



## Registered Data Sheet Perforating System Evaluation, API RP 19B Section 1

API Form 19B-Section 1     Conforms to All Requirements of Section 1     Special Test - See Remarks/Exceptions below

Service Company Available to all from Hunting    Explosive weight 38.5 gm, HMX powder, Case Material Steel  
 Gun OD & Trade Name 7" EXP Gun, 12 SPF 135/45 Degree    Max Temp, °F 400 1 hr 3 hr 24 hr 100 hr 200 hr  
 Charge Name 4" 38.5G HMX SDP    Maximum Pressure Rating 13,000 psi, Carrier Material H.T. Steel  
 Manufacturer Charge Part No. EXP-4039-423T Date of Manufacture 29 Sep 2010    Shot Density Tested 12    Shots/ft 12  
 Gun Type Hollow Steel Carrier, Expendable (HC, E)    Recommended Minimum ID for Running 7.5 in.  
 Phasing Tested 135/45 degrees, Firing Order:  Top down  Bottom up    Available Firing Mode:  X  Selective  X  Simultaneous  
 Debris Description Small steel chips, usually retained in carrier    Debris Weight n/a gm/charge, Debris n/a in<sup>3</sup>/charge

Remarks/Exceptions per Section 1.11 \_\_\_\_\_

Casing Data 9-5/8" OD, Weight 47 lb/ft, API Grade, L-80 Date of Section 1 Test 02 November 2010  
 Target Data 134" OD, Amount of Cement 11,250 lb, Amount of Sand 22,500 lb, Amount of Water 5,872 lb.  
 Date of Compressive Strength Test 02 November 2010 Briquette Compressive Strength 6,175 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	1.39	0.76	0.21	1.68	0.21	0.76	1.39	0.00	1.39	0.76	
Casing Hole Diameter, Short Axis, in.	0.39	0.35	0.38	0.40	0.32	0.43	0.41	0.33	0.40	0.33	0.40	
Casing Hole Diameter, Long Axis, in.	0.42	0.36	0.39	0.42	0.32	0.45	0.41	0.33	0.42	0.37	0.41	
Average Casing Hole Diameter, in.	0.41	0.36	0.39	0.41	0.32	0.44	0.41	0.33	0.41	0.35	0.41	
Total Depth, in.	37.22	58.47	56.22	38.72	59.97	56.72	60.72	50.97	36.97	59.47	55.72	
Burr Height, in.	0.09	0.09	0.08	0.10	0.11	0.08	0.07	0.09	0.08	0.08	0.10	
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.	0.21	1.68	0.21	0.76	1.39	0.00	1.39	0.76	0.21	1.68	0.21	XXXXXX
Casing Hole Diameter, Short Axis, in.	0.46	0.37	0.50	0.38	0.33	0.38	0.31	0.41	0.40	0.34	0.44	0.39
Casing Hole Diameter, Long Axis, in.	0.47	0.37	0.51	0.42	0.35	0.38	0.33	0.42	0.42	0.36	0.45	0.40
Average Casing Hole Diameter, in.	0.47	0.37	0.51	0.40	0.34	0.38	0.32	0.42	0.41	0.35	0.45	0.40
Total Depth, in.	37.72	60.72	53.60	60.47	55.85	38.47	15.72	54.97	33.47	53.47	47.47	49.60
Burr Height, in.	0.09	0.09	0.07	0.09	0.09	0.07	0.08	0.10	0.09	0.11	0.07	0.09

Remarks \_\_\_\_\_

### Manufacturer's Certification

Type of Certification: \_\_\_\_\_ Self  Third Party    API Witnesses: Jim Stout & Mona Elkhatib

I certify that these tests were made according to the procedures as outlined in API 19B: Recommended Practice for Evaluation of Well Perforators, Second Edition, September 2006. 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 that would be furnished to perforate a well for any operator. API neither endorses these tests nor recommends the use of the perforator system described.

CERTIFIED BY [Signature]    President, Hunting Titan    4/8/2014    143 HCR 4361, Milford, TX 76670, USA  
 X RECERTIFIED    (Company Official)    (Title)    (Date)    (Company)    (Address)

Name of test as it should appear on website: 7.00-in. EXP 12 SPF w/ DP EXP-4039-423T  
 Name of test as it appears on application and application date: EXP-4039-423T, Charge, 4" 38.5G HMX SDP (Appl: 10 Sep 2010)



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 Gun OD & Trade Name 7" EXP Gun, 12 SPF 135/45 Degree Max Temp, °F 400 1 hr 3 hr 24 hr 100 hr 200 hr  
 Charge Name 4" 38.5G HMX SDP Maximum Pressure Rating 13,000 psi, Carrier Material H.T. Steel  
 Manufacturer Charge Part No. EXP-4039-423T Date of Manufacture 29 Sep 2010 Shot Density Tested 12 Shots/ft 12  
 Gun Type Hollow Steel Carrier, Expendable (HC, E) Recommended Minimum ID for Running 7.5 in.  
 Phasing Tested 135/45 degrees, Firing Order:  Top down  Bottom up Available Firing Mode:  Selective  Simultaneous  
 Debris Description Small steel chips, usually retained in carrier Debris Weight n/a gm/charge, Debris n/a in<sup>3</sup>/charge

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 Date of Compressive Strength Test 02 November 2010 Briquette Compressive Strength 6,175 psi, Age of Target 28 days

Shot No.	No 23	No 24	No 25	No 26	No 27	No 28	No 29	No 30	No 31	No 32	No 33	
Clearance, in.	0.76											
Casing Hole Diameter, Short Axis, in	0.43											
Casing Hole Diameter, Long Axis, in	0.44											
Average Casing Hole Diameter, in.	0.44											
Total Depth, in.	57.72											
Burr Height, in.	0.09											
Shot No.	No 34	No 35	No 36	No 37	No 38	No 39	No 40	No 41	No 42	No 43	No 44	Average
Clearance, in.												
Casing Hole Diameter, Short Axis, in												XXXXXXXX
Casing Hole Diameter, Long Axis, in												0.40
Average Casing Hole Diameter, in.												0.40
Total Depth, in.												49.60
Burr Height, in.												0.09

Remarks \_\_\_\_\_

**Manufacturer's Certification**

Type of Certification: \_\_\_\_\_ Self  Third Party \_\_\_\_\_ API Witnesses: Jim Stout & Mona Elkhatib

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Name of test as it should appear on website: 7.00-in. EXP 12 SPF w/ DP EXP-4039-423T  
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