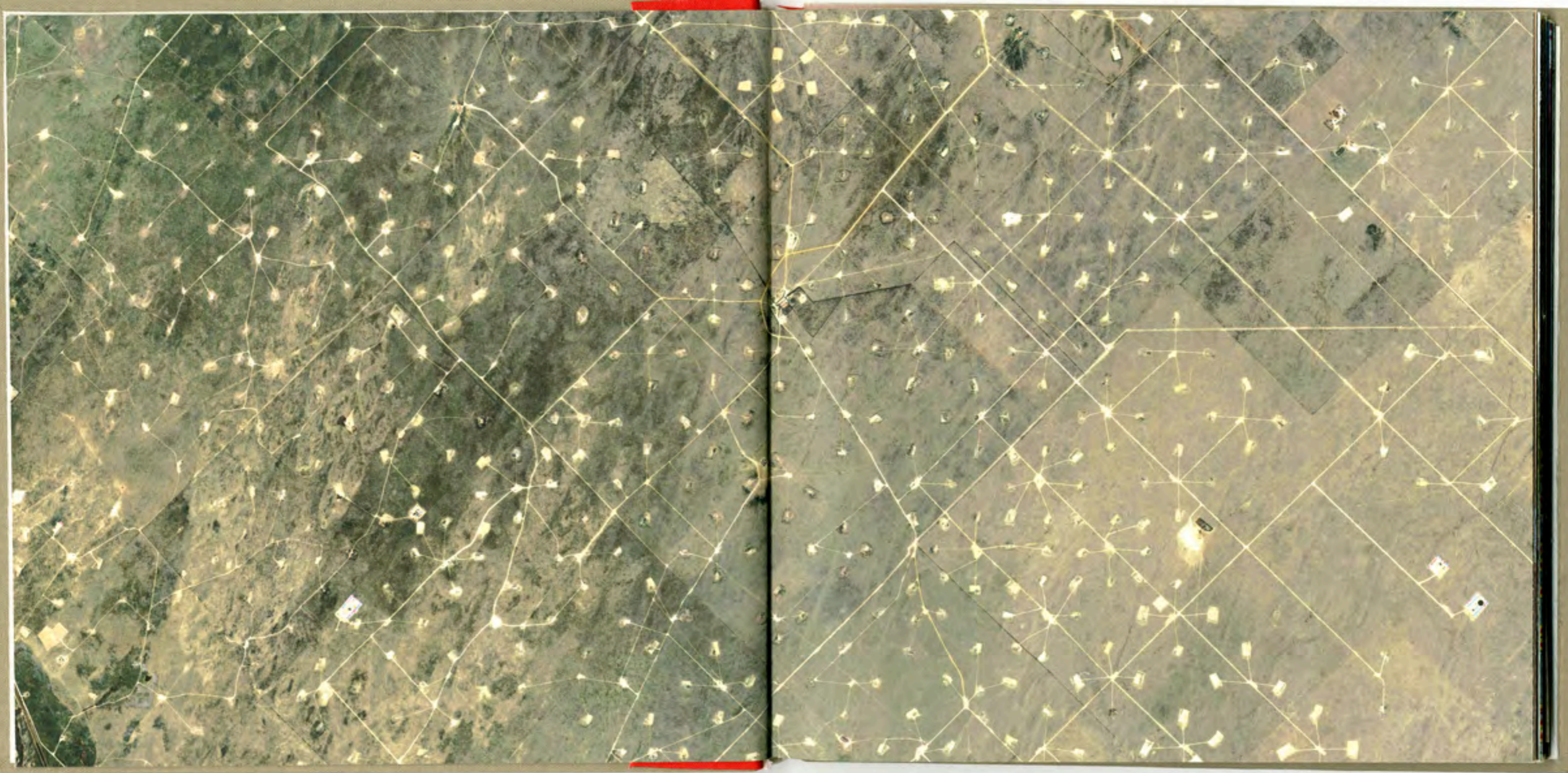
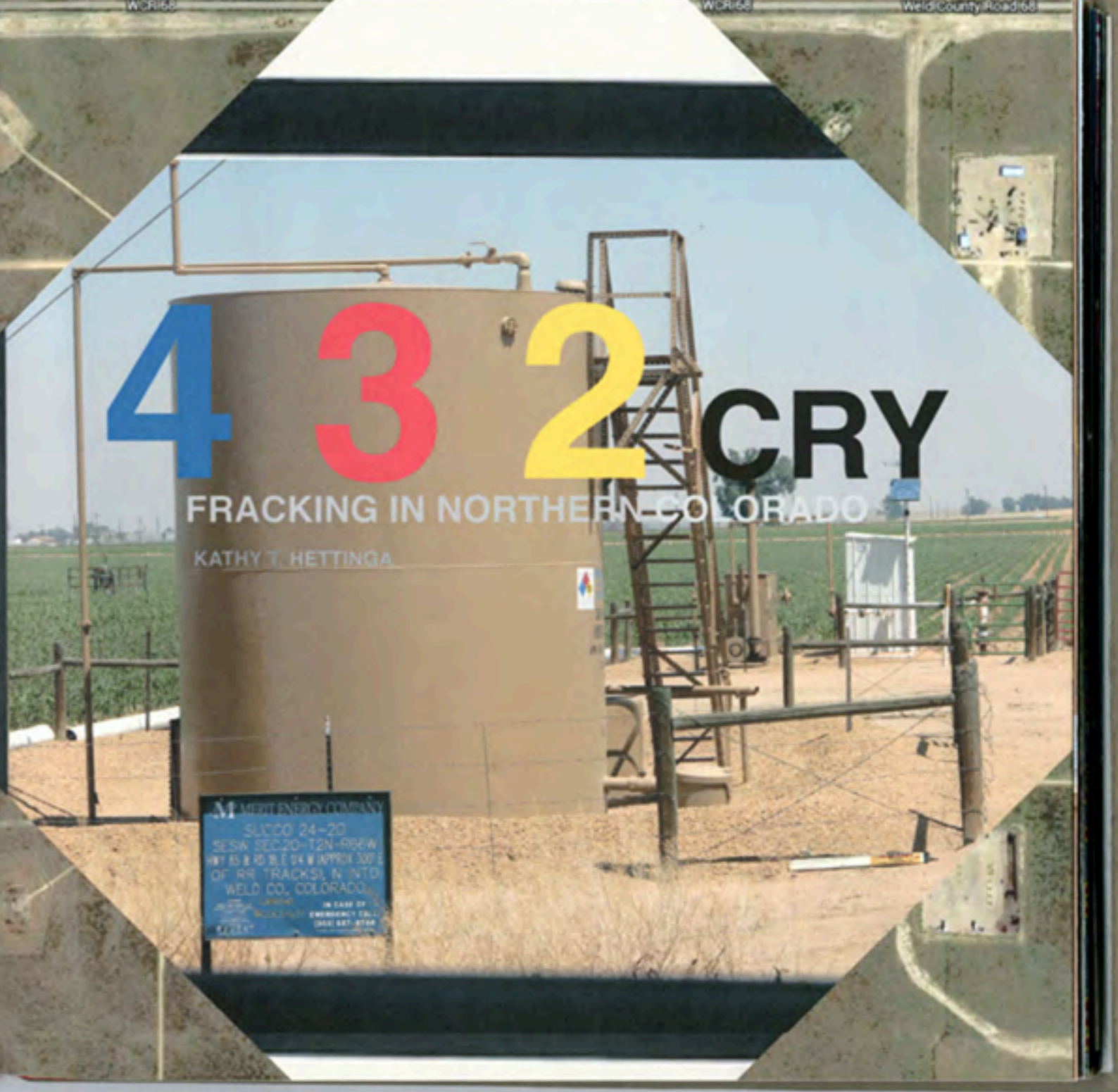




**CRY**

© 2000 CRY, INC. ALL RIGHTS RESERVED. www.cry.com





# 4 3 2 CRY

FRACKING IN NORTHERN COLORADO

KATHY T. HETTINGA

MEDIT ENERGY COMPANY  
SUCCO 24-20  
SESW SEC.20-T2N-R5EW  
R1Y 15 & RD 16 E 1/4 W APPROX 300'  
OF RR TRACKS, N INTD  
WELD CO, COLORADO  
IN CASE OF  
EMERGENCY CALL  
(930) 887-8784



DEDICATED to the activists in my life:  
 Cora Ellen Lunsford Wolfe  
 Duane William Tolisma  
 William Emerson Hettinga  
 and Nathan Richard Sooy.

My mother took an active stand on public education reforms and she often stood alone. My late husband Duane loved the Great Black and White Holsteins, was a producer of milk, a good steward, and filled with a kind heart. My son Emerson ponders systems of oppression in a consumerist society. My husband Nathan organizes against fracking, and like me, he has the deep heart of an activist.

# 300 BBL CONDENSATE

**CONDENSATE**

Great Western  
OIL & GAS COMPANY

FRITZ

*Northern Colorado is where I worked at a framing shop and on a dairy farm with my husband, where I earned my MFA in printmaking, and where I loved my life at my first farmhouse. Now, thirty years later, tens of thousands of drilling scars cover the land. Condensate tanks, produced water, frack pits, pipes, and burners dot every visible bit of farmland, encroaching on towns for miles and miles—and even into the backyard of my beloved home, the Johnstown Farm.*

During the summer of 2012 I set out to photograph the effect of hydraulic fracturing for natural gas upon the land, air and water in my home state of Colorado, which has an estimated eight percent of the natural gas reserves in the United States. Weld County, northeast of Denver, is experiencing a three-decade oil and gas boom.

At the beginning of the boom, the town of Greeley banned drilling/fracking within town limits and was subsequently sued by big energy companies at great cost to the citizens. Since then oil and gas companies have run rampant in Northern Colorado. State laws on mineral extraction supersede local zoning codes and concerns, resulting in nearly 500 wells in the city itself, a number expected to

triple in coming years. Energy companies have continued intense drilling—over 21,000 oil and gas wells surround Greeley. Weld is the most intensely fracked county in the U.S., with gas companies drilling to the edges of and even into populated western towns.

As seen on satellite maps, the open lands of Weld County form an intricate pattern of X's. Roads crisscross from large well pads—five per section—adding up to 20-plus drilling sites per square mile. Additionally, the entire land is covered with drilling holes. The land is pierced, perforated, gouged beyond comprehension. Northern Colorado is sitting on a pincushion of drilled and fractured earth.



17

# NFPA Rating Explanation Guide

## HEALTH HAZARD

- 4 = Can be lethal
- 3 = Can cause serious or permanent injury
- 2 = Can cause temporary incapacitation or residual injury
- 1 = Can cause significant irritation
- 0 = No hazard

- ALK = Alkaline
- ACID = Acidic
- COR = Corrosive
- OX = Oxidizing
- ☢ = Radioactive
- ☄ = Reacts violently or explosively with water
- ☄ = Reacts violently or explosively with water and oxidizing
- WOX

## SPECIAL HAZARD

## FLAMMABILITY HAZARD

- 4 = Will vaporize and readily burn at normal temperatures
- 3 = Can be ignited under almost all ambient temperatures
- 2 = Must be heated or high ambient temperature to burn
- 1 = Must be preheated before ignition can occur
- 0 = Will not burn

- 4 = May explode at normal temperatures and pressures
- 3 = May explode at high temperature or shock
- 2 = Violent chemical change at high temperatures or pressures
- 1 = Normally stable. High temperatures make unstable
- 0 = Stable

## INSTABILITY HAZARD

*This chart for reference only - For complete specifications consult the NFPA 704 Standard*



BLUE = HEALTH HAZARD

CAN BE LETHAL

PRODUCED WATER  
 WARNING  
 PRODUCED WATER  
 1 4 1

Produced water is a misnomer; the water is not created but destroyed—made briny and radioactive.

Field County, Colorado. These  
 with the numbers one  
 andrian, a modern artist,  
 d, yellow, and blue.  
 ene. When these  
 m safe, labeled  
 are code for  
 other lethal

violent chemical reactions,  
 all and crossbones symbol for  
 ation 'hazard diamond' does not  
 recognized and easily understood.



### HEALTH HAZARD

- 4 = Can be lethal
- 3 = Can cause serious injury or permanent disability
- 2 = Can cause irritation or temporary disability
- 1 = Slightly hazardous
- 0 = Not classified as a health hazard

# 4

- O<sub>2</sub> = Oxidizing
- ☢ = Radioactive
- W = Flammable liquid
- WF = Flammable solid
- W = Corrosive
- WOX = Reacts with water and releases a toxic gas

### SPECIAL HAZARD

This chart is

### HEALTH HAZARD


4 = Can be lethal

### DECEPTIVE GUIDE

There are tens of thousands of gas condensate tanks in Weld County, Colorado. These tanks have innocuous signage consisting of primary colors with the numbers one through four—like a playful Mondrian designed for children. Mondrian, a modern artist, designed with squares, diamonds, and the primary colors of red, yellow, and blue. The diamond-shaped signs the industry uses are aesthetic and serene. When these tanks are in your backyard or near your children's playground, they seem safe, labeled with large numbers and bright cheerful colors. The numbers and colors are code for a chilling catalog of possible hazards: serious injuries, incapacitation and other lethal



health effects, spontaneous vaporization and combustion, violent chemical reactions, and fiery explosions. Unlike the universally recognized skull and crossbones symbol for poison, the NFPA 704, National Fire Protection Association 'hazard diamond' does not communicate the hazards that it purports are readily recognized and easily understood.



VOC stacks burn and release volatile organic compounds, carcinogenic materials and chemicals into the air.

*Contrary to the Colorado neighborliness that I remember, residents are guarded and combative. When we drove into a driveway to turn around, a man blew an air horn and shook his fist at us. When we drove down an open unmarked road that ran through a farm field, a milky liquid from the irrigation sprinklers was purposely turned on our car. Further along the road, a man blocked our way with his SUV and interrogated us like a prosecutor.*

#### FRACKING

Hydraulic fracturing for oil and gas is a process in which wells are drilled deep into the earth (through layers of potable drinking water). Each well pad contains one or two acres of compressed dirt, rigs reaching up to 10 stories high, and channels drilled up to two miles deep, traveling horizontally or vertically. Hundreds of thousands of gallons of water (vertical fracking) or millions of gallons of water (horizontal fracking) are laced with a frightening array of chemicals and silt.

After explosions are set off to break through the concrete piping, the fluids are forced with great pressure to fracture (frack) the layers of shale, causing them to release their oil and gas deposits. The released gases then bubble up, along with wastewater and other radioactive liquids and gases from the earth. The gas is piped to condensate tanks where it is often flared, or burned, or

compressed—processes that release pollutants into the air.

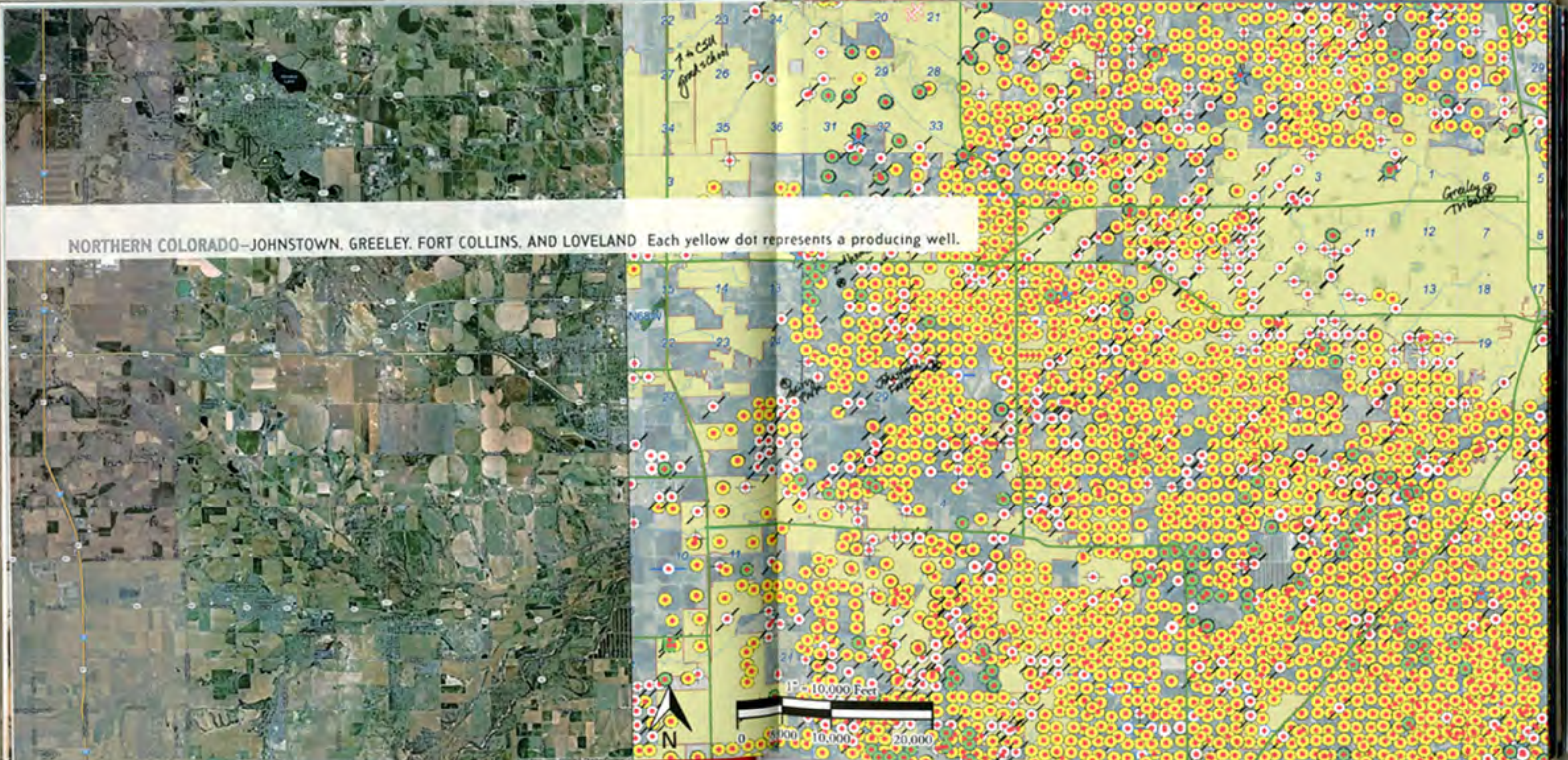
The back-water and the produced water must be stored in containers or plastic-lined ponds that evaporate into the air we breathe. Everywhere, various tanks and connecting pipes are labeled with benign, inscrutable signs, creating an infinite number of possible configurations and arrangements of burners, compressors, produced water tanks, and open pits covered with black plastic—like garbage bags for the earth.

#### BEHEMOTH


The fracking process causes many problems, from destroying the surface of the earth, wasting water, contaminating underground drinking water, and polluting the air to seismic phenomena. More than 15 million Americans now live within one mile of a fracking well. A million new oil and gas wells are predicted for the U.S. over the next few decades (Russell Gold, *Energy Boom Puts Wells in America's Backyards*, Wall Street Journal, Oct. 2013, [online.wsj.com](http://online.wsj.com)).

The centrality of the fracking process to industry is revealed in detailed animations on oil and gas websites. Efforts to stop them—rallies, cries of outrage, and tears—seem small in the face of such a monstrosity. Nevertheless, Goliath was stopped by a smooth river stone from a sling.

NORTHERN COLORADO—JOHNSTOWN, GREELEY, FORT COLLINS, AND LOVELAND Each yellow dot represents a producing well.







WELD COUNTY—GREELEY is surrounded by oil and gas wells. Each dot represents a well.

**N**orthern Colorado—Johnstown, Greeley  
Fort Collins, and Loveland  
This is where:  
I lived in our first farmhouse.  
I framed art and started an art gallery.  
My husband herded cows for a dairy.  
This is where we bought our first home.  
Where my husband died, crushed by a feed truck  
in front of the Holstein cows.  
Where my second husband and I wed  
at the church.

And this is where:  
My first and only baby was born.  
I earned my MFA at Colorado State.  
I worked as an artist at the Greeley Tribune.  
I divorced my second husband,  
who beat me.  
And this is where:  
I left to go east to make a living for myself  
and my baby son.  
Soon afterwards, a magnitude  
of fracking was unleashed.

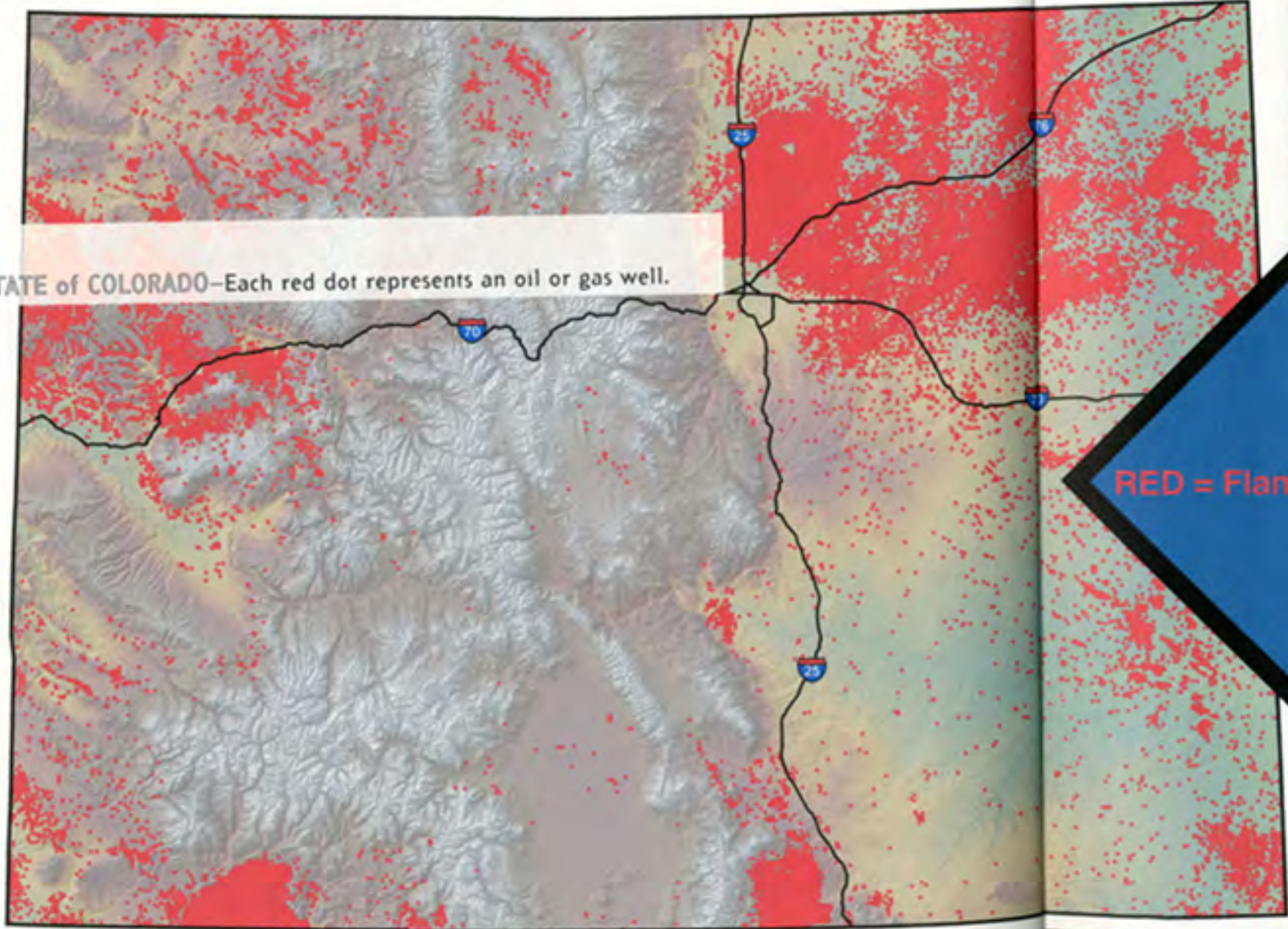
1" = 50,000 Feet

0 25,000 50,000 100,000  
3569W 3568W 3567W 3566W

1" = 50,000 Feet

0 25,000 50,000 100,000  
20 21 22 23

STATE of COLORADO—Each red dot represents an oil or gas well.



Industry predicts as many as 100,000 new wells in 30 years, in addition to the 51,928 presently producing wells in the state. A conservative estimate is that 20 percent of the state is leased and effectively owned by the oil and gas industry (ecowatch.com).

3

RED = Flammability HAZARD

CAN BE IGNITED  
AT ALL AMBIENT  
TEMPERATURES

...er,  
to be  
the well  
destined for  
  
...as written, consid-  
...ether the state or the  
...in Colorado. Populists  
...the water belongs to the  
...the state had control, the  
...corporations would steal it (Phillip  
...Account of Fracking in CO, Mar. 2013,

STATE of CO

# 3

**FLAMMABILITY HAZARD**  
3 = Can be ignited  
under almost  
all ambient  
temperatures

Industry predicts as many as 100,000 frackings  
A conservative estimate is that 20 percent

CONDOCO

## WATER

Almost all of the 51,000 presently producing wells in Colorado are vertically fracked wells, which require about 250,000 gallons of water in the initial frack. They often are fracked multiple times to keep the oil and gas moving to the surface. The new horizontally fracked wells take much more water, approximately five million gallons per well for the initial frack.

Water used by the fracking industry cannot be used for any other purpose. In contrast, fifty percent of water used by cities or for agriculture is returned to sustain streams and to be reused downstream. The polluted/fracked waters are being injected into

deep wells. In addition to the early flow-back water, other water, called produced water, continues to be carried back to the surface over the life of the well in much reduced quantities. It too is destined for the reinjection graveyard.

When the state's constitution was written, considerable debate surrounded whether the state or the public should own the water in Colorado. Populists won the day, saying that the water belongs to the public, arguing that if the state had control, the wealthy and the corporations would steal it (Phillip Doe, *A Must Read Account of Fracking in CO*, Mar. 2013, [ecowatch.com](http://ecowatch.com)).

## LAMENTATIONS for the city of GREELEY in NORTHERN COLORADO

Lamentations 2:11-19, Revised Standard Version (RSV), biblegateway.com

11 My eyes are spent with weeping;  
my soul is in tumult;  
my heart is poured out in grief  
because of the destruction of  
the (darling of Colorado),  
because infants and babes faint  
in the streets of the city.

14 Your prophets have seen for you  
false and deceptive visions;  
they have not exposed your iniquity  
to restore your fortunes,  
but have seen for you oracles  
false and misleading.

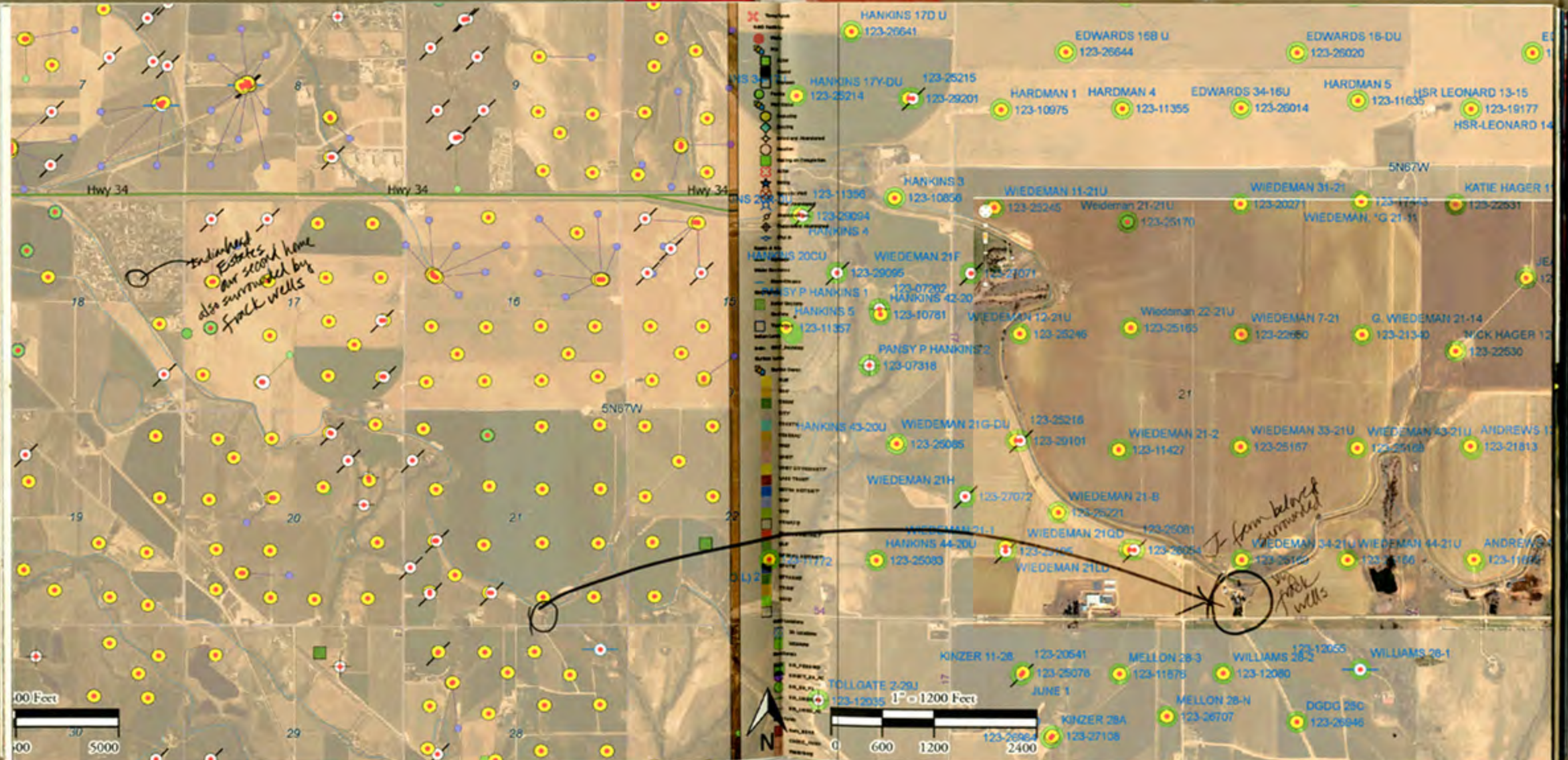
15 All who pass along the way  
clap their hands at you;  
they hiss and wag their heads  
at (Greeley of Colorado):  
"Is this the city which was called  
the perfection of beauty,  
the joy of all the earth?"

16 All your enemies  
rail against you;  
they hiss, they gnash their teeth,  
they cry: "We have destroyed her!  
Ah, this is the day we longed for:  
now we have it; we see it!"

18 Cry aloud to the Lord!  
O daughters of (Colorado)!  
Let tears stream down like a torrent  
day and night!  
Give yourself no rest,  
your eyes no respite!

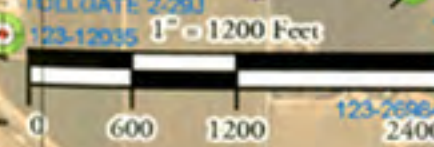
19 Arise, cry out in the night,  
at the beginning of the watches!  
Pour out your heart like water  
before the presence of the Lord!  
Lift your hands to him  
for the lives of your children,  
who faint for (clean air and water)  
at the head of every street.

As of January 2012, there were 419 operating wells and 191 abandoned permit locations in Greeley and another 55 pending approval. It is common for oil and gas wells to have a lifespan of between 15 to 50 years. The State of Colorado determines how many wells may be drilled in a square mile. Because of the mineral rich reserves in the Wattenberg Field, more oil wells can be drilled in Greeley/Weld County than in other areas of the state. In Greeley, within each quarter section, eight wells can be drilled from five surface locations. Generally speaking, a well and storage tank must be at least 200 feet away from a habitable building and 150 feet away from streets. *Oil and Gas Drilling in Greeley, Fast Facts, 2012, greeleygov.com*



*Indehood Estates also surrounded by frack wells*

*I am below surrounded by frack wells*



- Well Type
- Well Status
- Well Depth
- Well Diameter
- Well Completion
- Well Production
- Well Injection
- Well Abandonment
- Well Decommissioning
- Well Relinquishment
- Well Reopening
- Well Conversion
- Well Modification
- Well Repair
- Well Maintenance
- Well Inspection
- Well Testing
- Well Monitoring
- Well Sealing
- Well Plugging
- Well Grouting
- Well Cementing
- Well Drilling
- Well Completion
- Well Production
- Well Injection
- Well Abandonment
- Well Decommissioning
- Well Relinquishment
- Well Reopening
- Well Conversion
- Well Modification
- Well Repair
- Well Maintenance
- Well Inspection
- Well Testing
- Well Monitoring
- Well Sealing
- Well Plugging
- Well Grouting
- Well Cementing
- Well Drilling

Layers

- Shut In
- COGCC Data
  - O&G Locations
    - 2A Locations
    - Locations
  - Directionals
    - DIR\_PENDING
    - DIRECT\_BH\_AC
    - DIR\_BH\_PL
    - DIR\_LINES\_PL
    - DIR\_LINES\_AC
  - COGCC Rules
  - O&G Fields
    - Horiz\_NBRR
    - COGCC\_Fields
    - Waterberg
  - SeismicPermits
    - Seismic2D
    - Seismic3D
  - Water/Gas Sampling Data
    - Sites w/Lab Data
    - Sample Sites
  - Roads & RRs
    - Highways
    - Local Roads
    - Railroad
    - Major Roads
  - Water Resources
    - SecTwpRing
    - Wildlife CPW
  - State Lands
    - Indian Lands
    - BLM Lands
  - Surface Lands
    - Places
    - Counties\_Zoom
    - CityPolygons
    - Surface Owner
    - BLM
  - Special Projects
    - Soil Surveys
    - Geology
    - Topos24K
    - TOPOS24K
    - 1990sAerials
    - 2005Aerials
    - 2009 Aerials
    - 2011Aerials

Waterberg Field Undifferentiated - Field Code: 1501  
 Top 12 Formations:  
 COCDELL, NIOBRARA, J SAND, SUSSEX,  
 DAKOTA, SHANNON, FORT HAYS, D SAND,  
 GREENHORN, LYONS, PARKMAN, LAKOTA  
 Update: 09-20-2012



All of the dairy farmers we knew have drilled fracking wells. Somehow I thought dairy farmers with their registered Great Black and White Holstein cows would not want the water and air to be anything but pristine. On the State of Colorado Oil and Gas (COGCC) site you can view maps of the various wells, permitted wells, active wells, and producing wells. We rented the farmhouse from Ed Wiedeman. Surrounding the Johnstown Farm are his fracked wells. At the TeVelde Dairy Farm where my husband was killed, the wells are named for the TeVelde sons.

CHEMICAL DISCLOSURE REGISTRY

FracFocusData.org hosts the industry's voluntarily supplied chemical lists for hydraulic fracturing, showing locations and repeated fracks per well. Wiedeman's listing shows that vertical fracked wells on his property used between 116,000 to 464,549 gallons of water per event, with some being fracked numerous times—totaling millions of gallons of good water down a hole. Two of the Johnstown Farm wells appear in the registry. The chemicals in the Haliburton Frac Fluid contain these chemicals: Potassium Chloride, Hydrochloric Acid, Ethanol, Naphthalene, Poly-Alpha-Omega-Hydroxy-branched, Trimethylbenzene, Chlorous Acid, Terpenes and Terpenoids, Ammonium Acetate, Acetic Acid, Zirconium, Acetate Lactate Oxo Ammonium complexes, Ammonium Chloride, Hydro-treated light Petroleum Distillate, EDTA/Copper Chelate, Diethylenetriamine, Chloromethylnaphthalene Quinoline Quaternary Amine, Isopropanol, Aldehyde, and Methanol.

How could one love this place, yet fracture the earth with so many chemicals?



YELLOW = Instability HAZARD

2

INSTABILITY HAZARD  
2 = Violent chemical  
change at high  
temperatures or  
pressures

...chickens  
...neasant.  
...own speckled eggs.  
...  
...e closed by  
...r.  
...joys of setting up a farmhouse  
...oved, Duane.

A collage of images including a house, trees, and a large yellow number 2. The collage is composed of several overlapping photographs and cutouts. At the top left, there's a cutout of a window with the word "knowless" written in cursive. Below it, a photograph of a house with a porch is visible. A large, bright yellow number "2" is superimposed over the center of the collage. The background of the collage is a photograph of a rural landscape with trees and a fence.

2

A photograph of a long, straight road stretching into the distance under a cloudy sky. The road has double yellow lines in the center. The sky is filled with soft, white clouds. In the background, there are trees and a house on a hill. The overall mood is nostalgic and serene.


Goodbye to the Johnstown farm

When I look at satellite images or street views  
of the Johnstown Farm I feel sick  
with memories and loss.  
It is as if I am there—  
my mind goes back and I recall the light,  
the edge-trimmed linoleum floors,  
the colors, the very air.  
Making love, making meals, painting cupboards,  
raising chicks in the dirt basement.  
Feeding our orphaned lamb, Mr. Pibb, by hand with  
a red rubber nipple on a Mr. Pibb soda bottle.  
Chopping the head off one of our  
chickens for dinner.

The sun setting on Duane's blond hair  
as he held the lamb against his chest  
like a good shepherd stepped out  
from the pages of an illustrated bible.  
I sat on the chicken house stoop with chickens  
that I called by name—Spook, Eagle, Pheasant,  
Araucanas that lay green, blue, brown speckled eggs.  
Each day an Easter morning.

Since then I have led a life closed by  
stoic work and fear.  
Since the expansive joys of setting up a farmhouse  
with my beloved, Duane.





I grew up in the Colorado desert. Water is so precious, so valuable.  
We spent many a summer carrying water to trees—scarce because of their need for water.  
A tree provides shade by day from the heat, and refuge, shelter from the storms.

Duane and I lived at the Johnstown Farm when we returned from our studies at Calvin College in 1978. Much love was shared in that home. During a year of joy and work, Duane milked Holsteins at the Wiedeman dairy and I cooked in the brightly lit kitchen with butcher-block countertops and freshly painted wood cupboards. The freezer filled with half a pig and half a cow, part of the hiring wages.

I loved that house with the bright kitchen, small breakfast nook, beige brick fireplace, arched ceiling in the living room, blue toile wallpaper, paneled windows, and glassed-in porch. In the basement we raised fluffy yellow chicks under heat lamps, their chirping and running a delight as they happily drank from glass water jars filled daily.

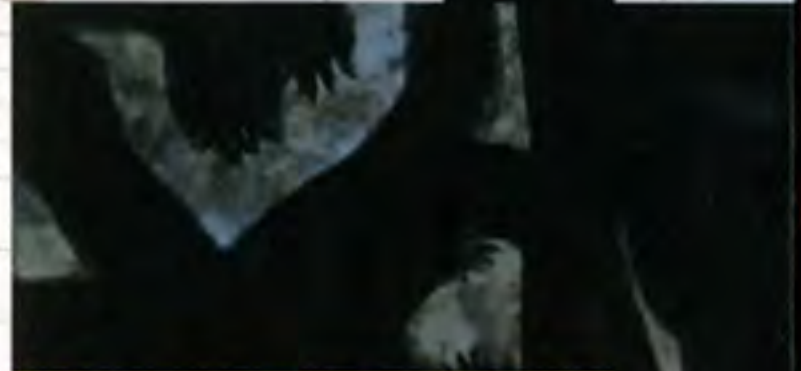
The outbuildings included the chicken house with boxes for eggs and scratching area for our Araucanas, Polish chickens and Barred Rock hens, and a white wood rabbit shelter where we let the rabbits run wild and dig tunnels to their heart's content.

Pine trees rushed skyward in the front yard—precious trees laid out in rows, an early farm tradition. Out back the Loveland Greeley Canal ran behind the house. To cross the ditch was to be in the farmer's cornfields.

Irises bloomed in the front yard around a silly little concrete bridge edged with sharp white rocks, a bridge so small that its only purpose was for joy.


Every Sunday and Thursday night found us at the Greeley Fellowship Christian Reformed Church. The church was a butter-yellow plaster with a short square bell tower at the front, and red door that opened to a dimly lit interior filled with old-fashioned pews and friendly people. Ivy vines climbed the plaster. I liked the simplicity of the small one room church with arched windows.

Next to the church was the Fellowship Hall with an open serving counter connecting the kitchen to a large room that functioned equally well for gatherings and Thursday night volleyball games. One night, Duane jumped high for the ball and he landed on me, and in his kind way stopped to hold me close saying, "I don't want to lose you." Embarrassed, I thought, "how could he lose me in the safe bright lights of a church fellowship hall?" But that next morning very early he was lost to me when the ten ton HARSH feed truck rolled over him as he crawled under it to slip it into gear to feed the 300 head of Holsteins. He died that day. A few years later kindhearted Pastor Van Oyen was killed in an auto accident.



I loved this farmhouse:  
light infused from many paneled windows,  
breakfast nook,  
built-in ironing board,  
drop down kitchen table, inlaid linoleum,  
beveled-glass French doors from dining room  
to bedroom—in such a modest home,  
built-in corner cupboard,  
built-in linen closet,  
tiny footbridge over a bed of irises.

The house, a side of beef, and a side of pork  
came with the job my young husband worked  
as herdsman for a dairy farmer.  
The bathroom was trimmed in blue tile,  
the color of distant mountains,  
the walls laid out in golden yellow,  
the color of the fields dried in winter.  
  
I loved this place with all my heart  
as only the young love.



Summer of 2012 I went to find my beloved Johnstown Farm in Weld County, between Loveland and Greeley. Much had changed. The front range had seen an explosion of population: and every square mile had numerous oil and gas condensate tanks, piping, water buffaloes in yards, and drill rigs in various stages of operation. A haze sat over the land. Gone were the days of pristine skies sweeping to the foot of the Rocky Mountains.

After driving around for some time, I recognized the stand of pine trees in front of the Johnstown Farm, planted in front of many a farmhouse as shade and shelter against wind and storms. I wanted to share this place with Nathan—love found again three decades later.

As we drove into the yard a young man came out. I told him that I had lived there years ago and loved the place. The same dairyman, Ed Wiedeman, still rents out the house. The dropdown ironing board was still there, but the blue and yellow tile destroyed, the inlaid linoleum long gone. The young man told me he and his wife were reclaiming the house from many a hardship, including a pit-bull fighting ring in the backyard. They had cleaned up the place, bulldozed the ring.

But the unmovable abuse was that hydraulic gas fracking had occurred right in the backyard. Three condensate tanks with gas piping stood there with their playful Mondrian signs pretending to be benign—an irreversible hazard.





Weld County, east of Greeley: Visualize millions of gallons of water at two well pads. The left pad has 112 frac tanks, each holding 500 barrels/21,000 gallons, totaling over 2.3 million gallons of water to be mixed with frack chemicals.

The right well pad has a pool tank, 150 ft. diameter, which holds 42,400 barrels/1,780,590 gallons, and 222 frac tanks contain 4.6 million gallons of water. This site for hydraulic fracturing contains 6.4 million gallons of water.





# CRY

Weld County, east of Greeley, has  
water at two well pads. The left pad  
holding 500 barrels/21,000 gallons.  
gallons of water to be mixed with frack

# JOHNSON

## GOODBYE JOHNSTOWN FARM

Losing the Johnstown Farm to fracking in the backyard is an outrage and a violation. Three condensate tanks line up along the creek on the road in front of the cornfields.

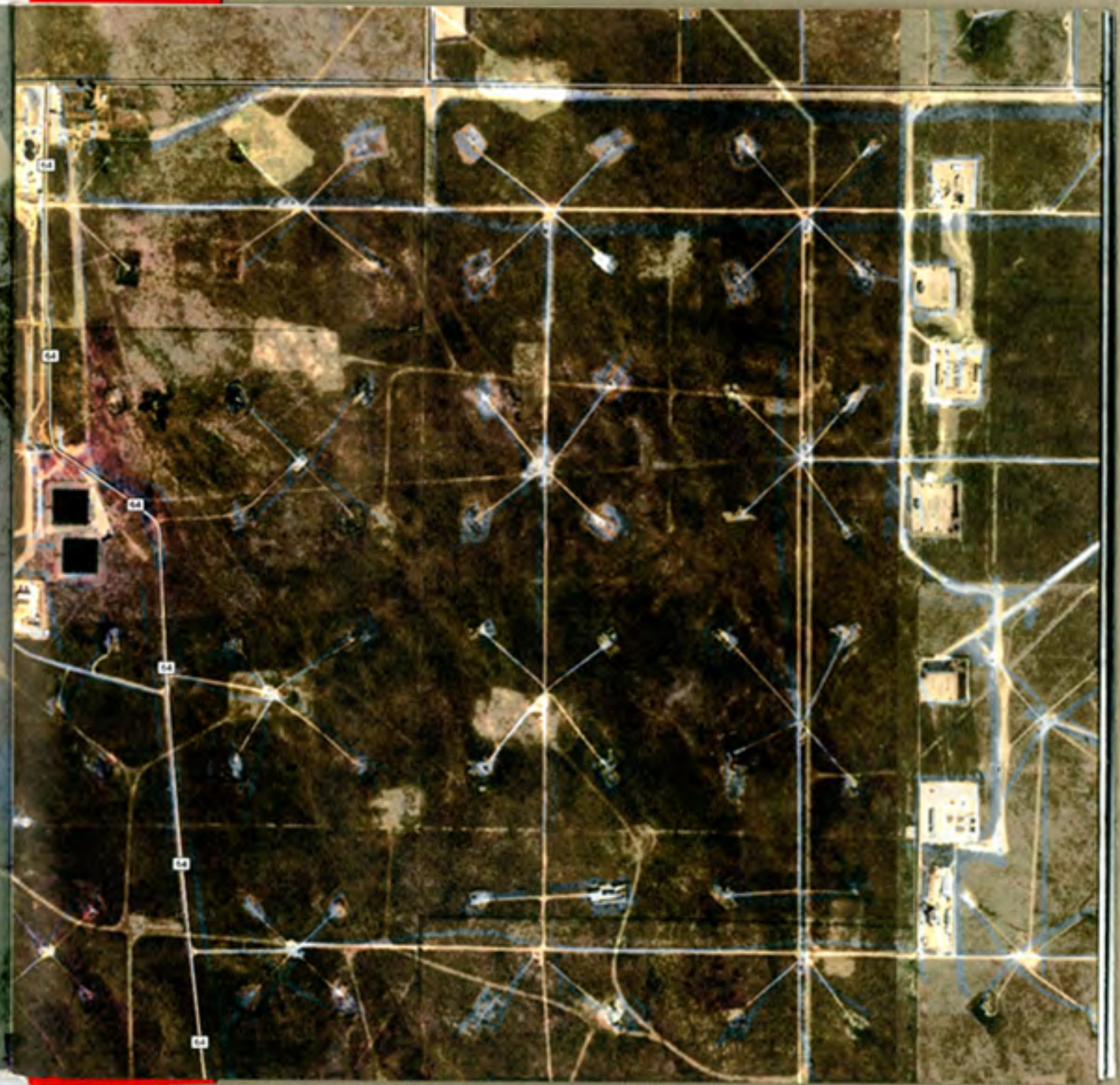
Most of the outbuildings are torn down—the chicken house, the rabbit building, the fence with its trellis for roses. The bathroom tiled in mountain blue and golden wheat was so abused that it had to be dry-walled over, creating an oddly cramped bathroom. The glassed-in porch sits vacant. The house has suffered much calamity and maleficence since we left.

Colorado is/was a place of big sky,  
cool dry air,  
light so brilliant that it  
illuminates your vision  
with hope and plans for the future.  
It is a place where I live,  
even when I am not there.

The Goodbye to my beloved Duane  
was inconceivable.  
4 3 2 CRY is a Lamentation  
and a Goodbye.




Weld County, northeast of Firestone; Frac tanks hold water/chemicals being prepared to go down a well or that has come out of a well. 166 tanks, each holding 500 barrels/21,000 gallons totals 3.5 million gallons of water.





A 2014 satellite map shows that east of Greeley a new pattern is emerging. In place of a field of Xs, a large skeletal ribcage has formed. Like a Miró or a wire mobile by Alexander Calder, the shape resembles a sewn up scar or an old television antenna.

Or perhaps it is a ladder of coveted escape? The ladder suggests a bridge between heaven and earth, like Jacob's ladder, a connection between reality and imagination—a yearning to flee from harsh conditions. As we observe these scars on the fields east of Greeley, we long for an experience like Jacob's dream, to be transported, beyond the barren nowhere land where we have made our bed, to the very gates of heaven.



East of Greeley: Cow trails to watering holes. Frack pits must be fenced to keep cows from drinking the polluted waters.

Special Thanks to Tatana Kellner for her inspiring artwork in social justice and her art direction and support of 4 3 2 CRY.

#### COLOPHON

4 3 2 CRY, Fracking in Northern Colorado  
Kathy T. Hettinga

Publisher: Women's Studio Workshop, Rosendale, NY

Funding: WSW is funded in part by the New York State Council on the Arts and the National Endowment for the Arts. This project was also supported by a Distinguished Professor award from Messiah College, Mechanicsburg, PA.

Printing: Epson 9880, archival inks  
Fonts: Helvetica 1957, Helvetica Neue 1983,  
and Arbitrary 1990 by Barry Deck  
Papers: Mohawk Superfine,  
70 lb. Text, Eggshell, Softwhite  
Cover: Compliance Signs, aluminum

Copyright: ©2014 Kathy T. Hettinga

ISBN: 1-893135-91-2

Edition: This is book no. 13 of 48 copies.

*Kathy T. Hettinga*





**CREDITS**

Map Data: Colorado Oil and Gas Conservation Commission, COGCC, GIS Online; Google Maps; Digital Globe  
Landsat, U.S. Geological Survey, USDA Farm Service Agency. Maps accessed: 2008, 2012, 2013, 2014.  
Images: Detail of oil field fire, behind sign #1, U.S. Marine Corps photo by Pfc. Mary Rose Xenikakis,  
[commons.wikimedia.org](http://commons.wikimedia.org). All others by Kathy T. Hettings.

