

Aerial Gas Detection “Ancillary” Benefits

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2008 El Paso / ITT ANGEL

DIAL LEAK SURVEY – OCTOBER 17, 2008

ITT Leak Survey Data



Pipeline Overlay View



Field Validation Results – Body bleed on a valve, valve repairman was dispatched.

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Visible Light Video allows for ROW Inspection.

Aerial Technology Providers

- ^ [FLIR](#)
 - ^ [Lasen](#)
 - ^ [Aviation Technology Services](#)
 - ^ [ITT](#)
 - ^ [Leak Surveys Inc.](#)
 - ^ [Apogee Scientific](#)
- ^ Question - Are they providers of “Just” aerial leak detection information?



Ancillary Benefits



- ▲ ROW Clearance
- ▲ Exposed Pipe
- ▲ Damage Assessments
- ▲ Augment ROW Patrols
- > Access Mountain Areas
- ▲ Incorporate w/ GIS

Evolution of Gas Leak Survey Technology

Flame Ionization Spectroscopy

- Hand-held device
- Speed – 1 mph
- Need to come in contact with the plume
- Terrain and property issues

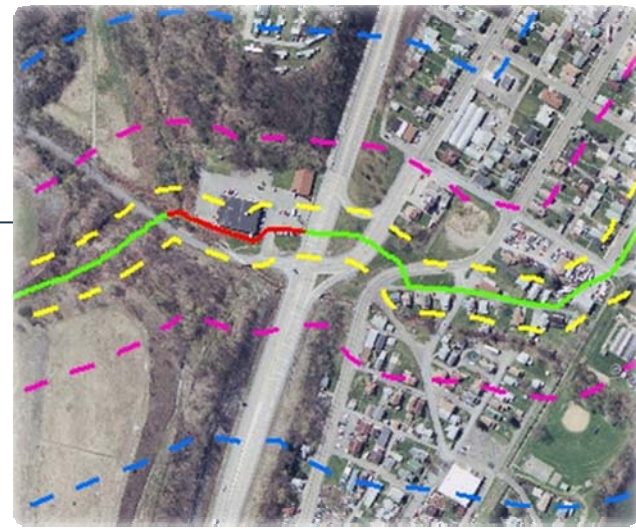
Aerial Gas Detection

- Gas speciation and sensitivity
- Speed – 60 to 100+ mph
- Productive – 100's of miles of coverage a day.
- Practically no terrain or property issues
- Visible Light Footage with Gas Detection

1960 1970 1980 1990 2000 2002 2004 2006 2008

Pass-through Optical Sensors

- Truck mounted sensor
- Speed – 15 mph
- Need to come in contact with the plume
- Terrain and property issues



El Paso Corridor Mapping Pipeline Class Location and HCA Calculations

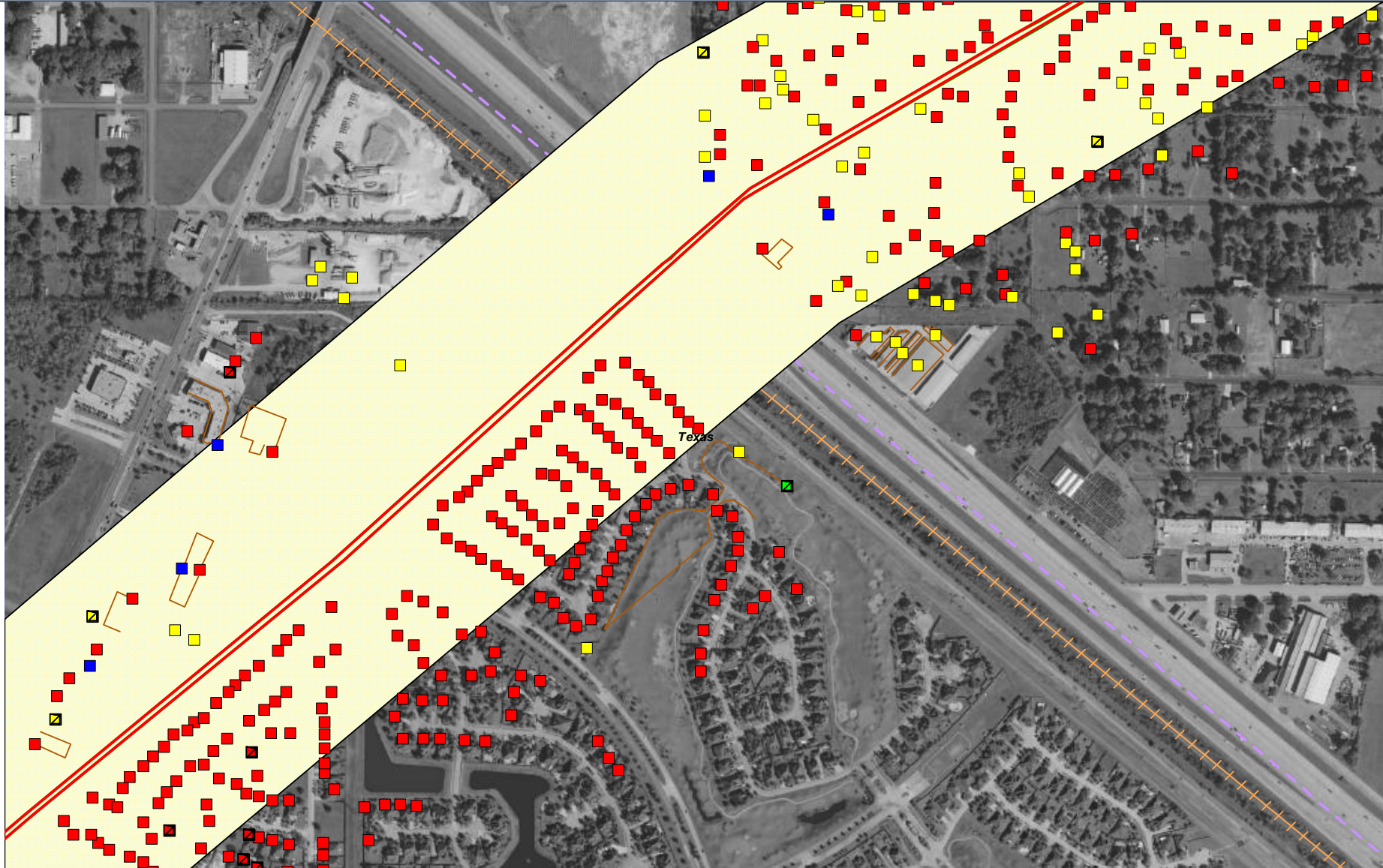
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Imagery Flight Date – October/2007



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Structures intended for human occupancy added 1320 Foot Corridor and Pipeline Classification Calculated



Aerial Gas Detection or Aerial Data?

⤴ Not just a Gas Detection Tool

⤴ Compliance Tool?

→ Enhance ROW Surveillance

→ HC, HCA tracking

⤴ Communication of Fugitive Sources Tool

→ Heightens awareness

→ Video worth a 1000 words

⤴ GHG & Public Relations Tool

Final Point

- Consider means to use the flight to benefit other departments or efforts