Certificate GC-113, Condition 22

Sneddon Creek Lateral Loop #2

Application for Leave to Open

Tab C – Leave to Open Documents

HT-1 TRANSCANADA PRIMARY HYDROSTATIC TEST CALCULATION SHEET FOR "NEW" BURIED PIPELINES						Sheet Updated:	Feb-2009
PROJECT NAME:	NPS 16 Sneddon Creek Laterial Loop # 2				TEST DATE:		
PROJECT#: 2094385 - AUC #	80541, Line # 3	NEB Cert #	GC-113	SECTION#:	One (1)	REV#:	One
ILTO#:		TEST#:	Section # 1	FILL WATER SOURCE:	Dug Out (LSD-1-8-80-12-W6M)		
FLOW U/S POINT (North END):	0+028.5			FILL WATER TYPE	Water	water or water/methanol mix	
FLOW D/S POINT (South END):	5+010.8			TEST CLASS=	1	Choice of 1 to 4	

PIPE DATA								
PIPE OD (D) =	406.4	(mm)	16.0	(in)	U/S POINT (North END) CHAINAGE (m)		-28.5	
LINE PIPE WT (t) =	5.60	(mm)	0.220	(in)	D/S POINT (South END) CHAINAGE (m)		5,010.8	
PIPE GRADE (S) =	448	(MPa)	65	(ksi)	TEST POINT AT North OR South END?		North	
MAOP =	8,450	(kPa)	1,226	(psig)	LINEPIPE STRESS LEVEL =		0.68	
PRESSURE @ 110% SMYS =	13,581	(kPa)	1,970	(psig)	Put Heavy Wall at section ends?		Yes	
PRESSURE @ 100% SMYS =	12,346	(kPa)	1,791	(psig)	Wall Thickness - H/Wall (mm) =		7.50	
PRESSURE @ 90% SMYS =	11,112	(kPa)	1,612	(psig)	H/Wall Pipe Grade (MPa) =		448	
PRESSURE @ 80% SMYS =	9,877	(kPa)	1,433	(psig)	HDD Crossing in test Section? (Yes = 1)		0	
SECTION LENGTH (m) =	5,039	(m)	16,533	(ft)	Total Squeeze Volume =	6,810	(l of water)	
SECTION VOLUME (litres) =	618,150	(litres)	135,977	(gal)	Total Squeeze Volume =	7,898	(l of w-m)	
0.2% OFFSET (litres) =	1,236	(litres)	272	(gal)	Pressure rise from 0 to	13,581	(kPa)	
Water volume for pressure rise in test section by			100	kPa =	48.87	(litres)	9.66	(litres/km)
Water/Methanol volume for pressure rise in test section by			100	kPa =	58.16	(litres)	11.54	(litres/km)

ELEVATION AND PRESSURE DIFFERENTIALS			HP - UTP =	46.7	(m)	458	(kPa)
North END TEST POINT (UTP) =	653.20	(m)	UTP - LP =	3.6	(m)	35	(kPa)
HIGH POINT (HP) =	699.90	(m)	HP - LP =	50.3	(m)	493	(kPa)
LOW POINT (LP) =	649.60	(m)	HP - DTP =	0.0	(m)	0	(kPa)
South END TEST POINT (DTP) =	699.90	(m)	DTP - LP =	50.3	(m)	493	(kPa)

YIELD PLOT NEEDED?	YES	(Yes, if the Commencement Strength Test Pressure at Low Point > 90% SMYS)						
YIELD PLOT START PRESSURE								
North END TEST POINT (UTP) =	9,842	(kPa)	1,427	(psig)	79.7%	(of SMYS)		
HIGH POINT =	9,384	(kPa)	1,361	(psig)	76.0%	(of SMYS)		
LOW POINT =	9,877	(kPa)	1,433	(psig)	80.0%	(of SMYS)	Limit =	80% SMYS
South END TEST POINT (DTP) =	9,384	(kPa)	1,361	(psig)	76.0%	(of SMYS)		
MINIMUM 'STRENGTH TEST' PRESSURE		125 % of MAOP at High Point						
North END TEST POINT (UTP) =	11,020	(kPa)	1,598	(psig)	130.4%	(of MAOP)		
HIGH POINT =	10,563	(kPa)	1,532	(psig)	125.0%	(of MAOP)	Limit =	125% MAOP
LOW POINT =	11,055	(kPa)	1,603	(psig)	130.8%	(of MAOP)		
South END TEST POINT (DTP) =	10,563	(kPa)	1,532	(psig)	125.0%	(of MAOP)		

COMMENCEMENT 'STRENGTH TEST' PRESSURE (Min 4 - HOURS)						CUSHION (kPa) =	700	(ROT=700)
(The Lesser of Min. Strength Test Pressure + Cushion, and 110% SMYS)							Limit for Max. P (kPa)	
North END TEST POINT (UTP) =	11,720	(kPa)	1,700	(psig)	94.9%	(of SMYS)	109.7%	13,646
HIGH POINT =	11,263	(kPa)	1,633	(psig)	91.2%	(of SMYS)	106.0%	13,088
LOW POINT =	11,755	(kPa)	1,705	(psig)	95.2%	(of SMYS)	110.0%	13,581
South END TEST POINT (DTP) =	11,263	(kPa)	1,633	(psig)	91.2%	(of SMYS)	106.0%	13,088

MINIMUM 'LEAK TEST' PRESSURE		(110% of MAOP at High Point)						
North END TEST POINT (UTP) =	9,753	(kPa)	1,414	(psig)	115.4%	(of MAOP)		
HIGH POINT =	9,295	(kPa)	1,348	(psig)	110.0%	(of MAOP)	Limit =	110% MAOP
LOW POINT =	9,788	(kPa)	1,420	(psig)	115.8%	(of MAOP)		
South END TEST POINT (DTP) =	9,295	(kPa)	1,348	(psig)	110.0%	(of MAOP)		

COMMENCEMENT 'LEAK TEST' PRESSURE (Min 4 - HOURS)						CUSHION (kPa) =	700	(ROT=700)
(Lesser of 100% SMYS and Qualification Pressure *)							Limit for Max. P (kPa)	
North END TEST POINT (UTP) =	10,453	(kPa)	1,516	(psig)	84.7%	(of SMYS)	99.7%	12,311
HIGH POINT =	9,995	(kPa)	1,450	(psig)	81.0%	(of SMYS)	96.0%	11,854
LOW POINT =	10,488	(kPa)	1,521	(psig)	84.9%	(of SMYS)	100.0%	12,346
South END TEST POINT (DTP) =	9,995	(kPa)	1,450	(psig)	81.0%	(of SMYS)	96.0%	11,854
							ROT - Rule of Thumb	

(*) Qualification pressure is the actual lowest pressure at high point during the strength test and = (kPa)

CALCULATED BY:	John Ness		DATE:	Oct-02-2009
CHECKED BY:	Mark Mulder		DATE:	Oct-02-2009

TRANSCANADA - HYDROSTATIC TEST FIELD REPORT

Rev 1 (Dec-01-2003)

DATE: YYYY 2009 MM 10 DD 05 | PAGE 1 OF 1 | FILL SOURCE: DOG OUT LSD-1-8-80-12-W6M

PROJECT NAME: NPS16 SNEDDON CREEK LATERIAL LOOP #2 | LENGTH OF TEST SECTION: 5,039 (m)

PROJECT NUMBER: 2094865 | PIPE O.D.: 406.4 (mm) | PIPE W.T.: 5.60 (mm)

TEST NUMBER: NPS16 SNEDDON - ONE | TEST SECTION: ONE (1) | TEST LOCATION: (U/S) or D/S

U/S LOCATION: 0-028.5 | D/S LOCATION: 5+010.8

TEST CONTRACTOR: (MAINLINE) - PARKLAND PIL CONTRACTORS (CMF) - N/A

INSTRUMENTATION	MANUFACTURER	TC TAG NUMBER	LOCATION
DEADWEIGHT	CHANDLER	AMS-086	0-028.5
PRESSURE RECORDER	BARTON	AMS-226	0-028.5
FILL RECORDER Totalizer	ML-1	AMS-067	0-028.5
TEMPERATURE RECORDER #1	BARTON	AMS-115	0+010
TEMPERATURE RECORDER #2	BARTON	AMS-088	4+857
TEMPERATURE RECORDER #3			
1" TURBINE	CMC	AMS-1140	0-028.5 ✓
U/S TEST HEAD	NOVA	# 1610 Z	0-028.5
D/S TEST HEAD	NOVA	# 1614 Z	5+010.8

TEST LOG SUMMARY	TIME (HR-MIN)	DATE (YY-MM-DD)
TEST HEAD WELDED ON:	08:30 10:06	09-10-02
FILLING STARTED:	13:05	09-10-02
FILLING COMPLETED:	02:50	09-10-03
PRESSURIZING STARTED:	09:40	09-10-05
YIELD PLOT STARTED:	11:32:52	09-10-05
YIELD PLOT COMPLETED:	11:49:29	09-10-05
STRENGTH TEST STARTED:	12:10	09-10-05
STRENGTH TEST COMPLETED:	16:10	09-10-05
LEAK TEST STARTED:	16:30	09-10-05
LEAK TEST COMPLETED:	20:30	09-10-05
DEWATERING STARTED:	21:07	09-10-05
DEWATERING COMPLETED:	0:900	09-10-06

YIELD PLOT SUMMARY

INITIAL DEVIATION: 10,000 (kPa) (psig)

FINAL DEVIATION: 64.51 (litres) 0.0104 (%)

ACTUAL TEST PRESSURES @ TEST POINT	(kPa)	(psig)
MAX STRENGTH TEST PRESSURE:	11,595	
MIN STRENGTH TEST PRESSURE (Note 1):	11,590	
MAX LEAK TEST PRESSURE (Note 2):	10,310	
MIN LEAK TEST PRESSURE:	10,310	

ACTUAL ELEVATION

U/S LOCATION: 653.20 (m)

D/S LOCATION: 699.90 (m)

HIGH POINT: 699.90 (m)

LOW POINT: 649.60 (m)

(Note 1): This is the Qualification Pressure or the Lowest actual Strength test pressure at high point, converted to the corresponding pressure at Test Point.

(Note 2): Maximum Leak Test Pressure is the lesser of the Pressure corresponding to 100% SMYS and the Qualification pressure.

CONSTRUCTION AND CALLIPER PIGGING

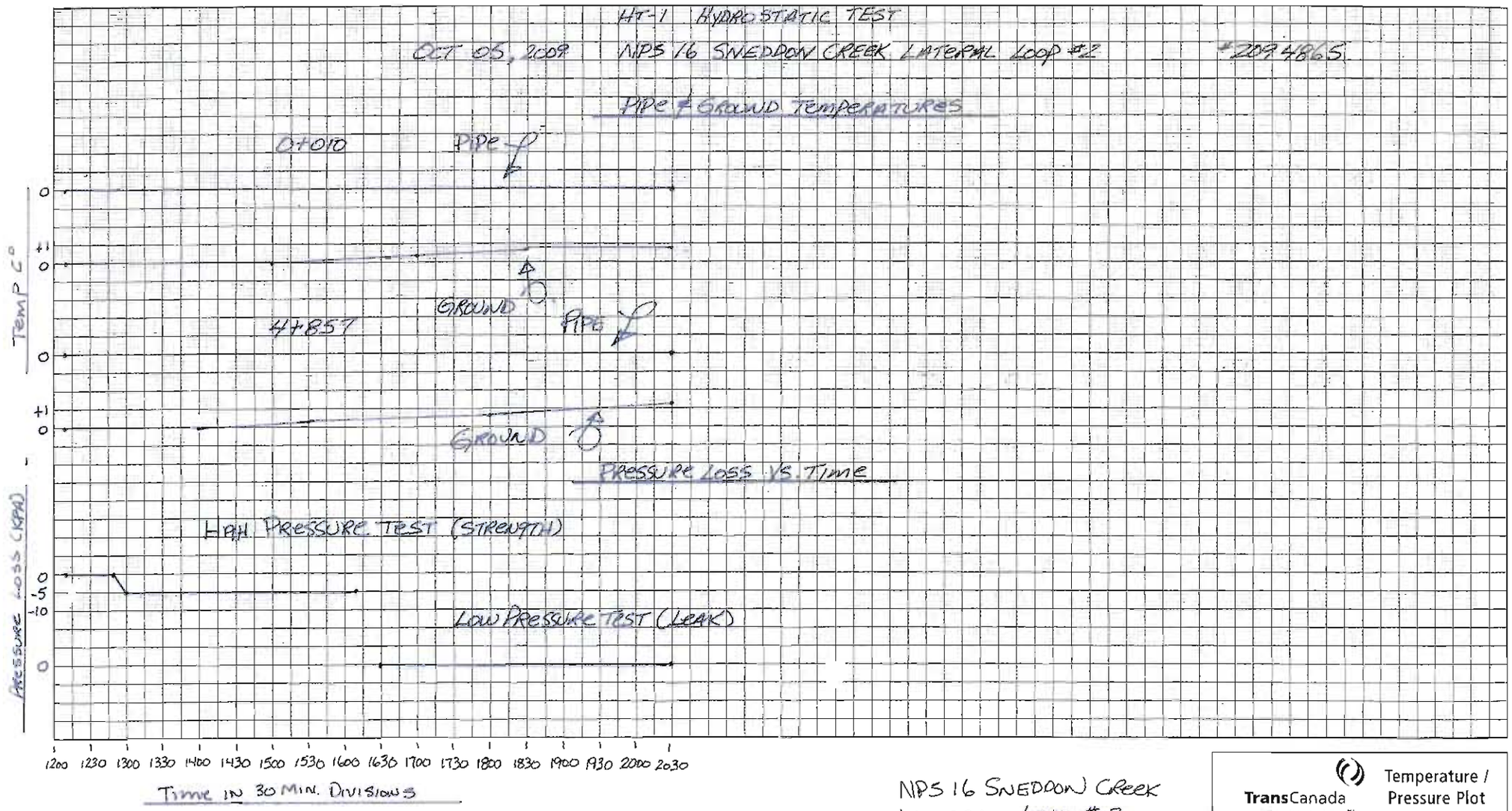
FROM STATION	TO STATION	TODAY	PREVIOUS	TOTAL TODATE	TIME IN	TIME OUT	TYPE
0-028.5	5+010.8	5039.3	0	5039.3	14:12 Oct 1	20:05 Oct 1	WIRE BRUSH PIG
0-028.5	5+010.8	5039.3	0	5039.3	21:57 Oct 9	02:37 Oct 10	CALIPER PIG

METHANOL WASH

TEST SECTION#	RUN #	FROM STATION	TO STATION	RUN STARTED	RUN ENDED	VOLUME ADDED	VOLUME RECOVERED	SG	TEMP
ONE	1	5+010.8	0-028.5	18:51 Oct 7	21:16 Oct 7	1200L	1113L	0.8340	10°C

TRANSCANADA TEST SUPERVISOR'S SIGNATURE & NAME:

JOHN NESS



NPS 16 SNEDDON CREEK
LATERAL, LOOP # 2

NEB CERTIFICATE GC-113
AUC PERMIT # 80541. LINE #3
ILTO # 160-2009

TransCanada
In business to deliver™

Temperature / Pressure Plot

Test No. NPS 16 SNEDDON DIVE-SECTION #1

0-028.5 To 5+010.8

Pro-# 2094865 Date: OCT 05, 2009

Approved: JOHN NESS

TRANSCANADA - HYDROSTATIC TEST

YIELD PLOT LOG SHEET

DATE: YYY 2009 MM 10 DD 05	PAGE: 1 of 1	YIELD PLOT START TIME: 11:32:52	END TIME: 11:49:29
PROJECT NAME: NPS16 SNEDDON CREEK LAT. LOOP #2		YIELD PLOT START PRESSURE: 9,800 (kPa)	
PROJECT NUMBER: 2094865		MAXIMUM STRENGTH TEST PRESSURE: 11,720 (kPa)	
TEST NUMBER: NPS16 SNEDDON-ONE	TEST SECTION: #1	TEST LOCATION: (U/S) or D/S	
U/S LOCATION: 0-028.5		D/S LOCATION: 5+010.8	
TEST CONTRACTOR: (MAINLINE) - PARKLAND PIPE CONTRACTING		(TCMF) - N/A	

TIME (Hour-Min)	PRESSURE (kPa)	PRESSURE (psig)	VOLUME ( )	REMARKS	TIME (Hour-Min)	PRESSURE (kPa)	PRESSURE (psig)	VOLUME ( )	REMARKS
11:32:52	9800		0	START YIELD PLOT ✓					
11:33:48	900		46.8						
11:34:42	10,000		93.6	46.8					
11:35:40	100		147.5	53.9					
11:36:28	200		190.7	43.2					
11:37:27	300		244.5	53.8					
11:38:17	400		287.5	43.0					
11:39:18	500		341.4	53.9					
11:40:12	600		391.6	50.2					
11:41:04	700		438.2	46.6					
11:42:03	800		491.9						
11:43:02	900		542.1	50.2					
11:43:55	11,000		591.1	50.0					
11:44:46	100		635.0	42.9					
11:45:39	200		681.5	46.5					
11:46:38	300		735	53.5					
11:47:26	400		777.8	42.8					
11:48:37	500		842.0	64.2					
11:49:29	600		888.4	46.4 END YIELD PLOT ✓					

TRANSCANADA TEST SUPERVISOR'S NAME: JOHN NESS

SIGNATURE: J Ness

FORM UPDATED: APRIL-27-2000

TRANSCANADA - HYDROSTATIC TEST — PRESSURE LOG SHEET

DATE: YYYY 2009 MM 10 DD 05 | PAGE: 1 of 1 | PROJECT NUMBER: 2094865

PROJECT NAME: NPS 16 SNEDDON CREEK LAT. LOOP #2 | TEST LOCATION: (U/S) OR D/S

TEST NUMBER: NPS16 SNEDDON ONE | TEST SECTION: ONE (1)

U/S LOCATION: 0-028.5 | D/S LOCATION: 5+010.8

TEST CONTRACTOR: (MAINLINE) - PARKLAND PL CONTRACTOR (CMF) - NA

TIME (Hour-Min)	PRESSURE (kPa)	PRESSURE (psig)	AMBIENT TEMP (deg C)	MAX 11,720 KPA REMARKS STRENGTH TEST MIN 11,020 KPA
12:10	11,595		8°	START STRENGTH TEST
12:15	11,595		8°	
12:20	11,595		7.5°	
12:25	11,595		8°+	
12:30	11,595		8°	
12:35	11,595		8.5°	
12:40	11,595		8.5°	
12:50	11,595		9°-	
13:00	11,590		9°+	
13:10	11,590		9°+	
13:25	11,590		10°	
13:40	11,590		10°	
13:55	11,590		12°	
14:10	11,590		12°	
14:25	11,590		12.5°	
14:40	11,590		13°	
14:55	11,590		15-°	
15:10	11,590		13.5°	
15:25	11,590		14°	
15:40	11,590		13.5°	
15:55	11,590		13+°	
16:10	11,590		13°	END STRENGTH TEST

IN

CLOUDY WITH MODERATE WIND

IN

TRANSCANADA TEST SUPERVISOR'S NAME: DAN NESS

SIGNATURE:

FORM UPDATED: April-27-2000

TRANSCANADA - HYDROSTATIC TEST — PRESSURE LOG SHEET

DATE: YYYY 2009 MM 10 DD 05 | PAGE: 1 of 1 | PROJECT NUMBER: 2094865

PROJECT NAME: NPS 16 SNEDDON CREEK LAT. LOOP #2 | TEST LOCATION: (U/S) OR D/S

TEST NUMBER: NPS16 SNEDDON - ONE | TEST SECTION: ONE (1)

U/S LOCATION: 0-028.5 | D/S LOCATION: 5+010.8

TEST CONTRACTOR: (MAINLINE) PARKLAND PIPE CONTRACTOR (CMF) - N/A

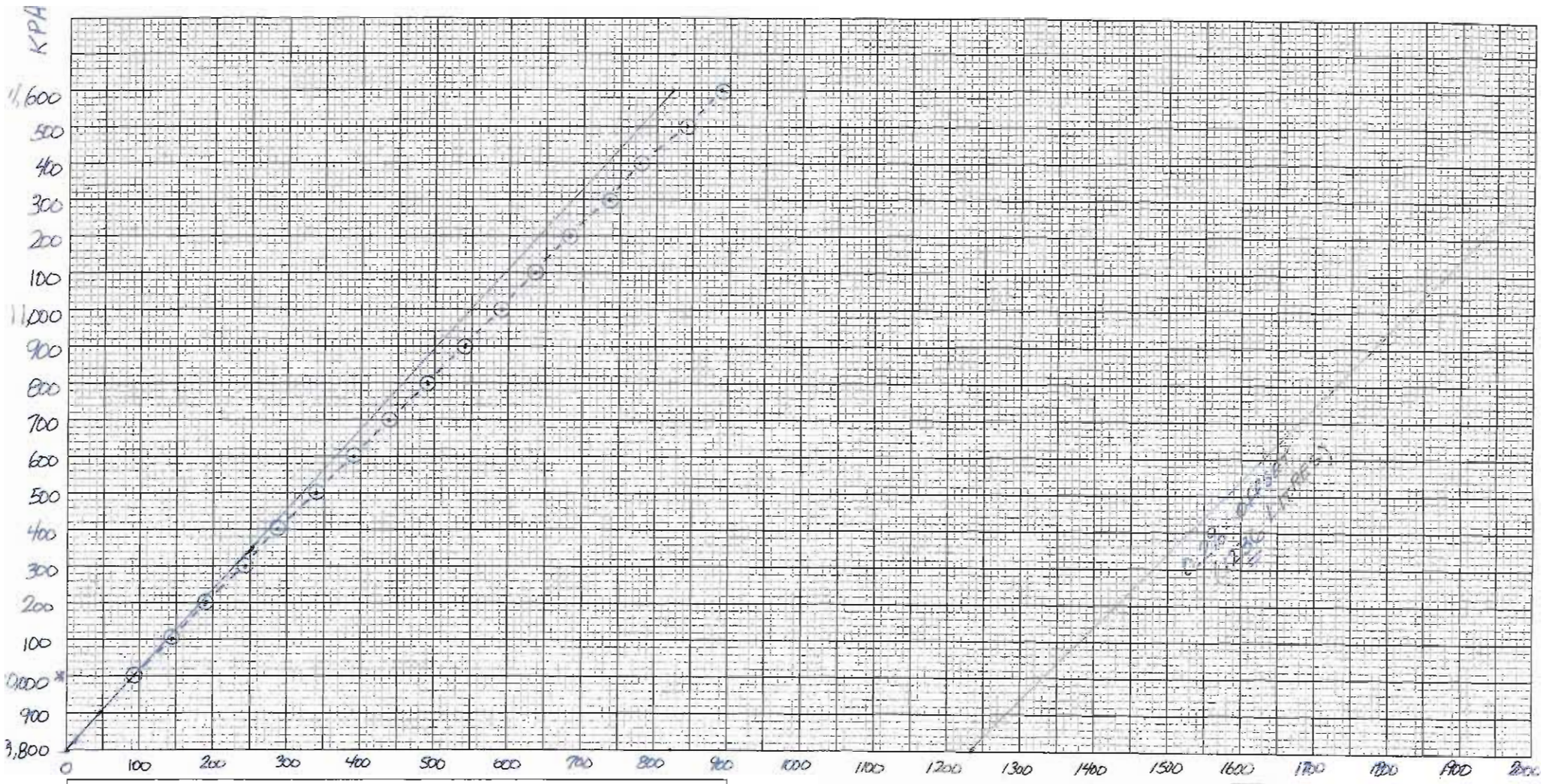
TIME (Hour-Min)	PRESSURE (kPa)	PRESSURE (psig)	AMBIENT TEMP (deg C)	MAX 10,453 KPA — REMARKS: LEAK TEST — MIN 9,753 KPA
16:30		10,310	13°C	START LEAK TEST IN
16:35		10,310	13° C	
16:40		10,310	13° C	
16:45		10,310	13°	
16:50		10,310	13°	
16:55		10,310	13°	
17:00		10,310	13°	
17:10		10,310	13°	
17:20		10,310	13°	
17:30		10,310	12°	
18:00		10,310	11°	
18:30		10,310	11°	
19:00		10,310	11°	
19:30		10,310	12°	
20:00		10,310	11°	
20:30		10,310	11°	END LEAK TEST IN

CLOUDY WITH LIGHT WIND.

TRANSCANADA TEST SUPERVISOR'S NAME: John Ness

SIGNATURE:

FORM UPDATED: April-27-2000



YIELD PLOT SUMMARY

COMMENCEMENT			
PRESSURE	TIME	INITIAL DEVIATION	10,000 KPA PRESSURE
9,800	11:32:52	FINAL DEVIATION	64.51 LITRES VOLUME
COMPLETION		FINAL DEVIATION	0.0104 % PERCENT
PRESSURE	TIME	TCPL TEST SUPERVISOR	JOHN NESS
11,600	11:49:29		

TC 948-1 02/25/02

NPS 16 SWEDOON CREEK LATERIAL LOOP #2

ILI ID # 160-2009

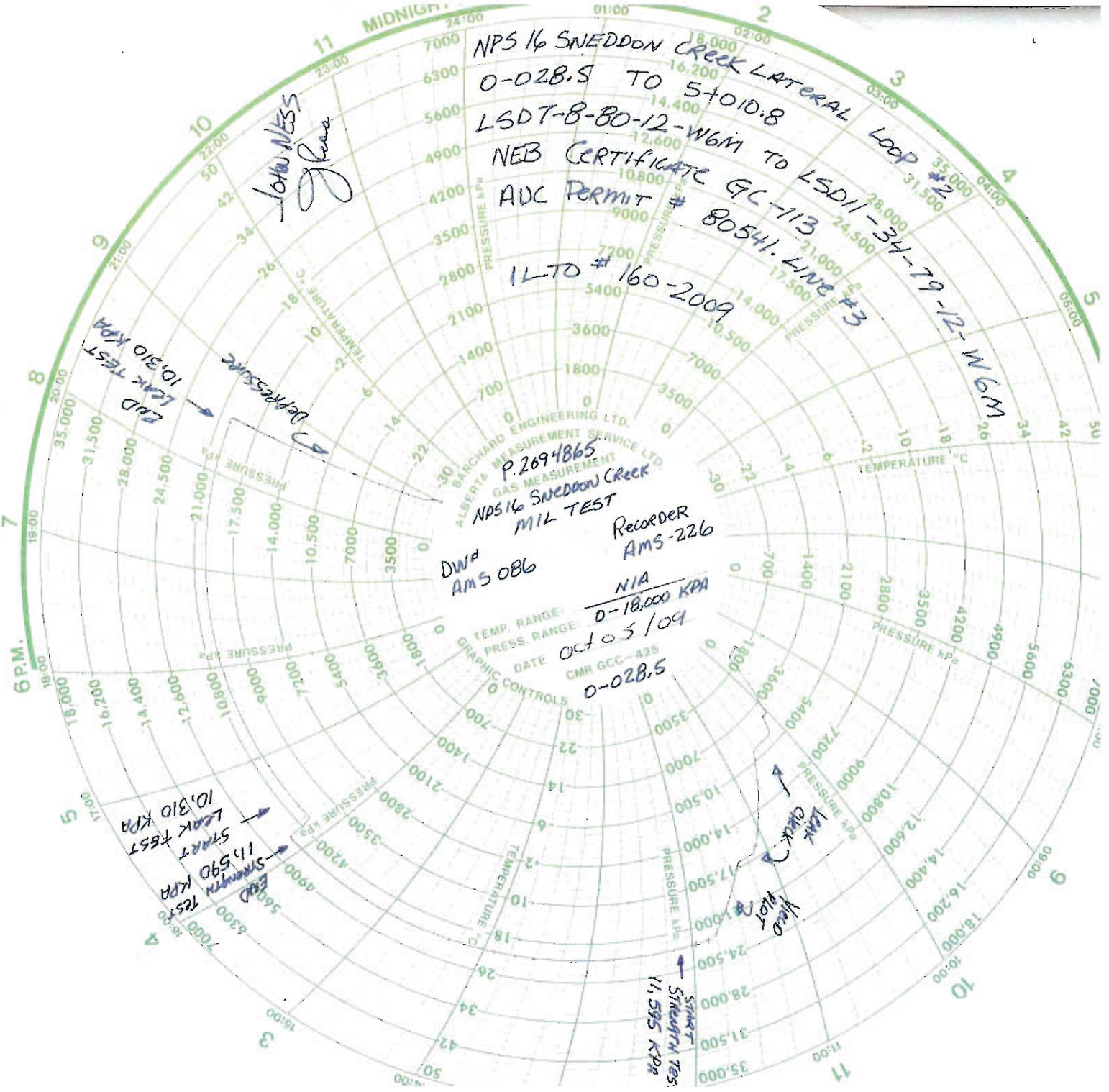
TransCanada
In business to deliver™

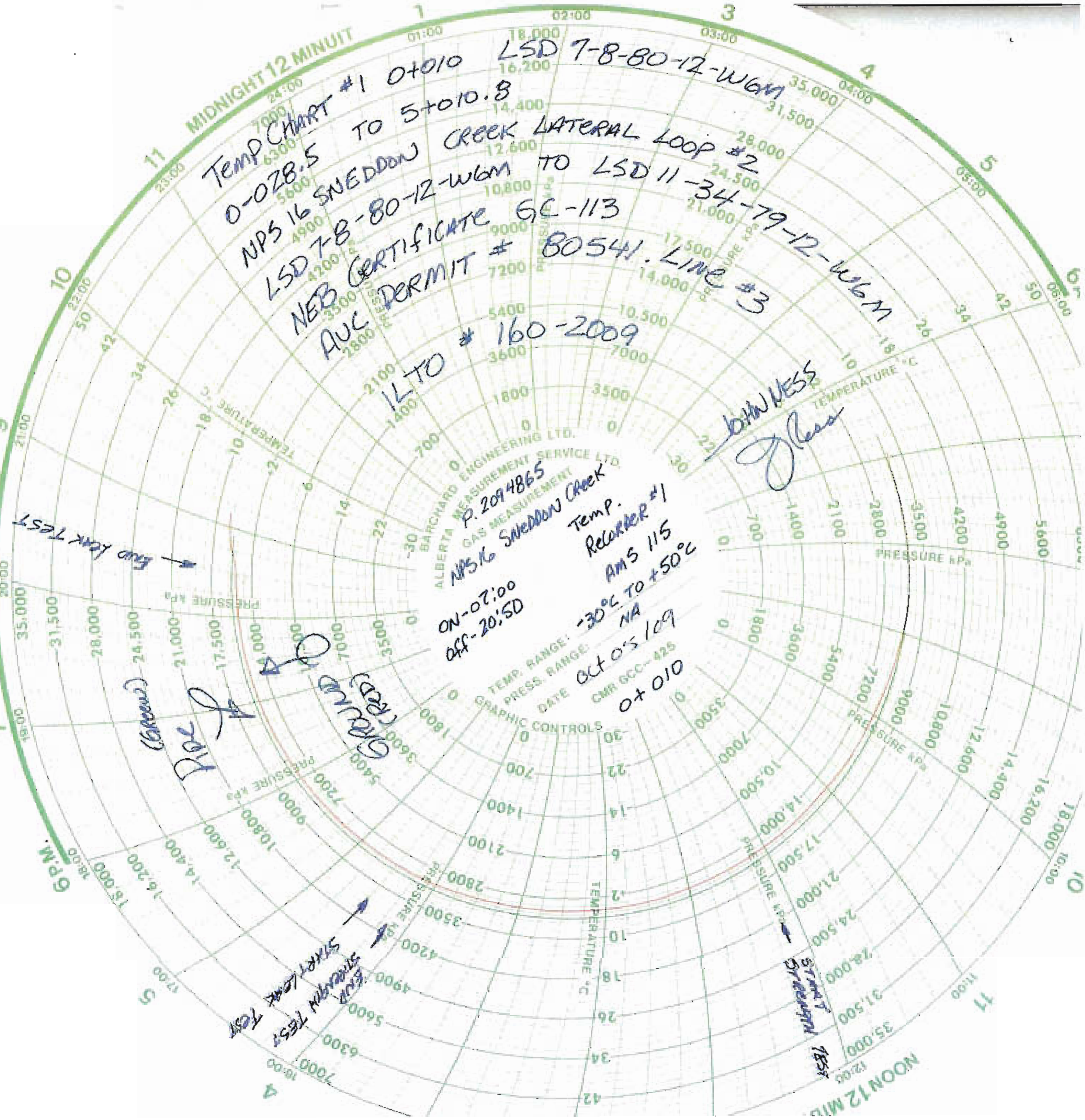
YIELD PLOT

TEST NO. NPS 16 SWEDOON - ONE SECTION #1

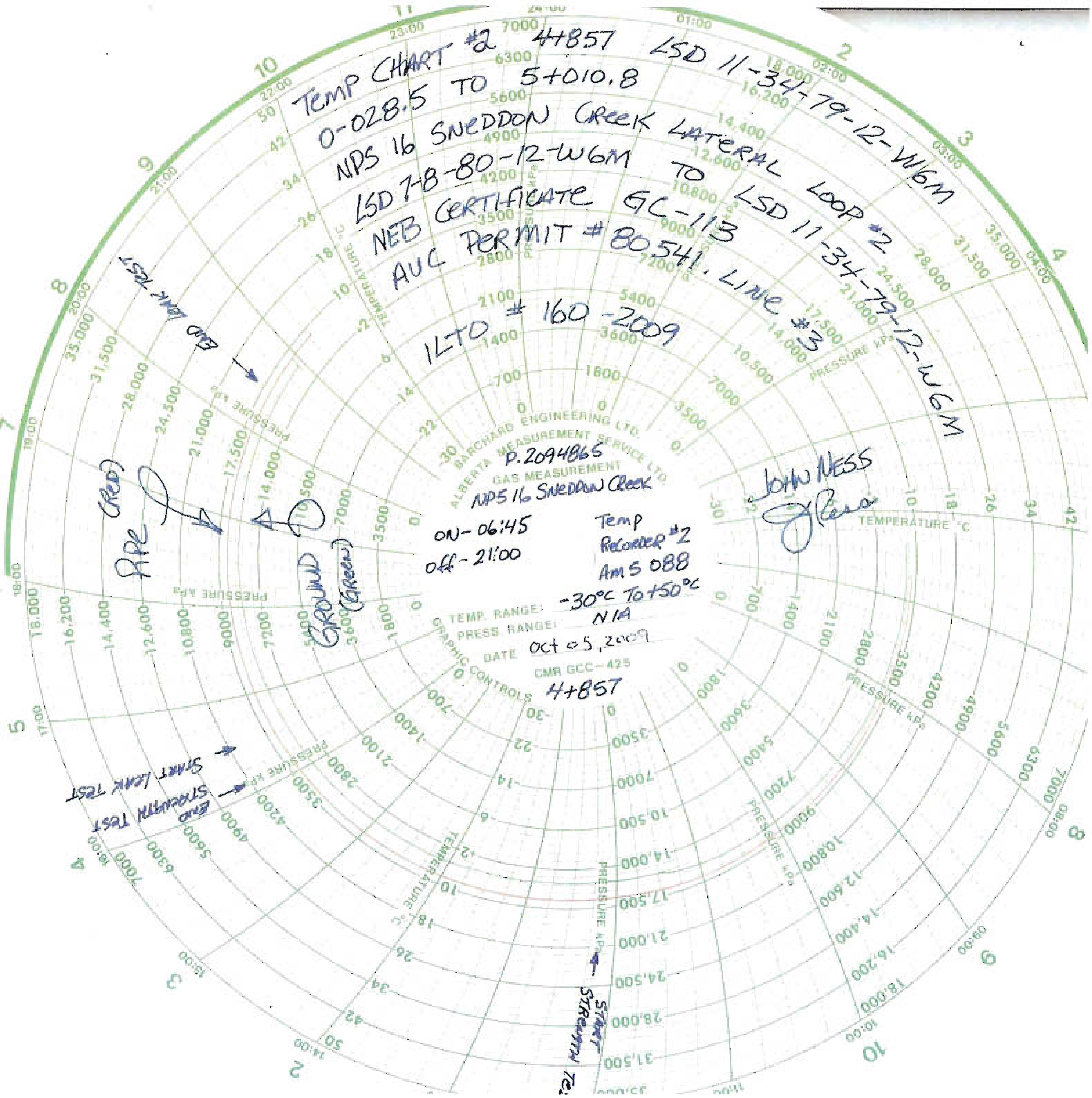
0-028.5 TO 5+010.8

PROJ # 2094865 DATE: OCT 05, 2009


NPS 16 SNEDDON CREEK LATERAL LOOP #2
0-028.5 TO 5+010.8
LSD 7-8-80-12-W6M TO LSD 11-34-79-12-W6M
NEB CERTIFICATE GC-113
AUC PERMIT # 80541. LINE #3
ILTO # 160-2009
JOHN NESS
P.2694865
ALBERTA MEASUREMENT SERVICE LTD
BARCHARD ENGINEERING LTD.
GAS MEASUREMENT
NPS16 SNEDDON CREEK
MIL TEST
RECORDER
AMS-226
DWP
AMS 086
TEMP. RANGE N/A
PRESS. RANGE 0-18,000 KPA
DATE Oct 05/09
CMR GCC-425
GRAPHIC CONTROLS
0-028.5
MIDNIGHT
6 P.M.
PRESSURE kPa
TEMPERATURE °C
DEADWEIGHT
END LEAK TEST 10,310 KPA
START LEAK TEST 10,310 KPA
END STRENGTH TEST 11,590 KPA
START STRENGTH TEST 11,595 KPA
LEAK CHECK
VALVE PILOT



MIDNIGHT 12 MINUIT
NOON 12
6 P.M.
TEMPERATURE °C
PRESSURE kPa
ALBERTA BARCHARD ENGINEERING LTD.
MEASUREMENT SERVICE LTD.
GAS MEASUREMENT
TEMP. RANGE: -30°C TO +50°C
PRESS. RANGE: NA
DATE Oct 05/09
CMR GCC-425
GRAPHIC CONTROLS
Temp Chart #1 0+010 LSD 7-8-80-12-W6M
0-028.5 TO 5+010.8
NPS 16 SNEDDON CREEK LATERAL LOOP #2
LSD 7-8-80-12-W6M TO LSD 11-34-79-12-W6M
NEB Certificate GC-113
AUC PERMIT # 80541. Line #3
ILTO # 160-2009
JOHN NESS
P. 2094865
NPS16 SNEDDON CREEK
Temp. Recorder #1
AMS 115
ON-07:00
Off-20:50
0+010
End Leak Test
Start Leak Test
End Strength Test
Start Strength Test
Ground (Red)
Pipe (Green)



TEMP CHART #2 4+857 LSD 11-34-79-12-W6M
0-028.5 TO 5+010.8
NPS 16 SNEDDON CREEK LATERAL LOOP #2
LSD 7-8-80-12-W6M TO LSD 11-34-79-12-W6M
NEB CERTIFICATE GC-113
AUC PERMIT # 80541. LINE #3
ILTO # 160-2009
BARCHARD ENGINEERING LTD.
ALBERTA MEASUREMENT SERVICE LTD.
GAS MEASUREMENT
P.2094865
NPS 16 SNEDDON CREEK
JOHN NESS
ON-06:45
OFF-21:00
TEMP RECORDER #2
AMS 088
TEMP. RANGE: -30°C TO +50°C
PRESS. RANGE: N/A
DATE Oct 05, 2009
GRAPHIC CONTROLS
CMR GCC-425
4+857
PIPE (RED)
GROUND (GREEN)
END LEAK TEST
START LEAK TEST
END STRENGTH TEST
START STRENGTH TEST
TEMPERATURE °C
PRESSURE kPa
6 P.M.

ALBERTA MEASUREMENT SERVICES LTD.
5327 - 91 STREET ~ EDMONTON, ALBERTA, T6E 2E6 ~ CANADA
Phone {780} 468- 6387 ~ Fax {780} 462-9387

DEADWEIGHT CALIBRATION CERTIFICATE

CUSTOMER: Parkland Pipeline Contractors

MODEL: Chandler

SERIAL: AMS-086

RANGE: 344.7 - 21,000 kPa

DATE: September 22, 2009

	MASTER DEADWEIGHT READING	WEIGHT #	CUSTOMER DEADWEIGHT READING	% DEVIATION
1)	5000 kPa	A	5000 kPa	0%
2)	5000 kPa	B	5000 kPa	0%
3)	5000 kPa	C	5000 kPa	0%
4)	2000 kPa	D	2000 kPa	0%
5)	2000 kPa	E	2000 kPa	0%
6)	1000 kPa	F	1000 kPa	0%
7)	500 kPa	G	500 kPa	0%
8)	200 kPa	H	200 kPa	0%
9)	100 kPa	I	100 kPa	0%
10)	50 kPa	J	50 kPa	0%
11)	50 kPa	K	50 kPa	0%
12)	50 kPa	P	50 kPa	0%
13)	50 kPa	Q	50 kPa	0%
14)	20 kPa	L	20 kPa	0%
15)	20 kPa	M	20 kPa	0%
16)	10 kPa	N	10 kPa	0%
17)	5 kPa	O	5 kPa	0%
	344.7 kPa	BASE WEIGHT	344.7 kPa	0%
	155.3 kPa	R	155.3 kPa	0%

REMARK: DO NOT INTERCHANGE WEIGHTS WITH OTHER DEADWEIGHT TESTERS.
DO NOT TIGHTEN PISTON.

THE ABOVE EQUIPMENT HAS BEEN COMPARED TO A RUSKA MODEL 5000 S/N 12342 DEADWEIGHT TESTER WHICH WAS CALIBRATED AGAINST A DHI MODEL RPM-4 S/N 489 TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST).

WITNESSED BY: _____ **SIGNATURE:** _____

P2090285 Doe Creek NPS 12" KH

P2090285 Doe Creek NPS 12" Kt

ALBERTA MEASUREMENT SERVICES LTD.
5327 - 91 STREET
EDMONTON, AB, CANADA, T6E 6E2
PH: 780.468.6387 FAX: 780.462.9387
WWW.AMS-CANADA.COM

AMS

CALIBRATION REPORT

6211

Company	Parkland Pipeline Contractors						Technician:	Shane Snider		
Model	Barton									
Location	Rental						Witness:	Kevin Cam		
Date	September 22, 2009									
Chart	Linear	X	Serial #	AMS-226			Clock	24 Hour	7 Day	Programmable X
Manifold	3 Way		5 Way	Piped	N/A	X	Condition	Good X	Bad	

Range %	0	10	20	30	40	50	60	70	80	90	100
Differential as found											
Differential as left											
Static as found											
Static as left	0	1800	3600	5400	7200	9000	10800	12600	14400	16200	18000
Temperature as found											
Temperature as left											

Pen Time Arc	Yes	X	No	
Pen Tension Good	Yes	X	No	

Operating Ranges				Static Zero
Differential	N/A	Found	N/A	
Static	0 - 18,000 kpa	Left	0 kpa	
Temperature	N/A	Ambient Temp	20°C	

Comments: Calibrated as required

Materials Supplied: Spare charts + pens

The above equipment has been compared to:

Differential: Ametek PK-II S/N 83713 traceable to national standards.

Pressure: Ruska 5000 S/N 12342 traceable to national standards.

Temperature: Fluke 51-II S/N 76420083 traceable to national standards

Signature: [signature]

P2090285 Doe Creek NPS 12" KT

ALBERTA MEASUREMENT SERVICES LTD.
5327 - 91 STREET
EDMONTON, AB, CANADA, T6E 6E2
PH: 780.468.6387 FAX: 780.462.9387
WWW.AMS-CANADA.COM

CALIBRATION REPORT 6207

Company	Parkland Pipeline Contractors							Technician:	Travis Stovold						
Model	Barton														
Location	Rewind							Witness:	Kerri Coons						
Date	September 22 2009														
Chart	Linear	X	Serial #	AMS - 115				Clock	24 Hour		7 Day		Programmable	X	
Manifold	3 Way		5 Way		Piped		N/A	X	Condition	Good	X	Bad			

Range %	0	10	20	30	40	50	60	70	80	90	100
Differential as found											
Differential as left											
Temp as found	Red										
Temp as left	-30	-22	-14	-6	+2	10	18	26	34	42	50
Temperature as found	Green										
Temperature as left	-30	-22	-14	-6	+2	10	18	26	34	42	50

Pen Time Arc	Yes	X	No		
Pen Tension Good	Yes	X	No		

Operating Ranges				Static Zero
Differential	N/A	Found	N/A	
Static	N/A	Left	N/A	
Temperature	-30 to 50 °C	Ambient Temp	20°C	

Comments: Calibrated as required

Materials Supplied: Spare charts + pens

Above equipment has been compared to:

Differential: Ametek PK-II S/N 83713 traceable to national standards.

Pressure: Ruska 5000 S/N 12342 traceable to national standards.

Temperature: Fluke 51-II S/N 76420083 traceable to national standards

Signature:

P2010285 Doe Creek NPS12" K4

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CALIBRATION REPORT 6215

Company	Parkland Pipeline Contractors							Technician:	Travis Storvold						
Model	Barton							Witness:							
Location	Rental														
Date	September 24, 2009														
Chart	Linear	X	Serial #	AMS-088				Clock	24 Hour		7 Day		Programmable	X	
Manifold	3 Way		5 Way		Piped		N/A	X	Condition	Good	X	Bad			

Range %	0	10	20	30	40	50	60	70	80	90	100
Differential as found	—										
Differential as left	—										
Static as found	N/A			Red							
Static as left	-30	-22	-14	-6	+2	10	18	26	34	42	50
Temperature as found	N/A			Green							
Temperature as left	-30	-22	-14	-6	+2	10	18	26	34	42	50

P ime Arc	Yes	X	No		
Pen Tension Good	Yes	X	No		

Operating Ranges			Static Zero
Differential	N/A	Found	N/A
Static	N/A	Left	N/A
Temperature	-30 to 50°C	Ambient Temp	20°C

Comments: Calibrated as required.

Materials Supplied: Spare charts & pens

The above equipment has been compared to:

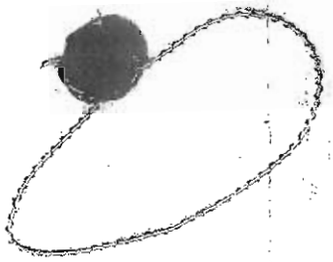
Differential: Ametek PK-II S/N 83713 traceable to national standards.

P ure: Ruska 5000 S/N 12342 traceable to national standards.

Temperature: Fluke 51-II S/N 76420083 traceable to national standards

Signature:

P2094865 NPS 16" Sheddan



Company Parkland Pipeline Contractors
Model 1" CMC Serial No. AMS-1140
Location Rental
Date October 4, 2009
Run No. 1 1.000 Run No. 3 1.000
Run No. 2 1.000 Run No. 4 1.000
Remarks Calibrated using fresh H2O
Totalizer: AMS-067
Calibration Factor 1.0000 @ 891.97 p/USGal

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GAUGE CALIBRATION CERTIFICATE

CUSTOMER: Parkland Pipelines Contactor
MODEL: AMS
RANGE: 0 – 3000 PSI
SERIAL #: AMS-1073
DATE: September 22, 2009

AMBIENT TEMP: 20C
ZERO
AS FOUND: 0 PSI
AS LEFT: 0 PSI
MECHANIC: Shane Snider

MASTER DEADWEIGHT READING	INSTRUMENT AS FOUND	INSTRUMENT AS LEFT
750 PSI	750 PSI	750 PSI
1500 PSI	1500 PSI	1500 PSI
2250 PSI	2250 PSI	2250 PSI

REMARKS: THIS GAUGE IS CERTIFIED TO MEET AND/OR EXCEED THE REQUIREMENTS AS OUTLINED IN API SPECIFICATION 6A, NINETEENTH EDITION, JULY, 2004. IN COMPLIANCE WITH SECTION 7, PARAGRAPH 7.2.2, SUBPARAGRAPH 7.2.2.1, 7.2.2.2, 7.2.2.3.

THE ABOVE EQUIPMENT HAS BEEN COMPARED TO A RUSKA MODEL 5000 S/N 12342 DEADWEIGHT TESTER WHICH WAS CALIBRATED AGAINST A DHI MODEL RPM-4 S/N 489 TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST).

WITNESSED BY: _____ **SIGNATURE:** _____

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Phone {780} 468- 6387 ~ Fax {780} 462-9387

GAUGE CALIBRATION CERTIFICATE

CUSTOMER: Parkland Pipelines Contactor
MODEL: AMS
RANGE: 0 – 3000 PSI
SERIAL #: AMS-1144
DATE: September 22, 2009

AMBIENT TEMP: 20C
ZERO
AS FOUND: 0 PSI
AS LEFT: 0 PSI
MECHANIC: Shane Snider

MASTER DEADWEIGHT READING	INSTRUMENT AS FOUND	INSTRUMENT AS LEFT
750 PSI	750 PSI	750 PSI
1500 PSI	1500 PSI	1500 PSI
2250 PSI	2250 PSI	2250 PSI

REMARKS: THIS GAUGE IS CERTIFIED TO MEET AND/OR EXCEED THE REQUIREMENTS AS OUTLINED IN API SPECIFICATION 6A, NINETEENTH EDITION, JULY, 2004. IN COMPLIANCE WITH SECTION 7, PARAGRAPH 7.2.2, SUBPARAGRAPH 7.2.2.1, 7.2.2.2, 7.2.2.3.

THE ABOVE EQUIPMENT HAS BEEN COMPARED TO A RUSKA MODEL 5000 S/N 12342 DEADWEIGHT TESTER WHICH WAS CALIBRATED AGAINST A DHI MODEL RPM-4 S/N 489 TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST).

WITNESSED BY: _____ **SIGNATURE:** _____

P2090285 Doe Creek NPS 12" KA