

Alameda-2 Appraisal Update – Webinar Presentation

SYDNEY, AUSTRALIA (28 August 2023)

Attached is a presentation that the company proposes to use for its webinar to be held today at 11:30AM AEST.

Released by authority:

**For and on Behalf of the Board of
Directors:**

Mr Andrew Purcell
Executive Chairman

Ends -

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MELBANA ENERGY LIMITED

ASX Code: MAY

Alameda-2 Appraisal Update

28 August 2023



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Contingent and Prospective Resources: Unless otherwise specified, the information that relates to Contingent Resources and Prospective Resources for Melbana is based on, and fairly represents, information and supporting documentation compiled by Mr. Dean Johnstone, who is an employee of the company and has more than 34 years of relevant experience. Mr. Johnstone is a member of the American Association of Petroleum Geologists. Mr. Johnstone consents to the publication of the resource assessments contained herein. The Contingent Resource and Prospective Resource estimates are consistent with the definitions of hydrocarbon resources that appear in the ASX Listing Rules.

Prospective Resources Cautionary Statement (PRSC): The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Future exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

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Videos from the field

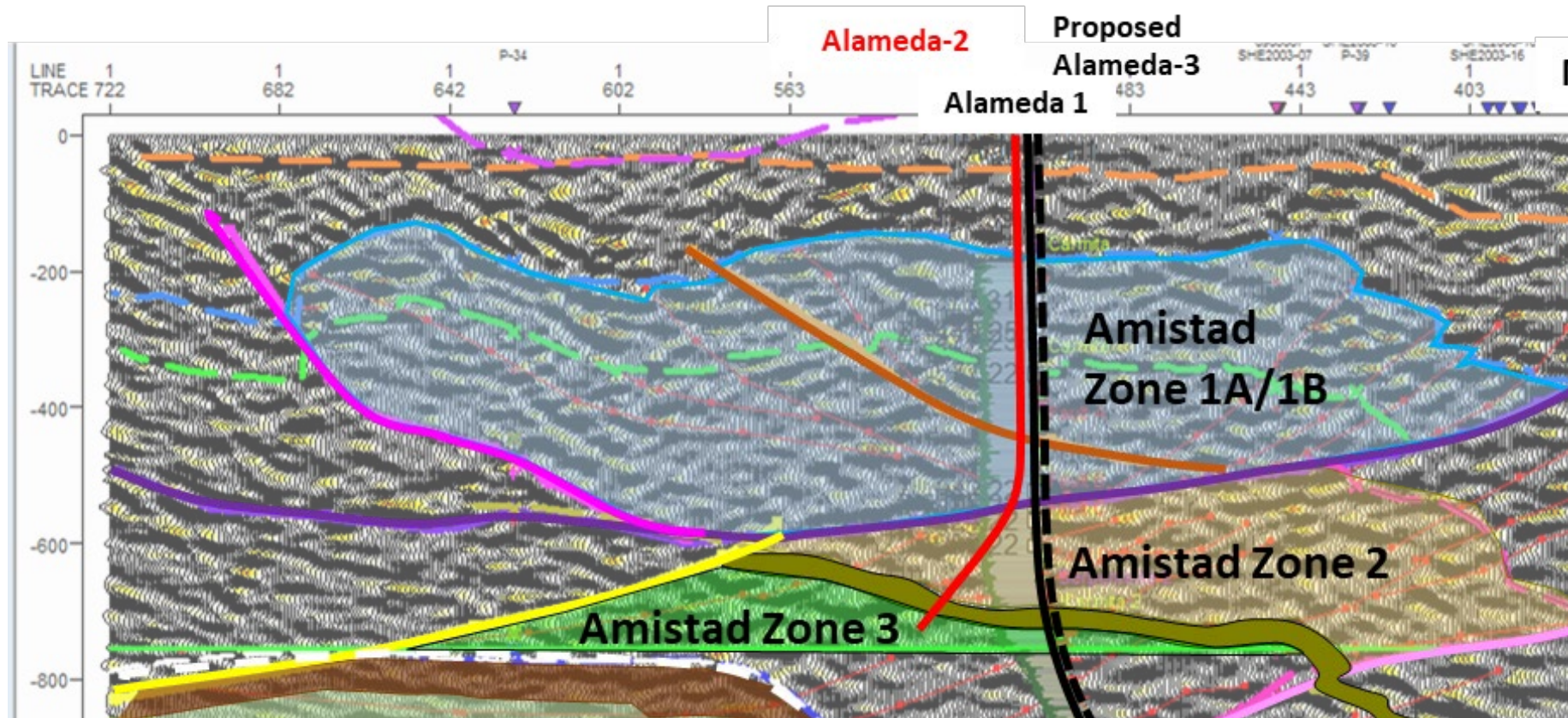
Oil in the tanks
from DST-4
(Unit-1B)



First look at oil
from Unit-1B

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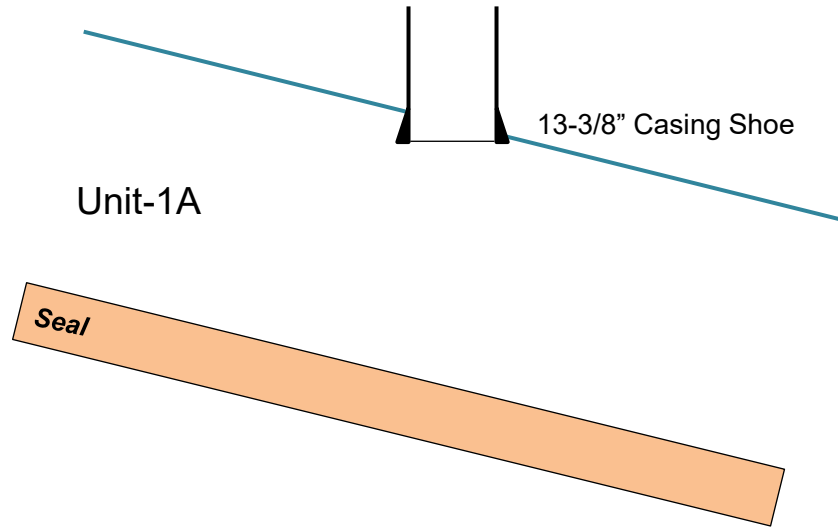
Objectives for Alameda-2 Appraisal Well



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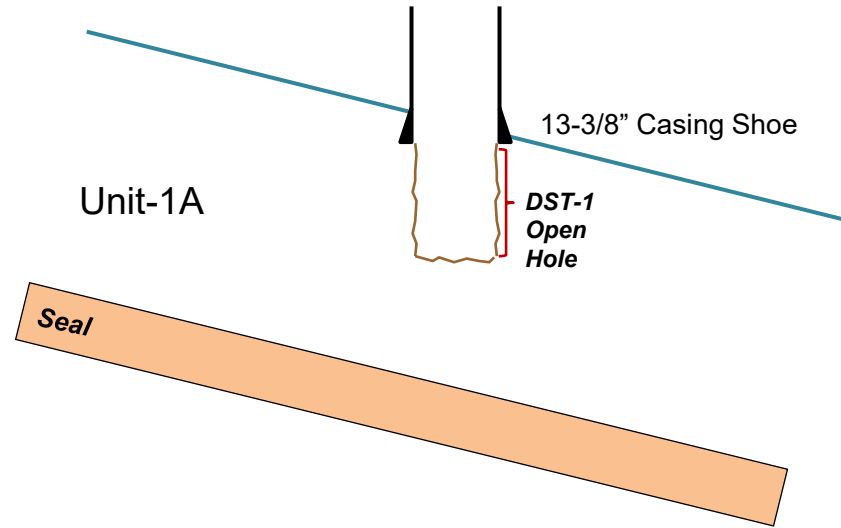
Alameda-2 Test Sequence

Set 13-3/8"
Casing in seal
above Unit-1A



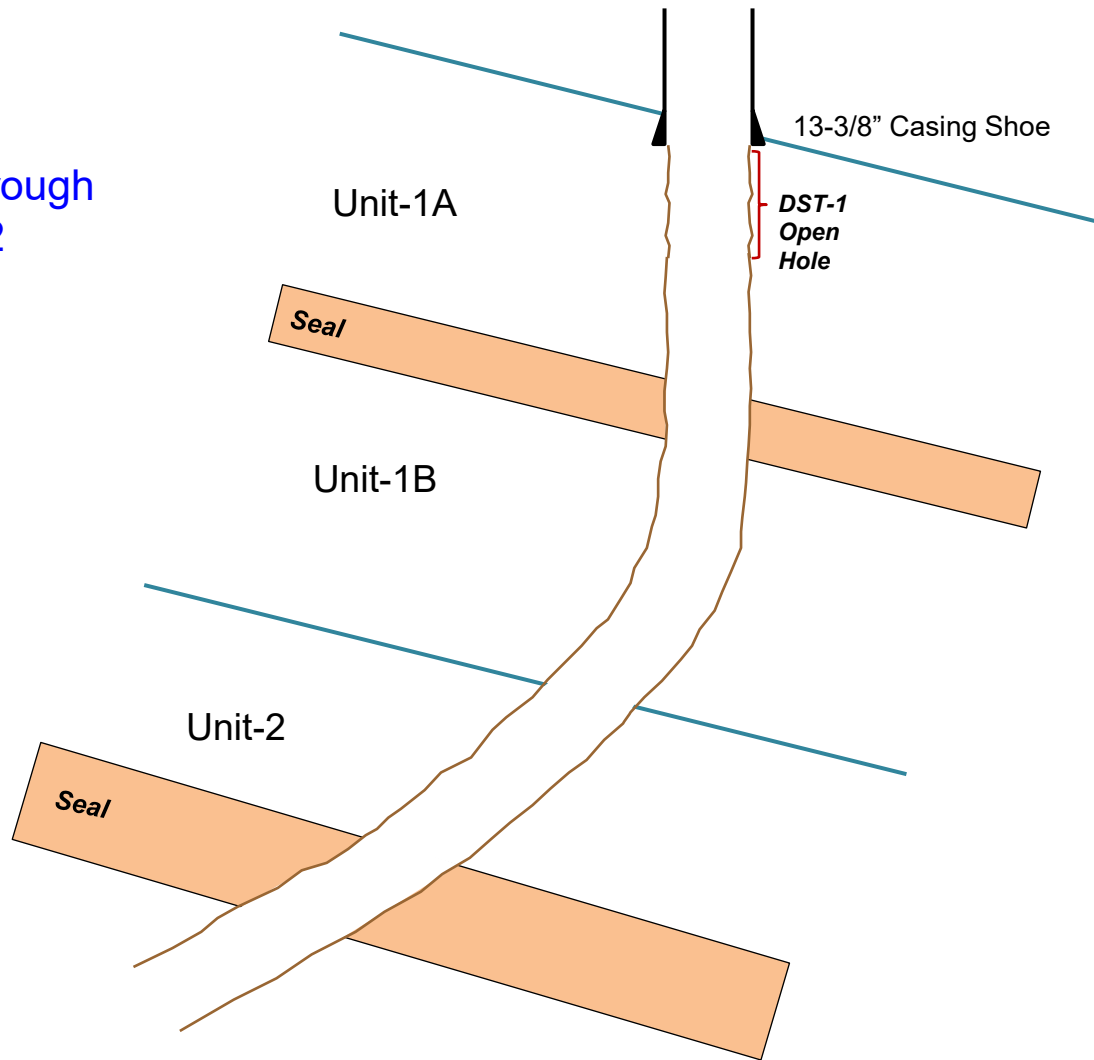
Alameda-2 Test Sequence

Drill 8-1/2" hole into Unit-1A and Flow test DST-1 in open hole



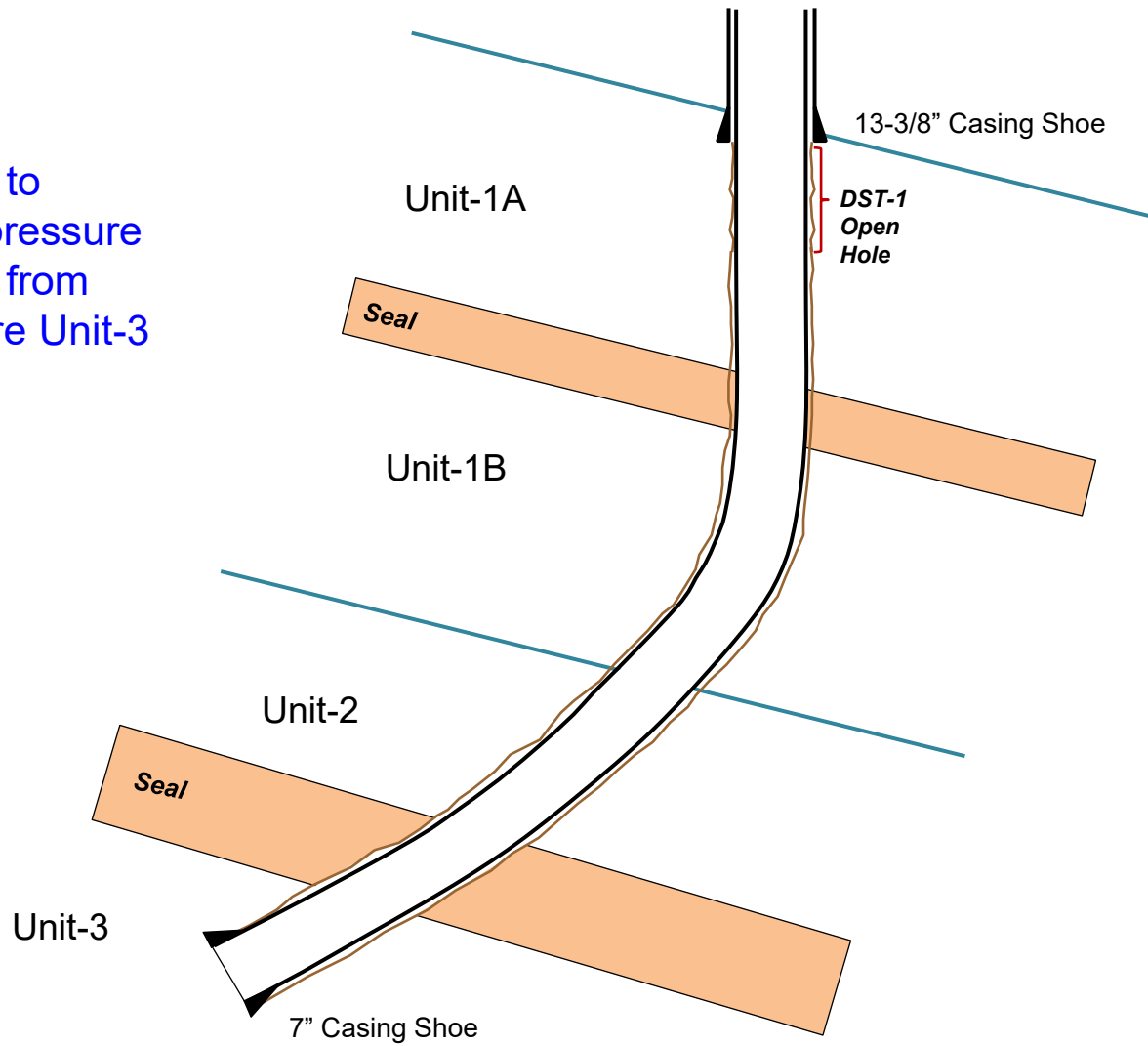
Alameda-2 Test Sequence

Drill 8-1/2" hole through
Units 1A, 1B and 2



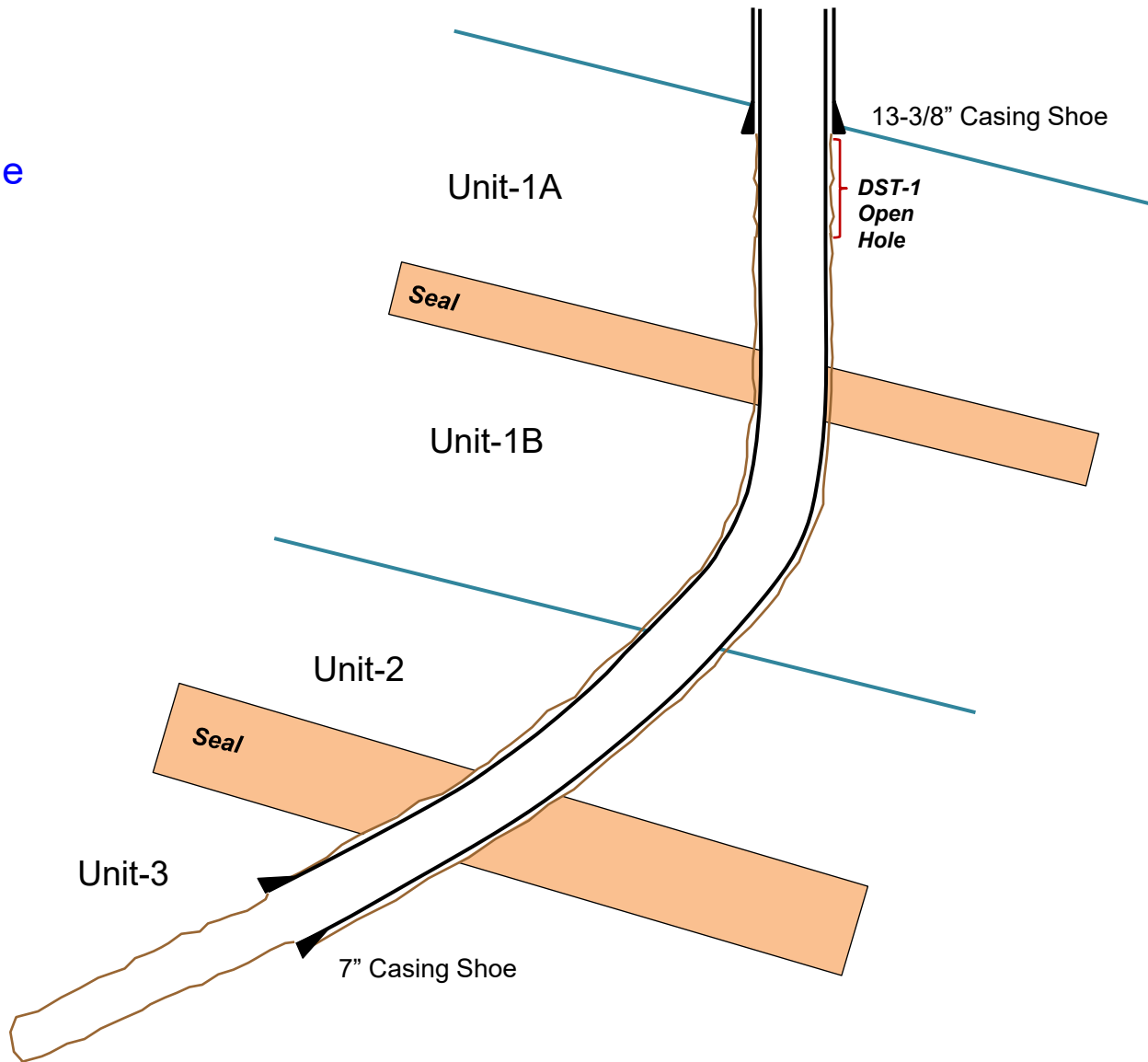
Alameda-2 Test Sequence

Run 7" casing to isolate lower pressure Units 1A & 1B from higher pressure Unit-3



Alameda-2 Test Sequence

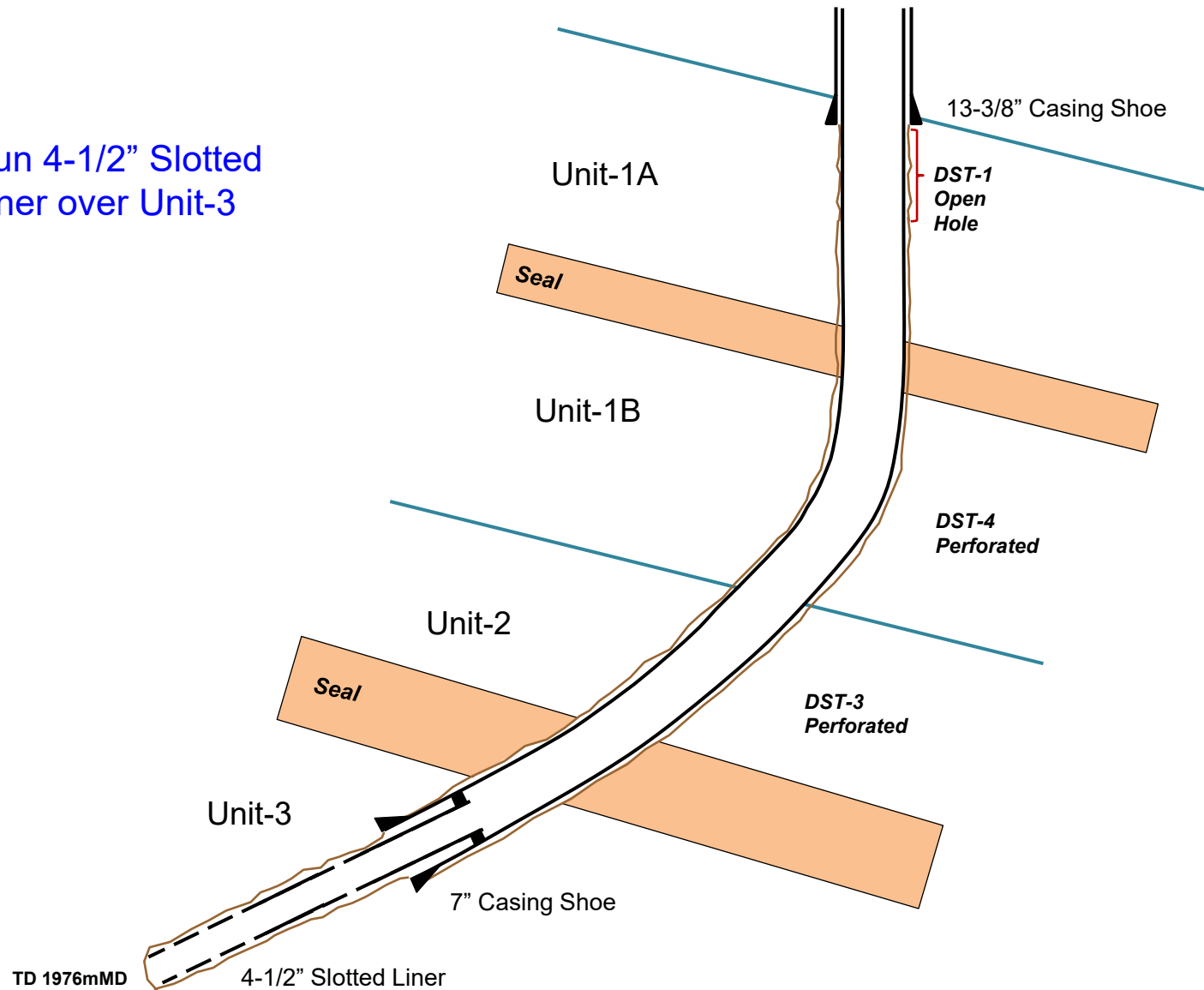
Drill 6" Hole
into Unit-3



TD 1976mMD

Alameda-2 Test Sequence

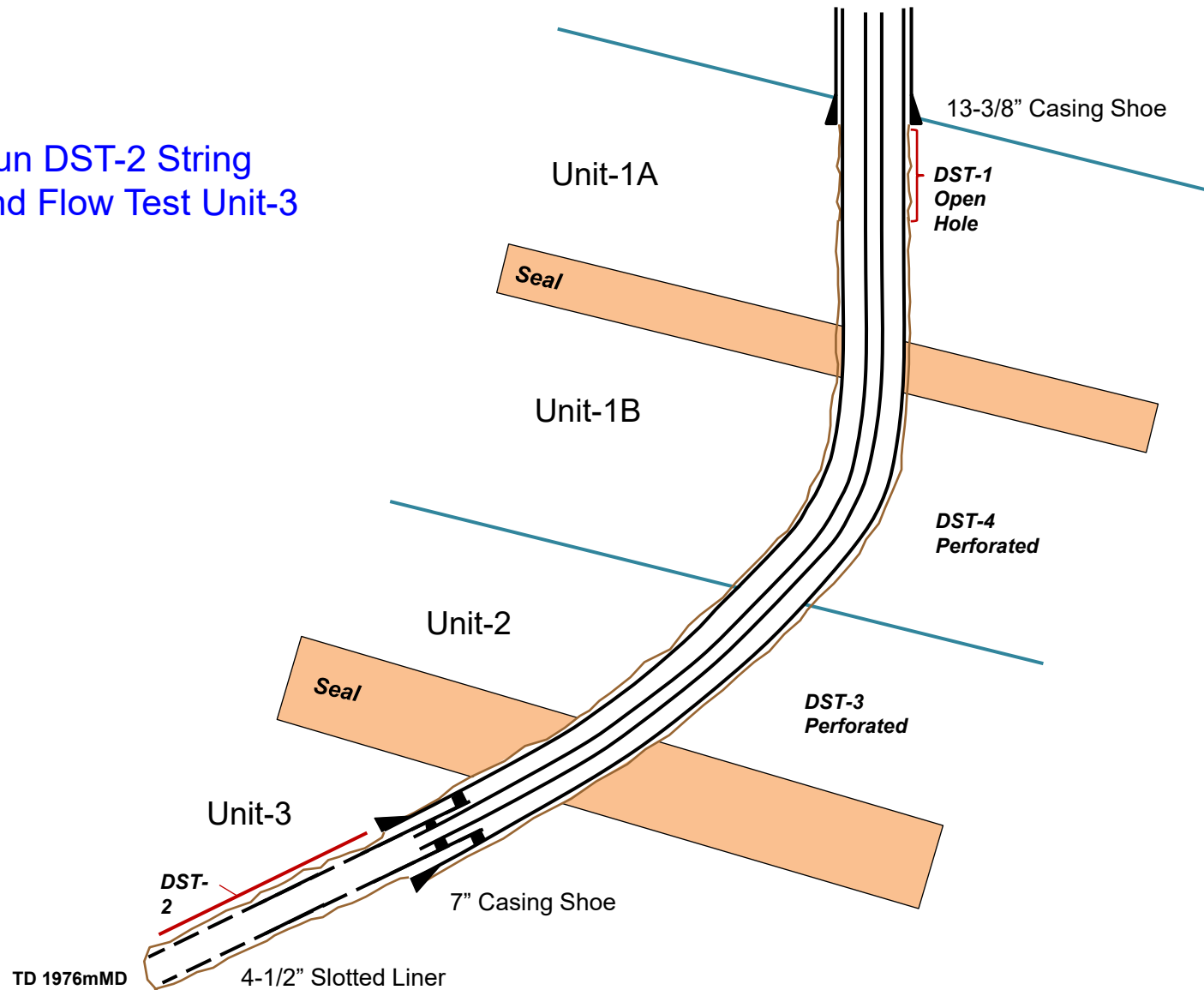
Run 4-1/2" Slotted
Liner over Unit-3



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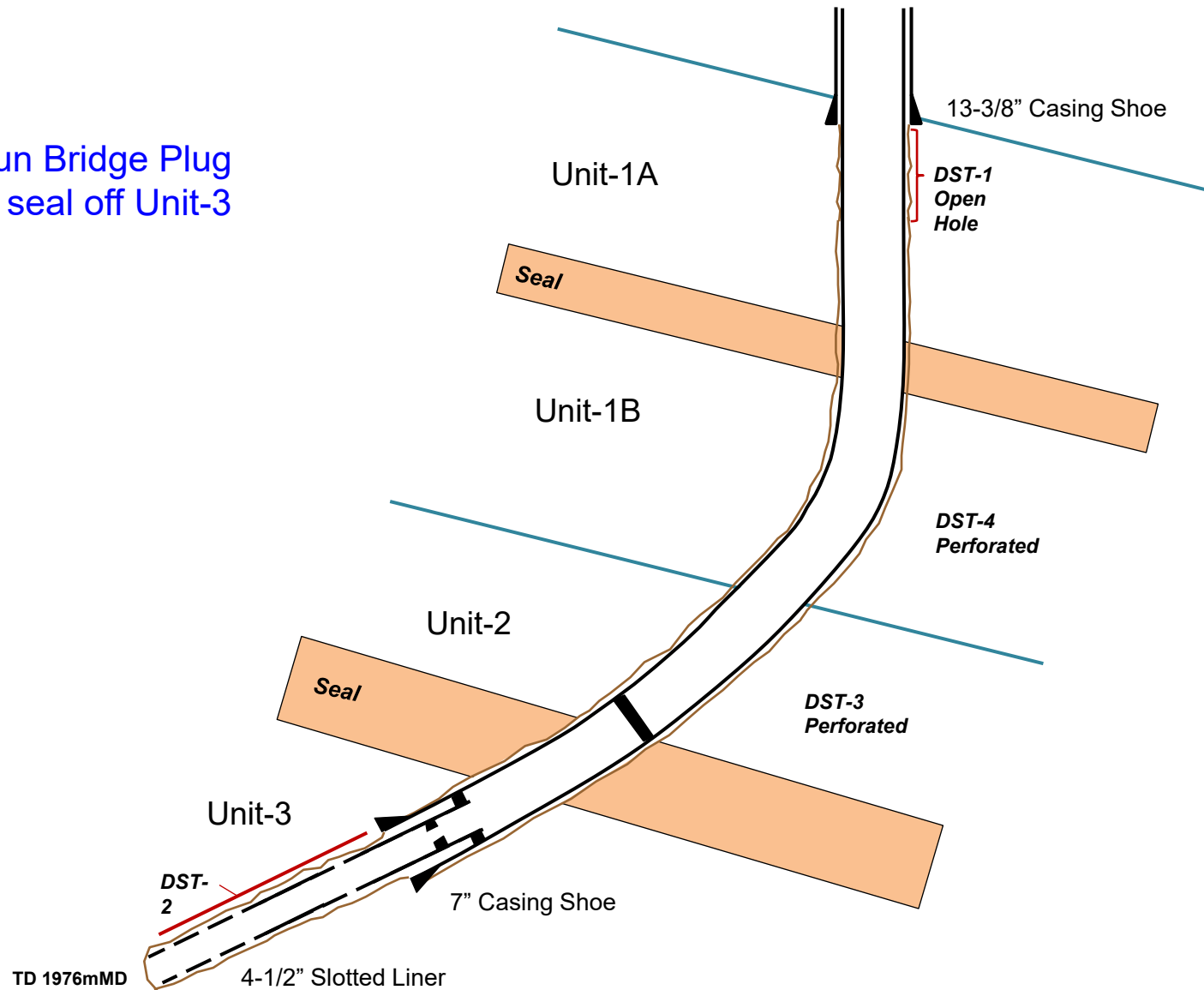
Alameda-2 Test Sequence

Run DST-2 String
and Flow Test Unit-3



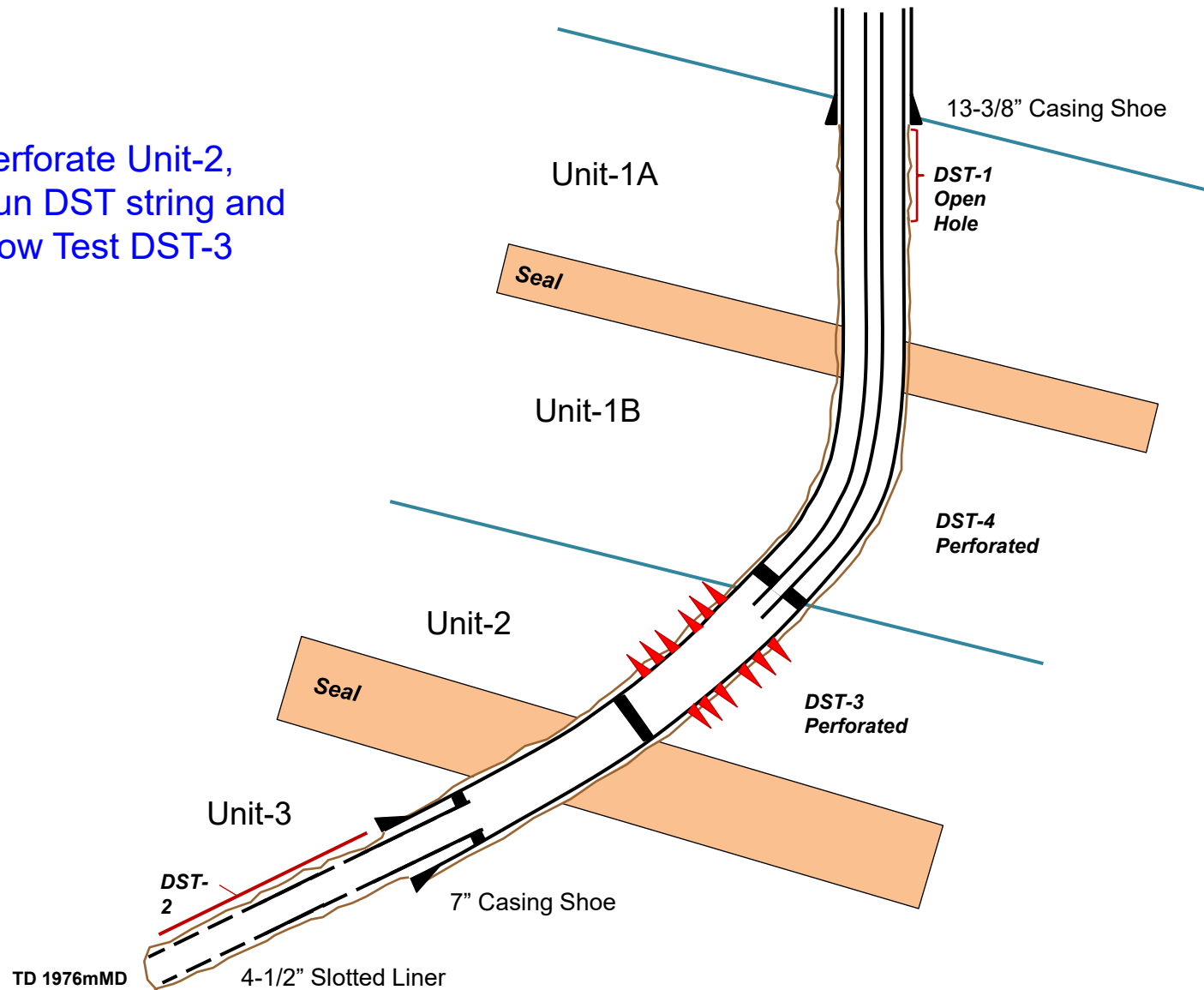
Alameda-2 Test Sequence

Run Bridge Plug
to seal off Unit-3



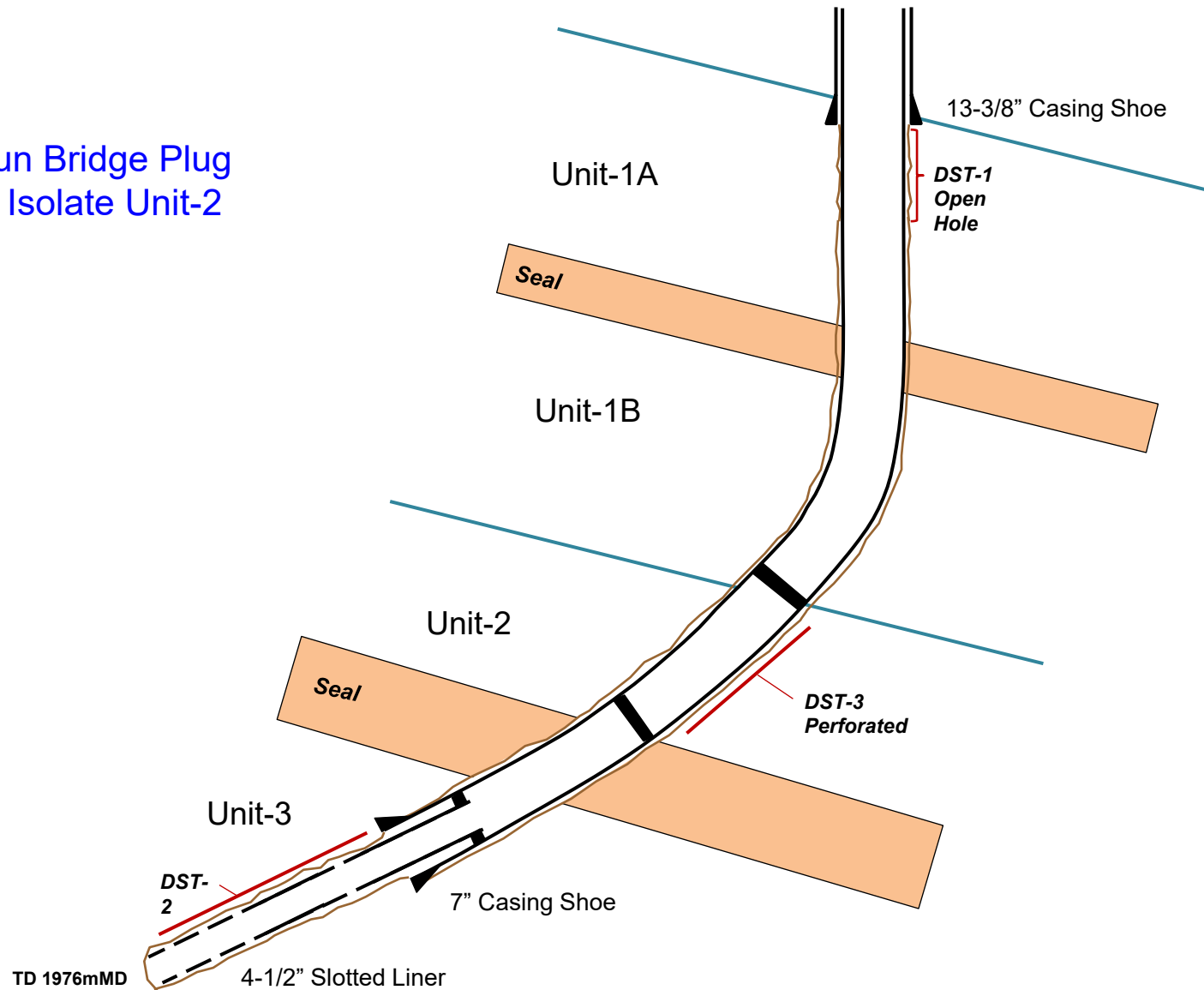
Alameda-2 Test Sequence

Perforate Unit-2,
Run DST string and
Flow Test DST-3



Alameda-2 Test Sequence

Run Bridge Plug
to Isolate Unit-2

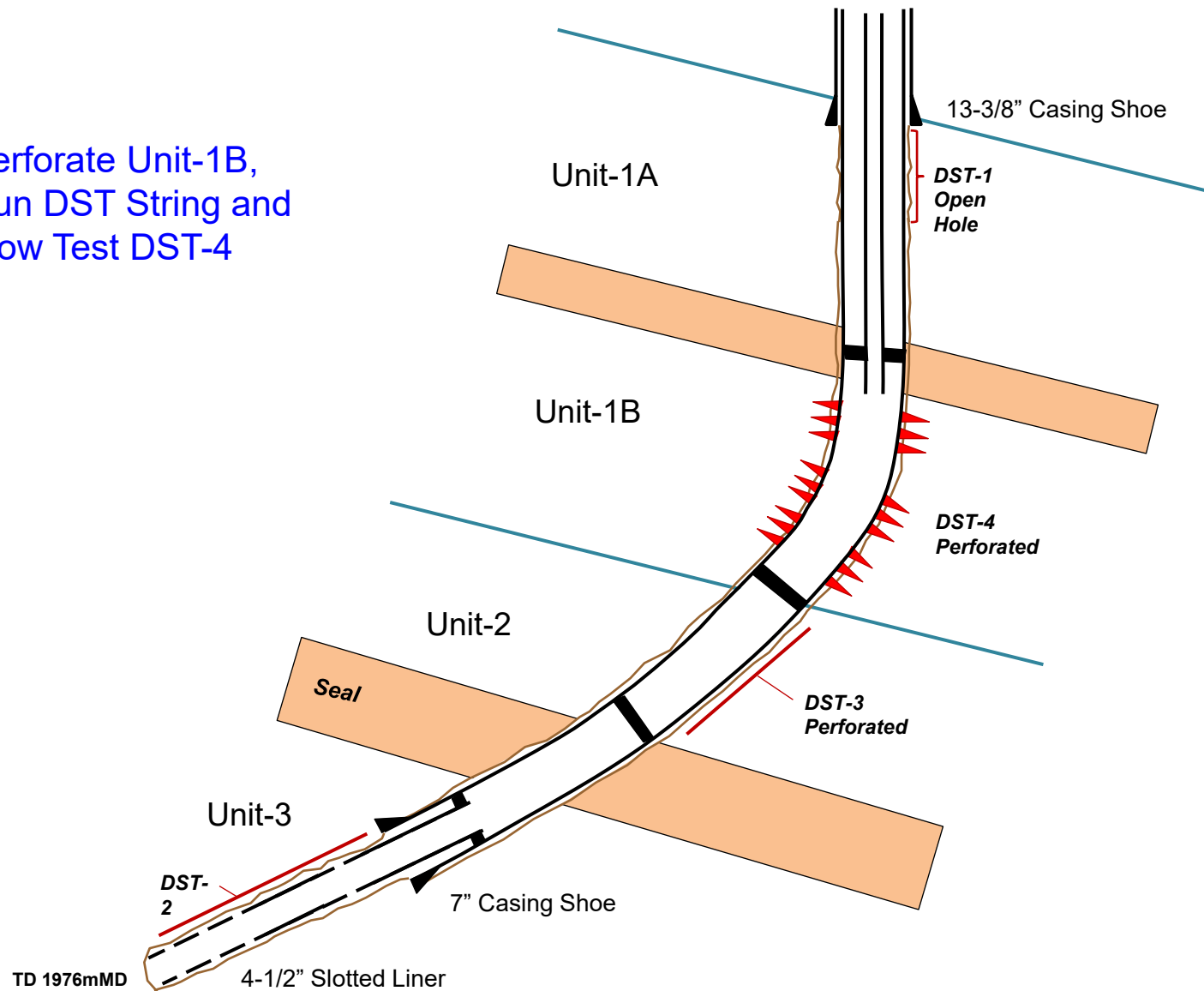


TD 1976mMD

4-1/2" Slotted Liner

Alameda-2 Test Sequence

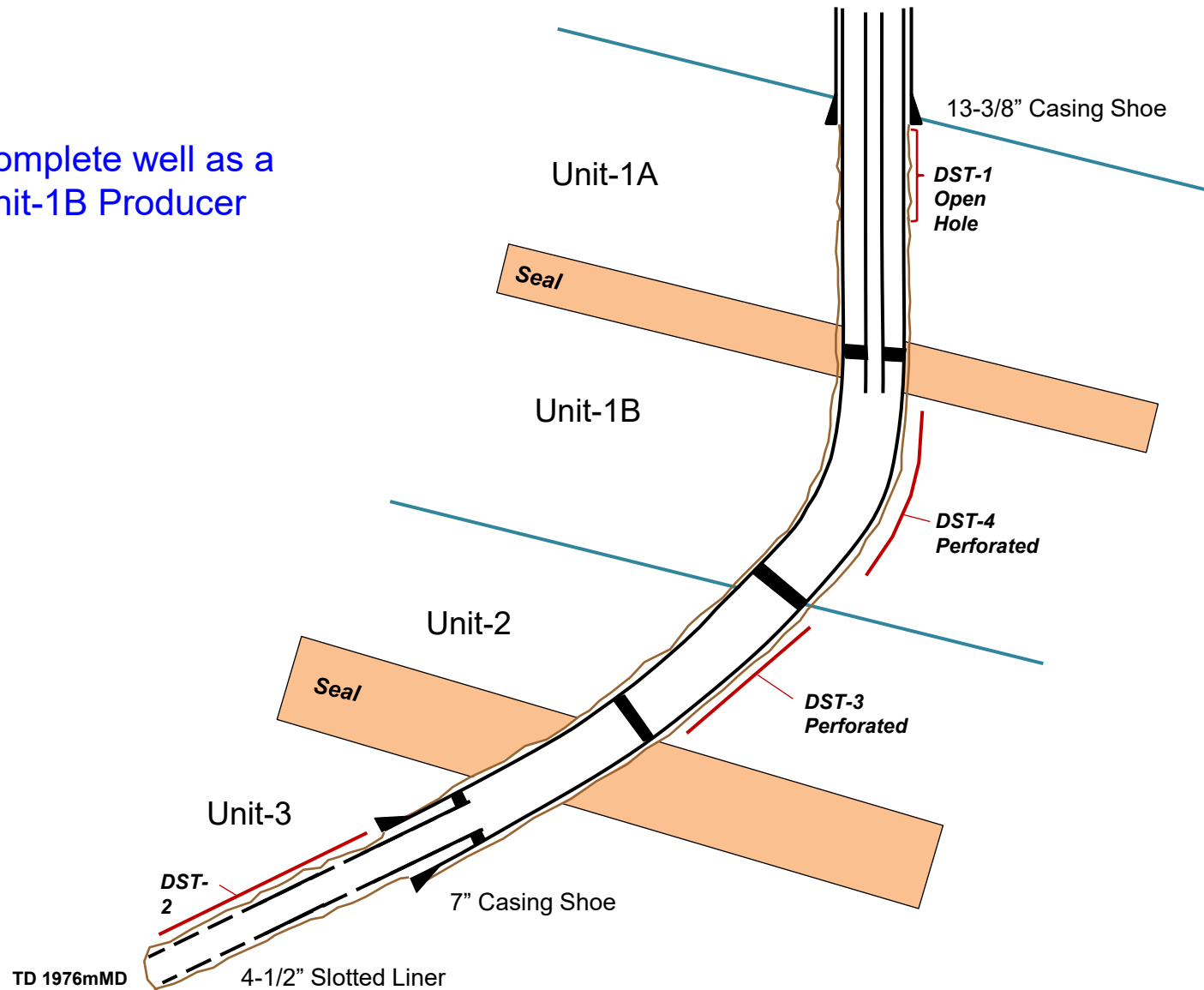
Perforate Unit-1B,
Run DST String and
Flow Test DST-4



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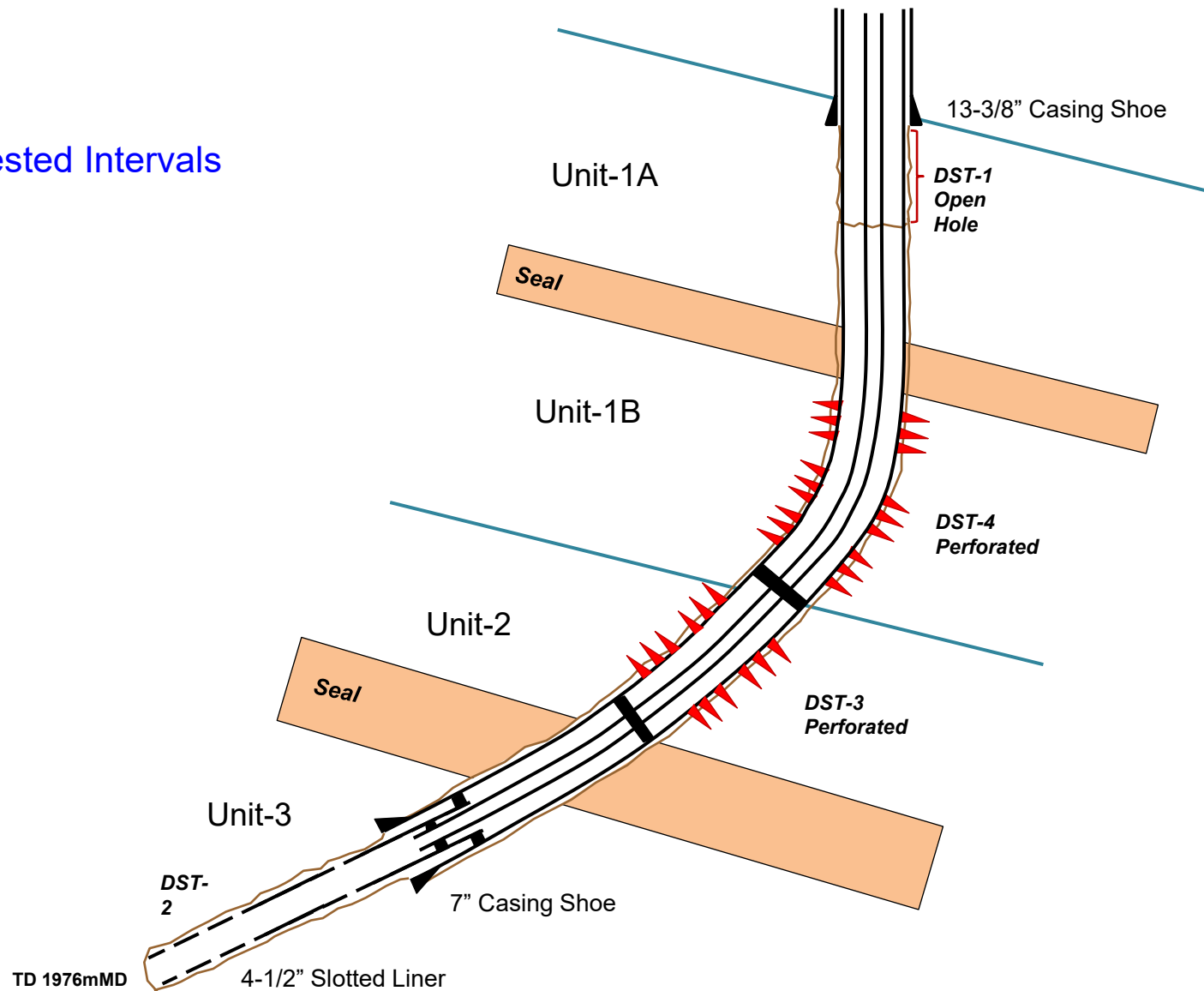
Alameda-2 Test Sequence

Complete well as a Unit-1B Producer



Alameda-2 Test Sequence

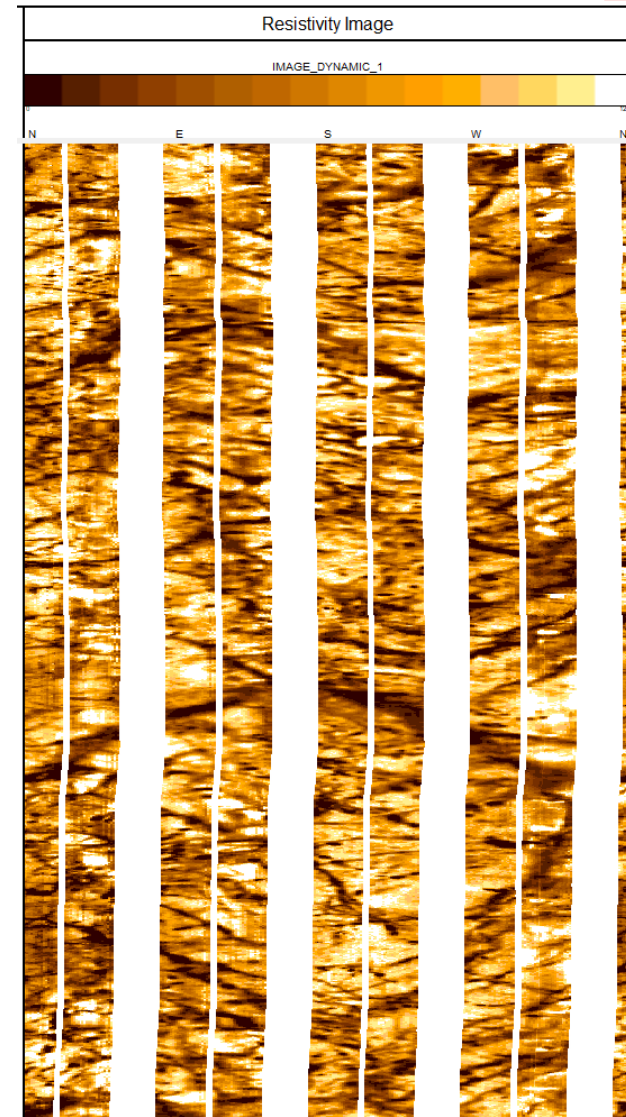
Tested Intervals



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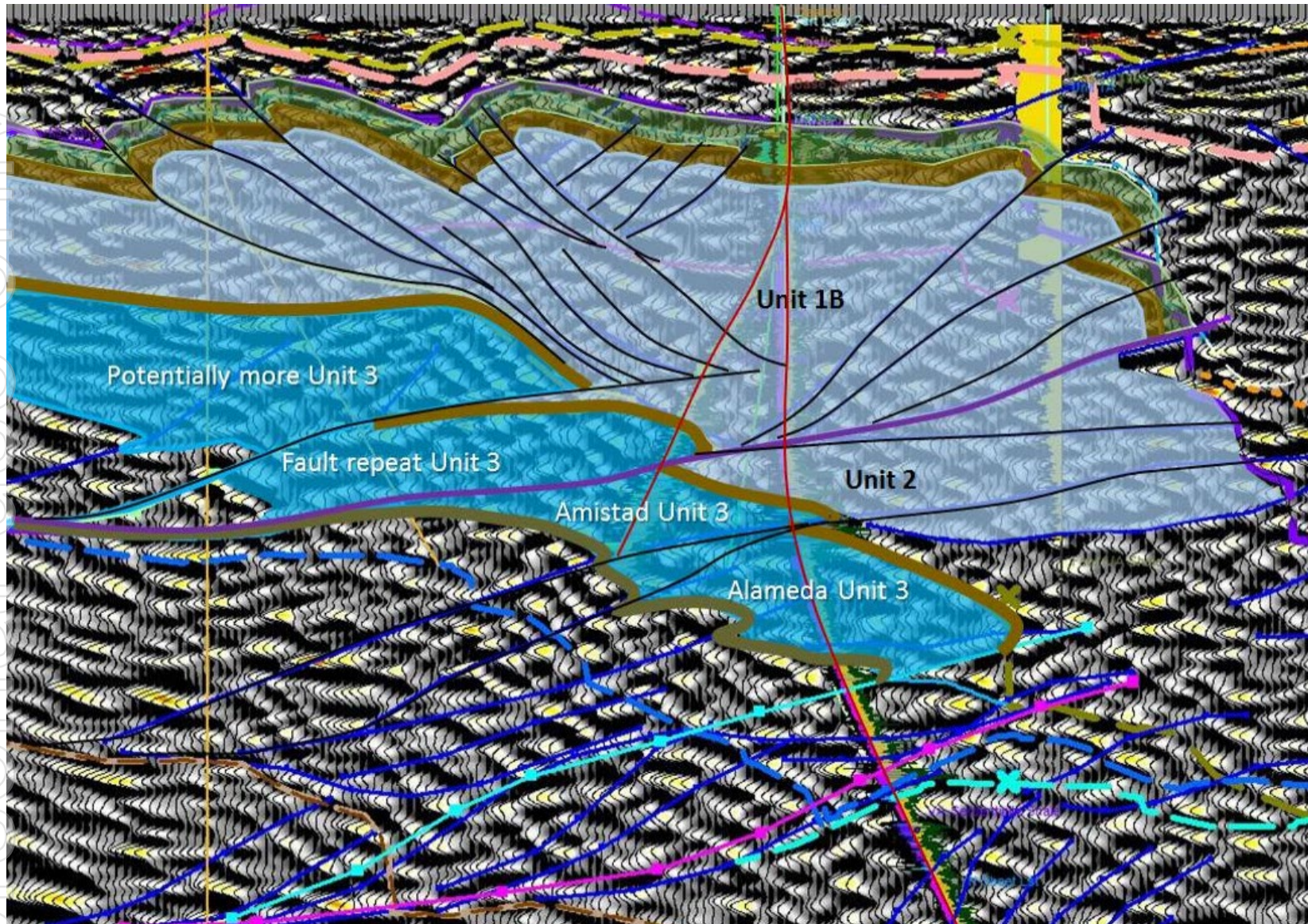
Alameda-2 Test Sequence

Resistivity borehole image located directly opposite the Unit 1B perforations. High density of natural fractures are the contributing factor to high oil flow rate.



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Structural Interpretation – Correlation between Alameda-1 and Alameda-2



Unit 1A	heavier oil (12° API)
Shale seal	
Unit 1B	lighter oil (19° API)
Unit 2	Footwall repeat of Unit 1B
Unit 3	Alameda-2 Fault repeated above Alameda-1 Unit 3
Unit 3	Alameda-1

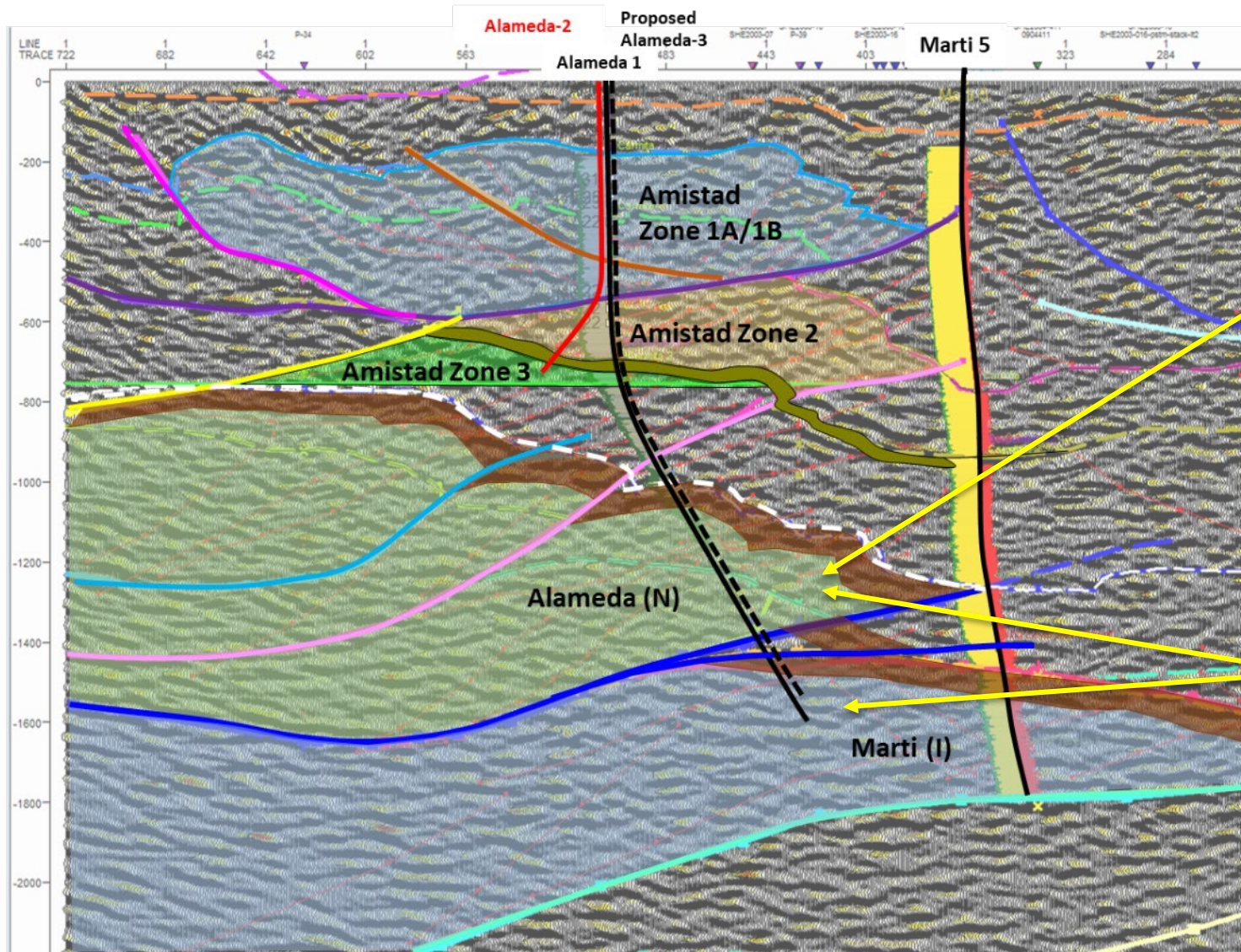
Summary of Alameda-2 appraisal results to date

- Unit 1A recovered 11.7° API oil with 3,783 cP viscosity at surface from a 63 metre MD interval starting from 445 metres MD. Flow rates at surface not established but 40 barrels of oil flowed unassisted to surface (through a 32/64" choke), exceeding expectations.
- Unit 3 intercepted 200 metres updip and 500 metres to the south of where Alameda-1 intercepted it. Moveable oil of a similar quality to Unit 1A confirmed. Testing indicated potential to flow at about 750 bopd.
- Pre-drill prognosed Unit 2 DST did not demonstrate moveable hydrocarbons to surface at the location tested.
- Unit 1B recovered 18.7° API oil with 30 cP viscosity at surface from a 70 metre TVD perforated section – less than 20% of the total Net Pay for Unit 1B (when incorporating fractures). Stabilised unassisted flow rate to surface of 1,235 bopd measured over 12 hours on a 36/64" choke, peaking at 1,903 bopd.
- Logged Net Pay for the entire Amistad Formation has been increased from 109 metres to 346 metres TVD – further increasing to 615 metres when the highly fractured limestones are incorporated (45% of the gross interval).
- Unit 1B has now been completed for future production, whilst Units 1A and 3 have been suspended for potential future development and production.



Alameda-2 Completions Ran Successfully

Forward Program



Alameda

- intercepted down dip. Potential for more interval thickness.

Alameda + Marti

- High formation pressures.
- Quality oil shows.
- Together, potential for higher recoveries unassisted at surface.



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