



COLORADO

Oil & Gas Conservation
Commission

Department of Natural Resources

Staff Report

for March 11, 2019

Top Stories

◆ Gas Leak Detection and Quantification Technologies Workgroup

In the COGCC Engineering Integrity work unit, Integrity Engineer Steven Wheeler, PE participated in the Colorado State University (CSU) Energy Institute's second meeting for the "Path to Equivalency" workgroup on gas leak detection and quantification technologies.

This workgroup aims to demonstrate equivalence for methane leak detection technologies and alternative Leak Detection and Repair (LDAR) programs. An efficient process for demonstrating equivalence would allow operators to use newly available technologies without a risk of falling out of compliance with State air quality regulations.

The second workgroup meeting included representatives from many emerging technology suppliers, operators, academic institutions, State regulatory agencies, and non governmental organizations. The meeting presented a framework for demonstrating equivalence in a series of steps or stages:

- Controlled Testing
- Simulation Modeling
- Pilot Deployment, and
- Full Regulatory Recognition.

In the current regulatory environment, operators have responsibility to demonstrate equivalence of the alternative program or technology they wish to use, despite the fact that the manufacturers of the emerging technology have the largest stake in the technology's success.

Given this background, the workgroup seeks the adoption of a standardized framework to accelerate the oil and gas industry's deployment and field testing of the newest technologies. Another meeting is planned in the near future.

◆ Flowline Instrument Monitoring Methods (IMM) Workgroup Update

In February 2018, the Commission adopted Flowline Rules and requested that the COGCC Director empanel a stakeholder workgroup (Workgroup) to evaluate instrument monitoring methods (IMM) as a tool to monitor flowline integrity.

The newly adopted Flowline Rules already state that operators may use IMM to detect leaks in flowlines. Rule 1104.j.(2) provides:

Instrument Monitoring Method (IMM). Where the regulations permit, an operator also may conduct a survey using an instrument monitoring method capable of detecting integrity failures, leaks, spills or releases, or signs of a leak, spill or release.

What the Flowline Rules do not specify is the type of IMM that operators should use. One of the Workgroup's purposes is to consider whether certain types of IMM technology may be preferable for use with flowlines.

The Workgroup met in February 2019 to finalize Staff's draft IMM Report for presentation to the Commission at its March 11 hearing.

◆ Bradenhead Pressure Monitoring and Reporting Area Update

COGCC Staff, Denver Julesburg (DJ) Basin Oil and Gas Operators, and several online participants met February 6 to discuss COGCC Order 1-232 Notice to Operators establishing a Bradenhead Pressure Monitoring and Reporting Area for most counties in the DJ Basin.

Participants reviewed the Order and current operator guidance to understand whether the guidance provided complete and accurate



answers on how the Order's testing and reporting should be done. In response to questions from the meeting, COGCC Staff modified the operator guidance.

Work continues on a process to bulk upload all Bradenhead test results that do not meet a reaction threshold. COGCC Staff are also working in conjunction with an operator group to create a bulk upload solution.

To access the operator guidance, go to this page of the COGCC website:

http://cogcc.state.co.us/documents/reg/OpGuidance/Guidance%20for%20NTO_20190211.pdf

To find the order, navigate to this link:

<http://cogcc.state.co.us/weblink/DownloadDocument1.aspx?DocumentId=4707761>

◆ **Community Relations Unit and Local Government Designee Program Update**

The COGCC established the Community Relations Unit (CRU) in 2018 to enhance collaboration between local governments, operators, other external stakeholders, and the COGCC. CRU Staff focus on providing information, training, outreach, guidance, and consultation to local governments, the public, non governmental organizations, industry representatives, elected officials, and others.

Upon request and contingent on availability and approval, CRU Staff and COGCC managers or supervisors will gladly participate in educational forums and panel discussions. CRU Staff include complaint intake staff, database analysts, GIS professionals, and outreach or Local Government Liaison (LGL) staff. COGCC LGL Staff also manage the Local Governmental Designee (LGD) Program that is available to counties, cities, towns, and certain special districts.

Participation in the voluntary LGD program provides local governments specific notifications (listed below) of pending oil and gas activity in or near their jurisdiction. Participation in the LGD Program also provides various opportunities for local governments to collaborate (at their discretion) with the COGCC concerning regulation of oil and gas in Colorado.

Local governments are reminded that participation in the LGD Program remains voluntary. Participation may begin with submittal to the COGCC of a completed and signed Form 29 (LGD Registration Form). Form 29 is available on the COGCC website under the "Regulation" tab on the menu, then under the "Forms" tab.

Participation in the LGD Program allows local governments to designate an individual (their Local Governmental Designee) to be the local government's "point person" on matters related to oil and gas. As such, the selection of the LGD by the local government is a critical decision.

Depending on the level of pending oil and gas activity, LGDs may receive (via email) various specific notifications that originate from "eForms," the COGCC's internet based form processing system.

Local Governments are also reminded that they must maintain (and monitor) a valid email address (as designated on the Form 29) or risk missing notifications that are sent.

LGD Program and local government opportunities include, but are not limited to the following:

- Receive training from COGCC CRU Staff
- Receive notifications (of pending Operator activity) via the COGCC's eForms system and directly from operators (as required in COGCC Rules)
- Have access to eForms, the COGCC's internet based form processing system
- Comment on pending Applications for Permits to Drill (APDs - also known Form 2s) and Location Assessments (also known as Form 2As) permit applications
- Request comment period extensions on pending APDs and Location Assessments
- Request Colorado Department of Public Health and Environment (CDPHE) consultation on pending Location Assessments or APDs
- Request operator five year plans (municipalities only)
- Opt to consult on proposed Large Urban Mitigation Area facilities, and
- Protest issuance of an APD or Location Assessment permit by the COGCC.

Notifications an LGD may receive via “eForms” are specified in COGCC Rules and include the following:

- Form 2A (Location Assessment) “posting” to COGCC website. This notification initiates the LGD and public comment period on pending Location Assessment applications.
- Form 2 (Application for Permit to Drill) posting to the COGCC website. This notification initiates the LGD and public comment period on pending APDs.
- Form 2A Decision (approval or rejection) by the COGCC.
- Form 2 Decision (approval or rejection) by the COGCC.
- 48 hour notice of drilling, also referred to as a “spud notice.”
- 48 hour notice of hydraulic fracturing.
- Flowline abandonment notice.

Operators are also reminded that COGCC Rules require other notifications to local governments, and that the notification depends on the COGCC Rule. The notice is Rule dependent and may go to an LGD, to Emergency Dispatch, or to another governmental office. Operator initiated notices include the following:

- Reportable spills
- Flaring during drilling
- Flaring during production
- Hydrogen sulfide detection
- Intent to conduct seismic exploration, and
- Accident reports.

Available Training from COGCC CRU Staff

LGDs, local government staff, elected officials and other stakeholders are reminded that training is available from COGCC CRU Staff. The 2019 LGD training schedule is under development and will be posted to the COGCC website once available, and an email announcement will be made to all LGDs. The COGCC recommends that LGDs take training from the COGCC at least once every two years, when an LGD change occurs, or when a local government elects to newly participate (or re-enter) the voluntary LGD program.

Four types of training to local governments and LGDs are available as described below:

LGD Orientation Training

LGD Orientation Training is offered to newly appointed LGDs (and their colleagues), and it is also provided upon request. Trainings are typically three to four hours in length and normally held at local government facilities or, if necessary, may be conducted online.

LGD Orientation Training is designed to get local governments prepared to effectively participate (at their discretion) in the voluntary LGD program.

Topics and content will vary but typically include the following:

- COGCC Overview (Commission / Staff / Major Units / Rules, recent rulemakings, policies, database/Colorado Oil and Gas Information System [COGIS], key website features)
- Well and Location Permitting (Forms 2A and 2)
- Effective Commenting on Pending Form 2A and 2 Permit Applications
- CDPHE Role in Oil and Gas Development
- LGD Program Opportunities
- Key LGD Tools and Skills
- Public Involvement Opportunities
- Using the COGCC Website (eForms, Maps/GIS, database queries and downloads, dashboard, and other website features).

Comprehensive (Full-Day) LGD Training

Comprehensive LGD Training is targeted to LGDs, local government staff, and other stakeholders including non governmental agencies, non profits, environmental organizations, operators, consultants, or subcontractors seeking a better understanding of the COGCC’s role regulating the oil and gas industry in Colorado.

Trainings may be held at the COGCC or at a participant’s venue. Comprehensive LGD Trainings build on the topics described in LGD Orientation Training (above), and also include various “hands on” website exercises.



COGCC Website Training

Training specific to using the COGCC website is available upon request and typically lasts three to four hours.

Topic Specific Training

Training of this type is available upon request, and its availability is dependent on management

approval and pending Staff subject matter expert availability; expect it to last one to two hours.

To request a training or if you have questions, please contact LGL Marc Morton at marc.morton@state.co.us or at (303) 894-2100, ext. 5132.

Public Outreach

➤ Outreach by the Director and Staff

- On February 20, Reclamation Supervisor Denise Arthur, PhD was invited to speak at the International Erosion Control Association (IECA) International Conference held at the Denver Convention Center. The IECA is a non profit member organization with 2500 members in 30 countries providing education and information resources for professionals interested in erosion and sediment control. Denise's presentation focused on construction best management practices for the oil and gas industry during the location construction phase.
- On February 21, Community Relations Manager Mike Leonard presented "Prioritizing Well Inspections in Colorado: A Risk Based Approach" as the first webinar of a TOPCORP series. His presentation covered the current inspection prioritization process in place at the COGCC. TOPCORP is an educational consortium composed of the Colorado School of Mines, Pennsylvania State University, and the University of Texas at Austin. The program is designed to provide training to oil and gas regulators from across the nation. For more information about this program, go to

<http://www.topenergytraining.com/>

➤ Outreach by the Community Relations Unit

- On February 5, Local Government Liaison (LGL) Marc Morton traveled to Brighton and met with Adams County LGD Christine Dougherty.
- On February 7, Marc traveled to Rifle and attended the monthly Garfield County Energy Advisory Board (EAB) meeting. Marc provided a live demonstration of the Daily Activity Dashboard tool on the COGCC website to EAB members and audience.
- On February 12, Marc traveled to Aurora and met with City of Aurora LGD Stephen Rodriguez.
- On February 13, Marc traveled to Broomfield and met with City and County of Broomfield LGD Tami Yellico and staff members Laura Davis and Ed Potthorff.
- On February 19, Marc traveled to Frederick and met with Town of Frederick LGD Jennifer Simmons and staff member Ali Van Deutekom.
- On February 21, Marc participated via teleconference in the quarterly Land/Resource Managers group meeting with Mesa County Commissioners.

Regional Activities

➤ Northeast Colorado

◆ Methane and Volatile Organic Compound Driving Survey of Weld County Using Geospatial Measurement of Air Pollution (GMAP)

The COGCC in cooperation with the U.S. Environmental Protection Agency (EPA) - National

Enforcement Investigation Center (NEIC) and CDPHE - Air Pollution Control Division (APCD) performed a driving survey focused on the detection of methane and volatile organic compounds in residential areas in close proximity to oil and gas facilities in portions of the Greater Wattenberg Area (GWA).

The purpose of the study was:

- To determine if there are uncontrolled releases of natural gas from oil and gas producing facilities in close proximity to residential areas that could result in public safety risks.
- To identify emissions from oil and gas production facilities in order to stop and prevent such emissions to protect human health and the environment in accordance with applicable air quality regulations.

Data including concentrations of methane; benzene, toluene, ethyl benzene and xylenes (BTEX); and volatile organic compounds (VOCs). Corresponding meteorological conditions and location information were measured using the NEIC's Geospatial Measurement of Air Pollution (GMAP) unit.

The GMAP equipment consisted of a four wheel drive van with an Integrated Cavity Output Spectrometer (ICOS) for measurements of methane and carbon dioxide; a Differential Ultraviolet Absorption Spectrometer (DUVAS) for BTEX; and a Photo Ionization Detector (PID) for total VOCs.

The GMAP unit included an integrated weather station and GPS. Measurements were data logged at a rate of approximately one per second. The GMAP was also equipped with and collected air canisters for laboratory analysis and used a Forward Looking Infrared (FLIR) Model GF320 Camera to help make emission source determinations. COGCC Staff also used hand held RKI GX-2003 Four Gas meters for source detection.

The survey covered 492 miles of public roads in parts of Frederick, Firestone, Johnstown, Milliken, Erie, Dacono, Broomfield, Fort Lupton, Platteville, Gilcrest, Evans and Greeley. No instances of uncontrolled releases of natural gas that would result in a public safety risk in residential areas were documented during this survey.

Methane was detected above background concentrations at a total of three locations in residential areas and one location in a commercial area. No upwind oil and gas source was determined for those detections.

There were a total of 23 instances of elevated methane detections (four of which also had detectable BTEX and VOCs). These were all detected on oil and gas locations in close proximity to production equipment or wells. The highest readings were observed on locations during well unloading and downhole maintenance operations. No elevated readings were detected downwind from these facilities in residential areas.

The complete report is available on the COGCC website under Special Projects, Other Topics in the Library. The project is also known as COGCC Special Project 10594.

➤ **Northwest Colorado**

◆ **Northwest Colorado Oil and Gas Forum**

The next Northwest Colorado Oil and Gas Forum meeting is scheduled for

Thursday, April 4 (9:00 a.m. - 12:00 p.m)
Clough Auditorium
Colorado Mountain College - Rifle Campus
3595 Airport Road
Rifle, CO

Meeting agendas will be posted to the COGCC website approximately one to two weeks prior to each meeting. The COGCC welcomes suggestions for speakers and topics. Meeting information is also emailed to those on the email distribution list.

As always, Northwest Forum stakeholders (operators, local governments, contractors, state and federal resource agencies, environmental groups, non governmental organizations, and others) are encouraged to provide updates. Northwest Forum meetings are open to the public, and a public comment period is held as part of each meeting.

All parties wishing to be placed on the meeting agenda or added to the email distribution list for announcements should contact Marc Morton at (303) 894-2100, ext. 5132 (direct), (720) 415-4959 (mobile), or by email:

marc.morton@state.co.us



◆ **Project Rio Blanco**

The email for Project Rio Blanco submittals is

DNR_rioblanco.submittal@state.co.us

◆ **Project Rulison**

The revised Project Rulison Sampling and Analysis Plan (RSAP) can be found at the following link:

<http://cogcc.state.co.us/documents/library/AreaReports/PiceanceBasin/Rulison/Rulison%20Sampling%20and%20Analysis%20Plan%20Revision%204%20062217.pdf>

The email for Project Rulison submittals is

DNR_rulison.submittal@state.co.us

➤ ***Southwest Colorado***

◆ **Gas and Oil Regulatory Team (GORT) Meeting**

The next meeting of the Southwest Colorado Gas and Oil Regulatory Team (GORT) is scheduled for

Thursday, May 23 (9:00 a.m. - 12:00 p.m.)
Classroom # 120
Center of Southwest Studies Building
Fort Lewis College
Durango, CO

The GORT meeting agenda will be posted to the COGCC website approximately two weeks prior to

the meeting, and emailed to those on the email distribution list. The COGCC welcomes suggestions and input for speakers, topics, and meeting format.

As always, GORT stakeholders (operators, local governments, contractors, state and federal resource agencies, environmental groups, non governmental organizations, and others) are encouraged to provide updates. GORT meetings are open to the public, and a public comment period is held as part of each meeting.

All parties wishing to be placed on the next meeting agenda or added to the distribution list for announcements should contact Marc Morton at (303) 894-2100, ext. 5132 (direct), (720) 415-4959 (mobile), or by email:

marc.morton@state.co.us

◆ **Fruitland Formation Outcrop Mitigation and Monitoring Projects**

South Fork Texas Creek Mitigation Site - La Plata County. Regularly scheduled operations and maintenance are being performed at the South Fork Texas Creek (SFTC) site by LTE, the COGCC's contractor. Since May 2009, the system has collected 26,140 Mcf of methane and generated 291,686 kWh of surplus electricity.

The 2017 4M Monitoring Report has been posted to the COGCC website in the Library under San Juan Basin, 4M Project, 2017 4M Monitoring Report (2018 June).

Admin / Organization / Other

COGCC organizational charts can be found on Pages 9-12. For contact information, please go to the COGCC homepage and select "Contact Us" in the upper right corner of the page.

◆ **Orphaned Well Program (OWP) Project Updates**

Since January 28, the COGCC performed field work for the OWP projects described below. These projects relate either to "Orphaned" locations or wells for which there is no known responsible party, or they relate to Bond Claim projects for which sureties have been claimed.

Project summary tables are found on Pages 13-16. The projects are sorted first by county and then by the project name. The field work described below pertains to ongoing projects or to recently completed projects. The agency has prioritized work planned for FY19, although each project is subject to change as new conditions arise during the year.

The **Red Mesa Holdings Project** began with Commission Order 1V-508. The project involves 56 locations and 52 wells in La Plata County. Recent FY19 work included a Bradenhead test on one well that was temporarily abandoned with downhole plugs in FY18.



The **Hall #1 Project** is located in Larimer County. The well was drilled in 1931, and it formerly served as a source of domestic gas. Recent FY19 work included wireline tagging and commencement of plugging (first plug set to Temporarily Abandon the well).

The **Sheffer Jack #1 Project** is located in Larimer County. The well was drilled in 1948, and it served as a source of domestic gas until the well was plugged and the flowline was abandoned in December 2018. Recent FY19 work included reclamation of the wellsite.

◆ Colorado Oil and Gas Information System (COGIS) Projects, Updates and Changes

Electronic Form (eForm) Submissions

The COGCC uses 44 types of forms to authorize oil and gas operations, inspect and monitor ongoing operations, and receive reports of operations. Of those 44 forms, 28 are currently submitted electronically.

The electronic form development team continues to convert and revise existing forms and is currently working on Forms 14, 14A, and 29. To date in 2019, industry electronically submitted 99 percent of the forms available in eForms. There are 953 operator users of eForms and 4,035 individual users.

For any operator not currently enrolled in eForms, instructions for starting the process can be found on the COGCC website at:

<http://cogcc.state.co.us/Announcements/COUAINformation.pdf>

Applications and Location Assessments

The public can make comments on all submitted Applications for Permits to Drill (Form 2s) and Location Assessments (Form 2As) through the eForm system. Simply go to the COGCC website and click on the menu option “Permits” or

<http://cogcc.state.co.us/permits.html#/permits>

On the “Permits Search” page, three search options are available. The first option, “All Pending Permit Applications,” is used for public comments. When the results are displayed for “Pending Applications,” a user can click on the

document number hyperlink in the “Status” column, which logs him or her to the eForms 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.

Data Access

The COGCC’s database is a comprehensive repository of Colorado’s oil and gas data. The information in the database is available to the public through interactive search tools and a variety of file downloads on the website.

Users of bulk data come from many different sectors of the community, including academia, oil and gas operators, environmental groups, government agencies, and the media.

All the data file downloads are available at:

<http://cogcc.state.co.us/data2.html#/downloads>

Current Data File Downloads

- Complaints
- Field Operations
- Flowline NTO Imported Data
- GIS Shapefiles (12 files)
- Mechanical Integrity Tests
- Notices of Alleged Violation
- Production Data (1999 - present)
- Sample Data
- Spacing Orders
- Spills and Releases
- Analytical Sample Data (COENV Database)

Future Data File Downloads

- Enforcement Orders (OFVs and AOCs)
- Underground Injection Control (UIC) Data

COENV Database Update

The COENV database (active since 2012) is a publicly available, searchable database of groundwater, surface water, gas, and soil sample analytical results from throughout the state. COENV currently contains over 46,000 individual samples from 16,329 sample locations. In FY 2017 -18, the COGCC received data from 2,699 water



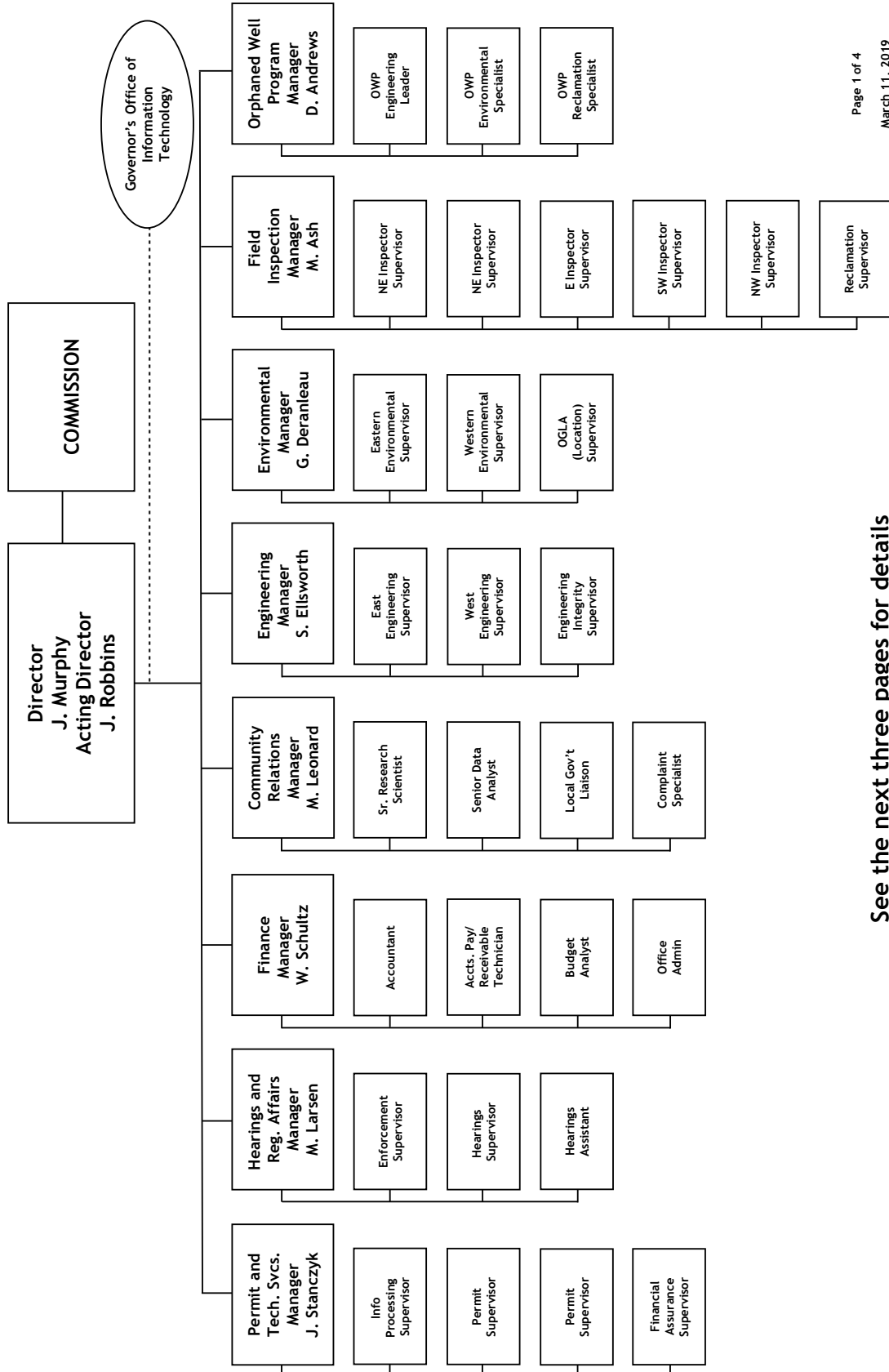
samples from 770 separate sample locations, and added them to the database.

The table on Page 28 reports the frequency of each reason for submission of a sample to the COENV database during the most recent 12 month period.



Organizational Charts and Statistics

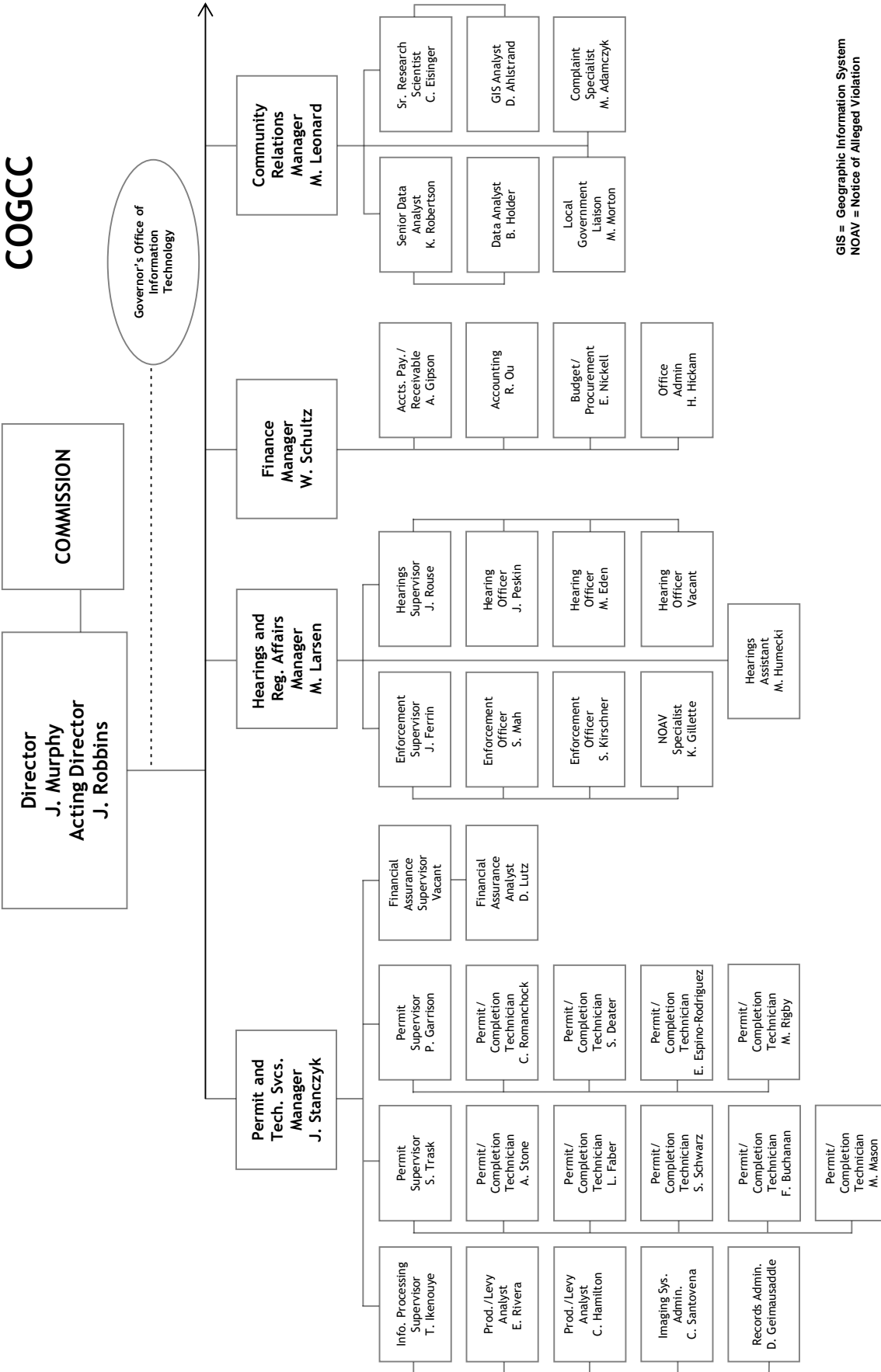
COLORADO OIL & GAS CONSERVATION COMMISSION



See the next three pages for details



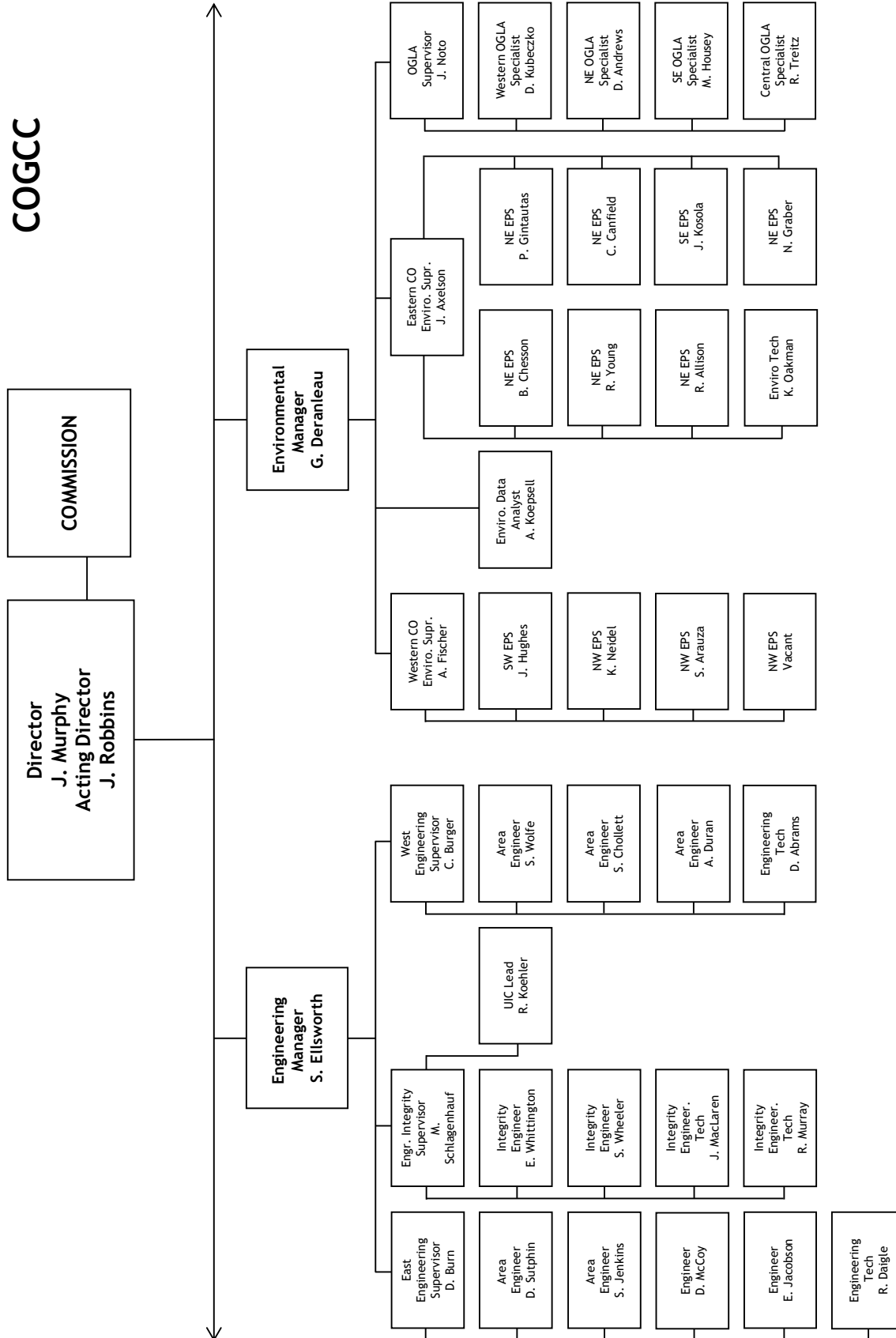
COGCC



GIS = Geographic Information System
NOAV = Notice of Alleged Violation

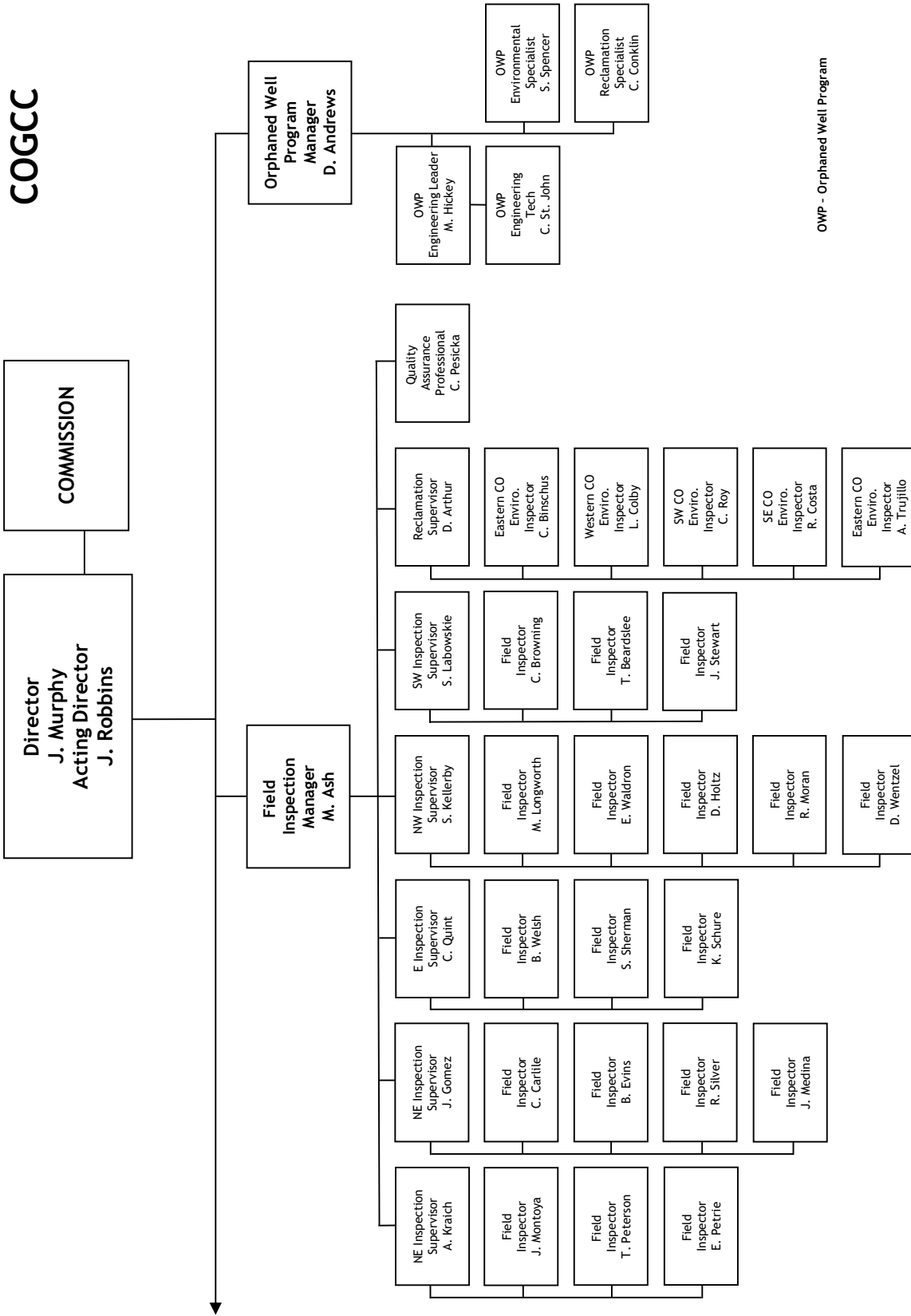


COGCC





COGCC



OWP - Orphaned Well Program



Orphaned Well Program

Active Task List

County	Project	Field Operations Task(s)	Engineering Task(s)	Environmental Task(s)	Reclamation Task(s)
Adams	Energy Search Bond Claim	■	■		
Adams	Ruth Bond Claim				■
Adams	Texas Tea Bond Claim	■	■	■	■
Adams	Tudex Petroleum Bond Claim	■	■		
Archuleta	Underwood Ditch Wells		■		
Baca	Falcon Seaboard - Chapman #1				■
Baca	Wallace Bond Claim				■
Cheyenne	Samotlor Bond Claim				■
Elbert	Coggins #10-5				■
Fremont	Florence-Canon City Field		■		■
Fremont	Hassler #1		■		■
Fremont	Pine Ridge Bond Claim				■
Jackson	CM Production Bond Claim			■	
Jefferson	Red Mountain Bond Claim				■
La Plata	Atom Petroleum Bond Claim		■		
La Plata	Hodges Pool Unit #1		■		
La Plata	K-F #1				■
La Plata	McCullough #4		■		■
La Plata	Red Mesa Holdings Bond Claim	■	■	■	■
La Plata	Reynolds* Noel Bond Claim		■	■	
La Plata	Stewart #1		■		
La Plata	Taylor* William Bond Claim		■		
La Plata	Wheeler #2				■
Larimer	Hall #1		■		■
Larimer	Ranchers Bond Claim				■
Larimer	Sheffer Jack #1				■
Lincoln	Kelly Oil - State #1		■		■
Lincoln	Nolte Bond Claim				■
Lincoln	Pine Ridge Bond Claim				■
Logan	Arco - Sindt #4 Lease			■	■
Logan	Benchmark Energy Bond Claim	■	■	■	■
Logan	CM Production Bond Claim				■
Logan	Donnelly Bond Claim	■	■	■	
Logan	J&L Oil Corp - North Shore Field				■
Logan	Red Mountain Bond Claim	■	■	■	■
Logan	Simms #1				■
Mesa	Buckeye #2				■
Mesa	Canfield #1		■	■	
Mesa	Curtis - Mann #1		■		
Mesa	DB Orphan #8			■	
Mesa	DB Orphan Ballpark #7				■
Mesa	DB Orphan Blair #1				■
Mesa	DeBeque #1		■		
Mesa	Flushwell #1		■		
Mesa	Geowell #1		■		
Mesa	Govt-Baker #1-A		■		
Mesa	Lloyd and Lowell #1			■	
Moffat	Texaco - Moffat Field		■	■	
Moffat	Vitruvian Exploration Bond Claim				■
Montezuma	Atom Petroleum Bond Claim	■			
Montezuma	Federal #13-6				■
Montezuma	Pilcher #1			■	
Montezuma	Wosley Oil - State #1-36				■
Montezuma	Wosley Oil Bond Claim		■		■
Montrose	Redwine Bond Claim				■
Morgan	Dyer* J G - Plainsman Field		■		■


**Orphaned Well Program
Active Task List**

Page 2 of 2

County	Project and Task	Field Operations Task(s)	Engineering Task(s)	Environmental Task(s)	Reclamation Task(s)
Morgan	Lamborn #1		■		■
Morgan	Timpe #1				■
Rio Blanco	Petrohunter Bond Claim	■	■		■
Rio Blanco	Unknown Operators - Rangely Field				■
Rio Grande	Faith Energy Bond Claim				■
Routt	Pine Ridge Bond Claim				■
San Miguel	Suckla #1		■		
Statewide	Various Projects	■			
Washington	CM Production Bond Claim	■	■	■	■
Washington	Energy Search Bond Claim	■			
Washington	Northstar Gas Bond Claim		■		
Washington	Vondy #3		■		
Weld	General Resources Ltd				■
Weld	P&M Petroleum Management Bond Claim			■	■
Weld	Porter #3				■
Weld	Severin & Co #1			■	
Weld	Texas Tea Bond Claim		■	■	
Weld	Tudex Petroleum Bond Claim	■			
Yuma	Midfields Oil - State #1				■

Notes:

Field Operations Tasks may include but are not limited to: Site Security, Equipment Intervention (draining, cleaning, and fluid management), or Equipment Salvage, including Hauling

Engineering Tasks may include but are not limited to: Engineering Design (site access for heavy equipment), Mechanical Integrity Tests or Other Well Work, Well Plugging, or Flowline Abandonment

Environmental Tasks may include but are not limited to: Sampling and Analysis, Remediation of Spills/Releases, or Pit Closure

Reclamation Tasks may include but are not limited to: Grading, Contouring, Stormwater Controls (BMPs), Seeding, and Weed Control



**Orphaned Well Program
Active Bond Claims**

Project	Order Number(s)	Total Bond Claim	Remaining Bond Balance
Atom Petroleum Bond Claim	1V-586	\$ 60,000	\$ 12,793
Benchmark Energy Bond Claim	1V-564	\$ 620,000	\$ 394,249
CM Production Bond Claim	1V-581	\$ 67,849	\$ -
Dolphin Bond Claim	1V-382	\$ 55,000	\$ -
Donnelly Bond Claim	1V-659	\$ 20,106	\$ 20,106
Energy Search Bond Claim	1V-636	\$ 60,000	\$ 49,832.42
Nolte Bond Claim	1V-582	\$ 61,838	\$ 61,838
Northstar Gas Bond Claim	1V-642, BLM (Fee and Fed)	\$ 30,000	\$ 30,000
P&M Petroleum Management Bond Claim	1V-520	\$ 61,239	\$ 61,239
Petrohunter Bond Claim	1V-608	\$ 62,573	\$ 57,787
Pine Ridge Bond Claim	1V-622	\$ 85,000	\$ 39,309
Ranchers Bond Claim	1V-526	\$ 63,424	\$ -
Red Mesa Holdings Bond Claim	1V-508	\$ 72,831	\$ -
Red Mountain Bond Claim*	1V-549, SLB	\$ 92,015	\$ 10,515
Redwine Bond Claim	1V-470, 1V-494	\$ 30,000	\$ -
Reynolds* Noel Bond Claim	1V-374, 1V-375	\$ 30,000	\$ 29,159
Taylor* William Bond Claim	1V-647	\$ 10,000	\$ 9,883
Texas Tea Bond Claim	1V-573	\$ 71,850	\$ -
Tudex Petroleum Bond Claim	1V-646	\$ 62,470	\$ 4,094.80
Vitruvian Exploration Bond Claim	1V-514	\$ 30,000	\$ 20,990
TOTALS ->		\$ 1,646,195	\$ 801,796

Note: Red Mountain Bond Total Claim Amount includes \$24,169 bankruptcy deposit and \$5,000 State Land Board deposit (bond transfer)



Orphaned Well Program
Project Financials for Fiscal Year 2018-19

Project Name	BOND Actual	PROW Actual	EMGY Actual	Subtotals Actual
Benchmark Energy Bond Claim	\$ 70,190	\$ -	\$ -	\$ 70,190
Canfield #1	\$ -	\$ 1,369	\$ -	\$ 1,369
CM Production Bond Claim	\$ -	\$ 2,761	\$ -	\$ 2,761
DB Orphan #8	\$ -	\$ 1,957	\$ -	\$ 1,957
Energy Search Bond Claim	\$ 2,391	\$ -	\$ -	\$ 2,391
General Resources Ltd	\$ -	\$ 3,005	\$ -	\$ 3,005
Hall #1	\$ -	\$ 7,565	\$ -	\$ 7,565
Koenig-Ashby #1	\$ -	\$ 1,290	\$ -	\$ 1,290
Lloyd and Lowell #1	\$ -	\$ 3,384	\$ -	\$ 3,384
Pine Ridge Bond Claim	\$ 3,200	\$ -	\$ -	\$ 3,200
Ranchers Bond Claim	\$ -	\$ 4,717	\$ -	\$ 4,717
Red Mesa Holdings Bond Claim	\$ -	\$ 963	\$ -	\$ 963
Redwine Bond Claim	\$ -	\$ 35,582	\$ -	\$ 35,582
Sheffer Jack #1	\$ -	\$ 51,520	\$ -	\$ 51,520
Texaco - Moffat Field	\$ -	\$ 4,807	\$ -	\$ 4,807
Texas Tea Bond Claim	\$ -	\$ 24,486	\$ -	\$ 24,486
TOTAL EXPENDITURES ->	\$ 75,781	\$ 143,406	\$ -	\$ 219,186

ABBREVIATIONS:

EMGY = Emergency Response Appropriation

PROW = Plugging and Reclaiming Orphaned Wells Appropriation



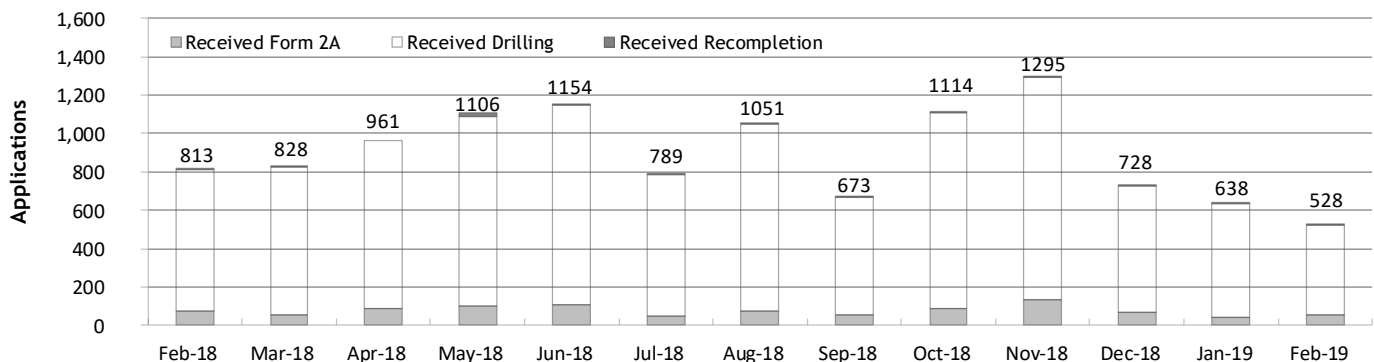
Monthly Permit Activity as of March 1, 2019

Form/Month	Backlog	Received	Approved	Withdrawn	Rejected	Incomplete ¹	In-Process	Remaining ²
Form2A								
Feb-18	254	73	22	5	1	45	254	299
Mar-18	299	56	50	5	0	52	248	300
Apr-18	300	87	25	8	1	60	293	353
May-18	353	98	46	10	0	74	321	395
Jun-18	395	109	51	5	5	65	376	443
Jul-18	441	50	44	7	2	65	372	438
Aug-18	437	71	53	5	0	72	378	450
Sep-18	450	56	38	5	4	61	398	459
Oct-18	459	90	52	4	6	61	429	487
Nov-18	490	135	81	7	3	55	480	534
Dec-18	535	67	83	5	2	55	456	511
Jan-19	511	43	34	8	3	59	451	510
Feb-19	510	52	36	8	0	61	457	518
Drilling								
Feb-18	2,639	736	217	34	45	99	2,980	3,079
Mar-18	3,079	769	463	1	8	98	3,278	3,376
Apr-18	3,376	874	164	185	64	104	3,733	3,837
May-18	3,837	994	327	54	89	91	4,332	4,361
Jun-18	4,423	1,040	436	81	56	59	4,839	4,890
Jul-18	4,898	738	466	58	73	61	4,979	5,039
Aug-18	5,040	978	392	30	45	62	5,489	5,551
Sep-18	5,551	613	435	77	24	92	5,536	5,628
Oct-18	5,628	1,017	596	39	9	80	5,922	6,001
Nov-18	6,002	1,158	715	132	18	101	6,206	6,295
Dec-18	6,307	659	687	73	31	102	6,047	6,149
Jan-19	6,149	592	244	95	26	109	6,267	6,376
Feb-19	6,376	471	307	65	32	162	6,282	6,444
Recompletion								
Feb-18	22	4	3	0	0	9	14	23
Mar-18	23	3	8	0	0	10	8	18
Apr-18	18	0	3	0	0	9	6	15
May-18	15	14	3	0	0	9	17	26
Jun-18	26	5	4	0	0	9	18	27
Jul-18	27	1	11	0	0	8	9	17
Aug-18	17	2	1	0	0	8	10	18
Sep-18	18	4	0	0	0	8	14	22
Oct-18	22	7	0	0	0	8	21	29
Nov-18	29	2	4	0	0	8	19	27
Dec-18	27	2	0	0	0	4	25	29
Jan-19	29	3	2	0	0	3	27	30
Feb-19	30	5	2	0	0	3	30	33

¹ Incomplete are applications that have missing or inaccurate data and cannot be approved.

² Backlog = Incomplete + In-process = Remaining permits from previous month.

Received Applications




Status of Permit Applications Filed By Month as of March 1, 2019
Form 2A Location Assessment

Year	Month	Received	Approved	Withdrawn	In Process	Percent In Process	Average			
							Days to Process	Less Than 30 Days	30 to 49 Days	Greater Than 50 Days
2013	TOTAL	1,281	1,202	78	1	0%		369	433	400
2014	TOTAL	1,114	1,067	47	0	0%		279	429	359
2015	TOTAL	592	564	26	2	0%		78	157	329
2016	TOTAL	407	376	27	2	0%		32	61	283
2017	TOTAL	607	508	48	49	8%		58	113	337
2018	JAN	65	42	7	16	25%	160	2	6	34
	FEB	73	53	8	12	16%	123	5	10	38
	MAR	56	41	4	10	18%	84	3	14	24
	APR	87	66	4	14	17%	123	3	10	53
	MAY	98	50	2	44	46%	105	0	11	39
	JUNE	109	50	9	47	44%	106	4	7	39
	JULY	50	28	3	19	38%	90	1	8	19
	AUG	71	38	2	25	37%	77	1	9	28
	SEP	56	38	2	13	25%	62	2	10	26
	OCT	90	41	0	48	54%	65	2	14	25
	NOV	135	60	9	65	49%	45	7	40	13
	DEC	67	3	4	58	89%	47	0	2	1
2018	TOTAL	957	510	54	371	39%		30	141	339
2019	JAN	43	1	1	41	95%	26	1	0	0
	FEB	52	0	0	52	100%	0	0	0	0
2019	TOTAL	95	1	1	93	98%	26	1	0	0

Form 2 Application For Permit to Drill (APDs)

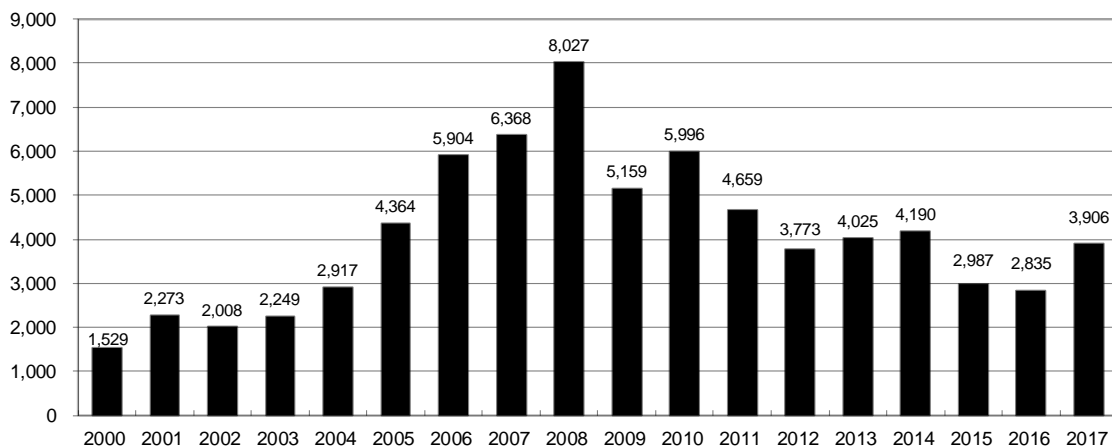
Year	Month	Received	Approved	Withdrawn	In Process	Percent In Process	Average			
							Days to Process	Less Than 30 Days	30 to 49 Days	Greater Than 50 Days
2013	TOTAL	4,548	4,312	235	1	0%		1,046	1,626	1,714
2014	TOTAL	4,208	4,026	182	0	0%		689	1,629	1,744
2015	TOTAL	3,237	3,091	146	0	0%		249	759	2,113
2016	TOTAL	3,253	3,027	145	23	1%		204	402	2,443
2017	TOTAL	5,548	4,238	542	609	11%		194	599	3,485
2018	JAN	639	422	43	137	23%	173	10	47	371
	FEB	735	413	91	197	28%	136	18	84	315
	MAR	769	452	32	219	31%	153	15	68	372
	APR	874	511	36	281	34%	128	25	75	411
	MAY	995	503	53	414	43%	117	2	37	476
	JUNE	1040	476	72	434	43%	120	11	83	387
	JULY	738	275	1	442	62%	99	8	45	222
	AUG	978	482	33	450	47%	103	13	65	406
	SEP	613	285	15	301	50%	76	7	54	224
	OCT	1018	331	26	644	64%	76	14	87	231
	NOV	1158	319	146	667	59%	44	31	214	74
	DEC	659	46	26	587	89%	46	9	12	25
2018	TOTAL	10,216	4,515	574	4,773	47%		163	871	3,514
2019	JAN	592	17	4	571	96%	27	5	12	0
	FEB	471	4	0	467	99%	3	4	0	0
2019	TOTAL	1063	21	4	1038	98%	30	9	12	0



Annual Drilling Permits by County as of March 1, 2019

County	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ADAMS	34	37	89	51	35	21	8	40	40	51	96	74	125	341	20
ARAPAHOE	7	11	10	10	10	8	23	35	23	34	19	5	78	112	16
ARCHULETA	13	14	26	47	11	18	12	5	4	3	11	3	21	40	
BACA	8	2	11	13	3	4	5	3	1	1			5	2	
BENT	3	8	1	1		5		2	1						
BOULDER	13	21	37	32	35	24	30	22							
BROOMFIELD	1	1		2	33	28	11	36		31				71	
CHEYENNE	10	21	15	33	12	13	16	31	50	26	9		1	1	
COSTILLA															
CROWLEY										2			3		
DELTA	10	9	2			4	3	6	1	2					
DENVER		19	25	24											
DOLORES	1	6	10	12	21	8	8	13	12	3		3	2	1	
EAGLE									1						
ELBERT		4			1		1	2	2	4	3	3	1		
EL PASO					2	3	3	18	1	2					
FREMONT	3	2	4	14	13	22	14	11	2	8	2	2	1	3	
GARFIELD	1,509	1,845	2,550	2,888	1,981	2,037	1,323	1,046	870	1,066	532	724	612	702	18
GRAND															
GUNNISON	9	19	7	10	12	4	3	11	9	20	28	19	33	24	
HUERFANO	2			7		2	1	9	1	13	2		2		
JACKSON	6	8	5	27	19	9	18	5	12	17	3	57	28	23	5
JEFFERSON		1	3	2					1						
KIOWA	1	11	9	26	7	16	17	17	12	5	3		3	2	
KIT CARSON	5	4	4	13	7	3	2	6	1	2		1			
LA PLATA	115	235	251	328	298	191	99	71	32	87	106	96	108	99	
LARIMER	1		5	46	12	41	8	13	2	4	28	4	30	2	
LAS ANIMAS	413	500	362	303	88	92	85	11	2	1					
LINCOLN	4	1	2	58	44	48	31	36	87	129	24	5	31	24	3
LOGAN	13	17	14	5	9	17	8	27	4	5		1	3	2	
MESA	136	265	293	501	427	306	127	150	105	74	126	7	215	64	
MOFFAT	60	120	68	57	51	53	93	88	44	54	12	17	5	4	
MONTEZUMA	11	5	12	22	39	19	27	29	14	25	3	3	6	3	1
MONTROSE		1	3	3		1	1								
MORGAN	7	3	6	2	1	6	13	5	16	6	4	28		4	
OTERO															
PARK					3	4	1								
PHILLIPS	17	12	69	82	45	64	112	56		11	2				
PITKIN			1								1				
PROWERS	5	7	5	8	1	3	1			1		1			
RIO BLANCO	161	360	321	477	348	441	109	117	167	121	107	71	115	83	14
RIO GRANDE				1	1			2		1					
ROUTT	6	9	8	4	2	3	10	4	12	4	9				
SAGUACHE			2	1	2										
SAN JUAN															2
SAN MIGUEL	45	35	23	20	13	10	2	1		2	3				
SEDGWICK	2	7	2	1	19	11	12	2		7	1				
WASHINGTON	50	69	45	11	1	6	12	6	19	12	9	7	10	11	2
WELD	901	1,418	1,527	2,340	1,448	2,152	2,262	1,826	2,468	2,303	1,841	1,704	2,466	3,496	472
YUMA	782	797	541	545	105	299	148	11	9	53	3		2		
TOTAL	4,364	5,904	6,368	8,027	5,159	5,996	4,659	3,773	4,025	4,190	2,987	2,835	3,906	5,116	551

ALL COUNTIES





Form 2A Breakdown By County By Year as of March 1, 2019

Year	County	Form 2As	Completed	In Process	New Location	CDP	SWH	RSO	CDPHE
2009	Total State	818	818	0	408	2	80	5	5
2010	Total State	2,377	2,377	0	1,543	0	317	22	55
2011	Total State	2,297	2,297	0	1,724	1	259	16	5
2012	Total State	1,297	1,297	0	900	0	167	6	1
2013	Total State	1,195	1,194	1	845	0	144	2	4
2014	Total State	1,067	1,065	0	776	3	129	7	3
2015	Total State	574	569	3	398	0	95	2	2
2016	Total State	393	379	1	219	0	49	4	7
2017	Total State	588	503	61	399	0	72	4	1
2018	ADAMS	36	11	25	22	0	0	0	0
	ARAPAHOE	24	8	16	15	0	0	0	0
	ARCHULETA	5	5	0	4	0	4	0	0
	BACA	4	1	3	4	0	4	1	0
	BOULDER	3	0	3	3	0	0	0	0
	BROOMFIELD	6	5	0	6	0	0	0	0
	CHEYENNE	1	1	0	0	0	0	0	0
	DOLORES	2	1	1	2	0	2	0	0
	FREMONT	1	1	0	1	0	1	0	0
	GARFIELD	53	45	8	17	0	41	1	1
	GUNNISON	3	3	0	0	0	2	0	0
	JACKSON	7	6	1	3	0	7	0	0
	KIOWA	2	2	0	1	0	0	0	0
	LA PLATA	7	5	2	0	0	5	0	0
	LARIMER	9	2	7	5	0	0	0	0
	LINCOLN	43	31	12	39	0	0	0	0
	LOGAN	2	2	0	1	0	0	0	0
	MESA	4	4	0	2	0	0	0	0
	MOFFAT	2	2	0	2	0	0	0	0
	MONTEZUMA	5	5	0	3	0	0	0	0
	MORGAN	1	1	0	0	0	0	0	0
	RIO BLANCO	10	5	5	5	0	8	0	1
	WASHINGTON	18	14	4	18	0	0	0	0
	WELD	630	343	274	475	60	8	0	0
	YUMA	3	0	3	2	0	0	0	0
2018	Total State	881	503	364	630	60	82	2	2
2019	ADAMS	5	0	5	2	0	0	0	0
	ARAPAHOE	2	0	2	2	0	0	0	0
	CHEYENNE	1	0	1	0	0	0	0	0
	GARFIELD	7	0	7	7	0	7	0	0
	JACKSON	6	0	6	2	0	6	0	0
	KIOWA	2	0	2	2	0	2	0	0
	LINCOLN	2	0	2	2	0	0	0	0
	RIO BLANCO	1	0	1	1	0	1	0	0
	WELD	63	1	62	52	0	3	1	0
2019	Total State	89	1	88	70	0	19	1	0

Abbreviations:

CDP = Comprehensive Drilling Plan SWH = Sensitive Wildlife Habitat consultation

RSO = Restricted Surface Occupancy consultation CDPHE= Colorado Department of Health and Environment consultation



Horizontal Well Activity as of March 1, 2019

County	Prior Years		2009-2012		2013		2014		2015		2016		2017		2018		2019		Total		Completion			
	Drilled	PA	Permit	Spud	Permit	Spud	Permit	Spud	Permit	Spud	Permit	Spud	Permit	Spud	Permit	Spud	Permit	Spud	Spud	AC	PR	DA	PA	
ADAMS			26	10	1	1	42	18	92	3	72	2	125	28	341	90	20	2	153	3	21		1	
ARAPAHOE	2		32	5	11	13	22	11	9		5	1	77	15	110	24	16	8	74	2	34		3	
ARCHULETA	17		37	30	2	2	1		6	3	2	1	17	2	27	5		63		56				
BENT			1	1														1						
BOULDER			4																					
BROOMFIELD															71				4		2		5	
CHEYENNE	5	4	6	3	1	2	1	1	1	1								2			2			
DELTA			33	5	5	4	3	1										18			12		5	
DOLORES	9		10																					
EL PASO			1																				1	
ELBERT																								
FREMONT	7	6	25	10	1	1			1									10			9		7	
GARFIELD	10	2	78	15	18	4	20	11	12	7	4		11		1	1		43			41		2	
GUNNISON	1		4	2	2	2	9		18	2	10	1	24	1	19	1		8			7			
HUERFANO			4	1			2		4									1						
JACKSON	8	1	24	5	8	5	15	4	3		52	24	24	9	20	13	4	1	67		21		5	
KIOWA			1		4	2	1											2					1	
KIT CARSON	1		1		1	1												2					4	
LA PLATA	28	2	69	13	5	1	43	7	42	3	67	8	83	6	70	3		96			95		3	
LARIMER	3	2	7	2	2	2			22	8	4	3	29	25	2	2		42			27		1	
LAS ANIMAS	16	2	5	1														16			16			
LINCOLN			5	2	6		4	2										4			1		3	
LOGAN	2		1															2			2			
MESA	3	2	96	20	9	2	9	1	6	3					3			30			28		4	
MOFFAT	7	1	63	13	18	13	15	1	5	2	3	1	3		3			36			19		12	
MONTEZUMA	6	1	60	16	3	4	15	2	4		28							36			29		8	
MORGAN			8	3	13	1	6		4	1								5			5			
PARK			2	1														1						
RIO BLANCO	7	2	27	5	4	5	3	2	3				9		5	1		18			12		3	
ROUTT	10	6	1		1				3									1			1		1	
SAN MIGUEL	1		1															1					1	
WASHINGTON	1	1																1					1	
WELD	11	3	1,947	912	2,114	1,099	2,215	1,423	1,789	1,063	1,671	723	2,435	1,248	3,482	1,220	466	297	7,999		5,750	13	106	
YUMA	1	1	6															1					1	
TOTAL Horizontal	156	25	14	2,584	1,075	2,260	1,160	2,428	1,484	2,016	1,096	1,918	764	2,837	1,334	4,154	1,360	506	308	8,737	5	6,191	34	167
Percent of Total HZ	16%	9%																		0%	71%	0%	2%	
Total All Permits			19,587		4,025		4,190		2,988		2,835		3,875		5,116		551							
HZ Percent of Total			13.2%		56.1%		57.9%		67.5%		67.7%		73.2%		81.2%		91.8%							



Well to Building Setbacks by Year and by County as of March 1, 2019

Count of well locations, grouped by proximity from well to buildings.

Location Proximity to Buildings	2012	2013	2014	2015	2016	2017	2018	2019	Number of Locations Since 2009	Percent of Total Locations
Less than 150 feet	2	0	3	2	0	0	1	0	16	0%
150 to 350 feet	39	34	38	12	15	16	7	2	319	3%
350 to 500 feet	61	65	48	33	23	24	23	4	538	5%
500 to 1000 feet	188	188	161	83	76	90	84	11	1,714	17%
1000 + feet	838	761	724	380	206	318	406	55	7,220	74%
TOTAL LOCATIONS	1,128	1,048	974	510	320	448	521	72	9,807	

County	TOTAL	Less than 150 feet	150 to 350 feet	350 to 500 feet	500 to 1000 feet	1000 + feet
ADAMS	122	0	4	9	29	80
ARAPAHOE	136	0	2	5	11	118
ARCHULETA	32	0	2	1	15	14
BACA	19	0	0	0	1	18
BENT	7	0	0	0	0	7
BOULDER	23	0	1	1	17	4
BROOMFIELD	38	0	0	4	17	17
CHEYENNE	141	1	0	0	2	138
CROWLEY	5	0	0	0	0	5
DELTA	7	0	0	2	1	4
DOLORES	23	0	0	0	7	16
EAGLE	1	0	0	0	0	1
EL PASO	14	0	0	0	3	11
ELBERT	15	0	0	0	3	12
FREMONT	42	0	2	7	9	24
GARFIELD	648	0	13	11	84	540
GUNNISON	53	1	0	5	1	46
HUERFANO	16	0	0	0	5	11
JACKSON	70	0	1	5	1	63
KIOWA	68	0	0	0	1	67
KIT CARSON	15	0	0	0	0	15
LA PLATA	157	0	8	16	49	84
LARIMER	43	0	5	5	16	17
LAS ANIMAS	201	1	6	7	37	150
LINCOLN	426	0	1	2	5	418
LOGAN	47	0	1	1	1	44
MESA	120	0	0	3	18	99
MOFFAT	191	0	1	3	16	171
MONTEZUMA	51	0	0	1	4	46
MONTROSE	2	0	0	0	0	2
MORGAN	35	0	0	2	5	28
PARK	4	0	0	0	0	4
PHILLIPS	275	1	4	6	21	243
PITKIN	1	0	0	0	0	1
PROWERS	6	0	0	0	0	6
RIO BLANCO	200	0	0	0	2	198
RIO GRANDE	2	0	0	0	1	1
ROUTT	30	0	0	0	2	28
SAN MIGUEL	14	0	0	0	0	14
SEDGWICK	33	0	0	1	3	29
WASHINGTON	100	0	2	0	7	91
WELD	5,835	12	256	425	1,274	3,867
YUMA	529	0	9	16	45	459



Well to Building Setbacks Less Than Two Hundred Feet as of March 1, 2019

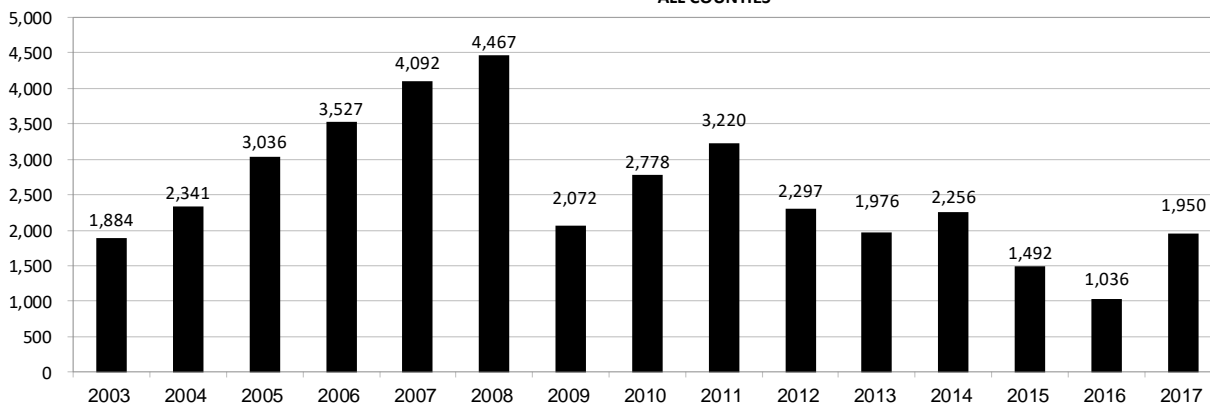
Year	Location Doc Number	County	High Density	New Location	Distance (Feet)	Proximity (Feet)	Building Description
2015	400768804	WELD	No	Yes	46	less 150	Building to be razed
2011	2587822	CHEYENNE	No	No	58	less 150	Water well house
2009	1691798	WELD	No	No	58	less 150	Vehicle garage
2010	400072164	WELD	No	Yes	69	less 150	Abandoned hog shed
2014	400569085	WELD	No	No	78	less 150	Well shed
2014	400600705	WELD	No	No	80	less 150	Livestock shed
2012	400240957	GUNNISON	No	Yes	90	less 150	Equipment shed
2015	400742811	WELD	No	Yes	102	less 150	Building to be razed
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
2018	401546143	WELD	No	Yes	132	less 150	Turkey barn to be removed
2014	400642113	WELD	No	Yes	142	less 150	Barn
2011	400117702	WELD	No	Yes	143	less 150	Irrigation pump house
2011	400227765	WELD	No	Yes	145	less 150	Storage barn
2014	400558626	LINCOLN	No	No	150	less 150	Gas plant equipment building
2009	1904205	WELD	No	No	154	150 to 350	Livestock enclosure
2012	400243295	WELD	No	Yes	155	150 to 350	Unused storage shed
2015	400862577	GARFIELD	No	No	155	150 to 350	Gravel pit scale house
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
2014	400554054	WELD	No	Yes	159	150 to 350	Equipment shed
2014	400559404	WELD	No	Yes	160	150 to 350	Barn
2016	400950178	LA PLATA	No	Yes	162	150 to 350	Residence
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
2013	400447386	WELD	No	No	169	150 to 350	Abandoned turkey barn
2013	400447391	WELD	No	No	169	150 to 350	Abandoned turkey barn
2011	400165164	WELD	No	Yes	178	150 to 350	Residence
2013	400367184	WELD	No	Yes	179	150 to 350	Shed
2011	400188780	WELD	No	Yes	180	150 to 350	Residence
2014	400562498	WELD	No	Yes	181	150 to 350	Garage / storage shed
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
2010	1774783	WELD	No	No	199	150 to 350	Cement service building
2011	400118102	YUMA	No	Yes	199	150 to 350	Steel barn



Annual Well Starts by County as of March 1, 2019

County	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ADAMS	25	32	24	12	41	14	14	21	2	15	5	29	3	2	29	89	2
ARAPAHOE		8	1	5	2	1	1	3	8	9	25	21		1	17	22	8
ARCHULETA	5	4	10	5	7	29	9	12	10	11		1	7	4	5	24	
BACA	2	6	6	2	6	12		5	4	2	2		1		2	1	
BENT		4	2	8	1	1			1	2							
BOULDER	2	5	11	9	14	25	16	13	7	14							
BROOMFIELD	6	1				10		21	11	5							
CHEYENNE	3		9	13	15	14	8	12	11	17	35	19	3				
CROWLEY												2			1		
DELTA	9	4	6	5	2			7	3	3		1					
DENVER				7	5	4											
DOLORES		1		2	16	6	2		1	5	10	4			1	1	
EAGLE											1						
EL PASO								2		5		1					
ELBERT				1									3		1		
FREMONT		1	3	2	3	6	3	9	16	9	2	6		2	1	2	
GARFIELD	473	644	800	980	1,308	1,690	765	906	877	495	391	361	174	160	308	274	38
GUNNISON	8	1	1	9	5	1	4	5	4	4	1	2	4	1	7	2	
HUERFANO	4	6	2			2		2		2	1	4	1				
JACKSON	11	14	2	3	3	12	1	8	8		7	7		23	13	13	1
JEFFERSON					2												
KIOWA	4	2	1	7	6	2	5	15	14	10	12	3	2				
KIT CARSON	1	1	6	2	1	14	3	1	1	3	1	2			1		
LA PLATA	113	107	107	108	182	205	131	67	54	3	10	40	42	44	100	39	
LARIMER			1		4	8	1	28	2	10	4	1	9	3	25	2	
LAS ANIMAS	233	302	387	415	326	222	14	7	78	1		1					
LINCOLN	6	2	2	1	2	18	11	14	21	23	41	42	12	2	12	16	3
LOGAN	3	2	11	12	13	3	7	3	9	13	4	6				1	
MESA	20	34	88	156	211	225	14	11	41	4	11	17	77	4	124	93	5
MOFFAT	50	32	43	61	47	26	18	15	32	26	27	3	6	3	1		
MONTEZUMA	7	4	12	4	17	22	10	3	8	18	12	8	1		2	2	1
MONTROSE	4	2			1	2		1									
MORGAN	7	5	5	3	4	1	2	3	2	3	1	3	1			4	
PARK								2									
PHILLIPS	6	12	15	4	35	18	2	42	130	48		9					
PITKIN		1															
PROWERS		6	5	6	3	5	2	3	1				1				
RIO BLANCO	138	103	98	110	101	205	118	107	71	54	36	43	17		5	21	2
RIO GRANDE											1						
ROUTT		1	5	3	2		2	1	2	4	2	2					
SAGUACHE																	
SAN MIGUEL	19	30	13	20	18	5	1	2	2			2					
SEDGWICK	1	4	1	1	5			3	8	3			1				
WASHINGTON	32	123	37	23	14	11	2	2	4	1	9	7	2	6	8	7	
WELD	571	674	723	933	1,223	1,312	878	1,209	1,671	1,459	1,312	1,570	1,125	781	1,287	1,228	300
YUMA	121	163	599	595	447	336	28	213	106	16	13	39	0	0	0	1	0
TOTAL	1,884	2,341	3,036	3,527	4,092	4,467	2,072	2,778	3,220	2,297	1,976	2,256	1,492	1,036	1,950	1,842	360

ALL COUNTIES





Active Wells by County and Status as of March 1, 2019

County	Drilling	Domestic	Injecting	Producing	Shut In	Temp Aband	Waiting on Completion	Active Storage	Total Active Wells
ADAMS	69		6	470	383	36	1	12	977
ARAPAHOE	23	1	4	88	71	10		43	240
ARCHULETA	7	5	2	110	16	15	6	1	162
BACA	1		16	82	33	3		56	191
BENT		1		18	8	6			33
BOULDER				250	42	3			295
BROOMFIELD				59	31	1			91
CHEYENNE			41	280	33	50	1		405
CROWLEY									
DELTA				1	14	1			16
DENVER					44	3	3		50
DOLORES			1	28	11				40
EL PASO		1				2			3
ELBERT				30	37	3		1	71
FREMONT	2	3		55	11	6	2		79
GARFIELD	220	2	42	10,978	368	82	48	1	11,741
GUNNISON	2		2	26	14	6	2		52
HUERFANO			1	37	3	3			44
JACKSON	17		26	92	77		1		213
JEFFERSON					1		1	3	5
KIOWA			12	81	17	10	2		122
KIT CARSON		1		8	5	2			16
LA PLATA	5	7	33	2,973	209	28	2	38	3,295
LARIMER		1	21	114	92	21			249
LAS ANIMAS	1	4	18	2,610	138	102	10	20	2,903
LINCOLN	11	1	11	86	23	6			138
LOGAN	2		25	86	32	36		28	209
MESA	47	1	7	1,009	148	34	4	11	1,261
MOFFAT	2		10	385	96	45	4		542
MONTEZUMA	1	2	7	101	34	12			157
MONTROSE								1	1
MORGAN			18	49	123	30		94	314
OURAY		1				1			2
PARK									
PHILLIPS			3	70	197	1			271
PITKIN								10	10
PROWERS				18	7	2			27
RIO BLANCO	45	2	298	2,003	354	167	6	2	2,877
ROUTT		2		22	10	2			36
SAN MIGUEL	1			69	44	15			129
SEDGWICK	2	1	1	4	11		2		21
WASHINGTON	4		24	367	52	8	1		456
WELD	1,248	1	51	12,976	6,692	724	21	3	21,716
YUMA	3	9	20	3,631	147	10	12	1	3,833
Totals	1,713	46	700	39,266	9,628	1,486	129	325	53,293



Monthly Statistics as of March 1, 2019

Page 1 of 2

YEAR and MONTH	Baker - Hughes Rig Count	Permits										Well Spud Notices	Active Drilling Permits	Active Wells	Public Visits			
		Drilling		Recompletion		Injection		Pits		Locations					Data	Office	Internet	
		Rcvd	Apvd	Rcvd	Apvd	Rcvd	Apvd	Rcvd	Apvd	Rcvd	Authz							
2011 TOTAL		4,709	4,659	325	320	44	32	190	192	2,382	2,267	3,220			187	1,294	1,337,865	
2012 TOTAL		3,982	3,773	154	168	63	44	114	84	1,373	1,293	2,297		159	1,305	1,324,443		
2013 TOTAL		4,481	4,028	74	72	67	63	67	106	1,268	1,213	1,976		92	1,456	511,734		
2014 TOTAL		4,223	4,191	37	34	48	48	82	45	1,113	1,115	2,255		130	1,682	521,685		
2015 TOTAL		3,505	2,988	33	33	28	54	38	17	581	557	1,476		73	1,489	339,080		
2016 TOTAL		3,395	2,832	20	16	45	37	62	19	417	353	1,036		41	1,339	325,117		
2017 JAN	28	442	211	8	2	2	2	0	0	42	25	139	4,492	54,111	6	79	28,702	
FEB	26	701	263	2	4	4	3	0	0	62	38	142	4,543	54,194	1	97	27,715	
MAR	28	510	423	2	2	7	4	3	24	71	48	200	4,714	54,322	1	152	31,952	
APR	29	352	301	5	4	3	7	1	2	41	54	131	4,635	54,369	1	103	30,406	
MAY	31	307	367	4	3	1	6	1	28	41	55	183	4,899	54,369	5	94	36,109	
JUNE	36	493	331	3	2	6	1	1	1	58	40	165	4,947	54,605	5	109	30,644	
JULY	37	508	234	2	4	2	2	1	1	45	31	186	4,999	54,699	2	80	27,025	
AUG	37	572	349	9	0	8	3	1	2	53	49	178	5,000	54,814	1	143	30,715	
SEP	35	528	450	2	6	5	4	1	1	56	41	155	4,976	54,925	2	114	27,402	
OCT	34	550	311	0	2	2	3	0	1	58	40	153	5,022	54,989	2	174	31,995	
NOV	37	438	331	12	1	13	10	1	1	47	38	167	5,016	55,062	1	124	28,802	
DEC	34	479	304	4	4	4	1	0	0	44	32	151	5,039	55,151	0	100	25,556	
2017 TOTAL		5,880	3,875	53	34	57	46	10	61	618	491	1,950			27	1,369	357,023	
2018 JAN	34	639	218	6	3	4	3	2	0	66	19	165	4,920	55,155	4	102	34,895	
FEB	33	736	217	4	3	2	8	1	5	73	22	143	4,871	55,153	2	99	30,666	
MAR	30	769	463	3	8	6	9	4	2	56	50	129	5,024	54,811	2	118	32,185	
APR	30	874	164	0	3	7	6	4	4	87	25	133	4,918	54,260	4	124	33,403	
MAY	29	994	327	14	3	10	11	6	3	98	46	210	4,847	53,832	1	100	30,873	
JUNE	33	1,040	436	5	4	7	3	3	1	109	51	132	5,017	53,738	0	138	29,244	
JULY	32	738	466	1	11	5	9	1	0	50	44	134	5,133	53,708	3	138	29,781	
AUG	30	978	392	2	1	9	10	1	2	71	53	147	5,400	53,602	5	121	32,801	
SEP	32	613	435	4	0	11	2	3	0	56	38	169	5,451	53,732	1	130	28,323	
OCT	33	1,017	596	7	0	5	6	0	0	90	52	155	5,746	53,703	3	140	34,966	
NOV	33	1,158	715	2	4	2	5	2	2	135	81	173	6,300	53,470	2	105	30,698	
DEC	34	659	687	2	0	1	1	0	1	67	83	154	6,648	53,384	1	101	24,796	
2018 TOTAL		10,215	5,116	50	40	69	73	27	20	958	564	1,844			27	1,315	372,631	
2019 JAN	35	592	244	3	2	3	4	2	0	43	34	145	6,625	53,277	5	117	34,052	
FEB	35	471	307	5	2	4	1	0	0	52	36	170	6,688	53,293	0	126	29,935	
2019 TOTAL		1,063	551	8	4	7	5	2	0	95	70	315						

Abbreviation Key: Rcvd = Received, Apvd = Approved, Authz = Authorized



Oil and Gas Staff Report

March 11, 2019

27

Monthly Statistics as of March 1, 2019

Page 2 of 2

YEAR and MONTH	Well			Bonds						Hearings						Enforcement				Remediation				Inspections	
	Oper Change	Operators New	Operators Inactive	Release		Claim		Hearings		Enforcement				Projects		Inspections									
				Ind	Blntk	Replace	Ind	Blntk	Apps.	Orders	NOAVs	AOCs	OFVs	Cmplt	Spills	Rcvd	Comp	Wells	Locations						
2011 TOTAL	6,743	33	31	79	44	43	4	4	403	349	230	10	19	247	527	726	536	12,394	-						
2012 TOTAL	7,546	47	37	70	46	33	3	0	482	396	157	9	2	244	402	690	641	19,071	12,670						
2013 TOTAL	7,192	49	21	48	26	20	0	0	571	522	237	37	3	201	568	507	541	23,551	13,370						
2014 TOTAL	10,298	55	28	42	39	13	1	1	698	598	179	43	4	243	786	596	502	34,208	18,982						
2015 TOTAL	4,461	59	27	27	45	31	3	3	738	645	173	57	8	358	623	516	601	38,957	19,199						
2016 TOTAL	6,562	38	28	37	41	23	9	5	473	397	107	43	7	261	528	461	600	43,135	23,126						
2017 JAN	4,210	3	3	3	3	1	0	0	80	72	1	11	1	46	48	23	11	3,007	1,447						
FEB	374	1	5	2	4	2	0	3	0	0	13	0	0	74	57	34	17	3,180	1,372						
MAR	1,092	6	4	2	2	2	1	1	86	65	18	3	0	44	55	49	18	3,812	1,851						
APR	938	3	0	1	5	5	0	0	0	0	6	0	0	32	40	43	29	2,895	1,578						
MAY	688	1	3	0	5	0	0	0	128	93	3	6	0	185	55	46	30	2,491	1,487						
JUNE	775	6	1	1	2	0	0	0	107	102	2	4	1	131	63	57	26	2,532	1,680						
JULY	778	5	2	2	2	0	0	1	108	104	5	3	0	66	38	29	23	2,168	1,300						
AUG	670	4	2	27	13	32	0	0	0	0	3	0	0	207	55	63	51	2,903	1,712						
SEP	844	1	2	9	6	6	0	1	133	74	20	1	0	212	55	64	38	2,804	1,568						
OCT	1,176	1	0	0	2	2	0	0	131	79	3	5	4	237	51	37	24	2,770	1,593						
NOV	643	2	0	0	0	0	0	0	19	1	0	0	0	81	51	51	34	2,570	1,191						
DEC	256	4	4	11	1	7	0	0	112	72	4	3	0	43	46	42	28	2,011	1,159						
2017 TOTAL	12,444	37	26	58	45	57	1	6	885	680	79	36	6	1,358	614	538	329	33,143	17,938						
2018 JAN	765	3	9	5	6	3	1	2	105	95	11	3	0	60	54	55	39	2,381	1,257						
FEB	553	3	3	2	7	1	1	0	0	0	6	0	0	52	40	51	81	1,988	1,031						
MAR	609	5	0	4	0	0	0	0	159	105	16	4	0	47	55	52	52	2,512	1,548						
APR	749	4	0	11	5	15	0	0	94	70	4	4	0	47	54	60	44	2,402	1,228						
MAY	513	3	3	5	3	0	0	0	0	0	13	0	0	61	55	60	41	2,810	1,572						
JUNE	895	4	1	1	2	1	0	0	108	74	4	2	0	27	45	53	47	2,434	1,381						
JULY	920	4	2	1	5	2	1	0	128	102	9	4	0	23	52	71	77	2,729	1,576						
AUG	346	2	1	1	3	0	0	0	0	0	8	0	0	55	54	54	43	2,511	1,245						
SEP	797	3	2	1	2	0	0	0	73	132	6	5	0	42	41	47	59	2,161	1,317						
OCT	347	7	3	1	7	0	0	0	168	124	53	5	0	34	43	63	61	3,165	1,734						
NOV	291	1	4	3	3	0	0	0	0	0	3	0	0	10	46	60	60	2,562	1,460						
DEC	175	1	1	0	2	1	0	0	179	70	1	5	0	12	54	53	64	3,569	1,775						
2018 TOTAL	6,960	40	29	35	45	23	3	2	1,014	772	134	32	0	470	593	679	668	31,224	17,124						
2019 JAN	15	0	3	3	1	0	0	0	101	86	0	0	1	27	68	102	85	3,816	1,802						
FEB	1	2	3	0	6	3	0	0	0	0	18	0	0	23	50	126	55	3,245	1,563						
2019 TOTAL	16	2	6	3	7	3	0	0	101	86	18	0	1	50	118	228	140	7,061	3,365						

Abbreviation Key: Ind = Individual, Blntk = Blanket, Apps = Application for Hearing, NOAV = Notice of Alleged Violation, AOC = Administrative Order of Consent, OFV = Order Finding Violation, Cmplt = Complaint, Comp = Completed


Analytical Samples Submitted by Month to the COENV Database as of February 27, 2019

Sample Submission Reason	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sept 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	TOTAL
Rule 318A.e.(4)/318A.f pre drill	4	6	4	5	12	4	3	2	13	17	10	4	84
Rule 318A.e.(4)/318A.f post drill	5	5	13	4	11	17		4	13	4	9	2	87
Rule 609 pre drill	13	3	2	10		12		5	3	16	1	1	66
Rule 609 1 year subsequent		6				21			14	7	2	5	55
Rule 609 5 year subsequent			29	2									31
Rule 608 pre drill	17	15	3	11		3		1	9				59
Rule 608 1 year post drill			15			4	8	1	27		33		88
Rule 608 3 year post drill					12	9			6		3	6	36
Rule 608 6 year post drill		4	2	6		2			3				17
317 B Initial sample												1	1
317 B subsequent sample	1		1	2		3			2	5	4		18
Voluntary baseline sample	99	113	73	37	63	61	7	21	63	7	19	24	587
Voluntary post drill	6	18	17			2	3	10	33	37	2	64	192
Bradenhead gas sample	37	43	31	33	45	40	77	56	72	88	33	66	621
Bradenhead water sample	23	34	20	11	26	14	12	24	31	24	8	14	241
Bradenhead non-aqueous liquids	5	3	3	5	6	3	4	1	4	4	2		40
Production gas sample	35	28	20	21	30	39	71	43	71	57	30	29	474
Int. casing gas sample					1				4				5
Produced non-aqueous liquids						4							4
Produced water	103		6										109
Rule 912b flaring natural gas		2									52	1	55
Remediation	54	23		30	1	7	1	8	1	14		14	153
Complaint investigation	5	1	5		2		3	23	23		1	3	66
Land owner request	1					1			7				9
Spill investigation		16	27					2			9	40	94
UIC_COA_5year		1							1				2
Rule 908.B.(9) Baseline sample		2											2
Rule 908.B.(9) post construction sample			1			1					1		3
COA baseline	5					1	2	3					11
COA post drill	4	26		3	11	4	1	5	18	8			80
COA 3 year post drill	2												2
COGCC Baseline -COGCC staff	3					2		2		11			18
COA post construction												8	8
Duplicate sample		2	1			1							4
TOTAL, ALL REASONS	422	351	273	422	255	192	211	418	299	219	282	3,322	