Innovations in Potash Technologies

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INTREPID POTASH

Intrepid's Innovations

- Past
- Present
- Future

INTREPID POTASH

Intrepid Potash's Cane Creek Potash Solution Mine

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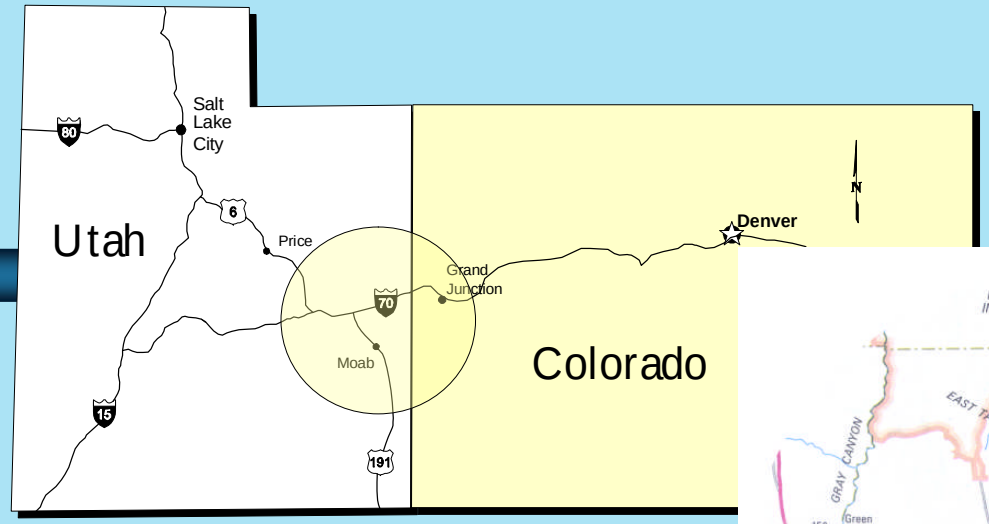

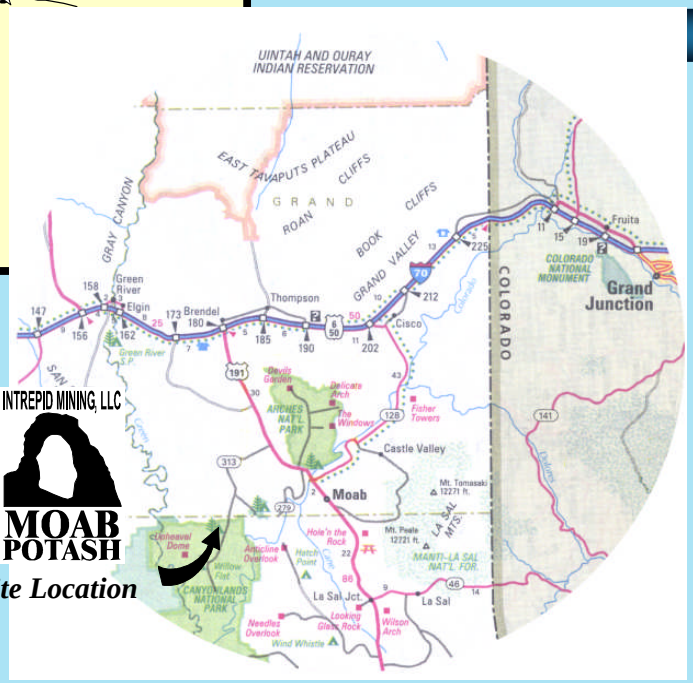

Moab Mine

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Intrepid Potash's Cane Creek Potash Solution Mine

- Conventional underground mining of Bed 5 initiated in 1964
- Bed 5 mine workings converted to solution mining in 1971
- Approximately 400 acres of Solar Evaporation Ponds
- Facility purchased by Intrepid Potash in 1999
- In 2001, Intrepid initiated Bed 9 horizontal well solution mining to supplement production
- Cane Creek produces both Salt (NaCl) and Potash (KCl)
- Cane Creek currently produces between 100,000 and 110,000 tons of KCl product annually

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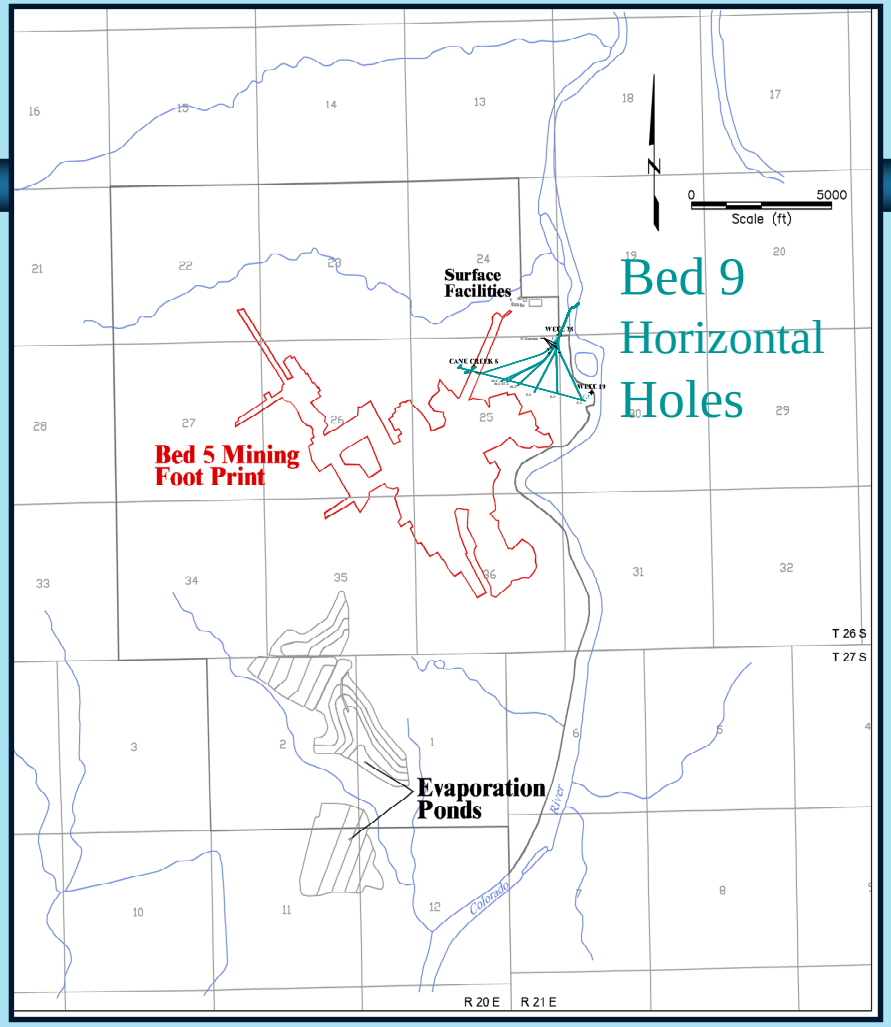
Site Map
Cane Creek Mine, Moab, Utah



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Intrepid Potash's Cane Creek Potash Solution Mine

Injection Well

Recovery Well

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Intrepid Potash's Cane Creek Potash Solution Mine

Solar Evaporation Ponds

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Intrepid Potash's Cane Creek Potash Solution Mine

Harvesting a Pond

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Introducing …

INTREPID Magna K

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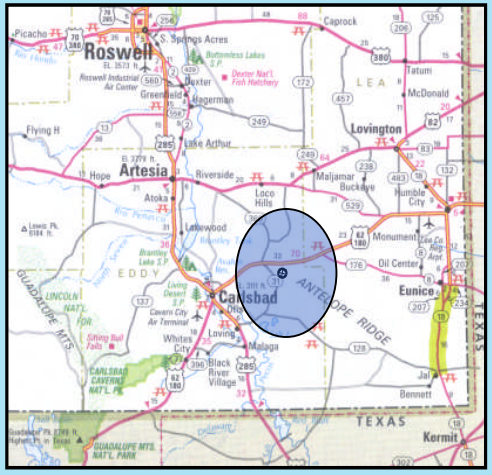
Carlsbad Potash Basin Location



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World Potash Production and Consumption

- Potash is produced in the U.S. in New Mexico, Utah, and Michigan
- 85% of U.S. potash is produced in the Carlsbad Potash Basin (CPB)
- About 20% of U.S. consumption is produced in the CPB
- Between 70%–80% of U.S. consumption is imported from Canada

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Brief History of Carlsbad Potash Basin

- Bedded Potash discovered in 1925
- First Production in 1931 from American Potash Company (presently Intrepid Potash West Mine)
- Potash Company of America formed in 1931 (presently Intrepid Potash HB Mine)
- Five companies merge in 1936 to form IMC (presently Mosaic)
- Duval Sulphur and Potash begins operation in 1951 (presently Mosaic)
- Southwest Potash begins operation in 1952 (Horizon/Amax—presently abandoned)
- National Potash begins operation in 1956 (presently Intrepid Potash North Mine)
- Kerr-McGee begins operation in 1965 (presently Intrepid Potash East Mine)

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Overview of the Carlsbad Potash Basin

- Eleven potash beds are within the ~400' thick McNutt Member of the Salado Formation
- Depth to the McNutt potash zone ranges from 700'–1800'
- Sylvite (KCl) and Langbeinite (K_2SO_4-$2MgSO_4$) are the major economic potassium minerals
- Sylvinite is a mixture of Halite and Sylvite (NaCl + KCl)
- Major Sylvinite ore zones are 1, 10, 7, 5, and 3
- Major Langbeinite ore zones are 4, 3, and 5
- Sylvinite Ore is 20%–40% KCl and 80%–60% NaCl
- Langbeinite Ore is 30%–50% K_2SO_4-$2MgSO_4$ and 70%– 50% NaCl

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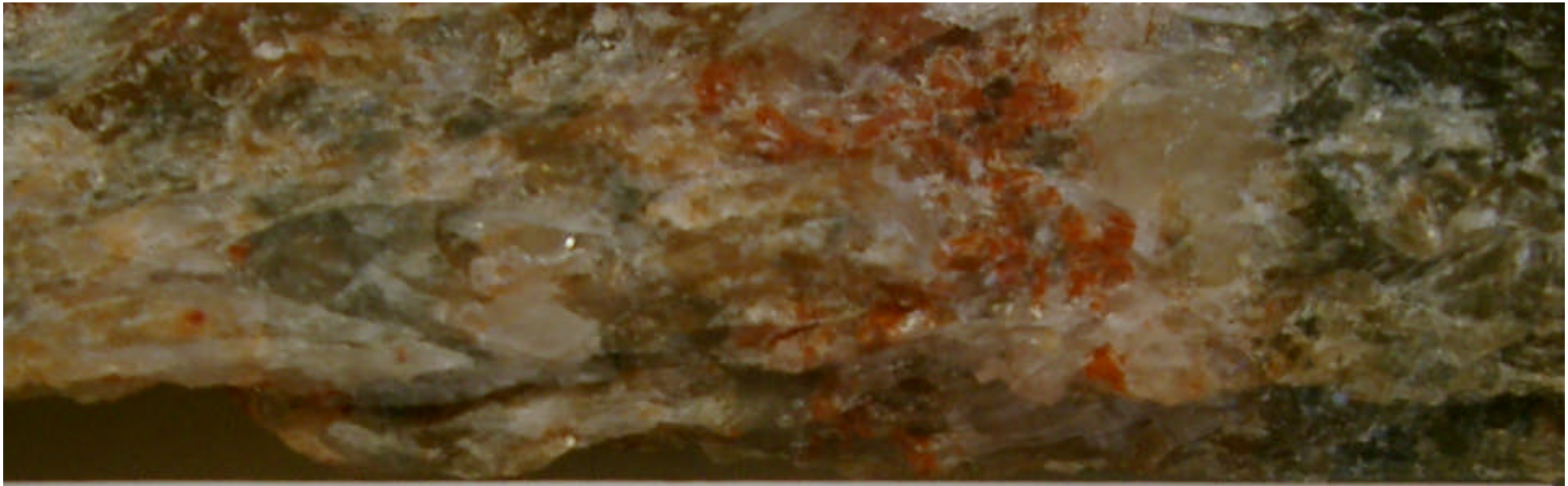
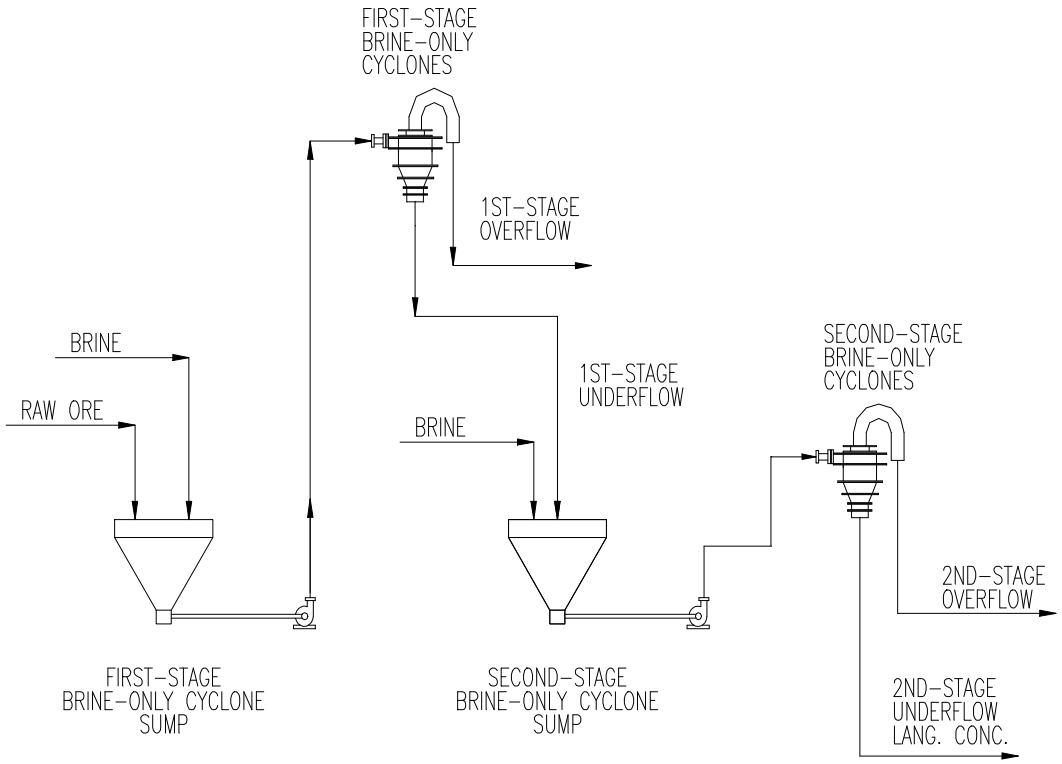


Mixed Ore
Langbeinite & Sylvinite
5th Ore Zone

TYPICAL TWO–STAGE
"BRINE" – ONLY CYCLONE CIRCUIT



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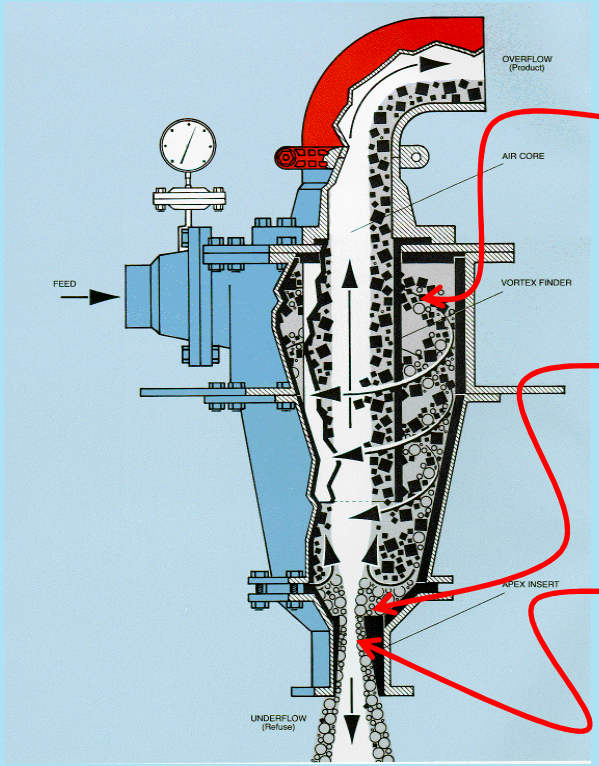
Section View of a Water-Only Cyclone or "Brine"-Only Cyclone



- Vortex-finder length can be adjusted to increase or decrease density cut point.

- Truncated cone bottom allows "high-density" bed to form which rejects lighter-density particles. These particles are then transported to the vortex finder by the ascending slurry stream in the cyclone.

- Apex Ø can be adjusted to increase or decrease density cut point.

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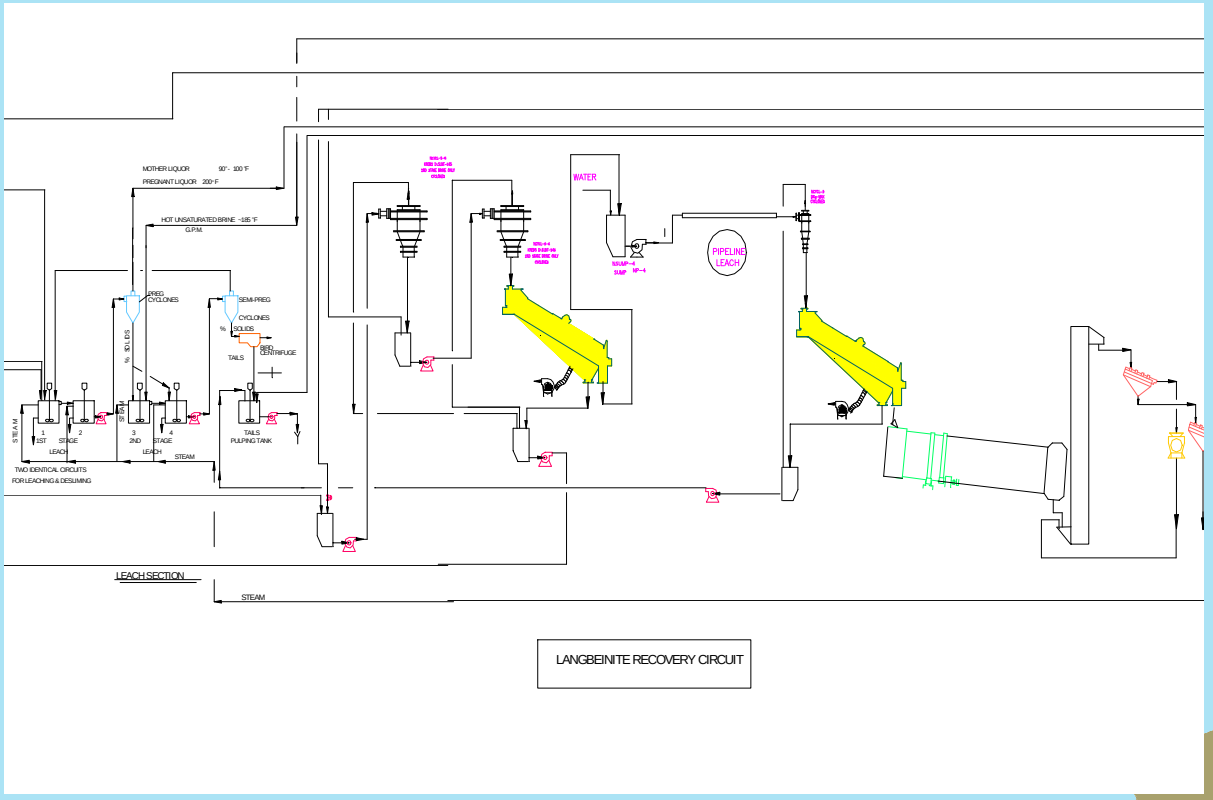
LANG RECOVERY CIRCUIT



LANGBEINITE RECOVERY CIRCUIT

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BRINE ONLY CYCLONES AND HOT SCREENS

1ST AND 2ND STAGE BRINE ONLY CYCLONES

LANG DEWATERING SCREEN AFTER PIPE LINE LEACH

LANG GRANULAR PRODUCT FROM WAREHOUSE

Future for Carlsbad

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Intrepid Potash's Carlsbad Solution Mining Project

The Intrepid Potash Solution Mining Project takes full advantage of previous mining and milling operations to provide the following benefits:

- Re-activation of an existing mineral operation by a well-defined alternative mining method
- Utilization of existing industrial facilities and right of ways
- Stable Intrepid Potash employment
- Recovery of abandoned resource
- Long-term, low-cost potash production
- Strengthens CPB competitive position in the fertilizer marketplace
- Potential for expansion
- Utilization of non-potable water source
- Utilization of energy efficient solar evaporation

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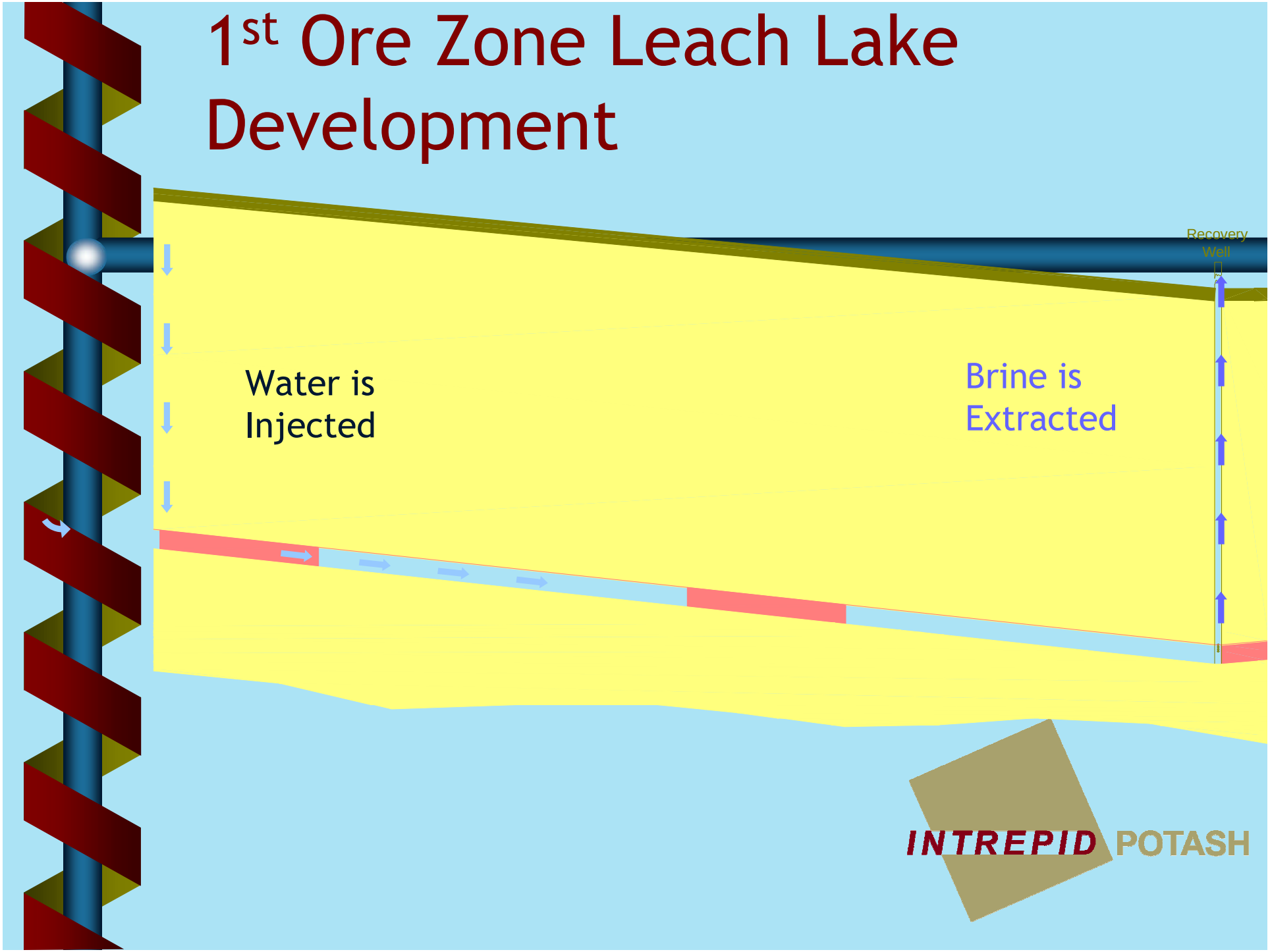
1st Ore Zone Leach Lake Development



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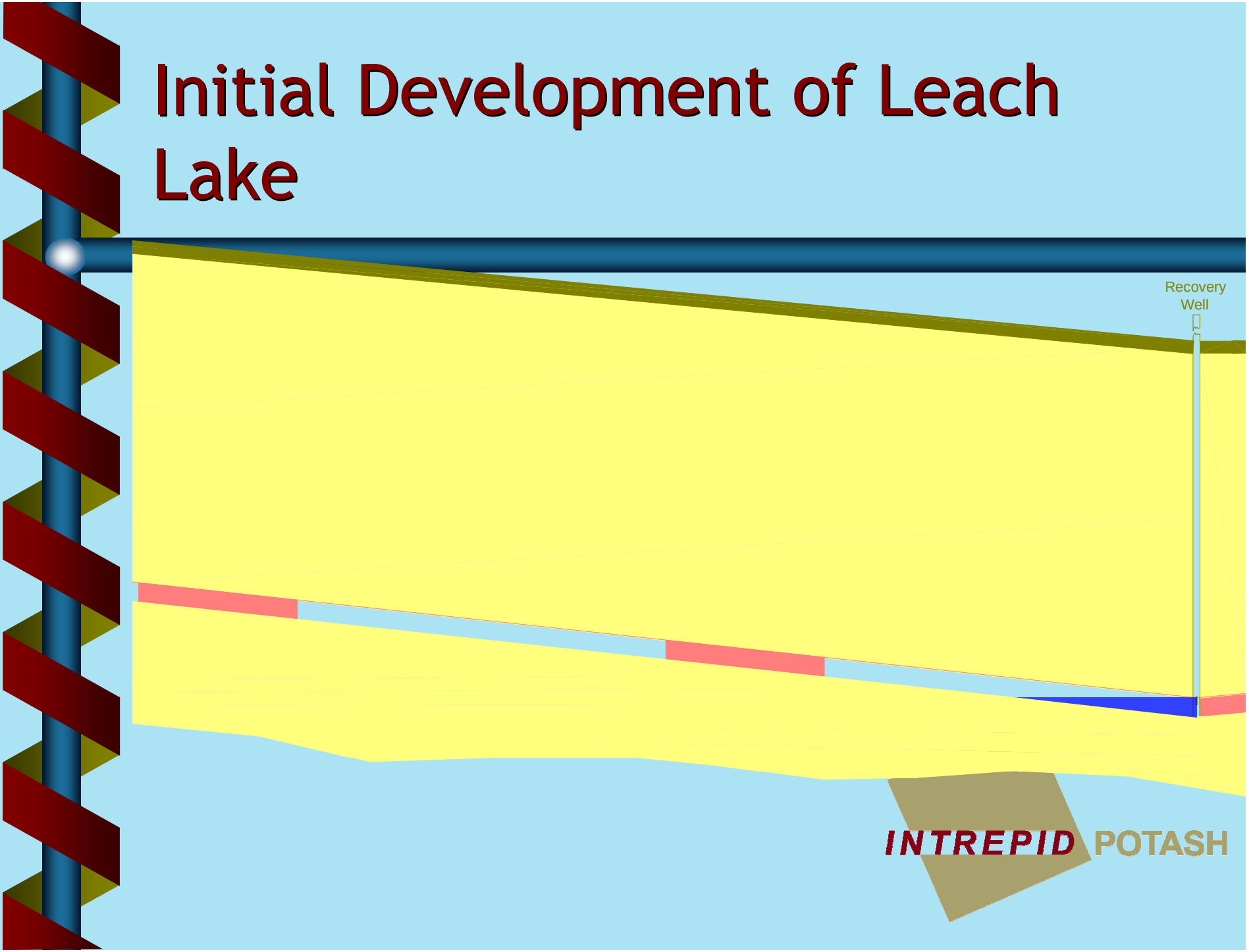
Initial Development of Leach Lake



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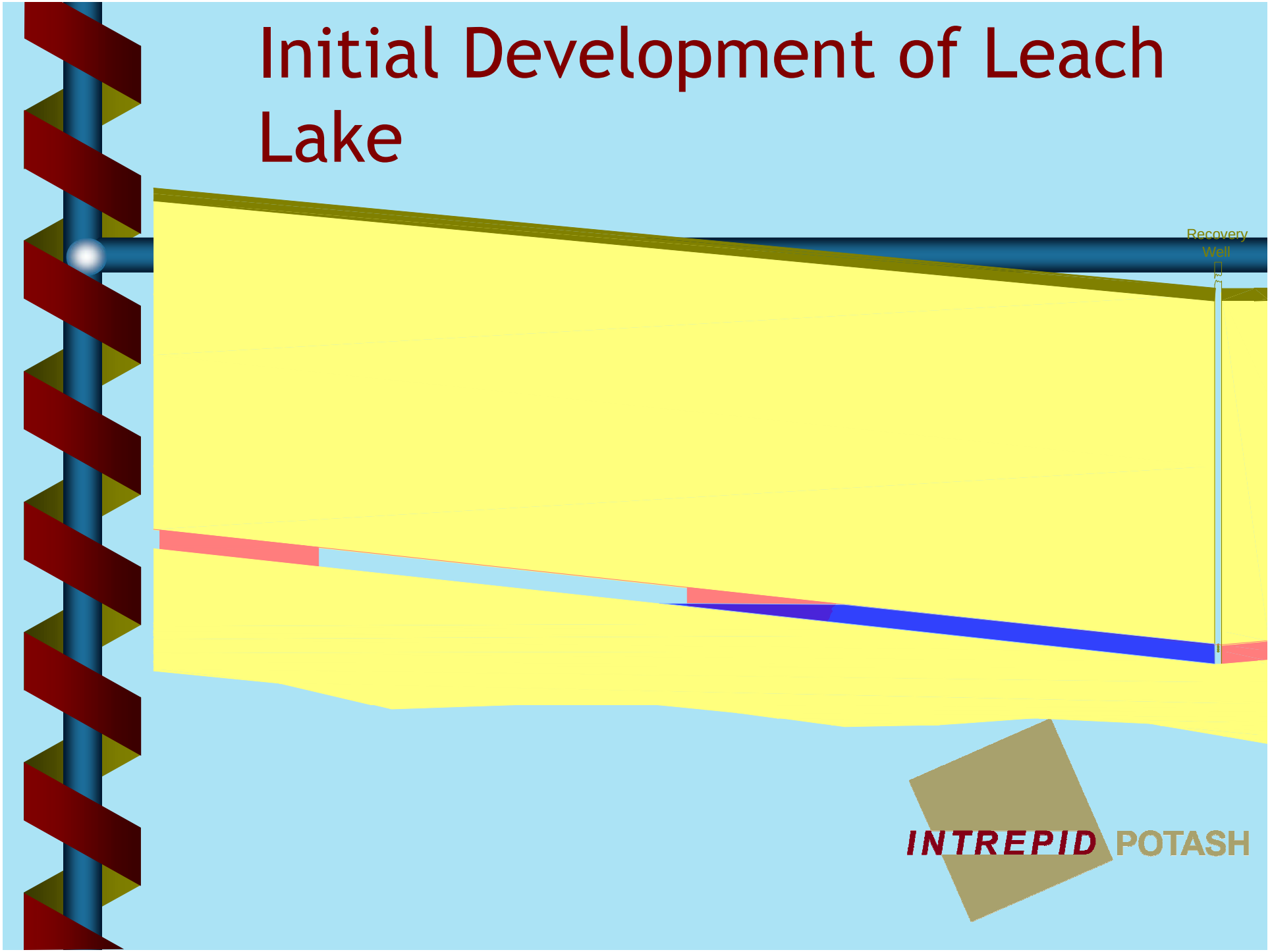

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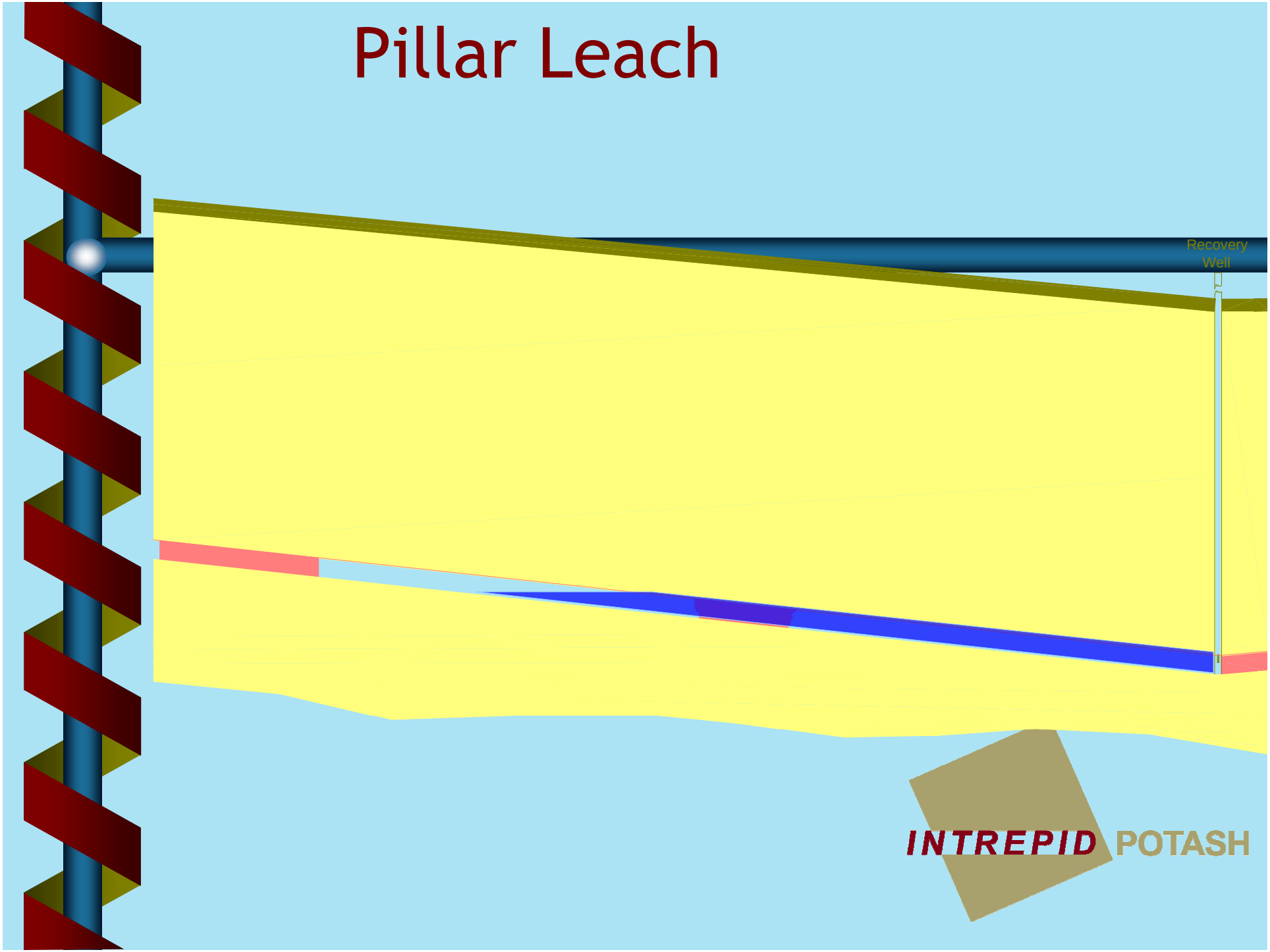
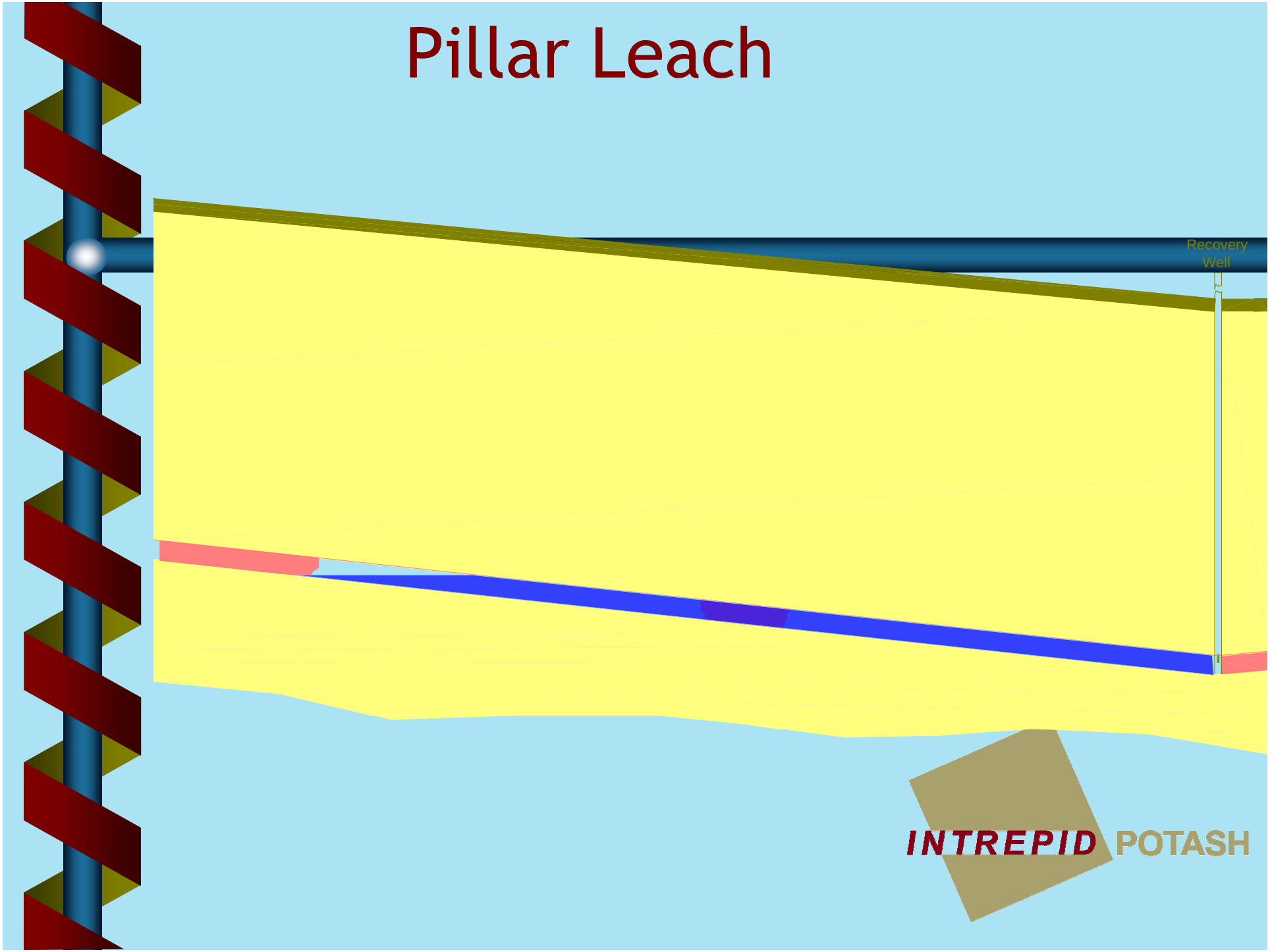
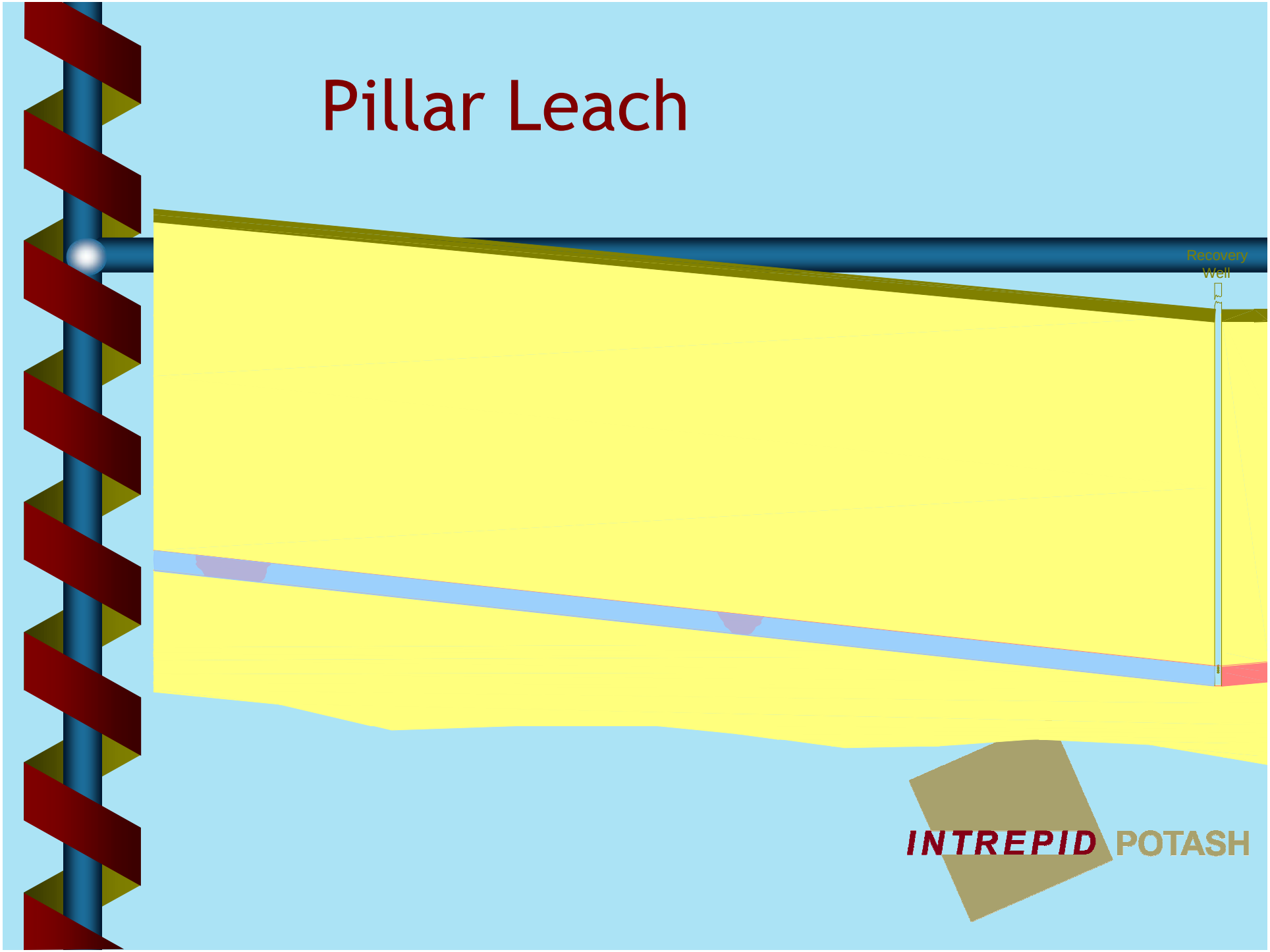
Pillar Leach



Pillar Leach



Pillar Leach



THANK YOU

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