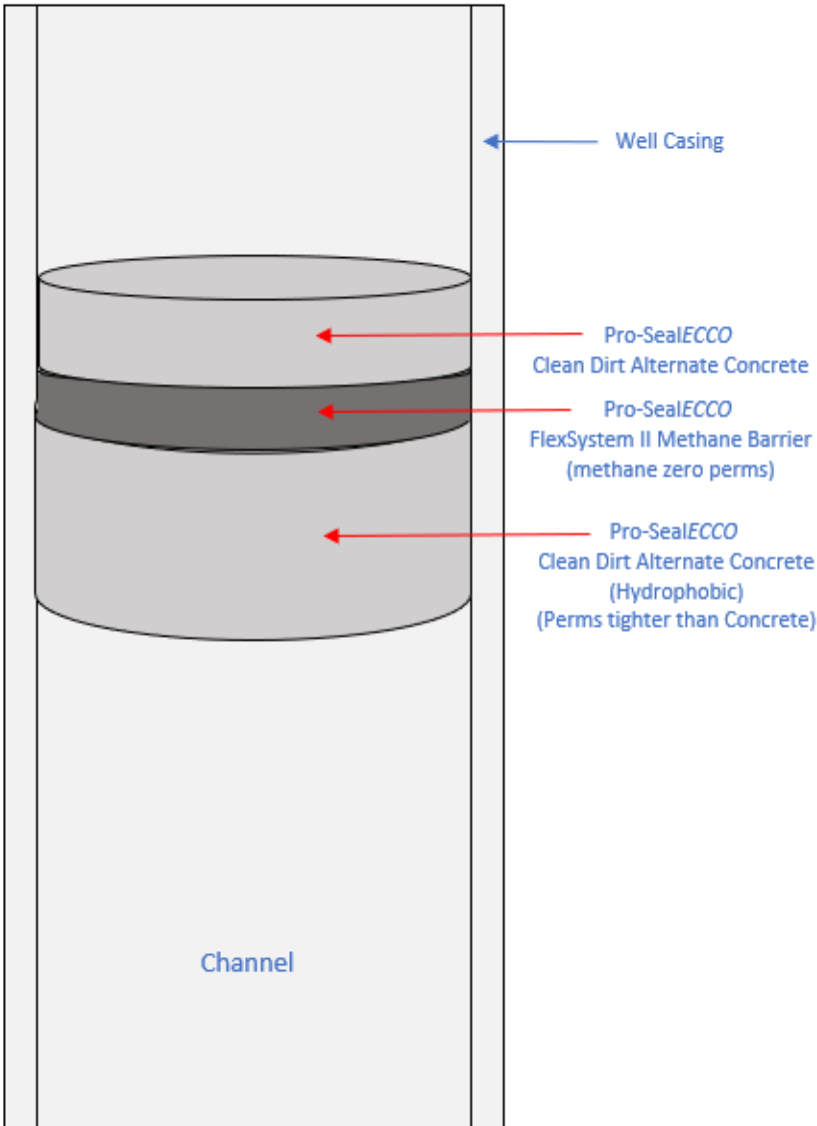




Abandoned Oil Well Closure Sealing



This system is composed of green materials that greatly reduce the carbon footprint:

- Pro-SealECCO is custom formulated to create a concrete like material from site soils.
- Reduces harvest of rock, and other materials from remote quarries.
- Reduces haul ins and haul outs.
- Reduces diesel or gas powered equipment operational times.

A Classic Belt and Suspenders Approach

Pro-SealECCO clean dirt alternate to concrete is expansive, high PSI and low perms as well as hydrophobic.

Pro-Seal FlexSystem II is stand-alone qualified methane barrier LARR# 26015 and CSI# 07130.

Test Result			
ASCE ASTMS	Evaluation	Allowed	Result
E-96-80-L021	Water Vapor Transmission	Perms Max Allowed 1.0	0.004 Passed Exceeds Parameters
E-154-88 Sec. 13	Decay Resistance	%Wieht Gain Max Allowed 10%	0.015 Passed Exceeds Parmeters
D-638 L021	Tension	Lbs. per ft @ Break	33.4 Passed Exceeds Parameters
D-638 L021	Elongation	% Elongation @ Break Mim. Allowed 25%	48.3% Passed Exceeds Parameters
D 903 L021	Shear Sdhesion tp Concrete	Lbs. per ft@ failure min. Allowed 1 ft lbs	5.54 Passed Exceeds Parameters
E-154-88 Section 10	Puncture Resistance	Lbs per ft of Force @ Puncture Min. 40 Lbs.	110.5 (±.5) Passed Exceeds Parameters
C-836 L021	Hardness	Depth of Penetration Min. Hardness Allowed 50	52 Passed
D-751 L021	Hydrostatic Pressure Resistance	Pressence of Water @ PSI	No Water Present @ >168 psi
E-1454	Methane permeability	Vapor Transmission Rate ml/day/m ² atmosphere (avg)	No Vapor Detected Passed



Image Left: Impermeable, Its hydrophobic this Specimen has been submerged since 2014. No water has penetrated the surface, and no breakdown has occurred.

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Pro-SealECCO Abandoned Oil Well Seal Cap



Site dirt treated with Pro-SealECCO Additive = alternate concrete



Site Native Soil treated with Pro-SealECCO additive = alternate concrete.

ASTM	Test	Data (Typical)		
ASTM C 109	Compressive Strength (psi)	1 day 6,250		
		7 days 11,440		
		28 Days 12,600		
Tensile (psi)	24 hrs. 390			
	7 days 780			
	28 days 1,280			
ASTM C 266	Set Time	Initial 1 minute Final 3 minutes		
CSA A 23.2-6B	Tensile Pull (psi)	Final 409		
USACE CRD-C621				
Aterberg Limits	Platicity		Passed	
	Fluidity: plastic water content 6 pints flow:100 seconds expansion	3 days	+ 0.02	
		14 days	+ 0.01	
		28 days	+ 0.01	
	Compressive Strength (psi)	1 day	6,000	
		3 days	8,000	
		7 days	10,000	
		28 Days	11,000	
	Fluidity: Flowable water content 7 pints flow: 130 seconds expansion	3 days	+ 0.01	
		14 days	+ 0.01	
		28 days	+ 0.01	
	Compressive Strength (psi)	1 day	6,500	
3 days		8,000		
7 days		10,000		
28 Days		11,000		
Fluidity: Fluid water content 8.3 pints flow: 30 seconds expansion	3 days	+ 0.01		
	14 days	+ 0.01		
	28 days	+ 0.01		
Compressive Strength (psi)	1 day	4,500		
	3 days	7,000		
	7 days	8,500		
	28 Days	10,000		
Shrinkage		Zero		
Absorption		Hydrophobic		
Strikes		> 20		

Plug Specimens Tested As Follows: (modified tests)		
ASTM	Data	Value
C-67, Section 7	Decreased Absorption	Hydrophobic
C- 67, Section 14	Decreased Suction	Anionic
C-67, Section 7	Leaching Efflorescence	Initial Cure
C-156	Stabilizing, avoiding hairline cracking	Significant >
C-666	Freeze thaw damage	86% improved
C-666 Using 5% NaCl	Salt attack in the presence of moisture	95% improved
ORF Method	Dusting due to abrasion	100% improved

Note: Above results (typical) when site soils are mixed with Pro-SealECCO NanoCrete and Pro-SealECCO XWCretes

The Highlights:

A unique long lifecycle solution, that is service life cost effective. Pro-SealECCO Plug system is a unique, one-of-a-kind, patent pending Nano Novel Matrix material that can develop high PSI, with controlled set times and initial rapid cure formulations. The system is hydrophobic and is methane impervious. The Pro-SealECCO system gains these exceptional properties due to its ability to gain billions more reaction points in the same footprint. This material is the only material that can contain and encapsulate RCRA 8 metals as well as PFOS and PFAS in soils.

The system is custom designed to sight soils for the greatest possible environment positive impact and product performance. The system is green, easy to install, and generates great PR for your project.