

8/08/2014 DATE IN	SUSPENSE	MAM ENGINEER	8/08/2014 LOGGED IN	NSP NSL TYPE	PMAM1422056799 PMAM1422056663 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



Chaco 2306-19E #188H

ADMINISTRATIVE APPLICATION CHECKLIST 30-043-21136

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] **[NSP-Non-Standard Proration Unit]** **[SD-Simultaneous Dedication]** NSL-7049
[DHC-Downhole Commingling] **[CTB-Lease Commingling]** **[PLC-Pool/Lease Commingling]** NSP
[PC-Pool Commingling] **[OLS - Off-Lease Storage]** **[OLM-Off-Lease Measurement]**
[WFX-Waterflood Expansion] **[PMX-Pressure Maintenance Expansion]** - WPX ENERGY
[SWD-Salt Water Disposal] **[IPI-Injection Pressure Increase]** 120782
[EOR-Qualified Enhanced Oil Recovery Certification] **[PPR-Positive Production Response]**

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication

☒ NSL ☒ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Heather Riley
Print or Type Name

Heather Riley
Signature

Regulatory Manager 8/16/2014
Title Date

heather.riley@wpenergy.com
e-mail Address



Sent via Overnight Delivery

August 6, 2014

Jami Bailey
Division Director
NEW MEXICO OIL CONSERVATION DIVISION
1220 South Saint Francis Drive
Santa Fe, NM 87505

Re: Request for Administrative Approval of a 200-acre non-standard project area in the Lybrook Gallup Oil Pool (42289) and for non-standard location for the Chaco 2306-19E #188H, API: 30-043-21136

Dear Ms. Bailey:

WPX Energy Production, LLC, ("WPX"), requests administrative approval of a non-standard project area for the Chaco 2306-19E #188H. This well's original east-west orientation was changed after Order No. R-13817 established a 9,238 acre project area in the NE Chaco CA. The revised lateral orientation is a NW to SE azimuth, which takes better advantage of the fracture orientation indicated on microseismic.

Order No. R-13817 is contingent upon the formation of a new horizontal oil pool by the NMOCD, which has not yet been established. Stimulation activities are set for August 11, 2014 with first oil production anticipated on August 18, 2014. In order to sell production, WPX needs approval of this non-standard project area.

In addition to the non-standard project area, WPX seeks administrative approval of an unorthodox location for the Chaco 2306-19E #188H. Until Order R-13817 is in full force and effect, we are subject to the 330 feet setbacks and 40-acre spacing units under the Lybrook Gallup Pool rules.

Jami Bailey
Division Director
NEW MEXICO OIL CONSERVATION DIVISION
August 6, 2014
Page 2

This horizontal well surface location is 1779' FNL and 302' FWL, Section 19, T23N, R6W. End of lateral is 930' FNL & 222' FWL, Section 24, T23N, R7W. The top perf is at 93' FEL of Section 24 and the base perf is 337' FWL of section 24. Given the setback requirements, the completed interval is encroaching on the following 40 acre units:

SW/4 NW/4 of Section 24, T23N R7W
N2 of Section 24, T23N R7W
SW/4 NW/4 of Section 19, T23N R6W

Both impacted sections (Section 24 T23N, R7W and section 19 T23N, R6W) are 100% owned and operated by WPX. Therefore no offset notifications are required pursuant to NMOCD rules.

Please note that a NSL application was previously filed for this well March 7, 2014 and a second one was filed on April 23, 2014. This request supersedes those previous applications. Attached is an approved Federal sundry (form 3160-5) changing the plat and drilling plans to those outlined in this letter. Should you have any questions or concerns, please don't hesitate to contact me.

These requests would be rendered moot if the new horizontal oil pool were established; however, a number of factors have contributed to its delay.

Sincerely,

A handwritten signature in black ink, appearing to read "Heather Riley", written in a cursive style.

Heather Riley
Regulatory Manager

Enc.: C-102
Form 3160-5 (approved)
Completed Interval Diagram

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) 476-3450 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

¹ API Number	² Pool Code 42289	³ Pool Name LYBROOK GALLUP
⁴ Property Code	⁵ Property Name CHACO 2306-19E	⁶ Well Number 188H
⁷ GRID No. 120782	⁸ Operator Name WPX ENERGY PRODUCTION, LLC	⁹ Elevation 6965'

¹⁰ Surface Location

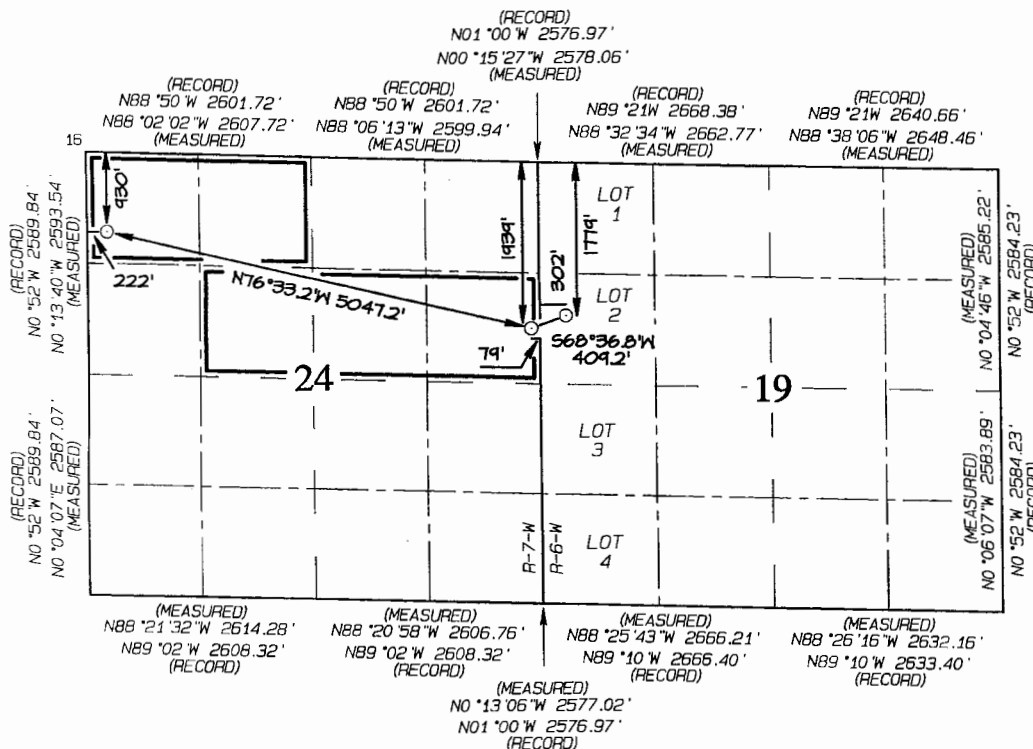
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	19	23N	6W	2	1779	NORTH	302	WEST	SANDOVAL

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
D	24	23N	7W		930	NORTH	222	WEST	SANDOVAL

¹² Dedicated Acres 200.0 Acres - Section 24 N/2 NW/4 - S/2 NE/4 - SE/4 NW/4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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 _____ Date _____

Printed Name _____

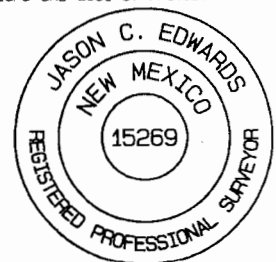
E-mail Address _____

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: JUNE 27, 2014
Date of Survey: JULY 10, 2012

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

END-OF-LATERAL
930' FNL 222' FWL
SECTION 24, T23N, R7W
LAT: 36.21592°N
LONG: 107.53472°W
DATUM: NAD1927

LAT: 36.21593°N
LONG: 107.53532°W
DATUM: NAD1983

POINT-OF-ENTRY
1939' FNL 79' FEL
SECTION 24, T23N, R7W
LAT: 36.21287°N
LONG: 107.51803°W
DATUM: NAD1927

LAT: 36.21288°N
LONG: 107.51863°W
DATUM: NAD1983

SURFACE LOCATION
1779' FNL 302' FWL
SECTION 19, T23N, R6W
LAT: 36.21329°N
LONG: 107.51674°W
DATUM: NAD1927

LAT: 36.21331°N
LONG: 107.51735°W
DATUM: NAD1983



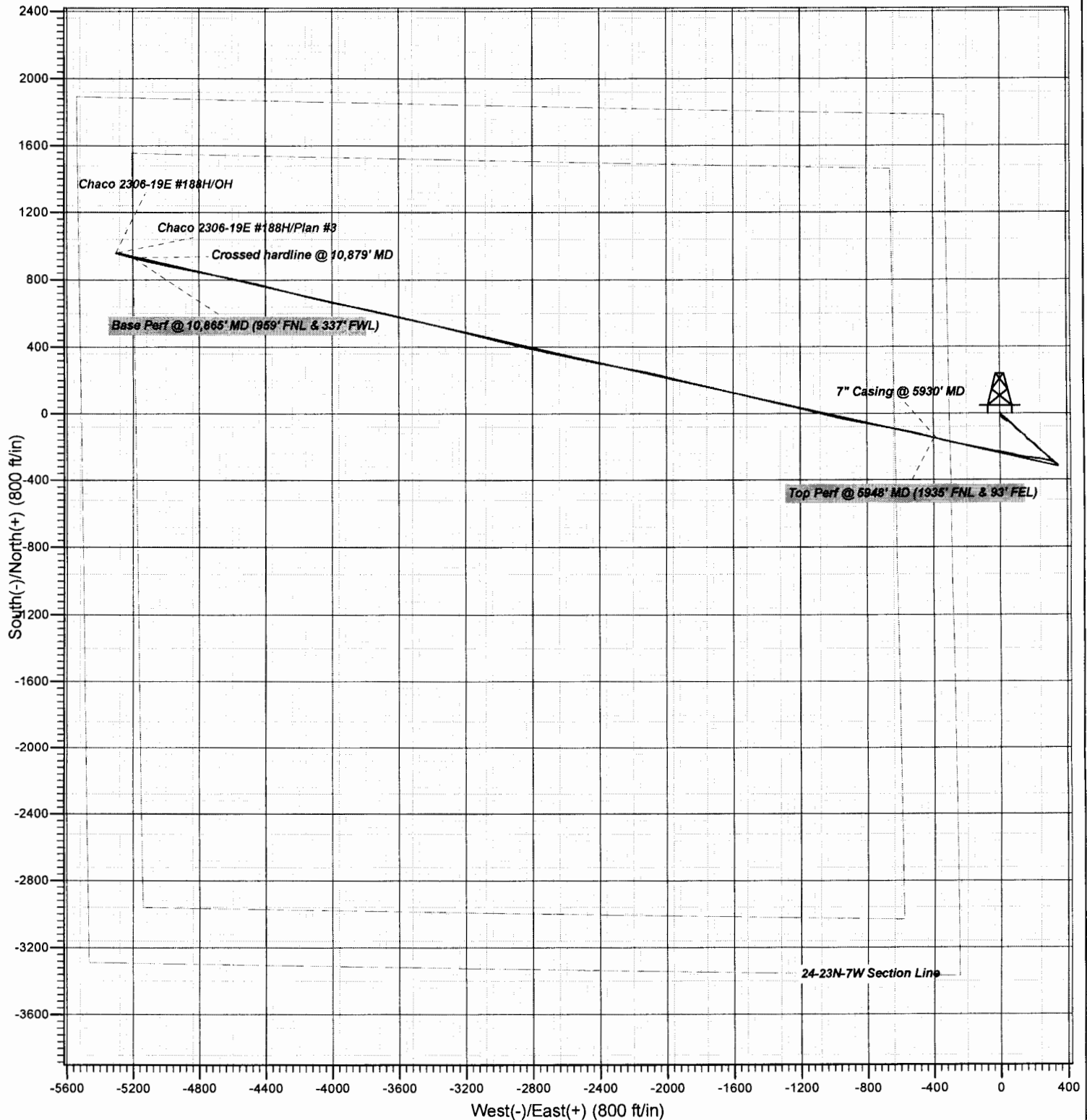
Scientific Drilling

Company: WPX Energy Rocky Mountain, LLC
Project: Sandoval County, NM NAD27
Site: Chaco 2306-19E



Well Details: Chaco 2306-19E #188H

TVD Reference: GL 6965' & RKB 14' @ 6979.00ft
+N/-S E/-W Northing Easting Latitude Longitude Slot
0.00 0.001899288.10 126313.86 36° 12' 47.844 N 107° 31' 0.264 W



Plan: OH

16:02, August 13 2014
Created By: Janie Collins

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

Jami Bailey, 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 3160-4 or 3160-5 form.

Operator Signature Date:

Application Type:

☐ P&A ☒ Drilling/Casing Change ☐ Recomplete/DHC
☐ Location Change ☐ Other: Extend lateral

Well information:

API Well #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E	Feet	NS	FE	EW
30-043-21136-00-00	CHACO 2306 19E	188H	WPX ENERGY PRODUCTION, LLC	O	N	Sandoval	F	E	19	23	N	6	W	1779	N	302	W

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations

Hold C104 for directional survey, as drilled plat, NSL and NSP

NMOCD Approved by Signature

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

JUN 11 2014

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)

505-333-1808

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

Sur: 1779' FNL & 302' FWL, sec 19, T23N, R6W - BHL: 926' FNL & 230' FWL, Sec 24, T23N, R7W

5. Lease Serial No.

NMSF-078360

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Chaco 2306-19E #188H

9. API Well No.

30-043-21136

10. Field and Pool or Exploratory Area

Lybrook Gallup

11. Country or Parish, State

Sandoval County, 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 <u>Extended Lateral</u>
	☐ 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 plans to plans to extend the lateral on this well as per attached C-102, operations plan and directional plan. No new surface disturbance is required. This well is in an extended CA per NMOCD order R-13817. 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.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

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) Larry Higgins		Title Regulatory Specialist
Signature <i>Larry Higgins</i>		Date 6/11/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by <i>William Tambekou</i>	Petroleum Title Engineer	Date 6/16/2014
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 FFO

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)

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

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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
RECEIVED

JUN 11 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-043-21136	Pool Code 42289	Pool Name LYBROOK GALLUP
Property Code 40021	Property Name CHACO 2306-19E	Well Number 188H
GRID No. 120782	Operator Name WPX ENERGY PRODUCTION, LLC	Elevation 6965'

10 Surface Location

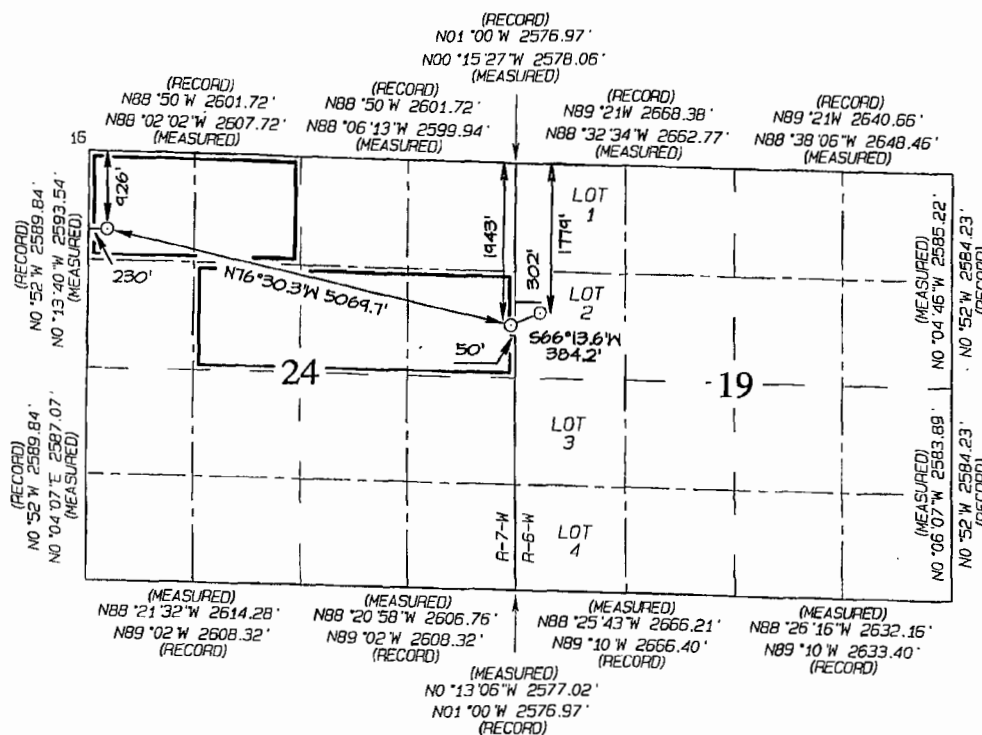
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	19	23N	6W	2	1779	NORTH	302	WEST	SANDOVAL

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
D	24	23N	7W		926	NORTH	230	WEST	SANDOVAL

Dedicated Acres 200.0 Acres - Section 24 N/2 NW/4 - S/2 NE/4 - SE/4 NW/4	Joint or Infill	Consolidation Code	Order No.
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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



END-OF-LATERAL
926' FNL 230' FWL
SECTION 24, T23N, R7W
LAT: 36.21593°N
LONG: 107.53469°W
DATUM: NAD1927

LAT: 36.21594°N
LONG: 107.53529°W
DATUM: NAD1983

POINT-OF-ENTRY
1943' FNL 50' FEL
SECTION 24, T23N, R7W
LAT: 36.21286°N
LONG: 107.51793°W
DATUM: NAD1927

LAT: 36.21287°N
LONG: 107.51853°W
DATUM: NAD1983

SURFACE LOCATION
1779' FNL 302' FWL
SECTION 19, T23N, R6W
LAT: 36.21329°N
LONG: 107.51674°W
DATUM: NAD1927

LAT: 36.21331°N
LONG: 107.51735°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: *Larry Higgins* Date: 6/11/14
Larry Higgins

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 belief.

Date Revised: JUNE 11, 2014
Date of Survey: JULY 10, 2012

Signature and Seal of 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: 6/10/2014 **FIELD:** Lybrook (Gallup)
WELL NAME: Chaco 2306-19E #188H Rev **SURFACE:** BLM
SH Location: SWNW Sec 19-23N-06W **ELEVATION:** 6965' GR
BH Location: NWNW Sec 24-23N-07W **MINERALS:** BLM
Sandoval, NM
MEASURED DEPTH: 10,996' **LEASE #:** NMSF 078360

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1309	1305	Point Lookout	4199	4184
Kirtland	1608	1602	Mancos	4385	4370
Picture Cliffs	1910	1902	Kickoff Point	4840	4812
Lewis	1993	1987	Top Target	5621	5423
Chacra	2329	2317	Landing Point	5926	5479
Cliff House	3422	3407	Base Target	5926	5479
Menefee	3440	3425			
			TD	10996	5429

- 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.**

NOTE: Vertical portion of the well (8-3/4 in.) will be directionally drilled as per attached Directional Plan to +/- 4,840' (MD) / 4,812' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,926' (MD) / 5,479' (TVD). 7 in. csg will be set at this point. A 6-1/8" Lateral will be drilled as per the attached Directional Plan to +/- 10,996' (MD) / 5,429' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,776 ft. to TD and cemented. Liner will be tied back to surface w / 4-1/2" Casing for stimulation / testing, then removed from the well.

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"	5,926'	7"	23#	K-55
Prod. Liner	6.125"	5,776' - 10,996'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,776'	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., and 2,000ft. Additionally run 1 turbolizing centralizer on every other joint from 100' below the top of the Kirtland to 100' above the top of the Ojo Alamo, as referenced in Formation Tops in Section I-A.
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 + (2) RSI (Sliding Sleeves) 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:** None

C. CEMENTING:

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

1. **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.
2. **INTERMEDIATE:** 20 bbl (112 cu-ft) Mud Flush III spacer + Lead: 850 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.
3. **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:** 220 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 (220 sx / 433 cu-ft. / 77.1 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 (330 sx / 575.3 cu ft / 102.1 bbls). Mix Foamed Cement w/ +/- 75,000 SCF Nitrogen. Est. TOC +/- 5,475 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 +/-10,994 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,775 ft. (MD) +/- 90 degree angle. TOC: +/- 5,475 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: Casing Landing Points, well TD and Directional Plan.



Company: WVX Energy Rocky Mountain
 Project: Sandoval County, NM NAD27
 Site: Chaco 2306-19E
 Well: Chaco 2306-19E #188H
 Wellbore: OH
 Design: Plan #3

PROJECT DETAILS: Sandoval County, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico Central 3002
 System Datum: Mean Sea Level
 Local North: True



Azimuths to True North
 Magnetic North: 8.8°

Magnetic Field
 Strength: 48885.1nT
 Dip Angle: 61.0°
 Date: 6/28/2014
 Model: HDG1

WELL DETAILS: Chaco 2306-19E #188H

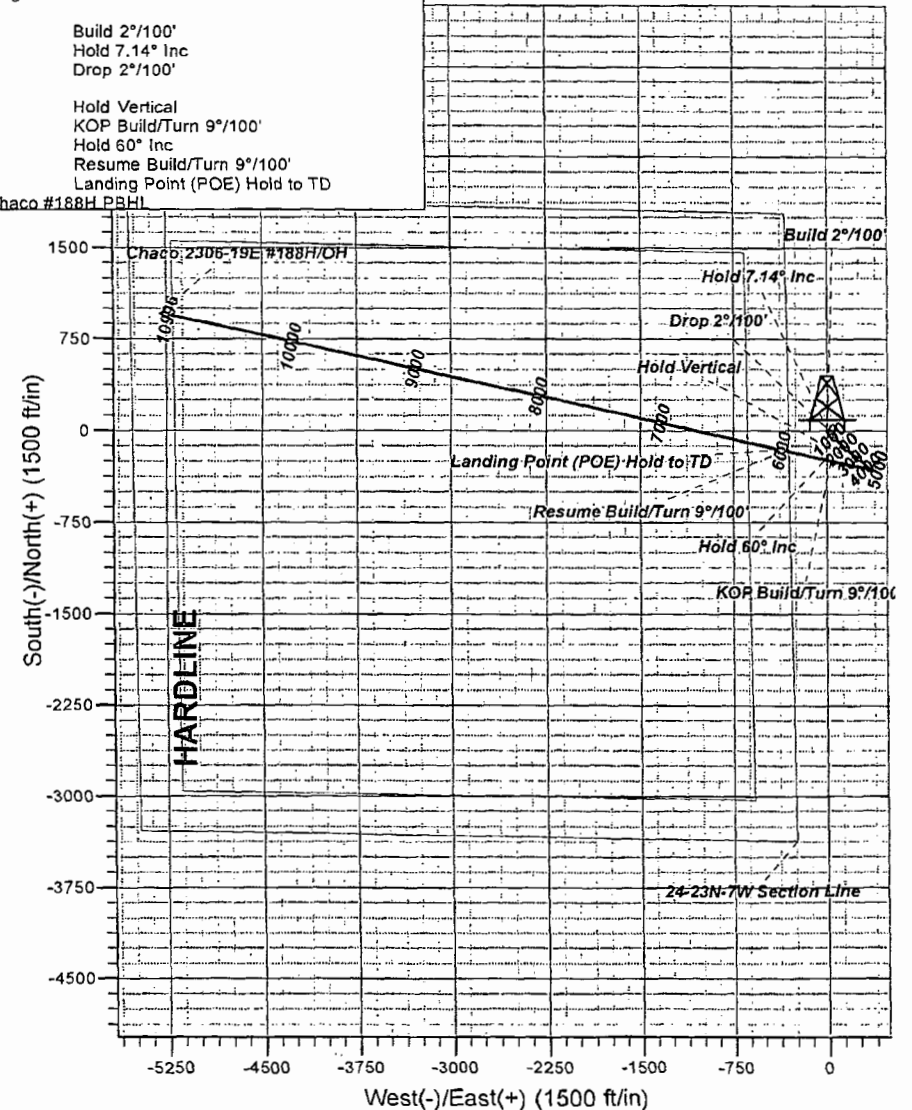
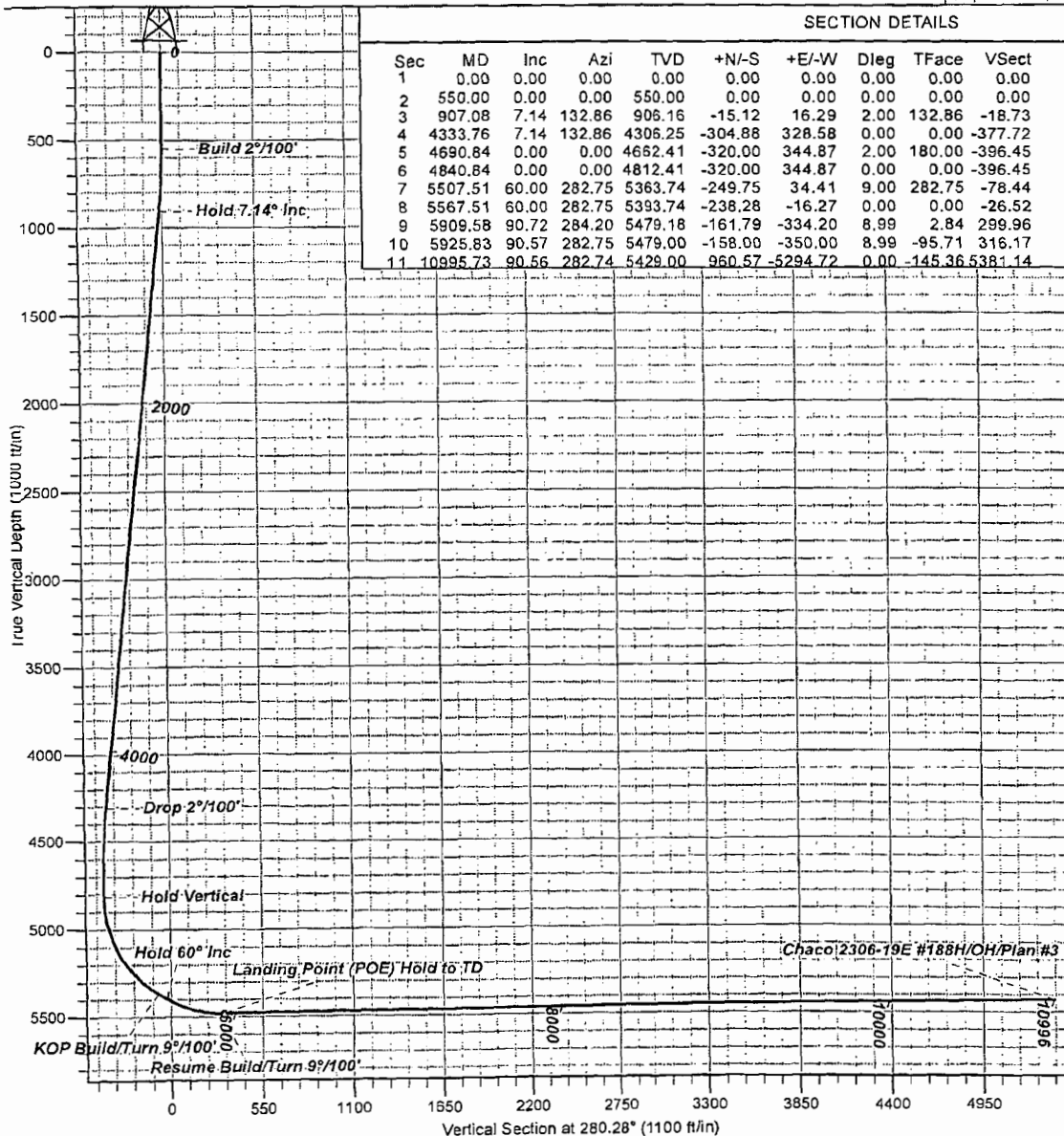
Plan: Plan #3 (Chaco 2306-19E #188H/OH)

Created By: Janie Collins Date: 16:02, June 09 2014

GL 6965' & RKB 14' @ 6979.00ft
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.00 0.00 1899288.10 126313.86 36° 12' 47.844 N 107° 31' 0.264 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00		Build 2°/100'
3	907.08	7.14	132.86	906.16	-15.12	16.29	2.00	132.86	-18.73		Hold 7.14° Inc
4	4333.76	7.14	132.86	4306.25	-304.88	328.58	0.00	0.00	-377.72		Drop 2°/100'
5	4690.84	0.00	0.00	4662.41	-320.00	344.87	2.00	180.00	-396.45		
6	4840.84	0.00	0.00	4812.41	-320.00	344.87	0.00	0.00	-396.45		Hold Vertical
7	5507.51	60.00	282.75	5363.74	-249.75	34.41	9.00	282.75	-78.44		KOP Build/Turn 9°/100'
8	5567.51	60.00	282.75	5393.74	-238.28	-16.27	0.00	0.00	-26.52		Hold 60° Inc
9	5909.58	90.72	284.20	5479.18	-161.79	-334.20	8.99	2.84	299.96		Resume Build/Turn 9°/100'
10	5925.83	90.57	282.75	5479.00	-158.00	-350.00	8.99	-95.71	316.17		Landing Point (POE) Hold to TD
11	10995.73	90.56	282.74	5429.00	960.57	-5294.72	0.00	-145.36	5381.14		Chaco #188H PBHI



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Company:	WPX Energy Rocky Mountain, LLC	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Project:	Sandoval County, NM NAD27	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	North Reference:	True
Well:	Chaco 2306-19E #188H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Project	Sandoval County, NM NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site	Chaco 2306-19E				
Site Position:		Northing:	1,899,266.26 usft	Latitude:	36° 12' 47.628 N
From:	Lat/Long	Easting:	126,313.58 usft	Longitude:	107° 31' 0.264 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.75 °

Well	Chaco 2306-19E #188H					
Well Position	+N/-S	0.00 ft	Northing:	1,899,288.11 usft	Latitude:	36° 12' 47.844 N
	+E/-W	0.00 ft	Easting:	126,313.86 usft	Longitude:	107° 31' 0.264 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	6,965.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/28/2014	8.85	61.05	49,885

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	280.28

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	
907.08	7.14	132.86	906.16	-15.12	16.29	2.00	2.00	0.00	132.86	
4,333.76	7.14	132.86	4,306.25	-304.88	328.58	0.00	0.00	0.00	0.00	
4,690.84	0.00	0.00	4,662.41	-320.00	344.87	2.00	-2.00	0.00	180.00	
4,840.84	0.00	0.00	4,812.41	-320.00	344.87	0.00	0.00	0.00	0.00	
5,507.51	60.00	282.75	5,363.74	-249.75	34.41	9.00	9.00	0.00	282.75	
5,567.51	60.00	282.75	5,393.74	-238.28	-16.27	0.00	0.00	0.00	0.00	
5,909.58	90.72	284.20	5,479.18	-161.79	-334.20	8.99	8.98	0.42	2.84	
5,925.83	90.57	282.75	5,479.00	-158.00	-350.00	8.99	-0.90	-8.94	-95.71	Chaco #188H POE
10,995.73	90.56	282.74	5,429.00	960.57	-5,294.72	0.00	0.00	0.00	-145.36	Chaco #188H PBHL

Database: Grand Junction District
Company: WPX Energy Rocky Mountain, LLC
Project: Sandoval County, NM NAD27
Site: Chaco 2306-19E
Well: Chaco 2306-19E #188H
Wellbore: OH
Design: Plan #3

Local Co-ordinate Reference: Well Chaco 2306-19E #188H
TVD Reference: GL 6965' & RKB 14' @ 6979.00ft
MD Reference: GL 6965' & RKB 14' @ 6979.00ft
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
100.00	0.00	0.00	100.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
200.00	0.00	0.00	200.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
300.00	0.00	0.00	300.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
400.00	0.00	0.00	400.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
500.00	0.00	0.00	500.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
550.00	0.00	0.00	550.00	0.00	0.00	1,899,288.11	126,313.86	36° 12' 47.844 N	107° 31' 0.264 W
Build 2°/100'									
600.00	1.00	132.86	600.00	-0.30	0.32	1,899,287.80	126,314.18	36° 12' 47.841 N	107° 31' 0.260 W
700.00	3.00	132.86	699.93	-2.67	2.88	1,899,285.40	126,316.71	36° 12' 47.818 N	107° 31' 0.229 W
800.00	5.00	132.86	799.68	-7.41	7.99	1,899,280.59	126,321.76	36° 12' 47.771 N	107° 31' 0.166 W
900.00	7.00	132.86	899.13	-14.52	15.65	1,899,273.38	126,329.33	36° 12' 47.700 N	107° 31' 0.073 W
907.08	7.14	132.86	906.16	-15.12	16.29	1,899,272.78	126,329.96	36° 12' 47.695 N	107° 31' 0.065 W
1,000.00	7.14	132.86	998.36	-22.97	24.76	1,899,264.81	126,338.32	36° 12' 47.617 N	107° 30' 59.962 W
1,057.00	7.14	132.86	1,054.91	-27.79	29.95	1,899,259.92	126,343.45	36° 12' 47.569 N	107° 30' 59.898 W
Hold 10.14° Inc									
1,100.00	7.14	132.86	1,097.58	-31.43	33.87	1,899,256.24	126,347.32	36° 12' 47.533 N	107° 30' 59.851 W
1,200.00	7.14	132.86	1,196.80	-39.89	42.99	1,899,247.66	126,356.33	36° 12' 47.450 N	107° 30' 59.739 W
1,300.00	7.14	132.86	1,296.03	-48.34	52.10	1,899,239.09	126,365.33	36° 12' 47.366 N	107° 30' 59.628 W
1,400.00	7.14	132.86	1,395.25	-56.80	61.21	1,899,230.51	126,374.33	36° 12' 47.282 N	107° 30' 59.517 W
1,500.00	7.14	132.86	1,494.48	-65.26	70.33	1,899,221.94	126,383.33	36° 12' 47.199 N	107° 30' 59.406 W
1,600.00	7.14	132.86	1,593.70	-73.71	79.44	1,899,213.36	126,392.33	36° 12' 47.115 N	107° 30' 59.295 W
1,700.00	7.14	132.86	1,692.92	-82.17	88.55	1,899,204.79	126,401.34	36° 12' 47.031 N	107° 30' 59.183 W
1,800.00	7.14	132.86	1,792.15	-90.62	97.67	1,899,196.21	126,410.34	36° 12' 46.948 N	107° 30' 59.072 W
1,900.00	7.14	132.86	1,891.37	-99.08	106.78	1,899,187.64	126,419.34	36° 12' 46.864 N	107° 30' 58.961 W
2,000.00	7.14	132.86	1,990.60	-107.54	115.89	1,899,179.06	126,428.34	36° 12' 46.781 N	107° 30' 58.850 W
2,100.00	7.14	132.86	2,089.82	-115.99	125.01	1,899,170.49	126,437.34	36° 12' 46.697 N	107° 30' 58.739 W
2,200.00	7.14	132.86	2,189.05	-124.45	134.12	1,899,161.92	126,446.35	36° 12' 46.613 N	107° 30' 58.627 W
2,300.00	7.14	132.86	2,288.27	-132.90	143.23	1,899,153.34	126,455.35	36° 12' 46.530 N	107° 30' 58.516 W
2,400.00	7.14	132.86	2,387.49	-141.36	152.35	1,899,144.77	126,464.35	36° 12' 46.446 N	107° 30' 58.405 W
2,500.00	7.14	132.86	2,486.72	-149.82	161.46	1,899,136.19	126,473.35	36° 12' 46.363 N	107° 30' 58.294 W
2,503.00	7.14	132.86	2,489.69	-150.07	161.73	1,899,135.94	126,473.62	36° 12' 46.360 N	107° 30' 58.291 W
Drop 2°/100'									
2,600.00	7.14	132.86	2,585.94	-158.27	170.57	1,899,127.62	126,482.35	36° 12' 46.279 N	107° 30' 58.183 W
2,700.00	7.14	132.86	2,685.17	-166.73	179.69	1,899,119.04	126,491.36	36° 12' 46.195 N	107° 30' 58.072 W
2,800.00	7.14	132.86	2,784.39	-175.19	188.80	1,899,110.47	126,500.36	36° 12' 46.112 N	107° 30' 57.960 W
2,900.00	7.14	132.86	2,883.61	-183.64	197.91	1,899,101.89	126,509.36	36° 12' 46.028 N	107° 30' 57.849 W
3,000.00	7.14	132.86	2,982.84	-192.10	207.03	1,899,093.32	126,518.36	36° 12' 45.944 N	107° 30' 57.738 W
3,010.00	7.14	132.86	2,992.76	-192.94	207.94	1,899,092.46	126,519.26	36° 12' 45.936 N	107° 30' 57.727 W
Hold Vertical									
3,100.00	7.14	132.86	3,082.06	-200.55	216.14	1,899,084.75	126,527.37	36° 12' 45.861 N	107° 30' 57.627 W
3,200.00	7.14	132.86	3,181.29	-209.01	225.25	1,899,076.17	126,536.37	36° 12' 45.777 N	107° 30' 57.516 W
3,300.00	7.14	132.86	3,280.51	-217.47	234.37	1,899,067.60	126,545.37	36° 12' 45.694 N	107° 30' 57.404 W
3,400.00	7.14	132.86	3,379.74	-225.92	243.48	1,899,059.02	126,554.37	36° 12' 45.610 N	107° 30' 57.293 W
3,500.00	7.14	132.86	3,478.96	-234.38	252.59	1,899,050.45	126,563.37	36° 12' 45.526 N	107° 30' 57.182 W
3,600.00	7.14	132.86	3,578.18	-242.83	261.71	1,899,041.87	126,572.38	36° 12' 45.443 N	107° 30' 57.071 W
3,700.00	7.14	132.86	3,677.41	-251.29	270.82	1,899,033.30	126,581.38	36° 12' 45.359 N	107° 30' 56.960 W
3,800.00	7.14	132.86	3,776.63	-259.75	279.93	1,899,024.72	126,590.38	36° 12' 45.276 N	107° 30' 56.848 W
3,900.00	7.14	132.86	3,875.86	-268.20	289.05	1,899,016.15	126,599.38	36° 12' 45.192 N	107° 30' 56.737 W
4,000.00	7.14	132.86	3,975.08	-276.66	298.16	1,899,007.58	126,608.38	36° 12' 45.108 N	107° 30' 56.626 W
4,100.00	7.14	132.86	4,074.31	-285.12	307.27	1,898,999.00	126,617.39	36° 12' 45.025 N	107° 30' 56.515 W
4,200.00	7.14	132.86	4,173.53	-293.57	316.39	1,898,990.43	126,626.39	36° 12' 44.941 N	107° 30' 56.404 W
4,300.00	7.14	132.86	4,272.75	-302.03	325.50	1,898,981.85	126,635.39	36° 12' 44.857 N	107° 30' 56.292 W
4,333.76	7.14	132.86	4,306.25	-304.88	328.58	1,898,978.96	126,638.43	36° 12' 44.829 N	107° 30' 56.255 W

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Company:	WPX Energy Rocky Mountain, LLC	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Project:	Sandoval County, NM NAD27	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	North Reference:	True
Well:	Chaco 2306-19E #188H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,400.00	5.82	132.86	4,372.07	-309.97	334.06	1,898,973.80	126,643.84	36° 12' 44.779 N	107° 30' 56.188 W
4,500.00	3.82	132.86	4,471.71	-315.68	340.21	1,898,968.01	126,649.92	36° 12' 44.722 N	107° 30' 56.113 W
4,600.00	1.82	132.86	4,571.58	-319.02	343.81	1,898,964.62	126,653.48	36° 12' 44.689 N	107° 30' 56.069 W
4,690.84	0.00	0.00	4,662.41	-320.00	344.87	1,898,963.63	126,654.52	36° 12' 44.680 N	107° 30' 56.056 W
4,700.00	0.00	0.00	4,671.57	-320.00	344.87	1,898,963.63	126,654.52	36° 12' 44.680 N	107° 30' 56.056 W
4,800.00	0.00	0.00	4,771.57	-320.00	344.87	1,898,963.63	126,654.52	36° 12' 44.680 N	107° 30' 56.056 W
4,840.46	0.00	0.00	4,812.03	-320.00	344.87	1,898,963.63	126,654.52	36° 12' 44.680 N	107° 30' 56.056 W
KOP Build/Turn 9.2°/100'									
4,840.84	0.00	0.00	4,812.41	-320.00	344.87	1,898,963.63	126,654.52	36° 12' 44.680 N	107° 30' 56.056 W
4,900.00	5.32	282.75	4,871.48	-319.39	342.19	1,898,964.27	126,651.85	36° 12' 44.686 N	107° 30' 56.089 W
5,000.00	14.32	282.75	4,969.92	-315.63	325.57	1,898,968.25	126,635.28	36° 12' 44.723 N	107° 30' 56.292 W
5,100.00	23.32	282.75	5,064.47	-308.52	294.13	1,898,975.77	126,603.94	36° 12' 44.793 N	107° 30' 56.675 W
5,200.00	32.32	282.75	5,152.82	-298.23	248.65	1,898,986.66	126,558.60	36° 12' 44.895 N	107° 30' 57.230 W
5,300.00	41.32	282.75	5,232.78	-285.01	190.25	1,899,000.63	126,500.37	36° 12' 45.026 N	107° 30' 57.943 W
5,400.00	50.32	282.75	5,302.40	-269.20	120.37	1,899,017.36	126,430.71	36° 12' 45.182 N	107° 30' 58.795 W
5,492.63	58.66	282.75	5,356.15	-252.57	46.89	1,899,034.94	126,357.45	36° 12' 45.346 N	107° 30' 59.692 W
Hold 60° Inc									
5,500.00	59.32	282.75	5,359.95	-251.18	40.73	1,899,036.42	126,351.31	36° 12' 45.360 N	107° 30' 59.767 W
5,507.51	60.00	282.75	5,363.74	-249.75	34.41	1,899,037.93	126,345.01	36° 12' 45.374 N	107° 30' 59.844 W
5,567.51	60.00	282.75	5,393.74	-238.28	-16.27	1,899,050.06	126,294.48	36° 12' 45.488 N	107° 31' 0.463 W
5,577.28	60.88	282.80	5,398.56	-236.40	-24.56	1,899,052.04	126,286.22	36° 12' 45.506 N	107° 31' 0.564 W
Resume Build/Turn 9°/100'									
5,600.00	62.92	282.91	5,409.26	-231.94	-44.10	1,899,056.76	126,266.74	36° 12' 45.550 N	107° 31' 0.802 W
5,700.00	71.90	283.37	5,447.64	-210.97	-133.91	1,899,078.91	126,177.21	36° 12' 45.758 N	107° 31' 1.898 W
5,800.00	80.87	283.78	5,471.16	-188.18	-228.29	1,899,102.93	126,083.14	36° 12' 45.983 N	107° 31' 3.050 W
5,900.00	89.85	284.17	5,479.23	-164.13	-324.91	1,899,128.23	125,986.83	36° 12' 46.221 N	107° 31' 4.229 W
5,909.58	90.72	284.20	5,479.18	-161.79	-334.20	1,899,130.70	125,977.57	36° 12' 46.244 N	107° 31' 4.342 W
5,917.28	90.65	283.51	5,479.09	-159.94	-341.68	1,899,132.64	125,970.13	36° 12' 46.262 N	107° 31' 4.433 W
Landing Point (POE) Hold to TD									
5,925.83	90.57	282.75	5,479.00	-158.00	-350.00	1,899,134.69	125,961.83	36° 12' 46.282 N	107° 31' 4.535 W
Chaco #188H POE									
6,000.00	90.57	282.75	5,478.26	-141.63	-422.34	1,899,152.00	125,889.71	36° 12' 46.443 N	107° 31' 5.417 W
6,100.00	90.57	282.75	5,477.27	-119.56	-519.87	1,899,175.34	125,792.48	36° 12' 46.662 N	107° 31' 6.607 W
6,200.00	90.57	282.75	5,476.27	-97.49	-617.40	1,899,198.68	125,695.24	36° 12' 46.880 N	107° 31' 7.797 W
6,300.00	90.57	282.75	5,475.28	-75.43	-714.93	1,899,222.02	125,598.01	36° 12' 47.098 N	107° 31' 8.987 W
6,400.00	90.57	282.75	5,474.29	-53.36	-812.46	1,899,245.36	125,500.78	36° 12' 47.316 N	107° 31' 10.177 W
6,500.00	90.57	282.75	5,473.29	-31.29	-909.99	1,899,268.70	125,403.55	36° 12' 47.534 N	107° 31' 11.367 W
6,600.00	90.57	282.75	5,472.30	-9.22	-1,007.52	1,899,292.04	125,306.31	36° 12' 47.753 N	107° 31' 12.558 W
6,700.00	90.57	282.75	5,471.31	12.84	-1,105.05	1,899,315.38	125,209.08	36° 12' 47.971 N	107° 31' 13.748 W
6,800.00	90.57	282.75	5,470.32	34.91	-1,202.58	1,899,338.72	125,111.85	36° 12' 48.189 N	107° 31' 14.938 W
6,900.00	90.57	282.75	5,469.32	56.98	-1,300.11	1,899,362.06	125,014.61	36° 12' 48.407 N	107° 31' 16.128 W
7,000.00	90.57	282.75	5,468.33	79.04	-1,397.64	1,899,385.40	124,917.38	36° 12' 48.625 N	107° 31' 17.318 W
7,100.00	90.57	282.75	5,467.34	101.11	-1,495.17	1,899,408.74	124,820.15	36° 12' 48.843 N	107° 31' 18.508 W
7,200.00	90.57	282.75	5,466.35	123.17	-1,592.70	1,899,432.08	124,722.91	36° 12' 49.062 N	107° 31' 19.698 W
7,300.00	90.57	282.75	5,465.36	145.24	-1,690.23	1,899,455.41	124,625.68	36° 12' 49.280 N	107° 31' 20.888 W
7,400.00	90.57	282.75	5,464.37	167.31	-1,787.76	1,899,478.75	124,528.45	36° 12' 49.498 N	107° 31' 22.078 W
7,500.00	90.57	282.75	5,463.38	189.37	-1,885.29	1,899,502.09	124,431.21	36° 12' 49.716 N	107° 31' 23.268 W
7,600.00	90.57	282.75	5,462.39	211.44	-1,982.82	1,899,525.43	124,333.98	36° 12' 49.934 N	107° 31' 24.458 W
7,700.00	90.57	282.75	5,461.40	233.50	-2,080.35	1,899,548.76	124,236.75	36° 12' 50.152 N	107° 31' 25.648 W
7,800.00	90.57	282.75	5,460.42	255.56	-2,177.88	1,899,572.10	124,139.51	36° 12' 50.370 N	107° 31' 26.838 W
7,900.00	90.57	282.75	5,459.43	277.63	-2,275.41	1,899,595.44	124,042.28	36° 12' 50.588 N	107° 31' 28.028 W
8,000.00	90.57	282.75	5,458.44	299.69	-2,372.94	1,899,618.77	123,945.05	36° 12' 50.807 N	107° 31' 29.218 W
8,100.00	90.57	282.75	5,457.45	321.76	-2,470.47	1,899,642.11	123,847.81	36° 12' 51.025 N	107° 31' 30.408 W
8,200.00	90.57	282.75	5,456.46	343.82	-2,568.00	1,899,665.44	123,750.58	36° 12' 51.243 N	107° 31' 31.599 W

Database: Grand Junction District
 Company: WPX Energy Rocky Mountain, LLC
 Project: Sandoval County, NM NAD27
 Site: Chaco 2306-19E
 Well: Chaco 2306-19E #188H
 Wellbore: OH
 Design: Plan #3

Local Co-ordinate Reference: Well Chaco 2306-19E #188H
 TVD Reference: GL 6965' & RKB 14' @ 6979.00ft
 MD Reference: GL 6965' & RKB 14' @ 6979.00ft
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,300.00	90.57	282.75	5,455.48	365.88	-2,665.53	1,899,688.78	123,653.34	36° 12' 51.461 N	107° 31' 32.789 W
8,400.00	90.57	282.75	5,454.49	387.95	-2,763.06	1,899,712.11	123,556.11	36° 12' 51.679 N	107° 31' 33.979 W
8,500.00	90.56	282.75	5,453.50	410.01	-2,860.59	1,899,735.45	123,458.88	36° 12' 51.897 N	107° 31' 35.169 W
8,600.00	90.56	282.75	5,452.52	432.07	-2,958.12	1,899,758.78	123,361.64	36° 12' 52.115 N	107° 31' 36.359 W
8,700.00	90.56	282.75	5,451.53	454.13	-3,055.65	1,899,782.12	123,264.41	36° 12' 52.333 N	107° 31' 37.549 W
8,800.00	90.56	282.75	5,450.55	476.20	-3,153.19	1,899,805.45	123,167.17	36° 12' 52.551 N	107° 31' 38.739 W
8,900.00	90.56	282.75	5,449.56	498.26	-3,250.72	1,899,828.79	123,069.94	36° 12' 52.769 N	107° 31' 39.929 W
9,000.00	90.56	282.75	5,448.58	520.32	-3,348.25	1,899,852.12	122,972.71	36° 12' 52.987 N	107° 31' 41.119 W
9,100.00	90.56	282.75	5,447.59	542.38	-3,445.78	1,899,875.45	122,875.47	36° 12' 53.205 N	107° 31' 42.309 W
9,200.00	90.56	282.75	5,446.61	564.44	-3,543.31	1,899,898.79	122,778.24	36° 12' 53.423 N	107° 31' 43.500 W
9,300.00	90.56	282.75	5,445.63	586.50	-3,640.84	1,899,922.12	122,681.00	36° 12' 53.641 N	107° 31' 44.690 W
9,400.00	90.56	282.75	5,444.64	608.57	-3,738.37	1,899,945.45	122,583.77	36° 12' 53.859 N	107° 31' 45.880 W
9,500.00	90.56	282.75	5,443.66	630.63	-3,835.90	1,899,968.79	122,486.53	36° 12' 54.077 N	107° 31' 47.070 W
9,600.00	90.56	282.75	5,442.68	652.69	-3,933.44	1,899,992.12	122,389.30	36° 12' 54.295 N	107° 31' 48.260 W
9,700.00	90.56	282.74	5,441.70	674.75	-4,030.97	1,900,015.45	122,292.06	36° 12' 54.513 N	107° 31' 49.450 W
9,800.00	90.56	282.74	5,440.71	696.81	-4,128.50	1,900,038.78	122,194.83	36° 12' 54.731 N	107° 31' 50.640 W
9,900.00	90.56	282.74	5,439.73	718.87	-4,226.03	1,900,062.12	122,097.59	36° 12' 54.949 N	107° 31' 51.830 W
10,000.00	90.56	282.74	5,438.75	740.93	-4,323.56	1,900,085.45	122,000.36	36° 12' 55.167 N	107° 31' 53.020 W
10,100.00	90.56	282.74	5,437.77	762.98	-4,421.09	1,900,108.78	121,903.12	36° 12' 55.385 N	107° 31' 54.211 W
10,200.00	90.56	282.74	5,436.79	785.04	-4,518.63	1,900,132.11	121,805.89	36° 12' 55.603 N	107° 31' 55.401 W
10,300.00	90.56	282.74	5,435.81	807.10	-4,616.16	1,900,155.44	121,708.65	36° 12' 55.821 N	107° 31' 56.591 W
10,400.00	90.56	282.74	5,434.83	829.16	-4,713.69	1,900,178.77	121,611.42	36° 12' 56.039 N	107° 31' 57.781 W
10,500.00	90.56	282.74	5,433.85	851.22	-4,811.22	1,900,202.10	121,514.18	36° 12' 56.257 N	107° 31' 58.971 W
10,600.00	90.56	282.74	5,432.87	873.28	-4,908.75	1,900,225.43	121,416.95	36° 12' 56.475 N	107° 32' 0.161 W
10,700.00	90.56	282.74	5,431.89	895.34	-5,006.28	1,900,248.76	121,319.71	36° 12' 56.693 N	107° 32' 1.351 W
10,800.00	90.56	282.74	5,430.91	917.39	-5,103.82	1,900,272.09	121,222.48	36° 12' 56.911 N	107° 32' 2.542 W
10,900.00	90.56	282.74	5,429.94	939.45	-5,201.35	1,900,295.42	121,125.24	36° 12' 57.129 N	107° 32' 3.732 W
10,995.73	90.56	282.74	5,429.00	960.57	-5,294.72	1,900,317.76	121,032.16	36° 12' 57.338 N	107° 32' 4.871 W

Chaco #188H PBHL

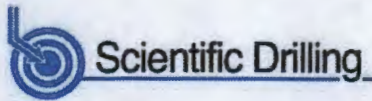
Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Chaco #188H PBHL	0.00	0.00	5,429.00	960.57	-5,294.72	1,900,317.76	121,032.16	36° 12' 57.338 N	107° 32' 4.871 W
- plan hits target center									
- Point									
Chaco #188H POE	0.00	0.00	5,479.00	-158.00	-350.00	1,899,134.69	125,961.83	36° 12' 46.282 N	107° 31' 4.535 W
- plan hits target center									
- Point									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well Chaco 2306-19E #188H
Company:	WPX Energy Rocky Mountain, LLC	TVD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Project:	Sandoval County, NM NAD27	MD Reference:	GL 6965' & RKB 14' @ 6979.00ft
Site:	Chaco 2306-19E	North Reference:	True
Well:	Chaco 2306-19E #188H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
550.00	550.00	0.00	0.00	Build 2°/100'
1,057.00	1,054.36	-36.65	25.67	Hold 10.14° Inc
2,503.00	2,477.78	-245.15	171.66	Drop 2°/100'
3,010.00	2,982.38	-279.54	195.73	Hold Vertical
4,840.46	4,812.84	-279.51	195.63	KOP Build/Turn 9.2°/100'
5,492.63	5,348.79	-209.08	-114.90	Hold 60° Inc
5,577.28	5,391.12	-192.86	-186.40	Resume Build/Turn 9°/100'
5,917.28	5,478.44	-121.09	-502.79	Landing Point (POE) Hold to TD



Company Name: WPX Energy Rocky Mountain, LLC
 Project: Sandoval County, NM NAD27
 Site: Chaco 2306-19E
 Well: Chaco 2306-19E #188H

WPXENERGY



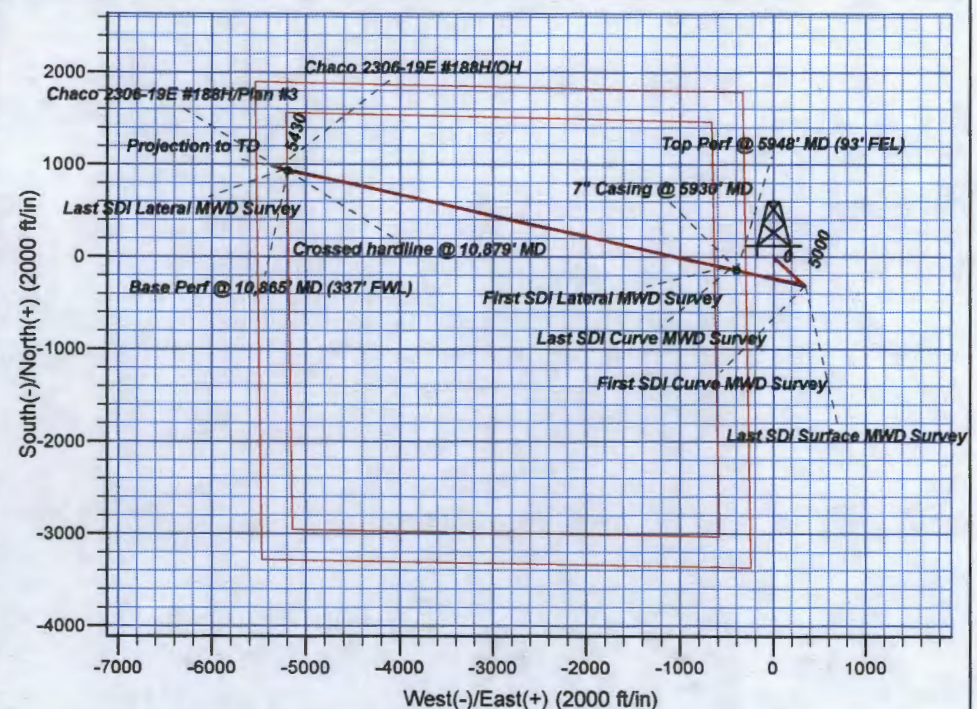
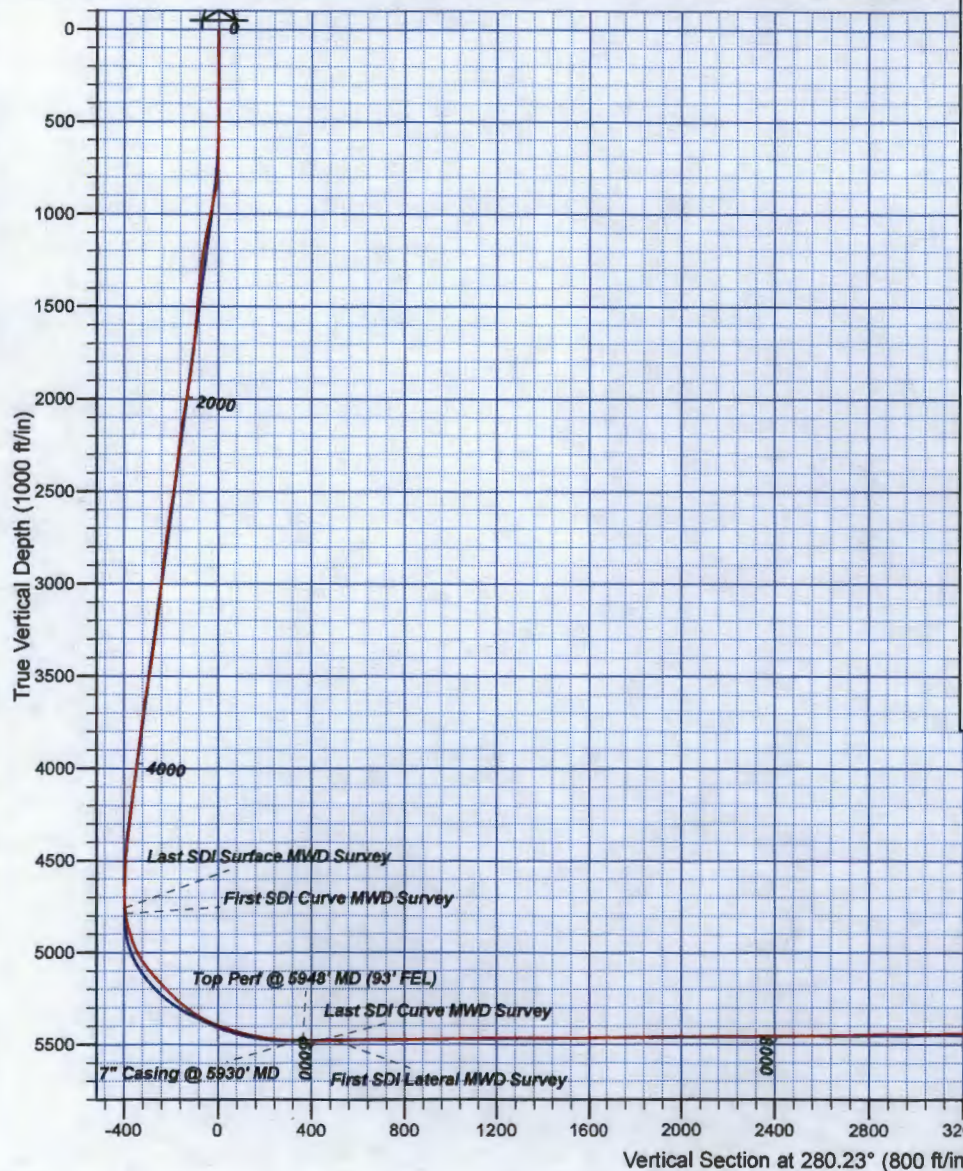
Azimuths to True North
 Magnetic North: 9.44°

Magnetic Field
 Strength: 50087.4snT
 Dip Angle: 63.00°
 Date: 6/12/2014
 Model: BGGM2014

WELL DETAILS: Chaco 2306-19E #188H

GL 6965' & RKB 14' @ 6979.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1899288.10	126313.86	36° 12' 47.844 N	107° 31' 0.264 W



Chaco 2306-19E #188H/Plan #3

Chaco 2306-19E #188H/OH

Last SDI Lateral MWD Survey

Crossed hardline @ 10,879' MD

Base Perf @ 10,865' MD (337' FWL)

Projection to TD

Design: OH (Chaco 2306-19E #188H/OH)

Created By: Janie Collins Date: 16:20, August 05 2014

PROJECT DETAILS: Sandoval County, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico Central 3002

System Datum: Mean Sea Level
 Local North: True

August 11, 2014



Via Email

Engineering and Geological Services Bureau, Oil Conservation Division
ATTN: Michael A. McMillan
1220 South St. Francis Dr.
Santa Fe NM 87505

RE: Chaco 2306-19E #205H
Chaco 2306-19E #189H
Chaco 2306-19E #188H
Rio Arriba and Sandoval County, New Mexico

Mr. McMillan:

WPX owns 100% interest in all of T23N-R6W-Section 19 and T23N-R7W-Section 24, therefore WPX is the only affected party concerning the above referenced wells.

Should you have any questions regarding the above provided information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "CB", with a long, sweeping horizontal line extending to the right.

Chuck Bassett
Landman
(539) 573-6575
chuck.bassett@wpxenergy.com.

McMillan, Michael, EMNRD

From: Riley, Heather <Heather.Riley@wpxenergy.com>
Sent: Thursday, August 21, 2014 4:07 PM
To: McMillan, Michael, EMNRD
Subject: RE: Chaco 2306-19E #205H,Chaco 2306-19E #189H,Chaco 2306-19E #188H

This looks good. Thank you for the clarification.

Heather Riley
Regulatory Manager, San Juan Asset Team
WPX Energy
P. O. Box 640
Aztec, NM 87410
(970) 749-8747 (cell)
(505) 333-1822 (office)
heather.riley@wpxenergy.com

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Thursday, August 21, 2014 4:06 PM
To: Riley, Heather
Subject: RE: Chaco 2306-19E #205H,Chaco 2306-19E #189H,Chaco 2306-19E #188H

Ms. Riley:

I am not sure that your portion that you wrote would honor the C-102 for each well.

Here is an alternative that may solve the problem.

NSP for the 188H

The operator shall share the allowable with the Chaco 2306-19E No. 189H for the units that both wells penetrate. The common units are SW/4 NE/4 and SE/4 NW/4 of Section 24. It will receive its full share for the N/2 NW/4 and SE/4 NE/4 of Section 24.

NSP for 189H

The operator shall share the allowable with the Chaco 2306-19E No. 188H for the units that both wells penetrate. The common units are SW/4 NE/4 and SE/4 NW/4 of Section 24. It will receive its full share for the N/2 SE/4 and SW/4 NW/4 of Section 24.

Give me your feedback, because the cum production does not change

Michael McMillan

From: Riley, Heather [mailto:Heather.Riley@wpxenergy.com]
Sent: Thursday, August 21, 2014 3:52 PM
To: McMillan, Michael, EMNRD
Cc: McQueen Jr, Ken; Granillo, Lacey; Higgins, Larry
Subject: RE: Chaco 2306-19E #205H,Chaco 2306-19E #189H,Chaco 2306-19E #188H

Michael,

Would you please amend our NSL and NSP applications for the #188H and #189H wells to include the following if it meets your approval:

Where multiple horizontal wellbores cross the same 40 acre units and have included those 40 acres in its proration unit, the allowables are to be prorated between the two creating a 320 acre combined proration unit. The allowables for the 320 acres would be 856 barrels of oil per day.

Heather Riley
Regulatory Manager, San Juan Asset Team
WPX Energy
P. O. Box 640
Aztec, NM 87410
(970) 749-8747 (cell)
(505) 333-1822 (office)
heather.riley@wpxenergy.com

From: McMillan, Michael, EMNRD [<mailto:Michael.McMillan@state.nm.us>]
Sent: Thursday, August 21, 2014 3:31 PM
To: Riley, Heather
Subject: RE: Chaco 2306-19E #205H, Chaco 2306-19E #189H, Chaco 2306-19E #188H

Ms. Riley
IF they are as-drilled, then no signature is required.
How is the letter going for the allowables we discussed today?
Michael McMillan

From: Riley, Heather [<mailto:Heather.Riley@wpxenergy.com>]
Sent: Thursday, August 21, 2014 3:28 PM
To: McMillan, Michael, EMNRD
Subject: RE: Chaco 2306-19E #205H, Chaco 2306-19E #189H, Chaco 2306-19E #188H

I'm sorry Michael. We sign the official "As Drilled" C-102s and they are already on record with the OCD. I thought that the copies I send in my NSL application are just courtesy copies not requiring signatures. I will get these to you.

From: McMillan, Michael, EMNRD [<mailto:Michael.McMillan@state.nm.us>]
Sent: Thursday, August 21, 2014 3:26 PM
To: Riley, Heather
Subject: RE: Chaco 2306-19E #205H, Chaco 2306-19E #189H, Chaco 2306-19E #188H

Ms. Riley:
Can you sign and e-mail me C102's for the 188H and 189H? The C-102 has the survey signed, but not company representative.
Thank You
Michael McMillan

From: Riley, Heather [<mailto:Heather.Riley@wpxenergy.com>]
Sent: Monday, August 18, 2014 1:38 PM
To: McMillan, Michael, EMNRD
Cc: Felix, Andrea; Granillo, Lacey; Heil, Mark; Higgins, Larry; Bassett, Chuck; Richardson, Amy; McQueen Jr, Ken
Subject: RE: Chaco 2306-19E #205H, Chaco 2306-19E #189H, Chaco 2306-19E #188H

Mr. McMillan,