

# BUILDING A WORLD OF DIFFERENCE

## FAST TRACK RELIEF TO MIDLAND'S EMERGENCY THIRST – **PUBLIC - PUBLIC PARTNERSHIP**

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VICE PRESIDENT  
WATER

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Building a world of difference.®



# CASE STUDY – MIDLAND, PUBLIC - PUBLIC PARTNERSHIP

Unique Solution for a unique challenge

# MIDLAND HAS A BOOMING OIL/GAS ECONOMY...



- Booming oil/gas industry
- 1,000s of job created each year
- Fastest growing area in the country
- People struggle to find housing
- 3% unemployment

# SUSTAINED DROUGHT IS STRESSING ALL SYSTEMS...

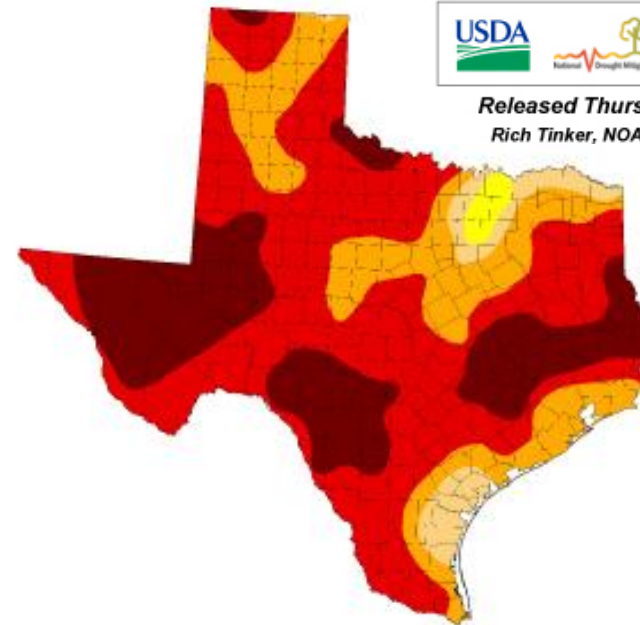
## U.S. Drought Monitor, Texas, May 3, 2011

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	98.86	93.99	73.73	25.96
Last Week (04/26/2011 map)	0.00	100.00	100.00	94.97	70.42	17.16
3 Months Ago (02/01/2011 map)	19.47	80.53	53.00	35.11	6.93	0.00
Start of Calendar Year (12/28/2010 map)	7.89	92.11	69.43	37.46	9.59	0.00
Start of Water Year (09/28/2010 map)	75.57	24.43	2.43	0.99	0.00	0.00
One Year Ago (04/27/2010 map)	96.94	3.06	0.00	0.00	0.00	0.00

**Intensity:**

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional



Released Thursday, May 5, 2011  
Rich Tinker, NOAA/NWS/NCEP/CPC

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>

2011 was 3<sup>rd</sup> worst drought in recorded history

# ...AND THE PRICE OF SUCCESS (AND SUSTAINED DROUGHT) IS THIRST FOR WATER!



- More people = higher water demand
- Oil/gas business = higher water demand
- Colorado River Municipal Water District relies on 3 reservoirs:
  - 2 dry
  - 1 at 15% capacity
- Sustained drought
- CRMWD restrictions starting June 2013

Healthy economy is driving the water demand up, up, up.....

# UNIQUE PROJECT CHALLENGES REQUIRE DEVELOPMENT OF A UNIQUE SOLUTION

**FUNDING** – not in City budget

**SCHEDULE** – need  
before end of May 2013

**LOGISTICS** – aquifer  
(T-Bar Ranch) 58 miles away

**LAND ACQUISITION** –  
70 miles private-owned land

**RESOURCES** – lacking labor,  
accommodation and support

*A comprehensive and  
collaborative team is needed*

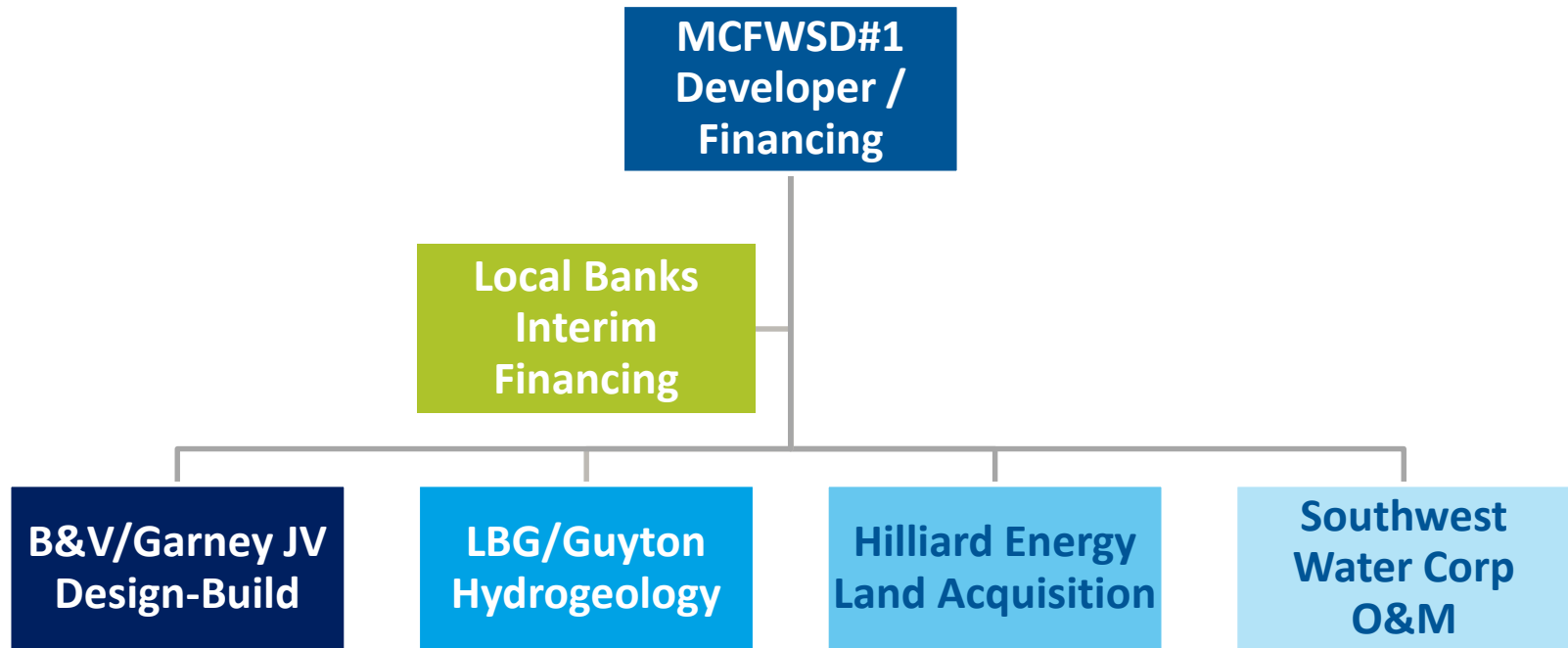


# **BUILDING A FAST TRACK TEAM**

Bringing a fast-track team together to achieve results despite project challenges

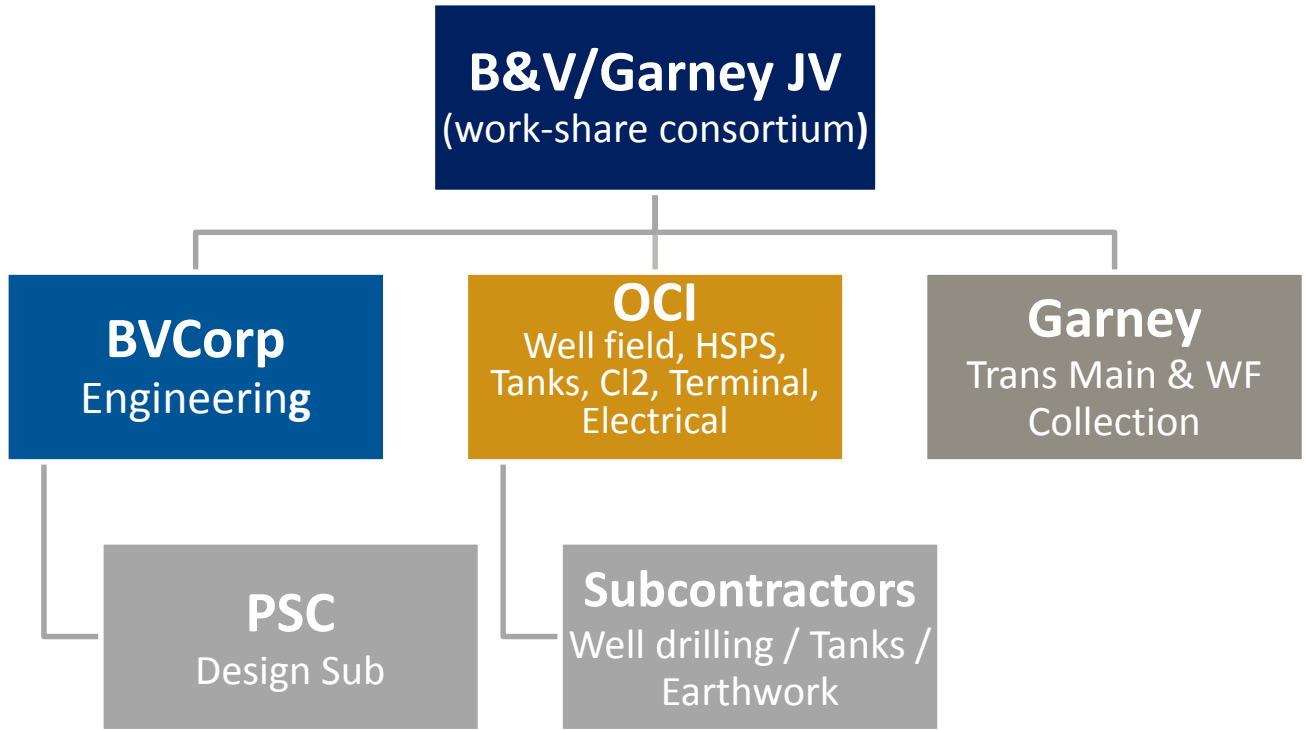


# A “PUBLIC-TO-PUBLIC” DBFOM TEAM ASSEMBLED FOR THE CHALLENGES



This is a “P3” team of 16 companies to address schedule, logistics, land acquisition, funding, and resources challenges

# DESIGN-BUILD TEAM ORGANIZATION



**Overland Contracting (B&V) and Garney self-performed the construction scope**



# FUNDING CHALLENGE

Financing a \$200-million project in parallel with land acquisition and design-build activities



# CRITICAL WATER SITUATION...AND WITH NO FUNDING



- Situation clearly required *immediate* spending to
  - Well test drilling
  - Acquire ROW
  - Design
  - Buy pipe and equipment
  - Construction
- City did not have funding in place, let alone a solution developed

A **P3 “Public-to-Public Partnership”** was the logical choice to move forward

# THE P3 SOLUTION SOLVES THIS EMERGENCY FUNDING WHILE OFFERING OTHER BENEFITS TO THE CITY

## MINIMIZES RISK TO CITY

also capitalizes on private-sector efficiencies

## SAVES MONEY

MCFWSD#1 gets public sector financing with municipal rates

## FUNDS PROJECT FAST

P3 allows interim private sector financing to get started on project

The interim private sector financing through Wells Fargo and local Midland banks allowed early procurement, design, and land acquisition to proceed



# **MCFWSD#1 SOLD NEARLY \$200-MILLION IN BONDS – RESULTS IN A LOW COST SOLUTION TO CITY RATE PAYERS**

- **Tax-exempt revenue bonds**
- **Lower-cost water for rate payers**
- **City ownership of facilities after 20-year contract**
- **Bonds sold out in a day to local investors**
- **Secured blended rate of 4.39% instead of 5% anticipated**



# FINANCING ALSO FAST-TRACKED TO SUPPORT THE LAND AND DESIGN-BUILD



A true fast-track model to cover funds, land, design and build

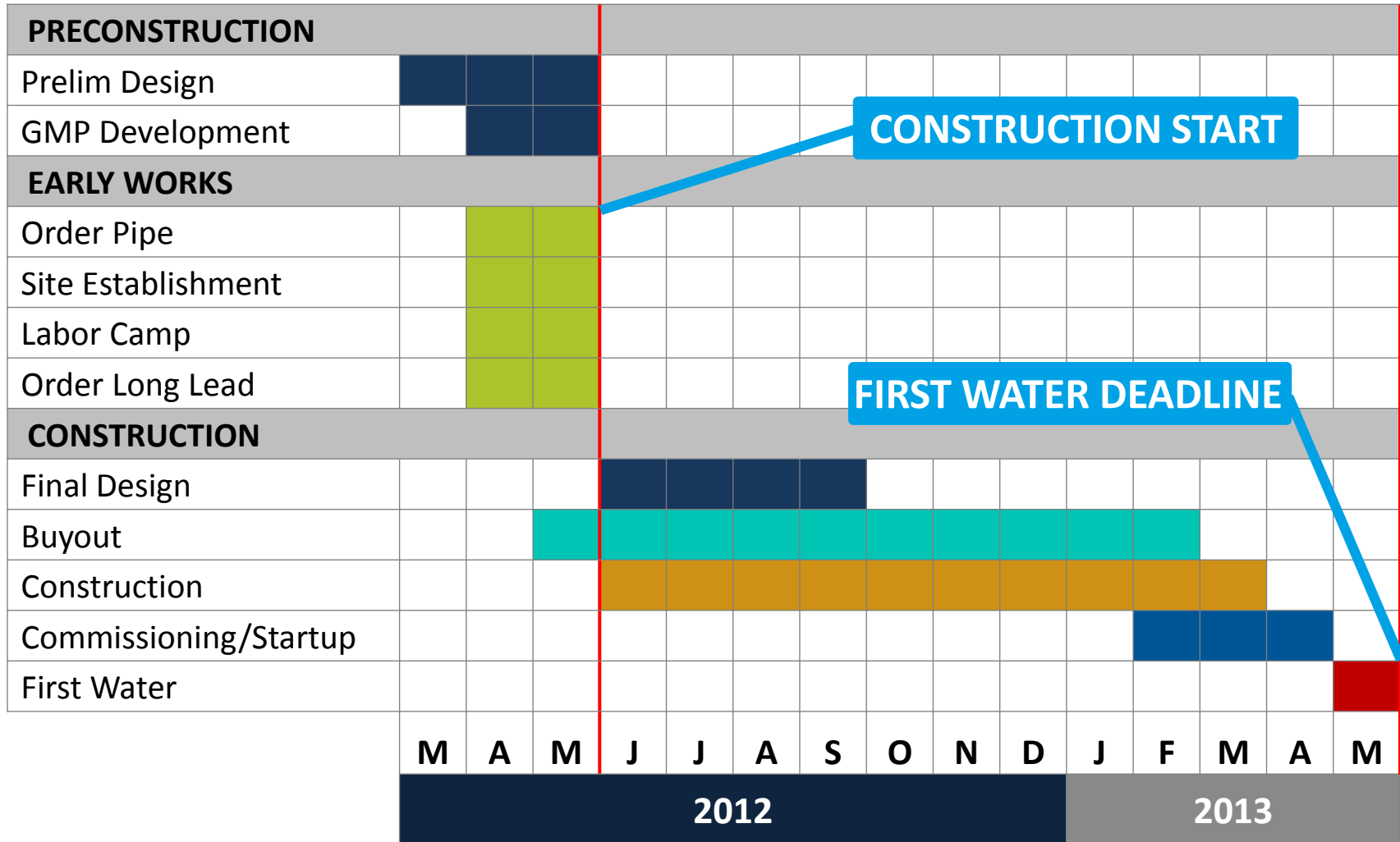


# SCHEDULE CHALLENGE

Delivering 20-MGD before May 31, 2013



# FAST TRACK DESIGN-BUILD ACHIEVES FIRST WATER BEFORE MAY 31 2013



# FAST TRACK MEASURES TAKEN TO ENSURE ON-TIME DELIVERY

## **BEFORE** CONSTRUCTION CONTRACT

- 58-miles of 48" Pipe ordered early
- 50 test wells & site work
- Submittals packages
- Satellite communications
- Mobilize field staff
- Long lead air compressor package

## **AFTER** CONSTRUCTION CONTRACT

- Up to 8 pipeline crews working at once
- 24-hour/day production well drilling
- Staged TCEQ approvals on design
- Design/Construction/Land Acquisition done in parallel

...and many more strategies employed!



# LAND ACQUISITION REQUIRES COLLABORATION WITH ENGINEERING...AND CONSTRUCTION!



Note how the land acquisition started and ran in parallel with pipeline and facilities design



# LOGISTICS CHALLENGE

Working in a desolate area with 47 worksites  
and 58-mile pipeline alignment

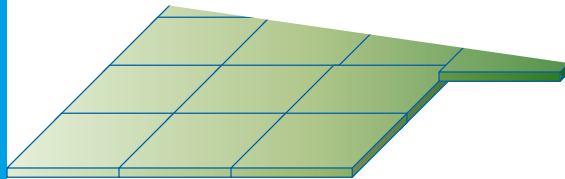


# 44 WELL SITES, 3 FACILITY SITES AND 58 MILES OF PIPELINE – THE LOGISTICAL CHALLENGE

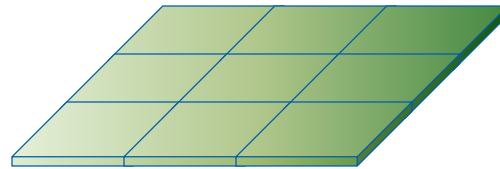


Combined with other project issues the landscape presented plenty of challenges

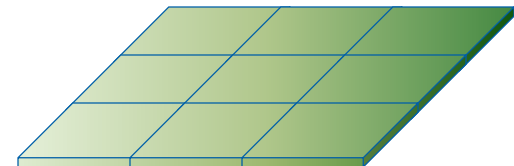
# COMPARE THE PROJECT SOLUTION TO THE LOGISTIC CHALLENGES



**T-Bar Well Field Site**



**Intermediate Tank Site**

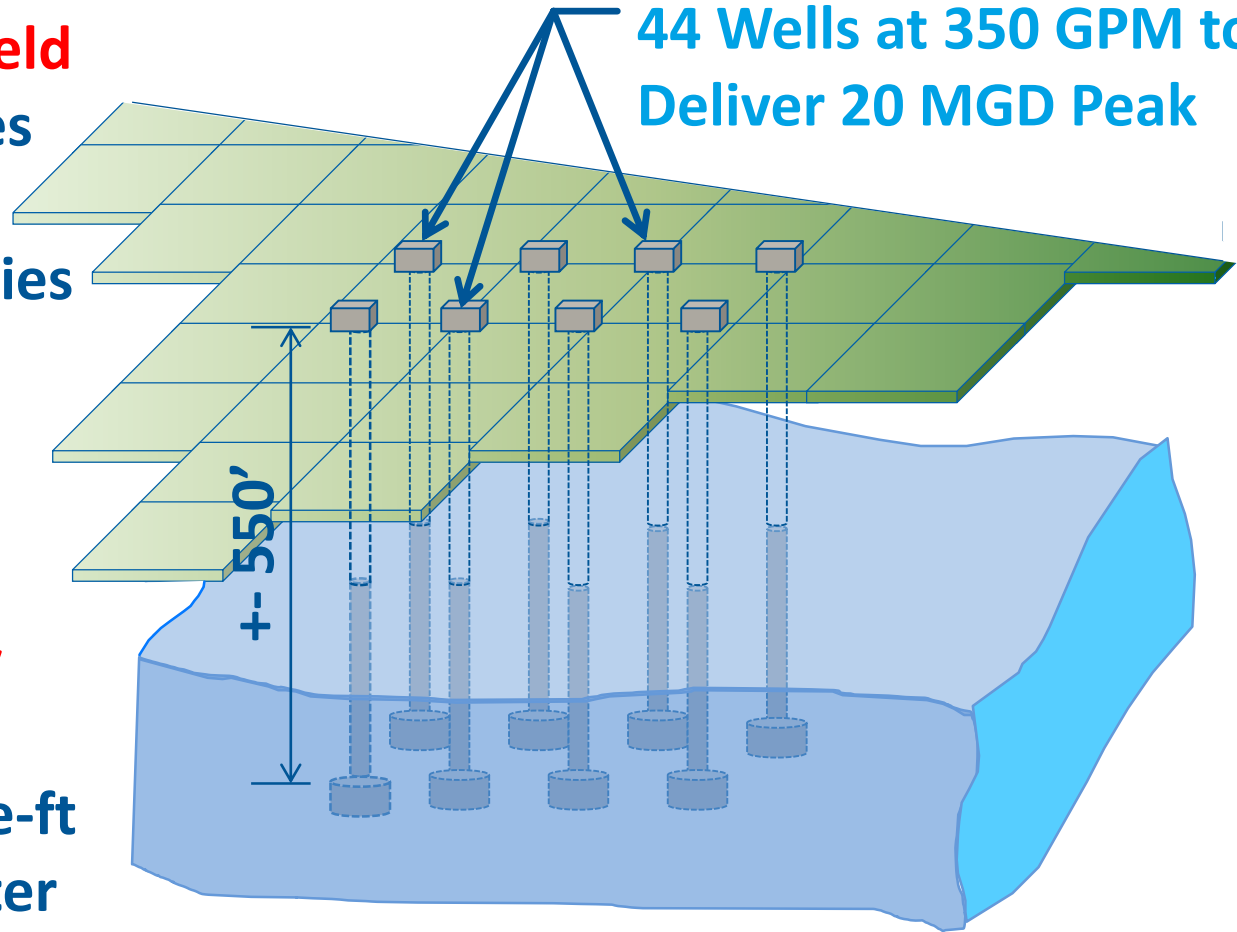


**Terminus Site**

# T-BAR WELL FIELD DEVELOPMENT

**T-Bar Well Field**  
22,000 + acres  
Winkler &  
Loving Counties

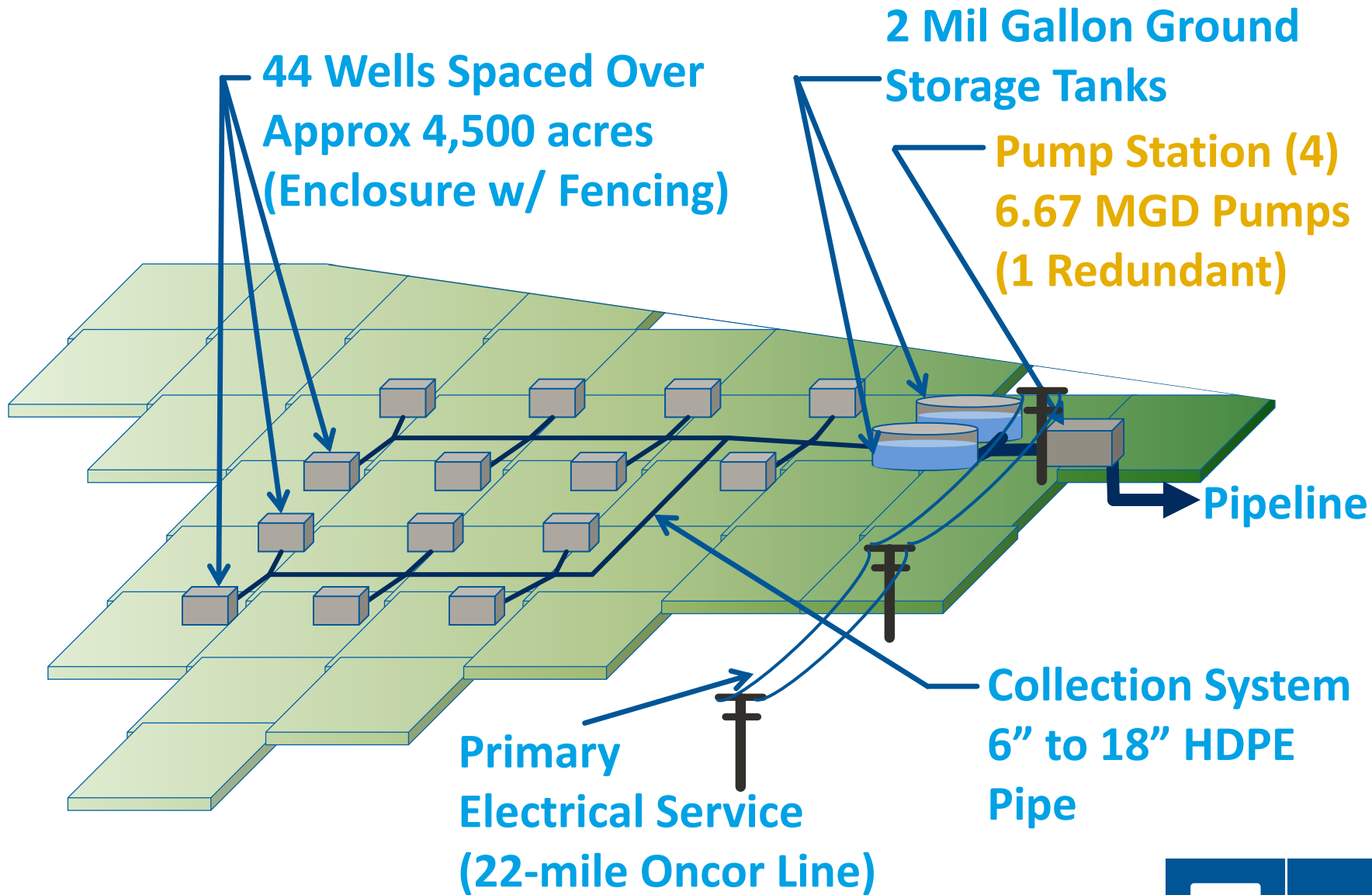
44 Wells at 350 GPM to  
Deliver 20 MGD Peak



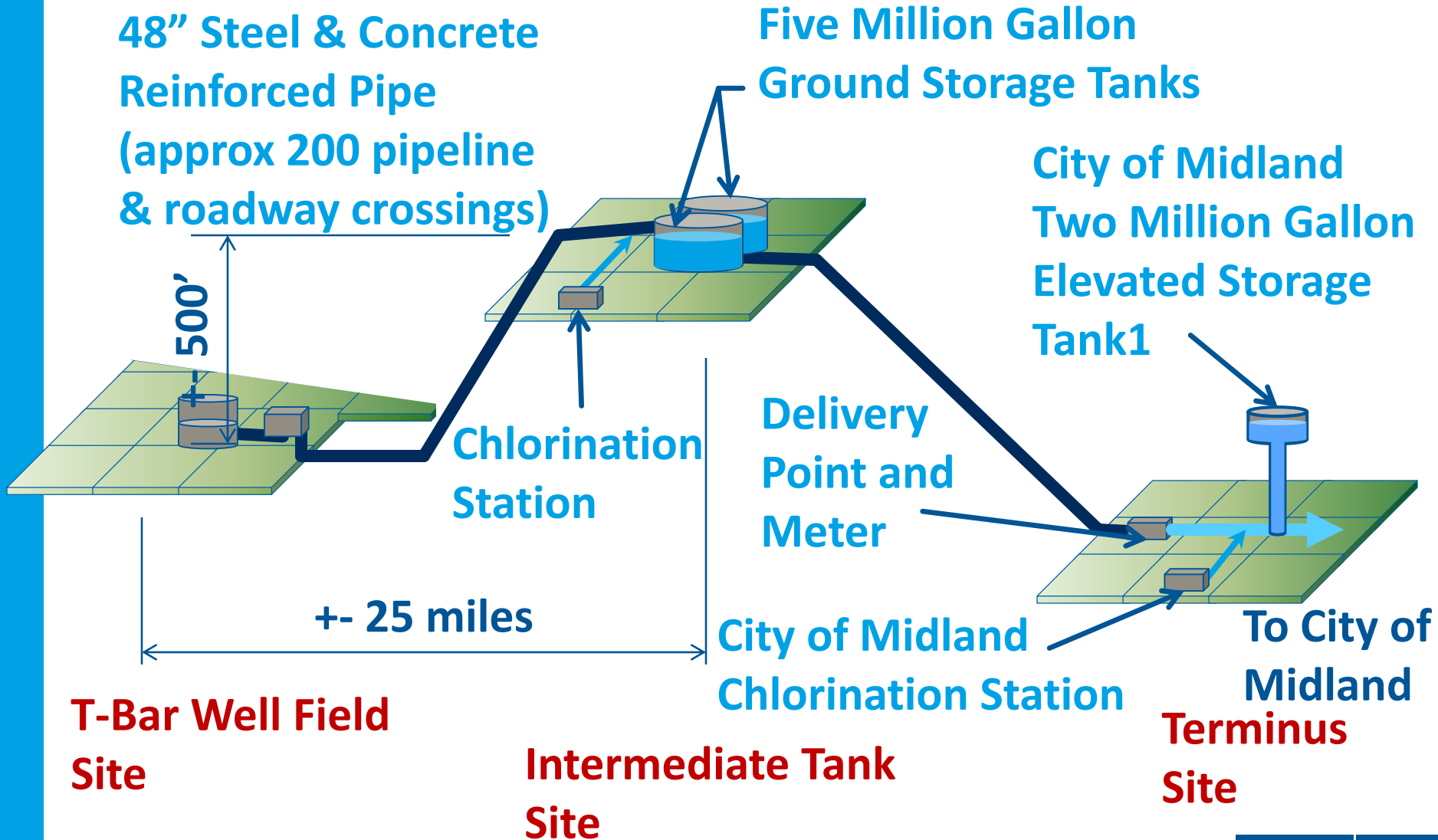
**Pecos Valley  
Aquifer**  
550,000 acre-ft  
Potable Water



# T-BAR WELL FIELD COLLECTION



# T-BAR WELL DELIVERY SYSTEM



# B&V AND GARNEY MEET THE LOGISTICS CHALLENGE



## Get people close to work:

- OCI site offices on west side/Garney to east
- Labor accommodations built ground-up and close to work

## Supervision/facilities for multiple work sites:

- Developing existing wells for construction phase water
- Supervisory and safety staff at all sites – around the clock

## Communications:

- Cell phone boosters in vehicles & offices
- Satellite system communications early works

Design worked alignment and locations along with land acquisition

# LAND ACQUISITION CHALLENGE

Right-of-ways and easements across 70 miles of west Texas terrain



# PIPELINE LOGISTICS CHALLENGES

- Privately owned land – more than 55 land owners
- Oil and gas wells, pipelines, facilities
- Sand dunes
- 550-foot elevation rise escarpment
- Prairie and cattle ranches
- Major wind farm
- Habitat for dunes sagebrush lizard

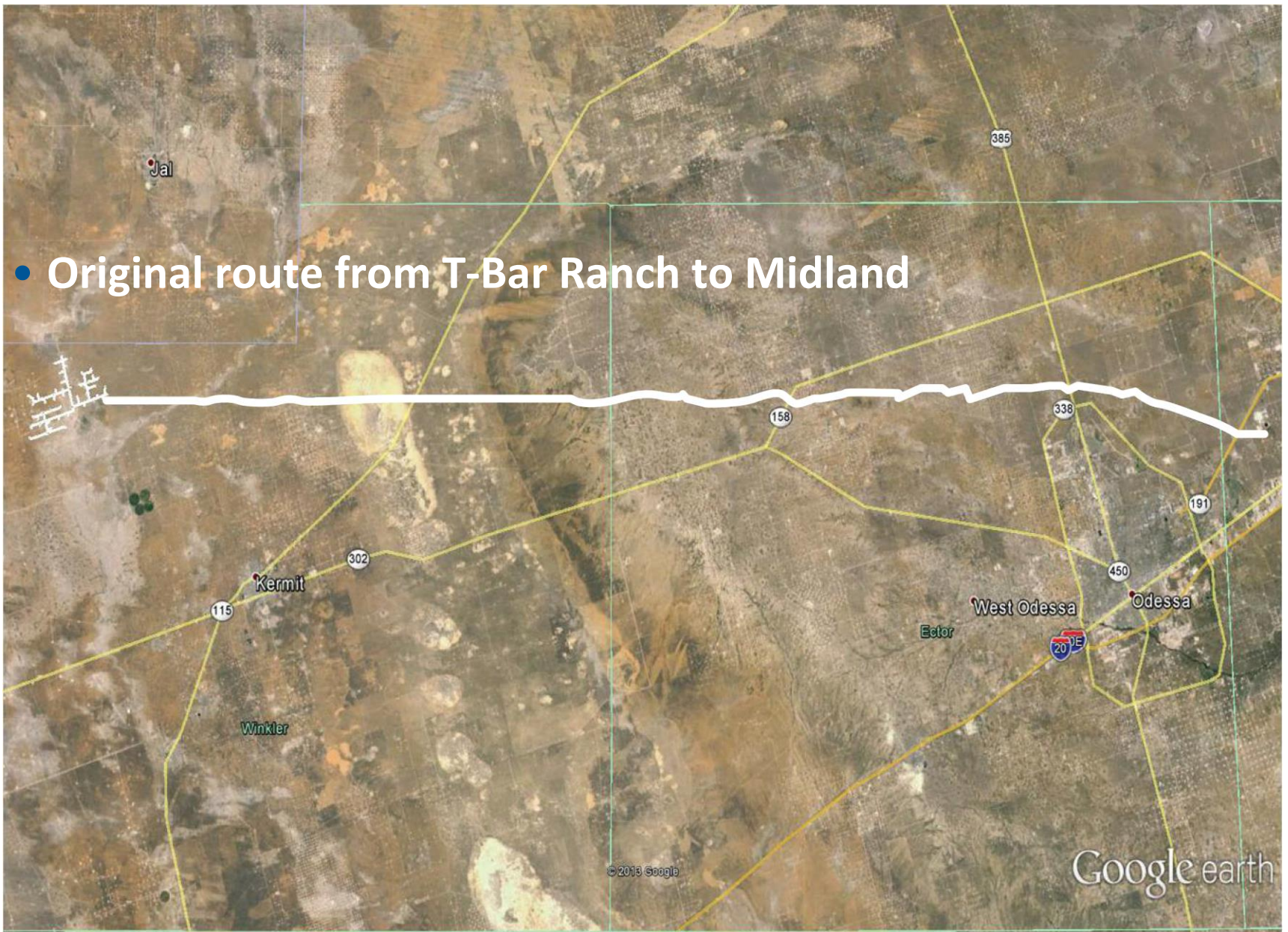


# THE CHALLENGE TO ACQUIRE 58 MILES OF ROW

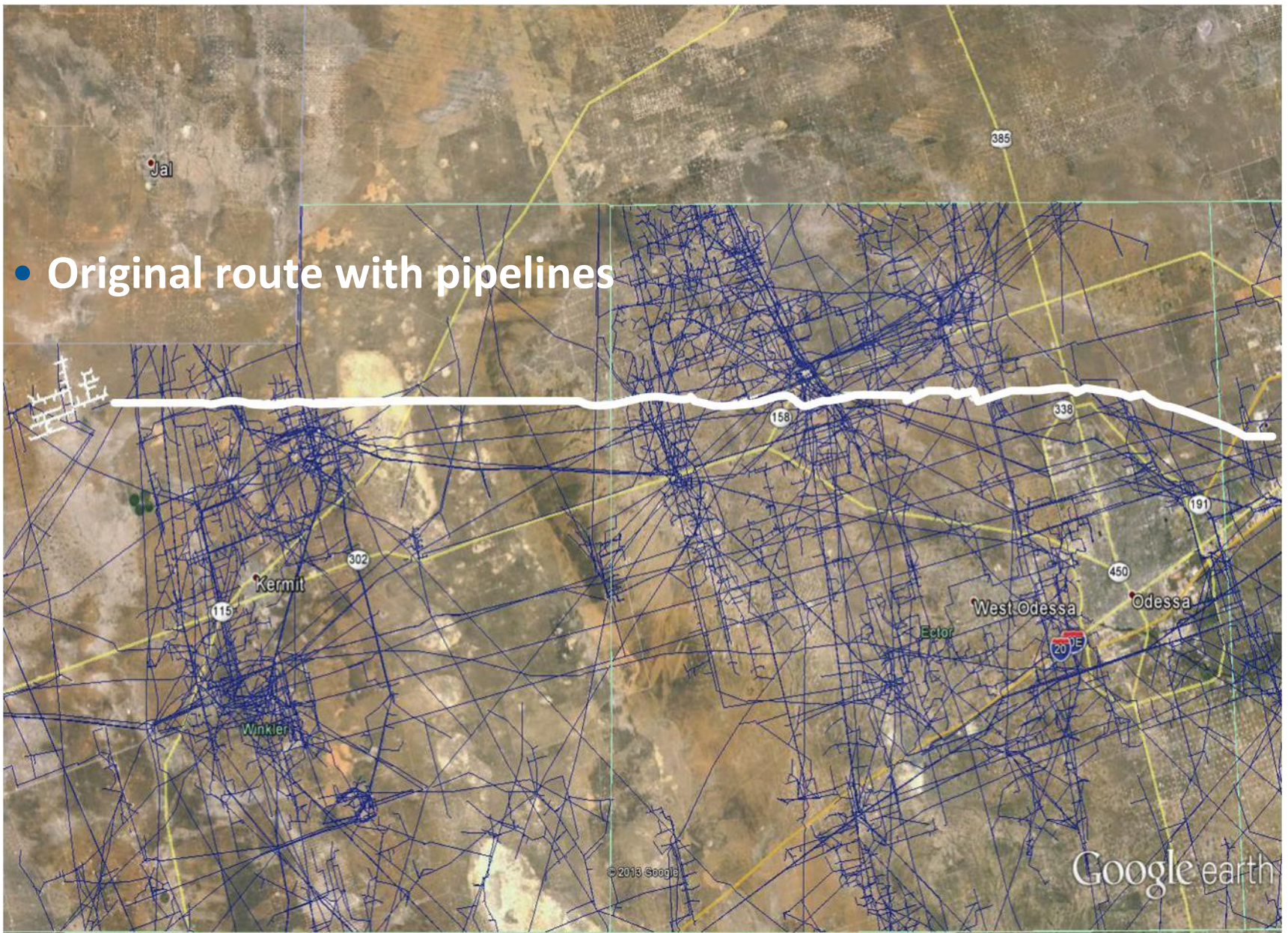
- This acquisition started same date as design and worked in parallel with design and construction!
- This effort not only included permanent and construction easements acquisition but also utility crossing agreements (226 ea.), highway and country road crossing permits (15 ea.) and railroad permits (1 ea.)
- Step 1 – route selection



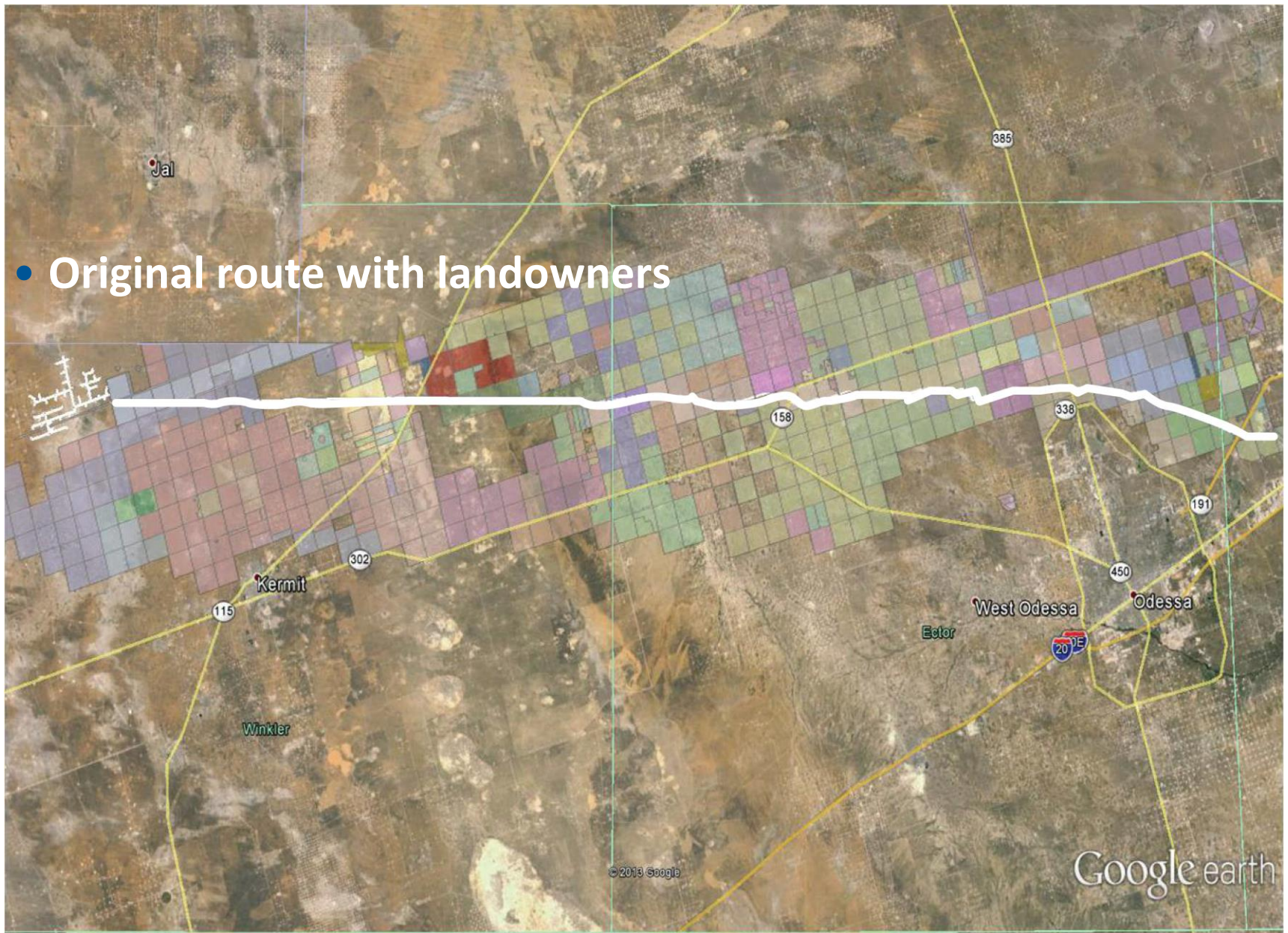
- Original route from T-Bar Ranch to Midland



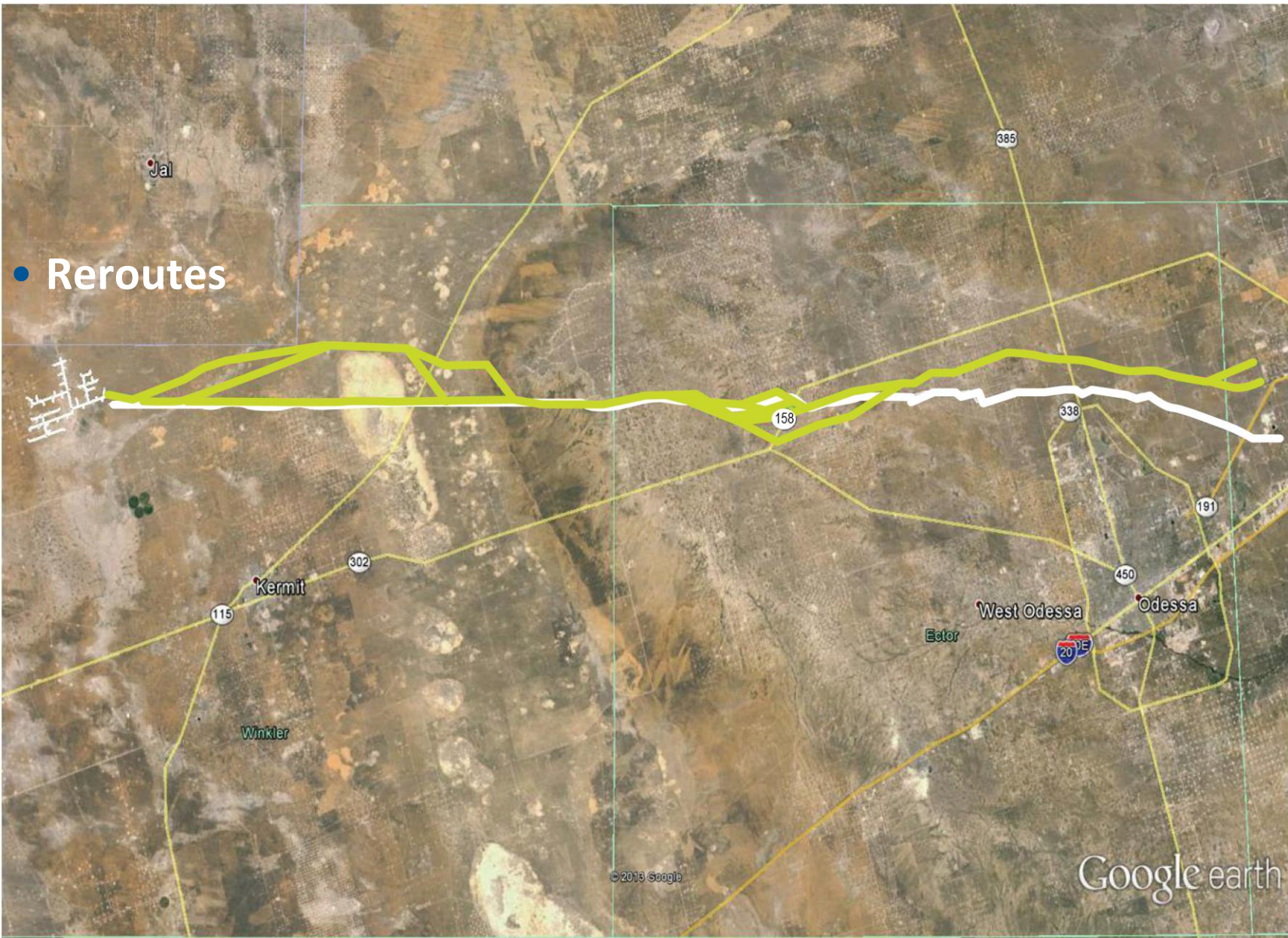
- Original route with pipelines



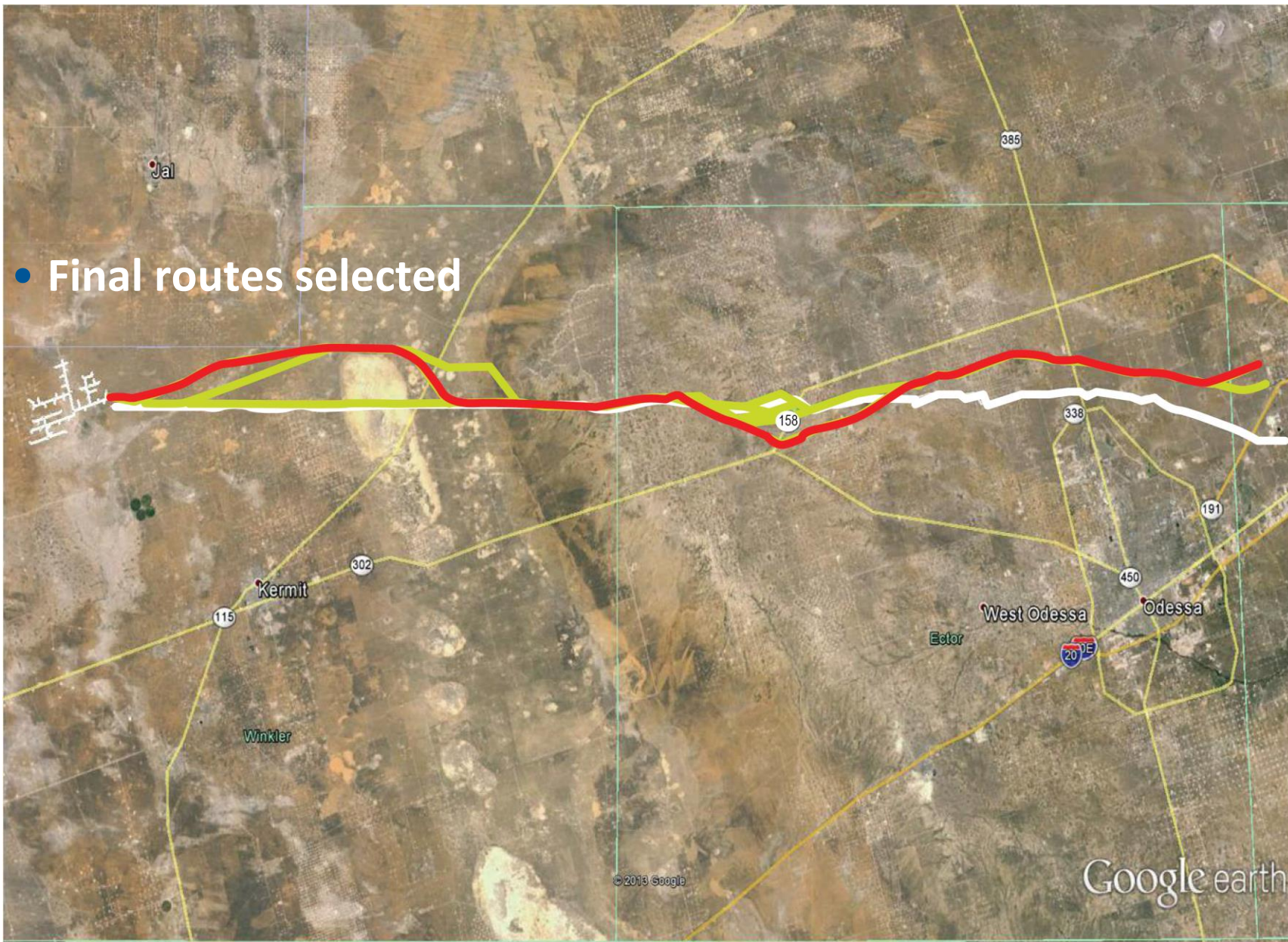
- Original route with landowners



- Reroutes



- Final routes selected



# DESIGN-BUILD TEAMWORK GETS IT ALL DONE



- Land access to 32 easements in 6 months
- Land acquisition phased to accommodate construction start locations
- Land acquisition costs within budget
- **NO CONDEMNATIONS!!**

Land acquisition, design, procurement, clearing, delivery, construction —  
*all fast-tracked for results*

# WE MADE IT HAPPEN! FIRST WATER DELIVERY 17 DAYS AHEAD OF SCHEDULE



# TAKEAWAY POINTS:

- Understanding Stakeholder requirements
- Appropriate allocations of risks:  
Guarantees vs Qualifications
- Timely communications (remember problems don't go away!)
- Shape the delivery method accordingly

# QUESTIONS

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**Together**



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# OUR MESSAGE TODAY:

- Pubic – Public Partnerships
- Midlands Solution to Water Crisis
- Asdfa;dkfadf
- Asdfkjadskf

# Public Partnership and PPP Projects



**Public Private Partnerships**

**Prevalence**

**Typical Advantages**

**Perceived Disadvantages**

**Why now?**

**Stakeholder requirements**

**Creative Procurement**

**Schedule restraints**

## PROJECT MANAGEMENT DEFINITION

Project management is the **of** knowledge, skills, tools, and techniques to project activities to



Villard de Honnecourt

# Life May Be Like A Box Of Chocolates



But Projects Are Like A Bowl of Ice Cream!

# ACHIEVING SUCCESS BY:

- Understanding Stakeholder requirements
- Timely and concise communication
- Creation of municipal water district for long term financing
- Local Financial Partners for Short Term
- Design Build Contracting for schedule flexibility and acceleration