



Stuart Levenbach
Natural Resources and Environment Branch
Office of Information & Regulatory Affairs
Office of Management & Budget

December 8, 2017

Mr. Levenbach,

Thank you for agreeing to meet with us about the Bureau of Land Management's proposed rescission, 82 Fed. Reg. 34,464 (July 25, 2017), of its 2015 Rule pertaining to hydraulic fracturing on federal and Indian lands, 80 Fed. Reg. 16,128 (Mar. 26, 2015).

Attached is a recent news article (Attachment 1) and several supporting documents regarding well communications (also known as "frack hits"). The report referenced in the article (Attachment 2) indicates that frack hits may be extremely common in production fields in which horizontal drilling occurs beneath areas with high levels of historic vertical well production. It further documents surface contamination in these areas that may be caused by frack hits.

Thank you for considering this important information as a component of your review of the Bureau of Land Management's regulation,

Sincerely,

Jessica Ennis
Michael S. Freeman
Joel Minor
Earthjustice
633 17th Street, Suite 1600
Denver, CO 80202
303-623-9466
jennis@earthjustice.org
mfreeman@earthjustice.org
jminor@earthjustice.org

ATTACHMENTS

1	Mike Soraghan, <i>Now It's Oilmen Who Say Fracking Could Harm Groundwater</i> , E&E News (Nov. 1, 2017)
2	Okla. Energy Producers' All., <i>Are Vertical Wells Impacted by Horizontal Drilling?</i> (Sept. 14, 2017)
3	Okla. Corp. Comm'n (OCC), Incident Report No. 18515OGDO40829 (Apr. 10, 2015)
4	OCC, ALJ Decision No. CD 201403671 (Nov. 5, 2014)
5	FracFocus Chemical Disclosure, <i>API No. 35-063-24425-00-00</i> (May 7, 2014)
6	Env't Res. Tech., LLC, <i>Water Sampling Analysis</i> (July 13, 2016)

ATTACHMENT

1

THE TRANSFORMATION OF THE ENERGY SECTOR

HYDRAULIC FRACTURING

Now it's oilmen who say fracking could harm groundwater

Mike Soraghan, E&E News reporter

Published: Wednesday, November 1, 2017



A pumpjack atop a Silver Creek Oil & Gas well in Hughes County, Okla. Mike Soraghan/E&E News

HOLDENVILLE, Okla. — It's no longer just environmentalists who suspect hydraulic fracturing is contaminating groundwater.

Oil companies here in Oklahoma — ones that produce from older vertical wells — have raised that prospect as they complain about the practices of their larger brethren.

They say hundreds of their wells have been flooded by high-pressure fracturing of horizontal wells that blast fluid a mile or more underground. Some of those "frack hits," they suspect, have reached groundwater.

"I'm convinced we're impacting fresh water here," Mike Majors, a small producer from Holdenville, said as he drove from well to well on a September afternoon. "If they truly impact the groundwater, we can kiss hydraulic fracturing goodbye."

Oil and gas regulators at the Oklahoma Corporation Commission (OCC) say they've found no proof of such groundwater contamination. But some oil and gas operators think regulators aren't looking too hard. And at least one OCC official has said it's "beyond the authority" of the agency to block drilling based on a risk to groundwater.

Larger producers acknowledge that such contamination could happen, but they reiterate that there's no proof that it has.

"We have never seen a freshwater impact," said Lloyd Hetrick, operations engineering adviser for Newfield Exploration Co., the state's largest oil producer. "I'm not saying it can never occur. If we felt it was us, I think we'd clean it up."

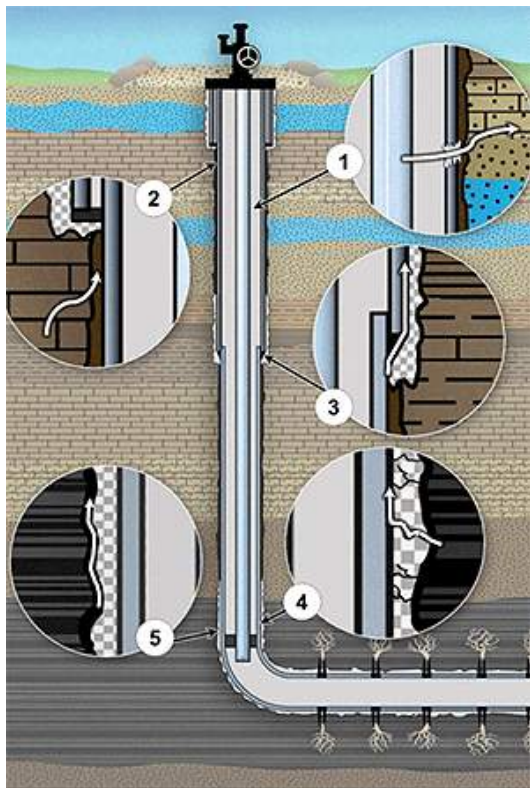
Groundwater contamination is an inflammatory charge — large oil companies and national trade groups have been fending off such allegations almost since the horizontal drilling boom began. They've often tarred such critics as environmental extremists.

The small producers leveling these accusations are tangling with Oklahoma's large independent drillers in a bitter political brawl. The question of groundwater contamination is a small part of that debate, overshadowed by a fight over taxes on drilling and where horizontal wells can be drilled.

The complaints have a familiar ring to them. In places like Pennsylvania, many small farmers complained that their water wells went bad after "fracking" showed up.

But unlike some fracking critics elsewhere, the small producers say they're not against fracking, much less drilling itself. They say they simply want it done right, and they say it's the larger horizontal drillers who are putting the industry's reputation at risk.

"If it happens where farmers depend on groundwater, the entire industry will get blamed," said Dewey Bartlett, a small producer and former mayor of Tulsa. "That's scary."



[+] This graphic from an EPA study shows potential pathways for fluid movement in a wellbore: (1) casing and tubing leak into a permeable formation, (2) migration between the drill pipe and the outside of an uncemented wellbore, (3) migration between the casing and cement, (4) migration through a bad cement job, and (5) migration between the cement and formation. (Graphic not to scale.) U.S. EPA

The prospect of frack hits causing water contamination was raised in a 2016 EPA study that nevertheless found no systemic threat to groundwater from fracking ([Energywire](#), Dec. 14, 2016). It was mentioned in both the draft and final versions of the study, which were alternately praised and criticized by industry groups ([Energywire](#), June 5, 2015).

Those who dismiss concerns about groundwater contamination have long asserted that fracking occurs far beneath aquifers — a mile or more — and oil and gas wells are sealed off with cement casing to protect even remotely drinkable groundwater.

That was pretty much true at the beginning of the boom, when producers were focused on deep shale formations. But now, some large producers have turned that same technology on shallower formations. In Oklahoma, high-volume fracking has gotten as shallow as 2,800 feet, and many old wells were built without protections for groundwater.

Oklahoma's unique system of spacing and pooling means that the horizontal wells can be fracked within 600 feet of the older vertical ones, sometimes closer ([Energywire](#), Oct. 31).

And fractures can reach much farther than that. A Newfield engineer testified in September that frack fluid has been found a mile away from where it started, although he said he did not believe that it could get into groundwater.

Bubbling to the surface



A frack hit at this well site near Holdenville, Okla., has been suspected of causing groundwater contamination. Oklahoma Corporation Commission

Majors found a burbling mess two years ago when he showed up at his friends' oil well outside Holdenville.

Water was bubbling up around the wellhead of the well, named the I. Davis No. A-1, but also flowing out of a nearby embankment leading to a drainage.

A company called Silver Creek Oil & Gas LLC had been fracking a well about 2,000 feet away from the well. The frack fluid leaked out of its intended path and flooded into the well, which belongs to a company called Rayland Operating LLC.

The older wellbore, drilled in 1928, was not sealed off with cement casing deep enough to prevent the surging flow from reaching groundwater.

On a warm September afternoon, Majors, a lanky, chain-smoking veteran of the oil field, leaned on the hood of his pickup parked at the well site and explained that with thousands of pounds of upward pressure, there was nothing to stop the fluid from flooding into groundwater.

"Logic says it will impact [groundwater]," Majors said, looking out over the slight slope. "There was water coming out of the ground. There was enough pressure to bring it to surface."

When the state inspector showed up at the well site in 2015, he had similar concerns about underground contamination. He **ordered** Silver Creek to drill a monitoring well to see if water had been contaminated.

It took months and the threat of a contempt charge to get the monitoring well drilled. The **results**, filed with the state and obtained by E&E News through state open records laws, shows that chlorides, sometimes a sign of oil and gas contamination, are low.

"A frack hit would cause elevated chlorides, and that's what we're most concerned with when it comes to groundwater protection," said OCC spokesman Matt Skinner.

But there wasn't a baseline to measure the chlorides against. And there was no test for fracking chemicals. A **list** of frack fluid ingredients Silver Creek filed with the FracFocus registry included chemicals such as isopropanol and naphthenic solvents.

The report is vague about where the samples were collected. It doesn't list the depth of the monitoring well, or its location. It merely says the monitoring well is north of another well.

The monitoring well was drilled only to the depth of water likely to be used currently for drinking. Environmental laws generally require the protection of groundwater that isn't used now but might be someday.

Mike Cantrell, co-chairman of the Oklahoma Energy Producers Alliance (OEPA), said the sampling should be taken deeply enough to find contamination that might not show up for years in drinking water.

"You may never see it," he said. "It's not a problem until it's a problem."

Low as it is, the chloride level is likely above background level, said Kerry Sublette, a spill cleanup expert and chemical engineering professor at the University of Tulsa. After reviewing the results, he said the saltiness of the water could be a problem for irrigation and drinking water.

"That could be confirmed with a more complete analysis," Sublette said. To make a more conclusive determination on whether fracturing contaminated the well, he said "a more complete analysis is required."

Silver Creek did not respond to requests for comment. But in a pending federal lawsuit, Silver Creek alleged that Rayland was at fault for the incident because the well was set up to produce from a formation it wasn't supposed to. Rayland countered that Silver Creek was reckless and failed to give notice of its plans.

Majors hopped in his dusty pickup, steering it down another dirt road. He stopped in front of a house set well back from the road across a low, barbed-wire fence.

He said the water well to this house gushed water — or "purged" — for four days in 2013 after Silver Creek fracked a well about a mile away, pointing with a smoldering cigarette across a stand of trees.

"It looked like a lake," Majors said. "It never purged prior, and it hasn't purged since."

Majors cited the incident when he **protested** Silver Creek's further development plans in his area in 2014. He said it showed a risk to groundwater.

But Niles Stuck, an OCC administrative law judge, **said** preventing such contamination wasn't the agency's job. Majors, he said, could seek an injunction in civil court or report contamination when it happens.

"The proposed development may also result in pollution," Stuck wrote. But, "It is beyond the authority of OCC to deny a spacing or location exception application based on the theory that development may cause pollution."

A minefield for contamination

Small producers, some of whom have banded together as OEPA, released a **study** in September estimating more than 400 frack hits in just one county. They say many more haven't been reported.

And they say that with that much disruption underground, often leading to surface spills, it would just make sense that groundwater is getting contaminated.

"If it's happening at the surface, you can make a logical assumption it's probably happening in groundwater," Bartlett said.

Particularly here on the eastern side of the state, the ground is already riddled with thousands of holes — old vertical wells that could conduct frack fluid right to the surface. Many of them were drilled, produced and plugged long before modern cementing techniques were introduced to protect underground water.

Darlene Wallace, president of Columbus Oil Co., said she operates wells drilled in the 1920s that are still producing oil. Others were plugged with primitive methods.

She recalled one "plugged with two cedar trees shoved down the shaft and a bag of mud poured over them." She thinks damage to water wells often goes unreported.

"The problem is created when we have high-pressure fracks," Wallace said. "There's lots of faults. If it gets in a fault, I've been told it can go a mile and a half."

There's far less horizontal drilling and fracking here than in the hot plays west of Oklahoma City where OEPA's study was done. Still, more than 100 horizontal wells have been drilled and fracked in Hughes County, where Holdenville is located, since the beginning of 2015.

Chad Warmington, president of the Oklahoma Oil and Gas Association, which represents larger producers, acknowledges the combination of high-volume fracturing and old, decrepit wells could lead to problems.

"We may need to be more careful in places with mud-plugged wells," Warmington told E&E News in a telephone interview. But he said any rule should be tailored to areas with more legacy wells, rather than statewide.

But Zack Taylor, who operates wells with his father out of Seminole, said he tried that and met defeat at the hands of horizontal drillers. He and other small producers proposed a field rule several years ago that would require horizontal drillers to look for wells close to wellbore before drilling in his area.

But larger drillers objected, he said, and his proposal was rewritten to put the burden on small, vertical producers. He withdrew it.

"It got turned back on us," said Taylor, who has since been elected to the state Legislature. "We're not the ones causing the problem."

Today, the once-bubbling Davis well is just a low spot in the cracked dirt in the gravelly clearing.

The conflict between Silver Creek and the well's owner is scheduled for trial in federal court in April next year. But that is unlikely to resolve the questions about whether groundwater was contaminated or how well it is protected statewide.

To read the documents cited in this report, click [here](#), [here](#), [here](#), [here](#), [here](#) and [here](#).

Twitter: [@MikeSoraghan](#) | Email: msoraghan@eenews.net

Advertisement

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ATTACHMENT

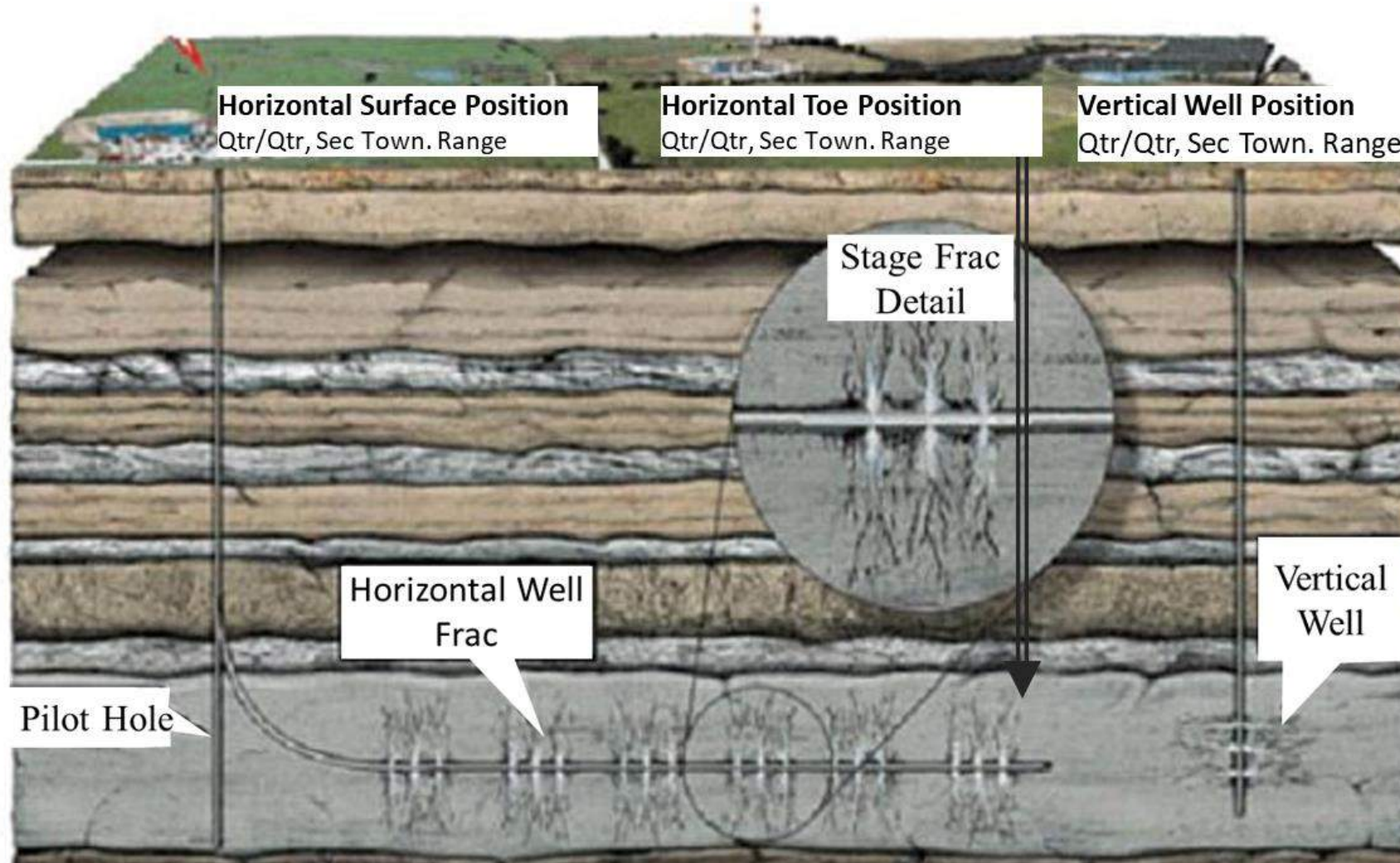
2

Are Vertical Wells Impacted by Horizontal Drilling?

A study of Kingfisher County

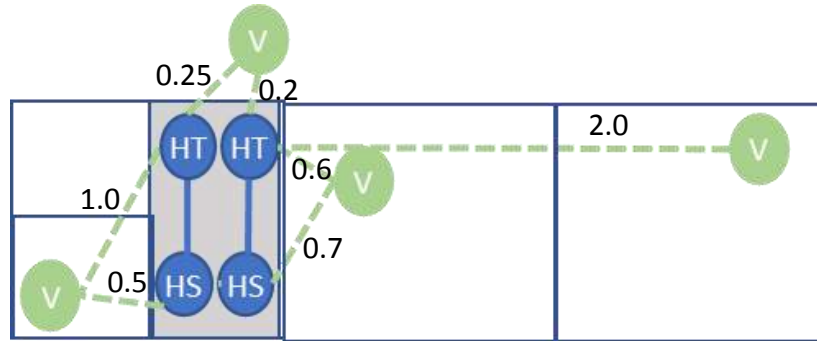
September 14, 2017

Illustration of Vertical and Horizontal Well

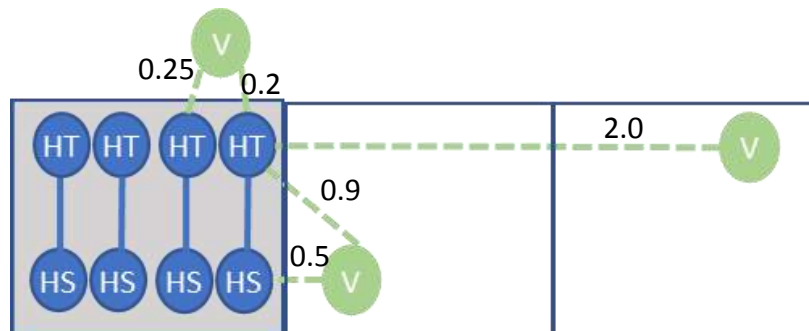


Vertical Well to Horizontal Well

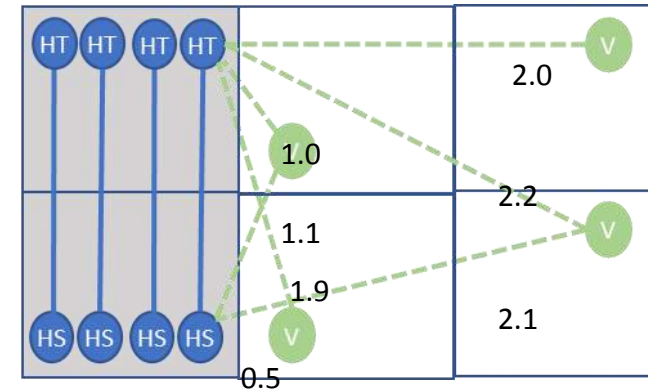
Example: 5000 foot horizontals on 320 acre



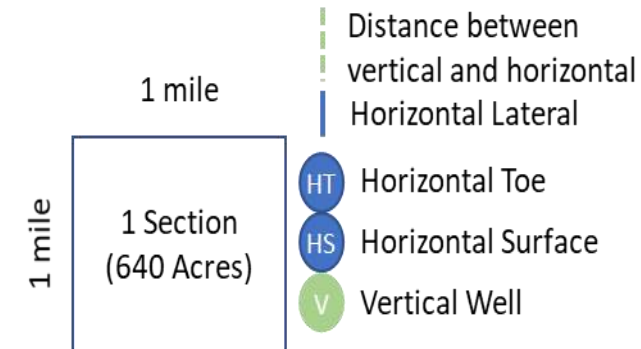
Example: 5000 foot horizontals on 640 acre



Example 10,000 foot horizontals on 1280 acre



Legend:

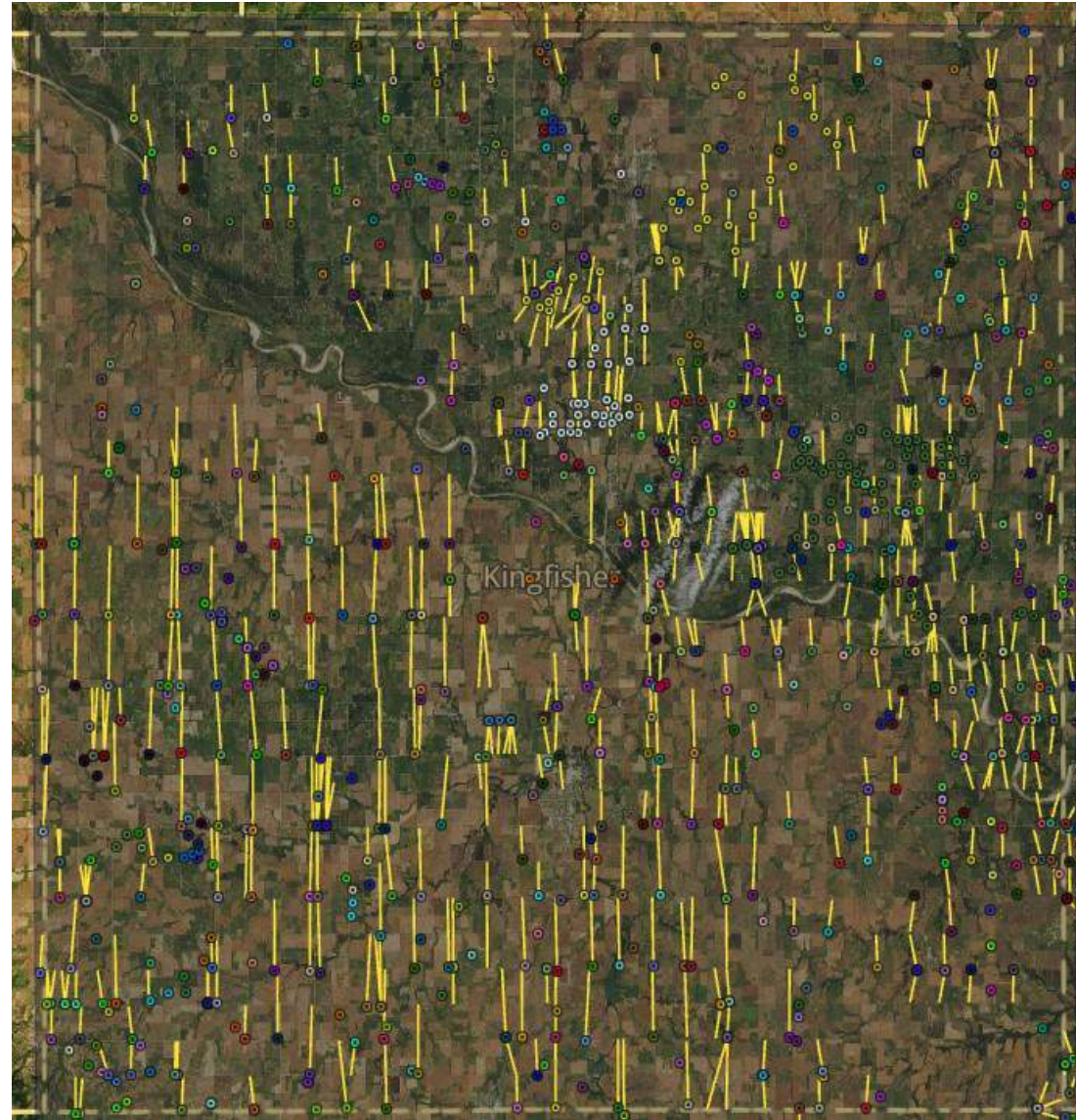


Need for Independent Report

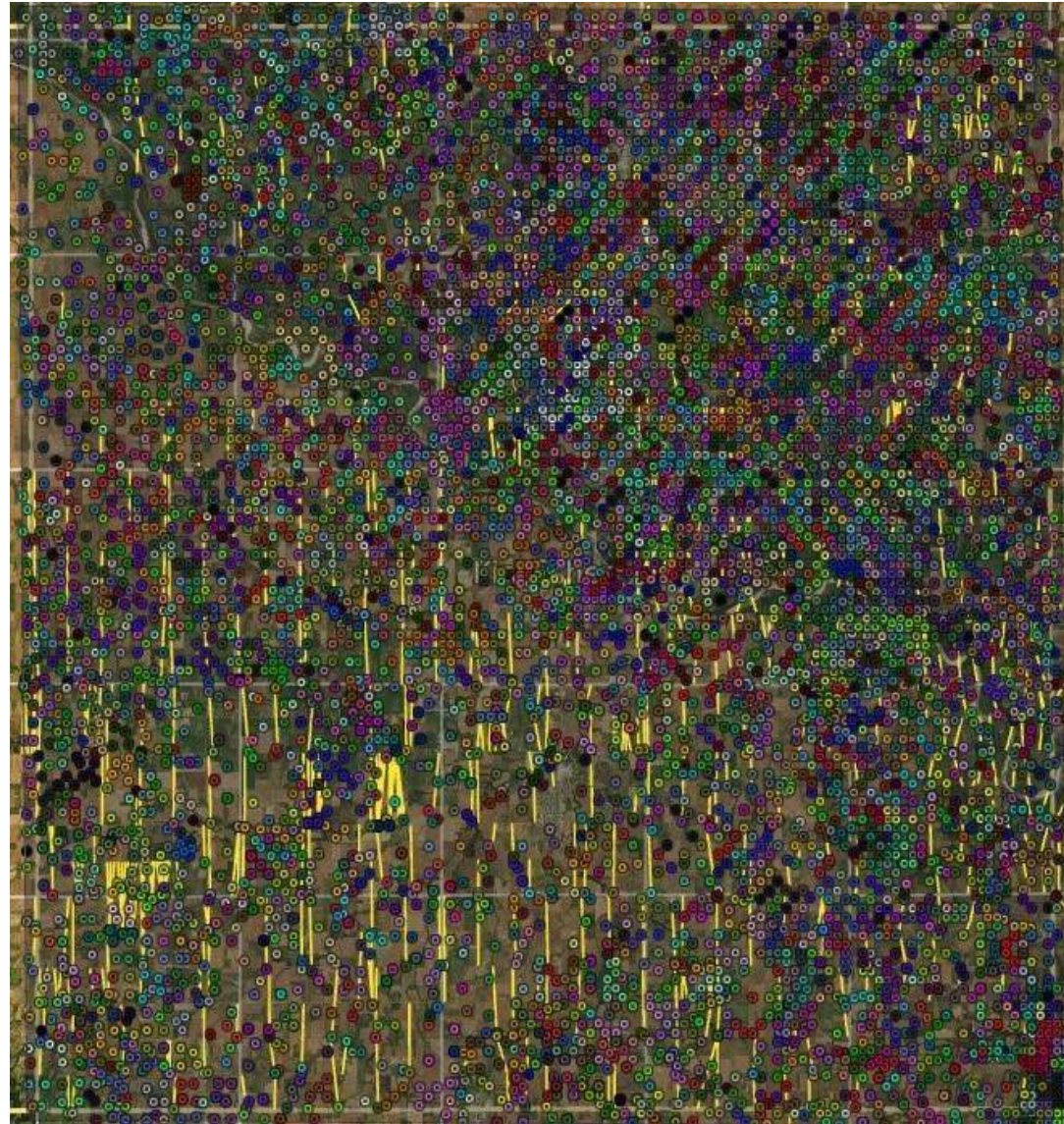
Industry Challenges

- Known damage to OEPA member wells
- Increasing number of horizontal wells create more opportunity to impact more vertical wells
- Increasingly bigger fracks create greater opportunity to damage more vertical wells
- Significant Anecdotal Evidence – Reports of Vertical Wells Damaged
 - Changed operational conditions
 - Circulating wells to remove sand influx
 - Swabbing wells to remove sudden fluid increase
 - Shutting in wells in attempt to minimize impact
- Denials of damage by major horizontal drillers

Horizontal Wells Kingfisher County



Overlaid by Vertical Wells



OEPA Selected Derek Reid/PeakWin For Independent Study

OEPA Criteria for Independence	
Independence from OEPA	<ul style="list-style-type: none">• No prior knowledge of OEPA• No prior relationships with founding members
Degreed Petroleum Engineer	<ul style="list-style-type: none">• BSPE University of Tulsa
Operational Experience	<ul style="list-style-type: none">• Managed operations for many wells• Different production lift methods and reservoir drive mechanisms
Ability to develop solution	<ul style="list-style-type: none">• Brought potential solution method
Experienced in art of the possible	<ul style="list-style-type: none">• MBA with extensive problem solving experience• Energy regulatory background, assisting with assessment to support successful regulatory change• Past management consultant

Objective: Identify Vertical Wells Impacted by Horizontal Drilling in Kingfisher County

Identify number of vertical wells:

- Within 2 miles of a horizontal well
- With average long term production changes of +/- 25% after horizontal well fracked
- With month-to-month short term production changes +/-50% after horizontal well fracked
- Investigation period March 2014 to January 2017

Sources of Information

- Oklahoma Tax Commission production records
- Oklahoma Corporation Commission well records

Findings: 451 Potentially Impacted Vertical Wells

- 360 (80%) impacted vertical wells outside horizontal well unit boundaries
- 91 (20%) impacted vertical wells within horizontal well unit boundaries
- 371 (82%) impacted vertical wells operated by vertical well only operators
- 80 (18%) impacted vertical wells operated by horizontal well operators

IMPACTED WELL ADDITIONAL OPERATIONAL COSTS

- COST TO CLEAN OUT SAND AND WATER FROM WELLBORE
- COST TO REPLACE DAMAGED EQUIPMENT, SURFACE AND SUBSURFACE
- COST TO CONTINUALLY REBALANCE PRODUCTION SYSTEM AND VESSELS
- COST TO DISPOSE OF IMPACTION WATER AND SAND
- COST TO ADDRESS ENVIRONMENTAL DAMAGE
- COST OF INCREASED GENERAL ONGOING OPERATIONAL EXPENSES
- THE ULTIMATE DISASTER: COLLAPSED CASING FROM FRAC PRESSURES

Environmental Damage



Horizontal Well Operators in Kingfisher County

	Horizontals Wells Drilled March 2014 to June 2017	% of Total
Newfield Exploration	117	28%
Oklahoma Energy Acquisitions	81	19%
Chaparral Energy	41	10%
Devon Energy	36	9%
Gastar Exploration	36	9%
Chesapeake	33	8%
Marathon Oil	24	6%
Hinkle Oil & Gas	11	3%
Chisholm Oil & Gas Operating	10	2%
Longfellow Energy	8	2%
Blake Production Company	6	1%
Cimarex Energy	5	1%
Payne Exploration	3	1%
Husky Ventures	3	1%
Sandridge	1	0%
Gulf Exploration	1	0%
Total	416	100%

Total Horizontal Well Count in Kingfisher County: 633

New OCC Form: Aid in Formal Identification of Impacted Wells

WELL IMPACT REPORT					
Date: _____					
Operator: _____		Oper. # _____			
Well Name: _____		Well # _____			
API Number: _____		SHL: SEC _____ TWP _____ RGE _____		(10-DIGIT API# - FOR EXAMPLE, 3500321606)	
County: _____		Datum used: _____			
SHL: _____		Latitude: _____		Longitude: _____	
		(decimal degrees)		(decimal degrees)	
BHL: _____		Latitude: _____		Longitude: _____	
		(decimal degrees)		(decimal degrees)	
		TD (MD) _____		TD (TVD) _____	
Date of impact or when impact consequence was observed: _____					
Producing formation1: _____		Perforated Interval: _____			
Producing formation2: _____		Perforated Interval: _____			
(if applicable)					
Producing formation3: _____		Perforated Interval: _____			
(if applicable)					
Was frac notice received? _____ (Y/N) ➔		If "yes", date received: _____			
Was well flowing or on artificial lift prior to impact? _____		(Gas lift, Plunger Lift, Rod pump, Flowing)			
Distance to well being hydraulically fractured: _____		(ft)			
Offset well being hydraulically fractured:					
Well Name: _____		Well # _____			
Operator: _____		Oper. # _____			
API Number: _____		SHL: SEC _____ TWP _____ RGE _____		(10-DIGIT API# - FOR EXAMPLE, 3500321606)	
County: _____		Datum used: _____			
SHL: _____		Latitude _____		Longitude _____	
		(decimal degrees)		(decimal degrees)	
BHL: _____		Latitude _____		Longitude _____	
		(decimal degrees)		(decimal degrees)	
Formation being hydraulically fractured: _____					
Perforated Interval: _____		TD (MD) _____		TD (TVD) _____	
Was incident reported to District office? _____ (Y/N) ➔		if "yes", date: _____			
Was a 1085 filed by the District? _____ (Y/N)					
Report filed by: _____		Title _____			
Phone _____		Email _____			
RULE: 165-10-3-10(b)(4) effective date 9/11/17					
(4) If an operator believes there is evidence that hydraulic fracturing operations have impacted its well(s), the operator may report the occurrence either by facsimile or electronic mail to the appropriate Conservation District Office with 24 hours of discovery.					
PRODUCTION INFORMATION					
Report 12 months production prior to impact and all production after impact to current date.					
DATE (MM/yyyy)	OIL (bbls)	GAS (mcf)	WATER (bbls)	CASING (psi)	TUBING (psi)

QUESTIONS?

THANK YOU

ATTACHMENT

3

☒ POLLUTION
☐ NON POLLUTION

**OKLAHOMA CORPORATION COMMISSION
INCIDENT AND COMPLAINT INVESTIGATION REPORT**

Form 1085-0
Rev-2014

Complainant Type: Company

Complainant:

Email:

Company:

SILVER CREEK OIL & GAS LLC
5525 N MACARTHUR BLVD STE 775
IRVING, TX 75038-2665
Email: PCOYLE@SILVERCREEKOG.COM

Taken By: Darrel Wilkes		Incident No. 18515OGDO40829
Date 04/10/2015	Time	Referred From

Joint Inspection Date:

Home Phone: Not on file.

Work Phone: Not on file.

FAX No.: Not on file.

Joint Inspection Date:

Phone No.: (972) 573-1630

Second Number: Not on file.

Operator No.: 22726

Lease/Well Name: REUNION Well No.: 7-1H API No: 133-25198

Location within Sec.: NW NW NW NW Sec 18 Twp 06N Rge 08E County: SEMINOLE

General Directions:

Lat: 34.999222

Long: -96.510841

Complaint/Incident Incident Type: Well Site

Source Code(s) & Description(s)

18-Discharge/Leak/Spill

Nature of Complaint:

During frac'ing operations two wells in 07-06N-08E stated purging oil.

The picture of the I.Davis A#1 was taken at the well facing south.
35.002484 -96.501935 NW SW SE 07-06N-08E

The picture of the Spillman CR #3 was taken at the purge facing south.
35.004318 -96.510414 SW NW SW 07-06N-08E

Oil Released: 40 bbls

Oil Recovered: bbls

Water Released: bbls

Water Recovered: bbls

Water Body Affected: Yes

Fish/Wild Kill Reported: N

Response

Investigator: Darrel Wilkes

Phone No.

Initial Response Date: 04/10/2015

Follow Up Dates: 02-17-2016; 10-09-2015

Investigation Date:
10/09/2015

Mediation Date:

Remediation Date:

Litigation Date:

Referred To:

Referred Date:

Agency of Jurisdiction: Oklahoma Corporation Commission

Resolved Date:

☒ Water Body Affected Confirmed

☐ Fish/Wildlife Kill Confirmed

Incident Confirmation Status:
Confirmed Violation

Red-Tagged Date:

Removal Date:

Violations: 165:10-7-5 Citation #:

Findings: During frac'ing operations two wells in 07-06N-08E, the I.Davis A#1, and the Spillman CR #3 stated purging oil. Neither well has the base of treatable water covered with cemented pipe. The frac. operations were shut down. Clean up will begin immediately.

Recommendations: Re-plug the Spillman CR #3, and plug or repair the casing on the I.Davis A#1 to prevent the purging, before frac. operations can recommence. Determine whether or not the ground water has been contaminated, and remediate all contaminated soil. Give the operator until 5-8-15 to conduct the clean up. If you have any questions or concerns call Darrel Wilkes at (580)320-7973.

Violations: 165:10-7-5 Citation #:

Findings: The Spillman well has been plugged, and the I Davis #A-1 has its own complaint. A water well has not been drilled to monitor the water table for contamination.

Recommendations: File contempt. Drill a water well between the Spillman CR#3 and I Davis #A-1 immediately in order to determine whether or not the ground water has been contaminated.

Violations: 165:10-7-5 Citation #:

Findings: 02/17/2016 - The monitor well has not been drilled.

Recommendations: Will continue to monitor for drilling operations.

Bob Anthony
Commissioner

Dana Murphy
Commissioner

Todd Hiatt
Commissioner

**Oklahoma
Corporation Commission**

1400 HOPPE BLVD SUITE D
ADA, OK 74820

Telephone: (580) 332-3441

Oil & Gas Conservation Division



Grant Ellis, District Manager

February 17, 2016

NOTICE OF REPORT OF INVESTIGATION

SILVER CREEK OIL & GAS LLC
5525 N MACARTHUR BLVD STE 775
IRVING, TX 75038-2665

RE: Complaint #:	18515OGDO40829
Date Received:	4/10/2015
Leasename WellNbr:	REUNION 7-1H
Location:	NW NW NW NW Sec 18 Twp 06N Rge 08E
County:	SEMINOLE

A Corporation Commission representative has investigated the above mentioned complaint.
The findings and recommendations are as follows:

Findings:

02/17/2016 - The monitor well has not been drilled.

Recommendations:

Will continue to monitor for drilling operations.

If there are questions regarding this matter please contact this office at (580) 332-3441.

Sincerely,

Darrel Wilkes
Field Inspector
(580) 320-7973

OKLAHOMA

Corporation Commission

1400 Hoppe Blvd; Ste D
Ada, OK 74820

Telephone: (580)332-3441
FAX: (580)332-8434

OIL & GAS CONSERVATION DIVISION, DISTRICT IV



GRANT ELLIS, DISTRICT MANAGER

October 9, 2015

TO: Tony Cupp, Mgr.
Field Operations

FROM: Grant Ellis, Mgr.
District IV

A handwritten signature in black ink, appearing to be "GE" or "Grant Ellis".

RE: Silver Creek Oil & Gas LLC
Complaint: 18515OGDO40829
Reunion 7-1H
NW NW NW NW 18-06N-08E
Seminole County

Please request a contempt citation be issued against the above referenced operator for failure to comply with our rules and regulations.

c: Tracy Case Legal Dept.

INTERNAL TRACKING LOG FOR THE OFFICE OF GENERAL COUNSEL

REV2009

DISTRICT 4 FIELD INSPECTOR Darrel Wilkes

INTERNAL TRACKING NUMBER 18515OGDO40829

DATE OF COMPLAINT 4/10/2015 FILED 10/9/2015

OPERATOR Silver Creek Oil & Gas LLC OPERATOR # 22726

WELL NAME Reunion 7-1H API 133-25198

LEGAL SEC 18 TN 06N RNG 08E
NW 1/4 NW 1/4 NW 1/4 NW 1/4

COUNTY Seminole - 133

STATE FUND ENFORCEMENT X DISMISSAL REQUEST

DISTRICT ONE JIM HAMILTON

DISTRICT TWO SUSAN CONRAD

DISTRICT THREE CONNIE MOORE

DISTRICT FOUR X TRACY CASE

REVIEWED BY:

APPROVED BY:

☒ POLLUTION
☐ NON POLLUTION

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Phone No.

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Follow Up Dates: 10-09-2015

Investigation Date:
04/10/2015

Mediation Date:

Remediation Date:

Litigation Date:

Referred To: OCC LEGAL OKC

Referred Date:

Agency of Jurisdiction: Oklahoma Corporation Commission

Resolved Date:

☒ Water Body Affected Confirmed

☐ Fish/Wildlife Kill Confirmed

Incident Confirmation Status:
Confirmed Violation

Red-Tagged Date:

Removal Date:

Violations: 165:10-7-5 Citation #:

Findings: During frac'ing operations two wells in 07-06N-08E, the I.Davis A#1, and the Spillman CR #3 stated purging oil. Neither well has the base of treatable water covered with cemented pipe. The frac. operations were shut down. Clean up will begin immediately.

Recommendations: Re-plug the Spillman CR #3, and plug or repair the casing on the I.Davis A#1 to prevent the purging, before frac. operations can recommence. Determine whether or not the ground water has been contaminated, and remediate all contaminated soil. Give the operator until 5-8-15 to conduct the clean up. If you have any questions or concerns call Darrel Wilkes at (580)320-7973.

Violations: 165:10-7-5 Citation #:

Findings: The Spillman well has been plugged, and the I Davis #A-1 has its own complaint. A water well has not been drilled to monitor the water table for contamination.

Recommendations: File contempt. Drill a water well between the Spillman CR#3 and I Davis #A-1 immediately in order to determine if the ground water has been contaminated.

Bob Anthony
Commissioner

Dana Murphy
Commissioner

Todd Hiatt
Commissioner

**Oklahoma
Corporation Commission**

1400 HOPPE BLVD SUITE D
ADA, OK 74820

Telephone: (580) 332-3441

Oil & Gas Conservation Division



Grant Ellis, District Manager

October 09, 2015

NOTICE OF REPORT OF INVESTIGATION

SILVER CREEK OIL & GAS LLC
5525 N MACARTHUR BLVD STE 775
IRVING, TX 75038-2665

RE: Complaint #:	18515OGDO40829
Date Received:	4/10/2015
Leasename WellNbr:	REUNION 7-1H
Location:	NW NW NW NW Sec 18 Twp 06N Rge 08E
County:	SEMINOLE

A Corporation Commission representative has investigated the above mentioned complaint. The findings and recommendations are as follows:

Findings:

The Spillman well has been plugged, and the I Davis #A-1 has its own complaint. A water well has not been drilled to monitor the water table for contamination.

Recommendations:

File contempt. Drill a water well between the Spillman CR#3 and I Davis #A-1 immediately in order to determine if the ground water has been contaminated.

If there are questions regarding this matter please contact this office at (580) 332-3441.

Sincerely,

Darrel Wilkes
Field Inspector
(580) 320-7973

Bob Anthony
Commissioner

Dana Murphy
Commissioner

Todd Hiatt
Commissioner

**Oklahoma
Corporation Commission**

1400 HOPPE BLVD SUITE D
ADA, OK 74820

Telephone: (580) 332-3441

Oil & Gas Conservation Division



Grant Ellis, District Manager

April 10, 2015

NOTICE OF REPORT OF INVESTIGATION

SILVER CREEK OIL & GAS LLC
5525 N MACARTHUR BLVD STE 775
IRVING, TX 75038-2665

RE: Complaint #:	18515OGDO40829
Date Received:	4/10/2015
Leasename WellNbr:	REUNION 7-1H
Location:	NW NW NW NW Sec 18 Twp 06N Rge 08E
County:	SEMINOLE

A Corporation Commission representative has investigated the above mentioned complaint. The findings and recommendations are as follows:

Findings:

During frac'ing operations two wells in 07-06N-08E, the I.Davis A#1, and the Spillman CR #3 stated purging oil. Neither well has the base of treatable water covered with cemented pipe. The frac. operations were shut down. Clean up will begin immediately.

Recommendations:

Re-plug the Spillman CR #3, and plug or repair the casing on the I.Davis A#1 to prevent the purging, before frac. operations can recommence. Determine weather or not the ground water has been contaminated, and remediate all contaminated soil. Give the operator until 5-8-15 to conduct the clean up. If you have any questions or concerns call Darrel Wilkes at (580)320-7973.

If there are questions regarding this matter please contact this office at (580) 332-3441.

Sincerely,

Darrel Wilkes
Field Inspector
580-320-7973

OKLAHOMA CORPORATION COMMISSION
COMPLAINT, SUMMONS, AND NOTICE OF CITATION FOR CONTEMPT
SHORT FORM

DATE: 10/5/2015

Compliant No: 18515OGDO40829

EN NO:

1. RESPONDENT

COMPANY NAME:	Silver Creek Oil & Gas LLC	OTC/OCC NO:	22726
CONTACT PERSON:	John Sanchez		
ADDRESS:	5525 N MACARTHUR BLVD STE 775		
CITY	Irving	STATE:	Texas
		ZIP CODE:	75038-2665

2. LEASE

Name& Well No:	Reunion 7-1H		
Location	NW NW NW NW	Sec	18
		Twp	06N
		Rge	08E
COUNTY:	Seminole - 133		

3: COMMISSION STAFF

NAME:	Darrel Wilkes		
DEPARTMENT:	Field Operations - Oil and Gas Division - District IV		
LOCATION OF FILING	<input checked="" type="checkbox"/> OKLAHOMA CITY	<input type="checkbox"/> TULSA	

4. VIOLATION(S) AND RULE NUMBER(S)

Rule 165:10-7-5	Failure to prohibit pollution
-----------------	-------------------------------

5. COMMENTS

--

6. EVIDENCE ATTACHED:

Standard Forms

TRIAL MATERIAL

COMPLAINT NO: 18515OGDO40829

DESCRIPTION: Reunion 7-1H
133-25198
NW NW NW NW 18-06N-08E
Seminole County

OPERATOR: Silver Creek Oil & Gas LLC
(Operator # 22726)

OCC NEEDS

FIND ATTACHED

- | | | |
|-------|-------|--|
| _____ | _____ | 1. 1073 - Transfer or Ownership |
| _____ | _____ | 2. 1002A - Completion Report |
| _____ | _____ | 3. Complaint Notice |
| _____ | _____ | 4. Inspection Report - 1085 |
| _____ | _____ | 5. Request Contempt Cover Letter |
| _____ | _____ | 6. Samples Taken? Number? |
| _____ | _____ | 7. Sample Results Forwarded |
| _____ | _____ | 8. Pictures Taken? |
| _____ | _____ | 9. Other - Explain or Describe
(letters, memos, ect.) |

Oklahoma Corporation Commission

Oil & Gas Conservation Division
P.O. Box 52000
Oklahoma City, Oklahoma 73152-2000



Room 255 Jim Thorpe Building
Telephone: (405) 521-2246
Fax: (405) 522-0493
www.occeweb.com

Affidavit Of Valid Surety

I confirm that the following individual and/or company has valid surety on file with the Oklahoma Corporation Commission as required in OCC/OGR Rule 165:10-1-10 through 105:10-1-14, or as the law may be amended. This confirmation is made on this day, October 09, 2015.

Operator Number: 22726

Operator: SILVER CREEK OIL & GAS LLC
5525 N MACARTHUR BLVD STE 775
IRVING, TX 75038-2665

Expiration Date: July 31, 2016

If any further information is required, please contact the undersigned at (405) 521-2273.

Respectfully submitted,

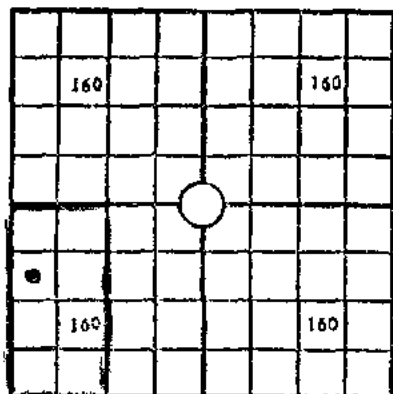
Larry Claxton
Manager, Surety Department
Oil and Gas Conservation Division

6 8 0 0 0 0 2 0 0 0 7

240586

640 Acres
N

Form 1003



Locate Well Correctly



PLUGGING RECORD

MAIL TO CORPORATION COMMISSION,
Oklahoma City, Oklahoma

NOTE: All questions on this form must be satisfactorily answered

Company Operating The Carter Oil CompanyOffice Address Tulsa, Oklahoma.County Seminole. Sec 7 Twp 6.N. Range 8.EFarm Name C. R. Spillman Well No 3 Field Seminole.Character of Well (whether oil, gas or dry) Oil WellCommenced Plugging December 22, 1931 Finished December 29, 1931 Total Depth 2865 ft.Was permission obtained from the Corporation Commission or its agents before plugging was commenced? Plugged back from 4190' Wilcox HFW
YesName of Conservation Officer who supervised plugging of this well Frank AllenName of producing sand Gilcrease Sand, Depth top 2750 ft., Bottom 2830 ft.

Show depth and thickness of all fresh water, oil and gas formations

SAND OR ZONE RECORDS

CASING RECORDS

Formation	Content	From	To	Size	Put In	Pulled Out
Gilcrease Sand	Oil	2750'	2830'	8 1/4"	3784'	2292'
Wapanucka Sand	-----	2890'	3000'			
Mayes Linn	-----	3740'	3825'			
Sycamore Linn	-----	3825'	3830'			
Woodford Shale	Show Oil	3830'	4032'			
Slyvan Shale	-----	4032'	4043'			
Viola Linn	-----	4043'	4087'			
Simpson Linn	Water	4087'	4188'			
Wilcox Sand	HFW	4188'	4190'			

Describe in detail the manner in which the well was plugged, indicating where the mud fluid was placed and the methods used in introducing it into the hole. If cement or other plugs were used, state the character of same and depth placed

Filled with mud to top of hole.Does the above conform strictly to the oil and gas regulations? Yes

The Law requires that adjacent lease, royalty and land-owners be notified, give their names with their address below

Magnolia Pet Co, Oklahoma City, Oklahoma.Prairie O & G Co, Tulsa, Oklahoma.REMARKS Why plugged? Production exhausted. If abandoned oil or gas well, state amount and date of last production December 4, 1931. --- 5 barrelsCorrespondence regarding this well should be addressed to H. O. Helvie,Address Tulsa, Oklahoma.I, J J CONRY, being first duly sworn, on oath state that I have knowledge of the facts and matter herein set forth and that the same are true and correctSubscribed and sworn to before me this 19 day of January 1932My Commission expires 3-11-34, 1934

Notary Public

160					160
160					160

Mail to Corporation Commission, Oklahoma City, Oklahoma

COUNTY Seminole, SEC 7, TWP 6 N, RGE 2 E
 COMPANY OPERATING The Carter Oil Company
 OFFICE ADDRESS Tulsa, Oklahoma
 FARM NAME C. R. Spillman WELL NO. 3
 DRILLING STARTED 12-31-29, DRILLING FINISHED 4-25-30, 19
 WELL LOCATED SW 1/4 1/4 NW 1/4 1/4 SW 1/4 1/4 990' ft. North of South of
 North Line and 330 ft. East of West Line of Quarter Section
 ELEVATION (Relative to sea level) DERRICK FLR --- GROUND ---
 CHARACTER OF WELL (Oil, gas or dry hole) Oil Well

Locate Well Correctly

OIL OR GAS SANDS OR ZONES

Name	From	To	Name	From	To
1 <u>Gilcrease Sand</u>	<u>2750'</u>	<u>2830'</u>	4 <u>Sycamore Lime</u>	<u>3825'</u>	<u>3830'</u>
2 <u>Wapanucka Sand</u>	<u>2890'</u>	<u>3000'</u>	5 <u>Woodford Shale</u>	<u>3830'</u>	<u>4032'</u>
3 <u>Payes Line</u>	<u>3740'</u>	<u>3825'</u>	6 <u>Sylvan Shale</u>	<u>4032'</u>	<u>4043'</u>
			7 <u>St. Viola Line</u>	<u>4043'</u>	<u>4087'</u>
			8 <u>Simpson Lime</u>	<u>4087'</u>	<u>4188'</u>

WATER SANDS

Name	From	To	Water Level	Name	From	To	Water Level
1 <u>Wilcox Sand</u>				4			
2				5			
3				6			

CASING RECORD

Size	Wt.	Fads	Make	Amount Set		Amount Pulled		Size	Length	Depth Set	Make
				Ft	In	Ft	In				
<u>12 1/2</u>	<u>50</u>	<u>8</u>	<u>Latl Lap</u>	<u>61</u>	<u>0</u>	<u>NOHE</u>					
<u>8 1/2</u>	<u>32</u>	<u>8</u>	<u>Sta Seam</u>	<u>3784</u>	<u>0</u>	<u>"</u>					
<u>6-5/8</u>	<u>26</u>	<u>10</u>	<u>" "</u>	<u>4082</u>	<u>0</u>	<u>ALL</u>					
<u>5-3/16</u>	<u>17</u>	<u>10</u>	<u>" "</u>	<u>4166</u>	<u>0</u>	<u>(M)</u>					

Liner Record Amount --- Kind --- Top --- Bottom ---

CEMENTING AND MUDDING RECORD

Size	Amount Set		Sacks Cement	Chemical		Method of Cementing	Amount	Mudding Method	Results (See Note)
	Feet	In		Gal	Make				
<u>12 1/2</u>	<u>61</u>	<u>0</u>	<u>90</u>	<u>100#</u>	<u>C C</u>	<u>Halliburton</u>	<u>---</u>		
<u>8 1/2</u>	<u>3784</u>	<u>0</u>	<u>700</u>	<u>320#</u>	<u>C C</u>	<u>" "</u>	<u>---</u>		

NOTE What method was used to protect sands when outer strings were pulled? Not Pulled.

NOTE Were bottom hole plugs used? --- If so state kind, depth set and results obtained

TOOLS USED

Rotary tools were used from 0 feet to 3761' feet and from --- feet to ---
 Cable tools were used from 3761' feet, to 4190' feet, and from --- feet to ---
 Type R/R Rotary

PRODUCTION DATA

Production first 24 hours 115 bbls Gravity 38 Emulsion --- per cent, Water --- per cent
 Production second 24 hours 100 bbls Gravity 38 Emulsion --- per cent, Water --- per cent
 If gas well cubic per 24 hours 8 mil Stock Pressure lbs, per square inch

I the undersigned being first duly sworn upon oath, state that this well record is true correct and complete according to the records of this office and to the best of my knowledge and belief

Subscribed and sworn to before me this the 31st, day of May, 1930
 My Commission expires 3-11-34
Chas M Smith
 Notary Public

FORMATION RECORD

Give detailed description and thickness of all formations drilled through and contents of sands whether dry, water, oil or gas

Formation	Top	Bottom	Formation	Top	Bottom
Surface			70 Cem. 12 $\frac{1}{2}$ " Csg. @ 80'		
Shale & Shells	70	1140			
Sandy Shale	1140	1226			
Shale & Shells	1226	1300			
Hard Sandy Lime	1300	1310			
Shale & Shells	1310	1621			
Sandy Lime	1621	1644			
Shale & Lime	1644	2038			
Sandy Lime	2038	2050			
Shale & Lime	2050	2282			
Hard Sand & Shale	2282	2299			
Shale & Shells	2299	2768			
Sand	2768	2784			
Sand & Shale	2784	2756			
Slate	2856	2917			
Sand & Shale	2917	2963			
Sandy Lime	2963	3042			
Sand & Shale	3042	3067			
Lime & Shale	3067	3075			
Hard Sand & Lime	3075	3123			
Shale & Sand	3123	3288			
Shale & Shells	3288	3664			
Shale & Hard Sand	3664	3674			
Shale	3674	3733			
Hard Sandy Lime	3733	3742			
Lime	3742	3761	Cem. 8 $\frac{1}{2}$ " Csg. 700 S. Cem. 300# C. C.		
Sand		2750-2830	Show Oil		
Lime		2890-3000			
Sand		3000	Top Cromwell		
Lime	3000	3740	Top Mayes		
Lime	3740	3761	Stdz.		
		3761	Stdz.		
Lime	Mayes	3761	Top Sycamore		
Lime	Sycamore	3825	Top Woodford		
Shale	Woodford	3830	3 boilers oil per hour		
Shale	Woodford	3980	Top Sylvan		
Shale	Sylvan	4032	Top Viola		
Lime	Viola	4043	Set 6 5-8" Casing		
Lime	Viola	4045	Top Simpson		
Lime (Sandy)	Simpson	4087	3000' Water		
Lime "	Simpson	4118	Set 5 3-16" Csg.		
Lime "	Simpson	4126	Top Wilcox		
Sand	Wilcox	4188	H. F. V.		
Sand	Wilcox	4189	Total Depth.		
SET 6" LIMIT PLUG 4126-23' - CEMENTED BACK TO 4123-4073' - ROCK 4073-71' - LEAD WOOL 4071-4064' - 6" LIMIT PLUG 4064-61' LEAD WOOL 4061-60' - CEMENT 4060-48' - 6" LIMIT PLUG 4048-45' - OPEN HOLE 4045-2900' - ROCK 2900-2865' 2 8 6 5' T.D. PULLED ALL 6-5/8' and 5-3/16' CASING - RIPPED 8 $\frac{1}{2}$ " CASING 2750-62' ESTIMATED 8,000,000 CU. FT. GAS 2759-62'					

58245

API NO. 133-02148
OTC PROD. UNIT NO.
133-032901

Rule 185 10-3-25
ORIGINAL
X AMENDED
Reason Amended

Converted to producing oil well

COMPLETION REPORT
OKLAHOMA CORPORATION COMMISSION
Oil & Gas Conservation Division
Post Office Box 52000-2000
Oklahoma City, Oklahoma 73152-2000

001282001



Form 1002A
Rev 1996

PLEASE TYPE OR USE BLACK INK ONLY

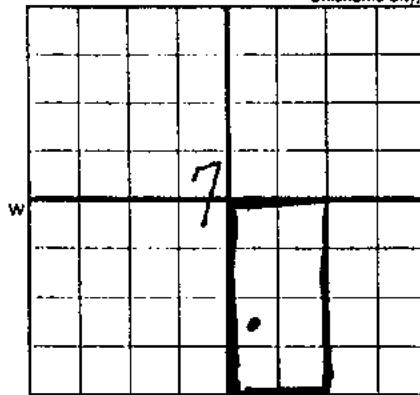
NOTE: Attach copy of original 1002A if recompletion or reentry

TYPE OF DRILLING OPERATION

X STRAIGHT HOLE _____ DIRECTIONAL HOLE _____ HORIZONTAL HOLE

If directional or horizontal, see reverse for bottom hole location.

COUNTY	Seminole	SEC	7	TWP	6N	RGE	8E
LEASE NAME	"I" Davis		WELL NO. A-1				
SHL	NW 1/4	SW 1/4	SE 1/4	1/4	990	FSL	330
ELEVATION	Derrick Ft N/A		Ground N/A		SPUD DATE 11-1-28		
DRILG FINISHED	N/A		WELL COMPLETION		4-16-29		
1ST PROD DATE	RECOMP DATE						



LOCATE WELL

OPERATOR NAME	Cook Oil Co.	OTC/OCC OPERATOR NO.	07286
ADDRESS	Post Office Box 1020		
CITY	Wewoka	STATE	OK
ZIP	74884		

COMPLETION TYPE	XX SINGLE ZONE
MULTIPLE ZONE ORDER NO.	
COMINGLED ORDER NO.	
LOCATION EXCEPTION ORDER NO.	none
INCREASED DENSITY ORDER NO.	none
PENALTY	none

OIL OR GAS ZONES	TOP	BOTTOM
FORMATIONS		
Simpson	4085	4199

CASING & CEMENT (Form 1002C must be attached)

TYPE	SIZE	WEIGHT	GRADE	FEET	PSI	SAX	FILLUP	TOP
Conductor	15 1/2	70		32		100	circulated to surface	
Surface	8 5/8	32		2921		175		
Intermediate	7"	26		3290				
Production	4 1/2	10.5		3276		415	circulated to surface	
Liner								

PACKER @	BRAND & TYPE	TOTAL DEPTH	4201
PLUG @	TYPE		

FORMATION	Simpson
SPACING & SPACING	none
ORDER NUMBER	
CLASS: Oil, Gas, Dry	oil
Wj. Disp. Comm Disp	open hole
PERFORATED INTERVALS	4085-4199
ACID/VOLUME	—
Fracture Treated?	—
Fluids Amounts	—

INITIAL TEST DATA

INITIAL TEST DATE	12-20-99
OIL-BBL/DAY	5
OIL-GRAVITY (API)	38
GAS-MCF/DAY	—
GAS-OIL RATIO CU FT/BBL	—
WATER-BBL/DAY	200
PUMPING OR FLOWING	pumping
INITIAL SHUT-IN PRESSURE	- 0 -
CHOKE SIZE	none
FLOW TUBING PRESSURE	none

A record of the formations drilled through, and pertinent remarks are presented on the reverse. I declare that I have knowledge of the contents of this report and am authorized by my organization to make this report, which was prepared by me or under my supervision and direction, with the data and facts stated herein to be true, correct, and complete to the best of my knowledge and belief.

SIGNATURE	Doyle Cook	NAME (PRINT OR TYPE)	Doyle Cook
ADDRESS	Post Office Box 1020, Wewoka, OK 74884		
DATE	January 24th, 2000	PHONE NUMBER	(405) 257-3301

Directional surveys are required for all drainholes and directional wells.

OKLAHOMA

Corporation Commission

1400 Hoppe Blvd; Ste D
Ada, OK 74820

Telephone: (580)332-3441
FAX: (580)332-8434

OIL & GAS CONSERVATION DIVISION, DISTRICT IV



GRANT ELLIS, DISTRICT MANAGER

INCIDENT NUMBER: 15-40829

I, DARREL WILKES, certify that the enclosed pictures were
taken by me on April 10, 2015.

Signed before me this 9th day of October, 2015.



Audra L. Shelton, Notary Public

00020013
Commission Number

My Commission Expires: 08/26/2017

04/10/2015



04/10/2015



ATTACHMENT

4

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

APPLICANT: SILVER CREEK OIL AND GAS, LLC
RELIEF SOUGHT: DRILLING AND SPACING UNITS
HORIZONTAL WELL UNITS
LEGAL DESCRIPTION: SECTION 32, TOWNSHIP 7 NORTH,
RANGE 8 EAST, HUGHES AND
SEMINOLE COUNTIES, OKLAHOMA

)
)
) CAUSE CD NO.
) CD 201403671
)

FILED
NOV 05 2014

APPLICANT: SILVER CREEK OIL AND GAS, LLC
RELIEF SOUGHT: LOCATION EXCEPTION
LEGAL DESCRIPTION: SECTION 32, TOWNSHIP 7 NORTH,
RANGE 8 EAST, HUGHES AND
SEMINOLE COUNTIES, OKLAHOMA

COURT CLERK'S OFFICE - OKC
CORPORATION COMMISSION
OF OKLAHOMA
) CAUSE CD NO.
) CD 201403673
)
)
)

REPORT OF THE ADMINISTRATIVE LAW JUDGE

This cause came on for hearing before Niles E. Stuck, Administrative Law Judge for the Corporation Commission of the State of Oklahoma, on the 20th day of August, 2014, at 8:30 a.m. in the Commission's Courtroom, Jim Thorpe Building, Oklahoma City, Oklahoma, pursuant to the notice given as required by law and the rules of the Commission for the purpose of taking testimony and reporting to the Commission.

CASE SUMMARY:

The Applicant, Silver Creek Oil and Gas, LLC (Silver Creek), is seeking to establish a 640 acre horizontal drilling unit for the Mississippian, Woodford, Sylvan and Viola common sources of supply underlying Section 32, Township 7 North Range 8 East in Hughes and Seminole Counties (Section 32). Silver Creek further seeks authority to drill a well in the West Half of Section 32 closer to the North and South boundaries of that section than would otherwise be allowed. The Protestant, Michael Majors (Mr. Majors), believes such horizontal development would communicate with plugged vertical wells and would pollute freshwater reservoirs.

RECOMMENDATIONS:

1. The relief requested by Silver Creek is likely to promote production, prevent waste and protect correlative rights and as such should be approved by the Oklahoma Corporation Commission (OCC).
2. Mr. Majors' concerns may or may not be valid, but it is beyond the authority of OCC to deny a spacing or location exception application based on the theory

that development may cause pollution. Mr. Majors may seek an injunction in District Court or report the violation of existing rules to the proper parties in the OCC.

HEARING DATE: August 20, 2014

APPEARANCES: John C. Moricoli, Jr., Attorney at Law, appeared on behalf of Silver Creek Oil and Gas, LLC.

Michael Majors, appeared Pro Se.

FINDINGS AND SUMMARY OF EVIDENCE

1. That CD 201403671 is the application of Silver Creek seeking to establish a 640 acre horizontal spacing unit for the Mississippian, Woodford, Hunton, Sylvan and Viola common sources of supply underlying Section 32, Township 7 North Range 8 East in Hughes and Seminole Counties (Section 32). The Hunton was dismissed at the hearing.

2. That Cd 201403673 is the application of Silver Creek seeking authorization to drill a horizontal well in a location not authorized by the requested spacing order. The first perforation of the proposed well would not be located closer than 165 feet from the south line of the unit and the last perforation of which would not be located closer than 165 feet from the north line of the unit. No portion of the lateral would be closer than 165 feet from the west line of the unit.

3. In both causes, the OCC has jurisdiction over the subject matter and notice has been given in all respects as required by law and the rules of the Commission.

4. The following numbered exhibits were accepted into evidence:

1. A nine section plat centered on Section 32 showing what wells drilled in the subject section and surrounding sections. The plat also showed production information and highlighting the wells used in Exhibit 2.
2. A cross section showing the depths of the subject.
4. A township plat showing wells drilled throughout the area.

5. At the outset of the hearing, the Court requested statements from the parties describing the issues in controversy. Mr. Davis summarized his protest, "I protest this case because I am concerned about the protection of our freshwater. I do not think the frac jobs from these horizontals can be contained in this area due to the number of old holes that have penetrated these reservoirs. That's pretty much it."

6. Joe Ferguson, a land man qualified to testify in matters of this type, appeared on behalf of the Applicant and testified that the Applicant had complied with the rules of the OCC regarding notice and, with regard to un-locatable respondents, stated that the Applicant had exercised due diligence in attempting to locate those

respondents and serve them with notice. The Applicant requested the OCC approve notice by publication for those un-locatable respondents.

The Applicant argued that Mr. Majors was not a proper respondent to the application and moved that his protest be dismissed. The Applicant argued that Mr. Majors' father had been a mineral interest owner, but Mr. Majors' father's interest had been conveyed to a trust through probate. Because title was vested in the trust, Mr. Majors could not represent himself.

Mr. Majors argued that the mineral interest had been conveyed to all beneficiaries of the trust, including him, but that the tract of land at issue in the hearing was not included in the deed due to a scrivener's error.

Upon further questioning, Mr. Ferguson stated that there was a deed of record conveying mineral interests from the trust to the beneficiaries of the trust, but that deed did not describe the tract of land at issue in the hearing.

The Court overruled applicant's objection to standing. The deed described by Mr. Ferguson was labeled "Exhibit 3." No one offered Exhibit 3 into evidence.

7. Michael Glenn Davis, an Engineer and Geologist qualified to testify in matters of this type, appeared on behalf of the Applicant and testified that the Hunton is not present under this section. The applicant dismissed the Hunton. The Mississippian is at a depth of 3,775 feet, the Woodford at 3,865 feet, the Sylvan at 4,050 feet and the Viola at 4,110 feet. All formations are expected to be productive of oil. The Hunton and Viola were spaced as 40 acre units by Order Number 186605, but there is no current production.

The porosity and permeability of the Mississippian, Woodford, Sylvan and Viola common sources of supply result in them being appropriate for horizontal development rather than vertical.

The witness expects that more than one well will be necessary to fully develop the unit and 640 acre spacing will allow for proper spacing of the wells, as well as the ability to build an infrastructure to more efficiently drill and operator wells.

Due to the tight nature of the target formations, the wells are not expected to adversely impact owners in offsetting units.

During cross examination, Mr. Majors inquired as to what databases the witness relied on to gather information, create exhibits and to come to his ultimate expert opinions. Mr. Davis said he relied primarily on IHS data and also used the National Resource Information Study database to find older completion records. The witness stated that he found the information available through the Oklahoma Tax Commission to be unreliable.

The Applicant rested.

8. Mr. Majors read a statement into the record in which he described his belief that horizontal wells will be fracture treated in proximity to ancient wellbores. The locations of those wells are speculative. Older wells were not plugged in such a way to properly protect fresh water.

Mr. Majors attempted to submit a packet of exhibits. The Applicant objected to Mr. Major's testimony and exhibits as being incompetent, irrelevant and immaterial. After a lengthy discussion to ensure scope of Mr. Majors protest, the Court ruled that Mr. Majors' exhibits and general argument were irrelevant to a spacing and location exception application.

RECOMMENDATIONS AND CONCLUSIONS

Mr. Majors' objection is that horizontal wells will communicate with older wells in the area and that communication will result in pollution of fresh water. Mr. Majors used the phrase "co-mingle," but based on the context in which it was used it appears Mr. Majors is concerned with communications between wells rather than co-mingling as defined by OCC rules.

Mr. Majors is concerned with pollution, but one could argue that he is also concerned with the correlative rights of the owners of up-hole zones. While Mr. Majors did not present an eloquent correlative rights argument at the hearing, such an argument would not be persuasive absent the actual presence of vertical wells with which horizontal wells could communicate.

Mr. Majors described the number and locations of existing well bores as "speculative at best." OCC rules prohibit any well bore to be located nearer than 600 feet of an existing well bore. That is the rule that prevents the communication that Mr. Majors is concerned about. The rules of the OCC do not require operators to ensure they do not interfere with wells whose existence is speculative. How such a rule could possibly be followed is difficult to imagine.

Mr. Majors' concerns may well be valid, and nothing in this report should be construed as dismissing those concerns as being unfounded, but Mr. Majors' is bringing those concerns to the wrong court. In essence, Mr. Majors is asking for any oil company to be prohibited from drilling a horizontal well in an effort to protect fresh water from what he believes to be an inappropriate risk of pollution. That is a request for equitable relief and the Oklahoma Corporation Commission does not have the constitutional nor statutory authority to grant that request in this specific type of cause. Mr. Majors should seek an injunction in district court.

The OCC is tasked with establishing and maintaining spacing units that prevents various types of waste, that protects correlative rights, and that promotes the orderly development of Oklahoma's natural resources. The testimony provided by the Applicant leads me to the conclusion that the requested relief would accomplish those goals. The

proposed development may also result in pollution, but it is beyond the scope of the hearing at hand.

The OCC has issued a series of rules designed to protect the public from pollution. For instance, surface casing is required to be set to sufficiently protect against pollution of fresh water. There is no allegation that the Applicant in the action at hand has violated any specific Commission rule. It may be that these rules are insufficient to protect the public, but it is not up to an Administrative Law Judge to second guess the legislature or the OCC Commissioners in a spacing or location exception recommendation.

Mr. Majors may seek immediate relief at the district court in the form of an emergency injunction and may also petition his representatives at the state legislature and at the OCC.

RESPECTFULLY submitted this 5th day of November, 2014.



Niles Stuck
Administrative Law Judge

CC: John Moricoli
Michael Majors
Michael Decker, OAP Director
Oil Law Records
Court Clerk
Commission Files

ATTACHMENT

5

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/6/2014
Job End Date:	5/7/2014
State:	Oklahoma
County:	Hughes
API Number:	35-063-24425-00-00
Operator Name:	Silver Creek Oil & Gas, LLC
Well Name and Number:	Irving 8-4H
Longitude:	-96.37611711
Latitude:	35.01357542
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	2,804
Total Base Water Volume (gal):	2,845,710
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Company 1	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	92.26181	None
Sand (Proppant)	Badger , Superior Silica	Proppant					
			Silica Substrate	14808-60-7	100.00000	7.35415	None
Hydrochloric Acid	Reagent	Acid					
			Water	7732-18-5	85.00000	0.15326	None
			Hydrogen Chloride	7647-01-0	15.00000	0.02705	None
Catsurf 109 KCL	Catalyst	KCL Clay Control					
			Water	7732-18-5	100.00000	0.09961	None
			Alkyl Dimethyl Ammonium Chloride , Methanol	67-56-1	19.00000	0.01893	None
Plexslick 957 FR	Chemplex	Friction Reducer					
			Water	7732-18-5	40.00000	0.01527	None
			Poly (acrylamide-co-acrylic acid). Partial sodium salt	62649-23-4	35.00000	0.01336	None
			Paraffinic ,Napthenic Solvant	64742-47-8	30.00000	0.01145	None
			Nonionic Surfactants	Proprietary	10.00000	0.00382	None
			Ammonium Chloride	12125-02-9	5.00000	0.00191	None
			Sodium Choride	7647-14-5	5.00000	0.00191	None
Payzone 814 BCD	Catalyst	Biocide					

			Water	7732-18-5	100.00000	0.02684	None
			Glutaraldehyde	111-30-8	14.00000	0.00376	None
			N-alkyldimethyl Benzyl Ammonium Chloride	68424-85-1	3.00000	0.00081	None
Payzone 268 NE	Catalyst	Non Emulsifier for Acids and Water					
			Water	7732-18-5	100.00000	0.00889	None
			Isopropanol	67-63-0	30.00000	0.00267	None
			Polyester Castor	Proprietary	20.00000	0.00178	None
			NP-9	Proprietary	10.00000	0.00089	None
Clayplex 306	Chemplex	Clay Stabilizer					
			Methyl Alcohol	67-56-1	14.00000	0.00413	None
Plexhib 256	Chemplex	Acid Inhibitor					
			Methyl Alcohol	67-56-1	60.00000	0.00043	None
			AlcoholEthoxylate Sufactants	Proprietary	20.00000	0.00014	None
			Thiourea-Formaldehyde Copolymer	68527-49-1	10.00000	0.00007	None
			N-Olefins	Proprietary	5.00000	0.00004	None
			Propargyl	107-19-7	5.00000	0.00004	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

ATTACHMENT

6

ENVIRONMENTAL RESOURCE TECHNOLOGIES, LLC

131 Arlington St.
Ada, OK 74820
(580) 332-8808 Phone (580) 421-9110 Fax
EPA Laboratory Code: OK00921
ODEQ Certification No. 8304

Client Name: **Silver Creek**

Date Received: 06/30/16

Sample Date: 06/30/16

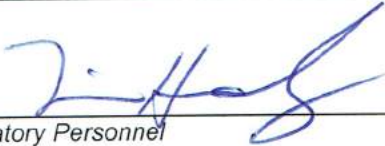
Report Date: 07/13/16

Project: **Sasakwa**

- CERTIFICATE OF ANALYSIS -

Sample ID	Specific Conductivity (micromhos/cm)	Chloride ppm	pH S.U	TSS ppm	TPH ppm
Water					
North of Sasakwa Well	3,570	104	7.30	2,285	<5.0

Methods SM 2510-B SM 4500-Cl⁻ B SM 4500-H⁺ B SM 2510-B EPA 1664A


Laboratory Personnel

Analytical Laboratory * Environmental Consulting

131 Arlington Ada, Oklahoma 74820
Phone (580) 332-8808 Fax (580) 421-9110

CLIENT NAME: Silver Creek

PROJECT NAME: Sasakawa

[illegible]

Comments:

Sampled By: <i>Michael Murphy</i>	Date/Time: <i>6-30-16 0845</i>	PH Analyzed By: <i>Michael Murphy</i>	Date/Time: <i>6-30-16 0845</i>
<i>Relinquished to Lab by 'Michael Murphy'</i>	<i>6-30-16 1000</i>	<i>John Hudson</i>	<i>6-30-16 10:30</i>

Date Sample Analyzed : 6-30-16
Time Sample Analyzed : 0845
Analyst Initials : MCN

pH = 7.50 S.U.
EC = _____ uS

pH meter(Oakton pH 6 Acorn Series) calibrated with Hach
4.01, 7.00, & 10.01 buffers

Conductivity Meter calibrated with 1413 μS Standard

Report To: Sauv Silver Creek (a prior)

Address:

Phone/Fax Number:

Send Invoice To:

Address:

Phone/Fax Number:

ENVIRONMENTAL RESOURCE TECHNOLOGIES, LLC

131 Arlington St.

Ada, OK 74820

(580) 332-8808 Phone (580) 421-9110 Fax

EPA Laboratory Code: OK00921

ODEQ Certification No. 8304

Client Name: Silver Creek

Date Received: 08/31/16

Sample Date: 08/31/16


Report Date: 09/07/16

Project: Sasakwa

- CERTIFICATE OF ANALYSIS -

Sample ID	Specific Conductivity (micromhos/cm)	Chloride ppm	pH S.U	TSS ppm	TPH ppm
Water					
North of Sasakwa Well	3,570	91.0	7.17	2,285	<1.4

Methods SM 2510-B SM 4500-Cl⁻ B SM 4500-H⁺ B SM 2510-B EPA 1664A


Laboratory Personnel

Analytical Laboratory * Environmental Consulting

131 Arlington Ada, Oklahoma 74820
Phone (580) 332-8808 Fax (580) 421-9110

CLIENT NAME: Silver Creek

PROJECT NAME: Sasakawa

[illegible]

Comments:

Read on the 26th

Sampled By: <i>Michael Newport</i>	Date/Time: <i>8-31-16 0930</i>	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished to Lab By: <i>Michael Newport</i>	Date/Time: <i>8-31-16 1230</i>	Received at Lab By: <i>Alan Hudson</i>	Date/Time: <i>8-31-16 1230</i>

Date Sample Analyzed : 8-31-16
Time Sample Analyzed : 0930

Analyst Initials: MCN

20.4°C

pH meter calibrated with 4.0, 7.0, & 10.0 buffers

Report To:

Send Invoice To:

Address:

Address:

Phone/Fax Number:

Phone/Fax Number:

ENVIRONMENTAL RESOURCE TECHNOLOGIES, LLC

131 Arlington St.
Ada, OK 74820
(580) 332-8808 Phone (580) 421-9110 Fax
EPA Laboratory Code: OK00921
ODEQ Certification No. 8304

Client Name: Silver Creek

Date Received: 07/29/16

Sample Date: 07/29/16

Report Date: 08/03/16

Project: Sasakwa

- CERTIFICATE OF ANALYSIS -

Sample ID	Specific Conductivity (micromhos/cm)	Chloride ppm	pH S.U	TSS ppm	TPH ppm
Water					
North of Sasakwa Well	3,400	91.0	7.13	2,176	<5.0

Methods SM 2510-B SM 4500-Cl⁻ B SM 4500-H⁺ B SM 2510-B EPA 1664A

Laboratory Personnel

Analytical Laboratory * Environmental Consulting

131 Arlington Ada, Oklahoma 74820
Phone (580) 332-8808 Fax (580) 421-9110

PROJECT NAME: Sasakwa

[illegible]

Sampled By: <i>W. Caldwell Newport</i>	Date/Time: 7-29-16 0930	Analyzed By:	Date/Time:
Requisitioned by <i>W. Caldwell Newport</i>	7-29-16 1100	Received by: <i>W. Caldwell Newport</i>	

pH meter(Oakton pH 6 Acom Series) calibrated with Hach
4.01, 7.00, & 10.01 buffers

Phone/Fax Number:

ENVIRONMENTAL RESOURCE TECHNOLOGIES, LLC

131 Arlington St.

Ada, OK 74820

(580) 332-8808 Phone (580) 421-9110 Fax

EPA Laboratory Code: OK00921

ODEQ Certification No. 8304

Client Name: **Silver Creek**

Date Received: 09/30/16

Sample Date: 09/30/16


Report Date: 10/06/16

Project: **Sasakwa**

- CERTIFICATE OF ANALYSIS -

Sample ID	Specific Conductivity (micromhos/cm)	Chloride ppm	pH S.U	TSS ppm	TPH ppm
Water					
North of Sasakwa Well	3,580	101	7.31	2,291	<5.0

Methods SM 2510-B SM 4500-Cl⁻ B SM 4500-H⁺ B SM 2510-B EPA 1664A


Laboratory Personnel

Analytical Laboratory * Environmental Consulting

131 Arlington Ada, Oklahoma 74820
Phone (580) 332-8808 Fax (580) 421-9110

CHAIN OF CUSTODY

PROJECT NAME : Sasakwa

CLIENT NAME: Silver Creek

Sasakawa

[illegible]

Comments:

bed on the 60°

Date Sample Analyzed: 9-30-16

Time Sample Analyzed: 1030

Analyst Initials: MEW

pH = 7.3 S.U.

pH meter calibrated with 4.0, 7.0, & 10.0 buffers

Sampled By: <i>[Signature]</i>	Date/Time: 9-30-16 1030	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished to Lab By: <i>[Signature]</i>	Date/Time: 9-30-16 1130	Received at Lab By: <i>[Signature]</i>	Date/Time: 9-30-16 11:30

Report To:

Send Invoice To:

Address:

Address:

Phone/Fax Number:

Phone/Fax Number:

ENVIRONMENTAL RESOURCE TECHNOLOGIES, LLC

131 Arlington St.
Ada, OK 74820
(580) 332-8808 Phone (580) 421-9110 Fax
EPA Laboratory Code: OK00921
ODEQ Certification No. 8304

Client Name: Silver Creek

Date Received: 04/08/16

Sample Date: 04/08/16


Report Date: 04/21/16

Project: Sasakwa

- CERTIFICATE OF ANALYSIS -

Sample ID	Specific Conductivity (micromhos/cm)	Chloride ppm	pH S.U	TSS ppm	TPH ppm
Water					
North of Sasakwa Well	1,495	42.5	7.35	957	<1.4

Methods SM 2510-B SM 4500-Cl⁻ B SM 4500-H⁺ B SM 2510-B EPA 1664A


Laboratory Personnel

Analytical Laboratory * Environmental Consulting

131 Arlington Ada, Oklahoma 74820
Phone (580) 332-8808 Fax (580) 421-9110

PROJECT NAME: Saxawa

CLIENT NAME: Silver Creek

Sasakwa

[illegible]

Comments:

Date Sample Analyzed :	4-8-16
Time Sample Analyzed :	1045
Analyst Initials :	M.N
Temperature = 13.4 °C	pH = 7.35 S.U.
	EC = 1495 μ S

Sampled By <i>Nicholas Mumpert</i>	Date/Time: 4-8-16 1045	Analyzed By <i>Nicholas Mumpert</i>	Date/Time: 4-8-16 1045
Relinquished By: <i>Nicholas Mumpert</i>	4-8-16 1230	Received by: <i>Lisa Hudson</i>	4-8-16 12:30

pH meter(Oakton pH 6 Acorn Series) calibrated with Hach
4.01, 7.00, & 10.01 buffers

Conductivity Meter calibrated with 1413 uS Standard

Send Invoice To:

Address:

Phone/Fax Number:

Phone/Fax Number: _____

ENVIRONMENTAL RESOURCE TECHNOLOGIES, LLC

131 Arlington St.
Ada, OK 74820
(580) 332-8808 Phone (580) 421-9110 Fax
EPA Laboratory Code: OK00921
ODEQ Certification No. 8304

Client Name: Silver Creek

Date Received: 05/24/16

Sample Date: 05/24/16

Report Date: 06/10/16

Project: Sasakwa

- CERTIFICATE OF ANALYSIS -

Sample ID	Specific Conductivity (micromhos/cm)	Chloride ppm	pH S.U	TSS ppm	TPH ppm
Water					
North of Sasakwa Well	1,767	66.0	7.09	1,131	<5.0

Methods SM 2510-B SM 4500-Cl⁻ B SM 4500-H⁺ B SM 2510-B EPA 1664A

Laboratory Personnel

Analytical Laboratory * Environmental Consulting