

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

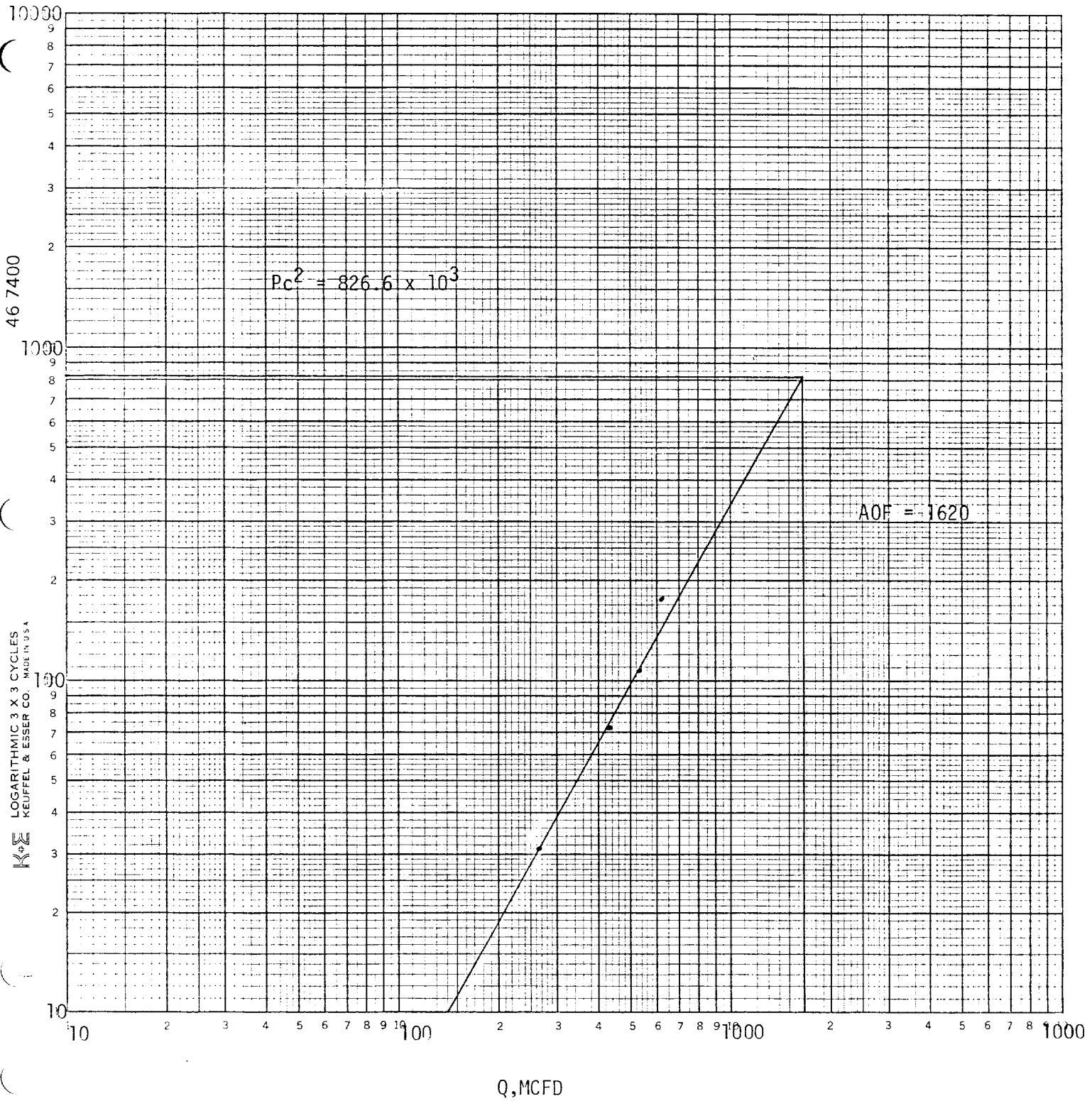
Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11-19-81		DEC 2 1981	
Company AMOCO PRODUCTION COMPANY				Connection TRANSWESTERN		O. C. D. ARTESIA, OFFICE	
Pool BOYD MORROW				Formation MORROW		Unit	
Completion Date 4-27-81		Total Depth 8817.		Plug Back TD 8720.		Elevation 3700.	
Csg. Size 5.500		Wt. 17.0		Set At 4.778		Perforations: From 8586. To 8652.	
Tub. Size 2.375		Wt. 4.7		Set At 1.995		Perforations: From 0. To 0.	
Type Well - Single - Dradhead - G.C. or G.O. Multiple SINGLE				Packer Set At 8507.		Well No. 1	
Producing Thru TUBING		Reservoir Temp. °F 188. # 8619.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.2	
L 8619.		H 8619.		G _g 0.598		% CO ₂ 1.00	
				% N ₂ 0.45		% H ₂ S 0.	
				Prover 0.		Meter Run 2.0 FLANGE	
FLOW DATA							
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Duration of Flow
1.	2.00 X 0.625			560.	19.0	65.	72.0
2.	2.00 X 0.625			565.	51.0	67.	1.0
3.	2.00 X 0.625			565.	77.0	68.	1.0
4.	2.00 X 0.625			570.	100.0	68.	1.0
5.							1.0
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super. Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	1.87	104.36	573.2	0.9952	1.2930	1.0474	263.
2.	1.87	171.72	578.2	0.9933	1.2930	1.0471	432.
3.	1.87	211.00	578.2	0.9924	1.2930	1.0467	530.
4.	1.87	241.50	583.2	0.9924	1.2930	1.0471	606.
5.							
NO.	P _i	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ 0. Mcf/bbl.		
1.	0.85	525.	1.48	0.911	A.P.I. Gravity of Liquid Hydrocarbons _____ 0. Deg.		
2.	0.86	527.	1.48	0.912	Specific Gravity Separator Gas _____ 0.598 X X X X X X X X		
3.	0.86	528.	1.49	0.913	Specific Gravity Flowing Fluid _____ X X X X X 0.598		
4.	0.86	528.	1.49	0.912	Critical Pressure _____ 676. P.S.I.A. 676. P.S.I.A.		
5.					Critical Temperature _____ 355. R 355. R		
P _c 909.2 P _c ² 826.6					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 7.5420$		
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.0567$		
1.	791.	891.	794.	32.6	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1620.$		
2.	754.	869.	756.	70.6			
3.	716.	847.	717.	109.6			
4.	648.	806.	649.	177.6			
5.							
Absolute Open Flow 1620.				Mcf @ 15.025		Angle of Slope θ 61.1	
						Slope, n .553	
Remarks: Fourth point appears erroneous therefore was not included in calculations.							
Approved By Commission: _____ Conducted By: John West Engr. Co. Calculated By: B. A. Hemmeline Checked By: L. W. Sheppard							

AMOCO PRODUCTION COMPANY

FEDERAL BV #1



SUGGESTED FIELD DATA SHEET (Not to be used to file)

☒ Initial ☐ Annual ☐ Special		Test Date 11-79-81	Lease No. or Serial No.
Company Amoco Production Co.		Location TRANSWESTERN	Allottee
Field Undesign.	Reservoir Morrow	Unit N	Form or Lease Name
Completion Date	Total Depth 8817	Perforations 5720	Well No. 8586-8652
Casing Size 3 1/2"	W.L. 4.7	Set At 8811	Sec. 3
Tubing Size 2 3/8"	W.L. 1.995	Set At open End	Two-Box 195 24E
Type Completion (Describe) Single		Packer Set At 8513	County or Portion Eddy
Production Test Tubing	Reservoir Temp. 182.8	Annulus Temp. 60	State NEW MEXICO
	H 1.578	S.G. 1.00	Prover 2" Flange
		S.G. 1.450	% H ₂ S

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
Time of Reading	HR.	Tbg. Psg.	Csg. Psg.	Temp. F	Pressure Psg.	Size	Temp. F	Orifice	(Include liquid production data) Type-A.P.I. Gravity-Amount
7/130 AM		896		48				1.674	Water
8/145		896							5-100' 2-1000' 0-150'
9/100		895		53	560	5"	62		Basin Test
9/115		891		53	560	10"	64		11/64 Choke
9/120		875		54	560	19"	64		251 mcf/day
9/145		876		55	560	19"	65		End Rate I
10/100		857		56	560	48"	65		12/64 Choke
10/115		863		57	565	49"	66		412 mcf/day
10/130		857		57	565	50"	66		
10/145		855		57	565	51"	67		End Rate II
11/100		845		58	565	78"	67		14/64 Choke
11/115		847		59	565	77"	67		505 mcf/day
11/130		839		59	565	77"	68		
11/145		833		59	565	77"	68		End Rate III
12/100 AM		817		59	570	100"	68		18/64 Choke
12/115 AM		803		60	570	100"	68		578 mcf/day
12/130		801		60	570	100"	68		
12/145 AM		792		61	570	100"	68		End Rate IV
									No liquid during tests

NEW-TEX LAB
P.O. BOX 1161
HOBBE NM 88241-1161
505-393-3561

ANALYSIS NUMBER: 6061
DATE OF RUN: 11 20 81
DATE SECURED: 11 19 81

ANALYSIS CERTIFICATE

SAMPLE IDENT: AMOCO PRODUCTION-FEDERAL "SV" #1
CLIENT: JOHN WEST ENGINEERING
ADDRESS: 412 NORTH DAL PASO
CITY, STATE: HOBBE

SAMPLING PRESS: 0 PSIG SAMPLING TEMP: 0 DEG F
STATION NUMBER:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NITROGEN	0.4496106	
CARBON DIOXIDE	1.0012397	
METHANE	93.5561752	
ETHANE	3.8541117	1.0278900
PROPANE	0.7397475	0.2030610
ISO-BUTANE	0.1447499	0.0472319
NORMAL BUTANE	0.1211284	0.0390828
ISO-PENTANE	0.0528362	0.0192905
NORMAL PENTANE	0.0214831	0.0077658
HEXANES	0.0589128	0.0241681
HEPTANES PLUS	0.0000000	0.0000000
TOTAL	100.0000000	1.3674900

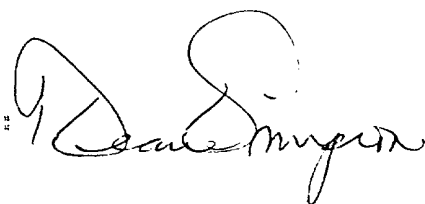
PROPANE GPM: 0.20 BUTANES GPM: 0.09
ETHANE GPM: 1.03 PENTANES PLUS GPM: 0.05

SPECIFIC GRAV (CALC): .5981
MOLE WEIGHT: 17.32

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696	1028	1046	
14.650	1025	1043	
14.730	1030	1049	
14.735	1031	1049	

ANALYZED BY:

APPROVED BY:

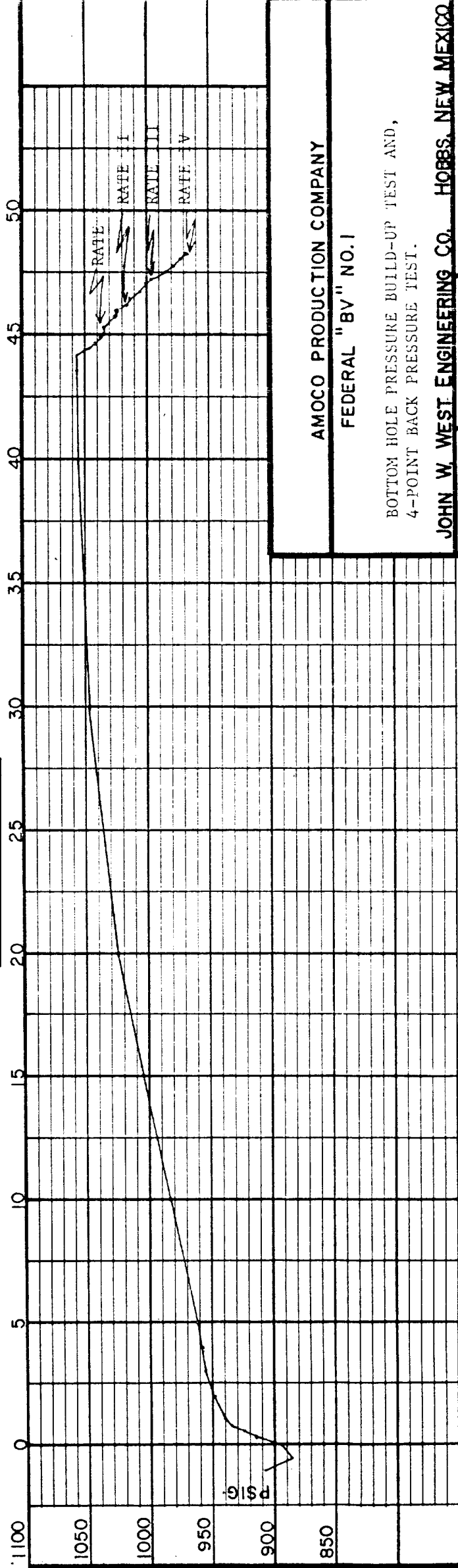


TEST DATE: NOVEMBER 17-19, 1981
TEST DEPTH: 8619 FEET

ELEMENT NO: 34911
RANGE: 0-6000 psi
CLOCK NO: 22509
RANGE: 0-72 Hours

NOTE: SEE TABULATION OF TIMES AND PRESSURES ON ATTACHED SHEET.

TIME-IN-HOURS



AMOCO PRODUCTION COMPANY

FEDERAL "BV" NO.1

BOTTOM HOLE PRESSURE BUILD-UP TEST AND,
4-POINT BACK PRESSURE TEST.

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 11-24-81 Drawn by: bsm

Scale: as shown

AMOCO PRODUCTION COMPANY
 FEDERAL "BV" NO. 1
 BOTTOM HOLE PRESSURE BUILD-UP TEST, AND
 4-POINT BACK PRESSURE TEST.
 TABULATION OF TIMES AND PRESSURES.

TEST CONDUCTED BY:
 JOHN WEST ENGINEERING COMPANY

TEST DATE: NOVEMBER 17-19, 1981
 TEST DEPTH: 8619 FEET
 ELEMENT NO: 34911 (0-6000 psi)
 OPERATOR: R.W.

DATE	TIME	CUM HRS. / MIN		PSIG @ 8619 FEET
11-17-81	11:30 A.M.			909 Gauge reached 8619 Feet
	12:00 Noon			897
	12:30 P.M.	00 Hrs.	00 Min.	894 Shut-In, Begin Test
		00	15	915
		00	30	924
		00	45	934
	1:30 P.M.	01	00	940
	2:30 P.M.	02	00	949
	3:30 P.M.	03	00	955
	4:30 P.M.	04	00	958
	5:30 P.M.	05	00	961
11-17-81	10:30 P.M.	10	00	982
11-18-81	3:30 A.M.	15	00	1003
	8:30 A.M.	20	00	1024
11-18-81	6:30 P.M.	30	00	1048
11-19-81	4:30 A.M.	40	00	1054
11-19-81	8:00 A.M.	43	30	1057 Gauge off Bottom, Grad. Stop
11-19-81	8:30 A.M.			1057 Gauge back to 8619 Feet
	8:45 A.M.	00 Hrs.	00 Min.	1057 Begin Test
	9:00 A.M.	00	15	1048 11/64 Choke
	9:15 A.M.	00	30	1042
	9:30 A.M.	00	45	1036
	9:45 A.M.	01	00	1036 End Rate I
	10:00 A.M.	01	15	1030 13/64 Choke
	10:15 A.M.	01	30	1027
	10:30 A.M.	01	45	1024
	10:45 A.M.	02	00	1018 End Rate II
	11:00 A.M.	02	15	1012 14/64 Choke
	11:15 A.M.	02	30	1006
	11:30 A.M.	02	45	1000
	11:45 A.M.	03	00	997 End Rate III
	12:00 Noon	03	15	985 15/64 Choke
	12:15 P.M.	03	30	979
	12:30 P.M.	03	45	973
11-19-81	12:45 P.M.	04	00	967 End Rate IV, Gauge out, End Test.

JOHN W. WEST ENGINEERING COMPANY
412 NORTH DAL PASO, HOBBS, NEW MEXICO

TELEPHONES 393-3942
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR AMOCO PRODUCTION COMPANY
LEASE FEDERAL "BV"
WELL NO. 1
FIELD _____
DATE 11-19-81 TIME 8:30 A.M.
STATUS Shut-In TEST DEPTH 8612'
TIME S.I. _____ LAST TEST DATE _____
CAS. PRES. _____ BHP LAST TEST _____
TUB. PRES. 896 psi BHP CHANGE _____
ELEV. _____ FLUID TOP _____
DATUM _____ WATER TOP _____
TEMP _____ RUN BY R.W.
CLOCK NO. 22509 GAUGE NO. 19389
ELEMENT NO. 34911 (0-6000 psi)

DEPTH	PRESSURE	GRADIENT
000	896	
7519	1030	.018
8019	1039	.018
8519	1051	.024
8619	1057	.060

