State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 5/8/2017
Well information;
Operator WPX, Well Name and Number Rosa Unit 884H

API# 30-039-31360, Section 10, Township 31 (N)/S, Range 4 E(W)

Conditions of Approval: (See the below checked and handwritten conditions)

- ~~A~~ Notify Aztec OCD 24hrs prior to casing & cement.
- ~~B~~ Hold C-104 for directional survey & "As Drilled" Plat
- ~~C~~ Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- o Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Chad Hollon — NMOCD Approved by Signature

6-23-2017 — Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3441 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

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OIL CONS. DIV DIST. 3

JUN 19 2017

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMSF078888

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.: ROSA UNIT / NMNM78407E

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone

8. Lease Name and Well No.: ROSA UNIT 884H

2. Name of Operator: WPX ENERGY LLC

9. API Well No.: 30-039-31360

3a. Address: 720 S Main Aztec NM 87410

3b. Phone No. *(include area code)*: (505)333-1822

10. Field and Pool, or Exploratory: BASIN MANCOS GAS POOL / MANCOS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface G 1543/N & 2191/E Sec 10, T. 31N, R4W SWNE

At proposed prod. zone A 924/N & 658/E Sec 12, T. 31N, R4W NENE

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*: 38 miles

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 658 feet

16. No. of acres in lease: 2560

17. Spacing Unit dedicated to this well: 15

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 278.8 feet

19. Proposed Depth: N/A / N/A

20. BLM/BIA Bond No. on file: FED: UTB000178

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

22. Approximate date work will start*: 06/21/2017

23. Estimated duration: 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Marie Jaramillo / Ph: (505)533-1808	05/08/2017

Title: Permitting Tech III

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Maclesten		6/16/17
Title: AFM	Office: FARMINGTON	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NMOCD

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011

Submit one copy to Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-039-31360	97232	BASIN MANCOS GAS POOL

4 Property Code	5 Property Name	6 Well Number
17033	ROSA UNIT	884H

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6950'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	10	31N	4W		1543	NORTH	2191	EAST	RIO ARRIBA

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	12	31N	4W	1	924	NORTH	658	EAST	RIO ARRIBA

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
960.04	N/2 - Section 10 N/2 - Section 11 N/2 - Section 12			R-13457-A

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date 5/15/17

Marie E. Jaramillo
Printed Name

marie.jaramillo@wpxenergy.com
E-mail Address

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: MARCH 8, 2017
Date of Survey: JUNE 30, 2016

Signature and Seal of Professional Surveyor

JASON C. EDWARDS NEW MEXICO 15269 REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION
1543' FNL 2191' FEL
SEC 10, T31N, R4W
LAT: 36.917091 'N
LONG: 107.240172 'W
DATUM: NAD1927

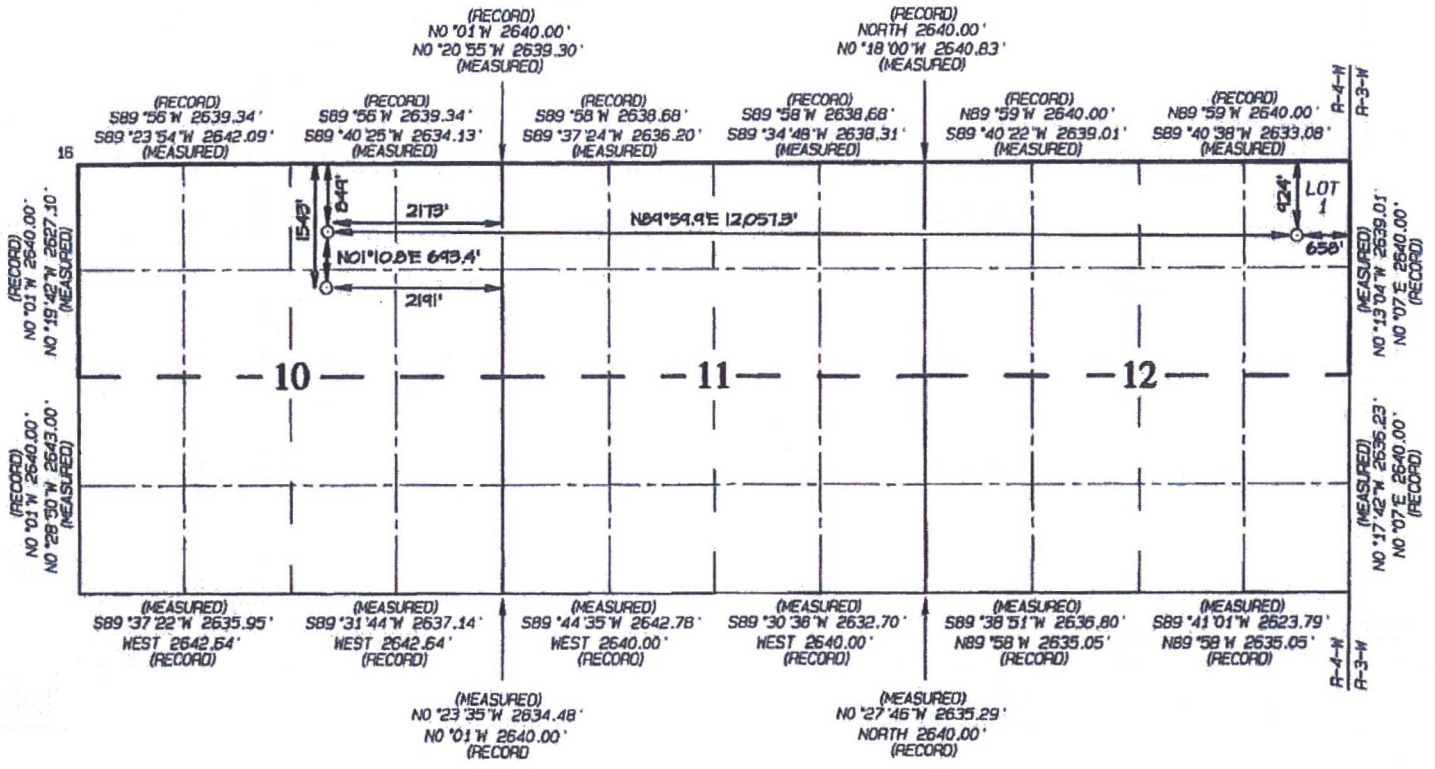
LAT: 36.917098 'N
LONG: 107.240770 'W
DATUM: NAD1983

POINT-OF-ENTRY
849' FNL 2173' FEL
SEC 10, T31N, R4W
LAT: 36.918995 'N
LONG: 107.240108 'W
DATUM: NAD1927

LAT: 36.919002 'N
LONG: 107.240706 'W
DATUM: NAD1983

END-OF-LATERAL
924' FNL 658' FEL
SEC 12, T31N, R4W
LAT: 36.918782 'N
LONG: 107.199864 'W
DATUM: NAD1927

LAT: 36.918789 'N
LONG: 107.199462 'W
DATUM: NAD1983



WPXENERGY

WPX Energy

Operations Plan

(Note: This procedure will be adjusted onsite based upon actual conditions)

Date:	**April 20, 2017**	**Field:**	**Basin Mancos**
Well Name:	**Rosa Unit #884H**	**Surface:**	**BLM**
SH Location:	**SWNE Sec 10 31N-04W**	**Elevation:**	**6950' GR**
BH Location:	**NENE Sec 12 31N-04W**	**Minerals:**	**FED**

Measured Depth: **20,249.94'**

I. **GEOLOGY:** SURFACE FORMATION - San Jose

A. FORMATION TOPS (GR)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	3,277.00	3,197.00	MENEFEE	6,294.00	6,178.00
KIRTLAND	3,454.00	3,368.00	POINT LOOKOUT	6,412.00	6,296.00
FRUITLAND	3,765.00	3,668.00	MANCOS	7,063.00	6,947.00
PICTURED CLIFFS	3,952.00	3,848.00	KICKOFF POINT	7,189.41	7,073.39
LEWIS	4,358.00	4,244.00	TOP TARGET	7,830.00	7,611.00
CHACRA	5,203.00	5,087.00	LANDING POINT	8,192.49	7,710.00
CLIFF HOUSE	6,250.00	6,134.00	BASE TARGET	8,192.49	7,710.00
			TD	20,249.94	7,650.00

B. MUD LOGGING PROGRAM: Mudlogger on location from surface csg to TD.

C. LOGGING PROGRAM: LWD GR from surface casing to TD.

D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. **MUD PROGRAM:** LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 ¾" Directional Vertical hole. A LSND (WBM) or (OBM) will be used to drill the curve and lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. **BOP TESTING:** While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The BOPE will be tested to **5000 psi (High) for 10 minutes**. Annular preventor will be tested to 50% of rated working pressure. Pressure test surface casing to **1500 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes.** Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. **All tests and inspections will be recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD)	CSG SIZE	WEIGHT	GRADE	CONN
SURFACE	12.25"	320.00'	9.625"	36 LBS	J-55, equiv or <	STC
INTERMEDIATE	8.75"	7089'	7"	23 LBS	J-55, equiv or <	LTC
PRODUCTION	6.125"	6939.41' - 20,249.94'	4.5"	11.6 LBS	P-110, equiv or <	LTC
TIE BACK	6.125"	Surf. - 6939.41'	4.5"	11.6 LBS	P-110, equiv or <	LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.

2. INTERMEDIATE CASING: 7" cement nose guide shoe with a self-fill insert float. Place float collar one joint above the shoe. Install (1) centralizer on each of the bottom (3) joints and one standard centralizer every (3) joints to 2,500 ft. Run (1) centralizer at 2,500 ft., 2,300ft., 2,000ft., 1,500 ft., and 1,000 ft. **A DV tool will be placed 100' above the top of the Chacra formation.**

3. PRODUCTION LINER: Run 4-1/2" Liner with cement nose guide Float Shoe + 2jts. of 4-1/2" casing + Landing Collar + 4-1/2" pup joint + 1 RSI (Sliding Sleeve). Centralizer program will be determined by Wellbore condition and when Lateral is evaluated by Geoscientists and Reservoir Engineers. Set seals on Liner Hanger. Test TOL to 1500 psi for 15 minutes.

C. CEMENTING:

(Note: Volumes may be adjusted onsite due to actual conditions)

1. Surface 5 bbl Fresh Water Spacer, 100 sx (160 cu.ft.) of 14.5 ppg Type I-II (Neat G) + 20% Fly Ash cement w/ 7.41 gal/sack mix water ratio @ 1.61 cu ft/sx yield. Calculated @ volume + 50% excess. WOC min. 12 hours. Total Volume: (160 cu-ft/100 sx/ Bbls).TOC at Surface.

2.Intermediate STAGE 1: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 81 bbls, 231 sks, (456 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 17 bbls, 75 sks, (98 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 279 bbl Drilling mud or water.
Total Cement: 99 bbls, 306 sks, (553 cuft)
STAGE 2: Spacer #1: 20 bbl (112 cuft) Chemwash. Lead Cement: 131 bbls, 377 sks, (734 cuft), 12.3 ppg @ 1.97 cuft/sk yield. Tail Cement: 17 bbls, 85 sks, (98 cuft), 13.5 ppg @ 1.3 cuft/sk yield. Displacement: Displace w/ +/- 168 bbl Drilling mud or water.
Total Cement: 148 bbls, 462 sks, (832 cuft)

3. PROD. LINER: Spacer #1:10 bbl (56.cu-ft) Water Spacer. Spacer #2: 40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III. Spacer #3: 10 bbl Water Spacer. Lead Cement: Extencem ™ System. Yield 1.36 cuft/sk 13.3 ppg (1197 sx /1627 cuft /290 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 274bbl Fr Water. Total Cement (1197 sx /1627bbls).

I.

COMPLETION

A. **CBL**

Run CCL for perforating

A. **PRESSURE TEST**

1. Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

B. **STIMULATION**

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs and flowback lateral.

C. **RUNNING TUBING**

1. *Production Tubing:* Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner.

- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC,will be entirely within the applicable setbacks . This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2)NMAC, and 19.15.16.15. B(4) NMAC.

NOTE:

Proposed Operations:

A 4-1/2" 11.6# P-110 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# J-55 Intermediate casing with a Liner Hanger and pack-off assembly then cemented to top of liner hanger.

After cementing and TOL clean up operations are complete, the TOL will be tested to 1500 psi (per BLM).

WPX Energy

T31N R4W Rosa Unit
Pad 47
Rosa Unit #884H

Wellbore #1
Plan #2 22Mar17 sam

Anticollision Summary Report

27 March, 2017

WPX

Anticollision Summary Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well Rosa Unit #884H (A2) - Slot A2
Project:	T31N R4W Rosa Unit	**TVD Reference:**	GL @ 6950.00usft (Original Well Elev)
Reference Site:	Pad 47	**MD Reference:**	GL @ 6950.00usft (Original Well Elev)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Rosa Unit #884H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	COMPASS
Reference Design:	Plan #2 22Mar17 sam	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2 22Mar17 sam		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 2,224.99 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	**Casing Method:**	Not applied

Survey Tool Program **Date** 3/27/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	20,249.88	Plan #2 22Mar17 sam (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Pad 47						
Rosa Unit #880H (A1) - Wellbore #1 - Plan #2 22Mar17 s	626.88	626.39	14.59	12.00	5.623	CC, ES
Rosa Unit #880H (A1) - Wellbore #1 - Plan #2 22Mar17 s	8,300.00	8,095.02	100.53	54.63	2.190	SF
Rosa Unit #881H (B3) - Wellbore #1 - Plan #1 31Jan17 s	500.00	500.00	17.70	15.68	8.749	CC, ES
Rosa Unit #881H (B3) - Wellbore #1 - Plan #1 31Jan17 s	600.00	599.55	20.49	18.02	8.311	SF
Rosa Unit #882H (B5) - Wellbore #1 - Plan #1 31Jan17 s	500.00	500.00	45.86	43.83	22.669	CC, ES
Rosa Unit #882H (B5) - Wellbore #1 - Plan #1 31Jan17 s	600.00	598.46	49.11	46.65	19.981	SF
Rosa Unit #883H (B7) - Wellbore #1 - Plan #1 31Jan17 s	500.00	500.00	75.96	73.94	37.552	CC, ES
Rosa Unit #883H (B7) - Wellbore #1 - Plan #1 31Jan17 s	9,700.00	7,650.00	2,089.27	2,013.90	27.717	SF
Rosa Unit #885H (A3) - Wellbore #1 - Plan #1 31Jan17 s	500.00	500.00	15.31	13.29	7.569	CC, ES
Rosa Unit #885H (A3) - Wellbore #1 - Plan #1 31Jan17 s	20,249.94	20,451.57	705.48	55.03	1.085	Level 2, SF
Rosa Unit #886H (A5) - Wellbore #1 - Plan #1 31Jan17 s	500.00	500.00	44.80	42.78	22.148	CC, ES
Rosa Unit #886H (A5) - Wellbore #1 - Plan #1 31Jan17 s	20,249.94	20,212.36	1,319.79	629.67	1.912	SF
Rosa Unit #887H (A7) - Wellbore #1 - Plan #1 31Jan17 s	500.00	500.00	75.04	73.01	37.094	CC, ES
Rosa Unit #887H (A7) - Wellbore #1 - Plan #1 31Jan17 s	20,249.94	20,573.86	1,995.62	1,309.88	2.910	SF
Section 11						
Rosa Unit #600 - Wellbore #1 - Wellbore #1	12,974.54	7,755.43	1,443.66	1,118.04	4.434	CC
Rosa Unit #600 - Wellbore #1 - Wellbore #1	13,000.00	7,755.30	1,443.66	1,117.67	4.426	ES
Rosa Unit #600 - Wellbore #1 - Wellbore #1	13,100.00	7,754.81	1,449.10	1,120.98	4.416	SF
Section 12						
Rosa Unit #86 - Wellbore #1 - Wellbore #1	16,442.49	7,723.94	229.28	-188.38	0.549	Level 1, CC, ES, SF

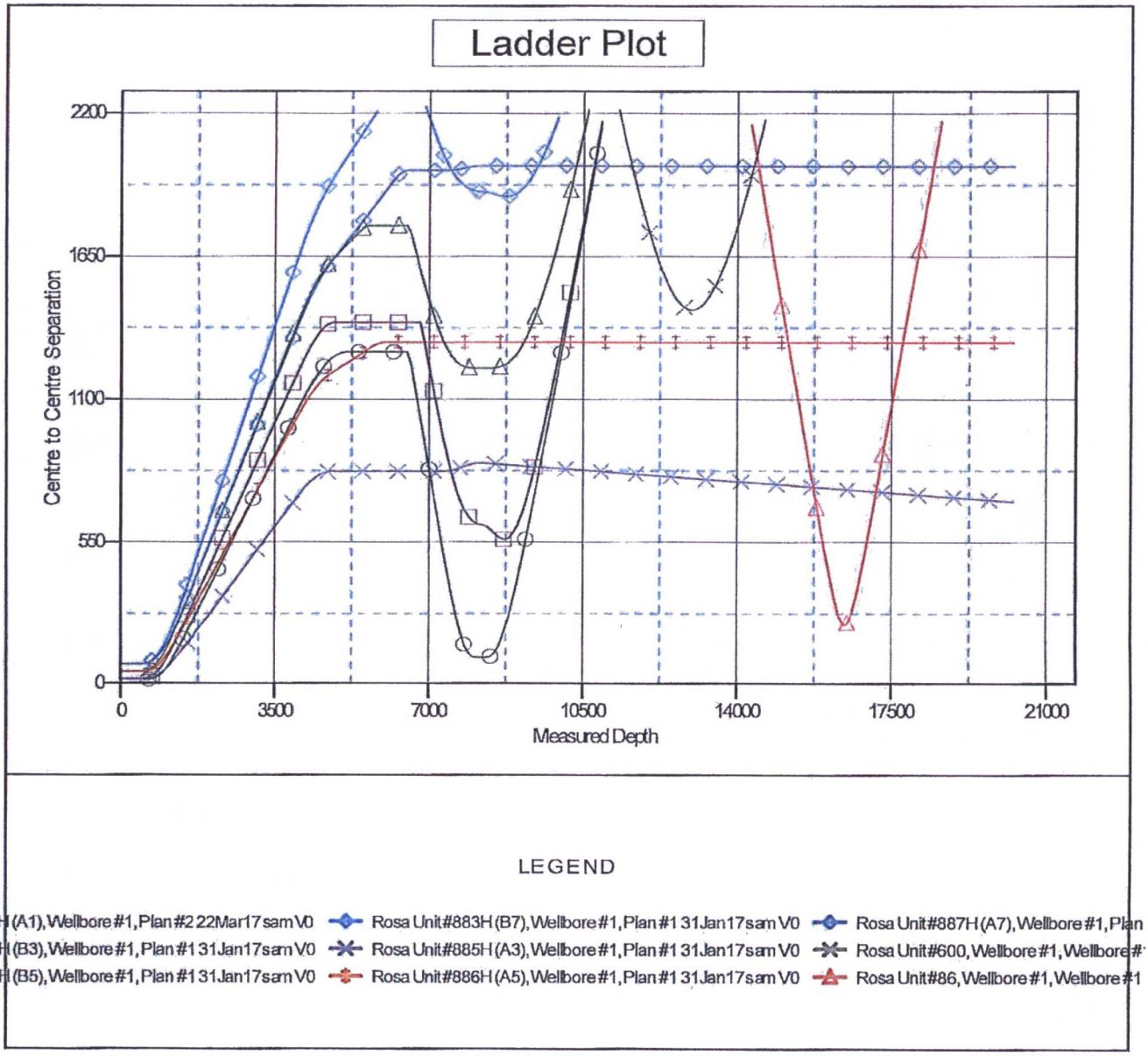
WPX

Anticollision Summary Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well Rosa Unit #884H (A2) - Slot A2
Project:	T31N R4W Rosa Unit	**TVD Reference:**	GL @ 6950.00usft (Original Well Elev)
Reference Site:	Pad 47	**MD Reference:**	GL @ 6950.00usft (Original Well Elev)
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Rosa Unit #884H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	COMPASS
Reference Design:	Plan #2 22Mar17 sam	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL @ 6950.00usft (Original Well Elev
Offset Depths are relative to Offset Datum
Central Meridian is -107.833334

Coordinates are relative to: Rosa Unit #884H (A2) - Slot A2
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.36°



WPX

Anticollision Summary Report

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well Rosa Unit #884H (A2) - Slot A2
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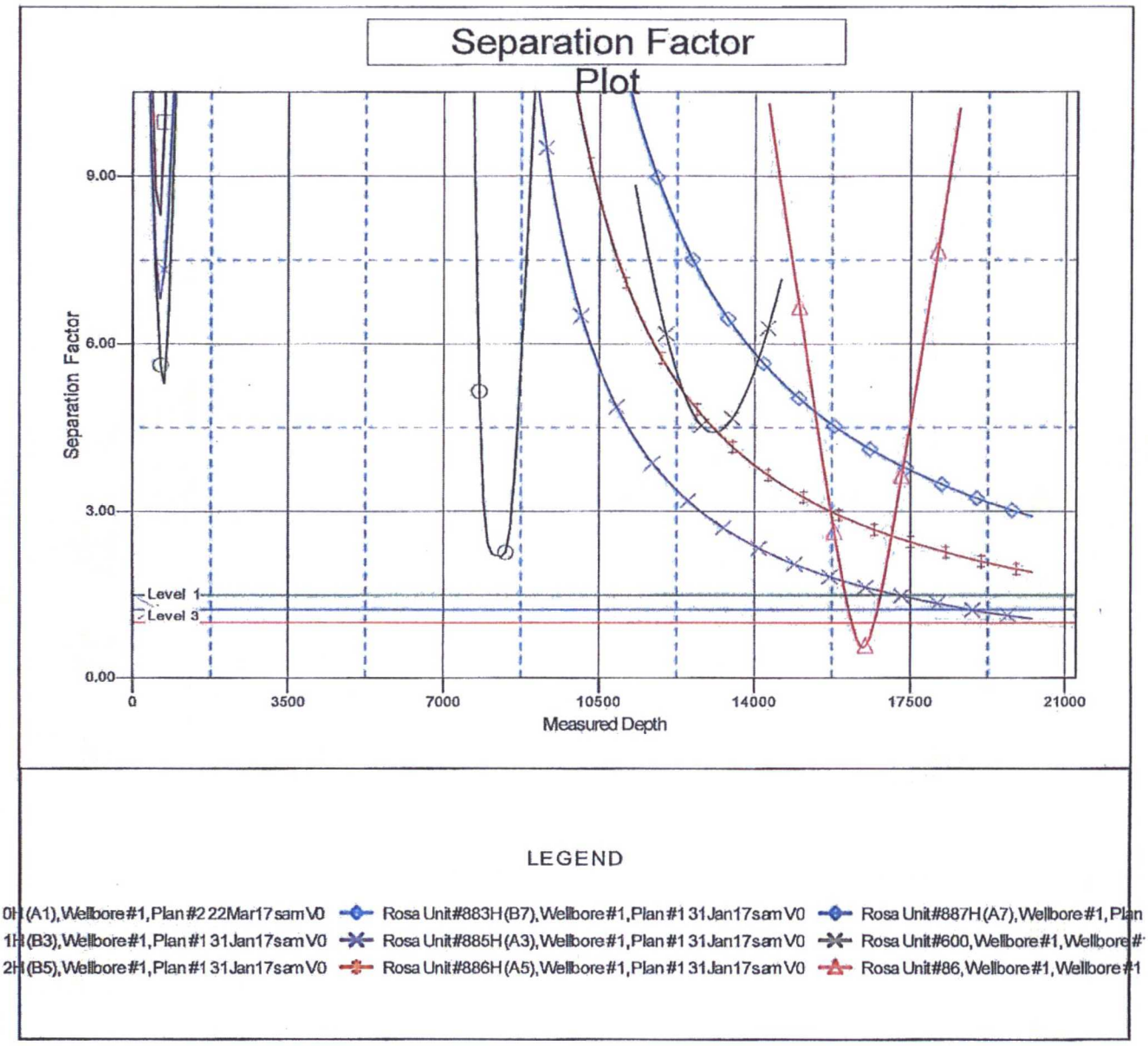
Reference Design:	Plan #2 22Mar17 sam	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL @ 6950.00usft (Original Well Elev
Offset Depths are relative to Offset Datum
Central Meridian is -107.833334

Coordinates are relative to: Rosa Unit #884H (A2) - Slot A2
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.36°



WPX Energy

T31N R4W Rosa Unit
Pad 47
Rosa Unit #884H - Slot A2

Wellbore #1

Plan: Plan #2 22Mar17 sam

Standard Planning Report

27 March, 2017

WPX
Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well Rosa Unit #884H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	GL @ 6950.00usft (Original Well Elev)
Project:	T31N R4W Rosa Unit	**MD Reference:**	GL @ 6950.00usft (Original Well Elev)
Site:	Pad 47	**North Reference:**	True
Well:	Rosa Unit #884H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22Mar17 sam		

Project	T31N R4W Rosa Unit		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	Pad 47				
Site Position:		**Northing:**	2,153,639.70 usft	**Latitude:**	36.917131
From:	Lat/Long	**Easting:**	673,397.00 usft	**Longitude:**	-107.240185
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.36 °

Well	Rosa Unit #884H - Slot A2					
Well Position	**+N/-S**	-14.56 usft	**Northing:**	2,153,625.16 usft	**Latitude:**	36.917091
	+E/-W	3.80 usft	**Easting:**	673,400.89 usft	**Longitude:**	-107.240172
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,950.00 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	1/4/2017	9.11	63.59	50,246

Design	Plan #2 22Mar17 sam			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (bearing)**
	0.00	0.00	0.00	87.07

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,263.32	15.27	318.31	1,254.32	75.49	-87.24	2.00	2.00	0.00	318.31	
4,041.03	15.27	318.31	3,934.01	621.62	-553.73	0.00	0.00	0.00	0.00	
4,804.35	0.00	0.00	4,688.33	697.11	-620.97	2.00	-2.00	0.00	180.00	#884H VP
7,189.41	0.00	0.00	7,073.39	697.11	-620.97	0.00	0.00	0.00	0.00	#884H KOP
8,192.49	90.28	90.36	7,710.00	693.14	18.72	9.00	9.00	9.01	90.36	#884H POE
20,249.94	90.29	90.36	7,650.00	618.25	12,075.79	0.00	0.00	0.00	2.84	#884H BHL

WPX

Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well Rosa Unit #884H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	GL @ 6950.00usft (Original Well Elev)
Project:	T31N R4W Rosa Unit	**MD Reference:**	GL @ 6950.00usft (Original Well Elev)
Site:	Pad 47	**North Reference:**	True
Well:	Rosa Unit #884H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22Mar17 sam		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	10.00	318.31	997.47	32.50	-28.95	-27.25	2.00	2.00	0.00
1,263.32	15.27	318.31	1,254.32	75.49	-67.24	-63.29	2.00	2.00	0.00
Hold 15.27 Inclination									
1,500.00	15.27	318.31	1,482.65	122.02	-108.69	-102.31	0.00	0.00	0.00
2,000.00	15.27	318.31	1,965.00	220.33	-196.26	-184.74	0.00	0.00	0.00
2,500.00	15.27	318.31	2,447.36	318.63	-283.83	-267.17	0.00	0.00	0.00
3,000.00	15.27	318.31	2,929.72	416.94	-371.40	-349.60	0.00	0.00	0.00
3,500.00	15.27	318.31	3,412.07	515.25	-458.97	-432.03	0.00	0.00	0.00
4,000.00	15.27	318.31	3,894.43	613.55	-546.54	-514.46	0.00	0.00	0.00
4,041.03	15.27	318.31	3,934.01	621.62	-553.73	-521.22	0.00	0.00	0.00
Start Drop -2.00									
4,500.00	6.09	318.31	4,384.55	685.05	-610.23	-574.40	2.00	-2.00	0.00
4,804.35	0.00	0.00	4,688.33	697.11	-620.97	-584.51	2.00	-2.00	0.00
Vertical									
5,000.00	0.00	0.00	4,883.98	697.11	-620.97	-584.51	0.00	0.00	0.00
5,500.00	0.00	0.00	5,383.98	697.11	-620.97	-584.51	0.00	0.00	0.00
6,000.00	0.00	0.00	5,883.98	697.11	-620.97	-584.51	0.00	0.00	0.00
6,500.00	0.00	0.00	6,383.98	697.11	-620.97	-584.51	0.00	0.00	0.00
7,000.00	0.00	0.00	6,883.98	697.11	-620.97	-584.51	0.00	0.00	0.00
7,089.00	0.00	0.00	6,972.98	697.11	-620.97	-584.51	0.00	0.00	0.00
7"									
7,189.41	0.00	0.00	7,073.39	697.11	-620.97	-584.51	0.00	0.00	0.00
KOP DLS 9.00 TFO 90.36									
7,500.00	27.95	90.36	7,371.81	696.65	-546.70	-510.36	9.00	9.00	0.00
8,000.00	72.95	90.36	7,682.04	694.31	-170.99	-135.26	9.00	9.00	0.00
8,192.49	90.28	90.36	7,710.00	693.14	18.72	54.14	9.00	9.00	0.00
POE at 90.28 Inclination									
8,500.00	90.28	90.36	7,708.51	691.23	326.22	361.14	0.00	0.00	0.00
9,000.00	90.28	90.36	7,706.08	688.13	826.20	860.31	0.00	0.00	0.00
9,500.00	90.28	90.36	7,703.64	685.02	1,326.19	1,359.48	0.00	0.00	0.00
10,000.00	90.28	90.36	7,701.20	681.92	1,826.17	1,858.65	0.00	0.00	0.00
10,500.00	90.28	90.36	7,698.76	678.82	2,326.16	2,357.82	0.00	0.00	0.00
11,000.00	90.28	90.36	7,696.31	675.71	2,826.14	2,856.99	0.00	0.00	0.00
11,500.00	90.28	90.36	7,693.85	672.61	3,326.13	3,356.17	0.00	0.00	0.00
12,000.00	90.28	90.36	7,691.39	669.51	3,826.11	3,855.34	0.00	0.00	0.00
12,500.00	90.28	90.36	7,688.92	666.40	4,326.09	4,354.51	0.00	0.00	0.00
13,000.00	90.28	90.36	7,686.45	663.30	4,826.08	4,853.68	0.00	0.00	0.00
13,500.00	90.28	90.36	7,683.97	660.19	5,326.06	5,352.85	0.00	0.00	0.00
14,000.00	90.28	90.36	7,681.49	657.09	5,826.05	5,852.02	0.00	0.00	0.00
14,500.00	90.29	90.36	7,679.00	653.98	6,326.03	6,351.20	0.00	0.00	0.00
15,000.00	90.29	90.36	7,676.50	650.88	6,826.02	6,850.37	0.00	0.00	0.00
15,500.00	90.29	90.36	7,674.01	647.77	7,326.00	7,349.54	0.00	0.00	0.00
16,000.00	90.29	90.36	7,671.50	644.67	7,825.98	7,848.71	0.00	0.00	0.00
16,500.00	90.29	90.36	7,668.99	641.56	8,325.97	8,347.88	0.00	0.00	0.00
17,000.00	90.29	90.36	7,666.48	638.45	8,825.95	8,847.05	0.00	0.00	0.00
17,500.00	90.29	90.36	7,663.96	635.35	9,325.94	9,346.22	0.00	0.00	0.00
18,000.00	90.29	90.36	7,661.43	632.24	9,825.92	9,845.39	0.00	0.00	0.00
18,500.00	90.29	90.36	7,658.90	629.13	10,325.90	10,344.57	0.00	0.00	0.00

WPX
Planning Report

Database:	COMPASS	**Local Co-ordinate Reference:**	Well Rosa Unit #884H (A2) - Slot A2
Company:	WPX Energy	**TVD Reference:**	GL @ 6950.00usft (Original Well Elev)
Project:	T31N R4W Rosa Unit	**MD Reference:**	GL @ 6950.00usft (Original Well Elev)
Site:	Pad 47	**North Reference:**	True
Well:	Rosa Unit #884H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22Mar17 sam		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,000.00	90.29	90.36	7,656.36	626.02	10,825.89	10,843.74	0.00	0.00	0.00
19,500.00	90.29	90.36	7,653.82	622.92	11,325.87	11,342.91	0.00	0.00	0.00
20,000.00	90.29	90.36	7,651.28	619.81	11,825.86	11,842.08	0.00	0.00	0.00
20,249.94	90.29	90.36	7,650.00	618.25	12,075.79	12,091.60	0.00	0.00	0.00
TD at 20249.94									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
#884H VP - plan hits target center - Point	0.00	0.00	4,688.33	697.11	-620.97	2,154,318.39	672,775.59	36.919006	-107.242296
#884H KOP - plan hits target center - Point	0.00	0.00	7,073.39	697.11	-620.97	2,154,318.39	672,775.59	36.919006	-107.242296
#884H BHL - plan hits target center - Point	0.00	0.00	7,650.00	618.25	12,075.79	2,154,318.50	685,472.60	36.918782	-107.198864
#884H POE - plan hits target center - Point	0.00	0.00	7,710.00	693.14	18.72	2,154,318.40	673,415.30	36.918995	-107.240108

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8"	9.625	12.250
7,089.00	6,972.98	7"	7.000	8.500

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
500.00	500.00	0.00	0.00	Start Build 2.00
1,263.32	1,254.32	75.49	-67.24	Hold 15.27 Inclination
4,041.03	3,934.01	621.62	-553.73	Start Drop -2.00
4,804.35	4,688.33	697.11	-620.97	Vertical
7,189.41	7,073.39	697.11	-620.97	KOP DLS 9.00 TFO 90.36
8,192.49	7,710.00	693.14	18.72	POE at 90.28 Inclination
20,249.94	7,650.00	618.25	12,075.79	TD at 20249.94

WPXENERGY

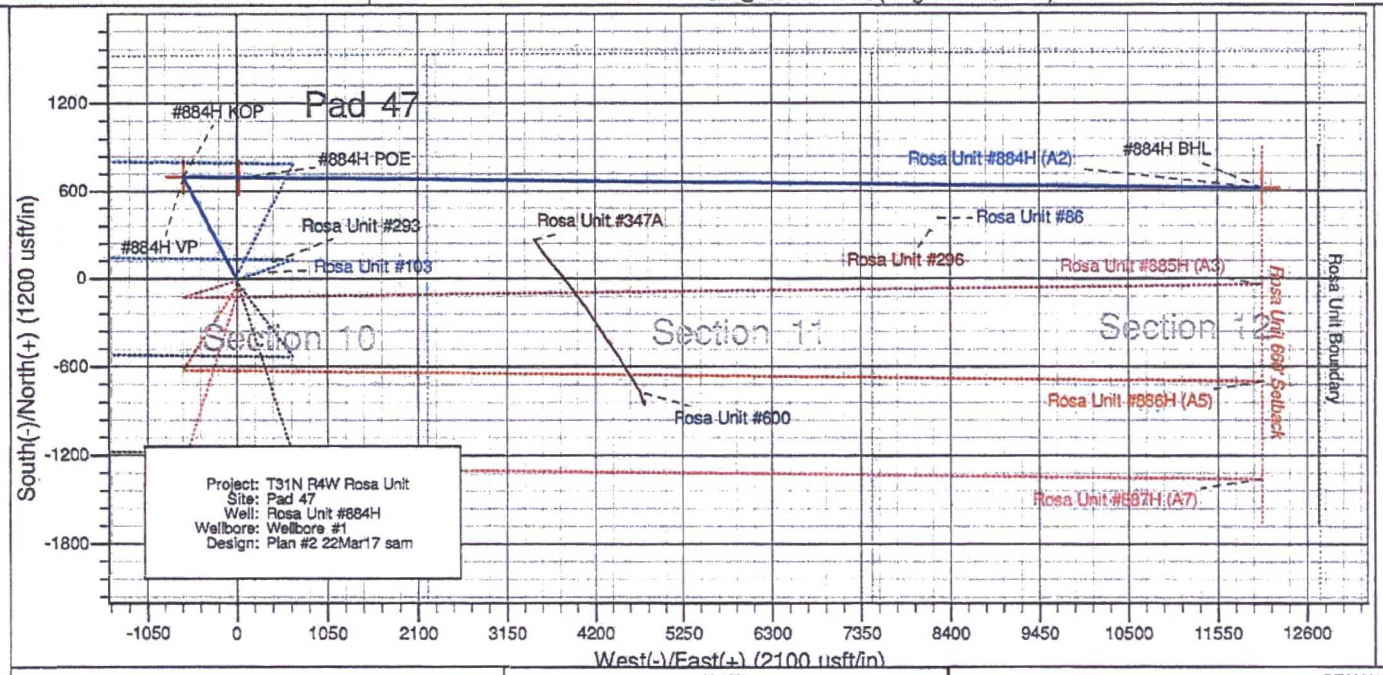
Well Name: Rosa Unit #884H
Surface Location: Pad 47
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6950.00

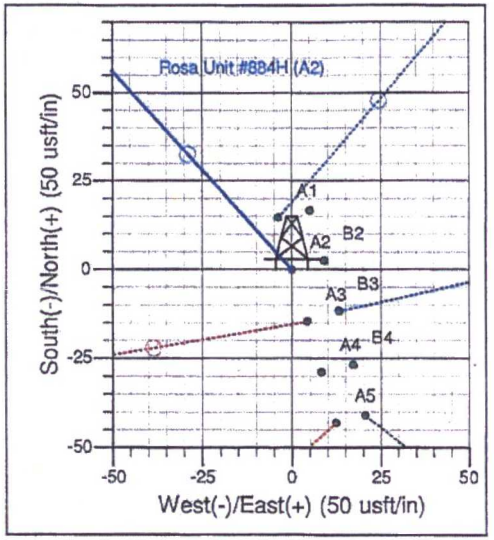
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2153625.16	673400.89	36.917091	-107.240172	A2

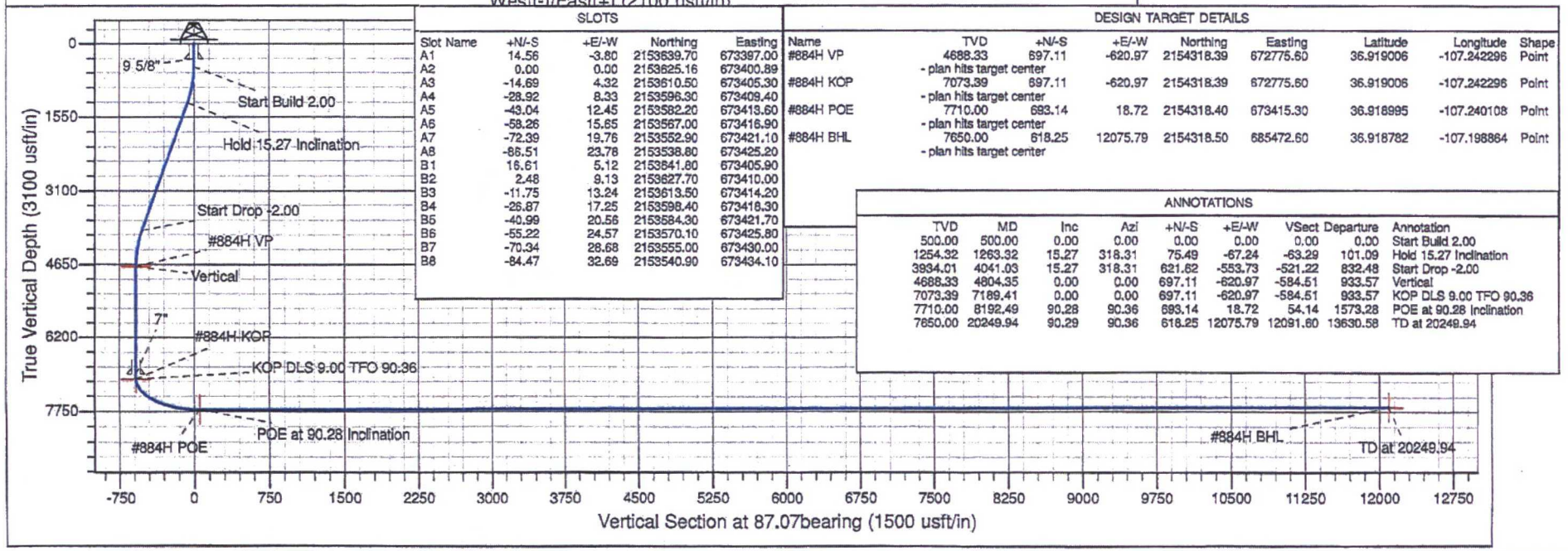
GL @ 6950.00usft (Original Well Elev)

Azimuths to True North
Magnetic North: 9.11°

Magnetic Field
Strength: 50246.2snT
Dip Angle: 63.59°
Date: 1/4/2017
Model: IGRF2015







SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A1	14.56	-3.80	2153639.70	673397.00
A2	0.00	0.00	2153625.16	673400.89
A3	-14.69	4.32	2153610.50	673405.30
A4	-28.92	8.33	2153596.30	673409.40
A5	-43.04	12.45	2153582.20	673413.60
A6	-58.26	15.65	2153567.00	673416.90
A7	-72.39	19.76	2153552.90	673421.10
A8	-86.51	23.78	2153538.80	673425.20
B1	16.61	5.12	2153641.80	673405.90
B2	2.48	9.13	2153627.70	673410.00
B3	-11.75	13.24	2153613.50	673414.20
B4	-26.87	17.25	2153598.40	673418.30
B5	-40.99	20.56	2153584.30	673421.70
B6	-55.22	24.57	2153570.10	673425.80
B7	-70.34	28.68	2153555.00	673430.00
B8	-84.47	32.69	2153540.90	673434.10

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
#884H VP	4688.33	697.11	-620.97	2154318.39	672775.60	36.919006	-107.242296	Point
	- plan hits target center							
#884H KOP	7073.39	697.11	-620.97	2154318.39	672775.60	36.919006	-107.242296	Point
	- plan hits target center							
#884H POE	7710.00	693.14	18.72	2154318.40	673415.30	36.918995	-107.240108	Point
	- plan hits target center							
#884H BHL	7650.00	618.25	12075.79	2154318.50	685472.60	36.918782	-107.198864	Point
	- plan hits target center							

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1254.32	1263.32	15.27	318.31	75.49	-67.24	-63.29	101.09	Hold 15.27 Inclination
3934.01	4041.03	15.27	318.31	621.62	-553.73	-521.22	832.48	Start Drop -2.00
4688.33	4804.35	0.00	0.00	697.11	-620.97	-584.51	933.57	Vertical
7073.39	7189.41	0.00	0.00	697.11	-620.97	-584.51	933.57	KOP DLS 9.00 TFO 90.36
7710.00	8192.49	90.28	90.36	693.14	18.72	54.14	1573.28	POE at 90.28 Inclination
7650.00	20249.94	90.29	90.36	618.25	12075.79	12091.60	13630.58	TD at 20249.94

similar soils, and 25 percent Rock outcrop. The parent material of Haplustalfs, mesic, dry, very stony soils is colluvium derived from sandstone and shale and/or residuum weathered from sandstone and shale. Haplustalfs, mesic, dry, very stony soils occur on 15-80 percent slopes, are well drained, and have a depth to restrictive lithic bedrock between 20 and 80 inches. The parent material of Haplustepts, mesic, dry, very stony soils is colluvium derived from sandstone and shale and/or residuum weathered from sandstone and shale. Haplustepts, mesic, dry, very stony soils occur on 15-80 percent slopes, are well drained, and have a depth to restrictive lithic bedrock between 20 and 80 inches. The parent material of Ustorthents, mesic, dry, very stony soils is colluvium derived from sandstone and shale and/or residuum weathered from sandstone and shale. Ustorthents, mesic, dry, very stony soils occur on 15-80 percent slopes, are well drained, and have a depth to restrictive lithic bedrock between 20 and 80 inches. Landforms associated with these soils are scarps, hillslopes, and rock outcrops (USDA/NRCS 2016).

7. METHODS FOR HANDLING WASTE

A. Cuttings

1 Drilling operations would utilize a closed-loop system. Drilling of the horizontal laterals would be accomplished with water-based mud. All cuttings would be placed in roll-off bins and hauled to a commercial disposal facility, land farm, or WPX permitted cutting disposal. WPX would follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit would be used.

2 If oil-based mud drilling is used, a closed-loop system will be used to minimize potential impacts to surface and groundwater quality. A 30-mil reinforced liner will be placed under the drill rig mats and all drilling machinery. This area will be enclosed by a containment berm and ditches, which will drain to sump areas for spill prevention and control. The containment berm will be ramped to allow access to the solids control area.

3 Closed-loop tanks would be adequately sized for containment of all fluids.

B. Drilling Fluids

1 Drilling fluids would be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids would be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids would be hauled to a commercial disposal facility.

C. Spills

1 Any spills of non-freshwater fluids would be immediately cleaned up and removed to an approved disposal site.

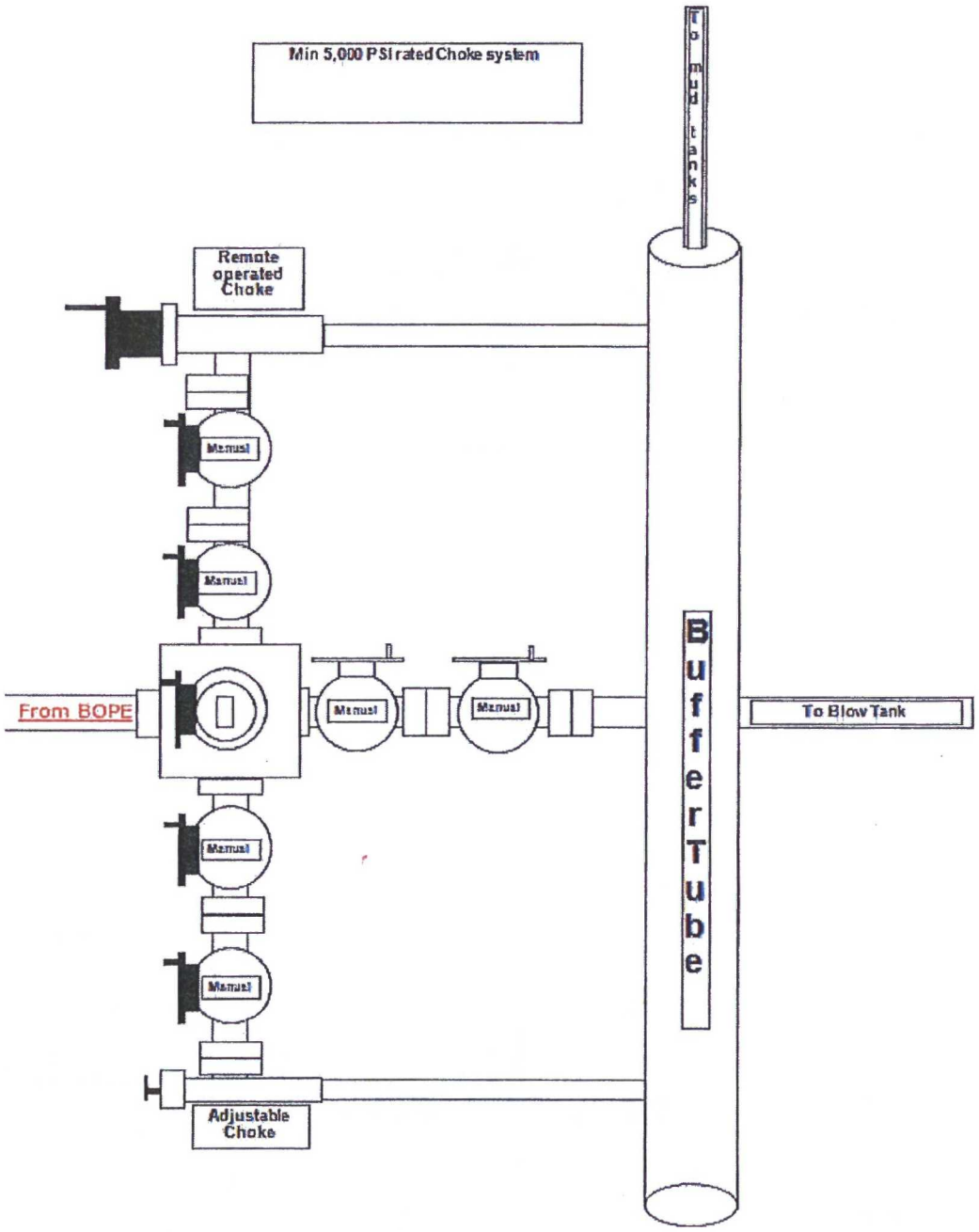
D. Sewage

1 Portable toilets would be provided and maintained as needed during construction, drilling and completion phases.

E. Garbage and other waste material

1 All garbage and trash would be placed in an enclosed metal trash containment. The trash and garbage would be hauled off site and dumped in an approved landfill, as needed.

F. Hazardous Waste


Min 5,000 PSI rated Choke system
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Buffer Tube
To Blow Tank
Manual
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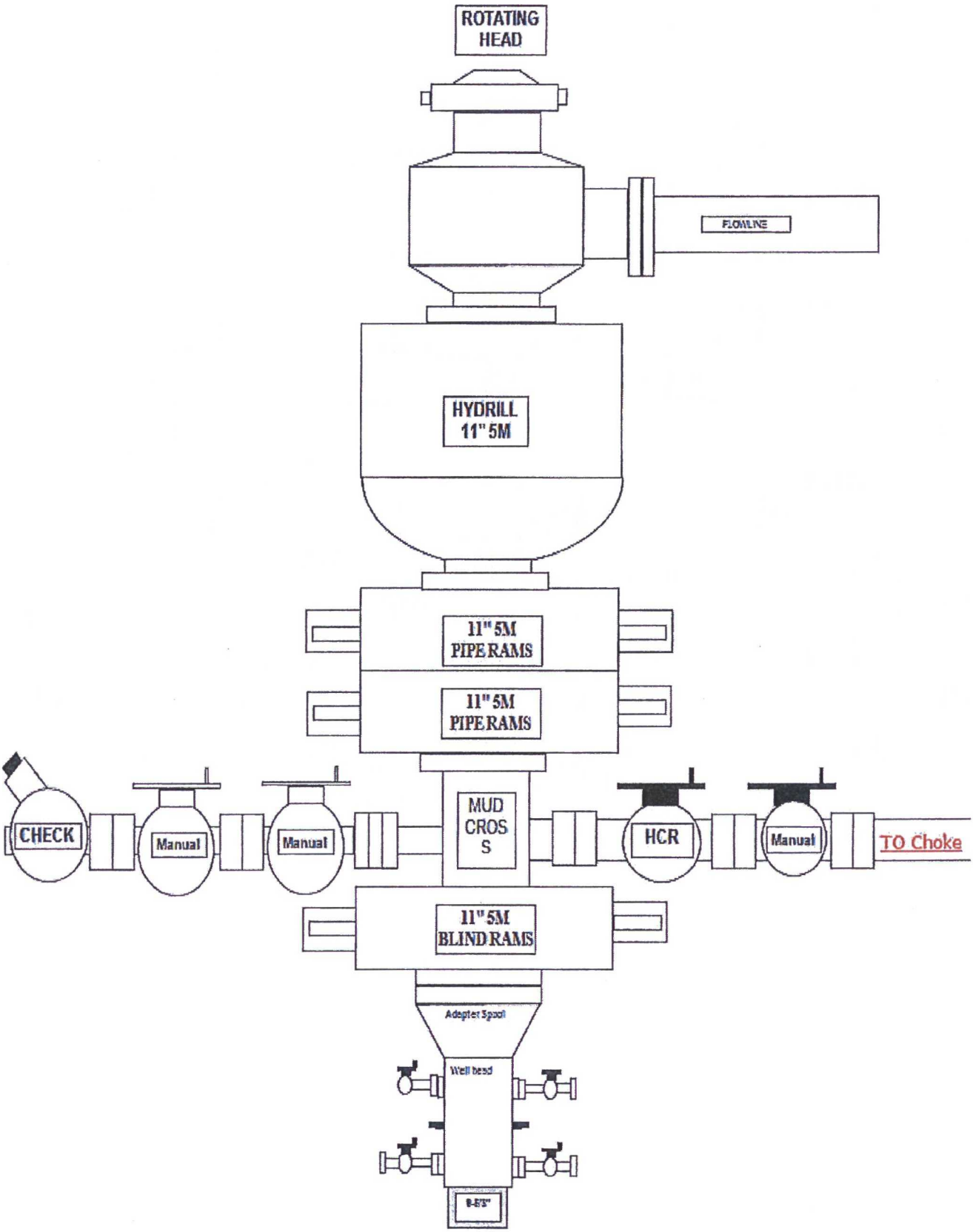
Adjustable Choke


ROTATING HEAD
FLOWLINE
HYDRILL 11" 5M
11" 5M PIPE RAMS
11" 5M PIPE RAMS
CHECK
Manual
Manual
MUD CROS S
HCR
Manual
TO Choke
11" 5M BLIND RAMS
Adapter Spool
Well head

Directions from the Intersection of US Hwy 550 & US Hwy 64

in Bloomfield, NM to WPX Energy Production, LLC Rosa Pad #47

1543' FNL & 2191' FEL, Section 10, T31N, R4W, N.M.P.M., Rio Arriba County, NM

Latitude: 36.917098°N Longitude: 107.240770°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Easterly on US Hwy 64 for 38.0 miles to Mile Marker 102.3 to State Hwy 527 (Simms Hwy);

Go Left (North-westerly) on State Hwy 527 (Simms Hwy) for 7.9 miles to Rosa Road @ La Jara Station;

Go Right (Northerly) on Rosa Road for 6.5 miles to fork in roadway;

Go Left (Northerly) which is straight remaining on Rosa Road for 2.4 miles to fork in roadway;

Go Right (Easterly) exiting Rosa Road for 0.2 miles to fork in roadway;

Go Left (North-easterly) for 1.0 mile to fork in roadway;

Go Right (North easterly) which is straight for 0.5 miles to fork in roadway;

Go Right (Easterly) for 2.5 miles onto Forest Road #309 to fork in roadway;

Go Right (Easterly) remaining on Forest Road #309 which is straight for 1.5 miles to fork in roadway;

Go Left (Easterly) remaining on Forest Road #309 which is straight for 1.4 miles to fork in roadway;

Go Right (Easterly) remaining on Forest Road #309 which is straight for 3.0 miles to fork in roadway;

Go Left (Easterly) exiting Forest Road #309 onto Forest Road #310 for 2.6 miles to fork in roadway;

Go Left (Northerly) on Forest Road #310 for 5.9 miles to fork in roadway;

Go Left (South-westerly) for 1.0 mile to existing WPX Rosa Unit #293 location, from which begin proposed access on west edge continues for 287.8' to staked WPX Rosa Pad #47 location.