State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Tony Delfin
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: 9/14/15
Well information;
Operator WPX, Well Name and Number W Hamito UT #460H

API# 30-045-35713, Section 1, Township 22 N/S, Range 8 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
- o 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
- ✓ 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.

Chris Kern
NMOCD Approved by Signature

6-5-2016
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

Form 3160-3
(September 2001)

OIL CONS. DIV DIST. 3

JAN 29 2016

RECEIVED

SEP 14 2015

Farmington Field Office
Bureau of Land Management

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.	NMNM 117143
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	W. Alamito Unit, R-14002
8. Lease Name and Well No.	W Alamito UT #460H
9. API Well No.	30-045-35713
10. Field and Pool, or Exploratory	West Alamito Unit Mancos HZ Oil
11. Sec., T., R., M., or Blk. and Survey or Area	SHL: Sec 1, T22N, R8W BHL: Sec 12, T22N, R8W
12. County or Parish	San Juan County
13. State	NM

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator: WPX Energy Production, LLC

3a. Address: P.O. Box 640 Aztec, NM 87410

3b. Phone No. *(include area code)*: (505) 333-1849

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

At surface A 240' FNL & 1,047' FEL, sec 1, T22N, R8W NENE

At proposed prod. zone H 2,220' FNL & 516' FEL, sec 12, T22N, R8W SENE

14. Distance in miles and direction from nearest town or post office*: approximately 6 miles southwest of Lybrook, New Mexico

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 240'	16. No. of Acres in lease: 1,122.40 acres	17. Spacing Unit dedicated to this well: 640.06 acres E/2 Sections 1 & 12, T22N, R8W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 40'	19. Proposed Depth: 12,653' MD / 4,896' TVD	20. BLM/BIA Bond No. on file: UTB000178
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,938' GR	22. Approximate date work will start*: October 15, 2015	23. Estimated duration: 1 month

KP

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall 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 shall 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 authorized officer.

25. Signature	Name *(Printed/Typed)*: Andrea Felix	Date: 09/14/2015
Title: Regulatory Specialist Sr.		
Approved by *(Signature)*: /s/ Maryellen O AFM	Name *(Printed/Typed)*	Date: 1/28/16
Title	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 Alamito-Gallup / Basin Mancos formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the BLM and is on lease and will be twinned with the W Alamito #461H.

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

A new 122.4 foot on lease access will be built to access location.

A new 3673 foot on lease pipeline will be built.

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

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"

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
30-045-35713	98163	ALAMITO MANCOS W

4 Property Code	5 Property Name	6 Well Number
315082	W ALAMITO UNIT	460H

7 OGRID No.	8 Operator Name	9 Elevation
120782	WPX ENERGY PRODUCTION, LLC	6938'

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
A	1	22N	8W	1	240	NORTH	1047	EAST	SAN JUAN

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
H	12	22N	8W		2220	NORTH	516	EAST	SAN JUAN

12 Dedicated Acres		13 Joint or Infill	14 Consolidation Code	15 Order No.
240.15	E/2 E/2 - Section 1 E/2 NE/4 - Section 12			R-14002 - 1922.40 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

SURFACE LOCATION
240' FNL 1047' FEL
SECTION 1, T22N, R8W
LAT: 36.175386 °N
LONG: 107.627310 °W
DATUM: NAD1927

LAT: 36.175400 °N
LONG: 107.627919 °W
DATUM: NAD1983

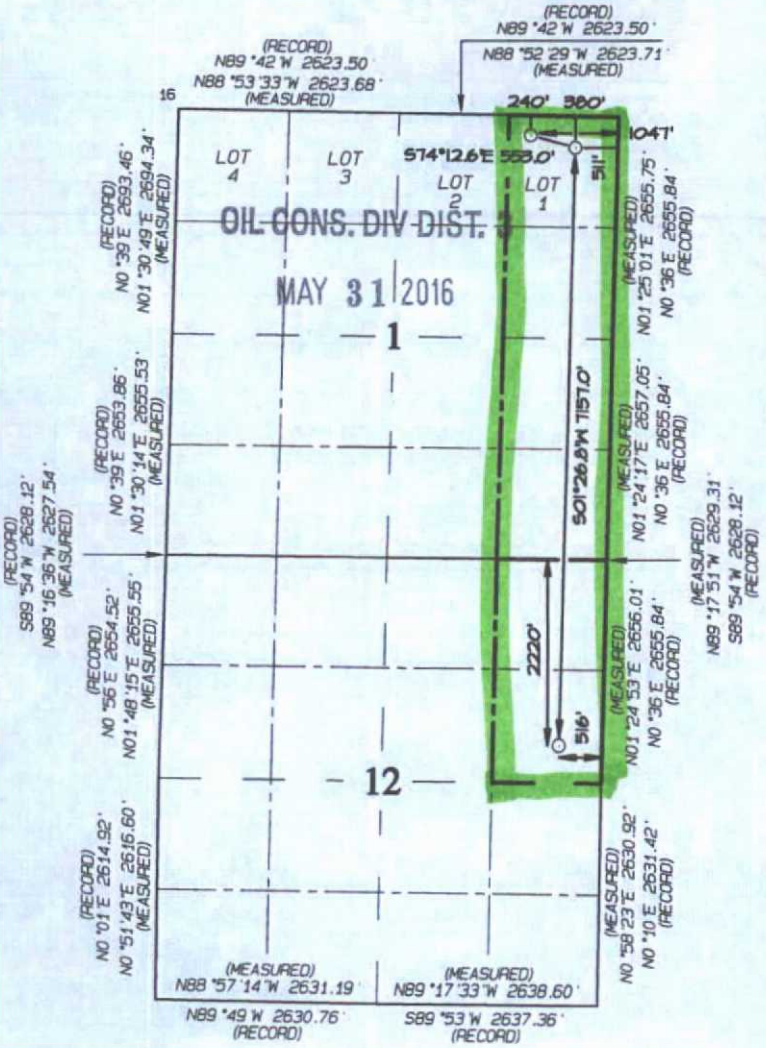
POINT-OF-ENTRY
380' FNL 511' FEL
SECTION 1, T22N, R8W
LAT: 36.174993 °N
LONG: 107.625500 °W
DATUM: NAD1927

LAT: 36.175008 °N
LONG: 107.626109 °W
DATUM: NAD1983

KP

END-OF-LATERAL
2220' FNL 516' FEL
SECTION 12, T22N, R8W
LAT: 36.155337 °N
LONG: 107.625768 °W
DATUM: NAD1927

LAT: 36.155351 °N
LONG: 107.626377 °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 — Date: 5/31/16

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: MAY 31, 2016
Date of Survey: JUNE 16, 2015

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPXENERGY

WPX ENERGY

Operations Plan

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

DATE: 08/05/2015

FIELD: Alamito- Gallup/ Basin Mancos

WELL NAME: W Alamito UT 460H

SURFACE: BLM

SH Location: NENE Section 1 22N-08W

ELEVATION: 6938' GR

BH Location: SENE Section 12 22N-08W

MINERALS: Federal

MEASURED DEPTH:

I. GEOLOGY:

Surface formation – Nacimiento

A. **FORMATION TOPS:** (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	779	779	Point Lookout	3801	3738
Kirtland	948	946	Mancos	3996	3929
Picture Cliffs	1354	1344	Gallup	**4309**	4235
Lewis	1454	1442	**Kickoff Point**	**4321**	4247
Chacra	1757	1738	Top Target	5334	4996
Cliff House	2865	2822	**Landing Point**	**5496**	5014
Menefee	2922	2878	Base Target	5496	5014
			TD	12653	4896

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, 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) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	320'	9.625"	36#	J-55
Intermediate	8.75"	5,496	7"	23#	K-55
Prod. Liner	6.125"	5346' - 12653'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5346'	4-1/2"	11.6#	N-80

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 2,700 ft., 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.

4. TIE-BACK CASING: Tie back to surface with 4-1/2" N-80 casing.

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. PRODUCTION 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 1.29 cu ft/sk, 13.5 ppg, (582 sx / 792 cu ft. / 140 bbls). **Tail Spacer:** 20 BBL of MMCR. **Displacement**: Displace w/ +/- 170 bbl Fr Water. Total Cement (792 cu ft / 140 bbls).

IV. COMPLETION

A. CBL

1. Run CCL for perforating.

B. 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.

C. 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.

D. 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:

Installation of RSI sleeves at Toe of Lateral.

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).

A 4-1/2" 11.6# N-80 tie-back string with seal assembly will be run and stung into the PBR of the liner hanger, tested to 1500 PSI and hung off at the surface. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

WPX Energy

T22N R8W
W Alamito UT 1A
W Alamito UT #460H - Slot A1

Wellbore #1

Plan: Design #1 1Aug15 sam

Standard Planning Report

01 August, 2015

WPX
Planning Report

Database:	San Juan	**Local Co-ordinate Reference:**	Well W Alamito UT #460H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	KB @ 6954.00usft (Aztec 920)
Project:	T22N R8W	**MD Reference:**	KB @ 6954.00usft (Aztec 920)
Site:	W Alamito UT 1A	**North Reference:**	True
Well:	W Alamito UT #460H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 1Aug15 sam		

Project	T22N R8W		
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	W Alamito UT 1A				
Site Position:		**Northing:**	1,883,146.08 usft	**Latitude:**	36.1753860
From:	Lat/Long	**Easting:**	560,805.38 usft	**Longitude:**	-107.6273100
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.12 °

Well	W Alamito UT #460H - Slot A1					
Well Position	**+N/-S**	0.00 usft	**Northing:**	1,883,146.08 usft	**Latitude:**	36.1753860
	+E/-W	0.00 usft	**Easting:**	560,805.38 usft	**Longitude:**	-107.6273100
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	6,940.00 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	8/1/2015	9.27	62.90	50,017

Design	Design #1 1Aug15 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	176.43

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	
1,098.99	11.98	41.17	1,094.63	46.97	41.07	2.00	2.00	0.00	41.17	
4,321.39	11.98	41.17	4,246.86	550.48	481.35	0.00	0.00	0.00	0.00	
5,092.06	60.00	180.63	4,898.00	237.86	537.32	9.00	6.23	18.10	143.03	Start 60 tan #460H
5,152.06	60.00	180.63	4,928.00	185.90	536.75	0.00	0.00	0.00	0.00	End 60 tan #460H
5,156.39	60.13	180.21	4,930.16	182.16	536.72	9.07	2.97	-9.89	-71.02	
5,496.15	90.94	180.63	5,014.00	-142.88	534.25	9.07	9.07	0.13	0.84	POE #460H
12,652.85	90.94	180.63	4,896.00	-7,298.17	455.18	0.00	0.00	0.00	0.00	BHL #460H

Database:	San Juan	**Local Co-ordinate Reference:**	Well W Alamito UT #460H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	KB @ 6954.00usft (Aztec 920)
Project:	T22N R8W	**MD Reference:**	KB @ 6954.00usft (Aztec 920)
Site:	W Alamito UT 1A	**North Reference:**	True
Well:	W Alamito UT #460H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 1Aug15 sam		

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" 36# J-55									
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	41.17	997.47	32.76	28.65	-30.92	2.00	2.00	0.00
1,098.99	11.98	41.17	1,094.63	46.97	41.07	-44.32	2.00	2.00	0.00
Hold 11.98 Inclination									
1,500.00	11.98	41.17	1,486.91	109.63	95.86	-103.45	0.00	0.00	0.00
2,000.00	11.98	41.17	1,976.02	187.76	164.18	-177.17	0.00	0.00	0.00
2,500.00	11.98	41.17	2,465.13	265.88	232.49	-250.90	0.00	0.00	0.00
3,000.00	11.98	41.17	2,954.24	344.01	300.81	-324.62	0.00	0.00	0.00
3,500.00	11.98	41.17	3,443.35	422.14	369.12	-398.34	0.00	0.00	0.00
4,000.00	11.98	41.17	3,932.46	500.26	437.44	-472.06	0.00	0.00	0.00
4,321.39	11.98	41.17	4,246.86	550.48	481.35	-519.45	0.00	0.00	0.00
Start Build DLS 9.00 TFO 143.03									
4,500.00	9.64	136.98	4,423.42	553.53	503.90	-521.09	9.00	-1.31	53.64
5,000.00	51.81	179.12	4,846.43	314.03	537.20	-279.98	9.00	8.43	8.43
5,092.06	60.00	180.63	4,898.00	237.86	537.32	-203.95	9.00	8.90	1.65
Hold 60.00 Inclination									
5,152.06	60.00	180.63	4,928.00	185.90	536.75	-152.13	0.00	0.00	0.00
Start Build DLS 9.07 TFO -71.02									
5,156.39	60.13	180.21	4,930.16	182.16	536.72	-148.39	9.07	2.97	-9.89
Start DLS 9.07 TFO 0.84									
5,496.00	90.93	180.63	5,014.00	-142.73	534.26	175.71	9.07	9.07	0.13
7" 23# K-55									
5,496.15	90.94	180.63	5,014.00	-142.88	534.25	175.86	9.07	9.07	0.11
POE at 90.94 Inc 180.63 deg									
5,500.00	90.94	180.63	5,013.94	-146.73	534.21	179.70	0.00	0.00	0.00
6,000.00	90.94	180.63	5,005.69	-646.63	528.69	678.28	0.00	0.00	0.00
6,500.00	90.94	180.63	4,997.45	-1,146.53	523.16	1,176.87	0.00	0.00	0.00
7,000.00	90.94	180.63	4,989.20	-1,646.43	517.64	1,675.46	0.00	0.00	0.00
7,500.00	90.94	180.63	4,980.96	-2,146.33	512.11	2,174.05	0.00	0.00	0.00
8,000.00	90.94	180.63	4,972.72	-2,646.24	506.59	2,672.64	0.00	0.00	0.00
8,500.00	90.94	180.63	4,964.47	-3,146.14	501.06	3,171.23	0.00	0.00	0.00
9,000.00	90.94	180.63	4,956.23	-3,646.04	495.54	3,669.81	0.00	0.00	0.00
9,500.00	90.94	180.63	4,947.98	-4,145.94	490.01	4,168.40	0.00	0.00	0.00
10,000.00	90.94	180.63	4,939.74	-4,645.84	484.49	4,666.99	0.00	0.00	0.00
10,500.00	90.94	180.63	4,931.50	-5,145.74	478.96	5,165.58	0.00	0.00	0.00
11,000.00	90.94	180.63	4,923.25	-5,645.64	473.44	5,664.17	0.00	0.00	0.00
11,500.00	90.94	180.63	4,915.01	-6,145.55	467.91	6,162.75	0.00	0.00	0.00
12,000.00	90.94	180.63	4,906.76	-6,645.45	462.39	6,661.34	0.00	0.00	0.00
12,500.00	90.94	180.63	4,898.52	-7,145.35	456.87	7,159.93	0.00	0.00	0.00
12,652.85	90.94	180.63	4,896.00	-7,298.17	455.18	7,312.35	0.00	0.00	0.00
TD at 12652.85									

Database:	San Juan	**Local Co-ordinate Reference:**	Well W Alamito UT #460H (A1) - Slot A1
Company:	WPX Energy	**TVD Reference:**	KB @ 6954.00usft (Aztec 920)
Project:	T22N R8W	**MD Reference:**	KB @ 6954.00usft (Aztec 920)
Site:	W Alamito UT 1A	**North Reference:**	True
Well:	W Alamito UT #460H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 1Aug15 sam		

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
BHL #460H - plan hits target center - Point	0.00	0.00	4,896.00	-7,298.17	455.18	1,875,848.89	561,276.04	36.1553366	-107.6257682
Start 60 tan #460H - plan hits target center - Point	0.00	0.00	4,898.00	237.86	537.32	1,883,385.08	561,342.19	36.1760394	-107.6254895
End 60 tan #460H - plan misses target center by 1.14usft at 5152.05usft MD (4928.00 TVD, 185.91 N, 536.75 E) - Point	0.00	0.00	4,928.00	185.90	537.89	1,883,333.12	561,342.87	36.1758967	-107.6254875
POE #460H - plan hits target center - Point	0.00	0.00	5,014.00	-142.88	534.25	1,883,004.33	561,339.93	36.1749934	-107.6254999

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
320.00	320.00	9 5/8" 36# J-55	9.62	12.25
5,496.00	5,014.00	7" 23# K-55	7.00	8.75

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
1,098.99	1,094.63	46.97	41.07	Hold 11.98 Inclination
4,321.39	4,246.86	550.48	481.35	Start Build DLS 9.00 TFO 143.03
5,092.06	4,898.00	237.86	537.32	Hold 60.00 Inclination
5,152.06	4,928.00	185.90	536.75	Start Build DLS 9.07 TFO -71.02
5,156.39	4,930.16	182.16	536.72	Start DLS 9.07 TFO 0.84
5,496.15	5,014.00	-142.88	534.25	POE at 90.94 Inc 180.63 deg
12,652.85	4,896.00	-7,298.17	455.18	TD at 12652.85

WPXENERGY

Well Name: W Alamito UT #460H
Surface Location: W Alamito UT 1A
NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
Ground Elevation: 6940.00

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.00	0.00	1883146.08	560805.37	36.1753860	-107.6273100	A1

KB @ 6954.00usft (Aztec 920)

Azimuths to True North
Magnetic North: 9.27°

Magnetic Field
Strength: 50017.5snT
Dip Angle: 62.90°
Date: 8/1/2015
Model: IGRF2010

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 tan #460H	4898.00	237.86	537.32	1883385.08	561342.19	36.1760394	-107.6254894	Point
	- plan hits target center							
End 60 tan #460H	4928.00	185.90	537.89	1883333.12	561342.87	36.1758967	-107.6254875	Point
	- plan misses target center by 1.14usft at 5152.05usft MD (4928.00 TVD, 185.91 N, 536.75 E)							
POE #460H	5014.00	-142.88	534.25	1883004.33	561339.93	36.1749935	-107.6254998	Point
	- plan hits target center							
BHL #460H	4896.00	-7298.17	455.18	1875848.89	561276.04	36.1553366	-107.6257681	Point
	- plan hits target center							

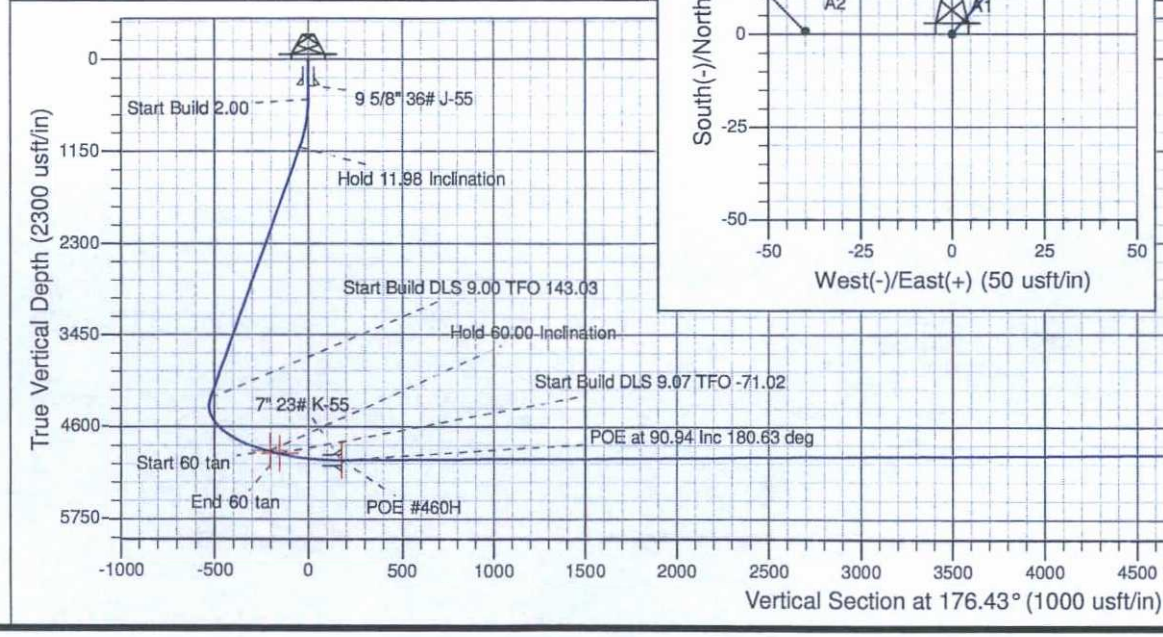
ANNOTATIONS

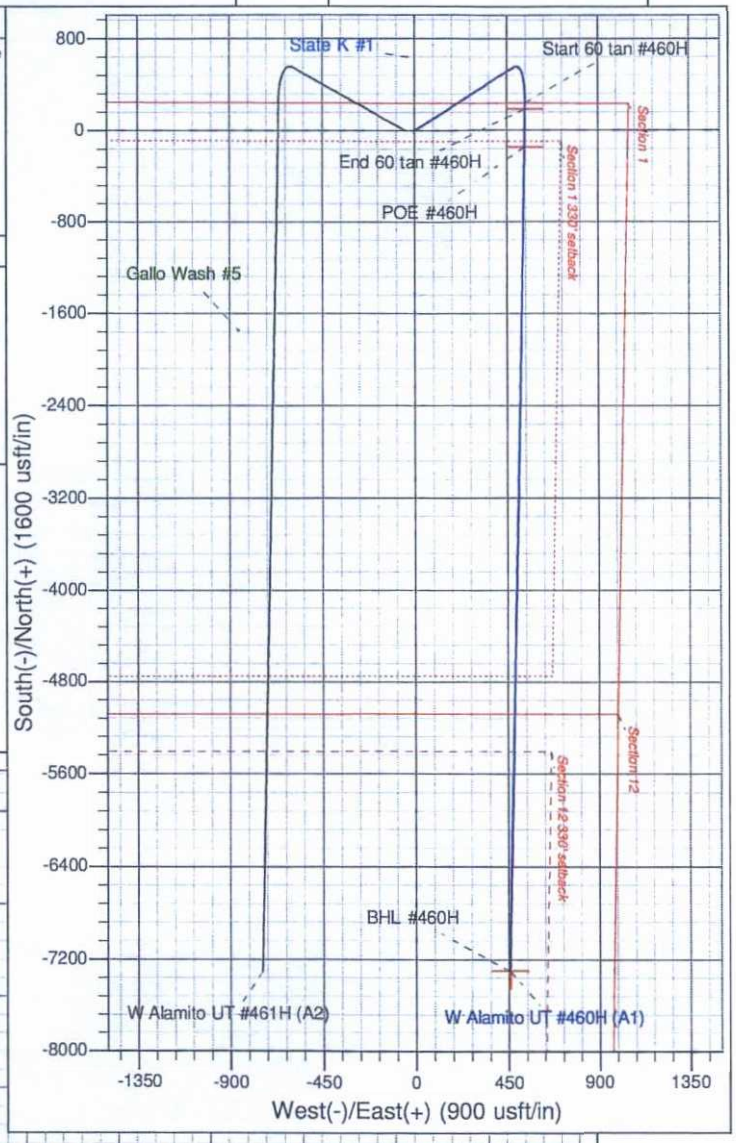
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1094.63	1098.99	11.98	41.17	46.97	41.07	-44.32	62.39	Hold 11.98 Inclination
4246.86	4321.39	11.98	41.17	550.48	481.35	-519.45	731.25	Start Build DLS 9.00 TFO 143.03
4898.00	5092.06	60.00	180.63	237.86	537.32	-203.95	1078.75	Hold 60.00 Inclination
4928.00	5152.06	60.00	180.63	185.90	536.75	-152.13	1130.71	Start Build DLS 9.07 TFO -71.02
4930.16	5156.39	60.13	180.21	182.16	536.72	-148.39	1134.46	Start DLS 9.07 TFO 0.84
5014.00	5496.15	90.94	180.63	-142.88	534.25	175.86	1459.51	POE at 90.94 Inc 180.63 deg
4896.00	12652.85	90.94	180.63	-7298.17	455.18	7312.35	8615.23	TD at 12652.85

Project: T22N R8W
Site: W Alamito UT 1A
Well: W Alamito UT #460H
Wellbore: Wellbore #1
Design: Design #1 1Aug15 sam

SLOTS

Slot Name	+N/-S	+E/-W	Northing	Easting
A1	0.00	0.00	1883146.08	560805.37
A2	0.73	-39.84	1883146.72	560765.53





driving surface; the tear drop would be used to access the proposed wellheads and other facilities.

2. As practical, access will be a teardrop-shaped road through the production areas so that the center may be revegetated.
3. Within 90 days of installation, production facilities would be painted Juniper Green to blend with the natural color of the landscape and would be located, to the extent practical, to reasonably minimize visual impact.
4. Berms will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks. Berm walls will be compacted with appropriate equipment to assure containment.

After the completion phases and pipeline installation, portions of the project areas not needed for operation will be reclaimed. When the wells are plugged, final reclamation will occur within the remainder of the project areas. Reclamation is described in detail in the Reclamation Plan (Appendix A).

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 basket. 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.

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

in Bloomfield, NM to WPX Energy Production, LLC W Alamito UT #460H

240' FNL & 1047' FEL, Section 1, T22N, R8W, N.M.P.M., San Juan County, NM

Latitude: 36.175400°N Longitude: 107.627919°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 38.7 miles to Mile Marker 112.7:

Go Right (Southerly) on County Road #7900 for 4.9 miles to fork in road:

Go Straight (South-easterly) remaining on County Road #7900 for 0.2 miles to fork in road:

Go Left (Easterly) exiting County Road #7900 for 2.8 miles to new access on left-hand side of existing roadway which continues for 122.4' to staked WPX W Alamito UT #460H location.

3000 PSI BOP Schematic