



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

Service Company Available to all Design Number \_\_\_\_\_ Explosive Weight 22.7 gm, HMX powder, Case Material Steel  
 Gun OD & Trade Name 4 5/8" High Shot Density Gun, HMX Max. Temp, °F 400 1 hr \_\_\_\_\_ 3 hr \_\_\_\_\_ 24 hr \_\_\_\_\_ 100 hr \_\_\_\_\_ 200 hr  
 Charge Name 4 5/8" Universal DP 22.7 gms. HMX (DSC 03-02-17) Maximum Pressure Rating 20.000 psi, Carrier Material Steel  
 Manufacturer Charge Part No. TC26H Date of Manufacture Feb 05<sup>th</sup> 2003 Shot Density Tested \_\_\_\_\_ 12 \_\_\_\_\_ Shots/ft  
 Gun Type High Shot Density Gun 12 SPF 135° WL/TCP Recommended Minimum ID for Running \_\_\_\_\_ \* \_\_\_\_\_ in.  
 Phasing Tested 135 degrees, Firing Order X Top Down, \_\_\_\_\_ Bottom Up Available Firing Mode \_\_\_\_\_ Selective, \_\_\_\_\_ Simultaneous  
 Debris Description \_\_\_\_\_ N/A Debris Weight \_\_\_\_\_ N/A gm/charge, Debris \_\_\_\_\_ N/A in<sup>3</sup>/charge  
 Remarks \* Gun OD After shooting in Liquid 4.98In., in air 5.19In.

**SECTION 1 - CONCRETE TARGET**

Casing Data 7" OD, Weight 32 lb/ft, L-80 API Grade, Date of Section 1 Test March 11<sup>th</sup> 2003  
 Target Data 70" OD, Amount of Cement 4625 lb., Amount of Sand 9250 lb., Amount of Water 2405 lb.  
 Date of Compressive Strength Test March 11<sup>th</sup> 2003, Briquette Compressive Strength 5654 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.....	0.00	1.314	0.694	0.182	1.602	0.182	0.694	1.314	0.00	1.314	0.694	
Casing Hole Diameter, Short Axis, in..	0.290	0.320	0.294	0.301	0.326	0.298	0.314	0.330	0.310	0.334	0.313	
Casing Hole Diameter, Long Axis, in. .	0.315	0.363	0.320	0.311	0.342	0.330	0.341	0.341	0.347	0.347	0.325	
Average Casing Hole Diameter, in.....	0.303	0.342	0.307	0.306	0.334	0.314	0.328	0.336	0.329	0.341	0.319	
Total Depth, in. ....	27.454	26.704	26.454	27.954	25.954	28.954	28.454	28.704	24.954	26.704	25.454	
Burr Height, in.....	0.063	0.050	0.028	0.061	0.062	0.051	0.039	0.034	0.065	0.019	0.051	
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.....	0.182	1.602	0.182	0.694	1.314	0.00	1.314	0.694	0.182	1.602	0.182	0.724
Casing Hole Diameter, Short Axis, in..	0.307	0.339	0.300	0.290	0.331	0.278	0.317	0.322	0.294	0.306	0.308	0.310
Casing Hole Diameter, Long Axis, in. .	0.337	0.355	0.304	0.340	0.359	0.315	0.328	0.330	0.310	0.313	0.310	0.331
Average Casing Hole Diameter, in.....	0.322	0.347	0.302	0.315	0.345	0.297	0.323	0.326	0.302	0.310	0.309	0.321
Total Depth, in. ....	28.204	24.954	26.704	27.954	30.954	27.954	29.954	26.954	28.954	24.454	26.204	27.318
Burr Height, in.....	0.030	0.044	0.045	0.070	0.067	0.034	0.062	0.060	0.036	0.039	0.030	0.047

**WITNESSING INFORMATION**

Date of Notice of Intent to Test: Jan 03<sup>rd</sup> 2003 Witnessed by: [Signature] J. Smirnov (API Certified)  
 Other Activities Witnessed: Target Pouring \_\_\_\_\_ Briquette: Preparation \_\_\_\_\_ Testing X Burr Height Measurement 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 DARIO MANTANZI Perforating Projects Manager 03/12/2003 Explosivos Tecnológicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina  
 \_\_\_\_\_ RECERTIFIED \_\_\_\_\_ (Title) (Date) (Company) (Address)