

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

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-31277		*Pool Code 98088		*Pool Name CHACO UNIT NE HZ (OIL)	
*Property Code 313800		*Property Name NE CHACO COM			*Well Number 269H
*GRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 6832'

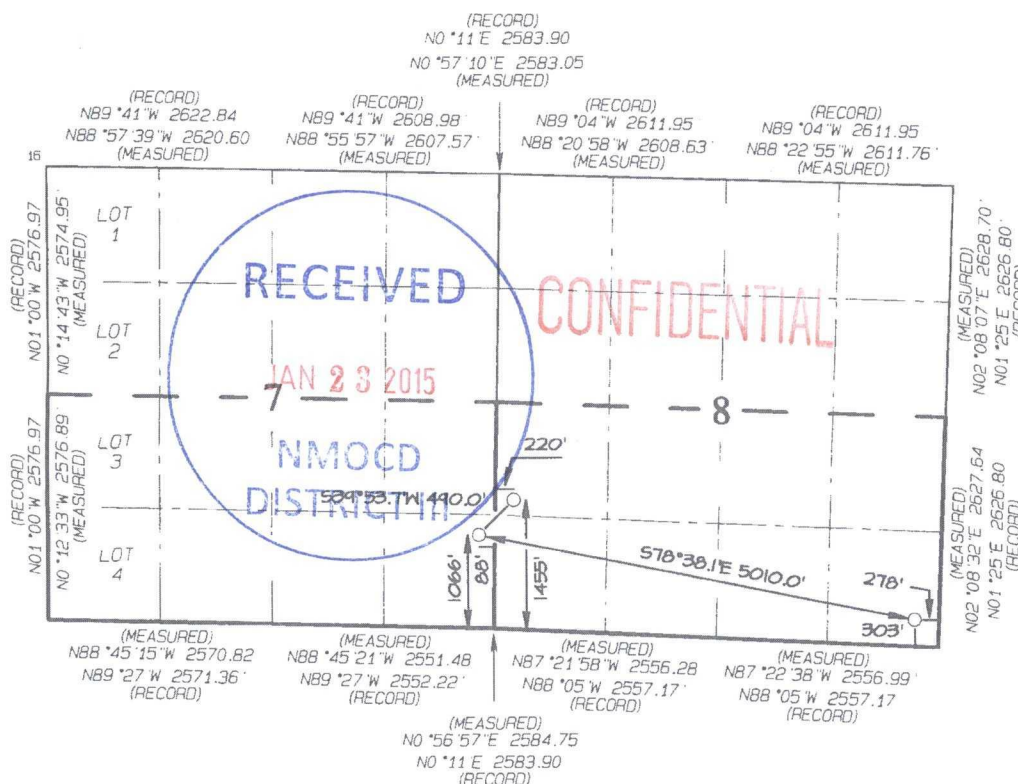
¹⁰ Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	23N	6W		1455	SOUTH	220	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
P	8	23N	6W		303	SOUTH	278	EAST	RIO ARriba
¹² Dedicated Acres 641.12		S/2 - Section 7 S/2 - Section 8			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No

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: *Lacey Granillo* Date: 1/21/15
Printed Name: LACEY GRANILLO
E-mail Address: LACEY.GRANILLO@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: DECEMBER 15, 2014
Date of Survey: MARCH 27, 2014

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number 15269

SURFACE LOCATION
1455 FSL 220 FWL
SECTION 8, T23N, R6W
LAT: 36.236189°N
LONG: 107.500048°W
DATUM: NAD1927

LAT: 36.236202°N
LONG: 107.500653°W
DATUM: NAD1983

POINT-OF-ENTRY
1066 FSL 88 FEL
SECTION 7, T23N, R6W
LAT: 36.235145°N
LONG: 107.501097°W
DATUM: NAD1927

LAT: 36.235158°N
LONG: 107.501702°W
DATUM: NAD1983

BASE PERFORATION
316 FSL 369 FEL
SECTION 8, T23N, R6W
LAT: 36.232651°N
LONG: 107.484710°W
DATUM: NAD1927

LAT: 36.232664°N
LONG: 107.485315°W
DATUM: NAD1983

END-OF-LATERAL
303 FSL 278 FEL
SECTION 8, T23N, R6W
LAT: 36.232607°N
LONG: 107.484403°W
DATUM: NAD1927

LAT: 36.232620°N
LONG: 107.485008°W
DATUM: NAD1983

WPXENERGY

Project: Rio Arriba Co., NM
Site: Sec.8-T23N-R6W
Well: NE Chaco Com #269H
Wellbore: Wellbore #1
Design: Wellbore #1



WELL DETAILS: NE Chaco Com #269H

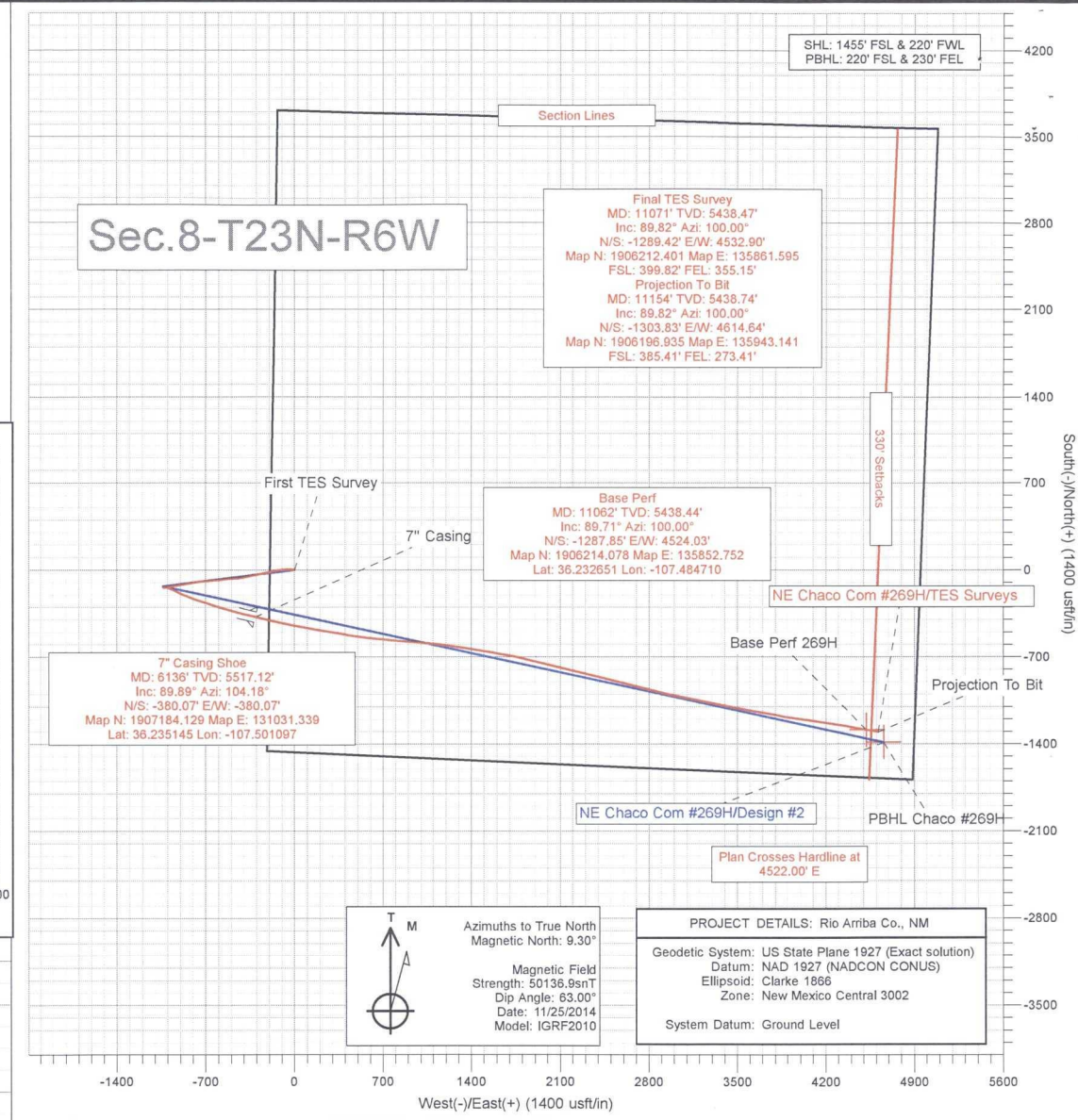
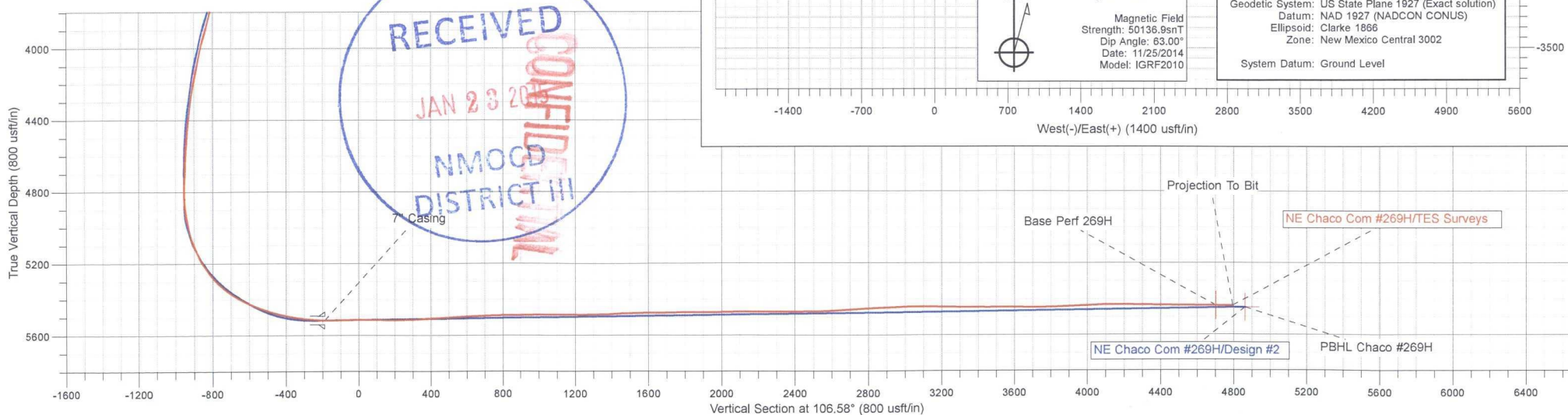
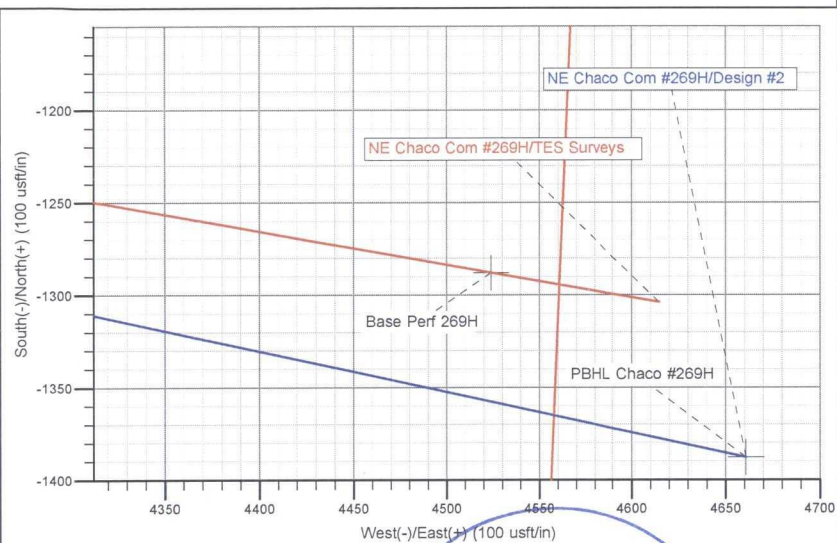
Ground Level:		Northing		Easting		Latitude		Longitude		Slot
+N/-S	+E/-W									
0.00	0.00	1907560.177990		131345.705649		36.236189		-107.500048		

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Base Perf 269H	5438.44	-1287.85	4524.03	36.232651	-107.484710	Point
PBHL Chaco #269H	5449.00	-1387.78	4660.74	36.232376	-107.484247	Point

Survey: TES Surveys (NE Chaco Com #269H/Wellbore #1)

Created By: M. Ramich Date: 10.06, December 12 2014

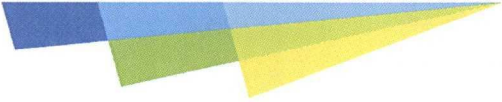


Azimuths to True North
Magnetic North: 9.30°

Magnetic Field
Strength: 50136.9nT
Dip Angle: 63.00°
Date: 11/25/2014
Model: IGRF2010

PROJECT DETAILS: Rio Arriba Co., NM
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico Central 3002
System Datum: Ground Level

WPXENERGY



WPX Energy Production, LLC

Rio Arriba Co., NM

Sec.8-T23N-R6W

NE Chaco Com #269H

Wellbore #1

Survey: TES Surveys

Standard Survey Report

12 December, 2014

CONFIDENTIAL





Terrapin Energy Services

Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #269H
Project:	Rio Arriba Co., NM	TVD Reference:	Elev @ 6846.00usft
Site:	Sec.8-T23N-R6W	MD Reference:	Elev @ 6846.00usft
Well:	NE Chaco Com #269H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Rio Arriba Co., NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site	Sec.8-T23N-R6W				
Site Position:		Northing:	1,907,579.608704 usft	Latitude:	36.236242
From:	Lat/Long	Easting:	131,335.337172 usft	Longitude:	-107.500084
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.74 °

Well	NE Chaco Com #269H					
Well Position	+N/-S	0.00 usft	Northing:	1,907,560.177990 usft	Latitude:	36.236189
	+E/-W	0.00 usft	Easting:	131,345.705649 usft	Longitude:	-107.500048
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,832.00 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/25/14	9.30	63.00	50,137

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	106.58	

Survey Program	Date 12/12/14			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
64.00	344.00	Surface Gyro's (Wellbore #1)	GYRO	Gyro-compassing and drop
495.00	11,154.00	TES Surveys (Wellbore #1)	MWD	MWD - Standard

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)	
344.00	0.12	50.54	343.99	1.56	0.35	-0.11	0.00	0.00	0.00	
495.00	0.34	143.91	494.99	1.30	0.73	0.33	0.24	0.15	61.83	
First TES Survey										
558.00	0.80	263.40	557.99	1.10	0.41	0.08	1.61	0.73	189.67	
621.00	2.29	260.97	620.97	0.85	-1.27	-1.46	2.37	2.37	-3.86	
684.00	3.38	270.29	683.89	0.66	-4.37	-4.38	1.87	1.73	14.79	
747.00	4.38	278.09	746.74	1.01	-8.61	-8.54	1.79	1.59	12.38	
810.00	5.96	279.60	809.49	1.90	-14.22	-14.17	2.52	2.51	2.40	
873.00	7.58	277.34	872.05	2.97	-21.57	-21.52	2.61	2.57	-3.59	
937.00	8.95	275.42	935.38	3.98	-30.71	-30.57	2.18	2.14	-3.00	



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #269H
Project:	Rio Arriba Co., NM	TVD Reference:	Elev @ 6846.00usft
Site:	Sec.8-T23N-R6W	MD Reference:	Elev @ 6846.00usft
Well:	NE Chaco Com #269H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
1,000.00	9.93	272.50	997.53	4.68	-41.01	-40.65	1.73	1.56	-4.63
1,063.00	10.77	268.72	1,059.50	4.79	-52.33	-51.52	1.71	1.33	-6.00
1,126.00	11.94	264.18	1,121.27	4.00	-64.70	-63.15	2.34	1.86	-7.21
1,190.00	12.76	263.46	1,183.79	2.52	-78.30	-75.77	1.30	1.28	-1.13
1,253.00	14.01	264.00	1,245.07	0.93	-92.80	-89.21	1.99	1.98	0.86
1,316.00	15.14	260.51	1,306.05	-1.22	-108.50	-103.64	2.27	1.79	-5.54
1,377.00	16.34	258.46	1,364.76	-4.25	-124.77	-118.36	2.17	1.97	-3.36
1,437.00	18.24	260.57	1,422.05	-7.48	-142.30	-134.25	3.33	3.17	3.52
1,498.00	19.25	263.29	1,479.81	-10.22	-161.70	-152.06	2.19	1.66	4.46
1,559.00	19.43	260.63	1,537.37	-13.05	-181.70	-170.42	1.47	0.30	-4.36
1,620.00	19.11	256.45	1,594.95	-17.04	-201.42	-188.18	2.32	-0.52	-6.85
1,680.00	18.79	254.99	1,651.70	-21.84	-220.30	-204.91	0.95	-0.53	-2.43
1,741.00	18.13	255.25	1,709.56	-26.80	-238.97	-221.38	1.09	-1.08	0.43
1,802.00	17.18	256.85	1,767.69	-31.27	-256.92	-237.31	1.75	-1.56	2.62
1,863.00	17.10	255.04	1,825.98	-35.63	-274.36	-252.78	0.88	-0.13	-2.97
1,923.00	17.23	256.41	1,883.31	-40.00	-291.52	-267.98	0.71	0.22	2.28
1,982.00	17.40	259.50	1,939.64	-43.66	-308.69	-283.39	1.58	0.29	5.24
2,043.00	17.87	258.92	1,997.77	-47.12	-326.84	-299.80	0.82	0.77	-0.95
2,104.00	17.81	259.20	2,055.84	-50.67	-345.19	-316.37	0.17	-0.10	0.46
2,165.00	17.49	260.30	2,113.97	-53.96	-363.39	-332.88	0.76	-0.52	1.80
2,225.00	16.97	262.33	2,171.27	-56.65	-380.95	-348.94	1.32	-0.87	3.38
2,286.00	16.39	259.19	2,229.71	-59.45	-398.23	-364.70	1.76	-0.95	-5.15
2,346.00	15.77	258.49	2,287.36	-62.66	-414.53	-379.41	1.08	-1.03	-1.17
2,407.00	15.85	260.13	2,346.05	-65.75	-430.86	-394.18	0.74	0.13	2.69
2,468.00	17.00	265.43	2,404.57	-67.89	-447.96	-409.96	3.09	1.89	8.69
2,530.00	17.89	266.91	2,463.71	-69.12	-466.50	-427.38	1.60	1.44	2.39
2,593.00	17.35	264.91	2,523.76	-70.48	-485.52	-445.22	1.29	-0.86	-3.17
2,656.00	16.84	264.23	2,583.97	-72.23	-503.96	-462.39	0.87	-0.81	-1.08
2,718.00	16.66	262.68	2,643.34	-74.26	-521.71	-478.82	0.78	-0.29	-2.50
2,781.00	18.12	263.36	2,703.46	-76.55	-540.40	-496.08	2.34	2.32	1.08
2,845.00	18.13	265.32	2,764.29	-78.51	-560.21	-514.51	0.95	0.02	3.06
2,908.00	17.31	264.65	2,824.30	-80.18	-579.31	-532.34	1.34	-1.30	-1.06
2,971.00	16.96	263.80	2,884.50	-82.05	-597.78	-549.50	0.68	-0.56	-1.35
3,001.00	16.63	263.09	2,913.22	-83.04	-606.39	-557.47	1.30	-1.10	-2.37
3,064.00	17.37	266.39	2,973.47	-84.71	-624.72	-574.57	1.93	1.17	5.24
3,127.00	16.93	266.09	3,033.67	-85.93	-643.26	-591.99	0.71	-0.70	-0.48
3,190.00	17.21	266.64	3,093.89	-87.10	-661.72	-609.34	0.51	0.44	0.87
3,254.00	17.15	265.31	3,155.04	-88.43	-680.57	-627.03	0.62	-0.09	-2.08
3,317.00	17.44	264.17	3,215.19	-90.15	-699.22	-644.42	0.71	0.46	-1.81
3,380.00	16.80	264.18	3,275.40	-92.03	-717.67	-661.56	1.02	-1.02	0.02
3,443.00	18.57	263.55	3,335.42	-94.08	-736.70	-679.21	2.83	2.81	-1.00
3,506.00	19.43	262.83	3,394.99	-96.52	-757.06	-698.04	1.41	1.37	-1.14
3,569.00	18.59	261.71	3,454.55	-99.27	-777.40	-716.74	1.45	-1.33	-1.78



Terrapin Energy Services
Survey Report



Company: WPX Energy Production, LLC
Project: Rio Arriba Co., NM
Site: Sec. 8-T23N-R6W
Well: NE Chaco Com #269H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well NE Chaco Com #269H
TVD Reference: Elev @ 6846.00usft
MD Reference: Elev @ 6846.00usft
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
3,633.00	17.95	259.82	3,515.32	-102.49	-797.20	-734.80	1.36	-1.00	-2.95
3,696.00	18.40	260.59	3,575.18	-105.83	-816.56	-752.41	0.81	0.71	1.22
3,759.00	17.93	260.85	3,635.04	-109.00	-835.95	-770.08	0.76	-0.75	0.41
3,823.00	17.18	258.76	3,696.06	-112.40	-854.94	-787.31	1.53	-1.17	-3.27
3,886.00	16.40	258.25	3,756.37	-116.03	-872.78	-803.37	1.26	-1.24	-0.81
3,949.00	16.14	257.25	3,816.85	-119.77	-890.03	-818.83	0.61	-0.41	-1.59
4,013.00	15.98	259.38	3,878.35	-123.36	-907.36	-834.42	0.95	-0.25	3.33
4,076.00	15.53	263.65	3,938.99	-125.89	-924.27	-849.91	1.97	-0.71	6.78
4,140.00	15.07	262.19	4,000.72	-127.97	-941.03	-865.37	0.94	-0.72	-2.28
4,203.00	13.49	258.29	4,061.77	-130.57	-956.34	-879.30	2.93	-2.51	-6.19
4,266.00	11.77	256.88	4,123.25	-133.52	-969.79	-891.36	2.77	-2.73	-2.24
4,330.00	10.75	257.37	4,186.01	-136.31	-981.97	-902.24	1.60	-1.59	0.77
4,393.00	10.34	257.73	4,247.95	-138.80	-993.23	-912.32	0.66	-0.65	0.57
4,457.00	9.02	260.35	4,311.04	-140.86	-1,003.79	-921.85	2.17	-2.06	4.09
4,520.00	7.27	261.28	4,373.40	-142.29	-1,012.60	-929.88	2.79	-2.78	1.48
4,584.00	6.08	263.96	4,436.96	-143.26	-1,019.97	-936.67	1.92	-1.86	4.19
4,647.00	4.04	275.02	4,499.72	-143.42	-1,025.50	-941.93	3.57	-3.24	17.56
4,710.00	2.94	296.38	4,562.60	-142.51	-1,029.16	-945.69	2.67	-1.75	33.90
4,774.00	2.48	303.46	4,626.53	-141.01	-1,031.79	-948.64	0.89	-0.72	11.06
4,837.00	2.08	293.66	4,689.48	-139.80	-1,033.97	-951.08	0.88	-0.63	-15.56
4,901.00	1.48	289.05	4,753.45	-139.07	-1,035.82	-953.05	0.96	-0.94	-7.20
4,965.00	0.47	29.97	4,817.44	-138.57	-1,036.47	-953.82	2.56	-1.58	157.69
5,028.00	5.22	94.54	4,880.35	-138.57	-1,033.48	-950.95	7.99	7.54	102.49
5,091.00	9.75	95.53	4,942.80	-139.31	-1,025.31	-942.91	7.19	7.19	1.57
5,154.00	13.54	102.09	5,004.49	-141.37	-1,012.78	-930.32	6.36	6.02	10.41
5,217.00	17.02	106.00	5,065.26	-145.46	-996.70	-913.74	5.76	5.52	6.21
5,281.00	23.18	110.80	5,125.34	-152.52	-975.90	-891.79	9.96	9.63	7.50
5,344.00	28.95	117.13	5,181.91	-163.89	-950.71	-864.41	10.16	9.16	10.05
5,407.00	35.41	116.53	5,235.21	-179.01	-920.78	-831.40	10.27	10.25	-0.95
5,470.00	41.03	115.01	5,284.69	-195.92	-885.68	-792.94	9.04	8.92	-2.41
5,534.00	48.18	113.32	5,330.22	-214.27	-844.69	-748.42	11.32	11.17	-2.64
5,597.00	56.04	110.75	5,368.89	-232.85	-798.63	-698.97	12.88	12.48	-4.08
5,660.00	62.34	108.64	5,401.14	-251.04	-747.70	-644.97	10.40	10.00	-3.35
5,724.00	64.10	108.76	5,429.98	-269.36	-693.58	-587.87	2.76	2.75	0.19
5,787.00	70.96	107.14	5,454.04	-287.27	-638.23	-529.71	11.14	10.89	-2.57
5,851.00	72.21	107.75	5,474.26	-305.48	-580.30	-468.99	2.15	1.95	0.95
5,915.00	78.94	106.44	5,490.20	-323.67	-521.09	-407.05	10.70	10.52	-2.05
5,979.00	79.76	105.34	5,502.02	-340.89	-460.60	-344.16	2.12	1.28	-1.72
6,043.00	84.21	104.41	5,510.94	-357.16	-399.36	-280.83	7.10	6.95	-1.45
6,080.00	84.75	104.34	5,514.50	-366.30	-363.69	-244.03	1.47	1.46	-0.19
6,152.00	91.36	104.13	5,516.95	-383.98	-293.98	-172.17	9.19	9.18	-0.29
6,213.00	91.58	103.26	5,515.38	-398.42	-234.73	-111.27	1.47	0.36	-1.43
6,274.00	91.54	103.34	5,513.72	-412.45	-175.39	-50.39	0.15	-0.07	0.13



Terrapin Energy Services
Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #269H
Project:	Rio Arriba Co., NM	TVD Reference:	Elev @ 6846.00usft
Site:	Sec.8-T23N-R6W	MD Reference:	Elev @ 6846.00usft
Well:	NE Chaco Com #269H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
6,335.00	89.52	101.85	5,513.16	-425.75	-115.86	10.45	4.11	-3.31	-2.44
6,395.00	90.00	101.59	5,513.41	-437.94	-57.12	70.24	0.91	0.80	-0.43
6,456.00	89.25	101.32	5,513.81	-450.05	2.67	130.99	1.31	-1.23	-0.44
6,517.00	90.09	101.06	5,514.16	-461.89	62.51	191.72	1.44	1.38	-0.43
6,578.00	90.18	100.71	5,514.01	-473.41	122.41	252.42	0.59	0.15	-0.57
6,639.00	92.11	100.36	5,512.80	-484.56	182.37	313.06	3.22	3.16	-0.57
6,698.00	94.13	100.00	5,509.58	-494.97	240.35	371.61	3.48	3.42	-0.61
6,758.00	93.65	99.39	5,505.51	-505.05	299.35	431.04	1.29	-0.80	-1.02
6,818.00	93.42	98.86	5,501.81	-514.55	358.48	490.41	0.96	-0.38	-0.88
6,880.00	93.03	98.77	5,498.33	-524.03	419.65	551.75	0.65	-0.63	-0.15
6,940.00	92.64	98.68	5,495.36	-533.12	478.89	611.11	0.67	-0.65	-0.15
7,001.00	92.37	98.16	5,492.69	-542.05	539.17	671.44	0.96	-0.44	-0.85
7,061.00	91.93	96.84	5,490.44	-549.87	598.61	730.64	2.32	-0.73	-2.20
7,122.00	91.10	95.61	5,488.83	-556.48	659.23	790.62	2.43	-1.36	-2.02
7,183.00	90.92	95.34	5,487.75	-562.30	719.94	850.47	0.53	-0.30	-0.44
7,244.00	90.83	94.99	5,486.82	-567.79	780.69	910.26	0.59	-0.15	-0.57
7,305.00	90.66	95.08	5,486.03	-573.15	841.45	970.02	0.32	-0.28	0.15
7,366.00	90.66	95.43	5,485.33	-578.73	902.19	1,029.83	0.57	0.00	0.57
7,427.00	90.00	94.73	5,484.98	-584.14	962.95	1,089.60	1.58	-1.08	-1.15
7,489.00	89.21	93.59	5,485.40	-588.63	1,024.78	1,150.15	2.24	-1.27	-1.84
7,550.00	90.09	95.52	5,485.78	-593.48	1,085.58	1,209.80	3.48	1.44	3.16
7,612.00	90.09	97.01	5,485.68	-600.24	1,147.21	1,270.80	2.40	0.00	2.40
7,673.00	91.63	98.60	5,484.76	-608.52	1,207.63	1,331.07	3.63	2.52	2.61
7,733.00	92.72	99.39	5,482.49	-617.90	1,266.85	1,390.50	2.24	1.82	1.32
7,794.00	92.46	98.68	5,479.73	-627.47	1,327.03	1,450.91	1.24	-0.43	-1.16
7,855.00	90.97	98.68	5,477.90	-636.67	1,387.31	1,511.31	2.44	-2.44	0.00
7,916.00	90.88	98.86	5,476.92	-645.97	1,447.58	1,571.73	0.33	-0.15	0.30
7,977.00	91.01	98.86	5,475.91	-655.36	1,507.85	1,632.17	0.21	0.21	0.00
8,039.00	90.97	101.06	5,474.84	-666.08	1,568.90	1,693.74	3.55	-0.06	3.55
8,099.00	90.88	100.79	5,473.87	-677.45	1,627.81	1,753.44	0.47	-0.15	-0.45
8,161.00	90.66	100.88	5,473.04	-689.11	1,688.70	1,815.13	0.38	-0.35	0.15
8,222.00	90.48	101.23	5,472.43	-700.80	1,748.56	1,875.84	0.65	-0.30	0.57
8,283.00	90.53	103.52	5,471.89	-713.88	1,808.14	1,936.67	3.75	0.08	3.75
8,345.00	90.09	102.90	5,471.56	-728.04	1,868.50	1,998.56	1.23	-0.71	-1.00
8,409.00	90.97	104.66	5,470.97	-743.29	1,930.65	2,062.48	3.07	1.38	2.75
8,472.00	91.27	104.22	5,469.74	-758.99	1,991.65	2,125.42	0.85	0.48	-0.70
8,535.00	90.00	103.78	5,469.04	-774.23	2,052.77	2,188.35	2.13	-2.02	-0.70
8,599.00	89.38	103.17	5,469.38	-789.15	2,115.01	2,252.26	1.36	-0.97	-0.95
8,662.00	89.21	103.26	5,470.16	-803.55	2,176.33	2,315.14	0.31	-0.27	0.14
8,725.00	90.31	104.31	5,470.42	-818.56	2,237.52	2,378.07	2.41	1.75	1.67
8,789.00	90.22	104.93	5,470.13	-834.71	2,299.44	2,442.03	0.98	-0.14	0.97
8,853.00	90.26	103.96	5,469.86	-850.68	2,361.42	2,505.98	1.52	0.06	-1.52
8,916.00	91.93	104.13	5,468.65	-865.96	2,422.52	2,568.91	2.66	2.65	0.27
8,980.00	94.79	105.36	5,464.90	-882.22	2,484.30	2,632.76	4.86	4.47	1.92



Terrapin Energy Services

Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #269H
Project:	Rio Arriba Co., NM	TVD Reference:	Elev @ 6846.00usft
Site:	Sec.8-T23N-R6W	MD Reference:	Elev @ 6846.00usft
Well:	NE Chaco Com #269H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
9,044.00	94.17	104.05	5,459.90	-898.42	2,546.01	2,696.53	2.26	-0.97	-2.05
9,107.00	93.91	104.22	5,455.47	-913.76	2,606.95	2,759.31	0.49	-0.41	0.27
9,171.00	92.50	104.31	5,451.89	-929.51	2,668.88	2,823.16	2.21	-2.20	0.14
9,235.00	92.77	104.49	5,448.95	-945.41	2,730.81	2,887.04	0.51	0.42	0.28
9,299.00	92.20	104.75	5,446.17	-961.55	2,792.67	2,950.95	0.98	-0.89	0.41
9,363.00	91.80	104.57	5,443.94	-977.73	2,854.55	3,014.87	0.69	-0.63	-0.28
9,427.00	91.05	103.34	5,442.35	-993.16	2,916.64	3,078.78	2.25	-1.17	-1.92
9,490.00	88.81	101.94	5,442.42	-1,006.95	2,978.11	3,141.63	4.19	-3.56	-2.22
9,554.00	89.47	100.62	5,443.38	-1,019.46	3,040.87	3,205.34	2.31	1.03	-2.06
9,617.00	88.99	101.23	5,444.23	-1,031.40	3,102.72	3,268.03	1.23	-0.76	0.97
9,681.00	90.04	101.94	5,444.77	-1,044.25	3,165.41	3,331.78	1.98	1.64	1.11
9,744.00	88.33	101.76	5,445.67	-1,057.19	3,227.06	3,394.56	2.73	-2.71	-0.29
9,808.00	90.31	102.55	5,446.43	-1,070.66	3,289.62	3,458.36	3.33	3.09	1.23
9,871.00	91.27	102.38	5,445.56	-1,084.26	3,351.12	3,521.19	1.55	1.52	-0.27
9,934.00	89.08	101.67	5,445.37	-1,097.39	3,412.74	3,583.99	3.65	-3.48	-1.13
9,998.00	89.69	100.79	5,446.05	-1,109.85	3,475.51	3,647.71	1.67	0.95	-1.38
10,061.00	90.44	100.71	5,445.98	-1,121.60	3,537.40	3,710.38	1.20	1.19	-0.13
10,124.00	89.78	100.27	5,445.86	-1,133.07	3,599.35	3,773.02	1.26	-1.05	-0.70
10,186.00	92.15	100.62	5,444.82	-1,144.31	3,660.31	3,834.65	3.86	3.82	0.56
10,249.00	92.50	100.27	5,442.26	-1,155.72	3,722.21	3,897.24	0.79	0.56	-0.56
10,312.00	92.68	100.44	5,439.41	-1,167.03	3,784.12	3,959.81	0.39	0.29	0.27
10,375.00	93.12	100.53	5,436.23	-1,178.48	3,845.99	4,022.37	0.71	0.70	0.14
10,438.00	91.36	99.30	5,433.76	-1,189.32	3,908.00	4,084.89	3.41	-2.79	-1.95
10,501.00	91.14	98.77	5,432.39	-1,199.21	3,970.20	4,147.33	0.91	-0.35	-0.84
10,564.00	88.95	97.54	5,432.34	-1,208.15	4,032.56	4,209.65	3.99	-3.48	-1.95
10,627.00	89.87	98.42	5,432.99	-1,216.89	4,094.95	4,271.93	2.02	1.46	1.40
10,690.00	88.90	98.25	5,433.67	-1,226.02	4,157.28	4,334.28	1.56	-1.54	-0.27
10,753.00	89.21	98.68	5,434.70	-1,235.30	4,219.58	4,396.64	0.84	0.49	0.68
10,817.00	89.34	98.77	5,435.51	-1,245.00	4,282.84	4,460.03	0.25	0.20	0.14
10,880.00	89.25	100.36	5,436.29	-1,255.47	4,344.95	4,522.55	2.53	-0.14	2.52
10,944.00	89.43	100.53	5,437.03	-1,267.07	4,407.89	4,586.18	0.39	0.28	0.27
11,008.00	89.07	100.00	5,437.86	-1,278.48	4,470.86	4,649.79	1.00	-0.56	-0.83
11,071.00	89.82	100.00	5,438.47	-1,289.42	4,532.90	4,712.37	1.19	1.19	0.00
11,154.00	89.82	100.00	5,438.74	-1,303.83	4,614.64	4,794.82	0.00	0.00	0.00
Projection To Bit									



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well NE Chaco Com #269H
Project:	Rio Arriba Co., NM	TVD Reference:	Elev @ 6846.00usft
Site:	Sec.8-T23N-R6W	MD Reference:	Elev @ 6846.00usft
Well:	NE Chaco Com #269H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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									
Base Perf 269H	0.00	0.00	5,438.44	-1,287.85	4,524.03	1,906,214.081 922	135,852.74796 5	36.232651	-107.484711
- survey hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
6,136.00	5,517.12	7" Casing	7	8-3/4

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
495.00	494.99	1.30	0.73	First TES Survey
11,154.00	5,438.74	-1,303.83	4,614.64	Projection To Bit

Checked By: _____ Approved By: _____ Date: _____