

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary



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: 10-29-14

Well information;

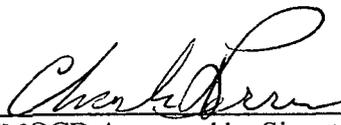
Operator WPX, Well Name and Number Chaco 2308-04D #282H

API# 30-045-35616, Section 4, Township 23 (N/S), Range 2 (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
- 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.


NMOCD Approved by Signature

11-18-2014
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

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

OCT 29 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NO-G-1401-1876	
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 Navajo allotment	
2. Name of Operator WPX Energy Production, LLC		7. Unit or CA Agreement, Name and No.	
3a. Address P.O. Box 640 Aztec, NM 87410		8. Lease Name and Well No. Chaco 2308-04D #282H	
3b. Phone No. (include area code) (505) 333-1808		9. API Well No. 30-045-35616	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface ^D 480' FNL & 777' FWL, sec 4, T23N, R8W At proposed prod. zone ^D 379' FNL & 230' FWL, sec 5, T23N, R8W		10. Field and Pool, or Exploratory Basin Mancos/Nageezi Gallup	
14. Distance in miles and direction from nearest town or post office* approximately 9 miles northwest of Lybrook, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area Surface: Sec 4, T23N, R8W BHL: Sec 5, T23N, R8W	
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 480'		12. County or Parish San Juan County	
16. No. of Acres in lease 160.16148		13. State NM	
17. Spacing Unit dedicated to this well 641.44 acres		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 22'	
19. Proposed Depth 10,694' MD / 5,463' TVD		20. BLM/BIA Bond No. on file -UTB000478- B001576	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7078' GR		22. Approximate date work will start* December 1, 2014	
23. Estimated duration 1 month		24. Attachments	

OIL CONS. DIV DIST. 3

NOV 18 2014

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 <i>Larry Higgins</i>	Name (Printed/Typed) Larry Higgins	Date 10/29/14
Title Regulatory Specialist		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 11/14/14
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 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. This location is shared with the Chaco 2308-33D #458H

This location has been archaeologically surveyed by SA [Name] and Archaeological Consultants. Copies of their report have been submitted directly to the BLM and

2330' of new access road is needed for this well site

An approximate 2275' pipeline has been applied for these wells as a separate ROW action

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

ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER PERMITS OR SURVEY WORK FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

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

CONFIDENTIAL

NMOCDA

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 478-3460 Fax: (505) 478-3482

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 Dr.
Santa Fe, N.M. 87505

RECEIVED
OCT 29 2014

Field Office
Bureau of Land Management
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-350110		*Pool Code 47540/97232		*Pool Name NAGEEZI GALLUP & BASIN MANCOS	
*Property Code 313897		*Property Name CHACO 2308-04D			*Well Number 282H
*GRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 7078

¹⁰ Surface Location

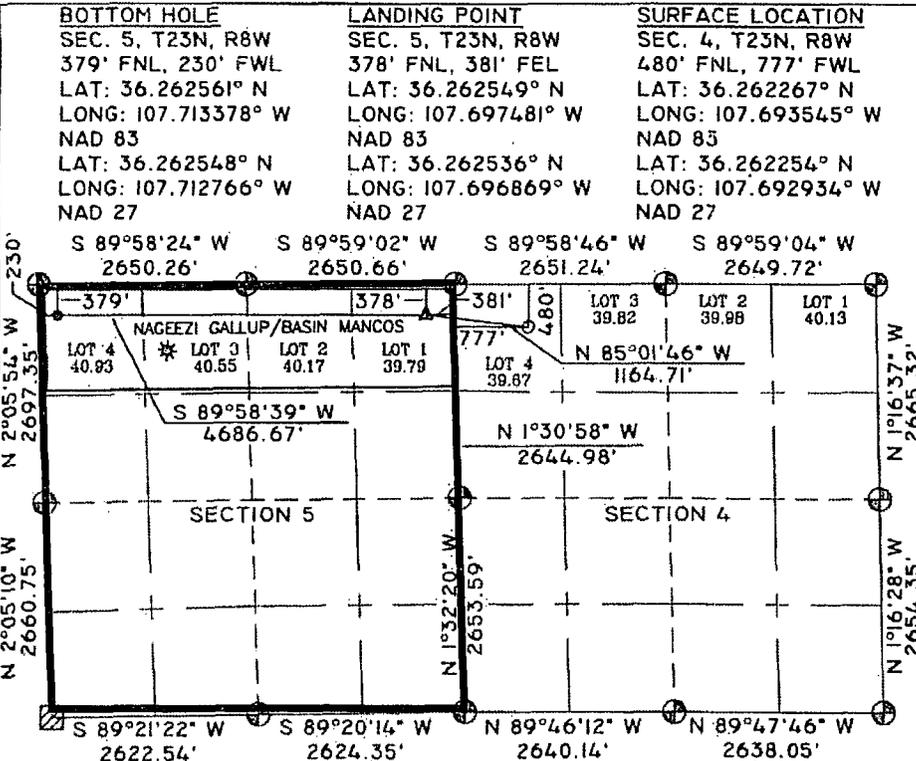
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	4	23 N	8 W	LOT 4	480	NORTH	777	WEST	SAN JUAN

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
D	5	23 N	8 W	LOT 4	379	NORTH	230	WEST	SAN JUAN

¹² Dedicated Acres All section 5 - 641.44 acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. NSP pending
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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



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: *Larry Higgins* Date: 10/29/14
Printed Name: Larry Higgins
E-mail Address: larry.higgins@wpxenergy.com

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 knowledge and belief.

REV 3
04/04/14
Date of Survey

Signature and Seal of Professional Surveyor:
John Vukovich

14831
Certificate Number
United Field Services, Inc. 10-3-2014

LEGEND:
○ = SURFACE LOCATION * = GRAHAM RESOURCES (P&A)
△ = LANDING POINT UNION NAVAJO ALLOTTED #21
⊙ = BOTTOM HOLE LAT. = 36.261363° N
⊕ = FOUND 1947 U.S.G.L.O. LONG. = 107.708599° W
BRASS CAP NAD 83
⊞ = POSITION CALCULATED

NOTE:
BEARINGS & DISTANCES ARE REFERENCED TO THE NEW MEXICO COORDINATE SYSTEM, WEST ZONE, NAD 83.

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	OH SIZE (IN)	DEPTH (MD) (FT)	CASING SIZE (IN)	WEIGHT(LB)	GRADE
Surface	12.25"	400'+	9.625"	36#	J-55
Intermediate	8.75"	6006'	7"	23#	K-55
Prod. Liner	6.125"	5,856' - 10,694'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,856'	4-1/2"	11.6#	N-80

B. FLOAT EQUIPMENT:

- SURFACE CASING: 9-5/8" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (4) joints of Surface Casing.
- 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.
- 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.
- TIE-BACK CASING: None

C. CEMENTING:

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

- SURFACE: 10 bbl Fr Water Spacer + 190 sx (222.3 cu.ft.) of "Premium Cement" + 2% Calcium Chloride Cement + 0.125# pps of Poly-E-Flake, 15.8 #/gal (1.17 cu ft./sk, Vol 39.58 Bbls.). The 100% excess should circulate cement to the surface. WOC 12 hours. Test csg to 600psi. Total Volume: (222.3 cu-ft/190 sx/39.6 Bbls). TOC at Surface.
- 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: 1216 cu-ft / 216.5 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). Test Casing to 1500 PSI for 30 minutes. Total Cement Volume: (1050 sx / 1461 cu-ft / 260 bbls). Mix with +/- 84,000 SCF Nitrogen. TOC at surface.
- PRODUCTION LINER: **STAGE 1**:10 bbl (56.cu-ft) Fr Water Spacer. **STAGE 2**:40 bbl 9.5 ppg (224.6 cu-ft) Tuned Spacer III + 0.5 gal/bbl Musol + 38.75 ppb Barite + 0.5 gal/bbl SEM-7. **STAGE 3**: 10 bbl Fr Water Spacer. **STAGE 4: Lead Cement**: 50 / 50 Poz Premium + 0.2% Versaset + 0.2% Halad -766, Yield 1.43 cu ft/sk, 13.0 ppg, (10 sx / 14.3 cu ft. / 2.5 bbls). **STAGE 5**: 200 sx. Foamed Lead Cement: 50 / 50 Poz Standard + 0.2% Versaset + 0.2% HALAD-766 + 1.5% Chem-Foamer 760. Yield 1.97 cu-ft/sk. 13.0 ppg (200 sx / 394 cu-ft. / 70.2 bbls.). **STAGE 6**: Tail Cement : 100 sx. 50/50 Poz Standard + 0.2% Versaset + 0.05% HALAD-766 + .05% SA-1015, Weight: 13.5 ppg (100 sx / Yield 1.28 cu ft/sk. / 128 cu ft. / 22.8 bbls) **STAGE 7**: Displace w/ +/- 137 bbl Fr Water. Total Cement (536.3 cu ft / 95.5 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,644 ft.

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 point of curve (~5,800' MD).

- 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 (set at 6,094 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,944 ft. (MD) +/- 78 degree angle. TOC: +/- 5,644 ft. (MD).

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.

The Drilling Rig will be rigged down at this point and Completion operations will begin. After Stimulation and Testing operations are complete the 4-1/2" tie-back string will be removed from the well.

Note: Changes to formation tops, casing landing points, well TD and Directional Plan.



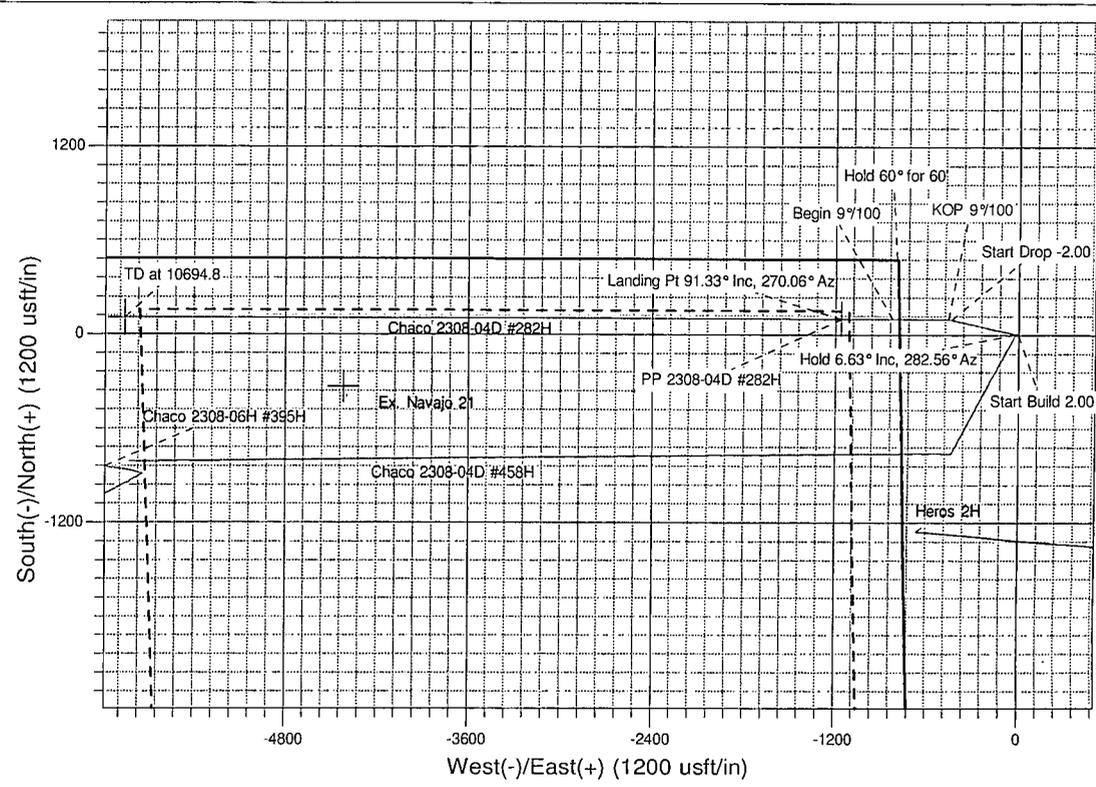
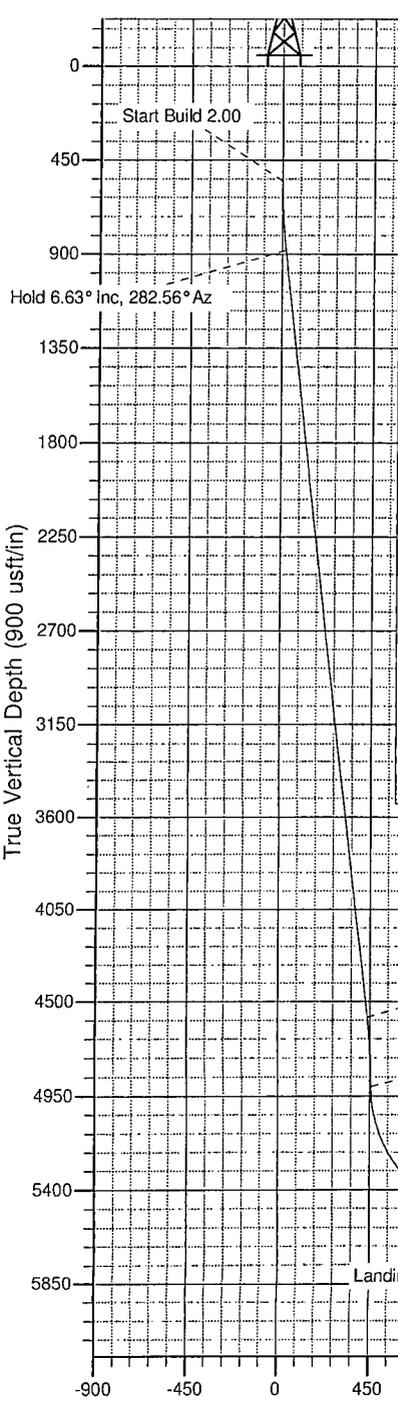
Well Name: Chaco 2308-04D #282H
 Surface Location: Chaco 2308-04D
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 7078.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1914732.60 541391.51 36.262254 -107.692934
WELL @ 7093.0usft (Original Well Elev)

T M
 Azimuths to True North
 Magnetic North: 9.41°
 Magnetic Field
 Strength: 50141.6snT
 Dip Angle: 62.99°
 Date: 9/23/2014
 Model: IGRF2010

Project: SJ 04-23N-8W
 Site: Chaco 2308-04D
 Well: Chaco 2308-04D #282H
 Design #1 23Sep14 kjs

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
550.0	550.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00	
880.8	881.6	6.63	282.56	4.2	-18.7	18.7	19.2	Hold 6.63° Inc, 282.56° Az	
4574.8	4600.4	6.63	282.56	97.5	-437.9	438.0	448.6	Start Drop -2.00	
4905.6	4932.0	0.00	0.00	101.7	-456.6	456.7	467.8	KOP 9°/100	
5456.9	5598.6	60.00	270.06	102.0	-774.9	775.0	786.1	Hold 60° for 60'	
5486.9	5658.6	60.00	270.06	102.1	-826.9	827.0	838.1	Begin 9°/100	
5572.0	6006.8	91.33	270.06	102.4	-1160.0	1160.1	1171.2	Landing Pt 91.33° Inc, 270.06° Az	
5463.0	10693.8	91.33	270.06	107.4	-5845.7	5845.9	5856.9	TD at 10694.8	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TD / PBHL 2308-04D #282H	5463.0	107.4	-5846.7	1914831.48	535544.62	36.262547	-107.712766
PP 2308-04D #282H	5572.0	102.4	-1160.0	1914833.28	540231.36	36.262535	-107.696868



Vertical Section at 270.06° (900 usft/in)

WPXENERGYSM



SAN JUAN BASIN

SJ 04-23N-8W

Chaco 2308-04D

Chaco 2308-04D #282H

Wellbore #1

Plan: Design #1 23Sep14 kjs

Standard Planning Report - Geographic

23 September, 2014



WPX
Planning Report - Geographic

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2308-04D #282H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 7093.0usft (Original Well Elev)
Project:	SJ 04-23N-8W	MD Reference:	WELL @ 7093.0usft (Original Well Elev)
Site:	Chaco 2308-04D	North Reference:	True
Well:	Chaco 2308-04D #282H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23Sep14 kjs		

Project	SJ 04-23N-8W, San Juan County, NM		
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 2308-04D				
Site Position:	Northing:	1,914,728.80 usft	Latitude:	36.262244	
From:	Map	Easting:	541,369.86 usft	Longitude:	-107.693007
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	0.08 °

Well	Chaco 2308-04D #282H					
Well Position	+N/-S	0.0 usft	Northing:	1,914,732.60 usft	Latitude:	36.262254
	+E/-W	0.0 usft	Easting:	541,391.51 usft	Longitude:	-107.692934
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	7,078.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	9/23/2014	9.41	62.99	50,142

Design	Design #1 23Sep14 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	270.06

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
550.0	0.00	0.00	550.0	0.0	0.0	0.00	0.00	0.00	0.00	
881.6	6.63	282.56	880.8	4.2	-18.7	2.00	2.00	0.00	282.56	
4,600.4	6.63	282.56	4,574.8	97.5	-437.9	0.00	0.00	0.00	0.00	
4,932.0	0.00	0.00	4,905.6	101.7	-456.6	2.00	-2.00	0.00	180.00	
5,598.6	60.00	270.06	5,456.9	102.0	-774.9	9.00	9.00	0.00	270.06	
5,658.6	60.00	270.06	5,486.9	102.1	-826.9	0.00	0.00	0.00	0.00	
6,006.8	91.33	270.06	5,572.0	102.4	-1,160.0	9.00	9.00	0.00	0.00	
10,694.8	91.33	270.06	5,463.0	107.4	-5,846.7	0.00	0.00	0.00	0.00	TD / PBHL 2308-04D



WPX
Planning Report - Geographic

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2308-04D #282H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 7093.0usft (Original Well Elev)
Project:	SJ 04-23N-8W	MD Reference:	WELL @ 7093.0usft (Original Well Elev)
Site:	Chaco 2308-04D	North Reference:	True
Well:	Chaco 2308-04D #282H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23Sep14 kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,914,732.60	541,391.51	36.262254	-107.692934
200.0	0.00	0.00	200.0	0.0	0.0	1,914,732.60	541,391.51	36.262254	-107.692934
400.0	0.00	0.00	400.0	0.0	0.0	1,914,732.60	541,391.51	36.262254	-107.692934
550.0	0.00	0.00	550.0	0.0	0.0	1,914,732.60	541,391.51	36.262254	-107.692934
Start Build 2.00									
600.0	1.00	282.56	600.0	0.1	-0.4	1,914,732.70	541,391.09	36.262255	-107.692935
800.0	5.00	282.56	799.7	2.4	-10.6	1,914,734.96	541,380.87	36.262261	-107.692970
881.6	6.63	282.56	880.8	4.2	-18.7	1,914,736.74	541,372.80	36.262266	-107.692997
Hold 6.63° Inc, 282.56° Az									
1,000.0	6.63	282.56	998.5	7.1	-32.1	1,914,739.70	541,359.44	36.262274	-107.693043
1,200.0	6.63	282.56	1,197.1	12.2	-54.6	1,914,744.69	541,336.89	36.262288	-107.693119
1,400.0	6.63	282.56	1,395.8	17.2	-77.1	1,914,749.67	541,314.34	36.262301	-107.693196
1,600.0	6.63	282.56	1,594.5	22.2	-99.7	1,914,754.66	541,291.79	36.262315	-107.693272
1,800.0	6.63	282.56	1,793.1	27.2	-122.2	1,914,759.65	541,269.24	36.262329	-107.693349
2,000.0	6.63	282.56	1,991.8	32.2	-144.8	1,914,764.64	541,246.69	36.262343	-107.693425
2,200.0	6.63	282.56	2,190.4	37.3	-167.3	1,914,769.63	541,224.14	36.262357	-107.693502
2,400.0	6.63	282.56	2,389.1	42.3	-189.9	1,914,774.62	541,201.59	36.262370	-107.693578
2,600.0	6.63	282.56	2,587.8	47.3	-212.4	1,914,779.61	541,179.03	36.262384	-107.693654
2,800.0	6.63	282.56	2,786.4	52.3	-235.0	1,914,784.59	541,156.48	36.262398	-107.693731
3,000.0	6.63	282.56	2,985.1	57.4	-257.5	1,914,789.58	541,133.93	36.262412	-107.693807
3,200.0	6.63	282.56	3,183.7	62.4	-280.0	1,914,794.57	541,111.38	36.262426	-107.693884
3,400.0	6.63	282.56	3,382.4	67.4	-302.6	1,914,799.56	541,088.83	36.262439	-107.693960
3,600.0	6.63	282.56	3,581.1	72.4	-325.1	1,914,804.55	541,066.28	36.262453	-107.694037
3,800.0	6.63	282.56	3,779.7	77.4	-347.7	1,914,809.54	541,043.73	36.262467	-107.694113
4,000.0	6.63	282.56	3,978.4	82.5	-370.2	1,914,814.53	541,021.18	36.262481	-107.694190
4,200.0	6.63	282.56	4,177.1	87.5	-392.8	1,914,819.51	540,998.63	36.262495	-107.694266
4,400.0	6.63	282.56	4,375.7	92.5	-415.3	1,914,824.50	540,976.07	36.262508	-107.694343
4,600.0	6.63	282.56	4,574.4	97.5	-437.8	1,914,829.49	540,953.52	36.262522	-107.694419
4,600.4	6.63	282.56	4,574.8	97.5	-437.9	1,914,829.50	540,953.48	36.262522	-107.694419
Start Drop -2.00									
4,800.0	2.64	282.56	4,773.7	101.0	-453.6	1,914,832.98	540,937.73	36.262532	-107.694473
4,932.0	0.00	0.00	4,905.6	101.7	-456.6	1,914,833.64	540,934.77	36.262534	-107.694483
KOP 9°/100									
5,000.0	6.12	270.06	4,973.5	101.7	-460.2	1,914,833.64	540,931.13	36.262534	-107.694495
5,200.0	24.12	270.06	5,165.8	101.8	-512.2	1,914,833.62	540,879.17	36.262534	-107.694671
5,400.0	42.12	270.06	5,332.6	101.9	-621.0	1,914,833.57	540,770.33	36.262534	-107.695041
5,598.6	60.00	270.06	5,456.9	102.0	-774.9	1,914,833.51	540,616.46	36.262535	-107.695562
Hold 60° for 60'									
5,600.0	60.00	270.06	5,457.6	102.0	-776.1	1,914,833.51	540,615.27	36.262535	-107.695566
5,658.6	60.00	270.06	5,486.9	102.1	-826.9	1,914,833.49	540,564.49	36.262535	-107.695739
Begin 9°/100									
5,800.0	72.72	270.06	5,543.5	102.2	-956.1	1,914,833.44	540,435.25	36.262535	-107.696177
6,000.0	90.72	270.06	5,572.2	102.4	-1,153.2	1,914,833.36	540,238.14	36.262536	-107.696846
6,006.8	91.33	270.06	5,572.0	102.4	-1,160.0	1,914,833.36	540,231.38	36.262536	-107.696869
Landing Pt 91.33° Inc, 270.06° Az									
6,200.0	91.33	270.06	5,567.6	102.6	-1,353.2	1,914,833.28	540,038.20	36.262536	-107.697524
6,400.0	91.33	270.06	5,562.9	102.8	-1,553.1	1,914,833.20	539,838.25	36.262537	-107.698202
6,600.0	91.33	270.06	5,558.2	103.1	-1,753.1	1,914,833.12	539,638.31	36.262537	-107.698880
6,800.0	91.33	270.06	5,553.6	103.3	-1,953.0	1,914,833.04	539,438.36	36.262538	-107.699559
7,000.0	91.33	270.06	5,548.9	103.5	-2,153.0	1,914,832.96	539,238.41	36.262538	-107.700237
7,200.0	91.33	270.06	5,544.3	103.7	-2,352.9	1,914,832.88	539,038.47	36.262539	-107.700915
7,400.0	91.33	270.06	5,539.6	103.9	-2,552.8	1,914,832.80	538,838.52	36.262539	-107.701593
7,600.0	91.33	270.06	5,535.0	104.1	-2,752.8	1,914,832.72	538,638.58	36.262540	-107.702271
7,800.0	91.33	270.06	5,530.3	104.3	-2,952.7	1,914,832.64	538,438.63	36.262540	-107.702950



WPX
Planning Report - Geographic

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2308-04D #282H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 7093.0usft (Original Well Elev)
Project:	SJ 04-23N-8W	MD Reference:	WELL @ 7093.0usft (Original Well Elev)
Site:	Chaco 2308-04D	North Reference:	True
Well:	Chaco 2308-04D #282H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23Sep14 kjs		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
8,000.0	91.33	270.06	5,525.7	104.5	-3,152.7	1,914,832.56	538,238.68	36.262541	-107.703628	
8,200.0	91.33	270.06	5,521.0	104.7	-3,352.6	1,914,832.48	538,038.74	36.262541	-107.704306	
8,400.0	91.33	270.06	5,516.4	104.9	-3,552.6	1,914,832.40	537,838.79	36.262542	-107.704984	
8,600.0	91.33	270.06	5,511.7	105.2	-3,752.5	1,914,832.32	537,638.85	36.262542	-107.705662	
8,800.0	91.33	270.06	5,507.1	105.4	-3,952.5	1,914,832.24	537,438.90	36.262543	-107.706341	
9,000.0	91.33	270.06	5,502.4	105.6	-4,152.4	1,914,832.16	537,238.96	36.262543	-107.707019	
9,200.0	91.33	270.06	5,497.8	105.8	-4,352.4	1,914,832.08	537,039.01	36.262544	-107.707697	
9,400.0	91.33	270.06	5,493.1	106.0	-4,552.3	1,914,832.00	536,839.06	36.262544	-107.708375	
9,600.0	91.33	270.06	5,488.5	106.2	-4,752.2	1,914,831.92	536,639.12	36.262545	-107.709054	
9,800.0	91.33	270.06	5,483.8	106.4	-4,952.2	1,914,831.84	536,439.17	36.262545	-107.709732	
10,000.0	91.33	270.06	5,479.2	106.6	-5,152.1	1,914,831.76	536,239.23	36.262546	-107.710410	
10,200.0	91.33	270.06	5,474.5	106.8	-5,352.1	1,914,831.68	536,039.28	36.262546	-107.711088	
10,400.0	91.33	270.06	5,469.9	107.0	-5,552.0	1,914,831.60	535,839.33	36.262547	-107.711766	
10,600.0	91.33	270.06	5,465.2	107.3	-5,752.0	1,914,831.52	535,639.39	36.262547	-107.712445	
10,694.8	91.33	270.06	5,463.0	107.4	-5,846.7	1,914,831.48	535,544.62	36.262548	-107.712766	
TD at 10694.8										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
TD / PBHL 2308-04D #2 - hit/miss target center - Shape - Point	0.00	0.00	5,463.0	107.4	-5,846.7	1,914,831.48	535,544.62	36.262548	-107.712766	
PP 2308-04D #282H - plan misses target center by 0.1usft at 6006.8usft MD (5572.0 TVD, 102.4 N, -1160.0 E) - Point	0.00	0.00	5,572.0	102.4	-1,160.0	1,914,833.28	540,231.36	36.262535	-107.696869	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
550.0	550.0	0.0	0.0	Start Build 2.00	
881.6	880.8	4.2	-18.7	Hold 6.63° Inc, 282.56° Az	
4,600.4	4,574.8	97.5	-437.9	Start Drop -2.00	
4,932.0	4,905.6	101.7	-456.6	KOP 9°/100	
5,598.6	5,456.9	102.0	-774.9	Hold 60° for 60'	
5,658.6	5,486.9	102.1	-826.9	Begin 9°/100	
6,006.8	5,572.0	102.4	-1,160.0	Landing Pt 91.33° Inc, 270.06° Az	
10,694.8	5,463.0	107.4	-5,846.7	TD at 10694.8	

7. 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. Garbage, trash, and other waste materials will be collected in a portable, self-contained, and fully enclosed trash container during drilling and completion operations. The accumulated trash will be removed, as needed, and will be disposed of at an authorized sanitary landfill. No trash will be buried or burned on location.

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.

