Helis St Tammany Energy Project

About Helis Oil & Gas

- New Orleans-based; privately owned
- Founded in 1934
- Approximately 50 employees including Northshore residents

Helis Oil & Gas

- Drilled and operated more than 65 wells in 2 states
- Current operations in TX, LA, ND, WY
- Outstanding safety and environmental record
- By design a quiet company
- Helis Foundation

The Helis Environmental Record

- Commendations for outstanding performance and cooperation
  - Coast Guard
  - Federal regulators (“SAFE” award)
- Voluntary SEMS for offshore and onshore
- First company to privately restore a barrier island, Stone Island
- Recognized for performance beyond legal requirements in that project (LDEQ website)

Well Activity in St. Tammany

- More than 18,000 water wells
- Approximately 50 conventional oil wells
- Phase 1 of our project: same as water wells with 3 differences:
  - Better equipment: steel piping instead of PVC
  - Better technology
  - Better permitting, regulation and accountability

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About This Project

- Conventional TMS project
- Same aquifer that 4850+ wells have been drilled over 60+ years, including 43+ fractured TMS wells
- Located on a 960 acre lease in a non-residential tree farm

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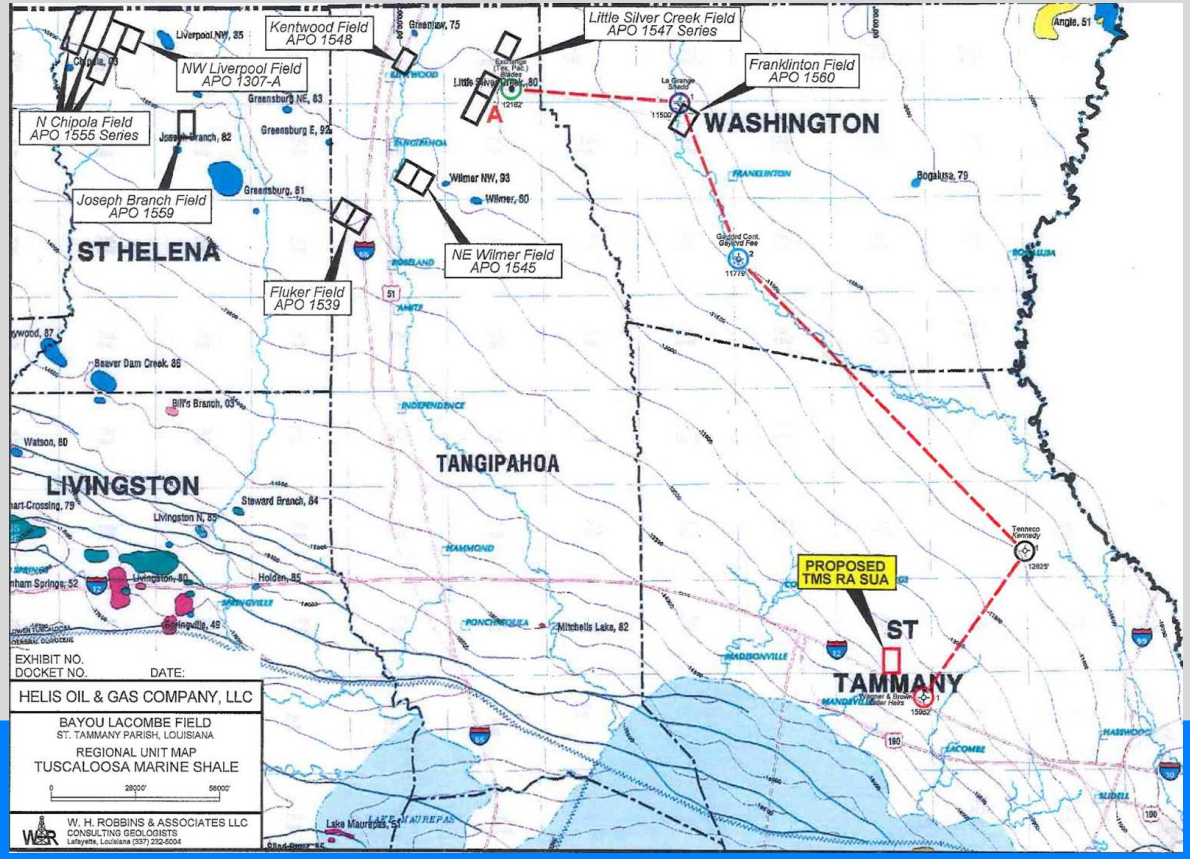
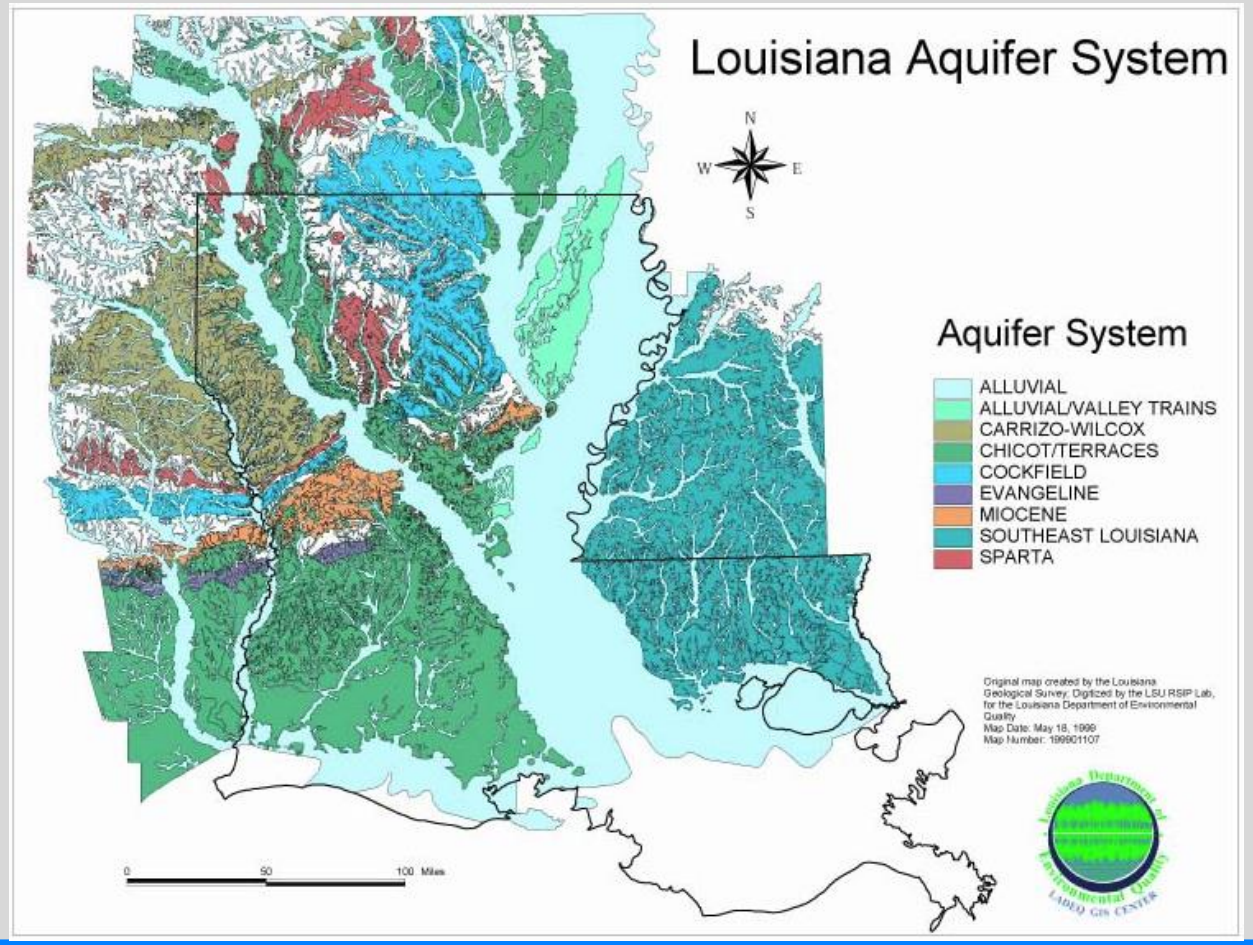
About This Project

- 1.2 miles from Lakeshore High and more than 2 miles from any residential area



Permits and Agency Oversight

- USACoE
- EPA
- OSHA
- DNR
- DEQ
- LDOT



The Project

- Two phases – longer and more expensive
- Phase 1: conventional vertical drill to 13,000 feet, 9000 feet below the lowest freshwater aquifer
- Stop, pull back, remove rig and analyze results
- Cement and plug well if not commercially viable

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The Project

- Phase 2: return rig, drill horizontally, hydraulically fracture
- Phase 1 & Phase 2 : approximately 30 days each

Drilling Facts

- Fracturing will take place at 12,600 feet
- Aquifer only extends to 3300 feet
- Fracturing at 1.8 miles below the aquifer
- Fractures will only extend +/- 250 feet
- Impossible for fractures to penetrate over 1.8 miles of rock to reach aquifer
- Average fracture .2 inches in width

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Environmental Responsibility

- Pre-drilling air and water quality testing
- Pre-drilling benchmarking of noise levels
- No use of aquifer water
- No storage of waste water on site
- All waste water to be disposed of out of the parish

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Mounting Body of Evidence

- Hydraulic fracturing is safe and that regulations are appropriate
- State of Maryland Public Health Study
- Cornell / Journal of Hydrology
- Groundwater Protection Council reaffirmed their 2009 study that the “states are doing a good job” in protecting groundwater

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National Academy of Sciences

- Ohio State – Duke
- Declining water issues
  - Marcellus (7)
  - Barnett (1)
- Noble gases as tracers
- ID causes of methane
- Findings: annulus cement leaks (4), production casing (3), UG well failure (1)

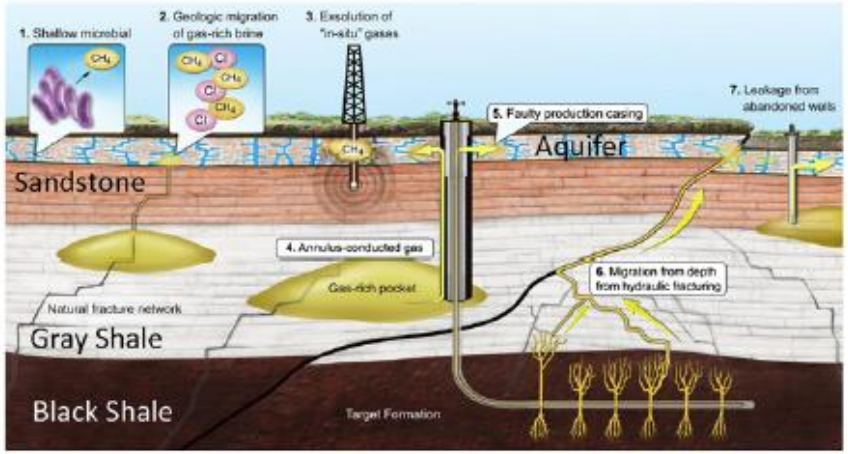

Fig. 1. A diagram of seven scenarios that may account for the presence of elevated hydrocarbon gas levels in shallow aquifers (see discussion in text). The figure is a conceptualized stratigraphic section and is not drawn to scale. Additional scenarios (e.g., coal bed methane and natural-gas pipelines leaking into aquifers) are unlikely in our specific study areas (Figs. S2 and S3).

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NAS Findings

- "Noble gas data appear to rule out gas contamination by upward migration from depth through overlying geological strata triggered by horizontal drilling or hydraulic fracturing."

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DOE Study (NETL)

- Greene County, PA over 18 months
- During and after hydraulic fracturing
- Used chemical tracers and microseismic
- Max height of fractures
- Migration of gas or fluids
- Findings: no evidence of migration

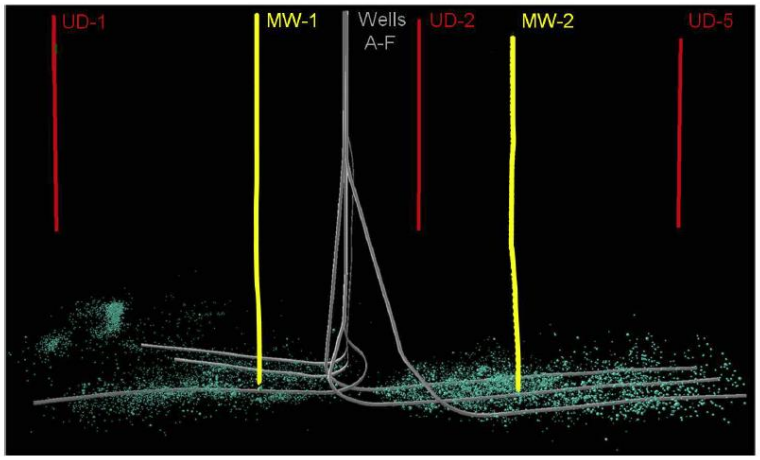

Figure 8: East-west section looking north that shows the spatial relationship between horizontal Marcellus Shale gas wells (A-F), vertical Marcellus Shale gas wells (MW-1 and MW-2), and vertical Upper Devonian/Lower Mississippian gas wells (UD-1, UD-2, and UD-5). Light blue spheres depict microseismic events located during the hydraulic fracturing of horizontal Marcellus Shale gas wells.

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Helis “Above & Beyond” Commitments

- 3 strings of casing and cement instead of required 2
- 2.5 feet high protective berm
- Use of sound baffles to contain any noise
- No truck traffic during school entrance and exit times
- Traffic will be controlled during movements of heavy equipment

Helis "Above & Beyond" Commitments

- 24-hour security provided by experienced law enforcement personnel
- Fulltime presence of 2 safety supervisors
- Professional training of parish first responders (at Helis' expense)
- Voluntary implementation of SEMS

Sweeping Economic Benefits

- IHS CERA: $283B added to GDP (2012), +$1,200/ household ($3500+by 2025)
- US oil production 9.5 MMB/D by 2015
- Imports down from 61% to below 40%
- 1.5B in LA taxes and fees in 2013 (14.6%) , $2.9B including indirect impacts
- Supported $74B in sales to local firms in 2011
- $410 million in LA property taxes in 2013, +37.5% since 2009
- Tangi School District: $1.06M bonus

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The Helis Promise

- Be respectful guests in your community
- Have a special responsibility since many Helis employees and their families live and go to school in St. Tammany
- Set a very high bar of performance for any other operator in St. Tammany
- Listen and accommodate wherever possible

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