TEST SPECIFICATIONS

Rangeview Pipeline Gathering System Hydrostatic Pressure Test

Suden Well Connect

Date:	Select Routing:
4-Sep-2015	

Test Number: 1 of 1

Project Name:	Project I.D. / AFE Number	Facility Name or Number
Rangeview Pipeline Gathering System	14CO009	Suden Well Connect

Installation Location (M.P. or S.S.):	State:	County/Parish:	Class Location Designation	2	Selected Design Pressure	1480	Planned MAOP	1400
0+00 to 2752.8	CO	Weld						

Project Description:

Hydrostatic pressure test of the 4" well connect pipeline.

Testing at 1.25*MAOP = 1850 minimum test pressure. **2221 psig Target Test Pressure at Chart Location**

Max Test Pressure for ANSI 600 Valves and Fittings is 2660 psig where they are located.

Test shall be compliant with all test specifications in Exhibit D "Pipeline Construction Specifications" and all other Construction Documents.

LEAK ONLY TEST ☐ STRENGTH TEST ☑ FABRICATION ☐ NEW CONSTRUCTION ☑ REPLACEMENT ☐ RETEST ☐ REFERENCE DRAWINGS ATTACHED ☐

POST-INSTALLATION TEST ☑ PRE-INSTALLATION TEST ☐

Test Design Criteria

Minimum Component Characteristics

Pipe Information

O.D.	4.5
Wall Thickness	0.188
SMYS	52,000

Valve/Flange ANSI Class Rating
600# Valves/Fittings

Test Pressure Calculations

☐ Input minimum and maximum pressure of test
☐ Input minimum and maximum %SMYS of test

	Pressure (psig)	% PIPE SMYS
Max. Test Pressure (Pipe)	2590	59.6%
Max. Test Pressure (Valves and Fittings)	2660	61.2%
Min.	1850	42.6%

Test Section - Reference Data

Test Medium	Water	
Test Duration	8	Hours (min)
Section Length	2,753	Ft.
Section Fill Volume	2,274	Gal
Max. Elevation Change	21	Ft.

Station Equations:	1	2	3
Back	0+00	0+00	0+00
Ahead	0+00	0+00	0+00

Test Pressures

Location	Station	Elevation (feet)	Max. psig.	% SMYS @ Max.	Min. psig.	% SMYS @ Min.	Variance psig.	Target psig.	% SMYS @Target
BEGIN -	0+00	4664	2,587	59.5%	1,856	42.7%	731	2,221	51.1%
HIGH ELEVATION	23+50	4678	2,581	59.4%	1,850	42.6%	731	2,215	51.0%
LOW ELEVATION	11+55	4657	2,590	59.6%	1,859	42.8%	731	2,224	51.2%
END	27+52.8	4674	2,583	59.4%	1,852	42.6%	731	2,217	51.0%
Chart Location (Test Point)	**0+00**	**4664**	**2,587**	**59.5%**	**1,856**	**42.7%**	**731**	**2,221**	**51.1%**

REMARKS:

Test shall be compliant with all test specifications in Exhibit D "Pipeline Construction Specifications" and all other Construction Documents.

PRE-TEST SPECIFIED / REVIEWED BY:		TEST PERFORMED / ACCEPTED BY:		POST-TEST REVIEWED BY:	
Originator (Signature)	Date:	Test Performed by (Signature):	Date: 9-12-15	Compliance (signature)	Date:
Designed Reviewed if applicable (Signature)	Date:	Company Name (for Contractor or for Employee): North Wrks	Date: 9-12-15	Engineering or Operations (Signature)	Date:
Compliance (Signature)	Date:	Witnessed & Accepted by Company Representative: (Signature) Charles Walton	Date: 9-12-2015	Actual MAOP	

LIQUID PIPELINE PRESSURE TEST REPORT

Pressure Test Number ONE

MOP of tested facility is [ ] PSIG

Company: Saddle Butte
Operations Area:
Project: Rangeview Gathering System
AFE: 14C0009
Pipeline: Suden Well Connect
Section: All

Station or Milepost From: 0+00 To: 27+52

INSTRUCTIONS

In this worksheet, cells containing formulas are protected against input.
Cells with BLUE text labels allow or require input.

General Information	· Complete this Report and attached necessary exhibits for all SBP installed pipelines or pipeline segments or those re-qualified for service. · Fill in all applicable information. If information is not applicable, write NA in the corresponding space on the Report.
Pipe Data	· Record the details for each pipe section tested, including lengths, line fill, pipe fittings, etc. · Add together pipe section lengths and line fill for a total pipe section length and line fill.
Test Water Data	· Enter water source information (i.e., from municipal supply, well, river, lake, pond) in the Test Log or notes section of the Report. · Source water temperature compared to ground temperature can assist with understanding the time for the water to stabilize.
Pressure Calculations	· Elevation of high and low points and the elevation of the test pressure measure sites is required for calculation of the target test pressures.
Test Log	· Fill out the Test Log at the time of the test. This is the actual log of the test. · From the start of filling the test section, record pressure readings from the calibrated test gauge or deadweight tester used in the test. · Record the test pressure and temperatures at intervals of 30 minutes to an hour and as necessary to represent the test pressure during the test period. · The below ground pipe temperature sensor should be placed away from exposed pipe and far enough from the water injection point so that water injected will not affect the readings. · In the Remarks column, enter start of test, end of test, and any remarks concerning unusual events, such as liquid added or withdrawn, weather conditions, etc.
Notes	· Enter all pertinent comments about the test, including such things as weather conditions, radical weather changes, equipment malfunctions, or any other noteworthy event that may affect testing.
Profile	· An elevation profile is required for any test section where the elevation varies more than 100 feet. The following items should be noted on the profile: - Location and elevation where test pressure measurements are taken - High and low points - Stationing or mileposts - Horizontal and vertical scale of the drawing · Elevation data is available in electronic format from the KPL mapping system. · If electronic elevation data is not available, take profile elevations from survey information or from U.S. Geological Service 7 1/2 minute topographical maps.
Failure Log	· Record each failure event that causes the line to be taken "off test". · Enter the date, time, and pressure at the time of failure. · List the apparent cause of the failure if the actual cause cannot be determined. Pipe seam failure or leaking flange, for example, could be entered as the cause of test failure. · Describe the repair method (i.e., changed-out pipe or tightened flange).
Supplementary Documentation	· Check each supplementary documentation attached as part of this test record (i.e., test charts and/or equipment certifications). · Write the corresponding Exhibit Number on the attached supplementary documentation.
Certification	· Signatures of the Company and Contractor representatives in charge of the test are MANDATORY.

Location of Test Point	Elevation of Test Point	High Point	Low Point
0+00	4664 Ft. (Elevation)	4678 Ft. (Elevation)	4657 Ft. (Elevation)
	0+06 Ft. (Station)	23+50 Ft. (Station)	11+55 Ft. (Station)
		Location Name	Location Name

Target MOP:

Test Duration: 8 hr

Target Test Pressure Range

1st Min: 2230 Maximum: 2590

2nd Min:

	High Point	Low Point
Start Point	4664 Ft. (Elevation)	
	0+00 Ft. (Station)	
	Location Name	
End Point	4674 Ft. (Elevation)	
	27+52 Ft. (Station)	
	Location Name	

TEST LOG

DATE	TIME	PRESSURE	AMBIENT TEMP	BELOW GROUND TEMP	ABOVE GROUND TEMP	REMARKS
9-12-K	7:15	0	46			
	7:30	0-491	46			Built up to 500
	7:46	491	47			Build to 1000
	7:49	1000	47			
	8:00	1000	48			Build to 1500
	8:04	1504	48			
	8:15	1500	48			Build to 2000
	8:19	2002	49			
	8:30	2002	49			Build to 2221
	8:32	2230	49			
*	8:45	2230	51			Begin TEST Clear Sunny skies
	9:00	2230	53			Sunny warming up fast
	9:15	2232	55			
	9:30	2235	58			
	9:45	2237	61			
	10:00	2238	63			
	10:15	2241	65			
	10:30	2245	68			
	10:45	2248	70			
	11:00	2252	72			
	11:15	2256	72			
	11:30	2261	73			
	11:45	2265	74			
	12:00	2269	75			
	12:15	2273	77			
	12:30	2276	79			
	12:45	2279	80			
	1:00	2283	81			
	1:15	2286	81			
	1:30	2290	82			
	1:45	2293	82			
	2:00	2295	83			
	2:15	2297	83			
	2:30	2298	84			
	2:45	2300	84			
	3:00	2301	84			
	3:15	2302	84			
	3:30	2303	84			
	3:45	2303	84			

EAGLE MOUNTAIN PIPELINE, LLC

TEST LOG (CONTINUED)

DATE	TIME	PRESSURE	AMBIENT TEMP	BELOW GROUND TEMP	ABOVE GROUND TEMP	REMARKS
9-12	4:00	2303	85			Clear Sunny Hot - Perfect Weather
	4:15	2304	85			
	4:30	2304	86			
*	4:45	2304	86			END TEST
	4:50	2304	86			Bleed to 2000
	4:51	2002	86			
	5:05	2002	86			Bleed to 1500
	5:07	1506	86			
	5:20	1506	85			Bleed to 1000
	5:22	1002	85			
	5:35	1002	85			Bleed to 500
	5:38	498	85			
	5:50	498	84			Bleed to 0
	5:54	-0-	84			

TEST EQUIPMENT

PRESSURE RECORDER 1:

Mfg. Barton (PSS)
Model
Serial No. 242-119810
Range 0-3000 #
Notes: Cal on 4-9-15

PRESSURE RECORDER 2:

Mfg.
Model
Serial No.
Range
Notes:

DEADWEIGHT TESTER OR CALIBRATED TEST GAUGE:

Mfg. Crystal Engineering
Model XP-5000
Serial No. 364359
Date of last Calibration 6-10-15
Calibrated by PSS
Range 0-5000
Notes:

TEMPERATURE RECORDER:

Mfg.
Model
Serial No.
Range
Notes:

CALIBRATION OF TEMPERATURE RECORDER

Temperature recorder reading	Test mercury thermometer reading	Remarks

CALIBRATION OF PRESSURE RECORDER 1

Pressure recorder reading	Deadweight tester reading	Remarks

CALIBRATION OF PRESSURE RECORDER 2

Pressure recorder reading	Deadweight tester reading	Remarks

NOTES

SPP Eagle Ford Pipeline, LLC

EQUIPMENT CALCULATED MOP SUMMARY WORKSHEET

1. Test Information:

Target MOP [ ]
Enter the desired MOP, if less than pipe internal design pressure.

Date 9-12-15 Time 7:15 Am
Test Point Location 0+00
Test Medium Water Test Duration 8 hr
Specific Gravity of Test Medium
Min. Test Press. at test site 125% of min. MOP + elv. 110%
Maximum allowable % of SMYS = 100%

2. Pipe Specifications:

Manufacture Type
Grade X52 Pipe (#1) O.D. 4.5 SMYS
Wall thickness .188
Length (ft.):
MOP
Seam Joint Factor
Design Factor (F)
Volume
Max allowable test pressure, psig

3. Pipe Specifications:

Manufacture Type
Grade Pipe (#2) O.D. SMYS
Wall thickness
Length (ft.):
MOP
Seam Joint Factor
Design Factor (F)
Volume
Max allowable test pressure, psig

4. Pipe Specifications:

Manufacture Type
Grade Pipe (#3) O.D. SMYS
Wall thickness
Length (ft.):
MOP
Seam Joint Factor
Design Factor (F)
Volume
Max allowable test pressure, psig

5. Pipe Specifications:

Manufacture Type
Grade Pipe (#4) O.D. SMYS
Wall thickness
Length (ft.):
MOP
Seam Joint Factor
Design Factor (F)
Volume
Max allowable test pressure, psig

6. Pipe Specifications:

Manufacture Type
Grade Pipe (#5) O.D. SMYS
Wall thickness
Length (ft.):
MOP
Seam Joint Factor
Design Factor (F)
Volume
Max allowable test pressure, psig

7. Pipe Specifications:

Manufacture Type
Grade Pipe (#6) O.D. SMYS
Wall thickness
Length (ft.):
MOP
Seam Joint Factor
Design Factor (F)
Volume
Max allowable test pressure, psig

8. Pipe Fittings Specifications:

Manufacture Type
Fitting Description
Grade Pipe Fitting O.D. SMYS
Wall thickness
MOP
Seam Joint Factor
Design Factor (F)
Max allowable test pressure, psig

9. Pipe Fittings Specifications:

Manufacture Type
Fitting Description
Grade Pipe Fitting O.D. SMYS
Wall thickness
MOP
Seam Joint Factor
Design Factor (F)
Max allowable test pressure, psig

10. Pipe Fittings Specifications:

Manufacture Type
Fitting Description
Grade Pipe Fitting O.D. SMYS
Wall thickness
MOP
Seam Joint Factor
Design Factor (F)
Max allowable test pressure, psig

EQUIPMENT CALCULATED MOP SUMMARY WORKSHEET
(continued)

11. Manufactured:
Weldolet, etc. O.D. _____ Working Pressure _____
Manufacture Type _____ Grade _____
Fitting Description _____
Max allowable test pressure, psig

12. Manufactured:
Pipe Flanges O.D. _____ Working Pressure _____
Manufacture Type _____ Class _____
Temperature Derating Factor (T) _____
Max allowable test pressure, psig

13. Manufactured:
Pipe Flanges O.D. _____ Working Pressure _____
Manufacture Type _____ Class _____
Temperature Derating Factor (T) _____
Max allowable test pressure, psig

14. Manufactured:
Block Valve Size _____ Working Pressure _____
Manufacture Type _____ Class _____
Temperature Derating Factor (T) _____
Max allowable test pressure, psig

15. Calculated MOPs (psi):

Test Pressure Range @Test Site, psig — 125% to psig | 110% to psig

Note: Add [0] psi to min. test range

Maximum test presssure at test site, psig

CALCULATED TARGET MOP OF PIPELINE SECTION **PSIG**

SADDLE BUTTE PIPELINE, LLC

FAILURE LOG

FAILURE:

Date: ________ Time: ________________ am / pm Failure Pressure: ______________________________

Apparent Cause: ____

____

REPAIR:

Describe Repair Method: ____

____

FAILURE:

Date: ________ Time: ________________ am / pm Failure Pressure: ______________________________

Apparent Cause: ____

____

REPAIR:

Describe Repair Method: ____

____

FAILURE:

Date: ________ Time: ________________ am / pm Failure Pressure: ______________________________

Apparent Cause: ____

____

REPAIR:

Describe Repair Method: ____

____

FAILURE:

Date: ________ Time: ________________ am / pm Failure Pressure: ______________________________

Apparent Cause: ____

____

REPAIR:

Describe Repair Method: ____

____

FAILURE:

Date: ________ Time: ________________ am / pm Failure Pressure: ______________________________

Apparent Cause: ____

____

REPAIR:

Describe Repair Method: ____

____

The following marked exhibits are attached as a part of this Test Report:

EXHIBIT NO. 1 ☐ Sketch of Tested Piping (including how section is isolated), with material list

EXHIBIT NO. 2 ☐ Profile of pipeline section and/or segment

EXHIBIT NO. 3 ☐ Pressure Chart, with pressure test number, date, test section name, Inspector name and signature

EXHIBIT NO. 4 ☐ Temperature Chart, with pressure test number, date, test section name, Inspector name and signature

EXHIBIT NO. 5 ☐ Pressure Recorder Certification Papers

EXHIBIT NO. 6 ☐ Temperature Recorder Certification Papers

EXHIBIT NO. 7 ☐ Deadweight or Calibrated Test Gauge Certification Papers

EXHIBIT NO. 8 ☐ Field test data log, if hand written

EXHIBIT NO. 9 ☐ Pressure Test Procedure, if applicaple, with MOP Area Representative and Engineer signature approval

CERTIFICATION

I certify this pipeline or pipeline section has been tested and successfully met the terms of SBP MOP Establishment and Pressure Testing of Pipelines Technical Guideline and, where applicable, the contract document between SBP and its prime contractor.

MOP Area Representative

By: _____ (Please print) _____ (Signature) Date: _____

Engineer

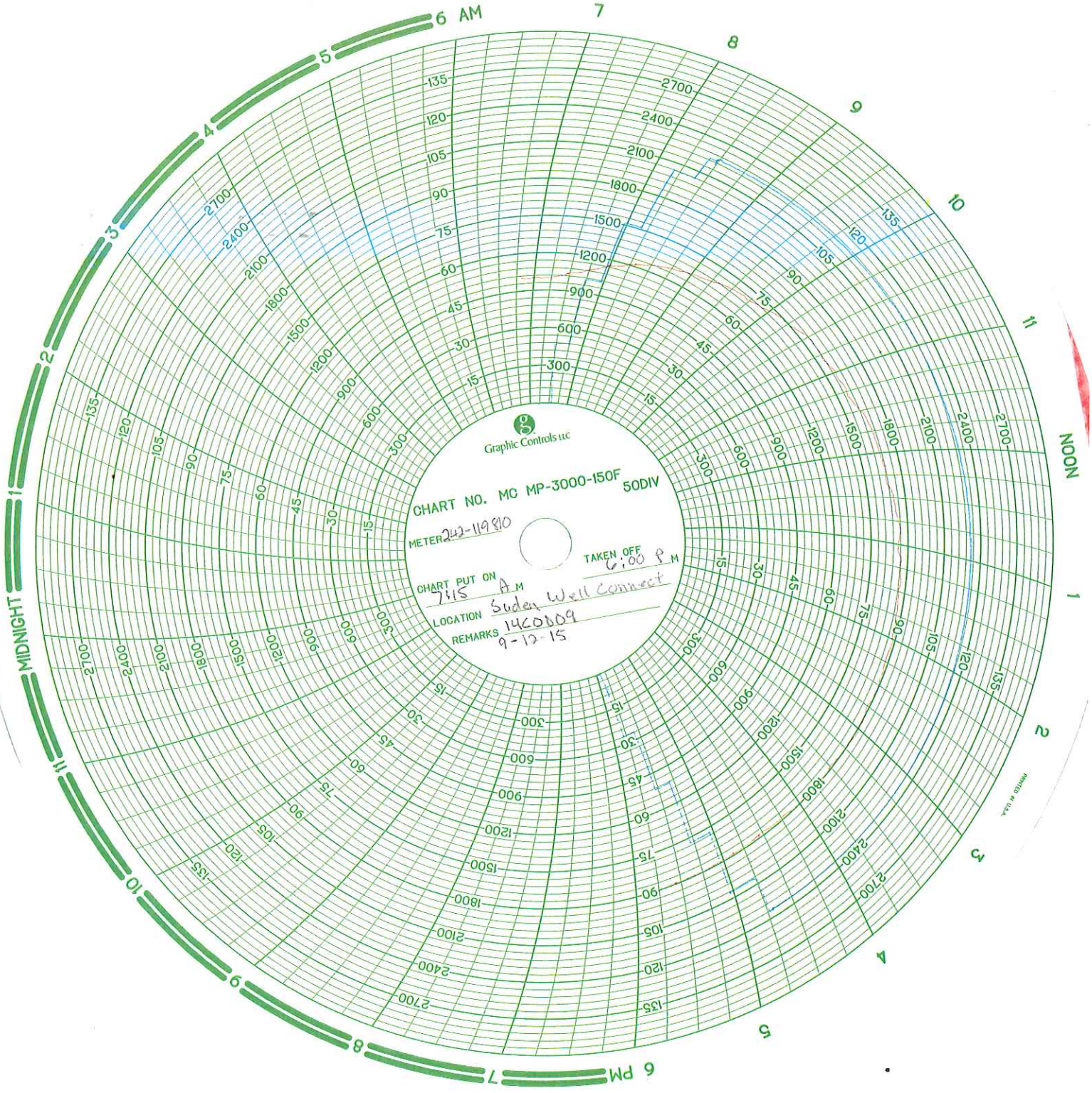
By: _____ (Please print) _____ (Signature) Date: _____

Inspector

By: Charles Wallace (Please print) Charles Wallace (Signature) Date: 9-12-2015

Name of Testing Contractor North Winds of Wyoming

By: Philip Mackey (Please print) _____ (Signature) Date: 9-12-2015


Graphic Controls LLC
CHART NO. MC MP-3000-150F 50DIV
METER 242-119810
CHART PUT ON 7:15 A M
TAKEN OFF 6:00 P M
LOCATION Suder Well Connect
REMARKS 14C0809
9-12-15
MIDNIGHT
NOON
6 AM
6 PM

Dig Gauge

P-S-S-COMPANIES

WASATCH SUPPLY · PSS PIPELINE SUPPLY & SERVICE · NS

2070 South 4250 West - Salt Lake City, Utah 84104 - Phone (801) 363-1933 - Fax (801) 531-9548

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER: UT 61015-2

Details+/-: 0.05% ACCURACY

DATE CALIBRATED: 06-10-2015
DUE DATE: 06-10-2016
INDICATED PRESSURE RANGE: # 0 – 5,000 PSI
SERIAL NO: 364359
MANUFACTURER: CRYSTAL / XP2 i
PRESSURE INSTRUMENT: # 0 – 5,000 PSI / DIGITAL GAUGE
INSTRUMENT FINDINGS/STATUS: UNIT IS IN TOLERANCE/ INSTRUMENT MEETS OR EXCEEDS SPECIFICATIONS.

BASED ON INTERNATIONAL STANDARDS OF GRAVITY: (980.665 cm./sq.).

BASED ON CLAIBRATED PISTON AREA: (0.3969154 cm./sq.) (0.061522 cm./sq.)
TYPE OF STANDARD USED TO CALIBRATE: AMERI-WEIGHT DEADWEIGHT TEST UNIT SPT. (50-05-B) SERIAL No. 1031; CALIBRATION DATE: JULY 14, 2014

ALL STANDARD DIRECTLY TRACEABLE TO NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGIES TEST NO: (N.I.S.T.) 2.6/172490 & 6.6/139577.
CALCULATED USING MASS VALUES, AREA, Ao, AND STATED GRAVITY.

ROOM TEMPERATURE/HUMIDITY (AT TIME OF TEST): 77°F (25°C)/ 40%

CALIBRATED BY: TYLER HALL

SIGNATURE

P-SS-SS-COMPANIES

WASATCH SUPPLY · PSS PIPELINE SUPPLY & SERVICE · NS NORTH STATE SUPPLY

2070 South 4250 West - Salt Lake City, Utah 84104 - Phone (801) 363-1933 - Fax (801) 531-9548

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER: UT 4915-3

Details +/-: 0.05% ACCURACY

DATE CALIBRATED: 04-09-2015
DUE DATE: 04-09-2016
INDICATED TEMPERATURE RANGE: # 0 – 150°F
INDICATED PRESSURE RANGE: # 0 - 3,000 PSI
SERIAL NO: 242 - 119810
MANUFACTURER: BARTON / 12" CHART RECORDER

TYPE OF INSTRUMENT CALIBRATED: TEMPERATURE / PRESSURE RECORDER /

INSTRUMENT FINDINGS/STATUS: UNIT IS IN TOLERANCE/ INSTRUMENT MEETS OR EXCEEDS SPECIFICATIONS.

BASED ON INTERNATIONAL STANDARDS OF GRAVITY: (980.665 cm./sq.).
BASED ON CALIBRATED PISTON AREA: (0.3969154 cm./sq.) (0.061522 cm./sq.).

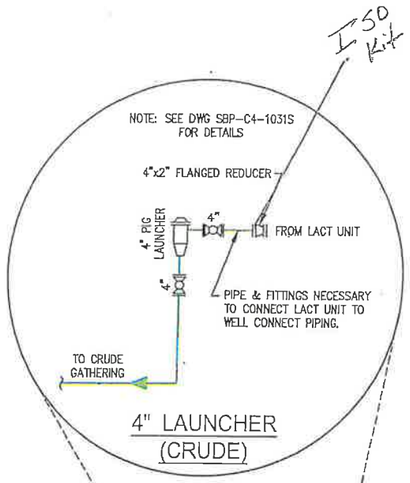
TYPE OF STANDARD USED TO CALIBRATE: AMERI-WEIGHT DEADWEIGHT TEST UNIT SPT. (50-05) SERIAL No. 1031: KESSLER TEST THERMOMETERS; SERIAL NO, 87B2276 & 403751. CALIBRATION DATE: JULY 14, 2014

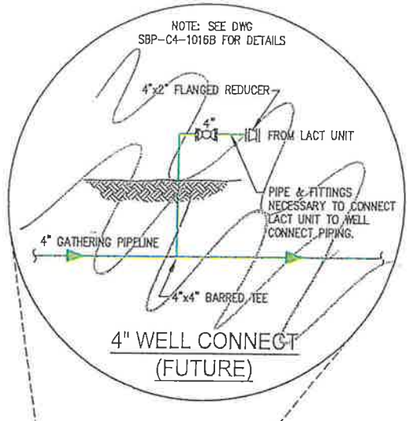
ALL STANDARD DIRECTLY TRACEABLE TO NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGIES TEST NO: (N.I.S.T.) 2.6/172490 & 6.6/139577.

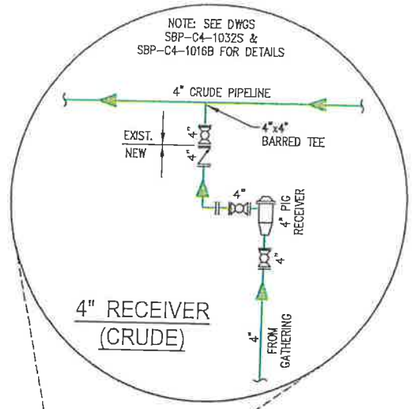
CALCULATED USING MASS VALUES, AREA, AO, AND STATED GRAVITY.
ROOM TEMPERATURE/HUMIDITY (AT TIME OF TEST): 77°F (25°C)/ 40%.

CALIBRATED BY: TYLER HALL

SIGNATURE







NOTES:

1) FLOW SCHEMATIC IS FOR GRAPHICAL REPRESENTATION ONLY.
2) ALL GAS, WATER AND UTILITY LINES SHOULD BE LOCATED PRIOR TO ANY EXCAVATING, DIGGING, OR TRENCHING ANYWHERE ON OR NEAR THIS SITE.
3) CH2M HILL ASSUMES NO RESPONSIBILITY FOR THE SPECIFIC LOCATION OF ANY BURIED GAS, WATER, OR UTILITY LINES THAT MAY BE PRESENT ON OR NEAR THIS SITE, NOR IS ANY LIABILITY ASSUMED FOR ANY LEGAL ACTION WHICH RESULTS FROM A DISCOVERY OF A GAS, WATER, OR UTILITY LINE IN ADDITION TO OR IN A DIFFERENT LOCATION THAN SHOWN ON THIS PLAT.
4) COORDINATE SYSTEM BASED ON NAD 83 COLORADO STATE PLANE, NORTH ZONE.
5) PROPOSED PIPELINE ROUTES FROM IMPORTED SHAPE FILES PROVIDED BY SADDLE BUTTE PIPELINE, LLC.

REFERENCE DRAWINGS

DWG. NO.	TITLE

REVISIONS

NO.	DESCRIPTION	DATE	BY	CHK.	APPR.
0	ISSUED FOR CONSTRUCTION	08/13/15	TMM	JK	

DRAWN BY: TMM	08/13/15
CHECKED BY: JK	08/13/15
REVIEWED BY: JK	08/13/15
APPROVED BY:	
SCALE: SCALE: 1" = 100'	

PREPARED FOR: SADDLE BUTTE PIPELINE

CH2MHILL
150 TECH CENTER DRIVE, SUITE E
DURANGO, CO 81301-6940

FLOW SCHEMATIC
SUDEN WELL CONNECT
RANGEVIEW GATHERING — WELD COUNTY, COLORADO

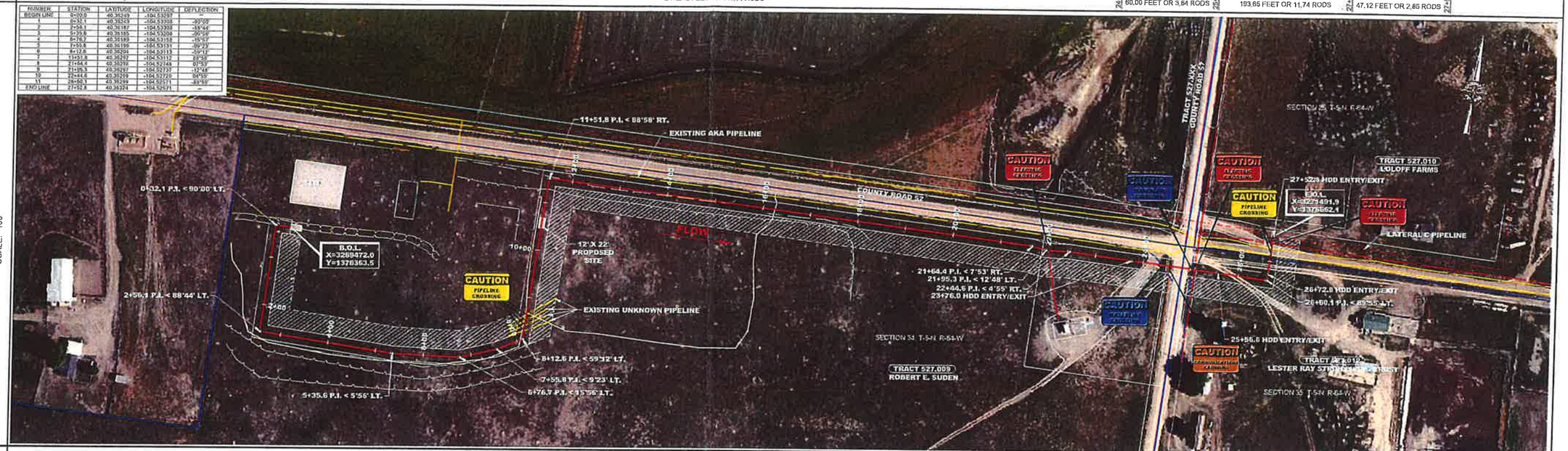
PROJECT NUMBER: 657489
DRAWING NUMBER: 657489-PL-MAP-0008
REV: 0

Aug 13, 2015 - 2:25pm by tmmaloney - Path = K:\Jobs\Saddle Butte Pipeline and Pipeline II\657489 Rangeview Gathering System\Mapping\Schematics\657489-PL-MAP-0008.dwg

COUNTY & STATE	WELD COUNTY, COLORADO
SURVEY	SECTION 34, T-5-N, R-64-W / SECTION 35, T-5-N, R-64-W / SECTION 26, T-5-N, R-64-W
OWNERSHIP FEET/RODS	0+00.0 — TRACT 527,009 ROBERT E. SUDEN 2452.02 FEET OR 148.61 RODS — 24+52.0 — TRACT 527,XXX COUNTY ROAD 57 60.00 FEET OR 3.64 RODS — 25+12.0 — TRACT 527,012 LESTER RAY STROH LIVING TRUST 193.65 FEET OR 11.74 RODS — 27+05.7 — TRACT 527,010 LOLOFF FARMS 47.12 FEET OR 2.85 RODS — 27+52.8

PLAN
SCALE: 100

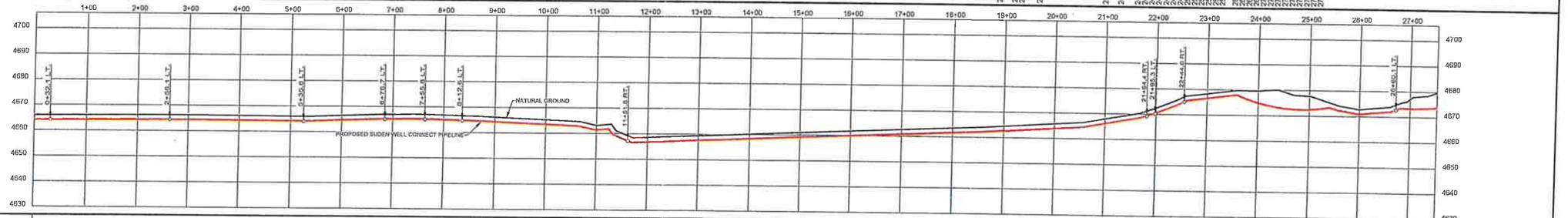
NUMBER BEGIN LINE	STATION	LATITUDE	LONGITUDE	DEFLECTION
	0+00.0	40.36249	-104.53297	-
1	0+32.1	40.36243	-104.53293	-90°00'
2	2+56.1	40.36187	-104.53208	-88°44'
3	5+35.6	40.36185	-104.53208	-05°56'
4	6+76.7	40.36189	-104.53158	-15°56'
5	7+55.8	40.36196	-104.53131	-09°23'
6	8+12.6	40.36204	-104.53113	-59°32'
7	11+51.8	40.36292	-104.53112	88°58'
8	21+64.4	40.36288	-104.52748	07°53'
9	21+95.3	40.36287	-104.52737	12°48'
10	22+44.6	40.36259	-104.52720	04°55'
11	25+60.1	40.36299	-104.52571	89°55'
END LINE	27+52.8	40.36324	-104.52571	-



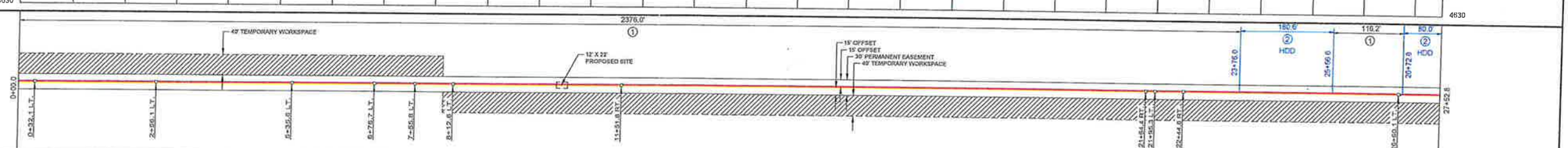
STATIONING

0+00.0 B.O.L.
0+00.3 TOP OF SLOPE
0+32.1 P.I. < 90°00' LT.
2+56.1 P.I. < 88°44' LT.
5+35.6 P.I. < 5°56' LT.
6+76.7 P.I. < 15°56' LT.
7+55.8 P.I. < 9°23' LT.
8+07.4 EDGE OF ROAD
8+12.6 P.I. < 59°32' LT.
8+42.0 EXISTING PIPELINE
8+52.2 EXISTING PIPELINE
8+69.4 EDGE OF ROAD
11+26.4 TOP OF SLOPE
11+51.8 P.I. < 88°58' RT.
11+89.8 TOE OF SLOPE
15+31.1 TOE OF SLOPE
16+24.1 EDGE OF ROAD
21+64.4 P.I. < 7°53' RT.
21+95.3 P.I. < 12°48' LT.
22+44.6 P.I. < 4°55' RT.
23+76.0 HDD ENTRY/EXIT
24+06.0 EDGE OF ROAD
24+28.1 WATER LINE
24+31.0 FENCE LINE
24+50.0 ROAD R.O.W.
24+62.2 EDGE OF ROAD
24+81.3 EDGE OF ROAD
25+04.4 OVERHEAD ELECTRIC
25+12.0 ROAD R.O.W.
25+56.8 HDD EXIT/EXIT
25+78.5 EDGE OF ROAD
25+99.4 EDGE OF ROAD
26+60.1 P.I. < 89°55' LT.
26+72.0 HDD ENTRY/EXIT
26+92.7 EDGE OF ROAD
26+93.4 EDGE OF ROAD
27+05.7 FENCE LINE
27+06.7 PROPERTY LINE
27+13.0 EDGE OF ROAD
27+27.3 EDGE OF ROAD
27+27.3 EXISTING PIPELINE
27+34.9 EDGE OF ROAD
27+47.4 OVERHEAD ELECTRIC
27+52.0 HDD EXIT/EXIT
27+52.8 E.O.L.

PROFILE
HORIZONTAL: 100
VERTICAL: 40



PIPE DETAIL
N.T.S.



LEGEND

- CL PROPOSED PIPELINE
- FENCE LINE
- SURVEY/SECTION LINE
- TRACT BORDER
- COUNTY LINE
- EXISTING PIPELINE
- ROAD WAY
- PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- ADDITIONAL TEMPORARY WORKSPACE
- POINT OF INTERSECTION
- TEST LEAD
- BLOCK VALVE
- BORE ENTRY/EXIT

GENERAL INFORMATION

ISSUED FOR REVIEW

M.A.O.P.: XXXX P.S.I.G., MINIMUM REQ. TEST PRESSURE - XXXXX PSIG
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET

WARNING

A REASONABLE ATTEMPT HAS BEEN MADE TO LOCATE ALL UNDERGROUND OBSTRUCTIONS BUT UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND THERE MAY ALSO BE OTHER UNDERGROUND UTILITIES THAT ARE NOT SHOWN. IT IS STILL THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL UNDERGROUND FACILITIES WITHIN WORKING AREA. CONTRACTOR MUST CONTACT ONE CALL UTILITY LOCATION SERVICES AND THE OWNERS OF THE UTILITIES TO VERIFY THEIR LOCATION.

THIS DOCUMENT IS FOR CONSTRUCTION PURPOSES ONLY AND IS NOT INTENDED TO BE FILED OF RECORD FOR EASEMENT OR ANY OTHER PURPOSE.

ORIGINAL DOCUMENT SIZE: 24" X 36"

REVISION

NO.	DESCRIPTION	DATE

SUMMARY OF MATERIALS

ITEM #	LINEAR FEET	DESCRIPTION
1	2492.2	4.5" OD, 0.188" wall FBE
2	260.6	4.5" OD, 0.237" wall, ARO

SADDLE BUTTE ROCKIES MIDSTREAM, LLC.

GEO SURV — A DIVISION OF Topographic Land Surveyors

PRELIMINARY CONSTRUCTION ALIGNMENT

PROPOSED
SADDLE BUTTE
SUDEN WELL CONNECT
0+00.0 TO 27+52.8

FILE: AI_SB_SUDEN_WELL_CONNECT_JFR		REVISION:
DRAFT: JJM.C	CHECK: B.R	0
SHEET: 1 OF 1	DATE: 04/17/15	