

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

CONFIDENTIAL

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35616	*Pool Code 47540 / 97232	*Pool Name NAGEEZI GALLUP / BASIN MANCOS
*Property Code 313897	*Property Name CHACO 2308-04D	*Well Number 282H
*GRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC	*Elevation 7078'

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	4	23N	8W	4	480	NORTH	777	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	5	23N	8W	4	385	NORTH	240	WEST	SAN JUAN

¹² Dedicated Acres 161.44 Acres N/2 N/2 - Section 5	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

END-OF-LATERAL
385' FNL 240' FWL
SECTION 5, T23N, R8W
LAT: 36.262534°N
LONG: 107.712731°W
DATUM: NAD1927

LAT: 36.262547°N
LONG: 107.713343°W
DATUM: NAD1983

BASE PERFORATION
381' FNL 340' FWL
SECTION 5, T23N, R8W
LAT: 36.262545°N
LONG: 107.712392°W
DATUM: NAD1927

LAT: 36.262557°N
LONG: 107.713004°W
DATUM: NAD1983

POINT-OF-ENTRY
369' FNL 504' FEL
SECTION 5, T23N, R8W
LAT: 36.262565°N
LONG: 107.697291°W
DATUM: NAD1927

LAT: 36.262578°N
LONG: 107.697903°W
DATUM: NAD1983

SURFACE LOCATION
480' FNL 777' FWL
SECTION 4, T23N, R8W
LAT: 36.262254°N
LONG: 107.692934°W
DATUM: NAD1927

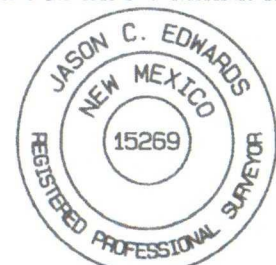
LAT: 36.262267°N
LONG: 107.693545°W
DATUM: NAD1983

¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

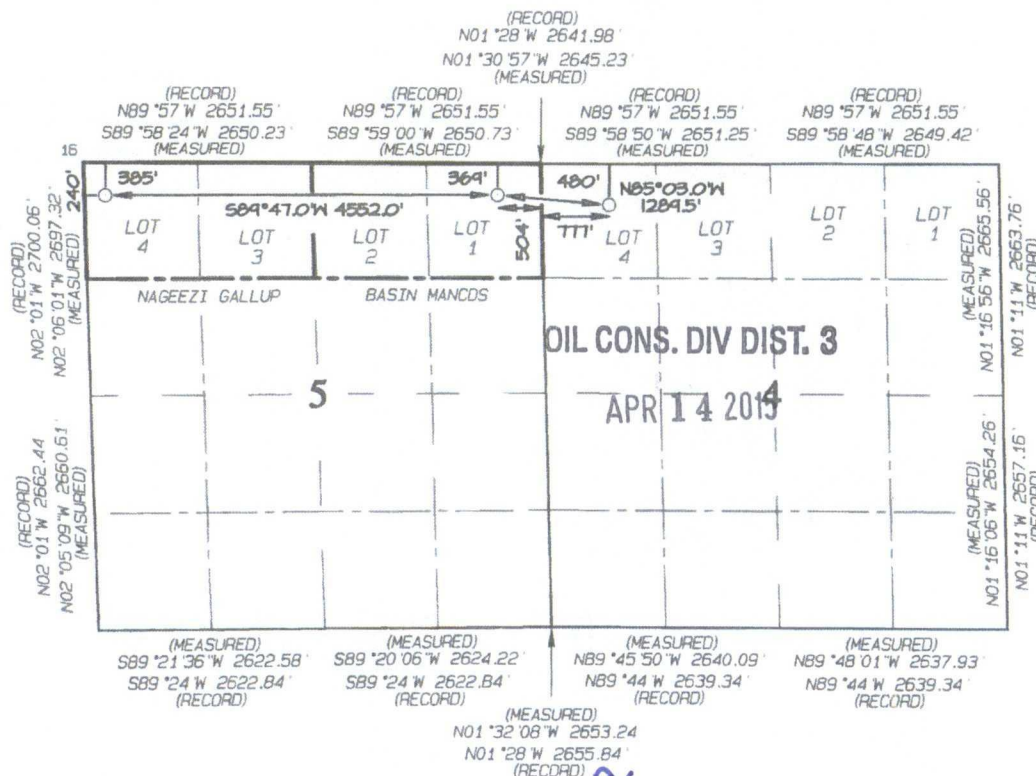
Signature: *[Signature]* Date: 4-13-15
Printed Name: LACEY GRANILLO
lacey.granillo@wpxenergy.com
E-mail Address:

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: APRIL 13, 2015
Date of Survey: APRIL 4, 2014
Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



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☐ AMENDED REPORT

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35616		*Pool Code 47540 / 97232		*Pool Name NAGEEZI GALLUP / BASIN MANCOS	
*Property Code 313897		*Property Name CHACO 2308-04D			*Well Number 282H
*GRID No. 120782		*Operator Name WPX ENERGY PRODUCTION, LLC			*Elevation 7078'

¹⁰ Surface Location

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D	4	23N	8W	4	480	NORTH	777	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

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D	5	23N	8W	4	385	NORTH	240	WEST	SAN JUAN

¹² Dedicated Acres 161.44 Acres N/2 N/2 - Section 5		¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL
BEEN CONSOLIDATED C

ALL INTERESTS HAVE
OVED BY THE DIVISION

DENIED

END-OF-LATERAL
385' FNL 240' FWL
SECTION 5, T23N, R8W
LAT: 36.262534°N
LONG: 107.712731°W
DATUM: NAD1927

BASE PERFORATION
381' FNL 340' F
SECTION 5, T23N,
LAT: 36.262545°N
LONG: 107.712392°W
DATUM: NAD1927

DATUM: NAD1927

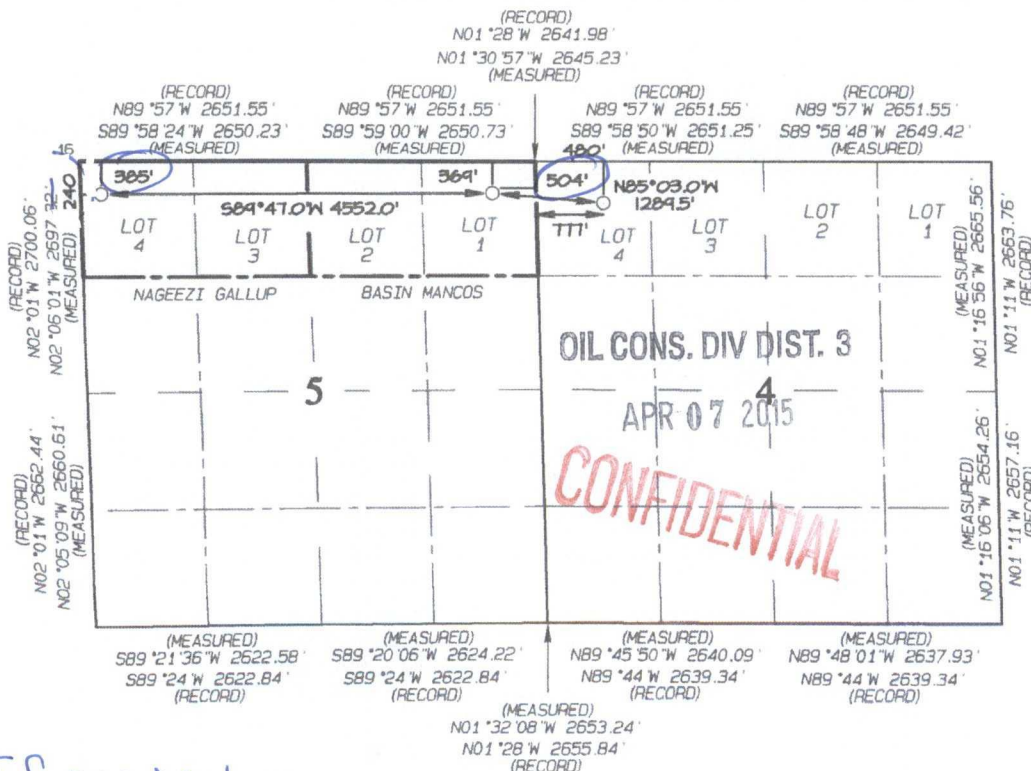
DATUM: NAD1927

LAT: 36.262547°N
LONG: 107.713343°W
DATUM: NAD1983

LAT: 36.262557°N
LONG: 107.713004°W
DATUM: NAD1983

LAT: 36.262578°N
LONG: 107.697903°W
DATUM: NAD1983

LAT: 36.262267°N
LONG: 107.693545°W
DATUM: NAD1983



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

Signature: LACEY GRANILLO
Date: 4-6-15
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: MARCH 11, 2015
Date of Survey: APRIL 4, 2014

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

If needed make corrections to C104



Project: San Juan Co., NM
Site: Sec.4-T23N-R8W
Well: Chaco 2308-04D 282H
Wellbore: Wellbore #1
Design: Wellbore #1



WELL DETAILS: Chaco 2308-04D 282H

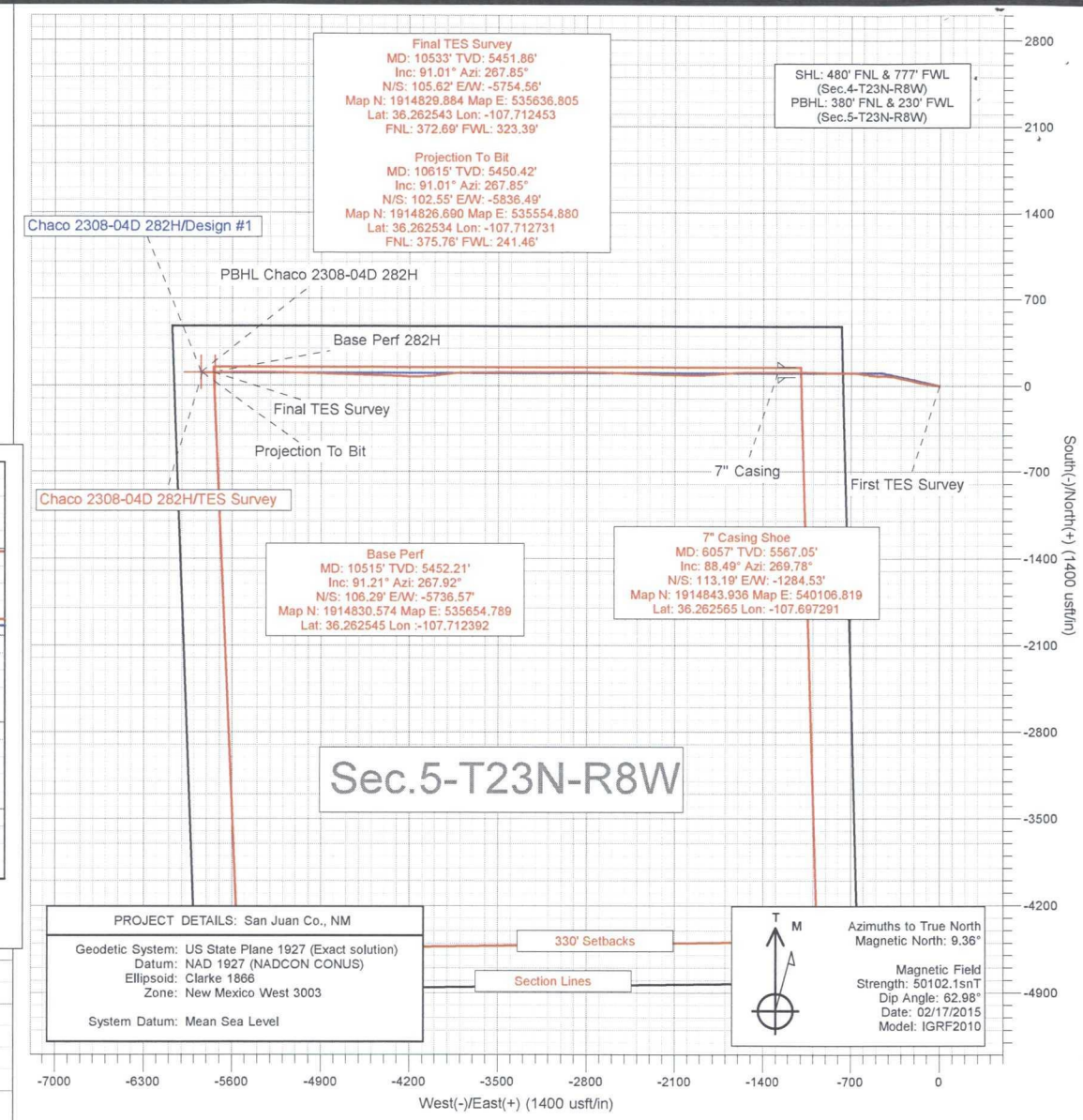
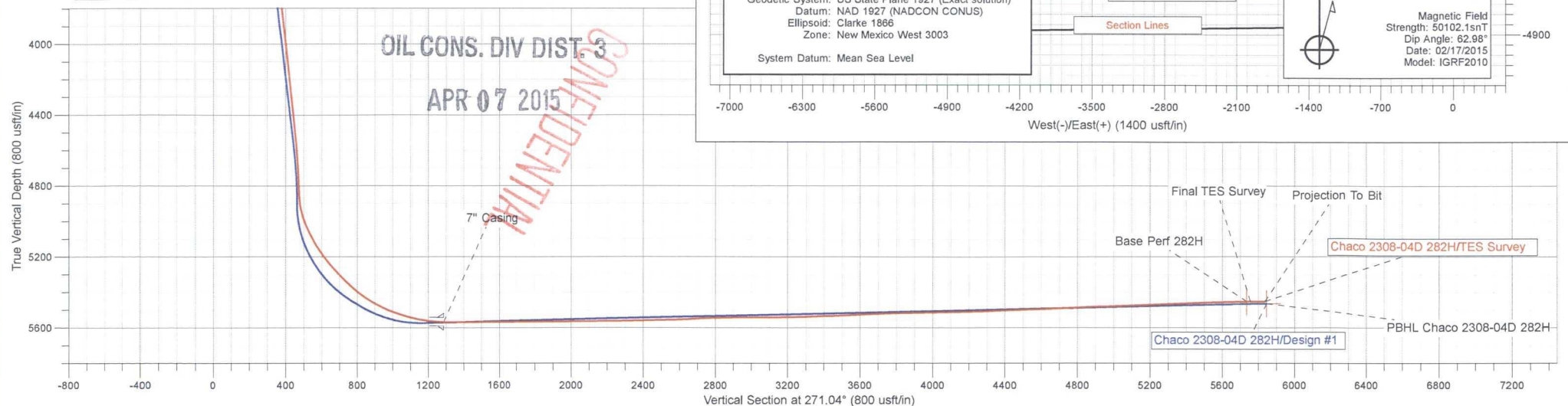
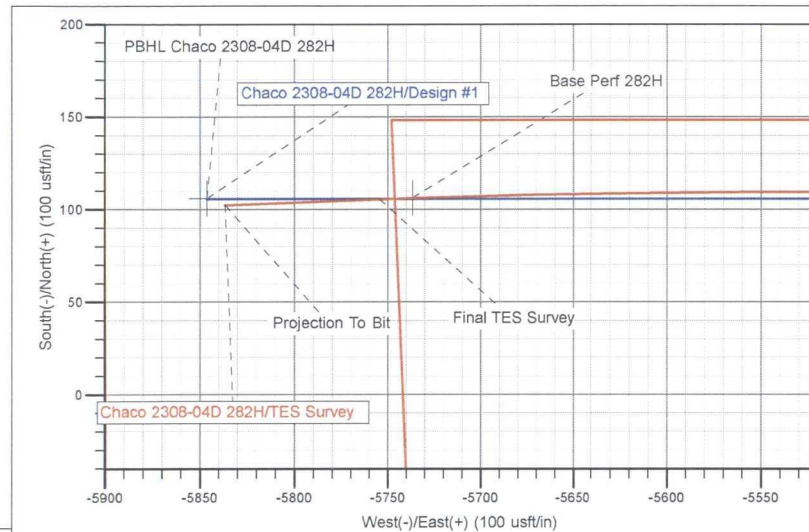
	Ground Level:					
	7078.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1914732.604757	541391.508667	36.262254	-107.692934	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Base Perf 282H	5452.21	106.29	-5736.57	36.262545	-107.712392	
PBHL Chaco 2308-04D 282H	5463.32	106.09	-5846.23	36.262544	-107.712764	

Survey: TES Survey (Chaco 2308-04D 282H/Wellbore #1)

Created By: M. Ramich Date: 10:45, March 06 2015



WPXENERGY



WPX Energy Production, LLC

San Juan Co., NM

Sec.4-T23N-R8W

Chaco 2308-04D 282H

Wellbore #1

OIL CONS. DIV DIST. 3

APR 07 2015

Survey: TES Survey

Standard Survey Report

06 March, 2015

CONFIDENTIAL





Terrapin Energy Services

Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well Chaco 2308-04D 282H
Project:	San Juan Co., NM	TVD Reference:	Elev @ 7092.00usft
Site:	Sec.4-T23N-R8W	MD Reference:	Elev @ 7092.00usft
Well:	Chaco 2308-04D 282H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	San Juan Co., 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	Sec.4-T23N-R8W				
Site Position:		Northing:	1,914,732.604757 usft	Latitude:	36.262254
From:	Lat/Long	Easting:	541,391.508667 usft	Longitude:	-107.692934
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.08 °

Well	Chaco 2308-04D 282H					
Well Position	+N/-S	0.00 usft	Northing:	1,914,732.604757 usft	Latitude:	36.262254
	+E/-W	0.00 usft	Easting:	541,391.508667 usft	Longitude:	-107.692934
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,078.00 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/17/15	9.36	62.98	50,102

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 (°)	
	5,463.32	0.00	0.00	271.04	

Survey Program	Date 03/06/15				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
64.00	343.00	Surface Gyro's (Wellbore #1)	GYRO	Gyro-compassing and drop	
481.00	10,615.00	TES Survey (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)	
343.00	0.73	303.04	342.99	0.48	0.48	-0.47	0.00	0.00	0.00	
481.00	1.01	284.45	480.97	1.26	-1.43	1.46	0.29	0.20	-13.47	
First TES Survey										
542.00	1.69	302.03	541.96	1.87	-2.72	2.75	1.29	1.11	28.82	
603.00	3.37	301.26	602.89	3.28	-5.01	5.07	2.75	2.75	-1.26	
664.00	4.03	297.48	663.77	5.20	-8.45	8.54	1.15	1.08	-6.20	
725.00	5.65	286.31	724.55	7.03	-13.23	13.36	3.06	2.66	-18.31	
786.00	6.24	286.15	785.22	8.79	-19.30	19.45	0.97	0.97	-0.26	
847.00	6.91	280.86	845.82	10.41	-26.08	26.27	1.48	1.10	-8.67	
907.00	8.15	274.70	905.30	11.44	-33.87	34.07	2.46	2.07	-10.27	



Terrapin Energy Services

Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well Chaco 2308-04D 282H
Project:	San Juan Co., NM	TVD Reference:	Elev @ 7092.00usft
Site:	Sec.4-T23N-R8W	MD Reference:	Elev @ 7092.00usft
Well:	Chaco 2308-04D 282H	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)
968.00	8.39	272.72	965.67	12.00	-42.62	42.83	0.61	0.39	-3.25
1,028.00	7.86	276.40	1,025.07	12.67	-51.07	51.29	1.24	-0.88	6.13
1,088.00	7.73	278.14	1,084.51	13.70	-59.14	59.38	0.45	-0.22	2.90
1,150.00	7.98	278.36	1,145.93	14.91	-67.53	67.79	0.41	0.40	0.35
1,210.00	7.84	276.87	1,205.36	16.01	-75.71	75.99	0.41	-0.23	-2.48
1,271.00	8.25	277.85	1,265.76	17.10	-84.18	84.48	0.71	0.67	1.61
1,332.00	8.62	277.04	1,326.10	18.26	-93.05	93.37	0.64	0.61	-1.33
1,394.00	8.62	275.61	1,387.40	19.28	-102.29	102.62	0.35	0.00	-2.31
1,454.00	8.92	278.38	1,446.70	20.40	-111.36	111.72	0.86	0.50	4.62
1,515.00	8.85	278.73	1,506.97	21.80	-120.68	121.06	0.14	-0.11	0.57
1,575.00	7.60	277.54	1,566.35	23.02	-129.18	129.57	2.10	-2.08	-1.98
1,635.00	8.01	273.28	1,625.79	23.78	-137.28	137.69	1.18	0.68	-7.10
1,696.00	7.29	275.32	1,686.25	24.39	-145.38	145.80	1.26	-1.18	3.34
1,757.00	6.26	286.68	1,746.82	25.70	-152.42	152.86	2.76	-1.69	18.62
1,818.00	6.09	285.68	1,807.47	27.53	-158.72	159.19	0.33	-0.28	-1.64
1,880.00	6.74	283.23	1,869.08	29.25	-165.43	165.93	1.14	1.05	-3.95
1,943.00	7.15	284.27	1,931.62	31.06	-172.83	173.36	0.68	0.65	1.65
2,005.00	7.33	282.81	1,993.13	32.89	-180.42	180.99	0.42	0.29	-2.35
2,068.00	7.06	287.15	2,055.63	34.92	-188.04	188.64	0.96	-0.43	6.89
2,132.00	6.32	287.23	2,119.19	37.13	-195.16	195.81	1.16	-1.16	0.13
2,196.00	6.02	288.38	2,182.82	39.23	-201.71	202.39	0.51	-0.47	1.80
2,260.00	5.77	291.72	2,246.48	41.48	-207.89	208.61	0.66	-0.39	5.22
2,324.00	6.04	287.36	2,310.14	43.67	-214.09	214.85	0.82	0.42	-6.81
2,387.00	6.47	283.84	2,372.77	45.51	-220.70	221.49	0.91	0.68	-5.59
2,451.00	6.40	282.51	2,436.37	47.15	-227.68	228.50	0.26	-0.11	-2.08
2,514.00	6.55	279.65	2,498.97	48.51	-234.65	235.50	0.56	0.24	-4.54
2,578.00	6.19	277.33	2,562.57	49.56	-241.67	242.53	0.69	-0.56	-3.63
2,641.00	6.48	278.01	2,625.19	50.49	-248.56	249.44	0.48	0.46	1.08
2,704.00	6.45	276.01	2,687.78	51.35	-255.60	256.49	0.36	-0.05	-3.17
2,768.00	6.91	274.61	2,751.35	52.04	-263.02	263.92	0.76	0.72	-2.19
2,831.00	7.43	278.55	2,813.86	52.95	-270.82	271.74	1.14	0.83	6.25
2,894.00	6.95	283.19	2,876.36	54.43	-278.56	279.50	1.20	-0.76	7.37
2,958.00	7.37	284.13	2,939.86	56.31	-286.31	287.29	0.68	0.66	1.47
3,021.00	7.17	281.20	3,002.36	58.06	-294.09	295.09	0.67	-0.32	-4.65
3,084.00	6.91	283.21	3,064.88	59.69	-301.63	302.67	0.57	-0.41	3.19
3,147.00	5.91	286.97	3,127.49	61.50	-308.43	309.49	1.72	-1.59	5.97
3,211.00	5.56	285.68	3,191.17	63.30	-314.56	315.66	0.58	-0.55	-2.02
3,274.00	5.25	283.92	3,253.89	64.82	-320.30	321.42	0.56	-0.49	-2.79
3,337.00	5.78	282.39	3,316.60	66.20	-326.19	327.34	0.87	0.84	-2.43
3,400.00	6.60	286.15	3,379.23	67.88	-332.77	333.95	1.45	1.30	5.97
3,463.00	6.20	286.19	3,441.84	69.84	-339.51	340.73	0.63	-0.63	0.06
3,526.00	6.34	283.94	3,504.46	71.63	-346.16	347.40	0.45	0.22	-3.57
3,589.00	6.48	280.42	3,567.06	73.11	-353.03	354.30	0.66	0.22	-5.59



Terrapin Energy Services
Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well Chaco 2308-04D 282H
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Site:	Sec.4-T23N-R8W	MD Reference:	Elev @ 7092.00usft
Well:	Chaco 2308-04D 282H	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)
3,653.00	6.26	278.57	3,630.67	74.28	-360.03	361.32	0.47	-0.34	-2.89
3,716.00	6.30	274.75	3,693.29	75.08	-366.87	368.18	0.67	0.06	-6.06
3,780.00	6.14	276.50	3,756.92	75.76	-373.77	375.09	0.39	-0.25	2.73
3,843.00	6.04	274.33	3,819.56	76.39	-380.43	381.75	0.40	-0.16	-3.44
3,906.00	6.23	275.42	3,882.20	76.96	-387.13	388.47	0.35	0.30	1.73
3,969.00	6.24	272.41	3,944.83	77.43	-393.96	395.30	0.52	0.02	-4.78
4,032.00	6.17	269.43	4,007.46	77.54	-400.76	402.11	0.52	-0.11	-4.73
4,096.00	6.18	272.46	4,071.09	77.65	-407.65	408.99	0.51	0.02	4.73
4,159.00	6.05	281.52	4,133.73	78.46	-414.29	415.64	1.54	-0.21	14.38
4,222.00	5.91	276.83	4,196.39	79.51	-420.76	422.13	0.81	-0.22	-7.44
4,285.00	5.48	277.23	4,259.08	80.27	-426.97	428.35	0.69	-0.68	0.63
4,349.00	5.74	274.36	4,322.77	80.90	-433.19	434.58	0.60	0.41	-4.48
4,412.00	6.03	273.33	4,385.44	81.33	-439.63	441.04	0.49	0.46	-1.63
4,475.00	5.91	274.61	4,448.10	81.79	-446.17	447.58	0.28	-0.19	2.03
4,538.00	5.49	270.48	4,510.78	82.07	-452.42	453.83	0.93	-0.67	-6.56
4,602.00	5.20	271.10	4,574.51	82.15	-458.38	459.79	0.46	-0.45	0.97
4,665.00	4.33	267.49	4,637.29	82.10	-463.61	465.02	1.46	-1.38	-5.73
4,729.00	3.34	261.15	4,701.14	81.71	-467.86	469.27	1.68	-1.55	-9.91
4,792.00	2.40	248.65	4,764.06	80.95	-470.91	472.30	1.78	-1.49	-19.84
4,824.00	2.42	245.80	4,796.04	80.43	-472.15	473.53	0.38	0.06	-8.91
4,888.00	2.70	245.63	4,859.97	79.25	-474.75	476.11	0.44	0.44	-0.27
4,951.00	9.83	280.46	4,922.57	79.62	-481.40	482.77	12.33	11.32	55.29
5,014.00	18.30	282.16	4,983.63	82.68	-496.39	497.80	13.46	13.44	2.70
5,078.00	24.13	271.89	5,043.28	85.23	-519.31	520.77	10.77	9.11	-16.05
5,140.00	27.71	271.51	5,099.04	86.03	-546.40	547.87	5.78	5.77	-0.61
5,204.00	34.31	281.02	5,153.89	89.88	-579.03	580.57	12.82	10.31	14.86
5,267.00	36.27	280.22	5,205.31	96.58	-614.80	616.45	3.20	3.11	-1.27
5,330.00	42.33	276.36	5,254.05	102.24	-654.27	656.01	10.37	9.62	-6.13
5,393.00	43.59	272.40	5,300.16	105.50	-697.06	698.86	4.73	2.00	-6.29
5,456.00	45.54	266.94	5,345.06	105.21	-741.23	743.02	6.82	3.10	-8.67
5,519.00	49.72	267.62	5,387.51	103.01	-787.71	789.45	6.68	6.63	1.08
5,583.00	56.30	270.80	5,426.00	102.37	-838.79	840.51	11.02	10.28	4.97
5,646.00	59.07	273.35	5,459.68	104.31	-891.98	893.73	5.57	4.40	4.05
5,709.00	66.26	271.58	5,488.59	106.69	-947.86	949.64	11.68	11.41	-2.81
5,772.00	69.67	272.33	5,512.23	108.69	-1,006.21	1,008.02	5.52	5.41	1.19
5,835.00	73.72	270.33	5,532.01	110.06	-1,065.99	1,067.81	7.10	6.43	-3.17
5,899.00	77.20	270.52	5,548.08	110.52	-1,127.93	1,129.75	5.45	5.44	0.30
5,963.00	82.72	271.89	5,559.23	111.85	-1,190.91	1,192.74	8.88	8.63	2.14
5,998.00	84.11	271.08	5,563.24	112.76	-1,225.67	1,227.51	4.59	3.97	-2.31
6,065.00	90.57	269.16	5,567.28	112.93	-1,312.52	1,314.36	7.75	7.43	-2.21
6,146.00	90.18	270.31	5,566.88	112.65	-1,373.52	1,375.34	1.99	-0.64	1.89
6,207.00	90.04	270.66	5,566.76	113.17	-1,434.52	1,436.33	0.62	-0.23	0.57
6,268.00	90.66	268.99	5,566.39	112.98	-1,495.51	1,497.32	2.92	1.02	-2.74



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well Chaco 2308-04D 282H
Project:	San Juan Co., NM	TVD Reference:	Elev @ 7092.00usft
Site:	Sec.4-T23N-R8W	MD Reference:	Elev @ 7092.00usft
Well:	Chaco 2308-04D 282H	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)
6,329.00	90.70	266.88	5,565.67	110.78	-1,556.47	1,558.22	3.46	0.07	-3.46
6,390.00	90.83	264.95	5,564.85	106.44	-1,617.30	1,618.97	3.17	0.21	-3.16
6,451.00	90.48	264.95	5,564.15	101.07	-1,678.06	1,679.62	0.57	-0.57	0.00
6,512.00	90.09	266.70	5,563.85	96.63	-1,738.90	1,740.36	2.94	-0.64	2.87
6,573.00	89.34	266.26	5,564.15	92.88	-1,799.78	1,801.17	1.43	-1.23	-0.72
6,634.00	89.60	266.62	5,564.72	89.10	-1,860.66	1,861.97	0.73	0.43	0.59
6,694.00	90.26	269.52	5,564.79	87.08	-1,920.62	1,921.88	4.96	1.10	4.83
6,754.00	90.83	270.40	5,564.22	87.03	-1,980.62	1,981.87	1.75	0.95	1.47
6,814.00	90.04	269.96	5,563.77	87.22	-2,040.61	2,041.86	1.51	-1.32	-0.73
6,876.00	90.79	270.57	5,563.32	87.51	-2,102.61	2,103.85	1.56	1.21	0.98
6,936.00	90.83	271.98	5,562.47	88.84	-2,162.59	2,163.84	2.35	0.07	2.35
6,997.00	90.57	271.54	5,561.72	90.72	-2,223.55	2,224.83	0.84	-0.43	-0.72
7,058.00	90.75	272.15	5,561.02	92.68	-2,284.52	2,285.82	1.04	0.30	1.00
7,120.00	91.85	272.42	5,559.61	95.15	-2,346.45	2,347.79	1.83	1.77	0.44
7,180.00	91.36	272.42	5,557.93	97.69	-2,406.37	2,407.75	0.82	-0.82	0.00
7,241.00	91.23	271.71	5,556.56	99.88	-2,467.32	2,468.73	1.18	-0.21	-1.16
7,301.00	91.80	273.21	5,554.97	102.46	-2,527.24	2,528.68	2.67	0.95	2.50
7,361.00	90.66	272.77	5,553.68	105.59	-2,587.14	2,588.63	2.04	-1.90	-0.73
7,422.00	93.52	271.54	5,551.46	107.88	-2,648.05	2,649.57	5.10	4.69	-2.02
7,483.00	92.99	270.92	5,547.99	109.19	-2,708.94	2,710.48	1.34	-0.87	-1.02
7,544.00	92.46	270.66	5,545.09	110.03	-2,769.87	2,771.41	0.97	-0.87	-0.43
7,605.00	91.71	270.31	5,542.87	110.54	-2,830.82	2,832.36	1.36	-1.23	-0.57
7,667.00	90.57	270.13	5,541.64	110.78	-2,892.81	2,894.34	1.86	-1.84	-0.29
7,727.00	89.34	269.87	5,541.69	110.78	-2,952.81	2,954.33	2.10	-2.05	-0.43
7,789.00	90.66	270.31	5,541.69	110.88	-3,014.81	3,016.32	2.24	2.13	0.71
7,850.00	89.91	269.78	5,541.38	110.92	-3,075.80	3,077.31	1.51	-1.23	-0.87
7,914.00	91.18	270.40	5,540.77	111.03	-3,139.80	3,141.30	2.21	1.98	0.97
7,978.00	90.31	270.40	5,539.94	111.47	-3,203.79	3,205.29	1.36	-1.36	0.00
8,041.00	91.71	270.40	5,538.83	111.91	-3,266.78	3,268.27	2.22	2.22	0.00
8,105.00	93.34	270.40	5,536.01	112.36	-3,330.71	3,332.20	2.55	2.55	0.00
8,169.00	92.07	269.87	5,532.99	112.51	-3,394.64	3,396.12	2.15	-1.98	-0.83
8,232.00	90.96	269.34	5,531.33	112.07	-3,457.62	3,459.08	1.95	-1.76	-0.84
8,296.00	92.85	269.96	5,529.20	111.68	-3,521.58	3,523.02	3.11	2.95	0.97
8,360.00	92.24	269.08	5,526.36	111.15	-3,585.51	3,586.94	1.67	-0.95	-1.38
8,423.00	93.47	268.90	5,523.22	110.04	-3,648.42	3,649.82	1.97	1.95	-0.29
8,487.00	93.60	268.90	5,519.27	108.81	-3,712.29	3,713.65	0.20	0.20	0.00
8,550.00	90.66	266.79	5,516.93	106.44	-3,775.19	3,776.50	5.74	-4.67	-3.35
8,614.00	91.14	265.56	5,515.93	102.18	-3,839.04	3,840.26	2.06	0.75	-1.92
8,677.00	90.57	263.10	5,514.99	95.95	-3,901.72	3,902.81	4.01	-0.90	-3.90
8,741.00	91.41	262.92	5,513.88	88.17	-3,965.23	3,966.18	1.34	1.31	-0.28
8,804.00	91.19	262.13	5,512.45	79.97	-4,027.68	4,028.47	1.30	-0.35	-1.25
8,867.00	90.79	267.49	5,511.36	74.28	-4,090.39	4,091.06	8.53	-0.63	8.51
8,931.00	91.32	273.03	5,510.18	74.57	-4,154.35	4,155.02	8.69	0.83	8.66
8,995.00	90.53	272.77	5,509.15	77.80	-4,218.26	4,218.98	1.30	-1.23	-0.41



Terrapin Energy Services

Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well Chaco 2308-04D 282H
Project:	San Juan Co., NM	TVD Reference:	Elev @ 7092.00usft
Site:	Sec.4-T23N-R8W	MD Reference:	Elev @ 7092.00usft
Well:	Chaco 2308-04D 282H	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)
9,058.00	92.55	271.45	5,507.46	80.12	-4,281.19	4,281.94	3.83	3.21	-2.10
9,120.00	93.03	271.89	5,504.44	81.93	-4,343.09	4,343.86	1.05	0.77	0.71
9,183.00	92.46	271.89	5,501.42	84.00	-4,405.98	4,406.78	0.90	-0.90	0.00
9,247.00	91.80	271.45	5,499.04	85.87	-4,469.91	4,470.73	1.24	-1.03	-0.69
9,310.00	90.57	270.40	5,497.74	86.88	-4,532.89	4,533.72	2.57	-1.95	-1.67
9,373.00	93.65	272.86	5,495.42	88.67	-4,595.81	4,596.66	6.25	4.89	3.90
9,437.00	93.16	272.42	5,491.62	91.61	-4,659.63	4,660.52	1.03	-0.77	-0.69
9,499.00	92.55	272.50	5,488.53	94.27	-4,721.49	4,722.42	0.99	-0.98	0.13
9,564.00	92.81	272.15	5,485.49	96.91	-4,786.37	4,787.34	0.67	0.40	-0.54
9,627.00	91.85	271.63	5,482.93	98.98	-4,849.28	4,850.28	1.73	-1.52	-0.83
9,690.00	90.83	271.80	5,481.46	100.87	-4,912.23	4,913.25	1.64	-1.62	0.27
9,753.00	92.29	271.45	5,479.74	102.65	-4,975.18	4,976.23	2.38	2.32	-0.56
9,816.00	91.58	270.83	5,477.61	103.91	-5,038.13	5,039.19	1.50	-1.13	-0.98
9,880.00	93.56	271.36	5,474.75	105.13	-5,102.05	5,103.12	3.20	3.09	0.83
9,943.00	92.42	270.40	5,471.46	106.09	-5,164.96	5,166.03	2.36	-1.81	-1.52
10,006.00	92.02	270.22	5,469.02	106.43	-5,227.91	5,228.98	0.70	-0.63	-0.29
10,069.00	91.58	270.66	5,467.04	106.92	-5,290.88	5,291.95	0.99	-0.70	0.70
10,132.00	91.93	270.66	5,465.11	107.64	-5,353.84	5,354.92	0.56	0.56	0.00
10,196.00	92.55	270.92	5,462.61	108.52	-5,417.79	5,418.87	1.05	0.97	0.41
10,260.00	91.71	270.75	5,460.23	109.46	-5,481.74	5,482.82	1.34	-1.31	-0.27
10,324.00	91.63	269.34	5,458.36	109.51	-5,545.71	5,546.78	2.21	-0.13	-2.20
10,387.00	92.20	269.60	5,456.26	108.92	-5,608.67	5,609.72	0.99	0.90	0.41
10,450.00	91.93	268.90	5,453.99	108.10	-5,671.62	5,672.65	1.19	-0.43	-1.11
10,513.00	91.23	267.93	5,452.25	106.36	-5,734.57	5,735.56	1.90	-1.11	-1.54
10,533.00	91.01	267.85	5,451.86	105.62	-5,754.56	5,755.53	1.17	-1.10	-0.40
Final TES Survey									
10,615.00	91.01	267.85	5,450.42	102.55	-5,836.49	5,837.39	0.00	0.00	0.00
Projection To Bit									

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 282H	0.00	0.00	5,452.21	106.29	-5,736.57	1,914,830.579	535,654.79062	36.262545	-107.712392
						549	7		
- survey hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
6,057.00	5,567.05	7" Casing	7	8-3/4	



Terrapin Energy Services
Survey Report



Company:	WPX Energy Production, LLC	Local Co-ordinate Reference:	Well Chaco 2308-04D 282H
Project:	San Juan Co., NM	TVD Reference:	Elev @ 7092.00usft
Site:	Sec.4-T23N-R8W	MD Reference:	Elev @ 7092.00usft
Well:	Chaco 2308-04D 282H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
481.00	480.97	1.26	-1.43	First TES Survey
10,533.00	5,451.86	105.62	-5,754.56	Final TES Survey
10,615.00	5,450.42	102.55	-5,836.49	Projection To Bit

Checked By: _____	Approved By: _____	Date: _____
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