



Registered Data Sheet Perforating System Evaluation, API RP 19B Section 1

API Form 19B-Section 1 Conforms to All requirements of Section 1 Special test - See Remarks/Exceptions below

Service Company Available to all service companies. Manufactured by ETASA (Argentina) S.A. Explosive weight 25 gm, HMX Powder, Case Material STEEL

Gun OD & Trade Name 3 3/8" HSD Gun 6 SPF 60°- 25grams HMX EXTRA II Max Temp, °F 400°F 1 hr 3 hr 24 hr 100 hr 200 hr

Charge Name 25grams HMX EXTRA II Maximum Pressure Rating 20000 psi, Carrier Material STEEL

Manufacturer Charge Part No. TC53H Extra II Date of Manufacture 07-30-2018 Shot Density Tested 6 Shots/ft

Gun Type TCP and Wireline Hollow Carrier, Non Reusable Recommended Minimum ID for Running _____ in.

Phasing Tested 60 degrees, Firing Order: Top down Bottom up Available Firing Mode: _____ Selective Simultaneous

Debris Description Steel pieces remains inside the gun.

Remarks/Exceptions per Section 1.12 RDX VERSION AVAILABLE AS TC53R Extra II

Casing Data 4.5" OD, Weight 11.6 lb/ft, API Grade, L-80 Date of Section 1 Test 12-03-2018

Target Data 135 OD, Amount of Cement 21950 lb, Amount of Sand 43900 lb, Amount of Water 11420 lb.

Date of Compressive Strength Test 12-04-2018 Briquette Compressive Strength 5886 psi, Age of Target 32 days

Shot No.	No 1	No 2	No 3	No 4	No 5	No 6	No 7	No 8	No 9	No 10	No 11
Clearance, in.	0.000	0.138	0.450	0.625	0.450	0.138	0.000	0.138	0.450	0.625	0.450
Casing Hole Diameter, Short Axis, in	0.430	0.420	0.440	0.400	0.370	0.420	0.430	0.420	0.350	0.360	0.400
Casing Hole Diameter, Long Axis, in	0.450	0.430	0.450	0.430	0.400	0.430	0.470	0.430	0.370	0.370	0.410
Average Casing Hole Diameter, in.	0.440	0.425	0.445	0.415	0.385	0.425	0.450	0.425	0.360	0.365	0.405
Total Depth, in.	53.76	61.26	53.51	55.51	57.26	58.26	56.01	55.26	51.26	51.26	55.26
Burr Height, in.	0.016	0.042	0.070	0.021	0.028	0.031	0.033	0.029	0.041	0.045	0.021

Shot No.	No 12	No 13	No 14	No 15	No 16	No 17	No 18	No 19	No 20	No 21	No 22	Average
Clearance, in.	0.138	0.000	0.138	0.450	0.625	0.450	0.138					XXXX
Casing Hole Diameter, Short Axis, in	0.420	0.450	0.440	0.370	0.390	0.370	0.380					0.403
Casing Hole Diameter, Long Axis, in	0.430	0.460	0.450	0.390	0.400	0.390	0.420					0.421
Average Casing Hole Diameter, in.	0.425	0.455	0.445	0.380	0.395	0.380	0.400					0.412
Total Depth, in.	48.76	56.76	57.26	54.26	58.26	54.26	54.76					55.163
Burr Height, in.	0.016	0.038	0.032	0.019	0.055	0.020	0.058					0.034

Remarks: _____

WITNESSING INFORMATION

Witnessed by: Carlos J. Caste

Optionally Witnessed Activities: Target Pouring Briquette Preparation Briquette Testing Burr Height Measurements

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, Third Edition, October 2014. All of the equipment used in these tests, such as the guns, shaped charges, detonating cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment, which would be furnished to perforate a well for any operator. API neither endorses these test results nor recommends the use of the perforator system described.

Penetration data recorded in API RP19B Section 1 may not directly correlate to penetration downhole.

CERTIFIED BY Gabriel O. Scipioni Explosive Plant Manager Dic-5-2018 ETASA (Argentina) S.A. Ruta 25 km 13-Villa Rosa- Buenos Aires-Argentina

(Company Official) (Title) (Date) (Company) (Address)

Name of test as it should appear on website: 3 3/8" High Shot Density Gun, 25grams HMX ExTrA II

Name of test as it appears on application and application date: 3 3/8", 25grams HMX, ExTrA II, 6 SPF 60°

Figure 2-Data Sheet- Perforating System Evaluation, API RP 19B Section 1