TEST SPECIFICATIONS

Stroh - Bernhardt Farms 8 Hour Test

4" Well Ties to Stroh and Bernhardt Farms Well Pads

Date:	Select Routing:
10-Nov-2015	Alignment Sheets

Test Number: 1 of 1

Project Name:	Project I.D. / AFE Number	Facility Name or Number
Rangeview Pipeline Gathering System	14CO009	Stroh/Bernhardt Farms

Installation Location (M.P. or S.S.):				State:	County/Parish:	Class Location Designation	Selected Design Pressure	Planned MOP
From:	0+00	To:	58+15	CO	Weld	1	1480	1400
From:	0+00		24+00					

Project Description:

Pressure test of the 4" combined well ties prior to commissioning

Testing requirement at 1.25*MOP = 1850 minimum test pressure. **2225 psig Target Minimum Test Pressure at Chart Location**

Max Test Pressure for ANSI 600 Valves and Fittings is 2640 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)	2600	59.8%
Max. Test Pressure (Valves and Fittings)	2640	60.8%
Min.	2225	51.2%

Test Section - Reference Data

Test Medium	Water	
Test Duration	8	Hours (min)
Section Length	8,215	Ft.
Section Fill Volume	6,787	Gal
Max. Elevation Change	128	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	4843	2,545	58.6%	2,225	51.2%	320	2,384	54.9%
HIGH ELEVATION	0+00	4843	2,545	58.6%	2,225	51.2%	320	2,384	54.9%
LOW ELEVATION	19+75	4715	2,600	59.8%	2,280	52.5%	320	2,440	56.2%
END	58+15	4805	2,561	58.9%	2,241	51.6%	320	2,401	55.3%
Chart Location (Test Point)	**0+00**	**4843**	**2,545**	**58.6%**	**2,225**	**51.2%**	**320**	**2,384**	**54.9%**

REMARKS:

Note that there are two well ties tied together with a piggable wye. The beginning, high point, and end point stationing are all on the Stroh well tie.

The low point is on the Bernhardt Farms well tie.

The low point is the HDD under the UP RR tracks.

The chart location is at the receiver where the well ties tie into the F leg.

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) Paul Chandler	Date: 11/10/2015	Test Performed by (Signature): Phil Ey	Date:	Compliance (signature)	Date:
Designed Reviewed if applicable (Signature)	Date:	Company Name (for Contractor or for Employee): North Wind's of Wyo	Date:	Engineering or Operations (Signature)	Date:
Compliance (Signature)	Date:	Witnessed & Accepted by Company Representative: (Signature)	Date: 11-10-15	Actual MOP	

LIQUID PIPELINE PRESSURE TEST REPORT

Pressure Test Number 1

MOP of tested facility is ______ PSIG

Company: SADDLE BUTTE

Operations Area:

Project: Rangeview Pipeline Gathering System

AFE: 14C0009

Pipeline:

Section: Stroh-Bernhardt Farms 4" Well Connect

Station or Milepost From: 0+00, 0+00 To: 24+00, 58+15

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.

PRESSURE CALCULATIONS

Location of Test Point	Elevation of Test Point	High Point	Low Point
	___ Ft. (Elevation)	5813 Ft. (Elevation)	4715 Ft. (Elevation)
	___ Ft. (Station)	0+00 Ft. (Station)	19+75 Ft. (Station)
		___ Location Name	___ Location Name

Target MOP:	Test Duration: 8 hr	Start Point	End Point
Target Test Pressure Range	High Point / Low Point	5813 Ft. (Elevation)	4805 Ft. (Elevation)
1st Min: Maximum: 2640		0+00 Ft. (Station)	58+15 Ft. (Station)
2nd Min:		___ Location Name	___ Location Name

TEST LOG

DATE	TIME	PRESSURE	AMBIENT TEMP	BELOW GROUND TEMP	ABOVE GROUND TEMP	REMARKS
11-10-[illegible]	7:45	500	33°			Pressured up TO 500 - Hold 15 minute
	8:00	500	34°			Pressuring up to 1000 PSI
	8:08	1000	34°			Pressured up to 1000 - hold 15 min.
	8:23	1000	34°			Pressuring up to 1500 PSI
	8:30	1500	35°			Pressured up to 1500 PSI - 15 [illegible]
	8:45	1500	37°			Pressuring up to 2000 PSI
	8:52	2000	39°			Pressured up to 2000 - Hold [illegible]
	9:08	2000	45			Pressuring up to Target - Pressure
	9:30	2100	46°			Tightened Gauge Pressuring up To
						Target Pressure
Test	10:00	2324.6	46°			Reached Target Pressure - TEST STARTS
	10:15	2324.6	49°			Sunny
	10:30	2324.7	52			Sunny
	10:45	2324.7	54°			Sunday
	11:00	2324.9	54°			
	11:15	2325.2	54°			Sunny
	11:30	2325.5	54°			
	11:45	2325.7	55°			
	12:00	2326.0	55°			Sunny
	12:15	2326.4	55°			
	12:30	2327.0	55°			
	12:45	2327.0	55°			Sunny
	1:00	2327.0	55°			Sunday
	1:15	2327.3	58			
	1:30	2327.6	57°			
	1:45	2327.9	57°			Sunny
	2:00	2327.9	61°			
	2:15	2327.9	61			
	2:30	2327.9	61°			
	2:45	2327.4	61°			
	3:00	2327.2	61			Sunny
	3:15	2327.1	61°			
	3:30	2327.1	61			
	3:45	2326.6	58°			
	4:00	2326.5	57°			
	4:15	2326.4	55°			
	4:30	2326.4	54°			
	4:45	2326.1	53°			
	5:00	2325.8	52°			

CARGILL BUTTES PIPELINE, LLC

TEST LOG (CONTINUED)

DATE	TIME	PRESSURE	AMBIENT TEMP	BELOW GROUND TEMP	ABOVE GROUND TEMP	REMARKS
11-10-15	5:15	2325.5	52			
	5:30	2325.3	52			
	5:45	2325.2	50			
	1:00	2325.0	50			End of Test - 15 Min. hold
	6:15	2324.8				Bleeding down To 2000 PSI
	6:15	2324.8				Bled down And 15 Min-held
	6:17	2000				Bleeding down TO 1500 PSI
	6:32	2000				Bled down TO 1500 - held 15 Min
	6:34	1500				Bleeding down TO 1000 PSI
	6:49	1500				Bled down TO 1000 - Held 15 Min
	6:50	1000				Bleeding down To 500 PSI
	7:05	1000				Bled down To 500 PSI Held - 15 MIN
	7:07	500				Bleeding Down Line
	7:23					

SADDLE BUTTE PIPELINE, LLC

TEST EQUIPMENT

PRESSURE RECORDER 1:

Mfg. J-W Measurement Company
Model
Serial No. # 202A-161884
Range 0 - 1000
Notes: Last Calibration 9-10-2015

PRESSURE RECORDER 2:

Mfg.
Model
Serial No.
Range
Notes:

DEADWEIGHT TESTER OR CALIBRATED TEST GAUGE:

Mfg. Crystal Engineering
Model XP2i 5000 psi
Serial No. 364157
Date of test Calibration 6-10-15
Calibrated by [illegible]
Range 0 - 5000 PSI
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

SANDLE BUTTE PIPELINE, LLC

EQUIPMENT CALCULATED MOP SUMMARY WORKSHEET

1. Test Information:

Target MOP: ______

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

- Date: 11-10-15
- Time: ______
- Test Point Location: 0+00
- Test Medium: Water
- Test Duration: 8
- 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:

- Pipe (#1) O.D.: 4.5
- MOP: ______
- Manufacture Type: ______
- Grade: X-52
- SMYS: ______
- Seam Joint Factor: ______
- Wall thickness: .188
- Design Factor (F): ______
- Length (ft.): 8215
- Volume: ______
- Max allowable test pressure, psig: ______

3. Pipe Specifications:

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

4. Pipe Specifications:

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

5. Pipe Specifications:

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

6. Pipe Specifications:

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

7. Pipe Specifications:

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

8. Pipe Fittings Specifications:

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

9. Pipe Fittings Specifications:

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

10. Pipe Fittings Specifications:

- Pipe Fitting O.D.: ______
- MOP: ______
- Manufacture Type: ______
- Grade: ______
- SMYS: ______
- Seam Joint Factor: ______
- Fitting Description: ______
- Wall thickness: ______
- 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

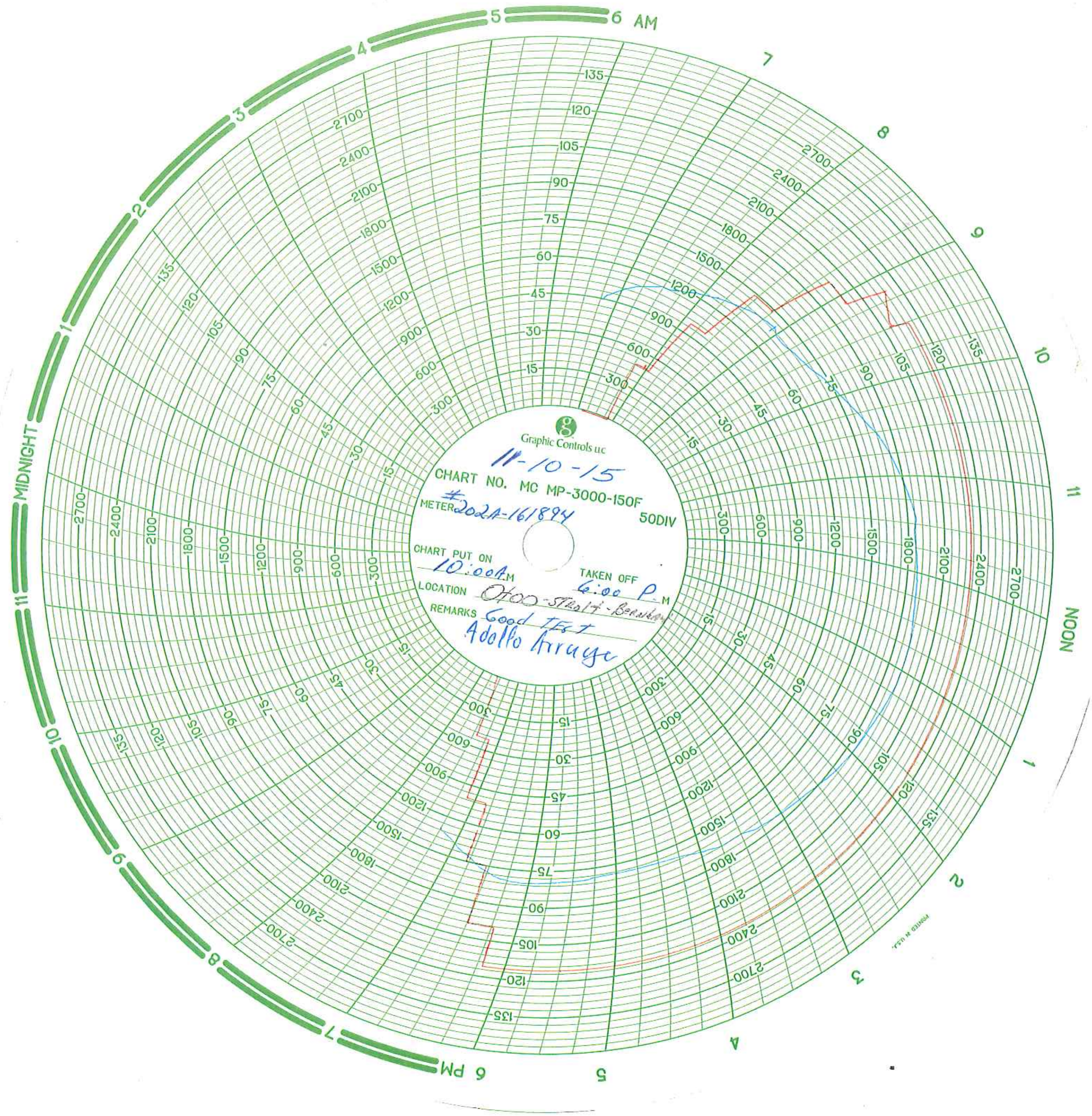
By: _____ (Please print) _____ (Signature) Date: _____

Inspector

By: Oscar Pickens (Please print) Oscar Pickens (Signature) Date: 11-10-15

Name of Testing Contractor: Northwinds

By: Adolfo Arriaga (Please print) Adolfo Arriaga (Signature) Date: 11-10-15



Graphic Controls LLC
11-10-15
CHART NO. MC MP-3000-150F
METER #2021-161894
50DIV
CHART PUT ON 10:00 A.M
TAKEN OFF 6:00 P.M
LOCATION
REMARKS Good TEST
6 AM
NOON
6 PM
MIDNIGHT

Dig Gauge

P-SS-SS-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 | NORTH STATE SUPPLY NS

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

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER: UT 91015-5

Details +/-: 0.05% ACCURACY

DATE CALIBRATED: 09-10-2015
DUE DATE: 09-10-2016
INDICATED TEMPERATURE RANGE: # 0 – 150°F
INDICATED PRESSURE RANGE: # 0 – 3,000 PSI
SERIAL NO: 202A - 161894
MANUFACTURER: J – W MEASUREMENT / 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: THERMOWORKS TEST THERMOMETER; SERIAL NO, D14140809. CALIBRATION DATE: JULY 15, 2015

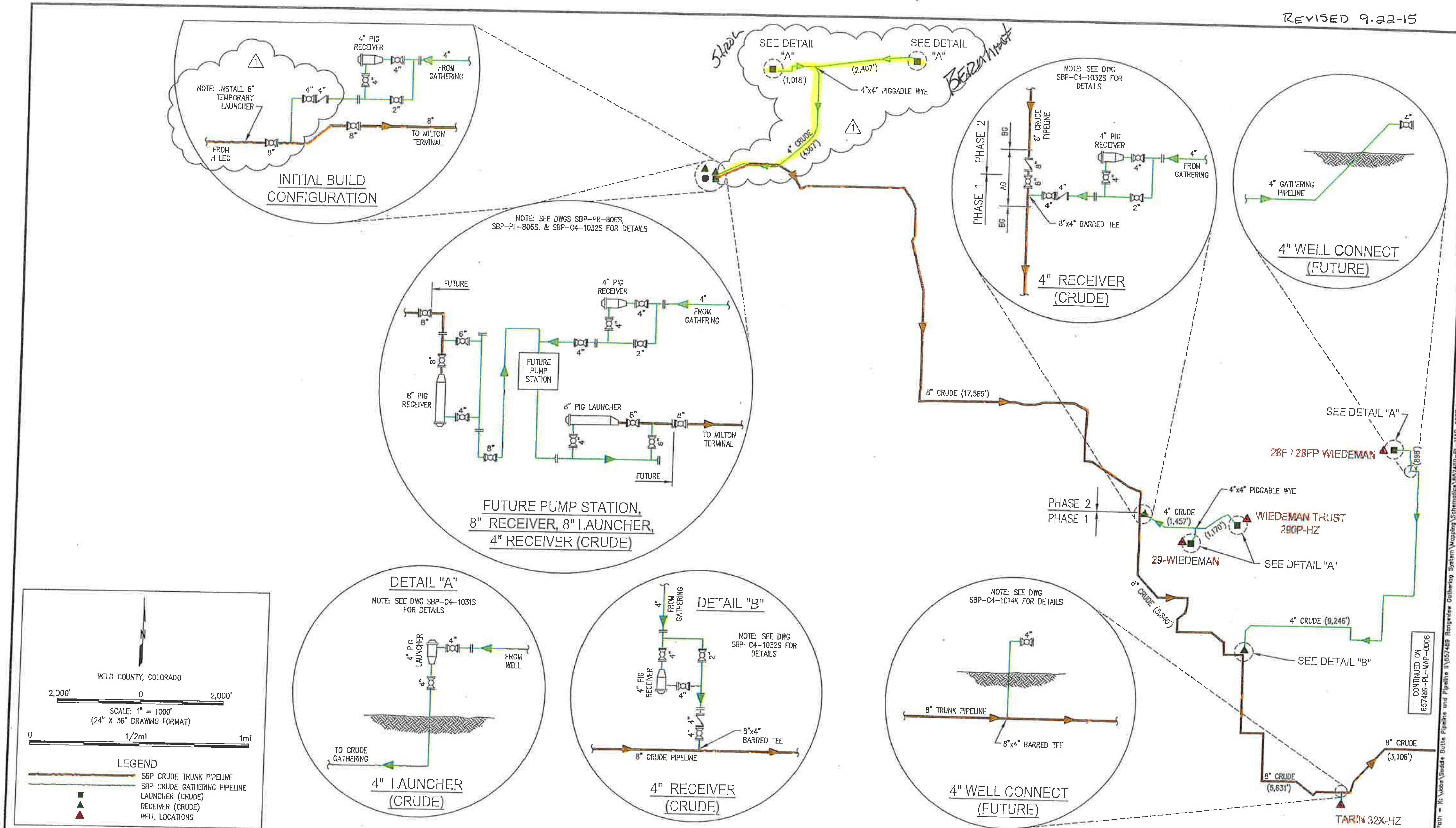
ALL STANDARD DIRECTLY TRACEABLE TO NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGIES TEST NO: (N.I.S.T.) 2.6/172490 & 6.6/139577.

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

REVISED 9-22-15



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.
2	RE-ISSUED FOR CONSTRUCTION	09/22/15	TMM	JK	
1	ISSUED FOR CONSTRUCTION	06/15/15	TMM	JK	

DRAWN BY:	TMM	04/27/15
CHECKED BY:	JK	04/27/15
REVIEWED BY:	JK	04/27/15
APPROVED BY:		
SCALE:	SCALE: 1" = 1000'	

PREPARED FOR:
SADDLE BUTTE PIPELINE

CH2MHILL
150 TECH CENTER DRIVE, SUITE E
DURANGO, CO 81301-6840

FLOW SCHEMATIC
RANGEVIEW GATHERING SYSTEM
RANGEVIEW GATHERING
WELD COUNTY, COLORADO

PROJECT NUMBER: 657489
DRAWING NUMBER: 657489-PL-MAP-0007
REV. 1

Sep 22, 2015 – 10:14am by tmmaloney – Path = X:\Saddle Butte Pipeline and Pipeline II\657489 Rangeview Gathering System\Mapping\Schematics\657489-PL-MAP-0007.dwg

REVISED 11-2-15

COUNTY & STATE	WELD COUNTY, COLORADO		
SURVEY	SECTION 24, T-4-N, R-67-W	SECTION 13, T-4-N, R-67-W	
OWNERSHIP FEET/RODS	0+00.0	TRACT 660.2 CHERYL L. KASTEN 233.54 FEET OR 14.15 RODS	2+33.5
	2+33.5	TRACT 660.3 CHERYL L. KASTEN 938.24 FEET OR 56.86 RODS	11+71.8
	11+71.8	TRACT 660.3 CHERYL L. KASTEN 1930.16 FEET OR 116.98 RODS	31+01.9
	31+01.9	TRACT 660.3 CHERYL L. KASTEN 2720.29 FEET OR 164.87 RODS	58+22.2

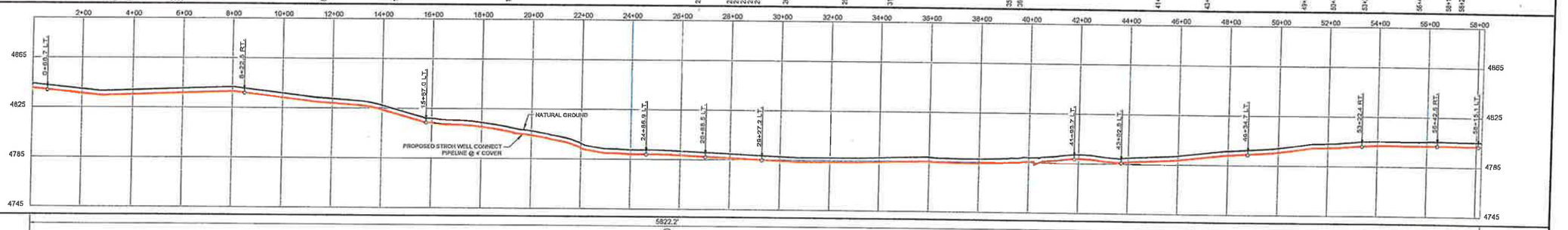
PLAN
SCALE: 1 = 200'

NUMBER	STATION	LATITUDE	LONGITUDE	DEFLECTION
BEGIN LINE	0+00.0	40.30445	-104.84787	—
1	0+68.7	40.30445	-104.84772	-23°13'
2	8+22.5	40.30624	-104.84572	23°47'
3	15+87.0	40.30519	-104.84248	-41°56'
4	24+86.9	40.30628	-104.84002	-7°11'
5	26+88.5	40.30718	-104.83953	-23°54'
6	28+27.2	40.30781	-104.83926	-18°15'
7	41+53.7	40.31125	-104.83724	-29°37'
8	43+32.8	40.31172	-104.83651	-69°16'
9	49+34.7	40.31173	-104.84155	62°53'
10	53+22.4	40.31081	-104.84319	63°40'
11	56+42.5	40.31053	-104.84334	89°28'
12	58+15.1	40.31130	-104.84334	90°54'
END LINE	58+22.2	40.31130	-104.84330	—

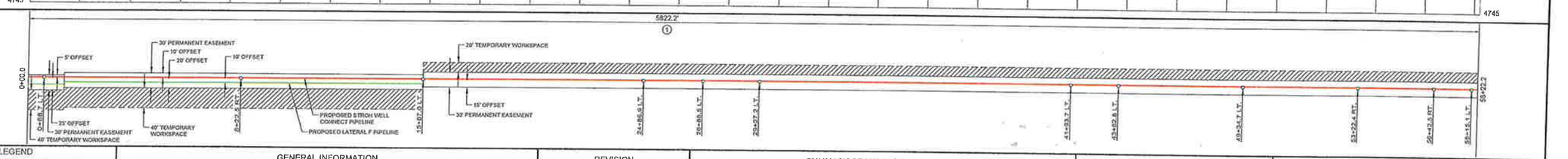
STATIONING

0+00.0 BEGIN STA.
0+68.7 P.I. < 23°13' LT.
2+33.5 SECTION LINE
2+45.0 EXISTING PIPELINE
8+22.5 P.I. < 23°47' RT.
11+71.8 PROPERTY LINE
15+87.0 P.I. < 41°56' LT.
23+45.8 EXISTING PIPELINE
24+86.9 P.I. < 7°11' LT.
25+06.9 DRIP LINE
25+45.0 ACCESS ROAD
25+51.1 ACCESS ROAD
25+56.1 ACCESS ROAD
26+88.5 P.I. < 23°54' LT.
29+27.2 P.I. < 18°15' LT.
31+01.9 PROPERTY LINE
35+97.4 ACCESS ROAD
36+07.9 ACCESS ROAD
41+93.7 P.I. < 29°37' LT.
43+82.8 P.I. < 69°16' LT.
49+34.7 P.I. < 62°53' LT.
52+47.1 SITE
53+22.4 P.I. < 63°40' RT.
56+42.5 P.I. < 89°28' RT.
58+15.1 P.I. < 90°54' LT.
58+22.2 E.O.L.

PROFILE
HORIZONTAL: 1 = 200'
VERTICAL: 1 = 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 CONSTRUCTION

M.O.P.: 1480 P.S.I.G., MINIMUM REQ. TEST PRESSURE -2225 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
1	ROUTE EXTENDED	11/02/15

SUMMARY OF MATERIALS

ITEM #	LINEAR FEET	DESCRIPTION
1	5822.2	4.500" OD x 0.188" w API 5L, X52, FBE

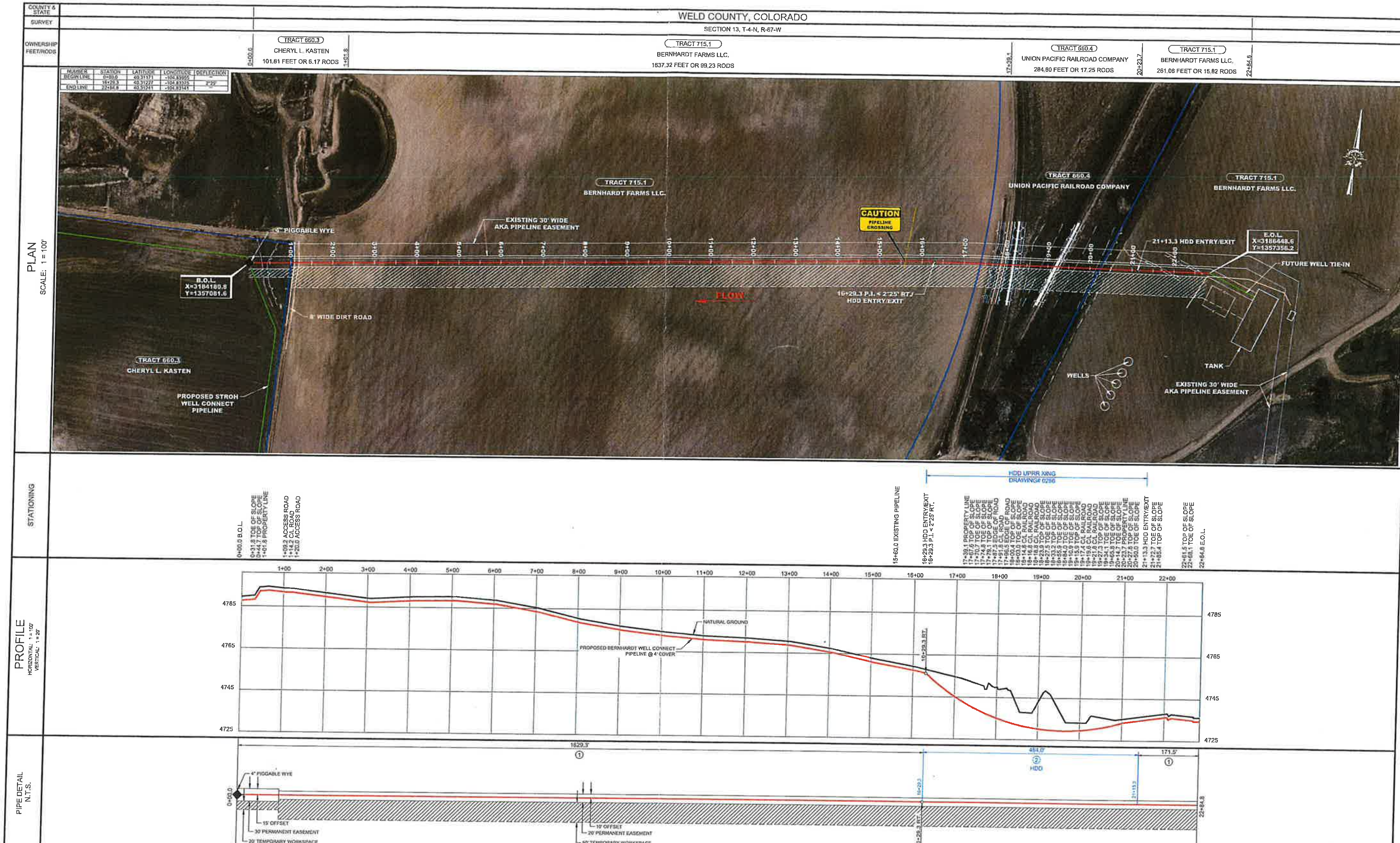
SADDLE BUTTE ROCKIES MIDSTREAM, LLC.

GEO SURV — A DIVISION OF Topographic Land Surveyors

CONSTRUCTION ALIGNMENT

PROPOSED
STROH WELL CONNECT
4" PIPELINE
STA. 0+00.0 TO STA. 58+22.2

FILE: M_SADDLE_BUTTE_PIPELINE_STROH_WELL_CONNECT_REV1		REVISION: 1
DRAFT: SRJ	CHECK: BR	
SHEET: 1 OF 1	DATE: 9/15/15	



LEGEND

- CL PROPOSED PIPELINE
- FENCE LINE
- SURVEY/SECTION LINE
- TRACT BORDER
- COUNTY LINE
- EXISTING PIPELINE
- ROAD WAY
- PERMANENT EASEMENT
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GENERAL INFORMATION

ISSUED FOR CONSTRUCTION

M.O.P.: 1480 P.S.I.G., MINIMUM REQ. TEST PRESSURE -2225 PSIG

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ORIGINAL DOCUMENT SIZE: 24" X 36"

REVISION

NO.	DESCRIPTION	DATE

SUMMARY OF MATERIALS

ITEM #	LINEAR FEET	DESCRIPTION
1	1800.8	4.500" OD x 0.188" w API 5L, X52, FBE
2	484.0	4.500" OD x 0.237" w API 5L, X52, ARO

SADDLE BUTTE ROCKIES MIDSTREAM, LLC.

GEO SURV — A DIVISION OF Topographic Land Surveyors

CONSTRUCTION ALIGNMENT

PROPOSED
BERNHARDT WELL CONNECT
4" PIPELINE
STA. 0+00.0 TO STA. 22+84.8

FILE: AL_SADDLE_BUTTE_PIPELINE_BERNHARDT_WELL_CONNECT		REVISION: 0
DRAFT: SRJ	CHECK: BR	
SHEET: 1 OF 1	DATE: 9/14/15	