



## SURVEY REPORT

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## OVERVIEW

Aerial Production Services performed an Aerial Gas Leak Survey of [REDACTED] Compressor Station and 3 Well Site Locations Outlined in the Report. The Gas Leak Survey identified 9 Total Methane Leaks. See Report Below for additional Details.

Name	Anomaly Type	Severity (Low)	Severity (Medium)	Severity (High)
[REDACTED] Compressor Station	Leak	1	4	0
[REDACTED]	Leak	1	0	0
[REDACTED]	None	0	0	0
[REDACTED]	Leak	3	0	0

## Methodology

Aerial Production Services Utilizes both Aerial and Ground Surveys with a combo sensor. The Aerial Survey is conducted with a UAV carrying the ICI OGI Inspector Plus. The Ground Survey is conducted with the ICI OGI Inspector Plus on a handheld platform. This Sensor has a Optical Gas Imaging Sensor and Aerial Production Services utilizes Thermographic processes to detect leaks in accordance with industry standards for OOOOa OGI Surveys. The OGI camera is paired with a "TDLAS" Tunable Diode Laser Absorption Spectrometer to supplement the OGI camera. The TDLAS allows for the detection of Methane down to 1 ppm.m. The pairing of these sensors provides an inspection method that surpasses standard OGI inspection methods.

An Aerial Flight is conducted to find locate leak areas. Larger leaks are captured with the OGI system from the UAV. Smaller leaks that the TDLAS picks up on during the flight and a good OGI video cannot be obtained are captured during the Ground Scan.

The Aerial Flight is conducted across the entire outside facility. The Ground Scan is a targeted scan based on the Aerial flight. Any area that is not visible by the Aerial Scan is noted and marked for Ground Scan. Site Observations are recorded





## Compressor Station Overview







Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

**Station Leak 1**

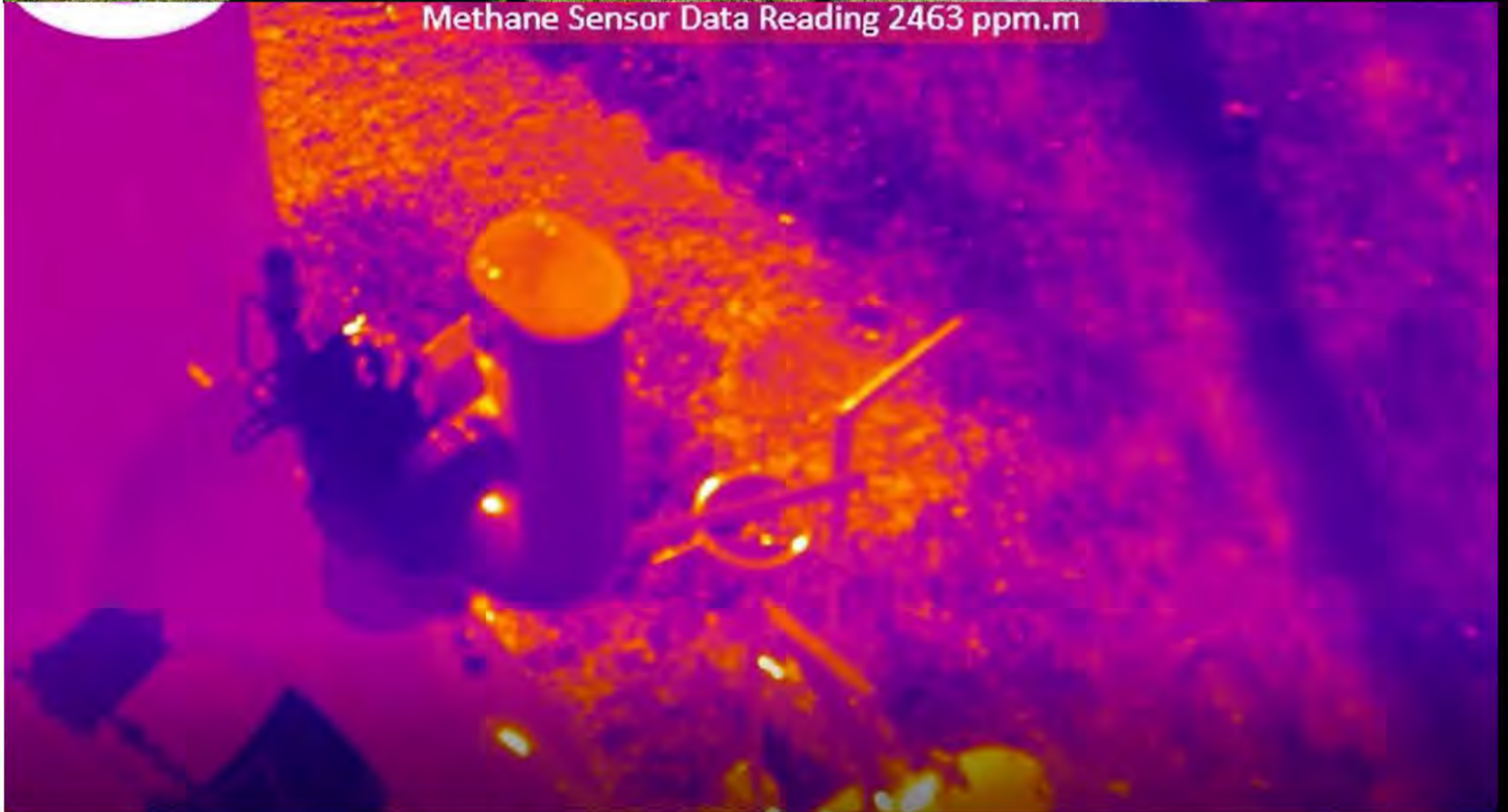


Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
11:27AM	11/07/2021	[REDACTED]	5432	Leak	Medium





**Station Leak 2**



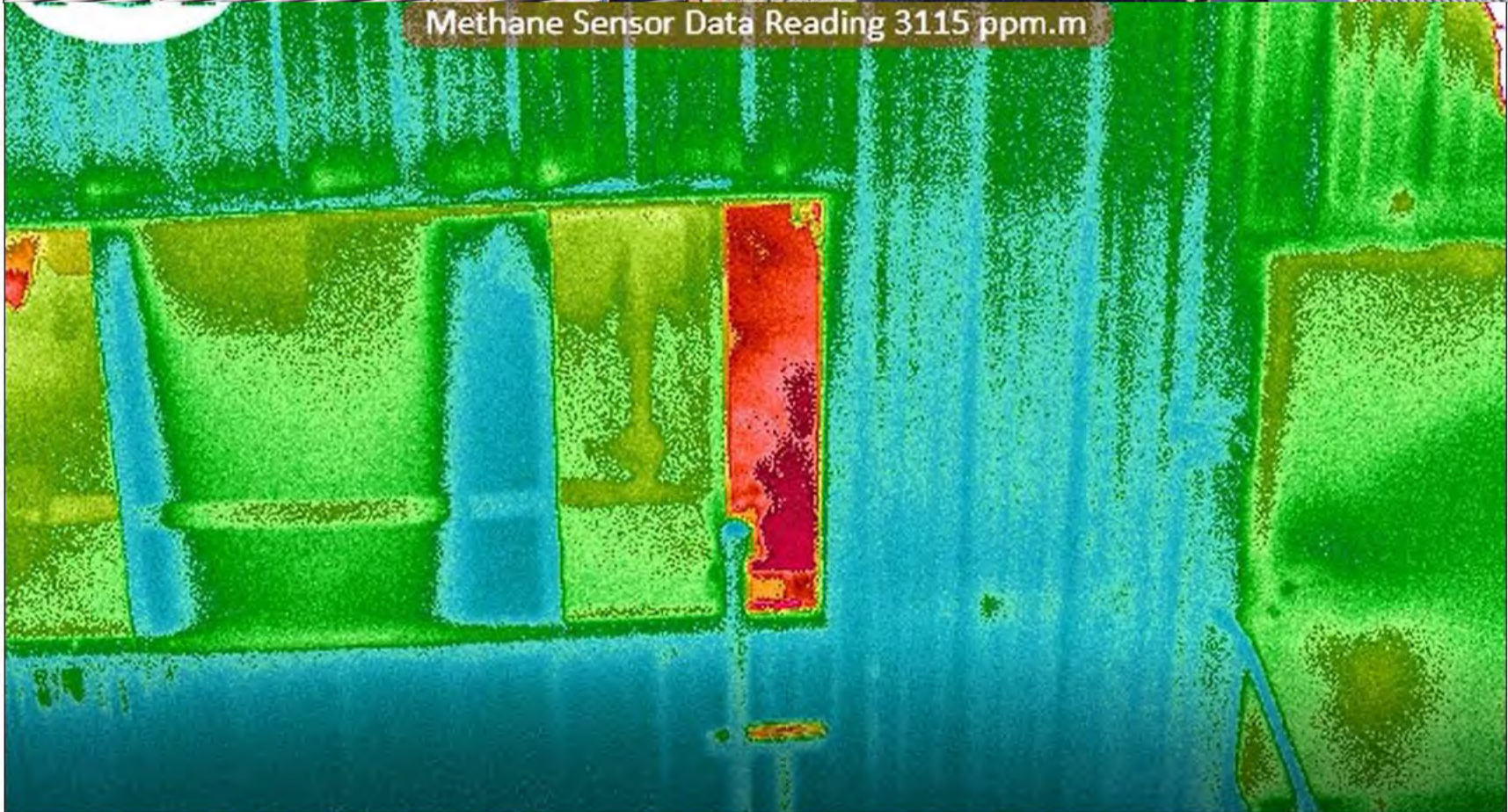
Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
11:33AM	11/07/2021	[REDACTED]	5432	Leak	Medium





Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

**Station Leak 3**



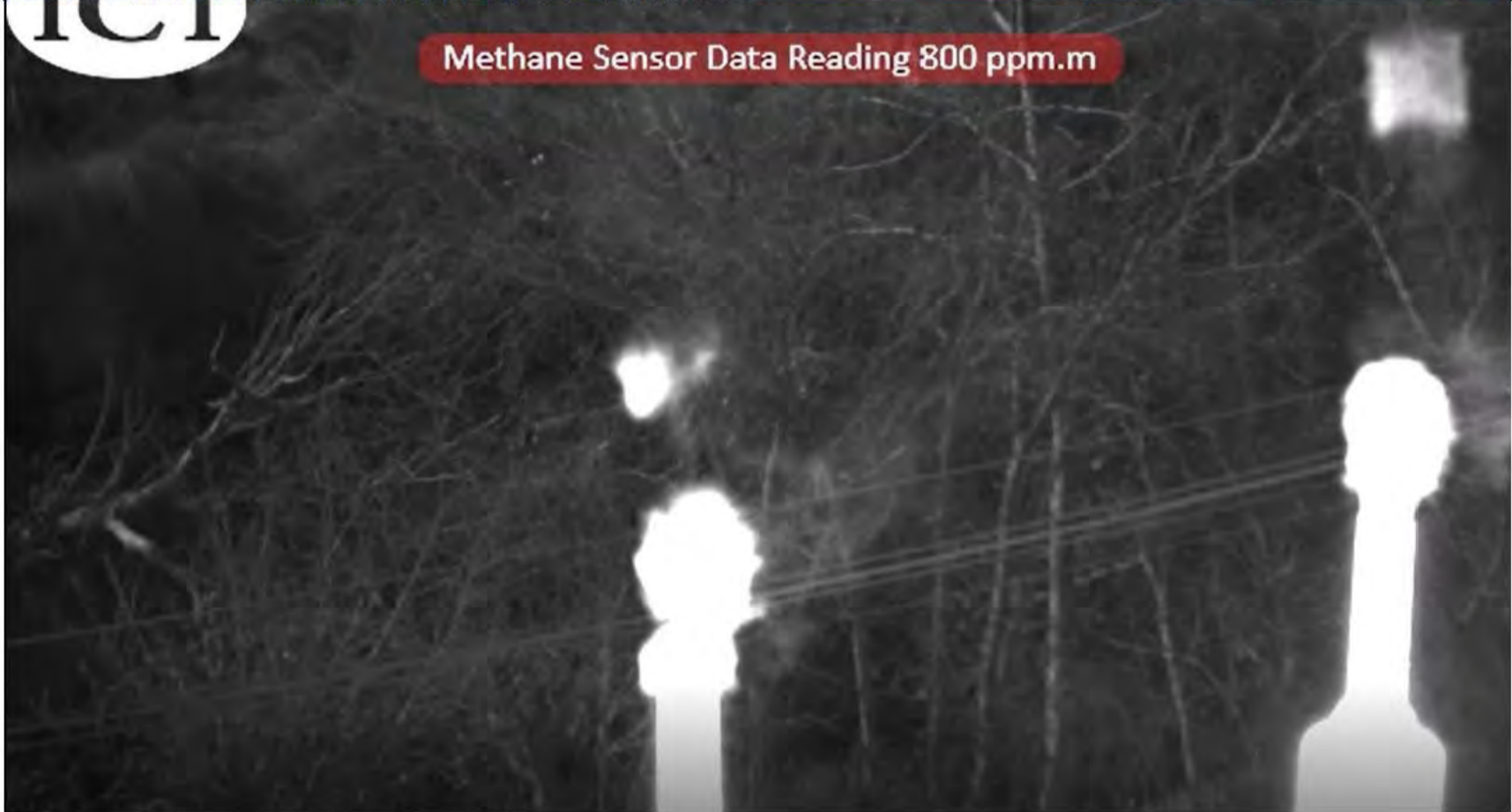
Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
12:00PM	11/07/2021	[REDACTED]	3115	Leak	Medium





Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

**Station Leak 4**



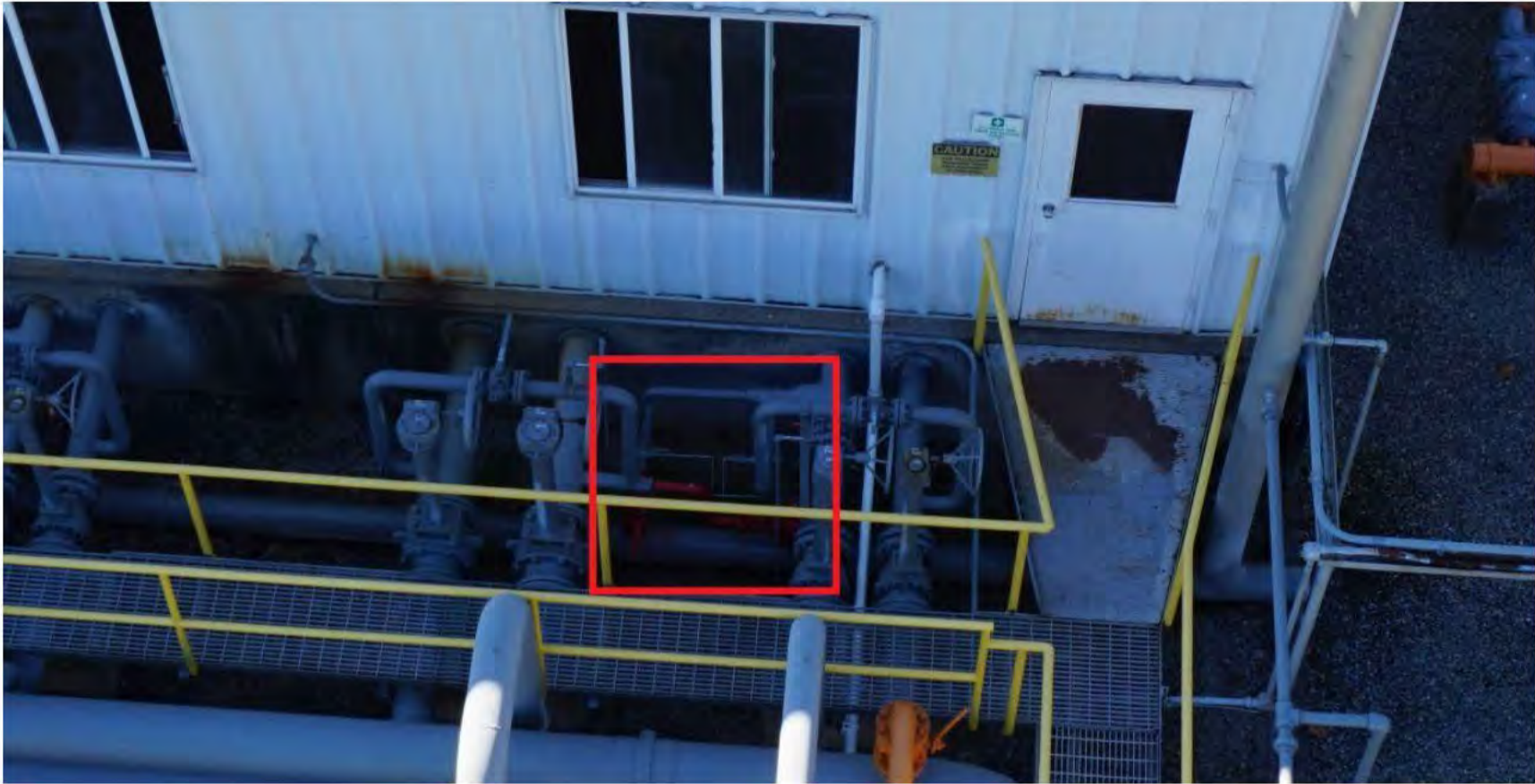
Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
12:27PM	11/07/2021	[REDACTED]	800	Leak	Low





Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

**Station Leak 5**



**No OGI Picture as Ground Scan Needs to be Completed**

Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
11:42AM	11/07/2021	[REDACTED]	40	Leak	Low





Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

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## Crew Site Observations

Asset Name: [REDACTED] Compressor Station

Beginning Time: 17:27:15 UTC

Surveyor Name: Drew Talley

Instruments Used: ICI Sensor Combo ( OGI, RGB, TDLAS)

Instrument Make: ICI

Instrument Model: OGI Inspector Plus

Location: [REDACTED]

Ambient Temperature: 53

Windspeed: 3 nnw.

Deviation from monitoring plan? No Deviation

End Time: 18:27:22 UTC

Leak(s) Detected: 5

Component(s) Location: See Report

Leak(s) Comment: See Report Leak Observations

Difficult to monitor: None, Outside Inspection Only

Unsafe to monitor: None

Repair Due Date: TBD

Resurvey Date: TBD

Requested Repair? No

Leak 1: Condensate Tank. Consistent readings. Averaging approximately 3,000 ppm.m.

Leak 2: Separator. Consistent readings. Averaging 1,500 ppm.m

Leak 3: Unknown Equipment Type. Consistent readings. Averaging 2,300 ppm.m.

Leak 4: Exhaust Readings. Higher Methane readings within the area of the Compressor Exhaust. Saturating the area.

Leak 5: Unknown Equipment Type. Inconsistent readings. Very low readings. Sporadic.





## Compressor Station Crew Flight Readings



Notes: Flight path covered all visible exterior equipment. The readings above are shown from the location of the UAV at time of recording ( every .80 Seconds ) and are not indicative of the location of the leak. The UAV with sensor stands off from the equipment on average of 15-20 meters. See Leak information for data that corresponds to each leak.





Report Name: Demo  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

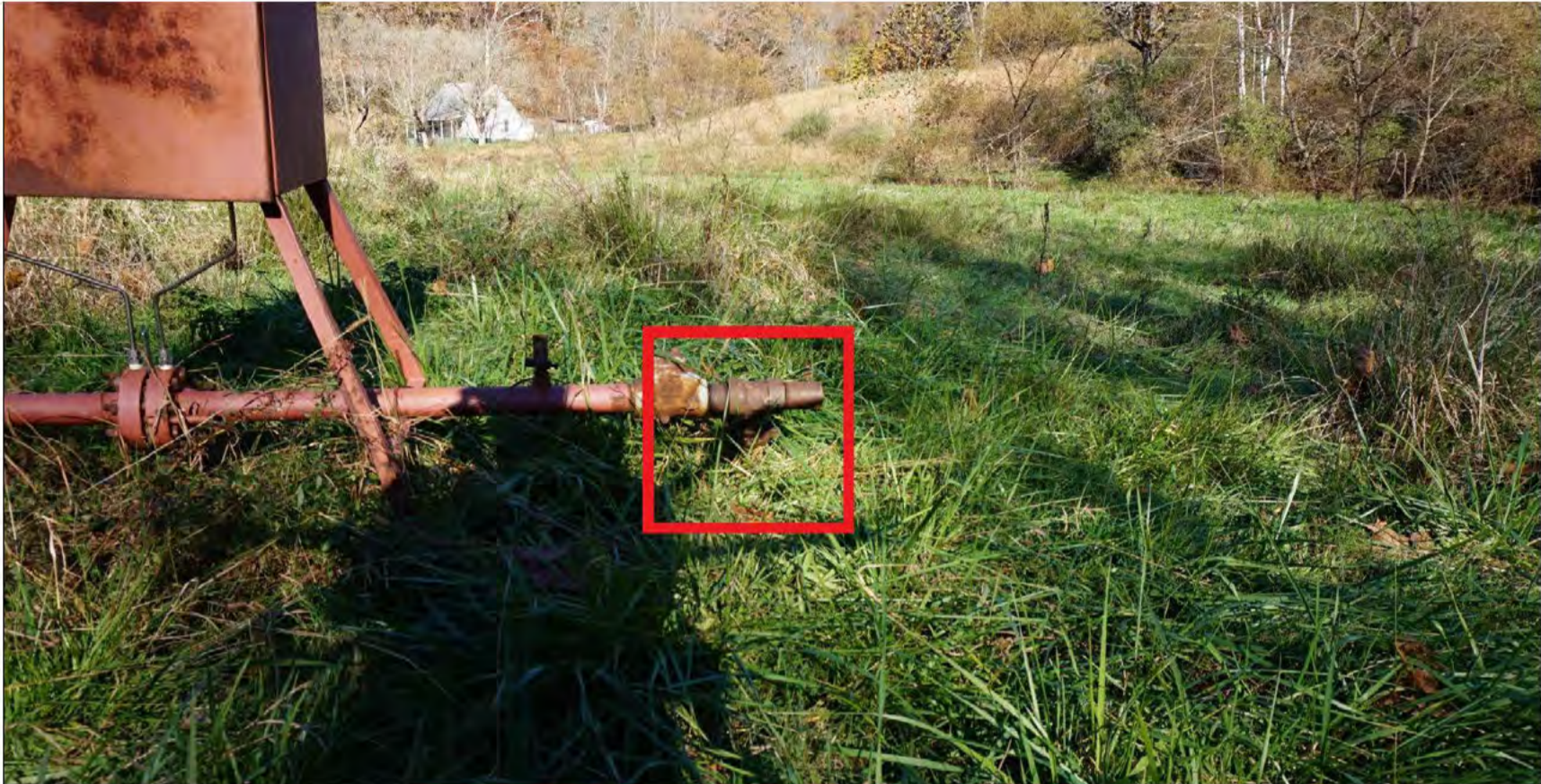
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## Leak 1



Methane Sensor Data Reading 2332 ppm.m



Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
3:15PM	11/06/2021	[REDACTED]	2332	Leak	Medium





Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

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## Crew Site Observations

Asset Name: [REDACTED]  
Beginning Time: 18:59:15 UTC 11/6/2021  
Surveyor Name: Drew Talley  
Instruments Used: ICI Sensor Combo ( OGI, RGB, TDLAS)  
Instrument Make: ICI  
Instrument Model: OGI Inspector Plus  
Location: [REDACTED]  
Ambient Temperature: 69  
Windspeed: 7 wsw.  
Deviation from monitoring plan? No Deviation  
End Time: 19:15:18 UTC 11/6/2021  
Leak(s) Detected: 1  
Component(s) Location: See Report  
Leak(s) Comment: See Report Leak Observations  
Difficult to monitor: None, Outside Inspection Only  
Unsafe to monitor: None  
Repair Due Date: TBD  
Resurvey Date: TBD  
Requested Repair? No

Leak 1: Pipe Thread.. Consistent readings. Averaging approximately 500 ppm.m.





## Crew Flight Readings



Notes: Flight path covered all visible exterior equipment. The readings above are shown from the location of the UAV at time of recording ( every .80 Seconds ) and are not indicative of the location of the leak. The UAV with sensor stands off from the equipment on average of 15-20 meters. See Leak information for data that corresponds to each leak.





Report Name: Demo  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

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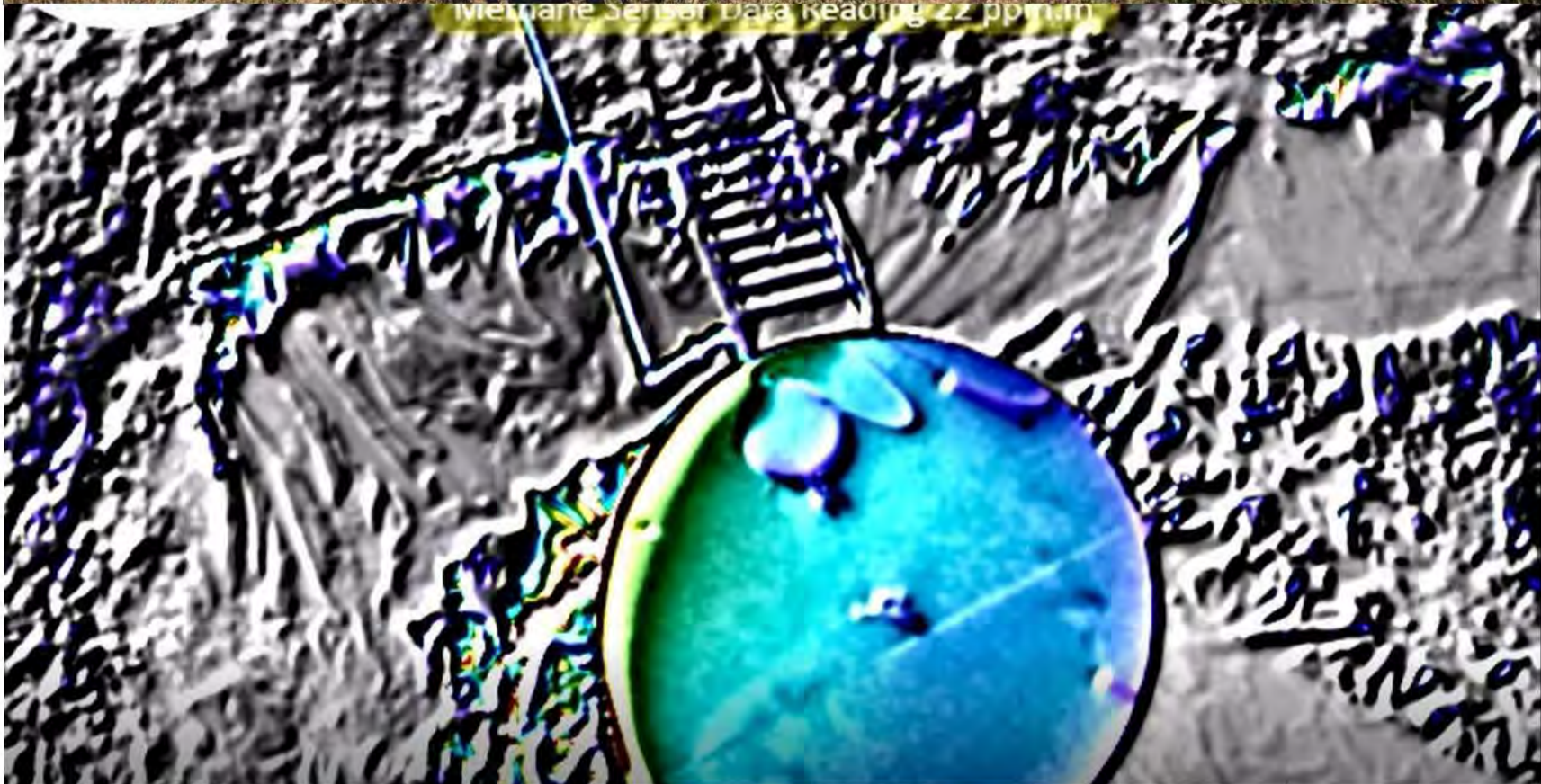
## Well Site Overview







**Leak 1**



Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
1:55PM	11/08/2021	[REDACTED]	183	Leak	Low





**[REDACTED] Leak 2**



Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
2:06PM	11/08/2021	[REDACTED]	186	Leak	Low





**Leak 3**



Time	Date	Location/GPS	Peak Reading (ppm.m)	Anomaly Type	Severity
2:17PM	11/08/2021	[REDACTED]	81	Leak	Low





Report Name: Sample  
Report Date: November 7, 2021  
Contractor: Aerial Production Services

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## Crew Site Observations

Asset Name: [REDACTED]  
Beginning Time: 19:51:23 UTC 11/8/2021  
Surveyor Name: Drew Talley  
Instruments Used: ICI Sensor Combo ( OGI, RGB, TDLAS)  
Instrument Make: ICI  
Instrument Model: OGI Inspector Plus  
Location: [REDACTED]  
Ambient Temperature: 69  
Windspeed: 7 wsw.  
Deviation from monitoring plan? No Deviation  
End Time: 20:10:18 UTC 11/8/2021  
Leak(s) Detected: 3  
Component(s) Location: See Report  
Leak(s) Comment: See Report Leak Observations  
Difficult to monitor: None, Outside Inspection Only  
Unsafe to monitor: None  
Repair Due Date: TBD  
Resurvey Date: TBD  
Requested Repair? No

Leak 1: Tank Vents.. Consistent readings. Averaging approximately 65 ppm.m.  
Leak 2: WellHead Thread. Intermittent Leak. Small Average below 50 ppm.m  
Leak 3: Unknown Equipement Leak. Continuous Leak. Average 35 ppm.m





## ██████████ Crew Flight Readings



Notes: Flight path covered all visible exterior equipment. The readings above are shown from the location of the UAV at time of recording ( every .80 Seconds ) and are not indicative of the location of the leak. The UAV with sensor stands off from the equipment on average of 15-20 meters. See Leak information for data that corresponds to each leak.