

Powell, Brandon, EMNRD

From: Basye, Matt <Matt.Basye@wpxenergy.com>
Sent: Friday, December 19, 2014 3:21 PM
To: Powell, Brandon, EMNRD
Cc: Riley, Heather
Subject: NE Chaco Unit 4-1 CDP LACT

Brandon,

Currently, we are planning on putting the Chaco 4-1 CDP into service the first week of January, which the C-106 form I submitted last week will cover(NE Chaco CA, NMNM132829; R-13817A). We currently have two transfer pumps set which will service the following three wells:

- NE Chaco Com #206H (API # 30-043-21190)
- NE Chaco Com #207H (API # 30-043-21191)
- NE Chaco Com #208H (API # 30-043-21170)

I will get with Heather's group as additional pumps are set and we will report that to you.

Thanks,
Matt Basye
Production Supervisor
Chaco Slope Team
Office-505-333-1802
Cell-505-486-1837
Fax-505-333-1805

WPXENERGY

District I (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II (575) 748-1283
811 S. First St., Artesia, NM 88210
District III (505) 334-6178
1000 Rio Brazos Road, Aztec, NM 87410
District IV (505) 827-8198
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-106
Revised August 1, 2011

ACT Permit No. _____

NOTICE OF INTENTION TO UTILIZE AUTOMATIC CUSTODY TRANSFER EQUIPMENT

Operator WPX Energy LLC _____

Address 721 S Main St Aztec NM 87410 _____ County San Juan

Lease(s) to be served by this ACT Unit Northeast Chaco CA, NMNM132829; R-13817A _____

Pool(s) to be served by this ACT Unit Chaco Unit NE HZ (OIL) _____

Location of ACT System: Unit F and K _____ Section 13 _____ Township 23N _____ Range 07W _____

Order No. authorizing commingling between leases if more than one lease is to be served by this system.

_____ R-13817 _____ Date 5/2/2014 _____

Order No. authorizing commingling between pools if more than one pool is to be served by this system

_____ R-13817A and R-13817 _____ Date 5/2/2014 _____

OIL CONS. DIV DIST. 3

Authorized transporter of oil from this system Western Refining _____

DEC 09 2014

Transporter's address 3303 North 1st St Bloomfield, NM 87413 _____

Maximum expected daily through-put for this system: 11,600 BBLs/D _____

If system fails to transfer oil due to malfunction or otherwise, waste by overflow will be averted by:

CHECK ONE: A. Automatic shut-down facilities B. Providing adequate available capacity to receive production
as required by 19.15.18.15.C(8) NMAC during maximum unattended time of lease operation
19.15.18.15.C(9) NMAC

If "A" above is checked, will flowing wells be shut-in at the header manifold or at the wellhead?

_____ Wellhead _____ Maximum well-head shut-in pressure 1500PSI _____

If "B" above is checked, how much storage capacity is available above the normal high working level of the

surge tank _____ BBLs.

What is the normal maximum unattended time of lease operation? _____ 7 _____ Hours.

What device will be used for measuring oil in this ACT unit?

CHECK ONE: Positive displacement meter Weir-type measuring vessel
 Positive volume metering chamber Other; describe Coriolis Meter _____

Remarks: Pipeline LACT will be utilized to sell oil to Western Refining via pipeline. The truck LACTS will be used for backup in case the pipeline expectedly or unexpectedly goes down. _____

OPERATOR:

I hereby certify above information is true and complete to best of my knowledge and subject ACT system will be installed and operated in accordance with Rule 19.15.18.15 NMAC. Approval of this Form

C-106 does not eliminate necessity of an approved C-104 prior to running any oil or gas from this system.

Signature Matt Basye

Printed Name & Title Matt Basye/ Production Supervisor

E-mail Address matt.basye@wpxenergy.com

Date 11/20/14 Telephone 505-486-1837

OIL CONSERVATION DIVISION

Approved by: [Signature]
DEPUTY OIL & GAS INSPECTOR

Title: DISTRICT # 3

Date: 12-19-14

INSTRUCTIONS: Submit one copy of Form C-106 with following attachments to appropriate district office.

- 1) Lease plat showing all wells which will be produced in ACT system.
- 2) Schematic diagram of battery and ACT equipment showing all major components and means employed to prove accuracy of measuring device.
- 3) Letter from transporter agreeing to utilization of ACT system as shown on schematic diagram.

19.15.18.15.C. The division shall not approve form C-106 unless the operator of the ACT system will install and operate the ACT system in compliance with the following requirements.

(1) Provision is made for accurate determination and recording of uncorrected volume and applicable temperature, or of temperature corrected volume. The system's overall accuracy shall equal or surpass manual methods.

- The LACT system is more accurate when compared to a manual tank sale. It is proved per BLM On Shore Order #4 Measurement of Oil, and API MPMS Chapter 4 Proving Systems, with a third party volumetric prover on a monthly interval and at initial use. The LACT also has a temperature RTD which will be calibrated semi-annually, unless more frequent verification is requested by the Division.

(2) Provision is made for representative sampling of the oil transferred for determination of API gravity and BS&W content.

- The LACT is equipped with a flow proportional sampler (sample probe and actuated valve). The sampled fluid is stored in a sealed cylinder that is used for API gravity and S&W determination.

(3) Provision is made if required by either the oil's producer or the transporter to give adequate assurance that the ACT system runs only merchantable oil.

- The LACT is equipped with a water cut analyzer that communicates with the flow computer. When the S&W set point is reached the divert valve will engage sending non-merchantable oil to a divert tank. The set point can be adjusted in the flow computer but only if agreed upon by both shipper and producer.

(4) Provision is made for set-stop counters to stop the flow of oil through the ACT system at or prior to the time the allowable has been run. Counters shall provide non-reset totalizers that are visible for inspection at all times.

- The coriolis meter has a non-resettable totalizer which is always visibly available on the LCD display.

(5) Necessary controls and equipment are enclosed and sealed, or otherwise arranged to provide assurance against, or evidence of, accidental or purposeful mismeasurement resulting from tampering.

- All means of escape and measurement of oil are sealed and tracked in the seal log.

(6) The ACT system's components are properly sized to ensure operation within the range of their established ratings. All system components that require periodic calibration or inspection for proof of continued accuracy are readily accessible; the frequency and methods of the calibration or inspection shall be as set forth in Paragraph (12) of Subsection C of 19.15.18.15 NMAC.

- The coriolis is proved per BLM Onshore Order #4 Measurement of Oil and API MPMS Chapter 4 Proving Systems; with a third party volumetric prover on a monthly interval and at initial use. The prover is NIST traceable and water drawn on a bi-annual basis. Monthly proving will continue per the rule, unless a variance is granted by the Division. NMOCD representatives are sent the schedule to witness if desired. The temperature transmitter is verified on a semi-annual basis. The water cut analyzer is calibrated as needed.

(7) The control and recording system includes adequate fail-safe features that provide assurance against mismeasurement in the event of power failure, or the failure of the ACT system's component parts.

- In the event of power failure, the divert valve mechanically goes to a "failed state" and no longer sales oil but only sends it to the divert tank.
- All of the historized volume data is stored in flow computer memory with battery backup and is also transmitted by SCADA, multiple times a day, to an office server. So even during a power failure no oil volume is lost.
- In the event of a malfunction, the LACT unit is programmed to shut off and the divert valve is forced to close and no longer sales oil but only sends it to the divert tank. The malfunction is also logged by the flow computer.

(8) The ACT system and allied facilities include fail-safe equipment as may be necessary, including high level switches in the surge tank or overflow storage tank that, in the event of power failure or malfunction of the ACT or other equipment, will shut down artificially lifted wells connected to the ACT system and will shut in flowing wells at the well-head or at the header manifold, in which latter case the operator of the ACT system shall pressure test all flowlines to at least 1½ times the maximum well-head shut-in pressure prior to the ACT system's initial use and every two years thereafter.

Pipeline LACTS (2)

BILL OF MATERIALS WPX-BOM RevC

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
1	1	SK-8-144-350-RS	SKID, 8" HEIGHT X 144" W X 350-1/4" LG	SA-36
2	1	3 INCH WPX-SPOOL01	SPOOL 01, 4" 150# (SUCTION)	SA-106 Gr. B
3	1	3 INCH WPX-SPOOL02	SPOOL 02, 4" X 3" 150# (SUCTION)	SA-106 Gr. B
4	1	3 INCH WPX-SPOOL03	SPOOL 03, 3" X 2" 150# (PUMP OUTLET)	SA-106 Gr. B
5	1	3 INCH WPX-SPOOL04	SPOOL 04, 3" 150# (DREXELBROOK PROBE)	SA-106 Gr. B
6	1	3 INCH WPX-SPOOL05	SPOOL 05, 3" 150#	SA-106 Gr. B
7	1	3 INCH WPX-SPOOL06	SPOOL 06, 3" 150# (STATIC MIXING SPOOL)	SA-106 Gr. B
8	1	3 INCH WPX-SPOOL07	SPOOL 07, 3" 150#	SA-106 Gr. B
9	1	3 INCH WPX-SPOOL08	SPOOL 08, 3" 150#	SA-106 Gr. B
10	1	3 INCH WPX-SPOOL09	SPOOL 09, 3" 150# (PROVER CONNECTION)	SA-106 Gr. B
11	1	3 INCH WPX-SPOOL10	SPOOL 10, 3" 150# (PROVER CONNECTION)	SA-106 Gr. B
12	1	3 INCH WPX-SPOOL11	SPOOL 11, 3" 150#	SA-106 Gr. B
13	1	3 INCH WPX-SPOOL12	SPOOL 12, 3" 600#	SA-106 Gr. B
14	1	3 INCH WPX-SPOOL13	SPOOL 13, 3" 600#	SA-106 Gr. B
15	2	3 INCH WPX-SPOOL14	SPOOL 14, 3" 150# (PROVER CONNECTION)	SA-106 Gr. B
16	1	3 INCH WPX-SPOOL15	SPOOL 15, 3" 150# (REJECT LINE)	SA-106 Gr. B
17	1	3 INCH WPX-SPOOL16	SPOOL 16, 3" 150# (REJECT LINE)	SA-106 Gr. B
18	1	3 INCH WPX-SPOOL17	SPOOL 17, 3" 600#	SA-106 Gr. B
19	1	3 INCH WPX-SPOOL18	SPOOL 18, 3" 600#	SA-106 Gr. B
20	1	3 INCH WPX-SPOOL19	SPOOL 19, 3" 600#	SA-106 Gr. B
21	1	3 INCH WPX-SPOOL20	SPOOL 20, 3" 600#	SA-106 Gr. B
22	1	3 INCH WPX-SPOOL21	SPOOL 21, 3" 600#	SA-106 Gr. B
23	1	-	CORIOLIS METER, FMC 3" 150# RF, #8JF80AAA5A9P1BBCW/INTERGRAL TRANSMITTER	-
24	1	-	CHARGE PUMP, GRISWOLD, 3" x 2" x 13, W/20H.P. 3PH MOTOR	-
25	1	-	CUT MONITOR, DREXELBROOK, 3/4" NPT, INSERTION LENGTH 32.1"	-
26	1	-	J-WAY VALVE, FLO-TITE 3" 150# RF, T-PORT W/VALVECON LADCWX3UP	C.S.
27	2	-	ACTUATOR BALL VALVE, 3", 150# ANSI RF FLANGED, FP	C.S.
28	2	-	CONTROL VALVE, KIMRAY, 3" 310 FMT BP, 150# FLANGED W/30-60 PSI-SPRING	C.S.
29	1	-	CHECK VALVE, DURABLA WLC, 3" 150/300# RF, WAFER, WCB BODY, 316SS TRIM	C.S./316SS
30	2	3345900	ELBOW-THREADED, 1/2" 90° 2000# F.S.	SA-105
31	7	-	BALL VALVE, 1/2" FNPT X FNPT, 2000# WOG, C.S. BODY S.S. BALL & STEM	C.S./316SS
32	4	-	PRESSURE GAUGE, ASHCROFT, 4-1/2" FACE 0-200 PSI, 1/2" CONN.	-
33	1	-	TEMPERATURE INDICATING TRANSMITTER, ROSEMOUNT 3144, W/ROSEMOUNT QD88 RTD & THERMOWELL	ALUM/S.S.
34	1	-	THERMOWELL W/ CAP & CHAIN, 3/4" NPT X 2-1/2" U DIMENSION	316SS
35	2	-	PRESSURE INDICATING TRANSMITTER, ROSEMOUNT 3051TG, ROSEMOUNT 306 TWO VALVE MANIFOLD	ALUM/S.S.
36	1	-	AIR ELIMINATOR, ARMSTRON 11AV	-
37	4	-	BALL VALVE, 3" 600# ANSI RF FLANGED, FP	C.S.
38	1	-	BASKET STRAINER, 4" 150# RFT, TITAN W/4-MESH BASKET 304SS SCREEN PLATE W/1/4" PERFORATED HOLES	C.S.
39	1	SC-14-15-V001&PA-SC-XXX	SAMPLE CONTAINER, 15GAL NON-CODE W/ PIPING ASSMBLY	SA-53 Gr. B
40	1	-	ADAPTOR, 1/4" TUBE X 1/4" NPT	316 SS
41	1	3477370	NIPPLE, 1/2" X 3" LG, XH, SMLS	SA-106 Gr. B
42	5	3477350	NIPPLE, 1/2" X 2" LG, XH, SMLS	SA-106 Gr. B
43	1	3477390	NIPPLE, 1/2" X 4" LG, XH, SMLS	SA-106 Gr. B
44	2	-	DFT CHECK VALVE, 1/2" SCV 750CWP/500WSP	-
45	3	-	CHECK VALVE, DURABLA WLC, 3" 600# RF, WAFER, WCB BODY, 316SS TRIM	C.S./316SS
46	1	-	DOUBLE BLOCK & BLEED, FRANKLIN, 3" 150# RF W/DRT AND LEAK VERIFICATION VALVE	C.S.
47	1	-	3L-VR-15R-100 (SAMPLER ASSEMBLY)	-
48	1	-	PRESSURE GAUGE, 4-1/2" FACE, 30-0-150 VAC/PSI, 1/2" CONN.	-
49	1	-	PRESSURE GAUGE, 4-1/2" FACE, 30-0-30 VAC/PSI, 1/2" CONN.	-
50	3	3477090	NIPPLE, 1/4" X 2" LG, XH, SMLS	SA-106 Gr. B
51	1	-	ELBOW-THREADED, 1/4" 90°, 2000# F.S.	SA-105
52	3	-	BALL VALVE, 1/4" FNPT X FNPT, 2000# WOG, F.P., C.S. BODY, S.S. BALL & STEM	C.S./316SS
53	3	-	CARBON STEEL FITTINGS ELL, 1/2" X 3/8"	CARBON STEEL
54	2	-	BALL VALVE, 3/4" FNPT X FNPT, 2000# WOG, R.P, C.S. BODY S.S. BALL & STEM	C.S./316SS
55	2	-	NIPPLE, 1" X 2-1/2" LG, XH, SMLS	C.S./316SS
56	2	-	PSV, 1" NPT X 1" NPT, SET @ 775 PSI	-
57	1	-	BALL VALVE, 3/4" FNPT X FNPT, 2000# WOG, F.P. C.S. BODY S.S. BALL & STEM	C.S./316SS
58	-	-	NOT USED	SA-106 Gr. B
59	3	3350780	PLUG, 2" F.S., HEX, HD	SA-105
60	2	-	BALL VALVE, 1" FNPT X FNPT, 2000# WOG, F.P., C.S. BODY S.S. BALL & STEM	C.S./316SS
61	2	-	UNION-THREADED, 1" 3000# F.S., HEX	SA-105
62	2	-	NEEDLE VALVE, 1/4" FNPT X 1/4" MNPT	-
63	2	-	TUBBING, 3/8" X 8" LG	S.S.
64	2	-	PRESSURE GAUGE, 4-1/2" FACE, 0-1000 PSI, 1/2" CONN.	-
65	-	-	NOT USED	SA-106 Gr. B
66	-	-	NOT USED	SA-106 Gr. B
67	1	-	API BEVELED PROBE, 3/4" NPT PROCESS X 1/2" NPT INTERNAL, 2.5 U DIMENSION	S.S.
68	1	-	API BEVELED PROBE, 1/2" PROCESS X 1/4" EXTERNAL	C.S.
69	1	-	INFRARED HYDROCARBON GAS DETECTOR MODEL# PIR9400 W/FLEXVU -EXPLOSION-PROOF UNIVERSAL DISPLAY UNIT MODEL# UD10	-
70	-	-	NOT USED	-
71	3	-	LIGHT, CLASS 1, DIV. 2	C.S.
72	1	-	LIGHT SWITCH,	C.S.

BILL OF MATERIALS WPX-BOM Rev C (CONT.)

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
73	2	-	RUFFNECK CX1 HEATER, 3.6 KW, 220V/SINGLE-PHASE WITH BUILT IN THERMOSTAT -PT#CX1-220/360-036-T2AIB-T	-
74	1	-	WINDOW, 30" X 20" SLIDER WHITE VINYL, CLEAR GLASS	-
75	2	-	SHIPPING PUMP, VIKING SPUR GEAR, 3" 800# RF, #5G-41440-600 W/50HP, 3PH, 1750 RPM MOTOR	C.S.
76	2	-	ESD SWITCH, PUSH/PULL	C.S.
77	2	-	3-WAY LIGHT SWITCH	-
78	1	-	EXHAUST FAN SWITCH- INTERIOR	-
79	1	-	OIL P.L.C., R.O.C. 800L	-
80	2	-	OIL V.F.D.	-
81	1	-	TRANSFORMER, KVA 25,	-
82	1	-	480 VAC 3-PHASE POWER DISTRIBUTION	-
83	1	-	HVAC 1.5 TON.	-
84	1	-	120 VAC DISTRIBUTION	-
85	1	-	20 HP CHARGE PUMP MOTOR STARTER	-
86	1	-	EXHAUST FAN STARTER, 220V	-
87	1	-	EXHAUST FAN, CLASS 1 DIV. 1 W/LOUVERS & STORM HOOD	-

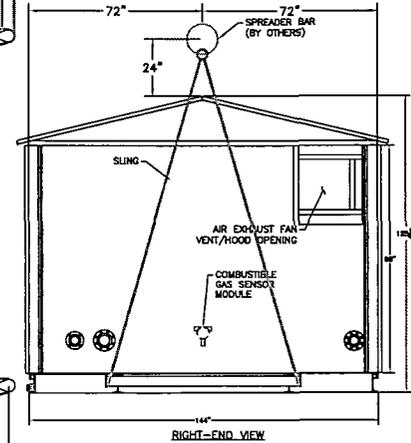
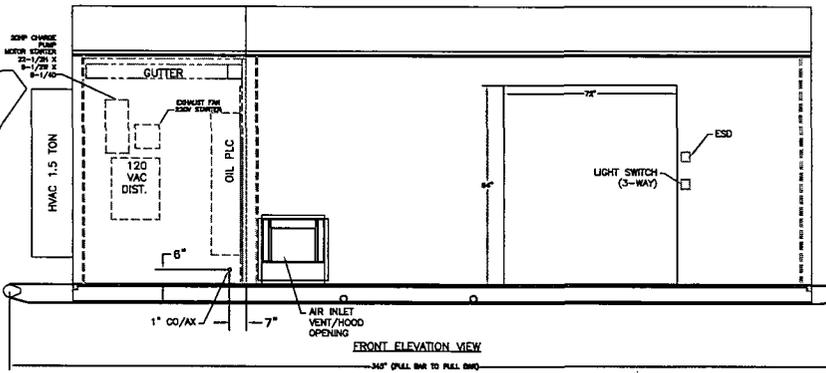
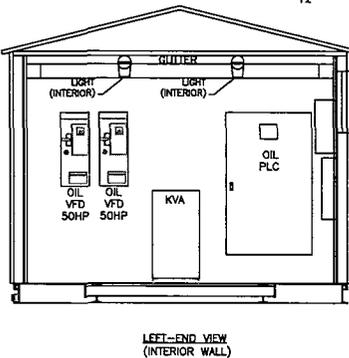
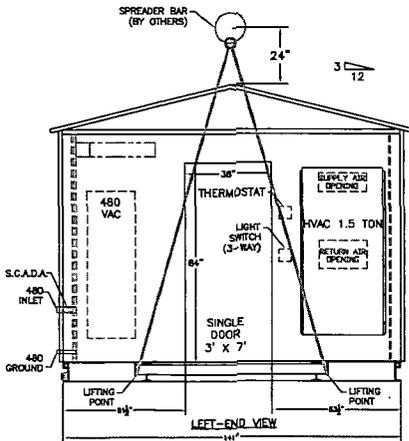
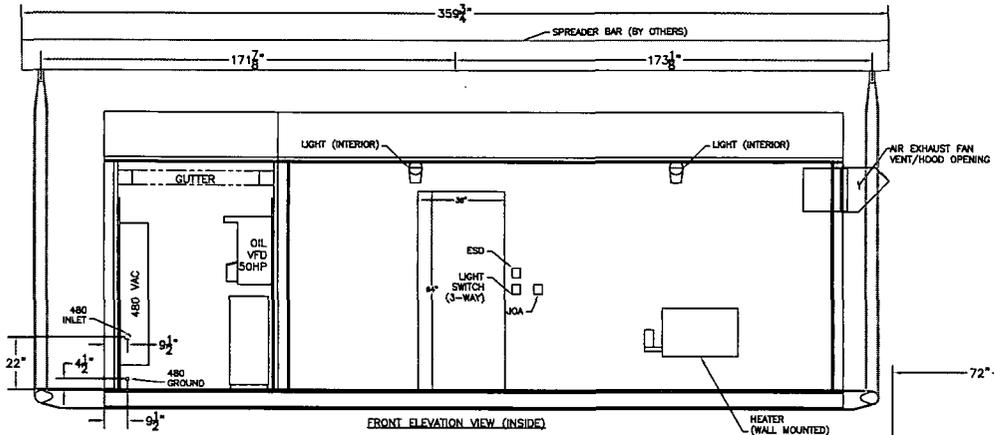
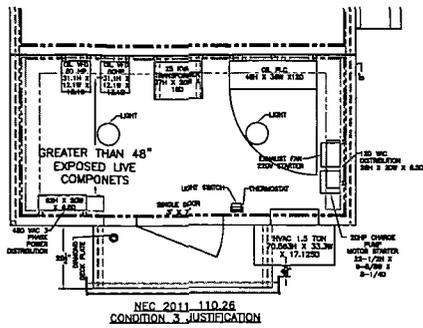
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EQUIPMENT[®]
MANUFACTURING
 2250 NORTH FIRST STREET
 BLOOMFIELD, NEW MEXICO 87413
 C&J EQUIPMENT MANUFACTURING

REVISION #	DATE	APPROVED
B	10/27/14	
C	11/5/14	
	11/6/14	

DESIGNED BY:	SKN	DATE:	10/27/14	DRAWING TITLE:	WPX LACT
CHECKED BY:		SCALE:		NEW LACT BOM	
APPROVED BY:		SHEET:	1 OF 4	PRINT DATE:	11/6/14



NOTES:

1. INTERIOR LACT OIL ROOM; ELECTRICAL COMPONENTS ARE CLASS 1 DIV. 2.
2. M.C.C. ROOM, UNCLASSIFIED.
3. 1/8" WELD GAP & 1/8" GASKET HAVE BEEN INCLUDED IN THIS LAYOUT.
4. REFERENCE DETAIL. NEC 2011 100.26 CONDITION 3 REQUIRES 48" DISTANCE BETWEEN EXPOSED LIVE COMPONENTS.

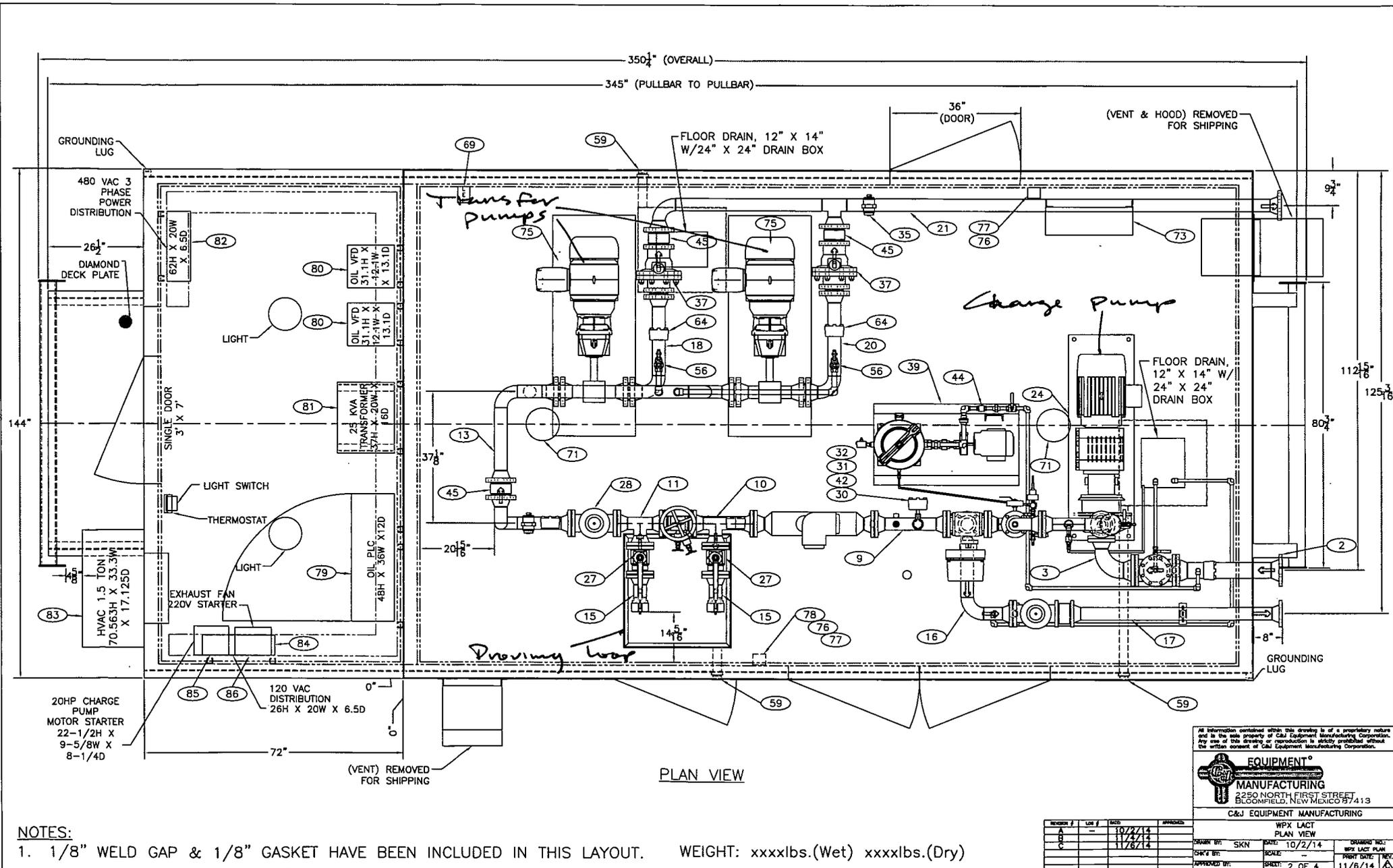
WEIGHT: xxxlbs.(Wet) xxxlbs.(Dry)

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REVISION #	DATE	APPROVAL	DATE	APPROVAL
A	10/2/14			
B	11/6/14			

WPX LACT		
PLAN VIEW & ELEVATION VIEW		
DRAWN BY: SKN	DATE: 10/2/14	DRAWING NO.:
CHECK BY:	SCALE: -	WPX LACT PLAN:
APPROVED BY:	SHEET: 4 OF 4	DATE: 11/6/14

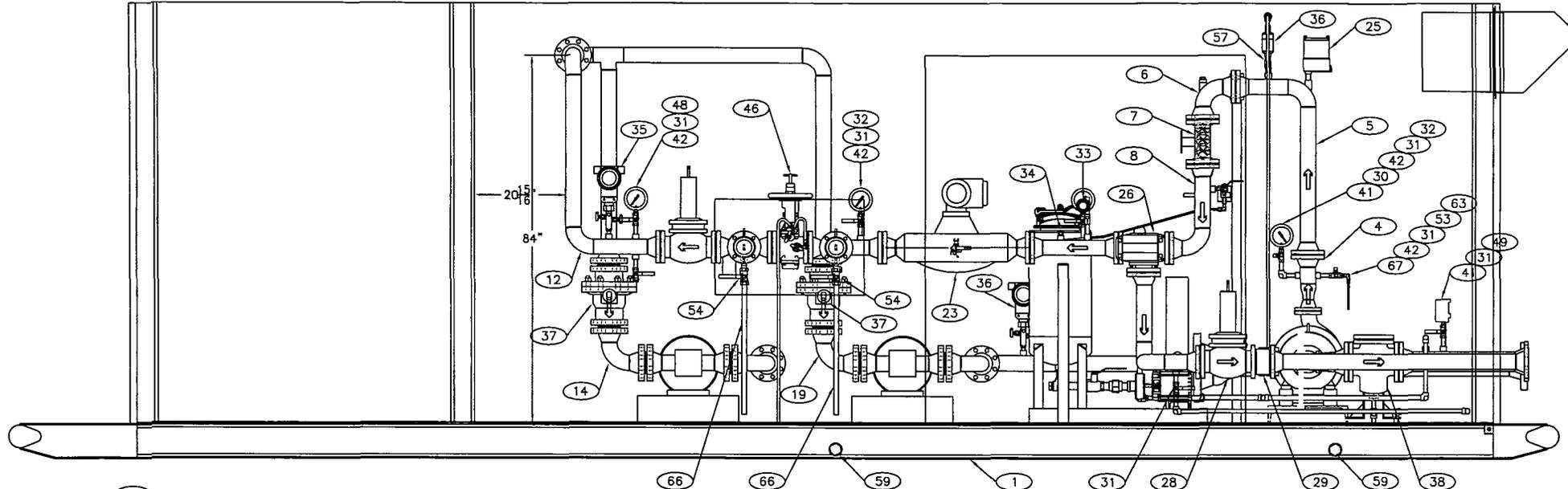


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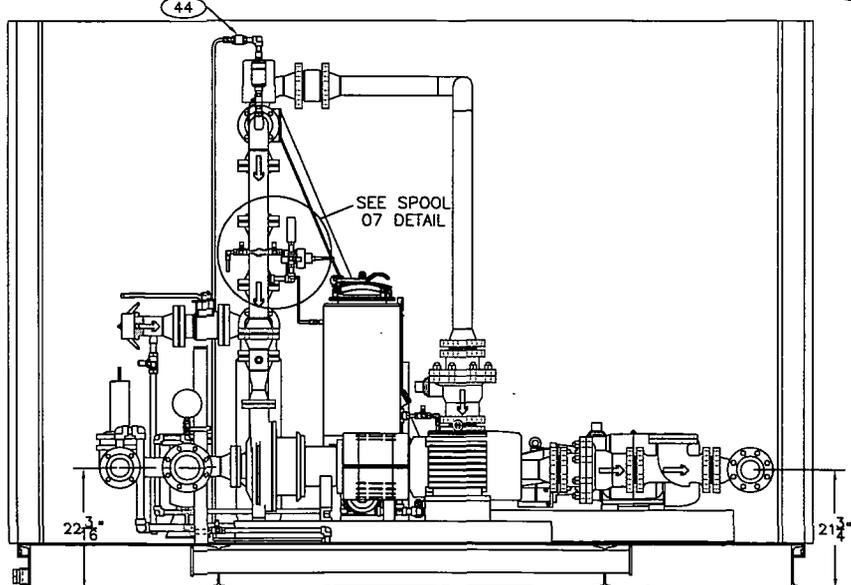
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Revision #	Use #	DATE	APPROVED
A	-	10/2/14	
B	-	11/2/14	
C	-	11/6/14	

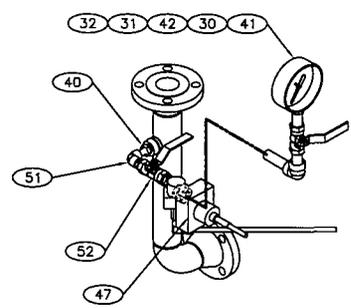
DESIGNED BY:	SKN	DATE:	10/2/14	DRAWING TITLE:	WPX LACT PLAN VIEW
CHK'D BY:		SCALE:	-	PRINT DATE:	11/6/14
APPROVED BY:		SHEET:	2 OF 4		



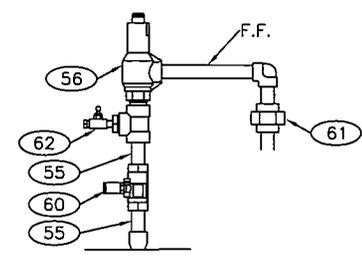
ELEVATION VIEW



LEFT END VIEW



SPOOL 07 DETAIL



PSV DETAIL

NOTES:
 1. 1/8" WELD GAP & 1/8" GASKET HAVE BEEN INCLUDED IN THIS LAYOUT.

REVISION #	DATE	APPROVED
A	10/22/14	
B	11/6/14	

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 C&J EQUIPMENT MANUFACTURING

DRAWN BY: SKN	DATE: 10/2/14	DRAWING TITLE: WPX LACT ELEVATION VIEW
CHK'D BY:	SCALE: -	PRINT DATE: REV: 11/6/14
APPROVED BY:	SHEET: 3 OF 4	

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General Information

The enclosed proposal provides a lump sum price and options for the engineering, design, equipment, material selection, supply, fabrication, assembly, inspection, testing of equipment required per the Lact specifications and drawing.

All desirable aspects of service, ease of operation and maintenance, personnel and environmental safety, precise measurement and data collection, as well as end customer acceptance, has been incorporated into this proposal.

Codes and Standards

American Petroleum Institute (API)

API STD 1104 “Welding of Pipelines and Related Facilities”

API RP 500 “Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities

API SPEC 5L “Specification for Line Pipe”

American Society of Mechanical Engineers

ASME B16.5 “Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24”

ASME B16.9 “Factory-Made Wrought Butt Welding Fittings”

ASME B16.20 “Metallic Gaskets for Pipe Flanges”

ASME B16.25 “Butt Welding Ends”

ASME B16.34 “Valves – Flanged and Butt Welding Ends”

ASME B1.20.1 “Pipe Threads, General Purpose (Inch)”

ASME B31.4 “Liquid Transportation Systems for Hydrocarbons and Other Liquids”

ASME BPVC, Sect. V “Non-Destructive Examination”

ASME BPVC, Sect. VIII “Rules for Construction of Pressure Vessels – Division 1”

ASME BPVC, Sect. IX “Welding and Brazing Qualifications”

Manufacturer’s Standardization Society (MSS)

MSS-SP-44 “Steel Pipe Line Flanges”

National Association of Corrosion Engineers (NACE)

NACE No. 1 “SSPC-SP 5, White Metal Blast Cleaning”

NACE No. 2 “SSPC-SP 10, Near White Metal Blast Cleaning”

NACE No. 3 “SSPC-SP 6, Commercial Blast Cleaning”

American Society for Testing and Materials

ASTM A-105 “Carbon Steel Forgings for Piping Applications”

ASTM A-106 “Seamless Carbon Steel Pipe for High Temperature Service”

ASTM E-164 “Standard Practice for Ultrasonic Contact Examination of Weldments”

ASTM E-165 “Standard Test Methods for Liquid Penetrant Examination”

ASTM A-193 “Alloy Steel and Stainless Steel Bolting Materials for High Temperature Service”

ASTM A-194 “Carbon Steel and Alloy Steel Nuts for Bolts for High Pressure and High Temperature Service”

ASTM A-234 “Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service”

ASTM E-709 “Standard Guide for Magnetic Particle Examination”

Codes and Standards (Cont'd)

American Welding Society (AWS)

- AWS A5.1** “Covered Carbon Steel Arc Welding Electrodes”
- AWS A5.2** “Iron and Steel Oxyfuel Gas Welding Rods”
- AWS A5.5** “Low Alloy Steel Covered Arc Welding Electrodes”
- AWS A5.17** “Carbon Steel Electrodes and Fluxes for Submerged Arc Welding”
- AWS A5.18** “Carbon Steel Filler Metals for Gas Shield Arc Welding”
- AWS A5.20** “Carbon Steel Electrodes for Flux Cored Arc Welding”
- AWS A5.28** “Low Alloy Steel Filler Metals for Gas Shield Arc Welding”
- AWS A5.29** “Low Alloy Steel Electrodes for Flux Cored Arc Welding”
- AWS QC7** “Standards for AWS Certified Welders”

National Electric Code (NEC) Latest Edition (2010)

- OSHA** – Occupational Safety Health Administration
- API RP 550** “Installation of Refinery and Control Systems”
- AISC** “Steel Construction Manual”
- NEMA** Requirements
- NFPA** Requirements, Bulletin 70 NEC
- ANSI/AWS D1.1** “Structural Welding Code”
- ANSI/AWS D1.4** “Structural Welding Code – Reinforcing Steel”

Uniform Building Code “1997 Edition”

Steel Structures Painting Council – SSPC

Process Specifications

Flow Rate	210 GPM
API Gravity	64.6 Degrees API
Operating Pressure	40 - 70 PSI
Design Pressure	150 ANSI
Normal Operating Temperature	40 – 120 DEG. F.
Maximum Operating Temperature	120 DEG. F.
Specific Gravity	4 cP
Discharge Piping	600# ANSI
Maximum Discharge Pressure	750 PSI

Equipment Listing

1. Strainer/Upstream Spool

A strainer will be installed on the inlet side of charge pump downstream of the inlet isolation valve. Strainer basket shall be .250 perforated stainless steel basket and be removable from the top. Strainer will have a differential pressure taps. Downstream of the strainer one 150# RFF x 150# FFF suction line spool. Spool shall house two (2) ½” 3000# TOL, process connection taps to be utilized for sample container discharge drain and inlet pressure indicator.

- A. **One (1) 4” Titan BS-85, 150# ANSI Flanged Inline Strainer, .250 perforated inner basket, and 3/4” Drain tap.**
- B. **3” 150# RFF x FFF inlet spool with two (2) ½” 3000# TOL, process connection taps.**
- C. **Midwest Instruments 0-30 PSID Differential Pressure Gauge.**
- D. **4” 150# RFF FP Ball Valve, S.S. ball and stem, CS body, lever handle.**
- F. **Pressure indicator 30-0-30 vacuum pressure indicator with isolation valve.**

2. Charge Pump and Motor

Charge pump and motor mound on separate skid base with flex coupler and OSHA guard. Pump to include Plan II seal flush system.

- A. **GRISWOLD UNIT M/3X2X13/DSTM/CS, CONSISTING OF A GRISWOLD 3X2X13 ANSI PROCESS PUMP -DUCTILE IRON CONSTRUCTION, FULL TRIM 316SS IMPELLER - FLEX-A-SEAL CARTRIDGE MECHANICAL SEAL WITH MULTI-SPRING STATIONARY, CARBON vs SILICON CARBIDE SEAL FACES, VITON O-RINGS, HAST-C SPRINGS, 316SS SLEEVE AND GLAND DRIVEN BY A 20HP, 1800RPM, 3PH, 230-460V, TEFC, C1D2 ELECTRIC MOTOR - 5 PIECE ELASTOMERIC COUPLINGS – METAL ANSI DESIGN GUARD – CHANNEL STEEL BASEPLATE**

Equipment Listing

3. Cut Probe

Cut probe installed in the vertical rising flow downstream of the charge pump and manual sampler spool.

- A. **One (1) Drexelbrook 3" Universal VI Cut Monitor System. Probe construction, S.S. with Perma-Seal isolation. System to include Universal VI electronics, digital display and 4-20 mA output.**
- B. **One (1) 2" 150# FFF x 3" 150# RFF manual sampler spool with two (2) ½" 3000# TOL process connections for manual sample port and process pressure indication.**

5. Air Eliminator

Air eliminator mounted on the horizontal pipe run at the highest point on the process piping. Air eliminator to include isolation ball valve and check valve and tubed via ½" S.S. tubing to common drain pan.

- A. **Armstrong 11-AV Air Eliminator.**
- B. **DFT ½" SCV Check Valve.**
- C. **¾" NPT FP 2000# CWP ball valve.**

4. Sampler Section

Sampler section will be installed in the vertical down flow and shall include the following:

- A. **3" 150# RFF Inline Sulzer Static mixer, C.S. elements and heavy duty metal identification tag.**
- B. **Automatic sampler, API beveled probe with 3-way solenoid valve and volume regulator.**
- C. **½" process pressure indicator with isolation valve.**

Equipment Listing

5. Sample Container

Sample container to have fifteen (15) gallon capacity tank with quick-open pressure closure. The container will be internally coated and shall contain a stainless steel spray bar assembly to obtain complete mixing, adjustable pressure relief valve, vacuum breaker assembly; float operated level indicator, and vortex breaker. The bottom outlet to the inlet of the circulating pump shall be 1-1/4" and contain full port isolation valve. The discharge piping shall contain inline static mixer and valves to circulate as well as to draw a sample. The excess product discharged shall be connected via 1/2" piping to the suction side of the Lact charge pump and shall include 1/2" check valve and full port isolation valve. The container piping shall be arranged to avoid trapping BS&W in low spots and dead spaces and will permit complete evacuation of the sample container and piping.

The pump will be a centrifugal type MP series 15 GPM @ 20 PSI, 3600 RPM, 1 H.P. single phase explosion proof motor. The electrical on the sample skid shall be explosion proof with a manual on/off switch with heaters sized to the load requirements of the motor.

6. Reject Valve

Three way divert valve with electric actuator shall be installed downstream of the sampler. A check valve and a reject line back pressure valve installed on the reject side of the three way valve, discharge piping to skid edge for 3" 150# RFF customer connection.

- A. **3" 150# Flotite 3-Way ball valve, T-port design with Valcon LADCWX 3-UP electric actuator with position feedback switches.**
- B. **3" 150# DFT check valve.**
- C. **Kimray 3" 150# RFF, 310 series self-contained back pressure valve.**
- D. **3" 150# RFF FP Ball Valve, S.S. ball and stem, CS body, lever handle.**

Equipment Listing

7. Coriolis Meter and Accessories

Meter will be installed in the vertical up flow position on the upstream side of the prover connections. Meter will incorporate a transmitter for remote mounting on the side of the panel enclosure.

- A. One (1) FMC 83F80AAASA9P1BBCM Promass Coriolis meter and integral transmitter.**
- B. One (1) ¾" process connection thermowell with cap and chain located upstream of meter.**
- C. One (1) Rosemount 3144 Temperature Indicating Transmitter w/0078 RTD w/thermowell**

8. Prover Manifold

A proving manifold shall be installed downstream of the meter to provide for meter calibration under normal operating conditions. The prover manifold shall consist of a mainline double block and bleed valve, two branch valves and prover connections. The drains from the prover connections will be tied into the common on skid drain pan. Common on skid drain pan shall have 2" NPT customer connection.

- A. One (1) Franklin D711, 3", 150# ANSI Flanged, Carbon Steel Double Block and Bleed Valve with Viton Seals, Firesafe in Design and Differential Thermal Relief.**
- B. Two (2) Branch Valves 3" 150# ANSI Flanged, Carbon Steel Ball Valves, WCB Body, SS Ball and Stem, Full Port.**
- C. Two (2) 3" Aluminum Cam-Locks with dust caps.**

9. Back Pressure Valve

Back pressure valve installed downstream of the proving manifold.

- E. Kimray 3" 150# RFF, 310 series self-contained back pressure valve.**

Equipment Listing

10. Check Valve/Downstream Spool

A check valve shall be installed downstream of the proving connections. A 3" 150# RFF spool piece with two (2) 1/2" 3000# TOL, One (1) 3/4" 3000# TOL (future PSV) process connections plugged.

- A. One (1) 3" 150/300# DFT check valve.
- B. One (1) 3" 150# ANSI Flanged, Carbon Steel Ball Valves, WCB Body, SS Ball and Stem, Full Port.
- C. Pressure indicator 30-0-150 vacuum pressure indicator with isolation valve.

11. Pressure Gauges and Valves

The ACT system will require seven (7) gauges. Gauge shall be 4" face, 1/2" bottom connection, stainless steel Bourdon tube, socket and tip. All gauges shall be mounted on 1/2" isolation ball valves.

Upstream of Charge Pump	30-0-30 PSI
Downstream of Charge Pump	0-200 PSI
Downstream of Inline Static Mixer	0-200 PSI
Upstream of Meter	0-200 PSI
Downstream of Meter	0-200 PSI
Downstream of BPR	30-0-150 PSI
Downstream of Shipping Pumps	0-1000 PSI

Equipment Listing

12. Shipping Pumps

Two gear pumps will be required to meet the flow requirements of 210 GPM, the maximum discharge pressure for either the Viking or Northern Gear Pumps is 750 PSI, if additional pressure is required C&J recommends vertical series centrifugal pumps (two required) or install a plunger or Triplex pump on a separate skid outside the main Lact skid.

The pumps shall share a common suction line and shall contain inlet 3" 150# RFF FP Ball Valves. The discharge shall contain 1" x 1" PSV valves; the discharge of the PSV will be connected back into the suction side of the shipping pump piping. Additionally the discharge line shall manifold with each pump discharge and contain two (2) 3" 600# RFF swing type check valves and two (2) 3" 600# RFF FP ball valves.

A. Viking model SG-41440-G00 spur gear pump in cast iron construction with a silicon carbide/Carbon mechanical seal, plain head (no internal relief valve), 3" SAE 4 Bolt Ports, and bushing, bracket, tolerance and additional modifications to accommodate high differential pressures with low viscosity crude oils. Pump is driven by a 50hp, 1,750 rpm, inverter duty Class 1, Div 2, Group D electric motor (230/460V/3ph/60Hz) with 20:1 turn down ratio. Pump and motor will be mounted on a painted steel baseplate with footed bracket, coupling and coupling guard included. Each assembly (two required to meet total flow rate requirement) is capable of providing a nominal flow rate of 120 GPM of crude oil at a differential pressure of 500 psig.

Equipment Listing

13. Controls

The Lact shall be controlled by a Fisher 800L ROC Control panel. The Fisher ROC shall be fabricated to include all wiring, modules, power supply and HMI; the unit shall be programmed by WPX personnel. The ROC panel shall contain the following:

FSROC-827/827 MPU w/LOI, Ethernet, RS232
93449 4 FSROC-EXP/EXP 6 Slot Expansion Backplane
ROC Enclosure - TBD 1 VPC ROC800 ENCL, CUSTOM, PRE-WIRED, 48x36 NEMA
4, 48x36x12 Powder Coat Steel, Terminal Blocks, Fusing, Grounding,
Color Coded Marshalling To ROC I/O, Wireway, Assy and Testing, LOI
Bulkhead & CAD, AC/DC PWR,
5-PORTETHERNET Switch
4X LAMPS
1x E-STOP
1X PUSHBUTTON
129025 1 BEIJER QTERM-A7/4303R TOUCHSCREEN
131653 1 BEIJER A7 SINGLE DSP MANAGER - ROC800
64090 1 FS8PS-2, 24 VDC Power Module
61566 1 FS8CM-2 (RS485)
91402 2 FS8MVS-1, MVS I/O
131517 1 FS8CM-5NA ROC800 NETWORK RADIO MODULE, 2.4GHz
61793 1 FS8DI-1, 8 Channel Discrete Input
61568 1 FS8DO-2, 5 Channel Discrete Relay Output
60682 1 FS8PI-1, 2 Channel Pulse Input
60677 2 FS8AI-1, 4 Channel Analog Input, 12 Bit
60681 2 FS8AO-1 4 Channel Analog Output, 16 Bit
109200 1 FS8KY-8, Liquids App User Program
60690 2 FS8KY-1, AGA 3 & 7 Six Meter Run Key
132644 1 PROD MGR TANK MGR FOR ROC800 (PMTM)

Note: This is identical material to include Fisher Modules, HMI and application user program keys as current Lacts in C&J facility.

The ROC 800L as well as the shipping pump VFD's, charge pump starter, 480 VAC distribution panel, 25 KVA transformer and HVAC unit shall be mounted in the MCC building.

Pipe and Structural Design

The piping, structural support steel and construction will be in complete adherence to all specifications, codes, and regulations required to meet the bid specifications.

Prior to the start of any construction, we will supply, if required, a complete set of Welding Procedure Specifications (WPS) and Procedure Qualifications Records (PQR) to be approved by customer. All welders used on the construction will be required to satisfactorily pass a performance qualification tests using an approved welding procedure and in accordance with specifications. All testing equipment will be calibrated and certified within thirty (30) days of the required test.

The skid base shall be rectangular designed and constructed to have sufficient rigidity for support both vertically and laterally, resulting in no noticeable vibration in any part of the installed unit under normal operating conditions. The design loads of the system will meet the requirements of Seismic Zone four (4) with a wind speed of one hundred (100) m.p.h. The Lact will be completely unitized and skid mounted. The unit will be designed to require setting on and engineered foundation during operation. All connections to the supply header assembly, outlet pipeline connections, drains, power supply instrument air, and control wiring, etc. shall be performed by others. The skid shall have pipe pull bars on each end for lifting.

All flanges and fittings will be per supplied specifications. Mill specifications or equivalent test reports may be supplied for all pipe and weld fittings.

All threadolets and weldolets will be 3000#. Short radius elbows, screwed fittings, or victaulic couplings will not be utilized as an integral part of the main piping.

All structural welding will conform to American Welding Society's "Structural Welding Code - Steel" AWS D1.1. All seams between or around beams, gusset plates, braces, splices, and fillers shall be completely seal welded. The welding shall be performed by gas meter arc weld (GMAW) and conform to ANSI B31.3 specifications with 100 percent (100%) of the weld being visually inspected and 100 percent (100%) of the pipe welds being inspected via X-Ray. All welds will be stamped with the welder's assigned number on the qualification sheets.

Pipe and Structural Design (continued)

Structural Steel – W8” 18.40# main runners (2), 8” 11.50# C-channel cross bracing, 2” x 2” x ¼” angle additional deck plate support. The skid shall be covered with ¼” deck plating. One (1) common sub floor drain shall be located in a skid corner. The common drain pan shall be covered with 1” serrated bar grating and the discharge shall be piped to the outer edge of the skid. Two (2) 2” MNPT will be supplied for customer connection.

Building

Exterior wall sheeting - 29 Gauge corrugated metal “R” panel, interior wall sheeting - 29 Gauge corrugated “U” panel, interior wall insulation, one (1) layer of 2” fiberglass with liner, R13 value, interior roof insulation one (1) layer of 2” fiberglass with liner, R19 value, wall and roof structure 4” 14 gauge Purlin channel and 2” square tubing and one (1) 18’ ridge cap. One (1) 6070 double-door and one (1) 3070 w/ single handle keyed alike (outer) mechanism and panic hardware (interior) shall be installed on a side wall as well as one (1) 30” x 20” sliding window w/screens, four (4) louvers providing natural air exchanges per API 500 requirements.

Note: See optional pricing for automatic exhaust fan, louvers, storm hood and LEL monitor. Advantage to this system is temperature control in that the building will stay warmer as the air exchanges are controlled as well as personnel safety in that the LEL is forced to be evacuated from the building.

Lact MCC Building

Exterior wall sheeting - 29 Gauge corrugated metal “R” panel, interior wall sheeting - 29 Gauge corrugated “U” panel, interior wall insulation - one (1) layer of 2” fiberglass with liner, R13 value, interior roof insulation - one (1) layer of 2” fiberglass with liner, R19 value, wall and roof structure – 4”, 14 gauge Purlin channel and 2” square tubing, one (1) 3070 door w/ single handle keyed (outer) mechanism and panic hardware (interior).

The building shall be matched to exiting roof height as well as the building gable pitch. The common wall between process side and electrical room shall incorporate solid sheeting (process side) between the insulation and the 29 gauge panel on the electrical side. Sheetting shall incorporate conduit couplings (process side) with conduit nipples extending to the process side.

Electrical

Material and equipment will be designed, fabricated and inspected in accordance with the latest revisions of the NEMA, ANSI, IEEE, and IEC standards and shall bear an approved label or equal. Installation and construction work will also be in accordance with established electrical construction practices and shall conform to the latest editions of the U.S. National Electrical Code (NEC) and all applicable local codes and standards in addition to the above standards. Electrical equipment will be considered "approved" as required throughout this specification when it is certified and labeled by an independent testing laboratory (UL, FM, CSA, etc.) as being suitable for the specified location and service.

Classification of Area

All electrical equipment and designs, as a minimum, will conform to the requirements of the NEC for the following:

CLASS 1, DIVISION 2, GROUPS C and D on skid.

Electrical Cable and Wire

These specifications cover selection and sizing of electrical cable and wire for low-voltage (600 volts maximum) power and circuits for electrical systems. The approved wiring methods shall be wiring through conduit. All neutrals and grounding conductors shall be identified by white and green color respectively along its entire length. No splicing will be allowed from the instrument point to the junction boxes. No splicing will be allowed from the junction boxes to the termination points.

Conduit

All Conduit shall be 3/4" diameter minimum size (individual instrument stub ups maybe 1/2" in diameter), rigid, hot-dipped galvanized. All seals shall be poured by others. Conduits shall be rigid galvanized and supported per NEC 2010 so as to prevent excessive vibration or deflection. Supports for individual conduits shall consist of unistrut clamps instead of one-hole conduit clamps. Supporting clamps shall be copper-free aluminum, hot-dipped galvanized or stainless steel. Conduit and conduit fittings will not be welded to any structure and will not be painted. Conduit will be spaced so that conduit fittings are accessible for pulling or splicing. The electrical supports will constitute a system for use of electrical conduit only. These supports will not be attached to any piping. Conduit supports of approved design shall be used in vertical runs of conduit as required by the NEC.

Electrical (continued)

All on skid devices shall be routed back to the ROC panel. All motors shall be routed to the VFDs or the charge pump starter. All lighting and heaters shall be routed to the power distribution panel. Process side building shall contain two (2) Class 1 Div. 2 lights w/150 watt bulbs, interior wall mounted light switch and Ruffneck 240 VAC, hazardous area radiant heater. The MCC building shall contain wet location lighting with interior mounted light switch.

External Protective Coating

After the systems piping and equipment have been assembled and hydro tested, the structural steel, piping and installed equipment will be sand blasted in accordance with Steel Structure Painting Council SSPC-SP6 specifications. All manufacture tags, valve stems, and moving parts shall be completely protected or removed so no damage is done by the blasting. The initial prime coat shall be Sherwin-Williams Universal Structural Steel primer applied to manufactures DFT requirements. The topcoat shall be Sherwin-Williams Industrial Enamel applied to manufactures DFT requirements, customer color preference (color TBD).

Testing, Inspection, and Drawings

Before assembly, an outside firm will X-Ray One Hundred percent (100%) of the welds. Weld specification shall be ANSI B31.3. A final X-ray inspection is available for review upon project completion.

All piped assemblies and sub-assemblies shall be pressure tested too at least one and one-half times the design pressure. System piping shall maintain pressure for at least eight (8) hour. The test shall be recorded and print out supplied by a certified electronic gauge.

Each coat of the applied paint -- primary and topcoat -- may be mil tested and recorded

Mechanical drawings will be supplied within ten (10) days after receipt of order. Drawings will be in Auto-Cad formatted two-dimensional in views. Drawings will be detailed drawings with plan and elevation views of both skid base and skid base with process piping. In addition a complete bill of materials with complete equipment model numbers is included on the drawings

Basye, Matt

From: White, Randy [Randy.White@wnr.com]
Sent: Monday, December 08, 2014 11:58 AM
To: Hixon, Melinda; Ping, Brad
Cc: Basye, Matt
Subject: RE: Chaco 4-1 CDP

You have my approval.

Randy P. White
Lease Representative

Western Refining
3303 N. 1st Street
Bloomfield, NM 87413
(505) 632-4030 or 634-4738 Office
(505) 793-5313 Cell
(505) 632-4034 Fax
Randy.White@wnr.com
www.wnr.com
Yahoo IM: rwhite0502

(Please note new address and addt'l office number)

From: Hixon, Melinda
Sent: Monday, December 08, 2014 11:53 AM
To: Hixon, Melinda; White, Randy; Ping, Brad
Cc: Basye, Matt
Subject: RE: Chaco 4-1 CDP
Importance: High

Will you please work with Matt and get him the document he needs, we are holding up the process for them getting approval to sell directly to the pipe



Mindy Hixon(Melinda)
Terminal Manager
Bloomfield New Mexico
505/634-4737 Office
505/320-2307 Cell phone

From: Hixon, Melinda
Sent: Tuesday, December 02, 2014 2:19 PM
To: White, Randy; Ping, Brad
Cc: 'Basye, Matt'
Subject: FW: Chaco 4-1 CDP

Brad and Matt will you please give Matt the authorization that he needs to proceed. Randy this is the same as we did for the LACT units in the field



Mindy Hixon(Melinda)
Terminal Manager
Bloomfield New Mexico
505/634-4737 Office
505/320-2307 Cell phone

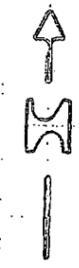
From: Basye, Matt [<mailto:Matt.Basye@wpxenergy.com>]
Sent: Tuesday, December 02, 2014 2:00 PM
To: Hixon, Melinda
Subject: Chaco 4-1 CDP

Mindy,
I am in the process of submitting the State paperwork (C-106) for LACT permission on the Chaco 4-1 CDP (Lease # Northeast Chaco CA, NMNM132829). There will be two LACT units that will deliver to your pipeline, and two truck load LACT units onsite in case the pipeline is down. Could I get an authorization from you and Randy to utilize this equipment so I can include that with my paperwork?

Thanks,
Matt Basye
Production Supervisor
Chaco Slope Team
Office-505-333-1802
Cell-505-486-1837
Fax-505-333-1805

WPXENERGY

grid is 5'

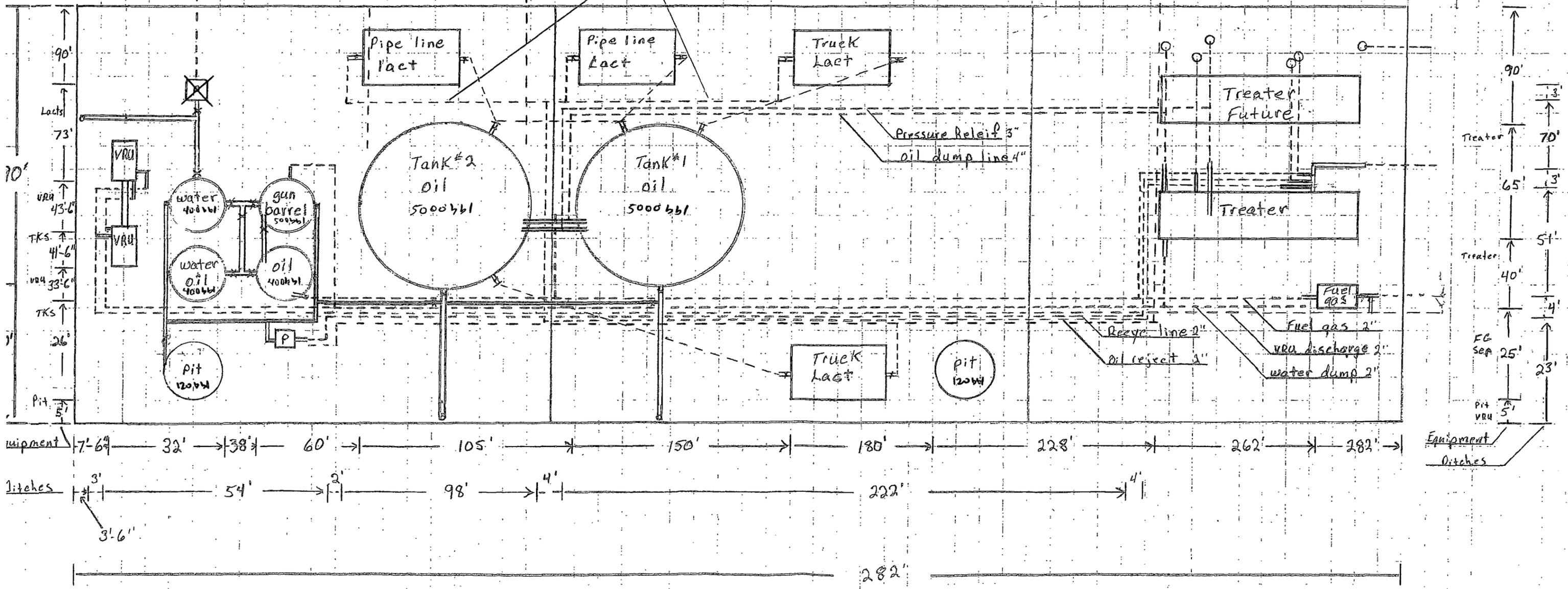


4-1 CDP phase

Contingency lines 4"

Pipe line Lact will pull through 6" lines from each tank
Truck Lact will pull through 4" lines from each tank.

LACT reject will be pumped through a 2" Common line with options to return to Treater or gunbarrell tank



Process Specifications

Flow Rate	245 GPM
API Gravity	38 - 42 Degrees API
Operating Pressure	40 - 50PSI
Design Pressure	150 ANSI
Normal Operating Temperature	40 – 120 DEG. F.
Maximum Operating Temperature	150 DEG. F.
Specific Gravity	2 - 4 cP
Discharge Piping	150# ANSI

Equipment Listing

1. Strainer/Upstream Spool

A strainer will be installed on the inlet side of charge pump downstream of the inlet isolation valve. Strainer basket shall be .250 perforated stainless steel basket and be removable from the top. Strainer will have a differential pressure taps. Downstream of the strainer one 150# RFF x 150# FFF suction line spool. Spool shall house two (2) ½” 3000# TOL, process connection taps to be utilized for sample container discharge drain and inlet pressure indicator.

- A. **One (1) 4” Titan BS-85, 150# ANSI Flanged Inline Strainer, .250 perforated inner basket, and 3/4” Drain tap.**
- B. **3” 150# RFF x FFF inlet spool with two (2) ½” 3000# TOL, process connection taps.**
- C. **Ashcroft 0-30 PSID Differential Pressure Gauge mount across strainer.**
- D. **4” 150# RFF FP Ball Valve, S.S. ball and stem, CS body, lever handle.**
- F. **Pressure indicator 30-0-30 vacuum pressure indicator with isolation valve.**

2. Charge Pump and Motor

Charge pump and motor mound on separate skid base with flex coupler and OSHA guard. Pump to include Plan II seal flush system.

- A. **GRISWOLD UNIT M/3X2X13/DSTM/CS, CONSISTING OF A GRISWOLD 3X2X13 ANSI PROCESS PUMP -DUCTILE IRON CONSTRUCTION, FULL TRIM 316SS IMPELLER - FLEX-A-SEAL CARTRIDGE MECHANICAL SEAL WITH MULTI-SPRING STATIONARY, CARBON vs SILICON CARBIDE SEAL FACES, VITON O-RINGS, HAST-C SPRINGS, 316SS SLEEVE AND GLAND DRIVEN BY A 20HP, 1800RPM, 3PH, 230-460V, TEFC, CID2 ELECTRIC MOTOR - 5 PIECE ELASTOMERIC COUPLINGS – METAL ANSI DESIGN GUARD – CHANNEL STEEL BASEPLATE**

Equipment Listing

3. Cut Probe

Cut probe installed in the vertical rising flow downstream of the charge pump and manual sampler spool.

- A. **One (1) Drexelbrook 3" Universal VI Cut Monitor System. Probe construction, S.S. with Perma-Seal isolation. System to include Universal VI electronics, digital display and 4-20 mA output.**
- B. **One (1) 2" 150# FFF x 3" 150# RFF manual sampler spool with two (2) ½" 3000# TOL process connections for manual sample port and process pressure indication.**

4. Air Eliminator

Air eliminator mounted on the horizontal pipe run at the highest point on the process piping. Air eliminator to include isolation ball valve and check valve and tubed via ½" S.S. tubing to common drain pan.

- A. **Armstrong 11-AV Air Eliminator.**
- B. **DFT ½" SCV Check Valve.**
- C. **¾" NPT FP 2000# CWP ball valve.**

5. Sampler Section

Sampler section will be installed in the vertical down flow and shall include the following:

- A. **3" 150# RFF Inline Sulzer Static mixer, C.S. elements and heavy duty metal identification tag.**
- B. **Automatic sampler, API beveled probe with 3-way solenoid valve and volume regulator.**
- C. **½" process pressure indicator with isolation valve.**

Equipment Listing

6. Sample Container

Sample container to have fifteen (15) gallon capacity tank with quick-open pressure closure. The container will be internally coated and shall contain a stainless steel spray bar assembly to obtain complete mixing, adjustable pressure relief valve, vacuum breaker assembly; float operated level indicator, and vortex breaker. The bottom outlet to the inlet of the circulating pump shall be 1-1/4" and contain full port isolation valve. The discharge piping shall contain inline static mixer and valves to circulate as well as to draw a sample. The excess product discharged shall be connected via 1/2" piping to the suction side of the Lact charge pump and shall include 1/2" check valve and full port isolation valve. The container piping shall be arranged to avoid trapping BS&W in low spots and dead spaces and will permit complete evacuation of the sample container and piping.

The pump will be a centrifugal type MP series 15 GPM @ 20 PSI, 3600 RPM, 1 H.P. single phase explosion proof motor. The electrical on the sample skid shall be explosion proof with a manual on/off switch with heaters sized to the load requirements of the motor.

7. Reject Valve

Three way divert valve with electric actuator shall be installed downstream of the sampler. A check valve and a reject line back pressure valve installed on the reject side of the three way valve, discharge piping to skid edge for 3" 150# RFF customer connection.

- A. **3" 150# Flotite 3-Way ball valve, T-port design with Valcon LADCWX200L3SN115AC electric actuator with position feedback switches.**
- B. **3" 150# DFT WLC series check valve.**
- C. **3" 150# RFF FP Ball Valve, S.S. ball and stem, CS body, lever handle.**

Equipment Listing

8. Coriolis Meter and Accessories

Meter will be installed in the vertical up flow position on the upstream side of the prover connections. Meter will incorporate a transmitter for remote-mounting on the side of the panel enclosure/pole mount. Prover pulse connection will be supplied and mounted on the ROC 800 panel.

- A. **One (1) Micro Motion 3" CMF300M355NQBAEZZZ Coriolis meter.**
- B. **One (1) Micro Motion 1700R12BAEZZZ Multi-Variable Transmitter**
- C. **One (1) ¾" process connection thermowell with cap and chain located upstream of meter.**
- D. **One (1) 0068 spring loaded RTD w/thermowell**
- E. **Amphenol 4 pin, military style prover connection plug in**

9. Prover Manifold

A proving manifold shall be installed downstream of the meter to provide for meter calibration under normal operating conditions. The prover manifold shall consist of a mainline double block and bleed valve, two branch valves and prover connections. The drains from the prover connections will be tied into the common on skid drain pan. Common on skid drain pan shall have 2" NPT customer connection.

- A. **One (1) Franklin D711, 3", 150# ANSI Flanged, Carbon Steel Double Block and Bleed Valve with Viton Seals, Firesafe in Design and Differential Thermal Relief.**
- B. **Two (2) Branch Valves 3" 150# ANSI Flanged, Carbon Steel Ball Valves, WCB Body, SS Ball and Stem, Full Port.**
- C. **Two (2) 3" Aluminum Cam-Locks with dust caps.**

Equipment Listing

10. Back Pressure Valve

Back pressure valve installed downstream of the proving manifold.

- A. Kimray 3" 150# RFF, 310 series self-contained back pressure valve.**

11. Check Valve/Downstream Spool

A check valve shall be installed downstream of the proving connections. A 3" 150# RFF spool piece with two (2) 1/2" 3000# TOL, One (1) 3/4" 3000# TOL (future PSV) process connections plugged.

- A. One (1) 3" 150/300# DFT WLC series check valve.**
B. One (1) 3" 150# ANSI Flanged, Carbon Steel Ball Valves, WCB Body, SS Ball and Stem, Full Port.
C. Pressure indicator 30-0-150 vacuum pressure indicator with isolation valve.

12. Pressure Gauges and Valves

The ACT system will require six (6) gauges. Gauge shall be 4" face, 1/2" bottom connection, stainless steel Bourdon tube, socket and tip. All gauges shall be mounted on 1/2" isolation ball valves.

Upstream of Charge Pump	30-0-30 PSI
Downstream of Charge Pump	0-200 PSI
Downstream of Inline Static Mixer	0-200 PSI
Upstream of Meter	0-200 PSI
Downstream of Meter	0-200 PSI
Downstream of BPR	30-0-150 PSI

P.O. Box 1963 • 2250 North First Street • Bloomfield, NM 87413
 Telephone (505) 632-2685 • Fax (505) 632-0038 • www.cjemc.com

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Electrical (continued)

All on skid devices shall be routed back to the ROC panel. All motors shall be routed to the VFDs or the charge pump starter. All lighting and heaters shall be routed to the power distribution panel. Process side building shall contain two (2) Class 1 Div. 2 lights w/150 watt bulbs, interior wall mounted light switch and Ruffneck 240 VAC, hazardous area radiant heater. The MCC building shall contain wet location lighting with interior mounted light switch.

Testing, Inspection, and Drawings

Before assembly, an outside firm will X-Ray 10 percent (10%) of the welds. Weld specification shall be ANSI B31.3. A final X-ray inspection is available for review upon project completion.

All piped assemblies and sub-assemblies shall be pressure tested too at least one and one-half times the design pressure. System piping shall maintain pressure for at least eight (8) hour. The test shall be recorded and print out supplied by a certified electronic gauge.

Each coat of the applied paint -- primary and topcoat -- may be mil tested and recorded

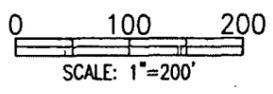
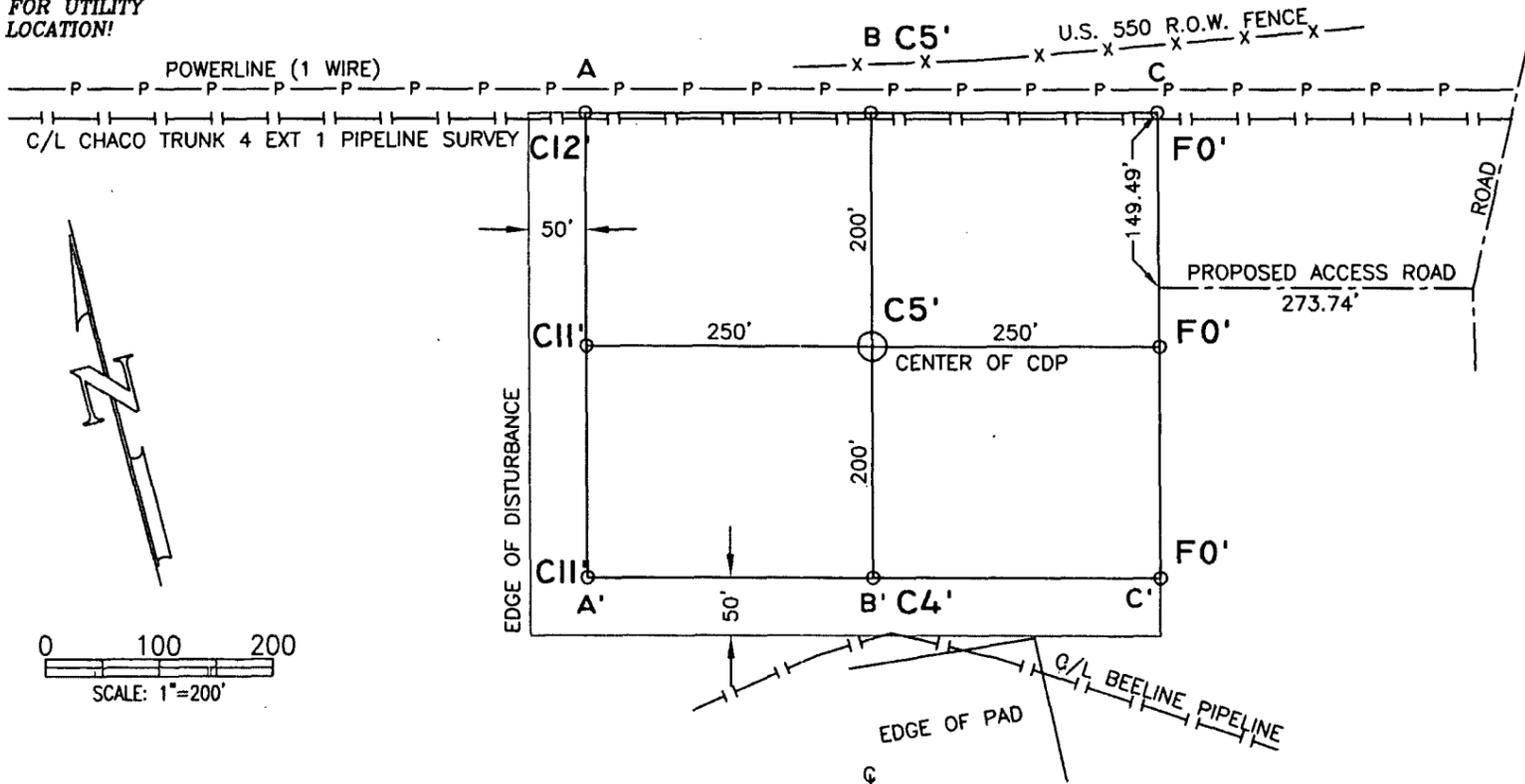
Mechanical drawings will be supplied within ten (10) days after receipt of order. Drawings will be in Auto-Cad formatted two-dimensional in views. Drawings will be detailed drawings with plan and elevation views of both skid base and skid base with process piping. In addition a complete bill of materials with complete equipment model numbers is included on the drawings

Preparation and Shipment

All parts are to be securely braced and protected from damage during shipment. All flanged openings shall be covered. All screwed openings, either piping or electrical, shall be plugged. All instrumentation, i.e., gauges, transmitters, and any other calibrated equipment may be removed and boxed. C&J Equipment will provide loading of equipment for shipment.

Customer will be responsible for trucking to site and unloading at site.

**BEFORE DIGGING
CALL FOR UTILITY
LINE LOCATION!**



A-A'

ELEVATION				
7000	.....	.....	.....	.....
6990	.....	.....	.....	.....
6980	.....	.....	.....	.....
6970	.....	.....	.....	.....
6960	.....	.....	.....	.....

B-B'

ELEVATION				
7000	.....	.....	.....	.....
6990	.....	.....	.....	.....
6980	.....	.....	.....	.....
6970	.....	.....	.....	.....
6960	.....	.....	.....	.....

C-C'

ELEVATION				
7000	.....	.....	.....	.....
6990	.....	.....	.....	.....
6980	.....	.....	.....	.....
6970	.....	.....	.....	.....
6960	.....	.....	.....	.....

CROSS SECTIONS
HORIZONTAL: 1"=200'
VERTICAL: 1"=50'

CHACO TRUNK 4-1 CDP
NW 1/4 & SW 1/4 SEC. 13,
T-23-N, R-7-W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO
PROPOSED ELEVATION: 6984.0



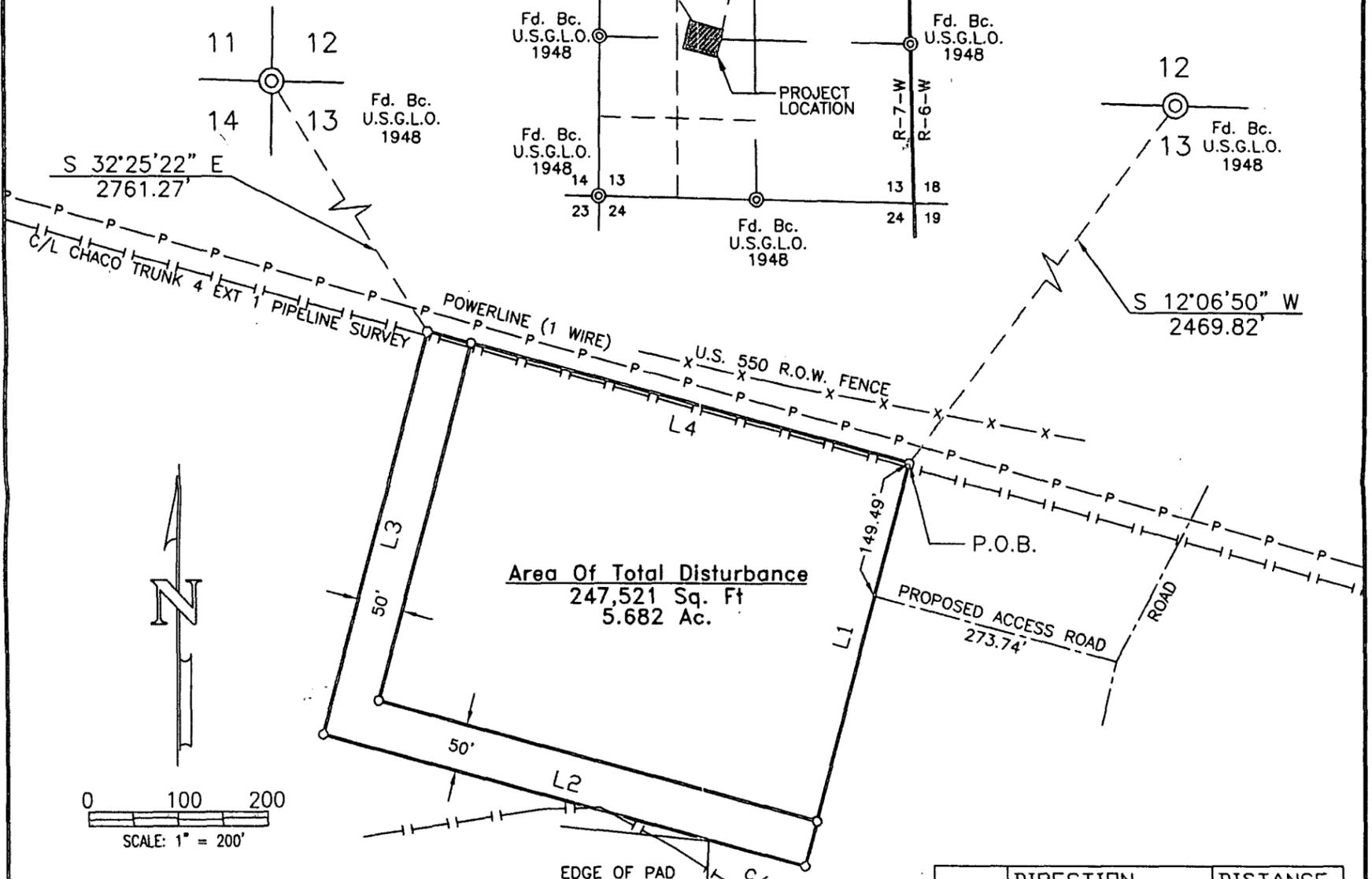
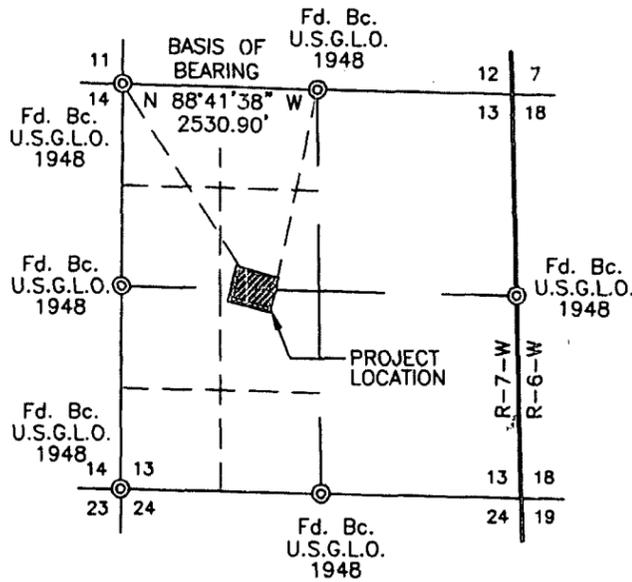
SURVEYED: 06/27/14	REV. DATE:	APP. BY: J.A.V.
DRAWN BY: V.C.	DATE DRAWN: 07/16/14	FILE NAME: 10688C01

WPX ENERGY PRODUCTION, LLC
Chaco Trunk 4-1 CDP
 NW 1/4 & S/W 1/4 SEC. 13, T-23-N, R-7-W, N.M.P.M.
 RIO ARRIBA COUNTY, NEW MEXICO

LEGEND:

- ⊙ - FOUND MONUMENT AS NOTED
- - EDGE OF CDP
- - - - EDGE OF DISTURBANCE
- - SITE CORNER
- - SET 5/8" REBAR WITH 2" ALUM CAP "NMPS 14831"
- |-|- PIPELINE
- - - - ROAD

VICINITY MAP
 SCALE: 1" = 3000'



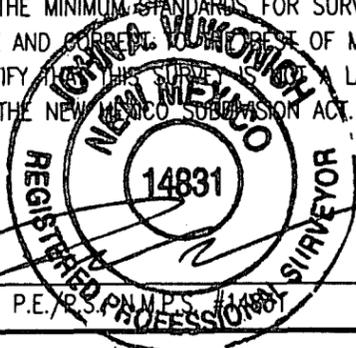
Area Of Total Disturbance
 247,521 Sq. Ft
 5.682 Ac.

	DIRECTION	DISTANCE
L1	S 14°55'35" W	450.01'
L2	N 75°04'39" W	550.00'
L3	N 14°55'35" E	450.06'
L4	S 75°04'20" E	550.00'

NOTES:

- BASIS OF BEARING: MONUMENTED NORTH LINE OF THE NW 1/4 OF SECTION 13, T-23-N, R-7-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: N 88°41'38" W - 2530.90'
- ALL BEARINGS & DISTANCES SHOWN ARE BASED UPON THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83.

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.



7-18-2014
 DATE

JOHN VUKONICH P.E., R.S., N.M.P.S. #14831

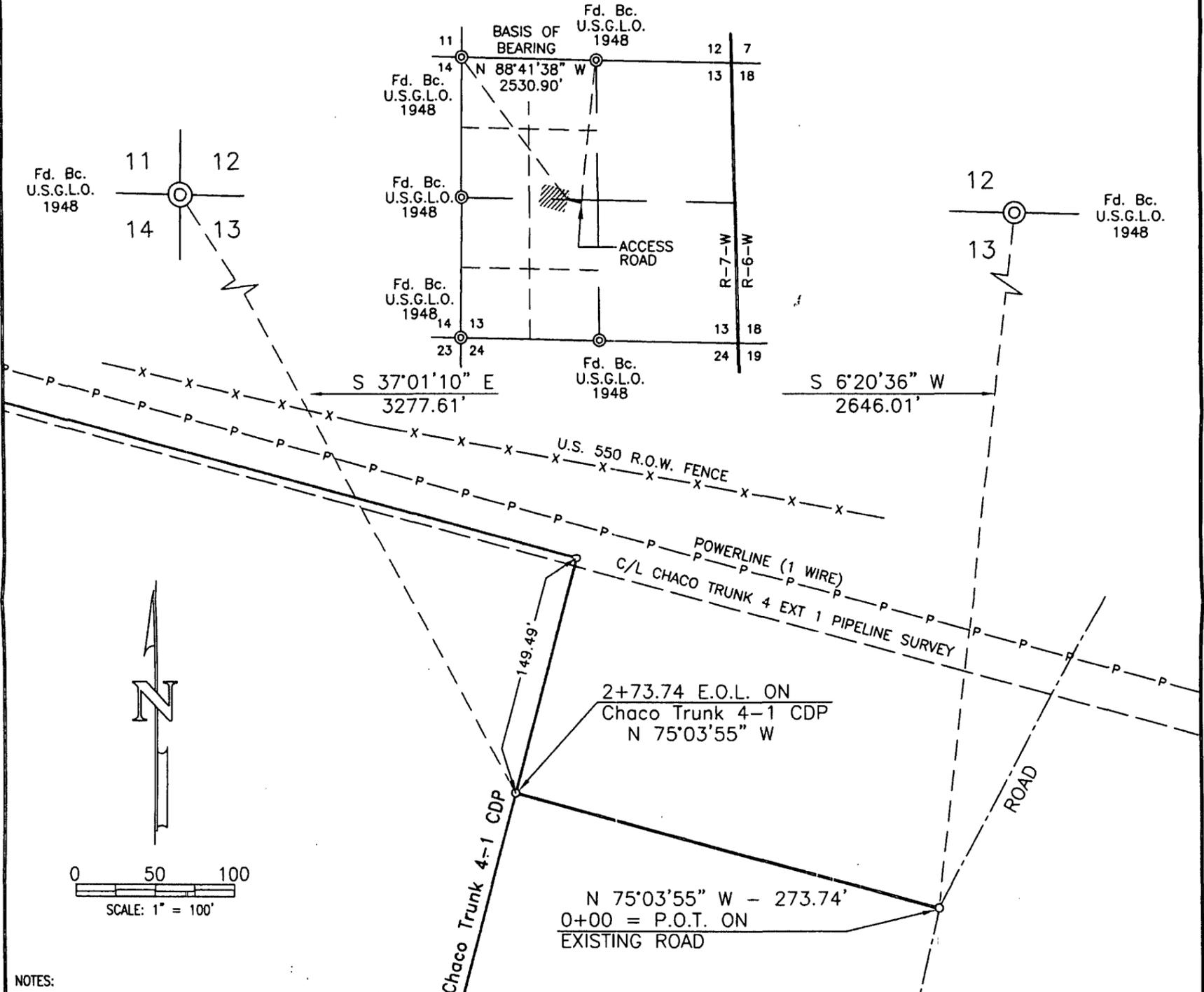
OWNER	SQUARE FEET	ACRES
BUREAU OF LAND MANAGEMENT	247,521	5.682

	 P.O. BOX 3851 FARMINGTON, NM 87499 OFFICE: (505) 334-0408
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SURVEYED: 06/27/14	REV. DATE:	APP. BY: J.A.V.
DRAWN BY: V.C.	DATE DRAWN: 07/16/14	FILE NAME: 10688CDP

WPX ENERGY PRODUCTION, LLC
Chaco Trunk 4-1 CDP Access Road
 NW 1/4 & S/W 1/4 SEC. 13, T-23-N, R-7-W, N.M.P.M.,
 RIO ARRIBA COUNTY, NEW MEXICO

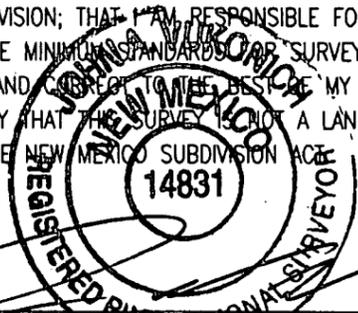
VICINITY MAP
 SCALE: 1" = 3000'



NOTES:

1. BASIS OF BEARING: MONUMENTED NORTH LINE OF THE NW 1/4 OF SECTION 13, T-23-N, R-7-W, N.M.P.M., RIO ARRIBA COUNTY, NEW MEXICO. BEARS: N 88°41'38" W - 2530.90'
2. ALL BEARINGS & DISTANCES SHOWN ARE BASED UPON THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83.

I, JOHN A. VUKONICH, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14831, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS OF SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.



JOHN VUKONICH P.E./P.S., N.M.S.#14831

7-18-2014
 DATE

OWNER	STATION	FEET/RODS/ACRES
BUREAU OF LAND MANAGEMENT	0+00 TO 2+73.74	273.74/16.590/0.188

 WPX ENERGY	 UNITED FIELD SERVICES INC. <small>P.O. BOX 3651 FARMINGTON, NM 87499 OFFICE: (505) 334-0408</small>	
SURVEYED: 06/27/14	REV. DATE:	APP. BY: J.A.V.
DRAWN BY: V.C.	DATE DRAWN: 07/16/14	FILE NAME: 10688A01

WPXENERGY.

NE CHACO CA #132829

Well Laterals

Projection: NAD 1983 StatePlane New Mexico West FIPS 3003 Feet

Date: 12/19/2014

User: mheil

T24 N R6 W

27 26 25 30 29 28 27 26

34 35 36 31 32 33 34 35

RIO ARRIBA



T23 N R7 W

T23 N R6 W

County

SANDOVAL

OIL CONS. DIV DIST. 3

DEC 19 2014

WPX Well Laterals

US Highway 550

Township

Section

BLM

Indian

Private

State

NE Chaco Unit

County

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