



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

F10

Service Company AVAILABLE TO ALL FROM OWEN OIL TOOLS Explosive Weight 21.0 gm, HMX powder, Case Material STEEL
 Gun OD & Trade Name 4 1/2" OD 12SPF DP 145/35 TAG Max. Temp. °F 400 - 1 hr 3 hr 24 hr 100 hr 200 hr
 Charge Name 3 1/8" SDP HERO NT4 - HMX Maximum Pressure Rating 18,000 psi, Carrier Material STEEL
 Manufacturer Charge Part No. SDP-3125-411NT4 Date of Manufacture 15-SEP-2006 Shot Density Tested 12 Shots/ft
 Gun Type SCALLOPED, RETRIEVABLE EXPENDABLE HOLLOW CARRIER Recommended Minimum ID for Running 5.675 in.
 Phasing Tested 145/35 degrees, Firing Order X Top Down, X Bottom Up Available Firing Mode X Selective, X Simultaneous
 Debris Description SMALL STEEL PIECES Debris Weight N/A gm/charge, Debris N/A in³/charge
 Remarks RDX VERSION AVAILABLE AS SDP-3125-411NT4

SECTION 1 - CONCRETE TARGET

Casing Data 7" OD, Weight 32 lb/ft, L-80 API Grade, Date of Section 1 Test 1-NOV-2006
 Target Data 108" OD, Amount of Cement 26,438 lb., Amount of Sand 52,875 lb., Amount of Water 13,675.7 lb.
 Date of Compressive Strength Test 01-NOV-2006, Briquette Compressive Strength 5906 psi, Age of Target 28 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	1.46	0.32	0.69	1.12	0.08	1.59	0.08	1.12	0.69	0.32	
Casing Hole Diameter, Short Axis, in.	0.38	0.27	0.37	0.36	0.26	0.38	0.32	0.31	0.39	0.29	0.36	
Casing Hole Diameter, Long Axis, in.	0.38	0.28	0.38	0.38	0.27	0.40	0.33	0.31	0.40	0.29	0.36	
Average Casing Hole Diameter, in.	0.38	0.28	0.38	0.37	0.27	0.39	0.33	0.31	0.40	0.29	0.36	
Total Depth, in.	36.71	32.46	31.96	33.21	31.71	34.96	34.59	31.96	33.84	38.46	32.46	
Burr Height, in.	0.07	0.04	0.07	0.08	0.05	0.04	0.06	0.06	0.05	0.04	0.06	
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.	1.46	0.00	1.46	0.32	0.69	1.12	0.08					XXX
Casing Hole Diameter, Short Axis, in.	0.38	0.26	0.37	0.33	0.29	0.36	0.29					0.33
Casing Hole Diameter, Long Axis, in.	0.39	0.27	0.39	0.33	0.30	0.37	0.30					0.34
Average Casing Hole Diameter, in.	0.39	0.27	0.38	0.33	0.30	0.37	0.30					0.34
Total Depth, in.	36.21	26.96	32.71	29.71	33.84	27.71	31.96					32.86
Burr Height, in.	0.11	0.05	0.06	0.09	0.06	0.05	0.06					0.06

WITNESSING INFORMATION

Date of Notice of Intent to Test: September 22, 2006 Witnessed by: Jerry Baldwin
 Other Activities Witnessed: Target Pouring Briquette: Preparation Testing Burr Height Measurements 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 VICE PRESIDENT - ENGINEERING OWEN OIL TOOLS 12001 County Road 1000 Godley, TX, USA 76044
 RECERTIFIED (Company Official) (Title) (Date) (Company) (Address)