

Oak Meadow Homeowners Association Briefing

May 24th, 2017



COLORADO
Oil & Gas Conservation
Commission
Department of Natural Resources

Matthew J. Lepore
Director

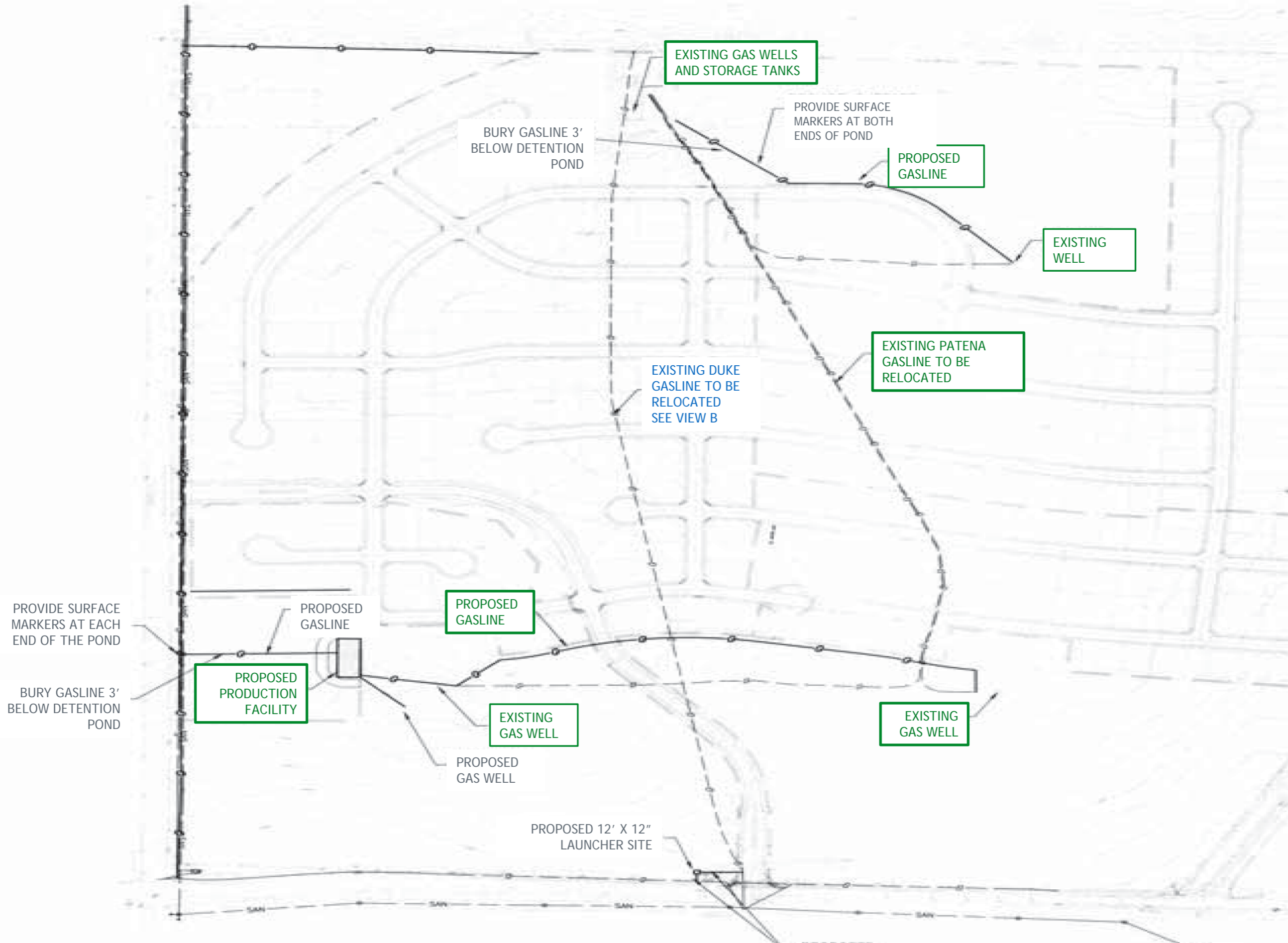
Agenda:

- Coors V6-14Ji Well and Oak Meadows Subdivision History
- Environmental Impacts Investigation and Remediation
- COGCC Notice To Operators re: Flowlines

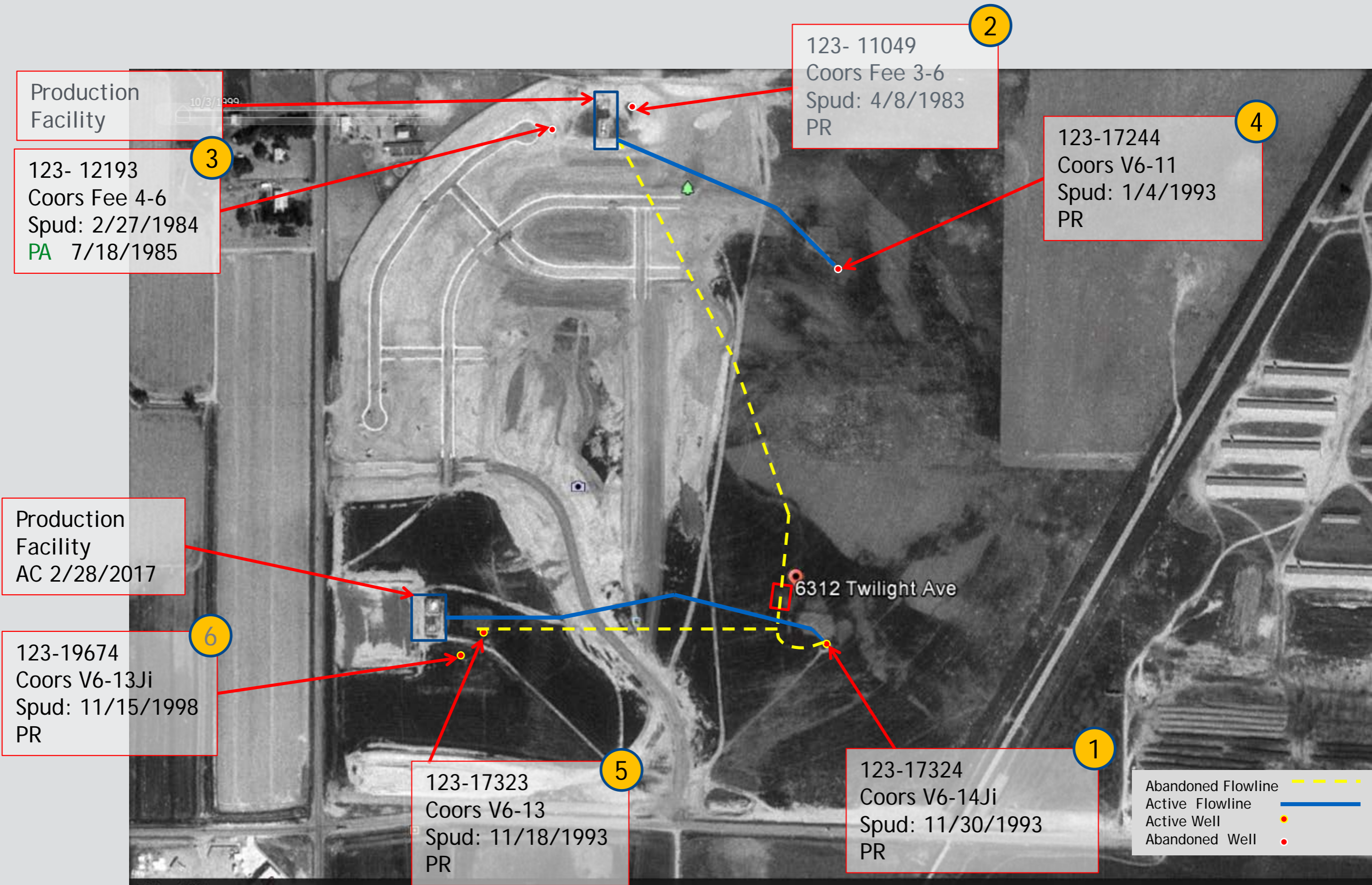
Coors V6-14Ji Well and Oak Meadows Subdivision History

Coors V6-14Ji

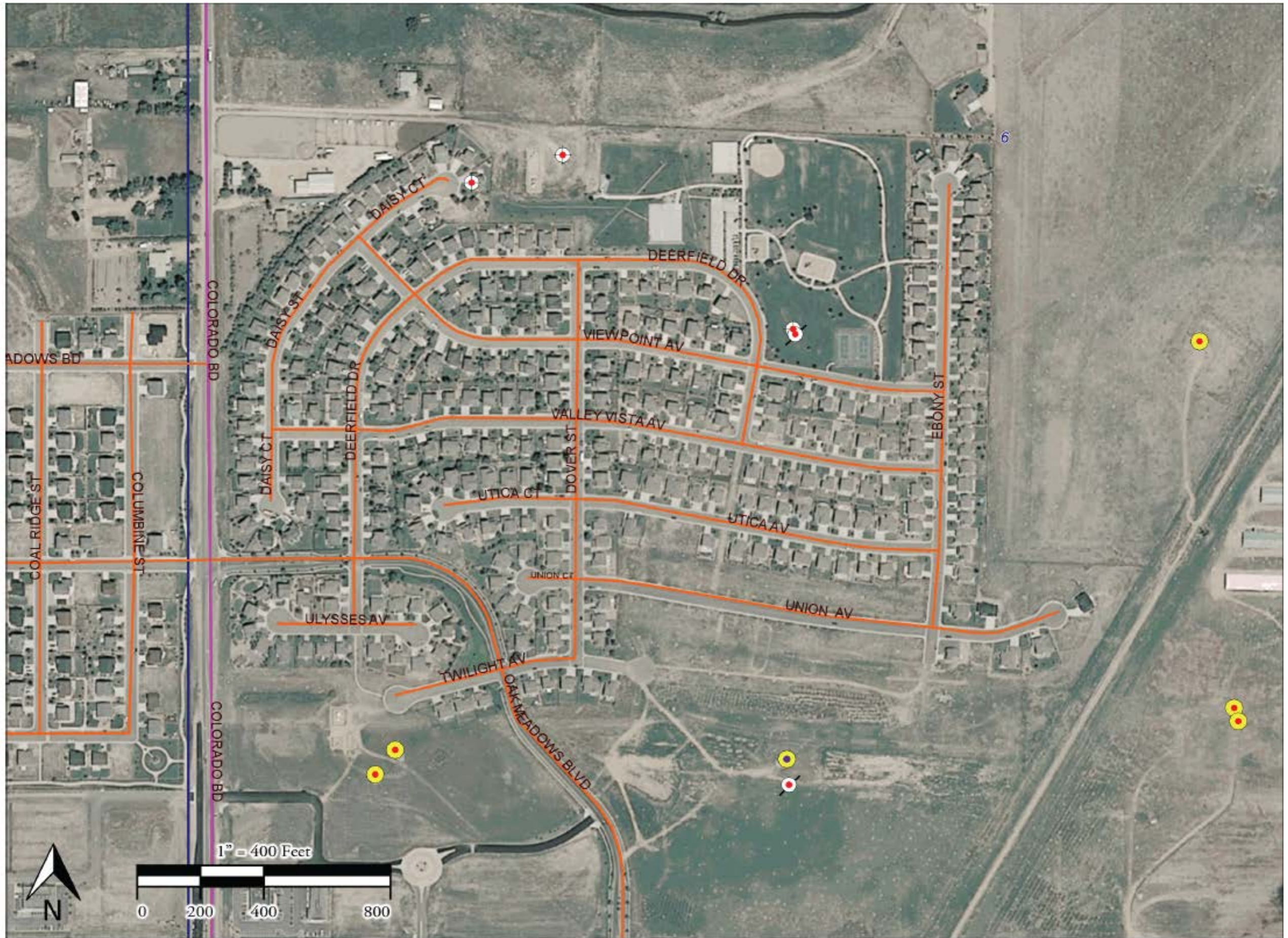
- ❑ Vertical well, drilled by Gerrity Oil & Gas Corp. in 1993.
- ❑ Drilled to Codell formation; total depth of 7912 feet.
- ❑ Well produced primarily gas, but also produced some oil.
- ❑ Patina Oil & Gas Corp. acquired the well in 1997.
- ❑ Patina re-completed the well to the J sand in 2001.
- ❑ Noble Energy acquired the well in 2005.
- ❑ Anadarko acquired the well in 2014.



10/3/1999 aerial image; 1999 facility status



Firestone 2009 Aerial (current facility status)



10/9/2015 aerial image; current facility status

Facility
Abandoned in
11/2014

123- 11049
Coors Fee 3-6
PA 11/19/2014

123-17244
Coors V6-11
PA 11/7/2014

123- 12193
Coors Fee 4-6
PA 7/18/1985

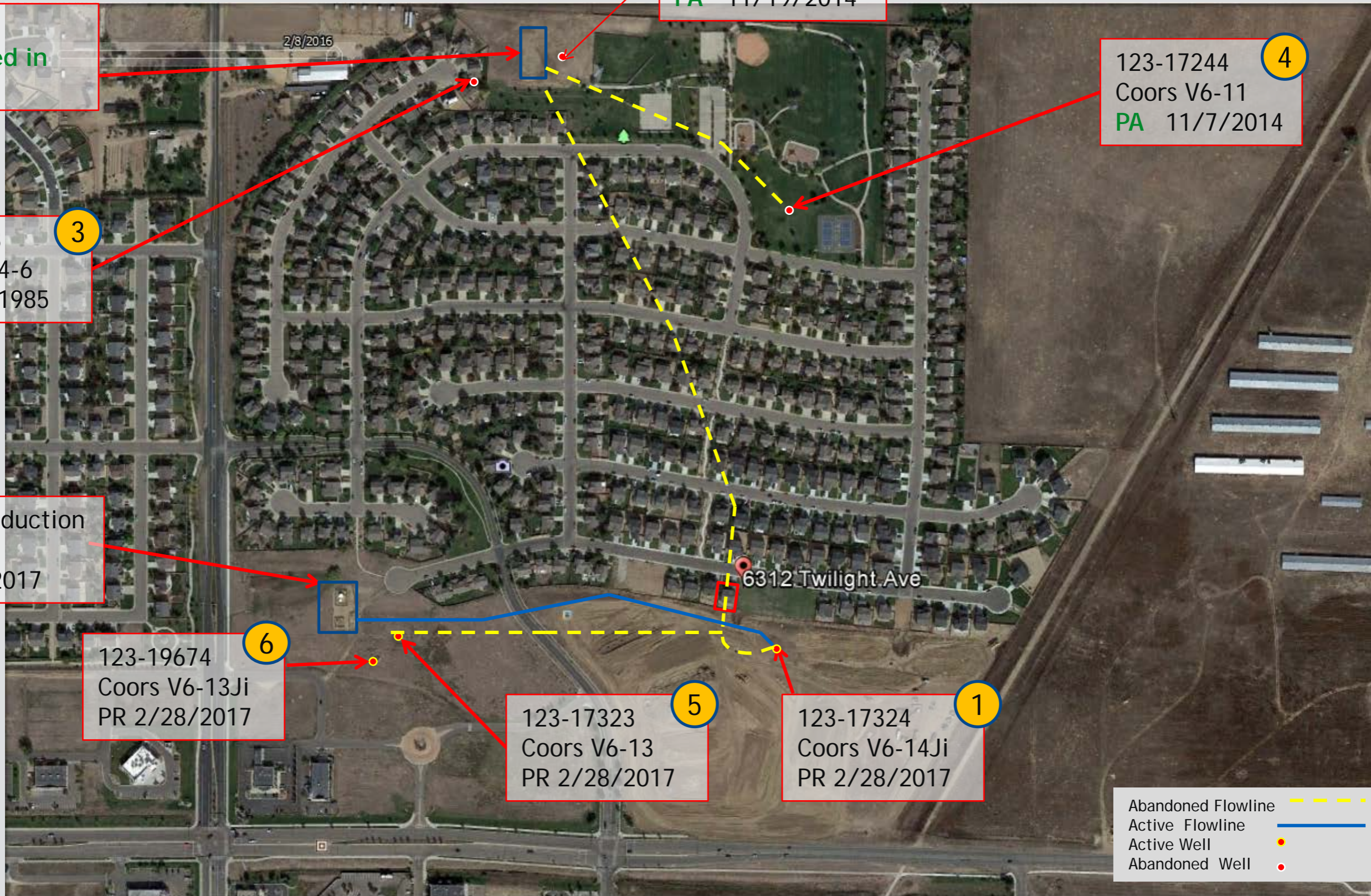
Active Production
Facility
AC 2/28/2017

123-19674
Coors V6-13Ji
PR 2/28/2017

123-17323
Coors V6-13
PR 2/28/2017

123-17324
Coors V6-14Ji
PR 2/28/2017

Abandoned Flowline ———
Active Flowline ———
Active Well ●
Abandoned Well ●





Environmental Assessment & Progress Update



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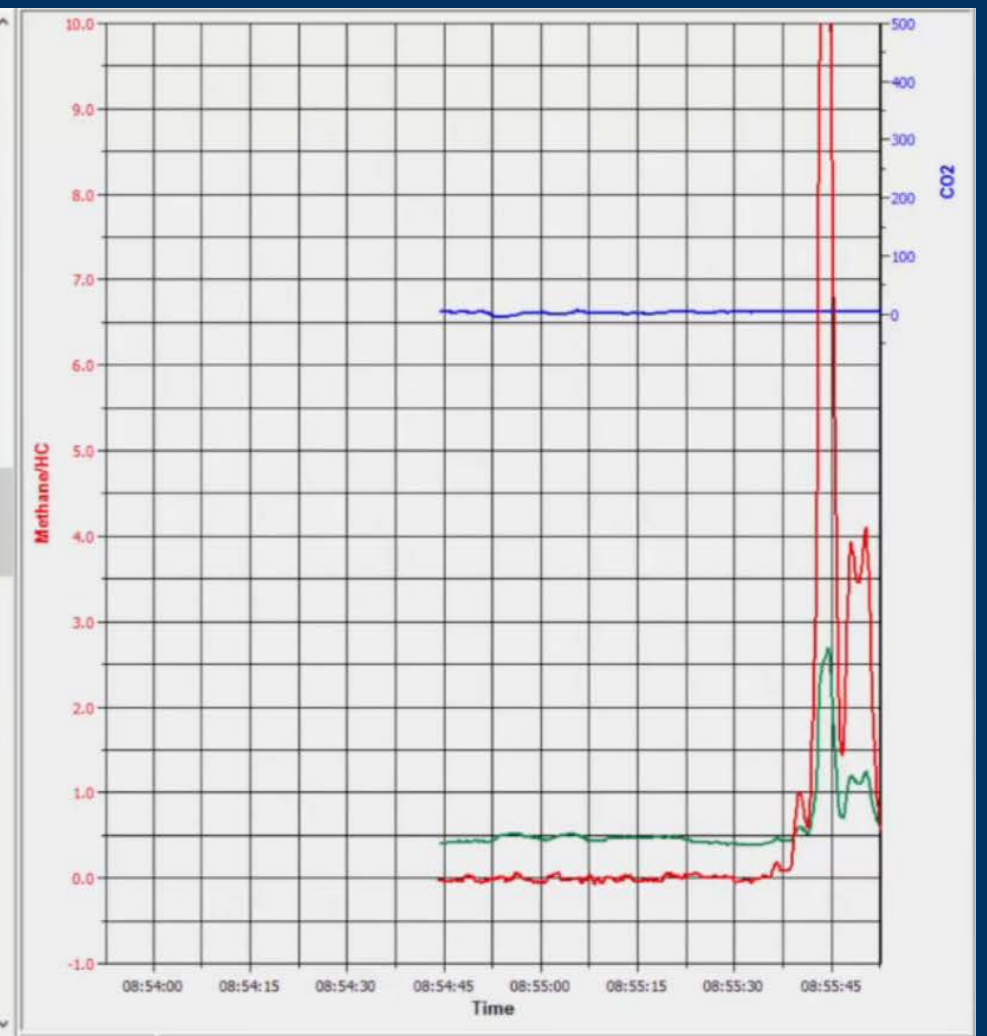
Methane Information

- Natural Gas vs. Methane
- Fire/Explosion
- Asphyxiant
- Toxicity
- Environmental

Ground Methane Driving Survey

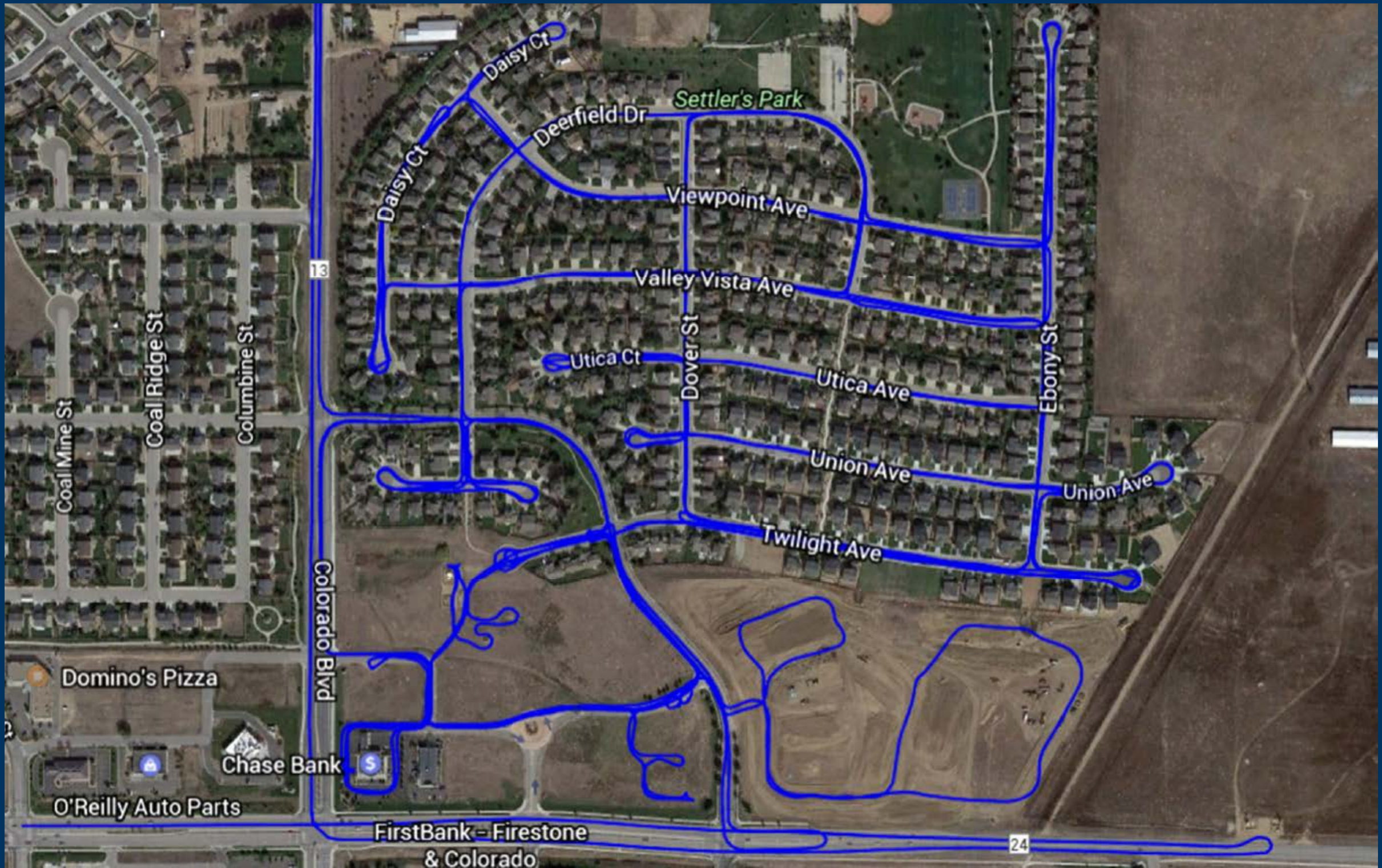
Apogee Scientific, Inc. Leak Detection System (LDS)

Real-time, mobile detection of methane (CH₄), carbon dioxide (CO₂), and total hydrocarbons (HC)

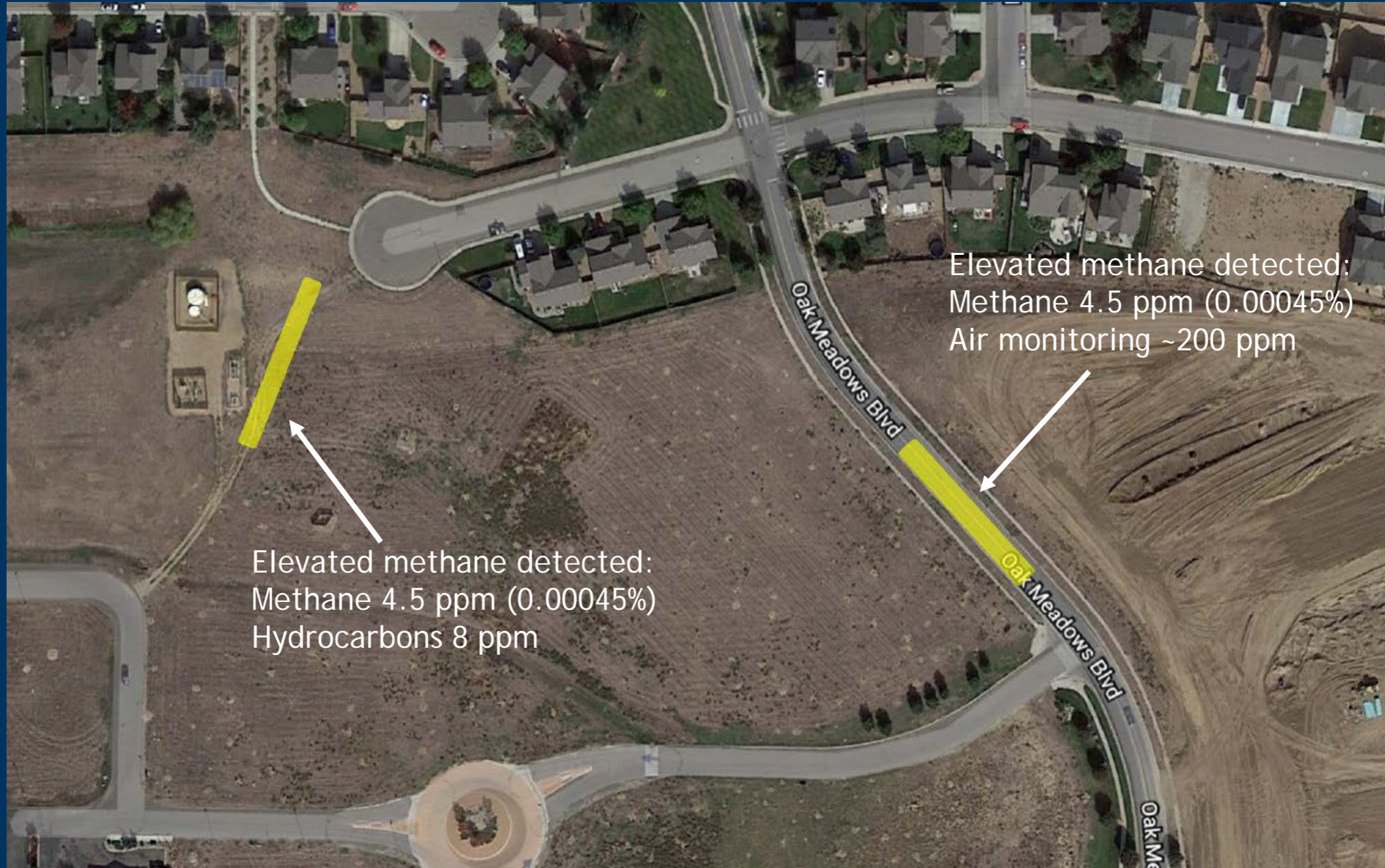


Apogee-sci.com/leak-detection

Ground Methane Driving Survey

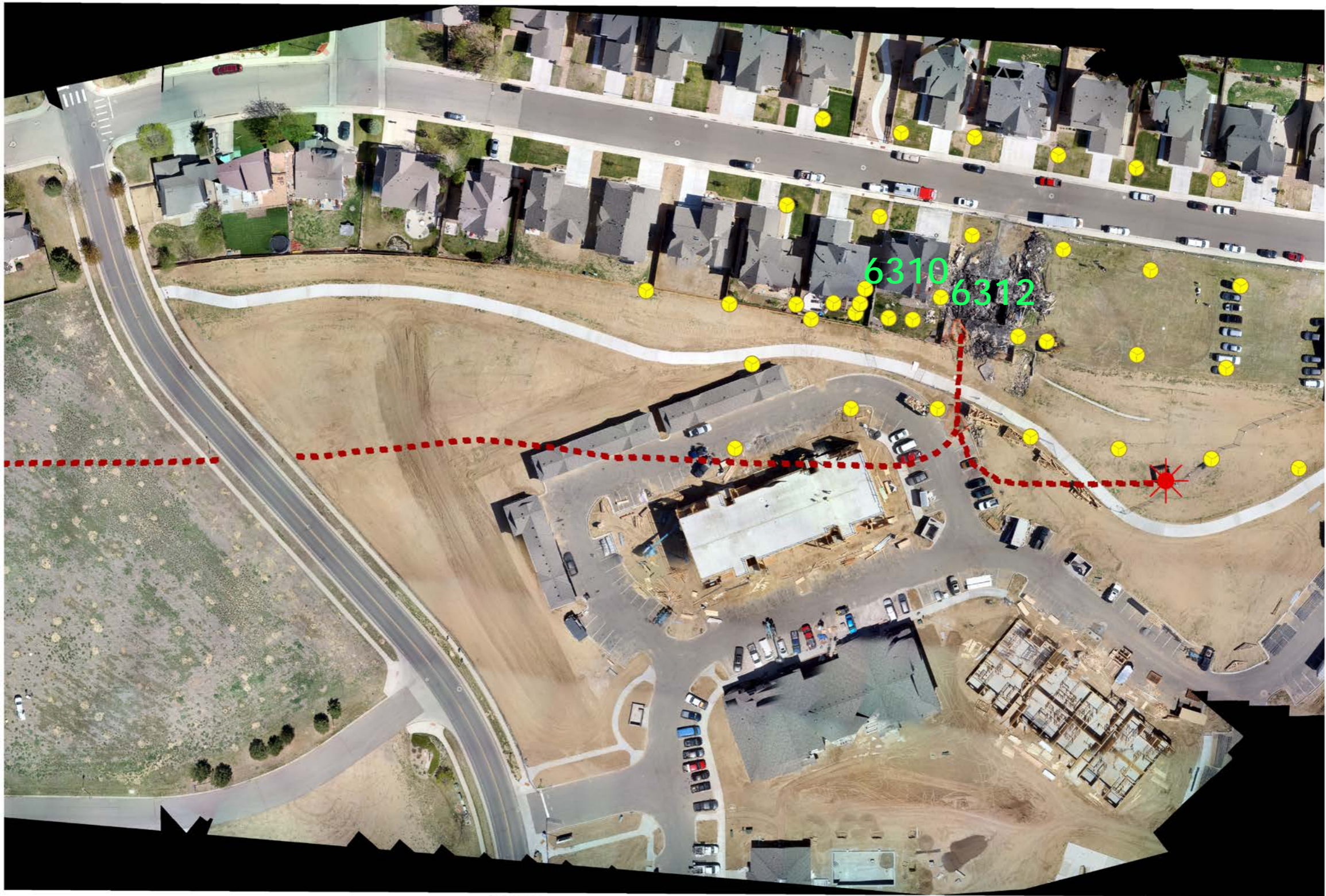


Ground Methane Driving Survey



Soil Gas Survey

- Shallow soil screening points on a 75' grid
- Hand-held screening equipment
- Laboratory sampling
- Intended to guide additional assessment



Legend

-  Eastern Soil Vapor Samples Collected 4/27 to 5/10
-  Flow Line
-  Coors V #6-14Ji



0 25 50 100 Feet

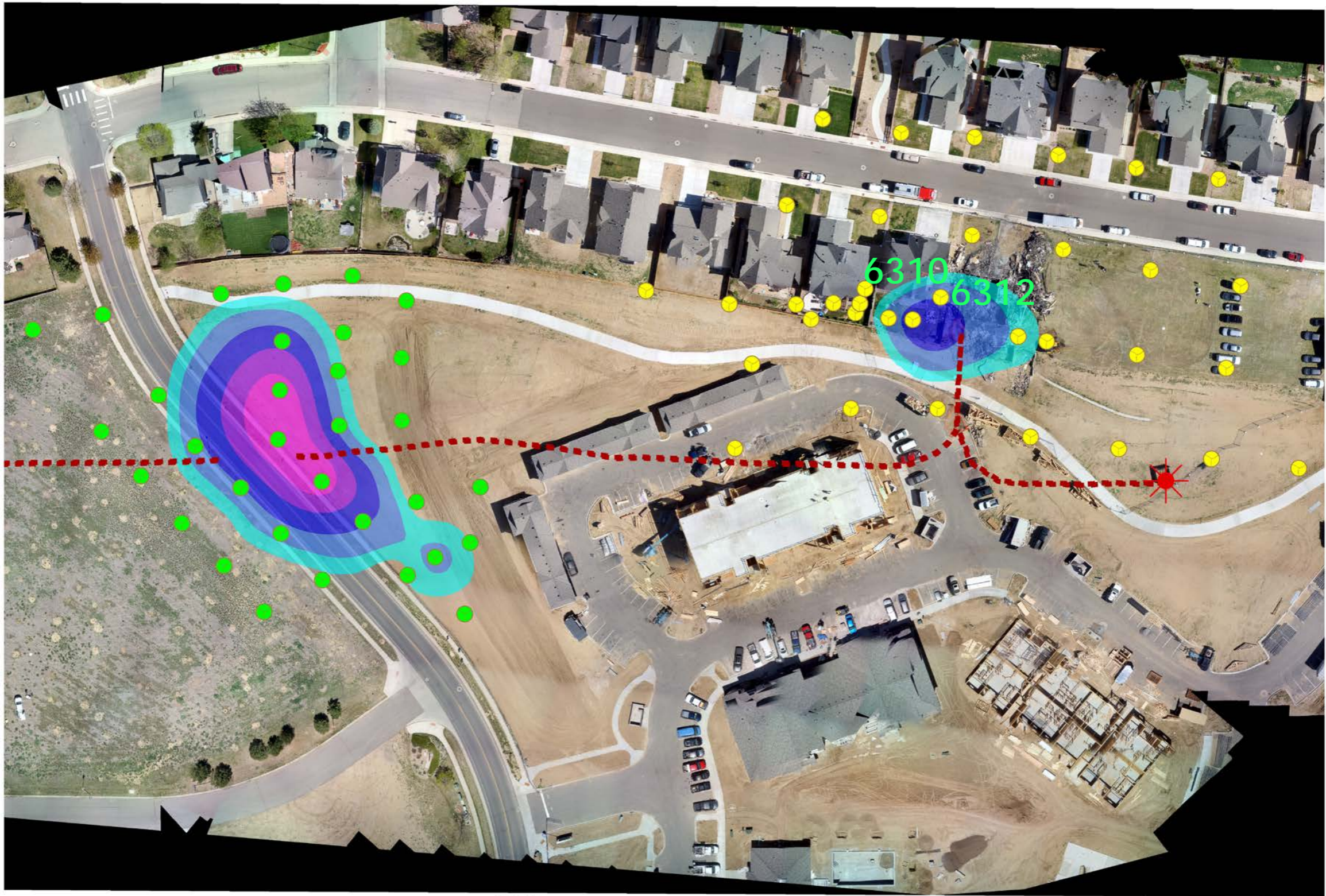


Legend

- Western Soil Vapor samples collected 5/5 to 5/12
- Flow Line
- ★ Coors V #6-14Ji



0 25 50 100 Feet



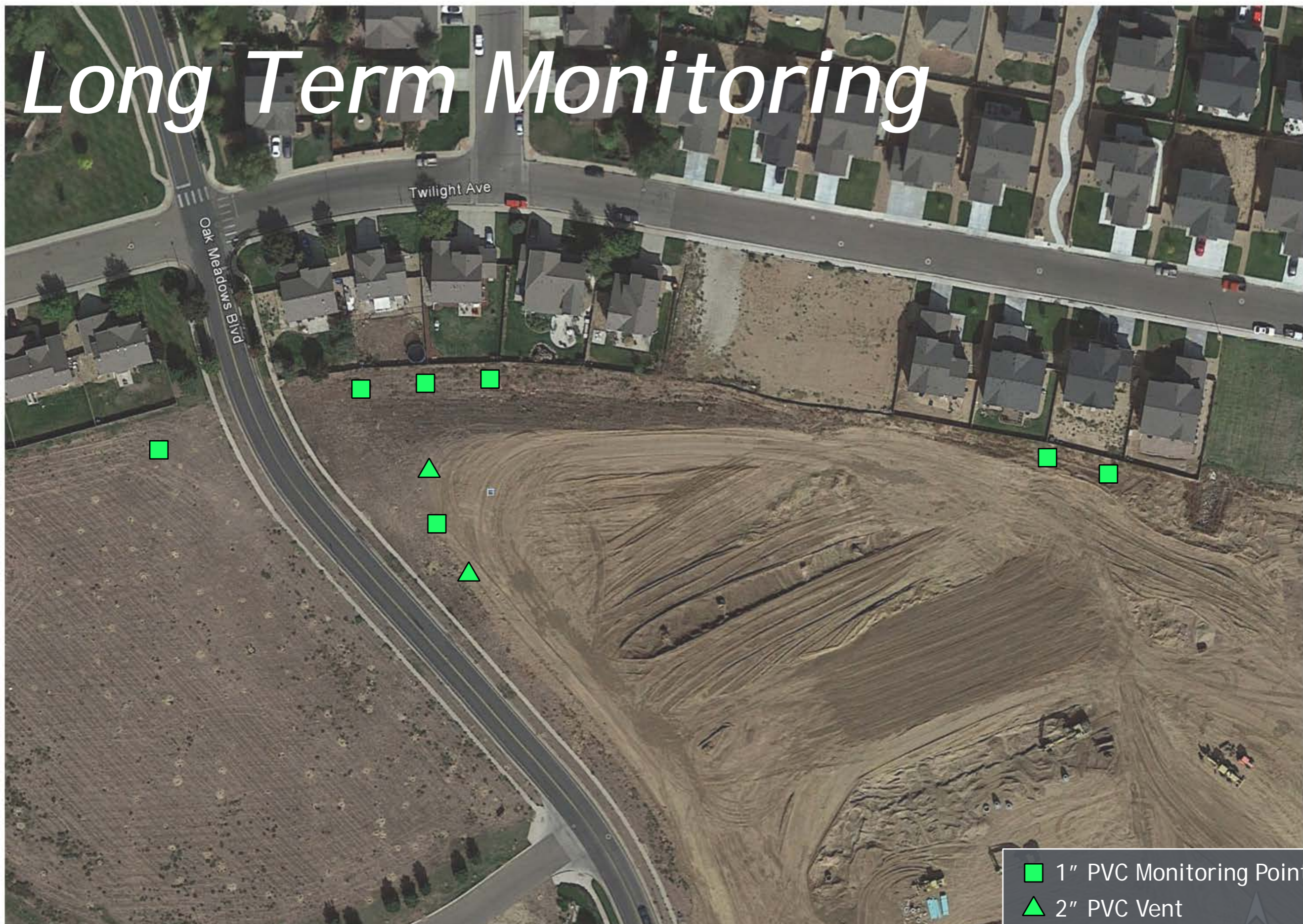
0 25 50 100 Feet

Legend

- Western Soil Vapor samples collected 5/5 to 5/12
- Eastern Soil Vapor Samples Collected 4/27 to 5/10
- ⋄ Flow Line
- ★ Coors V #6-14Ji

% Volume Methane	
	2.0 - 6.0
	6.1 - 20.0
	20.1 - 40.0
	40.1 - 60.0
	> 60

Long Term Monitoring



- 1" PVC Monitoring Point
- ▲ 2" PVC Vent

Long Term Monitoring



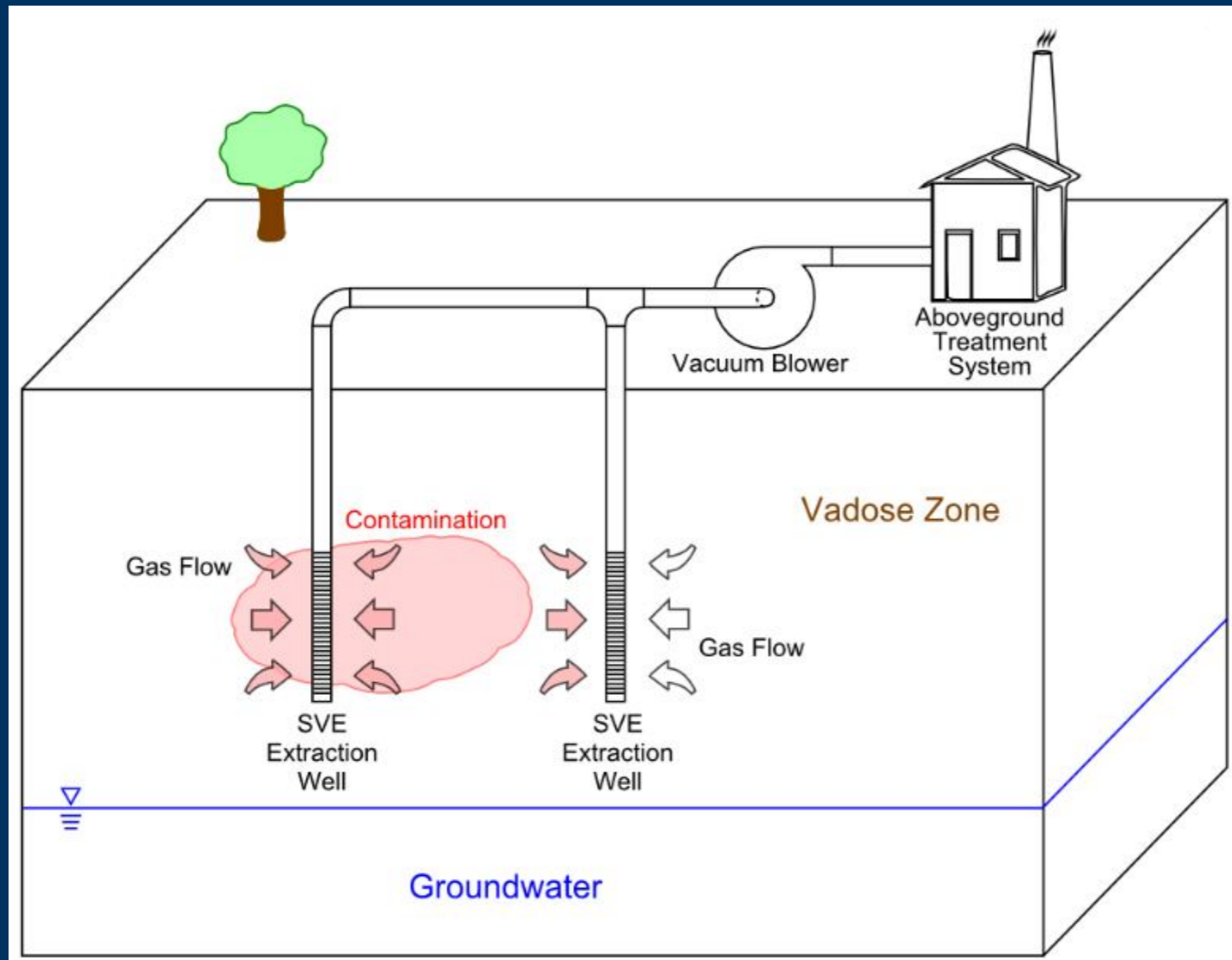
Soil Gas Survey Findings

- Soil gas is limited to 2 distinct areas
 - Eastern area around 6312 Twilight Avenue
 - Western area at Oak Meadows Boulevard, south of Twilight
- Lateral extent of methane is delineated
- Monitoring point data indicate that methane in soil is not migrating to occupied residences

Implications and Next Steps

- Beginning May 4, COGCC engaged the operator of the Coors V 6-14 Ji well to commence their own investigation into the release of gas
- Anadarko began to investigate the lateral and vertical extent of gas in the soil on May 5
- Anadarko installed additional PVC monitoring points and vents in the western area
- Soil, soil gas, and groundwater samples collected
- Soil Vapor Extraction system implemented to remediate excess methane concentrations

Ongoing Efforts - SVE



https://en.wikipedia.org/wiki/Soil_vapor_extraction

Ongoing Efforts - SVE

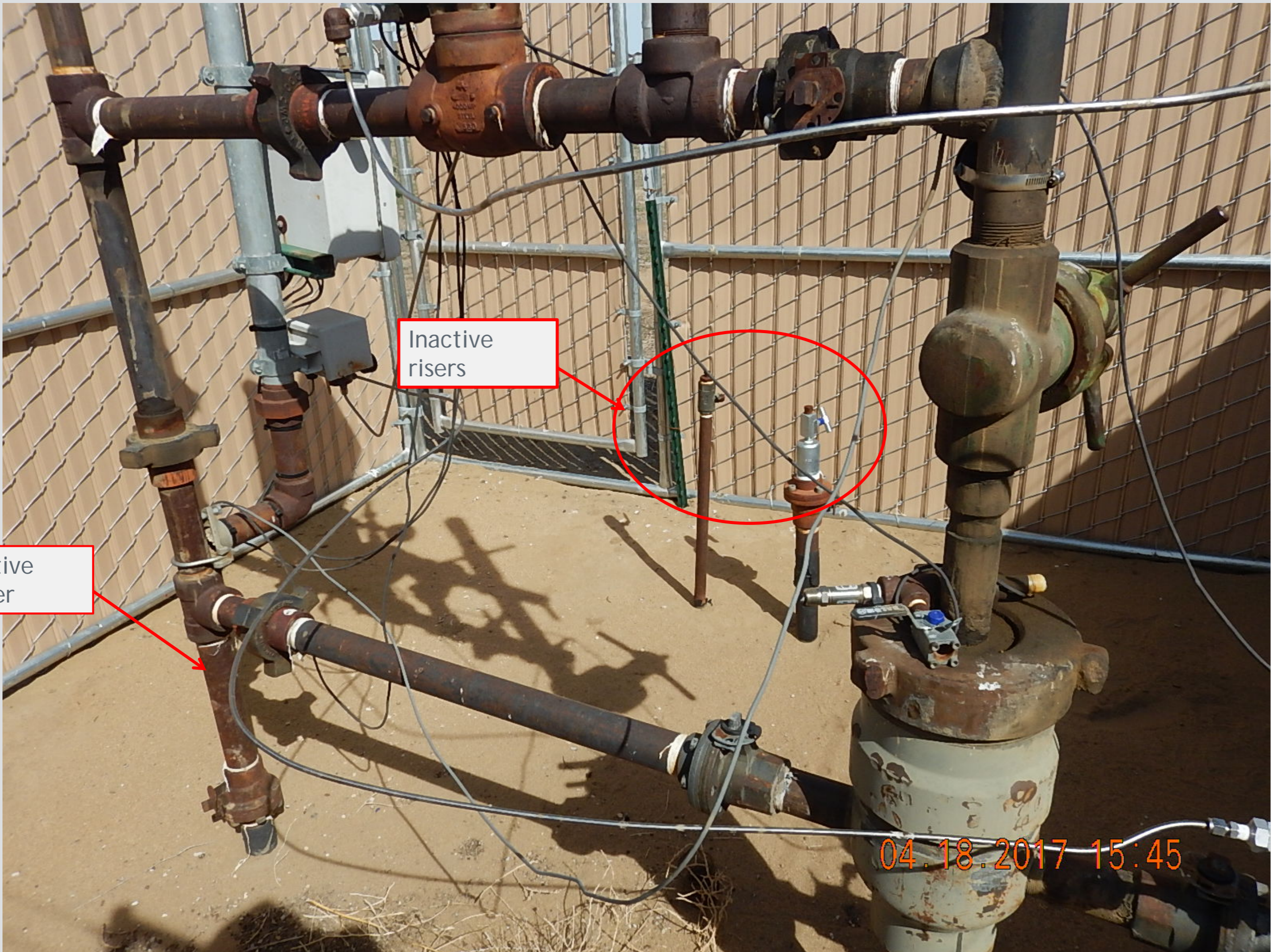


*COGCC Notice to Operators
re: Flowlines*

May 2, 2017

Flowline Riser NTO

- Requires oil and gas operators to take immediate steps to minimize any possibility an improperly abandoned flowline remains connected, or can be re-connected, to an active well or production facility.
- COGCC inspectors and engineers are embedded with operators to witness and inspect actions taken pursuant to the NTO.



Inactive risers

Active riser

04.18.2017 15:45

Flowline Riser NTO

- For all wells or production facilities within 1,000' of an occupied building, operators must:
 - By May 30, re-inspect all existing flowlines and identify the wellhead connection and the corresponding production facility connection; document these locations and report to COGCC.
 - By June 30, test all flowlines to ensure they have mechanical integrity and document testing.

Flowline Riser NTO

- Regardless of distance between a well or production facility and an occupied building, operators must:
 - By May 30, mark any existing flowline riser not in active use with fluorescent paint; remove all operating valves (or lock-out/tag-out); and cap riser until it can be cut-off below grade and sealed pursuant to Rule 1103.
 - By June 30, cut-off below grade all risers not in active use and seal the ends.
 - An operator may return an unused riser to active use if a successful pressure test is performed and the riser is locked-out / tagged-out pending return to service.

Unused line marked for abandonment With lock-out & tag-out



Pressure tested line with Lock-out & Tag-out for future use



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