



— Seeing is believing —

New Mexico's SHALE SNAPSHOT

Permian Basin — November 2019
Report available at earthworks.org/nmsnapshot



EARTHWORKS



Shale Snapshot

NEW MEXICO PERMIAN BASIN

OIL AND GAS POLLUTION — CHEMICALS AND GASES THAT HARM HEALTH AND THE CLIMATE



— Seeing is believing —

In 2014, Earthworks started the Community Empowerment Project (CEP) because oil and gas pollution is putting people and the climate at risk. Methane pollution is 86 times more damaging to our climate than carbon dioxide over a 20-year time frame – longer than the time that scientists say we have to avoid the most catastrophic effects of climate change. Oil and gas operations also release volatile organic compounds (VOCs) that cause a range of health problems, including carcinogens like benzene and toluene. This directly threatens the nearly 13 million US residents who live within a half mile radius of more than one million active oil and gas facilities.

The Goals of CEP are:

- Make visible otherwise invisible air pollution from oil and gas facilities so that frontline residents and community organizations have evidence of the problems they face.
- Shine a spotlight on the need for regulators, legislators, and companies to reduce that pollution.
- Help advance state and federal policies to protect health and the climate.
- Promote a managed decline/reduction of oil and gas away from fossil fuels and towards renewable energy.



The Technology: Earthworks' trained and certified thermographers document pollution with optical gas imaging (OGI) cameras, the same technology used by industry and regulators. Earthworks' FLIR GF320 OGI cameras are designed to provide video evidence of air pollution from oil and gas operations. The GF320 can make visible methane and 20 VOCs associated with oil and gas operations.

Our Evidence: To date, we have documented air pollution from more than 1,000 different oil and gas facilities in 18 states, as well as Canada, Mexico, Argentina, and the United Kingdom, with the most work done in California, Colorado, New Mexico, Ohio, Pennsylvania, and Texas.



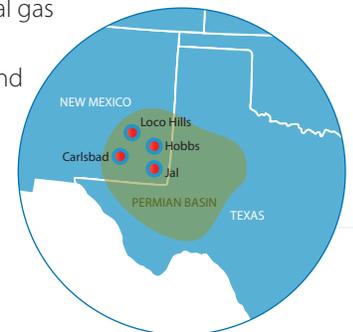
How We Use Our Evidence: Earthworks uses OGI evidence to file formal complaints with regulators, influence state and federal policy debates, and verify industry pledges to reduce pollution. We make repeat visits to the most problematic facilities and to date have filed over 300 formal complaints with state regulators.

Earthworks began conducting fieldwork in New Mexico's Permian Basin in 2017. Most recently, Earthworks' fieldstaff and thermographers conducted five rounds of fieldwork in the oil and gas hot spots in the New Mexico Permian.

New Mexico Permian Snapshot

- South of Carlsbad
- Loco Hills
- Highway 128 between Carlsbad and Jal
- Highway 62 between Hobbs and Carlsbad

The following snapshots represent a summary of our optical gas imaging findings, the complaints we filed, and the resulting (in)action from regulatory agencies.



Fieldwork methodology: Earthworks staff use an industry standard OGI camera and telephoto lens to expose dangerous emissions from oil and gas sites. Fieldstaff film from public lands or roads, or are granted prior permission from landowners to access sites. You can learn more about the Community Empowerment Project, see hundreds of OGI videos, and request a visit to your community at cep.earthworks.org.



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South of Carlsbad, NM



Directly south of Carlsbad, a growing number of oil and gas facilities are being developed close to homes and agriculture. We are in touch with families experiencing impacts to their health and quality of life in this area and have communicated with some of the operators.

Sendero - Pecos Compressor Station

Open thief hatch, June 2018



Enterprise - South Carlsbad Compressor Station

Stack emissions, January 2019



Matador - Kathy Coleman

Unlit flare - January 2019



Operator & Site Name	NMED Air Permits	Complaints Filed	Regulatory Response
Sendero Midstream - State Compressor station	Synthetic Minor Source	4/16/19: NMED #13534	11/13/19→ Transferred to EPA
Sendero Midstream - Bounds Compressor station	Synthetic Minor Source	4/16/19: NMED #13530	11/13/19→ Transferred to EPA
Enterprise - South Carlsbad Compressor Station	Major Source (Title V)	11/15/19: NMED #13940 8/1/19: NMED #13725 4/16/19: NMED #13532 3/18/19: NMED #13497 10/17/18: NMED #13320 6/22/18: NMED #13139 4/25/18: NMED #13023	pending pending 11/13/19→ Transferred to EPA 11/13/19→ Transferred to EPA 11/14/18→ OCD; 4/5/19 closed - no action 2/19/19 - closed- no action 4/25/18→ OCD; 4/5/19 closed - no action
Matador - Coleman South TB Well	Minor Source	11/15/19: NMED #13941 4/16/19: NMED #13531 2/15/19: NMED #13455 10/17/18: NMED #13318 6/22/18: NMED #13137 4/25/18: NMED #13024	pending 11/13/19→ Transferred to EPA 11/13/19→ Transferred to EPA 10/25/18: OCD closed - no action 2/19/19 - closed - no action 4/25/18 → OCD; 4/5/19 closed - no action
Cimarex - White City 31 Federal #003	No permit required	2/15/19: NMED #13443	11/13/19→ Transferred to EPA
RKI - Longview Federal 12-2H	No permit required	2/15/19: NMED #13444	11/13/19→ Transferred to EPA
Marathon Oil - unknown gathering facility		10/23/18: NMED #13326	10/25/18 → OCD; 4/5/19 closed - no action
Lucid Energy - Road Runner	Major Source (Title V)	10/17/18: NMED #13319 4/25/18: NMED #13026	10/17/18 → OCD; 4/5/19 closed - no action 4/25/18 → OCD; 4/5/19 closed - no action
DLK Black River - SWD #1	Synthetic Minor Source	10/23/18: NMED #13327	10/25/18 → OCD; 4/5/19 closed - no action
BTA Oil Producers - Watts Federal #001	No permit required	10/23/18: NMED #13325 4/25/18: NMED #13026	10/27/18 → OCD; 4/5/19 closed - no action 4/25/18 → OCD; 4/5/19 closed - no action
Mewbourne - Jester 19-30 Federal Com #001H	No permit required	6/22/18: NMED #13132	2/19/19 → OCD; closed - no action
Mewbourne - Queen 23 24 Federal Com Well #001H & #002H	No permit required	6/22/18: NMED #13133	2/19/19 - closed; - no action
Sendero Midstream - Pecos Compressor Station	Synthetic Minor Source	11/15/19: NMED #13942 8/1/19: NMED #13727 4/16/19: NMED #13533 6/22/18: NMED #13134	pending pending 11/13/19→ Transferred to EPA 2/19/19 - closed - no action
COG Operating - Roadster State Com #1H Well	No permit required	6/22/18: NMED #13135	2/19/19 - closed -no action
Mewbourne - Viper 29/32	No permit required	6/22/18: NMED #13136	2/19/19 - closed - no action



Loco Hills, NM



Loco Hills is an area of primarily older well sites. From the highway driving between Artesia and Lovington we detected strong gas odors. Farther off the highway on the south side, we documented emissions in early 2019 coming from new development. Most of the sites are on public lands (federal Bureau of Land Management (BLM) or New Mexico State Lands). Due to the intensity of industrial development, future reclamation and a possible return to another use such as recreation or grazing seems unlikely.

Oxy USA - Turkey Track
Venting thief hatches, March 2018



DCP - Loco Hills Compressor
Venting tank, January 2019



Devon - Emerald
Open thief hatch, March 2019

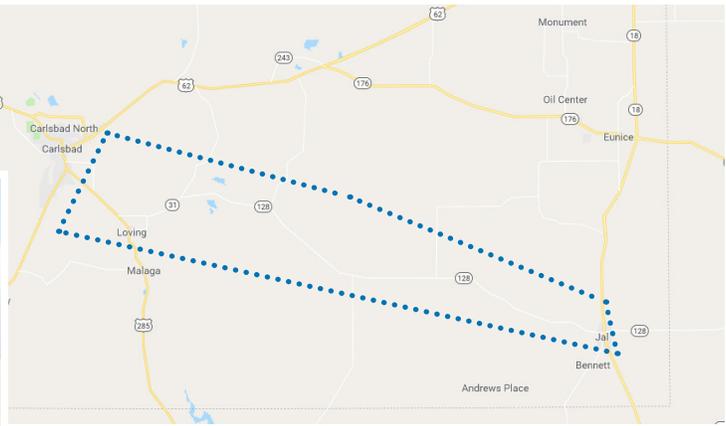


Recent complaints submitted by Earthworks to New Mexico Environment Department (NMED) regarding oil and gas air pollution (health-harming VOCs and climate-change causing methane) from sites in Loco Hills, east of Artesia Lovington (U.S. Route 82).

Operator & Site Name	NMED Air Permits	Complaints Filed	Regulatory Response
Rover Operating - Berry A #6 Well Site	No permit required	2/15/19: NMED #13448	11/13/19 → Transferred to OCD
Rover Operating - Saunders #2 Well	No permit required	2/15/19: NMED #13449	11/13/19 → Transferred to OCD
DCP - Jackson Booster Compressor Station	Minor Source	2/15/19: NMED #13450	11/13/19 → Transferred to OCD
DCP - Loco Hills Compressor	Synthetic Minor Source	2/15/19: NMED #13451	Open
DCP Midstream - Illinois Camp Booster	Major Source	11/15/19: NMED #13938	<i>pending</i>
Apache Corporation - Red Lake 36 State #1 Well Site	No permit required	11/15/19: NMED #13939	<i>pending</i>
Apache Compressor Station	No permit required	8/1/19: NMED #13722	<i>pending</i>
Oxy - Turkey Track	Synthetic Minor Source	8/1/19: NMED #13726	<i>pending</i>



Highway 128: Carlsbad to Jal, NM



Highway 128 is one of the most active areas in the New Mexico Permian. In January 2019, there were 47 drill rigs along Highway 128 between Carlsbad and Jal. 1,000 wells have been drilled, but production is on hold. Staff experienced particularly intense dust and truck traffic in this area. In the middle of all of the new development there are also old compressor stations and booster stations where we documented significant emissions.

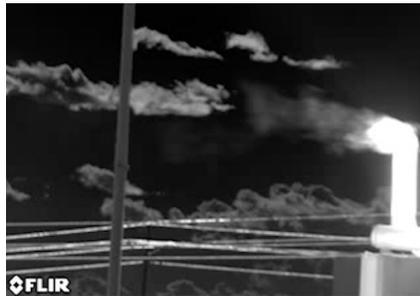
Oxy - Patton Gathering Facility

Dirty flare + venting tanks, January 2018



DCP Midstream- Pure Gold Booster

Stack emissions + venting thief hatch
January 2019



DCP Midstream - Double X Booster Station - Venting tank, January 2019

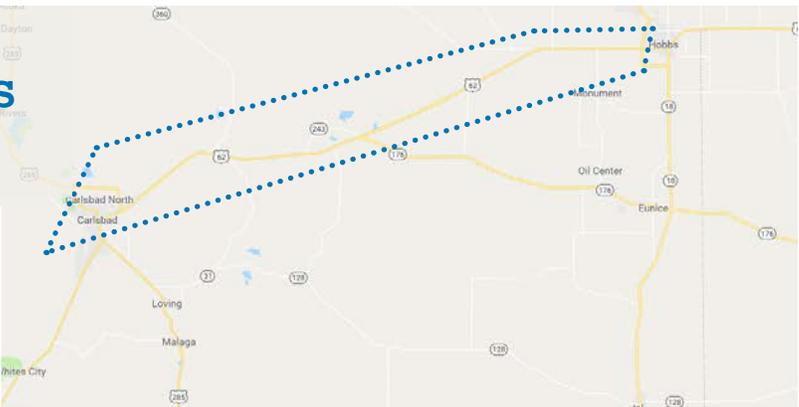


Recent complaints submitted by Earthworks to New Mexico Environment Department (NMED) regarding oil and gas air pollution (health-harming VOCs and climate-change causing methane) from sites along highway 128 between Carlsbad and Jal.

Operator & Site Name	NMED Air Permits	Complaints Filed	Regulatory Response
Impetro Operating - Prize Hog 1-H	No permit required	2/15/19: NMED #13445	11/13/19 → Transferred to OCD
Salt Creek Midstream - AmereDev South Treatment Facility	Synthetic Minor Source	2/15/19: NMED #13446	11/13/19 → Transferred to OCD
DCP - Pure Gold Booster Station	Synthetic Minor Source	2/15/19: NMED #13452	<i>pending</i>
OXY USA - Patton Gathering Station	No permit required	2/15/19: NMED #13453	<i>pending</i>
DCP - Double X Booster Station	Minor Source	2/15/19: NMED #13454	<i>pending</i>



Highway 62: Hobbs to Carlsbad, NM



Hobbs to Carlsbad is primarily older well sites off the highway. Some are clearly visible, while others are hidden from view. Field staff detected gas odors while driving along dirt roads.

Seeley Oil - EK Queen
Venting tank, January 2019



DCP Midstream - Zia Gas Plant
Stack emissions, January 2019



DCP Midstream - Golf Course Booster
Stack emissions, March 2018



Recent complaints submitted by Earthworks to New Mexico Environment Department (NMED) regarding oil and gas air pollution (health-harming VOCs and climate-change causing methane) from sites between Carlsbad and Hobbs.

Operator & Site Name	NMED Air Permits	Complaints Filed	Regulatory Response
Seeley Oil - EK Queen Unit	No permit required	2/15/19: NMED #13441	11/13/19 → Transferred to OCD
DCP - Zia Gas Plant	Major Source (Title V)	8/1/19: NMED #13723 2/15/19: NMED #13442	pending pending
DCP - Golf Course Booster	Synthetic Minor Source	4/25/18: NMED #13022	4/25/18 → OCD; 4/5/19 closed - no action