



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

Service Company Available to all _____ Design Number _____ Explosive Weight 22.7 gm, RDX powder, Case Material Steel
 Gun OD & Trade Name 3 3/8" High Shot Density Gun, RDX Max. Temp, °F 330 1 hr 305 3 hr 260 24 hr 230 100 hr _____ 200 hr _____
 Charge Name 22.7 gms. Universal DP RDX (DSC 04-07-43) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. TC26R Date of Manufacture July 31st 2004 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type High Shot Density Gun, 6 SPF 60° Recommended Minimum ID for Running _____ * _____ in.
 Phasing Tested 60 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 _____ in³/charge
 Remarks * Gun OD after shooting in liquid is 3.75In.

SECTION 1 - CONCRETE TARGET

Casing Data 4 1/2" OD, Weight 11.6 lb/ft, L-80 API Grade, Date of Section 1 Test August 30th 2004
 Target Data 70" OD, Amount of Cement 5850 lb., Amount of Sand 11690 lb., Amount of Water 3040 lb.
 Date of Compressive Strength Test August 31st 2004, Briquette Compressive Strength 6561 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.	0.00	0.138	0.450	0.625	0.450	0.138	0.00	0.138	0.450	0.625	0.450	
Casing Hole Diameter, Short Axis, in.	0.36	0.38	0.38	0.39	0.35	0.34	0.36	0.34	0.38	0.35	0.35	
Casing Hole Diameter, Long Axis, in.	0.38	0.39	0.38	0.40	0.37	0.35	0.39	0.36	0.40	0.37	0.38	
Average Casing Hole Diameter, in.	0.370	0.385	0.380	0.395	0.360	0.345	0.375	0.350	0.390	0.360	0.365	
Total Depth, in.	25.755	25.505	26.755	27.755	24.005	25.755	26.505	26.255	26.255	27.255	24.755	
Burr Height, in.	0.068	0.070	0.058	0.046	0.063	0.066	0.065	0.033	0.066	0.070	0.056	
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	0.00	0.138									0.267
Casing Hole Diameter, Short Axis, in.	0.37	0.35	0.35									0.361
Casing Hole Diameter, Long Axis, in.	0.40	0.37	0.35									0.378
Average Casing Hole Diameter, in.	0.385	0.360	0.350									0.369
Total Depth, in.	27.005	27.505	25.005									26.148
Burr Height, in.	0.038	0.049	0.035									0.057

WITNESSING INFORMATION

Date of Notice of Intent to Test: July 27th 2004 Witnessed by: J. Smimoff (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 MATTANZIO Perforating Projects Manager Sept 1st 2004 Explosivos Tecnologicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ (Title) _____ (Date) _____ (Company) _____ (Address)