02054765

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FORM 4
Rev 12/05

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax:(303)894-2109

RECEIVED
DEC 10 2010
COGCC

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 10079
2. Name of Operator: Antero Resources Piceance Corporation
3. Address: 1625 17th Street
City: Denver State: CO Zip: 80202
4. Contact Name: Hannah Knopping
Phone: (303) 357-6412
Fax: (303) 357-7315

Complete the Attachment Checklist — OP OGCC

Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page	X	
Other cement report	X	

5. API Number 05- 045-15179-00 OGCC Facility ID Number
6. Well/Facility Name: Norcross 7. Well/Facility Number A3
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): NESW, Section 13, T6S, R93W, 6th P.M.
9. County: Garfield 10. Field Name: Mamm Creek
11. Federal, Indian or State Lease Number:

General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage **from** Exterior Section Lines:				
Change of **Surface** Footage **to** Exterior Section Lines:				
Change of **Bottomhole** Footage **from** Exterior Section Lines:				
Change of **Bottomhole** Footage **to** Exterior Section Lines:				

attach directional survey

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer
Latitude
Longitude
Ground Elevation
Distance to nearest property line
Distance to nearest lease line
Distance to nearest well same formation
Distance to nearest bldg, public rd, utility or RR
Is location in a High Density Area (rule 603b)? Yes/No
Surface owner consultation date:

GPS DATA:
Date of Measurement PDOP Reading Instrument Operator's Name

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):
Effective Date:
Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME NUMBER
From:
To:
Effective Date:

☐ ABANDONED LOCATION:
Was location ever built? ☐ Yes ☐ No
Is site ready for inspection? ☐ Yes ☐ No
Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS
Date well shut in or temporarily abandoned:
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT

☐ SPUD DATE:

☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately
☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent
Approximate Start Date:
☒ Report of Work Done
Date Work Completed: 10/16/2010

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)	☐ Request to Vent or Flare	☐ E&P Waste Disposal
☐ Change Drilling Plans	☒ Repair Well	☐ Beneficial Reuse of E&P Waste
☐ Gross Interval Changed?	☐ Rule 502 variance requested	☐ Status Update/Change of Remediation Plans
☐ Casing/Cementing Program Change	☐ Other:	for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Hannah Knopping Date: 12/9/2010 Email: hknopping@anteroresources.com
Print Name: Hannah Knopping Title: Permit Representative

COGCC Approved: David Andrews Title: PE II Date: 12/21/2010
CONDITIONS OF APPROVAL, IF ANY:

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY
RECEIVED
DEC 10 2010
COGCC

1. OGCC Operator Number: 10079 API Number: 05-045-15179-00
2. Name of Operator: Antero Resources Piceance Corp OGCC Facility ID #
3. Well/Facility Name: Norcross Well/Facility Number: A3
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NESW, Section 13, T6S, R93W, 6th P.M.

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

Antero Resources Piceance Corporation (Antero) performed a casing leak repair on the subject well. The well was pressure tested and failed, and Antero found hole(s) in the casing at approximately 2324 feet. Casing repair was performed as follows:

1) Set CBP @ 6700' w/ 2 sx cement on top. Pressure test to 2500psi. Test good.
2) Test casing from surface to 4010'. Test fails.
3) Continue testing uphole and confirm lowest hole in casing is above 2324'.
4) RIH with RCT cutter and cut casing at 2365'. Pull casing out of hole.
5) Make up Bowen 10K external casing patch; RIH on new 5-1/2" casing and set casing slips. Reinstall B-section. Casing patch held at 2500 psi on initial test but then failed
6) Set CBP at 2395'
7) Squeeze 50 sx of Class G cement at 2365'
8) Ran CBL; log indicates good cement to 1950'
9) Drill out CBP's set @ 2395' and 6700'; clean out hole to 8200'
10) Land 2-3/8" tubing at 7306'
11) Flow test well and turn well over to sales

Attachments:

1) Cement Summary
2) CBL dated 10/13/2010

CEMENT JOB REPORT

CUSTOMER	DATE	F.R. #	SERV. SUPV.
Antero Resources Corporation	12-OCT-10	1001701661	JESS BEAVER

LEASE & WELL NAME	LOCATION	COUNTY-PARISH-BLOCK
Norcross A3 - API 05045151790000	13-6S-93W	Garfield Colorado

DISTRICT	DRILLING CONTRACTOR RIG #	TYPE OF JOB
Grand Junction		Squeeze-Perforation

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	PHYSICAL SLURRY PROPERTIES						
		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT^3	WATER GPS	PUMP TIME HR:MIN	BBL SLURRY	BBL MIX WATER
	NA-Squeeze							
	NA-Squeeze							
MATERIALS FURNISHED BY BJ								
Class "G" Cement		50	13.8	1.57	8.09		14	9.64
Fresh Water			8.34				9	
						TOTAL	23	9.64

Available Mix Water 40 Bbl. Available Displ. Fluid 40 Bbl.

HOLE			TBG-CSG-D.P.					COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	GRADE	SHOE	FLOAT	STAGE
			2.375	4.7	TBG	2365	N-80			

LAST CASING				PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID	
SIZE	WGT	TYPE	DEPTH	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
5.5	17	CSG	2365			2365	2365	2.375	EUE	WATER BASED MU	8.4

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	
9	BBLS	Fresh Water	8.34	0	500	1500	6480	6160	3832	3205	WATER TRK

Circulation Prior to Job

Circulated Well: Rig [X] BJ [ ] | Circulation Time: | Circulation Rate: BPM

Mud Density In: LBS/GAL | Mud Density Out: LBS/GAL | PV & YP Mud In: | PV & YP Mud Out:

Gas Present: NO [X] YES [ ] | Units: | Solids Present at End of Circulation: NO [X] YES [ ]

Displacement And Mud Removal

Displaced By: Rig [ ] BJ [ ] | Amount Bled Back After Job: BBLS

Returns During Job: [ ] NONE [ ] PARTIAL [ ] FULL | Method Used to Verify Returns:

Cement Returns at Surface: [ ] YES [X] NO | Were Returns Planned at Surface: [X] NO [ ] YES

Pipe Movement: [ ] ROTATION [ ] RECIPROCATION [ ] NONE [ ] UNABLE DUE TO STUCK PIPE

Centralizers: [X] NO [ ] YES | Quantity: - | Type: [ ] BOW [ ] RIGID

Job Pumped Through: [ ] CHOKE MANIFOLD [ ] SQUEEZE MANIFOLD [ ] MANIFOLD [ ] NO MANIFOLD

Plugs

Number of Attempts by BJ: | Competition: | Wiper Balls Used: [X] NO [ ] YES Quantity:

Plug Catcher Used: [X] NO [ ] YES | Parabow Used: [X] NO [ ] YES

Was There a Bottom: [X] NO [ ] YES | Top of Plug: FT | Bottom of Plug: FT

Squeezes (Update Original Treatment Report for Primary Job)

BLOCK SQUEEZE [ ] SHOE SQUEEZE [ ] TOP OF LINER SQUEEZE [ ] PLANNED [ ] UNPLANNED [ ]

Liner Packer: [X] NO [ ] YES | Bond Log: [X] NO [ ] YES | PSI Applied: | Fluid Weight: LBS/GAL

Casing Test (Update Original Treatment Report for Primary Job)

Casing Test Pressure: PSI With LBS/GAL Mud | Time Held: Hours Minutes

Shoe Test (Update Original Treatment Report for Primary Job)

Depth Drilled out of Shoe: FT | Target EMW: LBS/GAL | Actual EMW: LBS/GAL

Number of Times Tests Conducted: | Mud Weight When Test was Conducted: LBS/GAL

Problems Before Job (I.E. Running Casing, Circulating Well, ETC)

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: CIRCULATING HOLE

CEMENT JOB REPORT

Problems During Job (I.E. Lost Returns, Equipment Failure, Bulk Delivery, Foaming, ETC)

Problems After Job (I.E. Gas at Surface, Float Equipment Failed, ETC)

PRESSURE/RATE DETAIL						EXPLANATION
TIME HR:MIN.	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW [X] CO. REP. [X]
						TEST LINES 2500 PSI
						CIRCULATING WELL - RIG [X] BJ [ ]
15:30						ARRIVE LOCATION
17:00						SAFETY MEETING
17:14	3900	0	0	0	H2O	PRESSURE TEST LINES
17:30	0	0	1.2	0	H2O	LOAD HOLE
17:39	288	0	1	12	H2O	ST 5BBLS SPACER/ INJECTION TEST
17:49	166	0	1	5	H2O	ST 18 BBLS CMT @ 13.8
18:06	481	0	.7	18	CMT	ST 8.5 BBLS DISPLACEMENT
18:16	980	0	.8		H2O	PRESSURE BEFORE SHUT DOWN
18:19	0	0	0	8.5	H2O	SHUT DOWN/ STING OUT
18:34	400	0	2.3		H2O	REVERSE OUT
18:43	0	0	0	14	H2O	SHUT DOWN/ SHUT IN W/ 500 PSI
						CEMENT TO PIT-- 1/2 BBL

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	Service Supervisor Signature:
Y [N]		Y [N]	.5	58	500	Y [N]	

BJ Services JobMaster Program Version 3.50
Job Number: 1001701661
Customer: ANTERO
Well Name: NORCROSS A3