

Staff Report

Department of Natural Resources

for May 21, 2019

Top Stories

Pathway to Equivalency for Methane Detection

In the COGCC Engineering Integrity work unit, Integrity Engineer Steven Wheeler. participated in the Colorado State University (CSU) Energy Institute's third meeting for the "Pathway to Equivalency." This workgroup aims to demonstrate equivalence for alternative detection methods while methane leak concurrently complying with State air quality regulations.

The third workgroup meeting included representatives from academic institutions, state and national regulatory agencies, as well as nongovernmental organizations. This focused on the usage of two separate programs to aid in the demonstration of equivalence: the Collaboratory to Advance Methane Science (CAMS) developed at the Gas Technology Institute (via the University of Texas - Austin or UT) and the Fugitive Emissions Abatement Simulation Testbed (FEAST) model developed by Stanford University.

The CAMS program creates an inventory of continuous and intermittent (tank flashing, compressors, etc.) emissions. The UT program has already created estimates from the Barnett and Eagle Ford shales.

The extensive review of the FEAST model looked at the typical model inputs/outputs, and the meeting's discussion centered on acquiring those large datasets. The COGCC's well and facility dataset was cited as a potential source for analysis. Another point of discussion was setting up the model based on a typical configuration for a given field, operator, and type of operation. The COGCC's equipment inventories could be useful in selecting these default conditions.

Some of the most discussed topics included being able to compare both field and model results to

the reference methods, which are optical gas imaging (OGI) and Method 21. Those field trials would either need to be conducted in an academic environment or where an operator's full Leak Detection and Repair would not begin until all methods are finished testing. Such a field trial would assist in comparing multiple methods at more complex oil and gas sites.

♦ Bradenhead Pressure Monitoring and Reporting Area

COGCC Staff and multiple Denver Julesburg (DJ) Basin Operators met in person and online February 6 to discuss Order 1-232, Notice to Operators Establishing a Bradenhead Pressure Monitoring and Reporting Area for Most Counties in the DJ Basin.

The order and the current operator guidance were evaluated for how well the guidance helps the operators complete testing and reporting. After the evaluation and consistent with comments from the audience, the instructions in the operator guidance for Order 1-232 were modified.

The COGCC continues work in conjunction with an operator group on a solution to bulk upload all Bradenhead test results that do not meet a reaction threshold.

Updates from the Colorado Public Utility Commission (PUC) and US Pipeline and Hazardous Materials Safety Administration (PHMSA)

To discuss common regulatory issues, COGCC Staff recently met with staff from the PUC's Gas Safety Group and with staff from PHMSA at PHMSA offices in Lakewood. PHMSA is the federal pipeline and hazardous materials safety regulator.



The agencies shared information about the following topics relevant to oil and gas operations:

Progression of Pipeline Safety Conference

The PUC and its contractors have begun planning the conference and would like to make the information from the conference available throughout Colorado to make sure operator personnel know the code, safety regulations, and best practices.

Each agency will present for a half hour with questions and answers. The overall goal is to emphasize how to keep product inside the pipe.

The PUC will emphasize that the agencies are working together as a group. The COGCC's new flowline regulations are helping to clarify jurisdictional issues between the agencies.

PERI (Pipeline Emergency Response Initiative)

This initiative plans for emergency response to pipeline incidents for each state. PHMSA is coordinating efforts with interested states in the Western Region. Colorado's operator association, COGA, has received a PHMSA TAG grant to do a needs assessment. The grant is good until September 2019, and an extension is possible if needed. This type of grant does not allow use of educational institutions, so COGA has hired a third party contractor to help.

Farm Taps

Revisions to current PHMSA regulations will require that owners of farm taps periodically test their lines for safety. Also, federal regulators are working to resolve the definition of where the farm tap begins, which relates to requirements that gas must be odorized to protect public safety.

Standards

COGCC Staff and PHMSA discussed API 1133 "Managing Hydrotechnical Hazards for Pipelines Located Onshore or Within Coastal Zone Areas," which concerns gaging stations for river crossings.

The group discussed the proposed API 1181 also. This standard is being developed to expand

PHMSA's classifications for pipelines as "active" or "abandoned."

Firestone Incident

The group discussed that the National Transportation Safety Board. (NTSB) has not issued its final report. PHMSA explained that they interacted with NTSB on safety issues, but that NTSB operates under Congressional oversight and is not part of the executive branch. PHMSA said they might be able to obtain additional information and, if so, would update the State.

♦ 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 may 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 manage the Local Governmental Designee (LGD) Program that is available to counties, cities, towns, and certain special districts.

Participation in the voluntary 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.

Furthermore, LGDs receive specific notifications of pending oil and gas activity in or near their jurisdiction, as specified throughout COGCC rules. LGDs also periodically receive "all-LGD" emails from COGCC staff or managers. To summarize, 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, and it is up to the local government to inform COGCC should their LGD change due to (e.g., retirement, change reason employment status, etc.) Participation (or a change in a local government's LGD) is triggered by submittal to the COGCC of a completed and signed Form 29 (LGD Registration Form). The Form 29 is available on the COGCC website under the "Regulation" tab on the menu, then under the "Forms" tab.

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 or COGCC communications that are sent.

Public Outreach

Outreach by the Director and Staff

- Director Jeff Robbins met with members of local government, community groups, and operators to discuss next steps following the Governor's signing of Senate Bill 19-181. He spoke at the following industry events to implementation and answer questions related to the bill: April 4 (Weld County Elected Officials), April 10 (Colorado Oil and Gas Association Executive Board), April 13 (Club 20 Meeting in Grand Junction), April 16 (Energy Mergers and Acquisitions and Financing Forum), April 18 (Environment and Energy Symposium in Rifle), and April 24 (Weld County Oil and Gas Work Group).
- On March 21, Mark Schlagenhauf Integrity Supervisor, Engineering presentation on COGCC flowline rules at the "Progression of Pipeline Safety" conference held at the Drake Center in Fort Collins. Other COGCC Staff attending included Field Inspection Manager Margaret Ash, Community Relations Manager Mike Leonard, Reclamation Supervisor Denise Arthur, and Integrity Engineer Steve Wheeler, PE. Other presentations were given by the Colorado PUC's Gas Safety Group, the Federal Pipeline Regulator PHMSA, CO 811, and consulting company. Elemental. a Colorado pipeline operators attended the event.
- On April 1 and 2, Environmental Protection Specialist Peter Gintautas was an invited speaker and roundtable discussion participant at the Innovations in Produced Water Treatment and Reuse session of the 21st Century Energy Transition Symposium held in Denver. The symposium was organized by the Colorado Energy Research Collaboratory, which comprised of Colorado State University (CSU),

- University of Colorado, Colorado School of Mines, and the National Renewable Energy Laboratories.
- On April 11, Environmental Protection Specialist Peter Gintautas was invited to be on the technical advisory committee for a U.S. Department of Energy funded study entitled "Quantification of Methane Emissions from Marginal (Small Producing) Oil and Gas Wells." The principal groups managing the study are GSI Environmental, the Partnership to Secure Energy for America, and the Gas Technology Institute.
- On April 11, COGCC Engineering Staff attended the Oil and Gas Muster coordinated by the EPA that included a presentation on Bradenhead pressure, referred to in the muster as Sustained Casing Annular Pressure (SCAP) management.
- On April 23, COGCC Northwest Area Engineering Staff met with Bureau of Land Management (BLM) White River Field Office engineering staff to discuss hydrogen sulfide monitoring and well plugging.

Outreach by the Community Relations Unit

- On March 6, Marc Morton attended a City of Louisville Source Water Protection Planning workshop meeting at the request of the Colorado Rural Water Association or CRWA.
- On March 7, Marc attended a Standley Lake source water protection planning meeting in Westminster at the request of the CRWA.
- On March 21, Marc and Community Relations Manager Leonard traveled to Erie to present a talk at a Citizens of Erie oil and gas workshop.

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- On March 22, Marc provided a three hour online LGD orientation training to Montezuma County LGD Jane Duncan.
- On March 28, Marc traveled to Evans and provided a 3-hour day LGD orientation training to staff from the City of Evans.
- On April 4, Marc traveled to Rifle and attended the monthly Garfield County Energy Advisory Board (EAB) meeting.
- On April 17 and 18 in Rifle, Marc attended the seventh annual Energy and Environment

- Symposium organized by Garfield County and the Colorado Mesa University Unconventional Energy Center.
- On April 23, Marc Morton traveled to Kiowa and provided a three hour day LGD orientation training to Elbert County staff.
- On April 24, Marc attended the Weld County Oil and Gas Working Group meeting held in Greeley.
- On May 1, Marc traveled to Rifle and attended the monthly Garfield County Energy Advisory Board (EAB) meeting to provide a brief overview of Senate Bill 19-181.

Regional Activities

> Northwest Colorado

♦ Northwest Colorado Oil and Gas Forum

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

Thursday, August 1 (9:00 a.m. - 12:00 p.m) Colorado Mountain College - Rifle Campus Clough Auditorium 3595 Airport Road Rifle, CO

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

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.

Those 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 Southwest Colorado Gas and Oil Regulatory Team (GORT) meeting is scheduled for

Thursday, June 13 (9:00 a.m. - 12:00 p.m.) Durango Public Library Program Rooms 1 & 2 1900 E. 3rd Avenue 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

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distribution list. The COGCC welcomes suggestions and input for speakers, agenda items, 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.

Those 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 26,663 Mcf of methane and generated 301,530 kWh of surplus electricity.

Variances

◆ TEP Rocky Mountain LLC (TEP)

On March 7, the COGCC Acting Director granted TEP a Rule 502.b variance to Rule 907.e.(1) in order to obtain permission to transport cuttings from location DOE 1-M-18 well pad (COGCC Location ID #335744) to the DOE 1-M-18 Cuttings Management Area (Location ID #456106) and to the Clough RWF 44-18 pad (COGCC Location ID #335146). Rule 907.e.(1) of the COGCC's Rules and Regulations states

Oily waste may be treated or disposed as follows:

- A. Disposal at a commercial solid waste disposal facility;
- B. Land treatment onsite; or
- C. Land treatment at a centralized E&P waste management facility permitted in accordance with Rule 908.

TEP requested permission to transport approximately 5,000 cubic yards of cuttings from Location ID #335744 to Location ID #456106 and #335146 due to a spacing limitation within the current boundaries of the DOE 1-M-18 well pad, (COGCC Location ID #335744) and to commercial off-site concerns and logistics.

♦ Ursa Operating Company LLC (Ursa)

On March 7, the COGCC Acting Director granted TEP a Rule 502.b variance to Rule 605.a.(5) to set a single temporary tank at a distance less than 75 feet from a fired vessel at the CSF T Pad

(Location ID #335052). Rule 605.a.(5) of the COGCC's Rules and Regulations states:

Tanks shall be a minimum of seventy-five (75) feet from a fired vessel or heater-treater.

Ursa has disconnected the fired vessels from the source of gas, closed the gas valve, and performed lock out and tag out. Ursa took these safety precautions in response to both spill remediation activities and the process of rebuilding a new tank battery.

♦ WEXPRO Company (Wexpro)

On March 5, the COGCC Acting Director granted Wexpro a Rule 502.b variance to Rules 704 and 980.d. (financial assurance requirements) for Location Facility ID #454586. Rule 704 of the COGCC's Rules and Regulations states:

An operator which makes application for an offsite, centralized E&P waste management facility shall, upon approval and prior to commencing construction, provide to the Commission financial assurance in an amount equal to the estimated cost necessary to ensure the proper reclamation, closure, and abandonment of such facility as set forth in Rule 908.g, or in an amount voluntarily agreed to with the Director, or in an amount to be determined by order of the Commission. Operators of centralized E&P waste management facilities permitted prior



to May 1, 2009 on federal land and April 1, 2009 for all other land shall, by July 1, 2009, comply with Rule 908.g and this Rule 704. This section does not apply to underground injection wells and multi-well pits covered under Rules 706 and 707.

And Rule 908.d. of the COGCC's Rules and Regulations states:

The operator of a centralized E&P waste management facility shall submit for the Director's approval such financial assurance as required by Rule 704. prior to issuance of the operating permit.

Wexpro provided a cost estimate of \$321,756.96 to decommission, remediate, and reclaim their proposed Powder Wash Evaporation and Centralized Waste Management Facility (ID #454586). The operator then provided financial assurance to the BLM for that same amount.

An estimated amount of \$794,593.00 to decommission, remediate, and reclaim the Facility was determined by the COGCC's third party review. Wexpro provided an additional \$472,827.04 in financial assurance to the COGCC which is almost the difference of the COGCC estimate (\$794,593.00) and what was provided to the BLM (\$321,756.96).

Admin / Organization / Other

♦ New Northwest Environmental Protection Specialist (EPS)

The COGCC welcomes John Heil to the Environmental Unit. John started at the agency April 1 to replace Stan Spencer when Stan moved to the Orphaned Well Program. John is based in the Rifle office, where he joins Steven Arauza in work that includes various West Slope environmental issues.

John has a Bachelor's Degree in Geology from Colorado State University with a concentration in Geophysics. His professional experience includes consulting on groundwater and soil contamination issues related to Dense and Light Non-Aqueous Phase Liquids (DNAPL and LNAPL). Originally from Grand Junction, John took the opportunity to relocate to the West Slope from the Front Range. He is an outdoor enthusiast, and some of his favorite activities outside of work involve adventures with his dog, friends, and family.

COGCC organizational charts can be found on Pages 8-11. 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

The COGCC performed field work for the Orphaned Wells Program projects described below since March 11. 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 for Fiscal Year 2018-19 (FY19) are found on pages 12-14. 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 Tudex Petroleum Project began with Commission Order 1V-646. The project consists of nine wells located in Adams and Weld Counties. Two locations are multi-well pads. Recent FY19 work included removal and offsite disposal or salvage of production equipment and associated debris at multiple sites in both counties.

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 setting a surface plug and cutting off the casing.

The Ranchers Project began with Commission Order 1V-526. The project involves two single well locations in Larimer County. Both wells were plugged and abandoned prior to FY17. Recent FY19 work included rebuilding the landfill cover that was disturbed during drilling operations by Ranchers Exploration Partners, LLC. This work is

being performed in cooperation with the Colorado Department of Public Health and Environment.

The **Benchmark Project** began with Commission Order 1V-564. The project involves 44 locations and 39 wells in Logan County. Recent FY19 work included removal of cement debris left over from plugging one well.

The **DB Orphan Ballpark #7 Project** is located in Mesa County, Recent FY19 work included removal of debris left over from plugging the well.

♦ 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 971 operator users of eForms and 4,075 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

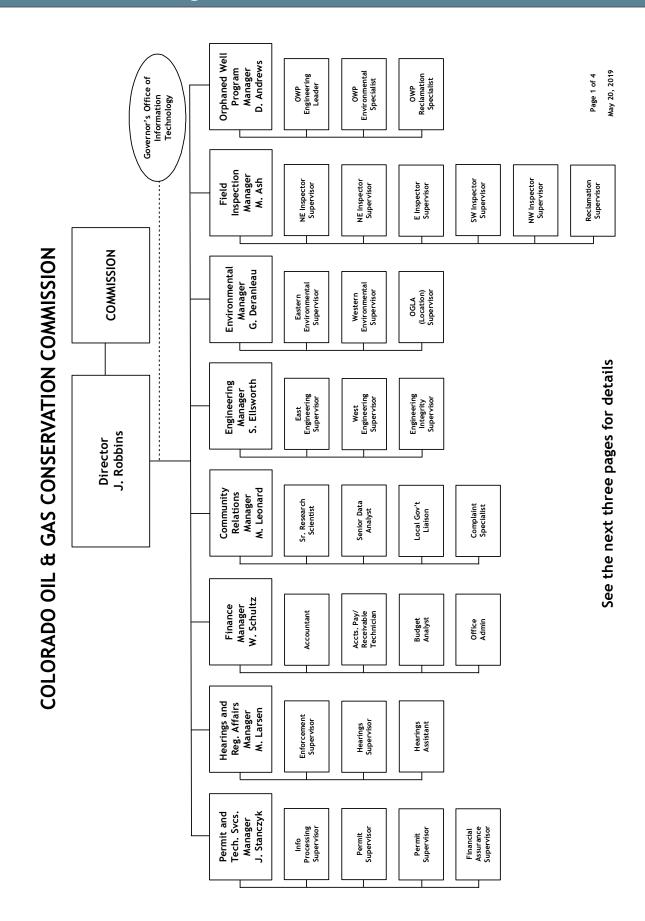
Enforcement Orders (OFVs and AOCs) Underground Injection Control (UIC) Data

COENV Database Update

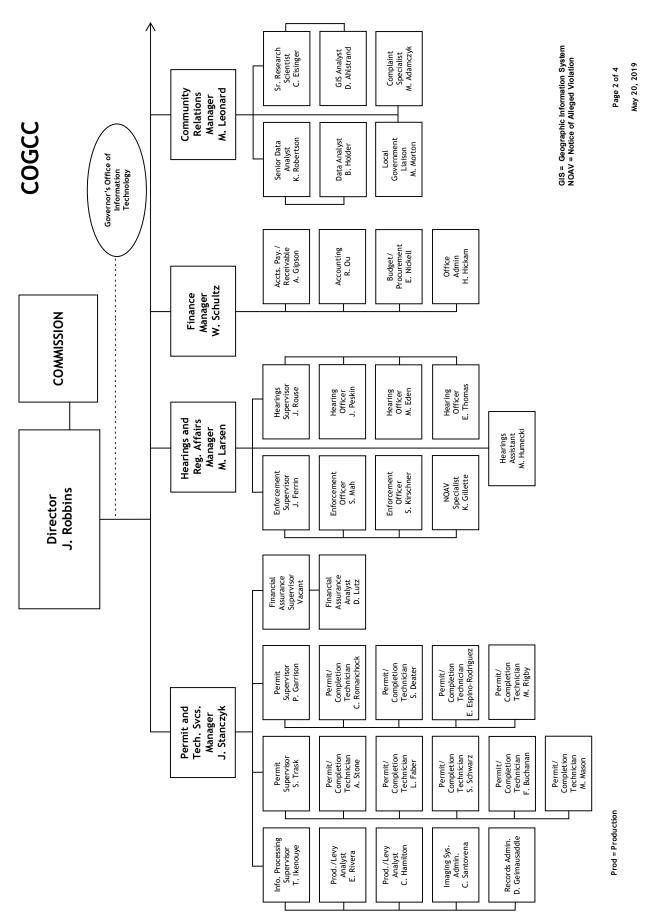
The COENV database (active since 2012) is a publicly available, searchable database of groundwater, surface water, gas, and soil sample analytical results from throughout the state. COENV currently contains over 46,000 individual samples from 16,329 sample locations. In FY 2017 -18, the COGCC received data from 2,699 water samples from 770 separate sample locations, and added them to the database. The table on Page 26 reports the frequency of each reason for submission of a sample to the COENV database during the most recent 12 month period.



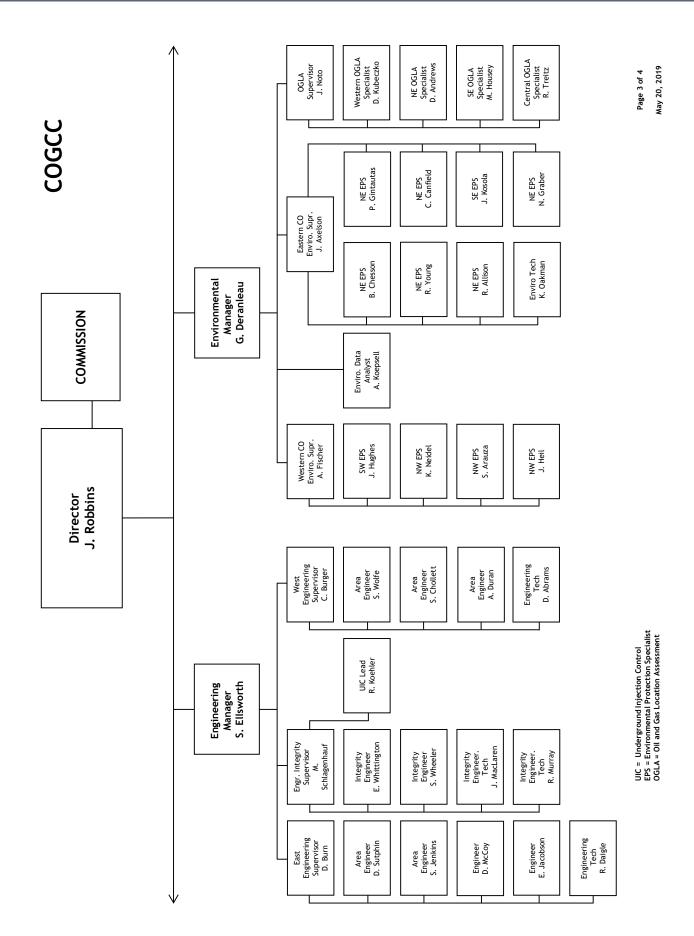
Organizational Charts and Statistics



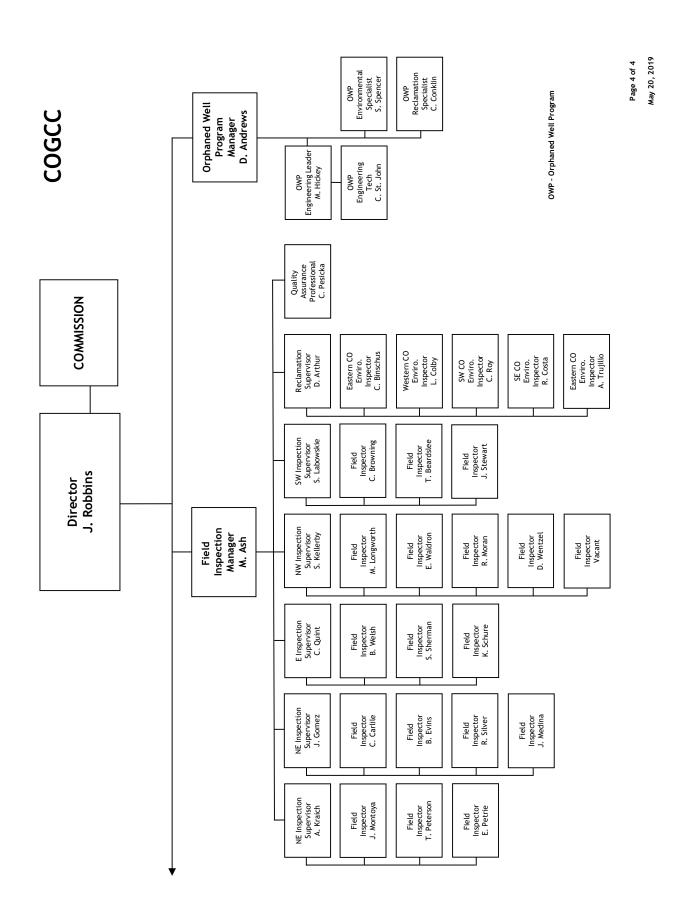












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Orphaned Well Program Active Task List

Page 1 of 1

County	Project	Field Operations Task(s)	Engineering Task(s)	Environmental Task(s)	Reclamation Task(s)
Adams	Energy Search Bond Claim				
Adams	Texas Tea Bond Claim				
Adams	Tudex Petroleum Bond Claim				
Baca	Falcon Seaboard - Chapman #1				
Baca	Wallace Bond Claim				
Jackson	CM Production Bond Claim				
Jefferson	Red Mountain Bond Claim				
La Plata	Red Mesa Holdings Bond Claim				
La Plata	Reynolds* Noel Bond Claim				
Larimer	Hall #1				
Larimer	Ranchers Bond Claim				
Larimer	Sheffer Jack #1				
Lincoln	Pine Ridge Bond Claim				
Logan	Benchmark Energy Bond Claim				
Logan	Donnelly Bond Claim				× ×
Logan	J&L Oil Corp - North Shore Field		~ ~		
Logan	Red Mountain Bond Claim				
Mesa	Canfield #1				
Mesa	DB Orphan #8				
Mesa	DB Orphan Ballpark #7			W 78	
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				
Montezuma	Pilcher #1				
Montrose	Redwine Bond Claim				
Rio Grande	Faith Energy Bond Claim				
San Miguel	Suckla #1		1		
Statewide	Various Projects				
Washington	CM Production Bond Claim				
Washington	Energy Search Bond Claim				
Weld	General Resources Ltd				
Weld	Porter #3				
Weld	Tudex Petroleum Bond Claim				
Yuma	Midfields Oil - State #1				

Notes:

<u>Field Operations Tasks</u> 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
Benchmark Energy Bond Claim	1V-564	\$ 620,000	\$ 393,421
CM Production Bond Claim	1V-581	\$ 67,849	\$
Donnelly Bond Claim	1V-659	\$ 20,106	\$ 20,106
Energy Search Bond Claim	1V-636	\$ 60,000	\$ 49,832
Pine Ridge Bond Claim	1V-622	\$ 85,000	\$ 39,309
Ranchers Bond Claim	1V-526	\$ 63,424	\$ 7
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
Texas Tea Bond Claim	1V-573	\$ 71,850	\$ -
Tudex Petroleum Bond Claim	1V-646	\$ 62,470	\$ <u>.</u>
	TOTALS ->	\$ 1,275,545	\$ 542,342

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

Project Financials for Fiscal Year 2018-19

Orphaned Well Program

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3,200 1,957 1,652 3,005 7,765 3,384 125,947 1,141 35,582 4,807 24,486 416,942 Subtotals Actual w S S w w S **EMGY Actual** 70,863 \$ 336,239 \$ 1,369 3,005 7,765 51,520 3,384 24,486 1,141 35,582 4,807 1,957 125,947 1,652 PROW Actual 80,704 71,018 BOND Actual TOTAL EXPENDITURES -> Benchmark Energy Bond Claim Red Mesa Holdings Bond Claim Tudex Petroleum Bond Claim CM Production Bond Claim Energy Search Bond Claim DB Orphan Ballpark #7 General Resources Ltd Pine Ridge Bond Claim Texas Tea Bond Claim Texaco - Moffat Field Ranchers Bond Claim Redwine Bond Claim Lloyd and Lowell #1 Sheffer Jack #1 DB Orphan #8 Canfield #1 Hall #1

ABBREVIATIONS:

EMGY = Emergency Response Appropriation

PROW = Plugging and Reclaiming Orphaned Wells Appropriation

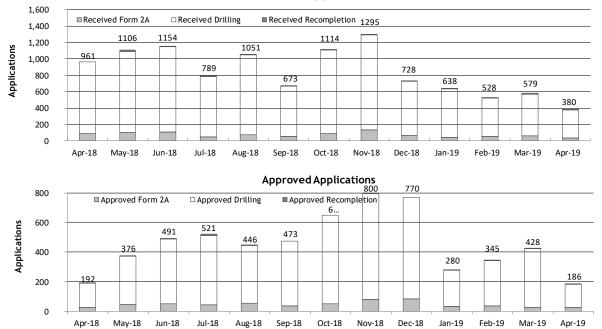


Monthly Permit Activity as of May 1, 2019

Form/Month	Backlog	Received	Approved	Withdrawn	Rejected	Incomplete ¹	In-Process	Remaining ²
Form2A								
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
Mar-19	518	59	27	7	1	57	485	542
Apr-19	542	35	27	9	2	61	479	540
Drilling								
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
Mar-19	6,444	509	397	132	21	120	6,283	6,403
Apr-19	6,403	344	156	136	18	118	6,328	6,446
Recompletion	0, 100	5	.50	.50	.0	7.0	0,520	0,110
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 5	2	0	0	3	30	33
Mar-19	33	5 11	4	7	0	3	30	33
	33	11	3	7	0	3	30 27	33
Apr-19	33	1	3	T T	0	3	2/	30

 $^{^{\}rm 1}\!$ Incomplete are applications that have missing or inaccurate data and cannot be approved.

Received Applications



 $^{^2\,\}mbox{Backlog}$ = Incomplete + In-process = Remaining permits from previous month.

Oil and Gas Staff Report



Status of Permit Applications Filed By Month as of May 1, 2019

				Form 2	2A Locatio	n Assessme	nt			
							Average			
						Percent In	Days to			Greater Than
Year	Month		•••	Withdrawn		Process	Process	30 Days	Days	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	50	46	8%		58	113	337
2018	JAN	65	43	8	14	22%	167	2	6	35
	FEB	73	55	8	10	14%	133	5	10	40
	MAR	56	41	4	10	18%	84	3	14	24
	APR	87	68	4	12	14%	130	3	10	55
	MAY	98	54	3	38	40%	122	0	11	43
	JUNE	109	52	14	40	37%	112	4	7	41
	JULY	50	29	3	18	36%	95	1	8	20
	AUG	71	39	5	23	34%	81	1	9	29
	SEP	56	41	2	10	19%	70	2	10	29
	OCT	90	47	1	41	46%	76	2	14	31
	NOV	135	72	10	52	39%	59	7	40	25
	DEC	67	16	4	45	69%	87	0	2	14
2018	TOTAL	957	557	66	313	33%		30	141	386
2019	JAN	43	3	2	38	88%	68	1	0	2
	FEB	52	4	1	47	90%	50	0	2	2
	MAR	59	1	1	56	97%	29	1	0	0
	APR	35	0	0	35	100%	0	0	0	0
2019	TOTAL	189	8	4	176	93%	147	2	2	4

Form 2 Application For Permit to Drill (APDs)

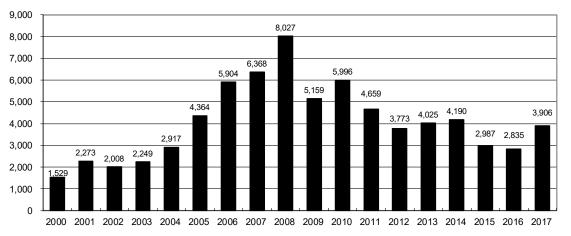
							Average			
					ln	Percent In	Days to	Less Than	30 to 49	Greater Than
Year	Month	Received	Approved	Withdrawn	Process	Process	Process	30 Days	Days	50 Days
2013	TOTAL	4,548	4,312	235	1	0%		1,046	1,626	1,714
2014	TOTAL	4,208	4,026	182	0	0%		689	1,629	1,744
2015	TOTAL	3,237	3,091	146	0	0%		249	759	2,113
2016	TOTAL	3,253	3,027	145	23	1%		204	402	2,443
2017	TOTAL	5,548	4,256	578	555	10%		194	599	3,503
2018	JAN	639	442	53	107	18%	185	10	391	391
	FEB	735	445	91	165	24%	156	18	347	347
	MAR	769	471	47	185	29%	153	15	391	372
	APR	874	523	49	256	32%	128	25	423	411
	MAY	995	542	55	373	42%	120	2	515	484
	JUNE	1040	487	111	384	42%	122	11	398	394
	JULY	738	281	6	431	60%	101	8	228	226
	AUG	978	508	52	404	42%	109	13	432	432
	SEP	613	287	23	291	49%	77	7	226	226
	OCT	1018	400	88	503	56%	99	14	304	296
	NOV	1158	397	181	551	54%	57	31	152	131
	DEC	659	136	36	470	77%	72	9	115	92
2018	TOTAL	10,216	4,919	792	4,120	40%		163	3,922	3,802
2019	JAN	592	108	14	469	79 %	59	5	28	75
	FEB	471	36	0	435	92%	46	8	5	23
	MAR	509	5	4	500	98%	38	5	2	1
	APR	344	1	0	343	100%	3	1	0	0
2019	TOTAL	1916	150	18	1747	91%	146	19	35	99



Annual Drilling Permits by County as of May 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	70
ARAPAHOE	7	11	10	10	10	8	23	35	23	34	19	5	78	112	20
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	1
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	4
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	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	67
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	18
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	500	5	46	12	41	8	13	2	4	28	4	30	2	
LAS ANIMAS	413	500	362	303	88	92	85	11	2	1	2.4	_	24	2.4	40
LINCOLN	4	1	2	58	44	48	31	36	87	129	24	5	31	24	10
LOGAN MESA	13	17 265	14 293	5 501	9	17 306	8 127	27 150	4	5 74	126	1 7	3 215	2	
MOFFAT	136 60	120	293 68	57	427 51	53	93	88	105 44	74 54	126 12	17	5	64 4	
MONTEZUMA	11	5	12	22	39	19	93 27	29	14	25	3	3	6	3	1
MONTROSE	- 11	1	3	3	39	19	1	29	14	25	3	3	0	3	'
MORGAN	7	3	6	2	1	6	13	5	16	6	4	28		4	
OTERO		3	0		'	0	13	,	10	U	7	20		7	
PARK					3	4	1								
PHILLIPS	17	12	69	82	45	64	112	56		11	2				
PITKIN	17	12	1	UL	7.7	U-T	112	50		- 11	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	27
RIO GRANDE	101	300	32,	1	1		107	2	10,	1	107			- 03	_,
ROUTT	6	9	8	4	2	3	10	4	12	4	9				
SAGUACHE	3	•	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	4
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	880
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	1,103

ALL COUNTIES



Oil and Gas Staff Report



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

Year	County	Form 2As	Completed	In Process	New Location	CDP	SWH	RSO	CDPI
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	504	56	395	0	72	4	1
2018	ADAMS	36	14	22	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	2	2	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	2	0	2	0	2	0	0
	FREMONT	1	1	0	1	0	1	0	0
	GARFIELD	53	45	7	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	4	0	0	0	0
	LINCOLN	43	39	4	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
					18				
	WASHINGTON	18	16	2		0	0	0	0
	WELD	630	375	232	466	60	8	0	0
	YUMA	3	0	3	2	0	0	0	0
2018	Total State	881	550	306	620	60	82	2	2
2019	ADAMS	5	0	5	2	0	0	0	0
	ARAPAHOE	3	0	3	3	0	0	0	0
	ARCHULETA	2	0	2	0	0	0	0	0
	BACA	1	0	1	1	0	0	0	
	BROOMFIELD	1	0	1	1	0	0	0	0
	CHEYENNE	10	0	10	9	0	2	0	0
	DELTA	1	0	1	0	0	0	0	0
	FREMONT	1	0	1	0	0	1	0	0
	GARFIELD	7	0	7	6	0	7	0	0
	GUNNISON	1	0	1	0	0	0	0	0
	JACKSON	8	2	6	2	0	8	0	0
		2	0	2	2	0	2	0	0
	KIOWA	,		_					
	KIOWA			1	1	()	Λ	Λ	(1)
	LARIMER	1	0	1	1 5	0	0	0	
	LARIMER LINCOLN	1 6	0	5	5	0	0	0	0
	LARIMER LINCOLN PITKIN	1 6 1	0 1 0	5 1	5 0	0 0	0 0	0 0	0
	LARIMER LINCOLN PITKIN RIO BLANCO	1 6 1 5	0 1 0 0	5 1 5	5 0 5	0 0 0	0 0 5	0 0 0	0 0 0
	LARIMER LINCOLN PITKIN	1 6 1	0 1 0	5 1	5 0	0 0	0 0	0 0	0

Abbreviations:

CDP = Comprehensive Drilling Plan

SWH = Sensitive Wildlife Habitat consultation

RSO = Restricted Surface Occupancy consultation

CDPHE= Colorado Department of Health and Environment consultation

County Prince P	norizontal Well Activity as of May 1, 2019	CLIVILY AS OI MAY	1, 4017																			
Dylling D, A Dyll		Prior Years	2009-20	112	2013		2014		2015		2016		2017		2018	20	19	Total		Comple	tion	
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Nat	OOMFIELD														71	4			_			
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N	ERFANO		4	_			7											_				
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SON 1	WA		_		4	2	_											2				_
AA 28 6 9 13 5 1 43 7 42 3 67 8 83 6 70 3 96 95 1 3 MAS 16 2 7 2 2 2 2 2 2 2 2 2 1 4 2 1 4 3 4 3 2 2 2 2 2 2 2 2 1 4 1 3 4 4 3 29 2 2 2 2 2 2 2 2 2 4 4 3 29 2 2 2 4 4 1 4 1 4 4 4 2 3 4	CARSON	_	_		_	_												7				
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16% 9% 19,587 4,025 4,190 2,988 2,835 3,875 5,116 1,104 13.2% 56.1% 57.9% 67.5% 67.7% 73.2% 81.2% 89.0%	FAL Horizontal	25		1,075	2,260 1,				2,016 1,0				2,837 1,33		54 1,360					6,438		
19,587 4,025 4,190 2,988 2,835 3,875 5,116 1,104 13.2% 56.1% 57.9% 67.5% 67.7% 73.2% 81.2% 89.0%	cent of Total HZ																		%0	72%		_
	al All Permits Percent of Total		19,587		4,025 56.1%		4,190 57.9%		2,988 67.5%	,, ,	2,835 67.7%	,., .,	3,875 73.2%	8,	.2%	1,104						
																						_

Horizontal Well Activity as of May 1, 2019

Oil and Gas Staff Report



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

 ${\it Count\ of\ well\ locations,\ grouped\ by\ proximity\ from\ well\ to\ buildings.}$

Location Proximity to Buildings	2012	2013	2014	2015	2016	2017	2018	2019	Number of Locations Since 2009	Percent of Total Locations
to buildings	2012	2013	2017	2013	2010	2017	2010	2017	Since 2007	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	3	320	3%
350 to 500 feet	61	65	48	33	23	24	23	6	540	5%
500 to 1000 feet	188	188	161	83	76	90	84	18	1,721	17%
1000 + feet	838	761	724	380	206	318	406	85	7,250	74%
TOTAL LOCATIONS	1,128	1,048	974	510	320	448	521	112	9,847	

Country	TOT::		150 to 350	350 to 500	500 to	1000 - 6
County	TOTAL	150 feet	feet	feet	1000 feet	1000 + fe
ADAMS	125	0	4	9	30	82
ARAPAHOE	136	0	2	5	11	118
ARCHULETA	32	0	2	1	15	14
BACA	20	0	0	0	1	19
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	24	0	0	0	7	17
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	72	0	1	5	1	65
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	433	0	1	2	5	425
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	200	0	0	0	1	196
ROUTT	30	0	0	0		28
SAN MIGUEL					2	
	14	0	0	0	0	14
SEDGWICK	33	0	0	1	3	29
WASHINGTON	102	0	2	0	7	93
WELD	5,869	12	257	427	1,281	3,891
YUMA	529	0	9	16	45	459



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

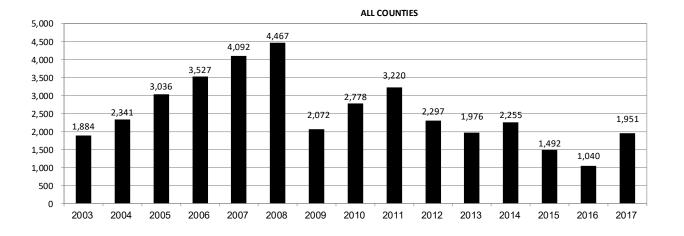
	Location Doc		High	New	Distance	Proximity	_
Year	Number	County	Density	Location	(Feet)	(Feet)	Building Description
2015	400768804	WELD	No	Yes	46	less 150	Building to be razed
2011	2587822	CHEYENNE	No	No	58	less 150	Water well house
2009	1691798	WELD	No	No	58	less 150	Vehicle garage
2010	400072164	WELD	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

Oil and Gas Staff Report



Annual Well Starts by County as of May 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	86	7
ARAPAHOE		8	1	5	2	1	1	3	8	9	25	21		1	17	22	1
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							10
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	70
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	Ć
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	4
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	92	5
MOFFAT	50	32	43	61	47	26	18	15	32	26	27	3	6	4	1	•	
MONTEZUMA	7	4	12	4	17	22	10	3	8	18	12	8	1		2	2	2
MONTROSE	4	2 5	-	2	1	2	2	1	2	2	4	2	4			4	
MORGAN	7	5	5	3	4	1	2	3	2	3	1	3	1			4	
PARK	,	40	45		25	40	2	2	420	40		0					
PHILLIPS	6	12	15	4	35	18	2	42	130	48		9					
PITKIN		1	-		_	-	_	2									
PROWERS	420	6	5	6	3	5	2	3	1	F.	21	43	1		-	2.4	_
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	1,569	1,125	784	1,288	1,233	504
YUMA	121	163	599	595	447	336	28	213	106	16	13	39	0	0	0	1	C
TOTAL	1,884	2,341	3,036	3,527	4,092	4,467	2,072	2,778	3,220	2,297	1,976	2,255	1,492	1,040	1,951	1,843	620





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

County	Drilling	Domestic	Injecting	Producing	Shut In	Temp Aband	Waiting on Completion	Active Storage	Total Active Wells
ADAMS	54		6	391	457	35	1	12	956
ARAPAHOE	26	1	4	90	73	10		43	247
ARCHULETA	7	5	2	110	16	15	6	1	162
BACA			6	81	41	3		56	187
BENT		1		19	7	6			33
BOULDER				238	54	3			295
BROOMFIELD	10			58	30	3			101
CHEYENNE CROWLEY			39	281	34	46	1		401
DELTA				1	14	1			16
DENVER					44	3	3		50
DOLORES			1	28	11				40
EL PASO		1		27	40	2		1	3
ELBERT FREMONT	2	3		27 55	40 11	3 9	2	1	71 82
GARFIELD	212	2	45	10,860	524	75	48	1	11,767
GUNNISON	2	_	2	24	16	6	2	•	52
HUERFANO	_		1	37	3	3	-		44
JACKSON	14		27	98	71		1		211
JEFFERSON					1			3	4
KIOWA			11	80	19	10	2		122
KIT CARSON		1	1	8	5	1			16
LA PLATA	5	7	34	2,960	216	33	2	37	3,294
LARIMER		1	22	114	90	22			249
LAS ANIMAS	1	4	18	2,632	116	102	10	20	2,903
LINCOLN	8	1	10	88	24	6		20	137
LOGAN MESA	1 27	1	24	4 019	31 159	39 29	4	28 11	207
MOFFAT	3		12	1,018 380	101	41	4	- 11	1,255 541
MONTEZUMA	2	2	7	104	31	12	7		158
MONTROSE			,	104	31	12		1	1
MORGAN			22	45	122	30		94	313
OURAY		1				1			2
PARK									
PHILLIPS			3	70	197	1			271
PITKIN								10	10
PROWERS				18	7	2			27
RIO BLANCO	45	2	295	1,986	384	154	6	2	2,874
ROUTT	4	2		19	13	2			36
SAN MIGUEL	1	4	4	65	48	15	2		129
SEDGWICK WASHINGTON	2	1	1 23	4 348	11 70	8	2		21 454
WELD	1,280	1	53	12,314	7,014	786	19	3	21,470
YUMA	3	9	23	3,617	158	10	12	1	3,833
Totals	1,709	46	698	38,352	10,263	1,527	126	324	53,045

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	Baker -					Perm	its					Well	Active				
YEAR and	Hughes	<u>Drill</u>	ing		pletion		<u>ction</u>	_	its		tions	Spud	Drilling	Active		Public \	√isits
MONTH	Rig Count	Rcvd	Apvd	Rcvd	Apvd	Rcvd	Apvd	Rcvd	Apvd	Rcvd	Authz	Notices	Permits	Wells	Data	Office	Internet
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	179	4,899	54,369	5	94	36,109
JUNE	36	493	331	3	2	6	1	1	1	58	40	168	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	156	4,976	54,925	2	114	27,402
ОСТ	34	550	311	0	2	2	3	0	1	58	40	151	5,022	54,989	2	174	31,995
NOV	37	438	331	12	1	13	10	1	1	47	38	168	5,016	55,062	1	124	28,802
DEC	34	479	304	4	4	4	1	0	0	44	32	153	5,039	55,151	0	100	25,556
2017 TOTAL		5,880	3,875	53	34	57	46	10	61	618	491	1,951			27	1,369	357,023
2018 JAN	34	639	218	6	3	4	3	2	0	66	19	168	4,920	55,155	4	102	34,895
FEB	33	736	217	4	3	2	8	1	5	73	22	141	4,871	55,153	2	99	30,666
MAR	30	769	463	3	8	6	9	4	2	56	50	130	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	212	4,847	53,832	1	100	30,873
JUNE		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	131	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		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	152	6,648	53,384	1	101	24,796
2018 TOTAL		10,215	5,116	50	40	69	73	27	20	958	564	1,843			27	1,315	372,631
2019 JAN	35	592	244	3	2	3	4	2	0	43	34	142	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
MAR		509	397	11	4	0	2	4	3	59	27	128	6,665	53,109	1	171	32,261
APR	32	344	156	1	3	3	3	1	1	35	27	144	6,508	53,045	1	132	32,337
2019 TOTAL		1,916	1,104	20	11	10	10	7	4	189	124	584					

Abbreviation

Rcvd = Received, Apvd = Approved, Authz = Authorized

Key:



Monthly Statistics as of May 1, 2019

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	Well					Bonds			-							Remed	diation		
YEAR and	Oper		erators	. —	<u>lease</u>		_	<u>aim</u>		rings		orceme					ects		<u>ctions</u>
MONTH	Change	New	Inactive	Ind	Blnkt	Replace	Ind	Blnkt	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	644	2	0	0	0	0	0	0	0	19	1	0	0	81	51	51	34	2,570	1,191
DEC	273	4	4	11	1	7	0	0	112	72	4	3	0	43	46	42	28	2,011	1,159
2017 TOTAL	12,462	37	26	58	45	57	1	6	885	680	79	36	6	1,358	614	538	329	33,143	17,938
2018 JAN	794	3	9	5	6	3	1	2	105	95	11	3	0	60	54	55	39	2,381	1,257
FEB	566	3	3	2	7	1	1	0	0	0	6	0	0	52	40	51	81	1,988	1,031
MAR	615	5	0	4	0	0	0	0	159	105	16	4	0	47	55	52	52	2,512	1,548
APR	818	4	0	11	5	15	0	0	94	70	4	4	0	47	54	60	44	2,402	1,228
MAY	546	3	3	5	3	0	0	0	0	0	13	0	0	61	55	59	41	2,810	1,572
JUNE	895	4	1	1	2	1	0	0	108	74	4	2	0	27	45	50	47	2,434	1,381
JULY	936	4	2	1	5	2	1	0	128	102	9	4	0	23	52	71	77	2,729	1,576
AUG	385	2	1	1	3	0	0	0	0	0	8	0	0	55	54	54	43	2,511	1,245
SEP	817	3	2	1	2	0	0	0	73	132	6	5	0	42	41	47	59	2,161	1,317
OCT	396	7	3	1	7	0	0	0	168	124	53	5	0	34	43	63	61	3,165	1,734
NOV	315	1	4	3	3	0	0	0	0	0	3	0	0	10	46	60	60	2,562	1,460
DEC	2,204	1	1	0	2	1	0	0	179	70	1	5	0	12	54	53	64	3,569	1,775
2018 TOTAL	9,287	40	29	35	45	23	3	2	1,014	772	134	32	0	470	593	675	668	31,224	17,124
2019 JAN	54	0	3	3	1	0	0	0	101	86	0	0	1	27	68	102	85	3,822	1,815
FEB	25	2	3	0	6	3	0	0	0	0	18	0	0	23	53	126	55	3,347	1,652
MAR	0	2	0	0	3	3	0	0	90	83	20	5	0	33	58	180	94	3,349	1,902
APR	0	3	0	1	1	2	0	0	0	0	5	0	0	445	50	216	120	2,767	1,717
2019 TOTAL	79	7	6	4	11	8	0	0	191	169	43	5	1	528	229	624	354	13,285	7,086

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

Oil and Gas Staff Report



Analytical Samples Submitted by Month to the COENV Database as of May 08, 2019

Sample Submission Reason	May 2018	Jun 2018	Jul 2018	Aug 2018	Sept 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	TOTAL
Rule 318A.e.(4)/318A.f pre drill	5	12	4	3	2	13	17	10	4	16	7	8	101
Rule 318A.e.(4)/318A.f post drill	4	11	17		4	13	4	9	2	3	5	17	89
Rule 609 pre drill	10		12		5	3	16	1	1		1	29	78
Rule 609 1 year subsequent			21			14	7	2	5	1	1	6	57
Rule 609 5 year subsequent	2												2
Rule 608 pre drill	11		3		1	9							24
Rule 608 1 year post drill			4	8	1	27		33		18	6	3	100
Rule 608 3 year post drill		12	9			6		3	6			37	73
Rule 608 6 year post drill	6		2			3							11
317 B Initial sample									1			1	2
317 B subsequent sample	2		3			2	5	4					16
Voluntary baseline sample	37	63	61	7	21	63	7	19	24	9	91	10	412
Voluntary post drill			2	3	10	33	37	2	64	4	152	85	392
Bradenhead gas sample	51	44	40	76	56	71	88	33	66	128	103	112	868
Bradenhead water sample	13	27	14	12	22	31	24	8	14	36	36	39	276
Bradenhead non-aqueous liquids	6	6	3	4	1	4	4	2		5	13	8	56
Production gas sample	35	30	39	70	43	69	57	30	29	69	69	109	649
Int. casing gas sample		1				4					2	1	8
Produced non-aqueous liquids			4										4
Rule 912b flaring natural gas								52	1				53
Remediation	30	1	7	1	8	1	14		14	9		13	98
Complaint investigation	5	2		3	23	23		1	3	2		3	65
Land owner request			1			7						2	10
Spill investigation					2			9	40				51
UIC_COA_5year						1							1
Rule 908.B.(9) post construction sample			1					1					2
COA baseline			1	2	3								6
COA post drill	3	11	4	1	5	18	8					8	58
COA 3 year post drill											4		4
COA post construction			2		2		11					3	18
Adena Field Monitoring									8				8
Duplicate sample			1										1
TOTAL, ALL REASONS	220	220	255	190	209	415	299	219	282	300	490	494	3,593