

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: 11/5/2015

Well information;

Operator WPK, Well Name and Number Ch20 UT 344H

API# 30-043-21280, Section 2, Township 22 N/S, Range 7 E/W

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

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat
 - ☐ Hold C-104 for NSL, NSP, DHC
 - ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
 - ☐ 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
 - ☐ 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
 - ☐ 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.

Charles L. Person

NMOCD Approved by Signature

6-12-2017
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

NOV 05 2015

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		Farmington Field Office Bureau of Land Management		5. Lease Serial No. N0-G-1312-1799
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone				6. If Indian, Allottee or Tribe Name
2. Name of Operator WPX Energy Production, LLC				7. If Unit or CA Agreement, Name and No. South Chaco Unit NMNM133321X
3a. Address P.O. Box 640 Aztec, NM 87410		3b. Phone No. (include area code) (505) 333-1808		8. Lease Name and Well No. S. Chaco UT #344H
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1067' FSL & 357' FEL, sec 2, T22N, R7W At proposed prod. zone 761' FSL & 369' FWL, sec 35, T23N, R7W				9. API Well No. 30 043-21280
14. Distance in miles and direction from nearest town or post office* Approximately Southerly on US HWY 550 for 48.3 miles to Mile Marker 103.0				10. Field and Pool, or Exploratory Lybrook Gallup
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 357'		16. No. of Acres in lease 160.00 Acres		11. Sec., T., R., M., or Blk. and Survey or Area SHL: Sec 2, T22N, R7W BHL: Sec 35, T23N, R7W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20'		19. Proposed Depth 11976' MD / 5253' TVD		12. County or Parish Sandoval County
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7003' GR		22. Approximate date work will start* December 1, 2015		13. State NM
		23. Estimated duration 1 month		
24. Attachments				

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

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

25. Signature 	Name (Printed/Typed) Marie E. Jaramillo	Date 11/5/15
Title Permit Technician III		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 6/1/17
Title AFM	Office FFO	

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.

*(Instructions on reverse)

WPX Energy Production, LLC, proposes to develop the Lybrook Gallup formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of BLM and FIMO and is on lease and will be twinned with the S Chaco UT #345 and S Chaco UT #908H.

This location has been archaeologically surveyed by La Plata Archeological Consultants. Copies of their report have been submitted directly to the BLM, FIMO, BIA and NNHPD.

The existing access road to S. Chaco UT #342H will be utilized and a new 3,818.1' onlease access road will be built and permitted via the APD.

A new 4,150.5' on lease well connect pipeline will be built and permitted via the APD.

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

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

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

OPERATOR
NMOC
AV

CONS. DIV DIST. 3
JUN 01 2017

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-043-21280		*Pool Code 42289	*Pool Name LYBROOK GALLUP
*Property Code 314331	*Property Name S CHACO UT		*Well Number 344H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 7003'

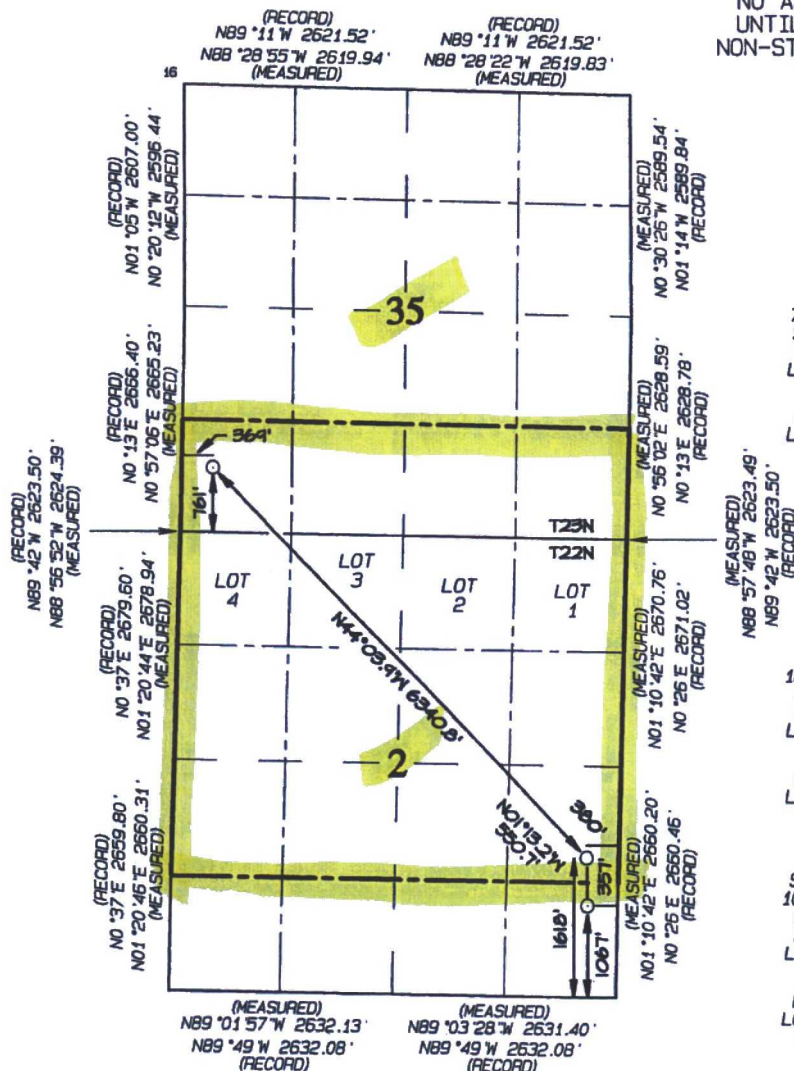
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	2	22N	7W		1067	SOUTH	357	EAST	SANDOVAL

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
M	35	23N	7W		761	SOUTH	369	WEST	SANDOVAL
¹² Dedicated Acres 641.80 S/2 S/2 Section 35 N/2 Section 2 N/2 S/2 Section 2					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. R-13883-A / 1282 Acres

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



END-OF-LATERAL
761' FSL 369' FWL
SEC 35, T23N, R7W
LAT: 36.177853°N
LONG: 107.551338°W
DATUM: NAD1927
LAT: 36.177867°N
LONG: 107.551945°W
DATUM: NAD1983

POINT-OF-ENTRY
1618' FSL 380' FEL
SEC 2, T22N, R7W
LAT: 36.165501°N
LONG: 107.536195°W
DATUM: NAD1927
LAT: 36.165516°N
LONG: 107.536801°W
DATUM: NAD1983

SURFACE LOCATION
1067' FSL 357' FEL
SEC 2, T22N, R7W
LAT: 36.163989°N
LONG: 107.536131°W
DATUM: NAD1927
LAT: 36.164004°N
LONG: 107.536737°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 *Marie E. Jaramillo* Date *11/5/15*
Printed Name
marie.jaramillo@wpenergy.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: SEPTEMBER 28, 2015
Date of Survey: JUNE 12, 2015

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

Indian Surface Federal minerals

WPX Energy

T22N R7W

Chaco 2207-2P

S Chaco UT #344H - Slot A2

Wellbore #1

Plan: Design #1 17Aug15 sam

Standard Planning Report

18 August, 2015

WPX Planning Report

Database:	San Juan	Local Co-ordinate Reference:	Well S Chaco UT #344H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 7017.00usft (Aztec 920)
Project:	T22N R7W	MD Reference:	KB @ 7017.00usft (Aztec 920)
Site:	Chaco 2207-2P	North Reference:	True
Well:	S Chaco UT #344H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 17Aug15 sam		

Project	T22N R7W		
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 2207-2P			
Site Position:		Northing:	1,879,067.21 usft	Latitude:	36.1639890
From:	Lat/Long	Easting:	587,728.55 usft	Longitude:	-107.5361310
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.18 °

Well	S Chaco UT #344H - Slot A2					
Well Position	+N/-S	0.00 usft	Northing:	1,879,067.21 usft	Latitude:	36.1639890
	+E/-W	0.00 usft	Easting:	587,728.55 usft	Longitude:	-107.5361310
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,003.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/15/2015	9.22	62.91	50,019

Design	Design #1 17Aug15 sam			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	318.35

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	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	
826.42	6.53	84.77	825.71	1.69	18.50	2.00	2.00	0.00	84.77	
4,532.16	6.53	84.77	4,507.43	40.12	438.07	0.00	0.00	0.00	0.00	
5,246.32	60.00	315.22	5,104.72	290.11	239.39	9.00	7.49	-18.14	-132.16	#344H Start 60 tan
5,306.32	60.00	315.22	5,134.72	326.99	202.79	0.00	0.00	0.00	0.00	#344H End 60 tan
5,329.37	62.05	315.27	5,145.89	341.31	188.59	8.90	8.90	0.21	1.17	
5,636.07	89.70	315.18	5,220.00	550.39	-18.89	9.02	9.02	-0.03	-0.20	#344H POE
11,975.96	89.70	315.18	5,253.00	5,047.01	-4,488.06	0.00	0.00	0.00	0.00	#344H BHL

WPX
Planning Report

Database: San Juan
Company: WPX Energy
Project: T22N R7W
Site: Chaco 2207-2P
Well: S Chaco UT #344H
Wellbore: Wellbore #1
Design: Design #1 17Aug15 sam

Local Co-ordinate Reference: Well S Chaco UT #344H (A2) - Slot A2
TVD Reference: KB @ 7017.00usft (Aztec 920)
MD Reference: KB @ 7017.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	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									
826.42	6.53	84.77	825.71	1.69	18.50	-11.03	2.00	2.00	0.00
Hold 6.53 Inclination									
1,000.00	6.53	84.77	998.17	3.49	38.15	-22.74	0.00	0.00	0.00
1,500.00	6.53	84.77	1,494.93	8.68	94.76	-56.49	0.00	0.00	0.00
2,000.00	6.53	84.77	1,991.68	13.86	151.37	-90.23	0.00	0.00	0.00
2,500.00	6.53	84.77	2,488.44	19.05	207.98	-123.97	0.00	0.00	0.00
3,000.00	6.53	84.77	2,985.20	24.23	264.60	-157.72	0.00	0.00	0.00
3,500.00	6.53	84.77	3,481.96	29.42	321.21	-191.46	0.00	0.00	0.00
4,000.00	6.53	84.77	3,978.72	34.60	377.82	-225.21	0.00	0.00	0.00
4,500.00	6.53	84.77	4,475.47	39.79	434.43	-258.95	0.00	0.00	0.00
4,532.16	6.53	84.77	4,507.43	40.12	438.07	-261.12	0.00	0.00	0.00
Start Build DLS 9.00 TFO -132.16									
5,000.00	37.98	318.64	4,944.05	155.84	366.18	-126.88	9.00	6.72	-26.96
5,246.32	60.00	315.22	5,104.72	290.11	239.39	57.71	9.00	8.94	-1.39
Hold 60.00 Inclination									
5,306.32	60.00	315.22	5,134.72	326.99	202.79	109.60	0.00	0.00	0.00
Start Build DLS 8.90 TFO 1.17									
5,329.37	62.05	315.27	5,145.89	341.31	188.59	129.73	8.90	8.90	0.21
Start DLS 9.02 TFO -0.20									
5,500.00	77.43	315.21	5,204.79	454.64	76.21	289.09	9.02	9.02	-0.03
5,636.00	89.70	315.18	5,220.00	550.34	-18.84	423.77	9.02	9.02	-0.03
7"									
5,636.07	89.70	315.18	5,220.00	550.39	-18.89	423.84	9.02	9.02	-0.03
POE at 89.70 Inc 315.18 deg									
6,000.00	89.70	315.18	5,221.89	808.51	-275.44	787.21	0.00	0.00	0.00
6,500.00	89.70	315.18	5,224.50	1,163.14	-627.90	1,286.43	0.00	0.00	0.00
7,000.00	89.70	315.18	5,227.10	1,517.77	-980.37	1,785.66	0.00	0.00	0.00
7,500.00	89.70	315.18	5,229.70	1,872.40	-1,332.83	2,284.88	0.00	0.00	0.00
8,000.00	89.70	315.18	5,232.30	2,227.03	-1,685.29	2,784.10	0.00	0.00	0.00
8,500.00	89.70	315.18	5,234.91	2,581.65	-2,037.76	3,283.33	0.00	0.00	0.00
9,000.00	89.70	315.18	5,237.51	2,936.28	-2,390.22	3,782.55	0.00	0.00	0.00
9,500.00	89.70	315.18	5,240.11	3,290.91	-2,742.69	4,281.77	0.00	0.00	0.00
10,000.00	89.70	315.18	5,242.71	3,645.54	-3,095.15	4,781.00	0.00	0.00	0.00
10,500.00	89.70	315.18	5,245.32	4,000.17	-3,447.62	5,280.22	0.00	0.00	0.00
11,000.00	89.70	315.18	5,247.92	4,354.80	-3,800.08	5,779.44	0.00	0.00	0.00
11,500.00	89.70	315.18	5,250.52	4,709.43	-4,152.54	6,278.67	0.00	0.00	0.00
11,975.96	89.70	315.18	5,253.00	5,047.01	-4,488.06	6,753.89	0.00	0.00	0.00
TD at 11975.96									

WPX Planning Report

Database: San Juan
Company: WPX Energy
Project: T22N R7W
Site: Chaco 2207-2P
Well: S Chaco UT #344H
Wellbore: Wellbore #1
Design: Design #1 17Aug15 sam

Local Co-ordinate Reference: Well S Chaco UT #344H (A2) - Slot A2
TVD Reference: KB @ 7017.00usft (Aztec 920)
MD Reference: KB @ 7017.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
#344H Start 60 tan - plan hits target center - Point	0.00	0.00	5,104.72	290.11	239.39	1,879,358.05	587,967.05	36.1647860	-107.5353200
#344H End 60 tan - plan misses target center by 0.28usft at 5306.08usft MD (5134.60 TVD, 326.85 N, 202.94 E) - Point	0.00	0.00	5,134.72	326.97	203.16	1,879,394.80	587,930.71	36.1648872	-107.5354428
#344H POE - plan hits target center - Point	0.00	0.00	5,220.00	550.39	-18.89	1,879,617.53	587,707.98	36.1655010	-107.5361950
#344H BHL - plan hits target center - Point	0.00	0.00	5,253.00	5,047.01	-4,488.06	1,884,100.46	583,225.06	36.1778530	-107.5513380

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8"	9.62	12.25
5,636.00	5,220.00	7"	7.00	8.75

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	Start Build 2.00
826.42	825.71	1.69	18.50	Hold 6.53 Inclination
4,532.16	4,507.43	40.12	438.07	Start Build DLS 9.00 TFO -132.16
5,246.32	5,104.72	290.11	239.39	Hold 60.00 Inclination
5,306.32	5,134.72	326.99	202.79	Start Build DLS 8.90 TFO 1.17
5,329.37	5,145.89	341.31	188.59	Start DLS 9.02 TFO -0.20
5,636.07	5,220.00	550.39	-18.89	POE at 89.70 Inc 315.18 deg
11,975.96	5,253.00	5,047.01	-4,488.06	TD at 11975.96

ANNOTATIONS									
TV/D	MD	Inc	Azi	+N/-S	+E/-W	V/Sec	Departure	Annotation	
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
825.71	825.45	6.53	7.77	1.69	18.50	-11.03	18.58	Hold 6.53 Inclination	
5104.73	4532.17	6.53	4832.17	4.00	438.07	-28.12	438.12	Start Build 8.00 TFO -132.16	
5104.72	5246.32	60.00	315.22	290.11	239.39	57.71	769.69	Hold 60.00 Inclination	
5134.72	5306.32	60.00	315.22	326.99	202.79	109.60	821.66	Start Build DLS 8.90 TFO 1.17	
5145.89	5329.37	62.05	315.27	341.31	188.59	129.73	841.82	Start DLS 9.02 TFO -0.20	
5220.00	5636.07	89.70	315.18	550.38	560.38	423.84	1195.37	TDE at 89.70 deg 315.18 deg	
5253.00	11975.96	89.70	315.18	5047.01	-4488.08	6753.89	7475.18	PO at 11975.96	



WPX Energy

Operations Plan

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

Date: November 4, 2015
Well Name: S Chaco UT 344H
SH Location: SESE Sec 2-22N-07W
BH Location: SWSW Sec 35-23N-07W

Field: Lybrook Gallup
Surface: IA
Elevation: 7003' GR
Minerals: IA

Measured Depth: 11,975.96'

I. GEOLOGY: SURFACE FORMATION - NACIMIENTO

A. FORMATION TOPS (KB)

NAME	MD	TVD	NAME	MD	TVD
OJO ALAMO	1067	1065	POINT LOOKOUT	3961	3940
KIRTLAND	1220	1217	MANCOS	4134	4112
PICTURED CLIFFS	1554	1549	GALLUP	4491	4467
LEWIS	1642	1636	KICKOFF POINT	5,246.32	5,104.72
CHACRA	1879	1871	TOP TARGET	5440	5189
CLIFF HOUSE	3058	3043	LANDING POINT	5,636.07	5,220.00
MENEFEE	3105	3090	BASE TARGET	5,636.07	5,220.00
			TD	11,975.96	5,253.00

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"	5,636.07'	7"	23 LBS	J-55 or equiv	LTC
PRODUCTION	6.125"	5486.07' - 11,975.96'	4.5"	11.6 LBS	P-110 or equiv	LTC
TIE BACK	6.125"	Surf. - 5486.07'	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 (636 sx /865 cuft /154 bbls). Tail Spacer: 20 BBL of MMCR. Displacement: Displace w/ +/- 140 bbl Fr Water. Total Cement (636 sx /865bbls).

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# N-80 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# K-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).

7.0 Methods for Handling Waste

- ✓ A. Cuttings
 - 1. Drilling operations will utilize a closed-loop system. Drilling of the horizontal laterals will be accomplished with water-based mud. All cuttings will be placed in roll-off bins and hauled to a commercial disposal facility or land farm. WPX will follow Onshore Oil and Gas Order No. 1 regarding the placement, operation, and removal of closed-loop systems. No blow pit will be used.
 - 2. Closed-loop tanks will be adequately sized for containment of all fluids.
- B. Drilling Fluids
 - 1. Drilling fluids will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical. All residual fluids will be hauled to a commercial disposal facility.
- C. Spills
 - 1. Any spills of non-freshwater fluids will be immediately cleaned up and removed to an approved disposal site.
- D. Sewage
 - 1. Portable toilets will be provided and maintained during construction, as needed (see Figure 4 in Appendix B for the location of toilets).
- E. Garbage and other water material
 - 1. All garbage and trash will be placed in a metal trash containment. The trash and garbage will be hauled off site and dumped in an approved landfill, as needed.
- F. Hazardous Waste
 - 1. No chemicals subject to reporting under Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
 - 2. No extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of these wells.
 - 3. All fluids (i.e., scrubber cleaners) used during washing of production equipment will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.
- G. Produced Water:
 - 1. WPX Energy will dispose of produced water from this well at one of the following facilities:
 - a. Lybrook Yard WDW #1, API #30-039-27533, NMOCD permit #SWD-907, operated by Elm Ridge Resources, located in NE ¼, Section 14, Township 23 North, Range 7 West
 - b. Jillson Federal #1, NMOCD order #R-10168, operated by ConocoPhillips, located in NW ¼, Section 8, Township 24 North, Range 3 West
 - c. Basin Disposal, permit #NM-01-005, located in the NW ¼, Section 3, Township 29 North, Range 11 West
 - d. Sunco SWD #001, API #30-045-28653, NMOCD permit SWD-457, operated by Key Energy, located in NW ¼, Section 2, Township 29 North, Range 12 West
 - 2. Water will be hauled by truck. Some produced water may also be used in drilling and completion operations as an alternative disposal method.

3000 PSI BOP Schematic

The diagram illustrates the components of a 3000 PSI Blowout Preventer (BOP) system. Key components and their specifications include:

- Rotating Head:** 13 5/8"
- Flow Line:** Connected to the rotating head.
- Annular Preventer:** 13 5/8" x 3,000 psi
- Double Ram Preventer:** 11" x 3,000 psi
- Gate Valve:** 4" x 3,000 psi (located below the ram preventer)
- Gate Valve:** 2" x 3,000 psi (multiple locations in the system)
- Gate Valve:** 4" x 3,000 psi (located near the buffer tank)
- Adjustable Choke:** 2" x 3,000 psi
- Positive Choke:** 2" x 3,000 psi
- Pressure Gauge:** Located on the line between the 4" and 2" gate valves near the buffer tank.
- Well Head:** The base of the well assembly.
- Mud Cross:** Located at the base of the well head.
- Check Valve:** 2" x 3,000 psi
- Kill Line:** Connected to the well head area.
- Buffer Tank:** A large vertical tank used for fluid storage and pressure regulation.

Handwritten notes in red ink at the bottom right include "Adjustable Choke" and "Positive Choke".

Adjustable Choke

APD Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 5th day of November, 2015.

Name Marie E Jaramillo

Position Title Permit Technician III

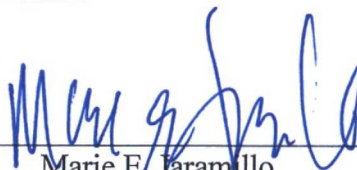
Address P.O. Box 640, Aztec, NM 87410

Telephone (505) 333-1808

Field representative (if not above signatory) _____

E-mail marie.jaramillo@wpxenergy.com

Date: 11/5/15



Marie E. Jaramillo
Permit Technician III
WPX Energy Production, LLC

Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to WPX Energy Production, LLC S Chaco UT #344H
1067' FSL & 357' FEL, Section 2, T22N, R7W, N.M.P.M., Sandoval County, NM

Latitude: 36.164004°N Longitude: 107.536737°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 48.3 miles to Mile Marker 103.0;

Go Right (Southerly) on Atkins Road for 4.2 miles to 4-way intersection;

Go Left (Easterly) exiting Atkins Road for 0.3 miles to fork in roadway;

Go Right (Southerly) along WPX S Chaco UT #342H existing access for 0.2 miles to begin access on right-hand side of roadway from which continuing for an additional 3818.1' to staked WPX S Chaco UT #344H location.