



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) SA
 Gun OD & Trade Name 2" DP HMX ExTrA II 6 SPF 60°
 Charge Name 6.5 grams RTTG HMX DP ExTrA II (DSC 17-05-29)
 Manufacturer Charge Part No. RT36H ExTrA II Date of Manufacture 05-22-2017
 Gun Type Retrievable Through Tubing Gun.
 Phasing Tested 60° degrees, Firing Order: Top down X Bottom up
 Debris Description Cases and loading tube debris keeps inside the gun

Explosive weight 6.5 gm, HMX powder, Case Material STEEL
 Max Temp, °F 400°F 1 hr 3 hr 24 hr 100 hr 200 hr
 Maximum Pressure Rating 20000 psi, Carrier Material STEEL
 Shot Density Tested 6 Shots/ft
 Recommended Minimum ID for Running in.
 Available Firing Mode: Selective X Simultaneous
 Debris Weight N/A gm/charge, Debris N/A in³/charge

Remarks/Exceptions per Section 1.11

Casing Data 2 7/8" OD, Weight 6.4 lb/ft, API Grade, L-80 Date of Section 1 Test 10 / 02 / 2017
 Target Data 65" OD, Amount of Cement 5275 lb, Amount of Sand 10550 lb, Amount of Water 2745 lb.
 Date of Compressive Strength Test 10 / 03 / 2017 Briquette Compressive Strength 6968 psi, Age of Target 31 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	0.095	0.315	0.440	0.315	0.095	0.000	0.095	0.315	0.440	0.315	
Casing Hole Diameter, Short Axis, in	0.250	0.230	0.240	0.250	0.220	0.280	0.250	0.230	0.240	0.260	0.280	
Casing Hole Diameter, Long Axis, in	0.280	0.260	0.250	0.270	0.260	0.320	0.260	0.260	0.260	0.280	0.310	
Average Casing Hole Diameter, in.	0.265	0.245	0.245	0.260	0.240	0.300	0.255	0.245	0.250	0.270	0.295	
Total Depth, in.	25.217	27.217	25.217	26.217	23.217	27.217	24.967	LOST	25.717	28.717	24.217	
Burr Height, in.	0.036	0.041	0.038	0.022	0.029	0.015	0.018	0.026	0.021	0.030	0.014	
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.	0.095	0.000	0.095	0.315	0.440	0.315	0.095					XXXXXX
Casing Hole Diameter, Short Axis, in	0.280	0.260	0.240	0.250	0.260	0.260	0.240					0.251
Casing Hole Diameter, Long Axis, in	0.320	0.280	0.250	0.270	0.270	0.300	0.250					0.275
Average Casing Hole Diameter, in.	0.300	0.270	0.245	0.260	0.265	0.280	0.245					0.263
Total Depth, in.	27.217	26.967	27.717	26.467	28.217	25.717	26.717					26.291
Burr Height, in.	0.016	0.028	0.021	0.019	0.023	0.021	0.025					0.025

Remarks

Manufacturer's Certification

Type of Certification: Self Carlos J. Castle API W Third Party

I certify that these tests were made according to the procedures as outlined in API 19B: Recommended Practice for Evaluation of Well Perforators, Second Edition, September 2006. All of the equipment used in these tests, such as the guns, jet charges detonator 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 that would be furnished to perforate a well for any operator. API neither endorses these tests nor recommends the use of the perforator system described.

X CERTIFIED BY Gabriel O. Scipioni Explosives Plant Manager 10-04-2017 ETASA(Argentina) SA Ruta 25 Km 13- Villa Rosa - Buenos Aires - Argentina
 RECERTIFIED (Company Official) (Title) (Date) (Company) (Address)

Name of test as it should appear on website: 2" Retrievable Through Tubing Gun ExTrA II With RT36H ExTrA II 6.5grams HMX DP

Name of test as it appears on application and application date: RT36H ExTrA! II - 2" 6 SPF 60° - DP - HMX