

**REGISTERED DATA SHEET PERFORATING SYSTEM EVALUATION, API RP 19B SECTION 1**

Service Company Available to ALL Design Number \_\_\_\_\_  
 Gun OD & Trade Name 3 3/8" High Shot Density Gun  
 Charge Name 22.7 gms. HMX Universal Premium DP (DSC 02-09-22)  
 Manufacturer Charge Part No. TC26HP Date of Manufacture Sept 19th 2002  
 Gun Type Expendable, Retrievable HSC TCP/WL 60° 6 SPF  
 Phasing Tested 60 degrees, Firing Order X Top Down, \_\_\_\_\_ Bottom Up  
 Debris Description n/a  
 Remarks \* Gun OD after shooting in water 3.75 in. (Scallop Gun)

Explosive Weight 22.7 gm, HMX powder, Case Material Steel  
 Max. Temp, °F 400 1 hr \_\_\_\_\_ 3 hr \_\_\_\_\_ 24 hr \_\_\_\_\_ 100 hr \_\_\_\_\_ 200 hr  
 Maximum Pressure Rating 20.000 psi, Carrier Material Steel  
 Shot Density Tested \_\_\_\_\_ 6 \_\_\_\_\_ Shots/ft  
 Recommended Minimum ID for Running \_\_\_\_\_ \* \_\_\_\_\_ in.  
 Available Firing Mode \_\_\_\_\_ X \_\_\_\_\_ Selective, \_\_\_\_\_ X \_\_\_\_\_ Simultaneous  
 Debris Weight \_\_\_\_\_ n/a \_\_\_\_\_ gm/charge, Debris \_\_\_\_\_ n/a \_\_\_\_\_ in<sup>3</sup>/charge

**SECTION 1 - CONCRETE TARGET**

Casing Data 4.5" OD, Weight 11.6 lb/ft, L-80 API Grade, Date of Section 1 Test Nov 13<sup>th</sup> 2002  
 Target Data 91" OD, Amount of Cement 8000 lb., Amount of Sand 16000 lb., Amount of Water 4160 lb.  
 Date of Compressive Strength Test Nov 12<sup>th</sup> 2002, Briquette Compressive Strength 7490 psi, Age of Target 35 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..	0.320	0.330	0.290	0.300	0.320	0.320	0.335	0.330	0.320	0.325	0.340
Casing Hole Diameter, Long Axis, in. .	0.325	0.340	0.335	0.336	0.350	0.335	0.350	0.360	0.350	0.348	0.350
Average Casing Hole Diameter, in.....	0.323	0.335	0.313	0.318	0.335	0.328	0.343	0.345	0.335	0.337	0.345
Total Depth, in. ....	33.270	31.020	29.020	30.395	31.770	30.520	33.770	31.270	29.770	30.770	33.520
Burr Height, in.....	0.013	0.029	0.032	0.031	0.029	0.015	0.040	0.025	0.023	0.022	0.020

  

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	0.000	0.138			0.277
Casing Hole Diameter, Short Axis, in..	0.308	0.342	0.320	0.305	0.340	0.327	0.317	0.307	0.316			0.321
Casing Hole Diameter, Long Axis, in. .	0.318	0.353	0.330	0.315	0.355	0.360	0.318	0.311	0.325			0.338
Average Casing Hole Diameter, in.....	0.313	0.348	0.325	0.310	0.338	0.344	0.318	0.309	0.321			0.329
Total Depth, in. ....	32.520	35.395	31.395	33.270	30.395	32.520	31.270	29.520	31.145			31.626
Burr Height, in.....	0.015	0.035	0.017	0.014	0.025	0.012	0.013	0.033	0.018			0.023

**WITNESSING INFORMATION**

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: Juan C. Valladares  
 Other Activities Witnessed: Target Pouring \_\_\_\_\_ Briquette: Preparation \_\_\_\_\_ Testing X Burr Height Measurements X Samples Taken: Concrete X Casing X

**CERTIFICATION**

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, First Edition, November 2000. 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, which would be furnished to perforate a well for any operator. The American Petroleum Institute neither endorses these test results nor recommends the use of the perforator system described.

X CERTIFIED BY \_\_\_\_\_ Perforating Projects Manager Nov 15<sup>th</sup> 2002 E.T.A. S.A. Ruta 25 Km 13 Pilar Bs. As. Argentina  
 \_\_\_\_\_ RECERTIFIED \_\_\_\_\_ (Company Official) (Title) (Date) (Company) (Address)