

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

				e 4	DI Con	ecial Test - See	Remarks/Ex	xceptions below	V				
API Form 19B-Section 1									powde	er. Case Ma	aterial	Steel	1
Service Company							325	gm, RDX	powde 3 h	3.	4 hr	100 hr	200 hr
Gun OD & Trade Name Ch	iun OD & Trade Name Charge, 7" EXP Gun, 18 SPF 140/20 Degree 7" 45 Gm RDX BH									ier Material		H.T. Steel	
Charge Name		m Pressure Ratir		18			^		18				
Manufacturer Charge Part No. FLO-70		ensity Tested	n ID for Don	ving		7.5	Shots/ft .		in.				
Gun Type Hollow S	Recommended Minimum ID for Runnin			x Selective			7.50 X		Simultaneous				
Phasing Tested 140/20 degrees,		Order: ×		Bottom up		le Firing Mode:	n/a	^	**************************************	Debris	n/a		in ³ /charge
Debris Description Small	steel chips	s, usually reta	ained in carr	ier	Debris W	weight	ilid	g	in charge,	De la Company	7		
Remarks/Exceptions per Section 1.11	Special ca	asing used. 9-	-5/8" 53.5# P-	110					1200	1/1/	40.1	2045	
Casing Data 9-5/8"	OD,	Weight	5	3.5	_lb/ft,	API Grade,	P-110	Date of Secti	ion 1 Test	777	18 June		100
	OD.	Amount of		6,204	lb,	Amount of San		12,408	lb,	Amount of W		3,250	lb.
Target Data 60 Date of Compressive Strength Test				Briquette Co	mpressive	Strength	6,990	psi, Age o		of Target		28	——— days
Date of Complessive Strength Test							110 9	71 /4	N- a	No C	No 10	No 11	
Shot No.		No 1	No 2	No 3	No 4	No 5	No 6	No 7	No 8	No 9	0.77	0.77	
Clearance, in.		0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	1.17	1.12	-
Casing Hole Diameter, Short Axis, in		1.12	1.13	1.14	1.16		1.14	1.14	1.15	1.16	1.17	1.12	-
Casing Hole Diameter, Long Axis, in		1.14	1.15	1.16	1.16	1.14	1.16	1.18	1.18	1.20	2	1.14	-
Average Casing Hole Diameter, in.		1.13	1.14	1.15	1.16		1.15	1.16	1.17	1.18	1.18	9.05	70
Total Depth, in.		9.30	10.05	9.30	Lost	11.30	9.30	9.05	8.30	9.05	Lost		=
Burr Height, in.		0.07	0.07	0.08	0.06	0.10	0.11	0.06	0.13	0.12	0.11	0.13	-
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.			0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	XXXXXX
Casing Hole Diameter, Short Axis, in			1.14	1.13	1.05	1.07	1.05	1.15	1.15	1.10	1.14	1.10	1.12
Casing Hole Diameter, Long Axis, in		1.11		1.15	1.10	1,13	1.09	1.20	1.16	1.10	1.18	1.16	1.15
Average Casing Hole Diameter, in.		1.09	A / A	1 11	1.08	1.10	1.07	1.18	1.16	1.10	1.16	1.13	1.13
Total Depth, in			17777	1	7.55	7.80	7.80	8.55	8.05	8.55	9.05	9.30	8.87
Burr Height, in			1 1 1 1 1 1 1		0.10	0.09	0.12	0.17	0.11	0.14	0.03	0.07	0.12
Remarks		72	77				Active to the State of the Stat						
Manufacturer's Certification Type of Certification: X		15		nird Party									
Type of Certification.					3: Recomn	nended Practic	e for Evalua	tion of Well Per	forators, Se	cond Edition, S	September 20	06. All of the	equipment used
I certify that these tests were made in these tests, such as the guns, je the equipment was chosen at rand nor recommends the use of the pe	et charges d lom from ste	ock and there	efore will be	standard equipr substantially the	ment with	our company for the equipment	t that would b	be furnished to	perforate a	well for any ope	erator. API ne	either endors	ses these tests
	X CERTIFIED BY President					July 2015	Hunting Titan		143 H		X 76670, USA		
RECERTIFIED (Company Official) (Title)						(Date) (Company)					(Add	tress)	
Name of test as it should appear on w)	7	7-in. EXP 18	8 SPF w/ FLO-7045-312CF								
Name of test as it appears on applica		lication date:								9			
						THE RESERVE AND ADDRESS OF THE PARTY OF THE	NAME AND ADDRESS OF THE OWNER,	THE RESERVE THE PERSON NAMED IN		THE RESERVE TO STREET,	The second secon		



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			100000	- W		Evaluation	weight	45 g	gm, RDX	powder	r, Case Ma	aterial	Steel	<u></u>
Service Company						Explosive Max Tem		325	9m, <u>RDX</u> 1 hr	powder 3 h		24 hr	100 hr	200 hr
	un OD & Trade Name Charge, 7" EXP Gun, 18 SPF 140/20 Degree						np, *F m Pressure Rating				er Material	1112	H.T. Steel	
Charge Name 7" 45 Gm RDX BH Manufacturer Charge Part No. FLO-7045-312CF Date of Manufacture 13 April 2015							nsity Tested		18			Shots/ft	18	
Wallander Charge Carrier Evropedoble (HC E)							nended Minimum	ID for Runni	ing		7.5			in.
Gun Type Hollow Steel Carrier, Expendable (HC, E) Phasing Tested 140/20 degrees, Firing Order: x Top down Bottom up							e Firing Mode:		x	Selective	11	x		Simultaneous
Phasing Tested	Debris W		n/a		m/charge,	Debris	n/a	V.	in³/charge					
Debris Description			s, usually reta			DEDITO VI			9		10%	10		
Remarks/Exception	ns per Section 1.11	Special ca	asing used. 9-							1/226	11-12	18 June	2015	*
Casing Data	9-5/8"	OD,	Weight	5.	3.5	lb/ft,	API Grade,	name and the second sec	Date of Secti		A		3,250	
Target Data		OD,	Amount of	f Cement	6,204		Amount of Sano		12,408	lb,	Amount of W		3,250	lb.
Date of Compressi		1	17 June 2015 Briquette Co			ompressive Strength 6,990			psi,	Age	of Target		20	——— days
				N. O.	N= 25	No 26	No 27	No 28	No 29	No 30	No 31	No 32	No 33	
Shot No.			No 23	No 24	No 25		0.77	0.77	0.77	0.77	0.77	0.77	0.77	
				0.77	0.77	0.77		1.04	1.15	1.08	1.17	1.15	1.09	
Casing Hole Diame			1.14			1.15	1.15	1.04	1.13	1.15	1.18	1.11	1.09	
Casing Hole Diame		100 mm 100 mm 100 mm	1,14	-		1.15		1.05	1.18	1.12		1.13	1.09	
Average Casing Ho			1.14			1.15	10.30	8.55	9.05	7.80	8.55	9.05	8.55	
						9.30		0.19	0.17	0.15	0.12	0.23	0.10	
Burr Height, in			0.19	0.08	0.10	017	0.12		- 4.1/	V.19			200 200	nga cacasa
				No 35	No 36	No 37	No 38	No 39	No 40	No 41	No 42	No 43	No 44	Average
Clearance, in			0.77	0.77	1527	19 -	~				-		-	xxxxxxx
177	neter, Short Axis, in		1.13	-	7 -14 7.	7)		1.15
Casing Hole Diam	neter, Long Axis, in		1.15		<u> (L</u>							1		1.13
Average Casing H	lole Diameter, in.		1.14	the state of the s	1774									8.87
Total Depth, in.					<i>J</i>							· —		0.12
					1									
Remarks			110	77										
Manufacturer's	Certification	1	16216											
Type of Certificat	tion: X				hird Party									
3. A. A. S.		1	<u> </u>) Person	rended Practice	for Evaluation	ion of Well Per	forators. Se	cond Edition.	September 20	06. All of the	equipment used
in these tests, su	ich as the guns, jet as chosen at rando	et charges d lom from st	detonator core tock and there	rd, etc., was s refore will be s	standard equipn substantially the	nent with c same as	our company for the equipment	the use in that would b	the gun being to be furnished to	ested and w perforate a	vas not change well for any op	ed in any man erator. API ne	ner for the test ither endorse	st. Furthermore, es these tests
nor recommends	the use of the per	rforator sys	em describe	ed.										
X CERTIFIE		6 A			esident	15 Ju	uly 2015		Hunting Tita		143 H			76670, USA
RECERTIFIED (Company Official) (Title)						(Date)		(Company)			(Add	dress)		
						SPF w	/ FLO-7045-	-312CF						
CANADA CALCADA DA CACADA D			E-District Control							1,000				
Name of test as i	it appears on applicat	tion and app	olication date:											