

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

NOV 13 2015

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

WPX Energy Production, LLC

3a. Address

PO Box 640 Aztec, NM 87410

3b. Phone No. (include area code)

505-333-1816

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 2425' FNL & 231' FWL SEC 5 T23N 6W

BHL: 750' FNL & 334' FEL SEC 8 T23N 6W

5. Lease Serial No.

NMSF0078362

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.
NNMN 132829

8. Well Name and No.

NE Chaco Com 912H

9. API Well No.

30-039-31298

10. Field and Pool or Exploratory Area
Chaco Unit NE HZ

11. Country or Parish, State

Rio Arriba, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other REALIGN LATERAL
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

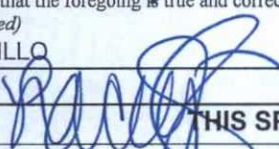
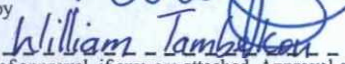
13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

WPX Energy request realign the lateral on the above mentioned well, per attached updated directional plan, ops and C102.

OIL CONS. DIV DIST. 3

NOV 19 2015

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

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) LACEY GRANILLO		Title Permit Tech III	
Signature 		Date 11/13/15	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved by 		Title Petroleum Engineer	Date 11/16/2015
Conditions of approval, if any, are attached. Approval of this notice 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.		Office FFD	

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.

(Instructions on page 2)

**ADHERE TO PREVIOUS NMOCD
CONDITIONS OF APPROVAL**

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

☐ AMENDED REPORT

REALIGN LATERAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-31298	² Pool Code 98088	³ Pool Name CHACO UNIT NE HZ (OIL)
⁴ Property Code 313800	⁵ Property Name NE CHACO COM	⁶ Well Number 912H
⁷ GRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC	⁹ Elevation 6882

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
E	5	23N	6W		2425	NORTH	231	WEST	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	280	East/West line	County
A	8	23N	6W		750	NORTH	334	EAST	RIO ARriba
¹² Dedicated Acres 960.56	Entire Section 5 N/2 - Section 8				¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13817A		

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

POINT-OF-ENTRY
1815' FNL 345' FNL
SECTION 5, T23N, R6W
LAT: 36.255678°N
LONG: 107.499718°W
DATUM: NAD1927

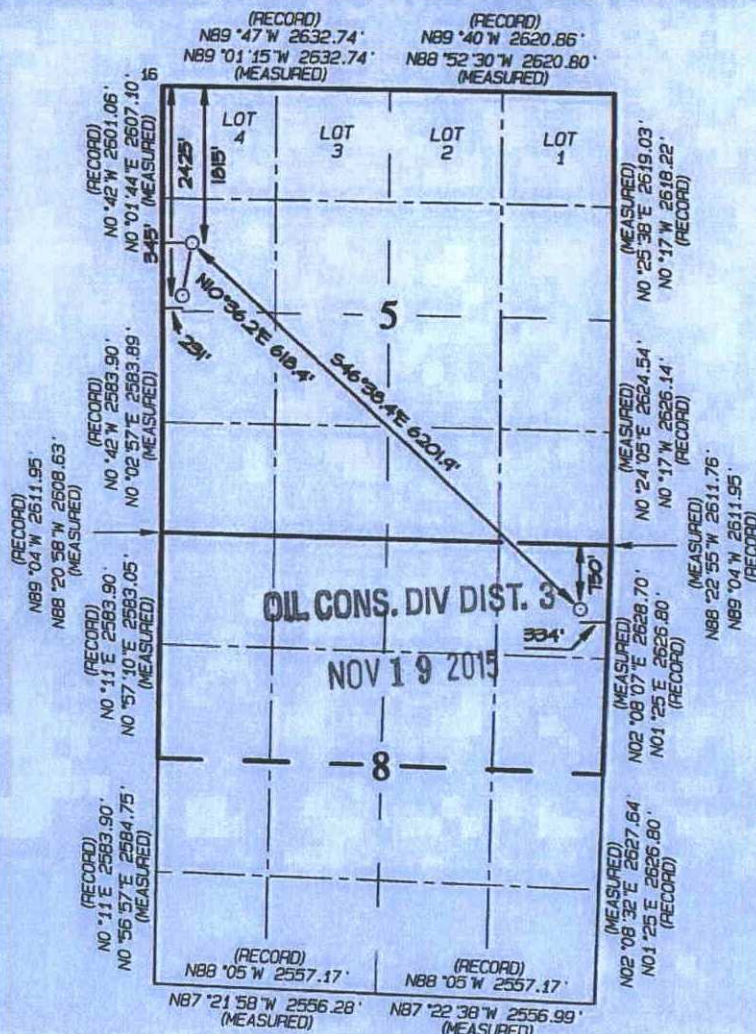
LAT: 36.255691°N
LONG: 107.500323°W
DATUM: NAD1983

SURFACE LOCATION
2425' FNL 231' FNL
SECTION 5, T23N, R6W
LAT: 36.254004°N
LONG: 107.500078°W
DATUM: NAD1927

LAT: 36.254017°N
LONG: 107.500683°W
DATUM: NAD1983

END-OF-LATERAL
750' FNL 334' FNL
SECTION 8, T23N, R6W
LAT: 36.244142°N
LONG: 107.484243°W
DATUM: NAD1927

LAT: 36.244155°N
LONG: 107.484848°W
DATUM: NAD1983



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
LACEY GRANILLO
Date
11/13/15
Printed Name
LACEY.GRANILLO@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: NOVEMBER 13, 2015
Survey Date: DECEMBER 17, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

NOV 19 2015

WPX Energy

T23N R6W

Chaco 2306-04E

NE Chaco Com #912H - Slot A2

Wellbore #1

Plan: Design #2 11Nov15 sam

Standard Planning Report

11 November, 2015

WPX
Planning Report

NOV 19 2015

Database:	COMPASS	Local Co-ordinate Reference:	Well NE Chaco Com #912H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 6907.00usft (Aztec 1000)
Project:	T23N R6W	MD Reference:	KB @ 6907.00usft (Aztec 1000)
Site:	Chaco 2306-04E	North Reference:	True
Well:	NE Chaco Com #912H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 11Nov15 sam		

Project		T23N R6W	
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		Chaco 2306-04E			
Site Position:		Northing:	1,911,745.11 usft	Latitude:	36.253610
From:	Lat/Long	Easting:	603,945.66 usft	Longitude:	-107.480790
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.21 °

Well	NE Chaco Com #912H - Slot A2					
Well Position	+N/-S	143.89 usft	Northing:	1,911,868.30 usft	Latitude:	36.254004
	+E/-W	-5,687.14 usft	Easting:	598,258.03 usft	Longitude:	-107.500079
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,882.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/30/2015	9.20	62.99	50,063

Design	Design #2 11Nov15 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	127.55

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	
711.00	0.00	0.00	711.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,597.83	17.74	337.09	1,583.73	125.43	-53.00	2.00	2.00	0.00	337.09	
4,774.94	17.74	337.09	4,609.82	1,016.97	-429.75	0.00	0.00	0.00	0.00	
5,623.20	60.00	132.63	5,336.73	863.90	-170.19	9.00	4.98	18.34	158.34	Start 60 tan 912H 11N
5,683.20	60.00	132.63	5,366.73	828.71	-131.96	0.00	0.00	0.00	0.00	End 60 tan 912H 11N
5,781.70	68.87	132.63	5,409.19	768.59	-66.64	9.00	9.00	0.00	0.03	
6,022.13	90.51	132.62	5,452.00	609.36	106.38	9.00	9.00	0.00	-0.03	POE 912H 11Nov15 s
12,223.52	90.51	132.62	5,397.00	-3,589.59	4,669.59	0.00	0.00	0.00	0.00	BHL 912H 11Nov15 s

WPX Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well NE Chaco Com #912H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 6907.00usft (Aztec 1000)
Project:	T23N R6W	MD Reference:	KB @ 6907.00usft (Aztec 1000)
Site:	Chaco 2306-04E	North Reference:	True
Well:	NE Chaco Com #912H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 11Nov15 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
331.00	0.00	0.00	331.00	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
711.00	0.00	0.00	711.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	5.78	337.09	999.51	13.42	-5.67	-12.67	2.00	2.00	0.00
1,500.00	15.78	337.09	1,490.06	99.45	-42.03	-93.93	2.00	2.00	0.00
1,597.83	17.74	337.09	1,583.73	125.43	-53.00	-118.47	2.00	2.00	0.00
Hold 17.74 Inclination									
2,000.00	17.74	337.09	1,966.79	238.29	-100.69	-225.06	0.00	0.00	0.00
2,500.00	17.74	337.09	2,443.02	378.59	-159.99	-357.58	0.00	0.00	0.00
3,000.00	17.74	337.09	2,919.26	518.90	-219.28	-490.09	0.00	0.00	0.00
3,500.00	17.74	337.09	3,395.49	659.21	-278.57	-622.61	0.00	0.00	0.00
4,000.00	17.74	337.09	3,871.72	799.51	-337.86	-755.13	0.00	0.00	0.00
4,500.00	17.74	337.09	4,347.96	939.82	-397.15	-887.65	0.00	0.00	0.00
4,774.94	17.74	337.09	4,609.82	1,016.97	-429.75	-960.51	0.00	0.00	0.00
Start Build DLS 9.00 TFO 158.34									
5,000.00	7.44	76.28	4,830.90	1,052.37	-428.93	-981.44	9.00	-4.58	44.07
5,500.00	49.02	130.73	5,265.31	930.58	-244.91	-761.32	9.00	8.32	10.89
5,623.20	60.00	132.63	5,336.73	863.90	-170.19	-661.44	9.00	8.91	1.54
Hold 60.00 Inclination									
5,683.20	60.00	132.63	5,366.73	828.71	-131.96	-609.68	0.00	0.00	0.00
Start Build DLS 9.00 TFO 0.03									
5,781.70	68.87	132.63	5,409.19	768.59	-66.64	-521.26	9.00	9.00	0.00
Start DLS 9.00 TFO -0.03									
6,000.00	88.52	132.62	5,451.79	624.34	90.09	-309.08	9.00	9.00	0.00
6,022.00	90.50	132.62	5,451.98	609.44	106.28	-287.17	9.00	9.00	0.00
7"									
6,022.13	90.51	132.62	5,452.00	609.36	106.38	-287.04	9.00	9.00	0.00
POE at 90.51 Inc 132.62 Deg									
6,500.00	90.51	132.62	5,447.76	285.80	458.01	188.94	0.00	0.00	0.00
7,000.00	90.51	132.62	5,443.33	-52.75	825.93	686.96	0.00	0.00	0.00
7,500.00	90.51	132.62	5,438.89	-391.30	1,193.85	1,184.99	0.00	0.00	0.00
8,000.00	90.51	132.62	5,434.46	-729.85	1,561.77	1,683.01	0.00	0.00	0.00
8,500.00	90.51	132.62	5,430.02	-1,068.40	1,929.68	2,181.04	0.00	0.00	0.00
9,000.00	90.51	132.62	5,425.59	-1,406.95	2,297.60	2,679.06	0.00	0.00	0.00
9,500.00	90.51	132.62	5,421.15	-1,745.50	2,665.52	3,177.09	0.00	0.00	0.00
10,000.00	90.51	132.62	5,416.72	-2,084.05	3,033.44	3,675.11	0.00	0.00	0.00
10,500.00	90.51	132.62	5,412.29	-2,422.60	3,401.36	4,173.14	0.00	0.00	0.00
11,000.00	90.51	132.62	5,407.85	-2,761.15	3,769.28	4,671.16	0.00	0.00	0.00
11,500.00	90.51	132.62	5,403.42	-3,099.70	4,137.20	5,169.19	0.00	0.00	0.00
12,000.00	90.51	132.62	5,398.98	-3,438.25	4,505.12	5,667.21	0.00	0.00	0.00
12,223.52	90.51	132.62	5,397.00	-3,589.59	4,669.59	5,889.84	0.00	0.00	0.00
TD at 12223.52									

WPX
Planning Report

Database:	COMPASS	Local Co-ordinate Reference:	Well NE Chaco Com #912H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 6907.00usft (Aztec 1000)
Project:	T23N R6W	MD Reference:	KB @ 6907.00usft (Aztec 1000)
Site:	Chaco 2306-04E	North Reference:	True
Well:	NE Chaco Com #912H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 11Nov15 sam		

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
Start 60 tan 912H 11Nov - plan hits target center - Point	0.00	0.00	5,336.73	863.90	-170.19	1,912,731.61	598,084.87	36.256377	-107.500656
End 60 tan 912H 11Nov - plan misses target center by 0.04usft at 5683.16usft MD (5366.71 TVD, 828.73 N, -131.98 E) - Point	0.00	0.00	5,366.73	828.72	-132.01	1,912,696.56	598,123.17	36.256280	-107.500526
BHL 912H 11Nov15 sam - plan hits target center - Point	0.00	0.00	5,397.00	-3,589.59	4,669.59	1,908,294.79	602,939.94	36.244142	-107.484243
POE 912H 11Nov15 sam - plan hits target center - Point	0.00	0.00	5,452.00	609.36	106.38	1,912,478.02	598,362.31	36.255678	-107.499718

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)
331.00	331.00	9 5/8"		9.625	12.250
6,022.00	5,451.98	7"		7.000	8.750

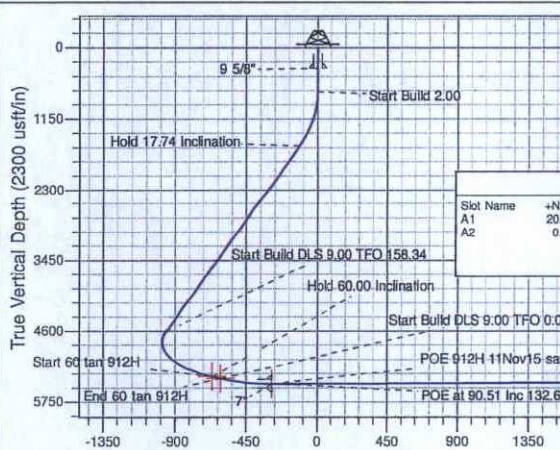
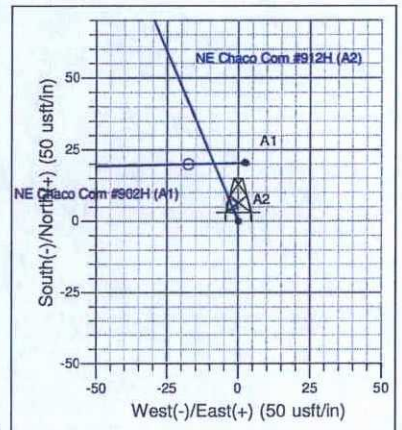
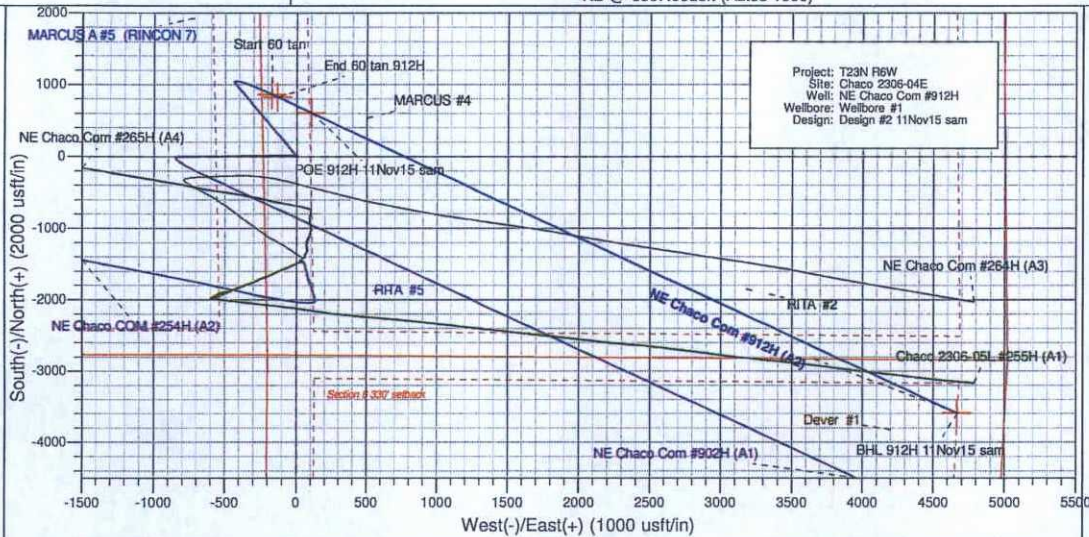
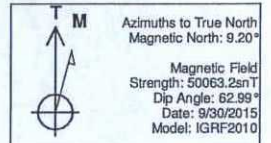
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
711.00	711.00	0.00	0.00	Start Build 2.00
1,597.83	1,583.73	125.43	-53.00	Hold 17.74 Inclination
4,774.94	4,609.82	1,016.97	-429.75	Start Build DLS 9.00 TFO 158.34
5,623.20	5,336.73	863.90	-170.19	Hold 60.00 Inclination
5,683.20	5,366.73	828.71	-131.96	Start Build DLS 9.00 TFO 0.03
5,781.70	5,409.19	768.59	-66.64	Start DLS 9.00 TFO -0.03
6,022.13	5,452.00	609.36	106.38	POE at 90.51 Inc 132.62 Deg
12,223.52	5,397.00	-3,589.59	4,669.59	TD at 12223.52

OIL CONS. DIV DIST. 3

NOV 19 2015



Well Name: NE Chaco Com #912H
 Surface Location: Chaco 2306-04E
 NAD 1927 (NADCON CONUS), US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 6882.00
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.00 0.00 1911868.30 598258.03 36.254004 -107.500078 A2
 KB @ 6907.00usft (Aztec 1000)



DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
Start 60 tan 912H 11Nov15 sam	5336.73	863.90	-170.19	1912731.61	598084.87	36.256377	-107.500656	Point	
End 60 tan 912H 11Nov15 sam	5366.73	826.72	-132.01	1912696.56	598123.17	36.256280	-107.500526	Point	- plan hits target center
POE 912H 11Nov15 sam	5452.00	609.36	106.38	1912478.02	598362.31	36.255676	-107.499718	Point	- plan misses target center by 0.04usft at 5693.16usft MD (5366.71 TVD, 826.73 N, -131.98 E)
BHL 912H 11Nov15 sam	5397.00	-3589.59	4669.59	1908294.79	602939.94	36.244142	-107.484243	Point	- plan hits target center

SLOTS									
Slot Name	+N/-S	+E/-W	Northing	Easting					
A1	20.49	2.50	1911868.80	598280.46					
A2	0.00	0.00	1911868.30	598258.03					

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
711.00	711.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
1583.73	1597.83	17.74	337.09	125.43	-53.00	-116.47	136.17	Hold 17.74 Inclination	
4609.82	4774.94	17.74	337.09	1016.97	-429.75	-960.51	1104.05	Start Build DLS 9.00 TFO 158.34	
5336.73	5623.20	60.00	132.63	863.90	-170.19	-661.44	1468.09	Hold 60.00 Inclination	
5366.73	5683.20	60.00	132.63	826.71	-131.98	-608.68	1520.06	Start Build DLS 9.00 TFO 0.03	
5409.19	5781.70	66.87	132.63	788.59	-68.64	-521.25	1608.82	Start DLS 9.00 TFO -0.03	
5452.00	6022.13	90.51	132.62	609.36	106.38	-287.04	1843.97	POE at 90.51 Inc 132.62 Deg	
5397.00	12223.52	90.51	132.62	-3589.59	4669.59	5889.84	8045.11	TD at 12223.52	

Vertical Section at 127.55bearing (900 usft/in)



WPX Energy

Operations Plan

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

<u>Date:</u>	November 13, 2015	<u>Field:</u>	Chaco Unit NE HZ (OIL)
<u>Well Name:</u>	NE Chaco COM 912H	<u>Surface:</u>	BLM
<u>SH Location:</u>	SWNW Sec 5-23N-06W	<u>Elevation:</u>	6882' GR
<u>BH Location:</u>	NENE Sec 8-23N-06W	<u>Minerals:</u>	FED

Measured Depth: 12,223.52'

I. GEOLOGY: SURFACE FORMATION - San Jose

A. FORMATION TOPS (KB)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	1484	1474	POINT LOOKOUT	4439	4332
KIRTLAND	1800	1780	MANCOS	4679	4564
PICTURED CLIFFS	1483	2073	GALLUP	5102	4979
LEWIS	2203	2170	KICKOFF POINT	5,623.20	5,336.73
CHACRA	2556	2511	TOP TARGET	5807	5424
CLIFF HOUSE	3682	3600	LANDING POINT	6,022.13	5,452.00
MENEFEE	3723	3639	BASE TARGET	6,022.13	5,452.00
			TD	12,223.52	5,397.00

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 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the 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 anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 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. The drum brakes will be inspected and tested each tour. **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 or equiv	STC
INTERMEDIATE	8.75"	6,022.13'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5872.13' - 12,223.52'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5872.13'	4.5"	11.6 LBS	P-110 or equiv	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.
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) positioned inside the 330ft Hard line. 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 12 hours. Test csg to 600psi. Total Volume: (160 cu-ft/100 sx/ Bbls). TOC at Surface.
2. Intermediate 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: +/- 700 sx Foamed 50/50 Poz Cement. 13.0 ppg + 0.1% Halad 766 + 0.2% Versaset + 1.5% Chem-Foamer 760 (Yield :1.43 cu-ft/ sk. / Vol: 1001 cu-ft / 178.3 Bbls.) + TAIL: 100 sx 13.5 #/gal. + 0.2% Versaset + 0.15% HALAD-766 (Yield: 1.28 cu-ft / sk / Vol: 128 cu-ft / 22.8 Bbls.). + Fresh Water Displacement (1,362 cu-ft / +/- 242 Bbls) + 100 sx Top-Out Cement Premium: Yield: (1.17 cu-ft/ sk / (Vol: 117 cu-ft / 20.8 Bbls). WOC 12 hrs. Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (900 sx / 1246 cu-ft / 222 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
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 (622 sx /846 cuft /151 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (622 sx /846bbls).

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 with 42,696 mscf N2 for 17 stages.
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).