



Tranquillon Ridge

OOIP = 1.3 billion bbls

Underground Energy, Inc.

A Better Approach

August 2008

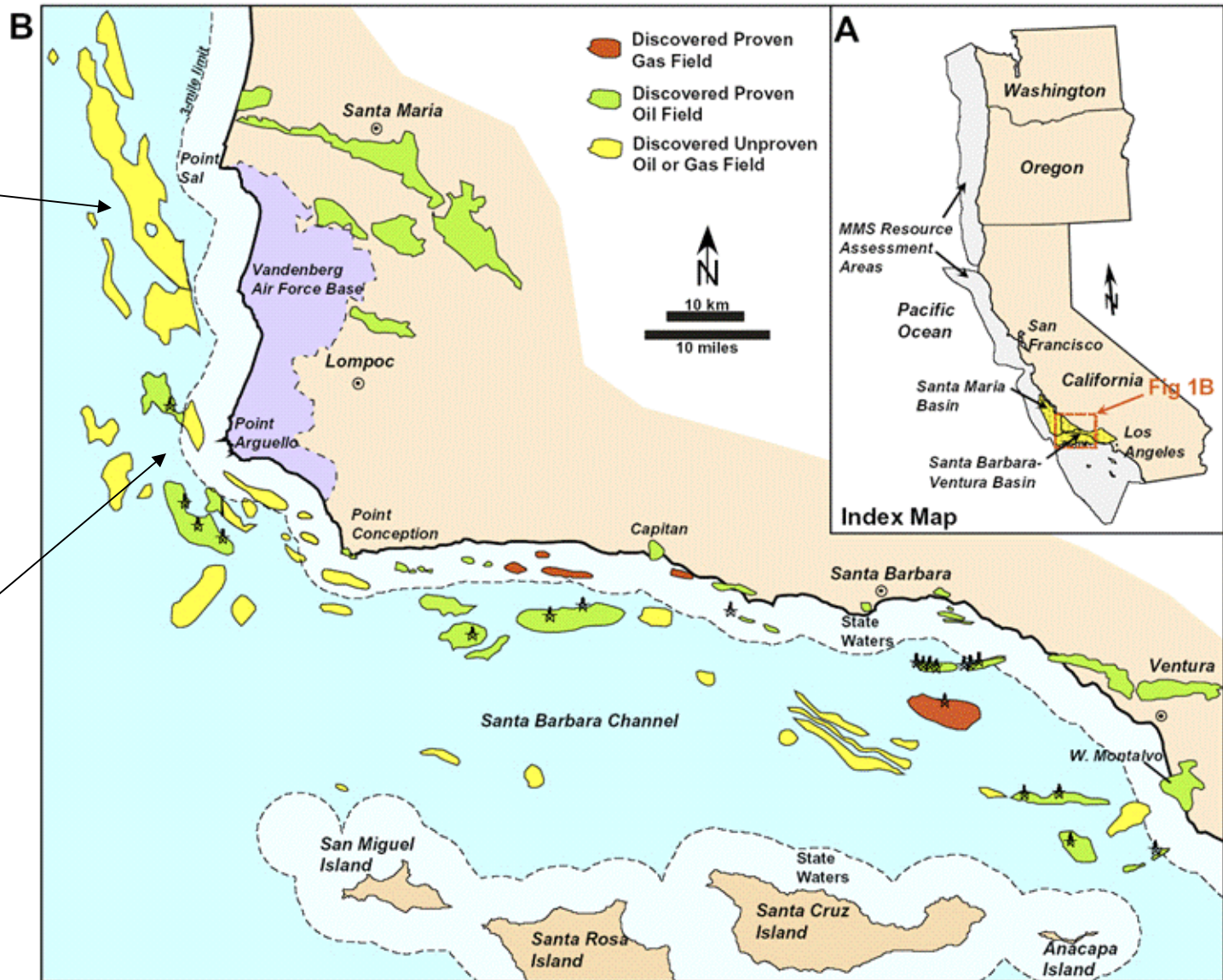


Outer Continental Shelf (Federal) and California Tide Lands

Northern Santa Maria Basin
~ 323 mbbls

Discovered Unproven candidate resources

Tranquillon Ridge





The Resource

OOIP = 1.3 billion STB

- Acres = 2,975
- Acre-ft = 4,218,750
- Porosity=6%(fracture 4%,matrix 2%)
- Water saturation = 25%
- FVF = 1.13 RB/STB (Standing)

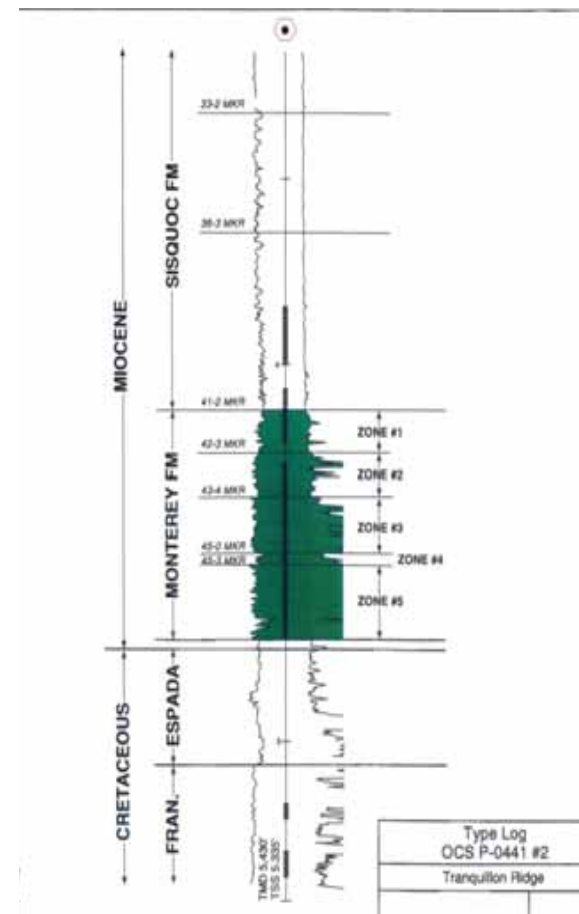
Data from Pages 2-16 & 2-17

“Tranquillon Ridge Drainage Study”

Allan Spivak Engineering

November 2001

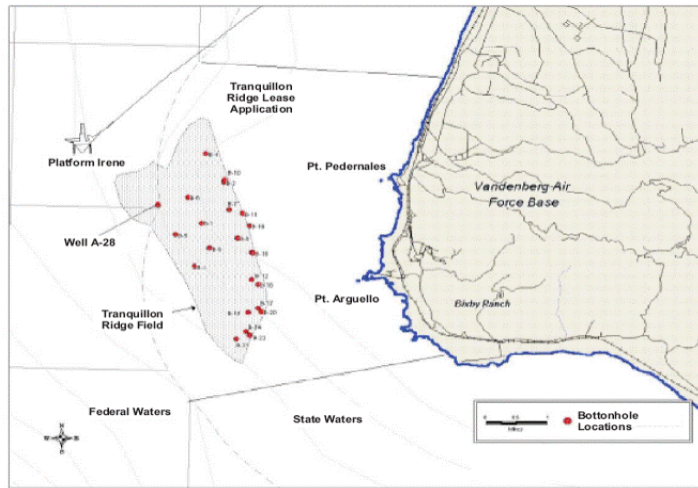
Prepared for: Calif. State Lands
Commission





PXP and Exxon/Sunset Proposals

PXP – Platform Irene



Exxon/Sunset Vahevala

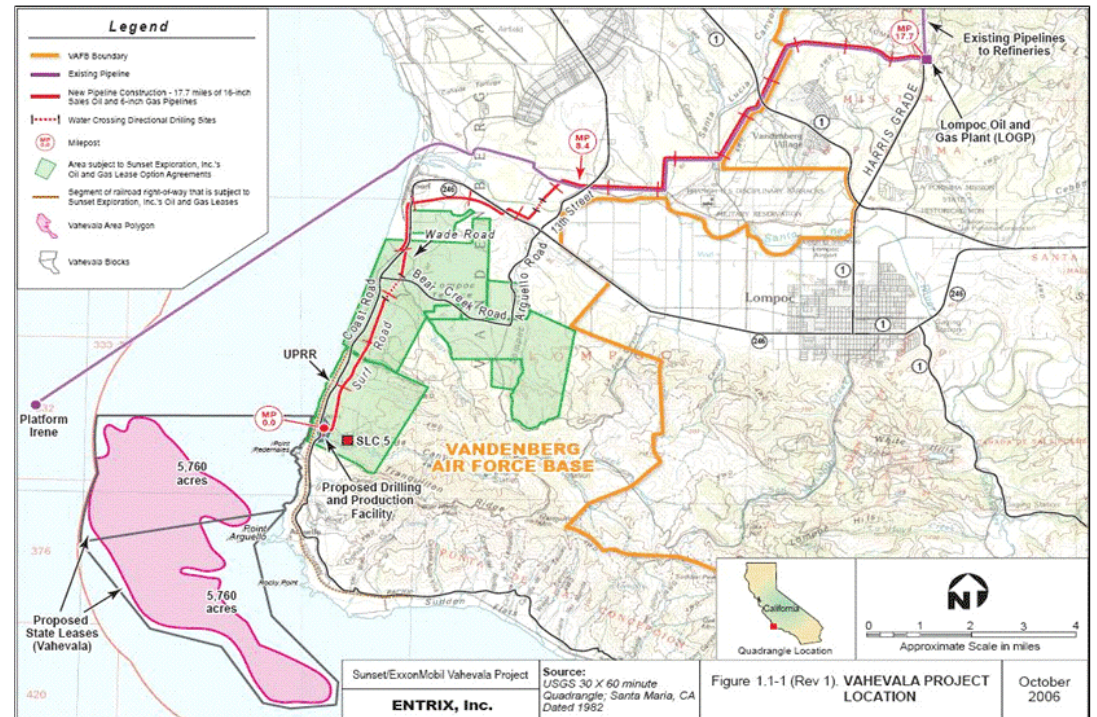


TABLE 2.1 PROPOSED WELL LOCATIONS AND DISTANCES

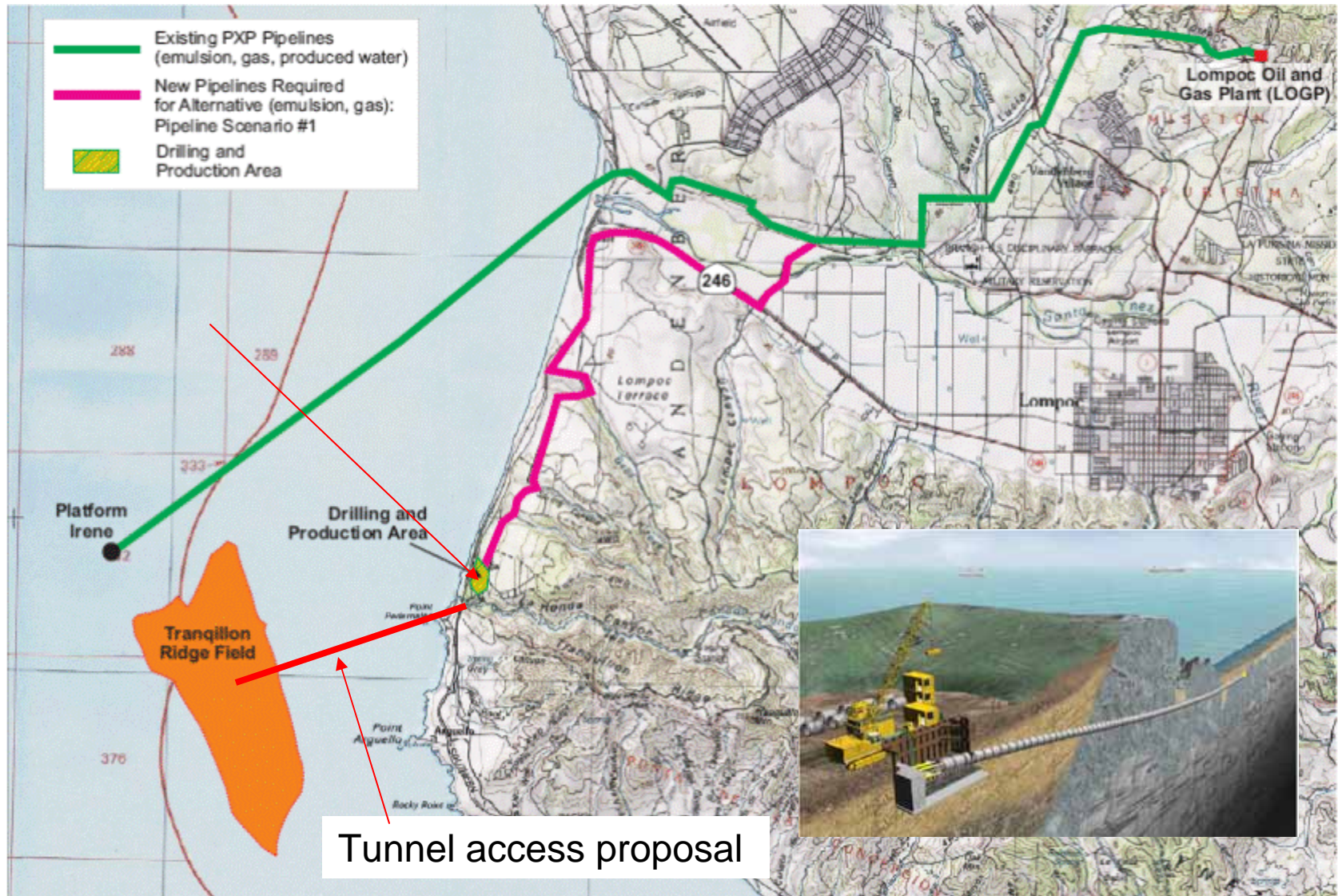
Well Number	Approximate Measured Length, feet	Estimated Drilling Days	Horizontal Distance from Irene, feet
B-1	15,000	60	13,250
B-2	15,000	60	13,250
B-3	17,300	90	15,600
B-4	13,090	60	11,250
B-5	14,060	60	12,250
B-6	12,850	60	10,975
B-7	16,200	90	14,600
B-8	18,100	90	16,600
B-9	16,860	90	15,300
B-10	15,000	60	13,250
B-11	17,370	90	15,800
B-12	21,540	120	20,000
B-13	19,800	120	18,400
B-14	24,700	120	23,300
B-15	23,390	120	22,050
B-16	22,225	120	20,750
B-17	23,750	120	22,300
B-18	19,900	120	18,500
B-19	18,650	90	16,900
B-20	24,070	120	22,750
B-21	24,900	120	23,400
B-22	25,150	120	23,800

Note: the wells may not be drilled in numerical order.

9/8/2008

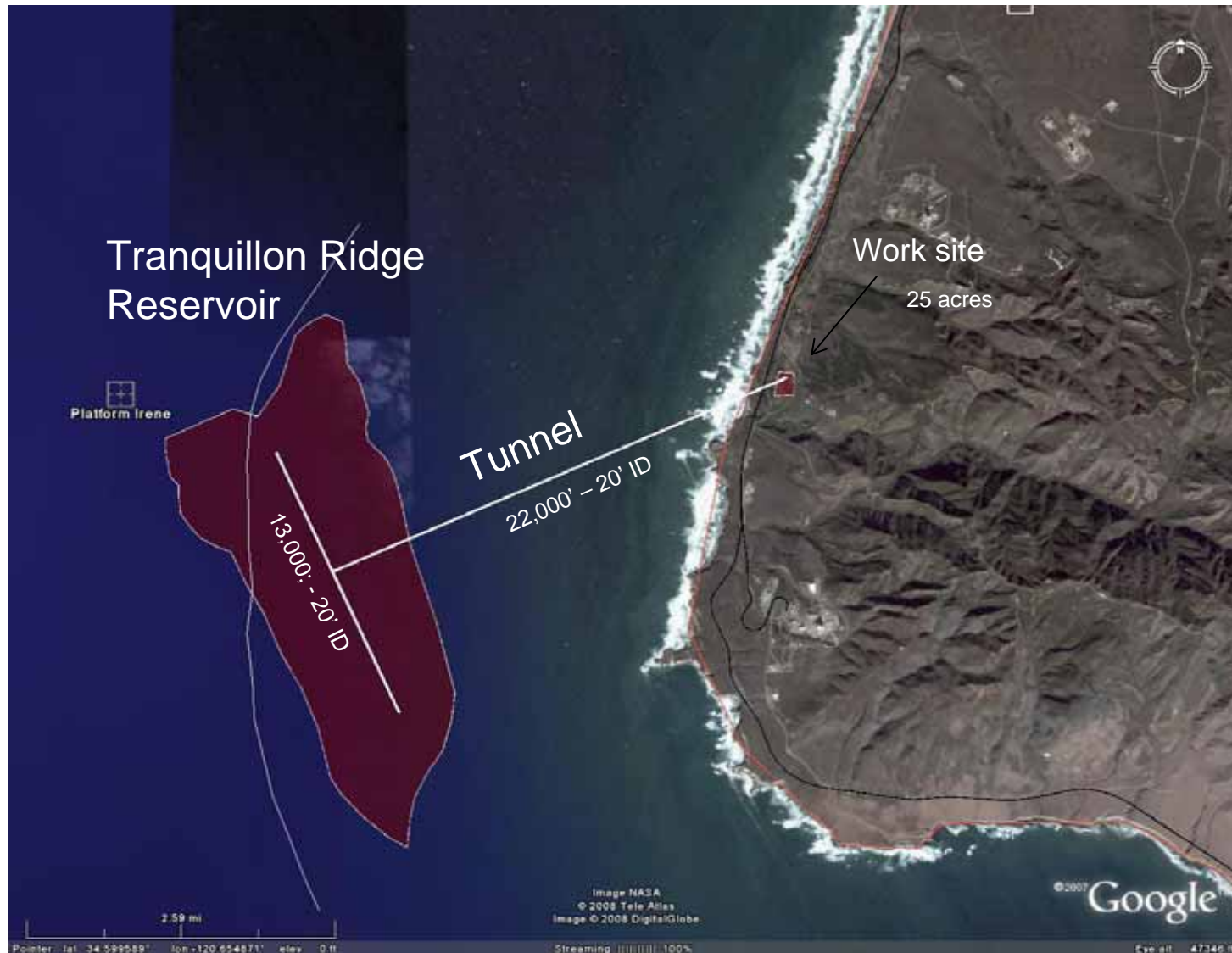


Underground Energy proposal – subsea access **tunnel** from VAFB





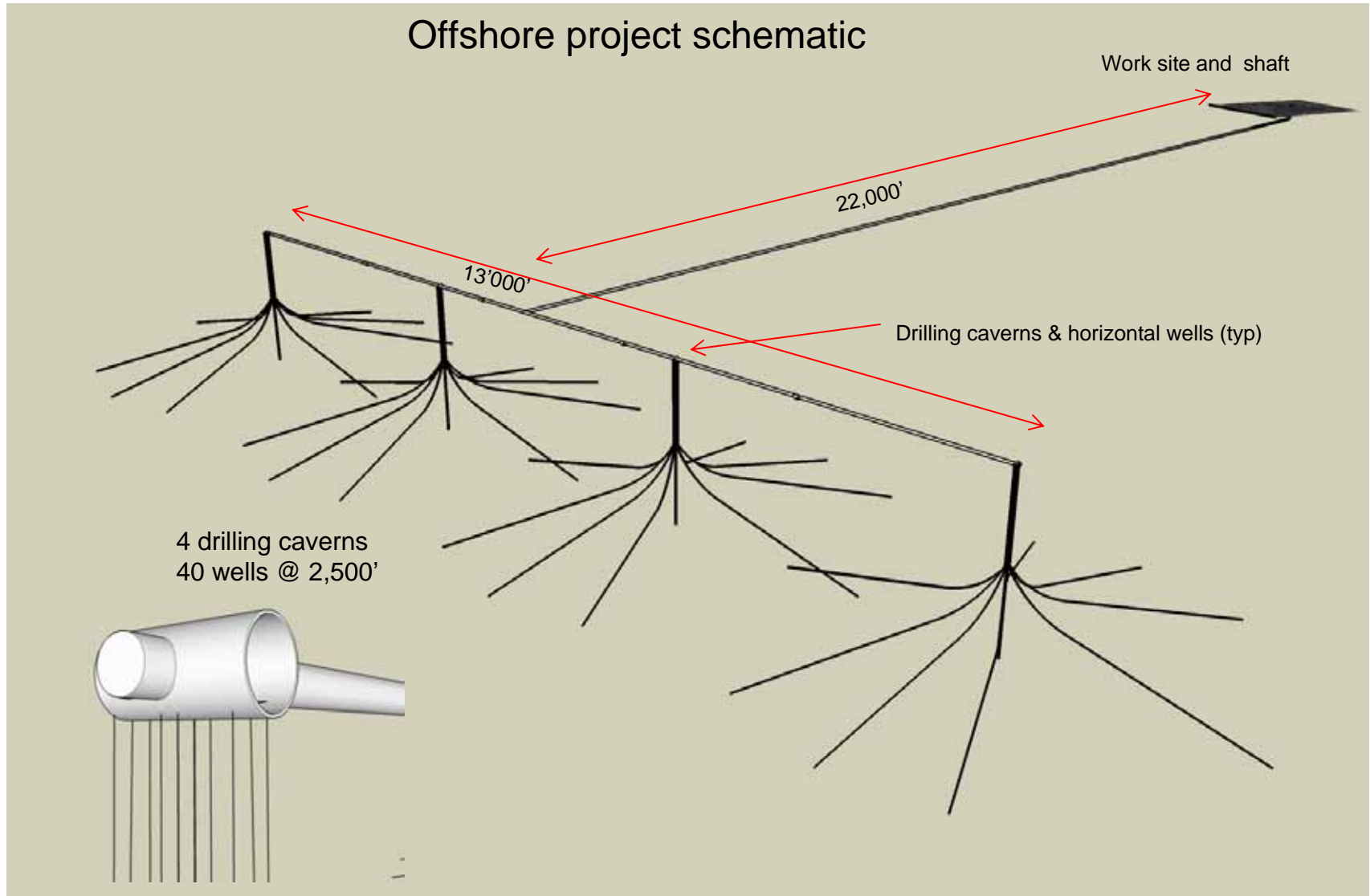
Underground Energy Tunnel



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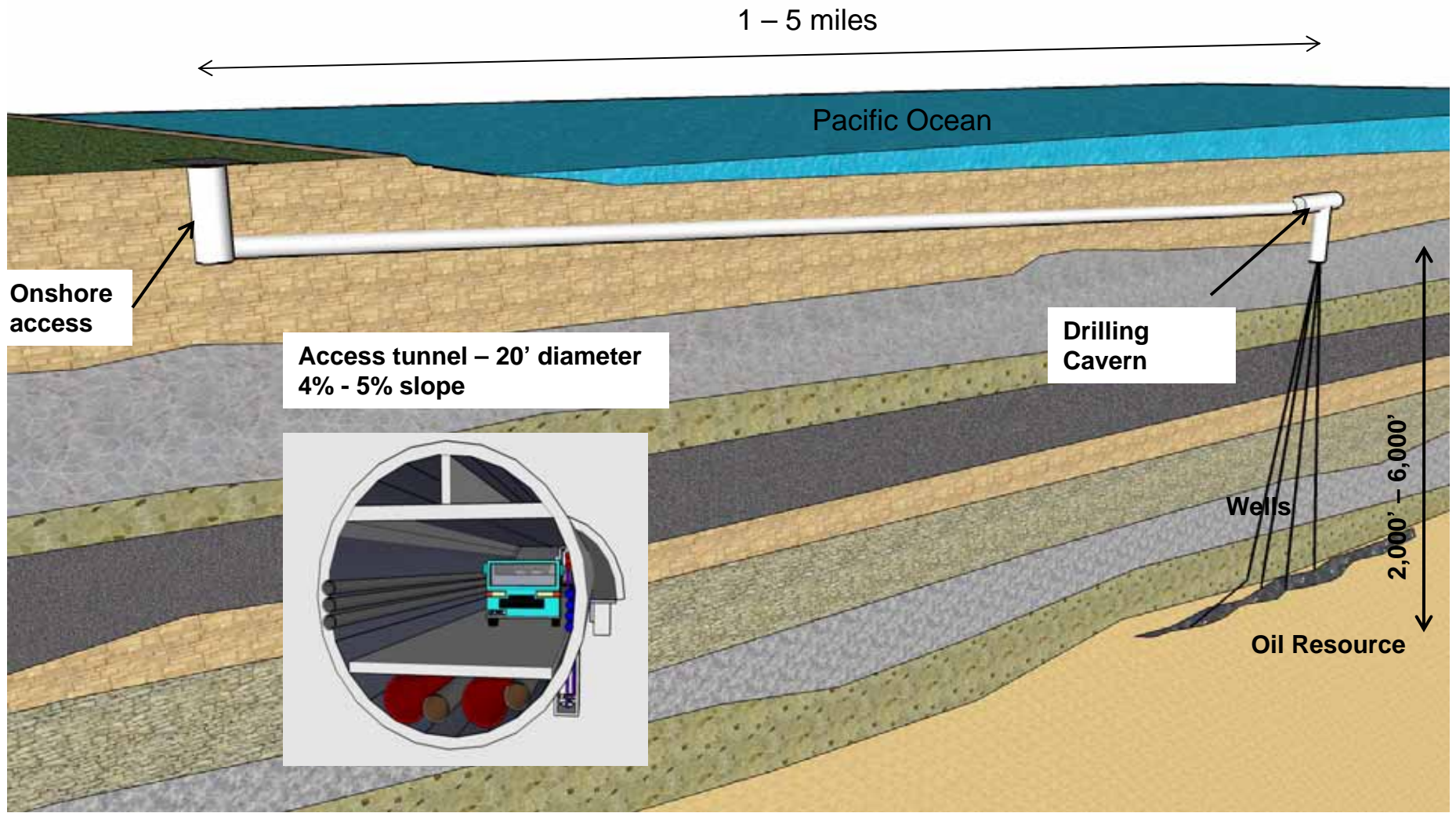


Tranquillon Ridge Tunnel Access from VAFB



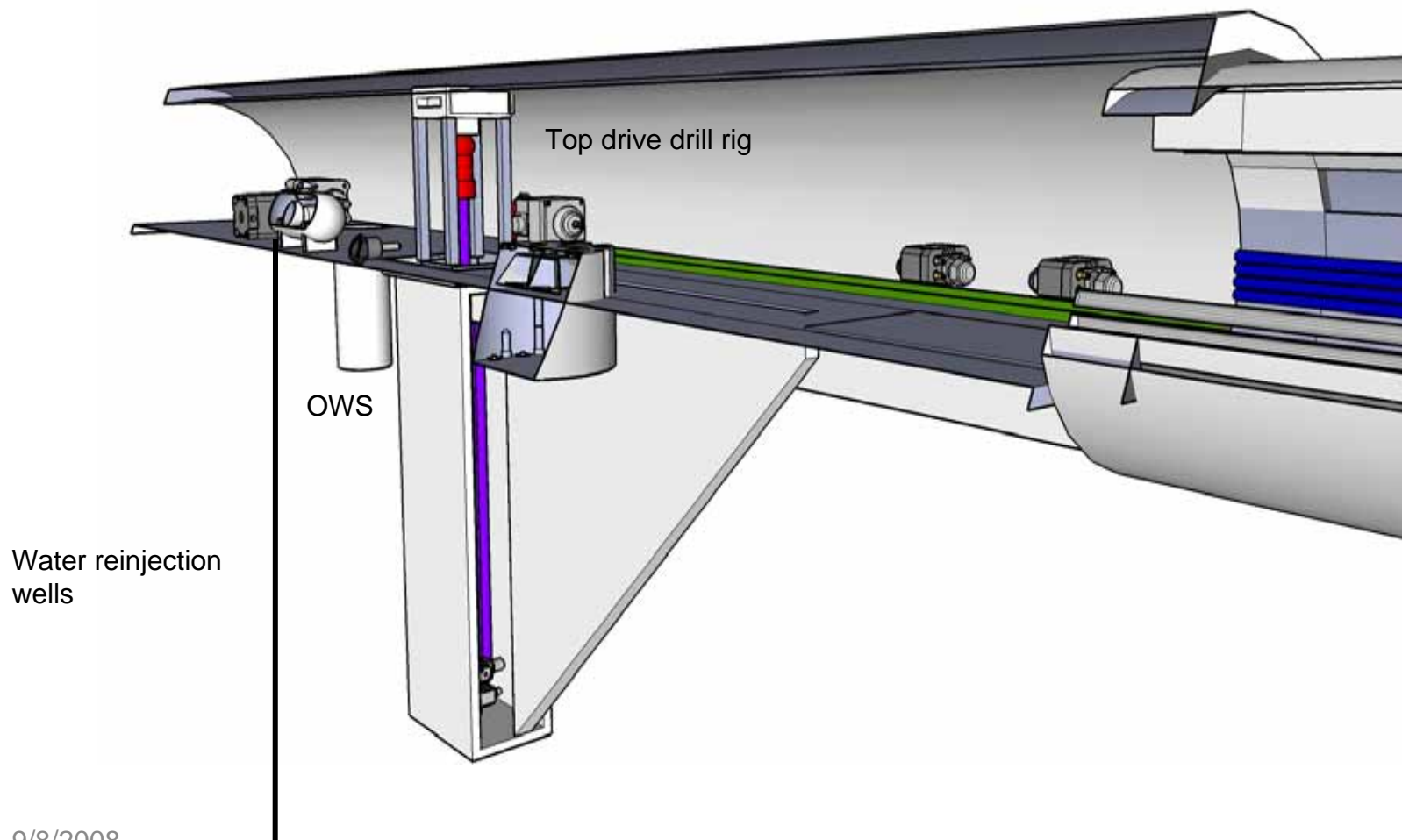


Offshore oil recovery shaft, tunnel and drilling cavern concepts





Concept: Offshore Drilling Cavern Top-side Drilling Rig & Equipment



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VAFB Onshore Work Site

Onshore project concept





Recovery Comparison PXP, Exxon/Sunset, Underground Energy

PXP estimated recovery = **135 to 170 million bbls (10%)**

Exxon/Sunset estimated recovery = **250 million bbls (19%)**

Underground Energy = 500 million bbls (38%)

Our higher recovery comes from:

1. Greater well density
2. EOR methods can be employed because we will be +/- 2,250 ft directly over the resource
3. Lower operating costs during production
4. Resource can be produced longer

Greater State and S.B. County Revenues !



Underground Energy Advantages

- Environmentally responsible approach to access offshore oil resource.
- No structures or facilities in or on the water.
- No risk of offshore oil spill (pipeline or well).
- No discharges to the ocean.
- No visual impacts, Out-of-site, underground and secure production facilities.
- No impacts to fisheries or marine navigation.
- Lower risk compared to extended reach drilling.
- Reduction in natural oil seepage – cleaner beaches.
- Capital cost equal to or less than extended reach drilling.
- Better conservation of the natural resource achieving 40% or more recovery of the oil in place.



Underground Energy Summary

- **We combine underground construction methods with enhanced oil recovery technologies.**
- **We can extract shallow oil, heavy oil, tar sands, onshore and offshore.**
- **Our method minimizes environmental impacts with a better extraction method.**
- **Oil recoveries and operating efficiencies are increased.**

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