

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 July 18, 2013

☐ AMENDED REPORT

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

¹ Operator Name and Address WPX Energy Production, LLC P.O. Box 640 Aztec, NM 87410		² OGRID Number 120782
		³ API Number 30.045-35000
⁴ Property Code 313155	⁵ Property Name Chaco 2408-33D	⁶ Well No. 118H

⁷ Surface Location

UL - Lot D	Section 33	Township 24N	Range 8W	Lot Idn	Feet from 1262	N/S Line NORTH	Feet From 422	E/W Line WEST	County SAN JUAN
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⁸ Proposed Bottom Hole Location

UL - Lot D	Section 32	Township 24N	Range 8W	Lot Idn	Feet from 380	N/S Line NORTH	Feet From 230	E/W Line WEST	County SAN JUAN
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⁹ Pool Information

RCVD SEP 26 '14

Pool Name Nageezi Gallup	Pool Code 47540
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Additional Well Information

OIL CONS. DIV.
DIST. 3

¹¹ Work Type N	¹² Well Type O	¹³ Cable/Rotary R	¹⁴ Lease Type S	¹⁵ Ground Level Elevation 7020'
¹⁶ Multiple NO	¹⁷ Proposed Depth 10,698' MD/5,483' TVD	¹⁸ Formation Gallup	¹⁹ Contractor AWS	²⁰ Spud Date 11/1/2014
Depth to Ground water >120'		Distance from nearest fresh water well >1000'		Distance to nearest surface water >1000'

☒ We will be using a closed-loop system in lieu of lined pits

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#	6005'	1050	Surface
N-80	6-1/8"	4-1/2"	11.6#	5,855' - 10,698'	310	5,855'

Casing/Cement Program: Additional Comments

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²² Proposed Blowout Prevention Program

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

*SEE ATTACHED COA'S

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: <i>Larry Higgins</i>		OIL CONSERVATION DIVISION	
Printed name: Larry Higgins		Approved By: <i>Chad Hurn</i> 10-3-2014	
Title: Regulatory Specialist		Title: SUPERVISOR DISTRICT # 3	
E-mail Address: larry.higgins@wpxenergy.com		Approved Date: OCT 03 2014	
Date: 9/25/14		Expiration Date: OCT 03 2016	
Phone: 333-1808		Conditions of Approval Attached * Last Page	

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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

*API Number 30-045-35606		*Pool Code 47540	*Pool Name NAGEEZI GALLUP
*Property Code 313755	*Property Name CHACO 2408-33D		*Well Number 118H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 7020'

10 Surface Location

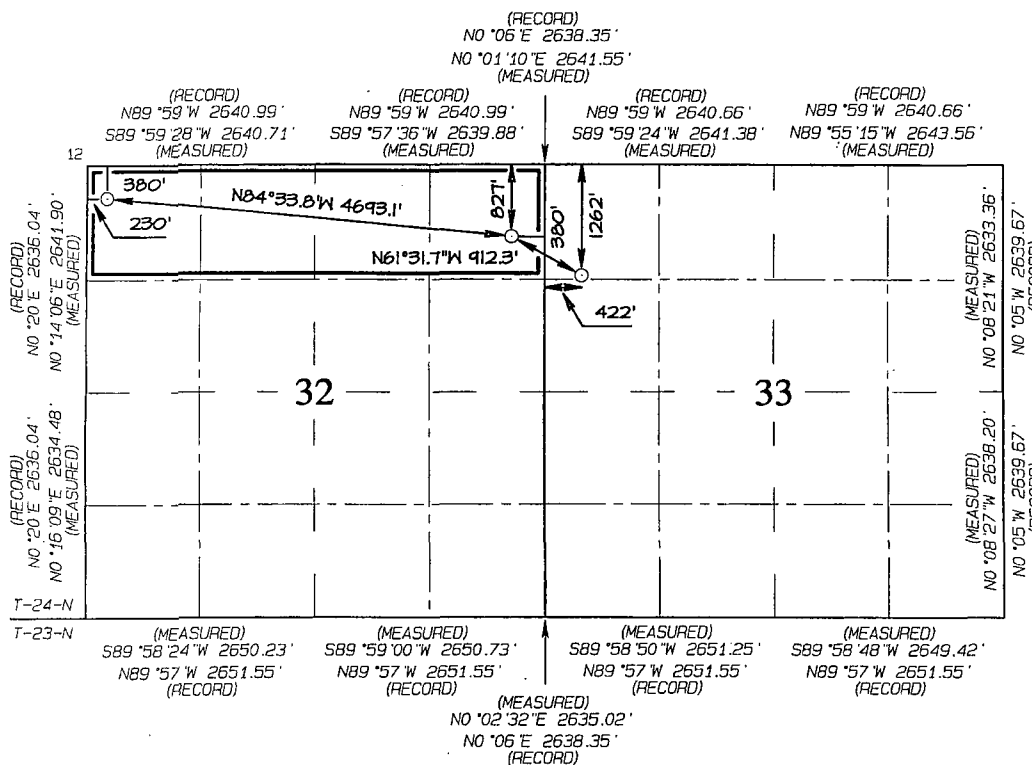
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	33	24N	8W		1262	NORTH	422	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	32	24N	8W		380	NORTH	230	WEST	SAN JUAN

*Dedicated Acres 160.0 Acres N/2 N/2 - Section 32	*Joint or Infill	*Consolidation Code	*Order No. ROUND SEP 26 '14 OIL CONS. DIV. DIST. 3
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: Larry Higgins
Date: 9/22/14

Printed Name: Larry Higgins
E-mail Address: larry.higgins@wpxenergy.com

18 SURVEYOR CERTIFICATION

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

Date Revised: SEPTEMBER 19, 2014
Survey Date: DECEMBER 12, 2013

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

END-OF-LATERAL
380' FNL 230' FWL
SECTION 32, T24N, R8W
LAT: 36.277042°N
LONG: 107.712718°W
DATUM: NAD1927

POINT-OF-ENTRY
827' FNL 380' FEL
SECTION 32, T24N, R8W
LAT: 36.275803°N
LONG: 107.696870°W
DATUM: NAD1927

SURFACE LOCATION
1262' FNL 422' FWL
SECTION 33, T24N, R8W
LAT: 36.274606°N
LONG: 107.694152°W
DATUM: NAD1927

LAT: 36.277054°N
LONG: 107.713330°W
DATUM: NAD1983

LAT: 36.275816°N
LONG: 107.697482°W
DATUM: NAD1983

LAT: 36.274618°N
LONG: 107.694763°W
DATUM: NAD1983

WPX ENERGY

Operations Plan

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

DATE: 9/9/14 **FIELD:** Nageezi Gallup

WELL NAME: Chaco 2408-33D #118H **SURFACE:** BLM

SH Location: NWNW Sec 33 -24N -08W **ELEVATION:** 7020' GR

BH Location: NWNW Sec 32 -24N -08W
San Juan Co., NM **MINERALS:** State

MEASURED DEPTH: 10,698' **LEASE #:** L029861

I. GEOLOGY: Surface formation – Nacimiento

A. FORMATION TOPS: (KB)

Name	MD	TVD	Name	MD	TVD
Ojo Alamo	1332	1329	Point Lookout	4278	4263
Kirtland	1526	1523	Mancos	4507	4491
Picture Cliffs	1889	1884	Kickoff Point	4932	4915
Lewis	2026	2020	Top Target	5706	5515
Chacra	2304	2297	Landing Point	6005	5581
Cliff House	3370	3359	Base Target	6005	5581
Menefee	3413	3401			
			TD	10698	5483

- 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 +/- 4,932' (MD) / 4,915' (TVD). Curve portion of wellbore will be drilled and landed at +/- 90 deg. at +/- 6,005' (MD) / 5,581' (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 +/- 10,698' (MD) / 5,483' (TVD). Will run 4-1/2 in. Production Liner from +/- 5,855 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"	6,005'	7"	23#	K-55
Prod. Liner	6.125"	5,855' - 10,698'	4-1/2"	11.6#	N-80
Tie-Back String	N/A	Surf. - 5,855'	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 + (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**: 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 +/- 5,555 ft.

IV. COMPLETION**A. CBL**

1. Run CCL for perforating.

B. PRESSURE TEST

1. Pressure test 4-1/2" casing to 4500 psi max, hold at 1500 psi for 30 minutes. Increase pressure to Open RSI sleeves.

C. STIMULATION

1. Stimulate with approximately 2,805,000# 20/40 mesh sand and 340,000# 16/30 mesh sand in 619,113 gallons water with 42,696 mscf N₂ for 17 stages.
2. Isolate stages with flow through frac plug.
3. Drill out frac plugs and flowback lateral.

D. RUNNING TUBING

1. Production Tubing: Run 2-7/8", 6.5#, J-55, EUE tubing with a SN on top of bottom joint. Land tubing near Top of Liner point of curve (~5,800' MD).

- Although this horizontal well will be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 B(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 B(2) NMAC, 19.15.16.15 B(2) NMAC, and 19.15.16.15 B(4) NMAC.

NOTE:

Installation of RSI sleeves at Toe of Lateral.

Proposed Operations:

A 4-1/2" 11.6# N-80 Liner will be run to TD and landed +/- 150 ft. into the 7" 23# K-55 Intermediate casing (set at 6,005 ft. MD) with a Liner Hanger and pack-off assembly then cemented to +/- 300 ft above the liner hanger. TOL will be +/- 5,855 ft. (MD) +/- 78 degree angle. TOC: +/- 5,555 ft. (MD).

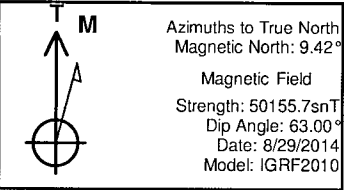
After cementing and TOL clean up operations are complete, the TOL will be tested to 1500 psi (per BLM).

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

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

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

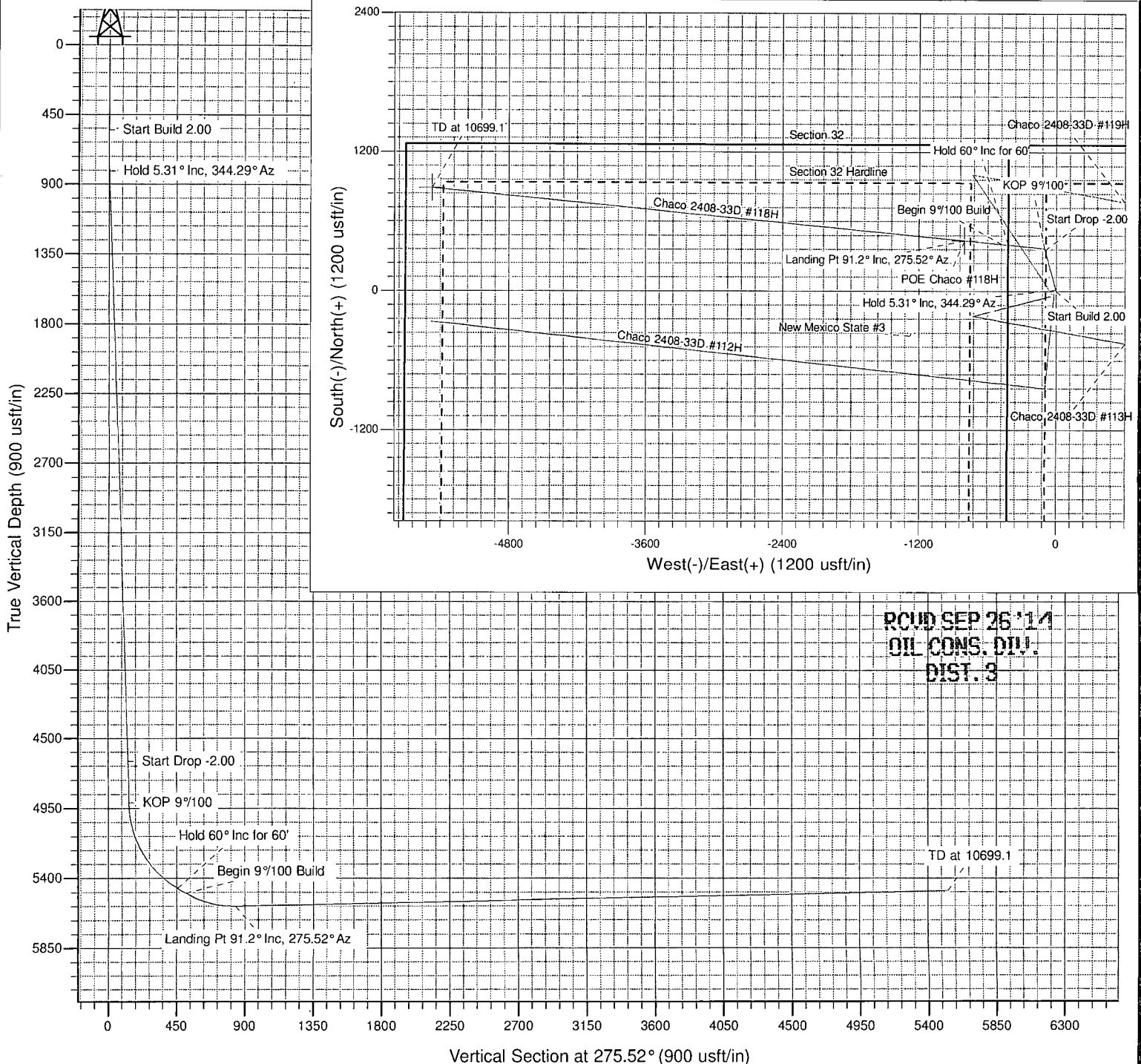
Well Name: Chaco 2408-33D #118H
 Surface Location: Chaco 2408-33D
 NAD 1927 (NADCON CONUS) , US State Plane 1927 (Exact solution) New Mexico West 3003
 Ground Elevation: 7020.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1919229.79 541026.47 36.274610 -107.694150 118H
 WELL @ 7034.0usft (Original Well Elev)

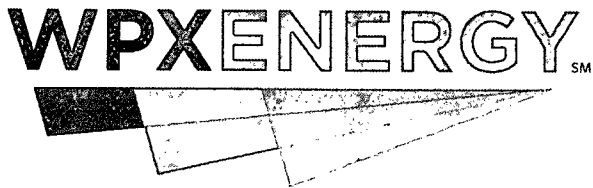


Project: SJ 32-24N-08W
 Site: Chaco 2408-33D
 Well: Chaco 2408-33D #118H
 Plan #2 09Sep14 kjs

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
550.0	550.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00	
815.2	815.6	5.31	344.29	11.8	-3.3	4.5	12.3	Hold 5.31° Inc, 344.29° Az	
4649.3	4666.2	5.31	344.29	355.1	-99.9	133.6	368.8	Start Drop -2.00	
4914.5	4931.8	0.00	0.00	366.9	-103.2	138.0	381.1	KOP 9°/100'	
5465.8	5598.5	60.00	275.52	397.5	-420.1	456.4	699.5	Hold 60° Inc for 60'	
5495.8	5658.5	60.00	275.52	402.5	-471.8	508.3	751.4	Begin 9°/100 Build	
5581.0	6005.1	91.20	275.52	434.4	-801.8	839.9	1083.0	Landing Pt 91.2° Inc, 275.52° Az	
5483.0	10698.1	91.20	275.52	885.7	-5472.0	5531.9	5775.0	TD at 10699.1	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TD / PBHL Chaco #118H	5483.0	885.8	-5473.1	1920107.74	535552.12	36.277042	-107.712718
POE Chaco #118H	5581.0	434.4	-801.8	1919662.99	540224.04	36.275803	-107.696870





SAN JUAN BASIN

SJ 32-24N-08W

Chaco 2408-33D

Chaco 2408-33D #118H - Slot 118H

Wellbore #1

Plan: Plan #2 09Sep14 kjs

Standard Planning Report - Geographic

09 September, 2014



WPX
Planning Report - Geographic

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2408-33D #118H - Slot 118H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 7034.0usft (Original Well Elev)
Project:	SJ 32-24N-08W	MD Reference:	WELL @ 7034.0usft (Original Well Elev)
Site:	Chaco 2408-33D	North Reference:	True
Well:	Chaco 2408-33D #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 09Sep14 kjs		

Project	SJ 32-24N-08W, San Juan County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	Chaco 2408-33D		
Site Position:		Northing:	1,919,215.20 usft
From:	Map	Easting:	541,008.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	36.274570
		Longitude:	-107.694210
		Grid Convergence:	0.08 °

Well	Chaco 2408-33D #118H - Slot 118H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	36.274610
		Longitude:	-107.694150
		Ground Level:	7,020.0 usft

Wellbore	Wellbore #1		
Magnetics:	Model Name	Sample Date	Declination
			(°)
	IGRF2010	8/29/2014	9.42
			Dip Angle
			(°)
			63.00
			Field Strength
			(nT)
			50,156

Design	Plan #2 09Sep14 kjs		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			275.52

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
550.0	0.00	0.00	550.0	0.0	0.0	0.00	0.00	0.00	0.00	
815.6	5.31	344.29	815.3	11.8	-3.3	2.00	2.00	0.00	344.29	
4,666.2	5.31	344.29	4,649.2	355.1	-99.9	0.00	0.00	0.00	0.00	
4,931.8	0.00	0.00	4,914.5	366.9	-103.2	2.00	-2.00	0.00	180.00	
5,598.5	60.00	275.52	5,465.8	397.5	-420.0	9.00	9.00	0.00	275.52	
5,658.5	60.00	275.52	5,495.8	402.5	-471.8	0.00	0.00	0.00	0.00	
6,005.1	91.20	275.52	5,581.0	434.4	-801.8	9.00	9.00	0.00	0.00	
10,699.1	91.20	275.52	5,483.0	885.8	-5,473.1	0.00	0.00	0.00	0.00	TD / PBHL Chaco #11



WPX
Planning Report - Geographic

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2408-33D #118H - Slot 118H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 7034.0usft (Original Well Elev)
Project:	SJ 32-24N-08W	MD Reference:	WELL @ 7034.0usft (Original Well Elev)
Site:	Chaco 2408-33D	North Reference:	True
Well:	Chaco 2408-33D #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2.09Sep14.kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,919,229.79	541,026.47	36.274610	-107.694150
200.0	0.00	0.00	200.0	0.0	0.0	1,919,229.79	541,026.47	36.274610	-107.694150
400.0	0.00	0.00	400.0	0.0	0.0	1,919,229.79	541,026.47	36.274610	-107.694150
550.0	0.00	0.00	550.0	0.0	0.0	1,919,229.79	541,026.47	36.274610	-107.694150
Start Build 2:00									
600.0	1.00	344.29	600.0	0.4	-0.1	1,919,230.21	541,026.35	36.274611	-107.694151
800.0	5.00	344.29	799.7	10.5	-3.0	1,919,240.28	541,023.50	36.274639	-107.694160
815.6	5.31	344.29	815.2	11.8	-3.3	1,919,241.63	541,023.12	36.274643	-107.694162
Hold 5.31° Inc, 344.29° Az									
1,000.0	5.31	344.29	998.8	28.3	-8.0	1,919,258.06	541,018.47	36.274688	-107.694177
1,200.0	5.31	344.29	1,198.0	46.1	-13.0	1,919,275.88	541,013.43	36.274737	-107.694194
1,400.0	5.31	344.29	1,397.1	63.9	-18.0	1,919,293.70	541,008.39	36.274786	-107.694211
1,600.0	5.31	344.29	1,596.3	81.8	-23.0	1,919,311.52	541,003.35	36.274835	-107.694228
1,800.0	5.31	344.29	1,795.4	99.6	-28.0	1,919,329.34	540,998.31	36.274884	-107.694245
2,000.0	5.31	344.29	1,994.5	117.4	-33.0	1,919,347.15	540,993.27	36.274933	-107.694262
2,200.0	5.31	344.29	2,193.7	135.2	-38.0	1,919,364.97	540,988.23	36.274982	-107.694279
2,400.0	5.31	344.29	2,392.8	153.1	-43.1	1,919,382.79	540,983.19	36.275031	-107.694296
2,600.0	5.31	344.29	2,592.0	170.9	-48.1	1,919,400.61	540,978.15	36.275080	-107.694313
2,800.0	5.31	344.29	2,791.1	188.7	-53.1	1,919,418.43	540,973.11	36.275129	-107.694330
3,000.0	5.31	344.29	2,990.2	206.5	-58.1	1,919,436.25	540,968.07	36.275177	-107.694347
3,200.0	5.31	344.29	3,189.4	224.4	-63.1	1,919,454.07	540,963.03	36.275226	-107.694364
3,400.0	5.31	344.29	3,388.5	242.2	-68.1	1,919,471.89	540,958.00	36.275275	-107.694381
3,600.0	5.31	344.29	3,587.7	260.0	-73.1	1,919,489.71	540,952.96	36.275324	-107.694398
3,800.0	5.31	344.29	3,786.8	277.8	-78.2	1,919,507.53	540,947.92	36.275373	-107.694415
4,000.0	5.31	344.29	3,985.9	295.7	-83.2	1,919,525.35	540,942.88	36.275422	-107.694432
4,200.0	5.31	344.29	4,185.1	313.5	-88.2	1,919,543.17	540,937.84	36.275471	-107.694449
4,400.0	5.31	344.29	4,384.2	331.3	-93.2	1,919,560.99	540,932.80	36.275520	-107.694466
4,600.0	5.31	344.29	4,583.4	349.2	-98.2	1,919,578.80	540,927.76	36.275569	-107.694483
4,666.2	5.31	344.29	4,649.3	355.1	-99.9	1,919,584.70	540,926.09	36.275585	-107.694489
Start Drop -2:00									
4,800.0	2.64	344.29	4,782.7	364.0	-102.4	1,919,593.62	540,923.56	36.275610	-107.694498
4,931.8	0.00	0.00	4,914.5	366.9	-103.2	1,919,596.54	540,922.74	36.275618	-107.694500
KOP 9°/100									
5,000.0	6.14	275.52	4,982.6	367.3	-106.8	1,919,596.89	540,919.11	36.275619	-107.694513
5,200.0	24.14	275.52	5,174.8	372.3	-158.6	1,919,601.82	540,867.33	36.275633	-107.694688
5,400.0	42.14	275.52	5,341.6	382.7	-267.0	1,919,612.13	540,758.94	36.275661	-107.695056
5,598.5	60.00	275.52	5,465.8	397.5	-420.1	1,919,626.71	540,605.84	36.275702	-107.695575
Hold 60° Inc for 60'									
5,600.0	60.00	275.52	5,466.6	397.6	-421.4	1,919,626.83	540,604.54	36.275702	-107.695580
5,658.5	60.00	275.52	5,495.8	402.5	-471.8	1,919,631.63	540,554.11	36.275716	-107.695751
Begin 9°/100 Build									
5,800.0	72.74	275.52	5,552.4	415.0	-600.6	1,919,643.89	540,425.32	36.275750	-107.696188
6,000.0	90.74	275.52	5,581.1	433.9	-796.7	1,919,662.57	540,229.10	36.275802	-107.696853
6,005.1	91.19	275.52	5,581.0	434.4	-801.8	1,919,663.05	540,224.05	36.275803	-107.696870
Landing Pt 91.2° Inc, 275.52° Az - POE Chaco #118H									
6,200.0	91.20	275.52	5,576.9	453.2	-995.8	1,919,681.52	540,030.04	36.275855	-107.697529
6,400.0	91.20	275.52	5,572.7	472.4	-1,194.8	1,919,700.46	539,830.98	36.275908	-107.698204
6,600.0	91.20	275.52	5,568.6	491.6	-1,393.8	1,919,719.41	539,631.93	36.275961	-107.698879
6,800.0	91.20	275.52	5,564.4	510.9	-1,592.9	1,919,738.36	539,432.87	36.276013	-107.699554
7,000.0	91.20	275.52	5,560.2	530.1	-1,791.9	1,919,757.30	539,233.81	36.276066	-107.700229
7,200.0	91.20	275.52	5,556.0	549.3	-1,990.9	1,919,776.25	539,034.76	36.276119	-107.700905
7,400.0	91.20	275.52	5,551.9	568.6	-2,190.0	1,919,795.20	538,835.70	36.276172	-107.701580
7,600.0	91.20	275.52	5,547.7	587.8	-2,389.0	1,919,814.15	538,636.64	36.276225	-107.702255
7,800.0	91.20	275.52	5,543.5	607.0	-2,588.0	1,919,833.09	538,437.59	36.276277	-107.702930



WPX

Planning Report - Geographic

Database:	COMPASS-SANJUAN	Local Co-ordinate Reference:	Well Chaco 2408-33D #118H - Slot 118H
Company:	SAN JUAN BASIN	TVD Reference:	WELL @ 7034.0usft (Original Well Elev)
Project:	SJ 32-24N-08W	MD Reference:	WELL @ 7034.0usft (Original Well Elev)
Site:	Chaco 2408-33D	North Reference:	True
Well:	Chaco 2408-33D #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 09Sep14 kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,000.0	91.20	275.52	5,539.3	626.3	-2,787.0	1,919,852.04	538,238.53	36.276330	-107.703606
8,200.0	91.20	275.52	5,535.2	645.5	-2,986.1	1,919,870.99	538,039.47	36.276383	-107.704281
8,400.0	91.20	275.52	5,531.0	664.7	-3,185.1	1,919,889.93	537,840.42	36.276436	-107.704956
8,600.0	91.20	275.52	5,526.8	684.0	-3,384.1	1,919,908.88	537,641.36	36.276488	-107.705631
8,800.0	91.20	275.52	5,522.6	703.2	-3,583.2	1,919,927.83	537,442.30	36.276541	-107.706307
9,000.0	91.20	275.52	5,518.5	722.4	-3,782.2	1,919,946.77	537,243.24	36.276594	-107.706982
9,200.0	91.20	275.52	5,514.3	741.7	-3,981.2	1,919,965.72	537,044.19	36.276647	-107.707657
9,400.0	91.20	275.52	5,510.1	760.9	-4,180.2	1,919,984.67	536,845.13	36.276700	-107.708332
9,600.0	91.20	275.52	5,505.9	780.1	-4,379.3	1,920,003.62	536,646.07	36.276752	-107.709007
9,800.0	91.20	275.52	5,501.8	799.4	-4,578.3	1,920,022.56	536,447.02	36.276805	-107.709683
10,000.0	91.20	275.52	5,497.6	818.6	-4,777.3	1,920,041.51	536,247.96	36.276858	-107.710358
10,200.0	91.20	275.52	5,493.4	837.8	-4,976.4	1,920,060.46	536,048.90	36.276911	-107.711033
10,400.0	91.20	275.52	5,489.2	857.1	-5,175.4	1,920,079.40	535,849.85	36.276963	-107.711708
10,600.0	91.20	275.52	5,485.1	876.3	-5,374.4	1,920,098.35	535,650.79	36.277016	-107.712384
10,699.1	91.20	275.52	5,483.0	885.8	-5,473.0	1,920,107.74	535,552.16	36.277042	-107.712718

TD at 10699.1 - TD / PBHL Chaco #118H

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
TD / PBHL Chaco #118H	0.00	0.00	5,483.0	885.8	-5,473.1	1,920,107.74	535,552.12	36.277042	-107.712718
- plan hits target center									
- Point									
POE Chaco #118H	0.00	0.00	5,581.0	434.4	-801.8	1,919,662.99	540,224.05	36.275803	-107.696870
- plan misses target center by 0.1usft at 6005.1usft MD (5581.0 TVD, 434.4 N, -801.8 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
550.0	550.0	0.0	0.0	Start Build 2.00
815.6	815.2	11.8	-3.3	Hold 5.31° Inc, 344.29° Az
4,666.2	4,649.3	355.1	-99.9	Start Drop -2.00
4,931.8	4,914.5	366.9	-103.2	KOP 9°/100
5,598.5	5,465.8	397.5	-420.1	Hold 60° Inc for 60'
5,658.5	5,495.8	402.5	-471.8	Begin 9°/100 Build
6,005.1	5,581.0	434.4	-801.8	Landing Pt 91.2° Inc, 275.52° Az
10,699.1	5,483.0	885.8	-5,473.0	TD at 10699.1

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
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.