Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM54290

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☑ Gas Well ☐ Other

8. Well Name and No.
NORTH BRUSHY DRAW FEDERAL 35 7H

2. Name of Operator ~~WPX ENERGY~~ RKI
Contact: JOSH WALKER
E-Mail: josh.walker@wpxenergy.com

9. API Well No.
30-015-~~42292~~ 42292

3a. Address
3500 ONE WILLIAMS CENTER MD-35
TULSA, OK 71472

3b. Phone No. (include area code)
Ph: 539-573-0108

10. Field and Pool, or Exploratory
UNDESIGNATED WOLFCAMP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 35 T25S R29E NWNE 159FNL 2309FEL

11. County or Parish, and State
EDDY COUNTY, NM

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

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

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

RKI is requesting the following changes:

-Change BHL from 230FSL, 2300FEL to 230FSL, 1633FEL.
-Change SHL from 159FNL, 2309FEL to 188FNL, 2275FEL, essentially shifting the SHL slightly on the pad. The pad is constructed and there would be no need for expansion to the approved pad or any additional disturbance. This change is necessary for the drilling rig to fit on location safely since the 6H is a producing well.

Please see attached plats, geoprog, directional plan, anti-collision report, BOP diagram, choke manifold diagram, and co-flex hose variance request form.

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 12 2016
RECEIVED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #355868 verified by the BLM Well Information System
For WPX ENERGY, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH MCKINNEY on 10/27/2016 ()

Name *(Printed/Typed)* JOSH WALKER — Title REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 10/25/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Cody R. Layton — Title AFM - Lands & Minerals — Date 12/07/16

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

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 Rd., 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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-42292	72897	~~UNDESIGNATED~~ Brush Draw WOLFCAMP (GAS)

Property Code	Property Name	Well Number
38962	NORTH BRUSHY DRAW FEDERAL 35	7H

OGRID No.	Operator Name	Elevation
246289	RKI EXPLORATION & PRODUCTION	3012'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	35	25 S	29 E		188	NORTH	2275	EAST	EDDY

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
O	35	25 S	29 E		230	SOUTH	1633	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
~~160~~ 320			

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.

NW COR SEC 35
NMSP-E (NAD 83)
N (Y) = 397973.5
E (X) = 655831.6'
LAT.= 32°05'36.84" N
LONG.= 103°57'49.00" W

NORTH BRUSHY DRAW FEDERAL 35 7H SHL
NMSP-E (NAD 83)
N (Y) = 397794.1'
E (X) = 658866.4'
LAT.= 32°05'34.97" N
LON.= 103°57'13.72" W
NMSP-E (NAD 27)
N (Y) = 397736.1'
E (X) =617681.2'
LAT.= 32.0929226°N
LON.= 103.9533274°W

188'
2275'
FIRST TAKE
330' FNL
1633' FEL

NE COR SEC 35
NMSP-E (NAD 83)
N (Y) = 397988.3
E (X) = 661140.7'
LAT.= 32°05'36.81" N
LONG.= 103°56'47.27" W

NORTH BRUSHY DRAW FEDERAL 35 7H FTP
NMSP-E (NAD 83)
N (Y) = 397653.7'
E (X) = 659509.1'
LAT.= 32°05'33.56" N
LON.= 103°57'06.25" W
NMSP-E (NAD 27)
N (Y) = 397595.8'
E (X) =618323.9'
LAT.= 32.0925305°N
LON.= 103.9512539°W

NORTH BRUSHY DRAW FEDERAL 35 7H LTP
NMSP-E (NAD 83)
N (Y) = 393005.2'
E (X) = 659529.8'
LAT.= 32°04'47.55" N
LON.= 103°57'06.20" W
NMSP-E (NAD 27)
N (Y) = 392947.4'
E (X) = 618344.5'
LAT.= 32.0797519°N
LON.= 103.9512406°W

NORTH BRUSHY DRAW FEDERAL 35 7H BHL
NMSP-E (NAD 83)
N (Y) = 392905.2'
E (X) = 659530.3'
LAT.= 32°04'46.56" N
LON.= 103°57'06.20" W
NMSP-E (NAD 27)
N (Y) = 392847.4'
E (X) = 618344.9'
LAT.= 32.0794770°N
LON.= 103.9512402°W

LAST TAKE
330' FSL
1633' FWL
230'
1633'

SE COR SEC 35
NMSP-E (NAD 83)
N (Y) = 392680.8
E (X) = 661164.4'
LAT.= 32°04'44.28" N
LONG.= 103°56'47.21" W

SW COR SEC 35
NMSP-E (NAD 83)
N (Y) = 392663.4
E (X) = 655847.1'
LAT.= 32°04'44.30" N
LONG.= 103°57'49.02" W

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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 10/15/16

Josh Walker
Print Name

josh.walker@wpxenergy.com
E-mail Address

SURVEYORS 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.

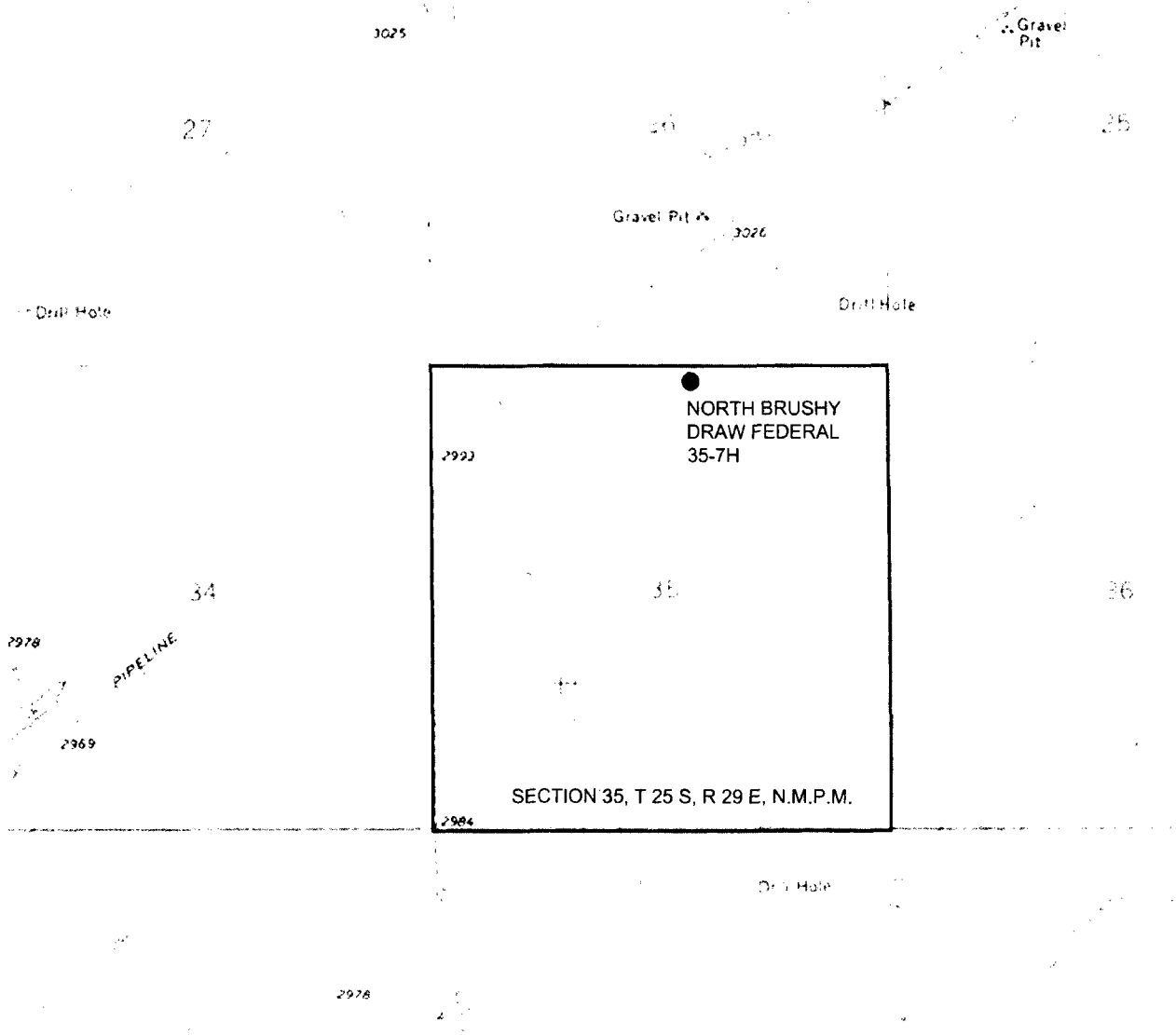
OCTOBER 12, 2016
Date of Survey

Signature and Seal of Professional Surveyor:

JAMES E. TOMPKINS
NEW MEXICO
14729
REGISTERED PROFESSIONAL LAND SURVEYOR

Job No.: WTC51403
JAMES E. TOMPKINS 14729
Certificate Number

LOCATION VERIFICATION MAP



GRAPHIC SCALE 1" = 2000'

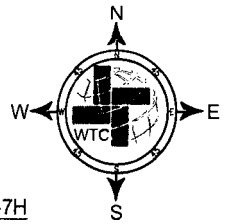
SECTION 35, T 25 S, R 29 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FNL & 2275' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: NORTH BRUSHY DRAW FEDERAL 35-7H



DRIVING DIRECTIONS:

From the intersection of 285 and Longhorn County Road 725 go on 725 for 4.3 miles to a Lease Road. Go Northeast 3.7 miles to another Lease Road. Go South 0.2 mile to the Fed 35 1H Well location and a point 395' East of location.

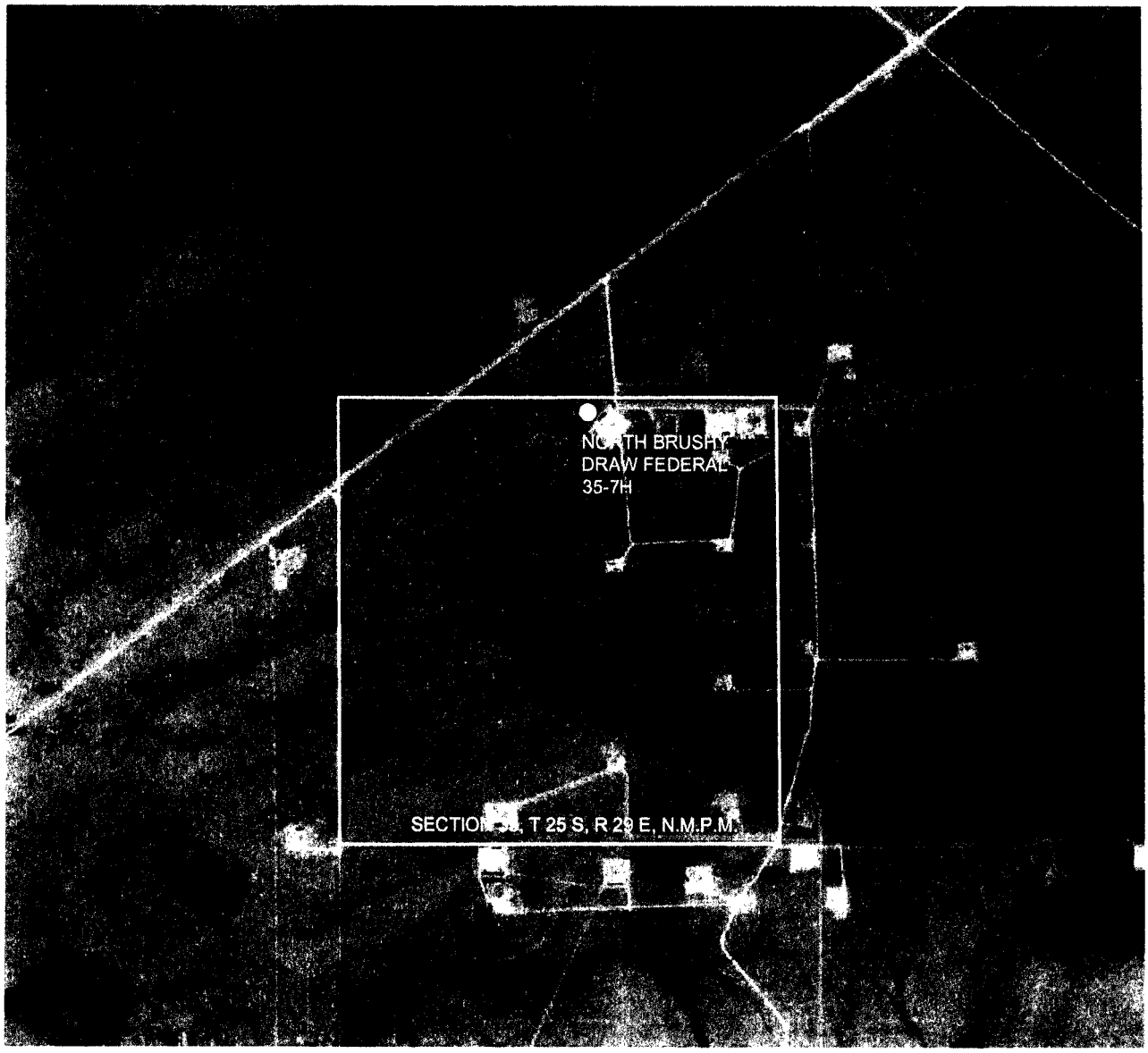
WTC, INC.
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC51403

X:\Projects\Oil & Gas Surveys\WPX Energy, LLC\51403-WPX Energy\Re-stake & Re-plat North Brushy Draw 35-7H, Eddy Co, NM\Drawings\51403-NORTH BRUSHY DRAW 7H-STAKED.dwg

AERIAL MAP



0 1000 2000 4000

GRAPHIC SCALE 1" = 2000'

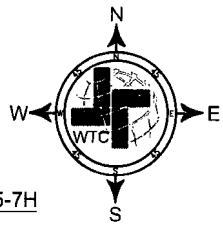
SECTION 35, T 25 S, R 29 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FNL & 2275' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: NORTH BRUSHY DRAW FEDERAL 35-7H



DRIVING DIRECTIONS:

From the intersection of 285 and Longhorn County Road 725 go on 725 for 4.3 miles to a Lease Road. Go Northeast 3.7 miles to another Lease Road. Go South 0.2 mile to the Fed 35 1H Well location and a point 395' East of location.

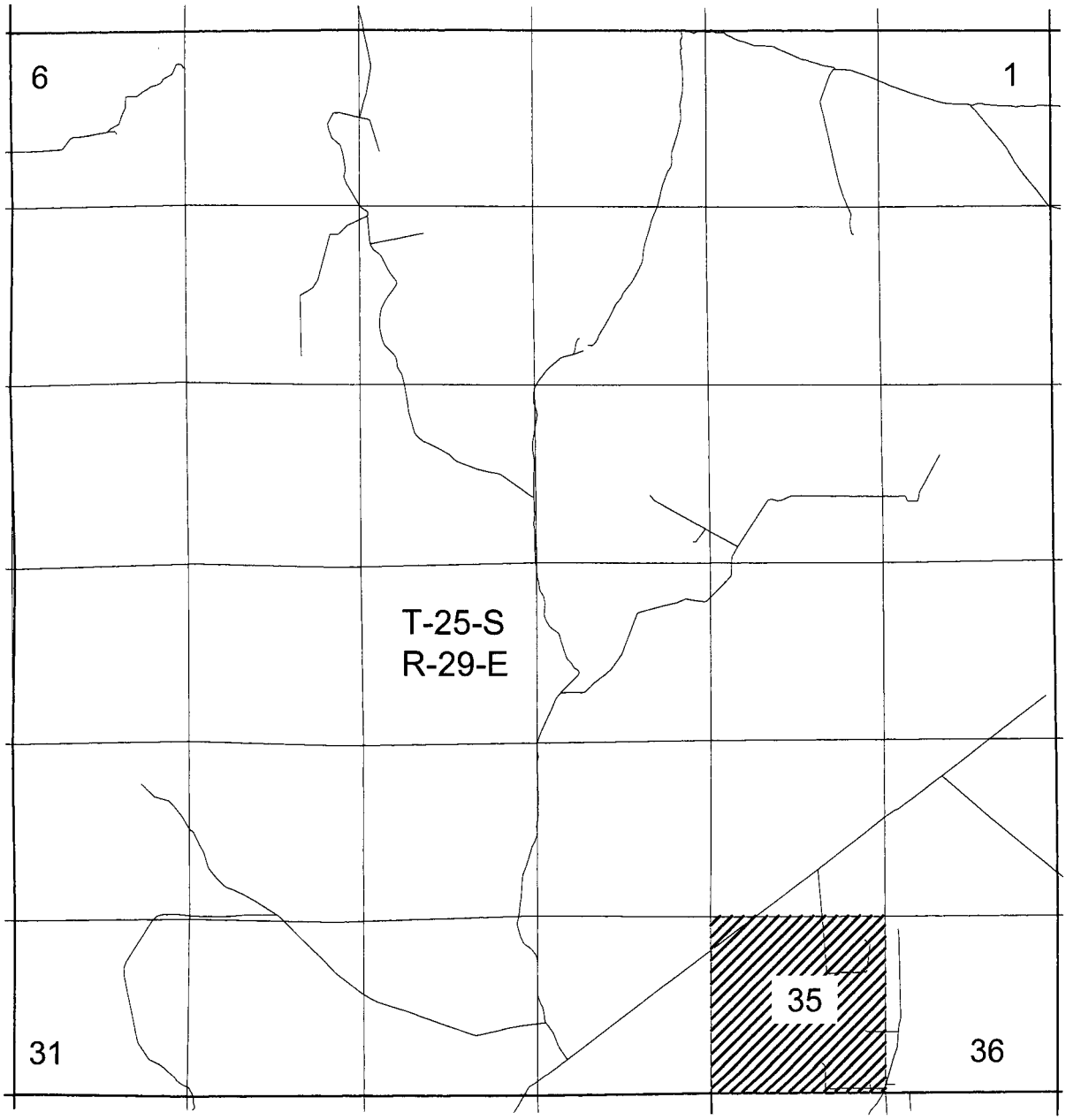
WTC

W T C, INC.
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC51403

VICINITY MAP



0 1 2 3

GRAPHIC SCALE 1" = 1 MILE

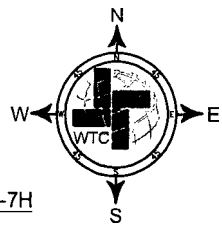
SECTION 35, T 25 S, R 29 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FNL & 2275' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: NORTH BRUSHY DRAW FEDERAL 35-7H



DRIVING DIRECTIONS:

From the intersection of 285 and Longhorn County Road 725 go on 725 for 4.3 miles to a Lease Road. Go Northeast 3.7 miles to another Lease Road. Go South 0.2 mile to the Fed 35 1H Well location and a point 395' East of location.

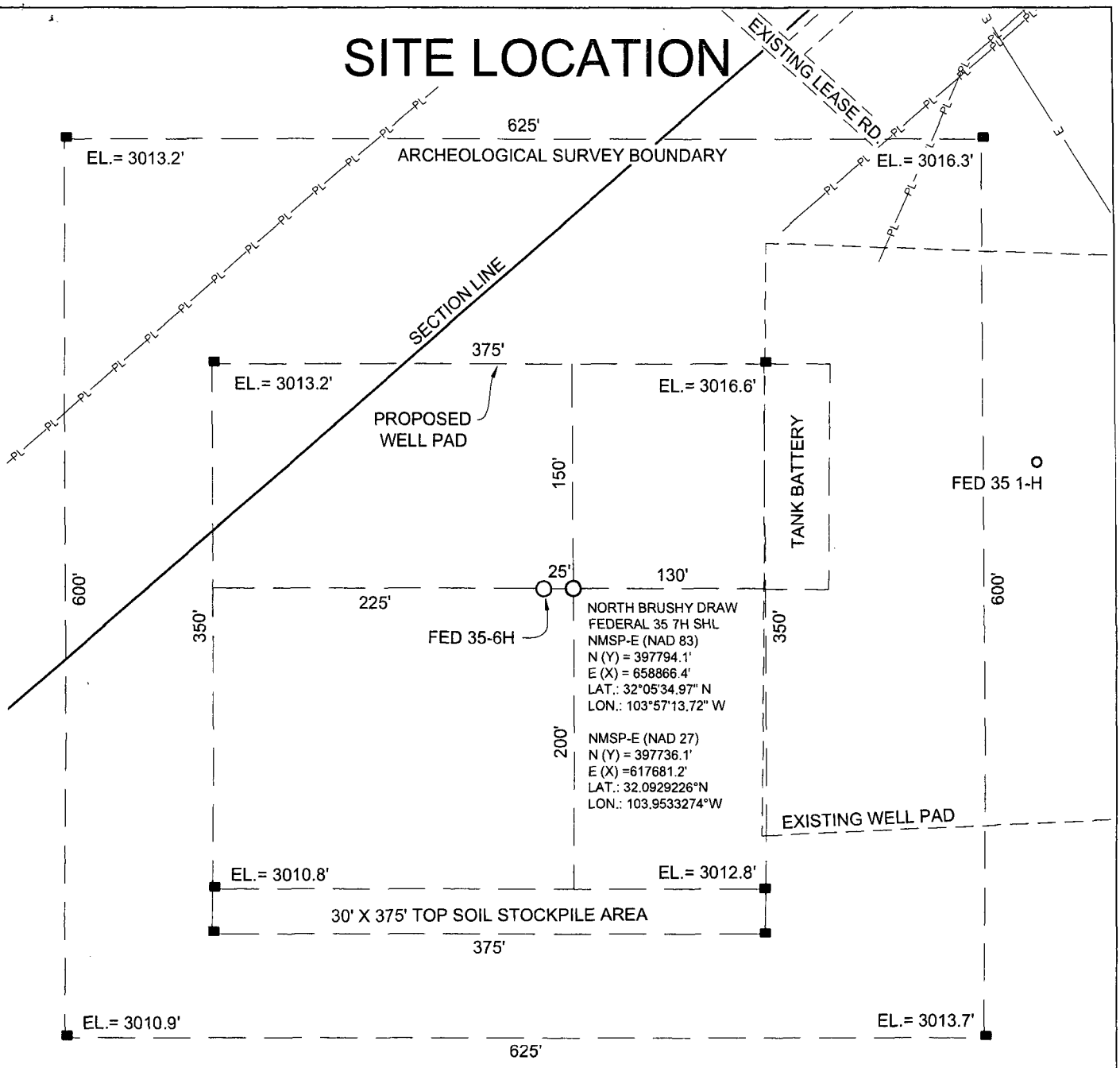
WTC

W T C, INC.
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC51403

SITE LOCATION



0 50 100 200

GRAPHIC SCALE 1" = 100'

SECTION 35, T 25 S, R 29 E, N.M.P.M.

COUNTY: EDDY STATE: NM

DESCRIPTION: 188' FNL & 2275' FEL

OPERATOR: RKI EXPLORATION & PRODUCTION

WELL NAME: NORTH BRUSHY DRAW FEDERAL 35-7H

DRIVING DIRECTIONS:

From the intersection of 285 and Longhorn County Road 725 go on 725 for 4.3 miles to a Lease Road. Go Northeast 3.7 miles to another Lease Road. Go South 0.2 mile to the Fed 35 1H Well location and a point 395' East of location.

WTC

W T C, INC.
405 S.W. 1st. STREET
ANDREWS, TEXAS 79714
(432) 523-2181

RKI EXPLORATION & PRODUCTION

JOB No.: WTC51403

WPX Energy

Well	North Brushy Draw 35-7H				
Location	Surface:	188 FNL	2,275 FWL	Sec 35-25S-29E	
	Bottom Hole:	230 FSL	1,633 FEL	Sec 35-25S-29E	

County Eddy
State New Mexico

1) The elevation of the unprepared ground is 3,012 feet above sea level.

2) The geologic name of the surface formation is Quaternary - Alluvium.

3) A rotary rig will be utilized to drill the well to 15,189 feet and run casing and cement. This equipment will then be rigged down and the well will be completed with a workover rig.

4) Proposed depth is 15,189 feet MD

5) Estimated tops:

	MD	TVD		BHP = .44 psi/ft x depth
Bell Canyon Sand (Base Salt)	3,214	3,214		1,414 psi
Cherry Canyon Sand	4,282	4,282		1,884 psi
Brushy Canyon Sand	5,424	5,424		2,387 psi
Bone Spring Lime	7,022	7,022	Oil	3,090 psi
1st Bone Spring Sand	7,910	7,910	Oil	3,480 psi
2nd Bone Spring Sand	8,797	8,797	Oil	3,871 psi
3rd Bone Spring Sand	9,046	9,046	Oil	3,980 psi
Wolfcamp	10,198	10,198	Oil	4,487 psi
Wolfcamp X	10,218	10,218	Oil	4,496
			Oil	-
KOP	9,888	9,836	Oil	4,328 psi
Landing Point (Wolfcamp)	10,638	10,313	Oil	4,538 psi
TD	15,189	10,313	Oil	

6) Casing program:

Hole Size	Top	Bottom	OD Csg	Wt/Grade	Connection	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 1/2"	0	650	13 3/8"	54.5#/J-55	ST&C	3.95	19.09	14.51
12 1/4"	0	3,214	9 5/8"	40#/J-55	LT&C	1.43	5.59	4.04
8 3/4"	0	10,638	7"	29#/HCP-110	BT&C	1.33	1.99	2.88
6 1/8"	9,888	15,189	4 1/2"	13.5#/HCP-110	CDC-HTC	2.35	1.24	6.19

Collapse	1.125
Burst	1.0
Tension	2.0

7) Cement program:

Surface	17 1/2" hole				
Pipe OD	13 3/8"				
Setting Depth	650 ft				
Annular Volume	0.69462 cf/ft				
Excess	1		100 %		
Lead	516 sx	1.75 cf/sk		9.13 gal/sk	13.5 ppg
Tail	200 sx	1.33 cf/sk		6.32 gal/sk	14.8 ppg

Lead: "C" + 4% PF20 (gel) + 2% PF1 (CC) + .125 pps PF29 (CelloFlake) + .4 pps PF46 (antifoam)
Tail: "C" + 1% PF1 (CC)
Top of cement: Surface

Intermediate	12 1/4" hole				
Pipe OD	9 5/8"				
Setting Depth	3,214 ft				
Annular Volume	0.31318 cf/ft		0.3627 cf/ft		
Excess	0.5		50 %		
Lead	545 sx	2.37 cf/sk		9.95 gal/sk	12.6 ppg
Tail	200 sx	1.33 cf/sk		6.32 gal/sk	14.8 ppg

Lead: 35/65 Poz "C" + 5% PF44 + 6% PF20 + 1% PF1 _ .125 pps PF29 + .4 pps PF46 + 3 pps PF42
Tail: "C" + .2% PF13 (retarder)
Top of cement: Surface

Intermediate	8 3/4" hole				
Pipe OD	7"				
Setting Depth	10,638 ft				
Annular Volume	0.15033 cf/ft		0.1585 cf/ft	500 ft	
Excess	0.35		35 %		
Lead:	731 sx	1.89 cf/sk		10.06 gal/sk	12.9 ppg
Tail:	175 sx	1.33 cf/sk		6.32 gal/sk	14.8 ppg

Lead: 35/65 Poz "C" + 5% PF44 + 6% PF20 + .2% PF13 + .125 ps PF29 + .4 pps PF46
Tail: "C" + .2% PF13
Top of cement: 2,714 ft

Production	6 1/8" hole				
Pipe OD (in OH)	4 1/2"				
Setting Depth	15,189 ft				
Annular Volume	0.0942				
Excess	0.50				
Lead:	401 sx	1.87 cf/sk		9.52 gal/sk	13.0 ppg

Lead: AcidSolid PVL + 5% PF174 + .7% PF606 + .2% PF153 + .5% PF13 + 30% PF151 + .4 pps PF46
Top of cement: 9,888 ft

8) Pressure control equipment:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a triple ram type (10,000 psi WP) preventer, a bag-type annular preventer (5,000 psi WP), and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with variable rams on top, blind rams, and pipe rams (sized to accommodate the drill pipe size being utilized) on bottom. A 13 3/8" SOW x 13 5/8" 5M casing head will be installed on the 13 3/8" casing and utilized until total depth is reached. All BOP and associated equipment will be tested to 5,000 psi and the annular will be tested to 1,500 psi after setting 13-3/8" casing string & 7" casing string. The 13 3/8" and 9 5/8" casing will be tested to .22 psi per ft of casing string length or 1500 psi whichever is greater, but not to exceed 70% of the minimum yield.
The 9 5/8" casing will be hung in the casing head and the stack will not be nippled down at this point.
The stack will not be isolated and tested after running the 9 5/8" casing, but will be tested along with the 9 5/8" casing. Pipe rams will be operated and checked each 24 hour period and each time the drill string is out of the hole. These function test will be documented on the daily driller's log.
A drilling spool or blowout preventer with 2 side outlets (choke side shall be 3" minimum diameter, kill side shall be at least 2" diameter).
2 kill line valves, one of which will be a check valve.
2 chokes on the manifold along with a pressure gauge.
Upper kelly cock valve with handle available.
Safety valve and subs to fit all drill string connections in use.
All BOP equipment connections subjected to pressure will be flanged, welded, or clamped.
Fill up line above the upper most preventer.

9) Mud program:

Top	Bottom	Mud Wt.	Vis	PV	YP	Fluid Loss	Type System
0	650	8.5 to 8.9	32 to 36	1 - 6	1 - 6	NC	Fresh Water
650	3,214	9.8 to 10.0	28 to 30	1 - 3	1 - 3	NC	Brine
3,214	10,638	8.9 to 9.1	28 to 36	1 - 3	1 - 3	NC	Cut Brine
10,638	15,189	10.5 to 12.5	50 to 55	20-22	8 - 10	8 - 10	OBM

10) Logging, coring, and testing program:

No drill stem test are planned
KOP to intermediate: No logs planned
Intermediate to surface: No logs planned
No coring is planned

11) Potential hazards:

No abnormal pressure or temperature is expected. No H2S is known to exist in the area.
Lost circulation can occur in, lost circulation material will be on location and readily available if needed.

12) Anticipated start date ASAP
Duration 30 days

WPXENERGY

Company: WPX Energy
Site: North Brushy Draw Federal 35
Well: 7H
Project: Eddy County, New Mexico (NAD 83)
Rig Name: Orion Pegasus

MS Energy Services.
WWW.MSENERGYSERVICES.COM

T G M

Azimuths to Grid North
True North: -0.20°
Magnetic North: 7.03°

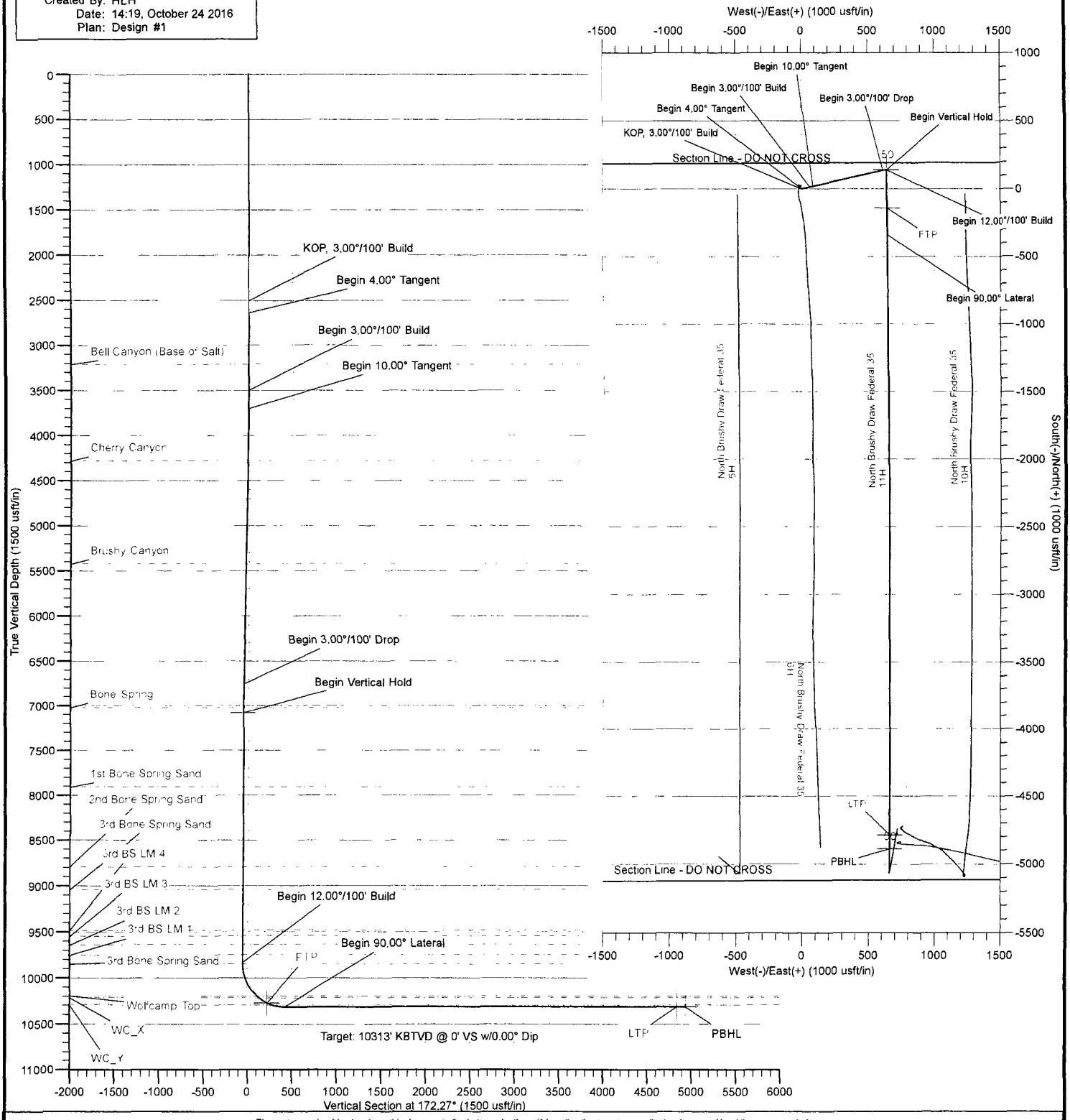
Magnetic Field
Strength: 47943.7snT
Dip Angle: 59.88°
Date: 12/21/2016
Model: BGGM2016

US State Plane 1983
New Mexico Eastern Zone

Created By: HLH
Date: 14:19, October 24 2016
Plan: Design #1

ANNOTATIONS

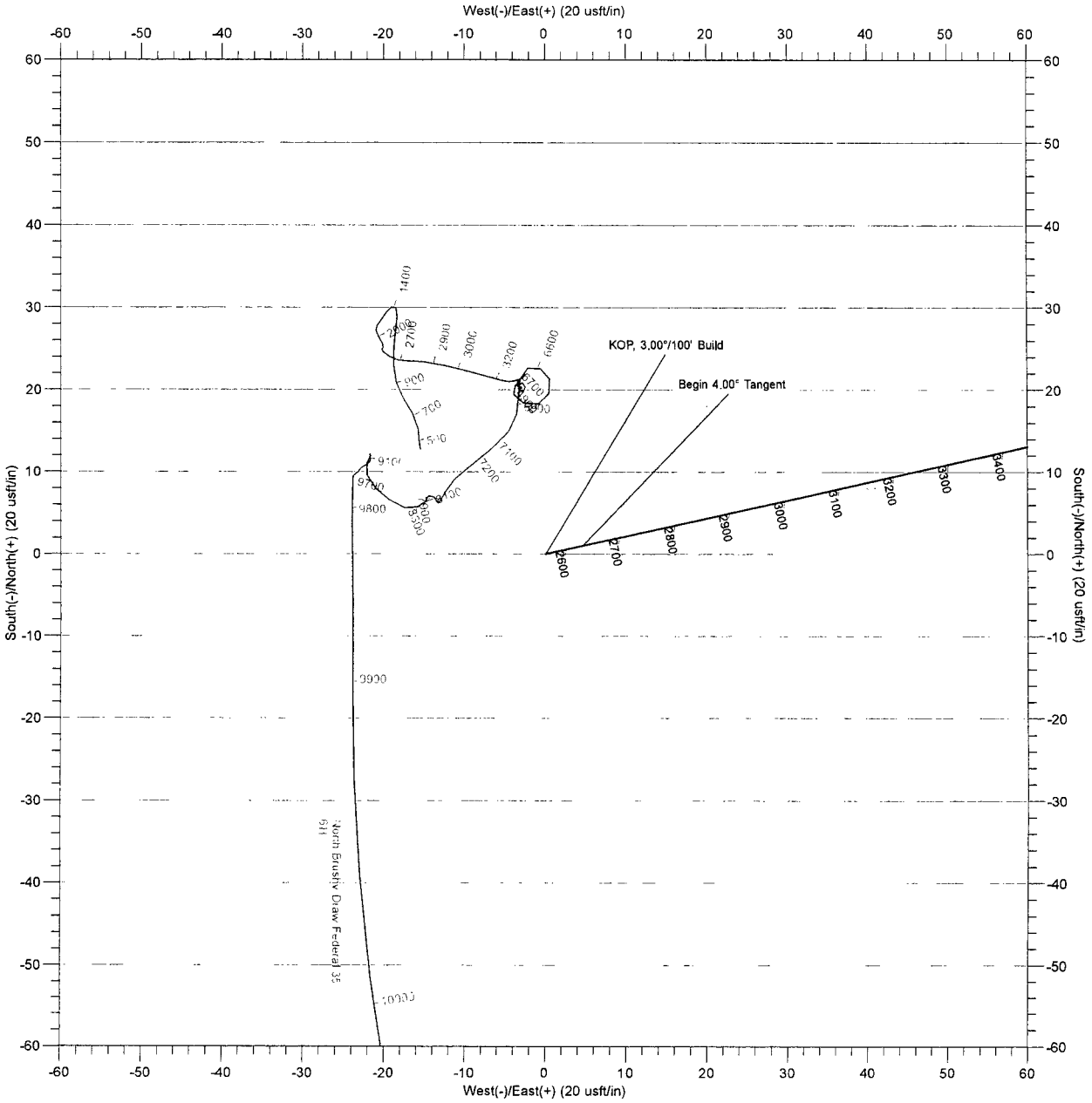
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	KOP, 3.00°/100' Build
2633.33	4.00	77.72	2633.23	0.99	4.55	-0.37	4.65	Begin 4.00° Tangent
3500.00	4.00	77.72	3497.78	13.85	63.62	-5.16	65.11	Begin 3.00°/100' Build
3699.84	10.00	77.72	3696.05	19.03	87.40	-7.09	89.44	Begin 10.00° Tangent
6799.35	10.00	77.72	6748.51	133.47	613.06	-49.77	627.42	Begin 3.00°/100' Drop
7132.53	0.00	0.00	7080.00	139.63	641.38	-52.06	656.41	Begin Vertical Hold
9888.07	0.00	0.00	9835.54	139.63	641.38	-52.06	656.41	Begin 12.00°/100' Build
10638.07	90.00	179.74	10313.00	-337.83	643.51	421.34	1133.87	Begin 90.00° Lateral
15189.14	90.00	179.74	10313.00	-4888.86	663.82	4933.72	5684.95	PBHL



WPXENERGY

Company: WPX Energy
Site: North Brushy Draw Federal 35
Well: 7H
Project: Eddy County, New Mexico (NAD 83)
Rig Name: Orion Pegasus

MS Energy Services.
WWW.MSENERGYSERVICES.COM



WPXENERGY

WPX Energy

Eddy County, New Mexico (NAD 83)
North Brushy Draw Federal 35
7H

Wellbore #1

Plan: Design #1

Standard Planning Report

24 October, 2016

MS Energy Services
WWW.MSENERGYSERVICES.COM

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 7H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site:	North Brushy Draw Federal 35	**North Reference:**	Grid
Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Well	7H					
Well Position	**+N/-S**	397,794.10 usft	**Northing:**	397,794.10 usft	**Latitude:**	32° 5' 34.969 N
	+E/-W	658,866.45 usft	**Easting:**	658,866.45 usft	**Longitude:**	103° 57' 13.718 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,012.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	12/21/2016	7.24	59.88	47,944

Design Design #1

Audit Notes:

Version:	**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	172.27

Plan Survey Tool Program **Date** 10/24/2016

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,189.14	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,633.33	4.00	77.72	2,633.23	0.99	4.55	3.00	3.00	0.00	77.72	VP - North Brushy D
3,500.00	4.00	77.72	3,497.78	13.85	63.62	0.00	0.00	0.00	0.00	
3,699.84	10.00	77.72	3,696.05	19.03	87.40	3.00	3.00	0.00	0.00	
6,799.35	10.00	77.72	6,748.51	133.47	613.06	0.00	0.00	0.00	0.00	
7,132.53	0.00	0.00	7,080.00	139.63	641.38	3.00	-3.00	0.00	180.00	VP - North Brushy D
9,888.07	0.00	0.00	9,835.54	139.63	641.38	0.00	0.00	0.00	0.00	
10,638.07	90.00	179.74	10,313.00	-337.83	643.51	12.00	12.00	0.00	179.74	
15,189.14	90.00	179.74	10,313.00	-4,888.86	663.82	0.00	0.00	0.00	0.00	PBHL - North Brush

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 7H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site:	North Brushy Draw Federal 35	**North Reference:**	Grid
Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 3.00°/100' Build									
2,600.00	3.00	77.72	2,599.95	0.56	2.56	-0.21	3.00	3.00	0.00
2,633.33	4.00	77.72	2,633.23	0.99	4.55	-0.37	3.00	3.00	0.00
Begin 4.00° Tangent									
2,700.00	4.00	77.72	2,699.73	1.98	9.09	-0.74	0.00	0.00	0.00
2,800.00	4.00	77.72	2,799.49	3.46	15.91	-1.29	0.00	0.00	0.00
2,900.00	4.00	77.72	2,899.24	4.95	22.72	-1.84	0.00	0.00	0.00
3,000.00	4.00	77.72	2,999.00	6.43	29.54	-2.40	0.00	0.00	0.00
3,100.00	4.00	77.72	3,098.76	7.91	36.35	-2.95	0.00	0.00	0.00
3,200.00	4.00	77.72	3,198.51	9.40	43.17	-3.50	0.00	0.00	0.00
3,300.00	4.00	77.72	3,298.27	10.88	49.99	-4.06	0.00	0.00	0.00
3,400.00	4.00	77.72	3,398.02	12.37	56.80	-4.61	0.00	0.00	0.00
3,500.00	4.00	77.72	3,497.78	13.85	63.62	-5.16	0.00	0.00	0.00
Begin 3.00°/100' Build									
3,600.00	7.00	77.72	3,597.31	15.89	72.98	-5.92	3.00	3.00	0.00
3,699.84	10.00	77.72	3,696.05	19.03	87.40	-7.09	3.00	3.00	0.00
Begin 10.00° Tangent									
3,800.00	10.00	77.72	3,794.68	22.72	104.38	-8.47	0.00	0.00	0.00
3,900.00	10.00	77.72	3,893.16	26.42	121.34	-9.85	0.00	0.00	0.00
4,000.00	10.00	77.72	3,991.65	30.11	138.30	-11.23	0.00	0.00	0.00
4,100.00	10.00	77.72	4,090.13	33.80	155.26	-12.60	0.00	0.00	0.00
4,200.00	10.00	77.72	4,188.61	37.49	172.22	-13.98	0.00	0.00	0.00
4,300.00	10.00	77.72	4,287.09	41.19	189.18	-15.36	0.00	0.00	0.00
4,400.00	10.00	77.72	4,385.57	44.88	206.14	-16.73	0.00	0.00	0.00
4,500.00	10.00	77.72	4,484.06	48.57	223.10	-18.11	0.00	0.00	0.00
4,600.00	10.00	77.72	4,582.54	52.26	240.06	-19.49	0.00	0.00	0.00
4,700.00	10.00	77.72	4,681.02	55.95	257.02	-20.86	0.00	0.00	0.00
4,800.00	10.00	77.72	4,779.50	59.65	273.98	-22.24	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 7H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site:	North Brushy Draw Federal 35	**North Reference:**	Grid
Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	10.00	77.72	4,877.99	63.34	290.94	-23.62	0.00	0.00	0.00
5,000.00	10.00	77.72	4,976.47	67.03	307.90	-24.99	0.00	0.00	0.00
5,100.00	10.00	77.72	5,074.95	70.72	324.86	-26.37	0.00	0.00	0.00
5,200.00	10.00	77.72	5,173.43	74.41	341.82	-27.75	0.00	0.00	0.00
5,300.00	10.00	77.72	5,271.91	78.11	358.78	-29.12	0.00	0.00	0.00
5,400.00	10.00	77.72	5,370.40	81.80	375.74	-30.50	0.00	0.00	0.00
5,500.00	10.00	77.72	5,468.88	85.49	392.69	-31.88	0.00	0.00	0.00
5,600.00	10.00	77.72	5,567.36	89.18	409.65	-33.25	0.00	0.00	0.00
5,700.00	10.00	77.72	5,665.84	92.88	426.61	-34.63	0.00	0.00	0.00
5,800.00	10.00	77.72	5,764.33	96.57	443.57	-36.01	0.00	0.00	0.00
5,900.00	10.00	77.72	5,862.81	100.26	460.53	-37.38	0.00	0.00	0.00
6,000.00	10.00	77.72	5,961.29	103.95	477.49	-38.76	0.00	0.00	0.00
6,100.00	10.00	77.72	6,059.77	107.64	494.45	-40.14	0.00	0.00	0.00
6,200.00	10.00	77.72	6,158.25	111.34	511.41	-41.51	0.00	0.00	0.00
6,300.00	10.00	77.72	6,256.74	115.03	528.37	-42.89	0.00	0.00	0.00
6,400.00	10.00	77.72	6,355.22	118.72	545.33	-44.27	0.00	0.00	0.00
6,500.00	10.00	77.72	6,453.70	122.41	562.29	-45.64	0.00	0.00	0.00
6,600.00	10.00	77.72	6,552.18	126.10	579.25	-47.02	0.00	0.00	0.00
6,700.00	10.00	77.72	6,650.66	129.80	596.21	-48.40	0.00	0.00	0.00
6,799.35	10.00	77.72	6,748.51	133.47	613.06	-49.77	0.00	0.00	0.00
Begin 3.00°/100' Drop									
6,900.00	6.98	77.72	6,848.04	136.62	627.57	-50.94	3.00	-3.00	0.00
7,000.00	3.98	77.72	6,947.58	138.65	636.89	-51.70	3.00	-3.00	0.00
7,100.00	0.98	77.72	7,047.47	139.57	641.11	-52.04	3.00	-3.00	0.00
7,132.53	0.00	0.00	7,080.00	139.63	641.38	-52.06	3.00	-3.00	0.00
Begin Vertical Hold									
7,200.00	0.00	0.00	7,147.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,300.00	0.00	0.00	7,247.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,400.00	0.00	0.00	7,347.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,500.00	0.00	0.00	7,447.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,600.00	0.00	0.00	7,547.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,700.00	0.00	0.00	7,647.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,800.00	0.00	0.00	7,747.47	139.63	641.38	-52.06	0.00	0.00	0.00
7,900.00	0.00	0.00	7,847.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,000.00	0.00	0.00	7,947.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,100.00	0.00	0.00	8,047.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,200.00	0.00	0.00	8,147.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,300.00	0.00	0.00	8,247.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,400.00	0.00	0.00	8,347.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,500.00	0.00	0.00	8,447.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,600.00	0.00	0.00	8,547.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,700.00	0.00	0.00	8,647.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,800.00	0.00	0.00	8,747.47	139.63	641.38	-52.06	0.00	0.00	0.00
8,900.00	0.00	0.00	8,847.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,000.00	0.00	0.00	8,947.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,100.00	0.00	0.00	9,047.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,200.00	0.00	0.00	9,147.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,300.00	0.00	0.00	9,247.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,400.00	0.00	0.00	9,347.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,500.00	0.00	0.00	9,447.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,600.00	0.00	0.00	9,547.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,700.00	0.00	0.00	9,647.47	139.63	641.38	-52.06	0.00	0.00	0.00
9,800.00	0.00	0.00	9,747.47	139.63	641.38	-52.06	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 7H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site:	North Brushy Draw Federal 35	**North Reference:**	Grid
Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,888.07	0.00	0.00	9,835.54	139.63	641.38	-52.06	0.00	0.00	0.00
Begin 12.00°/100' Build									
9,900.00	1.43	179.74	9,847.47	139.48	641.38	-51.92	12.00	12.00	0.00
9,925.00	4.43	179.74	9,872.43	138.20	641.39	-50.65	12.00	12.00	0.00
9,950.00	7.43	179.74	9,897.30	135.62	641.40	-48.09	12.00	12.00	0.00
9,975.00	10.43	179.74	9,921.99	131.74	641.42	-44.24	12.00	12.00	0.00
10,000.00	13.43	179.74	9,946.45	126.57	641.44	-39.12	12.00	12.00	0.00
10,025.00	16.43	179.74	9,970.60	120.13	641.47	-32.73	12.00	12.00	0.00
10,050.00	19.43	179.74	9,994.38	112.43	641.51	-25.10	12.00	12.00	0.00
10,075.00	22.43	179.74	10,017.73	103.50	641.54	-16.24	12.00	12.00	0.00
10,100.00	25.43	179.74	10,040.58	93.36	641.59	-6.19	12.00	12.00	0.00
10,125.00	28.43	179.74	10,062.86	82.04	641.64	5.04	12.00	12.00	0.00
10,150.00	31.43	179.74	10,084.53	69.57	641.70	17.40	12.00	12.00	0.00
10,175.00	34.43	179.74	10,105.51	55.98	641.76	30.88	12.00	12.00	0.00
10,200.00	37.43	179.74	10,125.75	41.31	641.82	45.42	12.00	12.00	0.00
10,225.00	40.43	179.74	10,145.19	25.60	641.89	61.00	12.00	12.00	0.00
10,250.00	43.43	179.74	10,163.79	8.90	641.97	77.56	12.00	12.00	0.00
10,275.00	46.43	179.74	10,181.49	-8.76	642.05	95.06	12.00	12.00	0.00
10,300.00	49.43	179.74	10,198.23	-27.31	642.13	113.46	12.00	12.00	0.00
10,325.00	52.43	179.74	10,213.99	-46.72	642.22	132.70	12.00	12.00	0.00
10,350.00	55.43	179.74	10,228.71	-66.93	642.31	152.74	12.00	12.00	0.00
10,375.00	58.43	179.74	10,242.35	-87.87	642.40	173.51	12.00	12.00	0.00
10,400.00	61.43	179.74	10,254.87	-109.51	642.50	194.96	12.00	12.00	0.00
10,425.00	64.43	179.74	10,266.24	-131.77	642.59	217.03	12.00	12.00	0.00
10,450.00	67.43	179.74	10,276.44	-154.59	642.70	239.66	12.00	12.00	0.00
10,475.00	70.43	179.74	10,285.42	-177.92	642.80	262.79	12.00	12.00	0.00
10,500.00	73.43	179.74	10,293.18	-201.68	642.91	286.35	12.00	12.00	0.00
10,525.00	76.43	179.74	10,299.68	-225.82	643.01	310.28	12.00	12.00	0.00
10,550.00	79.43	179.74	10,304.90	-250.26	643.12	334.52	12.00	12.00	0.00
10,575.00	82.43	179.74	10,308.84	-274.95	643.23	358.99	12.00	12.00	0.00
10,600.00	85.43	179.74	10,311.48	-299.80	643.34	383.64	12.00	12.00	0.00
10,625.00	88.43	179.74	10,312.82	-324.76	643.46	408.39	12.00	12.00	0.00
10,638.07	90.00	179.74	10,313.00	-337.83	643.51	421.34	12.00	12.00	0.00
Begin 90.00° Lateral									
10,700.00	90.00	179.74	10,313.00	-399.76	643.79	482.75	0.00	0.00	0.00
10,800.00	90.00	179.74	10,313.00	-499.76	644.24	581.90	0.00	0.00	0.00
10,900.00	90.00	179.74	10,313.00	-599.76	644.68	681.05	0.00	0.00	0.00
11,000.00	90.00	179.74	10,313.00	-699.76	645.13	780.20	0.00	0.00	0.00
11,100.00	90.00	179.74	10,313.00	-799.76	645.58	879.35	0.00	0.00	0.00
11,200.00	90.00	179.74	10,313.00	-899.76	646.02	978.50	0.00	0.00	0.00
11,300.00	90.00	179.74	10,313.00	-999.76	646.47	1,077.65	0.00	0.00	0.00
11,400.00	90.00	179.74	10,313.00	-1,099.76	646.91	1,176.80	0.00	0.00	0.00
11,500.00	90.00	179.74	10,313.00	-1,199.75	647.36	1,275.95	0.00	0.00	0.00
11,600.00	90.00	179.74	10,313.00	-1,299.75	647.81	1,375.10	0.00	0.00	0.00
11,700.00	90.00	179.74	10,313.00	-1,399.75	648.25	1,474.25	0.00	0.00	0.00
11,800.00	90.00	179.74	10,313.00	-1,499.75	648.70	1,573.40	0.00	0.00	0.00
11,900.00	90.00	179.74	10,313.00	-1,599.75	649.15	1,672.55	0.00	0.00	0.00
12,000.00	90.00	179.74	10,313.00	-1,699.75	649.59	1,771.69	0.00	0.00	0.00
12,100.00	90.00	179.74	10,313.00	-1,799.75	650.04	1,870.84	0.00	0.00	0.00
12,200.00	90.00	179.74	10,313.00	-1,899.75	650.48	1,969.99	0.00	0.00	0.00
12,300.00	90.00	179.74	10,313.00	-1,999.75	650.93	2,069.14	0.00	0.00	0.00
12,400.00	90.00	179.74	10,313.00	-2,099.75	651.38	2,168.29	0.00	0.00	0.00
12,500.00	90.00	179.74	10,313.00	-2,199.74	651.82	2,267.44	0.00	0.00	0.00
12,600.00	90.00	179.74	10,313.00	-2,299.74	652.27	2,366.59	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 7H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site:	North Brushy Draw Federal 35	**North Reference:**	Grid
Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,700.00	90.00	179.74	10,313.00	-2,399.74	652.72	2,465.74	0.00	0.00	0.00
12,800.00	90.00	179.74	10,313.00	-2,499.74	653.16	2,564.89	0.00	0.00	0.00
12,900.00	90.00	179.74	10,313.00	-2,599.74	653.61	2,664.04	0.00	0.00	0.00
13,000.00	90.00	179.74	10,313.00	-2,699.74	654.05	2,763.19	0.00	0.00	0.00
13,100.00	90.00	179.74	10,313.00	-2,799.74	654.50	2,862.34	0.00	0.00	0.00
13,200.00	90.00	179.74	10,313.00	-2,899.74	654.95	2,961.49	0.00	0.00	0.00
13,300.00	90.00	179.74	10,313.00	-2,999.74	655.39	3,060.64	0.00	0.00	0.00
13,400.00	90.00	179.74	10,313.00	-3,099.74	655.84	3,159.79	0.00	0.00	0.00
13,500.00	90.00	179.74	10,313.00	-3,199.73	656.29	3,258.94	0.00	0.00	0.00
13,600.00	90.00	179.74	10,313.00	-3,299.73	656.73	3,358.09	0.00	0.00	0.00
13,700.00	90.00	179.74	10,313.00	-3,399.73	657.18	3,457.24	0.00	0.00	0.00
13,800.00	90.00	179.74	10,313.00	-3,499.73	657.62	3,556.39	0.00	0.00	0.00
13,900.00	90.00	179.74	10,313.00	-3,599.73	658.07	3,655.54	0.00	0.00	0.00
14,000.00	90.00	179.74	10,313.00	-3,699.73	658.52	3,754.69	0.00	0.00	0.00
14,100.00	90.00	179.74	10,313.00	-3,799.73	658.96	3,853.84	0.00	0.00	0.00
14,200.00	90.00	179.74	10,313.00	-3,899.73	659.41	3,952.99	0.00	0.00	0.00
14,300.00	90.00	179.74	10,313.00	-3,999.73	659.86	4,052.14	0.00	0.00	0.00
14,400.00	90.00	179.74	10,313.00	-4,099.73	660.30	4,151.29	0.00	0.00	0.00
14,500.00	90.00	179.74	10,313.00	-4,199.72	660.75	4,250.44	0.00	0.00	0.00
14,600.00	90.00	179.74	10,313.00	-4,299.72	661.20	4,349.59	0.00	0.00	0.00
14,700.00	90.00	179.74	10,313.00	-4,399.72	661.64	4,448.74	0.00	0.00	0.00
14,800.00	90.00	179.74	10,313.00	-4,499.72	662.09	4,547.89	0.00	0.00	0.00
14,900.00	90.00	179.74	10,313.00	-4,599.72	662.53	4,647.04	0.00	0.00	0.00
15,000.00	90.00	179.74	10,313.00	-4,699.72	662.98	4,746.19	0.00	0.00	0.00
15,100.00	90.00	179.74	10,313.00	-4,799.72	663.43	4,845.34	0.00	0.00	0.00
15,189.14	90.00	179.74	10,313.00	-4,888.86	663.82	4,933.72	0.00	0.00	0.00
PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP - North Brushy Dra - plan hits target center - Point	0.00	0.00	7,080.00	139.63	641.38	397,933.73	659,507.83	32° 5' 36.328 N	103° 57' 6.256 W
FTP - North Brushy D - plan misses target center by 0.03usft at 10434.52usft MD (10270.27 TVD, -140.40 N, 642.63 E) - Point	0.00	0.00	10,270.27	-140.40	642.66	397,653.70	659,509.10	32° 5' 33.557 N	103° 57' 6.253 W
LTP - North Brushy Dr - plan misses target center by 0.02usft at 15089.18usft MD (10313.00 TVD, -4788.90 N, 663.38 E) - Point	0.00	0.00	10,313.00	-4,788.90	663.36	393,005.20	659,529.80	32° 4' 47.555 N	103° 57' 6.204 W
PBHL - North Brushy - plan hits target center - Point	0.00	0.00	10,313.00	-4,888.86	663.82	392,905.24	659,530.27	32° 4' 46.565 N	103° 57' 6.202 W

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 7H
Company:	WPX Energy	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Project:	Eddy County, New Mexico (NAD 83)	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site:	North Brushy Draw Federal 35	**North Reference:**	Grid
Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,215.53	3,214.00	Bell Canyon (Base of Salt)		0.00	
4,294.83	4,282.00	Cherry Canyon		0.00	
5,454.43	5,424.00	Brushy Canyon		0.00	
7,074.52	7,022.00	Bone Spring		0.00	179.74
7,962.53	7,910.00	1st Bone Spring Sand		0.00	179.74
8,849.53	8,797.00	2nd Bone Spring Sand		0.00	179.74
9,098.53	9,046.00	3rd Bone Spring Sand		0.00	179.74
9,537.53	9,485.00	3rd BS LM 4		0.00	179.74
9,598.53	9,546.00	3rd BS LM 3		0.00	179.74
9,693.53	9,641.00	3rd BS LM 2		0.00	179.74
9,802.53	9,750.00	3rd BS LM 1		0.00	179.74
9,902.53	9,850.00	3rd Bone Spring Sand		0.00	179.74
10,299.64	10,198.00	Wolfcamp Top		0.00	179.74
10,331.64	10,218.00	WC_X		0.00	179.74
10,506.54	10,295.00	WC_Y		0.00	179.74

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,500.00	2,500.00	0.00	0.00	KOP, 3.00°/100' Build
2,633.33	2,633.23	0.99	4.55	Begin 4.00° Tangent
3,500.00	3,497.78	13.85	63.62	Begin 3.00°/100' Build
3,699.84	3,696.05	19.03	87.40	Begin 10.00° Tangent
6,799.35	6,748.51	133.47	613.06	Begin 3.00°/100' Drop
7,132.53	7,080.00	139.63	641.38	Begin Vertical Hold
9,888.07	9,835.54	139.63	641.38	Begin 12.00°/100' Build
10,638.07	10,313.00	-337.83	643.51	Begin 90.00° Lateral
15,189.14	10,313.00	-4,888.86	663.82	PBHL

WPXENERGY

WPX Energy

Eddy County, New Mexico (NAD 83)
North Brushy Draw Federal 35
7H

Wellbore #1
Design #1

Anticollision Report

24 October, 2016

MS Energy Services®
WWW.MSENERGYSERVICES.COM

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 u	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 10/24/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,189.14	Design #1 (Wellbore #1)	MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
North Brushy Draw Federal 35						
10H - Wellbore #1 - Surveys	15,189.14	10,408.68	578.07	455.79	4.727	CC, ES, SF
11H - Wellbore #1 - Design #1	15,189.14	10,415.32	48.53	-22.59	0.682	Level 1, CC, ES, SF
12H - Wellbore #1 - Surveys	15,189.14	10,091.02	1,038.73	918.61	8.647	CC, ES, SF
5H - Wellbore #1 - Design #1	15,189.14	10,396.44	1,141.54	1,015.54	9.060	CC, ES, SF
6H - Wellbore #1 - Surveys	100.00	96.97	19.98	19.69	70.310	CC
6H - Wellbore #1 - Surveys	2,600.00	2,597.54	31.74	13.78	1.767	ES, SF

Offset Design North Brushy Draw Federal 35 - 10H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Survey Program: 155-MWD

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	2.23	2.23	0.00	0.00	171.06	-4,743.54	746.09	4,801.86				
100.00	100.00	113.48	113.48	0.14	0.17	171.06	-4,743.42	746.02	4,801.74	4,801.43	0.31	N/A	
200.00	200.00	229.20	229.20	0.50	0.50	171.06	-4,743.00	745.76	4,801.35	4,800.35	1.00	4,813.362	
300.00	300.00	350.55	350.55	0.86	0.93	171.07	-4,742.16	745.14	4,800.59	4,798.80	1.79	2,681.417	
400.00	400.00	499.42	499.37	1.22	1.46	171.04	-4,739.60	746.87	4,799.07	4,796.39	2.67	1,794.597	
500.00	500.00	669.82	669.55	1.57	2.06	170.96	-4,733.65	753.13	4,796.11	4,792.47	3.64	1,318.546	
600.00	600.00	754.21	753.81	1.93	2.37	170.91	-4,730.27	756.47	4,792.78	4,788.48	4.30	1,115.008	
700.00	700.00	833.47	832.97	2.29	2.65	170.88	-4,727.45	759.15	4,789.81	4,784.86	4.94	969.295	
800.00	800.00	908.80	908.25	2.65	2.93	170.85	-4,725.30	760.74	4,787.33	4,781.76	5.57	859.472	
900.00	900.00	985.17	984.60	3.01	3.20	170.84	-4,723.69	761.35	4,785.36	4,779.16	6.20	771.535	
1,000.00	1,000.00	1,065.79	1,065.21	3.37	3.49	170.84	-4,722.40	761.65	4,783.84	4,776.99	6.85	698.468	
1,100.00	1,100.00	1,146.41	1,145.83	3.72	3.78	170.83	-4,721.43	761.97	4,782.72	4,775.23	7.50	638.062	
1,200.00	1,200.00	1,220.12	1,219.54	4.08	4.03	170.83	-4,720.90	762.26	4,782.08	4,773.97	8.11	589.737	
1,265.43	1,265.43	1,268.02	1,267.43	4.32	4.20	170.83	-4,720.79	762.42	4,781.96	4,773.45	8.51	562.035	
1,300.00	1,300.00	1,293.32	1,292.73	4.44	4.28	170.82	-4,720.80	762.50	4,781.99	4,773.27	8.72	548.437	
1,400.00	1,400.00	1,377.73	1,377.14	4.80	4.57	170.82	-4,721.13	762.68	4,782.41	4,773.04	9.36	510.738	
1,500.00	1,500.00	1,474.03	1,473.44	5.16	4.89	170.83	-4,721.72	762.44	4,782.96	4,772.92	10.04	476.186	
1,600.00	1,600.00	1,572.00	1,571.40	5.52	5.22	170.84	-4,722.45	761.75	4,783.59	4,772.86	10.73	445.704	
1,700.00	1,700.00	1,671.06	1,670.45	5.88	5.55	170.85	-4,723.24	760.92	4,784.24	4,772.81	11.43	418.713	
1,800.00	1,800.00	1,762.85	1,762.24	6.23	5.87	170.86	-4,724.05	760.07	4,784.96	4,772.87	12.10	395.538	
1,900.00	1,900.00	1,852.07	1,851.45	6.59	6.17	170.87	-4,725.05	759.15	4,785.91	4,773.15	12.76	375.049	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	***Output errors are at***	*2.00 sigma*
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 10H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 155-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,000.00	2,000.00	1,961.76	1,961.12	6.95	6.55	170.89	-4,726.40	757.83	4,786.95	4,773.45	13.50	354.649	
2,100.00	2,100.00	2,084.63	2,083.97	7.31	6.98	170.92	-4,727.48	755.87	4,787.56	4,773.28	14.28	335.220	
2,200.00	2,200.00	2,172.14	2,171.46	7.67	7.28	170.94	-4,728.25	754.05	4,788.09	4,773.15	14.95	320.367	
2,300.00	2,300.00	2,261.68	2,260.97	8.03	7.59	170.97	-4,729.29	751.75	4,788.84	4,773.22	15.62	306.655	
2,400.00	2,400.00	2,352.37	2,351.61	8.38	7.91	171.00	-4,730.54	749.36	4,789.80	4,773.50	16.29	293.995	
2,500.00	2,500.00	2,443.15	2,442.36	8.74	8.23	171.02	-4,731.91	747.39	4,790.94	4,773.98	16.97	282.349	
2,600.00	2,599.95	2,522.53	2,521.72	9.10	8.51	171.07	-4,733.25	746.20	4,792.54	4,774.94	17.60	272.367	
2,633.33	2,633.23	2,548.27	2,547.45	9.21	8.60	171.10	-4,733.74	745.99	4,793.24	4,775.44	17.80	269.275	
2,700.00	2,699.73	2,599.75	2,598.93	9.44	8.78	171.16	-4,734.80	745.84	4,794.84	4,776.63	18.21	263.302	
2,800.00	2,799.49	2,676.39	2,675.54	9.79	9.04	171.24	-4,736.58	746.26	4,797.64	4,778.81	18.82	254.868	
2,900.00	2,899.24	2,752.09	2,751.20	10.14	9.31	171.32	-4,738.63	747.28	4,800.94	4,781.50	19.43	247.029	
3,000.00	2,999.00	2,836.00	2,835.06	10.49	9.60	171.38	-4,741.25	749.06	4,804.75	4,784.68	20.08	239.328	
3,100.00	3,098.76	2,905.14	2,904.12	10.85	9.84	171.45	-4,743.66	751.05	4,809.04	4,788.38	20.67	232.705	
3,200.00	3,198.51	2,982.66	2,981.54	11.20	10.11	171.50	-4,746.62	753.85	4,813.81	4,792.52	21.29	226.142	
3,300.00	3,298.27	3,087.70	3,086.40	11.56	10.47	171.54	-4,750.89	758.29	4,818.91	4,796.90	22.01	218.946	
3,400.00	3,398.02	3,227.63	3,226.15	11.92	10.96	171.57	-4,755.84	763.28	4,823.39	4,800.53	22.86	210.976	
3,500.00	3,497.78	3,321.09	3,319.52	12.28	11.29	171.63	-4,758.91	766.21	4,827.56	4,804.01	23.55	205.011	
3,600.00	3,597.31	3,395.00	3,393.35	12.64	11.55	171.72	-4,761.38	768.47	4,832.02	4,807.85	24.17	199.954	
3,699.84	3,696.05	3,450.58	3,448.83	13.01	11.75	171.87	-4,763.53	770.96	4,837.58	4,812.86	24.72	195.660	
3,700.00	3,696.20	3,450.65	3,448.90	13.01	11.75	171.87	-4,763.53	770.96	4,837.59	4,812.87	24.73	195.654	
3,800.00	3,794.68	3,490.00	3,488.11	13.39	11.89	172.04	-4,765.38	773.69	4,844.49	4,819.27	25.23	192.021	
3,900.00	3,893.16	3,536.60	3,534.45	13.78	12.05	172.20	-4,767.96	777.97	4,852.56	4,826.80	25.76	188.359	
4,000.00	3,991.65	3,585.00	3,582.40	14.17	12.23	172.34	-4,771.14	783.63	4,861.84	4,835.54	26.30	184.838	
4,100.00	4,090.13	3,675.95	3,672.33	14.56	12.56	172.42	-4,777.46	795.66	4,871.82	4,844.80	27.02	180.326	
4,200.00	4,188.61	3,785.41	3,780.56	14.95	12.96	172.46	-4,784.85	810.25	4,881.62	4,853.81	27.81	175.534	
4,300.00	4,287.09	3,878.62	3,872.74	15.35	13.31	172.53	-4,791.12	822.63	4,891.39	4,862.85	28.54	171.358	
4,400.00	4,385.57	3,965.04	3,958.16	15.76	13.63	172.61	-4,797.08	834.19	4,901.37	4,872.11	29.26	167.529	
4,500.00	4,484.06	4,087.08	4,078.87	16.16	14.09	172.64	-4,805.54	850.12	4,911.35	4,881.23	30.12	163.061	
4,600.00	4,582.54	4,227.36	4,217.76	16.57	14.62	172.65	-4,814.10	867.85	4,920.37	4,889.31	31.06	158.405	
4,700.00	4,681.02	4,348.92	4,338.18	16.98	15.09	172.69	-4,820.98	882.91	4,929.01	4,897.08	31.93	154.361	
4,800.00	4,779.50	4,401.67	4,390.36	17.39	15.29	172.81	-4,824.03	890.07	4,937.90	4,905.38	32.53	151.819	
4,900.00	4,877.99	4,483.17	4,470.60	17.80	15.61	172.86	-4,829.11	903.37	4,947.60	4,914.36	33.24	148.838	
5,000.00	4,976.47	4,617.66	4,603.00	18.22	16.15	172.82	-4,836.91	925.70	4,956.94	4,922.75	34.19	144.981	
5,100.00	5,074.95	4,716.30	4,700.24	18.64	16.54	172.85	-4,842.37	941.33	4,965.93	4,930.94	34.99	141.926	
5,200.00	5,173.43	4,822.41	4,804.84	19.05	16.97	172.86	-4,848.22	958.12	4,974.89	4,939.06	35.82	138.869	
5,300.00	5,271.91	4,921.03	4,902.14	19.47	17.37	172.90	-4,853.65	973.32	4,983.79	4,947.16	36.63	136.059	
5,400.00	5,370.40	4,961.79	4,942.37	19.90	17.53	173.03	-4,856.23	979.31	4,993.33	4,956.15	37.18	134.289	
5,500.00	5,468.88	5,008.00	4,987.98	20.32	17.72	173.16	-4,859.66	985.90	5,003.96	4,966.20	37.76	132.526	
5,600.00	5,567.36	5,125.57	5,103.99	20.74	18.20	173.18	-4,868.81	1,002.67	5,014.97	4,976.32	38.65	129.750	
5,700.00	5,665.84	15,452.00	10,619.74	21.17	88.09	99.25	-39.66	1,240.17	5,020.04	4,966.11	53.93	93.084	
5,800.00	5,764.33	15,452.00	10,619.74	21.60	88.09	99.70	-39.66	1,240.17	4,920.24	4,866.13	54.11	90.930	
5,900.00	5,862.81	15,452.00	10,619.74	22.02	88.09	100.17	-39.66	1,240.17	4,820.46	4,766.17	54.29	88.785	
6,000.00	5,961.29	15,452.00	10,619.74	22.45	88.09	100.66	-39.66	1,240.17	4,720.69	4,666.21	54.48	86.651	
6,100.00	6,059.77	15,452.00	10,619.74	22.88	88.09	101.17	-39.66	1,240.17	4,620.92	4,566.25	54.67	84.527	
6,200.00	6,158.25	15,452.00	10,619.74	23.31	88.09	101.71	-39.66	1,240.17	4,521.17	4,466.31	54.86	82.413	
6,300.00	6,256.74	15,452.00	10,619.74	23.74	88.09	102.26	-39.66	1,240.17	4,421.42	4,366.37	55.05	80.311	
6,400.00	6,355.22	15,452.00	10,619.74	24.18	88.09	102.84	-39.66	1,240.17	4,321.69	4,266.44	55.25	78.219	
6,500.00	6,453.70	15,452.00	10,619.74	24.61	88.09	103.45	-39.66	1,240.17	4,221.97	4,166.52	55.45	76.138	
6,600.00	6,552.18	15,452.00	10,619.74	25.04	88.09	104.08	-39.66	1,240.17	4,122.27	4,066.61	55.65	74.069	
6,700.00	6,650.66	15,452.00	10,619.74	25.48	88.09	104.74	-39.66	1,240.17	4,022.58	3,966.72	55.86	72.012	
6,799.35	6,748.51	15,452.00	10,619.74	25.91	88.09	105.43	-39.66	1,240.17	3,923.55	3,867.48	56.07	69.979	
6,800.00	6,749.15	15,452.00	10,619.74	25.91	88.09	105.44	-39.66	1,240.17	3,922.90	3,866.83	56.07	69.966	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 10H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft

Survey Program: 155-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,900.00	6,848.04	15,452.00	10,619.74	26.33	88.09	106.05	-39.66	1,240.17	3,823.22	3,766.92	56.29	67.914	
7,000.00	6,947.58	15,452.00	10,619.74	26.72	88.09	106.47	-39.66	1,240.17	3,723.69	3,667.14	56.55	65.845	
7,100.00	7,047.47	15,452.00	10,619.74	27.07	88.09	106.66	-39.66	1,240.17	3,624.62	3,567.77	56.84	63.765	
7,132.53	7,080.00	15,452.00	10,619.74	27.18	88.09	106.67	-39.66	1,240.17	3,592.54	3,535.59	56.94	63.088	
7,200.00	7,147.47	15,452.00	10,619.74	27.40	88.09	106.67	-39.66	1,240.17	3,526.12	3,468.95	57.17	61.681	
7,300.00	7,247.47	15,452.00	10,619.74	27.72	88.09	106.67	-39.66	1,240.17	3,427.75	3,370.24	57.51	59.606	
7,400.00	7,347.47	15,452.00	10,619.74	28.05	88.09	106.67	-39.66	1,240.17	3,329.47	3,271.61	57.86	57.542	
7,500.00	7,447.47	15,452.00	10,619.74	28.38	88.09	106.67	-39.66	1,240.17	3,231.31	3,173.07	58.23	55.490	
7,600.00	7,547.47	15,452.00	10,619.74	28.71	88.09	106.67	-39.66	1,240.17	3,133.25	3,074.63	58.62	53.450	
7,700.00	7,647.47	15,452.00	10,619.74	29.04	88.09	106.67	-39.66	1,240.17	3,035.33	2,976.30	59.03	51.423	
7,800.00	7,747.47	15,452.00	10,619.74	29.37	88.09	106.67	-39.66	1,240.17	2,937.54	2,878.09	59.45	49.408	
7,900.00	7,847.47	15,452.00	10,619.74	29.70	88.09	106.67	-39.66	1,240.17	2,839.91	2,780.01	59.91	47.406	
8,000.00	7,947.47	15,452.00	10,619.74	30.03	88.09	106.67	-39.66	1,240.17	2,742.46	2,682.07	60.38	45.416	
8,100.00	8,047.47	15,452.00	10,619.74	30.36	88.09	106.67	-39.66	1,240.17	2,645.19	2,584.29	60.89	43.440	
8,200.00	8,147.47	15,452.00	10,619.74	30.69	88.09	106.67	-39.66	1,240.17	2,548.13	2,486.69	61.44	41.476	
8,300.00	8,247.47	15,452.00	10,619.74	31.03	88.09	106.67	-39.66	1,240.17	2,451.30	2,389.29	62.02	39.526	
8,400.00	8,347.47	15,452.00	10,619.74	31.36	88.09	106.67	-39.66	1,240.17	2,354.75	2,292.10	62.64	37.590	
8,500.00	8,447.47	15,452.00	10,619.74	31.70	88.09	106.67	-39.66	1,240.17	2,258.49	2,195.17	63.32	35.667	
8,600.00	8,547.47	15,452.00	10,619.74	32.03	88.09	106.67	-39.66	1,240.17	2,162.58	2,098.52	64.06	33.760	
8,700.00	8,647.47	15,452.00	10,619.74	32.37	88.09	106.67	-39.66	1,240.17	2,067.05	2,002.18	64.86	31.868	
8,800.00	8,747.47	15,452.00	10,619.74	32.70	88.09	106.67	-39.66	1,240.17	1,971.96	1,906.21	65.75	29.992	
8,900.00	8,847.47	15,452.00	10,619.74	33.04	88.09	106.67	-39.66	1,240.17	1,877.38	1,810.65	66.73	28.133	
9,000.00	8,947.47	15,452.00	10,619.74	33.37	88.09	106.67	-39.66	1,240.17	1,783.40	1,715.57	67.83	26.294	
9,100.00	9,047.47	15,452.00	10,619.74	33.71	88.09	106.67	-39.66	1,240.17	1,690.11	1,621.05	69.05	24.476	
9,200.00	9,147.47	15,452.00	10,619.74	34.05	88.09	106.67	-39.66	1,240.17	1,597.62	1,527.19	70.44	22.682	
9,300.00	9,247.47	15,452.00	10,619.74	34.39	88.09	106.67	-39.66	1,240.17	1,506.10	1,434.09	72.01	20.915	
9,400.00	9,347.47	15,452.00	10,619.74	34.73	88.09	106.67	-39.66	1,240.17	1,415.73	1,341.92	73.81	19.181	
9,500.00	9,447.47	15,452.00	10,619.74	35.06	88.09	106.67	-39.66	1,240.17	1,326.74	1,250.86	75.88	17.484	
9,600.00	9,547.47	15,452.00	10,619.74	35.40	88.09	106.67	-39.66	1,240.17	1,239.43	1,161.15	78.28	15.834	
9,700.00	9,647.47	15,452.00	10,619.74	35.74	88.09	106.67	-39.66	1,240.17	1,154.18	1,073.12	81.06	14.238	
9,800.00	9,747.47	15,452.00	10,619.74	36.08	88.09	106.67	-39.66	1,240.17	1,071.48	987.18	84.30	12.710	
9,888.07	9,835.54	15,452.00	10,619.74	36.38	88.09	106.67	-39.66	1,240.17	1,001.27	913.69	87.58	11.432	
9,900.00	9,847.47	15,452.00	10,619.74	36.42	88.09	106.66	-39.66	1,240.17	991.95	903.89	88.06	11.264	
9,925.00	9,872.43	15,452.00	10,619.74	36.50	88.09	106.54	-39.66	1,240.17	972.45	883.37	89.08	10.916	
9,950.00	9,897.30	15,452.00	10,619.74	36.58	88.09	106.32	-39.66	1,240.17	953.05	862.91	90.14	10.573	
9,975.00	9,921.99	15,452.00	10,619.74	36.65	88.09	105.97	-39.66	1,240.17	933.79	842.57	91.22	10.237	
10,000.00	9,946.45	15,452.00	10,619.74	36.73	88.09	105.52	-39.66	1,240.17	914.74	822.41	92.33	9.907	
10,025.00	9,970.60	15,452.00	10,619.74	36.80	88.09	104.94	-39.66	1,240.17	895.98	802.51	93.46	9.586	
10,050.00	9,994.38	15,452.00	10,619.74	36.87	88.09	104.25	-39.66	1,240.17	877.56	782.94	94.62	9.275	
10,075.00	10,017.73	15,452.00	10,619.74	36.93	88.09	103.45	-39.66	1,240.17	859.57	763.79	95.79	8.974	
10,100.00	10,040.58	15,452.00	10,619.74	37.00	88.09	102.53	-39.66	1,240.17	842.09	745.12	96.97	8.684	
10,125.00	10,062.86	15,452.00	10,619.74	37.06	88.09	101.49	-39.66	1,240.17	825.19	727.04	98.15	8.407	
10,150.00	10,084.53	15,452.00	10,619.74	37.11	88.09	100.34	-39.66	1,240.17	808.97	709.63	99.33	8.144	
10,175.00	10,105.51	15,452.00	10,619.74	37.17	88.09	99.08	-39.66	1,240.17	793.50	692.99	100.50	7.895	
10,200.00	10,125.75	15,452.00	10,619.74	37.22	88.09	97.71	-39.66	1,240.17	778.87	677.22	101.65	7.662	
10,225.00	10,145.19	15,452.00	10,619.74	37.27	88.09	96.23	-39.66	1,240.17	765.18	662.41	102.77	7.445	
10,250.00	10,163.79	15,452.00	10,619.74	37.31	88.09	94.64	-39.66	1,240.17	752.52	648.67	103.85	7.246	
10,275.00	10,181.49	15,452.00	10,619.74	37.36	88.09	92.96	-39.66	1,240.17	740.97	636.10	104.87	7.066	
10,300.00	10,198.23	15,452.00	10,619.74	37.39	88.09	91.18	-39.66	1,240.17	730.62	624.80	105.82	6.905	
10,325.00	10,213.99	15,448.43	10,619.76	37.43	88.04	89.67	-43.23	1,240.19	721.53	614.88	106.66	6.765	
10,350.00	10,228.71	15,428.18	10,619.83	37.47	87.74	89.67	-63.48	1,240.26	713.42	606.13	107.29	6.649	
10,375.00	10,242.35	15,407.18	10,619.90	37.50	87.42	89.67	-84.48	1,240.33	706.10	598.25	107.85	6.547	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 10H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft

Survey Program: 155-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,254.87	15,385.50	10,619.98	37.53	87.10	89.68	-106.16	1,240.41	699.54	591.21	108.33	6.457	
10,425.00	10,266.24	15,363.20	10,620.05	37.57	86.77	89.68	-128.45	1,240.48	693.72	584.99	108.73	6.380	
10,450.00	10,276.44	15,340.34	10,620.13	37.60	86.43	89.69	-151.31	1,240.56	688.63	579.57	109.06	6.314	
10,475.00	10,285.42	15,318.53	10,620.22	37.63	86.10	89.54	-173.13	1,240.66	684.25	574.94	109.31	6.259	
10,500.00	10,293.18	15,296.87	10,620.32	37.66	85.78	89.34	-194.79	1,240.81	680.63	571.13	109.50	6.216	
10,525.00	10,299.68	15,274.87	10,620.46	37.70	85.45	89.13	-216.79	1,241.03	677.74	568.13	109.60	6.184	
10,550.00	10,304.90	15,252.58	10,620.63	37.74	85.12	88.93	-239.07	1,241.31	675.56	565.93	109.63	6.162	
10,575.00	10,308.84	15,228.37	10,620.83	37.78	84.76	88.88	-263.28	1,241.69	674.07	564.51	109.56	6.152	
10,600.00	10,311.48	15,202.74	10,620.99	37.83	84.38	88.96	-288.90	1,242.09	673.18	563.76	109.42	6.152	
10,625.00	10,312.82	15,177.02	10,621.08	37.88	84.00	89.03	-314.62	1,242.50	672.86	563.66	109.20	6.162	
10,626.49	10,312.86	15,175.48	10,621.08	37.88	83.98	89.03	-316.16	1,242.52	672.86	563.68	109.19	6.163	
10,638.07	10,313.00	15,163.56	10,621.10	37.91	83.81	89.07	-328.08	1,242.71	672.92	563.86	109.06	6.170	
10,700.00	10,313.00	15,103.03	10,621.29	38.06	82.91	88.93	-388.60	1,243.63	673.61	565.23	108.38	6.215	
10,800.00	10,313.00	15,004.06	10,621.89	38.36	81.46	88.84	-487.56	1,245.34	675.02	567.70	107.32	6.290	
10,900.00	10,313.00	14,909.08	10,619.57	38.75	80.06	88.36	-582.44	1,248.68	676.66	570.10	106.57	6.350	
11,000.00	10,313.00	14,814.50	10,616.31	39.20	78.68	87.84	-676.84	1,253.51	679.30	573.33	105.97	6.410	
11,100.00	10,313.00	14,716.47	10,614.78	39.73	77.26	87.66	-774.75	1,258.16	682.46	577.15	105.31	6.480	
11,200.00	10,313.00	14,604.71	10,611.99	40.32	75.65	88.76	-886.35	1,263.17	685.02	580.37	104.65	6.546	
11,300.00	10,313.00	14,506.14	10,607.48	40.96	74.23	88.61	-984.72	1,267.49	686.61	582.37	104.25	6.586	
11,400.00	10,313.00	14,415.52	10,603.63	41.67	72.94	87.75	-1,075.14	1,272.25	689.18	585.22	103.96	6.629	
11,500.00	10,313.00	14,313.45	10,600.99	42.43	71.50	87.94	-1,177.05	1,277.22	692.12	588.57	103.55	6.684	
11,600.00	10,313.00	14,213.92	10,599.53	43.23	70.10	87.90	-1,276.47	1,281.66	695.18	592.02	103.15	6.739	
11,700.00	10,313.00	14,104.93	10,597.56	44.09	68.59	88.71	-1,385.37	1,285.84	697.54	594.81	102.73	6.790	
11,800.00	10,313.00	13,987.34	10,597.76	44.99	66.98	90.29	-1,502.94	1,286.98	698.11	596.04	102.07	6.839	
11,900.00	10,313.00	13,884.05	10,599.91	45.94	65.57	90.58	-1,606.18	1,285.04	696.83	595.34	101.49	6.866	
12,000.00	10,313.00	13,780.37	10,605.23	46.92	64.18	90.90	-1,709.65	1,281.28	695.24	594.49	100.75	6.900	
12,100.00	10,313.00	13,679.38	10,611.03	47.94	62.83	90.97	-1,810.36	1,276.70	693.14	593.08	100.06	6.927	
12,196.41	10,313.00	13,596.26	10,614.77	48.95	61.73	89.74	-1,893.37	1,274.36	692.18	592.41	99.77	6.938	
12,200.00	10,313.00	13,593.28	10,614.90	48.99	61.69	89.69	-1,896.35	1,274.32	692.18	592.42	99.76	6.938	
12,300.00	10,313.00	13,509.28	10,618.77	50.08	60.60	88.21	-1,980.25	1,274.07	693.51	593.94	99.57	6.965	
12,400.00	10,313.00	13,414.32	10,621.68	51.20	59.37	87.74	-2,075.14	1,275.90	696.20	596.83	99.37	7.006	
12,500.00	10,313.00	13,326.34	10,627.12	52.34	58.24	86.63	-2,162.92	1,277.72	700.37	601.21	99.16	7.063	
12,600.00	10,313.00	13,186.26	10,626.40	53.52	56.49	90.28	-2,302.79	1,282.12	702.63	603.92	98.71	7.118	
12,700.00	10,313.00	13,080.36	10,620.26	54.71	55.19	90.80	-2,408.49	1,283.38	700.71	601.80	98.92	7.084	
12,800.00	10,313.00	12,973.60	10,616.34	55.93	53.91	91.40	-2,515.17	1,283.42	698.76	599.75	99.01	7.057	
12,900.00	10,313.00	12,876.05	10,611.26	57.18	52.76	91.17	-2,612.59	1,283.58	696.28	596.92	99.35	7.008	
13,000.00	10,313.00	12,790.54	10,610.13	58.44	51.77	89.85	-2,698.08	1,283.36	695.07	595.35	99.72	6.970	
13,007.73	10,313.00	12,783.95	10,610.22	58.54	51.70	89.74	-2,704.66	1,283.34	695.06	595.32	99.74	6.969	
13,100.00	10,313.00	12,705.46	10,611.25	59.72	50.82	88.49	-2,783.14	1,284.06	695.98	595.94	100.04	6.957	
13,200.00	10,313.00	12,612.10	10,612.18	61.02	49.79	87.89	-2,876.47	1,286.51	698.38	598.06	100.32	6.962	
13,300.00	10,313.00	12,488.09	10,614.01	62.34	48.47	90.06	-3,000.45	1,287.60	699.35	599.17	100.18	6.981	
13,400.00	10,313.00	12,384.04	10,615.22	63.67	47.40	90.43	-3,104.48	1,286.28	698.29	597.97	100.32	6.961	
13,500.00	10,313.00	12,287.27	10,615.23	65.02	46.45	90.14	-3,201.25	1,285.85	697.49	596.79	100.70	6.927	
13,600.00	10,313.00	12,186.00	10,615.03	66.38	45.48	90.25	-3,302.52	1,285.72	696.89	595.81	101.07	6.895	
13,700.00	10,313.00	12,085.12	10,613.27	67.76	44.56	90.33	-3,403.39	1,285.95	695.94	594.36	101.59	6.851	
13,800.00	10,313.00	11,988.78	10,612.86	69.15	43.71	90.00	-3,499.71	1,285.81	695.23	593.09	102.14	6.807	
13,900.00	10,313.00	11,888.49	10,616.44	70.54	42.87	90.02	-3,599.92	1,284.18	694.89	592.43	102.46	6.782	
14,000.00	10,313.00	11,785.94	10,618.28	71.95	42.07	90.25	-3,702.44	1,283.05	694.28	591.38	102.90	6.747	
14,100.00	10,313.00	11,688.97	10,618.18	73.37	41.36	89.97	-3,799.41	1,282.91	693.70	590.10	103.61	6.695	
14,200.00	10,313.00	11,591.24	10,618.56	74.80	40.70	89.76	-3,897.14	1,283.07	693.62	589.27	104.34	6.647	
14,300.00	10,313.00	11,484.98	10,619.43	76.24	40.04	90.34	-4,003.39	1,282.39	692.99	588.01	104.98	6.601	
14,400.00	10,313.00	11,383.29	10,619.32	77.69	39.46	90.49	-4,105.09	1,281.82	692.04	586.24	105.80	6.541	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 10H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 155-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,500.00	10,313.00	11,282.85	10,619.00	79.15	38.95	90.54	-4,205.52	1,280.87	690.65	583.95	106.70	6.473	
14,600.00	10,313.00	11,185.18	10,619.51	80.61	38.51	90.32	-4,303.18	1,279.97	689.65	581.99	107.66	6.406	
14,700.00	10,313.00	11,064.95	10,617.44	82.08	38.03	92.19	-4,423.38	1,278.87	687.75	579.24	108.51	6.338	
14,800.00	10,313.00	10,908.89	10,598.89	83.56	37.50	97.30	-4,578.02	1,273.02	678.20	568.75	109.45	6.197	
14,900.00	10,313.00	10,710.99	10,542.50	85.04	37.39	105.63	-4,766.77	1,259.61	660.42	549.88	110.54	5.975	
15,000.00	10,313.00	10,541.42	10,448.83	86.53	37.27	109.60	-4,906.10	1,242.48	629.55	516.23	113.32	5.556	
15,100.00	10,313.00	10,459.98	10,389.33	88.03	37.16	105.77	-4,961.08	1,234.93	598.48	480.50	117.97	5.073	
15,189.14	10,313.00	10,408.68	10,347.76	89.37	37.08	100.19	-4,990.96	1,231.86	578.07	455.79	122.28	4.727	CC, ES, SF

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 11H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	1.00	1.00	0.00	0.00	171.36	-4,743.44	721.09	4,797.94				
100.00	100.00	101.00	101.00	0.14	0.14	171.36	-4,743.44	721.09	4,797.94	4,797.66	0.28	N/A	
200.00	200.00	201.00	201.00	0.50	0.50	171.36	-4,743.44	721.09	4,797.94	4,796.94	0.99	4,823.217	
300.00	300.00	301.00	301.00	0.86	0.85	171.36	-4,743.44	721.09	4,797.94	4,796.23	1.71	2,803.022	
400.00	400.00	401.00	401.00	1.22	1.21	171.36	-4,743.44	721.09	4,797.94	4,795.51	2.43	1,975.562	
500.00	500.00	501.00	501.00	1.57	1.57	171.36	-4,743.44	721.09	4,797.94	4,794.79	3.15	1,525.291	
600.00	600.00	601.00	601.00	1.93	1.93	171.36	-4,743.44	721.09	4,797.94	4,794.08	3.86	1,242.175	
700.00	700.00	701.00	701.00	2.29	2.29	171.36	-4,743.44	721.09	4,797.94	4,793.36	4.58	1,047.705	
800.00	800.00	801.00	801.00	2.65	2.65	171.36	-4,743.44	721.09	4,797.94	4,792.64	5.30	905.884	
900.00	900.00	901.00	901.00	3.01	3.01	171.36	-4,743.44	721.09	4,797.94	4,791.92	6.01	797.880	
1,000.00	1,000.00	1,001.00	1,001.00	3.37	3.36	171.36	-4,743.44	721.09	4,797.94	4,791.21	6.73	712.886	
1,100.00	1,100.00	1,101.00	1,101.00	3.72	3.72	171.36	-4,743.44	721.09	4,797.94	4,790.49	7.45	644.257	
1,200.00	1,200.00	1,201.00	1,201.00	4.08	4.08	171.36	-4,743.44	721.09	4,797.94	4,789.77	8.16	587.681	
1,300.00	1,300.00	1,301.00	1,301.00	4.44	4.44	171.36	-4,743.44	721.09	4,797.94	4,789.06	8.88	540.239	
1,400.00	1,400.00	1,401.00	1,401.00	4.80	4.80	171.36	-4,743.44	721.09	4,797.94	4,788.34	9.60	499.885	
1,500.00	1,500.00	1,501.00	1,501.00	5.16	5.16	171.36	-4,743.44	721.09	4,797.94	4,787.62	10.32	465.141	
1,600.00	1,600.00	1,601.00	1,601.00	5.52	5.52	171.36	-4,743.44	721.09	4,797.94	4,786.91	11.03	434.912	
1,700.00	1,700.00	1,701.00	1,701.00	5.88	5.87	171.36	-4,743.44	721.09	4,797.94	4,786.19	11.75	408.373	
1,800.00	1,800.00	1,801.00	1,801.00	6.23	6.23	171.36	-4,743.44	721.09	4,797.94	4,785.47	12.47	384.887	
1,900.00	1,900.00	1,901.00	1,901.00	6.59	6.59	171.36	-4,743.44	721.09	4,797.94	4,784.76	13.18	363.955	
2,000.00	2,000.00	2,001.00	2,001.00	6.95	6.95	171.36	-4,743.44	721.09	4,797.94	4,784.04	13.90	345.182	
2,100.00	2,100.00	2,101.00	2,101.00	7.31	7.31	171.36	-4,743.44	721.09	4,797.94	4,783.32	14.62	328.251	
2,200.00	2,200.00	2,201.00	2,201.00	7.67	7.67	171.36	-4,743.44	721.09	4,797.94	4,782.60	15.33	312.903	
2,300.00	2,300.00	2,301.00	2,301.00	8.03	8.02	171.36	-4,743.44	721.09	4,797.94	4,781.89	16.05	298.926	
2,400.00	2,400.00	2,401.00	2,401.00	8.38	8.38	171.36	-4,743.44	721.09	4,797.94	4,781.17	16.77	286.145	
2,500.00	2,500.00	2,501.00	2,501.00	8.74	8.74	171.36	-4,743.44	721.09	4,797.94	4,780.45	17.48	274.412	
2,600.00	2,599.95	2,600.95	2,600.95	9.10	9.10	171.39	-4,743.44	721.09	4,798.10	4,779.91	18.19	263.710	
2,633.33	2,633.23	2,634.23	2,634.23	9.21	9.22	171.41	-4,743.44	721.09	4,798.24	4,779.81	18.43	260.359	
2,700.00	2,699.73	2,700.73	2,700.73	9.44	9.46	171.47	-4,743.44	721.09	4,798.54	4,779.64	18.90	253.900	
2,800.00	2,799.49	2,800.49	2,800.49	9.79	9.81	171.55	-4,743.44	721.09	4,799.00	4,779.39	19.61	244.772	
2,900.00	2,899.24	2,900.24	2,900.24	10.14	10.17	171.63	-4,743.44	721.09	4,799.47	4,779.16	20.31	236.259	
3,000.00	2,999.00	3,000.00	3,000.00	10.49	10.53	171.72	-4,743.44	721.09	4,799.95	4,778.93	21.02	228.302	
3,100.00	3,098.76	3,100.25	3,099.76	10.85	10.89	171.80	-4,743.44	721.09	4,800.44	4,778.70	21.74	220.833	
3,200.00	3,198.51	3,200.49	3,199.51	11.20	11.25	171.88	-4,743.44	721.09	4,800.94	4,778.49	22.45	213.826	
3,300.00	3,298.27	3,250.00	3,250.00	11.56	11.43	171.97	-4,743.44	721.09	4,801.71	4,778.72	22.99	208.903	
3,400.00	3,398.02	3,300.00	3,299.99	11.92	11.60	172.05	-4,744.09	720.98	4,803.62	4,780.11	23.51	204.328	
3,500.00	3,497.78	3,300.00	3,299.99	12.28	11.60	172.13	-4,744.09	720.98	4,807.24	4,783.39	23.85	201.532	
3,600.00	3,597.31	3,352.56	3,352.52	12.64	11.77	172.26	-4,746.15	720.60	4,812.16	4,787.78	24.38	197.415	
3,699.84	3,696.05	3,400.00	3,399.85	13.01	11.92	172.44	-4,749.24	720.05	4,819.22	4,794.34	24.89	193.649	
3,700.00	3,696.20	3,400.00	3,399.85	13.01	11.92	172.44	-4,749.24	720.05	4,819.23	4,794.35	24.89	193.645	
3,800.00	3,794.68	3,400.00	3,399.85	13.39	11.92	172.65	-4,749.24	720.05	4,827.77	4,802.54	25.23	191.332	
3,900.00	3,893.16	3,438.70	3,438.39	13.78	12.05	172.87	-4,752.61	719.44	4,837.82	4,812.11	25.72	188.130	
4,000.00	3,991.65	3,467.09	3,466.63	14.17	12.14	173.08	-4,755.57	718.91	4,849.39	4,823.23	26.16	185.384	
4,100.00	4,090.13	3,500.00	3,499.29	14.56	12.24	173.30	-4,759.52	718.20	4,862.42	4,835.80	26.62	182.679	
4,200.00	4,188.61	3,500.00	3,499.29	14.95	12.24	173.51	-4,759.52	718.20	4,877.09	4,850.15	26.94	181.007	
4,300.00	4,287.09	3,551.32	3,550.07	15.35	12.41	173.74	-4,766.79	716.90	4,892.83	4,865.36	27.47	178.114	
4,400.00	4,385.57	3,583.34	3,581.65	15.76	12.51	173.96	-4,772.00	715.96	4,910.21	4,882.29	27.92	175.884	
4,500.00	4,484.06	3,664.24	3,661.32	16.16	12.78	174.21	-4,785.83	713.48	4,928.53	4,899.96	28.57	172.533	
4,600.00	4,582.54	3,760.07	3,755.70	16.57	13.11	174.46	-4,802.21	710.54	4,946.97	4,917.69	29.28	168.947	
4,700.00	4,681.02	3,855.91	3,850.08	16.98	13.44	174.72	-4,818.59	707.60	4,965.51	4,935.51	30.00	165.509	
4,800.00	4,779.50	3,951.74	3,944.46	17.39	13.78	174.97	-4,834.97	704.66	4,984.14	4,953.42	30.73	162.212	
4,900.00	4,877.99	4,047.58	4,038.84	17.80	14.12	175.22	-4,851.35	701.72	5,002.87	4,971.42	31.45	159.050	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 11H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,976.47	4,143.41	4,133.21	18.22	14.47	175.47	-4,867.73	698.78	5,021.69	4,989.50	32.19	156.015	
5,100.00	5,074.95	4,239.25	4,227.59	18.64	14.82	175.72	-4,884.10	695.83	5,040.60	5,007.68	32.92	153.102	
5,200.00	5,173.43	4,335.08	4,321.97	19.05	15.17	175.96	-4,900.48	692.89	5,059.60	5,025.94	33.66	150.305	
5,300.00	5,271.91	4,430.92	4,416.35	19.47	15.54	176.21	-4,916.86	689.95	5,078.69	5,044.29	34.40	147.617	
5,400.00	5,370.40	4,526.75	4,510.73	19.90	15.90	176.45	-4,933.24	687.01	5,097.87	5,062.72	35.15	145.035	
5,500.00	5,468.88	15,362.33	10,553.00	20.32	87.36	116.95	-40.44	640.41	5,090.71	5,040.99	49.72	102.388	
5,600.00	5,567.36	15,362.33	10,553.00	20.74	87.36	119.32	-40.44	640.41	4,991.66	4,941.77	49.89	100.059	
5,700.00	5,665.84	15,362.33	10,553.00	21.17	87.36	121.95	-40.44	640.41	4,892.65	4,842.59	50.06	97.739	
5,800.00	5,764.33	15,362.33	10,553.00	21.60	87.36	124.84	-40.44	640.41	4,793.68	4,743.44	50.23	95.429	
5,900.00	5,862.81	15,362.33	10,553.00	22.02	87.36	128.03	-40.44	640.41	4,694.75	4,644.34	50.41	93.128	
6,000.00	5,961.29	15,362.33	10,553.00	22.45	87.36	131.55	-40.44	640.41	4,595.87	4,545.27	50.60	90.836	
6,100.00	6,059.77	15,362.33	10,553.00	22.88	87.36	135.41	-40.44	640.41	4,497.04	4,446.26	50.78	88.555	
6,200.00	6,158.25	15,362.33	10,553.00	23.31	87.36	139.64	-40.44	640.41	4,398.26	4,347.28	50.97	86.283	
6,300.00	6,256.74	15,362.33	10,553.00	23.74	87.36	144.22	-40.44	640.41	4,299.54	4,248.37	51.17	84.022	
6,400.00	6,355.22	15,362.33	10,553.00	24.18	87.36	149.15	-40.44	640.41	4,200.88	4,149.50	51.37	81.771	
6,500.00	6,453.70	15,362.33	10,553.00	24.61	87.36	154.37	-40.44	640.41	4,102.28	4,050.70	51.58	79.531	
6,600.00	6,552.18	15,362.33	10,553.00	25.04	87.36	159.83	-40.44	640.41	4,003.75	3,951.96	51.79	77.301	
6,700.00	6,650.66	15,362.33	10,553.00	25.48	87.36	165.44	-40.44	640.41	3,905.30	3,853.28	52.01	75.082	
6,799.35	6,748.51	15,362.33	10,553.00	25.91	87.36	171.06	-40.44	640.41	3,807.56	3,755.32	52.24	72.887	
6,800.00	6,749.15	15,362.33	10,553.00	25.91	87.36	171.10	-40.44	640.41	3,806.93	3,754.69	52.24	72.873	
6,900.00	6,848.04	15,362.33	10,553.00	26.33	87.36	175.85	-40.44	640.41	3,708.21	3,655.74	52.47	70.669	
7,000.00	6,947.58	15,362.33	10,553.00	26.72	87.36	178.87	-40.44	640.41	3,608.87	3,556.17	52.71	68.473	
7,100.00	7,047.47	15,362.33	10,553.00	27.07	87.36	-179.78	-40.44	640.41	3,509.15	3,456.22	52.93	66.296	
7,132.53	7,080.00	15,362.33	10,553.00	27.18	87.36	-179.69	-40.44	640.41	3,476.67	3,423.66	53.00	65.592	
7,200.00	7,147.47	15,362.33	10,553.00	27.40	87.36	-179.69	-40.44	640.41	3,409.29	3,356.14	53.15	64.140	
7,300.00	7,247.47	15,362.33	10,553.00	27.72	87.36	-179.69	-40.44	640.41	3,309.43	3,256.06	53.38	62.001	
7,400.00	7,347.47	15,362.33	10,553.00	28.05	87.36	-179.69	-40.44	640.41	3,209.59	3,155.98	53.60	59.876	
7,500.00	7,447.47	15,362.33	10,553.00	28.38	87.36	-179.69	-40.44	640.41	3,109.75	3,055.92	53.83	57.766	
7,600.00	7,547.47	15,362.33	10,553.00	28.71	87.36	-179.69	-40.44	640.41	3,009.92	2,955.86	54.07	55.671	
7,700.00	7,647.47	15,362.33	10,553.00	29.04	87.36	-179.69	-40.44	640.41	2,910.11	2,855.81	54.30	53.592	
7,800.00	7,747.47	15,362.33	10,553.00	29.37	87.36	-179.69	-40.44	640.41	2,810.31	2,755.77	54.54	51.527	
7,900.00	7,847.47	15,362.33	10,553.00	29.70	87.36	-179.69	-40.44	640.41	2,710.52	2,655.74	54.78	49.478	
8,000.00	7,947.47	15,362.33	10,553.00	30.03	87.36	-179.69	-40.44	640.41	2,610.75	2,555.72	55.03	47.444	
8,100.00	8,047.47	15,362.33	10,553.00	30.36	87.36	-179.69	-40.44	640.41	2,511.00	2,455.72	55.28	45.426	
8,200.00	8,147.47	15,362.33	10,553.00	30.69	87.36	-179.69	-40.44	640.41	2,411.26	2,355.74	55.53	43.424	
8,300.00	8,247.47	15,362.33	10,553.00	31.03	87.36	-179.69	-40.44	640.41	2,311.56	2,255.77	55.78	41.437	
8,400.00	8,347.47	15,362.33	10,553.00	31.36	87.36	-179.69	-40.44	640.41	2,211.87	2,155.83	56.04	39.467	
8,500.00	8,447.47	15,362.33	10,553.00	31.70	87.36	-179.69	-40.44	640.41	2,112.22	2,055.91	56.31	37.513	
8,600.00	8,547.47	15,362.33	10,553.00	32.03	87.36	-179.69	-40.44	640.41	2,012.60	1,956.03	56.57	35.575	
8,700.00	8,647.47	15,362.33	10,553.00	32.37	87.36	-179.69	-40.44	640.41	1,913.02	1,856.18	56.84	33.654	
8,800.00	8,747.47	15,362.33	10,553.00	32.70	87.36	-179.69	-40.44	640.41	1,813.49	1,756.37	57.12	31.749	
8,900.00	8,847.47	15,362.33	10,553.00	33.04	87.36	-179.69	-40.44	640.41	1,714.02	1,656.61	57.40	29.860	
9,000.00	8,947.47	15,362.33	10,553.00	33.37	87.36	-179.69	-40.44	640.41	1,614.60	1,556.92	57.69	27.988	
9,100.00	9,047.47	15,362.33	10,553.00	33.71	87.36	-179.69	-40.44	640.41	1,515.27	1,457.29	57.98	26.134	
9,200.00	9,147.47	15,362.33	10,553.00	34.05	87.36	-179.69	-40.44	640.41	1,416.03	1,357.74	58.28	24.296	
9,300.00	9,247.47	15,362.33	10,553.00	34.39	87.36	-179.69	-40.44	640.41	1,316.90	1,258.31	58.59	22.475	
9,400.00	9,347.47	15,362.33	10,553.00	34.73	87.36	-179.69	-40.44	640.41	1,217.92	1,159.00	58.92	20.672	
9,500.00	9,447.47	15,362.33	10,553.00	35.06	87.36	-179.69	-40.44	640.41	1,119.11	1,059.86	59.25	18.887	
9,600.00	9,547.47	15,362.33	10,553.00	35.40	87.36	-179.69	-40.44	640.41	1,020.54	960.93	59.61	17.120	
9,700.00	9,647.47	15,362.33	10,553.00	35.74	87.36	-179.69	-40.44	640.41	922.28	862.28	60.00	15.371	
9,800.00	9,747.47	15,362.33	10,553.00	36.08	87.36	-179.69	-40.44	640.41	824.44	764.01	60.43	13.643	
9,888.07	9,835.54	15,362.33	10,553.00	36.38	87.36	-179.69	-40.44	640.41	738.75	677.89	60.86	12.138	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 11H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	9,847.47	15,362.33	10,553.00	36.42	87.36	-179.69	-40.44	640.41	727.14	666.22	60.92	11.935	
9,925.00	9,872.43	15,362.33	10,553.00	36.50	87.36	-179.69	-40.44	640.41	702.66	641.61	61.05	11.510	
9,950.00	9,897.30	15,362.33	10,553.00	36.58	87.36	-179.68	-40.44	640.41	677.96	616.80	61.16	11.084	
9,975.00	9,921.99	15,362.33	10,553.00	36.65	87.36	-179.66	-40.44	640.41	653.12	591.85	61.27	10.660	
10,000.00	9,946.45	15,362.33	10,553.00	36.73	87.36	-179.65	-40.44	640.41	628.16	566.81	61.35	10.238	
10,025.00	9,970.60	15,362.33	10,553.00	36.80	87.36	-179.62	-40.44	640.41	603.17	541.74	61.42	9.820	
10,050.00	9,994.38	15,362.33	10,553.00	36.87	87.36	-179.59	-40.44	640.41	578.19	516.72	61.47	9.406	
10,075.00	10,017.73	15,362.33	10,553.00	36.93	87.36	-179.55	-40.44	640.41	553.32	491.82	61.50	8.997	
10,100.00	10,040.58	15,362.33	10,553.00	37.00	87.36	-179.50	-40.44	640.41	528.64	467.13	61.51	8.594	
10,125.00	10,062.86	15,362.33	10,553.00	37.06	87.36	-179.43	-40.44	640.41	504.24	442.75	61.49	8.200	
10,150.00	10,084.53	15,362.33	10,553.00	37.11	87.36	-179.33	-40.44	640.41	480.24	418.79	61.46	7.814	
10,175.00	10,105.51	15,362.33	10,553.00	37.17	87.36	-179.20	-40.44	640.41	456.79	395.39	61.40	7.440	
10,200.00	10,125.75	15,362.33	10,553.00	37.22	87.36	-179.01	-40.44	640.41	434.02	372.69	61.33	7.077	
10,225.00	10,145.19	15,362.33	10,553.00	37.27	87.36	-178.72	-40.44	640.41	412.14	350.88	61.26	6.728	
10,250.00	10,163.79	15,362.33	10,553.00	37.31	87.36	-178.19	-40.44	640.41	391.34	330.14	61.20	6.394	
10,275.00	10,181.49	15,362.33	10,553.00	37.36	87.36	-177.05	-40.44	640.41	371.87	310.68	61.19	6.078	
10,300.00	10,198.23	15,362.33	10,553.00	37.39	87.36	-172.55	-40.44	640.41	354.01	292.76	61.26	5.779	
10,325.00	10,213.99	15,356.05	10,553.00	37.43	87.27	-90.26	-46.73	640.44	338.02	276.67	61.34	5.510	
10,350.00	10,228.71	15,335.84	10,553.00	37.47	86.97	-90.26	-66.93	640.53	323.30	262.06	61.24	5.279	
10,375.00	10,242.35	15,314.89	10,553.00	37.50	86.65	-90.26	-87.88	640.62	309.66	248.53	61.13	5.066	
10,400.00	10,254.87	15,293.26	10,553.00	37.53	86.33	-90.26	-109.52	640.72	297.14	236.12	61.01	4.870	
10,425.00	10,266.24	15,271.00	10,553.00	37.57	86.00	-90.26	-131.77	640.82	285.76	224.87	60.89	4.693	
10,450.00	10,276.44	15,248.18	10,553.00	37.60	85.66	-90.26	-154.60	640.92	275.57	214.80	60.76	4.535	
10,475.00	10,285.42	15,224.85	10,553.00	37.63	85.31	-90.26	-177.92	641.02	266.58	205.95	60.63	4.397	
10,500.00	10,293.18	15,201.09	10,553.00	37.66	84.95	-90.26	-201.69	641.13	258.83	198.33	60.50	4.278	
10,525.00	10,299.68	15,176.95	10,553.00	37.70	84.60	-90.26	-225.83	641.23	252.33	191.97	60.36	4.180	
10,550.00	10,304.90	15,152.50	10,553.00	37.74	84.23	-90.26	-250.27	641.34	247.10	186.89	60.22	4.103	
10,575.00	10,308.84	15,127.82	10,553.00	37.78	83.87	-90.26	-274.95	641.45	243.17	183.09	60.08	4.048	
10,600.00	10,311.48	15,102.96	10,553.00	37.83	83.50	-90.26	-299.81	641.56	240.52	180.59	59.93	4.013	
10,625.00	10,312.82	15,078.00	10,553.00	37.88	83.13	-90.26	-324.77	641.67	239.19	179.40	59.79	4.001	
10,638.07	10,313.00	15,064.94	10,553.00	37.91	82.93	-90.26	-337.84	641.73	239.01	179.30	59.71	4.003	
10,700.00	10,313.00	15,003.00	10,553.00	38.06	82.02	-90.26	-399.77	642.00	239.01	179.65	59.36	4.027	
10,800.00	10,313.00	14,903.00	10,553.00	38.36	80.54	-90.26	-499.77	642.44	239.01	180.20	58.81	4.064	
10,900.00	10,313.00	14,803.00	10,553.00	38.75	79.08	-90.26	-599.77	642.89	239.01	180.71	58.29	4.100	
11,000.00	10,313.00	14,703.00	10,553.00	39.20	77.62	-90.26	-699.77	643.33	239.01	181.20	57.81	4.135	
11,100.00	10,313.00	14,603.00	10,553.00	39.73	76.17	-90.26	-799.77	643.77	239.01	181.66	57.35	4.168	
11,200.00	10,313.00	14,503.00	10,553.00	40.32	74.73	-90.26	-899.77	644.21	239.01	182.09	56.92	4.199	
11,300.00	10,313.00	14,403.00	10,553.00	40.96	73.29	-90.26	-999.76	644.66	239.01	182.49	56.52	4.229	
11,400.00	10,313.00	14,303.00	10,553.00	41.67	71.87	-90.26	-1,099.76	645.10	239.01	182.86	56.14	4.257	
11,500.00	10,313.00	14,203.00	10,553.00	42.43	70.46	-90.26	-1,199.76	645.54	239.01	183.21	55.79	4.284	
11,600.00	10,313.00	14,103.00	10,553.00	43.23	69.06	-90.26	-1,299.76	645.98	239.01	183.54	55.47	4.309	
11,700.00	10,313.00	14,003.00	10,553.00	44.09	67.67	-90.26	-1,399.76	646.43	239.01	183.84	55.17	4.332	
11,800.00	10,313.00	13,903.00	10,553.00	44.99	66.29	-90.26	-1,499.76	646.87	239.01	184.12	54.89	4.354	
11,900.00	10,313.00	13,803.00	10,553.00	45.94	64.92	-90.26	-1,599.76	647.31	239.01	184.37	54.63	4.375	
12,000.00	10,313.00	13,703.00	10,553.00	46.92	63.57	-90.26	-1,699.76	647.75	239.01	184.60	54.40	4.393	
12,100.00	10,313.00	13,603.00	10,553.00	47.94	62.23	-90.26	-1,799.76	648.20	239.01	184.82	54.19	4.410	
12,200.00	10,313.00	13,503.00	10,553.00	48.99	60.91	-90.26	-1,899.76	648.64	239.01	185.01	54.00	4.426	
12,300.00	10,313.00	13,403.00	10,553.00	50.08	59.60	-90.26	-1,999.75	649.08	239.01	185.18	53.83	4.440	
12,400.00	10,313.00	13,303.00	10,553.00	51.20	58.32	-90.26	-2,099.75	649.52	239.01	185.33	53.68	4.452	
12,500.00	10,313.00	13,203.00	10,553.00	52.34	57.05	-90.26	-2,199.75	649.97	239.01	185.46	53.55	4.463	
12,600.00	10,313.00	13,103.00	10,553.00	53.52	55.80	-90.26	-2,299.75	650.41	239.01	185.57	53.44	4.473	
12,700.00	10,313.00	13,003.00	10,553.00	54.71	54.57	-90.26	-2,399.75	650.85	239.01	185.66	53.35	4.480	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 11H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — *Offset Well Error: 0.00 usft*

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,800.00	10,313.00	12,903.00	10,553.00	55.93	53.37	-90.26	-2,499.75	651.29	239.01	185.73	53.27	4.486	
12,900.00	10,313.00	12,803.00	10,553.00	57.18	52.19	-90.26	-2,599.75	651.74	239.01	185.78	53.22	4.491	
13,000.00	10,313.00	12,703.00	10,553.00	58.44	51.04	-90.26	-2,699.75	652.18	239.01	185.82	53.19	4.494	
13,100.00	10,313.00	12,603.00	10,553.00	59.72	49.91	-90.26	-2,799.75	652.62	239.01	185.83	53.17	4.495	
13,200.00	10,313.00	12,503.00	10,553.00	61.02	48.82	-90.26	-2,899.75	653.06	239.01	185.83	53.18	4.494	
13,300.00	10,313.00	12,403.00	10,553.00	62.34	47.76	-90.26	-2,999.74	653.51	239.01	185.80	53.21	4.492	
13,400.00	10,313.00	12,303.00	10,553.00	63.67	46.73	-90.26	-3,099.74	653.95	239.01	185.75	53.25	4.488	
13,500.00	10,313.00	12,203.00	10,553.00	65.02	45.74	-90.26	-3,199.74	654.39	239.01	185.68	53.32	4.482	
13,600.00	10,313.00	12,103.00	10,553.00	66.38	44.79	-90.26	-3,299.74	654.83	239.01	185.59	53.41	4.475	
13,700.00	10,313.00	12,003.00	10,553.00	67.76	43.88	-90.26	-3,399.74	655.28	239.01	185.48	53.53	4.465	
13,800.00	10,313.00	11,903.00	10,553.00	69.15	43.02	-90.26	-3,499.74	655.72	239.01	185.34	53.67	4.453	
13,900.00	10,313.00	11,803.00	10,553.00	70.54	42.20	-90.26	-3,599.74	656.16	239.01	185.17	53.83	4.440	
14,000.00	10,313.00	11,703.00	10,553.00	71.95	41.43	-90.26	-3,699.74	656.60	239.01	184.98	54.02	4.424	
14,100.00	10,313.00	11,603.00	10,553.00	73.37	40.72	-90.26	-3,799.74	657.05	239.01	184.76	54.25	4.406	
14,200.00	10,313.00	11,503.00	10,553.00	74.80	40.06	-90.26	-3,899.74	657.49	239.01	184.51	54.50	4.386	
14,300.00	10,313.00	11,403.00	10,553.00	76.24	39.46	-90.26	-3,999.73	657.93	239.01	184.23	54.78	4.363	
14,400.00	10,313.00	11,303.00	10,553.00	77.69	38.92	-90.26	-4,099.73	658.37	239.01	183.91	55.09	4.338	
14,500.00	10,313.00	11,203.00	10,553.00	79.15	38.44	-90.26	-4,199.73	658.82	239.01	183.56	55.44	4.311	
14,600.00	10,313.00	11,103.00	10,553.00	80.61	38.03	-90.26	-4,299.73	659.26	239.01	183.18	55.83	4.281	
14,700.00	10,313.00	11,003.00	10,553.00	82.08	37.69	-90.26	-4,399.73	659.70	239.01	182.75	56.26	4.249	
14,800.00	10,313.00	10,903.00	10,553.00	83.56	37.42	-90.26	-4,499.73	660.14	239.01	182.28	56.72	4.214	
14,900.00	10,313.00	10,729.22	10,528.75	85.04	37.04	-178.69	-4,670.91	660.90	226.25	165.36	60.88	3.716	
15,000.00	10,313.00	10,574.55	10,457.35	86.53	36.72	-179.21	-4,807.36	661.51	179.27	111.64	67.63	2.651	
15,100.00	10,313.00	10,478.35	10,392.86	88.03	36.51	-178.83	-4,878.59	661.82	111.54	41.09	70.45	1.583	
15,189.14	10,313.00	10,415.32	10,348.29	89.37	36.38	-176.98	-4,923.16	662.02	48.53	-22.59	71.12	0.682	Level 1, CC, ES, SF

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 12H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 178-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	171.24	-4,843.34	746.59	4,900.55				
100.00	100.00	94.88	94.88	0.14	0.15	171.24	-4,843.39	746.56	4,900.59	4,900.30	0.29	N/A	
200.00	200.00	190.95	190.95	0.50	0.33	171.24	-4,843.53	746.45	4,900.72	4,899.89	0.82	5,947.099	
300.00	300.00	288.53	288.53	0.86	0.67	171.24	-4,843.73	746.38	4,900.91	4,899.38	1.53	3,203.192	
400.00	400.00	387.73	387.73	1.22	1.03	171.24	-4,843.96	746.41	4,901.14	4,898.90	2.24	2,187.087	
500.00	500.00	511.06	511.05	1.57	1.45	171.23	-4,843.81	747.29	4,901.13	4,898.11	3.03	1,619.250	
600.00	600.00	660.77	660.75	1.93	1.97	171.21	-4,842.36	748.71	4,900.29	4,896.39	3.90	1,257.100	
700.00	700.00	758.17	758.14	2.29	2.30	171.21	-4,841.10	749.00	4,899.06	4,894.46	4.59	1,066.765	
800.00	800.00	847.87	847.84	2.65	2.61	171.20	-4,840.08	748.92	4,897.92	4,892.66	5.26	930.854	
900.00	900.00	931.00	930.96	3.01	2.90	171.21	-4,839.45	748.48	4,897.09	4,891.18	5.91	828.663	
1,000.00	1,000.00	1,017.76	1,017.72	3.37	3.21	171.22	-4,839.15	747.65	4,896.60	4,890.03	6.57	745.200	
1,100.00	1,100.00	1,114.51	1,114.46	3.72	3.54	171.23	-4,838.99	746.51	4,896.25	4,888.98	7.27	673.611	
1,200.00	1,200.00	1,211.18	1,211.12	4.08	3.88	171.25	-4,838.91	745.21	4,895.97	4,888.00	7.97	614.543	
1,300.00	1,300.00	1,307.64	1,307.57	4.44	4.22	171.26	-4,838.93	743.76	4,895.76	4,887.09	8.67	564.942	
1,400.00	1,400.00	1,406.16	1,406.08	4.80	4.57	171.28	-4,839.04	742.10	4,895.61	4,886.24	9.37	522.314	
1,500.00	1,500.00	1,509.01	1,508.90	5.16	4.94	171.31	-4,839.18	739.95	4,895.44	4,885.34	10.10	484.867	
1,600.00	1,600.00	1,603.32	1,603.19	5.52	5.27	171.33	-4,839.37	737.57	4,895.25	4,884.46	10.79	453.676	
1,628.37	1,628.37	1,627.51	1,627.37	5.62	5.36	171.34	-4,839.45	736.95	4,895.24	4,884.26	10.98	445.912	
1,700.00	1,700.00	1,688.59	1,688.43	5.88	5.58	171.36	-4,839.76	735.37	4,895.32	4,883.86	11.45	427.452	
1,800.00	1,800.00	1,778.90	1,778.70	6.23	5.90	171.39	-4,840.43	733.06	4,895.67	4,883.54	12.13	403.514	
1,900.00	1,900.00	1,884.76	1,884.53	6.59	6.28	171.42	-4,841.22	730.37	4,896.03	4,883.16	12.87	380.448	
2,000.00	2,000.00	1,988.63	1,988.36	6.95	6.65	171.45	-4,841.87	727.75	4,896.27	4,882.67	13.60	360.051	
2,100.00	2,100.00	2,089.76	2,089.46	7.31	7.01	171.48	-4,842.45	725.30	4,896.48	4,882.16	14.32	341.953	
2,200.00	2,200.00	2,190.41	2,190.08	7.67	7.37	171.51	-4,842.98	723.00	4,896.66	4,881.62	15.04	325.621	
2,300.00	2,300.00	2,290.69	2,290.34	8.03	7.73	171.53	-4,843.47	720.93	4,896.84	4,881.09	15.76	310.804	
2,400.00	2,400.00	2,386.55	2,386.18	8.38	8.07	171.55	-4,843.92	719.24	4,897.05	4,880.59	16.46	297.580	
2,500.00	2,500.00	2,480.12	2,479.75	8.74	8.41	171.57	-4,844.40	718.12	4,897.37	4,880.23	17.15	285.588	
2,600.00	2,599.95	2,568.81	2,568.44	9.10	8.72	171.61	-4,844.92	717.57	4,898.04	4,880.23	17.81	274.991	
2,633.33	2,633.23	2,597.38	2,597.00	9.21	8.82	171.63	-4,845.12	717.50	4,898.40	4,880.38	18.03	271.737	
2,700.00	2,699.73	2,654.50	2,654.12	9.44	9.02	171.69	-4,845.58	717.55	4,899.26	4,880.81	18.46	265.454	
2,800.00	2,799.49	2,739.54	2,739.15	9.79	9.31	171.76	-4,846.42	718.06	4,900.80	4,881.71	19.10	256.620	
2,900.00	2,899.24	2,823.64	2,823.24	10.14	9.59	171.83	-4,847.42	719.17	4,902.67	4,882.93	19.73	248.450	
3,000.00	2,999.00	2,910.62	2,910.19	10.49	9.89	171.89	-4,848.65	720.97	4,904.85	4,884.47	20.38	240.672	
3,100.00	3,098.76	3,013.41	3,012.94	10.85	10.24	171.95	-4,850.12	723.43	4,907.12	4,886.04	21.08	232.755	
3,200.00	3,198.51	3,121.63	3,121.12	11.20	10.61	172.00	-4,851.58	726.02	4,909.30	4,887.49	21.81	225.125	
3,300.00	3,298.27	3,208.10	3,207.56	11.56	10.90	172.06	-4,852.65	727.95	4,911.38	4,888.92	22.46	218.695	
3,400.00	3,398.02	3,273.00	3,272.37	11.92	11.12	172.11	-4,853.69	731.10	4,914.14	4,891.10	23.03	213.349	
3,500.00	3,497.78	3,334.53	3,333.67	12.28	11.33	172.13	-4,854.83	736.33	4,917.64	4,894.05	23.60	208.410	
3,600.00	3,597.31	3,406.74	3,405.24	12.64	11.58	172.14	-4,856.16	745.74	4,921.99	4,897.79	24.20	203.385	
3,699.84	3,696.05	3,487.27	3,484.41	13.01	11.85	172.14	-4,857.42	760.38	4,927.17	4,902.33	24.84	198.319	
3,700.00	3,696.20	3,487.41	3,484.55	13.01	11.85	172.14	-4,857.43	760.41	4,927.18	4,902.34	24.85	198.311	
3,800.00	3,794.68	3,581.68	3,576.75	13.39	12.18	172.12	-4,858.81	780.00	4,932.84	4,907.28	25.55	193.030	
3,900.00	3,893.16	3,692.28	3,684.87	13.78	12.59	172.06	-4,860.23	803.26	4,938.34	4,912.00	26.34	187.481	
4,000.00	3,991.65	3,791.73	3,782.15	14.17	12.95	172.02	-4,861.48	823.83	4,943.79	4,916.70	27.10	182.457	
4,100.00	4,090.13	3,902.50	3,890.58	14.56	13.37	171.97	-4,862.87	846.46	4,949.20	4,921.29	27.90	177.363	
4,200.00	4,188.61	4,027.83	4,013.30	14.95	13.85	171.88	-4,863.94	871.91	4,954.18	4,925.40	28.78	172.113	
4,300.00	4,287.09	4,137.83	4,121.17	15.35	14.28	171.83	-4,864.59	893.40	4,958.80	4,929.19	29.61	167.458	
4,400.00	4,385.57	4,171.99	4,154.67	15.76	14.42	171.96	-4,865.07	900.11	4,964.07	4,933.94	30.14	164.723	
4,500.00	4,484.06	4,220.00	4,201.67	16.16	14.61	172.05	-4,866.22	909.80	4,970.50	4,939.79	30.72	161.826	
4,600.00	4,582.54	4,297.26	4,277.24	16.57	14.92	172.07	-4,868.61	925.72	4,977.72	4,946.30	31.42	158.407	
4,700.00	4,681.02	4,410.62	4,388.07	16.98	15.39	172.00	-4,872.08	949.23	4,984.97	4,952.67	32.30	154.357	
4,800.00	4,779.50	4,528.77	4,503.62	17.39	15.88	171.93	-4,875.32	973.70	4,991.90	4,958.70	33.20	150.376	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 12H - Wellbore #1 - Surveys

Survey Program: 178-MWD

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,877.99	4,650.63	4,622.94	17.80	16.39	171.85	-4,878.07	998.30	4,998.24	4,964.12	34.12	146.495	
5,000.00	4,976.47	4,721.70	4,692.55	18.22	16.69	171.89	-4,879.70	1,012.50	5,004.66	4,969.84	34.82	143.728	
5,100.00	5,074.95	4,769.90	4,739.76	18.64	16.89	171.98	-4,881.28	1,022.14	5,012.01	4,976.59	35.42	141.503	
5,200.00	5,173.43	4,845.72	4,813.97	19.05	17.21	172.02	-4,884.45	1,037.32	5,020.21	4,984.07	36.15	138.889	
5,300.00	5,271.91	4,945.84	4,912.01	19.47	17.64	172.00	-4,888.76	1,057.19	5,028.56	4,991.57	36.99	135.959	
5,400.00	5,370.40	5,061.96	5,025.84	19.90	18.14	171.95	-4,893.68	1,079.63	5,036.76	4,998.85	37.90	132.888	
5,500.00	5,468.88	5,190.16	5,151.64	20.32	18.69	171.88	-4,898.59	1,103.77	5,044.47	5,005.59	38.88	129.757	
5,600.00	5,567.36	5,312.57	5,271.92	20.74	19.21	171.83	-4,902.73	1,126.13	5,051.66	5,011.83	39.82	126.849	
5,700.00	5,665.84	5,447.74	5,404.87	21.17	19.79	171.77	-4,906.71	1,150.17	5,058.36	5,017.53	40.83	123.887	
5,800.00	5,764.33	15,253.38	10,503.36	21.60	88.56	97.26	-92.16	1,925.17	4,969.77	4,914.63	55.14	90.125	
5,900.00	5,862.81	15,260.39	10,503.54	22.02	88.66	97.21	-85.15	1,925.47	4,870.95	4,815.45	55.50	87.767	
6,000.00	5,961.29	15,267.40	10,503.73	22.45	88.76	97.17	-78.15	1,925.77	4,772.16	4,716.29	55.86	85.427	
6,100.00	6,059.77	15,274.41	10,503.91	22.88	88.87	97.12	-71.15	1,926.07	4,673.41	4,617.17	56.24	83.104	
6,200.00	6,158.25	15,281.42	10,504.10	23.31	88.97	97.07	-64.15	1,926.37	4,574.71	4,518.09	56.62	80.800	
6,300.00	6,256.74	15,288.43	10,504.28	23.74	89.08	97.02	-57.15	1,926.67	4,476.05	4,419.04	57.01	78.513	
6,400.00	6,355.22	15,295.44	10,504.47	24.18	89.18	96.97	-50.15	1,926.97	4,377.44	4,320.03	57.41	76.245	
6,500.00	6,453.70	15,302.45	10,504.65	24.61	89.28	96.92	-43.15	1,927.27	4,278.89	4,221.06	57.83	73.995	
6,600.00	6,552.18	15,302.00	10,504.64	25.04	89.28	97.18	-43.59	1,927.25	4,180.40	4,122.19	58.20	71.823	
6,700.00	6,650.66	15,302.00	10,504.64	25.48	89.28	97.42	-43.59	1,927.25	4,081.98	4,023.38	58.60	69.660	
6,799.35	6,748.51	15,302.00	10,504.64	25.91	89.28	97.67	-43.59	1,927.25	3,984.28	3,925.27	59.00	67.525	
6,800.00	6,749.15	15,302.00	10,504.64	25.91	89.28	97.67	-43.59	1,927.25	3,983.64	3,924.63	59.01	67.511	
6,900.00	6,848.04	15,302.00	10,504.64	26.33	89.28	97.89	-43.59	1,927.25	3,885.83	3,826.37	59.46	65.353	
7,000.00	6,947.58	15,302.00	10,504.64	26.72	89.28	98.04	-43.59	1,927.25	3,789.20	3,729.22	59.99	63.168	
7,100.00	7,047.47	15,302.00	10,504.64	27.07	89.28	98.11	-43.59	1,927.25	3,694.13	3,633.54	60.60	60.961	
7,132.53	7,080.00	15,302.00	10,504.64	27.18	89.28	98.11	-43.59	1,927.25	3,663.61	3,602.79	60.82	60.242	
7,200.00	7,147.47	15,302.00	10,504.64	27.40	89.28	98.11	-43.59	1,927.25	3,600.60	3,539.31	61.29	58.747	
7,300.00	7,247.47	15,302.00	10,504.64	27.72	89.28	98.11	-43.59	1,927.25	3,507.52	3,445.49	62.03	56.546	
7,400.00	7,347.47	15,302.00	10,504.64	28.05	89.28	98.11	-43.59	1,927.25	3,414.83	3,352.02	62.81	54.367	
7,500.00	7,447.47	15,302.00	10,504.64	28.38	89.28	98.11	-43.59	1,927.25	3,322.56	3,258.93	63.64	52.210	
7,600.00	7,547.47	15,302.00	10,504.64	28.71	89.28	98.11	-43.59	1,927.25	3,230.76	3,166.24	64.51	50.078	
7,700.00	7,647.47	15,302.00	10,504.64	29.04	89.28	98.11	-43.59	1,927.25	3,139.45	3,074.01	65.45	47.970	
7,800.00	7,747.47	15,302.00	10,504.64	29.37	89.28	98.11	-43.59	1,927.25	3,048.69	2,982.26	66.44	45.889	
7,900.00	7,847.47	15,302.00	10,504.64	29.70	89.28	98.11	-43.59	1,927.25	2,958.53	2,891.04	67.49	43.837	
8,000.00	7,947.47	15,302.00	10,504.64	30.03	89.28	98.11	-43.59	1,927.25	2,869.02	2,800.40	68.61	41.814	
8,100.00	8,047.47	15,302.00	10,504.64	30.36	89.28	98.11	-43.59	1,927.25	2,780.22	2,710.41	69.81	39.824	
8,200.00	8,147.47	15,302.00	10,504.64	30.69	89.28	98.11	-43.59	1,927.25	2,692.21	2,621.12	71.09	37.869	
8,300.00	8,247.47	15,302.00	10,504.64	31.03	89.28	98.11	-43.59	1,927.25	2,605.06	2,532.60	72.46	35.950	
8,400.00	8,347.47	15,302.00	10,504.64	31.36	89.28	98.11	-43.59	1,927.25	2,518.87	2,444.94	73.93	34.070	
8,500.00	8,447.47	15,302.00	10,504.64	31.70	89.28	98.11	-43.59	1,927.25	2,433.74	2,358.23	75.51	32.233	
8,600.00	8,547.47	15,302.00	10,504.64	32.03	89.28	98.11	-43.59	1,927.25	2,349.78	2,272.59	77.19	30.441	
8,700.00	8,647.47	15,302.00	10,504.64	32.37	89.28	98.11	-43.59	1,927.25	2,267.12	2,188.12	79.00	28.698	
8,800.00	8,747.47	15,302.00	10,504.64	32.70	89.28	98.11	-43.59	1,927.25	2,185.91	2,104.97	80.94	27.007	
8,900.00	8,847.47	15,302.00	10,504.64	33.04	89.28	98.11	-43.59	1,927.25	2,106.31	2,023.30	83.02	25.372	
9,000.00	8,947.47	15,302.00	10,504.64	33.37	89.28	98.11	-43.59	1,927.25	2,028.53	1,943.29	85.24	23.798	
9,100.00	9,047.47	15,302.00	10,504.64	33.71	89.28	98.11	-43.59	1,927.25	1,952.76	1,865.15	87.61	22.288	
9,200.00	9,147.47	15,302.00	10,504.64	34.05	89.28	98.11	-43.59	1,927.25	1,879.27	1,789.12	90.14	20.847	
9,300.00	9,247.47	15,302.00	10,504.64	34.39	89.28	98.11	-43.59	1,927.25	1,808.32	1,715.49	92.83	19.480	
9,400.00	9,347.47	15,302.00	10,504.64	34.73	89.28	98.11	-43.59	1,927.25	1,740.23	1,644.56	95.67	18.191	
9,500.00	9,447.47	15,302.00	10,504.64	35.06	89.28	98.11	-43.59	1,927.25	1,675.34	1,576.70	98.64	16.984	
9,600.00	9,547.47	15,302.00	10,504.64	35.40	89.28	98.11	-43.59	1,927.25	1,614.04	1,512.30	101.73	15.865	
9,700.00	9,647.47	15,302.00	10,504.64	35.74	89.28	98.11	-43.59	1,927.25	1,556.75	1,451.84	104.92	14.838	
9,800.00	9,747.47	15,302.00	10,504.64	36.08	89.28	98.11	-43.59	1,927.25	1,503.94	1,395.80	108.15	13.907	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 12H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft

Survey Program: 178-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,888.07	9,835.54	15,302.00	10,504.64	36.38	89.28	98.11	-43.59	1,927.25	1,461.53	1,350.55	110.98	13.169	
9,900.00	9,847.47	15,302.00	10,504.64	36.42	89.28	98.10	-43.59	1,927.25	1,456.08	1,344.72	111.36	13.075	
9,925.00	9,872.43	15,302.00	10,504.64	36.50	89.28	98.05	-43.59	1,927.25	1,444.80	1,332.66	112.14	12.884	
9,950.00	9,897.30	15,302.00	10,504.64	36.58	89.28	97.93	-43.59	1,927.25	1,433.74	1,320.84	112.90	12.699	
9,975.00	9,921.99	15,302.00	10,504.64	36.65	89.28	97.76	-43.59	1,927.25	1,422.94	1,309.30	113.64	12.521	
10,000.00	9,946.45	15,302.00	10,504.64	36.73	89.28	97.54	-43.59	1,927.25	1,412.43	1,298.07	114.36	12.351	
10,025.00	9,970.60	15,302.00	10,504.64	36.80	89.28	97.26	-43.59	1,927.25	1,402.25	1,287.20	115.05	12.189	
10,050.00	9,994.38	15,302.00	10,504.64	36.87	89.28	96.92	-43.59	1,927.25	1,392.43	1,276.73	115.70	12.035	
10,075.00	10,017.73	15,302.00	10,504.64	36.93	89.28	96.53	-43.59	1,927.25	1,383.02	1,266.69	116.32	11.889	
10,100.00	10,040.58	15,302.00	10,504.64	37.00	89.28	96.08	-43.59	1,927.25	1,374.03	1,257.12	116.91	11.753	
10,125.00	10,062.86	15,302.00	10,504.64	37.06	89.28	95.58	-43.59	1,927.25	1,365.51	1,248.06	117.46	11.625	
10,150.00	10,084.53	15,302.00	10,504.64	37.11	89.28	95.03	-43.59	1,927.25	1,357.50	1,239.53	117.96	11.508	
10,175.00	10,105.51	15,302.00	10,504.64	37.17	89.28	94.43	-43.59	1,927.25	1,350.01	1,231.58	118.43	11.399	
10,200.00	10,125.75	15,302.00	10,504.64	37.22	89.28	93.78	-43.59	1,927.25	1,343.08	1,224.23	118.84	11.301	
10,225.00	10,145.19	15,306.45	10,504.76	37.27	89.34	92.88	-39.15	1,927.44	1,336.73	1,217.49	119.24	11.210	
10,250.00	10,163.79	15,290.26	10,504.33	37.31	89.10	92.86	-55.32	1,926.75	1,330.95	1,211.48	119.47	11.140	
10,275.00	10,181.49	15,273.10	10,503.88	37.36	88.85	92.84	-72.46	1,926.01	1,325.60	1,205.94	119.65	11.079	
10,300.00	10,198.23	15,255.01	10,503.40	37.39	88.58	92.82	-90.52	1,925.24	1,320.64	1,200.85	119.79	11.025	
10,325.00	10,213.99	15,236.59	10,502.95	37.43	88.31	92.78	-108.92	1,924.44	1,316.07	1,196.18	119.89	10.978	
10,350.00	10,228.71	15,217.41	10,502.64	37.47	88.03	92.73	-128.07	1,923.59	1,311.87	1,191.93	119.94	10.938	
10,375.00	10,242.35	15,197.26	10,502.50	37.50	87.73	92.70	-148.21	1,922.66	1,308.02	1,188.07	119.95	10.905	
10,400.00	10,254.87	15,179.19	10,502.46	37.53	87.47	92.54	-166.26	1,921.84	1,304.51	1,184.58	119.93	10.877	
10,425.00	10,266.24	15,161.46	10,502.30	37.57	87.21	92.34	-183.97	1,921.11	1,301.36	1,181.47	119.89	10.855	
10,450.00	10,276.44	15,143.38	10,502.02	37.60	86.94	92.13	-202.04	1,920.46	1,298.57	1,178.75	119.81	10.838	
10,475.00	10,285.42	15,124.99	10,501.61	37.63	86.67	91.91	-220.42	1,919.89	1,296.12	1,176.41	119.71	10.827	
10,500.00	10,293.18	15,106.32	10,501.06	37.66	86.40	91.68	-239.07	1,919.39	1,294.00	1,174.43	119.58	10.821	
10,525.00	10,299.68	15,085.74	10,500.31	37.70	86.10	91.52	-259.63	1,918.95	1,292.21	1,172.79	119.41	10.821	
10,550.00	10,304.90	15,063.59	10,499.42	37.74	85.78	91.41	-281.76	1,918.52	1,290.68	1,171.46	119.22	10.826	
10,575.00	10,308.84	15,041.21	10,498.44	37.78	85.45	91.31	-304.12	1,918.14	1,289.40	1,170.40	119.00	10.835	
10,600.00	10,311.48	15,018.64	10,497.37	37.83	85.12	91.21	-326.66	1,917.80	1,288.36	1,169.60	118.76	10.848	
10,625.00	10,312.82	14,983.80	10,495.55	37.88	84.61	91.65	-361.45	1,917.27	1,287.52	1,169.08	118.44	10.870	
10,638.07	10,313.00	14,954.00	10,493.79	37.91	84.18	92.40	-391.18	1,916.47	1,286.98	1,168.78	118.20	10.888	
10,700.00	10,313.00	14,879.39	10,488.97	38.06	83.09	92.97	-465.56	1,913.16	1,283.34	1,165.91	117.42	10.929	
10,800.00	10,313.00	14,807.32	10,487.05	38.36	82.05	91.71	-537.55	1,910.49	1,278.86	1,162.36	116.49	10.978	
10,900.00	10,313.00	14,735.34	10,486.80	38.75	81.02	90.44	-609.51	1,909.18	1,276.55	1,160.95	115.60	11.042	
11,000.00	10,313.00	14,602.18	10,489.66	39.20	79.11	91.95	-742.60	1,906.53	1,274.57	1,160.22	114.35	11.146	
11,100.00	10,313.00	14,486.40	10,493.91	39.73	77.46	92.66	-858.14	1,900.56	1,269.44	1,156.21	113.23	11.211	
11,200.00	10,313.00	14,400.41	10,496.71	40.32	76.24	92.03	-944.00	1,896.69	1,265.00	1,152.57	112.44	11.251	
11,300.00	10,313.00	14,307.77	10,499.95	40.96	74.93	91.69	-1,036.52	1,893.29	1,261.44	1,149.78	111.65	11.298	
11,400.00	10,313.00	14,211.97	10,505.70	41.67	73.59	91.49	-1,132.07	1,889.70	1,258.20	1,147.33	110.87	11.348	
11,500.00	10,313.00	14,100.14	10,509.07	42.43	72.04	92.04	-1,243.80	1,886.19	1,255.18	1,145.12	110.06	11.404	
11,600.00	10,313.00	13,947.06	10,512.54	43.23	69.93	94.50	-1,396.43	1,875.88	1,248.09	1,139.20	108.89	11.462	
11,700.00	10,313.00	13,896.66	10,511.44	44.09	69.25	92.20	-1,446.74	1,873.11	1,241.88	1,133.03	108.85	11.409	
11,800.00	10,313.00	13,832.10	10,509.14	44.99	68.38	90.54	-1,511.25	1,872.23	1,239.36	1,130.65	108.71	11.401	
11,900.00	10,313.00	13,744.37	10,506.30	45.94	67.21	89.96	-1,598.94	1,872.58	1,238.76	1,130.33	108.43	11.424	
12,000.00	10,313.00	13,638.57	10,506.47	46.92	65.81	90.23	-1,704.73	1,872.27	1,238.06	1,130.04	108.02	11.461	
12,100.00	10,313.00	13,533.39	10,507.52	47.94	64.44	90.48	-1,809.91	1,871.55	1,237.10	1,129.44	107.65	11.491	
12,200.00	10,313.00	13,420.73	10,508.24	48.99	62.99	91.07	-1,922.54	1,869.95	1,235.37	1,128.09	107.27	11.516	
12,300.00	10,313.00	13,317.35	10,510.76	50.08	61.67	91.23	-2,025.86	1,867.39	1,232.87	1,125.88	106.98	11.524	
12,397.81	10,313.00	13,251.06	10,511.75	51.17	60.84	89.74	-2,092.13	1,866.50	1,231.45	1,124.39	107.07	11.502	
12,400.00	10,313.00	13,249.68	10,511.74	51.20	60.82	89.71	-2,093.51	1,866.51	1,231.45	1,124.38	107.07	11.501	
12,500.00	10,313.00	13,185.82	10,510.11	52.34	60.04	88.00	-2,157.33	1,868.07	1,233.01	1,125.76	107.24	11.497	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 12H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 178-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,600.00	10,313.00	13,117.00	10,506.59	53.52	59.21	86.54	-2,225.93	1,872.08	1,237.43	1,130.01	107.43	11.519	
12,700.00	10,313.00	13,038.21	10,502.48	54.71	58.28	85.55	-2,304.39	1,878.06	1,243.72	1,136.14	107.58	11.561	
12,800.00	10,313.00	12,892.68	10,499.60	55.93	56.60	87.67	-2,449.59	1,886.82	1,248.85	1,141.43	107.41	11.627	
12,900.00	10,313.00	12,790.78	10,502.18	57.18	55.45	87.76	-2,551.41	1,890.09	1,251.96	1,144.53	107.43	11.654	
13,000.00	10,313.00	12,714.17	10,501.19	58.44	54.61	86.68	-2,627.91	1,893.80	1,256.15	1,148.45	107.70	11.663	
13,100.00	10,313.00	13,100.00	10,498.55	59.72	58.76	86.73	-2,728.48	1,901.01	1,262.40	1,149.09	113.31	11.141	
13,200.00	10,313.00	12,454.04	10,496.25	61.02	51.88	89.44	-2,887.57	1,906.75	1,265.35	1,157.57	107.77	11.741	
13,300.00	10,313.00	12,341.05	10,497.77	62.34	50.74	90.04	-3,000.54	1,906.87	1,265.19	1,157.28	107.91	11.725	
13,400.00	10,313.00	12,245.36	10,500.30	63.67	49.81	89.84	-3,096.20	1,906.66	1,264.92	1,156.72	108.21	11.690	
13,500.00	10,313.00	12,136.09	10,500.87	65.02	48.78	90.26	-3,205.47	1,906.63	1,264.54	1,156.05	108.49	11.656	
13,600.00	10,313.00	12,023.74	10,500.23	66.38	47.78	90.83	-3,317.81	1,905.48	1,262.98	1,154.17	108.81	11.607	
13,700.00	10,313.00	11,930.69	10,499.10	67.76	46.99	90.51	-3,410.85	1,904.39	1,261.22	1,151.87	109.35	11.534	
13,784.28	10,313.00	11,863.07	10,497.48	68.93	46.44	89.74	-3,478.44	1,904.39	1,260.56	1,150.63	109.94	11.466	
13,800.00	10,313.00	11,851.70	10,497.16	69.15	46.35	89.54	-3,489.81	1,904.50	1,260.59	1,150.53	110.06	11.454	
13,900.00	10,313.00	11,762.25	10,494.71	70.54	45.67	89.06	-3,579.20	1,906.49	1,261.89	1,151.14	110.75	11.394	
14,000.00	10,313.00	11,649.58	10,495.60	71.95	44.87	89.64	-3,691.86	1,907.01	1,261.94	1,150.66	111.29	11.340	
14,100.00	10,313.00	11,575.32	10,497.74	73.37	44.38	88.46	-3,766.08	1,907.69	1,262.91	1,150.79	112.12	11.264	
14,200.00	10,313.00	11,515.98	10,497.99	74.80	44.01	86.60	-3,825.36	1,910.10	1,266.63	1,153.53	113.09	11.200	
14,300.00	10,313.00	11,341.45	10,502.37	76.24	43.04	90.00	-3,999.73	1,913.77	1,268.29	1,154.87	113.41	11.183	
14,400.00	10,313.00	11,173.15	10,500.04	77.69	42.21	93.13	-4,167.90	1,908.33	1,263.95	1,150.16	113.80	11.107	
14,500.00	10,313.00	10,945.79	10,492.63	79.15	41.26	99.00	-4,393.86	1,886.13	1,253.74	1,140.42	113.32	11.063	
14,600.00	10,313.00	10,259.05	10,131.84	80.61	38.59	120.29	-4,911.59	1,708.85	1,226.55	1,122.36	104.19	11.772	
14,700.00	10,313.00	10,226.11	10,105.79	82.08	38.44	117.01	-4,926.85	1,695.68	1,178.82	1,071.89	106.93	11.024	
14,800.00	10,313.00	10,193.84	10,079.61	83.56	38.29	113.38	-4,941.13	1,683.35	1,136.59	1,026.83	109.75	10.356	
14,900.00	10,313.00	10,162.52	10,053.50	85.04	38.15	109.35	-4,954.12	1,671.93	1,100.59	988.01	112.58	9.776	
15,000.00	10,313.00	10,134.50	10,029.56	86.53	38.03	104.86	-4,964.90	1,662.15	1,071.65	956.28	115.36	9.289	
15,100.00	10,313.00	10,108.46	10,006.96	88.03	37.92	100.01	-4,974.40	1,653.36	1,050.49	932.54	117.95	8.906	
15,189.14	10,313.00	10,091.02	9,991.66	89.37	37.84	95.32	-4,980.51	1,647.67	1,038.73	918.61	120.12	8.647	CC, ES, SF

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 5H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-172.74	-4,948.04	-630.11	4,988.01				
100.00	100.00	88.00	88.00	0.14	0.12	-172.74	-4,948.04	-630.11	4,988.00	4,987.74	0.26	N/A	
200.00	200.00	188.00	188.00	0.50	0.45	-172.74	-4,948.04	-630.11	4,988.00	4,987.05	0.95	5,260.726	
300.00	300.00	288.00	288.00	0.86	0.81	-172.74	-4,948.04	-630.11	4,988.00	4,986.33	1.67	2,995.613	
400.00	400.00	388.00	388.00	1.22	1.17	-172.74	-4,948.04	-630.11	4,988.00	4,985.62	2.38	2,093.999	
500.00	500.00	488.00	488.00	1.57	1.53	-172.74	-4,948.04	-630.11	4,988.00	4,984.90	3.10	1,609.557	
600.00	600.00	588.00	588.00	1.93	1.88	-172.74	-4,948.04	-630.11	4,988.00	4,984.18	3.82	1,307.151	
700.00	700.00	688.00	688.00	2.29	2.24	-172.74	-4,948.04	-630.11	4,988.00	4,983.46	4.53	1,100.405	
800.00	800.00	788.00	788.00	2.65	2.60	-172.74	-4,948.04	-630.11	4,988.00	4,982.75	5.25	950.128	
900.00	900.00	888.00	888.00	3.01	2.96	-172.74	-4,948.04	-630.11	4,988.00	4,982.03	5.97	835.964	
1,000.00	1,000.00	988.00	988.00	3.37	3.32	-172.74	-4,948.04	-630.11	4,988.00	4,981.31	6.68	746.293	
1,100.00	1,100.00	1,088.00	1,088.00	3.72	3.68	-172.74	-4,948.04	-630.11	4,988.00	4,980.60	7.40	673.995	
1,200.00	1,200.00	1,188.00	1,188.00	4.08	4.03	-172.74	-4,948.04	-630.11	4,988.00	4,979.88	8.12	614.468	
1,300.00	1,300.00	1,288.00	1,288.00	4.44	4.39	-172.74	-4,948.04	-630.11	4,988.00	4,979.16	8.83	564.602	
1,400.00	1,400.00	1,388.00	1,388.00	4.80	4.75	-172.74	-4,948.04	-630.11	4,988.00	4,978.45	9.55	522.223	
1,500.00	1,500.00	1,488.00	1,488.00	5.16	5.11	-172.74	-4,948.04	-630.11	4,988.00	4,977.73	10.27	485.761	
1,600.00	1,600.00	1,588.00	1,588.00	5.52	5.47	-172.74	-4,948.04	-630.11	4,988.00	4,977.01	10.99	454.059	
1,700.00	1,700.00	1,688.00	1,688.00	5.88	5.83	-172.74	-4,948.04	-630.11	4,988.00	4,976.30	11.70	426.241	
1,800.00	1,800.00	1,788.00	1,788.00	6.23	6.19	-172.74	-4,948.04	-630.11	4,988.00	4,975.58	12.42	401.634	
1,900.00	1,900.00	1,888.00	1,888.00	6.59	6.54	-172.74	-4,948.04	-630.11	4,988.00	4,974.86	13.14	379.714	
2,000.00	2,000.00	1,988.00	1,988.00	6.95	6.90	-172.74	-4,948.04	-630.11	4,988.00	4,974.14	13.85	360.063	
2,100.00	2,100.00	2,088.00	2,088.00	7.31	7.26	-172.74	-4,948.04	-630.11	4,988.00	4,973.43	14.57	342.345	
2,200.00	2,200.00	2,188.00	2,188.00	7.67	7.62	-172.74	-4,948.04	-630.11	4,988.00	4,972.71	15.29	326.290	
2,300.00	2,300.00	2,288.00	2,288.00	8.03	7.98	-172.74	-4,948.04	-630.11	4,988.00	4,971.99	16.00	311.673	
2,400.00	2,400.00	2,388.00	2,388.00	8.38	8.34	-172.74	-4,948.04	-630.11	4,988.00	4,971.28	16.72	298.309	
2,500.00	2,500.00	2,488.00	2,488.00	8.74	8.69	-172.74	-4,948.04	-630.11	4,988.00	4,970.56	17.44	286.044	
2,600.00	2,599.95	2,587.95	2,587.95	9.10	9.05	-172.71	-4,948.04	-630.11	4,988.87	4,970.73	18.15	274.898	
2,633.33	2,633.23	2,621.23	2,621.23	9.21	9.17	-172.69	-4,948.04	-630.11	4,989.56	4,971.17	18.38	271.424	
2,700.00	2,699.73	2,687.73	2,687.73	9.44	9.41	-172.64	-4,948.04	-630.11	4,991.12	4,972.26	18.85	264.741	
2,800.00	2,799.49	2,787.49	2,787.49	9.79	9.77	-172.57	-4,948.04	-630.11	4,993.47	4,973.91	19.56	255.298	
2,900.00	2,899.24	2,887.24	2,887.24	10.14	10.13	-172.49	-4,948.04	-630.11	4,995.82	4,975.56	20.27	246.492	
3,000.00	2,999.00	2,987.00	2,987.00	10.49	10.48	-172.42	-4,948.04	-630.11	4,998.19	4,977.21	20.98	238.264	
3,100.00	3,098.76	3,086.76	3,086.76	10.85	10.84	-172.34	-4,948.04	-630.11	5,000.56	4,978.87	21.69	230.560	
3,200.00	3,198.51	3,186.51	3,186.51	11.20	11.20	-172.27	-4,948.04	-630.11	5,002.95	4,980.55	22.40	223.333	
3,300.00	3,298.27	3,286.27	3,286.27	11.56	11.56	-172.19	-4,948.04	-630.11	5,005.34	4,982.22	23.11	216.541	
3,400.00	3,398.02	3,337.27	3,337.27	11.92	11.73	-172.12	-4,948.26	-629.82	5,008.16	4,984.51	23.65	211.778	
3,500.00	3,497.78	3,400.00	3,399.95	12.28	11.95	-172.07	-4,949.64	-628.04	5,012.19	4,987.97	24.22	206.949	
3,600.00	3,597.31	3,400.00	3,399.95	12.64	11.95	-171.96	-4,949.64	-628.04	5,018.20	4,993.63	24.57	204.249	
3,699.84	3,696.05	3,466.73	3,466.52	13.01	12.17	-171.85	-4,952.50	-624.36	5,026.92	5,001.77	25.15	199.844	
3,700.00	3,696.20	3,466.80	3,466.59	13.01	12.17	-171.85	-4,952.50	-624.36	5,026.94	5,001.78	25.15	199.839	
3,800.00	3,794.68	3,500.00	3,499.63	13.39	12.28	-171.70	-4,954.45	-621.84	5,037.84	5,012.21	25.63	196.586	
3,900.00	3,893.16	3,552.76	3,552.03	13.78	12.46	-171.58	-4,958.28	-616.91	5,049.80	5,023.63	26.17	192.961	
4,000.00	3,991.65	3,600.00	3,598.77	14.17	12.62	-171.46	-4,962.45	-611.53	5,062.90	5,036.21	26.69	189.662	
4,100.00	4,090.13	3,645.25	3,643.38	14.56	12.77	-171.35	-4,967.09	-605.55	5,077.08	5,049.87	27.21	186.570	
4,200.00	4,188.61	3,744.17	3,740.79	14.95	13.11	-171.34	-4,977.63	-591.97	5,091.70	5,063.75	27.94	182.226	
4,300.00	4,287.09	3,843.09	3,838.21	15.35	13.46	-171.32	-4,988.16	-578.40	5,106.31	5,077.63	28.68	178.054	
4,400.00	4,385.57	3,942.01	3,935.62	15.76	13.81	-171.31	-4,998.70	-564.82	5,120.92	5,091.50	29.42	174.047	
4,500.00	4,484.06	4,040.92	4,033.04	16.16	14.17	-171.30	-5,009.23	-551.24	5,135.53	5,105.36	30.17	170.197	
4,600.00	4,582.54	4,139.84	4,130.45	16.57	14.54	-171.28	-5,019.76	-537.66	5,150.14	5,119.21	30.93	166.499	
4,700.00	4,681.02	4,238.76	4,227.87	16.98	14.91	-171.27	-5,030.30	-524.09	5,164.76	5,133.06	31.70	162.946	
4,800.00	4,779.50	4,337.68	4,325.28	17.39	15.28	-171.26	-5,040.83	-510.51	5,179.37	5,146.90	32.47	159.533	
4,900.00	4,877.99	4,882.08	4,865.99	17.80	17.28	-171.58	-5,072.69	-469.46	5,192.01	5,157.05	34.96	148.529	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 5H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,976.47	4,980.57	4,964.47	18.22	17.62	-171.40	-5,072.69	-469.46	5,198.17	5,162.46	35.71	145.560	
5,100.00	5,074.95	5,079.05	5,062.95	18.64	17.96	-171.22	-5,072.69	-469.46	5,204.38	5,167.91	36.47	142.709	
5,200.00	5,173.43	5,177.53	5,161.43	19.05	18.31	-171.04	-5,072.69	-469.46	5,210.64	5,173.42	37.23	139.970	
5,300.00	5,271.91	5,276.01	5,259.91	19.47	18.65	-170.87	-5,072.69	-469.46	5,216.96	5,178.97	37.99	137.336	
5,400.00	5,370.40	5,374.49	5,358.40	19.90	19.00	-170.69	-5,072.69	-469.46	5,223.32	5,184.57	38.75	134.803	
5,500.00	5,468.88	15,443.36	10,603.00	20.32	89.32	-98.37	-43.51	-484.22	5,221.89	5,166.71	55.19	94.624	
5,600.00	5,567.36	15,443.36	10,603.00	20.74	89.32	-98.44	-43.51	-484.22	5,127.89	5,072.29	55.60	92.230	
5,700.00	5,665.84	15,443.36	10,603.00	21.17	89.32	-98.52	-43.51	-484.22	5,034.12	4,978.09	56.03	89.847	
5,800.00	5,764.33	15,443.36	10,603.00	21.60	89.32	-98.59	-43.51	-484.22	4,940.59	4,884.11	56.48	87.475	
5,900.00	5,862.81	15,443.36	10,603.00	22.02	89.32	-98.65	-43.51	-484.22	4,847.33	4,790.38	56.95	85.116	
6,000.00	5,961.29	15,443.36	10,603.00	22.45	89.32	-98.72	-43.51	-484.22	4,754.33	4,696.89	57.44	82.769	
6,100.00	6,059.77	15,443.36	10,603.00	22.88	89.32	-98.78	-43.51	-484.22	4,661.63	4,603.67	57.95	80.437	
6,200.00	6,158.25	15,443.36	10,603.00	23.31	89.32	-98.84	-43.51	-484.22	4,569.23	4,510.74	58.49	78.118	
6,300.00	6,256.74	15,443.36	10,603.00	23.74	89.32	-98.90	-43.51	-484.22	4,477.16	4,418.10	59.05	75.815	
6,400.00	6,355.22	15,443.36	10,603.00	24.18	89.32	-98.95	-43.51	-484.22	4,385.43	4,325.79	59.64	73.527	
6,500.00	6,453.70	15,443.36	10,603.00	24.61	89.32	-99.01	-43.51	-484.22	4,294.08	4,233.82	60.26	71.257	
6,600.00	6,552.18	15,443.36	10,603.00	25.04	89.32	-99.06	-43.51	-484.22	4,203.12	4,142.21	60.91	69.004	
6,700.00	6,650.66	15,443.36	10,603.00	25.48	89.32	-99.11	-43.51	-484.22	4,112.58	4,050.99	61.59	66.769	
6,799.35	6,748.51	15,443.36	10,603.00	25.91	89.32	-99.16	-43.51	-484.22	4,023.07	3,960.76	62.31	64.569	
6,800.00	6,749.15	15,443.36	10,603.00	25.91	89.32	-99.16	-43.51	-484.22	4,022.49	3,960.18	62.31	64.555	
6,900.00	6,848.04	15,443.36	10,603.00	26.33	89.32	-99.20	-43.51	-484.22	3,931.73	3,868.69	63.04	62.371	
7,000.00	6,947.58	15,443.36	10,603.00	26.72	89.32	-99.23	-43.51	-484.22	3,839.28	3,775.54	63.74	60.236	
7,100.00	7,047.47	15,443.36	10,603.00	27.07	89.32	-99.24	-43.51	-484.22	3,745.28	3,680.88	64.40	58.157	
7,132.53	7,080.00	15,443.36	10,603.00	27.18	89.32	-99.24	-43.51	-484.22	3,714.40	3,649.79	64.61	57.491	
7,200.00	7,147.47	15,443.36	10,603.00	27.40	89.32	-99.24	-43.51	-484.22	3,650.25	3,585.21	65.03	56.128	
7,300.00	7,247.47	15,443.36	10,603.00	27.72	89.32	-99.24	-43.51	-484.22	3,555.39	3,489.70	65.69	54.124	
7,400.00	7,347.47	15,443.36	10,603.00	28.05	89.32	-99.24	-43.51	-484.22	3,460.82	3,394.44	66.38	52.137	
7,500.00	7,447.47	15,443.36	10,603.00	28.38	89.32	-99.24	-43.51	-484.22	3,366.57	3,299.46	67.11	50.168	
7,600.00	7,547.47	15,443.36	10,603.00	28.71	89.32	-99.24	-43.51	-484.22	3,272.65	3,204.78	67.87	48.219	
7,700.00	7,647.47	15,443.36	10,603.00	29.04	89.32	-99.24	-43.51	-484.22	3,179.11	3,110.43	68.68	46.289	
7,800.00	7,747.47	15,443.36	10,603.00	29.37	89.32	-99.24	-43.51	-484.22	3,085.98	3,016.44	69.53	44.381	
7,900.00	7,847.47	15,443.36	10,603.00	29.70	89.32	-99.24	-43.51	-484.22	2,993.28	2,922.84	70.44	42.494	
8,000.00	7,947.47	15,443.36	10,603.00	30.03	89.32	-99.24	-43.51	-484.22	2,901.08	2,829.68	71.40	40.631	
8,100.00	8,047.47	15,443.36	10,603.00	30.36	89.32	-99.24	-43.51	-484.22	2,809.40	2,736.98	72.42	38.792	
8,200.00	8,147.47	15,443.36	10,603.00	30.69	89.32	-99.24	-43.51	-484.22	2,718.31	2,644.80	73.51	36.978	
8,300.00	8,247.47	15,443.36	10,603.00	31.03	89.32	-99.24	-43.51	-484.22	2,627.87	2,553.20	74.67	35.192	
8,400.00	8,347.47	15,443.36	10,603.00	31.36	89.32	-99.24	-43.51	-484.22	2,538.15	2,462.24	75.91	33.436	
8,500.00	8,447.47	15,443.36	10,603.00	31.70	89.32	-99.24	-43.51	-484.22	2,449.23	2,371.99	77.24	31.710	
8,600.00	8,547.47	15,443.36	10,603.00	32.03	89.32	-99.24	-43.51	-484.22	2,361.19	2,282.53	78.66	30.018	
8,700.00	8,647.47	15,443.36	10,603.00	32.37	89.32	-99.24	-43.51	-484.22	2,274.14	2,193.95	80.18	28.362	
8,800.00	8,747.47	15,443.36	10,603.00	32.70	89.32	-99.24	-43.51	-484.22	2,188.19	2,106.37	81.82	26.744	
8,900.00	8,847.47	15,443.36	10,603.00	33.04	89.32	-99.24	-43.51	-484.22	2,103.49	2,019.91	83.58	25.167	
9,000.00	8,947.47	15,443.36	10,603.00	33.37	89.32	-99.24	-43.51	-484.22	2,020.19	1,934.72	85.47	23.636	
9,100.00	9,047.47	15,443.36	10,603.00	33.71	89.32	-99.24	-43.51	-484.22	1,938.47	1,850.97	87.50	22.153	
9,200.00	9,147.47	15,443.36	10,603.00	34.05	89.32	-99.24	-43.51	-484.22	1,858.54	1,768.86	89.68	20.723	
9,300.00	9,247.47	15,443.36	10,603.00	34.39	89.32	-99.24	-43.51	-484.22	1,780.64	1,688.61	92.02	19.350	
9,400.00	9,347.47	15,443.36	10,603.00	34.73	89.32	-99.24	-43.51	-484.22	1,705.04	1,610.52	94.52	18.039	
9,500.00	9,447.47	15,443.36	10,603.00	35.06	89.32	-99.24	-43.51	-484.22	1,632.07	1,534.89	97.18	16.795	
9,600.00	9,547.47	15,443.36	10,603.00	35.40	89.32	-99.24	-43.51	-484.22	1,562.10	1,462.10	99.99	15.622	
9,700.00	9,647.47	15,443.36	10,603.00	35.74	89.32	-99.24	-43.51	-484.22	1,495.54	1,392.60	102.94	14.528	
9,800.00	9,747.47	15,443.36	10,603.00	36.08	89.32	-99.24	-43.51	-484.22	1,432.88	1,326.87	106.00	13.517	
9,888.07	9,835.54	15,443.36	10,603.00	36.38	89.32	-99.24	-43.51	-484.22	1,381.34	1,272.58	108.76	12.701	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 5H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	9,847.47	15,443.36	10,603.00	36.42	89.32	-99.23	-43.51	-484.22	1,374.62	1,265.49	109.13	12.596	
9,925.00	9,872.43	15,443.36	10,603.00	36.50	89.32	-99.17	-43.51	-484.22	1,360.67	1,250.75	109.92	12.379	
9,950.00	9,897.30	15,443.36	10,603.00	36.58	89.32	-99.04	-43.51	-484.22	1,346.93	1,236.21	110.71	12.166	
9,975.00	9,921.99	15,443.36	10,603.00	36.65	89.32	-98.85	-43.51	-484.22	1,333.43	1,221.92	111.51	11.958	
10,000.00	9,946.45	15,443.36	10,603.00	36.73	89.32	-98.59	-43.51	-484.22	1,320.23	1,207.93	112.30	11.756	
10,025.00	9,970.60	15,443.36	10,603.00	36.80	89.32	-98.27	-43.51	-484.22	1,307.37	1,194.27	113.09	11.560	
10,050.00	9,994.38	15,443.36	10,603.00	36.87	89.32	-97.89	-43.51	-484.22	1,294.89	1,181.01	113.88	11.371	
10,075.00	10,017.73	15,443.36	10,603.00	36.93	89.32	-97.44	-43.51	-484.22	1,282.84	1,168.19	114.65	11.189	
10,100.00	10,040.58	15,443.36	10,603.00	37.00	89.32	-96.93	-43.51	-484.22	1,271.28	1,155.87	115.41	11.015	
10,125.00	10,062.86	15,443.36	10,603.00	37.06	89.32	-96.36	-43.51	-484.22	1,260.23	1,144.08	116.15	10.850	
10,150.00	10,084.53	15,443.36	10,603.00	37.11	89.32	-95.74	-43.51	-484.22	1,249.75	1,132.88	116.87	10.694	
10,175.00	10,105.51	15,443.36	10,603.00	37.17	89.32	-95.05	-43.51	-484.22	1,239.88	1,122.32	117.56	10.547	
10,200.00	10,125.75	15,443.36	10,603.00	37.22	89.32	-94.31	-43.51	-484.22	1,230.66	1,112.44	118.22	10.410	
10,225.00	10,145.19	15,443.36	10,603.00	37.27	89.32	-93.51	-43.51	-484.22	1,222.14	1,103.29	118.85	10.283	
10,250.00	10,163.79	15,443.36	10,603.00	37.31	89.32	-92.66	-43.51	-484.22	1,214.34	1,094.90	119.44	10.167	
10,275.00	10,181.49	15,443.36	10,603.00	37.36	89.32	-91.77	-43.51	-484.22	1,207.32	1,087.33	119.99	10.062	
10,300.00	10,198.23	15,443.36	10,603.00	37.39	89.32	-90.82	-43.51	-484.22	1,201.09	1,080.60	120.49	9.968	
10,325.00	10,213.99	15,436.85	10,603.00	37.43	89.23	-90.17	-50.03	-484.20	1,195.67	1,074.83	120.85	9.894	
10,350.00	10,228.71	15,416.64	10,603.00	37.47	88.92	-90.17	-70.23	-484.14	1,190.85	1,069.90	120.94	9.846	
10,375.00	10,242.35	15,404.31	10,603.00	37.50	88.74	-90.17	-91.18	-484.08	1,186.52	1,065.40	121.12	9.796	
10,400.00	10,254.87	15,374.06	10,603.00	37.53	88.29	-90.17	-112.81	-484.02	1,182.68	1,061.67	121.01	9.774	
10,425.00	10,266.24	15,351.80	10,603.00	37.57	87.95	-90.17	-135.07	-483.95	1,179.30	1,058.32	120.98	9.748	
10,450.00	10,276.44	15,328.98	10,603.00	37.60	87.61	-90.17	-157.90	-483.88	1,176.36	1,055.44	120.91	9.729	
10,475.00	10,285.42	15,305.65	10,603.00	37.63	87.26	-90.17	-181.22	-483.81	1,173.84	1,053.03	120.81	9.716	
10,500.00	10,293.18	15,281.89	10,603.00	37.66	86.91	-90.17	-204.99	-483.74	1,171.72	1,051.04	120.68	9.710	
10,525.00	10,299.68	15,257.75	10,603.00	37.70	86.55	-90.17	-229.12	-483.67	1,169.99	1,049.47	120.51	9.708	
10,550.00	10,304.90	15,233.31	10,603.00	37.74	86.18	-90.17	-253.57	-483.60	1,168.62	1,048.31	120.32	9.713	
10,575.00	10,308.84	15,208.62	10,603.00	37.78	85.81	-90.17	-278.25	-483.53	1,167.62	1,047.53	120.10	9.722	
10,600.00	10,311.48	15,183.76	10,603.00	37.83	85.44	-90.17	-303.11	-483.46	1,166.97	1,047.12	119.85	9.737	
10,625.00	10,312.82	15,158.80	10,603.00	37.88	85.07	-90.17	-328.07	-483.38	1,166.66	1,047.08	119.58	9.756	
10,635.34	10,312.99	15,148.46	10,603.00	37.90	84.92	-90.17	-338.41	-483.35	1,166.63	1,047.17	119.46	9.766	
10,638.07	10,313.00	15,145.74	10,603.00	37.91	84.88	-90.17	-341.14	-483.35	1,166.63	1,047.20	119.43	9.768	
10,700.00	10,313.00	15,083.80	10,603.00	38.06	83.96	-90.17	-403.07	-483.16	1,166.72	1,048.00	118.72	9.828	
10,800.00	10,313.00	14,983.80	10,603.00	38.36	82.48	-90.17	-503.07	-482.87	1,166.87	1,049.24	117.63	9.920	
10,900.00	10,313.00	14,883.80	10,603.00	38.75	81.01	-90.17	-603.07	-482.58	1,167.02	1,050.40	116.62	10.007	
11,000.00	10,313.00	14,783.80	10,603.00	39.20	79.54	-90.17	-703.07	-482.28	1,167.17	1,051.49	115.68	10.090	
11,100.00	10,313.00	14,683.81	10,603.00	39.73	78.09	-90.17	-803.07	-481.99	1,167.31	1,052.51	114.81	10.168	
11,200.00	10,313.00	14,583.81	10,603.00	40.32	76.64	-90.17	-903.07	-481.70	1,167.46	1,053.46	114.00	10.241	
11,300.00	10,313.00	14,483.81	10,603.00	40.96	75.20	-90.17	-1,003.07	-481.40	1,167.61	1,054.35	113.26	10.309	
11,400.00	10,313.00	14,383.81	10,603.00	41.67	73.77	-90.17	-1,103.07	-481.11	1,167.76	1,055.18	112.58	10.373	
11,500.00	10,313.00	14,283.81	10,603.00	42.43	72.35	-90.17	-1,203.07	-480.82	1,167.90	1,055.94	111.96	10.431	
11,600.00	10,313.00	14,183.81	10,603.00	43.23	70.94	-90.17	-1,303.06	-480.52	1,168.05	1,056.65	111.40	10.485	
11,700.00	10,313.00	14,083.81	10,603.00	44.09	69.53	-90.17	-1,403.06	-480.23	1,168.20	1,057.30	110.89	10.534	
11,800.00	10,313.00	13,983.81	10,603.00	44.99	68.15	-90.17	-1,503.06	-479.94	1,168.35	1,057.90	110.44	10.579	
11,900.00	10,313.00	13,883.81	10,603.00	45.94	66.77	-90.17	-1,603.06	-479.64	1,168.49	1,058.45	110.04	10.619	
12,000.00	10,313.00	13,783.81	10,603.00	46.92	65.40	-90.17	-1,703.06	-479.35	1,168.64	1,058.95	109.69	10.654	
12,100.00	10,313.00	13,683.81	10,603.00	47.94	64.05	-90.17	-1,803.06	-479.05	1,168.79	1,059.40	109.39	10.685	
12,200.00	10,313.00	13,583.81	10,603.00	48.99	62.72	-90.17	-1,903.06	-478.76	1,168.94	1,059.80	109.14	10.711	
12,300.00	10,313.00	13,483.81	10,603.00	50.08	61.40	-90.17	-2,003.06	-478.47	1,169.08	1,060.16	108.93	10.733	
12,400.00	10,313.00	13,383.81	10,603.00	51.20	60.09	-90.17	-2,103.06	-478.17	1,169.23	1,060.47	108.76	10.750	
12,500.00	10,313.00	13,283.81	10,603.00	52.34	58.81	-90.17	-2,203.06	-477.88	1,169.38	1,060.73	108.64	10.763	
12,600.00	10,313.00	13,183.81	10,603.00	53.52	57.54	-90.17	-2,303.06	-477.59	1,169.53	1,060.96	108.57	10.772	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 5H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,700.00	10,313.00	13,083.81	10,603.00	54.71	56.29	-90.17	-2,403.06	-477.29	1,169.67	1,061.14	108.54	10.777	
12,800.00	10,313.00	12,983.81	10,603.00	55.93	55.07	-90.17	-2,503.06	-477.00	1,169.82	1,061.27	108.55	10.777	
12,900.00	10,313.00	12,883.81	10,603.00	57.18	53.87	-90.17	-2,603.06	-476.71	1,169.97	1,061.37	108.60	10.773	
13,000.00	10,313.00	12,783.81	10,603.00	58.44	52.69	-90.17	-2,703.06	-476.41	1,170.12	1,061.42	108.70	10.765	
13,100.00	10,313.00	12,683.81	10,603.00	59.72	51.54	-90.17	-2,803.06	-476.12	1,170.26	1,061.43	108.84	10.752	
13,200.00	10,313.00	12,583.81	10,603.00	61.02	50.41	-90.17	-2,903.06	-475.83	1,170.41	1,061.39	109.02	10.736	
13,300.00	10,313.00	12,483.81	10,603.00	62.34	49.32	-90.17	-3,003.06	-475.53	1,170.56	1,061.31	109.25	10.714	
13,400.00	10,313.00	12,383.81	10,603.00	63.67	48.26	-90.17	-3,103.05	-475.24	1,170.71	1,061.18	109.53	10.689	
13,500.00	10,313.00	12,283.81	10,603.00	65.02	47.23	-90.17	-3,203.05	-474.95	1,170.85	1,061.01	109.85	10.659	
13,600.00	10,313.00	12,183.81	10,603.00	66.38	46.24	-90.17	-3,303.05	-474.65	1,171.00	1,060.78	110.22	10.624	
13,700.00	10,313.00	12,083.81	10,603.00	67.76	45.29	-90.17	-3,403.05	-474.36	1,171.15	1,060.51	110.64	10.585	
13,800.00	10,313.00	11,983.81	10,603.00	69.15	44.37	-90.17	-3,503.05	-474.07	1,171.30	1,060.19	111.11	10.542	
13,900.00	10,313.00	11,883.81	10,603.00	70.54	43.51	-90.17	-3,603.05	-473.77	1,171.44	1,059.81	111.64	10.493	
14,000.00	10,313.00	11,783.81	10,603.00	71.95	42.69	-90.17	-3,703.05	-473.48	1,171.59	1,059.37	112.22	10.440	
14,100.00	10,313.00	11,683.81	10,603.00	73.37	41.91	-90.17	-3,803.05	-473.18	1,171.74	1,058.88	112.86	10.383	
14,200.00	10,313.00	11,583.81	10,603.00	74.80	41.19	-90.17	-3,903.05	-472.89	1,171.89	1,058.33	113.55	10.320	
14,300.00	10,313.00	11,483.81	10,603.00	76.24	40.53	-90.17	-4,003.05	-472.60	1,172.04	1,057.72	114.31	10.253	
14,400.00	10,313.00	11,383.81	10,603.00	77.69	39.92	-90.17	-4,103.05	-472.30	1,172.18	1,057.05	115.14	10.181	
14,500.00	10,313.00	11,283.81	10,603.00	79.15	39.37	-90.17	-4,203.05	-472.01	1,172.33	1,056.30	116.03	10.104	
14,600.00	10,313.00	11,183.81	10,603.00	80.61	38.89	-90.17	-4,303.05	-471.72	1,172.48	1,055.49	116.98	10.023	
14,700.00	10,313.00	11,083.81	10,603.00	82.08	38.47	-90.17	-4,403.05	-471.42	1,172.63	1,054.62	118.01	9.937	
14,800.00	10,313.00	10,983.81	10,603.00	83.56	38.11	-90.17	-4,503.05	-471.13	1,172.77	1,053.66	119.11	9.846	
14,900.00	10,313.00	10,870.36	10,602.53	85.04	37.78	-90.85	-4,616.49	-470.80	1,172.88	1,052.54	120.34	9.747	
15,000.00	10,313.00	10,628.54	10,532.33	86.53	37.19	-97.32	-4,845.20	-470.13	1,165.59	1,043.00	122.60	9.508	
15,100.00	10,313.00	10,476.42	10,433.56	88.03	36.91	-98.05	-4,960.05	-469.79	1,152.15	1,027.56	124.60	9.247	
15,189.14	10,313.00	10,396.44	10,368.42	89.37	36.71	-95.91	-5,006.29	-469.65	1,141.54	1,015.54	125.99	9.060	CC, ES, SF

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 6H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-50.48	12.66	-15.35	20.12				
100.00	100.00	96.97	96.97	0.14	0.14	-50.52	12.70	-15.42	19.98	19.69	0.28	70.310	CC
200.00	200.00	197.00	197.00	0.50	0.49	-50.57	12.75	-15.50	20.07	19.08	0.99	20.232	
300.00	300.00	296.95	296.95	0.86	0.85	-50.22	12.91	-15.51	20.18	18.47	1.71	11.825	
400.00	400.00	396.95	396.95	1.22	1.21	-49.54	13.26	-15.54	20.43	18.01	2.42	8.433	
500.00	500.00	496.86	496.86	1.57	1.57	-48.51	13.84	-15.65	20.89	17.75	3.14	6.655	
600.00	600.00	596.74	596.73	1.93	1.92	-46.19	15.11	-15.75	21.83	17.98	3.86	5.663	
700.00	700.00	696.57	696.54	2.29	2.28	-43.97	16.85	-16.26	23.42	18.85	4.57	5.124	
800.00	800.00	796.45	796.40	2.65	2.64	-42.97	18.73	-17.45	25.60	20.31	5.29	4.842	
900.00	900.00	896.51	896.43	3.01	3.00	-41.46	20.86	-18.42	27.83	21.83	6.00	4.636	
1,000.00	1,000.00	996.57	996.46	3.37	3.36	-39.15	23.08	-18.79	29.77	23.05	6.72	4.429	
1,100.00	1,100.00	1,096.59	1,096.46	3.72	3.71	-36.52	25.35	-18.77	31.54	24.11	7.44	4.241	
1,200.00	1,200.00	1,196.64	1,196.48	4.08	4.07	-33.82	27.57	-18.47	33.19	25.04	8.15	4.071	
1,300.00	1,300.00	1,296.76	1,296.58	4.44	4.43	-31.96	29.36	-18.32	34.61	25.74	8.87	3.902	
1,400.00	1,400.00	1,397.04	1,396.86	4.80	4.78	-31.82	30.15	-18.71	35.48	25.90	9.58	3.703	
1,500.00	1,500.00	1,497.28	1,497.10	5.16	5.12	-33.31	29.62	-19.46	35.44	25.16	10.28	3.447	
1,600.00	1,600.00	1,597.30	1,597.12	5.52	5.46	-35.12	28.69	-20.18	35.08	24.11	10.97	3.197	
1,700.00	1,700.00	1,697.31	1,697.12	5.88	5.79	-36.61	27.91	-20.74	34.77	23.10	11.67	2.980	
1,800.00	1,800.00	1,797.34	1,797.15	6.23	6.13	-37.46	27.30	-20.92	34.39	22.03	12.36	2.782	
1,900.00	1,900.00	1,897.32	1,897.12	6.59	6.47	-37.80	26.85	-20.83	33.99	20.93	13.06	2.603	
2,000.00	2,000.00	1,997.37	1,997.17	6.95	6.80	-37.94	26.48	-20.64	33.57	19.82	13.75	2.441	
2,100.00	2,100.00	2,097.37	2,097.17	7.31	7.14	-38.09	26.02	-20.39	33.06	18.60	14.45	2.287	
2,200.00	2,200.00	2,197.37	2,197.17	7.67	7.49	-38.25	25.55	-20.15	32.54	17.39	15.15	2.148	
2,300.00	2,300.00	2,297.27	2,297.07	8.03	7.83	-38.59	25.15	-20.08	32.18	16.33	15.85	2.030	
2,400.00	2,400.00	2,397.24	2,397.04	8.38	8.18	-39.14	24.86	-20.23	32.05	15.49	16.56	1.936	
2,500.00	2,500.00	2,497.45	2,497.25	8.74	8.52	-39.16	24.50	-19.95	31.59	14.33	17.26	1.830	
2,545.89	2,545.88	2,543.44	2,543.23	8.90	8.68	-39.81	24.24	-19.57	31.41	13.82	17.58	1.786	
2,600.00	2,599.95	2,597.54	2,597.33	9.10	8.87	-42.71	23.87	-18.97	31.74	13.78	17.96	1.767	ES, SF
2,633.33	2,633.23	2,630.76	2,630.55	9.21	8.98	-45.57	23.70	-18.62	32.45	14.26	18.19	1.784	
2,700.00	2,699.73	2,697.29	2,697.08	9.44	9.22	-51.47	23.54	-17.98	34.61	15.96	18.65	1.856	
2,800.00	2,799.49	2,797.41	2,797.18	9.79	9.56	-58.16	23.45	-16.28	37.90	18.55	19.35	1.959	
2,900.00	2,899.24	2,897.59	2,897.33	10.14	9.91	-63.47	23.22	-13.89	40.93	20.89	20.04	2.043	
3,000.00	2,999.00	2,997.66	2,997.36	10.49	10.26	-68.22	22.56	-10.82	43.49	22.75	20.73	2.097	
3,100.00	3,098.76	3,097.27	3,096.92	10.85	10.61	-72.53	21.88	-8.02	46.53	25.10	21.43	2.171	
3,200.00	3,198.51	3,196.69	3,196.32	11.20	10.96	-76.38	21.33	-6.05	50.65	28.51	22.13	2.288	
3,300.00	3,298.27	3,296.20	3,295.82	11.56	11.31	-79.54	21.01	-4.86	55.78	32.94	22.83	2.443	
3,400.00	3,398.02	3,395.91	3,395.53	11.92	11.66	-81.89	21.03	-3.98	61.39	37.86	23.53	2.609	
3,500.00	3,497.78	3,495.60	3,495.21	12.28	12.01	-83.66	21.27	-3.19	67.22	42.99	24.23	2.774	
3,600.00	3,597.31	3,594.87	3,594.48	12.64	12.36	-85.73	21.54	-2.71	75.90	50.97	24.94	3.044	
3,699.84	3,696.05	3,693.11	3,692.72	13.01	12.70	-88.38	21.57	-2.76	90.19	64.56	25.63	3.519	
3,700.00	3,696.20	3,693.26	3,692.87	13.01	12.70	-88.39	21.57	-2.76	90.22	64.59	25.63	3.520	
3,800.00	3,794.68	3,791.77	3,791.37	13.39	13.04	-90.76	21.30	-3.15	107.54	81.22	26.32	4.086	
3,900.00	3,893.16	3,890.34	3,889.94	13.78	13.39	-92.53	20.90	-3.35	124.82	97.80	27.01	4.621	
4,000.00	3,991.65	3,989.20	3,988.80	14.17	13.73	-93.88	20.51	-3.37	142.00	114.29	27.71	5.125	
4,100.00	4,090.13	4,088.06	4,087.67	14.56	14.08	-94.88	20.27	-3.13	158.97	130.56	28.41	5.596	
4,200.00	4,188.61	4,185.94	4,185.54	14.95	14.42	-95.58	20.38	-2.98	176.04	146.93	29.10	6.049	
4,300.00	4,287.09	4,284.26	4,283.87	15.35	14.76	-96.17	20.39	-3.07	193.37	163.57	29.80	6.489	
4,400.00	4,385.57	4,383.19	4,382.79	15.76	15.11	-96.71	20.26	-3.06	210.64	180.14	30.50	6.906	
4,500.00	4,484.06	4,481.76	4,481.37	16.16	15.45	-97.16	20.17	-2.92	227.80	196.59	31.20	7.300	
4,600.00	4,582.54	4,579.89	4,579.49	16.57	15.80	-97.51	20.25	-2.87	245.03	213.13	31.90	7.681	
4,700.00	4,681.02	4,678.05	4,677.65	16.98	16.14	-97.81	20.29	-2.98	262.44	229.84	32.60	8.050	
4,800.00	4,779.50	4,776.79	4,776.39	17.39	16.48	-98.09	20.29	-3.04	279.80	246.50	33.30	8.402	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 6H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,877.99	4,875.01	4,874.62	17.80	16.82	-98.32	20.31	-3.16	297.22	263.22	34.00	8.741	
5,000.00	4,976.47	4,973.99	4,973.59	18.22	17.17	-98.56	20.20	-3.19	314.59	279.88	34.71	9.064	
5,100.00	5,074.95	5,072.80	5,072.41	18.64	17.51	-98.76	20.19	-3.06	331.79	296.37	35.42	9.368	
5,200.00	5,173.43	5,170.82	5,170.42	19.05	17.85	-98.92	20.31	-3.00	349.04	312.92	36.12	9.663	
5,300.00	5,271.91	5,268.78	5,268.38	19.47	18.20	-99.07	20.37	-3.11	366.46	329.64	36.82	9.953	
5,400.00	5,370.40	5,367.79	5,367.40	19.90	18.54	-99.21	20.37	-3.17	383.85	346.32	37.53	10.228	
5,500.00	5,468.88	5,466.08	5,465.69	20.32	18.88	-99.34	20.36	-3.17	401.19	362.95	38.23	10.493	
5,600.00	5,567.36	5,564.66	5,564.27	20.74	19.23	-99.49	20.13	-3.25	418.64	379.70	38.94	10.750	
5,700.00	5,665.84	5,665.10	5,664.70	21.17	19.58	-99.65	19.87	-2.94	435.72	396.06	39.66	10.986	
5,800.00	5,764.33	5,763.38	5,762.98	21.60	19.92	-99.74	20.01	-2.51	452.61	412.24	40.37	11.211	
5,900.00	5,862.81	5,859.20	5,858.80	22.02	20.26	-99.77	20.57	-2.48	469.82	428.76	41.06	11.442	
6,000.00	5,961.29	5,954.18	5,953.78	22.45	20.59	-99.81	20.86	-3.12	487.76	446.02	41.75	11.684	
6,100.00	6,059.77	6,055.00	6,054.59	22.88	20.94	-99.96	20.09	-3.96	506.05	463.58	42.47	11.916	
6,200.00	6,158.25	6,162.12	6,161.70	23.31	21.31	-100.20	18.72	-3.25	522.97	479.74	43.23	12.097	
6,300.00	6,256.74	6,264.82	6,264.38	23.74	21.67	-100.36	18.18	-1.35	538.61	494.64	43.97	12.251	
6,400.00	6,355.22	6,360.38	6,359.92	24.18	22.01	-100.36	19.08	0.25	554.17	509.51	44.66	12.408	
6,500.00	6,453.70	6,451.85	6,451.37	24.61	22.33	-100.26	20.78	0.69	570.73	525.39	45.33	12.590	
6,600.00	6,552.18	6,543.23	6,542.73	25.04	22.65	-100.16	22.25	-0.06	588.58	542.59	45.99	12.797	
6,700.00	6,650.66	6,637.77	6,637.26	25.48	22.98	-100.15	22.80	-1.60	607.39	560.72	46.67	13.013	
6,799.35	6,748.51	6,739.85	6,739.33	25.91	23.33	-100.28	21.69	-2.98	626.12	578.71	47.41	13.206	
6,800.00	6,749.15	6,740.54	6,740.02	25.91	23.33	-100.29	21.68	-2.98	626.24	578.83	47.42	13.208	
6,900.00	6,848.04	6,842.07	6,841.52	26.33	23.68	-100.51	19.56	-3.28	641.63	593.48	48.14	13.328	
7,000.00	6,947.58	6,940.20	6,939.63	26.72	24.03	-100.73	17.35	-3.48	651.78	602.94	48.84	13.345	
7,100.00	7,047.47	7,032.85	7,032.25	27.07	24.35	-100.90	15.28	-4.26	657.35	607.86	49.49	13.282	
7,132.53	7,080.00	7,063.22	7,062.61	27.18	24.45	-100.95	14.61	-4.77	658.29	608.59	49.70	13.245	
7,200.00	7,147.47	7,127.57	7,126.93	27.40	24.68	-101.04	13.27	-6.09	659.93	609.78	50.14	13.161	
7,300.00	7,247.47	7,225.60	7,224.91	27.72	25.02	-101.17	11.33	-8.55	662.77	611.95	50.82	13.041	
7,400.00	7,347.47	7,327.50	7,326.75	28.05	25.37	-101.30	9.21	-11.08	665.61	614.08	51.53	12.917	
7,500.00	7,447.47	7,443.04	7,442.27	28.38	25.78	-101.44	7.27	-12.52	667.17	614.83	52.34	12.747	
7,600.00	7,547.47	7,541.28	7,540.50	28.71	26.12	-101.50	6.55	-12.96	667.76	614.73	53.02	12.594	
7,700.00	7,647.47	7,643.38	7,642.60	29.04	26.48	-101.52	6.13	-13.35	668.21	614.48	53.73	12.436	
7,800.00	7,747.47	7,744.91	7,744.13	29.37	26.83	-101.49	6.49	-13.48	668.26	613.83	54.44	12.276	
7,900.00	7,847.47	7,841.15	7,840.37	29.70	27.17	-101.44	7.05	-13.95	668.62	613.52	55.11	12.133	
8,000.00	7,947.47	7,941.77	7,940.98	30.03	27.52	-101.43	6.99	-14.68	669.35	613.54	55.81	11.994	
8,100.00	8,047.47	8,045.82	8,045.04	30.36	27.88	-101.47	6.48	-14.64	669.40	612.87	56.53	11.841	
8,140.21	8,087.68	8,085.47	8,084.68	30.50	28.02	-101.48	6.44	-14.61	669.38	612.58	56.81	11.783	
8,200.00	8,147.47	8,143.22	8,142.43	30.69	28.22	-101.47	6.46	-14.70	669.46	612.25	57.21	11.701	
8,300.00	8,247.47	8,237.76	8,236.97	31.03	28.55	-101.50	6.09	-15.25	670.12	612.25	57.87	11.579	
8,400.00	8,347.47	8,334.08	8,333.28	31.36	28.89	-101.52	5.53	-16.64	671.65	613.10	58.54	11.473	
8,500.00	8,447.47	8,434.11	8,433.29	31.70	29.24	-101.44	6.08	-18.45	673.30	614.06	59.24	11.365	
8,600.00	8,547.47	8,535.65	8,534.81	32.03	29.59	-101.30	7.44	-20.38	674.90	614.95	59.95	11.258	
8,700.00	8,647.47	8,641.42	8,640.55	32.37	29.96	-101.14	9.05	-21.86	675.99	615.30	60.69	11.139	
8,800.00	8,747.47	8,750.17	8,749.29	32.70	30.34	-100.98	10.91	-22.17	675.95	614.51	61.44	11.002	
8,900.00	8,847.47	8,847.84	8,846.95	33.04	30.68	-100.91	11.83	-21.71	675.31	613.18	62.12	10.870	
8,973.58	8,921.05	8,918.94	8,918.05	33.29	30.93	-100.89	12.08	-21.63	675.17	612.55	62.62	10.782	
9,000.00	8,947.47	8,944.49	8,943.60	33.37	31.02	-100.89	12.11	-21.65	675.19	612.39	62.80	10.751	
9,100.00	9,047.47	9,046.54	9,045.65	33.71	31.37	-100.90	11.90	-21.63	675.20	611.69	63.51	10.631	
9,131.19	9,078.66	9,076.55	9,075.66	33.82	31.48	-100.92	11.76	-21.57	675.17	611.45	63.72	10.595	
9,200.00	9,147.47	9,142.56	9,141.66	34.05	31.71	-100.95	11.39	-21.64	675.32	611.13	64.19	10.521	
9,300.00	9,247.47	9,242.16	9,241.26	34.39	32.06	-100.98	10.92	-22.00	675.76	610.88	64.89	10.415	
9,400.00	9,347.47	9,341.93	9,341.03	34.73	32.41	-100.99	10.70	-22.47	676.26	610.68	65.58	10.311	
9,500.00	9,447.47	9,442.53	9,441.64	35.06	32.76	-101.01	10.38	-22.85	676.70	610.41	66.29	10.208	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 6H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,600.00	9,547.47	9,541.61	9,540.71	35.40	33.11	-101.04	9.92	-23.29	677.22	610.23	66.98	10.110	
9,700.00	9,647.47	9,642.56	9,641.66	35.74	33.46	-101.07	9.51	-23.70	677.70	610.00	67.69	10.011	
9,800.00	9,747.47	9,742.42	9,741.51	36.08	33.81	-101.12	8.93	-23.85	677.96	609.56	68.39	9.913	
9,888.07	9,835.54	9,814.38	9,813.23	36.38	34.06	-101.55	3.61	-23.92	679.34	610.45	68.89	9.861	
9,900.00	9,847.47	9,824.04	9,822.78	36.42	34.10	-101.66	2.16	-23.92	679.67	610.72	68.95	9.857	
9,925.00	9,872.43	9,843.00	9,841.44	36.50	34.16	-101.83	-1.20	-23.89	680.31	611.24	69.07	9.850	
9,950.00	9,897.30	9,863.16	9,861.12	36.58	34.23	-101.98	-5.56	-23.86	680.88	611.70	69.19	9.841	
9,975.00	9,921.99	9,882.37	9,879.70	36.65	34.30	-102.06	-10.43	-23.83	681.41	612.12	69.29	9.834	
10,000.00	9,946.45	9,901.89	9,898.42	36.73	34.37	-102.09	-15.97	-23.83	681.86	612.47	69.39	9.826	
10,025.00	9,970.60	9,926.34	9,921.62	36.80	34.45	-102.20	-23.67	-23.78	682.17	612.62	69.55	9.808	
10,050.00	9,994.38	9,957.65	9,950.94	36.87	34.56	-102.48	-34.65	-23.33	682.11	612.33	69.77	9.776	
10,075.00	10,017.73	9,992.28	9,982.79	36.93	34.67	-102.87	-48.16	-22.02	681.43	611.40	70.03	9.731	
10,100.00	10,040.58	10,025.94	10,013.11	37.00	34.79	-103.27	-62.63	-19.95	680.12	609.86	70.26	9.680	
10,125.00	10,062.86	10,053.99	10,037.81	37.06	34.88	-103.46	-75.74	-17.69	678.30	607.86	70.44	9.629	
10,150.00	10,084.53	10,082.93	10,062.65	37.11	34.98	-103.68	-90.30	-14.96	676.10	605.47	70.63	9.572	
10,175.00	10,105.51	10,110.70	10,085.85	37.17	35.08	-103.86	-105.26	-11.90	673.46	602.65	70.81	9.511	
10,200.00	10,125.75	10,135.73	10,106.22	37.22	35.16	-103.88	-119.50	-8.89	670.50	599.53	70.97	9.448	
10,225.00	10,145.19	10,159.23	10,124.90	37.27	35.25	-103.79	-133.43	-5.95	667.30	596.18	71.12	9.383	
10,250.00	10,163.79	10,177.18	10,138.90	37.31	35.31	-103.36	-144.45	-3.71	664.00	592.78	71.23	9.323	
10,275.00	10,181.49	10,195.56	10,152.95	37.36	35.37	-102.89	-156.09	-1.52	660.71	589.38	71.34	9.262	
10,300.00	10,198.23	10,214.84	10,167.43	37.39	35.44	-102.42	-168.62	0.69	657.41	585.95	71.46	9.200	
10,325.00	10,213.99	10,234.42	10,181.88	37.43	35.51	-101.92	-181.66	2.86	654.09	582.51	71.58	9.138	
10,350.00	10,228.71	10,254.20	10,196.20	37.47	35.59	-101.37	-195.14	4.98	650.77	579.05	71.72	9.074	
10,375.00	10,242.35	10,278.80	10,213.78	37.50	35.68	-101.08	-212.15	7.59	647.36	575.46	71.90	9.004	
10,400.00	10,254.87	10,303.65	10,231.42	37.53	35.77	-100.74	-229.45	10.28	643.81	571.72	72.09	8.931	
10,425.00	10,266.24	10,325.47	10,246.81	37.57	35.86	-100.17	-244.73	12.68	640.17	567.91	72.26	8.860	
10,450.00	10,276.44	10,343.77	10,259.53	37.60	35.93	-99.33	-257.73	14.61	636.65	564.25	72.40	8.793	
10,475.00	10,285.42	10,360.88	10,271.18	37.63	36.00	-98.38	-270.15	16.31	633.34	560.80	72.54	8.731	
10,500.00	10,293.18	10,377.76	10,282.27	37.66	36.07	-97.39	-282.78	17.89	630.31	557.63	72.68	8.672	
10,525.00	10,299.68	10,397.17	10,294.53	37.70	36.15	-96.58	-297.73	19.61	627.54	554.70	72.84	8.615	
10,550.00	10,304.90	10,416.93	10,306.50	37.74	36.23	-95.79	-313.35	21.33	625.00	552.00	73.00	8.562	
10,575.00	10,308.84	10,436.24	10,317.76	37.78	36.31	-94.98	-328.96	22.95	622.75	549.59	73.15	8.513	
10,600.00	10,311.48	10,454.35	10,327.94	37.83	36.39	-94.07	-343.87	24.39	620.82	547.53	73.29	8.471	
10,625.00	10,312.82	10,471.64	10,337.29	37.88	36.46	-93.11	-358.35	25.65	619.32	545.91	73.41	8.436	
10,638.07	10,313.00	10,481.08	10,342.25	37.91	36.50	-92.65	-366.35	26.30	618.72	545.24	73.48	8.421	
10,700.00	10,313.00	10,532.44	10,367.32	38.06	36.73	-91.05	-411.07	29.44	617.13	543.36	73.77	8.366	
10,726.26	10,313.00	10,552.28	10,376.23	38.13	36.82	-90.26	-428.76	30.56	616.92	543.04	73.88	8.351	
10,800.00	10,313.00	10,611.03	10,400.04	38.36	37.10	-88.37	-482.40	32.73	618.35	544.19	74.15	8.339	
10,900.00	10,313.00	10,745.44	10,440.97	38.75	37.78	-90.98	-610.18	38.30	620.45	545.66	74.80	8.295	
11,000.00	10,313.00	10,851.93	10,459.02	39.20	38.37	-91.44	-714.89	44.52	619.01	543.46	75.55	8.194	
11,100.00	10,313.00	10,967.60	10,468.52	39.73	39.07	-92.91	-829.91	51.88	615.24	538.61	76.63	8.029	
11,200.00	10,313.00	11,080.82	10,473.20	40.32	39.82	-94.19	-942.67	60.70	609.16	531.27	77.89	7.821	
11,300.00	10,313.00	11,155.00	10,473.59	40.96	40.34	-91.67	-1,016.75	64.36	604.90	526.00	78.90	7.666	
11,400.00	10,313.00	11,248.31	10,471.22	41.67	41.04	-91.01	-1,110.02	65.19	603.74	523.43	80.31	7.518	
11,500.00	10,313.00	11,350.51	10,469.25	42.43	41.86	-91.23	-1,212.19	66.71	602.22	520.30	81.93	7.351	
11,600.00	10,313.00	11,457.39	10,468.21	43.23	42.76	-91.91	-1,319.04	69.21	600.14	516.45	83.69	7.171	
11,700.00	10,313.00	11,549.94	10,467.01	44.09	43.59	-91.17	-1,411.54	71.56	597.80	512.48	85.32	7.007	
11,800.00	10,313.00	11,657.18	10,466.94	44.99	44.60	-91.89	-1,518.75	74.11	595.94	508.69	87.25	6.830	
11,896.63	10,313.00	11,737.39	10,467.12	45.90	45.39	-90.26	-1,598.94	75.79	594.48	505.71	88.77	6.697	
11,900.00	10,313.00	11,740.13	10,467.15	45.94	45.41	-90.19	-1,601.68	75.81	594.48	505.66	88.82	6.693	
12,000.00	10,313.00	11,835.75	10,468.01	46.92	46.38	-89.76	-1,697.30	75.75	595.21	504.53	90.67	6.564	
12,100.00	10,313.00	11,938.31	10,467.90	47.94	47.45	-90.01	-1,799.85	75.46	595.88	503.12	92.76	6.424	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design North Brushy Draw Federal 35 - 6H - Wellbore #1 - Surveys

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

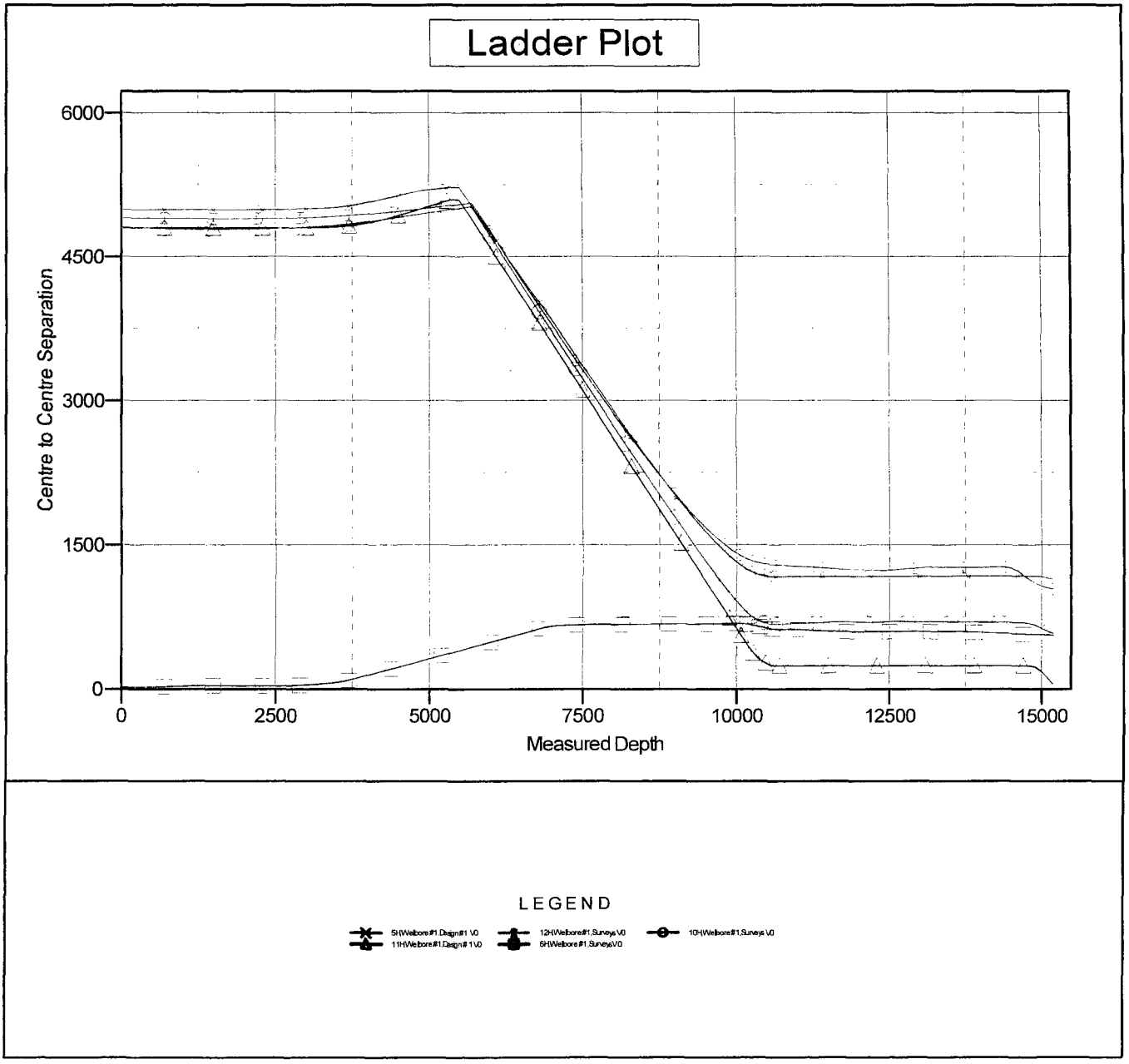
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,200.00	10,313.00	12,030.85	10,468.90	48.99	48.45	-89.27	-1,892.38	75.23	596.84	502.17	94.67	6.304	
12,300.00	10,313.00	12,132.06	10,473.60	50.08	49.58	-89.38	-1,993.48	75.25	598.51	501.78	96.73	6.188	
12,400.00	10,313.00	12,243.80	10,481.05	51.20	50.87	-90.52	-2,104.95	77.29	599.05	500.08	98.97	6.053	
12,500.00	10,313.00	12,352.78	10,486.54	52.34	52.17	-91.40	-2,213.72	81.00	597.67	496.43	101.23	5.904	
12,600.00	10,313.00	12,445.78	10,488.62	53.52	53.29	-90.70	-2,306.65	83.73	595.98	492.68	103.30	5.770	
12,620.91	10,313.00	12,462.33	10,488.63	53.77	53.49	-90.26	-2,323.19	83.87	595.90	492.22	103.69	5.747	
12,700.00	10,313.00	12,527.64	10,487.19	54.71	54.28	-88.87	-2,388.48	82.75	596.97	491.71	105.26	5.671	
12,800.00	10,313.00	12,633.13	10,485.92	55.93	55.58	-89.42	-2,493.93	80.69	598.92	491.06	107.86	5.553	
12,900.00	10,313.00	12,746.14	10,486.28	57.18	57.01	-90.72	-2,606.94	80.82	599.35	488.74	110.61	5.419	
13,000.00	10,313.00	12,852.14	10,486.38	58.44	58.37	-91.32	-2,712.90	83.18	597.64	484.44	113.21	5.279	
13,100.00	10,313.00	12,950.26	10,481.82	59.72	59.66	-91.12	-2,810.91	83.81	596.10	480.25	115.85	5.146	
13,178.86	10,313.00	13,020.58	10,478.33	60.75	60.58	-90.26	-2,881.14	83.90	595.25	477.47	117.78	5.054	
13,200.00	10,313.00	13,037.14	10,477.40	61.02	60.80	-89.79	-2,897.68	83.64	595.33	477.10	118.24	5.035	
13,300.00	10,313.00	13,126.14	10,471.59	62.34	61.98	-88.67	-2,986.42	80.21	597.60	476.84	120.76	4.949	
13,400.00	10,313.00	13,236.35	10,465.46	63.67	63.46	-89.67	-3,096.40	76.76	599.60	475.67	123.92	4.838	
13,500.00	10,313.00	13,350.59	10,460.84	65.02	65.02	-91.07	-3,210.54	76.28	599.40	472.27	127.12	4.715	
13,600.00	10,313.00	13,459.09	10,456.48	66.38	66.52	-91.90	-3,318.93	78.05	597.24	467.08	130.16	4.588	
13,700.00	10,313.00	13,550.82	10,453.85	67.76	67.80	-91.08	-3,410.61	79.83	595.10	462.34	132.76	4.482	
13,800.00	10,313.00	13,659.51	10,456.06	69.15	69.33	-91.94	-3,519.20	83.12	593.10	457.50	135.61	4.374	
13,900.00	10,313.00	13,752.36	10,458.78	70.54	70.65	-91.23	-3,611.96	86.27	590.97	452.90	138.06	4.280	
14,000.00	10,313.00	13,855.75	10,459.03	71.95	72.13	-91.57	-3,715.31	88.88	589.02	448.12	140.89	4.181	
14,100.00	10,313.00	13,959.65	10,459.86	73.37	73.63	-91.96	-3,819.16	92.07	586.69	442.96	143.72	4.082	
14,200.00	10,313.00	14,067.76	10,463.38	74.80	75.21	-92.79	-3,927.03	98.12	582.51	436.00	146.51	3.976	
14,300.00	10,313.00	14,162.35	10,466.96	76.24	76.60	-92.23	-4,021.44	102.89	579.06	430.07	148.99	3.886	
14,400.00	10,313.00	14,261.13	10,469.94	77.69	78.05	-92.11	-4,120.04	107.96	575.39	423.79	151.60	3.796	
14,500.00	10,313.00	14,353.79	10,471.33	79.15	79.42	-91.35	-4,212.64	110.75	573.31	419.16	154.15	3.719	
14,600.00	10,313.00	14,457.76	10,473.50	80.61	80.96	-91.76	-4,316.52	114.35	571.01	414.06	156.95	3.638	
14,700.00	10,313.00	14,556.34	10,477.21	82.08	82.44	-91.61	-4,414.95	118.45	568.55	409.03	159.52	3.564	
14,800.00	10,313.00	14,655.67	10,480.70	83.56	83.93	-91.53	-4,514.15	122.14	566.47	404.36	162.11	3.494	
14,900.00	10,313.00	14,753.59	10,485.47	85.04	85.41	-91.30	-4,611.87	126.24	564.40	399.83	164.58	3.429	
15,000.00	10,313.00	14,853.30	10,491.36	86.53	86.92	-91.25	-4,711.33	130.23	562.89	395.90	166.99	3.371	
15,100.00	10,313.00	14,958.94	10,497.92	88.03	88.53	-91.83	-4,816.64	135.27	560.85	391.38	169.47	3.309	
15,182.40	10,313.00	15,027.00	10,502.08	89.26	89.57	-90.26	-4,884.47	139.04	558.81	387.76	171.05	3.267	
15,189.14	10,313.00	15,027.00	10,502.08	89.37	89.57	-89.52	-4,884.47	139.04	558.85	387.83	171.02	3.268	

Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3034.00usft (Orion Pegasus
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

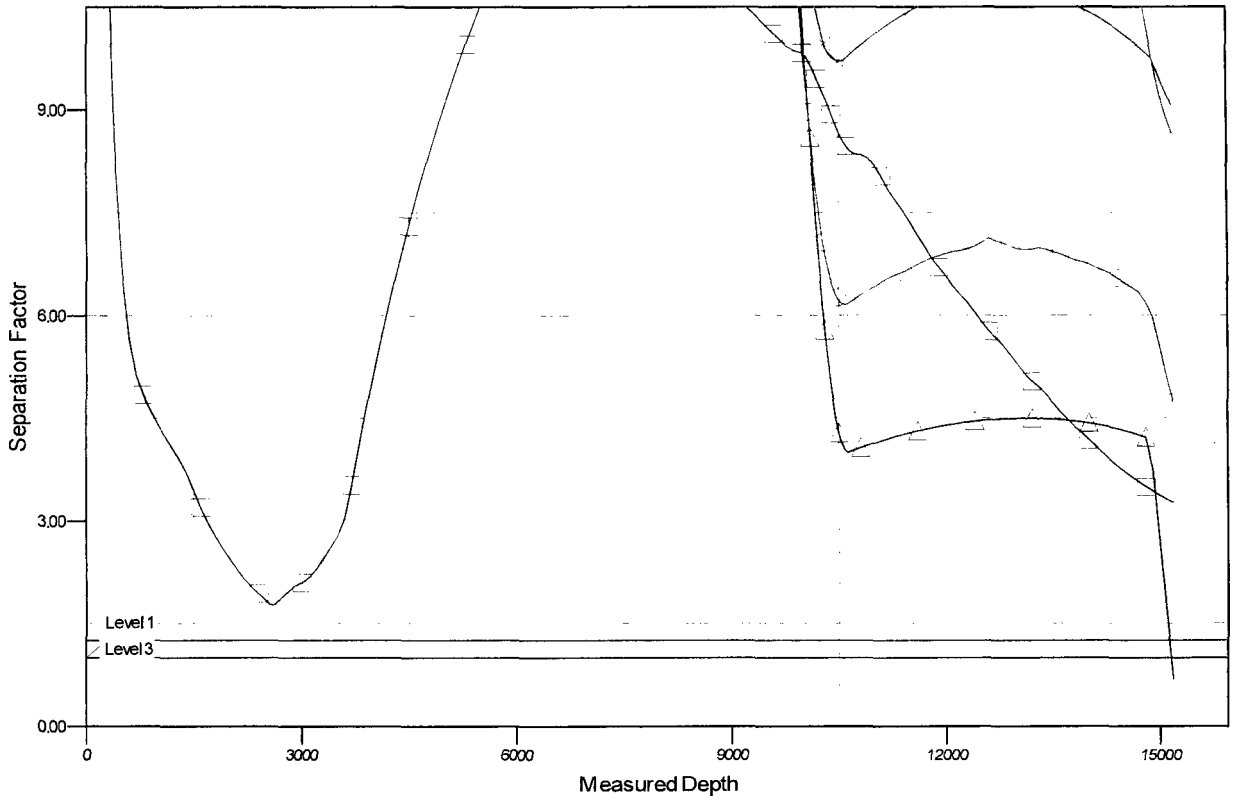
Coordinates are relative to: 7H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.20°



Company:	WPX Energy	**Local Co-ordinate Reference:**	Well 7H
Project:	Eddy County, New Mexico (NAD 83)	**TVD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Reference Site:	North Brushy Draw Federal 35	**MD Reference:**	WELL @ 3034.00usft (Orion Pegasus)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	7H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3034.00usft (Orion Pegasus
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W
Coordinates are relative to: 7H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.20°

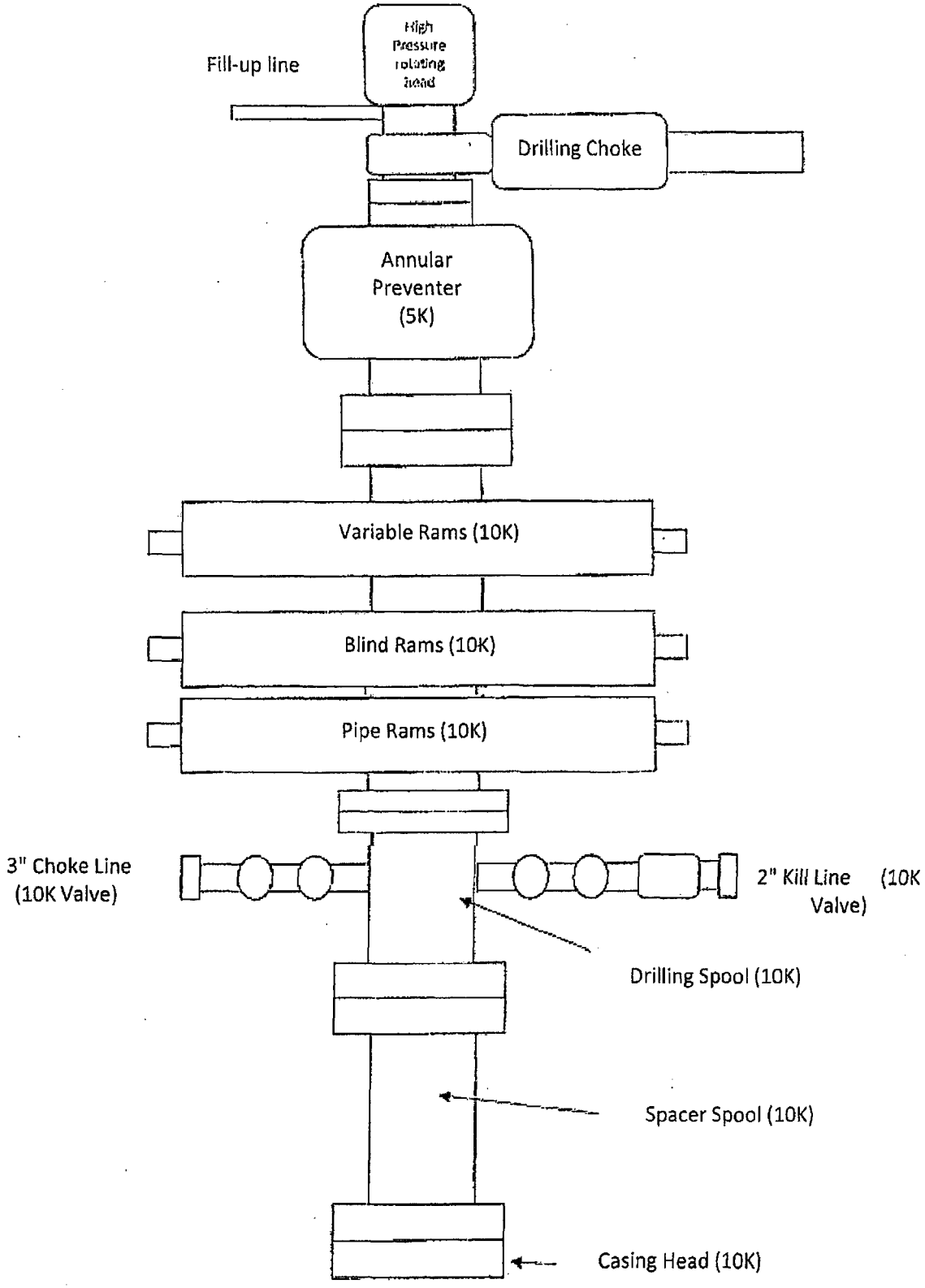
Separation Factor Plot



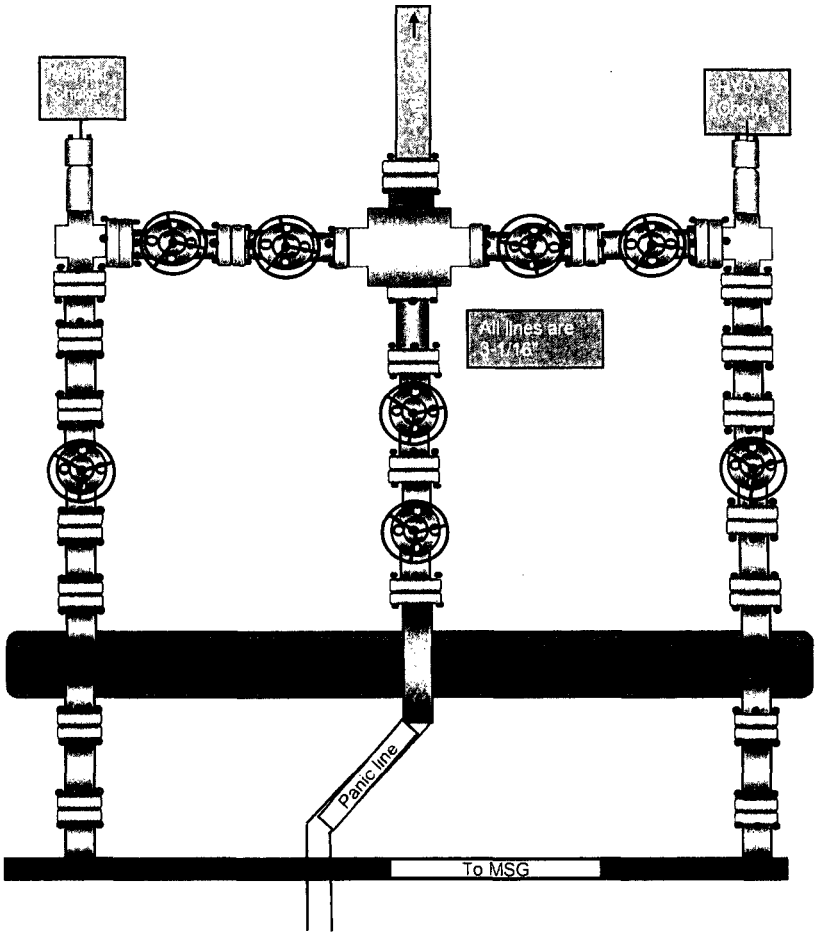
LEGEND

5H,Wellbore#1,Design#1 V0
11H,Wellbore#1,Design# 1 V0
12H,Wellbore#1,Surveys V0
6H,Wellbore#1,SurveysV0
10H,Wellbore#1,Surveys V0

13" 10K psi BOP



5M Choke Manifold



U. S. Steel Tubular Products

4 1/2 13.50 lb (0.29) P110 HC — USS-CDC HTQ™

	PIPE	CONNECTION	
MECHANICAL PROPERTIES			
Minimum Yield Strength	**110,000**		*psi*
Maximum Yield Strength	**140,000**		*psi*
Minimum Tensile Strength	**125,000**		*psi*
DIMENSIONS			
Outside Diameter	**4.500**	5.250	*in.*
Wall Thickness	0.290		*in.*
Inside Diameter	3.920	3.920	*in.*
Drift - API	3.795	3.795	*in.*
Nominal Linear Weight, T&C	**13.50**		*lbs/ft*
Plain End Weight	13.05		*lbs/ft*
SECTION AREA			
Cross Sectional Area | Critical Area	3.836	3.836	*sq. in.*
Joint Efficiency		100.0	%
PERFORMANCE			
Minimum Collapse Pressure	11,810	11,810	*psi*
External Pressure Leak Resistance		9,450	*psi*
Minimum Internal Yield Pressure	12,420	12,420	*psi*
Minimum Pipe Body Yield Strength	422,000		*lbs*
Joint Strength		443,000	*lbs*
Compression Rating		266,000	*lbs*
Reference Length		21,877	*ft*
Maximum Uniaxial Bend Rating		70.6	*deg/100 ft*
MAKE-UP TORQUES			
Make-Up Loss		4.44	*in.*
Minimum Make-Up Torque		7,000	*ft-lbs*
Maximum Make-Up Torque		10,000	*ft-lbs*
Connection Yield Torque		12,400	*ft-lbs*
* Verification of connection shoulder required. Typical shoulder range		4,500 6,500	*ft lbs*

Notes:

1) Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
2) Uniaxial bending rating shown is structural only, and equal to compression efficiency
3) Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.)
4) Reference length is calculated by joint strength divided by nominal T&C weight with 1.5 safety factor
5) Connection external pressure resistance has been verified to 80% API pipe body collapse pressure (API 5C5 CAL II testing protocol)

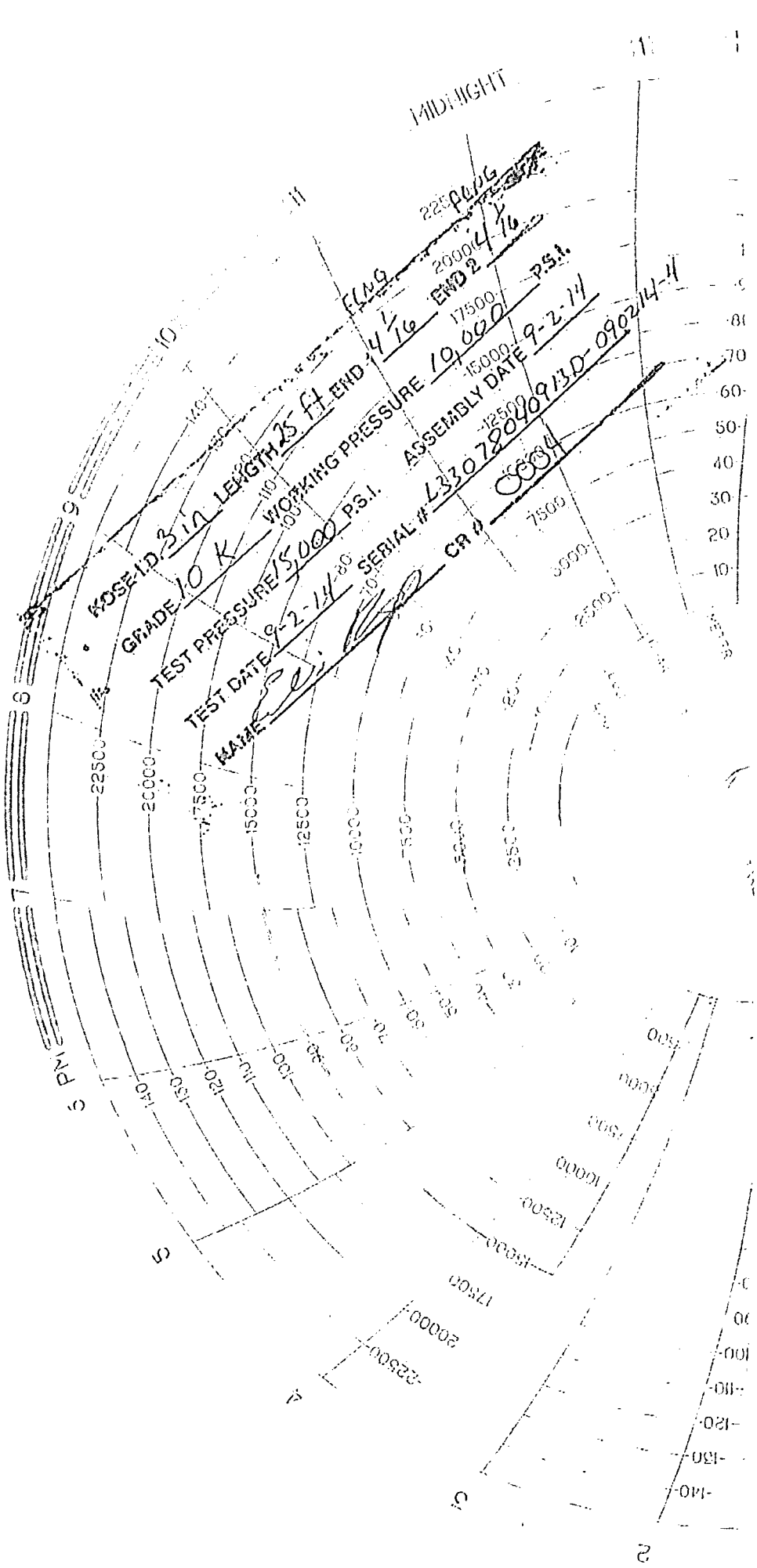
USS Product Data Sheet 2015 rev22 (Sept)

U. S. Steel Tubular Products
10343 Sam Houston Park Dr., #120
Houston, TX 77064
1-877-893-9461
connections@uss.com
www.usstubular.com

Flex Hose Variance Request

Flex Hose Variance Statement

WPX Energy (operator) requests a variance if Orion Pheonix (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.
Manufacturer: Gates
Serial Number:
Length: 44' Size: 4 1/16 10K x 4 1/16 10K Ends - flanges/clamps
WP rating: 10,000 PSI Anchors required by manufacturer – (Yes)/No


MIDNIGHT
HOSE I.D. 3 in
LENGTH 25 ft
END 1 4 1/16 FLNG
END 2 4 1/16 FLNG
GRADE 10 K
WORKING PRESSURE 10,000 P.S.I.
TEST PRESSURE 15,000 P.S.I.
ASSEMBLY DATE 9-2-14
TEST DATE 9-2-14
SERIAL # L330728090913D-090214-1
MADE
CR #
C604

GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL:
WEB: www.gates.com

10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE

Customer :	ORION DRILLING COMPANY	Test Date:	9/2/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-090214-4
Invoice No. :	203508	Created By:	JUSTIN CROPPER

Product Description:	10K3.025.0CK4.1/1610KFLGE/E

End Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG
Gates Part No. :	4773-4291	Assembly Code :	L3307B040913D-090214-4
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager :	QUALITY	Technical Supervisor :	PRODUCTION
Date :	9/2/2014	Date :	9/2/2014
Signature :		Signature :	

Gates E&S North America
134 - 44th St.
CORPUS CHRISTI, TEXAS 78405
PHONE : (361) 887-9807
FAX: (361) 887-0812

CERTIFICATE OF CONFORMANCE

This is to verify that all Parts and/or Materials included in this shipment have been manufactured and/or processed in Conformance with applicable drawings and specifications, and that Records of Required Tests are on file and subject to examination. The following items were assembled at Gates E & S, Inc. (formerly Dutex, Inc.), facilities in Corpus Christi, TX, USA. This hose assembly was designed and manufactured to meet all the requirements of API Spec 7K.

CUSTOMER: ORION DRILLING COMPANY
CUSTOMERS P.O.#: PENDING
PART DESCRIPTION: 10K3.025.0CK4.1/1610KFLGE/E
SALES ORDER #: 203508
QUANTITY: 1
SERIAL #: D-090214-4

SIGNATURE: _____
TITLE: QUALITY
DATE: 9/2/2014

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	RKI Exploration & Production, LLC.
LEASE NO.:	NMNM054290
WELL NAME & NO.:	North Brushy Draw Federal 35 7H
SURFACE HOLE FOOTAGE:	188'/N & 2275'/E
BOTTOM HOLE FOOTAGE	230'/N & 1630'/E
LOCATION:	Section 35, T.25 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.
Medium Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **650** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall

be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Medium Cave/Karst: If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the 7 inch production casing is:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. The minimum required fill of cement behind the 4-1/2 inch production liner is:

☒ Cement should tie-back to the top of the liner. Operator shall provide method of verification.

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. **Operator has proposed a multi-bowl wellhead assembly that has a weld on head with no o-ring seals. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.**

    a. **Wellhead manufacturer is supplying the test plug/retrieval tool for the operator's third party tester to use during the BOP/BOPE test. Operator shall use the supplied test plug/retrieval tool.**
    b. **Operator shall install the wear bushing required by the wellhead manufacturer. This wear bushing shall be installed by using the test plug/retrieval tool.**
    c. **Wellhead manufacturer representative shall be on location when the intermediate casing mandrel is landed. Operator shall submit copy of manufacturer's wellsite report with subsequent report.**
    d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after

installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW120716