

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
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 3160-4 or 3160-5 form.

Operator Signature Date: 7/2/2015

Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf_Owner	UL	Sec	Twp	N/S	Rng	W/E
30-039-31214-00-00	NE CHACO COM	172H	WPX ENERGY PRODUCTION, LLC	O	N	Rio Arriba	F	D	13	23	N	7	W

Drilling/Casing Change

Conditions of Approval:

(See the below checked and additional 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

☐ Ensure compliance with 19.15.17

☐ 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.

Additional requirements

NMOCD Approved by Signature

7-10-15

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

JUL 06 2015

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

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

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
WPX Energy Production, LLC

3a. Address
PO Box 640 Aztec, NM 87410

3b. Phone No. (include area code)
505-333-1816

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SUR: 1186' FNL & 474' FWL, Sec 13, T23N, R7W
BHL: 932' FNL & 287' FWL SEC 11, 23N 7W

5. Lease Serial No.
NMSF078362

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
NE CHACO COM #903H

9. API Well No.
30-039-31214

10. Field and Pool or Exploratory Area
CHACO UNIT NE HZ OIL

11. Country or Parish, State
Rio Arriba, NM

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

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

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

WPX Energy request to change the well name from **NE CHACO COM #172H** to **NE CHACO COM #903H**.
We also request to change the lateral orientation and target horizon per the attached directional, ops plan and C102.

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

OIL CONS. DIV DIST. 3

JUL 10 2015

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Marie E. Jaramillo		Title Permit Tech III
Signature <i>Marie E. Jaramillo</i>		Date 7/2/15
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by <i>William Tambekou</i>		Title <i>Petroleum Engineer</i>
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.		Date <i>07-07-2015</i>
		Office <i>FFD</i>

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)

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

☒ AMENDED REPORT

Name/Lateral Change

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31214	*Pool Code 98088	*Pool Name CHACO UNIT NE HZ (OIL)
*Property Code 313800	*Property Name NE CHACO COM	*Well Number 903H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 7014'

¹⁰ Surface Location

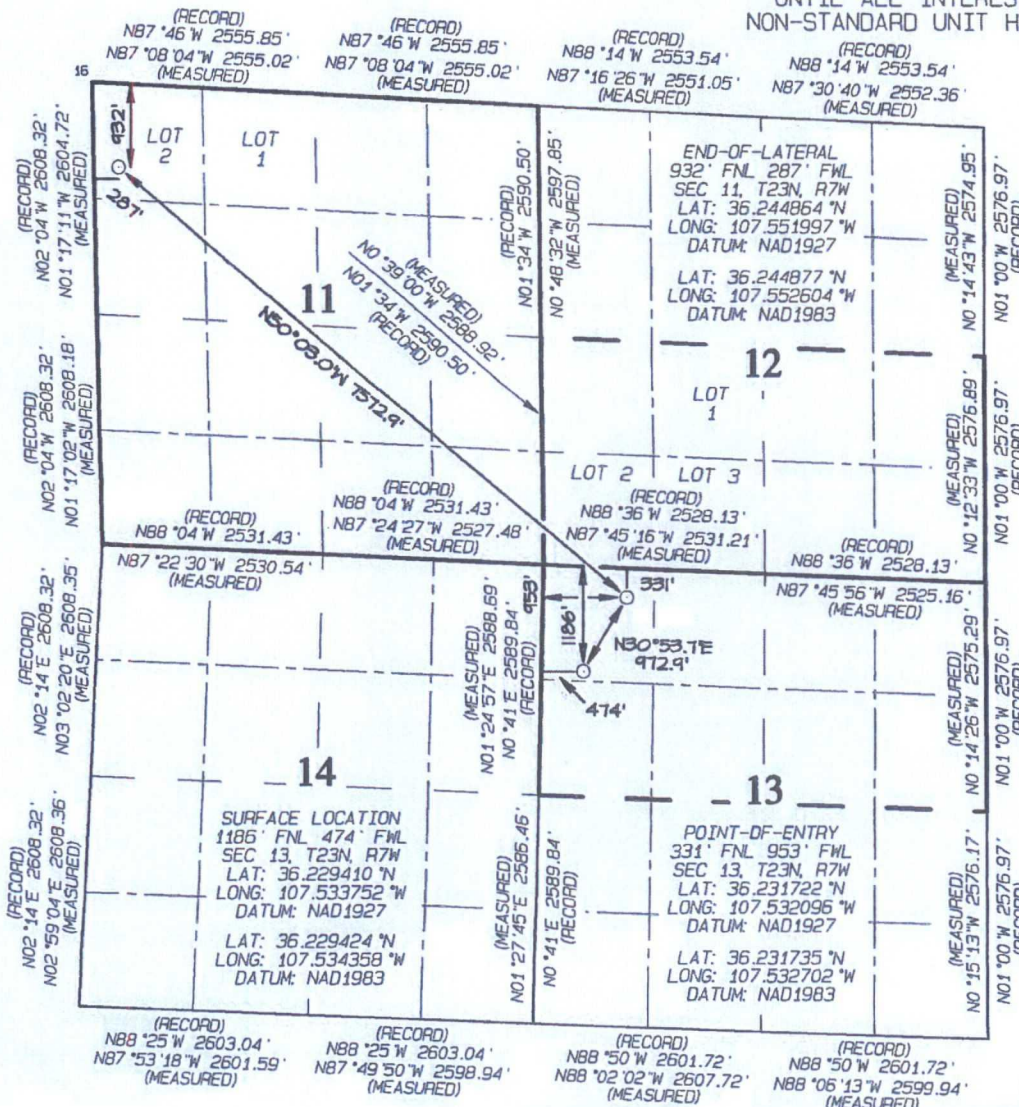
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	13	23N	7W		1186	NORTH	474	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	23N	7W	2	932	NORTH	287	WEST	RIO ARriba

¹² Dedicated Acres 1268.79	Entire - Section 11 S/2 - Section 12 N/2 - Section 13	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13817A
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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: Marie E. Jaramillo Date: 9/2/15

Printed Name: Marie E. Jaramillo

E-mail Address: marie.jaramillo@wpxenergy.com

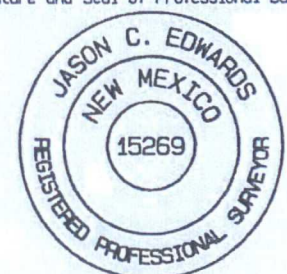
¹⁸ SURVEYOR CERTIFICATION

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: JULY 1, 2015

Survey Date: OCTOBER 24, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



WPX ENERGY

Operations Plan

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

DATE: July 1, 2015

FIELD:

WELL NAME: NE Chaco Com 903H

SURFACE:

SH Location: NWNW Sec 11, 23N7W

ELEVATION: 7014' GR

BH Location: NWNW Sec 13, 23N7W
Rio Arriba, CO. New Mexico

MINERALS:

MEASURED DEPTH: 13,481'

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1411	1427	Point Lookout	4412	4292
Kirtland	1945	1913	Mancos	4623	4495
Picture Cliffs	2061	2025	Gallup	5034	4893
Lewis	2146	2107	Kickoff Point	4751	4619
Chacra	2517	2465	Top Target	5822	5367
Cliff House	3627	3535	Landing Point	5909	5373
Menefee	3676	3582	Base Target	5909	5373
			TD	13481	5379

B. MUD LOGGING PROGRAM: Mudlogger on location from surface csg to TD.

C. LOGGING PROGRAM: LWD GR from surface casing to TD.

D. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 3/4" Directional Vertical hole, and the curve portion of the wellbore. A LSND (WBM) or (OBM) will be used to drill the lateral portion of well. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses.

B. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Pressure test surface casing to **600 psi for 30 minutes** and intermediate casing to **1500 psi for 30 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The drum brakes will be inspected and tested each tour. **All tests and inspections will be recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

<u>CASING TYPE</u>	<u>OH SIZE (IN)</u>	<u>DEPTH (MD) (FT)</u>	<u>CASING SIZE (IN)</u>	<u>WEIGHT(LB)</u>	<u>GRADE</u>
Surface	12.25"	320'	9.625"	36#	J-55
Intermediate	8.75"	5909'	7"	23#	K-55
Prod. Liner	6.125"	5759' - 13481'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5759'	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: None

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, (615 sx / 836 cu ft. / 149 bbls). **Tail Spacer:** 20 BBL of MMCR. **Displacement:** Displace w/ +/- 140 bbl Fr Water. Total Cement (836 cu ft / 149 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

T23N R7W

Chaco 2307-13D

NE Chaco COM #903H

Wellbore #1

Design #1 30Jun15 sam

Anticollision Summary Report

30 June, 2015

WPX

Anticollision Summary Report

Company:	WPX Energy	Local Co-ordinate Reference:	Well NE Chaco COM #903H (A2) - Slot A2
Project:	T23N R7W	TVD Reference:	KB @ 7028.00usft (Aztec 920)
Reference Site:	Chaco 2307-13D	MD Reference:	KB @ 7028.00usft (Aztec 920)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NE Chaco COM #903H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	COMPASS-SANJUAN
Reference Design:	Design #1 30Jun15 sam	Offset TVD Reference:	Offset Datum

Reference	Design #1 30Jun15 sam		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 30.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 5,000.00 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 6/30/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,480.77	Design #1 30Jun15 sam (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Chaco 2306-18D #185H						
Chaco 2306-18D #185H - Wellbore #1 - Wellbore #1	7,152.64	10,961.00	614.19	437.16	3.469	CC
Chaco 2306-18D #185H - Wellbore #1 - Wellbore #1	7,170.00	10,961.00	614.44	437.00	3.463	ES
Chaco 2306-18D #185H - Wellbore #1 - Wellbore #1	7,200.00	10,961.00	616.02	437.87	3.458	SF
Chaco 2307-12E						
Chaco 2307-12E #168H - Wellbore #1 - Wellbore #1	9,708.71	5,536.17	3,304.39	3,176.81	25.901	CC
Chaco 2307-12E #168H - Wellbore #1 - Wellbore #1	9,780.00	5,536.72	3,305.16	3,175.75	25.542	ES
Chaco 2307-12E #168H - Wellbore #1 - Wellbore #1	11,910.00	5,553.19	3,970.44	3,786.25	21.557	SF
Chaco 2307-12E #168H - Wellbore #2 - Wellbore #2	13,480.77	10,433.98	394.76	93.75	1.311	Level 3, CC, ES, SF
Chaco 2307-12E #169H - Wellbore #1 - Wellbore #1	12,059.32	9,460.98	148.33	67.93	1.845	CC
Chaco 2307-12E #169H - Wellbore #1 - Wellbore #1	12,270.00	9,622.66	199.63	29.23	1.172	Level 2, ES
Chaco 2307-12E #169H - Wellbore #1 - Wellbore #1	12,300.00	9,645.89	212.99	30.26	1.166	Level 2, SF
Chaco 2307-12L						
Chaco 2307-12L #171H - Wellbore #1 - Wellbore #1	8,832.18	8,098.62	200.69	150.92	4.033	CC
Chaco 2307-12L #171H - Wellbore #1 - Wellbore #1	9,480.00	8,732.09	242.02	130.43	2.169	ES
Chaco 2307-12L #171H - Wellbore #1 - Wellbore #1	9,960.00	9,196.73	306.27	143.08	1.877	SF
Chaco 2307-13A						
Chaco 2307-13A #184H - Wellbore #1 - Wellbore #1	5,808.17	8,923.00	245.78	184.96	4.041	CC
Chaco 2307-13A #184H - Wellbore #1 - Wellbore #1	5,850.00	8,958.49	247.86	184.01	3.882	ES
Chaco 2307-13A #184H - Wellbore #1 - Wellbore #1	6,090.00	9,165.00	308.07	218.38	3.435	SF
Chaco 2307-13D						
Chaco 2307-13D #173H (A1) - Wellbore #1 - Wellbore #1	0.00	0.00	20.24			
Chaco 2307-13D #173H (A1) - Wellbore #1 - Wellbore #1	60.00	59.96	20.30	20.18	172.864	ES
Chaco 2307-13D #173H (A1) - Wellbore #1 - Wellbore #1	660.00	659.19	26.34	23.95	11.060	SF

WPX

Anticollision Summary Report

Company:	WPX Energy	Local Co-ordinate Reference:	Well NE Chaco COM #903H (A2) - Slot A2
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Reference Site:	Chaco 2307-13D	MD Reference:	KB @ 7028.00usft (Aztec 920)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NE Chaco COM #903H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	COMPASS-SANJUAN
Reference Design:	Design #1 30Jun15 sam	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design	Depth (usft)	Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
Section 11 offsets						
Rincon #14 - Wellbore #1 - Wellbore #1	12,764.78	5,313.79	1,243.81	937.83	4.065	CC
Rincon #14 - Wellbore #1 - Wellbore #1	12,810.00	5,313.82	1,244.63	937.49	4.052	ES
Rincon #14 - Wellbore #1 - Wellbore #1	12,900.00	5,313.90	1,251.14	941.67	4.043	SF
Rincon #20 - Wellbore #1 - Wellbore #1	10,601.78	5,440.89	1,031.88	790.56	4.276	CC
Rincon #20 - Wellbore #1 - Wellbore #1	10,620.00	5,440.91	1,032.04	790.25	4.268	ES
Rincon #20 - Wellbore #1 - Wellbore #1	10,710.00	5,440.98	1,037.54	793.43	4.250	SF
Vandenburgh #2 - Wellbore #1 - Wellbore #1	12,300.76	5,342.19	856.54	573.02	3.021	CC
Vandenburgh #2 - Wellbore #1 - Wellbore #1	12,330.00	5,342.22	857.04	572.77	3.015	ES
Vandenburgh #2 - Wellbore #1 - Wellbore #1	12,360.00	5,342.24	858.59	573.54	3.012	SF
Vandenburgh 11 #1 - Wellbore #1 - Wellbore #1	10,689.84	5,456.79	2,254.20	1,945.31	7.298	CC
Vandenburgh 11 #1 - Wellbore #1 - Wellbore #1	10,740.00	5,456.83	2,254.75	1,944.58	7.269	ES
Vandenburgh 11 #1 - Wellbore #1 - Wellbore #1	11,100.00	5,457.11	2,291.21	1,971.76	7.172	SF

WPX

Anticollision Summary Report

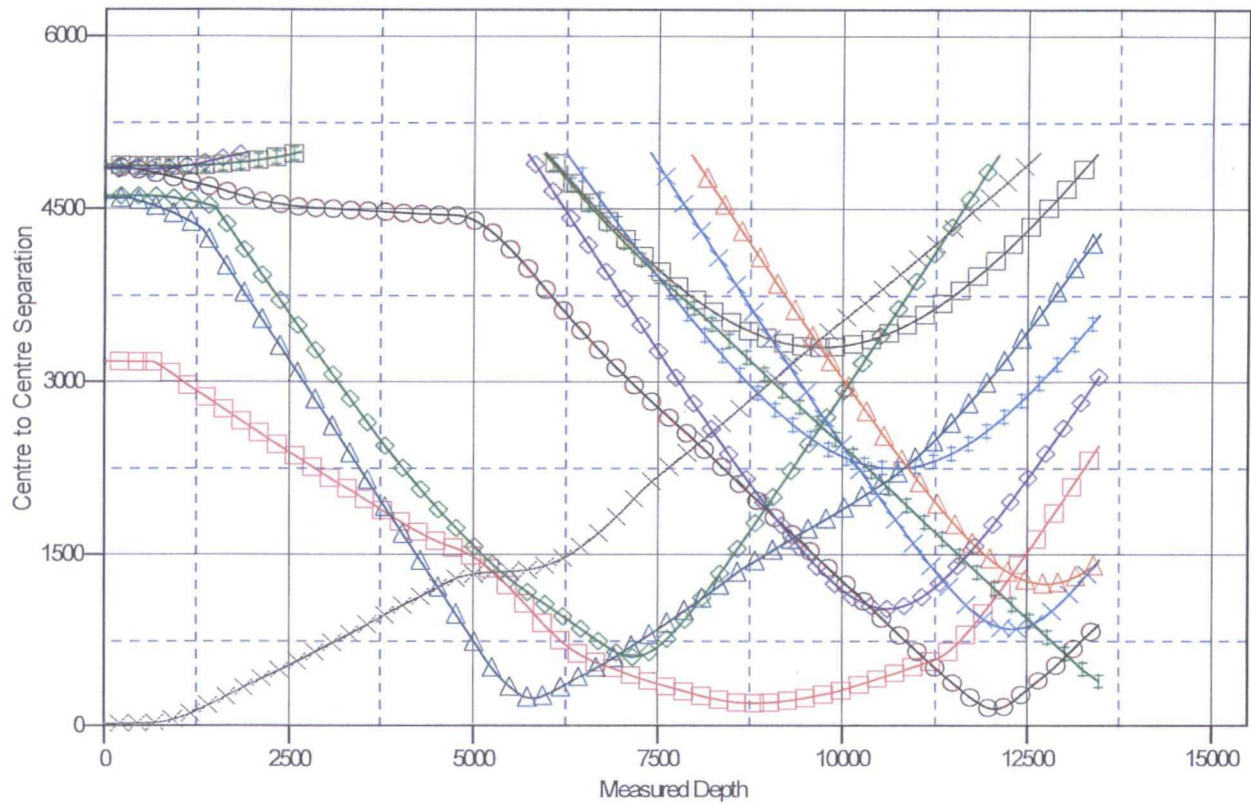
Company: WPX Energy
Project: T23N R7W
Reference Site: Chaco 2307-13D
Site Error: 0.00 usft
Reference Well: NE Chaco COM #903H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1 30Jun15 sam

Local Co-ordinate Reference: Well NE Chaco COM #903H (A2) - Slot A2
TVD Reference: KB @ 7028.00usft (Aztec 920)
MD Reference: KB @ 7028.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: COMPASS-SANJUAN
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 7028.00usft (Aztec 920)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333334

Coordinates are relative to: NE Chaco COM #903H (A2) - Slot A2
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 3003
 Grid Convergence at Surface is: 0.18°

Ladder Plot



LEGEND

06-18D#185H, Wellbore #1, Wellbore #1 V0	Chaco 2307-12L#171H, Wellbore #1, Wellbore #1 V0	Rincon #20, Wellbore #1, Wellbore #1 V0
07-12E #168H, Wellbore #1, Wellbore #1 V0	Chaco 2307-13A #184H, Wellbore #1, Wellbore #1 V0	Vandenburgh #2, Wellbore #1, Wellbore #1
07-12E #168H, Wellbore #2, Wellbore #2 V0	Chaco 2307-13D#173H (A1), Wellbore #1, Wellbore #1 V0	Vandenburgh 11 #1, Wellbore #1, Wellbore
07-12E #169H, Wellbore #1, Wellbore #1 V0	Rincon #14, Wellbore #1, Wellbore #1 V0	

WPX

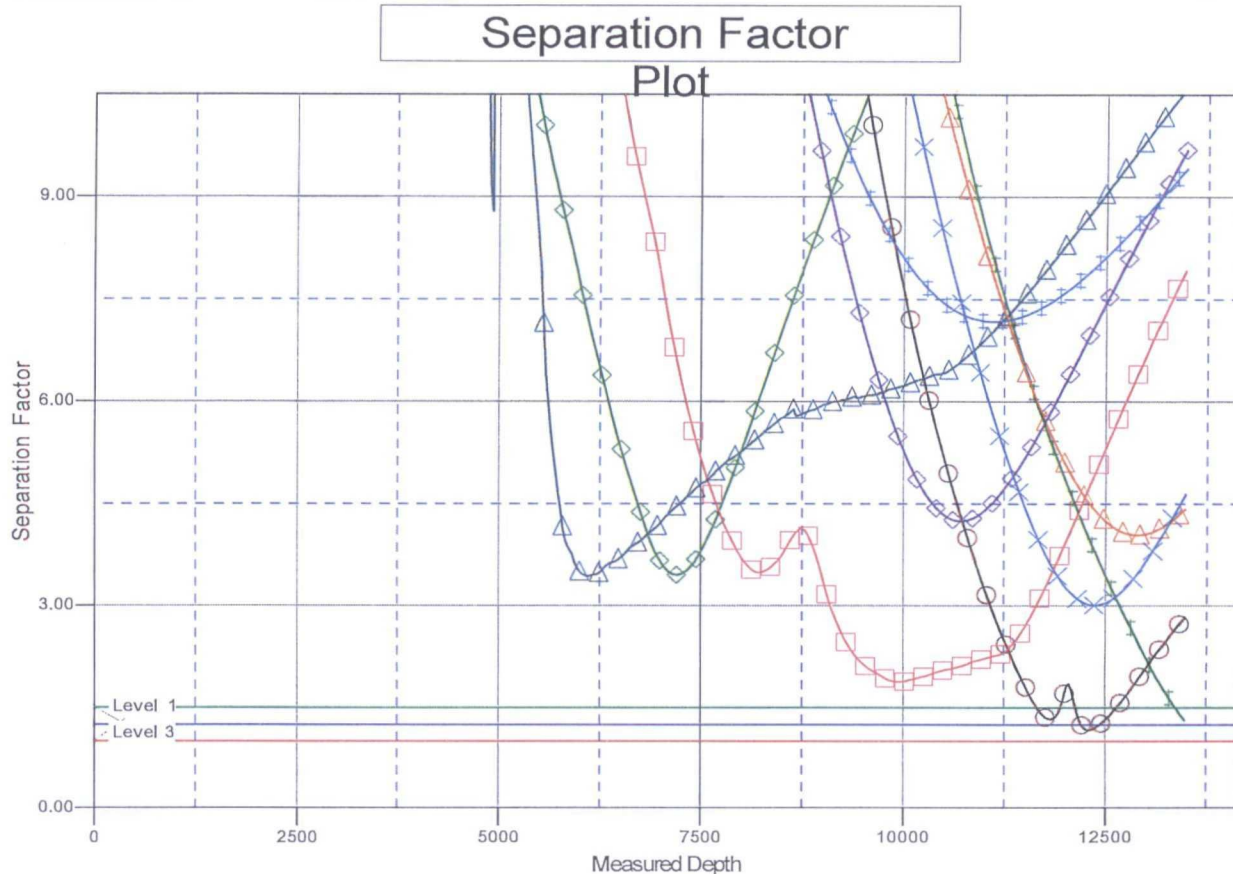
Anticollision Summary Report

Company: WPX Energy
Project: T23N R7W
Reference Site: Chaco 2307-13D
Site Error: 0.00 usft
Reference Well: NE Chaco COM #903H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1 30Jun15 sam

Local Co-ordinate Reference: Well NE Chaco COM #903H (A2) - Slot A2
TVD Reference: KB @ 7028.00usft (Aztec 920)
MD Reference: KB @ 7028.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: COMPASS-SANJUAN
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 7028.00usft (Aztec 920)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333334

Coordinates are relative to: NE Chaco COM #903H (A2) - Slot A2
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 3003
 Grid Convergence at Surface is: 0.18°



LEGEND

06-18D #185H, Wellbore #1, Wellbore #1 V0
 07-12E #168H, Wellbore #1, Wellbore #1 V0
 07-12E #168H, Wellbore #2, Wellbore #2 V0
 07-12E #169H, Wellbore #1, Wellbore #1 V0

Chaco 2307-12L #171H, Wellbore #1, Wellbore #1 V0
 Chaco 2307-13A #184H, Wellbore #1, Wellbore #1 V0
 Chaco 2307-13D #173H (A1), Wellbore #1, Wellbore #1 V0
 Rincon #14, Wellbore #1, Wellbore #1 V0

Rincon #20, Wellbore #1, Wellbore #1 V0
 Vandenburgh #2, Wellbore #1, Wellbore #1 V0
 Vandenburgh 11 #1, Wellbore #1, Wellbore #1 V0

WPX Energy

T23N R7W

Chaco 2307-13D

NE Chaco COM #903H - Slot A2

Wellbore #1

Plan: Design #1 30Jun15 sam

Standard Planning Report

30 June, 2015

WPX Planning Report

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well NE Chaco COM #903H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 7028.00usft (Aztec 920)
Project:	T23N R7W	MD Reference:	KB @ 7028.00usft (Aztec 920)
Site:	Chaco 2307-13D	North Reference:	True
Well:	NE Chaco COM #903H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun15 sam		

Project	T23N R7W		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site		Chaco 2307-13D			
Site Position:		Northing:	1,902,865.23 usft	Latitude:	36.2293600
From:	Lat/Long	Easting:	588,366.75 usft	Longitude:	-107.5337200
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.18 °

Well	NE Chaco COM #903H - Slot A2					
Well Position	+N/-S	18.20 usft	Northing:	1,902,883.40 usft	Latitude:	36.2294100
	+E/-W	-8.85 usft	Easting:	588,357.84 usft	Longitude:	-107.5337501
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,014.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/30/2015	9.24	62.97	50,069

Design	Design #1 30Jun15 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	316.28

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	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,319.45	15.39	70.92	1,310.23	33.58	97.07	2.00	2.00	0.00	70.92	
4,751.45	15.39	70.92	4,619.18	331.29	957.78	0.00	0.00	0.00	0.00	
5,516.17	60.00	309.19	5,257.71	607.78	774.43	9.00	5.83	-15.92	-127.82	Start 60 deg tan #903
5,576.17	60.00	309.19	5,287.71	640.61	734.16	0.00	0.00	0.00	0.00	End 60 deg tan #903
5,738.72	74.63	309.19	5,350.23	735.12	618.24	9.00	9.00	0.00	0.00	
5,908.99	89.95	309.19	5,373.00	841.43	487.85	9.00	9.00	0.00	0.00	POE #903H
13,480.77	89.95	309.19	5,379.00	5,626.01	-5,380.67	0.00	0.00	0.00	0.00	BHL #903H

WPX

Planning Report

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well NE Chaco COM #903H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 7028.00usft (Aztec 920)
Project:	T23N R7W	MD Reference:	KB @ 7028.00usft (Aztec 920)
Site:	Chaco 2307-13D	North Reference:	True
Well:	NE Chaco COM #903H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun15 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
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	9.00	70.92	998.15	11.53	33.33	-14.71	2.00	2.00	0.00
1,319.45	15.39	70.92	1,310.23	33.58	97.07	-42.83	2.00	2.00	0.00
Hold 15.39 Inclination									
1,500.00	15.39	70.92	1,484.31	49.24	142.35	-62.80	0.00	0.00	0.00
2,000.00	15.39	70.92	1,966.38	92.61	267.75	-118.13	0.00	0.00	0.00
2,500.00	15.39	70.92	2,448.46	135.99	393.14	-173.45	0.00	0.00	0.00
3,000.00	15.39	70.92	2,930.53	179.36	518.54	-228.78	0.00	0.00	0.00
3,500.00	15.39	70.92	3,412.60	222.73	643.93	-284.10	0.00	0.00	0.00
4,000.00	15.39	70.92	3,894.68	266.11	769.33	-339.43	0.00	0.00	0.00
4,500.00	15.39	70.92	4,376.75	309.48	894.72	-394.75	0.00	0.00	0.00
4,751.45	15.39	70.92	4,619.18	331.29	957.78	-422.57	0.00	0.00	0.00
Start Build DLS 9.00 TFO -127.82									
5,000.00	17.54	344.80	4,860.58	378.82	979.41	-403.17	9.00	0.86	-34.65
5,500.00	58.59	309.60	5,249.45	598.95	785.18	-109.84	9.00	8.21	-7.04
5,516.17	60.00	309.19	5,257.71	607.78	774.43	-96.03	9.00	8.73	-2.55
Hold 60.00 Inclination									
5,576.17	60.00	309.19	5,287.71	640.61	734.16	-44.47	0.00	0.00	0.00
Start Build DLS 9.00 TFO 0.00									
5,738.72	74.63	309.19	5,350.23	735.12	618.24	103.96	9.00	9.00	0.00
Start DLS 9.00 TFO 0.00									
5,908.99	89.95	309.19	5,373.00	841.43	487.85	270.90	9.00	9.00	0.00
POE at 89.95 Inc 309.19 deg									
5,909.00	89.95	309.19	5,373.00	841.43	487.84	270.91	0.00	0.00	0.00
7" 23# J-55									
6,000.00	89.95	309.19	5,373.07	898.93	417.31	361.21	0.00	0.00	0.00
6,500.00	89.95	309.19	5,373.47	1,214.88	29.79	857.39	0.00	0.00	0.00
7,000.00	89.95	309.19	5,373.86	1,530.83	-357.74	1,353.57	0.00	0.00	0.00
7,500.00	89.95	309.19	5,374.26	1,846.78	-745.27	1,849.75	0.00	0.00	0.00
8,000.00	89.95	309.19	5,374.66	2,162.73	-1,132.79	2,345.93	0.00	0.00	0.00
8,500.00	89.95	309.19	5,375.05	2,478.68	-1,520.32	2,842.11	0.00	0.00	0.00
9,000.00	89.95	309.19	5,375.45	2,794.62	-1,907.84	3,338.29	0.00	0.00	0.00
9,500.00	89.95	309.19	5,375.85	3,110.57	-2,295.37	3,834.47	0.00	0.00	0.00
10,000.00	89.95	309.19	5,376.24	3,426.52	-2,682.90	4,330.66	0.00	0.00	0.00
10,500.00	89.95	309.19	5,376.64	3,742.47	-3,070.42	4,826.84	0.00	0.00	0.00
11,000.00	89.95	309.19	5,377.03	4,058.42	-3,457.95	5,323.02	0.00	0.00	0.00
11,500.00	89.95	309.19	5,377.43	4,374.37	-3,845.47	5,819.20	0.00	0.00	0.00
12,000.00	89.95	309.19	5,377.83	4,690.32	-4,233.00	6,315.38	0.00	0.00	0.00
12,500.00	89.95	309.19	5,378.22	5,006.26	-4,620.52	6,811.56	0.00	0.00	0.00
13,000.00	89.95	309.19	5,378.62	5,322.21	-5,008.05	7,307.74	0.00	0.00	0.00
13,480.77	89.95	309.19	5,379.00	5,626.01	-5,380.67	7,784.83	0.00	0.00	0.00
TD at 13480.77									

WPX

Planning Report

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well NE Chaco COM #903H (A2) - Slot A2
Company:	WPX Energy	TVD Reference:	KB @ 7028.00usft (Aztec 920)
Project:	T23N R7W	MD Reference:	KB @ 7028.00usft (Aztec 920)
Site:	Chaco 2307-13D	North Reference:	True
Well:	NE Chaco COM #903H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun15 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
Start 60 deg tan #903H - plan hits target center - Point	0.00	0.00	5,257.71	607.78	774.43	1,903,493.57	589,130.39	36.2310796	-107.5311243
End 60 deg tan #903H - plan hits target center - Point	0.00	0.00	5,287.71	640.61	734.16	1,903,526.28	589,090.02	36.2311698	-107.5312608
POE #903H - plan hits target center - Point	0.00	0.00	5,373.00	841.43	487.85	1,903,726.33	588,843.09	36.2317215	-107.5320959
BHL #903H - plan hits target center - Point	0.00	0.00	5,379.00	5,626.01	-5,380.67	1,908,492.76	582,959.81	36.2448640	-107.5519970

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	
5,909.00	5,373.00	7" 23# J-55	7.00	8.75	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
550.00	550.00	0.00	0.00	Start Build 2.00
1,319.45	1,310.23	33.58	97.07	Hold 15.39 Inclination
4,751.45	4,619.18	331.29	957.78	Start Build DLS 9.00 TFO -127.82
5,516.17	5,257.71	607.78	774.43	Hold 60.00 Inclination
5,576.17	5,287.71	640.61	734.16	Start Build DLS 9.00 TFO 0.00
5,738.72	5,350.23	735.12	618.24	Start DLS 9.00 TFO 0.00
5,908.99	5,373.00	841.43	487.85	POE at 89.95 Inc 309.19 deg
13,480.77	5,379.00	5,626.01	-5,380.67	TD at 13480.77



Well Name: NE Chaco COM #903H

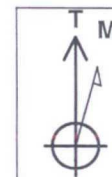
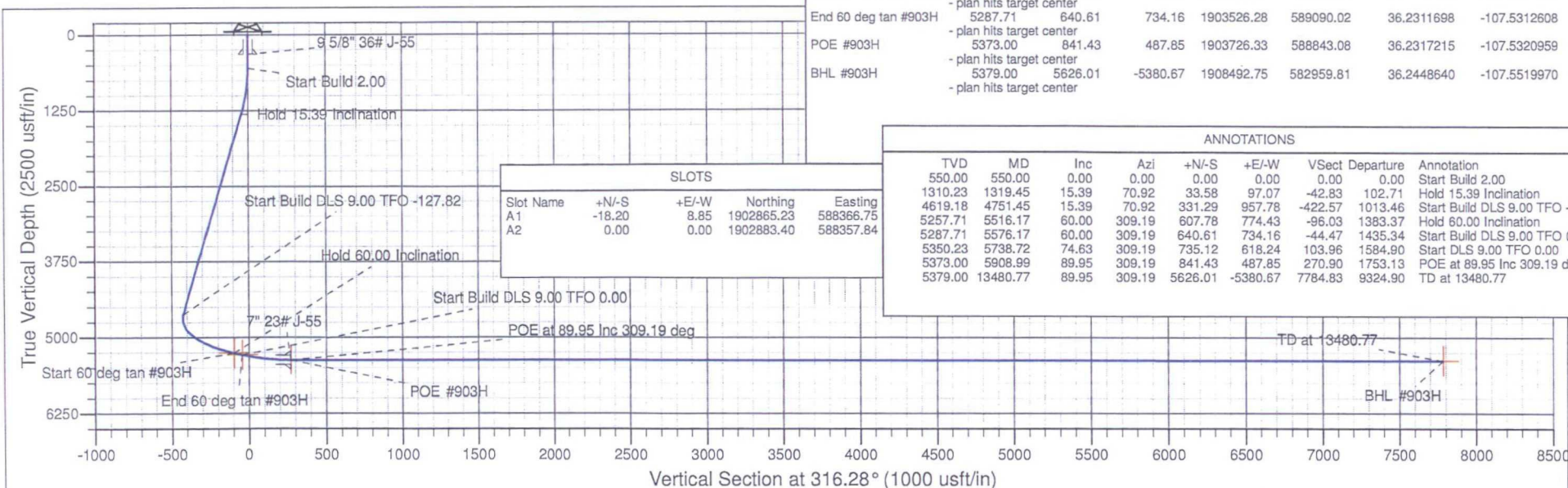
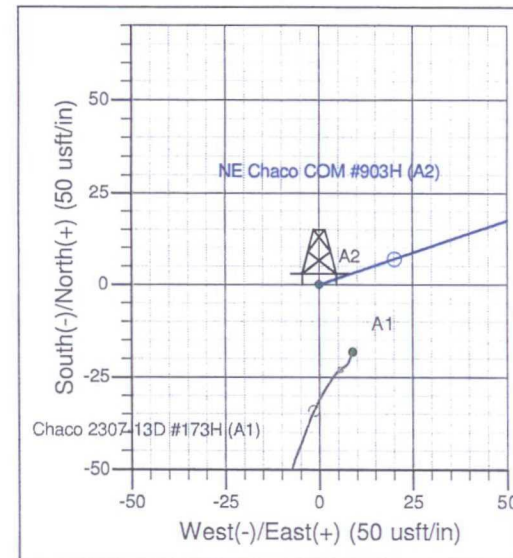
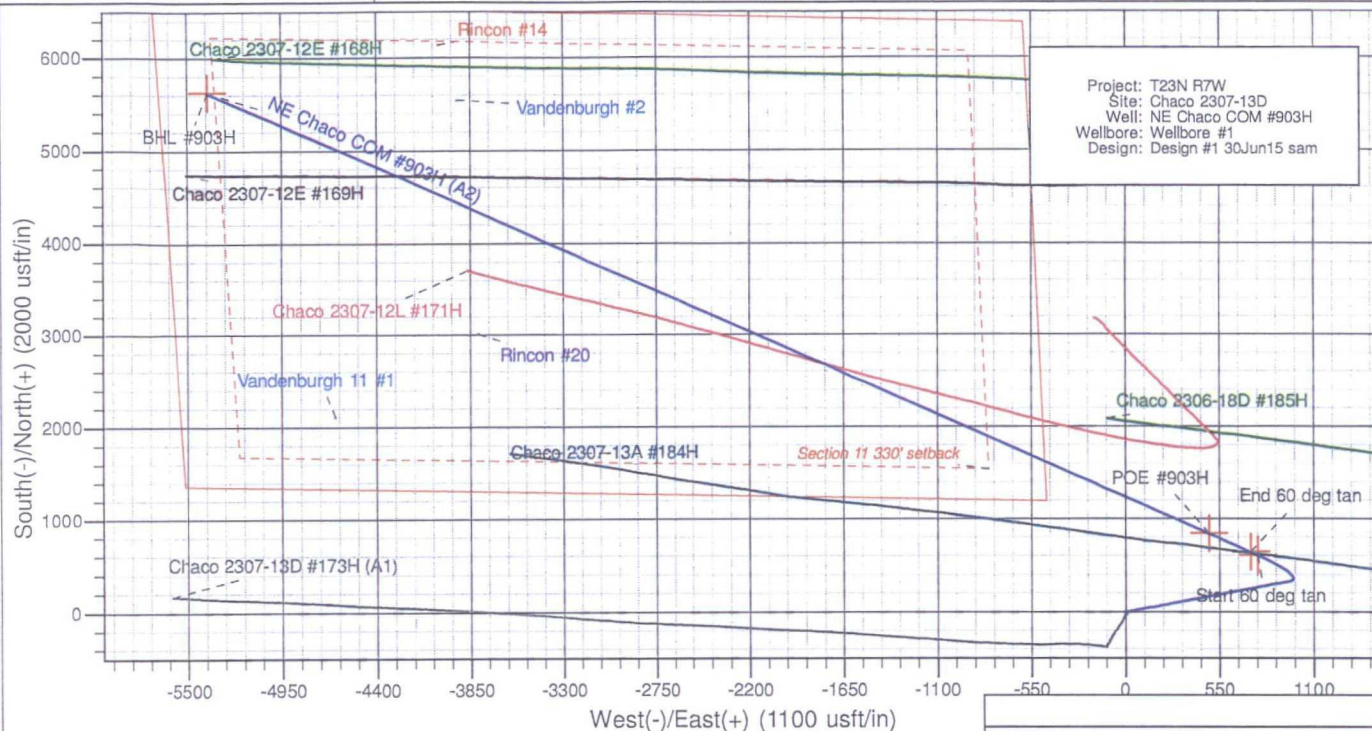
Surface Location: Chaco 2307-13D

NAD 1927 (NADCON CONUS), US State Plane 1927 (Exact solution) New Mexico West 3003

Ground Elevation: 7014.00

+N/-S
0.00+E/-W
0.00Northing
1902883.40Easting
588357.84Latitude
36.2294100Longitude
-107.5337500Slot
A2

KB @ 7028.00usft (Aztec 920)

Azimuths to True North
Magnetic North: 9.24°Magnetic Field
Strength: 50068.7snT
Dip Angle: 62.97°
Date: 6/30/2015
Model: IGRF2010

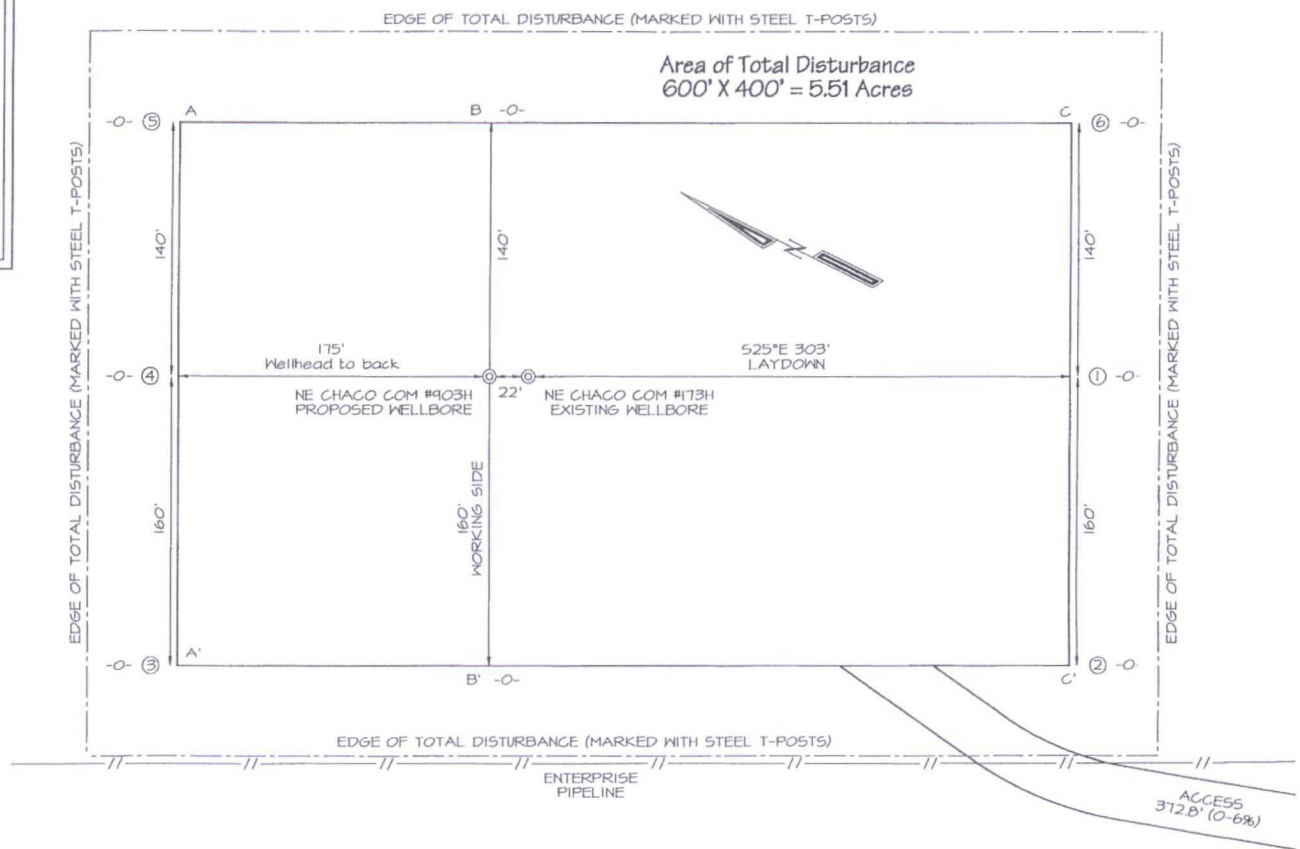
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Start 60 deg tan #903H	5257.71	607.78	774.43	1903493.57	589130.39	36.2310796	-107.5311242	Point
End 60 deg tan #903H	5287.71	640.61	734.16	1903526.28	589090.02	36.2311698	-107.5312608	Point
POE #903H	5373.00	841.43	487.85	1903726.33	588843.08	36.2317215	-107.5320959	Point
BHL #903H	5379.00	5626.01	-5380.67	1908492.75	582959.81	36.2448640	-107.5519970	Point
- plan hits target center								

SLOTS				
Slot Name	+N/-S	+E/-W	Northing	Easting
A1	-18.20	8.85	1902865.23	588366.75
A2	0.00	0.00	1902883.40	588357.84

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSection	Departure	Annotation	
550.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
1310.23	1319.45	15.39	70.92	33.58	97.07	-42.83	102.71	Hold 15.39 Inclination	
4619.18	4751.45	15.39	70.92	331.29	957.78	-422.57	1013.46	Start Build DLS 9.00 TFO -127.82	
5257.71	5516.17	60.00	309.19	607.78	774.43	-96.03	1383.37	Hold 60.00 Inclination	
5287.71	5576.17	60.00	309.19	640.61	734.16	-44.47	1435.34	Start Build DLS 9.00 TFO 0.00	
5350.23	5738.72	74.63	309.19	735.12	618.24	103.96	1584.90	Start DLS 9.00 TFO 0.00	
5373.00	5908.99	89.95	309.19	841.43	487.85	270.90	1753.13	POE at 89.95 Inc 309.19 deg	
5379.00	13480.77	89.95	309.19	5626.01	-5380.67	7784.83	9324.90	TD at 13480.77	

WPX ENERGY PRODUCTION, LLC NE CHACO COM #903H
 1186' FNL & 474' FWL, SECTION 13, T23N, R7W, NMPM
 RIO ARriba COUNTY, NEW MEXICO ELEVATION: 7014'
 LAT: 36.229424°N LONG: 107.534358°W DATUM: NAD1983

~ SURFACE OWNER ~
 Bureau of Land Management



Steel T-Posts have been set to define the Edge of Disturbance limits which are 50' offset from the edge of the staked wellpad.

**WPX ENERGY PRODUCTION, LLC NE CHACO COM #903H
1186' FNL & 474' FWL, SECTION 13, T23N, R7W, NMPM
RIO ARriba COUNTY, NEW MEXICO ELEVATION: 7014'**

HORIZONTAL SCALE
1"=40'

C/L

VERTICAL SCALE
1"=30'

A-A'	.....	.....	.....	.....	.....	.....	.....
7024'	.....	.....	.....	.....	.....	.....	.....
7014'	.....	.....	.....	.....	.....	.....	.....
7004'	.....	.....	.....	.....	.....	.....	.....
							

C/L

B-B'	.....	.....	.....	.....	.....	.....	.....
7024'	.....	.....	.....	.....	.....	.....	.....
7014'	.....	.....	.....	.....	.....	.....	.....
7004'	.....	.....	.....	.....	.....	.....	.....
							

C/L

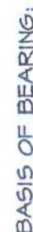
C-C'	.....	.....	.....	.....	.....	.....	.....
7024'	.....	.....	.....	.....	.....	.....	.....
7014'	.....	.....	.....	.....	.....	.....	.....
7004'	.....	.....	.....	.....	.....	.....	.....
							

NCE SURVEYS IS NOT LIABLE FOR LOCATION OF UNDERGROUND UTILITIES OR PIPELINES.

CONTRACTOR SHOULD CONTACT ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED UNDERGROUND UTILITIES OR PIPELINES ON WELLPAD AND/OR ACCESS ROAD AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION.

GRAPHIC SCALE 1"=1000'

0 1000 2000



FOUND
1948 GLO
BRASS CAP

PLAT NOTE:

BEFORE ANY CONSTRUCTION BEGINS, CONTRACTOR IS ADVISED TO CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED PIPELINES OR CABLES IN THE AREA OF THE PROJECT



JASON C. EDWARDS

Date: July 1, 2015

0+00 TO 3+72.8	372.8 FT / 22.6 RODS
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Prepared for:

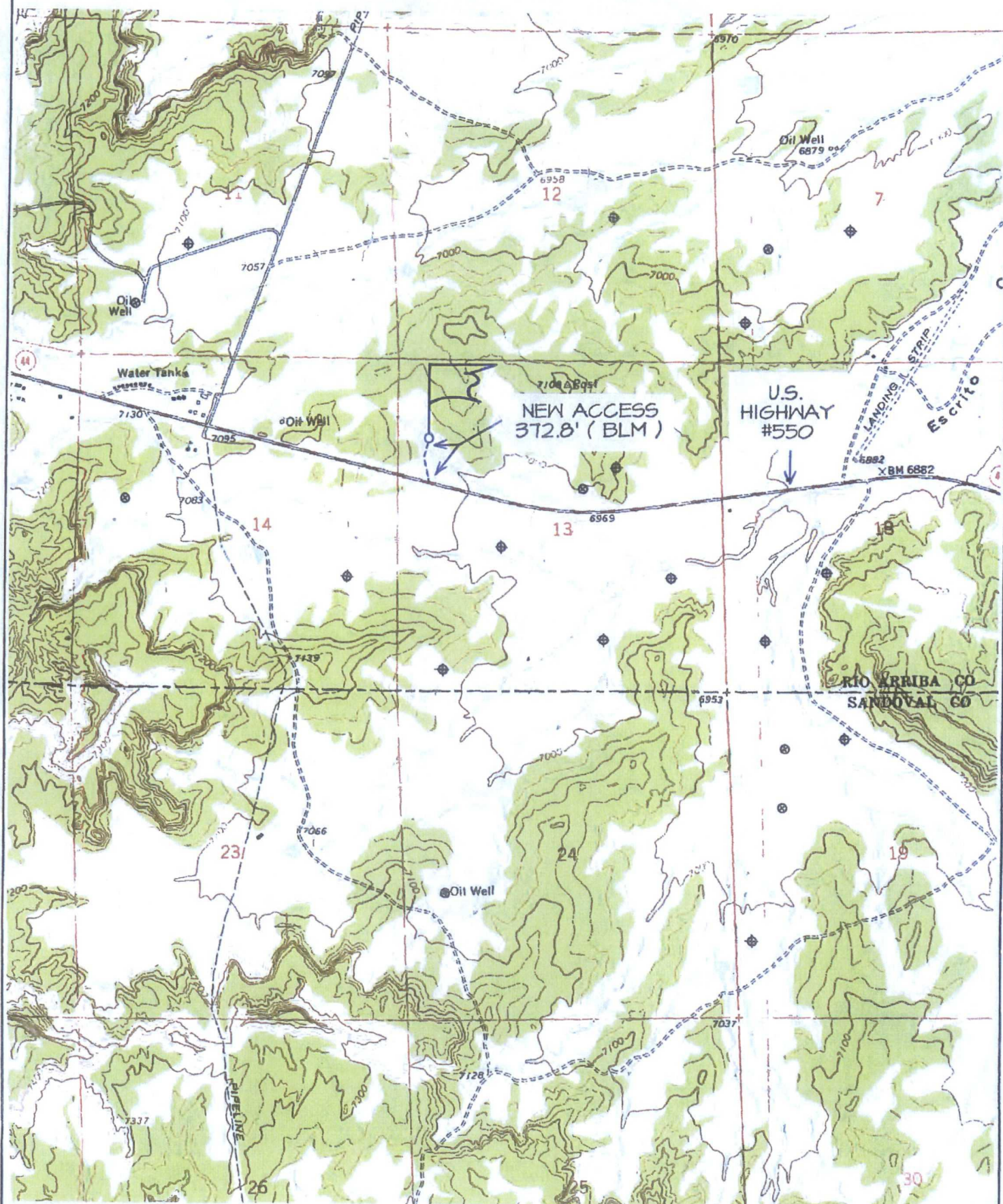
Business Address:
111 East Pinon Street
Farmington, NM 87402
(505) 325-2654 (Office)
(505) 326-5650 (Fax)

SURVEYS, INC.

SHEET 4 OF 6	CHECKED BY: JCE
FILENAME: 23713DAI	DRAWN BY: RAP

WPX ENERGY PRODUCTION, LLC NE CHACO COM #903H

1186' FNL & 747' FWL, SECTION 13, T23N, R7W, N.M.P.M.
RIO ARriba COUNTY, NEW MEXICO



NAME OF TOPO MAP : LYBROOK

⊕ PRODUCING WELL ⊗ PLUGGED & ABANDONED WELL

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

in Bloomfield, NM to WPX Energy Production, LLC NE Chaco COM #903H

1186' FNL & 747' FWL, Section 13, T23N, R7W, N.M.P.M., Rio Arriba County, NM

Latitude: 36.229410°N Longitude: 107.533752°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 49.1 miles to Mile Marker 102.2 to highway access approach on left-hand side of highway;

Go Left (Northerly) exiting Highway #550 for 372.8' to staked WPX NE Chaco Com #903H location which overlaps existing WPX NE Chaco COM #173H location.