

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

				4" High Shot Density Gun ExTrA! With TC47H ExTrA! 39grams HMX DP	rAl 39gran	C47H ExT	rA! With T	, Gun ExT	not Density	4" High SI	application date:	on application and	Name of test as it appears on application and application date:
					s HMX DP	\i 39grams	47H ExTr	VI With TC.	3un ExTr/	ot Density	4" High Shot Density Gun ExTrA! With TC47H ExTrA! 39grams HMX D	Name of test as it should appear on website:	
	<b>(S</b> )	(Address)			(Company)		(Date)		(Title)		(Company Official)	(Compar	RECERTIFIED
res - Argentina	a - Buenos Air	Ruta 25 Km 13- Villa Rosa - Buenos Aires - Argentina	Ruta 25 Kr		ETASA			nager	Plant Mar	Explosives Plant Manager	Gabriel O. Scipioni	- 5	CERTIFIED BY
uipment used Furthermore, these tests	for the test. ler endorses	erforators, Second Edition, September 2006. All of the equipment used tested and was not changed in any manner for the test. Furthermore, o perforate a well for any operator. API neither endorses these tests	nd Edition, Se not changed I for any oper	forators, Seconsted and was perforate a we	on of Well Perse gun being to furnished to p	for Evaluation the use in the that would be	nded Practice r company for le equipment	)B: Recomme )ment with ou ne same as th	ned in API 19 andard equip ubstantially th	edures as outlind, etc., was sirefore will be sed.	made according to the proceduns, jet charges detonator cord, random from stock and therefore partial raystem described	ere made accord guns, jet charg n at random from of the perforator	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 us in these tests, such as the guns, jet charges defonator 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 deforator system described.
									rd Party	Jorge Smirnoff APIW Third Party	Self Jorge		Type of Certification:
									1	1	1	ation	Manufacturer's Certification
100										1	7		Remarks
56.100											58.308		Total Depth, in
0.469											0.435	eter, in	Average Casing Hole Diameter, in
0.478											0.440	g Axis, in	Casing Hole Diameter, Long Axis, in
XXXXXXX											0.405	A Avic in	Clearance, in
Average	No 22	No 21	No 20	No 19	No 18	No 17	No 16	No 15	No 14	No 13	No 12		Shot No
enconstructed the	0.022	0.065	0.059	0.068	0.035	0.058	0.080	0.076	0.027	0.047	0.055		Burr Height, in
nanosatifin	0.435				0.425	0.500	0.535	0.475	0.395	0.435	0.465	eter, in	Average Casing Hole Diameter, in.
Dribbo el Tutor	0.450	0.520		0.490	0.430	0.510	0.540	0.490	0.400	0.450	0.480	g Axis, in	Casing Hole Diameter, Long Axis, in
	0.420	0.510	0.530		0.420	0.490	0.530	0.460	0.390	0.420	0.450	rt Axis, in	Casing Hole Diameter, Short Axis, in
	0.892	0.405	0.000	0.405	0.892	0.405	0.000	0.405	0.892	0.405	0.000		Clearance, in
	No 11	No 10	No 9	No 8	No 7	No 6	No 5	No 4	No 3	No 2	No 1		Shot No.
days			Target 31	Age of Target	psi,	5	trength 6175	ssive S	Briquette (		03 / 16 / 2010	Test .	=
lb.		ater 16520	Amount of Water	lb,		d 63600	Amount of Sand	lb,	000	Amount of Cement 31800	Amount	OD,	
			15 / 2010	Date of Section 1 Test 03 / 15 / 2010	Date of Secti	80	API Grade, L-80	lb/ft,		7	Weight 17	OD,	Casing Data 5 1/2"
												ction 1.11	Remarks/Exceptions per Section 1.11
in³/charge			Debris N/A	_gm/charge, De	9		eight N/A	_ Debris Weight		nside the gun	debris keeps i	and loading tube	Debris Description Cases and loading tube debris keeps inside the gun
Simultaneous				Selective X			Available Firing Mode:		Bottom up	Top down X	Firing Order:		Phasing Tested 90°
ji		01000			ng	n ID for Runni	Recommended Minimum ID for Running	Recomme		1		sity Gun.	Gun Type High Shot Density Gun
		Shots/ft					Shot Density Tested 4	Shot Dens		Date of Manufacture		lo. TC47H ExTrA	유.
			Carrier MaterialSTEEL	psi, Carrier	_	ng 20000	ress	Maximum				39 grams HMX DP ExTrAI	3
200 hr	100 hr	, ,	24	3 hr	1 hr		),°F 400°F	Max Temp,		idotalod by E.	SPF 90°	ime 4" DP HMX ExTrAl 4 SPF 90°	Gun OD & Trade Name 4"
esus encode		Case Material STEE!	Cace Ma	W		Remarks/Ex		Special les	tion 1	ements of Sec	Conforms to All Requirements of Section	Confor	-
									Annual Contraction of the Contra	Application of the second			