc Sodium Metasilicate + 89.6% Fresh Water
Tail Slurry	208	/	1.39	= 150 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 0.5% bwoc Sodium Metasilicate + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 60% Fresh Water

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Displacement			185.8 bbls Mud @ 10 ppg

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	12.60	13.80
Slurry Yield (cf/sack)	1.73	1.39
Amount of Mix Water (gps)	8.81	5.90
Estimated Pumping Time - 70 BC (HH:MM)	4:00	3:00
COMPRESSIVE STRENGTH		
11 hrs @ 99 ° F (psi)	500	
12 hrs @ 99 ° F (psi)	565	
24 hrs @ 99 ° F (psi)	1050	
7 hrs @ 112 ° F (psi)		500
24 hrs @ 112 ° F (psi)		1900
72 hrs @ 112 ° F (psi)		2700

ACTUAL CEMENT VOLUME MAY VARY BASED ON FLUID CALIPER.

IF THERE IS NO CIRCULATION WHEN DV TOOL IS OPENED THEN RECOMMEND PUMPING 30 BBLS SEALBOND WITH 10 PPB SEALBOND PLUS.

DO NOT PUMP ANY WATER SPACER BETWEEN SEALBOND AND LEAD CEMENT SLURRY.

JOB AT A GLANCE

Depth (TVD)	7,910 ft
Depth (MD)	12,305 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	15,064 gals

Stage No: 1 **Float/Landing Collar set @** 12,265 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	380 sacks
Density	12.5 ppg
Yield	2.01 cf/sack
Tail Slurry	
50:50 Poz:Class H	1,340 sacks
Density	14.2 ppg
Yield	1.28 cf/sack
Displacement	
Displacement Fluid	285 bbls

JOB AT A GLANCE (Continued)

Stage No: 2 **Stage Collar set @** 4,500 ft

Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Lead Slurry	
Class C + Additives	130 sacks
Density	11.4 ppg
Yield	2.88 cf/sack
Tail Slurry	
60:40 Poz:Class C (MPA)	150 sacks
Density	13.8 ppg
Yield	1.37 cf/sack
Displacement	
Displacement Fluid	105 bbls

Operator Name:	DEVON ENERGY PRODUCTION COMPANY LP
Well Name:	Strawberry `7` Fed Com #9H
Job Description:	Long String
Date:	December 7, 2013

Proposal No: 899150407H

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.835 CASING	3,100	3,100
8.750 HOLE	12,305	7,910

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
5.500	4.892	17	12,305	7,910

STAGE: 1

Float/Landing Collar set @	12,265 ft
Mud Density	9.20 ppg
Est. Static Temp.	139 ° F
Est. Circ. Temp.	139 ° F

VOLUME CALCULATIONS

2,400 ft	x	0.2526 cf/ft	with	25 %	excess	=	757.8 cf
5,405 ft	x	0.2526 cf/ft	with	25 %	excess	=	1706.6 cf
40 ft	x	0.1305 cf/ft	with	0 %	excess	=	5.2 cf (inside pipe)
			TOTAL SLURRY VOLUME			=	2469.6 cf
						=	440 bbls

STAGE: 2

Stage Collar set @	4,500 ft
Mud Density	9.20 ppg
Est. Static Temp.	114 ° F
Est. Circ. Temp.	101 ° F

VOLUME CALCULATIONS

500 ft	x	0.2607 cf/ft	with	0 %	excess	=	130.4 cf
748 ft	x	0.2526 cf/ft	with	25 %	excess	=	236.0 cf
652 ft	x	0.2526 cf/ft	with	25 %	excess	=	206.0 cf
			TOTAL SLURRY VOLUME			=	572.4 cf
						=	102 bbls

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP
Well Name: Strawberry `7` Fed Com #9H
Job Description: Long String
Date: December 7, 2013

Proposal No: 899150407H

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	758	/	2.01	= 380 sacks (35:65) Poz (Fly Ash):Class H Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 6% bwoc Bentonite + 0.7% bwoc FL-52A + 102.5% Fresh Water
Tail Slurry	1712	/	1.28	= 1340 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 + 0.4% bwoc FL-52A + 57.3% Fresh Water

Displacement — 285.1 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	12.50	14.20
Slurry Yield (cf/sack)	2.01	1.28
Amount of Mix Water (gps)	10.70	5.77
Estimated Pumping Time - 70 BC (HH:MM)	5:00	4:00
Free Water (mls) @ ° F @ 90 ° Angle		0.0
Fluid Loss (cc/30min) at 1000 psi and ° F		50.0
COMPRESSIVE STRENGTH		
12 hrs @ 145 ° F (psi)	200	250
24 hrs @ 145 ° F (psi)	450	1500
72 hrs @ 145 ° F (psi)	700	2000

FLUID SPECIFICATIONS (Continued)

STAGE NO. 2

Spacer				20.0 bbls Fresh Water @ 8.34 ppg
Lead Slurry	366	/	2.88	= 130 sacks Class C Cement + 1% bwoc R-3 + 0.125 lbs/sack Cello Flake + 3% bwoc Sodium Metasilicate + 157% 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			104.6 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
Slurry Weight (ppg)	11.40	13.80
Slurry Yield (cf/sack)	2.88	1.37
Amount of Mix Water (gps)	17.69	6.43
Estimated Pumping Time - 70 BC (HH:MM)	4:00	3:00
Free Water (mls) @ ° F @ 90 ° Angle		
Fluid Loss (cc/30min) at 1000 psi and ° F		
COMPRESSIVE STRENGTH		
12 hrs @ 116 ° F (psi)	228	800
24 hrs @ 116 ° F (psi)	310	1900
72 hrs @ 116 ° F (psi)	370	2700

CEMENT VOLUMES MAY VARY BASED ON CALIPER.

Operator Name:	DEVON ENERGY PRODUCTION COMPANY LP
Well Name:	Strawberry `7` Fed Com #9H
Job Description:	2 Stage Thixotropic Surface Casing
Date:	December 7, 2013

Proposal No: 899150407H

JOB AT A GLANCE

Depth (TVD)	575 ft
Depth (MD)	575 ft
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	3,699 gals

Stage No: 1 **Float/Landing Collar set @** 535 ft

Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Spacer	
SealBond	40 bbls
Cement Slurry	
Class C	335 sacks
Density	14.2 ppg
Yield	1.63 cf/sack
Displacement	
Mud	84 bbls
Density	9.0 ppg

JOB AT A GLANCE (Continued)

Stage No: 2 **Stage Collar set @** 208 ft

Spacer	
Spacer	30 bbls
Density	8.3 ppg
Spacer	
Sealbond	40 bbls
Cement Slurry	
Class C	215 sacks
Density	14.8 ppg
Yield	1.34 cf/sack
Displacement	
Displacement Fluid	33 bbls
Density	8.3 ppg

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
17.500 HOLE	575	575

SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
13.375	12.715	48	575	575

STAGE: 1

Float/Landing Collar set @	535 ft
Mud Density	9.00 ppg
Est. Static Temp.	80 ° F
Est. Circ. Temp.	80 ° F

VOLUME CALCULATIONS

367 ft	x	0.6946 cf/ft	with	100 % excess	=	509.9 cf
40 ft	x	0.8818 cf/ft	with	0 % excess	=	35.3 cf (inside pipe)
			TOTAL SLURRY VOLUME		=	545.1 cf
					=	97 bbls

STAGE: 2

Stage Collar set @	208 ft
Mud Density	9.00 ppg
Est. Static Temp.	80 ° F
Est. Circ. Temp.	80 ° F

VOLUME CALCULATIONS

208 ft	x	0.6946 cf/ft	with	100 % excess	=	289.1 cf
			TOTAL SLURRY VOLUME		=	289.1 cf
					=	52 bbls

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP
Well Name: Strawberry `7` Fed Com #9H
Job Description: 2 Stage Thixotropic Surface Casing
Date: December 7, 2013

Proposal No: 899150407H

FLUID SPECIFICATIONS

STAGE NO. 1

Spacer — 20.0 bbls Fresh Water @ 8.34 ppg

Spacer — 40.0 bbls SealBond + 10 lbs SealBond Plus

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Cement Slurry	545	/	1.63	= 335 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125% bwoc Cello Flake + 10 lbs/sack LCM-1 + 10% bwoc A-10 + 61.8% Fresh Water
Displacement				84.0 bbls Mud @ 9 ppg

CEMENT PROPERTIES

	SLURRY NO.1
Slurry Weight (ppg)	14.20
Slurry Yield (cf/sack)	1.63
Amount of Mix Water (gps)	6.96
Estimated Pumping Time - 70 BC (HH:MM)	1:45

RHEOLOGIES

FLUID		TEMP	600	300	200	100	6	3
Cement Slurry	@	80 ° F	214	161	133	105	29	25

STAGE NO. 2

Spacer — 30.0 bbls Spacer @ 8.34 ppg

Spacer — 40.0 bbls Sealbond + 10 lbs SealBond Plus

FLUID	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Cement Slurry	289	/	1.34	= 215 sacks Class C Cement + 2% bwoc Calcium Chloride + 56.4% Fresh Water
Displacement				32.7 bbls Displacement Fluid @ 8.34 ppg

CEMENT PROPERTIES

	SLURRY NO.1
Slurry Weight (ppg)	14.80
Slurry Yield (cf/sack)	1.34
Amount of Mix Water (gps)	6.36
Estimated Pumping Time - 70 BC (HH:MM)	

FLUID SPECIFICATIONS (Continued)

Note:

Stage 1 is Thixotropic, do not shut down for any reason.