



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 3/8" DP HMX EXTRA 6 SPE 60° Max Temp. °F 400°F 1 hr 3 hr 24 hr 100 hr 200 hr

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

Manufacturer Charge Part No. TC53H EXTRA Date of Manufacture Shot Density Tested 6 Shots/ft

Gun Type High Shot Density Gun Recommended Minimum ID for Running in.

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

Debris Description Cases and loading tube debris keeps inside the gun Debris Weight N/A gm/charge, Debris N/A in³/charge

Remarks/Exceptions per Section 1.11

Casing Data 4 1/2" OD, Weight 11.6 lb/ft, API Grade, L-80 Date of Section 1 Test May 28th 2008

Target Data 147" OD, Amount of Cement 26400 lb, Amount of Sand 52800 lb, Amount of Water 13730 lb,

Date of Compressive Strength Test May 29th 2008 Briquette Compressive Strength 7186 psi, Age of Target 30 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	Average
Clearance, in.	0.000	0.138	0.450	0.625	0.450	0.138	0.000	0.138	0.450	0.625	0.450	XXXXXX
Casing Hole Diameter, Short Axis, in	0.390	0.380	0.380	0.400	0.370	0.390	0.380	0.370	0.360	0.390	0.410	0.388
Casing Hole Diameter, Long Axis, in	0.400	0.410	0.400	0.420	0.380	0.420	0.430	0.390	0.400	0.400	0.420	0.408
Average Casing Hole Diameter, in.	0.395	0.400	0.390	0.410	0.375	0.405	0.405	0.380	0.380	0.395	0.415	0.398
Total Depth, in.	42.750	47.250	47.250	42.500	44.250	45.750	40.750	39.250	42.250	44.250	40.750	43.150
Burr Height, in.	0.036	0.025	0.032	0.051	0.042	0.056	0.022	0.043	0.078	0.015	0.019	0.039
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							XXXXXX
Casing Hole Diameter, Short Axis, in	0.420	0.390	0.360	0.420	0.390							0.388
Casing Hole Diameter, Long Axis, in	0.430	0.420	0.380	0.430	0.400							0.408
Average Casing Hole Diameter, in.	0.425	0.405	0.370	0.425	0.395							0.398
Total Depth, in.	47.750	36.750	43.500	39.250	41.750							43.150
Burr Height, in.	0.052	0.043	0.029	0.043	0.035							0.039

Manufacturer's Certification

Type of Certification: Self Logar Seshair API w Third Party

I certify that these tests were made according to the procedures as outlined in API 19B: Recommended Practices 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.

CERTIFIED BY Darío Baltanzio Perforating Projects Manager May 30th 2008 ETASA (Company) Ruta 25 Km 13- Villa Rosa - Buenos Aires - Argentina (Address)

RECEIVED (Company Official) Name of test as it should appear on website: 3 3/8" High Shot Density Gun EXTRA With TC53H EXTRA 25grams HMX DP Name of test as it appears on application and application date: 3 3/8" High Shot Density Gun EXTRA With TC53H EXTRA 25grams HMX DP