

CERTIFICATION DATA SHEET

5-1/8" OD, TAG, 5 SPF, 60°, 39G, SUPER-HERO (SDP-4500-411NT3)

FORM 43F

PERFORATING SYSTEM EVALUATION, RP 43, SECTIONS 1 AND 2

SDP-4500-411NT3

Service Company AVAILABLE TO ALL FROM OWEN OIL TOOLS, INC.
 Gun OD & Trade Name 5-1/8" OD, TAG, 5 SPF, 60°, 39G, SUPER-HERO (SDP-4500-411NT3)
 Charge Name PERFORATOR, 4-1/2", SDP, 39G, SUPER-HERO, HMX
 Manufacturer Charge Part No. SDP-4500-411NT3 Date of Manufacture 29-May-07
 Gun Type SCALLPOED, EXPEPENDABLE
 Phasing Tested 60 degrees, Firing Order X Top down, Bottom up
 Debris Description SMALL STEEL PIECES
 Remarks RDX VERSION AVAILABLE AS SDP-4500-311NT3

Explosive Weight 39 gm, HMX powder, Case Material STEEL
 Max. Temp, F 400 1 hr 3 hr 24 hr 100 hr hr
 Maximum Pressure Rating 17,000 psi, Carrier Material STEEL
 Shot Density 5 shots/ft
 Recommended Minimum ID for Running 5.625 in.
 Available Firing Mode Selective, X Simultaneous.
 Debris Weight N/A gm/charge, Debris N/A in.³/charge

SECTION 1 - CONCRETE TARGET

Casing Data 7" OD, Weight 32 lb/ft, L-80 API Grade, Date of Concrete Test 23-Jan-08
 Target Data 144 OD, Briquet Compressive Strength 6150 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	
Clearance, in.	0.00	0.32	1.12	1.60	1.12	0.32					
Casing Hole Diameter, Short Axis, in.	0.39	0.43	0.40	0.38	0.42	0.43					
Casing Hole Diameter, Long Axis, in.	0.41	0.44	0.42	0.38	0.44	0.44					
Average Casing Hole Diameter, in.	0.40	0.44	0.41	0.38	0.43	0.44					
Total Depth, in.	59.20	62.85	63.50	66.13	62.62	62.10					
Burr Height, in.	0.04	0.05	0.04	0.04	0.03	0.04					
Shot No.	No. 11	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	Average
Clearance, in.											
Casing Hole Diameter, Short Axis, in.											0.41
Casing Hole Diameter, Long Axis, in.											0.42
Average Casing Hole Diameter, in.											0.42
Total Depth, in.											62.73
Burr Height, in.											0.04
Remarks											

SECTION 2 - BEREA SANDSTONE CORE TARGET

	Shot No.	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Average
Berea Bulk Porosity, <u> </u>	Faceplate Hole Diameter, Short Axis, in.							
	Faceplate Hole Diameter, Long Axis, in.							
Date of Berea Test <u> </u>	Average Faceplate Hole Diameter, in.							
	Total Depth, in.							

CERTIFICATION

Type of Certification: Self Third Party

I certify that these tests were made according to the procedures as outlined in RP 43: Recommended Practices for Evaluation of Well Perforators, Fifth Edition, January 1991. All of the equipment used in these tests, such as the guns, jet charges, detonator cord, etc., was standard with our company for 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.

CERTIFIED BY *Dan W. Pratt* DAN W. PRATT VICE PRESIDENT - ENGINEERING 30-Jan-08 OWEN OIL TOOLS, INC 8900 FORUM WAY, FT. WORTH TX. 76140
 RECERTIFIED (Company Officer) (Title) (Date) (Company) (Address)