

### **Staff Report**

August 20, 2012

### Matt Lepore Named Director

Denver lawyer and former Colorado Assistant Attorney General Matthew Lepore has been chosen as the new director of the COGCC.

Matt recently served as lead counsel for the Commission and represented the agency on numerous matters including environmental protection, permitting and regulatory enforcement. He has also worked extensively for private firms and specialized in natural resource and environmental law in a legal career spanning nearly 20 years.

"We're pleased to have Matt at the Commission's helm as it balances responsible energy development and protecting the natural beauty of Colorado," said Governor John Hickenlooper. "Matt is a longtime Coloradan whose love and appreciation of the outdoors and experience with legal and natural resource issues make him an ideal leader for the Commission. We expect Matt and the Commission to maintain the high standards that protect the environment and help Colorado's economy to continue moving forward."

### I. STATISTICS

Our monthly statistics and permit activity report are on pages 16-25. These statistics include the permit and location assessment information previously included on the first page of the staff report.

### II. NORTHWEST COLORADO

### ♦ Northwest Colorado Oil and Gas Forum

The Northwest Colorado Oil and Gas Forum (Forum) is an informal gathering of local, state, and federal government officials, oil and gas industry representatives, and citizens that have

met regularly since 1989. The purpose of the Forum is to share information about oil and gas development in northwest Colorado and to make government officials and oil and gas industry representatives easily accessible to the public. Currently the meetings are conducted once per quarter and are co-chaired by the COGCC's Director, Matt Lepore, and Garfield County Commissioner, Mike Samson.

The next meeting is scheduled for Thursday, September 6, 2012, at 10:00 am at the Colorado Mountain College, West Garfield Campus, 3695 Airport Road, Rifle, CO 81650.

All parties wishing to be placed on the meeting agenda should contact Chris Canfield at 970-625-2497 or via email at: chris.canfield@state.co.us.

### III. SOUTHWEST COLORADO

### ♦ Gas and Oil Regulatory Team (GORT) Meeting

The next GORT/Southwest Colorado Oil and Gas Stakeholders meeting is scheduled for August 30, 2012, at 8:30 am at the La Plata County Fairgrounds in Durango, Colorado.

All parties wishing to be placed on the next meeting agenda should contact Karen Spray at: 970-259-1619 or karen.spray@state.co.us.

### ◆ Fruitland Formation Outcrop Mitigation and Monitoring Projects (4M Projects)

Fruitland Formation Outcrop - 4M Pilot Scale Mitigation Projects La Plata County. The South Fork Texas Creek (SFTC) Mitigation system continued operation at approximately 10 to 11 Kilowatts (kW) power generation. From June 3 through June 30, 2012, it operated approximately 67% of the time. High temperatures and recovery of fluids resulted in system shut down



and have affected turbine operating time. Approximately 5.0 kW of power is returned to the grid at this operating rate. Gas continues to be collected and vented at the Pine River Ranches (PRR) location. Methane concentrations currently average 99% at SFTC and less than 1% at PRR. Operations & Maintenance activities are continuing.

4M Monitoring Wells La Plata and Archuleta Counties. There are 17 wells at 11 locations in the COGCC 4M monitoring program. Well pressures are monitored remotely via satellite telemetry with one or two maintenance visits per year, depending upon data received. An alternate access is still being sought for the Beaver Creek Ranch locations. Telemetry contact with the Beaver Creek Ranch locations was regained in July 2012 for unknown reasons and pressures at this location appear stable. Repairs for the Fiddler #1 wellhead are pending and long-term repairs are being assessed. The Airpark fire on July 22 burned close to the Basin Creek well locations, but telemetry data indicate no impact to the well sites.

 Ongoing Investigation, Reclamation, and Mitigation of Residual Methane in the Vicinity of the Bryce 1-X Well Area, Bondad, Colorado

The next groundwater sampling date is scheduled for October 2012. Parties will be notified in advance of sampling.

### IV. NORTHEAST COLORADO

### ♦ Baseline Water Quality Sampling

COGCC environmental staff responded to, or are in the process of responding to, requests for baseline water quality sampling in Elbert, Douglas, Rio Grande, and Weld Counties. These requests are being tracked as complaints in the COGCC database under the baseline sampling request category. Staff also provided concerned landowners with information about the COGCC permitting and regulatory process, as well as an overview of the current level of activity in the area. Results of these investigations are summarized and provided to landowners after laboratory analyses are complete.

These data are also entered into the COGCC water quality database.

### V. SOUTHEAST COLORADO

Methane Investigation Monitoring, and Mitigation Plan (MIMMP) - Huerfano County

Petroglyph Energy Inc. (PEI) has completed plugging their CBM wells in Huerfano County. *Phase 2 Operations* 

PEI shut down operations of the Phase 2 reinjection system in September 2011. Gas Seep monitoring at two locations was completed this spring. No flux of gas was detected at either of the two sites. Gas flux at both sites had been present in 2007 and 2008.

### U.S. EPA Raton Basin Hydraulic Fracturing Study - Las Animas and Huerfano Counties

A follow-up sampling and analysis event, including samples collected from domestic water wells, monitoring wells, CBM wells, and surface waters occurred between May 14 to May 18, 2012. Split samples from 3 monitoring wells, 2 coalbed methane wells and 2 domestic wells were collected by COGCC staff or contractors. Analytical data will be shared with operators, U.S. EPA and domestic well owners. Data will be incorporated into the COGCC analytical database.

### VI. ORGANIZATION

Effective July 19, 2012, **Dan Willis** filled the open position in the scanning department, and is an integral part of the Information Processing Team. Dan has over 10 years of professional administrative experience and extensive elections experience (both paid and volunteer) from Denver Elections.

The Hearings Unit added 3 more people, effective August 1, 2012.

Jill Dorancy joined the COGCC as the newest Hearings Officer, after over a decade of private practice with Cooper & Dorancy, LLC. She graduated from the University of New Mexico School of Law and completed a Petroleum Land

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Management Certificate Program with University of Denver, Daniels College of Business.

Marc Morton and Nancy Prince filled the newly created positions of Local Government Liaisons. Marc comes to the COGCC from the Colorado Department of Transportation and has a background in NEPA and environmental project management, including environmental site characterization and remediation. He previously worked as an environmental consultant in Colorado and in the San Francisco Bay area, but hails from Iowa, and has a master's degree in Geology.

Nancy has a Master's degree in Geology from the University of Colorado - Denver. She has been with the COGCC in permitting and environmental groups for 3 years. Prior to that she managed environmental remediation projects for oil and gas and industrial clients.

Toby Sachen is the newest permitting technician, filling the vacancy created by the appointment of Nancy Prince. Toby has a Bachelor's Degree in Chemistry, a Master's Degree in Chemical Engineering, and work experience in the oil and gas industry. She has also worked as a consulting Petroleum Engineer. For the past 2 months Toby has worked as a contract Permit Technician. With her education, valuable industry experience, and current knowledge of the OGCC Permit Technician position, she will require little training to have a significant contribution to the Permit Group.

An organizational chart can be found on pages 11-13 For contact information, please go to our website and click on "Contacts" on our homepage, and then "Staff Contact Information."

### VII.PLANNING/ADMINISTRATION/OTHER

### Consultations with the Colorado Division of Wildlife and the Colorado Department of Public Health and Environment

According to Rule 306.c.(1), the Commission must consult with the Colorado Division of Wildlife (DOW) (now Colorado Parks and Wildlife) when: 1) an operator requests a modification of an existing Commission order to increase well density to more than one well per

40 acres; 2) a consultation is required in accordance with the 1200-series rules; 3) an operator requests a variance from a provision in the 1200-series rules; or 4) if DOW requests a consultation due to the presence of a federally listed threatened or endangered species. Correspondence regarding wildlife consultation should be submitted to:

Dean Riggs Assistant Regional Manager - Northwest Division 711 Independent Avenue Grand Junction, CO 81505

Similarly, Rule 306.d.(1)B requires the Commission to consult with the Colorado Department of Public Health and Environment (CDPHE) when an operator requests a modification of an existing Commission order to increase well density to more than one well per 40 acres. Operators should direct all documents submitted in this regard to:

Kent Kuster
Oil & Gas Consultant Coordinator
CDPHE
4300 Cherry Creek Drive South
Denver, CO 80246-1500

### ♦ Public Outreach Opportunities

On July 21, 2012, Mike Leonard, Southern Colorado Field Inspection Supervisor, presented an Oilfield Awareness for First Responders class for 38 Volunteer Firefighters and EMS personnel representing 6 different agencies located in the Southeast Colorado area. The presentation included a 2-hour powerpoint discussion and a field trip to a working oil and gas production site near Brandon, CO.

On July 27, 2012, Jon Holst, CPW Energy Liaison, Kent Kuster, CDPHE Oil and Gas Liaison, and Thom Kerr, COGCC Acting Director, provided presentations to the Natural Gas Collaborative Group periodic meeting. This is a group of interested citizens and government officials from Delta, Gunnison and Montrose counties. The meeting was held at the BLM office in Montrose with the BLM and Forest Service present at the meeting. The presentations covered the oil and gas permitting process and how

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agencies and the public can provide input in the process.

On August 7, 2012, Nancy Prince and Marc Morton, COGCC Local Government Liaisons, and Thom Kerr made a presentation to the Weld County Planning Commission and their staff. David Bauer, the Local Government Designee (LGD) and County Engineer were present. The presentation covered the regional activity, Rule 318A, the permit process, and LGD input.

### ♦ How Well Do You Know Your Water Well

The ever popular brochure How Well Do You Know Your Water Well has been updated and revised to include information about mitigating methane in water wells, current contact information for various agencies, and water well maintenance and record keeping. Water well owners are provided this useful brochure when water samples are collected from their wells by COGCC staff, operators, or third party contractors. The update project was initiated by COGA with support from the COGCC and cooperation of the Colorado Department of Public Health and Environment and the Department of Water Resources. Copies of the updated brochure have been provided to the COGCC Commissioners. An electronic version of the brochure is available in the Library section of the COGCC website.

### ♦ New Policy - COGCC Directional Survey Electronic Data Submittals

The COGCC has been working with industry and its IT developers to formulate a methodology to electronically report directional well bore locations. The tactic was to make the reporting process work for plans submitted at the time of permitting and for the final as-drilled survey data. The last stakeholder meeting was on October 26, 2011, and we went over the Internet reporting application, the standardized format, and the reporting and filing process. We have met and discussed this with industry engineering and regulatory representatives, the directional drilling companies, the data vendors, and agency IT staff.

With all of this accomplished, a new policy to require that all directional and horizontal well permits and completion reports include electronically submitted directional surveys and plans has been created and went into effect January 1, 2012. This allows for mapping the entire wellbore path, providing a more accurate picture of where these wells are being proposed and drilled. The new COGCC Policy for Electronic Submittal of Directional Surveys and Plans is available for download from the "POLICIES" page on the COGCC website.

### ♦ Onsite Inspection Policy

The COGCC has received a total of 147 requests for onsite inspections to date under the Policy For Onsite Inspections On Lands Where The Surface Owner Is Not A Party To A Surface Use Agreement Policy, effective for Applications for Permits-to-Drill (APDs) submitted after February 15, 2005.

Thirty-three onsite inspections have been conducted, while 98 requests for inspections have been withdrawn. Sixteen onsite inspections are pending and will be scheduled, if necessary, after the Application for Permit-to-Drill (APD) is received, or after issues related to local governmental designee consultation, location change, or surface use agreements are resolved.

Of the 147 requests for onsite inspection, 80 were for locations in Weld County, 26 in Las Animas County, 9 in Adams County, 7 in La Plata County, 5 in Garfield County, 3 each in Archuleta, Boulder, Logan, and Yuma Counties, 2 in Morgan County, and 1 each in Baca, Cheyenne, Kiowa, Larimer, Lincoln and Washington Counties.

COGCC staff have attended on-site meetings to facilitate communication between the parties and to minimize impacts to the surface owner through voluntary measures implemented by the operator in instances where surface owners have requested Onsite Inspections beyond the 10 business-day window provided for in the Policy, and where there is a dispute between parties regarding the date of the Rule 306 consultation.



In addition to the Onsite Inspection Policy, onsite inspections are being conducted in the San Juan Basin under Cause 112, Order Nos. 156 and 157. These are cases where an Onsite Inspection was required because an APD was submitted without a surface use agreement.

### ♦ Environmental Water Quality Database

A project to migrate analytical data to the SQLserver database was initiated in early 2011. The project is tasked with identifying new processes to allow for electronic submission of analytical data that are required by a variety of rules and orders and that are collected in support of investigations, spill/release responses, and remediation activities. The COGCC and the Groundwater Protection Council (GWPC) are working cooperatively on this project. COGCC and the GWPC anticipate having a standardized electronic data deliverable (EDD) format available to facilitate electronic data submission in the near future. The interface for entering field data, location data, and facility information will be similar to the e-Form applications used for other electronic submittals.

### ♦ <u>Voluntary Baseline Groundwater Quality Sam-</u> pling Program

The Colorado Oil and Gas Association (COGA), in cooperation with COGCC, developed a Voluntary Baseline Groundwater Quality Sampling Program that was finalized in November 2011. The program went into effect January 1, 2012. It is open to all oil and gas operators throughout the state and provides a standardized program for baseline sampling and analysis of domestic water wells and other groundwater features such as seeps and springs. Data generated from the sampling program and the results will be submitted to the COGCC and used to determine if impacts to groundwater related to oil and gas operations have occurred. The Voluntary Program does not exempt oil and gas operators from the mandatory baseline groundwater monitoring required in the Greater Wattenburg Area by Rule 318A.e.(4), or Rule 608.b. requirements for Coalbed Methane Wells or other existing field-wide orders for groundwater sampling.

During 2011, several oil and gas operators performed voluntary baseline groundwater sampling and provided analytical data to COGCC. These operators were active in development of the Niobrara Formation in northern Weld County and collected samples from a number of domestic water wells. Data from nearly 50 water wells and surface water sources have been submitted to the COGCC from operators and will be added to the COGCC environmental database after its development is complete.

### Plugging and Reclaiming Abandoned Wells (PRAW) - Project Status

On pages 14 and 15 are spreadsheets listing completed PRAW projects for Fiscal Year 2011-2012 and PRAW projects that are scheduled for FY 12-13 or completed.

### ♦ October 2012 Hearing Docket

A docket for the October 2012 hearing will be available shortly after the August hearing. Hearing dockets are available on our website by clicking on "Hearings." Links to the notices and hearing applications are available from the Docket Number and Applicant, respectively. To sign up for e-mail notification of hearing notices and applications, please see the announcement and instructions on the homepage of the COGCC website at: colorado.gov/cogcc.

### ◆ Colorado Oil and Gas Information System ("COGIS")

COGIS is made up of many different components that are used by the COGCC, staff, industry, government agencies and many others.

### Internet

The COGCC determined it was most cost effective to develop applications and information in an Internet-available format. This allows for the same tools to be utilized in different environments, thus eliminating the re-creation of applications. The Internet connection was moved to a new network structure which provides a much more secure environment. The following are tabs on the Internet menu bar:

### General This page has links to basic information con-

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cerning the COGCC, its function, and oil and gas development in Colorado.

### \* Contacts

This page has links to people and agencies that are involved with oil and gas regulation and related issues in the state. The page also contains phone lists and geographic areas of responsibility for COGCC staff.

### \* Library

This page contains links to documents resulting from COGCC studies, activity reports, and statistical downloads. The annual statistics and the weekly/monthly statistics are available here.

### \* Hearings

This page has links to the current and previous hearing schedules, which allow for review of the dockets, agendas, applications and their outcome. It also has information that is useful when considering filing an application for hearing or finding information about Commissioners.

### \* Rules

This page contains links to the COGCC statute, Rules and Regulations, and policies.

### \* Policies

This page contains links to COGCC policies.

### \* Orders

This application provides searchable capability of the COGCC's orders. The search by location is still under construction as we create the map layers for all spacing orders.

### \* Forms

All forms are available as Adobe Acrobat documents that can be downloaded, completed, printed and mailed; some are available as Excel and Word documents. Some example and instruction documents are viewable. The forms used by operators to submit information on location of wells and completion reports have been modified to accept latitude and longitude data. Eventually, online forms will be available here, but the exact time frame is unknown.

### Staff Report

Current and previous staff reports are viewable here.

### \* Permits

This application shows the last 12 months of

approved permits and current pending permits; it may be filtered by county.

### \* News/Media

This category provides general information to the media. It contains statistics, charts, graphs, and other items of interest.

### \* Database

This application enables users to query well, production, and operator information. These queried databases contain the most current set of data and are updated throughout the day.

### Local Gov

This application provides database searches for local government contact information and oil and gas activity within a selected area.

### \* Images

This application is an interface to the COGCC's historical paper files. All well files, logs, and hearing files have been scanned. This application is not user friendly and the preferred method is to use the database queries and click on the "docs" icon for wells and other facilities, or to use the Orders application.

### \* Maps

The Maps tab takes interested parties to the COGCC GIS Online page. From that page an Interactive map of the State of Colorado can be accessed by clicking on View Map. GIS specialists can also download GIS Shapefiles from a link on the GIS Online page. The COGCC is grateful to the many agencies that have contributed data to our GIS Online map, including BLM, State Land Board, Division of Water Resources, Colorado Geologic Survey, CDPHE, NRCS, and others.

The Interactive map (GIS Online) was designed to display COGCC well data, field boundaries, spacing orders, special rule areas, and other COGCC data along with more than 100 other map layers that are relevant to oil and gas operations. The map has proven to be a valuable tool for oil and gas permitting, and for researching COGCC's oil and gas data repository. Some of the more important layers are:

1. Oil and Gas Wells - All wells in the State displayed as red dots on the



map; a double click on any point opens the electronic informational "scout card" for that well.

- 2. Directional Bottomhole Locations Points with leader lines to actual and planned bottomhole locations.
- 3. Permits All valid oil and gas well permits in the State.
- Pending Permits/Pending 2A Locations Permit and Location applications that are currently under review by COGCC staff.
- 5. Field Boundaries Polygon outlines of field boundaries.
- Water Wells Water well locations as mapped by the Division of Water Resources (DWR); this layer is updated monthly by DWR.
- CPW Sensitive Wildlife Habitats and Restricted Surface Occupancy Areas.
- Rule 317B Surface water, source water protection areas as mapped by CDPHE.
- BLM data including Exploratory Units, Participating Areas, Subsurface Authority, Oil and Gas Leases, Lease Stipulations, etc.
- 10. State Land Board active leases.
- 11. Many Base Layers including roads, cities, towns, geology, soil surveys, topographic maps, and 2009 aerial photographs.

GIS Shapefiles that are available for download include: Well locations, Directional Bottom Hole locations, Oil and Gas Field Boundary polygons, Facilities locations (primarily pits), DOW Wildlife Habitats, Rule 317B Buffers, and a few other area-specific shapefiles.

Currently, GIS Staff are reviewing "As Drilled" location submittals for accuracy, and are completing development of a new version (MapGuide 2010) of the Interactive Map. The new version is available internally to staff and should be available to the public sometime this month.

Completed formations were added to Internet Map and the Fields Polygon shapefile in July 2011.

### \* Help

The Oil & Gas Activity Notification Tool allows a user to enter a section-township-range of interest which returns a table identifying which quarter-quarter sections are subject to Rule 317B, RSO areas, or SWH requirements. The user can then click on a link, which opens the map, and zoom to the section of interest for further inspection.

A tutorial document for the COGCC Interim Policy for APDs is posted in the Help area and the homepage of the website. This document helps explain the interim process that the COGCC used for processing APDs until the Final Amended Rules took effect. Included in the document are explanations on how to use the new tools and map layers that have been developed for the Final Amended Rules.

The COGCC, with assistance from the Ground Water Protection Council, has produced two Macromedia Flash movies to help users understand the many features available within the COGCC GIS Online system. The movies are located by clicking on the HELP link from the main menu or by using the following link: <a href="http://colorado.gov/cogcc/COGIS\_Help/Help.asp">http://colorado.gov/cogcc/COGIS\_Help/Help.asp</a>.

Two applications on the COGCC website are available to help operators with the entering of data relating to locations. The first, a Footage calculator, will take a new latitude and longitude and calculate new footage calls based on the location supplied at the time of permitting. The tool should only be used to compare locations where latitude and longitude were supplied on the permit as required by the December 1, 2005, rule change. The second application converts latitude and longitude as measured in degrees, minutes, and seconds into decimal degrees. The decimal degree format is what COGIS is expecting on all forms requiring lat/long coordinates.

The eForm Training Manual has been updated to include all of the forms available within the system. It can be found at <a href="http://cogcc.state.co.us/COGIS\_Help@formTraining.htm">http://cogcc.state.co.us/COGIS\_Help@formTraining.htm</a>. A document explaining the Local Government Des-



ignee process in eForm is now available in the Help section. The forms currently available in eform are: Applications for Permitsto-Drill (Form 2); Oil and Gas Location Assessment Form (Form 2A); Drilling Completion Report (Form 5); Completed Interval Report (Form 5A); Well Abandonment Report (Form 6); Earthen Pit Report/Permit (Form 15), Bradenhead Test Report (Form 17); Trade Secret Claim of Entitlement (Form 41); and Notice of Notification (Notice of Hydraulic Fracturing) (Form 42).

### Local Area Network

COGCC staff are connected to services by a Local Area Network ("LAN") connection which provides email and data-sharing capabilities. The LAN is connected to the Centennial Building at 1313 Sherman Street by a wireless interface; this connection provides access to the Internet and other state services. COGCC staff utilize the same applications in their work as Internet users, in addition to others outlined below.

### \* Database

The COGCC maintain a comprehensive database of regulated facilities (wells, pits, injection sites), incidents (inspections, complaints, spills), and affiliations (companies and contacts).

### \* Imaging

This application provides the capability to convert the paper documents received by the COGCC to electronically available documents.

### \* Form Processors

This set of applications allows users to input, route, edit, and update regulatory reports submitted by oil and gas operators.

### \* eForm

This application utilizes the same code base that industry uses to submit Applications for Permits-to-Drill (Form 2), Oil and Gas Location Assessment Form (Form 2A), Drilling Completion Report (Form 5), Completed Interval Report (Form 5A), Well Abandonment Report (Form 6), Earthen Pit Report/Permit (Form 15), Bradenhead Test Report (Form 17), Trade Secret Claim of Entitlement (Form 41) and Notice of Notification (Notice of Hydraulic Fracturing) (Form 42). All of these forms are also being used by

staff to input, route, edit, and update these forms internally.

\* Geographic Information Systems (GIS) These applications provide the capability to create custom maps, convert survey calls to geographic coordinates, and convert and utilize geographic positioning system (GPS) data.

The GIS Administrator creates daily updates for the Internet map data downloads.

### \* COGIS Tools

This set of applications allows COGCC staff to correct data in the database in addition to performing specialized workflow administration.

### Remote Users

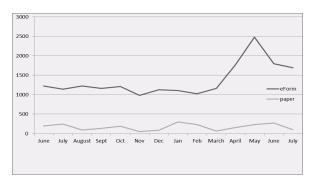
This is the final component of the COGIS system. This laptop system consists of Internet applications and other report tools necessary for COGCC field staff to facilitate data collection and provide information.

### Electronic Business There are approximately 200 operators reporting production electronically.

### ◆ COGIS Projects, Updates and Changes

### Electronic Form Submissions (eForm)

### TOTAL ELECTRONIC FORM SUBMITTALS JUNE 2011 – JULY 2012



Forms currently available through eForm:

Form 2 - Application for Permit to Drill

Form 2A - Oil and Gas Location Assessment

Form 5 - Drilling Completion Report

Form 5A - Completed Interval Report

Form 6 - Well Abandonment Report





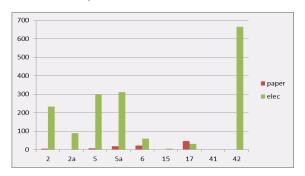
Form 15 - Earthen Pit Report/Permit

Form 17 - Bradenhead Test Report

Form 41 - Trade Secret Claim of Entitlement

Form 42 - Notice of Notification (Notice of Hydraulic Fracturing)

Following is a breakdown by form for the month of July:



Form 15, Pit Permit and Report, is now available in eForm and operators are encouraged to utilize the system to file this form. The form has some new fields added from the older version. The PDF version on the Forms page, <a href="http://cogcc.state.co.us/Forms/forms.html">http://cogcc.state.co.us/Forms/forms.html</a>, has also been revised to reflect the changes that occurred from the release of the form in eForm.

Form 41, Trade Secret Claim of Entitlement, and Form 42, Notice of Notification (Notice of Hydraulic Fracturing), are now available in eForm. Both forms came about from the Hydraulic Fracturing Disclosure Rulemaking that occurred last December.

The development of Form 10, Certification of Clearance and/or Change of Operator, is underway. Testing continues by the internal staff.

Form 4, the Sundry Notice, is under development and should be ready for testing by mid summer.

As forms are released on eForm, updates to the PDF forms on our website will occur in tandem. These new versions of the PDF forms will reflect any changes that have occurred.

Along with the eForm system, a page is available where the operators can review all known

bugs within the system and report any new ones they discover. Currently there are 285 operators using eForm.

The public can make comments on all submitted Oil and Gas Location Assessment (OGLA) forms (Forms 2A) through the eForm system. This is accomplished by going to the COGCC website (http://www.colorado.gov/cogcc) and clicking on the menu option, "Permits", (or http://cogcc.state.co.us/COGIS/DrillingPermits.asp).

On the COGIS-Permits page, two search options are available for OGLA forms, "All Pending Location Assessments for" and "All Approved Location Assessments for." When the results are displayed for forms in process, the public can click on the document number, which logs the user onto the new eForm application. Once the page is displayed with the selected document, the user can select the Comment button to make a comment on that particular form. The public can use this same method to make comments on APDs (Form 2s).

For any operator not currently enrolled in eForm, instructions for starting the process can be found at <a href="http://cogcc.state.co.us/">http://cogcc.state.co.us/</a> Announcements/COUAInformation.pdf.

### COGCC GIS Online

The latest version of the COGCC GIS Online is now available on the commission's website. This new version of the GIS site utilizes a different technology than the old site. The new technology eliminates the need for the user to download and install a plugin, which limited the browser that it could be used in to Internet Explorer. The new version will work with almost any browser.

### Spacing Orders Project

The spacing orders project has been completed for the first pass through the state. As new orders are issued, the map layers will be updated.

### VIII. VARIANCES

1. On June 27, 2012, a Rule 303.l.(2) Variance Request by Carrizo Oil & Gas Inc. was approved by

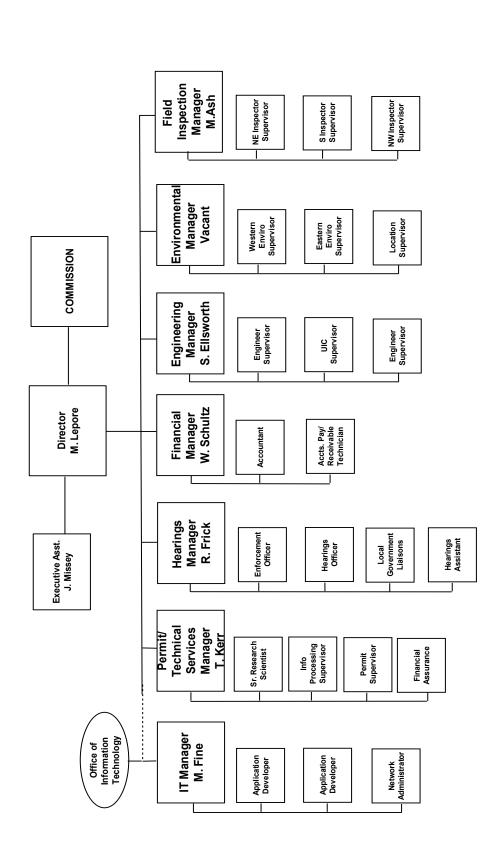


the Acting Director due to exigent circumstances, citing the need to have an approved permit to drill and complete the last well planned prior to moving the well to another drill site. The well is the Pergamos 2-4-34-7-60 (API No. 05-123-35804) located in the SW1/4 SE1/4 of Section 4, Township 7 North, Range 60 West, 6<sup>th</sup> P.M., Weld County. Significant economic hardship would result from either rig standby charges or moving the rig multiple times between pad locations. Granting the request allowed the permit to be issued 13 days before the comment period ended. Carrizo will revise their planning efforts in the future to avoid drilling conflicts. Carrizo provided the variance request addressed to the Director and waivers from the Local Government Designee and surface owner.

2. On July 9 and 13, 2012, variances to Rule 604. (a).8 (tank to wellhead distance) and 1003.b. (interim reclamation) were approved by the Acting Director, for 3 separate locations operated by Williams Production RMT Company LLC, for the placement and use of large capacity water tanks on Federal land in Rio Blanco County. The facilities are the Federal RG 12-14-298 Well Pad (Facility ID No. 335993) located in Section 14, Township 2 South, Range 98 West, 6<sup>th</sup> P.M., the Federal RGU 31-24-198 Well

Pad (Facility ID No. 413591) located in Section 24, Township 1 South, Range 98 West, 6<sup>th</sup> P.M., and the Federal RGU 13-36-198 Well Pad (Facility ID No. 335612) located in Sec 36, Township 1 South, Range 98 West, 6th P.M., Rio Blanco County. Use of the large tanks to manage water and completions fluids was requested by the surface and mineral owner (BLM), and required the tanks to be located less than 75 feet from wellheads, delaying the completion of interim reclamation work. Williams demonstrated they were unable to comply with the Rules and agreed to additional conditions of approval (COA) relating to the construction and operation of the tanks, site stabilization, and reclamation to ensure the intent of the Oil and Gas Act was met.

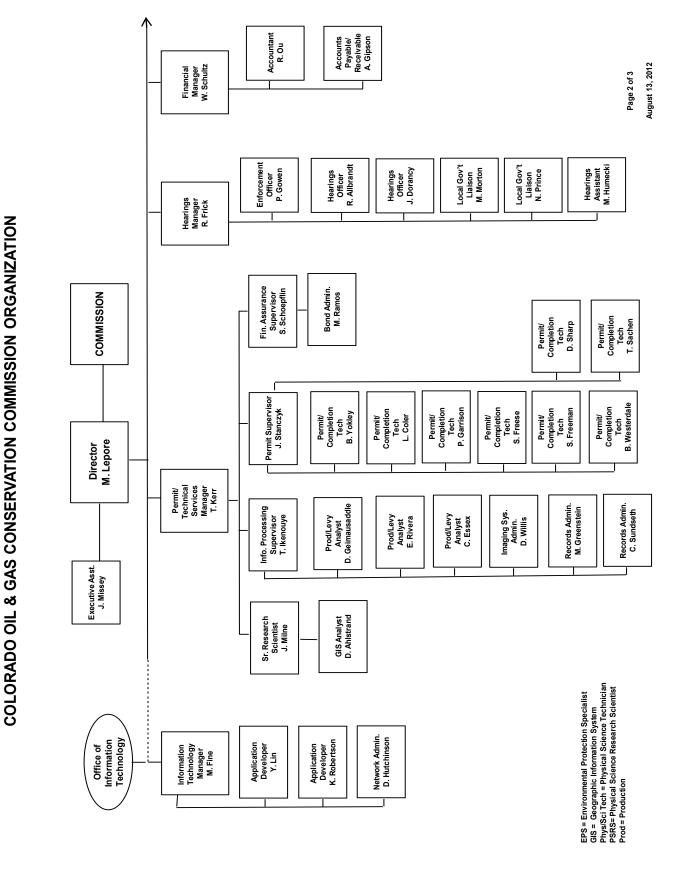
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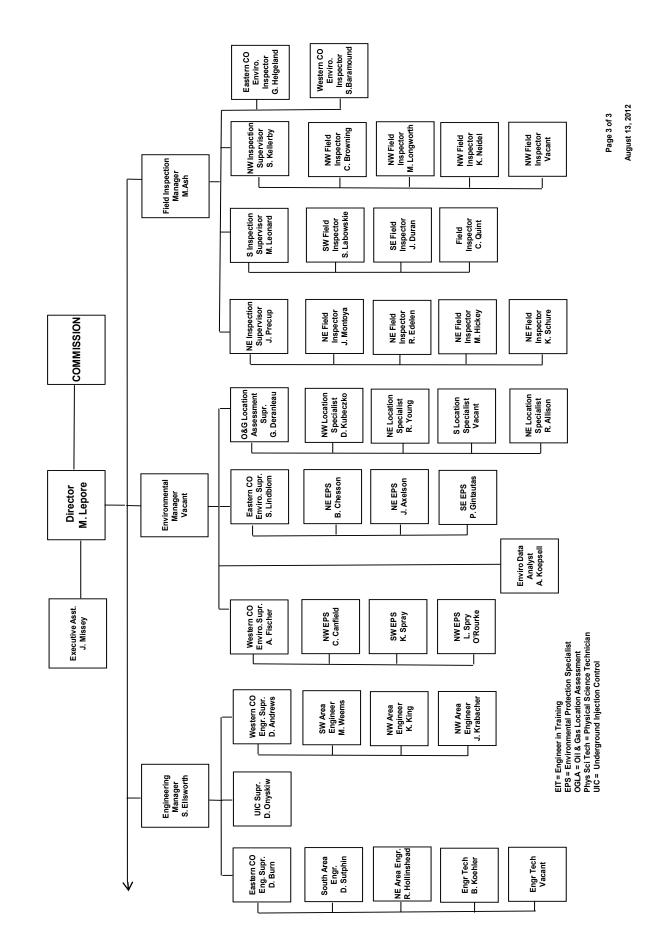
See the next two pages for details







# COLORADO OIL & GAS CONSERVATION COMMISSION ORGANIZATION



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### Oil & Gas Staff Report

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					FISCA	FISCAL YEAR 2011-2012	-2012					
PLANNED				ES.	ESTIMATED TOTAL PROJECT COST	L PROJECT (	SOST	FY 20	FY 2011-2012 YTD EXPENDITURES	EXPENDITL	JRES	
COUNTY	TYPE	PROJECT NAME	Accounting Reporting Category	BOND	PRAW	EMGY	TOTALS	BOND	PRAW	EMGY	TOTALS	DESCRIPTION
			TOTALS =>	0\$	\$0	\$0	\$0	\$0	0\$	0\$	\$0	
IN PROGRESS				<u> </u>	ESTIMATED TOTAL PROJECT COST	PROJECT	TSO	7	EY 2011-2012 VTD EXPENDITIBES	EXPENDIT	Si di	
COUNTY	TYPE	PROJECT NAME	Accounting Reporting Category	BOND	PRAW	EMGY	TOTALS	BOND	PRAW	EMGY	TOTALS	DESCRIPTION
			TOTALS =>	\$0	\$0	\$0	\$0	\$0	0\$	\$0	\$0	
COMPLETED				ES	ESTIMATED TOTAL PROJECT COST	L PROJECT (	20ST	FY 2	FY 2011-2012 YTD EXPENDITURES	EXPENDITL	RES	
COUNTY	TYPE	PROJECT NAME	Accounting Reporting Category	BOND	PRAW	EMGY	TOTALS	BOND	PRAW	EMGY	TOTALS	DESCRIPTION
CHEYENNE	PLUG	GOLDEN HAMMER PLUGGING AND ABANDONMENT	SAMO	\$30,000	\$20,000	\$0	\$50,000	\$30,000	\$6,575	\$0	\$36,575	Plugged and abandoned well.
FREMONT	PLUG	HW-1619S69W #1, HW-3419S69W #2, HW-2919S69W #3, AND HW-2919S69W #4 PLUGGING AND ABANDONMENT	HWEL	0\$	\$22,600	\$0	\$22,600	\$0	\$20,075	0\$	\$20,075	Plugged and abandoned four wells.
GARFIELD	PLUG	DOLPHIN BOND CLAIM PLUGGING AND ABANDONMENT	DOLP	\$30,000	\$85,000	0\$	\$115,000	\$30,000	\$113,941	0\$	\$143,941	Plugged and abandoned four conductor pipes, plugged and abandoned one well, temporarily abandoned two wells. Reclamation (separate phase of work) scheduled for FV12-13.
JEFFERSON	REC	PROVIDE ENERGY LLC BOND CLAIM RECLAMATION	7056	\$5,000	\$1,000	0\$	\$6,000	\$1,057	\$0	0\$	\$1,057	Performed weed mitigation.
LA PLATA	REC	DAVIE 1-22 RECLAMATION	DAVI	\$0	\$8,890	\$0	\$8,890	\$0	\$8,890	\$0	\$8,890	Completed final reclamation.
LA PLATA	PLUG		KILO	\$5,000	\$19,700	0\$	\$24,700	\$4,994	\$20,952	0\$		Plugged and abandoned well.
LOGAN	REC	COGCC KOENIG-ASHBY #1 AND R E LECKLER #1 RECLAMATION	KOEN	0\$	\$49,598	0\$	\$49,598	0\$	\$53,839	0\$	\$53,839	Completed salt remediation and final reclamation at two locations.
MESA	PLUG	DEBEQUE ORPHANS PLUGGING AND ABANDONMENT	DEBQ	80	\$127,023	\$179,512	\$306,535	0\$	0\$	\$264,817	\$264,817	Plugged and abandoned four wells. Salt remediation and final reclamation (separate phase of work) is scheduled for FY 12-13.
MESA	REC	DEBEQUE EARTHWORK AND RECLAMATION	DEBE	80	\$8,556	\$0	\$8,556	0\$	\$5,538	80	\$5,538	Completed ditch excavation, fence installation, debris removal and disposal, and partially completed Pad #1 aggregate base course removal.
MORGAN	REC	HUEY #1, HUEY #2A, HUEY #5, HUEY #9, HUEY #20, AND GFORGF F HIFY #1	HUEY	\$8,700	\$24,900	0\$	\$33,600	\$8,700	\$16,297	\$0	\$24,997	Completed final reclamation at six locations.
RIO GRANDE	PLUG	JYNNIFER #1 PLUGGING AND ABANDONMENT	FAIT TOTALS =>	\$5,000	\$61,000 \$428,267	\$0	\$66,000	\$5,000	\$40,128 \$286,235	\$0 \$264,817	\$45,128 \$630,803	Plugged and abandoned well.
		GRAND TOTALS =>		EST BOND \$83,700	ESTIMATED TOTAL PROJECT COSTS  D	PROJECT C EMGY \$179,512	:0STS TOTALS \$691,479	FY 20 BOND \$79,751	FY 2011-2012 YTD EXPENDITURES  ID PRAW EMGY TO  51 \$286,235 \$264,817 \$630	EMGY \$264,817	JRES TOTALS \$630,803	
Project Types: "PLUG" indicate: EMGY: indicates funding by the TBD: Cost estimates in process. PRAW: indicates funding by the	LUG" indica Inding by the Se in proce, Inding by the	Project Types: "PLUC" indicates plugging and abandonment, "REC" indicates reclamation, and "ENN" indicates environmental EMGY: indicates funding by the <i>Emergency Response</i> line item TBD: Cost estimates in process.  PRAW: indicates funding by the <i>Plugging and Reclaiming Abandoned Wells</i> line item	n, and "ENV" indicat	es environmer	mtal							
Updated August 8, 2012	2012											





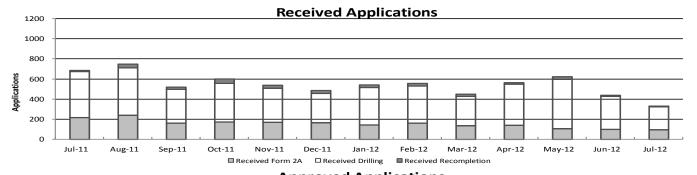
PATIONE   Type   PROJECT NAME   SON PANA   PANA   SON PANA   PANA   SON PANA					FISCAL YEAR 2012-2013	FISCAL YE	FISCAL YEAR 2012-2013					
Fig. 10   Fig.	PLANNED											
EXECUTION   STATE				EST	MATED TOTA	- PROJECT (	COST	FY 20	112-2013 YT.	D EXPENDIT	URES	
EXECUTE NAVIOLE HELD HELD STAND NOTE	COUNTY	TYPE		BOND	PRAW	EMGY	TOTALS	BOND	PRAW	EMGY	TOTALS	
ECC   BISCULT RANCH RECLAMATION   SS   SS   SS   SS   SS   SS   SS	ARCHULETA	PLUG		09	\$110,000	6	\$110,000					Plug and abandon well.
BISCUIT RAWCH RECLAMATION   SS   SS   SS   SS   SS   SS   SS	ARCHULEIA	A I	BONE #1 RECLAMATION	9	\$5,000	2	000,08					Redaim Well pad in Irrigated nay Tield.
CLU-KEPARET I HAMSTON HETECLAMATION   SSO, 000   SSO,	GARFIELD	A F	BISCUIT RANCH RECLAMATION DESIGN	000	\$25,000	2 8	\$25,000					Reclamation design for two well pads and one staging area.
LE	GARFIELD		BISCUI FANCH RECLAMATION	000,624	\$1.10,000	P.	\$135,000					Kedaim two well pags and one staging area.
EEC   MTELESTATE	GARFIELD	PLUG		\$0	\$90,000	\$0	\$90,000					Drill out, plug and abandon well, and dispose of fluids and cement.
CLUVERNICE HAMDLECORING ABANDONNIENT AND   S60,000   S9   S90,000   S9   S90,00	LA PLATA	REC	KEG #1 RECLAMATION	\$0	\$10,000	\$0	\$10,000					Reclaim pit in pasture.
PASTURE #1 WELL PLOCACEAL   PASTURE #1 SALT	LOGAN	REC	MITTELSTADT #1 AND LECKLER #1 RECLAMATION	\$60,000	\$0	\$0	\$60,000					Salt remediation, recounter eroded soil, remove pipe risers.
HOMESTEAD #1 AND PASTINE# I SALT	MESA	PLUG		0\$	\$49,000	\$0	\$49,000					Drill out, plug and abandon well, and dispose of fluids, cement, ar solids.
CLAYERWELL 10.23.07.94 AND ELDON GERBER O7   \$50,000   \$50   \$60,000   \$0   \$25,500   \$1   \$25,500   \$2	MESA	REC/EM		0\$	\$30,000	0\$	\$30,000					Salt remediation, topsoil spreading, seeding, and soil gas surveys near plugged and abandorment wells.
FECHETIT HAMISTON #1 PLUGGING AND   \$50.00   \$50.000	MOFFAT	PLUG		\$30,000	\$30,000	\$0	\$60,000					Plug and abandon two conductor pipes and one well and reclaim the pad including a drilling pit.
EC   EVERETT HJMISTON #1 RECLAMATION   \$0   \$5,000   \$0   \$5,000   \$0   \$5,000   \$0   \$5,000   \$0   \$0,000   \$0   \$0,000   \$0   \$	MONTEZUMA	PLUG		\$500	\$25,000	\$0	\$25,500					Plug and abandon well.
TOTALS => \$115,500   \$489,000   \$0   \$589,500   \$10	MONTEZUMA	REC	EVERETT HUMISTON #1 RECLAMATION	\$0	\$5,000	\$0	\$5,000					Reclaim well pad in irrigated hay field.
PRAME   PROJECT NAME   BOND   PRAW   EMGY   TOTALS   BOND   PRAW   EMGY   TOTALS			101ALS =>	\$115,500	\$489,000	0\$	\$599,500					
PROJECT NAME	V PROGRESS							ì				
YPE         PROJECT NAME         BOND         PRAW         EMGY         TOTALS         BOND         PRAW         EMGY         TOTALS           LUG         FREMONT CO ORPHANS 2012         \$0         \$0         \$0         \$0         \$0         \$0         \$0           LUG         FREMONT CO ORPHANS 2012         \$0         \$53,410         \$0         \$63,340         \$0         \$60,300         \$0         \$60,300         \$0				EST	MATED TOTA	- PROJECT (	COST	FY 20	112-2013 YT	D EXPENDIT	URES	
PROJECT COST   FY 2012-2013 YTD EXPENDITURES	COUNTY	TYPE	PROJECT NAME	BOND \$0	PRAW \$0	\$0	TOTALS \$0	BOND \$0	PRAW \$0	\$0	TOTALS \$0	DESCRIPTION
PROJECT NAME	OMPLETED							i				
FREMONT CO ORPHANS 2012   S0   \$53,410   \$0   \$60,300   \$0   \$60,300					MAIEDIOIA	- PROJECI (	1803	FY 20	172-2013 YI	D EXPENDI	UKES	
Stay 10   Stay	COUNITY	¥ :		BOND	PKAW	EMG	IOIALS		PKAW	EMGY	IOIALS	DESCRIPTION
ESTIMATED TOTAL PROJECT COSTS   FY 2012-2013 YTD EXPENDITU   BOND	L KEMON	PLUG	FREMONI CO ORPHANS 2013	\$ 0\$	\$53,410 \$53,410	80 %	\$53,410 \$53,410	S S	\$60,300	8 8	\$60,300	Six wells plugged; two emergency C/O's
BOND PRAW EMGY TOTALS BOND PRAW EMGY BOND PRAW EMGY GRAND TOTALS => \$115,500 \$542,410 \$0 \$652,910 \$0 \$0  rolicates plugging and abandonment, "REC" indicates reclamation, and "ENV" indicates environmental by the Emergency Response line item  by the Plugging and Reclaiming Abandoned Wells line item				ESTIN	ATED TOTAL	PROJECT C	OSTS	FY 20	112-2013 YT	EXPENDIT	URES	
rdicates plugging and abandonment, "REC" indicates reclamation, and "ENV" indicates environmental  by the Plugging and Reclaiming Abandoned Wells line item				ROND	PRAW	FMGV	TOTALS	- CNOR	PRAW	FMGY	TOTALS	
roject Types: "PLUG" indicates plugging and abandonment, "REC" indicates reclamation, and "ENV" indicates environmental BD: Cost estimates in process.  RAW: indicates funding by the Plugging and Reclaiming Abandoned Wells line item			GRAND TOTALS =>	\$115,500	\$542,410	\$	\$652,910	\$0\$	\$60,300	0\$	\$60,300	
INGY: indicates funding by the <i>Emergency Response</i> line item  BD: Cost estimates in process.  PAAW: indicates funding by the <i>Plugging and Reclaiming Abandoned Wells</i> line item	Project Types: "P	LUG" indica	ates plugging and abandonment, "REC" indicates reclamation, a	and "ENV" indi	cates environme	utal						
PRAW: indicates funding by the <i>Plugging and Reclaiming Abandoned Wells</i> line item	EIVIGY: Indicates	tunding by ti	the <i>Emergency Response</i> line item									
	PRAW: indicates i	funding by th	he Plugging and Reclaiming Abandoned Wells line item									

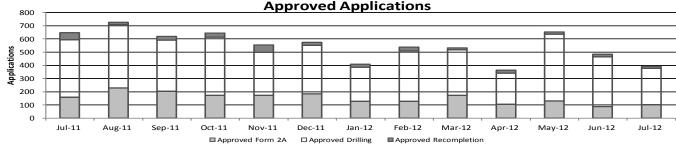


### Colorado Oil & Gas Conservation Commission <u>Monthly Permit Activity</u>

	Backlog	Received	Approved	Withdrawn	Rejected	Incomplete	In-Process	Remaining
Form2A								
Jul-11	209	215	158	8	0	65	193	258
Aug-11	258	236	229	6	0	66	193	259
Sep-11	259	159	203	6	0	58	151	209
Oct-11	209	171	172	12	0	50	146	196
Nov-11	196	166	174	9	0	69	110	179
Dec-11	179	164	183	5	0	44	111	155
Jan-12	155	142	129	1	0	50	117	167
Feb-12	167	160	129	3	0	44	150	195
Mar-12	195	133	172	5	0	32	118	151
Apr-12	151	136	106	1	0	48	132	180
May-12	180	105	131	6	0	51	97	148
Jun-12	148	97	89	2	0	54	100	154
Jul-12	154	92	103	4	0	51	88	139
<u>Drilling</u>								
Jul-11	525	457	436	9	0	107	430	537
Aug-11	537	472	482	8	0	141	378	519
Sep-11	519	336	389	8	0	108	350	458
Oct-11	458	382	443	16	0	85	296	381
Nov-11	381	342	324	8	0	146	245	391
Dec-11	391	291	370	5	0	118	189	307
Jan-12	307	372	258	7	0	133	281	414
Feb-12	414	370	382	8	0	103	291	394
Mar-12	394	292	347	13	0	103	223	326
Apr-12	326	410	235	1	0	127	373	500
May-12	500	491	506	25	0	110	350	460
Jun-12	460	327	377	9	0	114	287	401
Jul-12	401	230	276	4	0	91	260	351
Recompletion								
Jul-11	59	13	55	2	0	6	9	15
Aug-11	15	37	17	0	0	6	29	35
Sep-11	35	22	29	0	0	3	25	28
Oct-11	28	45	29	0	0	3	41	44
Nov-11	44	29	57	2	0	4	10	14
Dec-11	14	31	23	0	0	8	14	22
Jan-12	22	26	21	2	0	9	16	25
Feb-12	25	23	27	0	0	5	16	21
Mar-12	21	21	14	0	0	5	23	28
Apr-12	28	16	24	3	0	6	10	17
May-12	17	23	16	0	0	6	18	24
Jun-12	24	13	19	0	0	3	15	18
Jul-12	18	9	14	0	0	3	10	13
	-	-	•				rate data and can	

Incomplete are permits that have missing or inaccurate data and cannot be approved.







### Colorado Oil and Gas Conservation Commission Status of Permit Applications Filed By Month August 9, 2012

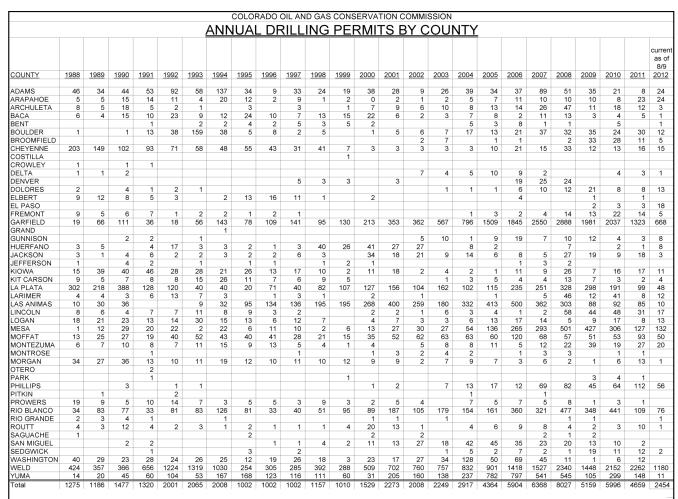
### Form 2A Location Assessment

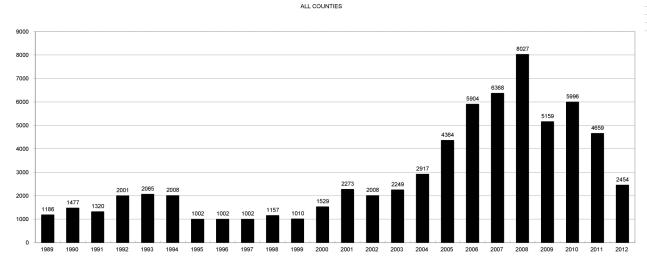
							Median			Greater
						Percent In	Days to	Less Than	30 to 49	Than 50
Year	Month	Received	Approved	Withdrawn	In Process	Process	Process	30 Days	Days	Days
2010	Total	2520	2433	85	0			1559	662	212
2011	1	236	234	2	0	0%	33	147	58	29
2011	2	174	163	11	0	0%	37	99	35	29
2011	3	281	273	8	0	0%	33	198	42	33
2011	4	189	179	9	1	1%	40	112	30	37
2011	5	211	198	13	0	0%	30	126	58	14
2011	6	184	181	3	0	0%	33	135	27	19
2011	7	211	198	11	2	1%	35	89	89	20
2011	8	245	239	4	2	1%	35	123	86	30
2011	9	156	145	9	2	1%	32	80	53	12
2011	10	167	157	9	1	1%	31	89	59	9
2011	11	171	162	8	1	1%	32	100	53	9
2011	12	166	165	0	1	1%	32	118	30	17
2011	Total	2391	2294	87	10	0%		1416	620	258
2012	1	141	138	3	0	0%	33	92	27	19
2012	2	160	151	8	1	1%	29	118	26	7
2012	3	135	128	1	6	4%	35	80	25	23
2012	4	126	114	3	9	7%	33	77	25	12
2012	5	119	110	0	9	8%	34	63	28	19
2012	6	101	77	1	22	22%	32	32	41	4
2012	7	104	21	1	82	79%	26	17	4	0
2012	8	23	0	0	23	100%				
2012	Total	909	739	17	152	17%		479	176	84

Form 2 Application For Permit to Drill (APDs)

							Median			Greater
						Percent In	Days to	Less Than	30 to 49	Than 50
Year	Month	Received	Approved	Withdrawn	In Process	Process	Process	30 Days	Days	Days
2010	Total	5891	5746	144	0	0%		1760	2739	1744
2011	1	380	371	7	0	0%	32	235	106	40
2011	2	336	333	3	0	0%	36	182	114	51
2011	3	466	454	12	0	0%	35	326	67	82
2011	4	347	334	12	1	0%	39	174	117	68
2011	5	364	355	9	0	0%	32	196	145	35
2011	6	514	511	3	0	0%	32	424	94	48
2011	7	472	457	12	3	1%	38	145	272	55
2011	8	468	462	4	2	0%	36	212	179	107
2011	9	334	312	19	3	1%	30	230	82	24
2011	10	369	354	13	2	1%	31	212	149	18
2011	11	337	307	27	3	1%	35	192	139	22
2011	12	308	303	3	2	1%	37	196	102	31
2011	Total	4695	4553	124	16	0%	413	2724	1566	581
2012	1	368	360	7	1	0%	33	235	107	44
2012	2	371	360	11	0	0%	31	277	70	37
2012	3	284	275	4	5	2%	37	164	84	46
2012	4	419	399	8	12	3%	35	219	160	35
2012	5	509	482	0	27	5%	35	260	149	95
2012	6	281	225	2	54	19%	33	107	114	14
2012	7	282	101	1	180	64%	26	66	32	4
2012	8	75	0	0	75	100%				
2012	Total	2589	2202	33	354	14%		1328	716	275











### Colorado Oil and Gas Conservation Commission Form 2A Breakdown By County By Year August 9, 2012

			Complete		Infor-	Requires	New				
Yr	County	Form2As	d	In Process	mational	Approval	Location	CDP	SWH	RSO	CDPHE
2009	Total State	818	818	0	728	108	408	2	80	5	5
2010	Total State	2378	2376	0	1824	637	1601	0	327	22	55
2011	ADAMS	10	10	0	1	1	9	0	0	0	0
2011	ARAPAHOE	20	20	0	12	0	21	0	0	0	0
2011	ARCHULETA	5	5	0	0	4	4	0	8	0	0
2011	BACA	5	5	0	3	1	4	0	1	0	0
2011	BOULDER	9	9	0	1	1	3	0	1	0	1 0
2011	BROOMFIELD CHEYENNE	1 17	1 17	0	1 7	0	0 12	0	0	0	0
2011	DELTA	2	2	0	0	0	1	0	0	0	0
2011	DOLORES	5	5	0	1	0	3	0	1	0	0
2011	EL PASO	5	5	0	0	0	5	0	0	0	0
2011	ELBERT	1	1	0	1	0	1	0	0	0	0
2011	FREMONT	11	11	0	3	0	8	0	0	0	0
2011	GARFIELD	117	116	1	0	67	50	0	101	9	1
2011	GUNNISON	7	6	1	0	4	5	1	6	0	0
2011	HUERFANO	1	1	0	1	0	1	0	0	0	0
2011	JACKSON	12	12	0	2	5	12	0	10	0	0
2011	KIOWA	19	19	0	12	1	18	0	1	0	0
2011	KIT CARSON	2	2	0	1	0	0	0	0	0	0
2011	LA PLATA	26	26	0	2	18	18	0	31	0	0
2011	LARIMER		7	0	7	0	7	0	0	0	0
2011	LAS ANIMAS	77	77	0	42	0	44	0	1	0	0
2011	LINCOLN	29	29	0	15	2	20	0	0	0	1
2011	LOGAN	10	10	0	9	0	8	0	0	0	0
2011	MESA	24	24	0	0	9	15	0	12	0	0
2011	MOFFAT	48	48 1	0	2	12 0	42 1	0	41 0	5 0	0
2011	MORGAN	10	10	0	6	0	10	0	0	0	0
2011	PARK	10	10	0	1	0	0	0	0	0	0
2011	PHILLIPS	129	129	0	56	0	126	0	0	0	0
2011	PROWERS	1	1	0	1	0	1	0	0	0	0
2011	RIO BLANCO	37	37	0	0	20	24	0	27	0	0
2011	RIO GRANDE	1	0	1	0	0	1	0	1	0	0
2011	ROUTT	8	8	0	0	0	9	0	10	1	0
2011	SEDGWICK	13	13	0	2	0	11	0	2	0	0
2011	WASHINGTON	13	13	0	10	1	12	0	0	0	0
2011	WELD	1472	1458	14	767	173	1162	0	20	2	2
2011	YUMA	149	149	0	38	0	123	0	0	0	0
2011	Total State	2305	2288	17	1004	319	1791	1	274	17	5
2012	ADAMS	15	11	4	0	0	14	0	0	0	0
2012	ARAPAHOE	13	10	3	0	0	12	0	0	0	0
2012	BACA	2	1	1	0	0	1	0	1	0	0
2012	BENT	1	1	0		0	1		0	0	0
2012	BOULDER	1	1	0	0	0	0	0	0	0	0
2012	BROOMFIELD	4	0	4			0	0	0	0	0
2012	CHEYENNE DOLORES	17 1	14 1	3	0	0	14 1	0	0	0	0
2012	EL PASO	3	3	0	0	0	3	0	0	0	0
2012	FREMONT	3	2	1	0		3		2	0	0
2012	GARFIELD	55	45	10	0	0	22	0	46	1	0
2012	GUNNISON	6	5	1	0		6	0	4	0	0
2012	HUERFANO	5	4	1	0	0	4	0	1	0	0
2012	JACKSON	2	1	1	0		2	0	1	0	0
2012	KIOWA	9	8	1	0	0	8	0	0	0	0
2012	KIT CARSON	5	4	1	0		3		0	0	0
2012	LA PLATA	8	7	1	0	0	3	0	6	0	0
2012	LARIMER	5	5	0			3	0	0	0	0
2012	LAS ANIMAS	8	7	1	0	0	6	0	0	0	0
2012	LINCOLN	21	17	4			18	0	0	0	0
2012	LOGAN	6	4	2	0	0	5	0	0	0	0
2012	MESA	8		1						0	0
2012	MOFFAT	36	26	10			33		33	3	0
2012	MONTEZUMA	8	8	0					0	0	
2012	MORGAN	4	2	2	0		4	0	0	0	0
2012	PHILLIPS RIO BLANCO	38 29	38 28	0	0		35 9	0	0 24	0	0
2012	RIO BLANCO	1	28	1	0		1		∠4 1	0	0
2012	ROUTT	5	0	5	0		5		5	0	0
2012	SEDGWICK	1	1	0			1		0	0	0
2012	WASHINGTON	4	0	4			4		0	0	0
2012	WELD	559	471	88	0			0		0	
2012	YUMA	1	1	0	0		1	0	0	0	0
2012	Total	884	733	151	0	0	633	0		4	1
	nnrehensive Drilling E			e Wildlife H							

| CDP = Comprehensive Drilling Plan | SWH = Sensitive Wildlife Habitat consultation | RSO = Restricted Surface Occupancy consultation | CDPHE= Colorado Department of Health and Environment consultation |



### Colorado Oil and Gas Conservation Commission

### **Horizontal Well Activity**

### August 9, 2011

	Prio	r Year	S	20	<b>)</b> 9	20	10	20	11	201	12			Comp	letion	
County	Drilled	DA	PA	Permit	Spud	Permit	Spud	Permit	Spud	Permit	Spud	Spud	AC	PR	DA	PA
ADAMS				6	6	2	3	1		11		9	4	3		
ARAPAHOE	2	[	[	Ī			[ 	10	1	17	2	5	2	1		
ARCHULETA	17	[	[	7	3	15	7	10	7	3	8	42		28		
BOULDER	T		ļ	T			: :	4				0				
CHEYENNE	5		4	Ī								5		1		4
DELTA	I	[	[				[			1	1					[
DOLORES	2	[		18	2	6				9	1	5		5		1
EL PASO	T			Ī						10		[				
FREMONT	7	6	[	6		12	5	3	4	1		16		9	6	1
GARFIELD	10	[	2	1	1	16		18	7	34	4	24		18		2
GUNNISON	1	[	[			1				2	2	3		1		
HUERFANO	T									4						
JACKSON	8	1	1	8		3	3	9	2	3		13		10	1	1
KIT CARSON	1	[	Ī	T			[					1		1		
LA PLATA	28	2		11	1	28	3	18	7	8	1	40		40	1	
LARIMER	3	2	[	Ī			[	5	1	2	1	5		1	2	
LAS ANIMAS	16	[	2	4		1	1					17		14		2
LINCOLN	T			2	1	2		1				2		2		
LOGAN	2	[	[				ļ					2		2		
MESA	3	2	[	36	1	22	8	24	13	11		25		17		2
MOFFAT	7			6		4	[	9	2	17	1	13	1	9		
MONTEZUMA	6		1	23		11	1	8		10	1	16		25		1
MORGAN							I	6	2			2		2		
PARK						1	1	1				1				
RIO BLANCO	7	2	[			1	1	11	1	15	2	11	1	6	2	
ROUTT	10	6	1							1		10		3	6	1
SAN MIGUEL	1			1								1		1		
WASHINGTON	1		1									1				1
WELD	11	3		12	5	208	92	763	231	529	287	626		229	6	2
YUMA	1	[	1	6								1				1
TOTAL Horizontal	149	25	14	147	28	333	128	901	281	688	311	896	8	428	27	20
Percent of Total HZ		17%	9%										1%	48%	3%	2%
Total All Permits		<u> </u>	<u> </u>	5159		5996		4659		2454						
Percent of Total				2.8%		5.6%		19.3%		28.0%						



### Well to Building Setback Review

Colorado Oil and Gas Conservation Commission August 9, 2012

Count of well locations by proximity groupings from well spot to buildings for all locations reviewed under the December 17, 2008 amended rules.

Location Proximity to Buildings	2009	2010	2011	2012	Number of Locations	Percent of Total Locations
less than 150 feet	4	1	4	1	10	0%
150 to 350 feet	45	55	60	17	177	3%
350 to 500 feet	54	111	96	31	292	5%
500 to 1000 feet	158	357	333	102	950	17%
1000 + feet	547	1594	1493	474	4108	74%
Total Locations	808	2118	1986	625	5537	

County	Total	Less than 150 feet	150 to 350 feet	350 to 500 feet	500 to 1000 feet	1000 + feet
ADAMS	33	0	2	4	9	18
ARAPAHOE	47	0	2	4	3	38
ARCHULETA	15	0	0	1	9	5
BACA	11	0	0	0	1	10
BENT	6	0	0	0	0	6
BOULDER	21	0	1	1	16	3
BROOMFIELD	26	0	0	4	10	12
CHEYENNE	47	1	0	0	0	46
DELTA	5	0	0	1	1	3
DOLORES	10	0	0	0	4	6
EL PASO	11	0	0	0	1	10
ELBERT	2	0	0	0	1	1
FREMONT	32	0	2	7	6	17
GARFIELD	361	0	3	2	55	301
GUNNISON	16	1	0	2	1	12
HUERFANO	6	0	0	0	1	5
JACKSON	23	0	0	1	1	21
KIOWA	46	0	0	0	1	45
KIT CARSON	9	0	0	0	0	9
LA PLATA	89	0	3	9	24	53
LARIMER	30	0	3	3	10	14
LAS ANIMAS	197	1	5	7	37	147
LINCOLN	116	0	0	1	2	113
LOGAN	25	0	1	0	0	24
MESA	75	0	0	3	11	61
MOFFAT	123	0	0	1	8	114
MONTEZUMA	18	0	0	1	1	16
MONTROSE	2	0	0	0	0	2
MORGAN	14	0	0	1	2	11
PARK	4	0	0	0	0	4
PHILLIPS	262	1	4	6	20	231
PROWERS	4	0	0	0	0	4
RIO BLANCO	131	0	0	0	1	130
RIO GRANDE	1	0	0	0	1	0
ROUTT	12	0	0	0	0	12
SAN MIGUEL	10	0	0	0	0	10
SEDGWICK	25	0	0	1	3	21
WASHINGTON	19	0	1	0	0	18
WELD	3189	6	143	218	668	2154
YUMA	464	0	7	14	42	401
TOTAL	5537	10	177	292	950	4108



### Well to Building Setback Review

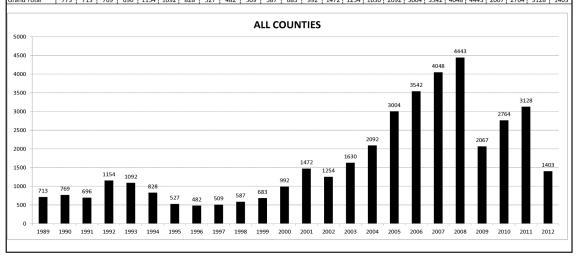
Colorado Oil and Gas Conservation Commission August 9, 2012

Listing of Locations less than 200 feet to Building

	Document		High	New			
Year	Number	County	Density	Location	Distance	Proximity	Building Description
2011	2587822	CHEYENNE	No	No	58	less 150	Water well house
2009	1691798	WELD	No	No	58	less 150	Vehicle garage
2010	400072164	WELD	No	Yes	69	less 150	Abandoned hog shed
2012	400240957	GUNNISON	No	Yes	90	less 150	Equipment Shed
2009	1758843	WELD	No	Yes	103	less 150	Building to be razed
2011	1636646	WELD	No	No	122	less 150	Storage shed
2009	400011284	LAS ANIMAS	No	Yes	127	less 150	Operator is owner
2009	1786896	PHILLIPS	No	No	132	less 150	Grain Storage
2011	400117702	WELD	No	Yes	143	less 150	Irrigation pump house
2011	400227765	WELD	No	Yes	145	less 150	Storage Barn
2009	1904205	WELD	No	No	154	150 to 350	Livestock Enclosure
2012	400243295	WELD	No	Yes	155	150 to 350	Unused storage shed
2011	400179419	WELD	No	Yes	157	150 to 350	Existing well / storage building
2010	400054716	WELD	No	No	159	150 to 350	Equipment Barn
2011	400188968	WELD	No	Yes	159	150 to 350	Abandoned
2010	400021477	WELD	No	Yes	162	150 to 350	Goat Barn
2009	1758386	WELD	No	Yes	168	150 to 350	Storage Shed
2011	1635946	WELD	No	No	169	150 to 350	Storage shed
2011	400165164	WELD	No	Yes	178	150 to 350	Residence
2011	400188780	WELD	No	Yes	180	150 to 350	Residence
2010	1697620	WELD	No	No	187	150 to 350	Livestock Shed
2009	1758746	WELD	No	No	193	150 to 350	Storage Shed
2011	400154431	WELD	No	Yes	198	150 to 350	Turkey barn
2012	400250031	WELD	No	Yes	198	150 to 350	abandoned guard shack
2009	1774783	WELD	No	No	199	150 to 350	cement service building
2011	400118102	YUMA	No	Yes	199	150 to 350	Steel Barn



															ON CO										
						AΝ	NU	AL	W	ELI	_ S	TAI	RT:	SB	Y (	CO	UN	ΤY							
																									Current
																									as of 8/9
COUNTY	1988	1989	1990	1991	1992	1993	1994		1996	1997	1998	1999	2000	2001	2002		2004	2005	2006	2007	2008		2010	2011	2012
ADAMS	39	27	26	36	54	20	54	28	6	16	12	17	18	13	4	19	22	24	13	41	14	15	21	2	6
ALAMOSA	ļ												ļ		ļ	ļ				ļ	ļ	ļ			
ARAPAHOE	2	4	16	11	11	3	9	8	3	3	2		ļ <u>-</u>		ļ <u>-</u>	ļ <u>-</u>	6	1	5	2	1	1	3	7	4
ARCHULETA	5	3	7	5	2	1	ļ <u>-</u>	2	ļ	1	11	ļ <u>-</u>	4	4	2	5	4	10	5	7	26	9	11	7	8
BACA BENT	5	5	12	6	21	8	9	19 3	9	7	11 3	8 6	19 2	6	2	11	6 3	6 2	2 8	6	12	<del> </del>	5	4	1
BOULDER	2			7	18	56	15	5	} <del>-</del>			<sup>0</sup>	<del> </del>		<del> </del>	2	5	11	9	14	25	16	13	7	9
BROOMFIELD	3	2	3	7	14	27	22	2	2				·		2		1				10		22	12	3
CHEYENNE	177	133	92	75	64	50	44	41	35	29	29	6	2	1	3	3		9	14	15	14	8	12	11	6
CONEJOS		100											<del> </del>												
COSTILLA	1											1	ļ		ļ					·	ļ	ļ			
CROWLEY	1		1																						
CUSTER	1																								
DELTA	1		1												ļ	5	4	6	5	2			4	1	1
DENVER	ļ				ļ					2	3	1	ļ	2	ļ	ļ			7	5	4	ļ			
DOLORES	2		4	1	ļ				ļ	ļ	ļ	ļ	ļ	ļ	ļ	ļ	2		2	13	4	2		1	2
DOUGLAS	ļ								ļ		ļ		ļ		ļ	ļ	ļ			ļ	ļ	ļ			
EAGLE	<b></b>			ļ	ļ				ļ	ļ	ļ	ļ	ļ		ļ	ļ	ļ		ļ	ļ	ļ	ļ	ļ		
EL PASO	ļ <u>-</u>			ļ <u>-</u>	ļ <u>-</u>				ļ	ļ <u>-</u>	ļ <u>.</u>		ļ <u>.</u>		ļ	ļ	ļ		ļ <del>-</del>	ļ	ļ	ļ	2		3
ELBERT	8	11	9	5	2			10	15	2	2		2		ļ	ļ	ļ <u>.</u>		11	ļ <u>.</u>	ļ <u>.</u>	ļ <u>.</u>			
FREMONT	6	3	5	7	1	4	1	2	7		1		100	254	245	447	1	3	2	2 1304	5	3	9	16 877	5
GARFIELD	3	12	24	8	3	4	15	13	<del>'</del>	28	19	94	190	251	245	417	585	799	1005	1304	1688	767	909	8//	357
GRAND GUNNISON	<del> </del>		1	2	<del> </del>	1	11		<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>		1	<del> </del>	1	1	9	5	1	4	5	2	2
HUERFANO	6			2	6	1	1	2	<del> </del>	2	31	9	25	14	19	3	6	2	ļ <sup>3</sup>		2	<del> </del>	1		<del></del>
JACKSON	2	1	3	7	2		3	1	1	3	3		24	2	4	10	10		3	3	10	1	6	7	
JEFFERSON	<del> </del>			<del></del>					1			2	<del> </del>		<del> </del>					2		<del> </del>			
KIOWA	14	32	35	37	28	19	20	22	8	13	6	4	8	16	2	4	2	1	7	7	2	5	14	15	6
KIT CARSON	11	6	6	6	9	13	15	9	6	3	7	7	ļ			1	1	6	2	1	14	3	1	1	3
LA PLATA	158	129	186	44	66	26	17	19	29	48	65	80	99	135	118	110	103	104	108	179	199	128	67	38	1
LARIMER	8	5	1	6	13	5	3		2	1			1	1				1		4	8	1	28	2	2
LAS ANIMAS	17	22	20	3	2	11	17	34	62	90	120	182	202	286	205	221	296	384	413	326	221	14	7	78	1
LINCOLN	6	5	4	4	7	7	8	8	3	2			2	2	1	5	2	2	1	2	19	10	14	22	10
LOGAN	17	19	19	8	13	24	9	11	4	10	4	ļ	4	6	3	3	2	11	12	12	3	7	3	8	11
MESA	1	2	2	4	1		7	2	11	1	4	4	2	12	12	13	25	89	156	209	222	14	11	37	3
MOFFAT	1	2	1	2	1	1	2	1	3	1	8	10	18	23	25	28	19	40	60	42	25	18	15	29	12
MONTEZUMA	6	5	7	5	2	5	7	3	12	2	2		2	3	5	5	11	7	2	4	18	11	2	4	77
MONTROSE	ļ <u></u> -			1			46	42	ļ		7		<del> </del>	3	<del> </del>	7	1			11	2	ļ	1		
MORGAN OTERO	26	20	32	11 1	9	11	16	13	8	9	}′	4	9	8	11	<del> ′</del>	5	5	3	11	11	2	3	2	11
OURAY	<del> </del>				<del> </del>				<del> </del>		<del> </del>		<del> </del>		<del> </del>					<del> </del>	<del> </del>	<del> </del>	<del> </del>		
PARK	<del> </del>			1	<del>  </del>				<del> </del>				<del> </del>		<del> </del>	<del> </del>				<del> </del>	<del> </del>	<del> </del>	2		
PHILLIPS	<del> </del>		3		<del>  </del>	1			<del> </del>				1		<del> </del>	6	10	11	4	35	18	2	42	105	42
PITKIN	†	1	<del>-</del>	·	2				·		·		† <del>-</del>		†	† <del>-</del>				1	ļ <del></del>	† <del></del>			
PROWERS	16	9	5	8	13	7	1	5	5	2	8	4	2	4	4	†	5	5	6	3	5	2	3	1	
PUEBLO									·		·		T		1	l				·	ļ	·			
RIO BLANCO	1	8	10	1	3	8	6	7	5	9	9	62	51	82	47	83	92	95	107	95	203	115	106	69	30
RIO GRANDE	1	2	2																						
ROUTT		1	1	3	1							1	5	12	1		1	6	3	2		2	1	2	1
SAGUACHE	1							2					ļ				ļ								
SAN MIGUEL				1					ļ		3	1	6	9	10	19	28	13	20	17	5	1	2	2	
SEDGWICK	ļ			1	ļ		1	3	ļ	2	ļ		ļ		ļ	1	2	1	1	5	ļ	ļ	3	7	3
WASHINGTON	39	28	22	26	24	20	20	13	17	23	18	4	15	12	24	29	65	34	23	14	11	2	2	3	
WELD	176	200	168	296	660	723	389	94	136	94	117	124	237	403	406	522	632	718	931	1222	1314	877	1201	1640	858
YUMA	12	16	41	47	102	39	114	145	101	104	93	52	42	162	108	106	144	597	593	445	336	27	213	108	15
Grand Total	773	713	769	696	1154	1092	828	527	482	509	587	683	992	1472	1254	1630	2092	3004	3542	4048	4443	2067	2764	3128	1403





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Colorado Oil Gas Conservation Commission Monthly Statistics

	S	Internet	984793	105289	97167	103614	127472	85000	85000	85000	86609	83055	82492	90322	81459	1112479	103968	96171	122393	106539	73024	108115	103585	111950	116043	132814	130612	132651	1337865	112686	105857	111746	107627	109802	108849	114195
	Public Visits	Office	1071	85	114	104	110	26	100	84	91	9/	85	94	22	1115	95	80	125	105	124	131	74	141	120	126	96	77	1294	106	114	138	108	123	111	102
	ď	Data	161	56	7	19	24	1	56	10	16	6	15	4	20	197	14	21	6	∞	4	30	20	21	<b>о</b>	14	18	တ	187	12	16	56	12	20	11	13
	Active	Wells		41207	41478	41632	41843	42096	42217	42324	42534	42686	42903	43139	43354		43588	43869	43927	44203	44752	45401	45710	45975	46115	46719	46721	46835		46958	47128	47263	47377	47533	47860	48173
Active	Drilling	Permits		4029	3722	3858	4040	4291	4373	4300	4481	4558	4502	4557	4735		4755	4733	4847	4882	4904	5013	5113	5328	5361	5423	5409	5329		5217	5173	5132	4785	4885	5136	5152
Well	~	Notice	1110	191	191	235	223	237	223	245	236	245	264	230	244	2764	239	212	263	236	250	274	248	281	288	280	296	261	3128	226	200	269	174	179	129	158
	ions	Authz	571	186	213	300	228	218	251	222	198	196	221	171	144	2548	112	150	258	218	171	239	158	229	203	172	174	183	2267	129	129	172	106	131	88	103
	Locations	Rcvd	765	277	265	206	220	200	253	185	239	166	160	162	128	2461	249	184	262	190	214	172	215	236	159	171	166	164	2382	142	160	133	136	105	6	92
	S	Apvd	242	20	6	6	17	47	12	15	37	∞	7	9	6	225	∞	က	31	27	∞	4	7	17	34	12	13	28	192	2	6	24	2	2	œ	^
	Pits	Rcvd	178	19	9	တ	2	10	40	19	တ	က	က	က	က	120	4	2	38	20	12	7	13	9	35	4	12	56	190	11	21	17	6	9	2	2
	ion	Apvd	22	5	4	2	7	9	0	-	2	_	0	_	-	28	9	9	7	0	9	4	_	0	0	_	_	0	32	0	2	2	2	_	9	2
nits	Injection	Rcvd	89	4	4	2	2	က	2	_	_	က	4	_	_	34	4	7	4	2	က	2	2	_	7	7	0	4	44	က	7	2	2	က	4	C
Permits	oletion	Apvd	334	31	တ	31	33	22	88	81	81	31	41	19	12	515	23	2	23	15	25	22	22	17	29	29	22	23	320	21	27	14	24	16	19	14
	Recompletion	Rcvd	344	7	35	33	29	29	139	24	22	33	21	4	56	519	∞	15	18	56	20	61	13	37	22	45	29	31	325	56	23	21	16	23	13	တ
	ng	Apvd	5159	462	377	713	649	622	490	432	532	437	200	421	361	5996	351	249	498	314	367	436	436	482	389	443	324	370	4659	258	382	347	235	909	377	276
	Drilling	Rcvd	4754	909	687	653	493	389	521	460	503	403	401	308	379	5703	405	343	472	325	372	512	457	472	336	382	342	291	4709	372	370	292	410	491	327	230
Baker -	Hughes	Rig Count		45	20	51	51	53	53	09	99	89	89	89	29		63	61	89	72	72	70	69	73	77	78	80	79		73	20	99	99	99	69	99
	Q		Total	JAN	FEB	MAR	APR	MAY	NN	JUL	AUG	SEP	OCT	NOV	DEC	Total	JAN	FEB	MAR	APR	MAY	NDS	JUL	AUG	SEP	OCT	NOV	DEC	Total	JAN	FEB	MAR	APR	MAY	NOC	٦
	YEAR		2009													2010 Tota													2011							



### Colorado Oil Gas Conservation Commission Monthly Statistics

ı		Well					Bonds										Re	Remediation		
YEAR	Q	Oper	Operators	ators	Rele	Release		రౌ	Claim	Heal	Hearings	>	Violations					Projects		Field
		Change	Ž	Inactive	Ind.	Blnkt	Replace	Ind.	Blnkt	Apps.	Order	NOAV	AOC	: OFV	/ Cmplt	t Spills	-		Comp	lnsp
2009 T	Total	5666	8	20	54	53	96	-	0	87	73	260	80	-	202	2 371		208	133	9991
7	A A	654		9	_	7	10	0	0	16	14	36			0	-	88	22	13	1160
芷	EB	734		က	4	4	က	0	_	7	13	6		0	0	1	24	19	4	1143
Σ	IAR	2171	4	2	9	9	7	0	0	13	12	37		0	0	9	င္သ	4	10	2046
Ā	PR	265	5	2	6		4	0	0	21	15	5		0	2	17 4	42	23	22	1183
Σ	ΙΑΥ	641	က	က	10		8	0	0	¥	¥	00	¥	₹		13	88	44	21	1364
<b>⊣</b>	3	653	က	0	2	2	2	0	0	23	20	22		0	0		34	25	45	1308
<b>=</b>	H	624	5	0	0		8	0	0	12	9	37		_	1	20 4	46	39	56	971
Ā	ne	556	က	2	2	_	2	0	0	80	12	40		_	0		46	39	22	1581
S	ËP	460	4	က	0	4	4	0	0	13	7	32		7	0		44	22	38	1388
Ó	CT	423	က	က	0	7	2	0	0	19	16	30		0			32	96	54	1595
Ź	0	429	2	2	2	9	2	0	0	19	21	20		9	0		48	21	49	1535
۵	DEC	479	5	_	2	_	16	0	0	Ą	¥	43	ΑĀ	¥	(1	23 4	42	30	71	1801
2010 Total	otal	8421	46	33	38	40	74	0	_	155	136	319		0	3 218		493 6	511	382	17075
7	A A	813	_	2	3	-	4	0	0	16		43		က		33 4	40	47	45	1316
豆	EB	356	_	_	6	4	9	0	0	16	15	7		0	1		52	48	33	1591
Σ	IAR	290		က	9	က	6	0	0	¥	ΑĀ	31	¥	Ϋ́	(1)	33 4	48	29	27	1675
₹	R	402		0	က		_	0	0	24	24	80					22	38	61	929
Σ	IAY	545	3	0	5		4	0	0	77	65	16		7	2	26 3	27	33	51	1577
≺	S	790	2	2	2		0	က	0	51	28	30		_	4		82	23	52	1099
<u>۲</u>	UL	595		9	3		က	-	0	ΑA	AA	29	Α̈́	Ϋ́				95	20	518
¥	ne	573		က	12	7	2	0	_	68	54	26			2			106	26	1032
S	ద	584		_	7	2	2	0	0	44	41	4		7			46	26	99	9/9
O	CT	552	4	2	12		7	0	3	57	45	6			0	15 3		102	28	598
Ź	0	572	4	6	15		_	0	0	ΑĀ	AA	15	¥	ΑN	_	16		70	28	525
Δ	ည္	347	4	2	2	7	4	0	0	20	32	12		0	_	13 5	28	22	99	518
2011 T	1 Total	6119	33	31	79	44	43	4	4	403	349	230		10 1	9 250	0 527		726	236	12084
J,	AN	1021		3	7		1	1	10	20	72	18		1	0			89	23	945
正	EB	385	9	6	∞	5	0	0	0	¥	¥	10	¥	Ϋ́	.,		40	98	36	948
Σ	IAR	365	4	_	7		6	0	0	44	38	19		0	0		38	63	61	1088
Ā	PR	469	4	2	10	က	2	0	0	80	29	7		0	0	17 3	34	22	86	884
Σ	ΙΑΥ	495	3	_	4	0	က	0	0	43	20	14			0	23 3	2	27	119	1625
7	N	263		4	3	က	4	0	0	Ą	ΑA	5	ΑĀ	Ϋ́	(1)		39	40	26	1019
₹	J	80	2	0		4	2	0	0	63	20	15		0	0	16	23	44	32	920
2012 T	Total	3108	28	20	40	23	24	_	10	300	269	92		က	0 16	168 23	238 3	353	466	7479