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
Gun OD & Trade Name: 2" DP HMX ExTrA! 6 SPF 60°
Charge Name: 6.5 grams RTTG HMX DP ExTrA!
Manufacturer Charge Part No.: RT36H ExTrA! Date of Manufacture:
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: 03 / 15 / 2010
Target Data: 55" OD, Amount of Cement: 3550 lb, Amount of Sand: 7100 lb, Amount of Water: 1840 lb.
Date of Compressive Strength Test: 03 / 16 / 2010 Briquette Compressive Strength: 5942 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	0.290	0.250	0.220	0.210	0.230	0.240	0.280	0.230	0.210	0.220	0.210
Casing Hole Diameter, Long Axis, in	0.310	0.260	0.230	0.220	0.230	0.260	0.300	0.240	0.230	0.240	0.230
Average Casing Hole Diameter, in.	0.300	0.255	0.225	0.215	0.230	0.250	0.290	0.235	0.220	0.230	0.220
Total Depth, in.	21.220	23.220	25.220	22.220	20.720	23.220	24.720	21.220	23.220	20.720	20.220
Burr Height, in.	0.022	0.031	0.019	0.040	0.027	0.038	0.042	0.046	0.038	0.015	0.024

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	0.240	0.270	0.230	0.200	0.200	0.220	0.250					0.233
Casing Hole Diameter, Long Axis, in	0.260	0.280	0.240	0.220	0.210	0.230	0.280					0.248
Average Casing Hole Diameter, in.	0.250	0.275	0.235	0.210	0.205	0.225	0.265					0.241
Total Depth, in.	24.220	22.720	24.220	22.220	21.220	20.970	22.970					22.470
Burr Height, in.	0.030	0.051	0.019	0.015	0.030	0.022	0.019					0.029

Remarks

Manufacturer's Certification

Type of Certification: ___ Self Jorge Smirnoff 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.

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

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

Name of test as it appears on application and application date: 2" Retrievable Through Tubing Gun ExTrA! With RT36H ExTrA! 6.5grams HMX DP