District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., 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 Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised November 14, 2012

☐ AMENDED REPORT

OIL CONS. DIV DIST. 3

DEC 12 2014

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
WPX Energy Production, LLC P.O. Box 640 Aztec, NM 87410	120782
	3. API Number 30-039-31294

4. Property Code	5. Property Name	6. Well No.
313800	NE Chaco COM	243H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
L	16	23N	6W		1449	South	344	West	Rio Arriba

8. Proposed Bottom Hole Location

UL – Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	16	23N	6W		1571	South	230	East	Rio Arriba

9. Pool Information

Pool Name	Pool Code
Chaco Unit NE HZ (OIL)	98088

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	O	R	S	6858'
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
No	11,375' MD / 5,433' TVD	Gallup	AWS	02/01/15

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
TBD	>1000'	>1000

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
J-55	12-1/4"	9-5/8"	36#	400'	190	Surface
K-55	8-3/4"	7"	23#	5,885'	1050	Surface
N-80	6-1/8"	4-1/2"	11.6#	5,885' – 11,375'	310	5735'

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000#	2000#	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.
Signature: Andrea Felix

Printed name: Andrea Felix

Title: Regulatory Specialist

E-mail Address: andrea.felix@wpxenergy.com

Date: 12/1/2014 Phone: 333-1849

OIL CONSERVATION DIVISION

Approved By: 12-17-2014

Title: SUPERVISOR DISTRICT #3

Approved Dat: DEC 17 2014 Expiration Date: DEC 17 2016

SEE ATTACHED NMOCD CONDITIONS OF APPROVAL

Conditions of Approval Attached

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-31294	98088	CHACO UNIT NE HZ (OIL)

[4] Property Code	[5] Property Name	[6] Well Number
313800	NE CHACO COM	243H

[7] OGRID No.	[8] Operator Name	[9] Elevation
120782	WPX ENERGY PRODUCTION, LLC	6858'

[10] Surface Location

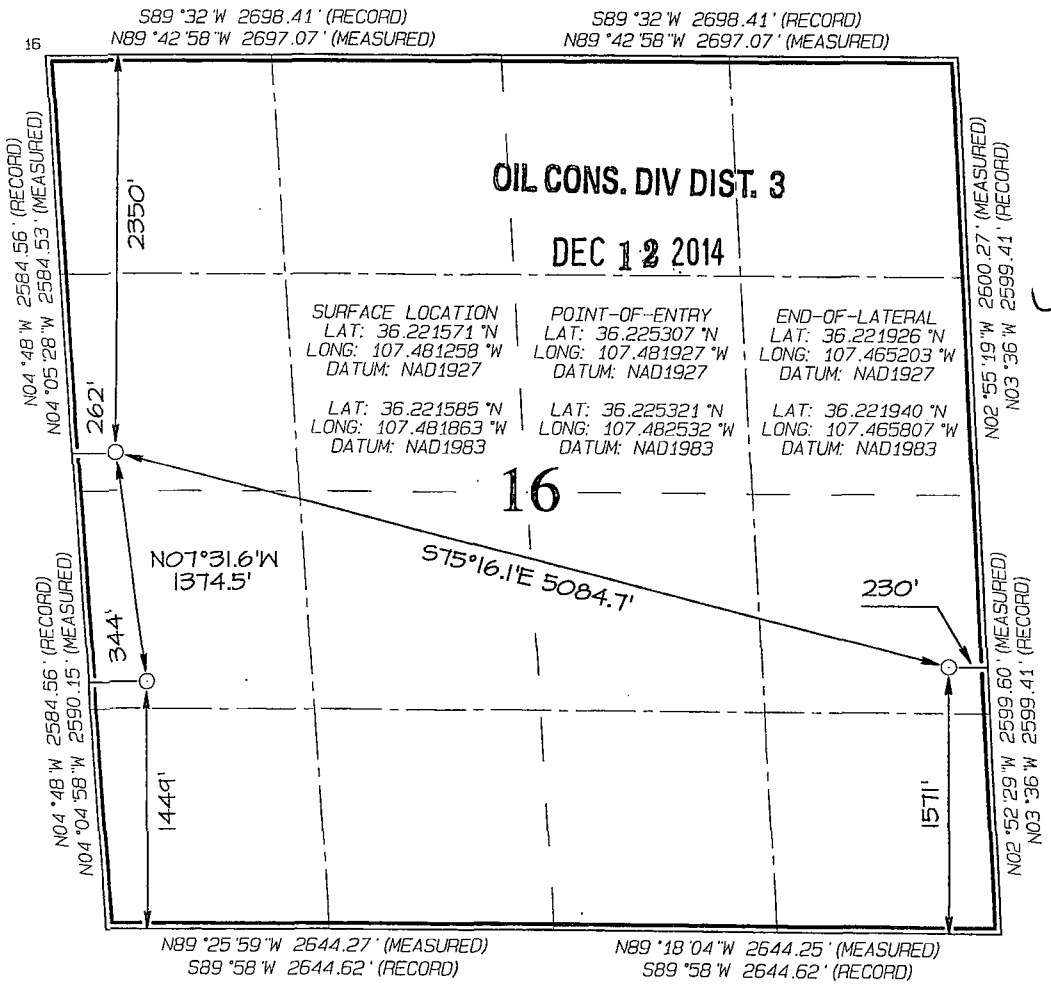
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	16	23N	6W		1449	SOUTH	344	WEST	RIO ARRIBA

[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
I	16	23N	6W		1571	SOUTH	230	EAST	RIO ARRIBA

[12] Dedicated Acres		[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640.0	Entire Section 16			R-13817A 9,237.3 acres

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



[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 12-1-2014 Date

Andrea Felix
Printed Name

Andrea.felix@wpxenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: NOVEMBER 6, 2014
Survey Date: SEPTEMBER 4, 2013

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

WPXENERGY.

WPX ENERGY

Operations Plan

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

DATE:	10/20/2014	**FIELD:**	Chaco Unit NE HZ (oil)
WELL NAME:	**NE Chaco COM #243H**	**SURFACE:**	STATE
SH Location:	NWSW Sec 16-23N-6W	**ELEVATION:**	6,859' GR
BH Location:	NESE Sec 16-23N-6W Rio Arriba Co, NM	**MINERALS:**	STATE
MEASURED DEPTH:	**11,375'**	**LEASE #:**	E012079

I. GEOLOGY: Surface formation – San Jose

A. FORMATION TOPS: (KB)

Ojo Alamo	1371	1360	Point Lookout	4499	4201
Kirtland	1500	1483	Mancos	4719	4400
Picture Cliffs	1984	1927	Gallup	5938	5426
Lewis	2024	**1963**	Kickoff Point	5002	4656
Chacra	2342	2251	Top Target	5906	5410
Cliff House	3672	**3453**	Landing Point	5885	5400
Menefee	3696	3476	Base Target	5885	5400
			TD	**11,375**	**5,433**

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

C. LOGGING PROGRAM: LWD GR from surface casing to TD. LWD GR / E- Sonic will be run in Lateral.

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

II. DRILLING

A. MUD PROGRAM: LSND mud (WBM) will be used to drill the 12-1/4" Surface hole, the 8 ¾" Directional Vertical hole, the curve portion of the wellbore. 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 +/- 5,002' (MD) / 4,656' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 5,885' (MD) / 5,400' (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 +/- 11,375' (MD) / 5,433' (TVD). Will run 4-1/2 in. Production Liner from

+/- 5,835 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 5/8	36#	J-55
Intermediate	8.75"	5,885'	7	23#	K-55
Prod. Liner	6.125"	5,735'-11,375'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 6,024'	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 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).

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: 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:** 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 +/- 5,724 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. 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 (~6,000' 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 6,174ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 6,024 ft. (MD) +/- 78 degree angle. TOC: +/- 5,724 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

WPXENERGY

WPX Energy

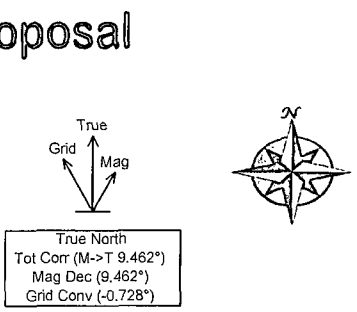
Rev 1

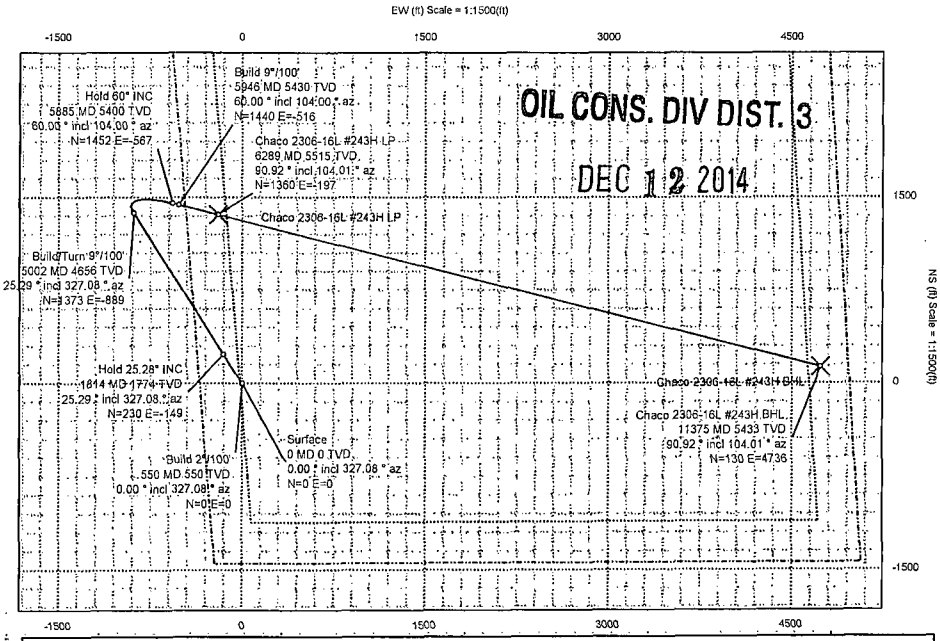
PATHFINDER
A Schlumberger Company

Borehole:	Well:	Field:	Structure:
Original Hole	Chaco 2306-16L #243H	NM, Rio Arriba (NAD 27 CZ)	WPX 16-23N-6W (Chaco 2306-16L Pad)

Gravity & Magnetic Parameters				Surface Location	NAD27 New Mexico State Plane, Central Zone, US Feet				Miscellaneous			
Model:	BGGM 2013	Dip: 63.019°	Date: 12-Nov-2013	Lat:	N 36 13 17.66	Northing:	1902167.82ftUS	Grid Conv: -0.7276°	Slot:	Chaco 2306-16L #243H	TVD Ref:	KB 14ft(6875ft above MSL)
MagDec:	9.462°	FS: 50174.459nT	Gravity FS: 998.92mgn (9.80665 Based)	Lon:	W 107 28 52.53	Easting:	136819.77ftUS	Scale Fact: 1.00005094	Plan:	Chaco 2306-16L #243H R1 mdv 11Aug14		

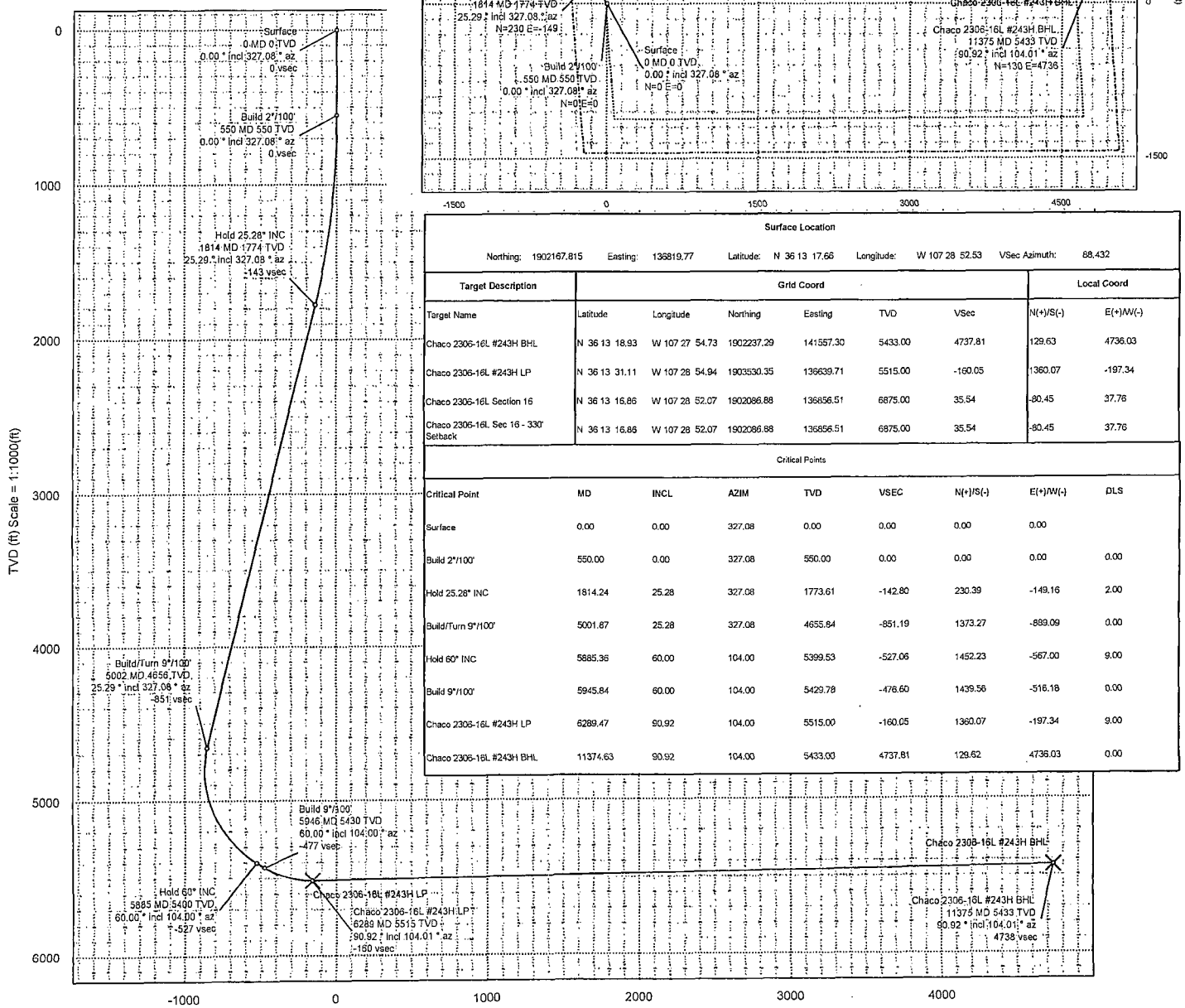
Proposal





OIL CONS. DIV DIST. 3

DEC 12 2014



Surface Location

Northing: 1902167.815 Easting: 136819.77 Latitude: N 36 13 17.66 Longitude: W 107 28 52.53 VSec Azimuth: 88.432

Target Description	Grid Coord						Local Coord	
Target Name	Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)
Chaco 2306-16L #243H BHL	N 36 13 18.93	W 107 27 54.73	1902237.29	141557.30	5433.00	4737.81	129.63	4736.03
Chaco 2306-16L #243H LP	N 36 13 31.11	W 107 28 54.94	1903530.35	136639.71	5515.00	-160.05	1360.07	-197.34
Chaco 2306-16L Section 16	N 36 13 16.86	W 107 28 52.07	1902086.88	136856.51	6875.00	35.54	-80.45	37.76
Chaco 2306-16L Sec 16 - 330' Setback	N 36 13 16.86	W 107 28 52.07	1902086.88	136856.51	6875.00	35.54	-80.45	37.76

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Surface	0.00	0.00	327.08	0.00	0.00	0.00	0.00	
Build 2°/100'	550.00	0.00	327.08	550.00	0.00	0.00	0.00	0.00
Hold 25.28° INC	1814.24	25.28	327.08	1773.61	-142.80	230.39	-149.16	2.00
Build/Turn 9°/100'	5001.87	25.28	327.08	4655.84	-851.19	1373.27	-889.09	0.00
Hold 60° INC	5885.36	60.00	104.00	5399.53	-527.06	1452.23	-567.00	9.00
Build 9°/100'	5945.84	60.00	104.00	5429.78	-476.60	1439.56	-516.18	0.00
Chaco 2306-16L #243H LP	6289.47	90.92	104.00	5515.00	-160.05	1360.07	-197.34	9.00
Chaco 2306-16L #243H BHL	11374.63	90.92	104.00	5433.00	4737.81	129.62	4736.03	0.00

Vertical Section (ft) Azim = 88.432° Scale = 1:1000(ft) Origin = 0N/-S, 0E/-W

WPXENERGY

PATHFINDER
A Schlumberger Company

Chaco 2306-16L #243H R1 mdv 11Aug14 Proposal Geodetic Report

(Def Plan)

Report Date:	August 11, 2014 - 04:07 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	WPX Energy	**Vertical Section Azimuth:**	88.432 ° (True North)
Field:	NM, Rio Arriba (NAD 27 CZ)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	WPX 16-23N-6W (Chaco 2306-16L Pad) / Chaco 2306-16L #243H	**TVD Reference Datum:**	KB 14ft
Well:	Chaco 2306-16L #243H	**TVD Reference Elevation:**	6875.000 ft above MSL
Borehole:	Original Hole	**Seabed / Ground Elevation:**	6861.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	9.462 °
Survey Name:	Chaco 2306-16L #243H R1 mdv 11Aug14	**Total Gravity Field Strength:**	998.9204mgn (9.80665 Based)
Survey Date:	November 12, 2013	**Gravity Model:**	DOX
Tort / AHD / DDI / ERD Ratio:	135.726 ° / 7529.220 ft / 6.324 / 1.365	**Total Magnetic Field Strength:**	50174.459 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Central Zone, US Feet	**Magnetic Dip Angle:**	63.019 °
Location Lat / Long:	N 36° 13' 17.65560", W 107° 28' 52.52880"	**Declination Date:**	November 12, 2013
Location Grid N/E Y/X:	N 1902167.815 ftUS, E 136819.770 ftUS	**Magnetic Declination Model:**	BGGM 2013
CRS Grid Convergence Angle:	-0.7276 °	**North Reference:**	True North
Grid Scale Factor:	1.00005094	**Grid Convergence Used:**	0.0000 °
Version / Patch:	2.8.551.0	**Total Corr Mag North->True North:**	9.4618 °
		Local Coord Referenced To:	Well Head

OIL CONS. DIV DIST. 3

DEC 12 2014

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	327.08	0.00	0.00	0.00	0.00	N/A	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
	100.00	0.00	327.08	100.00	0.00	0.00	0.00	0.00	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
	200.00	0.00	327.08	200.00	0.00	0.00	0.00	0.00	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
	300.00	0.00	327.08	300.00	0.00	0.00	0.00	0.00	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
	400.00	0.00	327.08	400.00	0.00	0.00	0.00	0.00	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
	500.00	0.00	327.08	500.00	0.00	0.00	0.00	0.00	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
Build 2°/100'	550.00	0.00	327.08	550.00	0.00	0.00	0.00	0.00	1902167.82	136819.77	N 36 13 17.66	W 107 28 52.53
	600.00	1.00	327.08	600.00	-0.23	0.37	-0.24	2.00	1902168.18	136819.54	N 36 13 17.66	W 107 28 52.53
	700.00	3.00	327.08	699.93	-2.04	3.30	-2.13	2.00	1902171.14	136817.68	N 36 13 17.69	W 107 28 52.55
	800.00	5.00	327.08	799.68	-5.67	9.15	-5.92	2.00	1902177.04	136813.96	N 36 13 17.75	W 107 28 52.60
	900.00	7.00	327.08	899.13	-11.11	17.92	-11.61	2.00	1902185.89	136808.39	N 36 13 17.83	W 107 28 52.67
	1000.00	9.00	327.08	998.15	-18.35	29.61	-19.17	2.00	1902197.66	136800.98	N 36 13 17.95	W 107 28 52.76
	1100.00	11.00	327.08	1096.63	-27.39	44.18	-28.61	2.00	1902212.36	136791.73	N 36 13 18.09	W 107 28 52.88
	1200.00	13.00	327.08	1194.44	-38.20	61.63	-39.90	2.00	1902229.95	136780.65	N 36 13 18.27	W 107 28 53.02
	1300.00	15.00	327.08	1291.46	-50.79	81.94	-53.05	2.00	1902250.43	136767.76	N 36 13 18.47	W 107 28 53.18
	1400.00	17.00	327.08	1387.58	-65.13	105.08	-68.03	2.00	1902273.75	136753.08	N 36 13 18.69	W 107 28 53.36
	1500.00	19.00	327.08	1482.68	-81.21	131.02	-84.82	2.00	1902299.90	136736.61	N 36 13 18.95	W 107 28 53.56
	1600.00	21.00	327.08	1576.65	-99.00	159.73	-103.41	2.00	1902328.85	136718.39	N 36 13 19.24	W 107 28 53.79
	1700.00	23.00	327.08	1669.36	-118.49	191.17	-123.77	2.00	1902360.55	136698.43	N 36 13 19.55	W 107 28 54.04
	1800.00	25.00	327.08	1760.71	-139.65	225.31	-145.87	2.00	1902394.97	136676.76	N 36 13 19.88	W 107 28 54.31
Hold 25.28° INC	1814.24	25.28	327.08	1773.61	-142.80	230.39	-149.16	2.00	1902400.09	136673.54	N 36 13 19.93	W 107 28 54.35
	1900.00	25.28	327.08	1851.15	-161.86	261.14	-169.07	0.00	1902431.09	136654.02	N 36 13 20.24	W 107 28 54.59
	2000.00	25.28	327.08	1941.57	-184.08	296.99	-192.28	0.00	1902467.24	136631.27	N 36 13 20.59	W 107 28 54.88
	2100.00	25.28	327.08	2031.99	-206.30	332.84	-215.49	0.00	1902503.39	136608.51	N 36 13 20.95	W 107 28 55.16
	2200.00	25.28	327.08	2122.41	-228.53	368.70	-238.70	0.00	1902539.53	136585.76	N 36 13 21.30	W 107 28 55.44
	2300.00	25.28	327.08	2212.82	-250.75	404.55	-261.92	0.00	1902575.68	136563.00	N 36 13 21.66	W 107 28 55.73
	2400.00	25.28	327.08	2303.24	-272.97	440.41	-285.13	0.00	1902611.83	136540.24	N 36 13 22.01	W 107 28 56.01
	2500.00	25.28	327.08	2393.66	-295.20	476.26	-308.34	0.00	1902647.97	136517.49	N 36 13 22.37	W 107 28 56.29
	2600.00	25.28	327.08	2484.08	-317.42	512.11	-331.55	0.00	1902684.12	136494.73	N 36 13 22.72	W 107 28 56.58
	2700.00	25.28	327.08	2574.50	-339.64	547.97	-354.77	0.00	1902720.27	136471.97	N 36 13 23.07	W 107 28 56.86
	2800.00	25.28	327.08	2664.92	-361.87	583.82	-377.98	0.00	1902756.42	136449.22	N 36 13 23.43	W 107 28 57.14
	2900.00	25.28	327.08	2755.34	-384.09	619.67	-401.19	0.00	1902792.56	136426.46	N 36 13 23.78	W 107 28 57.42
	3000.00	25.28	327.08	2845.76	-406.31	655.53	-424.41	0.00	1902828.71	136403.70	N 36 13 24.14	W 107 28 57.71
	3100.00	25.28	327.08	2936.18	-428.53	691.38	-447.62	0.00	1902864.86	136380.95	N 36 13 24.49	W 107 28 57.99
	3200.00	25.28	327.08	3026.60	-450.76	727.23	-470.83	0.00	1902901.01	136358.19	N 36 13 24.85	W 107 28 58.27
	3300.00	25.28	327.08	3117.02	-472.98	763.09	-494.04	0.00	1902937.15	136335.43	N 36 13 25.20	W 107 28 58.56
	3400.00	25.28	327.08	3207.44	-495.20	798.94	-517.26	0.00	1902973.30	136312.68	N 36 13 25.56	W 107 28 58.84
	3500.00	25.28	327.08	3297.86	-517.43	834.80	-540.47	0.00	1903009.45	136289.92	N 36 13 25.91	W 107 28 59.12
	3600.00	25.28	327.08	3388.28	-539.65	870.65	-563.68	0.00	1903045.60	136267.16	N 36 13 26.27	W 107 28 59.41
	3700.00	25.28	327.08	3478.70	-561.87	906.50	-586.89	0.00	1903081.74	136244.41	N 36 13 26.62	W 107 28 59.69
	3800.00	25.28	327.08	3569.12	-584.10	942.36	-610.11	0.00	1903117.89	136221.65	N 36 13 26.97	W 107 28 59.97
	3900.00	25.28	327.08	3659.54	-606.32	978.21	-633.32	0.00	1903154.04	136198.89	N 36 13 27.33	W 107 29 0.26
	4000.00	25.28	327.08	3749.96	-628.54	1014.06	-656.53	0.00	1903190.18	136176.14	N 36 13 27.68	W 107 29 0.54
	4100.00	25.28	327.08	3840.38	-650.76	1049.92	-679.74	0.00	1903226.33	136153.38	N 36 13 28.04	W 107 29 0.82
	4200.00	25.28	327.08	3930.80	-672.99	1085.77	-702.96	0.00	1903262.48	136130.62	N 36 13 28.39	W 107 29 1.11
	4300.00	25.28	327.08	4021.22	-695.21	1121.62	-726.17	0.00	1903298.63	136107.87	N 36 13 28.75	W 107 29 1.39
	4400.00	25.28	327.08	4111.63	-717.43	1157.48	-749.38	0.00	1903334.77	136085.11	N 36 13 29.10	W 107 29 1.67
	4500.00	25.28	327.08	4202.05	-739.66	1193.33	-772.59	0.00	1903370.92	136062.36	N 36 13 29.46	W 107 29 1.96
	4600.00	25.28	327.08	4292.47	-761.88	1229.19	-795.81	0.00	1903407.07	136039.60	N 36 13 29.81	W 107 29 2.24
	4700.00	25.28	327.08	4382.89	-784.10	1265.04	-819.02	0.00	1903443.22	136016.84	N 36 13 30.17	W 107 29 2.52
	4800.00	25.28	327.08	4473.31	-806.33	1300.89	-842.23	0.00	1903479.36	135994.09	N 36 13 30.52	W 107 29 2.81
	4900.00	25.28	327.08	4563.73	-828.55	1336.75	-865.44	0.00	1903515.51	135971.33	N 36 13 30.87	W 107 29 3.09
	5000.00	25.28	327.08	4654.15	-850.77	1372.60	-888.66	0.00	1903551.66	135948.57	N 36 13 31.23	W 107 29 3.37
Build/Turn 9°/100'	5001.87	25.28	327.08	4655.84	-851.19	1373.27	-889.09	0.00	1903552.33	135948.15	N 36 13 31.24	W 107 29 3.38
	5100.00	18.94	343.61	4746.80	-866.19	1406.21	-905.01	9.00	1903585.47	135932.65	N 36 13 31.56	W 107 29 3.57
	5200.00	15.15	11.89	4842.55	-867.30	1434.62	-906.89	9.00	1903613.91	135931.12	N 36 13 31.84	W 107 29 3.60
	5300.00	16.09	45.61	4939.05	-854.07	1457.15	-894.27	9.00	1903636.28	135944.03	N 36 13 32.07	W 107 29 3.44
	5400.00	21.12	69.34	5033.93	-826.83	1473.23	-867.46	9.00	1903652.02	135971.05	N 36 13 32.22	W 107 29 3.12
	5500.00	28.14	83.02	5124.84	-786.24	1482.47	-827.11	9.00	1903660.75	136011.52	N 36 13 32.32	W 107 29 2.62
	5600.00	36.00	91.36	5209.56	-733.30	1484.65	-774.21	9.00	1903662.25	136064.44	N 36 13 32.34	W 107 29 1.98
	5700.00	44.24	96.98	5285.99	-669.33	1479.70	-710.07	9.00	1903656.49	136128.51	N 36 13 32.29	W 107 29 1.19
	5800.00	52.69	101.14	5352.25	-595.88	1467.75	-636.28	9.00	1903643.60	136202.15	N 36 13 32.17	W 107 29 0.29
Hold 60° INC	5885.36	60.00	104.00	5399.53	-527.06	1452.23	-567.00	9.00	1903627.20	136271.23	N 36 13 32.02	W 107 28 59.45
	5900.00	60.00	104.00	5406.85	-514.84	1449.17	-554.70	0.00	1903623.98	136283.49	N 36 13 31.99	W 107 28 59.30
Build 9°/100'	5945.84	60.00	104.00	5429.78	-476.60	1439.56	-516.18	0.00	1903613.89	136321.89	N 36 13 31.89	W 107 28 58.83
	6000.00	64.87	104.00	5454.83	-430.37	1427.96	-469.61	9.00	1903601.69	136368.31	N 36 13 31.78	W 107 28 58.26
	6100.00	73.87	104.00	5490.03	-340.30	1405.34	-378.89	9.00	1903577.92	136458.74	N 36 13 31.55	W 107 28 57.15
	6200.00	82.87	104.00	5510.16	-246.05	1381.67	-283.95	9.00	1903553.05	136553.37	N 36 13 31.32	W 107 28 55.99
Chaco 2306-16L #243H LP	6289.47	90.92	104.00	5515.00	-160.05	1360.07	-197.34	9.00	1903530.34	136639.71	N 36 13 31.11	W 107 28 54.94
	6300.00	90.92	104.00	5514.83	-149.91	1357.52	-187.12	0.00	1903527.67	136649.89	N 36 13 31.08	W 107 28 54.81
	6400.00	90.92	104.00	5513.22	-53.60	1333.32	-90.11	0.00	1903502.24	136746.60	N 36 13 30.84	W 107 28 53.63
	6500.00	90.92	104.00	5511.61	42.72	1309.13	6.91	0.00	1903476.81	136843.30	N 36 13 30.60	W 107 28 52.44
	6600.00	90.92	104.00	5509.99	139.04	1284.93	103.92	0.00	1903451.38	136940.01	N 36 13 30.36	W 107 28 51.26
	6700.00	90.92	104.00	5508.38	235.35	1260.73	200.94	0.00	1903425.96	137036.71	N 36 13 30.12	W 107 28 50.08
	6800.00	90.92	104.00	5506.77	331.67	1236.54	297.95	0.00	1903400.53	137133.41	N 36 13 29.88	W 107 28 48.89
	6900.00	90.92	104.00	5505.16	427.99	1212.34	394.97	0.00	1903375.10	137230.12	N 36 13 29.64	W 107 28 47.71

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7000.00	90.92	104.00	5503.54	524.30	1188.14	491.98	0.00	1903349.67	137326.82	N 36 13 29.41	W 107 28 46.52
	7100.00	90.92	104.00	5501.93	620.62	1163.95	589.00	0.00	1903324.24	137423.53	N 36 13 29.17	W 107 28 45.34
	7200.00	90.92	104.00	5500.32	716.94	1139.75	686.01	0.00	1903298.82	137520.23	N 36 13 28.93	W 107 28 44.16
	7300.00	90.92	104.00	5498.70	813.25	1115.55	783.03	0.00	1903273.39	137616.94	N 36 13 28.69	W 107 28 42.97
	7400.00	90.92	104.00	5497.09	909.57	1091.36	880.04	0.00	1903247.96	137713.64	N 36 13 28.45	W 107 28 41.79
	7500.00	90.92	104.00	5495.48	1005.89	1067.16	977.06	0.00	1903222.53	137810.35	N 36 13 28.21	W 107 28 40.60
	7600.00	90.92	104.00	5493.87	1102.20	1042.96	1074.07	0.00	1903197.10	137907.05	N 36 13 27.97	W 107 28 39.42
	7700.00	90.92	104.00	5492.25	1198.52	1018.77	1171.09	0.00	1903171.68	138003.76	N 36 13 27.73	W 107 28 38.24
	7800.00	90.92	104.00	5490.64	1294.84	994.57	1268.10	0.00	1903146.25	138100.46	N 36 13 27.49	W 107 28 37.05
	7900.00	90.92	104.00	5489.03	1391.15	970.37	1365.12	0.00	1903120.82	138197.17	N 36 13 27.25	W 107 28 35.87
	8000.00	90.92	104.00	5487.42	1487.47	946.17	1462.13	0.00	1903095.39	138293.87	N 36 13 27.01	W 107 28 34.68
	8100.00	90.92	104.00	5485.80	1583.79	921.98	1559.15	0.00	1903069.96	138390.58	N 36 13 26.77	W 107 28 33.50
	8200.00	90.92	104.00	5484.19	1680.10	897.78	1656.16	0.00	1903044.53	138487.28	N 36 13 26.53	W 107 28 32.32
	8300.00	90.92	104.00	5482.58	1776.42	873.58	1753.18	0.00	1903019.11	138583.98	N 36 13 26.29	W 107 28 31.13
	8400.00	90.92	104.00	5480.97	1872.74	849.39	1850.19	0.00	1902993.68	138680.69	N 36 13 26.05	W 107 28 29.95
	8500.00	90.92	104.00	5479.35	1969.05	825.19	1947.21	0.00	1902968.25	138777.39	N 36 13 25.82	W 107 28 28.76
	8600.00	90.92	104.00	5477.74	2065.37	800.99	2044.22	0.00	1902942.82	138874.10	N 36 13 25.58	W 107 28 27.58
	8700.00	90.92	104.00	5476.13	2161.69	776.80	2141.24	0.00	1902917.39	138970.80	N 36 13 25.34	W 107 28 26.40
	8800.00	90.92	104.00	5474.52	2258.00	752.60	2238.25	0.00	1902891.97	139067.51	N 36 13 25.10	W 107 28 25.21
	8900.00	90.92	104.00	5472.90	2354.32	728.40	2335.27	0.00	1902866.54	139164.21	N 36 13 24.86	W 107 28 24.03
	9000.00	90.92	104.00	5471.29	2450.64	704.21	2432.28	0.00	1902841.11	139260.92	N 36 13 24.62	W 107 28 22.84
	9100.00	90.92	104.00	5469.68	2546.95	680.01	2529.30	0.00	1902815.68	139357.62	N 36 13 24.38	W 107 28 21.66
	9200.00	90.92	104.00	5468.07	2643.27	655.81	2626.31	0.00	1902790.25	139454.33	N 36 13 24.14	W 107 28 20.48
	9300.00	90.92	104.00	5466.45	2739.59	631.62	2723.33	0.00	1902764.83	139551.03	N 36 13 23.90	W 107 28 19.29
	9400.00	90.92	104.00	5464.84	2835.90	607.42	2820.34	0.00	1902739.40	139647.74	N 36 13 23.66	W 107 28 18.11
	9500.00	90.92	104.00	5463.23	2932.22	583.22	2917.36	0.00	1902713.97	139744.44	N 36 13 23.42	W 107 28 16.93
	9600.00	90.92	104.00	5461.62	3028.54	559.03	3014.37	0.00	1902688.54	139841.15	N 36 13 23.18	W 107 28 15.74
	9700.00	90.92	104.00	5460.00	3124.85	534.83	3111.39	0.00	1902663.11	139937.85	N 36 13 22.94	W 107 28 14.56
	9800.00	90.92	104.00	5458.39	3221.17	510.63	3208.40	0.00	1902637.69	140034.55	N 36 13 22.70	W 107 28 13.37
	9900.00	90.92	104.00	5456.78	3317.49	486.44	3305.42	0.00	1902612.26	140131.26	N 36 13 22.46	W 107 28 12.19
	10000.00	90.92	104.00	5455.17	3413.80	462.24	3402.43	0.00	1902586.83	140227.96	N 36 13 22.22	W 107 28 11.01
	10100.00	90.92	104.00	5453.55	3510.12	438.04	3499.45	0.00	1902561.40	140324.67	N 36 13 21.99	W 107 28 9.82
	10200.00	90.92	104.00	5451.94	3606.44	413.85	3596.46	0.00	1902535.97	140421.37	N 36 13 21.75	W 107 28 8.64
	10300.00	90.92	104.00	5450.33	3702.75	389.65	3693.48	0.00	1902510.54	140518.08	N 36 13 21.51	W 107 28 7.45
	10400.00	90.92	104.00	5448.72	3799.07	365.45	3790.49	0.00	1902485.12	140614.78	N 36 13 21.27	W 107 28 6.27
	10500.00	90.92	104.00	5447.10	3895.39	341.26	3887.51	0.00	1902459.69	140711.49	N 36 13 21.03	W 107 28 5.09
	10600.00	90.92	104.00	5445.49	3991.70	317.06	3984.52	0.00	1902434.26	140808.19	N 36 13 20.79	W 107 28 3.90
	10700.00	90.92	104.00	5443.88	4088.02	292.86	4081.54	0.00	1902408.83	140904.90	N 36 13 20.55	W 107 28 2.72
	10800.00	90.92	104.00	5442.27	4184.34	268.67	4178.55	0.00	1902383.40	141001.60	N 36 13 20.31	W 107 28 1.53
	10900.00	90.92	104.00	5440.65	4280.65	244.47	4275.57	0.00	1902357.98	141098.31	N 36 13 20.07	W 107 28 0.35
	11000.00	90.92	104.00	5439.04	4376.97	220.27	4372.58	0.00	1902332.55	141195.01	N 36 13 19.83	W 107 27 59.17
	11100.00	90.92	104.00	5437.43	4473.29	196.07	4469.60	0.00	1902307.12	141291.71	N 36 13 19.59	W 107 27 57.98
	11200.00	90.92	104.00	5435.82	4569.60	171.88	4566.61	0.00	1902281.69	141388.42	N 36 13 19.35	W 107 27 56.80
	11300.00	90.92	104.00	5434.20	4665.92	147.68	4663.63	0.00	1902256.26	141485.12	N 36 13 19.11	W 107 27 55.61
Chaco 2306-16L #243H BHL	11374.63	90.92	104.00	5433.00	4737.81	129.62	4736.03	0.00	1902237.29	141557.30	N 36 13 18.93	W 107 27 54.73

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2306-16L #243H R1 mdv 11Aug14
	1	14.000	11374.635	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2306-16L #243H R1 mdv 11Aug14

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 Conditions of Approval (C-101 Application for permit to drill)

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

KO