

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Tuesday, July 15, 2014 2:17 PM
To: Dave Kubeczko - DNR
Subject: FW: Notification
Attachments: COGCC Fracing Briefing.pdf; Meagher 3-3H Access Rev 1.pdf; Meagher 3-3H Form 2A Completed.pdf; Meagher 3-3H Rig Layout Rev.pdf; Rule 303 Major Equipment.docx; Preas Family.pdf

Categories: Operator Correspondence

Scan No 2107040

LANDOWNER NOTIFICATION VERIFICATION

2A#400568810

From: Jeff Wingerter [mailto:jwingerter@hohneng.com]
Sent: Monday, June 30, 2014 5:40 PM
To: David Kubeczko (dave.kubeczko@state.co.us)
Subject: FW: Notification

Dave,

Attached is the first of three landowner acknowledgements for the KGH Meagher 3-3H well. This email includes the documents that were attached in the notification letter.

Thanks,

Jeff Wingerter, Geologist
Hohn Engineering, PLLC
2708 1st Ave N., Suite 200
Billings, MT 59101

(406) 655-3381 office
(406) 655-3383 fax
(406) 850-9730 cell
jwingerter@hohneng.com
<http://www.hohneng.com>

NOTICE:

This message is intended solely for the use of the addressee and may contain information that is confidential. If you are not the addressee, you are hereby notified that any use, distribution or copying of this message is strictly prohibited. If you received this message in error, please notify us by reply e-mail or by telephone (406-655-3381) and immediately delete this message and any and all of its attachments.

From: kathy@tmhauptman.com [mailto:kathy@tmhauptman.com]
Sent: Monday, June 23, 2014 3:00 PM
To: Jeff Wingerter
Subject: Fw: Notification

From: [Mary Light](#)
Sent: Friday, May 23, 2014 2:37 PM
To: kathy@tmhauptman.com
Subject: Re: Notification

Kathy,

Yes, I have received this.

Thanks,
Mary

On May 23, 2014, at 2:07 PM, <kathy@tmhauptman.com> wrote:

Mary,

Please confirm you have received this email.

Thank you.

From: kathy@tmhauptman.com
Sent: Friday, May 23, 2014 11:58 AM
To: lights@twc.com
Subject: Fw: Notification

Mary,

Please see attached.

Thank you.

Kathy,

Yes, I have received this.

Thanks,
Mary

On May 23, 2014, at 2:07 PM, <kathy@tmhauptman.com> wrote:

> Mary,

>

> Please confirm you have received this email.

>

> Thank you.

>

> From: kathy@tmhauptman.com

> Sent: Friday, May 23, 2014 11:58 AM

> To: lights@twc.com

> Subject: Fw: Notification

>

> Mary,

>

> Please see attached.

>

> Thank you.

>

>

Colorado Oil & Gas Conservation Commission
Mr. Matt Lepore, Director
1120 Lincoln Street, Suite 810
Denver, Colorado 80203
(303) 894-2100
<http://cogcc.state.co.us>

and to the Local Governmental Designee:

Mr. Mark Sprague
Rio Blanco Community Development
2300 Main Street
Meeker, CO 81641
(970) 878-9580
msprague@co.rio-blanco.co.us

You may appoint an agent, including its tenant, for purposes of subsequent notice and for consultation or meetings under Rule 306. Such appointment shall be made in writing to the operator and must provide the agent's name, address, and telephone number.

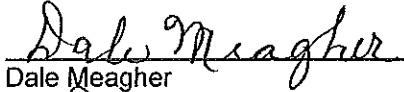
Any of the notices required herein may be waived in writing by the Surface Owner, its agent, or the Local Governmental Designee, provided that a waiver by a Surface Owner or its agent shall not prevent the Surface Owner or any successor-in-interest to the Surface Owner from rescinding that waiver if such rescission is in accordance with applicable law.

Regards,



Tom Hauptman
KGH Operating Company

Please return via self addressed, stamped envelope that you have received this notification.


Dale Meagher
June 18, 2014

**Sign &
Return**

Attachments and corresponding State of Colorado Oil and Gas Conservation Act Rules:

- Form 2A Oil & Gas Location Assessment
- Rule 303.b.(3).C . A list of major equipment components to be used in conjunction with drilling and operating the well(s), including all tanks, pits, flares, combustion equipment, separators, and other ancillary equipment and a description of any pipelines for oil, gas, or water.
- Rule 303.b.(3).D . A scaled drawing, or scaled aerial photograph showing the approximate outline of the Oil and Gas Location and the Well or reference point use for measuring distances. The drawing shall include all visible improvements within five hundred (500) feet of the

FORM
2A

Rev
08/13

State of Colorado
Oil and Gas Conservation Commission

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



Document Number:

400568810

Date Received:

03/19/2014

Oil and Gas Location Assessment

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: _____

Submit signed original form. This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

Expiration Date:

☒ This location assessment is included as part of a permit application.

CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # _____
- ☒ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 47200

Name: KGH OPERATING COMPANY

Address: P O BOX 2235

City: BILLINGS State: MT Zip: 59103-2235

Contact Information

Name: Thomas Hauptman

Phone: (406) 259-8509

Fax: (406) 259-2124

email: tom@tmhauptman.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20030032 ☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Meagher Number: #3-3H

County: RIO BLANCO

QuarterQuarter: LOT 5 Section: 3 Township: 1S Range: 104W Meridian: 6 Ground Elevation: 6111

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 3836 feet FSL from North or South section line

200 feet FEL from East or West section line

Latitude: 39.993560 Longitude: -109.046354

PDOP Reading: 2.8 Date of Measurement: 04/22/2014

Instrument Operator's Name: C Van Matre

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID #

FORM 2A DOC #

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	1	Oil Tanks	1	Condensate Tanks		Water Tanks		Buried Produced Water Vaults	
Drilling Pits	1	Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	
Pump Jacks	1	Separators	1	Injection Pumps		Cavity Pumps			
Gas or Diesel Motors		Electric Motors	1	Electric Generators		Fuel Tanks		Gas Compressors	
Dehydrator Units		Vapor Recovery Unit		VOC Combustor		Flare		LACT Unit	
								Pigging Station	

OTHER FACILITIES

Other Facility Type

Number

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

If this is a successful well, all piping is anticipated to be constructed of steel. The piping from the well head to the separator will be 2-inch buried a minimum of 3 feet deep. The gathering line is 4-inch steel and is above ground.

CONSTRUCTION

Date planned to commence construction: 06/01/2014 Size of disturbed area during construction in acres: 2.50
Estimated date that interim reclamation will begin: 06/01/2015 Size of location after interim reclamation in acres: 1.00
Estimated post-construction ground elevation: 6104

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Land Spreading with consent of surface owner.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Dale Meagher

Phone:

Address: 1163 South 500 West

Fax: _____

Address: _____

Email: _____

City: Vernal State: UT Zip: 84078

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☒ is the mineral owner

☒ is committed to an oil and Gas Lease

☒ has signed the Oil and Gas Lease

☐ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

Date of Rule 306 surface owner consultation _____

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): _____

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): _____

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet
Building Unit: 5280 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 1090 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone
☐ Exception Zone
☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Badlands-Walknolls-Rock outcrop complex, 50-90% slopes, Map Unit 110

NRCS Map Unit Name: Walknolls extremely channery sandy loam, 4 to 25% slope, Map Unit 125

NRCS Map Unit Name: _____

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☐ NRCS or, ☒ field observation Date of observation: 08/22/2012

List individual species: _____

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
☒ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
☒ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
☒ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
☐ Alpine (above timberline)
☐ Other (describe): _____

WATER RESOURCES

Is this a sensitive area: ☒ No ☐ Yes

Distance to nearest

downgradient surface water feature: 5280 Feet

water well: 5280 Feet

Estimated depth to ground water at Oil and Gas Location 500 Feet

Basis for depth to groundwater and sensitive area determination:

Estimated from geology

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: No

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

- ☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments

No improvements within 500 feet of location.

No surface water within 1000 feet of location.

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

Signed: _____

Date: 03/19/2014

Email: tkhohn@hohneng.com

Print Name: Thomas K Hohn

Title: owner/manager

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____

Director of COGCC

Date: _____

Surface Owner Information

Owner Name	Address	Phone	Fax	Email
Dale Meagher	1163 South 500 West Vernal, UT 84078			
Mahogany Resources LLC	2219 Avenida Platanar San Clemente, CA 92673			
Preas Family LLC	903 N Jackson Street Huntingsburg, IN 47542			

3 Surface Owner(s)

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type

Description

--	--

Best Management Practices

No	BMP/COA Type	Description
1	Wildlife	<p>SENSITIVE WILDLIFE AREA BMP</p> <p>1. Where oil and gas activities must occur in mule deer critical winter range or elk winter concentration areas, conduct those activities outside the time period from December 1 through April 15 (construction and drilling operations).</p> <p>2. Restrict post-development well site visitations to between the hours of 10:00 AM and 3:00 PM and reduce well site visitations between December 1 and April 15 in mule deer and elk winter range.</p> <p>3. Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads.</p> <p>4. Gate single-purpose roads and restrict general public access to reduce traffic disruptions to wildlife.</p> <p>5. Close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation.</p> <p>6. Avoid aggressive non-native grasses and shrubs in mule deer and elk habitat restoration.</p> <p>7. Reclaim mule deer and elk habitats with native shrubs, grasses, and forbs appropriate to the ecological site disturbed.</p> <p>8. Restore appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseedling when possible.</p>
2	Storm Water/Erosion Control	<p>Stormwater management will be managed under KGH Operating Companies' (KGH) Stormwater Management Plan prepared for the project area. Prior to construction, a stormwater "perimeter" will be built around the site for initial work purposes. Once the drilling pad construction is completed, the site will be inspected and necessary Erosion Control Devices needed to manage sediment discharge from the pad will be installed. These devices may include but are not limited to: Rock Check Dams; Settling Ponds; Straw Waddles and; Silt Fencing.</p>
3	Material Handling and Spill Prevention	<p>Once the well is drilled and completed onsite KGH will prepare a SPCC plan for the site.</p>

Total: 3 comment(s)

Attachment Check List

Att Doc Num	Name
400568810	FORM 2A SUBMITTED
400568831	DOW CONSULTATION
400569636	SURFACE OWNER CONSENT
400569646	REFERENCE AREA PICTURES
400569649	LEGAL/LEASE DESCRIPTION
400576071	NRCS MAP UNIT DESC
400611630	HYDROLOGY MAP
400612777	LOCATION DRAWING
400612778	LOCATION PICTURES
400612780	ACCESS ROAD MAP
400612821	NRCS MAP UNIT DESC
400612824	NRCS MAP UNIT DESC
400612864	WELL LOCATION PLAT

Total Attach: 13 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Passed completeness	5/21/2014 4:25:15 PM
Permit	Return to draft: 1. Form 2 in the related forms tab is still the old one. 2. Well Location Plat attachment is actually the location photos	5/21/2014 4:05:17 PM
Permit	Returned to draft: 1) Soil Map Unit 110 can remain on permit, but location is in Soil Map Unit 125. This must be added to permit with the NRCS attachment for this map unit. 2) SHL footages and lat/long do not agree with submitted APD already in process. 3) Related APD (#400568663) on this form was withdrawn. Submitted APD (#400605997) is in process. Please change related form 2 doc # to correct one. 4) Checked with OGLA and location drawing and hydrology map are adequate.	5/21/2014 1:26:26 PM
Permit	Return to draft. Hydrology map: should be topo map showing all surface waters & riparian areas. Area of map should concentrate on location.	5/19/2014 3:27:05 PM
Permit	Returned to draft: 1) NRCS map unit incorrect. 2) Hydrology map: should be topo map showing all surface waters & riparian areas. Area of map should concentrate on location.	3/25/2014 12:28:06 PM
Permit	Returned to draft; Still no location drawing and no comment in the submit tab that there are no improvements within 500'. Hydrology map should show well location with a circle indicating 1000 feet from well location and should have a statement saying there is no surface water within 1000' feet of well if its true otherwise list footage to surface water.	3/24/2014 8:50:11 AM
Permit	Returned to draft. There must be a pipeline description. Does not state where Plant Community information came from. Missing Hydrology Map. Missing NRCS Map Description Unit attachment. Number needs to be entered under Map Unit Name. Needs comment on submit tab that there are no improvements within 500' (no Location Drawing)	3/20/2014 10:19:44 AM

Total: 7 comment(s)

KGH OPERATING COMPANY

DIRECTIONS TO SITE

MEAGHER #3-3H

LOCATED IN RIO BLANCO COUNTY, COLORADO

SECTION 3, T1S, R104W, 6TH P.M.

3836' FSL & 200' FEL

PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY DIRECTION FROM RANGELY, COLORADO ALONG COUNTY ROAD 2 APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN LEFT AND PROCEED IN A SOUTHWESTERLY, THEN SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 9.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN RIGHT AND PROCEED IN A NORTHWESTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 1.4 MILES TO A GATE AT THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST, PROCEED THROUGH GATE NORTHWESTERLY FOR APPROXIMATELY 3.4 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE MEAGHER #3-3H LOCATION, TURN LEFT OFF OF EXISTING ROAD AND PROCEED WEST FOR APPROXIMATELY 188 FEET TO THE EAST EDGE OF THE MEAGHER #3-3H PAD.

TOTAL DISTANCE FROM RANGELY, COLORADO TO THE PROPOSED LOCATION IS APPROXIMATELY 26.7 MILES.



120 W. 84TH AVENUE
THORNTON, COLORADO 80260
PH. 303-702-1617
FAX. 303-702-1488
WWW.POWERSURVEYING.COM

LOCATION DRAWING

SCALE:
1" = 1000'

DATE:
5/1/14

P10

SURVEYED BY: C. VAN MATRE
DRAWN BY: D. YOSHIDA
APPROVED BY: R. GABRIEL

REVISED:

KGH OPERATING COMPANY

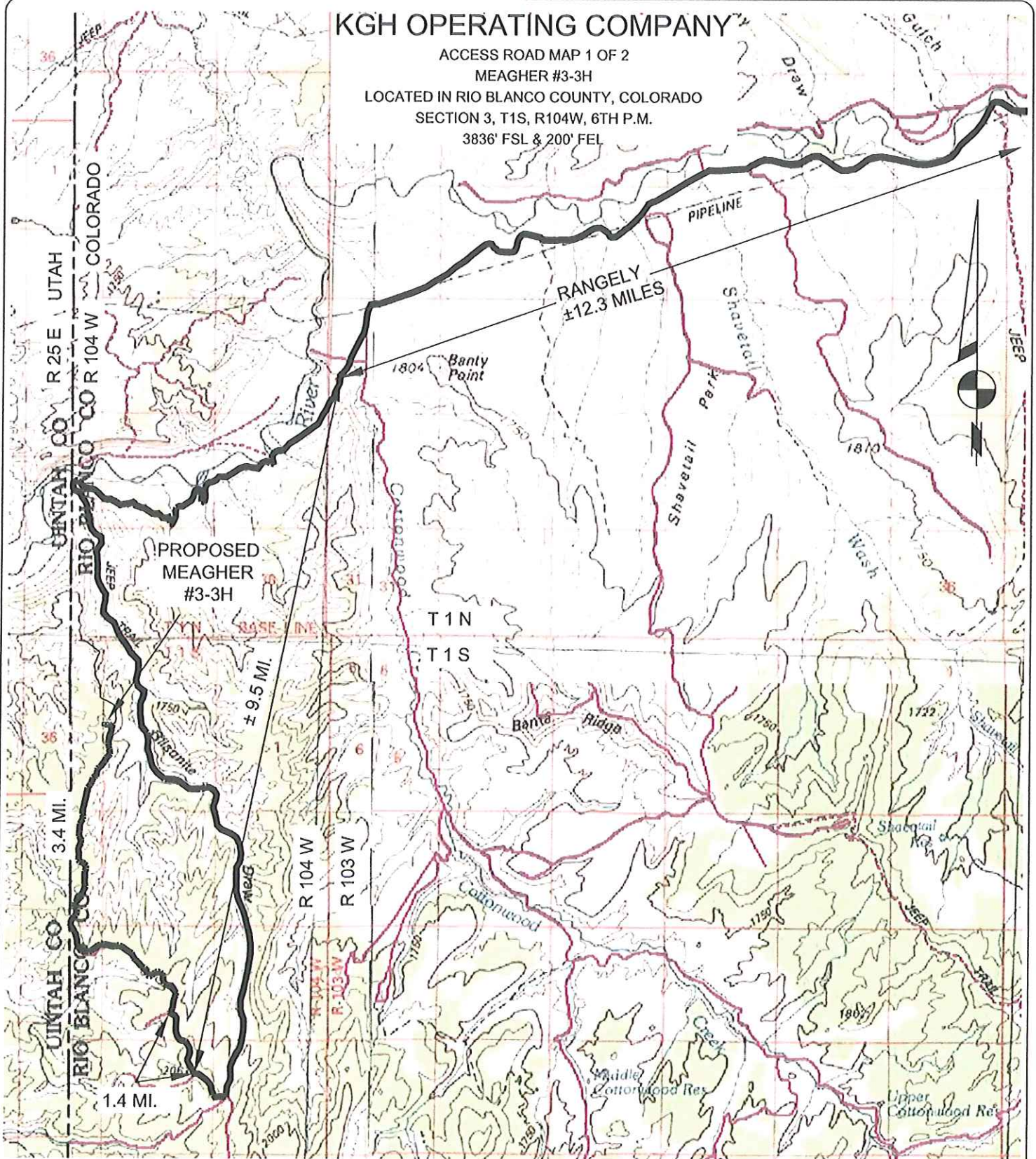
ACCESS ROAD MAP 1 OF 2

MEAGHER #3-3H

LOCATED IN RIO BLANCO COUNTY, COLORADO

SECTION 3, T1S, R104W, 6TH P.M.

3836' FSL & 200' FEL



120 W. 84TH AVENUE
THORNTON, COLORADO 80260
PH. 303-702-1617
FAX. 303-702-1488
WWW.POWERSURVEYING.COM

ACCESS ROAD MAP

SURVEYED BY: C. VAN MATRE
DRAWN BY: D. YOSHIDA
APPROVED BY: R. GABRIEL

REVISED:

SCALE:
1" = 6000'

DATE:
5/1/14

P11

KGH OPERATING COMPANY

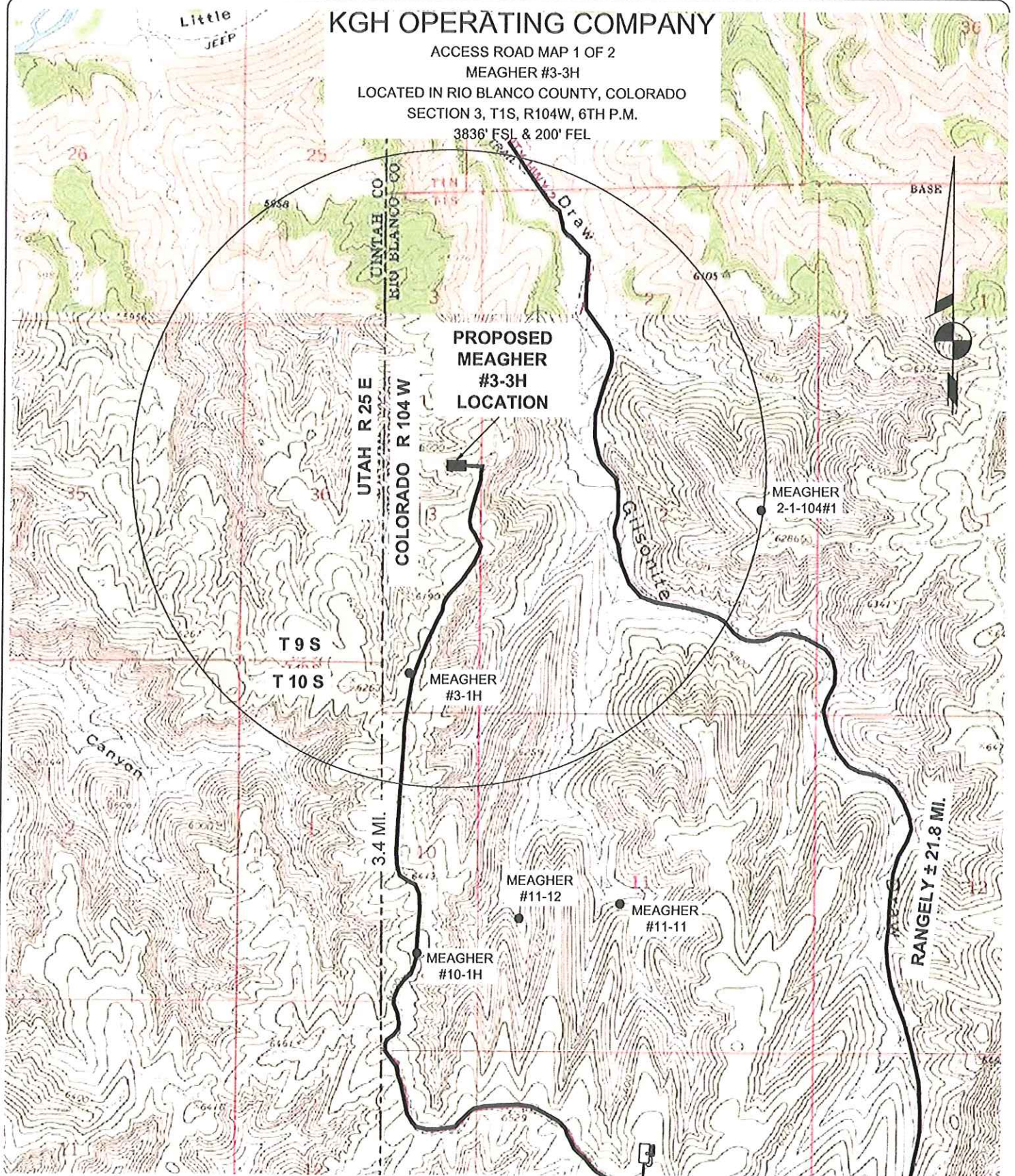
ACCESS ROAD MAP 1 OF 2

MEAGHER #3-3H

LOCATED IN RIO BLANCO COUNTY, COLORADO

SECTION 3, T1S, R104W, 6TH P.M.

3836' FSL & 200' FEL



120 W. 84TH AVENUE
THORNTON, COLORADO 80260
PH. 303-702-1617
FAX. 303-702-1488
WWW.POWERSURVEYING.COM

ACCESS ROAD MAP

MEAGHER #3-3H

3836' FSL & 200' FEL

LOCATED IN RIO BLANCO COUNTY, COLORADO

SECTION 3, T1S, R104W, 6TH P.M.

SURVEYED BY: C. VAN MATRE

DRAWN BY: D. YOSHIDA

APPROVED BY: R. GABRIEL

REVISED:

SCALE:
1" = 2000'

DATE:
5/1/14

P12

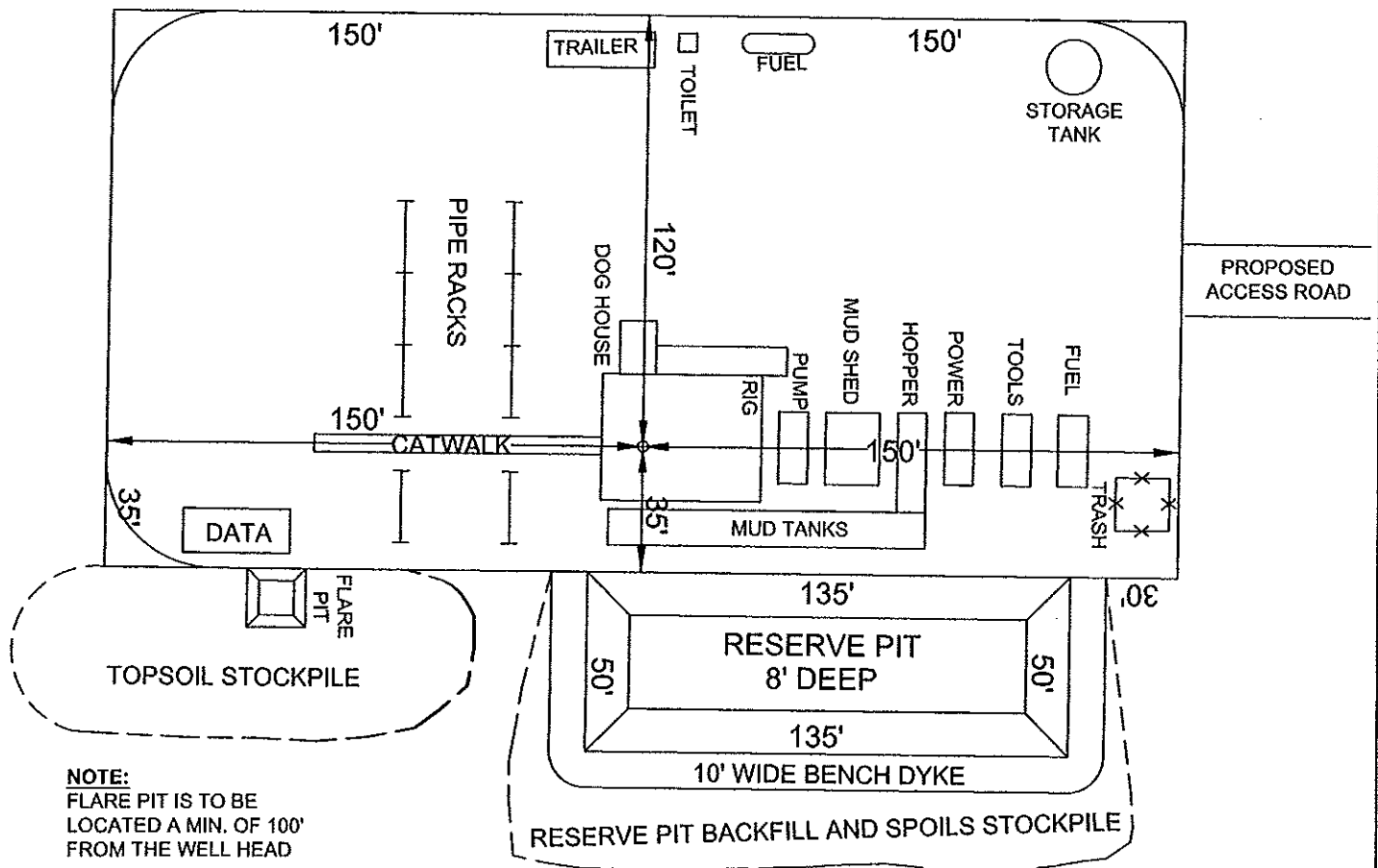
KGH OPERATING COMPANY

TYPICAL RIG LAYOUT FOR
MEAGHER #3-3H
LOCATED IN RIO BLANCO COUNTY, COLORADO
SECTION 3, T1S, R104W, 6TH P.M.
3836' FSL & 200' FEL

FIGURE #3



SCALE:
1" = 50'



NOTE:
FLARE PIT IS TO BE
LOCATED A MIN. OF 100'
FROM THE WELL HEAD

RESERVE PIT
TOTAL PIT CAPACITY
W/2' OF FREEBOARD
= 4520 Bbls±
TOTAL PIT VOLUME
= 1400 cu. yds.



120 W. 84TH AVENUE
THORNTON, COLORADO 80260
PH. 303-702-1617
FAX. 303-702-1488
WWW.POWERSURVEYING.COM

TYPICAL RIG LAYOUT

SURVEYED BY: C. VAN MATRE
DRAWN BY: D. YOSHIDA
APPROVED BY: R. GABRIEL

REVISED:

SCALE:
1" = 50'

DATE:
5/1/14

P8

Rule 303.b.(3).C List of major equipment

KGH Operating Company
Meagher #3-3H
Lot 5, Section 3, T1S-R104W
Rio Blanco County, Colorado

Drilling and Completion

Drilling Rig and support equipment

Reserve Pit (to be closed and reclaimed after drilling and completion)

Workover Rig and support equipment

Production

Well Head Assembly

Separator

400 Bbl Tanks (quantity unknown until completion)

Flare Stack

Pump Jack (possible, depending on need)

Gas Lift Equipment (possible, depending on need)

Production piping

COLORADO OIL AND GAS CONSERVATION COMMISSION

HYDRAULIC FRACTURING

MAY 2011



OIL & GAS CONSERVATION COMMISSION

Overview

- I. Background
- II. Relevant Regulations
- III. Engineering Review
- IV. Environmental and Groundwater Protection
- V. Inspection and Complaints



OIL & GAS CONSERVATION COMMISSION

Mission Statement

- Under the Oil and Gas Conservation Act, the Commission's mission is to: Foster the responsible, balanced development, production, and utilization of oil and gas in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources.
- C.R.S. 34-60-102(1)(a)(I).



OIL & GAS CONSERVATION COMMISSION

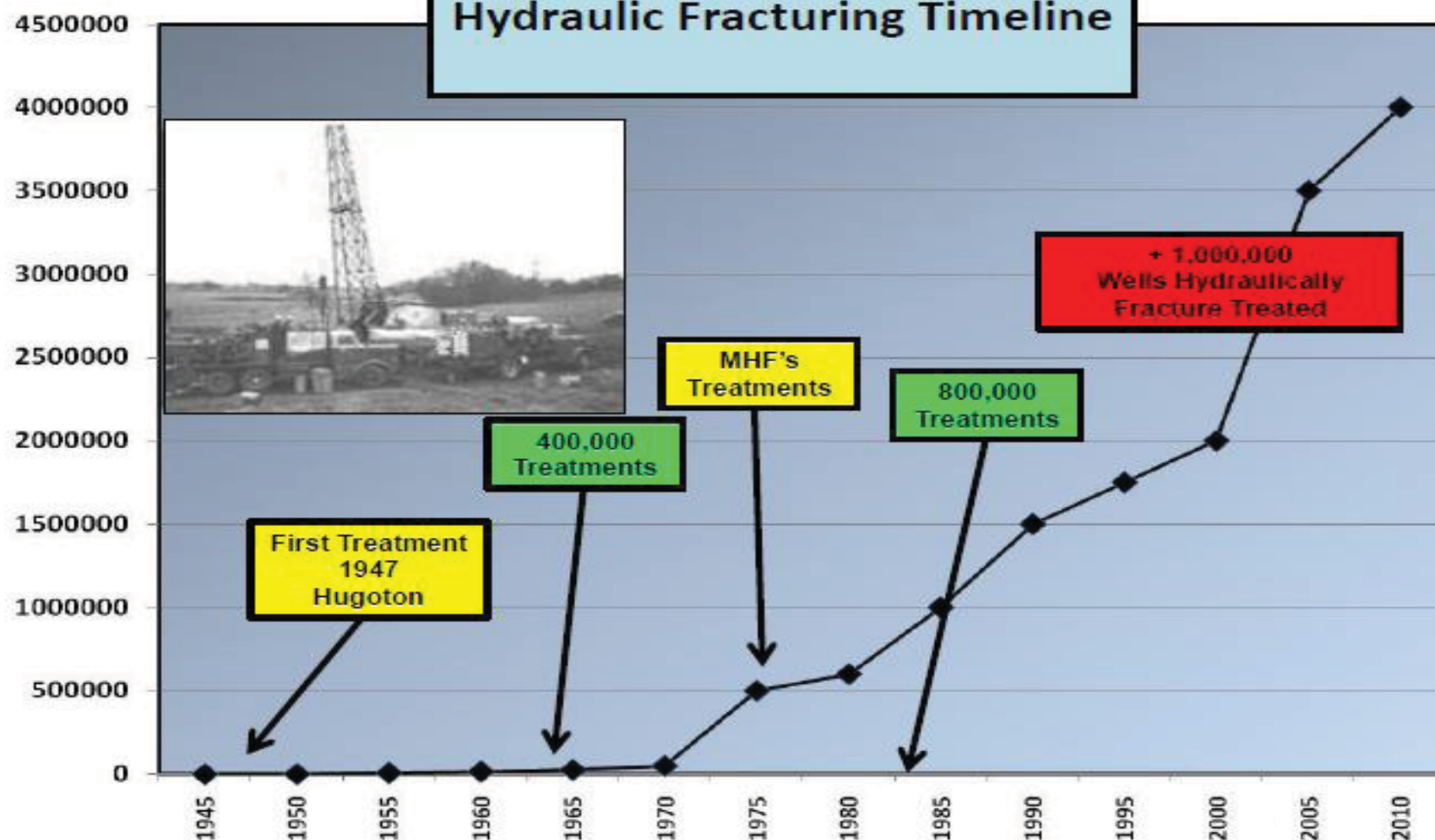
Purpose of Hydraulic Fracturing

- To improve the productivity and ultimate recovery of the well.
- Effectively connects the well to the productive formation.
- Creates a high permeability pathway from the productive formation to the well.

Uses a controlled high pressure injection of fluid and proppant (usually sand).



Hydraulic Fracturing Timeline



SPE Papers 801, 22392, 36166, IOGCC, Halliburton

4

gti.



History of Hydraulic Fracturing

OIL & GAS CONSERVATION COMMISSION

COGCC Hydraulic Fracturing Rules

- Rule 205 inventory chemicals
- Rule 317 Well casing and cementing; Cement bond logs.
- Rule 317B setbacks and precautions near surface waters and tributaries that are sources of public drinking water.
- Rule 341 monitor pressures during stimulation.
- Rule 608 Special requirements for CBM wells.
- Rules 903 & 904 pit permitting, lining, monitoring, & secondary containment
- Rule 906 requires Commission, CDPHE and the landowner of any spill that threatens to impact any water of the state.



OIL & GAS CONSERVATION COMMISSION

FRAC JOB – WELL SITE

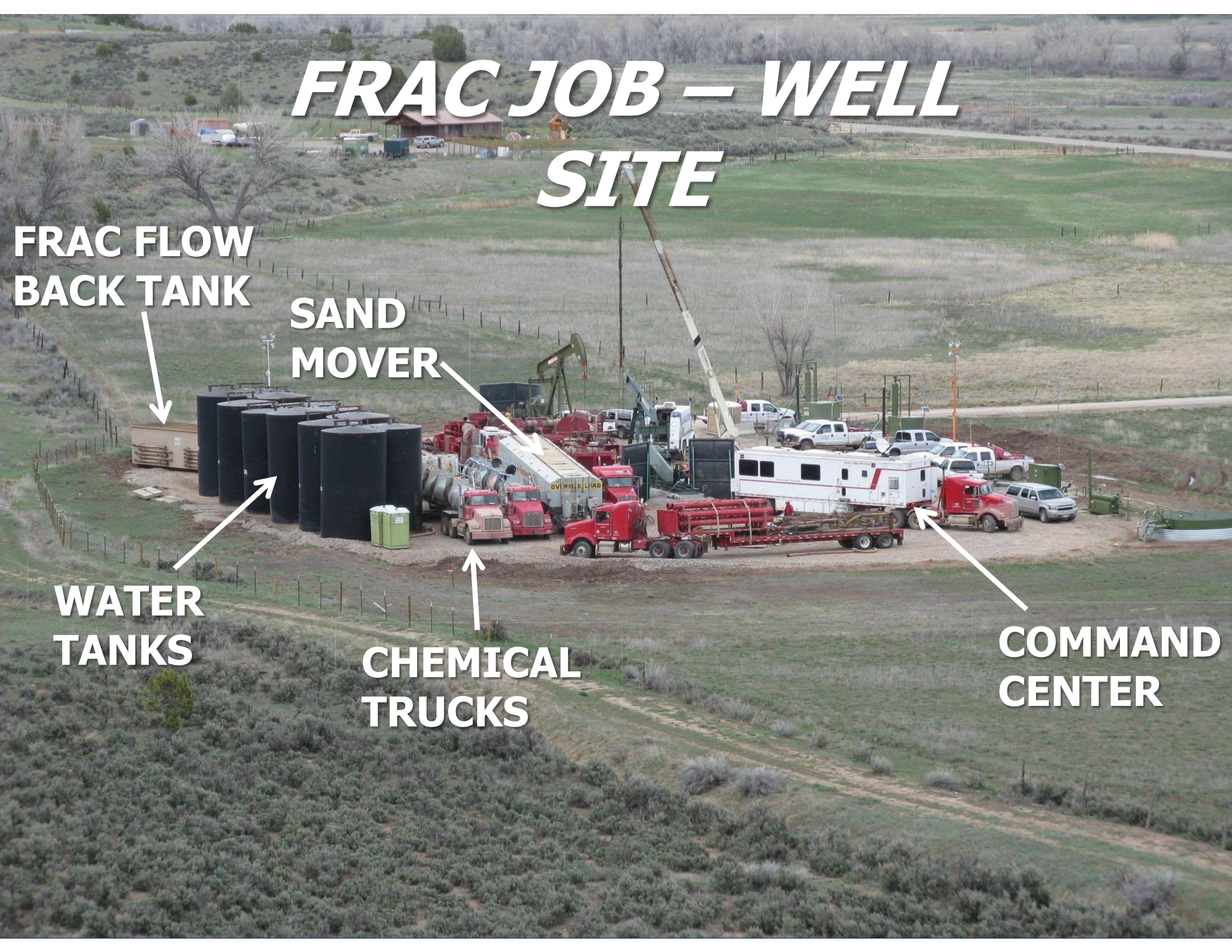
**FRAC FLOW
BACK TANK**

**SAND
MOVER**

**WATER
TANKS**

**CHEMICAL
TRUCKS**

**COMMAND
CENTER**



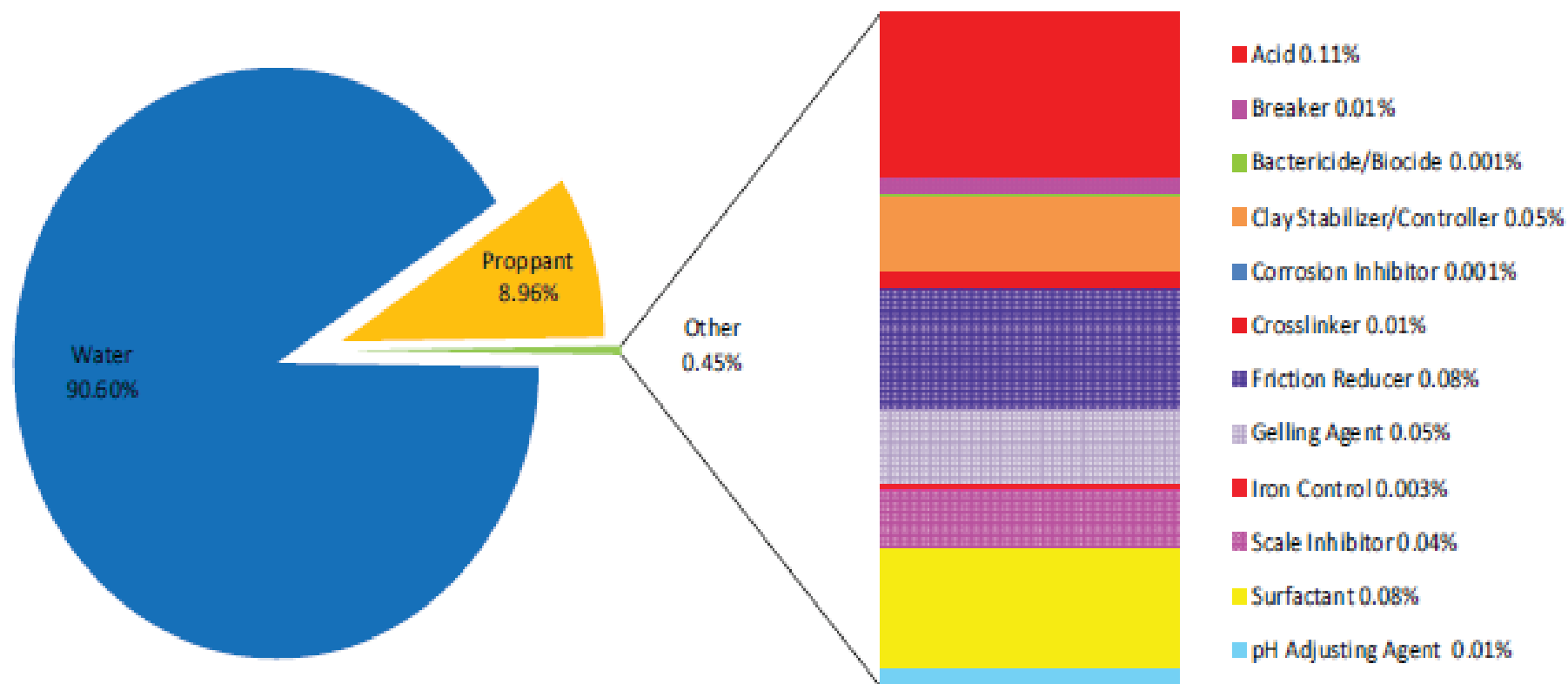
What's in the fluids and proppant?

- Though some water sensitive formations are still frac'd with petroleum based fluids, most frac fluids are water based including nitrogen foam systems.
- You still probably would not want to drink it. But you don't drink other things naturally present in the productive formation either like petroleum or condensate (similar to kerosene, paint thinner and gasoline).



Composition of Frac Fluid

Composition of Frac Fluid



From: Gas Research Institute

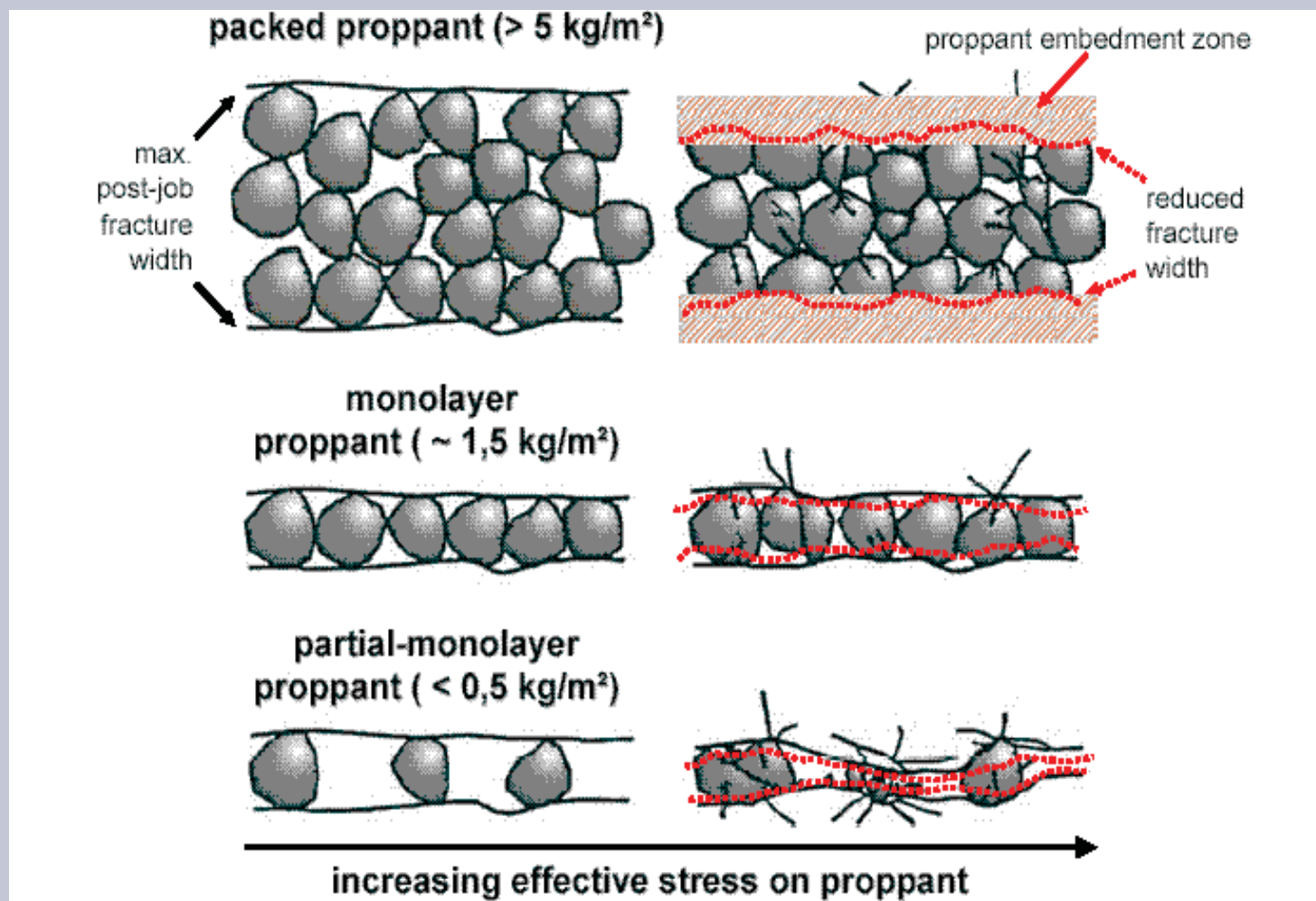


Composition of Frac Fluid

<u>Additive</u>	<u>Main Compound</u>	<u>Common Use</u>
Diluted Acid	Hydrochloricor, Muriatic Acid	Swimming Pools
Biocide	Glutaraldehyde	Dental Disinfectant
Breaker	Ammonium Persulfate	Bleaching Hair
Crosslinker	Borate Salts	Laundry Detergents
Iron Control	Citric Acid	Food Additive
Gelling Agent	Guar Gum	Biscuits
Scale Inhibitor	Ethylene Glycol	Antifreeze
Surfactant	Isopropanol	Glass Cleaner
Friction Reducer	Polyacrylamide	Water and Soil Treatment



Proppants (Sand)



from BJ Services

Where do the fractures go?

- They stay in the formation of interest.
- Typical fracture:
 - "Half" Length: 300' to 1500'.
 - Height: 20' to 300'.
 - Width: 0.1" – 0.3".
- Energy Force: less than -1 on Richter Scale



Where do the fluids go?

- Some fluids flowback prior to production.
- Flowback is collected in the flowback tanks (or lined pits).
- Most of the rest is produced from the well.
- Small percentages may remain in production formation.
- The frac fluid is reused at another site or disposed of into injection wells or other E&P waste disposal facility.



COGCC POLICIES TO PREVENT GAS/OIL MIGRATION

(FOR NEW WELLS)

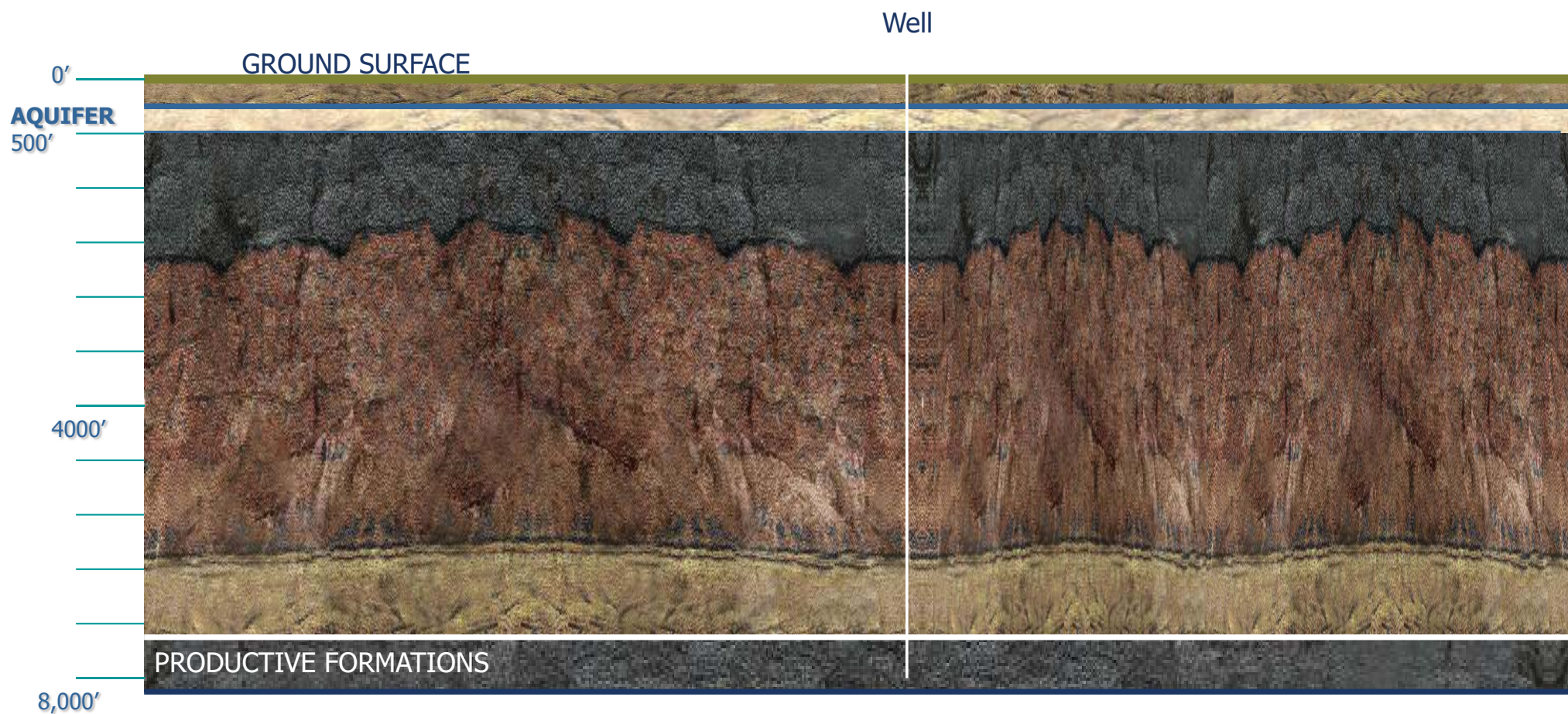
1. ENSURE SURFACE CASING IN ALL WELLS IS SET AT LEAST 50 FEET BELOW THE DEPTH OF THE DEEPEST WATER WELL OR AQUIFERS
2. ENSURE PRODUCTION CASING ISOLATES ALL PRODUCTION ZONES



OIL & GAS CONSERVATION COMMISSION

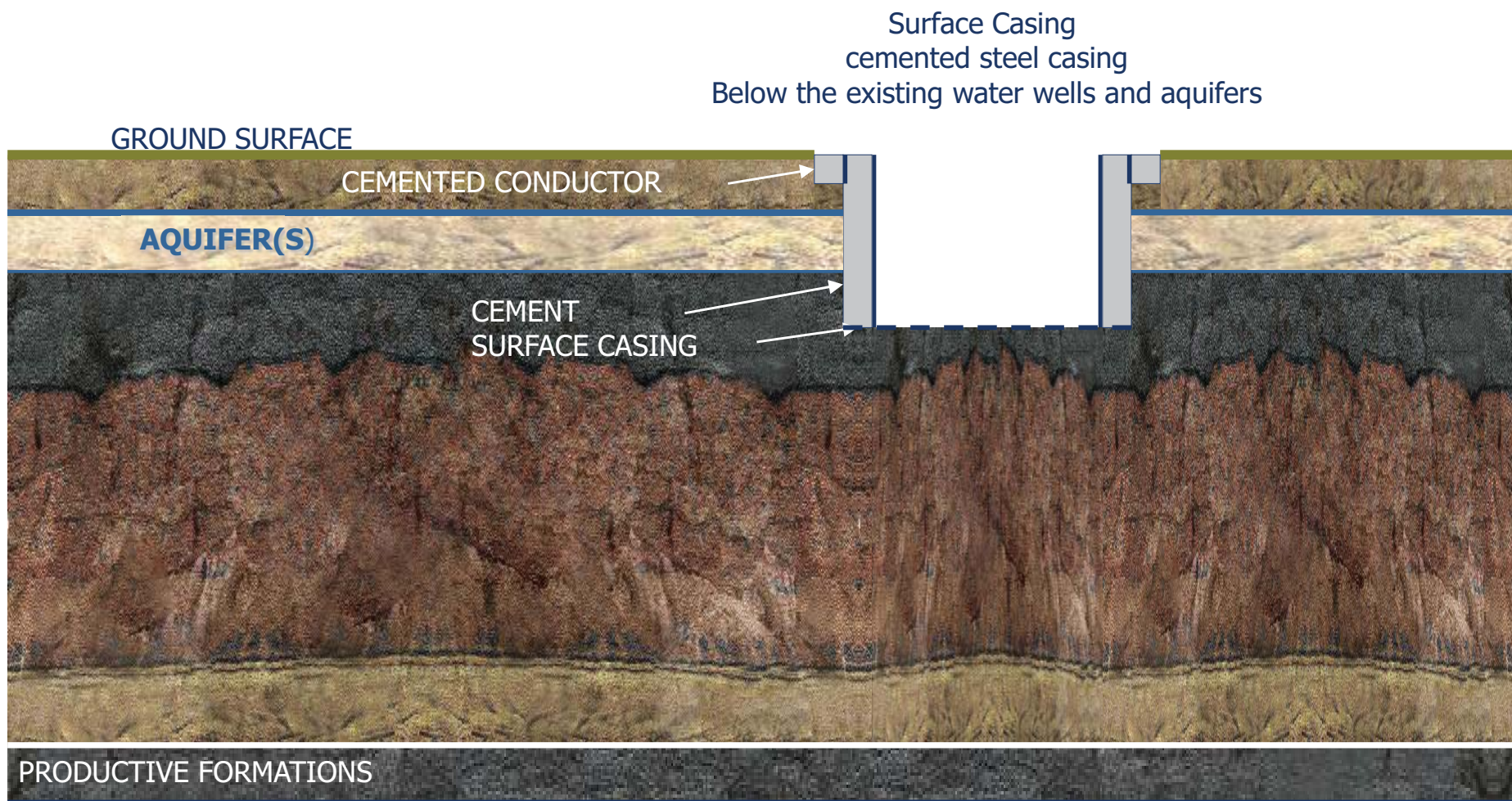
WELL BORE

The following diagrams are vertically distorted in order to depict a wellbore. The wellbore dimensions are in inches and the cross-section is in feet of depth.



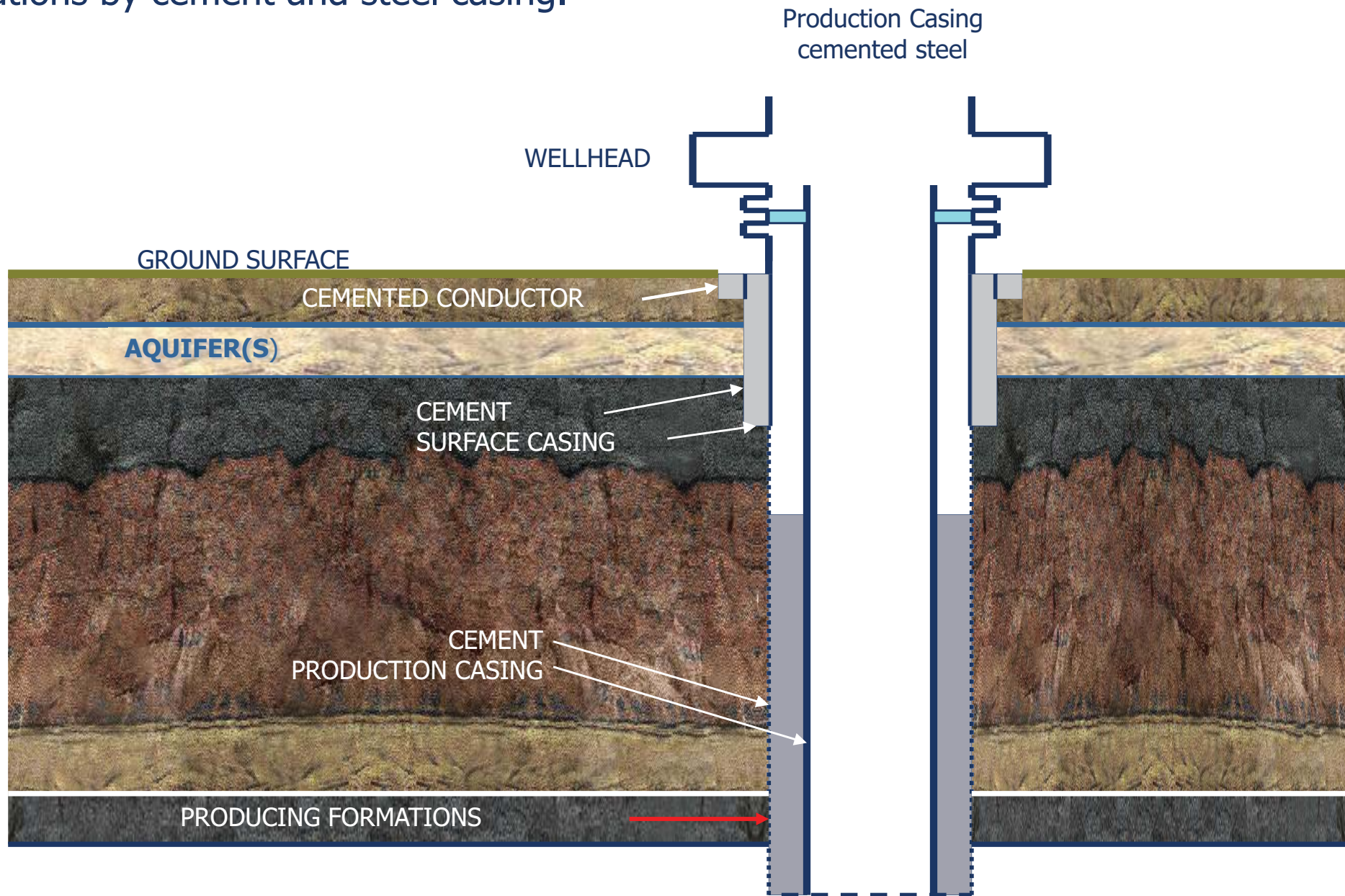
PLACE & CEMENT SURFACE CASING

To protect and isolate aquifers



CEMENT PRODUCTION CASING

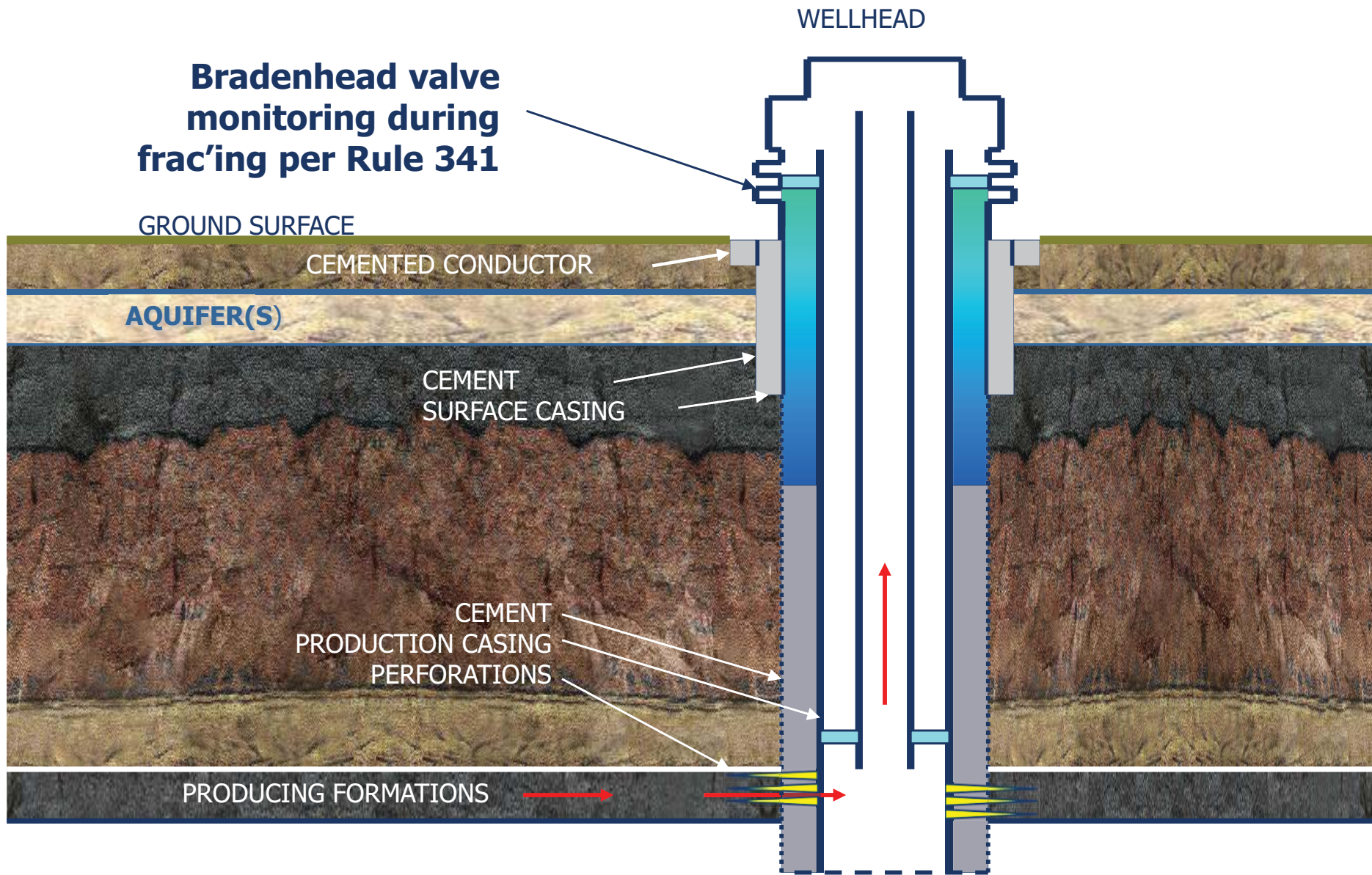
To isolate hydrocarbons to producing formations by cement and steel casing.



PREPARE FOR PRODUCTION

Perforate and run tubing

Bradenhead valve monitoring during frac'ing per Rule 341



Application for Permit to Drill – Casing and Cementing Plan

State of Colorado
Oil and Gas Conservation Commission
1025 Lincoln Street, Suite 801, Denver, Colorado 80202 Phone: (303) 864-2100 Fax: (303) 864-2109
APPLICATION FOR PERMIT TO DRILL

RECEIVED
MAY 31 2009
COGCC

1. ☒ Drilling ☐ Drilling and Completion ☐ Drilling and Production

2. TYPE OF WELL: ☒ OIL ☐ GAS ☐ OTHER: _____
3. NAME OF OPERATOR: El Paso Energy Company, LP 4. COGCC Operator Number: 100872

5. ADDRESS: 1999 18th St Ste 1900 City: Denver State: CO Zip: 80202
6. CONTACT NAME: Maria Okasaka Phone: (303) 291-6417 Fax: (303) 291-6485
7. WELL NAME: CDOU Well Number: 1-36-10-78
8. UNIT NAME (if applicable): _____ Unit Number: _____

9. PROPOSED TOTAL MEASURED DEPTH: 10200'

10. WELL LOCATION INFORMATION
Grid: NENE Sec: 36 Twp: 10S Rng: 76W Meridian: 6th PM
Latitude: 39 14 136 Longitude: 105 02 260
Footage At Surface: 680' N 650' S
11. Field Name: 340000 12. County: Park 13. Section: 36
14. GPS Data: Date of Measurement: 3/12/09 POCC Reading: 680' Instrument Operator's Name: Ryan Alford

15. If well is: ☐ Directional ☐ Horizontal (highly deviated) ☐ Horizontal (slightly deviated) ☐ Vertical ☐ Substantially deviated drilling plan. Bottomhole Sec Top Rng: _____
Footage At Top of Foot Zone: _____ At Bottom Hole: _____

16. Is location in high density area (Rule 903)? ☐ Yes ☒ No
17. Distance to the nearest building, public road, above ground utility or railroad: _____
18. Distance to Nearest Property Line: 650' 19. Distance to nearest well permitted/completed in the same formation: +16 miles

20. LEASE, SPACING AND POOLING INFORMATION
Objective Formation(s): _____ Spacing Order Number (s): _____ Unit Assigned to Well: _____ Unit Configuration (N2, S2, etc.): _____
21. Mineral Ownership: ☐ Fee ☐ Lease ☐ Partial ☐ Indian ☐ Other: _____
22. Surface Ownership: ☐ Fee ☐ Lease ☐ Partial ☐ Indian ☐ Other: _____
23. Is the Surface Owner also the Mineral Owner? ☐ Yes ☒ No
24. If 23 is No, is the Surface Owner's signature on the lease? ☐ Yes ☒ No
25. If 23 is No, is the Surface Owner's signature on the lease? ☐ Yes ☒ No
26. Using standard COGCC Sec. Top, Ring, Section, and Township, does the proposed wellbore intersect any other wellbore? ☐ Yes ☒ No
27. Distance to Nearest Mineral Lease Line: 650' 28. Total Acres in Lease: 640'

29. If H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.
30. Will salt sections be encountered during drilling? ☐ Yes ☒ No
31. Will salt (>15,000 ppm TDS Cl) or oil based muds be used during drilling? ☐ Yes ☒ No
32. If questions 27 or 28 are yes, is this location in a sensitive area (Rule 903)? ☐ Yes ☒ No If 28, 29 or 30 are "Yes" a pit permit may be required.
33. Mud disposal: ☐ Offsite ☒ Onsite
Method: ☐ Land Farming ☐ Land Spreading ☐ Disposal Facility ☒ Other: Mix, bury, cover
NOTE: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b.) If airless drilling, notify local fire officials.

34. BOP Equipment Type: ☒ Annular Preventer ☒ Double Ram ☒ Rotating Head ☐ None

35. Comments:

DRILLING PLANS AND PROCEDURES

27. Is H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.

28. Will salt sections be encountered during drilling? ☐ Yes ☒ No

29. Will salt (>15,000 ppm TDS Cl) or oil based muds be used during drilling? ☐ Yes ☒ No

30. If questions 27 or 28 are yes, is this location in a sensitive area (Rule 903)? ☐ Yes ☒ No If 28, 29 or 30 are "Yes" a pit permit may be required.

31. Mud disposal: ☐ Offsite ☒ Onsite
Method: ☐ Land Farming ☐ Land Spreading ☐ Disposal Facility ☒ Other: Mix, bury, cover

NOTE: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b.) If airless drilling, notify local fire officials.

String	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Column	Cement Top
Conductor	26"	20"	94#	70'	110	70'	0
Surface	17-1/2"	13-3/8"	54.5#	500'	340	500'	0
Intermediate	12-1/4"	9-5/8"	36#	1500'	350	1500'	0
Production	8-3/4"	7"	29#	10300'	880	10300'	1300'
Stage Tool							

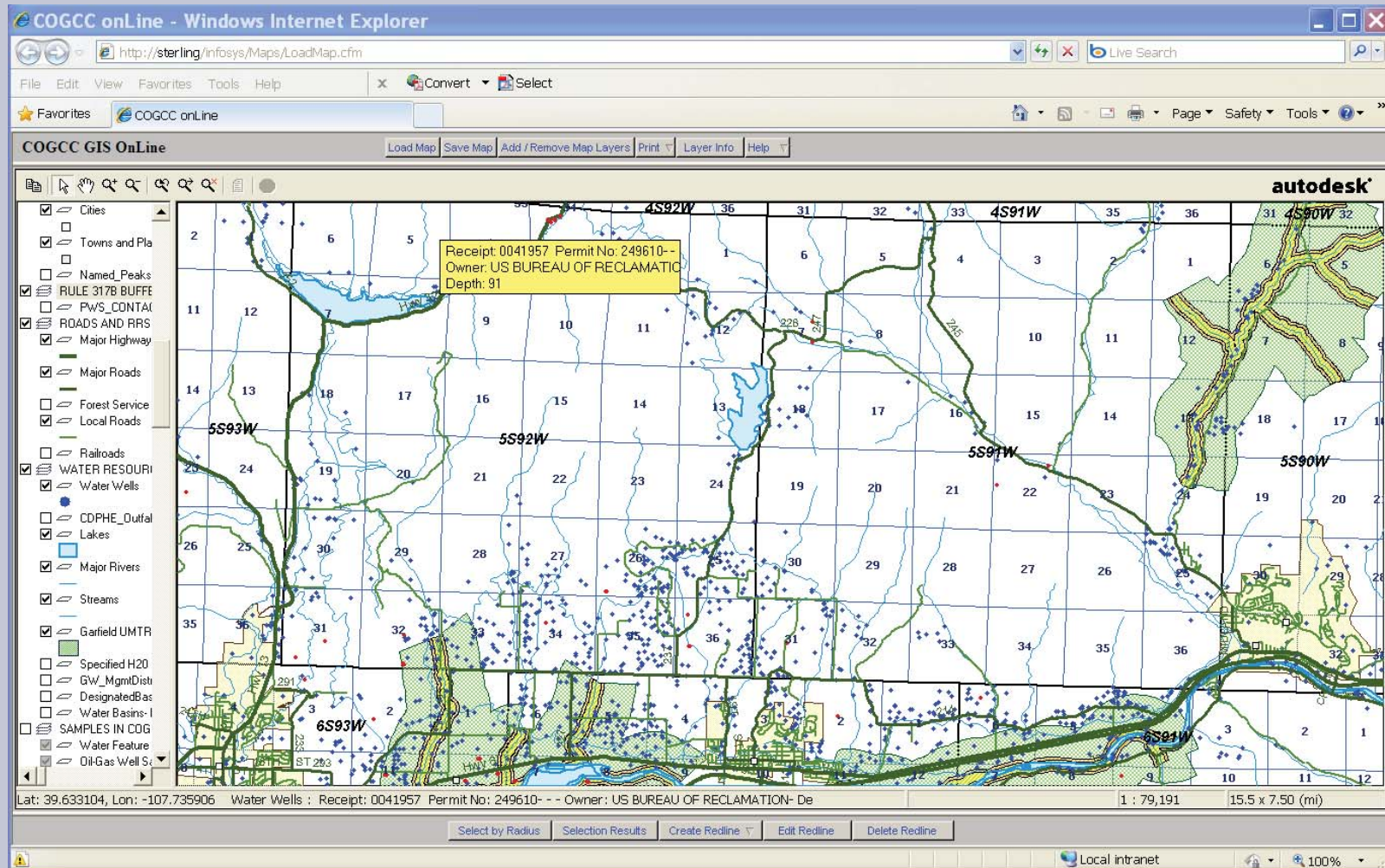
32. BOP Equipment Type: ☒ Annular Preventer ☒ Double Ram ☒ Rotating Head ☐ None

33. Comments:



OIL & GAS CONSERVATION COMMISSION

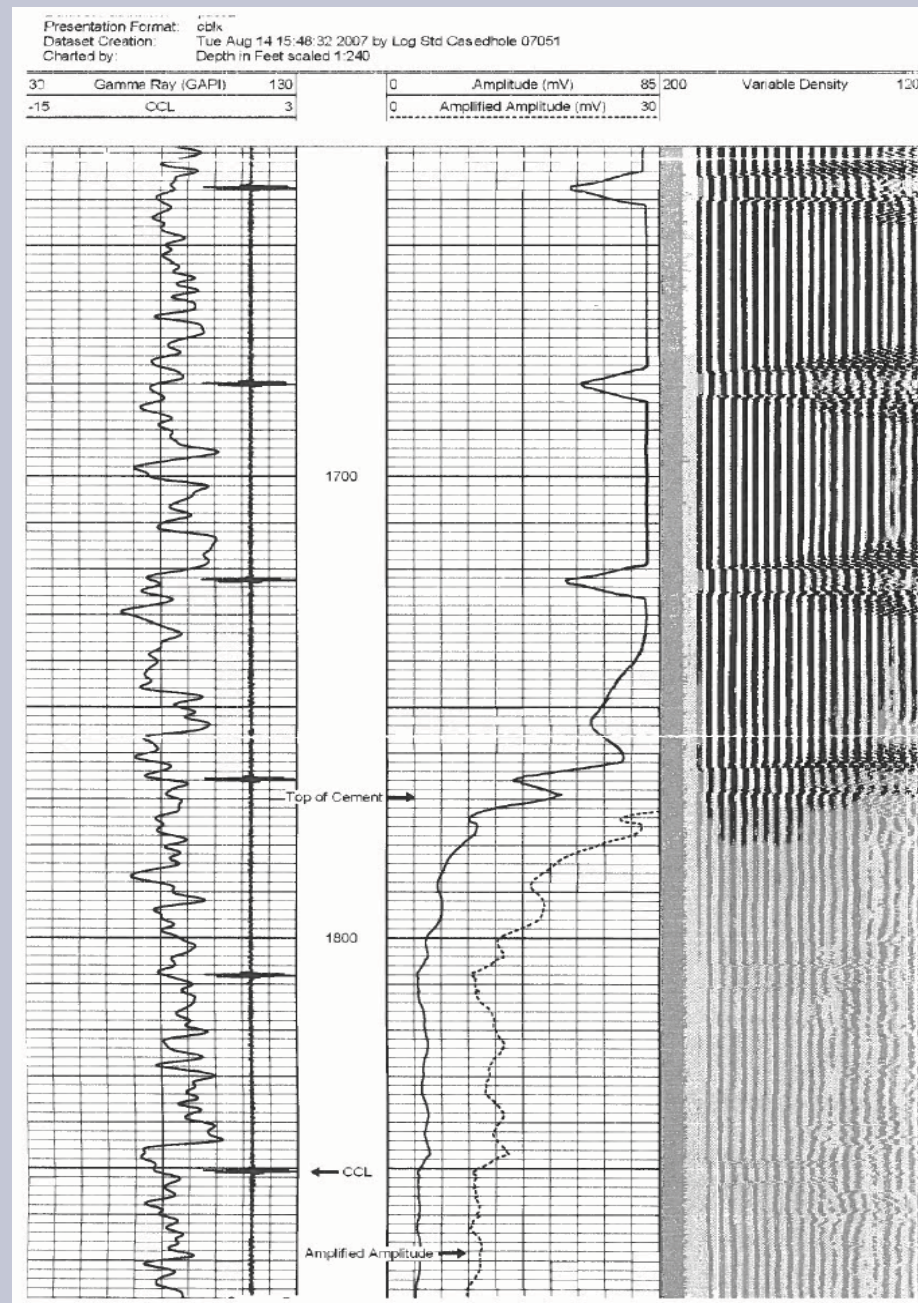
CDWR Water Well Data



OIL & GAS CONSERVATION COMMISSION

Cement Bond Logs

Rule 317.o.
requires cement
bond logs for all
wells.



COLORADO OIL AND GAS CONSERVATION COMMISSION

- Water for Fracing & Other Activities
- Waste Management
- Ground Water Protection, Investigations and Monitoring
- Complaint Response



OIL & GAS CONSERVATION COMMISSION

Sources of Water in Colorado

DNR Division of Water Resources

- Use of Water Must be Legally Allowed
 - Municipal lease/purchase (industrial uses)
 - Changed water rights (e.g. temp agricultural to industrial)
 - Fully consumed water (leased/purchase effluent)
 - Produced water (non-trib or decreed trib & augmented)
 - Non-tributary (landowner & operator agreement)



Sources of Water in Colorado

■ Non-tributary Water

- 1985 Law (SB5)
- Allows Non-tributary water withdrawal when mining minerals (includes O&G)
- Premised on incidental withdrawal
 - Amount that can be withdrawn
 - Duration
- Land ownership not required
- O&G reservoirs are deep, therefore not economic, not productive, and not suitable quality



MANAGEMENT OF E & P WASTE

■ PRODUCED WATER

- Injection (COGCC UIC or EPA on Tribal Lands)
- Evaporation (COGCC Pits & Centralized E&P)
- Commercial Facilities (CDPHE – Solid Waste)
- <3,500 TDS dust suppression (COGCC)
- Discharge (CDPHE – WQCD)
- Reuse & Recycle (COGCC)



MANAGEMENT OF E & P WASTE

- DRILLING FLUIDS, FLOWBACK (FRAC) & OILY WASTES
 - Injection (COGCC UIC or EPA on Tribal Lands)
 - Commercial Facilities (CDPHE – Solid Waste)
 - Land treatment (COGCC)
 - Centralized E&P Waste Facility (COGCC)
 - Reuse & Recycling (COGCC)



OIL & GAS CONSERVATION COMMISSION

900 SERIES RULES - Management of E&P Waste

- Rule 901 - General
- Rule 902 to 905 – Pits:
 permitting (Form 15 & Form 2A), lining, O&M, closing
- Rule 906 – Spills/releases:
 reporting, cleanup, surface owner notification
- Rule 907 – Management
 reuse/recycling, tracking, plans, disposal methods
 produced water, drilling fluids, oily wastes, frac fluid, etc
- Rule 908 – Centralized E&P Waste Management Facilities
- Rule 909 – Site Investigation, Remediation, Closure
- Rule 910 – Cleanup Concentrations



OIL & GAS CONSERVATION COMMISSION

GROUND WATER PROTECTION

- Properly drilling, completing, operating, and P&A to ensure and maintain isolation of productive zones from GW & SW.
- Properly storing, treating, reusing/recycling, transporting, and disposing of wastes.
- Properly installing and maintaining associated equipment & E&P waste management facilities.
- Rapid response to and thorough remediation of impacts from spills and releases.



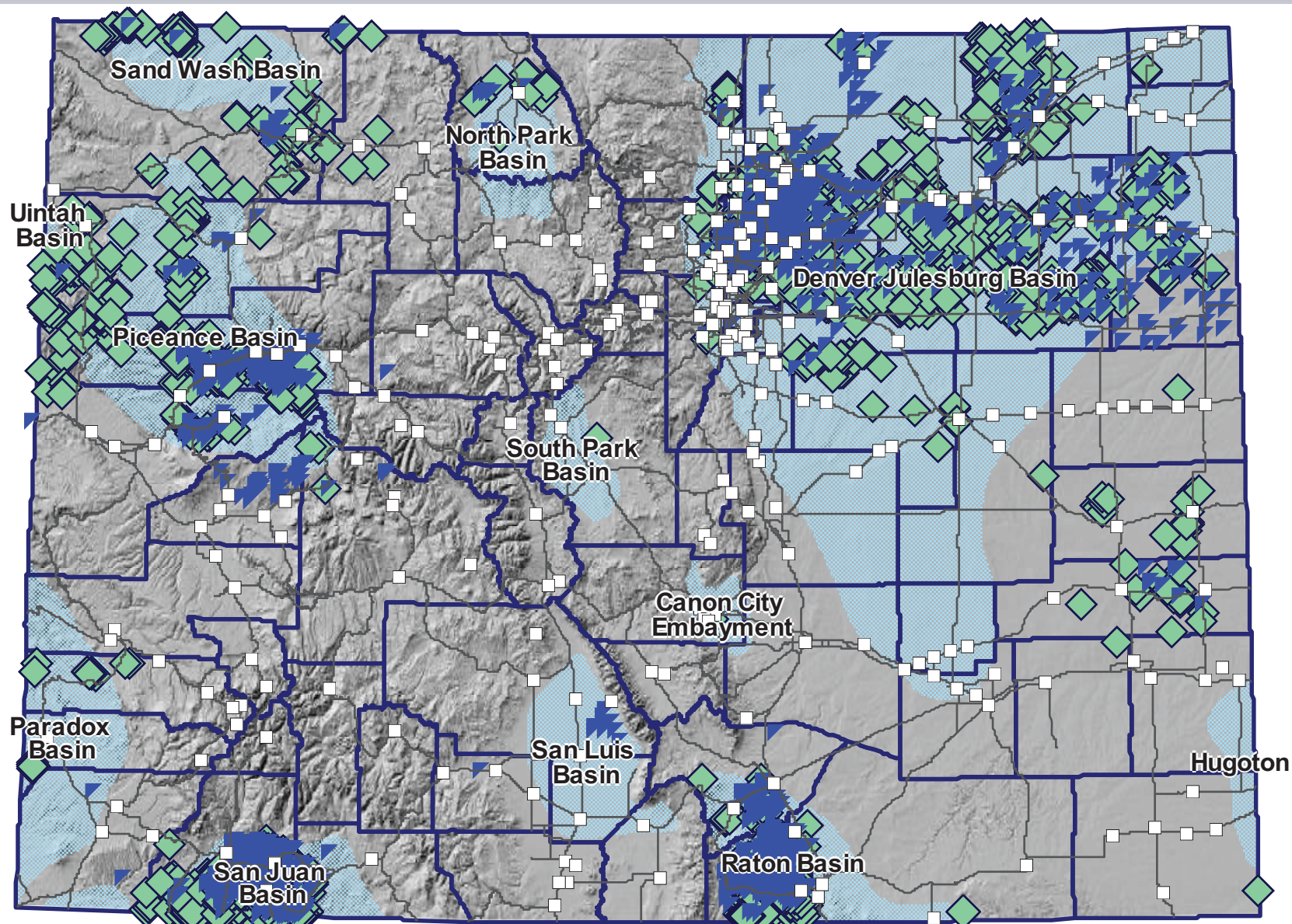
OIL & GAS CONSERVATION COMMISSION

GROUND WATER PROTECTION INVESTIGATIONS & MONITORING

- Analytical results from more than 5,000 water wells.
- Collected by the COGCC, Operators, other agencies
- Studies by COGCC to establish Baseline and Current Conditions
- Collected in response to complaints and requests
- Required by Orders of the Commission (Cause 112)
- Required by Rules (317B, 318A.e.4., 608, 908)
- Required as part of Site Investigation and Remediation activities.



OIL & GAS CONSERVATION COMMISSION



- Blue – water samples
- Green – oil/gas well samples



OIL & GAS CONSERVATION COMMISSION

COMPLAINT RESPONSE

- Collect samples from water wells, soil or other media for field and laboratory analyses.
- Collect samples of gas, oil, condensate, produced water, flow back, or other wastes from nearby oil and gas wells.
- Compare analytical results to background and water regional water quality.
- Compare stable isotopic signatures and composition of gas samples to determine source.
- If a complaint is verified:
 - Operator must remediate impacts to meet standards.
 - Operator must mitigate impacts.



OIL & GAS CONSERVATION COMMISSION

COMPLAINTS

- Response within 24 to 48 hours
- Water testing and analysis
- Reports
- Right to hearing



OIL & GAS CONSERVATION COMMISSION

INSPECTIONS

- 15 Inspectors located throughout the state
- Over 17,000 inspections in 2010
- Most inspections are unannounced



OIL & GAS CONSERVATION COMMISSION

OTHER ONGOING ACTIONS TO ENSURE THAT HYDRAULIC FRACTURING PROTECTS PUBLIC HEALTH AND ENVIRONMENT

- FracFocus.org Website
- “STRONGER” review
- Diesel investigation
- Water well investigations



OIL & GAS CONSERVATION COMMISSION

COGCC Public Website

www.colorado.gov/cogcc

- Denver Office Phone Number: (303) 894-2100
- Statewide Complaint Line: (888) 235-1101



OIL & GAS CONSERVATION COMMISSION