

CERTIFICATION DATA SHEET

2-3/4" 6 SPF EXPENDABLE SCALLOPED GUN

API FORM 43F

PERFORATING SYSTEM EVALUATION, RP 43, SECTIONS 1 AND 2

SDP-2750-311NT4

Service Company AVAILABLE TO ALL FROM OWEN OIL TOOLS
 Gun OD & Trade Name 2-3/4" 6 SPF EXPENDABLE SCALLOPED GUN
 Charge Name 2-3/4" SDP SuperHERO PLUS+
 Manufacturer Charge Part No. SDP-2750-311NT4 Date of Manufacture 5/1/2008
 Gun Type EXPENDABLE, RETRIEVABLE, SCALLOPED GUN
 Phasing Tested 60 degrees, Firing Order X Top down, X Bottom up
 Debris Description SMALL STEEL PIECES
 Remarks 0

Explosive Weight 15 gm, RDX powder, Case Material STEEL
 Max. Temp, F 330 1 hr 3 hr 24 hr 100 hr hr
 Maximum Pressure Rating 22500 psi, Carrier Material STEEL
 Shot Density 6 shots/ft
 Recommended Minimum ID for Running 3 in.
 Available Firing Mode X Selective, X Simultaneous.
 Debris Weight NA gm/charge, Debris NA in./charge

SECTION 1 - CONCRETE TARGET

Casing Data 4.5 OD, Weight 11.6 lb/ft, L-80 API Grade, Date of Concrete Test 3/10/2009
 Target Data 96 OD, Briquet Compressive Strength 6215 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	
Clearance, in.	0.24	0.86	1.25	0.86	0.24	0.00	0.24	0.86	1.25	0.86	
Casing Hole Diameter, Short Axis, in.	0.40	0.41	0.38	0.40	0.40	0.40	0.41	0.38	0.39	0.38	
Casing Hole Diameter, Long Axis, in.	0.41	0.42	0.39	0.41	0.42	0.41	0.42	0.40	0.40	0.38	
Average Casing Hole Diameter, in.	0.41	0.42	0.39	0.41	0.41	0.41	0.42	0.39	0.40	0.38	
Total Depth, in.	41.88	42.50	39.25	42.44	41.68	38.75	40.13	42.88	38.94	39.25	
Burr Height, in.	0.10	0.05	0.05	0.06	0.03	0.04	0.03	0.04	0.08	0.09	
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.	0.24	0.00	0.24	0.86	1.25						
Casing Hole Diameter, Short Axis, in.	0.43	0.40	0.41	0.38	0.36						0.40
Casing Hole Diameter, Long Axis, in.	0.43	0.41	0.43	0.38	0.37						0.41
Average Casing Hole Diameter, in.	0.43	0.41	0.42	0.38	0.37						0.40
Total Depth, in.	41.44	39.00	40.63	39.88	38.88						40.50
Burr Height, in.	0.05	0.03	0.08	0.06	0.07						0.17

SECTION 2 - HARD ROCK CORE TARGET

	Shot No.	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Average
Compressive Strength, _____	Faceplate Hole Diameter, Short Axis, in.							
Density ASTM C 97, _____	Faceplate Hole Diameter, Long Axis, in.							
Date of Hard Rock Test _____	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 MATTHEW CLAY BALLISTICS MANAGER - ENGINEERING 3-10-2009 OWEN OIL TOOLS, INC , 12001 CR 1000, GODLEY, TX, USA
 RECERTIFIED _____ (Company Officer) (Title) (Date) (Company) (Address)