File on eDOCs Yes No
Site Name Sinclair Refinery
Site No. 902003
County Allegany
Town Wellsville
Foilable Yes No
File Name Documents / Reports
Scanned & eDOC
report. HW902003. 1993-09. Remedial Action -
CELA - Vol 7.



Prepared for

Atlantic Richfield Company
515 South Flower Street
Los Angeles, California 90071

REMEDIAL ACTION REPORT
CENTRAL ELEVATED LANDFILL AREA

SINCLAIR REFINERY SITE
WELLSVILLE, NEW YORK

VOLUME VII

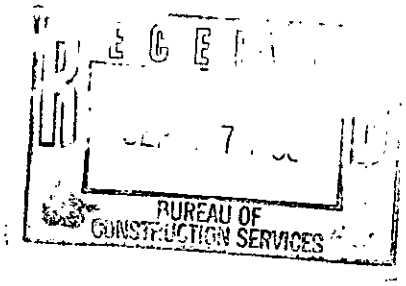
Prepared by



GeoSyntec Consultants
5775 Peachtree Dunwoody Road
Atlanta, Georgia 30342

Project Number: GQ3201

September 1993



APPENDIX K

GEOSYNTHETICS QUALITY ASSURANCE DOCUMENTATION

SYNTHETIC LINER QUALITY CONTROL
ARCO CONTRACT NO. C91028-003-01
SINCLAIR REFINERY SITE
WELLSVILLE, NEW YORK

Prepared by:

Geo-Con, Inc.
Corporate One, Building II, Suite 400
Monroeville, PA 15146

July 7, 1993

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C	CELA CAP • Panel Placement • Panel Thickness • Panel Seaming • Non-Destructive Testing • Destructive Test Log • Repair Report
D	Laboratory Test Results

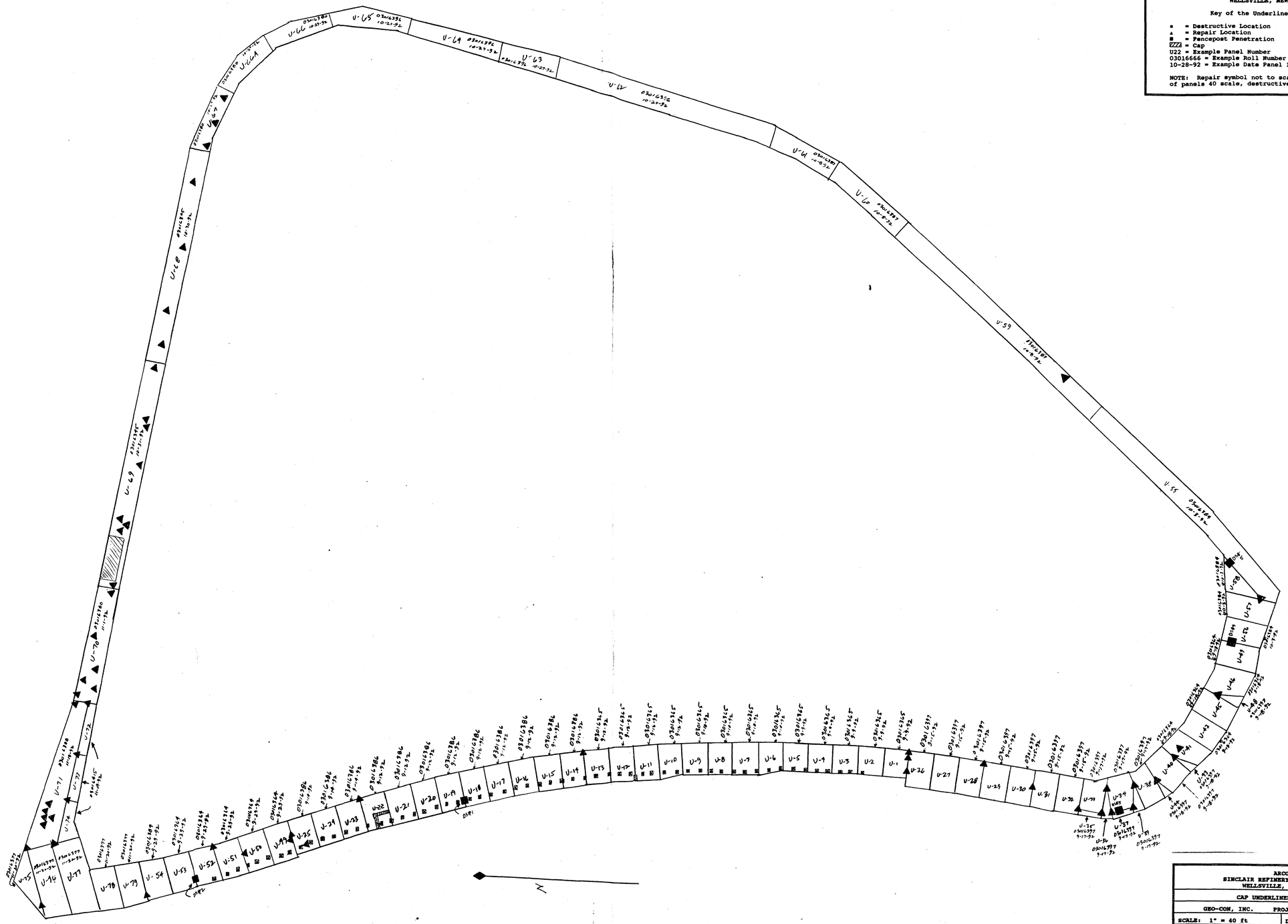
A

ARCO
SINCLAIR REFINERY LANDFILL CAP
WELLSVILLE, NEW YORK

Key of the Underliner As-Built

- ▪ = Destructive Location
- ▲ = Repair Location
- ■ = Pancepost Penetration
- ZZZ = Cap
- U22 = Example Panel Number
- 03016666 = Example Roll Number
- 10-28-92 = Example Date Panel Installed

NOTE: Repair symbol not to scale, field seams and sizes of panels 40 scale, destructive size not to scale



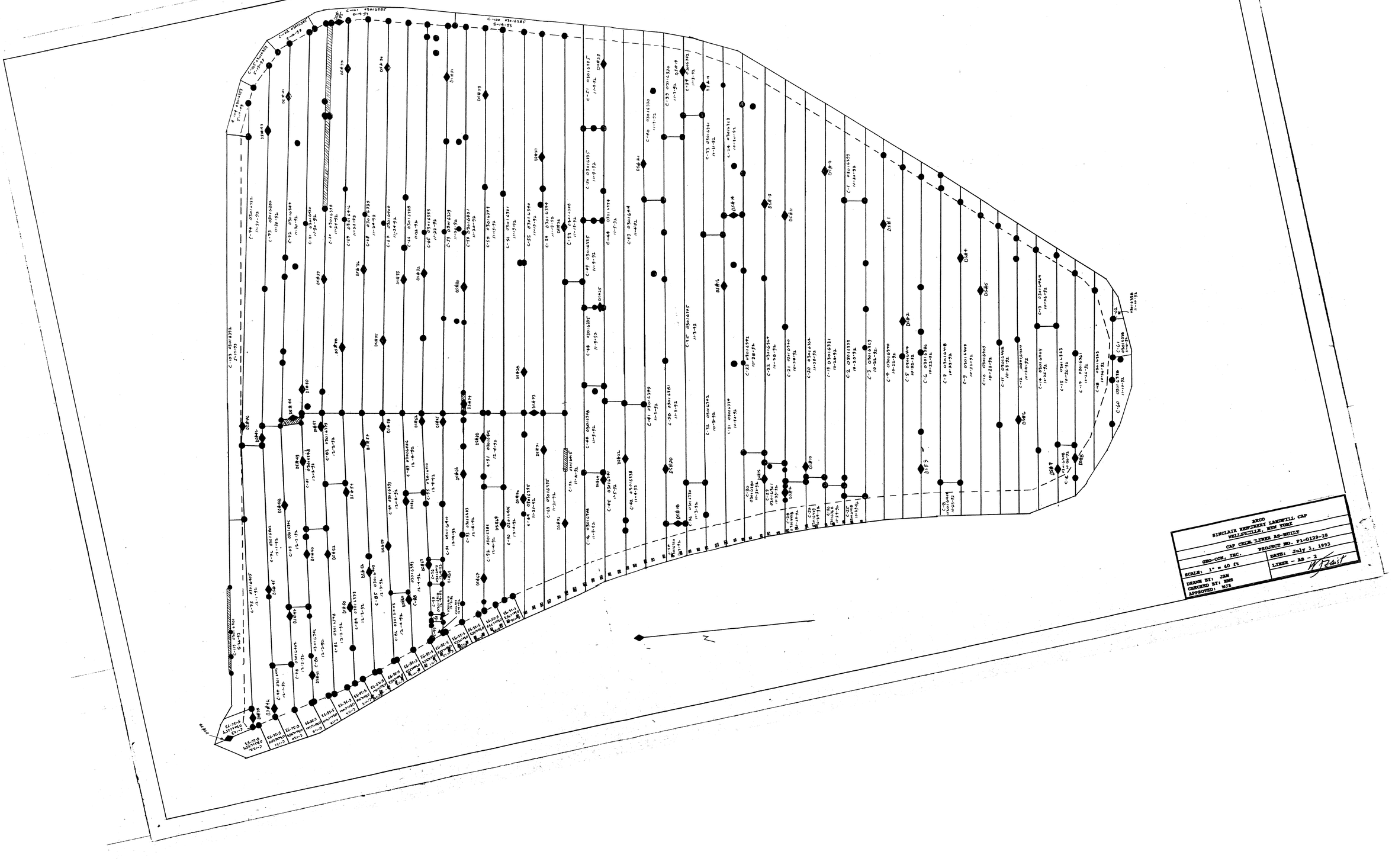
ARCO SINCLAIR REFINERY LANDFILL CAP WELLSVILLE, NEW YORK	
CAP UNDERLINER AS-BUILT	
GEO-CON, INC.	PROJECT NO. P1-0129-28
SCALE: 1" = 40 ft	DATE: July 1, 1993
DRAWN BY: JAM CHECKED BY: RMS APPROVED: WJS	LINER - AB - 1

ARCO
SINCLAIR REFINERY LANDFILL CAP
WELLSVILLE, NEW YORK

Key of the CELA Liner As-Built

= Repair Location
= Destructive Location
= Fencepost Penetration
= Cap Strip
WZZZ = Example Roll Number
03016666 = Example Date Panel Installed
10-22-92 = Example Panel
C-55 = Example Panel

NOTE: Repair and destructive symbols not to scale, panel sizes and field seam locations to 40 scale



ARCO SINCLAIR REFINERY LANDFILL CAP WELLSVILLE, NEW YORK	
CAP CELA LINER AS-BUILT	
GEO-COM, INC.	PROJECT NO. P1-0129-28
SCALE: 1" = 40 ft	DATE: July 1, 1993
DRAWN BY: JAM CHECKED BY: RMS APPROVED: MJS	LINER - AB - 2

B

PANEL PLACEMENT UNDER LINER

PROJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 mil VL Tex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
9-9	6365	V1	29'	22'	Good	Pass	Sunny	N/A	75°	W. Channel
9-9	6365	V2	29'	22'	Good	Pass	Sunny	N/A	75°	W. Channel
9-9	6365	V3	29'	22'	Good	Pass	Sunny	N/A	75°	W. Channel
9-9	6365	V4	29'	22'	Good	Pass	Sunny	N/A	75°	W. Channel
9-9	6365	V5	29'	22'	Good	Pass	Sunny	N/A	75°	W. Channel
9-10	6365	V6	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-10	6365	V7	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-10	6365	V8	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-10	6365	V9	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-12	6365	V10	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6365	V11	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6365	V12	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6365	V13	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	V14	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	V15	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	V16	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel

PANEL PLACEMENT UNDER LINER PAGE 2 OF 5

PROJECT NAME: Wellsville PROJECT NO.: P1-029 MATERIAL: 60mil VL Tex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
9-12	6386	U17	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	U18	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	U19	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	U20	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	U21	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-12	6386	U22	32'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-14	6386	U23	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-14	6386	U24	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-14	6386	U25	32'	22'	Good	Pass	Sunny	N/A	70°	W. Channel
9-15	6397	U26	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel
9-15	6397	U27	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel
9-15	6397	U28	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel
9-15	6397	U29	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel
9-15	6397	U30	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel
9-15	6397	U31	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel
9-15	6397	U32	32'	22'	Good	Pass	Sunny	N/A	80°	W. Channel

PANEL PLACEMENT UNDER LINER PAGE 3 OF 5

PROJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 mil VL Tex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
9-17	6397	U33	32'	22'	Good	Pass	Sunny	N/A	75°	S. Channel
9-17	6397	U34	32'	22'	Good	Pass	Sunny	N/A	75°	S. Channel
9-17	6397	U35	22'	5'	Good	Pass	Sunny	N/A	75°	S. Channel
9-17	6397	U36	22'	5'	Good	Pass	Sunny	N/A	75°	S. Channel
9-17	6397	U37	20'	8'	Good	Pass	Sunny	N/A	75°	S Channel
9-17	6397	U38	37'	22'	Good	Pass	Sunny	N/A	75°	S. Channel
9-17	6397	U39	20'	8'	Good	Pass	Sunny	N/A	75°	S. Channel
9-18	6397	U40	37'	22'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6364	U41	37	22'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6364	U42	37	22'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6397	U43	25'	5'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6397	U44	25'	5'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6364	U45	37'	22'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6364	U46	39'	22'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6364	U47	38'	22'	Good	Pass	Sunny	N/A	70°	S. Channel
9-18	6397	U48	25'	10'	Good	Pass	Sunny	N/A	70°	S. Channel

PANEL PLACEMENT UNDERLINER PAGE 4 OF 5

PROJECT NAME: Wellsville PROJECT NO.: P10129 MATERIAL: 60 mil VL Tex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
9-29	6364	U49	35'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-29	6364	U-50	35'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-29	6364	U-51	35'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-29	6364	U-52	35'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-29	6364	U-53	35'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
9-29	6384	U-54	35'	22'	Good	Pass	Sunny	N/A	65°	W. Channel
10-3	6384	U-55	218'	22'	Good	Pass	Sunny	N/A	70°	S.E. Channel
10-3	6384	U-56	38'	22'	Good	Pass	Sunny	N/A	70°	S.E. Channel
10-3	6384	U-57	42'	22'	Good	Pass	Sunny	N/A	70°	S.E. Channel
10-3	6384	U-58	57'	22'	Good	Pass	Sunny	N/A	70°	S.E. Channel
10-8	6387	U-59	239'	22'	Good	Pass	Sunny	N/A	65°	E. Channel
10-8	6387	U-60	89'	22'	Good	Pass	Sunny	N/A	65°	E. Channel
10-8	6387	U-61	67'	22'	Good	Pass	Sunny	N/A	65°	E. Channel
10-27	6396	U-62	200'	22'	Good	Pass	Cloudy	N/A	65°	E. Channel
10-27	6396	U-63	50'	22'	Good	Pass	Clear	N/A	55°	E. Channel
10-27	6396	U-64	85'	22	Good	Pass	Clear	N/A	55°	E. Channel

GEO·CON® INC.

PANEL PLACEMENT — UNDER-LINER

PROJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 mil VL Tex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
10-27	6396	U-65	70'	22	Good	Pass	Clear	N/A	55°	E. Channel
10-29	6380	U-66	56'	22	Good	Pass	Some Fog	N/A	43°	NE CHANNEL
10-29	6380	U-66A	66'	22'	Good	Pass	Some Rain	N/A	43°	NE CHANNEL
10-29	6380	U-67	60'	22	Good	Pass	Some Rain	N/A	43°	NE CHANNEL
10-30	6395	U-68	187'	22	Good	Pass	Clear	N/A	40°	N CHANNEL
10-31	6395	U-69	197'	22	Good	Pass	Clear	N/A	38°	N CHANNEL
11-1	6380	U-70	103'	22	Good	Pass	Clear	N/A	37°	N CHANNEL
11-19	6388	U-71	130'	22	Good	Pass	Clear	N/A	38°	N CHANNEL
11-19	6915	U-72	45'	7	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-19	6915	U-73	45'	7	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-19	6915	U-74	95'	7	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-20	6377	U-75	60'	18'	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-20	6377	U-76	67'	22'	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-20	6377	U-77	63'	22'	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-20	6377	U-78	35'	22'	Good	Pass	Clear	N/A	38°	NW CHANNEL
11-20	6377	U-79	35'	22	Good	Pass	Clear	N/A	38°	NW CHANNEL

GEO-CON INC.

UNDER LINER

PANEL THICKNESS

PROJECT NAME: W. Ilsville PROJECT NO: P1-0129 MATERIAL: 60 mil VC Tex.

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH		THICKNESS LENGTH			
9-9	6365	U1	29'	22'	Good	62	63	62	63	64	60
9-9	6365	U2	29'	22'	Good	60	61	61	60	62	63
9-9	6365	U3	29'	22'	Good	62	63	60	60	61	62
9-9	6365	U4	29'	22'	Good	63	61	61	61	62	60
9-9	6365	U5	29'	22'	Good	60	62	62	65	62	62
9-10	6365	U6	32'	22'	Good	63	63	60	61	62	63
9-10	6365	U7	32'	22'	Good	62	60	62	61	63	61
9-10	6365	U8	32'	22'	Good	61	62	62	60	61	62
9-10	6365	U9	32'	22'	Good	62	61	60	61	62	63
9-12	6365	U10	32'	22'	Good	61	62	60	61	61	62
9-12	6365	U11	32'	22'	Good	60	62	60	61	60	62
9-12	6365	U12	32'	22'	Good	61	61	62	60	61	62
9-12	6365	U13	32'	22'	Good	60	62	62	60	61	63
9-12	6386	U14	32'	22'	Good	61	63	62	63	63	62
9-12	6386	U15	32'	22'	Good	60	61	60	62	61	63
9-12	6386	U16	32'	22'	Good	62	61	62	61	63	61
9-12	6386	U17	32'	22'	Good	61	62	63	60	61	62
9-12	6386	U18	32'	22'	Good	60	62	62	60	62	63
9-12	6386	U19	32'	22'	Good	63	62	60	60	61	60
9-12	6386	U20	32'	22'	Good	[illegible]	[illegible]	61	62	63	62
9-12	6386	U21	32'	22'	Good	61	62	60	61	62	60
9-12	6386	U22	32'	22'	Good	60	63	61	62	63	61
9-14	6386	U23	32'	22'	Good	61	62	60	61	63	62
9-14	6386	U24	32'	22'	Good	62	61	63	62	61	60
9-14	6386	U25	32'	22'	Good	61	63	61	60	62	63
9-15	6397	U26	32'	22'	Good	60	61	61	62	63	60
9-15	6397	U27	32'	22'	Good	61	62	60	62	60	63
9-15	6397	U28	32'	22'	Good	62	63	61	61	61	62
9-15	6397	U29	32'	22'	Good	60	61	60	62	63	61
9-15	6397	U30	32'	22'	Good	[illegible]	[illegible]	62	60	62	61
9-15	6397	U31	32'	22'	Good	[illegible]	[illegible]	61	62	61	63
9-15	6397	U32	32'	22'	Good	62	61	62	60	61	60

GEO-CON INC.

PANEL THICKNESS — UNDER LINER — PAGE 2 OF 3

PROJECT NAME: Wellsville — PROJECT NO: P-0129 — MATERIAL: 60 mil VLTex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH		THICKNESS LENGTH			
9-17	6397	U33	32'	22'	Good	61	62	60	60	61	61
9-17	6397	U34	32'	22'	Good	62	60	62	62	63	61
9-17	6397	U35	22'	5'	Good	60	61	62	62	62	60
9-17	6397	U36	22'	5'	Good	60	62	61	61	61	60
9-17	6397	U37	20'	8'	Good	61	61	60	61	62	61
9-17	6397	U38	37'	22'	Good	62	62	61	60	61	62
9-17	6397	U39	20'	8'	Good	61	62	62	61	60	61
9-18	6397	U40	37'	22'	Good	61	61	61	62	61	60
9-18	6364	U41	37'	22'	Good	60	61	63	62	61	64
9-18	6364	U42	37'	22'	Good	62	63	61	61	60	60
9-18	6397	U43	25'	5'	Good	60	62	62	63	62	62
9-18	6397	U44	25'	5'	Good	61	60	61	62	61	62
9-18	6369	U45	37'	5'	Good	61	62	62	62	61	63
9-18	6369	U46	39'	22'	Good	61	61	61	61	61	60
9-18	6369	U47	38'	22'	Good	60	61	61	62	61	62
9-18	6397	U48	25'	10'	Good	60	62	62	63	62	61
9-28	6364	U49	35'	22'	Good	61	62	62	63	61	61
9-29	6364	U50	35'	22'	Good	62	60	61	60	61	60
9-29	6364	U51	35'	22'	Good	61	62	62	61	62	61
9-29	6364	U52	35'	22'	Good	61	60	62	61	61	61
9-29	6364	U53	35'	22'	Good	60	61	62	62	61	61
9-29	6384	U54	35'	22'	Good	60	60	61	61	61	60
10-3	6384	U55	218'	22'	Good	62	60	60	60	61	61
10-3	6384	U56	38'	22'	Good	61	61	61	62	60	61
10-3	6384	U57	42'	22'	Good	60	60	61	63	61	62
10-3	6384	U58	57'	22'	Good	62	61	61	64	61	61
10-8	6387	U59	239'	22'	Good	60	61	62	62	61	60
10-8	6387	U60	89'	22'	Good	60	60	62	61	60	60
10-8	6387	U61	67'	22'	Good	60	62	61	60	60	61
10-27	6396	U62	200'	22'	Good	61	61	62	60	61	60
10-27	6396	U63	50'	22'	Good	62	61	61	61	62	60

GEO-CON® INC.

PANEL THICKNESS

PAGE 3 OF 3

PROJECT NAME: Wellsville, NY PROJECT NO: P1-0127 MATERIAL: 60MIL VLDPE TEX

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH	THICKNESS LENGTH
10-27	6396	U64	85'	22'	Good	61 60	60 60 61 62
10-27	6396	U65	70'	22'	Good	62 61	60 61 62 62
10-29	6380	U66	52'	22'	Good	61 60	61 60 60 61
10-29	6380	U66A	66'	22'	Good	61 60	61 60 61 61
10-29	6380	U67	60'	22'	Good	61 60	61 60 61 62
10-30	6395	U68	187'	22'	Good	60 61	62 60 61 62
10-31	6395	U69	177'	22'	Good	60 61	62 60 60 61
11-1	6380	U70	103'	22'	Good	61 62	62 61 60 60
11-17	6388	U71	130'	22'	Good	62 61	61 61 62 62
11-17	6915	U72	95'	7'	Good	61 60	61 61 62 61
11-17	6915	U73	95'	7'	Good	60 62	61 62 61 62
11-17	6915	U74	95'	7'	Good	60 61	61 61 60 60
11-20	6377	U75	60'	18'	Good	60 61	62 60 61 61
11-20	6377	U76	67'	22'	Good	61 60	60 60 60 61
11-20	6377	U77	65'	22'	Good	61 61	60 62 61 61
11-20	6377	U78	35'	22'	Good	62 61	60 62 60 60
11-20	6377	U79	35'	22'	Good	62 61	61 61 61 62

UNDER LINER

PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL Tex

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
9-9	U1-U2	U1-U2	29'	C.K.	37	500°c	Sunny	N/A	75°	Pass	W. Channel
9-9	U2-U3	U1-U2	29'	C.K.	37	500°c	Sunny	N/A	75°	Pass	W. Channel
9-9	U3-U4	U3-U4	29'	C.K.	37	500°c	Sunny	N/A	75°	Pass	W. channel
9-9	U4-U5	U4-U5	29'	C.K.	37	500°c	Sunny	N/A	75°	Pass	W. channel
9-10	U5-U6	U5-U6	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. channel
9-10	U6-U7	U6-U7	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-10	U7-U8	U7-U8	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-10	U8-U9	U8-U9	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U9-U10	U9-U10	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U10-U11	U10-U11	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U11-U12	U11-U12	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U12-U13	U12-U13	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U13-U14	U13-U14	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U14-U15	U14-U15	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U15-U16	U15-U16	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U16-U17	U16-U17	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel

UNDER LINER

PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLTex

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
9-12	U17-U18	U17-U18	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U18U19	U18-U19	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U19-U20	U19-U20	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U20-U21	U20-U21	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-12	U21-U22	U21-U22	32'	C.K.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-14	U22-U23	U22-U23	32'	M.M.	37	500°c	Sunny	N/A	70°	Pass	W. channel
9-14	U23-U24	U23-U24	32'	M.M.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-14	U24-U25	U24-U25	32'	M.M.	37	500°c	Sunny	N/A	70°	Pass	W. Channel
9-15	U26-U27	U26-U27	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W Channel
9-15	U27-U28	U27-U28	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W. Channel
9-15	U28-U29	U28-U29	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W. Channel
9-15	U29-U30	U29-U30	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W. Channel
9-15	U30-U31	U30-U31	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W. Channel
9-15	U31-U32	U31-U32	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W. Channel
9-15	U26-U1	U26-U1	32'	M.M.	37	500°c	Sunny	N/A	80°	Pass	W. Channel

UNDER LINER

PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VL Tex.

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
9-17	U33-U35	U33-U35	22'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U35-U37	U35-U37									
9-17	U34-U36	U34U36	22'	MM	37	500°c	Sunny	N/A	75°	Pass	S. channel
9-17	U36-U39	U36-U39									
9-17	U33-U34	U33-U34	20'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U34-U38	U34-U38	20'	MM	37	500°c	Sunny	N/A	75°	Pass	S. channel
9-17	U32-U35	U32-U35	8'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U32-U33	U32-U33	27'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U38-U39	U38-U39	20'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U39-U34	U39-U34	10'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U34-U37	U34-U37	10'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-17	U36-U37	U36-U37									
9-17	U37-U33	U37-U33	10'	MM	37	500°c	Sunny	N/A	75°	Pass	S. Channel
9-18	U38-U44	U38-U44	25'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U38-U40	U38-U40									
9-18	U44-U40	U44U40	25'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U40-U41	U40-U41									
9-18	U40-U43	U40-U43	25'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U43-U41	U43-U41	25'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U41-U42	U41-U42	37'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U42-U45	U42-U45	37'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel

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UNDER LINER

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60mil VL Tex.

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
9-18	U45-U46	U45-U46									
9-18	U45-U48	U45-U48	25'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U48-U46	U48-U46	25'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-18	U46-U47	U46-U47	39'	MM	37	500°c	Sunny	N/A	70°	Pass	S. Channel
9-29	U25-U49	U25-U49									
9-29	U49-U50	U49-U50	35'	EB	37	500°c	Sunny	N/A	65°	Pass	S. Channel
9-29	U50-U51	U50-U51	35'	EB	37	500°c	Sunny	N/A	65°	Pass	W. Channel
9-29	U51-U52	U51-U52	35'	EB	37	500°c	Sunny	N/A	65°	Pass	W. Channel
9-29	U52-U53	U52-U53	35'	EB	37	500°c	Sunny	N/A	65°	Pass	W. Channel
9-29	U53-U54	U53-U54	35'	EB	37	500°c	Sunny	N/A	65°	Pass	W. Channel
10-3	U47-U56	U47-U56	38'	EB	37	500°c	Sunny	N/A	70°	Pass	S.E. Channel
10-3	U57-U55	U57-U55									
10-3	U57-U56	U57-U56	39'	EB	37	500°c	Sunny	N/A	70°	Pass	S.E. Channel
10-3	U57-U58	U57-U58	40'	EB	37	500°c	Sunny	N/A	70°	Pass	S.E. Channel
10-3	U58-U55	U58-U55	57'	JA	007	510°c	Sunny	N/A	70°	Pass	S.E. Channel
10-8	U55-U59	U55-U59	22'	MM	007	510°c	Sunny	N/A	65°	Pass	E. Channel
10-8	U59-U60	U59-U60	22'	MM	007	510°c	Sunny	N/A	65°	Pass	E. Channel
10-8	U60-U61	U60-U61	22'	MM	007	510°c	Sunny	N/A	65°	Pass	E. Channel
10-27	U61-U62	U61-U62	22'	M.R.	007	510°c	Clear	N/A	69°	Pass	E. Channel

UNDERLINER

PANEL SEAMING FORM

PROJECT NAME: Hellsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLOPE TEX

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
10-27	U62-U63	U62-U63	22'	MM	007	750°	Clear	N/A	55°	Pass	East Channel
10-27	U63-U64	U63-U64	22'	M.M.	007	750°	Clear	N/A	55°	Pass	East Channel
10-27	U64-U65	U64-U65	22'	M.M.	007	750°	Clear	N/A	55°	Pass	Northeast Channel
10-29	U65-U66	U65-U66	22'	S.R.	007	750°	Some Rain	N/A	93°	Pass	Northeast Channel
10-29	U66-U66A	U66-U66A	22'	S.R.	007	750°	Some Rain	N/A	93°	Pass	Northeast Channel
10-29	U66A-U67	U66A-U67	22'	S.R.	007	750°	Some Rain	N/A	93°	Pass	Northeast Channel
10-30	U67-U68	U67-U68	22'	MM	007	750°	Clear	N/A	90°	Pass	Northeast Channel
10-31	U68-U69	U68-U69	22'	MM	007	750°	Clear	N/A	38°	Pass	North Channel
11-1	U69-U70	U69-U70	22'	JN	14	750°	Clear	N/A	37°	Pass	North Channel
11-17	U70-U71	U70-U71	22'	MM	007	750°	Clear	N/A	38°	Pass	Northwest Channel
11-19	U70-U72	U70-U72	7'	MM	007	750°	Clear	N/A	38°	Pass	Northwest Channel
11-19	U71-U72	U71-U72	95'	DM	107	505°	Clear	N/A	38°	Pass	Northwest Channel
11-19	U71-U73	U71-U73	95'	DM	107	505°	Clear	N/A	38°	Pass	Northwest Channel
11-19	U71-U74	U71-U74	95'	DM	107	505°	Clear	N/A	38°	Pass	Northwest Channel
11-19	U72-U73	U72-U73	7'	DM	107	505°	Clear	N/A	38°	Pass	Northwest Channel
11-19	U73-U74	U73-U74	7'	DM	107	505°	Clear	N/A	38°	Pass	Northwest Channel
11-20	U74-U77	U74-U77	7'	MM	007	750°	Clear	N/A	38°	Pass	Northwest Channel

UNDERLINER

PANEL SEAMING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: 11-0129 MATERIAL DESCRIPTION: 60 MIL VLDPE TEX

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
11-20	U71-U76	U71-U76	22'	MM	107	750°	Clear	N/A	38°	Pass	Northwest Channel
11-20	U75-U76	U75-U76	67'	SR	107	700°	Clear	N/A	38°	Pass	Northwest Channel
11-20	U76-U77	U76-U77	63'	SR	107	700°	Clear	N/A	38°	Pass	Northwest Channel
11-20	U77-U78	U77-U78	35'	SR	107	700°	Clear	N/A	38°	Pass	Northwest Channel
11-20	U78-U79	U78-U79	35'	SR	107	700°	Clear	N/A	38°	Pass	Northwest Channel
11-20	U79-U59	U79-U59	35'	MM	007	750°	Clear	N/A	38°	Pass	Northwest Channel

Under Liner

NON-DESTRUCTIVE TESTING FORM

PAGE 1 OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLTex

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
9-9	U1-U2	E.B.	27	26	-1	6:00	6:05	P		Full seam
9-9	U2-U3	E.B.	29	28	-1	6:08	6:13	P		Full Seam
9-9	U3-U4	E.B.	29	29	0	6:15	6:20	P		Full seam
9-9	U4-U5	E.B.	30	30	0	6:20	6:25	P		Full Seam
9-10	U5-U6	E.B.	30	30	0	12:10	12:15	P		Full Seam
9-10	U6-U7	E.B.	30	29	-1	11:26	11:31	P		Full Seam
9-10	U7-U8	E.B.	30	29	-1	11:40	11:45	P		Full Seam
9-10	U8-U9	E.B.	27	26	-1	12:10	12:15	P		Full Seam
9-12	U10-U11	E.B.	30	29	-1	11:30	11:35	P		Full Seam
9-12	U11-U12	E.B.	30	30	0	11:37	11:42	P		Full Seam
9-12	U12-U13	E.B.	30	30	0	11:41	11:46	P		Full Seam
9-12	U9-U10	E.B.	30	30	0	12:40	12:45	P		Full Seam
9-12	U13-U14	E.B.	30	30	0	3:15	3:20	P		Full Seam
9-12	U14-U15	E.B.	30	30	0	2:45	2:50	P		Full Seam
9-12	U15-U16	E.B.	30	30	0	2:45	2:50	P		Full Seam
9-12	U16-U17	E.B.	30	30	0	2:58	2:55	P		Full Seam
9-12	U17-U18	E.B.	30	30	0	5:45	5:50	P		Full Seam
9-12	U18-U19	E.B.	30	30	0	4:41	4:46	P		Full Seam
9-12	U19-U20	E.B.	30	29	-1	4:42	4:47	P		Full Seam
9-12	U20-U21	E.B.	30	30	0	4:51	4:56	P		Full Seam
9-12	U21-U22	E.B.	30	30	0	5:10	5:15	P		Full Seam
9-14	U23-U24	E.B.	30	30	0	11:50	11:55	P		Full Seam
9-14	U24-U25	E.B.	30	30	0	11:57	12:02	P		Full Seam
9-14	U22-U23	E.B.	30	30	0	12:02	12:07	P		Full Seam
9-14	U13-U14	E.B.							Pass	AT Inner Trench G & B

Under Liner

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: PI-0128 MATERIAL DESCRIPTION: 60 mil VL Tex

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS	
			PRESSURE			TIME					
			START	END	+/-	START	END	P/F			
✓9-14	U18-U19	E.B.	30	30	0				Pass	110' From outer trench	DS # U1
✓9-14	U22-U23	E.B.	30	30	0				Pass	AT inner trench	G&B
✓9-15	U26-U27	E.B.	30	30	0	210	215	Pass		Full Seam	
✓9-15	U27-U28	E.B.	30	30	0	215	220	Pass		Full Seam	
✓9-15	U26-U1	E.B.	30	30	0	230	235	Pass		Full Seam	
✓9-15	U28-U29	E.B.	30	30	0	355	400	Pass		Full Seam	
✓9-15	U29-U30	E.B.	30	30	0	405	410	Pass		Full Seam	
✓9-15	U30-U31	E.B.	30	30	0	410	415	Pass		Full Seam	
✓9-15	U31-U32	E.B.	30	30	0	412	417	Pass		Full Seam	
✓9-16	U30-U31	E.B.							Pass.	15' From otter trench	G&B
✓9-16	U28-U29	E.B.							Pass	at inner trench	Patch
✓9-16	U1-U26	E.B.							Pass	15' From outer trench	G&B
✓9-16	U1-U26	E.B.							Pass	5' From inner trench	G&B
✓9-16	U1-U26	E.B.							Pass	at inner trench	G&B
✓9-17	U33-U35	E.B.	30	30	0	400	405	Pass		Full seam	
✓9-17	U34-U36	E.B.	30	30	0	405	410	Pass		Full Seam	
✓9-17	U33-U34	E.B.	30	30	0	415	420	Pass		Full Seam	
✓9-17	U34-U38	E.B.	30	30	0	421	426	Pass		Full Seam	
✓9-17	U38-U39	E.B.	30	30	0	426	431	Pass		Full Seam	
✓9-17	U39-U34	E.B.	30	30	0	432	437	Pass		Full Seam	
✓9-17	U34-U37	E.B.	30	30	0	438	443	Pass		Full Seam	
✓9-17	U37-U33	E.B.	30	30	0	447	452	Pass		Full Seam	
✓9-17	U32-U33	E.B.	30	30	0	500	505	PASS			
9-17	U32-U35	E.B.	30	30	0	510	515	PASS			
9-17	U36-U37	E.B.							PASS	5' Seam	
9-17	U36-U39	E.B.							PASS	5' Seam	

UNDER LINER

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL FPX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
9-18	U44-U38	E.B.	30	30	0	1005	1010	Pass		Full seam
9-18	U40-U44	E.B.	30	30	0	1015	1020	Pass		Full seam
9-18	U40-U43	E.B.	30	30	0	1020	1025	Pass		Full Seam
9-18	U43-U41	E.B.	30	30	0	955	1000	Pass		Full Seam
9-18	U41-U42	E.B.	30	30	0	1025	1030	Pass		Full Seam
9-18	33/34/37	E.B.							Pass	5' From inner trench T-weld
9-18	33/35/32	E.B.							Pass	5' from outer trench T-weld
9-18	34/36/37	E.B.							Pass	5' From outer trench T-weld
9-18	34/39/59	E.B.							Pass	5' From inner trench T-weld
9-18	44/38/40	E.B.							Pass	10' From inner trench T-weld
9-18	40/41/49	E.B.							Pass	10' From inner trench T-weld
9-18	45/46/48	E.B.							Pass	10' From inner trench T-weld
9-18	U42-U45	E.B.	30	30	0	245	250	Pass		Full Seam
9-18	U45-U48	E.B.	30	30	0	250	255	Pass		Full Seam
9-18	U48-U46	E.B.	30	30	0	255	300	Pass		Full Seam
9-18	U46-U47	E.B.	30	30	0	300	305	Pass		Full Seam
9-18	U41	E.B.							Pass	10' From inner trench center of panel Patch
9-29	U49-U50	E.B.	30	30	0	427	432	PASS		Full seam
9-29	U50-U51	E.B.	30	30	0	433	438	PASS		Full Seam
9-29	U51-U52	E.B.	30	30	0	441	446	PASS		Full Seam
9-29	U52-U53	E.B.	30	29	-1	456	501	PASS		Full Seam
9-29	U53-U54	E.B.	30	30	0	505	510	PASS		Full Seam
9-29	U51-U52	E.B.							PASS	AT INNER TRENCH PATCH
9-30	U25-U49	E.B.							PASS	Cap over seam CAP
9-30	U52-U53	E.B.							PASS	5'10" From outer trench DS # U2
9-30	U34-U36	E.B.							PASS	6' from U-33 DS # U3

Under Liner

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLTe

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
9-18	33/35/37	E.B.						PASS		5' From outer trench T-weld
9-18	34/36/39	E.B.						PASS		5' From outer trench T-weld
9-18	U40-U38	E.B						PASS		Remainder of seam from T-weld to ANCH. TRENCH
9-18	U40 U41	EB						PASS		" " " "
9-18	U45U46	EB						PASS		" " " "
10-3	U47-U56	EB	30	30	0	2:17	2:22	PASS		Full Seam
10-3	U57-U56	EB	30	30	0	2:28	2:33	PASS		Full Seam
10-3	U57U58	EB	30	30	0	3:06	3:11	Pass		Full Seam
10-3	U58-U55	EB							PASS	EXTRUSION SEAM
10-8	U55-U59	EB							PASS	EXTRUSION SEAM
10-8	U59-U60	EB							PASS	EXTRUSION SEAM
10-3	U57-U55	EB							PASS	EXTRUSION SEAM
10-8	U60-U61	EB							PASS	EXTRUSION SEAM
10-27	U61-U62	EB							PASS	EXTRUSION SEAM
10-27	U62-U63	EB							PASS	EXTRUSION SEAM
10-27	U63-U64	EB							PASS	EXTRUSION SEAM
10-27	U64-U65	EB							PASS	EXTRUSION SEAM
10-29	U65-U66	EB							PASS	EXTRUSION SEAM
10-29	U66-U66A	EB							PASS	EXTRUSION SEAM
10-29	U66A-U67	EB							PASS	EXTRUSION SEAM
10-30	U67-U68	EB							PASS	EXTRUSION SEAM
10-31	U68-U69	EB							PASS	EXTRUSION SEAM
11-1	U69-U70	EB							PASS	EXTRUSION SEAM
11-19	U70-U71	EB							PASS	EXTRUSION TIE IN
11-19	U70-U72	EB							PASS	EXTRUSION TIE IN

UNDER LINER

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: PL-0129 MATERIAL DESCRIPTION: 60 mil VLTex

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
11-19	U71-U72	EB	30	30	Ø	1:15	1:21	PASS		Full seam
11-19	U71-U73	EB	30	30	Ø	1:22	1:27	PASS		Full Seam
11-19	U71-U74	EB	30	30	Ø	1:27	1:32	PASS		Full Seam
11-19	U72-U73	EB	30	30	Ø	1:29	1:34	PASS		Full Seam
11-19	U73-U74	EB	30	30	Ø	1:35	1:40	PASS		Full Seam
11-20	U74-U77	EB							PASS	EXTRUSION TIE-IN
11-20	U71-U76	EB							PASS	Extrusion tie-in
11-20	U75-U76	EB	30	30	Ø	3:05	3:10	PASS		Full Seam
11-20	U76-U77	EB	30	30	Ø	3:10	3:15	PASS		Full Seam
11-20	U77-U78	EB	30	30	Ø	3:17	3:22	PASS		Full Seam
11-20	U78-U79	EB	30	30	Ø	3:30	3:35	PASS		Full Seam
11-20	U79-U54	EB							PASS	Extrusion tie-in
11-7	U59	EB							PASS	40' N. of USS-US9 seam 4' west of outer anchor trench
10-5	S7/S8/S5	EB							PASS	PATCH 10' from outer trench
10-5	US8/US6	EB							PASS	5' from inner trench DS #US
10-5	U47/US6	EB							PASS	5' From inner trench DS #U4
11-20	75/76/71	EB							PASS	AT INNER TRENCH T-WELD
11-20	U75/076	EB							PASS	10' From outer trench Patch
11-19	75/76/71	EB							PASS	AT INNER TRENCH T-WELD
11-19	U75/U76	EB							PASS	10' from outer trench PATCH
11-19	76 77 74 71	EB							PASS	AT Seam intersect. PATCH
11-19	U74/U71/U73	EB							PASS	Seam intersect T-WELD
11-19	71/72/73	EB							PASS	Seam intersect T-WELD
11-19	U70/U71/U72	EB							PASS	Seam intersect T-WELD
11-18	U70	EB							PASS	Panel extension 5'x20', From Seam U70-U71 EASTWARD

UNDER LINER

NON-DESTRUCTIVE TESTING FORM

PAGE 6 OF _____

PROJECT NAME: Wellsville NY PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60mil VLPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
11-19	V-71								PASS	10' west of seam 71-70 2' from outer anchor trench
11-19	V 70/71								PASS	Patch 1' from outer trench 1' from seam 70-71

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE _____ OF _____

PROJECT NAME: WELLSVILLE PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VCT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
5/13	U67	SM						PASS	PATCH SEE REPAIR LOG FOR LOCATIONS
5/13	U67	SM						PASS	
5/13	U67	SM						PASS	
5/18	U68	EM						PASS	
5/18	U68	EM						PASS	
5/18	U68	EM						PASS	
5/18	U68	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U69	EM						PASS	
5/18	U70	EM						PASS	
5/18	U70	EM						PASS	
5/18	U70	EM						PASS	
5/18	U70	EM						PASS	
5/18	U71	EM						PASS	
5/18	U71	EM						PASS	
5/18	U71	EM						PASS	
5/18	U71	EM						PASS	
5/18	U71	EM						PASS	

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	AIR P/F	VBOX P/F	LOCATION / COMMENTS
5/20	V11/V12	EM							PASS	PATCH SEE REPAIR LOG FOR LOCATION
5/20	V12	EM							PASS	
5/20	V22	EM							PASS	
5/20	V25	EM							PASS	
5/20	V25	EM							PASS	
5/20	V50	EM							PASS	

UNDER LINER

DESTRUCTIVE TEST LOG

PAGE 1 OF ____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0125 MATERIAL DESCRIPTION: 60 mil VLF

DATE	SAMPLE I.D.	SEAM NO.	MACH NO.	OPER INITIALS	PEEL VALUES LBS. / INCH	PASS / FAIL	DATE TO LAB PKG. SLIP NO.	LAB PASS / FAIL	LOCATION / COMMENTS
9-12	DS U1	U18-U19	37	CK	79-80 / 83-81 ← PEEL SHEAR → 82 / 74	Pass	9-16	PASS	W. Channel
9-29	DS U2	U52-U53	37	E.B.	89-91 / 92-90 ← PEEL SHEAR → 101 / 111	Pass	10-03	PASS	N.W Channel
9-17	DS U3	U34-U36	37	MM	89-93 / 95-97 ← PEEL SHEAR → 107 / 115	Pass	10-03	PASS	S.W. Channel
10-3	DS U4	U47-U56	37	EB	92-96 / 95-89 ← PEEL SHEAR → 120 / 107	Pass	10-05	Pass	S. CHANNEL
10-3	DS U5	U55-U58	007	J.A	87 / 97 ← PEEL SHEAR → 112 / 120	Pass	10-05	Pass	SE CHANNEL

UNDERLINER

REPAIR REPORT

PAGE 1 OF ____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VC Tex

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
U13/U14		9-14	J.N.	007	9-14	C.K.	P	Seam U13-U14 AT inner trench G&B
U10/U19		9-14	J.N.	007	9-14	C.K.	P	10' from inner trench DS #U1
U22/U23		9-14	J.N.	007	9-14	C.K.	P	Seam U22-U23 AT inner trench
U30/U31		9-16	J.N.	007	9-16	J.N.	P	15' E. of outer Trench G&B
U28/U29		9-16	J.N.	007	9-16	J.N.	P	AT INNER TRENCH Patch
U1/U26		9-16	J.N.	007	9-16	J.N.	P	15' E of outer Trench G&B
U1/U26		9-16	J.N.	007	9-16	J.N.	P	5' W. of inner trench G&B
U1/U26		9-16	J.N.	007	9-16	J.N.	P	AT inner trench G&B
U33/U34/U37		9-18	J.N.	007	9-18	J.N.	P	5' From inner trench T-weld
U33/U35/32		9-18	J.N.	007	9-18	J.N.	P	5' from outer trench T-weld
U34/U36/37		9-18	J.N.	007	9-18	J.N.	P	5' from outer trench T-weld
U34/U38/39		9-18	J.N.	007	9-18	J.N.	P	5' from inner trench T-weld
U44/U38/40		9-18	J.N.	007	9-18	J.N.	P	10' from inner trench T-weld
U40/U43/U41		9-18	J.N.	007	9-18	J.N.	P	10' from inner trench T-weld
U45/U48/U46		9-18	J.N.	007	9-18	J.N.	P	10' from inner trench T-weld
	U41	9-18	J.N.	007	9-18	J.N.	P	10' from inner trench center of panel Patch
U38/U36/U19		9-18	J.N.	007	9-18	J.N.	P	5' from outer trench

UNDERLINER

REPAIR REPORT

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VL

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
U13/U14		9-14	J.N.	007	9-14	C.K.	P	Seam U13-U14 AT inner trench G&B
U18/U19		9-14	J.N.	007	9-14	C.K.	P	10' from inner trench DS #U1
U22/U23		9-14	J.N.	007	9-14	C.K.	P	Seam U22-U23 AT inner trench
U30/U31		9-16	J.N.	007	9-16	J.N.	P	15' E. of outer trench G&B
U28/U29		9-16	J.N.	007	9-16	J.N.	P	AT INNER TRENCH Patch
U1/U26		9-16	J.N.	007	9-16	J.N.	P	15' E of outer trench G&B
U1/U26		9-16	J.N.	007	9-16	J.N.	P	5' W. of inner trench G&B
U1/U26		9-16	J.N.	007	9-16	J.N.	P	AT inner trench G&B
U33/U34/U37		9-18	J.N.	007	9-18	J.N.	P	5' From inner trench T-weld
U33/U35/32		9-18	J.N.	007	9-18	J.N.	P	5' from outer trench T-weld
U34/U36/37		9-18	J.N.	007	9-18	J.N.	P	5' from outer trench T-weld
U34/U38/39		9-18	J.N.	007	9-18	J.N.	P	5' from inner trench T-weld
U44/U38/40		9-18	J.N.	007	9-18	J.N.	P	10' from inner trench T-weld
U40/U43/U41		9-18	J.N.	007	9-18	J.N.	P	10' from inner trench T-weld
U45/U48/U46		9-18	J.N.	007	9-18	J.N.	P	10' from inner trench T-weld
	U41	9-18	J.N.	007	9-18	J.N.	P	10' from inner trench center of Patch Patch

UNDER LINER
REPAIR REPORT

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
V51/V52		9-29	E.B.	007	9-29	EB	P	at inner trench Patch
V25/V49		9-30	E.B.	007	9-30	EB	P	Cap entire seam V25/V49 CAP
V52/V53		9-30	E.B.	007	9-30	EB	P	10' from outer trench DS#V52
V34/V36		9-30	E.B.	007	9-30	EB	P	6' S. of panel V-33 DS#V33
	V59	11-7	S.R.	14	11-7	SR	P	40' N. of V55-V59 Seam Patch 4' West of outer anchor trench
V33/V35/V37		9-18	JN	007	9-18	JN	P	T WELD 5' from outer trench
V57/V58/V55		10-5	MM	007	10-5	MM	P	Patch 10' from outer trench
V47/V56		10-5	MM	007	10-5	MM	P	15' from inner trench DS#V47
V58/V55		10-5	MM	007	10-5	MM	P	5' From inner trench DS#V55
V75/V76/V71		11-20	MM	007	11-20	MM	P	AT Inner Trench T-weld
V75/V76		11-20	MM	007	11-20	MM	P	10' From outer trench Patch
V76 V77 V74 V71		11-20	MM	007	11-20	MM	P	AT Seam INTERSEC. PATCH
V74/V71/V73		11-19	MM	007	11-19	MM	P	Seam intersect T-weld
V71/V72/V73		11-19	MM	007	11-19	MM	P	Seam intesect T-weld
V70/V71/V72		11-19	MM	007	11-19	MM	P	Seam intersect T-weld
V-	V-70	11-19	MM	007	11-19	MM	P	Panel extension 5'x20' From Seam V70-V71 EASTWARD.

UNDER LINER

REPAIR REPORT

PROJECT NAME: Wellsville NY PROJECT NUMBER: PH0129 MATERIAL DESCRIPTION: 60mil VLR

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
	U-71	11-19	MM	007	11-19	MM	Pass	10' west of seam 71-70 2' from outer anchor trench
70/71		11-19	MM	007	11-19	MM	PASS	Patch 1' from outer trench 1' from seam 70-71

GEO-CON INC.

REPAIR REPORT

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
	U67	5/13	EB	014	5/13	SM	PASS	PATCH 10' WEST OF SEAM U66A-U67 CENTER OF CHANNEL
	U67	5/13	EB	014	5/13	SM	PASS	PATCH 30' WEST OF SEAM U66A-U67 CENTER OF CHANNEL
	U67	5/13	EB	014	5/13	SM	PASS	PATCH 5' EAST OF SEAM U67-U68 CENTER OF CHANNEL
	U68	5/18	JA	10	5/18	EM	PASS	PATCH 30' EAST OF U68-U67
	U68	5/18	JA	10	5/18	EM	PASS	PATCH 85' EAST OF U68-U67
	U68	5/18	JA	10	5/18	EM	PASS	PATCH 145' EAST OF U68-U67
	U68	5/18	JA	10	5/18	EM	PASS	PATCH 175' EAST OF U68-U67
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 5' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 30' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 37' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 90' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 140' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 145' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 150' EAST OF SEAM U69-U68 CENTER OF CHANNEL
	U69	5/18	JA	10	5/18	EM	PASS	CAP 38' X 15' 155' EAST OF SEAM U69-U68 FROM ANCHOR TRENCH SOUTH 15'
	U69	5/18	JA	10	5/18	EM	PASS	PATCH 195' EAST OF SEAM U69-U68 CENTER OF CHANNEL

GEO-CON INC.

REPAIR REPORT

PAGE _____ OF _____

PROJECT NAME: WELLSVILLE PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

ELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
	U70	5/18	JA	10	5/18	Em	PASS	PATCH 5' EAST OF SEAM U69-U70 CENTER OF CHANNEL
	U70	5/18	JA	10	5/18	Em	PASS	PATCH 45' EAST OF SEAM U69-U70 CENTER OF CHANNEL
	U70	5/18	JA	10	5/18	Em	PASS	PATCH 70' EAST OF SEAM U69-U70 CENTER OF CHANNEL
	U70	5/18	JA	10	5/18	Em	PASS	PATCH 85' EAST OF SEAM U69-U70 CENTER OF CHANNEL
	U70	5/18	JA	10	5/18	Em	PASS	PATCH 90' EAST OF SEAM U69-U70 CENTER OF CHANNEL
	U71	5/18	JA	10	5/18	Em	PASS	PATCH 90' EAST OF SEAM U70-U71 10' SOUTH OF ANCHOR TRENCH
	U71	5/18	JA	10	5/18	Em	PASS	PATCH 95' EAST OF SEAM U70-U71 10' SOUTH OF ANCHOR TRENCH
	U71	5/18	JA	10	5/18	Em	PASS	PATCH 100' EAST OF SEAM U70-U71 10' SOUTH OF ANCHOR TRENCH
	U71	5/18	JA	10	5/18	Em	PASS	PATCH 105' EAST OF SEAM U70-U71 10' SOUTH OF ANCHOR TRENCH
	U71	5/18	JA	10	5/18	Em	PASS	PATCH 104' EAST OF SEAM U70-U71 10' SOUTH OF ANCHOR TRENCH
U11/UR	U11	5/20	BB	10	5/20	Em	PASS	4' CAP FROM OUTER ANCHOR TRENCH WEST
	U12	5/20	EB	10	5/20	Em	PASS	PATCH AT OUTER ANCHOR TRENCH CENTER OF PANAL
	U22	5/20	EB	10	5/20	Em	PASS	25' CAP FROM OUTER TRENCH WEST 10' THEN SOUTH 15' CENTER OF PANAL
	U25	5/20	EB	10	5/20	Em	PASS	5'X6' PATCH CENTER OF PANEL 5' FROM OUTER ANCHOR TRENCH
	U25	5/20	EB	10	5/20	Em	PASS	PATCH 1' NORTH OF SEAM U25-U49 CENTER OF CHANNEL
	U50	5/20	EB	10	5/20	Em	PASS	PATCH 2' SOUTH OF SEAM U50-U51 CENTER OF CHANNEL

C

GEO-CON INC.

PANEL PLACEMENT — CAP

PAGE 1 OF _____

OJECT NAME: Wellsville Ag. PROJECT NO.: P10129 MATERIAL: 60 Mil VL Tex

TE/ ME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
10/20	6399	C-1	95'	22'	Good	Pass	Clear	N/A	38°	CELA
10/20	6399	C-2	320'	22'	Good	Pass	Clear	N/A	38°	CELA
10/20	6369	C-3	420'	22'	Good	Pass	Clear	N/A	55°	CELA
10/22	6370	C-4	420'	22'	Good	Pass	Clear	N/A	55°	CELA
10/22	6417	C-5	400'	22'	Good	Pass	Clear	N/A	55°	CELA
10/22	6368	C-6	380'	22'	Good	Pass	Clear	N/A	55°	CELA
10/23	6418	C-7	332'	22'	Good	Pass	Clear	N/A	65°	CELA
10/23	6407	C-8	34'	22'	Good	Pass	Clear	N/A	65°	CELA
10/23	6407	C-9	353'	22'	Good	Pass	Clear	N/A	65°	CELA
10/23	6409	C-10	345'	22'	Good	Pass	Clear	N/A	65°	CELA
10/23	6408	C-11	342'	22'	Good	Pass	Clear	N/A	65°	CELA
10/24	6404	C-12	320'	22'	Good	Pass	Clear	N/A	55°	CELA
10/24	6404	C-13	107'	22'	Good	Pass	Clear	N/A	55°	CELA
10/26	6336	C-14	205'	22'	Good	Pass	Clear	N/A	50°	CELA
10/26	6336	C-15	215'	22'	Good	Pass	Clear	N/A	50°	CELA
RB-26	6409	C-16	66'	22'	Good	Pass	Clear	N/A	50°	CELA

GEO·CON INC.

PANEL PLACEMENT — CAP

OJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 mil VL Tex.

TE/ IE	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
10/26	6361	C-17	265'	22'	Good	Pass	Clear	N/A	51°	CELA
10/26	6363	C-18	236'	22'	Good	Pass	Clear	N/A	51°	CELA
10/28	6331	C-19	413'	22'	Good	Pass	Clear	N/A	52°	CELA
10/28	6362	C-20	418'	22'	Good	Pass	Clear	N/A	52°	CELA
10/28	6360	C-21	420'	22'	Good	Pass	Clear	N/A	52°	CELA
10/28	6367	C-22	420'	22'	Good	Pass	Clear	N/A	52°	CELA
10/28	6372	C-23	420'	22'	Good	Pass	Clear	N/A	52°	CELA
10/30	6363	C-24	182'	22'	Good	Pass	Rain	N/A	43°	CELA
10/29	6418	C-25	98'	22'	Good	Pass	Rain	N/A	43°	CELA
10/29	6383	C-26	41'	22'	Good	Pass	Rain	N/A	43°	CELA
10/29	6409	C-27	52'	22'	Good	Pass	Rain	N/A	43°	CELA
10/29	6413	C-28	52'	22'	Good	Pass	Rain	N/A	43°	CELA
10/29	6361	C-29	79'	22'	Good	Pass	Rain	N/A	43°	CELA
10/30	6387	C-30	92'	22'	Good	Pass	Clear	N/A	43°	CELA
10/30	6377	C-31	358'	22'	Good	Pass	Clear	N/A	43°	CELA
10/31	6342	C-32	536'	22'	Good	Pass	Clear	N/A	38°	CELA

GEO·CON INC.

PANEL PLACEMENT

CAP

PROJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 Mil VL Tex

TE/ ME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
10/31	6341	C-33	211'	22'	Good	Pass	Clear	N/A	38°	CELA
"/3	6342	C-34	84'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6375	C-35	400'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6330	C-36	74'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6330	C-37	40'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6381	C-38	420'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6330	C-39	120'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6330	C-40	183'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/3	6379	C-41	400'	22'	Good	Pass	Some Rain	N/A	38°	CELA
"/4	6338	C-42	183'	22'	Good	Pass	Some Rain	N/A	58°	CELA
"/4	6414	C-43	412'	22'	Good	Pass	Some Rain	N/A	58°	CELA
"/5	[illegible]	[illegible]	406'	22'	Good	Pass	Some Rain	N/A	37°	CELA
"/5	6341	[illegible]	196'	22'	Good	Pass	Some Rain	N/A	37°	CELA
"/9	6348	[illegible]	125'	22'	Good	Pass	Clear	N/A	35°	CELA
"/9	6348	C-47	88'	22'	Good	Pass	Clear	N/A	35°	CELA
"/9	6335	C-48	84'	22'	Good	Pass	Clear	N/A	35°	CELA

GEO-CON INC.

PANEL PLACEMENT

CAP

PAGE 4 OF _____

PROJECT NAME: Wellsville PROJECT NO.: P-0129 MATERIAL: 60 mil VL Tex

DATE	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
11/9	6335	C-49	94'	22'	Good	Pass	Clear	N/A	35°	Cell A
11/9	6335	C-50	100'	22'	Good	Pass	Clear	N/A	35°	Cell A
11/9	6335	C-51	122'	22'	Good	Pass	Clear	N/A	35°	Cell A
11/10	6415	C-52	345'	22'	Good	Pass	Clear	N/A	45°	Cell A
11/19	6388	C-53	277'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/19	6394	C-54	426'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/19	6340	C-55	420'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/19	6371	C-56	420'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/19	6374	C-57	420'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/20	6321	C-58	420'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/20	6359	C-59	420'	22'	Good	Pass	Clear	N/A	38°	Cell A
11/20	6338	C-60	10'	22'	Good	Pass	Clear	N/A	45°	Cell A
11/20	6339	C-61	50'	22'	Good	Pass	Clear	N/A	45°	Cell A
11/20	6339	C-62	35'	22'	Good	Pass	Clear	N/A	45°	Cell A
11/21	6395	C-63	220	22'	Good	Pass	Some Rain	N/A	48°	Cell A
11/21	6395	C-64	200	22'	Good	Pass	Some Rain	N/A	48°	Cell A

GEO·CON INC.

CAP

PANEL PLACEMENT

OJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 mil VL Tex

E/E	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
"/22	6333	C-65	420	22	Good	Pass	Rain	N/A	58°	CELA
"/22	6328	C-66	420	22	Good	Pass	Rain	N/A	53°	CELA
"/24	6400	C-67	420	22	Good	Pass	Clear	N/A	44°	CELA
"/24	6339	C-68	420	22	Good	Pass	Clear	N/A	49°	CELA
"/24	6416	C-69	420	22	Good	Pass	Clear	N/A	49°	CELA
"/24	6398	C-70	420	22	Good	Pass	Clear	N/A	49°	CELA
"/30	6420	C-71	420'	22'	Good	Pass	Clear	N/A	36°	CELA
"/30	6347	C-72	420'	22'	Good	Pass	Clear	N/A	36°	CELA
"/30	6382	C-73	420'	22'	Good	Pass	Clear	N/A	36°	CELA
"/30	6332	C-74	420'	22'	Good	Pass	Clear	N/A	36°	CELA
12/1	6405	C-75	345'	22'	Good	Pass	Clear	N/A	39°	CELA
12/1	6402	C-76	258'	22'	Good	Pass	Clear	N/A	39°	CELA
12/1	6405	C-77	75'	22'	Good	Pass	Clear	N/A	39°	CELA
12/2	6402	C-78	143'	22'	Good	Pass	Cloudy	N/A	40°	CELA
12/2	6346	C-79	204'	22'	Good	Pass	Cloudy	N/A	40°	CELA
12/2	6346	C-80	206'	22'	Good	Pass	Cloudy	N/A	40°	CELA

GEO·CON® INC.

PANEL PLACEMENT

CAP

PROJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 mil VL Ex

TE/ ME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
12/2	6378	C-81	24'	22'	Good	Pass	Cloudy	N/A	40°	CELA
12/2	6378	C-82	254'	22'	Good	Pass	Cloudy	N/A	40°	CELA
12/2	6373	C-83	80'	22'	Good	Pass	Cloudy	N/A	40°	CELA
12/3	6373	C-84	303'	22'	Good	Pass	Cloudy	N/A	35°	CELA
12/3	6403	C-85	303'	22'	Good	Pass	Cloudy	N/A	35°	CELA
12/4	6403	C-86	98'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6395	C-87	202'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6395	C-88	203'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6402	C-89	96'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6402	C-90	216'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6406	C-91	90'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6393	C-92	36'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6383	C-93	240'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6410	C-94	236'	22'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6410	C-95	159'	22' AT E. 12' AT W	Good	Pass	Cloudy	N/A	31°	CELA

GEO·CON INC.

PANEL PLACEMENT

OJECT NAME: Wellsville Ny PROJECT NO.: PI-0129 MATERIAL: 60mil VL Tex

TE/ IE	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
12/4	6410	C-96	25'	12'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6410	C-97	33'	11'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6410	C-98	5'	10'	Good	Pass	Cloudy	N/A	31°	CELA
12/4	6410	C-99	34'	7'	Good	Pass	Cloudy	N/A	31°	CELA
12-18	6419	C-100	253'	11'	Good	Pass	Clear	N/A	35°	CELA

GEO·CON INC.

PANEL PLACEMENT

PAGE_____ OF_____

PROJECT NAME: Wellsville PROJECT NO.: 91-0129 MATERIAL: 60 VLT

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
5/14	6385	100	150'	22'	Good	Pass	Sunny	N/A	65°	EAST CHANNEL
5/14	6385	101	180'	22'	Good	Pass	Sunny	N/A	65	EAST CHANNEL
5/14	6385	102	70'	22'	Good	Pass	Sunny	N/A	65°	NORTH-EAST CHANNEL
5/19	6392	103	420'	22'	Good	Pass	Cloudy	N/A	60°	NORTH CHANNEL
5/19	6353	104	75'	22'	Good	Pass	Cloudy	N/A	60°	NORTH-EAST CHANNEL
5/19	6353	105	65'	22'	Good	Pass	Cloudy	N/A	60°	NORTH-EAST CHANNEL
5/25	6353	106	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	107	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	108	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	109	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	110	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	111	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	112	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6353	113	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6401	114	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6401	115	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL

GEO·CON INC.

PANEL PLACEMENT

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NO.: P1-0129 MATERIAL: 60 VCT

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	VISUAL INSPEC	WEATHER	WINDS	AMBIENT TEMP.	LOCATION/ COMMENTS
5/25	6401	116	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6401	117	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/25	6401	118	35'	22'	Good	Pass	Sunny	N/A	65°	WEST CHANNEL
5/26	6401	119	21.5'	22'	Good	Pass	Sunny	N/A	65°	NORTH-WEST CHANNEL
5/26	6354	120	36'	22'	Good	Pass	Sunny	N/A	65°	NORTH-WEST CHANNEL
5/26	6354	121	36'	22'	Good	Pass	Sunny	N/A	65°	NORTH-WEST CHANNEL
5/26	6354	122	55'	22'	Good	Pass	Sunny	N/A	65°	NORTH-WEST CHANNEL
5/26	6354	123	40'	22'	Good	Pass	Sunny	N/A	65°	NORTH-WEST CHANNEL

GEO-CON INC.

PANEL THICKNESS

PAGE 1 OF

PROJECT NAME: Wellsville PROJECT NO: P10129 MATERIAL: 60 mil VLT

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH		THICKNESS LENGTH			
10-20	6399	C1	95'	22'	Good	60	61	61	61	61	61
10-20	6399	C2	320'	22'	Good	60	62	61	61	60	60
10-22	6369	C3	420'	22'	Good	60	61	61	60	61	60
10-22	6370	C4	420'	22'	Good	61	61	60	61	60	60
10-22	6417	C5	420'	22'	Good	61	61	60	60	62	61
10-27	6368	C6	380'	22'	Good	61	60	60	62	61	60
10-23	6418	C7	332'	22'	Good	60	60	60	60	62	61
10-23	6407	C8	34'	22'	Good	60	60	61	60	62	61
10-23	6407	C9	353'	22'	Good	61	60	61	61	61	60
10-23	6409	C10	345'	22'	Good	60	60	60	61	60	60
10-23	6408	C11	342'	22'	Good	61	60	60	60	60	60
10-24	6409	C12	320'	22'	Good	62	61	60	61	61	61
10-26	6404	C13	107'	22'	Good	62	61	60	60	60	60
10-26	6336	C14	205'	22'	Good	61	60	60	61	60	60
10-26	6336	C15	215'	22'	Good	61	61	60	61	61	61
10-26	6408	C16	66'	22'	Good	60	61	61	61	61	61
10-26	6361	C17	265'	22'	Good	62	62	60	61	61	61
10-26	6383	C18	230'	22'	Good	61	61	62	60	61	60
10-28	6331	C19	415'	22'	Good	61	61	61	60	61	60
10-28	6362	C20	418'	22'	Good	61	61	61	60	61	60
10-28	6360	C21	420'	22'	Good	60	60	61	60	61	60
10-28	6367	C22	420'	22'	Good	60	60	61	60	60	60
10-28	6372	C23	420'	22'	Good	61	61	62	61	62	61
10-30	6363	C24	182'	22'	Good	62	61	61	61	61	61
10-29	6418	C25	78'	22'	Good	61	60	61	61	62	61
10-29	6368	C26	94'	22'	Good	61	60	62	60	60	61
10-29	6409	C27	52'	22'	Good	60	61	62	60	61	62
10-29	6418	C28	52'	22'	Good	61	61	61	60	61	61
10-29	6361	C29	79'	22'	Good	60	60	61	60	60	62
10-30	6380	C30	92'	22'	Good	61	61	61	60	60	61
10-30	6337	C31	350'	22'	Good	62	60	61	61	62	60

GEO-CON INC.

CELA

NEL THICKNESS

PAGE 2 OF

OJECT NAME: Wellsville PROJECT NO: P1-0129 MATERIAL: 60 mil VLTex

TE/ ME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH		THICKNESS LENGTH			
10-31	6342	C32	336'	22'	Good	60	61	60	61	61	62
10-31	6341	C33	211'	22'	Good	61	62	60	60	61	62
11-3	6342	C34	84'	22'	Good	61	61	60	61	61	62
11-3	6375	C35	406'	22'	Good	60	60	60	61	61	61
11-3	6330	C36	74'	22'	Good	61	62	60	61	62	60
11-3	6330	C37	40'	22'	Good	63	64	60	61	62	61
11-3	6391	C38	420'	22'	Good	60	61	60	62	63	63
11-3	6330	C39	120'	22'	Good	61	60	61	61	62	62
11-3	6330	C40	183'	22'	Good	60	60	61	62	62	62
11-3	6379	C41	400'	22'	Good	61	62	62	62	62	61
11-4	6338	C42	183'	22'	Good	60	62	60	60	60	62
11-4	6419	C43	412'	22'	Good	62	60	60	62	62	60
11-5	6324	C44	406'	22'	Good	61	61	61	62	62	61
11-5	6341	C45	196'	22'	Good	62	60	60	62	60	61
11-9	6348	C46	125'	22'	Good	62	60	60	62	60	61
11-9	6348	C47	88'	22'	Good	62	60	60	62	60	61
11-9	6335	C48	84'	22'	Good	61	62	61	61	60	60
11-9	6335	C49	94'	22'	Good	60	62	60	61	62	62
11-9	6335	C50	100'	22'	Good	60	60	60	62	60	61
11-9	6335	C51	122'	22'	Good	61	62	60	62	61	60
11-10	6415	C52	345'	22'	Good	61	62	60	61	60	61
11-10	6388	C53	277'	22'	Good	60	60	60	60	61	62
11-10	6394	C54	420'	22'	Good	62	62	61	60	62	62
11-10	6340	C55	420'	22'	Good	61	61	61	62	62	61
11-10	6371	C56	420'	22'	Good	62	63	61	62	63	63
11-10	6374	C57	420'	22'	Good	63	63	61	62	62	62
11-20	6421	C58	420'	22'	Good	62	61	61	60	61	61
11-20	6329	C59	420'	22'	Good	61	61	60	61	62	62
11-10	6338	C60	100'	22'	Good	62	62	62	62	62	60
11-10	6338	C61	50'	22'	Good	60	61	60	62	62	60
11-10	6338	C62	35'	22'	Good	60	61	61	61	62	61

GEO-CON INC.

ANEL THICKNESS

PAGE 3 OF

ROJECT NAME: Wellsville, NY PROJECT NO: A-0129 MATERIAL: 60 MIL VLDPE TEX

ATE/ IME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH		THICKNESS LENGTH			
11-21	6395	C63	220'	22'	Good	62	61	62	60	60	62
11-21	6395	C64	200'	22'	Good	60	61	61	61	61	61
11-22	6333	C65	420'	22'	Good	60	62	61	62	61	61
11-22	6328	C66	420'	22'	Good	60	62	62	61	60	62
11-29	6400	C67	420'	22'	Good	62	61	60	61	60	62
11-29	6339	C68	420'	22'	Good	61	62	60	62	60	63
11-29	6416	C69	420'	22'	Good	60	60	60	61	62	61
11-29	6398	C70	420'	22'	Good	61	60	60	62	61	61
11-30	6420	C71	420'	22'	Good	62	62	62	61	60	61
11-30	6397	C72	420'	22'	Good	61	62	61	62	61	61
11-30	6382	C73	420'	22'	Good	61	62	62	61	62	61
11-30	6332	C74	420'	22'	Good	60	60	60	61	60	60
12-1	6905	C75	345'	22'	Good	60	62	61	61	62	61
12-1	6402	C76	258'	22'	Good	61	61	62	60	60	61
12-1	6405	C77	75'	22'	Good	61	62	61	62	60	61
12-2	6402	C78	143'	22'	Good	61	62	61	61	61	62
12-2	6346	C79	204'	22'	Good	62	60	61	60	62	62
12-2	6346	C80	206'	22'	Good	60	61	60	62	61	62
12-2	6378	C81	124'	22'	Good	62	62	60	62	61	60
12-2	6378	C82	254'	22'	Good	62	63	62	60	61	62
12-2	6373	C83	80'	22'	Good	62	61	62	61	61	60
12-3	6373	C84	303'	22'	Good	62	61	62	62	60	61
12-3	6403	C85	303'	22'	Good	61	62	61	62	61	60
12-4	6403	C86	98'	22'	Good	62	64	62	63	62	60
12-4	6393	C87	202'	22'	Good	62	63	60	61	62	62
12-4	6393	C88	203'	22'	Good	60	60	62	60	63	62
12-4	6406	C89	86'	22'	Good	60	61	64	65	60	62
12-4	6406	C90	216'	22'	Good	61	62	60	61	62	
12-4	6406	C91	85'	22'	Good	62	62	61	60	62	60
12-4	6383	C92	136'	22'	Good	63	61	62	61	62	62
12-4	6393	C93	240'	22'	Good	61	60	60	60	61	61

GEO-CON INC.

PANEL THICKNESS

PAGE 4 OF _____

PROJECT NAME: Wellsville Wy PROJECT NO: P1-0129 MATERIAL: 60mil VL Tex

DATE/ TIME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH		THICKNESS LENGTH			
12-4	6410	94	239'	22'	Good	62	66	63	62	61	62
12-4	6410	95	183'	22'	Good	62	65	63	62	62	61
12-4	6410	96	160'	12'	Good	62	62	63	62	61	61
12-4	6410	97	33'	11'	Good	60	63	62	64	63	64
12-4	6410	98	5'	10'	Good	61	62	62	61	60	61
12-9	6410	99	34'	7'	Good	63	61	64	62	62	62
12-19	6419	100	253'	11'	Good	62	60	61	62	62	60

GEO-CON INC.

ANEL THICKNESS

PAGE _____ OF _____

OJECT NAME: Wellsville PROJECT NO: P1-0129 MATERIAL: 60 VLT

TE/ ME	ROLL NO.	PANEL NO.	LENGTH	WIDTH	SUBGRADE CONDITION	THICKNESS WIDTH	THICKNESS LENGTH
5/14	6385	100	150'	22'	Good	65-67	67-66-65-66
5/14	6385	101	180'	22'	Good	66-65	67-65-66 66
5/14	6385	102	70'	22'	Good	66-65	66-66-67 67
5/19	6392	103	420'	22'	Good	65-66	65-67-65 64
5/19	6353	104	75'	22'	Good	66-65	65-66-65 65
5/19	6353	105	65'	22'	Good	67-65	65-66-65 67
5/25	6353	106	35'	22'	Good	65-65	66-66-66-65
5/25	6353	107	35'	22'	Good	66-65	67-67-67-66
5/25	6353	108	35'	22'	Good	65-66	65-65-66-66
5/25	6353	109	35'	22'	Good	65-65	66-65-66-66
5/25	6353	110	35'	22'	Good	65-65	67-67-67-66
5/25	6353	111	35'	22'	Good	66-66	65-66-66-65
5/25	6353	112	35'	22'	Good	67-66	65-66-65-66
5/25	6353	113	35'	22'	Good	65-65	65-65-65-67
5/25	6401	114	35'	22'	Good	64-65	66-66-65-65
5/25	6401	115	35'	22'	Good	66-66	67-67-65-65
5/25	6401	116	35'	22'	Good	66-67	67-67-66-66
5/25	6401	117	35'	22'	Good	65-65	65-65-65-65
5/25	6401	118	35'	22'	Good	66-65	65-64-64-65
5/26	6401	119	242'	22'	Good	65-65	66-65-66-66
5/26	6354	120	36'	22'	Good	66-66	65-66-65-65
5/26	6354	121	36'	22'	Good	66-65	66-66-66-66
5/26	6354	122	55'	22'	Good	65-65	65-66-66-65
5/26	6354	123	40'	22'	Good	66-66	65-66-66-67

GEO-CON INC.
GEOTECHNICAL CONTRACTING

CAP

PAGE 1 OF

PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VL TE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
10-20	C1-C2	C1-C2	22'	MM	37	750°F	Cloudy	N/A	35°	Pass	CELA
10-22	C1-C3	C1-C3	95'	S.R.	37	750°F	Clear	N/A	48°	Pass	CELA
10-22	C2-C3	C2-C3	320'	SR	37	750°F	Clear	N/A	48°	Pass	CELA
10-22	C3-C4	C3-C4	420'	S.R.	37	750°F	Clear	N/A	48°	Pass	CELA
10-22	C4-C5	C4-C5	420'	S.R.	37	750°F	Clear	N/A	48°	Pass	CELA
10-23	C5-C6	C5-C6	380'	S.R.	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C6-C7	C6-C7	332'	S.R.	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C6-C8	C6-C8	39'	SR	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C7-C8	C7-C8	22'	S.R.	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C7-C9	C7-C9	332'	S.R	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C8-C9	C8-C9	34'	S.R.	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C9-C10	C9-C10	345'	S.R.	37	750°F	Clear	N/A	63°	Pass	CELA
10-23	C10-C11	C10-C11	342'	S.R.	37	750°F	Clear	N/A	63°	Pass	CELA
10-26	C11-C12	C11-C12	320'	SR	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C12-C13	C12-C13	107'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C12-C14	C12-C14	205'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C13-C14	C13-C14	22'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C13-C15	C13-C15	107'	S R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C14-C15	C14-C15	110'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C15-C17	C15-C17	190	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C15-C16	C15-C16	22'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA

GEOTECHNICAL CONTRACTING

PAGE 2 OF

PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLPe

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
10-26	C16-C17	C16-C17	66'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C16-C14	C16-C14	66'	S.R.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-26	C17-C18	C17-C18	236'	S.L.	37	750°F	Cloudy	N/A	51°	Pass	CELA
10-28	C20-C21	C20-C21	418'	S.R.	37	750°F	Clear	N/A	52°	Pass	CELA
10-28	C21-C22	C21-C22	420'	S.R.	37	750°F	Clear	N/A	52°	Pass	CELA
10-28	C22-C23	C22-C23	420'	S.R.	37	750°F	Clear	N/A	52°	Pass	CELA
10-28	C1-C19	C1-C19	95'	S.R.	37	750°F	Clear	N/A	52°	Pass	CELA
10-28	C2-C19	C2-C19	318'	S.R.	37	750°F	Clear	N/A	52°	Pass	CELA
10-28	C19-C20	C19-C20	415'	S.R.	37	750°F	Clear	N/A	52°	Pass	CELA
10-29	C25-C3	C25-C3	28'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C25-C2	C25-C2	22'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C26-C2	C26-C2	5'	DM	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C25-C26	C25-C26	28'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C26-C27	C26-C27	41'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C27-C28	C27-C28	52'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C28-C29	C28-C29	52'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C26-C19	C26-C19	22'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C27-C19	C27-C19	5'	DM	37	750°F	Cloudy	N/A	43°	Pass	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VL Tx

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON-DES TEST P/F	COMMENTS
10-29	C27-C20	C27-C20	22'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C28-C21	C28-C21	22'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C29-C22	C29-C22	22'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-29	C21-C29	C21-C29	18'	D.M.	37	750°F	Cloudy	N/A	43°	Pass	CELA
10-30	C22-C30	C22-C30	5'	J.M	37	750°F	Clear	N/A	40°	Pass	CELA
10-30	C29 C30	C29-C30	79'	J.M.	37	750°F	Clear	N/A	40°	Pass	CELA
10-30	C30-C23	C30-C23	22'	J.M.	37	750°F	Clear	N/A	40°	Pass	CELA
10-30	C30-C31	C30-C31	92'	J.M.	37	750°F	Clear	N/A	40°	Pass	CELA
10-30	C23-C24	C23-C24	182'	J.M	37	750°F	Clear	N/A	40°	Pass	CELA
10-30	C23-C31	C23-C31	260'	J.M.	37	750°F	Clear	N/A	40°	Pass	CELA
10-31	C31-C24	C31-C24	22'	S.R.	37	750°F	Cloudy	N/A	35°	Pass	CELA
10-31	C31-C32	C31-C32	330'	S.R.	37	750°F	Cloudy	N/A	35°	Pass	CELA
10-31	C32-C33	C32-C33	22'	S.R.	37	750°F	Cloudy	N/A	35°	Pass	CELA
10-31	C24-C33	C24-C33	182'	J.M.	107	750°F	Cloudy	N/A	35°	Pass	CELA
10-31	C31-C33	C31-C33	36'	J.M.	107	750°F	Cloudy	N/A	35°	Pass	CELA
11-3	C32-C35	C32-C35	270'	J.M	107	750°F	Cloudy	N/A	35°	Pass	CELA
11-3	C32-C36	C32-C36	70'	J.M	107	750°F	Cloudy	N/A	35°	Pass	CELA
11-3	C33-C35	C33-C35	134'	J.M	107	750°F	Cloudy	N/A	35°	Pass	CELA
11-3	C34-C35	C34-C35	22'	J.M	107	750°F	Cloudy	N/A	35°	Pass	CELA
11-3	C33-C34	C33-C34	84'	J.M.	107	750°F	Cloudy	N/A	35°	Pass	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wolsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLDPE-TO

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
11-3	C35-C36	C35-C36	22'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C36-C37	C36-C37	40'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C36-C38	C36-C38	40'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C35-C38	C35-C38	370'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C35-C39	C35-C39	27'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C38-C39	C38-C39	22'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C39-C39	C39-C39	84'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C37-C38	C37-C38	22'	SR	37	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C37-C41	C37-C41	40'	JM	107	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C38-C41	C38-C41	355'	JM	107	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C38-C40	C38-C40	63'	JM	107	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C39-C40	C39-C40	120'	JM	107	750°	Some Rain	N/A	38°	Pass	CELA
11-3	C40-C41	C40-C41	22'	JM	107	750°	Some Rain	N/A	38°	Pass	CELA
11-9	C41-C42	C41-C4	180'	SR	37	750°	Some Rain	N/A	58°	Pass	CELA
11-4	C41-C43	C41-C43	225'	SR	37	750°	Some Rain	N/A	59°	Pass	CELA
11-4	C40-C43	C40-C43	183'	SR	37	750°	Some Rain	N/A	58°	Pass	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

CTP

PANEL SEAMING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLOPE TEX

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
11-4	C42-C43	C42-C43	22'	SR	107	750°	Some Rain	N/A	58°	Pass	CELA
11-5	C43-C45	C43-C45	5'	SR	501	750°	Some Rain	N/A	37°	Pass	CELA
11-5	C42-C45	C42-C45	183'	SR	501	750°	Some Rain	N/A	37°	Pass	CELA
11-5	C43-C44	C43-C44	406'	SR	501	750°	Some Rain	N/A	37°	Pass	CELA
11-5	C44-C45	C44-C45	22'	SR	501	750°	Some Rain	N/A	37°	Pass	CELA
11-9	C45-C46	C45-C46	120'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C45-C47	C45-C47	76	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C44-C47	C44-C47	5'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C44-C48	C44-C48	84'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C44-C49	C44-C49	94'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C44-C50	C44-C50	100'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C44-C51	C44-C51	120'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C46-C47	C46-C47	22'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C47-C48	C47-C48	22'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C48-C49	C48-C49	22'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-9	C49-C50	C49-C50	22'	SR	37	750°	Clear	N/A	35°	Pass	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL HDPE TEX

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
11-9	C50-C51	C50-C51	22'	SR	37	750°	Clear	N/A	35°	Pass	CELA
11-10	C18-C60	C18-C60	100'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C18-C61	C18-C61	50'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C18-C62	C19-C62	35'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C60-C61	C60-C61	22'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C61-C62	C61-C62	22'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C46-C52	C46-C52	125'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C47-C52	C47-C52	88'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C48-C52	C48-C52	89'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-10	C49-C52	C49-C52	90'	SR	37	750°	Clear	N/A	45°	Pass	CELA
11-19	C49-C53	C49-C53	59'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-19	C50-C53	C50-C53	100'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-19	C51-C53	C51-C53	122'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-19	C52-C53	C52-C53	22'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-19	C52-C54	C52-C54	152'	EB	501	750°	Clear	N/A	38°	Pass	CELA
11-19	C53-C54	C53-C54	277'	EB	501	750°	Clear	N/A	38°	Pass	CELA

GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: GUNDLYNK TEX

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NDE TEST P/F	COMMENTS
11-19	C54-C55	C54-C55	415'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-19	C55-C56	C55-C56	415'	EB	501	750°	Clear	N/A	38°	Pass	CELA
11-19	C56-C57	C56-C57	415'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-20	C57-C58	C57-C58	415'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-20	C58-C59	C58-C59	415'	SR	107	750°	Clear	N/A	38°	Pass	CELA
11-21	C52-C63	C52-C63	200	SR	107	750°	Some Rain	N/A	48°	Pass	CELA
11-21	C63-C54	C63-C54	22'	SR	107	750°	Some Rain	N/A	48°	Pass	CELA
11-21	C63-C64	C63-C64	200	SR	107	750°	Some Rain	N/A	48°	Pass	CELA
11-21	C64-C55	C64-C55	22'	SR	107	750°	Some Rain	N/A	48°	Pass	CELA
11-22	C59-C65	C59-C65	415'	EM	501	750°	Rain	N/A	53°	Pass	CELA
11-22	C65-C66	C65-C66	415'	SR	37	750°	Rain	N/A	53°	Pass	CELA
11-29	C66-C67	C66-C67	415'	EM	107	750°	Clear	N/A	44°	Pass	CELA
11-24	C67-C68	C67-C68	415'	SR	501	750°	Clear	N/A	44°	Pass	CELA
11-29	C68-C69	C68-C69	415'	EM	107	750°	Clear	N/A	44°	Pass	CELA
11-29	C69-C70	C69-C70	415'	SR	501	750°	Clear	N/A	44°	Pass	CELA
~~11-30~~	~~C70-C71~~	~~C70-C71 E~~	~~210~~	~~SR~~	~~37~~						SEAM SPLIT &
11-30	C70-C71	C70-C71 W	205	MM	107	750°	Clear	N/A	36°	Pass	CELA TWO TECHS

GEO-CON Inc.
GEOTECHNICAL CONTRACTING

CAP

PANEL SEAMING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL HDPE TEX

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
11-30	C71-C72	C71-C72 E	210	SR	37	750°	Clear	n/a	36°	Pass	CELA SEAM SPLIT BY TWO TECHS
11-30	C71-C72	C71-C72 W	200	MM	107						
11-30	C72-C73	C71-C72 E	240	SR	37	750°	Clear	N/A	36°	Pass	CELA " "
11-30	C72-C73	C72-C73 W	175	MM	107						
11-30	C73-C74	C73-C74 E	260	SR	37	750°	Clear	N/A	36°	Pass	CELA " "
11-30	C73-C74	C73-C74 W	145	MM	107						
12-1	C74-C76	C74-C76	20'	MF	505	750°	Clear	N/A	39°	Pass	CELA
12-2	C75-C76	C75-C76	240'	MF	505	750°	Clear	N/A	39°	Pass	CELA
12-2	C75-C77	C75-C77	75'	MF	505	750°	Clear	N/A	39°	Pass	CELA
12-2	C76-C77	C76-C77	22'	MF	505	750°	Clear	N/A	39°	Pass	CELA
12-2	C74-C75	C74-C75	22'	MF	505	750°	Clear	N/A	39°	Pass	CELA
12-2	C73-C76	C73-C76	22'	MF	505	750°	Clear	N/A	39°	Pass	CELA
12-2	C81-C79	C81-C79	100'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C81-C80	C81-C80	22'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C80-C79	C80-C79	50'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C80-C78	C80-C78	120'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C81-C82	C81-C82	45'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C80-C82	C80-C82	205'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C81-C83	C81-C83	90'	MF	505	750°	Cloudy	N/A	35°	Pass	CELA
12-2	C82-C79	C82-C79	204'	MF	505	780°	Cloudy	N/A	35°	Pass	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLI

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NON DES TEST P/F	COMMENTS
12-2	C72-C74	C72-C79	22'	MF	505	750°	Cloudy	N/A	35°		
12-2	C82-C83	C82-C83	22'	MF	505	750°	Cloudy	N/A	35°	PASS	CELA
12-3	C82-C84	C82-C84	220'	SR	107	750°	Cloudy	N/A	35°	PASS	CELA
12-3	C83-C84	C83-C84	80'	SR	107	750°	Cloudy	N/A	35°	PASS	CELA
12-3	C84-C85	C84-C85	305'	MM	505	750°	Cloudy	N/A	35°	PASS	CELA
12-2	C81-C71	C81-C71	22'	MF	505	750°	Cloudy	N/A	35°	PASS	CELA
12-2	C83-C70	C83-C70	22'	MF	505	750°	Cloudy	N/A	35°	PASS	CELA
12-4	C84-C69	C84-C69	22'	SR	107	750°	Cloudy	N/A	35°	PASS	CELA
12-4	C85-C68	C85-C68	22'	SR	107	750°	Cloudy	N/A	35°	PASS	CELA
12-4	C85-C86	C85-C86	98'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C85-C87	C85-C87	202'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C86-C87	C86-C87	22'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C87-C97	C87-C89	66'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C87-C88	C87-C88	11'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C88-C89	C88-C89	85'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C88-C90	C88-C90	22'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-4	C90-C90	C90-C90	200'	SR	107	750°	Cloudy	N/A	30°	PASS	CELA
12-2	C78-C79	C78-C79	22'	MF	505	780°	Cloudy	N/A	35°	PASS	CELA

GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0125 MATERIAL DESCRIPTION: 60 mil VL Tx

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	NDE TEST P/F	COMMENTS
12-4	C87-C67.	C87-C67	22'	MM	505	780°	Cloudy Snow	N/A	32°	Pass	CELA
12-4	C89-C66	C89-C66	22'	MM	505	780°	Cloudy Snow	N/A	33°	Pass	CELA
12-4	C90-C91	C90-C91	80'	MM	505	780°	Cloudy Snow	N/A	33°	Pass	CELA
12-4	C92-C90	C92-C90	130'	MM	505	780°	Cloudy Snow	N/A	33°	Pass	CELA
12-4	C92-C93	C92-C93	136'	MF	35	780°	Cloudy Snow	N/A	33°	Pass	CELA
12-4	C91-C93	C91-C93	80'	MM	505	780°	Cloudy Snow	N/A	33°	Pass	CELA
12-4	C93-C94	C93-C94	240'	MF	35	780°	Cloudy Snow	N/A	AMB 31° / SHEET 40°	Pass	SAMPLES TAKEN FROM SEAM FIELD TESTED. ALL PASS. CE
12-2	C77-C78	C77-78	75'	MF	505	780°	Cloudy Snow	N/A	33°	Pass	CE
12-2	C76-C78	C77-78	68'	MF	505	780°	Cloudy Snow	N/A	33°	Pass	" " " CE
12-7	C94-C95	C94-C95	154'	MF	35	780°	Cloudy Snow	N/A	AMB 34° / SHEET 43°	Pass	" " " CE
12-7	C94-C96	C94-C96	26'	MF	35	780°	CLOUDY SNOW	N/A	AMB 31° / SHEET 41°	Pass	" " " CE
12-7	C94-C97	C94-C97	33'	MF	35	780°	CLOUDY SNOW	N/A	AMB 31° / SHEET 41°	Pass	" " " CE
12-7	C97-C98	C97-C98	10'	MF	35	780°	CLOUDY SNOW	N/A	AMB 28° / SHEET 38°	Pass	" " " CE
12-7	C98-C99	C98-C99	10'	MF	35	780°	CLOUDY SNOW	N/A	AMB 28° / SHEET 38°	Pass	" " " CE
12-7	C96-C97	C96-C97	12'	MF	35	780°	CLOUDY SNOW	N/A	AMB 27° / SHEET 40°	Pass	" " " CE
12-7	C95-C96	C95-C96	12'	MF	35	780°	CLOUDY SNOW	N/A	AMB 30° / SHEET 40°	Pass	" " " CE

GEO-CON INC.
GEOTECHNICAL CONTRACTING

CAP

PANEL SEAMING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLTE

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DUAL WEDGE TEST P/F	COMMENTS
12-7	C94-C98	C94-C98	5'	MF	35	780°	CLOUDY SNOW	N/A	AMB 31° / SHEET 40°	PASS	SAMPLES TAKEN FROM SEAM PEEL TEST ABOVE CE
12-7	C94-C99	C94-C99	34'	MF	35	780°	CLOUDY SNOW	N/A	AMB 30° / SHEET 40°	PASS	" " " CE
12-7	C89-C95	C89-C95	76'	MF	35	780°	CLOUDY SNOW	N/A	AMB 31° / SHEET 40°	PASS	" " " CE
12-9	C91-C92	C91-C92	22'	MF	35	780°	Cloudy SNOW	N/A	33°	PASS	N/A CELA
12-7	C88-C96	C88-C96	27'	MF	35	780°	CLOUDY SNOW	N/A	AMB 29° / SHEET 40°	PASS	" " " C
12-7	C88-C97	C88-C97	33'	MF	35	780°	CLOUDY SNOW	N/A	AMB 29° / SHEET 40°	PASS	" " " C
12-7	C88-C98	C88-C98	5'	MF	35	780°	CLOUDY SNOW	N/A	AMB 29° / SHEET 40°	PASS	" " " C
12-7	C88-C99	C88-C99	34'	MF	35	780°	CLOUDY SNOW	N/A	AMB 29° / SHEET 41°	PASS	" " " C
12-8	C56-C90	C56-C90	22'	MF	35	780°	CLOUDY L SNOW	N/A	AMB 27° / SHEET 43°	PASS	CELA
12-8	C57-C91	C57-C91	22'	MF	35	780°	CLOUDY L. SNOW	N/A	AMB 26° / SHEET 41°	PASS	CELA
12-8	C58-C93	C58-C93	22'	MF	35	780°	Cloudy L. SNOW	N/A	AMB 26° / SHEET 41°	PASS	CELA
12-8	C59-C94	C59-C94	22'	MF	35	780°	Cloudy L. SNOW	N/A	AMB 27° / SHEET 41°	PASS	CELA
12-8	C65-C95	C65-C95	22'	MF	35	780°	Cloudy L. SNOW	N/A	AMB 27° / SHEET 41°	PASS	CELA
12-19	C99-C100	C99-C100	253'	SR	505	750°	CLEAR	N/A	AMB 35 / SHEET 40	PASS	CELA

GEO·CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5/14	51-100	C51 C100	20'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-53	C100 C53	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-54	C100 C54	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-55	C100 C55	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-56	C100 C56	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-57	C100 C57	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-58	C100 C58	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-59	C100 C59	15	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	100-101	C100 C101	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-59	C101 C59	7	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-65	C100 C65	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-66	C101 C66	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-67	C101 C67	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-68	C101 C68	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-69	C101 C69	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL
5/14	101-70	C101 C70	22'	JA	014	530	Sunny	N/A	60°	P	E-CHANNEL

GEO·CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-029 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5/14	101-71	C101 C71	10'	JA	014	530	SUNNY	N/A	60°	P	E-CHANNEL
5/18	101-102	C101 C102	22'	JA	10	530	SUNNY	N/A	65	P	E-CHANNEL
5/19	102-105	C102 C105	22'	JA	10	530	SUNNY	N/A	65°	P	N-E CHANNEL
5/18	102-71	C102 C71	8'	JA	10	530	SUNNY	N/A	65°	P	E-CHANNEL
5/18	102-72	C102 C72	22'	JA	10	530	SUNNY	N/A	65°	P	E-CHANNEL
5/18	102-73	C102 C73	10'	JA	10	530	SUNNY	N/A	65°	P	E-CHANNEL
5/19	105-73	C105 C73	10'	EM	014	530	SUNNY	N/A	65°	P	N-CHANNEL
5/19	105-74	C105 C74	22'	EM	014	530	SUNNY	N/A	65°	P	N-CHANNEL
5/19	105-104	C105 C104	22'	EM	014	530	SUNNY	N/A	65°	P	N-CHANNEL
5/19	104-74	C104 C74	70'	JA	10	530	SUNNY	N/A	65°	P	N-CHANNEL
5/19	104-103	C104 C103	22'	JA	10	530	SUNNY	N/A	65°	P	N-CHANNEL
5/19	103-74	C103 C74	335'	EM	014	530	SUNNY	N/A	65°	P	N-CHANNEL
5/19	103-75	C103 C75	80'	JA	014	530	SUNNY	N/A	65°	P	N-CHANNEL
5/26	103-119	C103 C119	22'	EM	10	530	SUNNY	N/A	65°	P	N-CHANNEL
5/24	37-41	C37 C41	27'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL
5/24	41-42	C41 C42	27'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL

GEO-CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P-0129 MATERIAL DESCRIPTION: 60 VCT

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5/24	42-45	C42 C45	28'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL
5/24	45-46	C45 C46	28'	EB	10	580	SUNNY	N/A	65°	P	W-CHANNEL
5/24	46-52	C46 C52	28'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL
5/24	52-63	C52 C63	28'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL
5/24	63-64	C63 C64	28'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL
5/24	64-90	C64 C90	28'	EB	10	550	SUNNY	N/A	65°	P	W-CHANNEL
5/25	90-106	C90 C106	35'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	106-107	C106 C107	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	107-108	C107 C108	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	108-109	C108 C109	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	109-110	C109 C110	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	110-111	C110 C111	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	111-112	C111 C112	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	112-113	C112 C113	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	113-114	C113 C114	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	114-115	C114 C115	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL

GEO·CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5/25	115-116	C115 C116	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	116-117	C116 C117	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	117-118	C117 C118	35'	MF	505	750	SUNNY	N/A	65°	P	W-CHANNEL
5/25	106-92	C106 C92	8'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	107-92	C107 C92	19'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	107-93	C107 C93	4'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	108-93	C108 C93	22'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	109-94	C109 C94	22'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	110-94	C110 C94	4'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	110-99	C110 C99	10'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	110-88	C110 C88	4'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	111-88	C111 C88	22'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	112-86	C112 C86	22'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	113-85	C113 C85	22'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	114-85	C114 C85	4'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL
5/25	114-84	C114 C84	5'	EB	10	530	SUNNY	N/A	65°	P	W-CHANNEL

GEO·CON INC.
GEOTECHNICAL CONTRACTING

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PANEL SEAMING FORM

PROJECT NAME: Wellsville PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 6 VCT

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
5/25	115-84	C115 C84	8'	JA	10	535	Sunny	N/A	65°	P	W-CHANNEL
5/25	115-82	C115 C82	18'	JA	10	535	Sunny	N/A	65°	P	W-CHANNEL
5/25	116-82	C116 C82	14'	JA	10	535	Sunny	N/A	65°	P	W-CHANNEL
5/25	116-80	C116 C80	4'	JA	10	535	Sunny	N/A	65°	P	W-CHANNEL
5/25	117-80	C117 C80	22'	JA	10	535	Sunny	N/A	65°	P	W-CHANNEL
5/25	118-78	C118 C78	22'	JA	10	535	Sunny	N/A	65°	P	W CHANNEL
5/26	119-75	C119 C75	205'	EM	10	530	Sunny	N/A	65°	P	N-CHANNEL
5/26	119-123	C119 C123	40'	MP	505	750°	Sunny	N/A	65°	P	N-CHANNEL
5/26	123-122	C123 C122	40'	MF	505	750°	Sunny	N/A	65°	P	N-W CHANNEL
5/26	122-121	C122 C121	22'	MF	505	750°	Sunny	N/A	65°	P	N-W CHANNEL
5/26	121-120	C121 C120	28'	MF	505	750°	Sunny	N/A	65°	P	W-CHANNEL
5/26	120-118	C120 C118	35'	MF	505	750°	Sunny	N/A	65°	P	W-CHANNEL
5/26	120-77	C120 C77	22'	EM	10	530	Sunny	N/A	65°	P	W-CHANNEL
5/26	121-75	C121 C75	22'	EM	10	530	Sunny	N/A	65°	P	W-CHANNEL
5/26	122-75	C122 C75	10'	EM	10	530	Sunny	N/A	65°	P	N-W CHANNEL
5/26	123-75	C123 C75	22'	EM	10	530	Sunny	N/A	65°	P	N-W CHANNEL

GEO-CON INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville PROJECT NUMBER: P1-029 MATERIAL DESCRIPTION: 60mil UL Tex

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS / INCH		PASS/ FAIL	COMMENT
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			Peel	Shear		
9-9 / 2:30 PM	75°	C.K.	37						500°			20%	69-68 68-64	72 77	P	
9-10 / 10:00 AM	70°	C.K.	37						500°			20%	74-69 71-71	78 76	P	
9-12 / 10:15 AM	70°	C.K.	37						500°			20%	79-85 90-92	102 97	P	
9-12 / 2:00 PM	70°	Ck.	37						500°			20%	61-71 73-74	81 71	P	
9-14 / 10:30 AM	70°	MM	37						500°			20%	67-76 78-78	96 89	P	
9-14 / 2:15 PM	70°	J.N.	007	500°		7%							88 81	79 78	P	
9-15 / 1:30 PM	80°	M.M.	37						500°			20%	73-74 74-74	78 75	P	
9-16 / 8:30 AM	70°	J.N.	007	500°		7%							105 91	95 96	P	
9-17 / 2:00 PM	75°	MM	37						500°			20%	72-74 70-71	77 82	P	
9-18 / 9:00 AM	70°	MM	37						500°			20%	89-84 101-86	103 92	P	
9-18 / 8:00 AM	70°	JN	007	500°		7%							91 99	109 97	P	
9-18 / 1:00 PM	70°	MM	37						500°			20%	85-84 84-79	86 87	P	
9-29 / 3:30 PM	65°	EB	37						525°			20%	82-86 79-80	80 80	P	
9-29 / 5:00 PM	65°	EB	007	520°		7%							84 86	103 109	P	
9-30 / 9:00 AM	55°	EB	007	520°		7%							103 97	113 104	P	
9-30 / 1.00 PM	55°	EB	007	520°		7%							90 87	101 98	P	

GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL Tex

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS / INCH		PASS/ FAIL	COMMENT
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			PEEL	SHEAR		
10-3 / 9:00 AM	70°	E.B.	37						500°C			20%	89-88 91-97	108 110	P	
10-5 / 2:00 PM	60°	M.M.	007	500°C			7½%						71 70	88 84	P	
10-8 / 2:00 PM	65°	M.M.	007	500°C			7½%						77 72	89 97	P	
10-16 / 2:00 PM	69°	M.R.	007	510°C			8 %						84 80	96 93	P	
10-20 / 9:00 AM	35°	M.M.	37						750°F			20%	91-89 92-90	111 103	P	
10-22 / 9:30 AM	48°	S.R.	37						750°F			20%	82-80 91-97	112 113	P	
10-22 / 1:00 PM	48°	S.R.	37						750°F			20%	87-89 90-93	105 109	P	
10-23 / 9:00 AM	63°	S.R.	37						750°F			20%	91-92 90-83	100 99	P	
10-23 / 1:00 PM	63°	S.R.	37						750°F			20%	89-90 95-90	92 104	P	
10-24 / 10:00 AM	51°	S.R.	37						750°F			20%	90-91 93-91	107 108	P	
10-24 / 1:45 PM	51°	S.R.	37						750°F			20%	87-90 96-88	110 111	P	
10-28 / 9:00 AM	52°	S.R.	37						750°F			20%	88-92 93-95	105 107	P	
10-29 / 10:00 AM	43°	D.N.	37						750°F			20%	85-85 96-92	115 107	P	
10-30 / 12:15 PM	40°	J.M.	37						750°F			20%	105-100 112-110	113 122	P	
10-31 / 10:30 AM	35°	S.R.	37						750°F			20%	120-115 109-111	132 127	P	
10-31 / 2:00 PM	35°	J.M.	107						750°F			20%	115-113 104-111	127 130	P	

GEO-CON INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLTex

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS / INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			PEEL	SHEAR		
10-3 / 9:00 AM	70°	JA	007	510°		7%							94 92	100 92	P	
10-27 / AM	69°	MR	007	520°		7%							87 82	105 102	P	
10-29 / AM	43°	SR	007	520°		7%							79 86	108 110	P	
10-30 / AM	40°	MM	007	510°		7%							84 87	115 117	P	
10-31 / AM	35°	MM	007	510°		8%							82 81	105 100	P	
11-1 / AM	37°	J.N.	14	520°		7%							86 83	105 110	P	
11-19 / PM	38°	MM	007	520°		7%							82 81	121 119	P	
11-19 / PM	38°	DM	107						750°			20%	115-110 112-120	131 125	P	
11-20 / AM	38°	MM	007	510°		7%							85 82	120 115	P	
11-20 / PM	38°	SR	107						750°			20%	110-111 102-99	120 122	P	
11-7 / PM	35°	SR	014	525°		7%							84 91	122 119	P	
11-3 / AM	39°	SR	37						750°			20%	111-110 102-99	125 122	P	
/ PM	59°	SR	107						750°			20%	103-102 113-115	131 119	P	
11-5 / AM	37°	SR	501						750°			20%	107-110 108-104	122 127	P	
11-4 / AM	35°	SL	37						750°			20%	102-99 97-98	120 110	P	
10/30 AM	40°	JM	37						750°			20%	108-111 93-94	125 122	P	

GEO-CON INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville Wy PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLPE

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS / INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			PEEL	SHEAR		
11-10 / AM	45°	SR	37						750°			20%	110-99 97-89	120 125	P	
11-19 / AM	38°	SR	107						750°			20%	105-101 98-107	119 127	P	
11-19 / AM	38°	EB	501						750°			20%	100-92 88-81	109 117	P	
11-20 / AM	38°	SR	107						750°			20%	93-102 104-101	120 114	P	
11-21 / AM	48°	SR	107						750°			20%	97-98 95-99	110 101	P	
11-22 / AM	53°	SR	37						750°			20%	93-95 91-97	115 110	P	
11-22 / AM	53°	EM	501						750°			20%	99-89 104-106	117 118	P	
11-24 / AM	44°	EM	107						750°			20%	93-95 91-98	122 119	P	
11-24 / AM	44°	SR	501						750°			20%	105-97 107-102	110 115	P	
11-30 / AM	36°	SR	107						750°			20%	106-103 101-107	133 136	P	
11-30 AM	36°	MM	37						750°			20%	115-118 121-120	125 127	P	
11-30 PM	36°	MM	37						750°			20%	99-97 100-95	107 110	P	
12-1 / AM	31°	MF	505						750°			20%	100-95 94-95	NE 121	P	
12-1 / PM	39°	MF	505						750°			20%	98-99 101-104	125 111	P	
12-2 / AM	35°	MF	505						750°			20%	97-99 101-98	101 100	P	

GEO-CON INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville Dy PROJECT NUMBER: P10125 MATERIAL DESCRIPTION: 60 mil VLTC

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS/INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT/MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			Peel	Shear		
12-2/PM	35°	MF	505						750°		20%		102-100 98-100	105 103	P	
12-3/AM	35°	SR	107						750°		20%		102-105 95-92	107 111	P	
12-3/AM	35°	MM	505						750°		20%		90 98 92-96	113 110	P	
12-3/PM	35°	SR	107						750°		20%		98-87 101-92	122 119	P	
12-4/AM	35°	MF	35						750°		20%		93-92 88-96	105 112	P	
12-4/PM	35°	MF	35						750°		20%		87-95 82-91	121 125	P	
12-9/AM	35°	MM	505						750°		20%		85-92 91-96	96 100	P	
12-9/AM	35°	SR	107						750°		20%		91-89 79-89	115 103	P	
12-9/PM	35°	SR	107						75°		20%		92-90 89-91	117 122	P	
12-7/AM	30°	MF	35						750°		20%		no-99 105-100	100 120	P	
12-7/PM	30°	MF	35						760°		20%		104-97 99-101	98 106	P	
12-8/AM	29°	MF	35						750°		20%		92-95 87-82	108 116	P	
10-27/AM	47°	MM	007	525°		9%							88 92	112 117	P	
10-27/AM	47°	DM	14	530°		8%							79 81	108 112	P	
10-27/PM	47°	DM	14	530°		8%							90 82	112 115	P	

GEO-CON INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville NY PROJECT NUMBER: 01-0125 MATERIAL DESCRIPTION: 60 mil VLPE

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS/INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT/MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			PEEL	SHEAR		
11-8/ AM	34°	JA	007	530°		8%							82 77	99 102	P	
11-8/ AM	34°	JM	14	525°		8%							79 81	108 116	P	
11-14/ AM	32°	MM	007	530°		8%							72 75	109 115	P	
11-10/ AM	45°	MR	14	525°		8%							82 89	110 125	P	
11-12/ AM	57°	SR	007	525°		8%							85 81	112 117	P	
11-12/ PM	57°	DM	14	525°		8%							72 79	108 112	P	
11-13/ AM	40°	MM	14	530°		9%							91 85	113 110	P	
11-16/ AM	32°	DM	14	530°		8%							72 77	99 105	P	
11-16/ AM	32°	JM	007	530°		9%							78 82	108 116	P	
11-19/ AM	32°	SR	007	530°		9%							84 80	100 95	P	
11-19/ AM	32°	MM	14	535°		9%							77 81	92 104	P	
11-22/ AM	53°	JM	14	535°		9%							76 89	112 108	P	
11-22/ PM	53°	JM	14	535°		9%							81 76	115 111	P	
11-22/ PM	53°	EM	007	535°		9%							72 75	97 92	P	
11-25/ AM	49°	EB	14	535°		9%							80 79	103 104	P	

GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLTEX

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS/ INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			PEEL	SHEAR		
11-25 / PM	99°	SR	007	530°		9%							72 81	95 109	P	
11-30 / AM	36°	EB	14	525°		9%							69 75	92 95	P	
11-30 / PM	36°	EM	007	525°		9%							77 72	94 103	P	
12-1 / AM	39°	SR	007	525°		9%							78 84	109 109	P	
12-1 / AM	39°	MM	14	530°		9%							91 87	112 115	P	
12-3 / AM	35°	EM	505						750°			15%	99-92 88-85	108 112	P	
12-3 / AM	35°	MM	14	530°		9%							82 86	109 108	P	
12-3 / PM	35°	SR	007	530°		9%							79 84	117 112	P	
12-18 / AM	39°	EB	001	530°		9%							91 89	100 97	P	SHEET TEMP 42°
12-19 / PM	35°	SR	505						750°			15%	94-91 92-90	112 115	P	SHEET TEMP 40°
12-19 / PM	41°	SR	003	520°		9%							85 88	95 98	P	SHEET TEMP 45°
12-21 / AM	36°	SR	003	520°		9%							86 82	88 84	P	SHEET TEMP 45°

GEO·CON INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

Page ____ of ____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS/INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT/MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			SHEAR	PEEL		
5/13 AM	50°	EB	014	530			10						117 115	100 101	P	
5/13 PM	65°	EB	014	530			10						79 76	77 70	P	
5/14 AM	50°	EM	505						750			30%	101 101	84 93 / 88 89	P	
5/14 AM	50°	EB	107						750			45%	121 119	106 103 / 104 105	P	
5/14 PM	65°	JA	014	530			8						77 81	100 93	P	
5/14 PM	65°	EM	014	530			8						107 99	86 84	P	
5/18 AM	50°	JA	10	530			8						98 101	83 93	P	
5/18 AM	50°	EM	10	530			8						122 109	88 96	P	
5/19 AM	55°	JA	10	535			8						102 104	93 98	P	
5/19 AM	55°	EM	10	535			8						104 102	99 92	P	
5/19 PM	55°	EM	014	550			10						102 111	81 92	P	
5/20 AM	45°	JA	10	530			10						101 89	112 117	P	
5/24 AM	55°	JK	10	530			10						90 100	95 92	P	
5/25 AM	55°	EB	10	530			10						101 98	80 81	P	
5/25 AM	55°	MF	505						750			30%	102 105	103 101 / 104 106	P	

GEO·CON® INC.
GEOTECHNICAL CONTRACTING

TRIAL WELD INFORMATION

PROJECT NAME: Wellsville PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	AMBIENT TEMP	SEAMER INITIALS	MACHINE NUMBER	EXTRUSION WELDS					FUSION WELDS				PEEL VALUES LBS/ INCH		PASS/ FAIL	COMMENTS
				BARREL TEMP		PREHEAT TEMP		WELD THICKNESS MILS	WEDGE TEMP		MEASURED SPEED FT / MIN	WHEEL SETTING				
				SET	PYRO	SET	PYRO		SET	PYRO			SHEAR	PEEL		
5/25 PM	65°	JA	10	535°		9							94 99	94 94	P	
5/25 PM	65°	EB	10	535°		9							100 111	89 90	P	
5/26 AM	55°	EM	10	535°		9							102 97	93 86	P	
5/26 AM	55°	MF	505						750°			30%	89 95	104 NO 100 101	P	
5/26 PM	65°	EM	10	535°		9							97 104	95 97	P	
5/26 PM	65°	MF	505						750°			30%	100 108	103 99 98 102	P	

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: PI-0129 MATERIAL DESCRIPTION: 60 MIL VL TBX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
10/27	1/2/3	J.N.	—	—	—	—	—	—	P	PATCH AT SEAM 1/2/3 INTERSECTION 74' FROM EAST ANCHOR TRENCH
10/27	2/3	J.N	-	-	-	-	-	-	P	BOOT APRON G.V.P. 145' FROM EAST ANCHOR TRENCH
10/27	2/3	J.N	-	-	-	-	-	-	P	BOOT APRON G.V.P. 200' FROM EAST ANCHOR TRENCH
10/27	2/3	J.N	-	-	-	-	-	-	P	BOOT APRON G.V.P. 240' FROM EAST ANCHOR TRENCH
11/14	2/3/25	E.B	-	-	-	-	-	-	P	EXTRUSION T-WELD AT SEAM INTERSECTION
10/27	3/4	J.N	-	-	-	-	-	-	P	PATCH 94' FROM EAST ANCHOR TRENCH DS-1
11/8	3/4	E.B.	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF EAST CHANNEL TO OUTER ANCHOR TR
11/8	4/5	EB	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF EAST CHANNEL TO OUTER ANCHOR TRENCH
10/27	4/5	J.N	-	-	-	-	-	-	P	EXTRUSION WELD 48' FROM EAST ANCHOR TRENCH
10/27	4/5	J.N	-	-	-	-	-	-	P	PATCH 184' FROM EAST ANCHOR TRENCH DS-2
10/27	4/5	J.N	-	-	-	-	-	-	P	EXTRUSION WELD 225' FROM EAST ANCHOR TRENCH
11/8	5/6	EB	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF E CHANNEL TO OUTER ANCHOR TR
10/27	5/6	J.N	-	-	-	-	-	-	P	BOOT APRON UTILITY PIPE 243' FROM WEST ANCHOR TRENCH
10/27	5/6	J.N	-	-	-	-	-	-	P	EXTRUSION WELD 199' FROM WEST ANCHOR TRENCH
10/27	5/6	J N	-	-	-	-	-	-	P	PATCH 176' FROM WEST ANCHOR TRENCH
10/27	5/6	J N	-	-	-	-	-	-	P	PATCH 91' FROM WEST ANCHOR TRENCH
10/27	5/6	J N	-	-	-	-	-	-	P	PATCH 5' FROM WEST ANCHOR TRENCH DS-3
11/8	6/7	E.B	-	-	-	-	-	-	P	PATCH AT ANCHOR TRENCH @ SEAM BETWEEN PANELS
11/8	6/7	E.B.	-	-	-	-	-	-	P	EXTRUSION WELD AT INSIDE EDGE OF EAST CHANNEL
10/27	6/7/8	J.N	-	-	-	-	-	-	P	EXTRUSION T-WELD AT SEAM INTERSECTION
11/8	7/9	E.B	-	-	-	-	-	-	P	EXTRUSION WELD FROM TOP OF INSIDE EDGE OF CHANNEL TO E ANCHOR TRE
10/27	7/9	J.N	-	-	-	-	-	-	P	PATCH 77' FROM EAST ANCHOR TRENCH DS-4
10/27	7/8/9	J N	-	-	-	-	-	-	P	EXTRUSION WELD AT SEAM INTERSECTION
10/27	9/10	J.N	-	-	-	-	-	-	P	PATCH 100' FROM EAST ANCHOR TRENCH DS-5
11/8	9/10	E.B	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF CHANNEL TO E. ANCHOR TRENCH

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: PI-0129 MATERIAL DESCRIPTION: 60 MIL VL TPO

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F		
11/8	10/11	E.B	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TRENCH
10/27	10/11	J.N.	-	-	-	-	-	-	P	EXTRUSION WELD 144' FROM EAST TRENCH
10/27	10/11	J.N.	-	-	-	-	-	-	P	BOOT APRON 235' FROM EAST ANCHOR TRENCH
11/8	11/12	E.B.	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF E. CHANNEL TO ANCHOR TRENCH
10/27	11/12	J.N.	-	-	-	-	-	-	P	PATCH 40' FROM EAST ANCHOR TRENCH
10/27	11/12	J.N.	-	-	-	-	-	-	P	BOOT APRON 157' FROM WEST ANCHOR TRENCH
10/27	11/12	J.N.	-	-	-	-	-	-	P	PATCH 100' FROM WEST ANCHOR TRENCH DS-6
11/8	12/13	E.B.	-	-	-	-	-	-	P	EXTRUSION WELD FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TRENCH
10/27	12/13/14	J.N.	-	-	-	-	-	-	P	EXTRUSION T-WELD AT SEAM INTERSECTION
10/27	12/14	J.N.	-	-	-	-	-	-	P	PATCH 65' FROM WEST ANCHOR TRENCH
10/27	13/14/15	J.N.	-	-	-	-	-	-	P	EXTRUSION T-WELD AT SEAM INTERSECTION
10/27	14/15/16	J.N	-	-	-	-	-	-	P	EXTRUSION T-WELD AT SEAM INTERSECTION
11/8	13/15	EB	-	-	-	-	-	-	P	EXTRUSION WELD FROM BOTTOM (MIDDLE) OF E. CHANNEL TO OUTER ANCHOR TRENCH
10/27	14/16	J.N	-	-	-	-	-	-	P	PATCH 95' FROM EAST ANCHOR TRENCH DS-7
11/8	15/17	E.B	-	-	-	-	-	-	P	EXT. WELD FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TRENCH
10/27	15/17	J.N.	-	-	-	-	-	-	P	PATCH 105' FROM E ANCHOR TRENCH
10/27	15/17	J.N.	-	-	-	-	-	-	P	EXT. WELD 140' FROM E ANCHOR TRENCH
10/27	15/16/17	J N	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION
10/27	16/17	J.N	-	-	-	-	-	-	P	PATCH 34' FROM E. ANCHOR TRENCH DS-8
10/27	16/17	J.N.	-	-	-	-	-	-	P	PATCH 15' FROM E. ANCHOR TRENCH
11/8	17/18	EB	-	-	-	-	-	-	P	EXT. WELD FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TRENCH
11/10	18/01/02	E.B.	-	-	-	-	-	-	P	EXT. PATCH AT SEAM INTERSECTION
11/10	18/00/01	E.B.	-	-	-	-	-	-	P	EXT. PATCH AT SEAM INTERSECTION
11/10	19/00	E B	-	-	-	-	-	-	P	PATCH 100' FROM EAST ANCHOR TRENCH
11/10	18/00	EB	-	-	-	-	-	-	P	PATCH 150' FROM EAST ANCHOR TRENCH

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: PI-0129 MATERIAL DESCRIPTION: 60 mil VL TEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
11/13	1/2/19	EB	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	2/19	EB	-	-	-	-	-	-	P	PATCH 45' FROM WEST ANCHOR TRENCH
11/13	2/19/26	EB	-	-	-	-	-	-	P	PATCH AT SEAM INTERSECTION
11/13	2/26/25	EB	-	-	-	-	-	-	P	PATCH AT SEAM INTERSECTION @ E. TO 26/19/2 @ E. TO 1ST REPAIR
11/13	19/20	EB	-	-	-	-	-	-	P	PATCH 75' FROM E. ANCHOR TRENCH DS-9
11/13	19/20/27	EB	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	26/29/19	EB	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION VT BETWEEN 26-27-29 @ 19-26-27
11/13	20/21	EB	-	-	-	-	-	-	P	PATCH 40' FROM WEST ANCHOR TRENCH DS-10 ✓
11/13	27/28 20/21	EB	-	-	-	-	-	-	P	PATCH AT SEAM INTERSECTION
11/13	21/22	EB	-	-	-	-	-	-	P	PATCH 150' FROM EAST ANCHOR TRENCH DS-11
11/13	21/22	EB	-	-	-	-	-	-	P	PATCH 270' FROM EAST ANCHOR TRENCH
11/13	21/22/29	EB	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	21/29	EB	-	-	-	-	-	-	P	PATCH 70' FROM WEST ANCHOR TRENCH @ E. TO T WELD
11/13	21/29/29	EB	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	26/29	EB	-	-	-	-	-	-	P	PATCH 50' FROM WEST ANCHOR TRENCH
11/13	26/29	EB	-	-	-	-	-	-	P	PATCH 45' FROM WEST ANCHOR TRENCH DS-12
11/13	26/29	EB	-	-	-	-	-	-	P	PATCH 30' FROM WEST ANCHOR TRENCH
11/13	22/23	EB	-	-	-	-	-	-	P	PATCH 150' FROM EAST ANCHOR TRENCH DS-13
11/13	22/23	EB	-	-	-	-	-	-	P	PATCH 230' FROM EAST ANCHOR TRENCH
11/13	22/23/30	EB	-	-	-	-	-	-	P	PATCH AT SEAM INTERSECTION
11/13	22/30/29	EB	-	-	-	-	-	-	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	29/30	EB	-	-	-	-	-	-	P	PATCH 40' FROM WEST ANCHOR TRENCH DS-15
11/13	29	EB	-	-	-	-	-	-	P	PATCH APRON 75' FROM WEST ANCHOR TRENCH 5' FROM SEAM 27-29, 5' FROM SEAM 29-3
11/13	23	EB	-	-	-	-	-	-	P	PATCH APRON 50' FROM EAST ANCHOR TRENCH CENTER OF PANEL
11/18	21/24	EB	-	-	-	-	-	-	P	PATCH 55' FROM E. ANCHOR TRENCH

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville, NY PROJECT NUMBER: 01-0129 MATERIAL DESCRIPTION: ____

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
11/13	23/24	EB	—	—	-	—	—	—	P	PATCH 130' FROM E. ANCHOR TRENCH
11/13	23/24/31	EB	—	—	-	—	—	—	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	23/31	EB	—	—	-	—	—	—	P	PATCH 235' FROM E. ANCHOR TRENCH
11/13	23/31	EB	—	—	-	—	—	—	P	PATCH 200' FROM W. ANCHOR TRENCH
11/13	23/30/31	EB	—	—	-	—	—	—	P	EXT. T-WELD AT SEAM INTERSECTION
11/13	31	EB	—	—	-	—	—	—	P	GVP BOOT APRON MIDDLE OF PANEL 300' FROM W. TRENCH
11/13	24	EB	—	—	-	—	—	—	P	GVP BOOT APRON MIDDLE OF PANEL 130' FROM E. ANCHOR TRE
11/13	29/31	EB	—	—	-	-	—	—	P	PATCH 10' NORTH OF SEAM 23-31-29 DS 14
11/13	29/33	EB	—	—	-	-	—	—	P	PATCH 90' FROM E. ANCHOR TRENCH
11/13	29/31/33	EB	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/13	31/32/33	EB	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/13	31/32	EB	—	—	-	—	—	—	P	PATCH 260' FROM E ANCHOR TRENCH DS 16
11/13	33/34	EB	—	—	-	—	—	—	P	PATCH 50' FROM E. ANCHOR TRENCH DS 17
11/13	33/14/15	EB	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/13	33/32/35	EB	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/13	34/35/36	EB	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/13	32/36	EB	—	—	-	—	—	—	P	PATCH 35' FROM W. ANCHOR TRENCH
11/16	39/35	EB	—	—	-	—	—	—	P	PATCH 90' FROM E. ANCHOR TRENCH DS. 19
11/13	31	EB	—	—	-	—	—	—	P	GVP. Boot APRON CENTER OF PANEL 195' FROM W. ANCHOR TRENCH
11/14	39/36/34	MF	—	—	-	-	-	—	P	PATCH AT SEAM INTERSECTION
11/14	39/38/39	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/14	35/36/18	MF	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/14	36/37/38	MF	—	—	-	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11/14	39/40	MF	—	—	-	—	—	—	P	PATCH 10' FROM E. ANCHOR TRENCH
11/14	39/40	MF	—	—	-	—	—	—	P	PATCH 110' FROM E ANCHOR TRENCH

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville Ny PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VL TEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	-/-	START	END	P/F		
11-14	38/39/40	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-14	38/40/41	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-14	38/41	MF	—	—	—	—	—	—	P	PATCH 220' FROM E. ANCHOR TRENCH
11-14	38/41	MF	—	—	—	—	—	—	P	PATCH 265' FROM E. ANCHOR TRENCH
11-14	38/41	MF	—	—	—	—	—	—	P	PATCH 355' FROM E. ANCHOR TRENCH
11-16	38/41	MF	—	—	—	—	—	—	P	PATCH 100' FROM W. ANCHOR TRENCH DS20
11-16	37/38/41	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-16	37/38	MF	—	—	—	—	—	—	P	PATCH 10' NORTH OF 36/37/38 INTERSECTION DS18
11-16	40	MF	—	—	—	—	—	—	P	BOOT APRON 65' FROM E. ANCHOR TRENCH CENTER OF PANEL
11-16	40	MF	—	—	—	—	—	—	P	BOOT APRON 262' FROM E. ANCHOR TRENCH CENTER OF PANEL
11-17	40/43	MF	—	—	—	—	—	—	P	PATCH 195' FROM E. ANCHOR TRENCH DS21
11-17	40/41/43	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-17	41/42/43	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-17	43/44	MF	—	—	—	—	—	—	P	PATCH 20' FROM E ANCHOR TRENCH
11-17	42/43 44/45	MF	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION
11-25	42/45	MF	—	—	—	—	—	—	P	PATCH 125' FROM W ANCHOR TRENCH DS22
11-25	42/45	MF	—	—	—	—	—	—	P	PATCH 95' FROM W ANCHOR TRENCH
11-25	42/45	MF	—	—	—	—	—	—	P	PATCH 45' FROM W. ANCHOR TRENCH ? ALSO AT BETWEEN
11-25	42/45	MF	—	—		—	—	—	P	PATCH 55' FROM W ANCHOR TRENCH 3 PATCHES
11-15	49/51	MP	—	—	—	—	—	—	P	PATCH 90' FROM E ANCHOR TRENCH DS23
11-15	49/50/51	MP	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-15	49/50	MF	—	—	—	—	—	—	P	PATCH 180' FROM E ANCHOR TRENCH
11-15	49/49/50	MF	—	—	—	—	—	—	P	EXT. T-WELD AT SEAM INTERSECTION
11-15	49/48/49	MF	—	—	—	—	—	—	P	EXT. T-WELD AT SEAM INTERSECTION
11-15	49/48/47	MF	—	—	—	—	—	—	P	EXT. T-WELD AT SEAM INTERSECTION

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLTEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	AIR TESTING P/F	VBOX P/F	LOCATION / COMMENTS
11-15	44/47/48	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	45/46/47	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	45/46	MF	—	—	—	—	—	—	P	PATCH 110' FROM W. ANCHOR TRENCH DS24
11-25	50/51	MF	—	—	—	—	—	—	P	10' NORTH OF 49/50/51 INTERSECTION BOOT APRON
11-25	49/50	MF	—	—	—	—	—	—	P	BOOT APRON 15' NORTH OF 44/49/50 INTERSECTION
11-25	48/49	MF	—	—	—	—	—	—	P	BOOT APRON 15' NORTH OF 48/49/44 INTERSECTION
11-25	48/49	MF	—	—	—	—	—	—	P	PATCH 5' NORTH OF 44/48/49 INTERSECTION DS25
11-25	47	MF	—	—	—	—	—	—	P	BOOT APRON 16' WEST OF SEAM 47-48 CENTER OF PANEL
11-25	50/51/53	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	49/50/53	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	49/52/53	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	48/49/52	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	47/48/52	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	46/47/52	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	53/54	MF	—	—	—	—	—	—	P	PATCH 220' FROM E ANCHOR TRENCH DS26
11-25	52/53/54	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	52/53/54	MF	—	—	—	—	—	—	P	EXT T-WELD AT SEAM INTERSECTION
11-25	54/55	MF	—	—	—	—	—	—	P	PATCH 145' FROM E ANCHOR TRENCH DS27
11-25	54/55	MF	—	—	—	—	—	—	P	EXT WELD 180' FROM E ANCHOR TRENCH
11-25	55	MF	—	—	—	—	—	—	P	PATCH 200' FROM E ANCHOR TRENCH 4' FROM SEAM 54/55
11-25	54/55 63/64	MF	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION
11-25	55/56	MF	—	—	—	—	—	—	P	BOOT APRON 264' FROM E ANCHOR TRENCH & BOOT APRON VT BETWEEN PATCH
11-25	55	MF	—	—	—	—	—	—	P	PATCH 264' FROM E ANCHOR TRENCH 4' S OF SEAM 55-56
11-25	55/56	MF	—	—	—	—	—	—	P	PATCH 384' FROM E ANCHOR TRENCH DS28
11-25	56/57	MF	—	—	—	—	—	—	P	PATCH 170' FROM E. ANCHOR TRENCH

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VLTEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	TIME P/F	VBOX P/F	LOCATION / COMMENTS
11-25	57/58	MF	—	—	—	—	—	—	P	PATCH 85' From E. ANCHOR TRENCH DS29
11-25	57/58	MF	—	—	—	—	—	—	P	PATCH 185' FROM E. ANCHOR TRENCH
11-25	58/59	MF	—	—	—	—	—	—	P	PATCH 135' FROM E. ANCHOR TRENCH
11-25	58/59	MF	—	—	—	—	—	—	P	PATCH 235' FROM E. ANCHOR TRENCH
11-25	58/59	MF	—	—	—	—	—	—	P	PATCH 295" FROM E ANCHOR TRENCH DS 30
11-25	58/59	MF	—	—	—	—	—	—	P	PATCH 333' FROM E. ANCHOR TRENCH
11-25	59	MF	—	—	—	—	—	—	P	BOOT APRON 138' FROM E. ANCHOR TRENCH 10' FROM SEAM 58/
11-25	59	MF	—	—	—	—	—	—	P	BOOT APRON 235' FROM E. ANCHOR TRENCH 10' FROM SEAM 58/
11-25	59	MF	—	—	—	—	—	—	P	BOOT APRON 335' FROM E. ANCHOR TRENCH 10' FROM SEAM 58/
11-30	59/65	EB	—	—	—	—	—	—	P	PATCH 70' FROM E. ANCHOR TRENCH DS 31
11-25	59/65	MF	—	—	—	—	—	—	P	PATCH 138' FROM E. ANCHOR TRENCH
11-25	59/65	MF	—	—	—	—	—	—	P	PATCH 238' FROM E. ANCHOR TRENCH
11-25	59/65	MF	—	—	—	—	—	—	P	PATCH 334' FROM E ANCHOR TRENCH
11-25	65	MF	—	—	—	—	—	—	P	PATCH 30' FROM E. ANCHOR TRENCH CENTER OF PANEL
11-25	65	MF	—	—	—	—	—	—	P	PATCH 95' FROM E. ANCHOR TRENCH CENTER OF PANEL
11-25	65/66	MF	—	—	—	—	—	—	P	PATCH 30' FROM E. ANCHOR TRENCH
11-25	65/66	MF	—	—	—	—	—	—	P	PATCH 290' FROM E ANCHOR TRENCH
11-25	65/66	MF	—	—	—	—	—	—	P	PATCH 265' FROM E. ANCHOR TRENCH DS 32
11-25	65/66	MF	—	—	—	—	—	—	P	PATCH 355' FROM E ANCHOR TRENCH
11-25	66/67	MF	—	—	—	—	—	—	P	PATCH 205' FROM E ANCHOR TRENCH
11-25	66/67	MF	—	—	—	—	—	—	P	PATCH 260' FROM E ANCHOR TRENCH
11-25	66/67	MF	—	—	—	—	—	—	P	PATCH 295' FROM E ANCHOR TRENCH DS 33
11-30	67/68	MF	—	—	—	—	—	—	P	PATCH 65' FROM E. ANCHOR TRENCH DS 34
11-30	67/68	MF	—	—	—	—	—	—	P	PATCH 235' FROM E ANCHOR TRENCH
11-30	67/68	EB	—	—	—	—	—	—	P	PATCH 360' FROM E. ANCHOR TRENCH DS 35

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VA TEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
11-30	68/69	EB	—	—	-	—	—	—	P	PATCH 225' FROM E. ANCHOR TRENCH
11-30	68/69	EB	—	—	-	—	—	—	P	PATCH 205' FROM E. ANCHOR TRENCH DS36
11-30	69/70	EB	—	—	-	—	—	—	P	PATCH 65' FROM E. ANCHOR TRENCH DS37
11-30	69/70	EB	—	—	-	—	—	—	P	PATCH 195' FROM E. ANCHOR TRENCH
11-30	69/70	EB	—	—	-	—	—	—	P	PATCH 230' FROM E. ANCHOR TRENCH
11-30	69/70	EB	—	—	-	—	—	—	P	PATCH 370' FROM E. ANCHOR TRENCH DS38
12-3	70/71	EB	—	—	-	—	—	—	P	CAP STRIP WELDED 5'x100' CROSS SEAM AT 100' POINT
12-3	70/71	EB	—	—	-	—	—	—	P	115' FROM E. ANCHOR TRENCH EXT T-WELD (CAP STRIP WELD
12-3	70/71	EB	—	—	-	—	—	—	P	115' FROM E. ANCHOR TRENCH EXT T-WELD (CAP STRIP WELD
12-3	70/71	EB	—	—	-	—	—	—	P	PATCH 215' FROM E. ANCHOR TRENCH (OVER END OF CAP)
12-3	70/71	EB	—	—	-	-	—	—	P	PATCH 292' FROM E. ANCHOR TRENCH DS39
12-3	70/71	EB	—	—	-	—	—	—	P	PATCH 415' FROM E. ANCHOR TRENCH
12-3	71/72	EB	—	—	-	—	—	—	P	PATCH 225' FROM E. ANCHOR TRENCH
12-3	71/72	EB	—	—	-	—	—	—	P	PATCH 405' FROM E. ANCHOR TRENCH DS40
12-3	72	EB	—	—	-	—	—	—	P	BOOT APRON 130' FROM E. ANCHOR TRENCH CENTER OF PAN
12-3	72	EB	—	—	—	—	—	—	P	BOOT APRON 265' FROM E. ANCHOR TRENCH CENTER OF PANE
12-3	72/73	EB	—	—	-	—	—	—	P	PATCH 70' FROM E ANCHOR TRENCH DS41
12-3	72/73	EB	—	—	-	—	—	—	P	PATCH 270' FROM E. ANCHOR TRENCH
12-3	72/73	EB	—	—	-	—	—	—	P	PATCH 250' FROM E. ANCHOR TRENCH
12-3	72/73	EB	—	—	-	—	—	—	P	PATCH 350' FROM E. ANCHOR TRENCH
12-3	72/73	EB	—	—	-	—	—	—	P	PATCH 360' FROM E. ANCHOR TRENCH
12-3	73/74	EB	—	—	-	—	—	—	P	PATCH 95' FROM E. ANCHOR TRENCH DS43
12-3	73/74	EB	—	—	-	-	—	—	P	PATCH 270' FROM E. ANCHOR TRENCH
12-3	70/71	EB	—	—	—	—	—	—	P	PATCH 101' FROM E. ANCHOR TRENCH ON N. CAP SEAM

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLTEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
12-7	71	JM	—	—	—	—	—	—	P	BOOT APRON 3' FROM 71-81 TIE-IN
12-7	79/72	JM	—	—	—	—	—	—	P	WEDGE WELDED CAP OVER CROSS SEAM ALL SIDES VT
12-7	73/79/72	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION @ VT TO DS 42
12-7	74/72	JM	—	—	—	—	—	—	P	PATCH 280' FROM WEST CHANNEL DS 42
12-7	74/75/72	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION @ VT TO DS 42
12-7	75/76	JM	—	—	—	—	—	—	P	PATCH 140' FROM W. CHANNEL DS 45
12-7	75/76/77	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-7	75/77	JM	—	—	—	—	—	—	P	PATCH 50' FROM W. ANCHOR TRENCH DS 46
12-7	77/78/76	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION ON CAP E.S.OF
12-7	76/79/73	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION ON CAP W SIDE
12-7	76/79	JM	—	—	—	—	—	—	P	PATCH 220' FROM W. CHANNEL DS 48
12-7	76/79/78	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-7	76/78	JM	—	—	—	—	—	—	P	PATCH 105' FROM W. CHANNEL DS 47
12-7	76/77/78	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-7	76/79	JM	—	—	—	—	—	—	P	PATCH ON CAP BETWEEN SEAMS ON E. SIDE 5' N. OF 72-79-81 INTER DS 44
12-7	72/79/81	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION ON CAP E. SIDE
12-7	72/79/81	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION ON CAP W. SIDE
12-7	79/81	JM	—	—	—	—	—	—	P	PATCH 262' FROM W. CHANNEL DS 49
12-7	79/80/81	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-7	79/80	JM	—	—	—	—	—	—	P	BOOT APRON 180' FROM W CHANNEL
12-7	79/80	JM	—	—	—	—	—	—	P	PATCH 160' FROM W CHANNEL DS 50
12-7	78/79/80	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-7	79/80	JM	—	—	—	—	—	—	P	BOOT APRON 92' FROM W CHANNEL
12-7	78/80	JM	—	—	—	—	—	—	P	PATCH 52' FROM W. CHANNEL
12-7	81/72	JM	—	—	—	—	—	—	P	VT AC BETWEEN REPAIRS

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60 mil VLTEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	TIME P/F	VBOX P/F	LOCATION / COMMENTS	
12-7	78/80	JM	—	—	-	—	—	—	P	PATCH 30' FROM W. CHANNEL	DS51
12-7	71/72/81	JM	—	—	-	—	—	—	P	T-WELD AT SEAM INTERSECTION	
12-7	70/71 81/83	JM	—	—	-	—	—	—	P	PATCH AT SEAM INTERSECTION	
12-7	81/83	JM	—	—	-	-	—	—	P	PATCH 290' FROM W. CHANNEL	DS53
12-7	81/82/83	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION	
12-7	80/81/82	JM	—	—	-	-	—	—	P	T-WELD AT SEAM INTERSECTION	
12-7	80/82	JM	—	—	—	—	—	—	P	PATCH 150' FROM W. CHANNEL	DS52
12-7	69/70 83/84	JM	—	—	-	-	—	—	P	PATCH AT SEAM INTERSECTION	
12-7	82/83/84	JM	—	—	-	—	—	—	P	T-WELD AT SEAM INTERSECTION	
12-10	82/84	JM	—	—	-	—	—	—	P	PATCH 215' FROM W. CHANNEL	DS54
12-9	82/84	JM	—	—	-	—	—	—	P	PATCH 85' FROM W. CHANNEL	DS55
12-9	82/84	SR	—	—	-	—	—	—	P	EXT WELD 40' FROM W. CHANNEL	
12-9	84/85 69/68	SR	—	—	-	—	—	—	P	PATCH AT SEAM INTERSECTION	
12-9	84/85	SR	—	—	-	—	—	—	P	PATCH 250' FROM W. CHANNEL	DS57
12-10	84/85	SR	—	—	-	—	—	—	P	PATCH 125' FROM W CHANNEL	
12-10	84/85	SR	—	—	—	—	—	—	P	PATCH 110' FROM W CHANNEL	DS56
12-9	67/68 85/87	SR	—	—	-	—	—	—	P	PATCH AT SEAM INTERSECTION	
12-9	85/87	SR	—	—	—	—	—	—	P	PATCH 270' FROM W CHANNEL	DS58
12-10	85/87	SR	—	—	—	—	—	—	P	PATCH 125' FROM W CHANNEL	DS59
12-9	85/86/87	SR	—	—	-	—	—		P	T-WELD AT SEAM INTERSECTION	
12-9	86/88	SR	—	—	—	—	—	—	P	PATCH 60' FROM W CHANNEL	DS60
12-9	87/89 66/67	SR	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION	
12-9	87/88/89	SR	—	—	-	—	—	—	P	T-WELD AT SEAM INTERSECTION	
12-9	86/87/88	SR	—	—	-	—	—	—	P	T-WELD AT SEAM INTERSECTION	
12-9	87/88	SR	—	—	-	—	—	—	P	PATCH 180' FROM W. CHANNEL	DS61

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	P/F	/BOX P/F	LOCATION / COMMENTS
12-9	65/66 89/95	SR	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION
12-9	89/95	SR	—	—	-	—	—	—	P	PATCH 250' FROM WEST CHANNEL DS62
12-9	88/89/95	SR	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	88/95	SR	—	—	-	—	—	—	P	PATCH 150' FROM W. CHANNEL
12-9	88/94/95	SR	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	88/96	SR	—	—	—	—	—	—	P	PATCH 90' FROM W. CHANNEL DS63
12-9	88/99	SR	—	—	—	—	—	—	P	G&B 25' FROM W. CHANNEL
12-9	88/96/96	SR	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	96/97/88	SR	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	97/88/88	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION @ VT TO 98/99/88 T-WELD
12-9	98/99/88	SR	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION @ VT W. TO G&B
12-9	94/95/96	JM	—	—	-	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	99/96/97	SR	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	97/98/94	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION @ VT TO 98/99/94 T-WELD
12-9	98/99/94	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	94/96	JM	—	—	-	—	—	—	P	PATCH 70' FROM W. CHANNEL DS64
12-9	94/95	JM	—	—	-	—	—	—	P	PATCH 140' FROM W. CHANNEL
12-9	94/95 59/65	JM	—	—		—	—	—	P	PATCH AT SEAM INTERSECTION
12-9	94/95	JM	—	—		—	—	—	P	PATCH 235' FROM W. CHANNEL DS65
12-9	58/59	JM	—			—	—	—	P	15' CAP FROM 93/94/58/59 INTER. EASTWARD 15'
12-9	58/59	JM	—	-		—	—	—	P	PATCH 10' E OF 93/94/58/59 S. SIDE OF CAP DS74
12-9	58/59 93/94	JM	—		-	—	—	—	P	PATCH AT SEAM INTERSECTION
12-9	93/94	JM	—			—	—	—	P	BOOT APRON ON SEAM, 230' FROM W. CHANNEL
12-9	93/94	JM	—		—	—	—	—	P	PATCH 190' FROM W. CHANNEL
12-9	93/94	JM	—			-	—	—	P	PATCH 160' FROM W. CHANNEL DS66

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL TGX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE Δ	TIME START	TIME END	AIR TESTING P/F	VBOX P/F	LOCATION / COMMENTS
12-10	93/94	JM	—	—	—	—	—	—	P	PATCH 95' FROM W. CHANNEL
12-10	93/94	JM	—	—	—	—	—	—	P	PATCH 20' FROM W. CHANNEL
12-9	57/58 91/93	JM	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION
12-9	91/57	SR	—	—	—	—	—	—	P	PATCH 5' SOUTH OF 91/93/58/57 INTERSECTION @ 91 NORTH INTERSEC
12-9	91/93	JM	—	—	—	—	—	—	P	PATCH 190' FROM W. CHANNEL DS 68
12-9	91/93	JM	—	—	—	—	—	—	P	PATCH 145' FROM W. CHANNEL
12-9	91/92/93	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	92/93	JM	—	—	—	—	—	—	P	PATCH 35' FROM W CHANNEL DS 67
12-9	92/93	SR	—	—	—	—	—	—	P	PATCH 10' FROM W. CHANNEL
12-9	90/91 56/57	JM	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION
12-9	90/91/92	JM	—	—	—	—	—	—	P	T-WELD AT SEAM INTERSECTION
12-9	90/92	JM	—	—	—	—	—	—	P	PATCH 85' FROM W. CHANNEL DS 69
12-9	55/56 64/90	JM	—	—	—	—	—	—	P	PATCH AT SEAM INTERSECTION
12-9	64/90	JM	—	—	—	—	—	—	P	B&B 170' FROM W. CHANNEL
12-9	64/90	JM	—	—	—	—	—	—	P	PATCH 100' FROM W. CHANNEL DS 70
12-9	64/90	JM	—	—	—	—	—	—	P	PATCH 85' FROM W. CHANNEL
12-9	64/55	JM	—	—	—	—	—	—	P	PATCH CENTER OF CROSS SEAM DS 73
12-9	63/64	SR	—	—	—	—	—	—	P	PATCH 145' FROM W. CHANNEL DS 71
12-9	62/63	SR	—	—	—	—	—	—	P	PATCH 55' FROM W CHANNEL DS 72
12-10	52/63	JM	—	—	—	—	—	—	P	EXT FROM 52/54/63 INTER WEST
12-10	54/63	JM	—	—	—	—	—	—	P	CAP 110' FROM W. CHANNEL EASTWARD 76'
12-9	87/67	SR	—	—	—	—	—	—	P	CROSS SEAM 22' UT'D
12-9	99/59	SR	—	—	—	—	—	—	P	CROSS SEAM 22' UT'D
12-9	63/54	SR	—	—	—	—	—	—	P	CROSS SEAM 22' UT'D
12-9	89/66	SR	—	—	—	—	—	—	P	CROSS SEAM 22' VT'D

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLTEX

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
12-4	95/65	SR	—	—	—	—	—	—	P	CROSS SEAM 22' VT'D
12-9	91/93	SR	—	—	—	—	—	—	P	FROM SEAM 91/92/93 INTER E TO 1ST REPAIR
12-4	78/80	JM	—	—	—	—	—	—	P	VT FROM BOOT APRON E TO SEAM 78/79/80 INTERSECTION
12-9	64/55	SR	—	—	—	—	—	—	P	CROSS SEAM 22' VT'D
12-18	75/76	EB	—	—	—	—	—	—	P	PATCH 3' WEST OF DS #45
12-19	5/6	SR	—	—	—	—	—	—	P	BOOT APRON 243' FROM W. ANCHOR TRENCH
12-21	60	SR	—	—	—	—	—	—	P	PATCH 15' FROM S. ANCHOR TRENCH 5' FROM SEAM 60-C

CO-CON INC.

NON-DESTRUCTIVE TESTING FORM

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PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 ULT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING						VBOX P/F	LOCATION / COMMENTS
			PRESSURE			TIME				
			START	END	+/-	START	END	P/F		
5/14	51400	EM							PASS	EXT WELD
5/14	100-53	EM							PASS	EXT WELD
5/14	100-54	EM							PASS	EXT WELD
5/14	100-55	EM							PASS	EXT WELD
5/14	100-56	EM							PASS	EXT WELD
5/14	100-57	EM							PASS	EXT WELD
5/14	100-58	EM							PASS	EXT WELD
5/14	100-59	EM							PASS	EXT WELD
5/14	100-101	EM							PASS	EXT WELD
5/14	101-59	EM							PASS	EXT WELD
5/14	101-65	EM							PASS	EXT WELD
5/14	101-66	EM							PASS	EXT WELD
5/14	101-67	EM							PASS	EXT WELD
5/14	101-68	EM							PASS	EXT WELD
5/14	101-69	EM							PASS	EXT WELD
5/14	101-70	EM							PASS	EXT WELD
5/14	101-71	EM							PASS	EXT WELD
5/18	101-102	EM							PASS	EXT WELD
5/19	102-105	EM							PASS	EXT WELD
5/18	102-71	EM							PASS	EXT WELD
5/18	102-72	EM							PASS	EXT WELD
5/18	102-73	EM							PASS	EXT WELD
5/19	105-73	EM							PASS	EXT WELD
5/19	105-74	EM							PASS	EXT WELD
5/19	105-104	EM							PASS	EXT WELD

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	AIR TESTING TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
5/19	104-74	EM						PASS	EXT WELD
5/19	104-103	EM						PASS	EXT WELD
5/19	103-74	EM						PASS	EXT WELD
5/19	103-75	EM						PASS	EXT WELD
5/26	103-119	EM						PASS	EXT WELD
5/24	37-41	EM						PASS	EXT WELD
5/24	41-42	EM						PASS	EXT WELD
5/25	42-45	EM						PASS	EXT WELD
5/25	45-46	EM						PASS	EXT WELD
5/25	46-52	EM						PASS	EXT WELD
5/25	52-63	EM						PASS	EXT WELD
5/25	63-64	EM						PASS	EXT WELD
5/25	64-90	EM						PASS	EXT WELD
5/25	90-106	EM						PASS	EXT WELD
5/25	106-107	EM						PASS	FUSION WELD
5/25	107-108	EM						PASS	FUSION WELD
5/25	108-109	EM						PASS	FUSION WELD
5/25	109-110	EM						PASS	FUSION WELD
5/25	110-111	EM						PASS	FUSION WELD
5/25	111-112	EM						PASS	FUSION WELD
5/25	112-113	EM						PASS	FUSION WELD
5/25	113-114	EM						PASS	FUSION WELD
5/25	114-115	EM						PASS	FUSION WELD
5/25	115-116	EM						PASS	FUSION WELD
5/25	116-117	EM						PASS	FUSION WELD

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE _____ OF _____

PROJECT NAME: WILLSVILLE PROJECT NUMBER: P1 0129 MATERIAL DESCRIPTION: 6VLT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
5/25	117-118	EM						PASS	FUSION WELD
5/25	106-92	EM						PASS	EXT WELD
5/25	107-92	EM						PASS	EXT WELD
5/25	107-93	EM						PASS	EXT WELD
5/25	108-93	EM						PASS	EXT WELD
5/25	109-94	EM						PASS	EXT WELD
5/25	110-94	EM						PASS	EXT WELD
5/25	110-99	EM						PASS	EXT WELD
5/25	180-88	EM						PASS	EXT WELD
5/25	111-88	EM						PASS	EXT WELD
5/25	112-86	EM						PASS	EXT WELD
5/25	113-85	EM						PASS	EXT WELD
5/25	114-85	EM						PASS	EXT WELD
5/25	114-84	EM						PASS	EXT WELD
5/25	115-84	EM						PASS	EXT WELD
5/25	115-82	EM						PASS	EXT WELD
5/25	116-82	EM						PASS	EXT WELD
5/25	116-80	EM						PASS	EXT WELD
5/25	117-80	EM						PASS	EXT WELD
5/25	118-78	EM						PASS	EXT WELD
5/26	119-75	EM						PASS	EXT WELD
5/26	119-123	EM						PASS	FUSION WELD
5/26	123-122	EM						PASS	FUSION WELD
5/26	122-121	EM						PASS	FUSION WELD
5/26	121-120	EM						PASS	FUSION WELD

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE _____ OF _____

PROJECT NAME: WELLSVILLE PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
5/26	120-118	EM						PASS	FUSION WELD
5/26	120-77	EM						PASS	EXT WELD
5/26	121-75	EM						PASS	EXT. WELD
5/26	122-75	EM						PASS	EXT. WELD
5/26	123-75	EM						PASS	EXT. WELD

EO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME [illegible] PROJECT NUMBER [illegible] MATERIAL DESCRIPTION 20" VLT

DATE	WELD NO.	TESTED INITIAL	AIR TESTING PRESSURE START	AIR TESTING PRESSURE END	AIR TESTING TIME START	AIR TESTING TIME END	VISUAL PASS/FAIL	BOX CHECK	COMMENTS
5/14	53/54/100	EM					P		TORQUED
5/14	54/55/100	EM					P		"
5/14	55/56/100	EM					P		"
5/14	56/57/100	EM					P		"
5/14	57/58/100	EM					P		"
5/14	58/59/100	EM					P		"
5/14	59/60/101	EM					P		"
5/14	59/65/101	EM					P		"
5/14	65/66/101	EM					P		"
5/14	66/67/101	EM					P		"
5/14	67/68/101	EM					P		"
5/14	[illegible]	EM					P		"
5/14	[illegible]	EM					P		"
5/14	[illegible]	EM					P		"
5/19	[illegible]	EM					P		DS # 75 [illegible]
5/14	[illegible]	EM					P		TORQUED
5/18	[illegible]	EM					P		"
5/18	[illegible]	EM					P		"
5/19	[illegible]	EM					P		"
5/19	[illegible]	EM					P		"
5/19	[illegible]	EM					P		"
5/19	[illegible]	EM					P		"
5/19	[illegible]	EM					P		"
5/19	[illegible]	EM					P		DS # 76 [illegible]

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE ___ OF ___

PROJECT NAME: [illegible] PROJECT NUMBER: [illegible] MATERIAL DESCRIPTION: GM LINER

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	TIME START	TIME END	BOX OR PIT	LOCATION / COMMENTS
5/25	90/106	GH					P	HOT WELD
5/25	96/97/102	GH					P	"
5/25	92/100/107	GH					P	"
5/25	92/93/104	GH					P	"
5/25	93/107/108	GH					P	"
5/25	93/97/108/109	GH					P	"
5/25	94/99/109/110	GH					P	"
5/25	88/99/110/111	GH					P	"
5/25	86/88/111/112	GH					P	"
5/25	86/85/112/113	GH					P	"
5/25	84/85/113/114	GH					P	"
5/25	114/115/84	GH					P	"
5/25	82/84/115	GH					P	"
5/25	[illegible]	GH					P	"
5/25	[illegible]	GH					P	"
5/	[illegible]	GH						
5/	[illegible]	GH						
5/	[illegible]	GH						
5/	[illegible]	GH						
5/26	[illegible]	GH						
5/26	[illegible]	GH						
5/26	[illegible]	GH						
5/26	[illegible]	GH						
[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]						

ECO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE _____ OF _____

PROJECT NAME _____ PROJECT NUMBER _____ MATERIAL DESCRIPTION _____

DATE	SEAM NO	TEST INITIAL	AIR TEST START	AIR TEST END	PRESSURE START	PRESSURE END	TIME START	TIME END	BOX	PSI	SECTION COMMENTS
5/26	123/T	EM									CAP FOR BOX #78 CENTER OF CELL
5/26	T-119	EM									CAP FOR BOX #77 15' FROM OUTER ANCHOR TRENCH
5/26	119	EM								P	T-WELD AT ANCHOR TRENCH 110' WEST OF 119-103
5/26	119	EM								P	T-WELD AT ANCHOR TRENCH 120' WEST OF 119-103
5/26	119	EM								P	T-WELD AT ANCHOR TRENCH 195' WEST OF 119-103
5/26	119	EM								P	T-WELD AT ANCHOR TRENCH 115' WEST OF 119-103

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PAGE 1 OF ___

PROJECT NAME: Wellsville 11 PROJECT NUMBER: P1-0125 MATERIAL DESCRIPTION: 60mil VLP

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
10-24	1/2	EB	30	30	0	9:25	9:30	P	—	CROSS SEAM 22'
10-24	1/3	EB	30	30	0	9:56	10:01	P	—	FROM E ANCHOR TRENCH TO SEAM 1-2-3 I
10-24	2/3	EB	30	30	0	9:10	9:15	P	—	FROM 1-2-3 INTER. WEST TO BOOT APRON
10-24	2/3	EB	30	30	0	9:56	9:01	P	—	FROM BOOT #1 APRON TO BOOT #2 APRON
10-24	2/3	EB	30	30	0	8:43	8:48	P	—	FROM BOOT #2 APRON TO BOOT #3 APRON
10-24	2/3	EB	30	30	0	8:23	8:38	P	—	FROM BOOT #3 TO SEAM 2-3-25 INTER.
10-24	3/4	EB	30	30	0	10:25	10:30	P	—	FULL SEAM FROM TOP E. ANCHOR TRENCH TO W. A TR
N/A	3/4	EB	N/A	N/A						
10-24	4/5	EB	30	30	0	10:39	10:44	P	—	FROM TOP E. CHANNEL TO 1ST REPAIR
10-24	4/5	EB	30	30	0	10:47	10:52	P	—	FROM 1ST REPAIR WEST TO PATCH DS #2
10-24	4/5	EB	30	30	0	11:07	11:13	P	—	FROM PATCH DS #2 WEST TO 3RD REPAIR
10-24	4/5	EB	30	30	0	11:25	11:30	P	—	FROM 3rd REPAIR WEST TO W. ANCHOR TR
10-24	5/6	EB	30	30	0	11:58	12:03	P	—	FROM TOP E. CHANNEL WEST TO 1ST REPAIR
10-24	5/6	EB	30	29	-1	12:15	12:20	P	—	FROM 1ST REPAIR WEST TO 2ND REPAIR
10-24	5/6	EB	30	30	0	1:25	1:30	P	—	FROM 2ND REPAIR WEST TO 3RD REPAIR
10-24	5/6	EB	30	30	0	1:36	1:41	P	—	FROM 3RD REPAIR WEST TO 4TH REPAIR
10-24	5/6	EB	30	28	-2	1:50	1:55	P	—	FROM 4TH REPAIR WEST TO DS #3
10-24	5/6	EB	30	30	0	2:06	2:11	P	—	FROM DS #3 TO ANCHOR TRENCH
10-24	6/7	EB	30	30	0	2:36	2:41	P	—	FROM TOP E. CHANNEL WEST TO SEAM 6-7-8 INT
10-24	6/8	EB	30	30	0	2:21	2:26	P	—	FROM SEAM 6-7-8 INTER WEST TO ANCHOR T
10-24	7/8	EB	30	30	0	2:27	2:32	P	—	CROSS SEAM
10-24	7/9	EB	30	30	0	3:12	3:17	P	—	FULL SEAM FROM TOP E. ANCHOR TRENCH TO W. AN TRE
10-24	7/9	EB	N/A	N/A						
10-24	8/9	EB	30	28	-2	3:25	3:30	P	—	FROM SEAM 7-8-9 INTER WEST TO ANCHOR TR
10-24	9/10	EB	30	28	-2	3:41	3:46	P	—	FULL SEAM TOP E. CHANNEL TO W. ANCHOR TREN

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: 91-029 MATERIAL DESCRIPTION: 60 mil VLT

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION/ COMMENTS
N/A	9/10	N/A	N/A							
10-24	10/1.	EB	30	30	0	427	4:32	P	—	From top E channel west to 1st repair
10-24	10/11	EB	30	30	0	4:43	4:48	P	—	From 1st repair west to 2nd repair
10-24	10/11	EB	30	29	-1	4:54	4:59	P	—	From 2nd repair west to W anchor trench
10-27	11/12	EB	30	30	0	2:58	3:03	P	—	From top of E channel west to 2nd repair
10-27	11/12	EB	30	30	0	3:15	3:20	P	—	From 2nd repair west to DS # 6
10-27	11/12	EB	30	30	0	3:22	3:27	P	—	From DS #6 west to W. anchor trench
N/A	11/12	EB	N/A		N/A					
10-27	12/14	EB	30	29	-1	2:13	2:18	P	—	From W. trench E. to 1st repair
10-27	12/14	EB	30	29	-1	2:22	2:27	P	—	From 1st repair E. to seam 12-13-14
10-27	12/13	EB	30	29	-1	2:39	2:44	P	—	From seam 12-13-14 E. to top edge of E cha
10-27	14/16	EB	30	30	0	2:51	2:56	P	—	From seam 14-15-16 inter. to west trench
10-27	13/14	EB	30	30	0	2:59	3:04	P	—	Cross seam
10-27	14/15	EB	30	28	-2	3:10	3:15	P	—	From seam 14-15-16 E. to seam 13-14-15 inter.
10-27	15/15	EB	30	30	0	3:17	3:22	P	—	From top edge E. channel W. to seam 15-14-15 int
10-27	16/17	EB	30	30	0	3:27	3:32	P	—	From west trench to 1st repair
10-27	16/17	EB	30	30	0	3:37	3:42	P	—	From 1st repair E. to seam 15-16-17
10-27	15/17	EB	30	30	0	3:45	3:50	P	—	From seam 15-16-17 E. to 1st repair
10-27	15/17	EB	30	29	-1	3:51	3:56	P	—	From 1st repair E. to 2nd repair
10-27	15/12	EB	30	30	0	3:57	4:22	P	—	From 2nd repair E. to top edge of E. channe
10-27	17/18	EB	30	30	0	4:25	4:30	P	—	Full seam from top edge of E. channel W. to
11-10	18/60	EB	30	30	0	2:07	2:12	P		From W. channel to 1st repair
11-10	18/60	EB	30	30	0	2:15	2:20	P		From 1st repair E. to 2nd repair
11-10	18/60	EB	30	29	-1	2:21	2:26	P		From 2nd repair E. to seam 18-60-61 int
10-27	15/16	EB	30	29	-1	9:31	9:36	P	—	Cross seam

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-029 MATERIAL DESCRIPTION: 60 mil II

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBCX P/F	LOCATION / COMMENTS
11-10	3/62	EB	30	30	0	2:30	2:35	P	—	From E. ANCHOR TRENCH W. TO SEAM 6-1-62-18
11-10	60/61	EB	30	29	-1	2:35	2:40	P	—	From S. TRENCH N. TO SEAM 18-61-60 INTER.
11-10	61/62	EB	30	30	0	2:41	2:46	P	—	From S. TRENCH N. TO SEAM 18-61-62 INTER
11-10	18/61	EB	30	30	0	2:47	2:52	P	—	From SEAM 18-61-62 INTER W. TO SEAM 18-61-60 I.
N/A	N/A	EB	N/A							
11-5	1/19	EB	30	29	-1	2:19	2:24	P	—	From SEAM 1-2-19 E. TO E. ANCHOR TRENCH
11-5	2/19	EB	30	30	0	2:20	2:25	P	—	from SEAM 1-2-19 W. TO SEAM 2-19-26 INTER
11-5	19/20	EB	30	30	0	2:59	3:04	P	—	From E. ANCHOR TRENCH W. TO 19-20-27 INTE
N/A	19/20	EB	N/A							
11-5	20/21	EB	30	30	0	3:08	3:14	P	—	From E. ANCHOR TRENCH W. TO 20-21-27-28 I
11-5	21/22	EB	30	28	-2	3:16	3:21	P	—	From E. TRENCH W. TO SEAM 21-22-29 INTER
N/A	21/22	EB	N/A							
N/A	21/22	EB	N/A							
11-5	22/23	EB	30	29	-1	3:29	3:25	P	—	From E. TRENCH WEST TO SEAM 22-23-30 IN
N/A	22/23	EB	N/A							
N/A	22/23	EB	N/A							
11-13	23/24	EB	30	30	0	7:42	7:47	P	—	From E. TRENCH W. TO 1ST REPAIR
11-13	23/24	EB	30	30	0	7:47	7:52	P	—	FROM 1ST REPAIR W. TO 2ND REPAIR
11-13	23/29	EB	30	29	-1	7:53	7:58	P	—	FROM 2ND REPAIR W. TO SEAM 23-29-31 IN
11-13	23/31	EB	30	29	-1	7:59	8:04	P	—	From SEAM 23-29-31 INTER WEST TO 1ST REPAIR
11-13	23/31	EB	30	30	0	8:06	8:11	P	—	From 1ST REPAIR WEST TO 2ND REPAIR
11-13	23/31	EB	30	30	0	8:13	8:18	P	—	From 2ND REPAIR WEST TO SEAM 30-31-23 IN
11-13	29/31	EB	30	30	0	8:42	8:47	P	—	Cross SEAM
11-5	2/26	EB	—	—	-	—	—	—	PASS	From SEAM 2-19-26 INTER W. TO SEAM 2-25-26 IN
11-5	2/25	EB	30	29	-1	3:31	3:36	P	—	CROSS SEAM

GEO-CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville Ny PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL Tc

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
11-5	3/25	EB	30	29	-1	3:37	3:42	P	—	FROM W. TRENCH E. TO SEAM 3-2-25 INTER
11-5	25/26	EB	30	30	0	3:42	3:47	P	—	FROM W TRENCH E. TO SEAM 2-25-26 INTER
11-5	26/19	EB	30	30	0	3:48	3:53	P	—	CROSS SEAM
11-5	26/27	EB	30	30	0	3:59	3:59	P	—	FROM W. TRENCH E. TO SEAM 26-27-19 INTER
11-5	27/20	EB	30	30	0	901	9:06	P	—	CROSS SEAM
11-5	27/28	EB	30	29	-1	9:07	9:12	P	—	FROM W. TRENCH E. TO SEAM 20-21-27-28 INTER
11-5	20/21	EB	30	30	0	9:17	9:22	P	—	CROSS SEAM
11-5	28/29	EB	30	28	-2	9:22	9:27	P	—	FROM W. TRENCH E. TO 1ST REPAIR
11-5	29/29	EB	30	30	0	9:29	9:34	P	—	FROM 1ST REPAIR E. TO SEAM 21-28-29 INTER
N/A	29/21	N/A	~							
11-5	29/21	EB	—	—	—	—	—	—	P	FROM SEAM 28-29-21 E. TO 1ST REPAIR
11-5	29/21	EB	—	—	—	—	—	—	P	FROM 1ST REPAIR E. TO SEAM 21-22-29 INTE
11-5	29/22	EB	30	30	0	9:39	9:44	P	—	CROSS SEAM
11-5	29/30	EB	30	29	-1	9:48	9:53	P	—	FROM W. TRENCH E. TO SEAM 22-29-30 INTER.
11-5	30/22	EB	—	—	—	—	—	—	P	FROM REPAIR TO REPAIR (WHOLE SEAM)
11-13	30/23	EB	30	29	-1	8:26	8:31	P	—	CROSS SEAM
11-13	30/31	EB	30	30	0	8:20	8:25	P	—	FROM SEAM 30-31-23 INTER. W. TO TRENCH
11-13	29/33	EB	30	28	-2	8:50	8:55	P	—	FROM E. TRENCH WEST TO SEAM 31-33-29 IN
N/A	29/33	EB	NA	~						
11-13	31/33	EB	30	29	-1	8:56	9:01	P	—	FROM SEAM 31-29-33 WEST TO SEAM 31-32-33 INTE
11-13	31/32	EB	30	30	0	8:58	9:03	P	—	FROM SEAM 31-32-33 INTER W. TO W. TRENCH
N/A	31/32	EB	N/A	~						
11-13	32/33	EB	30	30	0	9:05	9:10	P	—	CROSS SEAM
11-13	33/34	EB	30	29	-1	9:06	9:11	P	—	FROM E. TRENCH W. TO SEAM 33-34-35 INTE
N/A	33/34	EB	N/A	~						

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
11-13	33/35	EB	30	29	-1	9:13	9:18	P	—	FROM SEAM 39-33-35 W. TO SEAM 32-33-35 INTER
11-13	32/35	EB	30	30	0	9:20	9:25	P	—	FROM SEAM 32-33-35 W. TO SEAM 32-35-36 INTER
11-13	32/36	EB	30	28	-2	9:27	9:32	P	—	FROM SEAM 32-35-36 W. TO TRENCH
N/A	32/32	EB	N/A							
11-13	39/35	EB	30	30	0	9:22	9:27	P	—	CROSS SEAM
11-13	35/36	EB	30	30	0	9:28	9:33	P	—	CROSS SEAM
11-13	34/29	EB	30	29	-1	9:36	9:41	P	—	FROM E. TRENCH WEST TO SEAM 39-39-35 INTE
11-13	35/39	EB	30	30	0	9:38	9:43	P	—	FROM SEAM 39-35-39 WEST TO SEAM 35-38-39 INTE
N/A	—	EB	N/A							
11-13	35/38	EB	30	30	0	9:43	9:48	P	—	FROM SEAM 35-38-39 W. TO SEAM 35-36-38 I
11-13	36/38	EB	30	30	0	9:50	9:55	P	—	FROM SEAM 35-36-38 W. TO SEAM 36-37-38 INTE
11-13	36/37	EB	30	29	-1	9:57	10:02	P	—	FROM SEAM 36-37-38 WEST TO TRENCH
11-13	38/39	EB	30	30	0	10:03	10:08	P	—	CROSS SEAM
11-13	37/38	EB	30	30	0			P	—	CROSS SEAM
N/A	37/38	EB	N/A							
11-13	39/90	EB	30	30	0	10:06	10:11	P	—	FROM EAST CHANGE WEST TO SEAM 35-38-39 I
N/A	39/90	EB	N/A							
11-13	38/40	EB	30	29	-1	10:15	10:20	P	—	FROM SEAM 38-39-90 WEST TO SEAM 38-90-91
11-13	38/41	EB	30	28	-2	10:16	10:21	P	—	FROM SEAM 38-90-91 WEST TO SEAM 37-38-91 INTE
N/A	38/41	EB	N/A							
N/A	38/41	EB	N/A							
N/A	38/91	EB	N/A							
N/A	39/41	EB	N/A							
11-13	37/41	EB	30	29	-1	10:22	10:27	P	—	FROM SEAM 37-38-91 INTER WEST TO TRENCH
11-13	90/93	EB	30	30	0	10:31	10:36	P	—	FROM SEAM 90-91-93 INTER. E. TO TRENCH

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville #4 PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60 mil V/C T

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE Δ	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
N/A	93/93	N/A								
11-13	91/93	EB	30	30	0	10:38	10:43	P	—	FROM SEAM 90-91-93 W. TO SEAM 91-92-93 INTER.
11-13	91/92	EB	30	30	0	10:47	10:52	P	—	FROM SEAM 91-92-93 W. TO TRENCH
11-13	92/93	EB	30	29	-1	10:53	10:58	P	—	CROSS SEAM
11-13	93/94	EB	30	29	-1	11:01	11:06	P	—	FROM 93-94-95 INTER E. TO CHANNEL
11-13	92/95	EB	30	30	0	11:08	11:12	P	—	FROM SEAM 93-92-95 W. TO TRENCH
N/A	92/95	EB	N/A							
N/A	92/95	EB	N/A							
N/A	92/95	EB	N/A							
11-13	99/51	EB	30	29	-1	11:15	11:20	P	—	FROM SEAM 99-50-51 E. TO E. CHANNEL
N/A	99/51	EB	N/A							
11-13	99/50	EB	30	30	0	11:24	11:29	P	—	FROM SEAM 99-90-51 INTER WEST TO SEAM 99-50-9
11-13	99/97	EB	—	—	—	—	—	—	P	FROM SEAM 99-98-97 TO SEAM 99-95-97 INTER.
11-13	99/99	EB	30	30	0	11:30	11:35	P	—	FROM SEAM 99-50-99 WEST TO SEAM 99-98-99 INTE
11-13	99/98	EB	30	30	0	11:37	11:42	P	—	FROM SEAM 99-98-99 WEST TO SEAM 99-97-98 INTER
11-13	95/97	EB	30	30	0	11:43	11:48	P	—	FROM SEAM 99-95-97 WEST TO SEAM 95-96-97 INTE
N/A	99/98	N/A								
11-13	95/96	EB	30	30	0	11:49	11:54	P	—	FROM SEAM 95-96-97 WEST TO TRENCH
N/A	95/96	EB	N/A							
11-13	96/97	EB	30	30	0	12:20	12:25	P	—	CROSS SEAM
11-13	97/98	EB	30	30	0	12:27	12:32	P	—	CROSS SEAM
11-22	98/99	MF	—	—	—	—	—	—	P	FROM SEAM 99-98-99 NORTH TO SEAM 98-99-52 INT. /INCLUDING BOOT AR
N/A	98/99	EB	N/A							
11-22	99/50	MF	—	—	—	—	—	—	P	FROM SEAM 99-99-50 NORTH TO 99-50-98 INCLUDING BOOT
N/A	99/50	EB	N/A							

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville Mt PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VLTE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	AIR P/F	VBOX P/F	LOCATION / COMMENTS
11-22	50/51	MF	—	—	—	—	—	—	P	FROM SEAM 44-50-51 N. TO SEAM 50-51-53 INCLUDING Root MIRON
N/A	50/51	N/A	~	~	~	~	~	~	~	~
11-20	51/53	EB	30	30	0	8:24	8:29	P	—	FROM SEAM 50-51-53 INTER. E. TO CHANNEL
11-20	50/53	EB	31	31	0	8:31	8:36	P	—	FROM SEAM 50-51-53 W. TO 49-50-53 INTER.
11-20	49/53	EB	30	30	0	8:37	8:42	P	—	FROM SEAM 49-50-53 W. TO SEAM 49-52-53 INTER.
11-20	49/52	EB	30	29	-1	8:45	8:50	P	—	FROM SEAM 49-52-53 W. TO SEAM 48-49-52
11-20	48/52	EB	30	30	0	8:51	856	P	—	FROM SEAM 48-49-52 W. TO SEAM 47-48-52
11-20	47/52	EB	30	30	0	9:01	9:06	P	—	FROM SEAM 47-48-52 W. TO SEAM 46-47-52 INTER.
11-20	46/52	EB	31	30	-1	9:07	9:12	P	—	FROM SEAM 46-47-52 W. TO TRENCH
11-20	52/53	EB	30	30	0	9:15	9:20	P	—	CROSS SEAM
11-20	53/54	EB	30	30	0	9:22	9:27	P	—	FROM SEAM 52-53-54 E. TO CHANNEL
N/A	53/54	N/A	~	~	~	~	~	~	~	~
11-20	52/54	EB	30	29	-1	9:30	9:35	P	—	FROM SEAM 52-53-54 W. TO SEAM 52-54-63 II
12-8	52/63	EB	31	30	-1	2:02	2:07	P	—	FROM END OF CAP STRIP W. TO END OF SEAM
12-9	54/63	SR	—	—	—	—	—	—	P	CROSS SEAM
11-20	54/55	EB	30	29	-1	9:36	9:41	P	—	FROM BEGINNING OF SEAM ON W. TO END OF SEAM
N/A	54/55	N/A	~	~	~	~	~	~	~	~
N/A	54/55	N/A	~	~	~	~	~	~	~	~
12-8	63/64	EB	31	30	-1	2:08	2:13	P	—	FROM 54/55/63/64 INTER W. TO END OF SEAM
12-9	55/64	SR	—	—	—	—	—	—	P	CROSS SEAM UTID
11-20	55/56	EB	30	30	0	9:45	9:50	P	—	FROM BEGINNING OF SEAM ON W. TO END OF SEAM E
N/A	55/56	N/A	~	~	~	~	~	~	~	~
N/A	55/56	N/A	~	~	~	~	~	~	~	~
11-20	56/57	EB	30	30	0	9:51	9:56	P	—	FROM BEGINNING OF SEAM ON W. TO END OF SEAM
N/A	56/57	N/A	~	~	~	~	~	~	~	~

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville Ny PROJECT NUMBER: D1-0129 MATERIAL DESCRIPTION: 60 mil VL

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
11-20	57/58	EB	31	30	-1	9:58	10:03	P	—	FROM BEGIN. OF SEAM ON W. TO END OF SEAM
N/A	57/58	N/A	~	~	~	~	~	~	~	~
N/A	57/58	N/A	~	~	~	~	~	~	~	~
11-30	58/59	EB	30	29	-1	8:27	8:32	P	—	FROM BEGIN OF SEAM ON W. 200' TO REPAIR #2
11-30	58/59	EB	30	30	0	8:33	8:38	P	—	FROM REPAIR #2 MIDDLE E. TO CHANNEL
N/A	58/59	N/A	~	~	~	~	~	~	~	~
N/A	58/59	N/A	~	~	~	~	~	~	~	~
N/A	58/59	N/A	~	~	~	~	~	~	~	~
11-30	59/65	EB	30	30	0	8:40	8:45	P	—	FROM W. END OF SEAM E. TO 1ST G.V.P.
11-30	59/65	EB	30	29	-1	8:47	8:52	P	—	FROM 1ST G.V.P. TO 2ND G.V.P.
11-30	59/65	EB	30	30	0	8:55	9:00	P	—	FROM 2ND G.V.P. TO 3RD G.V.P
11-30	59/65	EB	30	30	0	9:02	9:07	P	—	FROM 3RD GVP TO E. CHANNEL
N/A	59/65	N/A	~	~	~	~	~	~	~	~
11-30	65/66	EB	31	30	-1	9:08	9:13	P	—	FROM W. BEGINNING OF SEAM E. 190' TO REPAIR
11-30	65/66	EB	30	30	0	9:14	9:19	P	—	FROM W. 190' (REPAIR) E. TO CHANNEL
N/A	65/66	N/A	~	~	~	~	~	~	~	~
N/A	65/66	N/A	~	~	~	~	~	~	~	~
N/A	65/66	N/A	~	~	~	~	~	~	~	~
11-30	66/67	EB	30	30	0	9:37	9:42	P	—	FROM E. CHANNEL W. 190' TO 1ST REPAIR
11-30	66/67	EB	30	30	0	9:24	9:29	P	—	FROM E. 190' W. 60' TO 2ND REPAIR
11-30	66/67	EB	30	29	-1	9:30	9:35	P	—	FROM 2ND REPAIR W. TO END OF SEAM
N/A	66/67	N/A	~	~	~	~	~	~	~	~
11-30	67/68	EB	32	32	0	9:46	9:51	P	—	FROM E. CHANNEL W. 200' TO REPAIR
11-30	67/68	EB	30	30	0	9:52	9:57	P	—	FROM 200' REPAIR W. TO END OF SEAM
N/A	67/68	N/A	~	~	~	~	~	~	~	~

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville Ny PROJECT NUMBER: P1-0125 MATERIAL DESCRIPTION: 60 mil V/L

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE Δ	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
N/A	67/68	N/A	~	~	~	~	~	~	~	~
11-30	68/69	EB	31	30	-1	9:58	10:03	P	—	FROM E. CHANNEL WEST 210' TO REPAIR
11-30	68/69	EB	31	30	-1	10:04	10:09	P	—	FROM 210' REPAIR WEST TO END OF SEAM
N/A	68/69	NA	~	~	~	~	~	~	~	~
11-30	69/70	EB	30	30	0	10:11	10:16	P	—	FROM E. CHANNEL WEST 180 TO 1ST REPAIR
11-30	69/70	EB	30	29	-1	10:18	10:23	P	—	FROM 180' WEST 35' TO 2ND REPAIR
11-30	69/70	EB	30	30	0	10:25	10:30	P	—	FROM 2ND REPAIR WEST TO END OF SEAM
N/A	69/70	N/A	~	~	~	~	~	~	~	~
N/A	69/70	N/A	~	~	~	~	~	~	~	~
12-2	70/71 SE	EB	31	31	0	H08	11:13	P	—	FROM E. CHANNEL WEST TO CROSS SEAM ON CA
12-2	70/71 NE	EB	31	31	0	11:16	11:21	P	—	FROM REPAIR TO CROSS SEAM ON CAP
12-2	70/71 SW	EB	30	30	0	10:25	10:30	P	—	FROM CROSS SEAM WEST TO PATCH AT W. END O
12-2	70/71 NW	EB	30	30	0	10:32	10:37	P	—	FROM CROSS SEAM WEST TO PATCH AT W. END OF
12-2	70/71 NE	EB	30	29	-1	10:38	10:43	P	—	FROM E.CHANNEL TO REPAIR
12-1	70/71	EB	30	29	-1	8:55	9:00	P	—	FROM W. END OF CAP TO W. END OF SEAM
N/A	70/71	N/A	~	~	~	~	~	~	~	~
12-1	71/72	EB	30	30	0	10:14	10:19	P	—	FROM E. CHANNEL W. 210' TO 1ST REPAIR
12-1	71/72	EB	35	35	0	10:21	10:26	P	—	FROM 1ST REPAIR W. TO END OF SEAM
N/A	71/72	N/A	~	~	~	~	~	~	~	~
12-1	72/73	EB	30	30	0	10:38	10:38	P	—	FROM E. CHANNEL W. 240' TO 1ST REPAIR
12-1	72/73	EB	30	30	0	10:40	10:45	P	—	FROM 1ST REPAIR W. 20' TO 2ND REPAIR
12-1	72/73	EB	30	30	0	10:47	10:52	P	—	FROM 2ND REPAIR W. 80' TO 3RD REPAIR
12-1	72/73	EB	31	30	-1	10:28	10:33	P	—	FROM *4TH REPAIR W. TO END OF SEAM
12-3	72/73	EB	—	—	—	—	—	—	PASS	70' WEST TO 3RD & 4TH REPAIR V.T. BETWEEN
N/A	72/73	N/A	~	~	~	~	~	~	~	~

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Wellsville Ny PROJECT NUMBER: 01-0129 MATERIAL DESCRIPTION: 60 mil VL

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	+/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
12-1	73/74	EB	30	30	0	10:35	10:40	P	—	FROM E. CHANNEL W. 260' TO 1ST REPAIR
12-1	73/74	EB	30	30	0	10:43	10:48	P	—	FROM W. 260' REPAIR W. TO END OF SEAM
	SEAM RETESTED AFTER REPAIRS COMPLETE									
12-1	58/59	EB	30	30	0	2:30	2:35	P	—	FROM E. CHANNEL WEST 120' TO 1ST REPAIR
12-1	58/59	EB	30	30	0	2:40	2:45	P	—	FROM 1ST REPAIR WEST 100' TO 2ND REPAIR
12-1	58/59	EB	30	30	0	3:09	3:14	P	—	FROM 2ND REPAIR WEST 53' TO DS #30
12-1	58/59	EB	30	30	0	3:25	3:30	P	—	FROM DS #30 WEST 40' TO 4TH REPAIR
12-1	58/59	EB	30	30	0	3:33	3:38	P	—	FROM 4TH REPAIR WEST TO END OF SEAM
	SEAM RETESTED AFTER REPAIRS COMPLETE									
12-4	77/76	EB	30	30	0	11:02	11:07	P	—	CROSS SEAM
12-2	75/76	EB	30	30	0	2:23	2:28	P	—	FROM 75/76/77 INTER E. TO 74/75/76 INTER
12-2	75/77	EB	35	35	0	2:17	2:12	P	—	FROM 75/76/77 INTER W. TO END OF SEAM
12-2	76/77	EB	30	30	0	2:29	2:34	P	—	CROSS SEAM
12-2	77/78	EB	35	34	-1	2:35	2:40	P	—	FROM 76/77/78 INTER W. TO END OF SEAM
12-2	76/78	EB	30	30	0	2:41	2:46	P	—	FROM 76/77/78 INTER E. TO 76/78/79 INTER
12-2	78/79	EB	30	30	0	2:53	2:58	P	—	CROSS SEAM
12-2	76/79	EB	30	30	0	2:47	2:52	P	—	FROM 76/78/79 INTER E. TO 77/73/76/79 INTER
12-2	78/80	EB	30	29	-1	3:05	3:10	P	—	FROM SEAM 78/79/80 INTER W. 60' TO 1ST REPAIR
12-2	78/80	EB	30	30	0	3:11	3:16	P	—	FROM W. 60' REPAIR W. TO END OF SEAM
12-2	79/80	EB	30	30	0	3:31	3:36	P	—	FROM 78/79/80 INTER E. 80' TO 1ST REPAIR
12-2	79/80	EB	30	30	0	3:50	3:55	P	—	FROM E. 80' REPAIR E. TO 79/80/81 INTER
12-2	79/81	EB	30	30	0	4:02	4:07	P	—	FROM 79/80/81 E. TO 79/72/81 INTER
12-2	80/81	EB	30	30	0	3:56	4:01	P	—	CROSS SEAM

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: WELLSVILLE UT PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil ULTEY

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	TIME P/F	VBOX P/F	LOCATION / COMMENTS
12-4	80/82	EB	30	30	0	8:31	8:36	P	—	From 80/81/82 INTER W. TO END OF SEAM
12-4	81/82	EB	30	30	0	8:19	8:24	P	—	From 81/82/83 INTER W. TO 80/81/82 INTER
12-4	81/83	EB	30	30	0	8:12	8:17	P	—	From 81/82/83 INTER E. TO 81/83/71/70 INTER.
12-4	82/83	EB	31	30	-1	8:25	8:30	P	—	CROSS SEAM
12-4	82/84	EB	30	30	0	8:37	8:42	P	—	From 82/83/84 WEST TO END OF SEAM
N/A	82/84	EB	N/A					P		
12-4	83/84	EB	30	30	0	8:43	8:48	P	—	From 82/83/84 INTER E. TO 83/84/70/69 INTER
12-4	71/81	EB	30	30	0	10:50	10:55	P	—	CROSS SEAM
12-4	70/83	SR	—	—	—	—	—	—	P	CROSS SEAM
12-4	69/84	EB	30	30	0	10:32	10:37	P	—	CROSS SEAM
12-4	74/75	EB	30	29	-1	11:09	11:14	P	—	CROSS SEAM
12-4	84/85	EB	30	30	0	8:49	8:54	P	—	From 84/85/68/69/ INTER W. 175' TO REPAIR
12-4	84/85	EB	30	30	0	8:55	9:00	P	—	FROM W. 175' REPAIR W. TO END OF SEAM
12-4	85/68	EB	30	30	0	10:20	10:25	P	—	CROSS SEAM
12-8	85/86	EB	30	30	0	10:30	10:35	P	—	From 85/86/87 INTER. W. TO END OF SEAM
12-8	85/87	EB	30	30	0	10:36	10:41	P	—	From 85/86/87 INTER. E. TO 85/87/67/68 INTER.
12-9	87/67	SL	—	—	—	—	—	—	P	CROSS SEAM
12-8	86/88	EB	30	29	-1	10:48	10:53	P	—	From 86/87/88 INTER. W. TO END OF SEAM
12-8	86/87	EB	30	30	0	10:55	11:00	P	—	CROSS SEAM
12-8	87/88	EB	30	29	-1	11:02	11:07	P	—	From 86/87/88 INTER. E. TO 87/88/89
12-8	87/89	EB	31	30	-1	11:10	11:15	P	—	From 87/88/89 INTER. E. TO 87/89/66/67 INTER
12-8	89/66	SR	—	—	—	—	—	—	P	CROSS SEAM
12-8	88/89	EB	30	30	0	11:19	11:24	P	—	CROSS SEAM
12-8	88/99	EB	30	30	0	11:25	11:30	P	—	From 88/98/99 INTER W. TO END OF SEAM
12-9	88/98	JM	—	—	—	—	—	—	P	SEAM VT'D

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: A-0129 MATERIAL DESCRIPTION: 60 MIL VLPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
12-8	88/97	EB	30	29	-1	11:37	11:42	P	—	FROM 88/97/98 INTER E. TO 96/97/98 INTER.
12-8	88/96	EB	31	30	-1	11:43	11:48	P	—	FROM 96/97/88 INTER E. TO 95/96/88 INTER
12-8	88/95	EB	32	32	0	12:50	12:55	P	—	FROM 95/96/88 INTER E. TO 95/88/89 INTER
12-8	89/95	EB	30	30	0	1:00	1:05	P	—	FROM 95/88/89 INTER E. TO 65/66/89/95 INTER
12-9	95/65	SL	—	—	—	—	—	—	P	CROSS SEAM
12-8	99/98	EB	30	30	0	1:07	1:12	P	—	CROSS SEAM
12-8	98/97	EB	31	30	-1	1:13	1:18	P	—	CROSS SEAM
12-8	96/97	EB	30	30	0	1:18	1:23	P	—	CROSS SEAM
12-8	95/96	EB	32	31	-1	1:24	1:29	P	—	CROSS SEAM
12-8	95/94	EB	30	30	0	1:30	1:35	P	—	FROM 94/65/94/95 INTER W. TO REPAIR
12-8	95/94	EB	32	32	0	1:35	1:40	P	—	FROM REPAIR W. TO 94/95/96 INTER
12-8	94/99	EB	30	30	0	1:55	1:59	P	—	FROM 94/99/98 INTER W. TO END OF SEAM
12-9	99/98	JM	—	—	—	—	—	—	P	SEAM VT'D
12-8	94/97	EB	33	32	-1	1:47	1:52	P	—	FROM 94/96/97 INTER W. TO 94/97/98 INTER
12-8	94/96	EB	30	30	0	1:42	1:47	P	—	FROM 94/95/96 INTER W. TO 94/96/97 INTER
12-9	94/59	SL	—	—	—	—	—	—	P	CROSS SEAM VT'D
12-8	94/93	EB	30	30	0	3:41	3:46	P	—	FROM 3rd REPAIR W. TO END OF SEAM
12-8	94/93	EB	30	30	0	3:33	3:38	P	—	FROM W. 100' 2ND REPAIR W. 75' TO 3rd REPAIR
12-8	94/93	EB	30	29	-1	3:26	3:31	P	—	FROM 90' W. REPAIR W. 100' TO 2ND REPAIR
12-8	94/93	EB	31	30	-1	3:21	3:26	P	—	FROM 58/59/93/94 INTER W. 90' TO REPAIR
12-8	93/58	EB	30	30	0	3:16	3:21	P	—	CROSS SEAM
12-8	92/93	EB	30	30	0	3:10	3:15	P	—	FROM 91/92/93 INTER W. TO END OF SEAM
12-8	91/92	EB	30	29	-1	3:03	3:08	P	—	CROSS SEAM
12-8	91/93	EB	33	33	0	2:57	3:02	P	—	FROM 57/58/91/93 INTER WEST TO 91/92/93 INTER
12-8	91/57	EB	30	29	-1	2:51	2:56	P	—	CROSS SEAM FROM 56/57/90/91 INTER N. TO REPAIR

GEO·CON INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: [illegible] PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL HDPE

DATE/ TIME	SEAM NO.	TESTER INITIAL	AIR TESTING PRESSURE START	PRESSURE END	PRESSURE +/-	TIME START	TIME END	P/F	VBOX P/F	LOCATION / COMMENTS
12-8	92/90	EB	32	32	0	2:45	2:50	P	—	FROM 90/91/92 INTER WEST TO END OF SEAM
12-8	90/91	EB	30	29	-1	2:39	2:44	P	—	FROM 56/57/90/91 INTER WEST TO 90/91/92 INTER
12-8	90/56	EB	32	31	-1	2:28	2:33	P	—	CROSS SEAM
12-8	90/64	EB	30	30	0	2:15	2:20	P	—	FROM 65/90/64/90 WEST 110' TO REPAIR
12-8	90/64	EB	30	29	-1	2:21	2:26	P	—	FROM W. 110' REPAIR W. TO END OF SEAM
12-19	99/100	SL	30	30	0	11:00	11:05	P	—	FULL SEAM FROM END TO END

GEO-CON INC.
GEOTECHNICAL CONTRACTING

DESTRUCTIVE TEST LOG

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PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL TEX

DATE	SAMPLE I.D.	SEAM NO.	MACH NO.	OPER. INITIALS	PEEL VALUES LBS. / INCH	PASS / FAIL	DATE TO LAB PKG. SUP NO.	LAB PASS / FAIL	LOCATION / COMMENTS
10-22	1	3/4	37	S.R.	92-95 / 94-93 ← Peel Shear → 99-100	PASS	10-27	PASS	CELA
10-22	2	4/5	37	S R.	96-94 / 94-100 ← Peel Shear → 102-101	"	10-27	"	CELA
10-23	3	5/6	37	S R	93-94 / 96-92 ← Peel Shear → 101-104	"	10-27	"	CELA
10-23	4	7/9	37	S R	89-97 / 96-95 ← Peel Shear → 105-100	"	10-27	"	CELA
10-23	5	9/10	37	S R	93-96 / 99-94 ← Peel Shear → 107-102	"	10-27	"	CELA
10-26	6	11/12	37	S R	96-94 / 100-101 ← Peel Shear → 105-108	"	10-27	"	CELA
10-26	7	14/16	37	S R	94-96 / 98-92 ← Peel Shear → 100-103	"	10-27	"	CELA
10-26	8	16/17	37	S R	96-90 / 92-94 ← Peel Shear → 101-106	"	10-27	"	CELA
10-28	9	A/20	37	S R	101-110 / 99-105 ← PEEL SHEAR → 102-118	PASS	11-13	PASS	CELA
10-28	10	20/21	37	S R	110-108 / 107-117 ← PEEL SHEAR → 111-122	PASS	11-13	PASS	CELA
10-28	11	21/22	37	S R	100-112 / 101-108 ← PEEL SHEAR → 130-114	PASS	11-13	PASS	CELA
10-29	12	28/29	37	DM	105-117 / 119-112 ← PEEL SHEAR → 124-117	PASS	11-13	PASS	CELA
10-28	13	22/23	37	S R	97-102 / 89-95 ← PEEL SHEAR → 123-117	PASS	11-13	PASS	CELA
10-30	14	29/31	37	S R	112-96 / 101-104 ← PEEL SHEAR → 120-119	PASS	11-13	PASS	CELA
10-30	15	29/30	37	J M	106-99 / 97-118 ← PEEL SHEAR → 119-122	PASS	11-13	PASS	CELA
10-30	16	31/32	37	S R	112-120 / 121-108 ← PEEL SHEAR → 107-121	PASS	11-13	PASS	CELA
10-30	17	30/31	37	J M	97-102 / 112-92 ← PEEL SHEAR → 99-110	PASS	11-13	PASS	CELA
11-3	18	37/38	37	S R	106-80 / 113-112 ← PEEL SHEAR → 108-112	PASS	11-16	PASS	CELA
11-3	19	39/39	37	S R	120-108 / 118-114 ← PEEL SHEAR → 112-119	PASS	11-16	PASS	CELA
11-3	20	41/38	107	J M	117-120 / 108-106 ← PEEL SHEAR → 118-120	PASS	11-16	PASS	CELA
11-4	21	43/40	37	S R	102-108 / 95-114 ← PEEL SHEAR → 124-116	PASS	11-16	PASS	CELA
11-5	22	42/45	501	S R	85-81 / 90-87 ← PEEL SHEAR → 91-77	PASS	11-22	PASS	CELA
11-9	23	49/51	37	S R	108-121 / 108-115 ← PEEL SHEAR → 118-120	PASS	11-16	PASS	CELA
11-9	24	46/45	37	S R	75-75 / 71-78 ← PEEL SHEAR → 77-81	PASS	11-22	PASS	CELA
11-9	25	48/49	37	S R	95-95 / 86-85 ← PEEL SHEAR → 77-81	PASS	11-22	PASS	CELA
11-9	26	53/54	501	E B	90-78 / 95-93 ← PEEL SHEAR → 95-91	PASS	11-22	PASS	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

DESTRUCTIVE TEST LOG

PROJECT NAME: Hellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLOPE TEX

DATE	SAMPLE I.D.	SEAM NO.	MACH NO.	OPER INITIALS	PEEL VALUES LBS. / INCH	PASS / FAIL	DATE TO LAB PKG. SLIP NO.	LAB PASS / FAIL	LOCATION / COMMENTS
11-19	27	54/55	107	SR	96-99 87-89 ← PEEL SHEAR → 89-87	PASS	11-22	PASS	CELA
11-19	28	55/56	501	EB	87-79 89-84 ← PEEL SHEAR → 99-92	Pass	11-22	Pass	CELA
11-20	29	56/57	107	SR	77-83 85-87 ← PEEL SHEAR → 82-82	Pass	11-22	Pass	CELA
11-20	30	58/59	107	SR	81-91 83-90 ← PEEL SHEAR → 93-97	Pass	11-22	Pass	CELA
11-22	31	59/65	501	EM	91-84 87-95 ← PEEL SHEAR → 101-99	Pass	11-30	Pass	CELA
11-22	32	65/66	37	SR	95-87 84-88 ← PEEL SHEAR → 112-113	Pass	11-30	Pass	CELA
11-24	33	66/67	107	EM	96-92 90-88 ← PEEL SHEAR → 110-121	Pass	11-30	Pass	CELA
11-24	34	67/68	501	SR	75-77 77-89 ← PEEL SHEAR → 108-104	Pass	11-30	Pass	CELA
11-24	35	67/68	501	SR	92-95 101-99 ← PEEL SHEAR → 111-102	Pass	11-30	Pass	CELA
11-24	36	68/69	107	EM	89-92 82-86 ← PEEL SHEAR → 98-104	Pass	11-30	Pass	CELA
11-24	37	69/70	501	SR	102-94 89-85 ← PEEL SHEAR → 89-92	Pass	11-30	Pass	CELA
11-24	38	69/70	501	SR	96-92 101-95 ← PEEL SHEAR → 97-92	Pass	11-30	Pass	CELA
11-30	39	70/71	107	SR	93-96 94-99 ← PEEL SHEAR → 102-93	Pass	12-1	Pass	CELA
11-30	40	71/72	37	MM	87-93 77-83 ← PEEL SHEAR → 114-107	Pass	12-1	Pass	CELA
11-30	41	72/73	107	SR	90-82 79-86 ← PEEL SHEAR → 99-92	Pass	12-1	Pass	CELA
12-1	42	76/74	505	MF	96-85 89-92 ← PEEL SHEAR → 86-89	Pass	12-1	Pass	CELA
11-30	43	73/70	37	MM	87-92 85-82 ← PEEL SHEAR → 105-101	Pass	12-1	Pass	CELA
12-2	44	72/79	505	MF	79-75 74-77 ← PEEL SHEAR → 81-84	Pass	12-7	Pass	CELA
12-2	45	75/76	505	MF	87-81 76-78 ← PEEL SHEAR → 90-89	Pass	12-7	Pass	CELA
12-2	46	75/77	505	MF	82-87 80-84 ← PEEL SHEAR → 91-94	Pass	12-7	Pass	CELA
12-2	47	76/78	505	MF	73-74 75-86 ← PEEL SHEAR → 89-92	Pass	12-7	Pass	CELA
12-2	48	76/79	505	MF	84-80 [illegible] ← PEEL SHEAR → 85-90	Pass	12-7	Pass	CELA
12-2	49	81/77	505	MF	75-78 81-76 ← PEEL SHEAR → 92-93	Pass	12-7	Pass	CELA
12-2	50	80/79	505	MF	71-72 [illegible] ← PEEL SHEAR → 87-90	Pass	12-7	Pass	CELA
12-2	51	80/78	505	MF	72-75 81-78 ← PEEL SHEAR → 85-88	Pass	12-7	Pass	CELA
12-2	52	80/82	505	MF	91-84 89-75 ← PEEL SHEAR → 97-90	Pass	12-7	Pass	CELA

GEO-CON INC.
GEOTECHNICAL CONTRACTING

DESTRUCTIVE TEST LOG

PROJECT NAME: Wellsville, NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLOAF TEX

DATE	SAMPLE I.D.	SEAM NO.	MACH NO.	OPER INITIALS	PEEL VALUES LBS. / INCH	PASS / FAIL	DATE TO LAB PKG. SLIP NO.	LAB PASS / FAIL	LOCATION / COMMENTS
12-2	53	81/83	505	MF	87-85 / 79-80 ← PEEL SHEAR → 88-90	Pass	12-7	Pass	CELA
12-3	54	82/84	107	SR	105-112 / 109-101 ← PEEL SHEAR → 108 110	PASS	12-9		
12-3	55	82/84	107	SR	101-99 / 98-94 ← PEEL SHEAR → 109-101	Pass	12-9		
12-3	56	84/85	505	MF	81-80 / 87-85 ← PEEL SHEAR → 97-99	Pass	12-9		
12-3	57	84/85	505	MF	84-87 / 91-89 ← PEEL SHEAR → 101-105	Pass	12-9		
12-4	58	85/87	107	SR	93-100 / 90-95 ← PEEL SHEAR → 100-102	Pass	12-9		
12-4	59	85/87	107	SL	105-94 / 99-92 ← PEEL SHEAR → 109-107	Pass	12-9		
12-4	60	86/88	107	SR	99-95 / 100-98 ← PEEL SHEAR → 100-97	Pass	12-9		
12-9	61	87/88	107	SR	92-89 / 89-87 ← PEEL SHEAR → 99-97	Pass	12-9		
12-7	62	89/95	35	MF	92-84 / 89-86 ← PEEL SHEAR → 97-98	Pass	12-9		
12-7	63	88/96	35	MF	87-89 / 84-90 ← PEEL SHEAR → 100-97	Pass	12-9		
12-7	64	97/94	35	MF	84-90 / 81-85 ← PEEL SHEAR → 99-96	Pass	12-9		
12-7	65	95/94	35	MF	81-85 / 86-84 ← PEEL SHEAR → 98-92	Pass	12-9		
12-4	66	94/93	35	MF	94-91 / 95-90 ← PEEL SHEAR → 100-97	Pass	12-9		
12-4	67	93/92	35	MF	90-91 / 92-88 ← PEEL SHEAR → 97-95	Pass	12-5		
12-4	68	93/91	505	MM	93-84 / 87-83 ← PEEL SHEAR → 91-94	Pass	12-9		
12-4	69	92/90	505	MM	87-86 / 84-88 ← PEEL SHEAR → 90-94	Pass	12-9		
12-4	70	90/84	107	JM	79-78 / 80-79 ← PEEL SHEAR → 87-85	Pass	12-9		
11-21	71	85/83	107	SR	81-81 / 85-85 ← PEEL SHEAR → 90-89	Pass	12-9		
11-21	72	83/82	107	SR	80-84 / 79-80 ← PEEL SHEAR → 89-88	Pass	12-9		
11-21	73	69/55	107	SR	92-90 / 89-90 ← PEEL SHEAR → 99-95	Pass	12-9		
12-8	74 X	58/59	13	SR	77 / 76 ← PEEL SHEAR → 90-102	Pass	12-9		
	- = EXTRUSION WELD				ALL OTHERS FUSION				

GEO·CON® INC.
GEOTECHNICAL CONTRACTING

DESTRUCTIVE TEST LOG

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PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

DATE	SAMPLE I.D.	SEAM NO.	MACH NO.	OPER INITIALS	PEEL VALUES LBS. / INCH			PASS / FAIL	DATE TO LAB PKG. SUP NO.	LAB PASS / FAIL	LOCATION / COMMENTS
5/14	75	101-70	014	JA	105 101	← PEEL SHEAR →	120 115	Pass	5-13	Pass	
5/19	76	103-74	10	JA	100 99	← PEEL SHEAR →	119 123	Pass	5-13	Pass	
5/26	77	123-123	505	MF	90-87 92-90	← PEEL SHEAR →	117 120	Pass	5-27	Pass	
5/26	78	123-75	10	EM	81-84	← PEEL SHEAR →	115 118	Pass	5-27	Pass	

GEO·CON® INC.

REPAIR REPORT

PAGE 1 OF

PROJECT NAME: Wellsville NY PROJECT NUMBER: 01-0129 MATERIAL DESCRIPTION:

ELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
1/2/3	—	10-27	MM	007	10-27	J.N.	Pass	PATCH AT SEAM 1/2/3 INTERSECTION 74' FROM EAST ANCHOR TRENCH
2/3	—	10-27	MM	007	10-27	J.N.	Pass	BOOT APRON G.V.P. 192' FROM EAST ANCHOR TRENCH
2/3	—	10-27	MM	007	10-27	J.N	Pass	BOOT APRON G.V.P. 201' FROM EAST ANCHOR TRENCH
2/3	—	10-27	MM	007	10-27	J.N	Pass	BOOT APRON G.V.P. 240' FROM EAST ANCHOR TRENCH
2/3/25	—	11-14	MM	007	11-14	EB	Pass	EXTRUSION T-WELD AT SEAM INTERSEC
3/4	—	10-27	MM	007	10-27	J.N.	Pass	PATCH 99' FROM EAST ANCHOR TRENCH
3/4	—	11-8	JA	007	11-8	EB	Pass	EXTRUSION WELD FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TREN
4/5	—	11-8	JA	007	11-8	EB	Pass	EXTRUSION FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TRENCH
4/5	—	10-27	MM	007	10-27	JN	Pass	EXTRUSION WELD 62' FROM EAST ANCHOR TRENCH
4/5	—	10-27	MM	007	10-27	J.N.	Pass	PATCH 184' FROM EAST ANCHOR TRENCH
4/5	—	10-27	MM	007	10-27	JN	Pass	EXTRUSION WELD 225' FROM EAST ANCHOR TRENCH
5/6	—	11-8	JA	007	11-8	EB	Pass	EXTRUSION WELD FROM INSIDE EDGE E. CHANNEL TO OUTER ANCHOR TRENCH
5/6	—	10-27	MM	007	10-27	J.N	Pass	BOOT APRON UTILITY POLE 243' FR WEST ANCHOR TRENCH
5/6	—	10-27	MM	007	10-27	JN	Pass	EXT. WELD 199' FROM WEST ANCHOR TREN
5/6	—	10-27	MM	007	10-27	JN	Pass	PATCH 126' FROM WEST ANCHOR TRENC
5/6	—	10-27	MM	007	10-27	JN	Pass	PATCH 91' FROM WEST ANCHOR TRE

GEO·CON INC.

REPAIR REPORT

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PROJECT NAME: ____ PROJECT NUMBER: ____ MATERIAL DESCRIPTION: ____

ELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
5/6	—	10-27	MM	007	10-27	JN	PASS	PATCH 53' FROM WEST ANCHOR TRENCH DS3
6/7	—	11-8	JA	007	11-8	EB	PASS	PATCH AT ANCHOR TRENCH
6/7	—	11-8	JA	007	11-8	EB	PASS	EXT WELD AT INSIDE EDGE OF E CHANNEL.
6/7/8	—	10-27	MM	007	10-27	JN	PASS	EXT T-WELD AT SEAM INTERSECTION
7/9	—	11-8	JA	007	11-8	EB	PASS	EXT WELD FROM TOP OF INSIDE EDGE OF CHANNEL TO EAST ANCHOR TRE
7/9	—	10-27	MM	007	10-27	JN	PASS	PATCH 72' FROM EAST ANCHOR TRENCH
7/8/9	—	10-27	MM	007	10-27	JN	PASS	EXT T-WELD AT SEAM INTERSECTION
9/10	—	10-27	MM	007	10-27	JN	PASS	PATCH 100' FROM EAST ANCHOR TRENCH DS
9/10	—	11-8	JA	007	11-8	EB	PASS	EXT WELD FROM INSIDE EDGE OF CHANNEL TO E. ANCHOR TRENCH
10/11	—	11-8	JA	007	11-8	EB	PASS	EXT WELD FROM INSIDE EDGE OF E. CHANNEL TO OUTER ANCHOR TRENCH
10/11	—	10-27	MM	007	10-27	JN	PASS	EXTRUSION WELD 194' FROM EAST TRE
10/11	—	10-27	DM	14	10-27	JN	PASS	BOOT APRON 235' FROM EAST ANCHOR TRENCH
11/12	—	11-8	JM	14	11-8	EB	PASS	EXT WELD FROM INSIDE EDGE of E CHANNEL TO ANCHOR TRENCH
11/12	—	10-27	MM	007	10-27	JN	PASS	PATCH 90' FROM EAST ANCHOR TRENCH
11/12	—	10-27	DM	14	10-27	JN	PASS	BOOT APRON 187' FROM WEST ANCHOR TRENCH
11/12	—	10-27	MM	007	10-27	JN	PASS	PATCH 100' FROM WEST ANCHOR TRENCH DS

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: [illegible] PROJECT NUMBER: [illegible] MATERIAL DESCRIPTION: [illegible]

FIELD TAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
12/3	—	11-8	JM	14	11-8	EB	Pass	EXT WELD FROM INSIDE EDGE OF E CHANNEL TO OUTER ANCHOR TRENCH
12/13/14	—	10-27	MM	007	10-27	JN	Pass	EXT T-WELD AT SEAM INTERSECTION
12/14	—	10-27	MM	007	10-27	JN	Pass	PATCH 65' FROM WEST ANCHOR TRENCH
13/14/15	—	10-27	MM	007	10-27	JN	Pass	EXT T-WELD AT SEAM INTERSECTION
14/15/16	—	10-27	MM	007	10-27	JN	Pass	EXT T-WELD AT SEAM INTERSECTION
13/15	—	11-8	JM	14	11-8	EB	Pass	EXT WELD FROM BOTTOM (MIDDLE) OF E CHANNEL TO OUTER ANCHOR TRENCH.
14/16	—	10-27	MM	007	10-27	JN	Pass	PATCH 35' FROM EAST ANCHOR TRENCH DS
15/17	—	11-8	JM	14	11-8	EB	Pass	EXT. WELD FROM INSIDE EDGE OF E CHANNEL TO OUTER ANCHOR TRENCH
15/17	—	10-27	MM	007	10-27	JN	Pass	PATCH 105' FROM E. ANCHOR TRENCH
15/17	—	10-27	MM	007	10-27	JN	Pass	EXT WELD 190' FROM E. ANCHOR TRENCH
15/16/17	—	10-27	MM	007	10-27	JN	Pass	EXT T-WELD AT SEAM INTERSECTION
16/17	—	10-27	MM	007	10-27	JN	Pass	PATCH 34' FROM EAST ANCHOR TRENCH DS
16/17	—	10-27	MM	007	10-27	JN	Pass	PATCH 15' FROM EAST ANCHOR TRENCH
17/18	—	11-8	JM	14	11-8	EB	Pass	EXT WELD FROM INSIDE EDGE OF E CHANNEL TO OUTER ANCHOR TRENCH

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: Williams Hy PROJECT NUMBER: [illegible] MATERIAL DESCRIPTION: [illegible]

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
19/61/62	—	11-10	MR	14	11-10	EB	PASS	EXT PATCH AT SEAM INTERSECTION
19/60/61	—	11-10	MR	14	11-10	EB	PASS	EXT PATCH AT SEAM INTERSECTION
3/60	—	11-10	MR	14	11-10	EB	PASS	PATCH 100' FROM EAST ANCHOR TRENCH
18/60	—	11-10	MR	14	11-10	EB	PASS	PATCH 150' FROM EAST ANCHOR TREN
1/2/19	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION
2/19	—	11-12	SR	007	11-13	EB	PASS	PATCH 95' FROM WEST ANCHOR TREN
2/18/26	—	11-12	SR	007	11-13	EB	PASS	PATCH AT SEAM INTERSECTION
2/26/25	—	11-12	SR	007	11-13	EB	PASS	PATCH AT SEAM INTERSECTION
19/20	—	11-12	SR	007	11-13	EB	PASS	PATCH 75' FROM EAST ANCHOR TRENCH DS
19/20/27	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION
26/27/19	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION
20/21	—	11-12	SR	007	11-13	EB	PASS	PATCH 60' FROM WEST ANCHOR TRENCH DS1
27/28 20/21	—	11-12	SR	007	11-13	EB	PASS	PATCH AT SEAM INTERSECTION
21/22	—	11-12	SR	007	11-13	EB	PASS	PATCH 150' FROM EAST ANCHOR TRENCH DS
21/22	—	11-12	SR	007	11-13	EB	PASS	PATCH 270' FROM EAST ANCHOR TRE
21/22/29	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION

GEO-CON INC.

REPAIR REPORT

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PROJECT NAME: Wellsville Ly PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 mil VL TE

WELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
21/29	—	11-12	SR	007	11-13	EB	PASS	PATCH 70' FROM WEST ANCHOR TRENCH
21/29/29	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION
28/29	—	11-12	SR	007	11-13	EB	PASS	PATCH 50' FROM WEST ANCHOR TRENCH
28/29	—	11-12	SR	007	11-13	EB	PASS	PATCH 45' FRM WEST ANCHOR TRENCH DS
28/29	—	11-12	SR	007	11-13	EB	PASS	PATCH 30' FRM WEST ANCHOR TRENCH
22/23	—	11-12	SR	007	11-13	EB	PASS	PATCH 150' FROM EAST ANCHOR TRENCH DS
22/23	—	11-12	SR	007	11-13	EB	PASS	PATCH 230' FROM EAST ANCHOR TRENCH
22/23/30	—	11-12	SR	007	11-13	EB	PASS	PATCH AT SEAM INTERSECTION
22/30/29	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION
29/30	—	11-12	SR	007	11-13	EB	PASS	PATCH 60' FROM WEST ANCHOR TRENCH DS
—	29	11-12	DM	14	11-13	EB	PASS	Boot APRON 75' FROM W. ANCHOR TRENCH 5' FROM SEAM 22-29 5' FRM SEAM 29-30
—	23	11-12	DM	14	11-13	EB	PASS	Boot APRON 50' FROM EAST ANCHOR TREN CENTER of PANEL
23/29	—	11-12	SR	007	11-13	EB	PASS	PATCH 55' FROM E. ANCHOR TRENCH
23/29	—	11-12	SR	007	11-13	EB	PASS	PATCH 130' FROM E. ANCHOR TRENCH
23/29/31	—	11-12	SR	007	11-13	EB	PASS	EXT T-WELD AT SEAM INTERSECTION
23/31	—	11-12	SR	007	11-13	EB	PASS	PATCH 235' FROM E. ANCHOR TRENC

GEO-CON INC.

REPAIR REPORT

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PROJECT NAME: Wellsville Ky PROJECT NUMBER: P-0129 MATERIAL DESCRIPTION: 60 mil VL

WELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
23/31	—	11-13	MM	14	11-13	EB	Pass	PATCH 200' FROM W. ANCHOR TRENCH
23/30/31	—	11-13	MM	14	11-13	EB	Pass	EXT T-WELD AT SEAM INTERSECTION
—	24	11-12	DM	14	11-13	EB	Pass	GVP BOOT APRON MIDDLE OF PANEL 130' FROM E. ANCHOR TRENCH
—	31	11-12	DM	14	11-13	EB	Pass	GVP BOOT APRON MIDDLE OF PANEL 300' FROM W. ANCHOR TRENCH
—	31	11-12	DM	14	11-13	EB	Pass	GVP BOOT APRON MIDDLE OF PANEL 195' FROM W ANCHOR TRENCH
29/31	—	11-12	SR	007	11-13	EB	Pass	PATCH 10' NORTH OF SEAM 23/31/29 DS
29/33	—	11-13	MM	14	11-13	EB	Pass	PATCH 90' FROM E. ANCHOR TRENCH
24/31/33	—	11-13	MM	14	11-13	EB	Pass	EXT. T-WELD AT SEAM INTERSECTION
31/32/33	—	11-13	MM	14	11-13	EB	Pass	EXT T-WELD AT SEAM INTERSECTION
31/32	—	11-12	SR	007	11-13	EB	Pass	PATCH 260' FROM E. ANCHOR TRENCH DS
33/34	—	11-12	SR	007	11-13	EB	Pass	PATCH 50' FROM E. ANCHOR TRENCH DS
33/34/35	—	11-13	MM	14	11-13	EB	Pass	EXT T-WELD AT SEAM INTERSECTION
33/34/35	—	11-13	MM	14	11-13	EB	Pass	EXT T-WELD AT SEAM INTERSECTI
32/35/36	—	11-13	MM	14	11-13	EB	Pass	EXT T-WELD AT SEAM INTERSECTION
32/36	—	11-13	MM	14	11-13	EB	Pass	PATCH 35' FROM W. ANCHOR TREN
34/39	—	11-16	DM	14	11-16	EB	Pass	PATCH 90' FROM E ANCHOR TRENCH DS

GEO·CON INC.

REPAIR REPORT

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PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0123 MATERIAL DESCRIPTION: 60mil VLTEX

IELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PIF	LOCATION / COMMENTS
34/35/39	—	11-14	SR	007	11-14	MF	PASS	PATCH AT SEAM INTERSECTION
35/38/39	—	11-14	SR	007	11-14	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
35/34/38	—	11-14	MM	14	11-14	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
26/37/38	—	11-14	MM	14	11-14	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
39/40	—	11-14	SR	007	11-14	MF	PASS	PATCH 10' FROM E. ANCHOR TRENCH
39/40	—	11-14	SR	007	11-14	MF	PASS	PATCH 110' FROM E. ANCHOR TRENCH
38/39/40	—	11-14	MM	14	11-14	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
38/40/41	—	11-14	MM	14	11-14	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
38/41	—	11-14	MM	14	11-14	MF	PASS	PATCH 220' FROM E ANCHOR TRENCH
38/41	—	11-14	MM	14	11-14	MF	PASS	PATCH 265' FROM E. ANCHOR TRENCH
38/41	-	11-14	MM	14	11-14	MF	PASS	PATCH 355' FROM E. ANCHOR TRENCH
38/41	—	11-16	JM	007	11-16	MF	PASS	PATCH 102' FROM W. ANCHOR TRENCH DS
37/38/41	—	11-16	JM	007	11-16	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
37/38	-	11-16	JM	007	11-16	MF	PASS	PATCH 10' NORTH OF 36/37/38 INTERSECTION DS
—	40	11-16	JM	007	11-16	MF	PASS	BOOT APRON 65' FROM E ANCHOR TRENCH CENTER OF PANEL
—	40	11-16	JM	007	11-16	MF	PASS	BOOT APRON 262' FROM E. ANCHOR TRE CENTER OF PANEL.

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: Wellsville Ny PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VL TE

ELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PIF	LOCATION / COMMENTS
40/43	—	11-16	JM	007	11-17	MF	PASS	PATCH 195' FROM E. ANCHOR TRENCH DS
40/41/43	—	11-16	JM	007	11-17	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
41/42/43	—	11-16	JM	007	11-17	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
43/44	—	11-16	JM	007	11-17	MF	PASS	PATCH 20' FROM E. ANCHOR TRENCH
42/43 44/45	—	11-16	JM	007	11-17	MF	PASS	PATCH AT SEAM INTERSECTION
42/45	—	11-22	JM	14	11-25	MF	PASS	PATCH 125' FROM W. ANCHOR TRENCH
42/45	—	11-22	EM	007	11-25	MF	PASS	PATCH 95' FROM W. ANCHOR TRENCH
42/45	—	11-22	EM	007	11-25	MF	PASS	PATCH 45' FROM W. ANCHOR TRENCH
42/45	—	11-22	EM	007	11-25	MF	PASS	PATCH 55' FROM W. ANCHOR TRENCH
44/51	—	11-14	MM	14	11-15	MF	PASS	PATCH 90' FROM E. ANCHOR TRENCH DS
44/50/51	—	11-14	MM	14	11-15	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
44/50	—	11-14	MM	14	11-15	MF	PASS	PATCH 180' FROM E. ANCHOR TRENCH
49/49/50	—	11-14	MM	14	11-15	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
44/48/49	—	11-14	MM	14	11-15	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
44/48/49	—	11-14	MM	14	11-15	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
44/49/45	—	11-14	MM	14	11-15	MF	PASS	EXT T-WELD AT SEAM INTERSECTION

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: Wellsville NY PROJECT NUMBER: P-0128 MATERIAL DESCRIPTION: 60 mil VLT

WELD NUM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
45/46/47	—	11-22	JM	14	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
45/46	—	11-22	JM	14	11-25	MF	PASS	PATCH 110' FROM W ANCHOR TRENCH DS 2
50/51	—	11-22	JM	14	11-25	MF	PASS	10' NORTH OF 99/50/51 INTERSECT. BOOT APR
49/50	—	11-22	JM	14	11-25	MF	PASS	BOOT APRON 10' NORTH 99/99/50 INTERSEC.
48/49	—	11-22	JM	14	11-25	MF	PASS	BOOT APRON 15' NORTH OF 99/48/49 INTER
48/49	—	11-22	EM	007	11-25	MF	PASS	PATCH 5' NORTH OF 99/98/99 INTERSEC. D
—	47	11-22	JM	14	11-25	MF	PASS	BOOT APRON 10' WEST OF SEAM 97-98 CENTER OF PANEL
50/51/53	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
49/50/53	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
49/52/53	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
48/49/52	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
47/49/52	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
46/49/52	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
53/54	—	11-22	EM	007	11-25	MF	PASS	PATCH 220' FROM E ANCHOR TRENCH
52/53/54	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION
52/59/63	—	11-22	EM	007	11-25	MF	PASS	EXT T-WELD AT SEAM INTERSECTION

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: Wellsville NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60mil VL

FIELD PANEL #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
54/55	—	11-22	JM	14	11-25	MF	PASS	PATCH 195' FROM E. ANCHOR TRENCH D
54/55	—	11-22	JM	14	11-25	MF	PASS	EXT. WELD (3) FROM E. ANCHOR TRENCH
—	55	11-22	JM	14	11-25	MF	PASS	PATCH 200' FROM E. ANCHOR TRENCH 4' FROM SEAM 54/55
54/55 63/64	—	11-25	EB	14	11-25	MF	PASS	PATCH AT SEAM INTERSECTION
55/56	—	11-22	JM	14	11-25	MF	PASS	BOOT APRON 264' FROM E. ANCHOR TRENCH
—	55	11-22	JM	14	11-25	MF	PASS	PATCH 264' FROM E. ANCHOR TRENCH 4' SOUTH OF SEAM 55-56
55/56	—	11-22	JM	14	11-25	MF	PASS	PATCH 384' FROM E. ANCHOR TRENCH DS
56/57	—	11-25	EB	14	11-25	MF	PASS	PATCH 170' FROM E. ANCHOR TRENCH
57/58	—	11-25	EB	14	11-25	MF	PASS	PATCH 85' FROM E. ANCHOR TRENCH DS
57/58	—	11-25	EB	14	11-25	MF	PASS	PATCH 185' FROM E. ANCHOR TRENCH
58/59	—	11-25	EB	14	11-25	MF	PASS	PATCH 135' FROM E. ANCHOR TRENCH
58/59	—	11-25	EB	14	11-25	MF	PASS	PATCH 235' FROM E. ANCHOR TRENCH
58/59	—	11-22	JM	14	11-25	MF	PASS	PATCH 295' FROM E. ANCHOR TRENCH D
58/59	—	11-25	SR	007	11-25	MF	PASS	PATCH 333' FROM E. ANCHOR TRENCH
—	59	11-25	EB	14	11-25	MF	PASS	BOOT APRON 138' FROM E. ANCHOR TRE 10' FROM SEAM 58/59
—	59	11-25	EB	14	11-25	MF	PASS	BOOT APRON 235' FROM E. ANCHOR TRENC 10' FROM SEAM 58/59

GEO-CON INC.

REPAIR REPORT

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P-0129 MATERIAL DESCRIPTION: 60MIL VLTEX

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
—	59	11-25	EB	14	11-25	MF	PASS	BOOT APRON 335' FROM E. ANCHOR TREN 10' FROM SEAM 58-59
59/65	—	11-30	EB	14	11-30	EB	PASS	PATCH 20' FROM E. ANCHOR TRENCH DS
59/65	—	11-25	EB	14	11-25	MF	PASS	PATCH 138' FROM E. ANCHOR TRENCH
59/65	—	11-25	EB	14	11-25	MF	PASS	PATCH 238' FROM E. ANCHOR TRENCH
59/65	—	11-25	EB	14	11-25	MF	PASS	PATCH 338' FROM E. ANCHOR TRENCH
—	65	11-25	EB	14	11-25	MF	PASS	PATCH 30' FROM EAST ANCHOR TRENCH CENTER OF PANEL
—	65	11-25	EB	14	11-25	MF	PASS	PATCH 45' FROM E. ANCHOR TRENCH CENTER OF PANEL
65/66	—	11-25	SR	007	11-25	MF	PASS	PATCH 30' FROM E. ANCHOR TRENCH
65/66	—	11-25	SR	007	11-25	MF	PASS	PATCH 240' FROM E. ANCHOR TRENCH
65/66	—	11-25	SR	007	11-25	MF	PASS	PATCH 285' FROM E. ANCHOR TRENCH DS
65/66	—	11-25	SR	007	11-25	MF	PASS	PATCH 355' FROM E. ANCHOR TRENCH
66/67	—	11-25	SR	007	11-25	MF	PASS	PATCH 205' FROM E. ANCHOR TRENCH
66/67	—	11-25	EB	14	11-25	MF	PASS	PATCH 260' FROM E. ANCHOR TRENCH
66/67	—	11-25	EB	14	11-25	MF	PASS	PATCH 295' FROM E ANCHOR TRENCH D
67/68	—	11-30	EB	14	11-30	MF	PASS	PATCH 65' FROM E. ANCHOR TRENCH DS
67/68	—	11-30	EM	007	11-30	MF	PASS	PATCH 235' FROM E. ANCHOR TRENCH

GEO-CON INC.

REPAIR REPORT

PROJECT NAME: Wellsville NY PROJECT NUMBER: P10129 MATERIAL DESCRIPTION: 60 mil VL

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
67/68	—	11-30	EM	007	11-30	EB	PASS	PATCH 360' FROM E. ANCHOR TRENCH DS
68/69	—	11-25	EB	14	11-30	EB	PASS	PATCH 225' FROM E. ANCHOR TRENCH
69/69	—	11-30	EM	007	11-30	EB	PASS	PATCH 295' FROM E. ANCHOR TRENCH DS
69/70	—	11-30	EB	14	11-30	EB	PASS	PATCH 65' FROM E ANCHOR TRENCH DS
69/70	—	11-30	EM	007	11-30	EB	PASS	PATCH 195' FROM E ANCHOR TRENCH
69/70	—	11-30	EB	14	11-30	EB	PASS	PATCH 230' FROM E. ANCHOR TRENCH
69/70	—	11-30	EM	007	11-30	EB	PASS	PATCH 370' FROM E. ANCHOR TRENCH DS
70/71	—	12-3	MM	505	12-3	EB	PASS	CAP STRIP WEDGE WELDED 5'X200' CROSS SEAM AT 100' (CENTER) FROM E. END W
70/71	—	12-3	MM	505	12-3	EB	PASS	115' FROM E. ANCHOR TRENCH EXT T-W 2.5 NORTH OF SEAM ON CAP STRIP
70/71	—	12-3	MM	505	12-3	EB	PASS	115' FROM E. ANCHOR TRENCH 2.5' SO OF SEAM ON CAP STRIP EXT T-WELD
70/71	—	12-3	SR	007	12-3	EB	PASS	PATCH 215' FROM E. ANCHOR COVER E OF CAP STRIP.
70/71	—	12-3	SR	007	12-3	EB	PASS	PATCH 292' FROM E. ANCHOR TRENCH DS
70/71	—	12-3	SR	007	12-3	EB	PASS	PATCH 915' FROM E. ANCHOR TRENCH
71/72	—	12-1	SR	007	12-3	EB	PASS	PATCH 225' FROM E. ANCHOR TRENCH
71/72	—	12-1	SR	007	12-3	EB	PASS	PATCH 405' FROM E. ANCHOR TRENCH DS
—	72	12-1	SR	007	12-3	EB	PASS	BOOT APRON 130' FROM E ANCHOR TRENC CENTER OF PANEL
70/71	—	12-3	MM	505	12-3	EB	PASS	PATCH ON CAP SEAM N. 100' FROM E. ANCHOR TRENC

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLT

ELD AM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
—	72	12-1	SL	007	12-3	EB	PASS	BOOT APRON 265' FROM E ANCHOR TRENCH CENTER OF PANEL
72/73	—	12-1	SL	007	12-3	EB	PASS	PATCH 70' FROM E ANCHOR TRENCH DS<
72/73	—	12-1	MM	14	12-3	EB	PASS	PATCH 270' FROM E ANCHOR TRENCH
72/73	—	12-1	MM	14	12-3	EB	PASS	PATCH 250' FROM E ANCHOR TRENCH
72/73	—	12-1	MM	14	12-3	EB	PASS	PATCH 350' FROM E. ANCHOR TRENCH
72/73	—	12-1	MM	14	12-3	EB	PASS	PATCH 360' FROM E. ANCHOR TRENCH
73/74	—	12-1	MM	14	12-3	EB	PASS	PATCH 95' FROM E. ANCHOR TRENCH DS
73/74	—	12-1	SK	007	12-3	EB	PASS	PATCH 270' FROM E. ANCHOR TRENCH
—	71	12-3	JM	14	12-7	JM	PASS	BOOT APRON 3' FROM 71-81 TIE-IN
74/72	—	12-3	JM	14	12-7	JM	PASS	WEDGE WELDED CAP OVER CROSS SEAM
73/74/76	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
74/76	—	12-4	JM	14	12-7	JM	PASS	PATCH 280' FROM WEST CHANNEL DS 42
74/75/76	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
75/76	—	12-4	JM	14	12-7	JM	PASS	PATCH 140' FROM W. CHANNEL DS 45
75/76/77	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
75/77	—	12-4	JM	14	12-7	JM	PASS	PATCH 50' FROM W. ANCHOR TRENCH DS 46

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: Wellsville NY PROJECT NUMBER: PI-0129 MATERIAL DESCRIPTION: 60 mil HDPE

WELD NUM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
72/73/74	—	12-3	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION ON CAP E
73/73	—	12-3	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION ON CAP W
76/79	—	12-4	JM	14	12-7	JM	PASS	PATCH 220' FROM W. CHANNEL DS 48
76/79/78	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
76/78	—	12-4	JM	14	12-7	JM	PASS	PATCH 105' FROM W. CHANNEL DS 47
76/77/78	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
72/79	—	12-4	JM	14	12-7	JM	PASS	PATCH ON CAP BETWEEN SEAMS DS 49 ON E. SIDE 5' N. OF 72-79-81 INTERSECTION
79/79/81	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION ON CAP E. SIDE
72/79/81	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION ON CAP W. SIDE
79/81	—	12-4	JM	14	12-7	JM	PASS	PATCH 262' FROM W. CHANNEL DS 49
79/80/81	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
79/80	—	12-4	JM	14	12-7	JM	PASS	BOOT APRON 180' FROM W. CHANNEL
79/80	—	12-4	JM	14	12-7	JM	PASS	PATCH 160' FROM W. CHANNEL DS 50
78/79/80	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
78/80	—	12-4	JM	14	12-7	JM	PASS	BOOT APRON 92' FROM W. CHANNEL
78/80	—	12-4	JM	14	12-7	JM	PASS	PATCH 52' FROM W. CHANNEL

GEO-CON INC.

REPAIR REPORT

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P-5129 MATERIAL DESCRIPTION: 60 mil VLT

WELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
78/80	—	12-4	JM	14	12-7	JM	PASS	PATCH 30' FROM W. CHANNEL DS 51
71/72/81	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
70/71 81/83	—	12-4	JM	14	12-7	JM	PASS	PATCH AT SEAM INTERSECTION
81/83	—	12-4	JM	14	12-7	JM	PASS	PATCH 290' FROM W. CHANNEL DS 53
81/82/83	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
82/81/82	—	12-4	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
80/82	—	12-4	JM	14	12-7	JM	PASS	PATCH 150' FROM W. CHANNEL DS 52
61/70 83/84	—	12-4	JM	14	12-7	JM	PASS	PATCH AT SEAM INTERSECTION
82/83/84	—	12-9	JM	14	12-7	JM	PASS	T-WELD AT SEAM INTERSECTION
82/84	—	12-10	JM	14	12-10	JM	PASS	PATCH 215' FROM W. CHANNEL DS 54
82/89	—	12-9	JM	14	12-9	JM	PASS	PATCH 85' FROM W. CHANNEL DS 55
82/84	—	12-9	SR	13	12-9	SR	PASS	90' FROM W. CHANNEL EXT WELD
84/85 61/60	—	12-9	SR	13	12-9	SR	PASS	PATCH AT SEAM INTERSECTION
84/85	—	12-9	SR	13	12-9	SR	PASS	PATCH 250' FROM W. CHANNEL DS 57
84/85	—	12-10	SR	13	12-10	SR	PASS	PATCH 125' FROM W. CHANNEL
84/85	—	12-10	SR	13	12-10	SR	PASS	PATCH 110' FROM W. CHANNEL DS 56

GEO-CON INC.

REPAIR REPORT

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL VLTEX

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
67/68 35/37	—	12-9	SR	13	12-9	SR	PASS	PATCH AT SEAM INTERSECTION
35/87	—	12-9	SR	13	12-9	SR	PASS	PATCH 270' FROM W. CHANNEL DS 58
85/87	—	12-10	SR	13	12-10	SR	PASS	PATCH 25' FROM W. CHANNEL DS 59
85/86/87	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
86/88	—	12-9	SR	13	12-9	SR	PASS	PATCH 60' FROM W. CHANNEL DS 60
87/89 66/67	—	12-9	SR	13	12-9	SR	PASS	PATCH AT SEAM INTERSECTION
87/88/89	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
86/87/88	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
87/88	—	12-9	SR	13	12-9	SR	PASS	PATCH 180' FROM W. CHANNEL DS 61
65/66 89/95	—	12-9	SR	13	12-9	SR	PASS	PATCH AT SEAM INTERSECTION
89/95	—	12-9	SR	13	12-9	SR	PASS	PATCH 250' FROM WEST CHANNEL DS 62
88/89/95	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
88/95	—	12-9	SR	13	12-9	SR	PASS	PATCH 150' FROM W. CHANNEL
88/96/95	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
88/96	—	12-9	SR	13	12-9	SR	PASS	PATCH 90' FROM W. CHANNEL DS 63
98/99	—	12-9	SR	13	12-9	SR	PASS	G & B 25' FROM W CHANNEL

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 MIL LLDPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
30/15/96	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
96/97/88	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
97/99/88	—	12-9	JM	14	12-9	JM	PASS	T-WELD AT SEAM INTERSECTION
98/99/88	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
99/15/96	—	12-9	JM	14	12-9	JM	PASS	T-WELD AT SEAM INTERSECTION
99/96/97	—	12-9	SR	13	12-9	SR	PASS	T-WELD AT SEAM INTERSECTION
97/98/94	—	12-9	JM	14	12-9	JM	PASS	T-WELD AT SEAM INTERSECTION
98/99/94	—	12-9	JM	14	12-9	JM	PASS	T-WELD AT SEAM INTERSECTION
94/96	—	12-9	JM	14	12-9	JM	PASS	PATCH 70' FROM W. CHANNEL DS 64
94/95	—	12-9	JM	14	12-9	JM	PASS	PATCH 140' FROM W. CHANNEL
99/95 59/65	—	12-9	JM	14	12-9	JM	PASS	PATCH AT SEAM INTERSECTION
99/95	—	12-9	JM	14	12-9	JM	PASS	PATCH 235' FROM W. CHANNEL DS 65
58/59	—	12-9	JM	14	12-9	JM	PASS	15' CAP FROM 93-94-58-59 INTERSECTION EAST WARD 15'
58/59	—	12-9	JM	14	12-9	JM	PASS	PATCH 10' E. OF 93-94-58-59 S. SIDE DS75 OF CAP
58/59 93/94	—	12-9	JM	14	12-9	JM	PASS	PATCH AT SEAM INTERSECTION
93/94	—	12-9	JM	14	12-9	JM	PASS	BOOT APRON ON SEAM 230' FROM W. CHANNEL

GEO·CON INC.

REPAIR REPORT

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P1-91-9 MATERIAL DESCRIPTION: 60 mil VLTE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
93/94	—	12-9	JM	14	12-9	JM	Pass	PATCH 190' FROM W. CHANNEL
93/94	—	12-9	JM	14	12-9	JM	Pass	PATCH 160' FROM W. CHANNEL DS 66
93/94	—	12-10	JM	14	12-10	JM	Pass	PATCH 95' FROM W. CHANNEL
93/94	—	12-10	JM	14	12-10	JM	Pass	PATCH 20' FROM W CHANNEL
57/58 91/93	—	12-9	JM	14	12-9	JM	Pass	PATCH AT SEAM INTERSECTION
91/57	—	12-9	SR	13	12-9	SR	Pass	PATCH 5' SOUTH OF 91-93-58 INTERSECT
91/93	—	12-9	JM	14	12-9	JM	Pass	PATCH 190' FROM W. CHANNEL DS 68
91/93	—	12-9	JM	14	12-9	JM	Pass	PATCH 145' FROM W. CHANNEL
91/92/93	—	12-9	JM	14	12-9	JM	Pass	T-WELD AT SEAM INTERSECTION
92/93	—	12-9	JM	14	12-9	JM	Pass	PATCH 35' FROM W. CHANNEL DS 67
92/93	—	12-9	SR	13	12-9	SR	Pass	PATCH 10' FROM W. CHANNEL
90/91 56/57	—	12-9	JM	14	12-9	JM	Pass	PATCH AT SEAM INTERSECTION
90/91/92	—	12-9	JM	14	12-9	JM	Pass	T-WELD AT SEAM INTERSECTION
90/92	—	12-9	JM	14	12-9	JM	Pass	PATCH 85' FROM W. CHANNEL DS 69
55/56 64/90	—	12-9	JM	14	12-9	JM	Pass	PATCH AT SEAM INTERSECTION
64/90	—	12-9	JM	14	12-9	JM	Pass	G & B 170' FROM W. CHANNEL

GEO·CON INC.

REPAIR REPORT

PAGE 19 OF ____

PROJECT NAME: WELLSVILLE NY PROJECT NUMBER: P-5012 MATERIAL DESCRIPTION: 60 mil HDPE

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
64/90	—	12-9	JM	14	12-9	JM	PASS	PATCH 100' FROM W. CHANNEL DS 70
64/90	—	12-9	JM	14	12-9	JM	PASS	PATCH 85' FROM W CHANNEL
69/55	—	12-9	JM	14	12-9	JM	PASS	PATCH CENTER OF CROSS SEAM DS 73
63/64	—	12-9	JM	14	12-9	SR	PASS	PATCH 145' FROM W. CHANNEL DS 71
52/63	—	12-9	JM	14	12-9	SR	PASS	PATCH 55' FROM W. CHANNEL DS 72
52/63	—	12-10	JM	14	12-10	JM	PASS	EXT WELD ON SEAM FROM 52/63/54 INTER W. 30'
52/63	—	12-10	JM	14	12-10	JM	PASS	CAP FROM W. END OF EXT WELD WEST 26'
75/76	—	12-18	EB	001	12-18	EB	PASS	PATCH 3' W. OF DS#45
S/C	—	12-19	SR	003	12-19	SR	PASS	BOOT AROUND UTILITY POLE 243' FROM W. ANCHOR TRENCH
—	60	12-21	SR	003	12-21	SR	PASS	PATCH 15' FROM S. ANCHOR TRENCH 5' FROM SEAM 60/61

GEO-CON INC.

REPAIR REPORT

PAGE _____ OF _____

PROJECT NAME: Wellwillg PROJECT NUMBER: 01-0129 MATERIAL DESCRIPTION: 60 VLT

WELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
53/54/100		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
54/55/100		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
55/56/100		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
56/57/100		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
57/58/100		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
58/59/100		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
59/100/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
59/65/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
65/66/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
66/67/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
67/68/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
68/69/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
69/70/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
70/71/101		5/14	JA	014	5/14	Em	P	EXT T-WELD INT SEAM
101/70		5/19	JA	014	5/19	Em	P	PATCH DSE 75 30' SOUTH OF SEAM 101-102
71/101/102		5/14	JA	014	5/14	Em	P	EXT T-WELD

GEO-CON® INC.

REPAIR REPORT

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

WELD NUM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
71/72/102		5/18	JA	10	5/18	EM	P	EXT T-WELD SEAM INT
72/73/102		5/18	JA	10	5/18	EM	P	EXT T-WELD SEAM INT
73/102/105		5/19	JA	10	5/19	EM	P	EXT T-WELD SEAM INT
74/75/103		5/19	JA	10	5/19	EM	P	EXT T-WELD SEAM INT
74/103/104		5/19	JA	10	5/19	EM	P	EXT T-WELD SEAM INT
74/104/		5/19	JA	10	5/19	EM	P	EXT T-WELD SEAM INT
74/104/105		5/19	JA	10	5/19	EM	P	EXT T-WELD SEAM INT
73/74/105		5/19	JA	10	5/19	EM	P	EXT T-WELD SEAM INT
103/74		5/19	JA	10	5/19	EM	P	DS #76 20' EAST OF SEAM 103-74-75 INT.
70/106		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAM INT
70/92/106		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAMS INT
92/106/107		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAM INT
92/93/107		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAM INT
93/107/108		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAM INT
93/94 108/109		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAM INT
94/99 109/110		5/25	EB	10	5/25	EM	P	EXT T-WELD SEAM INT

GEO·CON® INC.

REPAIR REPORT

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

WELD NUM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
88/99 110/111		5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
86/88 111/112		5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
86/85 112/113		5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
84/85 113/114		5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
114/115 84		5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
82/84/	15	5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
115/116/	82	5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
80/82/	116	5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
116/117/	80	5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
117/118/	78/82	5/25	EB	10	5/25	Em	P	EXT T-WELD SEAM INT
119/103/	75	5/26	Em	10	5/26	Em	P	EXT T-WELD SEAM INT
118/120/	74/78	5/26	Em	10	5/26	Em	P	EXT T-WELD SEAM INT
120/121/	75/77	5/26	Em	10	5/26	Em	P	EXT T-WELD SEAM INT
121/122/	75	5/26	Em	10	5/26	Em	P	EXT T-WELD SEAM INT
124/123/	75	5/26	Em	10	5/26	Em	P	EXT T-WELD SEAM INT
119/123/	75	5/26	Em	10	5/26	Em	P	EXT T-WELD SEAM INT

GEO-CON INC.

REPAIR REPORT

PAGE _____ OF _____

PROJECT NAME: Wellsville PROJECT NUMBER: P1-0129 MATERIAL DESCRIPTION: 60 VLT

FIELD SEAM #	PANEL NO.	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST P/F	LOCATION / COMMENTS
123/75		5/26	EM	10	5/26	EM	P	DS # 78 CENTER OF SEAM
122/123		5/26	EM	10	5/26	EM	P	DS # 77 15' FROM OUTER ANCHOR TRENCH
	119	5/26	EM	10	5/26	EM	P	EXT T-WELD AT ANCHOR TRENCH 70' WEST OF SEAM 119-103
	119	5/26	EM	10	5/26	EM	P	EXT T-WELD AT ANCHOR TRENCH 120' WEST OF SEAM 119-103
	119	5/26	EM	10	5/26	EM	P	EXT T-WELD AT ANCHOR TRENCH 145' WEST OF SEAM 119-103
	119	5/26	EM	10	5/26	EM	P	EXT T-WELD AT ANCHOR TRENCH 165' WEST OF SEAM 119-103

D

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
MAI NO. 92-210
P.O. NO. 20827

REPORT I

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Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT I

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

OCTOBER 30, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 9/16/92

SAMPLE NO.: DS - 1 TECHNICIAN: RBF

SEAM NO.: 18/19 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

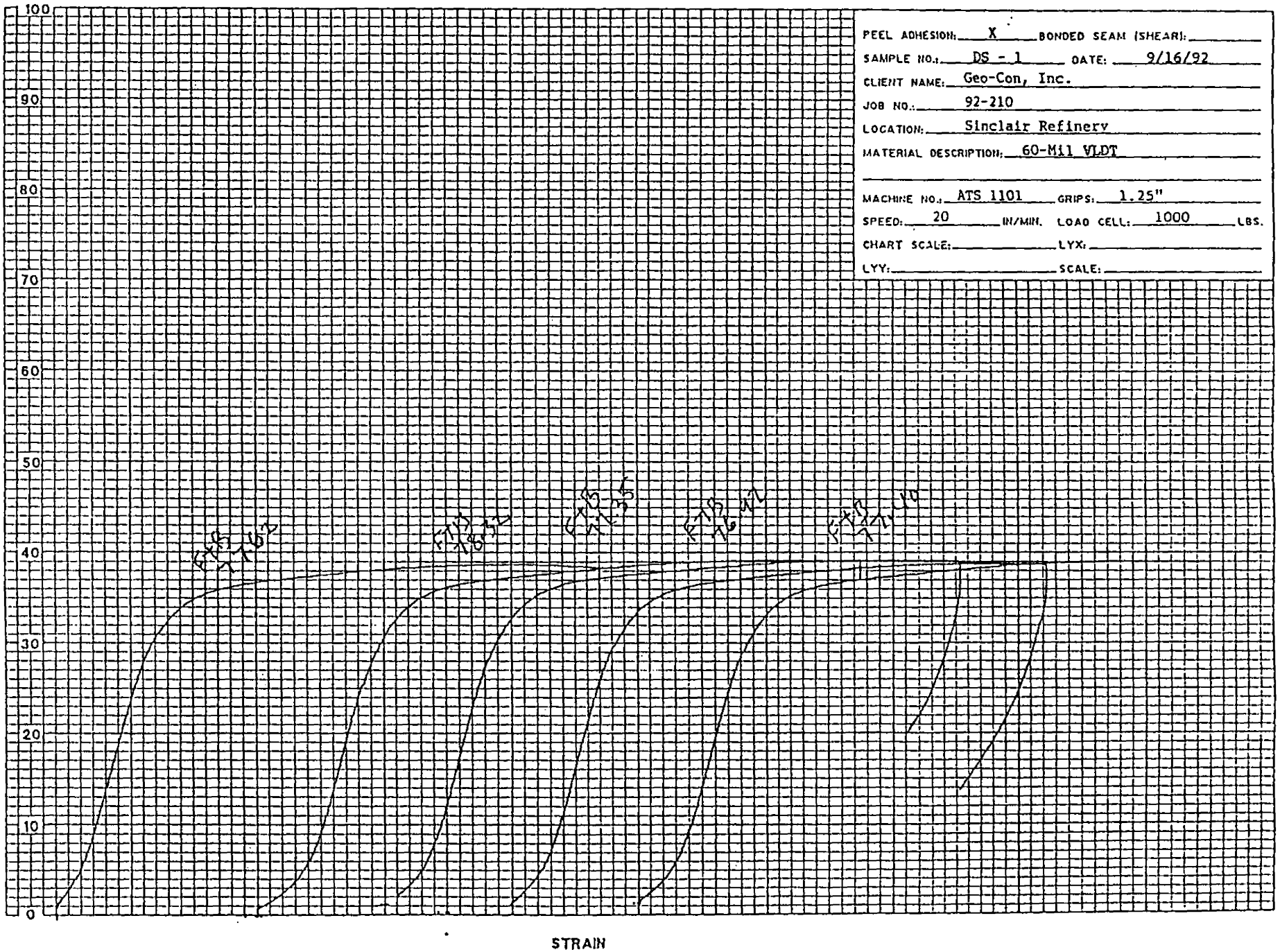
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	77.62	FTB
2	1.0	78.32	FTB
3	1.0	77.57	FTB
4	1.0	76.92	FTB
5	1.0	77.40	FTB
Average		77.56	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	74.50	FTB
2	1.0	75.02	FTB
3	1.0	75.15	FTB
4	1.0	75.62	FTB
5	1.0	75.42	FTB
Average		75.14	

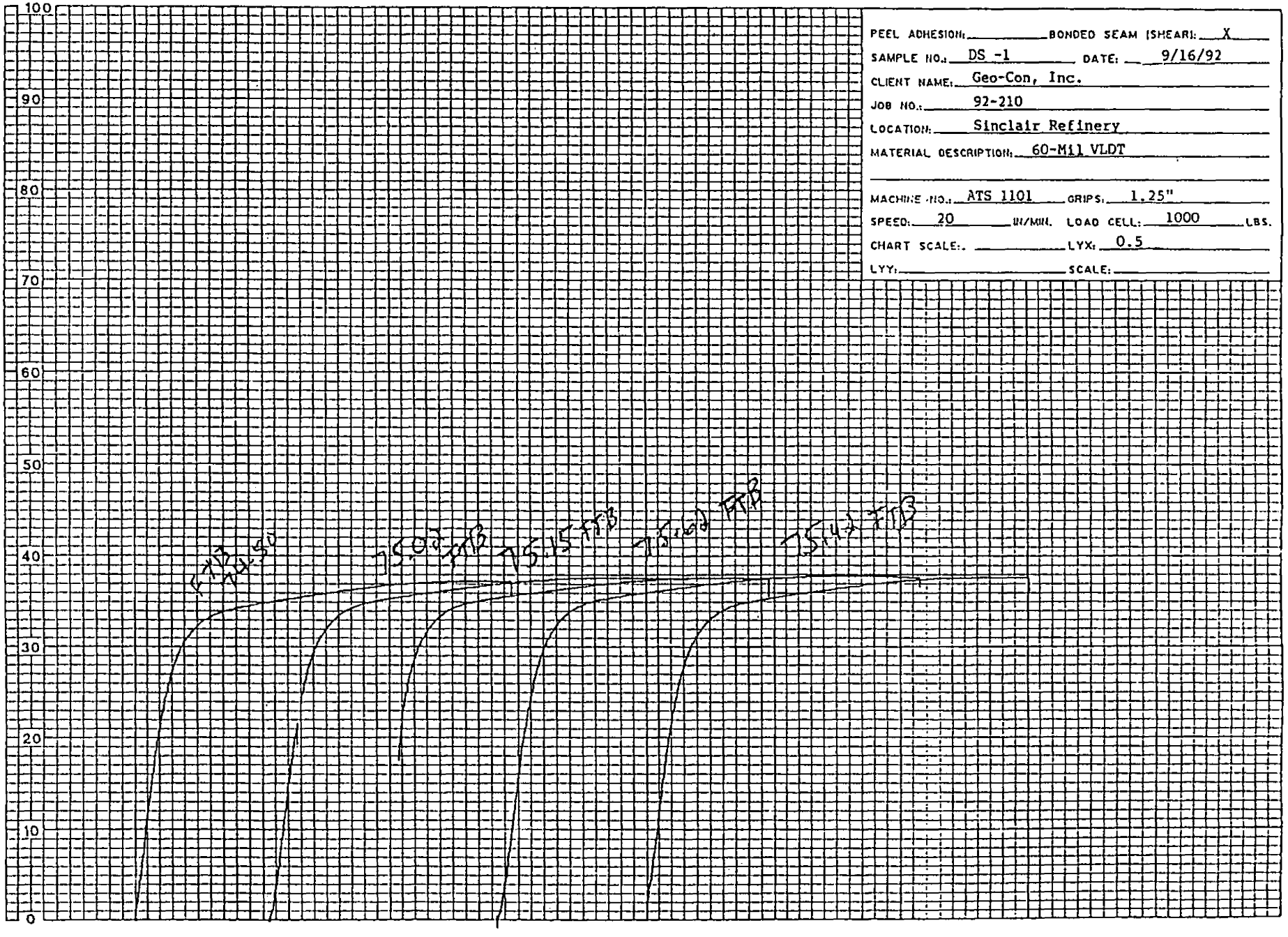
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL AND SHEAR TEST RESULTS

CLIENT: GEO-CON, Iinc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/03/92

SAMPLE NO.: DIS #2 TECHNICIAN: _____

SEAM NO.: _____ MANUFACTURER: _____

PANEL: _____ MACHINE: _____

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

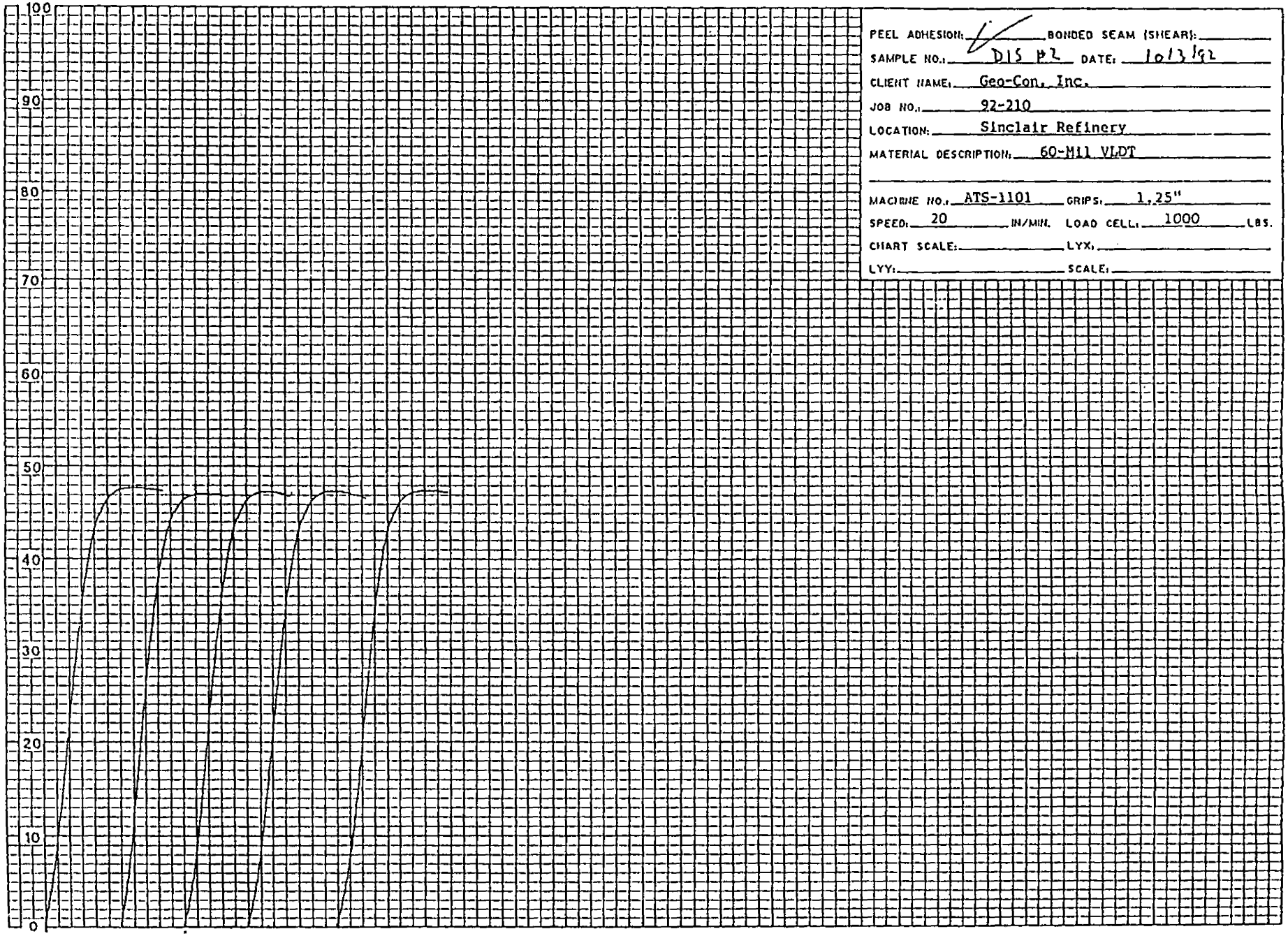
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	97.47	FTB
2	1.0	96.87	FTB
3	1.0	96.07	FTB
4	1.0	96.82	FTB
5	1.0	97.27	FTB
Average		96.90	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.40	FTB
2	1.0	97.62	FTB
3	1.0	98.57	FTB
4	1.0	97.67	FTB
5	1.0	96.42	FTB
Average		97.14	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

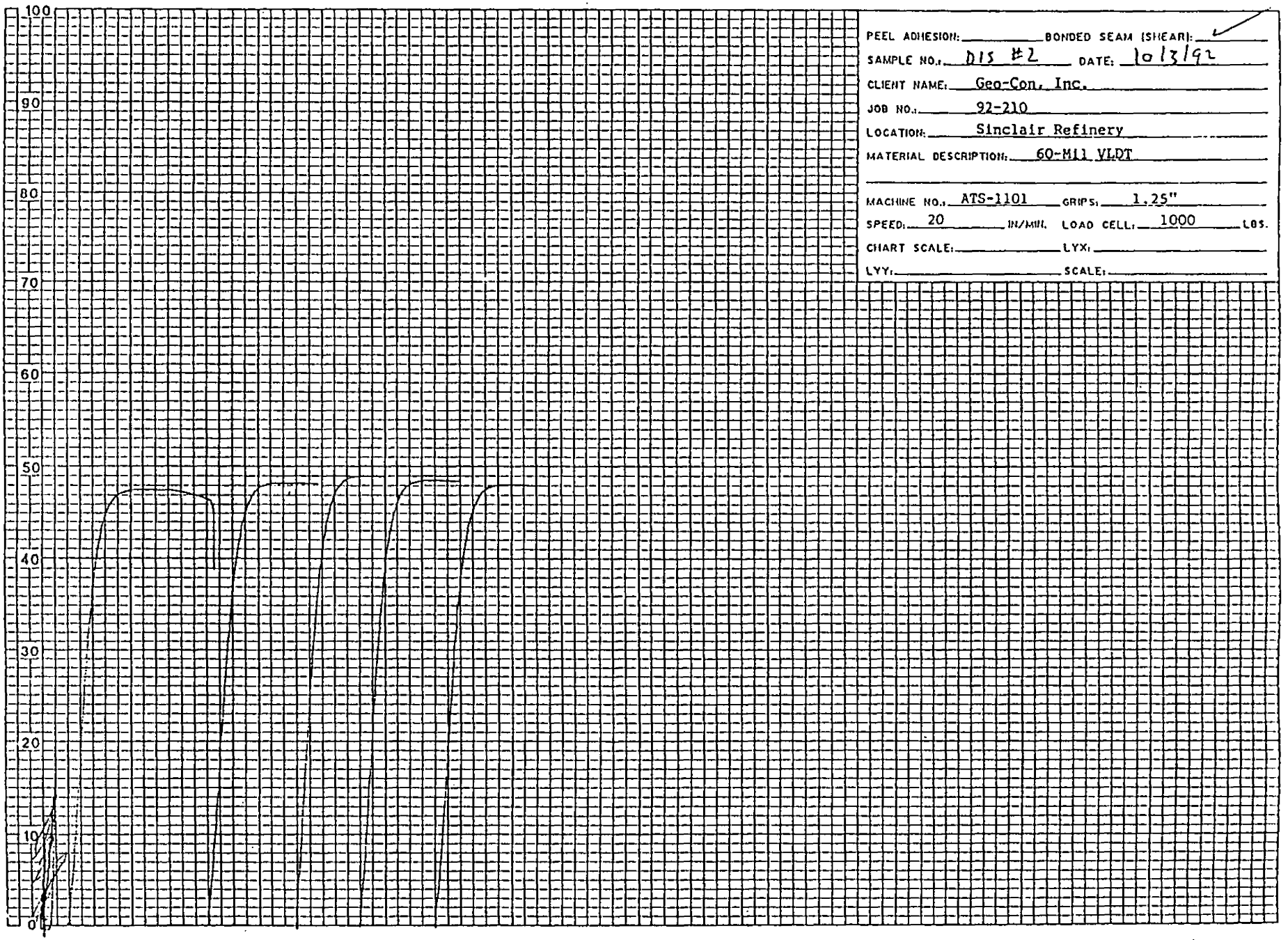
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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____
SAMPLE NO.: D15 #2 DATE: 10/13/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DIS #2 DATE: 10/3/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/03/92

SAMPLE NO.: DIS #3 TECHNICIAN:

SEAM NO.: MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

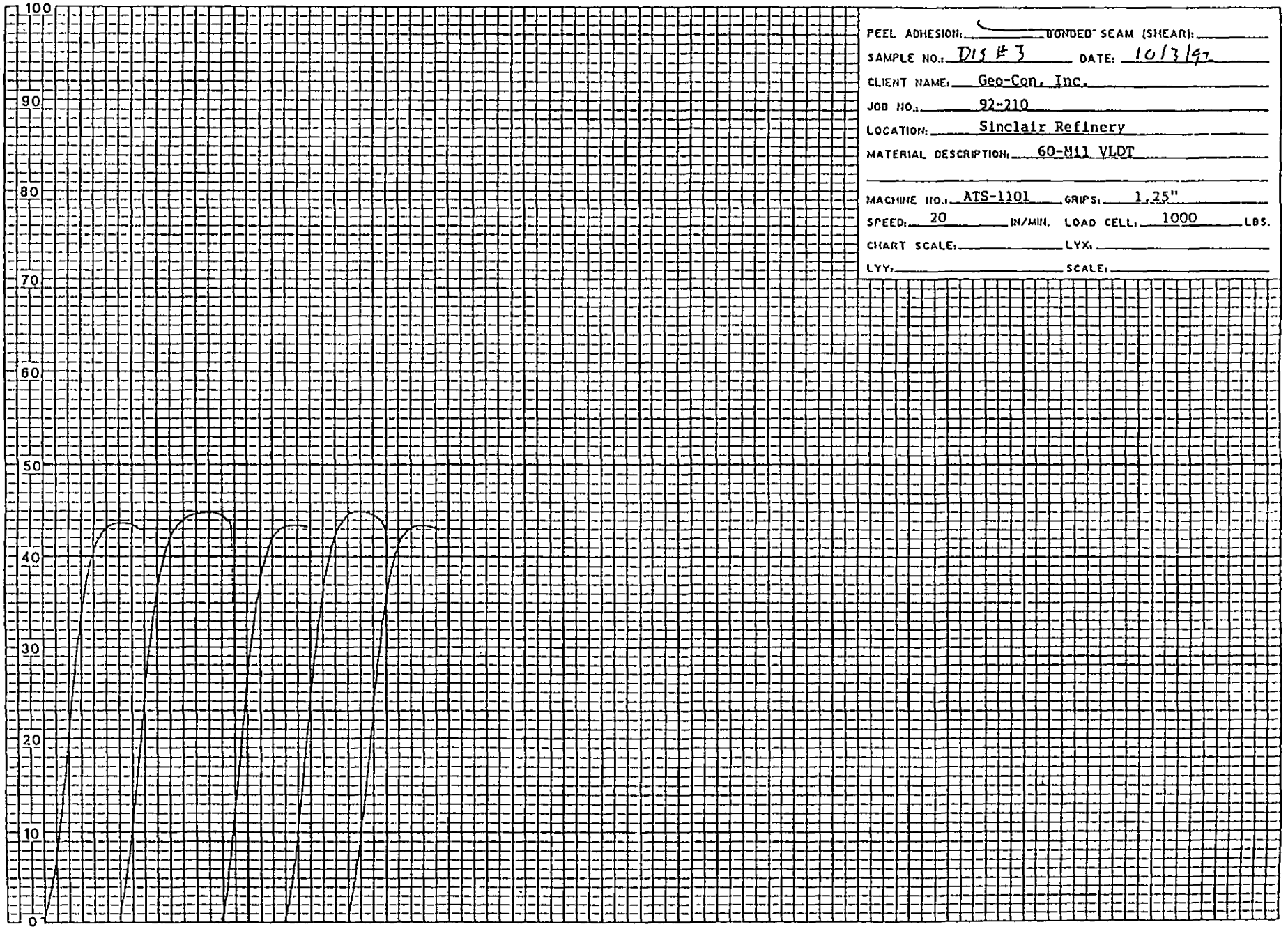
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.55	FTB
2	1.0	93.47	FTB
3	1.0	91.50	FTB
4	1.0	91.72	FTB
5	1.0	90.15	FTB
Average		91.48	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.65	FTB
2	1.0	94.87	FTB
3	1.0	94.55	FTB
4	1.0	95.95	FTB
5	1.0	94.72	FTB
Average		94.75	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

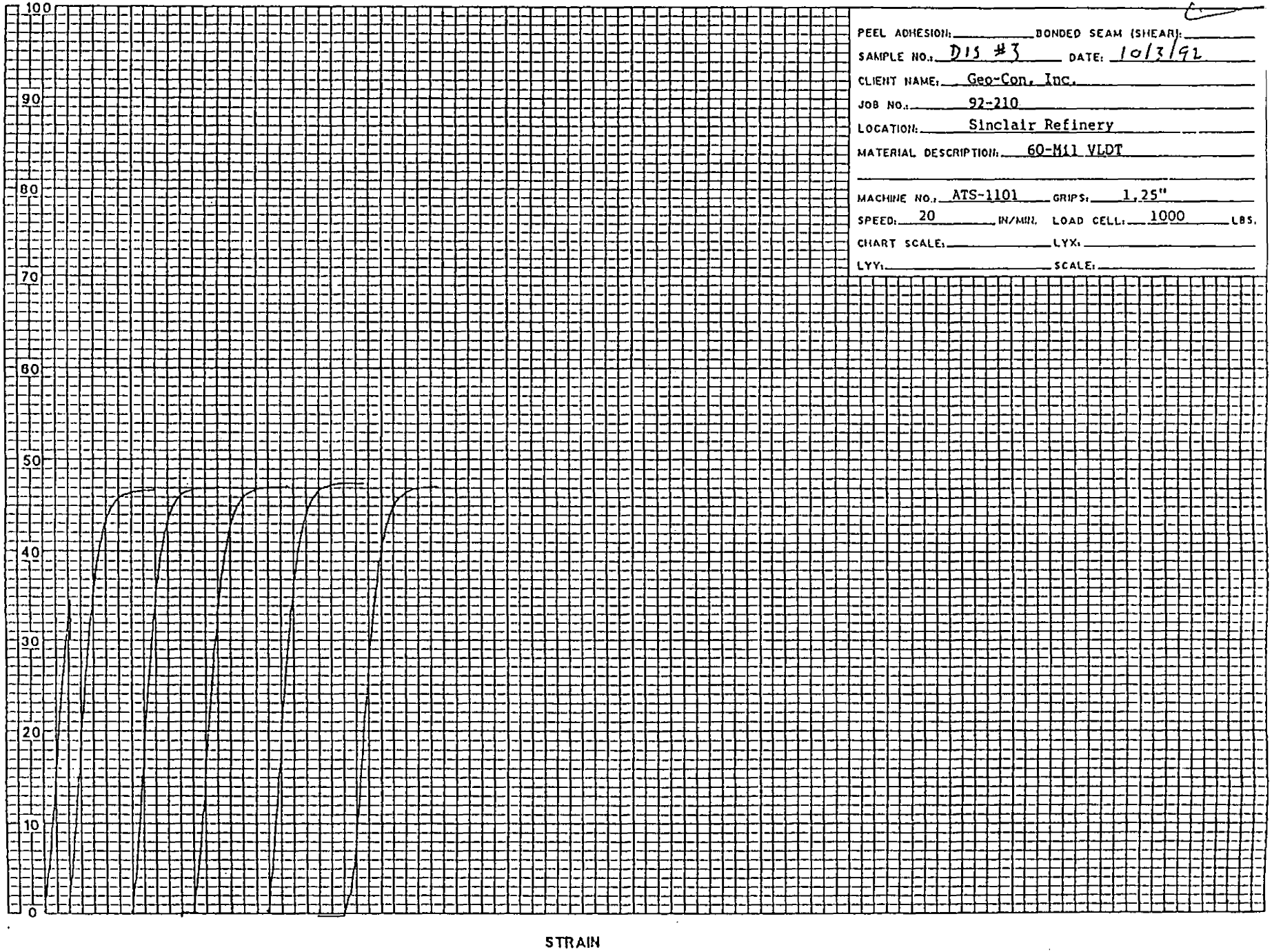
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): _____
SAMPLE NO.: DIS #3 DATE: 10/3/97
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): _____
SAMPLE NO.: D15 #3 DATE: 10/3/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-120

PROJECT: Sinclair Refinery DATE TESTED: 10//06/92

SAMPLE NO.: DIS 4 TECHNICIAN: KMT

SEAM NO.: MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

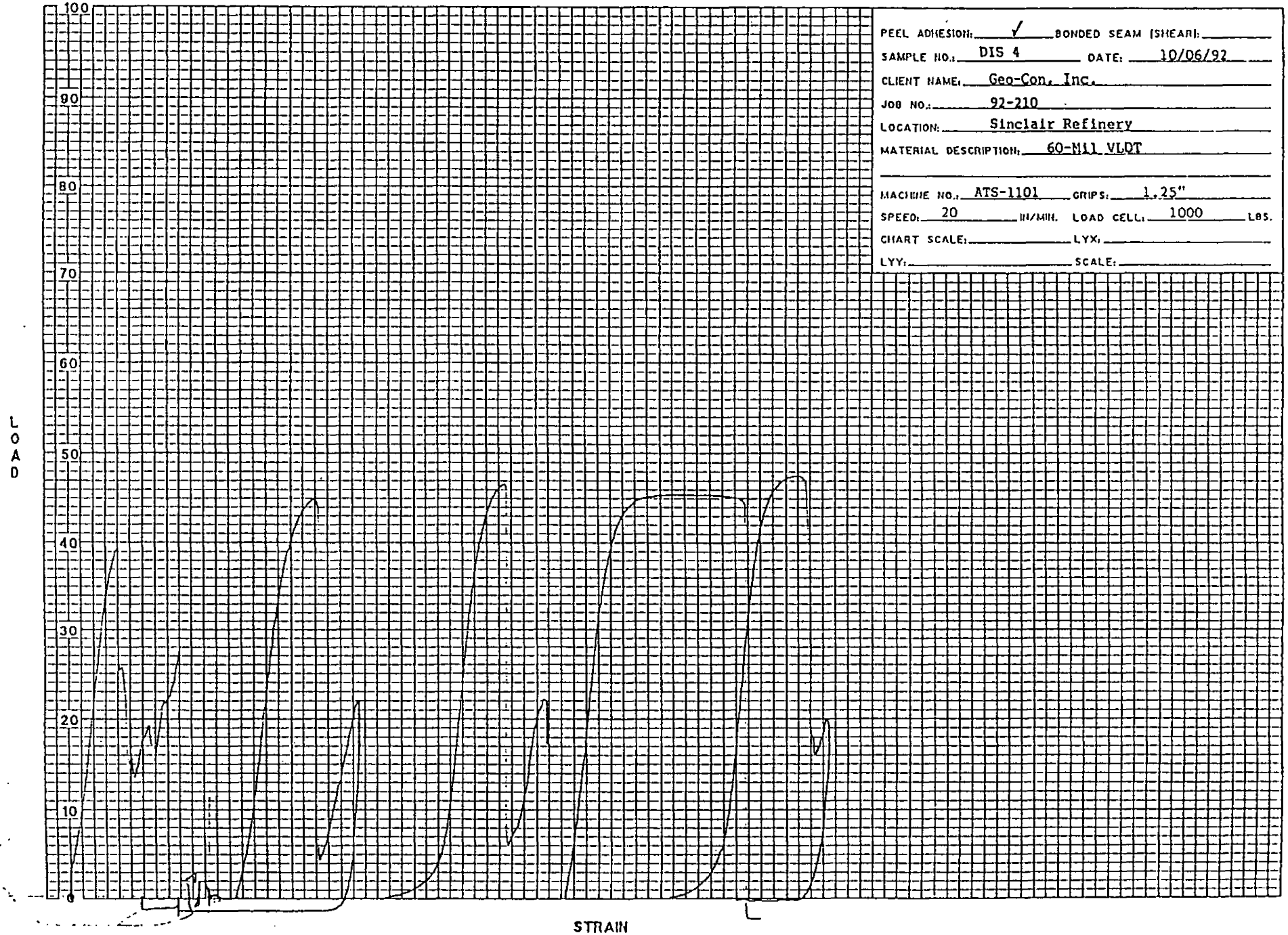
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	78.07	FTB
2	1.0	92.37	FTB
3	1.0	93.62	FTB
4	1.0	95.37	FTB
5	1.0	95.15	FTB
Average		90.92	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.50	FTB
2	1.0	103.17	FTB
3	1.0	103.17	FTB
4	1.0	98.87	FTB
5	1.0	102.22	FTB
Average		102.19	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

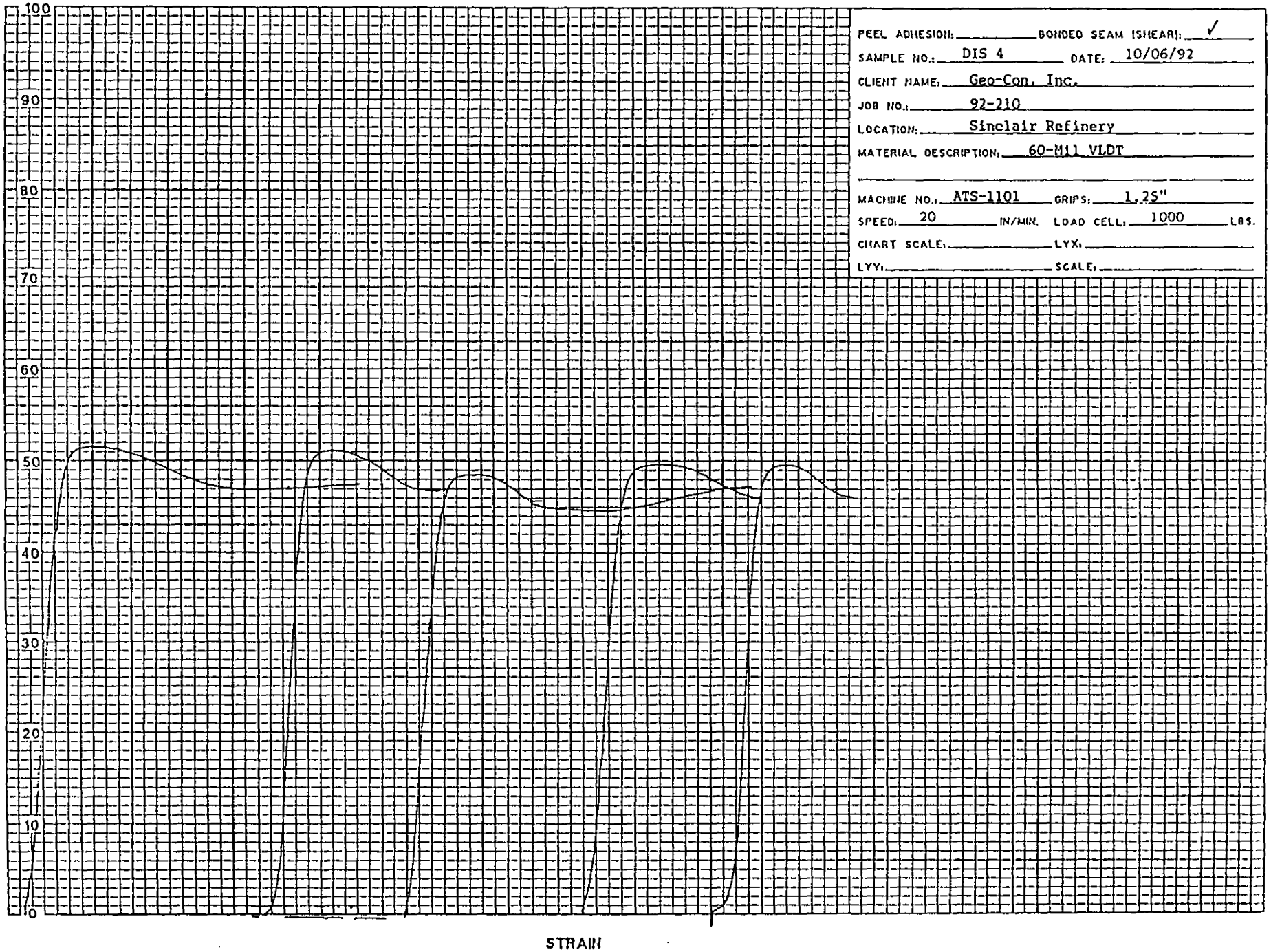
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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____
SAMPLE NO.: DIS 4 DATE: 10/06/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DIS 4 DATE: 10/06/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/06/92

SAMPLE NO.: DIS 5 TECHNICIAN: JRF

SEAM NO.: MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT VLST VLDPE WELD TYPE: D-FUSION EXTRUSION X

Peel Adhesion Test Data

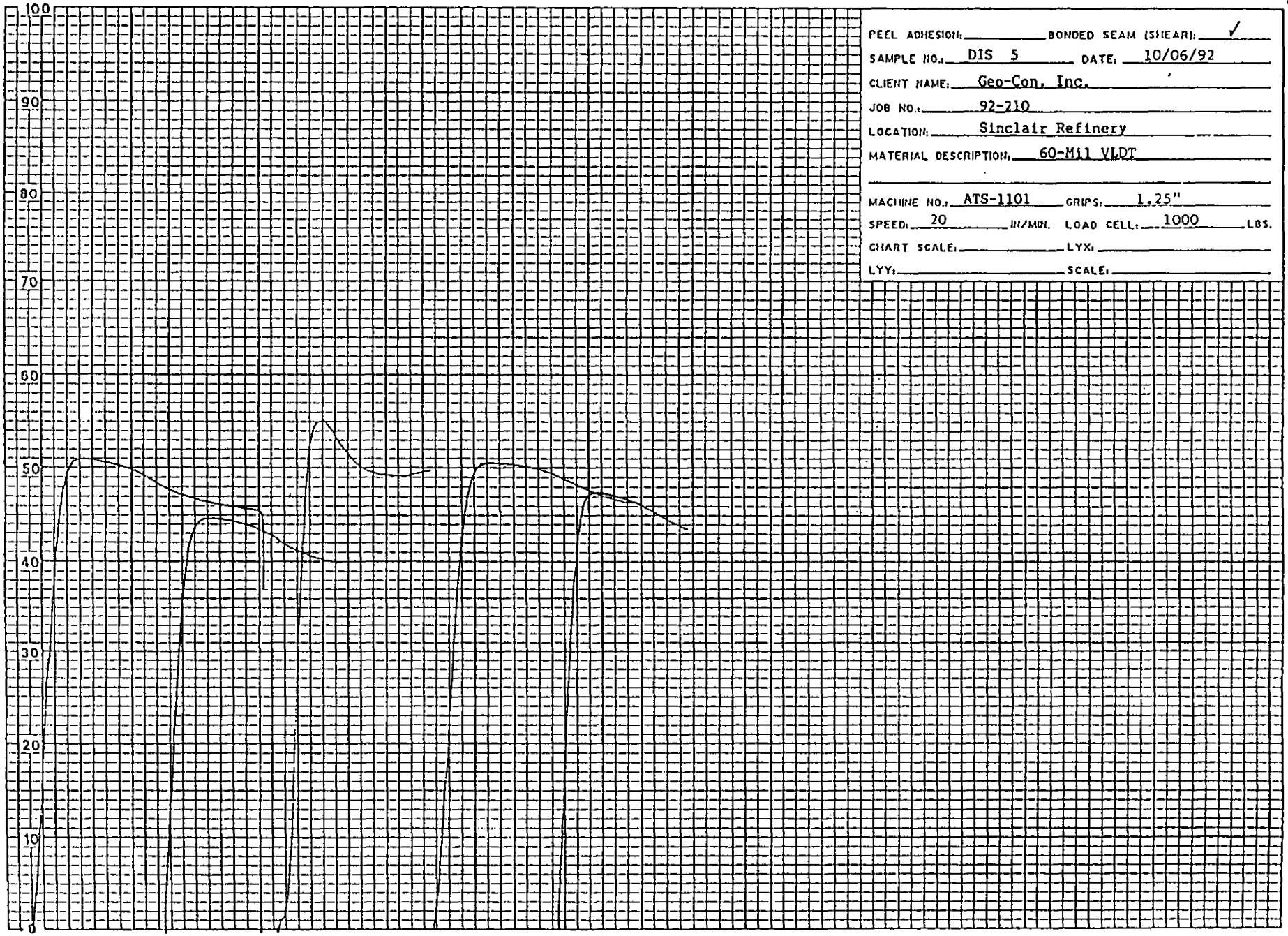
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.97	FTB
2	1.0	96.90	FTB
3	1.0	96.90	FTB
4	1.0	95.15	FTB
5	1.0	95.25	FTB
Average		95.83	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.87	FTB
2	1.0	102.12	FTB
3	1.0	108.65	FTB
4	1.0	101.30	FTB
5	1.0	102.95	FTB
Average		103.78	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DIS 5 DATE: 10/06/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

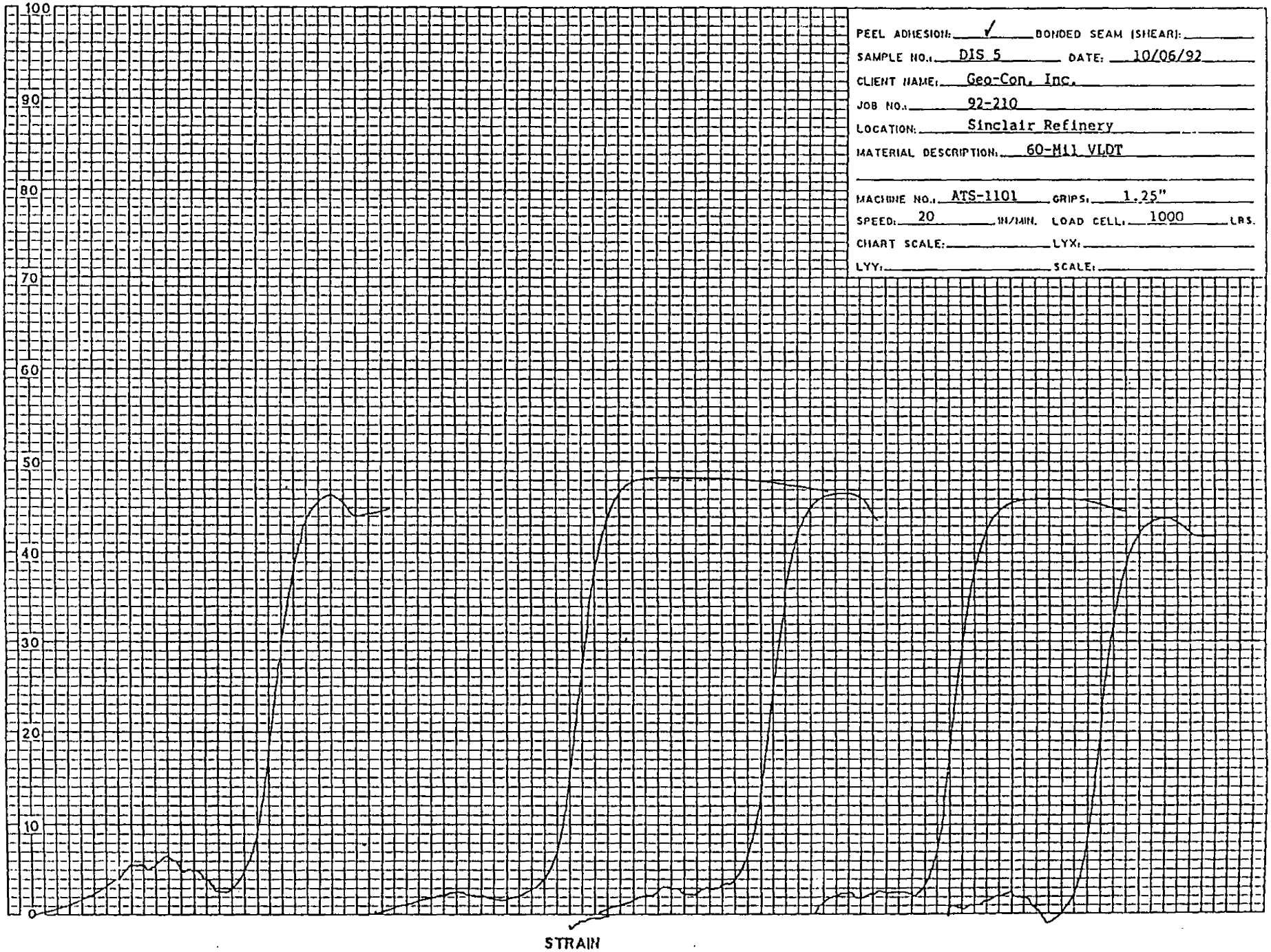
MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: DIS 5 DATE: 10/06/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/22/92

SAMPLE NO.: TECHNICIAN: J.M.

SEAM NO.: 1 - 2 MANUFACTURER: Gundle

PANEL: 1 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: HDT HST HDPE WELD TYPE: D-FUSION EXTRUSION

Peel Adhesion Test Data

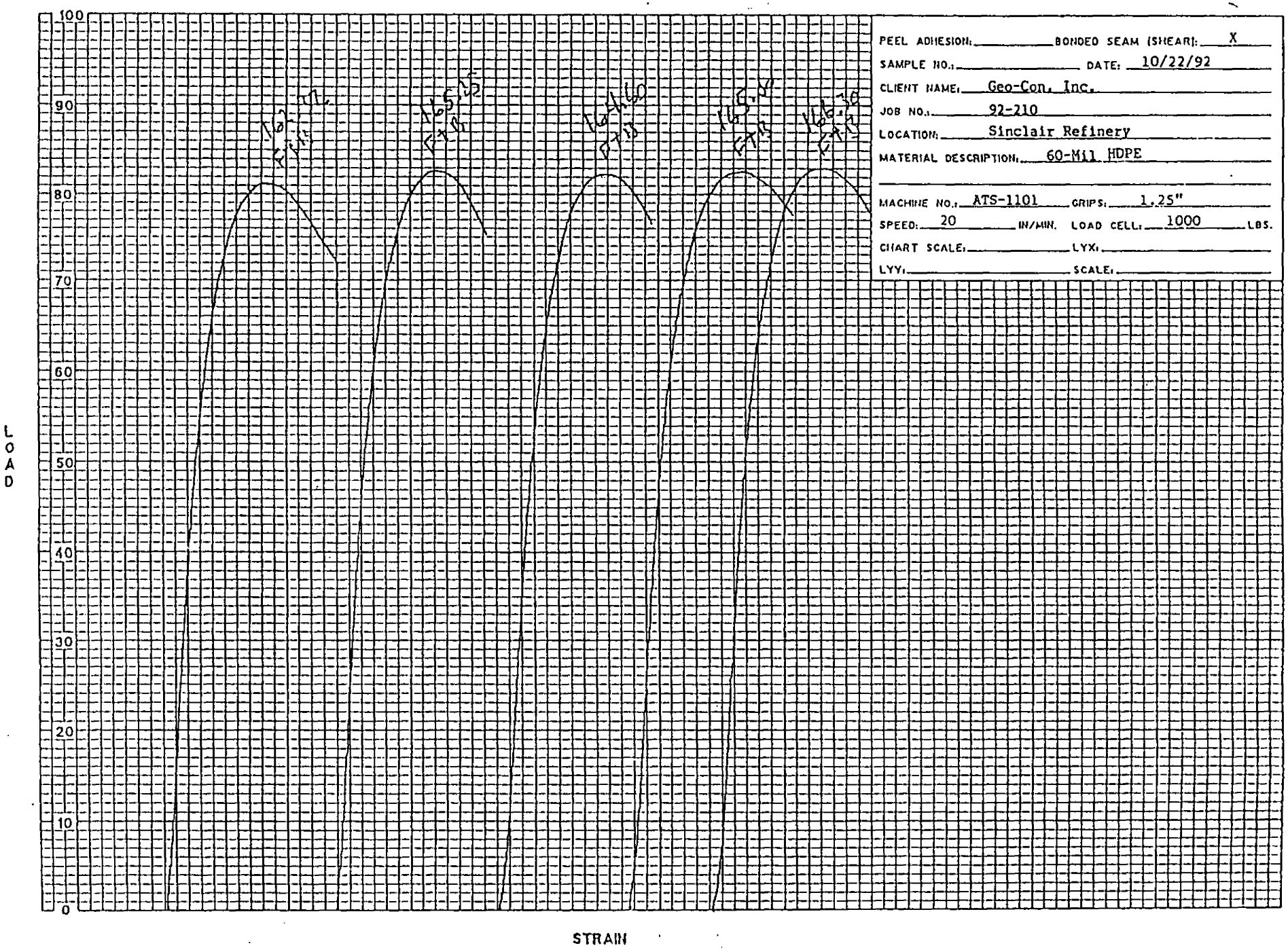
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	117.37	FTB
2	1.0	101.62	FTB
3	1.0	102.82	FTB
4	1.0	115.97	FTB
5	1.0	116.92	FTB
Average		110.94	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	162.32	FTB
2	1.0	165.25	FTB
3	1.0	164.60	FTB
4	1.0	165.00	FTB
5	1.0	166.30	FTB
Average		164.69	

HLDT = Double Textured VLDPE
HLST = Single Textured VLDPE
HLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

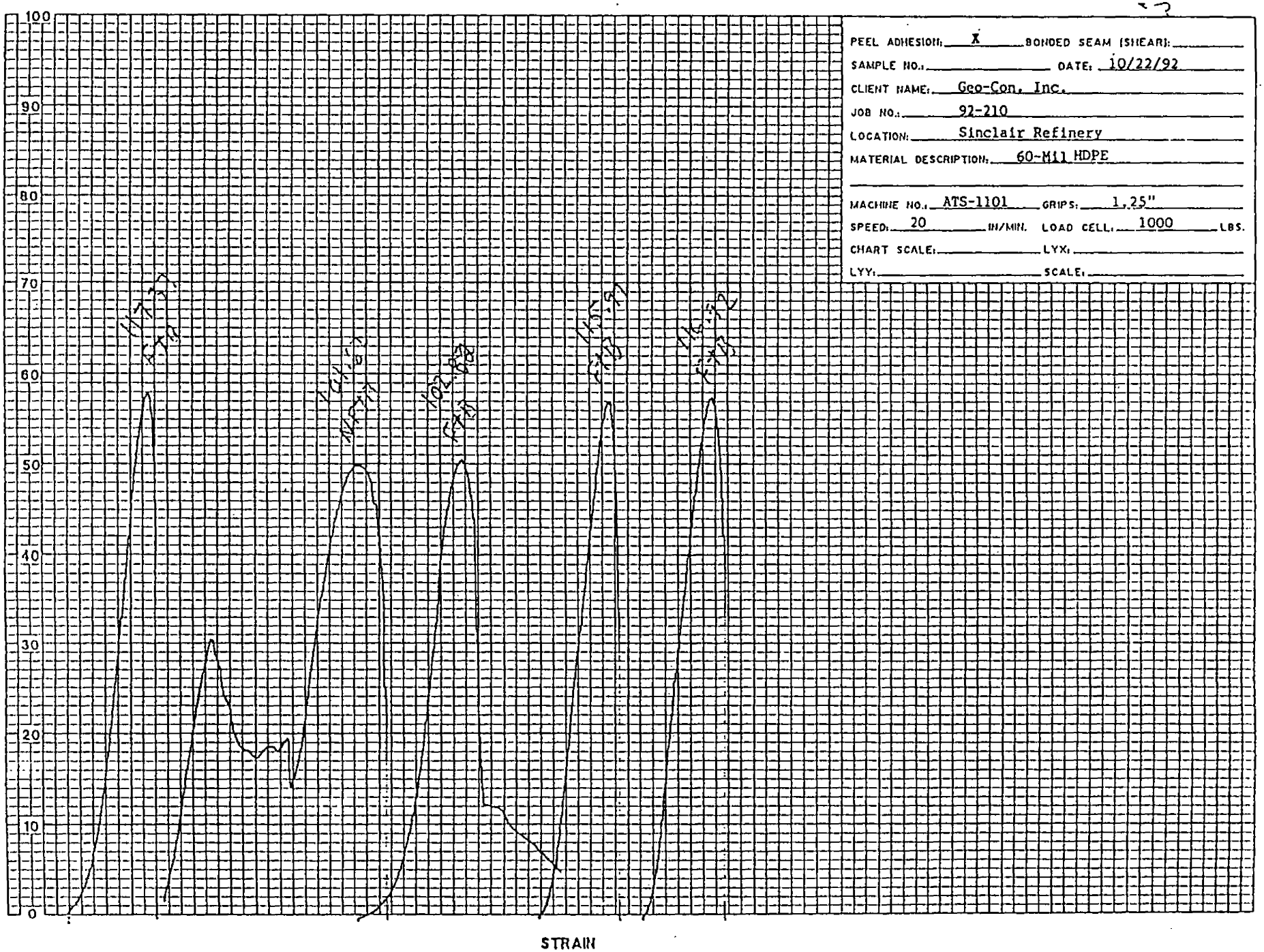
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X
SAMPLE NO.: _____ DATE: 10/22/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil HDPE

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
MAI NO. 92-210
P.O. NO. 20827

REPORT II

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GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT II

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

OCTOBER 30, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - 1C TECHNICIAN: CMB

SEAM NO.: 2 - 3 MANUFACTURER: Gundle

PANEL: 2 - 3 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

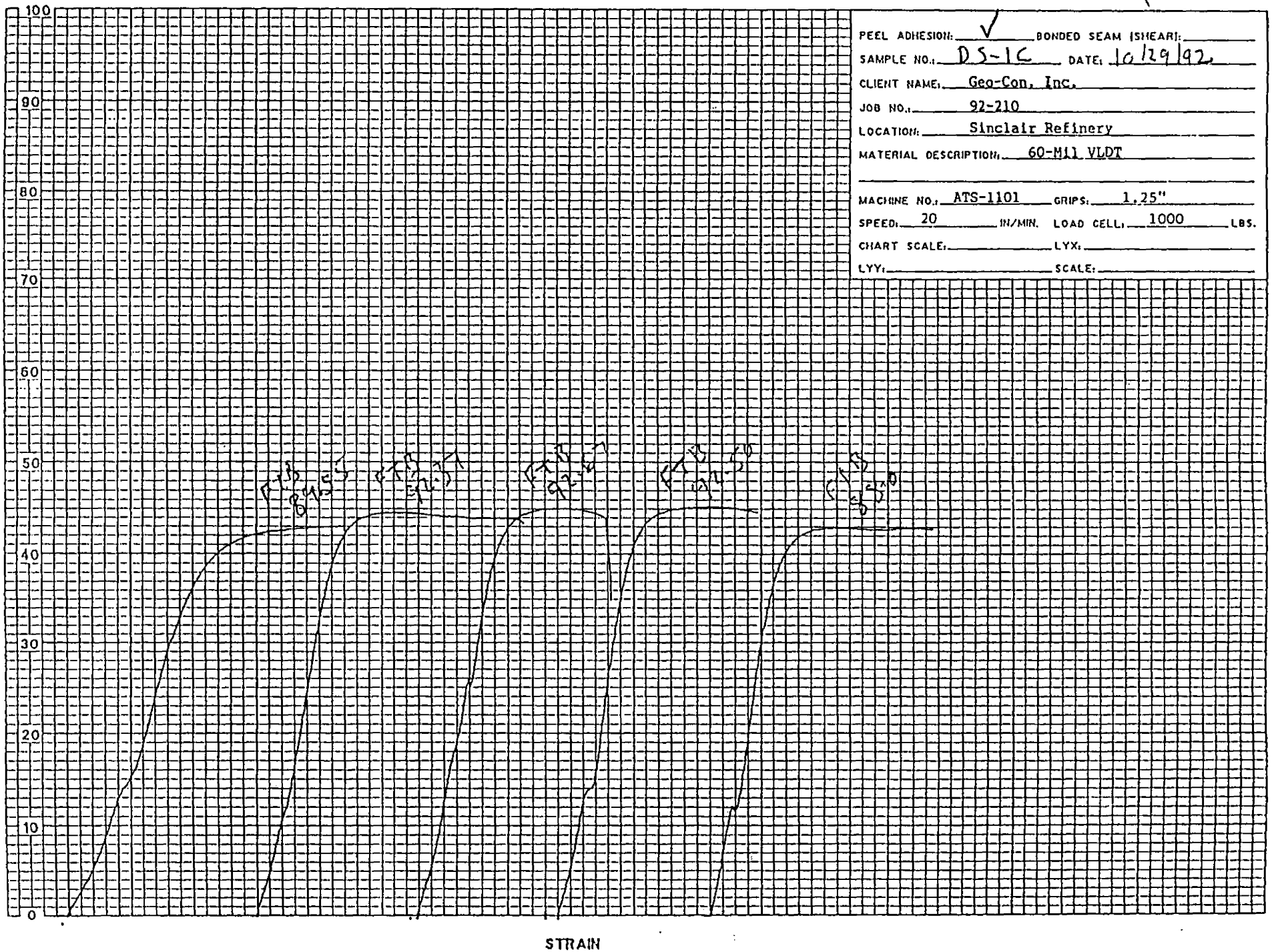
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.55	FTB
2	1.0	92.37	FTB
3	1.0	92.67	FTB
4	1.0	92.50	FTB
5	1.0	88.0	FTB
Average		91.10	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.02	FTB
2	1.0	94.27	FTB
3	1.0	93.32	FTB
4	1.0	93.17	FTB
5	1.0	92.95	FTB
Average		93.95	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

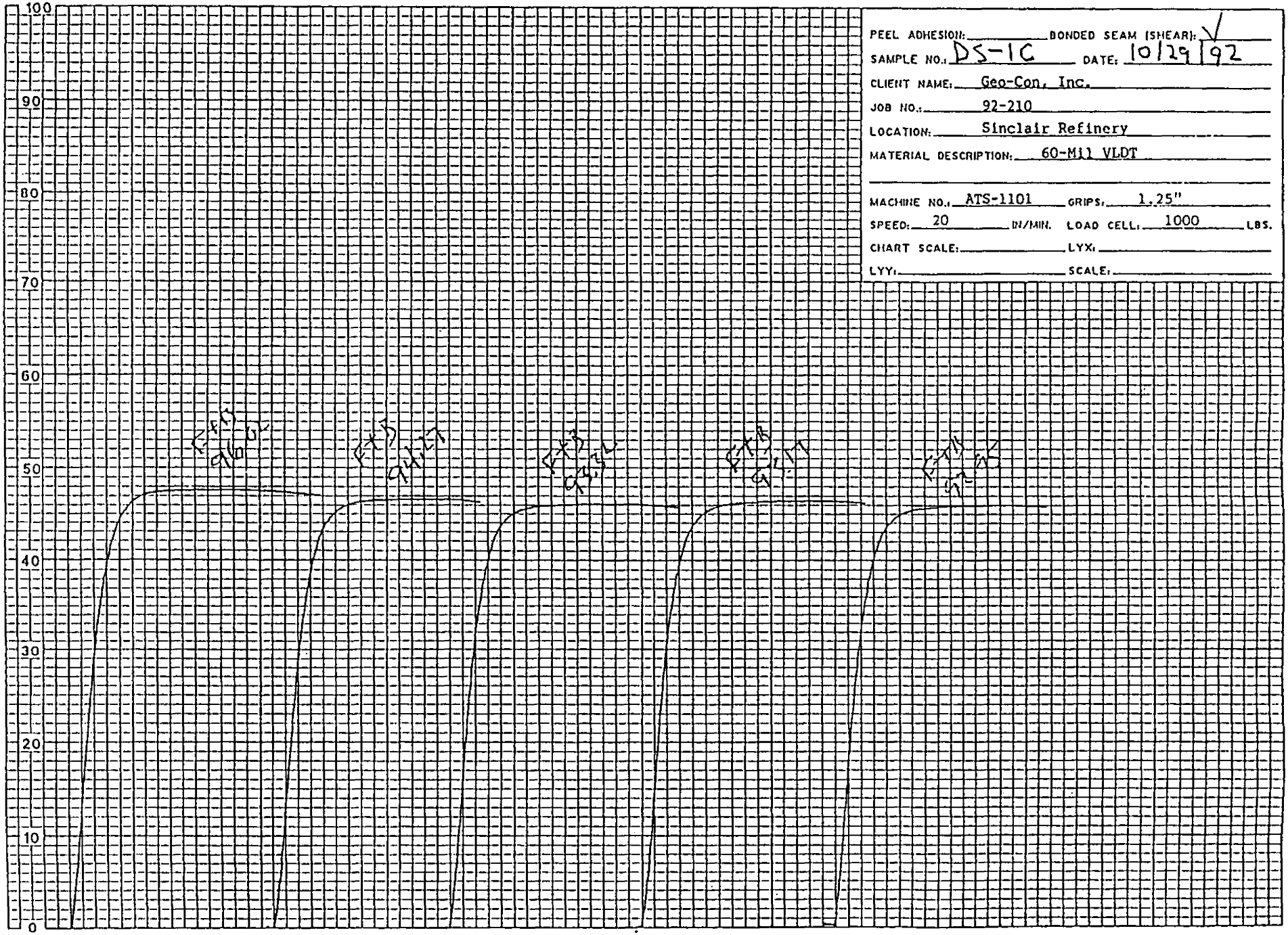
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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):
SAMPLE NO.: DS-1C DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DS-1C DATE: 10/29/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - 2C TECHNICIAN: CMB

SEAM NO.: 3 - 4 MANUFACTURER: Gundle

PANEL: 3 - 4 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY____ SECONDARY____

MATERIAL TYPE: VLDT x VLST___ VLDPE___ WELD TYPE: D-FUSION____ EXTRUSION____

Peel Adhesion Test Data

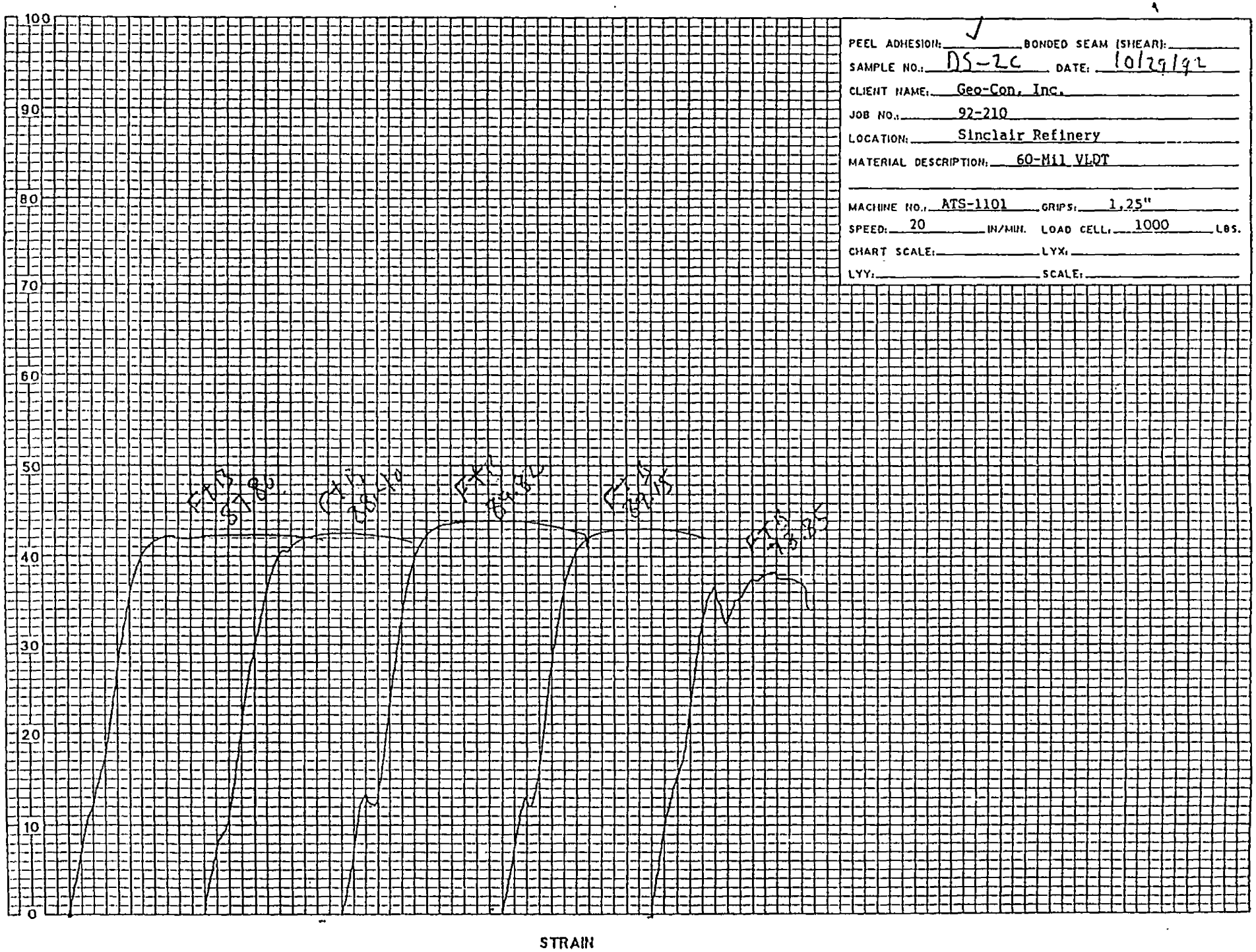
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	87.80	FTB
2	1.0	88.40	FTB
3	1.0	89.82	FTB
4	1.0	89.15	FTB
5	1.0	78.85	FTB *
Average		86.80	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.72	FTB
2	1.0	90.97	FTB
3	1.0	90.75	FTB
4	1.0	90.25	FTB
5	1.0	87.47	FTB
Average		90.23	

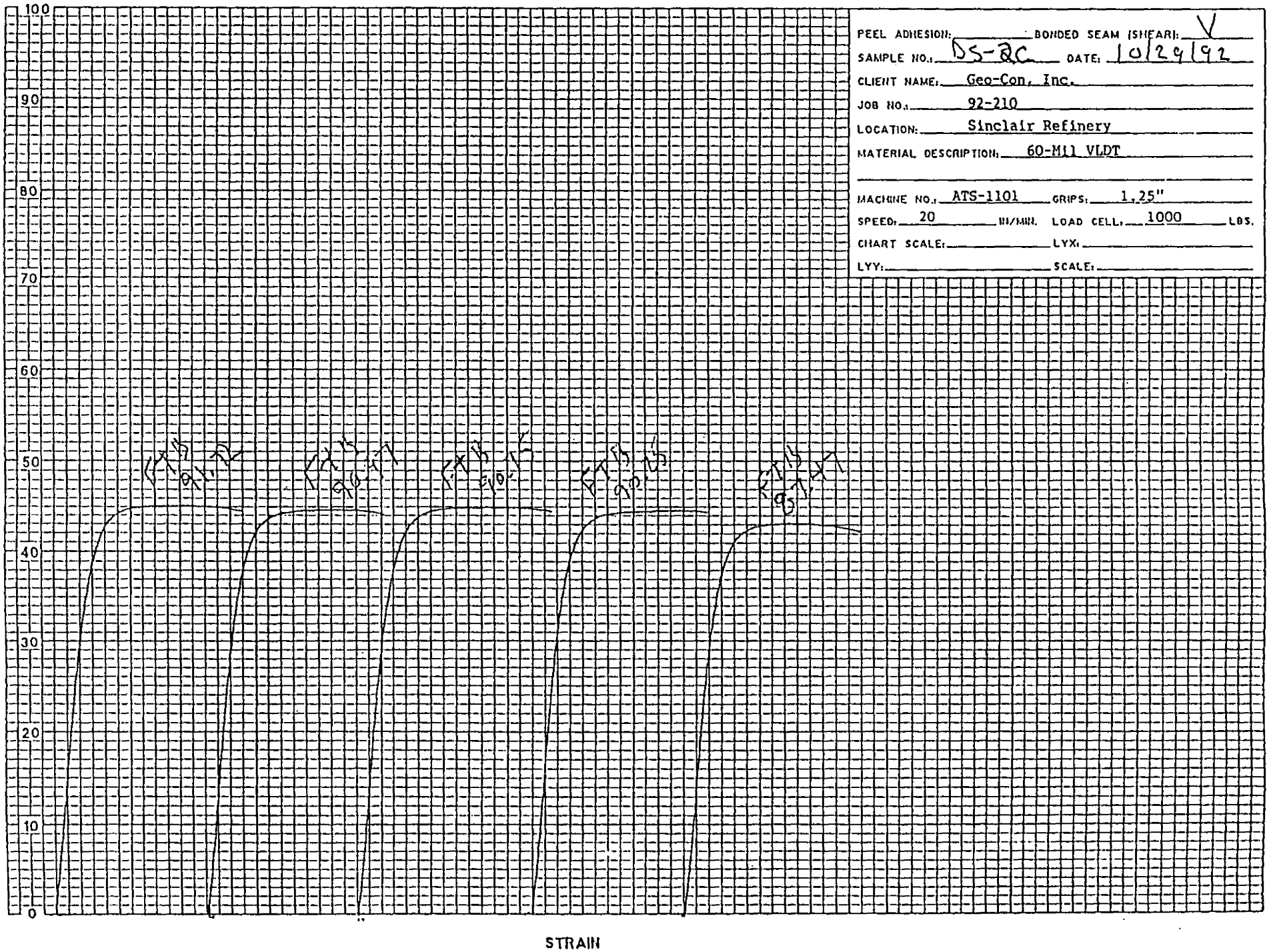
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V
SAMPLE NO.: DS-2C DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - 3C TECHNICIAN: CMB

SEAM NO.: 4 - 5 MANUFACTURER: Gundle

PANEL: 4 - 5 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION ___ EXTRUSION ___

Peel Adhesion Test Data

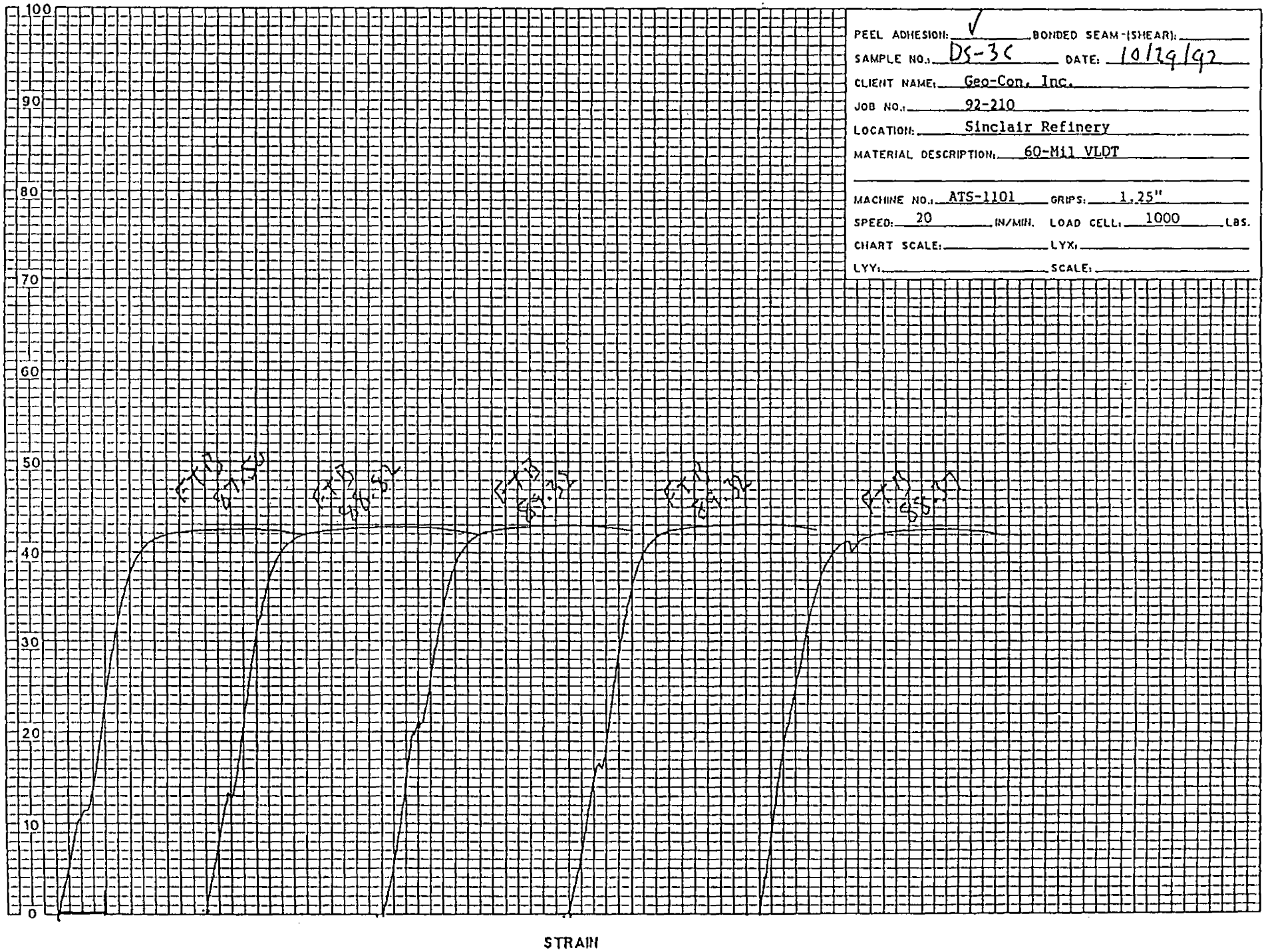
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	87.50	FTB
2	1.0	88.82	FTB
3	1.0	89.32	FTB
4	1.0	89.32	FTB
5	1.0	88.37	FTB
Average		88.67	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.75	FTB
2	1.0	91.02	FTB
3	1.0	90.65	FTB
4	1.0	90.52	FTB
5	1.0	90.22	FTB
Average		90.83	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

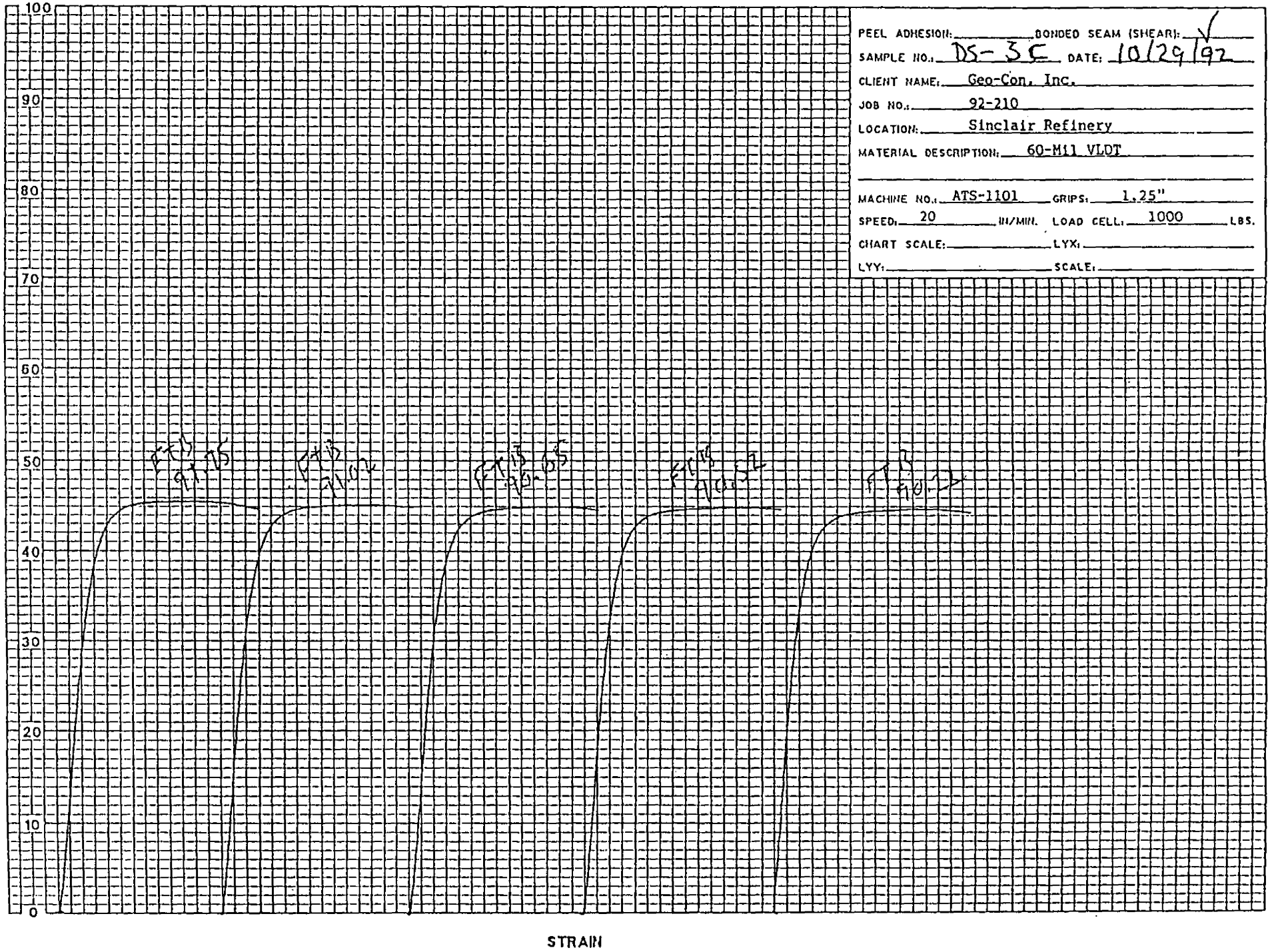
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PEEL ADHESION: ✓ BONDED SEAM-(SHEAR):
SAMPLE NO.: DS-3C DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - C4 TECHNICIAN: CMB

SEAM NO.: 6 MANUFACTURER: Gundle

PANEL: 6 - 7 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY____ SECONDARY____

MATERIAL TYPE: VLDT x VLST___ VLDPE___ WELD TYPE: D-FUSION____ EXTRUSION___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	87.47	FTB
2	1.0	90.40	FTB
3	1.0	90.72	FTB
4	1.0	87.15	FTB
5	1.0	90.70	FTB
Average		89.29	

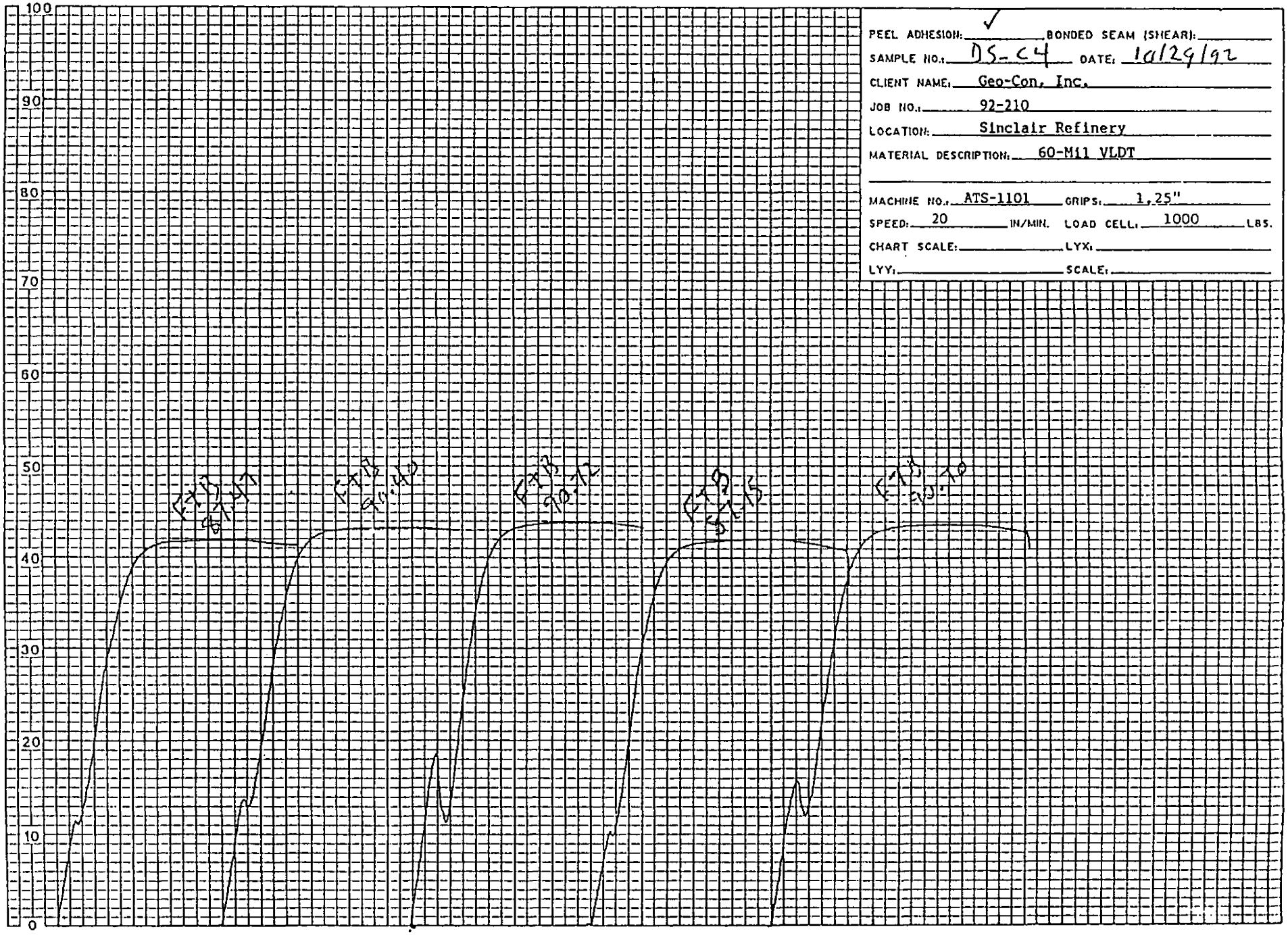
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.95	FTB
2	1.0	90.25	FTB
3	1.0	90.87	FTB
4	1.0	91.07	FTB
5	1.0	89.27	FTB
Average		90.48	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C4 DATE: 10/29/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-M11 VLDT

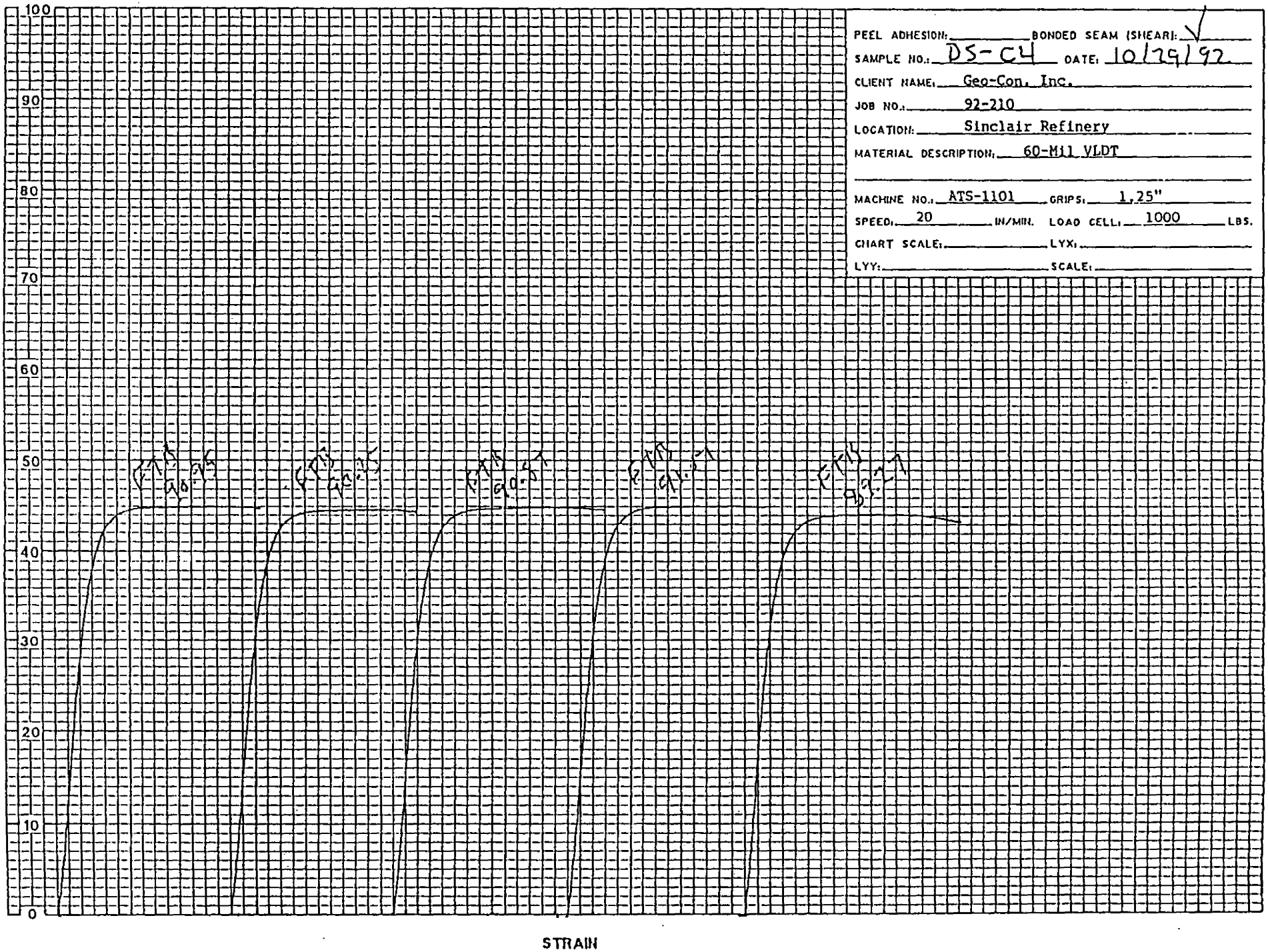
MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): √

SAMPLE NO.: DS-C4 DATE: 10/29/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - C5 TECHNICIAN: CMB

SEAM NO.: 7 MANUFACTURER: Gundle

PANEL: 7 - 8 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT ___ VLST ___ VLDPE ___ WELD TYPE: D-FUSION ____ EXTRUSION ____

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.15	FTB
2	1.0	89.35	FTB
3	1.0	89.62	FTB
4	1.0	89.57	FTB
5	1.0	89.72	FTB
Average		89.48	

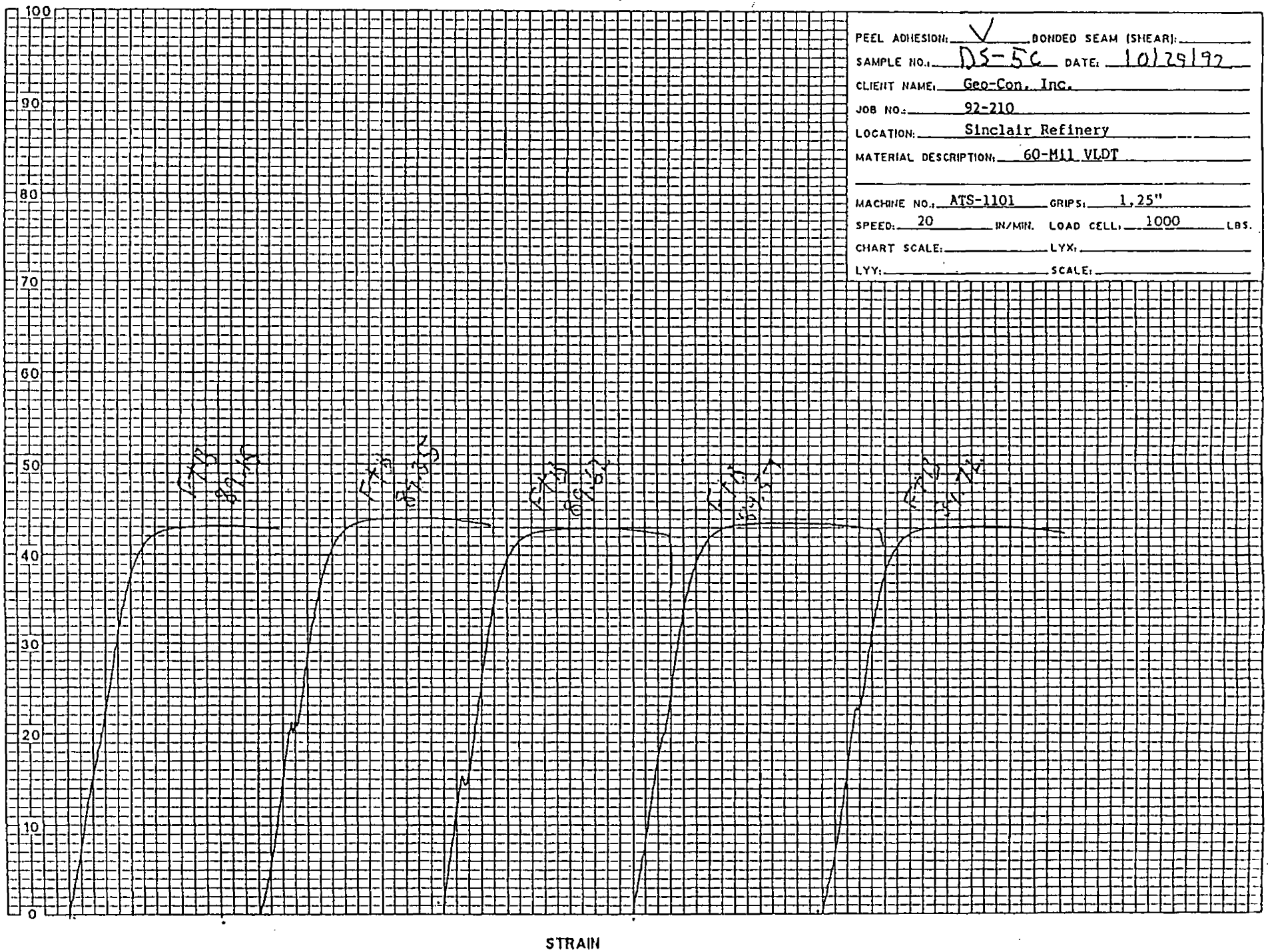
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.85	FTB
2	1.0	86.80	FTB
3	1.0	90.47	FTB
4	1.0	89.95	FTB
5	1.0	88.40	FTB
Average		89.49	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: V BONDED SEAM (SHEAR):

SAMPLE NO.: DS-5C DATE: 10/29/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DS-C5 DATE: 10/29/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

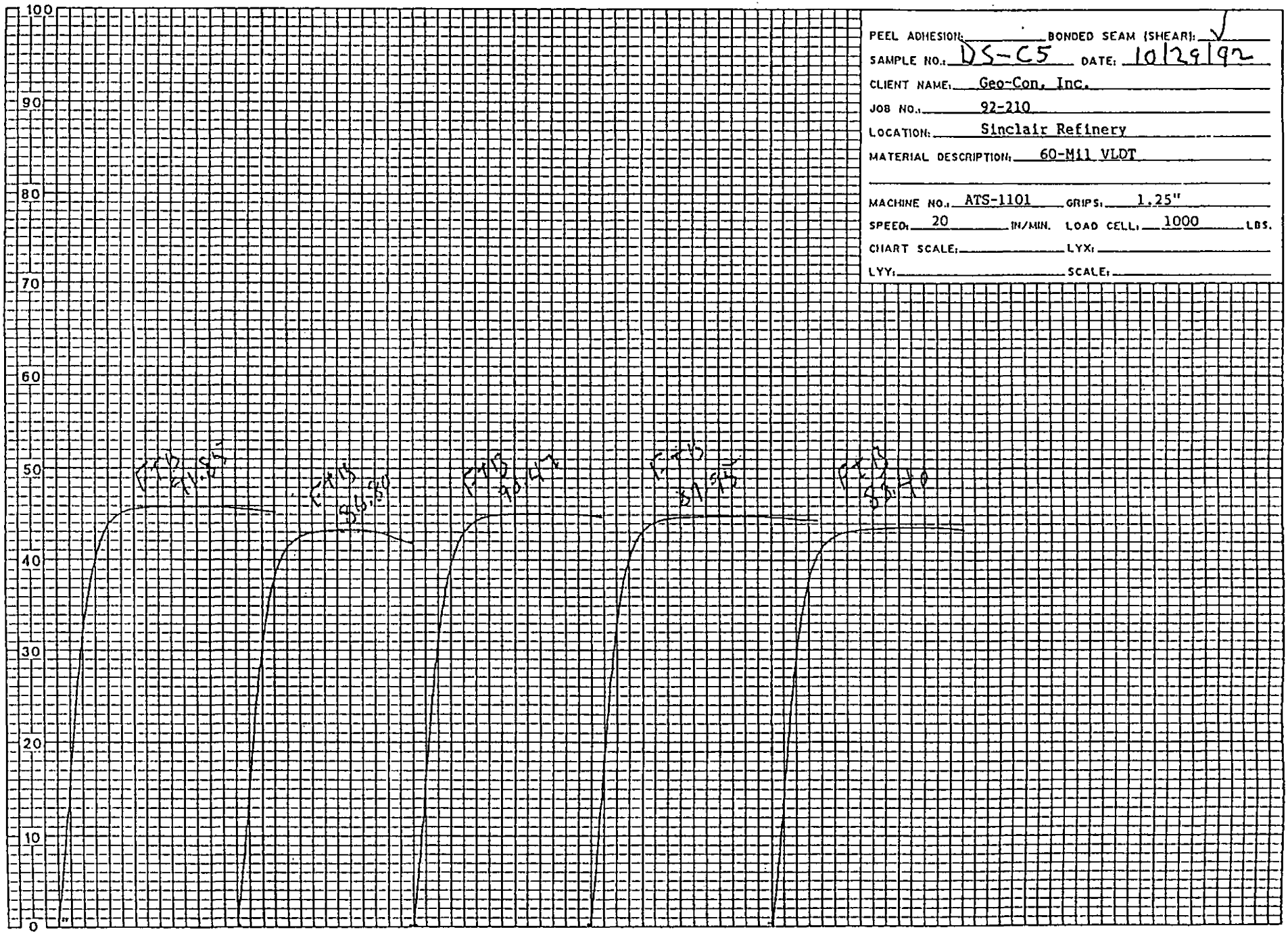
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - C6 TECHNICIAN: CMB

SEAM NO.: 10 - 11 MANUFACTURER: Gundle

PANEL: 10 - 11 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

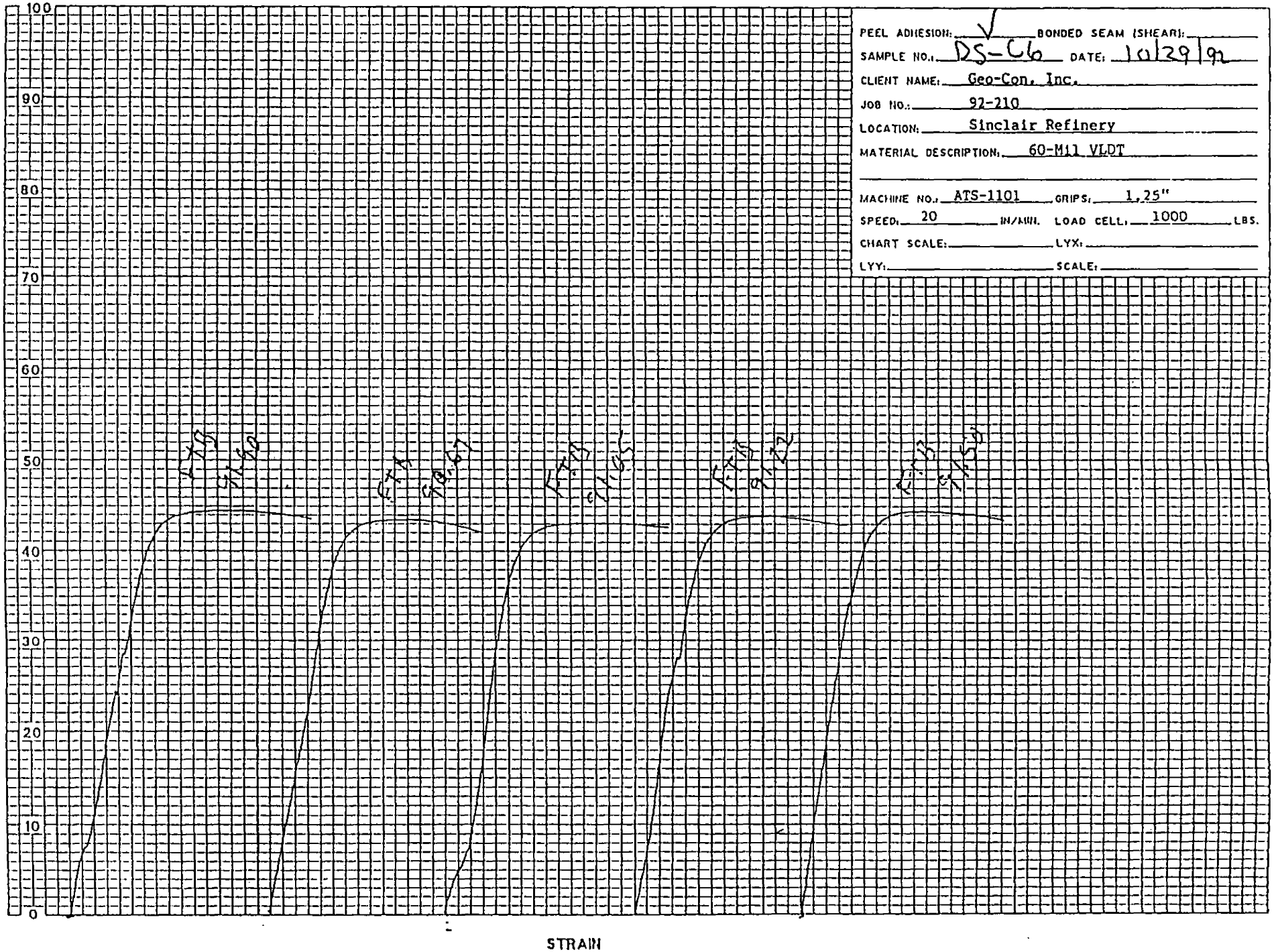
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.90	FTB
2	1.0	90.67	FTB
3	1.0	91.05	FTB
4	1.0	91.22	FTB
5	1.0	91.50	FTB
Average		91.27	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.95	FTB
2	1.0	93.30	FTB
3	1.0	92.75	FTB
4	1.0	92.55	FTB
5	1.0	91.67	FTB
Average		92.64	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

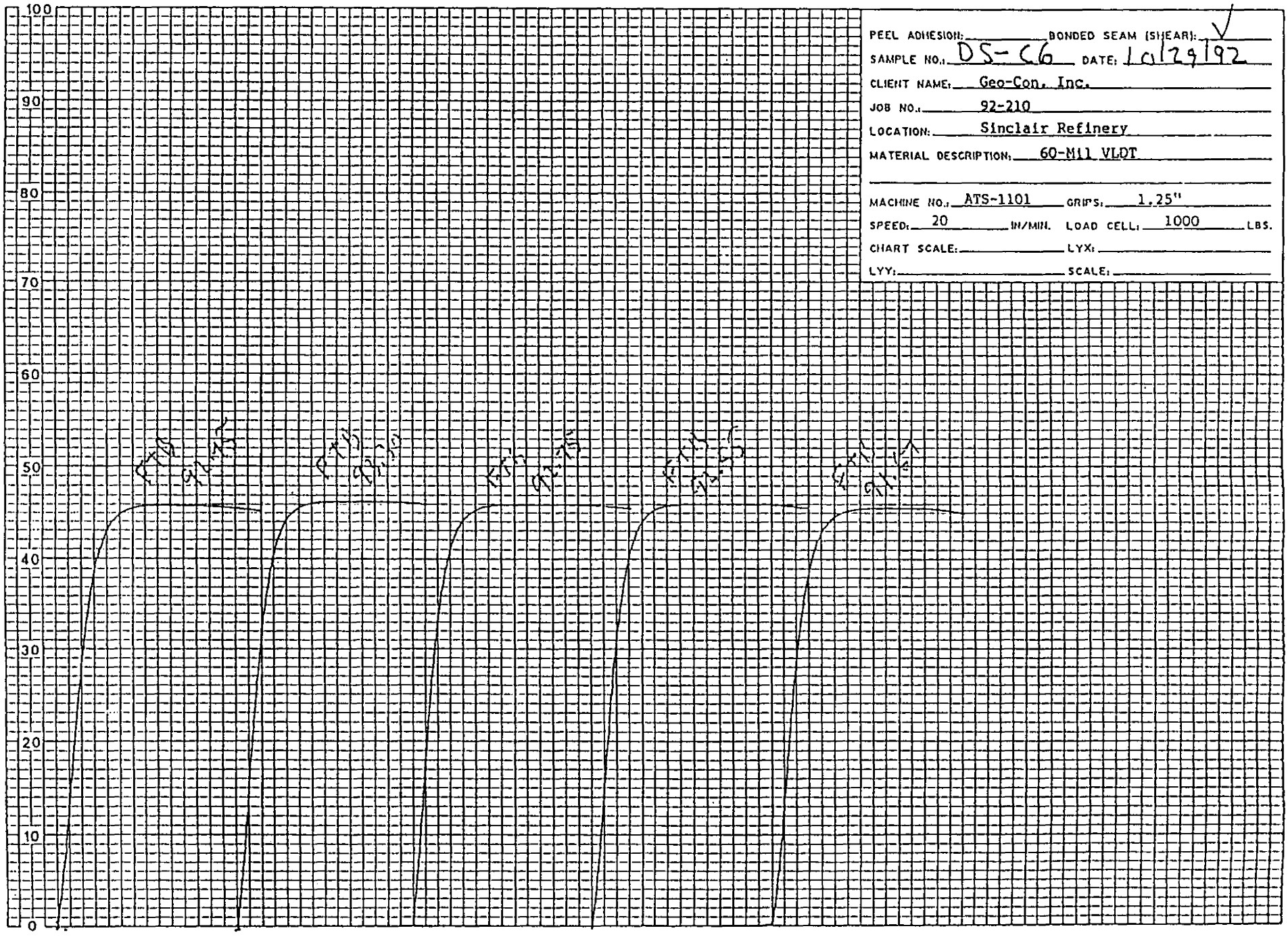
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PEEL ADHESION: √ BONDED SEAM (SHEAR): _____
SAMPLE NO.: DS-C6 DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): √
SAMPLE NO.: DS-C6 DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - C7 TECHNICIAN: CMB

SEAM NO.: 7 - 8 MANUFACTURER: Gundle

PANEL: 7 - 8 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

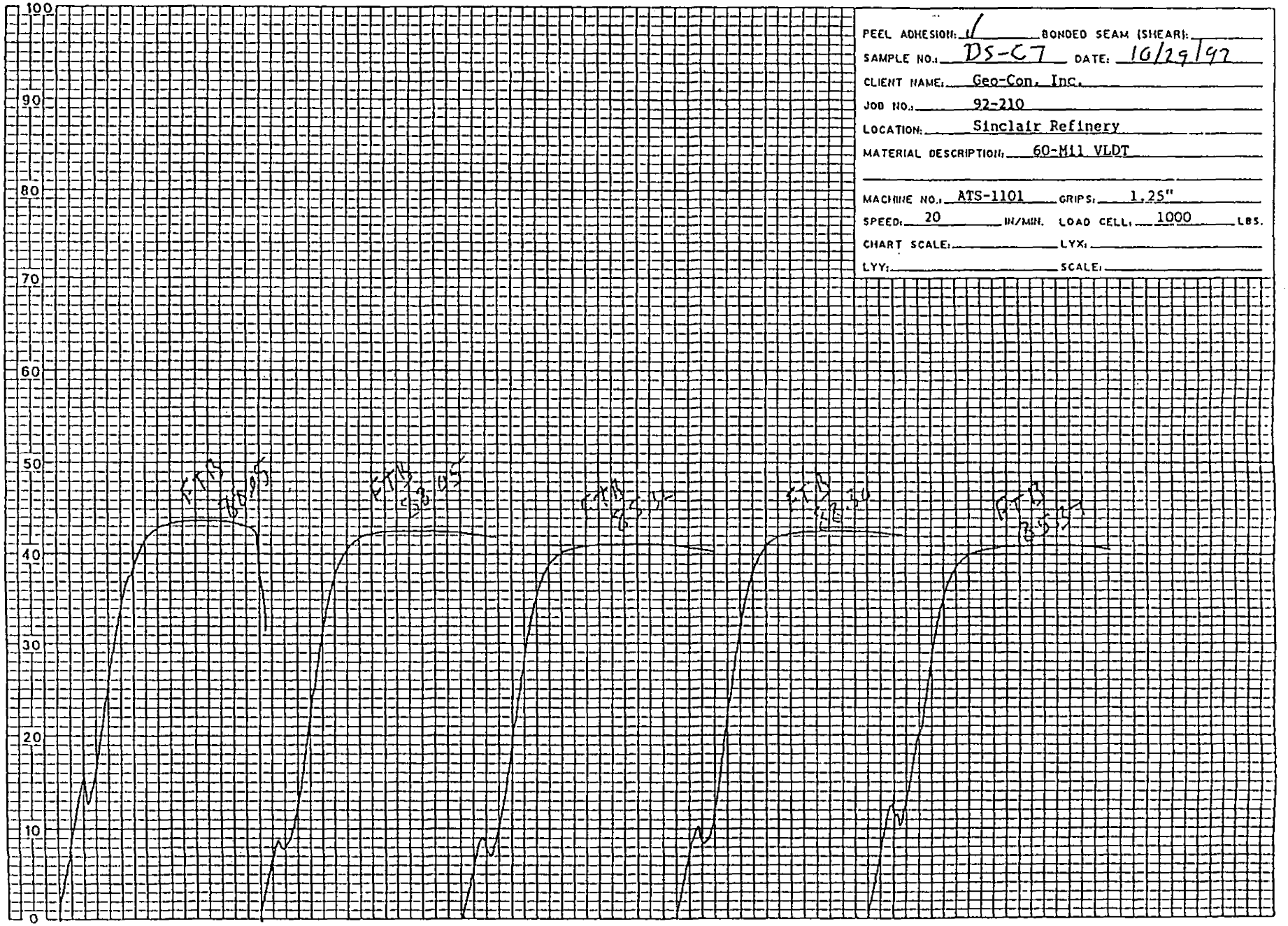
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	88.05	FTB
2	1.0	88.05	FTB
3	1.0	85.32	FTB
4	1.0	88.30	FTB
5	1.0	85.37	FTB
Average		87.02	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.85	FTB
2	1.0	89.72	FTB
3	1.0	89.25	FTB
4	1.0	88.57	FTB
5	1.0	87.20	FTB
Average		88.92	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

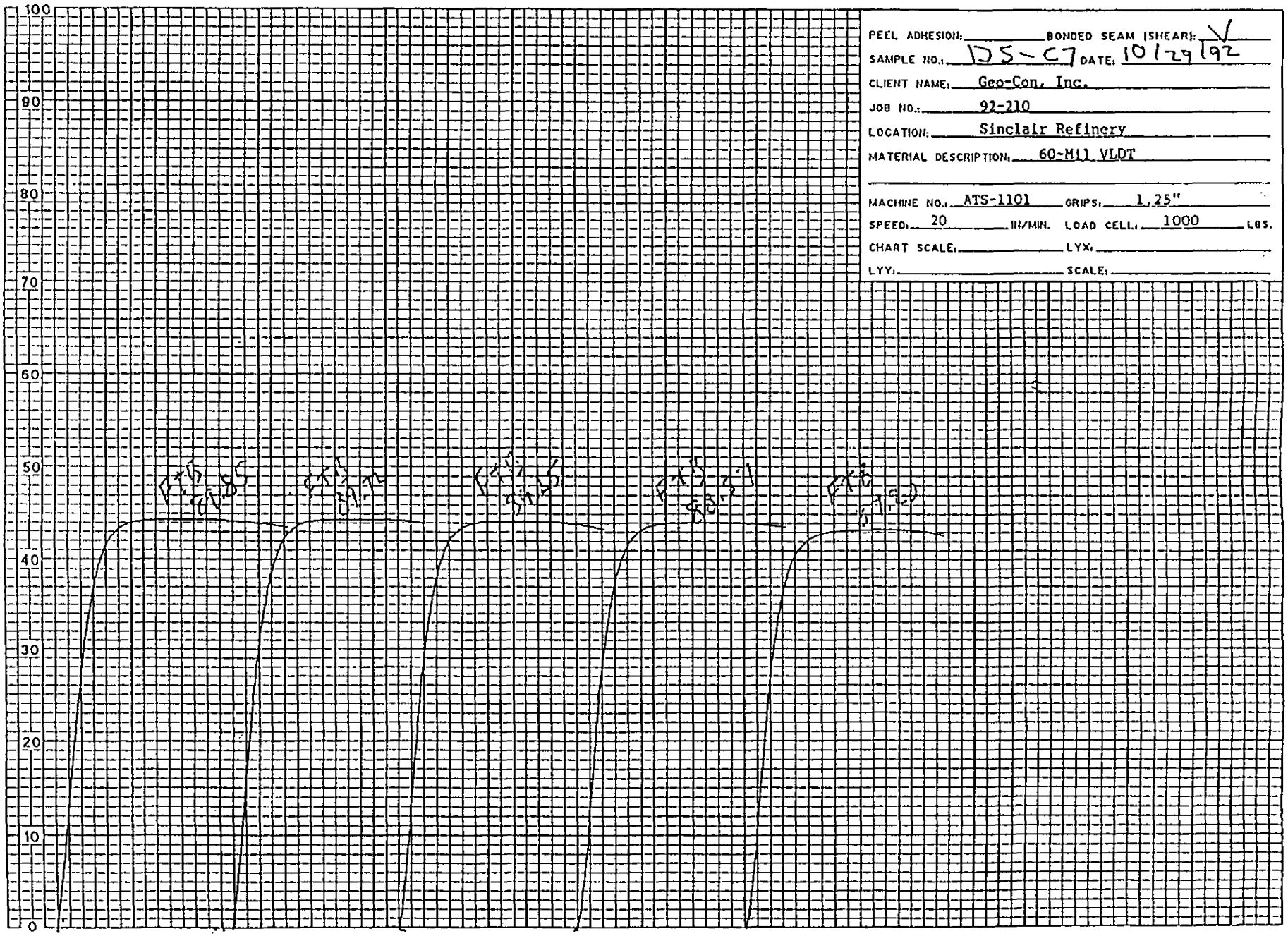
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V
SAMPLE NO.: DS-C7 DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL.: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/29/92

SAMPLE NO.: DS - C8 TECHNICIAN: CMB

SEAM NO.: 12 - 13 MANUFACTURER: Gundle

PANEL: 12 - 13 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

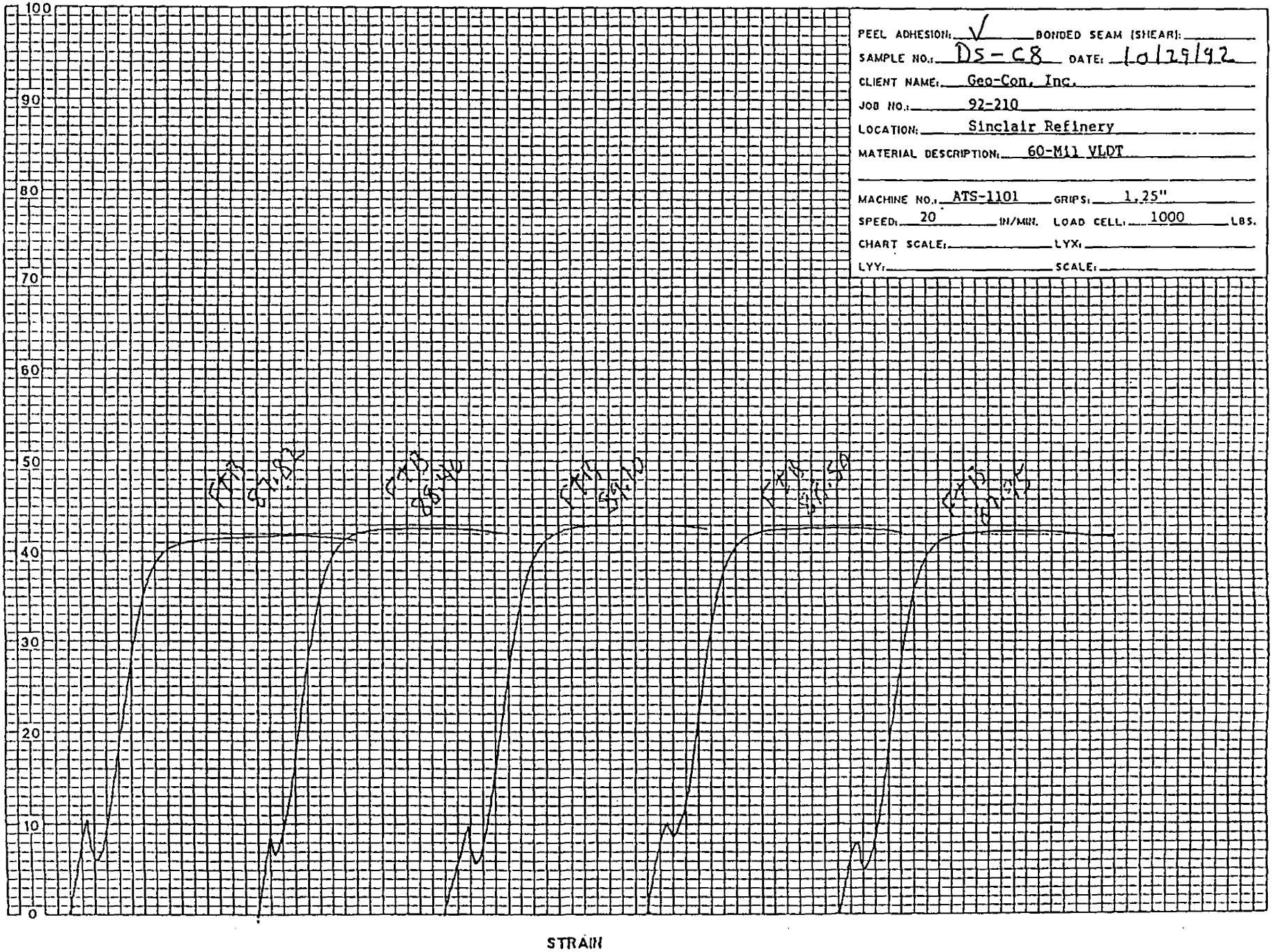
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	87.82	FTB
2	1.0	88.40	FTB
3	1.0	89.10	FTB
4	1.0	88.50	FTB
5	1.0	87.95	FTB
Average		88.35	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	87.05	FTB
2	1.0	89.22	FTB
3	1.0	88.87	FTB
4	1.0	89.47	FTB
5	1.0	88.77	FTB
Average		88.68	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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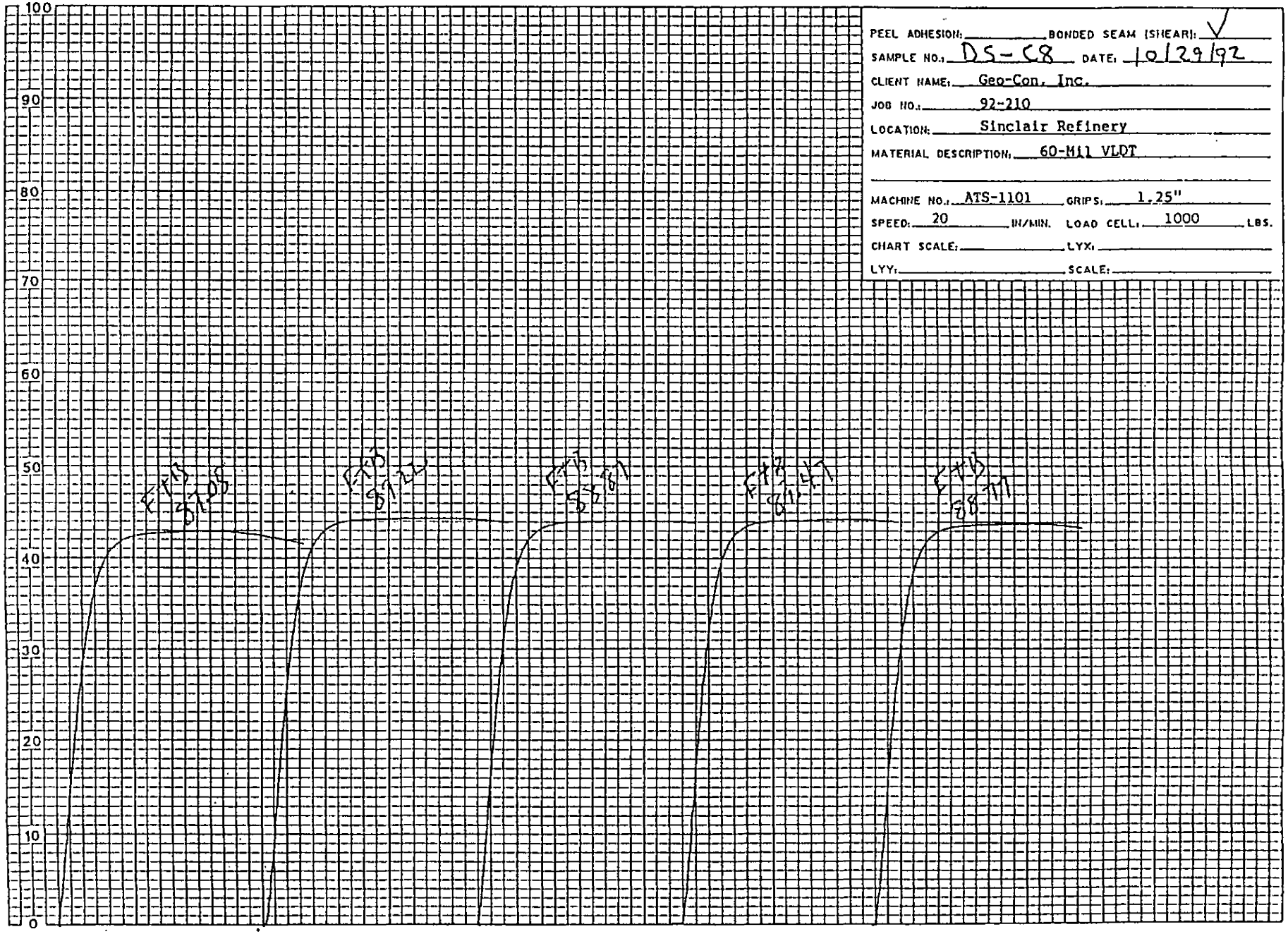


PEEL ADHESION: V BONDED SEAM (SHEAR): _____
SAMPLE NO.: DS-C8 DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT
MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V
SAMPLE NO.: DS-C8 DATE: 10/29/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____



GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
MAI NO. 92-210
P.O. NO. 20827

REPORT III

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Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT III

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

NOVEMBER 19, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C-9 TECHNICIAN: CMB

SEAM NO.: 19/20 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.82	FTB
2	1.0	92.42	FTB
3	1.0	92.37	FTB
4	1.0	93.12	FTB
5	1.0	92.10	FTB
Average		92.57	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.87	FTB
2	1.0	96.47	FTB
3	1.0	97.80	FTB
4	1.0	96.10	FTB
5	1.0	96.52	FTB
Average		96.75	

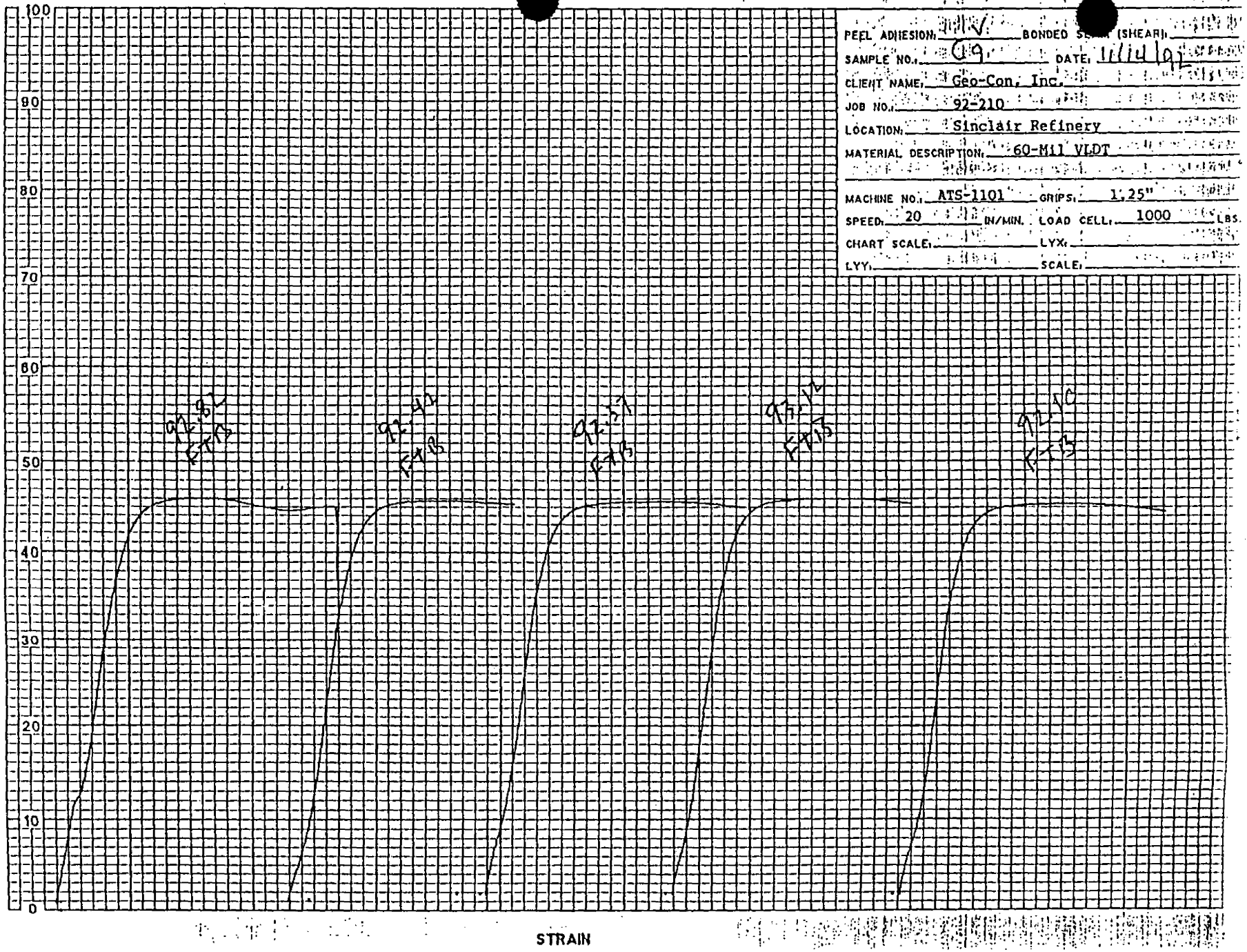
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

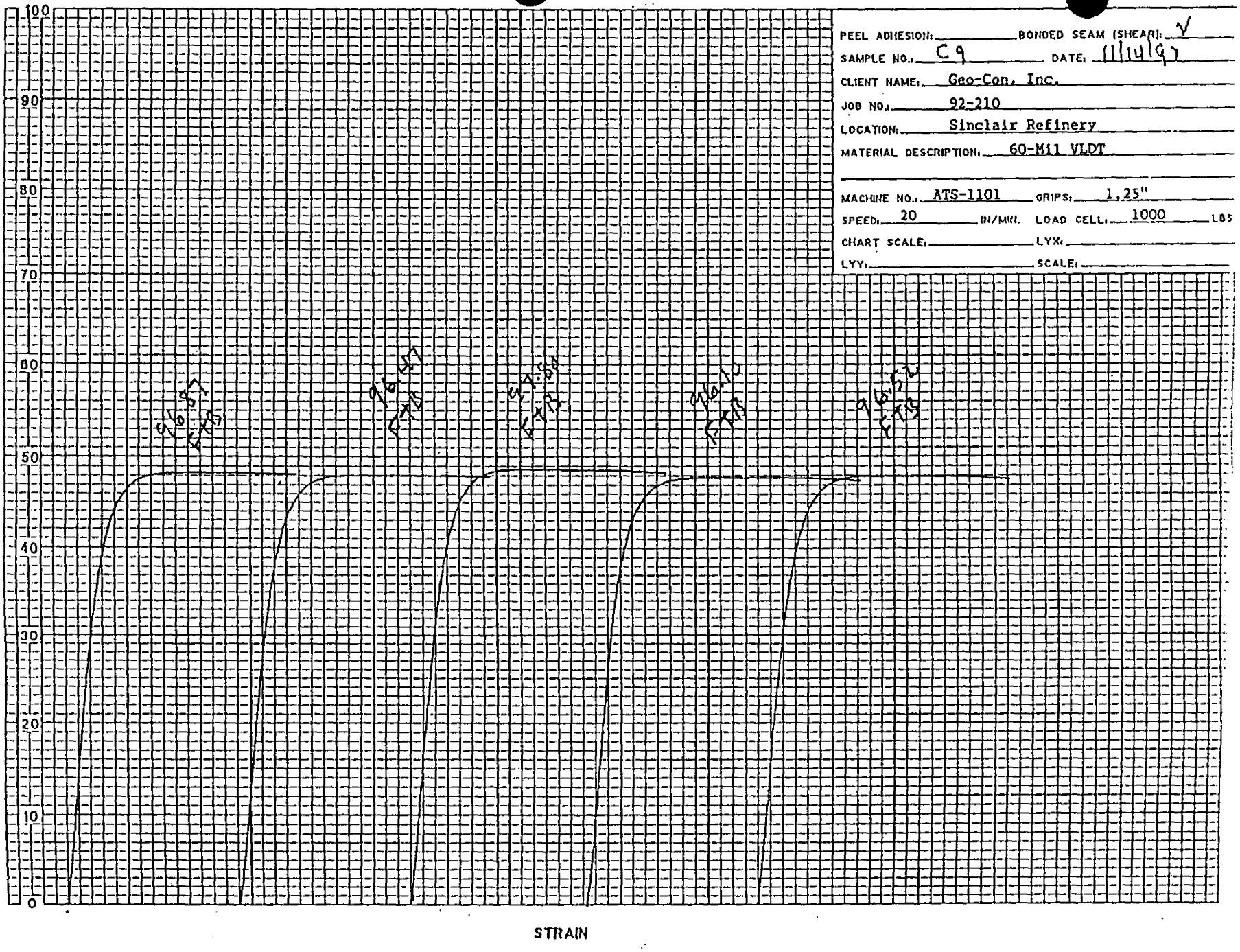
Consulting Engineers • 413 Penn Avenue • Little Creek, PA 15[illegible] • (41[illegible]-20[illegible] FAX [illegible]0[illegible]

PEEL ADHESION: [illegible]V BONDED S[illegible] (SHEAR):
SAMPLE NO.: 09 DATE: 11/14/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX: LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V

SAMPLE NO.: C9 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 10 TECHNICIAN: CMB

SEAM NO.: 20/21 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	88.60	FTB
2	1.0	94.57	FTB
3	1.0	94.62	FTB
4	1.0	94.27	FTB
5	1.0	94.27	FTB
Average		93.27	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.32	FTB
2	1.0	93.62	FTB
3	1.0	93.17	FTB
4	1.0	92.37	FTB
5	1.0	92.22	FTB
Average		92.94	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):

SAMPLE NO.: C10 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

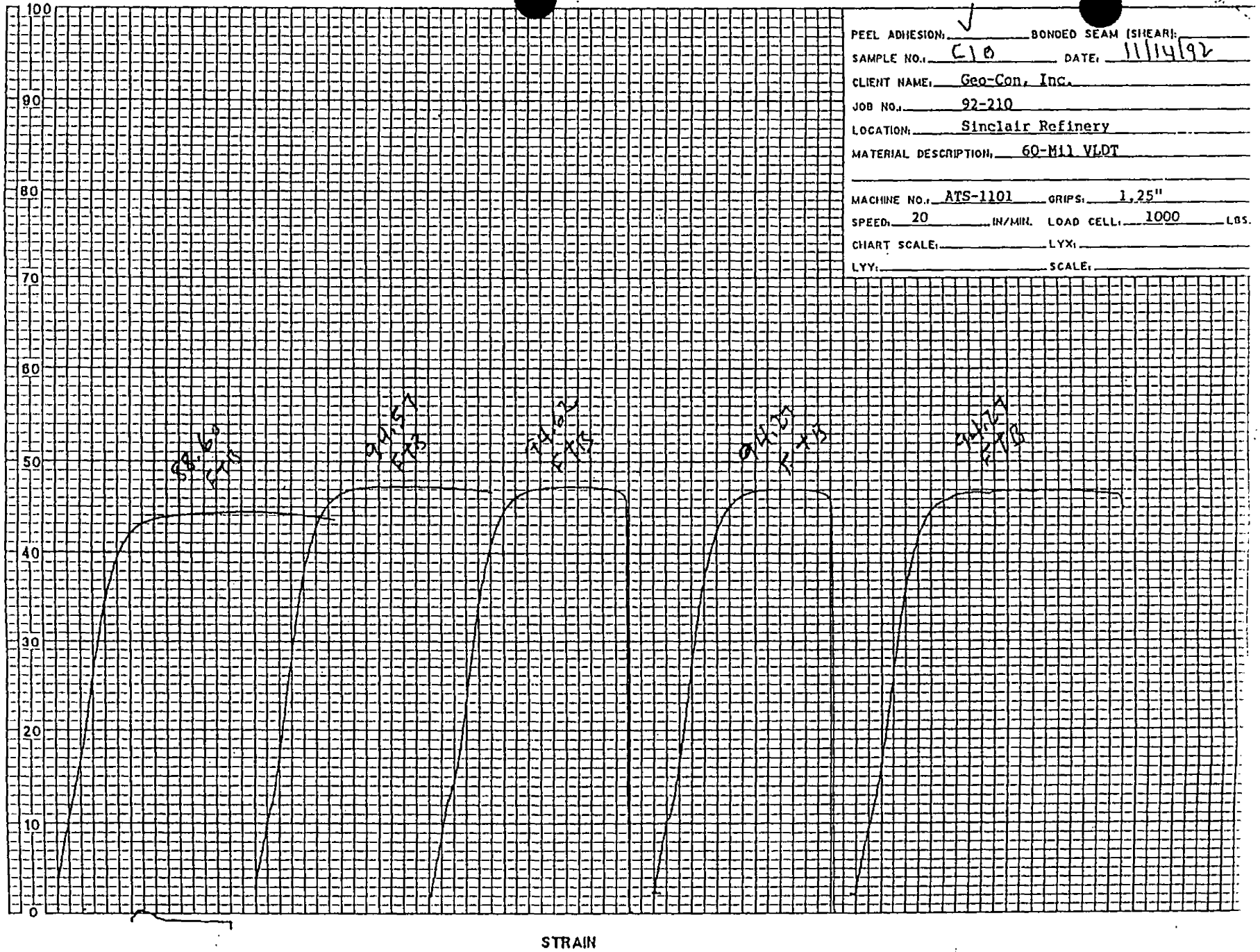
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V

SAMPLE NO.: C 10 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

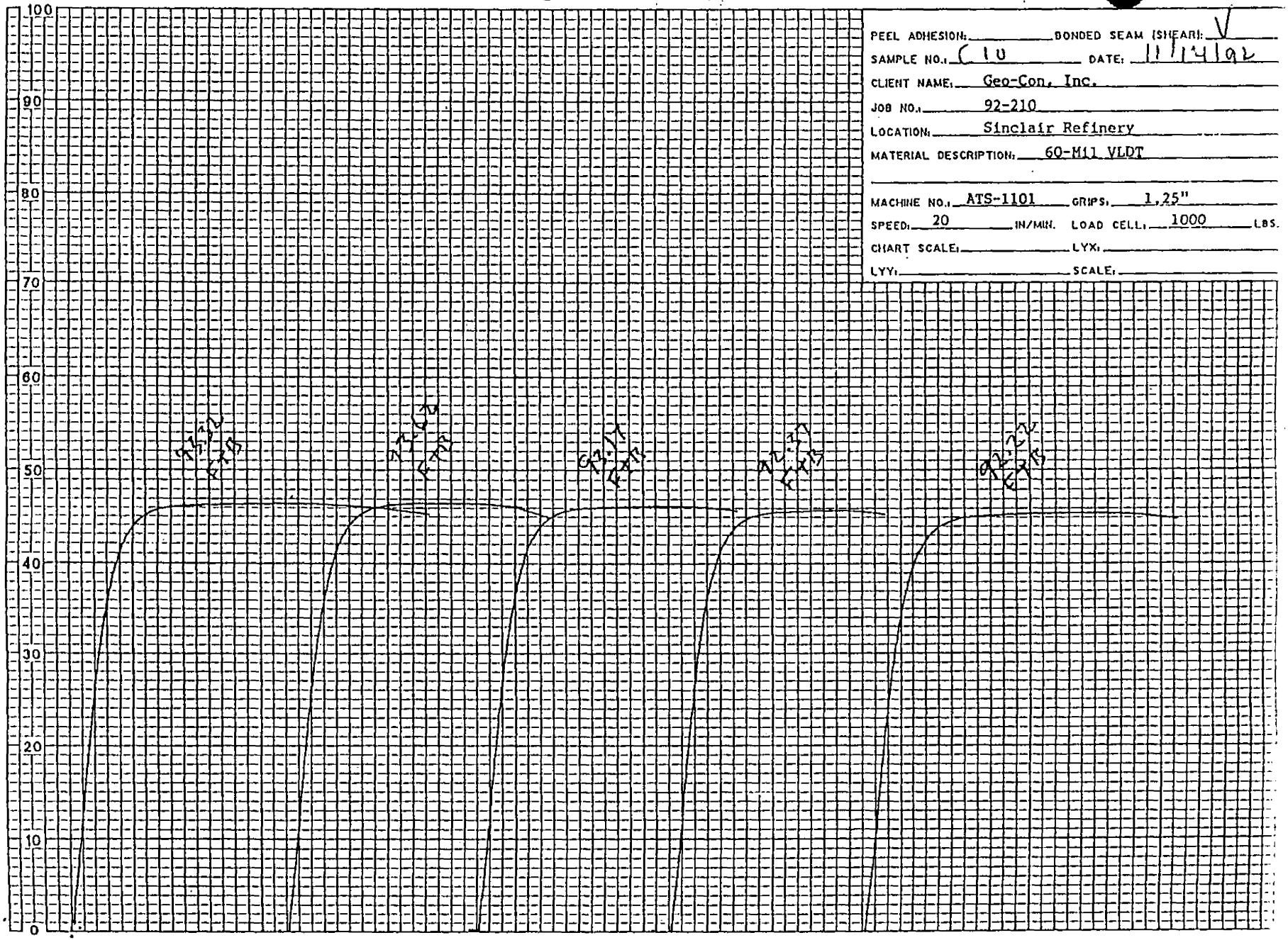
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

LIENT: Geo-Con, Inc. JOB NO.: 92-210

:OJECT: Sinclair Refinery DATE TESTED: 11/14/92

:AMPLE NO.: C 11 TECHNICIAN: CMB

:EAM NO.: 21/22 MANUFACTURER: Gundle

:ANEL: MACHINE: ATS-11-1

:ATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

:ATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION ____ EXTRUSION ____

eel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	99.02	FTB
2	1.0	91.95	FTB
3	1.0	92.92	FTB
4	1.0	96.60	FTB
5	1.0	93.40	FTB
Average		94.78	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.67	FTB
2	1.0	94.92	FTB
3	1.0	94.70	FTB
4	1.0	94.42	FTB
5	1.0	95.02	FTB
Average		94.95	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: √ BONDED SEAM (SHEAR): –

SAMPLE NO.: C 11 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

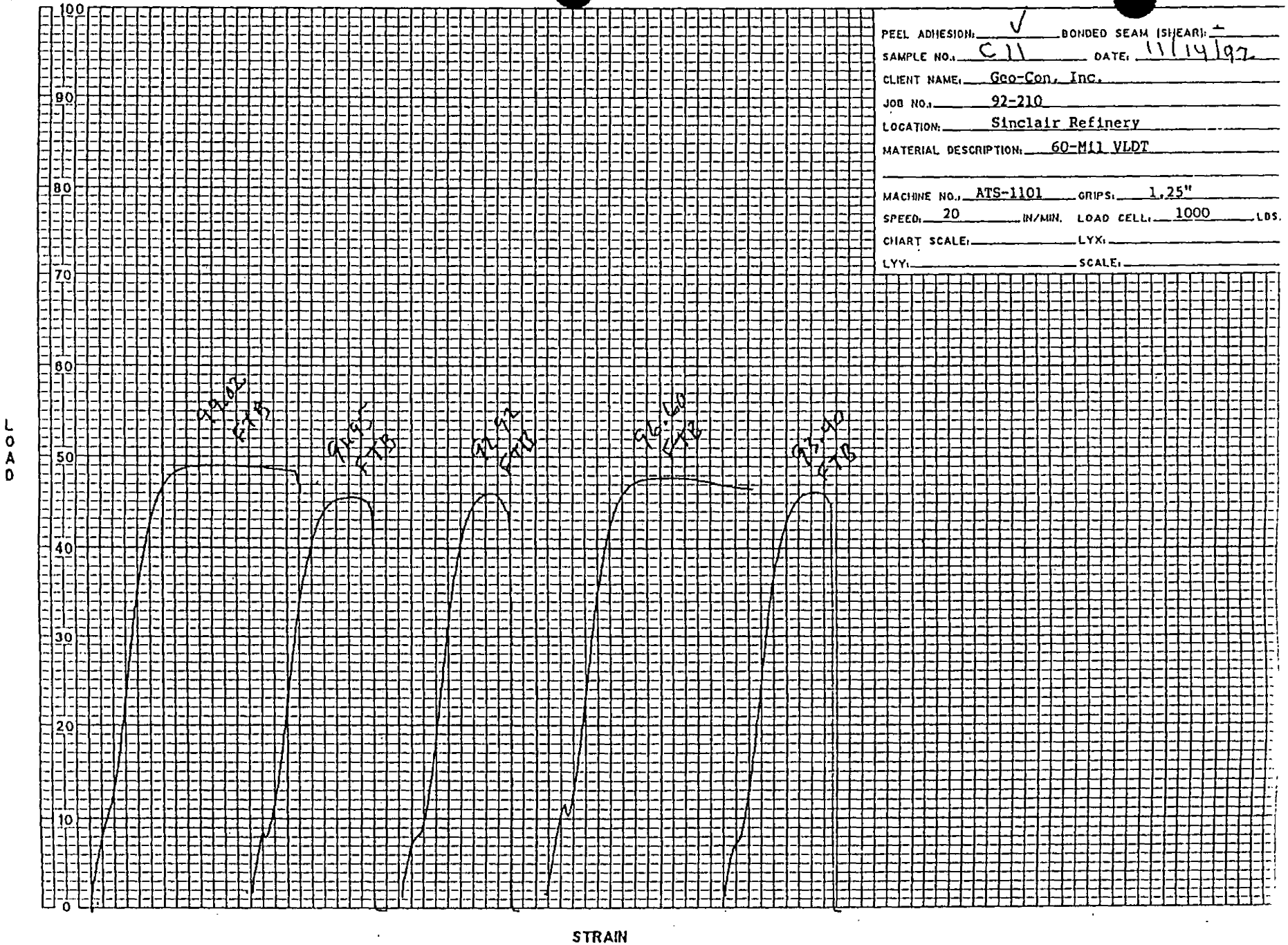
LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX: LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C11 DATE: 12/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

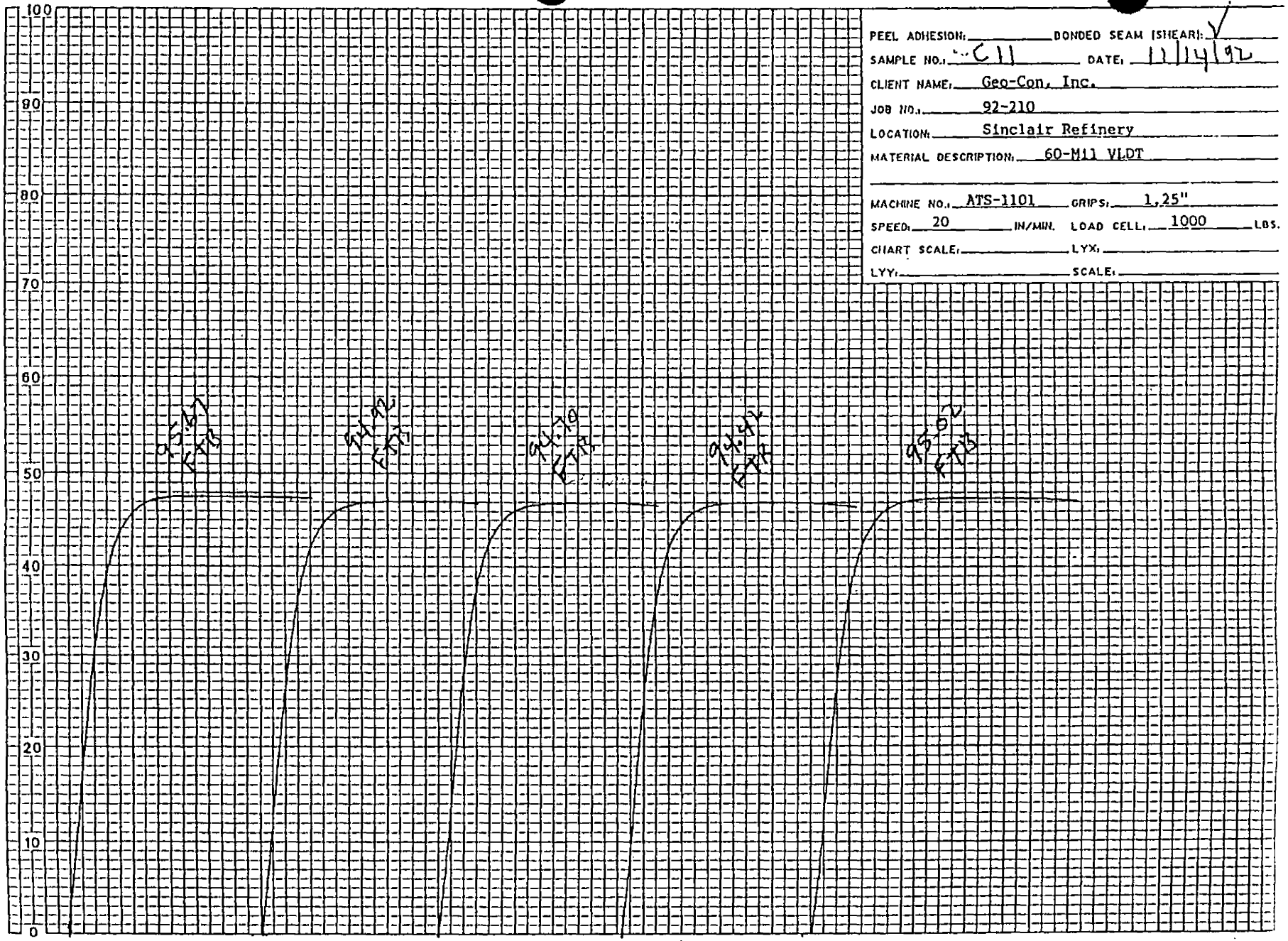
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 12 TECHNICIAN: CMB

SEAM NO.: 28/29 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

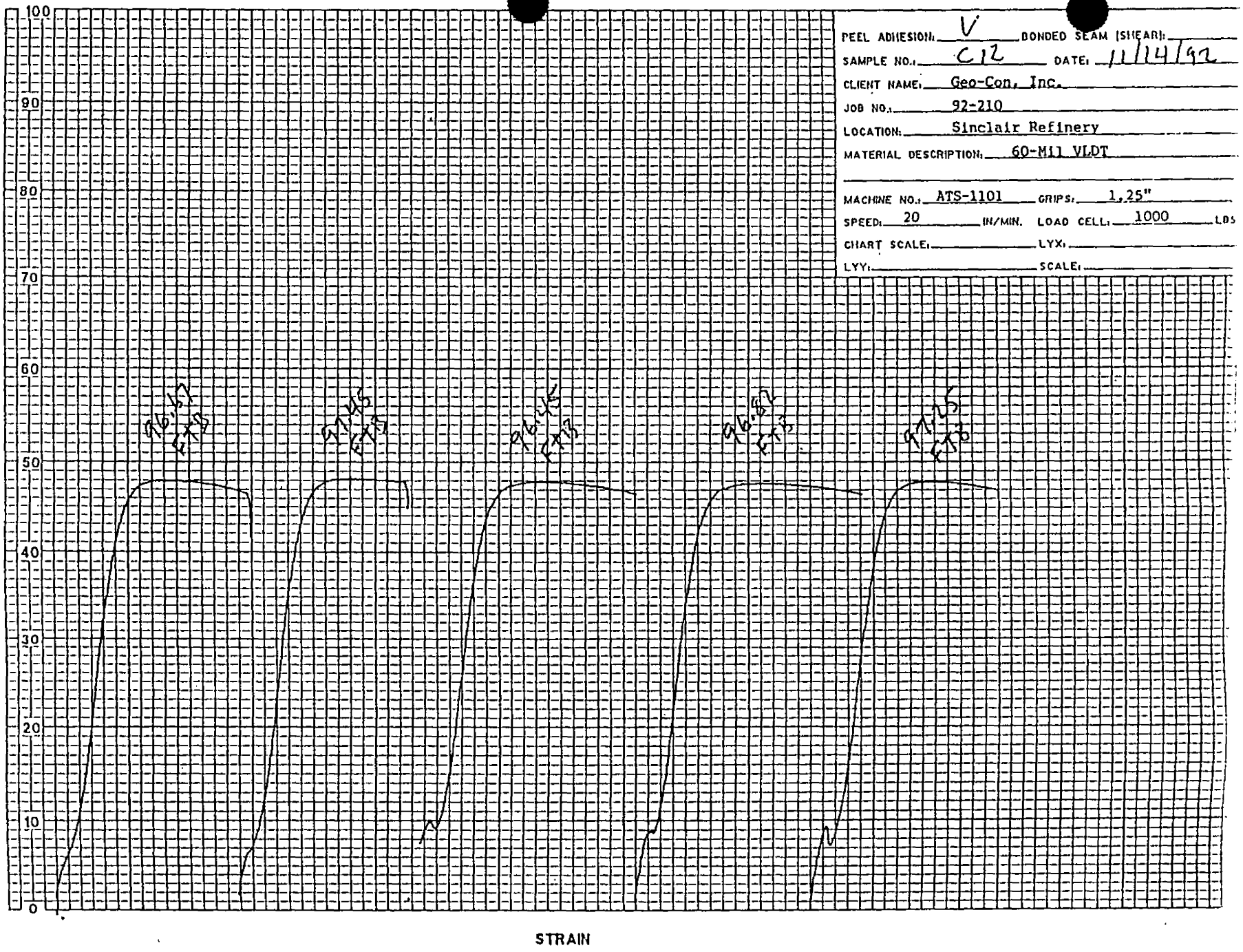
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.77	FTB
2	1.0	97.45	FTB
3	1.0	96.45	FTB
4	1.0	96.82	FTB
5	1.0	97.25	FTB
Average		96.95	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.05	FTB
2	1.0	95.97	FTB
3	1.0	94.42	FTB
4	1.0	94.70	FTB
5	1.0	95.52	FTB
Average		94.53	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: V BONDED SEAM (SHEAR):
SAMPLE NO.: C12 DATE: 11/14/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS
CHART SCALE: LYX:
LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V

SAMPLE NO.: C 12 DATE: 11/14/94

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

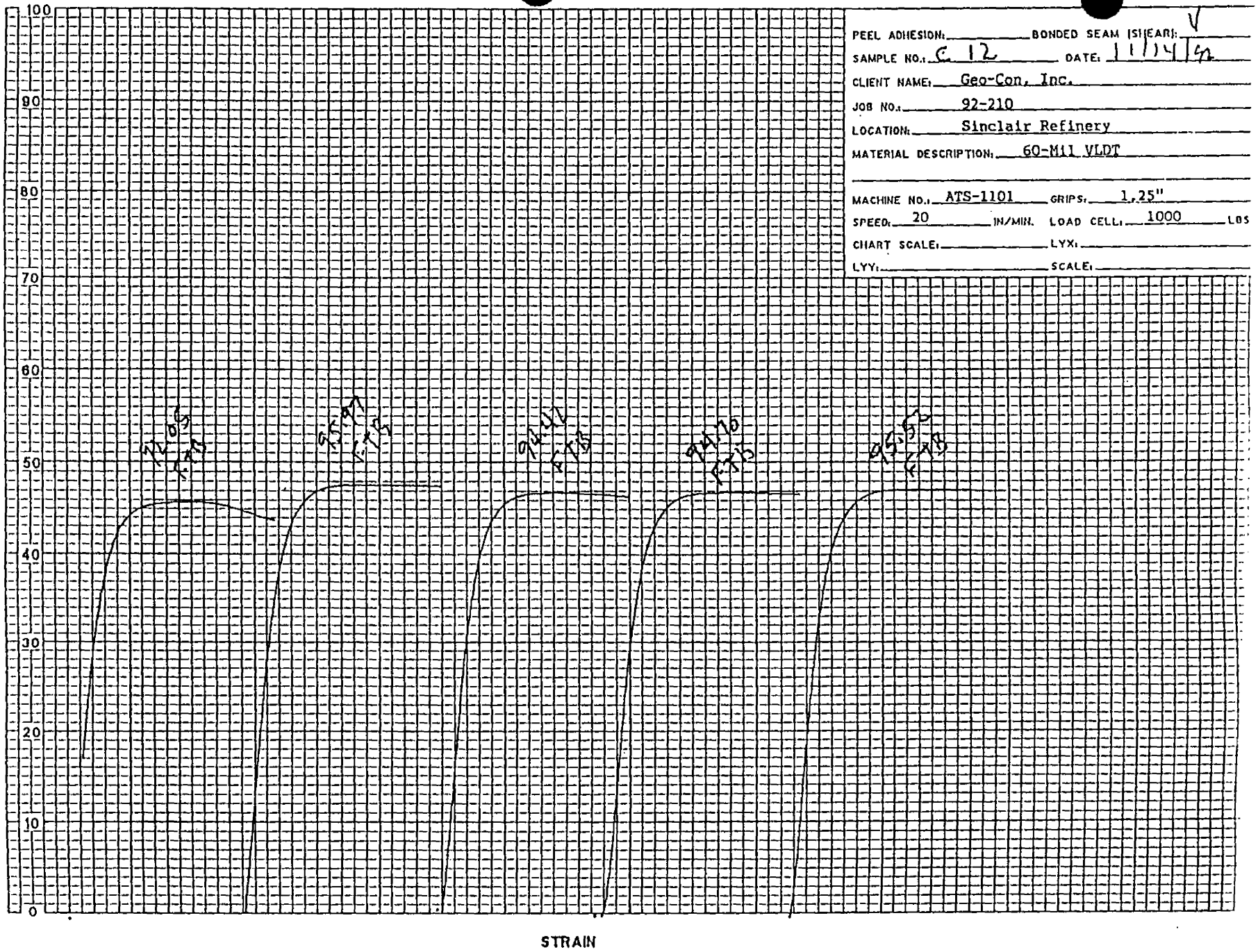
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 13 TECHNICIAN: CMB

SEAM NO.: 22/23 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

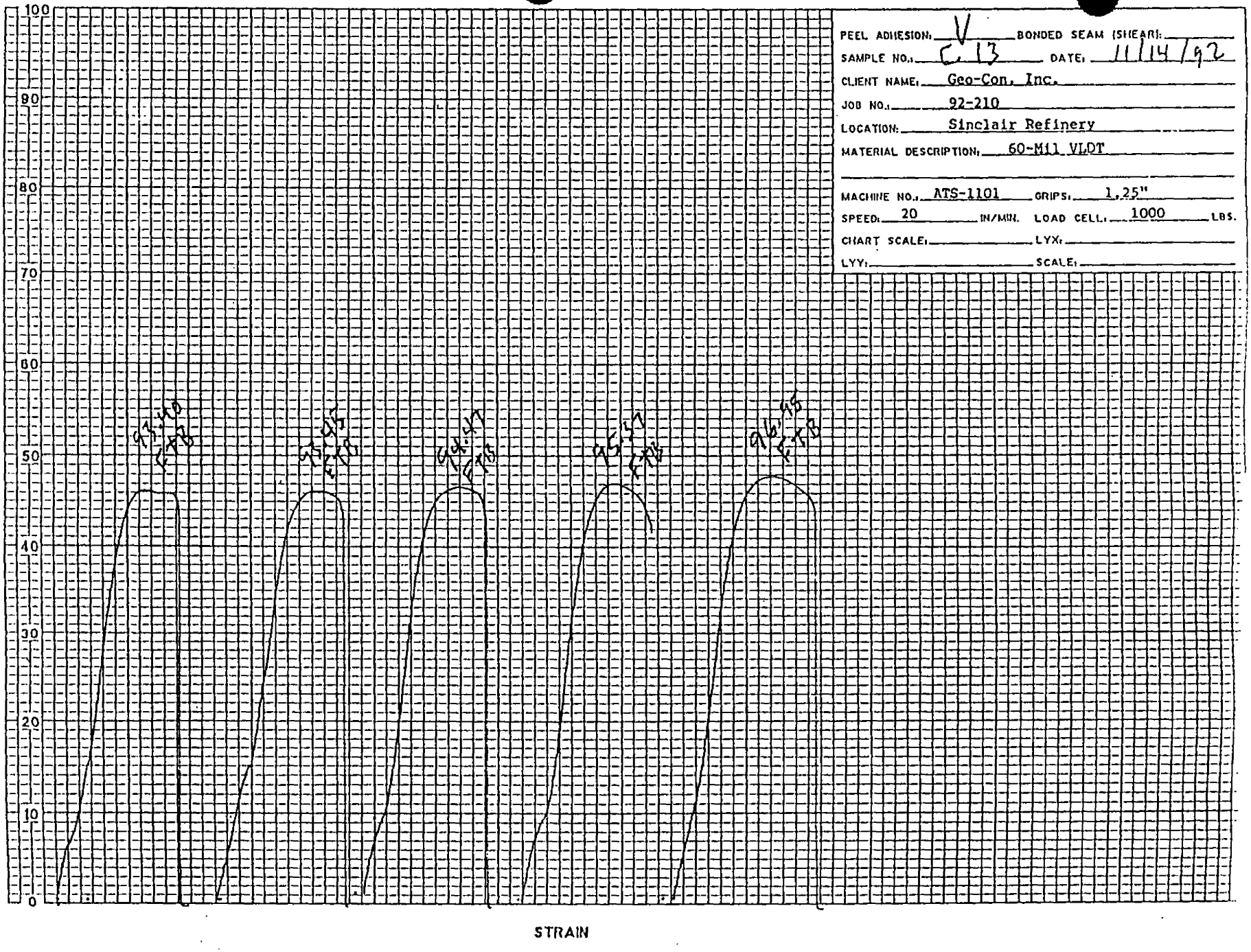
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.40	FTB
2	1.0	93.45	FTB
3	1.0	94.47	FTB
4	1.0	95.37	FTB
5	1.0	96.95	FTB
Average		94.73	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	97.05	FTB
2	1.0	95.97	FTB
3	1.0	95.15	FTB
4	1.0	97.22	FTB
5	1.0	96.65	FTB
Average		96.41	

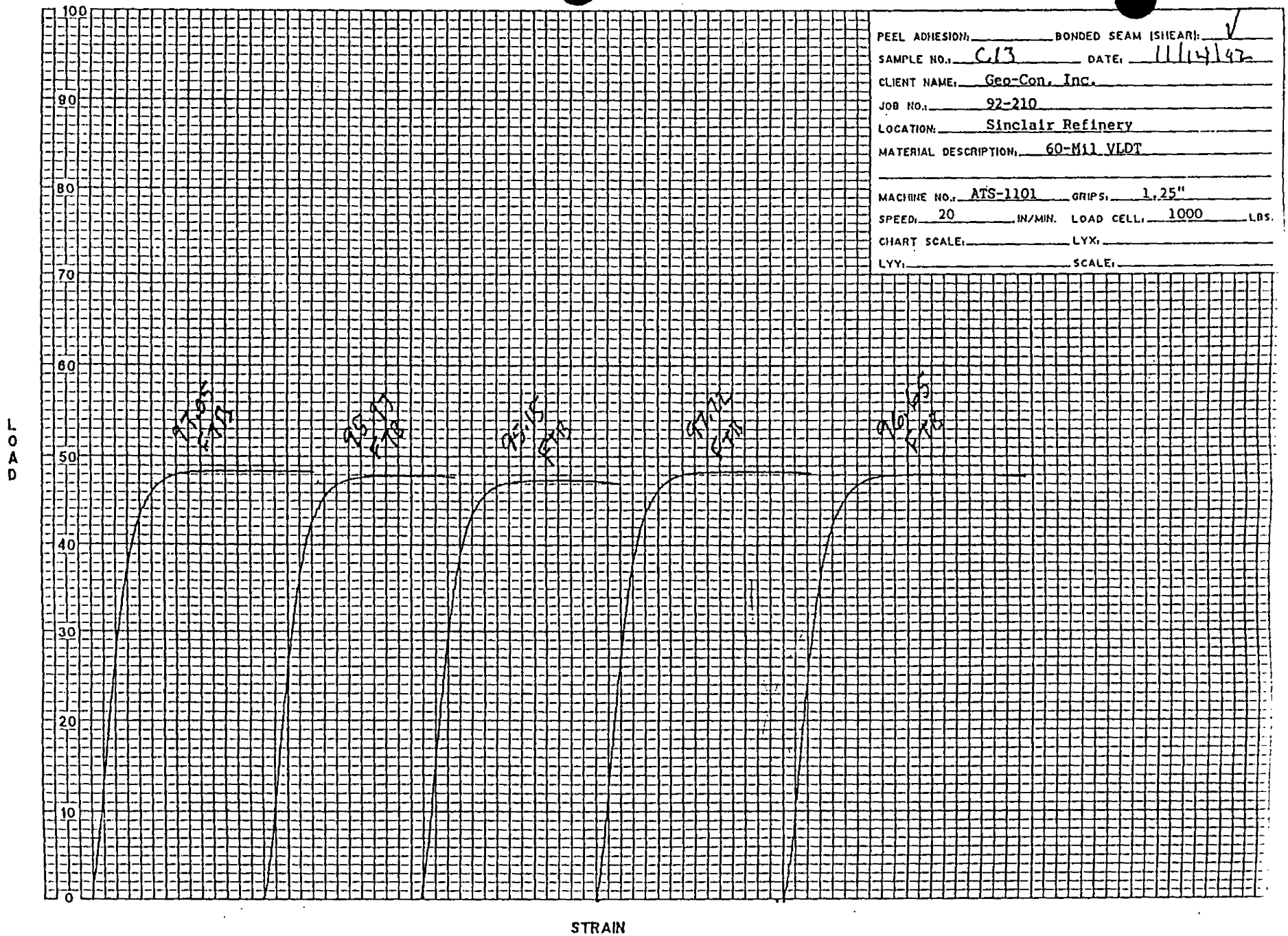
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V

SAMPLE NO.: C13 DATE: 11/14/97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 14 TECHNICIAN: CMB

SEAM NO.: 24/25 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

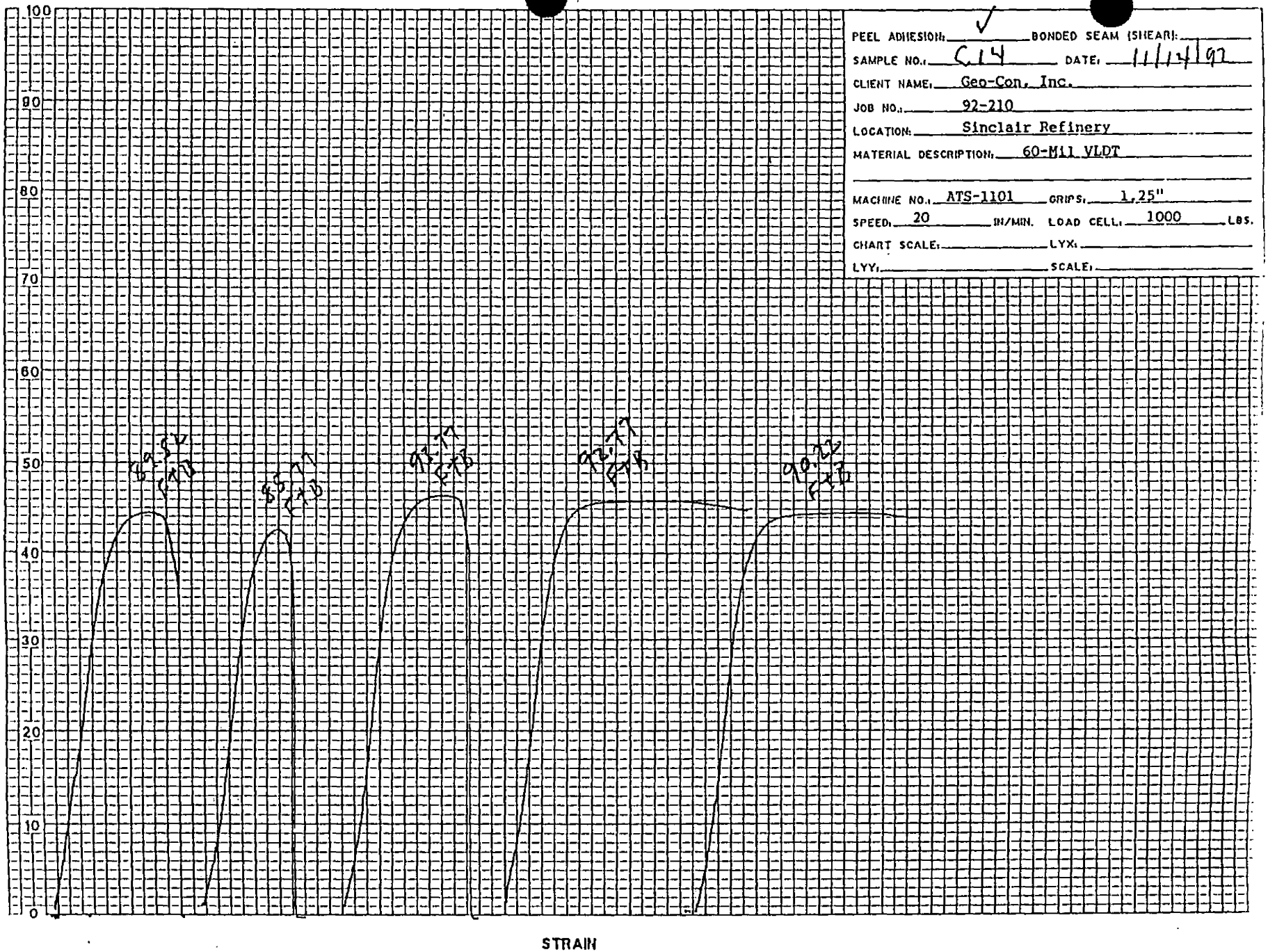
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.52	FTB
2	1.0	85.77	FTB
3	1.0	93.77	FTB
4	1.0	92.77	FTB
5	1.0	90.22	FTB
Average		90.40	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.72	FTB
2	1.0	90.45	FTB
3	1.0	91.80	FTB
4	1.0	90.45	FTB
5	1.0	89.80	FTB
Average		90.84	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: C-14 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

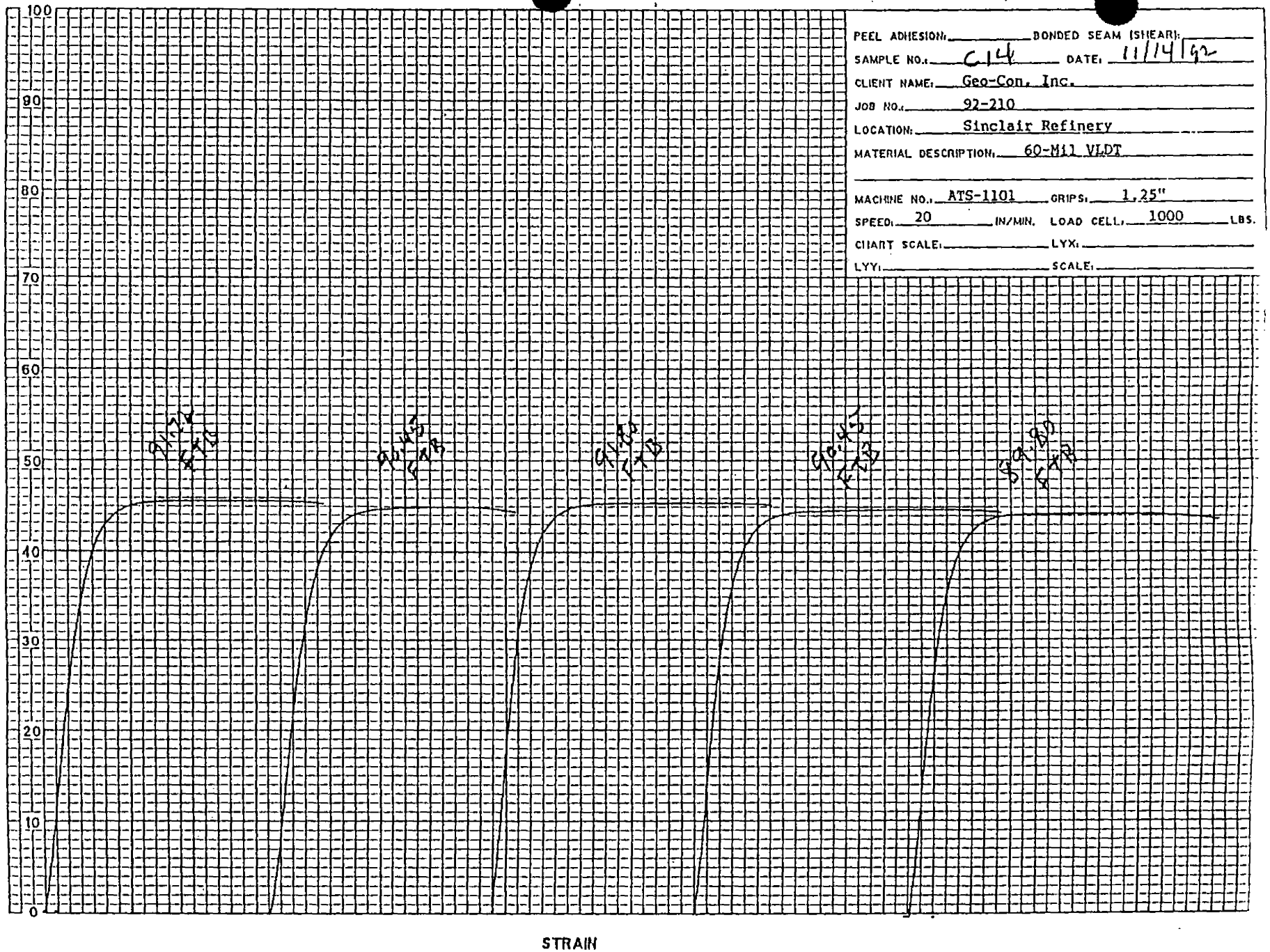
MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): _____

SAMPLE NO.: C14 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 15 TECHNICIAN: CMB

SEAM NO.: 29/25 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

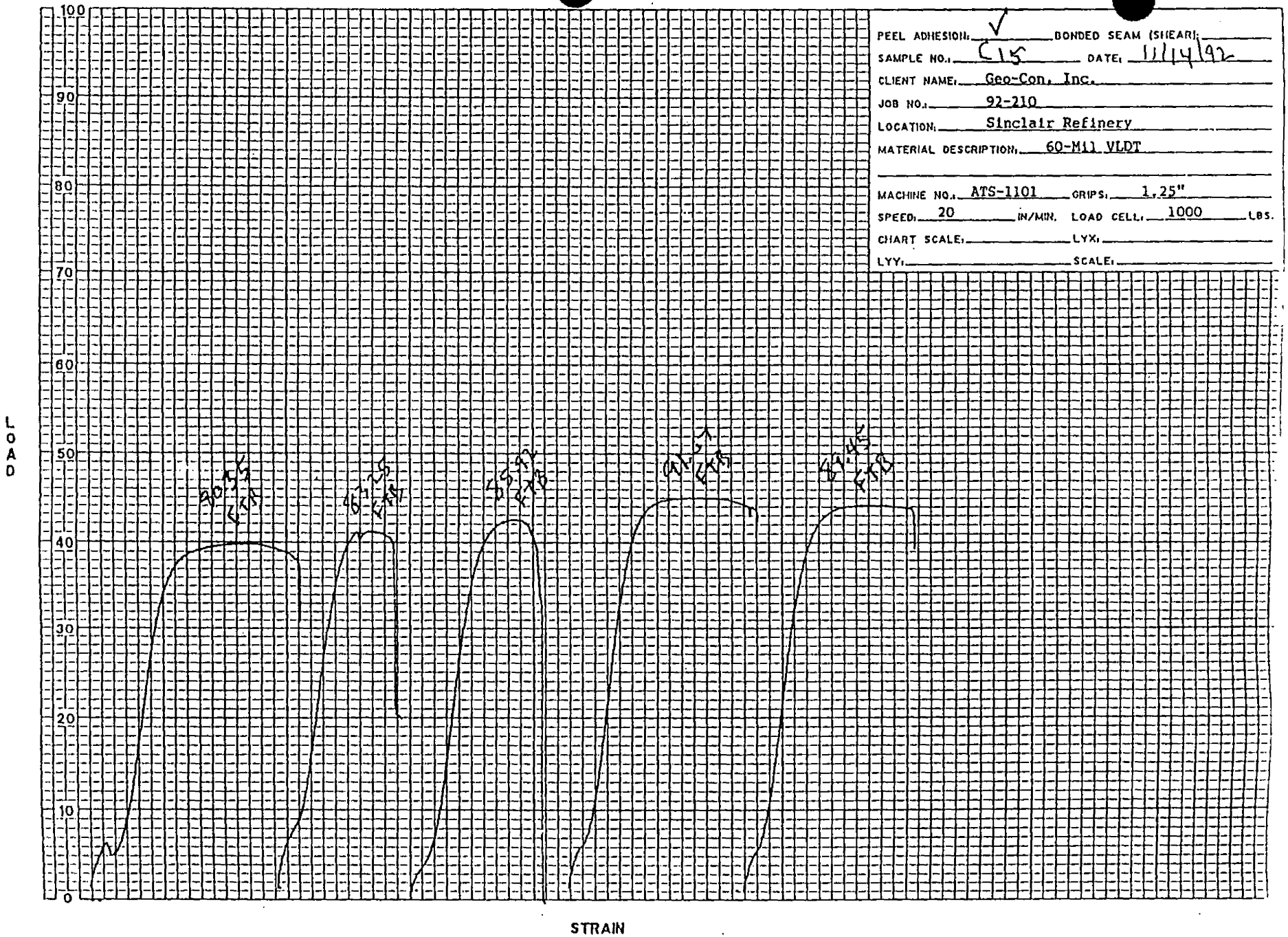
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	80.35	FTB
2	1.0	83.25	FTB
3	1.0	85.92	FTB
4	1.0	91.07	FTB
5	1.0	89.45	FTB
Average		86.01	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.80	FTB
2	1.0	90.30	FTB
3	1.0	89.57	FTB
4	1.0	90.27	FTB
5	1.0	89.20	FTB
Average		90.03	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: C15 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): √

SAMPLE NO.: C115 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

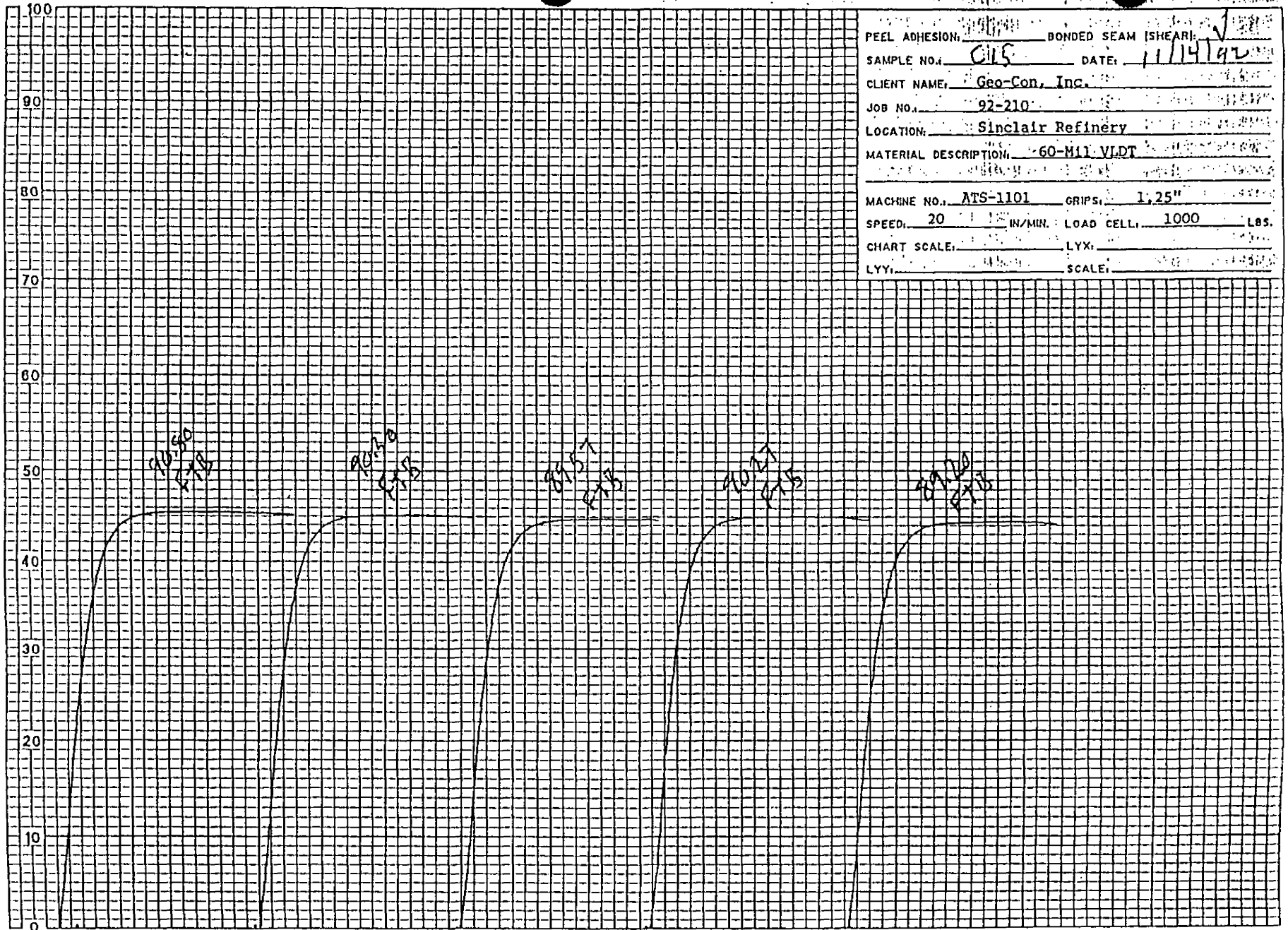
MATERIAL DESCRIPTION: 60-MIL VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 16 TECHNICIAN: CMB

SEAM NO.: 25/31 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	87.87	FTB
2	1.0	87.12	FTB
3	1.0	89.45	FTB
4	1.0	88.40	FTB
5	1.0	87.57	FTB
Average		88.08	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.20	FTB
2	1.0	88.65	FTB
3	1.0	89.20	FTB
4	1.0	89.02	FTB
5	1.0	89.07	FTB
Average		89.03	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):

SAMPLE NO.: C16 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

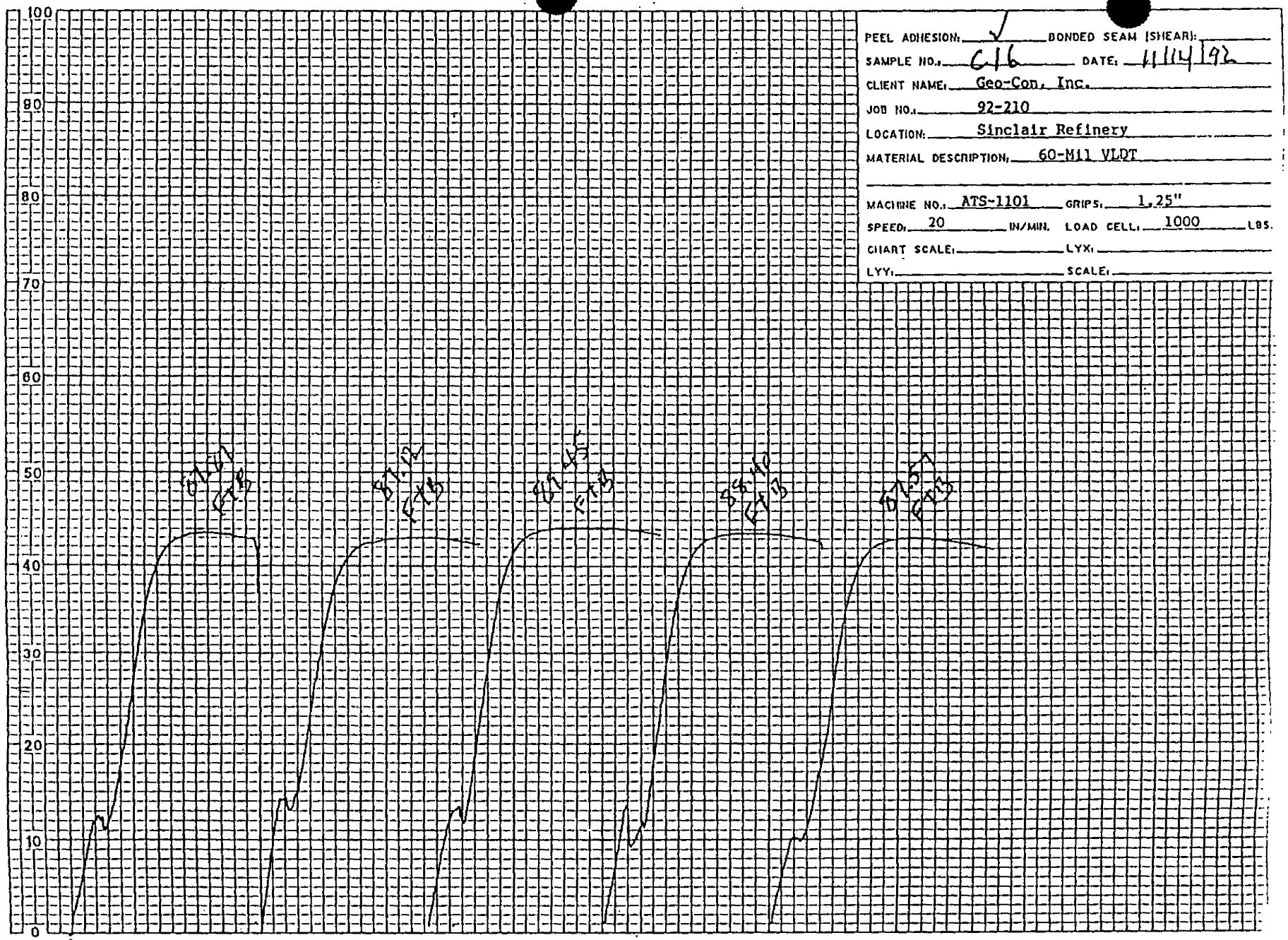
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): √

SAMPLE NO.: C16 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

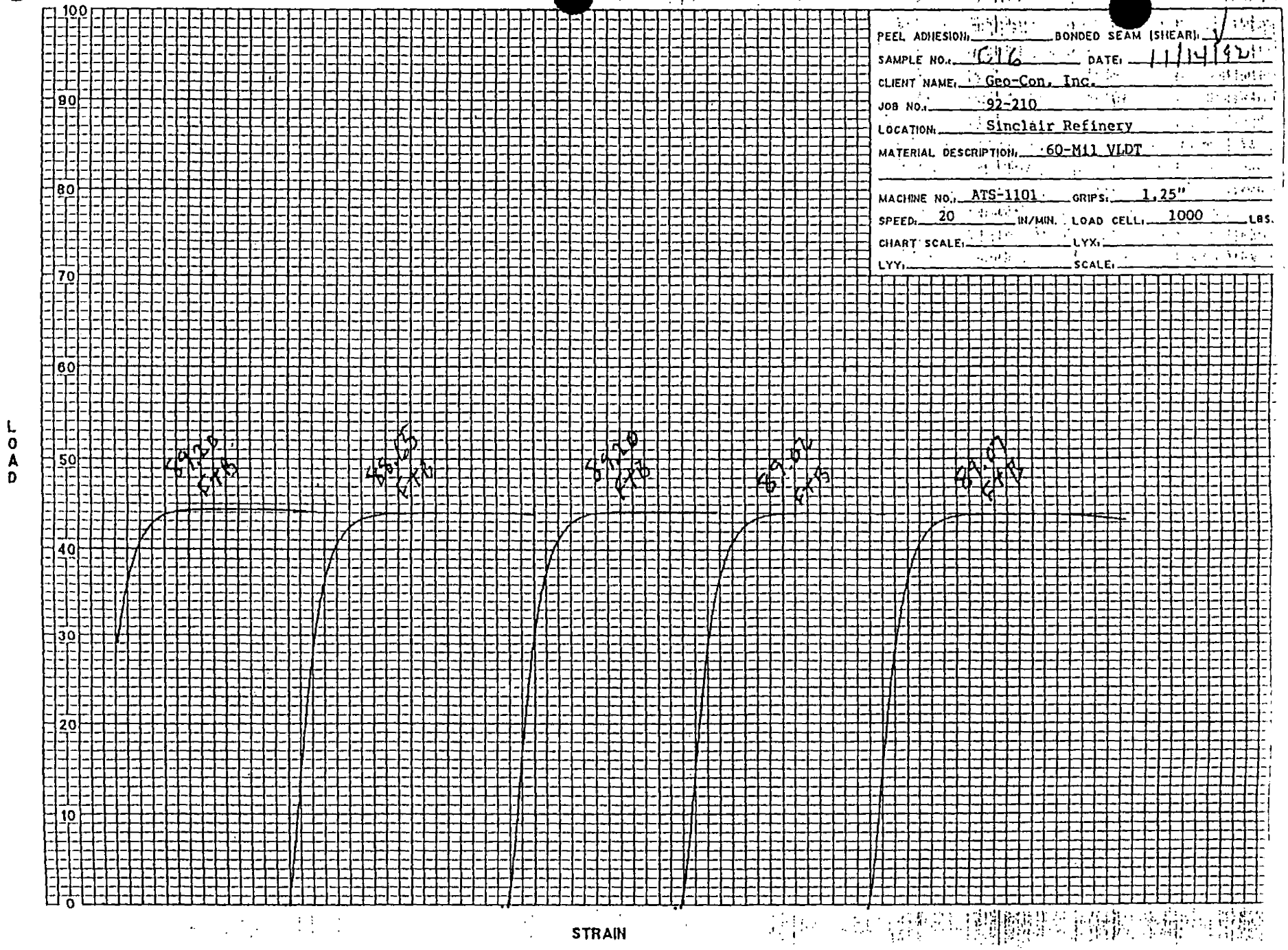
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 22-210

PROJECT: Sinclair Refinery DATE TESTED: 11/14/92

SAMPLE NO.: C 17 TECHNICIAN: CMB

SEAM NO.: 30/31 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.77	FTB
2	1.0	92.10	FTB
3	1.0	92.80	FTB
4	1.0	91.85	FTB
5	1.0	91.50	FTB
Average		92.0	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.42	FTB
2	1.0	90.00	FTB
3	1.0	90.72	FTB
4	1.0	90.80	FTB
5	1.0	89.87	FTB
Average		90.16	

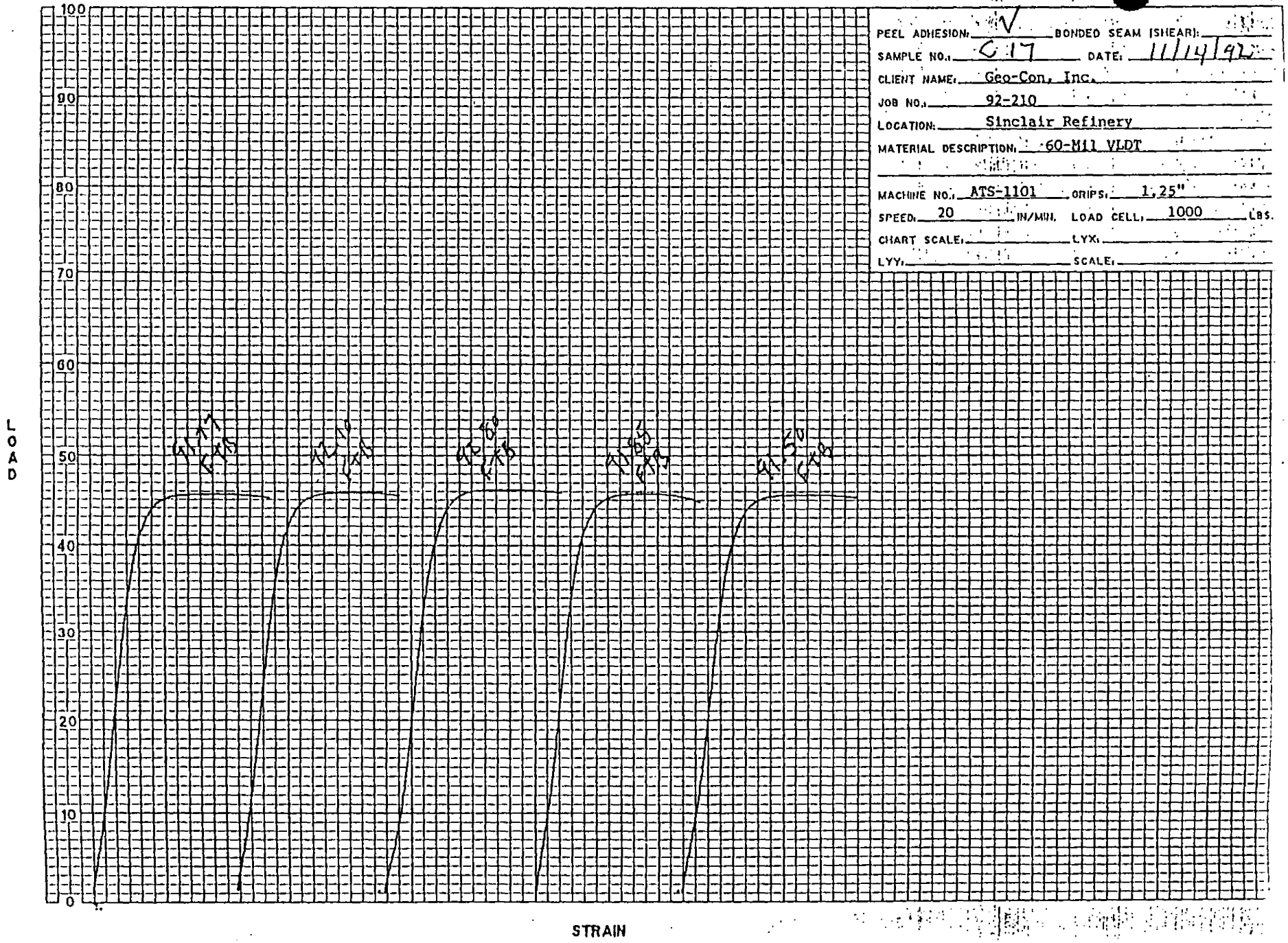
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

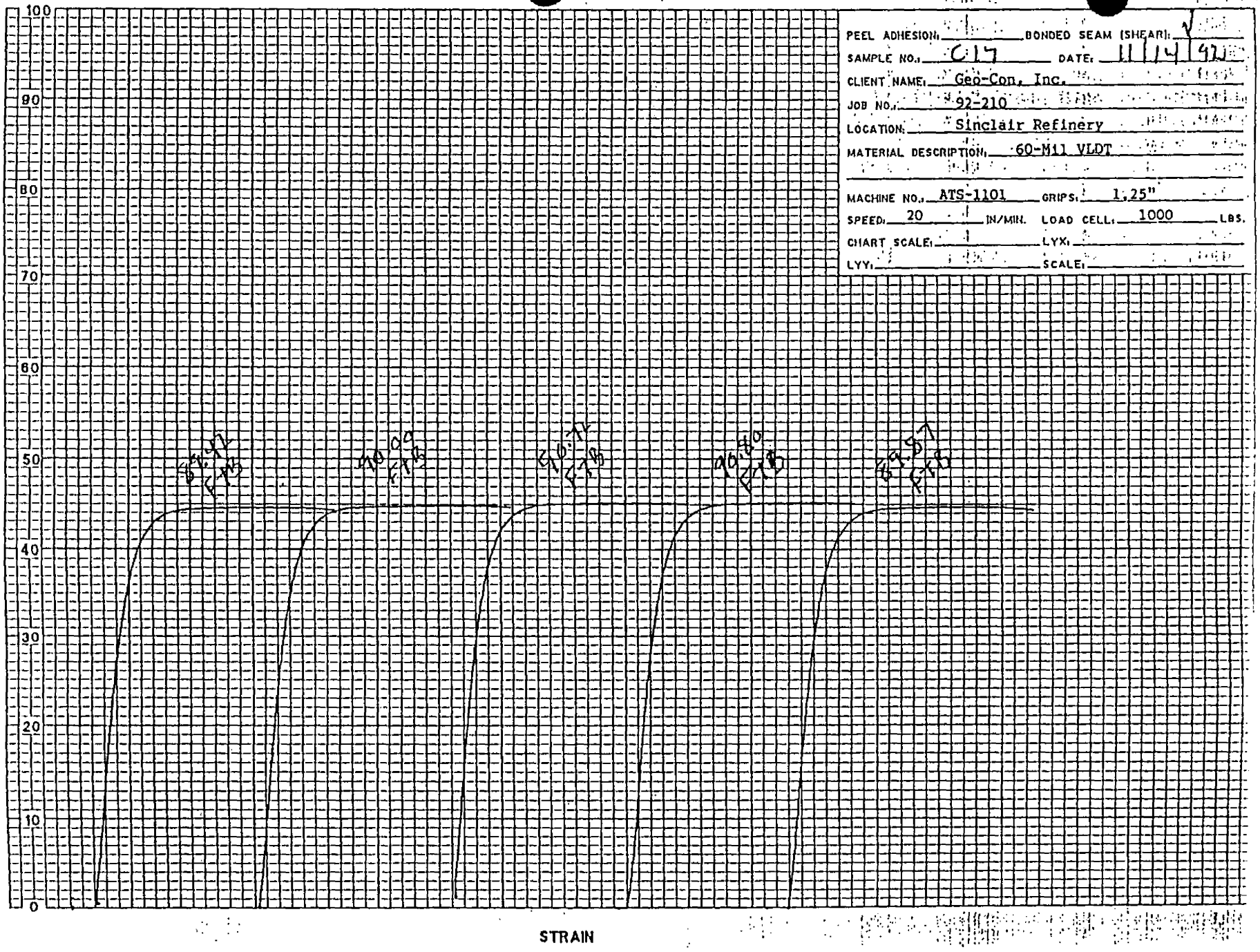
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PEEL ADHESION: V BONDED SEAM (SHEAR):
SAMPLE NO.: C 17 DATE: 11/14/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C17 DATE: 11/14/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: 1 LYX: _____

LYY: _____ SCALE: _____

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
MAI NO. 92-210
P.O. NO. 20827

REPORT IV

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Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT IV

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

NOVEMBER 19, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/17/92

SAMPLE NO.: C 18 TECHNICIAN: GJM

SEAM NO.: 37/38 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

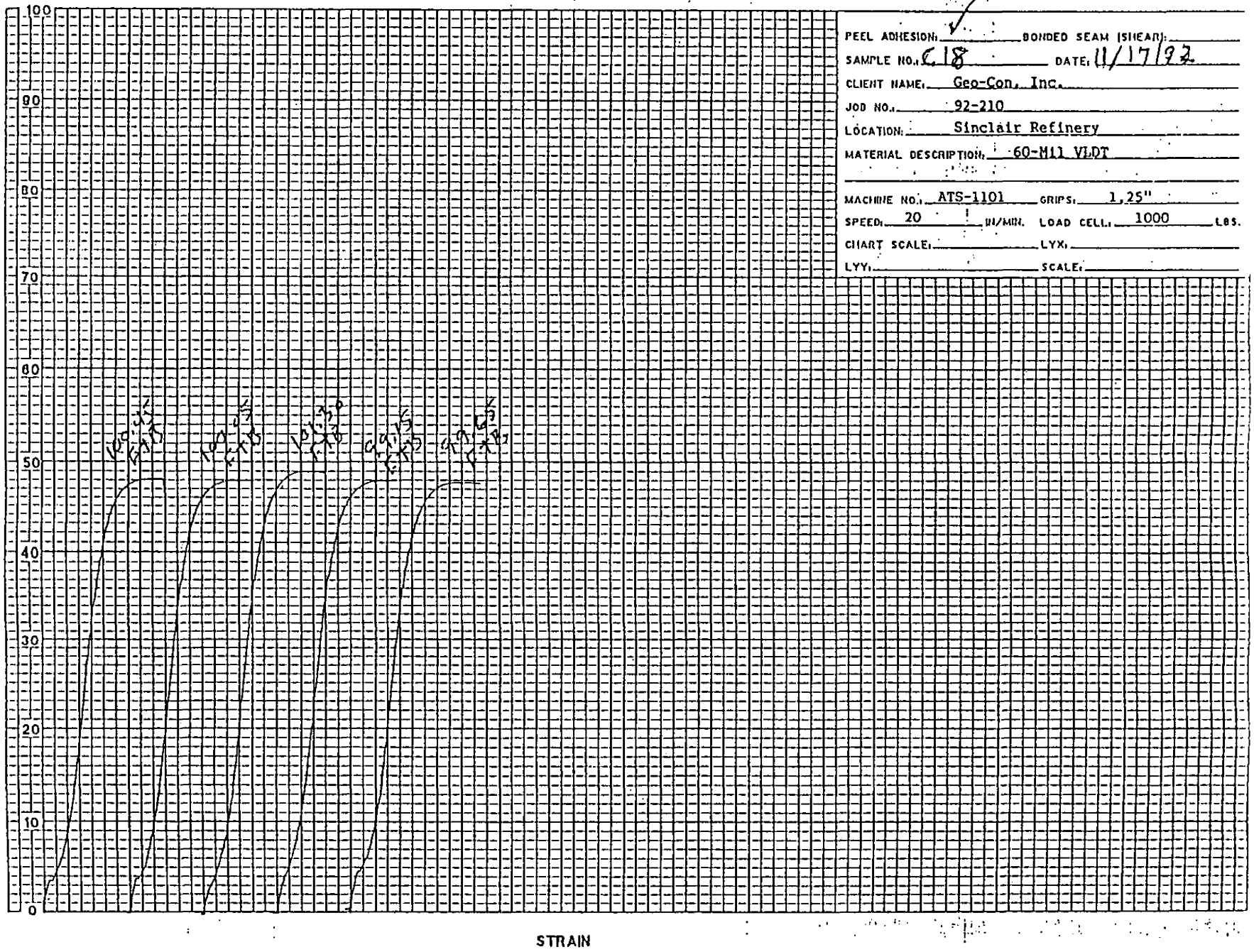
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.45	FTB
2	1.0	100.05	FTB
3	1.0	101.30	FTB
4	1.0	99.15	FTB
5	1.0	99.65	FTB
Average		100.12	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.07	FTB
2	1.0	99.27	FTB
3	1.0	100.12	FTB
4	1.0	100.82	FTB
5	1.0	99.87	FTB
Average		100.03	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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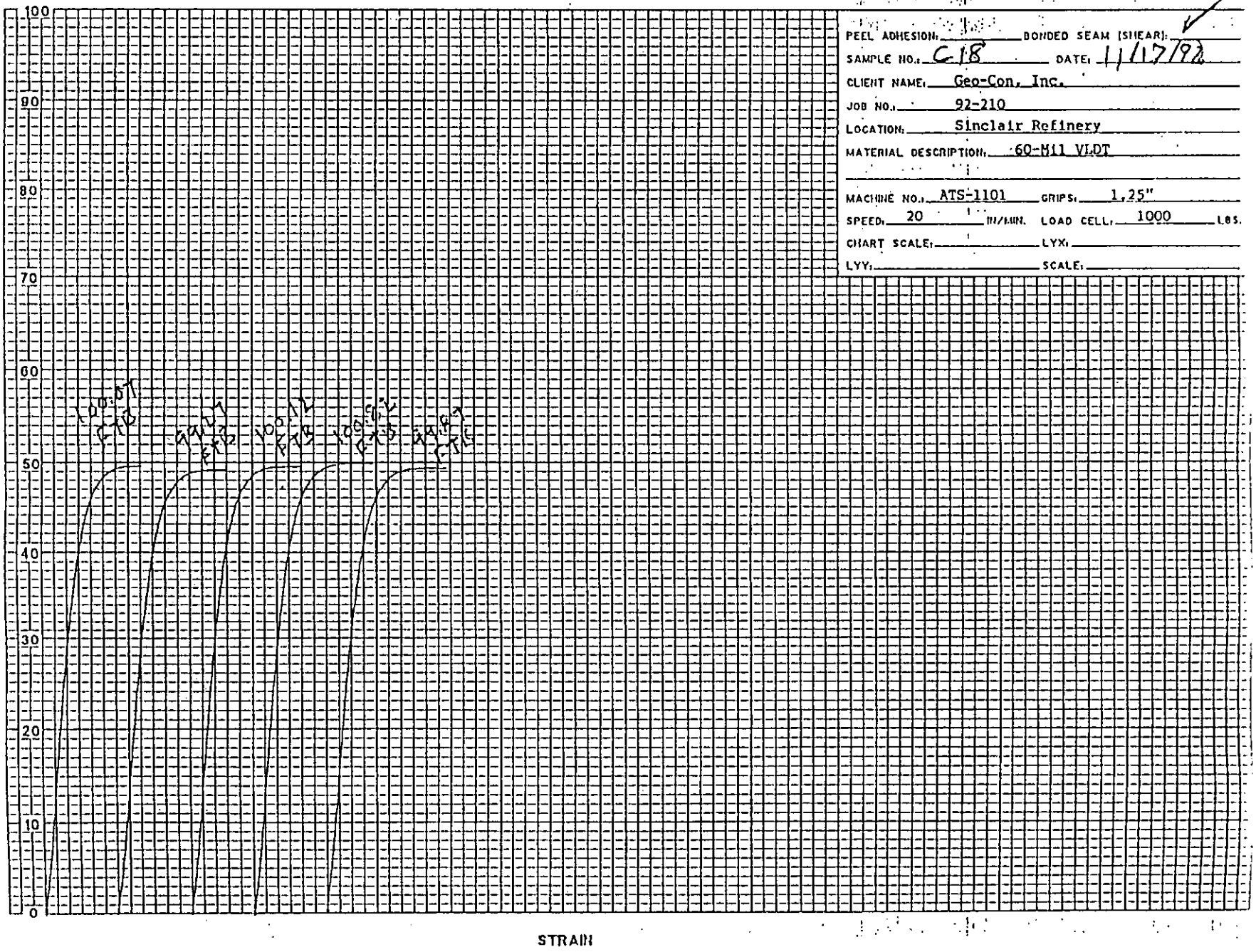


PEEL ADHESION: ✓ BONDED SEAM (SHEAR):
SAMPLE NO.: C-18 DATE: 11/17/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/17/92

SAMPLE NO.: C 19 TECHNICIAN: GJM

SEAM NO.: 34/39 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

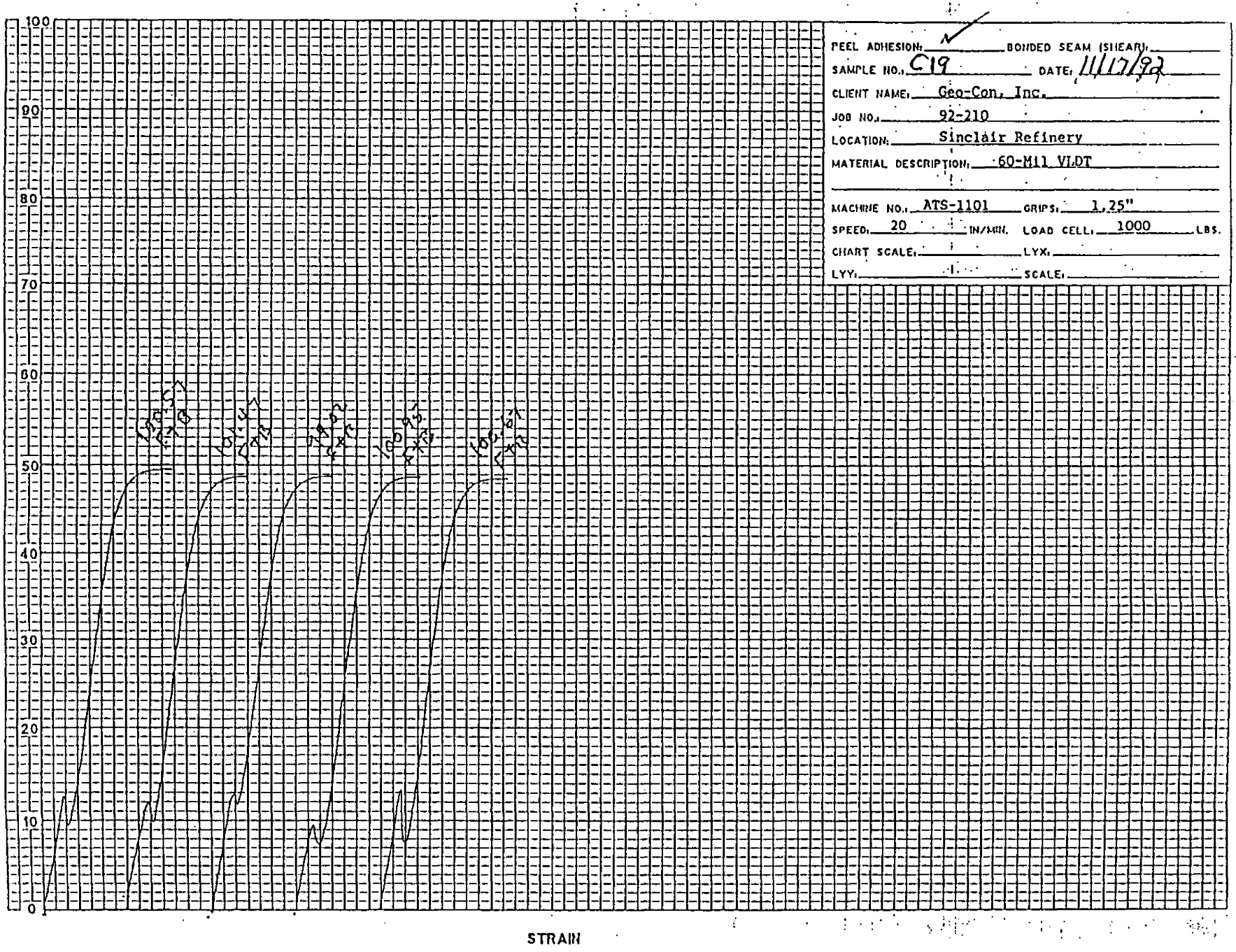
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.57	ftb
2	1.0	101.47	FTB
3	1.0	99.92	FTB
4	1.0	100.95	FTB
5	1.0	100.67	FTB
Average		100.72	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.07	FTB
2	1.0	100.15	FTB
3	1.0	100.12	FTB
4	1.0	100.60	FTB
5	1.0	100.82	FTB
Average		98.95	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

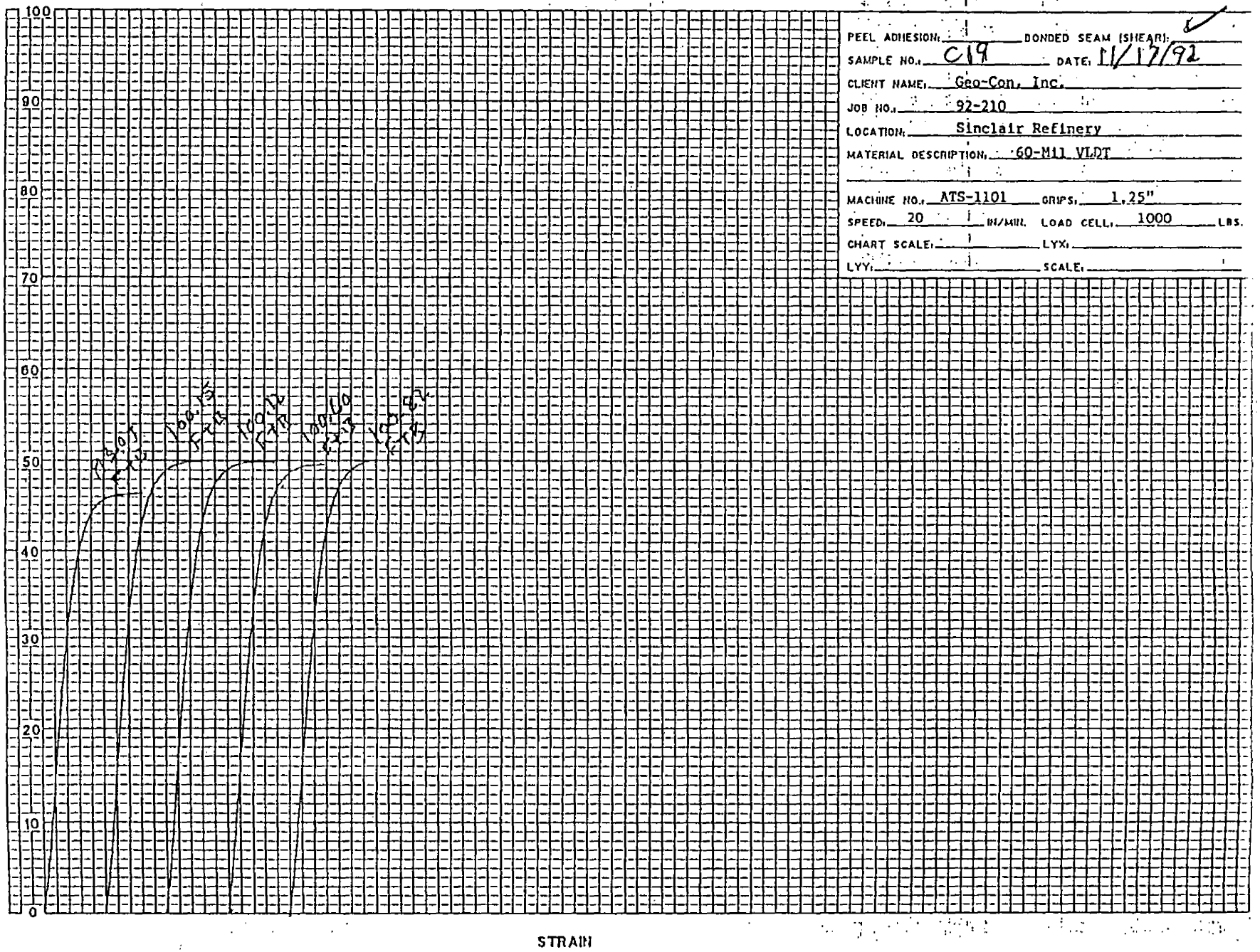
FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C19 DATE: 11/17/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/17/92

SAMPLE NO.: C 20 TECHNICIAN: GJM

SEAM NO.: 41/38 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

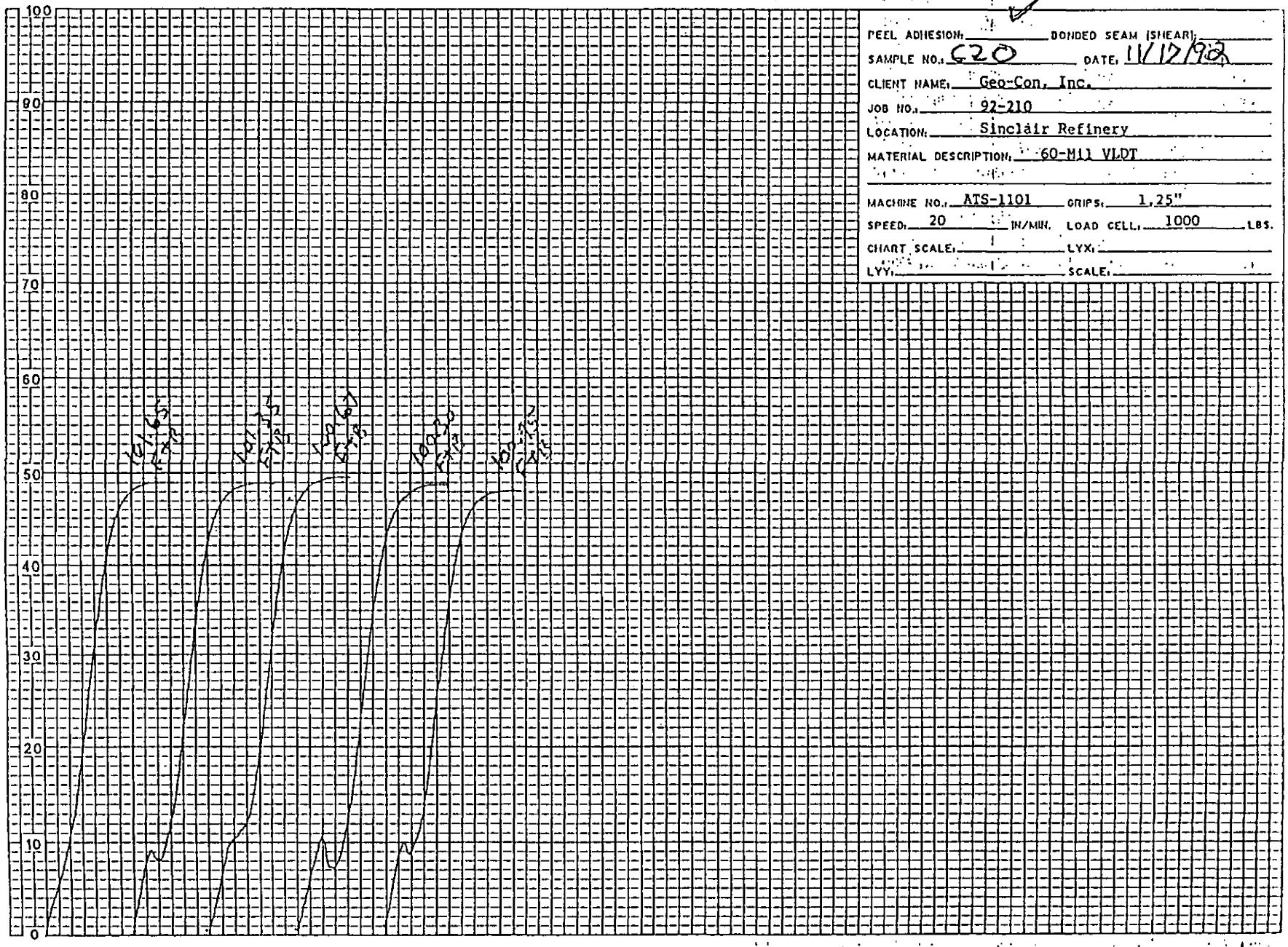
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	101.65	FTB
2	1.0	101.35	FTB
3	1.0	100.67	FTB
4	1.0	100.30	FTB
5	1.0	100.95	FTB
Average		100.98	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.40	FTB
2	1.0	102.85	FTB
3	1.0	102.72	FTB
4	1.0	103.30	FTB
5	1.0	102.52	FTB
Average		102.96	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

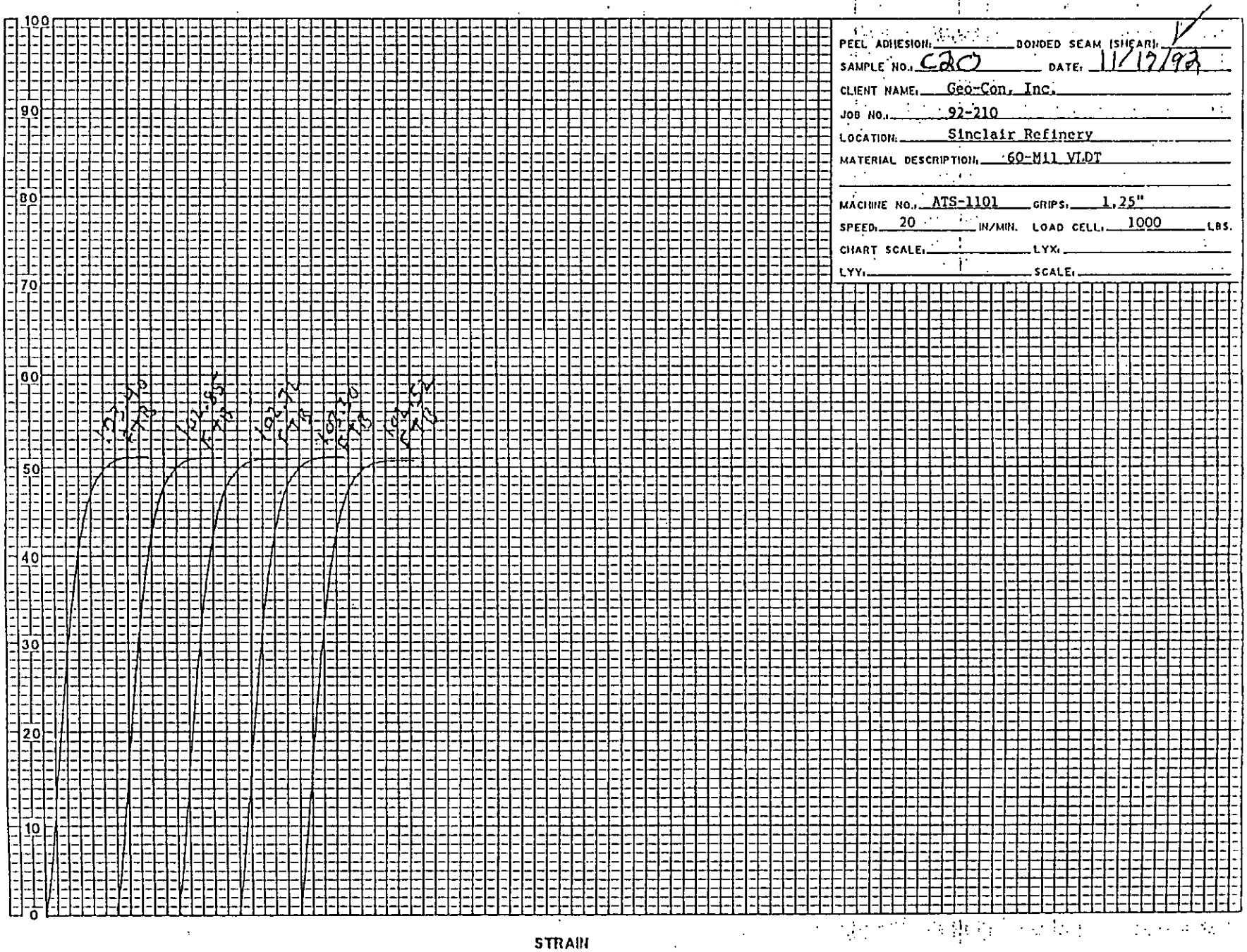
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): _____
SAMPLE NO.: G20 DATE: 11/12/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V

SAMPLE NO.: C20 DATE: 11/17/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/17/92

SAMPLE NO.: C 21 TECHNICIAN: GJM

SEAM NO.: 43/40 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

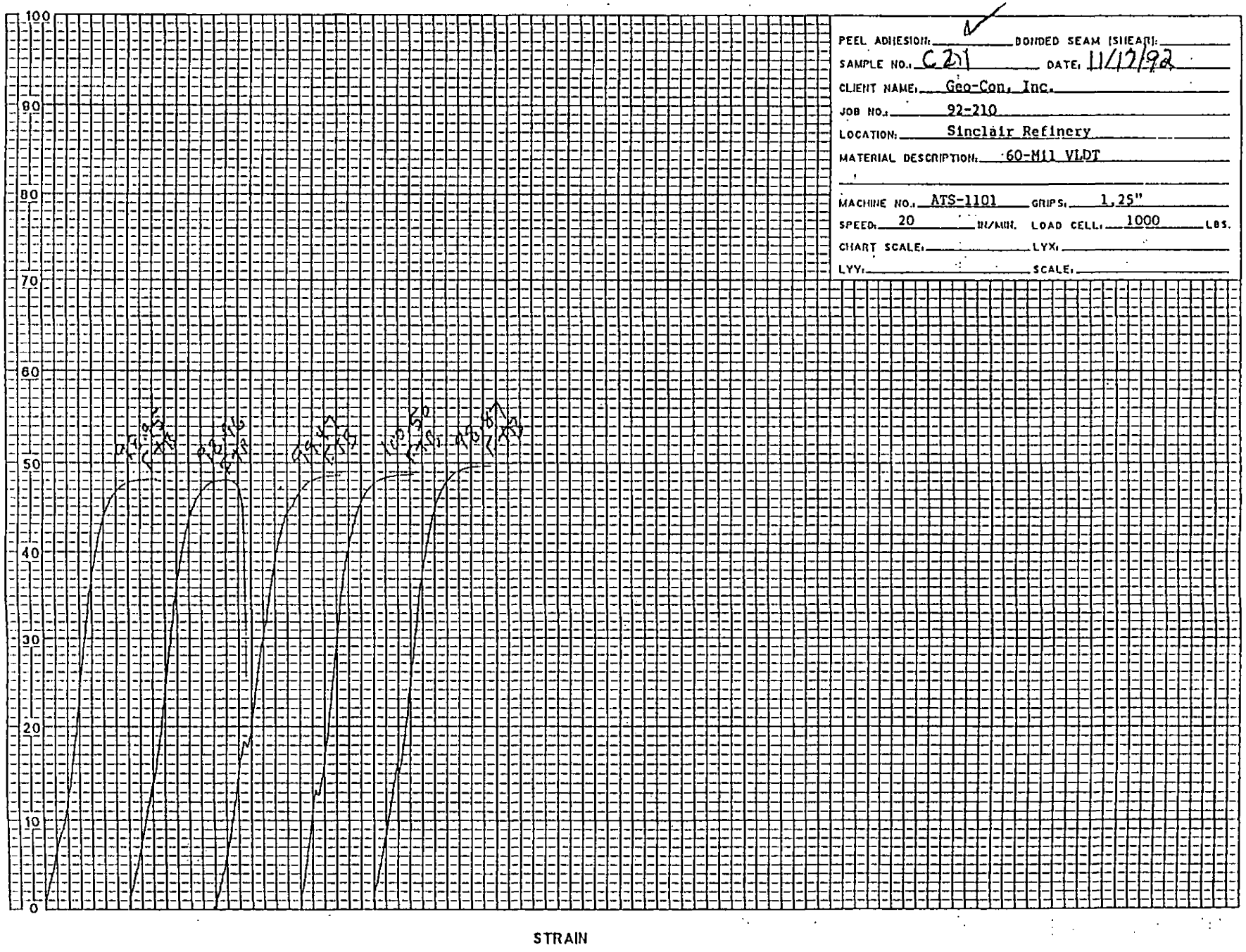
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.95	FTB
2	1.0	98.96	FTB
3	1.0	99.47	FTB
4	1.0	100.50	FTB
5	1.0	98.87	FTB
Average		99.35	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.45	FTB
2	1.0	101.10	FTB
3	1.0	100.67	FTB
4	1.0	100.80	FTB
5	1.0	102.22	FTB
Average		101.05	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

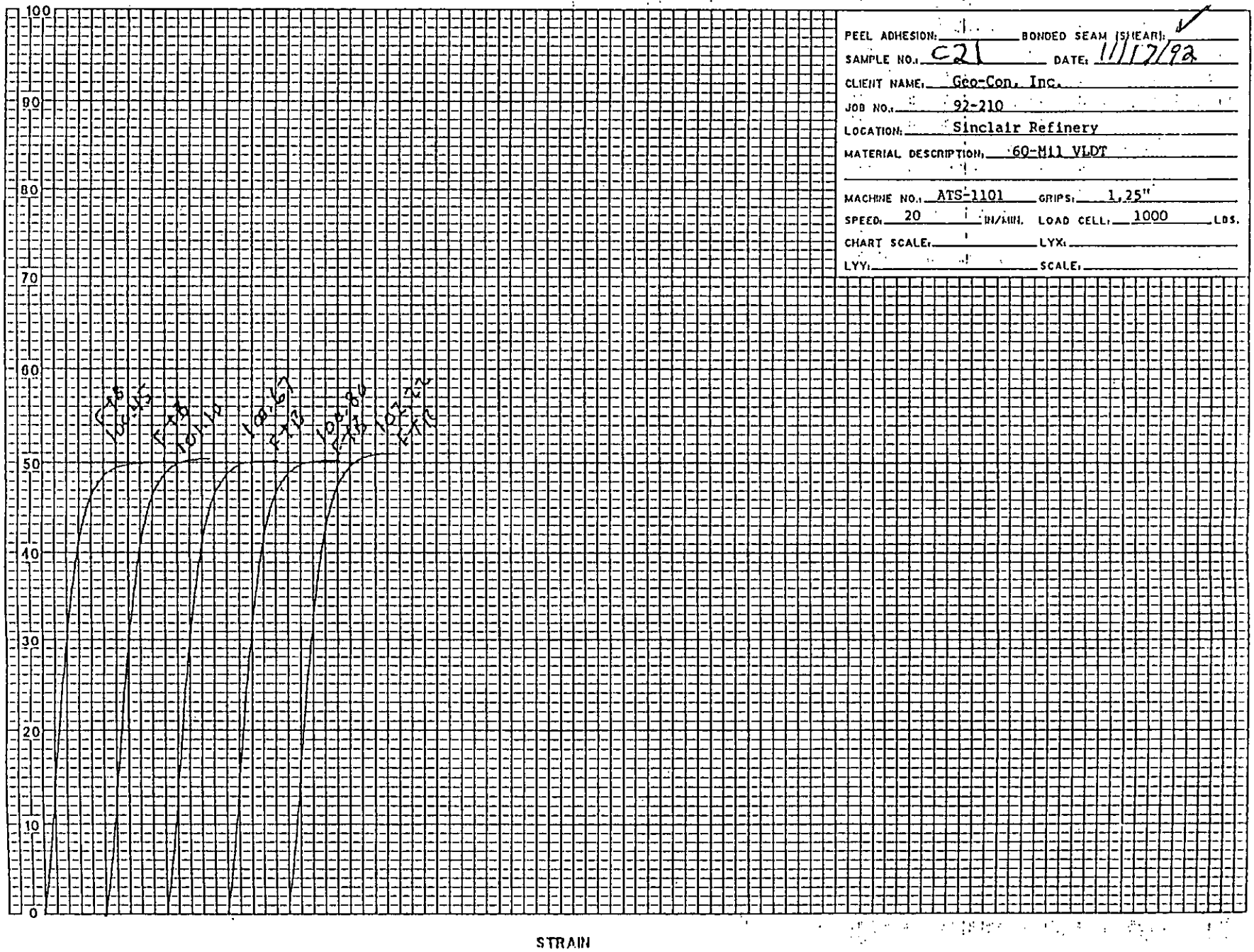
FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C21 DATE: 11/17/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/17/92

SAMPLE NO.: C 23 TECHNICIAN: GJM

SEAM NO.: 44/51 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

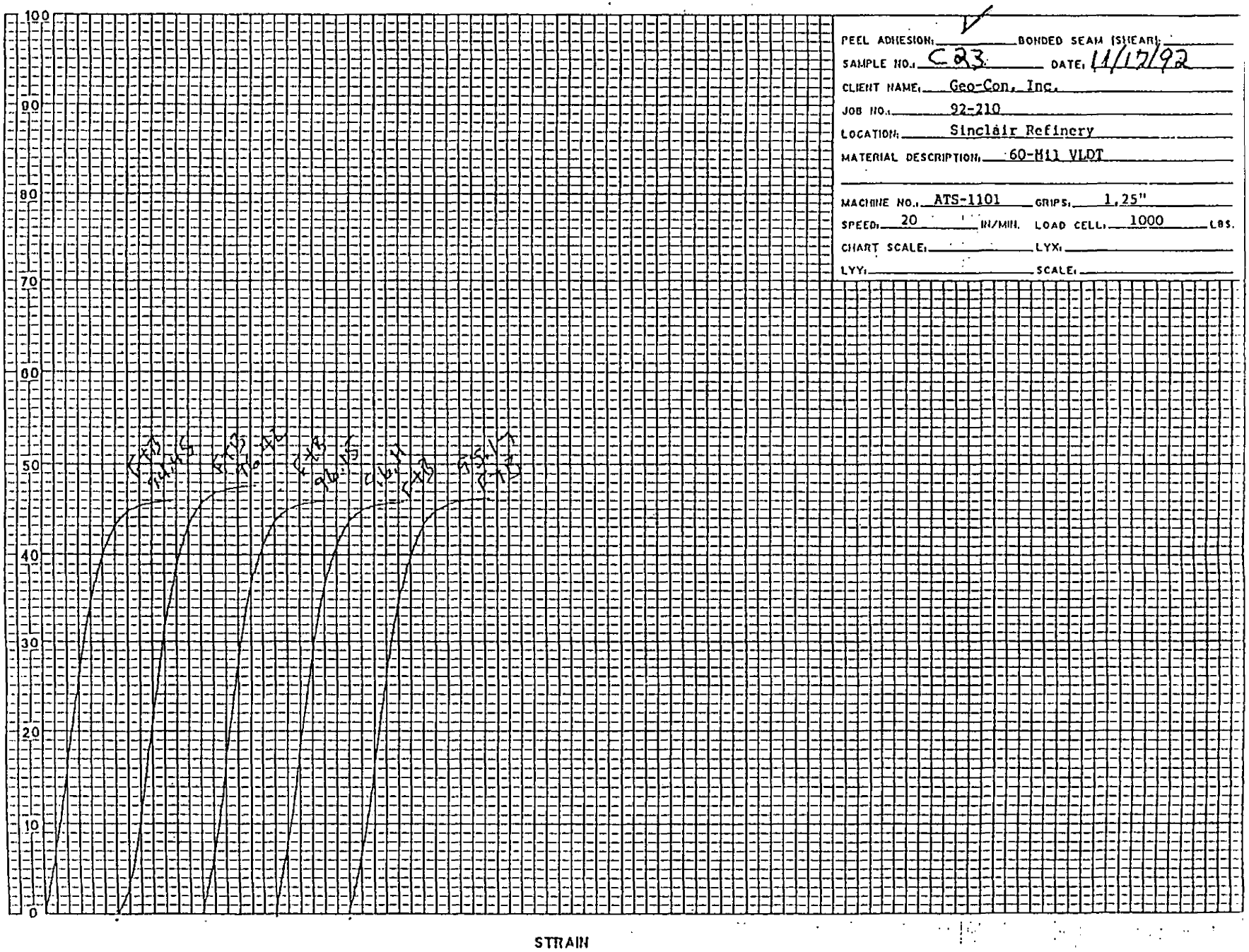
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.45	FTB
2	1.0	96.42	FTB
3	1.0	96.15	FTB
4	1.0	96.11	FTB
5	1.0	95.17	FTB
Average		95.66	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.00	FTB
2	1.0	98.10	FTB
3	1.0	97.97	FTB
4	1.0	98.00	FTB
5	1.0	97.25	FTB
Average		97.86	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ____ BONDED SEAM (SHEAR): V

SAMPLE NO.: C23 DATE: 11/17/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

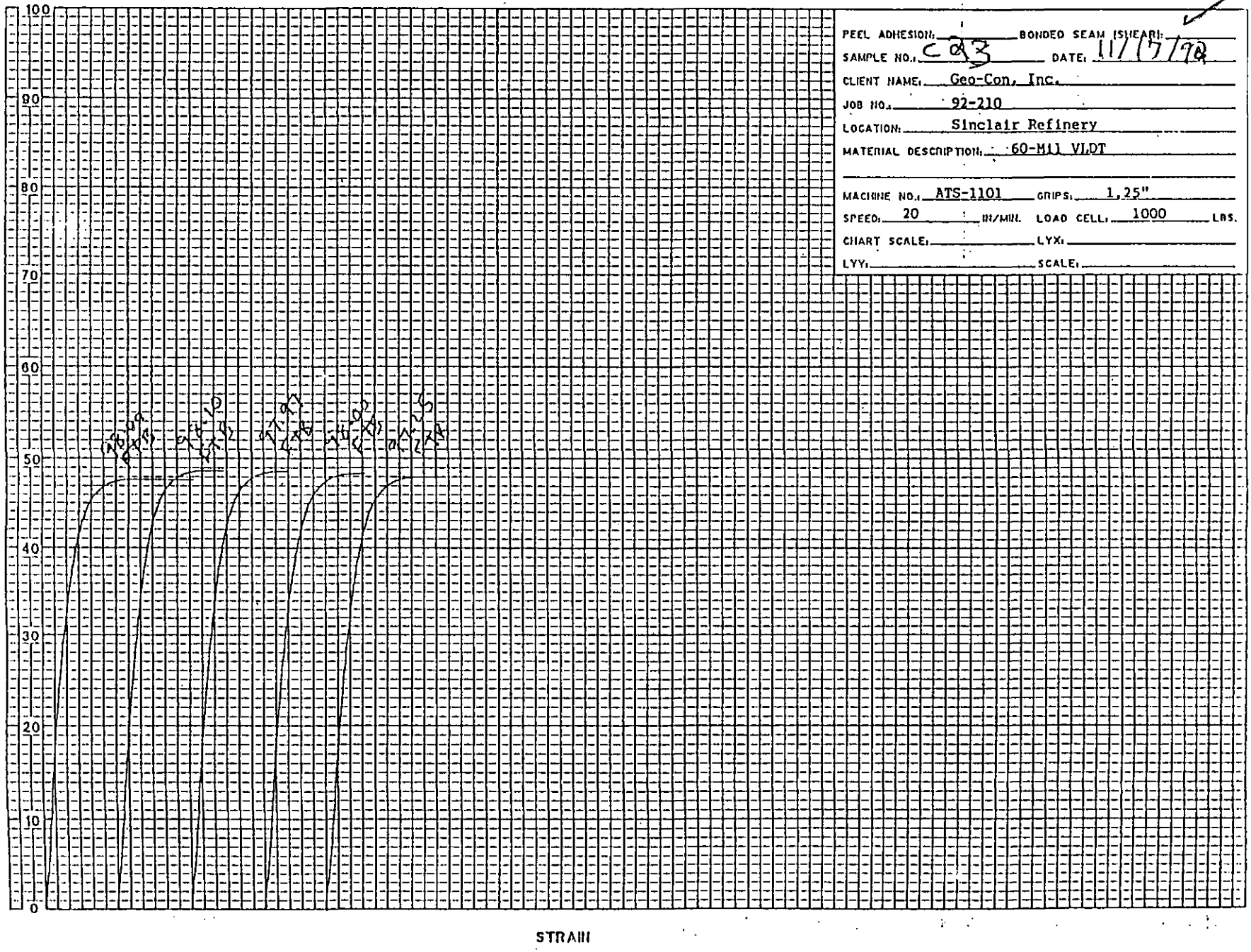
MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: ____ LYX: ____

LYY: ____ SCALE: ____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C-3 DATE: 11/7/90

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT V

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

NOVEMBER 27, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 22 TECHNICIAN: CMS

SEAM NO.: 42--45 MANUFACTURER: Gundle

PANEL: 42 & 45 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.85	FTB
2	1.0	99.30	FTB
3	1.0	99.95	FTB
4	1.0	99.55	FTB
5	1.0	99.55	FTB
Average		99.04	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.02	FTB
2	1.0	98.62	FTB
3	1.0	99.25	FTB
4	1.0	98.15	FTB
5	1.0	97.95	FTB
Average		98.40	

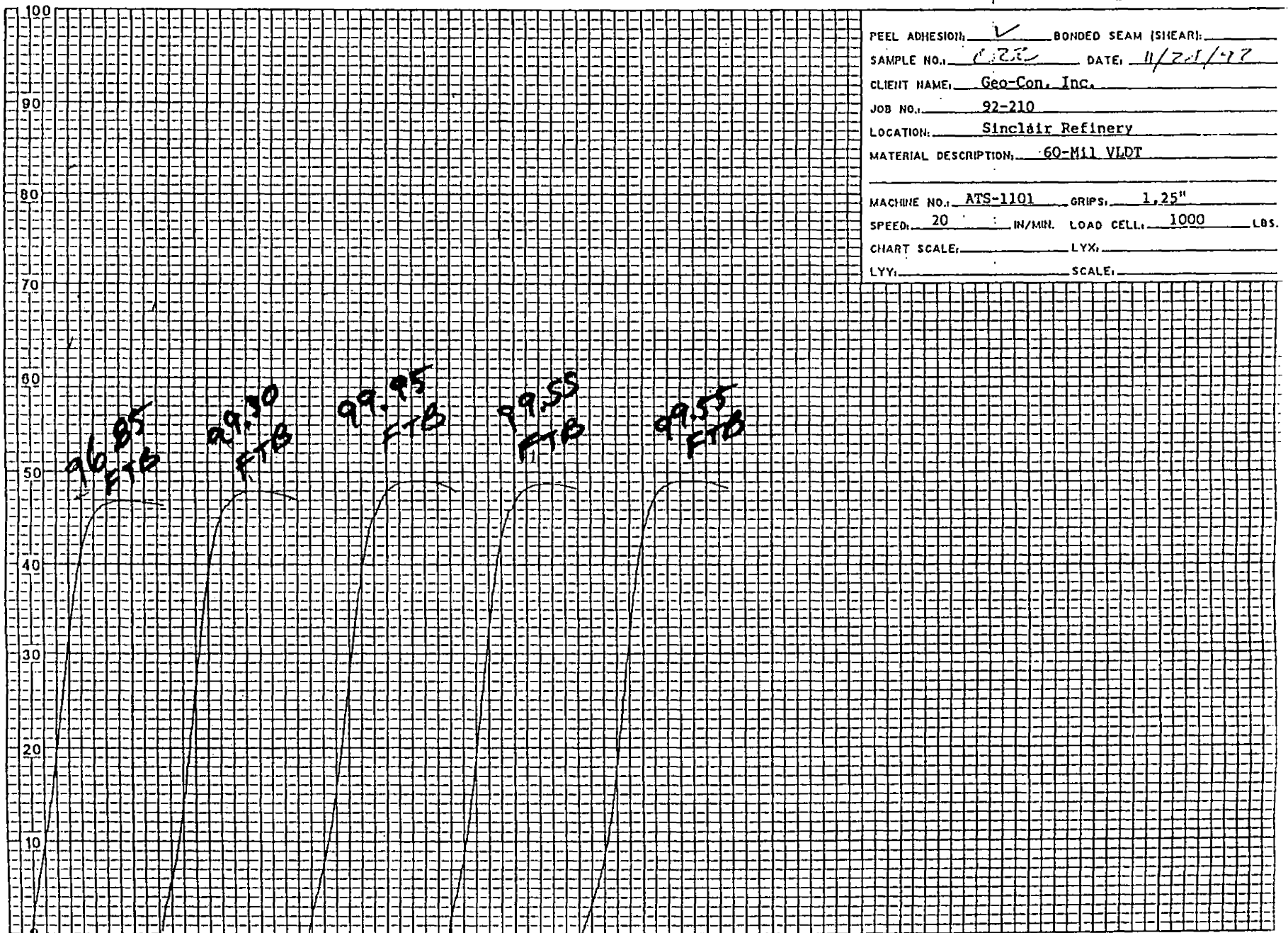
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: V BONDED SEAM (SHEAR):
SAMPLE NO.: C-22 DATE: 11/24/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): 1

SAMPLE NO.: C 22 DATE: 11/12/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

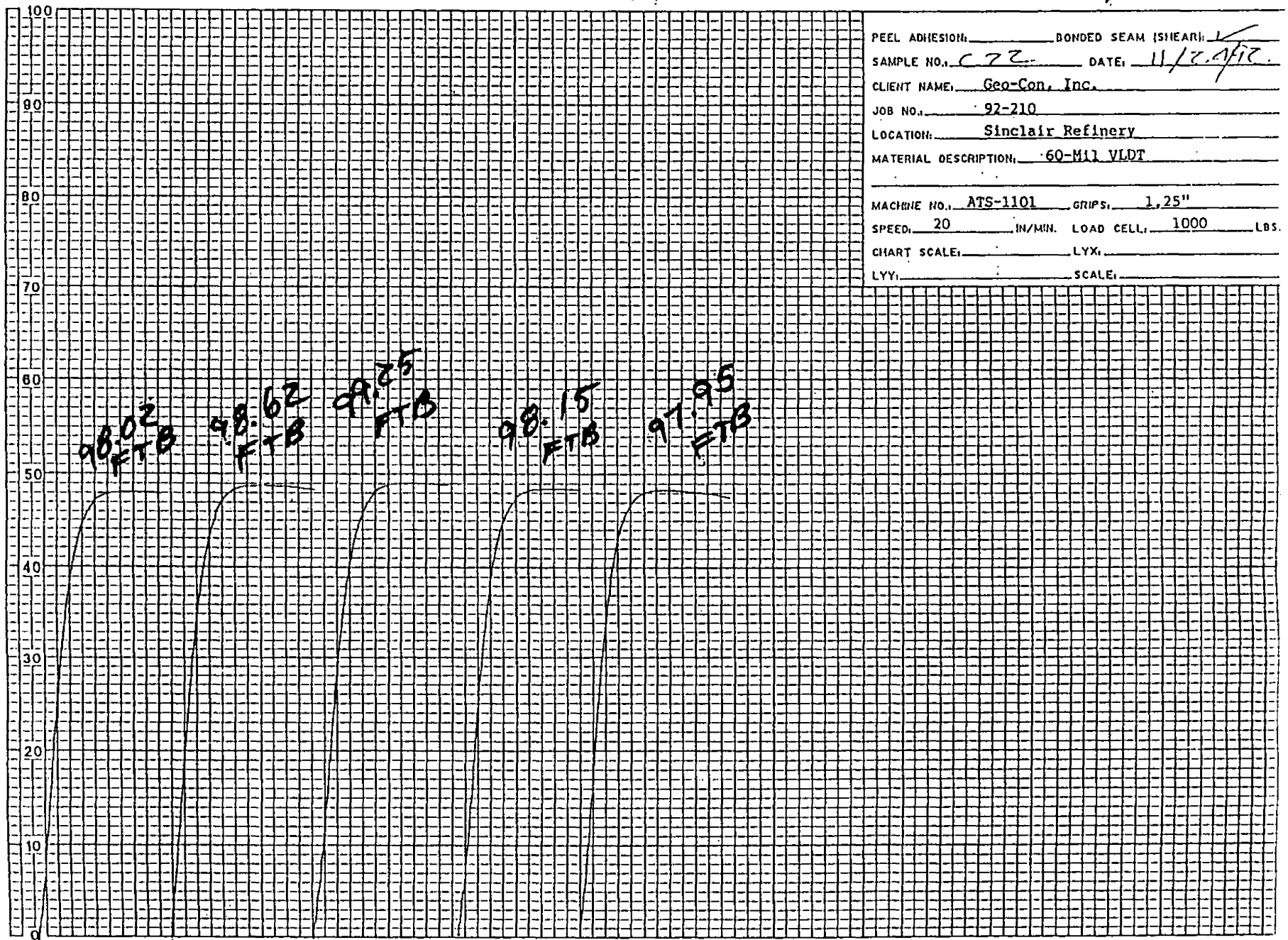
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 24 TECHNICIAN: CMS

SEAM NO.: 46 - 45 MANUFACTURER: Gundle

PANEL: 46 & 45 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.85	FTB
2	1.0	92.85	FTB
3	1.0	93.90	FTB
4	1.0	91.85	FTB
5	1.0	93.22	FTB
Average		92.93	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.02	FTB
2	1.0	96.10	FTB
3	1.0	96.50	FTB
4	1.0	95.92	FTB
5	1.0	98.62	FTB
Average		96.63	

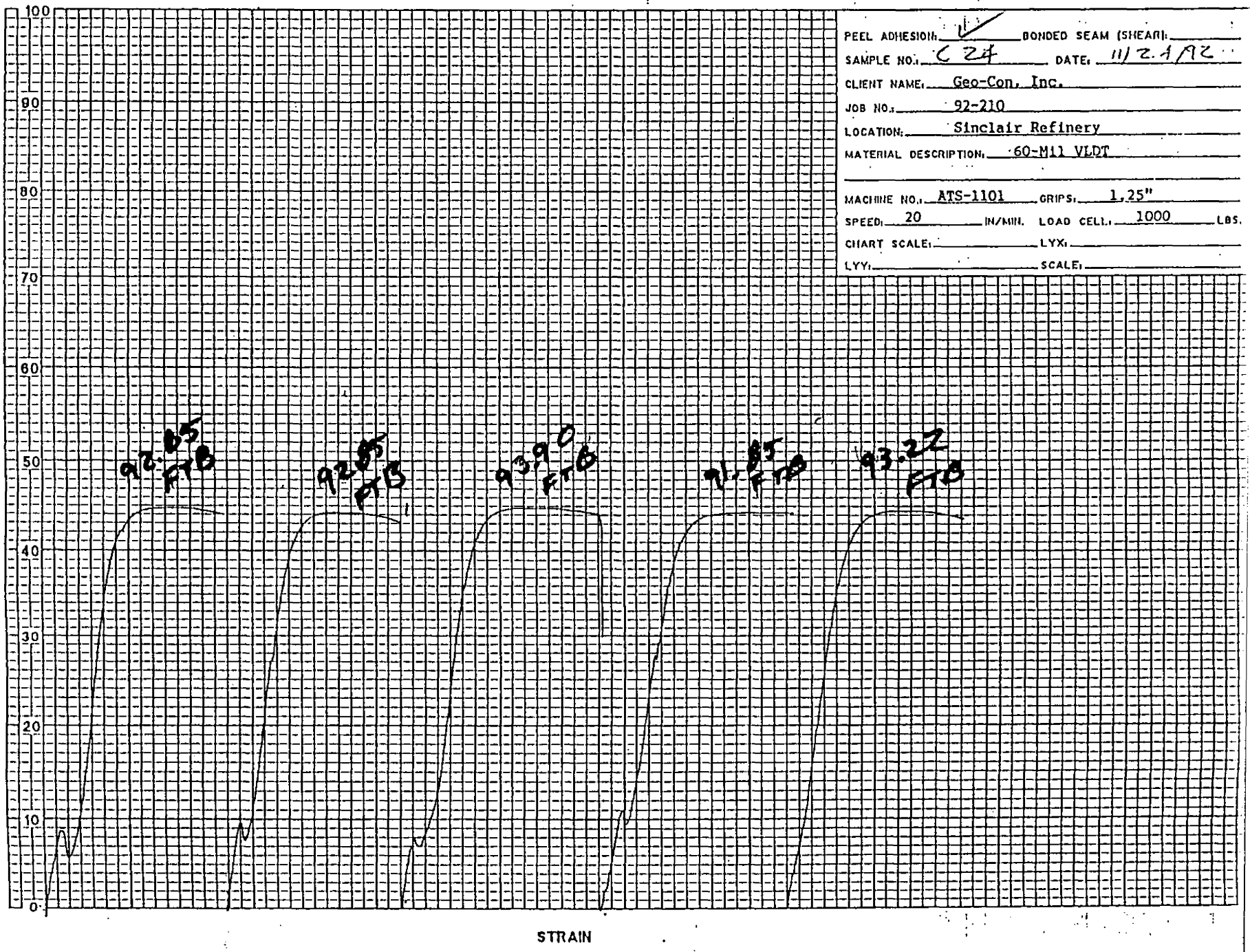
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

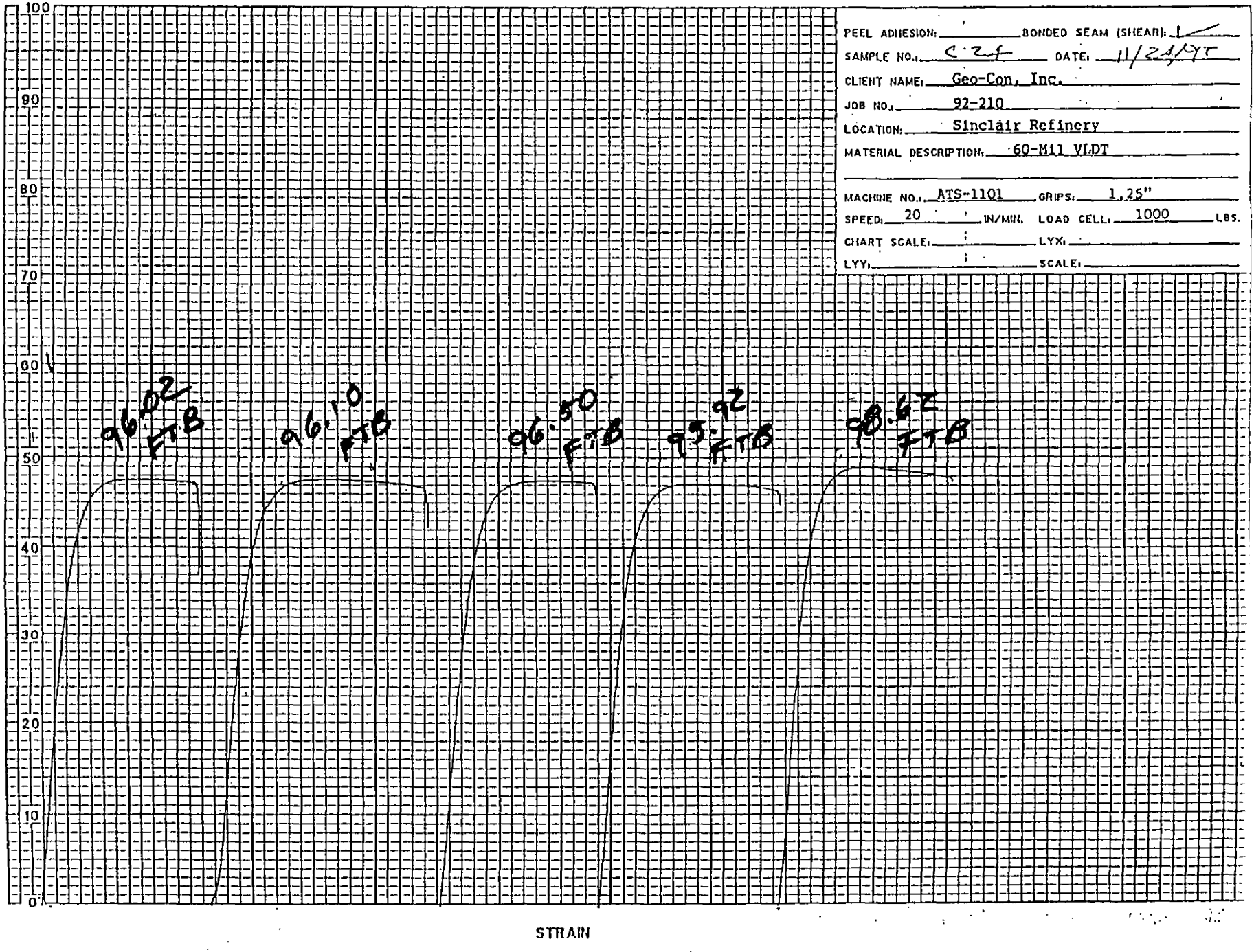
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PEEL ADHESION: V BONDED SEAM (SHEAR):
SAMPLE NO.: C 24 DATE: 11/2.4/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C-24 DATE: 11/21/97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 25 TECHNICIAN: CMS

SEAM NO.: 48 - 49 MANUFACTURER: Gundle

PANEL: 48 & 49 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	104.75	FTB
2	1.0	103.20	FTB
3	1.0	101.77	FTB
4	1.0	104.80	FTB
5	1.0	105.35	FTB
Average		103.97	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	102.10	FTB
2	1.0	107.50	FTB
3	1.0	102.97	FTB
4	1.0	106.22	FTB
5	1.0	106.35	FTB
Average		105.03	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: C 2.5 DATE: 11/21/07

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

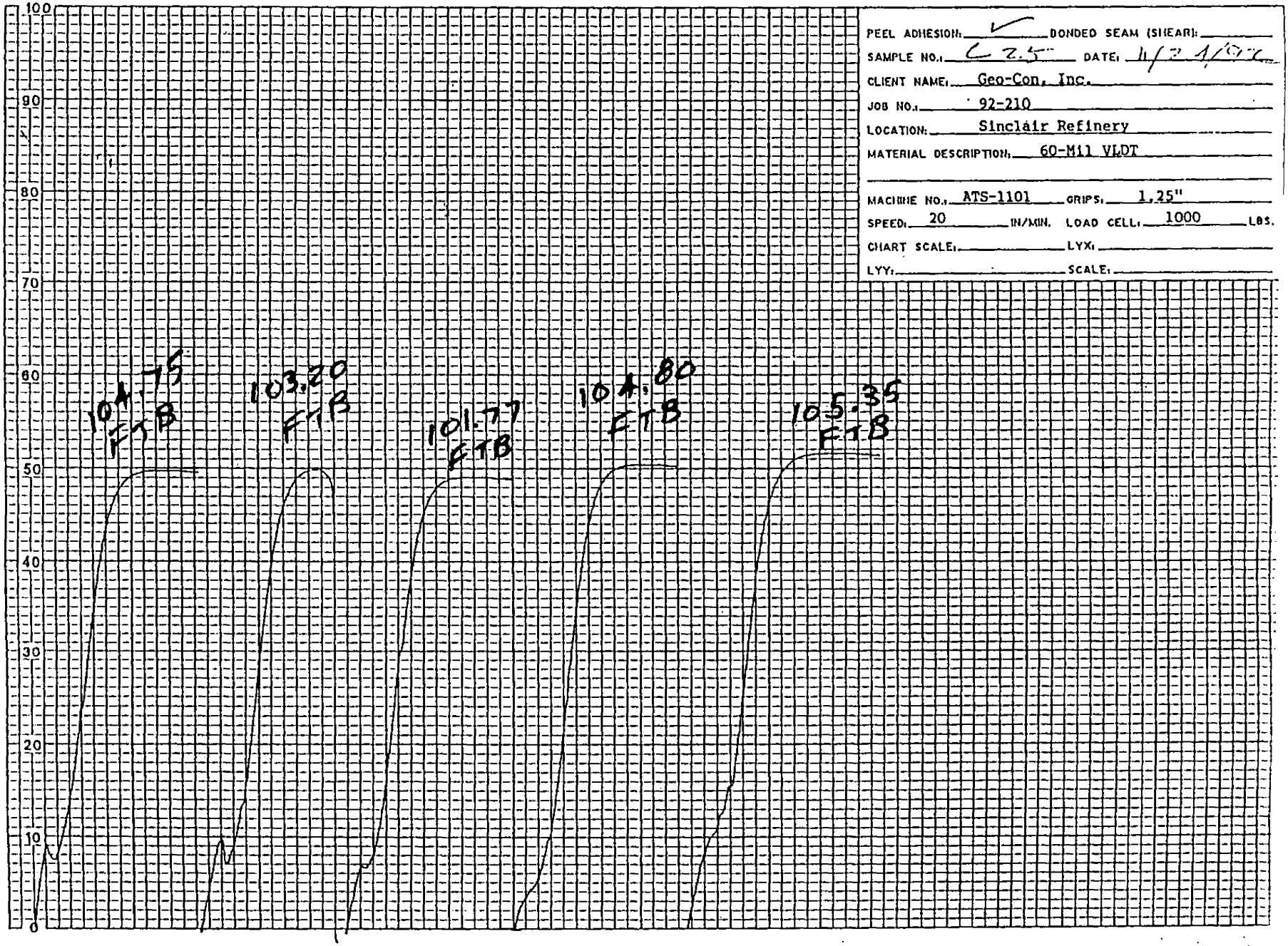
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

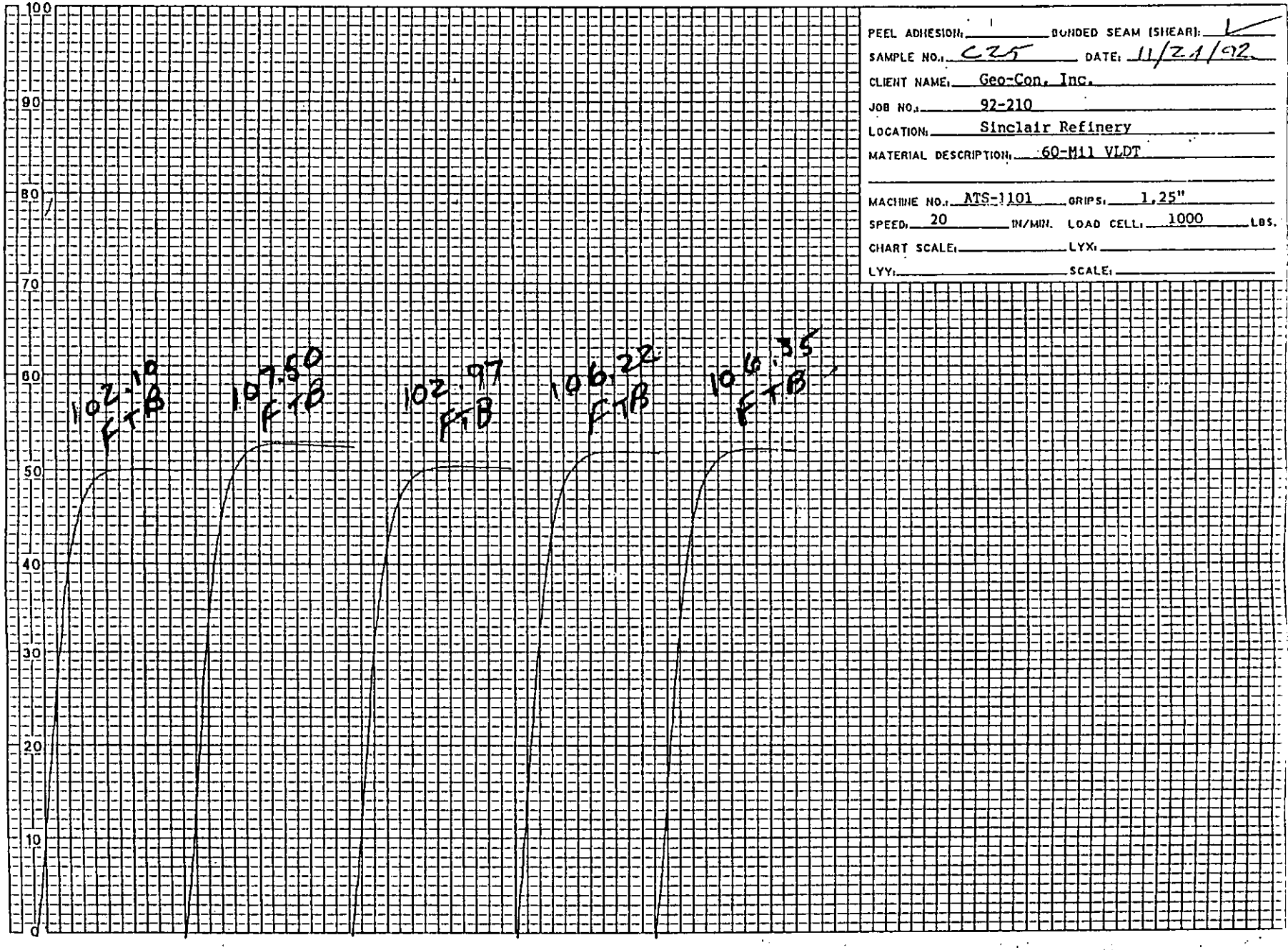
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C25 DATE: 11/24/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 26 TECHNICIAN: CMS

SEAM NO.: 53 - 54 MANUFACTURER: Gundle

PANEL: 53 & 54 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.65	FTB
2	1.0	99.92	FTB
3	1.0	100.40	FTB
4	1.0	99.20	FTB
5	1.0	99.10	FTB
Average		99.45	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	99.05	FTB
2	1.0	100.47	FTB
3	1.0	101.05	FTB
4	1.0	101.35	FTB
5	1.0	100.57	FTB
Average		100.50	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: V BONDED SEAM (SHEAR):
SAMPLE NO.: 626 DATE: 11/24/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

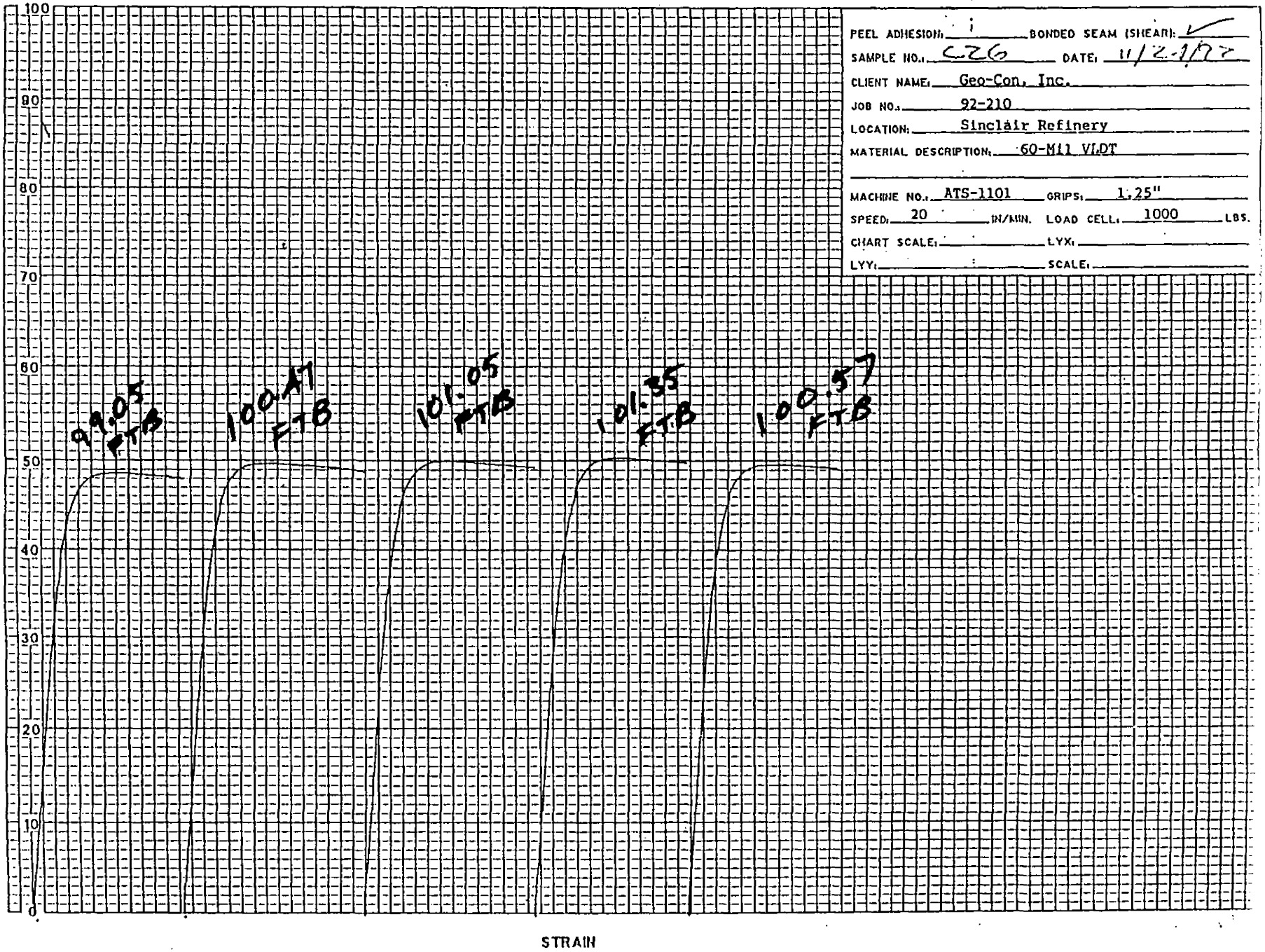
LOAD

100
90
80
70
60
50
40
30
20
10
0

98.65 FTB
99.92 FTB
100.80 FTB
99.20 FTB
99.10 FTB

STRAIN

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 27 TECHNICIAN: CMS

SEAM NO.: 54 - 55 MANUFACTURER: Gundle

PANEL: 54 & 55 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ____

Peel Adhesion Test Data

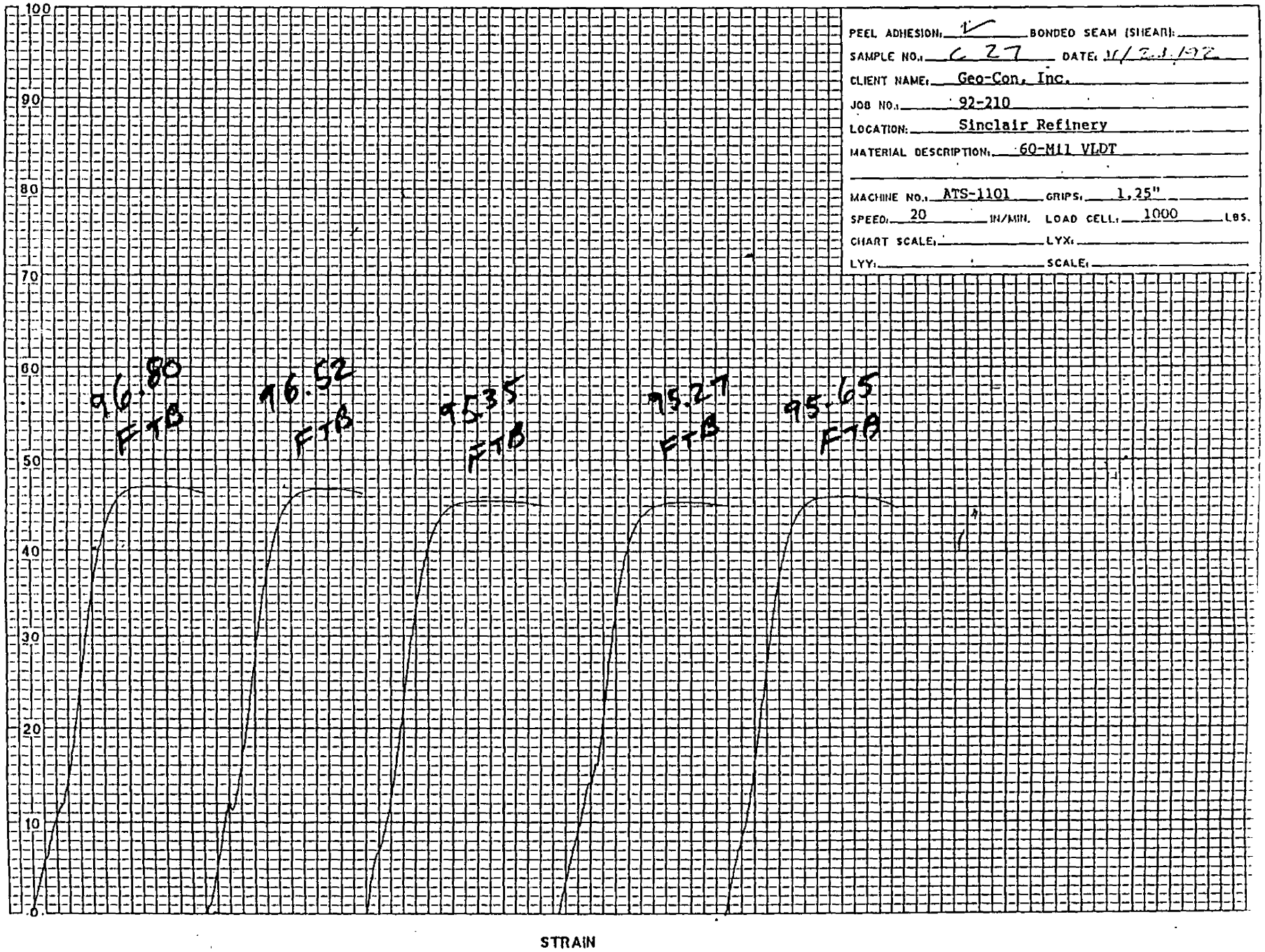
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.80	FTB
2	1.0	96.52	FTB
3	1.0	95.35	FTB
4	1.0	95.27	FTB
5	1.0	95.65	FTB
Average		95.92	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.92	FTB
2	1.0	95.35	FTB
3	1.0	94.80	FTB
4	1.0	94.77	FTB
5	1.0	93.65	FTB
Average		94.70	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C-7-7 DATE: 11/24/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

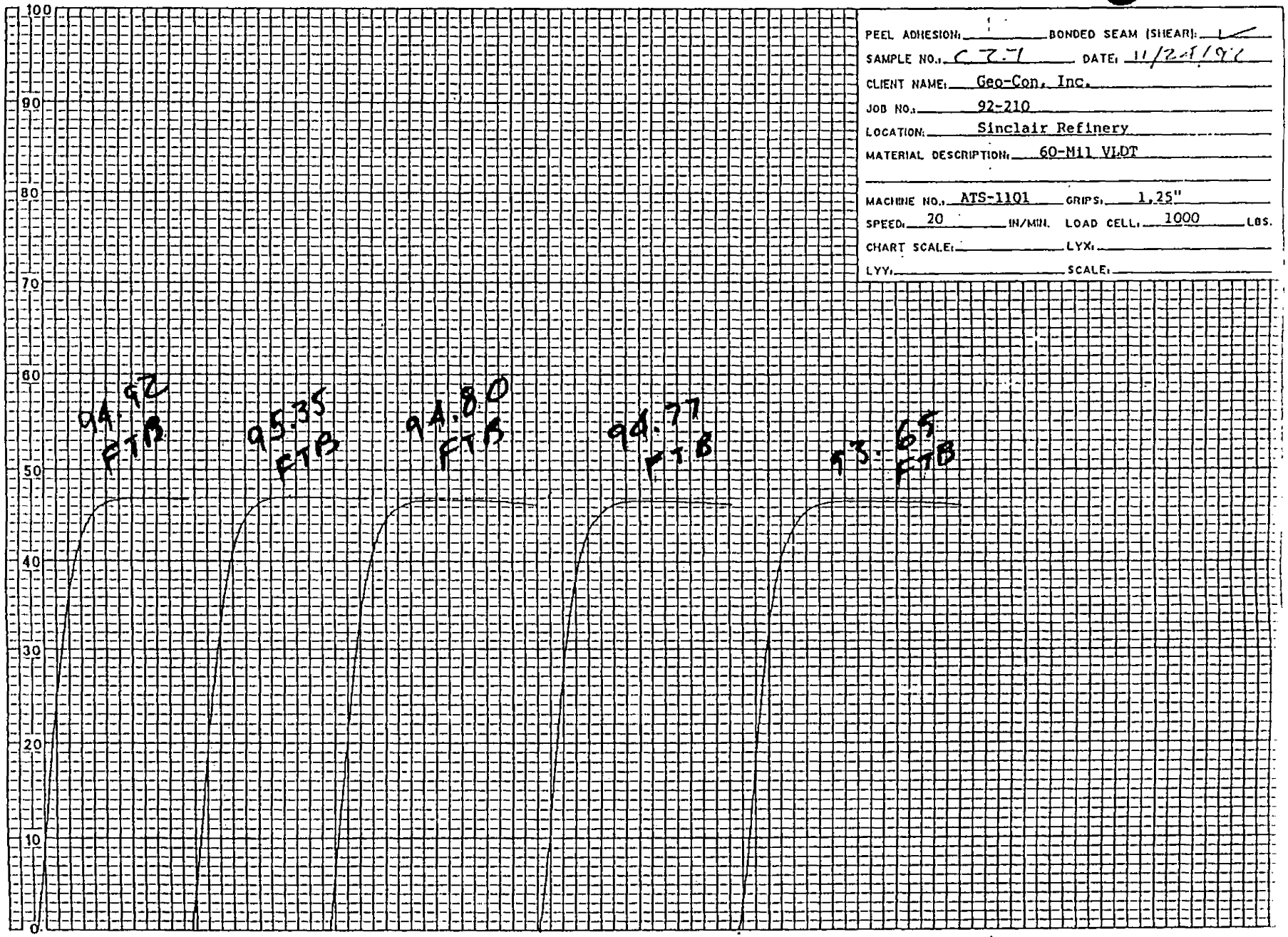
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 28 TECHNICIAN: CMS

SEAM NO.: 55 - 56 MANUFACTURER: Gundle

PANEL: 55 & 56 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.15	FTB
2	1.0	94.32	FTB
3	1.0	94.10	FTB
4	1.0	93.65	FTB
5	1.0	95.22	FTB
Average		94.09	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	97.02	FTB
2	1.0	97.22	FTB
3	1.0	97.70	FTB
4	1.0	97.20	FTB
5	1.0	95.92	FTB
Average		97.01	

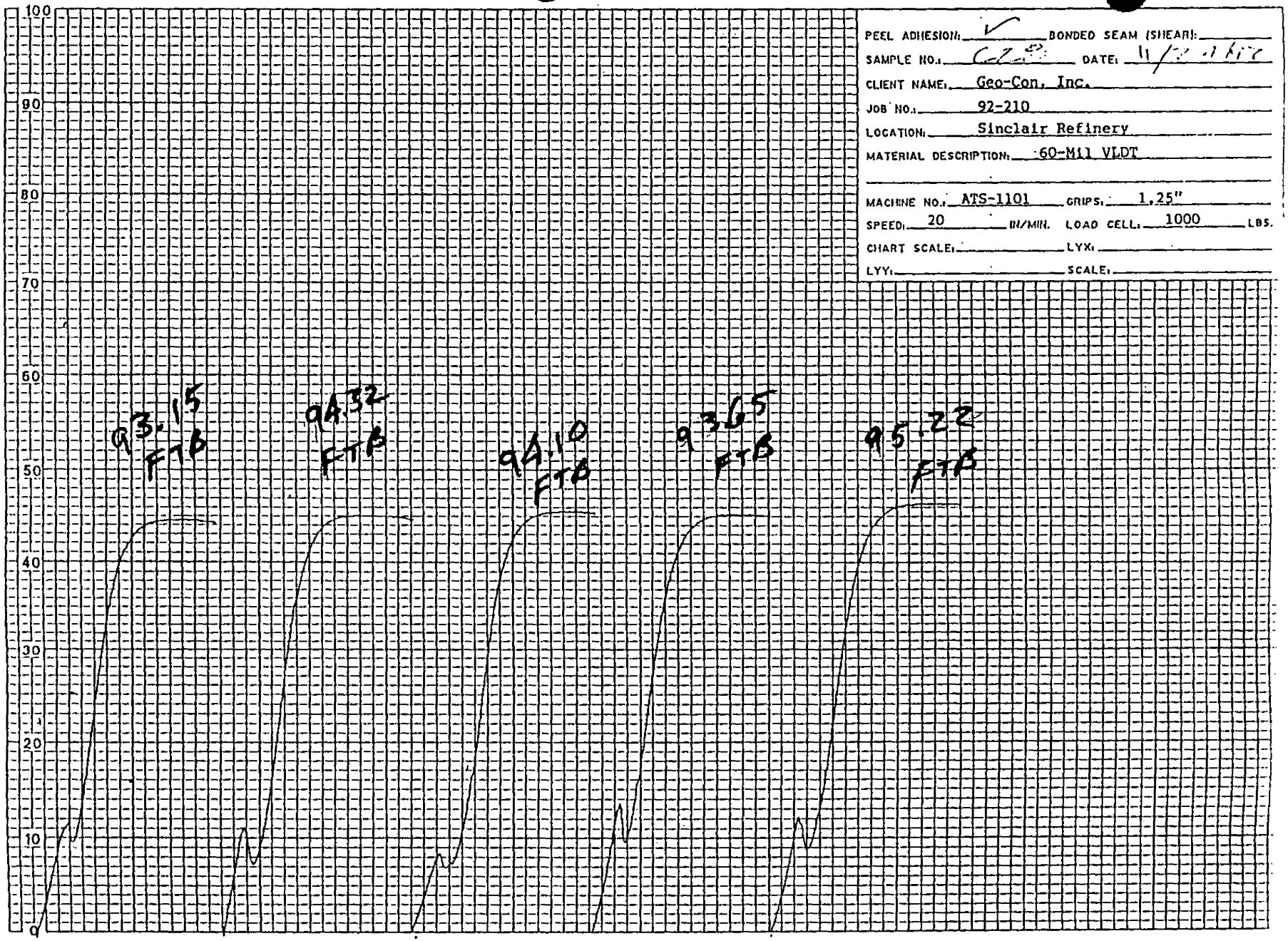
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

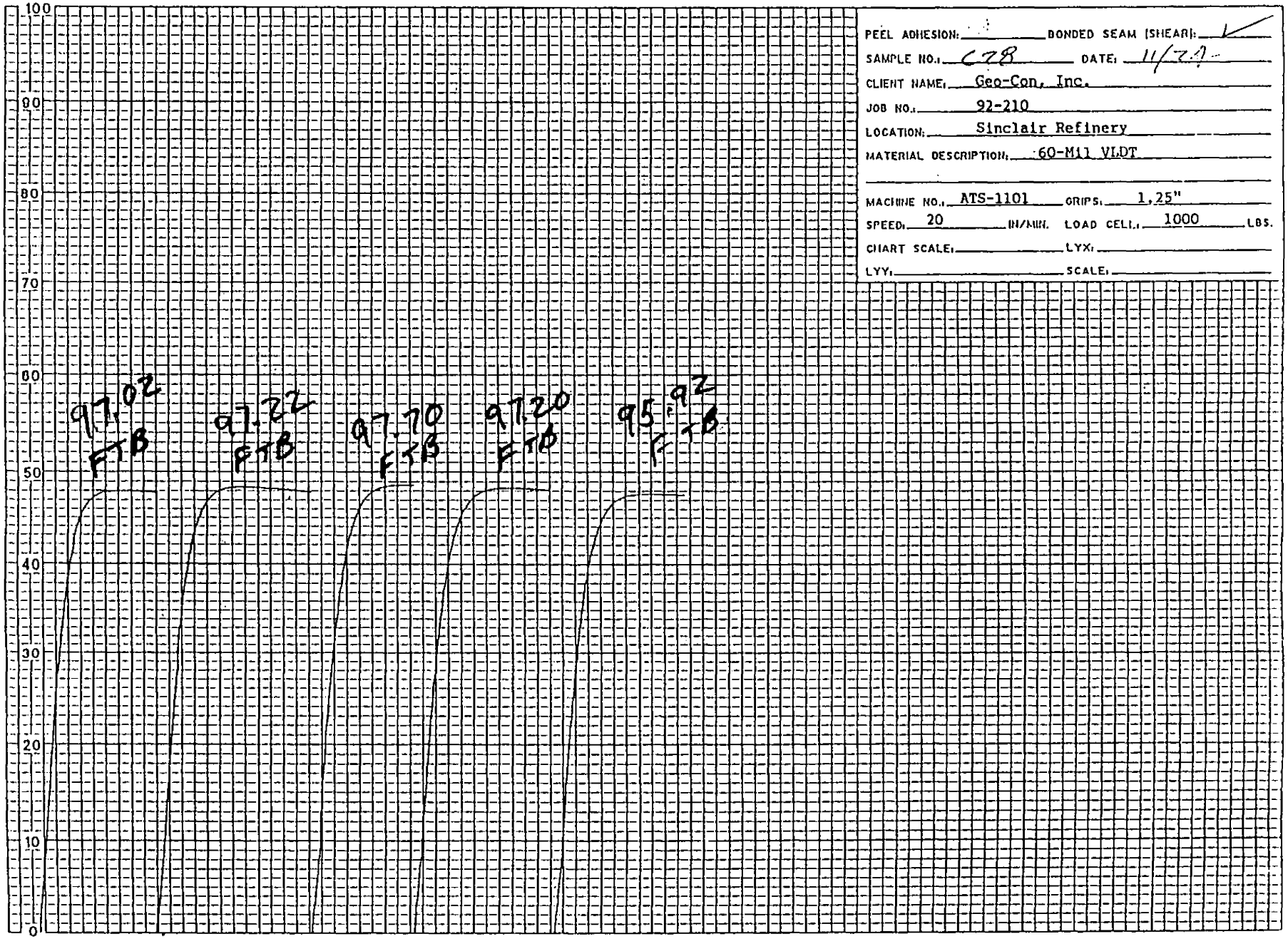
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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):
SAMPLE NO.: C2-5 DATE: 11/12-13/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX: LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C28 DATE: 11/24

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 29 TECHNICIAN: CMS

SEAM NO.: 58 - 57 MANUFACTURER: Gundle

PANEL: 58 & 57 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

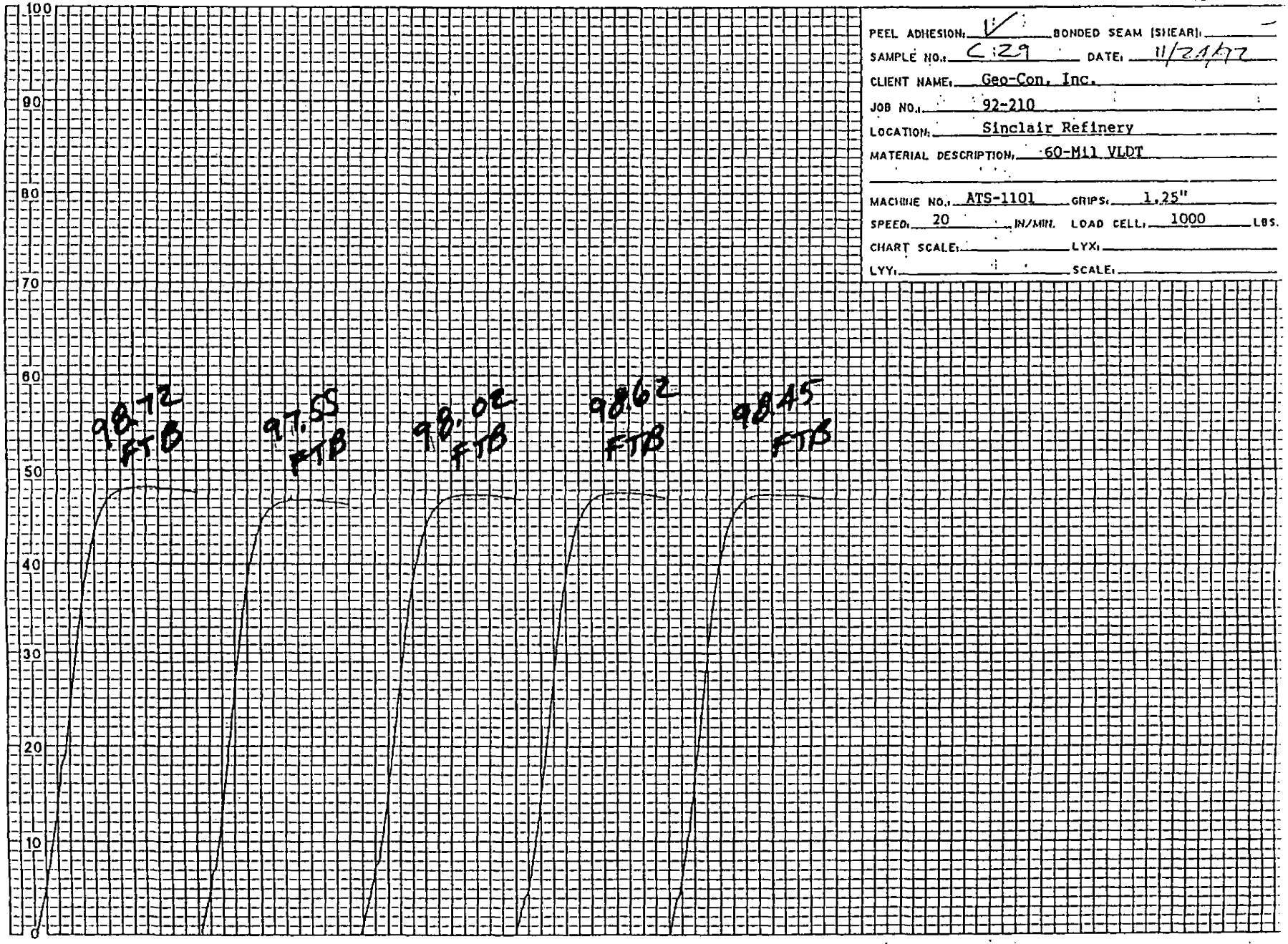
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.72	FTB
2	1.0	97.55	FTB
3	1.0	98.02	FTB
4	1.0	98.62	FTB
5	1.0	98.45	FTB
Average		98.27	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	97.30	FTB
2	1.0	98.60	FTB
3	1.0	98.80	FTB
4	1.0	97.80	FTB
5	1.0	98.60	FTB
Average		98.22	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: V BONDED SEAM (SHEAR):

SAMPLE NO.: C-29 DATE: 11/21/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C29 DATE: 11/24/93

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

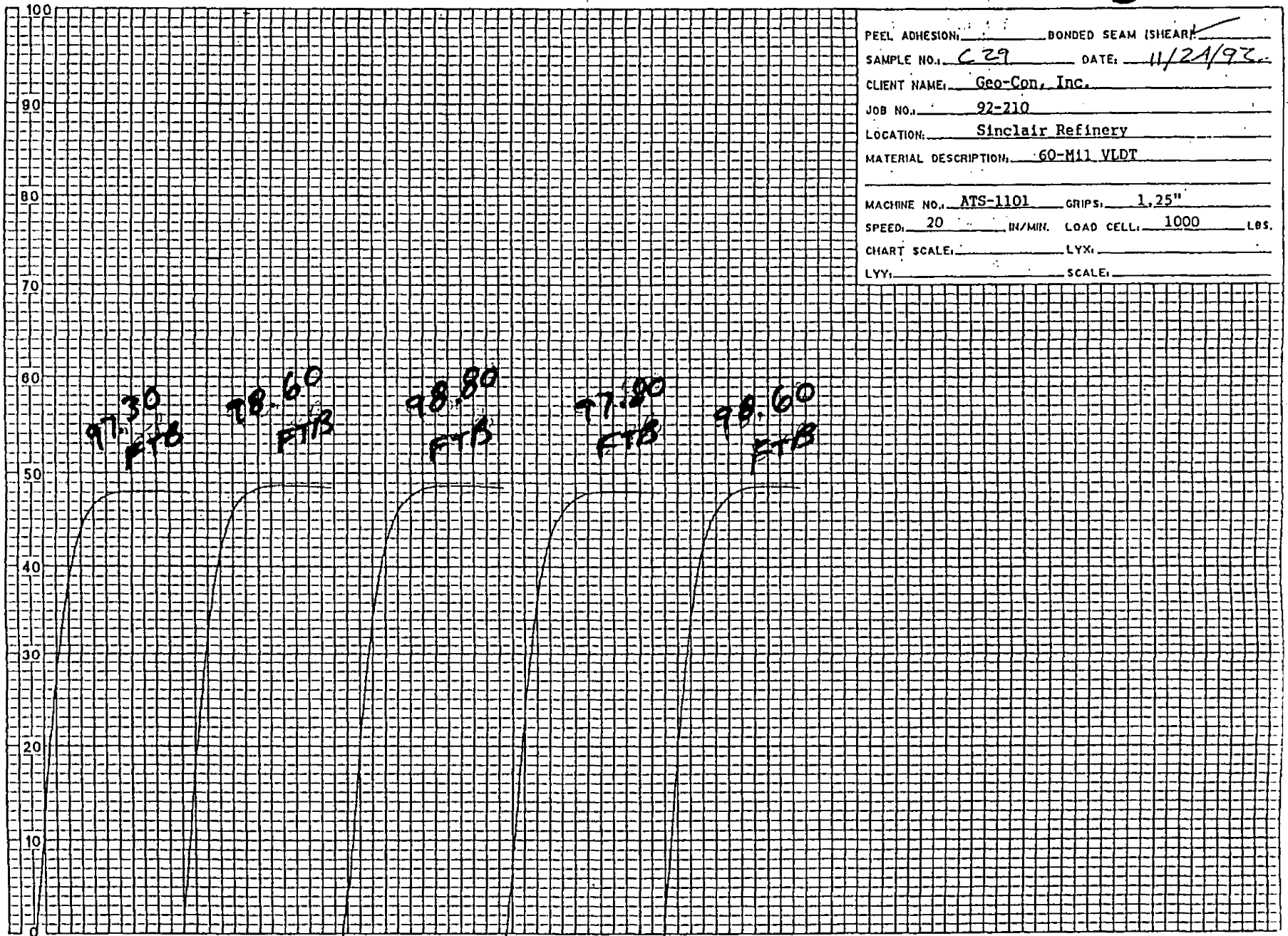
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 11/24/92

SAMPLE NO.: C 30 TECHNICIAN: CMS

SEAM NO.: 58 - 59 MANUFACTURER: Gundle

PANEL: 58 & 59 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

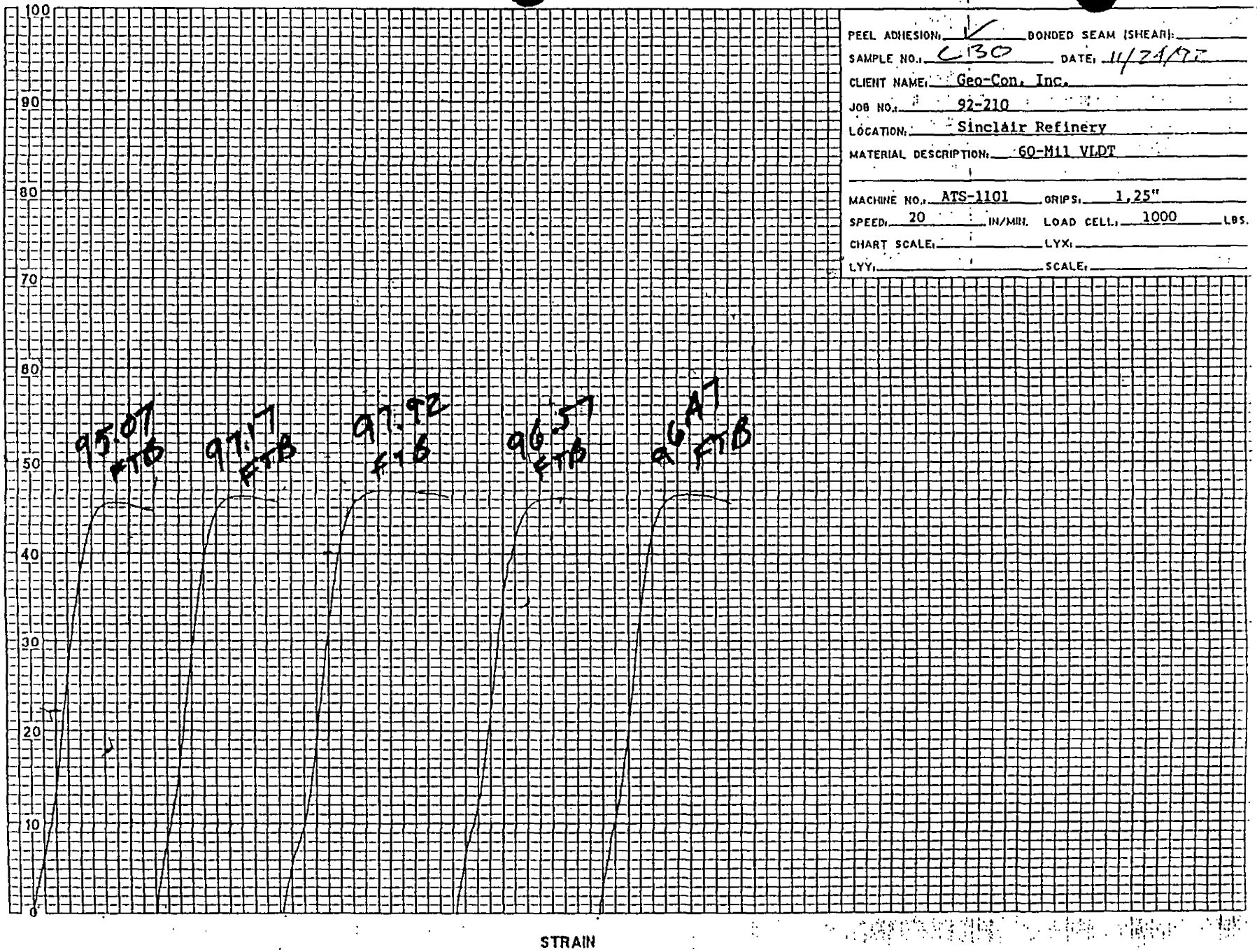
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.07	FTB
2	1.0	97.17	FTB
3	1.0	97.92	FTB
4	1.0	96.57	FTB
5	1.0	96.47	FTB
Average		96.64	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.40	FTB
2	1.0	98.95	FTB
3	1.0	99.50	FTB
4	1.0	98.95	FTB
5	1.0	98.12	FTB
Average		98.78	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: V BONDED SEAM (SHEAR):

SAMPLE NO.: C130 DATE: 11/24/97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

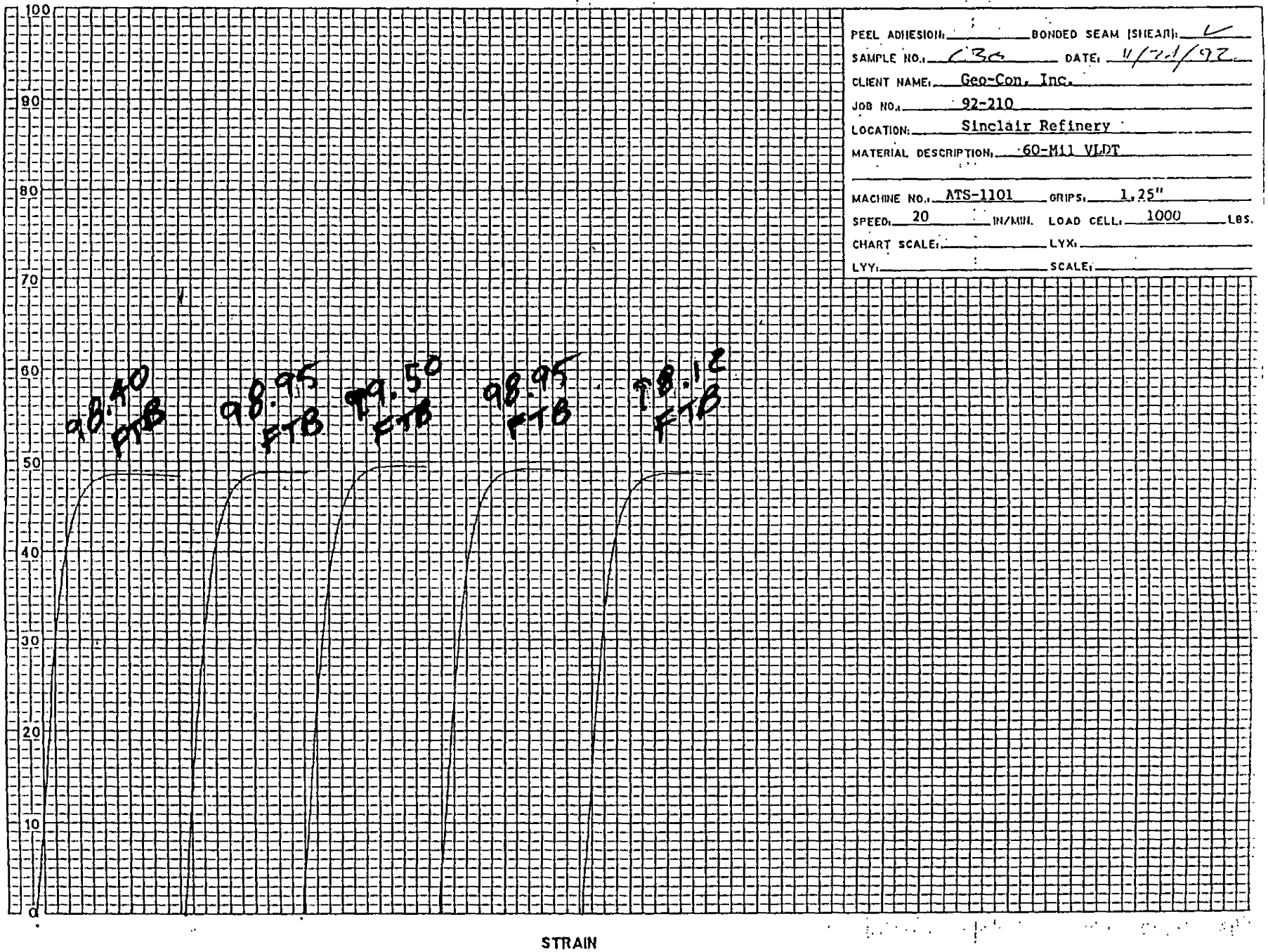
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX: LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): C

SAMPLE NO.: C30 DATE: 11/24/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT VI

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

DECEMBER 2, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C31 TECHNICIAN: RBF

SEAM NO.: 64/65 MANUFACTURER: Gundle

PANEL: 64 & 65 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.45	FTB
2	1.0	103.62	FTB
3	1.0	102.77	FTB
4	1.0	103.27	FTB
5	1.0	100.90	FTB
Average		102.80	

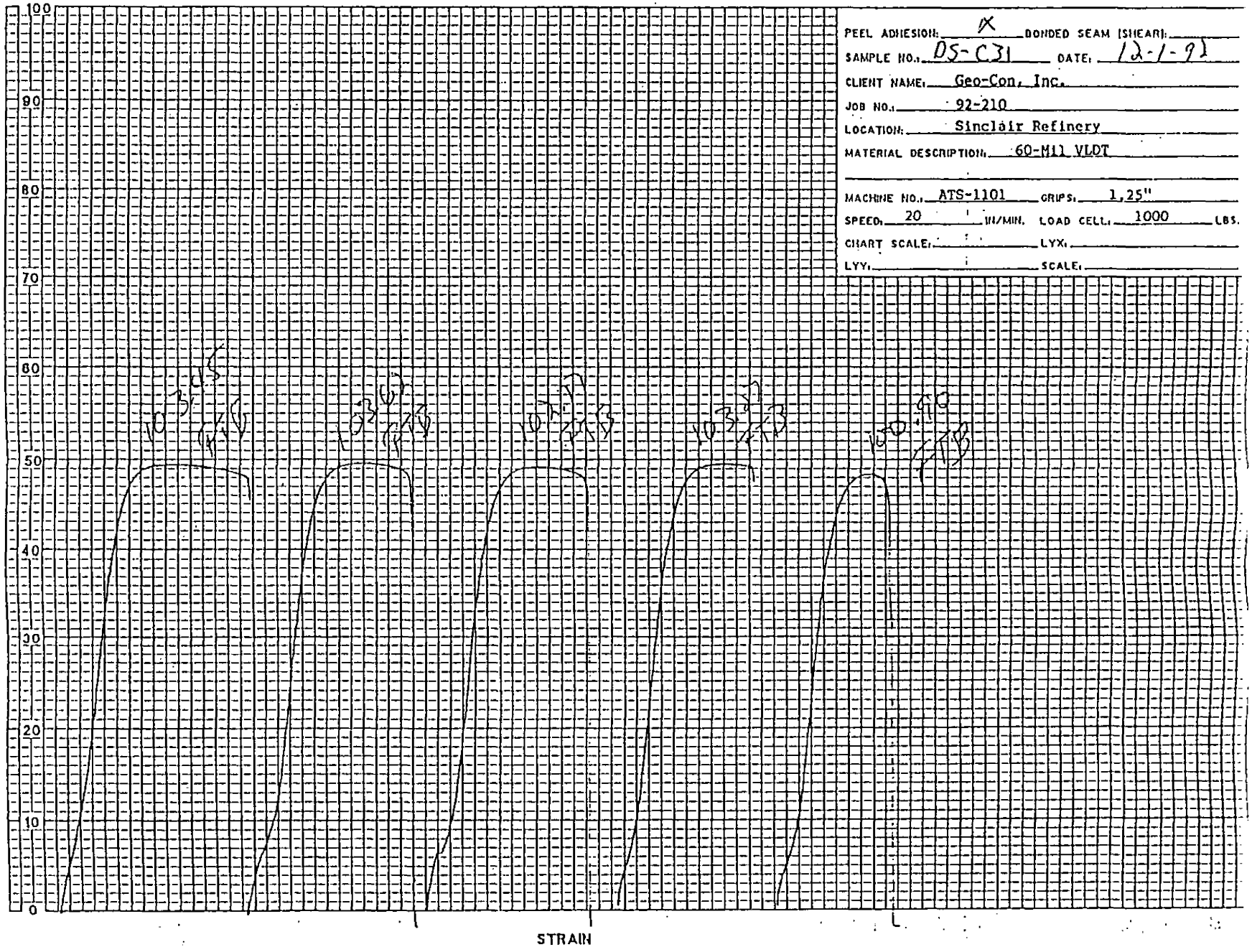
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	102.47	FTB
2	1.0	103.22	FTB
3	1.0	102.80	FTB
4	1.0	102.50	FTB
5	1.0	101.67	FTB
Average		102.53	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C31 DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

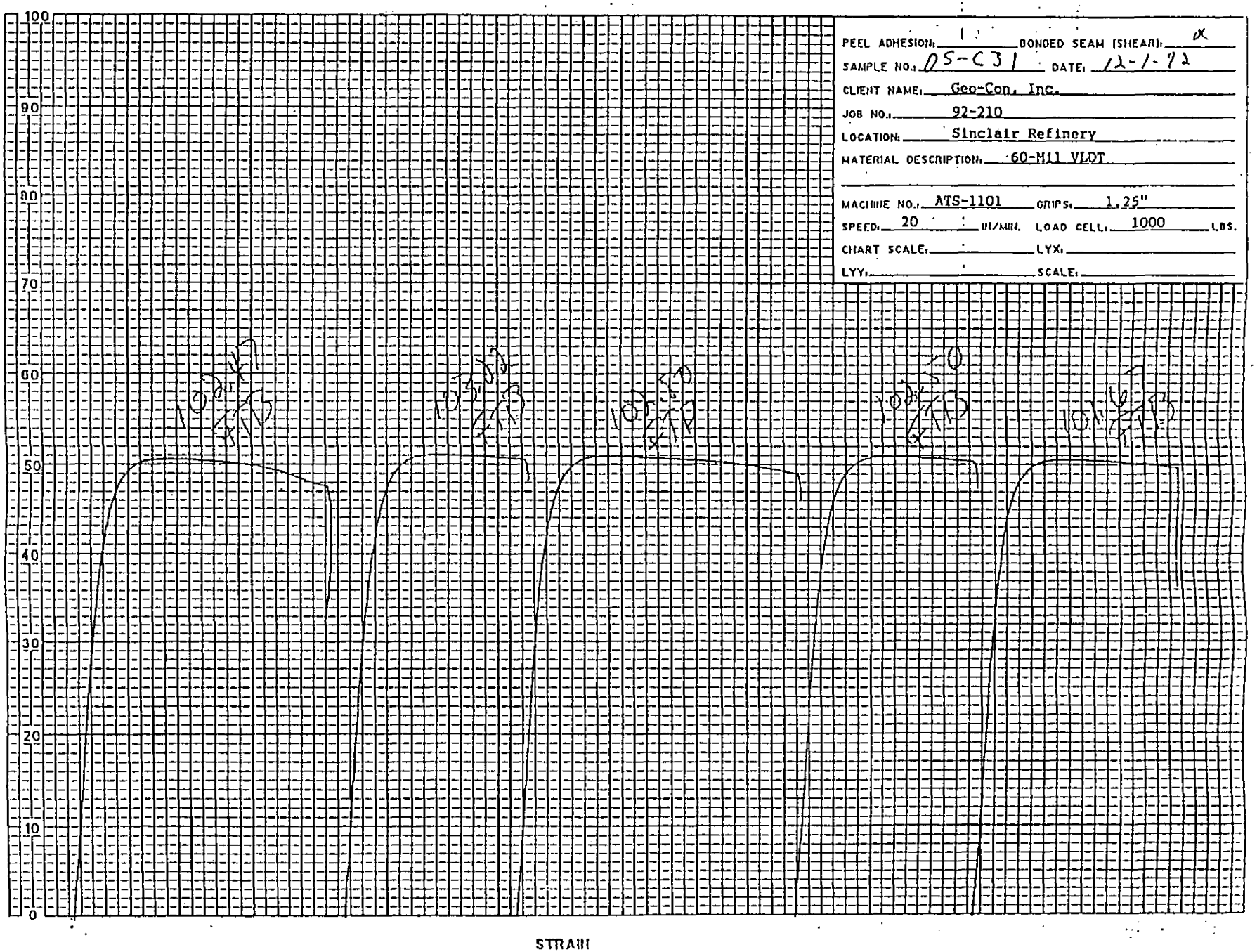
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C32 TECHNICIAN: RBF

SEAM NO.: 65/66 MANUFACTURER: Gundle

PANEL: 65 & 66 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.15	FTB
2	1.0	100.40	FTB
3	1.0	98.07	FTB
4	1.0	99.95	FTB
5	1.0	100.30	FTB
Average		99.37	

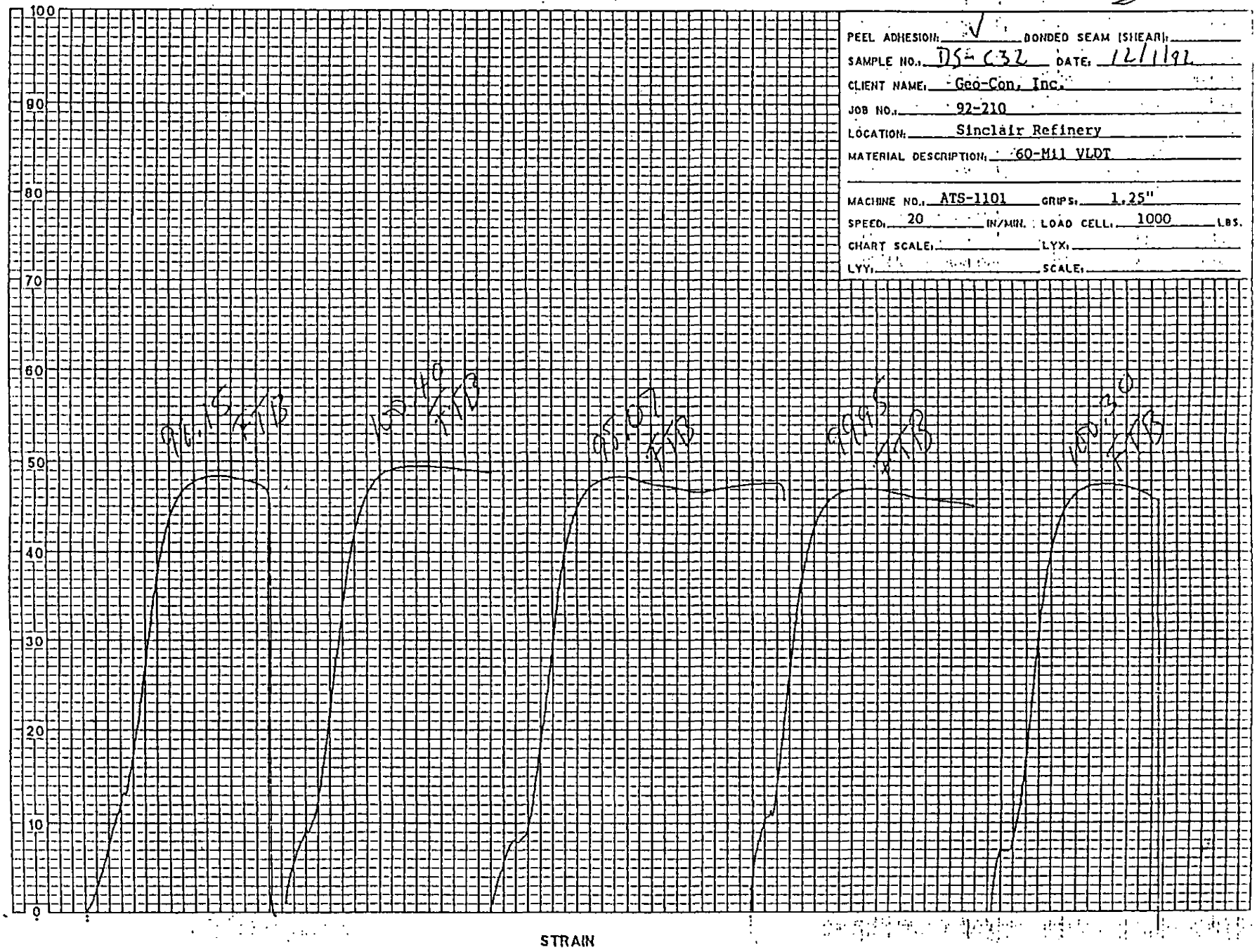
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	101.85	FTB
2	1.0	100.50	FTB
3	1.0	101.87	FTB
4	1.0	101.90	FTB
5	1.0	101.90	FTB
Average		101.60	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: √ BONDED SEAM (SHEAR):

SAMPLE NO.: DS-C32 DATE: 12/1/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

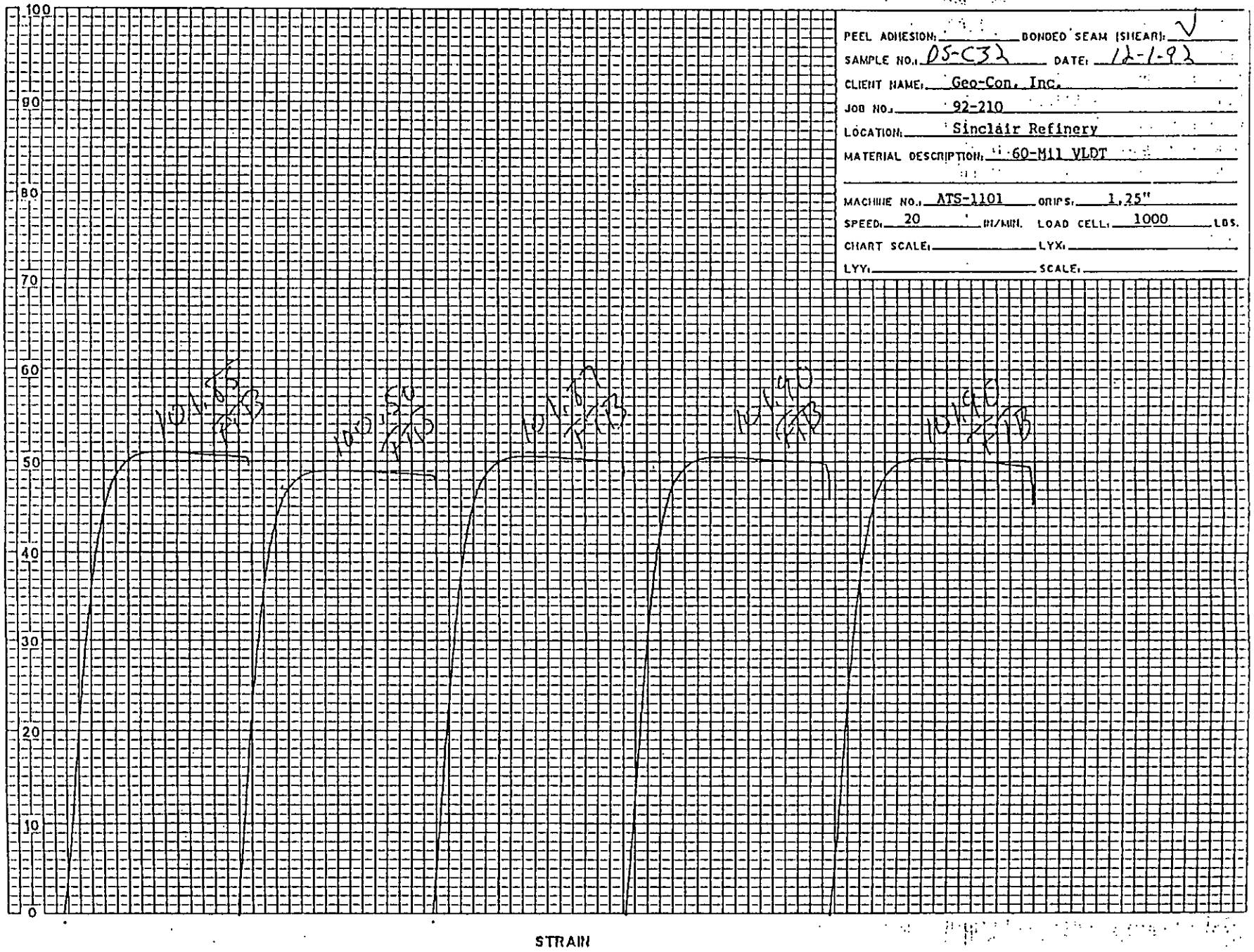
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C33 TECHNICIAN: RBF

SEAM NO.: 66/67 MANUFACTURER: Gundle

PANEL: 66 & 67 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	102.15	FTB
2	1.0	102.52	FTB
3	1.0	101.02	FTB
4	1.0	100.90	FTB
5	1.0	101.62	FTB
Average		101.64	

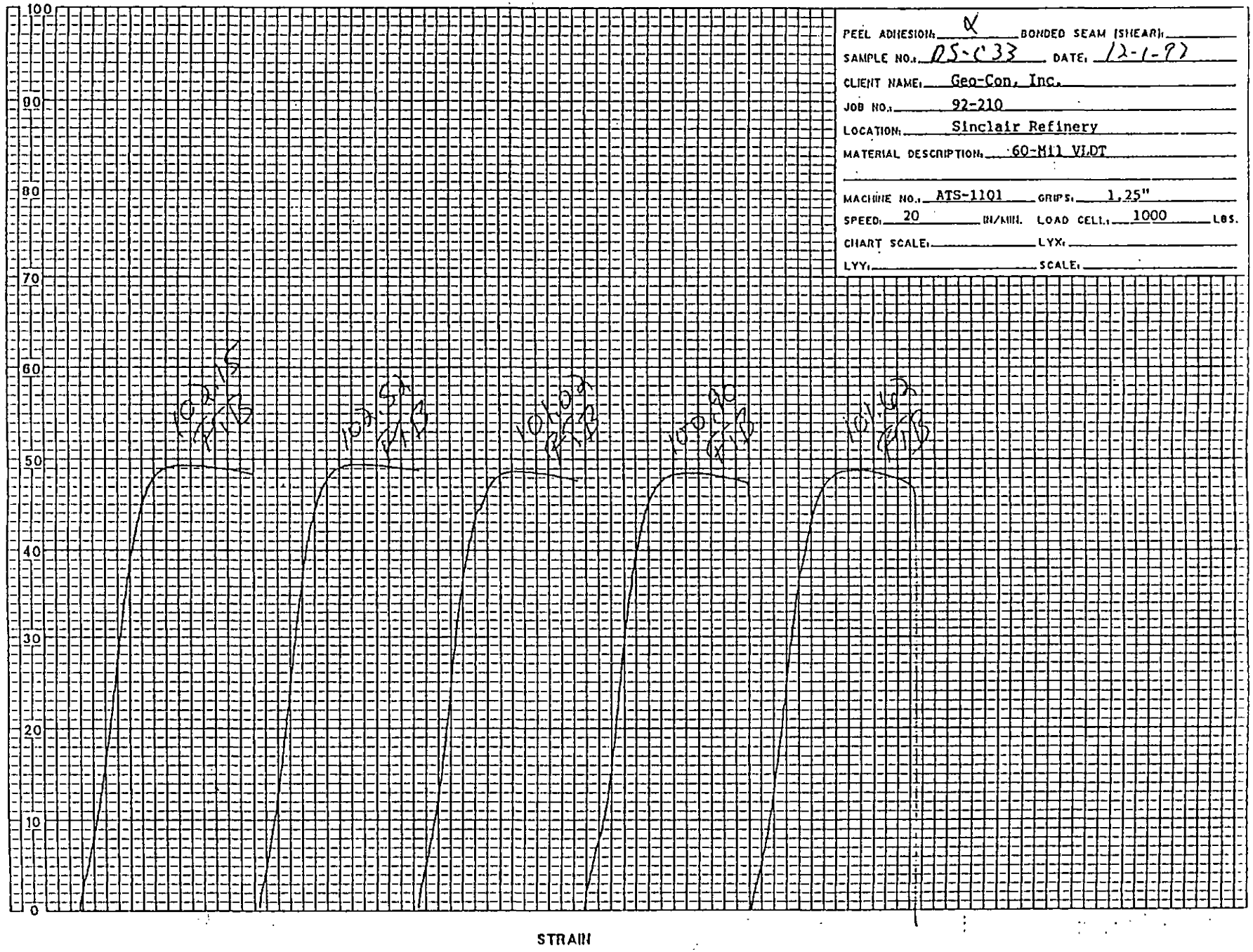
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	102.07	FTB
2	1.0	102.05	FTB
3	1.0	101.35	FTB
4	1.0	99.45	FTB
5	1.0	99.20	FTB
Average		100.82	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

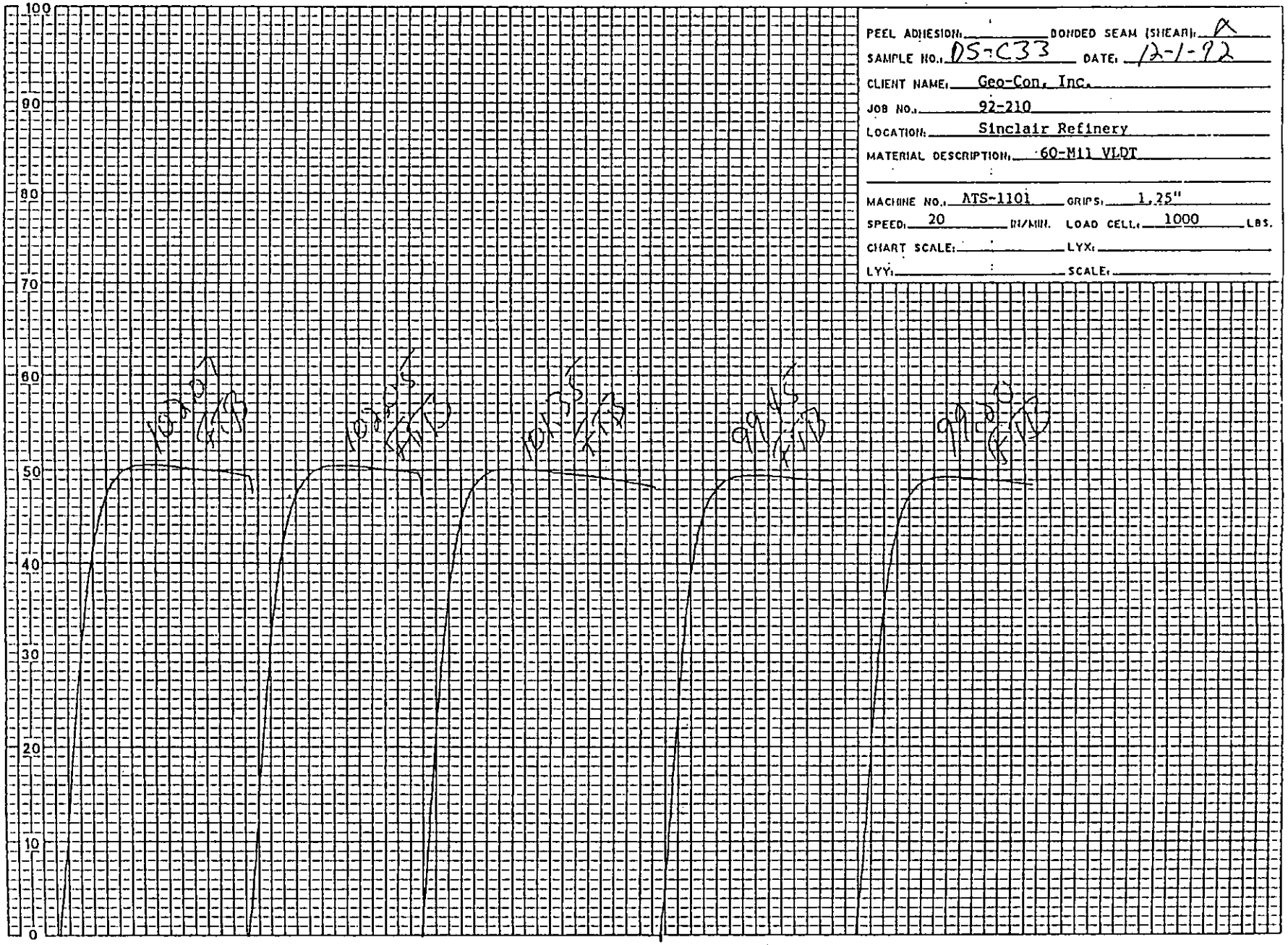
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): A

SAMPLE NO.: DS-C33 DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C34 TECHNICIAN: RBF

SEAM NO.: 67/68 MANUFACTURER: Gundle

PANEL: 67 & 68 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	101.50	FTB
2	1.0	101.80	FTB
3	1.0	102.72	FTB
4	1.0	102.35	FTB
5	1.0	101.82	FTB
Average		102.04	

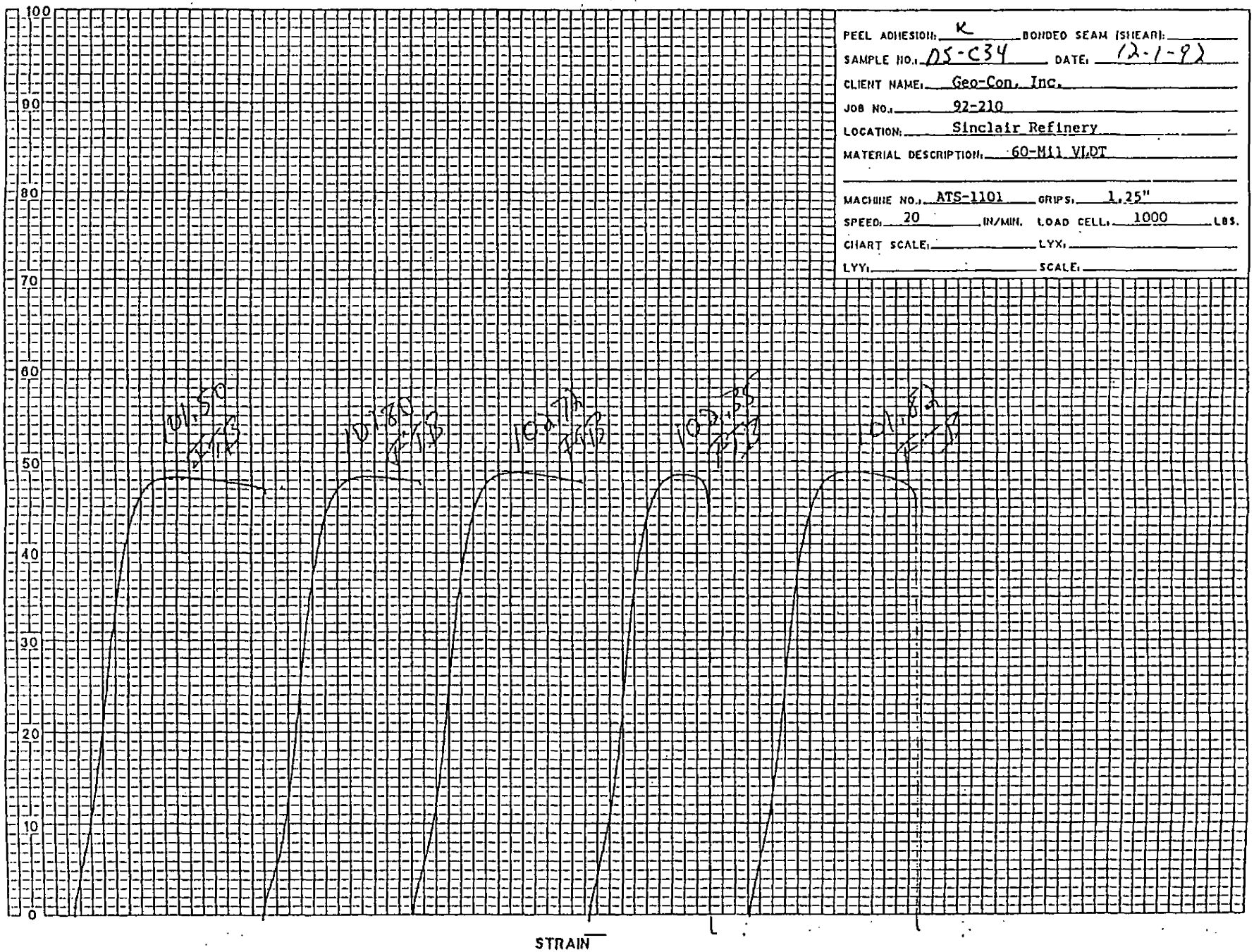
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	102.37	FTB
2	1.0	101.82	FTB
3	1.0	101.32	FTB
4	1.0	100.75	FTB
5	1.0	98.22	FTB
Average		100.90	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: K BONDED SEAM (SHEAR):

SAMPLE NO.: DS-C34 DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

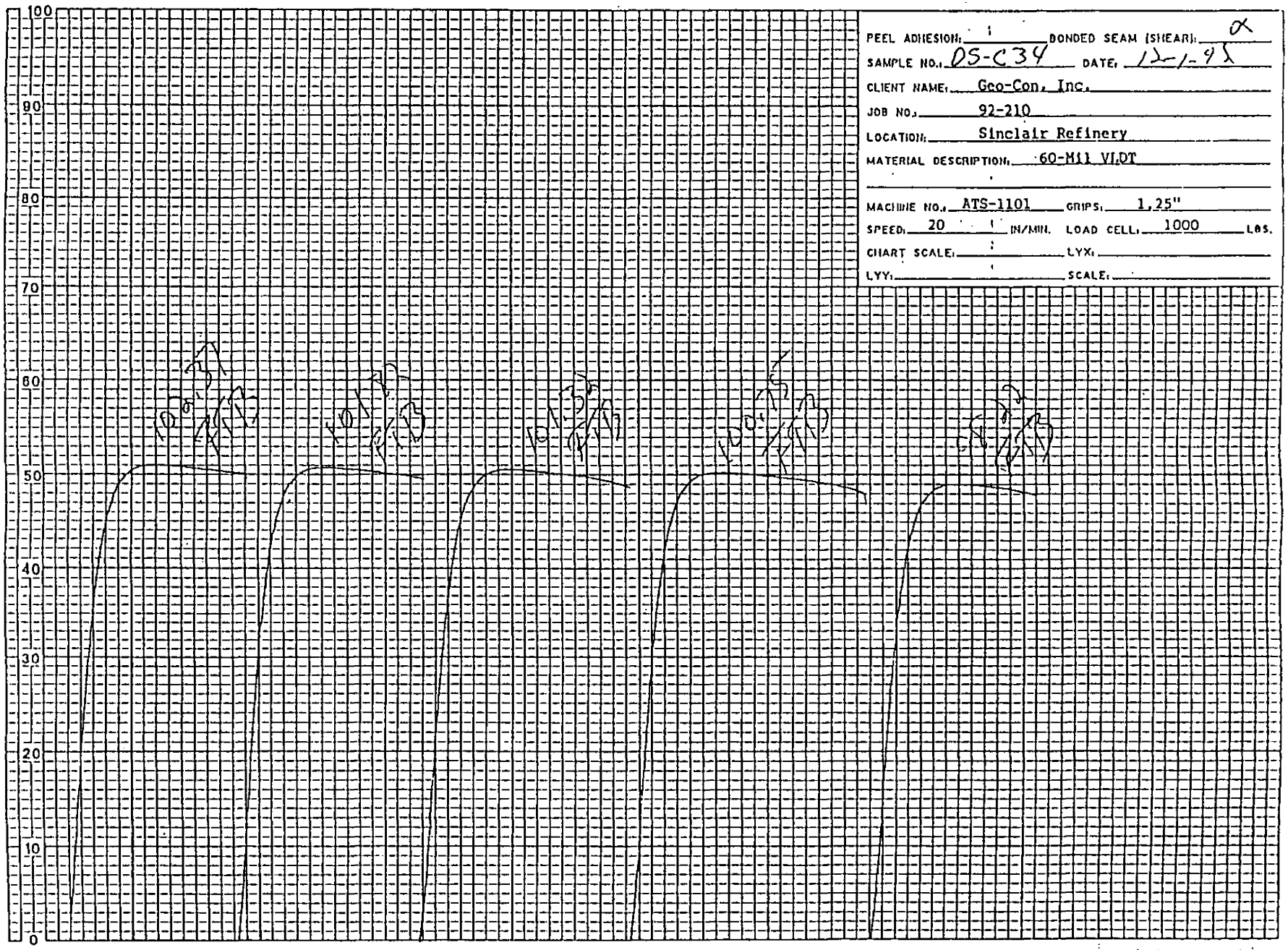
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ∝

SAMPLE NO.: DS-C34 DATE: 12-1-95

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C35 TECHNICIAN: RBF

SEAM NO.: 67/68 MANUFACTURER: Gundle

PANEL: 67 & 68 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.37	FTB
2	1.0	96.90	FTB
3	1.0	100.37	FTB
4	1.0	101.00	FTB
5	1.0	100.20	FTB
Average		99.77	

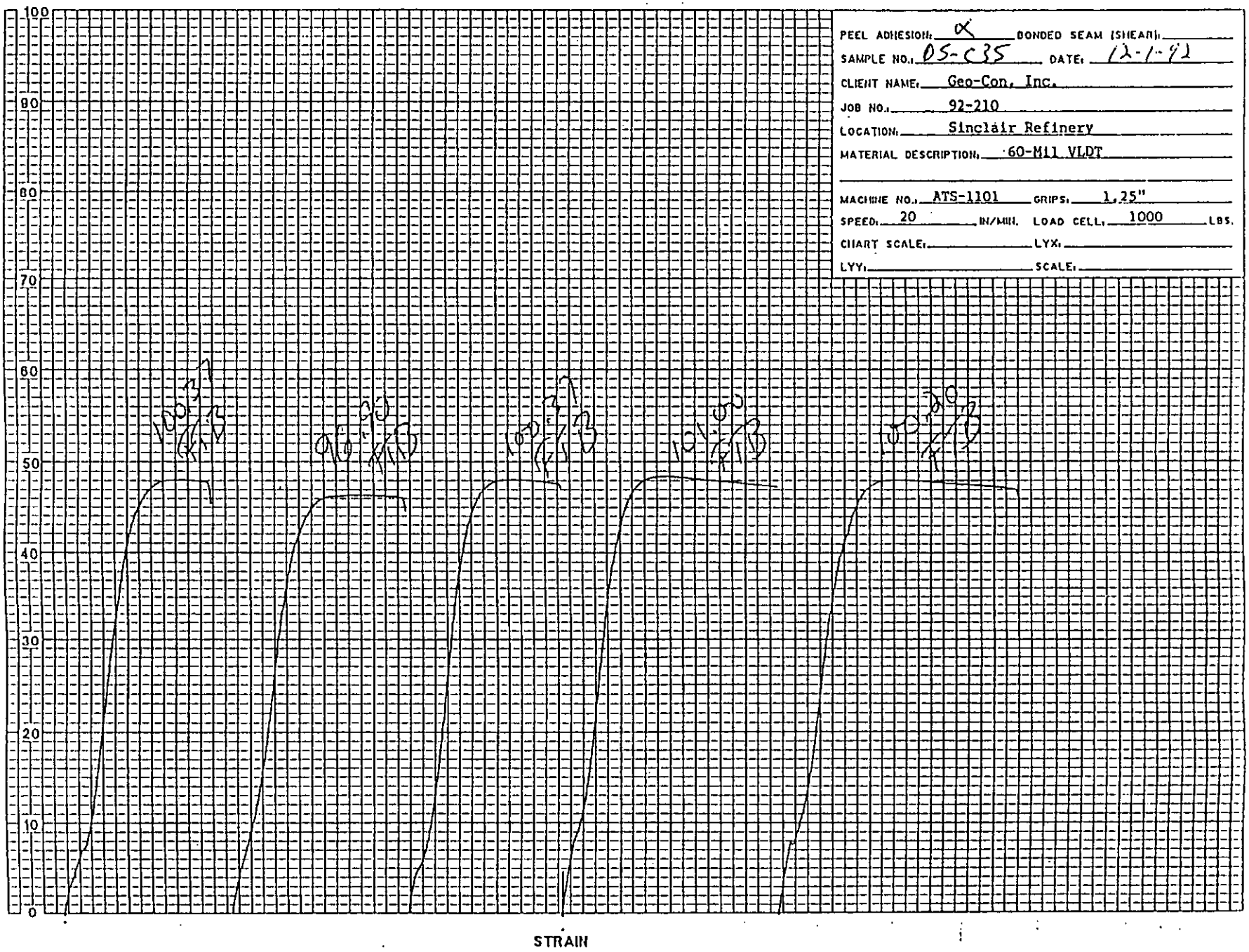
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.67	FTB
2	1.0	100.05	FTB
3	1.0	99.05	FTB
4	1.0	99.60	FTB
5	1.0	98.85	FTB
Average		99.24	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: 05-C35 DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

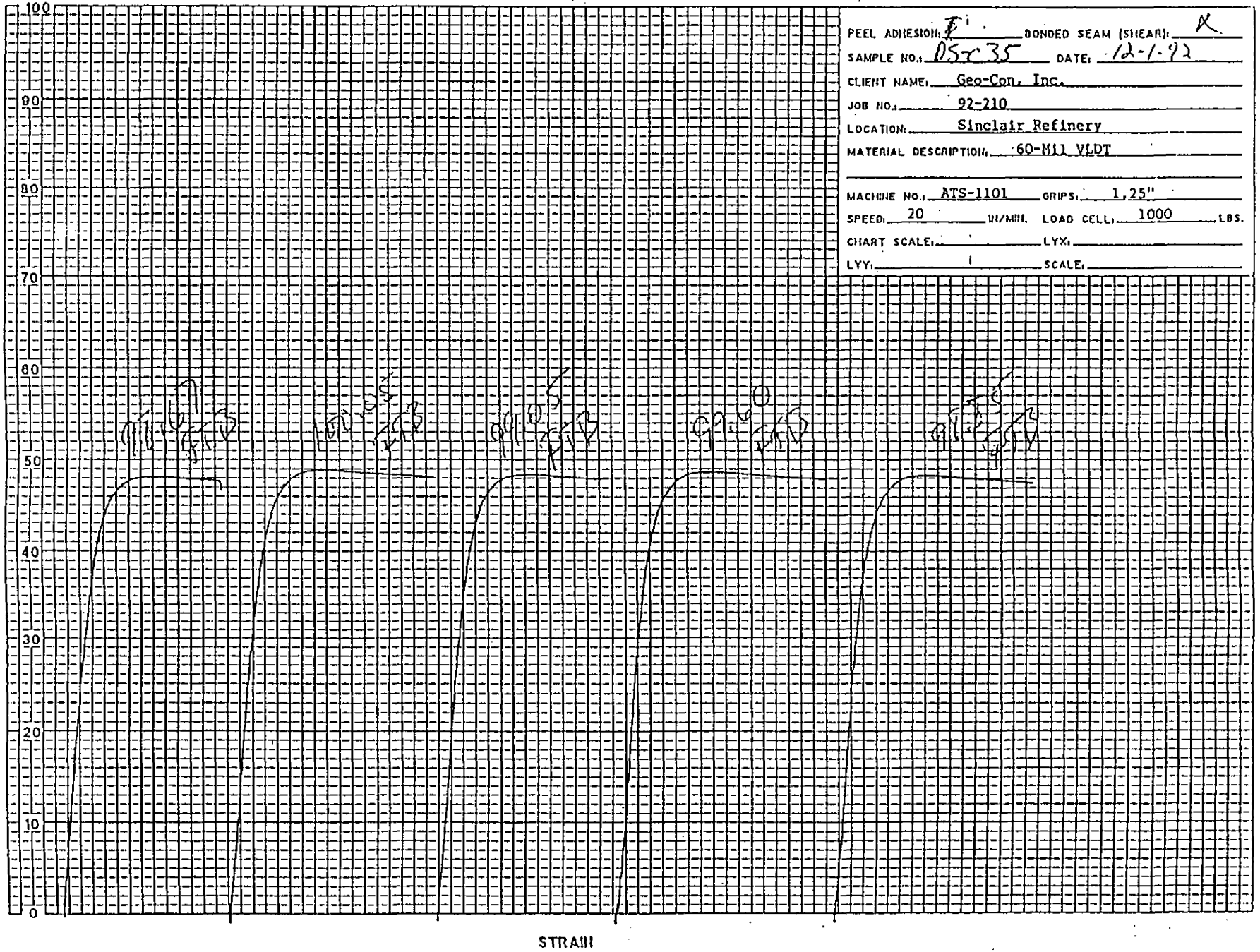
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C36 TECHNICIAN: RBF

SEAM NO.: 68/69 MANUFACTURER: Gundle

PANEL: 68 & 69 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.75	FTB
2	1.0	101.02	FTB
3	1.0	101.62	FTB
4	1.0	101.42	FTB
5	1.0	102.00	FTB
Average		101.36	

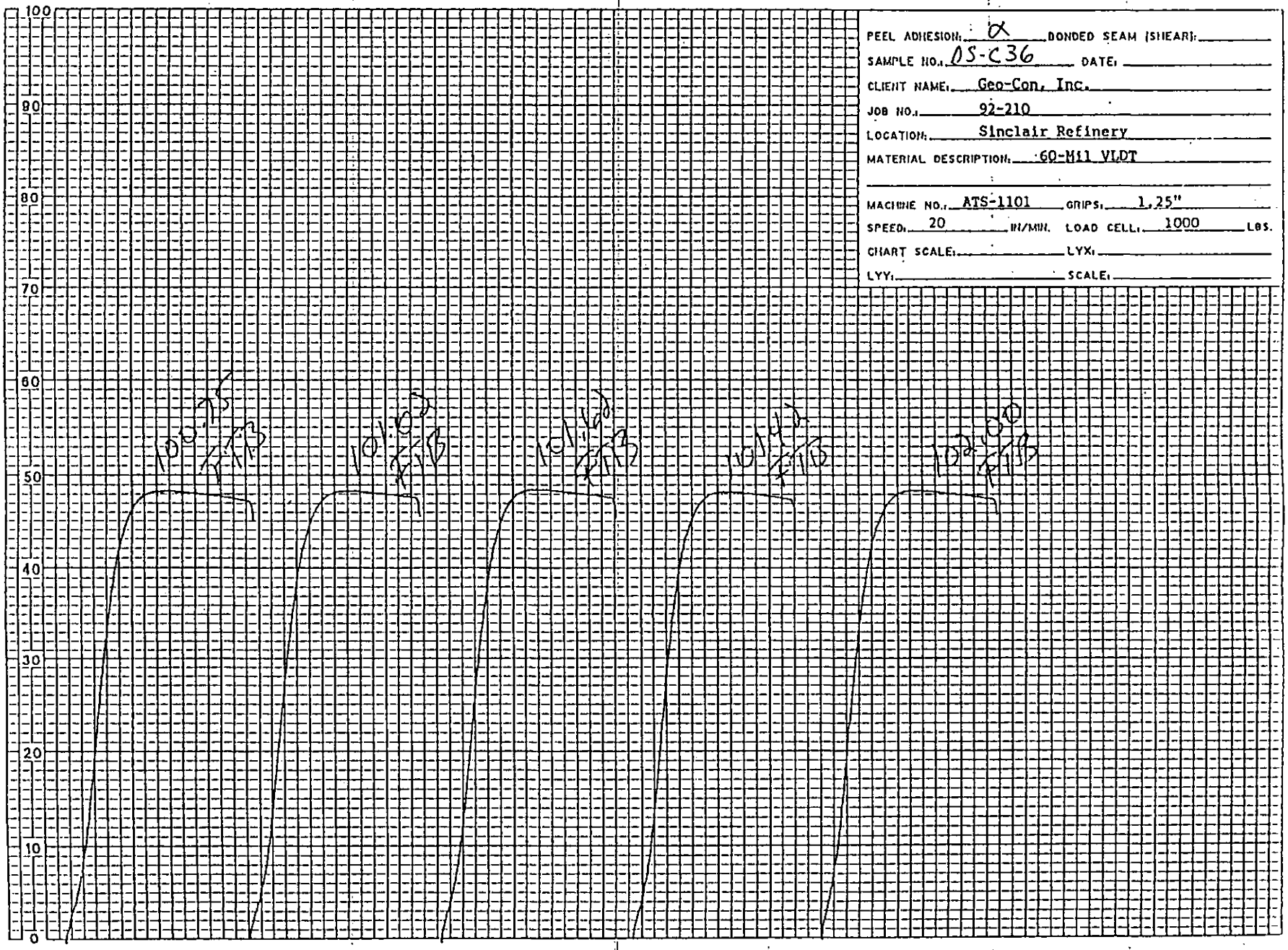
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.60	FTB
2	1.0	103.32	FTB
3	1.0	103.55	FTB
4	1.0	103.10	FTB
5	1.0	102.55	FTB
Average		103.22	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: α BONDED SEAM (SHEAR):

SAMPLE NO.: OS-C36 DATE:

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

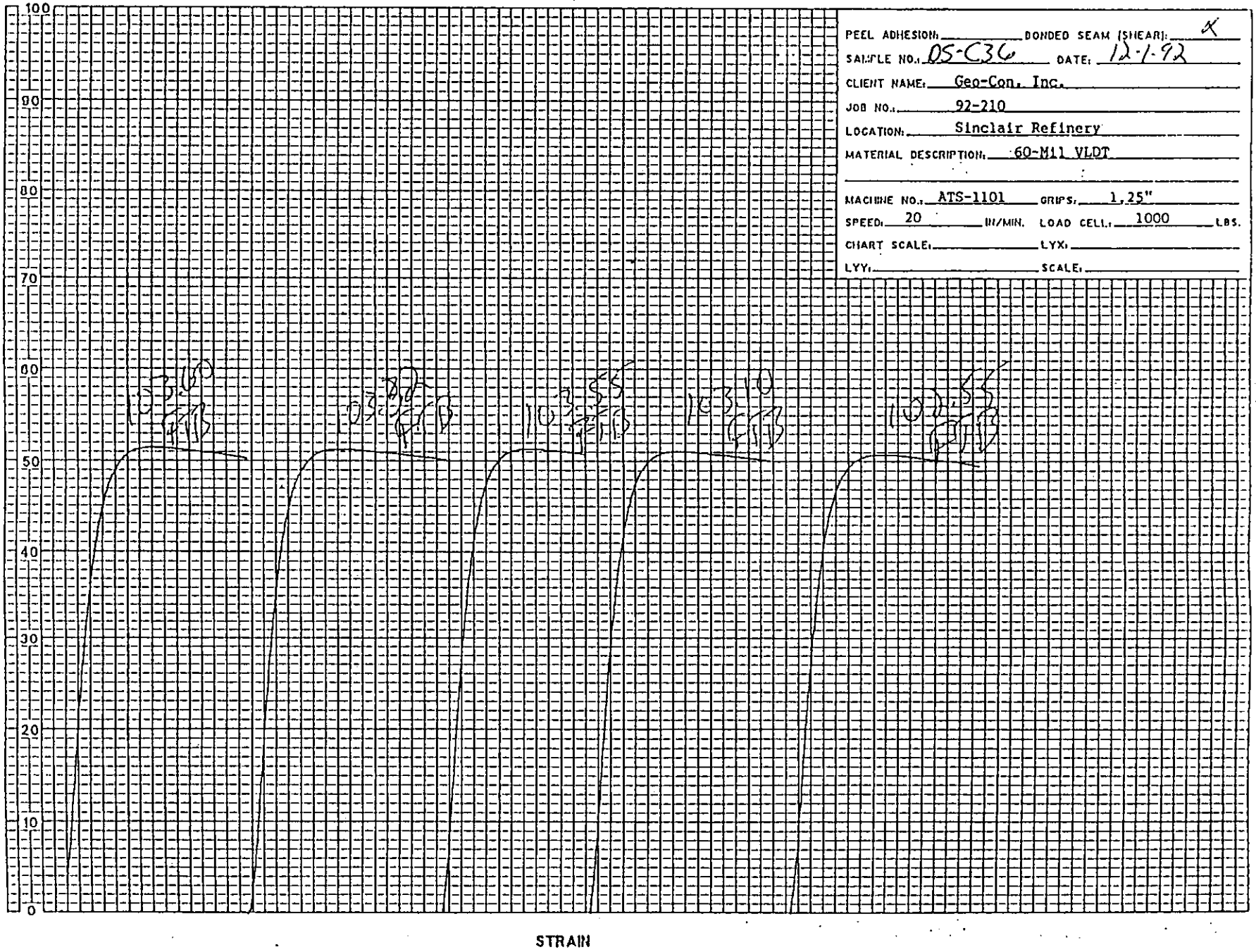
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/01/92

SAMPLE NO.: DS - C37 TECHNICIAN: RBF

SEAM NO.: 69/70 MANUFACTURER: Gundle

PANEL: 69 & 70 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

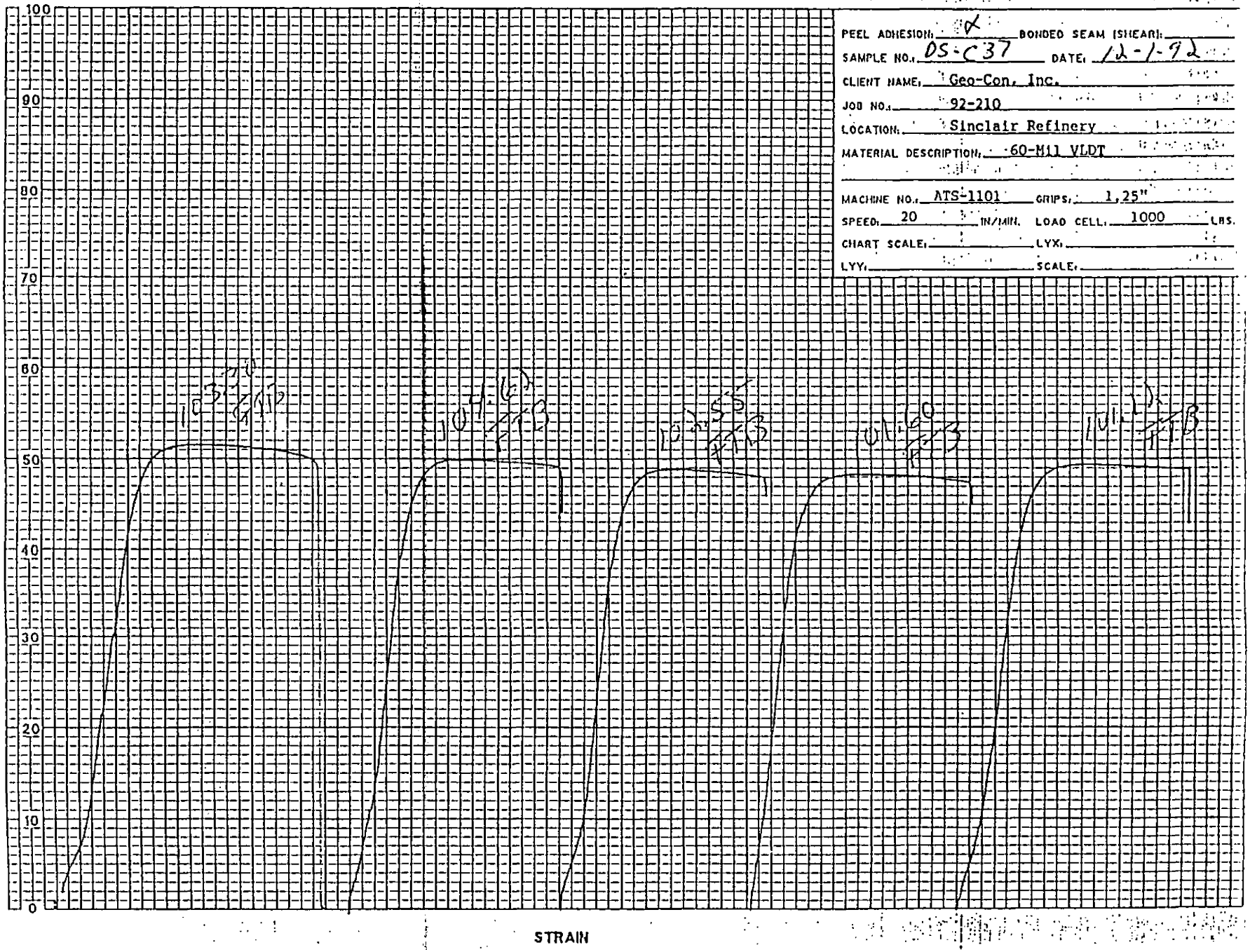
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.30	FTB
2	1.0	104.62	FTB
3	1.0	102.55	FTB
4	1.0	101.60	FTB
5	1.0	101.12	FTB
Average		102.64	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.92	FTB
2	1.0	97.95	FTB
3	1.0	101.30	FTB
4	1.0	101.22	FTB
5	1.0	101.80	FTB
Average		99.64	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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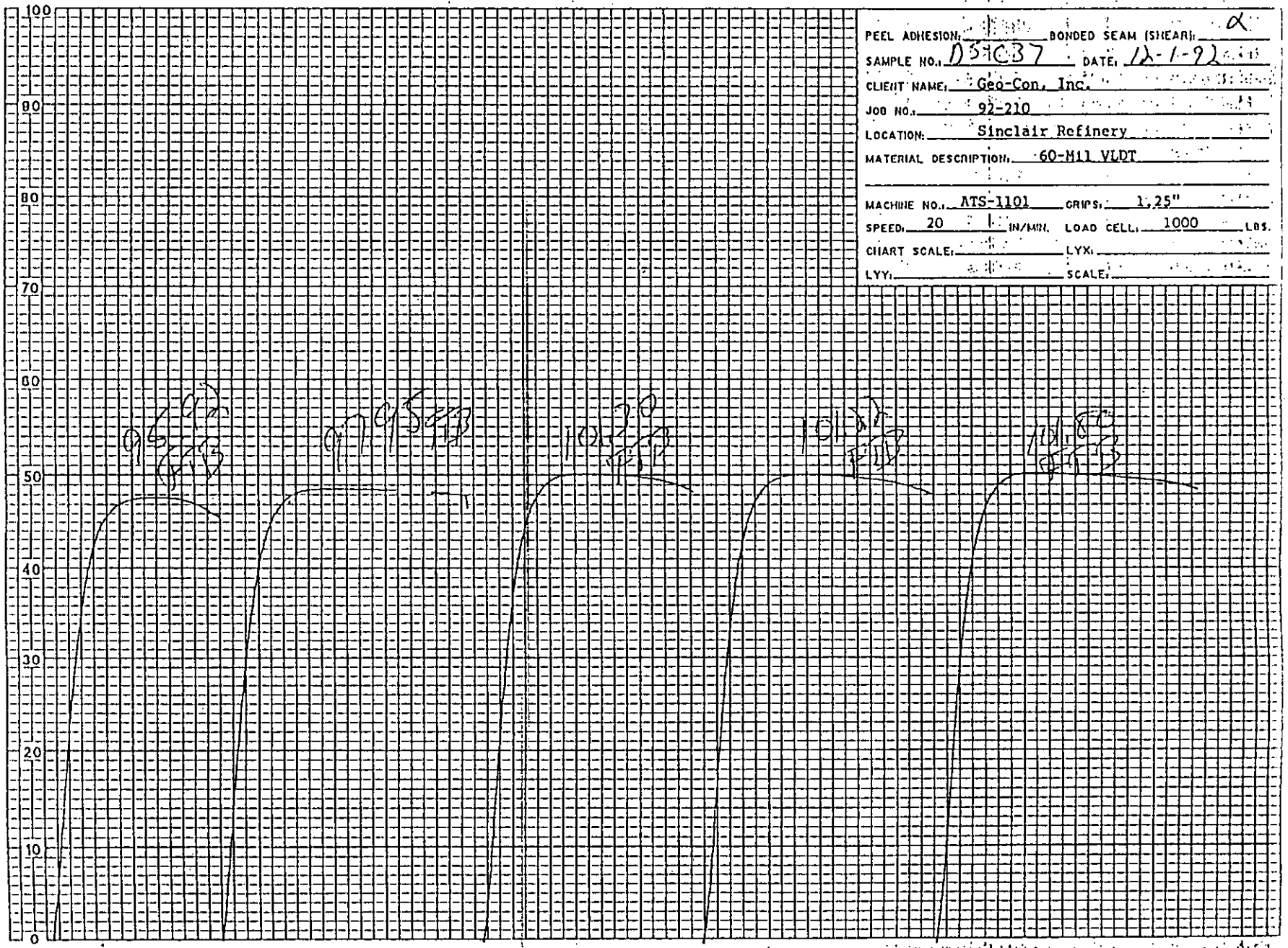


PEEL ADHESION: X BONDED SEAM (SHEAR):
SAMPLE NO.: DS-C37 DATE: 12-1-92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): α

SAMPLE NO.: D5C37 DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 10/01/92

SAMPLE NO.: DS - C38 TECHNICIAN: RBF

SEAM NO.: 69/70 MANUFACTURER: Gundle

PANEL: 69 & 70 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	106.25	FTB
2	1.0	106.32	FTB
3	1.0	106.67	FTB
4	1.0	97.17	FTB
5	1.0	96.75	FTB
Average		102.63	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	109.20	FTB
2	1.0	107.72	FTB
3	1.0	107.37	FTB
4	1.0	107.55	FTB
5	1.0	106.92	FTB
Average		107.75	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

Murray Associates Inc.

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: DS-C3F DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

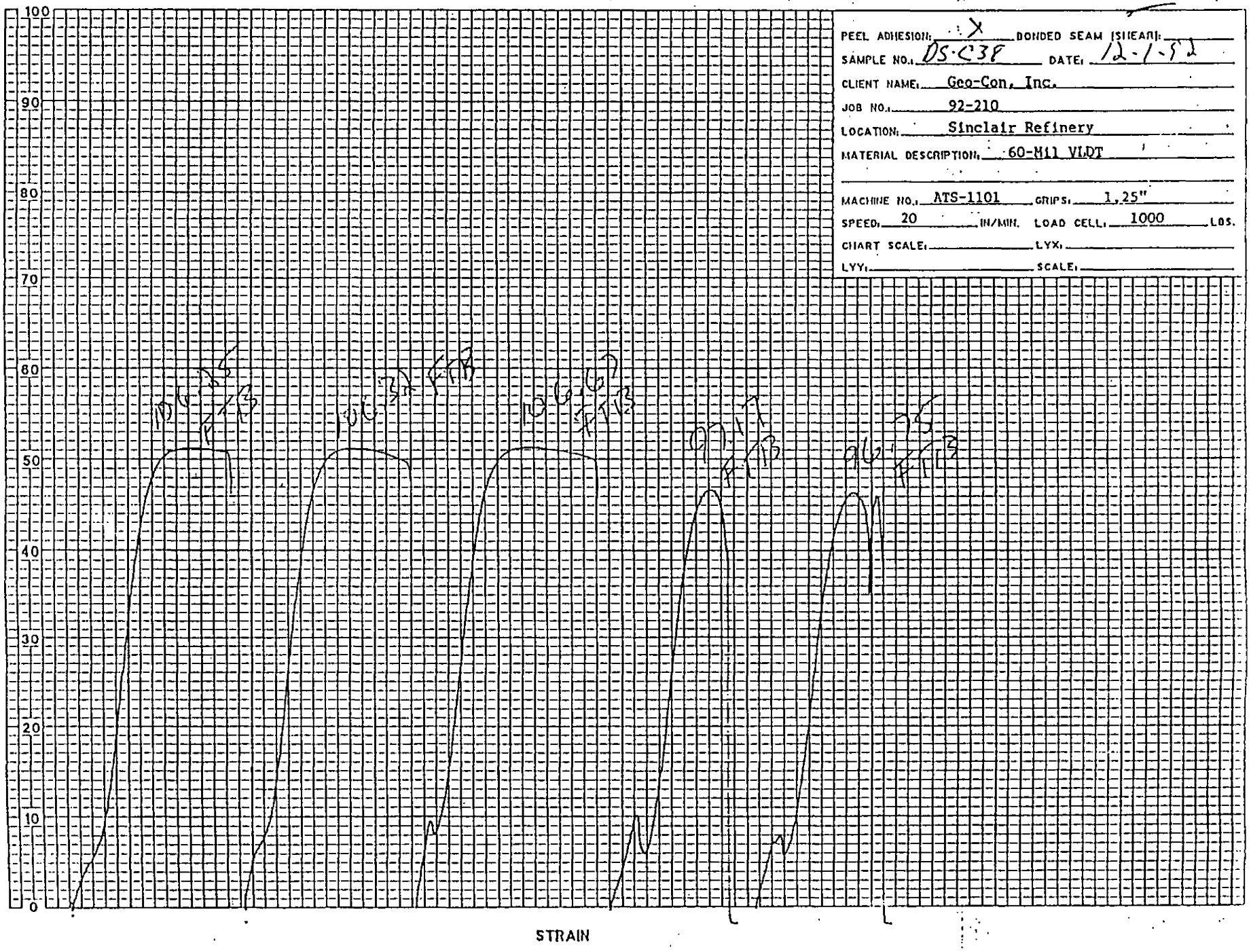
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

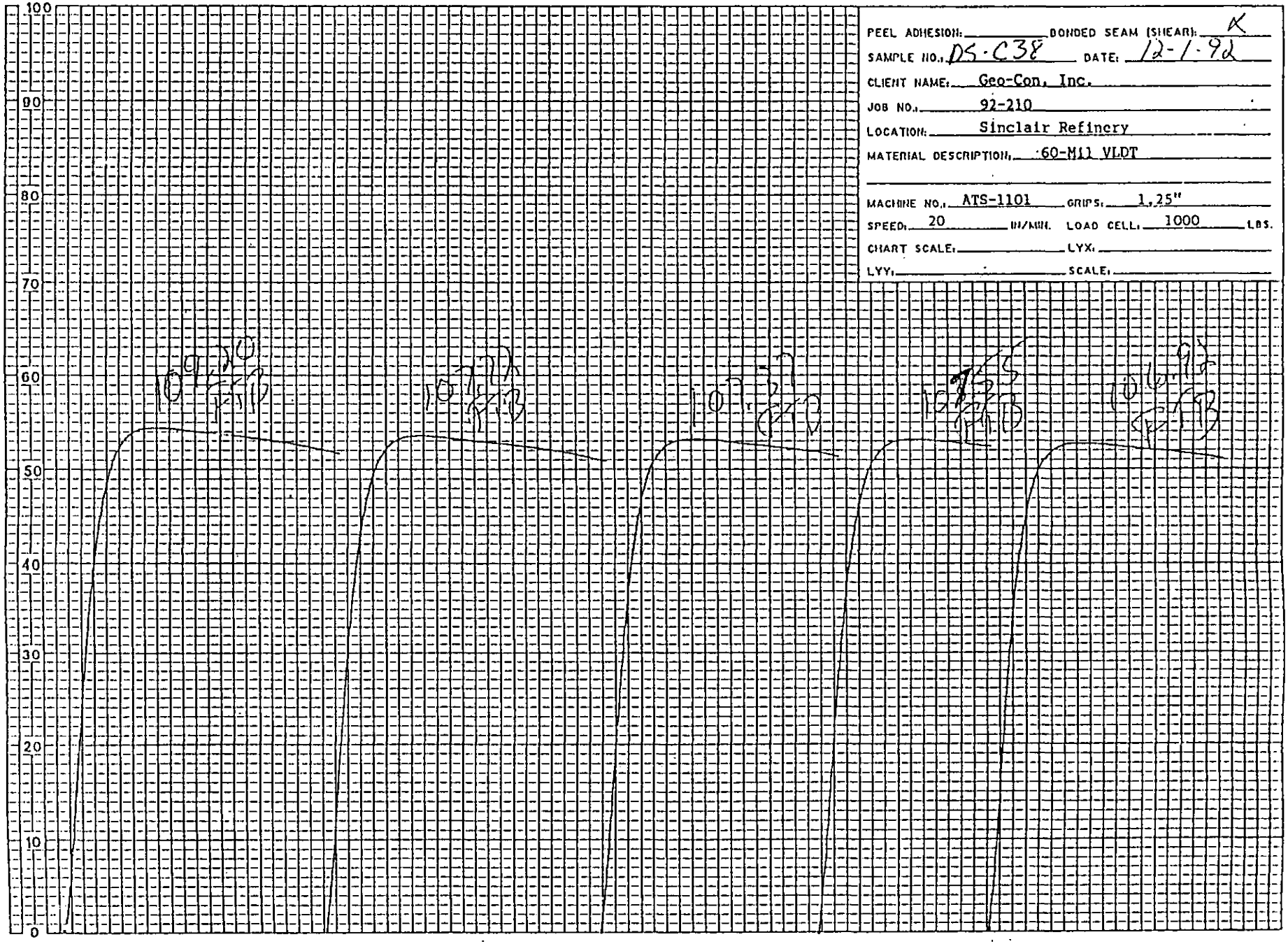
CHART SCALE: LYX:

LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): K

SAMPLE NO.: DS-C38 DATE: 12-1-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 20827

REPORT VII

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

DECEMBER 4, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/02/92

SAMPLE NO.: DS C39 TECHNICIAN: KMT

SEAM NO.: 70/71 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	105.70	FTB
2	1.0	105.00	FTB
3	1.0	105.17	FTB
4	1.0	105.77	FTB
5	1.0	105.52	FTB
Average		105.32	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	105.05	FTB
2	1.0	105.47	FTB
3	1.0	104.52	FTB
4	1.0	105.05	FTB
5	1.0	105.30	FTB
Average		105.08	

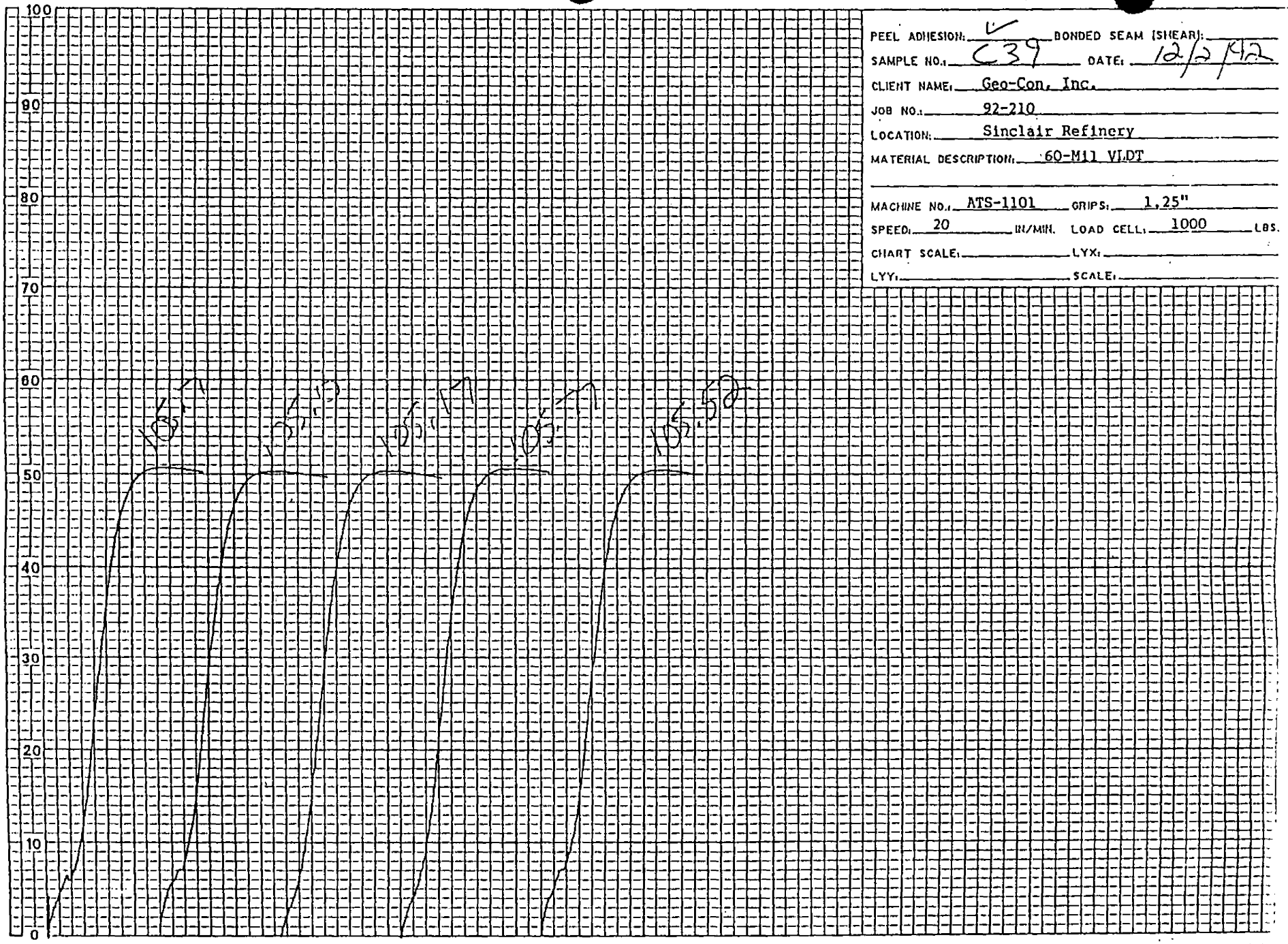
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):
SAMPLE NO.: C39 DATE: 12/2/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C 35 DATE: 12/2/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

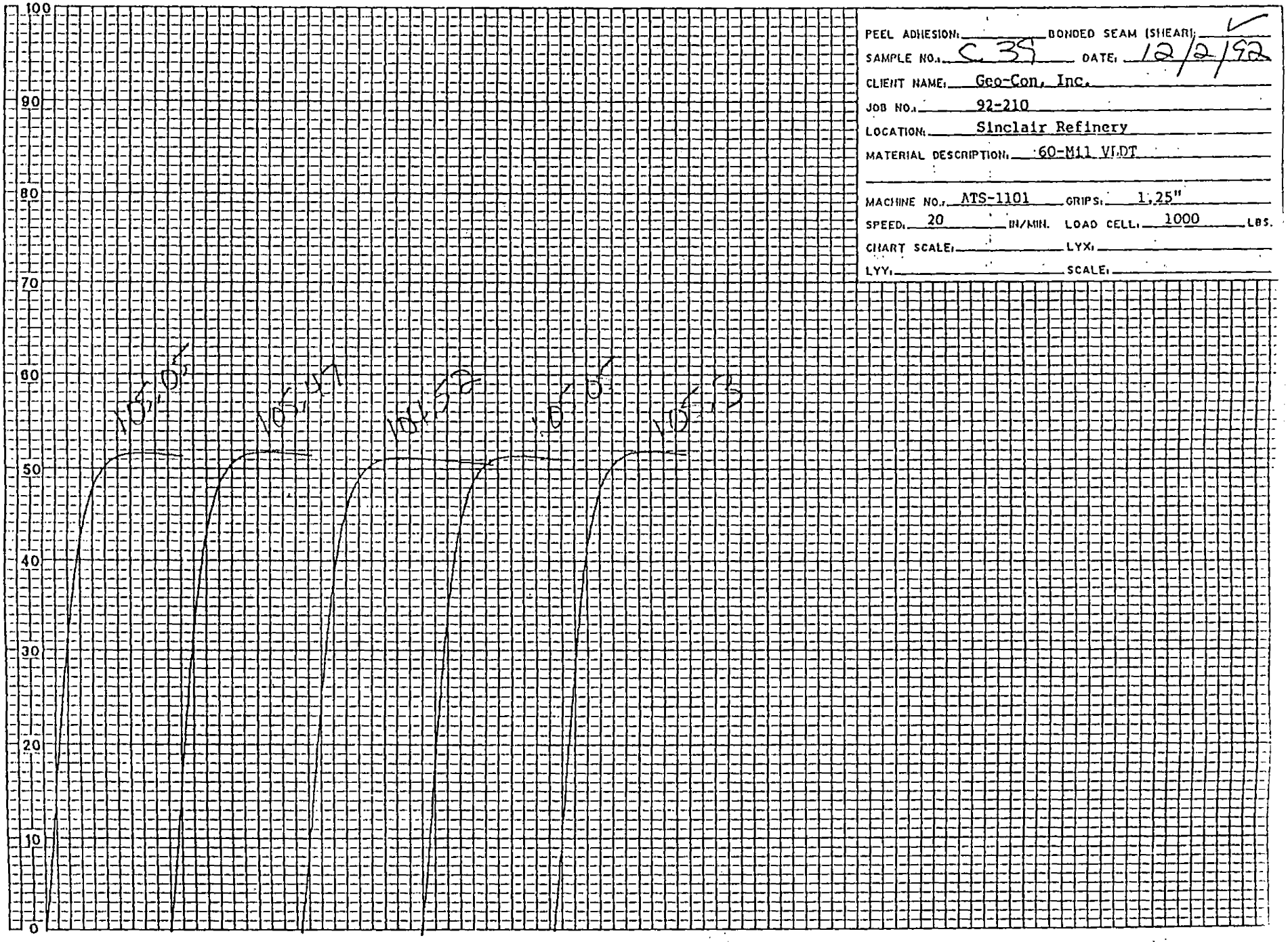
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/02/92

SAMPLE NO.: DS C40 TECHNICIAN: KMT

SEAM NO.: 71/72 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

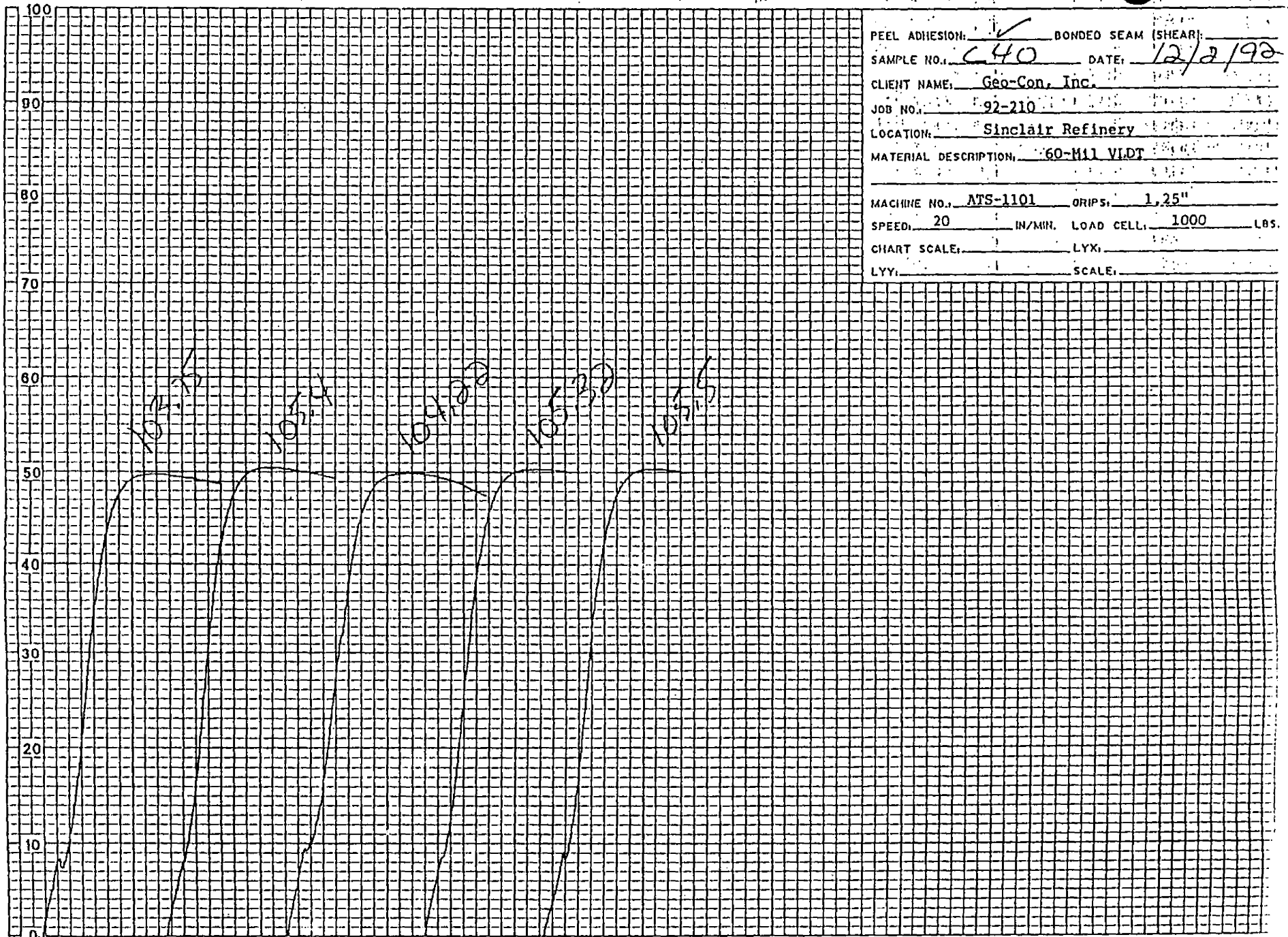
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.75	FTB
2	1.0	105.40	FTB
3	1.0	104.22	FTB
4	1.0	105.32	FTB
5	1.0	105.50	FTB
Average		104.84	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	105.25	FTB
2	1.0	105.00	FTB
3	1.0	104.82	FTB
4	1.0	104.62	FTB
5	1.0	104.45	FTB
Average		104.83	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: C40 DATE: 12/2/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

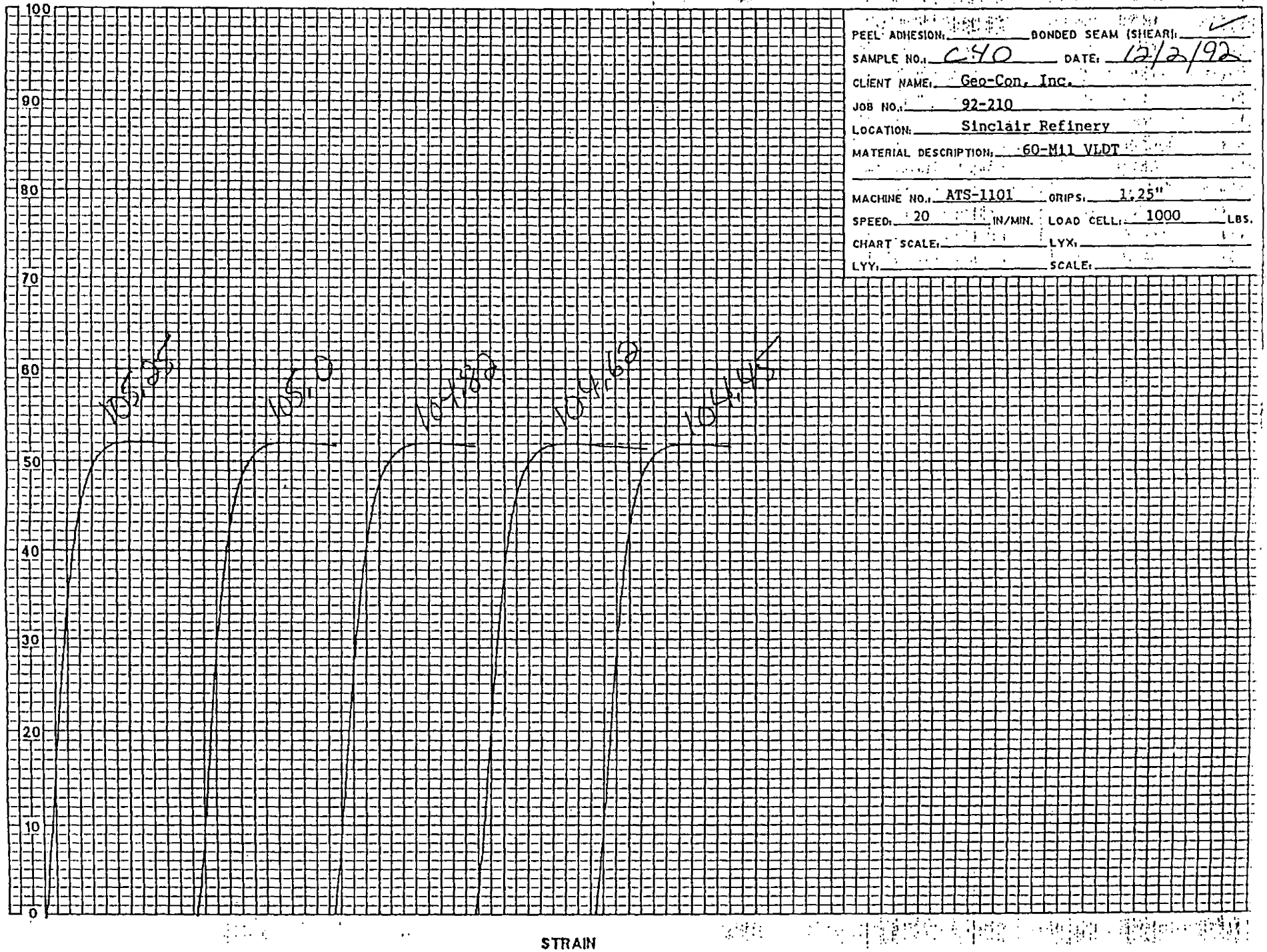
MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C-40 DATE: 12/2/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/02/92

SAMPLE NO.: DS C41 TECHNICIAN: KMT

SEAM NO.: 72/73 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT X VLST VLDPE WELD TYPE: D-FUSION X EXTRUSION

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	104.30	FTB
2	1.0	103.57	FTB
3	1.0	104.47	FTB
4	1.0	105.20	FTB
5	1.0	104.62	FTB
Average		104.43	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	104.52	FTB
2	1.0	104.75	FTB
3	1.0	104.30	FTB
4	1.0	103.80	FTB
5	1.0	103.47	FTB
Average		104.17	

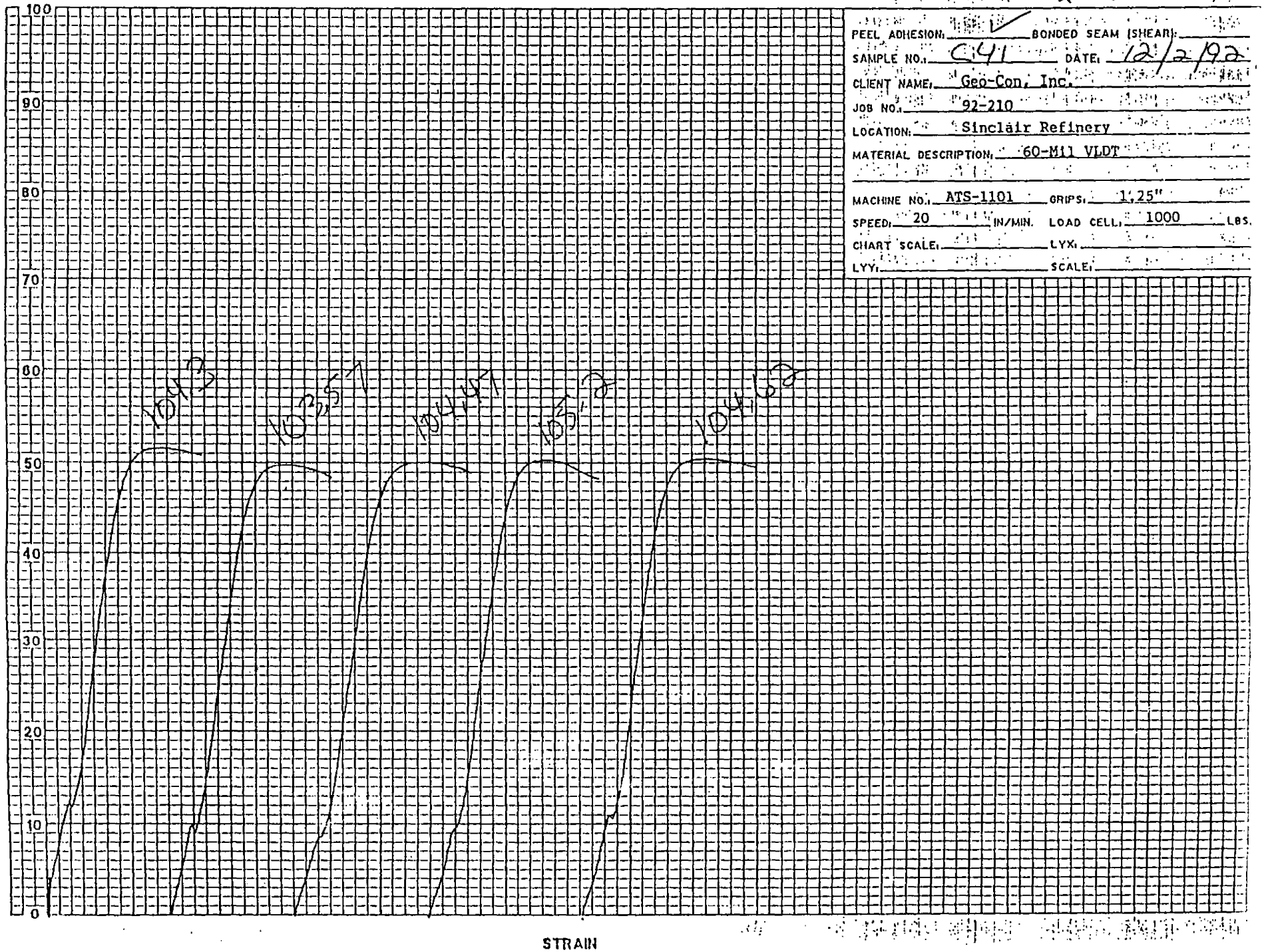
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

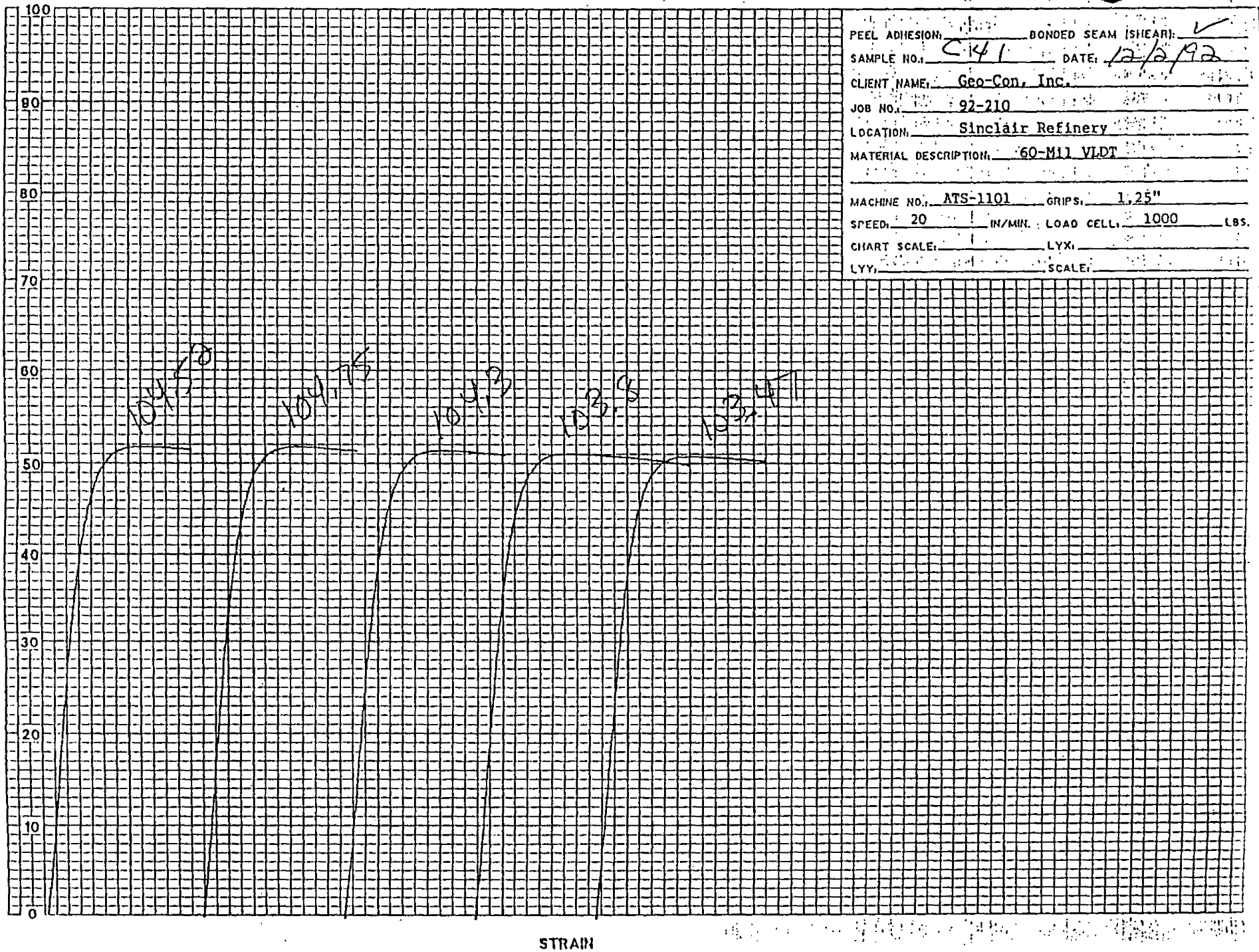
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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):
SAMPLE NO.: C-41 DATE: 12/2/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:



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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/02/92

SAMPLE NO.: DS C42 TECHNICIAN: KMT

SEAM NO.: 73/74 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	106.42	FTB
2	1.0	108.02	FTB
3	1.0	107.90	FTB
4	1.0	109.37	FTB
5	1.0	109.35	FTB
Average		108.21	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	108.17	FTB
2	1.0	108.12	FTB
3	1.0	108.30	FTB
4	1.0	106.80	FTB
5	1.0	109.10	FTB
Average		108.10	

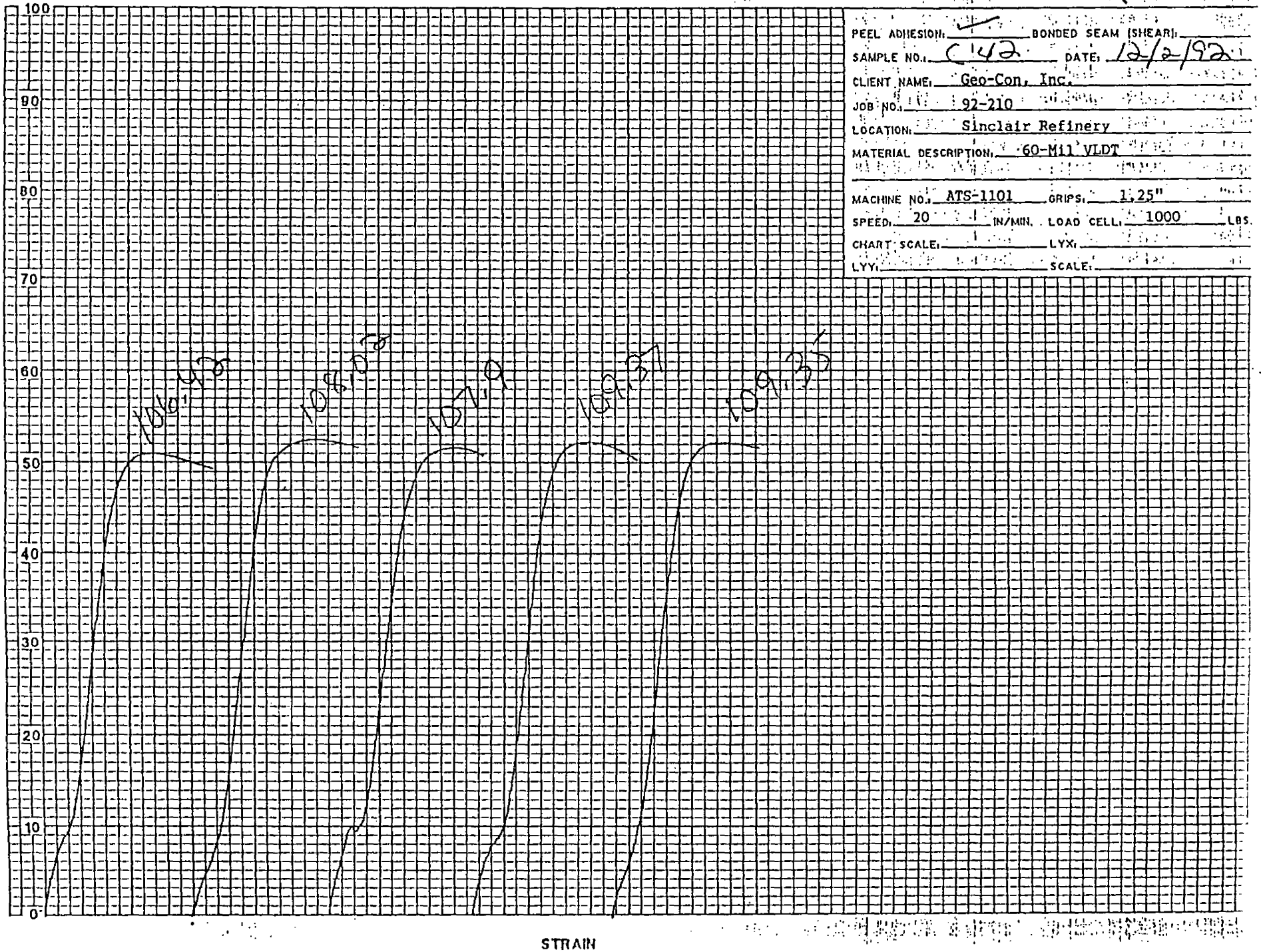
VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR):
SAMPLE NO.: C142 DATE: 12/2/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:



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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: C142 DATE: 12/2/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

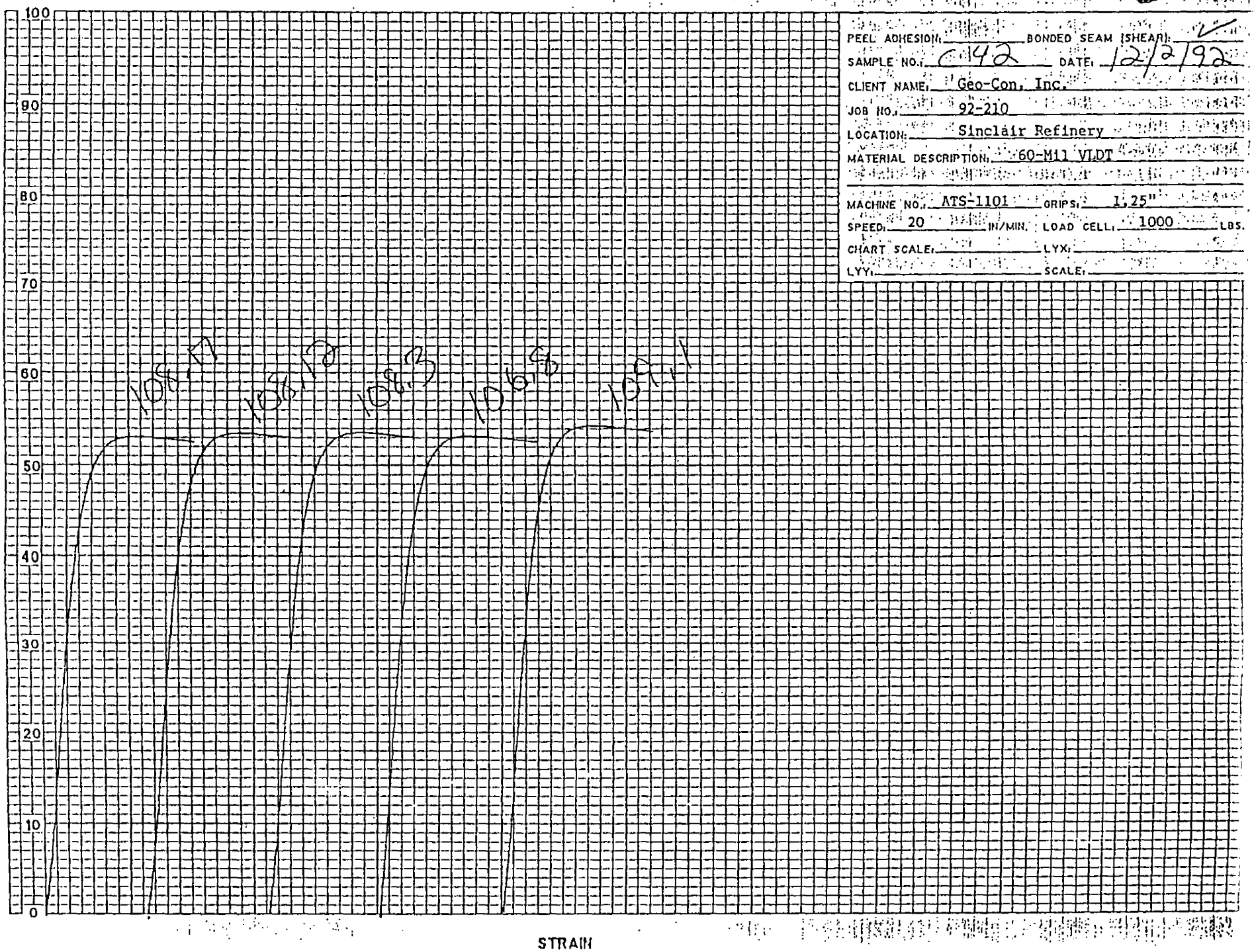
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/02/92

SAMPLE NO.: DS C43 TECHNICIAN: KMT

SEAM NO.: 73/74 MANUFACTURER: Gundle

PANEL: MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY SECONDARY

MATERIAL TYPE: VLDT x VLST VLDPE WELD TYPE: D-FUSION x EXTRUSION

Peel Adhesion Test Data

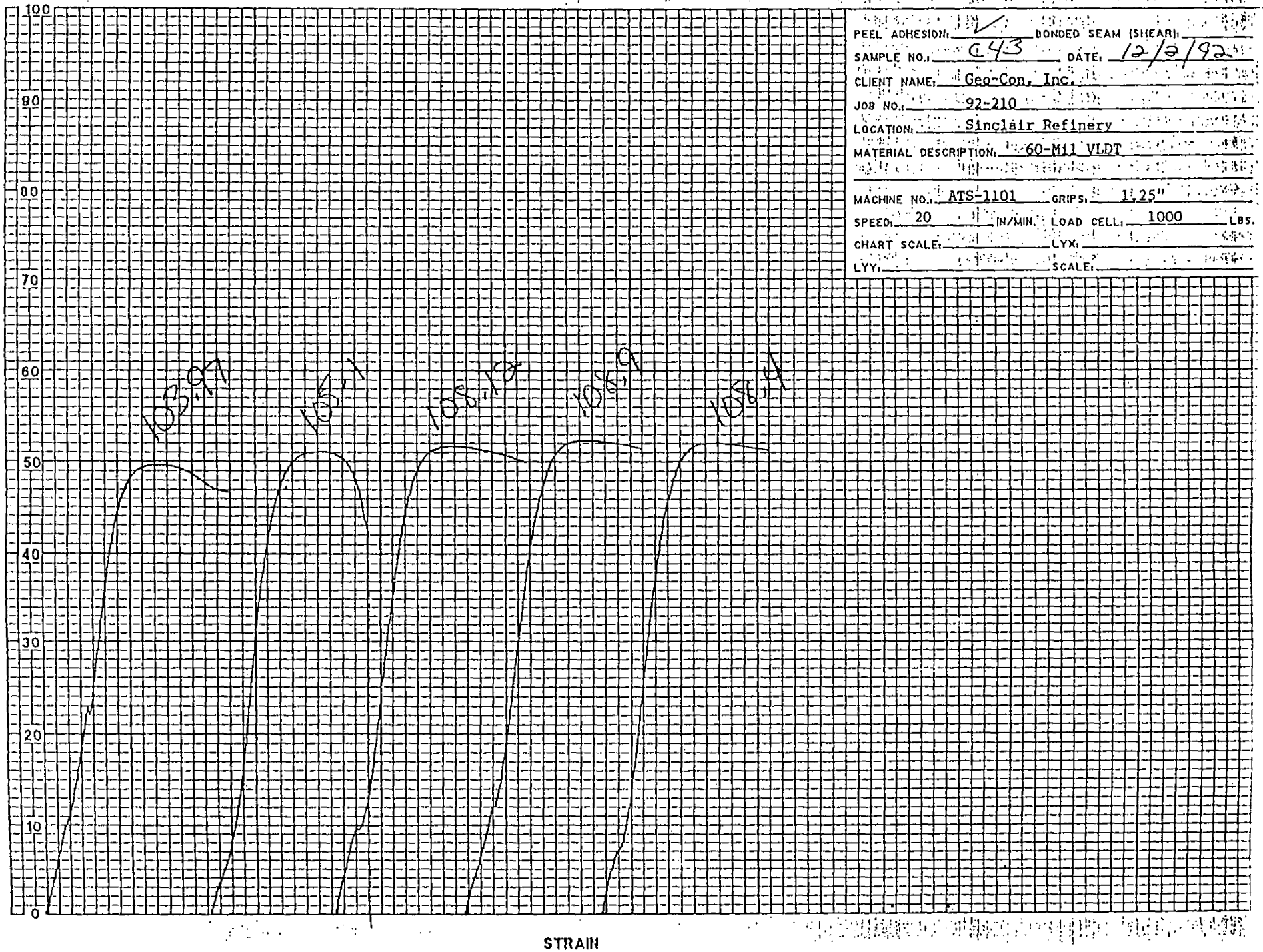
Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.97	FTB
2	1.0	105.10	FTB
3	1.0	108.12	FTB
4	1.0	108.90	FTB
5	1.0	108.40	FTB
Average		106.90	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	108.35	FTB
2	1.0	108.10	FTB
3	1.0	108.17	FTB
4	1.0	108.12	FTB
5	1.0	108.15	FTB
Average		108.18	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

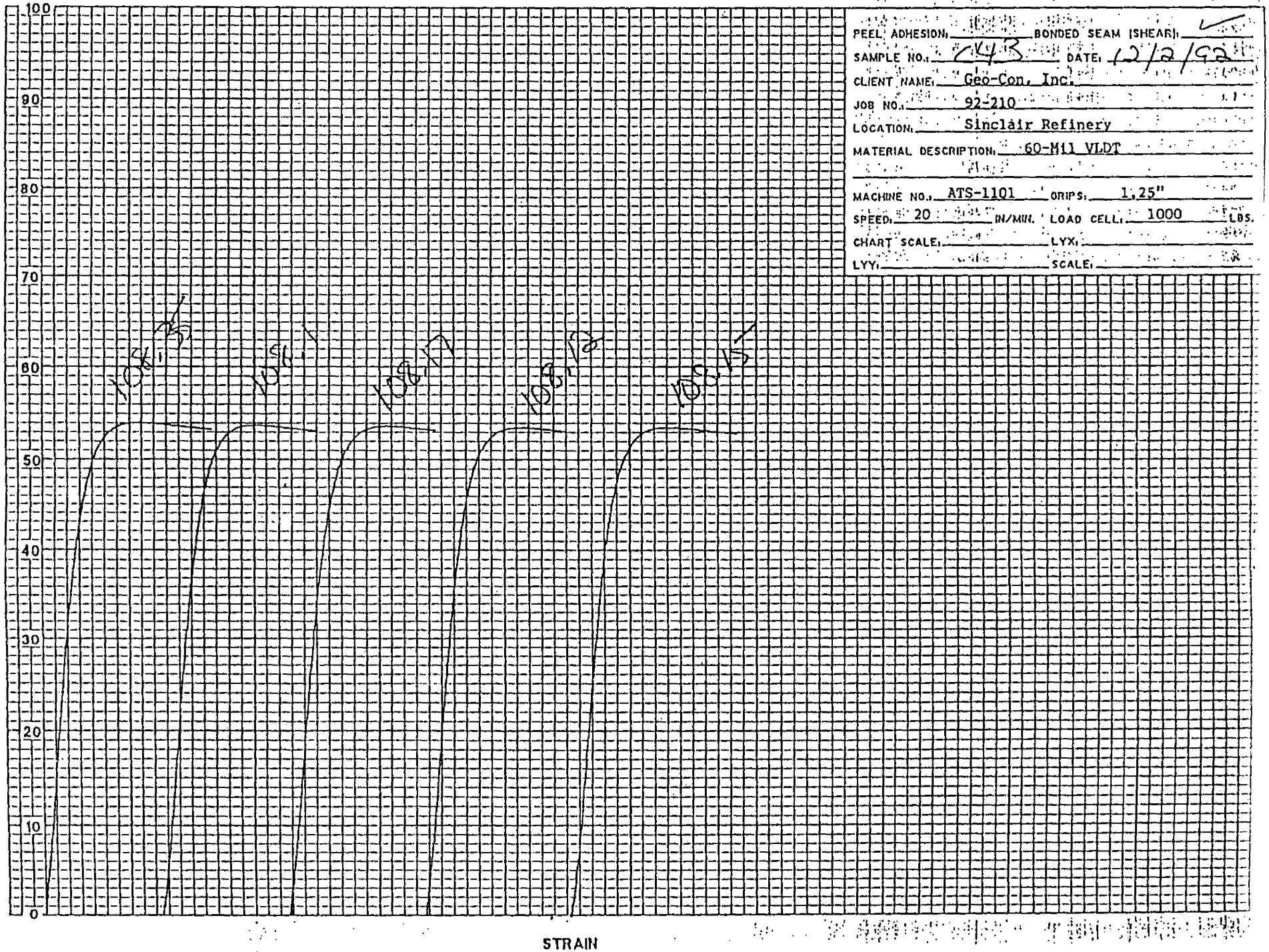
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓
SAMPLE NO.: 243 DATE: 12/2/92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____



Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 23048

REPORT VIII

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

DECEMBER 9, 1992

Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NOS. 20827 AND 23048

REPORT VIII

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

DECEMBER 9, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C44 TECHNICIAN: CMS

SEAM NO.: 72/79 MANUFACTURER: Gundle

PANEL: 72 & 79 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.90	FTB
2	1.0	96.02	FTB
3	1.0	100.10	FTB
4	1.0	88.52	FTB
5	1.0	98.17	FTB
Average		95.74	

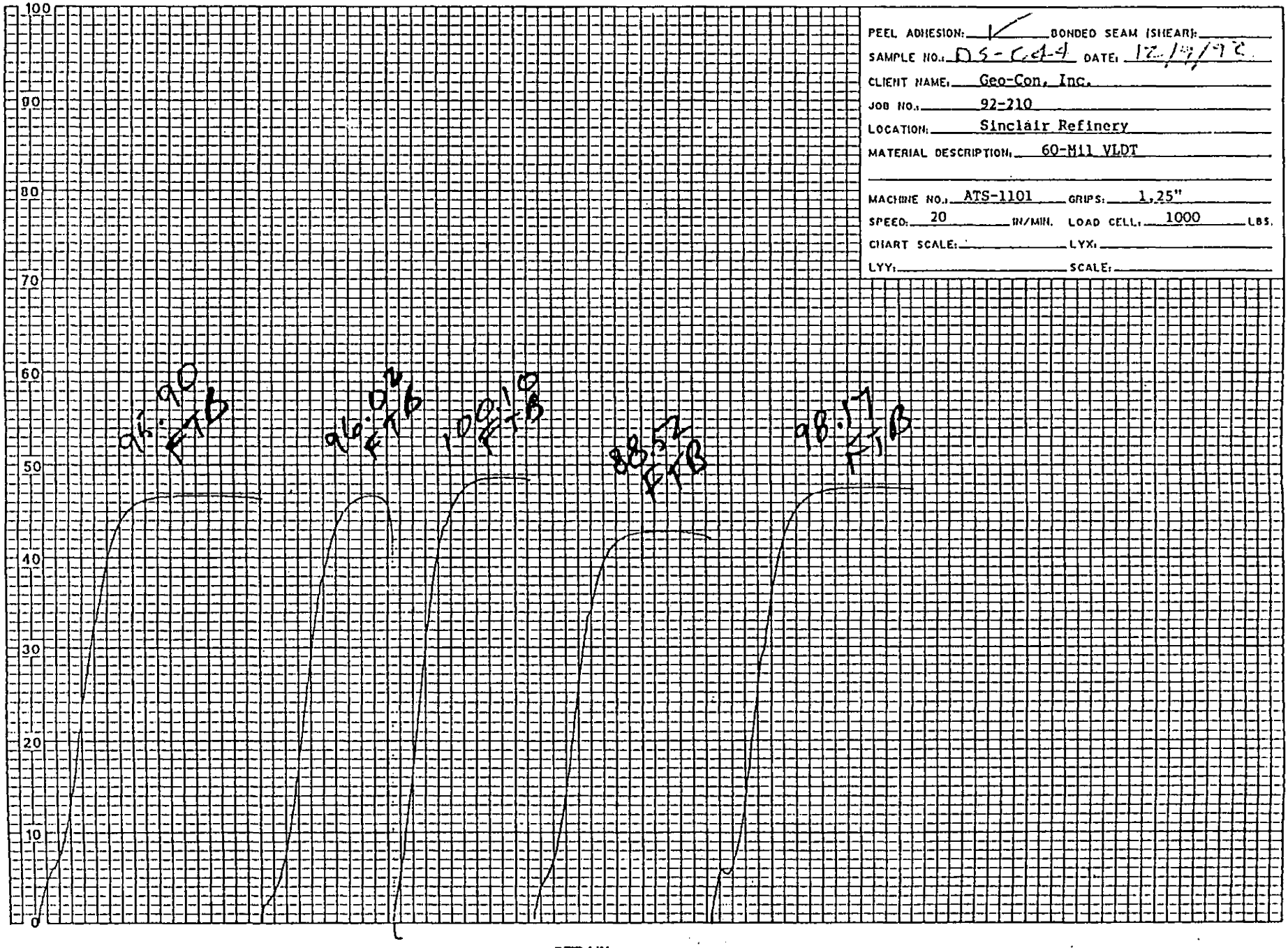
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.50	FTB
2	1.0	96.45	FTB
3	1.0	97.75	FTB
4	1.0	97.80	FTB
5	1.0	96.07	FTB
Average		96.91	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

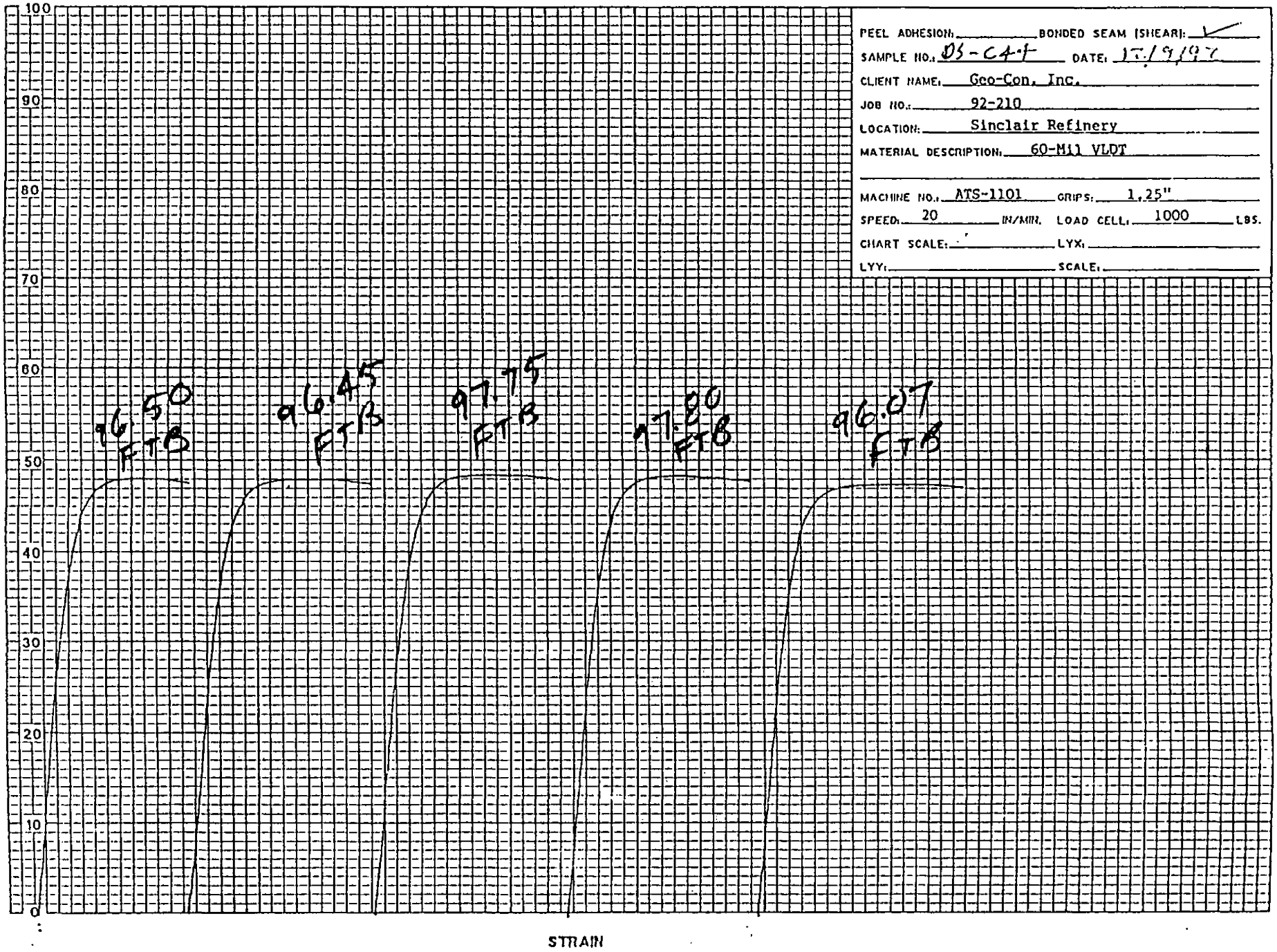
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: D5-C4-T DATE: 12/9/97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C45 TECHNICIAN: CMS

SEAM NO.: 75/76 MANUFACTURER: Gundle

PANEL: 75 & 76 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.40	FTB
2	1.0	98.95	FTB
3	1.0	99.37	FTB
4	1.0	98.82	FTB
5	1.0	97.92	FTB
Average		99.09	

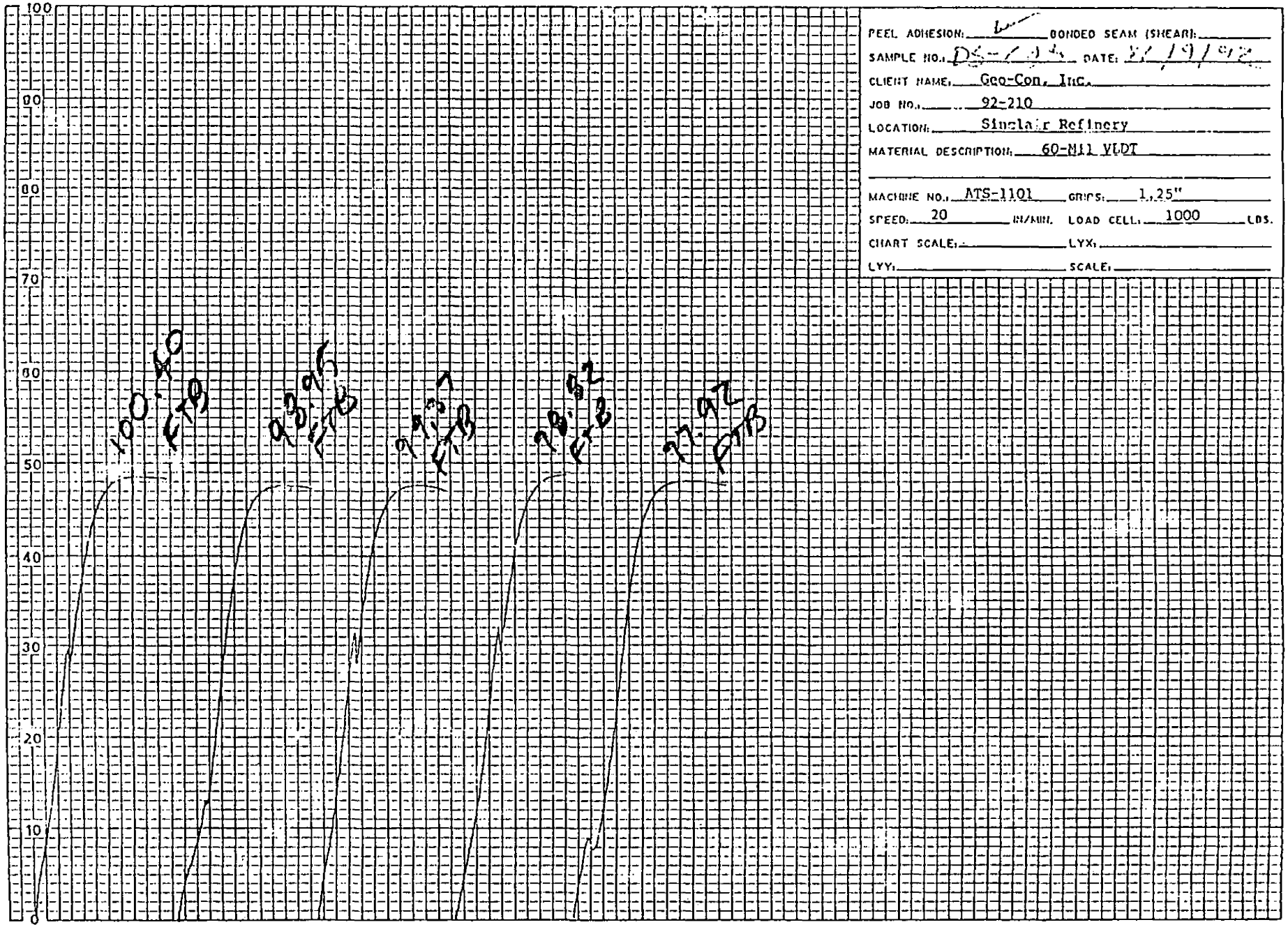
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.42	FTB
2	1.0	102.62	FTB
3	1.0	102.65	FTB
4	1.0	103.32	FTB
5	1.0	102.00	FTB
Average		102.20	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

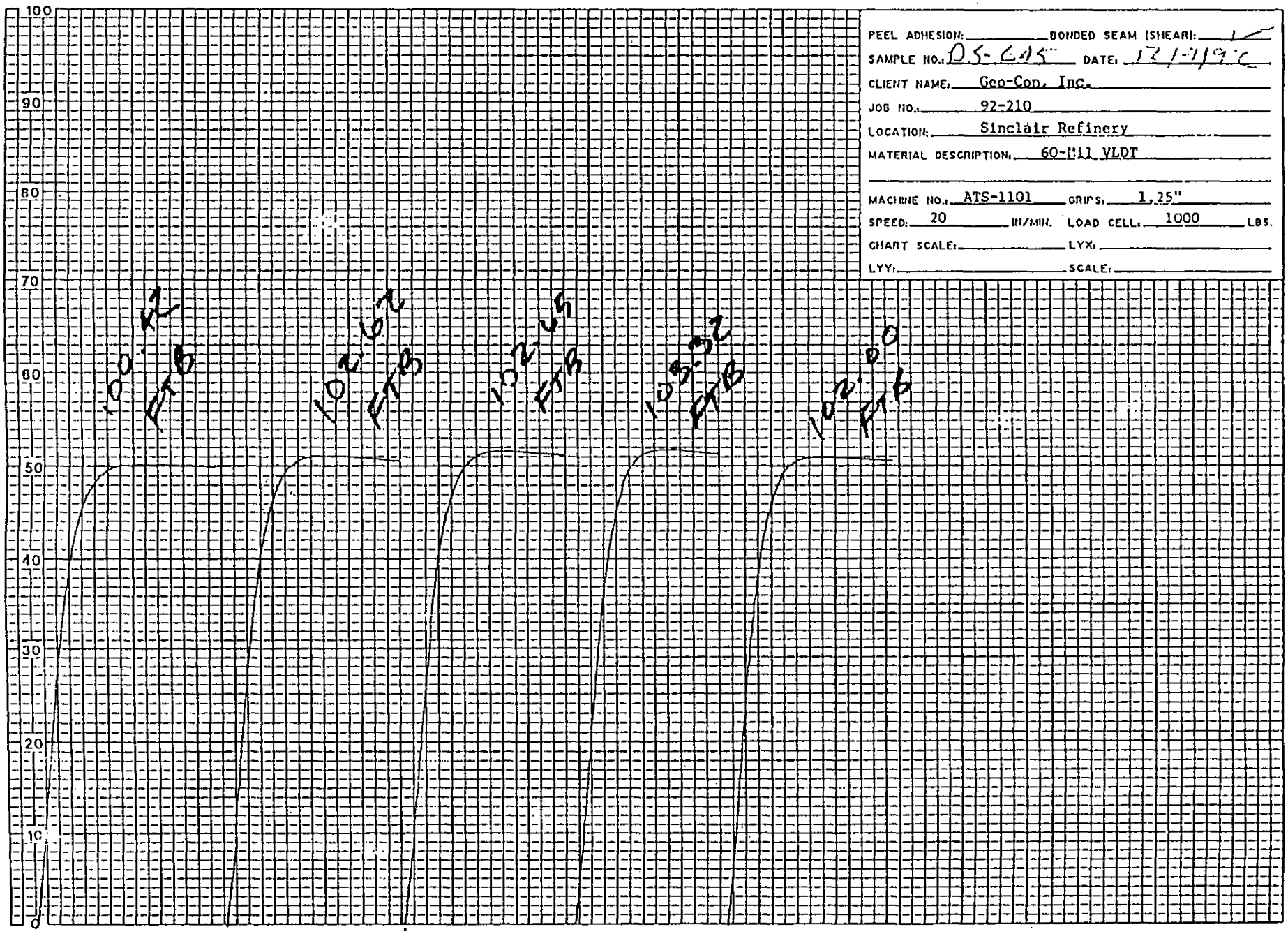
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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C46 TECHNICIAN: CMS

SEAM NO.: 75/77 MANUFACTURER: Gundle

PANEL: 75 & 77 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.75	FTB
2	1.0	97.25	FTB
3	1.0	97.20	FTB
4	1.0	90.30	FTB
5	1.0	93.07	FTB
Average		93.91	

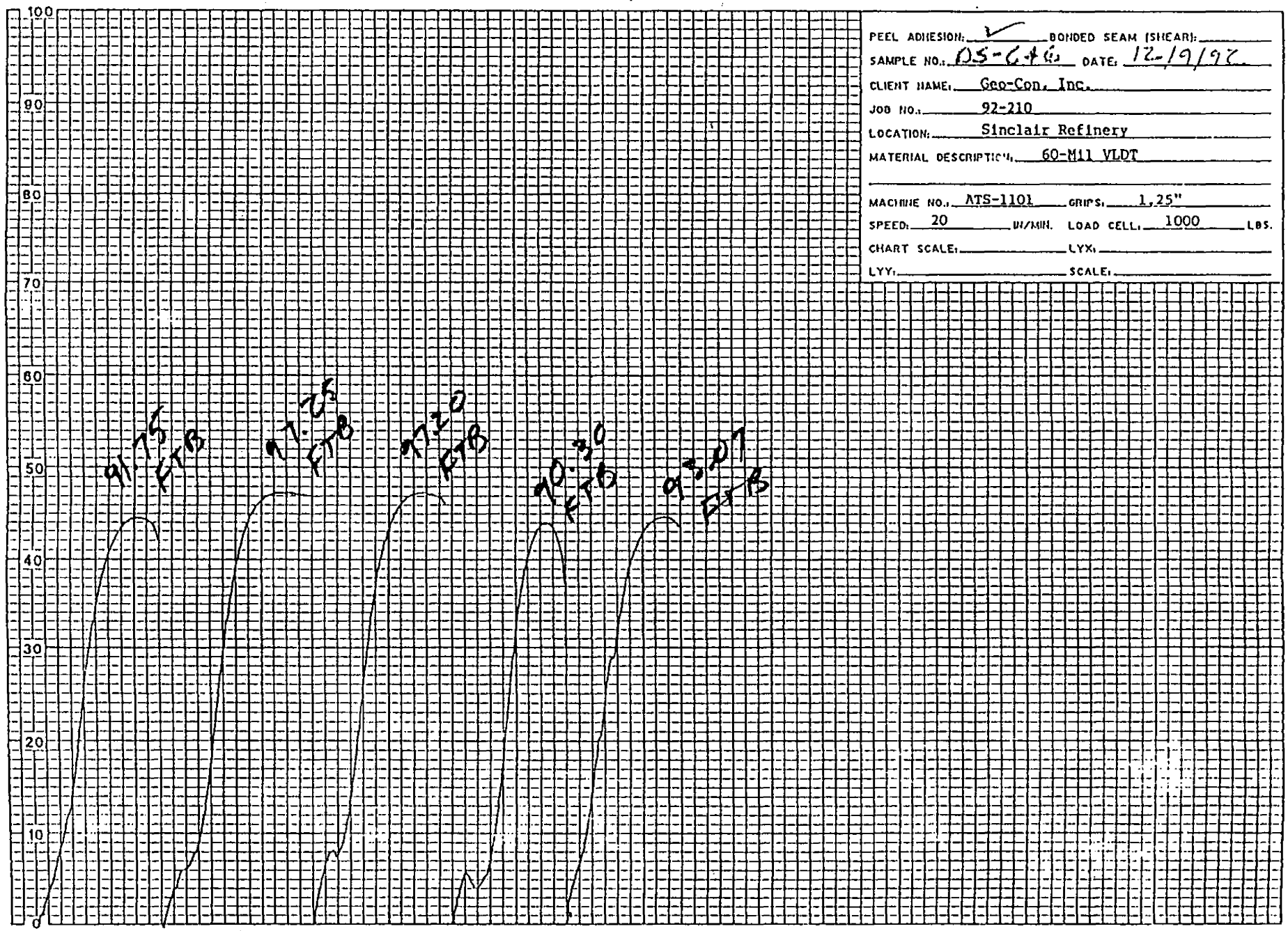
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	97.45	FTB
2	1.0	98.22	FTB
3	1.0	99.72	FTB
4	1.0	100.97	FTB
5	1.0	100.70	FTB
Average		99.41	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-648 DATE: 12-19-97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

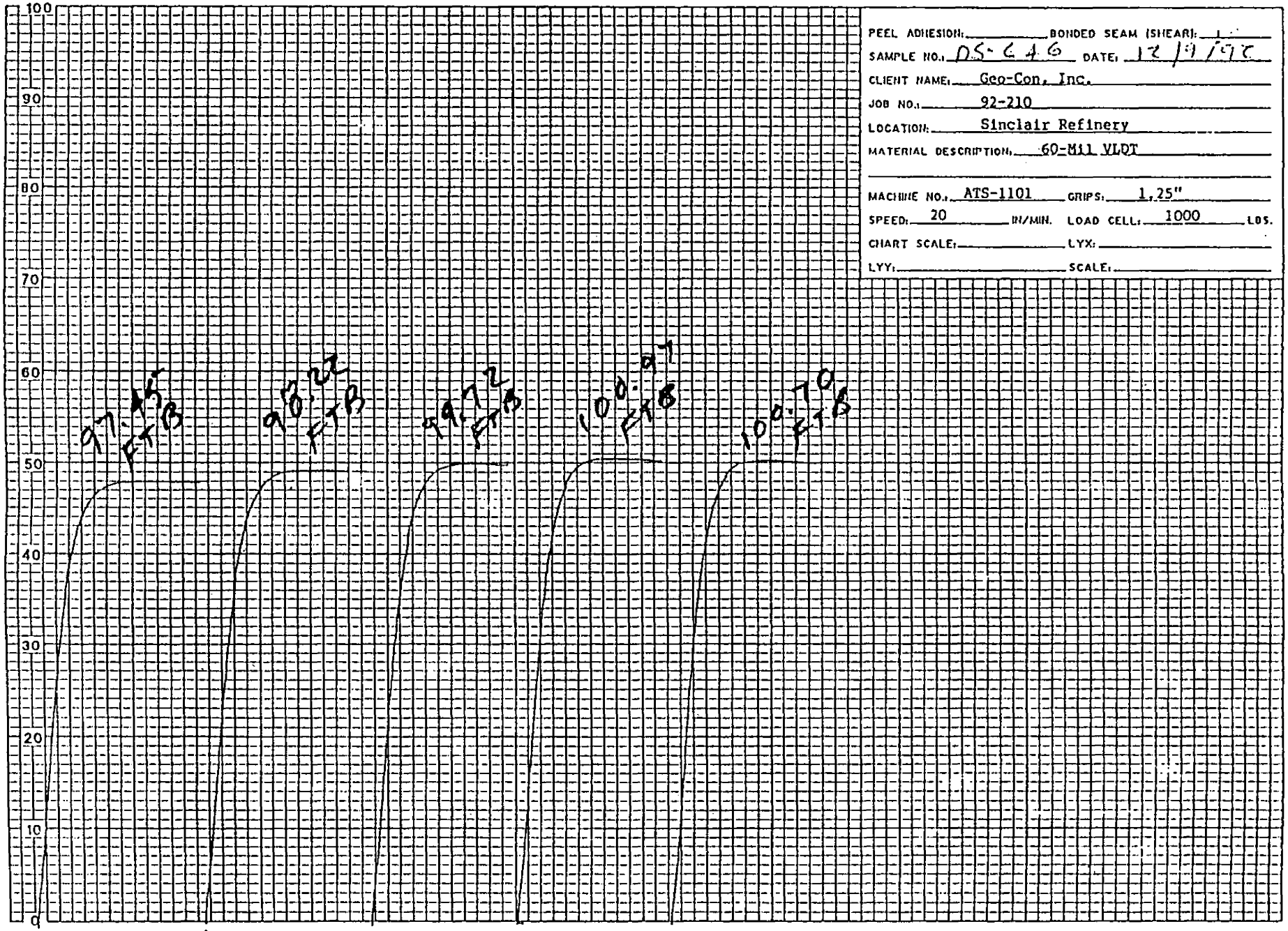
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

Murray Associates Inc.

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): 1

SAMPLE NO.: DS-646 DATE: 12/9/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C47 TECHNICIAN: CMS

SEAM NO.: 76/78 MANUFACTURER: Gundle

PANEL: 76 & 78 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.60	FTB
2	1.0	95.47	FTB
3	1.0	92.07	FTB
4	1.0	92.15	FTB
5	1.0	92.75	FTB
Average		93.21	

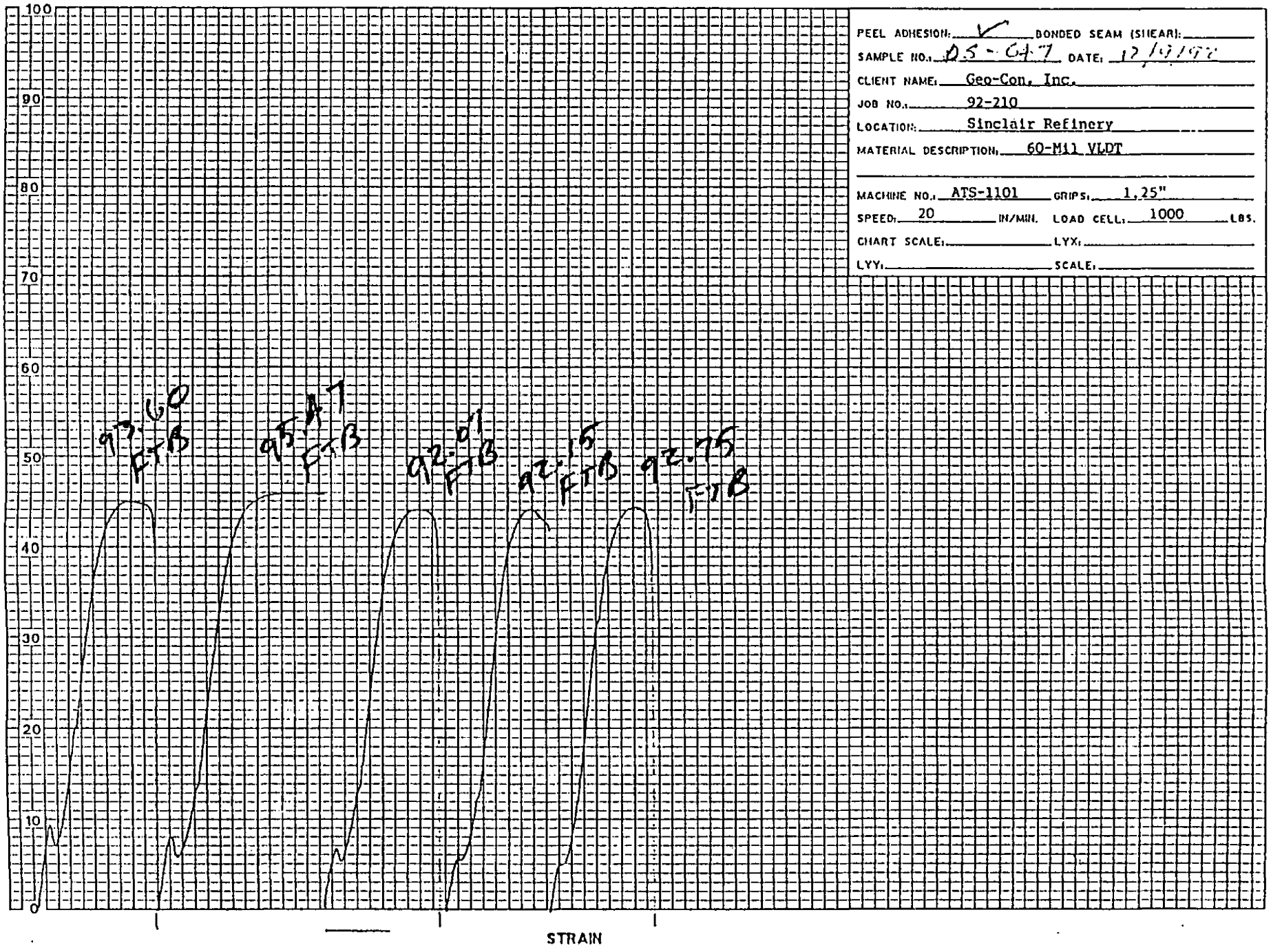
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.20	FTB
2	1.0	97.85	FTB
3	1.0	96.67	FTB
4	1.0	95.45	FTB
5	1.0	97.32	FTB
Average		96.70	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: D5-647 DATE: 12/9/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

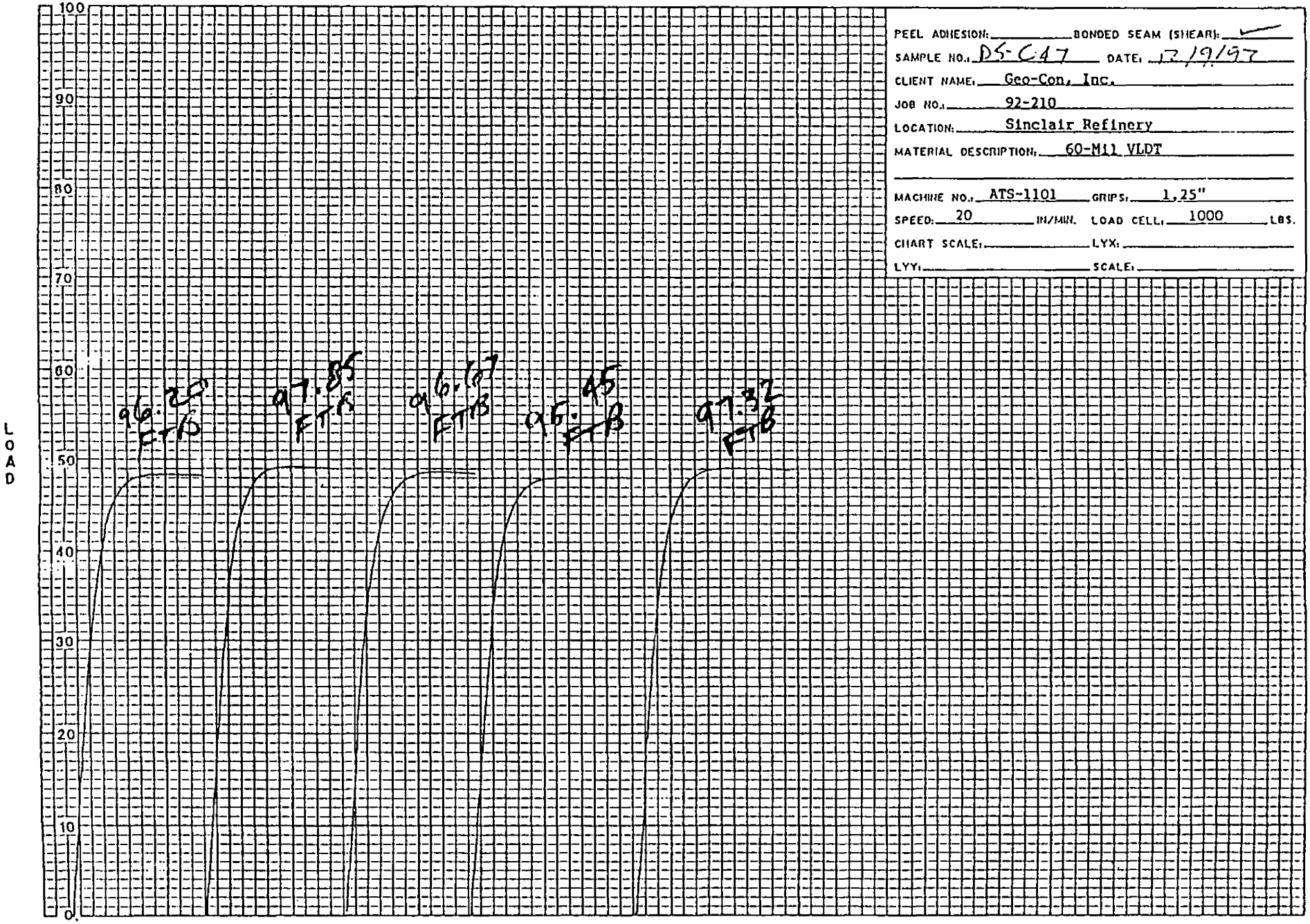
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DS-C47 DATE: 12/19/97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C48 TECHNICIAN: CMS

SEAM NO.: 76/79 MANUFACTURER: Gundle

PANEL: 76 & 79 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	88.07	FTB
2	1.0	96.37	FTB
3	1.0	99.15	FTB
4	1.0	98.85	FTB
5	1.0	97.30	FTB
Average		95.95	

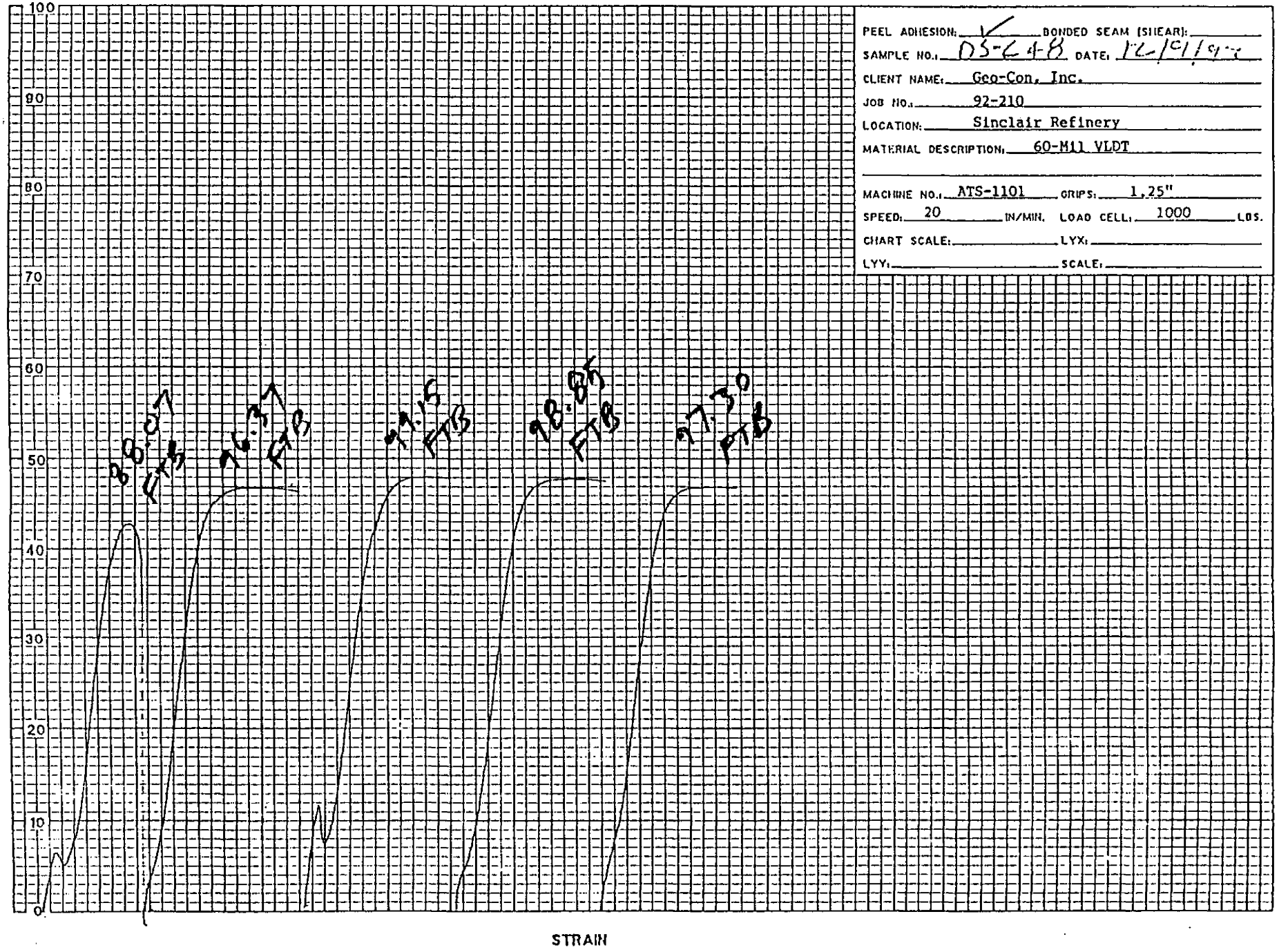
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	99.70	FTB
2	1.0	97.15	FTB
3	1.0	97.35	FTB
4	1.0	95.75	FTB
5	1.0	97.65	FTB
Average		97.52	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: 05-648 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: 05-2.5 DATE: 12/9/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

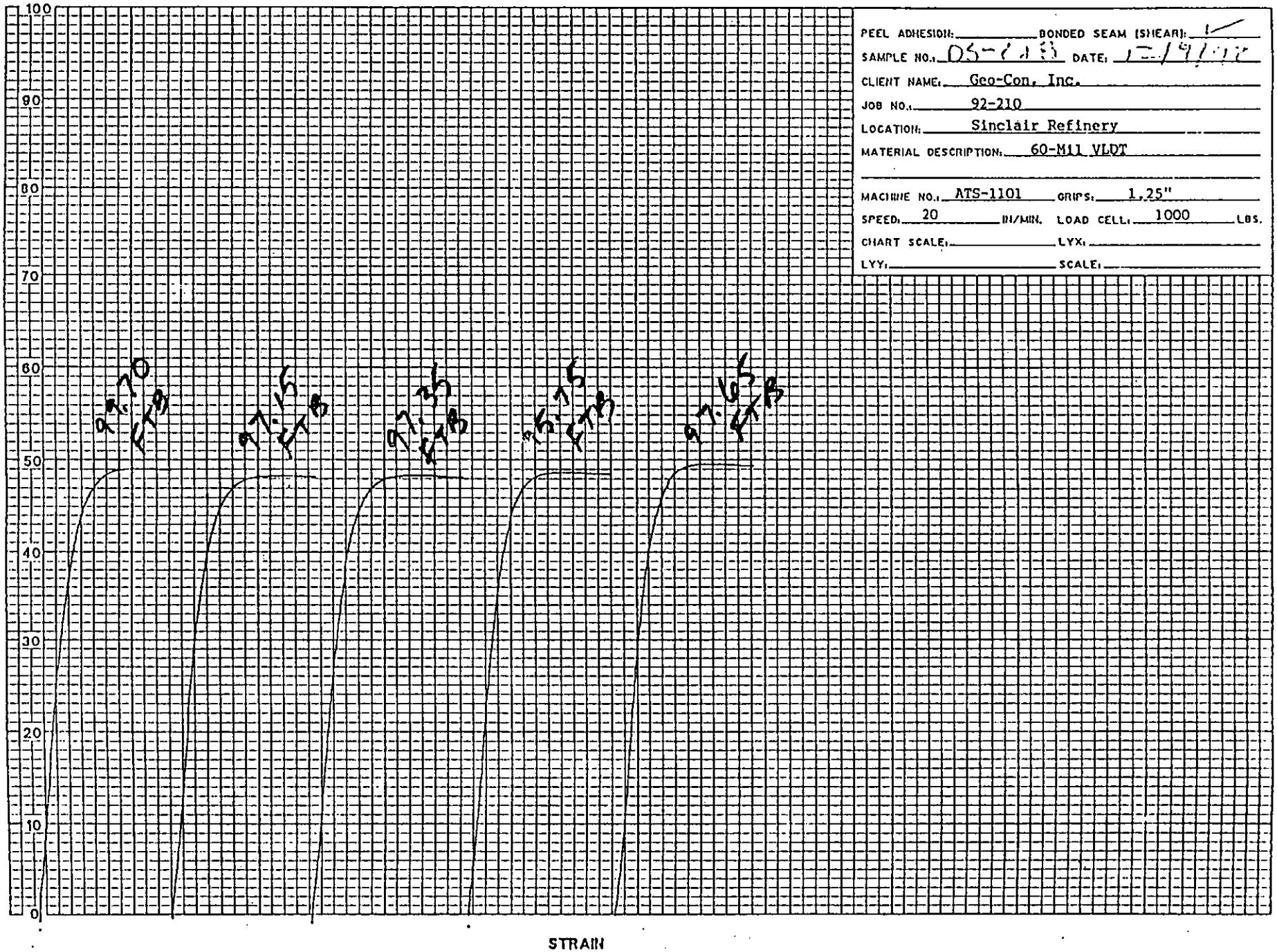
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C49 TECHNICIAN: CMS

SEAM NO.: 79/81 MANUFACTURER: Gundle

PANEL: 79 & 81 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	101.42	FTB
2	1.0	103.50	FTB
3	1.0	102.45	FTB
4	1.0	96.20	FTB
5	1.0	93.07	FTB
Average		99.33	

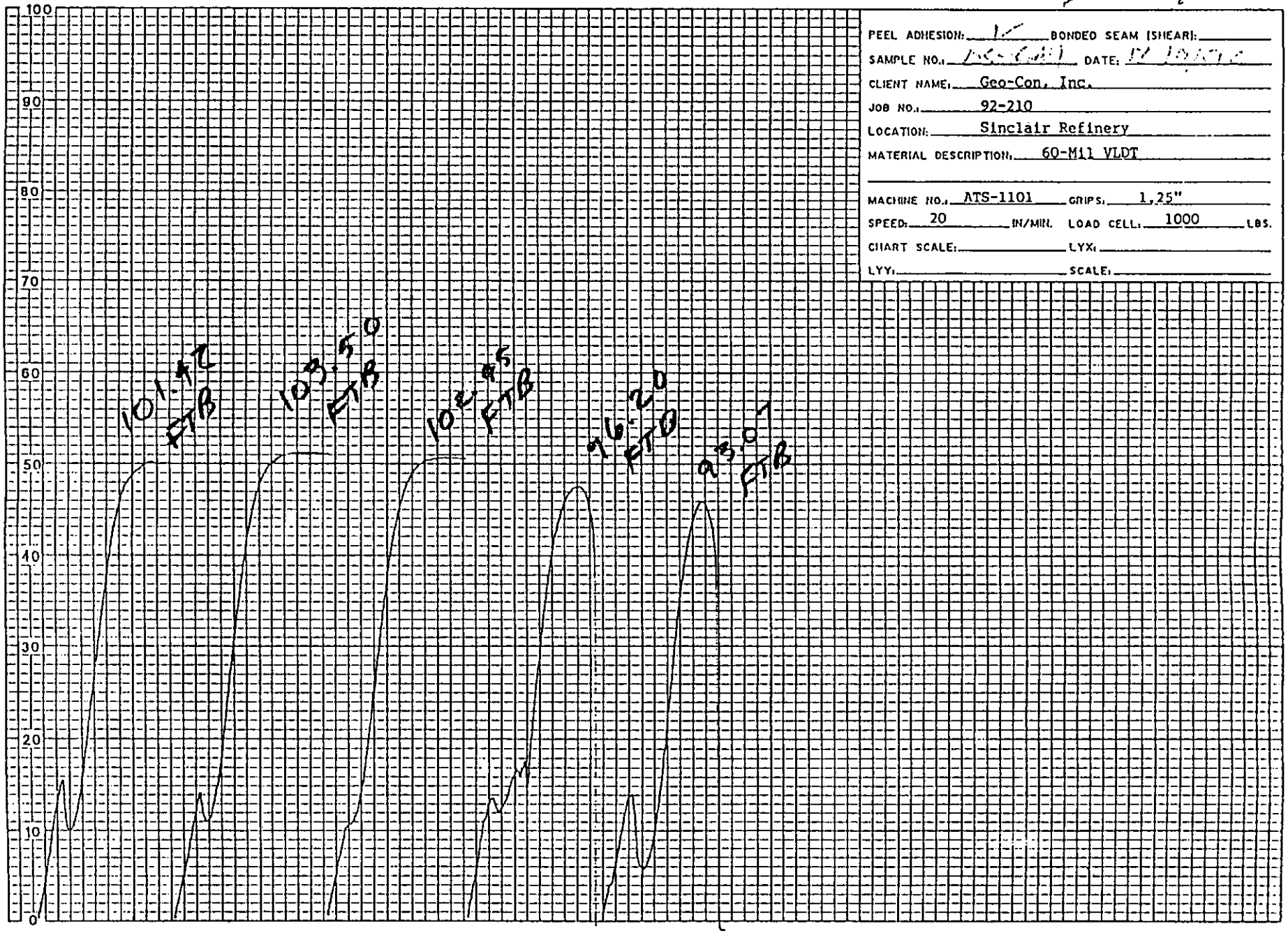
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	104.95	FTB
2	1.0	103.65	FTB
3	1.0	104.17	FTB
4	1.0	103.67	FTB
5	1.0	103.70	FTB
Average		104.03	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: 1" BONDED SEAM (SHEAR): _____

SAMPLE NO.: MC-60-M11 DATE: 12 10 92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

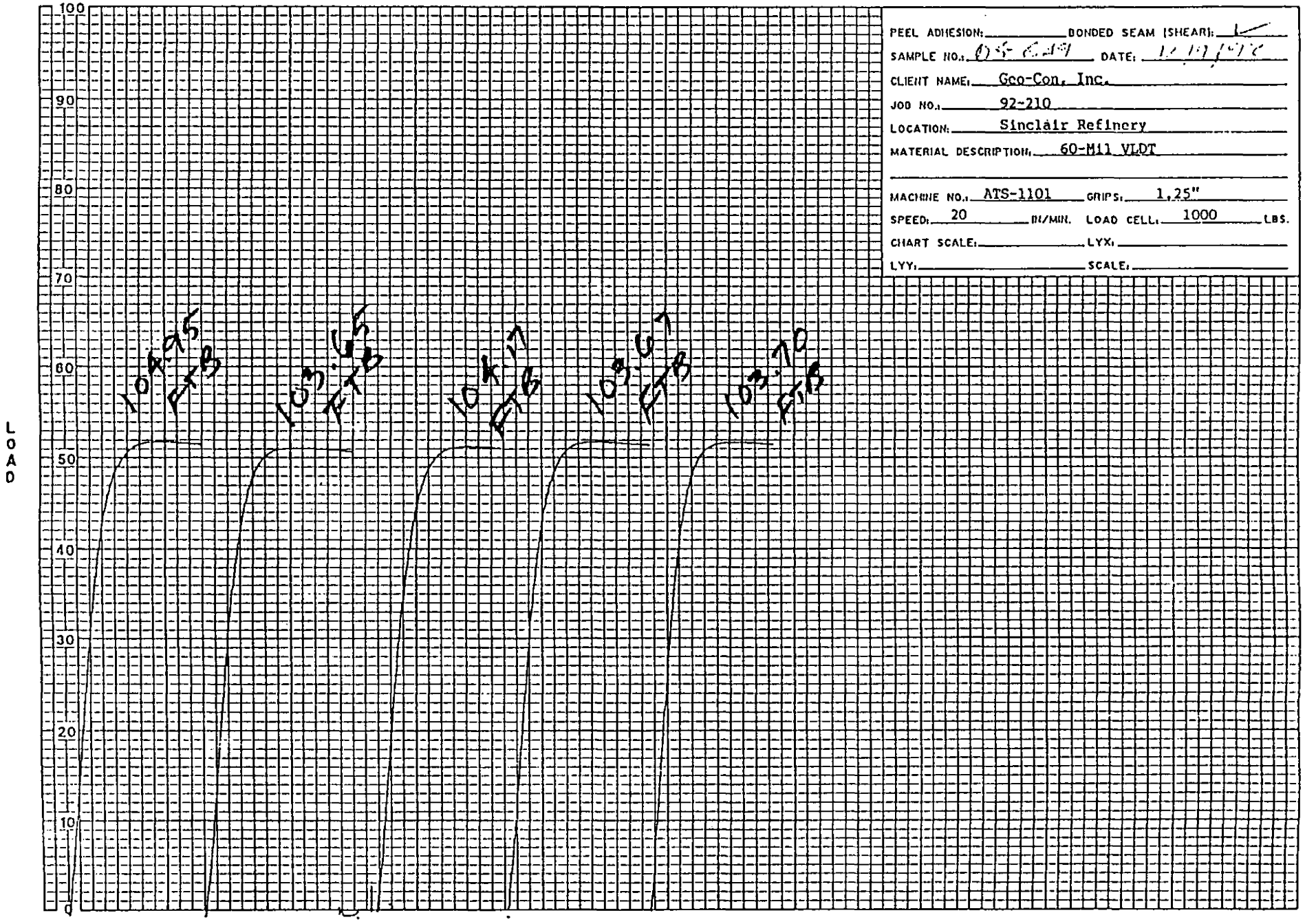
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C50 TECHNICIAN: CMS

SEAM NO.: 79/80 MANUFACTURER: Gundle

PANEL: 79 & 80 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.37	FTB
2	1.0	96.52	FTB
3	1.0	99.07	FTB
4	1.0	100.57	FTB
5	1.0	97.95	FTB
Average		97.90	

Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	106.85	FTB
2	1.0	99.70	FTB
3	1.0	101.77	FTB
4	1.0	103.42	FTB
5	1.0	100.82	FTB
Average		102.51	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C30 DATE: 12/9/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

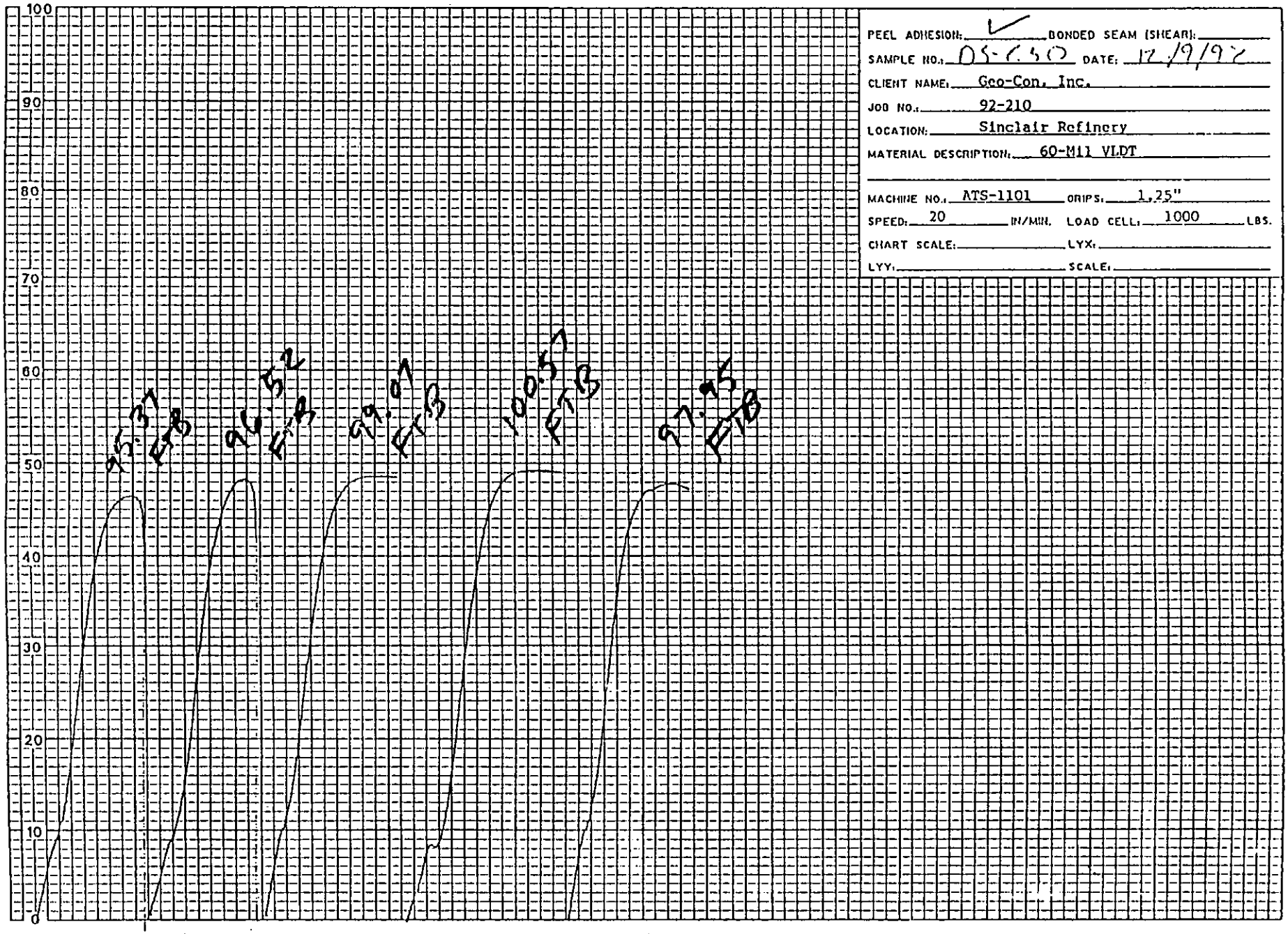
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

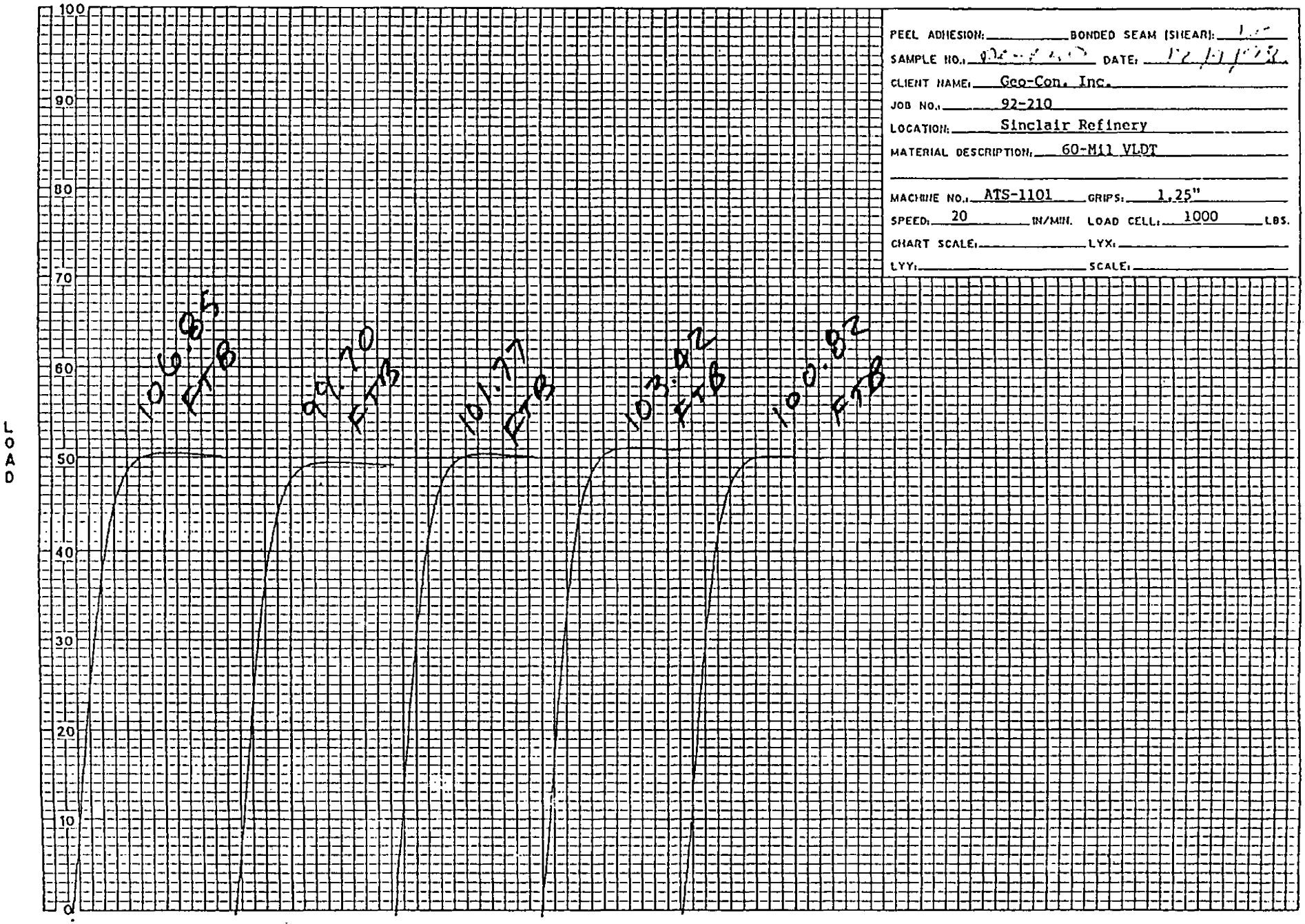
CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C51 TECHNICIAN: CMS

SEAM NO.: 78/80 MANUFACTURER: Gundle

PANEL: 78 & 80 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	102.42	FTB
2	1.0	103.25	FTB
3	1.0	103.22	FTB
4	1.0	97.87	FTB
5	1.0	102.62	FTB
Average		101.87	

Bonded Seam (Shear) Test Data

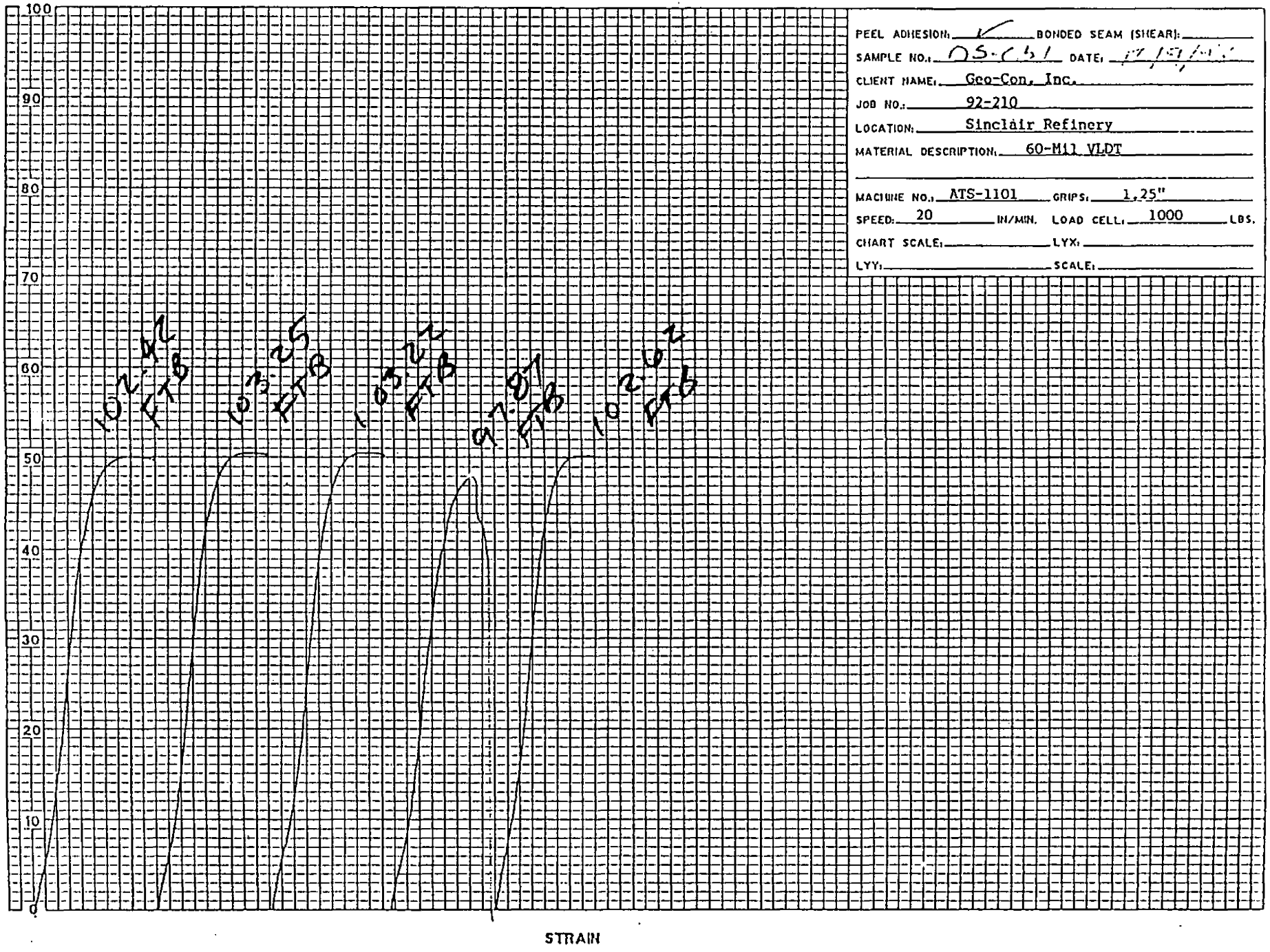
	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	101.75	FTB
2	1.0	101.42	FTB
3	1.0	102.92	FTB
4	1.0	101.80	FTB
5	1.0	102.37	FTB
Average		102.05	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: K BONDED SEAM (SHEAR): _____

SAMPLE NO.: OS-C61 DATE: 12/15/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

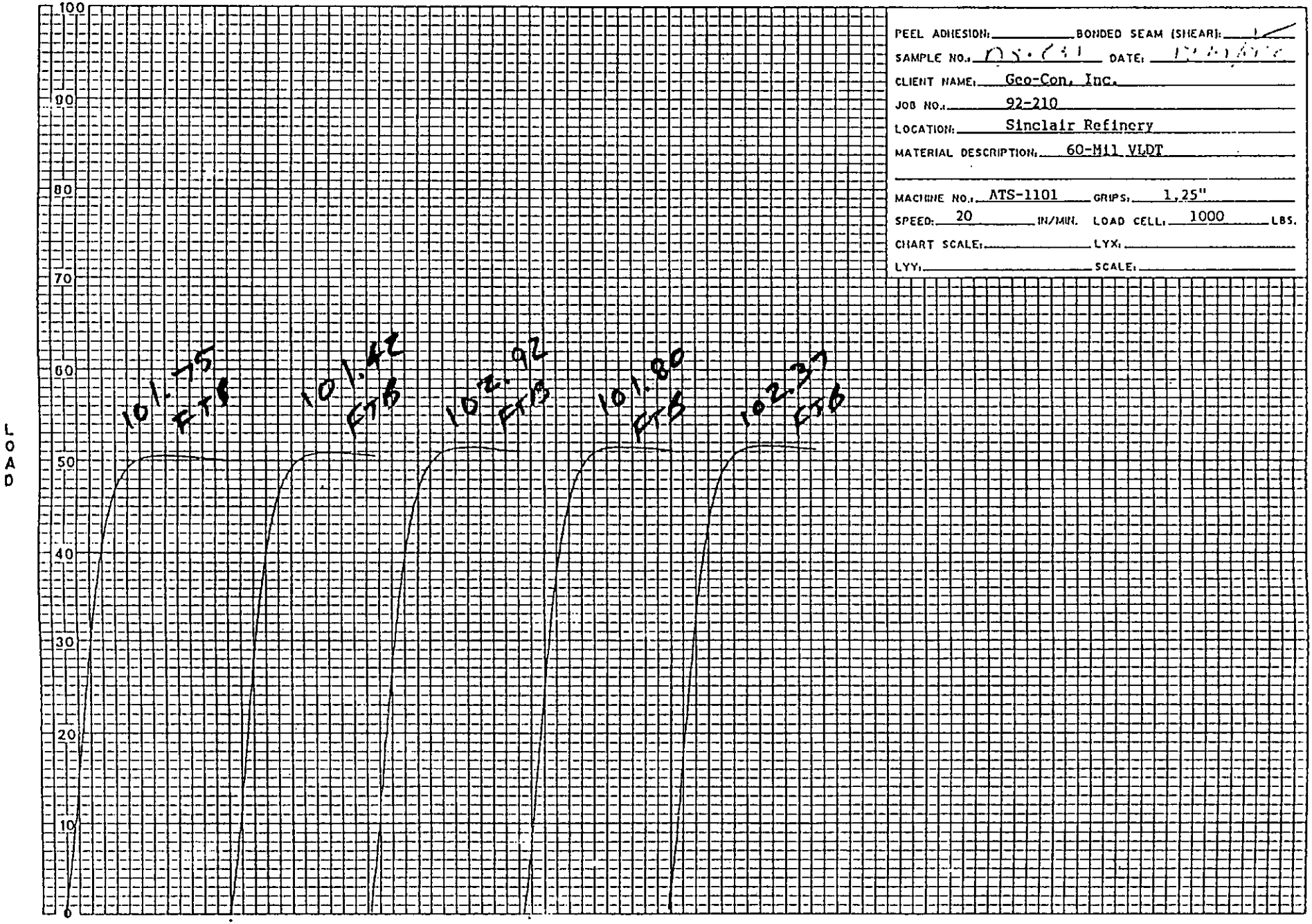
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: 105-C41 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C52 TECHNICIAN: CMS

SEAM NO.: 80/82 MANUFACTURER: Gundle

PANEL: 80 & 82 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.02	FTB
2	1.0	104.22	FTB
3	1.0	102.25	FTB
4	1.0	100.20	FTB
5	1.0	98.30	FTB
Average		101.60	

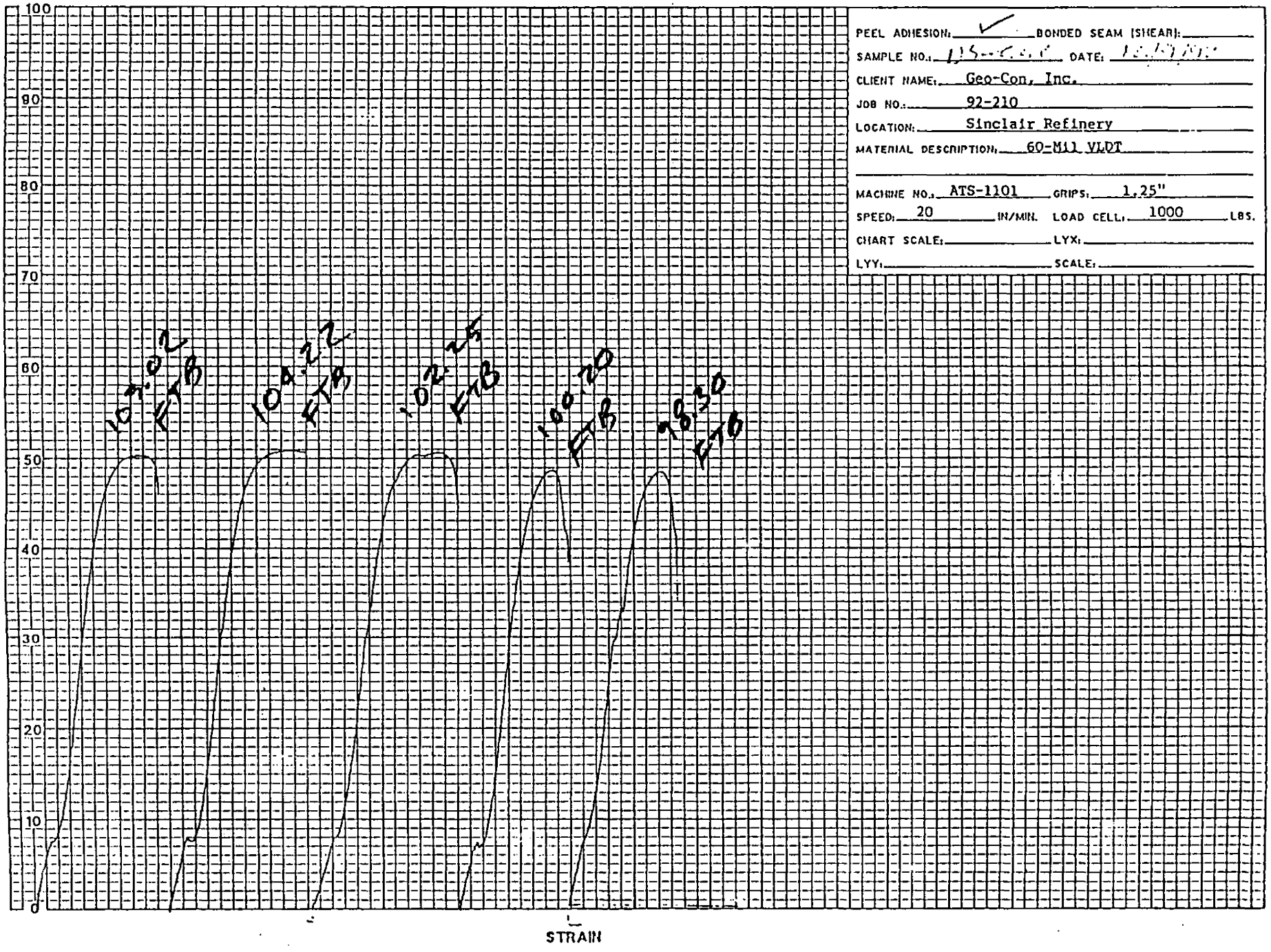
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	104.25	FTB
2	1.0	104.90	FTB
3	1.0	102.95	FTB
4	1.0	103.45	FTB
5	1.0	103.37	FTB
Average		103.78	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: 15-C.C.C DATE: 12/5/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

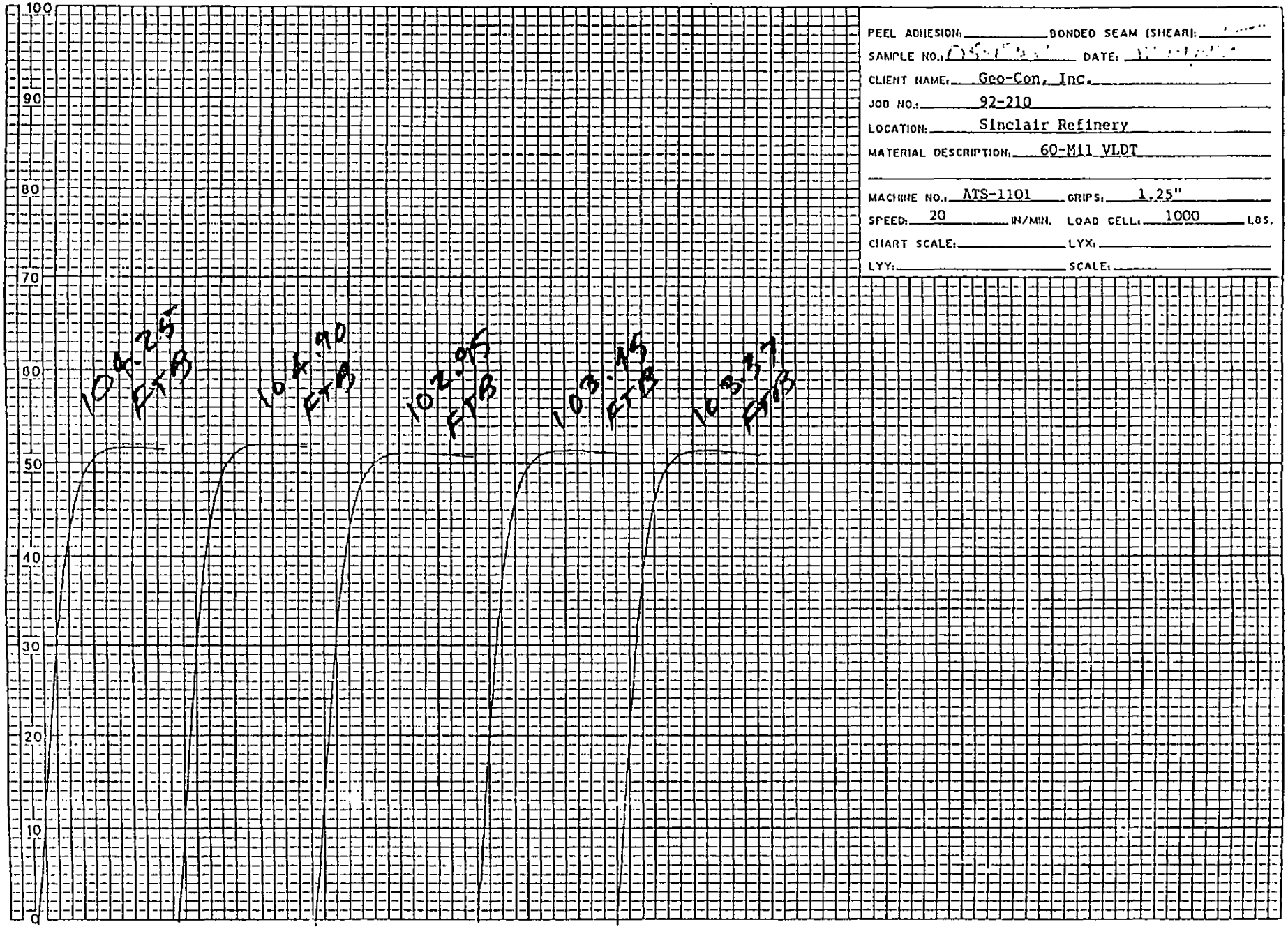
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): _____

SAMPLE NO.: [illegible] DATE: [illegible]

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/9/92

SAMPLE NO.: DS C53 TECHNICIAN: CMS

SEAM NO.: 81/83 MANUFACTURER: Gundle

PANEL: 81 & 83 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	106.80	FTB
2	1.0	105.87	FTB
3	1.0	103.17	FTB
4	1.0	105.92	FTB
5	1.0	104.92	FTB
Average		105.34	

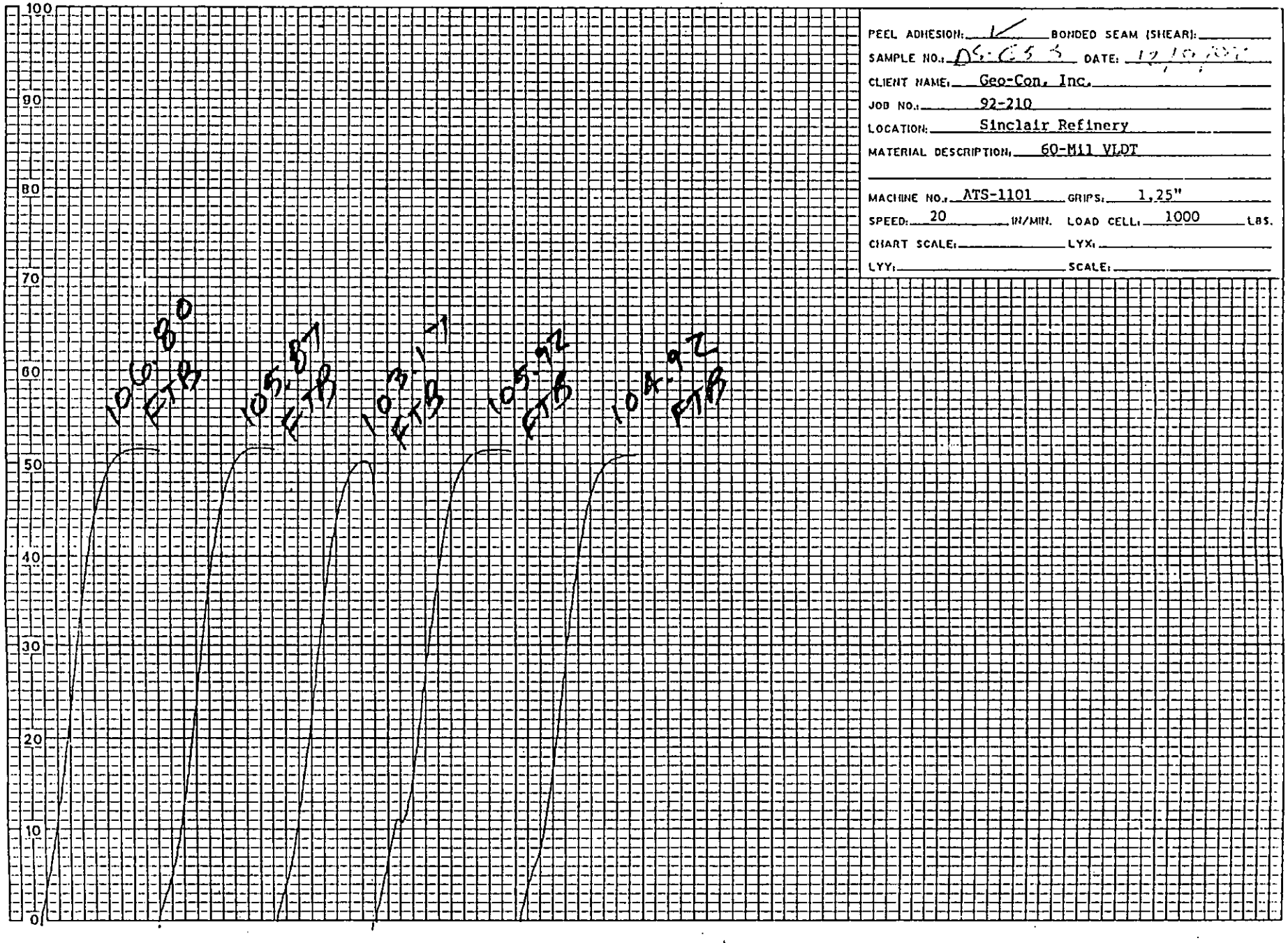
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	106.37	FTB
2	1.0	105.90	FTB
3	1.0	106.70	FTB
4	1.0	106.12	FTB
5	1.0	105.25	FTB
Average		106.07	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C5-3 DATE: 12/10/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

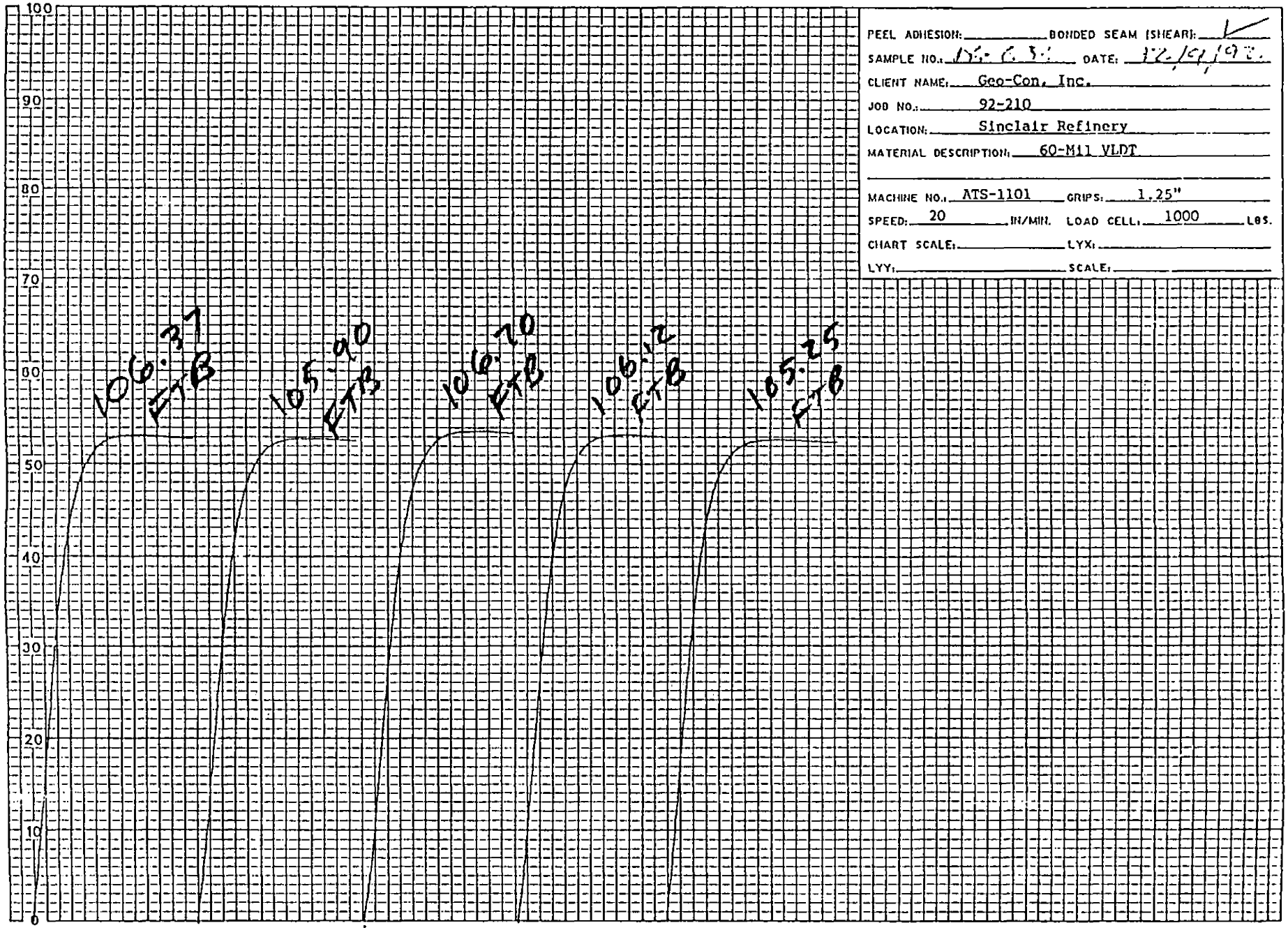
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: D.C. 3 DATE: 12/04/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 23048

REPORT IX

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

DECEMBER 14, 1992

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C54 TECHNICIAN: CMB

SEAM NO.: 82/84 MANUFACTURER: Gundle

PANEL: 82 & 84 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.85	FTB
2	1.0	94.57	FTB
3	1.0	96.22	FTB
4	1.0	91.40	FTB
5	1.0	93.55	FTB
Average		93.72	

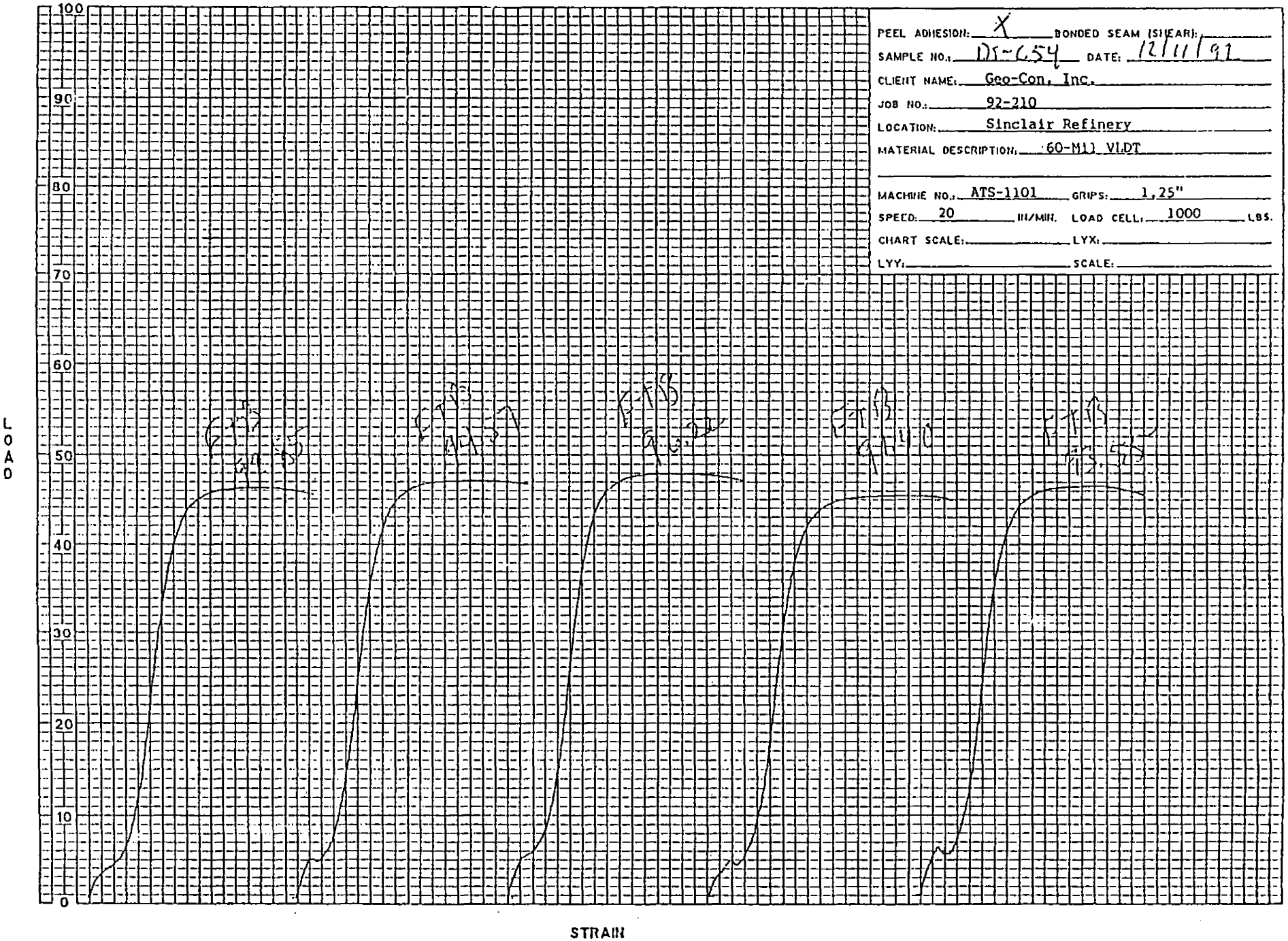
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.22	FTB
2	1.0	92.22	FTB
3	1.0	92.30	FTB
4	1.0	92.30	FTB
5	1.0	90.80	FTB
Average		91.97	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

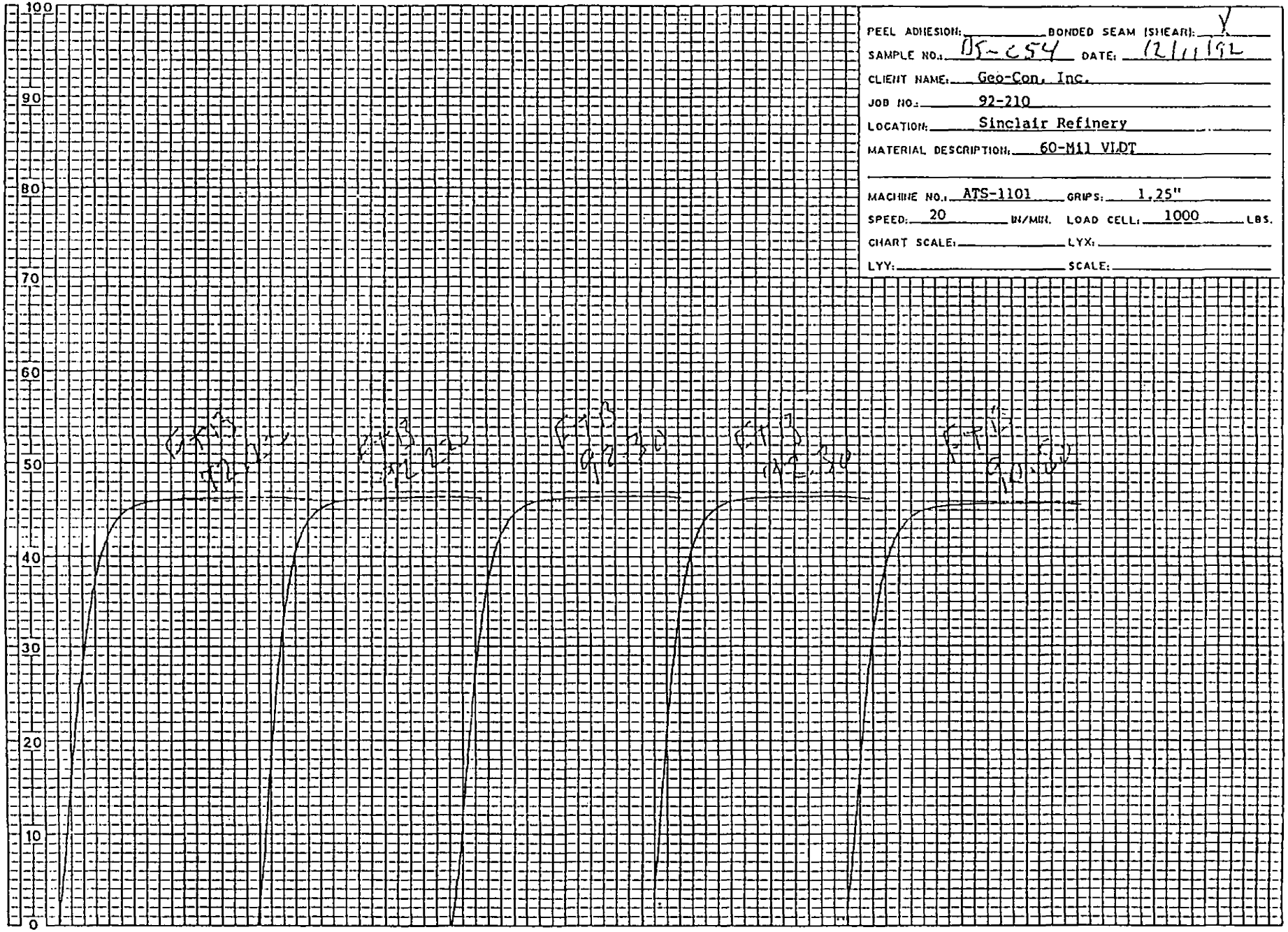
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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C55 TECHNICIAN: CMB

SEAM NO.: 82/84 MANUFACTURER: Gundle

PANEL: 82 & 84 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.00	FTB
2	1.0	93.82	FTB
3	1.0	92.60	FTB
4	1.0	93.15	FTB
5	1.0	90.20	FTB
Average		92.75	

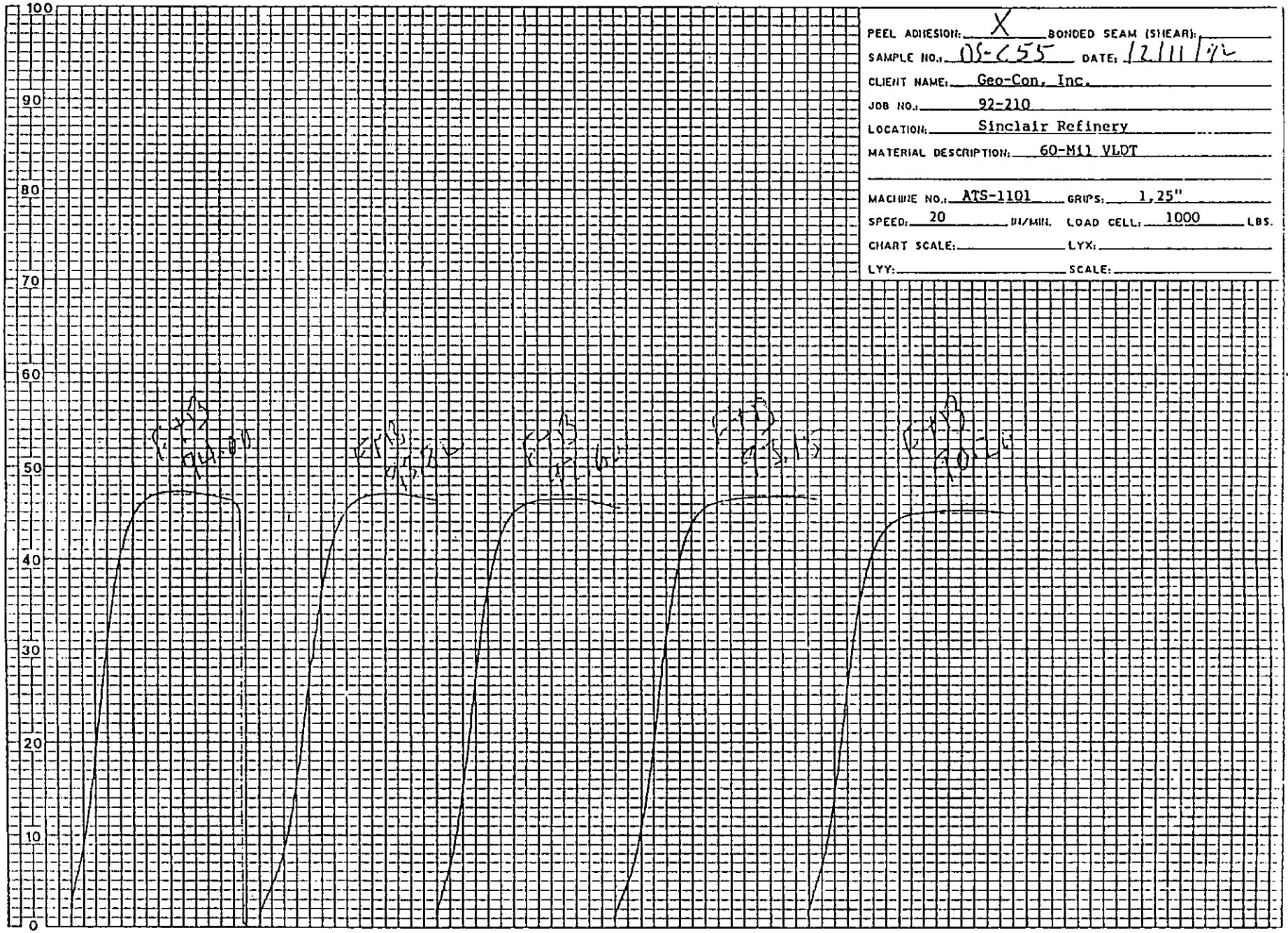
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	82.22	FTB
2	1.0	85.55	FTB
3	1.0	85.62	FTB
4	1.0	87.90	FTB
5	1.0	87.97	FTB
Average		85.85	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: 05-C55 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

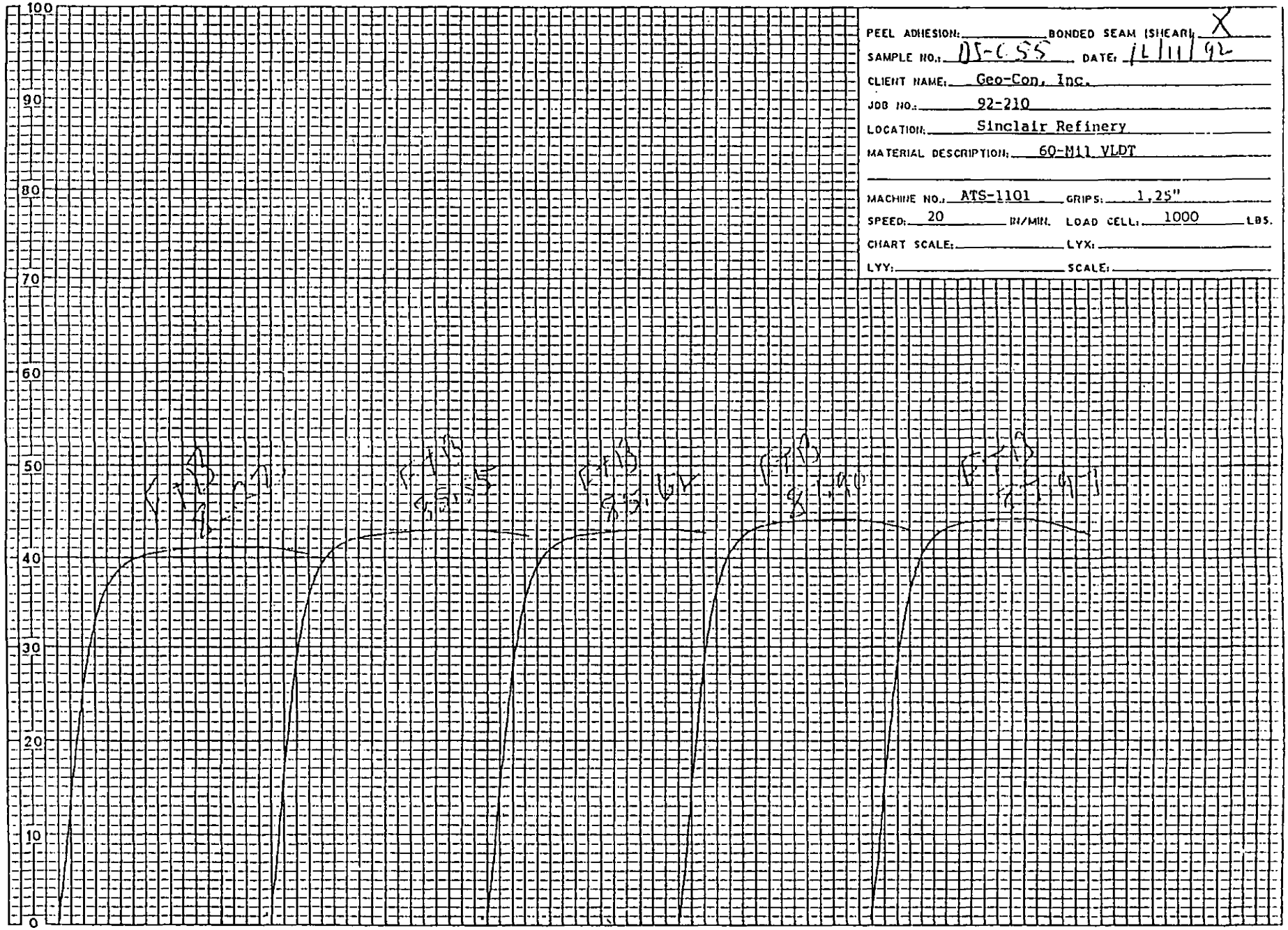
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR) X

SAMPLE NO.: DS-C 55 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C56 TECHNICIAN: CMB

SEAM NO.: 84/85 MANUFACTURER: Gundle

PANEL: 84 & 85 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.95	FTB
2	1.0	92.65	FTB
3	1.0	93.27	FTB
4	1.0	91.62	FTB
5	1.0	89.85	FTB
Average		92.27	

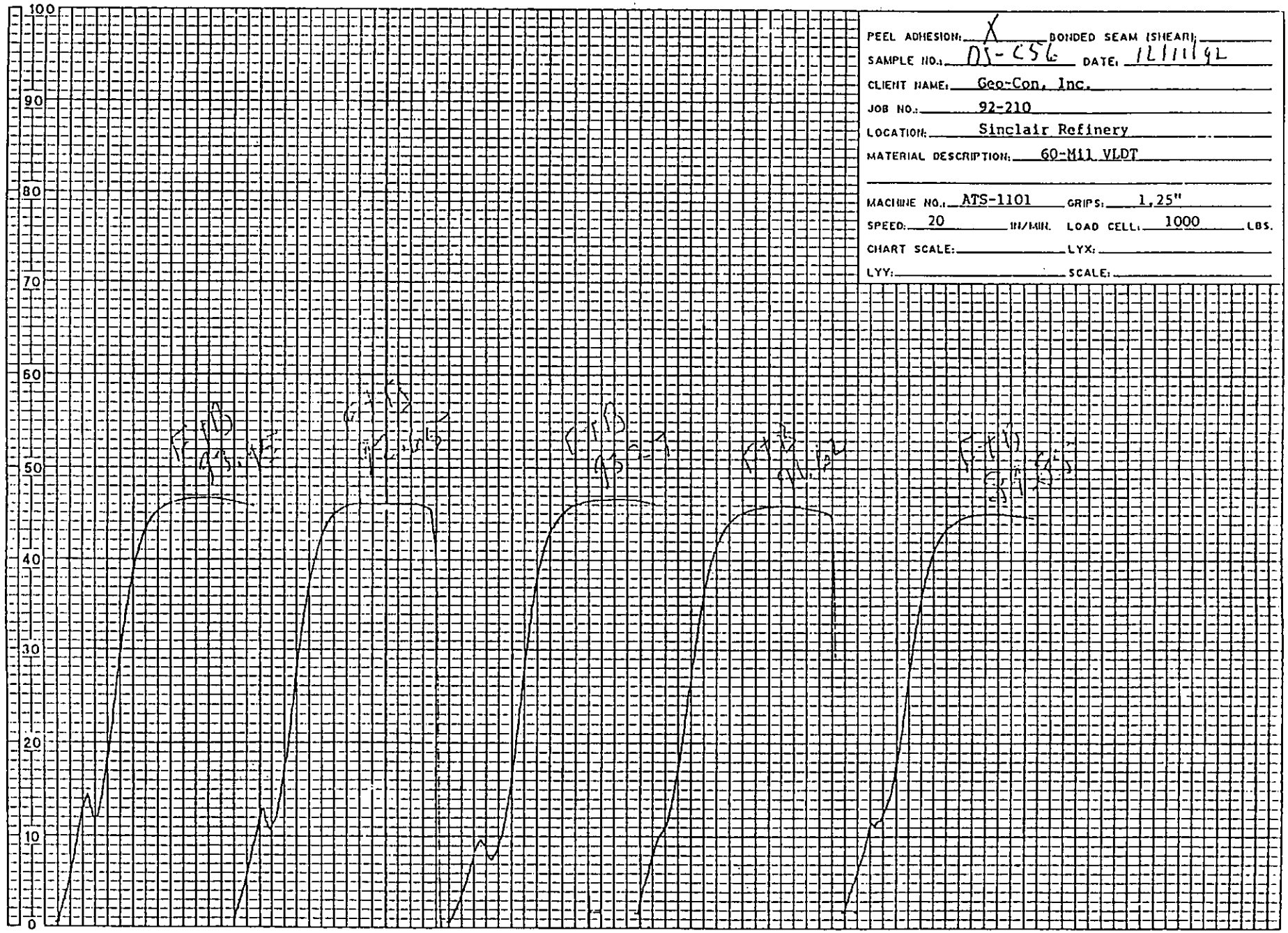
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	89.72	FTB
2	1.0	91.30	FTB
3	1.0	90.67	FTB
4	1.0	91.42	FTB
5	1.0	89.65	FTB
Average		90.55	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C56 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

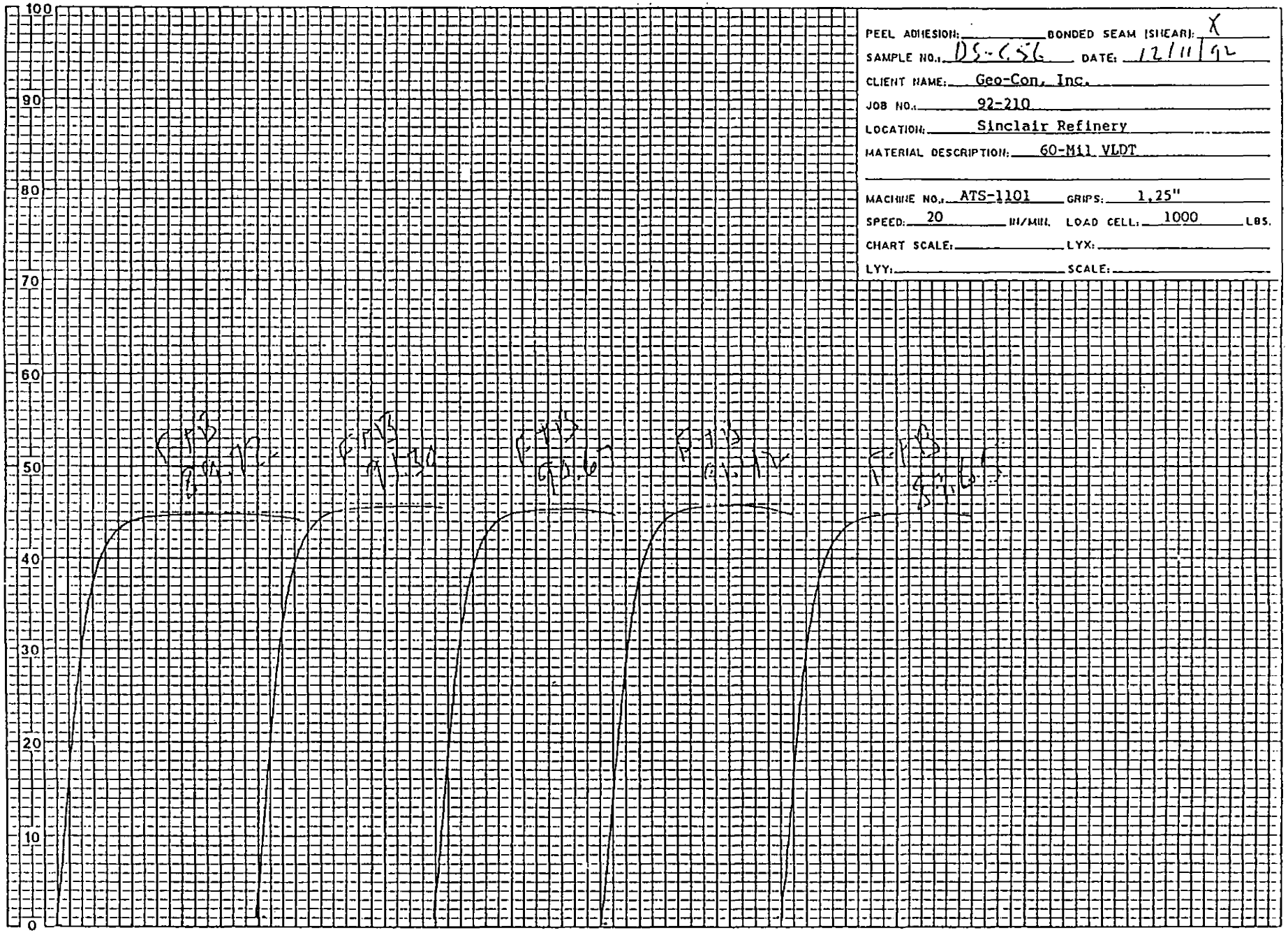
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 21-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C57 TECHNICIAN: CMB

SEAM NO.: 85/84 MANUFACTURER: Gundle

PANEL: 84 & 85 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.02	FTB
2	1.0	95.47	FTB
3	1.0	91.01	FTB
4	1.0	92.94	FTB
5	1.0	91.45	FTB
Average		92.98	

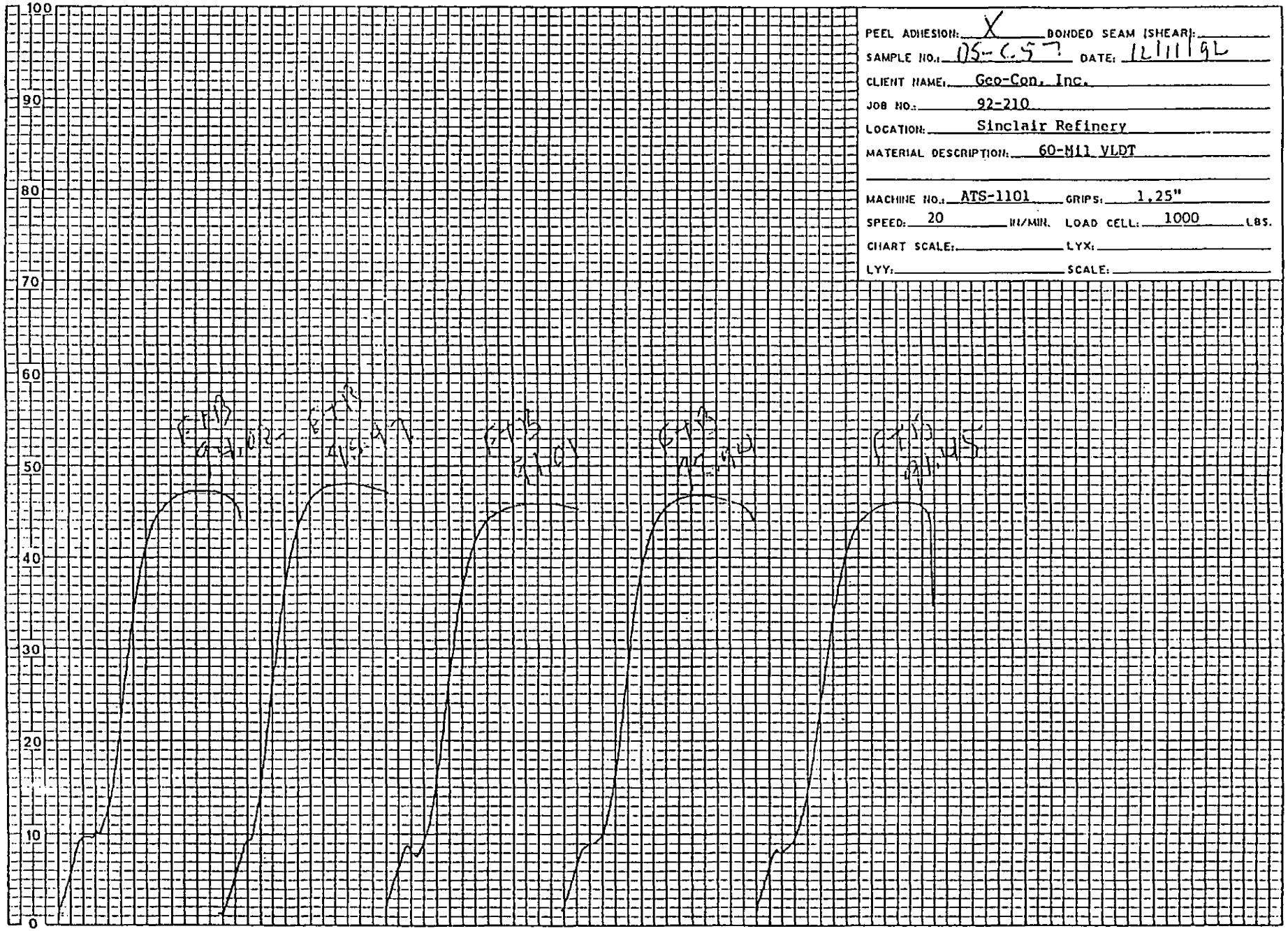
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.90	FTB
2	1.0	93.60	FTB
3	1.0	95.32	FTB
4	1.0	95.42	FTB
5	1.0	94.25	FTB
Average		93.90	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: 05-C-57 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

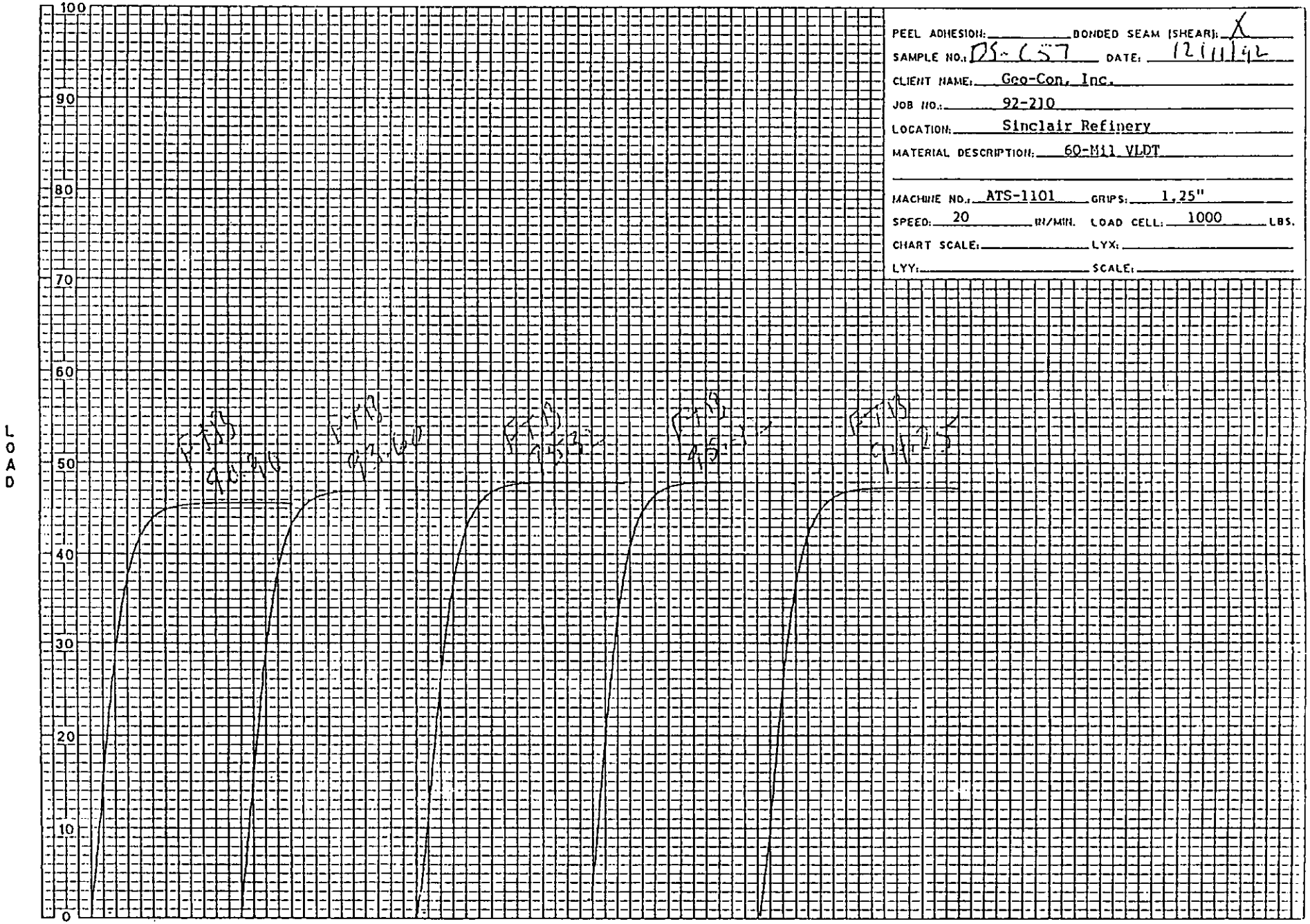
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DS-C57 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C58 TECHNICIAN: CMB

SEAM NO.: 85/87 MANUFACTURER: Gundle

PANEL: 85 & 87 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.55	FTB
2	1.0	96.50	FTB
3	1.0	95.30	FTB
4	1.0	95.70	FTB
5	1.0	90.70	FTB
Average		94.55	

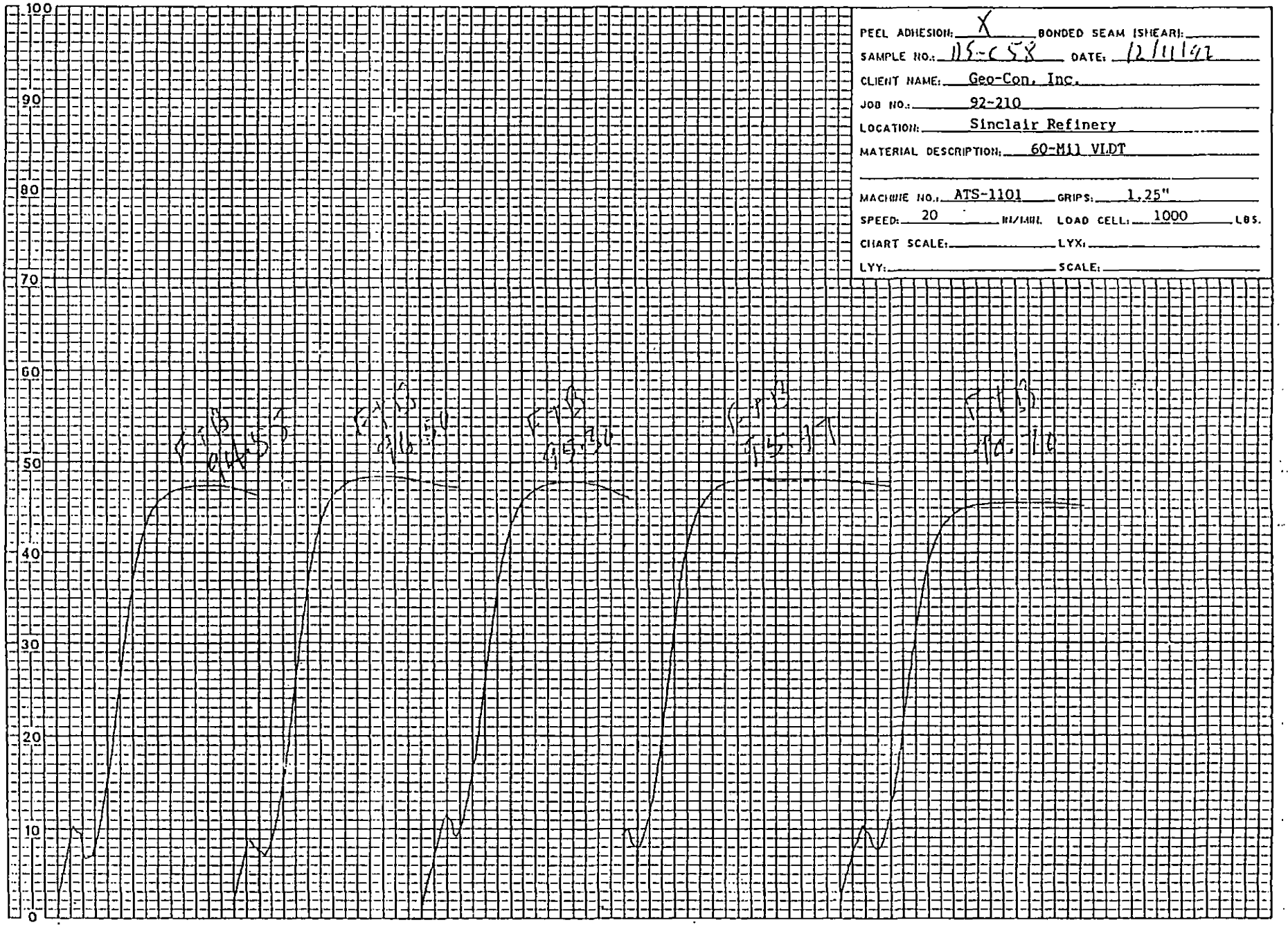
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	88.87	FTB
2	1.0	92.60	FTB
3	1.0	93.80	FTB
4	1.0	94.05	FTB
5	1.0	93.62	FTB
Average		92.59	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: 115-C5X DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

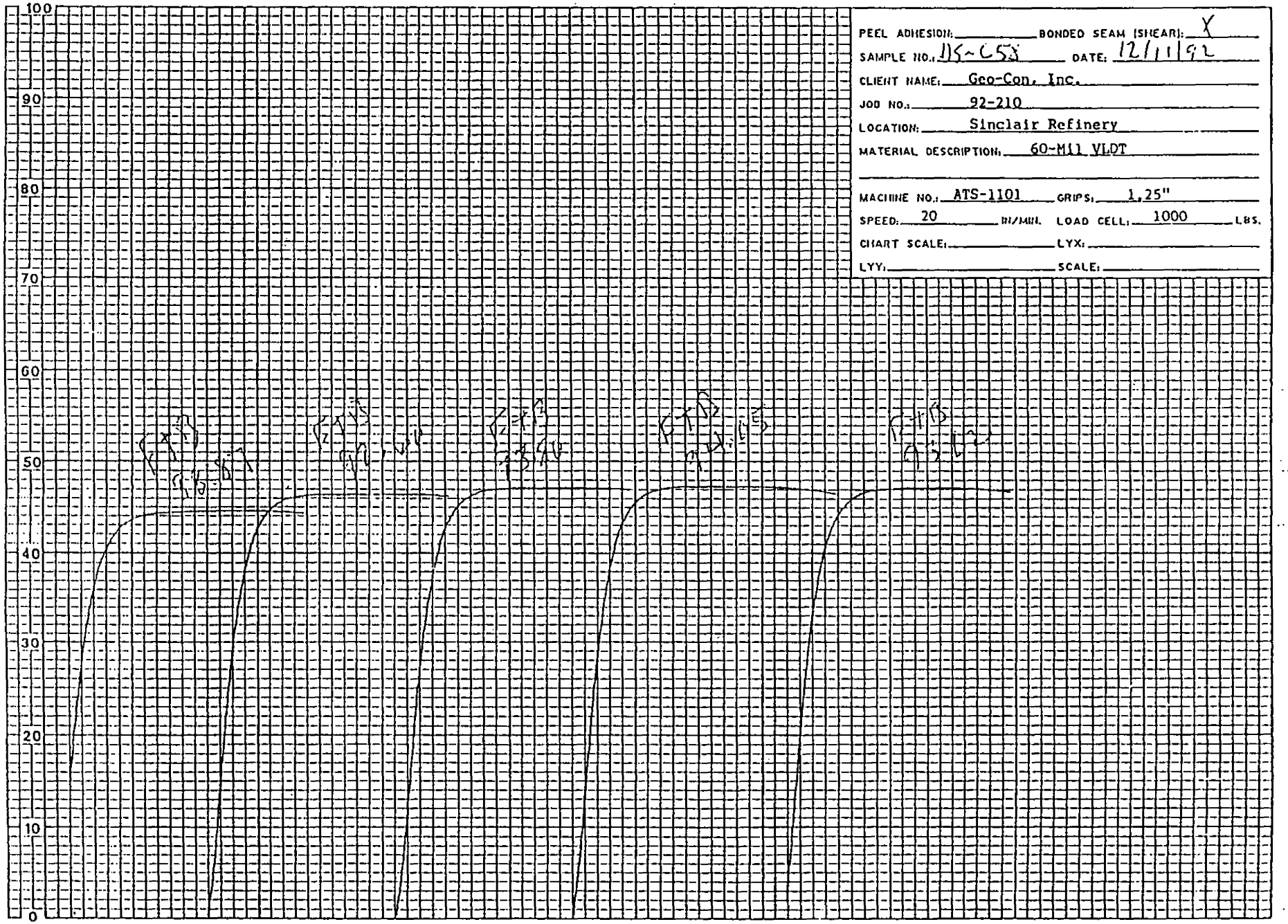
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: D5-C53 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C59 TECHNICIAN: CMB

SEAM NO.: 85/87 MANUFACTURER: Gundle

PANEL: 85 & 87 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.15	FTB
2	1.0	93.10	FTB
3	1.0	90.52	FTB
4	1.0	93.07	FTB
5	1.0	92.52	FTB
Average		92.67	

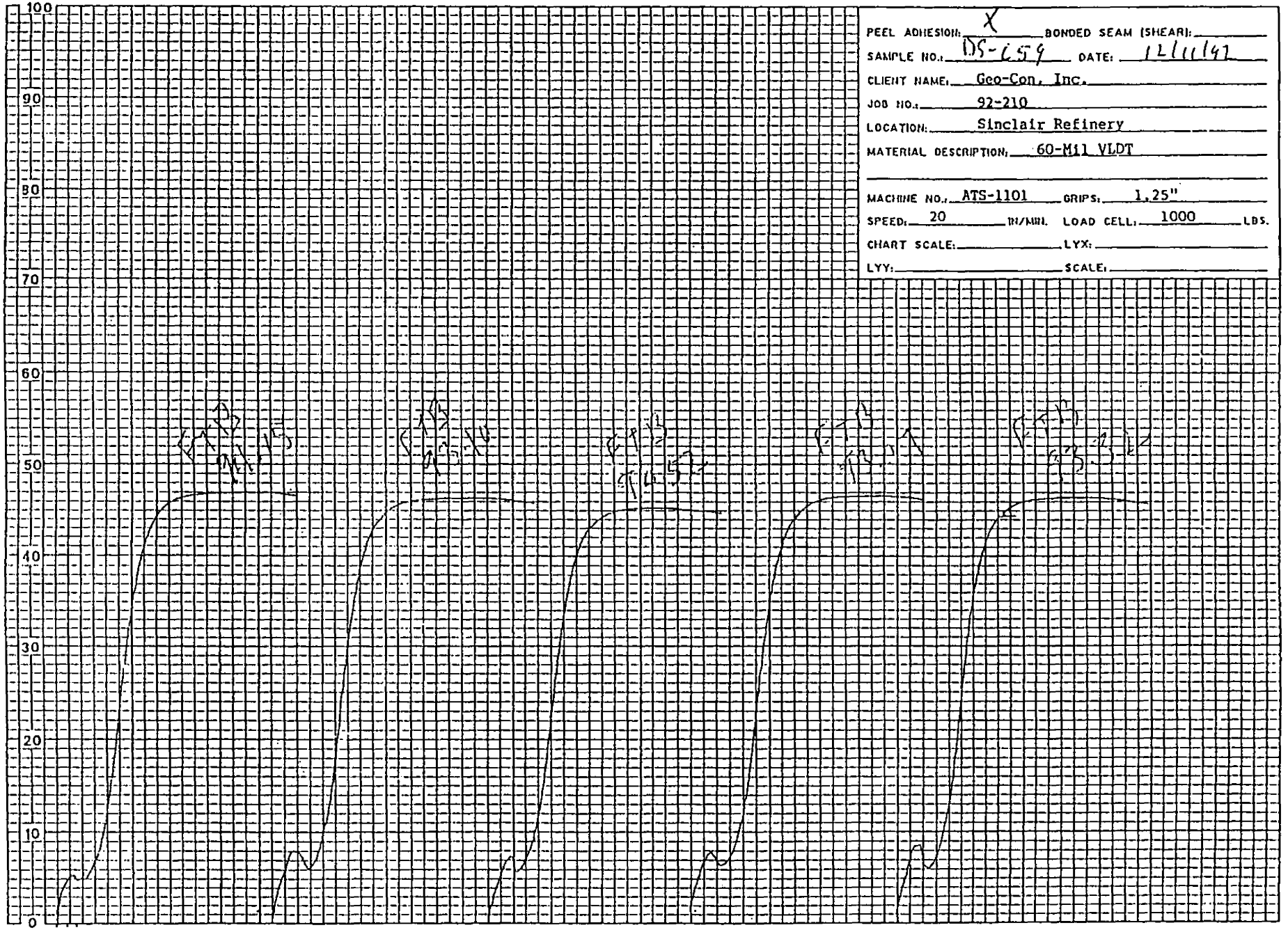
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.37	FTB
2	1.0	88.07	FTB
3	1.0	90.30	FTB
4	1.0	90.72	FTB
5	1.0	93.22	FTB
Average		90.94	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-659 DATE: 12/11/97

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

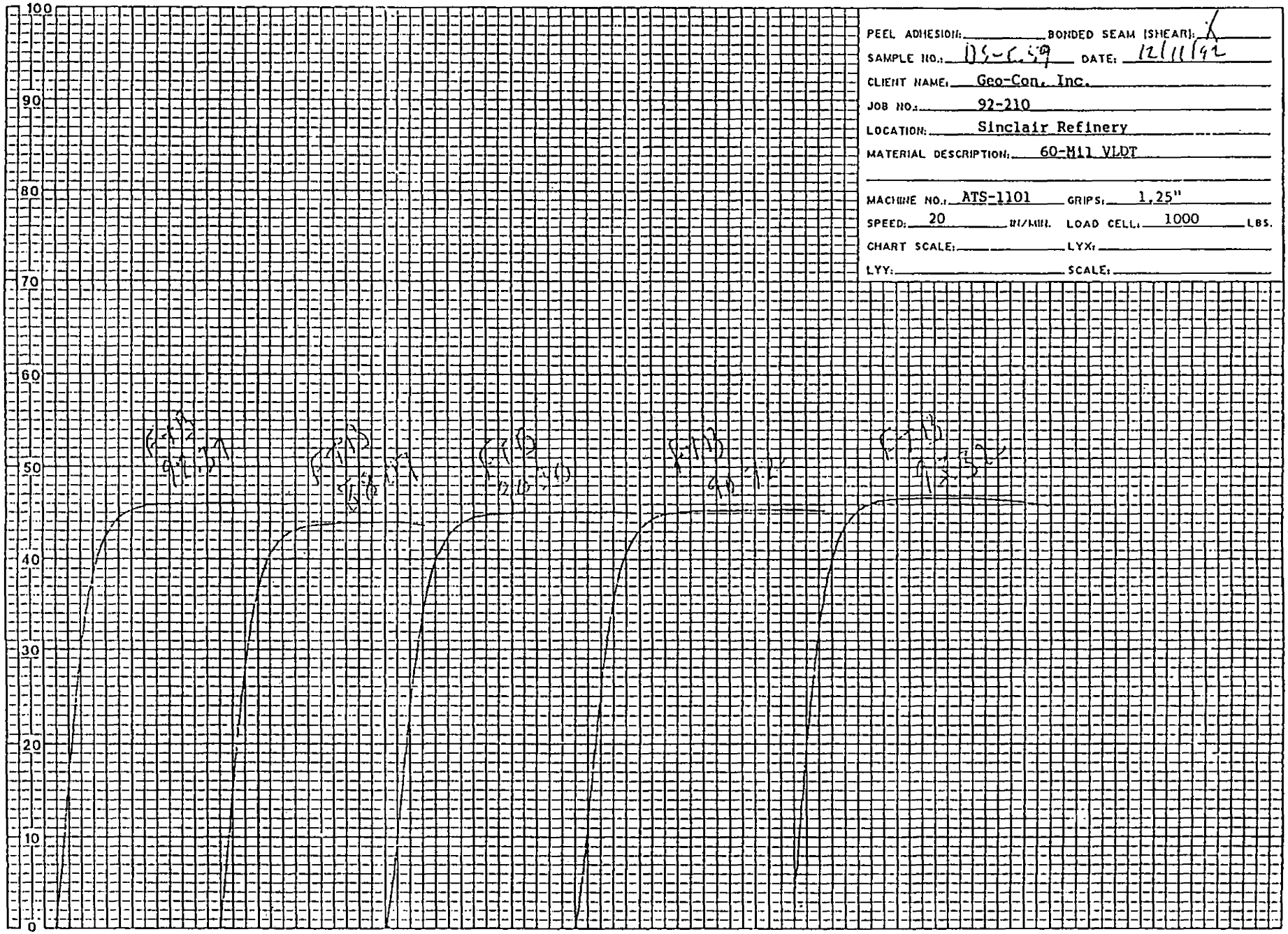
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DS-C.59 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C60 TECHNICIAN: CMB

SEAM NO.: 86/88 MANUFACTURER: Gundle

PANEL: 86 & 88 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	94.55	FTB
2	1.0	95.15	FTB
3	1.0	95.45	FTB
4	1.0	96.60	FTB
5	1.0	94.90	FTB
Average		95.33	

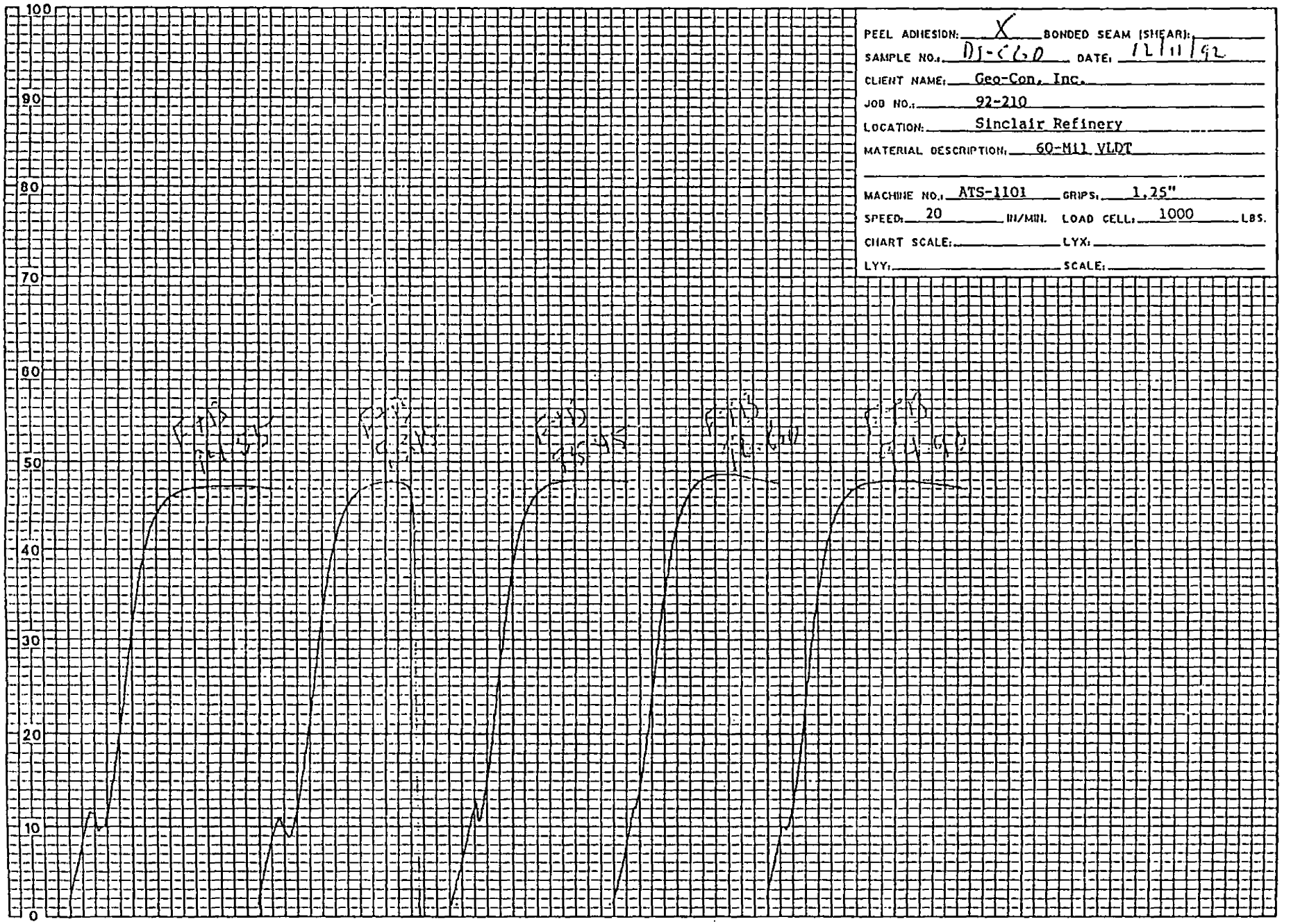
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.45	FTB
2	1.0	93.75	FTB
3	1.0	93.20	FTB
4	1.0	90.95	FTB
5	1.0	87.12	FTB
Average		91.49	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: DJ-CL-D DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

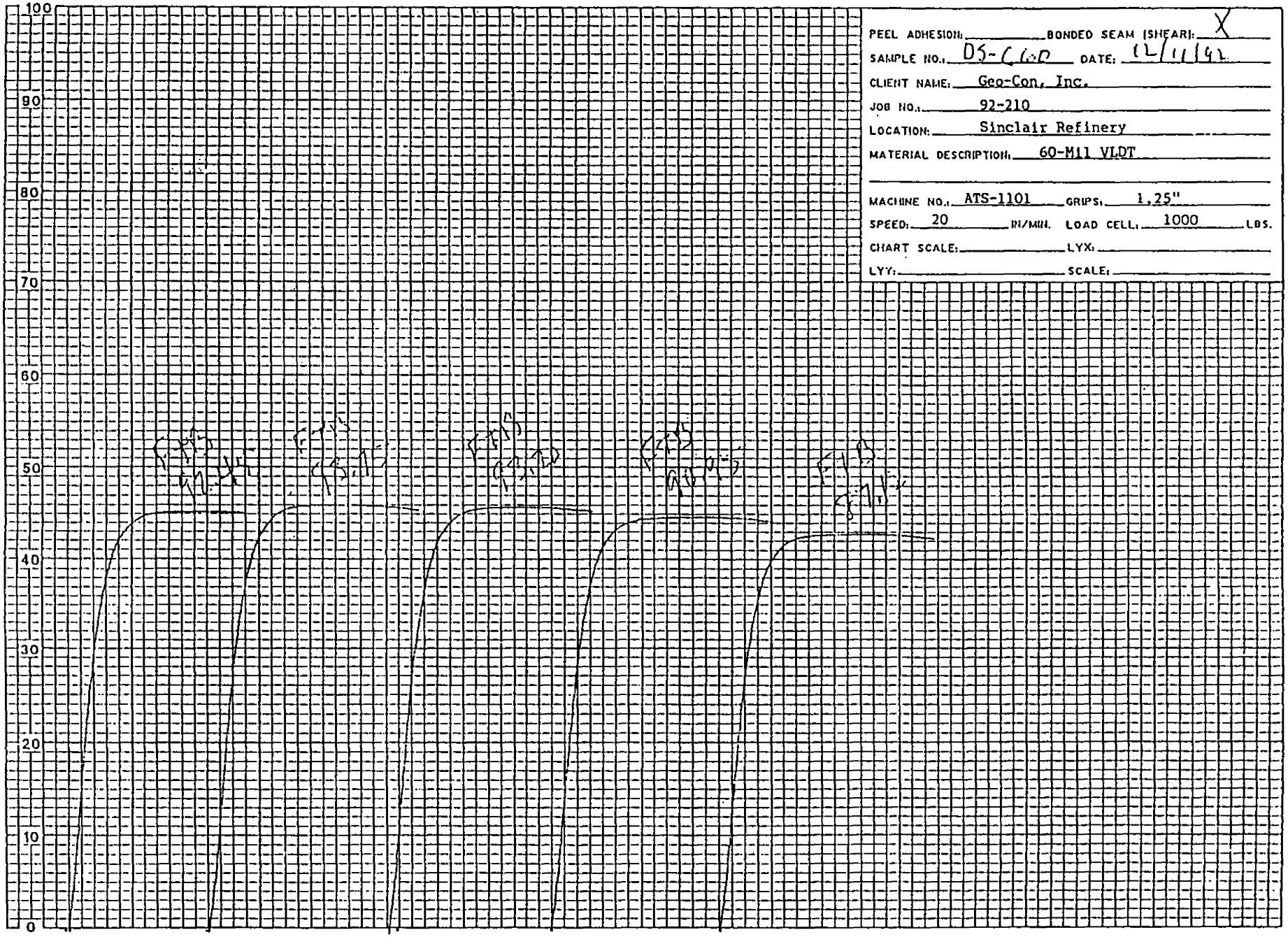
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: D5-C6-D DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C61 TECHNICIAN: CMB

SEAM NO.: 87/88 MANUFACTURER: Gundle

PANEL: 87 & 88 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.35	FTB
2	1.0	95.50	FTB
3	1.0	95.35	FTB
4	1.0	96.92	FTB
5	1.0	94.55	FTB
Average		95.13	

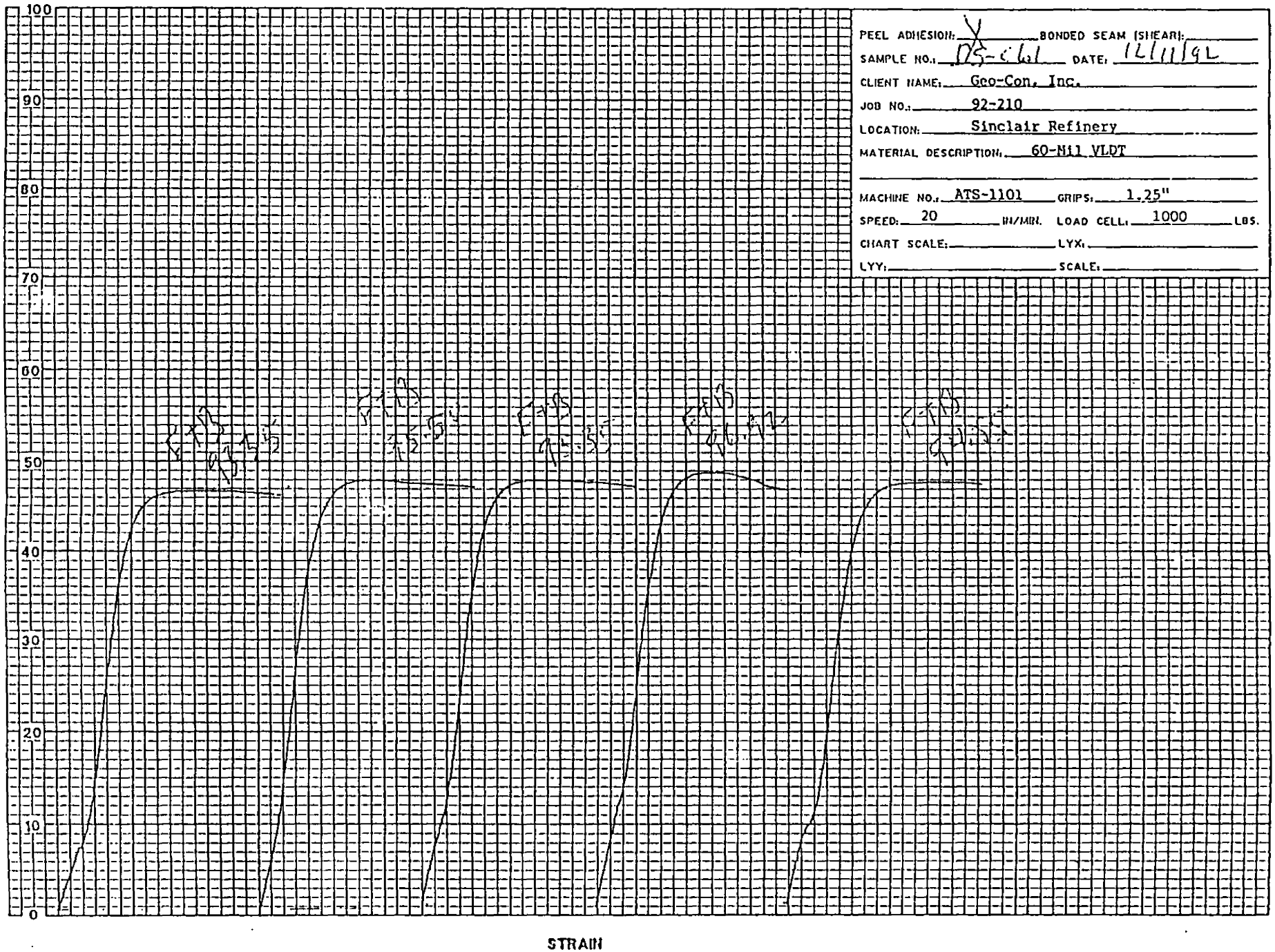
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	86.85	FTB
2	1.0	92.90	FTB
3	1.0	92.00	FTB
4	1.0	95.10	FTB
5	1.0	90.40	FTB
Average		91.45	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

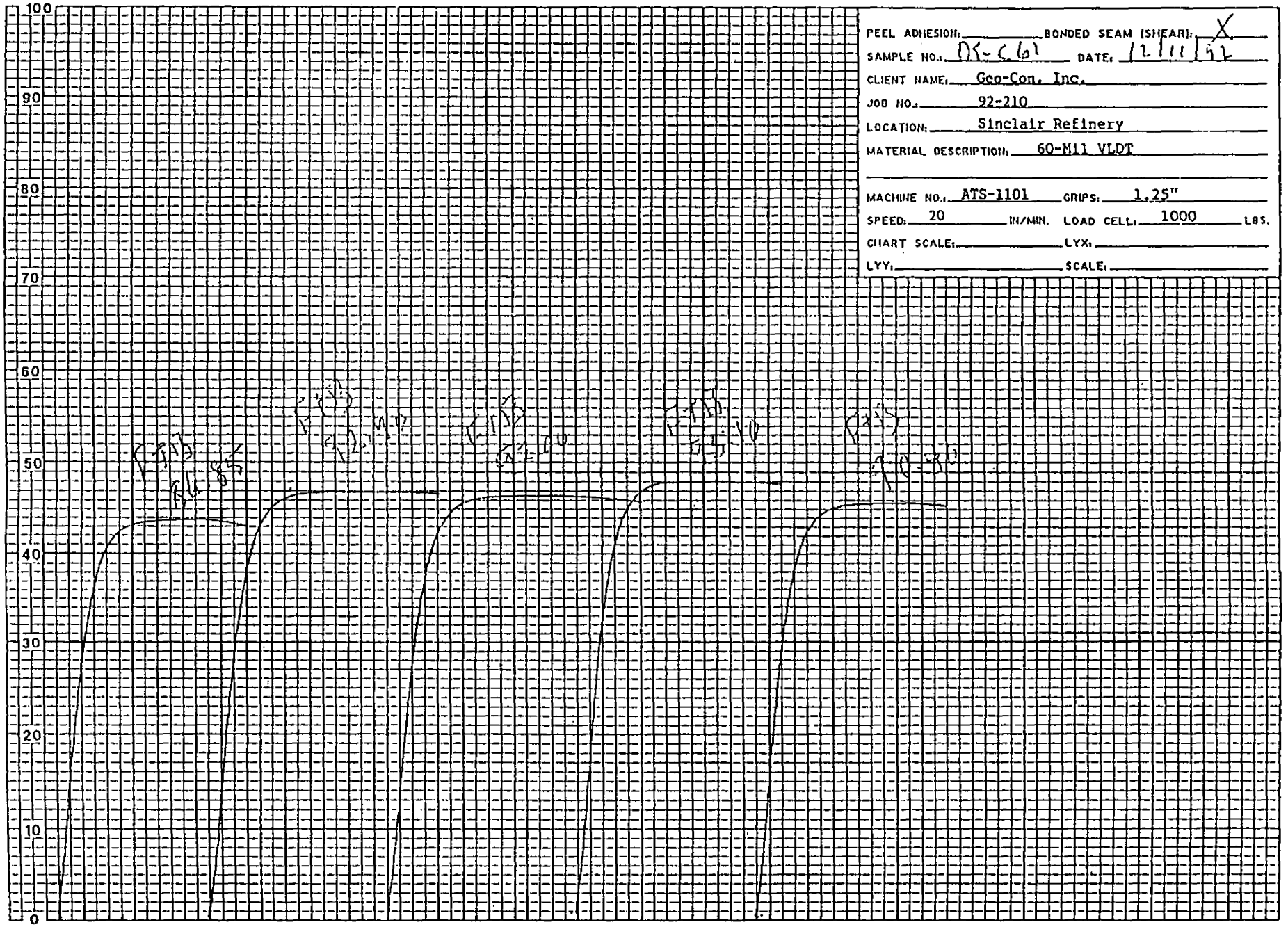
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DC-C.61 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C62 TECHNICIAN: CMB

SEAM NO.: 89/95 MANUFACTURER: Gundle

PANEL: 89 & 94 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.70	FTB
2	1.0	94.62	FTB
3	1.0	93.90	FTB
4	1.0	92.70	FTB
5	1.0	94.65	FTB
Average		93.91	

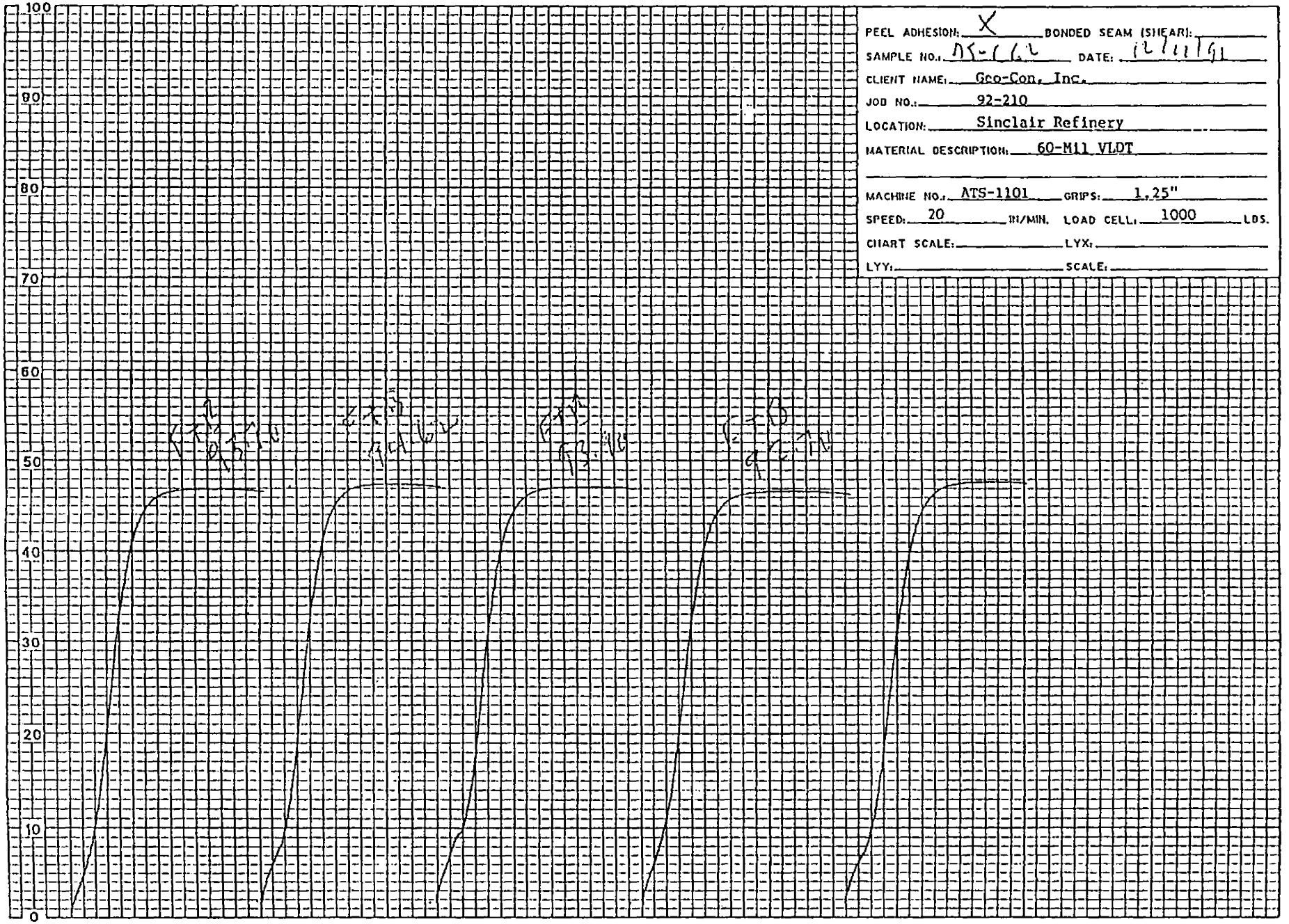
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.47	FTB
2	1.0	92.22	FTB
3	1.0	95.35	FTB
4	1.0	94.45	FTB
5	1.0	95.40	FTB
Average		93.78	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: DS-662 DATE: 12/11/91

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

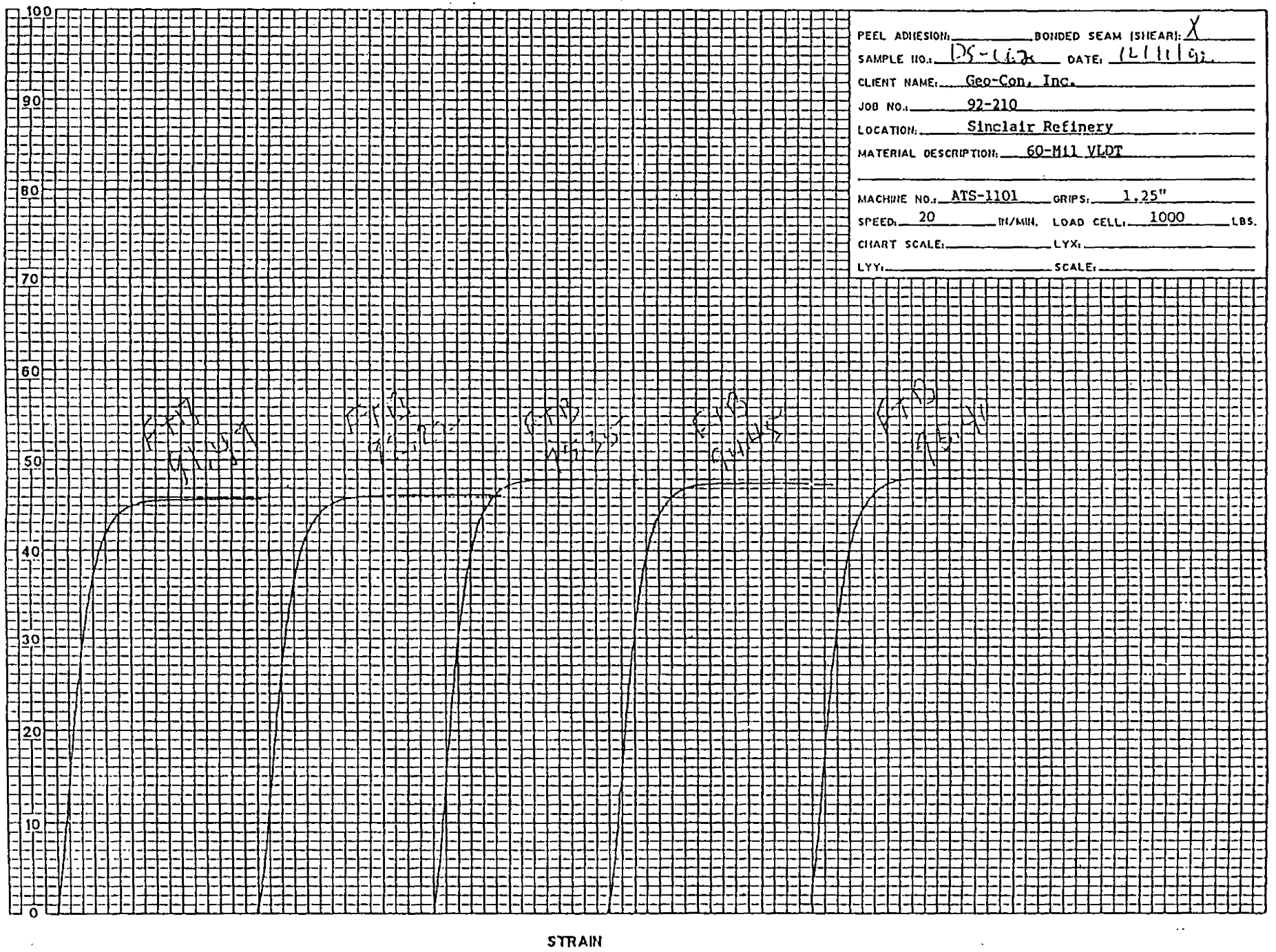
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C63 TECHNICIAN: CMB

SEAM NO.: 78/96 MANUFACTURER: Gundle

PANEL: 78 & 96 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.45	FTB
2	1.0	97.92	FTB
3	1.0	97.70	FTB
4	1.0	95.87	FTB
5	1.0	97.80	FTB
Average		97.15	

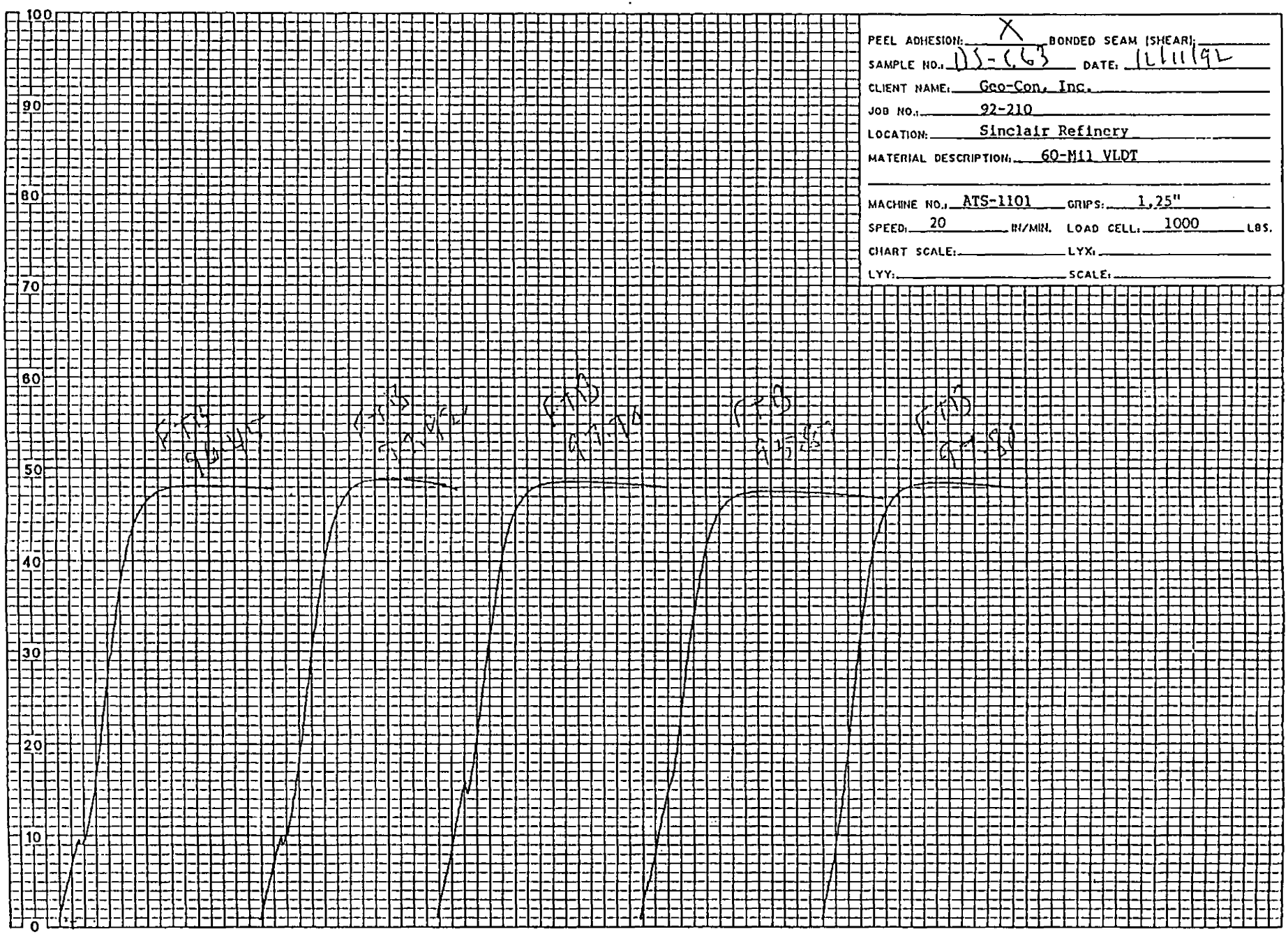
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.77	FTB
2	1.0	92.35	FTB
3	1.0	95.15	FTB
4	1.0	96.95	FTB
5	1.0	95.92	FTB
Average		94.23	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

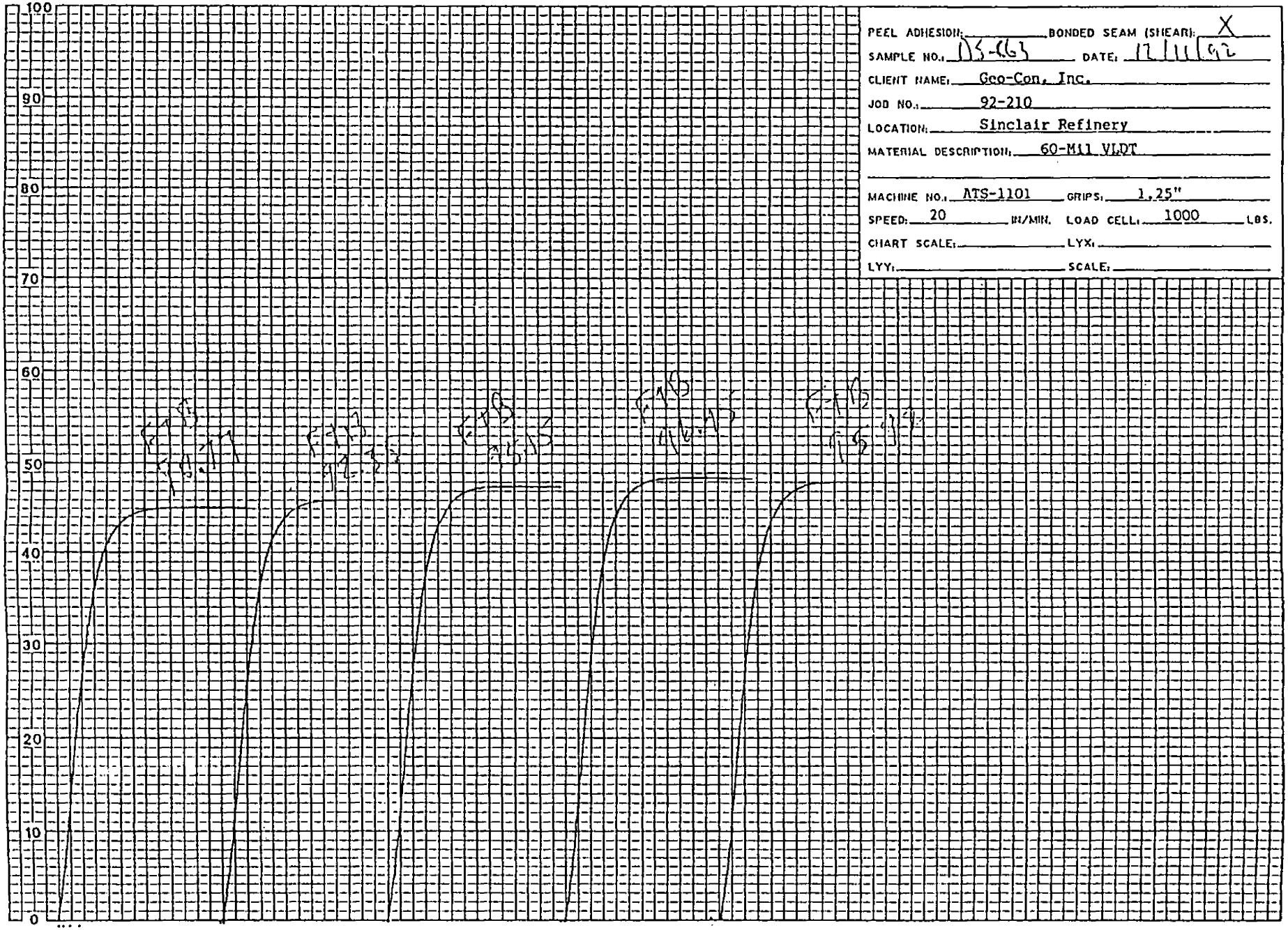
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: D5-463 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C64 TECHNICIAN: CMB

SEAM NO.: 94/97 MANUFACTURER: Gundle

PANEL: 94 & 97 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.62	FTB
2	1.0	92.52	FTB
3	1.0	96.47	FTB
4	1.0	94.45	FTB
5	1.0	93.30	FTB
Average		94.67	

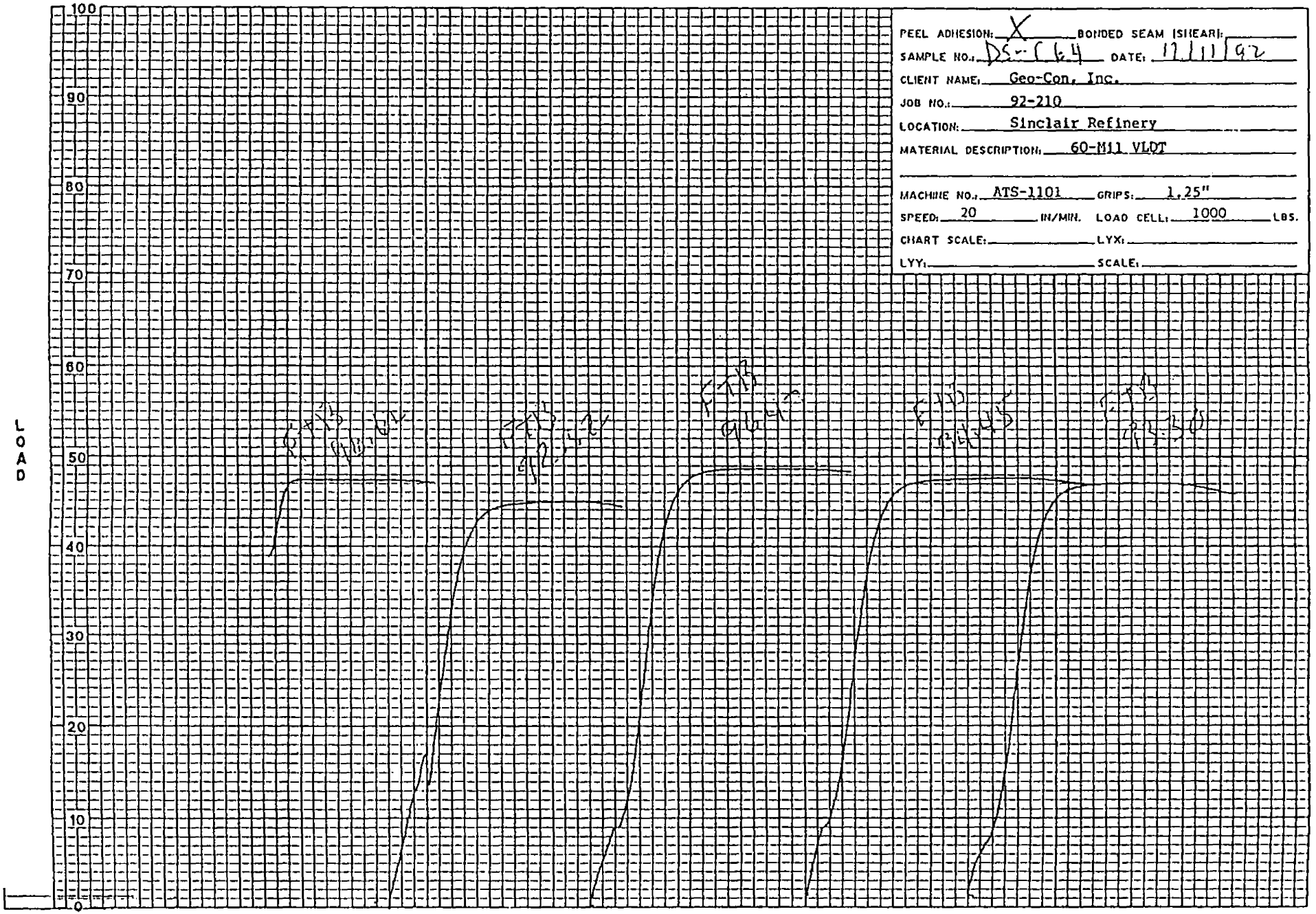
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.30	FTB
2	1.0	93.70	FTB
3	1.0	91.90	FTB
4	1.0	94.75	FTB
5	1.0	89.92	FTB
Average		92.61	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: DS-C64 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

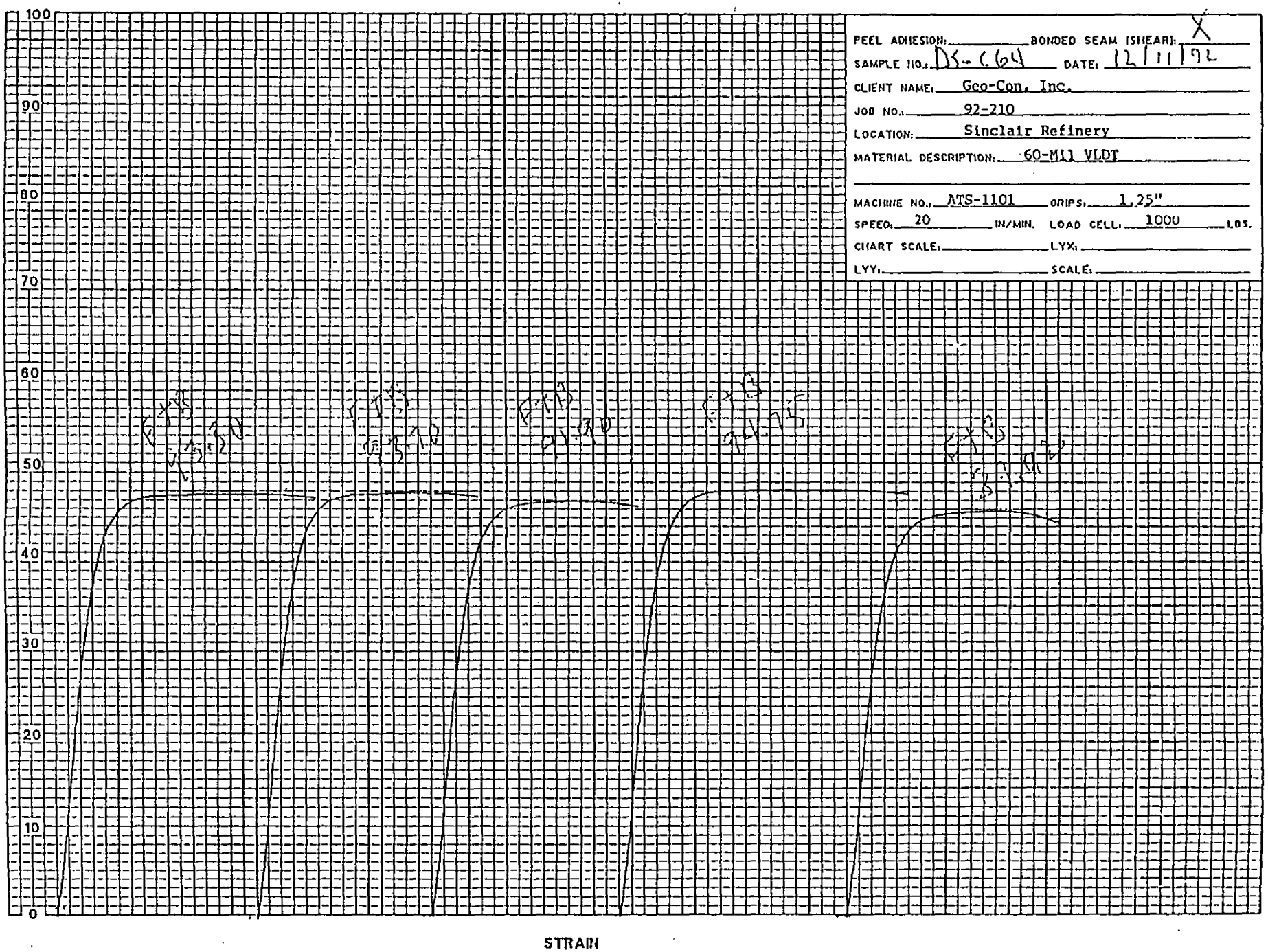
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DS-C64 DATE: 12/11/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C65 TECHNICIAN: CMB

SEAM NO.: 94/95 MANUFACTURER: Gundle

PANEL: 94 & 95 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.32	FTB
2	1.0	88.77	FTB
3	1.0	90.72	FTB
4	1.0	88.50	FTB
5	1.0	87.92	FTB
Average		89.85	

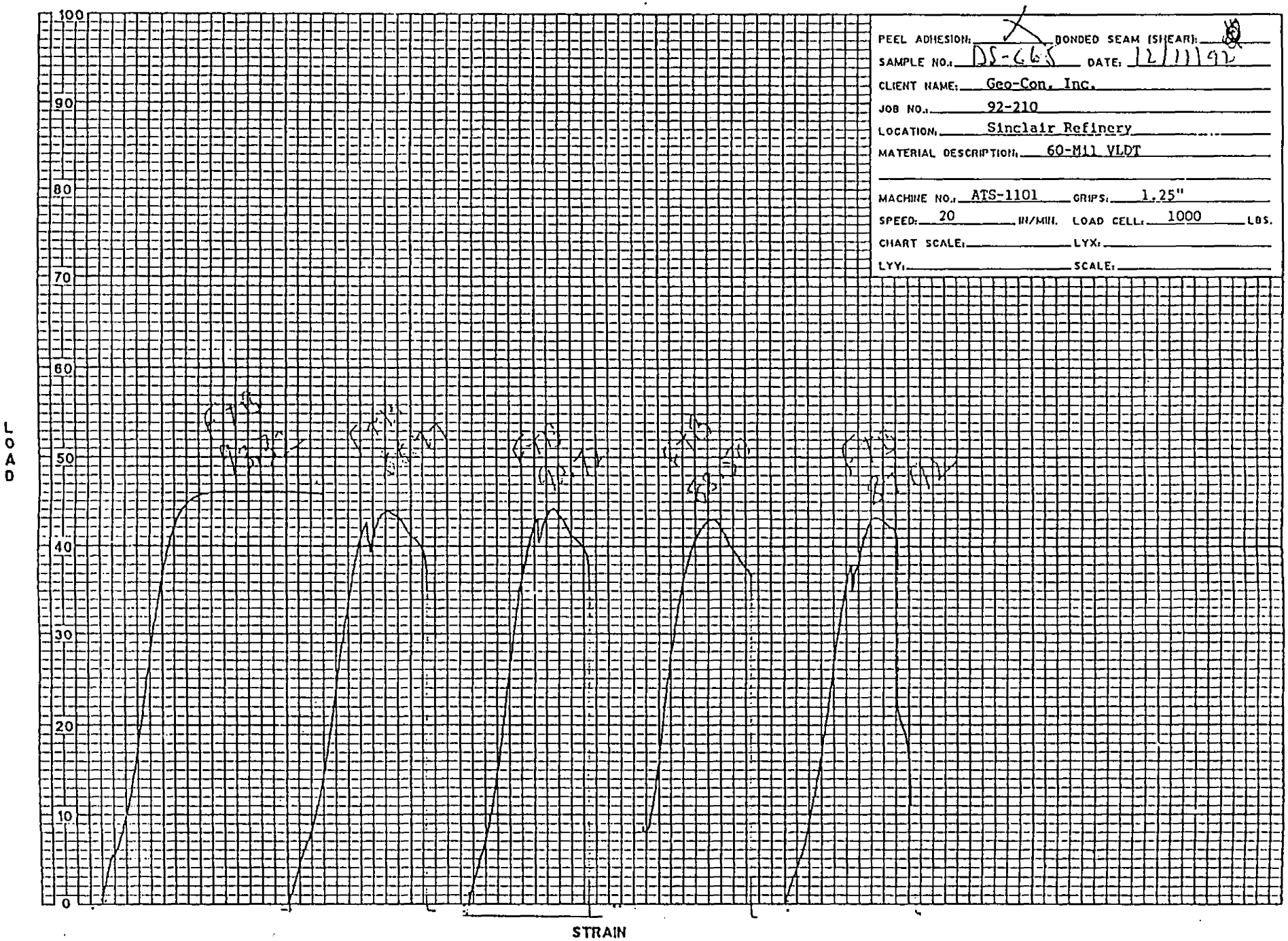
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.12	FTB
2	1.0	92.20	FTB
3	1.0	93.30	FTB
4	1.0	92.30	FTB
5	1.0	91.75	FTB
Average		92.33	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

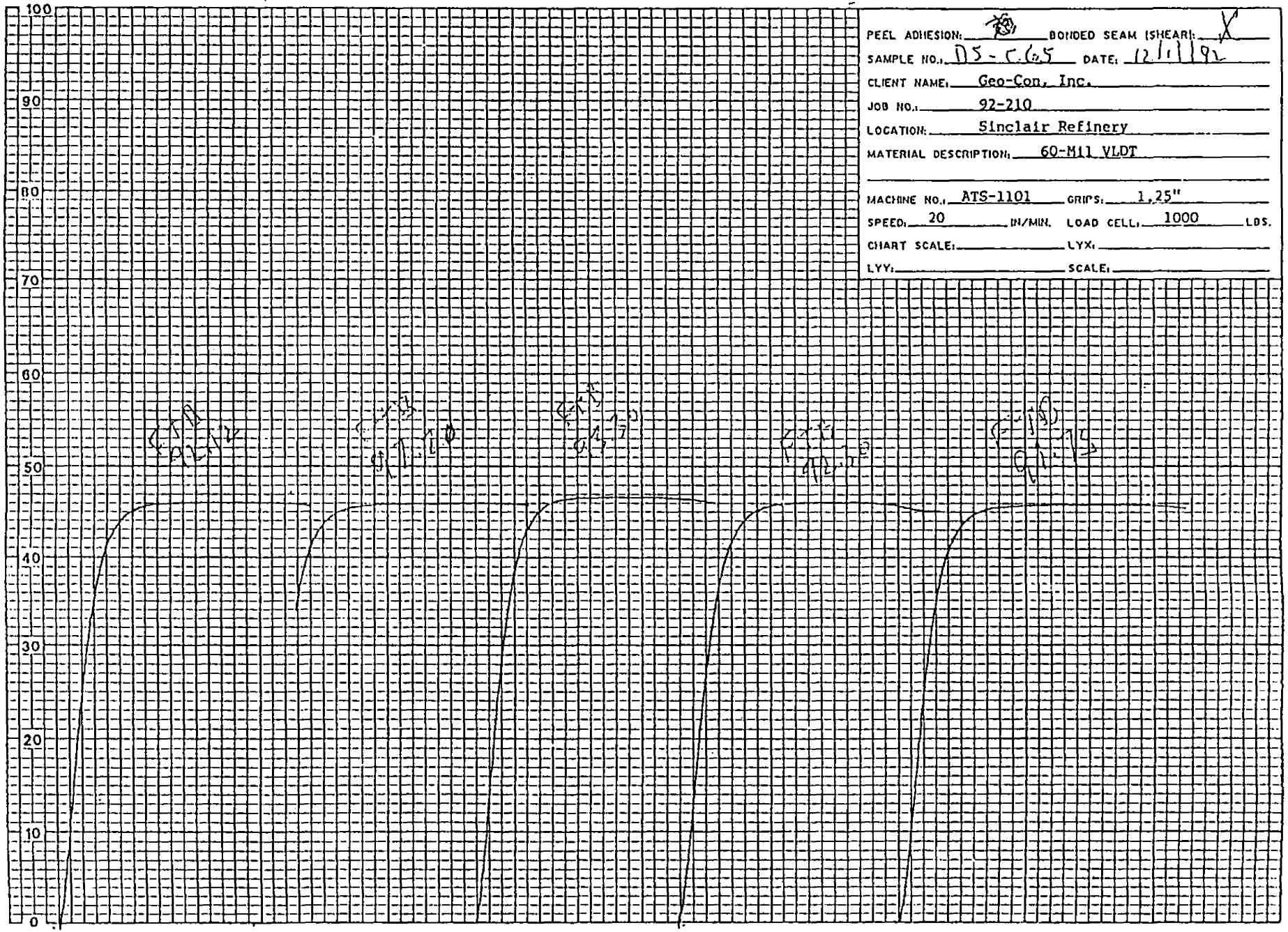
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PEEL ADHESION: ____ BONDED SEAM (SHEAR): X

SAMPLE NO.: D5-C.G.5 DATE: 12/1/92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: ____ LYX: ____

LYY: ____ SCALE: ____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C66 TECHNICIAN: RBF

SEAM NO.: 93/94 MANUFACTURER: Gundle

PANEL: 93 & 94 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.30	FTB
2	1.0	101.07	FTB
3	1.0	91.72	FTB
4	1.0	95.57	FTB
5	1.0	95.00	FTB
Average		95.13	

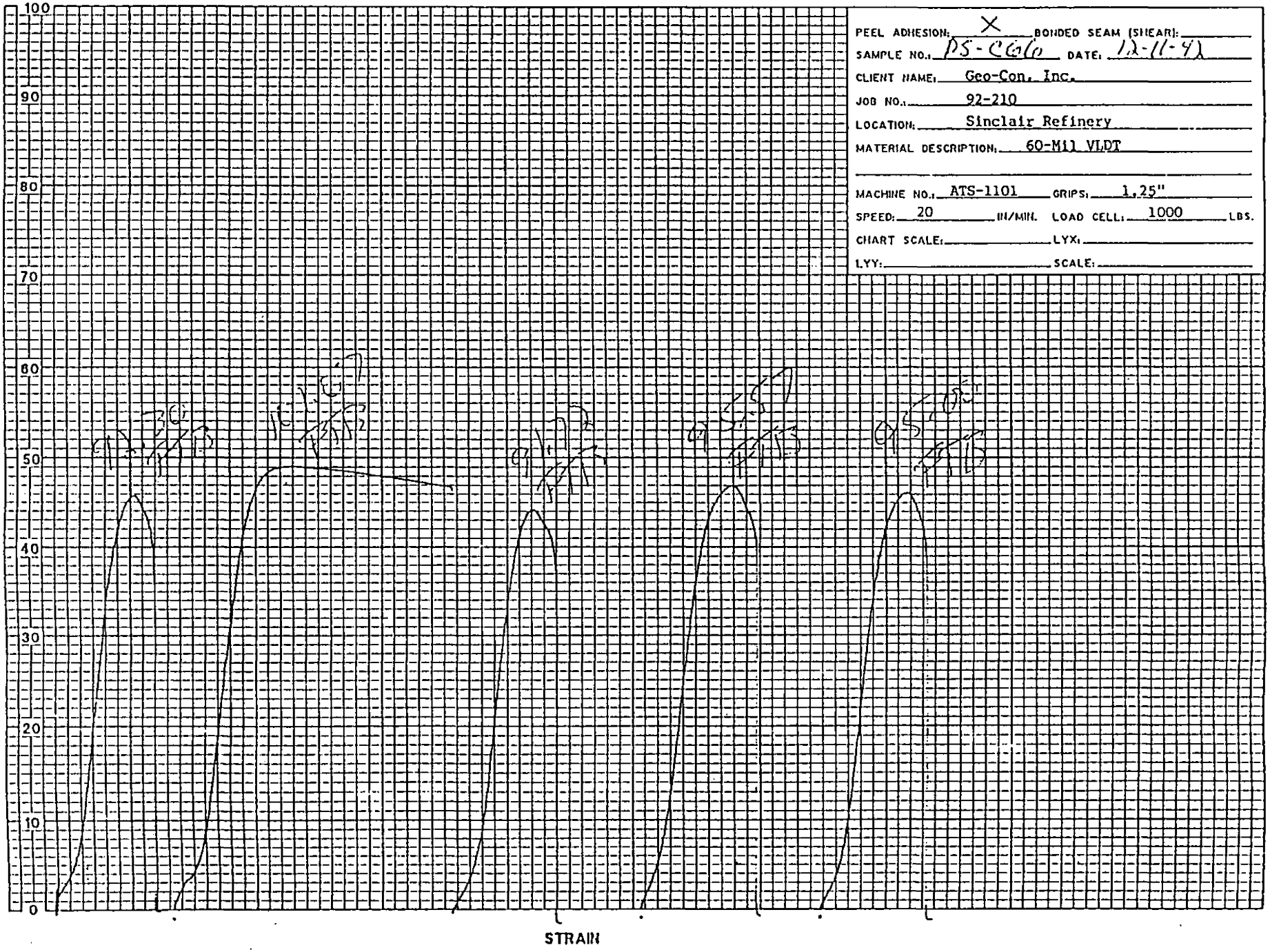
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.32	FTB
2	1.0	95.25	FTB
3	1.0	96.37	FTB
4	1.0	96.80	FTB
5	1.0	88.67	FTB
Average		94.68	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: PS-C6(6 DATE: 12-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

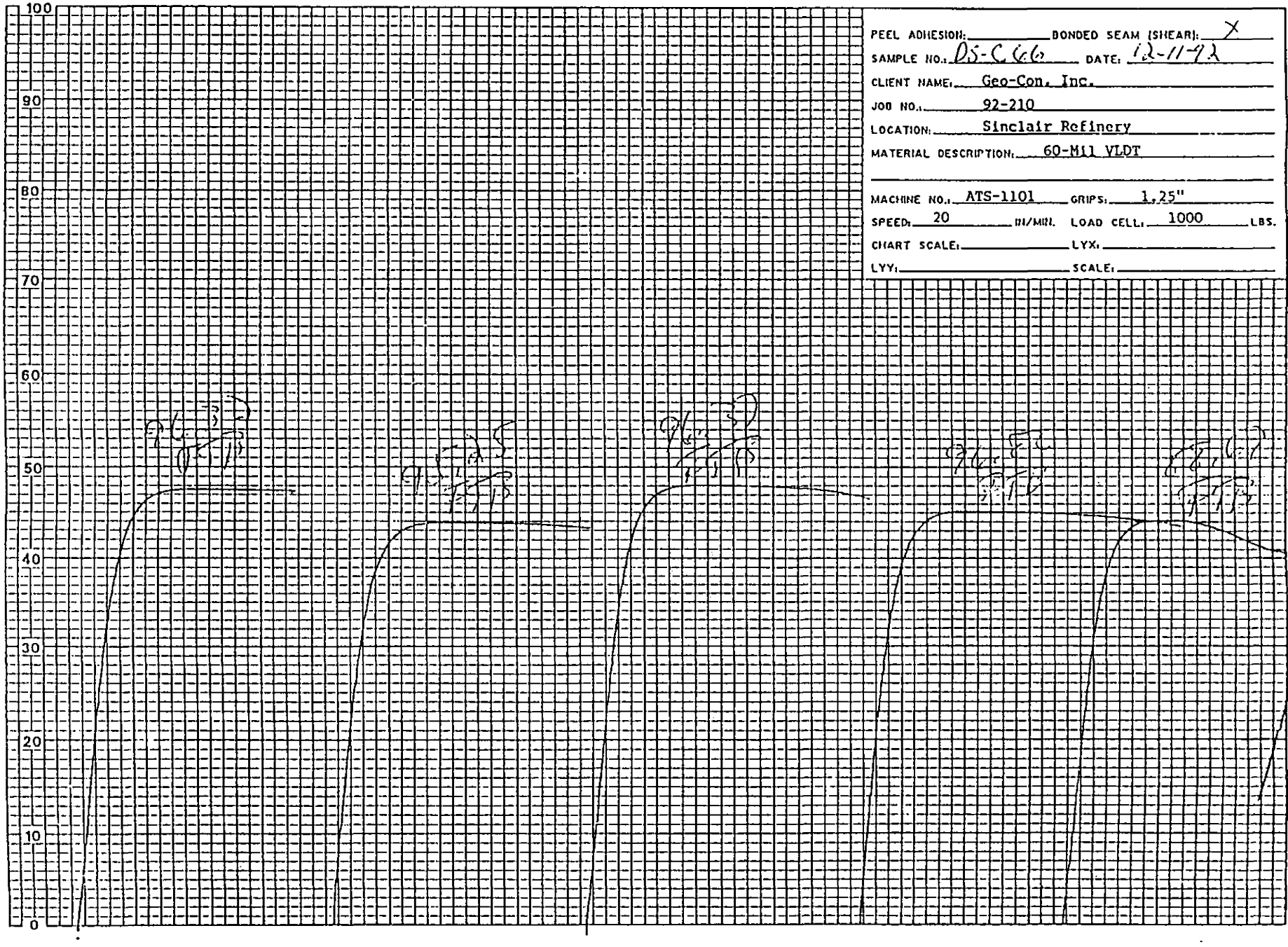
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DS-C66 DATE: 12-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C67 TECHNICIAN: RBF

SEAM NO.: 92/93 MANUFACTURER: Gundle

PANEL: 92 & 93 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	99.50	FTB
2	1.0	95.65	FTB
3	1.0	99.32	FTB
4	1.0	100.02	FTB
5	1.0	100.40	FTB
Average		98.98	

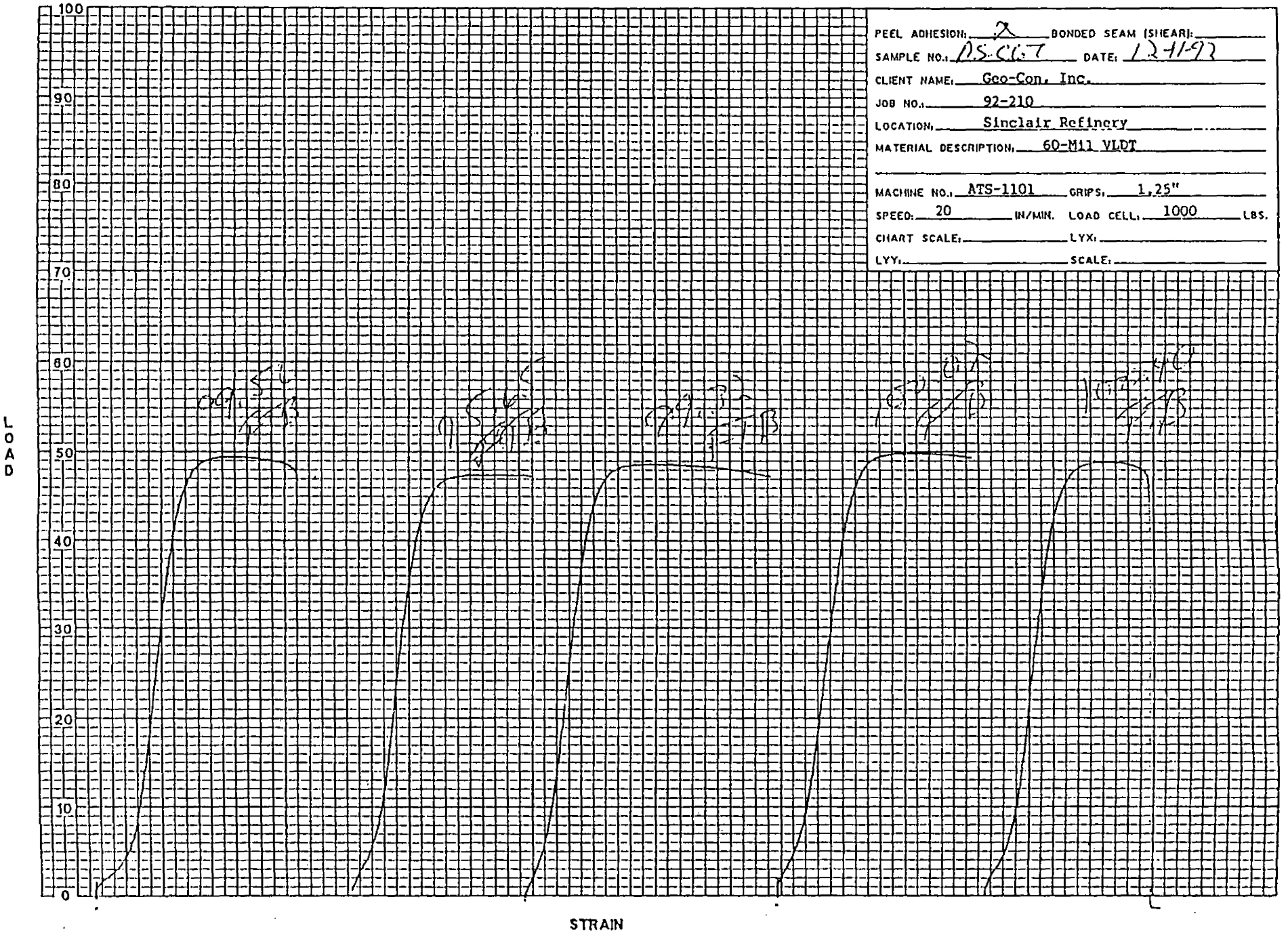
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.40	FTB
2	1.0	94.70	FTB
3	1.0	96.12	FTB
4	1.0	96.47	FTB
5	1.0	96.35	FTB
Average		94.81	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: DS-CC-7 DATE: 12-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

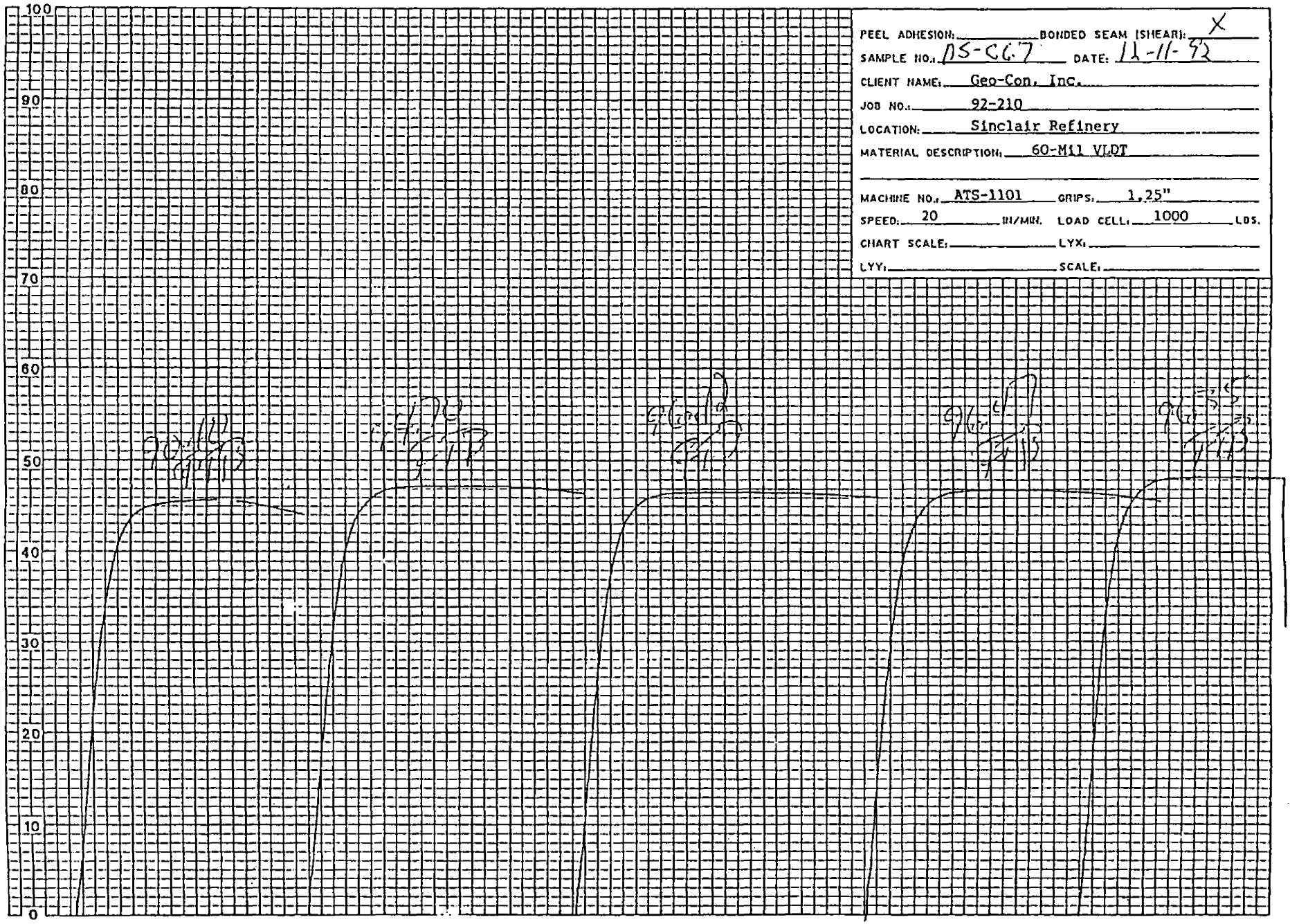
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DS-CC7 DATE: 11-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C68 TECHNICIAN: RBF

SEAM NO.: 91/93 MANUFACTURER: Gundle

PANEL: 91 & 93 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	92.90	FTB
2	1.0	96.77	FTB
3	1.0	92.97	FTB
4	1.0	93.55	FTB
5	1.0	92.47	FTB
Average		93.73	

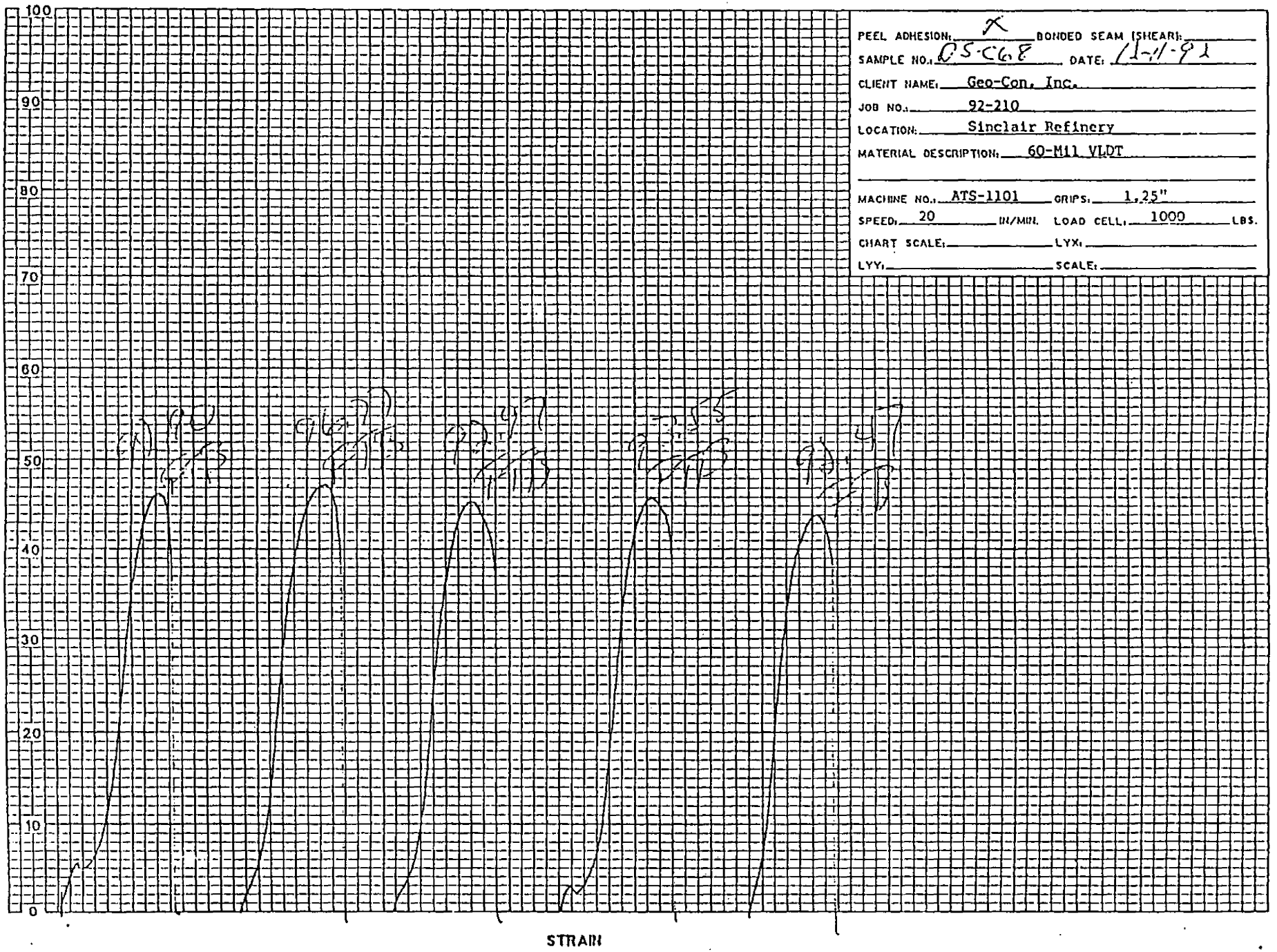
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.65	FTB
2	1.0	96.00	FTB
3	1.0	97.70	FTB
4	1.0	97.17	FTB
5	1.0	96.05	FTB
Average		96.51	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: GS-C6.8 DATE: 11-1-91

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-M11 VLDT

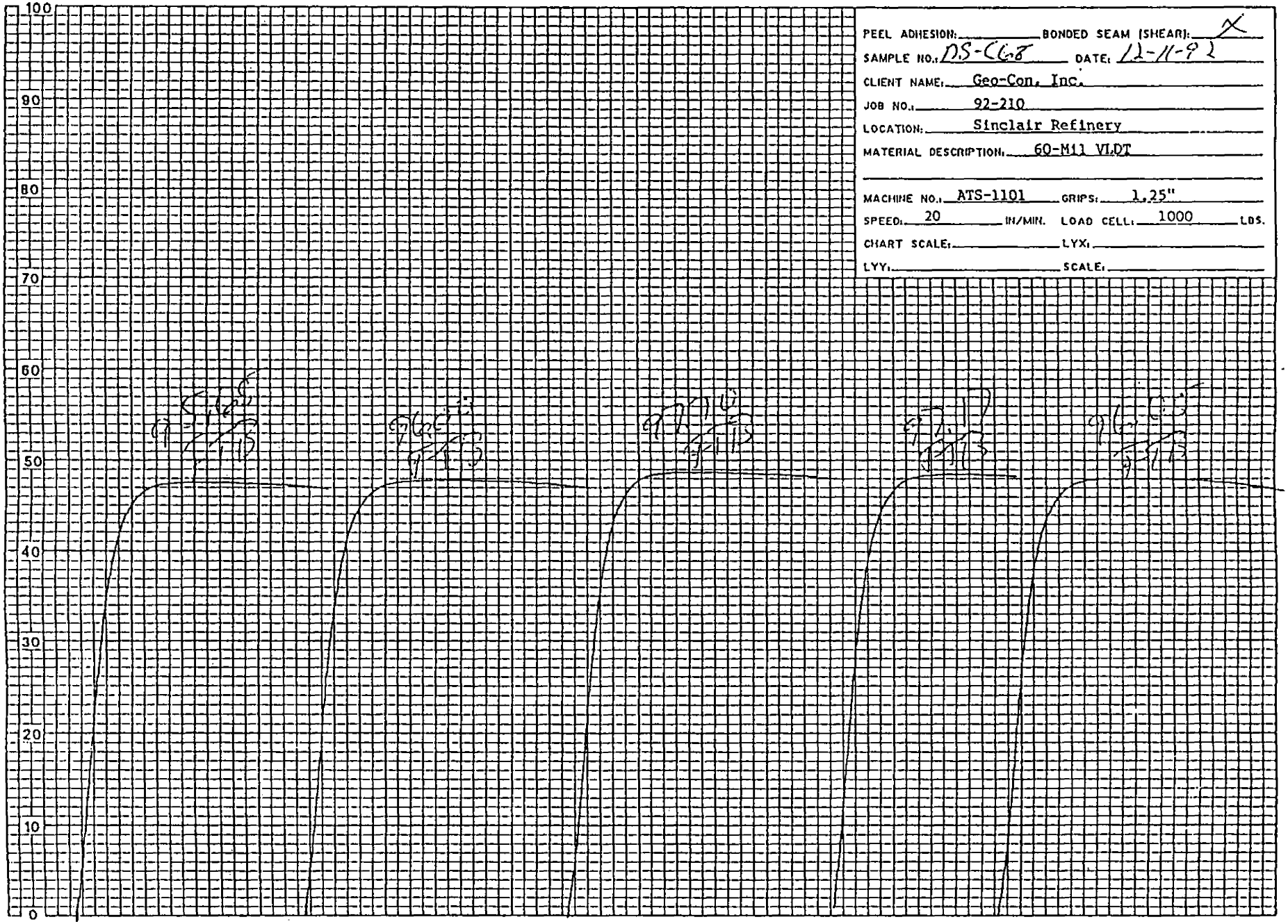
MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X
SAMPLE NO.: DS-C68 DATE: 12-11-92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-M11 VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: _____ LYX: _____
LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C69 TECHNICIAN: RBF

SEAM NO.: 92/90 MANUFACTURER: Gundle

PANEL: 92 & 90 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	106.52	FTB
2	1.0	104.75	FTB
3	1.0	105.05	FTB
4	1.0	102.90	FTB
5	1.0	102.97	FTB
Average		104.44	

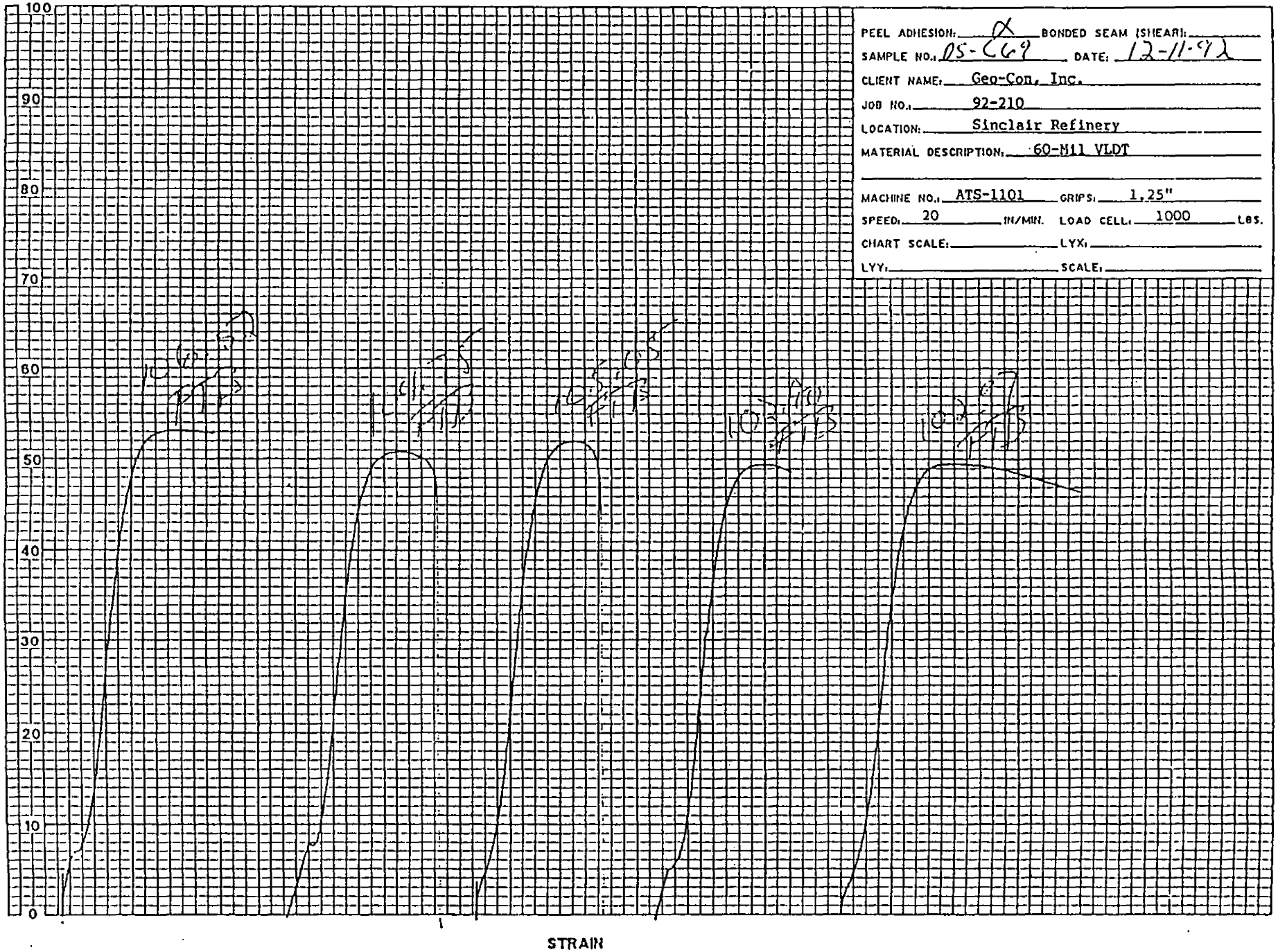
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.92	FTB
2	1.0	102.35	FTB
3	1.0	102.85	FTB
4	1.0	103.80	FTB
5	1.0	97.22	FTB
Average		101.03	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: 05-C69 DATE: 12-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

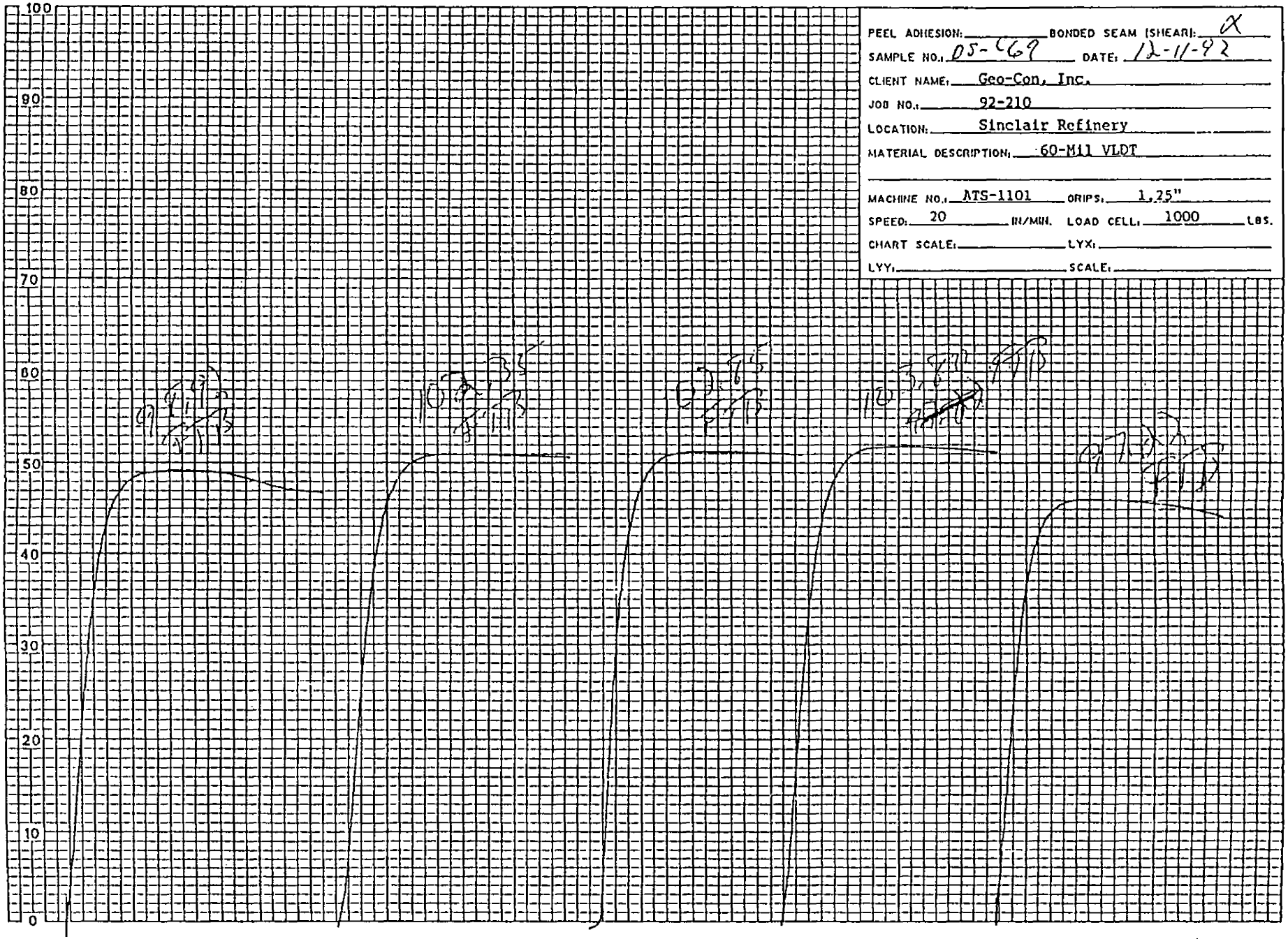
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: 05-C69 DATE: 12-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C70 TECHNICIAN: RBF

SEAM NO.: 64/90 MANUFACTURER: Gundle

PANEL: 64 & 90 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.62	FTB
2	1.0	99.77	FTB
3	1.0	97.97	FTB
4	1.0	98.62	FTB
5	1.0	97.87	FTB
Average		98.17	

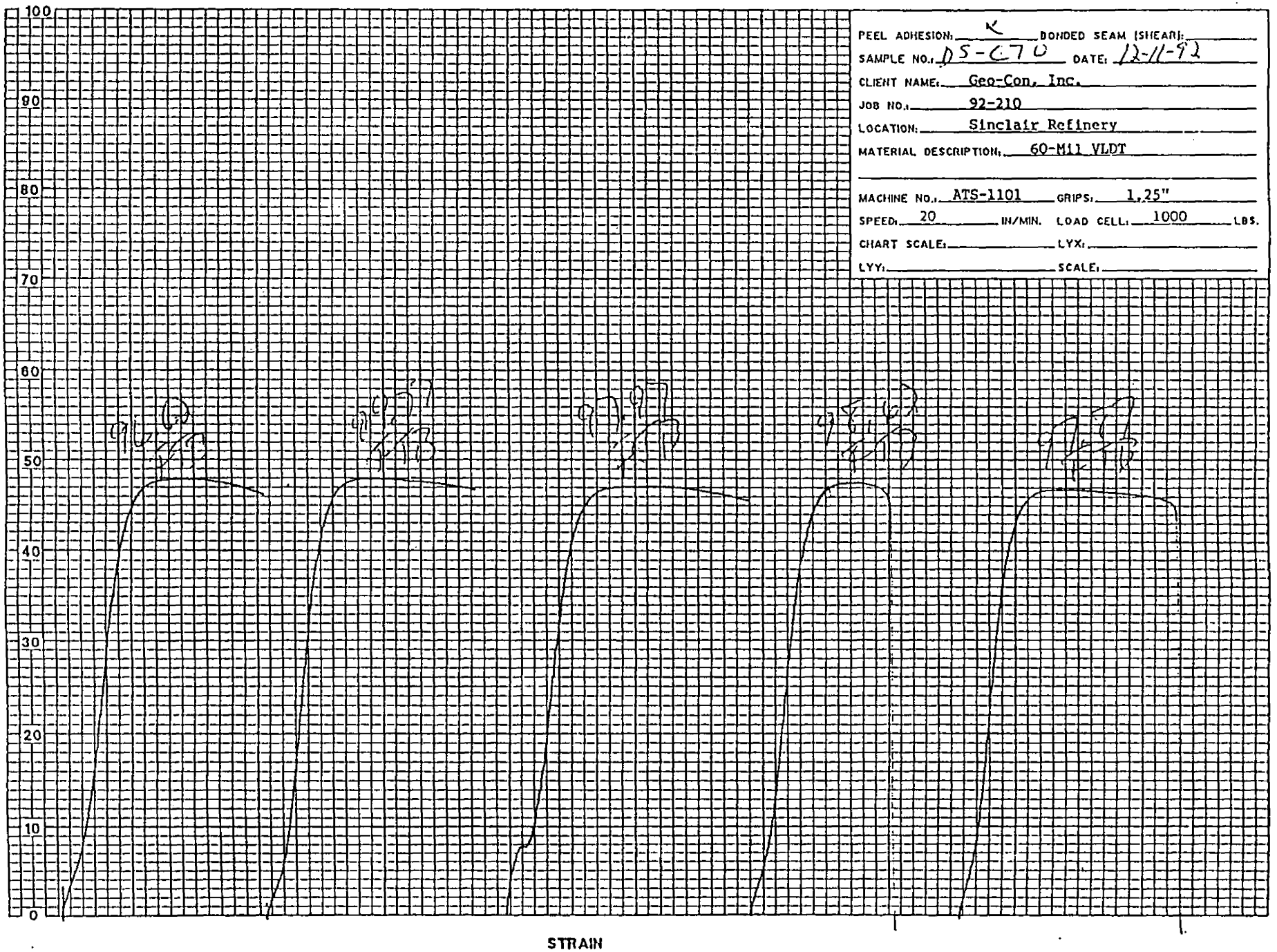
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.07	FTB
2	1.0	97.22	FTB
3	1.0	97.10	FTB
4	1.0	97.65	FTB
5	1.0	97.80	FTB
Average		97.17	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

Murray Associates Inc.

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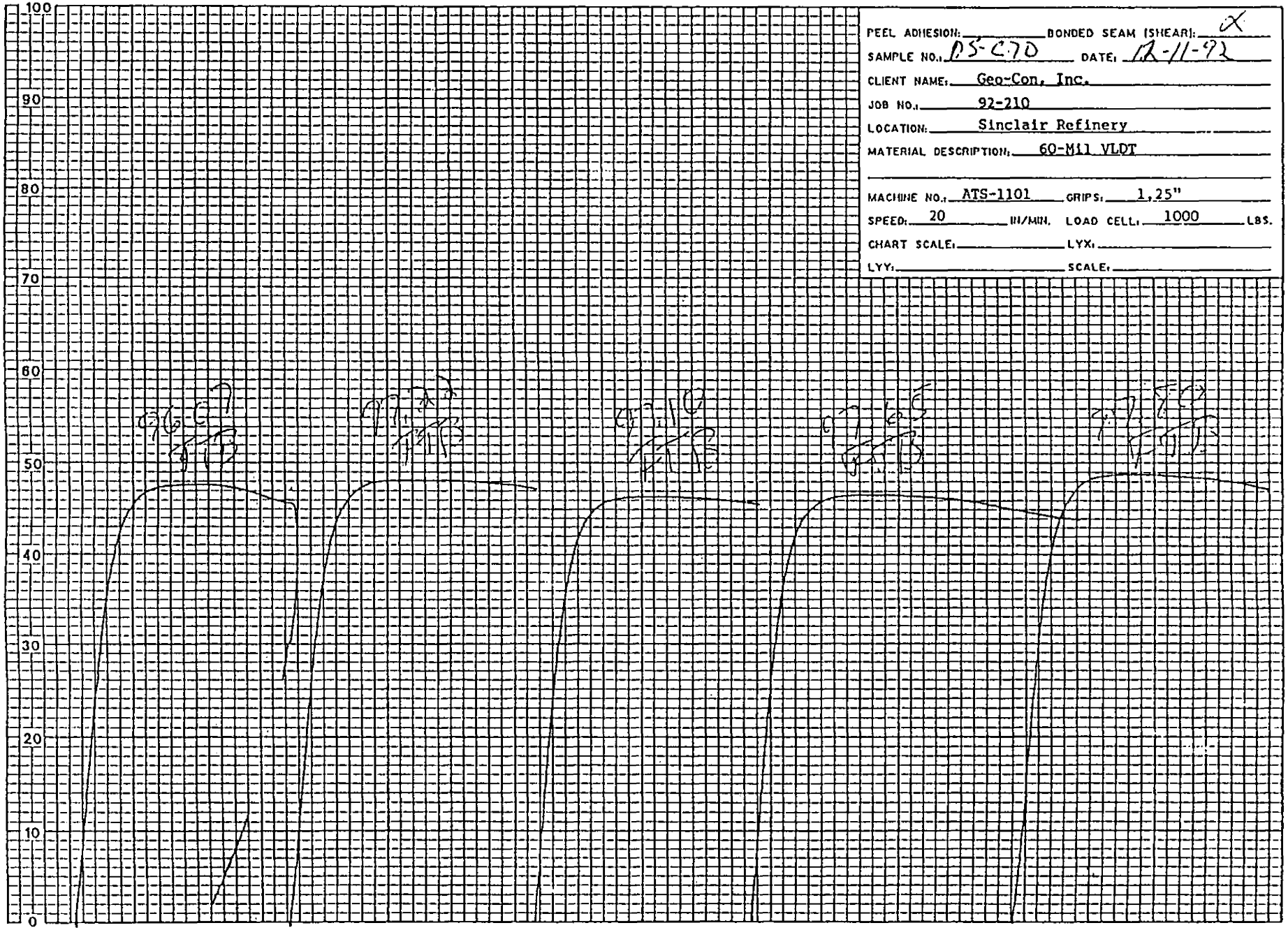


PEEL ADHESION: K BONDED SEAM (SHEAR):
SAMPLE NO.: D5-C70 DATE: 12-11-92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: DS-C7D DATE: 12-11-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/11/92

SAMPLE NO.: DS C71 TECHNICIAN: RBF

SEAM NO.: 63/64 MANUFACTURER: Gundle

PANEL: 63 & 64 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	100.47	FTB
2	1.0	100.45	FTB
3	1.0	100.42	FTB
4	1.0	100.90	FTB
5	1.0	101.55	FTB
Average		100.76	

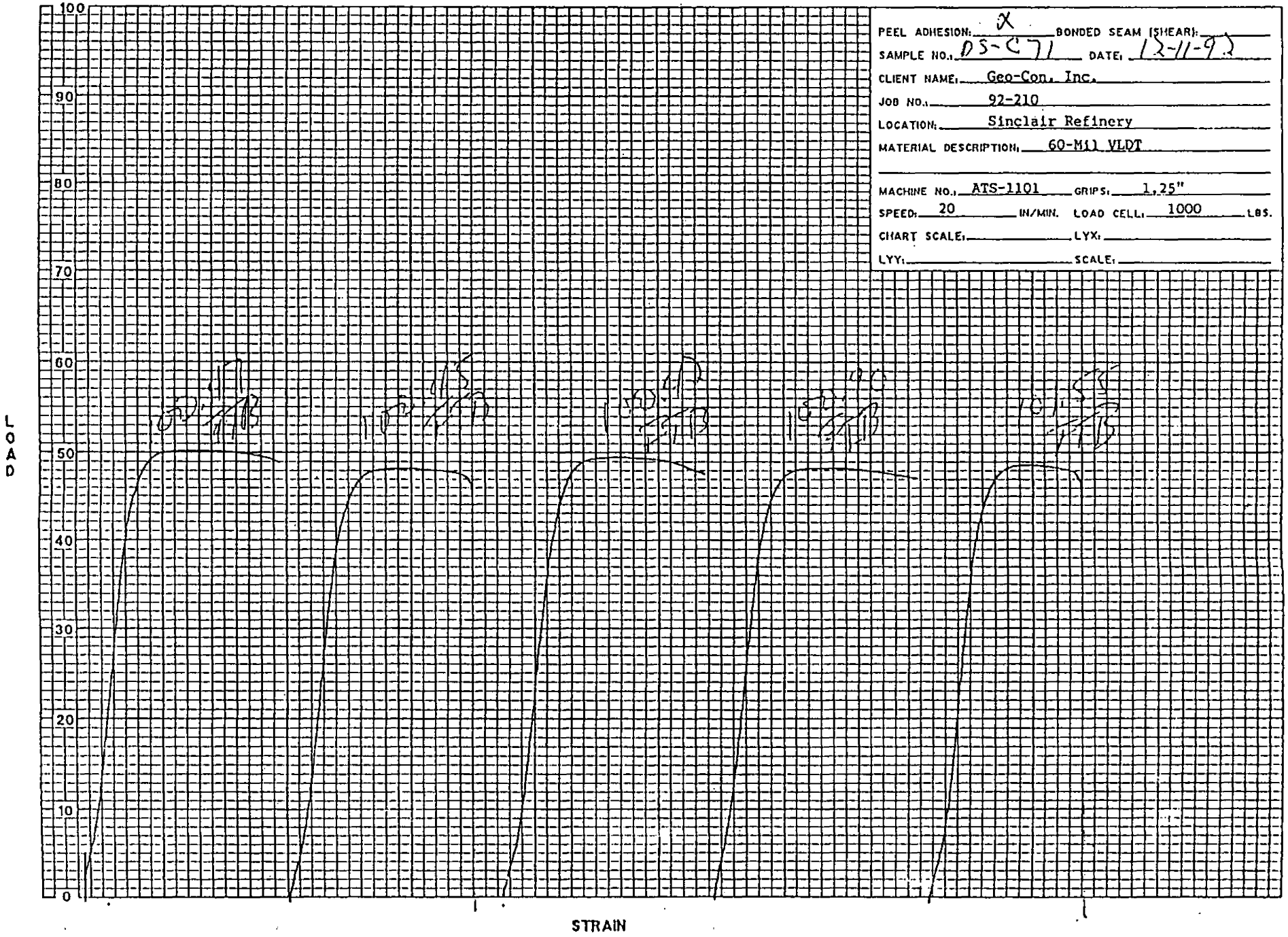
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.85	FTB
2	1.0	99.55	FTB
3	1.0	100.05	FTB
4	1.0	99.00	FTB
5	1.0	99.42	FTB
Average		99.37	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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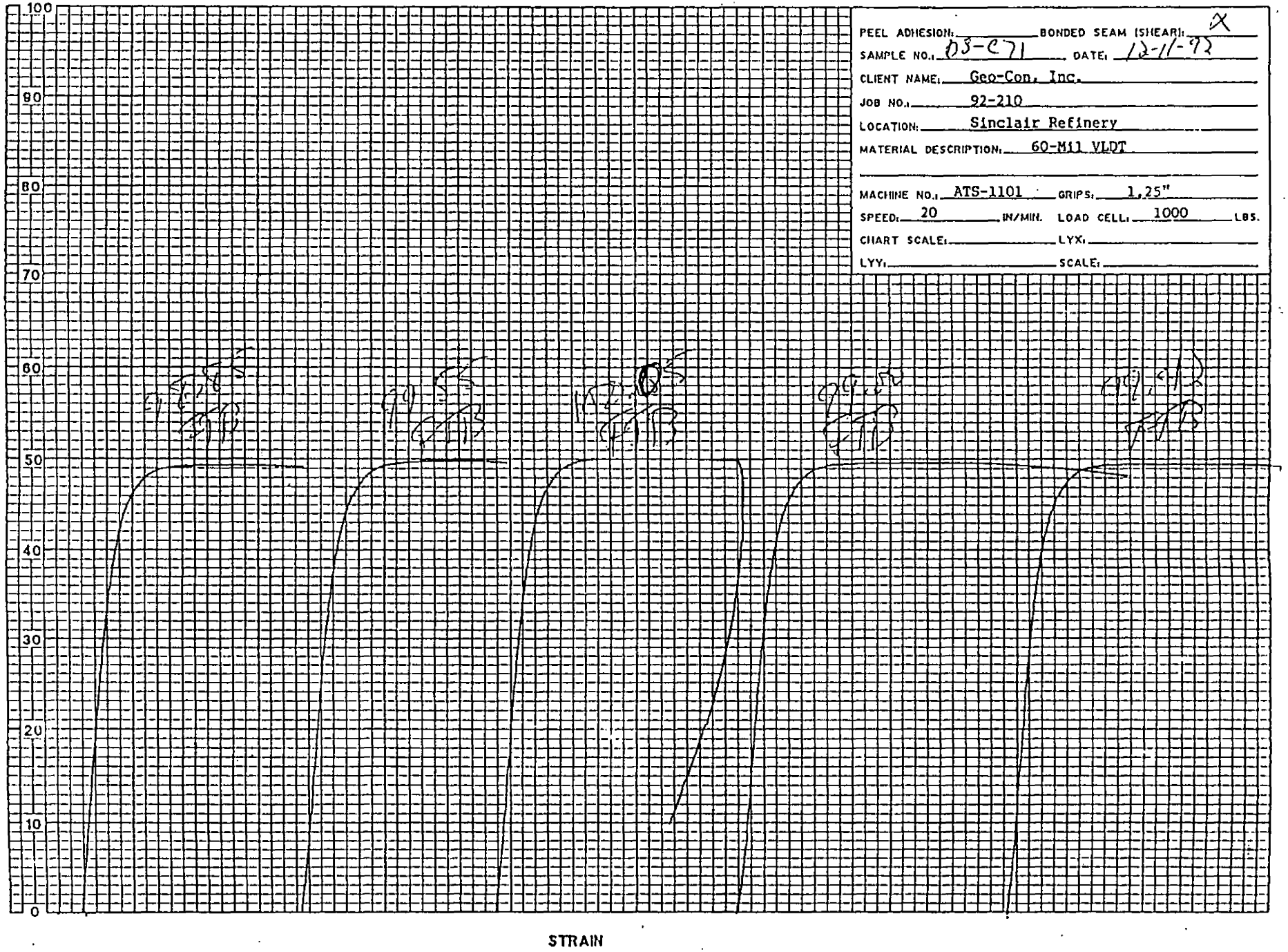


PEEL ADHESION: X BONDED SEAM (SHEAR):
SAMPLE NO.: DS-C71 DATE: 12-11-92
CLIENT NAME: Geo-Con, Inc.
JOB NO.: 92-210
LOCATION: Sinclair Refinery
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.
CHART SCALE: LYX:
LYY: SCALE:

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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/10/92

SAMPLE NO.: DS C72 TECHNICIAN: RBF

SEAM NO.: 63/52 MANUFACTURER: Gundle

PANEL: 63 & 52 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT x VLST ___ VLDPE ___ WELD TYPE: D-FUSION x EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	103.95	FTB
2	1.0	106.62	FTB
3	1.0	100.60	FTB
4	1.0	105.52	FTB
5	1.0	105.07	FTB
Average		104.35	

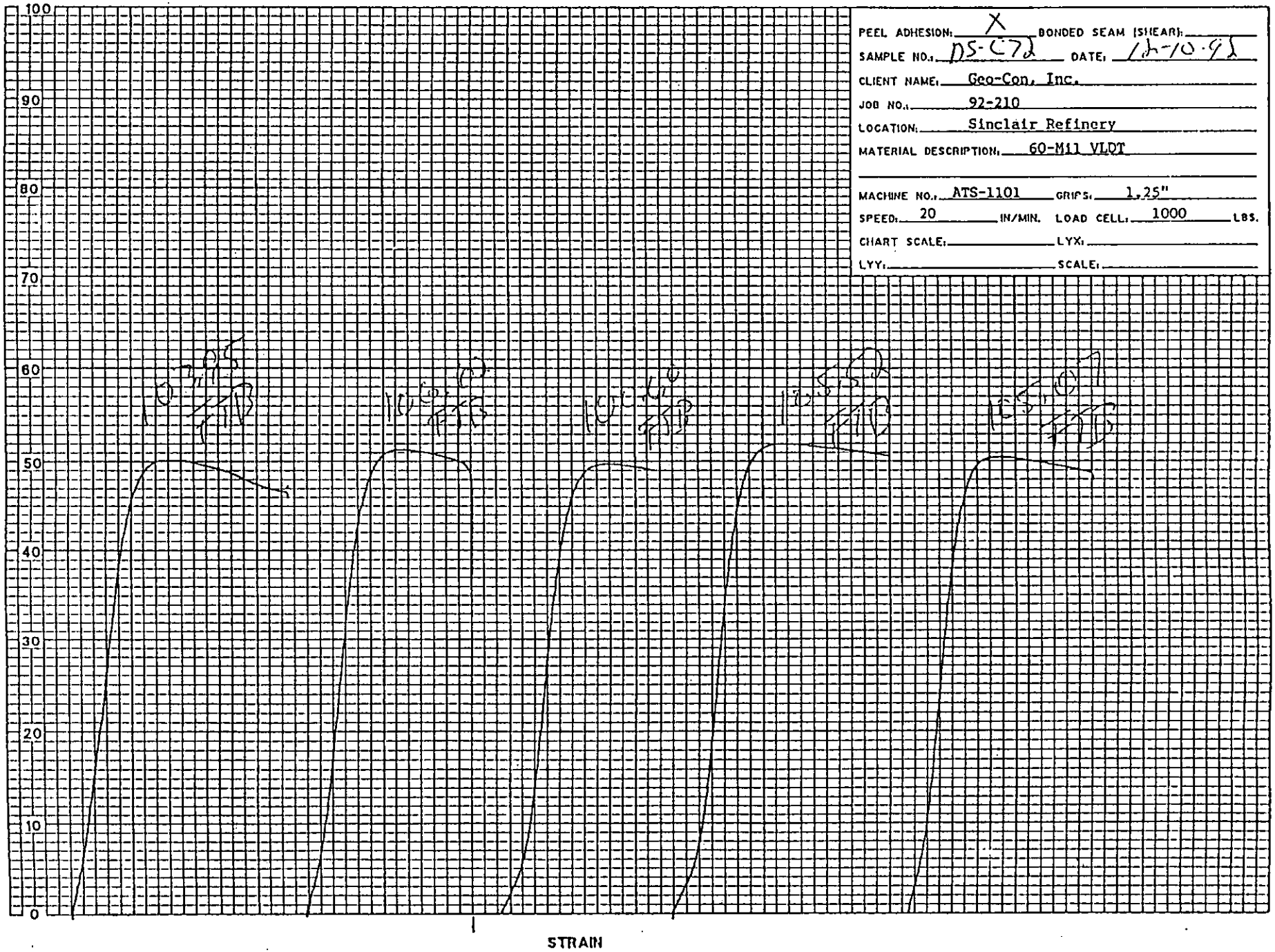
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	98.30	FTB
2	1.0	104.75	FTB
3	1.0	104.10	FTB
4	1.0	103.22	FTB
5	1.0	103.47	FTB
Average		102.77	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C72 DATE: 12-10-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

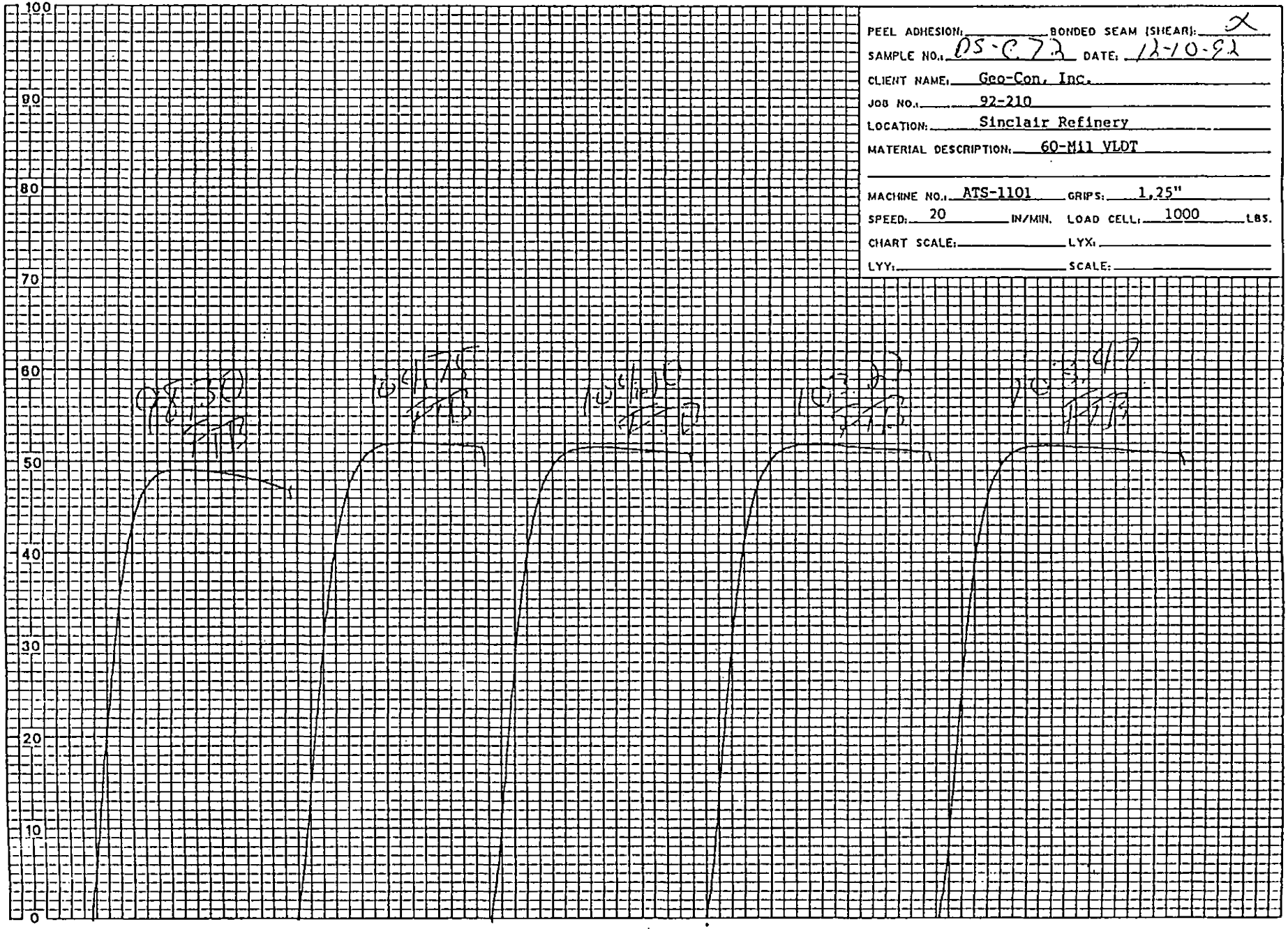
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: 05-C72 DATE: 12-10-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/10/92

SAMPLE NO.: DS C73 TECHNICIAN: RBF

SEAM NO.: 64/65 MANUFACTURER: Gundle

PANEL: 64 & 65 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION X EXTRUSION ___

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	108.57	FTB
2	1.0	102.87	FTB
3	1.0	103.15	FTB
4	1.0	107.50	FTB
5	1.0	100.42	FTB
Average		104.50	

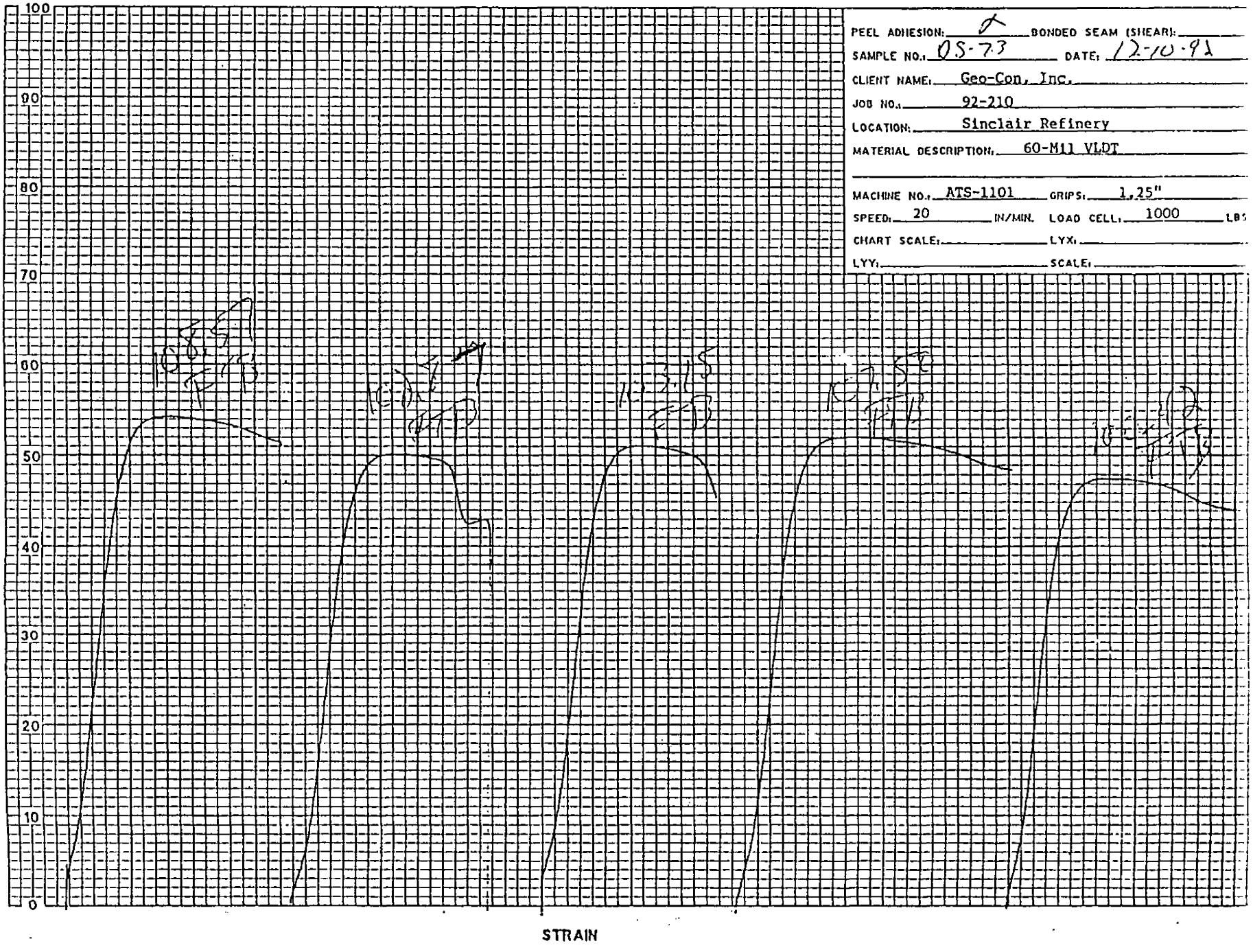
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	107.05	FTB
2	1.0	105.17	FTB
3	1.0	106.32	FTB
4	1.0	106.57	FTB
5	1.0	101.10	FTB
Average		105.24	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR): _____

SAMPLE NO.: 05-73 DATE: 12-10-91

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

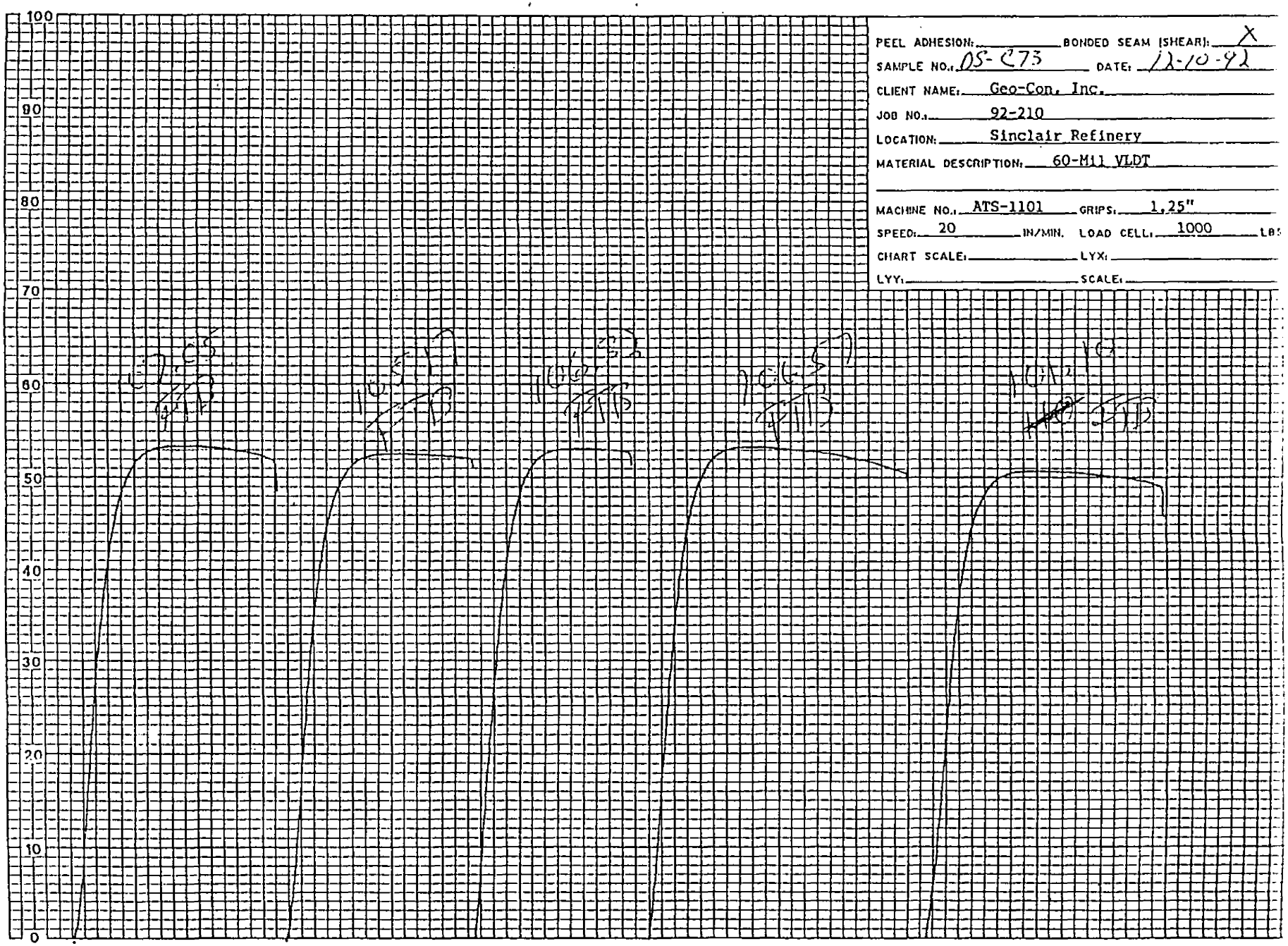
SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: OS-C73 DATE: 12-10-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 12/10/92

SAMPLE NO.: DS C74 TECHNICIAN: RBF

SEAM NO.: 58/59 MANUFACTURER: Gundle

PANEL: 58 & 59 MACHINE: ATS-1101

MATERIAL THICKNESS 60 MIL LINER: PRIMARY _____ SECONDARY _____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION ____ EXTRUSION X

Peel Adhesion Test Data

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	90.35	FTB
2	1.0	95.70	FTB
3	1.0	91.12	FTB
4	1.0	98.57	FTB
5	1.0	96.62	FTB
Average		94.47	

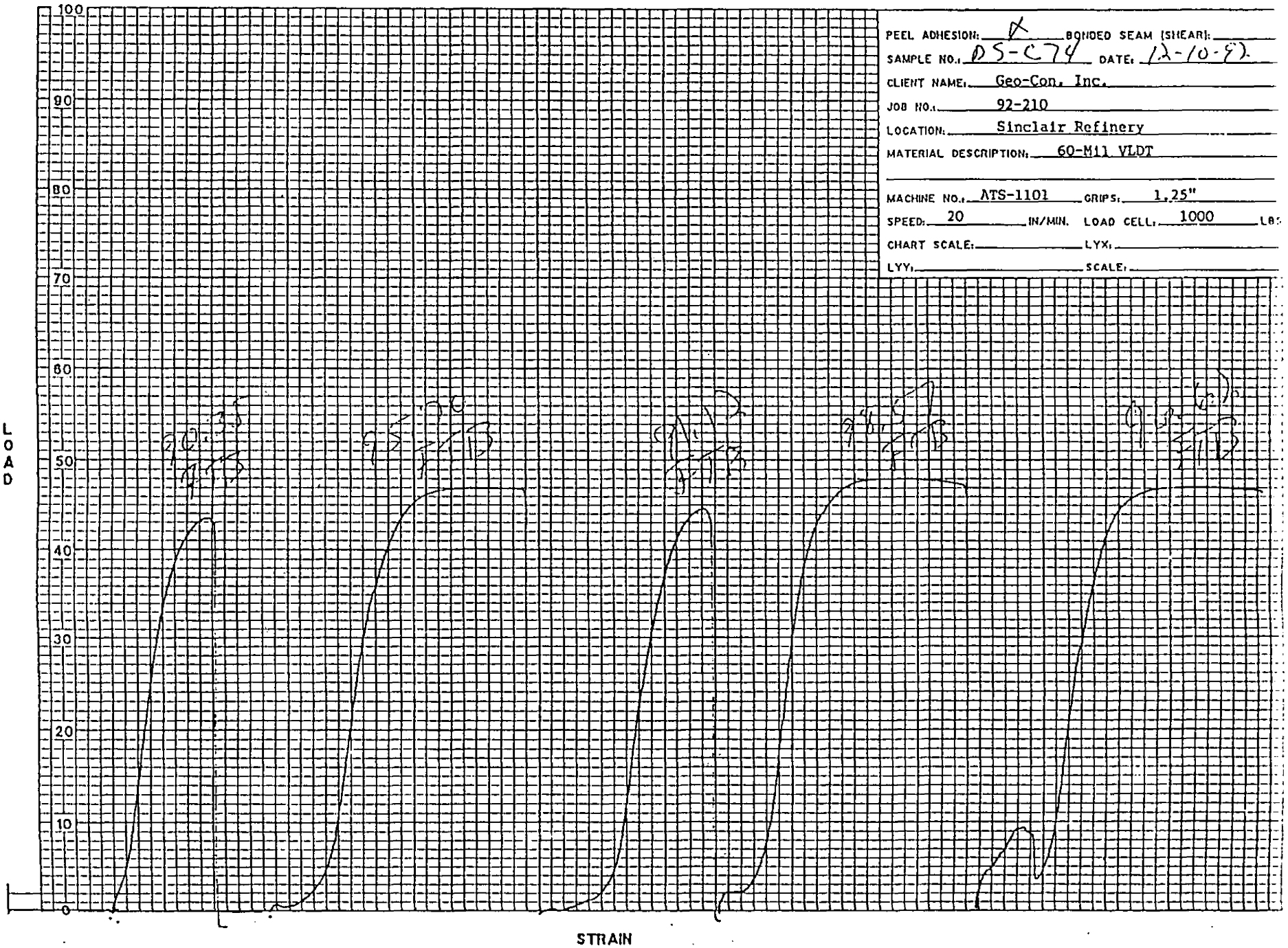
Bonded Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	97.45	FTB
2	1.0	96.47	FTB
3	1.0	97.40	FTB
4	1.0	99.17	FTB
5	1.0	97.12	FTB
Average		97.52	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB - Film-Tear Bond
NFTB - Non-Film Tear Bond
Peel Adhesion - ASTM D-413, NSF Modified
Bonded Seam (Shear) - ASTM D-3083, NSF Modified

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PEEL ADHESION: X BONDED SEAM (SHEAR):

SAMPLE NO.: DS-C74 DATE: 12-10-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS

CHART SCALE: LYX:

LYY: SCALE:

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PEEL ADHESION: _____ BONDED SEAM (SHEAR): X

SAMPLE NO.: PS-C74 DATE: 12-10-92

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

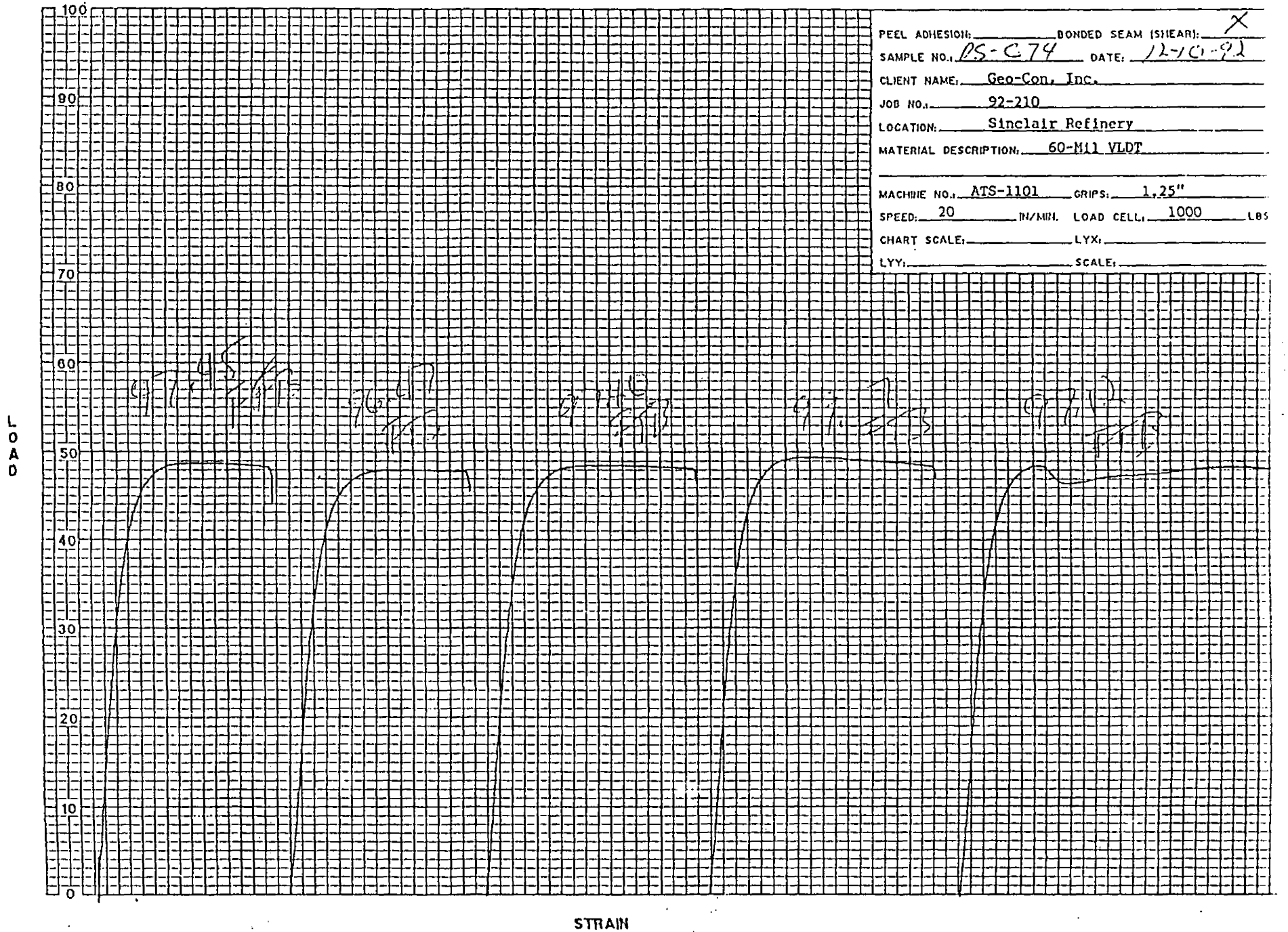
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



Murray Associates Inc.

GEOSYNTHETIC LABORATORY TEST RESULTS
SINCLAIR REFINERY
P.O. NO. 23048

REPORT X

PREPARED FOR

GEO-CON, INC.
4075 MONROEVILLE BOULEVARD
MONROEVILLE, PA 15146

PREPARED BY

MURRAY ASSOCIATES, INC.
413 PENN AVENUE
TURTLE CREEK, PA 15145

MAI NO. 92-210

JUNE 2, 1993

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc. JOB NO.: 92-210

PROJECT: Sinclair Refinery DATE TESTED: 05/21/93

SAMPLE NO.: DS - C76 TECHNICIAN: CMB

SEAM NO.: 103 - 74 MANUFACTURER: Gundle

PANEL: C103 - C74 MACHINE: ATS-1101

MATERIAL THICKNESS: 60 MIL LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___ WELD TYPE: D-FUSION ___ EXTRUSION X

PEEL ADHESION TEST DATA

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	96.45	FTB
2	1.0	93.95	FTB
3	1.0	92.00	FTB
4	1.0	94.72	FTB
5	1.0	92.15	FTB
Average		93.85	

Bond Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	93.15	FTB
2	1.0	94.40	FTB
3	1.0	93.00	FTB
4	1.0	97.12	FTB
5	1.0	94.72	FTB
Average		94.48	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
[illegible]PE = Smooth VLDPE

FTB = Film-Tear Bond
NFBT = Non-Film Tear Bond
Peel Adhesion = ASTM D-413, NSF Modified
Bonded Seam (Shear) = ASTM D-3083, NSF Modified

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PEEL ADHESION: ✓ BONDED SEAM (SHEAR): _____

SAMPLE NO.: DS-C75 DATE: 5/21/93

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

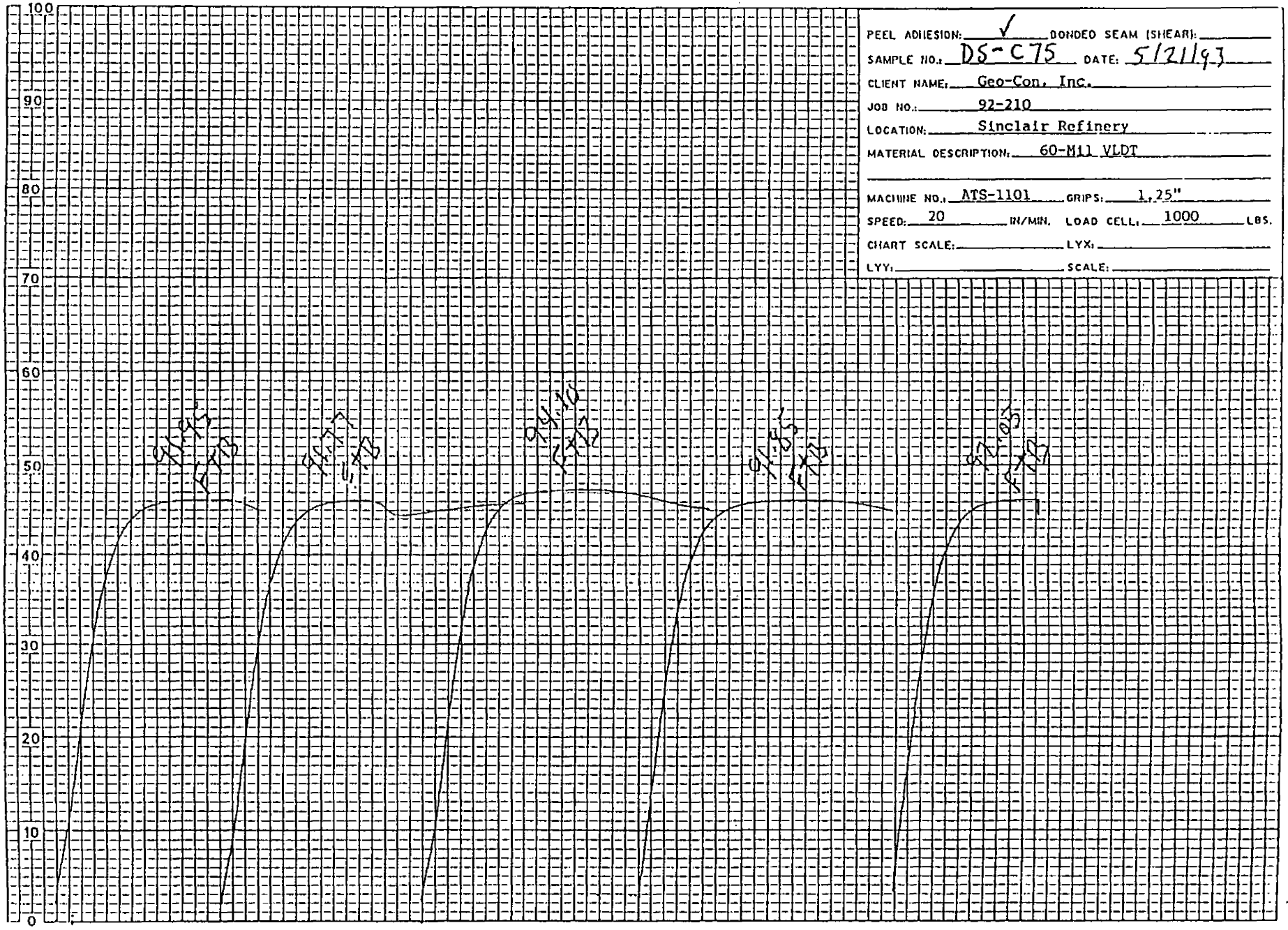
MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

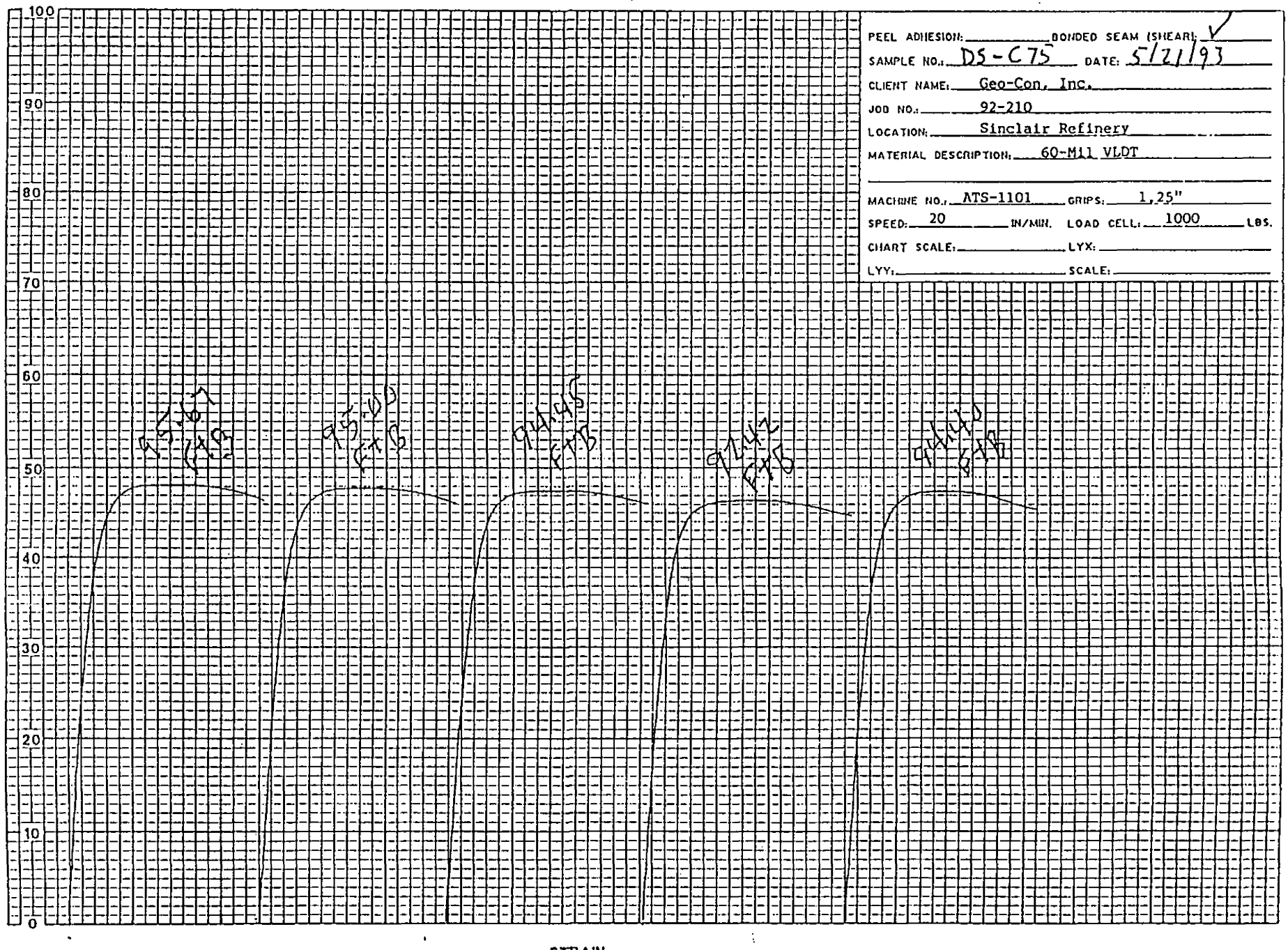
CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____



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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc.

JOB NO.: 92-210

PROJECT: Sinclair Refinery

DATE TESTED: 05/21/93

SAMPLE NO.: DS - C75

TECHNICIAN: CMB

SEAM NO.: 101 - 70

MANUFACTURER: Gundle

PANEL: C101 - C70

MACHINE: ATS-1101

MATERIAL THICKNESS: 60 MIL

LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___

WELD TYPE: D-FUSION ___ EXTRUSION X

PEEL ADHESION TEST DATA

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	91.95	FTB
2	1.0	91.77	FTB
3	1.0	94.10	FTB
4	1.0	91.85	FTB
5	1.0	92.05	FTB
Average		92.34	

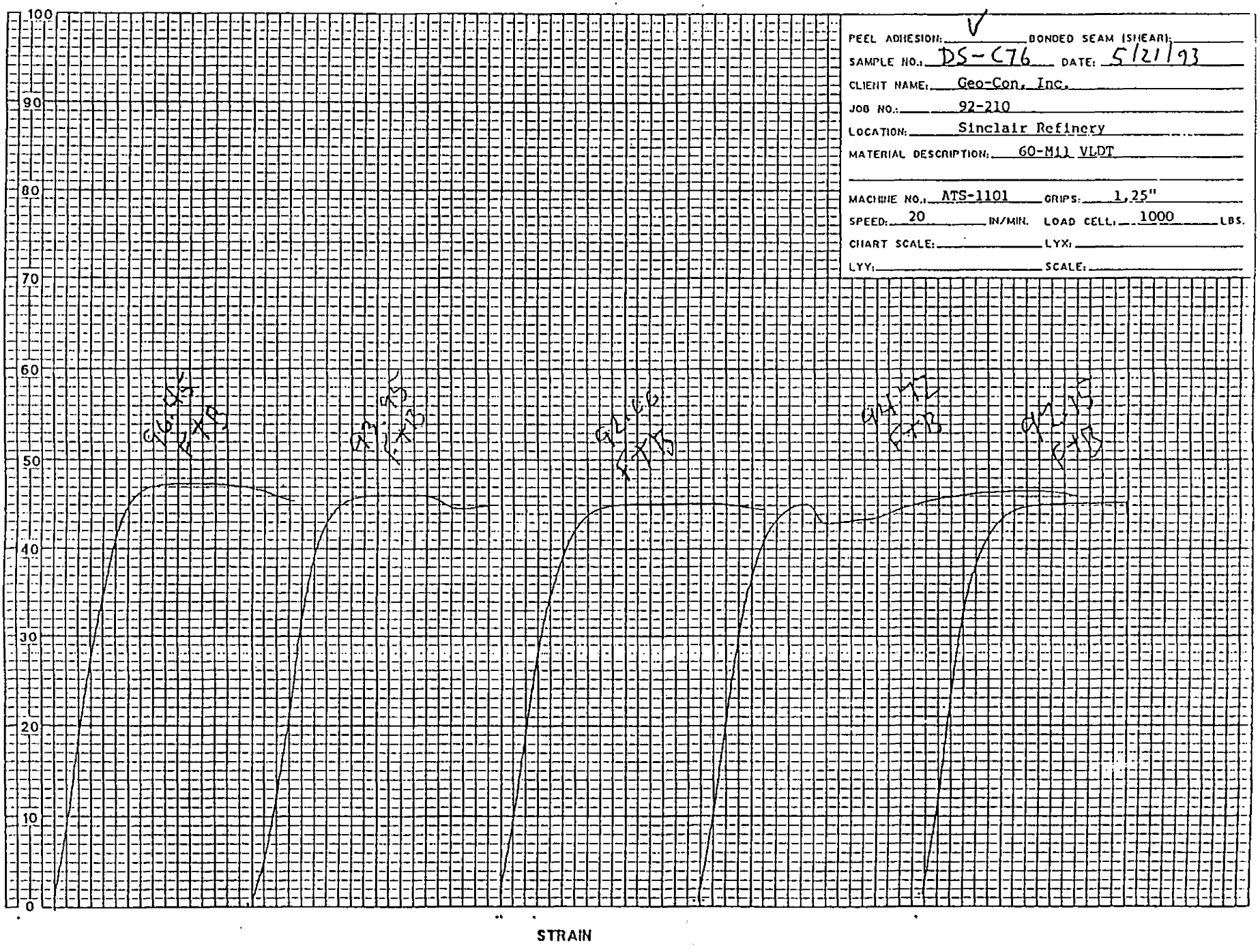
Bond Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	95.67	FTB
2	1.0	95.00	FTB
3	1.0	94.45	FTB
4	1.0	92.42	FTB
5	1.0	94.40	FTB
Average		94.39	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB = Film-Tear Bond
NFBT = Non-Film Tear Bond
Peel Adhesion = ASTM D-413, NSF Modified
Bonded Seam (Shear) = ASTM D-3083, NSF Modified

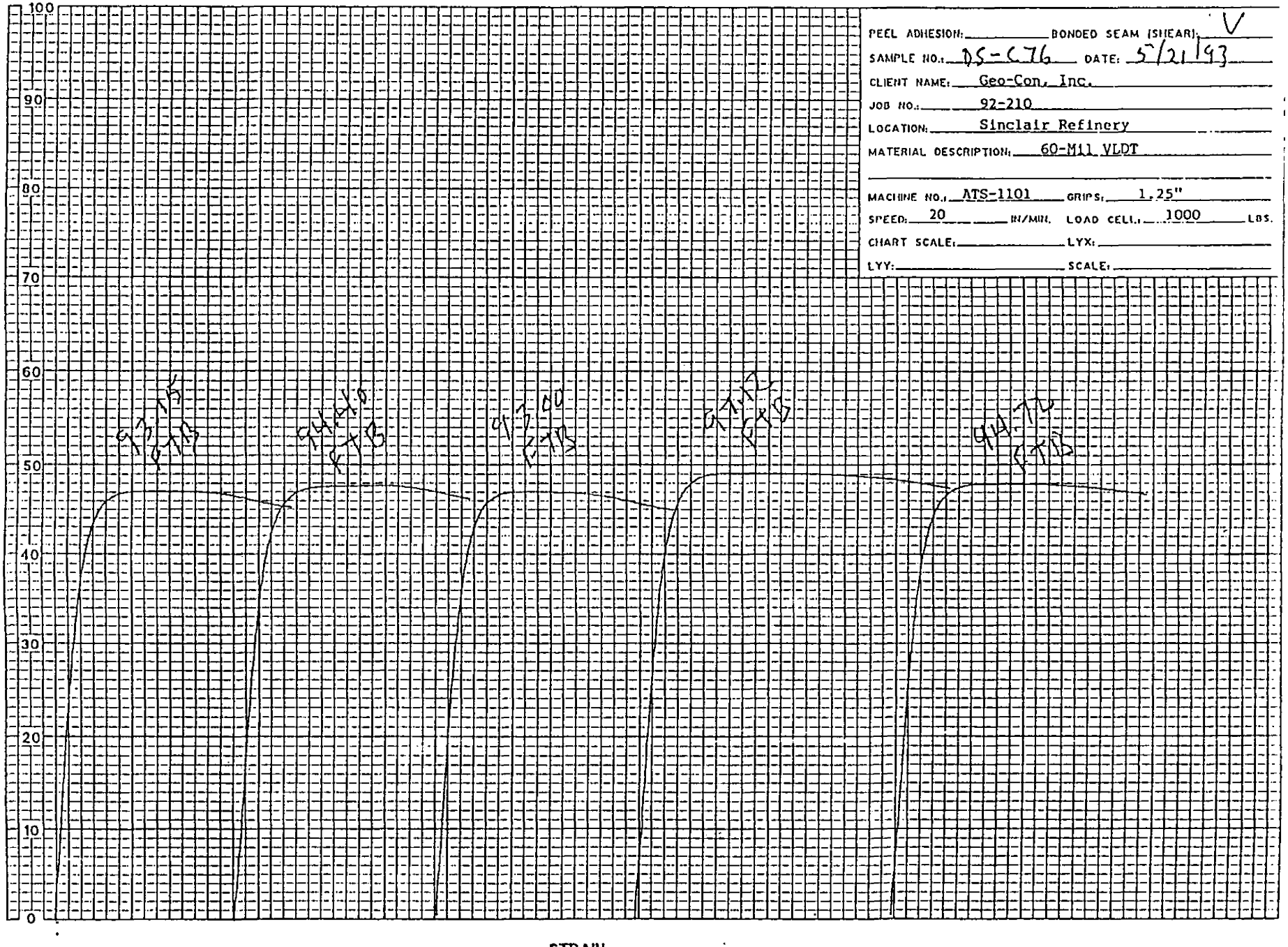
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): V

SAMPLE NO.: DS-C76 DATE: 5/21/93

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____

PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc.

JOB NO.: 92-210

PROJECT: Sinclair Refinery

DATE TESTED: 05/28/93

SAMPLE NO.: DS - C77

TECHNICIAN: CMB/DS

SEAM NO.: C122 - C123

MANUFACTURER: Gundle

PANEL: C122 - C123

MACHINE: ATS-1101

MATERIAL THICKNESS: 60 MIL

LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___

WELD TYPE: D-FUSION X EXTRUSION ___

PEEL ADHESION TEST DATA

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	83.27	FTB
2	1.0	84.72	FTB
3	1.0	83.00	FTB
4	1.0	83.90	FTB
5	1.0	84.97	FTB
Average		83.97	

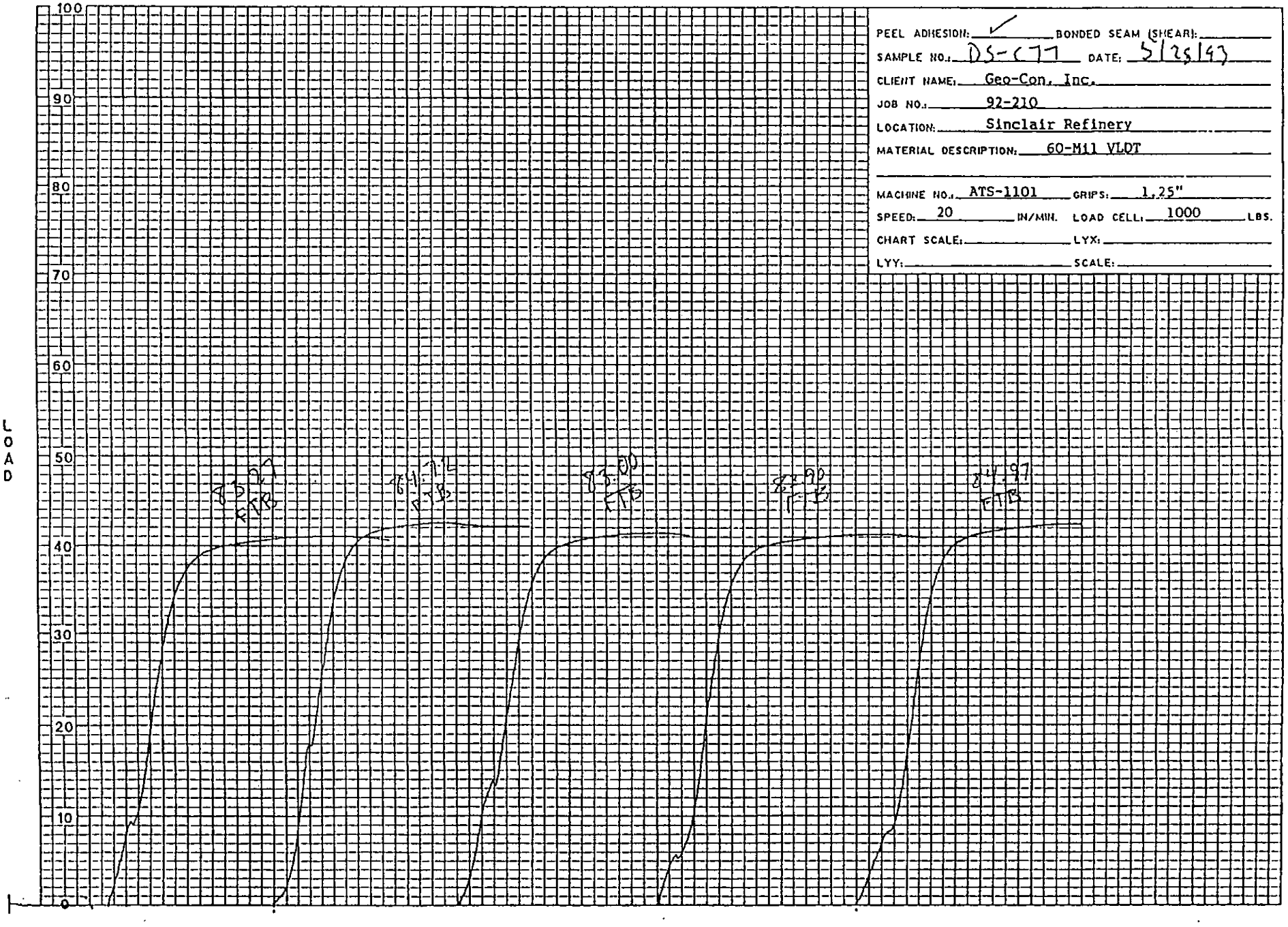
Bond Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	85.82	FTB
2	1.0	85.95	FTB
3	1.0	86.27	FTB
4	1.0	85.67	FTB
5	1.0	85.42	FTB
Average		85.83	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB = Film-Tear Bond
NFBT = Non-Film Tear Bond
Peel Adhesion = ASTM D-413, NSF Modified
Bonded Seam (Shear) = ASTM D-3083, NSF Modified

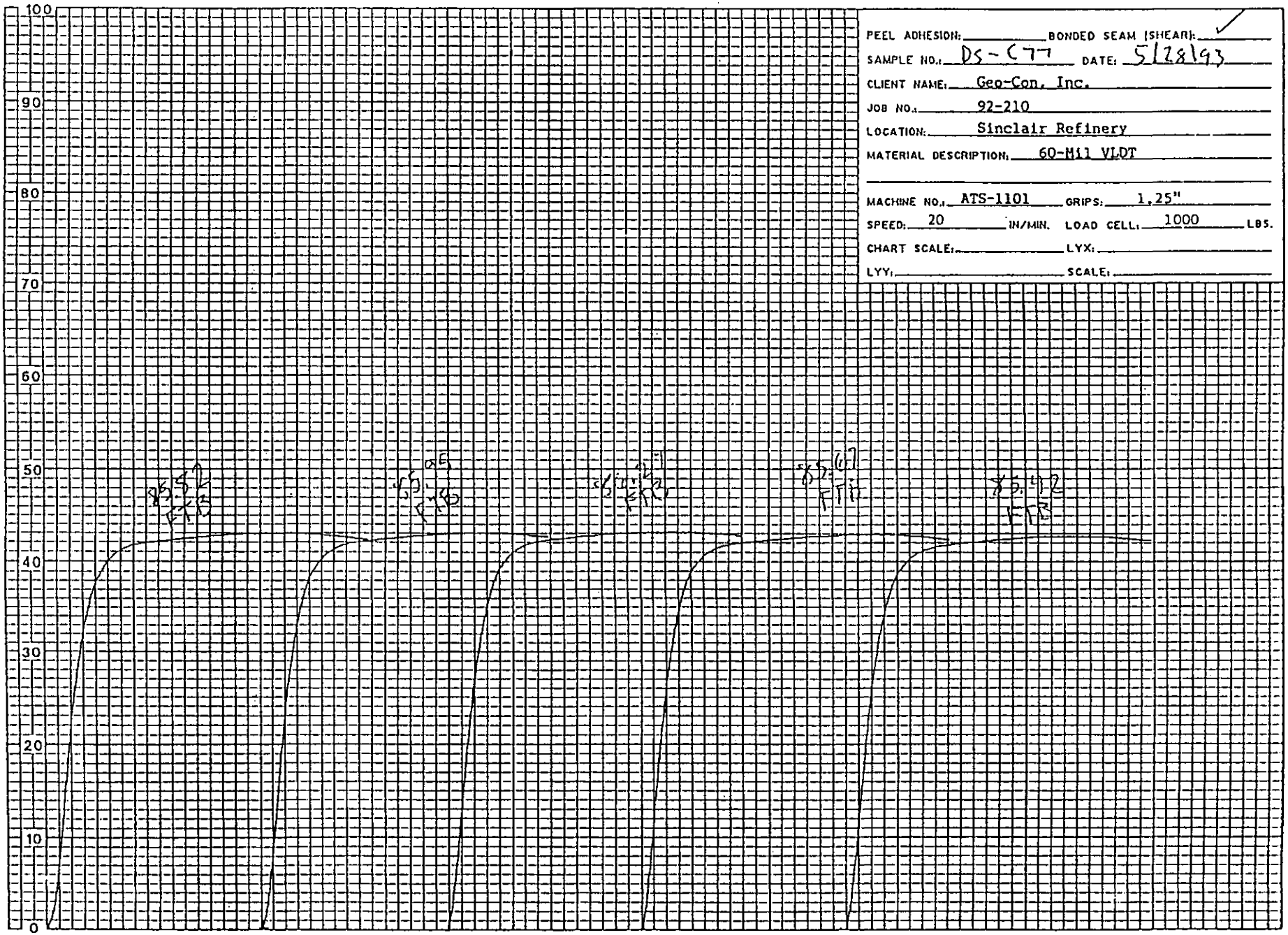
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PEEL AND SHEAR TEST RESULTS

CLIENT: Geo-Con, Inc.

JOB NO.: 92-210

PROJECT: Sinclair Refinery

DATE TESTED: 05/28/93

SAMPLE NO.: DS - C78

TECHNICIAN: CMB/SB

SEAM NO.: C123 - C75

MANUFACTURER: Gundle

PANEL: C123 - C75

MACHINE: ATS-1101

MATERIAL THICKNESS: 60 MIL

LINER: PRIMARY ____ SECONDARY ____

MATERIAL TYPE: VLDT X VLST ___ VLDPE ___

WELD TYPE: D-FUSION ___ EXTRUSION X

PEEL ADHESION TEST DATA

Replicate No.	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	82.40	FTB
2	1.0	79.90	FTB
3	1.0	80.30	FTB
4	1.0	80.35	FTB
5	1.0	80.95	FTB
Average		80.78	

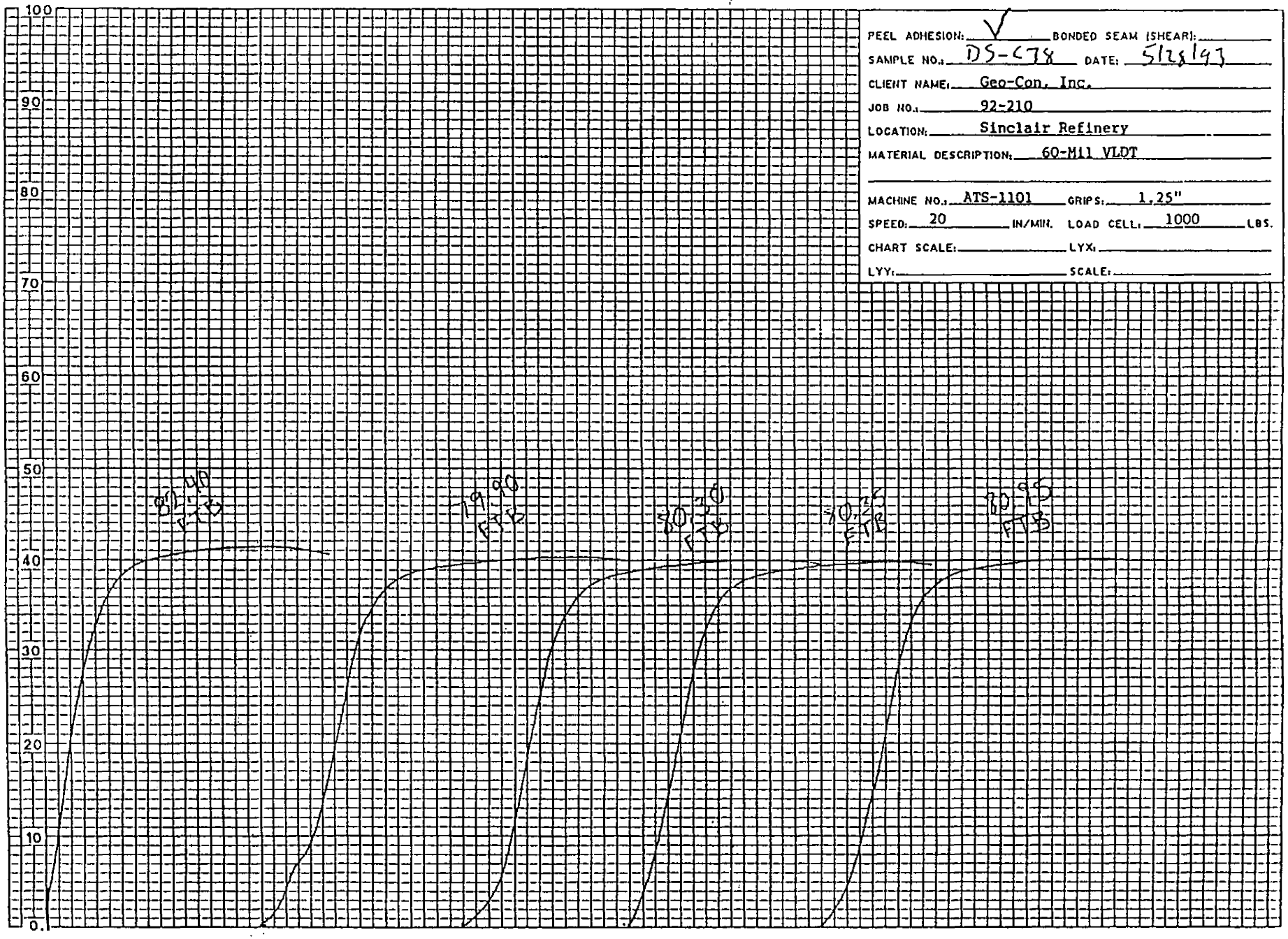
Bond Seam (Shear) Test Data	Width (Inches)	Peak Load (Pounds)	Comments
1	1.0	83.35	FTB
2	1.0	83.97	FTB
3	1.0	82.05	FTB
4	1.0	79.65	FTB (Broke Adj. to Ext
5	1.0	82.30	FTB
Average		82.20	

VLDT = Double Textured VLDPE
VLST = Single Textured VLDPE
VLDPE = Smooth VLDPE

FTB = Film-Tear Bond
NFBT = Non-Film Tear Bond
Peel Adhesion = ASTM D-413, NSF Modified
Bonded Seam (Shear) = ASTM D-3083, NSF Modified

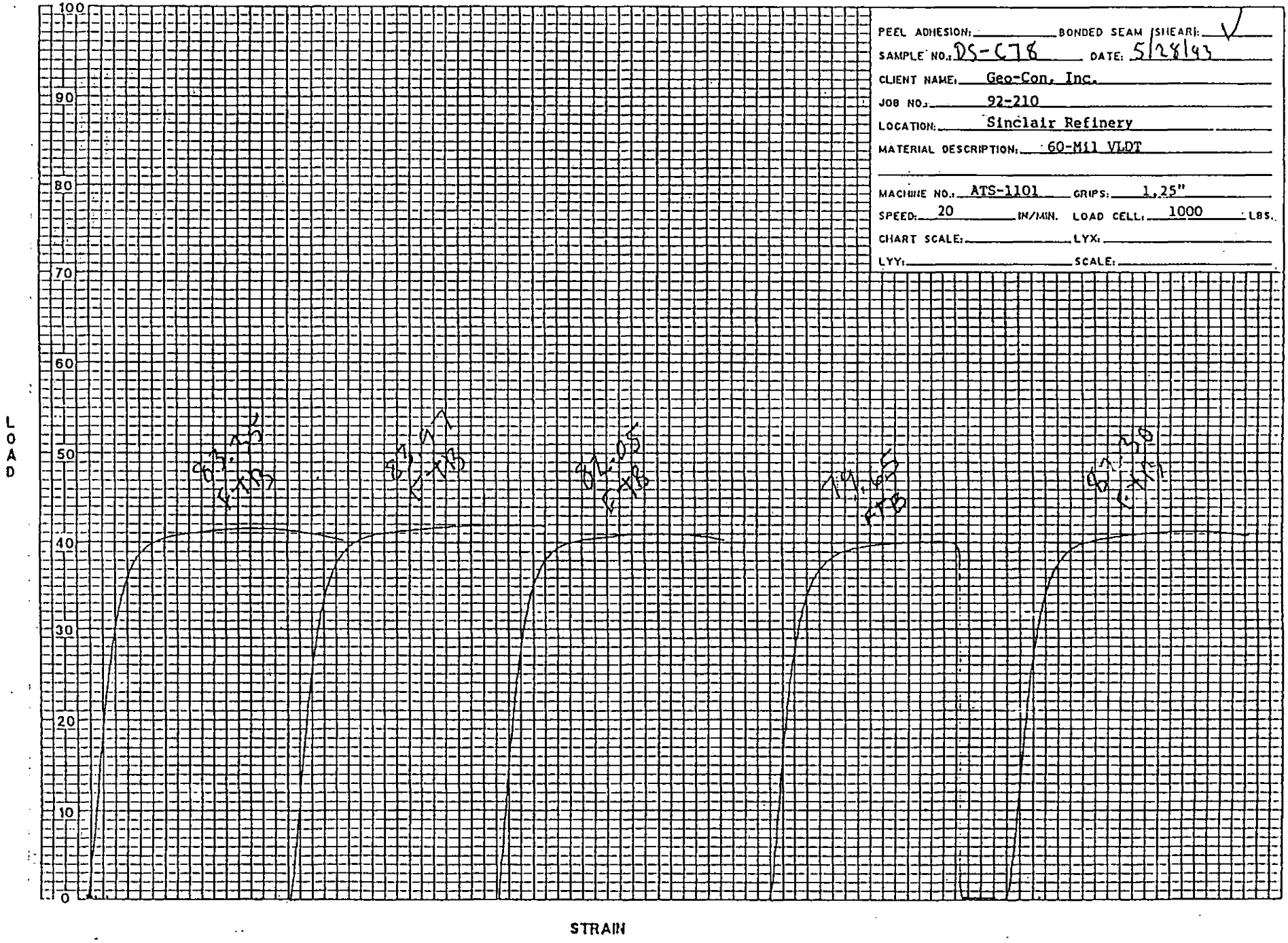
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PEEL ADHESION: _____ BONDED SEAM (SHEAR): ✓

SAMPLE NO.: DS-C78 DATE: 5/28/93

CLIENT NAME: Geo-Con, Inc.

JOB NO.: 92-210

LOCATION: Sinclair Refinery

MATERIAL DESCRIPTION: 60-Mil VLDT

MACHINE NO.: ATS-1101 GRIPS: 1.25"

SPEED: 20 IN/MIN. LOAD CELL: 1000 LBS.

CHART SCALE: _____ LYX: _____

LYY: _____ SCALE: _____