

**COSSLETT 1A-22H-B168
AS-BUILT**

**API #: 05 123 47679 00
AFE #: 16191456**

From Daily Drilling Reports #: 6.0 & 7.0 DFS: 4.25 on 10/28/2018

Work stuck casing @ 2,443' MD pulling up 250k and setting down with 90k while applying 25 -600 psi. Pull up to 300k one time.

PJSM with Pioneer and Ensign crew. Load 2' perf gun w/ 6 shots total. RIH to 2,407' MD & shoot gun. TOO& LD perf gun. Set in top drive and CRT and attempt to circulate, *would not circulate*. Load second 2' perf gun & w/ 3 spf (6 total perfs) & TIH to 2,200' MD, shoot gun, TOO&, LD perf gun. Set in CRT on top drive attempt to circulate and broke circulation. **Establish full circulation @ 8 bpm.**

Install cement head. Fill Lines and test to 500 psi low & 2500 psi high. Pump 40 bbls water spacer. Mix & Pump 102.9 bbls (340 sacks) of 13.5 ppg lead cement slurry (yield 1.7 cf/sx) followed by 98.8 bbls (335 sacks) of 15.2 ppg tail cement slurry (yield 1.26 cf/sx). Shut down & wash tub. Drop top plug & displace w/ 163.8 bbls fresh water. Stop displacement @ 3 bbls short for perforation coverage @ 2,200' MD. Hold pressure for 6 hours to achieve 70 BC set time.

Pumped 163.8 bbls displacement. Received total cement to surface of 33 bbls. Shut in pressure on cement head monitor pressure & monitor fall back. Drain cellar of cement & wash up. CIP @ 22:15 hrs on 10/28/2018.

Cement fell back 70 feet in 6 hrs 3 minutes. Top off well with 4.5 bbls of 15.2 ppg cement with good returns. Rig down cement equipment.

3 bbls (39.6') of cement w/ 9-5/8" cement plug on top intentionally left in casing to cover perfs. Estimated top of wiper plug in casing is 2,159' MD.

Perf Set #2: 6 Perforations w/ 2' perf gun @ 2,200' MD. Establish circ @ 8 bpm. Circulate 201.7 bbls cement returning 33 bbls cement to surface.

Perf Set #1: 6 Perforations w/ 2' perf gun @ 2,407' MD. *Could not establish circulation.*

9-5/8" Float Collar Set @ 2,422' MD

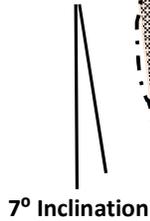
Casing stuck @ 2,443' MD

9-5/8" Float Shoe Set @ 2,459' MD

13-1/2" Hole Drilled to 2,475' MD

20" 78.67 ppf Conductor Casing set @ 118' RKB

13-3/8" 54.5 ppf Deep Conductor set @ 510' RKB

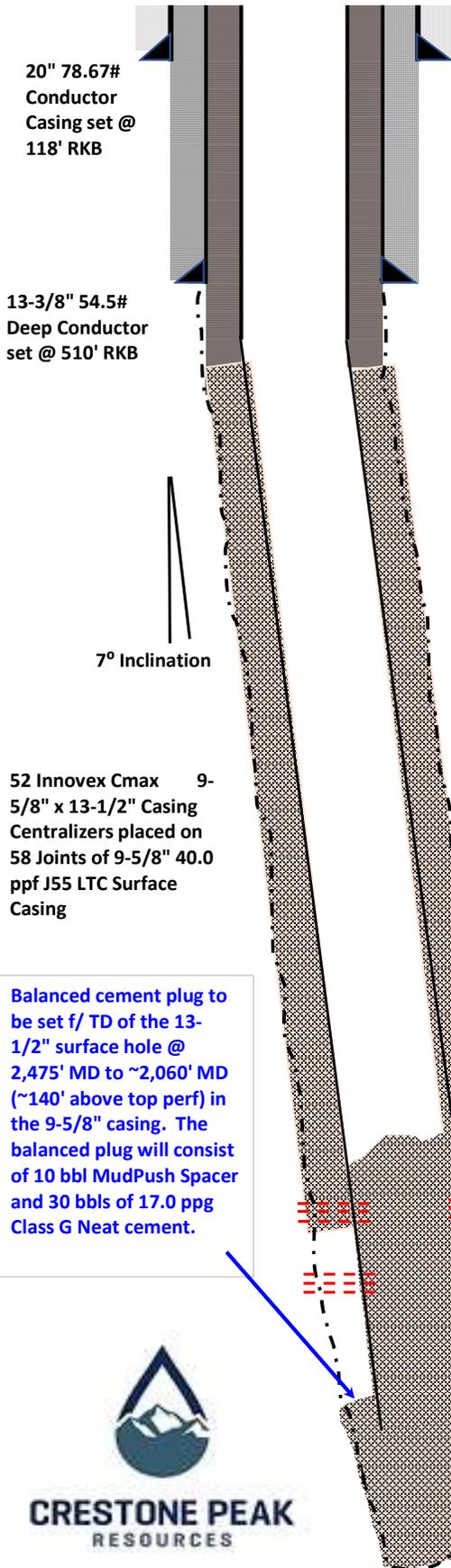


52 Innovex Cmax 9-5/8" x 13-1/2" Casing Centralizers placed on 58 Joints of 9-5/8" 40.0 ppf J55 LTC Surface

Perforate casing @ 2,407' MD w/ 2' casing gun w/ 3 spf- total of 6 shots. Attempt to circulate w/ no success. Re-perforate w/ 2' casing gun w/ 3 spf (6 shots) @ 2,200' MD. Establish circulation to surface @ 8 bpm.



**COSSLETT 1A-22H-B168
PROPOSED 9-5/8" CASING SHOE
REMEDICATION PLAN
API #: 05 123 47679 00**



20" 78.67#
Conductor
Casing set @
118' RKB

13-3/8" 54.5#
Deep Conductor
set @ 510' RKB

7° Inclination

52 Innovex Cmax 9-
5/8" x 13-1/2" Casing
Centralizers placed on
58 Joints of 9-5/8" 40.0
ppf J55 LTC Surface
Casing

Balanced cement plug to
be set f/ TD of the 13-
1/2" surface hole @
2,475' MD to ~2,060' MD
(~140' above top perf) in
the 9-5/8" casing. The
balanced plug will consist
of 10 bbl MudPush Spacer
and 30 bbls of 17.0 ppg
Class G Neat cement.



**CRESTONE PEAK
RESOURCES**

PROPOSED PLAN TO REMEDIATE 9-5/8" CASING SHOE

1. After Rig Release f/ the Cosslett 1B-22H-B168 well, skid rig over the Cosslett 1A-22H-B168 and RU. NU & Test BOPE.
 2. PU 8-3/4" milled-tooth bit and BHA & TIH to 9-5/8" cement wiper plug @ ~2,159' RKB. Displace hole w/ 9.6 ppg OBM.
 3. Drill out cement wiper plug and ~40' of cement left in the 9-5/8" casing f/ ~2,159' to 2,200' RKB (intentionally left in casing to cover top set of perms @ 2,200' RKB. Drill & wash down to Float Collar.
 4. Drill out 9-5/8" Float Collar @ 2,422' RKB and 9-5/8" Float Shoe @ 2,459' RKB. Wash down to TD of the 13-1/2" surface hole @ 2,475' RKB. Circulate hole clean w/ 9.6 ppg OBM. TOOH.
 5. RU Schlumberger Wireline and run Cement Bond Log f/ surface casing shoe @ 2,459' RKB to surface to verify cement placement.
 6. RD SLB. TIH open-ended w/ 5-1/2" DP to ~2,473' RKB (2' above TD of 13-1/2" surface hole) and set a 17.0 ppg Class G neat balanced cement plug f/ 2,475' RKB to ~2,070' RKB (~100' above the top perforation in the 9-5/8" casing @ 2,200') according to the procedures contained in SLB's Balanced Cement Plug Proposal v1 dated 2/4/2019.
 7. Pull out of cement plug 2 stands & circulate hole clean to ensure no cement in the hole from that point to surface. TOOH & PU 8-3/4" PDC bit, BICO mud motor, and BHA for drilling production hole to TD.
 8. TIH to 2 stands above top of balanced plug and WOC until cement reaches ≥ 70 Bc compressive strength according to SLB lab tests before tagging top of balanced plug. Tag & verify cement top & drill out balanced cement plug & 10' of new formation.
- FIT will be considered the EMW of the hydrostatic pressure of the ~400' of 17.0 ppg Class G neat cement plug plus the 2,075' of 9.6 ppg OBM when balanced plug is set in the 10' of new hole drilled and up inside the 9-5/8" casing over the perforations.*
9. Drill 8-3/4" prod hole as per Directional Plan #4.

Perf Set #2: 6 previous perforations w/ 2' perf gun @ 2,200' MD. Circ was established @ 8 bpm. Circulate 201.7 bbls cement returning 33 bbls cement to surface.

Perf Set #1: 6 previous perforations w/ 2' perf gun @ 2,407' MD. Circulation could not be established.

9-5/8" Float Shoe Set @ 2,459' MD

13-1/2" Hole Drilled to 2,475' MD