WPXENERGY

January 18, 2017

New Mexico Oil Conservation Division Director's Office
Attn: David Catanach,
Division Director 1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Meter Proving Frequency Variance Request. Variance to the ACT meter proving requirement in paragraph (12) of subsection C of 19.15.18.15 NMAC - Quarterly Proving of Automatic Custody Transfer Equipment (ACT).

Dear Director Catanach,

WPX Energy Production, LLC (WPX) is requesting a variance to the ACT meter proving requirement in paragraph (12) of subsection C of 19.15.18.15 New Mexico Administrative Code from a monthly ACT meter proving frequency to quarterly ACT meter proving. This would be an exception to the meter proving that states that all measuring and recording devices be checked for accuracy once each month. WPX has obtained C-106 Form approvals from the NMOCD Aztec Office to install LACT/ACT systems which utilize a very accurate Coriolis measurement technology for crude oil measurement. WPX has provided the attached monthly proving reports that show that the installed Coriolis meters continue to perform extremely well and have provided very stable meter proving factors. WPX has attached copies of the proving reports that provide documented meter test results that documents the meter stability and supports our request to move from monthly to quarterly ACT meter proving. The Coriolis meters will continue to be proved and tested per current and future Bureau of Land Management (BLM) rules and within the American Petroleum Institute's standards and guidelines. The provers will be NIST traceable and water drawn on an annual basis.

The leases served by the LACT/ACT units are a mixture of Federal, Indian and fee leases, and WPX will prove quarterly and will continue to provide a meter proving schedule to the NMOCD representatives which will allow the NMOCD to witness any or all of the meter provings. If you have any questions in regards to this request or need additional information, please do not hesitate to contact me at (505) 333-1812.

Sincerely yours,

Randy VanDenBerg
District Superintendent
WPX Energy Production, LLC

Cc: Charlie Perrin, District Supervisor (NMOCD District 3 - Aztec)
Brandon Powell, Inspection and Enforcement Supervisor (NMOCD District 3 - Aztec)

McMillan, Michael, EMNRD

From: Felix, Andrea <Andrea.Felix@wpxenergy.com>
Sent: Friday, May 5, 2017 12:28 PM
To: McMillan, Michael, EMNRD
Cc: Riley, Heather; VanDenBerg, Randy; Jordan, Robert; Shepard, Cyd; Jaramillo, Marie; Casey Haga; Granillo, Lacey; Atencio, Manuel
Subject: RE: [EXTERNAL] RE: Quarterly Proving Request
Attachments: 20170504065100638.pdf

Good afternoon Mike,

Please see attached proving data for the below listed wells. As we discussed all the wells within this quarterly proving request are Basin Mancos or equivalent wells.

Thank you,

Andrea Felix, RWA
Regulatory Support Team Lead
San Juan Basin
Office: 505-333-1849
Cell: 505-386-8205
WPXENERGY

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Tuesday, May 02, 2017 4:17 PM
To: Felix, Andrea <Andrea.Felix@wpxenergy.com>
Subject: RE: [EXTERNAL] RE: Quarterly Proving Request

Andrea:

Send the proving data for NW Lybrook Unit #133H, NW Lybrook Unit #131H, NW Lybrook Unit #143H, Chaco 2307-17H#163H, Chaco 2308-24H#153H, Chaco 2308-24H#151H, Chaco 2308-24H#147H, Mc 2 Com #283H, Chaco 2308-04P #150H,

From: Felix, Andrea [mailto:Andrea.Felix@wpxenergy.com]
Sent: Tuesday, May 2, 2017 11:13 AM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Cc: Riley, Heather <Heather.Riley@wpxenergy.com>; VanDenBerg, Randy <RandyN.VanDenBerg@wpxenergy.com>; Jordan, Robert <Robert.Jordan@wpxenergy.com>; Shepard, Cyd <Cyd.Shepard@wpxenergy.com>; Jaramillo, Marie <Marie.Jaramillo@wpxenergy.com>; Casey Haga <caseyhaga@eis-llc.com>; Granillo, Lacey <Lacey.Granillo@wpxenergy.com>; Atencio, Manuel <Manuel.Atencio1@wpxenergy.com>
Subject: RE: [EXTERNAL] RE: Quarterly Proving Request

Good morning Mike,

Jude Dysart
VP – Engineering & Technical Services
O: (918) 289-2145
M: (405) 834-9402
jude.dysart@whiptailmidstream.com

WHIPTAIL MIDSTREAM

15 West 6th Street | Suite 2901
Tulsa | Oklahoma | 74119
918.289.2949
www.whiptailmidstream.com

March 2, 2017

Andrea Felix, RWA
Regulatory Specialist Staff
WPX Energy
721 S Main Avenue
Aztec, NM 87410

RE: **NMOCD Meter Proving Frequency Variance Request**

Mrs. Felix:

Whiptail Midstream, LLC, on behalf of itself and its affiliates (collectively, "Whiptail") has no objection to WPX Energy, LLC (collectively, "WPX") pursuing the proposed NMOCD Meter Proving Frequency Variance Request.

Whiptail believes this variance to proving frequency will have minimal, if any, impact to realized measurement accuracy in the field. Approval of this variance will also decrease the operational efforts associated with maintaining measurement devices, and will allow our personnel to focus more on the safe and efficient operations of our measurement facilities and pipeline systems.

If WPX, or the NMOCD, should have any questions concerning this variance request, Whiptail is available to discuss at your convenience. As a new entrant into New Mexico, Whiptail is excited about the opportunity to work and grow alongside our partners and neighbors in the community.

Sincerely,

Jude Dysart
VP – Engineering and Technical Services

McMillan, Michael, EMNRD

From: Felix, Andrea <Andrea.Felix@wpxenergy.com>
Sent: Thursday, April 20, 2017 8:18 AM
To: McMillan, Michael, EMNRD
Cc: Riley, Heather; VanDenBerg, Randy; Jordan, Robert; Shepard, Cyd; Jaramillo, Marie; Casey Haga; Granillo, Lacey; Atencio, Manuel
Subject: RE: [EXTERNAL] RE: Quarterly Proving Request
Attachments: WPX LACTmeasurementfacilitiesSanJuan.xlsx

Good morning Mike,

Please see attached the updated spreadsheet, thank you for catching the blank line for the NE Chaco Com #187H it now reads Chaco Unit NE HZ (OIL).

The truck and pipeline LACTS have the potential to servicing different pools, so therefore we have left the pool column blank for that reason.

Thank you,

Andrea Felix, RWA
Regulatory Specialist Staff
San Juan Basin
Office: 505-333-1849
Cell: 505-386-8205
WPXENERGY.

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Wednesday, April 19, 2017 4:24 PM
To: Felix, Andrea <Andrea.Felix@wpxenergy.com>
Subject: RE: [EXTERNAL] RE: Quarterly Proving Request

Andrea:
Why are the pools for Truck and Pipeline LACTS (ones at bottom) and NE Chaco Com. #187H Transfer LACT blank? Are they servicing many different pools and leases, so the exact pool could not be determined?
Thanks
Mike

From: Felix, Andrea [mailto:Andrea.Felix@wpxenergy.com]
Sent: Wednesday, April 19, 2017 3:52 PM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Cc: Riley, Heather <Heather.Riley@wpxenergy.com>; VanDenBerg, Randy <RandyN.VanDenBerg@wpxenergy.com>; Jordan, Robert <Robert.Jordan@wpxenergy.com>; Shepard, Cyd <Cyd.Shepard@wpxenergy.com>; Jaramillo, Marie <Marie.Jaramillo@wpxenergy.com>; Casey Haga <caseyhaga@eis-llc.com>; Granillo, Lacey

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Friday, February 17, 2017 11:28 AM
To: Jones, William V, EMNRD
Cc: Brooks, David K, EMNRD
Subject: RE: WPX metering frequency exception

Also I am unclear of notice

From: McMillan, Michael, EMNRD
Sent: Friday, February 17, 2017 11:27 AM
To: Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Cc: Brooks, David K, EMNRD <DavidK.Brooks@state.nm.us>
Subject: WPX metering frequency exception

Will and David:
I looked at NMAC 19.15.18 15.Paragraph12-14 (legally wrong description), but it appears that WPX can apply administratively for an exception, which allows the Director to set the set the frequency determination. All they would have to do is provide a graph (which is a literal interpretation, but based on the data presented not needed).
I believe OCD should agree in this case to make WPX follow the either BLM or API standards, whichever is more stringent (Most likely irrelevant since BLM follows API standards)

I will put the application bank on Will's chair.

Mike

MICHAEL A. MCMILLAN
Engineering Bureau, Oil Conservation Division
1220 south St. Francis Dr., Santa Fe NM 87505
O: 505.476.3448
Michael.McMillan@state.nm.us

Customer: WPX -
Operator:
Location: 166 - Lact
Federal ID: SEC.15M T23N R7W

15-23N 7W
MECHACO 3089-31202

Meter Data

67432068 WPX 166H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14494842
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 43.6 °API
Obs. Temp: 87.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.2 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: Manual
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1474589103	1476169000
Date	09/22/2016	10/10/2016
Time	12:05	18:56
Product	Crude	Crude
Flowrate	35 bbl/hr	35 bbl/hr
Totalizer		
Throughput		
Base Density	41.8°API	41.2 °API
Avg Prvr Temp	117.9	109.8
Avg Prvr Press	38.0	38.0
Repeatability	0.021 %	0.042 %
CMF	0.9994	0.9990
CMF Variance	-0.0001	-0.0004

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 38.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	105.2	105.2	38.0	42.0	11910.000	1	Yes	0.99850	35.000
2	108.6	108.6	38.0	42.0	11911.000	2	Yes	0.99847	35.000
3	110.8	110.8	38.0	42.0	11907.000	3	Yes	0.99884	35.000
4	112.1	112.1	38.0	42.0	11908.000	4	Yes	0.99879	35.000
5	112.5	112.5	38.0	42.0	11907.000	5	Yes	0.99889	35.000
Average	109.8	109.8	38.0	42.0	11908.6000			0.99870	35.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00093	1.00003	0.97446	1.00025	0.97564	1.15926

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11908.6000	10000.0000	1.19086	0.97446	1.00028	0.97473	1.16077

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	0.9987	MF	
(2)	MF * CPL =	0.9990	CMF	
(3)	1 ÷ MF =	1.0013	MA	
(4)	NKF ÷ MF =	10013	KF	
(5)	KF ÷ CPL =	10010	CKF	

Repeatability: 0.042 %
Uncertainty: 0.022 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVE
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location: 166 - Lact
Federal ID: SEC.15M T23N R7W

AE CHA a
15-23n-7w

Meter Data

67432068 WPX 166H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14494842
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 43.9 °API
Obs. Temp: 81.1 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 42.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 6
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1469137585	1472092668
Date	07/21/2016	08/24/2016
Time	9:46	14:37
Product	Crude	Crude
Flowrate	35 bbl/hr	25 bbl/hr
Totalizer		
Throughput		
Base Density	40.7°API	42.0 °API
Avg Prvr Temp	80.5	80.2
Avg Prvr Press	36.0	39.0
Repeatability	0.014 %	0.050 %
CMF	1.0008	1.0012
CMF Variance	-0.0004	0.0004

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 41.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?	IMF	Flowrate bbl/hr
1	83.2	83.2	39.0	41.0	11878.741	1 Yes	1.00072	25.012
2	80.4	80.4	39.0	41.0	11872.150	2 Yes	1.00122	24.996
3	79.7	79.7	39.0	41.0	11876.841	3 Yes	1.00081	25.017
4	79.1	79.1	39.0	41.0	11876.231	4 Yes	1.00085	25.034
5	78.5	78.5	39.0	41.0	11871.848	5 Yes	1.00121	25.041
Average	80.2	80.2	39.0	41.0	11875.1622		1.00096	25.020

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00038	1.00003	0.98959	1.00023	0.99022	1.17658

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11875.1622	10000.0000	1.18752	0.98959	1.00025	0.98984	1.17545

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0010	MF
	(2)	MF * CPL =	1.0012	CMF
	(3)	1 ÷ MF =	0.9990	MA
	(4)	NKF ÷ MF =	9990.0	KF
	(5)	KF ÷ CPL =	9988.0	CKF

Repeatability: 0.050 %
Uncertainty: 0.027 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor
Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician: Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location: 166 - Lact
Federal ID: SEC.15M T23N R7W

MECHACO
15-23n-7h

Meter Data

67432068 WPX 166H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 in
Serial No.	14494842
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	DOMINION
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.3 °API
Obs. Temp	110.4 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1472093974	1474586840
Date	08/24/2016	09/22/2016
Time	14:59	11:27
Product	Crude	Crude
Flowrate	35 bbl/hr	25 bbl/hr
Totalizer		
Throughput		
Base Density	42.0°API	41.8 °API
Avg Prvr Temp	76.6	116.0
Avg Prvr Press	37.0	40.0
Repeatability	0.016 %	0.046 %
CMF	1.0013	0.9995
CMF Variance	0.0001	-0.0018

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	40.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	114.2	114.2	40.0	41.0	11904.436	1	Yes	0.99914	25.003
2	115.9	115.9	40.0	41.0	11901.652	2	Yes	0.99940	24.955
3	116.4	116.4	40.0	41.0	11907.429	3	Yes	0.99894	24.941
4	116.6	116.6	40.0	41.0	11904.730	4	Yes	0.99916	24.885
5	116.8	116.8	40.0	41.0	11904.693	5	Yes	0.99917	24.868
Average	116.0	116.0	40.0	41.0	11904.5880			0.99916	24.930

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00104	1.00003	0.97105	1.00027	0.97235	1.15535

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11904.5880	10000.0000	1.19046	0.97105	1.00028	0.97132	1.15632

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	0.9992	MF	
(2)	MF * CPL =	0.9995	CMF	
(3)	1 ÷ MF =	1.0008	MA	
(4)	NKF ÷ MF =	10008	KF	
(5)	KF ÷ CPL =	10005	CKF	

Repeatability: 0.046 %
Uncertainty: 0.025 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.

Customer: WPX -
Operator:
Location:
Federal ID:
13-23-7W
33-053-3162
Re check meter #175H

Meter Data

67418475 WPX 175H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.2 °API
Obs. Temp	89.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476431917	1476432049
Date	10/13/2016	10/13/2016
Time	19:58	20:00
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	41.6°API	41.6 °API
Avg Prvr Temp	86.8	90.1
Avg Prvr Press	48.0	42.0
Repeatability	0.045 %	0.044 %
CMF	1.0021	1.0035
CMF Variance	-0.0030	0.0014

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	40.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	88.5	88.5	42.0	46.0	11850.000	1	Yes	1.00324	12.000
2	89.6	89.6	42.0	46.0	11853.000	2	Yes	1.00301	12.000
3	90.4	90.4	42.0	46.0	11850.000	3	Yes	1.00327	12.000
4	90.6	90.6	42.0	46.0	11849.000	4	Yes	1.00335	12.000
5	91.2	91.2	42.0	46.0	11848.000	5	Yes	1.00345	12.000
Average	90.1	90.1	42.0	46.0	11850.0000			1.00326	12.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00056	1.00003	0.98453	1.00026	0.98537	1.17082

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11850.0000	10000.0000	1.18500	0.98453	1.00029	0.98482	1.16701

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0033	MF
	(2)	MF * CPL =	1.0035	CMF
	(3)	1 ÷ MF =	0.9967	MA
	(4)	NKF ÷ MF =	9967.1	KF
	(5)	KF ÷ CPL =	9965.1	CKF

Repeatability: 0.044 %
Uncertainty: 0.023 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

AB Chilcoat
13-23H-7W

Meter Data

67418475 WPX 175H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.7 °API
Obs. Temp	77.7 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468963534	1472250823
Date	07/19/2016	08/26/2016
Time	9:25	10:33
Product	Crude	Crude
Flowrate	8 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	42.1 °API
Avg Prvr Temp	89.2	82.6
Avg Prvr Press	118.0	54.0
Repeatability	0.016 %	0.025 %
CMF	0.9753	1.0070
CMF Variance	-0.0206	0.0317

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 53.0 psig
Eq. Vapor Pressure psig
CPL 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	82.1	82.1	54.0	54.0	11808.694	1	Yes	1.00665	8.184
2	82.0	82.0	54.0	54.0	11806.520	2	Yes	1.00684	8.398
3	82.6	82.6	54.0	54.0	11809.458	3	Yes	1.00659	8.388
4	83.0	83.0	54.0	54.0	11808.477	4	Yes	1.00669	8.319
5	83.2	83.2	54.0	54.0	11808.291	5	Yes	1.00671	8.427
Average	82.6	82.6	54.0	54.0	11808.2880			1.00670	8.343

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00042	1.00004	0.98833	1.00033	0.98911	1.17526

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11808.2880	10000.0000	1.18083	0.98833	1.00033	0.98866	1.16744

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0067	MF	
(2)	MF * CPL =	1.0070	CMF	
(3)	1 ÷ MF =	0.9933	MA	
(4)	NKF ÷ MF =	9933.4	KF	
(5)	KF ÷ CPL =	9930.4	CKF	

Repeatability: 0.025 %
Uncertainty: 0.013 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.

Customer: WPX -
Operator:
Location:
Federal ID:

MECHAM
13-23H7H

Meter Data

67418475 WPX 175H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.5 °API
Obs. Temp	100.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473976911	1473976149
Date	09/15/2016	09/15/2016
Time	9:45	9:49
Product	Crude	Crude
Flowrate	41 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	42.9°API	42.9 °API
Avg Prvr Temp	99.0	95.1
Avg Prvr Press	82.0	53.0
Repeatability	0.034 %	0.041 %
CMF	1.0027	1.0051
CMF Variance	0.0000	0.0024

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	36.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	94.8	94.8	53.0	55.0	11832.000	1	Yes	1.00490	8.000
2	94.5	94.5	53.0	55.0	11833.000	2	Yes	1.00482	8.000
3	95.1	95.1	53.0	55.0	11830.000	3	Yes	1.00507	8.000
4	95.3	95.3	53.0	55.0	11835.000	4	Yes	1.00466	8.000
5	95.6	95.6	53.0	55.0	11832.000	5	Yes	1.00491	8.000
Average	**95.1**	**95.1**	**53.0**	**55.0**	**11832.4000**			**1.00487**	**8.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00065	1.00004	0.98168	1.00034	0.98269	1.16763

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11832.4000	10000.0000	1.18324	0.98168	1.00036	0.98203	1.16198

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0049	MF
	(2)	MF * CPL =	1.0051	CMF
	(3)	1 ÷ MF =	0.9951	MA
	(4)	NKF ÷ MF =	9951.2	KF
	(5)	KF ÷ CPL =	9949.2	CKF

Repeatability: 0.041 %
Uncertainty: 0.022 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NE Chaco Com

Meter Data

67419511 WPX 176H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517624	
Model No.	CMF100M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.6 °API
Obs. Temp	99.8 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	38.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468879834	1471572007
Date	07/18/2016	08/18/2016
Time	10:10	14:00
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	38.0°API	38.3 °API
Avg Prvr Temp	117.3	104.2
Avg Prvr Press	172.0	95.0
Repeatability	0.006 %	0.037 %
CMF	0.9974	0.9997
CMF Variance	0.0018	0.0023

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	95.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0006	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	102.7	102.7	95.0	95.0	11899.841	1	Yes	0.99937	8.319
2	104.0	104.0	95.0	95.0	11904.003	2	Yes	0.99905	8.316
3	104.5	104.5	95.0	95.0	11904.817	3	Yes	0.99900	8.319
4	104.8	104.8	95.0	95.0	11902.946	4	Yes	0.99915	8.141
5	104.8	104.8	95.0	95.0	11902.914	5	Yes	0.99915	8.243
Average	104.2	104.2	95.0	95.0	11902.9042			0.99914	8.267

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00082	1.00008	0.97811	1.00058	0.97956	1.16391

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11902.9042	10000.0000	1.19029	0.97811	1.00058	0.97868	1.16491

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9991	MF
	(2)	MF * CPL =	0.9997	CMF
	(3)	1 ÷ MF =	1.0009	MA
	(4)	NKF ÷ MF =	10009	KF
	(5)	KF ÷ CPL =	10003	CKF

Repeatability: 0.037 %
Uncertainty: 0.020 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

MECHACO
13-23N-7W

Meter Data

67413121 WPX 173H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.6 °API
Obs. Temp	82.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	44.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1470359981	1473801422
Date	08/04/2016	09/13/2016
Time	13:19	9:17
Product	Crude	Crude
Flowrate	12 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	41.3°API	44.6 °API
Avg Prvr Temp	95.6	78.1
Avg Prvr Press	65.0	78.0
Repeatability	0.040 %	0.031 %
CMF	1.0010	1.0021
CMF Variance	0.0080	0.0011

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	69.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0004	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	77.4	77.4	78.0	80.0	11865.000	1	Yes	1.00179	12.000
2	77.1	77.1	78.0	80.0	11865.000	2	Yes	1.00179	12.000
3	78.5	78.5	78.0	80.0	11869.000	3	Yes	1.00148	12.000
4	79.7	79.7	78.0	80.0	11866.000	4	Yes	1.00177	12.000
5	77.9	77.9	78.0	80.0	11868.000	5	Yes	1.00156	12.000
Average	**78.1**	**78.1**	**78.0**	**80.0**	**11866.6000**			**1.00168**	**12.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00034	1.00006	0.99039	1.00049	0.99127	1.17783

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11866.6000	10000.0000	1.18666	0.99039	1.00050	0.99089	1.17585

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0017	MF
	(2)	MF * CPL =	1.0021	CMF
	(3)	1 ÷ MF =	0.9983	MA
	(4)	NKF ÷ MF =	9983.0	KF
	(5)	KF ÷ CPL =	9979.0	CKF

Repeatability: 0.031 %
Uncertainty: 0.017 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: Mitchell 173 H
30-039-31207
13-23N-7W

Meter Data

67413121 WPX 173H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.0 °API
Obs. Temp	60.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run 1

Proving Data

	Previous	Current
Task ID	1473801422	1476819712
Date	09/13/2016	10/18/2016
Time	9:17	7:41
Product	Crude	Crude
Flowrate	12 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	44.6°API	41.0 °API
Avg Prvr Temp	78.1	81.4
Avg Prvr Press	78.0	74.0
Repeatability	0.031 %	0.047 %
CMF	1.0021	1.0011
CMF Variance	0.0011	-0.0010

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 70.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0004

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	78.6	78.6	74.0	75.0	11885.722	1	No	1.00008	12.482
2	80.5	80.5	74.0	75.0	11882.431	2	Yes	1.00040	12.499
3	80.7	80.7	74.0	75.0	11880.338	3	Yes	1.00058	12.505
4	80.9	80.9	74.0	75.0	11879.366	4	Yes	1.00065	12.513
5	82.1	82.1	74.0	75.0	11878.244	5	Yes	1.00078	12.495
6	82.8	82.8	74.0	75.0	11877.333	6	Yes	1.00087	12.492
Average	81.4	81.4	74.0	75.0	11879.5424			1.00066	12.501

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00040	1.00006	0.98909	1.00044	0.98998	1.17629

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11879.5424	10000.0000	1.18795	0.98909	1.00045	0.98954	1.17552

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0007	MF
	(2)	MF * CPL =	1.0011	CMF
	(3)	1 ÷ MF =	0.9993	MA
	(4)	NKF ÷ MF =	9993.0	KF
	(5)	KF ÷ CPL =	9989.0	CKF

Repeatability: 0.047 %
Uncertainty: 0.033 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NE CHACO
13-23H-7W

Meter Data

67413121 WPX 173H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.
Model No.

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.
Obs. Gravity: 44.7 °API
Obs. Temp: 98.2 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1469226220	1470369981
Date	07/22/2016	08/04/2016
Time	10:23	13:19
Product	Crude	Crude
Flowrate	13 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	41.8°API	41.3 °API
Avg Prvr Temp	81.7	95.6
Avg Prvr Press	65.0	65.0
Repeatability	0.017 %	0.040 %
CMF	0.9930	1.0010
CMF Variance	-0.0040	0.0080

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 62.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0004

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	92.6	92.6	65.0	68.0	11888.244	1	No	1.00012	12.483
2	94.8	94.8	65.0	68.0	11884.707	2	Yes	1.00045	12.476
3	95.1	95.1	65.0	68.0	11883.034	3	Yes	1.00060	12.511
4	95.7	95.7	65.0	68.0	11884.365	4	Yes	1.00049	12.508
5	96.0	96.0	65.0	68.0	11880.325	5	Yes	1.00085	12.468
6	96.4	96.4	65.0	68.0	11880.671	6	Yes	1.00082	12.512
Average	**95.6**	**95.6**	**65.0**	**68.0**	**11882.6204**			**1.00064**	**12.495**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00066	1.00005	0.98176	1.00041	0.98286	1.16783

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11882.6204	10000.0000	1.18826	0.98176	1.00043	0.98218	1.16709

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0006	MF
	(2)	MF * CPL =	1.0010	CMF
	(3)	1 ÷ MF =	0.9994	MA
	(4)	NKF ÷ MF =	9994.0	KF
	(5)	KF ÷ CPL =	9990.0	CKF

Repeatability: 0.040 %
Uncertainty: 0.030 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NE CHACC
- 13-23H-7H

Meter Data

67412980 WPX 184H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518624	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.2 °API
Obs. Temp	90.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	39.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468373927	1471464727
Date	07/12/2016	08/17/2016
Time	13:38	8:12
Product	Crude	Crude
Flowrate	19 bbl/hr	10 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	39.6 °API
Avg Prvr Temp	83.0	88.9
Avg Prvr Press	200.0	97.0
Repeatability	0.024 %	0.034 %
CMF	0.9986	1.0006
CMF Variance	-0.0007	0.0020

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	84.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	88.7	88.7	97.0	102.0	11885.229	1	Yes	1.00031	10.419
2	88.9	88.9	97.0	102.0	11889.302	2	Yes	0.99997	10.413
3	89.0	89.0	97.0	102.0	11887.675	3	Yes	1.00011	10.355
4	89.0	89.0	97.0	102.0	11886.399	4	Yes	1.00021	10.352
5	89.0	89.0	97.0	102.0	11887.382	5	Yes	1.00013	10.352
Average	88.9	88.9	97.0	102.0	11887.1974			1.00015	10.378

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00054	1.00008	0.98549	1.00058	0.98667	1.17236

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11887.1974	10000.0000	1.18872	0.98549	1.00061	0.98609	1.17218

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0001	MF
	(2)	MF * CPL =	1.0006	CMF
	(3)	1 ÷ MF =	0.9999	MA
	(4)	NKF ÷ MF =	9999.0	KF
	(5)	KF ÷ CPL =	9994.0	CKF

Repeatability: 0.034 %
Uncertainty: 0.018 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NE Chaco
130-23a-7h

Meter Data

67412980 WPX 184H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518624	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.2 °API
Obs. Temp	90.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1471467575	1473976326
Date	08/17/2016	09/15/2016
Time	8:59	9:52
Product	Crude	Crude
Flowrate	19 bbl/hr	18 bbl/hr
Totalizer		
Throughput		
Base Density	39.6°API	41.6 °API
Avg Prvr Temp	98.1	101.9
Avg Prvr Press	182.0	196.0
Repeatability	0.029 %	0.030 %
CMF	1.0010	1.0007
CMF Variance	0.0004	-0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	153.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0010	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	100.3	100.3	196.0	197.0	11896.000	1	Yes	0.99973	18.000
2	99.5	99.5	196.0	197.0	11897.000	2	Yes	0.99962	18.000
3	102.2	102.2	196.0	197.0	11894.000	3	Yes	0.99992	18.000
4	103.4	103.4	196.0	197.0	11898.000	4	Yes	0.99962	18.000
5	103.9	103.9	196.0	197.0	11898.000	5	Yes	0.99962	18.000
Average	101.9	101.9	196.0	197.0	11896.6000			0.99970	18.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00078	1.00016	0.97843	1.00127	0.98059	1.16514

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11896.6000	10000.0000	1.18966	0.97843	1.00128	0.97968	1.16549

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9997	MF
	(2)	MF * CPL =	1.0007	CMF
	(3)	1 ÷ MF =	1.0003	MA
	(4)	NKF ÷ MF =	10003	KF
	(5)	KF ÷ CPL =	9993.0	CKF

Repeatability: 0.030 %
Uncertainty: 0.016 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NECHAS 13-23A-7W 30-039-31229

Meter Data

67412980 WPX 184H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518624	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	40.7 °API
Obs. Temp	60.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473976326	1476432778
Date	09/15/2016	10/13/2016
Time	9:52	20:12
Product	Crude	Crude
Flowrate	18 bbl/hr	18 bbl/hr
Totalizer		
Throughput		
Base Density	41.6°API	40.7 °API
Avg Prvr Temp	101.9	92.1
Avg Prvr Press	196.0	204.0
Repeatability	0.030 %	0.040 %
CMF	1.0007	1.0019
CMF Variance	-0.0003	0.0015

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	196.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0012	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	89.1	89.1	204.0	204.0	11882.000	1	Yes	1.00072	18.000
2	91.3	91.3	204.0	204.0	11882.000	2	Yes	1.00074	18.000
3	92.9	92.9	204.0	204.0	11881.000	3	Yes	1.00087	18.000
4	93.4	93.4	204.0	204.0	11882.000	4	Yes	1.00079	18.000
5	93.9	93.9	204.0	204.0	11886.000	5	Yes	1.00047	18.000
Average	**92.1**	**92.1**	**204.0**	**204.0**	**11882.6000**			**1.00072**	**18.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00060	1.00017	0.98367	1.00126	0.98567	1.17117

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11882.6000	10000.0000	1.18826	0.98367	1.00126	0.98491	1.17033

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0007	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 ÷ MF =	0.9993	MA
	(4)	NKF ÷ MF =	9993.0	KF
	(5)	KF ÷ CPL =	9981.0	CKF

Repeatability: 0.040 %
Uncertainty: 0.021 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

LBC WRCO
12-23 W 7H

Meter Data

67413247 WPX 171H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.	CMF100M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.1 °API
Obs. Temp	85.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468963993	1472241156
Date	07/19/2016	08/26/2016
Time	9:33	7:52
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	40.7°API	40.9 °API
Avg Prvr Temp	97.5	80.9
Avg Prvr Press	97.0	74.0
Repeatability	0.010 %	0.043 %
CMF	0.9971	1.0008
CMF Variance	0.0066	0.0037

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	70.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0004	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	79.0	79.0	74.0	74.0	11879.233	1	Yes	1.00064	8.335
2	81.2	81.2	74.0	74.0	11884.012	2	Yes	1.00027	8.316
3	81.4	81.4	74.0	74.0	11881.345	3	Yes	1.00052	8.317
4	81.4	81.4	74.0	74.0	11884.935	4	Yes	1.00021	8.294
5	81.7	81.7	74.0	74.0	11883.564	5	Yes	1.00032	8.156
Average	80.9	80.9	74.0	74.0	11882.6178			1.00039	8.284

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00039	1.00006	0.98936	1.00044	0.99024	1.17660

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11882.6178	10000.0000	1.18826	0.98936	1.00044	0.98980	1.17614

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0004	MF	
	(2)	MF * CPL =	1.0008	CMF	
	(3)	1 ÷ MF =	0.9996	MA	
	(4)	NKF ÷ MF =	9996.0	KF	
	(5)	KF ÷ CPL =	9992.0	CKF	

Repeatability: 0.043 %
Uncertainty: 0.023 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

67413247 WPX 171H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.	CMF100M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.6 °API
Obs. Temp	84.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473983269	1476519361
Date	09/15/2016	10/14/2016
Time	11:47	20:16
Product	Crude	Crude
Flowrate	12 bbl/hr	41 bbl/hr
Totalizer		
Throughput		
Base Density	40.6°API	40.5 °API
Avg Prvr Temp	89.6	83.6
Avg Prvr Press	68.0	52.0
Repeatability	0.025 %	0.042 %
CMF	1.0016	1.0003
CMF Variance	-0.0001	-0.0013

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	39.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	82.5	82.5	52.0	56.0	11883.000	1	Yes	1.00035	41.000
2	82.6	82.6	52.0	56.0	11888.000	2	Yes	0.99993	41.000
3	83.9	83.9	52.0	56.0	11885.000	3	Yes	1.00020	41.000
4	84.3	84.3	52.0	56.0	11887.000	4	Yes	1.00004	41.000
5	84.5	84.5	52.0	56.0	11886.000	5	Yes	1.00014	41.000
Average	83.6	83.6	52.0	56.0	11885.8000			1.00013	41.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00044	1.00004	0.98804	1.00031	0.98882	1.17492

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11885.8000	10000.0000	1.18858	0.98804	1.00033	0.98837	1.17476

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0001	MF	Trans. Serial No.
(2)	MF * CPL =	1.0003	CMF	Flow Calib Factor
(3)	1 ÷ MF =	0.9999	MA	Density Calib Factor
(4)	NKF ÷ MF =	9999.0	KF	Frequency Set Point
(5)	KF ÷ CPL =	9997.0	CKF	Flowrate Set Point

Zero Verified Zeroed
As Found As Left

Repeatability: 0.042 %
Uncertainty: 0.022 %

Technician: Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

12234-16

Meter Data

67413247 WPX 171H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.	CMF100M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.4 °API
Obs. Temp	92.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473983123	1473983269
Date	09/15/2016	09/15/2016
Time	11:45	11:47
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	40.6°API	40.6 °API
Avg Prvr Temp	89.8	89.6
Avg Prvr Press	102.0	68.0
Repeatability	0.033 %	0.025 %
CMF	1.0017	1.0016
CMF Variance	0.0007	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	60.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0004	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	91.0	91.0	68.0	74.0	11874.000	1	Yes	1.00128	12.000
2	91.1	91.1	68.0	74.0	11877.000	2	Yes	1.00103	12.000
3	87.0	87.0	68.0	74.0	11874.000	3	Yes	1.00120	12.000
4	89.0	89.0	68.0	74.0	11874.000	4	Yes	1.00125	12.000
5	90.1	90.1	68.0	74.0	11874.000	5	Yes	1.00125	12.000
Average	89.6	89.6	68.0	74.0	11874.6000			1.00120	12.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00055	1.00006	0.98497	1.00041	0.98597	1.17153

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11874.6000	10000.0000	1.18746	0.98497	1.00045	0.98541	1.17013

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0012	MF	
	(2)	MF * CPL =	1.0016	CMF	
	(3)	1 ÷ MF =	0.9988	MA	
	(4)	NKF ÷ MF =	9988.0	KF	
	(5)	KF ÷ CPL =	9984.0	CKF	

Repeatability: 0.025 %
Uncertainty: 0.013 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SHL SEC.35 T24N R7W NMPM

30-035-31312
MC-6 Com #160H; 35 - T24N R7W

Meter Data

67440546 WPX 160H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14504524	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.3 °API
Obs. Temp	76.7 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	39.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1469067215	1472166026
Date	07/20/2016	08/25/2016
Time	14:13	11:00
Product	Crude	Crude
Flowrate	41 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	39.7°API	39.9 °API
Avg Prvr Temp	91.0	77.8
Avg Prvr Press	33.0	44.0
Repeatability	0.017 %	0.008 %
CMF	1.0012	1.0022
CMF Variance	-0.0003	0.0010

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	44.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	79.5	79.5	44.0	44.0	11863.977	1	Yes	1.00191	12.490
2	77.8	77.8	44.0	44.0	11864.207	2	Yes	1.00186	12.523
3	77.2	77.2	44.0	44.0	11864.411	3	Yes	1.00184	12.498
4	77.1	77.1	44.0	44.0	11864.513	4	Yes	1.00183	12.546
5	77.2	77.2	44.0	44.0	11864.313	5	Yes	1.00184	12.582
Average	77.8	77.8	44.0	44.0	11864.2842			1.00186	12.528

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00033	1.00004	0.99105	1.00025	0.99166	1.17829

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11864.2842	10000.0000	1.18643	0.99105	1.00025	0.99130	1.17611

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0019	MF
	(2)	MF * CPL =	1.0022	CMF
	(3)	1 ÷ MF =	0.9981	MA
	(4)	NKF ÷ MF =	9981.0	KF
	(5)	KF ÷ CPL =	9978.0	CKF

Repeatability: 0.008 %
Uncertainty: 0.004 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NECHACO
12-23N-7W

Meter Data

67413185 WPX 168H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-6	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	38.5 °API
Obs. Temp	78.1 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	37.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468962940	1472173337
Date	07/19/2016	08/26/2016
Time	9:15	13:02
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	39.1°API	37.0 °API
Avg Prvr Temp	97.8	82.9
Avg Prvr Press	89.0	61.0
Repeatability	0.005 %	0.039 %
CMF	0.9961	1.0019
CMF Variance	0.0045	0.0058

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 44.0 psig
Eq. Vapor Pressure psig
CPL 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	82.6	82.6	61.0	52.0	11867.163	1	Yes	1.00176	8.352
2	83.0	83.0	61.0	52.0	11865.560	2	Yes	1.00191	8.324
3	83.0	83.0	61.0	52.0	11870.202	3	Yes	1.00152	8.336
4	82.9	82.9	61.0	52.0	11868.550	4	Yes	1.00166	8.390
5	82.9	82.9	61.0	52.0	11867.822	5	Yes	1.00173	8.350
Average	82.9	82.9	61.0	52.0	11867.8594			1.00172	8.350

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00043	1.00005	0.98886	1.00034	0.98967	1.17593

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11867.8594	10000.0000	1.18679	0.98886	1.00029	0.98915	1.17391

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0017	MF	
(2)	MF * CPL =	1.0019	CMF	
(3)	1 ÷ MF =	0.9983	MA	
(4)	NKF ÷ MF =	9983.0	KF	
(5)	KF ÷ CPL =	9981.0	CKF	

Repeatability: 0.039 %
Uncertainty: 0.021 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.

Customer: WPX -
Operator:
Location:
Federal ID:

MECHAC
12-23-16

Meter Data

67413185 WPX 168H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.2 °API
Obs. Temp	76.5 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	39.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1474575079	1474576370
Date	09/22/2016	09/22/2016
Time	8:11	8:32
Product	Crude	Crude
Flowrate	42 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	39.8°API	39.8 °API
Avg Prvr Temp	75.2	76.8
Avg Prvr Press	92.0	63.0
Repeatability	0.025 %	0.036 %
CMF	1.0015	1.0016
CMF Variance	0.0000	0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	57.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	75.7	75.7	63.0	63.0	11873.209	1	Yes	1.00108	12.523
2	76.3	76.3	63.0	63.0	11869.010	2	Yes	1.00144	12.525
3	77.1	77.1	63.0	63.0	11872.614	3	Yes	1.00115	12.518
4	77.2	77.2	63.0	63.0	11869.669	4	Yes	1.00140	12.501
5	77.5	77.5	63.0	63.0	11869.915	5	Yes	1.00139	12.503
Average	76.8	76.8	63.0	63.0	11870.8834			1.00129	12.514

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00031	1.00005	0.99156	1.00036	0.99227	1.17902

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11870.8834	10000.0000	1.18709	0.99156	1.00036	0.99192	1.17750

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0013	MF	Trans. Serial No.
	(2)	MF * CPL =	1.0016	CMF	Flow Calib Factor
	(3)	1 ÷ MF =	0.9987	MA	Density Calib Factor
	(4)	NKF ÷ MF =	9987.0	KF	Frequency Set Point
	(5)	KF ÷ CPL =	9984.0	CKF	Flowrate Set Point

Zero Verified — Zeroed
As Found — As Left

Repeatability: 0.036 %
Uncertainty: 0.019 %

Technician: Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

12-23N-7W

Meter Data

67413185 WPX 168H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude	
Batch No.		
Obs. Gravity	40.8 °API	
Obs. Temp	72.0 °F	
Obs. Press	0.0 psi	
API Table	Table A - Crude Oil (2004)	
Base Density	39.8 °API	HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476930131	1476930277
Date	10/19/2016	10/19/2016
Time	14:22	14:24
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	39.8°API	39.8 °API
Avg Prvr Temp	71.5	71.7
Avg Prvr Press	60.0	54.0
Repeatability	0.045 %	0.042 %
CMF	1.0013	1.0023
CMF Variance	-0.0003	0.0010

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	49.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	70.9	70.9	54.0	56.0	11859.000	1	Yes	1.00217	12.000
2	69.8	69.8	54.0	56.0	11859.000	2	Yes	1.00215	12.000
3	70.7	70.7	54.0	56.0	11864.000	3	Yes	1.00175	12.000
4	72.4	72.4	54.0	56.0	11863.000	4	Yes	1.00186	12.000
5	74.8	74.8	54.0	56.0	11864.000	5	Yes	1.00183	12.000
Average	71.7	71.7	54.0	56.0	11861.8000			1.00195	12.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00022	1.00004	0.99413	1.00030	0.99469	1.18189

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11861.8000	10000.0000	1.18618	0.99413	1.00032	0.99445	1.17960

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0020	MF	
(2)	MF * CPL =	1.0023	CMF	
(3)	1 ÷ MF =	0.9980	MA	
(4)	NKF ÷ MF =	9980.0	KF	
(5)	KF ÷ CPL =	9977.0	CKF	

Repeatability: 0.042 %
Uncertainty: 0.022 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
McClane
30-034-31251

Meter Data

67419511 WPX 176H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517624	
Model No.	CMF100M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	40.8 °API
Obs. Temp	60.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476519852	1476519985
Date	10/14/2016	10/14/2016
Time	20:24	20:26
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	40.8°API	40.8 °API
Avg Prvr Temp	96.4	95.2
Avg Prvr Press	132.0	88.0
Repeatability	0.048 %	0.021 %
CMF	1.0010	1.0001
CMF Variance	0.0011	-0.0009

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	82.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	97.6	97.6	88.0	90.0	11897.000	1	Yes	0.99949	12.000
2	95.6	95.6	88.0	90.0	11895.000	2	Yes	0.99962	12.000
3	94.8	94.8	88.0	90.0	11894.000	3	Yes	0.99970	12.000
4	94.1	94.1	88.0	90.0	11894.000	4	Yes	0.99968	12.000
5	93.7	93.7	88.0	90.0	11894.000	5	Yes	0.99968	12.000
Average	**95.2**	**95.2**	**88.0**	**90.0**	**11894.8000**			**0.99963**	**12.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00065	1.00007	0.98207	1.00055	0.98332	1.16838

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11894.8000	10000.0000	1.18948	0.98207	1.00056	0.98262	1.16881

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9996	MF
	(2)	MF * CPL =	1.0001	CMF
	(3)	1 ÷ MF =	1.0004	MA
	(4)	NKF ÷ MF =	10004	KF
	(5)	KF ÷ CPL =	9999.0	CKF

Repeatability: 0.021 %
Uncertainty: 0.011 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

67419511 WPX 176H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517624	
Model No.	CMF100M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.0 °API
Obs. Temp	108.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	38.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473982722	1473982851
Date	09/15/2016	09/15/2016
Time	11:38	11:40
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	38.0°API	38.0 °API
Avg Prvr Temp	106.0	107.8
Avg Prvr Press	118.0	72.0
Repeatability	0.047 %	0.026 %
CMF	1.0007	0.9999
CMF Variance	-0.0001	-0.0008

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	68.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0004	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	108.1	108.1	72.0	81.0	11898.000	1	Yes	0.99955	12.000
2	107.6	107.6	72.0	81.0	11900.000	2	Yes	0.99938	12.000
3	107.5	107.5	72.0	81.0	11899.000	3	Yes	0.99946	12.000
4	107.9	107.9	72.0	81.0	11898.000	4	Yes	0.99956	12.000
5	107.7	107.7	72.0	81.0	11897.000	5	Yes	0.99964	12.000
Average	107.8	107.8	72.0	81.0	11898.4000			0.99952	12.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00089	1.00006	0.97640	1.00045	0.97777	1.16179

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11898.4000	10000.0000	1.18984	0.97640	1.00050	0.97689	1.16234

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9995	MF
	(2)	MF * CPL =	0.9999	CMF
	(3)	1 ÷ MF =	1.0005	MA
	(4)	NKF ÷ MF =	10005	KF
	(5)	KF ÷ CPL =	10001	CKF

Repeatability: 0.026 %
Uncertainty: 0.014 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.6 T23N R6W NMPM

MECHA CO

Meter Data

67421942 WPX 179H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517208	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.8 °API
Obs. Temp	93.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473982469	1473982697
Date	09/15/2016	09/15/2016
Time	11:34	11:36
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	40.9°API	40.9 °API
Avg Prvr Temp	92.9	94.6
Avg Prvr Press	132.0	100.0
Repeatability	0.012 %	0.009 %
CMF	1.0016	1.0019
CMF Variance	0.0001	0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	88.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	94.3	94.3	100.0	101.0	11873.000	1	Yes	1.00147	12.000
2	94.3	94.3	100.0	101.0	11873.000	2	Yes	1.00147	12.000
3	94.5	94.5	100.0	101.0	11874.000	3	Yes	1.00139	12.000
4	95.0	95.0	100.0	101.0	11873.000	4	Yes	1.00148	12.000
5	94.9	94.9	100.0	101.0	11874.000	5	Yes	1.00140	12.000
Average	94.6	94.6	100.0	101.0	11873.4000			1.00144	12.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00064	1.00008	0.98235	1.00062	0.98367	1.16880

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11873.4000	10000.0000	1.18734	0.98235	1.00063	0.98297	1.16712

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0014	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 ÷ MF =	0.9986	MA
	(4)	NKF ÷ MF =	9986.0	KF
	(5)	KF ÷ CPL =	9981.0	CKF

Repeatability: 0.009 %
Uncertainty: 0.005 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.6 T23N R6W NMPM

30-039-31150

Meter Data

67421942 WPX 179H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.: 14517208
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 41.0 °API
Obs. Temp: 60.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs.

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: Manual
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1473982597	1476520196
Date	09/15/2016	10/14/2016
Time	11:36	20:29
Product	Crude	Crude
Flowrate	12 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	40.9°API	41.0 °API
Avg Prvr Temp	94.6	96.0
Avg Prvr Press	100.0	122.0
Repeatability	0.009 %	0.045 %
CMF	1.0019	1.0017
CMF Variance	0.0003	-0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 114.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0007

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	91.5	91.5	122.0	127.0	11881.000	1	Yes	1.00074	12.000
2	96.2	96.2	122.0	127.0	11877.000	2	Yes	1.00115	12.000
3	96.9	96.9	122.0	127.0	11879.000	3	Yes	1.00102	12.000
4	97.5	97.5	122.0	127.0	11877.000	4	Yes	1.00119	12.000
5	97.9	97.9	122.0	127.0	11879.000	5	Yes	1.00103	12.000
Average	**96.0**	**96.0**	**122.0**	**127.0**	**11878.6000**			**1.00103**	**12.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00067	1.00010	0.98161	1.00077	0.98312	1.16814

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11878.6000	10000.0000	1.18786	0.98161	1.00080	0.98240	1.16695

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0010	MF
	(2)	MF * CPL =	1.0017	CMF
	(3)	1 ÷ MF =	0.9990	MA
	(4)	NKF ÷ MF =	9990.0	KF
	(5)	KF ÷ CPL =	9983.0	CKF

Repeatability: 0.045 %
Uncertainty: 0.024 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.6 T23N R6W NMPM

IMF Calc A-CV

Meter Data

67421942 WPX 179H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	1.00 in
Serial No.	14517208
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	DOMINION
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.0 °API
Obs. Temp	102.5 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468879486	1471565892
Date	07/18/2016	08/18/2016
Time	10:04	12:18
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	39.6°API	40.3 °API
Avg Prvr Temp	122.3	103.2
Avg Prvr Press	190.0	110.0
Repeatability	0.034 %	0.015 %
CMF	0.9988	1.0021
CMF Variance	-0.0028	0.0033

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	105.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0007

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	103.4	103.4	110.0	112.0	11875.725	1	Yes	1.00143	8.339
2	102.7	102.7	110.0	112.0	11874.443	2	Yes	1.00152	8.337
3	103.3	103.3	110.0	112.0	11876.100	3	Yes	1.00139	8.338
4	103.3	103.4	110.0	112.0	11876.956	4	Yes	1.00137	8.337
5	103.3	103.4	110.0	112.0	11875.850	5	Yes	1.00146	8.298
Average	103.2	103.2	110.0	112.0	11875.8148			1.00143	8.330

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00080	1.00009	0.97809	1.00070	0.97965	1.16402

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11875.8148	10000.0000	1.18758	0.97809	1.00071	0.97878	1.16238

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0014	MF	
(2)	MF * CPL =	1.0021	CMF	
(3)	1 ÷ MF =	0.9986	MA	
(4)	NKF ÷ MF =	9986.0	KF	
(5)	KF ÷ CPL =	9979.0	CKF	

Repeatability: 0.015 %
Uncertainty: 0.008 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.5 T23N R6W NMPM
NECH4W Com
6-23N-7W

Meter Data

67424230 WPX 254H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518580	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.6 °API
Obs. Temp	95.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473982112	1473982232
Date	09/15/2016	09/15/2016
Time	11:28	11:30
Product	Crude	Crude
Flowrate	41 bbl/hr	18 bbl/hr
Totalizer		
Throughput		
Base Density	41.5°API	41.5 °API
Avg Prvr Temp	92.4	94.2
Avg Prvr Press	168.0	140.0
Repeatability	0.016 %	0.026 %
CMF	1.0006	1.0004
CMF Variance	0.0004	-0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	129.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0008	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	93.7	93.7	140.0	144.0	11894.000	1	Yes	0.99972	18.000
2	94.0	94.0	140.0	144.0	11895.000	2	Yes	0.99964	18.000
3	94.3	94.3	140.0	144.0	11896.000	3	Yes	0.99956	18.000
4	94.5	94.5	140.0	144.0	11897.000	4	Yes	0.99947	18.000
5	94.4	94.4	140.0	144.0	11894.000	5	Yes	0.99973	18.000
Average	94.2	94.2	140.0	144.0	11895.2000			0.99962	18.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00064	1.00012	0.98244	1.00088	0.98405	1.16925

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11895.2000	10000.0000	1.18952	0.98244	1.00091	0.98333	1.16969

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9996	MF	
	(2)	MF * CPL =	1.0004	CMF	
	(3)	1 ÷ MF =	1.0004	MA	
	(4)	NKF ÷ MF =	10004	KF	
	(5)	KF ÷ CPL =	9996.0	CKF	

Repeatability: 0.026 %
Uncertainty: 0.014 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.5 T23N R6W NMPM

NE CHACO COM

Meter Data

67424230 WPX 254H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518580	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.9 °API
Obs. Temp	103.5 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468879035	1471560970
Date	07/18/2016	08/18/2016
Time	9:57	10:56
Product	Crude	Crude
Flowrate	41 bbl/hr	19 bbl/hr
Totalizer		
Throughput		
Base Density	42.0°API	41.1 °API
Avg Prvr Temp	109.2	103.5
Avg Prvr Press	208.0	147.0
Repeatability	0.031 %	0.020 %
CMF	0.9993	1.0001
CMF Variance	-0.0027	0.0008

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	142.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0009	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	101.3	101.3	147.0	157.0	11900.902	1	Yes	0.99923	18.711
2	103.0	103.0	147.0	157.0	11901.105	2	Yes	0.99925	18.733
3	103.9	103.9	147.0	157.0	11901.432	3	Yes	0.99924	18.697
4	104.6	104.6	147.0	157.0	11901.256	4	Yes	0.99925	18.724
5	104.8	104.8	147.0	157.0	11903.812	5	Yes	0.99905	18.729
Average	103.5	103.5	147.0	157.0	11901.7014			0.99920	18.719

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00081	1.00012	0.97773	1.00095	0.97957	1.16393

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11901.7014	10000.0000	1.19017	0.97773	1.00101	0.97872	1.16484

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9992	MF	Trans. Serial No.
	(2)	MF * CPL =	1.0001	CMF	Flow Calib Factor
	(3)	1 ÷ MF =	1.0008	MA	Density Calib Factor
	(4)	NKF ÷ MF =	10008	KF	Frequency Set Point
	(5)	KF ÷ CPL =	9999.0	CKF	Flowrate Set Point

Zero Verified Zeroed
As Found As Left

Repeatability: 0.020 %
Uncertainty: 0.011 %

Technician:

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.5 T23N R6W NMPM
NE Chaco Com
30-039-31284

Meter Data

67424230 WPX 264H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518580	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	45.5 °API
Obs. Temp	94.8 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.051 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476834812	1476835883
Date	10/18/2016	10/18/2016
Time	11:53	12:11
Product	Crude	Crude
Flowrate	42 bbl/hr	19 bbl/hr
Totalizer		
Throughput		
Base Density	42.4°API	42.4 °API
Avg Prvr Temp	91.9	91.2
Avg Prvr Press	180.0	148.0
Repeatability	0.042 %	0.050 %
CMF	1.0002	0.9999
CMF Variance	-0.0002	-0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	140.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0009	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	91.9	91.9	148.0	152.0	11903.105	1	Yes	0.99892	18.651
2	91.5	91.5	148.0	152.0	11900.021	2	Yes	0.99918	18.646
3	91.2	91.2	148.0	152.0	11899.627	3	Yes	0.99920	18.698
4	90.9	90.9	148.0	152.0	11901.499	4	Yes	0.99902	18.701
5	90.6	90.6	148.0	152.0	11905.192	5	Yes	0.99870	18.612
Average	**91.2**	**91.2**	**148.0**	**152.0**	**11901.8888**			**0.99900**	**18.662**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00058	1.00012	0.98382	1.00094	0.98543	1.17089

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11901.8888	10000.0000	1.19019	0.98382	1.00096	0.98476	1.17205

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9990	MF
	(2)	MF * CPL =	0.9999	CMF
	(3)	1 ÷ MF =	1.0010	MA
	(4)	NKF ÷ MF =	10010	KF
	(5)	KF ÷ CPL =	10001	CKF

Repeatability: 0.050 %
Uncertainty: 0.027 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.8 T23N R8W NMPM
NE CHACO Com

Meter Data

67417923 WPX 197H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518623	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.8 °API
Obs. Temp	88.6 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468878172	1471555112
Date	07/18/2016	08/18/2016
Time	9:42	9:18
Product	Crude	Crude
Flowrate	42 bbl/hr	10 bbl/hr
Totalizer		
Throughput		
Base Density	40.8°API	40.3 °API
Avg Prvr Temp	99.7	91.9
Avg Prvr Press	189.0	139.8
Repeatability	0.004 %	0.009 %
CMF	0.9961	1.0011
CMF Variance	0.0009	0.0050

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	138.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0008	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	90.9	90.9	142.0	143.0	11886.949	1	Yes	1.00026	10.416
2	91.3	91.3	143.0	138.0	11887.111	2	Yes	1.00030	10.414
3	92.4	92.4	138.0	143.0	11887.030	3	Yes	1.00026	10.477
4	92.4	92.4	138.0	143.0	11887.635	4	Yes	1.00021	10.463
5	92.7	92.7	138.0	143.0	11886.947	5	Yes	1.00026	10.526
Average	91.9	91.9	139.8	142.0	11887.1344			1.00026	10.459

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00059	1.00012	0.98385	1.00085	0.98539	1.17084

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11887.1344	10000.0000	1.18871	0.98385	1.00087	0.98471	1.17053

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0003	MF
	(2)	MF * CPL =	1.0011	CMF
	(3)	1 ÷ MF =	0.9997	MA
	(4)	NKF ÷ MF =	9997.0	KF
	(5)	KF ÷ CPL =	9989.0	CKF

Repeatability: 0.009 %
Uncertainty: 0.005 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.8 T23N R6W NMPM

Mechaco
30-039-31278

Meter Data

67417923 WPX 197H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518623	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.7 °API
Obs. Temp	77.5 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.2 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473981955	1476830974
Date	09/15/2016	10/18/2016
Time	11:25	10:49
Product	Crude	Crude
Flowrate	10 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	40.9°API	40.2 °API
Avg Prvr Temp	77.0	76.9
Avg Prvr Press	113.0	162.0
Repeatability	0.028 %	0.015 %
CMF	0.9999	1.0015
CMF Variance	-0.0006	0.0007

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	155.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0009	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	76.7	76.7	162.0	162.0	11878.456	1	Yes	1.00074	12.482
2	76.8	76.8	162.0	162.0	11879.727	2	Yes	1.00064	12.503
3	76.9	76.9	162.0	162.0	11880.044	3	Yes	1.00061	12.508
4	77.0	77.0	162.0	162.0	11879.609	4	Yes	1.00065	12.513
5	77.1	77.1	162.0	162.0	11880.463	5	Yes	1.00059	12.496
Average	76.9	76.9	162.0	162.0	11879.6598			1.00065	12.501

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00031	1.00013	0.99147	1.00094	0.99284	1.17969

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11879.6598	10000.0000	1.18797	0.99147	1.00094	0.99240	1.17894

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0006	MF	
	(2)	MF * CPL =	1.0015	CMF	
	(3)	1 ÷ MF =	0.9994	MA	
	(4)	NKF ÷ MF =	9994.0	KF	
	(5)	KF ÷ CPL =	9985.0	CKF	

Repeatability: 0.015 %
Uncertainty: 0.008 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.8 T23N R6W NMPM

NCCMAD

Meter Data

67417923 WPX 197H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	1.00 in
Serial No.	14518623
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	DOMINION
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.5 °API
Obs. Temp	78.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473981776	1473981955
Date	09/15/2016	09/15/2016
Time	11:22	11:25
Product	Crude	Crude
Flowrate	41 bbl/hr	10 bbl/hr
Totalizer		
Throughput		
Base Density	40.9°API	40.9 °API
Avg Prvr Temp	76.3	77.0
Avg Prvr Press	168.0	113.0
Repeatability	0.042 %	0.028 %
CMF	1.0005	0.9999
CMF Variance	0.0001	-0.0006

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	101.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0006

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	76.2	76.2	113.0	126.0	11894.000	1	Yes	0.99931	10.000
2	76.3	76.3	113.0	126.0	11892.000	2	Yes	0.99947	10.000
3	76.5	76.5	113.0	126.0	11895.000	3	Yes	0.99923	10.000
4	77.4	77.4	113.0	126.0	11893.000	4	Yes	0.99941	10.000
5	78.6	78.6	113.0	126.0	11896.000	5	Yes	0.99919	10.000
Average	77.0	77.0	113.0	126.0	11894.0000			0.99932	10.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00032	1.00009	0.99135	1.00066	0.99241	1.17918

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11894.0000	10000.0000	1.18940	0.99135	1.00074	0.99208	1.17998

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9993	MF
	(2)	MF * CPL =	0.9999	CMF
	(3)	1 ÷ MF =	1.0007	MA
	(4)	NKF ÷ MF =	10007	KF
	(5)	KF ÷ CPL =	10001	CKF

Repeatability: 0.028 %
Uncertainty: 0.015 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.7 T23N R6W NMPM

MECHAccum
30-026-37120
7-23A-BLU

Meter Data

67412825 WPX 181H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		in
Serial No.	14518598	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	48.6 °API
Obs. Temp	105.2 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	44.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476839654	1476840656
Date	10/18/2016	10/18/2016
Time	13:14	13:30
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	44.4°API	44.4 °API
Avg Prvr Temp	100.4	101.8
Avg Prvr Press	125.0	138.0
Repeatability	0.032 %	0.039 %
CMF	1.0017	1.0022
CMF Variance	-0.0001	0.0005

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	131.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0009	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	101.9	101.9	138.0	141.0	11877.717	1	Yes	1.00123	20.769
2	102.1	102.1	138.0	141.0	11878.201	2	Yes	1.00119	20.816
3	101.6	101.6	138.0	141.0	11873.377	3	Yes	1.00158	20.868
4	101.5	101.5	138.0	141.0	11876.206	4	Yes	1.00134	20.838
5	101.8	101.8	138.0	141.0	11877.445	5	Yes	1.00126	20.853
Average	101.8	101.8	138.0	141.0	11876.5892			1.00132	20.829

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00078	1.00011	0.97778	1.00094	0.97957	1.16393

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11876.5892	10000.0000	1.18766	0.97778	1.00096	0.97872	1.16239

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0013	MF	
	(2)	MF * CPL =	1.0022	CMF	
	(3)	1 ÷ MF =	0.9987	MA	
	(4)	NKF ÷ MF =	9987.0	KF	
	(5)	KF ÷ CPL =	9978.0	CKF	

Repeatability: 0.039 %
Uncertainty: 0.021 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.7 T23N R6W NMPM

Nt Chaco Com

Meter Data

67412825 WPX 181H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		in
Serial No.	14518598	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	47.1 °API
Obs. Temp	93.4 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	44.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468878638	1471478772
Date	07/18/2016	08/17/2016
Time	9:50	12:06
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	39.8°API	44.0 °API
Avg Prvr Temp	85.0	102.9
Avg Prvr Press	178.0	92.0
Repeatability	0.035 %	0.016 %
CMF	0.9988	1.0021
CMF Variance	0.0008	0.0033

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 87.0 psig
Eq. Vapor Pressure psig
CPL 1.0006

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	100.3	100.3	92.0	92.0	11873.334	1	Yes	1.00156	20.766
2	102.1	102.1	92.0	92.0	11874.581	2	Yes	1.00148	20.832
3	103.3	103.3	92.0	92.0	11875.934	3	Yes	1.00140	20.845
4	104.1	104.1	92.0	92.0	11875.742	4	Yes	1.00142	20.842
5	104.8	104.8	92.0	92.0	11874.521	5	Yes	1.00153	20.866
Average	102.9	102.9	92.0	92.0	11874.8224			1.00148	20.830

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00080	1.00008	0.97729	1.00062	0.97876	1.16296

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11874.8224	10000.0000	1.18748	0.97729	1.00062	0.97790	1.16124

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0015	MF
	(2)	MF * CPL =	1.0021	CMF
	(3)	1 ÷ MF =	0.9985	MA
	(4)	NKF ÷ MF =	9985.0	KF
	(5)	KF ÷ CPL =	9979.0	CKF

Repeatability: 0.016 %
Uncertainty: 0.009 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:

Witness: Robert Sloan

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.7 T23N R6W NMPM
NE CHACO

Meter Data

67412825 WPX 181H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: in
Serial No.: 14518598
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 48.8 °API
Obs. Temp: 114.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 43.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: Manual
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1473981479	1473981642
Date	09/15/2016	09/15/2016
Time	11:17	11:20
Product	Crude	Crude
Flowrate	41 bbl/hr	20 bbl/hr
Totalizer		
Throughput		
Base Density	43.8°API	43.8 °API
Avg Prvr Temp	111.3	113.4
Avg Prvr Press	127.0	100.0
Repeatability	0.032 %	0.041 %
CMF	1.0017	1.0018
CMF Variance	0.0000	0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 97.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL 1.0007

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	114.5	114.5	100.0	106.0	11884.000	1	Yes	1.00087	20.000
2	112.5	112.5	100.0	106.0	11879.000	2	Yes	1.00127	20.000
3	112.5	112.5	100.0	106.0	11881.000	3	Yes	1.00111	20.000
4	113.6	113.6	100.0	106.0	11879.000	4	Yes	1.00128	20.000
5	113.9	113.9	100.0	106.0	11882.000	5	Yes	1.00103	20.000
Average	113.4	113.4	100.0	106.0	11881.0000			1.00111	20.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00099	1.00008	0.97176	1.00070	0.97348	1.15669

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11881.0000	10000.0000	1.18810	0.97176	1.00075	0.97249	1.15542

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0011	MF
	(2)	MF * CPL =	1.0018	CMF
	(3)	1 ÷ MF =	0.9989	MA
	(4)	NKF ÷ MF =	9989.0	KF
	(5)	KF ÷ CPL =	9982.0	CKF

Repeatability: 0.041 %
Uncertainty: 0.022 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.8 T23N R6W NMPM

NE Chaco Com

Meter Data

67413117 WPX 199H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518632	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.5 °API
Obs. Temp	110.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468368066	1471550513
Date	07/12/2016	08/18/2016
Time	12:01	8:01
Product	Crude	Crude
Flowrate	42 bbl/hr	15 bbl/hr
Totalizer		
Throughput		
Base Density	41.8°API	42.0 °API
Avg Prvr Temp	96.0	107.4
Avg Prvr Press	220.0	134.0
Repeatability	0.004 %	0.010 %
CMF	0.9993	0.9993
CMF Variance	-0.0040	0.0000

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	130.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0009	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	105.9	105.9	134.0	135.0	11912.274	1	Yes	0.99842	14.551
2	107.1	107.1	134.0	135.0	11912.761	2	Yes	0.99839	14.549
3	107.5	107.5	134.0	135.0	11913.525	3	Yes	0.99832	14.545
4	108.0	108.0	134.0	135.0	11912.745	4	Yes	0.99840	14.643
5	108.4	108.4	134.0	135.0	11912.793	5	Yes	0.99842	14.632
Average	107.4	107.4	134.0	135.0	11912.8196			0.99839	14.584

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00088	1.00011	0.97547	1.00089	0.97730	1.16123

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11912.8196	10000.0000	1.19128	0.97547	1.00090	0.97635	1.16311

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9984	MF
	(2)	MF * CPL =	0.9993	CMF
	(3)	1 ÷ MF =	1.0016	MA
	(4)	NKF ÷ MF =	10016	KF
	(5)	KF ÷ CPL =	10007	CKF

Repeatability: 0.010 %
Uncertainty: 0.005 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.8 T23N R6W NMPM
NEC/ACCUM com
30-039-31247

Meter Data

67413117 WPX 199H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518632	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	91.1 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476825139	1476826203
Date	10/18/2016	10/18/2016
Time	9:12	9:30
Product	Crude	Crude
Flowrate	42 bbl/hr	15 bbl/hr
Totalizer		
Throughput		
Base Density	40.8°API	40.8 °API
Avg Prvr Temp	89.5	88.9
Avg Prvr Press	194.0	156.0
Repeatability	0.037 %	0.014 %
CMF	1.0012	1.0008
CMF Variance	0.0024	-0.0004

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 152.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0009

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	88.9	88.9	156.0	158.0	11890.486	1	Yes	0.99994	14.569
2	88.9	88.9	156.0	158.0	11890.033	2	Yes	0.99998	14.567
3	88.8	88.8	156.0	158.0	11890.920	3	Yes	0.99991	14.531
4	88.8	88.8	156.0	158.0	11890.153	4	Yes	0.99997	14.577
5	88.9	88.9	156.0	158.0	11891.722	5	Yes	0.99984	14.569
Average	88.9	88.9	156.0	158.0	11890.6628			0.99993	14.562

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00054	1.00013	0.98529	1.00095	0.98689	1.17262

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11890.6628	10000.0000	1.18907	0.98529	1.00096	0.98624	1.17271

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9999	MF	
	(2)	MF * CPL =	1.0008	CMF	
	(3)	1 ÷ MF =	1.0001	MA	
	(4)	NKF ÷ MF =	10001	KF	
	(5)	KF ÷ CPL =	9992.0	CKF	

Repeatability: 0.014 %
Uncertainty: 0.007 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 8 T23N R6W NMPM
Pt Cliffs

Meter Data

67413117 WPX 199H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518632	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.6 °API
Obs. Temp	117.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473976776	1473981311
Date	09/15/2016	09/15/2016
Time	9:59	11:15
Product	Crude	Crude
Flowrate	41 bbl/hr	14 bbl/hr
Totalizer		
Throughput		
Base Density	41.5°API	41.5 °API
Avg Prvr Temp	114.0	112.8
Avg Prvr Press	167.0	108.0
Repeatability	0.049 %	0.035 %
CMF	1.0002	0.9988
CMF Variance	-0.0001	-0.0014

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	98.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0007	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	113.7	113.7	108.0	112.0	11915.000	1	Yes	0.99828	14.000
2	112.7	112.7	108.0	112.0	11917.000	2	Yes	0.99810	14.000
3	112.5	112.5	108.0	112.0	11918.000	3	Yes	0.99802	14.000
4	112.5	112.5	108.0	112.0	11919.000	4	Yes	0.99794	14.000
5	112.4	112.4	108.0	112.0	11919.000	5	Yes	0.99793	14.000
Average	**112.8**	**112.8**	**108.0**	**112.0**	**11917.6000**			**0.99805**	**14.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00098	1.00009	0.97281	1.00073	0.97456	1.15797

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11917.6000	10000.0000	1.19176	0.97281	1.00075	0.97354	1.16023

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9981	MF
	(2)	MF * CPL =	0.9988	CMF
	(3)	1 ÷ MF =	1.0019	MA
	(4)	NKF ÷ MF =	10019	KF
	(5)	KF ÷ CPL =	10012	CKF

Repeatability: 0.035 %
Uncertainty: 0.019 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.17 T23N R6W NMPM
MECHACO #0173-035-31256
17-23a-5H

Meter Data

67412945 WPX 201H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518601	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	47.9 °API
Obs. Temp	97.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	44.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476432462	1476432590
Date	10/13/2016	10/13/2016
Time	20:07	20:09
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	44.5°API	44.5 °API
Avg Prvr Temp	93.8	94.8
Avg Prvr Press	124.0	118.0
Repeatability	0.044 %	0.016 %
CMF	1.0011	1.0017
CMF Variance	-0.0015	0.0006

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	114.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0008	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	95.4	95.4	118.0	124.0	11881.000	1	Yes	1.00081	12.000
2	95.0	95.0	118.0	124.0	11879.000	2	Yes	1.00097	12.000
3	94.8	94.8	118.0	124.0	11880.000	3	Yes	1.00088	12.000
4	94.7	94.7	118.0	124.0	11880.000	4	Yes	1.00088	12.000
5	94.1	94.1	118.0	124.0	11879.000	5	Yes	1.00093	12.000
Average	94.8	94.8	118.0	124.0	11879.8000			1.00089	12.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00065	1.00010	0.98150	1.00078	0.98300	1.16800

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11879.8000	10000.0000	1.18798	0.98150	1.00082	0.98230	1.16695

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0009	MF
	(2)	MF * CPL =	1.0017	CMF
	(3)	1 ÷ MF =	0.9991	MA
	(4)	NKF ÷ MF =	9991.0	KF
	(5)	KF ÷ CPL =	9983.0	CKF

Repeatability: 0.016 %
Uncertainty: 0.009 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.17 T23N R6W NMPM
NMCMACO
17-23N-6W

Meter Data

67412945 WPX 201H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518601	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.0 °API
Obs. Temp	95.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468364008	1471470714
Date	07/12/2016	08/17/2016
Time	10:53	9:51
Product	Crude	Crude
Flowrate	42 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	43.1°API	40.0 °API
Avg Prvr Temp	77.5	91.3
Avg Prvr Press	175.0	100.0
Repeatability	0.026 %	0.027 %
CMF	1.0009	1.0022
CMF Variance	-0.0041	0.0013

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 100.0 psig
Eq. Vapor Pressure psig
CPL 1.0006

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	90.7	90.7	100.0	110.0	11871.255	1	Yes	1.00149	12.513
2	90.7	90.7	100.0	110.0	11870.913	2	Yes	1.00151	12.514
3	91.0	91.0	100.0	110.0	11868.209	3	Yes	1.00176	12.515
4	92.0	92.0	100.0	110.0	11871.274	4	Yes	1.00152	12.513
5	92.1	92.1	100.0	110.0	11870.454	5	Yes	1.00159	12.530
Average	91.3	91.3	100.0	110.0	11870.4210			1.00157	12.517

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00058	1.00008	0.98421	1.00061	0.98546	1.17092

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11870.4210	10000.0000	1.18704	0.98421	1.00067	0.98487	1.16908

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0016	MF
	(2)	MF * CPL =	1.0022	CMF
	(3)	1 ÷ MF =	0.9984	MA
	(4)	NKF ÷ MF =	9984.0	KF
	(5)	KF ÷ CPL =	9978.0	CKF

Repeatability: 0.027 %
Uncertainty: 0.014 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEII PROVEII 6.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.17 T23N R6W NMPM

NE CHACO
17-23N-6W

Meter Data

67412945 WPX 201H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	In
Serial No.	14518601	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.3 °API
Obs. Temp	83.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	44.2 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473802697	1473802869
Date	09/13/2016	09/13/2016
Time	9:38	9:41
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	44.2°API	44.2 °API
Avg Prvr Temp	83.8	81.9
Avg Prvr Press	138.0	103.0
Repeatability	0.043 %	0.042 %
CMF	1.0012	1.0026
CMF Variance	0.0002	0.0014

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	98.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0006	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	82.1	82.1	103.0	108.0	11867.000	1	Yes	1.00174	12.000
2	82.5	82.5	103.0	108.0	11864.000	2	Yes	1.00200	12.000
3	81.3	81.3	103.0	108.0	11862.000	3	Yes	1.00215	12.000
4	82.0	82.0	103.0	108.0	11865.000	4	Yes	1.00191	12.000
5	81.8	81.8	103.0	108.0	11862.000	5	Yes	1.00216	12.000
Average	**81.9**	**81.9**	**103.0**	**108.0**	**11864.0000**			**1.00199**	**12.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00041	1.00009	0.98842	1.00065	0.98956	1.17580

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11864.0000	10000.0000	1.18640	0.98842	1.00068	0.98909	1.17346

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0020	MF
	(2)	MF * CPL =	1.0026	CMF
	(3)	1 ÷ MF =	0.9980	MA
	(4)	NKF ÷ MF =	9980.0	KF
	(5)	KF ÷ CPL =	9974.0	CKF

Repeatability: 0.042 %
Uncertainty: 0.022 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: NE CHACO

Meter Data

67411556 WPX 206H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14516573	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	47.4 °API
Obs. Temp	106.8 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	43.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476926317	1476927350
Date	10/19/2016	10/19/2016
Time	13:18	13:35
Product	Crude	Crude
Flowrate	42 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	43.1°API	43.1 °API
Avg Prvr Temp	101.6	100.9
Avg Prvr Press	89.0	55.0
Repeatability	0.043 %	0.037 %
CMF	1.0022	1.0021
CMF Variance	0.0003	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	53.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0004	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	102.6	102.6	55.0	58.0	11868.885	1	Yes	1.00192	12.470
2	100.1	100.1	55.0	58.0	11870.612	2	Yes	1.00175	12.501
3	100.7	100.7	55.0	58.0	11872.689	3	Yes	1.00158	12.514
4	100.7	100.7	55.0	58.0	11873.104	4	Yes	1.00155	12.538
5	100.5	100.5	55.0	58.0	11870.537	5	Yes	1.00176	12.530
Average	100.9	100.9	55.0	58.0	11871.1654			1.00171	12.511

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00076	1.00005	0.97858	1.00036	0.97973	1.16412

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11871.1654	10000.0000	1.18712	0.97858	1.00038	0.97895	1.16213

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0017	MF	
(2)	MF * CPL =	1.0021	CMF	
(3)	1 ÷ MF =	0.9983	MA	
(4)	NKF ÷ MF =	9983.0	KF	
(5)	KF ÷ CPL =	9979.0	CKF	

Repeatability: 0.037 %
Uncertainty: 0.020 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 16 T23N R6W NMPM

NE CHACO
16-23N-6W

Meter Data

67422755 WPX 209H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.: 14617620
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 44.3 °API
Obs. Temp: 90.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1468360182	1470354213
Date	07/12/2016	08/04/2016
Time	9:49	11:43
Product	Crude	Crude
Flowrate	42 bbl/hr	23 bbl/hr
Totalizer		
Throughput		
Base Density	41.8°API	41.7 °API
Avg Prvr Temp	88.5	89.2
Avg Prvr Press	215.0	136.0
Repeatability	0.029 %	0.049 %
CMF	0.9992	1.0003
CMF Variance	-0.0001	0.0011

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 130.0 psig
Eq. Vapor Pressure: psig
CPL: 1.0008

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	91.4	91.4	136.0	140.0	11893.686	1	Yes	0.99968	22.899
2	89.5	89.5	136.0	140.0	11897.138	2	Yes	0.99936	22.886
3	87.3	87.3	136.0	140.0	11894.065	3	Yes	0.99958	22.892
4	88.2	88.2	136.0	140.0	11892.492	4	Yes	0.99972	22.901
5	89.8	89.8	136.0	140.0	11898.648	5	Yes	0.99923	22.889
Average	89.2	89.2	136.0	140.0	11895.2058			0.99951	22.893

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00054	1.00011	0.98498	1.00084	0.98645	1.17210

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11895.2058	10000.0000	1.18952	0.98498	1.00087	0.98584	1.17268

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9995	MF
	(2)	MF * CPL =	1.0003	CMF
	(3)	1 ÷ MF =	1.0005	MA
	(4)	NKF ÷ MF =	10005	KF
	(5)	KF ÷ CPL =	9997.0	CKF

Repeatability: 0.049 %
Uncertainty: 0.026 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.16 T23N R6W NMPM

NEGAS
16-23N-6W

Meter Data

67422755 WPX 209H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517620	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	83.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1470355923	1473802365
Date	08/04/2016	09/13/2016
Time	12:12	9:32
Product	Crude	Crude
Flowrate	42 bbl/hr	22 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	41.5 °API
Avg Prvr Temp	87.7	83.8
Avg Prvr Press	184.0	139.0
Repeatability	0.044 %	0.037 %
CMF	1.0006	1.0004
CMF Variance	0.0003	-0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	126.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0008	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	85.0	85.0	139.0	140.0	11896.000	1	Yes	0.99940	22.000
2	84.4	84.4	139.0	140.0	11895.000	2	Yes	0.99946	22.000
3	83.2	83.2	139.0	140.0	11891.000	3	Yes	0.99977	22.000
4	83.2	83.2	139.0	140.0	11891.000	4	Yes	0.99977	22.000
5	83.2	83.2	139.0	140.0	11892.000	5	Yes	0.99969	22.000
Average	83.8	83.8	139.0	140.0	11893.0000			0.99962	22.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00044	1.00011	0.98779	1.00084	0.98916	1.17532

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11893.0000	10000.0000	1.18930	0.98779	1.00085	0.98863	1.17578

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9996	MF
	(2)	MF * CPL =	1.0004	CMF
	(3)	1 ÷ MF =	1.0004	MA
	(4)	NKF ÷ MF =	10004	KF
	(5)	KF ÷ CPL =	9996.0	CKF

Repeatability: 0.037 %
Uncertainty: 0.020 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.16 T23N R6W NMPM

NG CHK : Comm 72 09/

Meter Data

67422755 WPX 209H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517620	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.0 °API
Obs. Temp	60.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476432180	1476432310
Date	10/13/2016	10/13/2016
Time	20:03	20:05
Product	Crude	Crude
Flowrate	41 bbl/hr	23 bbl/hr
Totalizer		
Throughput		
Base Density	41.0°API	41.0 °API
Avg Prvr Temp	88.1	87.1
Avg Prvr Press	126.0	88.0
Repeatability	0.025 %	0.042 %
CMF	1.0004	1.0003
CMF Variance	-0.0006	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	82.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	86.5	86.5	88.0	91.0	11894.000	1	Yes	0.99954	23.000
2	86.4	86.4	88.0	91.0	11889.000	2	Yes	0.99996	23.000
3	87.3	87.3	88.0	91.0	11891.000	3	Yes	0.99980	23.000
4	87.8	87.8	88.0	91.0	11894.000	4	Yes	0.99957	23.000
5	87.4	87.4	88.0	91.0	11890.000	5	Yes	0.99990	23.000
Average	87.1	87.1	88.0	91.0	11891.6000			0.99975	23.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00050	1.00007	0.98618	1.00053	0.98727	1.17307

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11891.6000	10000.0000	1.18916	0.98618	1.00055	0.98672	1.17337

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9998	MF
	(2)	MF * CPL =	1.0003	CMF
	(3)	1 ÷ MF =	1.0002	MA
	(4)	NKF ÷ MF =	10002	KF
	(5)	KF ÷ CPL =	9997.0	CKF

Repeatability: 0.042 %
Uncertainty: 0.022 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: NECHA 13-23HA-7W

Meter Data

67412826 WPX 187H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.: 14518605
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 42.0 °API
Obs. Temp: 60.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 42.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: Manual
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1468356073	1470347823
Date	07/12/2016	08/04/2016
Time	8:41	9:57
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	42.0°API	42.0 °API
Avg Prvr Temp	122.0	101.9
Avg Prvr Press	144.0	78.0
Repeatability	0.044 %	0.011 %
CMF	0.9987	1.0014
CMF Variance	-0.0034	0.0027

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 78.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0005

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	100.1	100.1	78.0	80.0	11880.128	1	Yes	1.00095	8.198
2	102.1	102.1	78.0	80.0	11881.745	2	Yes	1.00085	8.308
3	102.3	102.3	78.0	80.0	11880.457	3	Yes	1.00096	8.234
4	102.3	102.3	78.0	80.0	11881.174	4	Yes	1.00090	8.234
5	102.7	102.7	78.0	80.0	11880.682	5	Yes	1.00095	8.145
Average	101.9	101.9	78.0	80.0	11880.8372			1.00092	8.224

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00078	1.00006	0.97833	1.00051	0.97965	1.16402

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11880.8372	10000.0000	1.18808	0.97833	1.00052	0.97884	1.16294

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0009	MF
	(2)	MF * CPL =	1.0014	CMF
	(3)	1 ÷ MF =	0.9991	MA
	(4)	NKF ÷ MF =	9991.0	KF
	(5)	KF ÷ CPL =	9986.0	CKF

Repeatability: 0.011 %
Uncertainty: 0.006 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NE CHACO
13-23N-7W

Meter Data

67412826 WPX 187H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518605	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	98.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.2 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473802004	1473802177
Date	09/13/2016	09/13/2016
Time	9:26	9:29
Product	Crude	Crude
Flowrate	31 bbl/hr	10 bbl/hr
Totalizer		
Throughput		
Base Density	40.2°API	40.2 °API
Avg Prvr Temp	104.3	104.1
Avg Prvr Press	116.0	98.0
Repeatability	0.017 %	0.043 %
CMF	1.0006	1.0010
CMF Variance	-0.0007	0.0004

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	87.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0006	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		MF	Flowrate bbl/hr
1	104.3	104.3	98.0	98.0	11885.000	1	Yes	1.00065	10.000
2	104.4	104.4	98.0	98.0	11890.000	2	Yes	1.00024	10.000
3	104.3	104.3	98.0	98.0	11888.000	3	Yes	1.00040	10.000
4	103.8	103.8	98.0	98.0	11888.000	4	Yes	1.00038	10.000
5	103.9	103.9	98.0	98.0	11890.000	5	Yes	1.00022	10.000
Average	104.1	104.1	98.0	98.0	11888.2000			1.00038	10.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00082	1.00008	0.97766	1.00062	0.97915	1.16343

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11888.2000	10000.0000	1.18882	0.97766	1.00062	0.97827	1.16299

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0004	MF
	(2)	MF * CPL =	1.0010	CMF
	(3)	1 ÷ MF =	0.9996	MA
	(4)	NKF ÷ MF =	9996.0	KF
	(5)	KF ÷ CPL =	9990.0	CKF

Repeatability: 0.043 %
Uncertainty: 0.023 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
MECHACUCHA
13-23N7W
30-039-31208

Meter Data

67412826 WPX 187H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518605	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	46.9 °API
Obs. Temp	97.4 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	43.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476843837	1476844698
Date	10/18/2016	10/18/2016
Time	14:23	14:38
Product	Crude	Crude
Flowrate	42 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	43.5°API	43.5 °API
Avg Prvr Temp	97.4	95.1
Avg Prvr Press	144.0	110.0
Repeatability	0.017 %	0.026 %
CMF	1.0009	1.0017
CMF Variance	-0.0001	0.0008

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	108.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0007	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	98.3	98.3	110.0	112.0	11889.173	1	No	1.00018	12.472
2	98.4	98.4	110.0	112.0	11879.872	2	Yes	1.00096	12.531
3	96.0	96.0	110.0	112.0	11877.269	3	Yes	1.00114	12.545
4	94.5	94.5	110.0	112.0	11879.125	4	Yes	1.00096	12.485
5	93.8	93.8	110.0	112.0	11878.225	5	Yes	1.00102	12.512
6	93.0	93.0	110.0	112.0	11879.638	6	Yes	1.00088	12.535
Average	95.1	95.1	110.0	112.0	11878.8258			1.00099	12.522

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00065	1.00009	0.98155	1.00072	0.98298	1.16798

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11878.8258	10000.0000	1.18788	0.98155	1.00073	0.98227	1.16682

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0010	MF
	(2)	MF * CPL =	1.0017	CMF
	(3)	1 ÷ MF =	0.9990	MA
	(4)	NKF ÷ MF =	9990.0	KF
	(5)	KF ÷ CPL =	9983.0	CKF

Repeatability: 0.026 %
Uncertainty: 0.040 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor
Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NE CHAC
1823a-6w

Meter Data

67412397 WPX 240H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	In
Serial No.	14516547	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	45.2 °API
Obs. Temp	101.4 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468289618	1470341061
Date	07/11/2016	08/04/2016
Time	14:13	8:04
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	42.4°API	41.5 °API
Avg Prvr Temp	113.3	98.3
Avg Prvr Press	148.0	78.0
Repeatability	0.003 %	0.007 %
CMF	0.9989	0.9997
CMF Variance	-0.0017	0.0008

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	75.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	97.3	97.3	78.0	80.0	11899.777	1	Yes	0.99925	8.298
2	99.6	99.6	78.0	80.0	11900.908	2	Yes	0.99919	8.308
3	100.1	100.1	78.0	89.0	11899.451	3	Yes	0.99926	8.343
4	97.3	97.3	78.0	80.0	11899.984	4	Yes	0.99923	8.311
5	97.3	97.3	78.0	80.0	11900.454	5	Yes	0.99919	8.298
Average	**98.3**	**98.3**	**78.0**	**81.8**	**11900.1148**			**0.99922**	**8.312**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00071	1.00006	0.98032	1.00050	0.98157	1.16630

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11900.1148	10000.0000	1.19001	0.98032	1.00052	0.98083	1.16720

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9992	MF
	(2)	MF * CPL =	0.9997	CMF
	(3)	1 ÷ MF =	1.0008	MA
	(4)	NKF ÷ MF =	10008	KF
	(5)	KF ÷ CPL =	10003	CKF

Repeatability: 0.007 %
Uncertainty: 0.004 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NE CHA
18-23a-CH

Meter Data

67412397 WPX 240H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14516547	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	45.0 °API
Obs. Temp	97.8 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476906634	1476907883
Date	10/19/2016	10/19/2016
Time	7:50	8:11
Product	Crude	Crude
Flowrate	42 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	41.7 °API
Avg Prvr Temp	94.0	92.6
Avg Prvr Press	124.0	97.0
Repeatability	0.041 %	0.047 %
CMF	1.0012	1.0006
CMF Variance	0.0002	-0.0006

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	92.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0006	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	94.7	94.7	97.0	98.0	11893.177	1	Yes	0.99979	12.493
2	92.8	92.8	97.0	98.0	11886.955	2	Yes	1.00026	12.514
3	92.5	92.5	97.0	98.0	11891.267	3	Yes	0.99990	12.481
4	91.0	91.0	97.0	98.0	11888.357	4	Yes	1.00011	12.508
5	91.8	91.8	97.0	98.0	11890.931	5	Yes	0.99992	12.501
Average	92.6	92.6	97.0	98.0	11890.1374			1.00000	12.499

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00061	1.00008	0.98322	1.00061	0.98450	1.16978

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11890.1374	10000.0000	1.18901	0.98322	1.00061	0.98382	1.16977

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0000	MF
	(2)	MF * CPL =	1.0006	CMF
	(3)	1 ÷ MF =	1.0000	MA
	(4)	NKF ÷ MF =	10000.0	KF
	(5)	KF ÷ CPL =	9994.0	CKF

Repeatability: 0.047 %
Uncertainty: 0.026 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
MECHA 00
18-23H-6W

Meter Data

67412397 WPX 240H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.: 14516547
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 45.2 °API
Obs. Temp: 85.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 43.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: Manual
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1473801700	1473801853
Date	09/13/2016	09/13/2016
Time	9:21	9:24
Product	Crude	Crude
Flowrate	41 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	43.0°API	43.0 °API
Avg Prvr Temp	100.8	98.3
Avg Prvr Press	128.0	86.0
Repeatability	0.030 %	0.043 %
CMF	1.0012	1.0010
CMF Variance	0.0005	-0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 78.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0005

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?	IMF	Flowrate bbl/hr
1	98.8	98.8	86.0	87.0	11882.000	1 Yes	1.00077	8.000
2	98.3	98.3	86.0	87.0	11883.000	2 Yes	1.00069	8.000
3	97.9	97.9	86.0	87.0	11886.000	3 Yes	1.00041	8.000
4	98.3	98.3	86.0	87.0	11887.000	4 Yes	1.00034	8.000
5	98.2	98.2	86.0	87.0	11885.000	5 Yes	1.00051	8.000
Average	98.3	98.3	86.0	87.0	11884.6000		1.00054	8.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00071	1.00007	0.97997	1.00056	0.98128	1.16596

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11884.6000	10000.0000	1.18846	0.97997	1.00057	0.98053	1.16532

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0005	MF
	(2)	MF * CPL =	1.0010	CMF
	(3)	1 ÷ MF =	0.9995	MA
	(4)	NKF ÷ MF =	9995.0	KF
	(5)	KF ÷ CPL =	9990.0	CKF

Repeatability: 0.043 %
Uncertainty: 0.023 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician:
Witness:

PROVE
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
AEC 61c
20-23N-6W

Meter Data

67411556 WPX 206H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518573	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude	
Batch No.		
Obs. Gravity	44.5 °API	
Obs. Temp	80.0 °F	
Obs. Press	0.0 psi	
API Table	Table A - Crude Oil (2004)	
Base Density	42.7 °API	HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1470263102	1470264234
Date	08/03/2016	08/03/2016
Time	10:25	10:43
Product	Crude	Crude
Flowrate	42 bbl/hr	7 bbl/hr
Totalizer		
Throughput		
Base Density	42.7°API	42.7 °API
Avg Prvr Temp	79.6	79.6
Avg Prvr Press	85.0	42.0
Repeatability	0.008 %	0.018 %
CMF	1.0020	1.0009
CMF Variance	0.0027	-0.0011

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	42.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	79.6	79.6	42.0	42.0	11878.655	1	Yes	1.00066	6.500
2	79.6	79.6	42.0	42.0	11879.356	2	Yes	1.00060	6.500
3	79.6	79.6	42.0	42.0	11880.923	3	Yes	1.00048	6.500
4	79.6	79.6	42.0	42.0	11878.956	4	Yes	1.00064	6.500
5	79.6	79.6	42.0	42.0	11879.473	5	Yes	1.00060	6.500
Average	79.6	79.6	42.0	42.0	11879.4726			1.00060	6.500

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00036	1.00003	0.98981	1.00026	0.99045	1.17685

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11879.4726	10000.0000	1.18795	0.98981	1.00026	0.99007	1.17615

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0006	MF
	(2)	MF * CPL =	1.0009	CMF
	(3)	1 ÷ MF =	0.9994	MA
	(4)	NKF ÷ MF =	9994.0	KF
	(5)	KF ÷ CPL =	9991.0	CKF

Repeatability: 0.018 %
Uncertainty: 0.010 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

MECHA
20 - 23H - 6H

Meter Data

67411556 WPX 206H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518573	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	47.0 °API
Obs. Temp	110.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473713688	1473713832
Date	09/12/2016	09/12/2016
Time	8:54	8:57
Product	Crude	Crude
Flowrate	41 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	42.5°API	42.5 °API
Avg Prvr Temp	110.9	105.7
Avg Prvr Press	99.0	66.0
Repeatability	0.033 %	0.033 %
CMF	1.0012	1.0019
CMF Variance	0.0003	0.0007

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	61.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0004	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?	IMF	Flowrate bbl/hr
1	108.2	108.2	66.0	68.0	11873.000	1 Yes	1.00169	8.000
2	105.4	105.4	66.0	68.0	11876.000	2 Yes	1.00139	8.000
3	104.2	104.2	66.0	68.0	11876.000	3 Yes	1.00136	8.000
4	105.3	105.3	66.0	68.0	11874.000	4 Yes	1.00155	8.000
5	105.2	105.2	66.0	68.0	11874.000	5 Yes	1.00156	8.000
Average	105.7	105.7	66.0	68.0	11874.6000		1.00151	8.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00085	1.00005	0.97622	1.00044	0.97753	1.16150

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11874.6000	10000.0000	1.18746	0.97622	1.00045	0.97666	1.15974

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0015	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 ÷ MF =	0.9985	MA
	(4)	NKF ÷ MF =	9985.0	KF
	(5)	KF ÷ CPL =	9981.0	CKF

Repeatability: 0.033 %
Uncertainty: 0.018 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NB Unit O
20-23N-6W

Meter Data

67411113 WPX 208H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14518575	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.9 °API
Obs. Temp	103.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation: 0.25
Enabled? Y Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476921955	1476922867
Date	10/19/2016	10/19/2016
Time	12:05	12:21
Product	Crude	Crude
Flowrate	42 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	41.1°API	41.1 °API
Avg Prvr Temp	90.5	88.2
Avg Prvr Press	93.0	60.0
Repeatability	0.033 %	0.048 %
CMF	1.0009	1.0008
CMF Variance	0.0008	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 55.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	89.4	89.4	60.0	60.0	11884.519	1	Yes	1.00039	12.488
2	88.5	88.5	60.0	60.0	11886.062	2	Yes	1.00025	12.503
3	87.7	87.7	60.0	60.0	11881.615	3	Yes	1.00061	12.496
4	87.7	87.7	60.0	60.0	11880.080	4	Yes	1.00073	12.492
5	87.9	87.9	60.0	60.0	11881.664	5	Yes	1.00060	12.503
Average	88.2	88.2	60.0	60.0	11882.7880			1.00052	12.496

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00052	1.00005	0.98560	1.00037	0.98653	1.17219

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11882.7880	10000.0000	1.18828	0.98560	1.00037	0.98596	1.17160

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0005	MF
	(2)	MF * CPL =	1.0008	CMF
	(3)	1 ÷ MF =	0.9995	MA
	(4)	NKF ÷ MF =	9995.0	KF
	(5)	KF ÷ CPL =	9992.0	CKF

Repeatability: 0.048 %
Uncertainty: 0.026 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NE Chaco 42
26-23n-6W

Meter Data

67411113 WPX 208H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14518575	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	45.0 °API
Obs. Temp	97.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation: 0.25
Enabled? Y Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473713338	1473713509
Date	09/12/2016	09/12/2016
Time	8:48	8:51
Product	Crude	Crude
Flowrate	41 bbl/hr	10 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	41.7 °API
Avg Prvr Temp	97.1	93.6
Avg Prvr Press	96.0	66.0
Repeatability	0.024 %	0.029 %
CMF	1.0001	1.0001
CMF Variance	-0.0007	0.0000

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 58.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0004

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?	IMF	Flowrate bbl/hr
1	92.5	92.5	66.0	67.0	11892.000	1 Yes	0.99980	10.000
2	94.4	94.4	66.0	67.0	11896.000	2 Yes	0.99951	10.000
3	94.2	94.2	66.0	67.0	11894.000	3 Yes	0.99968	10.000
4	93.7	93.7	66.0	67.0	11894.000	4 Yes	0.99968	10.000
5	93.4	93.4	66.0	67.0	11893.000	5 Yes	0.99975	10.000
Average	**93.6**	**93.6**	**66.0**	**67.0**	**11893.8000**		**0.99968**	**10.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00062	1.00005	0.98270	1.00042	0.98377	1.16892

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11893.8000	10000.0000	1.18938	0.98270	1.00042	0.98311	1.16929

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9997	MF
	(2)	MF * CPL =	1.0001	CMF
	(3)	1 ÷ MF =	1.0003	MA
	(4)	NKF ÷ MF =	10003	KF
	(5)	KF ÷ CPL =	9999.0	CKF

Repeatability: 0.029 %
Uncertainty: 0.015 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NE 6HAC
20-23N-6W

Meter Data

67411113 WPX 208H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14518575	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.6 °API
Obs. Temp	82.4 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation: 0.25
Enabled? Y Passed? N Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468269358	1470253995
Date	07/11/2016	08/03/2016
Time	8:35	7:53
Product	Crude	Crude
Flowrate	42 bbl/hr	10 bbl/hr
Totalizer		
Throughput		
Base Density	41.4°API	41.6 °API
Avg Prvr Temp	107.0	79.4
Avg Prvr Press	105.0	42.0
Repeatability	0.002 %	0.034 %
CMF	0.9957	1.0005
CMF Variance	0.0046	0.0048

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	40.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	78.9	78.9	42.0	42.0	11884.677	1	Yes	1.00014	10.392
2	79.5	79.5	42.0	42.0	11881.448	2	Yes	1.00043	10.411
3	79.1	79.1	42.0	42.0	11880.908	3	Yes	1.00048	10.412
4	79.8	79.8	42.0	42.0	11882.891	4	Yes	1.00032	10.406
5	79.4	79.4	42.0	42.0	11882.481	5	Yes	1.00035	10.405
Average	79.4	79.4	42.0	42.0	11882.4810			1.00034	10.405

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00036	1.00003	0.99005	1.00025	0.99068	1.17713

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11882.4810	10000.0000	1.18825	0.99005	1.00025	0.99030	1.17672

Status

Failed - Prior deviation outside defined max.

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0003	MF
	(2)	MF * CPL =	1.0005	CMF
	(3)	1 ÷ MF =	0.9997	MA
	(4)	NKF ÷ MF =	9997.0	KF
	(5)	KF ÷ CPL =	9995.0	CKF

Repeatability: 0.034 %
Uncertainty: 0.018 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician:

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

67411557 WPX 191H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518579	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.7 °API
Obs. Temp	104.2 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1468280020	1470270582
Date	07/11/2016	08/03/2016
Time	11:33	12:29
Product	Crude	Crude
Flowrate	42 bbl/hr	6 bbl/hr
Totalizer		
Throughput		
Base Density	40.3°API	40.8 °API
Avg Prvr Temp	110.0	98.8
Avg Prvr Press	120.0	55.0
Repeatability	0.008 %	0.043 %
CMF	0.9975	0.9998
CMF Variance	0.0043	0.0023

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	46.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	98.6	98.6	55.0	55.0	11900.292	1	No	0.99924	6.219
2	99.1	99.1	55.0	55.0	11893.398	2	Yes	0.99983	6.252
3	98.7	98.7	55.0	55.0	11897.567	3	Yes	0.99946	6.200
4	98.7	98.7	55.0	55.0	11898.264	4	Yes	0.99940	6.200
5	98.7	98.7	55.0	55.0	11897.934	5	Yes	0.99943	6.200
6	98.7	98.7	55.0	55.0	11897.265	6	Yes	0.99949	6.200
Average	98.8	98.8	55.0	55.0	11896.8856			0.99952	6.210

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00072	1.00005	0.98022	1.00035	0.98132	1.16600

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11896.8856	10000.0000	1.18969	0.98022	1.00035	0.98056	1.16656

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	0.9995	MF	
(2)	MF * CPL =	0.9998	CMF	
(3)	1 ÷ MF =	1.0005	MA	
(4)	NKF ÷ MF =	10005	KF	
(5)	KF ÷ CPL =	10002	CKF	

Repeatability: 0.043 %
Uncertainty: 0.024 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

19-20N-6W

Meter Data

67411557 WPX 191H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.: 14516579
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 38.9 °API
Obs. Temp: 76.5 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 37.6 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1476917027	1476917949
Date	10/19/2016	10/19/2016
Time	10:43	10:59
Product	Crude	Crude
Flowrate	42 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	37.6°API	37.6 °API
Avg Prvr Temp	75.9	73.7
Avg Prvr Press	107.0	76.0
Repeatability	0.042 %	0.014 %
CMF	1.0012	1.0011
CMF Variance	-0.0005	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 70.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0004

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	74.6	74.6	76.0	76.0	11877.871	1	Yes	1.00067	12.486
2	73.8	73.8	76.0	76.0	11876.298	2	Yes	1.00081	12.549
3	73.5	73.5	76.0	76.0	11877.336	3	Yes	1.00071	12.512
4	73.4	73.4	76.0	76.0	11876.950	4	Yes	1.00073	12.504
5	73.2	73.2	76.0	76.0	11876.658	5	Yes	1.00075	12.484
Average	73.7	73.7	76.0	76.0	11877.0226			1.00073	12.507

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00025	1.00006	0.99330	1.00042	0.99403	1.18111

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11877.0226	10000.0000	1.18770	0.99330	1.00042	0.99372	1.18024

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0007	MF
	(2)	MF * CPL =	1.0011	CMF
	(3)	1 ÷ MF =	0.9993	MA
	(4)	NKF ÷ MF =	9993.0	KF
	(5)	KF ÷ CPL =	9989.0	CKF

Repeatability: 0.014 %
Uncertainty: 0.007 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NT CHAC
19-23N-6W

Meter Data

67411557 WPX 191H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14518579	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.8 °API
Obs. Temp	82.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473714085	1473714207
Date	09/12/2016	09/12/2016
Time	9:01	9:03
Product	Crude	Crude
Flowrate	41 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	40.9°API	40.9 °API
Avg Prvr Temp	83.0	84.0
Avg Prvr Press	109.0	77.0
Repeatability	0.010 %	0.034 %
CMF	1.0009	1.0017
CMF Variance	0.0003	0.0008

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 70.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0004

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?	IMF	Flowrate bbl/hr
1	83.9	83.9	77.0	78.0	11873.000	1 Yes	1.00125	8.000
2	84.0	84.0	77.0	78.0	11871.000	2 Yes	1.00143	8.000
3	84.0	84.0	77.0	78.0	11874.000	3 Yes	1.00118	8.000
4	84.0	84.0	77.0	78.0	11870.000	4 Yes	1.00152	8.000
5	84.0	84.0	77.0	78.0	11873.000	5 Yes	1.00126	8.000
Average	84.0	84.0	77.0	78.0	11872.2000		1.00133	8.000

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00045	1.00006	0.98778	1.00046	0.98874	1.17482

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11872.2000	10000.0000	1.18722	0.98778	1.00047	0.98824	1.17326

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0013	MF
	(2)	MF * CPL =	1.0017	CMF
	(3)	1 ÷ MF =	0.9987	MA
	(4)	NKF ÷ MF =	9987.0	KF
	(5)	KF ÷ CPL =	9983.0	CKF

Repeatability: 0.034 %
Uncertainty: 0.018 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

19-23H Cum

Meter Data

67411711 WPX 188H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 1.00 in
Serial No.: 14517638
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 43.0 °API
Obs. Temp: 89.7 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 40.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: Manual
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1468284286	1470275727
Date	07/11/2016	08/03/2016
Time	12:44	13:55
Product	Crude	Crude
Flowrate	42 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	38.6°API	40.4 °API
Avg Prvr Temp	109.4	91.3
Avg Prvr Press	144.0	80.0
Repeatability	0.006 %	0.020 %
CMF	0.9984	1.0019
CMF Variance	-0.0025	0.0035

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 74.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0005

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	93.6	93.6	80.0	83.0	11871.963	1	Yes	1.00152	8.341
2	91.1	91.1	80.0	83.0	11873.780	2	Yes	1.00132	8.339
3	89.2	89.2	80.0	83.0	11872.195	3	Yes	1.00142	8.339
4	91.3	91.3	80.0	83.0	11872.455	4	Yes	1.00144	8.452
5	91.3	91.3	80.0	83.0	11872.598	5	Yes	1.00143	8.368
Average	91.3	91.3	80.0	83.0	11872.5982			1.00143	8.368

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00058	1.00007	0.98414	1.00049	0.98526	1.17069

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11872.5982	10000.0000	1.18726	0.98414	1.00051	0.98464	1.16902

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0014	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 ÷ MF =	0.9986	MA
	(4)	NKF ÷ MF =	9986.0	KF
	(5)	KF ÷ CPL =	9981.0	CKF

Repeatability: 0.020 %
Uncertainty: 0.011 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

NE CHAC
19 23N-6W

Meter Data

67411711 WPX 188H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517638	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	91.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476912298	1476913699
Date	10/19/2016	10/19/2016
Time	9:24	9:48
Product	Crude	Crude
Flowrate	42 bbl/hr	13 bbl/hr
Totalizer		
Throughput		
Base Density	40.8°API	40.8 °API
Avg Prvr Temp	89.1	88.1
Avg Prvr Press	124.0	99.0
Repeatability	0.032 %	0.034 %
CMF	1.0022	1.0019
CMF Variance	0.0000	-0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 82.0 psig
Eq. Vapor Pressure psig
CPL 1.0005

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	86.2	86.2	99.0	112.0	11868.874	1	Yes	1.00160	12.497
2	88.4	88.4	99.0	112.0	11873.253	2	Yes	1.00126	12.513
3	88.9	88.9	99.0	112.0	11871.083	3	Yes	1.00146	12.524
4	88.9	88.9	99.0	112.0	11872.495	4	Yes	1.00134	12.499
5	88.3	88.3	99.0	112.0	11869.895	5	Yes	1.00155	12.522
Average	88.1	88.1	99.0	112.0	11871.1200			1.00144	12.511

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00052	1.00008	0.98570	1.00060	0.98688	1.17261

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11871.1200	10000.0000	1.18711	0.98570	1.00068	0.98637	1.17093

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0014	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 ÷ MF =	0.9986	MA
	(4)	NKF ÷ MF =	9986.0	KF
	(5)	KF ÷ CPL =	9981.0	CKF

Repeatability: 0.034 %
Uncertainty: 0.018 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:
NE CHACO
14-23N-6W

Meter Data

67411711 WPX 188H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	1.00	in
Serial No.	14517638	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	96.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1473714403	1473714540
Date	09/12/2016	09/12/2016
Time	9:06	9:09
Product	Crude	Crude
Flowrate	31 bbl/hr	8 bbl/hr
Totalizer		
Throughput		
Base Density	40.4°API	40.4 °API
Avg Prvr Temp	93.4	96.9
Avg Prvr Press	110.0	88.0
Repeatability	0.025 %	0.042 %
CMF	1.0020	1.0022
CMF Variance	0.0005	0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 72.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0004

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	96.5	96.5	88.0	88.0	11871.000	1	Yes	1.00168	8.000
2	96.7	96.7	88.0	88.0	11866.000	2	Yes	1.00210	8.000
3	96.1	96.1	88.0	88.0	11870.000	3	Yes	1.00175	8.000
4	97.0	97.0	88.0	88.0	11869.000	4	Yes	1.00186	8.000
5	98.0	98.0	88.0	88.0	11871.000	5	Yes	1.00171	8.000
Average	**96.9**	**96.9**	**88.0**	**88.0**	**11869.4000**			**1.00182**	**8.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00069	1.00007	0.98128	1.00055	0.98257	1.16749

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11869.4000	10000.0000	1.18694	0.98128	1.00055	0.98182	1.16536

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0018	MF
	(2)	MF * CPL =	1.0022	CMF
	(3)	1 ÷ MF =	0.9982	MA
	(4)	NKF ÷ MF =	9982.0	KF
	(5)	KF ÷ CPL =	9978.0	CKF

Repeatability: 0.042 %
Uncertainty: 0.022 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location: 342 - Lact
Federal ID:

Meter Data

WPX342 WPX South Chaco 342 Sales

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14490120	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.6 °API
Obs. Temp	45.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1478116943	1478821131
Date	11/02/2016	11/10/2016
Time	8:02	10:38
Product	Crude	Crude
Flowrate	116 bbl/hr	116 bbl/hr
Totalizer	138513	145662
Throughput	8009	7149
Base Density	40.8°API	42.9 °API
Avg Prvr Temp	84.9	64.7
Avg Prvr Press	22.0	10.0
Repeatability	0.022 %	0.036 %
CMF	1.0012	1.0022
CMF Variance	-0.0004	0.0010

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	24.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0001	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	63.8	63.8	10.0	24.0	11856.804	1	Yes	1.00213	114.857
2	65.4	65.4	10.0	24.0	11857.315	2	Yes	1.00211	114.809
3	64.8	64.8	10.0	24.0	11860.121	3	Yes	1.00187	114.773
4	65.1	65.1	10.0	24.0	11855.776	4	Yes	1.00223	114.798
5	64.5	64.5	10.0	24.0	11857.548	5	Yes	1.00208	114.818
Average	64.7	64.7	10.0	24.0	11857.5128			1.00208	114.811

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00009	1.00001	0.99756	1.00006	0.99772	1.18549

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11857.5128	10000.0000	1.18575	0.99756	1.00014	0.99770	1.18302

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0021	MF
	(2)	MF * CPL =	1.0022	CMF
	(3)	1 ÷ MF =	0.9979	MA
	(4)	NKF ÷ MF =	9979.0	KF
	(5)	KF ÷ CPL =	9978.0	CKF

Repeatability: 0.036 %
Uncertainty: 0.019 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician: Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location: 342 - Lact
Federal ID:

Meter Data

WPX342 WPX South Chaco 342 Sales

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14490120	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.3 °API
Obs. Temp	56.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1483563668	1486068532
Date	01/04/2017	02/02/2017
Time	8:01	7:48
Product	Crude	Crude
Flowrate	115 bbl/hr	115 bbl/hr
Totalizer	153067	160525
Throughput	7405	7458
Base Density	42.3°API	42.7 °API
Avg Prvr Temp	72.3	74.7
Avg Prvr Press	15.0	19.0
Repeatability	0.033 %	0.040 %
CMF	1.0010	1.0014
CMF Variance	-0.0012	0.0004

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	20.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0001	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	73.8	73.8	19.0	20.0	11867.076	1	Yes	1.00153	114.683
2	74.4	74.4	19.0	20.0	11871.198	2	Yes	1.00120	114.691
3	74.6	74.6	19.0	20.0	11869.096	3	Yes	1.00137	114.695
4	75.1	75.1	19.0	20.0	11871.074	4	Yes	1.00121	114.716
5	75.4	75.4	19.0	20.0	11872.161	5	Yes	1.00113	114.675
6	74.8	74.8	19.0	20.0	11871.756	6	No	1.00115	114.703
Average	**74.7**	**74.7**	**19.0**	**20.0**	**11870.1210**			**1.00129**	**114.692**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.16820	1.00027	1.00002	0.99237	1.00011	0.99277	1.17961

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11870.1210	10000.0000	1.18701	0.99237	1.00012	0.99249	1.17810

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0013	MF
	(2)	MF * CPL =	1.0014	CMF
	(3)	1 ÷ MF =	0.9987	MA
	(4)	NKF ÷ MF =	9987.0	KF
	(5)	KF ÷ CPL =	9986.0	CKF

Repeatability: 0.040 %
Uncertainty: 0.017 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:

Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location: **342 - Lact**
Federal ID:

Meter Data

WPX342 WPX South Chaco 342 Sales

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 In
Serial No.	14490120
Model No.	CMF 300M

Prover Data

BPV	1.18820 bbl
I.D.	7.981 In
W.T.	0.322 in
Manufacturer	
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.7 °API
Obs. Temp	63.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.4 °API HYC Y

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** Passed? **Y** Min # of Runs: **5**
Criteria: **5** out of **5** consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** Cutoff Date:

Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1488088532	1488576613
Date	02/02/2017	03/03/2017
Time	7:48	8:28
Product	Crude	Crude
Flowrate	115 bbl/hr	104 bbl/hr
Totalizer	160525	166592
Throughput	7458	6067
Base Density	42.7°API	41.4 °API
Avg Prvr Temp	74.7	61.6
Avg Prvr Press	19.0	22.0
Repeatability	0.040 %	0.041 %
CMF	1.0014	1.0019
CMF Variance	0.0004	0.0005

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	21.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0001

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	61.6	61.6	22.0	23.0	11858.804	1	Yes	1.00200	103.738
2	61.7	61.7	22.0	23.0	11860.745	2	Yes	1.00184	103.766
3	61.7	61.7	22.0	23.0	11863.093	3	Yes	1.00164	103.705
4	61.5	61.5	22.0	23.0	11863.557	4	Yes	1.00159	103.592
5	61.4	61.4	22.0	23.0	11860.689	5	Yes	1.00184	103.455
6	61.5	61.5	22.0	23.0	11865.577	6	No	1.00143	103.344
Average	**61.6**	**61.6**	**22.0**	**23.0**	**11861.3776**			**1.00178**	**103.651**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00003	1.00002	0.99918	1.00012	0.99935	1.18743

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11861.3776	10000.0000	1.18614	0.99918	1.00013	0.99931	1.18532

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0018	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 ÷ MF =	0.9982	MA
	(4)	NKF ÷ MF =	9982.0	KF
	(5)	KF ÷ CPL =	9981.0	CKF

Repeatability: 0.041 %
Uncertainty: 0.024 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician: PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SHL SEC.35 T24N R7W NMPM

MC 6 Com #160Y
30-039-31312

Meter Data

67440546 WPX 160H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14504524	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.5 °API
Obs. Temp	88.5 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	39.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1474581638	1474582706
Date	09/22/2016	09/22/2016
Time	10:00	10:18
Product	Crude	Crude
Flowrate	42 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	39.1°API	39.1 °API
Avg Prvr Temp	87.7	87.4
Avg Prvr Press	37.0	43.0
Repeatability	0.030 %	0.034 %
CMF	1.0009	1.0012
CMF Variance	-0.0008	0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 44.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	87.2	87.2	43.0	44.0	11876.638	1	Yes	1.00099	12.491
2	86.4	86.4	43.0	44.0	11880.462	2	Yes	1.00065	12.466
3	87.1	87.1	43.0	44.0	11877.414	3	Yes	1.00091	12.461
4	87.1	87.1	43.0	44.0	11877.623	4	Yes	1.00090	12.451
5	89.2	89.2	43.0	44.0	11877.542	5	Yes	1.00095	12.480
Average	87.4	87.4	43.0	44.0	11877.9358			1.00088	12.470

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00051	1.00004	0.98633	1.00025	0.98712	1.17290

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11877.9358	10000.0000	1.18779	0.98633	1.00026	0.98659	1.17186

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0009	MF
	(2)	MF * CPL =	1.0012	CMF
	(3)	1 ÷ MF =	0.9991	MA
	(4)	NKF ÷ MF =	9991.0	KF
	(5)	KF ÷ CPL =	9988.0	CKF

Repeatability: 0.034 %
Uncertainty: 0.018 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SHL SEC.35 T24N R7W NMPM

M6 - 6C cm #1601
30-039-31325
T24N R7W

Meter Data

67440546 WPX 160H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14504524	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.0 °API
Obs. Temp	60.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	Manual
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1476169158	1476169317
Date	10/10/2016	10/10/2016
Time	18:59	19:01
Product	Crude	Crude
Flowrate	41 bbl/hr	12 bbl/hr
Totalizer		
Throughput		
Base Density	41.0°API	41.0 °API
Avg Prvr Temp	78.0	73.6
Avg Prvr Press	47.0	47.0
Repeatability	0.032 %	0.016 %
CMF	1.0021	1.0032
CMF Variance	0.0009	0.0011

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	46.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	73.9	73.9	47.0	49.0	11851.000	1	Yes	1.00291	12.000
2	73.5	73.5	47.0	49.0	11851.000	2	Yes	1.00290	12.000
3	72.9	72.9	47.0	49.0	11851.000	3	Yes	1.00289	12.000
4	73.0	73.0	47.0	49.0	11852.000	4	Yes	1.00280	12.000
5	74.9	74.9	47.0	49.0	11853.000	5	Yes	1.00275	12.000
Average	**73.6**	**73.6**	**47.0**	**49.0**	**11851.6000**			**1.00285**	**12.000**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00025	1.00004	0.99308	1.00027	0.99364	1.18064

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11851.6000	10000.0000	1.18516	0.99308	1.00028	0.99336	1.17729

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0029	MF
	(2)	MF * CPL =	1.0032	CMF
	(3)	1 ÷ MF =	0.9971	MA
	(4)	NKF ÷ MF =	9971.1	KF
	(5)	KF ÷ CPL =	9968.1	CKF

Repeatability: 0.016 %
Uncertainty: 0.009 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

67443821 WPX 409H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.2 °API
Obs. Temp	77.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1481155934	1487970910
Date	12/07/2016	02/24/2017
Time	11:12	8:15
Product	Crude	Crude
Flowrate	42 bbl/hr	42 bbl/hr
Totalizer		
Throughput		
Base Density	40.4°API	41.7 °API
Avg Prvr Temp	76.7	71.0
Avg Prvr Press	10.0	36.0
Repeatability	0.023 %	0.045 %
CMF	1.0033	1.0020
CMF Variance	0.0005	-0.0013

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	38.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	MF	Flowrate bbl/hr
1	68.1	68.1	36.0	41.0	11864.480	1	Yes	1.00162	41.785
2	69.9	69.9	36.0	41.0	11862.864	2	Yes	1.00179	41.760
3	72.3	72.3	36.0	41.0	11862.707	3	Yes	1.00186	41.834
4	72.8	72.8	36.0	41.0	11860.315	4	Yes	1.00207	41.780
5	72.1	72.1	36.0	41.0	11864.654	5	Yes	1.00169	41.774
Average	71.0	71.0	36.0	41.0	11863.0040			1.00181	41.787

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00020	1.00003	0.99436	1.00021	0.99480	1.18202

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11863.0040	10000.0000	1.18630	0.99436	1.00024	0.99460	1.17989

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0018	MF
	(2)	MF * CPL =	1.0020	CMF
	(3)	1 ÷ MF =	0.9982	MA
	(4)	NKF ÷ MF =	9982.0	KF
	(5)	KF ÷ CPL =	9980.0	CKF

Repeatability: 0.045 %
Uncertainty: 0.024 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

67443821 WPX 409H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	In
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	In
W.T.	0.322	In
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.2 °API
Obs. Temp	80.9 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1478557884	1481155934
Date	11/07/2016	12/07/2016
Time	9:31	11:12
Product	Crude	Crude
Flowrate	41 bbl/hr	42 bbl/hr
Totalizer Throughput		
Base Density	40.1°API	40.4 °API
Avg Prvr Temp	79.4	76.7
Avg Prvr Press	40.0	10.0
Repeatability	0.044 %	0.023 %
CMF	1.0028	1.0033
CMF Variance	-0.0007	0.0005

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	36.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	70.6	70.6	10.0	36.0	11851.655	1	No	1.00263	41.795
2	74.9	74.9	10.0	36.0	11847.143	2	Yes	1.00309	41.844
3	76.0	76.0	10.0	36.0	11846.759	3	Yes	1.00314	41.777
4	76.9	76.9	10.0	36.0	11848.316	4	Yes	1.00301	41.717
5	77.6	77.6	10.0	36.0	11847.150	5	Yes	1.00313	41.781
6	78.4	78.4	10.0	36.0	11846.115	6	Yes	1.00324	41.806
Average	76.7	76.7	10.0	36.0	11847.0966			1.00312	41.785

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00031	1.00001	0.99155	1.00006	0.99193	1.17861

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11847.0966	10000.0000	1.18471	0.99155	1.00021	0.99176	1.17495

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0031	MF	
(2)	MF * CPL =	1.0033	CMF	
(3)	1 ÷ MF =	0.9969	MA	
(4)	NKF ÷ MF =	9969.1	KF	
(5)	KF ÷ CPL =	9967.1	CKF	

Repeatability: 0.023 %
Uncertainty: 0.026 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

67443821 WPX 409H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.		
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.1 °API
Obs. Temp	80.5 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1487970910	1489106739
Date	02/24/2017	03/09/2017
Time	8:15	11:45
Product	Crude	Crude
Flowrate	42 bbl/hr	42 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	40.3 °API
Avg Prvr Temp	71.0	80.5
Avg Prvr Press	36.0	16.0
Repeatability	0.045 %	0.043 %
CMF	1.0020	1.0021
CMF Variance	-0.0013	0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 35.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	79.7	79.7	16.0	35.0	11864.953	1	Yes	1.00170	41.713
2	81.0	81.0	16.0	35.0	11863.850	2	Yes	1.00180	41.760
3	81.2	81.2	16.0	35.0	11861.226	3	Yes	1.00203	41.767
4	81.5	81.5	16.0	35.0	11865.703	4	Yes	1.00166	41.691
5	79.0	79.0	16.0	35.0	11860.318	5	Yes	1.00209	41.720
Average	**80.5**	**80.5**	**16.0**	**35.0**	**11863.2100**			**1.00186**	**41.730**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00038	1.00001	0.98964	1.00009	0.99012	1.17646

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11863.2100	10000.0000	1.18632	0.98964	1.00021	0.98985	1.17428

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0019	MF
	(2)	MF * CPL =	1.0021	CMF
	(3)	1 ÷ MF =	0.9981	MA
	(4)	NKF ÷ MF =	9981.0	KF
	(5)	KF ÷ CPL =	9979.0	CKF

Repeatability: 0.043 %
Uncertainty: 0.023 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: Sec.2P T22N R6W

Meter Data

WPX228H WPX 228H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		In
Serial No.	14324674	
Model No.	CMF 300M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	In
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.7 °API
Obs. Temp	102.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1486076740	1488583277
Date	02/02/2017	03/03/2017
Time	9:49	10:21
Product	Crude	Crude
Flowrate	390 bbl/hr	369 bbl/hr
Totalizer	139379	
Throughput	996	
Base Density	41.2°API	40.1 °API
Avg Prvr Temp	59.5	66.7
Avg Prvr Press	19.0	17.0
Repeatability	0.019 %	0.036 %
CMF	1.0021	1.0020
CMF Variance	-0.0013	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	45.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	66.5	66.5	17.0	46.0	11864.080	1	No	1.00147	370.299
2	67.0	67.0	17.0	46.0	11862.339	2	Yes	1.00163	369.796
3	66.9	66.9	17.0	46.0	11858.249	3	Yes	1.00198	369.369
4	66.8	66.8	17.0	46.0	11861.686	4	Yes	1.00168	368.976
5	66.6	66.6	17.0	46.0	11862.296	5	Yes	1.00162	368.863
6	66.4	66.4	17.0	46.0	11861.537	6	Yes	1.00169	368.905
Average	66.7	66.7	17.0	46.0	11861.2214			1.00172	369.182

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00012	1.00001	0.99663	1.00009	0.99685	1.18446

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11861.2214	10000.0000	1.18612	0.99663	1.00026	0.99689	1.18243

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0017	MF
	(2)	MF * CPL =	1.0020	CMF
	(3)	1 ÷ MF =	0.9983	MA
	(4)	NKF ÷ MF =	9983.0	KF
	(5)	KF ÷ CPL =	9980.0	CKF

Repeatability: 0.036 %
Uncertainty: 0.021 %

Trans. Serial No.
Flow Calib Factor
Density Calib Factor

Frequency Set Point
Flowrate Set Point
Zero Verified Zeroed
As Found As Left

Technician: PROVE
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: Sec.2P T22N R6W

Meter Data

WPX228H WPX 228H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	in
Serial No.	14324674
Model No.	CMF 300M

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	DOMINION
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.2 °API
Obs. Temp	41.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	44.9 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID		1485467095
Date		01/26/2017
Time		8:44
Product		Crude
Flowrate		366 bbl/hr
Totalizer		138383
Throughput		
Base Density		44.9 °API
Avg Prvr Temp		40.2
Avg Prvr Press		49.0
Repeatability		0.029 %
CMF		1.0034
CMF Variance		

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 49.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	40.4	40.4	49.0	49.0	11841.477	1	Yes	1.00310	365.978
2	40.6	40.6	49.0	49.0	11842.230	2	Yes	1.00304	365.345
3	39.7	39.7	49.0	49.0	11838.624	3	Yes	1.00333	365.732
4	39.9	39.9	49.0	49.0	11841.378	4	Yes	1.00310	365.909
5	40.3	40.3	49.0	49.0	11842.072	5	Yes	1.00304	365.897
Average	**40.2**	**40.2**	**49.0**	**49.0**	**11841.1562**			**1.00312**	**365.772**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	0.99963	1.00004	1.01049	1.00027	1.01043	1.20059

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11841.1562	10000.0000	1.18412	1.01049	1.00027	1.01076	1.19686

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0031	MF
	(2)	MF * CPL =	1.0034	CMF
	(3)	1 + MF =	0.9969	MA
	(4)	NKF ÷ MF =	9969.1	KF
	(5)	KF ÷ CPL =	9966.1	CKF

Repeatability: 0.029 %
Uncertainty: 0.015 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Clinton York - Meter Provers Inc.
Witness: Howard Gillies

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: Sec.2P T22N R6W

Meter Data

WPX228H WPX 228H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		in
Serial No.	14324674	
Model No.	CMF 300M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.4 °API
Obs. Temp	74.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.2 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1485467095	1486076740
Date	01/26/2017	02/02/2017
Time	8:44	9:49
Product	Crude	Crude
Flowrate	366 bbl/hr	390 bbl/hr
Totalizer	138383	139379
Throughput		996
Base Density	44.9°API	41.2 °API
Avg Prvr Temp	40.2	59.5
Avg Prvr Press	49.0	19.0
Repeatability	0.029 %	0.019 %
CMF	1.0034	1.0021
CMF Variance		-0.0013

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	47.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0003	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	59.9	59.9	19.0	47.0	11858.195	1	Yes	1.00186	391.219
2	59.8	59.8	19.0	47.0	11858.232	2	Yes	1.00186	390.932
3	59.7	59.7	19.0	47.0	11857.608	3	Yes	1.00191	390.241
4	59.3	59.3	19.0	47.0	11858.011	4	Yes	1.00187	389.603
5	58.9	58.9	19.0	47.0	11859.717	5	Yes	1.00172	389.170
6	58.3	58.3	19.0	47.0	11853.056	6	No	1.00227	388.885
Average	**59.5**	**59.5**	**19.0**	**47.0**	**11858.3526**			**1.00184**	**390.233**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	0.99999	1.00002	1.00025	1.00010	1.00036	1.18863

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11858.3526	10000.0000	1.18584	1.00025	1.00026	1.00051	1.18644

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0018	MF
	(2)	MF * CPL =	1.0021	CMF
	(3)	1 + MF =	0.9982	MA
	(4)	NKF ÷ MF =	9982.0	KF
	(5)	KF ÷ CPL =	9979.0	CKF

Repeatability: 0.019 %
Uncertainty: 0.023 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 33 T24N R8W

Meter Data

WPX112 WPX 112

Factor Tracked: Meter Factor(MF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 In
Serial No.
Model No.: CMF 200M

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 In
W.T.: 0.322 In
Manufacturer
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F
Certified

Product Data

Name: Crude
Batch No.
Obs. Gravity: 44.2 °API
Obs. Temp: 102.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 40.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1489701156	1489702123
Date	03/16/2017	03/16/2017
Time	9:52	10:08
Product	Crude	Crude
Flowrate	42 bbl/hr	31 bbl/hr
Totalizer		
Throughput		
Base Density	40.5°API	40.5 °API
Avg Prvr Temp	97.0	97.2
Avg Prvr Press	38.0	38.0
Repeatability	0.040 %	0.036 %
MF	1.0006	1.0008
MF Variance	-0.0015	0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 37.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	99.5	99.5	38.0	39.0	11880.439	1	Yes	1.00089	31.222
2	97.9	97.9	38.0	39.0	11879.780	2	Yes	1.00091	31.252
3	97.0	97.0	38.0	39.0	11883.661	3	Yes	1.00057	31.263
4	95.8	95.8	38.0	39.0	11881.154	4	Yes	1.00075	31.267
5	95.6	95.6	38.0	39.0	11879.141	5	Yes	1.00093	31.275
Average	**97.2**	**97.2**	**38.0**	**39.0**	**11880.8350**			**1.00081**	**31.256**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00069	1.00003	0.98111	1.00024	0.98205	1.16687

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11880.8350	10000.0000	1.18808	0.98111	1.00024	0.98135	1.16592

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0008	MF
	(2)	MF * CPL =	1.0010	CMF
	(3)	1 ÷ MF =	0.9992	MA
	(4)	NKF ÷ MF =	9992.0	KF
	(5)	KF ÷ CPL =	9990.0	CKF

Repeatability: 0.036 %
Uncertainty: 0.019 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician: PROVE
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SEC 33 T24N R8W**

Meter Data

WPX112 WPX 112

Factor Tracked	**Meter Factor(MF)**	
Temp Compensated	**No**	
NKF	**10000.0000**	**N/bbl**
Manufacturer	**Micro Motion**	
Size	**2.00**	**In**
Serial No.		
Model No.	**CMF200M**	

Prover Data

BPV	**1.18820**	**bbl**
I.D.	**7.981**	**in**
W.T.	**0.322**	**in**
Manufacturer	**DOMINION**	
Type	**Displacement-Sphere**	
Serial No.	**23MM**	
Elasticity	**3.0E7**	**1/psi**
Pipe Gc	**1.86E-5**	**1/°F**

Certified

Product Data

Name	**Crude**
Batch No.	
Obs. Gravity	**42.3 °API**
Obs. Temp	**79.8 °F**
Obs. Press	**0.0 psi**
API Table	**Table A - Crude Oil (2004)**
Base Density	**40.6 °API** HYC **Y**

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** *Passed?* **Y** *Min # of Runs:* **5**
Criteria: **5** *out of* **5** *consecutive runs*

Avg X Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** *Cutoff Date:*

Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**

Proving Mode:	**Volumetric**
Density Mode:	**Manual**
Calc. Method:	**Avg. Meter Factor**
Proving Method:	**PIU**
Passes Per Run	**1**

Proving Data

	Previous	*Current*
Task ID	**1486759280**	**1486760468**
Date	**02/10/2017**	**02/10/2017**
Time	**7:41**	**8:01**
Product	**Crude**	**Crude**
Flowrate	**42 bbl/hr**	**31 bbl/hr**
Totalizer		
Throughput		
Base Density	**40.6°API**	**40.6 °API**
Avg Prvr Temp	**79.3**	**79.9**
Avg Prvr Press	**40.0**	**40.0**
Repeatability	**0.022 %**	**0.018 %**
MF	**1.0018**	**1.0021**
MF Variance	**0.0008**	**0.0003**

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	**42.0**	**psig**
Eq. Vapor Pressure	**0.0**	**psig**
CPL	**1.0002**	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	81.4	81.4	40.0	42.0	11863.440	1	Yes	1.00199	31.340
2	80.1	80.1	40.0	42.0	11861.867	2	Yes	1.00208	31.328
3	79.4	79.4	40.0	42.0	11860.686	3	Yes	1.00215	31.357
4	79.4	79.4	40.0	42.0	11862.156	4	Yes	1.00203	31.332
5	79.4	79.4	40.0	42.0	11860.521	5	Yes	1.00217	31.344
Average	**79.9**	**79.9**	**40.0**	**42.0**	**11861.7340**			**1.00208**	**31.340**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	*CTSp*	*CPSp*	*CTLp*	*CPLp*	*CCFp*	*GSVp*
1.18820	1.00037	1.00003	0.98991	1.00024	0.99054	1.17696

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	*NKF*	*IVm*	*CTLm*	*CPLm*	*CCFm*	*ISVm*
11861.7340	10000.0000	1.18617	0.98991	1.00025	0.99016	1.17450

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0021	MF
	(2)	MF * CPL =	1.0023	CMF
	(3)	1 + MF =	0.9979	MA
	(4)	NKF ÷ MF =	9979.0	KF
	(5)	KF ÷ CPL =	9977.0	CKF

Repeatability: **0.018 %**
Uncertainty: **0.010 %**

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician

Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 33 T24N R8W

Meter Data

WPX112 WPX 112

Factor Tracked	Meter Factor(MF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		in
Serial No.		
Model No.	CMF200M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.0 °API
Obs. Temp	97.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1484353852	1484356414
Date	01/13/2017	01/13/2017
Time	11:30	12:13
Product	Crude	Crude
Flowrate	41 bbl/hr	31 bbl/hr
Totalizer		
Throughput		
Base Density	40.8°API	40.8 °API
Avg Prvr Temp	95.2	96.5
Avg Prvr Press	35.0	37.0
Repeatability	0.022 %	0.039 %
MF	1.0010	1.0010
MF Variance		0.0000

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	36.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	96.7	96.7	37.0	37.0	11879.839	1	Yes	1.00088	31.262
2	96.4	96.4	37.0	37.0	11876.142	2	Yes	1.00120	31.244
3	96.3	96.3	37.0	37.0	11878.296	3	Yes	1.00101	31.250
4	96.6	96.6	37.0	37.0	11880.736	4	Yes	1.00081	31.251
5	96.4	96.4	37.0	37.0	11878.270	5	Yes	1.00101	31.284
Average	**96.5**	**96.5**	**37.0**	**37.0**	**11878.6566**			**1.00098**	**31.258**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00068	1.00003	0.98140	1.00023	0.98232	1.16719

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11878.6566	10000.0000	1.18787	0.98140	1.00023	0.98163	1.16605

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0010	MF
	(2)	MF * CPL =	1.0012	CMF
	(3)	1 ÷ MF =	0.9990	MA
	(4)	NKF ÷ MF =	9990.0	KF
	(5)	KF ÷ CPL =	9988.0	CKF

Repeatability: 0.039 %
Uncertainty: 0.021 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician: Clinton York - Meter Provers Inc.
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 32 T24N R8W

Meter Data

WPX114H WPX 114H

Factor Tracked: Meter Factor(MF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14504619
Model No.: CMF200M

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.
Obs. Gravity: 43.4 °API
Obs. Temp: 100.1 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 39.9 °API HYC: Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1486762844	1486764182
Date	02/10/2017	02/10/2017
Time	8:40	9:03
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	39.9°API	39.9 °API
Avg Prvr Temp	99.3	99.1
Avg Prvr Press	37.0	42.0
Repeatability	0.028 %	0.012 %
MF	1.0014	1.0013
MF Variance	-0.0011	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 44.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	99.9	99.9	42.0	44.0	11876.179	1	Yes	1.00125	20.829
2	99.3	99.3	42.0	44.0	11875.587	2	Yes	1.00130	20.841
3	98.9	98.9	42.0	44.0	11875.165	3	Yes	1.00131	20.841
4	98.7	98.7	42.0	44.0	11875.224	4	Yes	1.00131	20.822
5	98.6	98.6	42.0	44.0	11874.543	5	Yes	1.00137	20.881
Average	**99.1**	**99.1**	**42.0**	**44.0**	**11875.3396**			**1.00131**	**20.843**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00073	1.00003	0.98028	1.00026	0.98128	1.16596

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11875.3396	10000.0000	1.18753	0.98028	1.00027	0.98054	1.16442

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0013	MF
	(2)	MF * CPL =	1.0016	CMF
	(3)	1 ÷ MF =	0.9987	MA
	(4)	NKF ÷ MF =	9987.0	KF
	(5)	KF ÷ CPL =	9984.0	CKF

Repeatability: 0.012 %
Uncertainty: 0.006 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 32 T24N R8W

Meter Data

WPX114H WPX 114H

Factor Tracked	Meter Factor(MF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		In
Serial No.	14504519	
Model No.	CMF200M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.4 °API
Obs. Temp	71.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1484358676	1484359618
Date	01/13/2017	01/13/2017
Time	12:51	13:06
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	40.5°API	40.5 °API
Avg Prvr Temp	78.0	76.2
Avg Prvr Press	38.0	39.0
Repeatability	0.049 %	0.027 %
MF	1.0022	1.0025
MF Variance		0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	39.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	76.6	76.6	39.0	40.0	11858.113	1	Yes	1.00236	20.923
2	76.6	76.6	39.0	40.0	11854.892	2	Yes	1.00263	20.867
3	75.7	75.7	39.0	40.0	11857.576	3	Yes	1.00238	20.941
4	76.2	76.2	39.0	40.0	11856.651	4	Yes	1.00247	20.889
5	76.1	76.1	39.0	40.0	11855.602	5	Yes	1.00256	20.916
Average	**76.2**	**76.2**	**39.0**	**40.0**	**11856.5668**			**1.00248**	**20.907**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00030	1.00003	0.99180	1.00023	0.99236	1.17912

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11856.5668	10000.0000	1.18566	0.99180	1.00023	0.99203	1.17621

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0025	MF
	(2)	MF * CPL =	1.0027	CMF
	(3)	1 ÷ MF =	0.9975	MA
	(4)	NKF ÷ MF =	9975.1	KF
	(5)	KF ÷ CPL =	9973.1	CKF

Repeatability: 0.027 %
Uncertainty: 0.014 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: Clinton York - Meter Provers Inc.
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SEC 32 T24N R8W**

Meter Data

WPX114H WPX 114H

Factor Tracked	**Meter Factor(MF)**	
Temp Compensated	**No**	
NKF	**10000.0000**	**N/bbl**
Manufacturer	**Micro Motion**	
Size	**2.00**	**in**
Serial No.	**14504519**	
Model No.	**CMF 200M**	

Prover Data

BPV	**1.18820**	**bbl**
I.D.	**7.981**	**in**
W.T.	**0.322**	**in**
Manufacturer		
Type	**Displacement-Sphere**	
Serial No.	**23MM**	
Elasticity	**3.0E7**	**1/psi**
Pipe Gc	**1.86E-5**	**1/°F**
Certified		

Product Data

Name	**Crude**
Batch No.	
Obs. Gravity	**41.2 °API**
Obs. Temp	**63.0 °F**
Obs. Press	**0.0 psi**
API Table	**Table A - Crude Oil (2004)**
Base Density	**40.9 °API** HYC **Y**

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** *Passed?* **Y** *Min # of Runs:* **5**
Criteria: **5** *out of* **5** *consecutive runs*

Avg X Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** *Cutoff Date:*

Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**

Proving Mode:	**Volumetric**
Density Mode:	**Manual**
Calc. Method:	**Avg. Meter Factor**
Proving Method:	**PIU**
Passes Per Run	**1**

Proving Data

	Previous	*Current*
Task ID	**1489697728**	**1489698664**
Date	**03/16/2017**	**03/16/2017**
Time	**8:55**	**9:10**
Product	**Crude**	**Crude**
Flowrate	**42 bbl/hr**	**21 bbl/hr**
Totalizer Throughput		
Base Density	**40.9°API**	**40.9 °API**
Avg Prvr Temp	**63.7**	**63.0**
Avg Prvr Press	**39.0**	**38.0**
Repeatability	**0.047 %**	**0.013 %**
MF	**1.0030**	**1.0035**
MF Variance	**0.0017**	**0.0005**

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	**38.0**	**psig**
Eq. Vapor Pressure	**0.0**	**psig**
CPL	**1.0002**	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	62.8	62.8	38.0	39.0	11840.782	1	Yes	1.00355	20.839
2	62.9	62.9	38.0	39.0	11842.400	2	Yes	1.00342	20.908
3	63.1	63.1	38.0	39.0	11841.923	3	Yes	1.00347	20.910
4	63.0	63.0	38.0	39.0	11841.713	4	Yes	1.00348	20.896
5	63.1	63.1	38.0	39.0	11841.365	5	Yes	1.00351	20.903
Average	**63.0**	**63.0**	**38.0**	**39.0**	**11841.6366**			**1.00349**	**20.891**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	*CTSp*	*CPSp*	*CTLp*	*CPLp*	*CCFp*	*GSVp*
1.18820	1.00006	1.00003	0.99848	1.00021	0.99878	1.18675

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	*NKF*	*IVm*	*CTLm*	*CPLm*	*CCFm*	*ISVm*
11841.6366	10000.0000	1.18416	0.99848	1.00022	0.99870	1.18262

(3) Proving Factors:

>>>>	(1)	GSVp + ISVm =	1.0035	MF
	(2)	MF * CPL =	1.0037	CMF
	(3)	1 + MF =	0.9965	MA
	(4)	NKF + MF =	9965.1	KF
	(5)	KF + CPL =	9963.1	CKF

Repeatability: **0.013 %**
Uncertainty: **0.007 %**

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 4 T23N R8W

Meter Data

WPX282H WPX 282H

Factor Tracked: Meter Factor(MF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14504527
Model No.: CMF 200M

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-6 1/°F
Certified

Product Data

Name: Crude
Batch No.
Obs. Gravity: 41.3 °API
Obs. Temp: 72.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 40.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1489694289	1489695065
Date	03/16/2017	03/16/2017
Time	7:58	8:11
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	40.3°API	40.3 °API
Avg Prvr Temp	86.4	86.9
Avg Prvr Press	39.0	38.0
Repeatability	0.026 %	0.042 %
MF	1.0006	1.0006
MF Variance	0.0001	0.0000

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 38.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	87.0	87.0	38.0	40.0	11879.189	1	Yes	1.00075	20.888
2	85.6	85.6	38.0	40.0	11882.545	2	Yes	1.00045	20.906
3	86.2	86.2	38.0	40.0	11881.801	3	Yes	1.00053	20.884
4	87.1	87.1	38.0	40.0	11882.605	4	Yes	1.00047	20.887
5	88.4	88.4	38.0	40.0	11878.069	5	Yes	1.00087	20.874
Average	86.9	86.9	38.0	40.0	11880.8418			1.00061	20.888

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00050	1.00003	0.98639	1.00023	0.98714	1.17292

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11880.8418	10000.0000	1.18808	0.98639	1.00024	0.98663	1.17220

(3) Proving Factors:

>>>> (1) GSVp ÷ ISVm = 1.0006 MF
(2) MF * CPL = 1.0008 CMF
(3) 1 ÷ MF = 0.9994 MA
(4) NKF ÷ MF = 9994.0 KF
(5) KF ÷ CPL = 9992.0 CKF

Repeatability: 0.042 %
Uncertainty: 0.022 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEIt PROVEIt 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SEC 4 T23N R8W**

Meter Data

WPX282H WPX 282H

Factor Tracked	Meter Factor(MF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 in
Serial No.	14504527
Model No.	CMF200M

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	DOMINION
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.8 °API
Obs. Temp	95.6 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	38.8 °API HYC Y

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** Passed? **Y** Min # of Runs: **5**
Criteria: **5** out of **5** consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** Cutoff Date:

Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1486766839	1486767979
Date	02/10/2017	02/10/2017
Time	9:47	10:06
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	38.8°API	38.8 °API
Avg Prvr Temp	94.2	94.5
Avg Prvr Press	36.0	41.0
Repeatability	0.025 %	0.032 %
MF	1.0006	1.0005
MF Variance	0.0002	-0.0001

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	42.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	94.5	94.5	41.0	42.0	11881.391	1	Yes	1.00071	20.852
2	94.2	94.2	41.0	42.0	11884.277	2	Yes	1.00047	20.823
3	94.3	94.3	41.0	42.0	11882.510	3	Yes	1.00062	20.820
4	94.7	94.7	41.0	42.0	11884.688	4	Yes	1.00045	20.781
5	94.8	94.8	41.0	42.0	11885.322	5	Yes	1.00039	20.758
Average	**94.5**	**94.5**	**41.0**	**42.0**	**11883.6376**			**1.00053**	**20.807**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00064	1.00003	0.98283	1.00025	0.98373	1.16887

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11883.6376	10000.0000	1.18836	0.98283	1.00025	0.98308	1.16825

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0005	MF
	(2)	MF * CPL =	1.0008	CMF
	(3)	1 ÷ MF =	0.9995	MA
	(4)	NKF ÷ MF =	9995.0	KF
	(5)	KF ÷ CPL =	9992.0	CKF

Repeatability: 0.032 %
Uncertainty: 0.017 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC 4 T23N R8W

Meter Data

WPX282H WPX 282H

Factor Tracked: Meter Factor(MF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: in
Serial No.: 14504527
Model No.: CMF200M

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 42.2 °API
Obs. Temp: 86.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 40.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1484362484	1484363710
Date	01/13/2017	01/13/2017
Time	13:54	14:15
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	40.0°API	40.0 °API
Avg Prvr Temp	80.8	81.6
Avg Prvr Press	39.0	39.0
Repeatability	0.047 %	0.017 %
MF	1.0007	1.0004
MF Variance		-0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 40.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	80.4	80.4	39.0	40.0	11882.290	1	Yes	1.00037	20.838
2	81.9	81.9	39.0	40.0	11883.230	2	Yes	1.00033	20.743
3	81.9	81.9	39.0	40.0	11883.249	3	Yes	1.00033	20.817
4	81.9	81.9	39.0	40.0	11881.154	4	Yes	1.00050	20.939
5	81.9	81.9	39.0	40.0	11882.410	5	Yes	1.00040	20.813
Average	81.6	81.6	39.0	40.0	11882.4666			1.00039	20.830

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00040	1.00003	0.98912	1.00023	0.98977	1.17604

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11882.4666	10000.0000	1.18825	0.98912	1.00023	0.98935	1.17560

(3) Proving Factors:

>>>> (1)	GSVp ÷ ISVm =	1.0004	MF	
(2)	MF * CPL =	1.0006	CMF	
(3)	1 + MF =	0.9996	MA	
(4)	NKF ÷ MF =	9996.0	KF	
(5)	KF ÷ CPL =	9994.0	CKF	

Repeatability: 0.017 %
Uncertainty: 0.009 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician: Clinton York - Meter Provers Inc.
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.3L T23N R8W

Meter Data

67455821 WPX 404H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14502902	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	41.8 °API
Obs. Temp	84.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	39.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1484269828	1484270892
Date	01/12/2017	01/12/2017
Time	12:10	12:28
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	39.8°API	39.8 °API
Avg Prvr Temp	82.9	83.7
Avg Prvr Press	39.0	40.0
Repeatability	0.044 %	0.047 %
CMF	0.9977	0.9932
CMF Variance	0.0098	-0.0045

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	41.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	83.9	83.9	40.0	41.0	11973.682	1	Yes	0.99281	20.680
2	83.7	83.7	40.0	41.0	11974.093	2	Yes	0.99278	20.666
3	83.7	83.7	40.0	41.0	11972.115	3	Yes	0.99293	20.687
4	83.6	83.6	40.0	41.0	11968.323	4	Yes	0.99325	20.690
5	83.9	83.9	40.0	41.0	11971.422	5	Yes	0.99299	20.678
Average	83.7	83.7	40.0	41.0	11971.9270			0.99295	20.680

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00044	1.00003	0.98808	1.00024	0.98878	1.17487

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11971.9270	10000.0000	1.19719	0.98808	1.00024	0.98832	1.18321

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9930	MF
	(2)	MF * CPL =	0.9932	CMF
	(3)	1 ÷ MF =	1.0070	MA
	(4)	NKF ÷ MF =	10070	KF
	(5)	KF ÷ CPL =	10068	CKF

Repeatability: 0.047 %
Uncertainty: 0.025 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: Clinton York - Meter Provers Inc.
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.3L T23N R8W

Meter Data

67455821 WPX 404H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14502902	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.4 °API
Obs. Temp	90.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1489628384	1489629320
Date	03/15/2017	03/15/2017
Time	13:39	13:55
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	40.8°API	40.8 °API
Avg Prvr Temp	88.1	89.4
Avg Prvr Press	40.0	38.0
Repeatability	0.038 %	0.022 %
CMF	0.9976	0.9932
CMF Variance	0.0029	-0.0044

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	38.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	89.1	89.1	38.0	39.0	11971.660	1	Yes	0.99306	20.680
2	89.4	89.4	38.0	39.0	11972.342	2	Yes	0.99302	20.666
3	89.4	89.4	38.0	39.0	11970.524	3	Yes	0.99317	20.652
4	89.5	89.5	38.0	39.0	11972.170	4	Yes	0.99302	20.646
5	89.6	89.6	38.0	39.0	11973.172	5	Yes	0.99295	20.679
Average	**89.4**	**89.4**	**38.0**	**39.0**	**11971.9736**			**0.99304**	**20.665**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00055	1.00003	0.98503	1.00023	0.98583	1.17136

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11971.9736	10000.0000	1.19720	0.98503	1.00024	0.98527	1.17957

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9930	MF
	(2)	MF * CPL =	0.9932	CMF
	(3)	1 ÷ MF =	1.0070	MA
	(4)	NKF ÷ MF =	10070	KF
	(5)	KF ÷ CPL =	10068	CKF

Repeatability: 0.022 %
Uncertainty: 0.012 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.3L T23N R8W

Meter Data

67455821 WPX 404H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14502902
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer: DOMINION
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 42.4 °API
Obs. Temp: 91.3 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 39.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1486771354	1486772420
Date	02/10/2017	02/10/2017
Time	11:02	11:20
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	39.7°API	39.7 °API
Avg Prvr Temp	90.4	90.1
Avg Prvr Press	37.0	44.0
Repeatability	0.021 %	0.036 %
CMF	0.9989	0.9947
CMF Variance	0.0057	-0.0042

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 45.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	90.4	90.4	44.0	44.0	11953.990	1	Yes	0.99458	20.724
2	90.2	90.2	44.0	44.0	11954.633	2	Yes	0.99452	20.694
3	90.0	90.0	44.0	44.0	11958.191	3	Yes	0.99422	20.701
4	90.1	90.1	44.0	44.0	11955.494	4	Yes	0.99445	20.701
5	90.1	90.1	44.0	44.0	11956.107	5	Yes	0.99440	20.705
Average	90.1	90.1	44.0	44.0	11955.6830			0.99443	20.705

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00056	1.00004	0.98487	1.00026	0.98572	1.17123

(2) ISVm: [N(avg) + NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11955.6830	10000.0000	1.19557	0.98487	1.00026	0.98513	1.17779

(3) Proving Factors:

>>>>	(1)	GSVp + ISVm =	0.9944	MF
	(2)	MF * CPL =	0.9947	CMF
	(3)	1 + MF =	1.0056	MA
	(4)	NKF + MF =	10056	KF
	(5)	KF + CPL =	10053	CKF

Repeatability: 0.036 %
Uncertainty: 0.019 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVEit
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.11A T23N R8W NMPM

Meter Data

67413184 WPX 407H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14494853	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	45.5 °API
Obs. Temp	96.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.3 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1486674095	1486675150
Date	02/09/2017	02/09/2017
Time	8:01	8:19
Product	Crude	Crude
Flowrate	41 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	42.3°API	42.3 °API
Avg Prvr Temp	100.6	100.3
Avg Prvr Press	34.0	40.0
Repeatability	0.028 %	0.032 %
CMF	0.9902	0.9899
CMF Variance	-0.0003	-0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure 44.0 psig
Eq. Vapor Pressure 0.0 psig
CPL 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	100.2	100.2	40.0	44.0	12018.305	1	Yes	0.98941	20.747
2	100.1	100.1	40.0	44.0	12014.567	2	Yes	0.98971	20.696
3	100.2	100.2	40.0	44.0	12015.053	3	Yes	0.98968	20.700
4	100.3	100.3	40.0	44.0	12014.820	4	Yes	0.98970	20.682
5	100.4	100.4	40.0	44.0	12014.365	5	Yes	0.98973	20.664
Average	**100.3**	**100.3**	**40.0**	**44.0**	**12015.4220**			**0.98965**	**20.698**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00075	1.00003	0.97909	1.00026	0.98011	1.16457

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
12015.4220	10000.0000	1.20154	0.97909	1.00029	0.97937	1.17675

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9896	MF
	(2)	MF * CPL =	0.9899	CMF
	(3)	1 + MF =	1.0105	MA
	(4)	NKF ÷ MF =	10105	KF
	(5)	KF ÷ CPL =	10102	CKF

Repeatability: 0.032 %
Uncertainty: 0.017 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.11A T23N R8W NMPM

Meter Data

67413184 WPX 407H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14494853
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer:
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F
Certified:

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 45.4 °API
Obs. Temp: 101.5 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.7 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1489182234	1489184756
Date	03/10/2017	03/10/2017
Time	8:43	9:25
Product	Crude	Crude
Flowrate	41 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	41.7°API	41.7 °API
Avg Prvr Temp	102.9	106.2
Avg Prvr Press	34.0	37.0
Repeatability	0.026 %	0.035 %
CMF	0.9906	0.9902
CMF Variance	0.0007	-0.0004

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 40.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	106.6	106.6	37.0	40.0	12011.780	1	Yes	0.99006	20.381
2	106.1	106.1	37.0	40.0	12015.387	2	Yes	0.98976	20.511
3	106.1	106.1	37.0	40.0	12014.983	3	Yes	0.98979	20.721
4	106.2	106.2	37.0	40.0	12012.479	4	Yes	0.98999	20.580
5	106.3	106.3	37.0	40.0	12011.143	5	Yes	0.99011	20.698
Average	**106.2**	**106.2**	**37.0**	**40.0**	**12013.1544**			**0.98994**	**20.578**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00086	1.00003	0.97618	1.00024	0.97728	1.16120

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
12013.1544	10000.0000	1.20132	0.97618	1.00026	0.97643	1.17300

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9899	MF
	(2)	MF * CPL =	0.9902	CMF
	(3)	1 ÷ MF =	1.0102	MA
	(4)	NKF ÷ MF =	10102	KF
	(5)	KF ÷ CPL =	10099	CKF

Repeatability: 0.035 %
Uncertainty: 0.019 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

WPX395H WPX 395H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		In
Serial No.	14233156	
Model No.	CMF 300M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	In
W.T.	0.322	In
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F

Certified

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.6 °API
Obs. Temp	90.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1484342220	1485982838
Date	01/13/2017	02/01/2017
Time	8:17	8:00
Product	Crude	Crude
Flowrate	251 bbl/hr	215 bbl/hr
Totalizer	452050	455768
Throughput		3718
Base Density	41.5°API	40.0 °API
Avg Prvr Temp	76.9	83.8
Avg Prvr Press	82.0	82.0
Repeatability	0.041 %	0.035 %
CMF	1.0016	1.0021
CMF Variance		0.0000

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	82.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	83.2	83.2	82.0	82.0	11870.514	1	Yes	1.00147	215.422
2	83.5	83.5	82.0	82.0	11868.306	2	Yes	1.00167	214.979
3	83.7	83.7	82.0	82.0	11870.212	3	Yes	1.00152	214.953
4	84.2	84.2	82.0	82.0	11866.603	4	Yes	1.00182	214.891
5	84.5	84.5	82.0	82.0	11868.363	5	Yes	1.00169	215.508
Average	83.8	83.8	82.0	82.0	11868.7996			1.00163	215.151

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00044	1.00007	0.98801	1.00048	0.98899	1.17512

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11868.7996	10000.0000	1.18688	0.98801	1.00048	0.98848	1.17321

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0016	MF	
	(2)	MF * CPL =	1.0021	CMF	
	(3)	1 ÷ MF =	0.9984	MA	
	(4)	NKF ÷ MF =	9984.0	KF	
	(5)	KF ÷ CPL =	9979.0	CKF	

Repeatability: 0.035 %
Uncertainty: 0.019 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Witness:

PROVEIt

Copyright 2009, Flow-Cal, Inc.
PROVEIt PROVEIt 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

WPX395H WPX 395H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size		in
Serial No.	14233156	
Model No.	CMF 300M	

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.4 °API
Obs. Temp	75.3 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1485982838	1488487710
Date	02/01/2017	03/02/2017
Time	8:00	7:48
Product	Crude	Crude
Flowrate	215 bbl/hr	242 bbl/hr
Totalizer	455768	462477
Throughput	3718	6709
Base Density	40.0°API	41.1 °API
Avg Prvr Temp	83.8	75.2
Avg Prvr Press	82.0	82.0
Repeatability	0.035 %	0.047 %
CMF	1.0021	1.0019
CMF Variance	0.0000	-0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	82.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0005	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	75.1	75.1	82.0	82.0	11870.434	1	Yes	1.00132	242.687
2	75.2	75.2	82.0	82.0	11866.935	2	Yes	1.00162	242.275
3	75.1	75.1	82.0	82.0	11867.757	3	Yes	1.00154	241.866
4	75.2	75.2	82.0	82.0	11872.400	4	Yes	1.00115	241.463
5	75.3	75.3	82.0	82.0	11869.790	5	Yes	1.00137	241.438
Average	75.2	75.2	82.0	82.0	11869.4632			1.00140	241.946

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00028	1.00007	0.99225	1.00048	0.99307	1.17997

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11869.4632	10000.0000	1.18695	0.99225	1.00048	0.99273	1.17832

(3) Proving Factors:

>>>>	(1)	GSVp + ISVm =	1.0014	MF
	(2)	MF * CPL =	1.0019	CMF
	(3)	1 + MF =	0.9986	MA
	(4)	NKF + MF =	9986.0	KF
	(5)	KF + CPL =	9981.0	CKF

Repeatability: 0.047 %
Uncertainty: 0.025 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: [redacted]
Witness:

PROVE
Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID:

Meter Data

WPX395H WPX 395H

Factor Tracked	Meter Factor(MF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	in
Serial No.	14233166
Model No.	CMF 300M

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	DOMINION
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	42.0 °API
Obs. Temp	66.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID		1484342220
Date		01/13/2017
Time		8:17
Product		Crude
Flowrate		251 bbl/hr
Totalizer		452050
Throughput		
Base Density		41.5 °API
Avg Prvr Temp		76.9
Avg Prvr Press		82.0
Repeatability		0.041 %
MF		1.0016
MF Variance		

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	82.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0005

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	76.8	76.8	82.0	82.0	11868.383	1	Yes	1.00152	252.965
2	76.9	76.9	82.0	82.0	11865.387	2	Yes	1.00178	252.556
3	76.9	76.9	82.0	82.0	11865.800	3	Yes	1.00174	249.422
4	76.9	76.9	82.0	82.0	11868.020	4	Yes	1.00155	249.449
5	76.9	76.9	82.0	82.0	11870.220	5	Yes	1.00137	248.837
Average	76.9	76.9	82.0	82.0	11867.5620			1.00159	250.646

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00031	1.00007	0.99134	1.00048	0.99219	1.17892

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11867.5620	10000.0000	1.18676	0.99134	1.00048	0.99182	1.17705

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0016	MF
	(2)	MF * CPL =	1.0021	CMF
	(3)	1 ÷ MF =	0.9984	MA
	(4)	NKF ÷ MF =	9984.0	KF
	(5)	KF ÷ CPL =	9979.0	CKF

Repeatability: 0.041 %
Uncertainty: 0.022 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: Clinton York - Meter Provers Inc.

Witness: _ _

PROVEit

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.11A T23N R8W NMPM

Meter Data

67413184 WPX 407H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14494853	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer	DOMINION	
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.9 °API
Obs. Temp	83.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	42.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1484082007	1484082906
Date	01/10/2017	01/10/2017
Time	8:00	8:15
Product	Crude	Crude
Flowrate	41 bbl/hr	14 bbl/hr
Totalizer		
Throughput		
Base Density	42.8°API	42.8 °API
Avg Prvr Temp	82.7	82.8
Avg Prvr Press	37.0	41.0
Repeatability	0.021 %	0.026 %
CMF	0.9910	0.9905
CMF Variance	-0.0049	-0.0005

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	40.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	83.7	83.7	41.0	41.0	12005.744	1	Yes	0.99015	14.352
2	83.4	83.4	41.0	41.0	12003.768	2	Yes	0.99031	14.432
3	83.2	83.2	41.0	41.0	12003.099	3	Yes	0.99036	14.400
4	81.5	81.5	41.0	41.0	12002.141	4	Yes	0.99041	14.481
5	82.3	82.3	41.0	41.0	12004.398	5	Yes	0.99023	14.415
Average	82.8	82.8	41.0	41.0	12003.8300			0.99029	14.416

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00042	1.00003	0.98813	1.00025	0.98882	1.17492

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
12003.8300	10000.0000	1.20038	0.98813	1.00025	0.98838	1.18643

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9903	MF
	(2)	MF * CPL =	0.9905	CMF
	(3)	1 + MF =	1.0098	MA
	(4)	NKF ÷ MF =	10098	KF
	(5)	KF ÷ CPL =	10096	CKF

Repeatability: 0.026 %
Uncertainty: 0.014 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow Cal, Inc.
Copyright 2009, Flow Cal, Inc.
PROVEit PROVEit 8.7.0.0

01/10/2017 9:07 Page: 1
Revision: 1
Revision: 1

Customer: **WPX -**
Operator:
Location:
Federal ID: **SEC.36 T24N R8W**

Meter Data

68425694 WPX 133H

Factor Tracked	**Composite MF(CMF)**	
Temp Compensated	**No**	
NKF	**10000.0000**	**N/bbl**
Manufacturer	**Micro Motion**	
Size	**2.00**	**in**
Serial No.		
Model No.		

Prover Data

BPV	**1.18820**	**bbl**
I.D.	**7.981**	**in**
W.T.	**0.322**	**in**
Manufacturer		
Type	**Displacement-Sphere**	
Serial No.	**23MM**	
Elasticity	**3.0E7**	**1/psi**
Pipe Gc	**1.86E-5**	**1/°F**
Certified		

Product Data

Name	**Crude**
Batch No.	
Obs. Gravity	**43.2 °API**
Obs. Temp	**91.0 °F**
Obs. Press	**0.0 psi**
API Table	**Table A - Crude Oil (2004)**
Base Density	**40.5 °API** HYC **Y**

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** *Passed?* **Y** *Min # of Runs:* **5**
Criteria: **5** *out of* **12** *consecutive runs*

Avg X Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** *Cutoff Date:*

Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**

Proving Mode:	**Volumetric**
Density Mode:	**Manual**
Calc. Method:	**Avg. Meter Factor**
Proving Method:	**PIU**
Passes Per Run	**1**

Proving Data

	Previous	*Current*
Task ID	**1492212263**	**1492213240**
Date	**04/14/2017**	**04/14/2017**
Time	**11:24**	**11:40**
Product	**Crude**	**Crude**
Flowrate	**42 bbl/hr**	**21 bbl/hr**
Totalizer		
Throughput		
Base Density	**40.5°API**	**40.5 °API**
Avg Prvr Temp	**94.5**	**96.2**
Avg Prvr Press	**32.0**	**31.0**
Repeatability	**0.045 %**	**0.017 %**
CMF	**0.9982**	**0.9955**
CMF Variance	**0.0018**	**-0.0027**

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	**38.0**	**psig**
Eq. Vapor Pressure	**0.0**	**psig**
CPL	**1.0002**	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	96.7	96.7	31.0	39.0	11946.449	1	Yes	0.99526	20.902
2	96.1	96.1	31.0	39.0	11945.746	2	Yes	0.99530	20.671
3	96.0	96.0	31.0	39.0	11946.286	3	Yes	0.99525	20.812
4	96.1	96.1	31.0	39.0	11944.250	4	Yes	0.99542	20.759
5	96.1	96.1	31.0	39.0	11944.327	5	Yes	0.99542	20.765
Average	**96.2**	**96.2**	**31.0**	**39.0**	**11945.4116**			**0.99533**	**20.782**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	*CTSp*	*CPSp*	*CTLp*	*CPLp*	*CCFp*	*GSVp*
1.18820	1.00067	1.00003	0.98162	1.00019	0.98249	1.16739

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	*NKF*	*IVm*	*CTLm*	*CPLm*	*CCFm*	*ISVm*
11945.4116	10000.0000	1.19454	0.98162	1.00024	0.98186	1.17287

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9953	MF
	(2)	MF * CPL =	0.9955	CMF
	(3)	1 ÷ MF =	1.0047	MA
	(4)	NKF ÷ MF =	10047	KF
	(5)	KF ÷ CPL =	10045	CKF

Repeatability: **0.017 %**
Uncertainty: **0.009 %**

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician: PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.36 T24N R8W

Meter Data

68425694 WPX 133H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.
Model No.

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F
Certified

Product Data

Name: Crude
Batch No.
Obs. Gravity: 43.2 °API
Obs. Temp: 91.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 40.5 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 12 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1489615798	1492212263
Date	03/15/2017	04/14/2017
Time	10:09	11:24
Product	Crude	Crude
Flowrate	21 bbl/hr	42 bbl/hr
Totalizer		
Throughput		
Base Density	41.3°API	40.6 °API
Avg Prvr Temp	93.2	94.5
Avg Prvr Press	38.0	32.0
Repeatability	0.026 %	0.045 %
CMF	0.9964	0.9982
CMF Variance	-0.0025	0.0018

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 39.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	89.2	89.2	32.0	40.0	11914.086	1	Yes	0.99782	41.591
2	94.1	94.1	32.0	40.0	11913.281	2	Yes	0.99798	41.564
3	95.6	95.6	32.0	40.0	11913.962	3	Yes	0.99794	41.560
4	96.5	96.5	32.0	40.0	11910.250	4	Yes	0.99827	41.589
5	96.9	96.9	32.0	40.0	11914.470	5	Yes	0.99793	41.541
Average	**94.5**	**94.5**	**32.0**	**40.0**	**11913.2098**			**0.99799**	**41.569**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00064	1.00003	0.98249	1.00020	0.98334	1.16840

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11913.2098	10000.0000	1.19132	0.98249	1.00025	0.98274	1.17076

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9980	MF
	(2)	MF * CPL =	0.9982	CMF
	(3)	1 ÷ MF =	1.0020	MA
	(4)	NKF ÷ MF =	10020	KF
	(5)	KF ÷ CPL =	10018	CKF

Repeatability: 0.045 %
Uncertainty: 0.024 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVER PROVER 8770000

Customer:
Operator:
Location:
Federal ID: **SHL SEC.25M T24N R8W NMPM**

Meter Data

67455818 WPX 131H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 in
Serial No.	14504523
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	96.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	40.4 °API HYC Y

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? Y Passed? **Y** Min # of Runs: **6**
Criteria: **5** out of **5** consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** Cutoff Date:

Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1492220293	1492221131
Date	04/14/2017	04/14/2017
Time	13:38	13:52
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	40.4°API	40.4 °API
Avg Prvr Temp	75.8	67.5
Avg Prvr Press	32.0	32.0
Repeatability	0.013 %	0.021 %
CMF	1.0034	1.0056
CMF Variance	-0.0035	0.0022

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	37.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	69.1	69.1	32.0	39.0	11820.840	1	Yes	1.00534	20.984
2	68.1	68.1	32.0	39.0	11820.516	2	Yes	1.00534	20.937
3	67.5	67.5	32.0	39.0	11817.950	3	Yes	1.00555	20.945
4	66.2	66.2	32.0	39.0	11819.909	4	Yes	1.00536	20.944
5	66.3	66.3	32.0	39.0	11817.806	5	Yes	1.00554	20.942
Average	**67.5**	**67.5**	**32.0**	**39.0**	**11819.4042**			**1.00543**	**20.951**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00014	1.00003	0.99621	1.00018	0.99656	1.18411

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11819.4042	10000.0000	1.18194	0.99621	1.00022	0.99643	1.17772

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0054	MF
	(2)	MF * CPL =	1.0056	CMF
	(3)	1 ÷ MF =	0.9946	MA
	(4)	NKF ÷ MF =	9946.3	KF
	(5)	KF ÷ CPL =	9944.3	CKF

Repeatability: 0.021 %
Uncertainty: 0.011 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: PROVE
Witness:

Copyright 2009, Flow-Cal, Inc.

Customer:
Operator:
Location:
Federal ID: **SHL SEC.25M T24N R8W NMPM**

Meter Data

67455818 WPX 131H

Factor Tracked	**Composite MF(CMF)**	
Temp Compensated	**No**	
NKF	**10000.0000**	**N/bbl**
Manufacturer	**Micro Motion**	
Size	**2.00**	**in**
Serial No.	**14504523**	
Model No.		

Prover Data

BPV	**1.18820**	**bbl**
I.D.	**7.981**	**in**
W.T.	**0.322**	**in**
Manufacturer		
Type	**Displacement-Sphere**	
Serial No.	**23MM**	
Elasticity	**3.0E7**	**1/psi**
Pipe Gc	**1.86E-5**	**1/°F**
Certified		

Product Data

Name	**Crude**
Batch No.	
Obs. Gravity	**43.5 °API**
Obs. Temp	**96.0 °F**
Obs. Press	**0.0 psi**
API Table	**Table A - Crude Oil (2004)**
Base Density	**40.4 °API** HYC **Y**

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** *Passed?* **Y** *Min # of Runs:* **5**
Criteria: **5** *out of* **5** *consecutive runs*

Avg X Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** *Cutoff Date:*

Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**

Proving Mode:	**Volumetric**
Density Mode:	**Manual**
Calc. Method:	**Avg. Meter Factor**
Proving Method:	**PIU**
Passes Per Run	**1**

Proving Data

	Previous	*Current*
Task ID	**1489623501**	**1492220293**
Date	**03/15/2017**	**04/14/2017**
Time	**12:18**	**13:38**
Product	**Crude**	**Crude**
Flowrate	**21 bbl/hr**	**42 bbl/hr**
Totalizer		
Throughput		
Base Density	**41.4°API**	**40.4 °API**
Avg Prvr Temp	**60.8**	**75.8**
Avg Prvr Press	**37.0**	**32.0**
Repeatability	**0.041 %**	**0.013 %**
CMF	**1.0069**	**1.0034**
CMF Variance	**0.0029**	**-0.0035**

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	**37.0**	**psig**
Eq. Vapor Pressure	**0.0**	**psig**
CPL	**1.0002**	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	82.0	82.0	32.0	39.0	11848.849	1	Yes	1.00320	41.778
2	77.2	77.2	32.0	39.0	11848.802	2	Yes	1.00312	41.803
3	74.9	74.9	32.0	39.0	11846.775	3	Yes	1.00325	41.804
4	73.1	73.1	32.0	39.0	11846.499	4	Yes	1.00323	41.783
5	71.9	71.9	32.0	39.0	11846.004	5	Yes	1.00325	41.783
Average	**75.8**	**75.8**	**32.0**	**39.0**	**11847.3858**			**1.00321**	**41.790**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	*CTSp*	*CPSp*	*CTLp*	*CPLp*	*CCFp*	*GSVp*
1.18820	1.00029	1.00003	0.99201	1.00018	0.99251	1.17930

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	*NKF*	*IVm*	*CTLm*	*CPLm*	*CCFm*	*ISVm*
11847.3858	10000.0000	1.18474	0.99201	1.00023	0.99224	1.17555

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0032	MF
	(2)	MF * CPL =	1.0034	CMF
	(3)	1 ÷ MF =	0.9968	MA
	(4)	NKF ÷ MF =	9968.1	KF
	(5)	KF ÷ CPL =	9966.1	CKF

Repeatability: **0.013 %**
Uncertainty: **0.007 %**

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.36 T24N R8W

Meter Data

67455819 WPX 143H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14505452	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	44.4 °API
Obs. Temp	94.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1492216011	1492217190
Date	04/14/2017	04/14/2017
Time	12:26	12:46
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	41.4°API	41.4 °API
Avg Prvr Temp	100.9	100.0
Avg Prvr Press	32.0	32.0
Repeatability	0.031 %	0.020 %
CMF	1.0039	1.0074
CMF Variance	-0.0042	0.0035

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	39.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	100.1	100.1	32.0	40.0	11804.826	1	Yes	1.00728	20.964
2	99.8	99.8	32.0	40.0	11804.806	2	Yes	1.00725	20.956
3	100.0	100.0	32.0	40.0	11806.853	3	Yes	1.00708	20.960
4	100.0	100.0	32.0	40.0	11804.767	4	Yes	1.00725	20.983
5	100.1	100.1	32.0	40.0	11807.095	5	Yes	1.00709	20.982
Average	**100.0**	**100.0**	**32.0**	**40.0**	**11805.6694**			**1.00719**	**20.969**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00074	1.00003	0.97946	1.00020	0.98041	1.16492

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11805.6694	10000.0000	1.18057	0.97946	1.00026	0.97971	1.15662

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0072	MF
	(2)	MF * CPL =	1.0074	CMF
	(3)	1 ÷ MF =	0.9929	MA
	(4)	NKF ÷ MF =	9928.5	KF
	(5)	KF ÷ CPL =	9926.5	CKF

Repeatability: 0.020 %
Uncertainty: 0.011 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician: PROVE
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.36 T24N R8W

Meter Data

67455819 WPX 143H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14505452
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer:
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 44.4 °API
Obs. Temp: 94.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.4 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1489619851	1492216011
Date	03/15/2017	04/14/2017
Time	11:17	12:26
Product	Crude	Crude
Flowrate	21 bbl/hr	42 bbl/hr
Totalizer		
Throughput		
Base Density	42.8°API	41.4 °API
Avg Prvr Temp	91.4	100.9
Avg Prvr Press	36.0	32.0
Repeatability	0.016 %	0.031 %
CMF	1.0081	1.0039
CMF Variance	0.0036	-0.0042

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 39.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	100.5	100.5	32.0	40.0	11849.586	1	Yes	1.00347	41.830
2	101.0	101.0	32.0	40.0	11848.684	2	Yes	1.00356	41.767
3	101.0	101.0	32.0	40.0	11847.740	3	Yes	1.00364	41.810
4	100.9	100.9	32.0	40.0	11846.293	4	Yes	1.00376	41.791
5	100.8	100.8	32.0	40.0	11845.970	5	Yes	1.00378	41.760
Average	**100.9**	**100.9**	**32.0**	**40.0**	**11847.6546**			**1.00364**	**41.792**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00076	1.00003	0.97900	1.00021	0.97998	1.16441

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11847.6546	10000.0000	1.18477	0.97900	1.00026	0.97925	1.16019

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0036	MF
	(2)	MF * CPL =	1.0039	CMF
	(3)	1 ÷ MF =	0.9964	MA
	(4)	NKF ÷ MF =	9964.1	KF
	(5)	KF ÷ CPL =	9961.1	CKF

Repeatability: 0.031 %
Uncertainty: 0.017 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician: PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.24H T23N R8W

Meter Data

67421809 WPX 153H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14497222
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer:
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 41.3 °API
Obs. Temp: 90.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 38.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 8 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1492114573	1492116937
Date	04/13/2017	04/13/2017
Time	8:16	8:38
Product	Crude	Crude
Flowrate	42 bbl/hr	25 bbl/hr
Totalizer		
Throughput		
Base Density	38.8°API	38.8 °API
Avg Prvr Temp	89.7	92.9
Avg Prvr Press	32.0	32.0
Repeatability	0.048 %	0.043 %
CMF	1.0042	1.0057
CMF Variance	-0.0033	0.0015

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 38.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	92.7	92.7	32.0	40.0	11822.767	1	Yes	1.00560	25.032
2	93.0	93.0	32.0	40.0	11824.629	2	Yes	1.00544	25.132
3	92.6	92.6	32.0	40.0	11826.142	3	Yes	1.00532	25.113
4	93.0	93.0	32.0	40.0	11821.004	4	Yes	1.00575	25.091
5	93.1	93.1	32.0	40.0	11822.816	5	Yes	1.00561	25.130
Average	**92.9**	**92.9**	**32.0**	**40.0**	**11823.4716**			**1.00554**	**25.100**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00061	1.00003	0.98363	1.00019	0.98445	1.16972

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11823.4716	10000.0000	1.18235	0.98363	1.00024	0.98387	1.16328

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0055	MF
	(2)	MF * CPL =	1.0057	CMF
	(3)	1 ÷ MF =	0.9945	MA
	(4)	NKF ÷ MF =	9945.3	KF
	(5)	KF ÷ CPL =	9943.3	CKF

Repeatability: 0.043 %
Uncertainty: 0.023 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
Witness:

PROVE

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC.24H T23N R8W

Meter Data

67421809 WPX 153H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.: 14497222
Model No.:

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer:
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F

Certified

Product Data

Name: Crude
Batch No.:
Obs. Gravity: 41.3 °API
Obs. Temp: 90.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 38.8 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 8 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1489093880	1492114573
Date	03/09/2017	04/13/2017
Time	8:11	8:16
Product	Crude	Crude
Flowrate	25 bbl/hr	42 bbl/hr
Totalizer		
Throughput		
Base Density	38.9°API	38.8 °API
Avg Prvr Temp	80.7	89.7
Avg Prvr Press	40.0	32.0
Repeatability	0.040 %	0.048 %
CMF	1.0075	1.0042
CMF Variance	0.0012	-0.0033

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 38.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	84.3	84.3	32.0	40.0	11843.083	1	Yes	1.00372	41.831
2	88.7	88.7	32.0	40.0	11841.463	2	Yes	1.00392	41.833
3	91.3	91.3	32.0	40.0	11839.136	3	Yes	1.00419	41.868
4	91.9	91.9	32.0	40.0	11839.850	4	Yes	1.00413	41.792
5	92.1	92.1	32.0	40.0	11839.167	5	Yes	1.00420	41.834
Average	**89.7**	**89.7**	**32.0**	**40.0**	**11840.5398**			**1.00403**	**41.832**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00055	1.00003	0.98523	1.00019	0.98599	1.17155

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11840.5398	10000.0000	1.18405	0.98523	1.00024	0.98547	1.16685

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0040	MF
	(2)	MF * CPL =	1.0042	CMF
	(3)	1 + MF =	0.9960	MA
	(4)	NKF ÷ MF =	9960.2	KF
	(5)	KF ÷ CPL =	9958.2	CKF

Repeatability: 0.048 %
Uncertainty: 0.026 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SHL SEC.14 T23N R8W NMPM**

Meter Data

78448843 WPX 151H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 in
Serial No.	14503340
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	39.6 °API
Obs. Temp	91.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	37.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.053 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1489097798	1492119688
Date	03/09/2017	04/13/2017
Time	9:16	9:39
Product	Crude	Crude
Flowrate	21 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	41.6°API	37.1 °API
Avg Prvr Temp	89.8	95.7
Avg Prvr Press	38.0	38.0
Repeatability	0.037 %	0.034 %
CMF	1.0024	1.0022
CMF Variance	-0.0002	-0.0002

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	49.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0003

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	94.9	94.9	38.0	52.0	11868.046	1	Yes	1.00178	20.827
2	95.4	95.4	38.0	52.0	11865.139	2	Yes	1.00204	20.864
3	95.3	95.3	38.0	52.0	11869.106	3	Yes	1.00170	20.871
4	96.3	96.3	38.0	52.0	11866.735	4	Yes	1.00191	20.869
5	96.6	96.6	38.0	52.0	11865.714	5	Yes	1.00199	20.866
Average	**95.7**	**95.7**	**38.0**	**52.0**	**11866.9480**			**1.00188**	**20.860**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00066	1.00003	0.98259	1.00022	0.98348	1.16857

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11866.9480	10000.0000	1.18669	0.98259	1.00030	0.98288	1.16637

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0019	MF
	(2)	MF * CPL =	1.0022	CMF
	(3)	1 ÷ MF =	0.9981	MA
	(4)	NKF ÷ MF =	9981.0	KF
	(5)	KF ÷ CPL =	9978.0	CKF

Repeatability: 0.034 %
Uncertainty: 0.018 %

Trans. Serial No.	
Flow Calib Factor	
Density Calib Factor	
Frequency Set Point	
Flowrate Set Point	
Zero Verified	Zeroed
As Found	As Left

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SHL SEC.16 T23N R8W NMPM

Meter Data

78448842 WPX 147H

Factor Tracked	Composite MF(CMF)	
Temp Compensated	No	
NKF	10000.0000	N/bbl
Manufacturer	Micro Motion	
Size	2.00	in
Serial No.	14503370	
Model No.		

Prover Data

BPV	1.18820	bbl
I.D.	7.981	in
W.T.	0.322	in
Manufacturer		
Type	Displacement-Sphere	
Serial No.	23MM	
Elasticity	3.0E7	1/psi
Pipe Gc	1.86E-5	1/°F
Certified		

Product Data

Name	Crude
Batch No.	
Obs. Gravity	39.6 °API
Obs. Temp	92.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	37.0 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.052 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 6 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1489101032	1492123134
Date	03/09/2017	04/13/2017
Time	10:10	10:38
Product	Crude	Crude
Flowrate	21 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	38.8°API	37.0 °API
Avg Prvr Temp	73.8	81.9
Avg Prvr Press	34.0	32.0
Repeatability	0.047 %	0.043 %
CMF	1.0008	0.9999
CMF Variance	0.0001	-0.0009

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	35.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	84.9	84.9	32.0	36.0	11893.931	1	Yes	0.99947	20.800
2	82.9	82.9	32.0	36.0	11891.367	2	Yes	0.99964	20.815
3	81.7	81.7	32.0	36.0	11887.950	3	Yes	0.99990	20.827
4	80.4	80.4	32.0	36.0	11888.978	4	Yes	0.99980	20.806
5	79.8	79.8	32.0	36.0	11888.200	5	Yes	0.99985	20.825
Average	**81.9**	**81.9**	**32.0**	**36.0**	**11890.0852**			**0.99973**	**20.815**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00041	1.00003	0.98935	1.00018	0.98996	1.17627

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11890.0852	10000.0000	1.18901	0.98935	1.00020	0.98955	1.17658

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	0.9997	MF
	(2)	MF * CPL =	0.9999	CMF
	(3)	1 ÷ MF =	1.0003	MA
	(4)	NKF ÷ MF =	10003	KF
	(5)	KF ÷ CPL =	10001	CKF

Repeatability: 0.043 %
Uncertainty: 0.023 %

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician: PROVE
Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SHL SEC.17H T23N R7W NMPM**

Meter Data

78448840 WPX 163H

Factor Tracked	**Composite MF(CMF)**	
Temp Compensated	**No**	
NKF	**10000.0000**	**N/bbl**
Manufacturer	**Micro Motion**	
Size	**2.00**	**in**
Serial No.	**14497246**	
Model No.	**CMF 100M**	

Prover Data

BPV	**1.18820**	**bbl**
I.D.	**7.981**	**in**
W.T.	**0.322**	**in**
Manufacturer		
Type	**Displacement-Sphere**	
Serial No.	**23MM**	
Elasticity	**3.0E7**	**1/psi**
Pipe Gc	**1.86E-5**	**1/°F**
Certified		

Product Data

Name	**Crude**
Batch No.	
Obs. Gravity	**45.5 °API**
Obs. Temp	**103.0 °F**
Obs. Press	**0.0 psi**
API Table	**Table A - Crude Oil (2004)**
Base Density	**41.7 °API** HYC **Y**

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** *Passed?* **Y** *Min # of Runs:* **5**
Criteria: **5** *out of* **5** *consecutive runs*

Avg X Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** *Cutoff Date:*

Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**

Proving Mode:	**Volumetric**
Density Mode:	**Manual**
Calc. Method:	**Avg. Meter Factor**
Proving Method:	**PIU**
Passes Per Run	**1**

Proving Data

	Previous	*Current*
Task ID	**1489109180**	**1492204222**
Date	**03/09/2017**	**04/14/2017**
Time	**12:26**	**9:10**
Product	**Crude**	**Crude**
Flowrate	**37 bbl/hr**	**38 bbl/hr**
Totalizer		
Throughput		
Base Density	**41.7°API**	**41.7 °API**
Avg Prvr Temp	**98.5**	**104.7**
Avg Prvr Press	**38.0**	**31.0**
Repeatability	**0.025 %**	**0.040 %**
CMF	**1.0008**	**1.0010**
CMF Variance	**0.0002**	**0.0002**

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	**37.0**	**psig**
Eq. Vapor Pressure	**0.0**	**psig**
CPL	**1.0002**	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	103.9	103.9	31.0	38.0	11884.509	1	Yes	1.00059	37.520
2	103.9	103.9	31.0	38.0	11883.459	2	Yes	1.00068	37.466
3	104.9	104.9	31.0	38.0	11880.071	3	Yes	1.00099	37.498
4	105.6	105.6	31.0	38.0	11881.394	4	Yes	1.00088	37.565
5	105.2	105.2	31.0	38.0	11881.454	5	Yes	1.00087	37.477
Average	**104.7**	**104.7**	**31.0**	**38.0**	**11882.1774**			**1.00080**	**37.505**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	*CTSp*	*CPSp*	*CTLp*	*CPLp*	*CCFp*	*GSVp*
1.18820	1.00083	1.00003	0.97696	1.00020	0.97800	1.16206

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	*NKF*	*IVm*	*CTLm*	*CPLm*	*CCFm*	*ISVm*
11882.1774	10000.0000	1.18822	0.97696	1.00025	0.97720	1.16113

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0008	MF
	(2)	MF * CPL =	1.0010	CMF
	(3)	1 + MF =	0.9992	MA
	(4)	NKF ÷ MF =	9992.0	KF
	(5)	KF ÷ CPL =	9990.0	CKF

Repeatability: **0.040 %**
Uncertainty: **0.021 %**

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SHL SEC.4 T23N R8W NMPM**

Meter Data

67420186 WPX 283H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 in
Serial No.	14494841
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	38.4 °API
Obs. Temp	64.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	38.1 °API HYC Y

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** Passed? **Y** Min # of Runs: **5**
Criteria: **5** out of **5** consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** Cutoff Date:

Prev Meter Factor Deviation:
Enabled? **N** Passed? **Y** Prod Dep? **N**

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1493165060	1493166222
Date	04/25/2017	04/25/2017
Time	12:04	12:23
Product	Crude	Crude
Flowrate	42 bbl/hr	31 bbl/hr
Totalizer		
Throughput		
Base Density	38.1°API	38.1 °API
Avg Prvr Temp	61.9	62.6
Avg Prvr Press	32.0	32.0
Repeatability	0.027 %	0.050 %
CMF	1.0043	1.0046
CMF Variance	-0.0001	0.0003

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	39.0	psig
Eq. Vapor Pressure	0.0	psig
CPL	1.0002	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	61.8	61.8	32.0	40.0	11832.908	1	Yes	1.00417	31.502
2	62.4	62.4	32.0	40.0	11829.941	2	Yes	1.00443	31.360
3	62.4	62.4	32.0	40.0	11827.086	3	Yes	1.00467	31.376
4	62.9	62.9	32.0	40.0	11832.183	4	Yes	1.00425	31.323
5	63.7	63.7	32.0	40.0	11827.844	5	Yes	1.00464	31.364
Average	**62.6**	**62.6**	**32.0**	**40.0**	**11829.9924**			**1.00443**	**31.385**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00005	1.00003	0.99872	1.00017	0.99897	1.18698

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11829.9924	10000.0000	1.18300	0.99872	1.00021	0.99893	1.18173

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0044	MF
	(2)	MF * CPL =	1.0046	CMF
	(3)	1 ÷ MF =	0.9956	MA
	(4)	NKF ÷ MF =	9956.2	KF
	(5)	KF ÷ CPL =	9954.2	CKF

Repeatability: 0.050 %
Uncertainty: 0.027 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: **WPX -**
Operator:
Location:
Federal ID: **SHL SEC.4 T23N R8W NMPM**

Meter Data

67420186 WPX 283H

Factor Tracked	**Composite MF(CMF)**	
Temp Compensated	**No**	
NKF	**10000.0000**	**N/bbl**
Manufacturer	**Micro Motion**	
Size	**2.00**	**in**
Serial No.	**14494841**	
Model No.		

Prover Data

BPV	**1.18820**	**bbl**
I.D.	**7.981**	**in**
W.T.	**0.322**	**in**
Manufacturer		
Type	**Displacement-Sphere**	
Serial No.	**23MM**	
Elasticity	**3.0E7**	**1/psi**
Pipe Gc	**1.86E-5**	**1/°F**
Certified		

Product Data

Name	**Crude**
Batch No.	
Obs. Gravity	**38.4 °API**
Obs. Temp	**64.0 °F**
Obs. Press	**0.0 psi**
API Table	**Table A - Crude Oil (2004)**
Base Density	**38.1 °API** HYC **Y**

Tolerances

Tolerance Type: **Repeatability**
Maximum Deviation: **0.050 %**
Enabled? **Y** *Passed?* **Y** *Min # of Runs:* **5**
Criteria: **5** *out of* **5** *consecutive runs*

Avg X Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**
Prev X Factor Count Sought: **1**
Prev X Factor Count Used: **0**
Cut Off History? **N** *Cutoff Date:*

Prev Meter Factor Deviation:
Enabled? **N** *Passed?* **Y** *Prod Dep?* **N**

Proving Mode:	**Volumetric**
Density Mode:	**Manual**
Calc. Method:	**Avg. Meter Factor**
Proving Method:	**PIU**
Passes Per Run	**1**

Proving Data

	Previous	*Current*
Task ID	**1489706029**	**1493165060**
Date	**03/16/2017**	**04/25/2017**
Time	**11:13**	**12:04**
Product	**Crude**	**Crude**
Flowrate	**31 bbl/hr**	**42 bbl/hr**
Totalizer		
Throughput		
Base Density	**38.4°API**	**38.1 °API**
Avg Prvr Temp	**88.8**	**61.9**
Avg Prvr Press	**38.0**	**32.0**
Repeatability	**0.033 %**	**0.027 %**
CMF	**1.0044**	**1.0043**
CMF Variance	**0.0009**	**-0.0001**

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	**39.0**	**psig**
Eq. Vapor Pressure	**0.0**	**psig**
CPL	**1.0002**	

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	62.8	62.8	32.0	40.0	11834.208	1	Yes	1.00408	41.847
2	61.8	61.8	32.0	40.0	11831.584	2	Yes	1.00428	41.865
3	61.3	61.3	32.0	40.0	11832.106	3	Yes	1.00423	41.859
4	61.6	61.6	32.0	40.0	11834.831	4	Yes	1.00401	41.865
5	62.0	62.0	32.0	40.0	11834.106	5	Yes	1.00408	41.864
Average	**61.9**	**61.9**	**32.0**	**40.0**	**11833.3670**			**1.00414**	**41.860**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	*CTSp*	*CPSp*	*CTLp*	*CPLp*	*CCFp*	*GSVp*
1.18820	1.00004	1.00003	0.99907	1.00017	0.99931	1.18738

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	*NKF*	*IVm*	*CTLm*	*CPLm*	*CCFm*	*ISVm*
11833.3670	10000.0000	1.18334	0.99907	1.00021	0.99928	1.18249

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0041	MF
	(2)	MF * CPL =	1.0043	CMF
	(3)	1 ÷ MF =	0.9959	MA
	(4)	NKF ÷ MF =	9959.2	KF
	(5)	KF ÷ CPL =	9957.2	CKF

Repeatability: **0.027 %**
Uncertainty: **0.014 %**

Trans. Serial No.			
Flow Calib Factor			
Density Calib Factor			
Frequency Set Point			
Flowrate Set Point			
Zero Verified		Zeroed	
As Found		As Left	

Technician: [redacted]
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC. 04 T23N R8W NMPM

Meter Data

67455820 WPX 150H

Factor Tracked: Composite MF(CMF)
Temp Compensated: No
NKF: 10000.0000 N/bbl
Manufacturer: Micro Motion
Size: 2.00 in
Serial No.
Model No.

Prover Data

BPV: 1.18820 bbl
I.D.: 7.981 in
W.T.: 0.322 in
Manufacturer
Type: Displacement-Sphere
Serial No.: 23MM
Elasticity: 3.0E7 1/psi
Pipe Gc: 1.86E-5 1/°F
Certified

Product Data

Name: Crude
Batch No.
Obs. Gravity: 43.5 °API
Obs. Temp: 87.0 °F
Obs. Press: 0.0 psi
API Table: Table A - Crude Oil (2004)
Base Density: 41.1 °API HYC: Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode: Volumetric
Density Mode: Manual
Calc. Method: Avg. Meter Factor
Proving Method: PIU
Passes Per Run: 1

Proving Data

	Previous	Current
Task ID	1493085418	1493086614
Date	04/24/2017	04/24/2017
Time	13:56	14:16
Product	Crude	Crude
Flowrate	42 bbl/hr	21 bbl/hr
Totalizer		
Throughput		
Base Density	41.1°API	41.1 °API
Avg Prvr Temp	84.0	86.6
Avg Prvr Press	32.0	32.0
Repeatability	0.045 %	0.025 %
CMF	1.0035	1.0042
CMF Variance	-0.0005	0.0007

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure: 38.0 psig
Eq. Vapor Pressure: 0.0 psig
CPL: 1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run	Accepted ?	IMF	Flowrate bbl/hr
1	82.8	82.8	32.0	39.0	11837.543	1	Yes	1.00417	20.929
2	85.0	85.0	32.0	39.0	11839.325	2	Yes	1.00405	20.909
3	87.8	87.8	32.0	39.0	11841.539	3	Yes	1.00393	20.900
4	88.7	88.7	32.0	39.0	11841.677	4	Yes	1.00392	20.919
5	88.9	88.9	32.0	39.0	11839.726	5	Yes	1.00411	20.990
Average	**86.6**	**86.6**	**32.0**	**39.0**	**11839.9620**			**1.00404**	**20.929**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00049	1.00003	0.98642	1.00019	0.98712	1.17290

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11839.9620	10000.0000	1.18400	0.98642	1.00024	0.98666	1.16821

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0040	MF
	(2)	MF * CPL =	1.0042	CMF
	(3)	1 ÷ MF =	0.9960	MA
	(4)	NKF ÷ MF =	9960.2	KF
	(5)	KF ÷ CPL =	9958.2	CKF

Repeatability: 0.025 %
Uncertainty: 0.013 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEIt PROVEIt 8.7.0.0

Customer: WPX -
Operator:
Location:
Federal ID: SEC. 04 T23N R8W NMPM

Meter Data

67455820 WPX 150H

Factor Tracked	Composite MF(CMF)
Temp Compensated	No
NKF	10000.0000 N/bbl
Manufacturer	Micro Motion
Size	2.00 in
Serial No.	
Model No.	

Prover Data

BPV	1.18820 bbl
I.D.	7.981 in
W.T.	0.322 in
Manufacturer	
Type	Displacement-Sphere
Serial No.	23MM
Elasticity	3.0E7 1/psi
Pipe Gc	1.86E-5 1/°F
Certified	

Product Data

Name	Crude
Batch No.	
Obs. Gravity	43.5 °API
Obs. Temp	87.0 °F
Obs. Press	0.0 psi
API Table	Table A - Crude Oil (2004)
Base Density	41.1 °API HYC Y

Tolerances

Tolerance Type: Repeatability
Maximum Deviation: 0.050 %
Enabled? Y Passed? Y Min # of Runs: 5
Criteria: 5 out of 5 consecutive runs

Avg X Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N
Prev X Factor Count Sought: 1
Prev X Factor Count Used: 0
Cut Off History? N Cutoff Date:

Prev Meter Factor Deviation:
Enabled? N Passed? Y Prod Dep? N

Proving Mode:	Volumetric
Density Mode:	Manual
Calc. Method:	Avg. Meter Factor
Proving Method:	PIU
Passes Per Run	1

Proving Data

	Previous	Current
Task ID	1489632518	1493085418
Date	03/15/2017	04/24/2017
Time	14:48	13:56
Product	Crude	Crude
Flowrate	21 bbl/hr	42 bbl/hr
Totalizer		
Throughput		
Base Density	39.6°API	41.1 °API
Avg Prvr Temp	96.7	84.0
Avg Prvr Press	38.0	32.0
Repeatability	0.024 %	0.045 %
CMF	1.0040	1.0035
CMF Variance	0.0012	-0.0005

Liquid Properties at Metering Conditions for CMF

Normal Op. Pressure	38.0 psig
Eq. Vapor Pressure	0.0 psig
CPL	1.0002

Run	TEMPERATURE Tp	Tm	PRESSURE Pp	Pm	PULSES N	Run Accepted ?		IMF	Flowrate bbl/hr
1	81.3	81.3	32.0	39.0	11847.857	1	Yes	1.00327	41.814
2	84.3	84.3	32.0	39.0	11849.588	2	Yes	1.00317	41.832
3	85.0	85.0	32.0	39.0	11850.690	3	Yes	1.00309	41.764
4	85.4	85.4	32.0	39.0	11846.348	4	Yes	1.00346	41.783
5	84.1	84.1	32.0	39.0	11845.284	5	Yes	1.00354	41.824
Average	**84.0**	**84.0**	**32.0**	**39.0**	**11847.9534**			**1.00331**	**41.803**

(1) GSVp: BPV * [CTSp * CPSp * CTLp * CPLp = CCFp]

BPV	CTSp	CPSp	CTLp	CPLp	CCFp	GSVp
1.18820	1.00045	1.00003	0.98775	1.00019	0.98841	1.17443

(2) ISVm: [N(avg) ÷ NKF = IVm] * [CTLm * CPLm = CCFm]

N(avg)	NKF	IVm	CTLm	CPLm	CCFm	ISVm
11847.9534	10000.0000	1.18480	0.98775	1.00023	0.98798	1.17056

(3) Proving Factors:

>>>>	(1)	GSVp ÷ ISVm =	1.0033	MF
	(2)	MF * CPL =	1.0035	CMF
	(3)	1 ÷ MF =	0.9967	MA
	(4)	NKF ÷ MF =	9967.1	KF
	(5)	KF ÷ CPL =	9965.1	CKF

Repeatability: 0.045 %
Uncertainty: 0.024 %

Trans. Serial No.		
Flow Calib Factor		
Density Calib Factor		
Frequency Set Point		
Flowrate Set Point		
Zero Verified	Zeroed	
As Found	As Left	

Technician:
PROVE

Witness:

Copyright 2009, Flow-Cal, Inc.
PROVEit PROVEit 8.7.0.0