



August 25, 2009

Certified Mail Return Receipt Requested # 7008 3230 0003 3235 3608

Mr. Dan Valentine
Mr. Ken Valentine
Valentine Ranch, LLC
23085 County Road 43.7
Aguilar, CO 81020

RE: Complaints 200201868, 200213536 and 200213309
Alleged impacts to vegetation from CBM operations

Dear Dan and Ken:

You filed a complaint alleging impacts to vegetation in and along the Frio Canyon drainage (complaint 200201868) and two complaints alleging impacts to vegetation near in proximity to the Parachute 34-25 well pad (complaints 200213536 and 200213309). This letter is to inform you of the results of our investigations of these complaints and actions taken by the COGCC as a result of these complaints. Complaint 200213536 also alleged that an oily substance and coal fines were present on the produced water pit at the Parachute 34-25 produced water disposal pit.

SAMPLING EVENTS AND FIELD INSPECTIONS

I visited the area on Frio Canyon area January 13, 2009 and met with Dan Valentine so he could show me the area along the Frio drainage in which he had noticed several stands of dead or dying willows. Samples were collected of plant materials from both living and dead plants. Soil samples were collected from around the roots of the living and dead willows. The plant samples were submitted to the Colorado State University Plant Diagnostic and Identification Clinic in Fort Collins, CO. The soils samples were submitted to ALS Paragon Laboratories which is also located in Fort Collins. Discussion of results will be included below. Results from the January 2009 sampling and analyses are included as Attachments 1 (CSU) and Attachments 2 (ALS).

Complaint 200213536 was received on May 6, 2009. I inspected the Parachute 34-25 well and its surroundings on the same day I received the complaint (Field Inspection 200209671 included as Attachment 3). The failed inspection notice was sent to Pioneer on the same day addressing several issues. The pit did not have a minimum of two feet of freeboard at the time of the inspection. Unused equipment was present on the pad as in a previous inspection. No method of maintaining adequate freeboard had been installed and by the operator at the Parachute pit. A Notice of Alleged Violation was issued with respect to the failed inspection (Attachment 4 – 200213438) and you were previously notified of that NOAV. The investigation of the allegations regarding significant adverse impacts to the pines near the edge of the Parachute pad was conducted at a later date so that samples from the pines at the Parachute and samples from the willows near the Frio drainage, discussed above, could be collected at the same time and submitted to the CSU Plant Diagnostic and Identification Clinic at the same time.

Complaint 200213309 was received on June 19, 2009. I performed a field inspection of the Parachute 34-25 well on the same date the complaint was received (Attachment 5 – Field Inspection 200213324). A Notice of Alleged Violation (Attachment 6 – 200213324) with respect to issues noted in the inspection was issued to Pioneer Natural Resources.

A follow-up field inspection at the Parachute well was conducted on July 2, 2009 and is included as Attachment 7 (Field Inspection Notice 200214014). Samples of plant materials from just off the Parachute well site and from the area in the Frio drainage were collected on this date and subsequently forwarded to the CSU Plant Diagnostic and Identification Center for analyses and diagnosis of potential stressors on the plants. Photos of the area where the plants were collected are included below. Photograph 1 shows stressed and non-stressed pines just off the side of the Parachute pad. Samples of the stressed pines' branches were collected from plants in the center of the photo. Reference samples were collected from the pines in the left side of the photo.



Photograph 1. Stressed pines just off the Parachute 34-25 pad (July 2, 2009).

Photograph 2 shows a stand of willows in the Frio Drainage. Samples of both stressed and healthy plant material was collected from an area in the center of the photo.



Photograph 2. Stressed and healthy willows in the Frio Canyon drainage (July 2, 2009).

RESULTS AND DISCUSSION

The CSU Plant Diagnostic and Identification Clinic was not able to conclusively identify plant species from the samples I collected along the Frio drainage and then submitted in early 2009. They suggested re-collection after the plants leafed out in late spring. The lab did not see any signs of pathogens on the willow branches submitted in early 2009. The results of the Frio drainage soil sampling are also included as (Attachment 2). The soil from around the root zone of the dead willows contained more sodium (also higher SAR) and the conductivity was higher than from soil collected from around healthy willows.

Samples of stressed and apparently healthy willows were collected in early July 2009 along the Frio drainage. Samples of stressed and apparently healthy pines were collected from just off the pad of the Parachute CBM well. Photos of the sites are included above. No biotic causes of the stressed plants were observed. The diagnostic report indicated that high sodium concentrations in the stressed pine branches were measured. The report indicated that the levels of salts present in the tissues of the stressed pine branches were high enough that most plants would suffer salt injury and the soils around the plants would require immediate leaching to lower the salt levels. The sodium and general salt levels in the stressed willow branches were not considered to be high enough to cause the observed dieback in the willows along the Frio drainage.

A Notice of Alleged Violation (200216992) was issued to Pioneer Natural Resources on August 24, 2009 with respect to the stressed and dying plants located around the periphery of the Parachute well pad. The cause of the stressed and dying willows in the Frio drainage could not be conclusively diagnosed by the Plant Diagnostic Clinic. The Frio has received CDPHE permitted discharges of CBM produced water. As the sodium levels in the willow tissues are considered relatively normal by the lab. No finding of violation will be issued at this time with respect to the patches of dying willows in the Frio drainage.

If you have any questions or would like to discuss these matters further, please contact me at 719-846-3091 or by email at peter.gintautas@state.co.us . Should you be unsatisfied with COGCC staff's handling and resolution of your complaint Rule 522.b. (4) allows you as the complainant to file with the Commission an application for an Order Finding Violation.

Sincerely,
Colorado Oil and Gas Conservation Commission

Peter Gintautas
Environmental Protection Specialist

Attachments: Attachment 1 - CSU Plant Diagnostic Lab Report (February 27, 2009)
 Attachment 2 - ALS Paragon (and Olsen) Analytical Reports
 Attachment 3 - May 6, 2009 Parachute 34-25 Field Inspection Notice 200209671
 Attachment 4 - Notice of Alleged Violation 200213438
 Attachment 5 - June 19, 2009 Parachute 34-25 Field Inspection Notice 200213315
 Attachment 6 - Notice of Alleged Violation 200213324
 Attachment 7 - July 2, 2009 Parachute 34-25 Field Inspection Notice 200214014
 Attachment 8 - CSU Plant Diagnostic Lab Report (August 14, 2009)
 Attachment 9 - Notice of Alleged Violation 200216992

cc: David Neslin, COGCC Director w/o attachments
 Debbie Baldwin, COGCC Environmental Protection Manager w/o attachments
 Margaret Ash, COGCC Environmental Protection Supervisor w/o attachments
 Dave Holland, Pioneer Natural Resources, w/o attachments

DIAGNOSTIC REPORT

Campus Plant Diagnostic & Identification Clinic

E215 Plant Sciences Building
<http://plantclinic.agsci.colostate.edu/>
Fort Collins CO 80523-1177

Tel: 970-491-6950
Fax: 970-491-3862

Sample # **200900010**

Field ID creek bottom riparian

Host Willow

Received 1/16/2009

County Las Animas

Submitter:

Peter Gintautas
CO Oil & Gas Conservation Commission
P.O. Box 108
Trinidad CO 81082

Peter Gintautas
CO Oil & Gas Conservation Commission
P.O. Box 108
Trinidad CO 81082

Tel: 303-894-2100

Fax: 303-894-2109

Tel: 303-894-2100

Fax: 303-894-2109

Diagnosis and Recommendations:

Host/Habitat	Willow (Salix spp.)
Diagnosis/ID	Confirmed for Unknown (General)

Final Report:

Peter: I have been trying to identify the species of plant that you sent but it has been difficult. It doesn't look quite like willow, so I am thinking it may be alder. I can't really tell without the leaves. I tested the soils that you sent for EC and sample 1 has an EC of .308 dS, sample 2 has an EC of .0985 dS. These are fairly low values but I am not sure they are reflective of the entire area. I checked over the twigs that you sent and did not see any evidence of pathogen, either fruiting bodies or vascular discoloration. I cannot explain the dieback on the willows. I am hesitant to culture the dead branches as they usually become colonized with saprophytes and it would be impossible to determine the actual cause of death. Once the shrubs start leafing out, I would be glad to positively identify them and also there may be symptoms on the leaves that would provide some clues as to the cause of the dieback. If you have any questions, please feel free to contact the clinic. Tamla

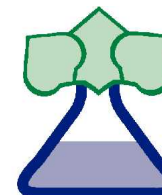
Tamla Blunt (plantlab@lamar.colostate.edu)
For Campus Plant Diagnostic & Identification Clinic

Sample Completed Date: 2/27/2009
Modified Date: 2/27/2009

Olsen's Agricultural Laboratory, Inc.

95028
AMY WOLF
PARAGON ANALYTICS
225 COMMERCE DRIVE
FT COLLINS CO 80524

210 E. First St. / P.O. BOX 370 / McCook, Nebraska 69001
Office: 308-345-3670 / FAX: 308-345-7880
Website: <http://www.olsenlab.com>



NAME : PARAGON SDG

DATE RECEIVED: 01/27/2009

DATE REPORTED: 02/03/2009

SOIL TEST RESULTS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	Depth Inches	pH		LIME REC T/A 60% ECCE		EL	SOLUBLE SALTS mod. SP mmhos/cm	OM LOI %	NITRATE-N (FIA)		PHOSPHORUS				
				1 : 1 Soil	Buffer Woodruff	Legume	Non Legume				ppm	lbs/A	P1 ppm	Bicarb ppm	P2 ppm	M2 ppm	M3 ppm
815811	0901163	FRIO SOIL 1	0-8	8.0				N	1.12								
815812	0901163	FRIO SOIL 2	0-8	7.5				N	0.52								

Soil 1 is from area of stressed plants and soil 2 is from area with apparently healthy plants

LAB NUMBER	SULFATE-S Ca-P ppm	NH4OAc (Exchangeable)				DTPA				BORON Sorbitol ppm	EST. CATION EXCHANGE CAPACITY (CEC) me/100g	% SATURATION					
		K ppm	Ca ppm	Mg ppm	Na ppm	Zn ppm	Fe ppm	Mn ppm	Cu ppm			BASE	H	Ca	Mg	K	Na
815811			2100							1.0							
815812			2760							1.2							

LAB NUMBER	SOLUBLE (SAT. EXT.)			SODIUM ADSORPTION RATIO (SAR)	EXCH. SODIUM PERCENT (ESP)	GYPSUM REQ T/A	PARTICLE SIZE ANALYSIS				CHLORIDE		EXCH. NH4-N		ALUMINUM ppm	TOTAL N %
	Ca me/L	Mg me/L	Na me/L				SAND %	SILT %	CLAY %	SOIL TEXTURE	ppm	lbs/A	ppm	lbs/A		
815811	2.56	1.28	7.55	5.45	7	0										
815812	2.00	0.92	1.60	1.32	1	0										


SUGGESTED FERTILIZER RECOMMENDATIONS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	CROP TO BE GROWN	YIELD GOAL	N lbs/A	P2O5 lbs/A	K2O lbs/A	S lbs/A	Zn lbs/A	MgO lbs/A	Fe lbs/A	Mn lbs/A	Cu lbs/A	B lbs/A	Cl lbs/A
815811	0901163	FRIO SOIL 1													
815812	0901163	FRIO SOIL 2													

Analysis By: Olsen's Ag. Lab

Recommendations By: Olsen's Ag. Lab

COGIS - Field Inspection Report

 Related GIS Doc			
API Number:	05-071-08408	Well Name:	PARACHUTE #34-25
Well Location:	SWSE 25 31S 66W	Lat: 37.312318	Long: -104.731153
Operator #:	10084	Operator Name:	PIONEER NATURAL RESOURCES USA INC
Inspection Date:	5/6/2009	Inspector:	PETER GINTAUTAS

Inspection was: **Unsatisfactory**

Insp. Type: ES	Insp. Stat: PR	Plugged: Pass/Fail:
Violation: Y		NOAV Sent: Y
UIC Violation Type:		Brhd. Pressure:
Inj. Pressure:		T-C Ann. Pressure:
Date Corrective Action Due: 5/14/2009		Date Remedied:




Pit Inspection

Pit Type: **PW** Oil on Pit: **N** Freeboard:
Number of Pits: **1** Number covered or lined: **0** Number uncovered or unlined: **0**
Comments: **PIT UNLINED, NOT FENCED 16 INCHES OF FREEBOARD, NO INSTALLED DEVICE TO AID OPERATOR IN DETERMINING FREEBOARD, PIT IN USE**

Field Inspection Comments and Observations

Insp. Comment	Inspection/Violation Comments
ACTION	MAINTAIN A MINIMUM OF 2 FEET FREEBOARD ON PIT AT ALL TIMES , REMOVE UNUSED EQUIPMENT FROM PAD. FREEBOARD AND UNUSED EQUIPMENT NOTED IN PREVIOUS INSPECTION AND OPERATOR NOTIFIED AT TIME OF PROBLEMS.
FIREWALL	NONE
GENHOUSE	UNUSED EQUIPMENT ON PAD
SPILCOM	NONE OBSERVED
TANKBAT	ELECTRIC OPERATED PUMP, SHED (VS, TFA), UNUSED NOISE BAFFLE

COGIS - Field Inspection Report

 Related  GIS  Doc			
API Number:	05-071-08408	Well Name:	PARACHUTE #34-25
Well Location:	SWSE 25 31S 66W	Lat: 37.312318	Long: -104.731153
Operator #:	10084	Operator Name:	PIONEER NATURAL RESOURCES USA INC
Inspection Date:	6/19/2009	Inspector:	PETER GINTAUTAS

Inspection was: **Unsatisfactory**

Insp. Type: ES	Insp. Stat: PR	Plugged: Pass/Fail:
Violation: Y		NOAV Sent: Y
UIC Violation Type:		Brhd. Pressure:
Inj. Pressure:		T-C Ann. Pressure:
Date Corrective Action Due: 7/31/2009		Date Remedied:

Pit Inspection

Pit Type: **PW** Oil on Pit: **N** Freeboard:

Number of Pits: **1** Number covered or lined: **0** Number uncovered or unlined: **0**

Comments: **PIT UNLINED AND UNFENCED, COAL FINES LAYER ON TOP OF WATER IN PIT AND COATING SIDES OF PIT, NO OIL OR OTHER LIQUID HYDROCARBONS WERE PRESENT ON PIT, 3 FEET OF FREEBOARD**

Field Inspection Comments and Observations

Insp. Comment	Inspection/Violation Comments
ACTION	SEE NOAV 200213324 ISSUED 24JUNE2009
FIREWALL	NONE
GENHOUSE	UNUSED EQUIPMENT (PIPE) LAYING ON PAD
SPILCOM	POSSIBLE SPILL IN EROSION PATH FROM WELLHEAD OFF SIDE OF PAD OBSERVED, PAD AND EROSION PATH WERE DRY AT TIME OF INSPECTION
TANKBAT	SHED (VS, TFA), PC PUMP, ELECTRIC BOX

FORM

NOAV

Rev 6/99

State of Colorado

Oil and Gas Conservation Commission

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

STATE OF COLORADO

OIL & GAS

FOR OGCC USE ONLY

06/24/2009

200213324

*** NOTICE OF ALLEGED VIOLATION ***

OGCC Operator Number: 10084

Name of Operator: PIONEER NATURAL RESOURCES USA INC

Address: 1401 17TH ST STE 1200 ATTN: DAVE HOLMES

City: DENVER State: CO Zip: 80202

Company Representative: DAVE HOLLAND

Date Notice Issued:

06/26/2009

Well Name: PARACHUTE Well Number: 34-25 Facility Number: 278032

Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSE 25 31S 66W 6 County: LAS ANIMAS

API Number: 05 071 08408 00 Lease Number:

COGCC Representative: GINTAUTAS PETER Phone Number: 719 846-3091

THE FOLLOWING ALLEGED VIOLATION WAS FOUND BY THE COGCC REPRESENTATIVE FOR THE SITE LISTED

Date of Alleged Violation: 05/20/2009

Approximate Time of Violation:

Description of Alleged Violation:

Spill of produced water and/or drilling/completion fluids not reported to COGCC or to surface owner. The operator is not taking adequate precautions to prevent significant adverse impacts to water soil or biological resources by not controlling disposal of E&P wastes properly. Unused equipment is present on site. The operator has not installed a method of monitoring and maintaining adequate freeboard on pit. The pit is not being operated in a manner to protect public health, safety and the environment. The operator has failed to control and contain E&P wastes. The operator is not ensuring that E&P wastes are properly stored, handled, transported and disposed to prevent threatened or actual adverse environmental impacts to water, soil or biological resources. Flowback fluids shall not be used for dust suppression and any produced water used for dust suppression must be of 3500mg/l TDS or less.

Act, Order, Regulation, Permit Conditions Cited:

324A.a., 603.j., 902.b., 902.c., 906.a., 906.b., 906.c., 907.a.

Abatement or Corrective Action Required to be Performed by Operator:*

Remove unused equipment from well site. Install method of monitoring and maintaining a minimum of 2 feet freeboard on pit. Report spill appropriately or document exact volumes of E&P waste released in an uncontrolled process from the well. Document activities at well that resulted in spill of E&P wastes on or around 5/20/2009. Document quantities of water produced on a weekly basis from 05/15/2009 to 06/19/2009. Document how water or other fluids were disposed for the same period with a weekly summary. Provide MSDS of chemicals and products used downhole at this well for the period 1April2009 to 30June2009 per rule 205.b.

Abatement or Corrective Action to be Completed by (date): 07/31/2009

* Proper and timely abatement does not necessarily preclude the assessment of penalties and an Order Finding Violation.

TO BE COMPLETED BY OPERATOR - When alleged violation is corrected, sign this notice and return to above address:

Company Representative Name: Title:

Signature: Date:

Company Comments:

*** THIS NOTICE CONSTITUTES A SEPARATE NOTICE OF ALLEGED VIOLATION FOR EACH VIOLATION LISTED ***

WARNING

Abatement and reporting time frames for Notices of Alleged Violation begin upon receipt of the Notice or five days after the date it is mailed, whichever is earlier. Each violation must be abated within the prescribed time upon receipt of this Notice, reported to the Colorado Oil and Gas Conservation Commission at the address shown above, and postmarked no later than the next business day after the prescribed time for abatement. Should abatement or corrective action fail to occur, the Director may make application to the Commission for an Order Finding Violation. Proper and timely abatement does not necessarily preclude the assessment of penalties and an Order Finding Violation.

PENALTY PROPOSED BY THE DIRECTOR PER RULE 523

The Director may propose a penalty as listed in the table below, not to exceed a maximum of \$1,000.00 per day per violation. Such proposed penalty amount will be limited to \$10,000.00 per violation if the violation does not result in significant waste of oil and gas resources, damage to correlative rights, or a significant adverse impact on public health, safety, or welfare. Such proposed penalty amount may be increased if aggravating factors indicate the violation: was intentional or reckless; had, or threatened to have, a significant negative impact on public health, safety, or welfare; resulted in significant waste of oil and gas resources; had a significant negative impact on correlative rights of other parties; resulted in, or threatened to result in, significant loss or damage to public or private property; involved recalcitrance or recidivism upon the part of the violator; involved intentional false reporting or record keeping; resulted in economic benefit to the violator. Such proposed penalty amount may be decreased if mitigating factors indicate the violator: self-reported; promptly, effectively and prudently responded to the violation; cooperated with the Commission or other agencies with respect to the violation; could not reasonably control, or be responsible for, the cause of the violation; made a good faith effort to comply with applicable requirements prior to the Commission learning of the violation; had any economic benefit reduced or eliminated due to the cost of correcting the violation; has demonstrated a history of compliance with Commission rules, regulations, and orders. The Commission has final authority over the penalty amount assessed. The Commission or other agencies with respect to the violation; could not reasonably control, or be responsible for, the cause of the violation; made a good faith effort to comply with applicable requirements prior to the Commission learning of the violation; had any economic benefit reduced or eliminated due to the cost of correcting the violation; has demonstrated a history of compliance with Commission rules, regulations, and orders. The Commission has final authority over the penalty amount assessed.




BASE FINE \$250.00 PER DAY PER VIOLATION:	RULES 210, 307, 311, 312, 313, 314A, 315, 403, 405, 803, 804
BASE FINE \$500.00 PER DAY PER VIOLATION:	RULES 205, 206, 207, 208, 302, 308, 309, 310, 316A, 321, 322, 328, 329, 330, 331, 332, 401
BASE FINE \$750.00 PER DAY PER VIOLATION:	RULES 605, 606A, 606B, 607
BASE FINE \$1,000.00 PER DAY PER VIOLATION:	RULES 209, 301, 303, 305, 306, 316B, 317, 317A, 318, 319, 320, 323, 324, 325, 326, 327, 333, 404, 602, 603, 604, 703, 704, 705, 706, 707, 708, 709, 711, 802, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 1002, 1003, 1004, 1101, 1102, 1103

In accordance with Rule 523.a.(4), fines for violations for which no base fine is listed shall be determined by the Commission at its discretion.

Signature of COGCC Representative: Date: Time:

Resolution Approved by: Date:

COGIS - Field Inspection Report

 Related  GIS  Doc			
API Number:	05-071-08408	Well Name:	PARACHUTE #34-25
Well Location:	SWSE 25 31S 66W	Lat: 37.312318	Long: -104.731153
Operator #:	10084	Operator Name:	PIONEER NATURAL RESOURCES USA INC
Inspection Date:	7/2/2009	Inspector:	PETER GINTAUTAS

Inspection was: **Satisfactory**

Insp. Type: **ES** Insp. Stat: **PR** Plugged: Pass/Fail:
Violation: **N** NOAV Sent: **N**
UIC Violation Type: Brhd. Pressure:
Inj. Pressure: T-C Ann. Pressure:
Date Corrective Action Due: Date Remedied:

Pit Inspection

Pit Type: **PW** Oil on Pit: **N** Freeboard:
Number of Pits: **1** Number covered or lined: **0** Number uncovered or unlined: **0**
Comments: **PIT IN USE, 4 FEET FREEBOARD, WATER TRUCKS HAD JUST FINISHED
DRAWING DOWN WATER, NOT FENCED, NOT LINED, CHAIN MARKER FOR
MEASURING FREEBOARD PRESENT ON EDGE OF PIT**

Field Inspection Comments and Observations

Insp. Comment	Inspection/Violation Comments
FIREWALL	NONE
GENHOUSE	PAD CLEAN
MISC	UNUSED EQUIPMENT HAD BEEN REMOVED FROM PAD, CHAIN VISIBLE AS METHOD OF EVALUATING FREEBOARD
TANKBAT	PC PUMP, ELECTRIC BOX, SHED (VS, TFA)

DIAGNOSTIC REPORT

Campus Plant Diagnostic & Identification Clinic

E215 Plant Sciences Building
http://plantclinic.agsci.colostate.edu/
Fort Collins CO 80523-1177

Tel: 970-491-6950
Fax: 970-491-3862

Sample # **200900484**

Field ID 200213309

Host Ponderosa Pine

Received 7/6/2009

County Las Animas

Submitter:

Peter Gintautas
CO Oil & Gas Conservation Commission
P.O. Box 108
Trinidad CO 81082

Peter Gintautas
CO Oil & Gas Conservation Commission
P.O. Box 108
Trinidad CO 81082

Tel: 303-894-2100

Fax: 303-894-2109

Tel: 303-894-2100

Fax: 303-894-2109

Diagnosis and Recommendations:

Host/Habitat	Ponderosa Pine (<i>Pinus ponderosa</i>)
Diagnosis/ID	Suspected for High Soluble Salt (Abiotic disorder)

Final Report:

Pete: I received the reports back from the tissue testing lab. The sample labeled ponderosa 2 (unhealthy sample) had elevated salts in comparison to the healthy sample (ponderosa 3).

Ponderosa 2: Na=3871.97 ppm Cl= 1700 ppm Mg=1200 ppm

Ponderosa 3: Na=935.74 ppm Cl= 900 ppm Mg= 1800 ppm

Willow 1: Na=725.168 ppm Cl= 2100 ppm Mg= 2650 ppm

<http://www.ext.colostate.edu/pubs/garden/07425.html>

The link above is to a fact sheet on MgCl affect on roadside trees from a study that Dr. Jacobi did a couple of years ago. The background chloride concentrations of healthy ponderosa pines is <1500 ppm with severe (>50% crown damage) concentrations at 7500 ppm. For aspen (closest we can get to willow), the background chloride concentrations of healthy aspen is <2500 ppm. Severe concentrations that affect >50% of the crown are considered 20,000 ppm of chloride. This fact sheet does not have any information on the magnesium part or the salts, although the salts are a bit high.

<http://www.ext.colostate.edu/pubs/crops/00521.html> is a fact sheet on diagnosing saline/sodic soil problems. To calculate the dS/m or EC for the Na ppm value use the equation (ppm * 1.4925) * 0.001= dS/m. So for the ponderosa 2, the sodium would equal 5.78 dS/m. According to the Ball RedBook chapter on water, media and nutrition testing the high values are variable depending on the extraction method, but they range from >1.1 to >7.8. These values would be labeled as extreme where most crops would suffer salt injury at these levels and immediate leaching is required.

If you have any other questions, let me know.

Tamla Blunt (plantlab@lamar.colostate.edu)
For Campus Plant Diagnostic & Identification Clinic

Sample Completed Date: 8/14/2009
Modified Date: 8/14/2009

FORM
NOAV
Rev 6/99

State of Colorado
Oil and Gas Conservation Commission

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



FOR OGCC USE ONLY

08/24/2009

200216992

***** NOTICE OF ALLEGED VIOLATION *****

OGCC Operator Number:	10084				
Name of Operator:	PIONEER NATURAL RESOURCES USA INC				
Address:	1401 17TH ST STE 1200 ATTN: DAVE HOLMES				
City:	DENVER	State:	CO	Zip:	80202
Company Representative:	DAVE HOLLAND				

Date Notice Issued:

08/24/2009

Well Name: PARACHUTE	Well Number: 34-25	Facility Number: 278032
Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSE 25 31S 66W 6		County: LAS ANIMAS
API Number: 05 071 08408 00		Lease Number:

COGCC Representative:	GINTAUTAS PETER	Phone Number:	719 846-3091
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THE FOLLOWING ALLEGED VIOLATION WAS FOUND BY THE COGCC REPRESENTATIVE FOR THE SITE LISTED

<p>Date of Alleged Violation: <u>05/06/2009</u></p> <p>Description of Alleged Violation:</p> <p>Significant adverse impacts to plants and soils near the Parachute 34-25 well pad have resulted from the lack of control of exploration and production wastes at the well. The operator failed to take adequate precautions to protect environmental resources and failed to manage exploration and production wastes in a manner that would protect those resources. No spills or releases of E&P wastes have been reported at this facility.</p>	<p>Approximate Time of Violation:</p>
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Act, Order, Regulation, Permit Conditions Cited: 324A.a., 906.a., 906.b.(3), 907.a.(1)

Abatement or Corrective Action Required to be Performed by Operator:*

Develop and submit a Site Investigation and Remediation Plan (Form 27) that will encompass how the operator suggests determining the cause and extent of the unauthorized release of E&P waste that resulted in the problems described above. The operator must include how the integrity of the pit will be evaluated. If disposal of produced water to the pit is a likely cause of the problems then a plan to cease use of the pit and to subsequently close the pit must be developed and approved by the COGCC.

Abatement or Corrective Action to be Completed by (date): **09/28/2009**

*** Proper and timely abatement does not necessarily preclude the assessment of penalties and an Order Finding Violation.**

TO BE COMPLETED BY OPERATOR - When alleged violation is corrected, sign this notice and return to above address:	
Company Representative Name: _____	Title: _____
Signature: _____	Date: _____
Company Comments: _____	

***** THIS NOTICE CONSTITUTES A SEPARATE NOTICE OF ALLEGED VIOLATION FOR EACH VIOLATION LISTED *****

WARNING

Abatement and reporting time frames for Notices of Alleged Violation begin upon receipt of the Notice. Within five days after the date it is mailed, whichever is earlier. Each violation must be abated within the prescribed time upon receipt of this Notice, reported to the Colorado Oil and Gas Conservation Commission at the address shown above, and postmarked no later than the next business day after the prescribed time for abatement. Should abatement or corrective action fail to occur, the Director may make application to the Commission for an Order Finding Violation. Proper and timely abatement does not necessarily preclude the assessment of penalties and an Order Finding Violation.

PENALTY PROPOSED BY THE DIRECTOR PER RULE 523

The Director may propose a penalty as listed in a table below, not to exceed a maximum of \$1,000.00 per day per violation. Such proposed penalty amount will be limited to \$10,000.00 per violation if the violation does not result in significant waste of oil and gas resources, damage to correlative rights, or a significant adverse impact on public health, safety, or welfare. Such proposed penalty amount may be increased if aggravating factors indicate the violation: was intentional or reckless; had, or threatened to have, a significant negative impact on public health, safety, or welfare; resulted in significant waste of oil and gas resources; had a significant negative impact on correlative rights of other parties; resulted in, or threatened to result in, significant loss or damage to public or private property; involved recalcitrance or recidivism upon the part of the violator; involved intentional false reporting or record keeping; resulted in economic benefit to the violator. Such proposed penalty amount may be decreased if mitigating factors indicate the violator: self-reported; promptly, effectively and prudently responded to the violation; cooperated with the Commission or other agencies with respect to the violation; could not reasonably control, or be responsible for, the cause of the violation; made a good faith effort to comply with applicable requirements prior to the Commission learning of the violation; had any economic benefit reduced or eliminated due to the cost of correcting the violation; has demonstrated a history of compliance with Commission rules, regulations and orders. The Commission has final authority over the penalty amount assessed. The Commission or other agencies with respect to the violation; could not reasonably control, or be responsible for, the cause of the violation; made a good faith effort to comply with applicable requirements prior to the Commission learning of the violation; had any economic benefit reduced or eliminated due to the cost of correcting the violation; has demonstrated a history of compliance with Commission rules, regulations, and orders. The Commission has final authority over the penalty amount assessed.

BASE FINE \$250.00 PER DAY PER VIOLATION: RULES 210, 307, 311, 312, 313, 314A, 315, 403, 405, 803, 804
 BASE FINE \$500.00 PER DAY PER VIOLATION: RULES 205, 206, 207, 208, 302, 308, 309, 310, 316A, 321, 322, 328, 329, 330, 331, 332, 401
 BASE FINE \$750.00 PER DAY PER VIOLATION: RULES 605, 606A, 606B, 607
 BASE FINE \$1,000.00 PER DAY PER VIOLATION: RULES 209, 303, 305, 306, 316B, 317, 318, 319, 320, 323, 324, 325, 326, 327, 333, 404, 602, 603, 604, 703, 704, 705,
 706, 707, 708, 709, 711, 802, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 1002, 1003, 1004, 1101, 1102, 1103

In accordance with Rule 523.a.(4), fines for violations for which no base fine is listed shall be determined by the Commission at its discretion.

Signature of COGCC Representative: _____ Date: _____ Time: _____

Resolution Approved by: _____ Date: _____